

ATTACHMENT H

Well Site Evaluation Report, prepared by GeoEngineers

Well Site Evaluation Report
Proposed Well 3

Cougar Creek Water Users Association Water System
Bonner County, Idaho

for
Coffman Engineers, Inc.

June 25, 2025

523 East Second Avenue
Spokane, Washington 99202
509.363.3125

GEOENGINEERS 

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Cougar Creek Water Users Association Water System
Bonner County, Idaho

File No. 27694-001-00
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Prepared for:

Coffman Engineers, Inc.
221 North Wall Street, Suite 500
Spokane, Washington 99201

Attention: Alan Gay, PE

Prepared by:

GeoEngineers, Inc.
523 East Second Avenue
Spokane, Washington 99202
509.363.3125



Bryce K. Hanson, PG
Project Hydrogeologist



Stephen D. Thomas
Associate Hydrogeologist

BKH:SDT:imm:edb

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1.0 Introduction

This Well Site Evaluation Report is associated with a planned new groundwater production well for the Cougar Creek Water Users Association (CCWUA) water system in Bonner County, Idaho. The CCWUA operates Public Water System (PWS) No. 1090030, which is currently sourced by combination of two active production wells (Well 1 and Well 2). Well 1 and Well 2 are located on privately owned parcels RP60N04W270702A and RP60N04W271201A, respectively. The project area is shown in Figure 1, Vicinity Map.

To augment current potable water system production, the CCWUA has proposed installing a new production well on CCWUA representative owned property located approximately 650 feet east of Well 2. The new production well, referred to herein as Well 3, is the subject of this well site evaluation report. CCWUA's active well locations, including the proposed location of Well 3, are presented in CCWUA Well Locations and Surficial Geology, Figure 2.

2.0 Scope of Services

Our hydrogeologic services were conducted in accordance with our proposal dated September 7, 2024, which was approved by Coffman Engineers, Inc. (Coffman) in an Agreement between Engineer and Subconsultant for Professional Services dated January 6, 2025. The primary purpose of the services described herein is to develop a well site evaluation report for Well 3 in general compliance with Subsection 510.01 of IDAPA 58.01.08. GeoEngineers, Inc.'s (GeoEngineers') specific scope for the services described in this report consisted of the following:

- Developed a well site evaluation report for Well 3 that contains a description of the following:
 - The anticipated quality of the groundwater.
 - Identification and description of the anticipated aquifer system beneath the planned well site.
 - Description of the anticipated hydrogeologic characteristics of the anticipated aquifer system and confining layers.
 - Identification of the target aquifer and the estimated drawdown that could occur within existing wells, springs and/or surface water bodies due to new production well pumping.
 - The anticipated new production well capture zone.
 - Identification of potential sources of contamination within 500 feet of the planned new production well site.
 - A preliminary well design and drilling approach.

3.0 Geologic/Hydrogeologic Setting

3.1 PHYSIOGRAPHY AND CLIMATE

The project area is within the northern portion of the Idaho Batholith geologic province. The project area is situated near the east shoreline of Priest Lake, specifically at the south end of Cavanaugh Bay. The project area is located within a slightly developed, gently north sloping basin that lies at the base of the western

flank of the Selkirk Mountains. Ground surface elevations within the project area basin are in the range of 2,440 to 2,600 feet above mean sea level (AMSL). On the undeveloped mountainous upland area to the east, elevations exceed 3,300 feet AMSL within approximately 1 mile of the margin of the project area.

The Idaho Batholith province is dominated by mountainous timber managed land. However, the project area appears to be primarily developed for residential use with intermittent undeveloped forest land. Irrigation appears to be primarily utilized for residential purposes. Excess runoff from the project area is likely to sheet flow to the north as surface runoff, partially infiltrate through surface sediments, and/or be captured in wetlands and surface water features. Infiltrated surface water likely migrates as shallow groundwater north toward Cavanaugh Bay.

