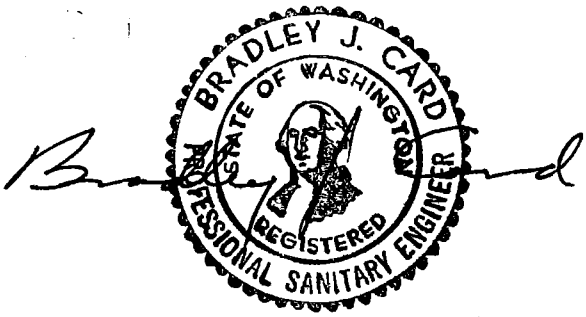
SITE ASSESSMENT AND INTERMEDIATE CLEANUP REPORT

ON

LEAKING UNDERGROUND STORAGE TANK REMOVAL

ROY FARMS, INC.

Moxee, Washington



July 1991

Job No. 91020

Prepared by

PLSA ENGINEERING & SURVEYING
WDOE Lic. No. S000210
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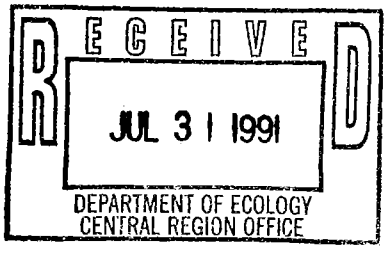

SITE ASSESSMENT AND INTERMEDIATE CLEANUP REPORT

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LEAKING UNDERGROUND STORAGE TANK REMOVAL

for

ROY FARMS

Moxee, Washington

INTRODUCTION

Roy Farms removed an underground storage tank from their farm on Walters Road east of Moxee, Washington. The tank was 8,000 gallon capacity, steel, appearing to be in good condition, and had contained diesel. During tank removal, diesel was detected to have been released into the surrounding soil. The tank was located at NW1/4, SW 1/4, SEC 5, TWP 12N, R20-EWM. See Figure 1.

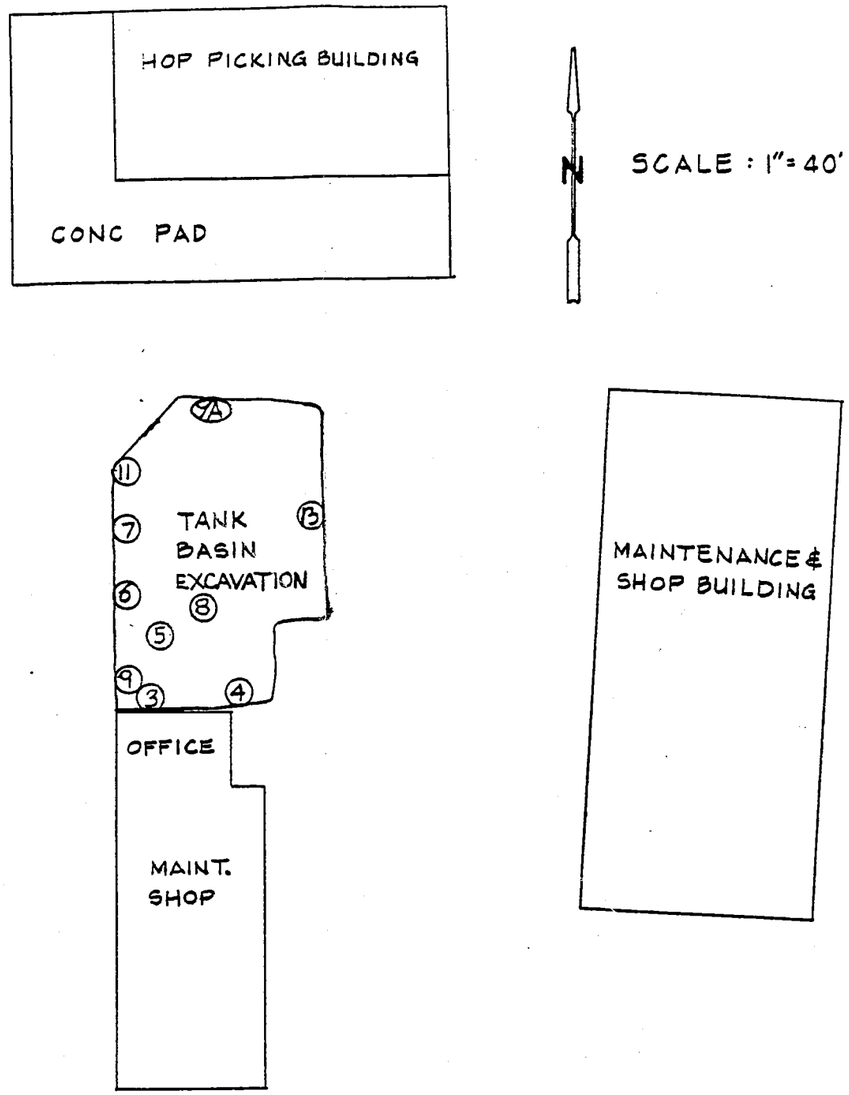
This report summarizes site conditions, proposes intermediate cleanup, and remediation and disposal of petroleum contaminated soil. Results of laboratory testing of representative soil samples for presence of Total Petroleum Hydrocarbons (TPH), benzene, toluene, ethylbenzene, and xylene (BTEX), characterization of the spilled petroleum by EPA 8015, and lead as appropriate are included. A geological engineer from PLSA Engineering and Surveying experienced with local soil conditions monitored removal of contaminated soil.

