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1100-EM-1 Phase II Remedial Investigation Well Inventory

Prepared for
Westinghouse Hanford Company
by Golder Associates Inc.

Date Published
April 1992

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Office of Environmental Restoration and
Waste Management

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ACRONYMS

ANF	Advanced Nuclear Fuels
DOE	United States Department of Energy
Ecology	Washington State Department of Ecology
FS	Feasibility Study
GAI	Golder Associates Inc.
PNL	Pacific Northwest Laboratory
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
SAIC	Science Applications International Corporation
TPA	Tri-Party Agreement
USGS	United States Geological Survey
WAC	Washington Administrative Code
WHC	Westinghouse Hanford Company
Westinghouse Hanford	Westinghouse Hanford Company

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1.0 INTRODUCTION

This report describes the results of a detailed well inventory performed in support of the Phase II remedial investigation (RI) for the 1100-EM-1 Operable Unit. The 1100-EM-1 Operable Unit is one of four hazardous substance release project units associated with the 1100 Area of the United States Department of Energy's (DOE's) Hanford Site.

Pursuant to the Hanford Federal Facility Agreement and Consent Order, the Tri-Party Agreement (TPA, Ecology et al. 1990), the 1100-EM-1 Phase I RI report was submitted to the Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) for review in August 1990 (DOE-RL 1990a). The 1100-EM-1 Phase I RI report describes the operable unit background and setting, and the nature and extent of the threat to human health and the environment posed by releases of hazardous substances from the operable unit, based on data collected and evaluated during the Phase I RI.

The 1100-EM-1 Phase I RI report (DOE-RL 1990a) identified 66 wells located within the vicinity of the 1100 Area (Figure 1). Information on these wells was obtained from Ecology water well report files (Table 1) and a published inventory by McGhan (1989) of wells located within the Hanford Site and vicinity (Table 2). The completeness of the well lists in Tables 1 and 2, the exact well locations, and the current ownership and use of the wells were not fully known during the preparation of the Phase I RI report.

In October 1990, a remedial investigation/feasibility study (RI/FS) Phase II supplemental work plan was issued (DOE-RL 1990b), which describes the activities required to further, to the degree necessary to complete the feasibility study (FS), the understanding of the nature and extent of the threat to human health and the environment posed by releases of hazardous substances from the 1100-EM-1 Operable Unit. The RI Phase II supplemental work plan (DOE-RL 1990b, Section 4.2.1.2, Activity 1b) described an activity for well inventory refinement that would support the data gathered during Phase II RI activities on ground-water withdrawal points within the potentially contaminated down-gradient direction of the operable unit, to determine if additional existing wells should be included in the Phase II RI ground-water investigation. The well inventory was to include a door-to-door search to collect information on location, current owner, current use, well condition, and well log availability. The area of interest, as conservatively defined in the Phase I RI report (Section 3.7.1.2, DOE-RL 1990a), includes all areas hydraulically downgradient from the operable unit to the Columbia River, and all areas hydraulically upgradient within an 0.8-km (0.5-mi) radius of the operable unit.

In November 1990, Westinghouse Hanford Company (Westinghouse Hanford, DOE-RL's Hanford Site operations contractor) issued Task Order S-91-02 to Golder Associates Inc. (GAI), subcontractor to Science Applications International Corporation (SAIC), under Hanford Letter Order MLW-SVV-073750. This task authorized GAI to perform the Phase II well inventory and to develop the report contained herein.

Section 2.0 of this report, 1100-EM-1 Well Inventory Activities, describes the approach used to perform the well inventory. Section 3.0, 1100-EM-1 Well Inventory Results, discusses the results of the inventory, and contains tables and maps showing well data and

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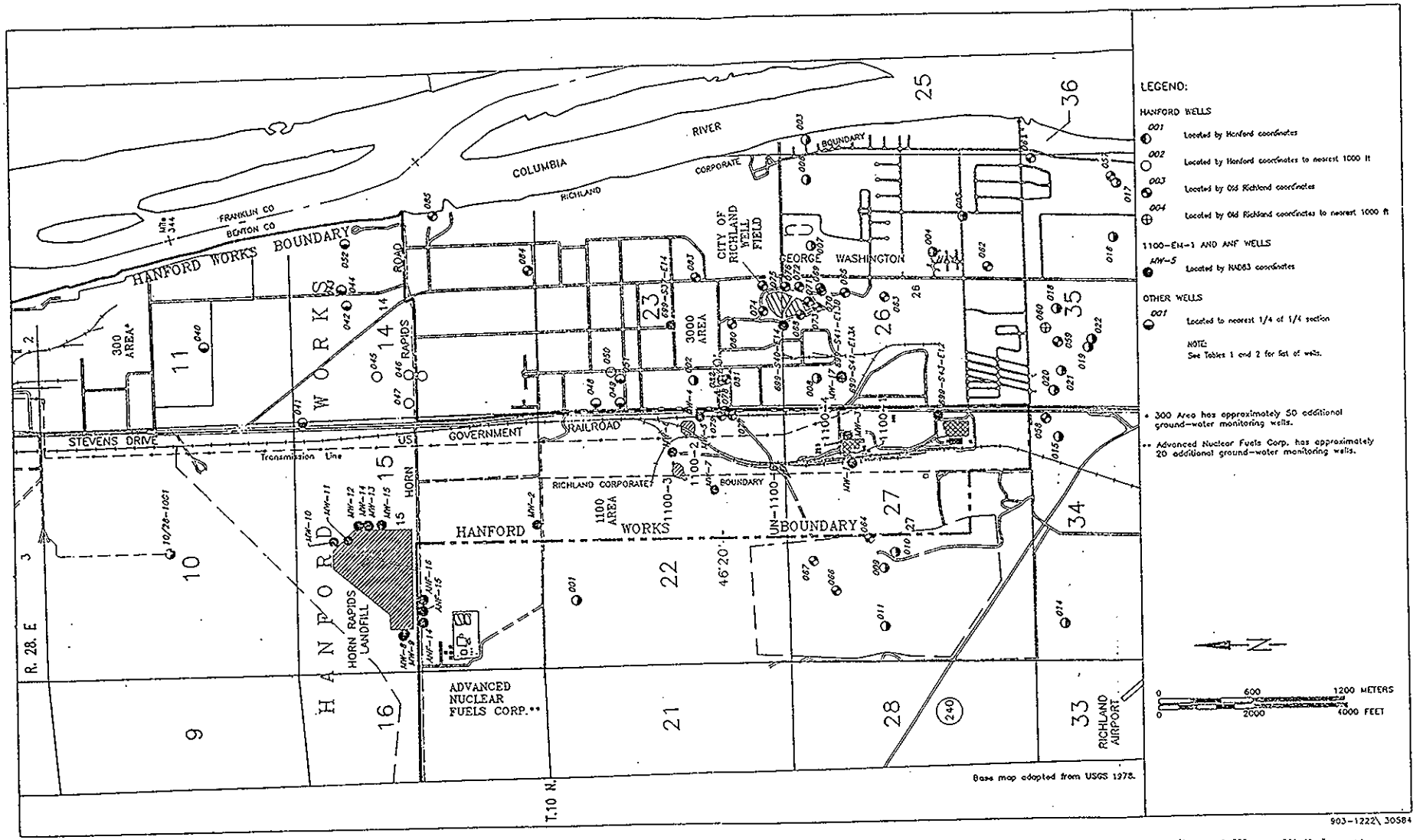

Figure 1. Ground-Water Well Locations in the 1100-EM-1 Operable Unit Vicinity as Defined in 1100-EM-1 Phase I RI Report.

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Table 1. Summary of Ground-Water Wells in the Vicinity of the 1100-EM-1 Operable Unit on File at Department of Ecology.

Well ID Figure 1	Well Owner	Installation Date (MM/YY)	Total Depth (meters)	Location Section	¼-¼ Section	Well Use
001	Allied Nuclear	05/88	11.4	22	N of NW	Hydrogeologic Testing
002	Ballard, Bill	03/88	42.7	23	NW of SW	Irrigation Supply
003	Stredwick, John	07/88	11.7	25	NE of NE	Domestic Supply
004	Bosch, Gary	04/74	8.5	26	NW of SE	Domestic Supply
005	Bond, Fredrick	01/81	16.2	26	S of E	Domestic Supply
006	Schelky, Dale	04/88	18.3	26	NE of NE	Domestic Supply
007	Richland School District	02/73	18.3	26	NW of NE	Irrigation Supply
008	General Telephone Co.	09/77	61.3	26	NW of NW	Unknown
009	Wiser Co. Inc	05/89	13.1	27	SE of NW	Hydrogeologic Testing
010	Wiser Co. Inc	04/89	25.9	27	SE of NW	Hydrogeologic Testing
011	Pederson, Herbert	02/78	39.6	27	SW of NW	Domestic Supply
014	Nensen, Pete	09/89	24.4	34	NW of NW	Domestic Supply
015	Rural Sales Inc.	06/70	29.9	34	NE of NE	Irrigation Supply
016	Roy, Norman	12/79	11.3	35	SW of NE	Domestic Supply
017	Gailey, John	11/79	13.4	35	SE of NE	Domestic Supply
018	Raymond, John	11/79	15.2	35	NE of NW	Domestic Supply
019	Fleischman, Rod	12/84	15.5	35	NW	Domestic Supply
020	Middlefence Irrigation Coop.	05/80	16.5	35	NW of NW	Domestic Supply
021	Strachan, Dennis and Marietta	08/81	20.1	35	NW of NW	Domestic Supply
022	Payton, D.B.	02/74	25.9	35	NW	Domestic and Irrigation Supply
023	McCaulley	05/78	57.9	36	SW of SW	Domestic Supply

NOTES: All wells are located within T.10.N, R.28.E of Benton County. (Source: Washington State Department of Ecology, February 1990)

Table 2. Summary of Ground-Water Wells in the Vicinity of the 1100-EM-1 Operable Unit Compiled by the Department of Energy (Sheet 1 of 2).

Well ID Figure 1	Formal Hanford Well ID	Installation Date (MM/YY)	Total Depth (meters)	Well Coordinates		Type	Well Use
				Latitude	Longitude		
040	699-S27-E14	04/48	50.3	27286 S	13673 E	H	Unknown
041	699-S29-E12	11/71	24.1	29392 S	12065 E	H	Resource Protection Monitoring
042	699-S30-E14	08/62	66.8	30380 S	14497 E	H	Resource Protection Monitoring
043	699-S30-E15A	10/71	24.4	30257 S	14838 E	H	Resource Protection Monitoring
044	699-S30-E15B	10/71	28.3	30286 S	14831 E	H	Resource Protection Monitoring
045	699-S31-E13	10/79	30.5	31000 S	13000 E	H	Resource Protection Monitoring
046	699-S32-E13A	09/79	30.5	32000 S	13000 E	H	Resource Protection Monitoring
047	699-S32-E13B	10/79	30.5	32000 S	13000 E	H	Unknown
048	699-S36-E12A	10/79	31.1	35667 S	12353 E	H	Unknown
049	699-S36-E12B	10/79	30.5	36182 S	12350 E	H	Unknown
050	699-S36-E13A	09/79	30.5	36000 S	13000 E	H	Unknown
051	699-S36-E13B	10/79	30.5	36195 S	12846 E	H	Unknown
052	699-S30-E15C	--/70	1079.0	30383 S	15232 E	H	Hydrogeologic Testing
057	11-33-18B	06/48	23.5	32564 N	18161 E	OR	Unknown (owner: City of Richland)
058	11-34-13	3/48	31.4	34026 N	13203 E	OR	Unknown
059	11-34-15A	09/48	36.6	33750 N	14700 E	OR	Unknown (owner: City of Richland)
060	11-34-15B	--	26.2	34000 N	15000 E	OR	Unknown (owner: City of Richland)
061	11-34-19	10/47	18.9	34260 N	18598 E	OR	Unknown (owner: Private Residence)
062	11-35-16	--	0.0	35225 N	16313 E	OR	Unknown (owner: Private Residence)
063	11-37-19	--	12.2	37450 N	15700 E	OR	Resource Protection Monitoring
064	11-38-11	09/44	27.4	37856 N	10621 E	OR	Unknown
065	11-38-16	--	18.0	38300 N	15800 E	OR	Unknown (owner: City of Richland)
066	11-39-10A	09/44	30.5	38585 N	9526 E	OR	Unknown
067	11-39-10B	08/44	16.5	39072 N	10160 E	OR	Unknown
068	11-39-15	--	21.6	39300 N	15400 E	OR	Municipal Well, City of Richland
069	11-39-16A	08/48	18.9	38831 N	15904 E	OR	Municipal Well, City of Richland

Table 2. Summary of Ground-Water Wells in the Vicinity of the 1100-EM-1 Operable Unit Compiled by the Department of Energy (Sheet 2 of 2).

Well ID Figure 1	Formal Hanford Well ID	Installation Date (MM/YY)	Total Depth (meters)	Well Coordinates		Type	Well Use
				Latitude	Longitude		
070	11-38-16B	03/48	33.5	38808 N	15848 E	OR	Unknown
071	11-39-16C	05/48	22.9	39097 N	15621 E	OR	Resource Protection Monitoring
072	11-39-16D	05/48	19.5	39300 N	15945 E	OR	Municipal Well, City of Richland
073	11-39-16E	--	25.3	38900 N	15500 E	OR	Municipal Well, City of Richland
074	11-40-15	04/48	26.8	40088 N	15442 E	OR	Municipal Well, City of Richland
075	11-40-16B	05/48	27.4	40087 N	15977 E	OR	Municipal Well, City of Richland
076	11-40-16C	--	17.1	39600 N	15950 E	OR	Municipal Well, City of Richland
077	11-41-13A	06/43	19.2	40796 N	13256 E	OR	Unknown
078	11-41-13B	06/43	19.8	40949 N	13351 E	OR	Unknown
079	11-41-13C	03/44	29.0	41030 N	13259 E	OR	Resource Protection Monitoring
080	11-41-15	10/49	22.6	40767 N	15184 E	OR	Resource Protection Monitoring
081	30-41-14	02/48	20.7	40907 N	14022 E	OR	Electrical Grounding
082	30-41-14B	--	0.0	41000 N	14000 E	OR	Unknown
083	30-42-16	10/44	40.8	41572 N	16180 E	OR	Resource Protection Monitoring
084	30-45-16	--	19.8	45108 N	16386 E	OR	Resource Protection Monitoring
085	30-47-18B	12/48	21.6	47120 N	17686 E	OR	Resource Protection Monitoring
ANF-14	--	--	--	373393.8 N	1943512.6 E	NAD	Resource Protection Monitoring
ANF-15	--	--	--	373389.7 N	1943652.1 E	NAD	Resource Protection Monitoring
ANF-16	--	--	--	373393.2 N	1943816.8 E	NAD	Resource Protection Monitoring

NOTES: Coordinates are listed according to type, H = Hanford Site, OR = Old Richland, and NAD = NAD '83.
Both coordinate systems use units of feet.
(Source: McGhan 1989 and Advanced Nuclear Fuels Corp. 1990).

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locations. References cited are listed in Section 4.0. Appendix A contains a copy of a newspaper article and a public notice announcing the well inventory. Well inventory report forms, including well logs and location maps, as available, are contained in Appendix B. Well data bases provided by the U.S. Geological Survey (USGS) and Westinghouse Hanford are provided in Appendices C and D, respectively.

2.0 1100-EM-1 WELL INVENTORY ACTIVITIES

Based on the down-gradient and up-gradient areas of interest defined in Section 1.0 above, the well inventory included wells in Township 10 North (T. 10 N.), Range 28 East (R. 28 E.), in all of sections 10, 11, 14, 15, 22, 23, 25, 26, and 27, the eastern half of section 16, and the northern half of sections 34, 35, and 36 (see Figure 1). The inventory was conducted by a search of existing well data bases and a door-to-door search to collect information on well location, current owner, current use, well condition, and well log availability. The survey included both residential and commercial well owners. The approximately 50 ground-water monitoring wells in the 300 Area of the Hanford Site were not assessed because many of these wells are currently actively monitored, and well data are readily available.

Prior to initiation of the actual survey, the City of Richland Water and Waste Utilities Department was visited to obtain any useful information that could support the survey. Mr. Stanley Arlt, Director of the Water and Waste Utilities Department, informed the investigators of a city ordinance promulgated in 1985 that requires all individuals with wells within the city of Richland to obtain a permit from the city. A list of names and addresses of all individuals that applied for a permit, copies of all of the permit applications within the area of interest for this survey, and copies of all maps and well logs that accompanied these permits were obtained (City of Richland 1990). Mr. Arlt stated that it is his understanding that if a well log did not accompany the permit, then a log did not exist.

In addition to the city permit requirements, Washington Administrative Code (WAC) 173-160-050, "Minimum Standards for Construction and Maintenance of Wells", requires every well contractor, within 30 days after completion of a well, to submit a complete water well report on the construction or alteration of the well to Ecology. Ecology was contacted in February 1990, as part of the initial well inventory performed for the Phase I RI, for copies of the water well reports for wells in the vicinity of the 1100 Area. These wells are listed in Table 1 and shown on Figure 1 of this report. Mr. Howard Powell of Ecology's Yakima office was visited in December 1990, and asked if the Ecology files have been updated to include any newly drilled wells or filed water well reports in T. 10 N., R. 28 E. Mr. Powell provided copies of all well records filed with Ecology since February 1990 (Ecology 1990). Excluding the wells drilled specifically for the 1100-EM-1 RI, there were two additional wells in the Ecology water well files. The availability of the state and city well data greatly enhanced the working data base and provided an excellent cross check for the door-to-door survey.

Mr. Rick Dawson of the Benton/Franklin County Health Department was contacted in December 1990, and informed the investigators that all of the Health Department's well data consist of water well reports that are sent to them by Ecology. These reports are

therefore duplicates of those already obtained from Ecology, as discussed above. Mr. Dawson also stated that the Health Department has received no new water well reports from Ecology in recent months.

Mr. Herb Everett, Planning and Inspection Supervisor for the City of Richland Community Development Department, provided the investigators with a city plat map at a scale of 1 inch (in) = 400 feet (ft) (1:4,800), which shows streets and individual city lots. This map was subsequently used as the base map to track door-to-door survey progress and to plot residential well locations. Well locations were plotted relative to the boundaries of the residential lot, and are accurate to approximately 50 ft (15 m). Following completion of the residential survey, well locations from this plat map were transferred to an AutoCAD computerized drafting data base.

The door-to-door residential survey was preceded by a formal public announcement by Westinghouse Hanford. This announcement, published in the local newspaper, the Tri-City Herald, on November 16, 1990, informed residents of the purpose and nature of the survey. Copies of the public notice and newspaper article are included in Appendix A. Further public announcement of the survey was facilitated by broadcasts of the local radio and television stations, including television interviews with Westinghouse Hanford and DOE personnel and filming of actual door-to-door survey activities.

The residential door-to-door well survey commenced on November 16, 1990. Owners or occupants of single-family dwellings and managers or owners of apartment complexes and trailer courts were contacted. Survey coverage was tracked on a daily basis on a copy of the 1 in = 400 ft plat map provided by the City of Richland. If the resident was found at home, a copy of the Westinghouse Hanford public notice was provided to them and they were asked whether they had a well on their property. If there was no well on the property, the resident was asked to verify this by signing a confirmation form (these forms are available for examination in the 1100-EM-1 Operable Unit Administrative Record). If there was a well on the property, a well inventory form was completed and, with permission of the resident, the well was photographed with a 35-mm camera to record well condition. The well inventory form included information on well location, ownership, verification by the owner or occupant of current well use, well specifications, and availability of a well log. Copies of all well inventory forms and well logs are contained in Appendix B of this report; original photographs are filed in the 1100-EM-1 Operable Unit Administrative Record.

All of the residences within the area of interest, which included a total of 1,266 single-family dwellings, apartment complexes, and trailer courts, were initially contacted between November 16, and November 30, 1990. If the resident was not at home at the time of the initial visit, a self-addressed and stamped postcard was left, along with a copy of the Westinghouse Hanford public notice, requesting that the resident complete the card and return it to GAI's Richland office. The postcard provided spaces to check whether there was or was not a ground-water well on the property and spaces for the signature and address of the resident. A total of 799 postcards were left where residences were not at home during the initial visit. If the returned postcard indicated that a well was present, the resident was contacted to obtain information for completion of the well inventory form and for permission to photograph the well. Follow-up contacts were made for all postcards not received, either by telephone or by returning to the residence and interviewing the resident or leaving a second postcard. A cutoff date for postcard receipt was set at December 14,

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1990, in order to complete a follow-up interview in time to meet the schedule for completion of this report. Any postcards received after this date were not incorporated into the data base; approximately 30% of the postcards were outstanding after December 14, 1990. However, all postcards received after December 14, 1990, reported no additional wells. It was ensured that well inventory forms were completed for all well owners on file in the City of Richland permit system and the Ecology water well report files.

The door-to-door survey also included contacting all businesses, schools, and other entities within the area of interest. Wells were located in the field on the U.S. Geological Survey (USGS) 1 in. = 2,000 ft Richland 7.5-minute topographic map used as the base for this report (USGS 1978) or by maps provided by the owner. Well inventory forms were completed for all of the wells identified as a result of these contacts (see Appendix B), and photographs of the wells were taken if permission was received from the owner. Wells were subsequently plotted in an AutoCAD computerized drafting system, using the coordinates provided in the available data bases, with corrections made as required based on the field examination and/or location maps provided by the owners. Well locations are accurate to approximately 100 ft (30 m).

In addition to the door-to-door survey, well data bases from the USGS and Westinghouse Hanford were evaluated. Mr. Brian Drost of the USGS, Tacoma, provided a computer printout of all of the wells in the USGS data base in the sections of interest in T. 10 N., R. 28 E. (USGS 1990). A summary table of all wells in the USGS data base is provided in Appendix C. Data sheets were also provided by the USGS for each well on this summary table that included, as available, well number, location coordinates, well use, owner, depth, water level, well elevation, and other information. Some wells on the USGS data base were not included in this inventory for the following reasons:

- McGhan (1989) indicates that the well has been abandoned, destroyed, or filled in
- The USGS data sheets indicate that the well has been destroyed or filled in
- The well is a monitoring well within the 300 Area of the Hanford Site
- The well is a vadose zone boring or monitoring well drilled as part of the Phase I RI for the 1100-EM-1 Operable Unit (see DOE-RL 1990a and Bryce and Goodwin 1989).

A key is provided in Appendix C that indicates if the well has been eliminated for the above reasons. Within the limited time available, an attempt was made to locate in the field those wells that were not eliminated. However, even if the well could not be located in the field, it has been retained in this report and a well inventory report has been prepared using information provided on the USGS data sheets.

A computerized well data base for wells in the area of interest was also obtained from Westinghouse Hanford (WHC 1990). A list of all wells in the Westinghouse Hanford data base is provided in Appendix D. There were no new wells found on the Westinghouse Hanford data base. As described for the USGS data base, there were some wells on the Westinghouse Hanford list that were eliminated for the following reasons:

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- McGhan (1989) indicates that the well has been abandoned, destroyed, filled in, or covered over
- The well is not within the area of interest
- The well is a vadose zone boring or monitoring well drilled as part of the Phase I RI for the 1100-EM-1 Operable Unit (see DOE-RL 1990a and Bryce and Goodwin 1989).

A key is provided in Appendix D that indicates if the well has been eliminated for the above reasons.

A thesis on ground-water modeling in the vicinity of the 1100 Area was recently completed by Mr. Terry Liikala of Pacific Northwest Laboratory (PNL). This thesis includes a well inventory performed as part of the data collection activities. Unfortunately, the thesis was unavailable for evaluation and comparison of well data collected by Mr. Liikala with those collected during this inventory.

All data bases and results of the door-to-door survey were integrated and a final listing of wells within the 1100 Area vicinity was prepared. Section 3.0 discusses the results of the inventory, and includes tables and maps showing well data and locations. Appendix B contains the well inventory report forms, and includes well logs and location maps, as available, for each of the wells.

3.0 1100-EM-1 WELL INVENTORY RESULTS

A total of 146 ground-water wells were identified as a result of this well inventory. The locations of these wells are shown on Figures 2 and 3, and Tables 3, 4, and 5 provide a summary of available data for Hanford and other area wells, City of Richland wells, and residential wells, respectively. Information on Tables 3, 4, and 5 include the location, use, installation date, and reported depth of each well, and whether or not the well was checked in the field during this inventory. Well inventory report forms for each well are presented in Appendix B, along with well logs and location maps as available. Well photographs are on file in the Administrative Record. Of the 146 wells identified, 56 are environmental monitoring wells, 30 are either unused or their usage is unknown, and the remainder are used for domestic and municipal potable supply, irrigation, electrical grounding, or heat pumps.

The five 1100-EM-1 monitoring wells installed in 1988 (Bryce and Goodwin 1989; DOE-RL 1990a) and the 16 monitoring wells installed in 1989 and 1990 (DOE-RL 1990a) are listed in Table 6. Well logs for these 21 wells can be found in the Phase I RI report for the 1100-EM-1 Operable Unit (DOE-RL 1990a).

The door-to-door survey, City of Richland well permit list, and Ecology well report data obtained in December 1990, contributed 36 additional wells to the original well lists in the Phase I RI report (see Tables 1 and 2 of this report). All of these new wells have been field-checked, with the exception of well number 137, which was based on a returned

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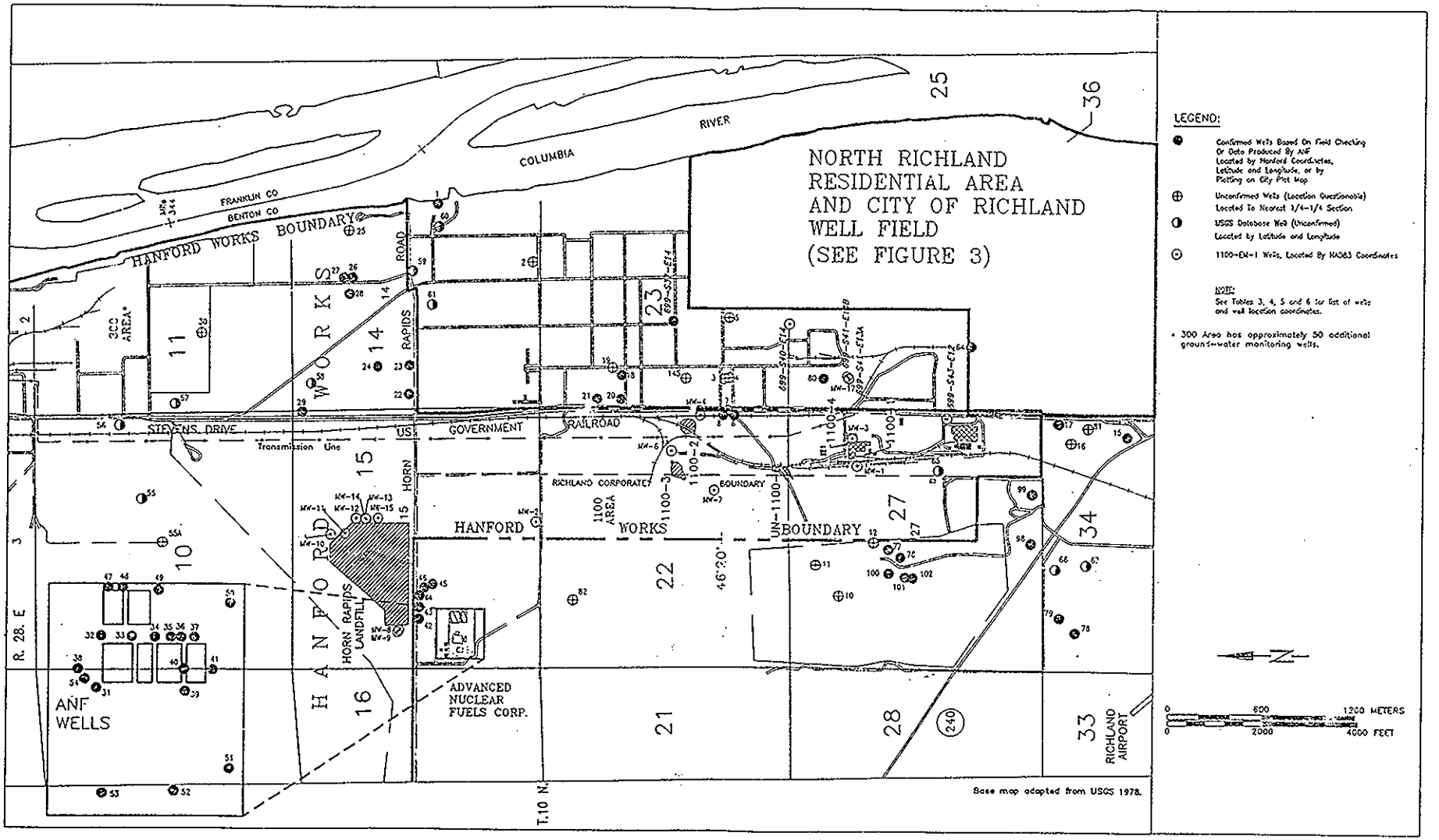

Figure 2. Ground-Water Well Locations in the 1100-EM-1 Operable Unit Vicinity.

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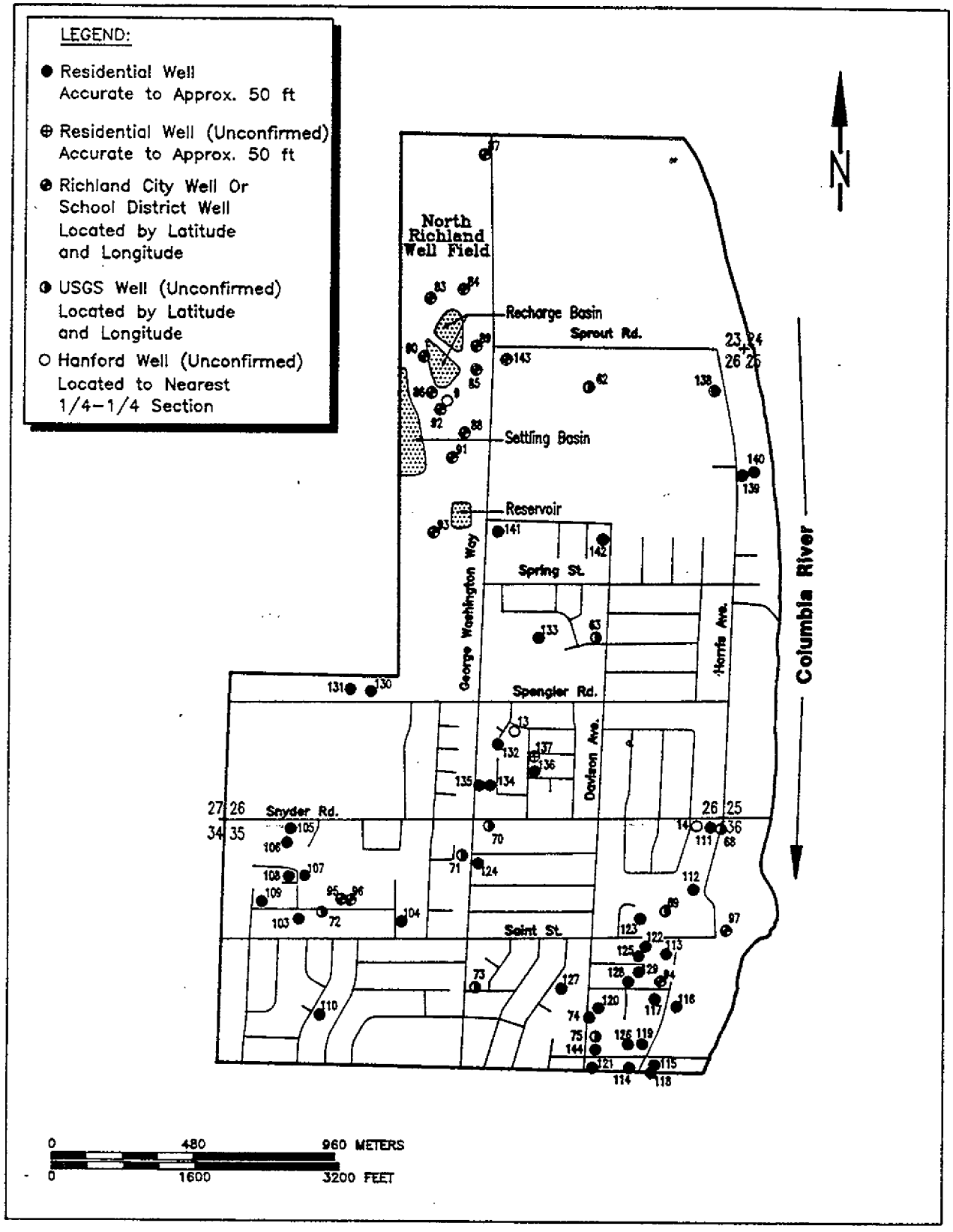

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Figure 3. North Richland Residential Area Wells and City Of Richland Well Field.

Table 3. List of Hanford and Other Area Wells Shown on Figure 2 or 3
(Sheet 1 of 6).

Figure 2 (or Fig.3) Well I.D.	Other Well I.D.	Field Check	USGS Well No. (Township/Range-Section)[a]	Location (Hanford Coords. or Lambert Grid Coords.)[b,c]	Current Well Use	Install. Date	Completion Depth ft (m)	Info. Source[d]	Comments
1	30-47-18B 3000-F	F	10N/28E-14J01	-32257 N,-16080 W	Unused-Monitoring	12/48	71.4 (21.8 m)	1,2,3,6	Former monitoring well.
2	30-45-16 F-2	NF	10N/28E-14Q01	-34269 N,-14780 W	Unused-Monitoring	–	65 (19.8 m)	1,2,3	Well is covered over. Former monitoring well.
3	30-41-14B	NF	10N/28E-23M02	–	Unknown	–	63 (19.2 m)	1,2,3,4	Approx. 250' NW of well 30-41-14.
4	30-41-14 3000-1	NF	10N/28E-23N01	-38470 N,-12416 W	Grounding	2/48	68 (20.7m)	1,2,3,4	Ground for telephone exchange.
5	11-41-15 3000 G	NF	–	–	Unused-Monitoring	10/49	74 (22.6 m)	1,4	Former monitoring well.
6	11-41-13A 3000-RA-E	F	10N/28E-22R02	-38581 N,-11650 W	Unused	6/43	63 (19.2 m)	1,2,3,4,6	
7	11-41-13B 3000-RA-D	NF	10N/28E-22R01	-38428 N,-11745 W	Unknown	6/43	65 (19.8 m)	1,2,3,4	
8	11-41-13C 3000-D-1	F	10N/28E-22J01	-38347 N,-11653 W	Unused-Monitoring	3/44	89.4 (27.2 m)	1,2,3,4,6	Former monitoring well.
9 (on Fig.3)	11-39-16B 3000-5	NF	10N/28E-26C01	-40569 N,-14242 W	Unused	3/48	102 (31.1 m)	1,2,3,4	Casing open at 63 feet.
10	11-39-10A 3000-D-3	NF	10N/28E-27C02	-40792 N,-7920 W	Unused	9/44	93 (28.3 m)	1,2,3,4	Casing open at 93 feet.
11	11-39-10B	NF	10N/28E-27C01	-40305 N,-8554 W	Unknown	8/44	49 (14.9 m)	1,2,3,4	Casing open at 49 feet.
12	11-38-11 3000-D-4	NF	10N/28E-27F01	-41521 N,-9015 W	Unknown	9/44	90 (27.4 m)	1,2,3,4	Casing open at 90 feet.
13 (on Fig.3)	11-35-16 F-14	NF	10N/28E-26Q01	-44152 N,-14707 W	Unknown	–	35.5 (10.8 m)	1,2,3,6	Possibly duplicate of well 132 at Bob Rector residence.
14 (on Fig.3)	11-34-19 F-10 K772	NF	10N/28E-35A01	-45117 N,-16992 W	Unknown	10/47	63 (19.2 m)	1,2,3,4,6	Possibly duplicate of well 111 at the McFadden residence.
15	11-33-13A 1100-3 Rankin #1	F	10N/28E-34A02	-46092 N,-11016 W	Unused	3/48	119 (36.3 m)	1,2,3,4,6	Well is located behind Clayton-Ward Recyling Center (1950 Saint St.) Rankin Well #1.

Table 3. List of Hanford and Other Area Wells Shown on Figure 2 or 3
(Sheet 2 of 6).

Figure 2 (or Fig.3) Well I.D.	Other Well I.D.	Field Check	USGS Well No. (Township/Range-Section)[a]	Location (Hanford Coords. or Lambert Grid Coords.)[b,c]	Current Well Use	Install. Date	Completion Depth ft (m)	Info. Source[d]	Comments
16	11-33-13B 1100-4	NF	10N/28E-34A03	-46119 N,-11589 W	Unknown	3/48	130 (39.6 m)	1,2,3,4,6	Well on property owned by Mo Rankin.
17	11-34-13 1100-2, Rankin #2	F	10N/28E-34A01	-45351 N,-11597 W	Water Level Monitoring	3/48	95 (29.0 m)	1,2,3,4,6	Stevens Recorder installed in well.
18	699-S36-E13B STES #3	F	10N/28E-23E02	-36195 N,-12845 W	Monitoring	10/79	70 (21.3 m)	1,2,3,6	PNL well.
19	699-S36-E13A STES #2	NF	10N/28E-23D02	-35689 N,-12847 W	Monitoring	9/79	72 (21.9 m)	1,2,3,6	PNL well.
20	699-S36-E12B	F	10N/28E-23E01	-36182 N,-12350 W	Monitoring	10/79	50 (15.2 m)	1,2,3,6	PNL well.
21	699-S36-E12A STES #5	F	10N/28E-23D01	-35667 N,-12353 W	Monitoring	10/79	102 (31.1 m)	1,2,3,6	PNL well.
22	699-S32-E13B STES #7	F	10N/28E-14E03	-31653 N,-12587 W	Monitoring	10/79	74 (22.6 m)	1,2,3,6	PNL well.
23	699-S32-E13A STES #1	F	10N/28E-14E02	-31640 N,-13166 W	Monitoring	9/79	72 (21.9 m)	1,2,3,6	PNL well.
24	699-S31-E13 STES #6	F	10N/28E-14E01	-31224 N,-13097 W	Monitoring	10/79	72 (21.9 m)	1,2,3,6	PNL well.
25	699-S30-E15C	NF	10N/28E-14B03	-30383 N,-15232 W	Hyd. Test	1970	3540 (1079.0 m)	1,2,5,6	
26	699-S30-E15B	F	10N/28E-14B02	-30286 N,-14831 W	Monitoring	10/71	93 (28.3 m)	1,2,3,6	
27	699-S30-E15A	F	10N/28E-14B01	-30257 N,-14838 W	Monitoring	10/71	72 (21.9 m)	1,2,3,4,5,6	
28	699-S30-E14 DDH-3 3099-49-E16	F	10N/28E-14C01	-30380 N,-14497 W	Monitoring Hydro. Test	8/62	2053 (625.8 m)	1,2,3,4	Originally drilled 8/62. Deepened in 1970
29	699-S29-E12	F	10N/28E-15A01	-29392 N,-12065 W	Monitoring	11/71	79 (24.1 m)	1,2,4,5,6	
30	699-S27-E14 3000-7	NF	10N/28E-11L01	-27286 N,-13673 W	Monitoring	4/48	165 (50.3 m)	1,2,4,5	Cement plug at 105 feet.

Table 3. List of Hanford and Other Area Wells Shown on Figure 2 or 3
(Sheet 3 of 6).

Figure 2 (or Fig.3) Well I.D.	Other Well I.D.	Field Check	USGS Well No. (Township/Range-Section)[a]	Location (Hanford Coords. or Lambert Grid Coords.)[b,c]	Current Well Use	Install. Date	Completion Depth ft (m)	Info. Source[d]	Comments
31	ANF #1	N	–	N.372769.0 E.2303158.0	Monitoring	–	G10	7	No clearance to enter facility. No photo.
32	ANF #2	N	–	N.372769.0 E.2303443.0	Monitoring	–	G10	7	No clearance to enter facility. No photo.
33	ANF #3	N	–	N.372526.5 E.2303443.0	Monitoring	–	G10	7	No clearance to enter facility. No photo.
34	ANF #4	N	–	N.372385.0 E.2303443.0	Monitoring	–	G10	7	No clearance to enter facility. No photo.
35	ANF #5	N	–	N.372255.0 E.2303443.0	Monitoring	–	G10	7	No clearance to enter facility. No photo.
36	ANF #6	N	–	N.372141.0 E.2303443.0	Monitoring	–	G10	7	No clearance to enter facility. No photo.
37	ANF #7	N	–	N.371966.7 E.2303443.0	Monitoring	–	G10	7	No clearance to enter facility. No photo.
38	ANF #9	N	–	N.372941.0 E.2303289.0	Monitoring	–	G10	7	No clearance to enter facility. No photo.
39	ANF #11	N	–	N.371981.0 E.2303182.0	Monitoring	–	G10	7	No clearance to enter facility. No photo.
40	ANF #12	N	–	N.371986.0 E.2303306.8	Monitoring	–	G10	7	No clearance to enter facility. No photo.
41	ANF #13	N	–	N.371713.7 E.2303306.8	Monitoring	–	G10	7	No clearance to enter facility. No photo.
42	ANF #14	F	–	N.373393.8 E.1943512.6	Monitoring	–	G10	6,7	
43	ANF #15	F	–	N.373389.7 E.1943652.1	Monitoring	–	G10	6,7	
44	ANF #16	F	–	N.373393.2 E.1943816.8	Monitoring	–	G10	6,7	
45	ANF #17	F	–	–	Monitoring	–	G10	6,7	
46	ANF #18	F	–	–	Monitoring	–	G10	6,7	

Table 3. List of Hanford and Other Area Wells Shown on Figure 2 or 3
(Sheet 4 of 6).

Figure 2 (or Fig.3) Well I.D.	Other Well I.D.	Field Check	USGS Well No. (Township/Range-Section)[a]	Location (Hanford Coords. or Lambert Grid Coords.)[b,c]	Current Well Use	Install. Date	Completion Depth ft (m)	Info. Source[d]	Comments
47	ANF #19	N	–	N.372774.2 E.2303767.2	Monitoring	–	G10	7	No clearance to enter facility. No photo.
48	ANF #20	N	–	N.372581.4 E.2303767.2	Monitoring	–	G10	7	No clearance to enter facility. No photo.
49	ANF #21	N	–	N.372371.7 E.2303767.7	Monitoring	–	G10	7	No clearance to enter facility. No photo.
50	ANF #22	N	–	N.371586.1 E.2303410.0	Monitoring	–	G10	7	No clearance to enter facility. No photo.
51	ANF #23	N	–	N.371555.1 E.2302498.8	Monitoring	–	G10	7	No clearance to enter facility. No photo.
52	ANF #24	N	–	N.372116.9 E.2302281.9	Monitoring	–	G10	7	No clearance to enter facility. No photo.
53	ANF #25	N	–	N.372619.6 E.2302040.7	Monitoring	–	G10	7	No clearance to enter facility. No photo.
54	ANF #26	N	–	N.372884.2 E.2303261.6	Monitoring	–	G10	7	No clearance to enter facility. No photo.
55	399-8-2 303-8	U	10N/28E-10B01	–	Monitoring	5/50	95 (29.0 m)	2	Limited info. from USGS.
55A	10/28-10G1 399-5-2	NF	10N/28E-10G01 10N/28E-10G01D1	–	Monitoring	4/51	417 (127.1 m)	2,4,9	Deepened in 1954.
56	399-6-1 303-9	U	10N/28E-10H01	–	Monitoring	5/50	67 (20.4 m)	2	Limited info. from USGS.
57	10N/28E-11M01	U	10N/28E-11M01	–	Industrial	1958	260 (79.2 m)	2	Limited info. from USGS.
58	10N/28E-14D01	U	10N/28E-14D01	–	Unknown	?	79 (24.1 m)	2	Maybe duplicate of 29. Limited info. from USGS.
59	H. HOGUE #1	U	10N/28E-14G01	–	Domestic	11/87	46 (14.0 m)	2	Limited info. from USGS.
60	10N/28E-14K03	U	10N/28E-14K03	–	Unknown	–	–	2	Limited info. from USGS.
61	F-1	U	10N/28E-14L01	–	Monitoring	–	–	2	Limited info. from USGS.

Table 3. List of Hanford and Other Area Wells Shown on Figure 2 or 3
(Sheet 5 of 6).

Figure 2 (or Fig.3) Well I.D.	Other Well I.D.	Field Check	USGS Well No. (Township/Range-Section)[a]	Location (Hanford Coords. or Lambert Grid Coords.)[b,c]	Current Well Use	Install. Date	Completion Depth ft (m)	Info. Source[d]	Comments
62 (on Fig.3)	F-16	U	10N/28E-26B02	--	Unknown	--	--	2	Limited info. from USGS.
63 (on Fig.3)	F-48	U	10N/28E-26K01	--	Monitoring	--	25 (7.6 m)	2	Maybe duplicate. Limited info. from USGS.
64	F-18	U	10N/28E-26M01	--	Monitoring	--	--	2	Limited info. from USGS.
65	F-21	U	10N/28E-27K01	--	Monitoring	--	--	2	Limited info. from USGS.
66	F-44	U	10N/28E-34C02	--	Monitoring	--	--	2	Maybe duplicate of 79. Limited info. from USGS.
67	F-46	U	10N/28E-34C03	--	Unknown	--	--	2	Maybe duplicate of 78. Limited info. from USGS.
68 (on Fig.3)	F-9	U	10N/28E-35A02	--	Monitoring	--	--	2	Maybe duplicate of 116 or 123. Limited info. from USGS.
69 (on Fig.3)	F-40	U	10N/28E-35A03	--	Monitoring	--	37 (11.3 m)	2	Maybe duplicate of 116 or 123. Limited info. from USGS.
70 (on Fig.3)	F-12	U	10N/28E-35B01	--	Unknown	--	32 (9.8 m)	2	Maybe duplicate of 124. Limited info. from USGS.
71 (on Fig.3)	F-22	U	10N/28E-35C01	--	Monitoring	--	28 (8.5 m)	2	Maybe duplicate of 104. Limited info. from USGS.
72 (on Fig.3)	F-26	U	10N/28E-35D03	--	Unknown	--	17 (5.2 m)	2	Maybe duplicate. Limited info. from USGS.
73 (on Fig.3)	F-24	U	10N/28E-35G01	--	Monitoring	--	--	2	Maybe duplicate of 127. Limited info. from USGS.
74 (on Fig.3)	1199-32-17 1100-6	U	10N/28E-35H03	-47537 N,-15811 W	Monitoring	4/48	75 (22.9 m)	2,3,4	Maybe duplicate. Limited info. from USGS.
75 (on Fig.3)	F-32	U	10N/28E-35H07	--	Monitoring	10/52	26 (7.9 m)	2	Maybe duplicate. Limited info. from USGS.
76	Thane Wiser #1	F	10N/28E-27F02	--	Irrigation	4/89	121 (36.9 m)	1,2,6,8	Location plotted on city plat base.
77	Thane Wiser #2	F	10N/28E-27F03	--	Irrigation	5/25/89	43 (13.1 m)	1,2,6,8	Location plotted on city plat base.
78	Lamb Weston #1	F	--	--	Unused-Irrigation	6/73	65 (19.8 m)	6	Former irrigation well. Location plotted on city plat base.

Table 3. List of Hanford and Other Area Wells Shown on Figure 2 or 3
(Sheet 6 of 6).

Figure 2 (or Fig.3) Well I.D.	Other Well I.D.	Field Check	USGS Well No. (Township/Range-Section)[a]	Location (Hanford Coords. or Lambert Grid Coords.)[b,c]	Current Well Use	Install. Date	Completion Depth ft (m)	Info. Source[d]	Comments
79	Lamb Weston #2	F	10N/28E-34G01	–	Unused	6/74	41 (12.5 m)	2,6	Location plotted on city plat base.
80	GTE	F	10N/28E-26D01	–	Grounding	9/77	201 (61.3 m)	1,2,6,8	Ground for telephone exchange.
81	C&M Landscaping (Rural Sales)	NF	10N/28E-34A04	–	Unused-Irrigation	6/70	98 (29.9 m)	2,6,8	Former irrigation well confirmed by owner, but not found in field.
82	Allied Tech. Group (Allied Nuclear)	N	10N/28E-22CD	–	Industrial	5/88	38 (11.6 m)	2,6	No clearance to enter facility. No photo.

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[a]See Appendix C for an explanation of the USGS township/range/section well numbering code.
[b]See well inventory forms in Appendix B for latitude and longitude where available.
[c]Lambert Grid coordinates given for ANF wells only (31-54).
[d]Information Source Codes:
1 - McGhan, 1989
2 - USGS, 1990 (see App. C)
3 - WHC, 1990 (see App. D)
4 - Summers and Schwab, 1977
5 - Fecht and Lillie, 1982
6 - GAI Well Inventory, 1990
7 - ANF Data, 1990
8 - Ecology, 1990
9 - Newcomb et. al., 1972

Abbreviation Codes:
F - Field Checked, Found in Field
NF - Field Checked, Not Found in Field
N - Not Field Checked
U - USGS Database Well, Not Found in Field
ANF - Advanced Nuclear Fuels
G10 - Bottom of casing located 10 feet below groundwater level.

Table 4. City of Richland Wells Shown on Figure 2 or 3
(Sheet 1 of 2).

Figure 3 (or Fig. 2) Well I.D.	City Well Number	Field Check	Hanford Well I.D.	USGS Well No. (Township/Range-Section)[a]	Well Location[b] (Old Richland Coordinates Where Available)	Current Well Use	Install. Date	Total Depth ft (m)	Info. Source[c]	Comments
83	3000-A	F	11-40-15	10N/28E-23P02	North Richland Well Field (40088 N, 15442 E)	Municipal Supply	4/48	88 (26.8 m)	1,2,3	Two access ports. Airline installed in one port.
84	3000-B	F	11-40-16B	10N/28E-23P03	North Richland Well Field (40087 N, 15977 E)	Municipal Supply	5/48	90 (27.4 m)	1,2,3	Two access ports. Airline installed in one port.
85	3000-C	F	11-39-16D	10N/28E-26C04	North Richland Well Field (39300 N, 15945 E)	Municipal Supply	5/48	64 (19.5 m)	1,2,3	Two access ports. Airline installed in one port.
86	3000-D	F	11-39-16C	10N/28E-26C03	North Richland Well Field (39097 N, 15621 E)	Municipal Supply	5/48	75.3 (23.0 m)	1,2,3	Two access ports. Airline installed in one port.
87	3000-D5	F	30-42-16	10N/28E-23L01	North Richland Well Field (41572 N, 16180 E)	Municipal Supply	10/44	134 (40.8 m)	1,2,3	Two access ports. Airline installed in one port.
88	3000-E	F	11-39-16A	10N/28E-26C02	North Richland Well Field (38831 N, 15904 E)	Municipal Supply	8/48	61.8 (18.8 m)	1,2,3	No access until pump is repaired.
89	3000-H	F	11-40-16C	10N/28E-26C08	North Richland Well Field (39600 N, 15950 E)	Municipal Supply	1952	56 (17.1 m)	1,2,3	Two access ports. Airline installed in one port.
90	3000-J	F	11-39-15	10N/28E-26C07	North Richland Well Field (39300 N, 15400 E)	Municipal Supply	10/52	71 (21.6 m)	1,2,3	Two access ports. Airline installed in one port.
91	3000-K	F	11-38-16	10N/28E-26C05	North Richland Well Field (38300 N, 15800 E)	Municipal Supply	10/52	59 (18.0 m)	1,2,3	Two access ports. Airline installed in one port.
92	3000-L	F	11-39-16E	10N/28E-26C06	North Richland Well Field (38900 N, 15500 E)	Municipal Supply	–	83 (25.3 m)	1,2,3	Two access ports. Airline installed in one port.
93	3000-N	F	11-37-16	10N/28E-26F01	North Richland Well Field (37450 N, 15700 E)	Municipal Supply	11/61	40 (12.2 m)	1,2,3	One access port on side of pump head has airline installed in it.
94	1100-B (Columbia Well)	F	11-33-18B	10N/28E-35H04	Corner of Wallace St. and Harris Ave.	Municipal Supply	6/48	77 (23.5 m)	1,2,3	Access port(s) on sides of pump head.
95	1100-8	F	11-34-15A	10N/28E-35D02	Duke Well Field Lynnwood Loop Park	Municipal Supply	9/48	120 (36.6 m)	1,2,3	Access port(s) on sides of pump head. French drain north of well.
96	1100-D	F	11-34-15B	10N/28E-35D01	Duke Well Field Lynnwood Loop Park	Municipal Supply	1948	86 (26.2 m)	1,2,3	Access port(s) on sides of pump head. French drain north of well.
97	–	F	–	10N/28E-36D01	Leslie Groves Park	Unused	7/76	53 (16.2 m)	1,2,3	Old, unused irrigation well. Well condition unknown. Well capped with access port on side.

Table 4. City of Richland Wells Shown on Figure 2 or 3
(Sheet 2 of 2).

Figure 3 (or Fig. 2) Well I.D.	City Well Number	Field Check	Hanford Well I.D.	USGS Well No. (Township/Range-Section)[a]	Well Location[b] (Old Richland Coordinates Where Available)	Current Well Use	Install. Date	Total Depth ft (m)	Info. Source[c]	Comments
98 (on Fig.2)	EC-1	F	–	–	Tri-City Enterprise Center SR 240 and Logston Rd.	Monitoring	–	–	1,2	Stevens recorder installed in well. Location plotted on city plat base.
99 (on Fig.2)	–	F	–	–	Horn Rapids Softball Complex	Irrigation	–	–	1,2	No obvious access to well. Location plotted on city plat base.
100 (on Fig.2)	–	F	–	–	Logston Road near Wiser wells T10N R28E Sec. 27 SE of NW	Monitoring	–	–	1,2	Welded cap has no access. Cap is tack welded only. Location plotted on city plat base.
101 (on Fig.2)	–	F	–	–	Logston Road near Wiser wells T10N R28E Sec. 27 SE of NW	Monitoring	1/83	29 (8.8 m)	1,2	Welded cap has small hole accessible with a small probe. Location plotted on city plat base.
102 (on Fig.2)	–	F	–	–	Logston Road near Wiser wells T10N R28E Sec. 27 SE of NW	Monitoring	1/83	32 (9.8 m)	1,2	Welded cap has small hole accessible with a small probe. Location plotted on city plat base.

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[a]See Appendix C for an explanation of the USGS township/range/section well numbering code.
[b]See Well Inventory forms in Appendix B for latitude and longitude where available.
[c]Information Source Codes:
1 - City of Richland, 1990
2 - GAI Well Inventory, 1990
3 - USGS, 1990 (see App. C)

Abbreviation Chode:
F - Field Checked

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Table 3. North Richland Residential Area Wells Shown on Figure 2 or 3
(Sheet 1 of 3).

Figure 3 (or Fig. 2) Well ID	Owner/Current Resident	Field Check	USGS Well No. (Township/Range-Section)[a]	Address[b]	Well Location[c]	Current Well Use	Install. Date	Total Depth ft (m)	Info. Source[d]	Comments
103	Walter Wykoff (Middlefence Irrig.)	F	10N/28E-35D06	703 Lynnwood Loop	SE property corner	Community irrigation	5/80	54 (16.5 m)	1,2,3	Information from permit records, and owner.
104	John Raymond	F	10N/28E-35C03	604 Lynnwood Loop	N property line	Community irrigation	11/79	50 (15.2 m)	1,2,3	
105	Peter D. Jensen	F	10N/28E-34D01	701 Snyder Rd.	NW corner of lot.	Irrigation	9/6/90	80 (24.4 m)	1,2,3	
106	Douglas Payton	F	10N/28E-35D04	705 Snyder Rd.	SW corner of lot	Domest.,Irrig.	2/2/74	85 (25.9 m)	1,2,3,4	Information from Ecology log, and owner. No photo taken.
107	Rod & Terry Fleischman	F	10N/28E-35D07	2224 Redwood Lane	S property line	Irrig., heat pump	12/3/90	51 (15.5 m)	1,2,3	
108	Denis Strachen	F		709 Redwood Lane	Back yard, directly behind house.	Irrigation and heat pump	8/81	67 (20.4 m)	1	Stainless steel screen. No log available. Information from owner.
109	Michael Harris	F	–	2212 Rosewood Ct.	N property line	Irrigation	–	–	1	Owner had no knowledge of well construction.
110	Joanna Powers (renter) (Community Irrig.)	F	10N/28E-35D05	2132 Cascade Ave.	E property line on 2125 Shasta property.	Community Irrigation System	8/20/81	66 (20.1 m)	1,2,3	Well on 2125 Shasta Ave. property. Community use well (Denis Strachen property).
111	McFadden	F	–	73 Snyder Rd.	Inside owner garage	Irrigation	1940's	55 (16.8 m)	1,3	Well covered with plastic bags.
112	Gregory Oberg	F	–	2205 Harris Ave.	SE of house	Irrig., heat pump	1/86	120 (36.6 m)	1,3	
113	John Nelson	F	–	2149 Harris Ave.	NW Corner of property	Irrigation	1945	30 (9.1 m)	1,3	Well head is underground.
114	Jack Davis	F	–	2047 Harris Ave.	NE Corner of house	Irrigation	1986	49 (14.9 m)	1	
115	G.R. Hewett	F	10N/28E-36E01	2046 Harris Ave.	N side of house	Unused	1957	121 (36.9 m)	1,2	Well not accessible. Not in use for 8 years.
116	Bjorn Lih, M.D.	F	–	2122 Harris Ave.	W side of house	Domest.,Irrig.	1959	165 (50.3 m)	1,3	Well used for irrigation, drinking, all uses.
117	M.F. Sullivan	F	–	2125 Harris Ave.	N side of house	Domest.,Irrig.	1957	135 (41.1 m)	1	Well used for irrigation, drinking, all uses.
118	John Barker	F	–	2042 Harris Ave.	In N. garage	Domest.,Irrig.	1957	110 (33.5 m)	1,3	Well used for irrigation, drinking, all uses.

Table 5. North Richland Residential Area Wells Shown on Figure 2 or 3
(Sheet 2 of 3).

Figure 3 (or Fig. 2) Well ID	Owner/Current Resident	Field Check	USGS Well No. (Township/Range-Section)[a]	Address[b]	Well Location[c]	Current Well Use	Install. Date	Total Depth ft (m)	Info. Source[d]	Comments
119	R. Brown	F	--	2101 Harris Ave.	Back of house, W side	Irrigation	1960	100 (30.5 m)	1,3	
120	Clark Harvey	F	--	2118 Davison	SE corner of lot	Irrig., H.pump	1984	113 (34.4 m)	1	Info. from telephone interview, 12-18-90.
121	Mary Watts	F	--	2042 Davisdon	S Side of garage	Irrigation	1/87	44 (13.4 m)	1,3	City permit issued to Ray Hawkins.
122	Truong Vo	F	--	217 Saint	S of house	Irrig., H.Pump (s)	10/88	28 (8.5 m)	1,3	City permit issued to Wasatch Construction.
123	Bruce Geelhood	F	10N/28E-35A04	244 Saint Ct.	SW corner of property	Irrigation	9/80	36 (11.0 m)	1,2,3	
124	A.G. Corrado	F	--	435 Sierra St.	N of NE corner of house	Irrigation	1968	?	1	Little info. available
125	John Gailey	F	10N/28E-35H09	222 Indian Ct.	N property line	Irrigation	11/79	44 (13.4 m)	1,2	
126	David Spinos	F	--	62 Park	S. side of house	Irrigation	10/80	48 (14.6 m)	1	
127	Norman Roy	F	10N/28E-35G02	2136 Hoxie Ave.	NE Corner of property	Unused	1979	57 (17.4 m)	1,2	No Cap, open casing.
128	Raymond Reilly	F	--	220 Wallace	5' north of house	Irrig.,H. Pump (s,d)	11/79	36 (11.0 m)	1,3	Well located in adjacent storage shed.
129	George F. Vargo	F	--	219 Indian Ct.	--	Unknown	--	--	1,3	Unable to contact owner.
130	Gaylord Thieme	F	--	622 Spengler Rd.	Back yard	Irrigation	1958-62?	111 (33.8 m)	1,3	
131	Herschal Lane	F	--	640 Spengler Rd.	NE corner of lot	Irrigation	1965	95 (29.0 m)	1	Well head underground.
132	Bob Rector	F	--	2340 George Washington Way	N side of house	Irrigation	1920	55 (16.8 m)	1	Info from telephone interview, 12-06-90. No evidence of pump during field investigation.
133	Clipper Ridge Homeowners Assoc.	F	--	400 Clipper Drive	NW of clubhouse	Irrigation	1975	--	1,3	Assoc. rep.: Bob Jones. Little info. available.
134	John Rector-1	F	--	2317 Ferndale Ave.	NE corner of lot	Heat Pump (s)	12/87	60 (18.3 m)	1,3	Both systems sealed. No obvious access.

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Table 8. North Richland Residential Area Wells Shown on Figure 2 or 3
(Sheet 3 of 3).

Figure 3 (or Fig. 2) Well ID	Owner/Current Resident	Field Check	USGS Well No. (Township/Range-Section)[a]	Address[b]	Well Location[c]	Current Well Use	Install. Date	Total Depth ft (m)	Info. Source[d]	Comments
135	John Rector-2	F	–	2317 Ferndale Ave.	NW corner of lot	Heat Pump (d)	12/87	60 (18.3 m)	1,3	Both systems sealed. No obvious access.
136	Fredrick Bond	F	10N/28E-26JR	2332 Snohomish Ave.	NE corner of house	Irrig.,heat pump (s)	1/81	53 (16.2 m)	1,2,3,4	Unable to contact resident. Information from Ecology log.
137	Hunter McCluer	N	–	2338 Snohomish Ave.	–	Unknown	–	–	1	Owner returned postcard claiming to have a well. Unable to contact owner to verify.
138	Dale Schielke	F	10N/28E-26A01	2635 Harris Ave.	NE corner of lot	Irrigation	4/80	60 (18.3 m)	1,2,3	Wellhead access bolt
139	Jim Felton-1	F	–	2560 Harris Ave.	SW corner of house	Irrig., heat pump	3/5/86	65 (19.8 m)	1,3	Irrigation and heat pump supply
140	Jim Felton-2	F	–	2560 Harris Ave.	SE corner of lot	Heat pump (d)	6/2/86	39 (11.9 m)	1,3	Heat pump discharge well
141	Susan Watkins	F	–	495 Hanford St.	W. side of garage	Irrigation	–	–	1	Wellhead is sealed. No obvious access.
142	David Myers	F	10N/28E-26G02	2533 Davison	NW corner of lot.	Irrig., H. Pump	11/79	58 (17.7 m)	1,2,3	Heat pump supply. No photo taken.
143	Richland School Dist.	F	10N/28E-26B01	450 Hanford St.	NW corner of campus	Unused irrig. well	4/73	60 (18.3 m)	1,2,3	Hanford High School draws water from river. No obvious access to well.
144	Paul Turner	F	–	2102 Davison	W side of house	Irrigation	1962	–	1	Owner claims well is old DOE (AEC) well.
145 (on Fig. 2)	Bill Ballard	NF	10N/29E-23M01	–	–	Irrigation	3/88	150 (45.7 m)	4	Could not locate in field. Owner unlisted.

903-1222

[a]See Appendix C for an explanation of USGS township/range/section well numbering code.
[b]Location plotted on city plat base map.
[c]See well inventory forms in Appendix B for latitude and longitude where available.
[d]Information Source Codes:
1 - GAI Well Inventory, 1990
2 - USGS, 1990 (see App. C)
3 - City of Richland, 1990
4 - Ecology Water Well Records

Abbreviation Codes:
N - Not Field Checked
F - Field Checked, Found in Field
NF - Field Checked, Not Found in Field

24 26

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Table 6. Ground-Water Monitoring Wells Sampled During the 1100-EM-1 Phase I Remedial Investigation[a].

Well ID	Installation Date (mo/yr)	Top-of-Casing Elevation (ft amsl)[b]	Top-of Screen Elevation (ft amsl)[b]	Screen Length (ft)[b]	Sand Pack Interval (ft amsl)[b]	Screen Type[c]	Coordinates (NAD83 meters)
MW-1	01/90	401.37	365.0	20	367.8 - 341.3	CP	N 110,973.68/E 593,310.96
MW-2	02/90	382.38	361.0	20	364.1 - 336.9	10-S	N 113,044.13/E 592,948.95
MW-3	02/90	402.00	360.0	20	362.6 - 333.5	10-S	--
MW-4	02/90	404.96	361.0	20	364.9 - 340.0	CP	N 111,987.47/E 593,626.74
MW-5	12/89	405.01	333.0	15	336.6 - 316.4	CP	N 111,980.5/E 593,626.74
MW-6	01/90	399.31	363.0	20	366.1 - 339.5	CP	N 112,172.54/E 593,401.31
MW-7	12/89	398.61	363.0	20	365.8 - 339.6	CP	N 111,891.71/E 593,154.04
MW-8	12/89	374.77	362.0	20	364.6 - 340.6	20-S	N 113,933.69/E 592,251.87
MW-9	02/90	375.79	307.0	10	309.1 - 295.1	CP	N 113,922.51/E 592,263.99
MW-10	11/89	392.30	358.0	20	361.5 - 335.5	10-S	N 114,379.79/E 592,861.90
MW-11	12/89	392.08	358.0	20	360.1 - 334.2	CP	N 114,284.84/E 592,869.76
MW-12	01/90	384.58	358.0	20	362.1 - 336.6	CP	N 114,215.19/E 592,964.46
MW-13	01/90	383.73	358.0	15	360.9 - 339.7	10-S	N 114,149.36/E 592,959.66
MW-14	01/90	382.92	339.0	10	344.7 - 329.0	CP	N 114,154.91/E 592,966.97
MW-15	12/89	380.59	361.0	20	364.6 - 337.3	10-S	N 114,065.92/E 592,967.97
MW-17	01/90	410.69	300.0	10	304.9 - 303.0	CP	N 111,036.27/E 593,870.70
699-S37-E14	10/88	408.28	361.3	16	--	20-S	N 112,168.8/E 594,216.2
699-S40-E14	10/88	402.85	368.9	26	372.7 - 340.4	10-S	N 111,416.4/E 594,201.8
699-S41-E13A	10/88	410.56	363.6	15	367.1 - 343.6	20-S	N 111,031.8/E 593,862.9
699-S41-E13B	10/88	410.10	333.1	10	338.1 - 315.1	20-S	N 111,041.9/E 593,863.4
699-S43-E12	10/88	405.60	363.6	16	368.3 - 343.9	20-S	N 110,404.5/E 593,612.9

[a]See Figures 1 and 2 for well locations.
[b]1 m = 0.3048 ft.
[c]CP = 10-slot channel pack; 10-S = 10-slot wire wrapped; 20-S = 20-slot wire wrapped; PC = perforated casing; M = manufactured well screen of unknown type.
-- Not available.

25 27

postcard from the door-to-door survey. Field checking could not be completed for this well because the owner could not be reached at home to confirm the well existence. As of December 15, 1990, there were 242 outstanding postcards from the residential survey, resulting in an overall residential coverage of approximately 80%. It has been assumed that any wells missed from these unreturned postcards have been covered by the city permit list and/or the Ecology well reports and that there are few, if any, data gaps.

Of the 21 original Ecology wells shown in Figure 1 and listed in Table 1 (based on data collected for the Phase I RI in February, 1990), all were confirmed during the door-to-door survey, with the exception of wells 001, 002, 011, 015, and 023 (as designated in the Phase I RI report and on Figure 1). Well 001 was confirmed by the owner, Allied Technology Group, but permission could not be received to enter the property; it has been retained as well Number 82 on Figure 2. Well 002 was not found in any of the existing data bases, in the field, or during the door-to-door survey; however it has been retained in this inventory (well number 145 on Figure 2) because it is a relatively recent well from the Ecology water well report files. Well 015 was confirmed by the owner, C & M Landscaping, but it could not be found in the field; it has been retained as well 81 on Figure 2, based on the owner's confirmation. Well 011 was located in the wrong section, and is outside the area of interest. Well 023 is located south of the area of interest. These two wells have therefore been eliminated.

Refinements to well data listed Table 1 as a result of this new inventory are as follows:

Well Number On Figure 1	New Well Number	Revision
003	139, Figure 3	formerly J. Stredwick, now believed to be J.Felton well
004	133, Figure 3	formerly G. Bosch, now believed to be Clipper Ridge Homeowners well
006	138, Figure 3	spelling is Schielke, not Schelky
014	105, Figure 3	well was located in wrong section; spelling is Jensen, not Nensen
015	81, Figure 2	Rural Sales well is now owned by C&M Landscaping
021	108, Figure 3	spelling is Denis, not Dennis

Of the 45 wells listed in Table 2 that were taken from McGhan (1989), 13 wells (well numbers 57, 59, 60, 65, 68, 69, 71, 72, 73, 74, 75, 76, and 83 on Figure 1 and Table 2) are city wells that were confirmed by city records and field checking (these wells are now numbered 94, 95, 96, 91, 90, 88, 86, 85, 92, 83, 84, 89, and 87, respectively, on Figure 3 and Table 4). Based on a review of City of Richland well data, seven additional city wells have been identified (numbers 93, 97, 98, 99, 100, 101, and 102 on Figure 2 or 3 and Table 4).

Well number 70 on Figure 1 and Table 2 (now numbered 9 on Figure 3 and Table 3) may be a City of Richland recharge well for the North Richland Well Field, but the City of Richland could not confirm this. It was not found during the field investigation.

The remaining 31 wells on Table 2 were searched for in the field, and 18 were confirmed. The following 13 wells on Figure 1 and Table 2 could not be located in the field (40, 50, 52, 61, 62, 64, 66, 67, 78, 80, 81, 82, and 84). These wells, which are identified by separate symbols on Figures 2 and 3, have been retained in this inventory (now numbered 30, 19, 25, 14, 13, 12, 10, 11, 7, 5, 4, 3, and 2, respectively on Table 3), although there is some question as to whether they still exist or are possible duplicates of other wells.

The Advanced Nuclear Fuels (ANF) well information (well numbers 31 through 54 on Table 3) is based on data provided to Westinghouse Hanford by ANF. Because many of these wells are located in a fenced-off restricted area, clearance could not be obtained to investigate them in the field.

The USGS data base contained 21 wells that were not found in any other source (well numbers 55 through 75 on Table 3). An attempt was made to locate these wells in the field within the limited time available, and none were found. Several of these wells (63, 66, 67, 68, 69, 70, 71, 72, 73, 74, and 75 on Table 3) may be duplicates of residential wells identified during the door-to-door survey, but without coordinates for either these wells or the residential wells, is was not possible to make a definite correlation. Although there is some question as to whether some of the wells actually still exist or whether they may be duplicates, these 21 wells have been retained in this inventory. They are identified by a separate symbol on Figures 2 and 3. Information listed on the well inventory forms for these wells has been obtained from the USGS data sheets.

In conclusion, of the 146 wells identified as a result of this inventory, a total of 106 wells have been confirmed as existing wells, based on the residential inventory, field investigations, and data provided by ANF. There are 26 wells on Figure 2 whose existence could not be confirmed, including three business/residential wells (81, and 145), 12 Hanford wells (2, 3, 4, 5, 7, 10, 11, 12, 16, 25, 30, and 55A, one PNL well (19), and 11 USGS wells (55, 56, 57, 58, 59, 60, 61, 64, 65, 66, and 67). There are 14 wells on Figure 3 that could not be confirmed, including three Hanford wells (9, 13, and 14), one residential well (137), and 10 USGS wells (62, 63, 68, 69, 70, 71, 72, 73, 74, and 75). Wells 19, 81, and 137 were confirmed by the owners but were not found in the field. Because of the time constraints imposed on completing this well inventory, there was not adequate time to perform follow-up investigations on these 40 unconfirmed wells. If it is determined that confirmation of these outstanding data is necessary to complete the Phase II RI, further field investigation will be required.

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APPENDIX A

WESTINGHOUSE HANFORD PUBLIC NOTICE
TRI-CITY HERALD NEWSPAPER ARTICLE

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Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

WHC-MR- 0295

CONTACT: Mike Berriochoa
376-5742

FOR IMMEDIATE RELEASE

WELL INVENTORY TO BE PERFORMED IN NORTH RICHLAND AREA

RICHLAND, Wash., November 15, 1990 -- A door-to-door survey will be conducted of homes and businesses in the north Richland area beginning November 16 to determine the location and use of private groundwater wells.

The survey and inventory of the wells are being done to provide background information for the ongoing environmental characterization work of the Hanford Site.

Residents in the area will be asked if there is a well on their property and if so, its use and condition. The inventory will provide a list of wells that could be used to help determine the flow of groundwater in the vicinity of the Hanford bus lot and maintenance facilities.

The area being surveyed is bounded by Coast Street on the south, the intersection of Stevens Drive and George Washington Way on the north, the Columbia River on the east and a line up to a mile west of Stevens Drive.

The door-to-door survey will be conducted by Golder Associates Inc.; a private firm which is subcontracted to Westinghouse Hanford Company to perform work under the Tri-Party Agreement to clean up the Hanford Site.

The primary mission of Westinghouse Hanford Company is the environmental restoration of the Hanford Site for the U.S. Department of Energy.

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WHC 9011-221

A-1

9 2 1 2 6 4 2 0 8 2 9

Westinghouse surveying wells in N. Richland

Westinghouse Hanford Co. is launching a door-to-door survey today to locate all private ground water wells in north Richland.

As part of the Hanford cleanup program, researchers may want to use the wells to learn more about the flow of ground water near the Hanford bus lot.

Using existing wells would be far cheaper than drilling new ones, said spokesman Mike Berriochoa.

The area being surveyed is bounded by Coast Street on the south, the intersection of Stevens Drive and George Washington Way on the north and the Columbia River on the east. The western boundary is a mile from Stevens.

Tri-City Herald

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APPENDIX B

WELL INVENTORY FORMS AND ACCOMPANYING WELL LOGS

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APPENDIX B

This Appendix contains the well inventory forms that were completed in the field or compiled from existing data for all wells that were identified as a result of this inventory. Field sketch maps prepared during this survey or maps provided by the well owner are attached where available. Well logs, Washington State Department of Ecology (Ecology 1990) water well records, City of Richland well permits (City of Richland 1990), and the U.S. Geological Survey (USGS 1990) data sheets are also attached where available. Well numbers are written in the upper corner of each page.

Included at the end of this appendix are the following:

- Well location map for the Advanced Nuclear Fuels (ANF) wells (Figure ANF-1)
- General well construction diagram for the ANF wells (Figure ANF-2)
- Well location map for the City of Richland wells (Figure RL-1)
- An explanation for the codes used on the USGS data sheets.

References Used as Sources for Additional Data on Well Inventory Forms

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#1

1100 AREA WELL INVENTORY FORM

Well Number: 30-47-1[illegible] / 1 Date 12/18/90
Other Well ID: 10N/25E-[illegible] 3000-F Surveyor: RPB
Was 10N/25E-14K02

Name of Well Owner: Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ See Fig. 2, This Report
Owner's Address:

Street Address of Residential Site if Different from Owner:

Current Well Use: Unused

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: -33902 ~~South~~ West: -16374
System: Hanford

Township: 10N Range: ____ Section (nearest 1/4 1/4): 14 (NE of SE)

Well Specifications:
Installation Date: 12/48 Total Depth (ft): 71.4
Well Construction Type: 17-in. dia. Gravel with perforations from 24' to 71.4'
Pump System Type: Unknown
Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 16A roll 1R
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:

Sources: McGhan (59)
USGS [illegible] Base
WHC [illegible] Base

9212608333

#1

Source: USGS[a]

11/30/1990 -M 10N/28E-14J01

SITE ID:	462059119160301
KEY.NO.:	2140
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	462059
LONGITUDE:	1191557
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-14J01
ALTITUDE:	373.00
ALT.ACC:	5
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	71.40
WELL.DEPTH:	71.40
DEPTH SOURCE:	S
DATE DRILLED:	12/ 1/1948
LOG DATA:	
OTHER DATA:	
FIRST NAME:	3099-47-18B
LAST NAME:	HANFORD
DATE OWNED:	12/ 1/1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	29.00
WATER LEVEL DATE:	12/ 1/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	27.58
WATER LEVEL DATE:	5/20/1952
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	30.41
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	31.71
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A

9212642083 4

#1

WATER LEVEL:	29.80
WATER LEVEL DATE:	5/23/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	750.00
DRAWDOWN:	-99.00
TEST TIME:	4.0
FINISH:	F
OPENING TYPE:	F
OPENING TOP:	24.00
OPENING BOTTOM:	71.40
OPENING DIAM.:	17.00
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 373.97
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-F
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	HARDNESS=98, CL=5PPM, 5/20/52
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 10N/28E-14K02
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 0 2 0 8 3 5

#2

1100 AREA WELL INVENTORY FORM

Well Number: 30-45-16 (2) Date 12/18/90
Other Well ID: F-2 ; 10N/25E - 14Q01 Surveyor: RPB

Name of Well Owner: Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ - See Fig. 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unused (USGS) - Covered over

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: ? South: ?
System:

Township: 10N Range: 25E Section (nearest 1/4 1/4): 15 (NE & NE)

Well Specifications:
Installation Date: Unknown Total Depth (ft): 65
Well Construction Type: 26-in. dia. Unknown perf. interval

Pump System Type: Unknown

Well Access for Sounding: Unknown
well is covered over (according to USGS)

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: N/A
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:
Covered Over (USGS)

* Not found in the field.

SOURCES: McGhan (1989)
USGS Data Base*
WHC Data Base

9212642083 6

#2

Source: USGS[a]

11/30/1990 -M 10N/28E-14Q01

SITE ID:	462042119155801
KEY.NO.:	2143
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	462039
LONGITUDE:	1191615
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-14Q01
ALTITUDE:	405.20
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	65.00
WELL.DEPTH:	65.00
DEPTH SOURCE:	A
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	3099-45-16
LAST NAME:	HANFORD
DATE OWNED:	4/ 5/1950
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	-99.00
WATER LEVEL DATE:	4/ 5/1950
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	D
WATER LEVEL SOURCE:	A
WATER LEVEL:	50.92
WATER LEVEL DATE:	7/12/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	60.13
WATER LEVEL DATE:	10/11/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	58.09
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A

9212620837

#2

WATER LEVEL:	58.14
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A

WATER LEVEL:	57.67
WATER LEVEL DATE:	5/23/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A

REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

REMARK:	CASING ELEVATION @ 406.9 OR 408.77?
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

REMARK:	WAS F-2
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

REMARK:	COVERED OVER
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 4 2 0 8 3 8

#3

1100 AREA WELL INVENTORY FORM

Well Number: 30-41-14B (3) Date 12/18/90
Other Well ID: 10N/28E - 23,NCC Surveyor: RPB

Name of Well Owner: Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ see Fig 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unknown

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes ____ No

Well Coordinates: North: ? South: ?
System:

Township: 10N Range: 28E Section (nearest 1/4 1/4): 23 (NW of SW)

Well Specifications:
Installation Date: Unknown Total Depth (ft): 63 (Summers + Schwab log)
Well Construction Type: Unknown

Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No ____ Yes Photo Number: N/A
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes Summers & Schwab (1977)

Other:

Approximately 250' NW of well 30-41-14A *Not found in the field.

Sources: McGhan (1989)
USGS Data Base.[a]
WHC Data Base
Summers & Schwab (1977)

#3

Summary of driller's log of 3099-41-14B[1]

1. Approximately 250' NW of well 3099-41-14A

Depth (ft) From	To	Description
0	2	sand overburden
2	40	coarse gravel and cobbles
40	52	gravel (muddy)
52	56	sand
56	63	sand and pea and medium gravel

9 2 1 2 5 4 2 0 8 4 0

#3

Source: USGS a

12/ 3/1990 -M 10N/28E-23M02

SITE ID:	461959119164701
KEY.NO.:	6653
FIELD CHECKED:	U
COUNTY:	[illegible]
LOCATION OF DATA	
VERIFICATION	
LATITUDE:	4[illegible]9
LONGITUDE:	11[illegible]7
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-23M02
ALTITUDE:	403.00
ALT.ACC:	10
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH	-99.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	

FIRST NAME:	3099-41-14B
LAST NAME:	HANFORD
DATE OWNED:	1/ 1/1990
STREET ADDR.:	
CITY ADDR.:	

9212608 41

#4

1100 AREA WELL INVENTORY FORM

Well Number: 30-41-14 (4) Date 12/18/90
Other Well ID: 3000-1 ; 10N/28E-23N01 Surveyor: RPB

Name of Well Owner: Hanford

Well Location: (~~Location Map Sketched on Attached Sheet)~~ see Fig. 2, THIS REPORT
Owner's Address: ~~Hanford~~

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Ground for Telephone Exchange

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: -38470 ~~South~~ West: -12416
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 23 (SW of SW)

Well Specifications:
Installation Date: 2/48 Total Depth (ft): 68'
Well Construction Type: 8-in. dia.

Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No ____ Yes Photo Number: N/A
Well Log Available: ____ No ✓ Yes Summers & Schwab (1977)
Well Log Obtained: ____ No ✓ Yes

Other: * Not found in the field.

SOURCES: McGhan (1989)
USGS Data Base
WHC. Data Base
Summers & Schwab (1977)

9212942084 2

#4

Driller's log of 3099-41-14 (N040907, E014023) Hanford Wells, 1973

Land surface altitude[1] 398 feet msl

1. Estimated from altitude of top of ca[illegible]en in Hanford Wells, 1973

Depth (ft) From	To	Description
0	2	sandy loam
2	15	coarse gravel and sand
15	22	fine sand
22	35	gray sand
35	44	sand and gravel
44	50	black sand
50	55	fine black sand
55	60	coarse gray sand
60	65	coarse gray sa[illegible]lt, and clay

#4

Source: USGS a

12/ 3/1990 -M 10N/28E-23N01

SITE ID:	461955119164701
KEY.NO.:	2163
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461958
LONGITUDE:	1191647
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-23N01
ALTITUDE:	399.00
ALT.ACC:	5
USE OF SITE:	A
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	68.00
WELL.DEPTH:	68.00
DEPTH SOURCE:	A
DATE DRILLED:	02/ /1948
LOG DATA:	
OTHER DATA:	
FIRST NAME:	3099-41-14
LAST NAME:	HANFORD
DATE OWNED:	02/ /1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	68.00
WATER LEVEL DATE:	2/ 1/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 400.06
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-1
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 4 2 0 8 4 4

#5

1100 AREA WELL INVENTORY FORM

Well Number: 11-41-15 (5) Date 1-2-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ See Fig 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: unknown (Monito ?)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ? ____ Yes ____ No

Well Coordinates: North: 40767 ~~South~~ East: 15184
System: old Richland

Township: 10N Range: 28E Section (nearest 1/4 1/4): 23 (SE of SW)

Well Specifications:
Installation Date: 10/49 Total Depth (ft): 74
Well Construction Type: unknown

Pump System Type:

Well Access [illegible]ing:

Other Information:
Photograph Taken: ____ No ____ Yes Photo Number: N/A
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes
Summers & Schwab.

Other: * Not found in the field.
Limited Information
Source: McGhan, 1989.
Summers & Schwab

9212608445

#5

Summary of driller's log of 1199-41-15 (N040767, E015184) Hanford Wells, 1973

Land surface altitude[1] 397 feet msl

1. Estimated from altitude of top of casing given in Hanford Wells, 1973

Depth (ft) From	To	Description
0	6	fill
6	44	fine sand and gravel (stones to 6")
44	46	fine sand and gravel (stones to 16")
46	49	fine sand and gravel (stones 4 to 5")
49	74	fine sand, stones, boulders, cemented with clay
74	76.5	brown clay

9 2 1 2 6 4 2 0 8 4 6

#6

1100 AREA WELL INVENTORY FORM

Well Number: 11-41-13A (6) Date 12/18/90
Other Well ID: ~~Sec. 24-E~~, 10N/28E - 22.R02 Surveyor: RPB

Name of Well Owner: Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ See Fig. 2, This Report
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unused

Verification by Owner/Occupant of Well Use: _____
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: -35581 ~~South:~~ West -11656
System:

Township: 10N Range: 28E Closest 1/4 1/4): 22 (SE of

Well Specifications:
Installation Date: 6/43 Total Depth (ft): 63
Well Construction Type: 6 in. dia. Screen 53'-63' (5 in dia. screen)

Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 18A
Well Log Available: ____ No ✓ Yes Summers & Schwab (1977)
Well Log Obtained: ____ No ✓ Yes USGS Log (not detailed)

Other:

Sources: McGhan (1959)
USGS Data Base
WHC Data Base
Summers & Schwab (1977)

9212608477

#6

Summary of driller's log of 1199-41-13A (N040796, E013256) Hanford Wells, 1973

Land surface altitude[1] 402 feet msl

1. Calculated from altitude of top of casing given in Hanford Wells, 1973

Depth (ft) From	To	Description
0	2	overburden
2	40	coarse gravel
40	52	gravel
52	58	sand
58	63	sand and fine gravel; entered silt at 63'

9212642084 8

#6

Source: USGS[a]

12/ 3/1990 -M 10N/28E-22R02

SITE ID:	461952119170701
KEY.NO.:	2159
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461957
LONGITUDE:	1191657
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-22R02
ALTITUDE:	402.00
ALT.ACC:	1
USE OF SITE:	T
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	63.00
WELL.DEPTH:	63.00
DEPTH SOURCE:	A
DATE DRILLED:	06/ /1943
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-41-13A
LAST NAME:	HANFORD
DATE OWNED:	06/ /1943
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	38.88
WATER LEVEL DATE:	10/15/1943
W.L.TIME:	1315
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	39.54
WATER LEVEL DATE:	10/23/1943
W.L.TIME:	1430
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	39.83
WATER LEVEL DATE:	10/29/1943
W.L.TIME:	1330
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	38.61
WATER LEVEL DATE:	10/29/1943
W.L.TIME:	1450
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A

9 2 1 2 6 0 8 4 9

#6

FINISH:	S
OPENING TYPE:	S
OPENING TOP:	53.00
OPENING BOTTOM:	63.00
OPENING DIAM.:	5.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	GRVL
LITHOLOGIC MODIFIER:	+ OBDN,SAND
% WATER.CONTRIBUTED:	100
UNIT TOP:	63.00
GEOHYDROLOGIC UNIT:	121RGLD
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SILT
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	0
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 404.64
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-RA-E
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642085 0

#7

1100 AREA WELL INVENTORY FORM

Well Number: 11-41-13B (7) Date 12/18/90
Other Well ID: 3000-RA-D ; KN/28E - 22201 Surveyor: RPB

Name of Well Owner: Hanford

Well Location: (~~Location Map Sketched on Attached Sheet~~) see Fig 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unknown

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: -35428 ~~South~~ West: -11745
System: Hanford

Township: KN Range: 28E Section (nearest 1/4 1/4): 22 (SE ¼ SE)

Well Specifications:
Installation Date: 6/43 Total Depth (ft): 65'
Well Construction Type: 6-in diameter; Perforated 54'-64'

Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: N/A
Well Log Available: ____ No ✓ Yes Summers & Schwab (1977)
Well Log Obtained: ____ No ✓ Yes USGS Log (not detailed)

Other:
USGS : Well was "Used for Construction"
* Not found in the field.

Sources
McGHAN (1959)
USGS Data Base
WHC Data Base
Summers & Schwab (1977)

9 2 1 2 6 0 2 0 8 5 1

#7

Summary of driller's log of 1199-41-13B (N040949, E013351) Hanford Wells, 1973

Land surface altitude[1] 403 feet msl

1. Calculated from altitude of top of casing given in Hanford Wells, 1973

Depth (ft) From	To	Description
0	2	overburden
2	54	sand, gravel and cobble
54	55	sand and gravel
55	64	fine sand and gravel
64	65	cemented gravel

9 2 1 2 6 4 2 0 8 5 2

#7

Source: USGS

11/21/1990 -M 10N/28E-22R01

SITE ID:	461954119171001
KEY.NO.:	2158
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461958
LONGITUDE:	1191659
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-22R01
ALTITUDE:	402.00
ALT.ACC:	1
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	65.00
WELL.DEPTH:	65.00
DEPTH SOURCE:	A
DATE DRILLED:	06/ /1943
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-41-13B
LAST NAME:	HANFORD
DATE OWNED:	06/ /1943
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	41.85
WATER LEVEL DATE:	6/16/1943
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	92.00
DRAWDOWN:	-99.00
TEST TIME:	-99.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	54.00
OPENING BOTTOM:	64.00
OPENING DIAM.:	5.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ OBDN 0-2
% WATER.CONTRIBUTED:	100
UNIT TOP:	64.00
GEOHYDROLOGIC UNIT:	121MDRG

#7

RELATIVE CONTRIBUTION:	N
LITHOLOGY:	GRCM
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	0
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 404.66
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-RA-D
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS USED FOR CONSTRUCTION
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642085 4

#8

1100 AREA WELL INVENTORY FORM

Well Number: 11-411-13C (18) Date 90
Other Well ID: 300-D-1 ; 10N/28E-22J01 Surveyor:

Name of Well Owner: Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ See Fig. 2, THIS REPORT
Owner's Address:

Street Address of Resident if different from Owner:

Current Well Use: Unused

Verification by Owner/Occupant of Well Use: _____ (Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: -38347 ~~South~~: -11653
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 22 (NE of SE)

Well Specifications:
Installation Date: 3/44 Total Depth (ft): 95' (Drilled Depth) 89.4' (Well Depth)
Well Construction Type: 20 in. dia. Perforated 55'-66' and 75'-83'

Pump System Type: Unknown

Well Access for Sounding: Un

Other Information:
Photo Taken: ____ No X Yes Photo Number: 17A ROLL 1R
Well Available: ____ No ✓ Yes Summers + Schwab (1977)
Well Sampled: ____ No ✓ Yes USGS Log (not detailed)

Other:

Sources: McGhee (79)
USGS "Data Base"
WHC Data Base
Summers + Schwab (1977)

Summary of driller's log of 1199-41-13C (N041030, E013259) Hanford Wells, 1973

Land surface altitude[1] 404 feet msl

1. Altitude given in driller's log in Hanford Files

Depth (ft) From	To	Description
0	5	sand
5	29	coarse gravel
29	37	sand and gravel
37	40	coarse gravel and rock
40	66	boulders and gravel
66	70	sand and gravel
70	72	fine sand
72	77	coarse gravel
77	79	boulders and gravel
79	84	sand and gravel
84	95	brown clay

9212642085 6

#8

Source: USGS

12/ 3/1990 -M 10N/28E-22J01

SITE ID:	462004119170701
KEY.NO.:	2157
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461959
LONGITUDE:	1191701
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-22J01
ALTITUDE:	404.30
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	95.00
WELL.DEPTH:	89.40
DEPTH SOURCE:	A
DATE DRILLED:	03/22/1944
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-41-13C
LAST NAME:	HANFORD
DATE OWNED:	03/22/1944
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	54.18
WATER LEVEL DATE:	3/29/1944
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	53.87
WATER LEVEL DATE:	4/ 3/1944
W.L.TIME:	920
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	53.63
WATER LEVEL DATE:	4/ 6/1944
W.L.TIME:	930
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	53.63
WATER LEVEL DATE:	4/ 7/1944
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	

#8

WATER LEVEL: 53.87
WATER LEVEL DATE: 4/28/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 52.52
WATER LEVEL DATE: 5/12/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 51.92
WATER LEVEL DATE: 5/18/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 49.91
WATER LEVEL DATE: 5/30/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 50.61
WATER LEVEL DATE: 6/ 2/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 50.07
WATER LEVEL DATE: 6/ 8/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 49.53
WATER LEVEL DATE: 6/16/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 48.62
WATER LEVEL DATE: 6/26/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 48.06
WATER LEVEL DATE: 7/ 1/1944
W.L.TIME: 0
W.L. METHOD:

9212642083 58

#8

W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.54
WATER LEVEL DATE: 7/ 7/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.02
WATER LEVEL DATE: 7/17/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 46.86
WATER LEVEL DATE: 7/22/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.11
WATER LEVEL DATE: 7/28/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.71
WATER LEVEL DATE: 8/ 7/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 47.84
WATER LEVEL DATE: 8/12/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 45.97
WATER LEVEL DATE: 8/19/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 46.31
WATER LEVEL DATE: 8/24/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 46.29

9 2 1 2 6 2 0 8 5 9

#8

WATER LEVEL DATE: 9/ 1/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 45.82
WATER LEVEL DATE: 9/ 9/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 45.77
WATER LEVEL DATE: 9/16/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 46.00
WATER LEVEL DATE: 9/22/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 45.73
WATER LEVEL DATE: 9/29/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 45.53
WATER LEVEL DATE: 10/ 5/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 45.38
WATER LEVEL DATE: 10/13/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 45.38
WATER LEVEL DATE: 10/20/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 45.33
WATER LEVEL DATE: 10/27/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P

9 2 1 2 6 4 2 0 8 6 0

#8

WATER LEVEL SOURCE:

WATER LEVEL: 45.31
WATER LEVEL DATE: 11/ 3/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 45.32
WATER LEVEL DATE: 11/10/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 45.63
WATER LEVEL DATE: 11/18/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 46.13
WATER LEVEL DATE: 11/25/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 46.51
WATER LEVEL DATE: 11/30/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.50
WATER LEVEL DATE: 12/ 8/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 48.08
WATER LEVEL DATE: 12/14/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 48.83
WATER LEVEL DATE: 12/22/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 49.68
WATER LEVEL DATE: 12/30/1944

9 2 1 2 6 0 8 5 1

#8

W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 50.43
WATER LEVEL DATE: 1/ 6/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 51.03
WATER LEVEL DATE: 1/11/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 51.78
WATER LEVEL DATE: 1/18/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 52.33
WATER LEVEL DATE: 1/26/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 53.23
WATER LEVEL DATE: 2/ 3/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 53.63
WATER LEVEL DATE: 2/17/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 54.03
WATER LEVEL DATE: 2/24/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 54.43
WATER LEVEL DATE: 3/ 3/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

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#8

WATER LEVEL: 54.95
WATER LEVEL DATE: 3/10/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 55.45
WATER LEVEL DATE: 3/17/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 55.82
WATER LEVEL DATE: 3/24/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 51.20
WATER LEVEL DATE: 3/31/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 51.93
WATER LEVEL DATE: 4/ 7/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 53.11
WATER LEVEL DATE: 4/14/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 53.69
WATER LEVEL DATE: 4/21/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 51.69
WATER LEVEL DATE: 4/28/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 62.13
WATER LEVEL DATE: 5/ 5/1945
W.L.TIME: 0

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#8

W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 62.19
WATER LEVEL DATE: 5/12/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 53.03
WATER LEVEL DATE: 5/19/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 49.98
WATER LEVEL DATE: 5/26/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 48.93
WATER LEVEL DATE: 6/ 2/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.78
WATER LEVEL DATE: 6/ 7/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 46.83
WATER LEVEL DATE: 6/16/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 46.88
WATER LEVEL DATE: 6/23/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 46.63
WATER LEVEL DATE: 6/30/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

9 2 1 2 6 4 2 0 8 6 4

#8

WATER LEVEL: 46.37
WATER LEVEL DATE: 7/ 7/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 46.73
WATER LEVEL DATE: 7/14/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 45.33
WATER LEVEL DATE: 7/21/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 45.02
WATER LEVEL DATE: 7/28/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 43.33
WATER LEVEL DATE: 8/ 4/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 44.21
WATER LEVEL DATE: 8/11/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 44.36
WATER LEVEL DATE: 8/18/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 44.48
WATER LEVEL DATE: 8/25/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 44.11
WATER LEVEL DATE: 9/ 1/1945
W.L.TIME: 0
W.L. METHOD:

#8

W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 44.23
WATER LEVEL DATE: 9/ 8/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 45.23
WATER LEVEL DATE: 9/15/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 45.37
WATER LEVEL DATE: 9/22/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 45.52
WATER LEVEL DATE: 9/29/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS: P
WATER LEVEL SOURCE:

WATER LEVEL: 44.65
WATER LEVEL DATE: 10/ 6/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 52.26
WATER LEVEL DATE: 3/ 2/1990
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE: A

WATER LEVEL: 52.46
WATER LEVEL DATE: 3/ 5/1990
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE: A

WATER LEVEL: 52.11
WATER LEVEL DATE: 5/23/1990
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE: A

DISCHARGE INFO SOURCE: O

9 2 1 2 6 4 2 0 8 6 6

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DISCHARGE MEASURING METHOD:	R
DISCHARGE:	140.00
DRAWDOWN:	21.72
TEST TIME:	1.0
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	105.00
DRAWDOWN:	26.00
TEST TIME:	10.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	55.00
OPENING BOTTOM:	66.00
OPENING DIAM.:	20.
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	75.00
OPENING BOTTOM:	83.00
OPENING DIAM.:	20.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ BLDR,SAND
% WATER.CONTRIBUTED:	100
UNIT TOP:	84.00
GEOHYDROLOGIC UNIT:	121RGLD
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	BROWN
% WATER.CONTRIBUTED:	0
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 404.87 OR 405.98?
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-D-1
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	PLUG @ 89.4FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WATER TEMP.=58 DEG F; 7/44
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	PUMP TEST 4/6/44
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 0 2 0 8 6 7

#9

1100 AREA WELL INVENTORY FORM

Well Number: 11-39-16B (9) Date 1/18/90
Other Well ID: 10N/28E - 26C01 ; 30C-5 Surveyor: RPB

Name of Well Owner: Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ See Fig. 3, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: ~~Public Supply (USGS)~~
Unused (USGS)

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: -40569 South: -14242
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (NE of NW)

Well Specifications:
Installation Date: 3/48 Total Depth (ft): 110' (Drilled Depth) 102' (Well Depth)
Well Construction Type: 8-in dia. Perf. interval (30'-63') well open at 102'
Pump System Type: Unknown
Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: N/A
Well Log Available: ____ No ✓ Yes Summers & Schwab (1977)
Well Log Obtained: ____ No ✓ Yes

Other:
* Not found in the field

Sources: McGhan (1989)
USGS Data Base*
WHC Data Base
Summers & Schwab (1997)

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#9

Driller's log of 1199-39-16B (N038808, E015848) Hanford Wells, 1973

Land surface altitude[1] 369 feet msl

1. Estimated from altitude of top of casing given in Hanford Wells, 1973

Depth (ft) From	To	Description
0	5	sand
5	15	sand and gravel
15	20	gravel
20	22	sand
22	30	sand and fine gravel
30	35	sand and gravel with little clay
35	38	rocks, sand, and gravel
38	40	sand and gravel
40	42	white sand and gravel
42	45	whitish brown sand
45	60	gray sand and gravel
60	63	gravel and sand
63	65	clay
65	77	yellow clay
77	85	yellow clay and gravel
85	95	blue shale, gravel and [illegible] basalt
95	100	blue shale and basalt
100	105	blue shale, clay, and basalt
105	110	blue shale and clay

#9

Source: USGS

12/ 3/1990 -M 10N/28E-26C01

SITE ID:	461935119162801
KEY.NO.:	2175
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461935
LONGITUDE:	1191621
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26C01
ALTITUDE:	370.51
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	110.00
WELL.DEPTH:	102.00
DEPTH SOURCE:	A
DATE DRILLED:	03/ /1948
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-39-16B
LAST NAME:	HANFORD
DATE OWNED:	03/ /1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	18.30
WATER LEVEL DATE:	4/ 2/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	660.00
DRAWDOWN:	15.00
TEST TIME:	-99.0
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	510.00
DRAWDOWN:	9.24
TEST TIME:	-99.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	30.00
OPENING BOTTOM:	63.00
OPENING DIAM.:	8.00
FINISH:	P
OPENING TYPE:	O
OPENING TOP:	102.00

9 2 1 2 6 4 2 0 8 7 0

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OPENING BOTTOM:	102.00
OPENING DIAM.:	8.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SAND 0-5
% WATER.CONTRIBUTED:	-99
UNIT TOP:	63.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	S
LITHOLOGY:	GRCL
LITHOLOGIC MODIFIER:	+ CLAY,SHLE
% WATER.CONTRIBUTED:	-99
UNIT TOP:	105.00
GEOHYDROLOGIC UNIT:	121LRRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SHLE
LITHOLOGIC MODIFIER:	BLUE GRAY
% WATER.CONTRIBUTED:	0
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 371.01
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-5
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	SWL?=30 @ 63FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	SWL?=27 @ 75FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	SWL?=30 @ 105FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

#10

1100 AREA WELL INVENTORY FORM

Well Number: 11-39-10A (10) Date 12/18/90
Other Well ID: 3000-D-3 ; 10N/28E-27C02 Surveyor: RPB

Name of Well Owner: HANFORD

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ See Fig. 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: UNKNOWN
Unused (USGS)

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ? ____ Yes ____ No

Well Coordinates: North: -40792 ~~South~~ West: -7920
System:

Township: 10N Range: 28E Section (nearest 1/4 1/4): 27 (NE of NW)

Well Specifications:
Installation Date: 9/30/44 Total Depth (ft): 100' (Drilled Depth) 93' (Well Depth)
Well Construction Type: 6-in. dia. Perf Interval 55'-65' and 70'-75'
Open at 93'
Pump System Type: Unknown
Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No ____ Yes Photo Number: N/A
Well Log Available: ____ No ✓ Yes Summers & Schwab (1977)
Well Log Obtained: ____ No ✓ Yes

Other: * Not found in the field.

SOURCES: McGHAN (1989)
USGS Data Base
WHC Data Base
Summers & Schwab (1977)

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#10

Summary of driller's log of 1199-39-10A (N038585, E009526) Hanford Wells, 1976

Land surface altitude[1] 367 feet msl

1. Calculated from altitude of top of casing given in Hanford Wells, 1973

Depth (ft) From	To	Description
0	10	sand and silt
10	20	sand and gravel
20	30	medium gravel
30	40	fine sand and gravel
40	55	fine heaving sand
55	65	coarse gravel
65	70	fine gravel and sand
70	75	coarse gravel
75	84	fine gravel and sand
84	94	blue slate and mud
94	100	blue slate and sand

Source: USGS

#10

12/ 3/1990 -M 10N/28E-27C02

SITE ID:	461930119180501
KEY.NO.:	2194
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461936
LONGITUDE:	1191751
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-27C02
ALTITUDE:	366.80
ALT.ACC:	1
USE OF SITE:	T
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	100.00
WELL.DEPTH:	93.00
DEPTH SOURCE:	A
DATE DRILLED:	09/02/1944
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-39-10A
LAST NAME:	HANFORD
DATE OWNED:	09/02/1944
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	7.85
WATER LEVEL DATE:	9/ 9/1944
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	6.97
WATER LEVEL DATE:	10/13/1944
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	6.73
WATER LEVEL DATE:	10/20/1944
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	6.65
WATER LEVEL DATE:	10/27/1944
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A

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#10

WATER LEVEL:	6.47
WATER LEVEL DATE:	2/ 3/1945
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	55.00
OPENING BOTTOM:	65.00
OPENING DIAM.:	6.00
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	70.00
OPENING BOTTOM:	75.00
OPENING DIAM.:	6.00
FINISH:	P
OPENING TYPE:	O
OPENING TOP:	93.00
OPENING BOTTOM:	93.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SDST,SAND,GRVL
% WATER.CONTRIBUTED:	-99
UNIT TOP:	84.00
GEOHYDROLOGIC UNIT:	121RGLD
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SLTE
LITHOLOGIC MODIFIER:	BLUE
% WATER.CONTRIBUTED:	-99
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 367.15
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-D-3
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 10N/28E-27D01
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 0 8 7 5

#11

1100 AREA WELL INVENTORY FORM

Well Number: 11-39-10B (11) Date 12/15/90
Other Well ID: 10N/28E-27C01 Surveyor: RPB

Name of Well Owner: Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ — See Fig 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unknown

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ? ____ Yes ____ No

Well Coordinates: North: -40305 ~~South:~~ West -8554'
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 27 (NE of NW)

Well Specifications:
Installation Date: 8/44 Total Depth (ft): 54' (Drilled Depth) 49' (Well Depth)
Well Construction Type: 6-in. dia. Perf. interval 25'-40', Open hole ~~below~~ at 49'

Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No ____ Yes Photo Number: N/A
Well Log Available: ____ No ✓ Yes Summers & Schwab (1977)
Well Log Obtained: ____ No ✓ Yes USGS Log (not detailed)

Other: * Not found in the field.

Source: McGhan (1989)
USGS Data Base[a]
WHC Data Base
Summers & Schwab (1977)

9212642087 6

Summary of driller's log of 1199-39-10B (N039072, E010160) Hanford Wells, 1973

Land surface altitude[1] 362 feet msl

1. Calculated from altitude of top of casing given in Hanford Wells, 1973

Depth (ft) From	To	Description
0	5	silt and sand
5	10	gravel
10	17	coarse gravel
17	28	boulders and gravel
28	30	boulders
30	44	sand and gravel
44	54	yellow clay

Source: USGS[a]

#11

11/26/1990 -M 10N/28E-27C01

SITE ID:	461940119174501
KEY.NO.:	2193
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461940
LONGITUDE:	1191745
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-27C01
ALTITUDE:	362.00
ALT.ACC:	5
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	54.00
WELL.DEPTH:	49.00
DEPTH SOURCE:	A
DATE DRILLED:	08/23/1944
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-39-10B
LAST NAME:	HANFORD
DATE OWNED:	08/23/1944
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	4.00
WATER LEVEL DATE:	8/15/1944
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
DISCHARGE INFO SOURCE:	R
DISCHARGE MEASURING METHOD:	
DISCHARGE:	80.00
DRAWDOWN:	16.00
TEST TIME:	-99.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	25.00
OPENING BOTTOM:	40.00
OPENING DIAM.:	6.00
FINISH:	P
OPENING TYPE:	O
OPENING TOP:	49.00
OPENING BOTTOM:	49.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P

9212542087 8

#11

LITHOLOGY:	BLDR
LITHOLOGIC MODIFIER:	+ SDGL,GRVL,SDST
% WATER.CONTRIBUTED:	-99
UNIT TOP:	44.00
GEOHYDROLOGIC UNIT:	121RGLD
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	YELLOW
% WATER.CONTRIBUTED:	-99
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 362.61
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-D-2
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WEEKLY WLS ON FILE; 9/44-2/45
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 5 0 3 7 9

#12

1100 AREA WELL INVENTORY FORM

Well Number: 11-38-11 (12) Date 12/18/90
Other Well ID: 3000-D-4 ; 10N/28E-27F01 Surveyor: RPB

Name of Well Owner: Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ see Fig. 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unknown

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes ____ No ?

Well Coordinates: North: [illegible] ~~South:~~ West -9015
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 27 (SE of NW)

Well Specifications:
Installation Date: 9/30/44 Total Depth (ft): 90
Well Construction Type: 6-in dia., ~~[illegible]~~ perforated 22' to 24', (casing open at 90') [USGS]
Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No ____ Yes Photo Number: N/A
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes Summers & Schwab (1977) USGS log not detailed.

Other: * Not found in the field.

Sources McGhan (1988)
USGS Data Base[a]
WHC Data Base
Summers & Schwab (1977)

9 2 1 2 6 4 2 0 8 3 0

#12

Summary of driller's log of 1199-38-11 (N037856, E010621) Hanford Wells, 19

Land surface altitude[1] 362 feet msl

1. Calculated from altitude of top of casing given in Hanford Wells, 1973

Depth (ft) From	To	Description
0	3	sand and silt
3	4	coarse gravel
4	10	sand and gravel
10	22	sand and gravel, some boulders
22	24	coarse gravel
24	30	sand and gravel
30	40	fine sand, heavy gravel
40	55	fine sand, with a little yellow clay
55	68	fine sand
68	75	sand and gravel
75	90	sand, fine gravel

Source: USGS[a]

#1

12/ 3/1990 -M 10N/28E-27F01

SITE ID:	461925119174501
KEY.NO.:	2195
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461926
LONGITUDE:	1191735
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-27F01
ALTITUDE:	361.50
ALT.ACC:	1
USE OF SITE:	T
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	90.00
WELL.DEPTH:	90.00
DEPTH SOURCE:	A
DATE DRILLED:	09/19/1944
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-38-11
LAST NAME:	HANFORD
DATE OWNED:	09/19/1944
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	1.19
WATER LEVEL DATE:	10/13/1944
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	22.00
OPENING BOTTOM:	24.00
OPENING DIAM.:	6.00
FINISH:	P
OPENING TYPE:	O
OPENING TOP:	90.00
OPENING BOTTOM:	90.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SDST,GRVL
% WATER.CONTRIBUTED:	-99
UNIT TOP:	40.00
GEOHYDROLOGIC UNIT:	121MDRG

9 2 1 2 6 4 2 0 8 3 2

#12

RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SAND,CLAY
% WATER.CONTRIBUTED:	-99
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 362.26
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-D-4
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WEEKLY WLS ON FILE; 10/4 2/45
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 2 0 8 8 3

#13

1100 AREA WELL INVENTORY FORM

Well Number: 11-35-16 (13) Date 12/18/90
Other Well ID: F-14 ; 10N/25E - 26 Q01 Surveyor: RPB

Name of Well Owner: HANFORD [McGhan lists location at private residence]
see also #132.

Well Location: (~~Location Map Sketched on Attached Sheet~~) SEE FIG. 3, THIS REPORT.
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unknown

Verification by Owner/Occupant of Well Use: _____
(Signature)

Water in Contact with Humans: ____ Yes ____ No

Well Coordinates: North: 44152 ~~South~~ West: 14707
System: Hanford

Township: 10N Range: 25E Section (nearest 1/4 1/4): 26 (SW of SE)

Well Specifications:
Installation Date: Unknown Total Depth (ft): Unknown total depth 35.5' Completion Depth
Well Construction Type: Unknown

Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:

Possibly well at Bob Rector residence? (#132)

Sources: McGhan (1989)
USGS Data Base
WHC Data Base

9 2 1 2 5 4 2 0 8 3 4

#13

Source: USGS

11/26/1990 -M 10N/28E-26Q01

SITE ID:	461901119161001
KEY.NO.:	2190
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461901
LONGITUDE:	1191617
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26Q01
ALTITUDE:	377.04
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	35.50
DEPTH SOURCE:	S
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	1199-35-16
LAST NAME:	HANFORD
DATE OWNED:	/ /
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	31.92
WATER LEVEL DATE:	4/ 5/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	22.52
WATER LEVEL DATE:	10/11/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 379.57
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS F-14
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 0 2 0 8 8 5

14

1100 AREA WELL INVENTORY FORM

Well Number: 11-34-19 (14) Date 12/18/90
Other Well ID: F-10; K772; 10N/28E - 35 A C 1 Surveyor: RPB
see Also # 115

Name of Well Owner: Private Residence. Possibly McFadden residence at 73 Snyder Rd. (# 111).
USGS lists as Hanford well.

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unknown
[Irrigation well if McFadden Res.]

Verification by Owner/Occupant of Well Use: _____
(Signature)

Water in Contact with Humans: ? Yes ____ No

Well Coordinates: North: -45117 ~~South~~ West: -16992
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (NE of NE)

Well Specifications:
Installation Date: 10/47 Total Depth (ft): 63
Well Construction Type: 8 in. dia Unknown surf. / screen interval

Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ____ No ✓ Yes Summers & Schwab
Well Log Obtained: ____ No ✓ Yes

Other:
Possibly McFadden well @ 73 Snyder Rd. (#111) & McFadden's were unable to provide sufficient detail as to well construction. The well was closed up for the winter at time of interview.