Climatic conditions in the project area are considered humid continental with four seasons and large seasonal temperature differences. Precipitation at the Priest River Experimental Weather Station No. USC00107386 (Priest River, Idaho) for water year 2024 was 36.4 inches of rainfall and 58.2 inches of snowfall. Most of the annual precipitation occurs during the fall and winter months of November through March. Fall and winter rainfall frequently falls on frozen ground or snow, resulting in rapid runoff or ponding. Average daily maximum temperatures in 2024 ranged from 88 degrees Fahrenheit (°F) in July to 30°F in January. Average daily minimum temperatures in 2024 range from 51°F in July to 20°F in January.

3.2 GEOLOGY

Surficial geologic conditions within and surrounding the CCWUA are shown in Figure 2. The project area at Cavanaugh Bay is composed of Quaternary age (less than about 2.6 million years [MA]) glacial and alluvial sediments underlain by Cretaceous age (145 MA to 66 MA) granitic and basement rocks associated with the Priest River Complex. The Priest River Complex, formed by a complex sequence of folding, faulting, and plutonic activity is primarily composed of a complex sequence of early to middle Eocene (54.8 MA to 41.3 MA) igneous and metamorphic core complexes (Doughty T. P., et al. 1999). The east boundary of the project area, at the base of the Selkirk Mountains, is formed in part by the east flank of the Newport Fault System, a west dipping normal fault that extends away from the Cretaceous age granites that primarily make up the Selkirk Mountains (Doughty T. P., et al. 1999). Quaternary-age sediments are generally composed of interbedded clay, silt, and sand deposits with variable thicknesses on the order of 200 feet. Although the overall thickness of Quaternary-age sediments near the project area is not well documented, granitic bedrock was reported in Well 1 at approximately 213 feet below ground surface (bgs).

3.3 HYDROGEOLOGY

The primary aquifer near the project area occurs within the relatively shallow interbedded Quaternary glacial and alluvial deposits. The aquifer is primarily composed of sand with highly variable silt, clay, and gravel content. The aquifer thickness varies and the highest report thickness is 89 feet. The aquifer is generally semi-confined to confined and recharged through hydraulic interactions with surface water and precipitation in the Selkirk Mountains to the east, direct infiltration of precipitation, and leakage from adjacent residential irrigation and ditches. Subsurface lithologic conditions show shallow plutonic bedrock, suggesting wells completed within this aquifer could be impacted by negative hydraulic boundary conditions that could limit groundwater flow. Discharge from the aquifer occur as pumped water at supply wells and subsurface outflow to Priest Lake. The groundwater flow direction within local aquifer is likely influenced by topography and surface water drainage patterns and seasonally by mountain recharge to the east. Given this, we interpret the groundwater flow direction to be primarily to the northwest toward Priest Lake. However, we do not know the hydraulic gradient in the site area.

4.0 Existing CCWUA Production Wells

The CCWUA water is sourced by two active production wells (Well 1 and Well 2). The approximate locations of CCWUA production wells are shown in Figure 2. Well driller's reports for Wells 1 and 2, on file within the Idaho Department of Water Resources' (IDWR's) Well Construction database, are provided in Appendix A.

4.1 WELL 1

Well 1 was drilled in July 1993 to a depth of 262 feet bgs by Ponderosa Drilling. Well 1 was drilled within the Township (T) 60 North (N), Range (R) 4 West (W), Boise Meridian (BM), Section 27, Southeast (SE) $\frac{1}{4}$ of the Northeast (NE) $\frac{1}{4}$, using rotary drilling methods. The reported well owner in 1993 was Dr. Loel Fenwick and the proposed use was for domestic purposes.

The geologic log for Well 1 indicates the following general lithologic units and depths:

- Overburden from ground surface to a depth of 1 feet bgs.
- Sand and gravel from 1 to 45 feet bgs.
- Silty sand with gravel from 45 to 135 feet bgs.
- Sand and gravel from 135 to 213 feet bgs.
- Granitic bedrock from 213 to 262 feet bgs, where the wellbore was terminated.