Tank removal was by Northwest Petroleum Equipment, a WDOE licensed tank decommissioning contractor.

ANALYTICAL RESULTS

Sample No.	Matrix	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Xylene (ppm)	TPH[1] (ppm)	Lead (ppm)
3	Soil	NT[2]	NT	NT	NT	9720.0	NT
4	Soil	<0.05	9.79	12.0	48.1	10380.0	6.3
5	Soil	<0.05	2.26	5.16	30.2	7760.0	7.9
6	Soil	<0.05	1.11	0.70	3.02	8880.0	NT
7	Soil	<0.05	<0.05	0.53	2.57	2950.0	NT
8	Soil	<0.05	0.12	1.96	11.4	1600.0	NT
9	Soil	<0.05	0.23	1.55	8.79	9170.0	NT
9A	Soil	<0.05	0.29	0.49	1.25	8440.0	NT
11	Soil	<0.05	<0.05	<0.05	<0.05	70.2	NT
13	Water	<0.001	<0.001	<0.001	<0.001	<1.0	<0.005

1 - Total Petroleum Hydrocarbons, EPA Method 418.1
2 - Not Tested



③-LOCATION AND NUMBER OF SOIL/WATER SAMPLE TAKEN

FIGURE 1

ROY FARMS, INC.
TANK BASIN LOCATION
MOXEE, WA

The owner's representative and contact person for this project is as follows:

Mr. Leslie Roy
Roy Farms, Inc.
401 Walters Road
Moxee, Washington 98936
phone (509) 452-3494

SURFACE CONDITIONS

A graveled parking area covered the tank basin.

SUB-SURFACE CONDITIONS

The tank was bedded in sandy silt topsoil containing some gravel overlying a stratum of cemented cobbles, gravel, and sand. The water table is seasonally variable with the irrigation season. A small quantity of ground water was found at the bottom of the tank basin excavation approximately 12 feet below the surface. The water table is seasonally variable with the irrigation season which extends from April to October. Groundwater is usually encountered approximately twenty feet below the surface when irrigation water is not available, and the static level of a well 1/2 mile to the North, is at 140 feet below the surface. A nearby well located within one quarter mile south at a somewhat lower elevation has a static level 22 feet below the surface.

From general topography, it appears that the groundwater hydraulic gradient is to the southwest toward the Moxee Drain.

SAMPLING PLAN

Representative soil and water samples were collected from backhoe excavations in the tank basin and along the product pipeline extending outside of the tank basin. Sample containers

were supplied by the analytical laboratory and were clean glass with teflon lined, screwed caps. Sampling equipment was cleaned between samplings.

All samples were stored and shipped to the laboratory by overnight express in a refrigerated, insulated container.