Sources: McGhan (1989)
USGS Data Base
WHC Data Base
Summers & Schwab (1977)

9212642083 6

#14

Driller's log of 1199-34-19 (N034260, E018598) Hanford Wells, 1973

Land surface altitude[1] 378 feet msl

1. Estimated from altitude of top of casing given in Hanford Wells, 1973

Depth (ft) From	To	Description
0	20	sand and gravel
20	30	gravel
30	40	sand
40	50	gravel
50	60	sand
60	62	sand and gravel
62	63	sand

#14

Source: USGS[a]

11/26/1990 -M 10N/28E-35A01

SITE ID:	461846119155001
KEY.NO.:	2231
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461853
LONGITUDE:	1191542
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35A01
ALTITUDE:	379.20
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	63.00
WELL.DEPTH:	63.00
DEPTH SOURCE:	A
DATE DRILLED:	10/ /1947
LOG DATA:	
OTHER DATA:	
FIRST NAME:	1199-34-19
LAST NAME:	HANFORD
DATE OWNED:	10/ 1/1947
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	38.77
WATER LEVEL DATE:	4/ 5/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	31.06
WATER LEVEL DATE:	10/11/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	33.32
WATER LEVEL DATE:	10/18/1952
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 380.02
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 4 2 0 8 3 8

#14

REMARK: WAS F-10
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

REMARK: WAS K772
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

9212620889

#15

1100 AREA WELL INVENTORY FORM

Well Number: 11-33-13A (15) Date 12/3/90
Other Well ID: 1100-3 ; 10N/28E-34A02 Surveyor: RPB
RANKIN #1
Name of Well Owner: Mo Rankin , Hanford (accord. to USGS)

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Not in use.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: -46092 ~~South~~ West: -11016
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 34 (NE of NE)

Well Specifications:
Installation Date: 3/48 Total Depth (ft): 120' (Total Drilled Depth) 119' (Completion Depth) USGS
Well Construction Type: 8-in dia. Unknown perf./screen interval

Pump System Type: None.

Well Access for Sounding: Steel plate welded over casing. No access without removing cap.

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 20 (RPB-1)
Well Log Available: ____ No ✓ Yes Summers & Schaab
Well Log Obtained: ____ No ✓ Yes

Other:
Well located directly behind Clayton-Ward Recycling Center building at 1950 Saint St.
Well casing covered by steel culvert pipe.

According to McGhan (1989) 11-33-13A has been destroyed. Therefore it is not confirmed that this well is actually 11-33-13A.

Sources: McGhan (1989) Telephone interview with Mo Rankin (1990)
USGS Data Base
WHC Data Base
Summers & Schaab (1977)

9212642089 0

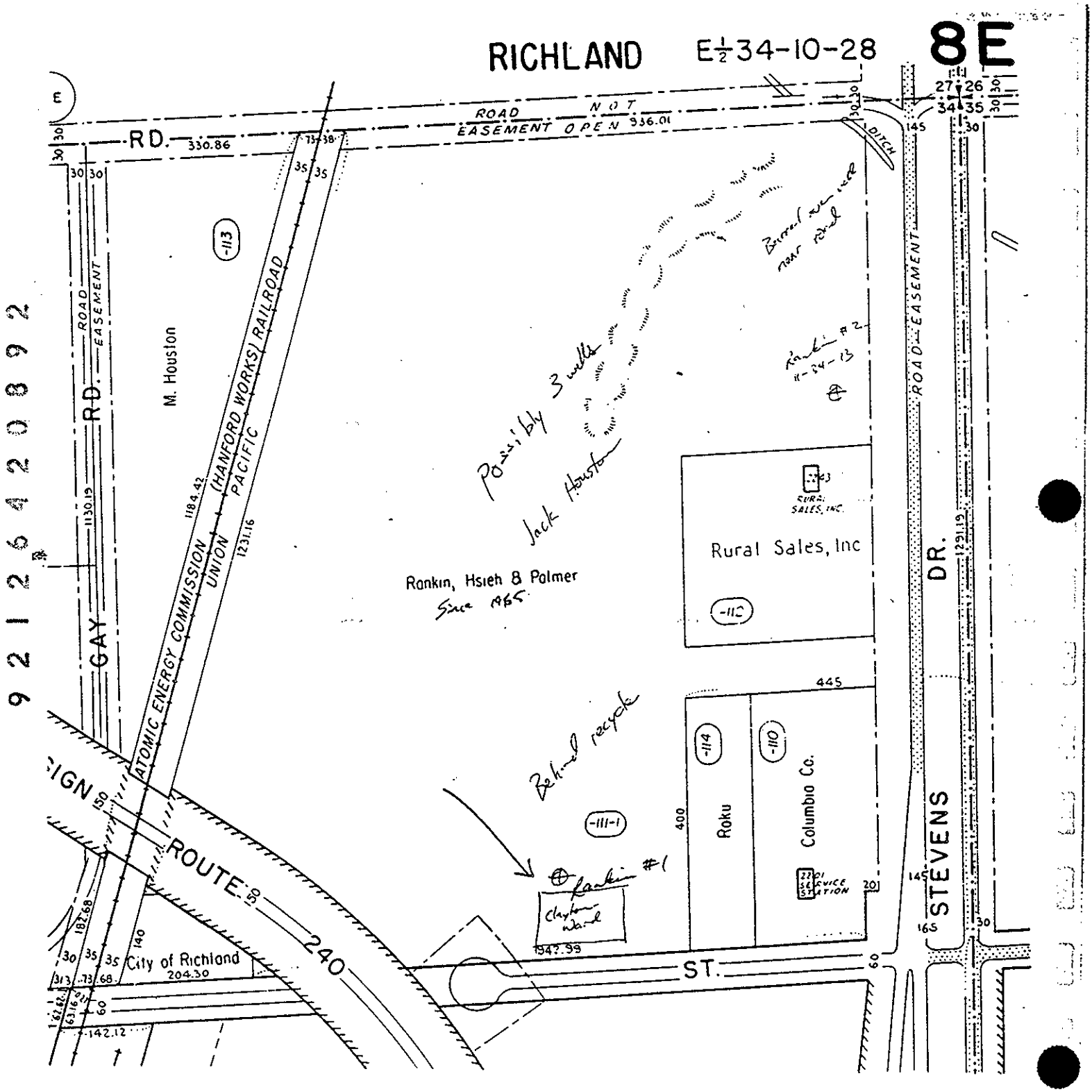
#15

Driller's log of 1199-33-13A (N033285, E012622) Hanford Wells, 1973

Land surface altitude[1] 378 feet msl

1. Estimated from altitude of top of casing given in Hanford Wells, 1973

Depth (ft) From	To	Description
0	7	sandy loam; large boulder at 7'
7	15	boulders
15	20	coarse sand and gravel
20	25	coarse sand, getting finer
25	38	coarse sand and fine gravel
38	40	coarse sand and yellow clay
40	47	sand, gravel and clay
47	48	yellow sand
48	58	yellow sand and gravel
58	60	yellow clay, sand and gravel
60	80	yellow clay, coarse sand and gravel
80	84	yellow clay sand and gravel
84	100	yellow clay
100	105	yellow clay with coarse gray sand
105	108	white sand, water gravel with trace of blue clay
108	110	slate and sand
110	115	blue clay and sand
115	120	blue clay or shale


RICHLAND
E½34-10-28
8E
ROAD NOT EASEMENT OPEN
RD.
ROAD EASEMENT
M. Houston
ATOMIC ENERGY COMMISSION (HANFORD WORKS) RAILROAD
UNION PACIFIC
GAY
RD.
Possibly 3 wells
Jack Houston
Rankin, Hsieh & Palmer
Since 1965
Rural Sales, Inc
Roku
Columbia Co.
Behind recycle
Rankin #1
Clayton Wand
Rankin #2
11-24-13
ROAD EASEMENT
DR.
STEVENS
ROUTE 240
SIGN
City of Richland
ST.
DITCH
9211264208392

Source: USGS

#15

11/26/1990 -M

10N/28E-34A02

SITE ID:	461846119171401
KEY.NO.:	2219
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461846
LONGITUDE:	1191714
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-34A02
ALTITUDE:	379.71
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	120.00
WELL.DEPTH:	119.00
DEPTH SOURCE:	A
DATE DRILLED:	03/ /1948
LOG DATA:	
OTHER DATA:	
FIRST NAME:	1199-33-13A
LAST NAME:	HANFORD
DATE OWNED:	03/ /1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	21.70
WATER LEVEL DATE:	3/ 1/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 380.01
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 1100-3
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	REPT.; WELL COULD BE BAILED DRY
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

16

1100 AREA WELL INVENTORY FORM

Well Number: 11-33-13B (16), Date 12/18/90
Other Well ID: 1100-4, 10N/28E-34A03 Surveyor: RPB

Name of Well Owner: HANFORD

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unknown

Verification by Owner/Occupant of Well Use: _____
(Signature)

Water in Contact with Humans: ____ Yes ____ No

Well Coordinates: North: -46119 ~~South~~ West: -11559
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 34 (NE of NE)

Well Specifications:
Installation Date: 3/45 Total Depth (ft): 130' (completion depth - 123')
Well Construction Type: 8-in diam., Unknown perf/screen interval

Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes Summers & Schwab

Other:

Destroyed according to McGhan (1989)

Sources: McGhan (1989)
USGS Data Base
WHC Data Base
Summers & Schwab (1977)
Telephone interview with Mr Rankin ( ). Rankin only suggested the possibility of a third well on his property, but could not elaborate.

9212642089 4

#16

Driller's log of 1199-33-13B (N033258, E013195) Hanford Wells, 1973

Land surface altitude[1] 378 feet msl

1. Estimated from altitude of top of casing given in Hanford Wells, 1973

Depth (ft) From	To	Description
0	5	sand
5	15	sand and gravel
15	20	black sand and gravel
20	25	black sand and coarse gravel
25	40	black sand and gravel
40	45	yellow clay, sand and gravel
45	55	yellow clay and gravel
55	90	yellow clay, sand, and gravel
90	105	yellow clay and sand
105	117	yellow clay and less sand
117	130	blue clay

Source: USGS[a]

#16

11/26/1990 -M

10N/28E-34A03

SITE ID:	461846119171301
KEY.NO.:	2220
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461846
LONGITUDE:	1191713
LAT/LONG ACC:	S
LOCAL NO.:	10N/28E-34A03
ALTITUDE:	380.00
ALT.ACC:	1
USE OF SITE:	Z
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	130.00
WELL.DEPTH:	123.00
DEPTH SOURCE:	A
DATE DRILLED:	03/ /1948
LOG DATA:	
OTHER DATA:	
FIRST NAME:	1199-33-13B
LAST NAME:	HANFORD
DATE OWNED:	03/ /1948
STREET ADDR.:	
CITY ADDR.:	
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 380.01
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 1100-4
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642089 6

#17

1100 AREA WELL INVENTORY FORM

Well Number: 11-34-13 (17) Date 12/3/90
Other Well ID: 1CN/25E-34A01 ; 1100-2 Surveyor: RPB
RANKIN #2.
Name of Well Owner: Mo RANKIN PROPERTY ; HANFORD (ACCORD TO USGS)

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: See attached.

Street Address of Residential Well Site if Different from Owner:

Current Well Use: CURRENTLY BEING ~~MONITORED~~ USED FOR WATER LEVEL MONITORING

Verification by Owner/Occupant of Well Use: _____
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: -45351 ~~South~~ West: -11597
System: Hanford

Township: 1CN Range: 25E Section (nearest 1/4 1/4): 34 (NE of NE)

Well Specifications:
Installation Date: 3/48 Total Depth (ft): 77 (WHC) ; 103 (McGhan, 1989)
Well Construction Type: 8-in. dia. Perf. interval 45-90
USGS : Drill Depth - 103' ; Well Depth - 95'
Pump System Type: None

Well Access for Sounding: Good access. STEVENS recorder currently installed in well.

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 21 (RPB-1)
Well Log Available: ____ No ✓ Yes Summers & Schwab
Well Log Obtained: ____ No ✓ Yes

Other:
- Well located approx. 100 feet west of Stevens Drive between WHC Central Stores and Benny's Auto Repair.
- Stevens recorder installed 55-gal. drum placed over well.

SOURCES: McGHAN (1989)
USGS's Data Base
WHC Data Base
Summers & Schwab (1977)
Telephone Interview with Mo Rankin ( )

9212603897

#17

Driller's log of 1199-34-13 (N034026, E013203) Hanford Wells, 1973

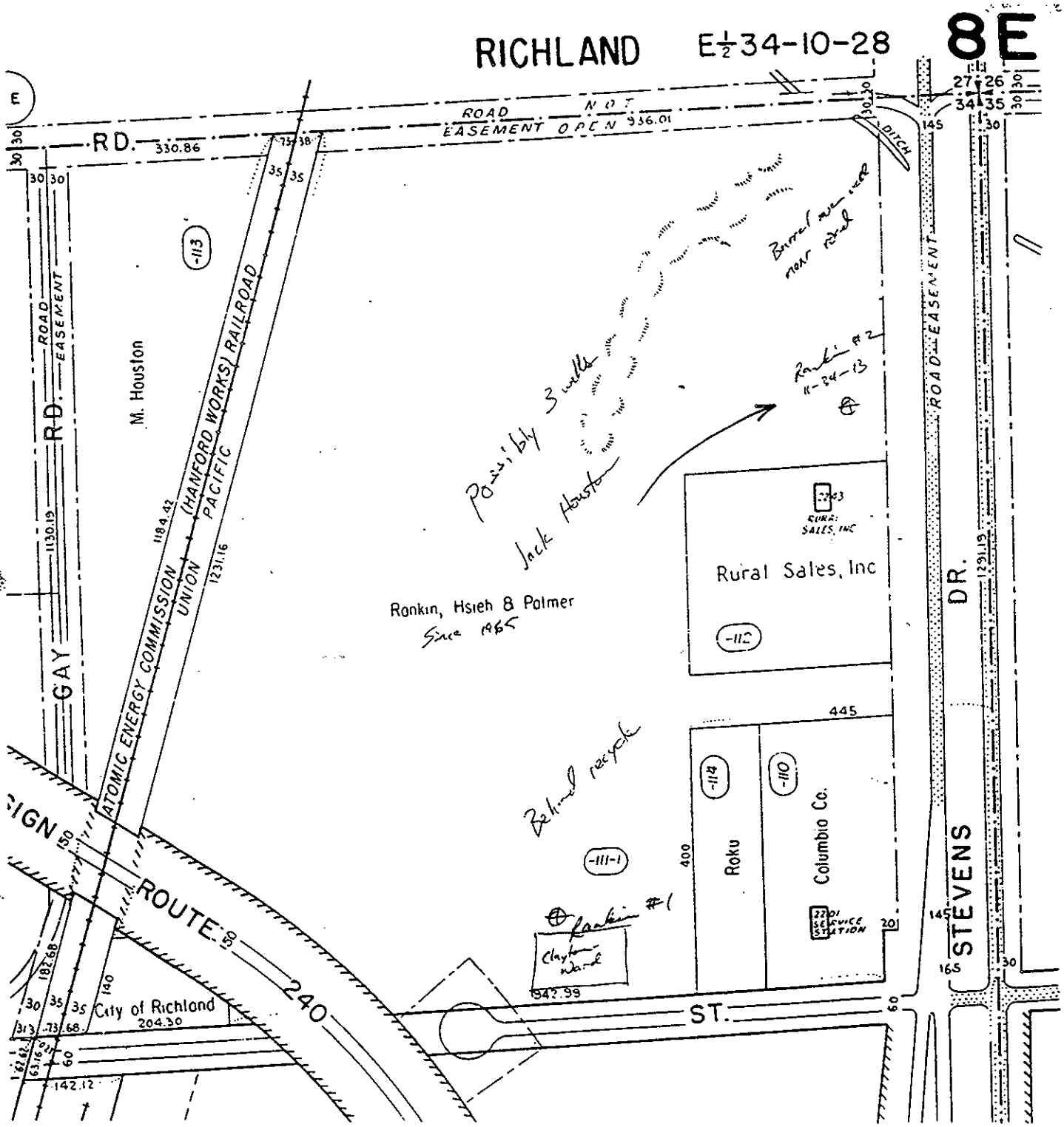
Land surface altitude[1] 389 feet msl

1. Calculated from altitude of top of casing given in Hanford Wells, 1973

Depth (ft) From	To	Description
0	25	sandy loam
25	30	sand and gravel
30	49	coarse gray sand
49	50	fine black and white sand
50	52	fine black and white sand with little clay
52	65	coarse pea gravel and clay, with sand
65	75	gravel with lots of clay
75	85	sandy clay
85	86	boulders, sand, and clay
86	92	gravel-pea to marble size, sand and gravel
92	103	gray sand and gravel

9212542089 8

#17


RICHLAND
E½34-10-28
8E
ROAD NOT EASEMENT OPEN
RD.
330.86
936.01
DITCH
ROAD EASEMENT
RD.
GAY
M. Houston
-113
ATOMIC ENERGY COMMISSION (HANFORD WORKS) RAILROAD
UNION PACIFIC
1184.42
1231.16
1130.19
Possibly 3 wells
Jack Houston
Barrel near road
Rankin #2
11-34-13
Rural Sales, Inc
-112
Ronkin, Hsieh & Palmer
Since 1965
Behind recycle
-111-1
Rankin #1
Clayton Ward
Roku
-114
Columbia Co.
-110
445
400
DR.
STEVENS
1291.19
ROUTE 240
SIGN
City of Richland
204.30
142.12
1942.99
ST.

Source: USGS[a]

#1,

12/ 3/1990 -M 10N/28E-34A01

SITE ID:	461847119171401
KEY.NO.:	2218
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461848
LONGITUDE:	1191701
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-34A01
ALTITUDE:	390.00
ALT.ACC:	5
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	103.00
WELL.DEPTH:	95.00
DEPTH SOURCE:	A
DATE DRILLED:	03/ /1948
LOG DATA:	
OTHER DATA:	
FIRST NAME:	1199-34-13
LAST NAME:	HANFORD
DATE OWNED:	03/ /1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	40.00
WATER LEVEL DATE:	3/ 1/1948
W.L.TIME:	
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	37.81
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	37.82
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	38.09
WATER LEVEL DATE:	5/23/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A

9212642090 0

#17

FINISH:	P
OPENING TYPE:	P
OPENING TOP:	45.00
OPENING BOTTOM:	90.00
OPENING DIAM.:	8.00

FINISH:	P
OPENING TYPE:	O
OPENING TOP:	95.00
OPENING BOTTOM:	95.00
OPENING DIAM.:	8.00

REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

REMARK:	CASING ELEVATION @ 391.00
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

REMARK:	WAS 1100-2
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212620901

18

1100 AREA WELL INVENTORY FORM

Well Number: 699-S36-E13B (18) Date 12/18/90.
Other Well ID: 10N/28E-23E02 ; STES #3 Surveyor: 2PB

Name of Well Owner: Hanford, PNL (USGS)

Well Location: (~~Location Map Sketched on Attached Sheet~~) SEE FIG. 2, THIS REPORT
Owner's Address: Battelle Blvd. (USGS)
Richland, WA 99352
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unknown

Verification by Owner/Occupant of Well Use: _____
(Signature)

Water in Contact with Humans: ____ Yes ____ No

Well Coordinates: North: -36195 ~~South~~ West: -12845
System: Hanford

Township: 10 N Range: 28E Section (nearest 1/4 1/4): 23 (SW of NW)

Well Specifications:
Installation Date: 10/79 Total Depth (ft): 100' (Drill Depth) 70' (Completion Depth) [USGS]
Well Construction Type: 8-in. dia. ; Unknown perf/screen interval
Pump System Type: Unknown
Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 14A
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes

Other:

Sources: McGhan (1989)
USGS Data Base[a]
WHC Data Base

9212642090 2

9 2 1 2 6 2 0 9 0 3

S36-E12B S32-E13B S36-E12A

S36-E13B

DRILLING LOG

RIG NUMBER	WELL NUMBER	DATE	PROJECT NUMBER
12 W #2	#3	10-10-79	DEPTH BEGINNING OF SHIFT
DRILLER: Mark Bultena	FOREMAN	SHIFT	DEPTH COMPLETION OF SHIFT

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
	52	to 62	Ringold gravel			added 10 3½ 8" pipe total casing 62 11½

REMARKS

B-73

WHC-MR- 0295

#8

S36-E12B 9212642090A S36-E12A

S36-E13B

DRILLING LOG

RIG NUMBER	WELL NUMBER	DATE	PROJECT NUMBER
22-W #2	#3	10-11-79	DEPTH BEGINNING OF SHIFT
DRILLER	FOREMAN	SHIFT	DEPTH COMPLETION OF SHIFT
Marv Bultema			

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
	[redacted] -					added 10, 10 of 8 inch pipe
	62 -	75	Ringold gravel			total casing 82 11½
	75 -	83	sandy tan clay			

REMARKS

WHC-MR- 0295

9 2 1 2 6 2 0 9 0 5

S36-E12 B

S32-E13B

S36-E12A

S36-E13 B

DRILLING LOG

RIG NUMBER	WELL NUMBER	DATE	PROJECT NUMBER
22-W #2	#3	10-12-79	DEPTH BEGINNING OF SHIFT
DRILLER: Marv Bultena	FOREMAN	SHIFT	DEPTH COMPLETION OF SHIFT

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
8	83	to 90	sandy tan clay			total casing 82 11/2
	90	to 100	gray conglomerate			

REMARKS

B-75

#18

Source: USGS[a]

12/ 3/1990 -M 10N/28E-23E02

SITE ID:	462025119164702
KEY.NO.:	6245
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA	
VERIFICATION	V
LATITUDE:	462025
LONGITUDE:	1191647
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-23E02
ALTITUDE:	398.73
ALT.ACC:	1
USE OF SITE:	T
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	100.00
WELL.DEPTH:	70.00
DEPTH SOURCE:	
DATE DRILLED:	10/ 1/1979
LOG DATA:	
OTHER DATA:	
FIRST NAME:	PACIFIC NWL
LAST NAME:	BATTELLE
DATE OWNED:	3/12/1986
STREET ADDR.:	BATTELLE BLVD.
CITY ADDR.:	RICHLAND WA 99352
FIRST NAME:	699-S36-E13B
LAST NAME:	HANFORD
DATE OWNED:	10/ 1/1979
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	49.23
WATER LEVEL DATE:	3/12/1986
W.L.TIME:	925
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	49.95
WATER LEVEL DATE:	4/21/1986
W.L.TIME:	1030
W.L. METHOD:	S
W.L. STATUS:	U
WATER LEVEL SOURCE:	S
WATER LEVEL:	50.00
WATER LEVEL DATE:	4/21/1986
W.L.TIME:	1032
W.L. METHOD:	S
W.L. STATUS:	U
WATER LEVEL SOURCE:	S
WATER LEVEL:	51.90

9212642090 6

#18

WATER LEVEL DATE:	5/13/1986
W.L.TIME:	1530
W.L. METHOD:	S
W.L. STATUS:	U
WATER LEVEL SOURCE:	S
WATER LEVEL:	44.80
WATER LEVEL DATE:	6/18/1986
W.L.TIME:	1400
W.L. METHOD:	S
W.L. STATUS:	U
WATER LEVEL SOURCE:	S
WATER LEVEL:	42.00
WATER LEVEL DATE:	7/21/1986
W.L.TIME:	1100
W.L. METHOD:	S
W.L. STATUS:	U
WATER LEVEL SOURCE:	S
WATER LEVEL:	41.55
WATER LEVEL DATE:	8/19/1986
W.L.TIME:	1000
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	42.78
WATER LEVEL DATE:	9/17/1986
W.L.TIME:	1040
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	43.80
WATER LEVEL DATE:	10/22/1986
W.L.TIME:	1025
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	44.25
WATER LEVEL DATE:	11/19/1986
W.L.TIME:	1105
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	44.59
WATER LEVEL DATE:	12/15/1986
W.L.TIME:	945
W.L. METHOD:	S
W.L. STATUS:	U
WATER LEVEL SOURCE:	S
WATER LEVEL:	45.70
WATER LEVEL DATE:	1/14/1987
W.L.TIME:	1010
W.L. METHOD:	S
W.L. STATUS:	

9212620907

#18

WATER LEVEL SOURCE:	S
WATER LEVEL:	45.90
WATER LEVEL DATE:	2/ 4/1987
W.L.TIME:	1005
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	46.91
WATER LEVEL DATE:	2/26/1987
W.L.TIME:	927
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	47.18
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	47.30
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	50.00
OPENING BOTTOM:	70.00
OPENING DIAM.:	-99.00
REMARK:	'MONTHLY NETWORK WELL'
STRUCTURE:	SYNCN-PASCO
DISTANCE FROM STRUCTURE:	0.25
REMARK:	CASING ELEVATION @ 399.63
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642209 08

#19

1100 AREA WELL INVENTORY FORM

Well Number: 699-S36-E13A (19)) Date 12/18/90
Other Well ID: 1C.N/28E-23DC2, STES #2 Surveyor: RPB

Name of Well Owner: Hanford, PNL

Well Location: (Location Map ~~Sketched on Attached Sheet~~) SEE FIG. 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unknown

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: UNKNOWN Yes ____ No

Well Coordinates: North: -35659 ~~South~~ West: -12847
System: Hanford

Township: 1C.N Range: 28E Section (nearest 1/4 1/4): 23 (NW of NW)

Well Specifications:
Installation Date: 9/79 Total Depth (ft): 100' (Drill Depth) 72' (Completion Depth)
Well Construction Type: 5-in. dia, Screen interval 52'-72'

Pump System Type: ~~Unknown~~ Submersible (WHC)

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes

Other:

SOURCES: McGhan (1989)
USGS Data Base
WHC Data Base

9 2 1 2 6 4 2 0 9 1 0

S36-E13A

DRILLING LOG

RIG NUMBER	WELL NUMBER	DATE	PROJECT NUMBER
	2	4-26-71	
DRILLER	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT
	Logged by Leigh Scott Smith		DEPTH COMPLETION OF SHIF

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
	0-31					a few inches of blackish [illegible] and pebble gravel
	31-59					black & white sand with [illegible] + [illegible]
	59-					quartz (Ringold) sand with small gravel

REMARKS

WHC-MR- 0295

B-80

#19

S36-E13A

DRILLING LOG

RIG NUMBER	WELL NUMBER 2	DATE 9-26-79	PROJECT NUMBER
DRILLER	FOREMAN Logged by Leigh Scott	SHIFT	DEPTH BEGINNING OF SHIFT
			DEPTH COMPLETION OF SHIFT

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
	0-26					a few inches of blacktop; then gray silt, sand, and pebble gravel
	26-58					black, white sand, gravel, and boulders; sand is coarser now
	58-100					fine quartz sand w/ pebbles (Rinpald)

REMARKS

WTC-MA 0295

B-81

#5

#19

Source: USGS[a]

12/ 3/1990 -M 10N/28E-23D02

SITE ID:	462025119164501
KEY.NO.:	6651
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	462025
LONGITUDE:	1191645
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-23D02
ALTITUDE:	398.00
ALT.ACC:	5
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	100.00
WELL.DEPTH:	71.00
DEPTH SOURCE:	A
DATE DRILLED:	9/ 1/1979
LOG DATA:	
OTHER DATA:	
FIRST NAME:	699-S36-E13A
LAST NAME:	HANFORD
DATE OWNED:	9/ 1/1979
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	46.71
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	47.09
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	46.39
WATER LEVEL DATE:	5/23/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	51.00
OPENING BOTTOM:	71.00
OPENING DIAM.:	4.00

9212642091 2

#22

1100 AREA WELL INVENTORY FORM

Well Number: 699-S36-E12B (20) Date 12/18/90
Other Well ID: C-S36E12B ; 10N/28E-23E01 Surveyor: RPB

Name of Well Owner: ~~Hanford~~ PNL

Well Location: (Location Map ~~Sketched on Attached Sheet~~) SEE FIG. 2, THIS REPORT
Owner's Address: Battelle Blvd.
Richland, WA 99352
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Unknown

Verification by Owner/Occupant of Well Use: _____
(Signature)

Water in Contact with Humans: ____ Yes ____ No

Well Coordinates: North: -36182 ~~South~~: West: -1[illegible]
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 23 (SW of NW)

Well Specifications:
Installation Date: 10/76 Total Depth (ft): 100 (50' completion depth [USGS])
Well Construction Type: 4-in diameter; Unknown perf./screen interval

Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 11A
Well Log Available: ____ No X Yes ROW 1R
Well Log Obtained: ____ No X Yes

Other:

Sources: Mc Ghan (1959)
USGS Data Base
WHC Data Base

DS1-E13 + S32-E13B 9 2 1 2 6 4 2 0 9 1 4 S32-E13A

S36-E12B

DRILLING LOG

RIG NUMBER	WELL NUMBER #4	DATE 10/4/79	PROJECT NUMBER
DRILLER Jerry Bulteau	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT Start
			DEPTH COMPLETION OF SHIFT 17'

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
9hrs				Sand + gravel		drilled 17', down to sand + gravel, 4' to 17' large rock 12" or larger

REMARKS

B-84

WHC-MR- 0295

* 20

9 2 1 2 6 2 0 9 1 5

S31-E13 S32-E13B S32-E13A

S36-E12-B

DRILLING LOG

PROJECT NUMBER			
RIG NUMBER	WELL NUMBER #4	DATE 10/5/79	DEPTH BEGINNING OF SHIFT 17'
DRILLER Jerry Bulteau	FOREMAN	SHIFT	DEPTH COMPLETION OF SHIFT 32'

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
9hrs	15'			silt + sand + gravel		drilled 15' on well, compact gravel + silt, drilled open hole 5' to 8' ahead of pipe

REMARKS

B-85

WHC-WK- 0295

#20

9212642091 6

S31-E13 S32-E13B S32-E13A

S36-E12B

DRILLING LOG

RIG NUMBER	WELL NUMBER #4	DATE	PROJECT NUMBER
			DEPTH BEGINNING OF SHIFT 32'
DRILLER Jerry Bullura	FOREMAN	SHIFT 10/8/79	DEPTH COMPLETION OF SHIFT 50'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
9hrs	18'			silt + gravel		drilled 18' of 8" in silt + gravel, drilling ahead of pipe 3' to 6'.

REMARKS

B-86

WHC-MR- 0295

#20

S31-E13 S32-E13B 9 2 1 2 6 2 0 9 1 7 S32-E13A

S36-E12B

DRILLING LOG

RIG NUMBER	WELL NUMBER #4	DATE 10/9/79	PROJECT NUMBER
DRILLER Jerry Butterworth	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT 50'
			DEPTH COMPLETION OF SHIFT 74'

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
9hrs	24'			sand & gravel ↓ heaving sand 68' to 74'		drilled 24' on well, water table close to 50', not able to drill open hole, drove plug 2' to 4' at a time, heaving sand from, 68' to 74'

REMARKS

B-87

#20

9212642091 8 S32-E13A

S36-E12B

DRILLING LOG

RIG NUMBER	WELL NUMBER #4	DATE 10/9/79	PROJECT NUMBER
DRILLER Gary Bullens	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT 50'
			DEPTH COMPLETION OF SHIFT 74'

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
9hrs	24'			sand & gravel ↓ heaving sand 68' to 74'		drilled 24' on well, water table close to 50', not able to drill open hole, drove pw 2' to 4' at a time, heaving sand from, 68' to 74'

REMARKS

B-88

WHGMR-0295

#20

9 2 1 2 6 2 0 9 1 9

S31-E13 S32-E13B S32-E13A

S36-E12B

DRILLING LOG

RIG NUMBER	WELL NUMBER #4	DATE 10/10/79	PROJECT NUMBER
DRILLER Jerry Bullins	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT 74'
			DEPTH COMPLETION OF SHIFT 86'

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
9hrs	12'			small gravel + some course sand	74' to 82'	drilled 12' on well, sand + grav from 74' to 82', from 82' on silt + clay
				silt + clay from 82' to 99'		

REMARKS

B-89

WHC-MR- 0295

#20

9 2 1 2 6 4 2 0 9 2 0

S31-E13 S32-E13B S32-E13A

S36-E12B

DRILLING LOG

RIG NUMBER	WELL NUMBER #4	DATE 10/11/79	PROJECT NUMBER
DRILLER Jerry Bullens	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT 86'
			DEPTH COMPLETION OF SHIFT 100'

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
5hrs	14'	well #4		Clay 86' 99'		drilled 14' on well, Clay from
		0 to 17 Sand + gravel		Sand 99' to 100		82' to 99' standing to drill
		17' to 68 silt + gravel				open hole 10' or more, 99'
		68' to 74' heaving sand				drilled into some lose sand
		74' to 82' Sand + gravel				that wanted to heave up pipe
		82' to 99' Clay				1' to 2' well done at 100'
		99' 100' sand				

REMARKS

WHC-MR-0295

8-90

#20

20

Source: USGS

12/ 3/1990 -M 10N/28E-23E01

SITE ID:	462025119164701
KEY.NO.:	2160
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA	C
VERIFICATION	V
LATITUDE:	462025
LONGITUDE:	1191653
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-23E01
ALTITUDE:	398.00
ALT.ACC:	5
USE OF SITE:	W
NO.1 WATER USE:	I
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	100.00
WELL.DEPTH:	50.00
DEPTH SOURCE:	D
DATE DRILLED:	10/04/1979
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	PACIFIC NWL
LAST NAME:	BATTELLE
DATE OWNED:	10/11/1979
STREET ADDR.:	
CITY ADDR.:	
FIRST NAME:	699-S36-E12B
LAST NAME:	HANFORD
DATE OWNED:	10/ 1/1979
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	43.00
WATER LEVEL DATE:	9/ 7/1983
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	O
WATER LEVEL:	49.12
WATER LEVEL DATE:	3/12/1986
W.L.TIME:	910
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	46.00
WATER LEVEL DATE:	6/10/1986
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	O
WATER LEVEL:	47.11

9212602921

20

WATER LEVEL DATE:	2/26/1987
W.L.TIME:	1009
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	45.34
WATER LEVEL DATE:	9/14/1988
W.L.TIME:	1456
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	46.53
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	46.84
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	46.33
WATER LEVEL DATE:	5/23/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	
DISCHARGE:	500.00
DRAWDOWN:	2.50
TEST TIME:	6.0
FINISH:	O
OPENING TYPE:	O
OPENING TOP:	50.00
OPENING BOTTOM:	50.00
OPENING DIAM.:	8.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SILT
% WATER.CONTRIBUTED:	100
UNIT TOP:	82.00
GEOHYDROLOGIC UNIT:	121LRRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	STCL
LITHOLOGIC MODIFIER:	+ SAND 99-100
% WATER.CONTRIBUTED:	0

9212642092 2

20

REMARK: WB 50-74
STRUCTURE: SYNCN-PASCO
DISTANCE FROM STRUCTURE: 0.25

REMARK: 'OWNER REPTS QUANT:PUMPS DRY IN SUMMER'
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

REMARK: 'LOCAL.NO. WAS 10N/28E-23DE01'
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.00

REMARK: CASING ELEVATION @ 399.04; CUT OFF?
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

9212562092 3

21

1100 AREA WELL INVENTORY FORM

Well Number: 699 - S36 - E12A (21) Date 12/18/90
Other Well ID: 6-S36E12A, STES #5, 10N/28E-23D01 Surveyor: RPB

Name of Well Owner: ~~Hanford~~, PNL.

Well Location: (Location Map ~~Sketched on Attached Sheet~~) SEE FIG. 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: GROUNDWATER MONITORING (?)

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ~~Yes~~ ____ Yes ✓ No

Well Coordinates: North: -30667N ~~South:~~ WEST -12353W
System: Hanford Coordinates

Township: 10N Range: 28E Section (nearest 1/4 1/4): 23 (NW of NW)

Well Specifications:
Installation Date: 10/79 Total Depth (ft): 102'
Well Construction Type: 8-in. dia, Unknown perf./screen interval

Pump System Type: Submersible

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 12A ROLL R
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes

Other:

SOURCES:
McGraw (1959)
USGS Data Base
WHC Data Base

9 2 1 2 6 4 2 0 9 2 4

-E12B S32-E13B 1 2 3 2 0 9 2 5 S32-E13A

S36-E12A

DRILLING LOG

RIG NUMBER	WELL NUMBER	DATE	PROJECT NUMBER
22W	BNU-#5	10/5/79	DEPTH BEGINNING OF SHIFT 0'
DRILLER: LD Bullion	FOREMAN	SHIFT	DEPTH COMPLETION OF SHIFT 20'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
				0'-20'		Drilled Surface Casing
				Large Cobbles and Brown sand		from 0' to 20'
						10 HRS.

REMARKS

B-95

WHC-MR- 0295

#21

9 2 1 2 6 4 2 0 9 2 6

S36-E12B S32-E13B S32-E13A

S36-E12A

DRILLING LOG

RIG NUMBER	WELL NUMBER	DATE	PROJECT NUMBER
22 W	BNW #5	10/8/79	DEPTH BEGINNING OF SHIFT 20'
DRILLER	FOREMAN	SHIFT	DEPTH COMPLETION OF SHIFT
DD Buttrin			58'

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
20'7"			20-58	Loose Gravel and Brown Sand		Set 8" Casing and
9'1"						Drilled to 58' Hit Water
7'11"						at 50' Alternator Quit Working
10'						had to take off and have
						replaced
						$10\frac{1}{2}$ HRS.

REMARKS

B-96

WHC-MR-0295

#21

9212620927

S36-E12B S32-E13B S32-E13A

S36-E12A

DRILLING LOG

RIG NUMBER: Rig 22W	WELL NUMBER: BNW ~~#5~~	DATE: 10/9/79	PROJECT NUMBER:
DRILLER: JC Bartlem	FOREMAN:	SHIFT:	DEPTH BEGINNING OF SHIFT: 58'
			DEPTH COMPLETION OF SHIFT: 58'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
						Didn't Work Waiting
						for Rig Parts

REMARKS

B-97

21

9212642092 8

S36-E12B S32-E13B S32-E13A

S36-E12A

DRILLING LOG

RIG NUMBER 22W	WELL NUMBER BNW #5	DATE 10/10/79	PROJECT NUMBER
DRILLER D Butler	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT 58'
			DEPTH COMPLETION OF SHIFT 74'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
10'				58-74 Loose Gravel & Brown Sand		Drilled from 58' to 74'
10'5"						
10'2"						6½ HRS. 11:00 to 6:30

REMARKS

B-98

WHC-MR- 0295

#21

S36-E12B S32-E13B S32-E13A

S36-E12A

DRILLING LOG

RIG NUMBER	WELL NUMBER	DATE	PROJECT NUMBER
22W	BNW #5	10/11/79	
DRILLER	**FOREMAN**	**SHIFT**	**DEPTH BEGINNING OF SHIFT**
J D Burton			74'
			DEPTH COMPLETION OF SHIFT
			94'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
10'			74-76	Loose Gravel and Brown Sand		Drilled from 74' to 94'
10'			76-80	Silt and Sand		Lost Water from 76' to 80'
			80-94	Silt, Sand and Gravel		80' to 94' Had water but very
						Silty and Not Much Water
						8½ HRS.

REMARKS

#2

B-99

9212642093 0

S32-E12B S32-E13B S32-E13A

S36-E12A

DRILLING LOG

RIG NUMBER	WELL NUMBER	DATE	PROJECT NUMBER
22 W	GNW #5	10/12/79	DEPTH BEGINNING OF SHIFT 94'
DRILLER L O Bolteng	FOREMAN	SHIFT	DEPTH COMPLETION OF SHIFT 100'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
5'			94-100	Silt, Sand, and Gravel		Drilled from 94' to 100'
			100-102	Grayish-Black Sand & Gravel		Cleaned Well Drilled 100 to
						102' More Water
						State Water level 50'
						Total Casing 103'2"
						7:00 to 11:00

REMARKS

#21

B-100

WHC-MR- 0295

#21

Source: USGS

12/ 3/1990 -M 10N/28E-23D01

SITE ID:	462025119165201
KEY.NO.:	6650
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA	
VERIFICATION	
LATITUDE:	462025
LONGITUDE:	1191652
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-23D01
ALTITUDE:	402.00
ALT.ACC:	10
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	102.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	A
DATE DRILLED:	10/ 1/1979
LOG DATA:	
OTHER DATA:	
FIRST NAME:	699-S36-E12A
LAST NAME:	HANFORD
DATE OWNED:	10/ 1/1979
STREET ADDR.:	
CITY ADDR.:	

9212620931

#22

1100 AREA WELL INVENTORY FORM

Well Number: 699-S32-E13B (22) Date 12/18/90
Other Well ID: STES #7 10N/28E-14E03 Surveyor: RPB

Name of Well Owner: ~~HANFORD~~, PNL

Well Location: (Location Map ~~Sketched on Attached Sheet~~) see Fig. 2, This Report
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Groundwater Monitoring (?)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: -31653 ~~South~~ West: -12587
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 14 (SW of SW)

Well Specifications:
Installation Date: 10/79 Total Depth (ft): 100' (Drill Depth) 74' Completion Depth
Well Construction Type: 8-in. dia. Screen 50'-70'

Pump System Type: Submersible

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 2A
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes

Other:

Source: McGhan (1991)
USGS Data Base
WHC Data Base

9212642093 2

9 2 1 2 6 2 0 9 3 3

S31-E13

S30-E15C

S32-E13B

DRILLING LOG

RIG NUMBER 22W	WELL NUMBER #7	DATE 9/26/79	PROJECT NUMBER
DRILLER LO Bultema	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT
			DEPTH COMPLETION OF SHIFT

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
						Moved Rig from
						River Near 100F
						to Well Site Set up
						and Hauled tools, Water
						and other equipment to
						Drill With.
						8HRS.

REMARKS

B-103

- 1-E13 S C21-1 9 2 1 2 6 4 2 0 9 3 4

S32-E13B

DRILLING LOG

RIG NUMBER 22 W	WELL NUMBER #7	DATE 9/27/79	PROJECT NUMBER
DRILLER L.D. Bultena	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT 0'
			DEPTH COMPLETION OF SHIFT 20'

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
				0-5 Brown Sand		Drilled Surface Casing
				5-20- L Cobbles		Down to 20' (10")
				and Brown Sand		

REMARKS

2 HRS.

#22

WHC-MR- 0295

831-E13

9212620935

830-E10

832-E13B

DRILLING LOG

RIG NUMBER 22W	WELL NUMBER ~~#~~ 7	DATE 9/28/79	PROJECT NUMBER
DRILLER LD Bultena	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT 20'
			DEPTH COMPLETION OF SHIFT 35'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
				20' to 35		Welded 8" Drive Shoe
				& Cobbles		on and Changed Bits
				and Brown Sand		and Drilled from 20'
						to 35'

REMARKS

The Cobbles are Cemented, Hard to Drill and Drive Casing through.

3 HRS.

B-105

9 2 1 2 6 4 2 0 9 3 6

S29-E12

S30-E15C

S31-E13

S32-E13B

DRILLING LOG			PROJECT NUMBER
RIG NUMBER 22W	WELL NUMBER #7	DATE 10/1/79	DEPTH BEGINNING OF SHIFT 35'
DRILLER L O Bolton	FOREMAN	SHIFT	DEPTH COMPLETION OF SHIFT 54'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
			35-50	L Cobbles Brown Sand		Drilled 35' to 50' in L Cobbles and Brown Sand. Hit Water at 50' and Changed into Smaller gravel and Sand through 54'
			50-54	Medium gravel and Brown Sand		

REMARKS

The futher into the Water table, the looser gravel.

~~2 HR~~ 10 HRS.

#3

WHC-MR- 0295

831-E13

C21-1

830-E15C

832-E13B

DRILLING LOG

RIG NUMBER: 22W	WELL NUMBER: #7	DATE: 10/2/79	PROJECT NUMBER:
DRILLER: [illegible]	FOREMAN:	SHIFT:	DEPTH BEGINNING OF SHIFT: 54'
			DEPTH COMPLETION OF SHIFT: 79'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
			54-68	Medium Gravel Brown Sand Some Silt		Drilled from 54' to 68' in Compacted gravel.
			68-76	Clay, Silt and Brown Sand		Hit Clay, Silt and Brown Sand to 76'. Then went into Compacted Grayish-Black gravel from 76' to 79'
			76-79	Compacted gravel		

REMARKS

10 HRS.

B-107

#2

9 2 1 2 6 4 2 0 9 3 8

829-E12

831-E13

C 21-1

830-E15C

332-E13B

DRILLING LOG

RIG NUMBER 22W	WELL NUMBER #7 BNW	DATE 10/3/79	PROJECT NUMBER
DRILLER L D Bultena	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT 79'
			DEPTH COMPLETION OF SHIFT 96'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
				79-100		Drilled from 79' to 96'
				Compacted gravel		in Grayish-Black Compacted
						gravel (Tight enough to Drill
						without Casing)
						10 HRS.

REMARKS

B-108

WMC-WRT- 0295

#22

9 2 1 2 6 2 0 9 3 9

S29-B12

S30-E15C

S31-E13

C21-1

S32-E13B

DRILLING LOG

RIG NUMBER: 22W	WELL NUMBER: #7 BNW	DATE: 10/4/79	PROJECT NUMBER:
DRILLER: LD Bultena	FOREMAN:	SHIFT:	DEPTH BEGINNING OF SHIFT: 96'
			DEPTH COMPLETION OF SHIFT: 100'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
				96-100 compacted gravel		Drilled 96' to 100' in tightly Compacted gravel. Barely Can Drive casing. Tore Rig Down and moved to Well #5. Set up rig and Hauled Water Total Casing 101' 1" 10 HRS.

REMARKS

To tight of formation to have much water less then 20gpm

B-109

#22

22

Source: USGS a

11/30/1990 -M 10N/28E-14E03

SITE ID:	462105119164901
KEY.NO.:	6613
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	462105
LONGITUDE:	1191649
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-14E03
ALTITUDE:	394.00
ALT.ACC:	5
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	100.00
WELL.DEPTH:	70.00
DEPTH SOURCE:	A
DATE DRILLED:	10/ 1/1979
LOG DATA:	
OTHER DATA:	
FIRST NAME:	699-S32-E13B
LAST NAME:	HANFORD
DATE OWNED:	10/ 1/1979
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	47.67
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	47.69
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	47.21
WATER LEVEL DATE:	5/23/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	50.00
OPENING BOTTOM:	70.00
OPENING DIAM.:	-99.00
REMARK:	CASING ELEVATION @ 394.72

9212642209 40

#22

STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

9212620941

23

1100 AREA WELL INVENTORY FORM

Well Number: 699-S32-E13A (23) Date 12/18/90
Other Well ID: STES #1, 10N/25E-14E02 Surveyor: RPB

Name of Well Owner: ~~Hanford~~, PNV.

Well Location: (Location Map ~~Sketched on Attached Sheet~~) SEE FIG. 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: ~~Irrigation~~ GROUNDWATER MONITORING (?)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: -31640 ~~South:~~ West: -13166
System: Hanford

Township: 10N Range: 25E Section (nearest 1/4 1/4): 14 (SW of NW)

Well Specifications:
Installation Date: 9/79 Total Depth (ft): 100' (Drill Depth) 72' (Completion Depth)
Well Construction Type: 8-in. diameter; Screen 50'-70'

Pump System Type: Submersible

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 3A
Well Log Available: * ____ No X Yes
Well Log Obtained: ____ No X Yes

Other:

SOURCES:
McGraw (1989) a
USGS Data Base
WHC Data Base

* USGS Log available. Not much info

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S32-E13A

DRILLING LOG

RIG NUMBER	WELL NUMBER	DATE	PROJECT NUMBER
	1	9-21-79	
DRILLER	FOREMAN	SHIFT	DEPTH BEGINNING OF SI
	Logged by Leigh Scott & Staff		0'
			DEPTH COMPLETION OF
			100'

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
	0-4					blow sand
	4-20					sand, tan + silty, med.
	20-52					cobbles to boulders, and 3"-gr fine black sand with gravel
	52-75	20' - 50 slot		50-70'		some cobbles + boulders
	75-76					fine black + white sand (Range w/p
	76-80					brown clay with some sm. g
	80-86					blue clay with some gravel
	86-100					dark brown clay
						small gravel, cemented

REMARKS

Hit water table at about 50 ft.
Well completed 9-25-79; total depth 100 ft

B-113

#23

#23

Source: USGS[a]

11/30/1990 -M 10N/28E-14E02

SITE ID:	462105119164001
KEY.NO.:	6612
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	462105
LONGITUDE:	1191640
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-14E02
ALTITUDE:	389.00
ALT.ACC:	5
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	100.00
WELL.DEPTH:	70.00
DEPTH SOURCE:	A
DATE DRILLED:	9/25/1979
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	699-S32-E13A
LAST NAME:	HANFORD
DATE OWNED:	9/25/1979
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	42.93
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	42.93
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	42.45
WATER LEVEL DATE:	5/23/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	50.00
OPENING BOTTOM:	70.00
OPENING DIAM.:	-99.00
UNIT TOP:	0.00

9212642094 4

23

GEOHYDROLOGIC UNIT:	110DUNE
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SAND
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	0
UNIT TOP:	4.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SAND,BLDR,COBB
% WATER.CONTRIBUTED:	100
UNIT TOP:	75.00
GEOHYDROLOGIC UNIT:	121RGLD
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	GRCM
LITHOLOGIC MODIFIER:	+ GRCL 75-86
% WATER.CONTRIBUTED:	0
REMARK:	CASING ELEVATION @ 390.46
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212602094 5

WHC-MR- 0295

#24

1100 AREA WELL INVENTORY FORM

Well Number: 699-S31-E13 (24) Date 12/18/90
Other Well ID: STES #6, 10N/28E - 14E01 Surveyor: RPB

Name of Well Owner: ~~Hanford~~ / PNL

Well Location: (Location Map ~~Sketched on Attached Sheet~~) SEE FIG. 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: ~~Unknown~~ GROUNDWATER MONITORING (?)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: -31224 ~~South~~ West: -13097
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 14 (SW of NW)

Well Specifications:
Installation Date: 10/79 Total Depth (ft): 100' (Drill Depth) 72' (Completion Depth)
Well Construction Type: 8" diameter, Screen 50'-68'

Pump System Type: Submersible

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 4A
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes

Other:

Sources: McGraw (1989), w
USGS Data Base
WHC Data Base

9212642209946

9 2 1 2 6 2 0 9 7

S29-E12

S30-E15A

S30-E15C

S31-1

S31-E13

DRILLING LOG

RIG NUMBER	WELL NUMBER	DATE	PROJECT NUMBER
	#6	9/26/79	DEPTH BEGINNING OF SHIFT —
DRILLER: Jerry Bullard	FOREMAN	SHIFT	DEPTH COMPLETION OF SHIFT —

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
4hrs						Set up drill rig on site

REMARKS

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S30-E15A

S30-E15C

S31-1

S31-E13

DRILLING LOG

	WELL NUMBER #6	DATE 9/27/79	DEPTH BEGINNING OF SHIFT –
DRILLER Jerry Bulterna	FOREMAN	SHIFT	DEPTH COMPLETION OF SHIFT 30'

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
9hrs	30'			Sand, Sand & gravel		drilled 30' on well
						1st 20' 7" pipe
						2nd 10' "
						0 to 5' Sand
						5 to 30 Sand & gravel

REMARKS

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#24

9 2 1 2 6 2 0 9 4 9

S29-E12

S30-E15A

S30-E15C

S31-1

S31-E13

DRILLING LOG

PROJECT NUMBER			PROJECT NUMBER
RIG NUMBER	WELL NUMBER #6	DATE 9/28/79	DEPTH BEGINNING OF SHIFT 30'
DRILLER Jerry Bultema	FOREMAN	SHIFT	DEPTH COMPLETION OF SHIFT 50'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
9hrs	20'			Sand + gravel		drilled 20' on well
						3rd pipes 10' 5½"
						4th " 10'
						sand gravel

REMARKS

B-119

#24

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S29-E12

S30-E15A

S30-E15C

S31-1

S31-E13

DRILLING LOG

RIG NUMBER	WELL NUMBER #6	DATE 10/4/79	PROJECT NUMBER
DRILLER Jerry Bultena	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT 50'
			DEPTH COMPLETION OF SHIFT 65'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
9hrs				sand & gravel		drilled 15' on well
						5th pipe 10'2"
						6th " 10'
						sand & gravel

REMARKS

WHC-MR- 0295

#24

9 2 1 2 6 2 0 9 5 1

S30-E15C

S31-1

S31-E13

DRILLING LOG

RIG NUMBER	WELL NUMBER	DATE	PROJECT NUMBER
	#6	10/2/79	
DRILLER	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT
Jerry Buttana			65'
			DEPTH COMPLETION OF SHIFT
			85'

DRILLING		CORING		TYPE SOIL	OTHER DELAYS	
TIME	DEPTH	TIME	DEPTH		TIME	EXPLANATION
8hrs				Sand & gravel		drilled 20' on well
				Clay		
						7th pipe 10' 4"
						65' to 70' sand & gravel
						70' to 82' clay

REMARKS

B-121

9212642095 2

S29-E12

S30-E15A

S30-E15C

S31-1

S31-E13

DRILLING LOG

RIG NUMBER	WELL NUMBER #6	DATE 10/3/79	PROJECT NUMBER
DRILLER Jerry Sullivan	FOREMAN	SHIFT	DEPTH BEGINNING OF SHIFT 85'
			DEPTH COMPLETION OF SHIFT 100'

DRILLING TIME	DRILLING DEPTH	CORING TIME	CORING DEPTH	TYPE SOIL	OTHER DELAYS TIME	OTHER DELAYS EXPLANATION
10hrs				Sand & gravel		drilled 15' on well, cleaned out well, & moved drill rig

REMARKS

WRC-WRK- 0295

#24

#24

Source: USGS a

11/30/1990 -M 10N/28E-14E01

SITE ID:	462110119164101
KEY.NO.:	6611
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	462110
LONGITUDE:	1191641
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-14E01
ALTITUDE:	393.00
ALT.ACC:	5
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	100.00
DEPTH SOURCE:	A
DATE DRILLED:	10/ 1/1979
LOG DATA:	
OTHER DATA:	
FIRST NAME:	699-S31-E13
LAST NAME:	HANFORD
DATE OWNED:	10/ 1/1979
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	47.16
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	47.18
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	46.74
WATER LEVEL DATE:	5/23/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	50.00
OPENING BOTTOM:	68.00
OPENING DIAM.:	-99.00
REMARK:	CASING ELEVATION @ 394.06

#2

STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

9 2 1 2 6 4 2 0 9 5 4

#25

1100 AREA WELL INVENTORY FORM

Well Number: 699-S30-E15C (25) Date 1-3-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Hanford.

Well Location: (Location Map ~~Sketched on Attached Sheet~~) see fig. 2, This Report
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Hydrologic Testing

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North~~ South: 30383 ~~South~~ east: 15232
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 14 (NW of NE)

Well Specifications:
Installation Date: ~1970 Total Depth (ft): 3540
Well Construction Type: unknown

Pump System Type: unknown

Well Access for Sounding: yes

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____ Not found.
Well Log Available: ____ No X Yes Fecht & Lillie
Well Log Obtained: ____ No X Yes

Other: Limited info.
Could not find well in the field using location from Fig 1 (old report)

Source of info.

McGhan 1999
USGS Database
WHC Database.
Fecht & Lillie

B-125

699-S31-1
Location: S30600, W725 10/28-1781
Casing Elevation: 460.11
Cable tool, drilled by Stanbery & Robinson of the USGS for the GE Company, 1951, groundwater monitoring borehole

Material (4)	Thickness	Depth
Sand, fine to coarse	16	16
Sand, pods of clay	5	21
Sand, w/gravel	52	73
Quartz & exotic sand	12	85
Sand w/gravel	43	128
Gravel w/sand	4	132
Sand, w/some gravel	16	148
Sand w/gravel	37	185
Silt, clayey	36	221
Columbia River basalt: Wanas basalt	7	228

699-S30-E15A
Location: S30257, E14838 10/28-1461
Casing Elevation: 400.39 Sum: 397
Cable tool, drilled by Evans of Hatch Drilling Company for ARHCO, 1971, groundwater monitoring borehole

Material (1)	Thickness	Depth
Sand & gravel 1/4 in. to boulders	9	9
Sand & 1/4 in. gravel to cobbles	11	20
Coarse to fine black sand & 1 1/2 in. gravel	15	35
Coarse black sand to fine sand, & 1 in. gravel	5	40
Coarse black sand to fine sand w/coarse gravel	10	50
Coarse black sand w/ coarse gravel	4	54
Coarse black sand & gravel & boulders	1	55
Black sand	5	60
Black sand coarse to fine w/ 1 1/2 in. gravel	5	65
Fine brown sand w/coarse black sand & silt w/2 in. gravel	3	68
Fine brown sand w/silt & some 4 in. gravel	7	75
Fine brown sand	5	80

699-S30-E15C (DDH-3)
Location: S30383, E15232 10/28-1463
Casing Elevation: 401.74
Cable tool (to 219 ft.) & diamond coring, drilled by Smith & Wilcox of Haden Drilling Company for GE Company & Boyles Brothers Drilling Company for ARHCO, 1970, groundwater monitoring borehole & bedrock geology investigation borehole

Material (1, 17)	Thickness	Depth
Brown sand fine	2	2
Cemented gravel & 10 in. minus cobbles	1	2
Cemented gravel w/little sand, dark gray in color	3	5
Cemented gravel & cobbles w/ trace of sand	5	10
Cemented grout & cobbles w/ trace of sand	5	15
Cemented 2 in. minus gravel w/ coarse black sand, color dark gray to black	5	20
4 in. minus gravel w/some coarse black sand & a trace of brown sand	5	25
Lightly cemented 3 in. minus gravel w/sand, color gray	5	30
3 in. minus gravel w/coarse sand & some finer sand	5	35
2 1/2 in. minus gravel & coarse sand w/little fine sand	5	40
Coarse sand w/2 1/2 in. minus gravel, trace of fine sand	5	45
3 in. minus gravel w/little sand	5	50
2 1/2 in. minus gravel w/trace of sand	5	55
2 1/2 in. minus gravel w/trace of sand, color of material gray	5	60
2 in. minus gravel w/coarse & fine sand	5	65
3 in. minus gravel w/some sand, material has a light brown color	5	70
1 1/2 in. minus gravel w/ coarse & fine sand, water color light brown	5	75
1 1/2 in. minus gravel w/some coarse & fine sand, water color light brown	5	80
1 in. minus gravel w/some coarse & fine sand, trace of silt, water color brown	5	85
1 1/2 in. minus gravel tightly packed w/light brown & blue sand	5	90
2 in. minus gravel w/green sand & a little black clay, very tightly packed.	5	95
3 in. minus gravel w/green sand & a little black clay, very tightly packed	5	100
2 1/2 in. minus gravel w/green sand very tightly packed	5	105
2 in. minus gravel w/green sand very tightly packed	5	110
3 in. minus gravel w/little light gray sand, very tightly packed	5	115
3 1/2 in. minus gravel & white & gray sand	5	120
Greenish blue clay w/some pebbles in it (silty)	5	125
Greenish blue clay w/small pebbles & a little silty	5	130
Fine green sand w/some hard lumps of sand	5	135
3 in. minus gravel w/green sand	5	140
2 in. minus gravel w/fine sand & coarse sand	5	145
1 in. minus gravel w/fine sand & some coarse sand	5	150
4 in. minus gravel w/some greenish blue sand	5	155
1 in. minus gravel w/greenish blue sand, very tightly packed	5	160
Clayey silt	5	165
Silt & clay, dark brown	5	170
Silt & clay w/stray 1 in. gravel dark brown	5	175

Silt & clay w/blue tint to it	20	195
2 in. minus pits of soft basalt w/coarse sand & blue clay	5	200
Basalt gravel & coarse sand w/ some clay	5	205
Basalt bedrock w/sand	5	210
Basalt bedrock	5	215
Basalt	69	284
Tuffaceous sandstone	39	323
Basalt	31	354
Altered rubble	8	362
Basalt	105	457
Tuffaceous sandstone	17	474
Black clay	1	475
Tuffaceous sandstone	8	487
Basalt	184	671
Sandstone	6	677
Highly altered rubble zone	23	700
Basalt	68	768
Clay	2	770
Altered tuff	72	842
Altered vesicular rubble zone	16	866
Basalt	253	1,119
Brown clay	17	1,136
Sandstone	8	1,144
Tuffaceous sandstone	14	1,158
Vesicular rubble zone	12	1,170
Basalt	124	1,294
Intermixed clay & sandstone, coal fragments	25	1,319
[illegible]alt	125	1,544
[illegible]sh oxidation zone	8	1,552
[illegible]	8	1,560
[illegible]ubble zone	10	1,570
[illegible]	1,970	3,540

699-S29-E12
Location: S29395, E12065 10/28-15A1
Casing Elevation: 387.97
Cable tool, drilled by Evans of Hatch Drilling Company, 1971, groundwater monitoring borehole

Material (1)	Thickness	Depth
Sand & cobbles	3	3
Brown & black sand w/boulders & gravel	6	9
Black sand coarse, & gravel & cobbles	8	17
Coarse black sand & gravel & boulders	3	20
Black sand & gravel & cobbles	10	30
Black coarse sand & gravel	15	45
Brown sand fine to 1 1/2 in.-gravel	5	50
[illegible]rown sand & 1 1/2 in.- w/some silt	13	63
[illegible]wn sand w/very little [illegible]	2	65
Brown silt & some silt & 1 1/2 in.-gravel	10	75
Brown sand with some 1 1/2 in.-gravel & traces of silt	5	80

699-S27-E14
Location: S27288, E13593 10/28-11L1
Casing Elevation: 399.77
Cable tool, drilled by Row, Chausse & Rumley of the USGS for GE Company, 1948, groundwater monitoring borehole

Material (1)	Thickness	Depth
Top soil (sandy loam), brown blow sand	5	5
Gravel & sand, boulders up to 10 in.	6	11
Boulders & sand	4	15
Coarse black basalt sand, gravel	9	24
Black basalt sand, coarse	6	30
Black basalt fine sand	5	35
Black sand & basalt	10	45
Black coarse to fine basalt sand some small gravel	10	55
70% marble size gravel, 30% sand & shale	10	65
Fine gray sand	6	71
60% gravel, all colors, fine to marble size, 40% coarse to fine gray sand. Lots of black basalt gravel & sand	7	78
Fine to coarse gray sand	3	81
Clay, sand, gravel	11	92
Shale, gravel; gravel is large marble size, binder is more like volcanic mud than shale	11	103
Shale on volcanic mud, sand, gravel the size of hen's egg	3	106
Shale on volcanic mud, more sand, less gravel, marble size	6	112
Shale, sand, gravel	6	118
Green shale	2	120
Gravel, sand	1	121
Blue shale	1	121
Gravel, sand	2	123
Blue shale	1	123
Gravel, sand	2	125
Blue shale	2	127
Gravel, sand; very fine gray sand filled up hole	2	129
Blue shale, sand	1	130
Very fine sand, pea gravel, blue shale	5	135
Shale, sand & gravel	5	140
Gray sand, gravel, shale; runs back up pipe	5	145
Fine gray sand, gravel, shale; runs back up pipe	7	152
Fine to coarse sand, gravel, shale; run back up pipe	6	158
Fine sand & gravel, clay	5	163
Green clay	2	165

699-S24-19
Location: S23965, W1874 10/27-2N1
Casing Elevation: 427.82
Cable tool, drilled by Row of the USGS, 1949, domestic water supply for gatekeeper at dam

Material (1)	Thickness	Depth
Top soil	1	1
Gravel, sand & silt; caves	3	4
Gravel, black sand & very little silt; very loose 15 to 18 ft.	14	18
Gravel, sand & silt (4 ft.), loose	6	24
Clay	1	25
Sand, silt & showing of clay	2	27
Fine white sand, some basalt chips & silt	7	34
Gravel	1	35
Fine sand, silt, & gravel	8	43
Blue shale	1	44
Coarse sand, basalt	2	46
Solid basalt	16	62
Black & white sand	3	65
Solid basalt	1	66
Sand & gravel	1	67

Source: USGS

11/30/1990 -M 10N/28E-14B03

SITE ID:	462118119161601
KEY.NO.:	2136
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	462119
LONGITUDE:	1191617
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-14B03
ALTITUDE:	400.00
ALT.ACC:	5
USE OF SITE:	T
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	3540.00
WELL.DEPTH:	2053.00
DEPTH SOURCE:	G
DATE DRILLED:	/ /1970
LOG DATA:	CEFGJNTU
OTHER DATA:	CORE,RX ANALYS
FIRST NAME:	699-S30-E15C
LAST NAME:	HANFORD
DATE OWNED:	/ /1970
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	14.56
WATER LEVEL DATE:	8/24/1970
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	14.86
WATER LEVEL DATE:	9/23/1970
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	15.38
WATER LEVEL DATE:	2/24/1971
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	14.42
WATER LEVEL DATE:	6/ 8/1972
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	

9212642095 8

#25

WATER LEVEL:	14.41
WATER LEVEL DATE:	6/22/1972
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	

WATER LEVEL:	14.72
WATER LEVEL DATE:	6/29/1972
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	

WATER LEVEL:	14.55
WATER LEVEL DATE:	7/ 6/1972
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	

WATER LEVEL:	14.77
WATER LEVEL DATE:	7/13/1972
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	

WATER LEVEL:	14.71
WATER LEVEL DATE:	7/20/1972
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	

WATER LEVEL:	14.72
WATER LEVEL DATE:	7/26/1972
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	

WATER LEVEL:	14.76
WATER LEVEL DATE:	8/ 2/1972
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	

WATER LEVEL:	14.65
WATER LEVEL DATE:	8/10/1972
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	

WATER LEVEL:	14.76
WATER LEVEL DATE:	8/17/1972
W.L.TIME:	0
W.L. METHOD:	R

9 2 1 2 6 2 0 9 5 9

#25

W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.60
WATER LEVEL DATE: 8/24/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.75
WATER LEVEL DATE: 8/30/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.53
WATER LEVEL DATE: 9/ 7/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.33
WATER LEVEL DATE: 9/21/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.60
WATER LEVEL DATE: 9/28/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.77
WATER LEVEL DATE: 10/ 5/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.72
WATER LEVEL DATE: 10/12/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.40
WATER LEVEL DATE: 10/19/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.24

9212642209 60

#25

WATER LEVEL DATE: 10/26/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.37
WATER LEVEL DATE: 11/ 2/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.27
WATER LEVEL DATE: 11/ 9/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.12
WATER LEVEL DATE: 11/16/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.33
WATER LEVEL DATE: 11/30/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.16
WATER LEVEL DATE: 12/20/1972
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 14.06
WATER LEVEL DATE: 1/ 3/1973
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 13.90
WATER LEVEL DATE: 1/19/1973
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 13.79
WATER LEVEL DATE: 2/22/1973
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:

9212520961

#25

WATER LEVEL SOURCE:

WATER LEVEL: 13.72
WATER LEVEL DATE: 3/15/1973
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 13.44
WATER LEVEL DATE: 3/30/1973
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 13.39
WATER LEVEL DATE: 4/12/1973
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 13.45
WATER LEVEL DATE: 4/26/1973
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 13.57
WATER LEVEL DATE: 5/10/1973
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 13.11
WATER LEVEL DATE: 5/24/1973
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 13.44
WATER LEVEL DATE: 6/ 4/1973
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 13.49
WATER LEVEL DATE: 6/ 4/1973
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE: A

WATER LEVEL: 12.60
WATER LEVEL DATE: 11/ 4/1982

9 2 1 2 6 4 2 0 9 6 2

#25

W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 12.80
WATER LEVEL DATE: 11/12/1982
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.81
WATER LEVEL DATE: 11/18/1982
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 12.84
WATER LEVEL DATE: 11/24/1982
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 12.92
WATER LEVEL DATE: 12/ 3/1982
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 12.76
WATER LEVEL DATE: 12/ 9/1982
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 12.23
WATER LEVEL DATE: 12/17/1982
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 12.30
WATER LEVEL DATE: 1/ 7/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 12.47
WATER LEVEL DATE: 1/14/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

9212602096 3

#2

WATER LEVEL: 12.13
WATER LEVEL DATE: 1/21/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 12.08
WATER LEVEL DATE: 1/28/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 12.00
WATER LEVEL DATE: 2/11/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.63
WATER LEVEL DATE: 2/18/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.65
WATER LEVEL DATE: 2/25/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.48
WATER LEVEL DATE: 3/ 4/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.75
WATER LEVEL DATE: 3/11/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.65
WATER LEVEL DATE: 3/18/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.63
WATER LEVEL DATE: 3/25/1983
W.L.TIME: 0

9 2 1 2 6 4 2 0 9 6 4

#25

W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.82
WATER LEVEL DATE: 4/ 8/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.83
WATER LEVEL DATE: 4/15/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.38
WATER LEVEL DATE: 4/29/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.50
WATER LEVEL DATE: 5/ 9/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.13
WATER LEVEL DATE: 6/ 2/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.07
WATER LEVEL DATE: 6/10/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.30
WATER LEVEL DATE: 6/16/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.21
WATER LEVEL DATE: 6/23/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

9 2 1 2 5 2 0 9 6 5

#25

WATER LEVEL: 11.09
WATER LEVEL DATE: 7/ 7/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.16
WATER LEVEL DATE: 7/14/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.08
WATER LEVEL DATE: 7/22/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.15
WATER LEVEL DATE: 7/29/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.02
WATER LEVEL DATE: 8/ 4/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.11
WATER LEVEL DATE: 8/12/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 10.86
WATER LEVEL DATE: 8/18/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 10.91
WATER LEVEL DATE: 9/22/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 11.13
WATER LEVEL DATE: 9/29/1983
W.L.TIME: 0
W.L. METHOD: R

9 2 1 2 6 4 2 0 9 6 6

#25

W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 10.82
WATER LEVEL DATE: 10/ 6/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 10.75
WATER LEVEL DATE: 10/13/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 10.75
WATER LEVEL DATE: 10/20/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 10.70
WATER LEVEL DATE: 10/27/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 10.48
WATER LEVEL DATE: 11/ 3/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 10.40
WATER LEVEL DATE: 11/10/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 10.20
WATER LEVEL DATE: 11/17/1983
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 10.00
WATER LEVEL DATE: 2/22/1984
W.L.TIME: 0
W.L. METHOD: R
W.L. STATUS:
WATER LEVEL SOURCE:

FINISH:

9 2 1 2 6 2 0 9 6 7

#25

OPENING TYPE:	X
OPENING TOP:	1973.00
OPENING BOTTOM:	2053.00
OPENING DIAM.:	3.00
UNIT TOP:	-99.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	GRVL
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	0
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	GRCM
LITHOLOGIC MODIFIER:	+ SAND SDGL
% WATER.CONTRIBUTED:	0
UNIT TOP:	160.00
GEOHYDROLOGIC UNIT:	121LRRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	STCL
LITHOLOGIC MODIFIER:	+ SDCL
% WATER.CONTRIBUTED:	0
UNIT TOP:	200.00
GEOHYDROLOGIC UNIT:	121BSRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SOME CLAY
% WATER.CONTRIBUTED:	0
UNIT TOP:	205.00
GEOHYDROLOGIC UNIT:	122SDLM
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	BSLT
LITHOLOGIC MODIFIER:	ELBG 130FT TUFF
% WATER.CONTRIBUTED:	0
UNIT TOP:	1118.00
GEOHYDROLOGIC UNIT:	122MBTN
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SNDS
LITHOLOGIC MODIFIER:	+CLAY
% WATER.CONTRIBUTED:	0
UNIT TOP:	1158.00
GEOHYDROLOGIC UNIT:	122WNPM
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	BSLT
LITHOLOGIC MODIFIER:	ELBG 1292-1318
% WATER.CONTRIBUTED:	100
UNIT TOP:	2197.00
GEOHYDROLOGIC UNIT:	122GDRD
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	BSLT
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	0

9 2 1 2 6 4 2 0 9 6 8

#25

REMARK:	GEOPHYS LOGS BY WSU
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
REMARK:	CORE IN STORAGE,ROCKWELL AT HANFORD
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
REMARK:	PIEZOMETER 1973-2053 FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
REMARK:	ADDTNAL WL DATA ON FILE:8/24/70-12/17/82
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
REMARK:	PLUGGED AT 2053-3540
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
REMARK:	AT 219FT, SWL=60FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
REMARK:	QW DATA-ROCKWELL RHO-BWI-C-19
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
REMARK:	PIEZOMETER PLUGGED?
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
REMARK:	ORIGINALLY DRILLED TO 218.5FT?
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
REMARK:	WAS DDH-3
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 10N/28E-14C01
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 2 0 9 6 9

WHC-MR- 0295

2

1100 AREA WELL INVENTORY FORM

Well Number: 699-S30-E15B (26) Date 12/18/90
Other Well ID: 1CN/28E-14B02 Surveyor: RPB

Name of Well Owner: HANFORD

Well Location: (Location Map ~~Sketched on Attached Sheet~~) - see fig. 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: GROUNDWATER MONITORING (?)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North~~ South: 30286 ~~South~~ East: 14831
System: Hanford

Township: 10N Range: 28E Section (nearest 1/4 1/4): 14 (NW of NE)

Well Specifications:
Installation Date: 10/71 Total Depth (ft): 93'
Well Construction Type: 6" diameter casing, Drill depth 93', Depth to bottom 93'

Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: SA 1011 1R
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:

SOURCES: McGHAN 1959
USGS Data Base
WHC Data Base

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#26

Source: USGS

11/30/1990 -M 10N/28E-14B02

SITE ID:	462120119161701
KEY.NO.:	6610
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	462120
LONGITUDE:	1191617
LAT/LONG ACC:	S
LOCAL NO.:	10N/28E-14B02
ALTITUDE:	400.00
ALT.ACC:	5
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	93.00
DEPTH SOURCE:	A
DATE DRILLED:	10/ 1/1971
LOG DATA:	
OTHER DATA:	
FIRST NAME:	699-S30-E15B
LAST NAME:	HANFORD
DATE OWNED:	10/ 1/1971
STREET ADDR.:	
CITY ADDR.:	

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27

1100 AREA WELL INVENTORY FORM

Well Number: 699-S30-E15A (27) Date 12/18/90
Other Well ID: 6-49-17A 10N/28E-14B01 Surveyor: RPB

Name of Well Owner: HANFORD

Well Location: (Location Map ~~Sketched on Attached Sheet~~) - See fig 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: GROUNDWATER MONITORING (?)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North~~ South: 30857 ~~South~~ East: 14838
System: Hanford

Township: 10 N Range: 28 E Section (nearest 1/4 1/4): 14 (NW of NE)

Well Specifications:
Installation Date: 10/71 Total Depth (ft): 72 (McGhan, 1989) Drilled to 80'
Well Construction Type: Cable Tool drilled; 6" diameter; ~~Unknown~~ Perf. interval 58' to 78'
Pump System Type: Submersible (McGhan 1989)
Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 6A roll 1R
Well Log Available: ____ No ✓ Yes Fecht & Lillie; ~~Schw~~ Summers & Schwab, USGS
Well Log Obtained: ____ No ✓ Yes

Other:

Sources: McGhan 1989 w
USGS Data Base
Summers & Schwab 1977
Fecht & Lillie 1982
WHC Data Base

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#27

Driller's log of 6[illegible] [illegible]15A[1] (S030257, E014838) Hanford Wells, 1973

Land surface altitude[2] 398 feet msl

1. Well 3099-49-17A
2. Estimated from altitude of top of casing given in Hanford Wells, 1973
3. Cable tool rig

Depth (ft) From	To	Description
0	9	sand and grav[illegible] ¾-to bo[illegible]ers
9	20	sand and ¼" [illegible]l to c[illegible]es
20	35	coarse to fi[illegible] [illegible]ack san[illegible] 1½-gravel
35	40	coarse black [illegible] to fine [illegible] and 1"-gravel
40	50	coarse black s[illegible] to fine [illegible]h coarse gravel
50	54	[illegible]arse black sand with coa[illegible]vel
54	55	[illegible]rse black sand and gravel [illegible] boulders
55	60	black sand
60	65'	black sand coarse to fine with 1½" gravel
65	68	fine brown sand with coarse black sand and silt with 2"-gravel
68	75	fine brown sand with silt and some 4"-gravel
75	80	fine brown sand

699-S31-1
Location: S30600, W725 10/28-1781
Casing Elevation: 460.11
Cable tool, drilled by Stanbery & Robinson of the USGS for the GE Company, 1951, groundwater monitoring borehole

Material (4)	Thickness	Depth
Sand, fine to coarse	16	16
Sand, pods of clay	5	21
Sand, w/gravel	52	73
Quartz & exotic sand	12	85
Sand w/gravel	43	128
Gravel w/sand	4	132
Sand, w/some gravel	16	148
Sand w/gravel	37	185
Silt, clayey	36	221
Columbia River basalt:		
Wanas basalt	7	228

699-S30-E15A
Location: S30257, E14838 10/28-14G1
Casing Elevation: 400.39 Surv: 399
Cable tool, drilled by Evans of Hatch Drilling Company for ARHCO, 1971, groundwater monitoring borehole

Material (1)	Thickness	Depth
Sand & gravel 1/4 in. to boulders	9	9
Sand & 1/4 in. gravel to cobbles	11	20
Coarse to fine black sand & 1 1/2 in. gravel	15	35
Coarse black sand to fine sand, & 1 in. gravel	5	40
Coarse black sand to fine sand w/coarse gravel	10	50
Coarse black sand w/ coarse gravel	4	54
Coarse black sand & gravel & boulders	1	55
Black sand	5	60
Black sand coarse to fine w/ 1 1/2 in. gravel	5	65
Fine brown sand w/coarse black sand & silt w/2 in. gravel	3	68
Fine brown sand w/silt & some 4 in. gravel	7	75
Fine brown sand	5	80

699-S30-E15C (DDH-3)
Location: S30383, E15232 10/28-14G3
Casing Elevation: 401.74
Cable tool (to 219 ft.) & diamond coring, drilled by Smith & Wilcox of Hagen Drilling Company for GE Company & Boyles Brothers Drilling Company for ARHCO, 1970, groundwater monitoring borehole & bedrock geology investigation borehole

Material (1, 17)	Thickness	Depth
Brown sand fine	2	2
Cemented gravel & 10 in. minus cobbles	1	2
Cemented gravel w/little sand, dark gray in color	3	5
Cemented gravel & cobbles w/ trace of sand	5	10
Cemented grout & cobbles w/ trace of sand	5	15
Cemented 2 in. minus gravel w/ coarse black sand, color dark gray to black	5	20
4 in. minus gravel w/some coarse black sand & a trace of brown sand	5	25
Lightly cemented 3 in. minus gravel w/sand, color gray	5	30
3 in. minus gravel w/coarse sand & some finer sand	5	35
2 1/2 in. minus gravel & coarse sand w/little fine sand	5	40
Coarse sand w/2 1/2 in. minus gravel, trace of fine sand	5	45
3 in. minus gravel w/little sand	5	50
2 1/2 in. minus gravel w/trace of sand	5	55
2 1/2 in. minus gravel w/trace of sand, color of material gray	5	60
2 in. minus gravel w/coarse & fine sand	5	65
3 in. minus gravel w/some sand, material has a light brown color	5	70
1 1/2 in. minus gravel w/ coarse & fine sand, water color light brown	5	75
1 1/2 in. minus gravel w/some coarse & fine sand, water color light brown	5	80
1 in. minus gravel w/some coarse & fine sand, trace of silt, water color brown	5	85
1 1/2 in. minus gravel tightly packed w/light brown & blue sand	5	90
2 in. minus gravel w/green sand & a little black clay, very tightly packed	5	95
3 in. minus gravel w/green sand & a little black clay, very tightly packed	5	100
2 1/2 in. minus gravel w/green sand very tightly packed	5	105
2 in. minus gravel w/green sand very tightly packed	5	110
3 in. minus gravel w/little light gray sand, very tightly packed	5	115
3 1/2 in. minus gravel & white & gray sand	5	120
Greenish blue clay w/some pebbles in it (silty)	5	125
Greenish blue clay w/small pebbles & a little silty	5	130
Fine green sand w/some hard lumps of sand	5	135
3 in. minus gravel w/green sand	5	140
2 in. minus gravel w/fine sand & coarse sand	5	145
1 in. minus gravel w/fine sand & some coarse sand	5	150
4 in. minus gravel w/some greenish blue sand	5	155
1 in. minus gravel w/greenish blue sand, very tightly packed	5	160
Clayey silt	5	165
Silt & clay, dark brown	5	170
Silt & clay w/stray 1 in. gravel dark brown	5	175

#27

Source: USGS

11/3 10N/28E-14B01

SITE:	462119119161701
KEY.NO.:	2137
FIELD CHECK:	C
COUNTY:	5
LOCATION OF DA:	[illegible]
VERIFICATION	
LATITUDE:	[illegible]
LONGITUDE:	119[illegible]
LAT/LONG ACC:	[illegible]
LOCAL NO.:	10N/ B01
ALTITUDE:	40[illegible]
ALT ACC:	5
[illegible] SITE:	T
[illegible] WATER USE:	U
[illegible] WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	80.00
WELL.DEPTH:	78.00
DEPTH SOURCE:	R
DATE DRILLED:	10/ /1971
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	699-S30-E15A
LAST NAME:	HANFORD
DATE OWNED:	10/ /1971
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	58.00
WATER LEVEL DATE:	10/ 1/1971
W.L. TIME:	
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	56.59
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	57.39
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	56.47
WATER LEVEL DATE:	5/23/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A

#27

FINISH:	S
OPENING TYPE:	S
OPENING TOP:	58.00
OPENING BOTTOM:	78.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SAND,COBB,BLDR
% WATER.CONTRIBUTED:	-99
UNIT TOP:	65.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SDST
LITHOLOGIC MODIFIER:	+ SAND 75-80
% WATER.CONTRIBUTED:	-99
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 400.39 OR 400.14?
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 49-17A
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	NO ORIGINAL DATA ON FILE; 11/16/90
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 10N/28E-14C02
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

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#28

1100 AREA WELL INVENTORY FORM

Well Number: 699-S30-E14 (28) Date 12/18/90
Other Well ID: 10N/28E-14(C1); DDH-3; 3099... Surveyor: RPB
6 S30E15C

Name of Well Owner: HANFORD

Well Location: (Location Map ~~Sketched on Attached Sheet~~) - see fig. 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: GROUNDWATER MONITORING (?)
HYDROGEOLOGIC TESTING

Verification by Owner of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North~~ South: 30385 ~~South~~ East: 14497
System: Hanford

Township: 10 Range: 28E Section (nearest 1/4 1/4): 14 (NE of NW)

Well Specifications:
Installation Date: 8/62 Total Depth (ft): 5540
Well Construction Type: C [illegible] 219' in 1966 (
Dry in 1970 (dia core). Completion depth 2053 (
Pump System Type: Unknown

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 7A Roll 1P
Well Log Available: ____ No ✓ Yes FECHT & LILLE 1982 - Refer to 699-S30-E15C
Well Log Obtained: ____ No ____ Yes

Other:

Sources: McGhan, 1985
USGS Data Base
FECHT & LILLE 1982
WHC Data Base

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Driller's log of 3099-49-E16

Depth (ft) From	To	Description
0	2	brown, fine sand
2	3	cemented gravel and 10" minus cobbles
3	5	cemented gravel with a little sand, dark gray in color
5	15	cemented gravel and cobbles with a trace of sand
15	20	cemented 2" minus gravel with coarse black sand, dark gray to black
20	25	4" minus gravel with some coarse black sand and a trace of brown sand
25	30	lightly cemented, 3" minus gravel with sand color gray
30	35	3" minus gravel with coarse [illegible] some finer sand
35	40	2½" minus gravel and coarse [illegible] little fine sand
40	45	coarse sand with 2½" minus grav[illegible] of fine sand
45	50	3" minus gravel with a little sand
50	60	2½" minus gravel with a trace of sand, color-gray
60	65	2" minus gravel with coarse and fine sand
65	70	3" minus gravel with some sand, light brown in color
70	75	1'5" minus gravel with coarse and fine sand
75	80	1½" minus gravel with coarse and fine sand
80	85	1" minus gravel with some coarse and fine sand
85	90	1'5" minus gravel, tightly packed with light brown and blue sand
90	95	2" minus gravel with green sand and a little black clay very tightly packed
95	100	3" minus gravel with green sand and a little black clay, very tightly packed
100	105	2½" minus gravel with green sand very tightly packed
105	110	2" minus gravel with green sand very tightly packed
110	115	3" minus gravel with a little light gray sand very tightly packed
115	120	3½" minus gravel and white and gray sand
120	125	greenish blue clay with small pebbles in it (silty)
125	130	greenish blue clay with small pebbles; clay a little silty
130	135	fine green sand, with some lumps of sand
135	140	3" minus gravel with green sand
140	145	2" minus gravel with fine and coarse sand
145	150	1" minus gravel with fine sand and some coarse sand
150	155	4" minus gravel with some greenish blue sand
155	160	1" minus gravel with greenish blue sand; very tightly packed
160	165	clay-like silt
165	170	dark brown silt and clay
170	175	silt and clay with stray 1" gravel-dark brown
175	195	silt and clay with blue tint
195	200	2" minus pits of soft basalt with coarse sand and blue clay
200	205	basalt gravel and coarse sand with some clay
205	210	basalt bedrock with sand
210	218.5	basalt bedrock

9 2 1 2 6 4 2 0 9 7 8

#28

Source: USGS

11/30/1990 -M 10N/28E-14C01

SITE ID:	462117119162301
KEY.NO.:	6631
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	462117
LONGITUDE:	1191623
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-14C01
ALTITUDE:	401.00
ALT.ACC:	10
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	219.00
DEPTH SOURCE:	A
DATE DRILLED:	8/ 1/1962
LOG DATA:	
OTHER DATA:	
FIRST NAME:	699-S30-E14
LAST NAME:	HANFORD
DATE OWNED:	8/ 1/1962
STREET ADDR.:	
CITY ADDR.:	

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29

1100 AREA WELL INVENTORY FORM

Well Number: 699-S29-E12 (29) Date 12/18/90
Other Well ID: 10N/28E - 15A01 Surveyor: RPB

Name of Well Owner: HANFORD

Well Location: (Location Map ~~Sketched on Attached Sheet~~) - see fig 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from Owner:

Current Well Use: GROUNDWATER MONITORING (?)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North~~ SOUTH: 29392 ~~South~~ EAST: 12065
System: HANFORD

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NE of NE)

Well Specifications:
Installation Date: 11/71 Total Depth (ft): 79 (McGHAN, 1984)
Well Construction Type: Cable Tool drilled - 6" diameter - Perf. interval 37'-59'

Pump System Type: Submersible

Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 15A Roll 1R
Well Log Available: ____ No ✓ Yes (Fecht & Lillie, 1982; Summers & Schwab, 1977)
Well Log Obtained: ____ No ✓ Yes [USGS Log contains little info.]

Other:

Sources: McGhan (1984)
Fecht & Lillie (1982)
Summers & Schwab (1977)
USGS Data Base

9212642093 0

#29

Driller's log of 699-S29-E12[1] (S029395, E012065) Hanford Wells, 1973

Land surface altitude[2] 386 feet msl

1. Well 3099-50-15
2. Estimated from altitude of top of casing given in Hanford Wells, 1973
3. Cable tool rig

Depth (ft) From	To	Description
0	3	sand and cobbles
3	9	brown and black sand with boulders and gravel
9	17	black sand coarse, and gravel and cobbles
17	20	coarse black sand and gravel and boulders
20	30	black sand and gravel and cobbles
30	45	black coarse sand and gravel
45	50	brown sand fine to 1½-gravel
50	63	fine brown sand and 1½-gravel with some silt; sand comes up pipe
63	65	fine brown sand with very little gravel; sand comes up pipe
65	75	brown sand and some silt and ½-gravel; sand comes up hole
75	80	brown sand with some 1½-gravel and traces of silt; sand comes up hole

#29

Silt & clay w/blue tint to it	20	195
2 in. minus pits of soft basalt w/coarse sand & blue clay	5	200
Basalt gravel & coarse sand w/ some clay	5	205
Basalt bedrock w/sand	5	210
Basalt bedrock	5	215
Basalt	69	284
Tuffaceous sandstone	39	323
Basalt	31	354
Altered rubble	8	362
Basalt	105	457
Tuffaceous sandstone	17	474
Black clay	1	475
Tuffaceous sandstone	8	487
Basalt	184	671
Sandstone	6	677
Highly altered rubble zone	23	700
Basalt	68	768
Clay	2	770
Altered tuff	72	842
Altered vesicular rubble zone	16	866
Basalt	253	1,119
Brown clay	17	1,136
Sandstone	8	1,144
Tuffaceous sandstone	14	1,158
Vesicular rubble zone	12	1,170
Basalt	124	1,294
Intermixed clay & sandstone, coal fragments	25	1,319
Basalt	125	1,544
Reddish oxidation zone	8	1,552
Basalt	8	1,560
Altered rubble zone	10	1,570
Basalt	1,970	3,540

699-S29-E12
Location: S29295, E12065 10/28-15A1
Casing Elevation: 387.97
Cable tool, drilled by Evans of Hatch Drilling Company, 1971, groundwater monitoring borehole

Material (1)	Thickness	Depth
Sand & cobbles	3	3
Brown & black sand w/boulders & gravel	6	9
Black sand coarse, & gravel & cobbles	8	17
Coarse black sand & gravel & boulders	3	20
Black sand & gravel & cobbles	10	30
Black coarse sand & gravel	15	45
Brown sand fine to 1 1/2 in.-gravel	5	50
Fine brown sand & 1 1/2 in.-gravel w/some silt	13	63
Fine brown sand w/very little gravel	2	65
Brown sand & some silt & 1 1/2 in.-gravel	10	75
Brown sand with some 1 1/2 in.-gravel & traces of silt	5	80

699-S27-E14
Location: S27288, E13593 10/28-11L1
Casing Elevation: 399.77
Cable tool, drilled by Row, Chausse & Rumley of the USGS for GE Company, 1948, groundwater monitoring borehole

Material (1)	Thickness	Depth
Top soil (sandy loam), brown blow sand	5	5
Gravel & sand, boulders up to 10 in.	6	11
Boulders & sand	4	15
Coarse black basalt sand, gravel	9	24
Black basalt sand, coarse	6	30
Black basalt fine sand	5	35
Black sand & basalt	10	45
Black coarse to fine basalt sand some small gravel	10	55
70% marble size gravel, 30% sand & shale	10	65
Fine gray sand	6	71
60% gravel, all colors, fine to marble size, 40% coarse to fine gray sand. Lots of black basalt gravel & sand	7	78
Fine to coarse gray sand	3	81
Clay, sand, gravel	11	92
Shale, gravel; gravel is large marble size, binder is more like volcanic mud than shale	11	103
Shale on volcanic mud, sand, gravel the size of hen's egg	3	106
Shale on volcanic mud, more sand, less gravel, marble size	6	112
Shale, sand, gravel	6	118
Green shale	2	120
Gravel, sand	1	121
Blue shale	1	121
Gravel, sand	2	123
Blue shale	1	123
Gravel, sand	2	125
Blue shale	2	127
Gravel, sand; very fine gray sand filled up hole	2	129
Blue shale, sand	1	130
Very fine sand, pea gravel, blue shale	5	135
Shale, sand & gravel	5	140
Gray sand, gravel, shale; runs back up pipe	5	145
Fine gray sand, gravel, shale; runs back up pipe	7	152
Fine to coarse sand, gravel, shale; run back up pipe	6	158
Fine sand & gravel, clay	5	163
Green clay	2	165

699-S24-19
Location: S23965, W1874 10/27-2N1
Casing Elevation: 427.83
Cable tool, drilled by Row of the USGS, 1949, domestic water supply for gatekeeper at dam

Material (1)	Thickness	Depth
Top soil	1	1
Gravel, sand & silt; caves	3	4
Gravel, black sand & very little silt; very loose 15 to 18 ft.	14	18
Gravel, sand & silt (4 ft.), loose	6	24
Clay	1	25
Sand, silt & snowing of clay	2	27
Fine white sand, some basalt chips & silt	7	34
Gravel	1	35
Fine sand, silt, & gravel	8	43
Blue shale	1	44
Coarse sand, basalt	2	46
Solid basalt	16	62
Black & white sand	3	65
Solid basalt	1	66
Sand & gravel	1	67

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9 2 1 2 6 4 2 0 9 3 2

#29

Source: USGS

11/30/1990 -M 10N/28E-15A01

SITE ID:	462127119165601
KEY.NO.:	6614
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	462127
LONGITUDE:	1191656
LAT/LONG ACC:	S
LOCAL NO.:	10N/28E-15A01
ALTITUDE:	387.00
ALT.ACC:	5
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	80.00
WELL.DEPTH:	80.00
DEPTH SOURCE:	A
DATE DRILLED:	11/ 1/1971
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	699-S29-E12
LAST NAME:	HANFORD
DATE OWNED:	11/ 1/1971
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	41.33
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	41.35
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	41.21
WATER LEVEL DATE:	5/23/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	60.00
OPENING BOTTOM:	80.00
OPENING DIAM.:	-99.00
UNIT TOP:	0.00

#29

GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	BLACK, + BLDR
% WATER.CONTRIBUTED:	0
UNIT TOP:	45.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	BROWN, + SILT
% WATER.CONTRIBUTED:	100
REMARK:	CASING ELEVATION @ 387.96 OR 387.97?
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642093 4

#30

Source: USGS

11/30/1990 -M 10N/28E-11L01

SITE ID:	462155119162601
KEY.NO.:	2130
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	462147
LONGITUDE:	1191634
LAT/LONG ACC:	
LOCAL NO.:	10N/28E-11L01
ALTITUDE:	399.00
ALT.ACC:	5
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	165.00
WELL.DEPTH:	165.00
DEPTH SOURCE:	A
DATE DRILLED:	04/ /1948
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	699-S27-E14
LAST NAME:	HANFORD
DATE OWNED:	04/ /1948
STREET ADDR.:	
ADDR.:	
WATER LEVEL:	60.00
WATER LEVEL DATE:	4/ 1/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	55.58
WATER LEVEL DATE:	3/ 2/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	56.34
WATER LEVEL DATE:	3/ 5/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	56.01
WATER LEVEL DATE:	5/29/1990
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A

#3

DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	420.00
DRAWDOWN:	1.00
TEST TIME:	10.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	122.00
OPENING BOTTOM:	140.00
OPENING DIAM.:	8.00
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	60.00
OPENING BOTTOM:	116.00
OPENING DIAM.:	8.00
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	150.00
OPENING BOTTOM:	158.00
OPENING DIAM.:	8.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	110DUNE
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SAND
LITHOLOGIC MODIFIER:	TOP SOIL
% WATER.CONTRIBUTED:	0
UNIT TOP:	5.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SAND,BLSD
% WATER.CONTRIBUTED:	-99
UNIT TOP:	71.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SHLE,SAND
% WATER.CONTRIBUTED:	-99
UNIT TOP:	163.00
GEOHYDROLOGIC UNIT:	121LRRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	GREEN
% WATER.CONTRIBUTED:	0
REMARK:	WAS 3000-7
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 399.76
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642 0936

#30

1100 AREA WELL INVENTORY FORM

Well Number: 699-S27 [illegible] (30) Date 12/[illegible]
Other Well ID: 300-7 [illegible] Surveyor: [illegible]

Name of Well Owner: HANFORD

Well Location: (Location Map ~~Sketched on Attached Sheet~~) - See fig. 2, THIS REPORT
Owner's Address:

Street Address of Residential Well Site if Different from [illegible]er:

Current Well Use: [illegible] Monitoring (?)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North~~ South: 27286 ~~South~~ East: 13673
S[illegible]m: Hanford

Township: 10[illegible] Range: [illegible] Section (nearest 1/4 1/4): 11 (NE of SW)

Well Specifications:
Installation Date: 4/48 Total Depth (ft): 165
Well Construction Type: Cable Tool d. [illegible] Cement plug at 105'
Pump System Type: ~~[illegible]~~ Sub
Well Access for Sounding: Unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: Not found.
Well Log Available: ✗ ____ No ✓ Yes (Fecht & Little [illegible], Summers & Schalk, 1977)
Well Log Obtained: ____ No ✓ Yes

Other:

SOURCES: McGhan (198[illegible])
Fecht and Little (1982)
Summers and Schalk (1977)
USGS Data Base [illegible]

* [illegible] for Conference Little info.

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9 2 1 2 6 0 2 0 9 3 7

#30

Driller's log of 699-S27-E14 (Hanford Wells, 1973)

Land surface altitude[1] 372 feet msl

1. Estimated from altitude of top of casing given in Hanford Wells, 1973
2. Well GE 3000-7
3. Cable tool rig

Depth (ft) From	To	Description
0	5	top soil (sandy loam), brown blow sand
5	11	gravel and sand, boulders up to 10"
11	15	boulders and sand
15	25	coarse black basalt sand, gravel; caves
25	30	black basalt sand, coarse
30	33	? no record
33	35	black basalt fine sand
35	38	? no record
38	45	black sand and basalt
45	55	black basalt sand, coarse to fine, some small gravel
55	65	70% marble size gravel, 30% sand and shale
65	71	fine gray quicksand
71	78	60% gravel, all colors, fine to marble size, 40% coars to fine gray sand. Lots of black basalt gravel and sand.
78	81	fine to coarse gray sand
81	92	clay, sand, gravel
92	103	shale, gravel; gravel is large marble size, binder is more like volcanic mud than shale
103	106	shale on volcanic mud, sand, gravel the size of hen's egg
106	112	shale on volcanic mud, more sand, less gravel, marble size
112	118	shale, sand, gravel
118	120	green shale
120	121	gravel, sand
121	121½	blue shale
121½	123	gravel, sand
123	123½	blue shale
123½	125½	gravel, sand
125½	127½	blue shale
127½	129	gravel, sand; very fine gray sand filled up hole
129	130	blue shale, sand
130	135	very fine sand, pea gravel, blue shale
135	140	shale, sand and gravel
140	145	gray sand, gravel, shale; runs back up pipe
145	152	fine gray sand, gravel, shale; runs back up pipe
152	158	fine to coarse sand, gravel, shale; run back up pipe
158	163	fine sand and gravel, clay
163	165	green clay

9 2 1 2 6 4 2 0 9 3 8

Silt & clay w/blue tint to it	20	195
2 in. minus pits of soft basalt w/coarse sand & blue clay	5	200
Basalt gravel & coarse sand w/ some clay	5	205
Basalt bedrock w/sand	5	210
Basalt bedrock	5	215
Basalt	69	284
Tuffaceous sandstone	39	323
Basalt	31	354
Altered rubble	8	362
Basalt	105	457
Tuffaceous sandstone	17	474
Black clay	1	475
Tuffaceous sandstone	8	487
Basalt	184	671
Sandstone	6	677
Highly altered rubble zone	23	700
Basalt	68	768
Clay	2	770
Altered tuff	72	842
Altered vesicular rubble zone	16	866
Basalt	253	1,119
Brown clay	17	1,136
Sandstone	8	1,144
Tuffaceous sandstone	14	1,158
Vesicular rubble zone	12	1,170
Basalt	124	1,294
Intermixed clay & sandstone, coal fragments	25	1,319
Basalt	125	1,544
Reddish oxidation zone	8	1,552
Basalt	8	1,560
Altered rubble zone	10	1,57[illegible]
Basalt	1,970	3,54[illegible]

699-[illegible]-E12
Location: S29395, E12065 10/26-15A1
Casing Elevation: 387.97
Cable tool, drilled by Evans of Hatch Drilling Company, 1971, groundwater monitoring borehole

Material (1)	Thickness	Depth
Sand & cobbles	3	3
Brown & black sand w/boulders & gravel	6	9
Black sand coarse, & gravel & cobbles	8	17
Coarse black sand & gravel & boulders	3	20
Black sand & gravel & cobbles	10	30
Black coarse sand & gravel	15	45
Brown sand fine to 1 1/2 in.-gravel	5	50
Fine brown sand & 1 1/2 in.-gravel w/some silt	13	63
Fine brown sand w/very little gravel	2	65
[illegible] sand & some silt & 1 1/2 -gravel	10	75
Brown sand with some 1 1/2 in.-gravel & traces of silt	5	80

699-S27-E14
Location: S27288, E13593 10/28-11L1
Casing Elevation: 399.77
Cable tool, drilled by Row, Chausse & Rumley of the USGS for GE Company, 1948, groundwater monitoring borehole

Material (1)	Thickness	Depth
Top soil (sandy loam), brown blow sand	5	5
Gravel & sand, boulders up to 10 in.	6	11
Boulders & sand	4	15
Coarse black basalt sand, gravel	9	24
Black basalt sand, coarse	6	30
Black basalt fine sand	5	35
Black sand & basalt	10	45
Black coarse to fine basalt sand some small gravel	10	55
70% marble size gravel, 30% sand & shale	10	65
Fine gray sand	6	71
60% gravel, all colors, fine to marble size, 40% coarse to fine gray sand. Lots of black basalt gravel & sand	7	78
Fine to coarse gray sand	3	81
Clay, sand, gravel	11	92
Shale, gravel; gravel is large marble size, binder is more like volcanic mud than shale	11	103
Shale on volcanic mud, sand, gravel the size of hen's egg	3	106
Shale on volcanic mud, more sand, less gravel, marble size	6	112
Shale, sand, gravel	6	118
Green shale	2	120
Gravel, sand	1	121
Blue shale	1	121
Gravel, sand	2	123
Blue shale	1	123
Gravel, sand	2	125
Blue shale	2	127
Gravel, sand; very fine gray sand filled up hole	2	129
Blue shale, sand	1	130
Very fine sand, pea gravel, blue shale	5	135
Shale, sand & gravel	5	140
Gray sand, gravel, shale; runs back up pipe	5	145
Fine gray sand, gravel, shale; runs back up pipe	7	152
Fine to coarse sand, gravel, shale; run back up pipe	6	158
Fine sand & gravel, clay	5	163
Green clay	2	165

699-S24-19
Location: S23965, W1874 10/27-2N1
Casing Elevation: 427.83
Cable tool, drilled by Row of the USGS, 1949, domestic water supply for gatekeeper at dam

Material (1)	Thickness	Depth
Top soil	1	1
Gravel, sand & silt; caves	3	4
Gravel, black sand & very little silt; very loose 15 to 18 ft.	14	18
Gravel, sand & silt (4 ft.), loose	6	24
Clay	1	25
Sand, silt & shown [illegible] clay	2	27
Fine white sand, some basalt chips & silt	7	34
Gravel	1	35
Fine sand, silt, & gravel	8	43
Blue shale	1	44
Coarse sand, basalt	2	46
Solid basalt	16	62
Black & white sand	3	65
Solid basalt	1	66
Sand & gravel	[illegible]	67

#31

1100 AREA WELL INVENTORY FORM

Well Number: ANF #1 (31) Date 12-20-90
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – FIG. ANF-1
Owner's Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N3727769.0 ~~South~~ east: E2303158.0
System: Lambert Grid

Township: 10 N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below ground water table (see attached)
Well Construction Type: 6" casing
lock on cap
Pump System Type: unknown

Well Access for Sounding: Yes

Other Information:
Photograph Taken: X No ____ Yes Photo Number: No clearance
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes
General construction log, FIG. ANF-2

Other:
Limited information available. Info from ANF.
Location of well on ANF facility.
No clearance to enter facility.

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#32

1100 AREA WELL INVENTORY FORM

Well Number: ANF #2 (32) Date 1-3-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – FIG. ANF-1
Owner's Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N 372740.0 ~~South~~ East: 2303443.0
System: Lambert Grid.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table (see attached)
Well Construction Type: 6" casing. lock on cap
Pump System Type: unknown.
Well Access for Sounding: yes

Other Information:
Photograph Taken: X No ____ Yes Photo Number: No clearance
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes General Construction log – FIG. ANF-2

Other:
Limited information available. Info. from ANF
Well located inside ANF facility – no clearance to enter.

9212920 0961

WHC-MR- 0295

#3

1100 AREA WELL INVENTORY FORM

Well Number: ANF #3 (33) Date 1-3-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels.

Well Location: (Location Map Sketched on Attached Sheet) – Fig. ANF-1
Owner's Address: Horn Rapids Road
Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N 372526.5 ~~South~~ East: E 2303473.0
System: Lambert Grid.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): ~~unknown~~ 10' below water table (see attached)
Well Construction Type: 6" casing, lock on cap
Pump System Type: unknown
Well Access for Sounding: yes

Other Information:
Photograph Taken: X No ____ Yes Photo Number: No clearance
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes
General Construction log – (Fig. ANF-2)

Other:
Limited info available. Info supplied by ANF
Well located on the ANF facility.
No clearance to enter facility.

9212642092

#34

1100 AREA WELL INVENTORY FORM

Well Number: ANF #4 Date 1-3-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels.

Well Location: (Location Map Sketched on Attached Sheet) – Fig. ANF-1
Owner's Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N 372388 East South: 2303443.0
System: Lambert Grid.

Township: 10N Range: 28E Section (nearest 1/4 1/4): NW of SW

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table (see attached)
Well Construction Type: 6" casing
Lock on cap.
Pump System Type: unknown
Well Access for Sounding: Yes

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: No clearance
Well Log Available: ____ No ____ Yes general construction log – Fig. ANF-2
Well Log Obtained: ____ No ____ Yes

Other:
Limited information available. Info. from ANF well located on ANF facility. Clearance not available.

9 2 1 2 6 0 2 0 9 9 3

#35

1100 AREA WELL INVENTORY FORM

Well Number: ANF #5 (35) Date 1-3-91
Other Well ID: Surveyor: KJV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – Fig. ANF-1
Owner's Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ___ Yes ✓ No

Well Coordinates: North: N 377255.0 ~~South~~ East: E 2303443.0
System: Lambert Grid.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table (see attached)
Well Construction Type: 6" casing. Lock on cap
Pump System Type: unknown
Well Access for Sounding: Yes.

Other Information: → No clearance
Photograph Taken: X No ___ Yes Photo Number: ___
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes } general construction log – Fig. ANF-2

Other:
Limited information available. Info from ANF.
Well location within ANF facility.

9212642069 94

#36

1100 AREA WELL INVENTORY FORM

Well Number: ANF#6 (FG) Date 1-3-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advc Nuclear Fuel

Well Location: (Location Map Sketched on Attached Sheet) – FIG. INF-1
Owner's Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Use: monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ___ Yes ✓ No

Well Coordinates: North: N52[illegible]1.0 [illegible]30341.3.0
System: Lambert Grid

Township: ___ Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth: below water table.
Well Construction Type: 6" casing. (see attached)
lock on cap
Pump System Type: unknown
Well Access for Sounding: yes.

Other Information: No clearance to enter facility.
Photograph Taken: ✓ No ___ Yes Photo Number: ___
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes instruction log - ANF-2

Other:
Limited information available.
well located in ANF facility.
Info supplied by ANF.

WHC-MR- 0295

#37

1100 AREA WELL INVENTORY FORM

Well Number: ANF #7 (37) Date 1-3-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels.

Well Location: (Location Map Sketched on Attached Sheet) – FIG. ANF-1
Owner's Address: 1Orn Badids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N371966.7 ~~South~~ East: E2303443.0
System: Lambert Grid

Township: 11 N Range: 28 E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table
Well Construction Type: 6" casing See attached
lock on cap.
Pump System Type: unknown

Well Access for Sounding: Yes

Other Information: No clearance.
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes } general construction log – FIG. ANF-2

Other:
Limited information available.
Well located in ANF facility.
Info supplied by ANF.

9212642099 6

#38

1100 AREA SITE SURVEY FORM

Well Number: ANF #89 Date 1-3 91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced N

Well Location: (Location Map Sketched on Attached) For ANF-1
Owner's Address: Horn Rapids Rd
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: 72941.0 ~~South~~ East E 3303289.0
Lambert Grid

Township: 1 N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table (See attached)
Well Construction Type: Cased
Pump System Type: unknown
Well Access for Sounding: Yes

Other Information:
Photograph Taken: X No ____ Yes No clear Photo
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes construction log - No. ANF-2

Other:
Limited info. available.
Well located in ANF facility
Info supplied by ANF.

9212620097

#39

1100 AREA WELL INVENTORY FORM

Well Number: ANF #11 (39) Date 1-3-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels.

Well Location: (Location Map Sketched on Attached Sheet) – Fig. ANF-1
Owner's Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N371981.0 ~~South~~ East: E2303182.0
System: Lambert Grid

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown. Total Depth (ft): 10' below water table (see attached)
Well Construction Type: 6" casing
lock on cap.
Pump System Type: unknown.
Well Access for Sounding: yes.

Other Information:
Photograph Taken: X No ____ Yes Photo Number: No clearance.
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes } general construction log – Fig. ANF-2

Other:
Limited info. available.
Well located in ANF facility.
Info. supplied by ANF.

9212642093

#40

1100 AREA WELL INVENTORY FORM

Well Number: ANF #12 (40) Date 1-3 91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – FIG. ANF-1
Owner's Address: Horn Rapids Rd
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N371986.0 ~~South~~ East: E2303306.8
System: Lambert Grid.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table (see attached)
Well Construction Type: 6" casing
lock on cap
Pump System Type: unknown
Well Access for Sounding: Yes

Other Information:
Photograph Taken: X No ____ Yes Photo Number: ____ No clearance
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes } general construction log – FIG. ANF-2

Other:
Limited information available.
Well located in ANF facility.
Info. supplied by ANF.

9212620999

#41

1100 AREA WELL INVENTORY FORM

Well Number: ANF #13 (41) Date 1-3-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – Fig. ANF-1
Owner's Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N371713.7 ~~South~~ East: E 230330.68
System: Lambert Grid

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table (see attached)
Well Construction Type: 6" casing
lock on cap
Pump System Type: unknown
Well Access for Sounding: Yes

Other Information: No clearance to enter facility.
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes } general construction log – Fig. ANF-2

Other:
Limited information available.
Well located within ANF facility.
Info supplied by ANF.

9 2 1 2 6 4 2 1 0 0 0

#42

1100 AREA WELL INVENTORY FORM

Well Number: ANF #14 (42) Date: 12-4-90
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – Fig. ANF-1
Owner's Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: 373393.8N ~~South~~ East: 194352.6E
System: NAD

Township: 11N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table (see attached)
Well Construction Type: 6" casing

Pump System Type: unknown

Well Access for Sounding: yes

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 21 roll 1 K
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes
general construction log – Fig. ANF-2

Other:
Limited information available.
Info supplied by ANF.

4

1100 AREA WELL INVENTORY FORM

Well Number: ANF # 15 (43) Date 12-4-90
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – Fig. ANF-1
Owner's Address: Horn Rapids Road
Richland WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: 3713589.7N South: 1941365.2E
System: NAD

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table (see attached)
Well Construction Type: 6" casing
Pump System Type: unknown
Well Access for Sounding: Yes

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 22, roll K
Well Log Available: ____ No Y Yes } general construction log – Fig. ANF-2
Well Log Obtained: ____ No Y Yes

Other:
Limited information available.
Info supplied by ANF.

9212642102

#44

1100 AREA WELL INVENTORY FORM

Well Number: ANF # 16 (44) Date 12-4-90
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – FIG. ANF-1
Owner's Address: Horn Rapids Road
Richland WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: 373 3[illegible].3 N South: 194 3[illegible]16.8 E
System: NAD

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table (see attached)
Well Construction Type: 6" casing
Pump System Type: unknown.
Well Access for Sounding: Yes

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 23 roll 1K
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes General Construction log - FIG. ANF-2

Other:

Limited info. available.
Info. supplied by ANF

9212610003

#4

1100 AREA WELL INVENTORY FORM

Well Number: ANF#17 (45) Date 12-4-90
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – Fig. ANF-1
Owner's Address: Horn Rapids Road.
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below ground water table
Well Construction Type: 6" casing

Pump System Type: unknown

Well Access for Sounding: Yes

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 3 roll 2K
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes
General Construction log – Fig. ANF-2

Other:
Limited information available.
Info. supplied by ANF.

9212642 1004

#46

1100 AREA WELL INVENTORY FORM

Well Number: ANF #18 (46) Date: 12-4-90
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – Fig. 1
Owner's Address: Horn Rapids Road
Richland WA
Street Address of Residential Well Site if Different from Owner:
~~Ho~~

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ___ Yes ✓ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10 N Range: 28 E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water
Well Construction Type: 6" casing
Pump System Type: unknown
Well Access for Sounding: yes

Other Information:
Photograph Taken: ___ ✓ Yes Photo Number: 2 row 2
Well Log Available: ___ ✓ Yes general –
Well Log Obtained: ___ Yes Fig. ANF-2

Other: Limited Info. available
Info. from ANF

9212610005

(#47)

1100 AREA WELL INVENTORY FORM

Well Number: ANF #19 (47) Date 1-5-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels.