Well 1 is reportedly completed with an 8-inch-diameter steel casing to 163 feet bgs and an 8-inch-diameter stainless steel screen to 205 feet bgs. Two slot sizes were noted as follows: 0.11-inch slot size screen from 163 to 184 feet bgs and 0.020-inch slot size screen from 184 to 205 feet bgs. The well driller's report specifies that a bentonite surface seal was installed to a depth of 19 feet bgs.

At the time of drilling, the following were reported:

- Groundwater in Well 1 was reported to be 34 feet bgs.
- Well performance data indicated production estimates of 25 gallons per minute (gpm).

Well 1 currently remains in use.

4.2 WELL 2

Well 2 was drilled in February 2004 to a depth of 120 feet bgs by Fogle Pump and Supply. Well 2 was drilled within the T60N, R4W, BM, Section 27, NE $\frac{1}{4}$ of the SE $\frac{1}{4}$ using rotary drilling methods. The reported well owner in 2004 was CCWUA and the proposed use was for municipal purposes.

The geologic log for Well 2 indicates the following general lithologic units and depths:

- Clayey sand from ground surface to a depth of 33 feet bgs.
- Silt/Clay from 33 to 60 feet bgs.
- Silty sand from 60 to 88 feet bgs.
- Silt with sand from 88 to 96 feet bgs.

- Silty sand 96 to 115 feet bgs.
- Sand from 115 to 120 feet bgs.

Well 2 was completed with an 8-inch-diameter steel casing to 114 feet bgs and a 7-inch-diameter stainless steel screen to 120 feet bgs. The screen assembly consisted of 0.014-inch slot size screen from 115 to 120 feet bgs with a K-packer connection. The well driller's report specifies that a bentonite surface seal was installed to a depth of 50 feet bgs.

At the time of drilling, the following were reported:

- Groundwater in Well 2 was reported to be 16 feet below ground surface.
- Well performance data indicated production estimates of 30 gallons per minute (gpm) with an estimated 35 feet of observed drawdown.

Well 2 currently remains in use.

5.0 Water Rights

The CCWUA holds the following two water rights that include the following.

- Water Right License No. 97-7059 has a priority date of June 6, 1974 and specifies a total groundwater diversion rate of 0.27 cubic feet per second (cfs), which equates to approximately 121 gpm, for year-round domestic use.

One point of diversion is included in this water right:

- T60N, R04W, Section 23 NE of SW.

- Water Right Permit No. 97-7580 has a priority date of September 8, 2020 and specifies a total groundwater diversion rate of 0.20 cfs, which equates to approximately 89 gpm, for mixed use including:

- 0.13 cfs for irrigation (04/01 to 10/31).
- 55.00 acre-feet (af) for irrigation to storage (annual volume).
- 55.00 af for irrigation from storage (annual volume).
- 0.13 cfs for domestic (year-round use).
- 40.40 af for domestic storage (annual volume).
- 40.40 af for domestic from storage (annual volume).
- 0.13 cfs for diversion to storage (year-round use).

Three points of diversion are included in this water right:

- T60N, R04W, Section 27 SE of NE.
- T60N, R04W, Section 27 NE of SE.
- T60N, R04W, Section 27 NE of SE.

As a component of the Well 3 project described herein, the CCWUA has submitted an Application for Transfer of Water Right – Point(s) of Diversion to IDWR for the purpose of adding the Well 3 location to the two water rights listed above.

6.0 Well Inventory

GeoEngineers conducted a review of geologic and hydrogeologic information contained in well driller's reports on file with IDWR within the following sections of Township (T) 60N, Range (R) 04 West (herein designated the Well Inventory Area or WIA):

- Section 26.
- Section 27, NE $\frac{1}{4}$ and SE $\frac{1}{4}$.
- Section 34, NE $\frac{1}{4}$.
- Section 35, Northwest (NW) $\frac{1}{4}$ and NE $\frac{1}{4}$.

The boundaries of the WIA are shown in Well Inventory Area, Figure 3. Within the WIA, we acquired and reviewed 16 well driller's reports with hydrogeologic information pertinent to the project. Copies of these reports are provided in Appendix B, Well Driller's Reports, Well Inventory Area.