CONTAMINANT CHARACTERIZATION

A diesel odor was released when the soil was disturbed. A sample was collected and submitted to a laboratory for analysis for TPH and contaminant characterization by EPA 8015 analysis. Results of laboratory analyses are found in Appendix I. Diesel was the only contaminant found. As the cleanup excavation progressed, gasoline odor was detected. A sample collected and and submitted to a laboratory for analysis for BTEX was found to contain only xylene in excess of WDOE cleanup regulations. Mr. Roy reported that a gasoline tank had been removed from the location approximately 30 years ago.

A Photovac TIP I ultraviolet analyzer was used to scan the tank basin for Volatile Organic Compounds (VOC's). Significant TIP indication was found.

CLEANUP METHOD

Locally available excavation equipment was used for tank and contaminated soil removal. Cleanup by excavation and on-site remediation was necessary because of the need to restore the area as soon as possible to avoid interrupting farm operations.

Sufficient area is available to decontaminate the soil by land-farming on-site.

CONTAMINANT REMOVAL AND PROPOSED INTERMEDIATE CLEANUP

A Photovac TIP 1 photoanalyzer was used to detect volatile organic compounds (VOC's) as contaminated soil was removed until significant readings were no longer obtained in the walls of the excavation or until the excavation began to threaten any buildings, a valuable elm tree, or farm operations. A 60,000 pound excavator with rippers on the bucket met with refusal in the bottom of the excavation. Representative soil and water samples were then collected and submitted for laboratory analysis to verify the TIP results. Results of the laboratory analysis may be found in Appendix II.

Petroleum contaminated soil (PCS) extends in all directions. See Figure 1. Continued PCS removal by excavation would require that the office building be removed and the excavation would extend far enough to jeopardize other farm buildings as well. In-situ cleanup methods are not applicable to the cemented soil. An intermediate cleanup action would save the building with cleanup delayed until further removal of contaminated soil would have less severe economic impact.

A water sample was collected from ground water which had seeped into the excavation. Analysis of this sample for BTEX, TPH, and lead found all parameters to be below detection limits. See Appendix II.

Proposed intermediate cleanup would consist of removing all accessible PCS, constructing a basement for an office building addition in the resulting excavation, and leaving the residual PCS under the existing office building in place.

RISK ASSESSMENT

Roy Farms office building is located approximately 100 feet from the nearest well which is approximately 900 feet deep with the static level at 12 to 15 feet below the surface during the irrigation season and rises to the surface during the rest of the year. The bottom of the PCS excavation terminates in a tightly cemented stratum of cobbles, gravel, and sand with low to zero permeability to water. Some water seeps into the excavation during the irrigation season, but has a contaminant level below detection limits. Remaining soil contaminants consist of TPH from diesel and xylene from aged gasoline.

The remaining contamination has several feet of uncontaminated overburden. The site is in accordance with WAC 173-340-740(a)(i), and (ii), which states: "(i) The site does not serve as a current residential area; (ii) The site does not have the potential to serve as a future residential area based on the consideration of site zoning, statutory and regulatory restrictions, comprehensive plans, historical site use, adjacent land uses, and other relevant factors;".

There is little danger that any of the contaminants would leach into the ground water or come into contact with humans or animals.

DISPOSAL OF CONTAMINATED SOIL

The estimated volume of contaminated soil is 500 cubic yards. Plans are to decontaminate the soil on site by land-farming. Decontaminated soil will spread over crop land.

SITE CLOSURE

The tank basin will form the excavation for a basement under the proposed office building addition.

TANK AND PIPING DISPOSAL

Tank cleaning was performed by Joe Hall Construction. The tank was certified and is currently being used as an above ground storage tank. Piping within the tank basin was disposed of as scrap.

LOCAL DOCUMENTED WATER WELLS

A location map and copies of well logs of documented water wells in the area are located in Appendix III.

APPENDIX I

Analytical Results

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering Date: January 29, 1991

Report On: Analysis of Soil Lab No.: 15694

IDENTIFICATION:
Samples Received on 01-28-91
Project: 91020

ANALYSIS:

Lab Sample No.	RUSH 1	RUSH 2
Client Identification	#1	#2
Matrix/Units	Soil ppm	Soil ppm
Total Petroleum Hydrocarbons EPA Method 418.1	6,055	512
Total Petroleum Fuel Hydrocarbons by EPA SW-846 Modified Method 8015	3,802	NT
TPH as	Diesel	

NT = Not Tested

Note - Relsults reported on an as received, wet basis.