Well Location: (Location Map Sketched on Attached Sheet) – Fig. ANF-1
Owner's Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N372774.2 ~~South:~~ East E2303767.2
System: Lambert Grid

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table (see attached)
Well Construction Type: 6" casing

Pump System Type: unknown

Well Access for Sounding: Yes

Other Information:
Photograph Taken: X No ____ Yes Photo Number: No clearance
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes
General Construction log – Fig. ANF-2

Other:
Limited information available. Info. supplied by ANF
Well location within ANF facility.

9212642100 6

#48

1100 AREA WELL INVENTORY FORM

Well Number: ANF #20 (ANF-1) Date 5-91
Other Well ID: Surveyor SLV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) - ANF-1
Owner's Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N37258' ~~South~~ East: E 2303767.2
System: State Plane Grid

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water table (see attached)
Well Construction Type: 6" casing

Pump System Type: unknown

Well Access for Sounding: Yes

Other Information:
Photograph Taken: X No ____ Yes Photo Number ____ -orange
Well Log Available: ____ No ____ Yes
Well Log Obtained: ____ No ____ Yes General construction log - Fig. ANF-2

Other:
Little amount of info. available
Info from ANF.
Well located within ANF facility

9212610007

#49

1100 AREA WELL INVENTORY FORM

Well Number: ANF #21 (49) Date 1-5-91
Other Well ID: Surveyor: KSV

Name of Well Owner:

Well Location: (Location Map Sketched on Attached Sheet) - FIG. ANF-1
Owner Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N372371.7 ~~South~~ East: E2303767.7
System: Lambert Grid.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 101 below water level (see attached)
Well Construction Type: 6" casing
Pump System Type: unknown
Well Access for Sounding: yes

Other Information:
Photograph Taken: X No ____ Yes Photo Number: No clearance
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes } general construction log - FIG. ANF-2

Other:
Limited info. available. Info supplied by ANF.
Well located within ANF facility.

9212642100 8

#50

1100 AREA WELL INVENTORY FORM

Well Number: ANF #22 (50) 1-5-91
Other Well ID: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) - Fig. ANF-1
Owner's Address: Horn Rapids Road - Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring Well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: North: 137158.6.1 ~~South~~ East: E2303410.0
System: Lambert Grid.

Township: 10 N Range: 28 E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water level (see attached)
Well Construction: 6" casing
Pump System:
Well Access for Sounding:

Other Information:
Photograph Taken: X No ____ Yes Photo Number: No clearance
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes / General Construction log - Fig. ANF-2

Other:
Limited information available.
Info. supplied by ANF.
Well located within ANF facility

9212602109

WHC-MR- 0295

#51

1100 AREA WELL INVENTORY FORM

Well Number: ANF#23 (51) Date 1-5-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – FIG. ANF-1
Owner's Address: Horn Rapids Road
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring Well

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: North: N371555.1 ~~South~~ East: E2302498.8
System: Lambert Grid

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: UNKNOWN Total Depth (ft): 10' BELOW WATER LEVEL (SEE ATTACHED)
Well Construction Type: 6" CASING

Pump System Type: UNKNOWN

Well Access for Sounding: YES

Other Information:
Photograph Taken: X No ____ Yes Photo Number: NO CLEARANCE
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes } GENERAL CONSTRUCTION LOG – FIG. ANF-2

Other:

LIMITED AMOUNT OF INFO. AVAILABLE.
INFO. SUPPLIED BY ANF.
WELL LOCATED WITHIN ANF FACILITY.

9212642101 0

#52

1100 AREA WELL INVENTORY FORM

Well Number: ANF #24 (52) Date 1-5-91
Other Well ID: Surveyor: KSV

Name of Well Owner: ADVANCED NUCLEAR FUELS

Well Location: (Location Map Sketched on Attached Sheet) – FIG. ANF-1
Owner's Address: HORN RAPIDS ROAD
RICHLAND, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: MONITORING WELL

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: North: N372116.9 ~~South~~ EAST: E2302281.9
System: LAMBERT GRID

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW OF SW)

Well Specifications:
Installation Date: UNKNOWN Total Depth (ft): 10' BELOW WATER LEVE (SEE ATTACHED)
Well Construction Type: 6" CASING

Pump System Type: UNKNOWN

Well Access for Sounding: YES

Other Information:
Photograph Taken: X No ____ Yes Photo Number: NO CLEARANCE
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes } GENERAL CONSTRUCTION LOG – FIG. ANF-2

Other:
LIMITED AMT. OF INFO. AVAILABLE.
INFO SUPPLIED BY ANF.
WELL LOCATED WITHIN ANF FACILITY

9212521011

#53

1100 AREA WELL INVENTORY FORM

Well Number: ANF#25 (53) Date 1-5-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketched on Attached Sheet) – FIG. ANF-1
Owner's Address: Horn Rapids Road.
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: North: N372619.6 ~~South~~ East: E 2302040.7
System: Lambert Grid

Township: 10N Range: 28E Section (nearest 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water level ~~(see attached)~~
Well Construction Type: 6" casing
Pump System Type: unknown.
Well Access for Sounding: Yes

Other Information:
Photograph Taken: X No ____ Yes Photo Number: Nuclearance.
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes
} general construction log – FIG. ANF-2

Other:
Limited amt. of info. available.
Info. supplied by ANF.
Well located within ANF facility.

9212642101 2

#54

1100 AREA WELL INVENTORY FORM

Well Number: ANF # 26 (54) Date 1-5-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Advanced Nuclear Fuels

Well Location: (Location Map Sketch on Attached Sheet) – Fig. ANF-1
Owner's Address: Three Rapids Road
Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Well Use: Monitoring Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: N372884.2 ~~South~~ East: E2303266.6
System: Lambert Grid

Tp: 10N Range: 28E Section (Quarter 1/4 1/4): 15 (NW of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 10' below water level (see attached).
Well Construction Type: 6" casing.

Pump System Type: unknown

Well Access for Sounding: yes

Other Information:
Photograph Taken: X No ____ Yes Photo Number: No clearance.
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes } general construction log – Fig. ANF-2

Other:
Limited info. available. Info. supplied by ANF.
Well located on ANF facility.

9212621013

WHC-MR- 0295

#55

1100 AREA WELL INVENTORY FORM

Well Number: 399-8-2 (55) Date 1-5-91
Other Well ID: 10N/28E-10B01 Surveyor: KSV

Name of Well Owner: Hanford.

Well Location: (~~Location Map Sketched on Attached Sheet~~) see fig. 2, THIS REPORT
Owner's Address: Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North:~~ Lat. 462220 ~~South:~~ Long 119172c
System: Latitude/Longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 10 (NW of NE)

Well Specifications:
Installation Date: 5/1950 Total Depth (ft): 95.0
Well Construction Type: 8" casing.
Pump System Type: unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: X No ____ Yes Photo Number: ____
Well Log Available: X No ____ Yes
Well Log Obtained: X No ____ Yes

Other:
~~Maybe a duplicate of another well.~~
Could not located well in the field.
Source of Info: USGS.

9212642101 4

Source: USGS[a]

#55

11/20/1990 -M 10N/28E-10B01

SITE ID:	462220119172001
KEY.NO.:	10
FIELD CHECKED:	
COUNTY:	5
LOCATION OF DATA	C
VERIFICATION	
LATITUDE:	220
LONGITUDE:	1720
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-10B01
ALTITUDE:	394.87
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	119.00
WELL.DEPTH:	95.00
DEPTH SOURCE:	A
DATE DRILLED:	05/ /1950
LOG DATA:	
OTHER DATA:	
FIRST NAME:	399-8-2
LAST NAME:	HANFORD
DATE OWNED:	05/ /1950
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	55.72
WATER LEVEL DATE:	4/12/1951
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	A
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	43.00
OPENING BOTTOM:	70.00
OPENING DIAM.:	8.00
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	98.00
OPENING BOTTOM:	106.00
OPENING DIAM.:	8.00
REMARK:	CASING ELEVATION @ 396.07
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	PLUG @ 95FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	SEE MCGHAN ET. AL. 1985

9212620210015

#55

STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

REMARK: WAS 303-8
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

9212642101 6

F55A

1100 AREA WELL INVENTORY FORM

Well Number: 10/28 - 10G1 (54A) Date 1-7-91
Other Well ID: 10N/28E - 10G01, 3925-2, 10N/28E-10G01D1 Surveyor: KSV
Name of Well Owner: Hanford

Well Location: (~~Location Map Sketched on Attached Sheet~~) See figure 2
Owner's Address: Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North~~: lat. 46.62157 ~~South~~: long 119.17.33
System: latitude & longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 4 (SW of NE)

Well Specifications:
Installation Date: 4/51 Total Depth (ft): 417
Well Construction Type: unknown
Pump System Type: unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: X No ____ Yes Photo Number: Could not find.
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes
Summers & Schwab USGS

Other: Originally 214' deep; deepened well in 1954 to 417'. Could not locate well in the field.

Source of info:
USGS catalogue
Oct 5, 1972
Summers & Schwab.

B-187

TABLE 2.—*Logs of type wells on the Hanford Reservation*

[Stratigraphic designations by R. C. Newcomb]

Materials	Thickness (feet)	Depth (feet)
9/28-5C1 [City of West Richland. Driller's log]		
Alluvium:		
Sand and top soil	8	8
Glaciofluviatile and fluviatile deposits (mostly):		
Sand, gravel, and boulders, water-bearing	50	58
Ringold Formation:		
Clay, blue	17	75
Sand gravel, and boulders, water-bearing	7	82
Sand and Clay, water-bearing	8	90
Sand, blue	4	94
Gravel and boulders, water-bearing	9	103
Clay, brown	18	121
Sand and gravel, water-bearing	4	125
Clay	46	171
Sand, loose	2	173
Basalt of the Columbia River Group:		
Basalt, porous, black, water-bearing	8	181
Basalt, hard, dark	3	184
Basalt, porous, water-bearing	4	188
Basalt, hard, dark	3	191
Lava rock, "burned"	6	197
Basalt, hard, gray	3	200
Basalt, porous, water-bearing	5	205
Basalt, hard, gray	76	281
Clay, gray-green	59	340
Basalt, hard, gray	150	490
Clay, gray-green	35	525
Basalt, medium-hard, gray	5	530
Clay, gray-green	10	540
Basalt, gray	32	572
9/28-15J1 [City of Richland. Drilled and recorded by A. A. Durand & Son, 1943]		
Alluvium:		
Sand, fine	18	18
Glaciofluviatile and fluviatile deposits(?):		
Silt and clay	10	28
Sand and gravel	4	32
Gravel, coarse	2	34
Sand	7	41
Sand, coarse, and gravel	4	45
Sand, fine, and coarse gravel	16	61
Gravel and boulders	9	70
Ringold(?) Formation:		
Clay	2	72
10/28-10G1 [Drilling, sampling, and stratigraphic designations of samples by U.S. Geol. Survey. Leveling and altitude data by Gen. Elec. Co.]		
Alluvium:		
Sand, silty; about 40 percent quartz and 60 percent basalt; angular to subangular; poorly sorted—mostly coarse to fine sand with some ¼- to ½-in. diameter gravel and a few boulders; some artificial fill in places	3	3
Glaciofluviatile and fluviatile deposits:		
Gravel, sandy and bouldery; contains a small amount of silt; basalt predominates in the gravel and coarse sand and makes up 80 percent of the finer sand; sand is angular to subangular, and gravel is subrounded to subrounded	12	15
Gravel, sandy and slightly silty; pebbles, averaging 1 to 3 in. in diameter, are subrounded to subangular, about 40 percent basalt and 60 percent exotic types; material is about 40 percent gravel, 55 percent medium to very fine sand, and 15 percent silt	6	21
Gravel, sandy; gravel forms 60 percent of sample, sand 25 percent, and silt 15 percent; ratio of basalt to exotic types in gravel is about 65 percent-35 percent; sand is about 55 percent basalt and 45 percent exotics and quartz; gravel is subangular to subrounded and has 3-in. maximum diameter and 1-in. average diameter	4	25
Gravel, coarse to fine, and coarse sand; maximum diameter of gravel 4 in., average diameter 2 in.; pebbles form about 80 percent of bed; basalt component of pebble gravel about 40 percent at 30-ft depth, decreasing gradually to 20 percent at 50-ft depth; basalt in coarse to medium sand decreases gradually from 30 percent at 30-ft depth to 5 percent at 50-ft depth; almost no silt present	25	50
Ringold Formation:		
Gravel; mostly exotic rock types; fine to coarse from ¼ to 6 in. in diameter, although mainly pebbles with occasional cobbles, in a medium clean micaceous, quartzose sand matrix; upper 10 ft of this gravel is highly calcareous and gives strong reaction to acid; sand content increases to 55 percent of sample in 57- to 60-ft zone, remainder being gravel	13	63
Gravel, exotic-type, subrounded to subangular; has thin silt and clay zones in bottom foot of bed	4	67
Clay, light-tan; contains a few ½-in. angular pebbles	5	72
Clay, light-tan, finely micaceous, slightly silty	9	81
Clay, light-tan, slightly silty; has a few 1/10- to ¼-in. diameter rounded to subrounded indurated claystone nodules	3	84
Gravel, granule and pebble, in a silty clay matrix; approximate percentages: granule gravel, 75; pebble gravel, 15; silty clay, 10; rock particles are about half exotic and half basalt, all rounded to subrounded	3	87

9 2 1 2 5 4 2 1 0 1 9

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TABLE 2. — *Logs of type wells on the Hanford Reservation* — Continued

Materials	Thickness (feet)	Depth (feet)
Ringold Formation—Continued		
Siltstone, light-tan, clayey, very finely micaceous	4	91
Sand, quartzose and micaceous, medium to fine, well-sorted, over 90 percent siliceous, and gravel mainly of dark exotic types mostly about ½ to 1½ in. in diameter; gravel about 30 percent of sample in 91- to 96-ft zone increasing to 50 percent of sample in the 96- to 99-ft zone	8	99
Sand, silty and clayey, and gravel; gravel, maximum diameter 1 in., forms approximately 20 percent of sample; rude ⅛-in.-thick weathering rind on basalt pebbles	3	102
Sand, quartzose and micaceous, and gravel, as in 91- to 96-ft zone; good weathering rind on basalt	4	106
Gravel, sandy, as in 91- to 99-ft bed except that gravel component has increased to 80 percent of sample; gravel in lower 6 ft increases in size to maximum diameter of 4 in. and average diameter of 2½ in.; larger gravel is about 20 percent basalt having weathering rinds	10	116
Sand, quartzitic and micaceous, medium to fine, well-sorted; medium to heavy response to acid test	4	120
Siltstone, gravelly and slightly clayey; gravel of ¼-in. diameter forms 40 percent of bed in 120- to 123-ft zone, is absent in 123- to 126-ft zone and increases to 50 percent of sample in 126- to 130-ft zone, where the maximum diameter is 3 in.; gravel is mainly exotic types, and sand is siliceous	10	130
Sand, silty; contains about 3 percent subrounded granule gravel	6	136
Gravel, sandy and bouldery; gravel forms about 80 percent of bed, is 50 percent granules, and is composed mainly of dark exotic rocks; cemented sand coatings on pebbles and excellent ⅛-in.-thick rinds on basalts	5	141
Sand, fine to medium, micaceous; about 90 percent clear angular to subangular quartz, about 2 percent basalt, and estimated 1 percent calcareous grains; very reactive to acid test; a sand interbed in gravel of 136- to 165-ft unit	3	144
Gravel, pebble and boulder, in a clayey sand; subrounded gravel, mainly of exotic types, forms 50 percent of bed in 144- to 156-ft zone and increases to 80 percent in 156- to 165-ft zone	21	165
Gravel, boulder, cobble, and pebble; pebble gravel is mainly ½ to 1 in. in diameter	6	171
Ringold Formation—Continued		
Silt, clayey, gray-tan; contains about 5 percent angular granules — both exotics and basalt; fewer rock particles in lower half of bed than in upper half	6	177
Clay, silty, gray-tan; has thin laminae of fine gray-white volcanic ash near bottom of bed	13	190
Clay, blue-gray, has some greenish laminae	2	192
Sand, basaltic; sand is 80 percent coarse to fine black basalt, with 10 percent quartz and 10 percent calcareous cement; some basalt and cemented fragments are ¼ in. in diameter; pyrite occurs as rare vesicle filling in basalt pebbles; water-bearing	2	194
Basalt of the Columbia River Group:		
Basalt, black, dense to vesicular; contains about 30 percent khaki banded and botryoidal opaline vesicle fillings, together with some clear feldspar and rounded and frosted quartz vesicle fillings; secondary minerals abundant in upper part of basalt; basalt is weathered and clayey in upper part but fresh and hard below 200-ft depth	18	212
10/28-17B1 [Drilling, sampling, and stratigraphic designations by U.S. Geol. Survey]		
Alluvium (wind-worked):		
Sand, mixed, very fine to coarse	12	12
Glaciofluviatile and fluviatile deposits:		
Sand, mixed, fine to coarse, quartz, exotic, and basaltic	4	16
Sand; same as just above, but with pods of clay	5	21
Sand and gravel, gray, fine to coarse	64	85
Sand and gravel	8	93
Sand and gravel; mixed grain sizes of a quartzose tan-white sand with 35 percent granule, pebble, and cobble gravel. Gravel consists equally of basalt and upriver exotic rock types; 93- to 128-ft zone is probably largely reworked Ringold material	35	128
Ringold Formation:		
Gravel and sand; granule and pebble basaltic and exotic gravel with 30 to 50 percent mixed quartzose sand; some basalt pebbles have iron-cemented sand coatings and weathering rinds	4	132
Sand and some gravel; medium and coarse brown-gray sand with 10 percent granule and pebble basaltic and exotic gravel	16	148
Sand and gravel	37	185
Silt, clayey; greenish-brown and bluish-gray laminated silt with some basalt pebbles and minor quantities of fine quartz sand; lowest 1 ft contains well-weathered basalt fragments	36	221

B-189

Driller's log of 399-5-2[1] (N053137, E011393) Hanford Wells, 1973

Land surface altitude[2] 389 feet msl

1. Also labeled 303-13
2. Calculated from altitude of top of casing given in Hanford Wells, 1973
3. Cable tool rig

Depth (ft) From	To	Description
0	3	topsoil, small boulders, sand and gravel
3	14	boulders, sand, gravel and silt
14	15	sand, gravel and silt
15	18	sand, gravel and little silt
18	25	sand, gravel and very little silt
25	32	gravel and sand
32	36	gravel, sand and a little silt
36	45	gravel, sand and very little silt
45	48	white sand and a little gravel
48	52	white sand and a lot more gravel
52	59	white sand and mixture of gravel
59	60	white sand and gravel
60	65	white sand and mixture of clay and gravel
65	67	white sand, small gravel, more clay
67	69	clay, gravel and coarse sand; at 69' clay, mixture of blue shale and coarse sand
69	75	blue clay, very sticky
75	86	blue, brown and yellow clay
86	89	little clay, gravel and coarse sand
89	90	sandy clay, very little gravel
90	95	clay, sand, and more gravel; 89' to 93' seems to have small layers of clay, gravel, and sand
95	97	black sand, little clay and gravel
97	100	black sand and little gravel
100	105	black sand and gravel
105	108	black sand and gravel; large percentage of basalt gravel
108	118	sand and gravel, mainly basalt
118	120	sand and gravel, mainly basalt, and a little wood
120	122	sand, gravel and clay
122	127	sandy clay
127	132	sandy clay and a little gravel
132	136	sand, clay and gravel
136	137	sand, gravel and clay; 137' hit rock at an angle or bent drive shoe, put boulders in hole trying to get solid sticking surface
137	152	sand, gravel and boulders; caves
152	156	sand, basalt rock and clay
156	165	sand, basalt gravel and clay
165	176	sand, gravel and a little clay
176	189	clay
189	192	clay and a little coarse sand
192	194	clay, black sand and basalt; at 192' hit basalt and sand
194	195	black sand and basalt
195	202	basalt, sand and a little clay; 202' very hard basalt
202	207	basalt and sand; brown chert grains, fine sand with small less than .1 mm quartz grains, basalt microcrystalline, micro-scoriaceous

9 2 1 2 6 4 2 1 0 2 0

Driller's log of 399-5-2 cont

Depth (ft) From	To	Description
207	208	basalt; 208' very hard basalt
208	212	basalt; micro scoria, tachlyte, black, dense, micro vesicles not filled, very glassy, some tuff and palagonite
212	218	pure black basalt; breccia palagonite, secondary quartz and chalcedony, brown chert; hole is being deepened after 3 years
218	220	basalt, black; micro breccia, palagonite, chert, some scoria, dark red brown basalt
220	225	porous, basalt; less breccia and chert, more scoria, tachylite
225	231	porous basalt with some volcanic mud; breccia and palagonite common
231	234	porous basalt, some pebbles and small gravel at 232', also volcanic mud and ash; glassy basalt, palagonite
234	236	hard basalt
236	239	layer of hard basalt, then layer of porous basalt with a few basalt gravel and some volcanic mud and ash
239	241	basalt, very hard; glassy, palagonite and breccia
241	245	hard basalt; basalt glass and palagonite, sample very dirty and mudded up
245	249	hard basalt
249	253	hard basalt; dense black, very glassy, sample mudded up
253	256	very hard basalt; tachylite, breccia and palagonite, sample heavily mudded
256	258	very hard basalt
258	260	basalt is super hard; tachylite glass, palagonite, some breccia, sample heavily mudded up; "3/11/64 much of what is here called hard basalt is evidently a basalt breccia or pillow basalt; microscopic studies show considerable palagonite; R&B"
260	264	basalt, very hard
264	266	hard basalt; palagonite, some breccia, basalt is dense and not as glassy
266	270	hard basalt; 270' dense vesicular micropalagonite
270	275	hard basalt-broke through basalt at 275'; 275' black, glassy vesicular, secondary chert in vesiclas, micropalagonite
275	278	greenish blue silt-basalt chip-sand formation; top of break is a greenish blue silt, sand and small gravel, also some lava mud
278	280	bluish-green silt (shale), sand, small gravel
280	295	bluish green shale and silt, very little sand, few granules of basalt gravel; looks like a rotten shale
295	300	green silt, lava mud, basalt granules
300	305	lava mud, basalt grindings; this is a later of basalt, starts at 300'
305	310	basalt, porous, with lava mud; this is a layer of basalt
310	315	basalt, semi-hard
315	318	shale, basalt mud, basalt gravel
318	330	rotten basalt, also a bluish-green shale and dark green quartz
330	340	basalt with some green shale
340	341	no record, probably softer basalt
341	345	basalt, very little blue shale; 341' to 347' basalt got harder
345	350	very hard basalt
350	355	basalt, hard; broke rien off drilling jars, recovered 10 big pieces, drilling up rest

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#55A

Driller's log of 399-5-2 cont

Depth (ft) From	To	Description
355	366	porous basalt
366	371	basalt, harder
371	375	very hard basalt
375	380	hard basalt, gray
380	384	gray basalt, very hard
384	386	hard gray basalt
386	389	drilling up some steel somebody dropped into my well over the weekend
389	395	basalt
395	405	basalt, black, not too hard; basalt is softer and more porous
405	407	harder basalt
407	416	basalt
416	420	basalt, harder
420	424	solid basalt

9212642102 2

#55A

Source: USGS

11/30/1990 -M 10N/28E-10G01

SITE ID:	4622(171701
KEY.NO.:	2111
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA	C
IFICATION	
ITUDE:	462157
NGITUDE:	1191733
AT/LONG ACC:	S
LOCAL NO.:	10N/28E-10G01
ALTITUDE:	389.25
ALT.ACC:	1
USE OF SITE:	Z
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	4.00
WELL.DEPTH:	.00
TH SOURCE:	
RILLED:	(951
TA:	D
DATA:	
FIRST NAME:	399-
LAST NAME:	HANFO
DATE OWNED:	04/ /19
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	8.59
ER LEVEL DAT	4/12/1951
L.TIME:	
.L. METHOD:	F
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	9.30
WATER LEVEL DATE:	/20/1953
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	S
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	110DUNE
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SAND
LITHOLOGIC MODIFIER:	SILTY
% WATER.CONTRIBUTED:	-99
UNIT TOP:	3.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	GRVL
LITHOLOGIC MODIFIER:	SANDY
WATER.CONTRIBUTED:	-99

9 2 1 2 6 2 1 0 2 3

#5

UNIT TOP: 50.00
GEOHYDROLOGIC UNIT: 121MDRG
RELATIVE CONTRIBUTION: U
LITHOLOGY: GRVL
LITHOLOGIC MODIFIER: + SAND CLAY
% WATER.CONTRIBUTED: -99

UNIT TOP: 171.00
GEOHYDROLOGIC UNIT: 121LRRG
RELATIVE CONTRIBUTION: U
LITHOLOGY: CLAY
LITHOLOGIC MODIFIER: BLUE, + SILT
% WATER.CONTRIBUTED: -99

UNIT TOP: 192.00
GEOHYDROLOGIC UNIT: 121BSRG
RELATIVE CONTRIBUTION: U
LITHOLOGY: SAND
LITHOLOGIC MODIFIER:
% WATER.CONTRIBUTED: -99

UNIT TOP: 194.00
GEOHYDROLOGIC UNIT: 122SDLM
RELATIVE CONTRIBUTION: U
LITHOLOGY: BSLT
LITHOLOGIC MODIFIER:
% WATER.CONTRIBUTED: -99

REMARK: WAS 303-13
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

REMARK: DEEPENED TO 424FT; 7/54
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

REMARK: WB 192-194
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

9 2 1 2 6 4 2 1 0 2 4

#55A

Source USGS

11/30/1990 -M 10N/28E-10G01D1

SITE ID:	2157119173301
KEY.NO.:	6599
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	462157
LONGITUDE:	1191733
LAT/LONG ACC:	S
LOCAL NO.:	10N/28E-10G01D1
ALTITUDE:	389.1
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	424.00
W. L. DEPTH:	417.00
DEPTH SOURCE:	A
DATE DRILLED:	7/ 1/1954
LOG DATA:	DG
OTHER DATA:	
FIRST NAME:	399-5-2
LAST NAME:	HANFORD
DATE OWNED:	7/ 1/1954
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	8.00
WATER LEVEL DATE:	7/ 1/1954
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	110DUNE
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SAND
LITHOLOGIC MODIFIER:	SILTY
% WATER.CONTRIBUTED:	-99
UNIT TOP:	3.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	GRVL
LITHOLOGIC MODIFIER:	SANDY
% WATER.CONTRIBUTED:	-99
UNIT TOP:	50.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	GRVL
LITHOLOGIC MODIFIER:	+ SAND,CLAY
% WATER.CONTRIBUTED:	-99

#55A

UNIT TOP:	171.00
GEOHYDROLOGIC UNIT:	121LRRG
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	BLUE, + SILT
% WATER.CONTRIBUTED:	-99

UNIT TOP:	192.00
GEOHYDROLOGIC UNIT:	121BSRG
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SAND
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	-99

UNIT TOP:	194.00
GEOHYDROLOGIC UNIT:	122SDLM
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	BSLT
LITHOLOGIC MODIFIER:	ELBG 28FT SHLE
% WATER.CONTRIBUTED:	-99

REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

REMARK:	WAS 303-13
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642102 6

#56

1100 AREA WELL INVENTORY FORM

Well Number: 399-6-1 (56) Date 1-7-91
Other Well ID: 10N/28E-10M01 Surveyor: KSV
3039

Name of Well Owner: HANFORD

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ see fig. 2, THIS REPORT
Owner's Address:
RICHLAND, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North~~: LA[illegible]205 ~~South~~: LONG. [illegible]1659
System: LATITUDE/LONGITUDE

Township: 10N Range: 28E Section (nearest 1/4 1/4): 10 (SE of NE)

Well Specifications:
Installation Date: 6/50 Total Depth (ft): 67'
Well Construction Type: 8" casing

Pump System Type: unknown

Well Access for Sounding: unknown

Other Information:
Photograph Taken: X No ____ Yes Photo Number: N/a
Well Log Available: X No ____ Yes
Well Log Obtained: X No ____ Yes

Other:
~~Maybe a duplicate well~~
Could not locate well in the field.
Source of info: USGS

9212621027

Source: USGS a

#56

11/26/1990 -M 10N/28E-10H01

SITE ID:	462205119165901
KEY.NO.:	2112
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	462205
LONGITUDE:	1191659
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-10H01
ALTITUDE:	385.48
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	101.00
WELL.DEPTH:	67.00
DEPTH SOURCE:	A
DATE DRILLED:	06/ /1950
LOG DATA:	
OTHER DATA:	
FIRST NAME:	399-6-1
LAST NAME:	HANFORD
DATE OWNED:	06/ /1950
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	47.47
WATER LEVEL DATE:	4/12/1951
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	A
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	25.00
OPENING BOTTOM:	50.00
OPENING DIAM.:	8.00
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	65.00
OPENING BOTTOM:	75.00
OPENING DIAM.:	8.00
REMARK:	CASING ELEVATION @ 386.98
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 303-9
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	SEE MCGHAN ET. AL. 1985

9 2 1 2 6 4 2 1 0 2 8

#56

STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

9212642102 9

#57

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E-11M01 (67) Date 1-7-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Hanford

Well Location: (~~Location Map Sketched on Attached Sheet~~) See fig. 2, THIS REPORT
Owner's Address:
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Industrial.

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North:~~ LAT. 462154 ~~South~~ Long. 1191653
System: Latitude/Longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): (SW of SW) Sec 11.

Well Specifications:
Installation Date: 1958 Total Depth (ft): 260.
Well Construction Type: unknown

Pump System Type: unknown

Well Access for Sounding: unknown.

Other Information:
Photograph Taken: X No ____ Yes Photo Number: ____
Well Log Available: X No ____ Yes
Well Log Obtained: X No ____ Yes

Other:
Maybe ~~a duplicate and maybe~~ mislocated.
Could not find in the field.
Source of info: USGS.

9212642103 0

Source: USGS[a]

#57

11/21/1990 -M

10N/28E-11M01

SITE ID:	462150119164601
KEY.NO.:	2131
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	462154
LONGITUDE:	1191653
LAT/LONG ACC:	M
LOCAL NO.:	10N/28E-11M01
ALTITUDE:	385.00
ALT.ACC:	40
USE OF SITE:	W
NO.1 WATER USE:	N
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	260.00
WELL.DEPTH:	260.00
DEPTH SOURCE:	D
DATE DRILLED:	/ /1958
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	/ /1958
STREET ADDR.:	
CITY ADDR.:	
UNIT TOP:	-99.00
GEOHYDROLOGIC UNIT:	122SDLM
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	BSLT
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	-99
REMARK:	MISLOCATED?; MAY BE IN 14M?
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 2 1 0 3 1

WHC-MR- 0295

#58

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E -14D01 (58) Date 1-7-91
Other Well ID: Surveyor: KSV

Name of Well Owner: ~~unknown~~ Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ See fig. 2, this report
Owner's Address:
~~unknown~~ Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: unknown

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ~~unknown~~ No

Well Coordinates: ~~North~~ Lat.: 462126 ~~South~~ Long.: 1191647
System: Latitude/Longitude.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 14 (NW of NW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 79'
Well Construction Type: unknown

Pump System Type: unknown

Well Access for Sounding: unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:
Maybe a duplicate well. (#29)
Could not locate in the field.
Source of info: USGS.

9212642103 2

Source: USGS[a]

#58

11/21/1990 -M

10N/28E-14D01

SITE ID:	462126119164701
KEY.NO.:	2138
FIELD CHECKED:	M
COUNTY:	5
LOCATION OF DATA	C
VERIFICATION	
LATITUDE:	462126
LONGITUDE:	1191647
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-14D01
ALTITUDE:	385.00
ALT.ACC:	40
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	79.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	/ /
STREET ADDR.:	
CITY ADDR.:	

9212621033

#59

1100 AREA WELL INVENTORY FORM

Well Number: H. HOGUE #1 (59) Date 1-7-91
Other Well ID: 10N/28E - 14G01 Surveyor: KSV

Name of Well Owner: HAROLD HOGUE

Well Location: (~~Location Map Sketched on Attached Sheet~~) see fig 2, THIS REPORT
Owner's Address: unknown

Street Address of Residential Well Site if Different from Owner:

Current Well Use: domestic

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North~~/Lat. 462104 ~~South~~/Long. 1191614
System: Latitude/Longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 14 (SW of NE)

Well Specifications:
Installation Date: 11/87 Total Depth (ft): 46.0
Well Construction Type: 9" casing
Pump System Type: unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: X No ____ Yes Photo Number: ____
Well Log Available: X No ____ Yes
Well Log Obtained: X No ____ Yes

Other:
Could not find well in location given.
Source of info: USGS.

9212642103 4

#59

SOURCE: USGS a

11/26/1990 -M 10N/28E-14G01

SITE ID:	4119161401
KEY.NO.:	6650
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	400104
LONGITUDE:	1191614
LAT/LONG ACC:	M
LOCAL NO.:	10N/28E-14G01
ALTITUDE:	1105.00
ALT.ACC:	20
USE OF SITE:	W
NO.1 WATER USE:	H
NO.2 WATER USE:	
NO.3 WATER USE:	
DEPTH	46.00
DEPTH:	46.00
DEPTH SOURCE:	D
DATE DRILLED:	11/24/1987
LOG D[illegible]:	D
OTHER DATA:	
FIRST NAME:	HAROLD
LAST NAME:	HOGUE
DATE OWNED:	11/24/1987
STREET ADDR.:	
[illegible]R.:	
[illegible] LEVEL:	15.00
WATER LEVEL DATE:	11/24/1987
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	B
DISCHARGE:	50.00
DRAWDOWN:	-99.00
TIME:	1.0
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	41.00
OPENING BOTTOM:	4[illegible].00
OPENING DIAM.:	9.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SAND,GRVL
% WATER.CONTRIBUTED:	-99
UNIT TOP:	44.50
GEOHYDROLOGIC UNIT:	121RGLD

9212610035

#59

RELATIVE CONTRIBUTION:	U
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	LIGHT BROWN
% WATER.CONTRIBUTED:	-99

9212642103 6

#60

1100 AREA WELL INVENTORY FORM

Well Number: 10N E-14K03(60) Date 1-7-91
Other Well ID: Surveyor: KSV

Name of Well Owner: Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ See fig 2, THIS REPORT
Owner's Address: Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: unknown

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: unknown ___ Yes ___ No

Well Coordinates: ~~North:~~ Lat. 462059 ~~South:~~ Long. 1191602
System: Latitude / Longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 14 (NE of SW)

Well Specifications:
Installation Date: unknown Total Depth (ft): unknown
Well Construction Type: unknown
Pump System Type: unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: ✓ No ___ Yes Photo Number: ___
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:

Could not find in the field.
Source of info: USGS

9212610037

SOURCE: USGS.

#60

11/21/1990 -M

10N/28E-14K03

SITE ID:	462059119160201
KEY.NO.:	2141
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	462059
LONGITUDE:	1191602
LAT/LONG ACC:	S
LOCAL NO.:	10N/28E-14K03
ALTITUDE:	381.00
ALT.ACC:	1
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	/ /
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	34.60
WATER LEVEL DATE:	2/ 1/1949
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	
REMARK:	NO ORIGINAL DATA ON FILE; 11/20/90
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642103 8

#61

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E-14C01 (61) Date 1-7-91
Other Well ID: E-1 Surveyor: KSV

Name of Well Owner: Hanford

Well Location: (~~Location Map Sketched on Attached~~ Sheet) THIS REPORT
Owner's Address:
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North~~: Lat 462100 ~~South~~: Long 1191624
System: Latitude / Longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 14 (NE of SW)

Well Specifications:
Installation Date: unk Total Depth (ft): unknown
Well Construction Type: unknown
Pump System Type: unknown
Access for Sounding: unknown

Other Information
Photograph: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Could not find in the field.
Source of info. USGS

9212621039

#61

Source: USGS

11/21/1990 -M 10N/28E-14L01

SITE ID:	462100119162401
KEY.NO.:	2142
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	462100
LONGITUDE:	1191624
LAT/LONG ACC:	S
LOCAL NO.:	10N/28E-14L01
ALTITUDE:	397.90
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	6/18/1952
STREET ADDR.:	
CITY ADDR.:	
REMARK:	WAS F-1
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 398.71
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642104 0

#62

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E-26B02 (62) Date 1-7-91
Other Well ID: F-16 Surveyor: KSV

Name of Well Owner: Hanford

Well Location: (~~Location Map Sketched on Attached Sheet~~) See fig 3, THIS REPORT
Owner's Address: Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: unknown

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North:~~ Lat. 461940 ~~South:~~ Long. 1191603
System: Latitude / Longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (NW of NE)

Well Specifications:
Installation Date: unknown Total Depth (ft): unknown
Well Construction Type: unknown
Pump System Type: unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:

May be a duplicate residential well, not enough info available to correlate.

Source of info: USGS.

9212610411

#62

Source: USGS[a]

11/26/1990 -M 10N/28E-26B02

SITE ID:	461940119160301
KEY.NO.:	2174
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461940
LONGITUDE:	1191603
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26B02
ALTITUDE:	380.00
ALT.ACC:	1
USE OF SITE:	Z
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	10/11/1950
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	33.42
WATER LEVEL DATE:	3/22/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	25.97
WATER LEVEL DATE:	10/11/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	WAS F-16
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 380.69
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642104 2

63

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E-26K01 (63) Date 1-7-91
Other Well ID: F-48 Surveyor: KSV

Name of Well Owner: Hanford.

Well Location: (~~Location Map Sketched on Attached Sheet~~) see fig 3, THIS REPORT
Owner's Address: Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North~~ Lat. 461913 ~~South~~: Long. 119160l
System: Latitude/Longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (NW of SE)

Well Specifications:
Installation Date: unknown Total Depth (ft): 25
Well Construction Type: unknown
Pump System Type: unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: X No ____ Yes Photo Number: ____
Well Log Available: X No ____ Yes
Well Log Obtained: X No ____ Yes

Other:
(#133)
May be a duplicate residential well; not enough info. available to correlate.
Source of info: USGS.

9212260210043

SOURCE: USGS[a]

#63

11/26/1990 -M

10N/28E-26K01

SITE ID:	461915119161001
KEY.NO.:	2187
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461913
LONGITUDE:	1191601
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26K01
ALTITUDE:	379.51
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	24.70
WELL.DEPTH:	24.70
DEPTH SOURCE:	A
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	10/11/1950
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	25.92
WATER LEVEL DATE:	10/11/1950
W.L.TIME:	
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	WAS F-48
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 381.61
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642104 4

#64

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E-26M01 (64) Date 1-7-91
Other Well ID: F-18 Surveyor: KSV

Name of Well Owner: Hanford.

Well Location: (~~Location Map Sketched on Attached Sheet~~) See fig 2, THIS REPORT
Owner's Address: Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North:~~ Lat. 461908 ~~South:~~ Long. 1191638
System: Latitude/Longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (NW of SW)

Well Specifications:
Installation Date: unknown. Total Depth (ft): unknown
Well Construction Type: unknown

Pump System Type: unknown

Well Access for Sounding: unknown.

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:

~~May be a duplicate well.~~
Could not find in the field.
Source of info: USGS.

9212610245

Source: USGS

11/26/1990 -M 10N/28E-26M01

SITE ID:	461914119165201
KEY.NO.:	2188
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461908
LONGITUDE:	1191638
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26M01
ALTITUDE:	406.60
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	3/22/1950
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	56.33
WATER LEVEL DATE:	3/22/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	42.75
WATER LEVEL DATE:	8/16/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	50.44
WATER LEVEL DATE:	10/11/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	53.51
WATER LEVEL DATE:	10/17/1952
W.L.TIME:	1500
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S

9212642210046

#64

REMARK: WAS F-18
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

REMARK: CASING ELEVATION @ 406.55
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

9 2 1 2 6 0 2 1 0 4 7

WHC-MR- 0295

#65

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E-27K01 (65) Date 1-7-91
Other Well ID: F-21 Surveyor: KSV

Name of Well Owner: Hanford.

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ fig 2, THIS REPORT
Owner's Address: Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North:~~ Lat. 461914 ~~South:~~ Long. 1191717
System: Latitude/Longitude.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 27 (NW of SE)

Well Specifications:
Installation Date: unknown Total Depth (ft): unknown
Well Construction Type: unknown
Pump System Type: unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:
~~Maybe a duplicate well.~~
Could not find in the field.
Source of info: USGS.

9212642 1048

#65

SOURCE: USGS[a]

11/26/1990 -M 10N/28E-27K01

SITE ID:	461913119173001
KEY.NO.:	2199
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461914
LONGITUDE:	1191717
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-27K01
ALTITUDE:	392.00
ALT.ACC:	5
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	6/18/1952
STREET ADDR.:	
CITY ADDR.:	
REMARK:	WAS F-21
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 392.68
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212521049

#66

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E-34C02 (66) Date 1-7-91
Other Well ID: F-14 Surveyor: KSV

Name of Well Owner: Hanford.

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ Fig 2, THIS REPORT
Owner's Address:
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North~~ Lat 461851 ~~South~~ Long. 1191749
System: Latitude/Longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 34 (NE of NW)

Well Specifications:
Installation Date: Unknown Total Depth (ft): Unknown
Well Construction Type: Unknown
Pump System Type: Unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:

May be a duplicate well. (#79)
Could not find in the field.
Source of info: USGS.

9212642 1050

SOURCE: USGS[a]

#66

11/26/1990 -M

10N/28E-34C02

SITE ID:	461846119174901
KEY.NO.:	2223
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461851
LONGITUDE:	1191749
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-34C02
ALTITUDE:	372.10
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	2/ 1/1949
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	14.36
WATER LEVEL DATE:	2/ 1/1949
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	WAS F-44
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 374.35
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212621051

WHC-MR- 0295

#67

1100 AREA WELL INVENTORY FORM

Well Number: 10/28E-34C03 (67) Date 1-7-91
Other Well ID: F-46 Surveyor: KSV

Name of Well Owner: Hanford.

Well Location: (~~Location Map Sketched on Attached Sheet~~) Fig 2, This Report
Owner's Address:
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: unknown.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North~~ Lat. 461845 ~~South~~ Long. 1191748
System: Latitude / Longitude.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 34 (NE of NW)

Well Specifications:
Installation Date: unknown Total Depth (ft): unknown.
Well Construction Type: unknown
Pump System Type: unknown
Well Access for Sounding: unknown.

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:
May be a duplicate well. (#78)
Could not find in the field.
Source of info: USGS.

9212642105 2

SOURCE: USGS a

#67

11/26/1990 -M

10N/28E-34C03

SITE ID:	461845119174801
KEY.NO.:	2224
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461845
LONGITUDE:	1191748
LAT/LONG ACC:	S
LOCAL NO.:	10N/28E-34C03
ALTITUDE:	372.80
ALT.ACC:	1
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	12/30/1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	14.84
WATER LEVEL DATE:	12/30/1948
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	WAS F-46
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 369.8
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 2 1 0 5 3

#68

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E - 35A02 (68) Date 1-7-91
Other Well ID: F-9 Surveyor: KSV

Name of Well Owner: Hanford

Well Location: (~~Location Map Sketched on Attached Sheet~~) See fig. 3, THIS REPORT
Owner's Address: ~~Hanford~~
Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ___ Yes X No

Well Coordinates: ~~North:~~ Lat. 461853 ~~South:~~ Long. 1191540
System: Latitude/Longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (NE of NE)

Well Specifications:
Installation Date: unknown Total Depth (ft): unknown
Well Construction Type: unknown
Pump System Type: unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: ✓ No ___ Yes Photo Number: ___
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:

Maybe a duplicate residential well; not enough info. available to correlate. (#116 or #123?)

Source of info: USGS.

9 2 1 2 6 4 2 1 0 5 4

Source: USGS a

#68

11/26/1990 -M

10N/28E-35A02

SITE ID:	461845119155001
KEY.NO.:	2232
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461853
LONGITUDE:	1191540
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35A02
ALTITUDE:	378.90
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	7/29/1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	31.11
WATER LEVEL DATE:	7/29/1948
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	WAS F-9
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 379.44
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WELL REPT. DRY @ TIMES, 6/18/52
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

#69

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E-35A03 (69) Date 1-7-91
Other Well ID: F-40 Surveyor: KSV

Name of Well Owner: Hanford

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ Fig 3, THIS REPORT
Owner's Address:
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North~~: lat. 461846 ~~South~~: long. 1191549
System: latitude/longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (NE of NE)

Well Specifications:
Installation Date: unknown Total Depth (ft): 37
Well Construction Type: unknown
Pump System Type: unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:
Maybe a duplicate residential well; not enough info. to correlate. (#116 or #123?)
Source of info: USGS

9212642 1056

#69

Source: USGS a

11/26/1990 -M 10N/28E-35A03

SITE ID:	461846119154901
KEY.NO.:	2233
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461846
LONGITUDE:	1191549
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35A03
ALTITUDE:	380.00
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	38.60
WELL.DEPTH:	37.20
DEPTH SOURCE:	S
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	10/11/1950
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	-99.00
WATER LEVEL DATE:	2/28/1950
W.L.TIME:	
W.L. METHOD:	
W.L. STATUS:	D
WATER LEVEL SOURCE:	S
WATER LEVEL:	29.69
WATER LEVEL DATE:	10/11/1950
W.L.TIME:	
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	31.08
WATER LEVEL DATE:	10/17/1952
W.L.TIME:	
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	WAS F-40
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 381.73
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

B-227

9212605710

WHC-MR- 0295

#70

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E - 35B01 (70) Date 1-7-91
Other Well ID: F-12 Surveyor: KSV

Name of Well Owner: Hanford

Well Location: (~~Location Map Sketched on Attached Sheet~~) Fig 3, THIS REPORT
Owner's Address:
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: unknown

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North:~~ lat. 461853 ~~South:~~ long. 1191617
System: latitude/longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (NW of NE)

Well Specifications:
Installation Date: unknown Total Depth (ft): 32'
Well Construction Type: unknown

Pump System Type: unknown

Well Access for Sounding: unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:
May be a duplicate residential well (#124), not enough info to correlate.
Source of info: USGS.

9212642105 8

Source: USGS[a]

#70

11/26/1990 -M

10N/28E-35B01

SITE ID:	461848119161001
KEY.NO.:	2234
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461853
LONGITUDE:	1191617
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35B01
ALTITUDE:	388.20
ALT.ACC:	1
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	31.50
DEPTH SOURCE:	S
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	7/29/1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	32.08
WATER LEVEL DATE:	7/29/1948
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	38.96
WATER LEVEL DATE:	12/30/1948
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	27.28
WATER LEVEL DATE:	9/12/1952
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	WAS F-12
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 388.74
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212621059

#71

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E-35C01 (71) Date 1-7-91
Other Well ID: F-22 Surveyor: KSV

Name of Well Owner: Hanford.

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ Fig. 3, THIS REPORT
Owner's Address:
Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North:~~ lat. 461850 ~~South:~~ long. 1191620
System: latitude / longitude.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (NE of NW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 28
Well Construction Type: unknown

Pump System Type: unknown

Well Access for Sounding: unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:
Maybe a duplicate of a residential well (#104), not enough info. available to correlate.
Source of info: USGS.[a]

9212642 1060

Source: USGS a

#71

11/26/1990 -M

10N/28E-35C01

SITE ID:	461850119163001
KEY.NO.:	2236
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461850
LONGITUDE:	1191620
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35C01
ALTITUDE:	373.90
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	27.70
DEPTH SOURCE:	S
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	9/ 1/1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	18.99
WATER LEVEL DATE:	9/ 1/1948
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	26.67
WATER LEVEL DATE:	2/23/1949
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	22.78
WATER LEVEL DATE:	9/12/1952
W.L.TIME:	1535
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	WAS F-22
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 376.67
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

#72

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E-35D03 Date 1-7-91
Other Well ID: F-26 Surveyor: KSV

Name of Well Owner: Hanford.

Well Location: ~~(Location Map Sketched on Attached Sheet)~~ Fig. 3, THIS REPORT
Owner's Address: Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: unknown.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North~~ lat. 461844 ~~South~~ long. 1191643
System: latitude/longitude.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (NW of NW)

Well Specifications:
Installation Date: unknown Total Depth (ft): 17
Well Construction Type: unknown.

Pump System Type: unknown.

Well Access for Sounding: unknown.

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:
Maybe a duplicate residential well; not enough info. available to correlate.
Source of info: USGS.

9212642 1062

Source: USGS[a]

#72

11/26/1990 -M

10N/28E-35D03

SITE ID:	461845119164901
KEY.NO.:	2241
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461844
LONGITUDE:	1191643
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35D03
ALTITUDE:	369.10
ALT.ACC:	1
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	17.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	10/21/1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	12.94
WATER LEVEL DATE:	10/21/1948
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	19.77
WATER LEVEL DATE:	2/23/1949
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	-99.00
WATER LEVEL DATE:	9/12/1952
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	D
WATER LEVEL SOURCE:	S
REMARK:	WAS F-26
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 369.07
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

WHC-MR- 0295

#73

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E - 35901 (73) Date 1-7-91
Other Well ID: F24 Surveyor: KSV

Name of Well Owner: Hanford.

Well Location: (~~Location Map Sketched on Attached Sheet~~) Fig 3, THIS REPORT
Owner's Address:
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: ~~North:~~ lat 461832 ~~South:~~ long. 1191620
System: latitude/longitude.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SW of NE)

Well Specifications:
Installation Date: unknown Total Depth (ft): unknown
Well Construction Type: unknown

Pump System Type: unknown

Well Access for Sounding: unknown

Other Information:
Photograph Taken: X No ____ Yes Photo Number: ____
Well Log Available: X No ____ Yes
Well Log Obtained: X No ____ Yes

Other:

Maybe a duplicate residential well; (#127)
not enough info. available to correlate.
Source of info. USGS.

9212642 1064

Source: USGS a

#73

11/26/1990 -M

10N/28E-35G01

SITE ID:	461832119161001
KEY.NO.:	2245
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461832
LONGITUDE:	1191620
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35G01
ALTITUDE:	381.20
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	-99.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	
DATE DRILLED:	/ /
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	3/22/1950
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	35.40
WATER LEVEL DATE:	3/22/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	27.07
WATER LEVEL DATE:	10/11/1950
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	WAS F-24
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 372.19
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212621065

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WHC-MR- 0295

#74

1100 AREA WELL INVENTORY FORM

Well Number: 1199-32-17 (74) Date 1-7-91
Other Well ID: 1100-6, 10N/28E-351+03 Surveyor: KSV
Name of Well Owner: Hanford.

Well Location: (Location Map ~~Sketched on Attached Sheet~~) FIG. 3, THIS REPORT
Owner's Address: Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ___ Yes ✓ No

Well Coordinates: ~~North:~~ lat. 461830 ~~South:~~ long 1191600
System: latitude/longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SE of NE)

Well Specifications:
Installation Date: 4/48 Total Depth (ft): 75
Well Construction Type: unknown
Pump System Type: unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: ✓ No ___ Yes Photo Number: ___
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes
Summers & Schwab

Other:

May be a duplicate residential well; not enough info. to correlate.

Source of info: USGS.
Summers & Schwab

9212642210066

#74

Driller's log of 1199-32-17 (N031840, E017417) Hanford Wells, 1973

Land surface altitude[1] 370 feet msl

1. Estimated from altitude of top of casing given in Hanford Wells, 1973
2. Cable tool rig

Depth (ft) From	To	Description
0	15	coarse gravel and rocks
15	20	rocks and coarse gravel
20	25	coarse gravel and rocks
25	35	fine black and white sand
35	40	coarse sand and gravel
40	50	sand
50	53	gray sand
53	55	gray sand and some yellow clay
55	60	gray sand and yellow clay
60	68	sand and red clay
68	75	blue clay and shale

9212621067

#74

Source: USGS[a]

11/26/1990 -M

10N/28E-35H03

SITE ID:	461830119155301
KEY.NO.:	2249
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461830
LONGITUDE:	1191600
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35H03
ALTITUDE:	371.00
ALT.ACC:	5
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	75.00
WELL.DEPTH:	75.00
DEPTH SOURCE:	A
DATE DRILLED:	4/ 1/1948
LOG DATA:	
OTHER DATA:	
FIRST NAME:	1199-32-17
LAST NAME:	HANFORD
DATE OWNED:	4/ 1/1948
STREET ADDR.:	
CITY ADDR.:	
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 372.00
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 1100-6
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212542106 8

#75

1100 AREA WELL INVENTORY FORM

Well Number: 10N/28E-35H07 (75) Date 1-7-91
Other Well ID: F-32 Surveyor: KSV

Name of Well Owner: Hanford.

Well Location: (Location Map ~~Sketched on Attached Sheet~~) Fig. 3, This Report
Owner's Address: Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: monitoring well.

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: ~~North~~: lat 461828 ~~South~~: long 1191602
System: latitude/longitude

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SE of NE)

Well Specifications:
Installation Date: 10/52 Total Depth (ft): 26
Well Construction Type: unknown
Pump System Type: unknown
Well Access for Sounding: unknown

Other Information:
Photograph Taken: ✓ No ____ Yes Photo Number: ____
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:

Maybe a duplicate residential well; not enough info. available to correlate.

Source of info: USGS.

9 2 1 2 6 0 1 0 6 9

WHO-MIT- 0295

Source: USGS a

#75

11/26/1990 -M

10N/28E-35H07

SITE ID:	461831119155501
KEY.NO.:	2253
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461828
LONGITUDE:	1191602
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35H07
ALTITUDE:	370.00
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	28.60
WELL.DEPTH:	26.16
DEPTH SOURCE:	S
DATE DRILLED:	10/ /1952
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	HANFORD
DATE OWNED:	10/ 1/1952
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	19.52
WATER LEVEL DATE:	10/17/1949
W.L.TIME:	
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	-99.00
WATER LEVEL DATE:	2/28/1950
W.L.TIME:	
W.L. METHOD:	
W.L. STATUS:	D
WATER LEVEL SOURCE:	S
WATER LEVEL:	18.59
WATER LEVEL DATE:	10/17/1952
W.L.TIME:	
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
REMARK:	WAS F-32
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 372.38
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642 1070

B-240

#76

1100 AREA WELL INVENTORY FORM

Well Number: WISER #1 WISER 14 dia (76) Date 11-15-90
Other Well ID: 10N/28E-27FC2 Surveyor: KSV, RB

Name of Well Owner: THANE WISER

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address:

Street Address of Residential Well Site if Different from Owner:
OFF OF LOGSTON RD, HORN RAPIDS IND. PARK

Current Well Use: IRRIGATION

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: unknown South: unknown
System:

Township: 10N Range: 28E Section (nearest 1/4 1/4): SE 1/4 of NW 1/4 Section 27

Well Specifications:
Installation Date: 4/89 Total Depth (ft): 85'
Well Construction Type: 14" dia. casing

Pump System Type: Submersible

Well Access for Sounding: [illegible] access

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 8 Roll 1 (Ron)
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:

[illegible]

B-241

9 2 1 2 6 0 2 1 0 7 1

WHC-MR- 0295

1762 #76

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

F

Application No.

Permit No.

(1) OWNER: Name Wiser Co Inc Address 236 Hillview Dr. Richland

(2) LOCATION OF WELL: County Benton 58 ¼ NW ¼ Sec 27 T 10 N, R 28 W.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☒ Other ☒

(4) TYPE OF WORK: Owner's number of well (if more than one) Observation

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 14 inches.
Drilled 121 ft. Depth of completed well 85 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 14" Diam. from +1 ft. to 85 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used Mills Knife
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft to ft

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 10 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft
Static level 4 ft below top of well Date 4/20/89
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Owner
Yield: gal./min with ft. drawdown after hrs.

350	"	36	"	2	"
"	"		"		"

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 4/20/89
Bailer test gal./min with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Sand + Gravel	0	5
Cemented Sand + Gravel	5	10
Loose Sand + Gravel	10	22
Sand + Gravel Cemented Layers	22	34
Brown Silt	34	59
Blue Clay	59	79
Sand, Gravel - Silt	79	83
Blue Clay with Sand + Gravel	83	95
Blue Clay	95	105
Blue Clay - Sand + Gravel	105	11[illegible]
Cemented Sand + Gravel (Ringold)	117	121

RECEIVED JUN - 2 1989 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

Work started 4/13 1989 Completed 4/20 1989

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Cannegie Drilling Co.
(Person, firm, or corporation) (Type or print)

Address R1 M Box 3E10 Kennewick

[Signed] [signature]
(Well Driller)

License No. 1333 Date 4/21 1989

(USE ADDITIONAL SHEETS IF NECESSARY)

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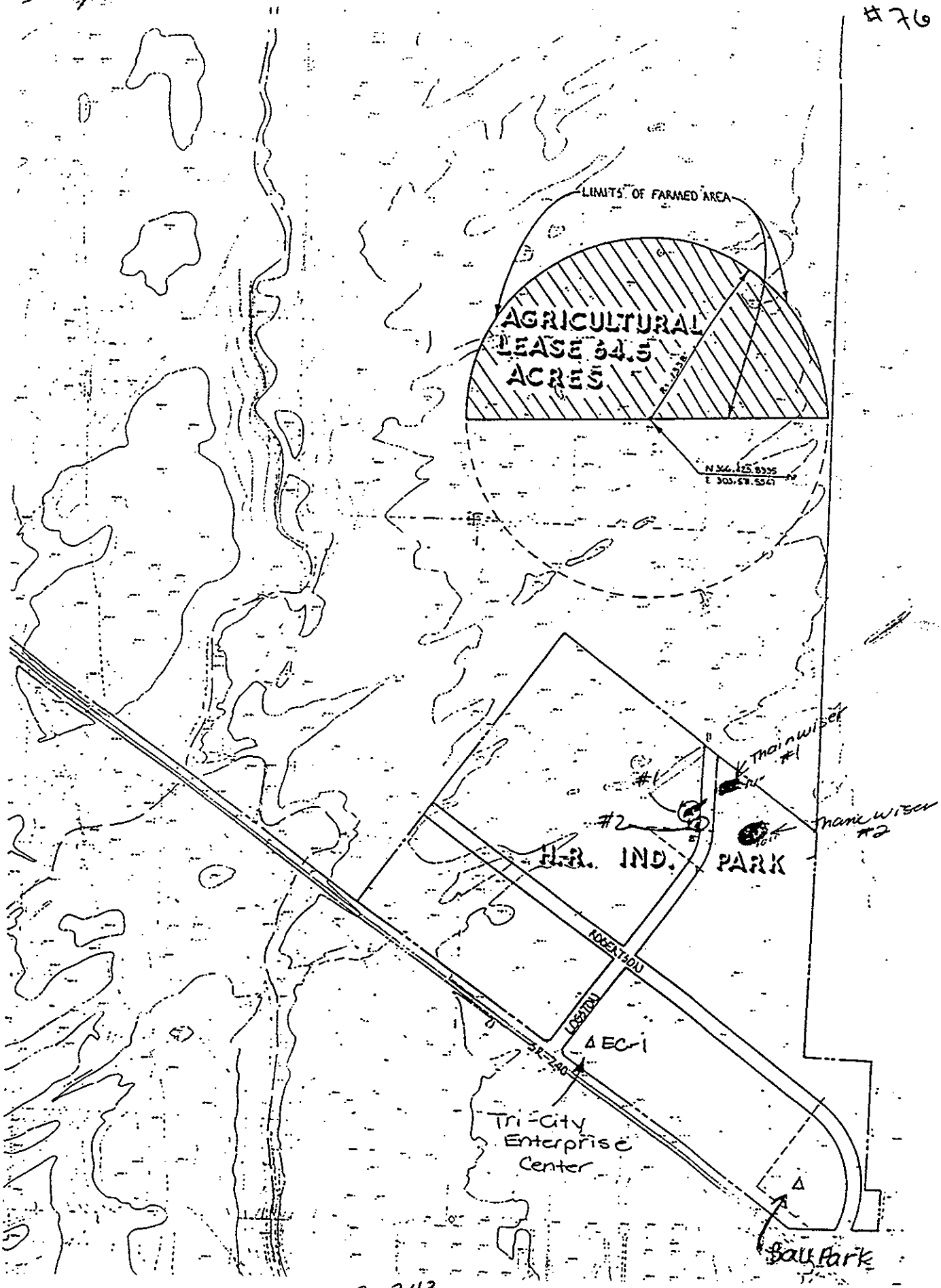
9212642 1072

#76



9 2 1 2 6 2 1 0 7 3

Source: USGS[a]

#76

12/ 3/1990 -M

10N/28E-27F02

SITE ID:	461923119174001
KEY.NO.:	6663
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	461923
LONGITUDE:	1191740
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-27F02
ALTITUDE:	358.00
ALT.ACC:	20
USE OF SITE:	T
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	85.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	A
DATE DRILLED:	4/ 1/1989
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	WISER CO. INC.
DATE OWNED:	4/ 1/1989
STREET ADDR.:	
CITY ADDR.:	

9212642107 4

#77

1100 AREA WELL INVENTORY FORM

Well Number: WISER #2 WISER 10" DIA. WELL (77) Date 11-19-90
Other Well ID: Surveyor: Blegen

Name of Well Owner: THAIN WISER

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address:

Street Address of Residential Well Site if Different from Owner:
Off of Leighton Rd., Horn Rapids Industrial Park

Current Well Use: Irrigation. Not currently in use

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System:

Township: 10N Range: 28E Section (nearest 1/4 1/4): SE 1/4 of NW 1/4 Sec. 27

Well Specifications:
Installation Date: 5/89 Total Depth (ft): ? 43
Well Construction Type: 10" dia steel casing

Pump System Type: None

Well Access for Sounding: Open well head.

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: Wiser 10 inch dia well
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes

Other:

B-245

9212260207 5

WHC-MR- 0295

1767

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

F

Application No. #77

Permit No.

(1) OWNER: Name WISER CO INC Address 236 HILLVIEW DR. RICHLAND

(2) LOCATION OF WELL: County BENTON SE ¼ NW ¼ Sec 27 T. 10 N., R. 28 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☒ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) 2

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 10 inches.
Drilled 43 ft. Depth of completed well 43 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 10" Diam. from +1 ft. to 43 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used MILLS KNIFE
SIZE of perforations 3/8 in. by 2 in.
192 perforations from 17 ft. to 29 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 17 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 4 ft below top of well Date 5/25
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield gal./min with ft. drawdown after hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
SILT	0	2
BLACK SAND SOME FINE GRAVEL	2	10
SAND GRAVEL COBBLES	10	15
SAND GRAVEL LARGE COBBLES	15	20
SAND GRAVEL	20	24
SAND GRAVEL COBBLES	24	30
SILT SAND GRAVEL	30	32
BROWN SILT CLAY	32	43

RECEIVED JUN - 2 1989 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

Work started 5/22 19 79. Completed 5/25 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME CONNEGO DRILLING CO INC (Person, firm, or corporation) (Type or print)

Address RT 14 BOX 3010 KENNEWICK

[Signed] (Well Driller)

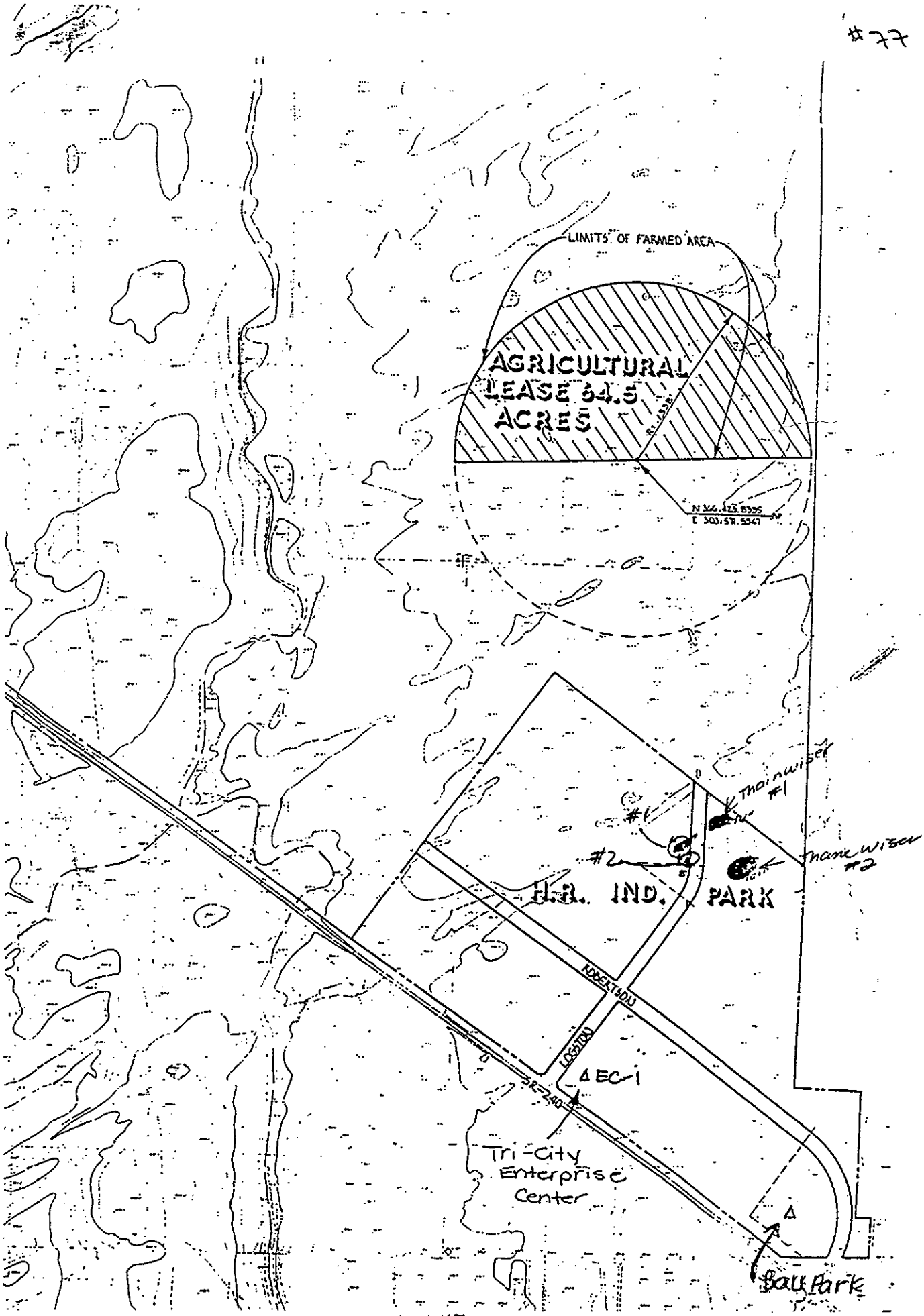
License No. 1333 Date 5/31 19 79

(USE ADDITIONAL SHEETS IF NECESSARY)

B-246

9 2 1 2 6 4 2 1 0 7 6

#77



9 2 1 2 6 2 1 0 7 7

WHC-MR- 0295

Source: USGS[a]

#77

12/ 3/1990 -M 10N/28E-27F03

SITE ID:	461924119174501
KEY.NO.:	6664
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	461924
LONGITUDE:	1191745
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-27F03
ALTITUDE:	358.00
ALT.ACC:	20
USE OF SITE:	T
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	43.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	A
DATE DRILLED:	5/ 1/1989
LOG DATA:	
OTHER DATA:	
FIRST NAME:	
LAST NAME:	WISER CO. INC.
DATE OWNED:	5/ 1/1989
STREET ADDR.:	
CITY ADDR.:	

9 2 1 2 6 4 2 1 0 7 8

(#78)

1100 AREA WELL INVENTORY FORM

Well Number: 1 LAMB WESTON #1 (78) Date 12-4-90 / 12/18/90
Other Well ID: G-3200249 Surveyor: KSV

Name of Well Owner: Lamb Weston

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: Richland, Wa 2013 Saint St.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: not used since 1975

Verification by ~~Owner~~/Occupant of Well Use: X Jim Hallsday
(Signature)
Maintenance Supervisor

Water in Contact with Humans: ___ Yes X No

Well Coordinates: North: ___ South: ___
System: ___

Township: 10 Range: 28E Section (nearest 1/4 1/4): 34

Well Specifications:
Installation Date: 9-15-73 Total Depth (ft): 65'
Well Construction Type: 14" Casing 0 to 33 ft
10" Casing 0 to 65 ft
Pump System Type: Vertical Centrifugal Turbine
15 HP
Well Access for Sounding: No: Pump located on top of well head.

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 78
Well Log Available: ___ No ✓ Yes roll 2K
Well Log Obtained: ___ No ✓ Yes

Other:

12/5 1100

9212620 2107 9

WNO-WR- 0295

File Original and First Copy with the Division of Water Resources
Second Copy — Owner's Copy
Third Copy — Driller's Copy

#1

WATER WELL REPORT
STATE OF WASHINGTON

Application No. 63-20029

Permit No. 9-3200291

(1) OWNER: Name PRIDE PAK FOODS INC Address P.O. Box 699 2-4-3 GRANT ST. RICHLAND WASH 9

(2) LOCATION OF WELL: County BENTON — ¼ ¼ Sec. 34 T. 10 N., R. 28 E.W.M.

Bearing and distance from section or subdivision corner 575 feet North & 275 West from center of section 34

(3) PROPOSED USE: Domestic ☐ Industrial ☑ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....

New well ☑ Deepened ☐ Reconditioned ☐

Method: Dug ☐ Cable ☑ Rotary ☐ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 10 inches.

Drilled 65 ft. Depth of completed well 65 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 14" Diam. from 0 ft. to 33 ft.

Threaded ☐ 10" Diam. from 0 ft. to 65 ft.

Welded ☑ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☑

Type of perforator used

SIZE of perforations in. by in.

perforations from ft. to ft.

perforations from ft. to ft.

perforations from ft. to ft.

Screens: Yes ☑ No ☐

Manufacturer's Name Johnson

Type STAINLESS Model No. 304

Diam. 10 Slot size 4 from 33 ft. to 53 ft.

Diam. Slot size from ft. to ft.

Gravel packed: Yes ☑ No ☐ Size of gravel: #9 Texture

Gravel placed from 0 ft. to 65 ft.

Surface seal: Yes ☑ No ☐ To what depth? 33 ft.

Material used in seal 14" casing

Did any strata contain unusable water? Yes ☐ No ☑

Type of water? Depth of strata

Method of sealing strata off

(7) PUMP: Manufacturer's Name LAYNE

Type Vertical Centrifugal Turbine HP 15

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.

Static level 19'-8" ft. below top of well Date 9/15/72

Artesian pressure lbs. per square inch Date

Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☑ No ☐ If yes, by whom? SELF

Yield: 400 gal./min. with 44 ft. drawdown after 80 hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.

Artesian flow g.p.m. Date

Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation

MATERIAL	FROM	TO
Light Brown Sandy Silt	0	8
Course gravel, and sand	8	24
Loose		
Sandy clay light Brown	24	29
Cemented course gravels	29	32
Fine to course white	32	56
Sand & small gravels		
Very water bearing, loose		
Cemented Mushy Blue	56	61
Sand & gravel		
Blue clay & conglomerated	61	65
gravels		

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hatch Drilling Co. (Person, firm, or corporation) (Type or print)

Address P.O. Box 741, Richland, Wash.

[Signed] [signature] (Well Driller)

License No. 7863 Date 6/20, 1973

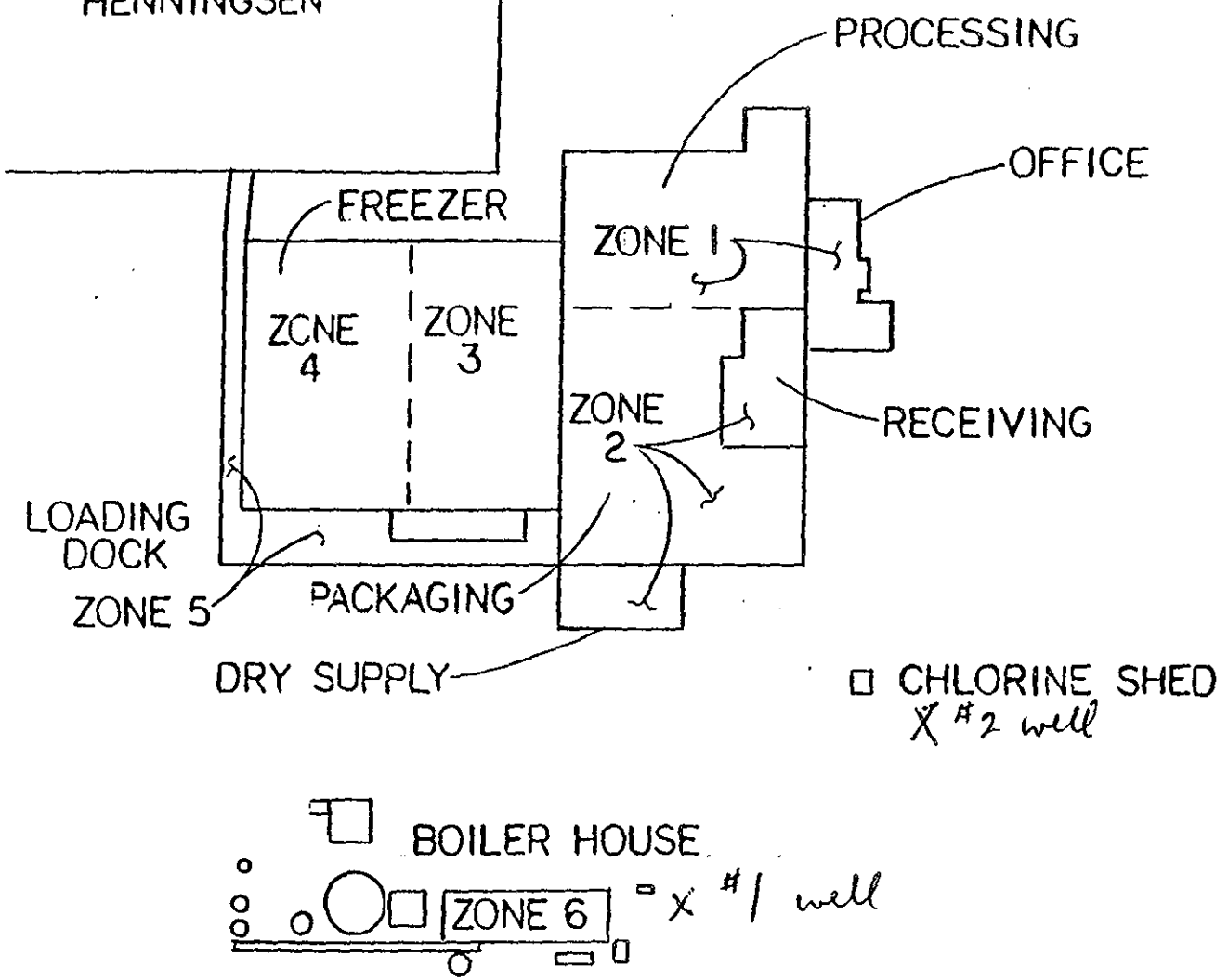
(USE ADDITIONAL SHEETS IF NECESSARY)

S. P. No. 7356—(Rev. 2-66)—2-66—5M. 4516.

B-250

9 2 1 2 6 4 2 1 0 3 0

LAMB WESTON PLANT



LAMB WESTON
RICHLAND PLANT

SCALE: 1"=160'
DATE: 7-12-87
DRAWN BY: TAYLOR

N

ZONE ANNEX

WHC-MR- 0295

B-251

#28

WHC-MR- 0295

#79

1100 AREA WELL INVENTORY FORM

Well Number: 2 Lamb Weston #2 (79) Date 12-4-90 / 12/13/90
Other Well ID: G-422826 Surveyor: KSV

Name of Well Owner: Lamb Weston

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2013 Saint St.
Richland, Wa
Street Address of Residential Well Site if Different from Owner:

Current Well Use: not used since 1975

Verification by ~~Owner~~/Occupant of Well Use: X Jim Golladay
(Signature)
Maintenance Supervisor

Water in Contact with Humans: ____ Yes X No

Well Coordinates: North: ____ South: ____
System: ____

Township: 16 Range: 28E Section (nearest 1/4 1/4): 34

Well Specifications:
Installation Date: 7-5-74 Total Depth (ft): 40.5
Well Construction Type: 16" casing

Pump System Type: Submersible

Well Access for Sounding: yes on top

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 9
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes
ROUGK

Other:

12/3 1100
USGS

9212642 1082

B-252

WHC-MR- 0295

Well #2

#79

WELL LOG

OWNER: NAME Pride Pak Foods, Inc
ADDRESS P.O. Box 699 Richland Wash
DATE DRILLED: 6/14/74 7/5/74

LOCATION OF WELL: COUNTY ____ BLOCK ____ UNIT ____
¼ ¼ SECTION ____ T. ____ R. ____ W.M.
TYPE OF WORK: ____ USE: ____

CASING: DIAMETER: 16 inch WEIGHT: .375 Wall DRIVE SHOE Rolled
TOTAL CASING: 25'-6 CASED BELOW SURFACE 24'-4
TOTAL WELL DEPTH: 40'-6" OPEN END: — SIZE: —
ALL CASING JOINTS DOUBLE TAPERED AND TRIPLE WELDED.

SCREEN: *Note Below SURFACE SEAL: Cement

TEST: STATIC WATER LEVEL: 19'-8" Top Casing BAILER TEST ____ PUMP TEST ✓
YIELD: 175 GAL./MIN. WITH 11'-4" FT. DRAWDOWN AFTER 2½ HRS.
YIELD: ____ GAL./MIN. WITH ____ FT. DRAWDOWN AFTER ____ HRS.
TEMPERATURE: 52 Degrees WELL CHLORINATED: Yes - Also all drilling water

PUMP SETTING: Suggest setting turbine pump with intake @ 35 ft below top of casing (maximum yield of 175 GPM & desired pressure) install check valve @ pump head discharge

MATERIAL	S. W. L.	THICKNESS	DEPTH	CASING	
Sandy Soil		2	7		
Brownish F.Gr - S.		5	12		
Black S. & F.Gr		5	17		
Black Sand	18'-5	6	23		
Black S. & F.Gr (75-25%)		2	25	Water	
Med. Gr, Some Sediment		4	29	"	
Brown Compact F.Gr, S. & Sediment		5	34	No Water	
" F.S. & F.Gr		2½	36½	Some	"
Compact S. & F.Gr		2½	39	No	"
Brown Clay		14	53	"	"
Blue Clay		3	56	"	"

Sand filled with minus 1½ in. gravel, chlorinated from 56 ft. to 40'-6" & jet screen

Total screen length complete with 14" pipe between sections & packer 18 ft - 1" (See Drawing)

Pump test: Bench Basis - 4 in. column set @ 36 ft from top of casing - Line pumped 7/5/74

Time	Depth	Gals	
12:50			
1:00	30-3	230	No sand
1:02	31-4	230	
1:03	32-3	205	
1:04	34-10	205	
1:06	35-	215	Air
1:18	35	215	"
1:33	35	200	"
1:38	33-8	145	
2:38	34-2	140	"
	34-1½	185	
	34-2	185	
	34-1	185	
	31-2	175	
	20-9½	175	No sand

ABBREVIATIONS USED
GR.—GRAVEL
S.—SAND BAS.—BASALT
CL.—CLAY
FRAC.—FRACTURED
MED.—MEDIUM
C.—COARSE
DEC.—DECOMPOSED
CEM.—CEMENTED

RECOVERY

TIME	WATER LEVEL
3:36 OFF	
3:37	21-0
3:38	20-9
3:39	20-8
3:40	20-7
3:41	20-7

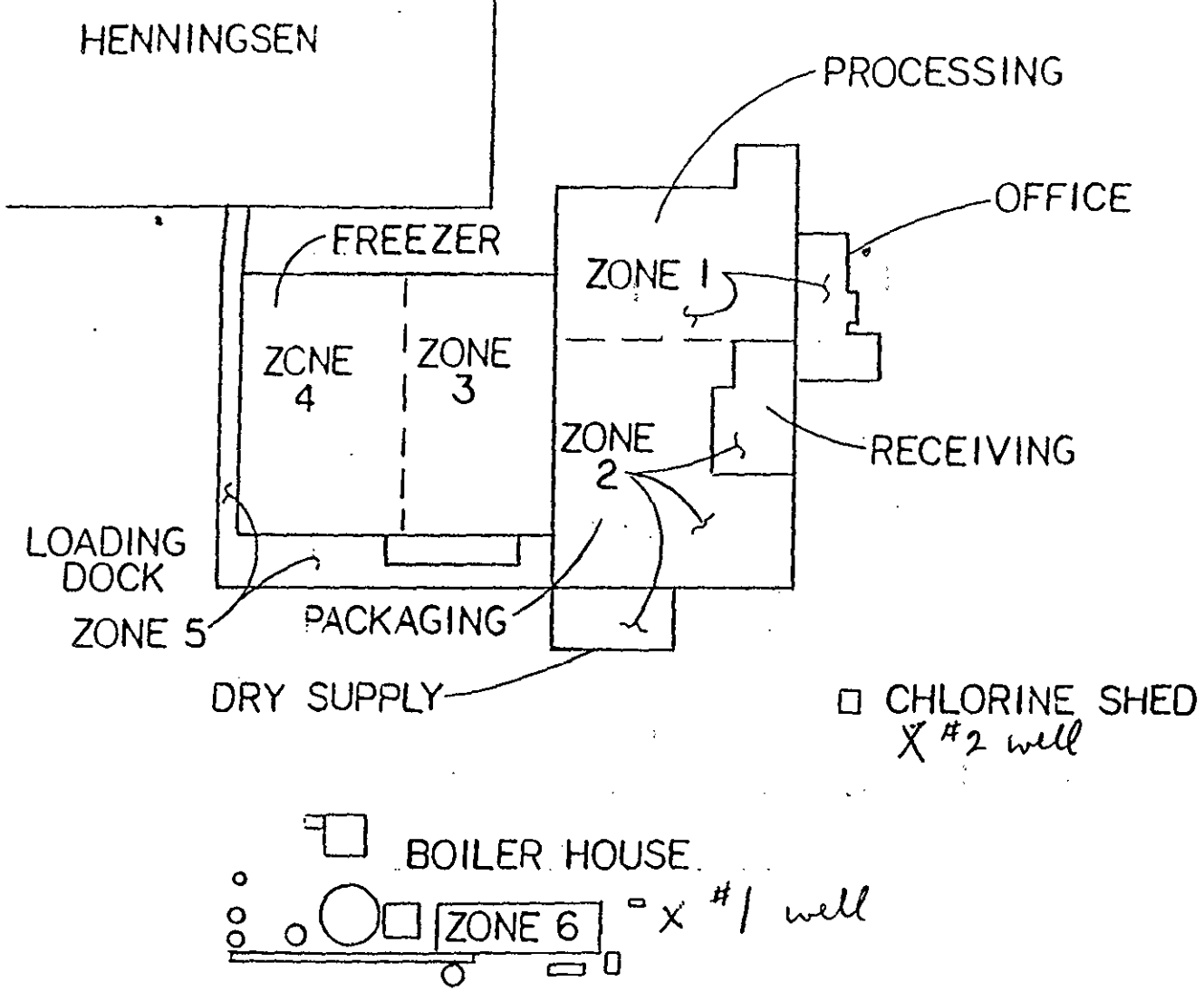
THIS WELL WAS DRILLED BY:
Greenline Drilling Co.
0466
(Signed) [signature] Driller
DATE 7/5 1974

B-253

9212620103

9 2 1 2 6 4 2 1 0 8 4

LAMB WESTON PLANT



LAMB WESTON
RICHLAND PLANT

SCALE: 1"=160'
DATE: 7-12-87
DRAWN BY: TAYLO

N

ZONE ANNEX

WHC-MR- 0295

B-254

#79

#79

Source: USGS

11/26/1990 -M 10N/28E-34G01

SITE ID:	461835119171001
KEY.NO.:	2225
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461829
LONGITUDE:	1191736
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-34G01
ALTITUDE:	370.00
ALT.ACC:	20
USE OF SITE:	U
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	56.00
WELL.DEPTH:	37.33
DEPTH SOURCE:	D
DATE DRILLED:	07/05/1974
LOG DATA:	D
OTHER DATA:	RECOVERY
FIRST NAME:	
LAST NAME:	LAMB-WESTON
DATE OWNED:	2/21/1986
STREET ADDR.:	
CITY ADDR.:	
FIRST NAME:	
LAST NAME:	PRIDE PAK FDS
DATE OWNED:	07/05/1974
STREET ADDR.:	
CITY ADDR.:	
FIRST NAME:	M
LAST NAME:	4
DATE OWNED:	/ /
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	20.00
WATER LEVEL DATE:	7/ 5/1974
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	R
DISCHARGE:	175.00
DRAWDOWN:	11.00
TEST TIME:	2.5
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	24.00

9212621085

B-255

#79

OPENING BOTTOM:	29.00
OPENING DIAM.:	14.00
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	33.50
OPENING BOTTOM:	37.33
OPENING DIAM.:	14.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SOIL,SAND
% WATER.CONTRIBUTED:	-99
UNIT TOP:	29.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	S
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	COMPACT
% WATER.CONTRIBUTED:	-99
UNIT TOP:	39.00
GEOHYDROLOGIC UNIT:	121LRRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	BROWN & BLUE
% WATER.CONTRIBUTED:	0
REMARK:	DRLR REPTS. WATER TEMP.=62 DEG F, 7/74.
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	BACKFILLED WI. CHLORINATED GRVL TO 40.5
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642108 6

#80

1100 AREA WELL INVENTORY FORM

Well Number: None GTE 80 Date 1-7-91
Other Well ID: Surveyor: KSV

Name of Well Owner: GTE

Well Location: (~~Location Map Sketched on Attached Sheet~~) see fig 1.
Owner's Address: 2600 Stevens Drive
Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: grounding for telephone

Verification by Owner/Occupant of Well Use: n/a
Talked w/ Darrel Peterson 11-30-90 (Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: North: Unknown South: Unknown
System:

Township: 10N Range: 28E Section (nearest 1/4 1/4): 20 (NW of NW)

Well Specifications:
Installation Date: 9-12-77 Total Depth (ft): 201
Well Construction Type: Casing capped on both ends.

Pump System Type: n/a

Well Access for Sounding: no

Other Information:
Photograph Taken: X No ____ Yes Photo Number: ____
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes

Other:

USGS

WHC-MR- 0295

#80

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name General Telephone Co Address 2600 Stevens Dr R

(2) LOCATION OF WELL: County Benton — NW¼ NW¼ Sec. 26 TWP 16 N., R. 28 W.M.

Bearing and distance from section or subdivision corner 1325' ESE of NW Corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☒

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 16 inches.
Drilled ..... ft. Depth of completed well 201'10" ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 16" Diam. from 0' ft. to 201'10" ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal .....
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 54' ft. below top of well Date .....
Artesian pressure ... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ... gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Coarse Gravel	0'	26'
Black Sand	26'	2[illegible]
Medium Gravel	28'	4[illegible]
Broken Basalt	43'	47'
Clay & Sand	47'	54'
Sand	54'	66'
First water	66'	
Pea Gravel & Sand	66'	89'
Sand and Silt	89'	103'
Pea Gravel & Water	103'	107'
Clay	107'	109'
Ringgold	109'	201'
Jt Basalt	201'10"	

RECEIVED
NOV 17 1978
DEPARTMENT OF ECOLOGY
CENTRAL OFFICE

Work started Aug 27, 19 77 Completed Sept 12, 19 77

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME B+L Drilling (Person, firm, or corporation) (Type or print)

Address Riviera Trailer Vill. #21

[Signed] R. J. Grist (Well Driller)

License No. 0539 Date 2/21, 19 7[illegible]

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

B-258

9 2 1 2 6 4 2 1 0 8 8

#80

Source: USGS

11/26/1990 -M 10N/28E-26D01

SITE ID:	461944119165301
KEY.NO.:	6605
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	461944
LONGITUDE:	1191653
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26D01
ALTITUDE:	405.00
ALT.ACC:	10
USE OF SITE:	A
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	201.80
WELL.DEPTH:	201.80
DEPTH SOURCE:	D
DATE DRILLED:	9/12/1977
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	
LAST NAME:	GENERAL TEL CO.
DATE OWNED:	9/12/1977
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	54.00
WATER LEVEL DATE:	9/12/1977
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
FINISH:	O
OPENING TYPE:	O
OPENING TOP:	201.80
OPENING BOTTOM:	201.80
OPENING DIAM.:	6.00
UNIT TOP:	-99.00
GEOHYDROLOGIC UNIT:	121RGLD
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	0
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	GRVL
LITHOLOGIC MODIFIER:	+ SAND 26-28FT
% WATER.CONTRIBUTED:	0
UNIT TOP:	201.80

9 2 1 2 6 2 1 0 3 9

#80

GEOHYDROLOGIC UNIT:	122SDLM
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	BSLT
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	100

9212642109 0

81

1100 AREA WELL INVENTORY FORM

Well Number: C&M Landscaping (81) Date 12-03-90
Other Well ID: Surveyor: KSV

Name of Well Owner: ~~Rural Sales, Inc~~ → C&M Landscaping Petty's Car Shop (renter)
open W.Th 2:00p - 9:00p

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2243 Stevens Rd.
Richland.

Lease from C&M Landscaping

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Not in Use/covered up.

Verification by Owner/Occupant of Well Use: X (Signature) Benny's
Phone Interview with owner, Mrs. Markem, 12-18-90

Water in Contact with Humans: ____ Yes X No

Well Coordinates: North: unknown South: unknown
System:

Township: 10 N Range: 28 E Section (nearest 1/4 1/4): NE 1/4 of NE 1/4 Sec. 34.

Well Specifications:
Installation Date: 6/70 Total Depth (ft): 98 (completed)
Well Construction Type: 8" casing, cable

Pump System Type: none

Well Access for Sounding: n/a

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: ~~[illegible]~~
Well Log Available: ____ No ✓ Yes Roll ~~[illegible]~~
Well Log Obtained: ____ No ✓ Yes
(SGSA)

Other:
Petty's Auto Repair and Petty's Car Shop [illegible] land from C&M Landscaping. Well was [illegible] at one time to water plants at nursery - but [illegible] not in use. Current property owner [illegible] [illegible] where the well is.

WHC-MR- 0295

File Original and First Copy with the Division of Water Management
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. G3-204

Permit No. #81

(1) OWNER: Name Rural Sales Inc Address 2243 Stevens Kirk. Wn

(2) LOCATION OF WELL: County Benton — NE ¼ NE ¼ Sec. 34 T. 10 N., R. 25E W.

and distance from section or subdivision corner 500 N. of Point of Intersection of East/West North line

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☒ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Deepened ☐ Reconditioned ☐
Method: Dug ☐ Cable ☒ Rotary ☐ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 233 ft. Depth of completed well 98 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: ____" Diam. from ____ ft. to ____ ft.
Threaded ☐ ____" Diam. from ____ ft. to ____ ft.
Welded ☒ 8" Diam. from 0 ft. to 229 ft.

Perforations: Yes ☒ No ☐
Type of perforator used Mills
SIZE of perforations 3/16 in. by 1¼ in.
~~96~~ 100 perforations from 87 ft. to 97 ft.
40 perforations from 165 ft. to 175 ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☒ No ☐ Johnson
Manufacturer's Name
Type ____ Model No. ____
Diam. 5 3/4 Slot size 014 from 88 ft. to 98 ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes ☒ No ☐ Size of gravel: 3/8 mins
Gravel placed from 75 ft. to 98 ft.

Surface seal: Yes ☒ No ☐ To what depth? 19 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ____ ft.
Static level 41 ft. below top of well Date 6-27-70
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test 60 gal./min. with 2 ft. drawdown after 1 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Sand	0	9
Sand & gravel	9	16
gravel 3" minus clean	16	24
Sand & gravel 1" minus	24	36
gravel & some sand	36	46
Cemented Sand & gravel	46	63
gravel 2" minus sand water	63	67
sand & gravel water bearing	67	73
gravel & sand	73	79
Heaving Light Tan sand	79	83
water Bearing Sand gravel	83	97
Cemented Sand & gravel	97	104
Tan sandy Clay	104	116
gravel & sand	116	120
Tan clay	120	122
gravel & sand	122	124
heaving sand	124	132
Blue clay	132	153
gravel & sand	153	160
gravel & sand	160	166
Water Bearing Sand & gravel	166	175
deep brown clay	175	215
blue clay	215	229
Basalt	229	

RECEIVED JAN 23 1975 DEPARTMENT OF ECOLOGY CENTRAL REGIONAL OFFICE

Work started 6-10, 1970 Completed 6-27, 1970

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Nelson Well drilling (Person, firm, or corporation) (Type or print)

Address RT3 Box 3630 Kenn.

[Signed] James Nelson (Well Driller)

License No. 223-92 170-2400 Date June 27, 1975

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 5-69)—5-69.

OK/WR

B-262

9 2 1 2 6 4 2 1 0 9 2

#87

11/26/1990 -M 10N/28E-34A04

SITE ID:	463350119171001
KEY.NO.:	2221
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461850
LONGITUDE:	1191710
LAT/LONG ACC:	S
LOCAL NO.:	10N/28E-34A04
ALTITUDE:	140.00
ALT.ACC:	1
USE OF SITE:	W
NO.1 WATER USE:	I
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	233.00
WELL.DEPTH:	98.00
DEPTH SOURCE:	D
DATE DRILLED:	06/27/1970
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	
LAST NAME:	RURAL SALES INC
DATE OWNED:	06/27/1970
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	41.00
WATER LEVEL DATE:	6/27/1970
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	B
DISCHARGE:	60.00
DRAWDOWN:	2.00
TEST TIME:	1.0
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	88.00
OPENING BOTTOM:	98.00
OPENING DIAM.:	5.60
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ GRCM,SAND
% WATER.CONTRIBUTED:	-99
UNIT TOP:	97.00
GEOHYDROLOGIC UNIT:	121MDRG

B-263

9212509.3

#81

RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ CLAY,GRCM,SAND
% WATER.CONTRIBUTED:	-99
UNIT TOP:	175.00
GEOHYDROLOGIC UNIT:	121LRRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	BROWN & BLUE
% WATER.CONTRIBUTED:	0
UNIT TOP:	229.00
GEOHYDROLOGIC UNIT:	122SDLM
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	BSLT
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	0
REMARK:	OPENINGS DATA UNCERTAIN
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00

9212642109 4

#82

1100 AREA WELL INVENTORY FORM

Well Number: ATG (82) Date 12-03-90
Other Well ID: Surveyor: KSV

Name of Well Owner: ALLIED TECHNOLOGY GROUP / ALLIED NUCLEAR (ATI RICHLAND CORP).

Well Location: (Location Map Sketched on Attached Sheet)

Owner's Address: SAME

Street Address of Residential Well Site if Different from Owner: 2025 BATTELLE BLVD (S. OF ANF)

Current Well Use: industrial.

Verification by Owner/Occupant of Well Use: (Signature) JILL PLOKSICK

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System:

Township: 10N Range: 28E Section (nearest 1/4 1/4):

Well Specifications:
Installation Date: 5/1988 Total Depth (ft): 38
Well Construction Type: 6" CASING, ROTARY

Pump System Type: submersible

Well Access for Sounding: NO

Other Information:
Photograph Taken: ✓ No ___ Yes Photo Number: ___
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes

Other: USGS

⇒ could not get clearance Restricted area.

WHC-MR- 0295

588

#82

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 148

Water Right Permit No.

(1) OWNER: Name Allied Purchase Address 2025 Battelle Blvd

(2) LOCATION OF WELL: County Benton N ¼ NW ¼ Sec 22 T 10 N., R 28 E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address)

(3) PROPOSED USE: ☐ Domestic ☐ Irrigation ☐ DeWater Industrial ☐ Test Well ☒ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 39 feet. Depth of completed well 37.6 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 32.6 ft.
Welded ☒ " Diam. from ft. to ft.
Liner installed ☐ " Diam. from ft. to ft.
Threaded ☐
Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
Screens: Yes ☒ No ☐
Manufacturer's Name Johnson
Type Stainless Steel Model No.
Diam. 5.56 Slot size 12 from 37.6 ft. to 32.6 ft.
Diam. Slot size from ft. to ft.
Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.
Surface seal: Yes ☒ No ☐ To what depth? 19 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 17 ft. below top of well Date 5-12-88
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 30 gal./min. with stem set at 32 ft. for 2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTIC

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sand Tan	0	9
Gravel 6" minus, Sand Tan	9	17
Gravel 6" minus, Sand Tan Water Bearing	17	37.6
Gravel very silty very slow water	37.6	39

17 88

Work started 5-12 19. Completed 5-12 1988

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Nelson Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 10036 W Agent Pasco
(Signed) James Nelson (WELL DRILLER) License No. 361
Contractor's Registration No. NELSONWD198CQ Date 5-12-88, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

B-266

9212642 1096

#82

Source: USGS

11/21/1990 -M

10N/28E-22CD

SITE ID:	462031119175401
KEY.NO.:	6602
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	462031
LONGITUDE:	1191754
LAT/LONG ACC:	M
LOCAL NO.:	10N/28E-22CD
ALTITUDE:	368.00
ALT.ACC:	30
USE OF SITE:	T
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	39.00
WELL.DEPTH:	37.50
DEPTH SOURCE:	D
DATE DRILLED:	5/12/1988
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	
LAST NAME:	ALLIED NUCLEAR
DATE OWNED:	5/12/1988
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	17.00
WATER LEVEL DATE:	5/12/1988
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	
DISCHARGE:	30.00
DRAWDOWN:	-99.00
TEST TIME:	2.0
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	32.50
OPENING BOTTOM:	37.50
OPENING DIAM.:	5.60
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	110DUNE
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SAND
LITHOLOGIC MODIFIER:	TAN
% WATER.CONTRIBUTED:	0
UNIT TOP:	9.00
GEOHYDROLOGIC UNIT:	112PSCO

9212260210097

#82

RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	TAN
% WATER.CONTRIBUTED:	100
UNIT TOP:	37.50
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	GRVL
LITHOLOGIC MODIFIER:	SILTY
% WATER.CONTRIBUTED:	0
REMARK:	WB 17-37.5
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	DRLR REPTS. VERY SLOW WATER 37.5-39FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 4 2 1 0 9 8

1100 AREA WELL INVENTORY FORM

83

Well Number: 3000-A
Other Well ID: 11-40-15 (HANFORD)
Date 12/4/90
Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) – Fig. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
North Richland Well Field

Current Well Use: Municipal Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: 40088 ~~South:~~ East 15442
System: Old Richland Coordinates.

Township: 10 N Range: 28 E Section (nearest 1/4 1/4): 23 (SE of SW)

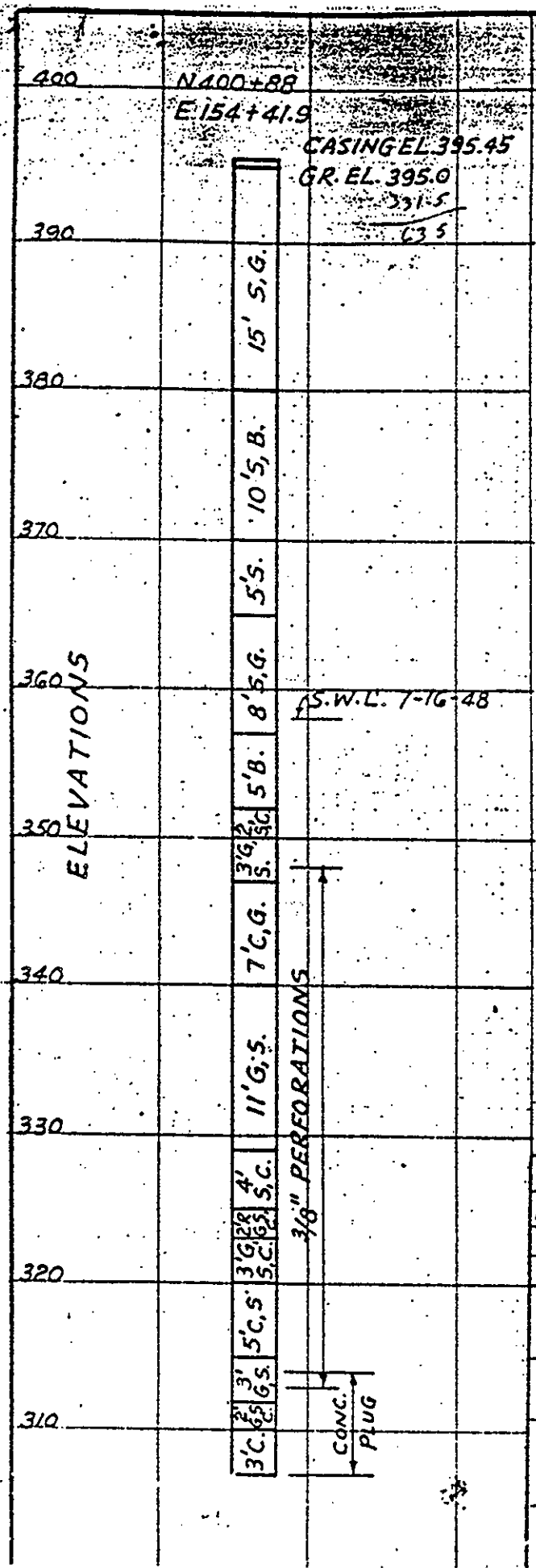
Well Specifications:
Installation Date: 4/48 Total Depth (ft): 88
Well Construction Type: ~~Unknown~~ 20" steel casing. Perf. from ~47' to ~82'

Pump System Type: GE 75 hp ~~(1000 gpm)~~ Motor. Fairbanks Morse 700 gpm vertical pump
Well Access for Sounding: Access ports on either side of pump. Air line in one port

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 10
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other: USGS

83



WELL DATA

20" steel casing with 3/8" x 2" perforations from Elev. 313 to 340. Static water level after surging and before pumping Elev. 358. Sandfree in 15 minutes at first pumping. At 1,000 to 2,000 GPM for 12 hours. d.d. 3 to 5 ft. Specific capacity 333 to 500. 1,000 GPM 6 stage Pomona pump, 230 ft. head, set at Elev. 331.5.

KEY

B Boulders
C Clay
G Gravel
R Rocks
S Sand

SCALE: 1"=10'

APPROVED

DATE 8-20-48 DRAWN BY [illegible]
CHECKED BY [illegible]

GENERAL ELECTRIC CO.
HANFORD WORKS

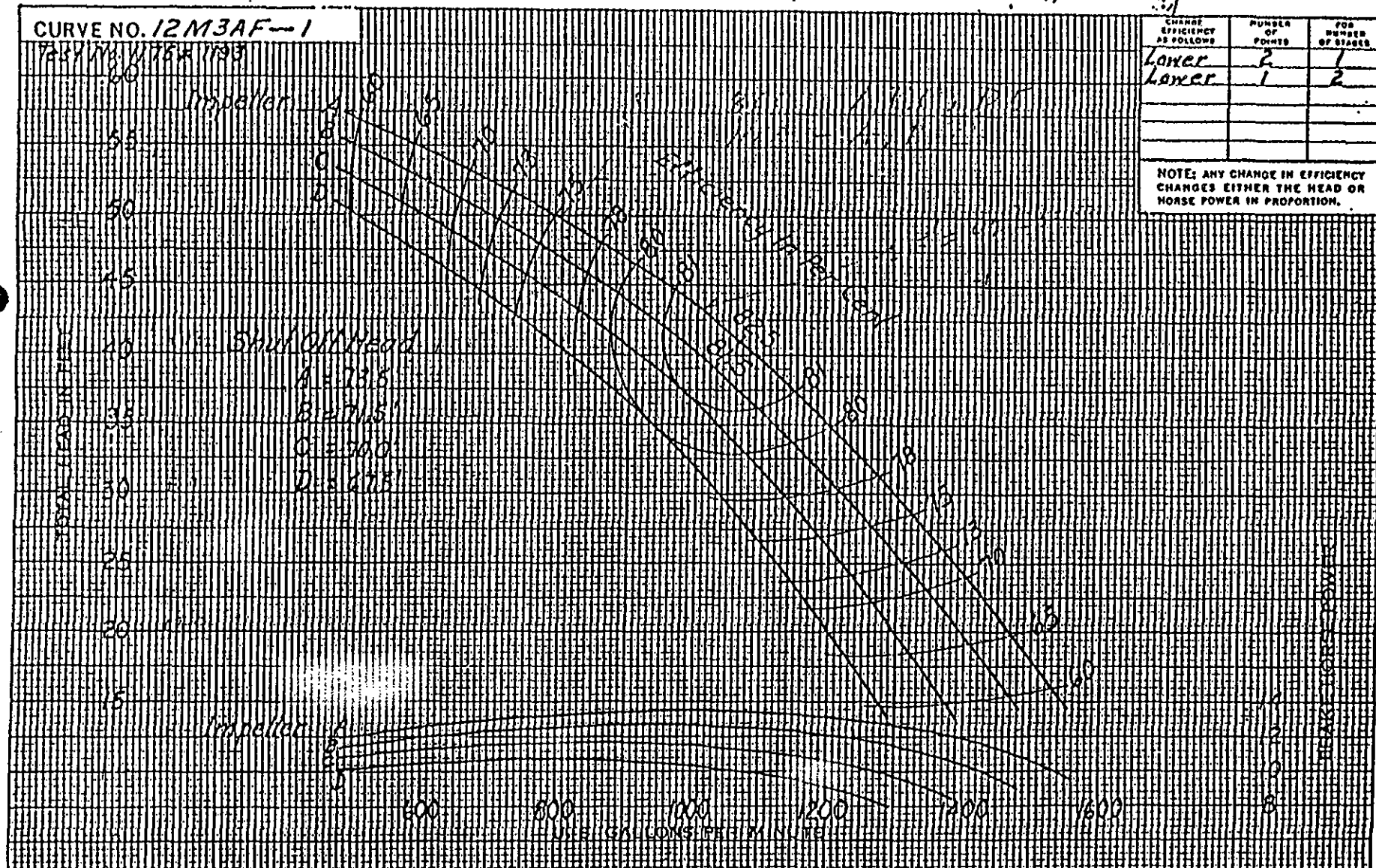
ALVORD, BURDICK & HOWSON
CONSULTING ENGINEERS CHICAGO

LOG OF WELL-3000-A

DWG. NO. H-11-4126

9212642110 0

CURVE NO. 12M3AF—1



CHANGE EFFICIENCY AS FOLLOWS	NUMBER OF POINTS	FOR NUMBER OF STAGES
Lower	2	1
Lower	1	2

NOTE: ANY CHANGE IN EFFICIENCY CHANGES EITHER THE HEAD OR HORSE POWER IN PROPORTION.

HYDRAULIC PERFORMANCE is contingent on the well furnishing the pump with the specified amount of clear, fresh, non-aerated water at a temperature of not to exceed 85 degrees Fahrenheit.

POMONA PUMPS

Fairbanks, Morse & Co.

Chicago 5, Illinois — Pomona California

LABORATORY PERFORMANCE
PER STAGE 12" M. C. DEEP WELL TURBINE
PUMP OPERATED AT 1760 R. P. M.
FIELD LOSS MUST BE DEDUCTED

B-271

WHC-MR- 0295

3000-A MPM

#83

#83

Source: USGS^a

12/ 3/1990 -M 10N/28E-23P02

SITE ID:	461952119162801
KEY.NO.:	2165
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461949
LONGITUDE:	1191626
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-23P02
ALTITUDE:	393.93
ALT.ACC:	1
USE OF SITE:	W
NO.1 WATER USE:	P
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	88.00
WELL.DEPTH:	88.00
DEPTH SOURCE:	A
DATE DRILLED:	04/ /1948
LOG DATA:	
OTHER DATA:	
FIRST NAME:	1199-40-15
LAST NAME:	HANFORD
DATE OWNED:	04/ /1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	37.00
WATER LEVEL DATE:	4/ 1/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	33.00
WATER LEVEL DATE:	4/ 1/1951
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	750.00
DRAWDOWN:	-99.00
TEST TIME:	-99.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	47.00
OPENING BOTTOM:	81.00
OPENING DIAM.:	20.00
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	

9212642102

#83

DISTANCE FROM STRUCTURE: 0.99

REMARK: CASING ELEVATION @ 395.93
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

REMARK: WAS 3000-A
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

9212611103

WHC-MR- 0295

84

1100 AREA WELL INVENTORY FORM

Well Number: 3000-B
Other Well ID: 11-40-16B (Hanford)
Date 12/4/90
Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) – Fig. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
N. Richland Well Field

Current Well Use: Municipal Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: 40087 ~~South~~ East: 15977
System: Old Richland Coordinates

Township: 10N Range: 28E Section (nearest 1/4 1/4): ~~35~~ 23 (NE or SW)

Well Specifications:
Installation Date: 5/48 Total Depth (ft): ~~86~~ 87
Well Construction Type: 20" steel casing. Perf. from ~45' to ~82'.

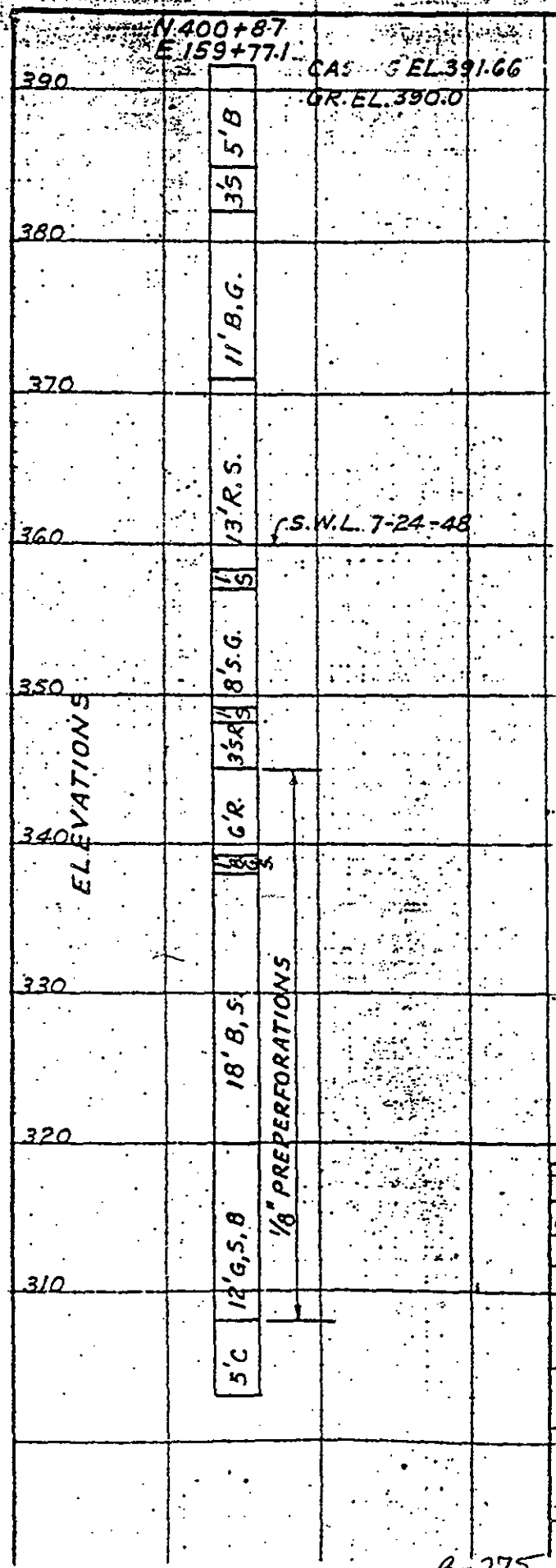
Pump System Type: GE 75 hp ~~[illegible]~~ Motor.
Fairbanks-Morse 700 gpm Vertical Pump
Well Access for Sounding: Access ports on either side of pump.
Air line in one port.

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 19
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:
USGS ?

9 2 1 2 6 4 2 1 1 0 4

#84



WELL DATA

20" steel casing, pre-perforated from Elev. 308 to 345. Static water level after surging and before pumping Elev. 360. Sandfree in 15 minutes at first pumping. Pumped at 1,000 to 2,000 GPM for 12 hours. Drawdown 4 to 14 ft. Specific capacity 143 to 250, 1,000 GPM, 6 stage Pomona pump, 230 ft. head, set at Elev. 312.5.