We anticipate that planned Well 3 will target relatively permeable water bearing soils within the semi-confined to confined sedimentary sequences between depths of approximately 50 and 200 feet bgs. Reported water-bearing zone thicknesses within existing wells in the WIA range from 5 feet to 89 feet. Reported well yields in the 16 wells within an approximate 0.50-mile radius of Well 3 range from 3 gpm (Well 27J1) to 30 gpm (Well 2). Reported well yields vary widely throughout the WIA.

The results of our existing data review indicate that the WIA is underlain by a sequence of variably indurated alluvial and lacustrine sediments consisting of clay, silt, sand and gravel. Granitic basement rock was reportedly encountered at Well 1 at a depth of 213 feet bgs.

7.0 Groundwater Quality

GeoEngineers obtained groundwater quality data for the WIA from online sources including the Idaho Department of Environmental Quality (IDEQ) Public Water System Switchboard (IDEQ 2025) and an IDEQ Source Water Assessment Summary Report for CCWUA Well 2 (IDEQ 2019). The source water assessment delineated a capture zone for Well 2 and was developed using the 1,000-foot fixed radius method.

The IDEQ Public Water System Switchboard provided a list of water quality violations and analyses associated with CCWUA. The IDEQ Public Water System Switchboard reports five group violations and 157 individual violations. Violations reported by IDEQ (2025) pertain to the following analytes:

- Coliform and/or E. Coli (72 occurrences).
- Turbidity (66 occurrences).
- Gross Alpha (1 occurrence).

- Metals (Selenium, silver, mercury, lead, chromium, cadmium, barium, arsenic) (8 occurrences).
- 2,4,5-TP (1 occurrence).
- 2,4-D (1 occurrence).
- Toxaphene (1 occurrence).
- Methoxychlor (1 occurrence).
- BHC–Gamma (1 occurrence).
- Endrin (1 occurrence).
- Nitrate (7 occurrences).
- Nitrite (1 occurrence).
- Fluoride (1 occurrence).

Based on IDEQ Source Water Assessment Summary Report for CCWUA Well 2 (IDEQ 2019), IDEQ assigned Well 2 susceptibility rankings of low for inorganic compounds (IOCs), low for volatile organic compounds (VOCs), low for synthetic organic compounds (SOCs) and low for microbial contaminants. The capture zone and potential sources of contamination are discussed below.

7.1 POTENTIAL SOURCES OF CONTAMINATION

7.1.1 Capture Zone

The IDEQ Source Water Assessment Summary Report for CCWUA Well 2 includes a 1,000 fixed radius that is shown in the Idaho DEQ Source Water Assessment and Protection Map dated January 7, 2025 in Appendix C.

Planned Well 3 will be located in the vicinity of Well 2 and operated under the same water system. Therefore, it is our opinion that a similar 1,000-foot fixed radius boundary, placed around the proposed Well 3 location, is appropriate for evaluation of potential sources of contamination as shown in Figure 4, Source Water Assessment Area. Contaminant source locations provided in the IDEQ Source Water Assessment and Protection Map for CCWUA Well 2 are included in Figure 4.

7.1.2 Contaminant Source Inventory

As shown in Figure 4, three potentially contaminant source locations are within approximately 1,000 feet of proposed Well 3. Potential contaminant sources include the following:

- An underground storage tank (UST)/leaking underground storage tank (LUST) site at the Cavanaugh Bay Marine located at 4024 Cavanaugh Bay Road in Coolin, Idaho. The site includes one, temporary out of service 6,000-gallon UST with associated fuel piping (IDEQ Facility ID 1-090080). According to the DEQ online database, there have been no reported petroleum releases and/or cleanup events.
- Major and minor roadways including Cavanaugh Bay Road, West Cavanaugh Bay Road, and other unimproved roadways and private residential driveways.
- Surface water, including Priest Lake (Cavanaugh Bay), approximately 400 feet north adjacent to the proposed Well 3 location.

Although not listed as a potential contaminant source, there are three production wells listed within 1,000 feet of proposed Well 3 including 26E1, 26K2 and 27I1 (Well 2). The production well nearest proposed Well 3 includes Well 26E1, reportedly owned and operated by the Idaho Department of Lands (DOL). Well 26E1 is reportedly artesian with a subsequent 15,000-gallon below grade concrete holding tank and a production rate of approximately 32 gpm.