SOUND ANALYTICAL SERVICES

C. LARRY ZURAW

APPENDIX II

Intermediate Analytical Results

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering Date: February 13, 1991

Report On: Analysis of Soil Lab No.: 15934

IDENTIFICATION:
Samples Received on 02-11-91
Project: 91020

ANALYSIS:

Lab Sample No.	RUSH 1	RUSH 2	RUSH 3
Client Identification	3	4	5
Matrix/Units	Soil ppm	Soil ppm	Soil ppm
Benzene	NT	< 0.05	< 0.05
Toluene	NT	9.79	2.26
Ethyl Benzene	NT	12.0	5.16
Xylenes	NT	48.1	30.2
BTEX by EPA SW-846 Method 8020			
Total Petroleum Hydrocarbons by EPA Method 418.1	9,720	10,380	7,760
Total Petoleum Fuel Hydrocarbons by EPA SW-846 Modified Method 8015	NT	8,888	6,136
TPH as		Diesel	Diesel
Total Lead	NT	6.3	7.9

NT = Not Tested

Note - BTEX, TPH 418.1, and TPH 8015 results reported on an as received basis.

SOUND ANALYTICAL SERVICES

STAN P. PALMQUIST

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering

Date: March 4, 1991
Revised: March 6, 1991

Report On: Analysis of Soil

Lab No.: 16274

IDENTIFICATION:
Samples Received on 03-01-91
Project: 91020

ANALYSIS:

Lab Sample No.	RUSH 1	RUSH 2	RUSH 3	RUSH 4
Client Identification	6	7	8	9
Matrix/Units	Soil ppm	Soil ppm	Soil ppm	Soil ppm
Benzene	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	1.11	< 0.05	0.12	0.23
Ethyl Benzene	0.70	0.53	1.96	1.55
Xylenes	3.02	2.57	11.4	8.79
BTEX by EPA SW-846 Method 8020				
Total Petroleum Hydrocarbons by EPA Method 418.1	8,880	2,950	1,600	9,170
Total Petroleum Fuel Hydrocarbons by EPA SW-846 Modified Method 8015	NT	2,633	NT	NT
TPH as		Diesel		

Note - Results reported on an as received basis.

Original Lab report was revised on March 6, 1991 to include additional TPH Modified Method 8015 testing.

SOUND ANALYTICAL SERVICES

C. LARRY ZURAW FOR

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering Date: March 5, 1991

Report On: Analysis of Soil Lab No.: 16299

IDENTIFICATION:
Samples Received on 03-04-91
Project: 91020

ANALYSIS:

Lab Sample No.	RUSH 1	RUSH 2	RUSH 3
Client Identification	#9A	#10	#11
Matrix/Units	Soil mg/kg	Soil mg/kg	Soil mg/kg
Benzene	< 0.05	< 0.05	< 0.05
Toluene	0.29	< 0.05	< 0.05
Ethyl Benzene	0.49	< 0.05	< 0.05
Xylenes	1.25	< 0.05	< 0.05
BTEX by EPA SW-846 Method 8020			
Total Petroleum Hydrocarbons by EPA Method 418.1	8,440	3,850	70.2
Total Petroleum Fuel Hydrocarbons by EPA SW-846 Modified Method 8015	8,432	NT	NT
TPH as	Diesel		

NT - Not Tested.

Note - Results reported on an as received basis.

SOUND ANALYTICAL SERVICES

C. LARRY ZURAW

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering Date: June 28, 1991

Report On: Analysis of Water & Soil Lab No.: 18347

IDENTIFICATION:
Samples Received on 06-25-91
Project: 91020

ANALYSIS:

Lab Sample No.	RUSH 1	RUSH 2	RUSH 3
Client Identification	91020-13	91020-S	91020-N
Matrix/Units	Water mg/l	Soil mg/kg	Soil mg/kg
Benzene	< 0.001	< 0.001	< 0.001
Toluene	< 0.001	< 0.001	< 0.001
Ethyl Benzene	< 0.001	< 0.001	< 0.001
Xylenes	< 0.001	< 0.001	< 0.001
BTEX by EPA SW-846 Method 8020			
Total Petroleum Hydrocarbons by EPA Method 418.1	< 1.0	660	170
Total Lead (GFAA)	< 0.005	8.6	8.5

Note - BTEX results reported on an as received basis.