KEY

B Boulders
C Clay
G Gravel
R Rocks
S Sand

SCALE: 1"=10'	
APPROVED	DATE 8-20-48 DRAWN BY Quen CHECKED BY Quen

GENERAL ELECTRIC CO.
HANFORD WORKS

ALVORD, BURDICK & HOWSON
CONSULTING ENGINEERS CHICAGO

LOG OF WELL-3000-B

DWG.

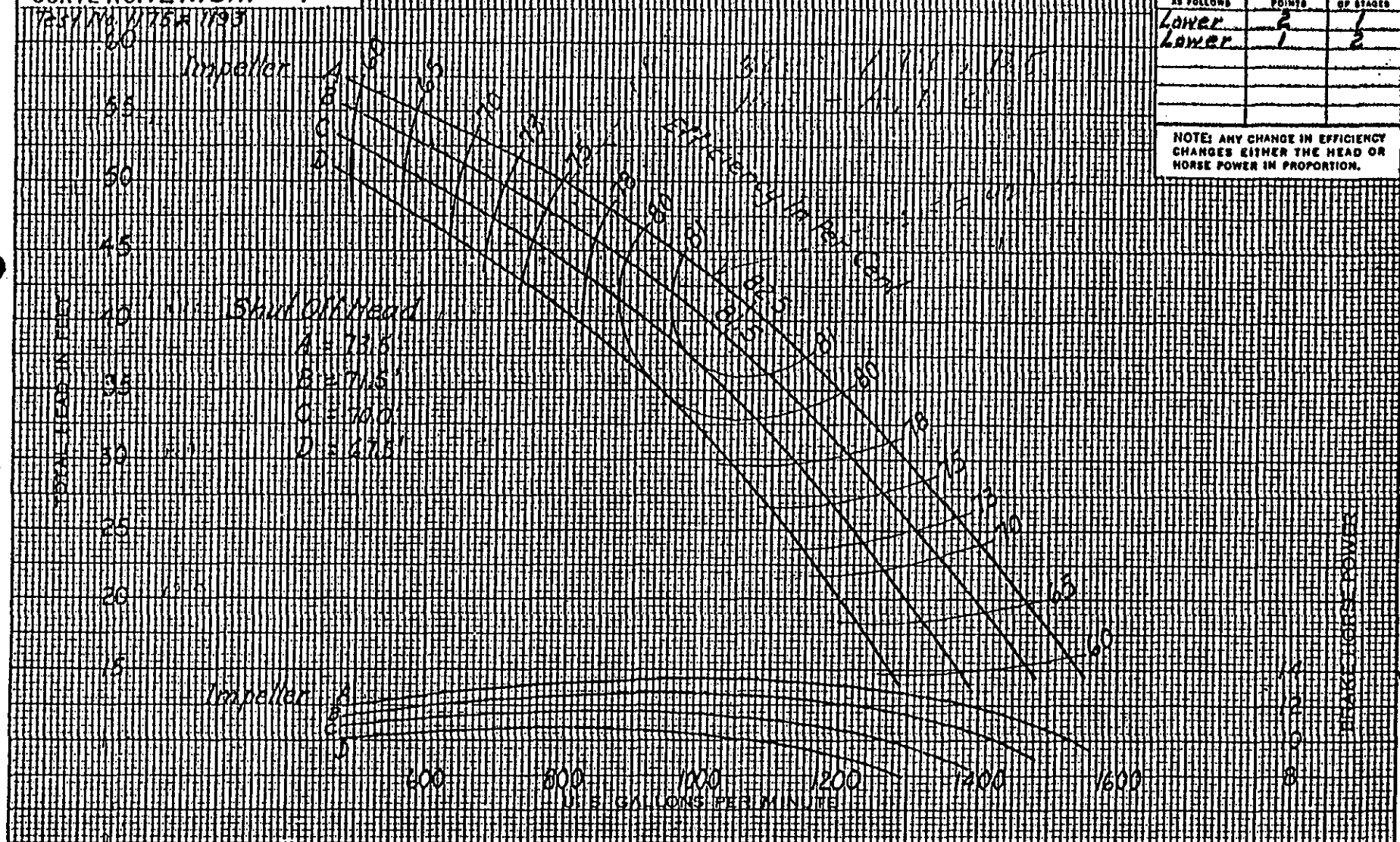
B-275

9 2 1 2 6 2 1 1 0 5

9 2 1 2 6 4 2 1 1 0 6

CURVE NO. 12M3AF—1

Testing Water 1795



CHANGE EFFICIENCY AS FOLLOWS	NUMBER OF POINTS	FOR NUMBER OF STAGES
Lower	2	1
Lower	1	2

NOTE: ANY CHANGE IN EFFICIENCY CHANGES EITHER THE HEAD OR HORSE POWER IN PROPORTION.

HYDRAULIC PERFORMANCE is contingent on the well furnishing the pump with the specified amount of clear, fresh, non-aerated water at a temperature of not to exceed 85 degrees Fahrenheit.

POMONA PUMPS

Fairbanks, Morse & Co.

Chicago 5, Illinois

Pomona California

LABORATORY PERFORMANCE

PER STAGE 12" M.C. DEEP WELL TURBINE

PUMP OPERATED AT 1760 R. P. M.

FIELD LOSS MUST BE DEDUCTED

B-276

WHC-MR- 0295

3000-B well

#84

#84

Source: USGS

12/ 3/1990 -M 10N/28E-23P03

SITE ID:	461953119162701
KEY.NO.:	2166
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461950
LONGITUDE:	1191621
LAT/LONG ACC:	S
LOCAL NO.:	10N/28E-23P03
ALTITUDE:	390.00
ALT.ACC:	1
USE OF SITE:	W
NO.1 WATER USE:	P
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	90.00
WELL.DEPTH:	90.00
DEPTH SOURCE:	A
DATE DRILLED:	5/ 1/1948
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-40-16B
LAST NAME:	HANFORD
DATE OWNED:	05/ /1951
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	32.00
WATER LEVEL DATE:	5/ 1/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	30.00
WATER LEVEL DATE:	7/24/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	23.34
WATER LEVEL DATE:	5/ 1/1951
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	650.00
DRAWDOWN:	-99.00
TEST TIME:	-99.0
DISCHARGE INFO SOURCE:	A

9 2 1 2 6 2 1 1 0 7

#84

DISCHARGE MEASURING METHOD:	
DISCHARGE:	1500.00
DRAWDOWN:	9.00
TEST TIME:	12.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	47.00
OPENING BOTTOM:	84.00
OPENING DIAM.:	20.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	BLSD
LITHOLOGIC MODIFIER:	+ SDGL,SAND,BLDR
% WATER.CONTRIBUTED:	-99
UNIT TOP:	82.00
GEOHYDROLOGIC UNIT:	121LRRG
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	-99
REMARK:	WAS 3000-B
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 392.82
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642108

85

1100 AREA WELL INVENTORY FORM

Well Number: 3000-C
Other Well ID: 11-39-16D (Hanford)
Date 12/4/90
Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) – Fig. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
N. Richland Well Field

Current Well Use: Municipal Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: 39300 ~~South:~~ East 15945
System: Old Richland Coords.

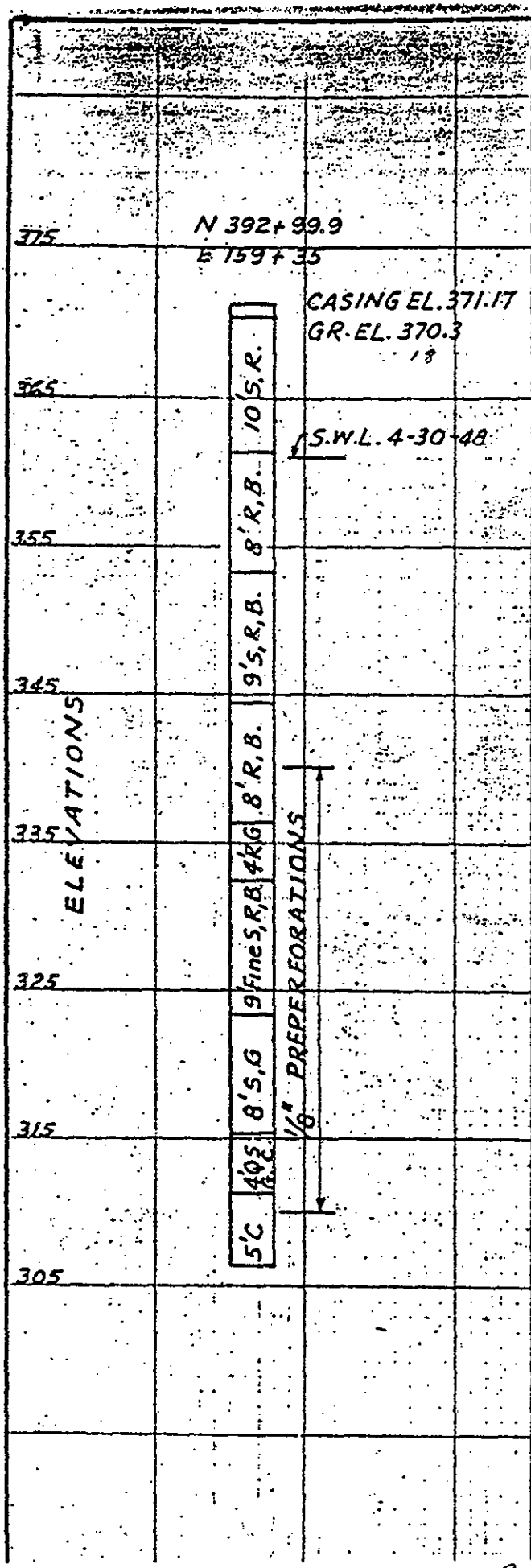
Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (NE of NW)

Well Specifications:
Installation Date: 5/48 Total Depth (ft): 64
Well Construction Type: ~~Hathaway 20" steel casing perf. from 40' to 70'~~
~~(18" perforations)~~ ~~Hathaway~~ 20" steel Casing. Perf. from 30'-60'
Pump System Type: Westinghouse 100 hp Motor
Fairbanks-Morse 800 gpm Vertical Pump
Well Access for Sounding: Access ports on either side of pump head.
Air line installed in one port.

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 17
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes

Other:
1555a

#85



WELL DATA

20" steel casing. Pre-perforated from Elev. 310 to 340. Static water level after surging and before pumping Elev. 360. Sandfree in 10 minutes after first pumping. Pumped 1100 to 2000 GPM for 12 hours drawdown 6.5 to 14.5 ft. Specific capacity at 1100 GPM - 170, at 2000 GPM - 138. 1,000 GPM, 6 stage Pomona pump, head 230 ft., set at Elev. 318.5.

KEY

B Boulders
C Clay
FS Fine sand
G Gravel
R Rocks
S Sand

SCALE: 1"=10'	
APPROVED	DATE 8-20-48 DRAWN BY [illegible]
	CHECKED BY [illegible]

GENERAL ELECTRIC CO.
HANFORD WORKS

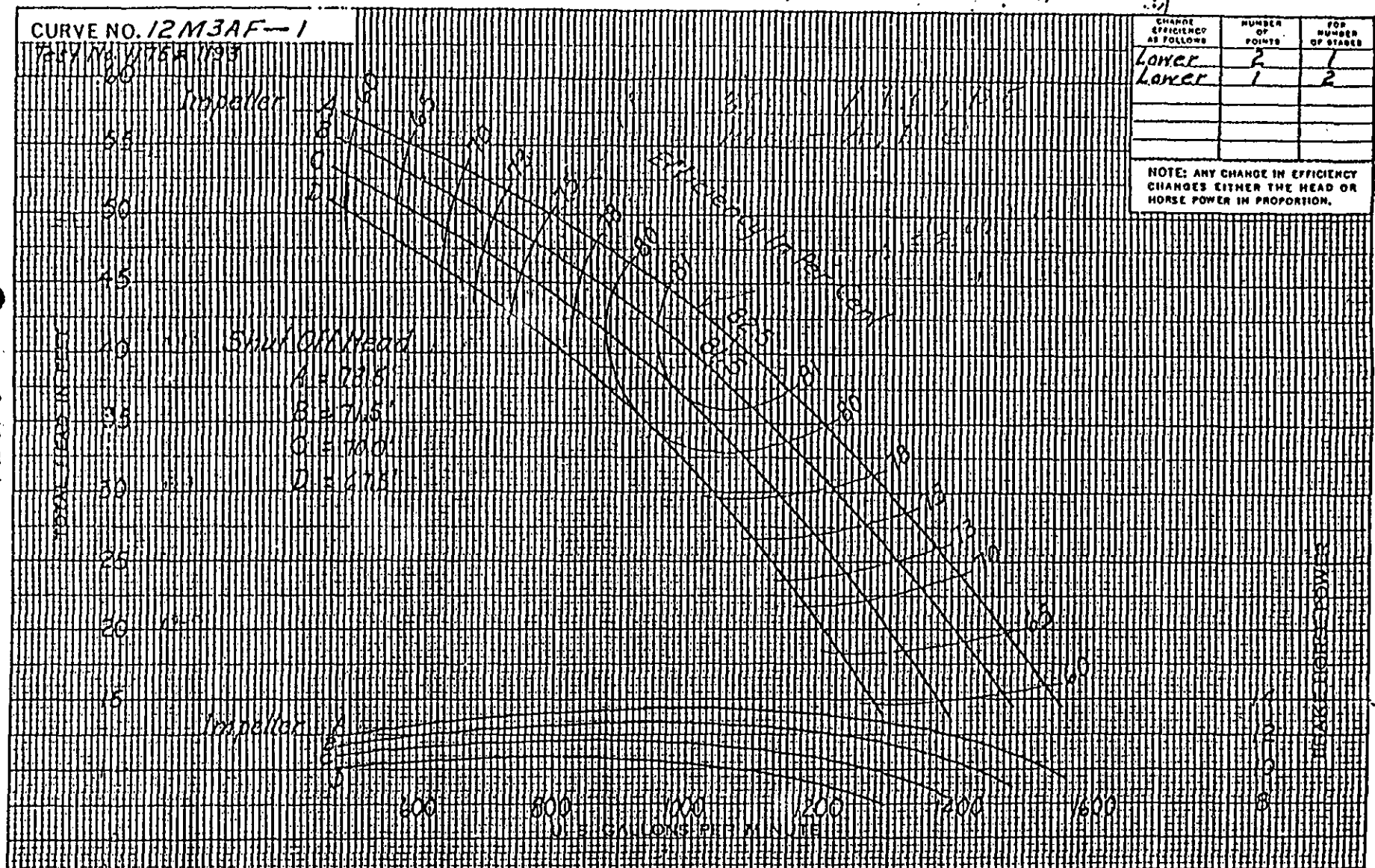
ALVORD, BURDICK & HOWSON
CONSULTING ENGINEERS CHICAGO

LOG OF WELL-3000-C

DWG. NO. [illegible]

9 2 1 2 6 4 2 1 1 1 0

CURVE NO. 12M3AF—1



CHANGE EFFICIENCY AS FOLLOWS	NUMBER OF POINTS	FOR NUMBER OF STAGES
Lower	2	1
Lower	1	2

NOTE: ANY CHANGE IN EFFICIENCY CHANGES EITHER THE HEAD OR HORSE POWER IN PROPORTION.

HYDRAULIC PERFORMANCE is contingent on the well furnishing the pump with the specified amount of clear, fresh, non-aerated water at a temperature of not to exceed 85 degrees Fahrenheit.

POMONA PUMPS

Fairbanks, Morse & Co.

Chicago 5, Illinois — Pomona California

LABORATORY PERFORMANCE
PER STAGE 12" M. C. DEEP WELL TURBINE
PUMP OPERATED AT 1760 R. P. M.
FIELD LOSS MUST BE DEDUCTED

B-281

300-25 well

#25

#85

Source: USGS[a]

12/ 3/1990 -M 10N/28E-26C04

SITE ID:	461934119162601
KEY.NO.:	2178
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461942
LONGITUDE:	1191619
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26C04
ALTITUDE:	371.77
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	64.00
WELL.DEPTH:	64.00
DEPTH SOURCE:	A
DATE DRILLED:	05/ /1948
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-39-16D
LAST NAME:	HANFORD
DATE OWNED:	05/ /1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	10.00
WATER LEVEL DATE:	4/ 4/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	2000.00
DRAWDOWN:	14.50
TEST TIME:	12.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	32.00
OPENING BOTTOM:	62.00
OPENING DIAM.:	20.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ BLDR,BLSD,SAND
% WATER.CONTRIBUTED:	-99
UNIT TOP:	59.00
GEOHYDROLOGIC UNIT:	121RGLD

9 2 1 2 6 4 2 1 1 1 2

B-282

#85

RELATIVE CONTRIBUTION:	U
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	-99
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 371.17
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-C
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 2 1 1 1 3

86

1100 AREA WELL INVENTORY FORM

Well Number: 3000 - D
Other Well ID: 11-39-16C (Hanford) 6-S39-16C
Date 12/4/90
Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) - FIG. RL-1
Owner's Address: 505 Swift. Blvd. Richland, WA
Street Address of Residential Well Site if Different from Owner: North Richland Well Field

Current Well Use: Municipal Well

Verification by Owner/Occupant of Well Use: n/a (Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: 39097 ~~South~~ East: 15621
System: Old Richland Coords.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (NE & NW)

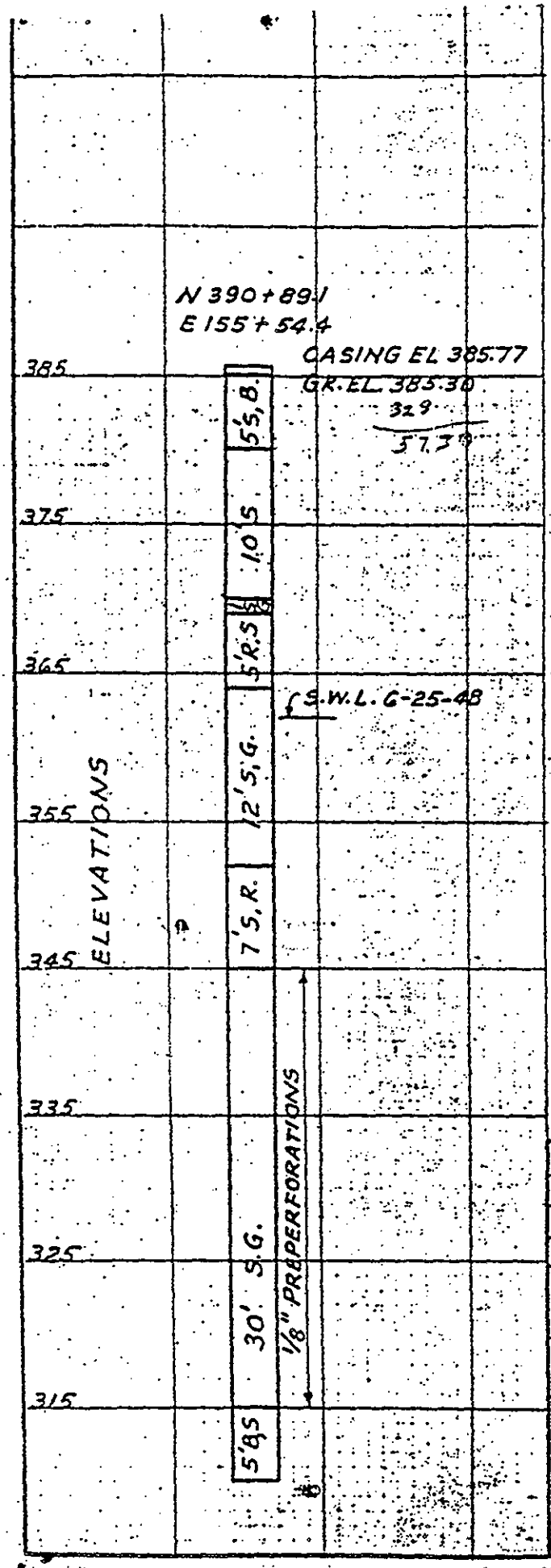
Well Specifications:
Installation Date: 5/48 Total Depth (ft): 75.3
Well Construction Type: 20" Steel casing perforated (1/8" perfs) from 40ft to 70 ft.
Pump System Type: Fairbanks-Morse 125 hp Motor
Fairbanks-Morse 850gpm Vertical Pump
Well Access for Sounding: Access ports on either side of pump
Air line in one port

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 12
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:
USGS

9212642114

#86



WELL DATA

20" steel casing, pre-perforated from Elev. 315 to 345. Static water level after surging and before pumping Elev. 362. Sandfree in 10 minutes at first pumping. Pumped at 1000-2000 GPM for 12 hours. Drawdown 3 to 6 ft. Specific capacity 327 to 350. 1,000 GPM 6 stage Pomona pump, 230 ft. head, set at Elev. 328.

KEY

B Boulders
C Clay
G Gravel
R Rocks
S Sand

Pomona Turbine
Serial # PJ 3053

SCALE: 1"=10'	
APPROVED	DATE 8-20-48 DRAWN BY Qeurd. CHECKED BY Qeurd.

GENERAL ELECTRIC CO.
HANFORD WORKS

ALVORD, BURDICK & HOWSON
CONSULTING ENGINEERS · CHICAGO

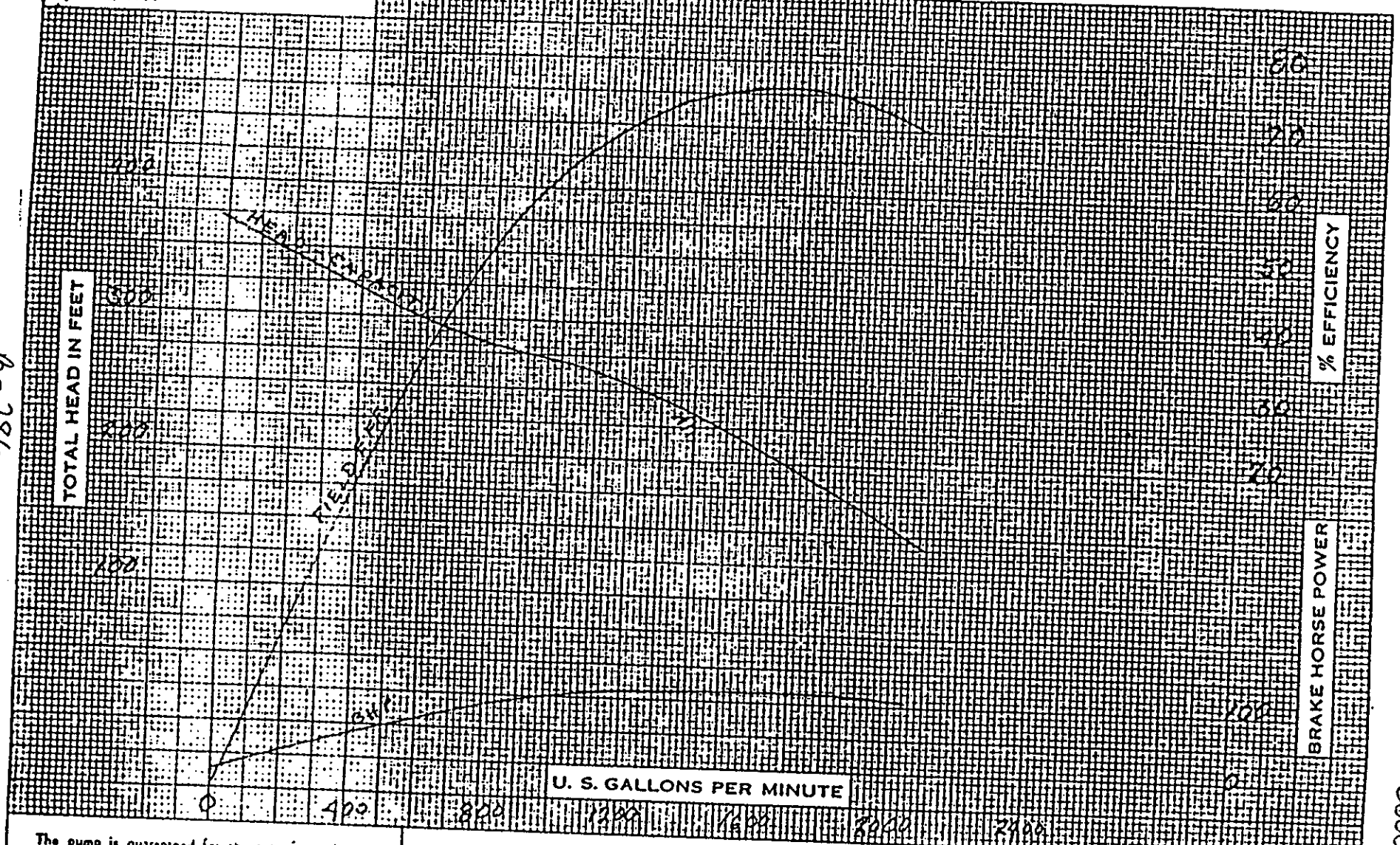
LOG OF WELL-3000-D
Abandoned 3/21/49 Well Complete 8/7/58

DWG. NO. H-11-4123

9 2 1 2 6 4 2 1 1 1 6

3000-LAV-D

CURVE NO.



The pump is guaranteed for the set of conditions specified, other points on the curve are approximate. Capacity, head and efficiency guarantees are contingent on the pump being furnished with the specified amount of clear, fresh non-aerated water at a temperature of not to exceed 80 degrees Fahrenheit

Reference Curve 12H6AF-1

FAIRBANKS MORSE & CO.

CHICAGO 5, ILLINOIS

LOSSES: 70 G.P.M. 8x1 7/16 C/S INCLUDES C/V.
- ALL BRONZE BOWL

PERFORMANCE

5 STAGE 12HC FIG. 6972

PUMP OPERATED AT 1760 R. P. M.

BRANCH ORDER NO.

FACTORY ORDER NO.

DATE 4/30/54

WHC-MR- 0295

3000-D Unit #86

B-286

#86

Source: USGS

12/ 3/1990 -M 10N/28E-26C03

SITE ID:	461935119162701
KEY.NO.:	2177
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461939
LONGITUDE:	1191623
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26C03
ALTITUDE:	384.77
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	75.00
WELL.DEPTH:	75.00
DEPTH SOURCE:	A
DATE DRILLED:	05/ /1948
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-39-16C
LAST NAME:	HANFORD
DATE OWNED:	05/ /1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	24.00
WATER LEVEL DATE:	5/ 1/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	22.77
WATER LEVEL DATE:	6/25/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
DISCHARGE INFO SOURCE:	R
DISCHARGE MEASURING METHOD:	
DISCHARGE:	1500.00
DRAWDOWN:	4.50
TEST TIME:	12.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	41.00
OPENING BOTTOM:	71.00
OPENING DIAM.:	20.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO

#86

RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ BLSD,SAND
% WATER.CONTRIBUTED:	100
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 385.77
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-D
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642118

#87

1100 AREA WELL INVENTORY FORM

Well Number: 3000-D5 Date 12/4/90
Other Well ID: 30-42-16 (Hanford) Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) – Fig. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
North Richland Well Field
(N. of 1st St.)

Current Well Use: Municipal Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: 41572 ~~South:~~ East 16180
System: WA Richland Coords.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 25 (NE of SW)

Well Specifications:
Installation Date: 10/44 Total Depth (ft): 134
Well Construction Type: 12" casing to 131', Perf. 55' to 125'

Pump System Type: GE 75hp ~~(illegible)~~ Motor, Fairbanks-Morse 700 gpm Vertical Pump.
Well Access for Sounding: Access ports on either side of pumphead (air line in one port)

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 9
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:
Well up for replacement. (Property sold)
(illegible)

#87

3000 - D-5

~~3000 AREA DURAND #5 WELL~~

Started Drilling - 9-22-44
Finished Drilling - 10-13-44

Elev. Top of Pipe - 407.63
Ground Elevation - 407.50

Drilled by: Dishman & Morkert

Coordinates: N.415 ≠ 72.19
E.161 ≠ 80.37

12" Casing at 131'

Formation Record

0	2	2	Sand
2	6	4	Gravel and Boulders
6	16	10	Coarse Gravel
16	26	10	Medium Gravel
26	32	6	Coarse Gravel and Sand
32	40	8	Medium Gravel and some Sand
40	78	38	Coarse Gravel and some Sand
78	80	2	Medium Gravel and Sand
80	83	3	Boulders
83	94	11	Coarse Gravel and some Sand
94	98	4	Fine Sand and Medium Gravel
98	112	14	Coarse Gravel and Boulders
112	120	8	Medium Gravel and some Sand
120	124	4	Coarse Gravel and some Sand
124	128	4	Boulders and some Sand
128	134	6	Blue sandy Shale

Cement plug set at
130.8'

Static - 10/13/44

Elevation 276.83

52' Elevation 355.50

Perforated 11-6-44
8 Vertical Holes
Spaced at 12" Centers
From 55' to 125'

Tested 11-21-44

1125 G.P.M. with 4.55 drawdown
Specific Capacity - 250
Tested for 16 hrs.

Equipped with a Pomona 1000 gpm pump driven by a 75 H.P. Electric Motor, Serial = P.J. 3056

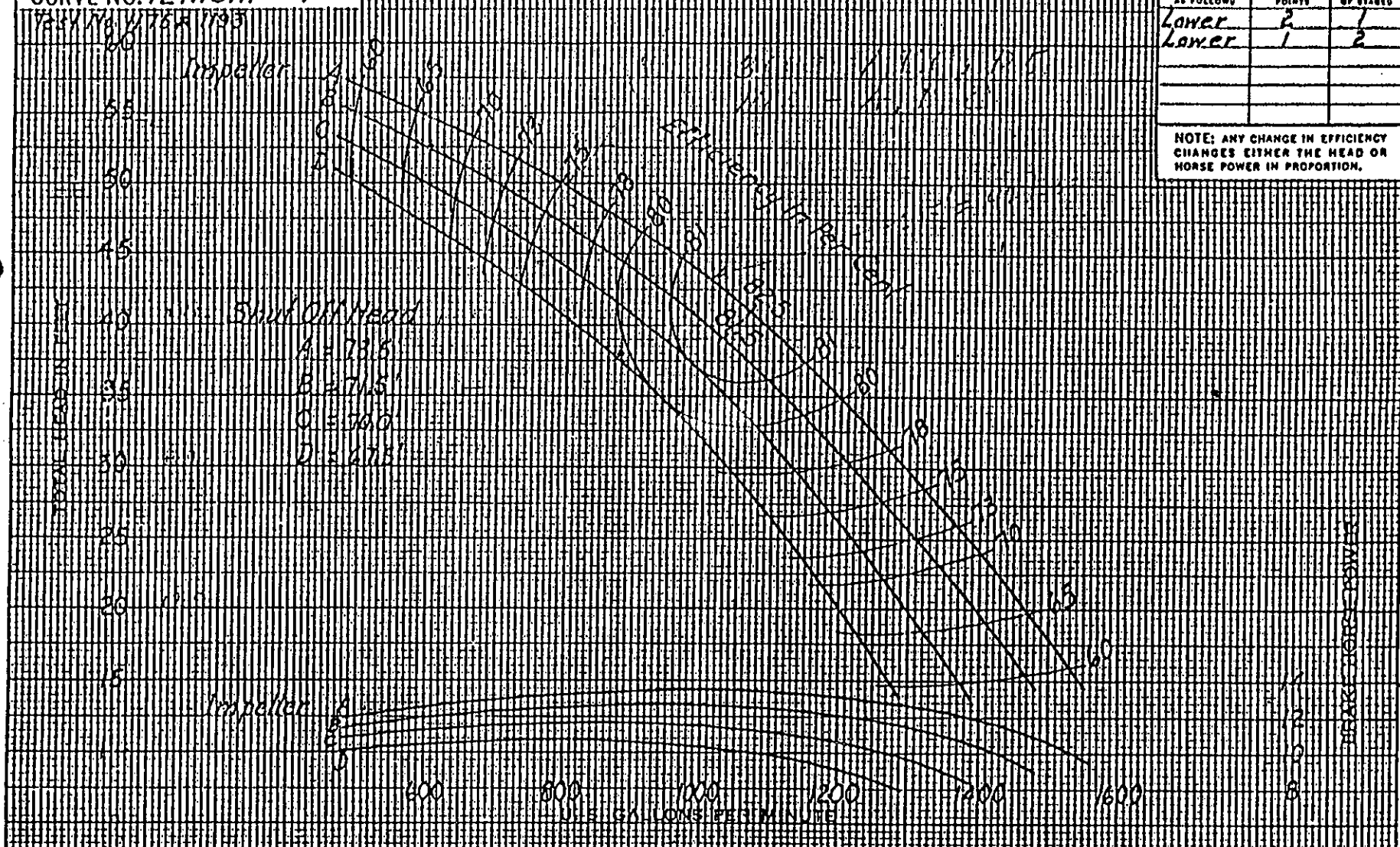
8988

B-290

9 2 1 2 6 4 2 1 1 2 0

9 2 1 2 6 2 1 1 2 1

CURVE NO. 12M3AF—1



CHANGE EFFICIENCY AS FOLLOWS	NUMBER OF POINTS	FOR NUMBER OF STAGES
Lower	2	1
Lower	1	2

NOTE: ANY CHANGE IN EFFICIENCY CHANGES EITHER THE HEAD OR HORSE POWER IN PROPORTION.

HYDRAULIC PERFORMANCE is contingent on the well furnishing the pump with the specified amount of clear, fresh, non-aerated water at a temperature of not to exceed 85 degrees Fahrenheit.

POMONA PUMPS

Fairbanks, Morse & Co.

Chicago 5, Illinois — Pomona California

LABORATORY PERFORMANCE
PER STAGE 12" M.C. DEEP WELL TURBINE
PUMP OPERATED AT 1760 R. P. M.
FIELD LOSS MUST BE DEDUCTED

B-291

WHC-MR- 0295

3000 D-5 Well #57

#87

Source: USGS[a]

11/21/1990 -M 10N/28E-23L01

SITE ID:	462004119162001
KEY.NO.:	2162
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	462004
LONGITUDE:	1191618
LAT/LONG ACC:	S
LOCAL NO.:	10N/28E-23L01
ALTITUDE:	407.50
ALT.ACC:	1
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	134.00
WELL.DEPTH:	130.80
DEPTH SOURCE:	A
DATE DRILLED:	10/13/1944
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	3099-42-16
LAST NAME:	HANFORD
DATE OWNED:	10/ /1944
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	48.27
WATER LEVEL DATE:	11/10/1944
W.L.TIME:	0
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	48.27
WATER LEVEL DATE:	11/10/1944
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	48.77
WATER LEVEL DATE:	11/18/1944
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	49.12
WATER LEVEL DATE:	11/21/1944
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	

9212521122

#87

WATER LEVEL: 49.50
WATER LEVEL DATE: 11/25/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 50.07
WATER LEVEL DATE: 11/30/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 51.09
WATER LEVEL DATE: 12/ 8/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 51.69
WATER LEVEL DATE: 12/14/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 52.44
WATER LEVEL DATE: 12/22/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 53.17
WATER LEVEL DATE: 12/30/1944
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 53.91
WATER LEVEL DATE: 1/ 6/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 54.71
WATER LEVEL DATE: 1/11/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 54.90
WATER LEVEL DATE: 1/12/1945
W.L.TIME: 0
W.L. METHOD:

#87

W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 55.49
WATER LEVEL DATE: 1/18/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 56.03
WATER LEVEL DATE: 1/24/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 56.03
WATER LEVEL DATE: 1/25/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 57.06
WATER LEVEL DATE: 2/ 3/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 57.51
WATER LEVEL DATE: 2/17/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 57.95
WATER LEVEL DATE: 2/24/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 58.35
WATER LEVEL DATE: 3/ 3/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 58.65
WATER LEVEL DATE: 3/10/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 59.10

9 2 1 2 6 4 2 1 1 2 4

#87

WATER LEVEL DATE:	3/17/1945
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	59.39
WATER LEVEL DATE:	3/24/1945
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	58.26
WATER LEVEL DATE:	3/31/1945
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	58.20
WATER LEVEL DATE:	4/ 7/1945
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	58.10
WATER LEVEL DATE:	4/14/1945
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	58.35
WATER LEVEL DATE:	4/21/1945
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	58.56
WATER LEVEL DATE:	4/28/1945
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	57.86
WATER LEVEL DATE:	5/ 5/1945
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	
WATER LEVEL:	57.39
WATER LEVEL DATE:	5/12/1945
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	

9 2 1 2 6 2 1 2 5

#87

WATER LEVEL SOURCE:

WATER LEVEL: 54.89
WATER LEVEL DATE: 5/19/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 53.56
WATER LEVEL DATE: 5/26/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 52.16
WATER LEVEL DATE: 6/ 2/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 50.96
WATER LEVEL DATE: 6/ 7/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 50.21
WATER LEVEL DATE: 6/16/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 49.46
WATER LEVEL DATE: 6/23/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 48.56
WATER LEVEL DATE: 6/30/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 48.06
WATER LEVEL DATE: 7/ 7/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 48.46
WATER LEVEL DATE: 7/14/1945

9 2 1 2 6 4 2 1 1 2 6

#87

W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.80
WATER LEVEL DATE: 7/21/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.04
WATER LEVEL DATE: 7/28/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.11
WATER LEVEL DATE: 8/ 4/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 48.21
WATER LEVEL DATE: 8/11/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.08
WATER LEVEL DATE: 8/18/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.06
WATER LEVEL DATE: 8/25/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 48.07
WATER LEVEL DATE: 9/ 1/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.78
WATER LEVEL DATE: 8/1945
W.L.TIME:
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

9212627

#87

WATER LEVEL: 48.06
WATER LEVEL DATE: 9/15/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 48.29
WATER LEVEL DATE: 9/22/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.93
WATER LEVEL DATE: 9/29/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

WATER LEVEL: 47.75
WATER LEVEL DATE: 10/ 6/1945
W.L.TIME: 0
W.L. METHOD:
W.L. STATUS:
WATER LEVEL SOURCE:

DISCHARGE INFO SOURCE: S
DISCHARGE MEASURING METHOD: R
DISCHARGE: 1125.00
DRAWDOWN: 4.55
TEST TIME: 16.0

FINISH: P
OPENING TYPE: P
OPENING TOP: 55.00
OPENING BOTTOM: 125.00
OPENING DIAM.: 12.00

UNIT TOP: 0.00
GEOHYDROLOGIC UNIT: 112PSCO
RELATIVE CONTRIBUTION: P
LITHOLOGY: SDGL
LITHOLOGIC MODIFIER: + BLDR,SAND
% WATER.CONTRIBUTED: 100

UNIT TOP: 128.00
GEOHYDROLOGIC UNIT: 121LRRG
RELATIVE CONTRIBUTION: N
LITHOLOGY: SHLE
LITHOLOGIC MODIFIER: SANDY, BLUE
% WATER.CONTRIBUTED: 0

REMARK: SEE MCGHAN ET. AL. 1985
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

REMARK: CASING ELEVATION @ 407.63

9 2 1 2 6 4 2 1 1 2 8

#87

STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

REMARK: WAS 3000-D-5
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

REMARK: CEMENT PLUG @ 130.8FT
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.99

9212612129

WHC-MR- 0295

#88

1100 AREA WELL INVENTORY FORM

Well Number: 3000-E
Other Well ID: 11-39-16A (Hanford)
Date 12/4/90
Surveyor: RR

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) – Fig. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
N. Richland Well Field

Current Well Use: Municipal Well (Out of service)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: 38831 ~~South~~ East: 159041
System: Old Richland Coords.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (NE of NW)

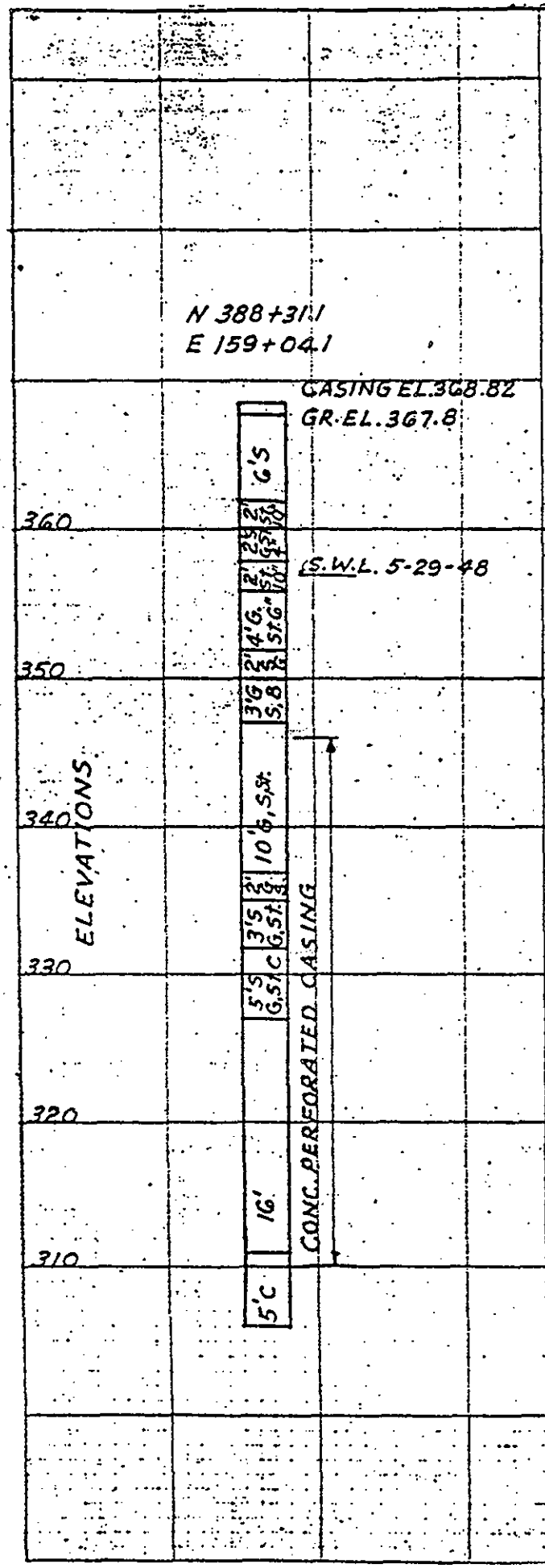
Well Specifications:
Installation Date: 8/48 Total Depth (ft): ~~60~~ 61.8
Well Construction Type: 17" I.D. concrete casing, gravel packed. Top 20' – 16", Bottom: 34".
(Kelly Well) Concrete perf. casing from 21.8 ft. to 57.8 ft.
Pump System Type: Pump out of service
Well Access for Sounding: No access until pump/well is repaired.

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 16
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:
Hole covered with plywood, Pump housing resting over well.
USGS

9212642113 0

B-300



88

WELL DATA

Kelly Well - 17" I.D. concrete casing, gravel packed. Top 20'-46", bottom 34". Concrete perforated casing Elev. 310 to 346. Static water level Elev. 357. Sanifree from beginning. 18 hours pumping at 1,085 GPM. Drawdown 2'4". Specific capacity 465. 2,000 GPM. Peerless pump 190 ft. head, set at Elev. 315.

KEY

B	Boulders
C	Clay
FS	Fine sand
G	Gravel
S	Sand
ST	Stone

SCALE: 1"=10'	
APPROVED	DATE 8-20-48 DRAWN BY [illegible]
	CHECKED BY [illegible]

GENERAL ELECTRIC CO.
HANFORD WORKS

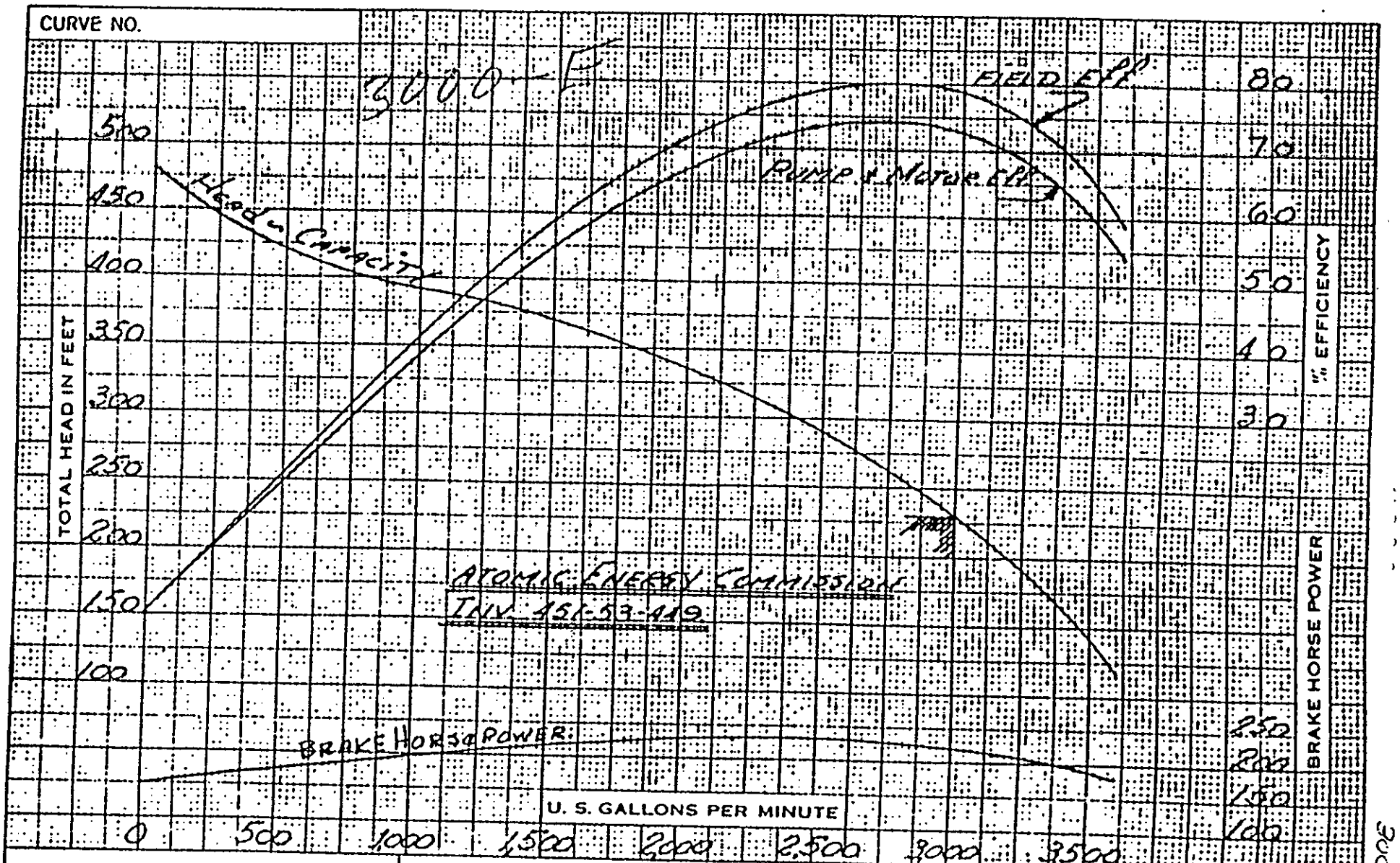
ALVORD, BURDICK & HOWSON
CONSULTING ENGINEERS CHICAGO

LOG OF WELL 3000-E

DWG. NO. H-11-412

B-301

9 2 1 2 6 4 2 1 1 3 2



The pump is guaranteed for the set of conditions specified. Other points on the curve are approximate. Capacity, head and efficiency guarantees are to apply on the pump being furnished with the specified amount of clear, fresh non-aerated water at a temperature of not to exceed 85 degrees. Fahrenheit

FAIRBANKS MORSE & CO.

CHICAGO 5, ILLINOIS

30 - E Jep

PERFORMANCE

4 STAGE 16 CYS FIG. 6972

PUMP OPERATED AT 1760 R. P. M.

BRANCH ORDER NO.

FACTORY ORDER NO.

DA. 8-2-61 H.

B-302

WHC-MR- 0295

3000 - E Well #8

#88

Source: USGS[a]

12/ 3/1990 -M 10N/28E-26C02

SITE ID:	461934119162801
KEY.NO.:	2176
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461935
LONGITUDE:	1191621
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26C02
ALTITUDE:	367.80
ALT.ACC:	1
USE OF SITE:	W
NO.1 WATER USE:	P
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	62.00
WELL.DEPTH:	62.00
DEPTH SOURCE:	A
DATE DRILLED:	08/ /1948
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-39-16A
LAST NAME:	HANFORD
DATE OWNED:	08/ /1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	9.78
WATER LEVEL DATE:	8/ 1/1948
W.L.TIME:	
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	R
DISCHARGE:	1085.00
DRAWDOWN:	2.30
TEST TIME:	18.0
FINISH:	F
OPENING TYPE:	F
OPENING TOP:	22.00
OPENING BOTTOM:	58.00
OPENING DIAM.:	17.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ COBB,SAND
% WATER.CONTRIBUTED:	-99
UNIT TOP:	57.00
GEOHYDROLOGIC UNIT:	121RGLD

9 2 1 2 6 4 2 1 1 3 3

#88

RELATIVE CONTRIBUTION:	U
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	-99
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 368.82
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-E
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 4 2 1 1 3 4

89

1100 AREA WELL INVENTORY FORM

Well Number: 3000-H
Other Well ID: 11-40-16C (Hanford)
Date 12/4/90
Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) - FIG. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
N. Richland Well Field

Current Well Use: Municipal Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: 39600 ~~South~~ East: 15950
System: Old Richland Coords.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 23 (SE of SW)

Well Specifications:
Installation Date: ~~1~~ 1/5T? ? Total Depth (ft): 56
Well Construction Type: ~~1~~ 20" Steel casing Perf./Screen from 25' to 50'

Pump System Type: Fairbanks-Morse ~~[illegible]~~ hp 200 hp Motor.
Fairbanks-Morse 1000gpm Vertical Pump.
Well Access for Sounding: Access ports on both sides of pump.
Air line in one port

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 18
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes

Other:
(5555)

9212641135

B-305

#89

SUnset 2366

R. J. Strasser Drilling Co.

8110 S. E. SUNSET LANE
PORTLAND 6, OREGON

Information concerning wells 3000 J, 3000 L, 3000M

Log of Formations; 3000 L

From	To	Formation
Surface	5	Gravel and sand
5	27	Gravel, boulders and sand
27	39	Gravel and sand
39	42	Coarse sand
42	54	Gravel, boulders, and sand, Hit water @ 50'
54	68	Gravel and sand (water bearing)
68	71	Sand, gravel, and boulders, tight clay binder
71	83	Sand and gravel, clay binder, After a depth of 68', sand pumping lowered elevation of water in hole. Open hole without caving was permissible due to tight clay binder in hole.

CASING: 3000L-Well cased to 83 ft. with ½" wall 20" O.D. pipe. Casing perforated from 56' to 81'.

WELL 3000 M: H

LOG OF FORMATIONS: 3000M H

From	To	Formation
Surface	15	Brown sand
15	20	Cemented gravel
20	30	Loose sand and gravel, large boulders
30	39	Loose gravel and sand, water bearing
39	51	Gravel and sand, formation tighter but water bearing
51	55	Fine runny brown sand

CASING: 3000 M-Well cased to 55 ft. with ½" wall 20" O.D. pipe Casing perforated from 25' to 50'.

Well 3000 J: Log of formation from 52 to 69'
From 50 ft. to 62 ft. gravel, boulder, and sand
62 ft. to 69 ft. sand and gravel
69 ft. to 71 ft. gravel, sand and clay binder

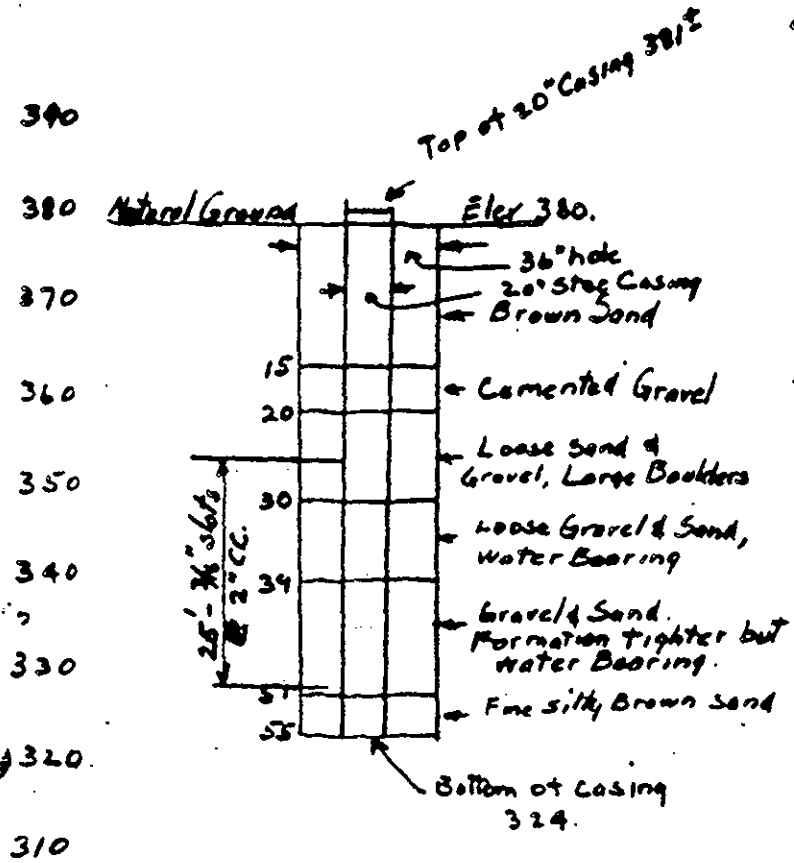
9 2 1 2 6 4 2 1 1 3 6

#89

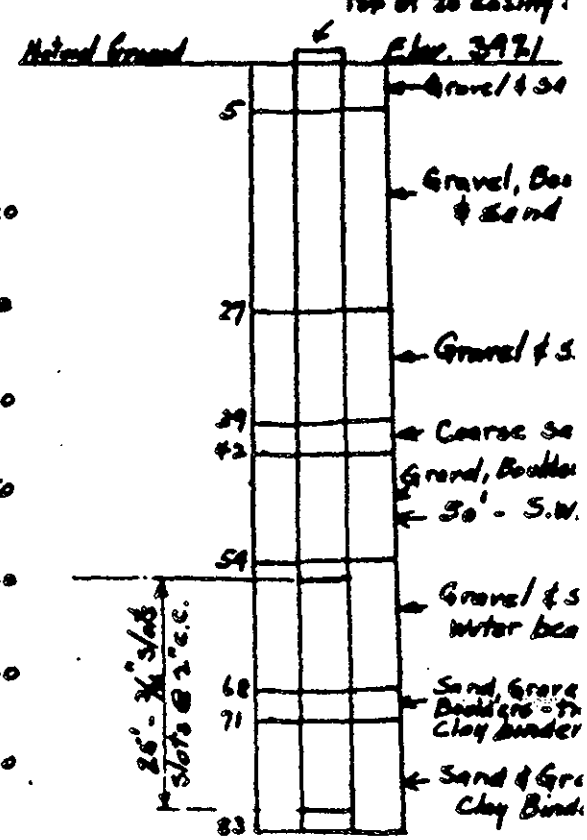
ELVORD, BURDICK & HOWSON
ENGINEERS - CHICAGO

BY HC SUBJECT Logs of Wells 3000H, -3000L DATE 1- 5

WELL 3000-H



WELL 3000-L



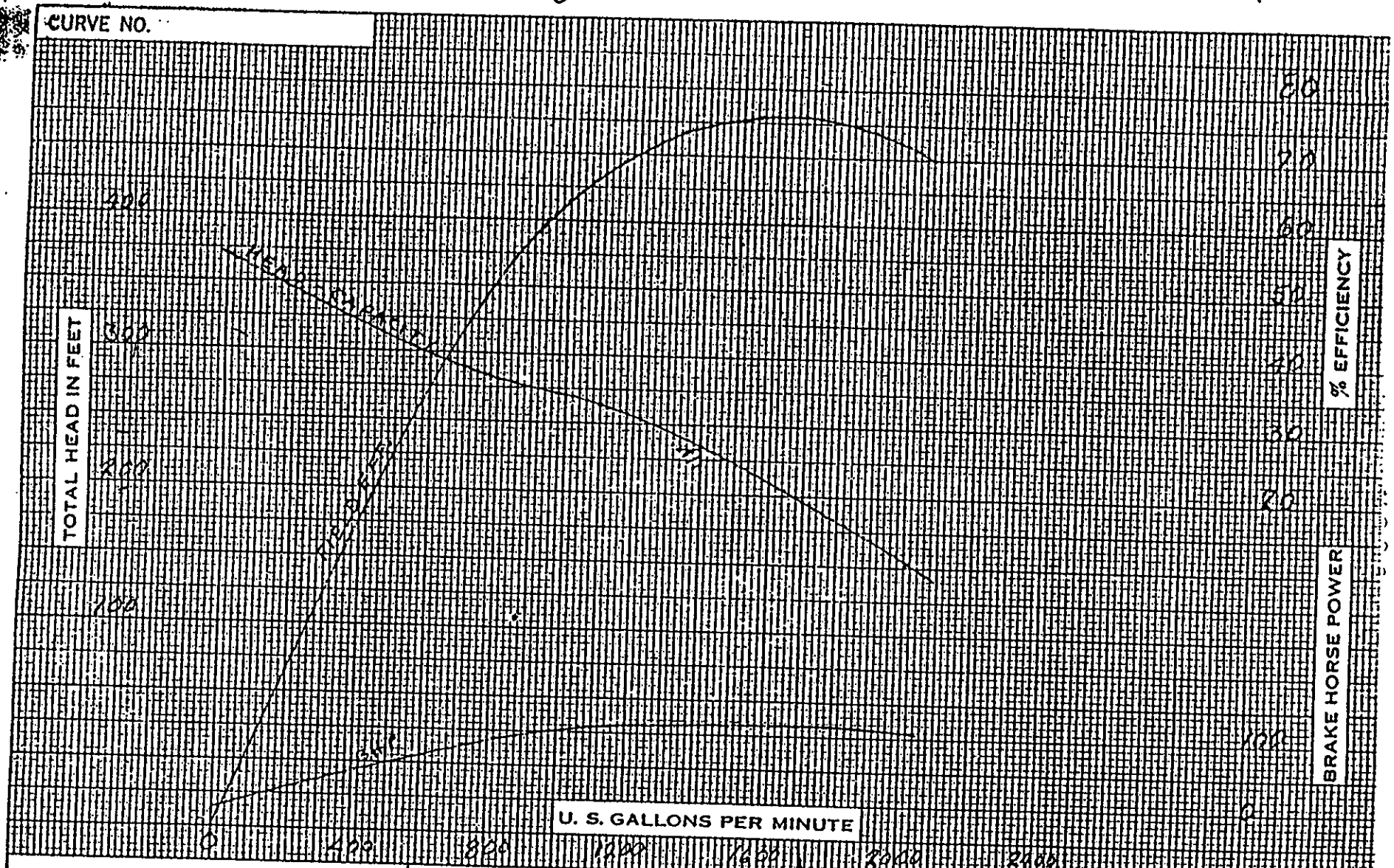
Test pumped 2000 gpm, 15' DD.
Spec Cap. 133.

Pump to be set with bottom of Bowls
@ 52' - 2000 gpm TDH 230'

9 2 1 2 6 4 2 1 1 3 8

3000 - L + J

CURVE NO.



The pump is guaranteed for the set of conditions specified, other points on the curve are approximate. Capacity, head and efficiency guarantees are contingent on the pump being furnished with the specified amount of clear, fresh non-aerated water at a temperature of not to exceed 85 degrees Fahrenheit

Reference Curve 12H6AF-1

FAIRBANKS MORSE & CO.

CHICAGO 5, ILLINOIS

LOSSES IN 70' OF 8" C/S INCLUDED CURVE.

PERFORMANCE

5 STAGE 12HC FIG. 6972

PUMP OPERATED AT 1760 R. P. M.

BRANCH ORDER NO.

FACTORY ORDER NO.

DATE 30 Jul

B-308

WHC-MR- 0295

3000-7-12

#89

Source: USGS[a]

12/ 3/1990 -M 10N/28E-26C08

SITE ID:	461936119162801
KEY.NO.:	2182
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461944
LONGITUDE:	1191619
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26C08
ALTITUDE:	380.00
ALT.ACC:	10
USE OF SITE:	W
NO.1 WATER USE:	P
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	55.00
WELL.DEPTH:	55.00
DEPTH SOURCE:	D
DATE DRILLED:	/ /1952
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-40-16C
LAST NAME:	HANFORD
DATE OWNED:	/ /1952
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	23.00
WATER LEVEL DATE:	1/ 1/1952
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	2000.00
DRAWDOWN:	16.00
TEST TIME:	-99.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	25.00
OPENING BOTTOM:	50.00
OPENING DIAM.:	20.00
FINISH:	P
OPENING TYPE:	O
OPENING TOP:	55.00
OPENING BOTTOM:	55.00
OPENING DIAM.:	20.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P

#89

LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ BLDR,SAND,GRCM
% WATER.CONTRIBUTED:	-99
UNIT TOP:	39.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	S
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SAND 51-55
% WATER.CONTRIBUTED:	-99
REMARK:	WB 30-51
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 3000-H
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 4 2 1 1 4 0

90

1100 AREA WELL INVENTORY FORM

Well Number: 3000 - J
Other Well ID: 11-39-15 (Hanford)
Date 12/4/90
Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) - Fig. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
North Richland Well Field

Current Well Use: Municipal Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: 39300 ~~South~~ East: 15400
System: UA Richland Coords.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (NE & NW)

Well Specifications:
Installation Date: 10/52 Total Depth (ft): 71'
Well Construction Type: 20" Steel casing. Perf/Screen 43' to 68'.

Pump System Type: Fairbanks - Morse 125hp Motor.
Fairbanks - Morse 850 gpm Vertical Pump.
Well Access for Sounding: Access ports on either side of pump
Air line in one port

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 11
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes

Other:
USGS

#90

SUnset 2366

R. J. Strasser Drilling Co.

8110 S. E. SUNSET LANE
PORTLAND 6, OREGON

Information concerning wells 3000 J, 3000 L, 3000M

Log of Formations; 3000 L

From	To	Formation
Surface	5	Gravel and sand
5	27	Gravel, boulders and sand
27	39	Gravel and sand
39	42	Coarse sand
42	54	Gravel, boulders, and sand, Hit water @ 50'
54	68	Gravel and sand (water bearing)
68	71	Sand, gravel, and boulders, tight clay binder
71	83	Sand and gravel, clay binder, After a depth of 68', sand pumping lowered elevation of water in hole. Open hole without caving was permissible due to tight clay binder in hole.

CASING: 3000L-Well cased to 83 ft. with ½" wall 20" O.D. pipe. Casing perforated from 56' to 81'.

WELL 3000 ~~L~~: H

LOG OF FORMATIONS: 3000M H

From	To	Formation
Surface	15	Brown sand
15	20	Cemented gravel
20	30	Loose sand and gravel, large boulders
30	39	Loose gravel and sand, water bearing
39	51	Gravel and sand, formation tighter but water bearing
51	55	Fine runny brown sand

CASING: 3000 M-Well cased to 55 ft. with ½" wall 20" O.D. pipe Casing perforated from 25' to 50'.

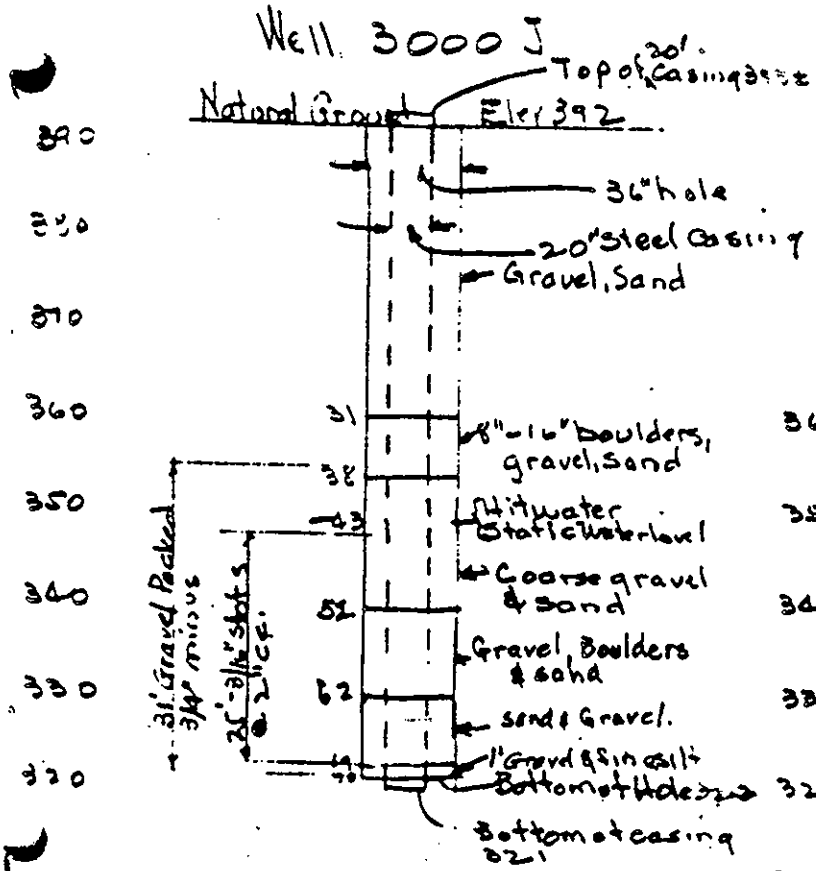
Well 3000 J: Log of formation from 52 to 69'
From 50 ft. to 62 ft. gravel, boulder, and sand
62 ft. to 69 ft. sand and gravel
69 ft. to 71 ft. gravel, sand and clay binder

9 2 1 2 6 4 2 1 1 4 2

#90

ALVORD, BURDICK & HOWSON
ENGINEERS · CHICAGO BY AWH SUBJECT Logs of Well 3000J; 3000K DATE 10-

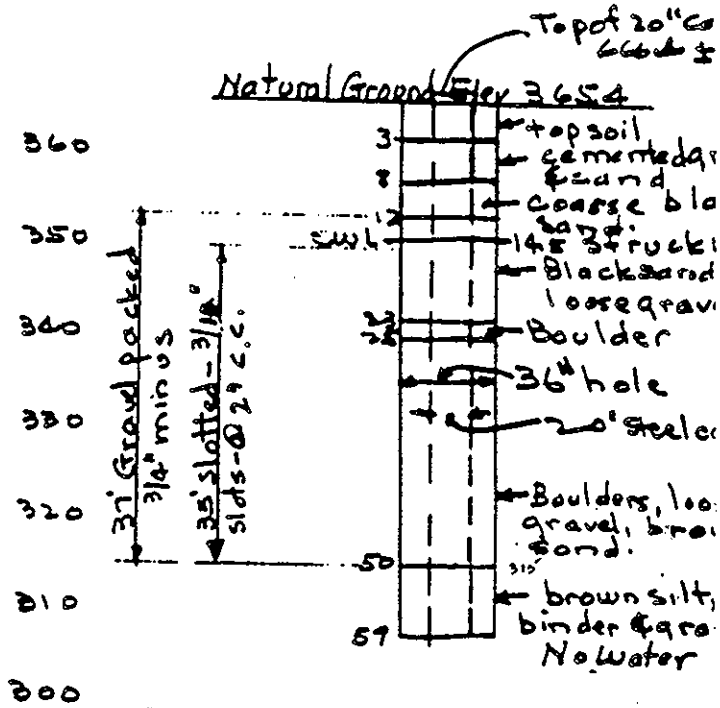
Well 3000 J



Test pumped - 1800 gpm - 18' d.d.
Spec Cap 100

Pump to be set with bottom of bowls @ 68' - 1400 gpm
TDH 230'

Well 3000 K



Test pumped - 2000 gpm, 25' dd, spec
Pump to be set with bottom of bowl @ -53' - 2000 gpm TDH 280

Completed Well and in test pump 11-10-5

(Base of pump to bottom of bowls 72')
Well D.

9 2 1 2 6 4 2 1 1 4 4

CURVE NO.

The pump is guaranteed for the set of conditions specified, other points on the curve are approximate. Capacity, head and efficiency guarantees are contingent on the pump being furnished with the specified amount of clear, fresh non-aerated water at a temperature of not to exceed 85 degrees Fahrenheit

Reference Curve 12H6AF-1

FAIRBANKS MORSE & CO.

CHICAGO 5, ILLINOIS

LOSSES IN 70' OF 8 x 1 7/16" C/S INCLUDES Cpg.
- ALL BRONZE B[illegible] -

PERFORMANCE

5 STAGE 12HC FIG. 6972

PUMP OPERATED AT 1760 R. P. M.

BRANCH ORDER NO.

FACTORY ORDER NO.

DATE 4/30/54

WHC-MR- 0295

3000-J Well 9

B-31H

Source: USGS

#90

12/ 3/1990 -M 10N/28E-26C07

SITE ID:	461936119162901
KEY.NO.:	2181
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461943
LONGITUDE:	1191628
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26C07
ALTITUDE:	392.00
ALT.ACC:	1
USE OF SITE:	W
NO.1 WATER USE:	P
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	70.00
WELL.DEPTH:	70.00
DEPTH SOURCE:	D
DATE DRILLED:	/ /
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-39-15
LAST NAME:	HANFORD
DATE OWNED:	1/ 1/1952
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	43.00
WATER LEVEL DATE:	1/ 1/1952
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO STATUS:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	1800.00
DRAWDOWN:	19.00
TEST TIME:	-99.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	44.00
OPENING BOTTOM:	69.00
OPENING DIAM.:	20.00
FINISH:	P
OPENING TYPE:	O
OPENING TOP:	70.00
OPENING BOTTOM:	70.00
OPENING DIAM.:	20.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P

#90

LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ BLDR
% WATER.CONTRIBUTED:	-99
UNIT TOP:	69.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	GRVL
LITHOLOGIC MODIFIER:	+ FINE SILT
% WATER.CONTRIBUTED:	-99
REMARK:	WAS 3000-J
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	36-IN. HOLE, GRAVEL-PACKED 39-70FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 4 2 1 1 4 6

#91

1100 AREA WELL INVENTORY FORM

Well Number: 3000-K
Other Well ID: 11-38-16 (Hanford)

Date 12/4/90
Surveyor: KB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) – FIG. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
N. Richland Well Field

Current Well Use: Municipal Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: 38300 ~~South~~ East: 15800
System: WA Richland Coords

Township: 8N Range: 28E Section (nearest 1/4 1/4): 26 (NE of NW)

Well Specifications:
Installation Date: 8/1/52 Total Depth (ft): 59
Well Construction Type: 20" Steel casing. Screen/Perf. from 15' to 50'. Gravel packed 13' to 50'
Pump System Type: Fairbanks Morse 125 hp Motor (No data on pump)
Well Access for Sounding: Ports on either side of pumphead
Air line in one port

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 14
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:
[illegible]

1891

SUheet 2365

R. J. Strasser Drilling Co.

8110 S. E. SUNSET LANE
PORTLAND 6, OREGON

Information concerning wells 3000 J, 3000 L, 3000M

Log of Formations; 3000 L

From	To	Formation
Surface	5	Gravel and sand
5	27	Gravel, boulders and sand
27	39	Gravel and sand
39	42	Coarse sand
42	54	Gravel, boulders, and sand, Hit water @ 50'
54	68	Gravel and sand (water bearing)
68	71	Sand, gravel, and boulders, tight clay binder
71	83	Sand and gravel, clay binder, After a depth of 68', sand pumping lowered elevation of water in hole. Open hole without caving was permissible due to tight clay binder in hole.

CASING: 3000L-Well cased to 83 ft. with ½" wall 20" O.D. pipe. Casing perforated from 56' to 81'.

WELL 3000 ~~L~~: H

LOG OF FORMATIONS: 3000M H

From	To	Formation
Surface	15	Brown sand
15	20	Cemented gravel
20	30	Loose sand and gravel, large boulders
30	39	Loose gravel and sand, water bearing
39	51	Gravel and sand, formation tighter but water bearing
51	55	Fine runny brown sand

CASING: 3000 M-Well cased to 55 ft. with ½" wall 20" O.D. pipe Casing perforated from 28' to 50'.

Well 3000 J: Log of formation from 52 to 69'
From 50 ft. to 62 ft. gravel, boulder, and sand
62 ft. to 69 ft. sand and gravel
69 ft. to 71 ft. gravel, sand and clay binder

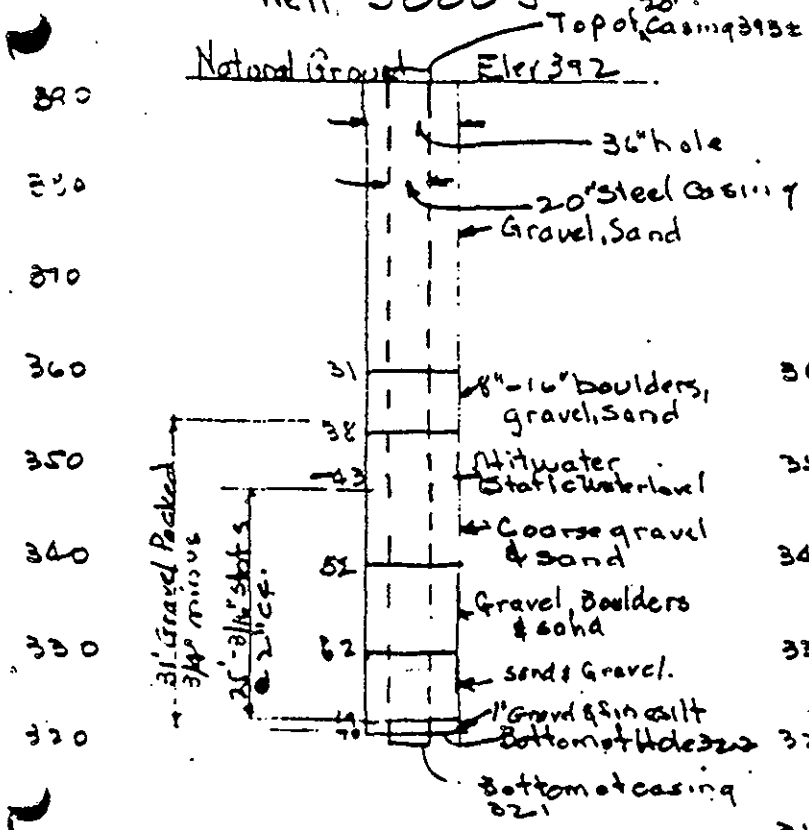
9 2 1 2 6 4 2 1 1 4 8

#91

ALVORD, BURDICK & HOWRON
ENGINEERS · CHICAGO

BY [illegible] SUBJECT [illegible] 16 3000 J; 3000 K DATE 10-[illegible]-5[illegible]

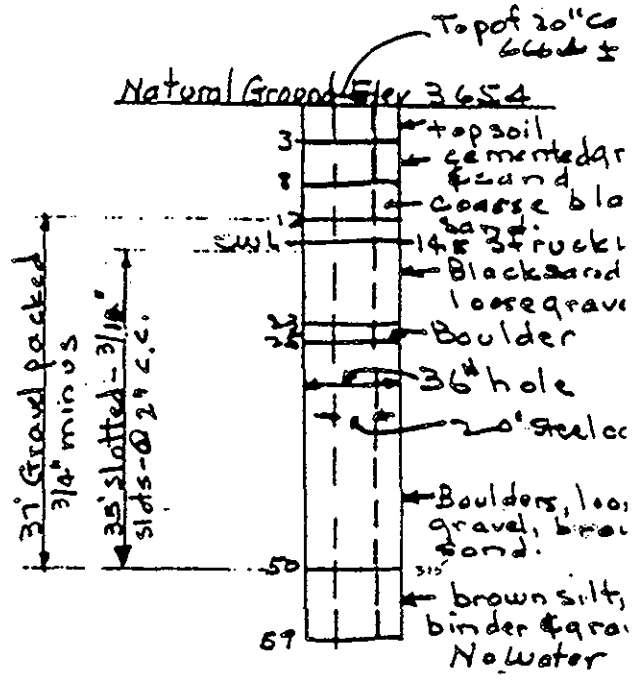
Well 3000 J



Test pumped - 1800 gpm - 18' d.d.
spec Cap 100

Pump to be set with bottom of bowls @ 68' - 1400 gpm
TDH 230'

Well 3000 K



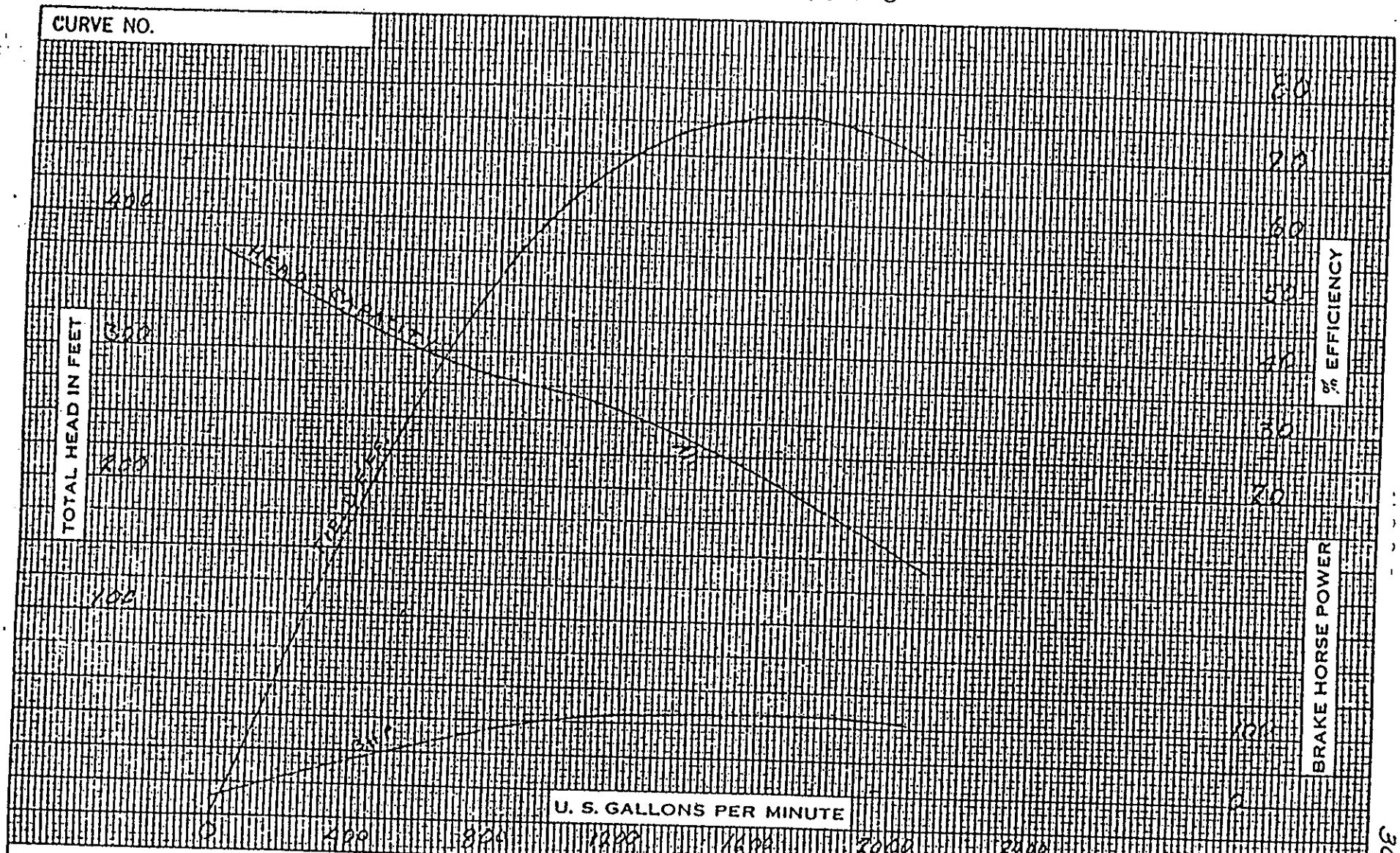
Test pumped - 2000 gpm, 25' dd. spec
Pump to be set with bottom of bowl @ -53' - 2000 gpm TDH 280

Completed ~~[illegible]~~ 11-10-5[illegible]

(Base of pump to bottom of bowls 72')
Well D.

9 2 1 2 6 4 2 1 1 5 0

CURVE NO.



The pump is guaranteed for the set of conditions specified, other points on the curve are approximate. Capacity, head and efficiency guarantees are contingent on the pump being furnished with the specified amount of clear, fresh non-aerated water at a temperature of not to exceed 85 degrees Fahrenheit

Reference Curve 12H6AF-1

FAIRBANKS MORSE & CO.

CHICAGO 5, ILLINOIS

LOSSES IN 70' OF 8×1 7/16" C/S INCLUDES CPG.
- ALL BRONZE B...

PERFORMANCE

5 STAGE 12HC FIG. 6972

PUMP OPERATED AT 1760 R. P. M.

BRANCH ORDER NO.

FACTORY ORDER NO.

DATE 4/30/54

B-320

WHC-MR-0295

3000-J Well #1

#91

Source: USGS

12/ 3/1990 -M 10N/28E-26C05

SITE ID:	461935119162601
KEY.NO.:	2179
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461932
LONGITUDE:	1191623
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26C05
ALTITUDE:	365.40
ALT.ACC:	1
USE OF SITE:	W
NO.1 WATER USE:	P
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	59.00
WELL.DEPTH:	59.00
DEPTH SOURCE:	D
DATE DRILLED:	11/ 1/1952
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-38-16
LAST NAME:	HANFORD
DATE OWNED:	11/ 1/1952
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	14.50
WATER LEVEL DATE:	11/ 1/1952
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	
DISCHARGE:	2000.00
DRAWDOWN:	25.00
TEST TIME:	-99.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	15.00
OPENING BOTTOM:	50.00
OPENING DIAM.:	20.00
FINISH:	P
OPENING TYPE:	O
OPENING TOP:	59.00
OPENING BOTTOM:	59.00
OPENING DIAM.:	20.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P

#91

LITHOLOGY:	BLDR
LITHOLOGIC MODIFIER:	+ SDGL,SAND,GRCM
% WATER.CONTRIBUTED:	-99
UNIT TOP:	50.00
GEOHYDROLOGIC UNIT:	121RGLD
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SILT
LITHOLOGIC MODIFIER:	BROWN + CLAY
% WATER.CONTRIBUTED:	-99
REMARK:	WAS 3000-K
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 4 2 1 1 5 2

92

1100 AREA WELL INVENTORY FORM

Well Number: 3000-L
Other Well ID: 11-38-16 (Hanford)
Date 12/4/90
Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) – FIG. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
North Richland Well Field

Current Well Use: Municipal Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: 38300 ~~South~~ East: 15800
System: Old Richland Coordinates

Township: 10 N Range: 28 E Section (nearest 1/4 1/4): 26 (NE & NW)

Well Specifications:
Installation Date: ~~1/5/?~~ 1953? Total Depth (ft): 83'
Well Construction Type: 20" steel casing. Perf./Screen ~56' to 84'

Pump System Type: Fairbanks Morse 125 hp Motor
Fairbanks Morse 850 gpm Vertical Pump
Well Access for Sounding: Access ports on sides of pump.
Air line in one port

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 13
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:

B-323

9212621153

#92

Sunset 2366

R. J. Strasser Drilling Co.
8110 S. E. SUNSET LANE
PORTLAND 6, OREGON

Information concerning wells 3000 J, 3000 L, 3000M

Log of Formations; 3000 L

From	To	Formation
Surface	5	Gravel and sand
5	27	Gravel, boulders and sand
27	39	Gravel and sand
39	42	Coarse sand
42	54	Gravel, boulders, and sand, Hit water @ 50'
54	68	Gravel and sand (water bearing)
68	71	Sand, gravel, and boulders, tight clay binder
71	83	Sand and gravel, clay binder, After a depth of 68', sand pumping lowered elevation of water in hole. Open hole without caving was permissible due to tight clay binder in hole.

CASING: 3000L-Well cased to 83 ft. with ½" wall 20" O.D. pipe. Casing perforated from 56' to 81'.

WELL 3000 M: H

LOG OF FORMATIONS: 3000M H

From	To	Formation
Surface	15	Brown sand
15	20	Cemented gravel
20	30	Loose sand and gravel, large boulders
30	39	Loose gravel and sand, water bearing
39	51	Gravel and sand, formation tighter but water bearing
51	55	Fine runny brown sand

CASING: 3000 M-Well cased to 55 ft. with ½" wall 20" O.D. pipe Casing perforated from 25' to 50'.

Well 3000 J: Log of formation from 52 to 69'
From 50 ft. to 62 ft. Gravel, boulder, and sand
62 ft. to 69 ft. sand and gravel
69 ft. to 71 ft. gravel, sand and clay binder

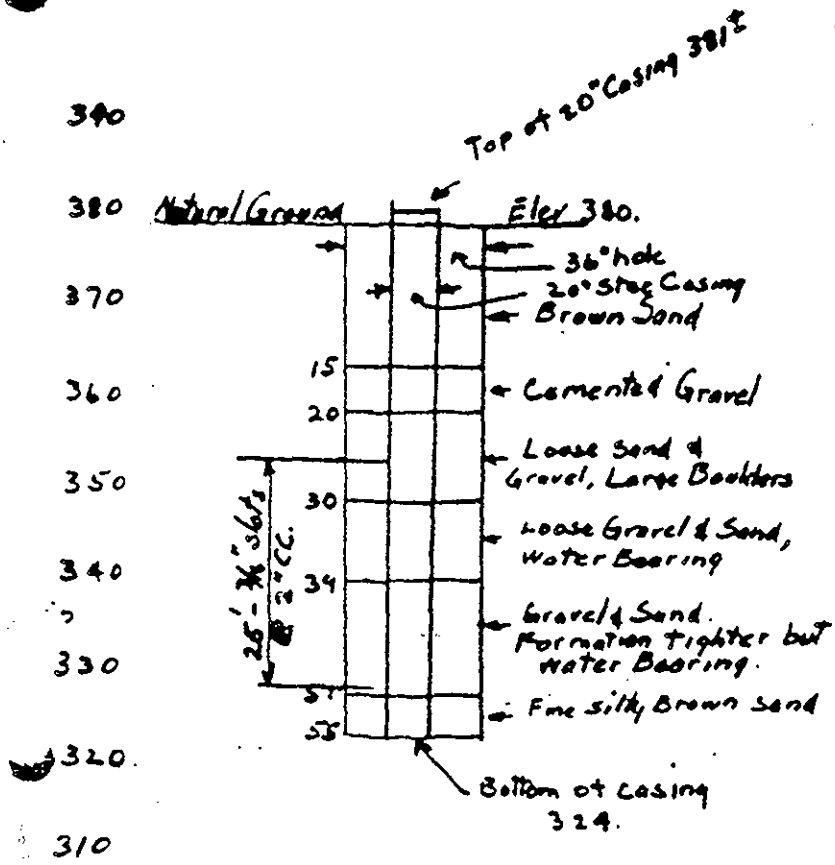
9 2 1 2 6 4 2 1 1 5 4

#92

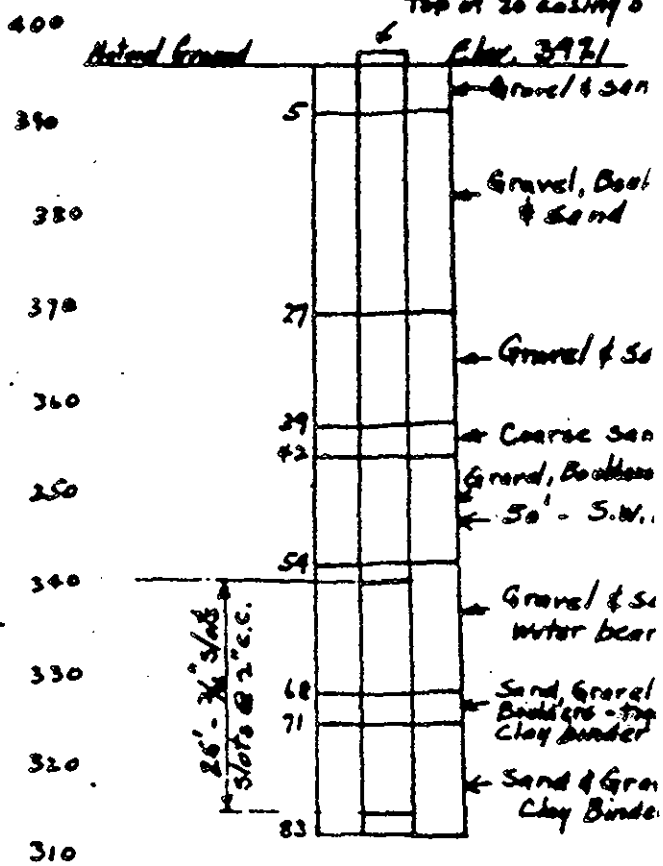
ELVORD, BURDICK & HOWSON
ENGINEERS • CHICAGO

BY HC SUBJECT Logs of Wells 3000H, -3000L DATE 1-5

WELL 3000-H



WELL 3000-L



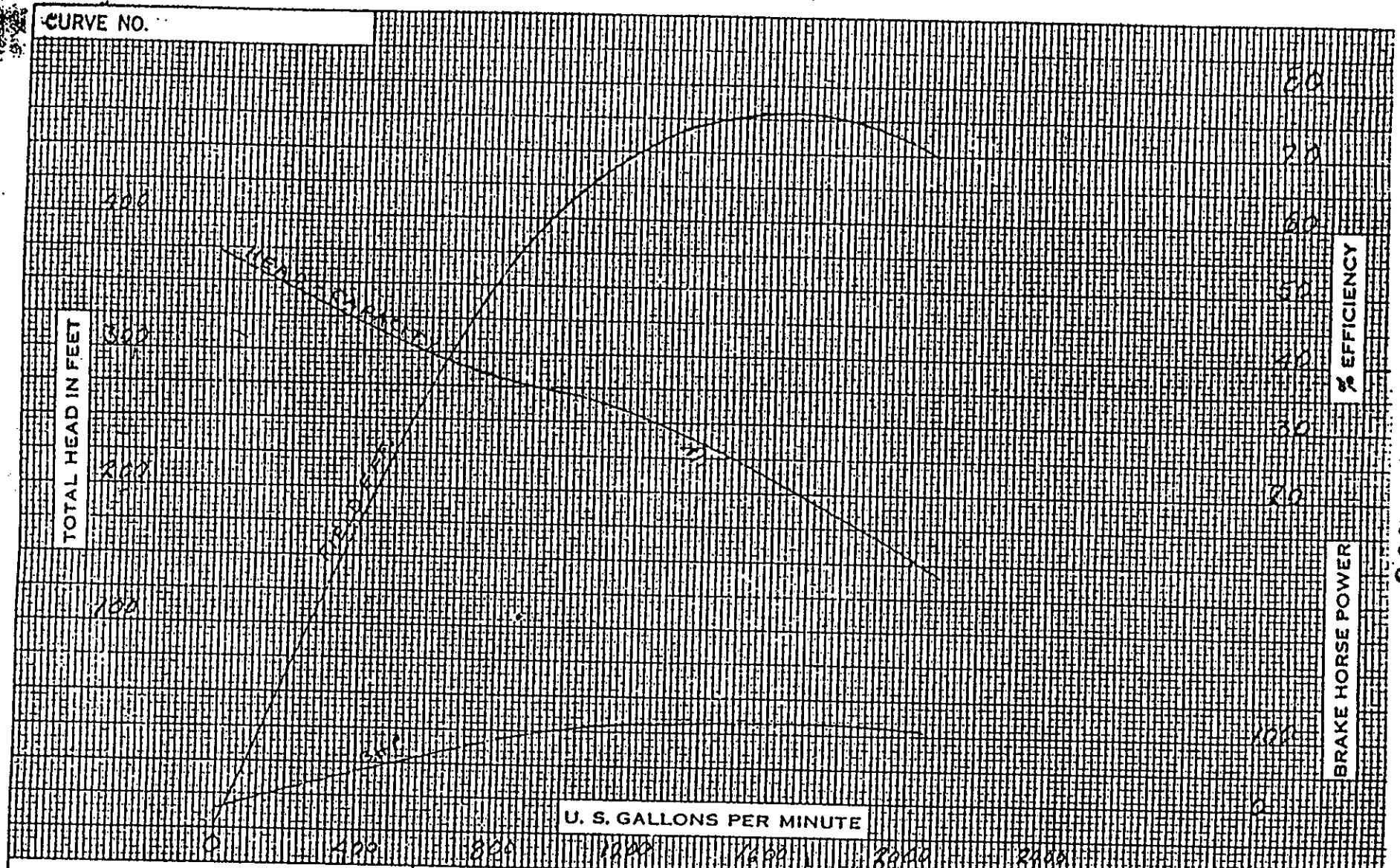
Test pumped 2000 gpm, 15' DD.
Spec Cap. 133.

Pump to be set with bottom of Bowls
@ 52' - 2000 gpm TDH 230'

9 2 1 2 6 4 2 1 1 5 6

3062 — L+J

CURVE NO.



The pump is guaranteed for the set of conditions specified, other points on the curve are approximate. Capacity, head and efficiency guarantees are contingent on the pump being furnished with the specified amount of clear, fresh non-aerated water at a temperature of not to exceed 85 degrees Fahrenheit

Reference Curve 12H6AF-1

FAIRBANKS MORSE & CO.

CHICAGO 5, ILLINOIS

LOSSES IN 70' OF 8" C/S INCLUDED

PERFORMANCE

5 STAGE 12HC FIG. 6972

PUMP OPERATED AT 1760 R. P. M.

BRANCH ORDER NO.

FACTORY ORDER NO.

DATE 1/31/4

B-326

WHC-MR-0295

3000-177

#92

Source: USGS

12/ 3/1990 -M 10N/28E-26C06

SITE ID:	461935119162901
KEY.NO.:	2180
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461937
LONGITUDE:	1191625
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26C06
ALTITUDE:	397.10
ALT.ACC:	1
USE OF SITE:	W
NO.1 WATER USE:	P
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	83.00
WELL.DEPTH:	83.00
DEPTH SOURCE:	D
DATE DRILLED:	/ /
LOG	D
OTH	
FIRST NAME:	1199-39-16E
LAST NAME:	HANFORD
DATE OWNED:	2/ 6/1956
STREET ADDR.:	
CITY ADDR.:	
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	
DISCHARGE:	1700.00
DRAW. DOWN:	16.00
TEST TIME:	-99.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	56.00
OPENING BOTTOM:	81.00
OPENING DIAM.:	20.00
FINISH:	P
OPENING TYPE:	O
OPENING TOP:	83.00
OPENING BOTTOM:	83.00
OPENING DIAM.:	20.00
UNIT	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ BLDR,SAND
% WATER.CONTRIBUTED:	-99
UNIT TOP:	68.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	S

9212621157

#92

LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SGVC 68-71
% WATER.CONTRIBUTED:	-99
REMARK:	WAS 3000-L
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	HIT WATER @ 50FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WB 54-68
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 4 2 1 1 5 8

93

1100 AREA WELL INVENTORY FORM

Well Number: 3000 - N
Other Well ID: 11-37-16 (Hanford)
Date 12/4/90
Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) - FIG. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
N. Richland Well Field

Current Well Use: Municipal Well

Verification by Owner/Occupant of Well Use: N/A
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: 37450 ~~South~~ East: 15700
System: Old Richland Coords.

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (NE of NW)

Well Specifications:
Installation Date: ? 11/61 Total Depth (ft): 40
Well Construction Type: 24" Steel casing. Johnson Stainless Steel screen from ~25' to ~40'
Pump System Type: 60E 100hp Motor
Western Pump (800gpm Vertical Pump)
Well Access for Sounding: One well access port on south side of pump has airline in it. May not be enough room for sounding tape.

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 15
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

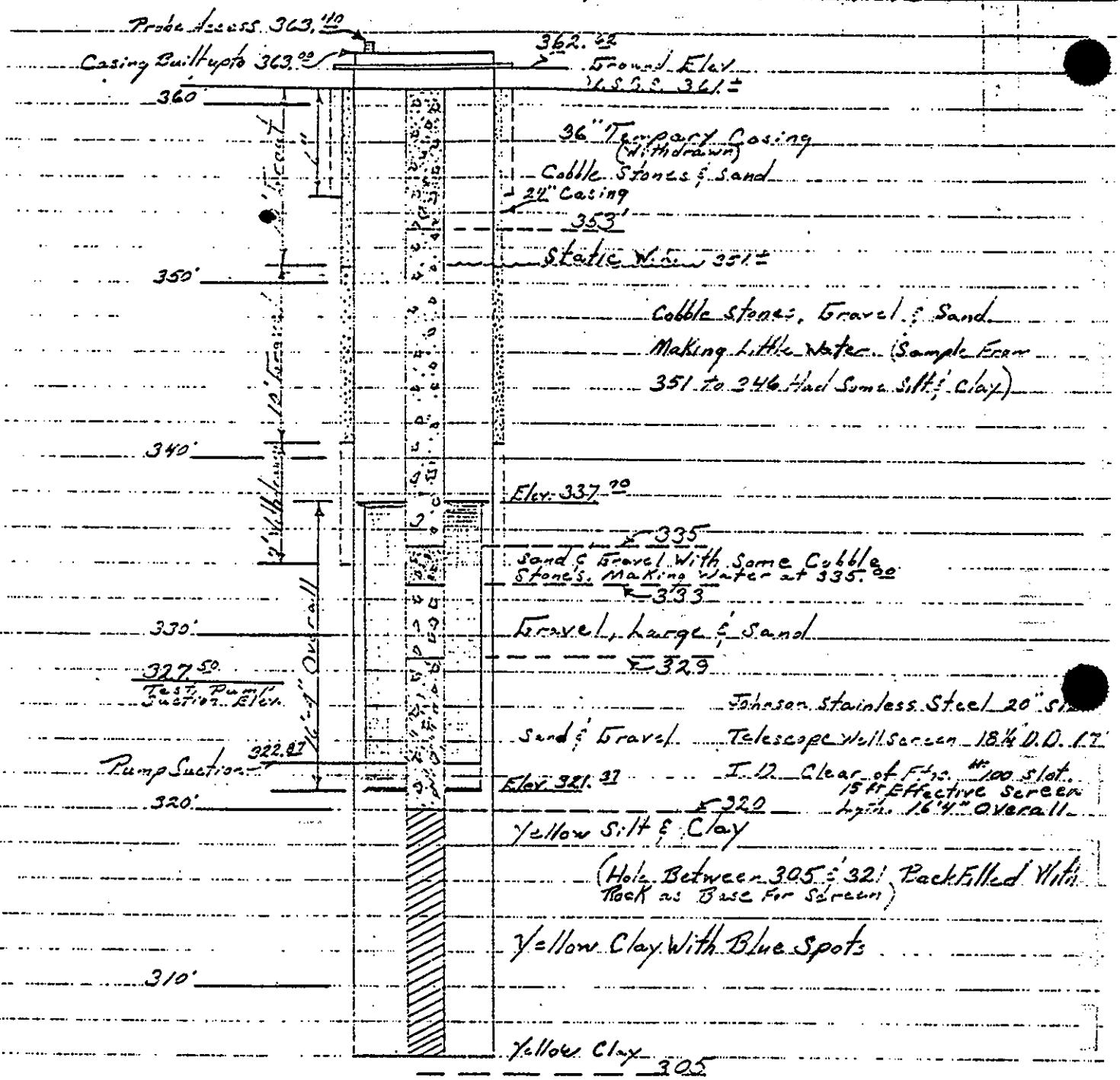
Other:
CDES

B-329

9212362159

#93

3000-N Well Well Tested 11-28-61



9212642 1160

#93

Construction and Operating Data - 1000 GPM Pump with Surface Mounted Driving Motor

BIDDER'S NAME	
PUMP DATA	
RPM	1760
Manufacturer	ALLIS-CHALMERS
Model Number	12JMO
Number of Stages	5
Nominal Size of Bowls	12"
Max. O.D. of Bowls	11¼"
Overall Length Bowl Sec.	5⅛
Pump Shaft Diameter	1 11/16"
Pump Shaft Material - SAE or AISI No.	416 STAINLESS
Number of Pump Bearings	6
Pump Bearing Material	SAE 660 BRONZE
Description of Pump Bearings	SLEEVE
Pump Bowl Catalog Number	12JMO
Pump Bowl Material	CI
Pump Bowl Lining	ENAMEL
Impeller Type (Open, Closed)	OPEN
Impeller Diameter	
Impeller Number	12JMO
Impeller Material	SAE 40 BRONZE
Type Lubrication	WATER
Max. Size Strainer Openings	⅜
Total Area Strainer Openings	205 IN²
Hp Demand at Guarantee Point	74.9
COLUMN SHAFT DATA	
Column Size	8"
Column Pipe Weight	24.7
Type Column Couplings	SCREW
Line Shaft Size	1½"
Line Shaft Material - SAE or AISI No.	ASI-C-1045
Line Shaft Insert Material- SAE or AISI No.	
Line Shaft Coupling Material - SAE or AISI No.	416 STAINLESS
Spacing Line Shaft Bearings	10'-0"
Line Shaft Bearing Materials	NEOPRENE
Line Shaft Bearing Description	FLUTED OR CUTLASS
Line Shaft Bearing Spider Material	SAE 40 BRONZE
DISCHARGE HEAD	
Manufacturer	ALLIS CHALMERS
Model Number	8"
Size Discharge	8"
Guide Bearing Material	SAE 660 BRONZE
Guide Bearing Lubrication	WATER
Guide Bearing Type	SLEEVE
Weight	550

#93

Construction and Operating Data - 1000 GPM Pump with Surface Mounted Driving Motor (Continued)

THRUST BEARING	
Manufacturer SKF or EQUAL	
Manufacturer's Number	7300 SERIES
Max. Total Thrust at Guar. Pt.	4800#
Rating Life in Hours	5 YEAR AVERAGE
MOTOR	
Manufacturer	ALLIS CHALMERS
Model No. & Type	HSO 405UP
Nominal Hp	75
Power Factor at Guar. Pt.	87
Overall Motor Efficiency at Guar. Pt.	92
Weight	985#

9 2 1 2 6 4 2 1 1 6 2

#93

Source: USGS a

12/ 3/1990 -M 10N/28E-26F01

SITE ID:	461916119161101
KEY.NO.:	2183
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461924
LONGITUDE:	1191626
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26F01
ALTITUDE:	370.00
ALT.ACC:	1
USE OF SITE:	O
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	55.00
WELL.DEPTH:	40.00
DEPTH SOURCE:	R
DATE DRILLED:	11/29/1961
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	CITY OF
LAST NAME:	RICHLAND
DATE OWNED:	11/29/1961
STREET ADDR.:	
CITY ADDR.:	
FIRST NAME:	1199-37-16
LAST NAME:	HANFORD
DATE OWNED:	11/29/1961
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	12.00
WATER LEVEL DATE:	11/29/1961
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	
DISCHARGE:	930.00
DRAWDOWN:	16.00
TEST TIME:	-99.0
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	25.00
OPENING BOTTOM:	40.00
OPENING DIAM.:	-99.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P

B-333

9 2 1 2 6 2 1 1 6 3

#93

LITHOLOGY:	COBB
LITHOLOGIC MODIFIER:	+ SDGL
% WATER.CONTRIBUTED:	100
UNIT TOP:	40.00
GEOHYDROLOGIC UNIT:	121LRRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	0

9212642116 4

94

1100 AREA WELL INVENTORY FORM

Well Number: 1100-B (Columbia Well) Date 12/4/90
Other Well ID: 11-33-18B (Hanford) Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
Corner of Wallace St. & Harris Ave.

Current Well Use: Municipal Well
Run ~ 1/week

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: 32564.3 ~~South~~ East: 18161.0
System: Old Richland Coords.

Township: 10 N Range: 28E Section (nearest 1/4 1/4): 35 (SE of NE)

Well Specifications:
Installation Date: 1948 Total Depth (ft): 77
Well Construction Type: 20-in. dia. steel casing. Perforated 37' to 73'

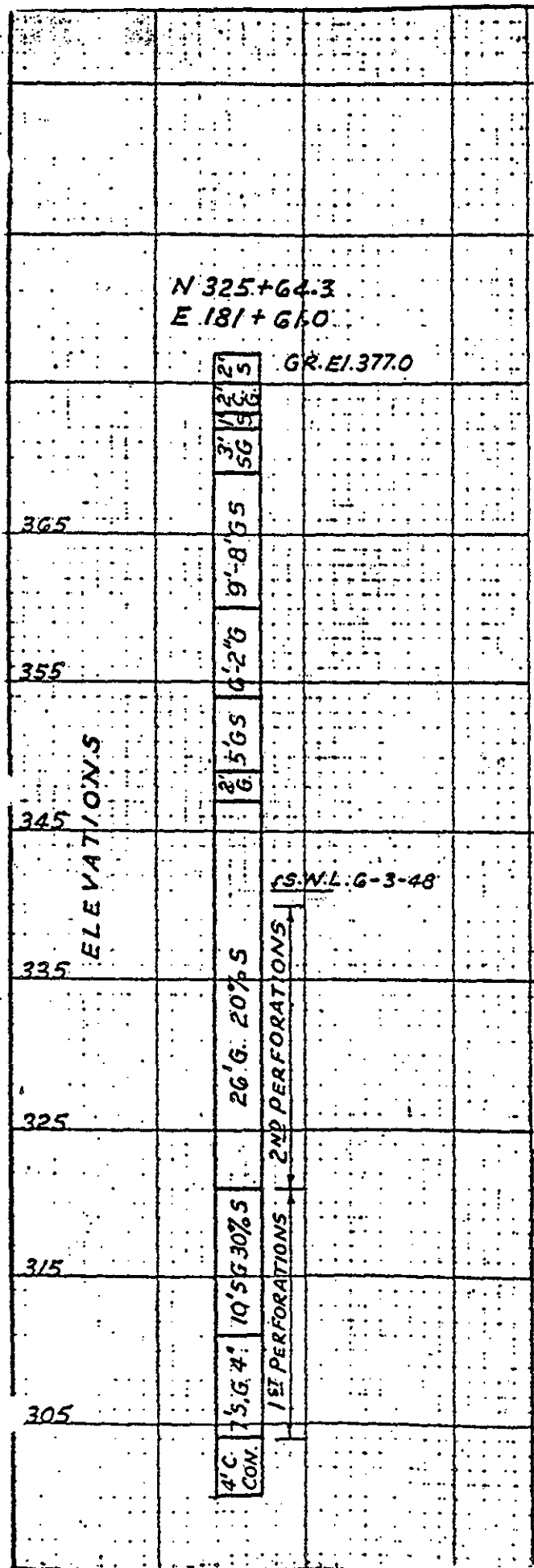
Pump System Type: GE 75hp motor Fairbanks-Morse 600gpm vertical pump.
Well Access for Sounding: Possible access at base of pump (on right side)

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 5
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:
LSGS"

B-335

#94



WELL DATA

Strasser Well. 20" steel casing with 3/8" x 1½" perforations from Elev. 304 to 340. Static water level after surging and before pumping Elev. 341. Some sand at all times. Pumped at 1040 to 1770 GPM d.d. 9.2 to 32.7 ft. Specific capacity 82 to 54. After 1 hour pumping at 1770 GPM well was exhausted but at 1040 GPM.
d.d. was constant.
1000 GPM 6 stage Pomona pump, head 230 ft., set at Elev. 310.

Pomona turbine
Serial PJ3055

KEY

C Clay
Con Cong
G Gravel
S Sand

PRELIMINARY
Not Approved for Construction

SCALE: 1"=10'	
APPROVED	DATE 8-20-48 DRAWN BY [illegible] CHECKED BY [illegible]

GENERAL ELECTRIC CO.
HANFORD WORKS

ALVORD, BURDICK & HOWSON
CONSULTING ENGINEERS CHICAGO

LOG OF WELL-1100-B

DWG. NO. H-11-4125

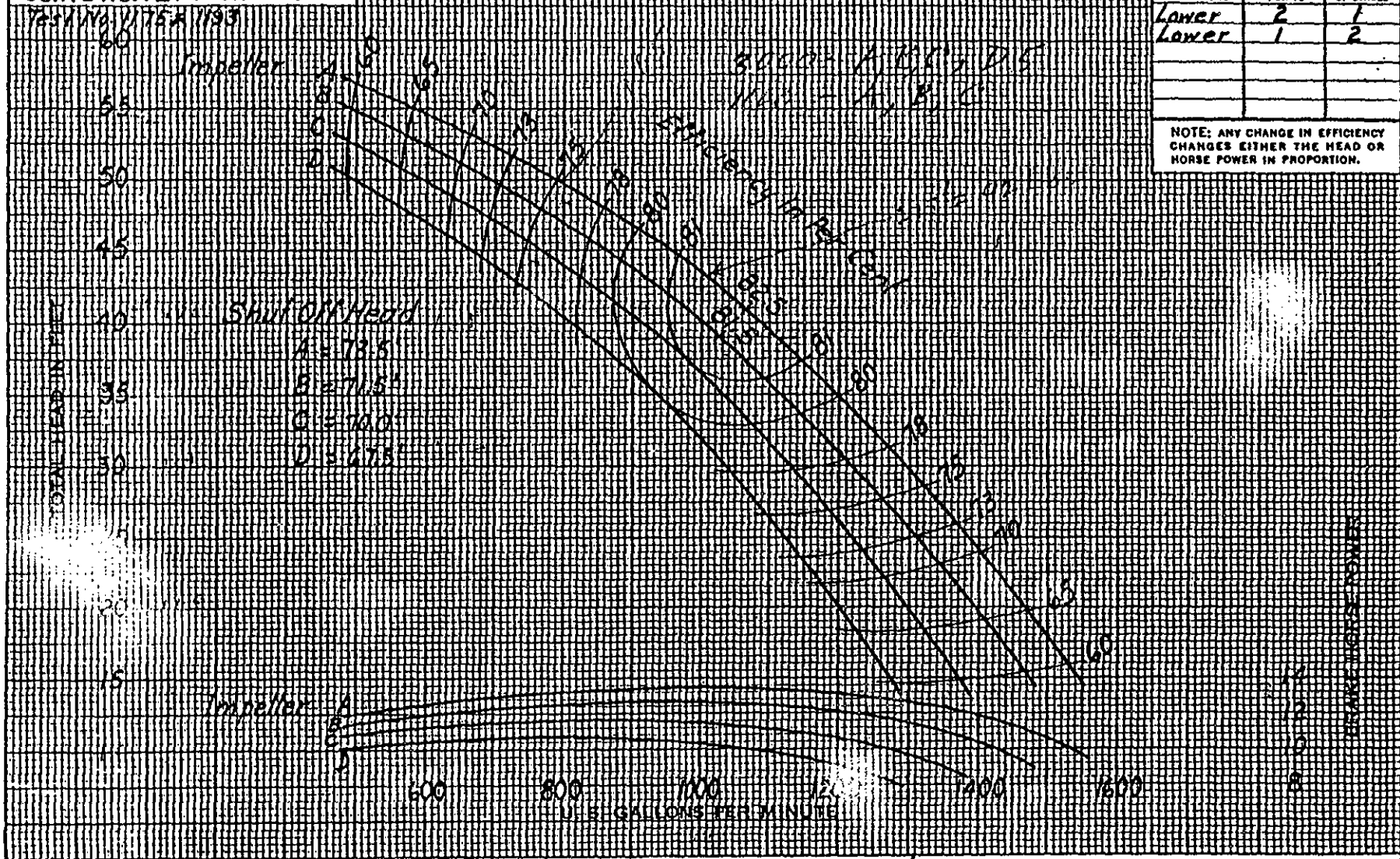
9 2 1 2 6 4 2 1 1 6 6

9 2 1 2 6 2 1 1 6 7

CURVE NO. 12M3AF—1

CHANGE EFFICIENCY AS FOLLOWS	NUMBER OF POINTS	NUMBER OF STAGES
Lower	2	1
Lower	1	2

NOTE: ANY CHANGE IN EFFICIENCY CHANGES EITHER THE HEAD OR HORSE POWER IN PROPORTION.