It is our opinion that given the proposed location of Well 3 and the location of these potential contaminant sites, Well 3 would have higher susceptibility ranking(s) than Well 2. However, given the likely confined nature of the target aquifer, susceptibility rankings would generally remain low.

8.0 Target Aquifer

8.1 HYDROSTRATIGRAPHY

Based upon subsurface conditions encountered in CCWUA's Well 1 and Well 2 and the Idaho DOL's Well 26E1, the target aquifer for Well 3 may consist of alluvial sand and gravel between approximately 50 and 200 feet bgs. The target aquifer may be artesian and is generally confined by silt and clay deposits to approximately 42 feet bgs with a potential potentiometric surface at or above ground surface. The target aquifer is likely underlain by interbedded sand and gravel deposits with various fines content and granitic basement rock at depth.

8.2 AQUIFER PARAMETER ESTIMATES

Hydraulic properties (hydraulic conductivity, transmissivity and storativity) of the target aquifer are estimated in this report subsection. These hydraulic characteristics are utilized to form the basis for the drawdown analyses provided in Section 10 of this report.

8.2.1 Area Water Supply Wells

GeoEngineers estimated the hydraulic conductivity and transmissivity of the target aquifer through evaluation of limited pumping test summary data provided in the well driller's reports in Appendix B. Well driller's reports were selected for analysis that: (1) are situated within approximately 0.5 miles of proposed Well 3; (2) are completed in the apparent semi-confined/confined aquifer located from about 50 to 200 feet bgs; and (3) contain well discharge and drawdown data.

Pumping test data were analyzed for hydraulic conductivity using methods described by Lambe and Whitman (1969) for constant head permeability experiments. Hydraulic conductivity describes the rate at which water is transmitted through a unit area of aquifer material and was estimated using the following equation for screened wells:

$$K = (Q \cdot \ln((L/D) + \sqrt{1+(L/D)^2})) / (2 \cdot \pi \cdot L \cdot H) \quad (\text{Eq. 2})$$

where:

K = Hydraulic conductivity (ft/d)

Q = Reported well discharge (ft³/d)

L = Screen length (ft)

D = Well diameter (ft)

H = Drawdown (ft)

Aquifer transmissivity describes the rate at which water is transmitted through a unit width of aquifer material and was estimated using the following equation:

$$T = K \cdot b \quad (\text{Eq. 2})$$

where:

$$T = \text{Transmissivity (ft}^2/\text{d)} \quad K = \text{Hydraulic conductivity (ft/d)}$$

$$b = \text{Aquifer thickness (ft).}$$

Hydraulic conductivity estimates generated from the well driller's reports are summarized in Table 1 and ranged from 5 feet per day (ft/d) in 26K1 to 15 ft/d in Well 2, with a geometric mean of 10 ft/d and an average of 11 ft/d. Transmissivity estimates ranged from 165 square feet per day (ft²/d) in 26M1 to 359 ft²/d in Well 2 with a geometric mean of 240 ft²/d and an average of 250 ft²/d.

TABLE 1. AQUIFER PARAMETER ESTIMATES

WELL	APPROXIMATE DISTANCE FROM THE WELL 3R ¹ (FEET)	WELL DEPTH (FEET BGS)	WELL DISCHARGE (GPM)	REPORTED DRAWDOWN (FEET)	K (FT/D)	AQUIFER THICKNESS ² (FEET)	T (FT ² /D)
2711 (Well 2)	650	120	30	35	15	24	359
26K1	1600	55	10	19	5	35	192
26M1	1950	83	5	10	9	18	165
26M2	1950	85	5	7	13	25	328
Geometric Mean					10	24	240
Average					11	24	250

Notes:

¹Distance from Well 3 is based on location information in the well driller's reports (Appendix B).

²Aquifer thickness was estimated from stratigraphic information provided in the respective well driller's reports. Where the wellbore did not penetrate the bottom of the aquifer, the bottom of the aquifer was assumed to occur at the bottom of the wellbore.