SURROGATE RECOVERY, %

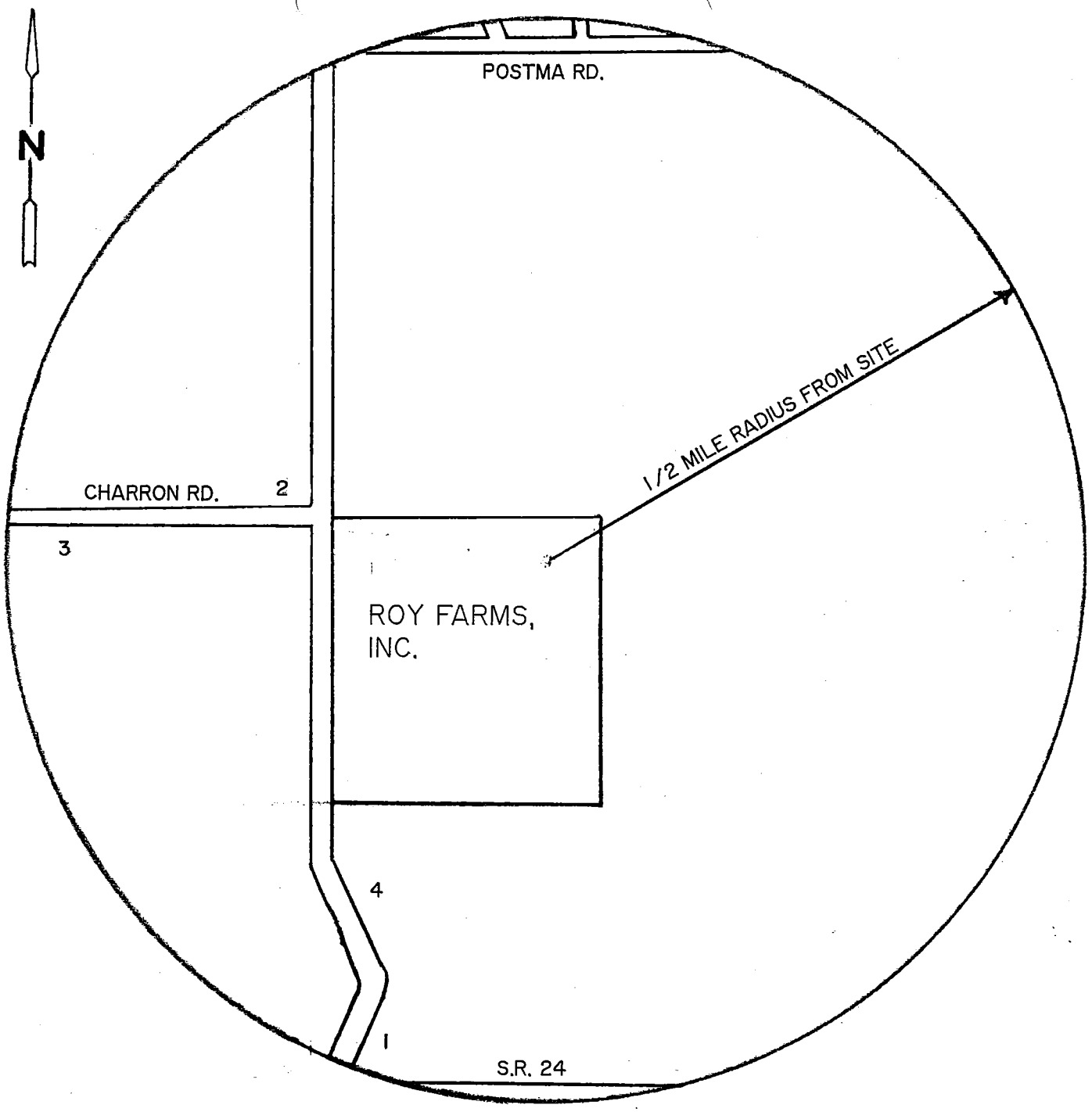
Lab Sample No.	1	2	3
BTEX-Trifluorotoluene	100	83	82

SOUND ANALYTICAL SERVICES

C. LARRY ZURAW

APPENDIX III

Documented Well Logs



2-LOCATION AND NUMBER
OF DOCUMENTED WELL

FIGURE 2

DOCUMENTED WELL
LOCATION MAP
ROY FARMS, INC.
N.T.S.