HYDRAULIC PERFORMANCE is contingent on the well furnishing the pump with the specified amount of clear, fresh, non-aerated water at a temperature of not to exceed 85 degrees Fahrenheit.

POMONA PUMPS

Fairbanks, Morse & Co.

Chicago 5, Illinois — Pomona California

LABORATORY PERFORMANCE PER STAGE 12" M.C. DEEP WELL TURBINE PUMP OPERATED AT 1760 R. P. M.

FIELD LOSS MUST BE DEDUCTED

B-337

WHC-MR- 0295

1100-B Well

#94

9212642168

WHC-INR- 0295

#91

#94

Source: USGS

11/26/1990 -M 10N/28E-35H04

SITE ID:	461829119155301
KEY.NO.:	2250
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461829
LONGITUDE:	1191553
LAT/LONG ACC:	S
LOCAL NO.:	10N/28E-35H04
ALTITUDE:	377.00
ALT.ACC:	1
USE OF SITE:	W
NO.1 WATER USE:	P
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	77.00
WELL.DEPTH:	77.00
DEPTH SOURCE:	A
DATE DRILLED:	06/02/1948
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-33-18B
LAST NAME:	HANFORD
DATE OWNED:	06/02/1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	36.00
WATER LEVEL DATE:	6/ 3/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
WATER LEVEL:	25.40
WATER LEVEL DATE:	7/10/1948
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	1040.00
DRAWDOWN:	12.70
TEST TIME:	-99.0
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	1040.00
DRAWDOWN:	12.70
TEST TIME:	-99.0
FINISH:	P
OPENING TYPE:	P

#94

OPENING TOP:	37.00
OPENING BOTTOM:	73.00
OPENING DIAM.:	20.00
FINISH:	P
OPENING TYPE:	O
OPENING TOP:	77.00
OPENING BOTTOM:	77.00
OPENING DIAM.:	20.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SAND,GRCL,GRVL
% WATER.CONTRIBUTED:	-99
UNIT TOP:	73.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	+ CGLM
% WATER.CONTRIBUTED:	-99
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 378.30
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 1100-B
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WENT DRY @ 1770GPM FOR 1 HR
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642117 0

#95

1100 AREA WELL INVENTORY FORM

RPB 12/5/90

Well Number: 1100-~~D~~8 Date 12/4/90
Other Well ID: 11-34-15A (Hanford) Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) – FIG. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
Lymnwood Loop Park (West Wellhouse)
Duke Well Field

Current Well Use: Municipal Well
(Rarely used – Only when necessary)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: 33700 ~~South~~ EAST: 14700
System: Old Richland Coords. (Approximate)

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (NE of NW)

Well Specifications:
Installation Date: 8/25 to 9/16/1948 Total Depth (ft): 120
Well Construction Type: 10-in. dia. steel casing. Perforated (24' to 27', [illegible] (44' to 95'). Open hole (96' to 120')
Pump System Type: GE 75 hp motor. Fairbanks-Morse 600 gpm vertical pump.
Well Access for Sounding: Access ports on either side of pump

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 6
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

↳ Well misidentified in picture. Picture I.D. 1100-D is actually 1100-8

Other:

French drain north of pump. Water ~4' down.
Operator said that it is typical of water level in this area

B-341

95

Sept. 17, 1948

STRASSER TEST WELL #2 (1100-8)

Location - Approximately N-337,00 E-147,00
Ground Elevation Approximately 369.0
10" Casing
Drilled - 8-25-48 to 9-16-48

Log:

0'	18'	18'	Top Soil
18'	24'	6'	Coarse gravel, some sand (cemented)
			Coarse washed gravel top of water strata. Static 12' 9"
			Water shut off at 25' 6".
24'	27'	3'	Coarse gravel, some sand.
27'	36'	9'	Coarse gravel, some sand and clay.
36'	38'	2'	Gravel, some sand.
38'	44'	6'	Gravel, sand and clay
44'	66'	22'	Loose gravel (Static water level 19')
66'	100'	34'	Sand, gravel, some clay.
100'	119'	19'	Sand, gravel, some clay (open hole)
119'	120'	1'	Blue clay

Perforated (24 to 27) and (44 to 95)
Open hole (96 to 120)

Pumping test - 200 g.p.m. to 250 g.p.m. per ft draw down. Pumped 5 hrs. at 985 g.p.m. pumping rate.

Equiped with a Pomona 1000 g.p.m. Pump driven by a 75 H.P. Electric Motor

-c-o-p-y-

9 2 1 2 6 4 2 1 1 7 2

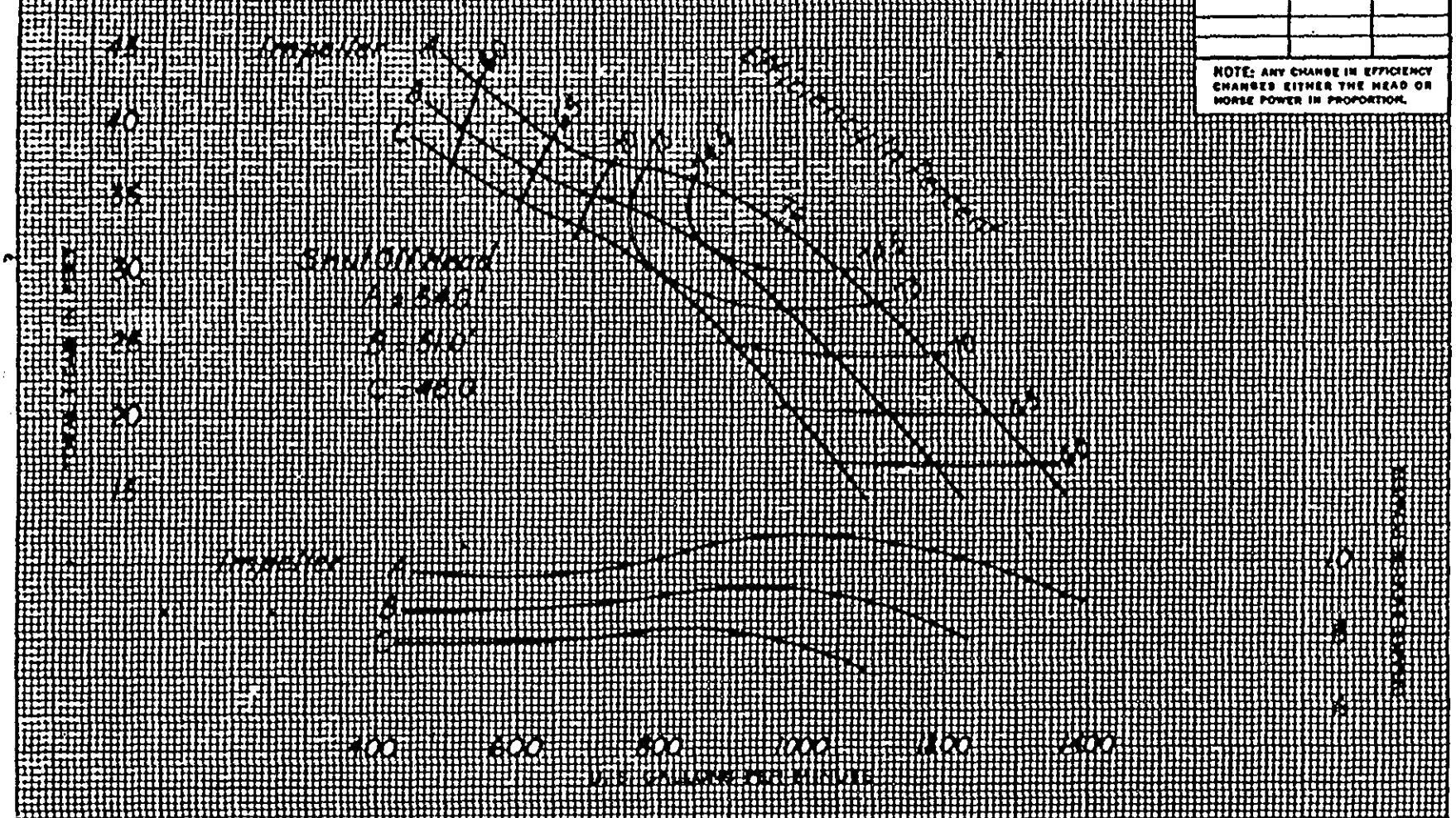
9 2 1 2 6 2 1 1 7 3

1100-8 Well-

CURVE NO. 10H3AF-1

DRIVER EFFICIENCY AS FOLLOWS	NUMBER OF POINTS	PER NUMBER OF STAGES
Lower	1	2
Lower	3	1

NOTE: ANY CHANGE IN EFFICIENCY CHANGES EITHER THE HEAD OR HORSE POWER IN PROPORTION.



HYDRAULIC PERFORMANCE is contingent on the well furnishing the pump with the specified amount of clear, fresh, non-aerated water at a temperature of not to exceed 85 degrees Fahrenheit.

POMONA PUMPS

Fairbanks, Morse & Co.

Chicago 5, Illinois — Pomona California

LABORATORY PERFORMANCE
PER STAGE 10" H.C. DEEP WELL TURBINE
PUMP OPERATED AT 1760 R. P. M.
FIELD LOSS MUST BE DEDUCTED

WHC-MR- 0295

1100-8 Well #95

B-343

WHC-MR- 0295

#95

source: USGS

12/ 3/1990 -M 10N/28E-35D02

SITE ID:	461845119165001
KEY.NO.:	2240
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461846
LONGITUDE:	1191639
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35D02
ALTITUDE:	369.00
ALT.ACC:	5
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	120.00
WELL.DEPTH:	95.00
DEPTH SOURCE:	A
DATE DRILLED:	09/ /1948
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-34-15A
LAST NAME:	HANFORD
DATE OWNED:	09/ /1948
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	19.00
WATER LEVEL DATE:	9/ 1/1948
W.L.TIME:	
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	A
DISCHARGE INFO SOURCE:	A
DISCHARGE MEASURING METHOD:	
DISCHARGE:	985.00
DRAWDOWN:	4.00
TEST TIME:	5.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	24.00
OPENING BOTTOM:	27.00
OPENING DIAM.:	10.00
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	44.00
OPENING BOTTOM:	95.00
OPENING DIAM.:	10.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P

9212642117 4

B-344

#95

LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SGVC,SOIL
% WATER.CONTRIBUTED:	-99
UNIT TOP:	66.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	S
LITHOLOGY:	SGVC
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	-99
UNIT TOP:	119.00
GEOHYDROLOGIC UNIT:	121LRRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	BLUE
% WATER.CONTRIBUTED:	0
REMARK:	SEE MCGHAN ET. AL. 1985
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	CASING ELEVATION @ 371.00
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	WAS 1100-8
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	SWL?=12.9 @ 24FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	SWL?=19 @ 66FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 0 2 1 1 7 5

WHC-MR- 0295

96

1100 AREA WELL INVENTORY FORM

Well Number: 1100-~~8~~D (RB 12/5/90) Date 12/4/90
Other Well ID: 11-34-15B Surveyor: RB

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet) - Fig. RL-1
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
Lynnwood Loop Park
Duke Well Field

Current Well Use: Municipal Well (Rarely used)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: 34000 ~~South~~ EAST: 15000
System: Old Richland

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (N½ of NW)

Well Specifications:
Installation Date: 1948 Total Depth (ft): 86'
Well Construction Type: ~~[illegible]~~ ~~[illegible]~~ ~~diameter~~ 20-in dia. steel casing, Perforated 42' to 78'
Pump System Type: ~~[illegible]~~ Westinghouse 100hp Motor, Fairbanks-Morse vertical pump (800gpm)
Well Access for Sounding: Access ports at sides of pump

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 7
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

↳ Well misidentified in photo. Well I.D. 1100-8 is actually well # 1100-D

Other:

French drain north of well
[illegible]

9 2 1 2 6 4 2 1 1 7 6

B-346

LOG 1100-D WELL

Pump Base Elevation
367.75

0-14	Sand, Large Gravel
14-42	Sand, Gravel & Clay
42-56	Sand,& Gravel
56-65	Sand, Gravel and Clay
65-78	Sand & Gravel
78-86	Sandy Clay & Gravel
20"	Casing perforated from 42' - 78'

Pumped 9 hours at 1260 g.p.m. with 38' draw.

Well equipped with 2000 g.p.m. at 231' discharge head. Bryon Jackson Oil Lubricated Turbine Pump, with 65' of discharge piping plus 7' Turbine.

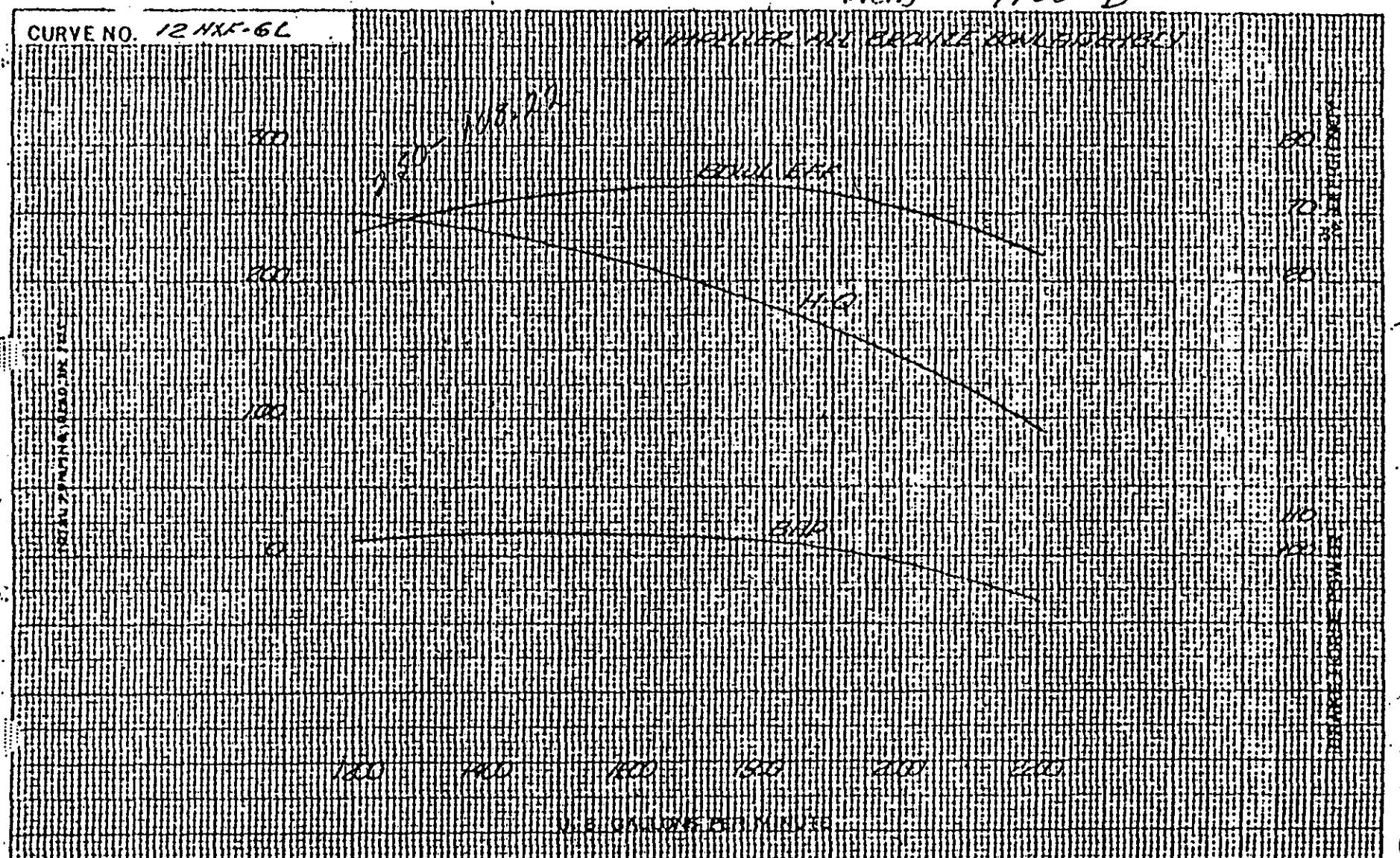
Guage line set at lowest bowl or elevation 295.75

9212677

9 2 1 2 6 4 2 1 1 7 8

Wells 1100-D

CURVE NO. 12 HXF-6L



The pump is guaranteed for the set of conditions specified, other points on the curve are approximate. The FIELD PERFORMANCE shown makes allowances for hydraulic and mechanical loss in new column, shaft and discharge elbow or head as specified in the title block. Capacity, head and efficiency guarantees are contingent on the pump being furnished with the specified amount of clear, fresh, non-aerated water at a temperature of not to exceed 83 degrees Fahrenheit.

CLD 6-13-60

FAIRBANKS, MORSE & CO.

POMONA WORKS

POMONA • CALIFORNIA

PR 1007-B

FIELD PERFORMANCE

5 Stage 12HC Fig. 6972

Pump operated at 1760 RPM with

8 Discharge 467 Ft. of Bowl Sl. & Sh.

ATOMIC ENERGY COMMISSION
HANFORD WASHINGTON

WHC-MR- 0295

1100-D Well

#96

#96

Source: USGS

12/ 3/1990 -M 10N/28E-35D01

SITE ID:	461846119165001
KEY.NO.:	2239
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461846
LONGITUDE:	1191639
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35D01
ALTITUDE:	367.75
ALT.ACC:	1
USE OF SITE:	W
NO.1 WATER USE:	P
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	86.00
WELL.DEPTH:	86.00
DEPTH SOURCE:	D
DATE DRILLED:	1/ 1/1953
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	1199-34-15B
LAST NAME:	HANFORD
DATE OWNED:	1/ 1/1953
STREET ADDR.:	
CITY ADDR.:	
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	
DISCHARGE:	1260.00
DRAWDOWN:	38.00
TEST TIME:	9.0
FINISH:	P
OPENING TYPE:	P
OPENING TOP:	42.00
OPENING BOTTOM:	78.00
OPENING DIAM.:	20.00
FINISH:	P
OPENING TYPE:	O
OPENING TOP:	86.00
OPENING BOTTOM:	86.00
OPENING DIAM.:	20.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SGVC
% WATER.CONTRIBUTED:	-99
UNIT TOP:	78.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	U

9212261179

#96

LITHOLOGY:	CLSD
LITHOLOGIC MODIFIER:	+ GRVL
% WATER.CONTRIBUTED:	-99
REMARK:	WAS 1100-D
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642118 0

97

1100 AREA WELL INVENTORY FORM

Leslie Grove Park

Well Number: LGP #1 Date 11-28-90

Other Well ID: None Surveyor: KSV

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet)

Owner's Address: 505 Swift Blvd.
Richland, WA

Street Address of Residential Well Site if Different from Owner:
Leslie Grove Park
Harris & Saint

Current Well Use: not in use

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 36 (NW of NW)

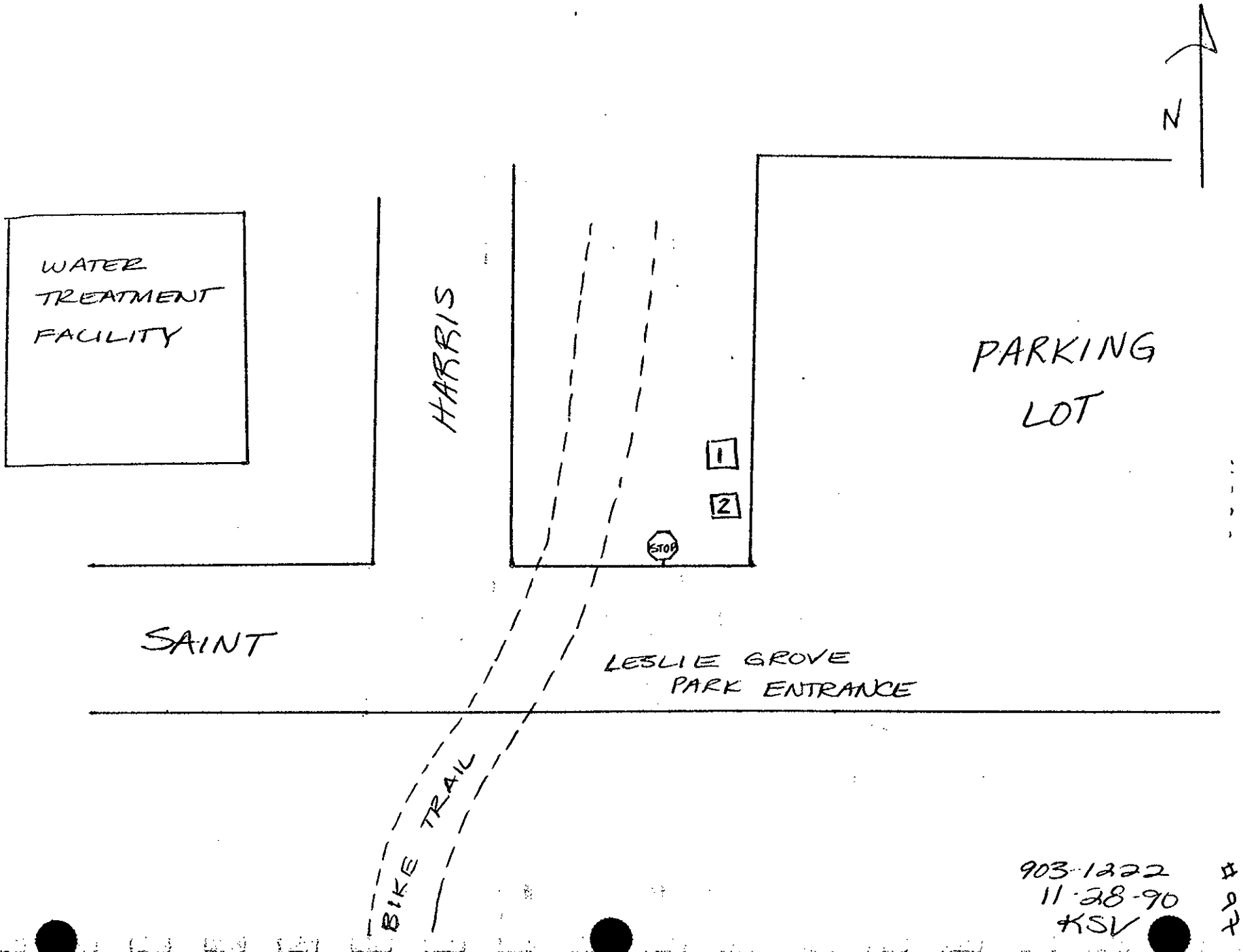
Well Specifications:
Installation Date: 7/76 Total Depth (ft): 53
Well Construction Type: 8" casing
cable tool
Pump System Type: none
Well Access for Sounding: yes - on side there is an opening

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 8
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes
Roll 1K.

Other:
18" casing
USGS

9 2 1 2 6 4 2 1 1 8 2

LESLIE GROVE PARK #1 & #2



903-1222
11-28-90
KSV

#92

WHC-WR- 0295

WHC-MR- 0295

#97

City Of Richland

WATER WELL PERMIT

Permit Number

Application Date

Approval Date

APPLICANT	DRILLER
City of Richland	
Name	Name
PO Box 190	
Address	Address
Richland, Wa	
City State Phone	City State Phone

WELL INFORMATION

Leslie Grove Park
Well Location Address Lot Block Subdivision

Well Use:
- ☐ Domestic
- ☐ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☐ Plot plan submitted _____ Date
- ☐ Drilling log submitted _____ Date
- ☐ Cross-connection inspection made _____ Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: _____

APPROVAL: _____
(After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

B-353

WCD-0055

9212618 3

WHC-MR- 0295

#97

Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. 9-24-2

Permit No.

(1) OWNER: Name City of Richland Address Richland, Wash. 99352

(2) LOCATION OF WELL: County Benton NW ¼ NW ¼ Sec. 24 T. 9 N. R. 28 W.M.

Bearing and distance from section or subdivision corner Leslie Grove Park S.W. Corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☒ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)

New well ☒ Deepened ☐ Reconditioned ☐

Method: Dug ☐ Bored ☐ Cable ☒ Driven ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches.

Drilled 53 ft. Depth of completed well 53 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8" Diam. from 0 ft. to 44 ft.

Threaded ☐ " Diam. from ft. to ft.

Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒

Type of perforator used

SIZE of perforations in. by in.

perforations from ft. to ft.

perforations from ft. to ft.

perforations from ft. to ft.

Screens: Yes ☒ No ☐

Manufacturer's Name Johnson

Type Stainless Model No. 304

Diam. 8 Slot size 50 from 43 ft. to 53 ft.

Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:

Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 22 ft.

Material used in seal Bentonite

Did any strata contain unusable water? Yes ☐ No ☐

Type of water? Depth of strata

Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 480 ft.

Static level 17 ft. below top of well Date July 176

Artesian pressure lbs. per square inch Date

Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☒ No ☐ If yes, by whom? HIC

Yield: 300 gal./min. with 7 ft. drawdown after 24 hrs.

" " "

" " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Immediate Recovery				

Date of test

Bailer test gal./min. with ft. drawdown after hrs.

Artesian flow g.p.m. Date

Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Fine Brown sand	0	7
Cemented sand and gravel	7	21
Hardpan, cemented sand	21	26
Sand & Gravel, Coarse	26	49
Ringold formation	49	53

RECEIVED
OCT 21 1977
DEPARTMENT OF ECOLOGY
REGIONAL OFFICE

Work started July 19 76. Completed July 19 76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hatch Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 420 Road 36 Pasco, Wash.

[Signed] (Well Driller)

License No. 0176 Date July 1976

(USE ADDITIONAL SHEETS IF NECESSARY)

9 2 1 2 6 4 2 1 1 8 4

Source: USGS

#97

11/13/1990 -M

10N/28E-36D01

SITE ID:	461848119153801
KEY.NO.:	2273
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461841
LONGITUDE:	1191540
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-36D01
ALTITUDE:	359.00
ALT.ACC:	5
USE OF SITE:	U
NO.1 WATER USE:	U
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	53.00
WELL.DEPTH:	53.00
DEPTH SOURCE:	D
DATE DRILLED:	7/ 1/1976
LOG DATA:	D
OTHER DATA:	RECOVERY
FIRST NAME:	RICHLAND
LAST NAME:	CITY OF
DATE OWNED:	7/ 1/1976
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	17.00
WATER LEVEL DATE:	7/ 1/1976
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	D
WATER LEVEL:	16.15
WATER LEVEL DATE:	2/25/1986
W.L.TIME:	1033
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	14.77
WATER LEVEL DATE:	9/ 4/1986
W.L.TIME:	1841
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	16.59
WATER LEVEL DATE:	2/24/1987
W.L.TIME:	1729
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S

9212261185

B-355

#97

DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	R
DISCHARGE:	300.00
DRAWDOWN:	7.00
TEST TIME:	24.0
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	43.00
OPENING BOTTOM:	53.00
OPENING DIAM.:	8.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	110ALVM
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SAND
LITHOLOGIC MODIFIER:	FINE,BROWN
% WATER.CONTRIBUTED:	0
UNIT TOP:	7.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ GRCM,HRDP
% WATER.CONTRIBUTED:	-99
UNIT TOP:	49.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	-99
REMARK:	---------
STRUCTURE:	SYNCN-PASCO
DISTANCE FROM STRUCTURE:	1.25

9 2 1 2 6 4 2 1 1 3 6

WHC-MR- 0295

98

1100 AREA WELL INVENTORY FORM

Well Number: EC-1
Other Well ID:

Date 11-15-90
Surveyor: R.B / KSV

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
ENTERPRISE CENTER - see attached.

Current Well Use: MONITORING WELL
NE corner of Logston and SR 240

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: — South: —
System: —

Township: 10N Range: 28E Section (nearest 1/4 1/4): NW 1/4 of NE 1/4 Sec 34

Well Specifications:
Installation Date: unknown Total Depth (ft): unknown
Well Construction Type: 6" casing - no cap.

Pump System Type: NO PUMP

Well Access for Sounding: Open hole Stevens recorder installed at surface.

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 10A
Well Log Available: ✓ No ____ Yes roll 1R.
Well Log Obtained: ✓ No ____ Yes

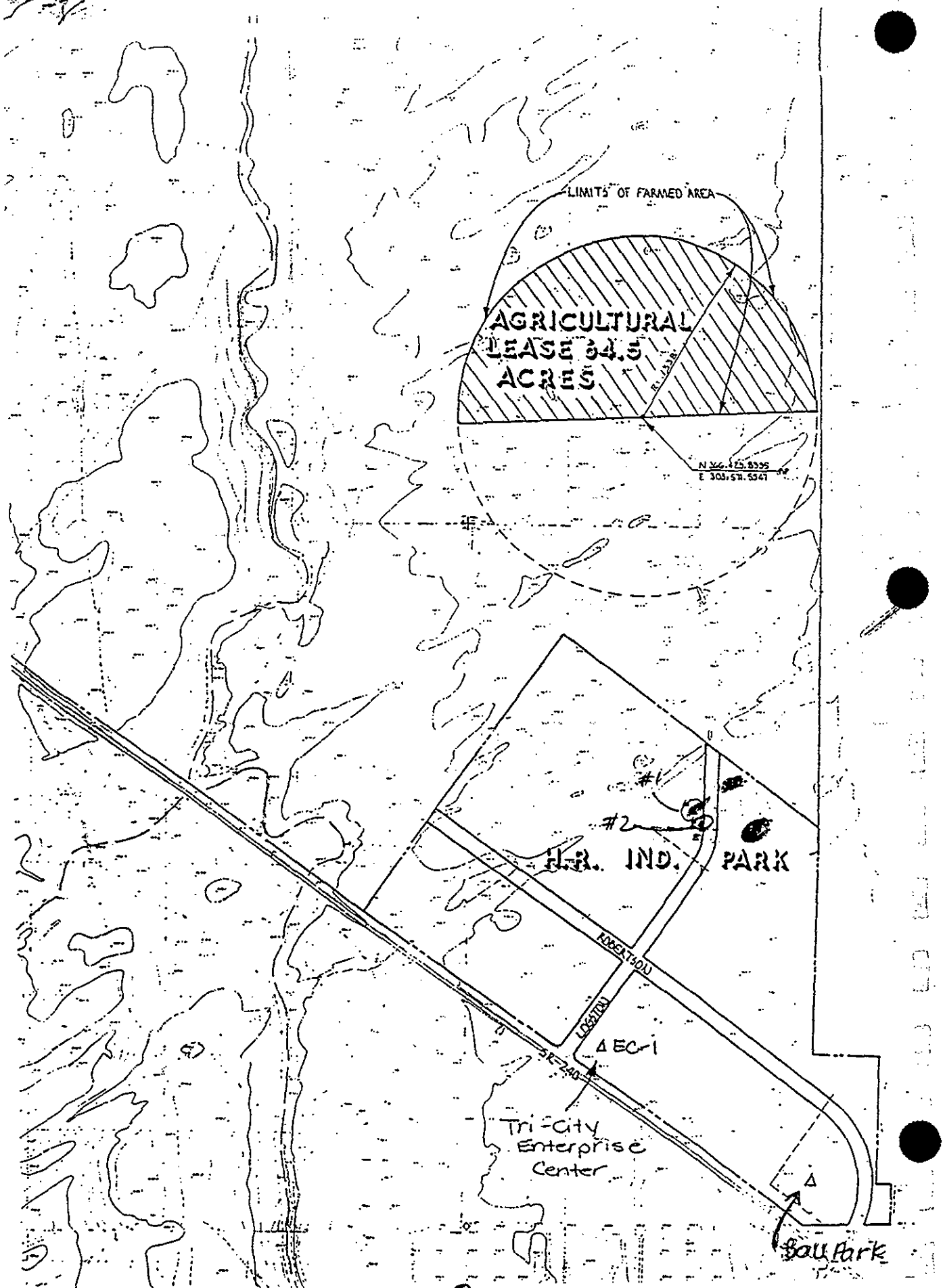
Other:

Stevens recorder installed in well.

B-357

9212621137

#98



9 2 1 2 6 4 2 1 1 8 8

99

1100 AREA WELL INVENTORY FORM

Well Number: t HRC # 1 Date 12/4/90
Other Well ID: none Surveyor: K. Blagen

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
Horn Rapids Softball Complex
SW corner of parking lot. Fenced enclosure

Current Well Use: Irrigation

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: unknown

Township: 10N Range: 28E Section (nearest 1/4 1/4): SW1/4 of SE 1/4 Sec. 27

Well Specifications:
Installation Date: unknown Total Depth (ft): unknown
Well Construction Type: 12" Dia Steel Casing

Pump System Type: Submersible

Well Access for Sounding: No obvious access

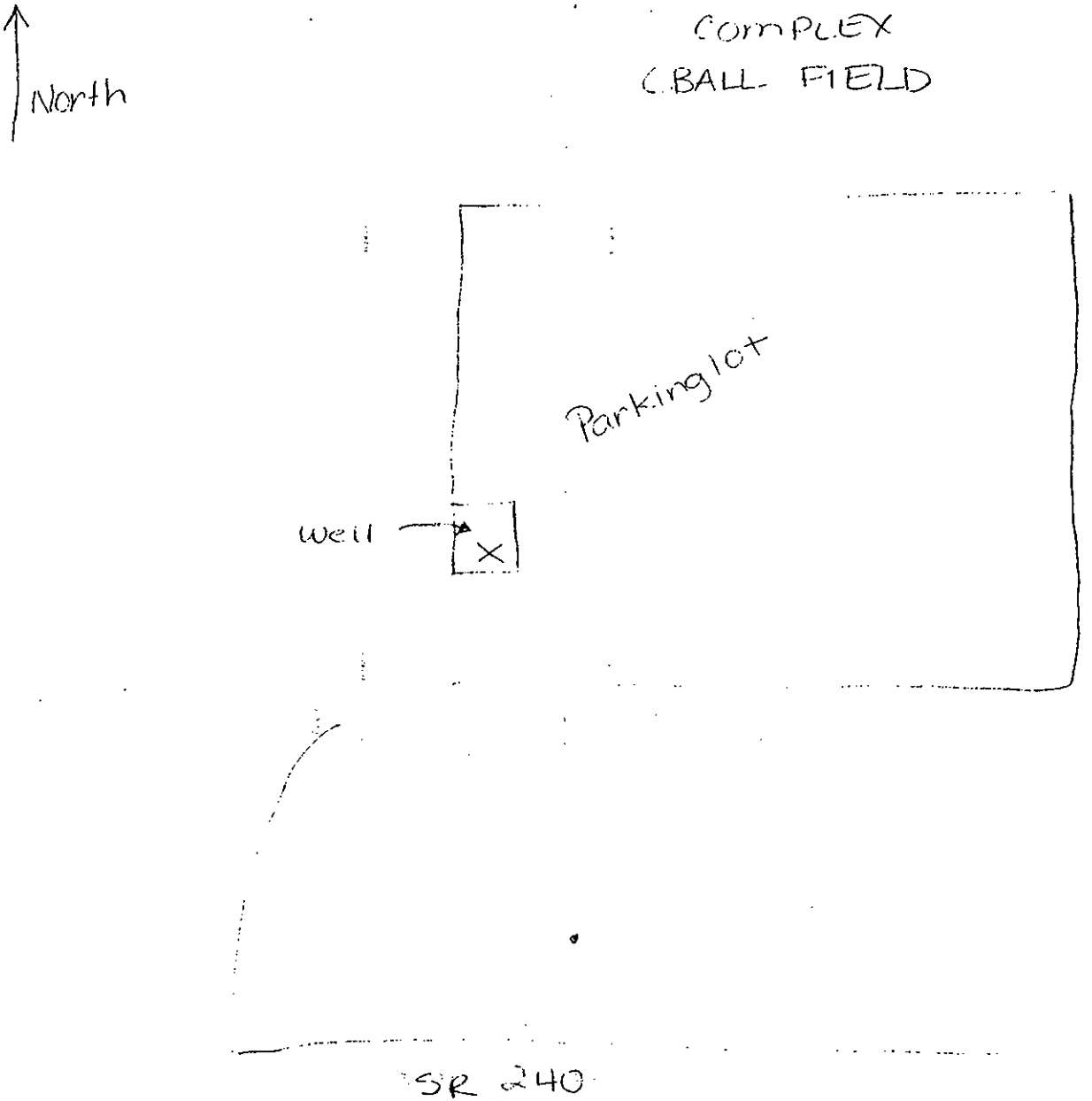
Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 20
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:

Filtration units attached to pump discharge outlet.

9212261139

HORN RAPIDS SOFT BALL
COMPLEX
C.BALL FIELD



100

1100 AREA WELL INVENTORY FORM

CR #1

Well Number: City of Richland, 6" well, #1 Date 11/19/90
Other Well ID: None Surveyor: Bergen

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 505 Swift Blvd
Richland, WA
Street Address of Residential Well Site if Different from Owner:
Leyster Road (See map)

Current Well Use: Monitoring Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: unknown South: unknown
System: unknown

Township: 10N Range: 28E Section (nearest 1/4 1/4): 27 (SE of NW)

Well Specifications:
Installation Date: unknown Total Depth (ft): unknown
Well Construction Type: 6" casing

Pump System Type: None

Well Access for Sounding: Hole in well cap (small probe)

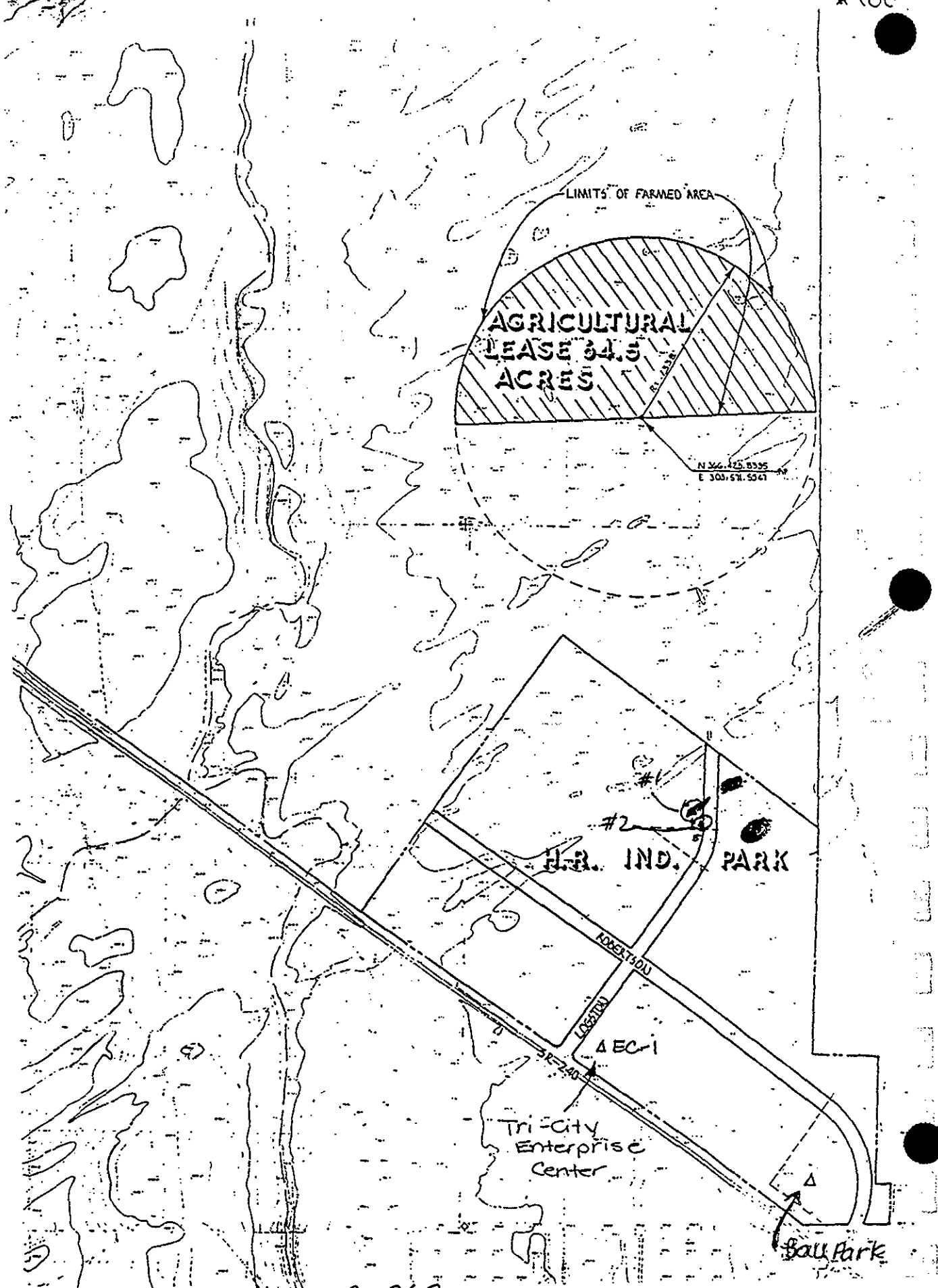
Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: City of Richland, 6" diam well (#1) Leyster Road
Well Log Available: X No ____ Yes
Well Log Obtained: X No ____ Yes

Other:

B-361

9212261191

*100



9 2 1 2 6 4 2 1 1 9 2

WHC-MR- 0295

#101

1100 AREA WELL INVENTORY FORM

Well Number: CP-#2 City of Richland, 6" well (#2) Date 11/19/90
Other Well ID: none Surveyor: Bleyer

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: G 505 Swift Blvd.
Richland, WA
Street Address of Residential Well Site if Different from Owner:
Layston Road (See Map)

Current Well Use: Monitoring well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: unknown South: unknown
System: unknown

Township: 10N Range: 28E Section (nearest 1/4 1/4): 27 (SE of NW)
Sec. 27

Well Specifications:
Installation Date: 3/1/83 Total Depth (ft): 29
Well Construction Type: 6" casing

Pump System Type: None

Well Access for Sounding: No access. Cap welded on casing has no port large enough to access.

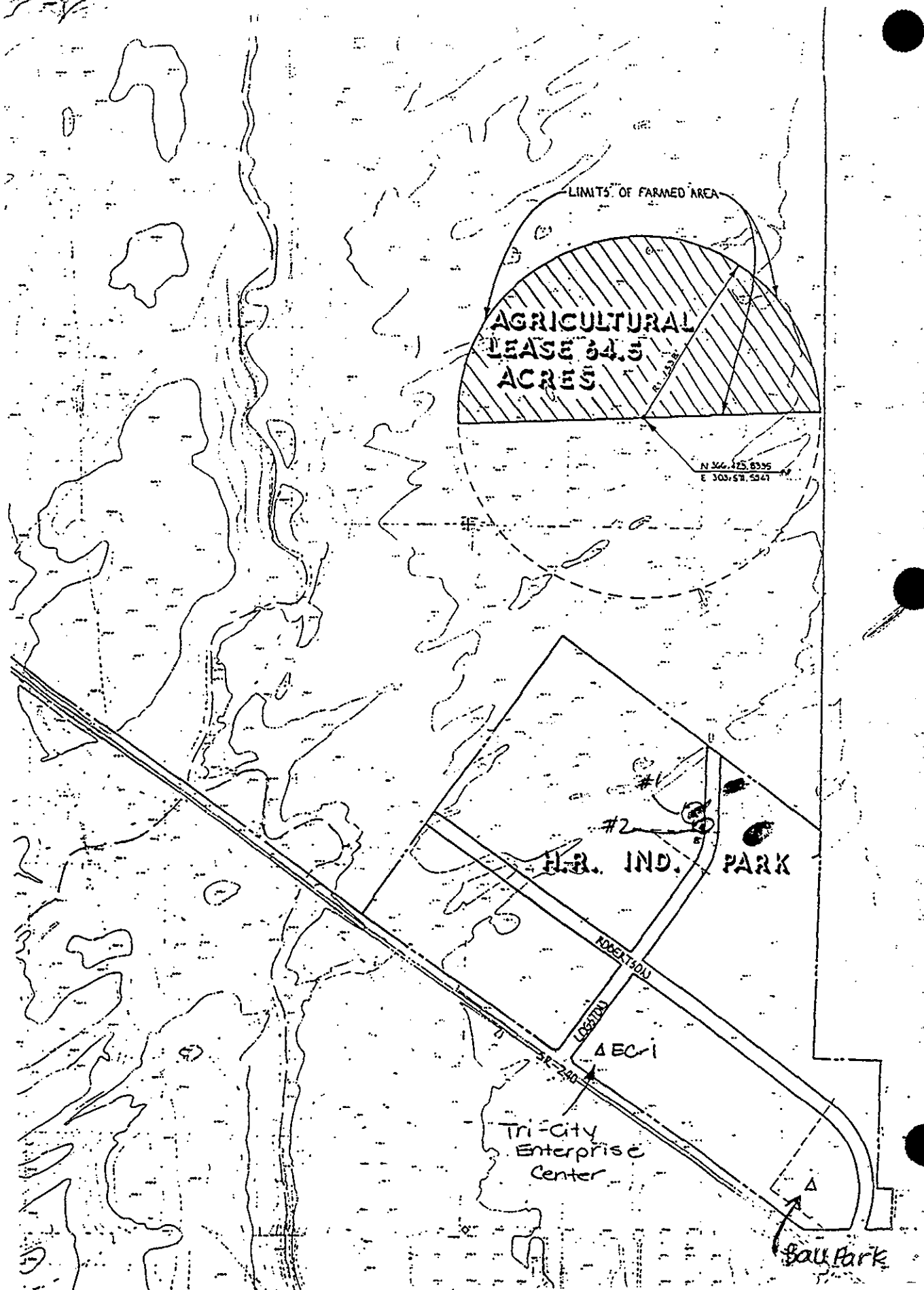
Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: City of Richland 6" dia. well #2 Layston Road.
Well Log Available: ✓ No X Yes
Well Log Obtained: ✓ No X Yes

Other:

B-363

9212621193

#101



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WHC-MR- 0295

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. # 101

Permit No. ....

(1) OWNER: Name City of Richland Address Po Box 190 Richland Wa

(2) LOCATION OF WELL: County Benton — ¼ ¼ Sec. T. N., R. W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☒ OBS.

(4) TYPE OF WORK: Owner's number of well (if more than one) 4

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 29 ft. Depth of completed well 29 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 29 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used Mills Knife
SIZE of perforations 1/4 in. by 2 in.
18 perforations from 5 ft. to 29 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☐ No ☒ To what depth? ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown silty sand	0	3
Sand gravel cobbles	3	26
Sand, cobbles Boulders	26	29

Work started, 19 Completed, 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Onweg Drilling Co Inc. (Person, firm, or corporation) (Type or print)

Address Rt 3 Box 3010 Kennewick

[Signed] Dale Bigham (Well Driller)

License No. 0036 Date Jan 31, 1983

Jerry

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

B-365

9212695

WHC-MR- 0295

#102

1100 AREA WELL INVENTORY FORM

CR #3

Well Number: City of Richland, 8" dia well Date 11/15/90
Other Well ID: None Surveyor: Bergman

Name of Well Owner: City of Richland

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 505 Swift Blvd.
Richland, WA.
Street Address of Residential Well Site if Different from Owner:
Leyster Road

Current Well Use: Monitoring Well

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ____ Yes ✓ No

Well Coordinates: North: unknown South: unknown
System: unknown

Township: 10N Range: 28E Section (nearest 1/4 1/4): SE 1/4 of NW 1/4 Sec. 27

Well Specifications:
Installation Date: JAN 1983 Total Depth (ft): 32
Well Construction Type: 8" dia. casing. Perf. 5' to 30'
Cable Tool
Pump System Type: None
Well Access for Sounding: Hole in well cap

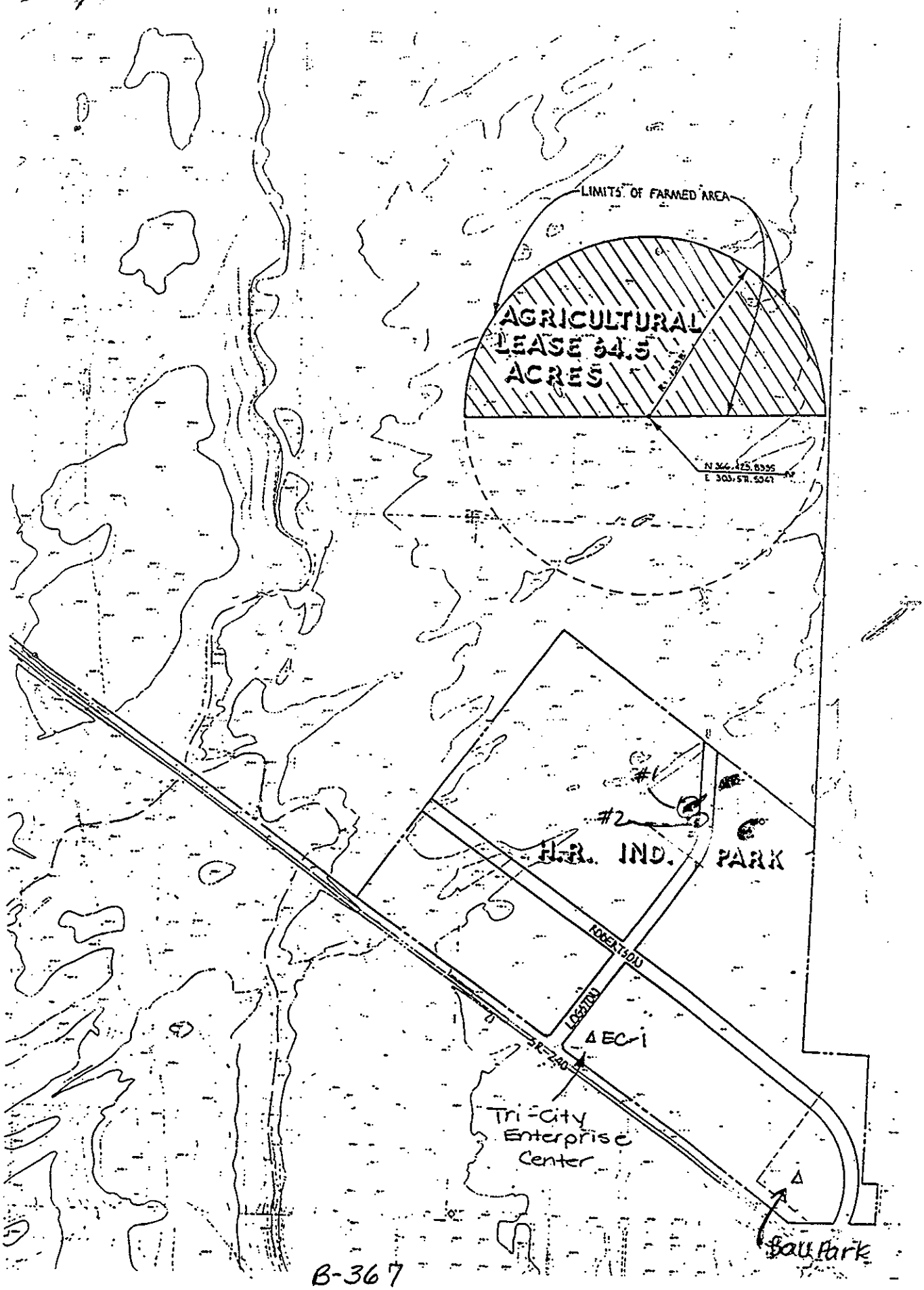
Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: City of Richland 8" dia well Leyster Road.
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:

9212642196

B-366

#102



9212602197

WHC-MR- 0295

#182

File Original and First Copy with Department of Ecology
Second Copy - Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name City of Richland Address PO Box 190 Richland WA

(2) LOCATION OF WELL: County Benton — ¼ ¼ Sec. T. N., R. W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☒ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) 2

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 32 ft. Depth of completed well 32 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8" Diam. from +1 ft. to 32 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☒ No ☐
Type of perforator used Mills Knife
SIZE of perforations 1/4 in. by 3 in.
400 perforations from 5 ft. to 30 ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☐ No ☒ To what depth? ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 4' 8" ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Owner
Yield: 25 gal./min. with 14 ft. drawdown after 8 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Brown silty sand	0	5
Sand gravel cobbles	5	12
cemented gravel + cobbles	12	15
Sand gravel cobbles	15	29
silt + clay	29	30

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Dunnegan Drilling Co Inc (Person, firm, or corporation) (Type or print)

Address Rt 3 Box 3010 Kennewick

[Signed] Paul Bigler (Well Driller)

License No. 0036 Date Jan 31 19 83

JERRY

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

R-368

9 2 1 2 6 4 2 1 1 9 8

WHC-MR- 0295

Sec. 1

#103

1100 AREA WELL INVENTORY FORM

revisited: 26-90 12/5/90 12/6/90

Well Number: [redacted] 103 Date 11-18-90
Other Well ID: Surveyor: KSV

Name of Well Owner: W. Robert Wykoff (Middlefence Inv.)

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 703 Lynnwood Loop
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation

Verification by Owner/Occupant of Well Use: [signature] (Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): NW1/4 of NW1/4 Sec 35

Well Specifications:
Installation Date: May 1980 Total Depth (ft): 54'
Well Construction Type: Rotary 6" casing
Pump System Type: Submersible
Well Access for Sounding: yes on top

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 11 Roll 2K
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes

Other:

Permit # WES-064

B-369

9212619

WHC-MR- 0295

#103

W85-064
Permit Number
4-4-85
Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
W. Robert Wykoff	Thompson Well Drilling
Name	Name
703 Lynnwood Loop	1415 Basin Loop Rd
Address	Address
Richland WA 375-1297	Pasco WA
City State Phone	City State Phone

WELL INFORMATION

703 Lynnwood Loop — Well Location Address
20 — Lot
2 — Block
Lynnwood Terrace — Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☒ Plot plan submitted — April 4, 1985 (Date)
- ☒ Drilling log submitted — April 4, 1985 (Date)
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: W Robert Wykoff

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

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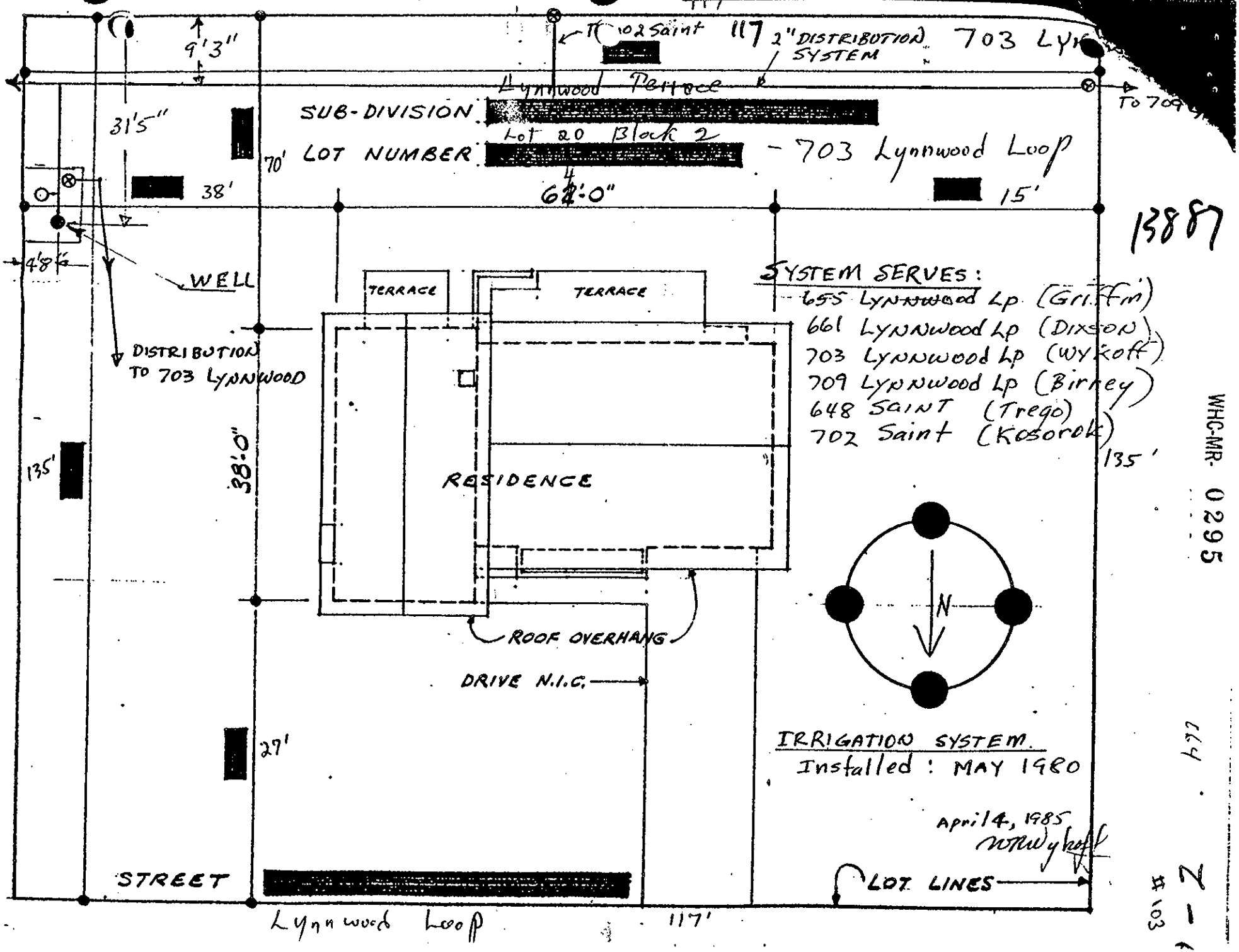

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B-371

WHC-MR- 0295

#103

WHC-MR- 0295

C64 #103

...al and First Copy with
...of Ecology
...opy — Owner's Copy
...opy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. G4-21662

(1) OWNER: Name Middle Fence Irrigation Coop Address .....

(2) LOCATION OF WELL: County Benton — ¼ ¼ Sec. 4 T. 1 N., R. 28 W.

...ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....

New well ☒ Deepened ☐ Reconditioned ☐

Method: Dug ☐ Bored ☐ Cable ☐ Driven ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.

Drilled 54 ft. Depth of completed well 54 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: ..." Diam. from ... ft. to ... ft.

Threaded ☐ ..." Diam. from ... ft. to ... ft.

Welded ☒ 6" Diam. from 1 ft. to 54 ft.

Perforations: Yes ☐ No ☒

Type of perforator used .....

SIZE of perforations ... in. by ... in.

... perforations from ... ft. to ... ft.

... perforations from ... ft. to ... ft.

... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒

Manufacturer's Name .....

Type ..... Model No. .....

Diam. ... Slot size ... from ... ft. to ... ft.

Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....

Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.

Material used in seal Bentonite

Did any strata contain unusable water? Yes ☐ No ☒

Type of water? ..... Depth of strata .....

Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....

Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.

Static level 24 ft. below top of well Date .....

Artesian pressure ... lbs. per square inch Date .....

Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....

Yield: ... gal./min. with ... ft. drawdown after ... hrs.

"The 6" Aquamic 45 Gal" "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....

Bailer test ... gal./min. with ... ft. drawdown after ... hrs.

Artesian flow ... g.p.m. Date .....

Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Topsoil	0	10
Cemented Gravel + Boulders	10	30
Gravel + Boulders (Cut to Casing)	30	54
Completed well at 54 ft.		

Work started May 12, 1986. Completed May 13, 1986

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME THOMPSON WELL DRILLING (Person, firm, or corporation) (Type or print)

Address 1415 Basin Loop Rd. Pasco, Wash.

[Signed] Manuel L. Thompson (Well Driller)

License No. 0650 Date May 13, 1986

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

9 2 1 2 6 4 2 1 2 0 2

103

Source: USGS

11/26/1990 -M

10N/28E-35D06

SITE ID:	461846119164901
KEY.NO.:	6608
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	461846
LONGITUDE:	1191649
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-35D06
ALTITUDE:	390.00
ALT.ACC:	30
USE OF SITE:	W
NO.1 WATER USE:	H
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	54.00
WELL.DEPTH:	54.00
DEPTH SOURCE:	D
DATE DRILLED:	5/13/1980
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	
LAST NAME:	MIDDLEFENCE IRR
DATE OWNED:	5/13/1980
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	24.00
WATER LEVEL DATE:	5/13/1980
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	
DISCHARGE:	45.00
DRAWDOWN:	-99.00
TEST TIME:	-99.0
FINISH:	O
OPENING TYPE:	O
OPENING TOP:	54.00
OPENING BOTTOM:	54.00
OPENING DIAM.:	6.00
UNIT TOP:	-99.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	100
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO

9212603

103

RELATIVE CONTRIBUTION: N
LITHOLOGY:
LITHOLOGIC MODIFIER:
% WATER.CONTRIBUTED: 0

9212642120 4

SECTION 1 #104

1100 AREA WELL INVENTORY FORM

Well Number: 104
Other Well ID:

Date 11-26-90 11-18-90
Surveyor: KSV

Name of Well Owner: JOHN R. RAYMOND.

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 1004 LYNNWOOD LOOP
RICHLAND, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION

Verification by Owner/Occupant of Well Use: Twila L. Raymond
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range 28E Section (nearest 1/4 1/4): NE 1/4 of NW 1/4 SEC. 35.

Well Specifications:
Installation Date: NOV 1979 Total Depth (ft): 50'
Well Construction Type: CABLE TOOL - 6" CASING.

Pump System Type: Submersible.

Well Access for Sounding: No. Bolted.

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 5 Roll 1K
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes

Other:
CITY OF RICHLAND
WATER WELL PERMIT # WSS-110.

B-375

0295

[redacted]

d First Copy with Ecology
— Owner's Copy
— Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No.
Permit No.

(1) OWNER: Name John Raymond Address 604 Lynnwood Loop - Richla

(2) LOCATION OF WELL: County Benton — SW ¼ SE ¼ Sec. 2 T. 9 N., R. 29 E.

Bearing and distance from section or subdivision corner Well at 604 Lynnwood Loop - Richland N. Side of Hwy

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☑ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 50 ft. Depth of completed well 50 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 45 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☑ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☑
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☑ No ☐
Manufacturer's Name Johnson
Type Stainless Steel Model No. 304
Diam. 6 Slot size 50 from 45 ft. to 50 ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 18+ ft.
Material used in seal Bentonite - Pellets
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level.... 480 ft.
Static level 18 ft. below top of well Date Nov 79
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☑ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 40 gal./min. with 0 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☑

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown Sand & Gravel to 1½"	0	3
Brown Sand & Large Cobbles	3	18
Brown Sand & Cobbles Cemented	18	24
Loose Gravel to 2" & Sand Coarse w/Water	24	36
Silty Sand and Gravels	36	43
Loose Gravels small amount of silt and sand - seems to have unlimited water.	43	50

Work started Nov 79, 19. Completed Nov, 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hatch Drilling Co. Inc. (Person, firm, or corporation) (Type or print)

Address 611 W. Court St. Pasco WA 993

[Signed] (Well Driller)

License No. 0176 Date 11/28, 19.

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

B-376

9212642 1206

WHC-MR- 0295

#104

City Of Richland

WATER WELL PERMIT

W85-110
Permit Number

6-24-85
Application Date

Approval Date

APPLICANT	DRILLER
JOHN R. RAYMOND	HATCH DRILLING CO., INC.
Name	Name
604 LYNNWOOD LOOP	6417 W. COURT ST.
Address	Address
RICHLAND WA 375-1282	PASCO WA
City State Phone	City State Phone

WELL INFORMATION

604 LYNNWOOD LOOP — Well Location Address
2 — Lot
3 — Block
LYNNWOOD TERRACE — Subdivision

Well Use:
- ☐ Domestic
- ☑ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☑ Plot plan submitted — 6/26/85 Date
- ☑ Drilling log submitted — 6/26/85 Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

WELL PLACED INTO OPERATION IN 1980
CERTIFICATE OF WATER RIGHT 866958 (ATTACHED)

APPLICANT: J. R. Raymond

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

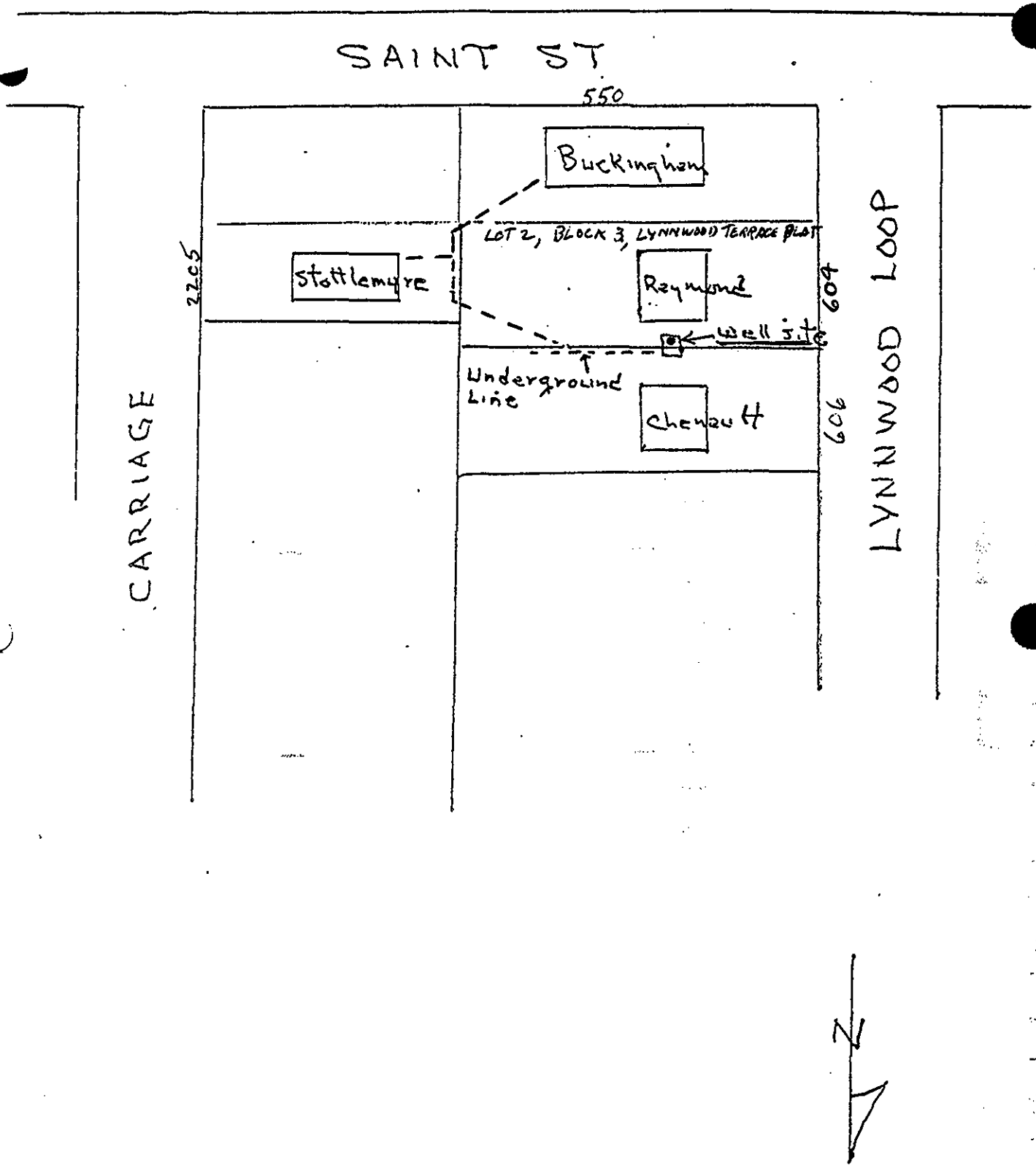
WSA-0055

B-377

9212607

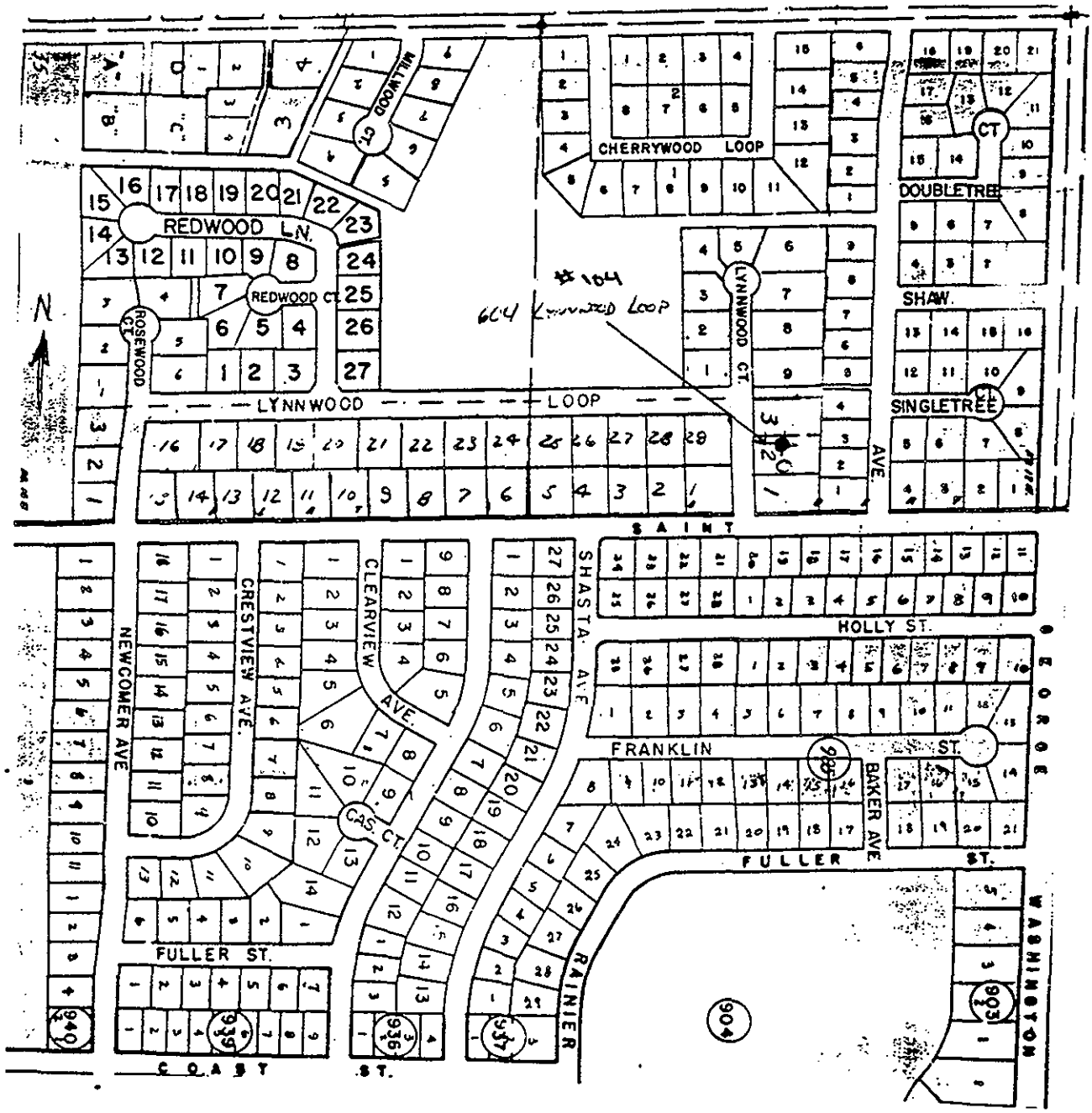
EXHIBIT "B"

PLOT PLAN



9212642 1208

104


REDWOOD LN.
REDWOOD CT.
ROSEWOOD CT.
WILLOWOOD CT.
CHERRYWOOD LOOP
DOUBLETREE CT
SHAW.
SINGLETREE CT.
LYNNWOOD CT.
LYNNWOOD LOOP
AVE.
SAINT
HOLLY ST.
FRANKLIN ST.
BAKER AVE
FULLER ST.
RAINIER
WASHINGTON
SHASTA AVE
CLEARVIEW AVE.
CAS CT.
CRESTVIEW AVE.
NEWCOMER AVE
FULLER ST.
COAST ST.
N
#104
604 Lynnwood Loop
904
903
940
939
936
937

107

Source: USGS

11/13/1990 -M 10N/28E-35C03

SITE ID:	461846119164501
KEY.NO.:	2238
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA	
VERIFICATION	V
LATITUDE:	461842
LONGITUDE:	1191630
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35C03
ALTITUDE:	375.00
ALT.ACC:	5
USE OF SITE:	W
NO.1 WATER USE:	I
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	50.00
WELL.DEPTH:	50.00
DEPTH SOURCE:	D
DATE DRILLED:	11/ 1/1979
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	JOHN
LAST NAME:	RAYMOND
DATE OWNED:	11/ 1/1979
STREET ADDR.:	604 LYNNWOOD LOOP
CITY ADDR.:	RICHLAND WA. 99352
WATER LEVEL:	18.00
WATER LEVEL DATE:	11/ 1/1979
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	D
WATER LEVEL:	20.00
WATER LEVEL DATE:	3/12/1986
W.L.TIME:	1148
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	16.44
WATER LEVEL DATE:	9/ 4/1986
W.L.TIME:	1121
W.L. METHOD:	S
W.L. STATUS:	U
WATER LEVEL SOURCE:	S
WATER LEVEL:	16.44
WATER LEVEL DATE:	9/ 4/1986
W.L.TIME:	1121
W.L. METHOD:	S
W.L. STATUS:	U
WATER LEVEL SOURCE:	S

9212642210

104

WATER LEVEL:	16.15
WATER LEVEL DATE:	9/ 4/1986
W.L.TIME:	1127
W.L. METHOD:	S
W.L. STATUS:	U
WATER LEVEL SOURCE:	S
WATER LEVEL:	16.31
WATER LEVEL DATE:	9/ 4/1986
W.L.TIME:	1131
W.L. METHOD:	S
W.L. STATUS:	U
WATER LEVEL SOURCE:	S
WATER LEVEL:	16.36
WATER LEVEL DATE:	9/24/1986
W.L.TIME:	1114
W.L. METHOD:	S
W.L. STATUS:	U
WATER LEVEL SOURCE:	S
WATER LEVEL:	19.19
WATER LEVEL DATE:	2/24/1987
W.L.TIME:	1331
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	18.15
WATER LEVEL DATE:	9/14/1988
W.L.TIME:	1320
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	B
DISCHARGE:	40.00
DRAWDOWN:	0.00
TEST TIME:	1.0
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	45.00
OPENING BOTTOM:	50.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	& COBB
% WATER.CONTRIBUTED:	0
UNIT TOP:	18.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	GRCM 18-24FT
% WATER.CONTRIBUTED:	100

#104

REMARK:	'WB 24-36;43-50'
STRUCTURE:	SYNCN-PASCO
DISTANCE FROM STRUCTURE:	2.25
REMARK:	'LOCAL NO. WAS 10/28-35D6'
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
SAMPLING DATE:	09/04/1986
TIME:	1150
NITRATE:	6.20
SPECIFIC CONDUCTANCE:	662

9212642121 2

105

1100 AREA WELL INVENTORY FORM

Well Number: 105 Date 12-1-90
Other Well ID: Surveyor: RBlagen

Name of Well Owner: Peter Jensen

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 701 Snyder
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation

Verification by Owner/Occupant of Well Use: Peter Jensen
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 13N Range: 28E Section (nearest 1/4 1/4): 35 (NW 1/4 ...)

Well Specifications:
Installation Date: 9/6/89 Total Depth (ft): 82'
Well Construction Type: No perf, 6" diameter
Rotary
Pump System Type: Pump at 62'
1.5 hp.
Well Access for Sounding: Bolt-on Cover

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 16 (Roll 1PB-1)
Well Log Available: ___ No ✓ Yes 17
Well Log Obtained: ___ No ✓ Yes

Other:

- Water level @ 42'
- Well is located in front yard near corner of intersection with private driveway and Snyder (2.0 (lower bed - Brick and wood frame well head protector)
- Owner had copy of permit application in his records

9212613

WHC-MR- 0295

10E

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. _____

Water Right Permit No. _____

(1) OWNER: Name Kte Jonsen Address Sunnyer, Rhld, Wa 99352

(2) LOCATION OF WELL: County Benton NW ¼ NW ¼ Sec 34 T 10 N, R 28 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Deepened [ ] Reconditioned [ ]
Method: Dug [ ] Cable [ ] Rotary [X] Bored [ ] Driven [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 80 feet. Depth of completed well 80 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from -1 ft. to 80 ft.
Welded [X] " Diam. from _____ ft. to _____ ft.
Liner installed [ ]
Threaded [ ] " Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 22 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [ ]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 42 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 70 gal./min. with stem set at 70 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sand	0	35
Sand & Gravel	35	60
Sand & Gravel Bearing Water	60	80

Work started 9-5-89, 19. Completed 9/6, 1989

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

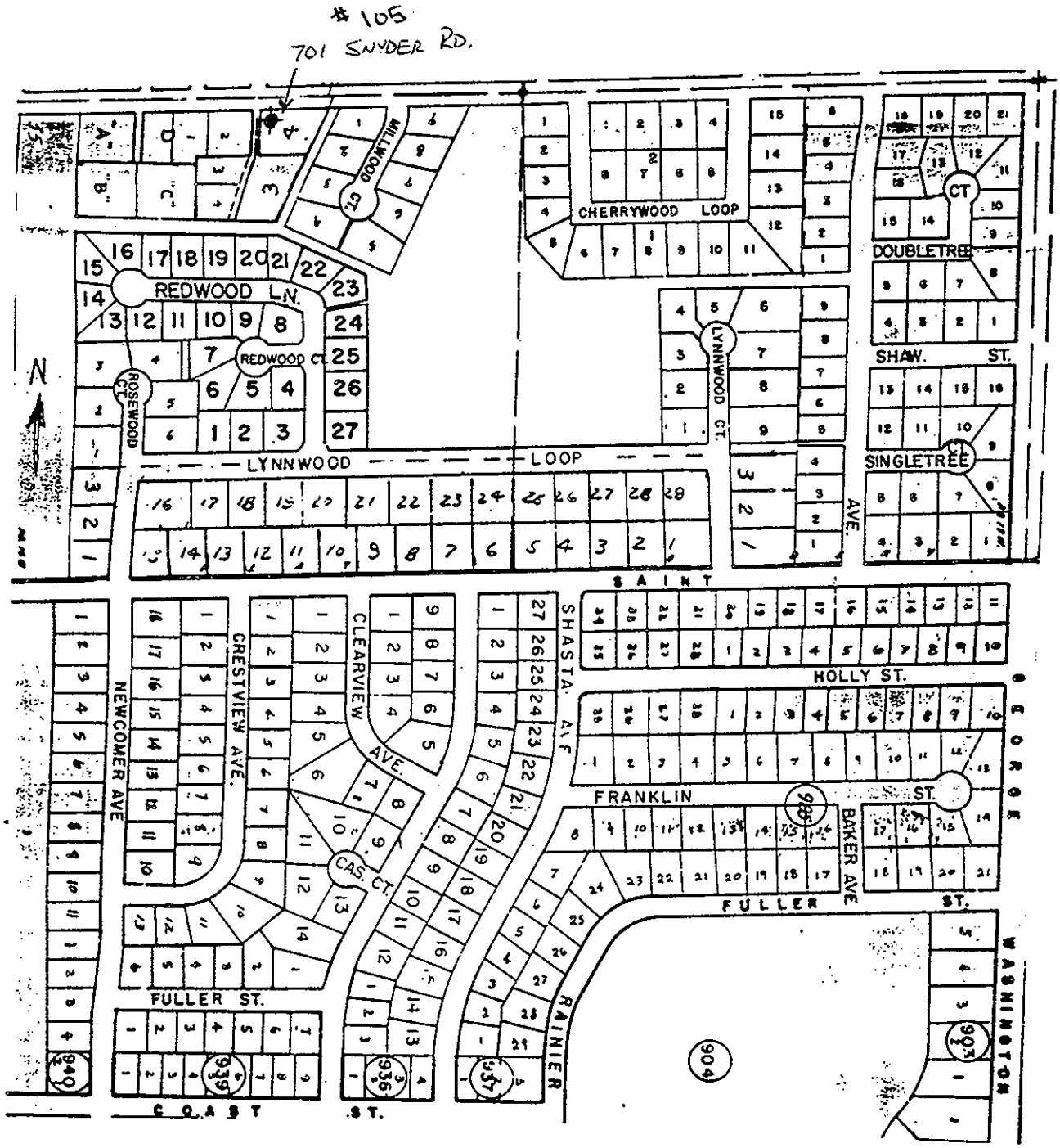
NAME St George Drilling Co. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 701 S. 45th Ave. W. Rhld. Wa
(Signed) _____ (WELL DRILLER) License No. 0483
Contractor's Registration No. 001-048-715 Date 9/6, 19 89

(USE ADDITIONAL SHEETS IF NECESSARY)

9-1-20 (10/87) -1329- 3

9 2 1 2 5 4 2 1 2 1 4

#105


#105
701 SNYDER RD.
MILLWOOD CT.
CHERRYWOOD LOOP
DOUBLETREE
CT
REDWOOD LN.
REDWOOD CT.
ROSEWOOD CT.
LYNNWOOD CT.
SHAW. ST.
SINGLETREE
LYNNWOOD LOOP
AVE.
SAINT
HOLLY ST.
FRANKLIN ST.
BAKER AVE
FULLER ST.
GEORGE WASHINGTON
SHASTA AVE
RAINIER
CLEARVIEW AVE.
CAS. CT.
CRESTVIEW AVE.
NEWCOMER AVE
FULLER ST.
COAST ST.
N
904
903
940
939
936
937

B-385

#105

Source: USGS

12/ 3/1990 -M 10N/28E-34D01

SITE ID:	461847119180301
KEY.NO.:	6668
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA	
VERIFICATION	
LATITUDE:	461847
LONGITUDE:	1191803
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-34D01
ALTITUDE:	375.00
ALT.ACC:	20
USE OF SITE:	W
NO.1 WATER USE:	H
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	80.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	A
DATE DRILLED:	9/ 1/1989
LOG DATA:	
OTHER DATA:	
FIRST NAME:	PETE
LAST NAME:	NENSEN
DATE OWNED:	9/ 1/1989
STREET ADDR.:	
CITY ADDR.:	

9212542216

WHC-MR- 0295

SEC. 1 # 106

1100 AREA WELL INVENTORY FORM

[redacted]

Well Number: ~~OEE~~ 106 Date 12/6/90

Other Well ID: Surveyor: LB

Name of Well Owner: Douglas Payton. D.B. Payton ph. 375-6251

Well Location: (Location Map Sketched on Attached Sheet)

Owner's Address: 705 Snyder, Richland, WA

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Domestic and Irrigation Supply.

Verification by Owner/Occupant of Well Use: Not available (Signature)

Telephone contact made 12/18/90

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: unknown South: unknown

System: n/a

Township: 10 Range: 28E Section (nearest 1/4 1/4): 35 (NW of NW)

Well Specifications:

Installation Date: 2/74 Total Depth (ft): 85'

Well Construction Type: Cable Tool, 6-in. dia. welded casing (+1' to 75')

5-in. dia PVC screen, 0.015-inch slots (75' to 85')

Pump System Type: Sub.

Well Access for Sounding: none

Other Information:

Photograph Taken: ✓ No ____ Yes Photo Number: ____

Well Log Available: ____ No ✓ Yes

Well Log Obtained: ____ No ✓ Yes WOLE

→ well not accessible. Mr Payton not available to meet me to photograph well.

Other:

City of Richland Water Well Permit # W85-062

B-387

9212617

WHC-MR- 0295

City Of Richland

WATER WELL PERMIT

Permit Number

Application Date

Approval Date

APPLICANT	DRILLER
D.B. Payton	Nelson Well Drilling
Name	Name
705 Snyder Rd.	012 Franklin
Address	Address
375;3050	Pasco Wa.
City State Phone	City State Phone

WELL INFORMATION

Well Location Address	Lot	Block	Subdivision
705 Snyder Rd.	3		Payton Tracts

Well Use:
- ☐ Domestic
- x☑ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- x☑ Plot plan submitted — 3;10-85 Date
- x☑ Drilling log submitted — 3-10-85 Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: _____

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

9212642218

Ecology
Owner's Copy
Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

#106

Application No. .....

Permit No. .....

OWNER: Name [illegible] Address [illegible] Richland

LOCATION OF WELL: County [illegible] — ¼ ¼ Sec. T. N., R. W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....

New well ☐ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well [illegible] inches.
Drilled [illegible] ft. Depth of completed well [illegible] ft.

(6) CONSTRUCTION DETAILS:

Casing installed: [illegible]" Diam. from +1 ft. to 72 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☐ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☐
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☐
Manufacturer's Name [illegible]
Type [illegible] Model No. .....
Diam. [illegible] Slot size [illegible] from [illegible] ft. to [illegible] ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☐ No ☐ To what depth? [illegible] ft.
Material used in seal [illegible]
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level ..... ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by .....
(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....

Yield:	gal./min. with	ft. drawdown after	hrs.
"	"	"	"
"	"	"	"

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test [illegible] gal./min. with [illegible] ft. drawdown after [illegible] hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

Work started [illegible], 19.... Completed [illegible], 19....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME [illegible] (Person, firm, or corporation) (Type or print)

Address [illegible] Tacoma

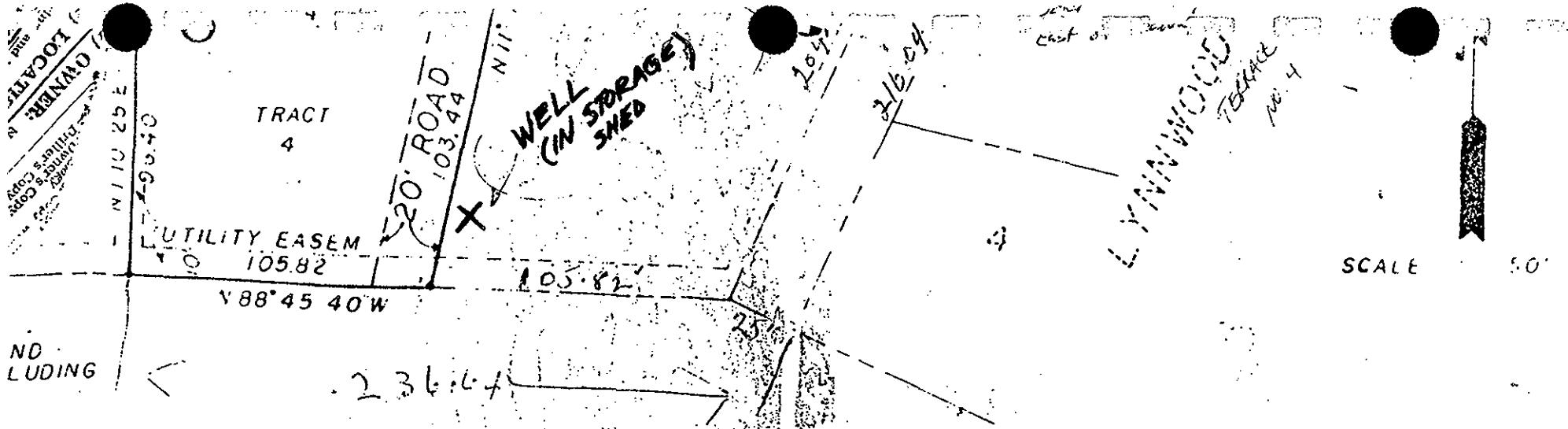
[Signed] [illegible] (Well Driller)

License No. [illegible] Date [illegible], 19....

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

B-389



OWNER'S CERTIFICATE

WE _____ AND _____ ARE THE OWNERS OF THE LAND DESCRIBED HEREON

SIGNATURE

SIGNATURE

ACKNOWLEDGEMENT

STATE OF WASHINGTON
COUNTY OF BENTON

I, THE UNDERSIGNED NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, HEREBY CERTIFY THAT ON THE ____ DAY OF _____ 197__, PERSONALLY APPEARED BEFORE ME _____ AND _____, HIS WIFE TO ME KNOWN TO BE THE PERSONS WHO EXECUTED THE FORGOING OWNERS CERTIFICATE AND THAT THEY SIGNED THE SAME AS THEIR FREE AND VOLUNTARY ACT AND DEED.

IN WITNESS WHEREOF I HAVE SET MY HAND AND AFFIXED MY OFFICIAL SEAL THE DAY AND YEAR ABOVE WRITTEN

RESIDING AT _____

NOTARY PUBLIC IN AND FOR THE STATE OF WASH. MY COMMISSION EXPIRES _____

9212642122 0

#106

Source: USGS

11/28/1990 -M 10N/28E-35D04

SITE ID:	461838119165701
KEY.NO.:	2242
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461850
LONGITUDE:	1191649
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35D04
ALTITUDE:	405.00
ALT.ACC:	10
USE OF SITE:	W
NO.1 WATER USE:	H
NO.2 WATER USE:	I
NO.3 WATER USE:	
HOLE DEPTH	86.00
WELL.DEPTH:	85.00
DEPTH SOURCE:	D
DATE DRILLED:	2/19/1974
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	D.B.
LAST NAME:	PAYTON
DATE OWNED:	02/22/1974
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	57.00
WATER LEVEL DATE:	2/22/1974
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
WATER LEVEL:	52.74
WATER LEVEL DATE:	2/23/1986
W.L.TIME:	1620
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	49.55
WATER LEVEL DATE:	9/ 3/1986
W.L.TIME:	1243
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	52.14
WATER LEVEL DATE:	3/ 4/1987
W.L.TIME:	1120
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S

#106

DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	B
DISCHARGE:	30.00
DRAWDOWN:	3.00
TEST TIME:	1.0
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	75.00
OPENING BOTTOM:	85.00
OPENING DIAM.:	5.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	& SOIL
% WATER.CONTRIBUTED:	0
UNIT TOP:	52.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	100
REMARK:	'WB 73-85'
STRUCTURE:	SYNCN-PASCO
DISTANCE FROM STRUCTURE:	2.00
REMARK:	'LOCAL NO WAS 10N/28E-26Q02'
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
REMARK:	'LOCAL NO WAS 10N/28E-35D05'
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
SAMPLING DATE:	09/04/1986
TIME:	1255
NITRATE:	4.40
SPECIFIC CONDUCTANCE:	569

9 2 1 2 6 4 2 1 2 2 2

SECTION 1

107

12:30

1100 AREA WELL INVENTORY FORM

Well Number: 107
Other Well ID:

Date 11-26-90 11-15-90
Surveyor: Kim Vik

Name of Well Owner: Rod & Terry Fleischman

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2224 Redwood
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION
HEAT PUMP (SUPPLY)

Verification by Owner/Occupant of Well Use: X (Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): NW1/4 of NW1/4 sec. 35

Well Specifications:
Installation Date: 12-3-84 Total Depth (ft): 51'
Well Construction Type: Cable Tool

Pump System Type: Berkeley - Submersible, 3/4 H.P.

Well Access for Sounding: [illegible] with ground access.

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 10 Roll 2K
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:
CITY OF RICHLAND WATER WELL PERMIT # W85-131

11/6 1115 - Packages & newspapers piling up on front porch - no one home
[illegible]

B-393

WHC-MR- 0295

#107

W89-131
Permit Number
01-17-89
Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
Rod & Terry Fleischman	St. George Drilling
Name	Name
2224 Redwood	701 South 45
Address	Address
Richland Wash 375-4095	W. Richland Wa
City State Phone	City State Phone

WELL INFORMATION

2224 Redwood Lane — Well Location Address
25 — Lot
Block
Sun River Estates — Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☒ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☐ Plot plan submitted enclosed — Date
- ☐ Drilling log submitted enclosed. — Date
- ☐ Cross-connection inspection made Occupancy inspection 1985 and 1986 — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: [signature]

APPROVAL: _____
(After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

9212642122 4

WHC-MR- 0295

W89-131 #107

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Rod Fleischman ~~Hoskins Farm~~ Address 2224 Redwood Lane ~~[illegible] Richland~~ Richland

LOCATION OF WELL: County Benton — ¼ NW ¼ Sec. 35 T. 10 N., R. 28 E. W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 51 ft. Depth of completed well 51 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 51 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☒
Type of perforator used ...
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☒ No ☐
Manufacturer's Name ...
Type S.S. Model No. ...
Diam. 5" Slot size 18 from 46 ft. to 51 ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name Berkley
Type: Submersible H.P. 3/4

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 28 ft. below top of well Date ...
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? ...
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test ... gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Brown Sand	0	12
Sand + Boulders	12	40
Brown Sand + Gravel	40	46
Black Sand + Gravel, water at 46'	46	51

Work started 11-28, 1984 Completed 12-3, 1984

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME St. George Drilling (Person, firm, or corporation) (Type or print)

Address 701 South 45 West Richland, Wash

[Signed] Donald St. George (Well Driller)

License No. 04191 Date 12-3, 1984

(USE ADDITIONAL SHEETS IF NECESSARY)

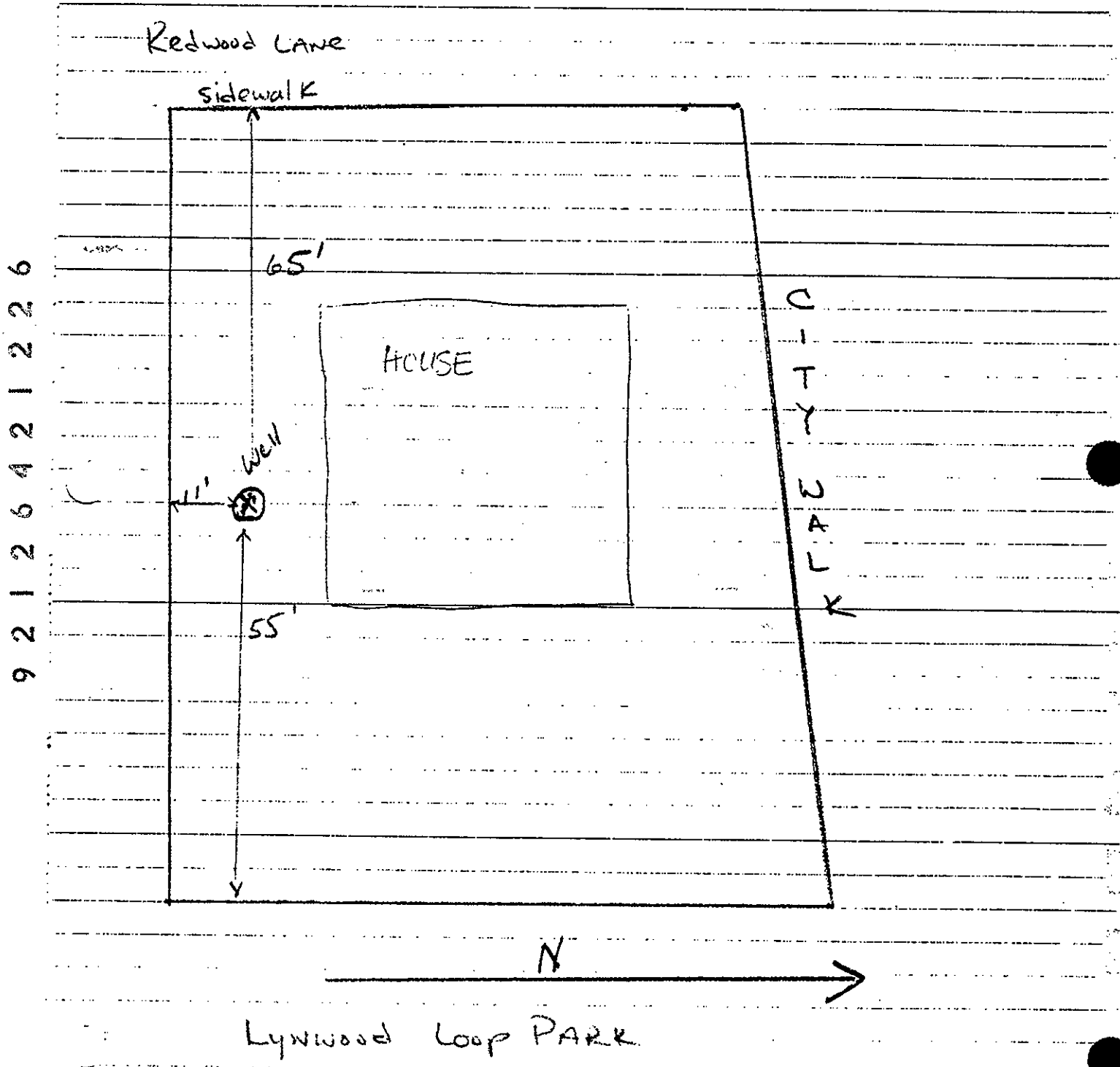
ECY 050-1-20

B-395

9212625

W89-131 #10.

well location
2224 Redwood Lane
Richland Wash



Source: USGS[a]

107

12/ 4/1990 -M

10N/28E-35D07

SITE ID:	461841119164201
KEY.NO.:	6669
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA	
VERIFICATION	
LATITUDE:	461841
LONGITUDE:	1191642
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-35D07
ALTITUDE:	370.00
ALT.ACC:	20
USE OF SITE:	W
NO.1 WATER USE:	H
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	51.00
WELL.DEPTH:	-99.00
DEPTH SOURCE:	A
DATE DRILLED:	12/ 1/1984
LOG DATA:	
OTHER DATA:	
FIRST NAME:	ROD
LAST NAME:	FLEISCHMAN
DATE OWNED:	12/ 1/1984
STREET ADDR.:	
CITY ADDR.:	

9212262127

108

1100 AREA WELL INVENTORY FORM

Well Number: 108 Date 12-1-90
Other Well ID: Surveyor: R. Bleyer

Name of Well Owner: DENIS STRACHAN

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 709 REDWOOD LANE
RICHLAND
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation + Heat Pump

Verification by Owner/Occupant of Well Use: Strachan
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: N/A

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (NW of NW)

Well Specifications:
Installation Date: 8/81 Total Depth (ft): 67 ft
Well Construction Type: Cable Tool 6" dia
Unknown screen interval (possibly 5') Stainless Steel
Pump System Type: 3/4 hp Grundfos submersible

Well Access for Sounding: Bolt-on cap

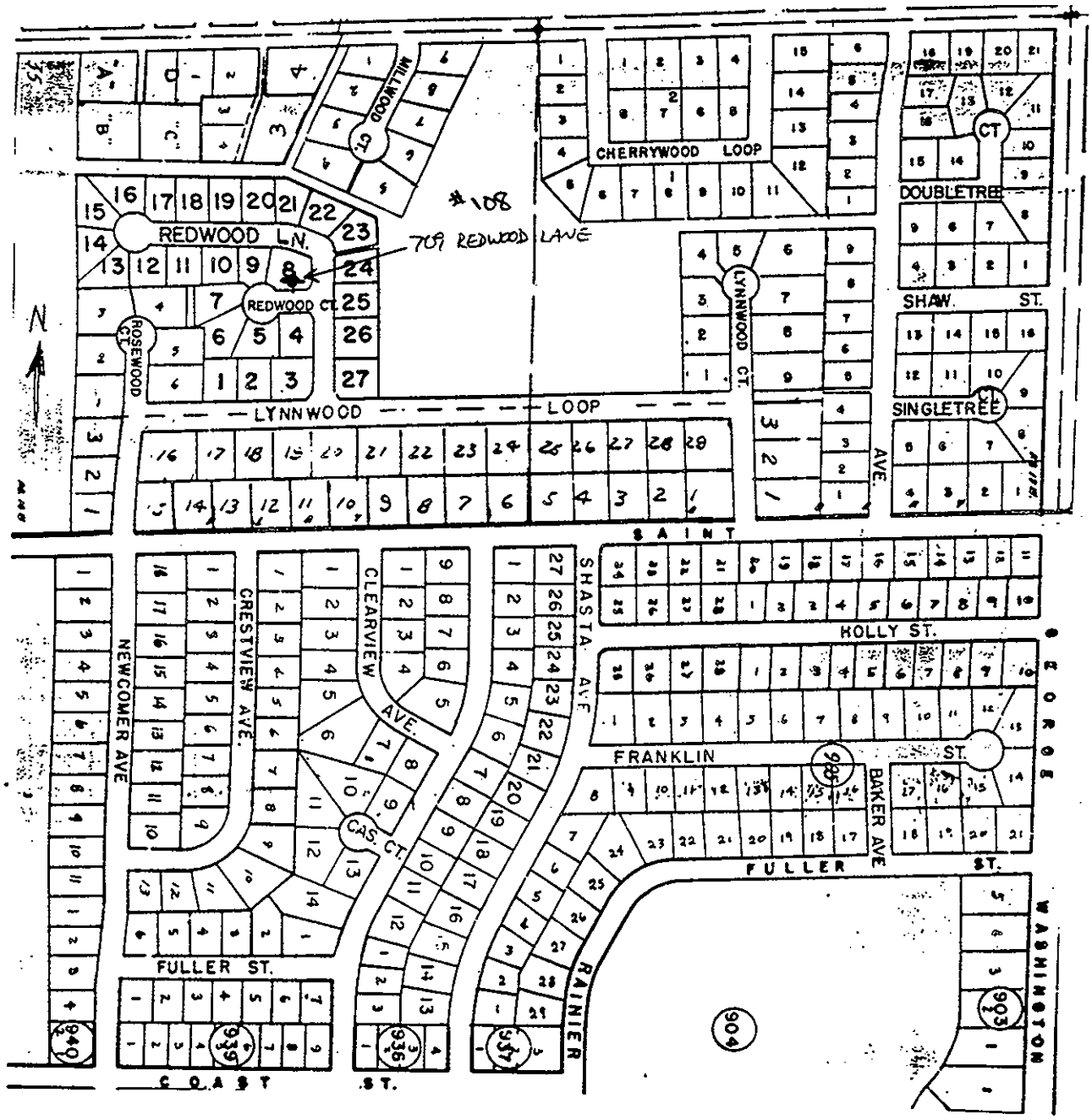
Other Information:
Photograph Taken: ___ No X Yes Photo Number: 18 (RPB-1
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:
~~Community Irrigation?~~ at ~~2132~~ ~~Cascade Ave~~? ~~Fire Comp~~.

Uses GPS

9212642128

#108


REDWOOD LN.
REDWOOD CT.
ROSEWOOD CT.
MILLWOOD CT.
CHERRYWOOD LOOP
DOUBLETREE
CT
SHAW ST.
SINGLETREE
LYNNWOOD CT.
LYNNWOOD LOOP
AVE.
SAINT
HOLLY ST.
FRANKLIN ST.
BAKER AVE
FULLER ST.
SHASTA AVE
RAINIER
CLEARVIEW AVE.
CAS. CT.
CRESTVIEW AVE.
NEWCOMER AVE
FULLER ST.
COAST ST.
WASHINGTON
N
709 REDWOOD LANE
#108
904
903
940
939
936
937
985

B-399

WHC-MR- 0295

109

1100 AREA WELL INVENTORY FORM

Well Number: 109 Date 11-26-90
Other Well ID: Surveyor: K.SV

Name of Well Owner: MICHAEL HARRIS → 375-3173

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2212 Rosewood
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation

X Verification by Owner/Occupant of Well Use: Brenda K. Harris
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): NW1/4 of ~~SE1/4~~ NW
Sec. 35

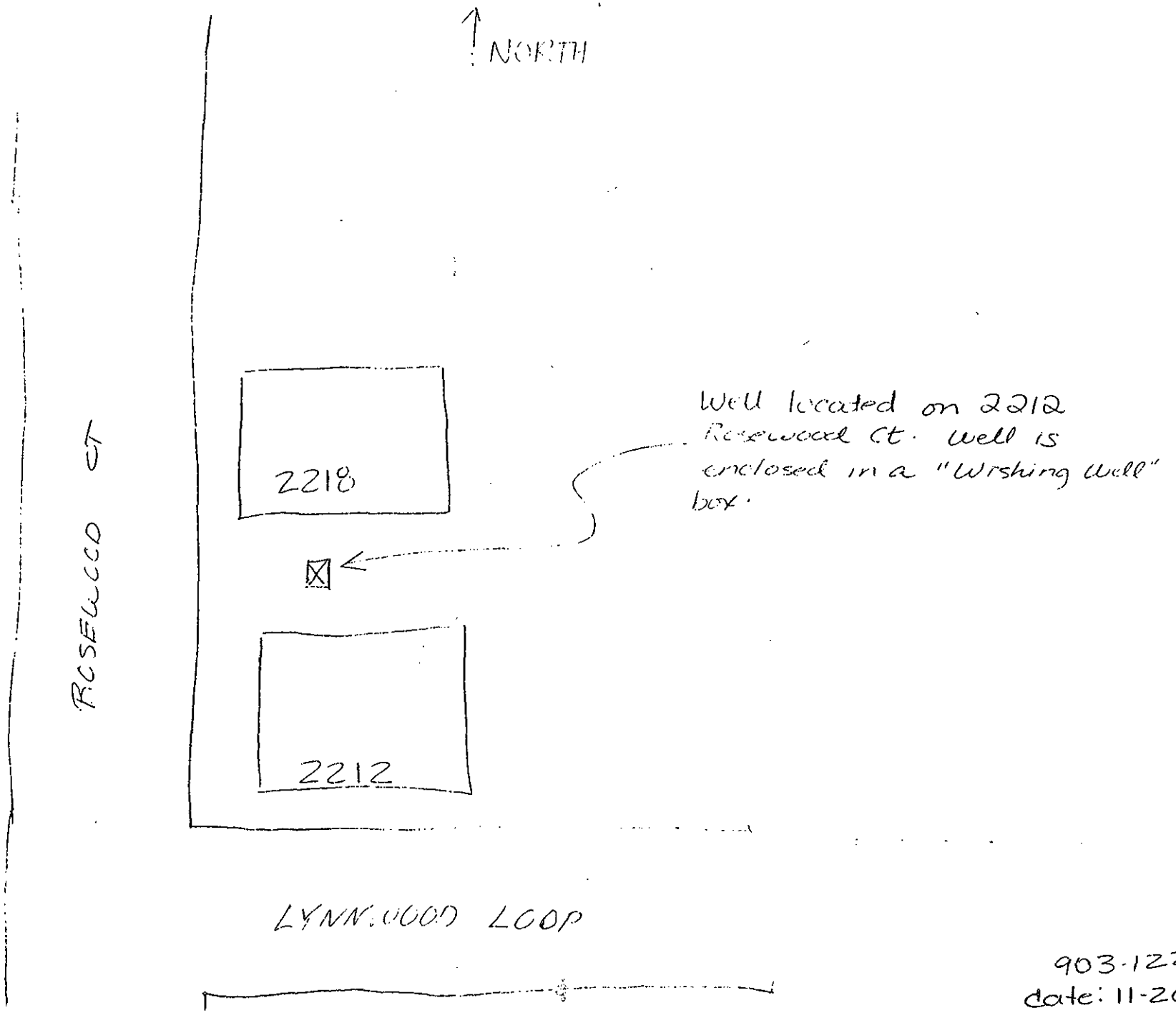
Well Specifications: (who could know)
Installation Date: ? Total Depth (ft): ?
Well Construction Type: 6" casing
Pump System Type: ~~Sub~~ Submersible
Well Access for Sounding: no

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 4 Roll 1K
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:
Well not registered at City of Richland.
Limited information available from owner

B-400

9212642123 0



903-1222
date: 11-26-90

SECTION 1 #110

1100 AREA WELL INVENTORY FORM

Well Number: 110 Date 11-18-90
Other Well ID: Surveyor: KSV/RPB

Name of Well Owner: Community Irrigation System.
Joana Powers - member

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2132 Cascade Ave.
Richland, WA.

Street Address of Residential Well Site if Different from Owner:
~~2131 Cascade Ave~~ 2125 Shasta
Richland, WA.

Current Well Use: IRRIGATION!

Verification by Owner/Occupant of Well Use: Joanna Powers
(Signature) (2132 Cascade Ave. Renter)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: Unknown South: Unknown
System: N/A

Township: 10N Range: 28E Section (nearest 1/4 1/4): SW 1/4 of NW 1/4 section 35

Well Specifications:
Installation Date: Aug. 1981 Total Depth (ft): BM 66'
Well Construction Type: cable tool

Pump System Type: 3 HP. Submersible.

Well Access for Sounding: Appears to be bolt-on cover. Possible bolt-hole access through cover

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 14, 15 (RPB-1)
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:

CITY OF RICHLAND
WELL PERMIT # W85-115
USGS

Well is on 2125 Shasta Property
Holding tank at 2132 Cascade Ave. (See diagram)
Current residents at 2132 Cascade Ave rent from Strachan

9212642123 2

WHC-MR- 0295

W85-115
Permit Number

Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
~~Dennis Stroman~~ Community Irrigation Sys	Basin Drilling
Name	Name
2132 Cascade Ave	-- no longer in business --
Address	Address
Richland, Wa	
City State Phone	City State Phone

WELL INFORMATION

2131 Cascade Ave			Riverbend Addition
Well Location Address	Lot	Block	Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☐ Plot plan submitted — Date
- ☐ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: Community Irrigation System

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

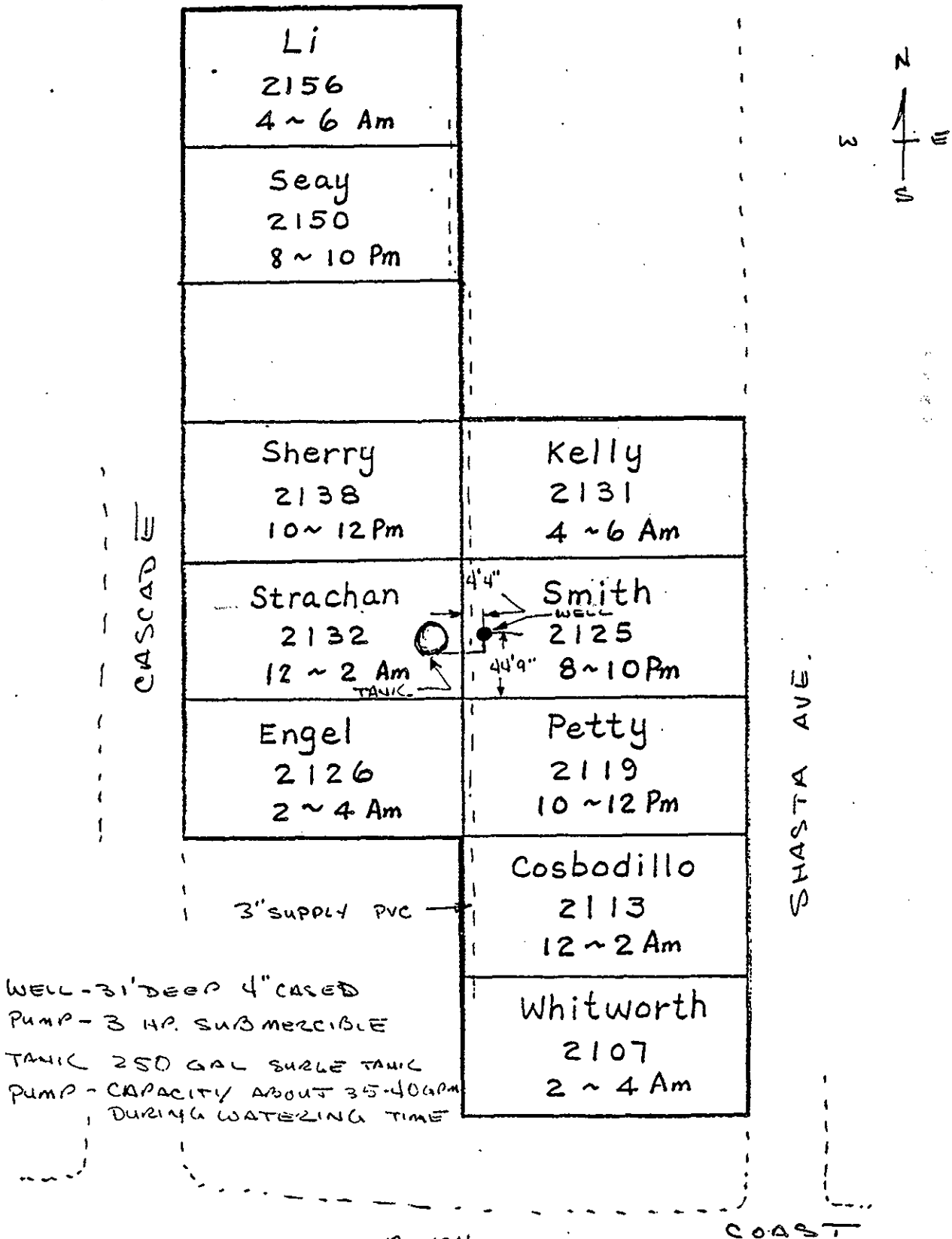
B-403

9212612333

W85-115

#110

Schedule for 1985



WELL - 31' DEEP 4" CASED
PUMP - 3 HP. SUBMERCIBLE
TANK 250 GAL SURLE TANK
PUMP - CAPACITY ABOUT 35-40 GPM
DURING WATERING TIME

9 2 1 2 6 4 2 1 2 3 4

WHC-MR- 0295

Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. CES 115 / #110

Permit No.