Storativity was estimated using methods described by Fetter (2001). Storativity describes the volume of water released from storage when hydraulic head in an aquifer is lowered by a unit distance and was estimated using the following equation:

$$S = b \cdot S_s \quad (\text{Eq. 3})$$

where:

$$S = \text{Storativity (unitless)} \quad S_s = \text{Specific Storage (unitless/ft)}$$

$$b = \text{Aquifer thickness (ft).}$$

For the purpose of the drawdown analyses described in Section 10 of this report, we assumed a specific storage of 0.0001 per foot and an average aquifer thickness of 24 feet, resulting in an estimated storativity of 0.0024 for the target aquifer.

9.0 Drawdown Analysis

9.1 MODEL SETUP

Based on the hydrologic properties of Well 26E1, Well 1 and Well 2 and estimates presented in Section 9.0, GeoEngineers estimated the potential drawdown distribution (commonly referred to as the cone of depression) around Well 3. Figure 5, Projected Groundwater Levels presents the expected cone of depression that can be expected as Well 3 is pumped at an assumed discharge rate of 30 gpm. Defining a well's cone of depression allows us to predict the likely drawdown interference effects of planned Well 3 pumping on adjacent wells.

The drawdown distribution associated with the planned new production well were evaluated using an analytical model based on the Theis (1935) non-equilibrium well equation for confined aquifers. Model inputs were based on site hydrostratigraphy and the estimated aquifer parameters presented in Table 1. The inputs included the following assumptions:

- Transmissivity of the target aquifer was assumed to be 240 ft/d, based on the geometric mean above.
- Target aquifer storage coefficient was assumed to be 0.0024 (unitless).
- The new production well was assumed to discharge continuously at a rate of 30 gpm for a period of 3 days. The new production well will actually be pumped intermittently as a function of water demand.
- Static groundwater level was assumed to be at ground surface, based on the groundwater elevation observed in Well 26E1.
- The target aquifer was assumed to be confined with infinite areal extent, no leakage or boundary conditions, and homogeneous and isotropic with uniform thickness.
- The new production well was assumed to be screened from 60 to 80 feet bgs.

9.2 MODEL RESULTS

Figure 5 shows projected aquifer potentiometric (groundwater) levels for a cone of depression in the target aquifer beneath the model section line after 3 days of continuous pumping at an approximate rate of 30 gpm. Assuming static groundwater is at ground surface, the aquifer groundwater level directly adjacent to Well 3 is estimated to be on the order of 24.4 feet bgs (24.4 feet of drawdown). Projected groundwater levels estimates increase to approximately 4.7 feet bgs (4.7 feet of drawdown), 2.3 feet bgs (2.3 feet of drawdown) and 0.6 feet (0.6 feet of drawdown) at distances of 250 feet, 500 feet, and 1,000 feet from Well 3, respectively. Drawdown decreases to approximately 0.1 feet at a distance of approximately 1,500 feet from Well 3.

The constructed model was used to simulate the approximate drawdown anticipated at existing adjacent wells within approximately 0.5 miles of Well 3. These projected drawdown estimates are listed in Table 2. Projected drawdowns at adjacent existing wells are minor and range from approximately less than 1 to 6 percent of estimated available drawdown.

TABLE 2. PROJECTED DRAWDOWN IN ADJACENT WELLS

WELL DESIGNATION	APPROXIMATE DISTANCE FROM WELL 1R ¹ (FEET)	PROJECTED APPROXIMATE DRAWDOWN ² (FEET)	AVAILABLE APPROXIMATE DRAWDOWN ³ (FEET)	PERCENT OF AVAILABLE DRAWDOWN ⁴
26E1	350	3.5	57	6
27I1 (Well 2)	650	1.6	99	2
26K2	1,000	0.6	79	1
27H1 (Well 1)	1,500	0.1	129	<1
26K1	1,600	0.1	20	1
26M1	2,000	0	13	<1
26M2	2,000	0	17	<1
27J1	2,500	0	86	<1

Notes:

¹Approximate distance from Well 3 is based on location information in the well driller's reports (Appendix B).