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. 1
Permit No. ....

(1) OWNER: Name Charles R. Groot Address 807 E. Viola, Yakima, Wash. 98901

(2) LOCATION OF WELL: County Yakima — SW ¼ SW ¼ Sec. 5 T. 12 N., R. 20 W.M.

Bearing and distance from section or subdivision corner N

(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 [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 5 inches.
Drilled .... ft. Depth of completed well 80 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 5 " Diam. from 0 ft. to 28' 8" ft.
Threaded [ ] " Diam. from .... ft. to .... ft.
Welded [X] " 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? 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. 1120 ft.
Static level From ground level 22 ft. below top of well Date 4-4-84
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: 20 gal./min. with .... ft. drawdown after .... hrs.
"With air. " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

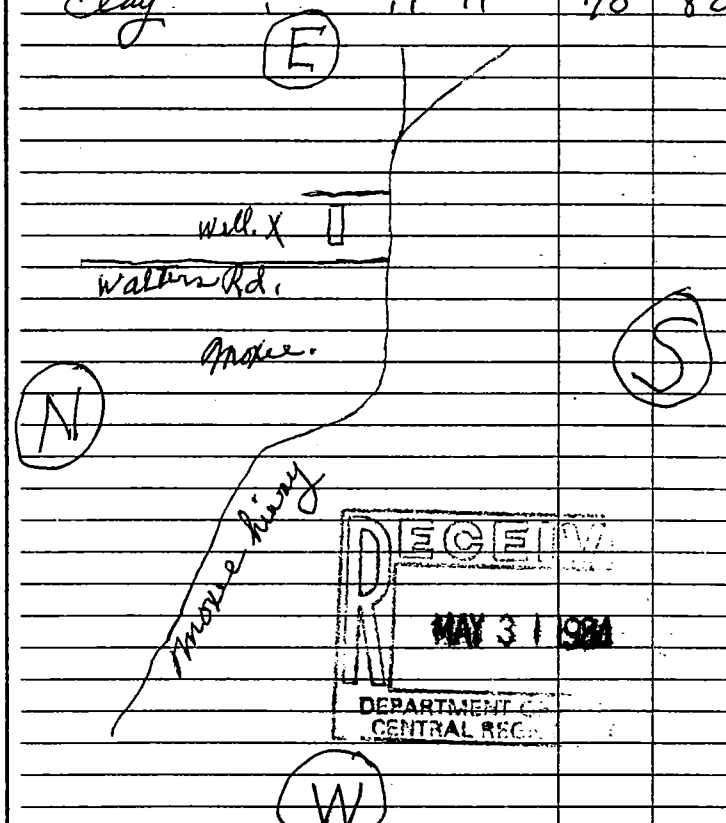
Time	Water Level	Time	Water Level	Time	Water Level

Date of test ....
Bailer test .... gal./min. with .... ft. drawdown after .... hrs.
Artesian flow .... g.p.m. Date....
Temperature of water 55 Was a chemical analysis made? Yes [ ] No [X]

(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
Top Soil, Light Brown	0	7
Conglomerate, " "	7	22
Clay, " "	22	26
Conglomerate, " "	26	30
Clay, " "	30	55
Sand Stone, " "	55	70
Clay, " "	70	80



RECEIVED
MAY 31 1984
DEPARTMENT OF ECOLOGY
CENTRAL REG.