(1) OWNER: Name Mrs. Marietta Strachan Address 2132 Cascade Richland

(2) LOCATION OF WELL: County Benton — NW ¼ NW ¼ Sec. 35 T. 10 N., R. 28 E. W.M.

Bearing and distance from section or subdivision corner NW corner of Sec. 35

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☑ Deepened ☐ Reconditioned ☐
Method: Dug ☐ Bored ☐ Cable ☑ Driven ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 66 ft. Depth of completed well 66 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 61 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☑ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☑
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☑ No ☐
Manufacturer's Name Johnson
Type 304 Stainless Model No. 304
Diam. 6 Slot size 20 from 61 ft. to 66 ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 21 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 31 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☑ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 20 gal./min. with 1 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date 8/18/81
Temperature of water 54 Was a chemical analysis made? Yes ☐ No ☑

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Blow Sand, Top Soil	0	5
Sand 80% Gravel 20%	5	21
Cemented Sand & Gravel	21	35
Sand Silt and Gravel	35	40
70% Sand 30% Gravel	40	57
50% Sand 50% Gravels	57	66
Sand Fine to coarse		
gravels to 1½"		

RECEIVED AUG 28 1981

Work started Aug 19 81 Completed Aug 19 81

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hatch Drilling Co. Inc. (Person, firm, or corporation) (Type or print)

Address 6417 W. Court St. Pasco

[Signed] (Well Driller)

License No. 0736 Date 8/20 1981

(USE ADDITIONAL SHEETS IF NECESSARY) Dave Garcia

ECY 050-1-20

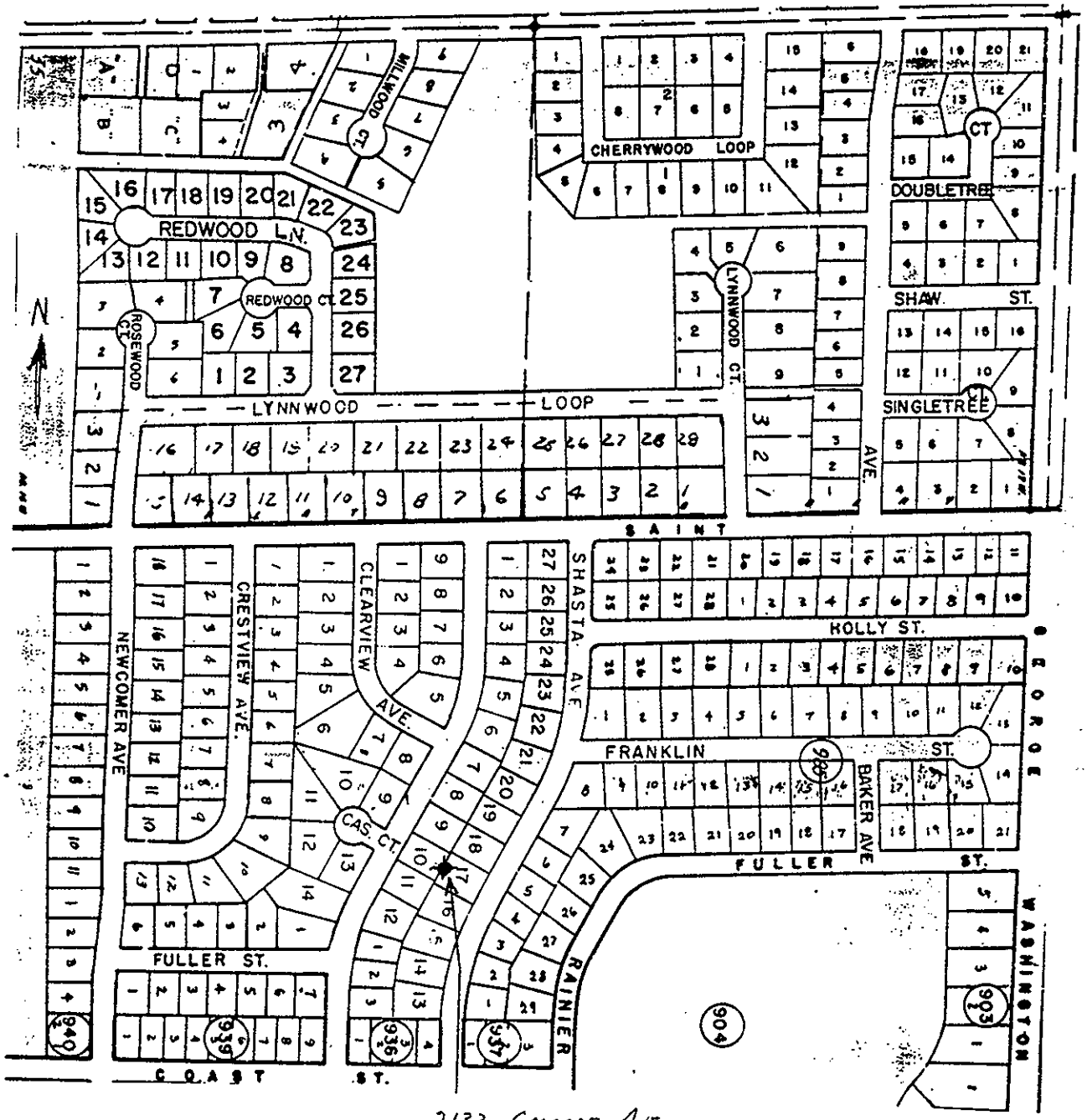
OK ED 9-16-81

B-405

9212623 5

WHC-MR- 0295

110



2132 CASCADE AVE.

9212642 1236

B-406

#116

Source: USGS

11/28/1990 -M 10N/28E-35D05

SITE ID:	461850119165501
KEY.NO.:	2243
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA	C
VERIFICATION	V
LATITUDE:	461850
LONGITUDE:	1191655
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-35D05
ALTITUDE:	400.00
ALT.ACC:	20
USE OF SITE:	W
NO.1 WATER USE:	H
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	66.00
WELL.DEPTH:	66.00
DEPTH SOURCE:	D
DATE DRILLED:	08/ /1981
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	DENNIS
LAST NAME:	STRACHAN
DATE OWNED:	08/ /1981
STREET ADDR.:	709 REDWOOD LANE
CITY ADDR.:	RICHLAND WA. 99352
WATER LEVEL:	34.00
WATER LEVEL DATE:	8/ 1/1981
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	B
DISCHARGE:	20.00
DRAWDOWN:	1.00
TEST TIME:	1.0
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	61.00
OPENING BOTTOM:	66.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	110DUNE
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SAND
LITHOLOGIC MODIFIER:	+ TOP SOIL
% WATER.CONTRIBUTED:	0
UNIT TOP:	5.00
GEOHYDROLOGIC UNIT:	112PSCO

9212637

#110

RELATIVE CONTRIBUTION: P
LITHOLOGY: SDGL
LITHOLOGIC MODIFIER: + GRCM 21-35FT
% WATER.CONTRIBUTED: 100

REMARK: DRLR REPTS WTR TEMP=59 DEG F 08/18/1981
STRUCTURE:
DISTANCE FROM STRUCTURE: 0.00

9212642123 8

WHC-MR- 0295

111

1100 AREA WELL INVENTORY FORM

Well Number: 111 Date 11-26-90
Other Well ID: Surveyor: RB

Name of Well Owner: McFadden

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 73 Snyder
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation

Verification by Owner/Occupant of Well Use: N. R. McFadden
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (NE, NE)

Well Specifications:
Installation Date: 1940's Total Depth (ft): ~55 ft
Well Construction Type: 12" casing (steel)

Pump System Type: ~~Open hole, Covered with plastic bags~~
Drill hole submersible

Well Access for Sounding: Covered with plastic bags, but essentially open-hole

Other Information:
Photograph Taken: ✓ No ___ Yes Photo Number: n/a
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Owner did not want to uncover. Well head is locked in garage

Other:

Well is registered.
No log
Owner says ~25' to water

9212612239

B-409

WHC-MR- 0295

#111

City Of Richland

WATER WELL PERMIT

W85-017
Permit Number

3/6/85
Application Date

Approval Date

APPLICANT	DRILLER
Name: N.R. McFADDEN	Name: N/A - EXISTING
Address: 73 SNYDER	Address:
City: RICHLAND, State: WA, Phone: 375-0165	City: State: Phone:

9 2 1 2 6 4 2 1 2 4 0

WELL INFORMATION

73 Snyder
Well Location Address | Lot | Block | Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☐ Plot plan submitted — Date
- ☐ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: N.R. McFadden

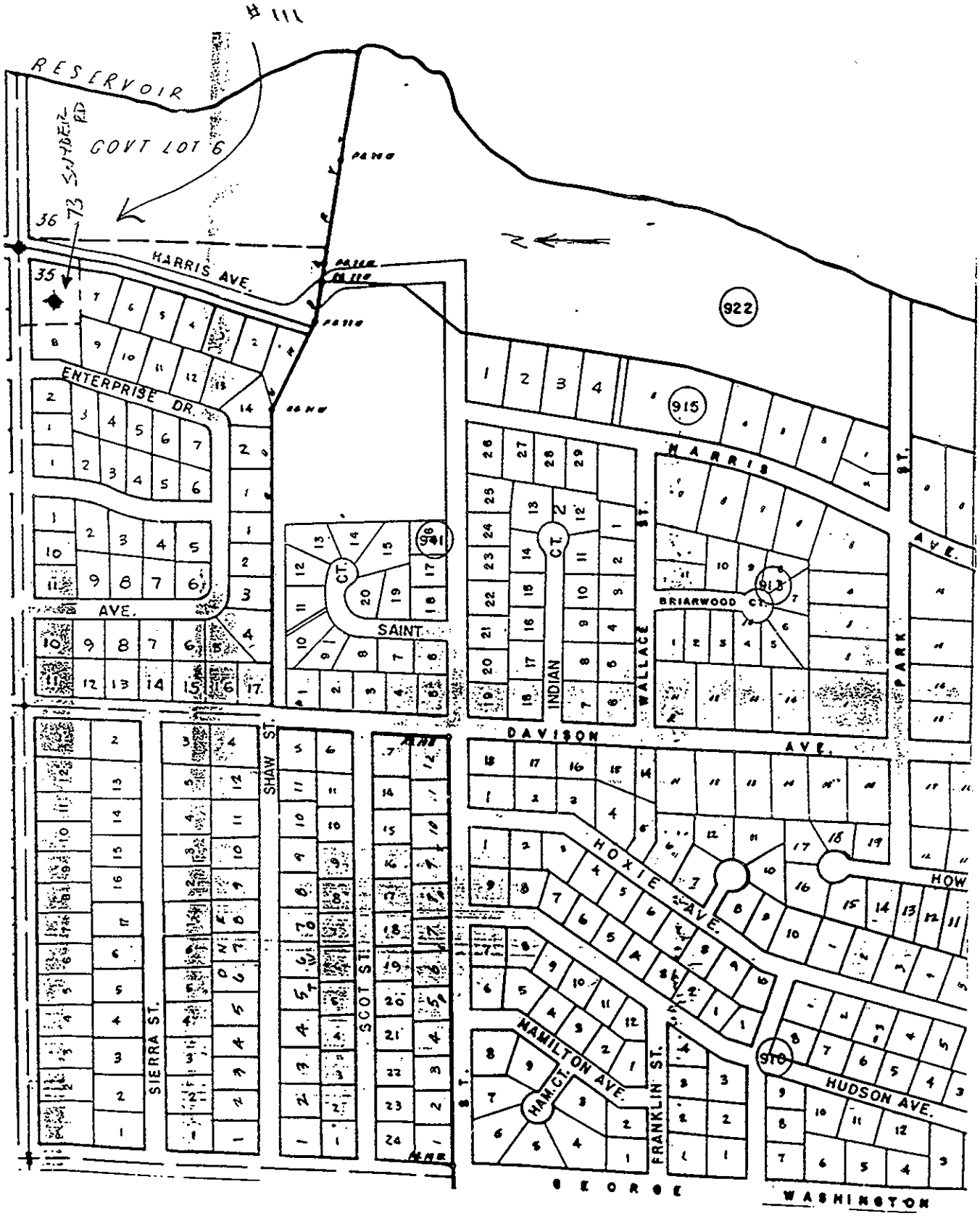
APPROVAL: _____
(After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

B-410

#111


#111
RESERVOIR
GOVT LOT 6
SNYDER RD
36
73
35
HARRIS AVE.
ENTERPRISE DR.
AVE.
SAINT
CT.
922
915
916
913
HARRIS
BRIARWOOD CT.
INDIAN
WALLACE ST.
PARK AVE.
DAVISON AVE.
HOXIE AVE.
HOW
SHAW ST.
SCOT ST.
SIERRA ST.
HAMILTON AVE.
HAM. CT.
FRANKLIN ST.
HUDSON AVE.
910
GEORGE
WASHINGTON

B-411

WHC-MR- 0295

Sec. 2. #112

1100 AREA WELL INVENTORY FORM

Well Number: 112 Date 11-15-90 12-1-90

Other Well ID: N/A Surveyor: Kim Vik

Name of Well Owner: Gregory Ofberg

Well Location: (Location Map Sketched on Attached Sheet)

Owner's Address: ~~[illegible]~~ 2205 HARRIS

Richland, WA ~~[illegible]~~

Street Address of Residential Well Site if Different from Owner:

2205 Harris

Current Well Use: IRRIGATION - ~~Not in use (no pump).~~ Heat pump currently in use.

Verification by Owner/Occupant of Well Use: Martin R Ofberg

X (Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: unknown South: unknown

System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (SE of SE)

Well Specifications:

Installation Date: JAN. '86 Total Depth (ft): 120'

Well Construction Type: 6" Casing

Pump System Type: submersible.

Well Access for Sounding: O.K. cap bolted

Other Information:

Photograph Taken: ____ No ✓ Yes Photo Number: 19

Well Log Available: ✓ No ____ Yes

Well Log Obtained: ✓ No ____ Yes

Other:

CITY OF RICHLAND

WATER WELL PERMIT # W85-119

9 2 1 2 6 4 2 1 2 4 2

B-412

WHC-MR- 0295

#112

City Of Richland

WATER WELL PERMIT

W95-119
Permit Number

Application Date

Approval Date

APPLICANT	DRILLER
Name: Gregory H. Cberg	Name: Hall Drilling Inc.
Address: 1003 Perkins	Address: RH-43 Box 8334
City: Richland State: Wa. Phone: 946-0933	City: Richland State: Wa. Phone: 627-3240

WELL INFORMATION

2205 Harris — Well Location Address; 1 — Lot; ? — Block; ? — Subdivision

Well Use: WILL BE
- ☐ Domestic
- ☒ Irrigation
- ☒ Heat Pump (supply)
- ☐ Heat Pump (discharge)

~~Not in use - W. Pump~~

Operational Requirements:
- ☐ Plot plan submitted — Date
- ☐ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: [illegible]

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

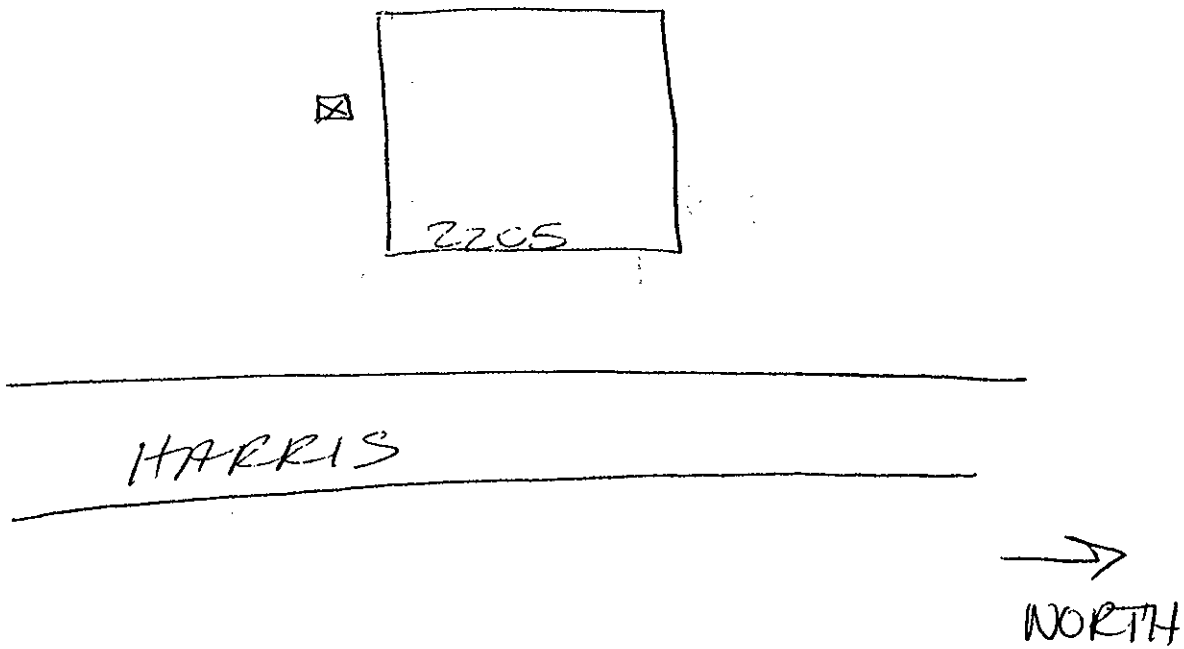
WSA-0055

B-413

9212262 12 43

#112

2205 HARRIS

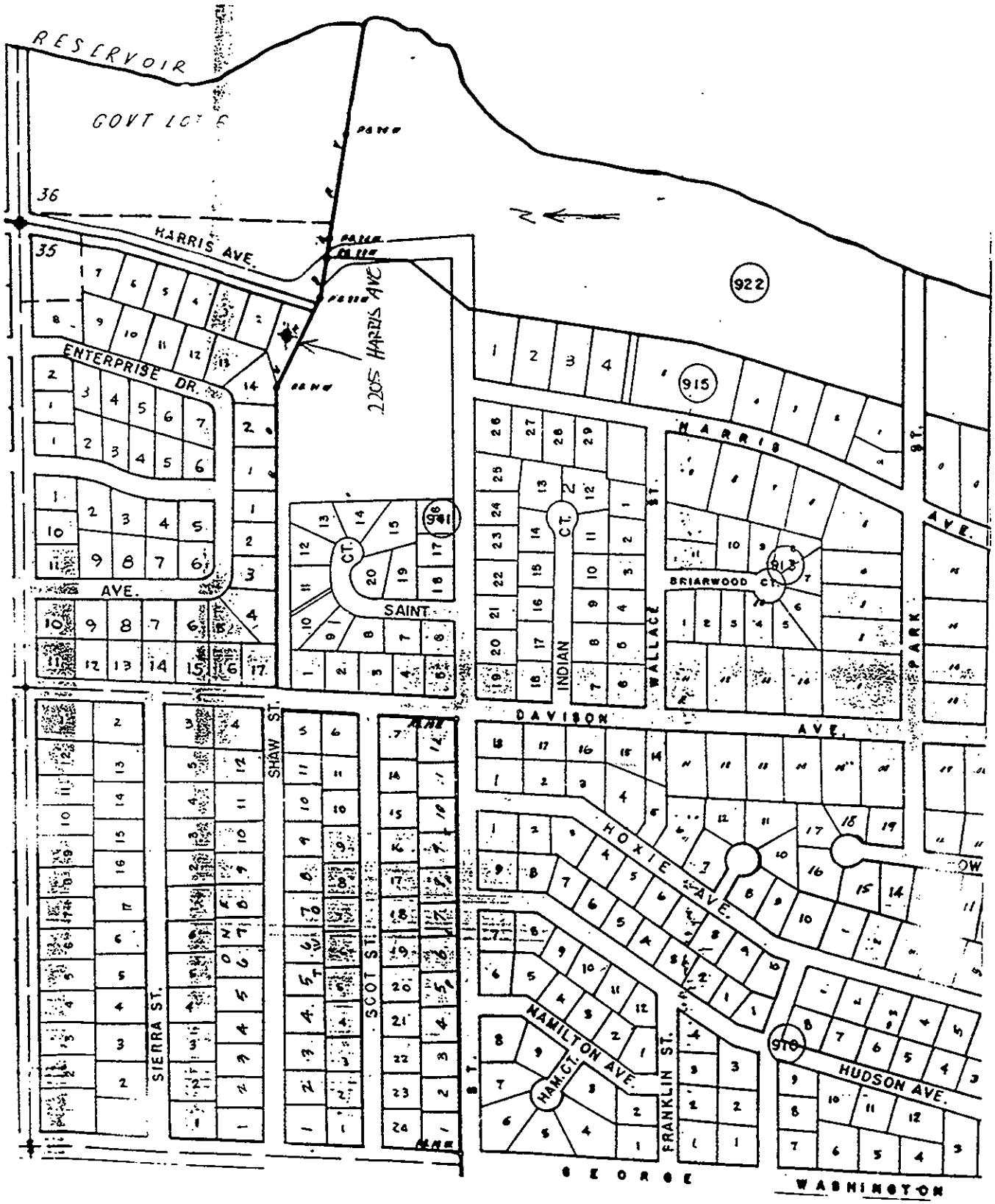


WHC-MR- 0295

B-414

9212642124 4

#112


RESERVOIR
GOVT LOT 6
36
35
HARRIS AVE.
ENTERPRISE DR.
220' HARRIS AVE
922
915
HARRIS
ST.
AVE.
BRIARWOOD CT.
SAINT
CT.
INDIAN
WALLACE
PARK
DAVISON
AVE.
HOXIE AVE.
SHAW ST.
SCOT ST.
SIERRA ST.
HAMILTON AVE.
HAM. CT.
FRANKLIN ST.
HUDSON AVE.
GEORGE
WASHINGTON

B-415

SECTION 2. #113

1100 AREA WELL INVENTORY FORM

Well Number: 113
Other Well ID:

Date 11-18-90
Surveyor: KSV

Name of Well Owner: JOHN & MARY ELLEN NELSON

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2149 HARRIS AVE
RICHLAND, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION
~~2 HEAT PUMP (SUPPLY)~~
~~2 HEAT PUMP (DISCHARGE)~~

Verification by Owner/Occupant of Well Use: [signature]
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (NE of NE)

Well Specifications:
Installation Date: 1945 Total Depth (ft): 230'
Well Construction Type: 18" hole
Pump System Type: submersible
Well Access for Sounding: NO

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 10
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:
CITY OF RICHLAND PERMIT WSS-098.
18" hole put in by the city.
No access to well.
Well head underground.

B-416

9212642246

30 MAY

WRC-MR- 0295

City Of Richland

WATER WELL PERMIT

#113

Permit Number 4 85.098

Application Date 1-85

Approval Date

APPLICANT	DRILLER
JOHN M. & MARY ELLEN NELSON	n.a.
Name	Name
2149 HARRIS AVE	
Address	Address
RICHLAND, WASH. 375-0300	
City State Phone	City State Phone
(WK 376-5[illegible])	

WELL INFORMATION

~~2137 Harris~~ 2149 HARRIS	27	2	INDIAN VALLEY
Well Location Address	Lot	Block	Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☒ Heat Pump (supply) (POSSIBLE FUTURE)
- ☒ Heat Pump (discharge) (POSSIBLE FUTURE)

Operational Requirements:
- ☐ Plot plan submitted _____ Date
- ☐ Drilling log submitted _____ Date
- ☐ Cross-connection inspection made _____ Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: John M. Nelson

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

B-417

9212612247

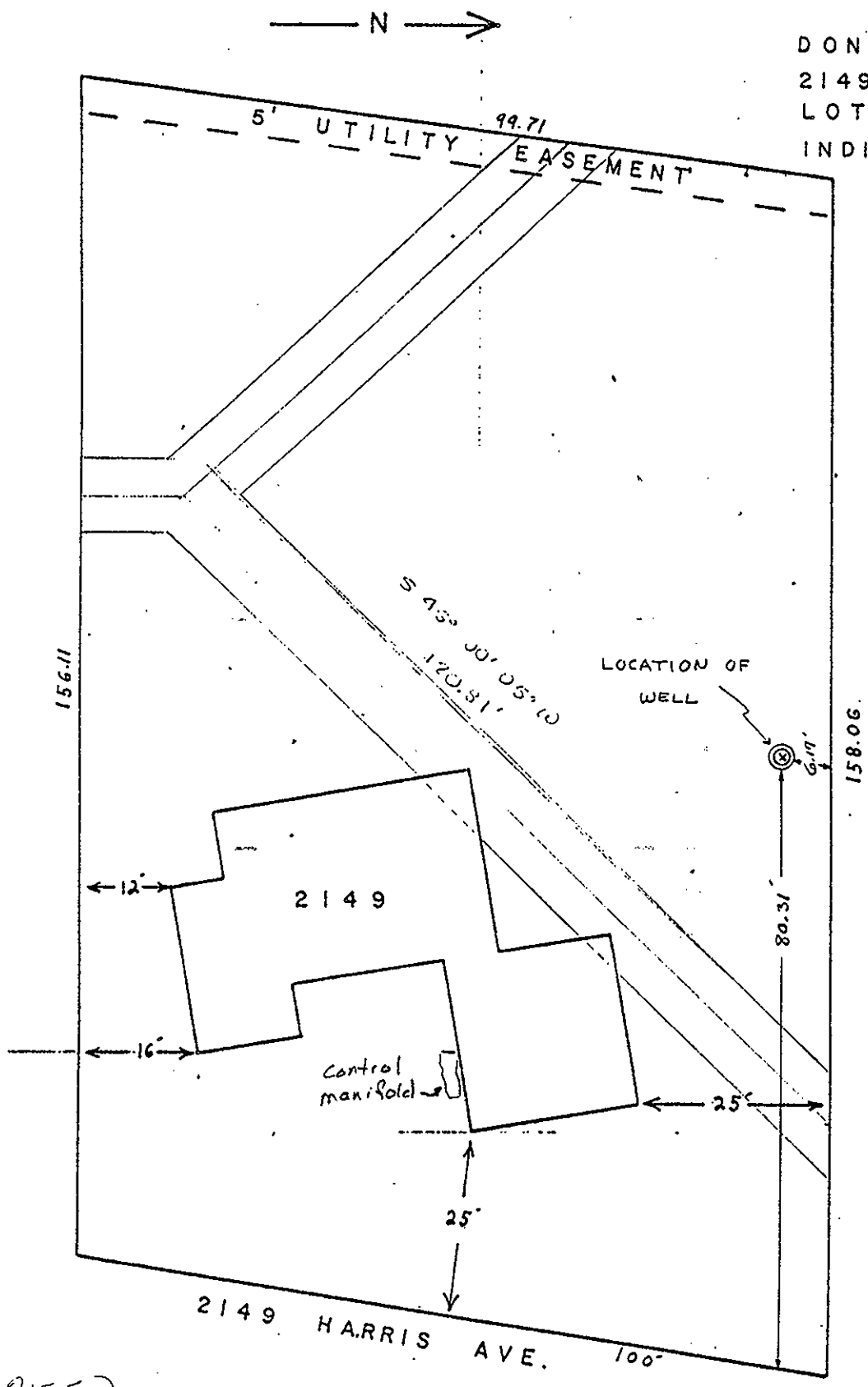
WHC-MR- 0295

WRS 098

#113

DONOGH ENT.
2149 HARRIS AVE.
LOT 27 BLK. 2
INDIAN VALLEY.

SCALE 1" = 20'



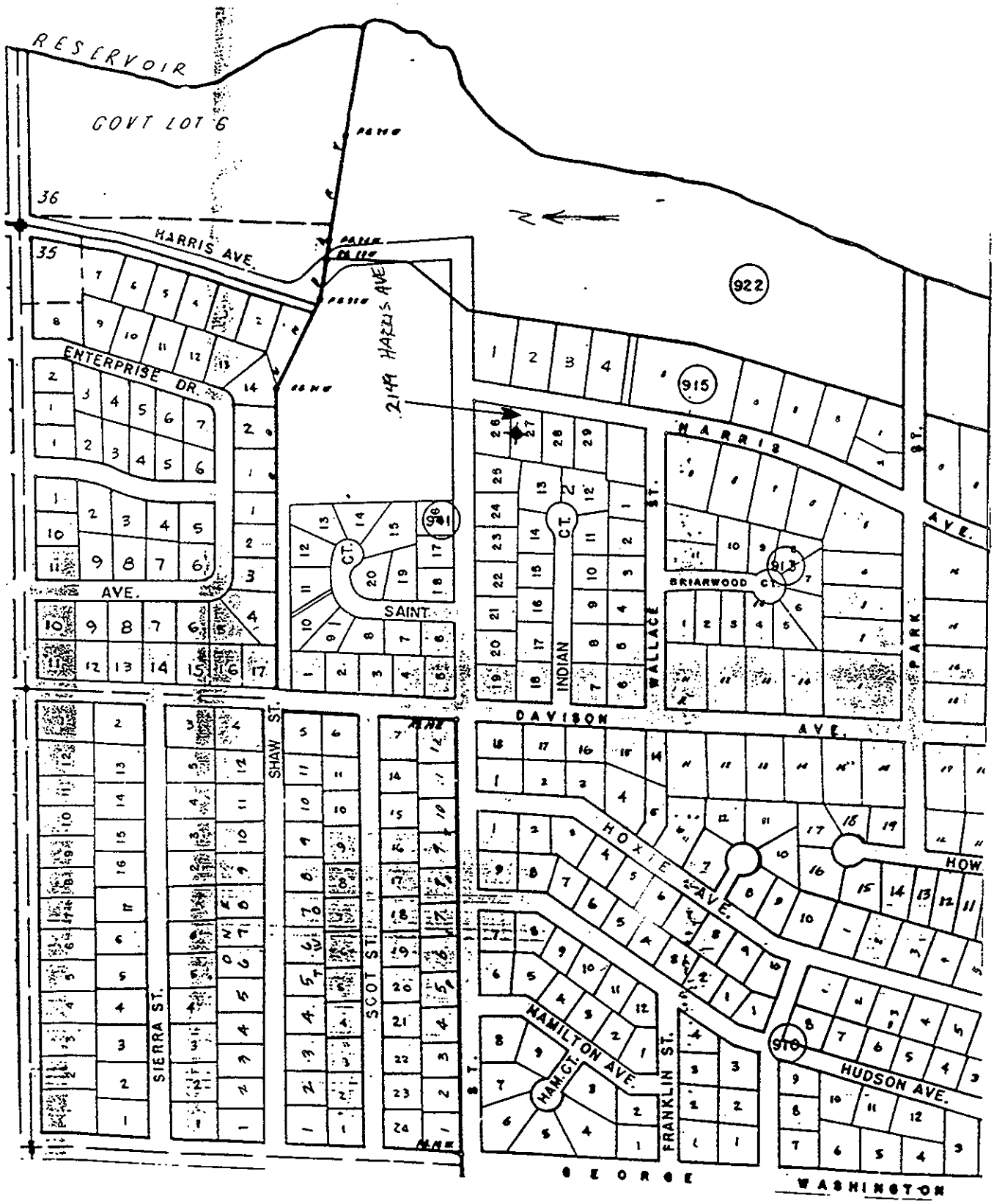
2155
2143 } also use water
2137 } for irrigation

the owner can show you where the neighbors connection are

JHB 7/10/77

9212642128

113


RESERVOIR
GOVT LOT 6
36
35
HARRIS AVE.
ENTERPRISE DR.
2149 HARRIS AVE
922
915
913
916
918
SAINT
CT.
INDIAN
WALLACE ST.
HARRIS
BRIARWOOD CT.
PARK ST.
AVE.
DAVISON
HOXIE AVE.
HOW
HUDSON AVE.
HAMILTON AVE.
HAM. CT.
FRANKLIN ST.
SHAW ST.
SCOT ST.
SIERRA ST.
GEORGE
WASHINGTON

B-419

114

1100 AREA WELL INVENTORY FORM

Well Number: 114
Other Well ID:

Date 11-28-90
Surveyor: KSV

Name of Well Owner: JACK DAVIS

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2047 HARRIS
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION

Verification by Owner/Occupant of Well Use: Jack Davis
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SE of NE)

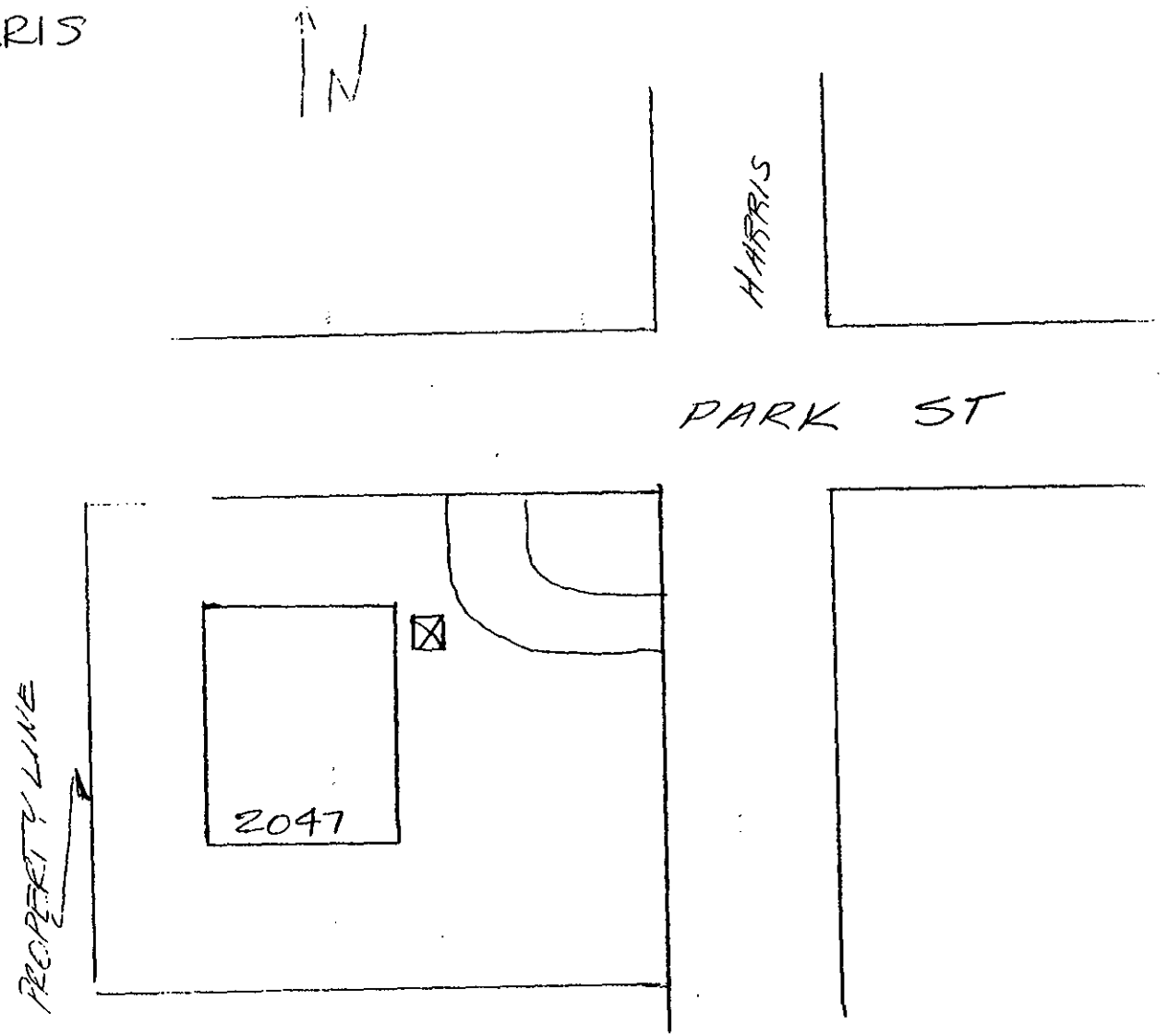
Well Specifications:
Installation Date: 1986 Total Depth (ft): 49'
Well Construction Type: 6" casing.
Pump System Type: submersible.
Well Access for Sounding: yes

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: ~~#~~13
Well Log Available: ✓ No ___ Yes Roll 1K
Well Log Obtained: ✓ No ___ Yes

Other:

9212642125 0

2047 HARRIS

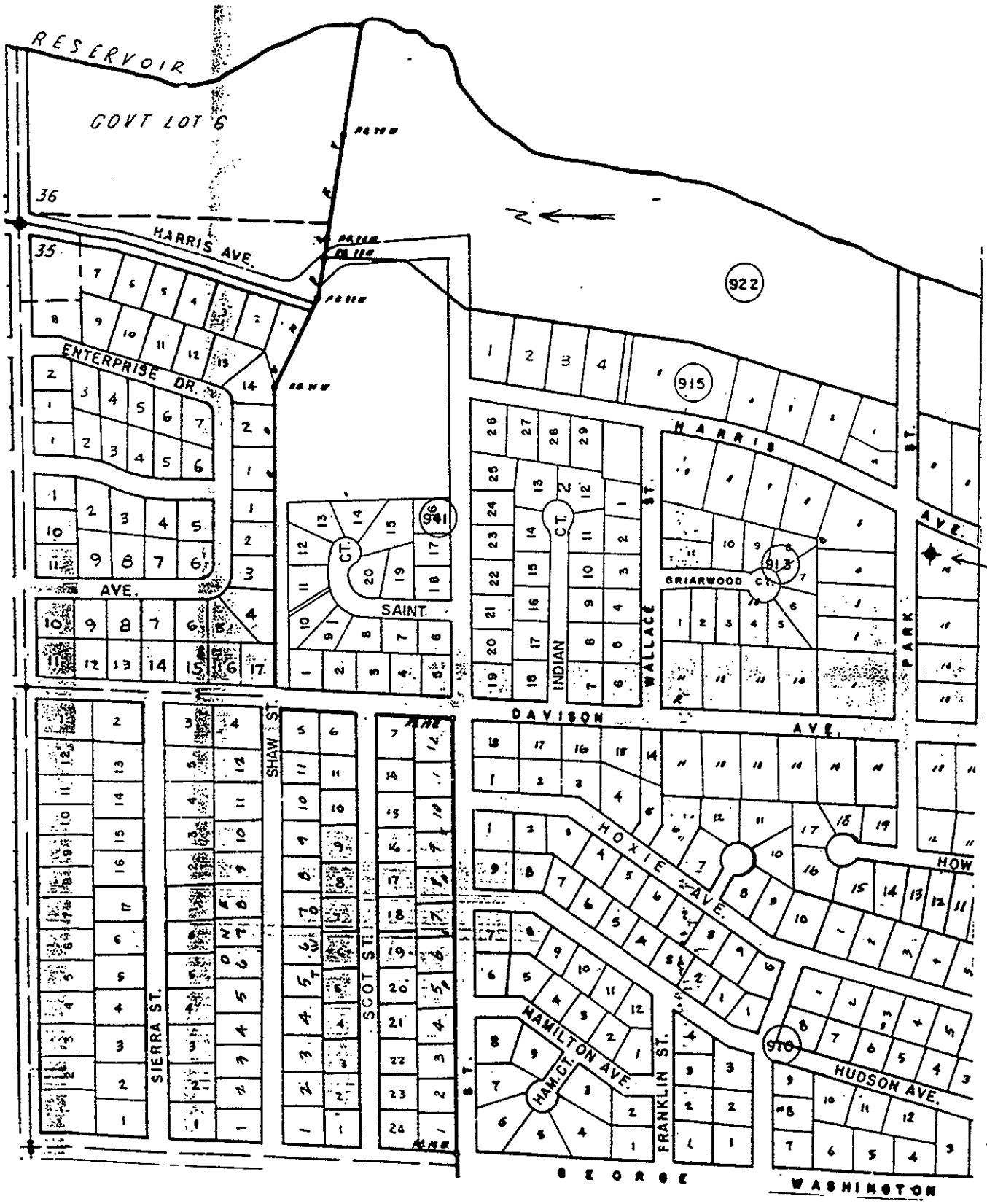


903-1222
KSV
11-28-90

#114

B-421

#114



9212642125 2

B422

115

1100 AREA WELL INVENTORY FORM

Well Number: 115
Other Well ID:

Date 11-28-90
Surveyor: KSV

Name of Well Owner: G.R HEWETT

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2046 HARRIS
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: NOT IN USE irrigation 8 years.
Pump gave out → did not replace

Verification by Owner/Occupant of Well Use: Gaven R Hewett
(Signature)

Water in Contact with Humans: ___ Yes ✓ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SE of NE)

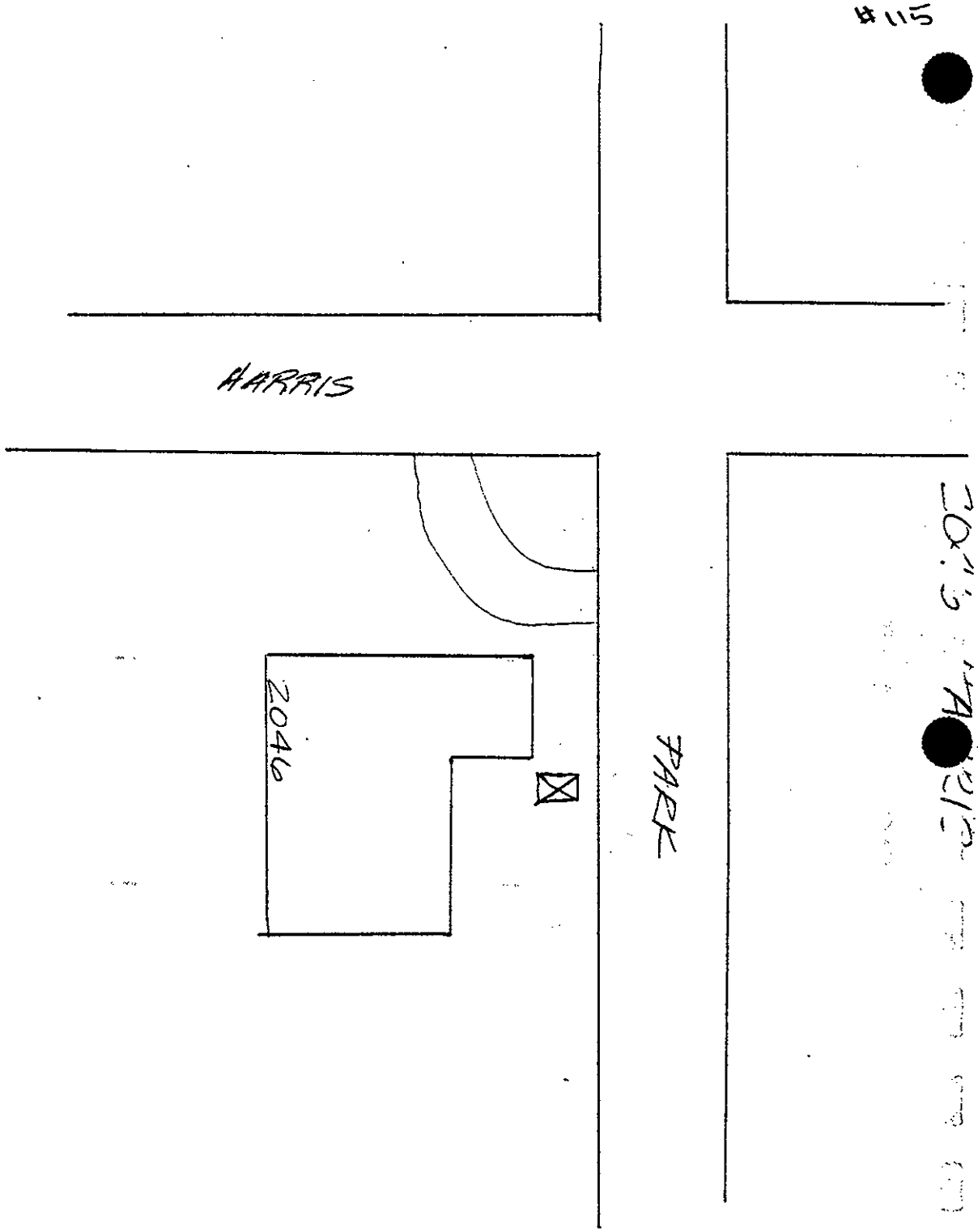
Well Specifications:
Installation Date: 1958 (32 yrs old) Total Depth (ft): 225'
Well Construction Type: 6" casing
Pump System Type: out → pressure tank: (not in order)
Well Access for Sounding: no

Other Information:
Photograph Taken: ✓ No ___ Yes Photo Number: NO PICTURE
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:
USGS
all covered up for the winter

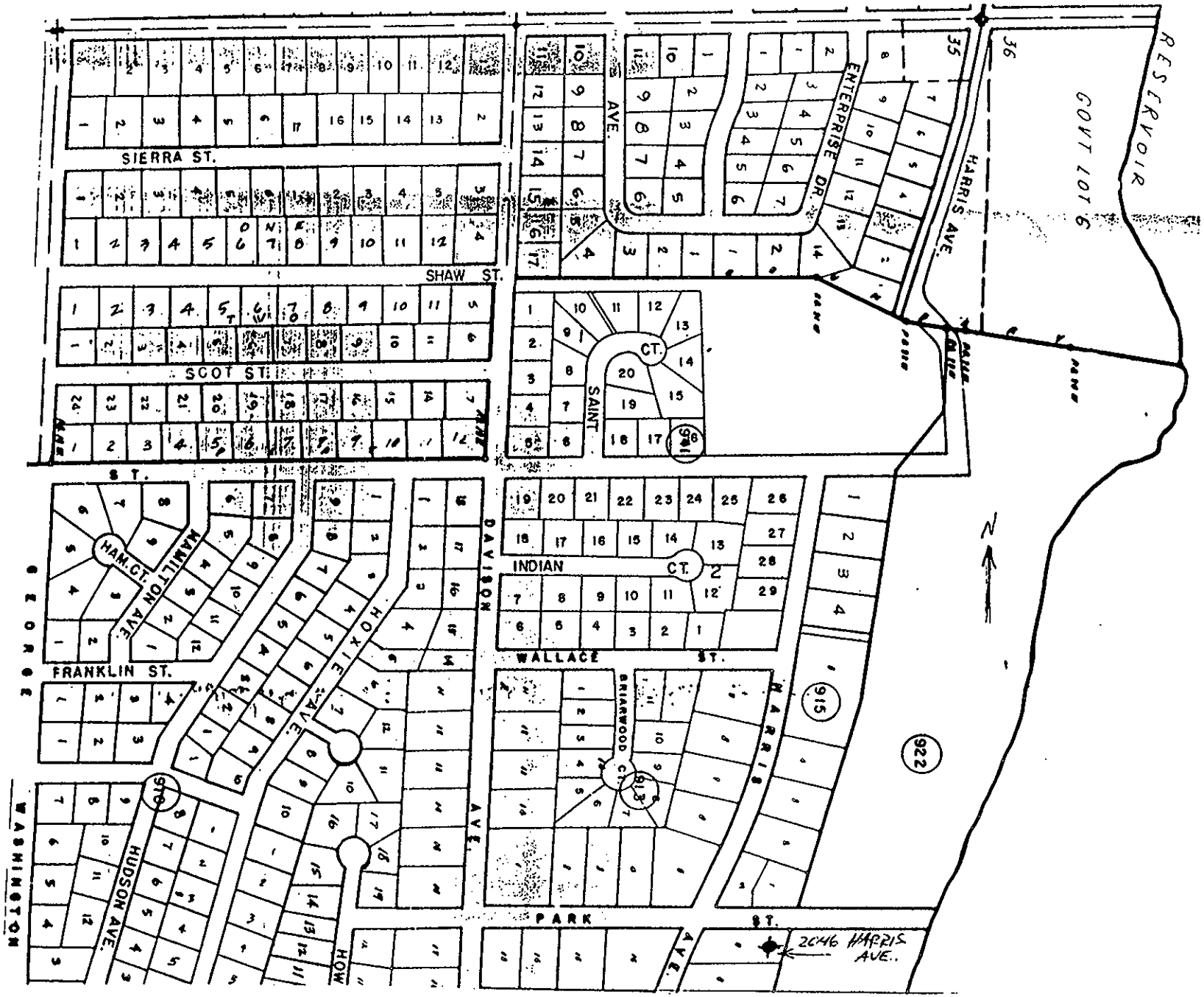
well has not been in use for 8 years (ever since the pump went out. Was used for irrigation. May or may not fix pump to use well for irrigation again.
Currently well is inaccessible - covered up for winter.
Pump is currently not working - is a pressure tank, not submersible.

#115



903 1232
11-28-90
ASH

9 2 1 2 6 4 2 1 2 5 4



B-425

WIC-WIR- 0295

#115

Source: USGS^a WRC-WR- 0295 #115

11/26/1990 -M 10N/28E-36E01

SITE ID:	461833119153801
KEY.NO.:	2274
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461833
LONGITUDE:	1191538
LAT/LONG ACC:	
LOCAL NO.:	10N/28E-36E01
ALTITUDE:	340.00
ALT.ACC:	0
USE OF SITE:	
NO.1 WATER USE:	
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	122.50
WELL.DEPTH:	121.00
DEPTH SOURCE:	D
DATE DRILLED:	/ /1957
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	G
LAST NAME:	HEWITT
DATE OWNED:	/ /1957
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	26.00
WATER LEVEL DATE:	1/ 1/1957
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	R
DISCHARGE:	25.00
DRAWDOWN:	48.00
TEST TIME:	-99.0
FINISH:	X
OPENING TYPE:	X
OPENING TOP:	118.50
OPENING BOTTOM:	122.50
OPENING DIAM.:	6.00
UNIT TOP:	-99.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SAND
% WATER.CONTRIBUTED:	0
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO

9 2 1 2 6 4 2 1 2 5 6

#115

RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SAND,GRVL
% WATER.CONTRIBUTED:	0
UNIT TOP:	66.00
GEOHYDROLOGIC UNIT:	121LRRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	CLAY
LITHOLOGIC MODIFIER:	BLUE + SDCL,WOOD
% WATER.CONTRIBUTED:	0
UNIT TOP:	118.00
GEOHYDROLOGIC UNIT:	121BSRG
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	GRVL
LITHOLOGIC MODIFIER:	COARSE
% WATER.CONTRIBUTED:	0
UNIT TOP:	118.50
GEOHYDROLOGIC UNIT:	122SDLM
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	BSLT
LITHOLOGIC MODIFIER:	OR BLDR?
% WATER.CONTRIBUTED:	100
REMARK:	GRAVEL PACKED 121-122.5FT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 0 2 1 2 5 7

WHC-MR- 0295

Sec. 2 # 116

1100 AREA WELL INVENTORY FORM

Well Number: 116'
Other Well ID:

Date 11-18-90
Surveyor: KSV

Name of Well Owner: Bjorn Lih, M.D.

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2122 Harris Ave.
Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation drinking water - not on city water.
? domestic
heat pump (supply)

Verification by Owner/Occupant of Well Use: (Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 25 (SE of NE)

Well Specifications:
Installation Date: 1959 Total Depth (ft): 165'
Well Construction Type: 6" casing
Pump System Type: submersible
Well Access for Sounding: NO

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 11 & 12
Well Log Available: X No ___ Yes
Well Log Obtained: X No ___ Yes Roll 1 K

Other:
Dr. Lih used groundwater for everything, inc. drinking water. He is not on City water.
City of Richland permit WSS-019.

9212642125 8

B-428

#116

City of Richland

WATER WELL PERMIT

4185-019
Permit Number

3-11-85
Application Date

Approval Date

APPLICANT	DRILLER
Bjorn Lih, M.D.	Haden Drilling Co.
Name	Name
2122 Harris Av.	Rt. 2
Address	Address
Richland Washington 99352	Pasco Washington
City State Phone	City State Phone
946-1208	(No longer in business)

WELL INFORMATION

2122 Harris 5 915
Location Address Lot Block Subdivision

Well Use: ☒ Domestic ☐ Heat Pump (supply)

☒ Irrigation ☐ Heat Pump (discharge) meaning?

Operational Requirements: ☒ Plot plan submitted 3.9.85 Date

☒ Drilling log submitted 3.9.85 Date

☐ Cross-connection inspection made Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no interties will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: APPROVAL:
(After requirements met)

Distribution: White - To applicant for approval
Green - To Department of Ecology after approval
Canary - Office file copy
Pink - To building inspector after approval
Gold - To applicant upon application

B-429

WSA-0055

WHC-MR- 0295

State of Washington Department of Ecology

Water Right Claims Registration

Water Right Claim

NOV-9 7305811

CASH ___ OTHER ___ NONE ✓

Name Bjorn Lih (Short Form) ✓40

Address 2122 Harris Ave.

Richland, Washington Zip Code 99352 Phone No. 947-1845

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: That portion of Lot 5, block 915, plat of Richland, according to plat recorded in Vols. 6 & 7 of plats, in Benton County, Washington, lying south of the following described line: beginning at a point on the west line of said lot bearing south 8° 09' 12" west and distant 183.53 ft. from the NW corner thereof, thence in a straight line to a point on the east line of said lot bearing south 8° 09' 13" west and distant 162.53 ft. from the NE corner thereof at terminus of said line.

If located within the limits of a recorded platted property:

Lot 5 Block 915 of Richland (Give name of plat or addition)

In addition, please indicate Sec. 35 T. 10 N., R. 28E E/W.W.M.

County in which lands are located Benton

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered — This has been assigned Water Right Claim Registry No.

JAN 27 0458U5

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Bjorn Lih, M.D.

Date November 6, 1973

If claim filed by designated representative print or type full name and mailing address of agent below.

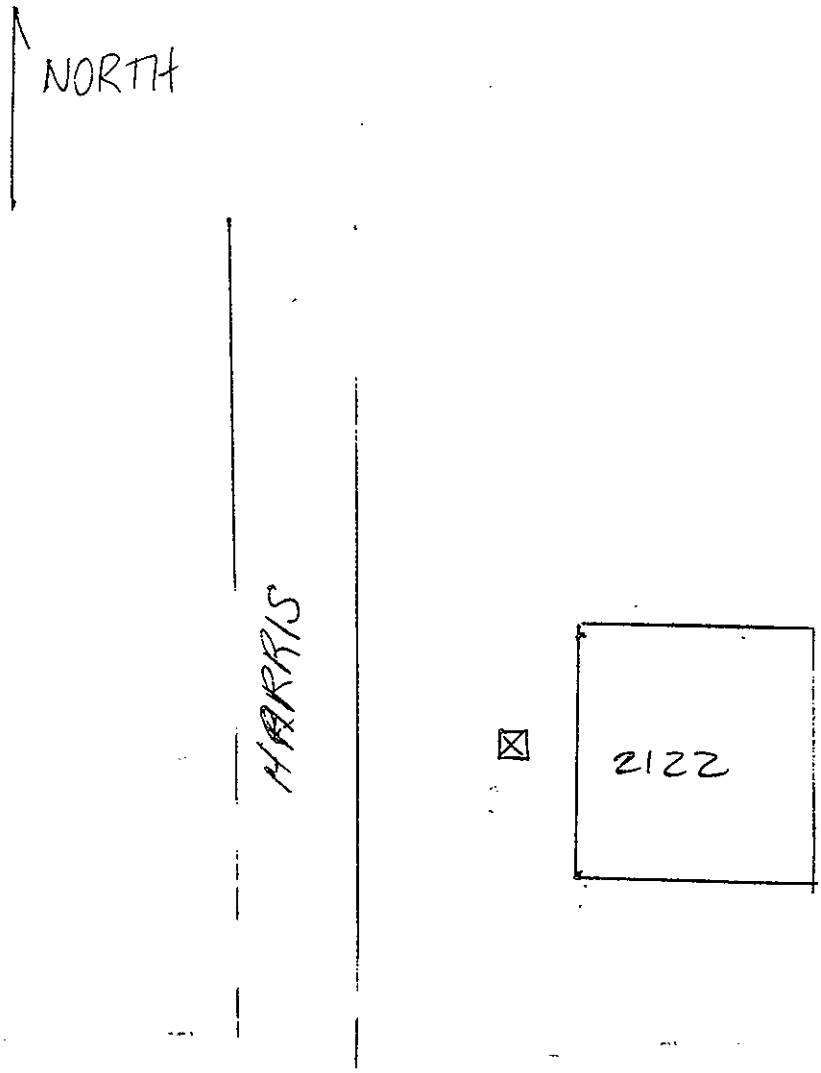
☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

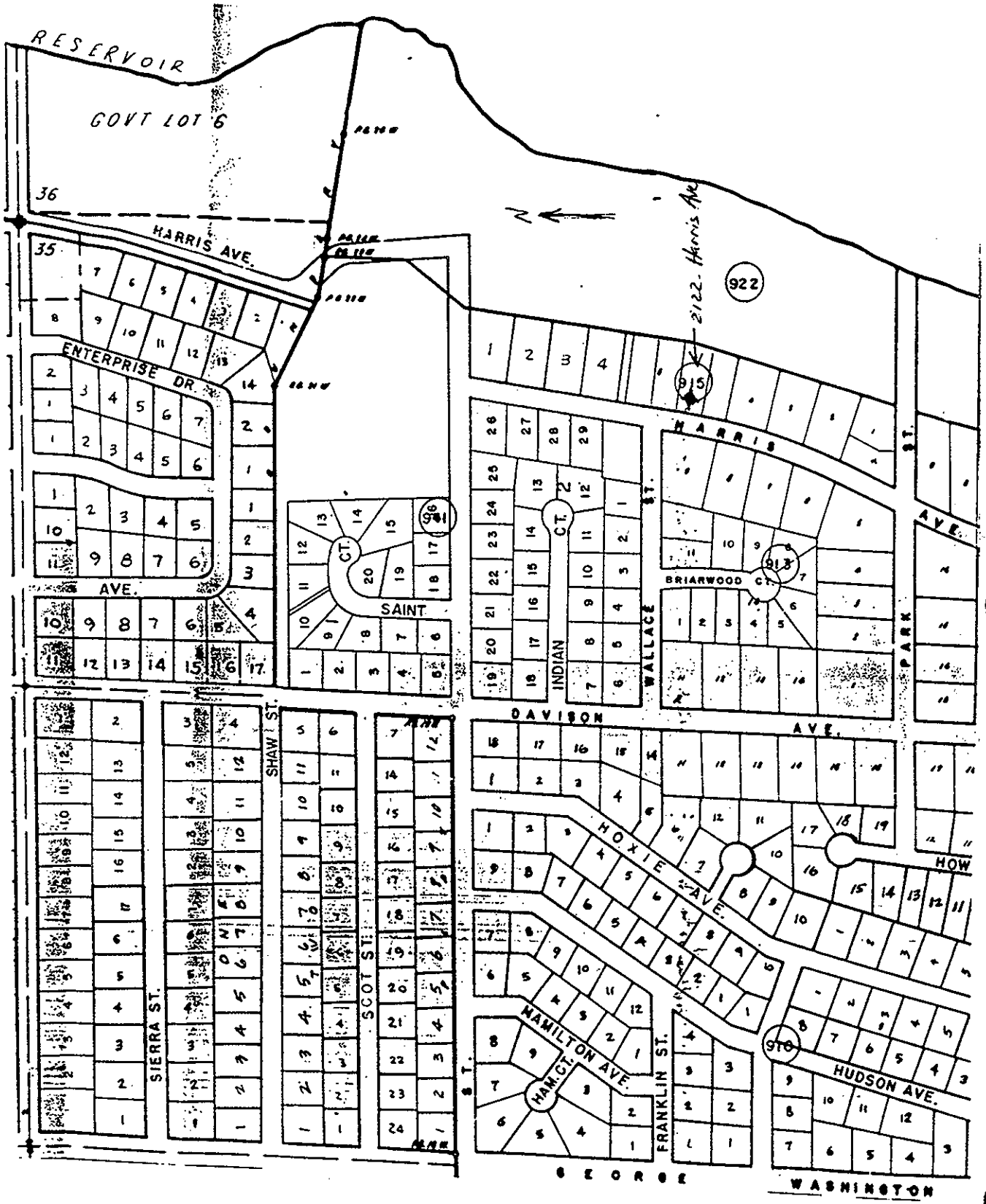
2122 HARRIS

#116



9212261

#116


RESERVOIR
GOVT LOT 6
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HARRIS AVE.
ENTERPRISE DR.
AVE.
SAINT
CT.
INDIAN
CT.
WALLACE ST.
HARRIS
BRIARWOOD CT.
PARK AVE.
DAVISON AVE.
HOXIE AVE.
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SHAW ST.
SCOT ST.
SIERRA ST.
HAM. CT.
HAMILTON AVE.
FRANKLIN ST.
HUDSON AVE.
GEORGE
WASHINGTON
2122 Harris Ave
922
915
916
913
910

WHC-MR- 0295

117

1100 AREA WELL INVENTORY FORM

Well Number: 117 Date 11-29-90
Other Well ID: Surveyor: KSV

Name of Well Owner: M.F. SULLIVAN

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2125 HARRIS
RICHLAND, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Everything - drinking, irrigation.

Verification by Owner/Occupant of Well Use: ✓ M.F. Sullivan
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SE of NE)

Well Specifications:
Installation Date: 1957 Total Depth (ft): 135
Well Construction Type: 6" casing.
Pump System Type: 3HP Jet pump
Well Access for Sounding: no.

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 15 Roll 1K.
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:
Use well water for everything.
Not on city water.

B-433

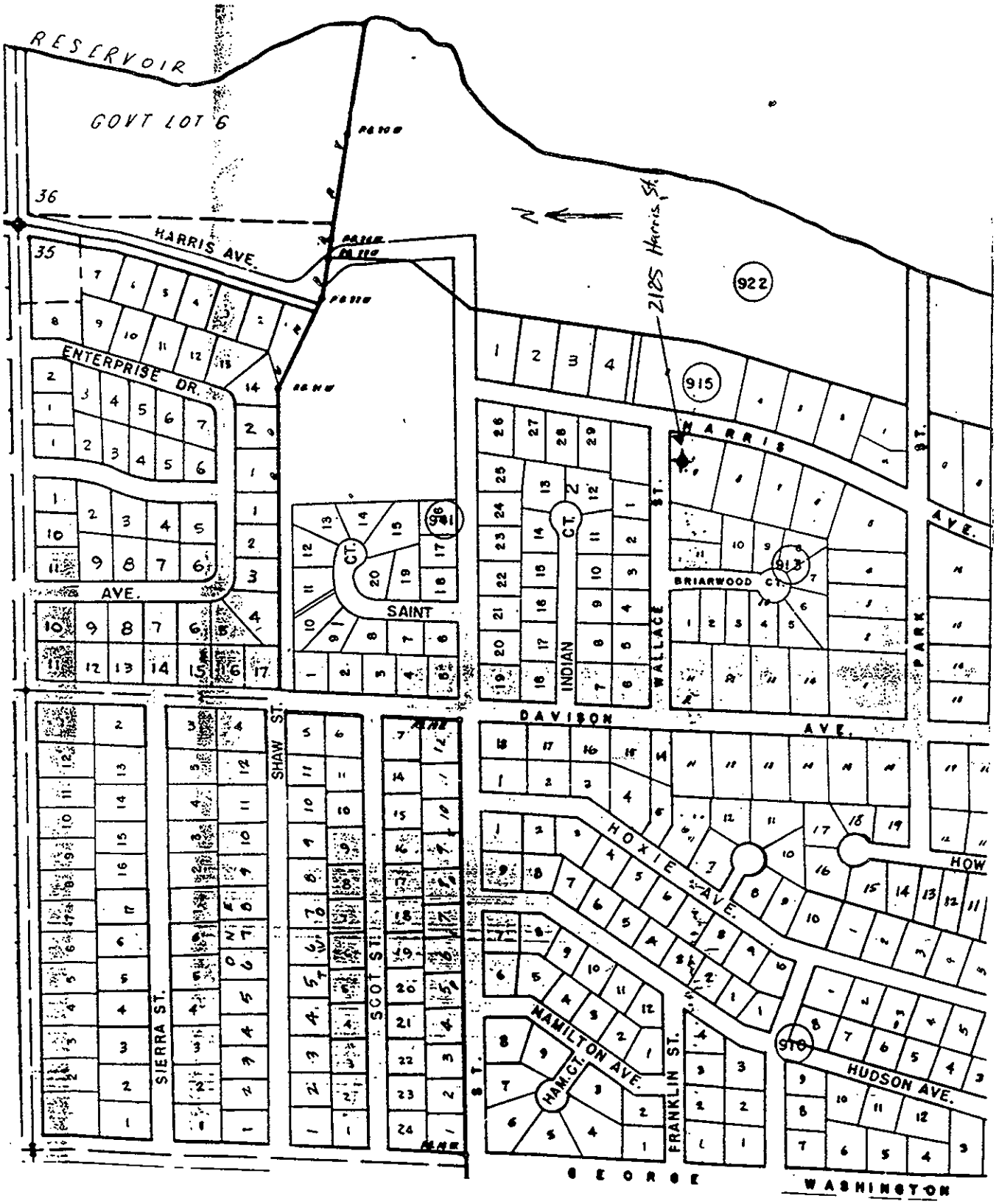
9212263

9 2 1 2 6 4 2 1 2 6 4

WHC-MR- 0295

#17

#117


RESERVOIR
GOVT LOT 6
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HARRIS AVE.
ENTERPRISE DR.
AVE.
SAINT
CT.
INDIAN
CT.
WALLACE ST.
HARRIS
BRIARWOOD CT.
PARK ST.
AVE.
DAVISON AVE.
HOXIE AVE.
HOW
SHAW ST.
SCOT ST.
SIERRA ST.
HAM.CT.
HAMILTON AVE.
FRANKLIN ST.
HUDSON AVE.
GEORGE
WASHINGTON
922
915
913
916
2185 Harris St.

B-435

WHC-MR- 0295

Sec. 27 #118

1100 AREA WELL INVENTORY FORM

11-28-90 - not home

Well Number: 118 Date 11-18-90

Other Well ID: N/A Surveyor: KSV

Name of Well Owner: John Barker

Well Location: (Location Map Sketched on Attached Sheet)

Owner's Address: 2042 Harris
Richland, WA

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation, drinking Not on City
domestic (?)
all uses

Verification by Owner/Occupant of Well Use: [signature]
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SE of NE)

Well Specifications:
Installation Date: 1957 Total Depth (ft): 110'
Well Construction Type: 6" casing
Pump System Type: submersible
Well Access for Sounding: no

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 21
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes 1K

Other:

Permit #W85-030
not on city water.
well located in North garage - inside

B-435

9212542126

WHC-MR- 0295

#118

W85-030
Permit Number
3-13-85
Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
Name: John BARKER	Name:
Address: 2042 HARRIS	Address:
City: RICHLAND, State: WA, Phone: 943-1814	City, State, Phone:
Barker Enterprises	

WELL INFORMATION

2042 Harris
Well Location Address | Lot | Block | Subdivision

Well Use:
- ☑ Domestic
- ☑ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☐ Plot plan submitted — Date
- ☐ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: John Barker

APPROVAL: _____ (After requirements met)

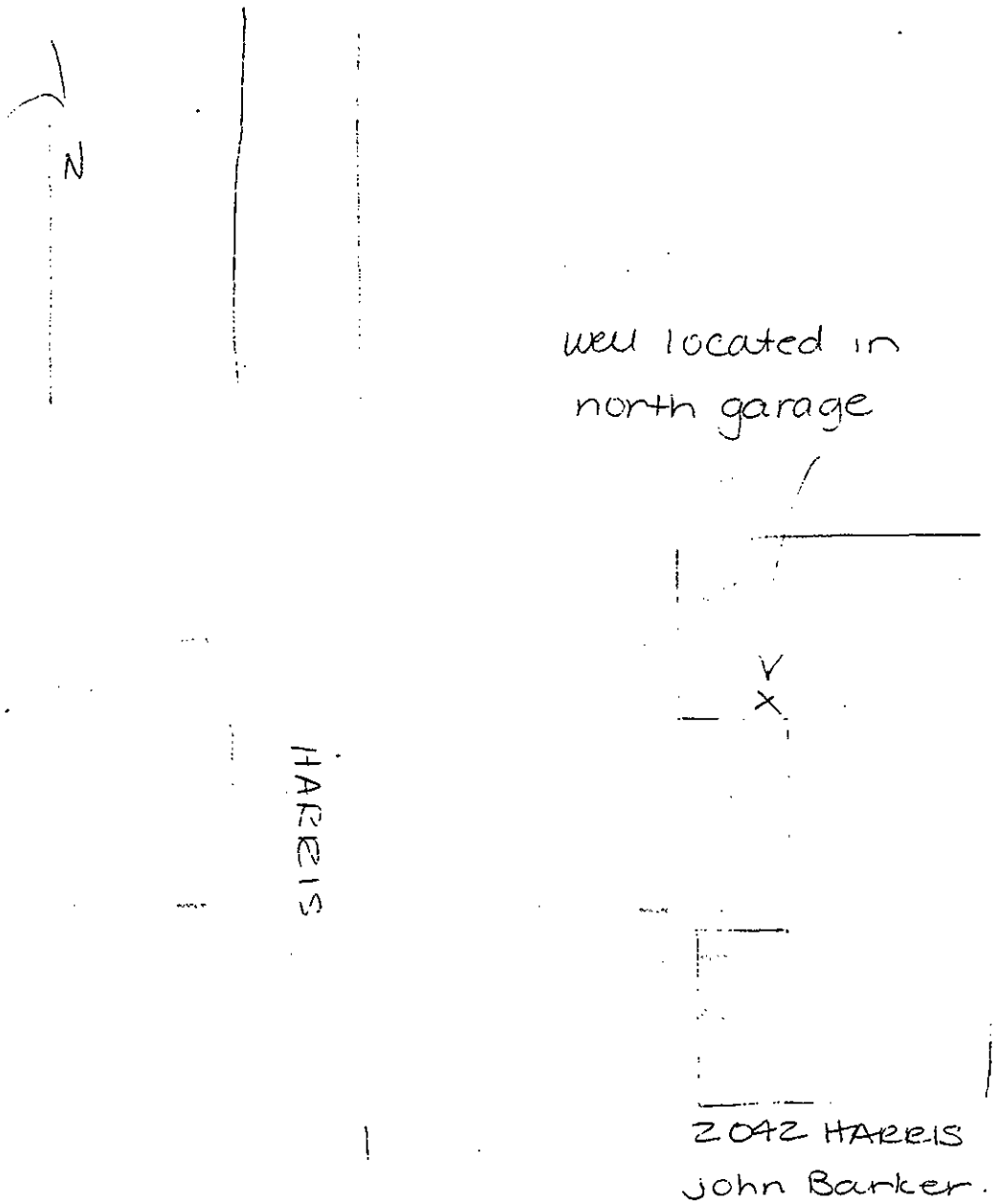
Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

B-437

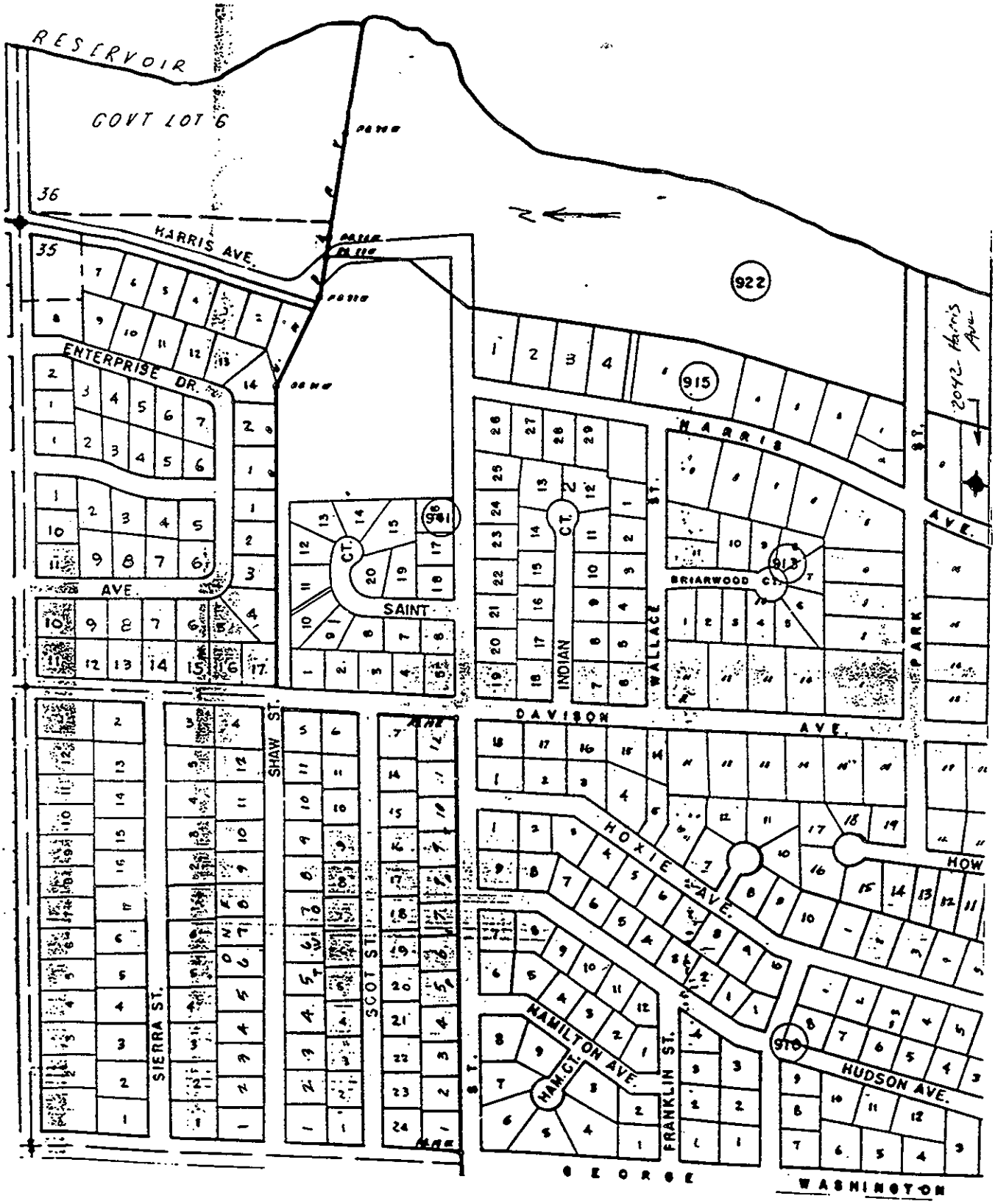
9212267

#118



9212642128 68

#118


RESERVOIR
GOVT LOT 6
36
35
HARRIS AVE.
ENTERPRISE DR.
AVE.
SAINT
CT.
922
915
916
918
2042 Harris Ave.
HARRIS
ST.
AVE.
BRIARWOOD CT.
INDIAN
WALLACE
PARK
DAVISON
AVE.
HOXIE AVE.
HOW
SHAW ST.
SCOT ST.
SIERRA ST.
HAM. CT.
HAMILTON AVE.
FRANKLIN ST.
HUDSON AVE.
GEORGE
WASHINGTON

B-439

WHC-MR- 0295

SECTION 2

119

1100 AREA WELL INVENTORY FORM

11-28-90 not hom

Well Number: _____ Date 11-18-90

Other Well ID: _____ Surveyor: KSV

Name of Well Owner: R. BROWN

Well Location: (Location Map Sketched on Attached Sheet)

Owner's Address: 2101 HARRIS
RICHLAND, WA.

Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION

Verification by Owner/Occupant of Well Use: R. T. Brown
X (Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): SE 1/4 of NE 1/4 SEC 35

Well Specifications: ~ 30 yrs old.

Installation Date: _____ Total Depth (ft): 100'

Well Construction Type: 6 inch casing

Pump System Type: Submersible 1 HP.

Well Access for Sounding: yes

Other Information:

Photograph Taken: ____ No ✓ Yes Photo Number: 20

Well Log Available: ✓ No ____ Yes

Well Log Obtained: ✓ No ____ Yes

1K

Other:

well located under wood panel on porch.
well head below ground surface.

B-440

9212642270

WHC-MR- 0295

#119

W-85-099
Permit Number
5-31-85
Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
R.T. Brown	NA
Name	Name
2101 Harris Ave.	
Address	Address
Richland, WA. 375-1829	
City State Phone	City State Phone

WELL INFORMATION

2101 Harris
Well Location Address Lot Block Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☒ Plot plan submitted — 5/30/85 Date
- No ☐ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: R. T. Brown 5/30/85 APPROVAL: (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

B-441

WSA-0055

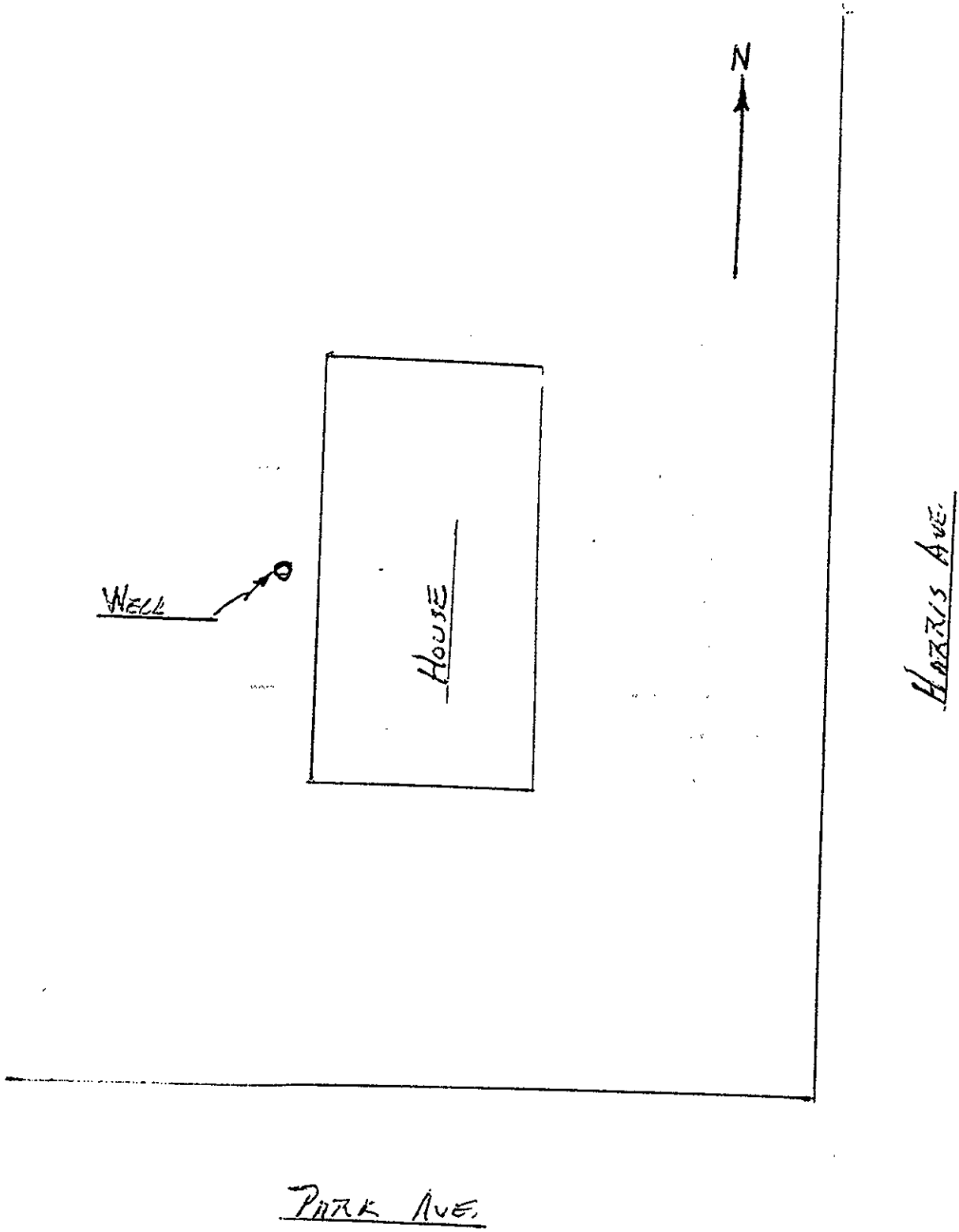
9212602127

R. T. BROWN
2101 HARRIS AVE.
RICHLAND, VA.

WTO-MR- 0295

W85-0519

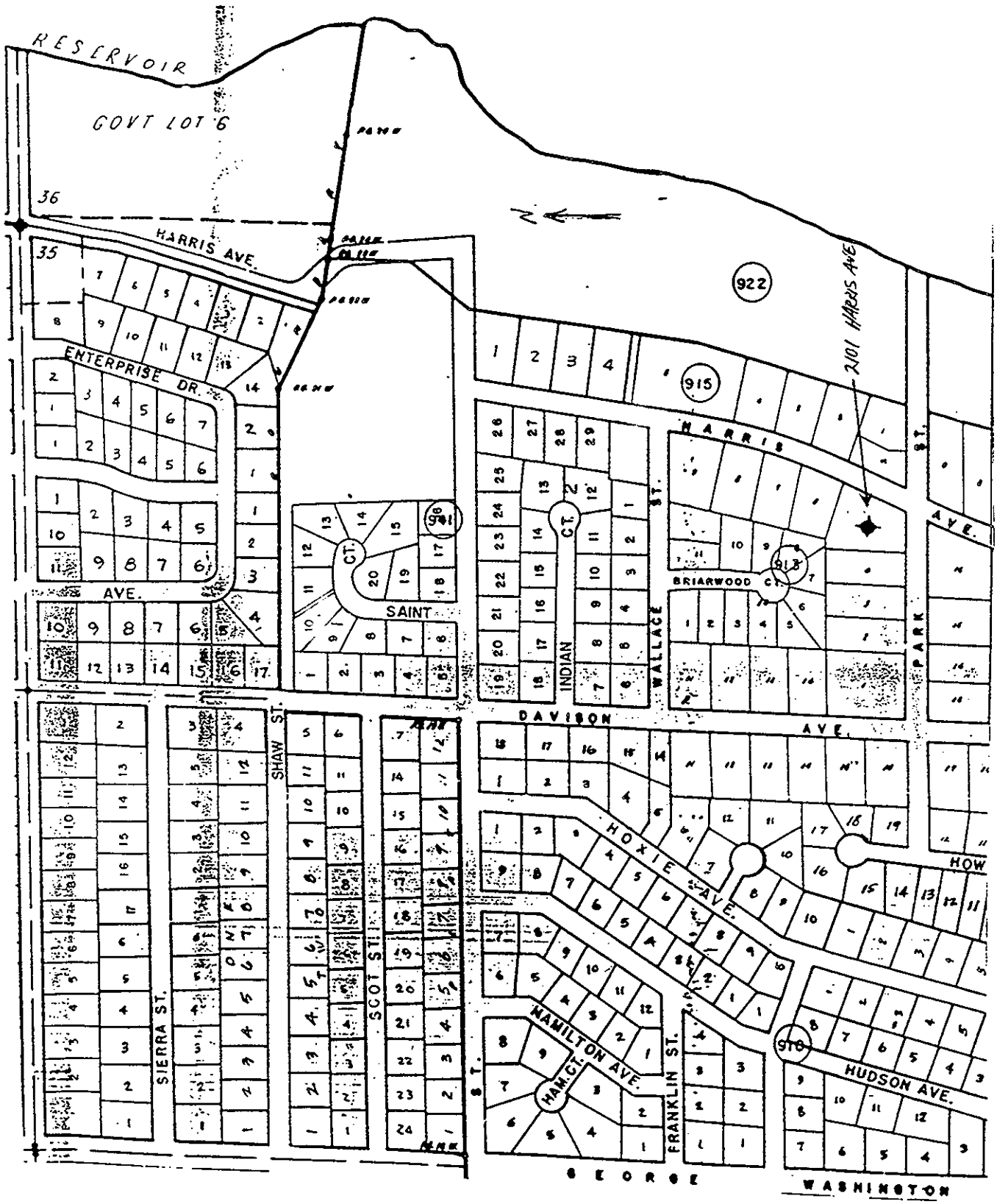
#119.



9 2 1 2 6 4 2 1 2 7 2

B-442

#119


RESERVOIR
GOVT LOT 6
36
35
HARRIS AVE.
ENTERPRISE DR.
AVE.
SAINT
CT.
922
915
918
913
916
2101 HARRIS AVE
HARRIS
BRIARWOOD CT.
INDIAN
WALLACE ST.
PARK AVE.
DAVISON AVE.
HOXIE AVE.
HOW
SHAW ST.
SCOT ST.
SIERRA ST.
HAMILTON AVE.
HAM. CT.
FRANKLIN ST.
HUDSON AVE.
GEORGE
WASHINGTON

B-443

120

1100 AREA WELL INVENTORY FORM

Well Number: 120
Other Well ID:

Date 12/18/90 10:4 pm
Surveyor:

Name of Well Owner: Clark O. Harvey ph. 375-1851

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2115 Davison
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: heat pump
irrigation

Verification by Owner/Occupant of Well Use: (see card)
telephone contact made on 12/18/90 6:00 pm
(Signature)

Water in Contact with Humans: X Yes ____ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SE of NE)

Well Specifications:
Installation Date: 6 years old ~1984 Total Depth (ft): 113'
Well Construction Type:

Pump System Type: submersible.

Well Access for Sounding: No. Bolt on cap.

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 20
Well Log Available: ✓ No ____ Yes permission to photograph Yes
Well Log Obtained: ✓ No ____ Yes

Other: location of well -
SE corner
garden plot
down driveway.

12/k 1100.

B-444

9212642127 4

120

Golder Associates Inc. is conducting a well inventory in your neighborhood, as described on the attached public notice from the U.S. Department of Energy. We have attempted to contact you to determine whether a groundwater well is on your property. To assist in this survey, please fill out and sign this postage-paid card and return it as soon as possible. Thank you for your assistance.

on my property I ✓ do I ___ do not have a groundwater well.

Name: Clark O. Harvey
(printed)

Clark O Harvey
(signature)

Street Address: 2118 Davison
Richland, WA 99352

375-1851

9212262275

WHO-WR- 0295

SECTION 2
#121

1100 AREA WELL INVENTORY FORM

Well Number: 121 Date 11-15-90
Other Well ID: N/A Surveyor: K. VIK

Name of Well Owner: ~~RAY HAWKINS~~ MARY WATTS
Former owner: Ray Hawkins.

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 204R DAVISON AVE
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION

Verification by Owner/Occupant of Well Use: X [signature] (Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): SW 1/4 of NE 1/4 Section 35

Well Specifications:
Installation Date: Jan. 1987 Total Depth (ft): 44'
Well Construction Type: Cable Tool
Pump System Type: submersible
Well Access for Sounding: No

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 4 roll 2K
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes

Other:
CITY OF RICHLAND-
WATER WELL PERMIT # W85-123

9 2 1 2 6 4 2 1 2 7 6

B-446

WHC-MR- 0295

#121

W85-123
Permit Number

Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
Ray Hawkins Name	~~Hatch Drilling Co., Inc.~~ Name
2042 Davison Ave Address	6417 West Court Street Address
Richland, Wa 946-1234 City State Phone	Pasco , Wash. 99301 547-9332 City State Phone
	Completed 1/29/81

WELL INFORMATION

2042 Davison Ave — Well Location Address
13 — Lot
912 — Block
Sect. 35 Twp. 10 Rng 28 — Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☒ Plot plan submitted — 11/1/85 Date
- ☒ Drilling log submitted — 11/1/85 Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: A. Ray Hawkins A. Ray Hawkins Nov 1, 1985

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

B-447

WHC-MR- 0295

WATER WELL REPORT

STATE OF WASHINGTON

...and First Copy with ...of Ecology
...py — Owner's Copy
...py — Driller's Copy

Application No. .....

Permit No. .....

(1) OWNER: Name Ray Hawkins Address 2602 Fordson Richland Wa.

(2) LOCATION OF WELL: County ..... — ..... ¼ ..... ¼ Sec ..... T ..... N., R. ..... W.

...ring and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....

New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☑ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 21 ft. Depth of completed well 21 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 21 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☐ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☑
Type of perforator used ...
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☑
Manufacturer's Name ...
Type ... Model No. ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☑ Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☑ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name ...
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 480 ft.
Static level 28 ft. below top of well Date ...
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? ...

Yield:	gal./min. with	ft. drawdown after	hrs.
"	"	"	"
"	"	"	"

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test 25 gal./min. with 11 ft. drawdown after 1 hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☑

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Sand Fine Brown, gravel	0	13
Clay, brown - cemented	13	21
layers of fine sand		
Sand Gravel Cobbles	21	29
Hard		
Sand Gravel, Large (water)	29	41

Work started JAN 1981 Completed JAN 1981

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hatch Drilling Co Inc
(Person, firm, or corporation) (Type or print)

Address 6417 W. Court St. Pasco

[Signed] ... (Well Driller)

License No. 0176 Date 7/2 1981

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

B-448

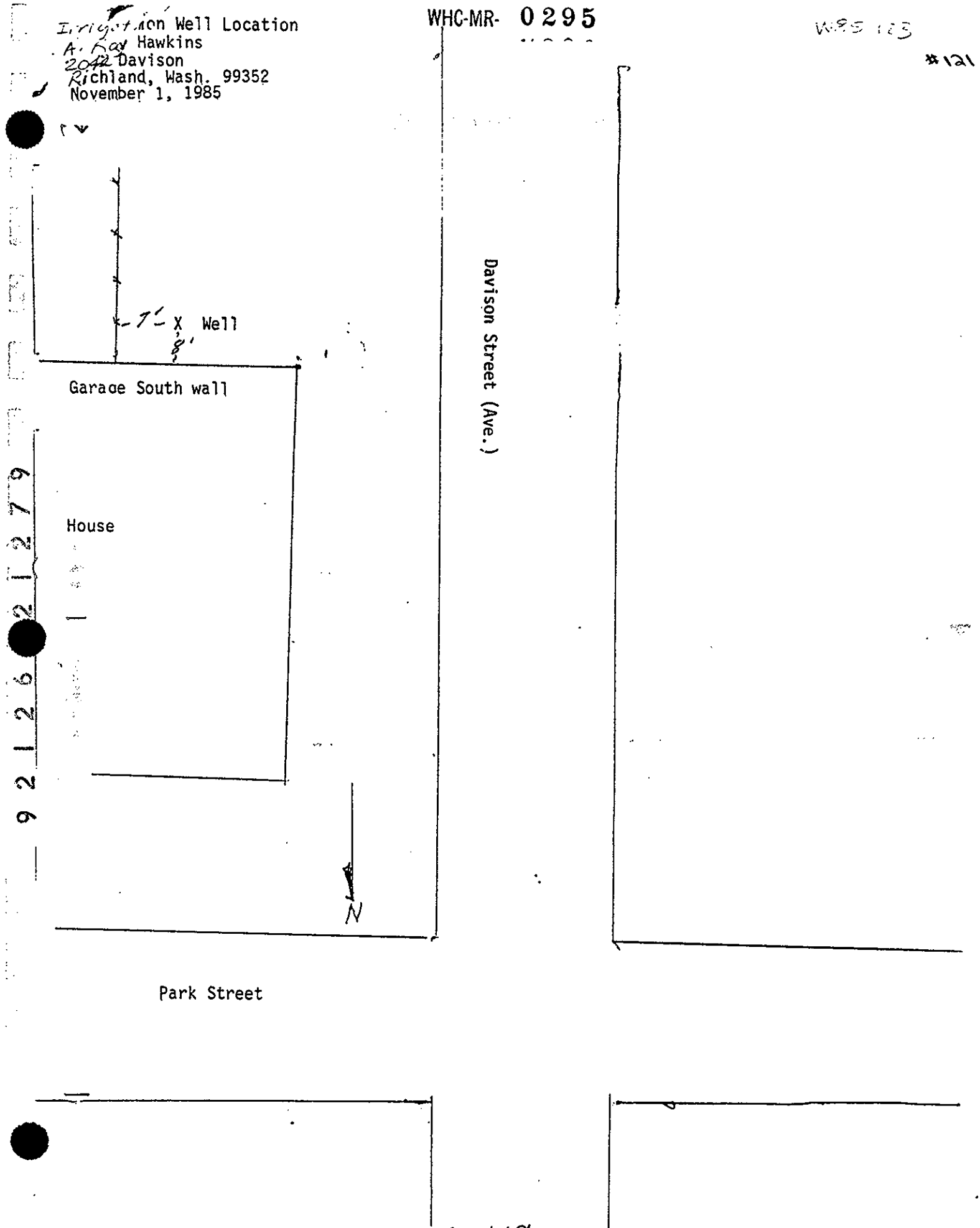
9 2 1 2 6 4 2 1 2 7 8

Irrigation Well Location
A. Ray Hawkins
2042 Davison
Richland, Wash. 99352
November 1, 1985

WHC-MR- 0295

W-95-123

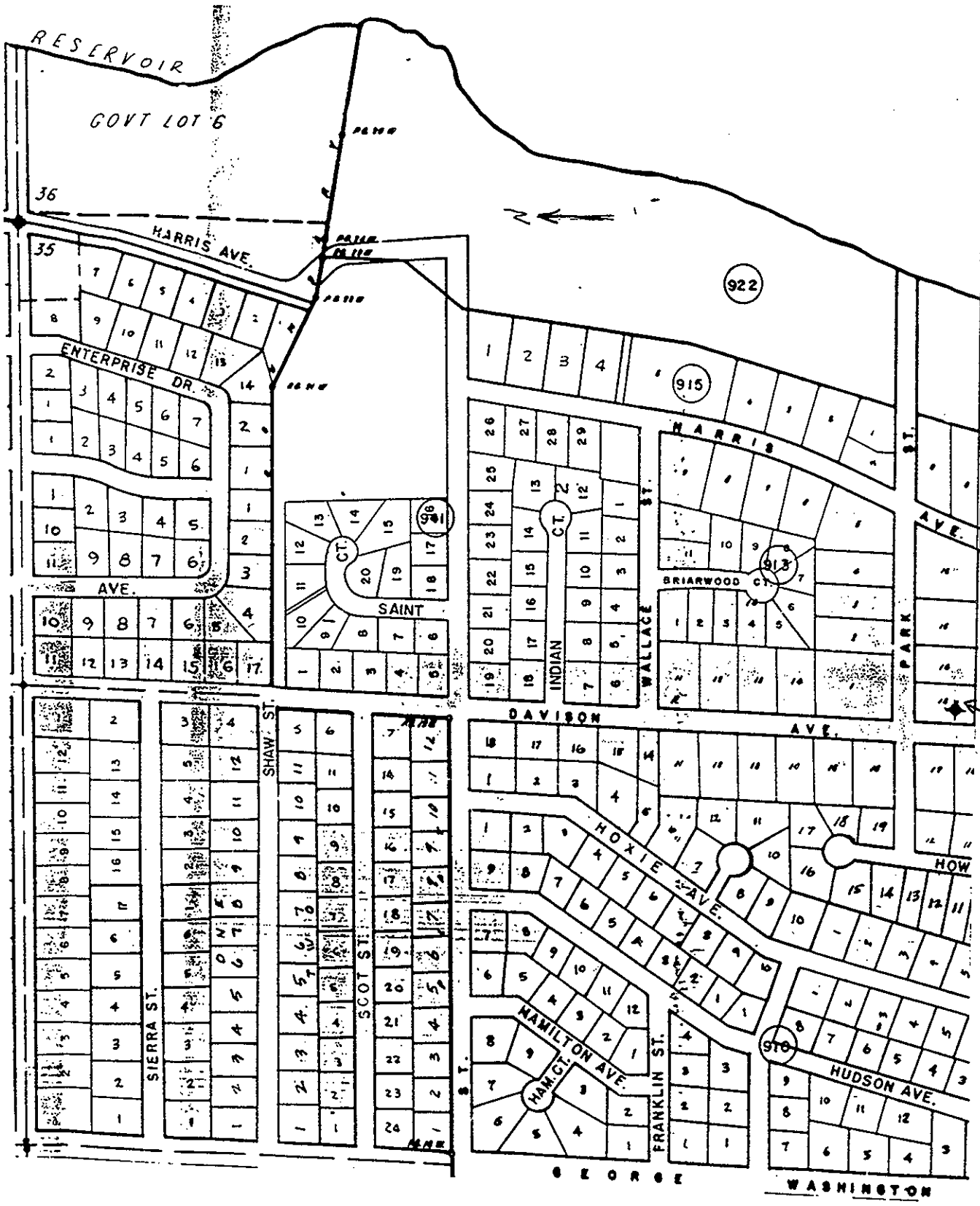
#121



9212679

B-449

#121



B-450

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WHC-MR- 0295

SECTION 2

#122

1100 AREA WELL INVENTORY FORM

2-05-90 Not Home
12-01-90 NOT HOME

Well Number: 122-

Other Well ID:

Date 11-15-90

Surveyor: Kim V.E.

Name of Well Owner: Truong V. Vo (current property owner)
Cathy Vo.

Well Location: (Location Map Sketched on Attached Sheet)

Owner's Address: 217 Saint Street
Richland, WA

Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION, HEAT PUMP (SUPPLY)

Verification by Owner/Occupant of Well Use: ✓ (Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (NW or SE)

Well Specifications:

Installation Date: [illegible] 1988 Total Depth (ft): 238'

Well Construction Type: [illegible]

Pump System Type: submersible

Well Access for Sounding: No - bolt on cap.

Other Information:

Photograph Taken: ___ No ✓ Yes Photo Number: 17 2K

Well Log Available: ✓ No ___ Yes

Well Log Obtained: ✓ No ___ Yes

Other: CITY OF RICHLAND - WATER WELL PERMIT # W87-127
Application Date 9-21-87
Applicant: Wasatch Construction
222 Indian Ct.
Richland, WA 375-6204

B-451

9212628

WHO-WR- 0295

#122

W87-127
Permit Number

9-21-87
Application Dat

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
Wasatch Const.	
Name	Name
222 Indian Ct.	
Address	Address
Richland, Wx. 375-6204	
City State Phone	City State Phone

WELL INFORMATION

217 Saint — Well Location Address
24 — Lot
2 — Block
Indian Valley — Subdivision

Well Use:
- ☐ Domestic
- ☑ Irrigation
- ☑ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☑ Plot plan submitted — 9-21-87 Date
- ☐ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: [signature]

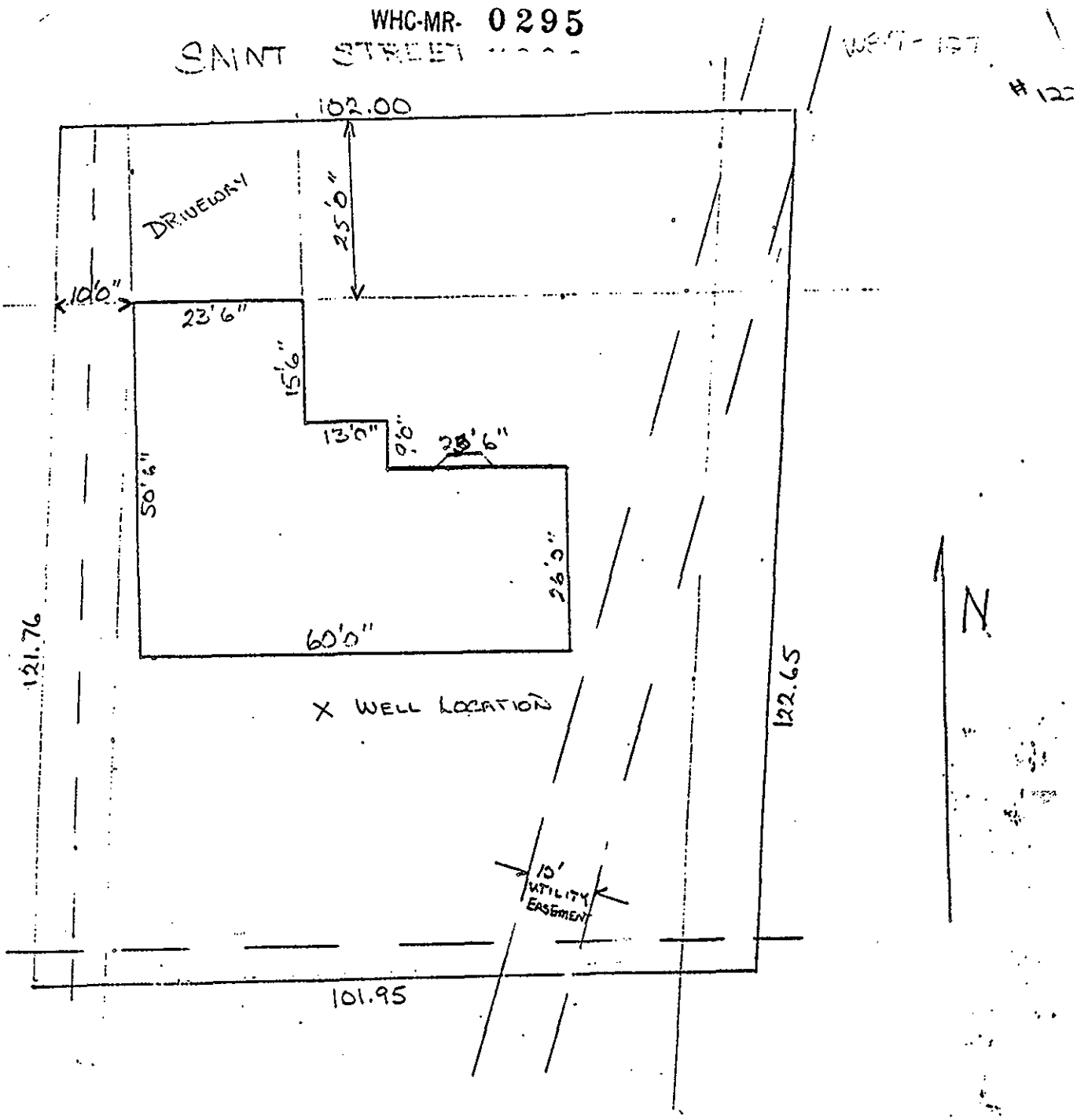
APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

B-452

9 2 1 2 6 4 2 1 2 3 2



217 SAINT STREET SCALE 1" = 20'

LOT 24 BLK. 2 INDIAN VALLEY

WHC-MR- 0295

Sec. 2 #123

1100 AREA WELL INVENTORY FORM

12-1-90

Well Number: 123 Date 11-18-90

Other Well ID: nka Surveyor: KSV

Name of Well Owner: ~~John Bell~~ Bruce D. Geelhood
Formerly John Bell

Well Location: (Location Map Sketched on Attached Sheet)

Owner's Address: 244 Saint Court
Richland, WA

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation.

Verification by Owner/Occupant of Well Use: X [signature] (Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): SE 1/4 of NE 1/4 SEC 35

Well Specifications:

Installation Date: SEPT 1980 Total Depth (ft): 360'

Well Construction Type: cable, 6" casing

Pump System Type: Sears submersible.

Well Access for Sounding: yes.

Other Information:

Photograph Taken: ___ No ✓ Yes Photo Number: 18

Well Log Available: ___ No ✓ Yes

Well Log Obtained: ___ No ✓ Yes

roll K

Other:

Permit # WS5-033

B-454

9212642128 4

WIC-WR- 0295

...and First Copy with ...t of Ecology
...nd Copy — Owner's Copy
...rd Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. ...

Permit No. ...

(1) OWNER: Name John Bell Address 244 Saint Court Richland

LOCATION OF WELL: County Benton — NE ¼ NE ¼ Sec. 11 T. 9 R. 28E W.M.

Bearing and distance from section or subdivision corner Lot 15 Block 1 Indian Valley Sub

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....

New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☑ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.

Drilled 36 ft. Depth of completed well 36 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 32 ft.
Threaded ☐ " Diam. from ... ft. to ... ft.
Welded ☑ " Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☑
Type of perforator used ...
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☑ No ☐
Manufacturer's Name Johnson
Type Stainless Model No. 304
Diam. 5 Slot size 20 from 31 ft. to 36 ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☐ Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☑ No ☐ To what depth? 21 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name ...
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level... 480 ft.
Static level 7.4 ft. below top of well Date Sept 80
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☑ If yes, by whom? ...
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test 23 gal./min. with 4 ft. drawdown after 1 hrs.
Artesian flow ... g.p.m. Date Sept 80
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☑

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Fine Brown Sand	0	4
Sandy Silt w/ small gravels + cobbles	4	14
Cemented Sand & Gravel	14	27
Cemented Sandy clay	27	30
Course Brown Sand with gravels to 1½"	30	36

Work started Sept 19 80 Completed Sept 19 80

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hitch Drilling Co Inc (Person, firm, or corporation) (Type or print)

Address 6417 W Court St Pasco.

[Signed] ... (Well Driller)

License No. 0176 Date Sep 29, 19 80

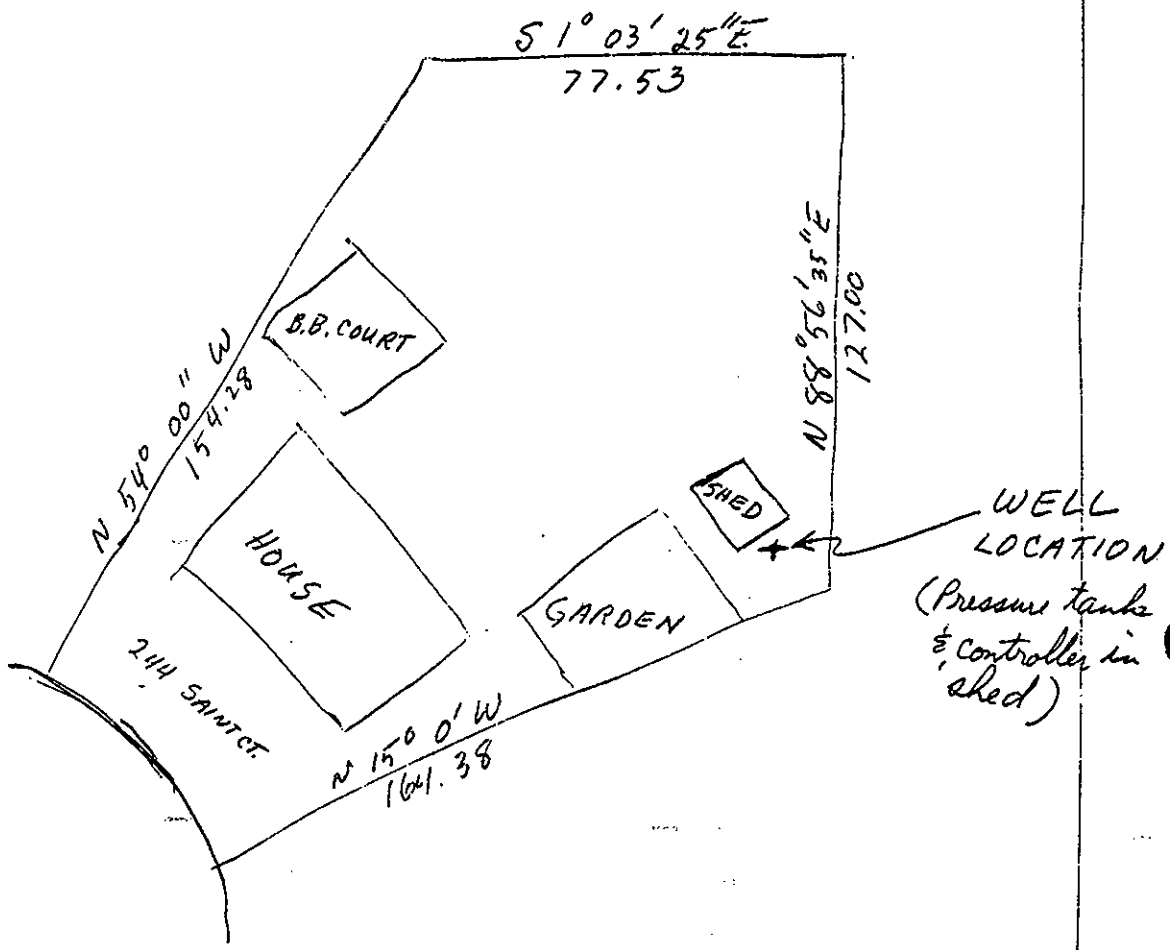
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

B-455

9 2 1 2 6 2 1 2 3 5

123



Lot 15 Block 1 Indian Valley

Not to scale. Locations are approximate.