²Projected approximate drawdown is based on the model results described herein.

³Available drawdown is based on the well driller's reports provided in Appendix B and was estimated by subtracting depth to water from the top of screen/perforations.

⁴Percent of available drawdown refers to (Projected Drawdown/Available Drawdown) * 100.

10.0 Preliminary Project Approach and Well Design

CCWUA plans to drill and construct Well 3 based on the preliminary project approach and well design described below. This preliminary well design targets the confined aquifer with a well completion depth of approximately 85 feet, with a proposed shallow seal depth of approximately 42 feet bgs. The shallow seal depth will be contingent upon approval by IDEQ and IDWR. The proposed well will be installed with casing, well screen and filter pack, as necessary, using the pullback method. Filter pack placement will depend on encountered subsurface conditions. The planned Well 3 project approach includes the following:

1. Select a new well site. We understand that Well 3 will be located near the intersection of Cavanaugh Bay Road and Arnold Drive, which is approximately 650 feet east of Well 2, as shown in Figure 2.
 - a. It is important to note that there will be challenges and risk associated with the proposed well location, such as limited drilling space, sloping well site, potential artesian conditions, and limited area for drilling fluid and water discharge.
2. Coordinate with IDWR regarding modification of the point of diversion under CCWUA's existing water right portfolio.
3. Coordinate with IDEQ regarding the proposed well design and seal depth.
4. Develop specifications for the drilling, construction and testing of Well 3, a new groundwater production well with a target design sustainable yield of 30 gpm. The actual well yield will be a function of the hydraulic characteristics of the underlying aquifer and the final well design and the quality of the post-construction development. The actual well yield will be revealed during test pumping.
5. Submit Well 3 specifications for IDEQ review and comment.

6. Drill, construct and test Well 3, consistent with the following preliminary design:
 - a. Drill a 6-inch-diameter pilot hole to approximately 200 feet bgs. Collect and analyze soil cutting samples for screen design and note the groundwater conditions during drilling.
 - b. Design a wire-wrapped well screen assembly and filter pack, depending on encountered subsurface conditions.
 - c. Backfill the pilot hole to the proposed bottom of well elevation.
 - d. Drill a minimum 14-inch-diameter wellbore using air rotary drilling or reverse circulation methods to a depth of about 85 feet bgs. We will adjust the well design accordingly if the pilot hole results indicate that the target aquifer is deeper and/or has different hydraulic properties than those based on our background review.
 - e. Install, seal, and develop an 8-inch-diameter (telescope size) stainless steel, wire-wrapped well screen assembly and filter pack using the pull-back method.
 - f. Conduct step-rate and constant-rate well performance testing.
7. Sample the production well for laboratory analysis of drinking water parameters required by IDEQ for new community well source approval.
8. Evaluate collected data and analyses for compliance with pertinent source approval requirements.

Prepare a Well Completion Report consistent with the requirements specified in Subsection 510.05 of IDAPA 58.01.08 for submittal to IDEQ.

11.0 Limitations

We prepared this Well Site Evaluation Report for use by Coffman Engineers, Inc. to assist in the permitting of CCWUA's planned new groundwater production well.