Work started 4-3 19 84 Completed 4-4 19 84

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 JENSEN'S WELL DRILLING & DRIVING,
(Person, firm, or corporation) (Type or print)
Address 1603 So. 10th Ave., Yakima, Wash. 98902

[Signed] Chris B. Jensen Jr.
(Well Driller)

License No. 0217 Date 5-30 19 84

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

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. 2
Permit No. 7

(1) OWNER: Name Mr. Ken Patterson Address Rt 1, Box 171 Moxee

(2) LOCATION OF WELL: County Yakima East ½ – NE ¼ SE ¼ Sec. 6 T. 12N., R. 20 W.M.

Bearing and distance from section or subdivision corner Charron Rd and Walters Rd. J

(3) PROPOSED USE: Domestic X Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
New well X Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary X Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 160 ft. Depth of completed well 160 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: .250 6" Diam. from 0 ft. to 160 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded X ..." 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? 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 7 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 X

(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
Top soil sandy clay	brn	S	0	2
Mixed gravel sandy clay		S	2	12
Clay, gravel	brn	s	12	26
Dry sandy clay	brn	s	26	80
			80	90
Moist hardpan, gravel	brn	S	90	92
Sandy clay		S	92	125
Sandy clay	bl/gry	S	125	151
Gray sandstone gravel	gry	M	151	155
Sandstone	brn	M	155	160
Water at 155 20/30 gpm				
WAter at 160 150+ gpm				

RECEIVED
NOV - 2 1984
DEPARTMENT OF ECOLOGY

Work started 7/24, 19... Completed 7/25/84, 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 RIEBE WEILL DRILLING
(Person, firm, or corporation) (Type or print)

Address 1503 E. Nob Hill Blvd.

[Signed] John A. Riebe
(Well Driller)

License No. 0422 Date 8/31/84, 19...

OK 11/3/84 2

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

3385 3

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. 033736

Water Right Permit No. I

(1) OWNER: Name Roger Miller Address 1450 Charron Rd. Moxee

(2) LOCATION OF WELL: County Yakima Parcel # 201206 41006 NE ¼ SE ¼ Sec. 6 T. 12 N., R. 20 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) Same

(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 140 feet. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 120' ft.
Welded ☒ Liner installed ☐ Threaded ☐ _____ " 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 Sta Rite
Type: Submersible H.P. 1½

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 15 ft. below top of well Date 5/3/90
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? Bach
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
	60 GPM @ 140'		40 GPM @ 100'		
	50 GPM @ 120'		35 GPM @ 80'		
Date of test	5/3/90		20 GPM 2 60'		

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water 60° 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	
Clay loam	0	8	
Conglom. gravel & sand	8	13	
Cemented gravel w/brn. sandy clay	13	33	
Brn. sandy clay	33	55	
" " " w/brn. s.stone	55	70	
Brn. sandy clay	70	81	
" " " w/brn. s.stone	81	108	
Green sandy clay	108	113	
Med. green s.stone	113	140	wt

ENTERED

RECEIVED
JUL 26 1990
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 5/1, 19. Completed 5/3, 1990

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 Bach Well Drilling Co. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 2111 Birchfield Rd. Yakima, Wa.

(Signed) Scott DeKinney (WELL DRILLER) License No. 1436

Contractor's Registration No. BACHWDC137NU Date 5/3, 1990

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

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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. 4
Permit No. .....

(1) **OWNER:** Name Marciso Gutierrez Address 231 Walters RD Moxee WA 959

(2) **LOCATION OF WELL:** County Yakima SE Cor SW ¼ SE ¼ Sec. 6 T. 12 N., R. 20 E W.M.

Bearing and distance from section or subdivision corner

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 180 ft. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +2 ft. to 80 ft.
Threaded ☐ 4½" Diam. from 70 ft. to 180 ft.
Welded ☑ " Diam. from ft. to ft.