John R. Bell

9 2 1 2 6 4 2 1 2 8 6

WHC-MR- 0295

See

B 123

W85-033
Permit Number

3-15-85
Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
Name: JOHN BELL	Name: HATCH DRILLING CO. INC.
Address: 244 SAINT COURT	Address: 6417 W. COURT ST.
City: RICHLAND State: WA Phone: 375-1813	City: PASCO State: WA Phone:

WELL INFORMATION

244 Saint Court — Well Location Address
15 — Lot
1 — Block
INDIAN VALLEY — Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☑ Plot plan submitted — 3/13/85 Date
- ☑ Drilling log submitted — 3/13/85 Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: John R. Bell

APPROVAL: _____ (After requirements met)

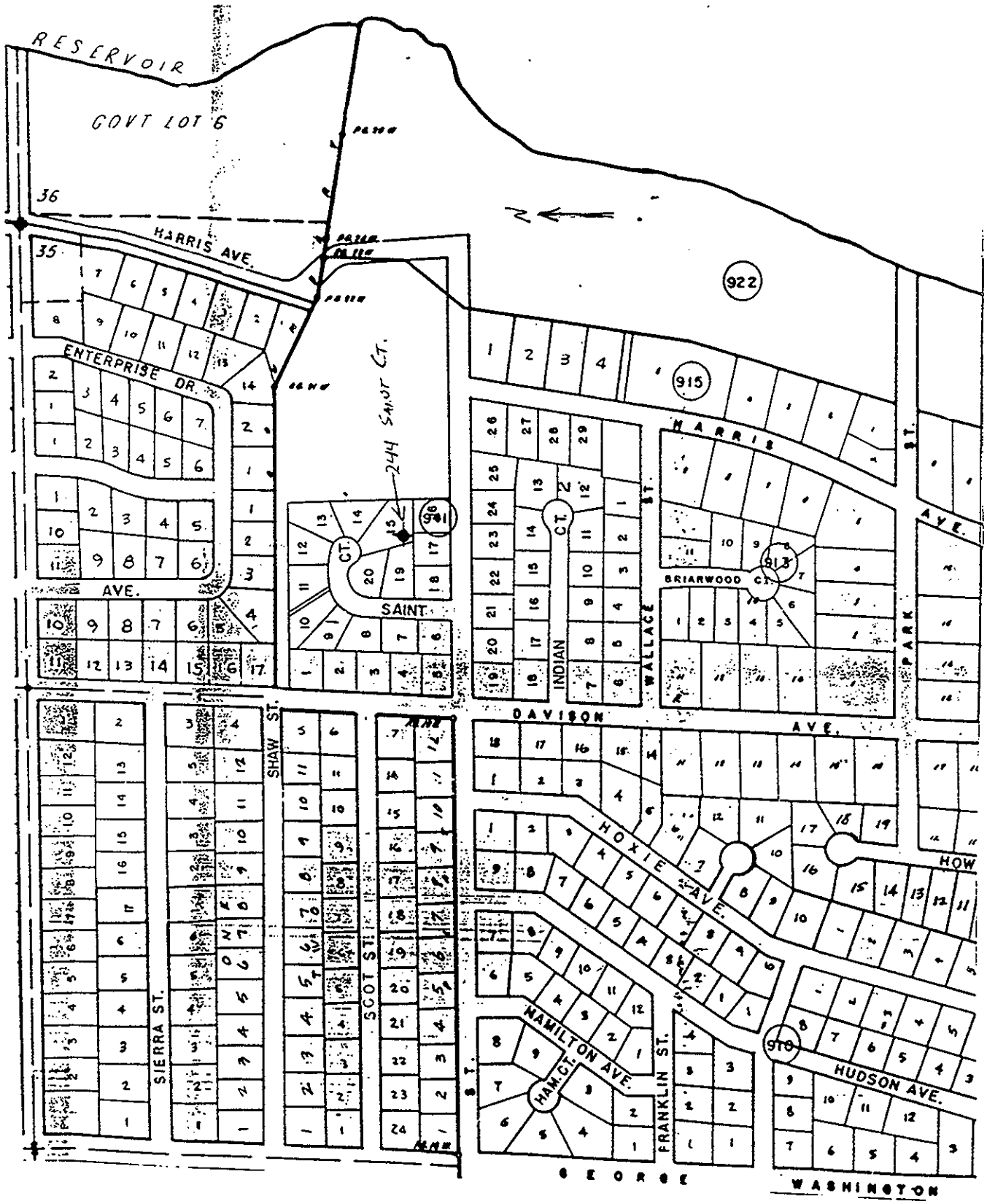
Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

B-457

WSA-0055

9212637

#123



9 2 1 2 6 5 4 2 1 2 8 8

B-458

#123

Source: USGS[a]

11/13/1990 -M 10N/28E-35A04

SITE ID:	461839119163901
KEY.NO.:	2244
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA	
VERIFICATION	V
LATITUDE:	461842
LONGITUDE:	1191553
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35A04
ALTITUDE:	372.00
ALT.ACC:	10
USE OF SITE:	W
NO.1 WATER USE:	I
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	36.00
WELL.DEPTH:	36.00
DEPTH SOURCE:	D
DATE DRILLED:	9/ 1/1980
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	JOHN
LAST NAME:	BELL
DATE OWNED:	9/ 1/1980
STREET ADDR.:	244 SAINT COURT
CITY ADDR.:	RICHLAND WA. 99352
WATER LEVEL:	14.00
WATER LEVEL DATE:	9/ 1/1980
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	D
WATER LEVEL:	14.55
WATER LEVEL DATE:	2/23/1986
W.L.TIME:	1658
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	11.31
WATER LEVEL DATE:	9/ 4/1986
W.L.TIME:	1313
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	14.50
WATER LEVEL DATE:	2/24/1987
W.L.TIME:	1303
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S

9212269212289

123

DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	B
DISCHARGE:	25.00
DRAWDOWN:	4.00
TEST TIME:	1.0
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	31.00
OPENING BOTTOM:	36.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SDST
LITHOLOGIC MODIFIER:	+ GRVL,SAND
% WATER.CONTRIBUTED:	0
UNIT TOP:	14.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	CEMENTED + CLSD
% WATER.CONTRIBUTED:	100
REMARK:	'LOCAL NO. WAS 10N/28E-35E01'
STRUCTURE:	SYNCN-PASCO
DISTANCE FROM STRUCTURE:	1.75
SAMPLING DATE:	09/04/1986
TIME:	1326
NITRATE:	5.10
SPECIFIC CONDUCTANCE:	568

9 2 1 2 6 4 2 1 2 9 0

124

1100 AREA WELL INVENTORY FORM

Well Number: 124 Date 11-27-90
Other Well ID: Surveyor: KSV.

Name of Well Owner: A.G. CORRADO

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 435 SIERRA
RICHLAND
Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION

Verification by Owner/Occupant of Well Use: Paula Corrado Levig
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): NW 1/4 of ~~E~~SE 1/4 Section 26

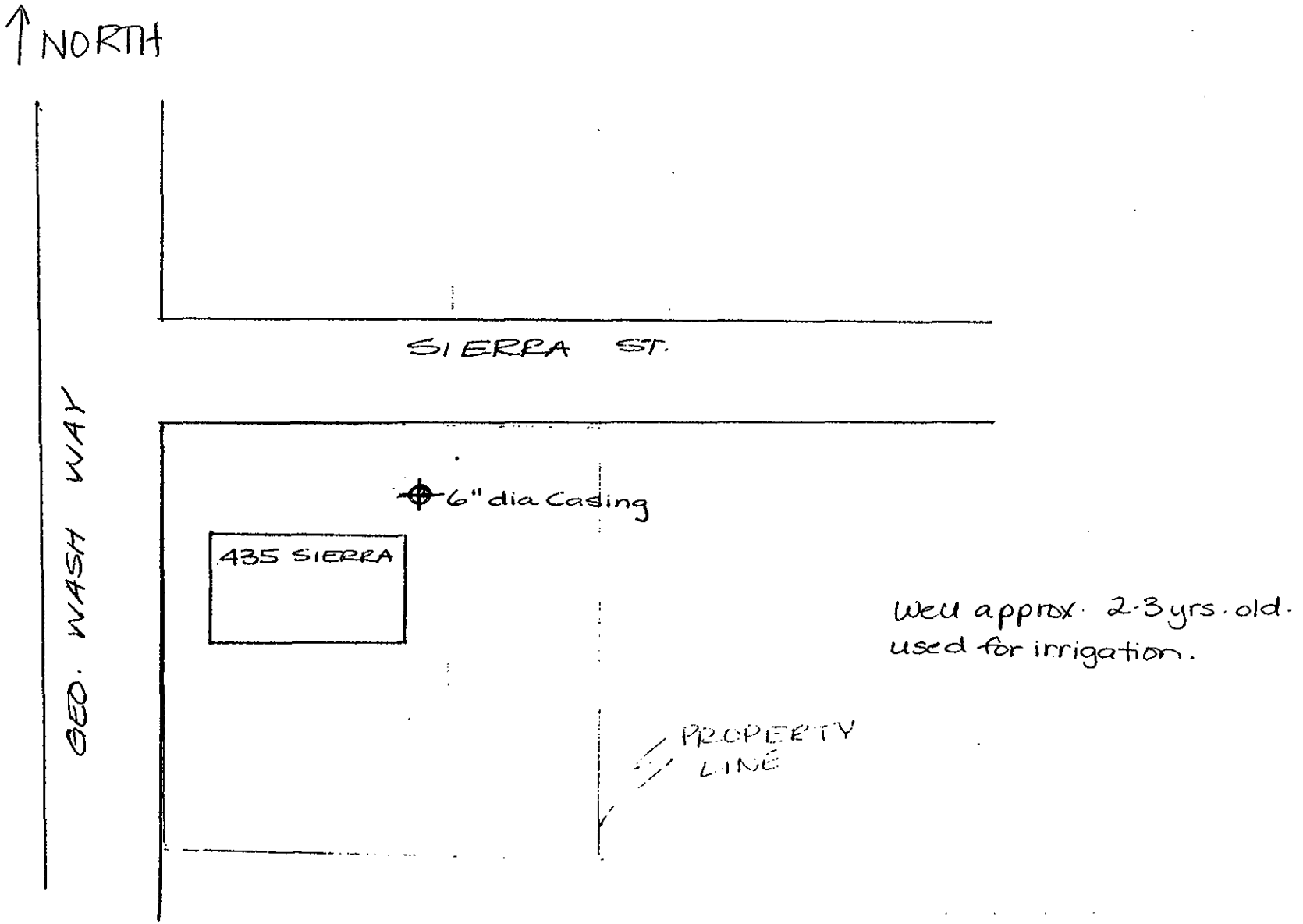
Well Specifications:
Installation Date: ~1988 (2-3 yrs old) Total Depth (ft): owner doesn't know unknown
Well Construction Type: 6" casing - capped/bolted shut
Pump System Type: (presumed submersible)
owner doesn't know
Well Access for Sounding: NO

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 6
Well Log Available: ✓ No ___ Yes Roll 1K
Well Log Obtained: ✓ No ___ Yes

Other:
Well not registered at City of Richland.
*Limited information from owner.

B-461

9 2 1 2 6 4 2 1 2 9 2



903-1222
435 SIERRA
OWNER: CO[illegible]ADO

WHC-MR- 0295

B-462

124

SECTION 2

125

1100 AREA WELL INVENTORY FORM

Well Number: 125 Date 11-29-90
Other Well ID: Surveyor: KSV

Name of Well Owner: JOHN GAILEY

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 222 INDIAN CT.
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION

Verification by Owner/Occupant of Well Use: X (Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): SE1/4, SE1/4 SEC. 35

Well Specifications:
Installation Date: 11/79 Total Depth (ft): 44'
Well Construction Type: 6" dia casing

Pump System Type: Submersible

Well Access for Sounding: no

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 16, roll 1R
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes

Other:

WRC-WR- 0295

WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name John O'Riley Address 222 Indian Ct - Rhld, Wa

(2) LOCATION OF WELL: County Benton — SE ¼ SE ¼ Sec. 35 T. 10 N., R. 28 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....

New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☑ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 44 ft. Depth of completed well 44 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 44 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☑ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☑
Type of perforator used ...
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☑ No ☐
Manufacturer's Name Johnson
Type STAINLESS Model No. 304
Diam. 6 Slot size 35 from 39 ft. to 44 ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☑ Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☑ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name ...
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 480 ft.
Static level 13 ft. below top of well Date 11/79
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☑ If yes, by whom? ...
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " "
" " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test 40 gal./min. with 1 ft. drawdown after 4 hrs.
Artesian flow ... g.p.m. Date 11/79
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☑

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown Sand & Cobbles	0	18'
Brown Sand & Cobbles Cemented	18'	24'
Sand & Gravel Very Sandy	24'	38'
Sand & Gravel	38	44'

Work started 11/26 19 79 Completed 11/28 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ... (Person, firm, or corporation) (Type or print)

Address ...

[Signed] ... (Well Driller)

License No. 6176 Date 12/5 19 79

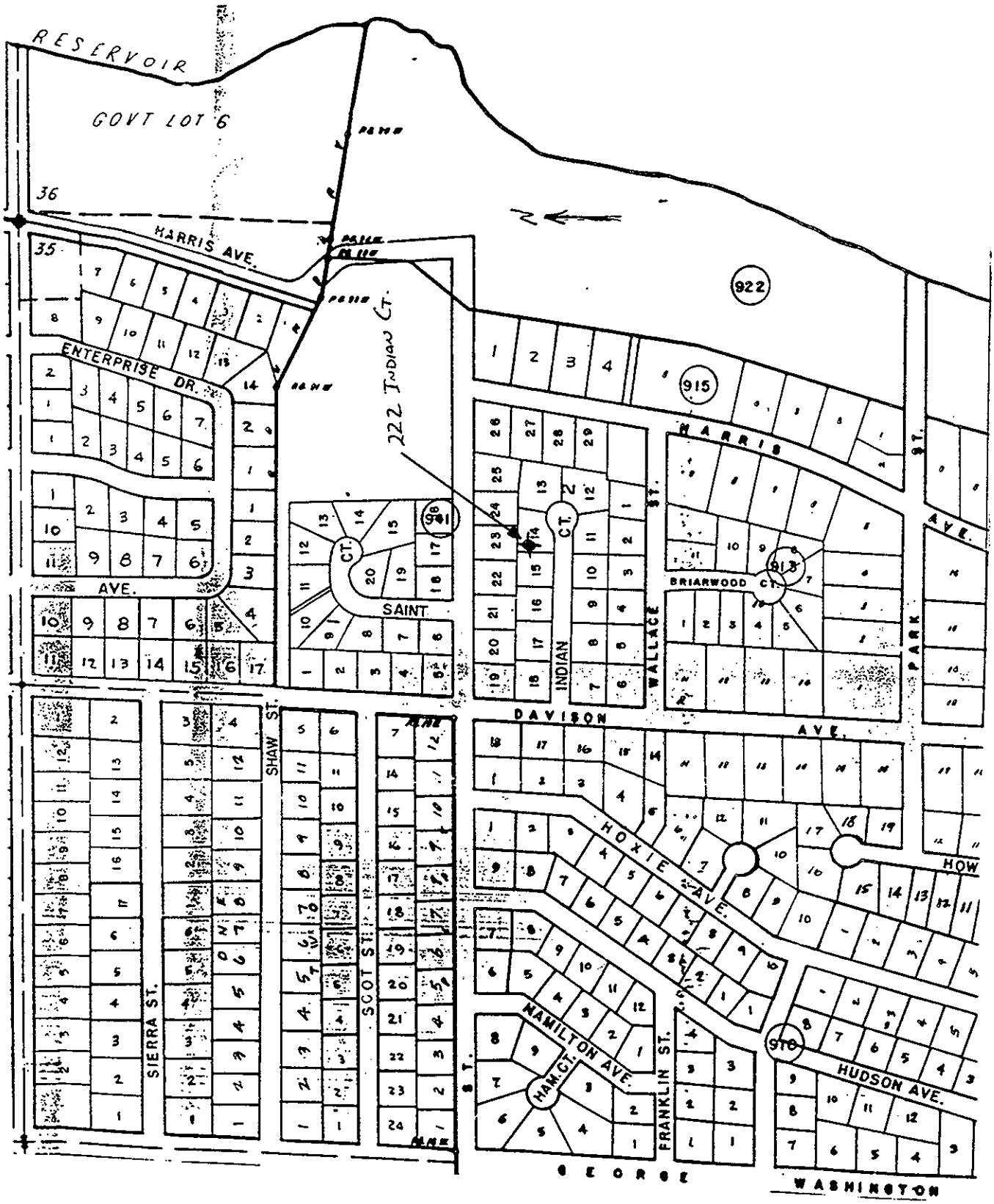
(USE ADDITIONAL SHEETS IF NECESSARY)

050-1-20

B-464

9 2 1 2 6 4 2 1 2 9 4

125


RESERVOIR
GOVT LOT 6
36
35
HARRIS AVE.
ENTERPRISE DR.
AVE.
222 INDIAN CT.
CT.
SAINT
INDIAN
CT.
WALLACE ST.
HARRIS
BRIARWOOD CT.
PARK AVE.
DAVISON AVE.
HOXIE AVE.
HOW
HAMILTON AVE.
HAM. CT.
FRANKLIN ST.
HUDSON AVE.
SHAW ST.
SCOT ST.
SIERRA ST.
GEORGE
WASHINGTON
922
915
918
913
910

B-465

Source: USGS[a]

#125

11/13/1990 -M

10N/28E-35H09

SITE ID:	461834119155501
KEY.NO.:	2255
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA	C
VERIFICATION	V
LATITUDE:	461838
LONGITUDE:	1191555
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35H09
ALTITUDE:	350.00
ALT.ACC:	20
USE OF SITE:	W
NO.1 WATER USE:	H
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	44.00
WELL.DEPTH:	44.00
DEPTH SOURCE:	D
DATE DRILLED:	11/26/1979
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	JOHN
LAST NAME:	GAILEY
DATE OWNED:	11/28/1979
STREET ADDR.:	222 INDIAN COURT
CITY ADDR.:	RICHLAND WA. 99352
WATER LEVEL:	13.00
WATER LEVEL DATE:	11/28/1979
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	D
WATER LEVEL:	16.84
WATER LEVEL DATE:	2/23/1986
W.L.TIME:	1700
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	13.17
WATER LEVEL DATE:	9/ 4/1986
W.L.TIME:	1442
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	16.45
WATER LEVEL DATE:	2/24/1987
W.L.TIME:	1427
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S

9212642129 6

B-466

125

WATER LEVEL:	14.41
WATER LEVEL DATE:	2/25/1988
W.L.TIME:	1113
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	B
DISCHARGE:	40.00
DRAWDOWN:	1.00
TEST TIME:	4.0
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	39.00
OPENING BOTTOM:	44.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	COSD
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	0
UNIT TOP:	18.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	
% WATER.CONTRIBUTED:	100
REMARK:	----------
STRUCTURE:	SYNCN-PASCO
DISTANCE FROM STRUCTURE:	2.00
SAMPLING DATE:	09/04/1986
TIME:	1455
NITRATE:	5.30
SPECIFIC CONDUCTANCE:	574

9212612297

B-467

WHC-MR- 0295

#126

1100 AREA WELL INVENTORY FORM

12-01-90 Not home

Well Number: 126
Other Well ID:

Date 11-28-90
Surveyor: KSV

Name of Well Owner: DAVID SPINOS

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 62 PARK
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: irrigation

Verification by Owner/Occupant of Well Use: X [signature] (Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SE of NE)

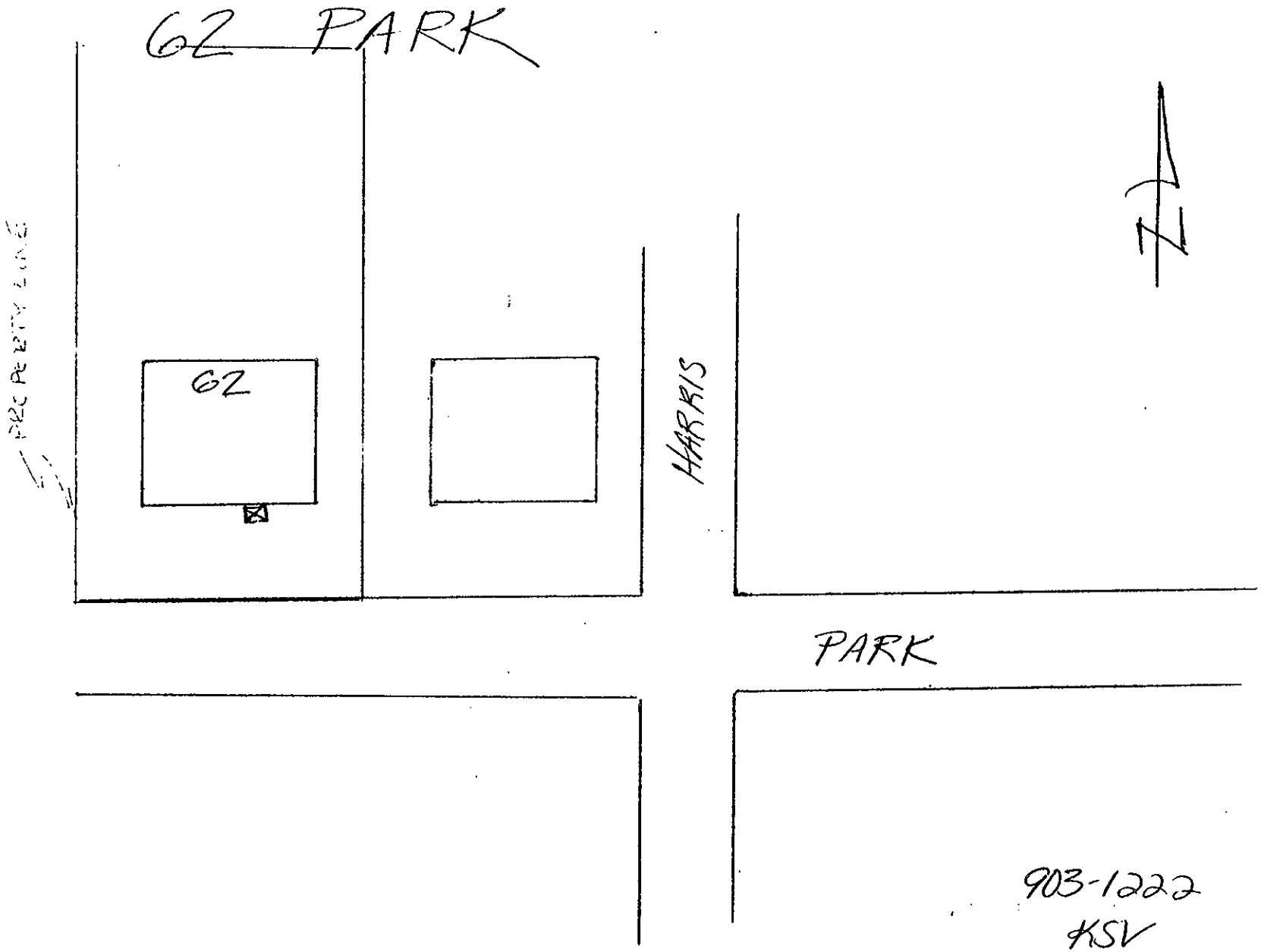
Well Specifications:
Installation Date: 19801 Total Depth (ft): 481
Well Construction Type: 6" casing
Pump System Type: submersible 3/4 HP
Well Access for Sounding: yes - Bolt on cap

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 14
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:

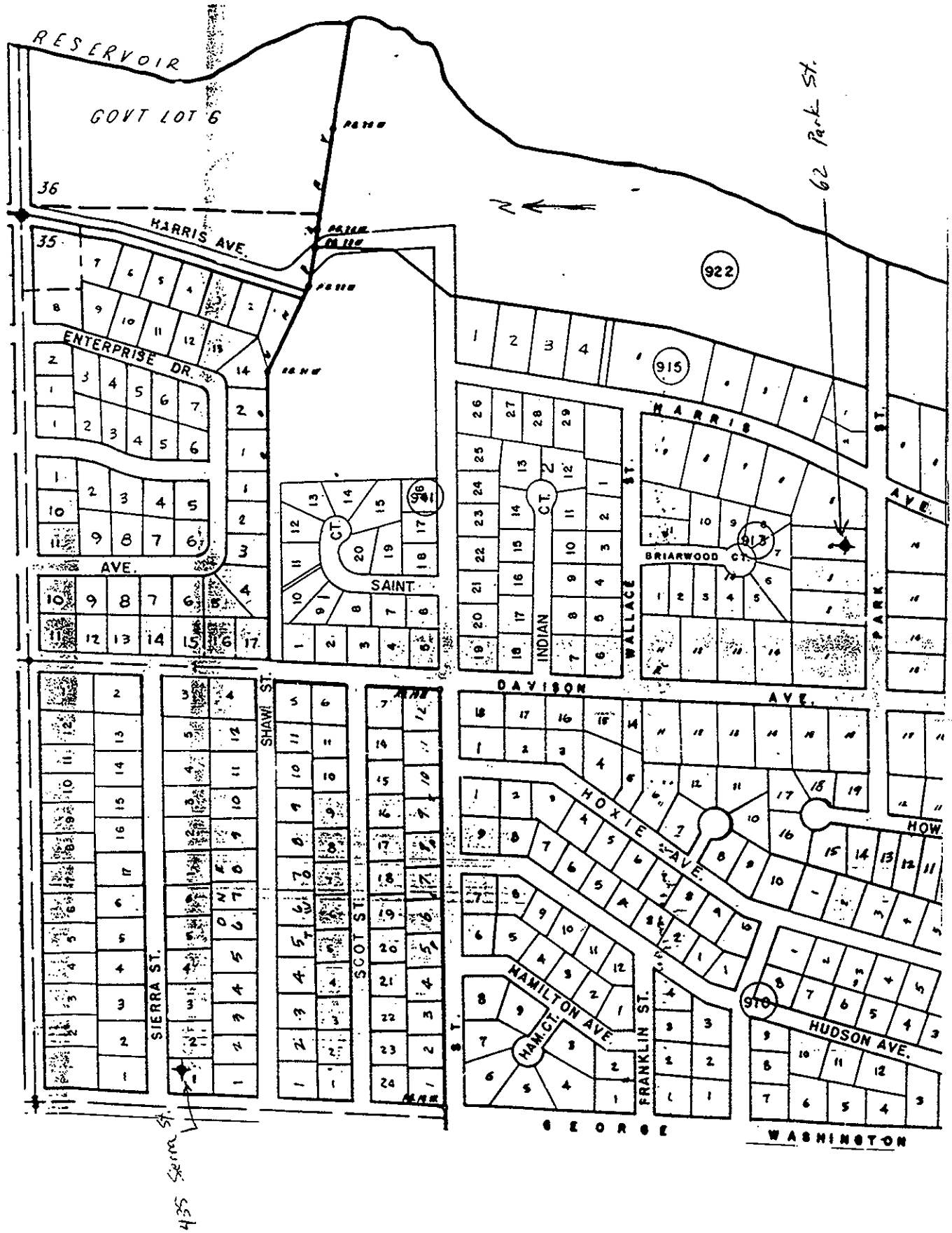
9212642129 8

B-468



903-1222
KSV
11-28-90

#126



9212642 1300

#127

1100 AREA WELL INVENTORY FORM

Well Number: 127
Other Well ID:

Date 11-30-90
Surveyor: KSV

Name of Well Owner: NORMAN ROY

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2136 HOXIE ST.
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: NOT IN USE

Verification by Owner/Occupant of Well Use: X Norman R. Roy (Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SW of NE)

Well Specifications: (7-8 years old)
Installation Date: 12-1979 Total Depth (ft): ~~34~~ 57
Well Construction Type: 6" CASING, OPEN HOLE - ~~CASED~~

Pump System Type: NO PUMP

Well Access for Sounding: YES - NO CAP

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 17
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Roll 1K

Other:
OPEN CASING - COVERED WITH A BUCKET.
CAN SEE WATER LEVEL INSIDE ~12'

9212363013

WHC-MR- 0295

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 4122

Permit No.

(1) OWNER: Name Norman J. Roy Address 2136 Hexie, Richland, WA.

(2) LOCATION OF WELL: County Benton — SW ¼ NE ¼ Sec. 35 T. 10 N., R. 28 E.W.M.

ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 37 inches.
Drilled 48 ft. Depth of completed well 47 ft.
38

(6) CONSTRUCTION DETAILS: 39
Casing installed: 6" Diam. from +1 ft. to 47 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level.... 480 ft. approx ft.
Static level 10 ft. below top of well Date 12/79
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 30 gal./min. with 0 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date Dec 79
Temperature of water 59 Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, ar show thickness of aquifers and the kind and nature of the material in eac stratum penetrated, with at least one entry for each change of formatio*

MATERIAL	FROM	TO
Loose Brown Sand & Gravel	0	8
Brown Sand + Medium Cobbles	8	16
Cemented Sandy Clay + Cobbles.	16	22
Sand & Gravel	22	32

Hatch Drilling
547-9332
Attn - for Bonnie

Well log owners Name
Norman J. Roy
SW¼ NE¼ Sec. 35 T. 10 R.
Benton Co

Item (5)
drilled 38 ft completed well
37 ft

Item (6) 6" diam +1 ft to

It is correct in item (1)

Address 6417 W. Court St. Pasco

[Signed] (Well Driller)

License No. 0176 Date 12/11, 19 79

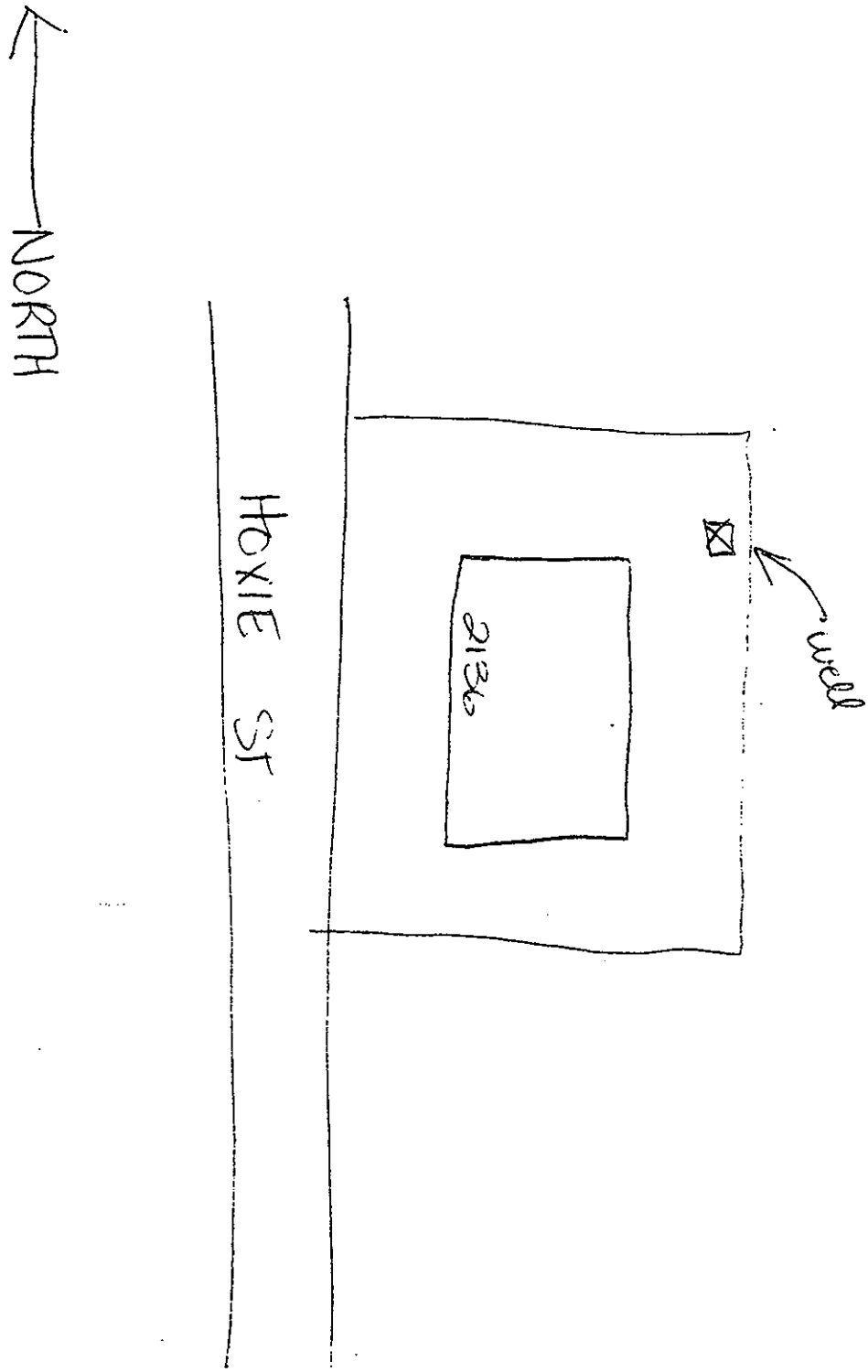
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

B-472

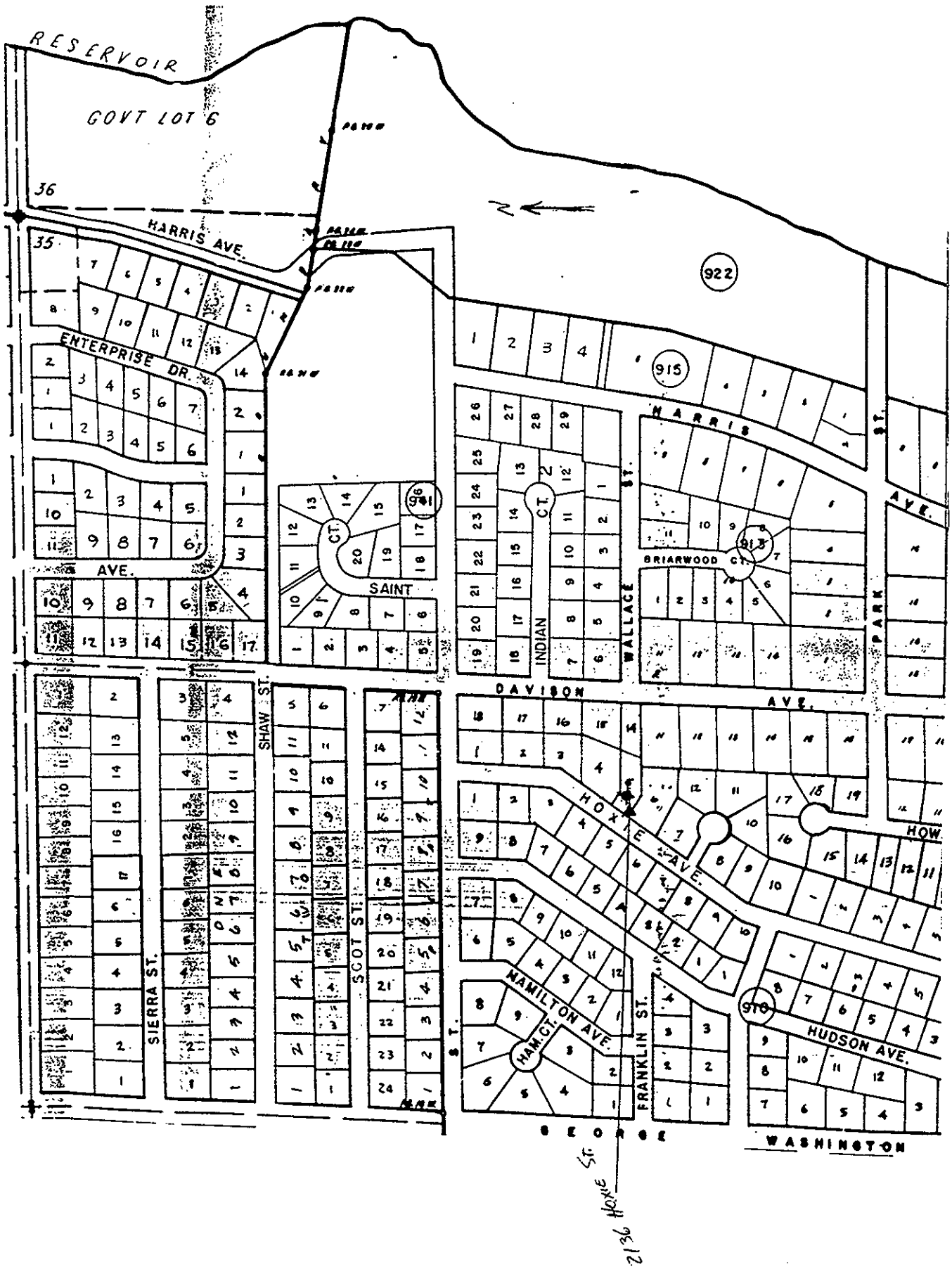
9 2 1 2 5 4 2 1 3 0 2

127



9212613 03

#127



9212642213304

Source: USGS

WHC-MR- 0295

#127

11/13/1990 -M

10N/28E-35G02

SITE ID:	461834119161101
KEY.NO.:	2246
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA	C
VERIFICATION	V
LATITUDE:	461834
LONGITUDE:	1191611
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-35G02
ALTITUDE:	370.00
ALT.ACC:	5
USE OF SITE:	W
NO.1 WATER USE:	H
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	48.00
WELL.DEPTH:	47.00
DEPTH SOURCE:	D
DATE DRILLED:	12/ 1/1979
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	NORMAN
LAST NAME:	ROY
DATE OWNED:	12/ 1/1979
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	10.00
WATER LEVEL DATE:	12/ 1/1979
W.L.TIME:	0
W.L. METHOD:	
W.L. STATUS:	
WATER LEVEL SOURCE:	D
WATER LEVEL:	12.99
WATER LEVEL DATE:	2/24/1986
W.L.TIME:	1732
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	10.07
WATER LEVEL DATE:	9/ 4/1986
W.L.TIME:	1407
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	12.87
WATER LEVEL DATE:	2/24/1987
W.L.TIME:	1408
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S

9212613055

B-475

#127

DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	B
DISCHARGE:	30.00
DRAWDOWN:	0.00
TEST TIME:	1.0
FINISH:	O
OPENING TYPE:	O
OPENING TOP:	47.00
OPENING BOTTOM:	47.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	& COBB
% WATER.CONTRIBUTED:	0
UNIT TOP:	16.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	& STCL
% WATER.CONTRIBUTED:	100
REMARK:	67=UNKNOWN
STRUCTURE:	SYNCN-PASCO
DISTANCE FROM STRUCTURE:	2.50
REMARK:	DRLR REPTS WTR TEMP=59 DEG F 12/00/1979
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.00
REMARK:	'OWNER REPTS QUAL:SAND;NO ODOR'
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99
REMARK:	LOG VS DEPTH DATA CONFLICT
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9212642130 6

WHC-MR- 0295

Section 2 # 128

12-01-90 Not home
11-28-90 Not home

1100 AREA WELL INVENTORY FORM

Well Number: 128
Other Well ID:

Date 11-18-90
Surveyor: KSV

Name of Well Owner: Raymond Reilly

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 220 Wallace
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation
heat pump (supply)
(heat pump (discharge) - dry well.

Verification by Owner/Occupant of Well Use: X Ray Reilly
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SE of NE)

Well Specifications:
Installation Date: Nov 1979 Total Depth (ft): 361
Well Construction Type: cable tool - 6" casing.
bottom cap
Pump System Type: [illegible]
Well Access for Sounding: no.

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 15 Roll 2K
Well Log Available: ✓ No ____ Yes 14
Well Log Obtained: ✓ No ____ Yes

Other:
PERMIT # WSS-090

B-477

9212613 07

WHC-MR- 0295

City Of Richland

WATER WELL PERMIT

W85-090
Permit Number
5-28-85
Application Date

Approval Date

APPLICANT	DRILLER
Name: Raymond & B. Joy Reilly	Name: Hatch Drilling Co.
Address: 220 Wallace	Address: 6417 W. Court
City: Richland, Wa. State: Wa. Phone: 99352	City: Pasco, Wa. State: Wa. Phone: 99301

WELL INFORMATION

Vol. 411
Pg. 423
Aud.# 84506

220 Wallace - Rich, Wa. 3 2 Indian Valley
Well Location Address Lot Block Subdivision

Well Use:
- ☐ Domestic
- ☑ Irrigation
- ☑ Heat Pump (supply)
- ☑ Heat Pump (discharge) (DRYWELL)

Operational Requirements:
- ☑ Plot plan submitted — Date
- ☐ ~~Drilling~~ log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: R B Reilly

APPROVAL: _____ (After requirements met)

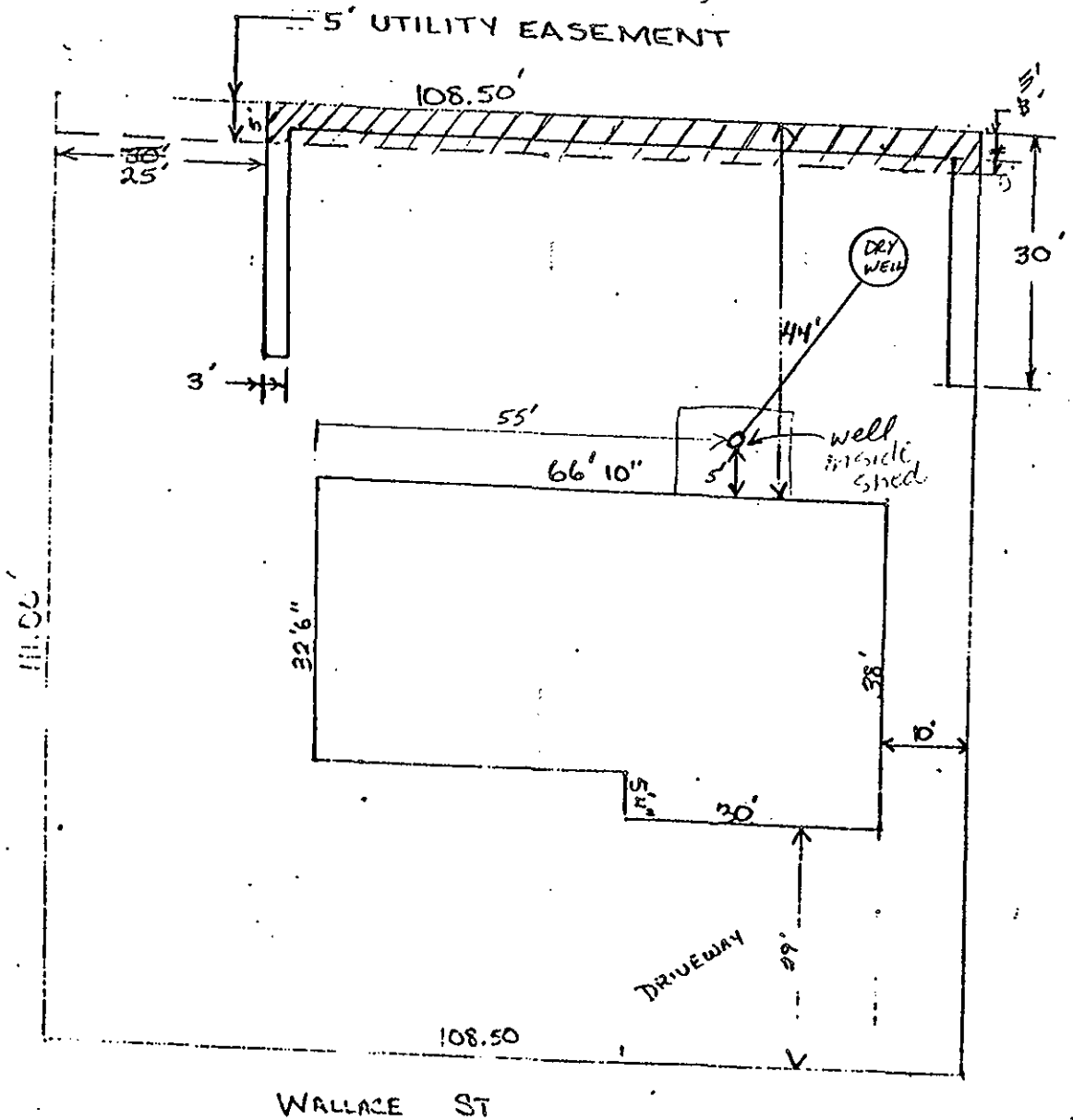
Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

B-478

9212642130 8

9 2 1 2 6 2 1 3 0 9



N

SCALE 1" = 20'

LOT 3 BLK 2
INDIAN VALLEY
220 WALLACE ST

#30245

6-479

WHC-MR- 0295

WHC-MR- 0295

WATER WELL REPORT

STATE OF WASHINGTON

...nd First Copy with ...of Ecology
...— Owner's Copy
...— Driller's Copy

Application No. #1 8

Permit No. ....

OWNER: Name Ray + Joy Reilly Address 220 Wallace - Richland, WA

(2) LOCATION OF WELL: County Benton - SE ¼ SE ¼ Sec. 35 T. 10 N., R. 28

...ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 36 ft. Depth of completed well 36 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 31'9" ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Johnson
Type stainless Model No. 304
Diam. Slot size from 31 ft. to 36 ft.
Diam. 6" Slot size 35 from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level Approx 480 ft.
Static level 7'5" ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 40 gal./min. with 6 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water 60 Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formatio*

MATERIAL	FROM	TO
Brown sand and gravel	0'	6'
Brown sand and cobbles cemented	6'	18'
Brown sand and cobbles	18'	22'
Brown sand and gravel	22'	36'

Work started Nov 19 79 Completed Nov 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hatch Drilling Co Inc
(Person, firm, or corporation) (Type or print)

Address 6417 W. Court St.

[Signed] (Well Driller)

License No. 0176 Date 11/19 19 79

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

B-480

9212642310

WHC-MR- 0295

SECTION 2 # 129

12-5-90 Not home
12-1-90 Not home
11-29-90 Not home

1100 AREA WELL INVENTORY FORM

Well Number: 129
Other Well ID:

Date 11-18-90
Surveyor: KSV

Name of Well Owner: GEORGE F. VARGO No phone number

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 219 INDIAN CT
RICHLAND, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION.

Verification by Owner/Occupant of Well Use: Not available
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): SW1/4 of SE 1/4 sec 24

Well Specifications:
Installation Date: 1979 Total Depth (ft):
Well Construction Type:

Pump System Type: (No info Avail.)

Well Access for Sounding:

Other Information:
Photograph Taken: No ___ Yes Photo Number: No one home.
Well Log Available: ✗ No ✓ Yes
Well Log Obtained: ✗ No ✓ Yes

Other:
CITY OF RICHLAND PERMIT # 1125-100

No information on well was available. Owner had an unlisted telephone number - not at home when I attempted to contact him. Well permit indicates a well exists and neighbors confirm.

B-481

9212602131 1

WHC-MR- 0295

#129

RECEIVED

MAY 31 1985

COMM SERV./PERS

City Of Richland

WATER WELL PERMIT

W85-100
Permit Number

Application Date

Approval Date

APPLICANT	DRILLER
GEORGE F. VARGO, JR	ST. GEORGE
Name	Name
219 INDIAN COURT	Tri Cities
Address	Address
RICHLAND, WASHINGTON	
City State Phone	City State Phone

We have had this well since 1979-1980. It was approved at the time.

WELL INFORMATION

219 Indian Court
Well Location Address | Lot | Block | Subdivision

Well Use:
- ☐ Domestic
- ☑ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☐ Plot plan submitted — Date
- ☐ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: George F. Vargo, Jr.

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

B-482

9 2 1 2 6 4 2 1 3 1 2

130

1100 AREA WELL INVENTORY FORM

Well Number: 130 Date 12/1/90
Other Well ID: Surveyor: RB

Name of Well Owner: GAYLORD G. THIEME

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 622 Spingler
Richland, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation

Verification by Owner/Occupant of Well Use: G J Thieme
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (NW or SW)

Well Specifications:
Installation Date: 1956 - 1966 Total Depth (ft): ~111 ft.
Well Construction Type: No drilling records. Unknown screen interval
~16" steel casing
Pump System Type: Submersible pump @ 103'
~2 hp
Well Access for Sounding: Possible access at top of well cap through hole used for pump wiring

---

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 15 (roll RPD 1)
Well Log Available: ✓ No ____ Yes
Well Log Obtained: ✓ No ____ Yes

Other:

with 6" ~ 8" BTOC according to owner
Aluminum housing covers most of well stickup and valve system
corrugated
Owner purchased property in 1964. Estimated well was installed 1955-66.

B-483

WHC-MR- 0295

130

W85-087
Permit Number
5-23-85
Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
Gaylord G. Thieme	Do Not Know
Name	Name
622 Spengler Rd.	
Address	Address
Richland, WA 375-0827	
City State Phone	City State Phone

9 2 1 2 6 4 2 1 3 1 4

WELL INFORMATION

622 Spengler Rd. ____ ____ ____
Well Location Address Lot Block Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☒ Plot plan submitted ____ Date
- ☐ Drilling log submitted ____ Date
- ☐ Cross-connection inspection made ____ Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: Gaylord G Thieme
5-23-85

APPROVAL: ____
(After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

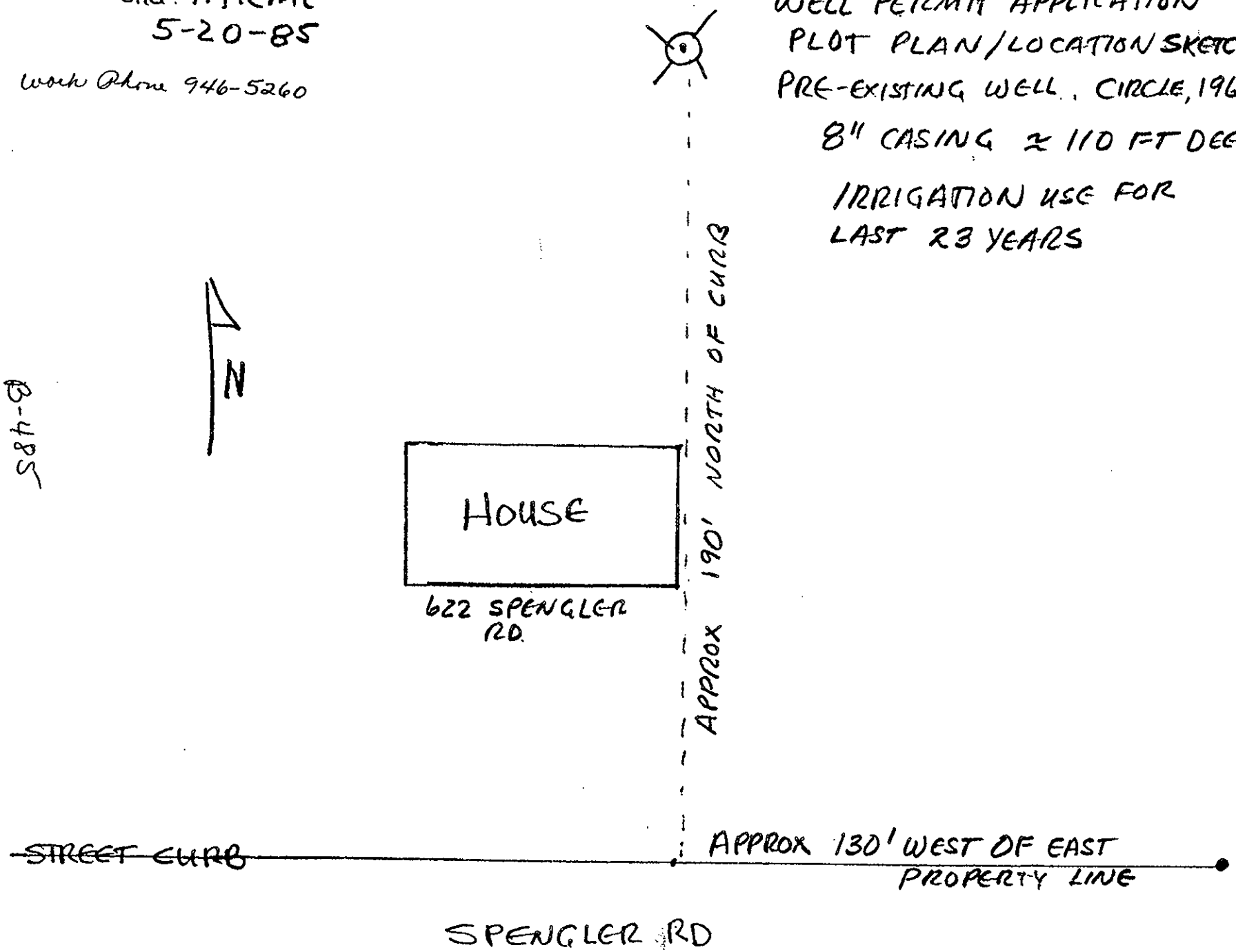
WSA-0055

9 2 1 2 6 4 2 1 3 1 5

PREPARED
G.G. THIEME
5-20-85

work Phone 946-5260

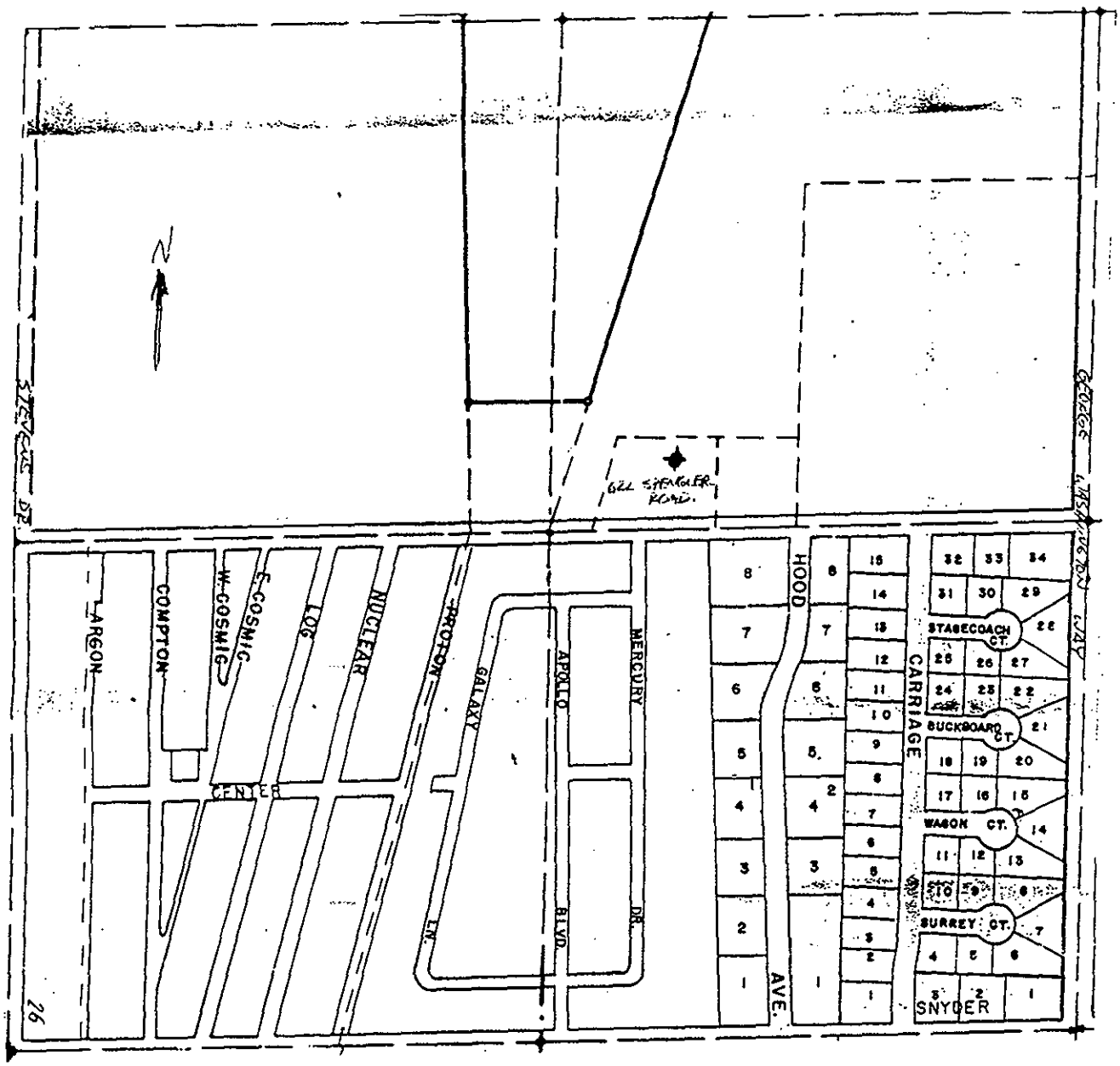
WELL PERMIT APPLICATION
PLOT PLAN/LOCATION SKETCH
PRE-EXISTING WELL, CIRCLE, 1962
8" CASING ≈ 110 FT DEEP.
IRRIGATION USE FOR
LAST 23 YEARS



B-485

WHC-MR- 0295

#130



9 2 1 2 6 4 2 1 3 1 6

131

1100 AREA WELL INVENTORY FORM

Well Number: 131 Date 11-20-90
Other Well ID: Surveyor: KSV

Name of Well Owner: HERSCHAL R. LANE

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 640 SPENGLER ROAD.
RICHLAND, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: irrigation

Verification by Owner/Occupant of Well Use: H R Lane (Signature)

Water in Contact with Humans: X Yes ___ No

Well Coordinates: North: unknown South: unknown
System: N/A

Township: 10N Range: 28E Section (nearest 1/4 1/4): NW1/4 of SW1/4 SEC 26

Well Specifications:
Installation Date: ~ 1965 (at least) Total Depth (ft): ~ 90-100' (95')
Well Construction Type: 4" -
Pump System Type: [illegible]
Well Access for Sounding: No - [illegible] road face.

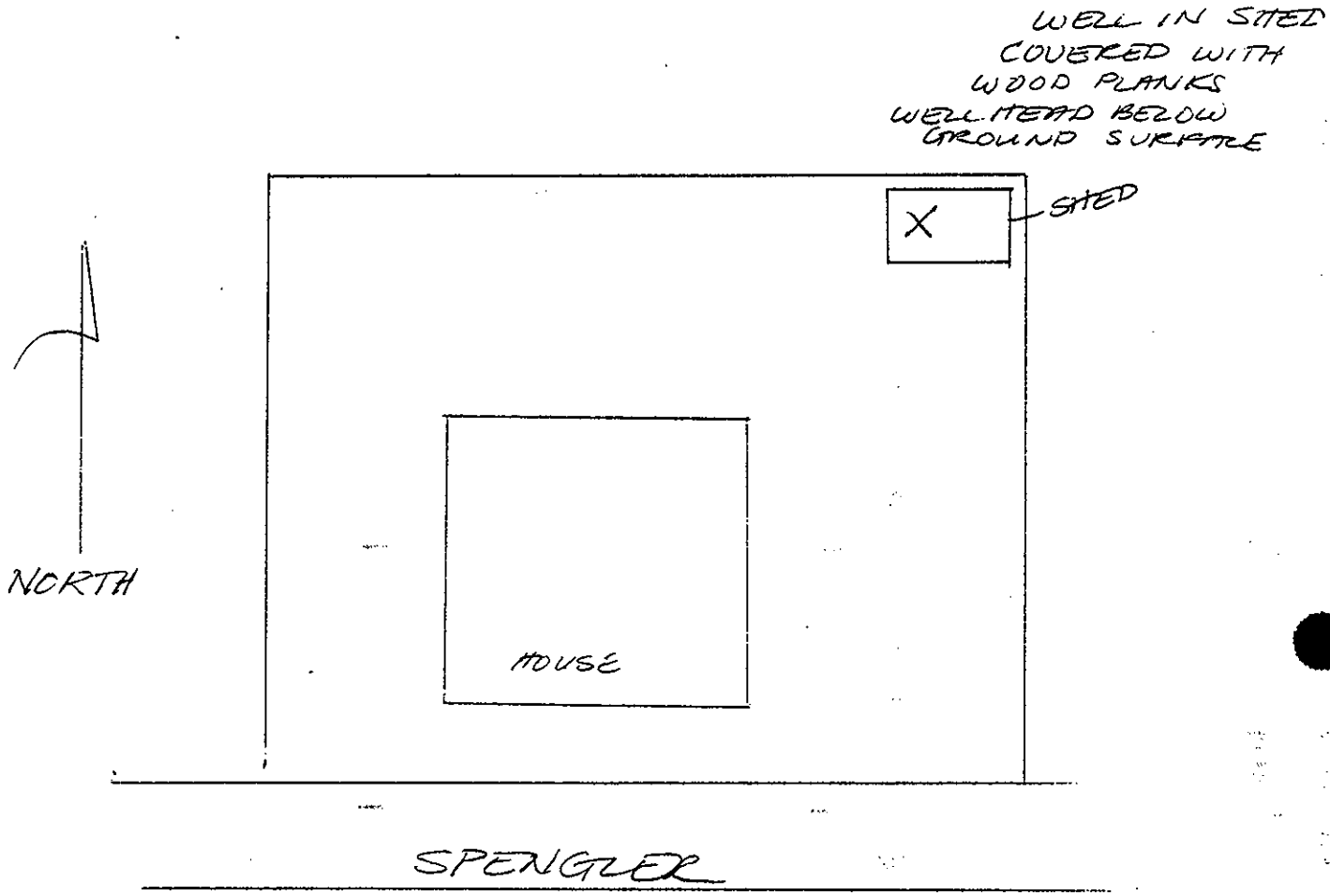
Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 12
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:
[illegible] 45 years ago. [illegible] [illegible]

B-487

9212613 7

131



HERSCHAL LANE
640 SPENGLER ROAD

9 2 1 2 6 4 2 1 3 1 8

132

1100 AREA WELL INVENTORY FORM

Well Number: 132 Date 12-5-90
Other Well ID: Surveyor: KSV

Name of Well Owner: BOB RECTOR
wk. phone: 375-3096

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2340 GEO. WASH. WAY
RICHLAND.

Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION ONLY

Verification by Owner/Occupant of Well Use: n/a
* telephone interview 12-6-90 KSV (Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (SW of SE)

Well Specifications:
Installation Date: ca. 1920 Total Depth (ft): 55'
Well Construction Type: hand dug, 4' dia. casing.
Pump System Type: centrifical pump - down hole.
Well Access for Sounding: yes - open on top

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: ___
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

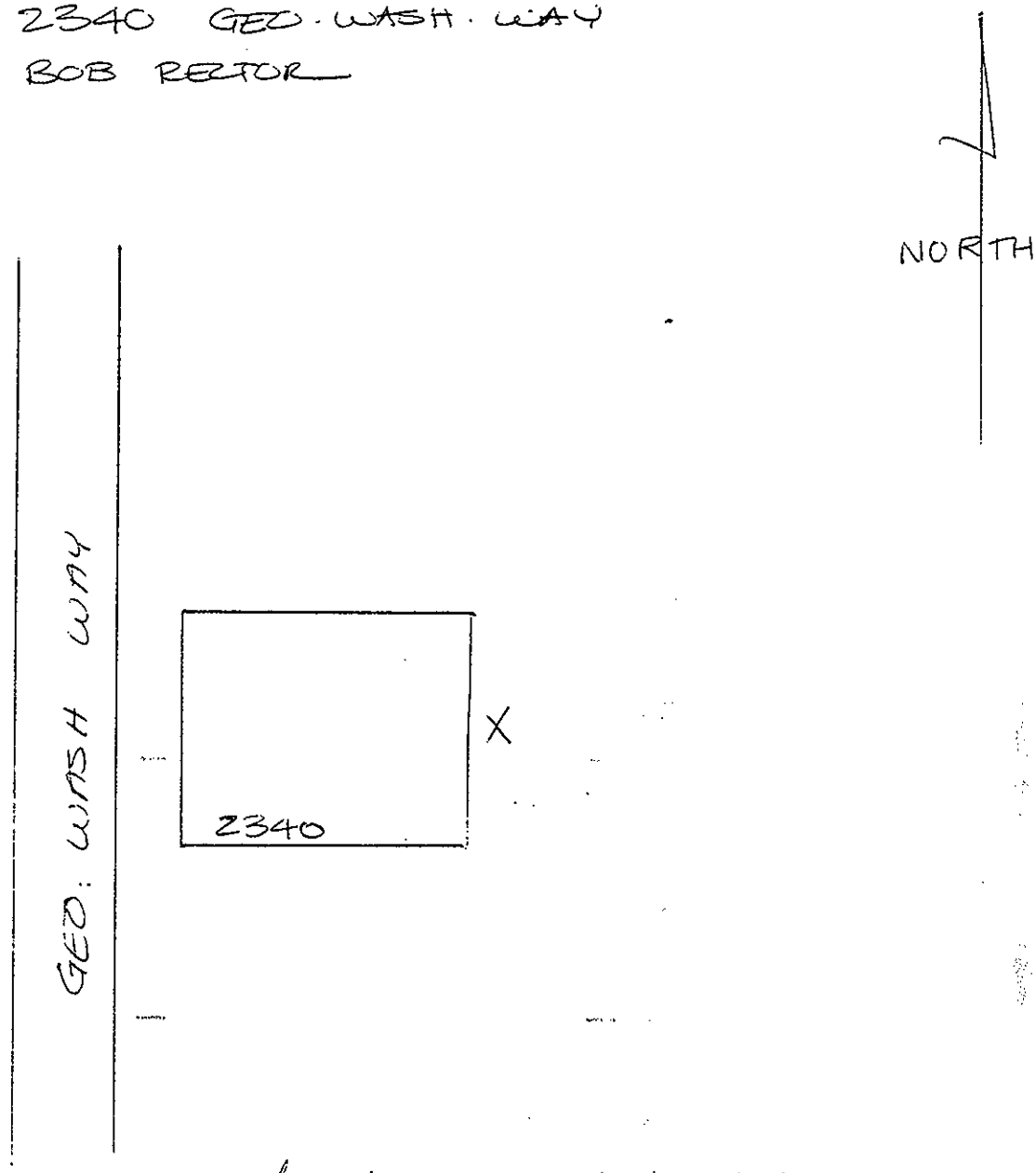
Other:
old hand dug well. wood frame on top
Mr. Rector gave us permission to photograph well.
37' to water level.

B-489

9212643219

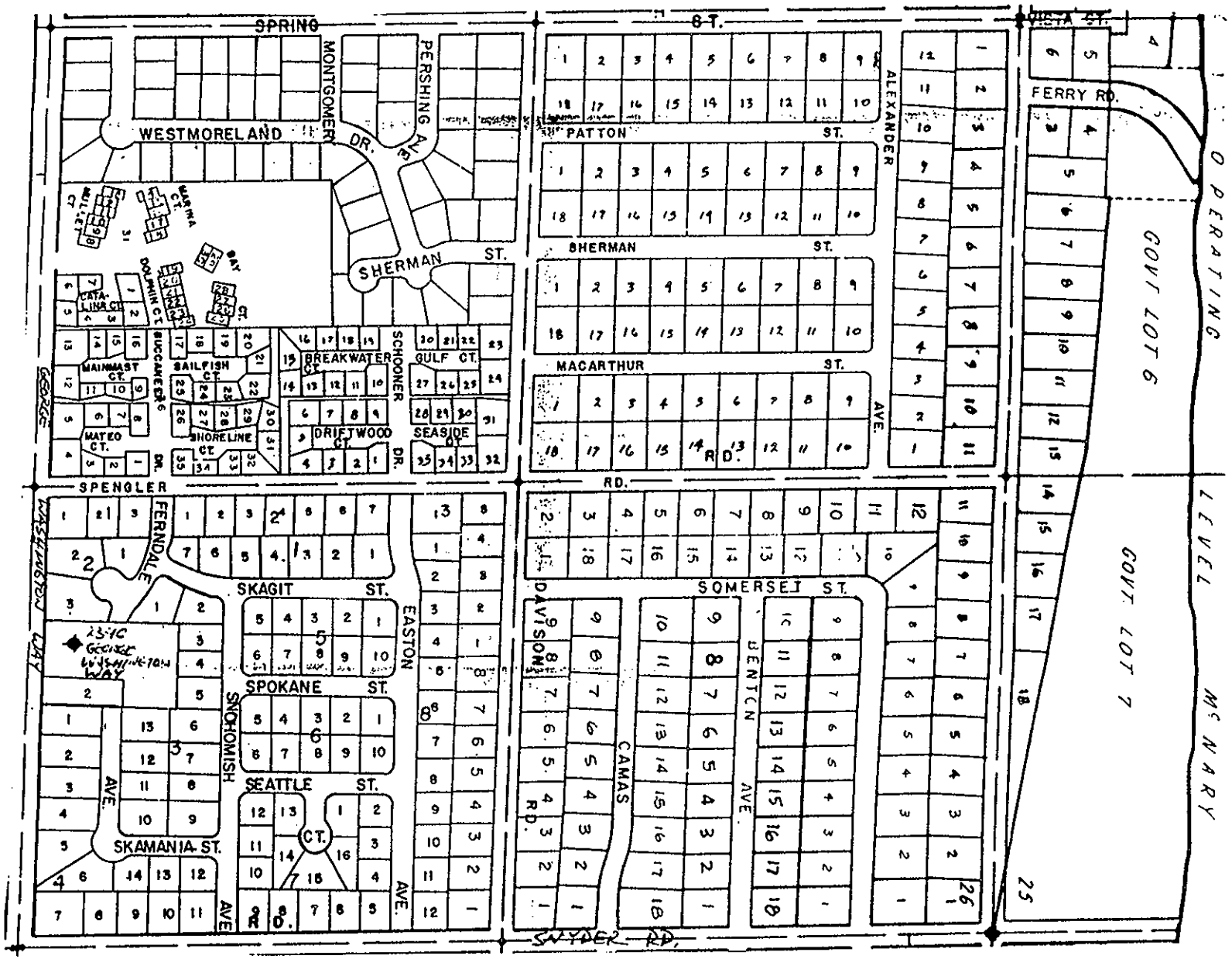
132

2340 GEO. WASH. WAY
BOB RECTOR



hand dug well located on east side of the house, in back of outboard garage. Since top of well is open, he has placed debris, bicycles, etc - on top so children would fall in. Will have to remove debris pile to access well.

9 2 1 2 6 4 2 1 3 2 0



B-491

WHC-MR- 0295

132

WHC-MR- 0295

SECTION 4 #133
RESIDENTIAL

1100 AREA WELL INVENTORY FORM

Well Number: #133 Date 11-17-90
Other Well ID: Surveyor: ~~11-17-9~~ KSV.

Name of Well Owner: CLIPPER RIDGE HOMEOWNERS ASSOC.

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 400 CLIPPER DRIVE
RICHLAND, WA
Street Address of Residential Well Site if Different from Owner:
N/A

Current Well Use: IRRIGATION

Verification by Owner/Occupant of Well Use: n/a
(Signature)
Photo conversation with Bob Jones - Clipper Homeowners Association.

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): NW 1/4 OF SE 1/4 Section 26

Well Specifications:
Installation Date: 1975 Total Depth (ft): unknown
Well Construction Type: 6"
Pump System Type: unknown.
Well Access for Sounding: no

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: Roll 1K #1
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:
CITY OF RICHLAND
WATER WELL PERMIT # WSS-055
limited information available about well.
Maintained by Home Lawn Care (no info available)

B-492

9212642132 2

WHC-MR- 0295

133

City Of Richland

WATER WELL PERMIT

Permit Number: 485-1-85

Application Date: 5-24-85

Approval Date:

APPLICANT	DRILLER
Name: Clipper Ridge Homeowners Association	Name:
Address: 400 Clipper Drive	Address:
City: RICHLAND State: WA Phone: 99352	City: State: Phone:
375-0562 (C. Kohler: President)	

WELL INFORMATION

400 Clipper Drive — Well Location Address; Lot; Block; Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☒ Plot plan submitted — Date
- ☐ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: Cecilia P. Kohler for C.R.H.O.A.

APPROVAL: (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

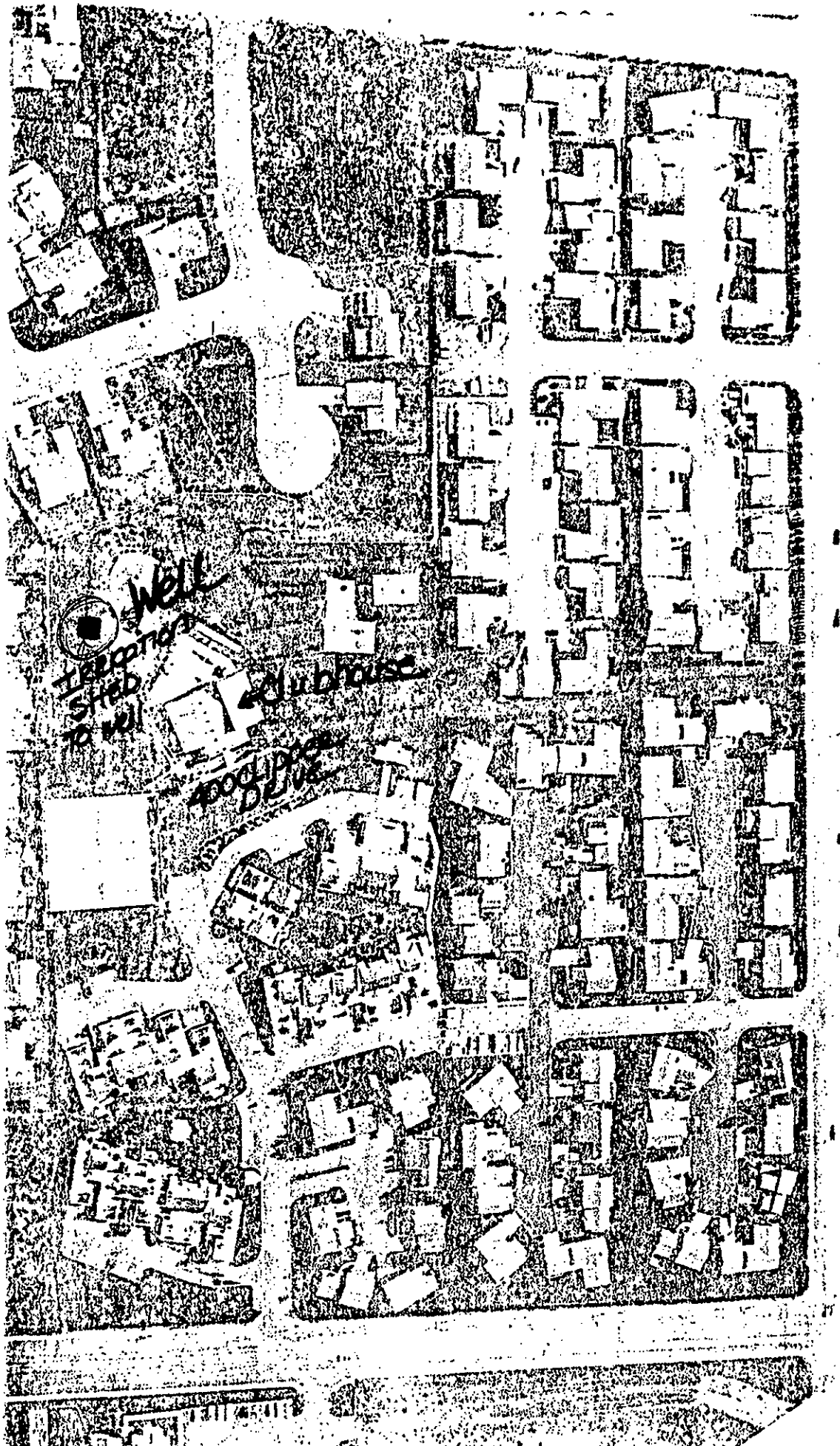
B-493

WSA-0055

9212623

#133

CLIPPER RIDGE HOMEOWNERS ASSOC.
400 CLIPPER DRIVE
RICHLAND, WA.
AERIAL PHOTO: 1983



9 2 1 2 6 4 2 1 3 2 4

WHC-MR- 0295

SECTION 4

134

1100 AREA WELL INVENTORY FORM

Well Number: 134' (Supply) #1 Date 11-18-90
Other Well ID: Surveyor: KSV

Name of Well Owner: JOHN RECTOR

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2317 FERNDALE
RICHLAND, WA.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: HEAT PUMP (SUPPLY) #1 2 wells
HEAT PUMP (DISCHARGE) #2
→ see attached for well #2

Verification by Owner/Occupant of Well Use: John H. Rector (Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: ___ South: ___
System: ___

Township: 10N Range: 28E Section (nearest 1/4 1/4): SW 1/4 of SE 1/4 Section 26

Well Specifications:
Installation Date: DEC. 1987 Total Depth (ft): well #1 60' well #2 60'
Well Construction Type: WELL #1 Rotary - 6" CASING
WELL #2 Rotary - 6" CASING
Pump System Type: WELL #1 ARO IMCTOR SUBMERSIBLE 1HP.
WELL #2 - NO PUMP
Well Access for Sounding: WELL #2 = ~~yes~~ ~~no pump~~ no
WELL #1 = ~~no pump~~ no enclosed system

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: ___
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes

well #2 photo #2 roll 1K

well #1 photo #3 roll 1K

Other:
CITY OF RICHLAND
WATER WELL PERMITS W88-130
W88-129

B-495

9212613225

WHC-MR- 0295

#134

W88-130
Permit Number
4-6-88
Application Date

Approval Date

City Of Richland

Well #2

WATER WELL PERMIT

APPLICANT	DRILLER
John Rector	Peter & St. George Jr
Name	Name
2317 Ferndale	701 S 45th Ave
Address	Address
Richland Washington, 99352	Richland, WA 99352 962-3200
City State Phone	City State Phone

WELL INFORMATION

2317 Ferndale — 4 — 41 — Riverforest Terrace #12
Well Location Address — Lot — Block — Subdivision

Well Use:
- ☐ Domestic
- ☐ Irrigation
- ☒ Heat Pump (supply)
- ☒ Heat Pump (discharge)

Operational Requirements:
- ☐ Plot plan submitted — Date
- ☒ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: _____ APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

2-496

WSA-0055

9212642132 6

WHC-MR- 0295

#134

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

#2

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name John Rector Address 2317 Ferndale Richland, WA 99

(2) LOCATION OF WELL: County Benton [redacted] W.M.

Bearing and distance from section or subdivision corner Lot 4, Bl 4, Riverpark

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) 2

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 60 ft. Depth of completed well 60 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from -1 ft. to 60 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☒ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 70 ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Air	Test	Apx	50 Gpm	

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Sand and Gravel Black in color	0	40
Sand and Gravel Brown in color Bearing Water Apx 50 Gpm	40	60

RECEIVED OCT 13 1988 DEPARTMENT OF ECOLOGY

RECEIVED FEB 16 1988 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

Work started 12/21 1987 Completed 12/21 1987

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME St George Drilling (Person, firm, or corporation) (Type or print)

Address 701 S 45 AVE W. Richland

[Signed] [signature] (Well Driller)

License No. 0483 Date 12/21 1987

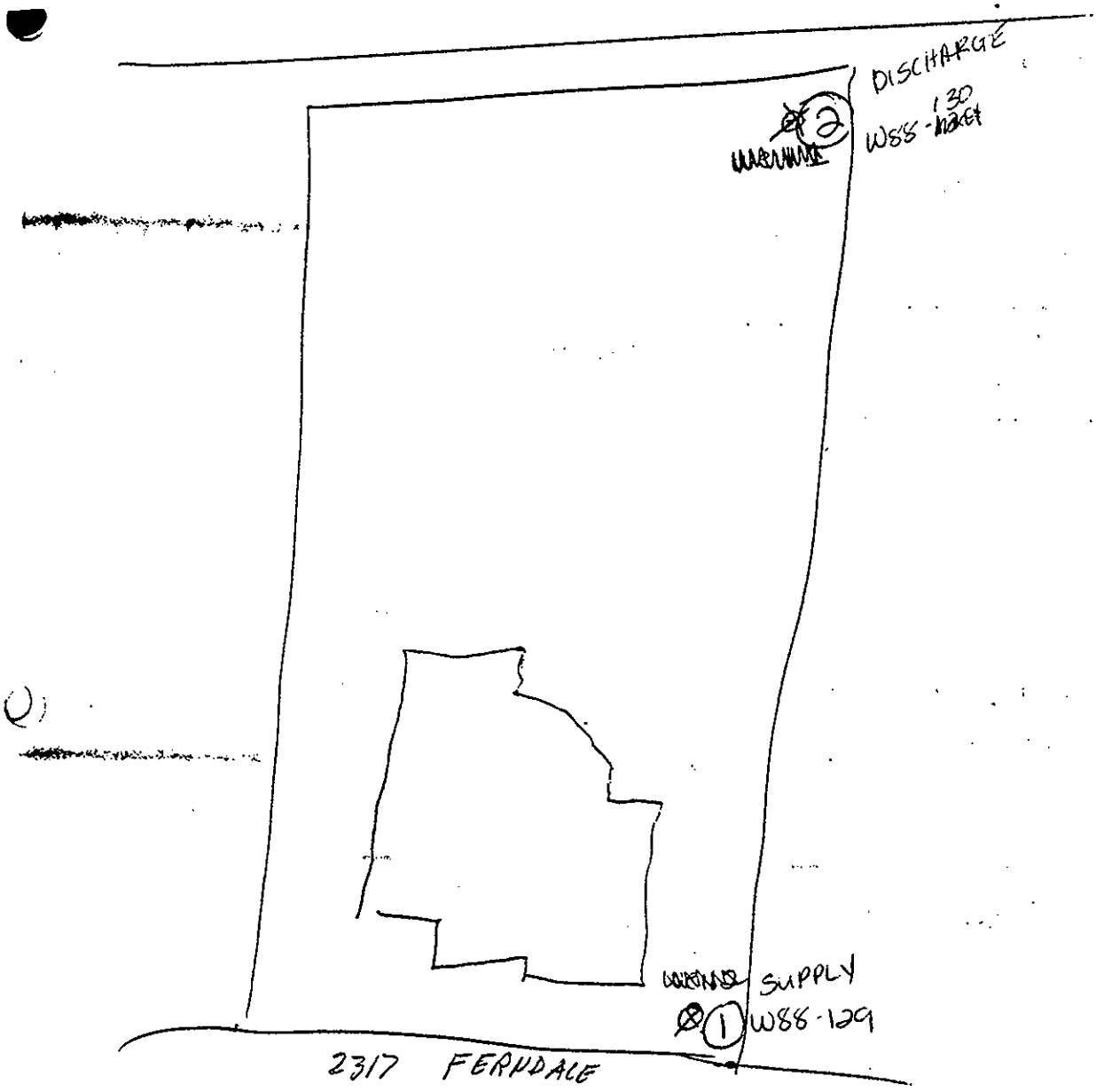
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

B-497

W88-129
~~W88-130~~

#130



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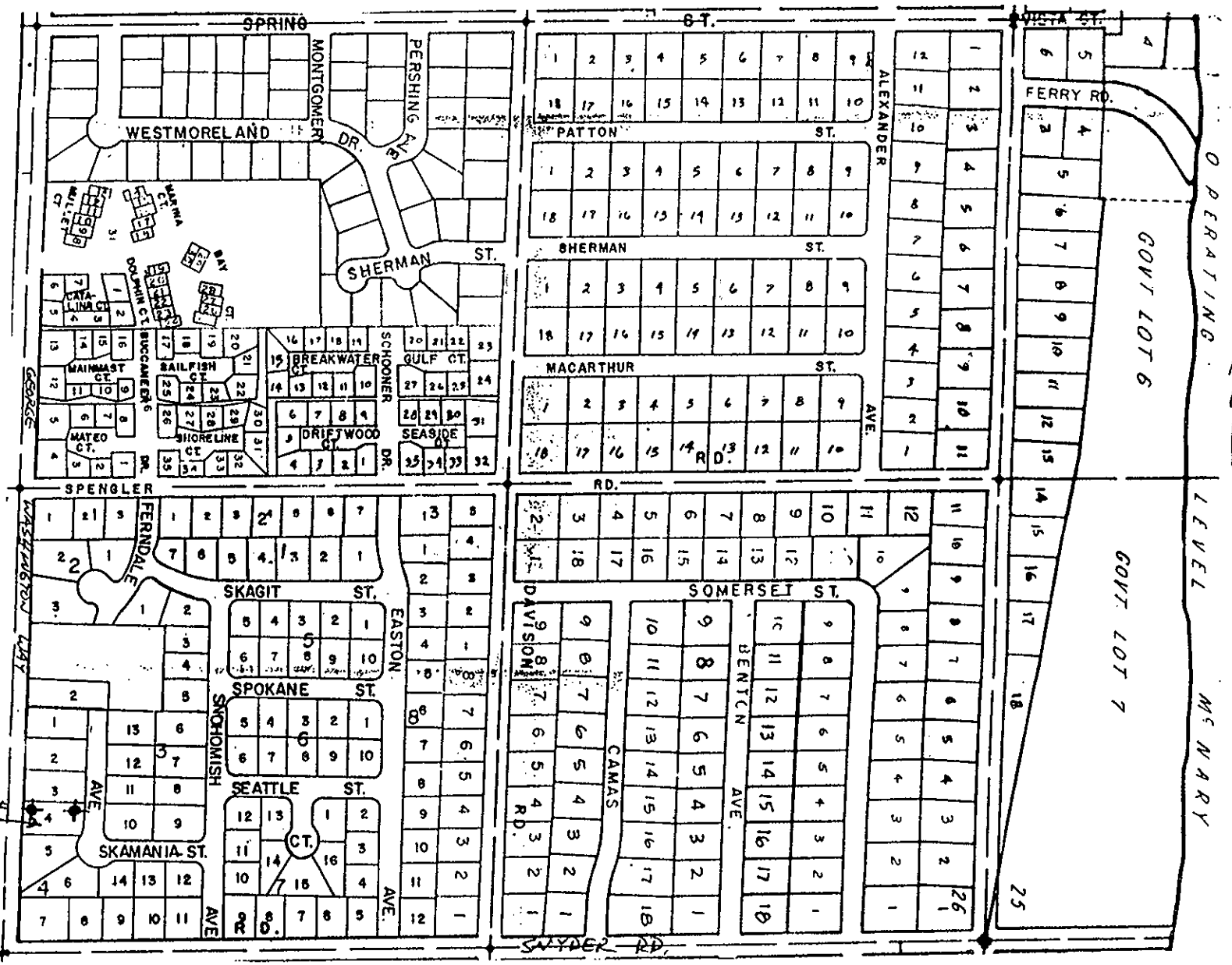


B-499

WHC-MR- 0295

134

WHC-MR- 0295

135

1100 AREA WELL INVENTORY FORM

Well Number: 135 #2 (discharge) Date 11-18-90
Other Well ID: Surveyor: KSV

Name of Well Owner: John Rector

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2317 Ferndale
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: heat pump discharge

Verification by Owner/Occupant of Well Use: (see form for well # 138)
(Signature)

Water in Contact with Humans: ____ Yes X No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (SW of SE)

Well Specifications:
Installation Date: Dec 1987 Total Depth (ft): 60
Well Construction Type: Rotary - 6" casing

Pump System Type: No pump

Well Access for Sounding: No - enclosed system

Other Information:
Photograph Taken: ____ No X Yes Photo Number: 2 roll K
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:

9212642130

B-500

WHC-MR- 0295

MIKE GILLIVAN #135

W88-129
Permit Number

4-6-88
Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

well #1

APPLICANT	DRILLER
John Rector	Peter E St. George Jr
Name	Name
2312 Ferndale	701 South Ave
Address	Address
Richland, WA 99352 375-1569	Richland, WA 99352 967-3767
City State Phone	City State Phone

WELL INFORMATION

2312 Ferndale — Well Location Address
21 — Lot
4 — Block
Rivercrest Terrace #12 — Subdivision

Well Use:
- ☐ Domestic
- ☐ Irrigation
- ☒ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☐ Plot plan submitted — Date
- ☒ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: _____

APPROVAL: _____
(After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

B-501

WSA-0055

9212613 1

35

WHC-MR- 0295

#1

135

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name John Pecker Address 2317 Fernoak, Richland W

(2) LOCATION OF WELL: County Benton [redacted]

Bearing and distance from section or subdivision corner Lot 4 Block 4 Rivercenter

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) 2

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 60 ft. Depth of completed well 60 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from -1 ft. to 60 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name ARC Motor
Type: Sub H.P. 1

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 70 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Air Test Apx. 555 Gpm				

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Sand and Gravel Black in color	0	40
Sand and Gravel Producing water Apx 555 Gpm	40	60

RECEIVED OCT 13 1989 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

RECEIVED DEC 16 1988 DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

Work started 12/14 19 87 Completed 12/20 19 87

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME St George Drilling (Person, firm, or corporation) (Type or print)

Address 201 S 45 AVE W. Richland

[Signed] Pete E. St George (Well Driller)

License No. 0483 Date 12/20 19 87

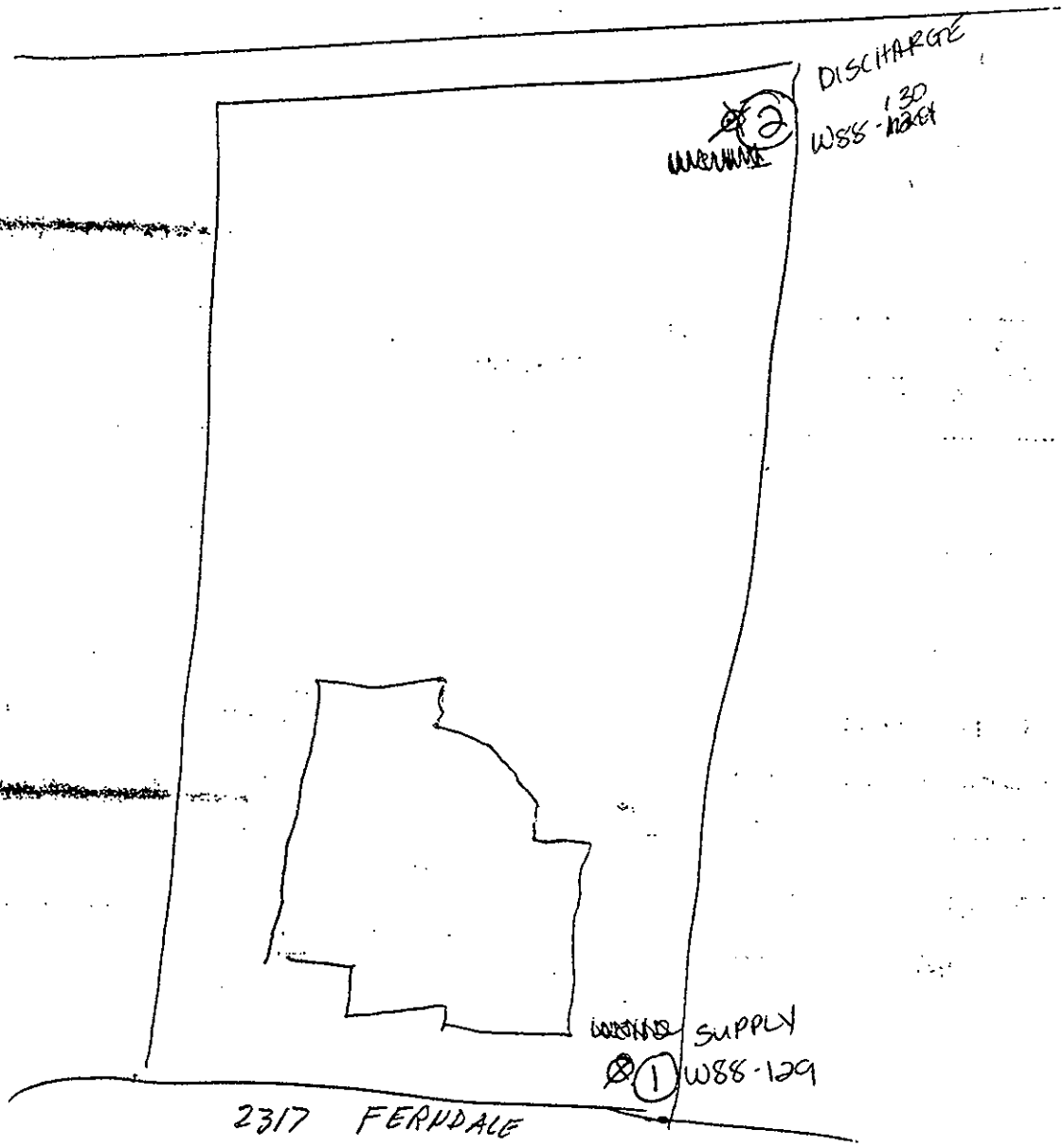
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

9 2 1 2 6 4 2 1 3 3 2

W88-129
~~W88-130~~

135



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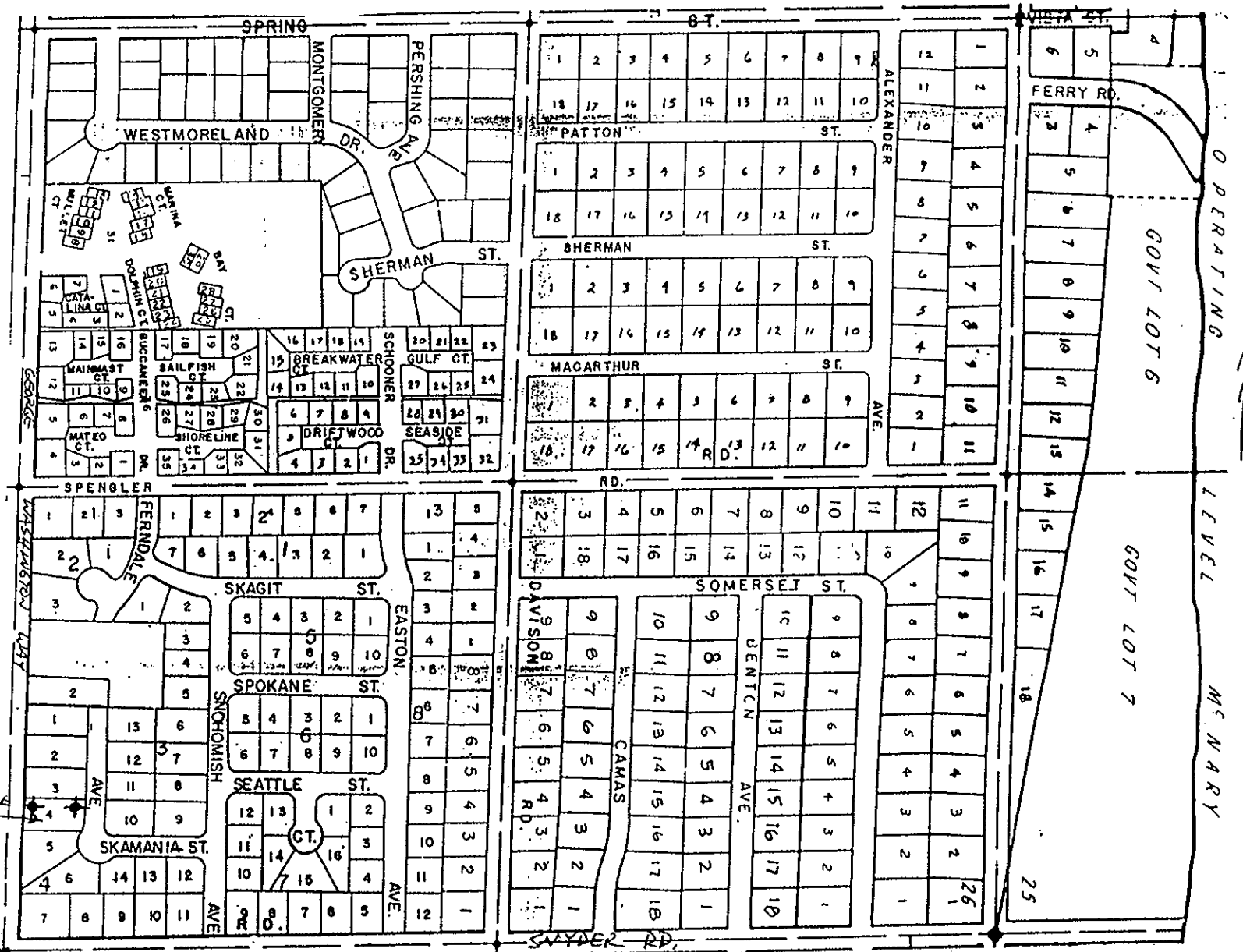


WHC-MR- 0295

135

SECTION 4 # 136

1100 AREA WELL INVENTORY FORM

Well Number: 136 Date 11-15-90
Other Well ID: Surveyor: K.VIK

Name of Well Owner: FREDRICK BOND ph. 375-1151

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2332 SNOHOMISH AVE.
RICHLAND, WA PH. 375-1151
Street Address of Residential Well Site if Different from Owner:

Current Well Use: IRRIGATION, HEAT PUMP (SUPPLY)

Verification by Owner/Occupant of Well Use: Not available
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): SW 1/4 of SE 1/4 section 26

Well Specifications:
Installation Date: JAN. 1987 Total Depth (ft): 531
Well Construction Type: CABLE TOOL

Pump System Type:

Well Access for Sounding: Bell on cap. ~~[illegible]~~
PVC (capped) on side

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 15 Roll 2K
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:

CITY OF RICHLAND
WATER WELL PERMIT # W85-120

Rtn'd card postmarked in San Jose, CA.
visited house several times
[illegible]

B-505

9212613355

WHC-MR- 0295

#136

W85-120
Permit Number

Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
Fredrick Bond	Hatch Drilling Co.
Name	Name
2332 Snohomish Ave	6417 W. Court St
Address	Address
Richland, Wa 375-1151	Pasco WA 99301
City State Phone	City State Phone

WELL INFORMATION

2332 Snohomish Ave — Well Location Address
6 — Lot
6 — Block
Rivercrest Terrace #12 — Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☒ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☐ Plot plan submitted _____ Date
- ☐ Drilling log submitted _____ Date
- ☐ Cross-connection inspection made _____ Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: _____

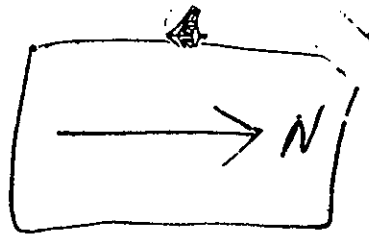
APPROVAL: _____
(After requirements met)

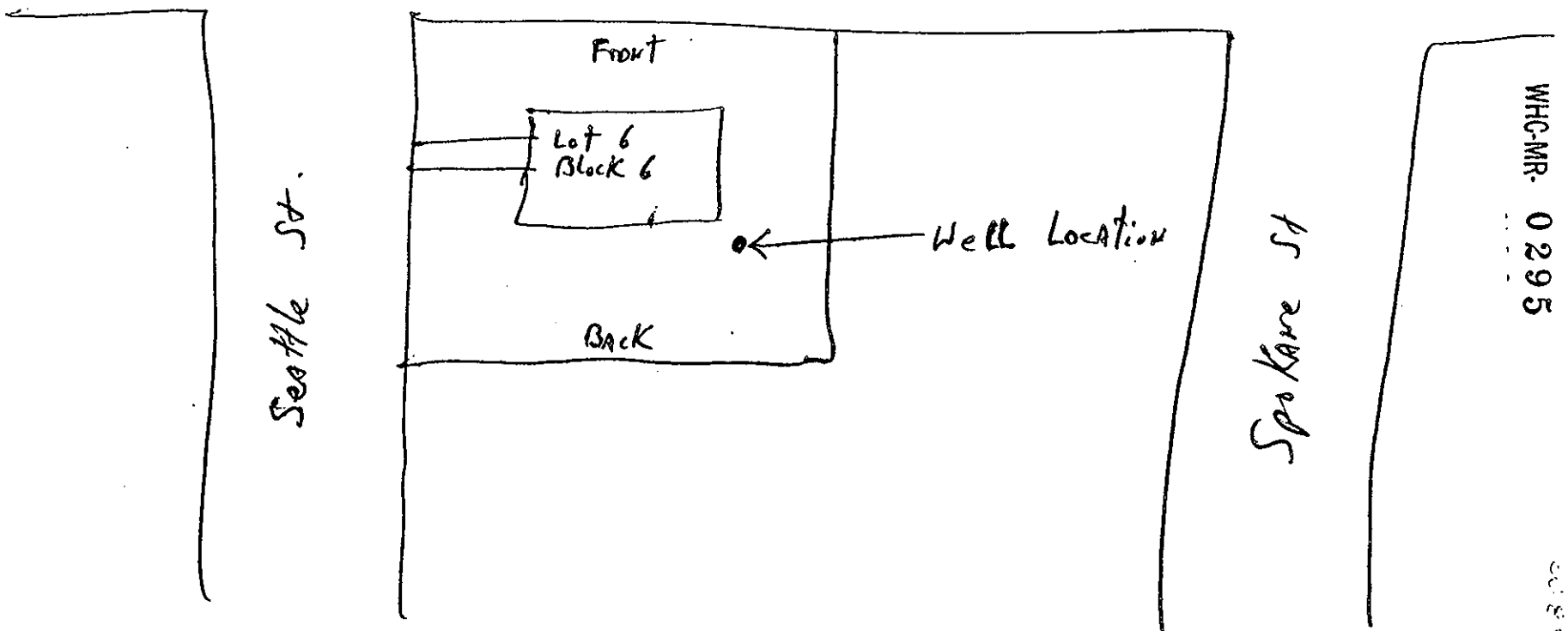
Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

9-21-2642133 6

Property Site PLAN





WHC-MR- 0295

B-507

#130

WHC-MR- 0295

Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. 0055-120 #136
Permit No. .....

(1) OWNER: Name Fredrick Bond Address 2332 Snohomish, Richland, Wa.

(2) LOCATION OF WELL: County Benton Co. — S ¼ E ¼ Sec. 26 T. 10 N., R. 28 W.

Give location and distance from section or subdivision corner.

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☑ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 53 ft. Depth of completed well 53 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1 ft. to 48 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☑ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☑
Type of perforator used
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☑ No ☐
Manufacturer's Name Johnson
Type Stainless Steel Model No. 304/5
Diam. 6 Slot size 22 from 48 ft. to 53 ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☑ Size of gravel:
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☑ No ☐ To what depth? 22 ft.
Material used in seal Portland
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level 35 ft. below top of well Date Jan 81
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 40 gal./min with 20 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date Jan 81
Temperature of water Was a chemical analysis made? Yes ☐ No ☑

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Fine Sand Fine to Course	0	22
Large Cobbles & Gravels		
Brown clay cemented cobbles	22	26
Small cemented gravels	26	39
Black Sand & Gravel - Loose	39	49
1½" River Gravel, Course Sand	49	53

Work started Jan 81, 19 81 Completed Jan 81, 19 81

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hall Drilling Co. Inc. (Person, firm, or corporation) (Type or print)

Address 6412 W Court St Pasco

[Signed] (Well Driller)

License No. 0176 Date 1/22, 19 81

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

DK 1.28.81

B-508

9 2 1 2 6 4 2 1 3 3 8

#136

Source: USGS

11/26/1990 -M

10N/28E-26JR

SITE ID:	461906119155001
KEY.NO.:	6607
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	461906
LONGITUDE:	1191550
LAT/LONG ACC:	M
LOCAL NO.:	10N/28E-26JR
ALTITUDE:	378.00
ALT.ACC:	10
USE OF SITE:	W
NO.1 WATER USE:	H
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	53.00
WELL.DEPTH:	53.00
DEPTH SOURCE:	D
DATE DRILLED:	1/ 1/1981
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	FREDERICK
LAST NAME:	BOND
DATE OWNED:	1/22/1981
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	35.00
WATER LEVEL DATE:	1/ 1/1981
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	B
DISCHARGE:	40.00
DRAWDOWN:	0.00
TEST TIME:	1.0
FINISH:	S
OPENING TYPE.	S
OPENING TOP:	48.00
OPENING BOTTOM:	53.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	BROWN
% WATER.CONTRIBUTED:	0
UNIT TOP:	22.00
GEOHYDROLOGIC UNIT:	121MDRG

#136

RELATIVE CONTRIBUTION:	P
LITHOLOGY:	GRCM
LITHOLOGIC MODIFIER:	+ SDGL 39-53FT
% WATER.CONTRIBUTED:	100

9212642134 0

137

WHC-MR- 0295

1100 AREA WELL INVENTORY FORM

Well Number: 137 Date 12-15-90
Other Well ID: Surveyor: KSV

Name of Well Owner: HUNTER S. McCLUER ph. 375-0752

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2338 SNOHOMISH
RICHLAND.
Street Address of Resid[illegible] Well Site if Different from Owner:

Current Well Use: No [illegible] available

Verification by Owner/Occupant of Well Use: (See card).
(Signature)

Water in Contact with Humans: ____ Yes ____ No
No info available.

Well Coordinates: North: [illegible] South: [illegible]
System: [illegible]

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (SW of SE)

Well Specifications: No info Available
Installation Date: Total Depth (ft):
Well Construction Type:

Pump System Type:

Well Access for Sounding:

Other Information:
Photograph Taken: ____ No ____ Yes Photo Number: ____
Well Log Available: ____ No ____ Yes
Well Log Obtained: ____ No ____ Yes

Other: Existance of well is Questionable.

12/3 [illegible]
12/6 [illegible] - [illegible] piling up at front door. Obviously out of town
Tried to contact H. McCluer several times by telephone (1-1 & 30 min), also drove by residence. No one was home. Suspect he is confusing F. Bennis' #1003 well with being on his property. Backyard is not fenced in. I took a look around, no well was found.

B-511

9212613411

137

Golder Associates Inc. is conducting a well inventory in your neighborhood, as described on the attached public notice from the U.S. Department of Energy. We have attempted to contact you to determine whether a groundwater well is on your property. To assist in this survey, please fill out and sign this postage-paid card and return it as soon as possible. Thank you for your assistance.

on my property I ✓ do / I ___ do not have a groundwater well.

Name: HUNTER S. McCLURE
(printed)

Hunter S. McClure
(signature)

Street Address: 2338 SNOHOMISH

375-0752 no ans at 6:00 pm

9212642134 2

WHC-MR- 0295

S'2S

138

1100 AREA WELL INVENTORY FORM

Well Number: 138 Date 11/16/90
Other Well ID: none Surveyor: Bryan

Name of Well Owner: Lou Ann Schielke

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2635 Harris Ave
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation

Verification by Owner/Occupant of Well Use: Lou Ann Schielke
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: unknown South: unknown
System: N/A

Township: 10N Range: 28E Section (nearest 1/4 1/4): 26 (NE 1/4 NE)

Well Specifications:
Installation Date: ~10 yrs ago Total Depth (ft): ~65 ft
Well Construction Type: Cable Tool; 6" dia. casing (0' to 60'), no perforations

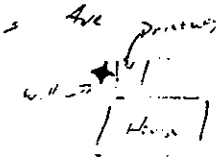
Pump System Type: Flygon submersible

Well Access for Sounding: Sealed system. Well access both

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: (Address in picture)
Well Log Available: ✓ No ✓ Yes
Well Log Obtained: ✓ No ✓ Yes WDOE LOG (FROM CITY)

Other: ~6" dia steel casing.

Harris Ave



Owner didn't know about very many nearby wells.
Left card. Her husband may send construction details later

B-513

9212613473

WHC-MR- 0295

#138

City Of Richland

WATER WELL PERMIT

W 85-071
Permit Number

4-25-85
Application Date

Approval Date

APPLICANT	DRILLER
Name: Dale R Schielke	Name: Lindsay Water Systems
Address: 2635 Harris Ave	Address: PO Box 2185
City: Richland State: WA Phone: 375-0183	City: Pasco State: WA Phone: 99302

WELL INFORMATION

2635 Harris (Well Location Address) | Lot: 4 | Block: 1 | Subdivision: Rio Vista Acres

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☑ Plot plan submitted — Date: 4-25-85
- ☑ Drilling log submitted — Date: 4-25-85
- ☐ Cross-connection inspection made — Date:
- ☑ Permit to Appropriate Public Waters; Permit # G4-26571P

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: Dale R Schielke

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

B-514

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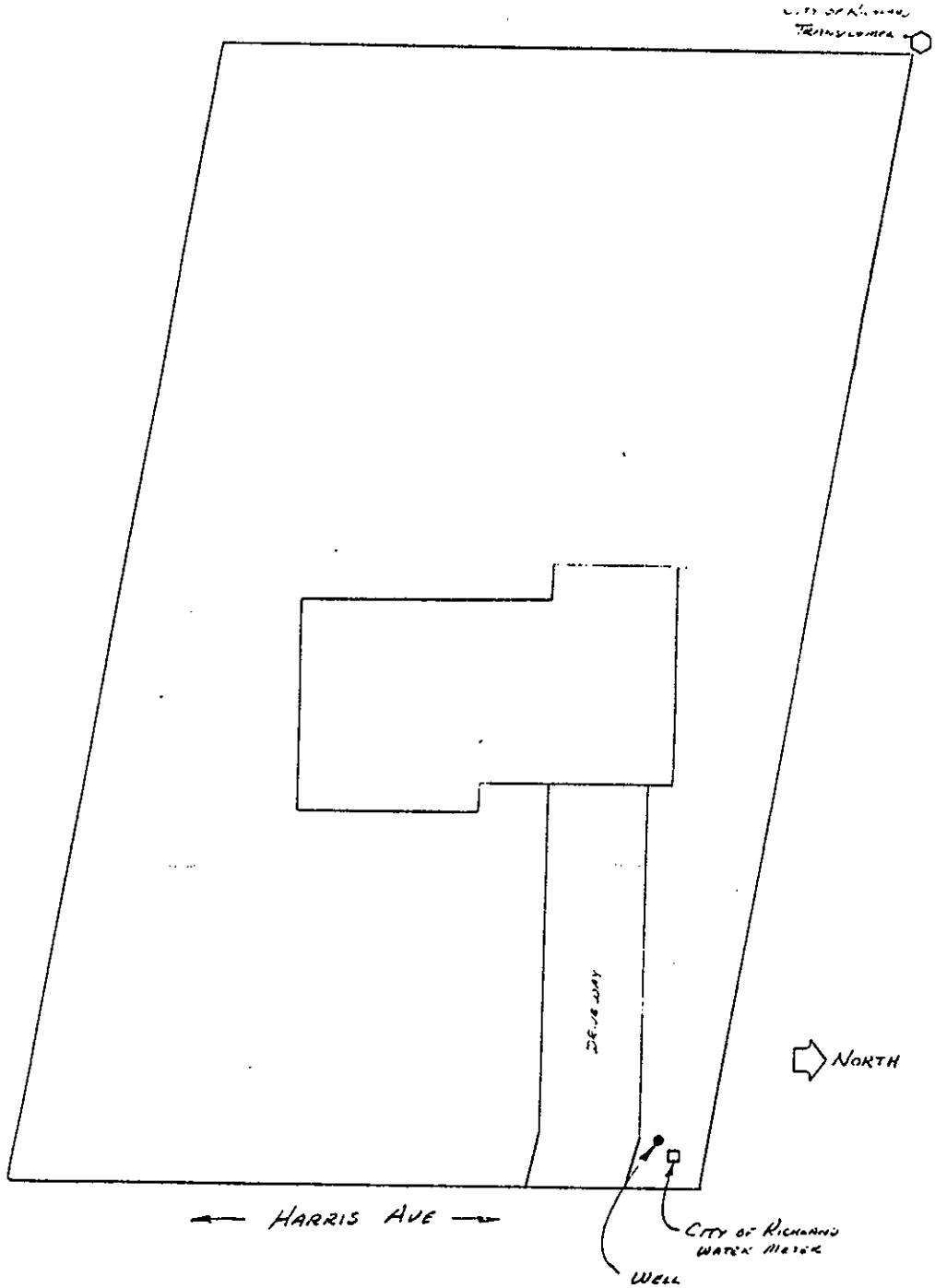


WELL LOCATION PLAN FOR 2635 HARRIS

WHC-MR- 0295

#138

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PERMIT

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
March 3, 1980	G4-26571	G4-26571P	

NAME: DALE R. SCHIELKE

ADDRESS (STREET)	CITY	STATE	ZIP CODE
2635 Harris Avenue	Richland	Washington	99352

The applicant is, pursuant to the Report of Examination which has been accepted by the applicant, hereby granted a permit to appropriate the following described public waters of the State of Washington, subject to existing rights and to the limitations and provisions set out herein

PUBLIC WATER TO BE APPROPRIATED

SOURCE: A well

TRIBUTARY OF (IF SURFACE WATER):

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	15	6.4

QUANTITY, TYPE OF USE, PERIOD OF USE: To be used from April 1 to October 31, for the irrigation of 1½ acre.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION/WITHDRAWAL: 410 feet south and 235 feet west of the northeast corner of Sec. 26.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE E. OR W. W.M.	W.R.I.A.	COUNTY
NE¼NE¼	26	10	28 E.	37	Benton

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
4	1	Rio Vista Acres Subdivision

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Lots 3, 4, and 5 of Rio Vista Acres Subdivision, being within the NE¼NE¼ of Sec. 26, T. 10 N., R. 28 E.W.M., Benton County.

RETAIN FOR YOUR FILES

ECY 040-1-20 (Rev. 4-77)

PERMIT

9212642134 6

B-516

DESCRIPTION OF PROPOSED WORKS

A well 6 inches in diameter and 60 feet deep with 1½ horsepower pump.

#138

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Begun	Complete	October 1, 1983

PROVISIONS

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

This authorization to use public waters of the state is classified as a FAMILY FARM PERMIT in accordance with Chapter 90.66 RCW (Initiative Measure No. 59). This means the land being irrigated under this authorization shall comply with the following definition: Family Farm - a geographic area including not more than 2,000 acres of irrigated agricultural lands, whether contiguous or noncontiguous, the controlling interest in which is held by a person having a controlling interest in no more than 2,000 acres of irrigated agricultural lands in the State of Washington which are irrigated under water rights acquired after December 8, 1977. Furthermore, the land being irrigated under this authorization must continue to conform to the definition of a family farm.

This permit shall be subject to cancellation should the permittee fail to [illegible] schedule and/or fail to give notice to the Department of Ecology on forms provided by that Department documenting such compliance

Given under my hand and the seal of this office at Yakima, *Washington, this* 23rd *day of* April, *19*82.

Department of Ecology

by Russell K. Taylor

RUSSELL K. TAYLOR, REGIONAL MANAGER

B-517

9 2 1 2 6 0 2 1 3 4 7

WHC-MR- 0295

WATER WELL REPORT

STATE OF WASHINGTON

...st Copy with
...ology
- Owner's Copy
- Driller's Copy

Application No. / #[illegible]

Permit No. ...

(1) OWNER: Name Dale Schelky Address 2641 Harris Richland Wa

(2) LOCATION OF WELL: County Benton — NE ¼ NE ¼ Sec. 26 T. 10 N., R. 28 E. W.

...ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) ....