Perforations: Yes ☑ No ☐
Type of perforator used SAW
SIZE of perforations ⅛ in. by 6 in.
160 perforations from 160 ft. to 180 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? 30 ft.
Material used in seal Bentionite 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 n/a
Type: n/a H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 1110 ft.
Static level 28 ft. below top of well Date 5-13-87
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: 100 gpm/min. with air Lift ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

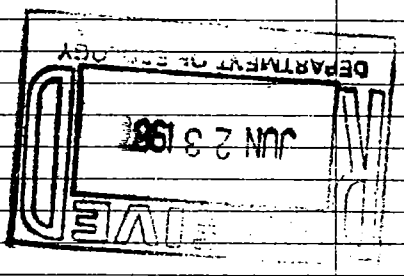
Time	Water Level	Time	Water Level	Time	Water Level

Date of test
er 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
Top Soil Brown	0	2
Gravel, Bolders, + Silt Brn	2	25
Silt & Shale Brown	25	32
Sandy Clay Brown	32	46
Sandstone Brown	46	50
Sandstone + Clay Brown	50	102
Brown + Blue Sandstone Clay	102	120
Med. Blue Sandstone	120	170
Soft Blue Sand + cobbles	170	180
Water		



Work started 5-12 19 87 Completed 5-13 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 Rebe Well Drlg (Person, firm, or corporation) (Type or print)
Address 1503 Enoch Ave Bell
[Signed] Bob Britton for Jake Rebe (Well Driller)
License No. 0492 Date 5-13 19 87

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 5-69)—5-69.

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 Steve Young Address P.O. Box 66 Moxee City, Wn

(2) **LOCATION OF WELL:** County Yakima — NE¼ SE¼ Sec. 6 T. 12 N., R. 20 W.M.

Bearing and distance from section or subdivision corner S 167 ft of N 767 ft of E 435.6 ft

(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 ☐ Driven ☐
Reconditioned ☐ Rotary X ☐ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 5 inches.
Drilled 84 ft. Depth of completed well 82 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: X 5" Diam. from 0 ft. to 23 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded X ☐ ..." 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 X ☐ No ☐ To what depth? 21 ft.
Material used in seal Bentonite with pressure
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 .... 1098 ft.
Static level 3 ft. below top of well Date 11/3/73
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.
At the time we drilled this well we didn't have any way to measure the draw down- We have now purchased a Powers Well Sounder
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 55 Was a chemical analysis made? Yes ☐ No X ☐

(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
Top Soil	0	4
Conglomerate - Brown	4	20
Conglomerate - Light Brown to Dark Brown	20	34
Sandstone - Light Creamy Brown to Dark Brown	34	60
Sandstone - Med Brown	60	-

RECEIVED
NOV 9 1973
DEPARTMENT OF ECOLOGY
SPOKANE REGIONAL OFFICE

I'm sorry I did not write down the day I started this job and I could'nt remember the exact day
Work started ... 19... Completed: 11/3 19 73

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 Jensens Well Drilling & Driving (Person, firm, or corporation) (Type or print)

Address 1603 So. 10th Avenue

[Signed] Chris B. Jensen Jr. (Well Driller)

License No. 0217 Date 11/5 19 73

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

11/30/73

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 LESLIE ROY Address .....

(2) LOCATION OF WELL: County ..... NW ~~SW~~ ¼ NE ¼ Sec ~~35~~ 5 T. 12 N., R. 20E 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 185 ft. Depth of completed well 185 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: ....." Diam. from +2 ft. to -185 ft.
Threaded ☐ ....." Diam. from .... ft. to .... ft.
Welded ☒ ....." Diam. from .... ft. to .... ft.

Perforations: Yes ☒ No ☐
Type of perforator used TORCH
SIZE of perforations ¼" in. by ⅛" in.
40 perforations from 184 ft. to 170 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 PORTLAND 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 ....
Type: .... H.P. ....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 1100 ft.
Static level 140 ft. below top of well Date 2-10-86
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 ....
er test .... gal./min. with .... ft. drawdown after .... hrs.
Artesian flow .... g.p.m. Date ....
Temperature of water 56° Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG: LESLIE'S HOUSE

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
SOIL	0	4
GRAVEL	4	21
CLAY BROWN	21	110
CLAY GREEN	110	170
SAND STONE & GRAVEL	170	185

RECEIVED
FEB 19 1987
DEPARTMENT OF ECOLOGY
WATER RESOURCES SECTION

Work started 1-30 19 87 Completed 2-10 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 LARRY BURD WELL DRILLING INC
(Person, firm, or corporation) (Type or print)

Address 5543 S.W. DOUGLAS; PENDLETON O

[Signed] Larry Burd
(Well Driller)

License No. 0062 Date 2-16, 19 87

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

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