New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [X] Driven [ ]
Reconditioned [ ] Rotary [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled ... ft. Depth of completed well ... ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to ... ft.
Threaded [ ] ..." Diam. from ... ft. to ... ft.
Welded [ ] ..." Diam. from ... ft. to ... ft.

Perforations: Yes [ ] No [X]
Type of perforator used ...
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name ...
Type ... Model No ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes [X] No [ ] To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name ...
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 29 ft. below top of well Date ...
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? ...
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test 30 gal./min. with 2 ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG: A

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Topsoil	0	3
Cemented Gravel & Boulders	3	50
Brown Sand & Pea Gravel	50	60

Work started 3-25 19 80 Completed 4-1 19 80

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Lindsay Water Systems (Person, firm, or corporation) (Type or print)

Address 4300 No 108 Pasco Wash.

[Signed] Jim Smith (Well Driller)

License No. 552 Date 4-1, 1980

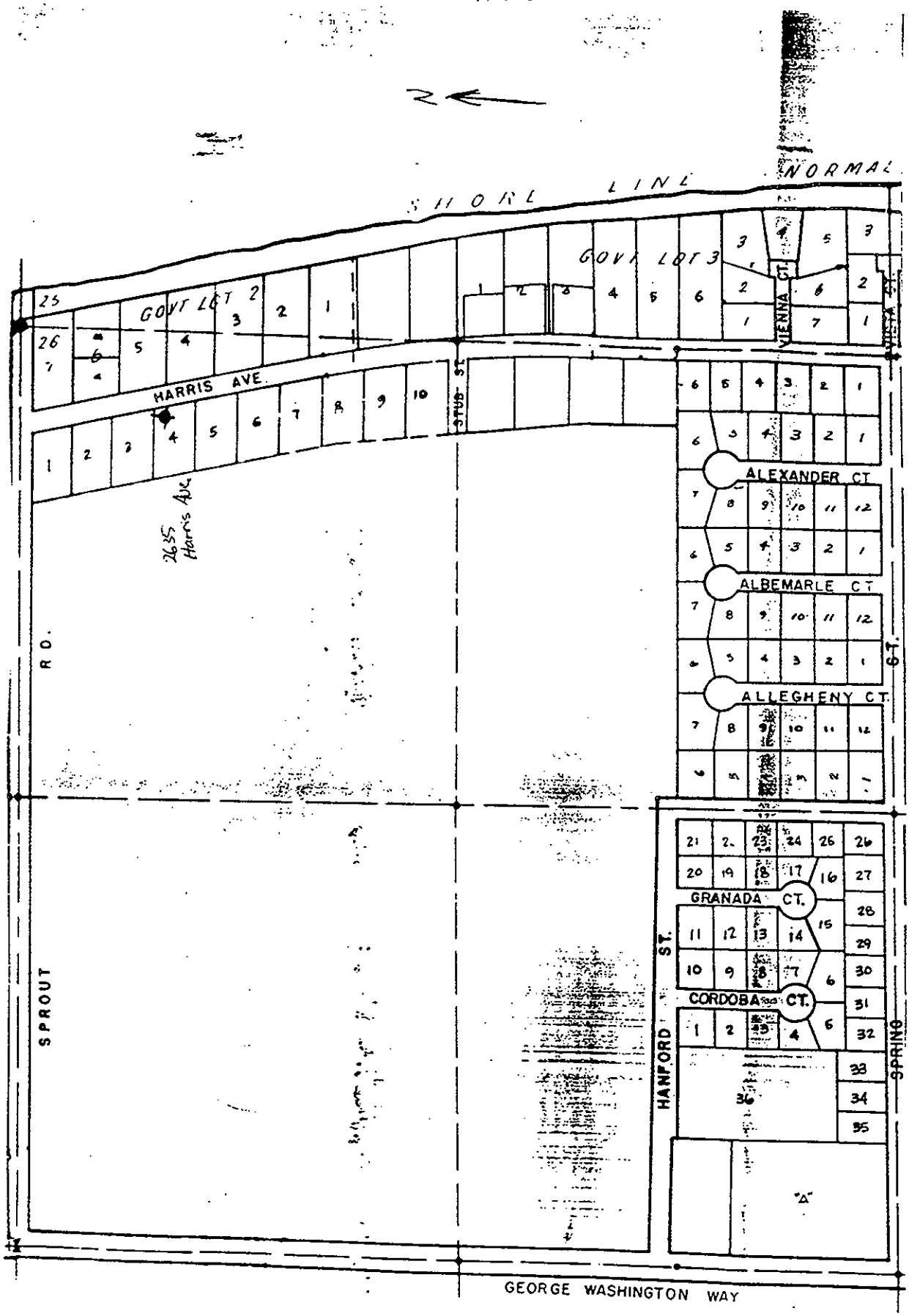
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

B-518

9212642134 8

#138


SHORE LINE
NORMAL
GOVT LOT 2
GOVT LOT 3
HARRIS AVE.
2655 Harris Ave
STUB ST.
VIENNA CT.
ALEXANDER CT.
ALBEMARLE CT.
ALLEGHENY CT.
GRANADA CT.
CORDOBA CT.
HANFORD ST.
SPRING ST.
SPROUT RD.
GEORGE WASHINGTON WAY
"A"

B-519

Source: USGS WHC-MR- 0295 #138

11/26/1990 -M 10N/28E-26A01

SITE ID:	461940119154601
KEY.NO.:	6604
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	461940
LONGITUDE:	1191546
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-26A01
ALTITUDE:	375.00
ALT.ACC:	20
USE OF SITE:	W
NO.1 WATER USE:	H
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	60.00
WELL.DEPTH:	60.00
DEPTH SOURCE:	D
DATE DRILLED:	4/ 1/1988
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	DALE
LAST NAME:	SCHELKY
DATE OWNED:	4/ 1/1988
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	28.00
WATER LEVEL DATE:	4/ 1/1988
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	
DISCHARGE:	30.00
DRAWDOWN:	2.00
TEST TIME:	-99.0
FINISH:	O
OPENING TYPE:	O
OPENING TOP:	60.00
OPENING BOTTOM:	60.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	GRCM
LITHOLOGIC MODIFIER:	+ BLDR SDGL SOIL
% WATER.CONTRIBUTED:	100

9 2 1 2 6 4 2 1 3 5 0

WHC-MR- 0295

139

1100 AREA WELL INVENTORY FORM

Well Number: 139 Date 11-28-90
Other Well ID: N/A Surveyor: R.B.

Name of Well Owner: Jim Felton

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2560 Harris
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Heat Pump, Irrigation (Supply)

Verification by Owner/Occupant of Well Use: see card attached
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): 25 (NW of NW)

Well Specifications:
Installation Date: 3/86 Total Depth (ft): 58
Well Construction Type: 6" casing
Stainless steel screen.
Pump System Type: Submersible
Well Access for Sounding: Bolt on cap.

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 8,9
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:

B-521

9 2 1 2 6 0 2 1 3 5 1

139

9 2 1 2 6 4 2 1 3 5 2

Golder Associates Inc. is conducting a well inventory in your neighborhood, as described on the attached public notice from the U.S. Department of Energy. We have attempted to contact you to determine whether a groundwater well is on your property. To assist in this survey, please fill out and sign this postage-paid card and return it as soon as possible. Thank you for your assistance.

on my property I X do I ___ do not have a groundwater well.

Name: Jim Felton
(printed)

Jim Felton
(signature)

Street Address: 2560 Harris

Section 5

B-522

WHC-MR- 0295 SUPPLY WELL #139

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Jim Felton Address 25[illegible] Hawks Rd [illegible]

(2) LOCATION OF WELL: County ..... — ..¼ ..¼ Sec. .. T. .. N., R. .. W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....

New well ☐ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 63 ft. Depth of completed well 58 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 53 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☐ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Johnson
Type Stainless Steel Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☐ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☐ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 38 ft. below top of well Date 3-5-86
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Gravel 6 inch minus sand	0	
Silty		17
Gravel 2" minus sand dry	17	
		38

Work started ....., 19.... Completed 3-5, 19 86

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Nelson Well Drilling Inc
(Person, firm, or corporation) (Type or print)

Address 12036 W Wright Pasco

[Signed] .....
(Well Driller) JAMES NELSON

License No. 361 Date ....., 19....

(USE ADDITIONAL SHEETS IF NECESSARY)

ecology 050-1-20

B-523

9 2 1 2 6 2 1 3 5 3

WHC-MR- 0295

#139

W86-125
Permit Number

1/22/86
Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
L. James Felton	Nelson Well Drilling Inc.
Name	Name
2560 Harris Avenue	10036 W. Argent
Address	Address
Richland, Washington 99352	Pasco, Washington 99336
City State Phone	City State Phone

WELL INFORMATION

2560 Harris Avenue — Well Location Address

Tract 2, Brown Tract, Vol.8, Page 102, Benton County — Lot Block Subdivision

Well Use:
- ☐ Domestic
- xxxx ☐ Irrigation
- x☒ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☒ Plot plan submitted (see attached) — 1-28-86 Date
- ☐ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: X L J Felton

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

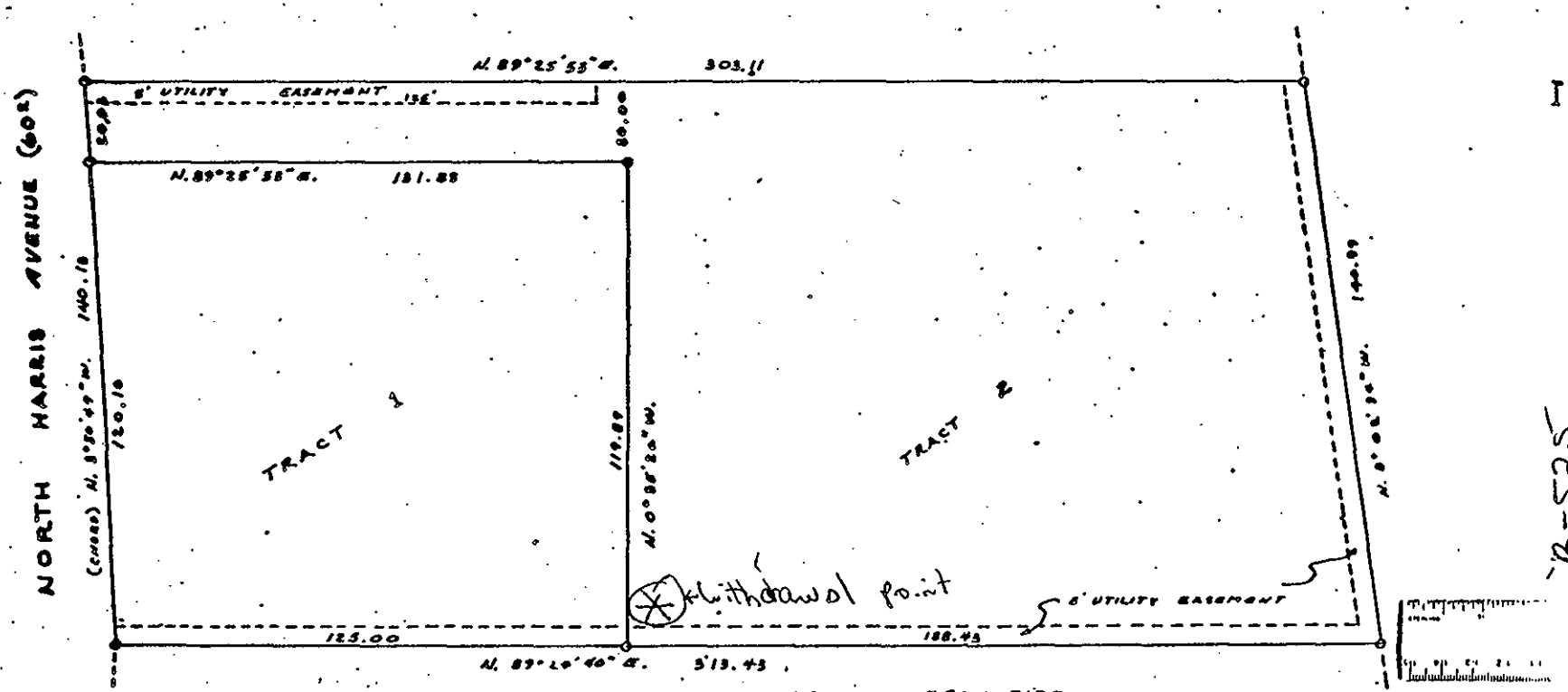
WSA-0055

9 2 1 2 5 4 2 1 3 5 4

THE BROWN TRACTS

RICHLAND WASHINGTON

PREPARED UNDER ORDINANCE NO. 295 - CHAPTER 24.15 - SMALL SUBDIVISIONS -



NOTE: ALL CORNERS MARKED WITH IRON PIPE.

TRAVERSE NOTES

BEARING	DIST.	COS.	SINE	N.	S.	E
N.5°50'47"W.	140.13	.99775	.06708	139.81		
N.89°25'55"E.	303.11	.00992	.99995	3.01		303
S.8°02'20"W.	140.99	.99016	.13991		139.60	19
S.89°20'40"W.	513.43	.01028	.99995		5.22	
				142.82	142.82	322.1

DESCRIPTION:

LOT 1, "SHORECREST SUBDIVISION", as recorded in Vol. 5 of Plats, page 93, records of Benton County, Washington.

THE UNDERSIGNED ARE THE OWNERS OF THE ABOVE DESCRIBED PROPERTY.

APPROVED BY AND FOR THE CITY OF RICHLAND

Merlin R. Greene

CITY ENGINEER

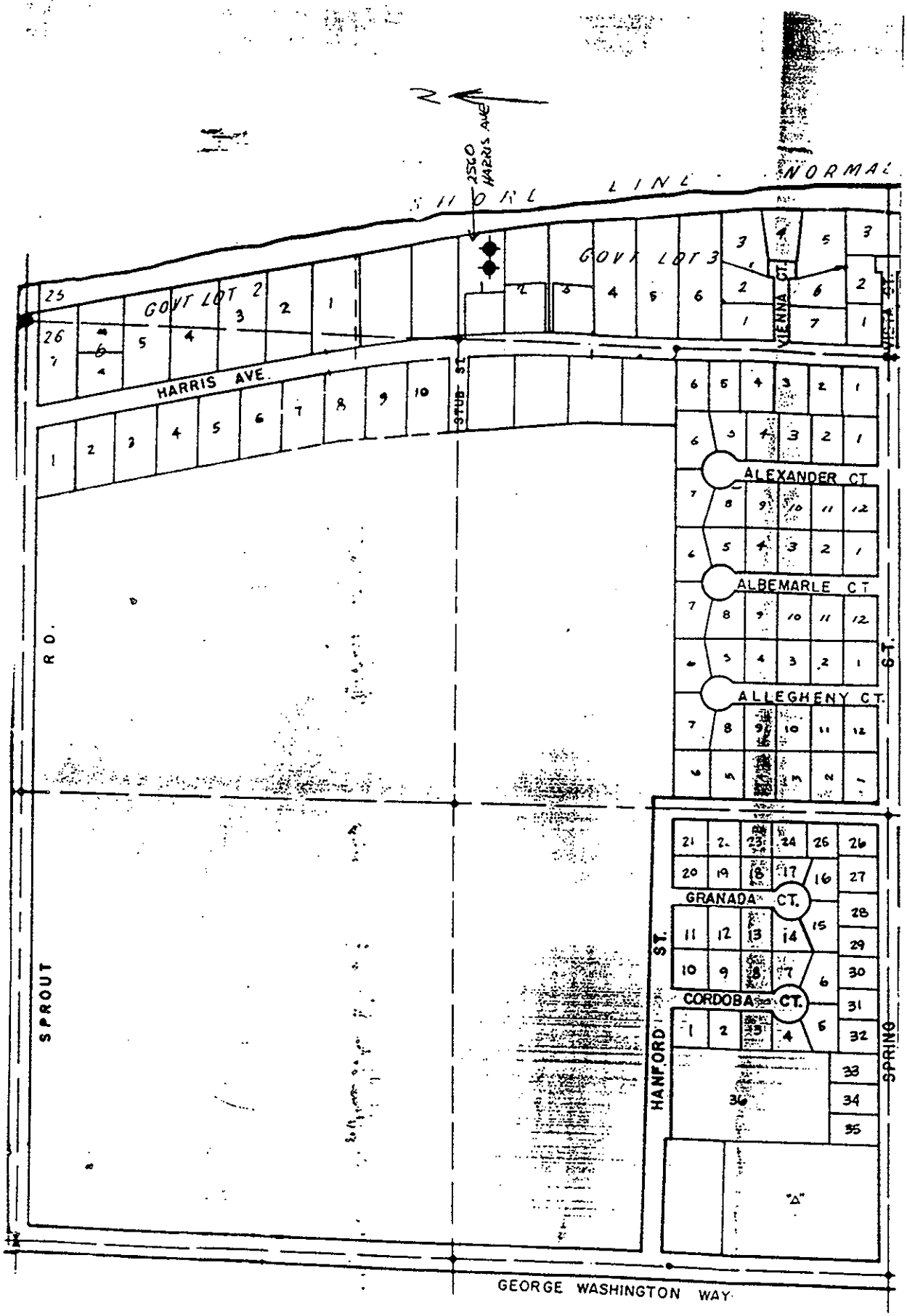
WHC-MR- 0295

B-525

#139

9212655

#139



9212642135 6

B-526

140

1100 AREA WELL INVENTORY FORM

Well Number: 140 Date 11-28-90
Other Well ID: N/A Surveyor: Bleyer

Name of Well Owner: Jim Felton

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2560 Harris

Street Address of Residential Well Site if Different from Owner:

Current Well Use: Heat pump & irrigation
2 wells (~~Residence~~) (Supply & Discharge)

Verification by Owner/Occupant of Well Use: see card
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: ____ South: ____
System: ____

Township: 10N Range: 28E Section (nearest 1/4 1/4): 25 (NW of NE)

Well Specifications:
Installation Date: 1986 Total Depth (ft): ~~58 ft~~ (supply) ~~38 ft~~ 38 ft (discharge)
Well Construction Type:

water at 38' Pump System Type: Pump at 58 ft, Electric Submersible

Well Access for Sounding: Bolt-on cap

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: ~~8, 9 supply well~~ 10, 11 discharge well
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:
City of Richland Permit # W86-125

#140

9 2 1 2 6 4 2 1 3 5 8

Golder Associates Inc. is conducting a well inventory in your neighborhood, as described on the attached public notice from the U.S. Department of Energy. We have attempted to contact you to determine whether a groundwater well is on your property. To assist in this survey, please fill out and sign this postage-paid card and return it as soon as possible. Thank you for your assistance.

on my property I X do I ___ do not have a groundwater well.

Name: Jim Felton
(printed)

Jim Felton
(signature)

Street Address: 2560 Harris

Section 5

B-528

WIC-MR- 0293

DISCHARGE WELL

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 140

Permit No. .....

(1) OWNER: Name Timfetlan Address

(2) LOCATION OF WELL: County Benton — W ½ NW¼ Sec. 25 T. 10 N., R. 22E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☒

(4) TYPE OF WORK: Owner's number of well (if more than one)....

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 37 ft. Depth of completed well 37 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +3 ft. to 37 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☐ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☐ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level 35 ft. below top of well Date 6-2-86
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Gravel 6inch mines sand silty	0	14
Gravel 2" mines sand Gray	14	35
Gravel 2" mines sand Gray water bearing	35	37
Inserted 2 gpm for 1½ HRS. Water level chain		
injection 33' 10'		

Work started 6-2 1986 Completed 6-2 1986

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Nelson Well Drilling Inc (Person, firm, or corporation) (Type or print)

Address 10026 W Grant Kennewick

[Signed] James Nelson (Well Driller)

License No. 361 Date 6-2 1986

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

B-529

WHC-MR- 0295

#140

City Of Richland

WATER WELL PERMIT

Permit Number

5/20/86
Application Date

Approval Date

APPLICANT	DRILLER
James Felton	Nelson Well Drilling
Name	Name
2560 Harris Ave	10036 W. Argent
Address	Address
Richland Wa 9430128	Pasco Wa 547-3018
City State Phone	City State Phone

WELL INFORMATION

2560 Harris — Well Location Address

Tracts 1 & 2 — Lot

Block

Brown Tracts - Vol. 8 of Plats Page 102 - Benton Co Wa — Subdivision

Well Use:

- ☐ Domestic
- ☐ Irrigation
- ☐ Heat Pump (supply)
- ☒ Heat Pump (discharge)

Operational Requirements:

- ☒ Plot plan submitted — 5/20/86 Date
- ☐ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

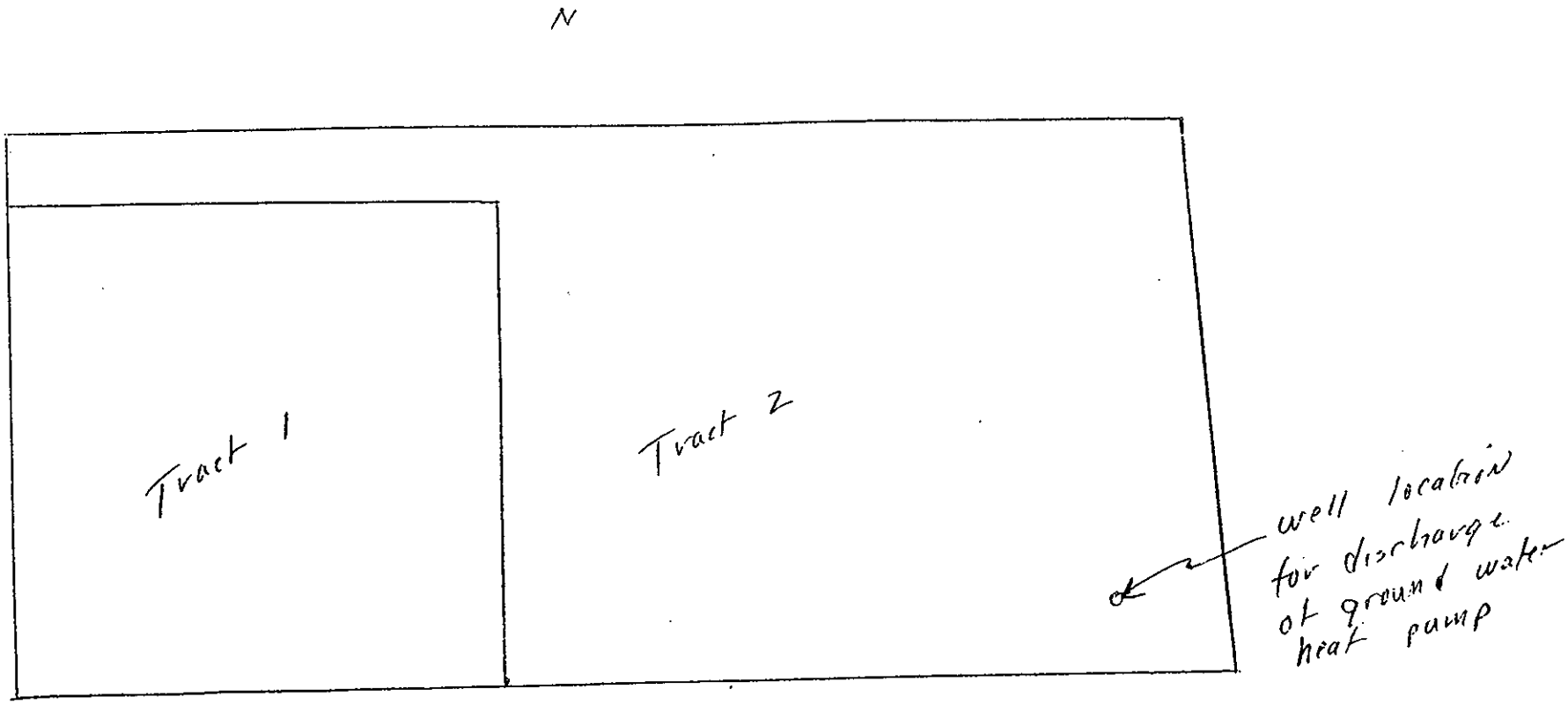
APPLICANT: [signature]

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

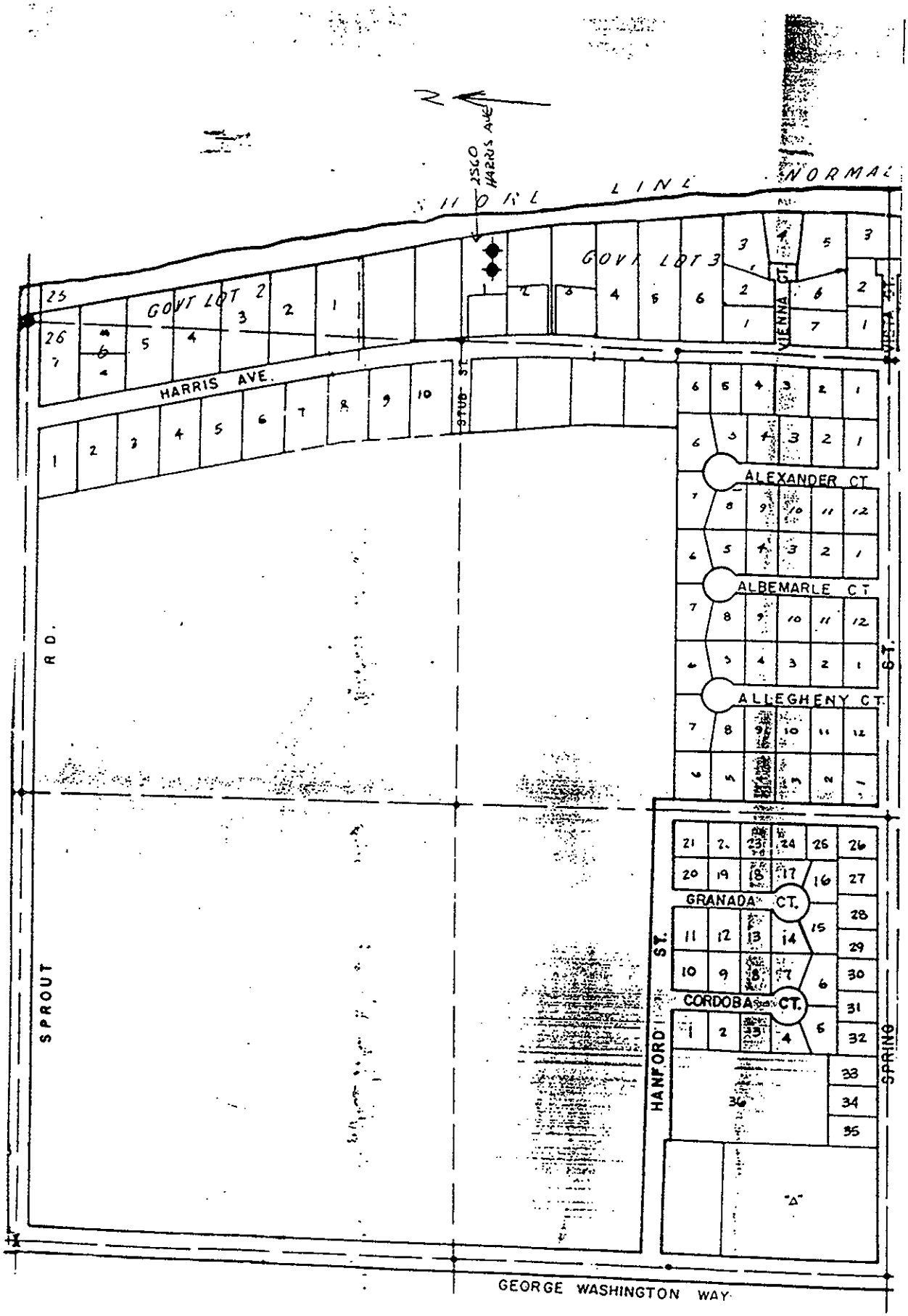
9212642 1360



B-531

The Brown Tracts – Richland, Wa
Lot 1 "Shorecrest Subdivision" as recorded in Vol. 5 of Plats, Page 93, records of Benton County, Wa

#140



9 2 1 2 6 4 2 1 3 6 2

141

1100 AREA WELL INVENTORY FORM

Well Number: 141 Date 11/19/90
Other Well ID: N/A Surveyor: [illegible]

Name of Well Owner: Susan Watkins

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 495 Hanford St.
Richland, WA
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation

Verification by Owner/Occupant of Well Use: [illegible]
(Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: [illegible] Range: 28E Section (nearest 1/4 1/4): [illegible]

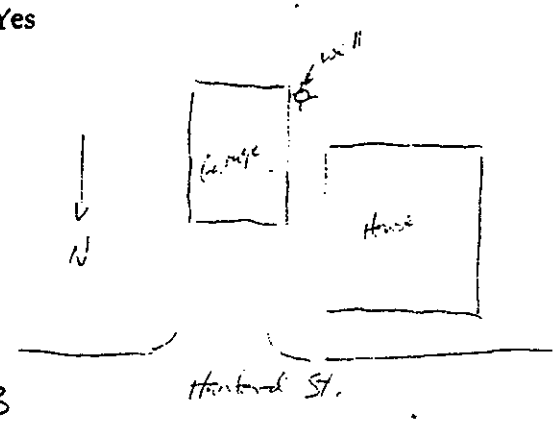
Well Specifications:
Installation Date: [illegible] Total Depth (ft): ?
Well Construction Type: Unknown, [illegible] casing

Pump System Type: Unknown, Jewelick pump (Electrical Submersible)

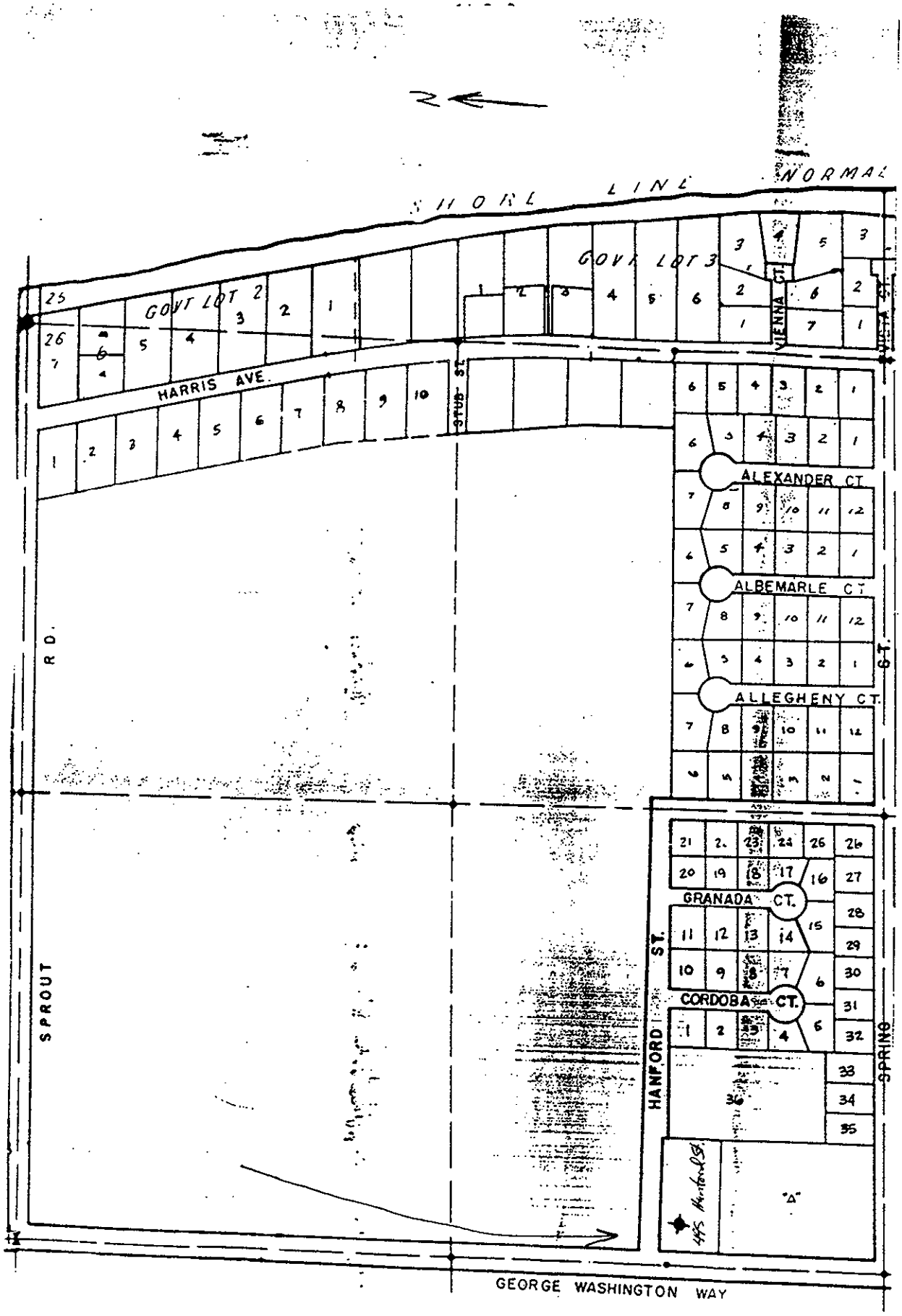
Well Access for Sounding: None

Other Information:
Photograph Taken: ___ No ✓ Yes Photo Number: 495 Hanford St.
Well Log Available: ✓ No ___ Yes
Well Log Obtained: ✓ No ___ Yes

Other:



#141



9212642136 4

WHC-MR- 0295

SEC 5 (?) #142

1100 AREA WELL INVENTORY FORM

Well Number: 142 Date 12/18/90
Other Well ID: Surveyor:

Name of Well Owner: DAVID A. MYERS

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2533 DAVISON
RICHLAND
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation and heat pump supply

Verification by Owner/Occupant of Well Use: n/a
telephone contact on 12/19/90 (Signature)

Water in Contact with Humans: ✓ Yes ___ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10 N Range: 28E Section (nearest 1/4.1/4): SE of NE section 26

Well Specifications:
Installation Date: 11/79 Total Depth (ft): 56
Well Construction Type: Cable Tool; 6" dia welded casing (+1' to 46'); 6" dia Stainless St. Johnson Screen, 0.035" slots, (46' to 51')
Pump System Type: Submersible 1 1/2 HP.

Well Access for Sounding: NO.

Other Information:
Photograph Taken: X No ___ Yes Photo Number: ___ one home.
Well Log Available: ___ No ✓ Yes
Well Log Obtained: ___ No ✓ Yes WDOE

Other:

Water Well Permit (City of Richland) with location map available
one supply well.
115 GPM

B-535

WHC-MR- 0295

#142

W35063
Permit Number

4-4-85
Application Date

Approval Date

City Of Richland

WATER WELL PERMIT

APPLICANT	DRILLER
Name: DAVID A MYERS	Name: HATCH DRILLING
Address: 2533 DAVISON	Address:
City: RICHLAND State: WA Phone: 375-0343	City: PASCO State: WA Phone:

WELL INFORMATION

2533 DAVISON — Well Location Address; Lot; Block; 2 COURTS NORTH — Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☒ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☐ Plot plan submitted — Date
- ☐ Drilling log submitted (NOT AVAILABLE) — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: David A Myers

APPROVAL: (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

B-536

9212642136

WHC-MR- 0295

063

Application No. #140

Permit No. ....

...ginal and First Copy with
...ment of Ecology
...d Copy — Owner's Copy
...d Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

(1) OWNER: Name David A. Myers Address 2533 Dawdson Ave Richland

(2) LOCATION OF WELL: County Benton — SE ¼ NE ¼ Sec. 2 T. 9 N., R. 28 E W.M.

...ring and distance from section or subdivision corner Well AT NW Corner 2533 Dawdson

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☑ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 53 ft. Depth of completed well 51 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 46 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☑ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☑
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☑ No ☐
Manufacturer's Name Johnson
Type Stainless Steel Model No. 304
Diam. 6 Slot size 35 from 46 ft. to 51 ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel:
Gravel placed from ft. to ft

Surface seal: Yes ☑ No ☐ To what depth? +18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 480 ft.
Static level 16 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☑ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

ADI
Date of test
Bailer test 40 gal./min. with 0 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☑

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Sandy Top Soil	0	4
Loose Sand Course with large Cobbles	4	16
Blue conglomerate Hard Pan	16	37
Course Black Sand Boulds to 3" (water	37	53

Work started Nov 19 79 Completed Nov 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hatch Drilling Co. Inc. (Person, firm, or corporation) (Type or print)

Address 647 W. County St. Tyson

[Signed] (Well Driller)

License No. 0176 Date 11/28 19 79

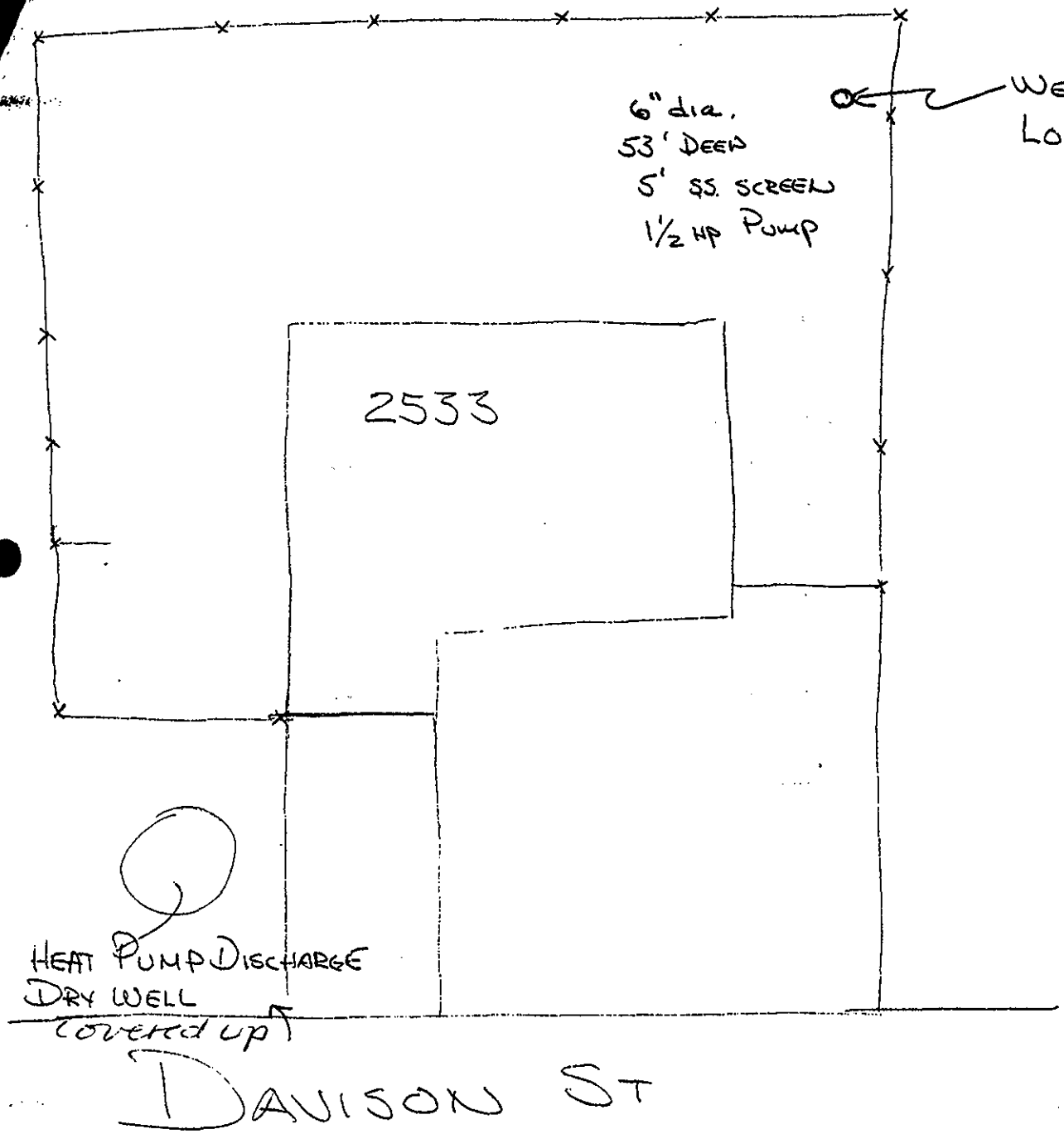
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

B-537

C63

#142


N
6" dia.
53' Deep
5' SS. Screen
1/2 HP Pump
WELL LOCATION
2533
HEAT PUMP DISCHARGE
DRY WELL
(covered up)
DAVISON ST

WHC-MR- 0295

#142

Source: USGS

11/26/1990 -M

10N/28E-26G02

SITE ID:	461925119160001
KEY NO.:	6606
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	461925
LONGITUDE:	1191600
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-26G02
ALTITUDE:	368.00
ALT.ACC:	10
USE OF SITE:	W
NO.1 WATER USE:	H
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	53.00
WELL.DEPTH:	51.00
DEPTH SOURCE:	D
DATE DRILLED:	11/ 1/1979
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	DAVID A.
LAST NAME:	MYERS
DATE OWNED:	11/ 1/1979
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	16.00
WATER LEVEL DATE:	11/ 1/1979
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	B
DISCHARGE:	40.00
DRAWDOWN:	0.00
TEST TIME:	1.0
FINISH:	S
OPENING TYPE:	S
OPENING TOP:	46.00
OPENING BOTTOM:	51.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ SOIL 0-4FT
% WATER.CONTRIBUTED:	0
UNIT TOP:	16.00
GEOHYDROLOGIC UNIT:	121MDRG

B-539

9 2 1 2 6 2 1 3 6 9

#142

RELATIVE CONTRIBUTION: P

LITHOLOGY: CGLM

LITHOLOGIC MODIFIER: + SAND 37-53FT

% WATER.CONTRIBUTED: 100

9212642 1370

WHC-MR- 0295

Section 5 #143

1100 AREA WELL INVENTORY FORM

Well Number: 143 Date 11-18-90 / 12-3-90
Other Well ID: Surveyor: KSV / RPB

Name of Well Owner: Richland School Distnct

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 1615 Snow St
Richland WA.
Street Address of Residential Well Site if Different from Owner:
450 Hanford (Hanford High School)

Current Well Use: Irrigation. (Not in use. School district draws water from river)

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: ✓ Yes ____ No

Well Coordinates: North: unknown South: unknown
System: n/a

Township: 10N Range: 28E Section (nearest 1/4 1/4): Sec 26 NE 1/4

Well Specifications:
Installation Date: Apr. 1973 Total Depth (ft): 60'
Well Construction Type: Cable, 24" dia.
Screen 21-54' (Stainless steel, 0.016" slots)
Pump System Type: Layne Turbine 100 HP

Well Access for Sounding: No noticeable access. Well head appears to be sealed

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: 2, 3 (RPB-2)
Well Log Available: ____ No ✓ Yes
Well Log Obtained: ____ No ✓ Yes

Other:
Permit # WE5-044
well is inside concrete block well house at site corner of Hanford H.S. grou

B-541

9 2 1 2 6 0 2 1 3 7 1

WHC-MR- 0295

#143

City Of Richland

WATER WELL PERMIT

W85-044
Permit Number

3-21-85
Application Date

Approval Date

APPLICANT	DRILLER
Richland School Dist	Hatch Drilling Co
Name	Name
615 Swift St	PO Box 741
Address	Address
Richland Wash 946-6106 x237	Richland Wash
City State Phone	City State Phone

WELL INFORMATION

450 Hanford — Well Location Address; Lot; Block; North West Corner of School Grds, Subdivision

Well Use:
- ☐ Domestic
- ☒ Irrigation
- ☐ Heat Pump (supply)
- ☐ Heat Pump (discharge)

Operational Requirements:
- ☐ Plot plan submitted — Date
- ☐ Drilling log submitted — Date
- ☐ Cross-connection inspection made — Date

The undersigned applicant hereby certifies that the well at the above address is to be used for the purposes stated above and that no intertie will be made between the well and the City's domestic water system. The applicant shall be responsible for submitting a copy of the driller's well log to the City after well drilling is completed. The applicant shall also, prior to operation, request the City to perform a cross-connection inspection on the completed well installation. Only after the applicant has an approved well permit can the well be placed into operation.

APPLICANT: Brian Bordson for Richland School

APPROVAL: _____ (After requirements met)

Distribution:
- White - To applicant after approval
- Green - To Department of Ecology after approval
- Canary - Office file copy
- Pink - To Building Inspection after approval
- Gold - To applicant upon application

WSA-0055

B-542

9212642137 2

Note: Carbon paper not necessary, as forms are impregnated with chemical which automatically reproduces the written material on each underlying copy.

044

#143

File Original and First Copy with the Division of Water Resources
Second Copy Owner's Copy
Third Copy Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Richland School District Address Richland, Wash

(2) LOCATION OF WELL: County Benton — ¼ ¼ Sec. T. N., R. W

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☑ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)

New well ☑ Deepened ☐ Reconditioned ☐

Method: Dug ☐ Bored ☐ Cable ☑ Driven ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 18 inches.

Drilled 60 ft. Depth of completed well 60 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 24" Diam. from 0 ft. to 39 ft.

Threaded ☐ 18" Diam. from 0 ft. to 37 ft.

Welded ☑ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☐

Type of perforator used

SIZE of perforations in. by in.

perforations from ft. to ft.

perforations from ft. to ft.

perforations from ft. to ft.

Screens: Yes ☑ No ☐

Manufacturer's Name Johnson

Type Jet Stainless Model No.

Diam. 18 Slot size 10 from 39 ft. to 57 ft.

Diam. Slot size from ft. to ft.

Gravel packed: Yes ☑ No ☐ Size of gravel: 1/4"

Gravel placed from 17 ft. to 40 ft.

Surface seal: Yes ☑ No ☐ To what depth? 17 ft.

Material used in seal Cement

Did any strata contain unusable water? Yes ☐ No ☑

Type of water? Depth of strata

Method of sealing strata off

(7) PUMP: Manufacturer's Name Layne

Type: Turbine HP 100

(8) WATER LEVELS: Land-surface elevation above mean sea level 460+ ft.

Static level 20 ft. below top of well Date

Artesian pressure lbs. per square inch Date

Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☑ No ☐ If yes, by whom? Self

Yield: 1150 gal./min. with 12 ft. drawdown after 6 hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
1 min	24'9	2 min	24'4	3 min	24'

Date of test 4/12/73

Bailer test gal./min. with ft. drawdown after hrs.

Artesian flow g.p.m. Date

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation

MATERIAL	FROM	TO
Brown Silt, Coarse gravels & small cobbles	0	31
Brown Sand, coarse gravel	31	35
Clean Sand, Fine Small to 1/4" gravels	35	46
Brown Silty Sand Larger gravels	46	55
Sandy Gravels w/ Bluish colored Clay	55	60

Work started Feb. 19 73 Completed Apr. 19 73

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report true to the best of my knowledge and belief.

NAME Hatch Drilling Co. (Person, firm, or corporation) (Type or print)

Address Box 741 Richland, Wash.

[Signed] (Well Driller)

B-543

Source: USGS[a]

WHC-MR- 0295

#143

11/13/1990 -M

10N/28E-26B01

SITE ID:	461940118184001
KEY.NO.:	2173
FIELD CHECKED:	C
COUNTY:	5
LOCATION OF DATA VERIFICATION	C
LATITUDE:	461945
LONGITUDE:	1191615
LAT/LONG ACC:	F
LOCAL NO.:	10N/28E-26B01
ALTITUDE:	378.00
ALT.ACC:	5
USE OF SITE:	W
NO.1 WATER USE:	I
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	60.00
WELL.DEPTH:	59.00
DEPTH SOURCE:	D
DATE DRILLED:	2/ 1/1973
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	
LAST NAME:	RICHLAND SCHL
DATE OWNED:	4/ 1/1973
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	20.00
WATER LEVEL DATE:	4/ 1/1973
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
WATER LEVEL:	25.88
WATER LEVEL DATE:	2/23/1986
W.L.TIME:	1400
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	17.99
WATER LEVEL DATE:	9/ 4/1986
W.L.TIME:	1022
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S
WATER LEVEL:	23.95
WATER LEVEL DATE:	2/26/1987
W.L.TIME:	1125
W.L. METHOD:	S
W.L. STATUS:	
WATER LEVEL SOURCE:	S

9 2 1 2 6 4 2 1 3 7 4

8544

#143

SWHC-MR- 0295

FINISH:	
OPENING TYPE:	S
OPENING TOP:	39.00
OPENING BOTTOM:	59.00
OPENING DIAM.:	0.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	GRVL
LITHOLOGIC MODIFIER:	+ SILT,COBB,SDGL
% WATER.CONTRIBUTED:	-99
UNIT TOP:	55.00
GEOHYDROLOGIC UNIT:	121MDRG
RELATIVE CONTRIBUTION:	U
LITHOLOGY:	SDGL
LITHOLOGIC MODIFIER:	+ BLUE CLAY
% WATER.CONTRIBUTED:	-99
REMARK:	'GRAVEL PACKED AT 17 FT'
STRUCTURE:	SYNCN-PASCO
DISTANCE FROM STRUCTURE:	1.00
REMARK:	'OWNER REPTS QUANT:RUNS DRY AT TIMES'
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 6 2 1 3 7 5

B-545

144

WHC-MR- 0295

1100 AREA WELL INVENTORY FORM

Well Number: 144 Date 12/18/90
Other Well ID: Surveyor: KSV

Name of Well Owner: PAUL TURNER ph. 375-5095

Well Location: (Location Map Sketched on Attached Sheet)
Owner's Address: 2102 DAVISON
Richland.
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation.

Verification by Owner/Occupant of Well Use: X n/a
phone conversation with Paul Turner - 12/18/90 (Signature)
Water in Contact with Humans: ____ Yes ____ No

Well Coordinates: North: unknown South: unknown
System: N/A

Township: 10N Range: 28E Section (nearest 1/4 1/4): 35 (SW of NE)

Well Specifications:
Installation Date: predate house 1962 built ~ or mon. by DOE Total Depth (ft): ? unknown
Well Construction Type: 4" casing [redacted] drill method unknown.
8" main inside house.
Pump System Type: submersible
Well Access for Sounding: Yes. open casing

Other Information:
Photograph Taken: ____ No ✓ Yes Photo Number: #16 not accessible.
Well Log Available: ✓ No ____ Yes roll 2K
Well Log Obtained: ✓ No ____ Yes
access in flowerbed by front.
W side by driveway

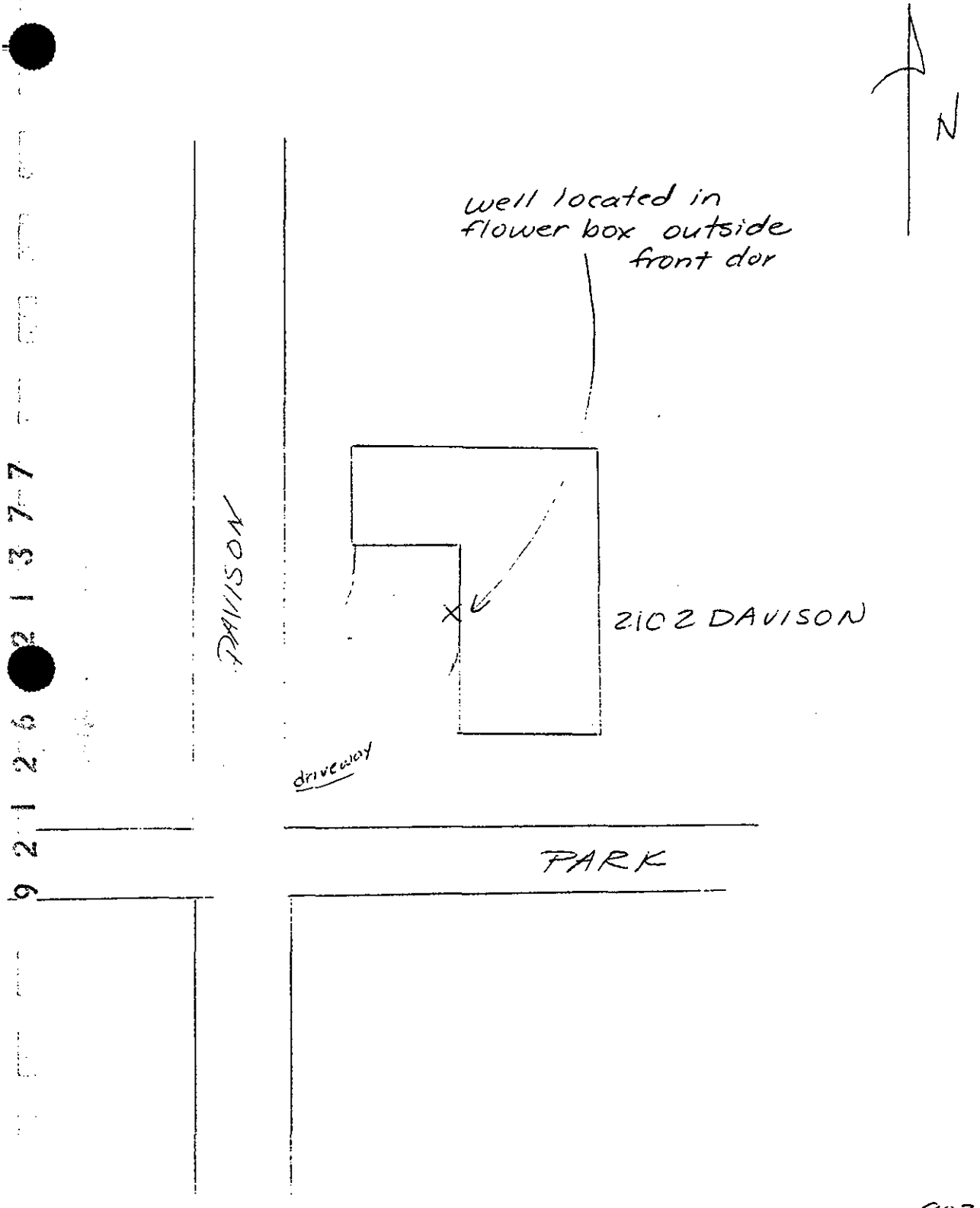
Other:

according to P. Turner,
well was originally a monitoring well installed by DOE or AEC. House was later built in 1962 and well used for irrigation. Well is located in the cellar of the house. No access from outside

B-546

9212642137 6

#144



903-1222
12-18-90

145

WHC-MR- 0295

1100 AREA WELL INVENTORY FORM

Well Number: ~~E~~ 145 Date 1-7-91
Other Well ID: Surveyor: KSV
USGS # 10N/28E-23M01
Name of Well Owner:

Well Location: (~~Location Map Sketched on Attached Sheet~~) SEE FIG. 2.
Owner's Address: unknown
Richland
Street Address of Residential Well Site if Different from Owner:

Current Well Use: Irrigation

Verification by Owner/Occupant of Well Use: n/a
(Signature)

Water in Contact with Humans: X Yes ____ No

Well Coordinates: North: unknown South: unknown
System:

Township: 10N Range: 28E Section (nearest 1/4 1/4): 23 (SW of SW)

Well Specifications:
Installation Date: 3/88 Total Depth (ft): 140
Well Construction Type: 6" casing

Pump System Type: Submersible 5 HP.

Well Access for Sounding: unknown

Other Information:
Photograph Taken: X No ____ Yes Photo Number: ____ could not locate
Well Log Available: ____ No X Yes
Well Log Obtained: ____ No X Yes

Other:

Could not find well in the field.
USGS

9212642137 9

B-548

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Bill Ballard Address

(2) LOCATION OF WELL: County Benton — NW ¼ Sec 3 T. 10N., R. 28 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☒ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well ..... inches.
Drilled ..... ft. Depth of completed well ..... ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from -6 ft. to 140 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam ..... Slot size ..... from ..... ft. to ..... ft.
Diam ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 19 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name Berkley
Type: Turbine H.P. 5

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ..... ft.
Static level 22 ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
Air test Apx 110					

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation

MATERIAL	FROM	TO
Sand Brown in color	0	12
Brown Sand Gravel Bearing Water Apx 36gpm	12	17
Blue clay and Sand Mixt	17	120
Basalt Gravel and Sand Bearing Water Apx 110 Gpm with little Sand	120	143
Increase in water to 7 Gpm per Foot		

RECEIVED 25 1988

Work started 2/25 19 88 Completed 3/1 19 88

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME St George Drilling (Person, firm, or corporation) (Type or print)

Address 701 So 45 AVE W. Richland

[Signed] [illegible] (Well Driller)

License No. 0483 Date 3/1, 1988

(USE ADDITIONAL SHEETS IF NECESSARY)

B-549

ECY 050-1-20

#145

Source: USGS

WHC-MR- 0295

11/21/1990 -M

10N/28E-23M01

SITE ID:	462003119165101
KEY.NO.:	6603
FIELD CHECKED:	U
COUNTY:	5
LOCATION OF DATA VERIFICATION	
LATITUDE:	462003
LONGITUDE:	1191651
LAT/LONG ACC:	T
LOCAL NO.:	10N/28E-23M01
ALTITUDE:	405.00
ALT.ACC:	20
USE OF SITE:	W
NO.1 WATER USE:	I
NO.2 WATER USE:	
NO.3 WATER USE:	
HOLE DEPTH	145.00
WELL.DEPTH:	145.00
DEPTH SOURCE:	D
DATE DRILLED:	3/ 1/1988
LOG DATA:	D
OTHER DATA:	
FIRST NAME:	BILL
LAST NAME:	BALLARD
DATE OWNED:	3/ 1/1988
STREET ADDR.:	
CITY ADDR.:	
WATER LEVEL:	22.00
WATER LEVEL DATE:	3/ 1/1988
W.L.TIME:	0
W.L. METHOD:	R
W.L. STATUS:	
WATER LEVEL SOURCE:	D
DISCHARGE INFO SOURCE:	D
DISCHARGE MEASURING METHOD:	
DISCHARGE:	110.00
DRAWDOWN:	-99.00
TEST TIME:	-99.0
FINISH:	X
OPENING TYPE:	X
OPENING TOP:	140.00
OPENING BOTTOM:	145.00
OPENING DIAM.:	6.00
UNIT TOP:	0.00
GEOHYDROLOGIC UNIT:	112PSCO
RELATIVE CONTRIBUTION:	N
LITHOLOGY:	SAND
LITHOLOGIC MODIFIER:	+ SDGL 12-17
% WATER.CONTRIBUTED:	0
UNIT TOP:	17.00
GEOHYDROLOGIC UNIT:	121RGLD

9 2 1 2 6 4 2 1 3 3 0

#145

RELATIVE CONTRIBUTION:	N
LITHOLOGY:	CLSD
LITHOLOGIC MODIFIER:	BLUE
% WATER.CONTRIBUTED:	0
UNIT TOP:	120.00
GEOHYDROLOGIC UNIT:	122SDLM
RELATIVE CONTRIBUTION:	P
LITHOLOGY:	BSLT
LITHOLOGIC MODIFIER:	+ SDGL
% WATER.CONTRIBUTED:	100
REMARK:	WB 12-17 ~3GPM; 120-145 ~110GPM
STRUCTURE:	
DISTANCE FROM STRUCTURE:	0.99

9 2 1 2 3 2 1 3 8 1

9 2 1 2 6 4 2 1 3 3 2

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FIGURE ANF - 1

LOCATION MAP FOR ANF WELLS

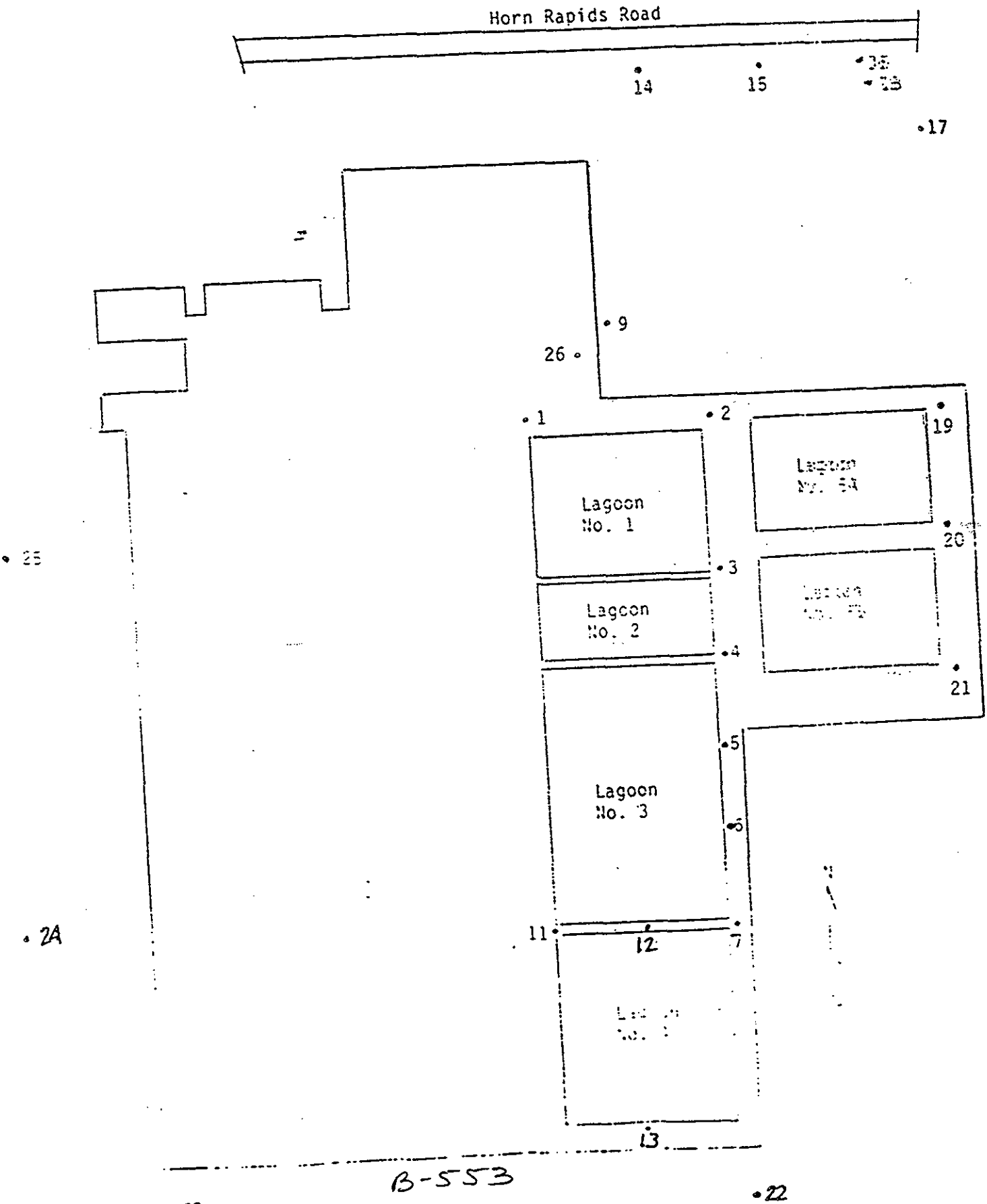


FIGURE ANF - 2

GENERAL CONSTRUCTION LOG FOR ANF WELLS

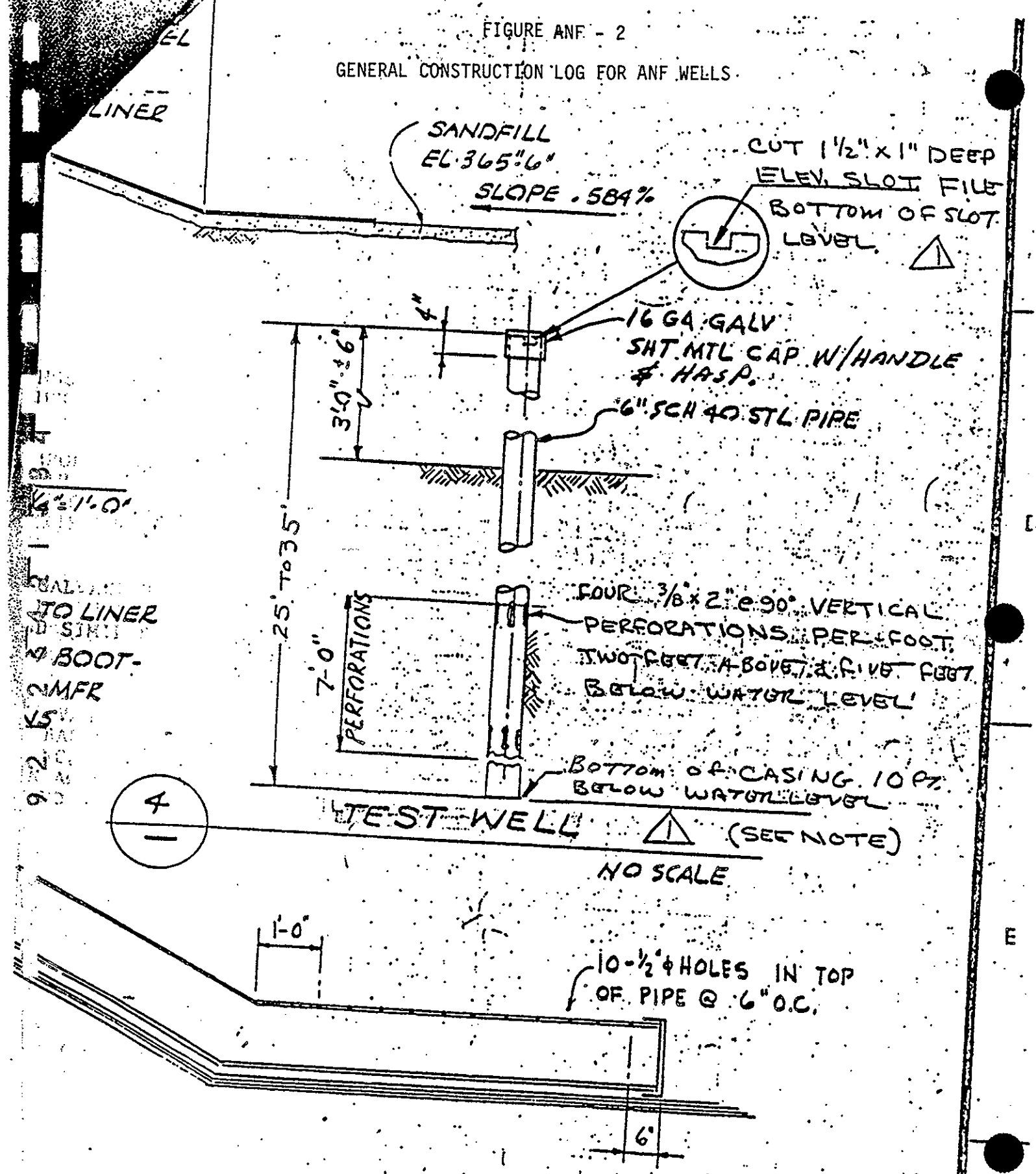


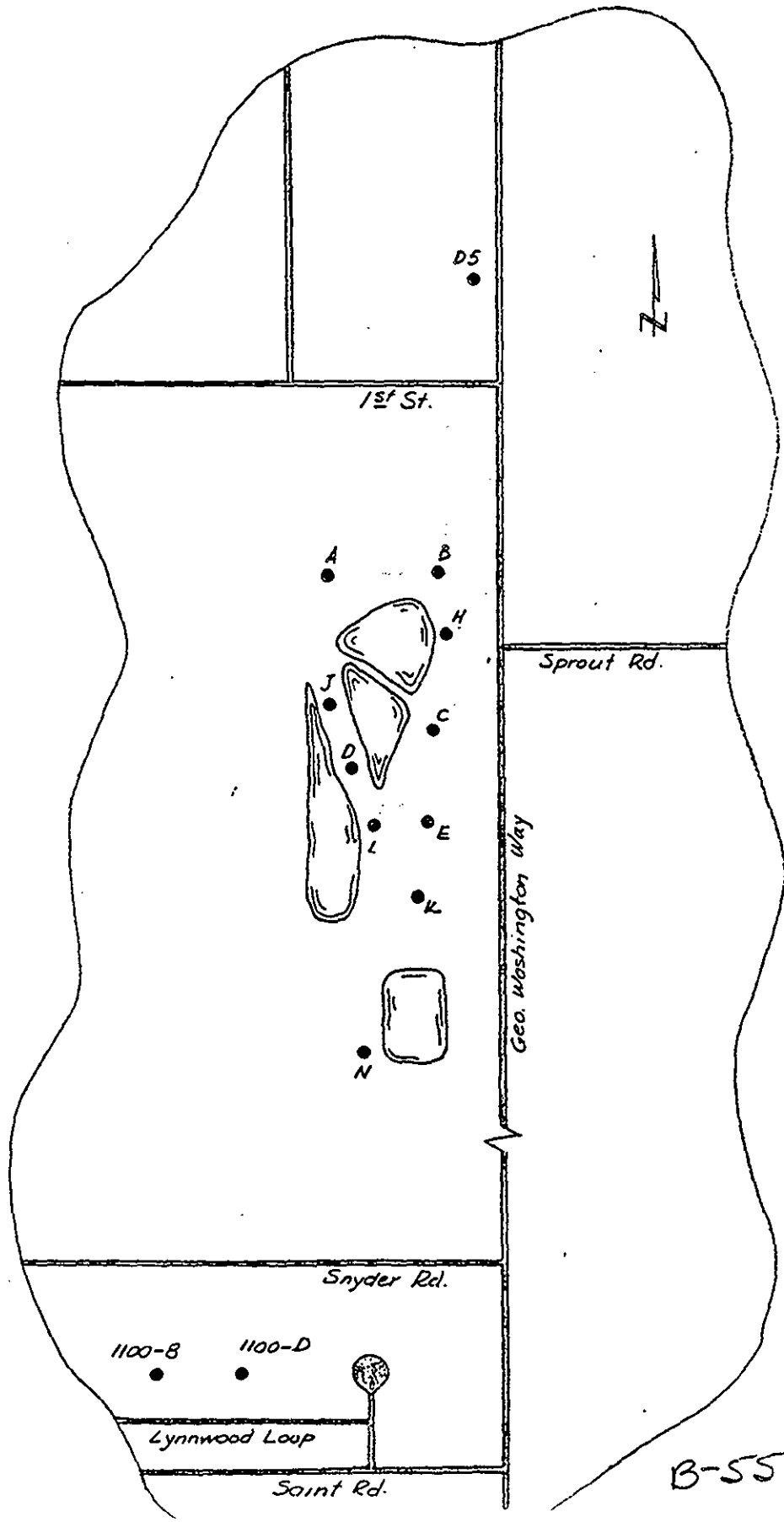
FIGURE RL - 1

Attachment

NORTH RICHLAND WELLS

North Richland Well Field

Well #	Depth
3000-A	88'
3000-B	87'
3000-C	64'
3000-D	75.3'
3000-E	61.8'
3000-H	56'
3000-J	71'
3000-K	59'
3000-L	83'
3000-N	40'
3000-D5	134'



Duke Well Field

Well #	Depth
1100-8	120'
1100-D	86'

B-555

9212613855

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12/04/90 16:22:19

[a] CODES FOR USGS DATA SHEETS

CODES

* ALL LENGTHS IN FEET UNLESS OTHERWISE INDICATED
* ALL RATES IN GALLONS PER MINUTE UNLESS OTHERWISE INDICATED

FIELD CHECKED:
- C = FIELD CHECKED BY USGS PERSONNEL
- U = UNCHECKED

LAT/LONG ACC: (LATITUDE/ LONGITUDE ACCURACY)
- S = ACCURATE TO WITHIN 1 SECOND
- F = ACCURATE TO WITHIN 5 SECONDS
- T = ACCURATE TO WITHIN 10 SECONDS
- M = ACCURATE TO WITHIN 1 MINUTE

ALT.ACC: (ALTITUDE ACCURACY)
- ACCURATE TO +/- NUMBER OF FEET INDICATED

USE OF SITE:
- A = ANODE
- C = STANDBY, EMERGENCY SUPPLY
- D = DRAIN
- E = GEOTHERMAL
- H = HEAT RESERVOIR
- M = MINE
- O = OBSERVATION WELL
- P = OIL OR GAS WELL
- R = RECHARGE
- S = REPRESSURIZING
- T = TEST WELL
- U = UNUSED
- W = WITHDRAWAL
- X = WASTE
- Z = DESTROYED (OR MODIFIED; DEEPENED, ETC.)

WATER USE:
- A = AIR CONDITIONING
- B = BOTTLING
- C = COMMERCIAL
- D = DEWATERING
- E = POWER
- F = FIRE PROTECTION
- H = DOMESTIC
- I = IRRIGATION
- J = INDUSTRIAL (COOLING)
- K = MINING
- M = MEDICINAL
- N = INDUSTRIAL (OTHER THAN COOLING)
- P = PUBLIC SUPPLY (FIVE OR MORE HOMES)
- Q = AQUACULTURE
- R = RECREATION
- S = STOCK
- T = INSTITUTION
- U = UNUSED
- Y = DESALINATION
- Z = OTHER

LOG DATA: (LOGS ON FILE)
- A = TIME (DRILLING)
- B = COLLAR
- C = CALIPER
- D = DRILLER'S
- E = ELECTRIC (WALL RESISTIVITY, FLUID RESISTIVITY)

F = FLUID CONDUCTIVITY (SPOTANEOUS POTENTIAL)
G = GEOLOGIST
H = MAGNETIC
I = INDUCTION
J = GAMMA RAY (NATURAL GAMMA)
K = DIPMETER
L = LATERLOG
M = MICROLOG
N = NEUTRON (NEUTRON-NEUTRON, NEUTRON-GAMMA)
O = MICROLATERLOG
P = PHOTOGRAPHIC
Q = RADIOACTIVE
S = SONIC
T = TEMPERATURE
U = GAMMA-GAMMA
V = FLUID-VELOCITY (FLOW METER)
X = CORE
Z = OTHER (INCLUDES BRINE EJECTOR)

WELL DEPTH SOURCE: (SOURCE OF DATA)

A = OTHER GOVERNMENT AGENCY
D = DRILLER
G = GEOLOGIST
L = LOGS (GEOPHYSICAL)
M = MEMORY (DRILLER)
O = OWNER
R = REPORTED (NEIGHBOR, ETC.)
S = USGS
Z = OTHER

W.L. METHOD: (METHOD OF WATER-LEVEL MEAS.)

A = AIRLINE (NOT CALIBRATED)
B = ANALOG
C = CALIBRATED AIRLINE
E = ESTIMATED
G = PRESSURE GAGE (NOT CALIBRATED; E.G., OWNER'S GAGE)
H = PRESSURE GAGE (CALIBRATED)
L = GEOPHYSICAL LOG
M = MANOMETER
N = NON-RECORDING GAGE
R = REPORTED
S = STEEL TAPE
T = ELECTRIC TAPE
Z = OTHER

W.L. STATUS: (WATER-LEVEL STATUS)

C = CASCADING WATER
D = DRY
F = FLOWING
E = RECENTLY FLOWING
G = NEARBY WELL FLOWING
H = NEARBY WELL RECENTLY FLOWING
I = INJECTOR SITE
J = INJECTOR SITE MONITOR
N = MEASUREMENTS DISCONTINUED
O = OBSTRUCTION IN WELL (NOT MEASURABLE)
P = WELL PUMPING
R = WELL RECENTLY PUMPING
S = NEARBY WELL PUMPING
T = NEARBY WELL RECENTLY PUMPING
V = FOREIGN SUBSTANCE ON/IN WATER (GENERALLY OIL FROM TURBINE PUMPS)
W = WELL DESTROYED (NO LONGER MEASURABLE)
X = SURFACE-WATER EFFECTS (FLOODING AROUND WELL, ETC.)
Z = OTHER

WATER LEVEL SOURCE: (SOURCE OF

SAME CODES AS DEPTH SOURCE

DATA)

DISCHARGE INFO SOURCE: (SOURCE OF DISCHARGE DATA) — SAME CODES AS DEPTH SOURCE

DISCHARGE MEASURING METHOD:
- B = BAILER
- C = CURRENT METER
- E = ESTIMATED
- F = FLUME
- M = TOTALING METER
- O = ORIFICE
- P = PITOT-TUBE METER
- R = REPORTED
- T = TRAJECTORY
- U = VENTURI
- V = VOLUMETRIC
- W = WEIR
- Z = OTHER

TEST TIME: IN HOURS

FINISH: (WELL FINISH)
- C = POROUS CONCRETE
- F = GRAVEL PACKED WITH PERFORATIONS
- G = GRAVEL PACKED WITH SCREEN
- H = HORIZONTAL GALLERY
- O = OPEN END CASING
- P = PERFORATED OR SLOTTED
- S = SCREEN
- T = SAND POINT
- W = WALLED
- X = OPEN HOLE
- Z = OTHER

OPENING TYPE:
- F = FRACTURE
- L = LOUVERED OR SHUTTERED (SCREEN)
- M = MESH (SCREEN)
- O = OPEN END CASING
- P = PERFORATED OR SLOTTED
- R = WIRE-WOUND
- S = SCREEN (UNKNOWN TYPE)
- T = SAND POINT
- W = WALLED
- X = OPEN HOLE
- Z = OTHER

OPENING DIAM.: (DIAMETER OF OPEN SECTION OF WELL) * IN INCHES *

GEOHYDROLOGIC UNIT:
- 110ALVM = QUATERNARY ALLUVIUM
- 110CLVM = " COLLUVIUM
- 110DUNE = " SAND DUNES
- 110LOSS = " LOESS
- 112PSCO = PASCO GRAVELS (HANFORD FORMATION)
- 112PLUS = PALOUSE FORMATION
- 112TCHT = TOUCHET BED (HANFORD FORMATION)
- 121BSRG = BASAL RINGOLD FORMATION
- 121LRRG = LOWER RINGOLD FORMATION
- 121MDRG = MIDDLE RINGOLD FORMATION
- 121RGLD = RINGOLD FORMATION (UNDIFFERENTIATED)
- 121UPRG = UPPER RINGOLD FORMATION

122CBRV = COLUMBIA RIVER BASALT GROUP (UNDIFFERENTIATED)
122ELBG = ELLENSBURG FORMATION (UNDIFFERENTIATED)
122GDRD = GRANDE RONDE BASALT
122MBTN = MABTON MEMBER (ELLENSBURG FORMATION)
122SDLM = SADDLE MOUNTAINS BASALT
122VNTG = VANATAGE MEMBER (ELLENSBURG FORMATION)
122WNPM = WANAPUM BASALT

RELATIVE CONTRIBUTION:
P = PRIMARY CONTRIBUTING UNIT
S = SECONDARY CONTRIBUTING UNIT
N = NON-CONTRIBUTING UNIT
U = CONTRIBUTION UNKNOWN

LITHOLOGY:
ALVM = ALLUVIUM
BSLT = BASALT
BLDR = BOULDER
BLSD = BOULDERS AND SAND
BLSC = BOULDERS, SILT, AND CLAY
CLCH = CALICHE (HARDPAN)
CLSD = CLAY, SOME SAND
CLSN = CLAYSTONE
COBB = COBBLES
COSD = COBBLES AND SAND
COSC = COBBLES, SILT, AND CLAY
CLVM = COLLUVIUM
CGLM = CONGLOMERATE
GLCL = GLACIAL, UNDIFFERENTIATED
GRVL = GRAVEL
GRCL = GRAVEL AND CLAY
GRCM = GRAVEL, CEMENTED
GRDS = GRAVEL, SAND, AND SILT
GRSC = GRAVEL, SILY, AND CLAY
HRDP = HARDPAN
LOSS = LOESS
OBDN = OVERBURDEN
SDCL = SAND AND CLAY
SDGL = SAND AND GRAVEL
SDST = SAND AND SILT
SGVC = SAND, GRAVEL, AND CLAY
SNCL = SAND, SOME CLAY
SNDS = SANDSTONE
SDSL = SANDSTONE AND SHALE
SHLE = SHALE
STCL = SILT AND CLAY
SLSN = SILTSTONE
SLTE = SLATE

STRUCTURE: (NEAREST GEOLOGIC STRUCTURE)
* WITHIN 5 MILES* OTHERWISE REPORTED AS NONE
ANTCN = ANTICLINE
MONCN = MONOCLINE
STRCR = COMPLEX STRUCTURE
SYNCN = SYNCLINE

DISTANCE FROM STRUCTURE:
* IN MILES *

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APPENDIX C

USGS WELL DATA BASE

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10N/28E-15G01	HANFORD	MW-12	59.1	46.8	T	U	1/16/1990	MW
10N/28E-15G02	HANFORD	MW-13	44.0	41.5	T	U	1/ 9/1990	MW
10N/28E-15G03	HANFORD	MW-14	60.5	53.5	T	U	1/ 4/1990	MW
10N/28E-15G04	HANFORD	MW-15	54.4	40.0	T	U	12/ 1/1989	MW
10N/28E-15G05	HANFORD	HRL-8	28.3	28.3	Z	U	12/21/1989	MW
10N/28E-15G06	HANFORD	HRL-9	27.0	27.0	Z	U	1/17/1990	MW
10N/28E-15G07	HANFORD	HRL-10	34.5	34.5	Z	U	1/25/1990	MW
10N/28E-15L01	ALLIED NUCLEAR	ANF-16	-99.0	-99.0	O	U	/ /	ANF
10N/28E-15M01	ALLIED NUCLEAR	ANF-14	-99.0	-99.0	O	U	/ /	ANF
10N/28E-15M02	ALLIED NUCLEAR	ANF-16	-99.0	-99.0	O	U	/ /	ANF
10N/28E-15Q01	HANFORD	MW-2	51.0	41.6	T	U	1/30/1990	MW
10N/28E-15R01	HANFORD	1199-45-12	92.0	92.0	Z	U	07/ /1950	D
10N/28E-22CD	ALLIED NUCLEAR		39.0	37.5	T	U	5/12/1988	
10N/28E-22J01	HANFORD	1199-41-13C	95.0	89.4	O	U	03/22/1944	
10N/28E-22J02	HANFORD	MW-4	67.3	64.1	T	U	11/20/1989	MW
10N/28E-22J03	HANFORD	MW-5	88.6	87.0	T	U	12/18/1989	MW
10N/28E-22J04	HANFORD	MW-6	91.0	56.0	T	U	11/20/1989	MW
10N/28E-22J05	HANFORD	DP-9	39.5	39.5	Z	U	9/20/1989	MW
10N/28E-22J06	HANFORD	DP-8	34.0	34.0	Z	U	9/28/1989	MW
10N/28E-22J07	HANFORD	DP-6	20.0	20.0	Z	U	7/25/1989	MW
10N/28E-22J08	HANFORD	DP-5	20.0	20.0	Z	U	7/19/1989	MW
10N/28E-22J09	HANFORD	DP-4	20.0	20.0	Z	U	7/14/1989	MW
10N/28E-22J10	HANFORD	DP-3	20.0	20.0	Z	U	7/28/1989	MW
10N/28E-22J11	HANFORD	DP-2	20.0	20.0	Z	U	8/ 1/1989	MW
10N/28E-22J12	HANFORD	DP-1	20.0	20.0	Z	U	8/ 3/1989	MW
10N/28E-22K01	HANFORD	MW-7	89.3	57.0	T	U	12/12/1989	MW
10N/28E-22K02	HANFORD	DP-7	41.0	41.0	Z	U	8/14/1989	MW
10N/28E-22R01	HANFORD	1199-41-13B	65.0	65.0			08/ /1943	
10N/28E-22R02	HANFORD	1199-41-13A	63.0	63.0	T	U	08/ /1943	
10N/28E-23D01	HANFORD	699-S36-E12A	102.0	-99.0			10/ 1/1979	
10N/28E-23D02	HANFORD	699-S36-E13A	100.0	71.0	O	U	9/ 1/1979	
10N/28E-23E01	HANFORD	699-S36-E12B	100.0	50.0	W	I	10/04/1979	
10N/28E-23E02	HANFORD	699-S36-E13B	100.0	70.0	T	U	10/ 1/1979	
10N/28E-23J01	HANFORD	3099-42-18	-99.0	-99.0	Z	U	/ /	D
10N/28E-23L01	HANFORD	3099-42-16	134.0	130.8			10/13/1944	
10N/28E-23L02	HANFORD	699-S37-E14	62.5	62.5			10/ 1/1988	
10N/28E-23M01	BALLARD	BILL	145.0	145.0	W	I	3/ 1/1988	
10N/28E-23M02	HANFORD	3099-41-14B	-99.0	-99.0			/ /	
10N/28E-23N01	HANFORD	3099-41-14	68.0	68.0	A	U	02/ /1948	
10N/28E-23N02	HANFORD	699-S40-E14	62.4	59.5	O	U	10/ 1/1988	
10N/28E-23P01	HANFORD	1199-40-16A	125.0	125.0	O	U	04/ /1948	D
10N/28E-23P02	HANFORD	1199-40-15	88.0	88.0	W	P	04/ /1948	
10N/28E-23P03	HANFORD	1199-40-16B	90.0	90.0	W	P	5/ 1/1948	
10N/28E-23P04	HANFORD	1199-41-15	74.0	74.0	O	U	10/ /1949	
10N/28E-23Q01	HANFORD	3099-41-17	29.0	28.6	Z	U	/ /	D
10N/28E-25D01	HANFORD	1199-39-19	-99.0	-99.0	Z	U	/ /	D
10N/28E-25D02	STREDWICK	JOHN	38.0	-99.0	W	H	7/ 1/1988	
10N/28E-25N01	HANFORD	1139-36-19	29.0	28.6	Z	U	/ /	D
10N/28E-26A01	SCHELKY	DALE	60.0	60.0	W	H	4/ 1/1988	
10N/28E-26B01	RICHLAND SCHL		60.0	59.0	W	I	2/ 1/1973	
10N/28E-26B02	HANFORD		-99.0	-99.0	Z	U	/ /	D
10N/28E-26C01	HANFORD	1199-39-16B	110.0	102.0	O	U	03/ /1948	
10N/28E-26C02	HANFORD	1199-39-16A	62.0	62.0	W	P	03/ /1948	
10N/28E-26C03	HANFORD	1199-39-16C	75.0	75.0	O	U	03/ /1948	
10N/28E-26C04	HANFORD	1199-39-16D	64.0	64.0	O	U	03/ /1948	
10N/28E-26C05	HANFORD	1199-38-16	59.0	59.0	W	P	11/ 1/1952	
10N/28E-26C06	HANFORD	1199-39-16E	83.0	83.0	W	P	/ /	
10N/28E-26C07	HANFORD	1199-39-15	70.0	70.0	W	P	/ /	
10N/28E-26C08	HANFORD	1199-40-16C	55.0	55.0	W	P	/ /1952	
10N/28E-26D01	GENERAL TEL CO.		201.8	201.8	A	U	9/12/1977	
10N/28E-26D02	HANFORD	MW-17	125.0	121.4	T	U	1/20/1990	
10N/28E-26D03	HANFORD	699-S41-E13A	-99.0	61.0	O	U	11/ 1/1988	
10N/28E-26D04	HANFORD	699-S41-E13B	-99.0	86.0	O	U	11/ 1/1988	
10N/28E-26F01	HANFORD	1199-37-16	55.0	40.0	O	U	11/29/1961	
10N/28E-26G01	HANFORD		-99.0	-99.0	Z	U	/ /	U
10N/28E-26G02	MYERS	DAVID A.	53.0	51.0	W	H	11/ 1/1979	

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12/04/90 10:42:46

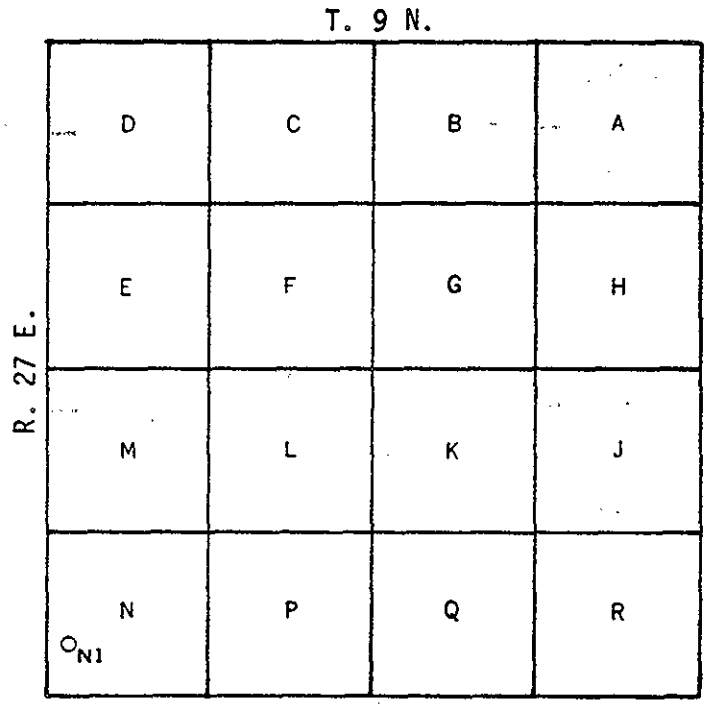
ALL WELLS IN BENTON/FRANKLIN COUNTIES PROJECT FILE AS OF 12/4/90 FOR FOLLOWING AREA: BENTON COUNTY, TOWNSHIP 10, RANGE 28, SECTIONS 10, 11, 14, 15, 16(E 1/2), 22, 23, 25, 26, 27, 34(N 1/2), 35(N 1/2), 36(N 1/2).

LOCAL WELL NO.[a]	WELL IDENTIFICATION (OWNER/NUMBER/ETC.)		DEPTH (ft) HOLE	DEPTH (ft) WELL	USE[b]	DATE DRILLED	INVENTORY[c] EXCLUSION
10N/28E-10B01	HANFORD	399-8-2	119.0	95.0	O U	05/ /1950	
10N/28E-10G01	HANFORD	399-5-2	214.0	214.0	Z U	04/ /1951	
10N/28E-10G01D1	HANFORD	399-5-2	424.0	417.0	O U	7/ 1/1954	
10N/28E-10H01	HANFORD	399-6-1	101.0	67.0	O U	06/ /1950	
10N/28E-11C01	HANFORD	399-3-1	78.0	78.0	O	10/ /1948	H
10N/28E-11C02	HANFORD	399-2-1	75.0	74.0	O U	10/ /1948	H
10N/28E-11C03	HANFORD	399-1-3	102.0	75.0	O U	04/ /1950	H
10N/28E-11D01	HANFORD	399-1-2	101.0	96.0	O U	04/ /1950	H
10N/28E-11D02	HANFORD	TEST #5	31.0	31.0	Z U	/ /	H
10N/28E-11D03	HANFORD	399-3-6	85.0	85.0		08/ /1943	H
10N/28E-11D04	HANFORD	399-3-7	86.7	86.0	W P	1/ 1/1944	H
10N/28E-11E01	HANFORD	399-5-1	102.0	95.0	O U	02/ /1951	H
10N/28E-11E02	HANFORD	399-3-2	102.0	102.0	T U	10/ /1947	H
10N/28E-11E03	HANFORD	399-3-3	175.0	81.0	T U	1/ 1/1948	H
10N/28E-11E04	HANFORD	399-4-2	42.0	42.0	Z U	05/ /1951	H
10N/28E-11E05	HANFORD	399-5-3	36.0	36.0	Z U	05/ /1951	H
10N/28E-11E06	HANFORD	399-3-4	40.0	40.0	Z U	05/ /1951	H
10N/28E-11E07	HANFORD	399-3-5	40.0	40.0	Z U	05/ /1951	H
10N/28E-11F01	HANFORD	399-4-1	101.0	96.0	U U	02/ /1951	H
10N/28E-11F02	HANFORD	399-4-5	196.0	196.0		8/ 1/1958	H
10N/28E-11F03	HANFORD		-99.0	40.0		/ /	H
10N/28E-11L01	HANFORD	699-S27-E14	165.0	165.0	O U	04/ /1948	
10N/28E-11M01	HANFORD		260.0	260.0	W N	/ /1958	
10N/28E-14B01	HANFORD	699-S30-E15A	80.0	78.0	T U	10/ /1971	
10N/28E-14B02	HANFORD	699-S30-E15B	-99.0	93.0	O U	10/ 1/1971	
10N/28E-14B03	HANFORD	699-S30-E15C	3540.0	2053.0	T U	/ /1970	
10N/28E-14C01	HANFORD	699-S30-E14	-99.0	219.0	O U	8/ 1/1962	
10N/28E-14D01	HANFORD		-99.0	79.0		/ /	
10N/28E-14E01	HANFORD	699-S31-E13	-99.0	100.0	O U	10/ 1/1979	
10N/28E-14E02	HANFORD	699-S32-E13A	100.0	70.0	O U	9/25/1979	
10N/28E-14E03	HANFORD	699-S32-E13B	100.0	70.0		10/ 1/1979	
10N/28E-14G01	HOGUE	HAROLD	46.0	46.0	W H	11/24/1987	
10N/28E-14J01	HANFORD	3099-47-18B	71.4	71.4	O U	12/ 1/1948	
10N/28E-14K01	HANFORD	3099-47-18A	191.0	191.0	Z U	03/ /1948	D
10N/28E-14K03	HANFORD		-99.0	-99.0		/ /	
10N/28E-14L01	HANFORD		-99.0	-99.0	O U	/ /	
10N/28E-14P01	HYNES	STEPHEN A.	-99.0	-99.0	Z U	8/14/1981	U
10N/28E-14Q01	HANFORD	3099-45-16	65.0	65.0	O U	/ /	
10N/28E-14R01	HANFORD	3099-45-18B	101.0	101.0	Z U	02/ /1948	D
10N/28E-14R02	HANFORD	3099-45-18A	99.0	20.0	U U	03/ /1948	D
10N/28E-15A01	HANFORD	699-S29-E12	80.0	80.0	O U	11/ 1/1971	
10N/28E-15B01	HANFORD	MW-10	67.5	57.0	T U	11/14/1989	MW
10N/28E-15B02	HANFORD	MW-11	58.5	54.7	T U	12/19/1989	MW
10N/28E-15C01	HANFORD	HRL-5	25.6	25.6	Z U	1/10/1990	MW
10N/28E-15E01	HANFORD	MW-8	34.6	34.2	T U	10/31/1989	MW
10N/28E-15E02	HANFORD	MW-9	81.4	79.3	T U	1/19/1990	MW
10N/28E-15E03	HANFORD	HRL-1	17.3	17.2	T U	6/30/1989	MW
10N/28E-15F01	HANFORD	HRL-7	26.0	26.0	T U	2/ 8/1990	MW
10N/28E-15F02	HANFORD	HRL-6	27.8	27.8	T U	1/15/1990	MW
10N/28E-15F03	HANFORD	HRL-4	25.5	25.5	Z U	1/29/1990	MW
10N/28E-15F04	HANFORD	HRL-3	25.6	25.6	Z U	1/24/1990	MW
10N/28E-15F05	HANFORD	HRL-2	25.3	25.3	Z U	1/19/1990	MW

10N/28E-26H01	HANFORD		-99.0	-99.0	O	U	/ /		U
10N/28E-26J01	HANFORD	1199-37-19	-99.0	34.0	Z	U	/ /		D
10N/28E-26JR	BOND	FREDERICK	53.0	53.0	W	H	1/ 1/1981		
10N/28E-26K01	HANFORD		24.7	24.7	O	U	/ /		
10N/28E-26K02	BOSCH	GARY	28.0	-99.0	W	H	4/ 1/1974		
10N/28E-26M01	HANFORD		-99.0	-99.0	O	U	/ /		
10N/28E-26N01	HANFORD		-99.0	50.0	U	U	/ /		U
10N/28E-26Q01	HANFORD	1199-35-16	-99.0	35.5	O	U	/ /		
10N/28E-26R01	HANFORD	1199-36-18	26.0	25.4	Z	U	/ /		D
10N/28E-26R02	HANFORD	1199-35-18	-99.0	27.3	Z	U	/ /		D
10N/28E-27A01	HANFORD	MW-3	83.7	65.0	T	U	2/16/1990		
10N/28E-27A02	HANFORD	ATS-1C	22.0	22.0	Z	U	11/10/1989		
10N/28E-27C01	HANFORD	1199-39-10B	54.0	49.0			08/23/1944		
10N/28E-27C02	HANFORD	1199-39-10A	100.0	93.0	T	U	09/02/1944		
10N/28E-27E01	PEDERSON	HERBERT	130.0	-99.0	W	H	2/ 1/1978		
10N/28E-27F01	HANFORD	1199-38-11	90.0	90.0	T	U	09/19/1944		
10N/28E-27F02	WISER CO. INC.		85.0	-99.0	T	U	4/ 1/1989		
10N/28E-27F03	WISER CO. INC.		43.0	-99.0	T	U	5/ 1/1989		
10N/28E-27H01	HANFORD	1199-37-13	52.0	52.0	Z	U	/ /		D
10N/28E-27H02	HANFORD	MW-1	94.0	57.0	T	U	1/22/1990		
10N/28E-27H03	HANFORD	BAP-1	20.0	20.0	Z	U	8/ 9/1989		
10N/28E-27H04	HANFORD	BAP-2	45.6	45.6	Z	U	6/23/1989		
10N/28E-27J01	HANFORD	1199-36-12	-99.0	-99.0	Z	U	/ /		D
10N/28E-27J02	HANFORD		-99.0	38.0	O	U	/ /		D
10N/28E-27J03	HANFORD	699-S43-E12	61.7	58.0	O	U	10/ 1/1988		
10N/28E-27K01	HANFORD		-99.0	-99.0	O	U	/ /		
10N/28E-34A01	HANFORD	1199-34-13	103.0	95.0	O	U	03/ /1948		
10N/28E-34A02	HANFORD	1199-33-13A	120.0	119.0	O	U	03/ /1948		D
10N/28E-34A03	HANFORD	1199-33-13B	130.0	123.0	Z	U	03/ /1948		D
10N/28E-34A04	RURAL SALES INC		233.0	98.0	W	I	06/27/1970		
10N/28E-34C01	HANFORD	1199-34-10	19.5	19.5	Z	U	/ /		D
10N/28E-34C02	HANFORD		-99.0	-99.0	O	U	/ /		
10N/28E-34C03	HANFORD		-99.0	-99.0			/ /		
10N/28E-34D01	NENSEN	PETE	80.0	-99.0	W	H	9/ 1/1989		
10N/28E-34G01	LAMB-WESTON		56.0	37.3	U	U	07/05/1974		
10N/28E-34H01	HANFORD	1199-32-13	-99.0	22.6	Z	U	/ /		D
10N/28E-35A01	HANFORD	1199-34-19	63.0	63.0	O	U	10/ /1947		
10N/28E-35A02	HANFORD		-99.0	-99.0	O	U	/ /		
10N/28E-35A03	HANFORD		38.6	37.2	O	U	/ /		
10N/28E-35A04	BELL	JOHN	36.0	36.0	W	I	9/ 1/1980		
10N/28E-35B01	HANFORD		-99.0	31.5			/ /		
10N/28E-35B02	HANFORD	1199-34-16	-99.0	-99.0	Z	U	/ /		D
10N/28E-35C01	HANFORD		-99.0	27.7	O	U	/ /		
10N/28E-35C02	HANFORD		-99.0	21.3	U	U	/ /		U
10N/28E-35C03	RAYMOND	JOHN	50.0	50.0	W	I	11/ 1/1979		
10N/28E-35D01	HANFORD	1199-34-15B	86.0	86.0	W	P	1/ 1/1953		
10N/28E-35D02	HANFORD	1199-34-15A	120.0	95.0			09/ /1948		
10N/28E-35D03	HANFORD		-99.0	17.0			/ /		
10N/28E-35D04	PAYTON	D.B.	86.0	85.0	W	H	I 2/19/1974		
10N/28E-35D05	STRACHAN	DENNIS	66.0	66.0	W	H	08/ /1981		
10N/28E-35D06	MIDDLEFENCE IRR		54.0	54.0	W	H	5/13/1980		
10N/28E-35D07	FLEISCHMAN	ROD	51.0	-99.0	W	H	12/ 1/1984		
10N/28E-35F01	HANFORD		-99.0	-99.0	O	U	/ /		U
10N/28E-35G01	HANFORD		-99.0	-99.0	O	U	/ /		
10N/28E-35G02	ROY	NORMAN	48.0	47.0	W	H	12/ 1/1979		
10N/28E-35H01	HANFORD	1199-33-18D	101.0	101.0	O	U	02/ /1948		D
10N/28E-35H02	HANFORD	1199-33-18E	80.0	76.0	O	U	4/ 1/1948		D
10N/28E-35H03	HANFORD	1199-32-17	75.0	75.0	O	U	4/ 1/1948		
10N/28E-35H04	HANFORD	1199-33-18B	77.0	77.0	W	P	08/02/1948		
10N/28E-35H05	HANFORD	1199-33-18C	70.0	-99.0	W	P	9/ 1/1948		D
10N/28E-35H06	HANFORD	1199-33-18F	56.0	56.0	W	P	08/23/1948		D
10N/28E-35H07	HANFORD		28.6	26.1	O	U	10/ /1952		
10N/28E-35H08	HANFORD	1199-33-18A	37.8	37.8	Z	U	/ /		D
10N/28E-35H09	GAILEY	JOHN	44.0	44.0	W	H	11/26/1979		
10N/28E-36D01	CITY OF	RICHLAND	53.0	53.0	U	U	7/ 1/1976		
10N/28E-36E01	HEWITT	G	122.5	121.0			/ /1957		

[a] USGS WELL NUMBERING SYSTEM

The well numbering system used by the USGS is based on the rectangular subdivision of public lands. These subdivisions include township, range, section, and ¼ - ¼ section. For example, in well number 9/27-4N1, the part written as a fraction and preceding the hyphen indicates the township and range (T. 9 N., R. 27 E.) north and east of the Willamette base line and meridian. The number following the hyphen indicates the section (sec. 4); the letter denotes the 40-acre subdivision of the section, or ¼ - ¼ section; and the final digit is a serial number among wells and springs in that particular 40-acre tract. Thus, well 9/27-4N1 is in the SW¼ SW¼ sec.4, T. 9 N., R. 27 E., and is the first well in that tract to be listed. The example is shown below.



Example: 9/27-4N1

Source: Newcomb et al. 1972

FOOTNOTES FOR INVENTORY CODES USED ON USGS WELL DATABASE

[b]USGS well database use key.

Use of Site:

A - Anode
C - Standby, Emergency Supply
D - Drain
E - Geothermal
H - Heat Reservoir
M - Mine
O - Observation Well
P - Oil or Gas Well
R - Recharge
S - Repressurizing
T - Test Well
U - Unused
W - Withdrawal
X - Waste
Z - Destroyed (or Modified: Deepened, Etc.)

Use of Water:

A - Air Conditioning
B - Bottling
C - Commercial
D - Dewatering
E - Power
F - Fire Protection
H - Domestic
I - Irrigation
J - Industrial (Coolings)
K - Mining
M - Medicinal
N - Industrial (Other than Cooling)
P - Public Supply (Five or More Homes)
Q - Aquaculture
R - Recreation
S - Stock
T - Institution
U - Unused
Y - Desalination
Z - Other

[c]USGS well database inventory exclusion key explaining why well was not used in this inventory.

D - McGhan (1989) indicates that the well has been abandoned, destroyed, or filled in.

H - The well is a monitoring well within the 300 Area of the Hanford Site.

MW - The well is a vadose zone boring or monitoring well drilled as part of the Phase I RI for the 1100-EM-1 Operable Unit; data are already available.

ANF - The well is an ANF monitoring well; more detailed ANF data were obtained from another source.

U - USGS well database (1990) indicates that the well has been filled in or sealed.

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APPENDIX D

WESTINGHOUSE HANFORD WELL DATA BASE

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WELL Name	LOCATION Hanford Coordinates North	West	Elevation	Survey Date	CONSTRUCTION RCRA Std	Dia. (in)	Depth (ft)	Open Interval (ft)	Drill Date	Sampling Device	Inventory Exclusion [a]
11-30-14	-49777	-11994	359.00		N	10.0	55	-	8/31/48		D
11-31-17	-48777	-15494	377.99		N			-			D
11-31-18	-48202	-16319	375.80		N	6.0	81	-	5/31/41		D
11-31-19	-48527	-17694	345.00		N	8.0	90	-	12/31/51		D
11-32-13	-47526	-11583	369.13		N			-			D
11-32-16A	-47775	-14220	379.44		N	36.0		-			D
11-32-16B	-47733	-14646	372.99		N	36.0		-			D
11-32-17	-47537	-15811	372.00		N	8.0	75	-	4/30/48		N
11-33-13A	-46092	-11016	380.01		N	8.0	120	-	3/31/48		D
11-33-13B	-46119	-11589	380.01		N	8.0	130	-	3/31/48		D
11-33-18A	-46864	-16804	377.19		N		38	-			D
11-33-18B	-46813	-16555	378.30		N	20.0	77	37 - 73	6/30/48		
11-33-18C	-46799	-16140	376.25		N	22.0		23 - 63	9/30/48		D
11-33-18D	-46613	-16312	365.00		N	8.0	101	80 - 100	2/28/48		D
11-33-18E	-46522	-16594	376.00		N	8.0	80	35 - 69	4/30/48		D
11-33-18F	-46413	-16611	368.00		N	17.0	55	32 - 64	6/30/48		D
11-34-10	-45031	-8227	372.79		N	48.0	19	-			D
11-34-13	-45351	-11597	394.78	5/01/90	N	8.0	77	45 - 90	3/31/48		
11-34-16	-45121	-14624	380.10		N	36.0		-			D
11-34-19	-45117	-16992	380.02		N	8.0	63	-	10/31/47		
11-35-16	-44152	-14707	379.57		N			-			
11-35-18	-44870	-16285	372.01		N	36.0		-			D
11-36-12	-43586	-10772	400.16		N	36.0		-			D
11-36-18	-43827	-16590	371.71		N	36.0	26	-			D
11-36-19	-43577	-17394	368.51		N		29	-			D
11-37-13	-42287	-11694	406.28		N		52	-			D
11-37-19	-42788	-17165	373.71		N	36.0		-			D
11-37-8	-42127	-5994	373.67		N			-			D
11-38-11	-41521	-9015	362.26		N	6.0	90	-	9/30/44		
11-39-10A	-40792	-7920	367.15		N	6.0	100	-	9/30/44		
11-39-10B	-40305	-8554	362.61		N	6.0	54	-	8/31/44		
11-39-16A	-40546	-14298	368.82		N	17.0	63	22 - 58	8/31/48		
11-39-16B	-40569	-14242	371.01		N	8.0	110	-	3/31/48		
11-39-16C	-40280	-14015	385.77		N	20.0	75	41 - 71	5/31/48		
11-39-16D	-40077	-14339	371.17		N	20.0	64	32 - 62	5/31/48		
11-39-19	-40846	-17529	382.73		N			-			D
11-40-15	-39289	-13836	395.93		N	20.0	88	47 - 81	4/30/48		
11-40-16A	-39277	-14394	390.01		N	8.0	125	112 - 117	4/30/48		D
11-40-16B	-39290	-14371	392.82		N	20.0	90	47 - 84	5/31/48		
11-41-13A	-38581	-11650	404.64		N	6.0	63	-	6/30/43		
11-41-13B	-38428	-11745	404.66		N	6.0	65	-	6/30/43		
11-41-13C	-38347	-11653	405.98	5/01/90	N	20.0	71	-	3/31/44		
11-41-15	-38610	-13578	398.94		N	17.0	74	-	10/31/49		
30-41-14	-38470	-12416	400.06		N	8.0	68	-	2/28/48		

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WELL	LOCATION				CONSTRUCTION						
	Hanford Coordinates			Survey	RCRA	Dia.	Depth	Open		Drill	Sampling	Inventory
Name	North	West	Elevation	Date	Std	(in)	(ft)	Interval (ft)		Date	Device	Exclusion[a]
30-41-17	-38581	-15820	372.16		N	36.0		-				D
30-42-16	-37805	-14574	407.63		N	12.0	134	55 -	125	10/31/44		
30-42-18	-37737	-16874	366.86		N	36.0		-				D
30-45-16	-34269	-14780	408.04	5/01/90	N	36.0	65	-				
30-45-18A	-33927	-16374	361.01		N	8.0	20	-		3/31/48		D
30-45-18B	-33902	-16374	361.01		N	8.0	101	15 -	42	2/28/48		D
30-47-18A	-32275	-16080	374.40		N	8.0	191	60 -	175	3/31/48		D
30-47-18B	-32257	-16080	376.95	5/01/90	N	17.0	71	24 -	72	12/31/48		
6-S30-E10A	-30009	-9557	392.29	3/05/90	Y			-				MW
6-S30-E10B	-30321	-9583	392.07	3/05/90	Y			-				MW
6-S30-E14	-30380	-14497	401.39		N	1.5	3540	-		8/08/62		
6-S30-E15A	-30257	-14838	400.14		N	6.0	72	-		10/31/71	P-Sub/Blad	
6-S30-E15B	-30286	-14831	399.33		N	6.0	93	-		10/31/71		
6-S31-E10A	-30550	-9893	384.57	3/05/90	Y			-				MW
6-S31-E10B	-30766	-9877	383.71	3/05/90				-				MW
6-S31-E10C	-30748	-9901	382.91	3/05/90	Y			-				MW
6-S31-E10D	-31040	-9902	380.58	3/05/90	Y			-				MW
6-S31-E13	-31224	-13097	394.06	1/11/89	N	8.0	72	50 -	68	10/31/79	P-Submrsbl	
6-S31-E8	-31469	-7553	374.75	3/05/90	Y			-				MW
4-S32-E13A	-31640	-13166	390.46	1/11/89	N	8.0	72	50 -	70	9/30/79	P-Submrsbl	
6-S32-E13B	-31653	-12587	394.72	1/11/89	N	8.0	74	50 -	70	10/31/79	P-Submrsbl	
6-S32-E8	-31506	-7593	375.50	6/13/90	Y			-				MW
6-S34-E10	-34392	-9835	382.37	3/05/90	Y			-				MW
6-S36-E12A	-35667	-12353	398.64		N	8.0		-		10/31/79	P-Submrsbl	
6-S36-E12B	-36182	-12350	399.04		N	8.0		-		10/31/79		
6-S36-E13A	-35689	-12847	399.30	1/11/89	N	8.0	72	-		9/30/79		
6-S36-E13B	-36195	-12845	399.61	1/11/89	N	8.0		-		10/31/79		
6-S37-E11	-37255	-11314	399.30	3/05/90	Y			-				MW
6-S37-E14	-37276	-13980	408.28	11/18/88	N	4.0	63	-		10/12/88	P-Hydstr	MW
6-S38-E11	-38175	-10501	398.60	3/05/90	Y			-				MW
6-S38-E12A	-37863	-12053	404.95	3/05/90	Y			-				MW
6-S38-E12B	-37886	-12053	405.00	3/05/90	Y			-				MW
6-S40-E14	-39745	-13927	402.85	11/18/88	N	4.0	60	-		10/20/88	P-Hydstr	MW
6-S41-E11	-41188	-11010	401.36	3/05/90	Y			-				MW
6-S41-E12	-40975	-11538	401.93	6/13/90	Y			-				MW
6-S41-E13A	-41004	-12811	410.56	11/18/88	N	4.0	63	-		10/17/88	P-Hydstr	MW
6-S41-E13B	-40970	-12813	410.10	11/18/88	N	4.0	87	-		10/18/88	P-Hydstr	MW
6-S41-E13C	-40986	-12847	410.67	3/05/90	Y			-				MW
6-S43-E12	-43060	-11986	405.60	11/18/88	N	4.0	58	-		10/24/88	P-Hydstr	MW
6-S48-E14	-47753	-14046	394.72		N			-				N
6-S48-E15	-47759	-14625	390.46		N			-				N

FOOTNOTE FOR INVENTORY EXCLUSION CODE USED ON
WESTINGHOUSE WELL DATABASE

[a] Westinghouse well database inventory exclusion key explaining why well was not used in this inventory.

D - McGhan (1989) indicates that the well has been abandoned, destroyed, filled in, or covered over.

N - The well is not within the area of interest.

MW - The well is a vadose zone boring or monitoring well drilled as a part of the Phase I RI for the 1100-EM-1 Operable Unit; data are already available.

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