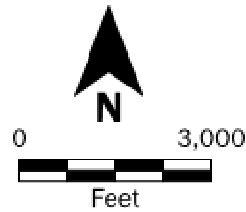
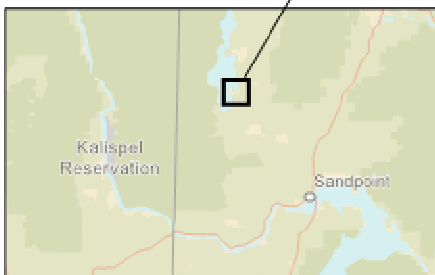
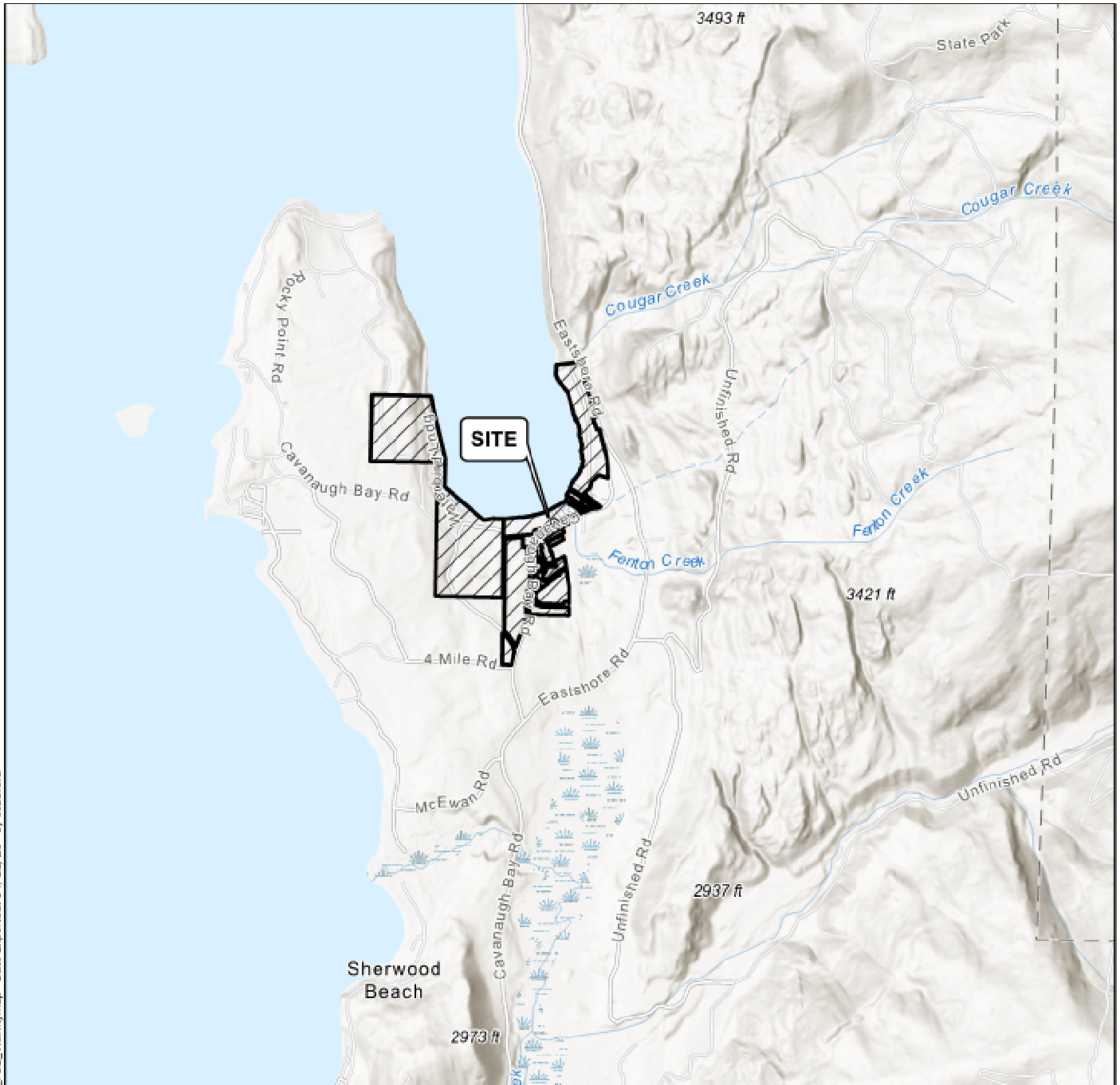
Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practices in the field of hydrogeology in this area at the time this report was prepared. No warranty or other conditions, expressed or implied, should be understood.

Please refer to Appendix D, Report Limitations and Guidelines for Use, for additional information pertaining to the use of this report.

12.0 References

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Figures



Source(s):
 • ESRI

Coordinate System: NAD 1983 StatePlane Idaho West FIPS 1103 Feet

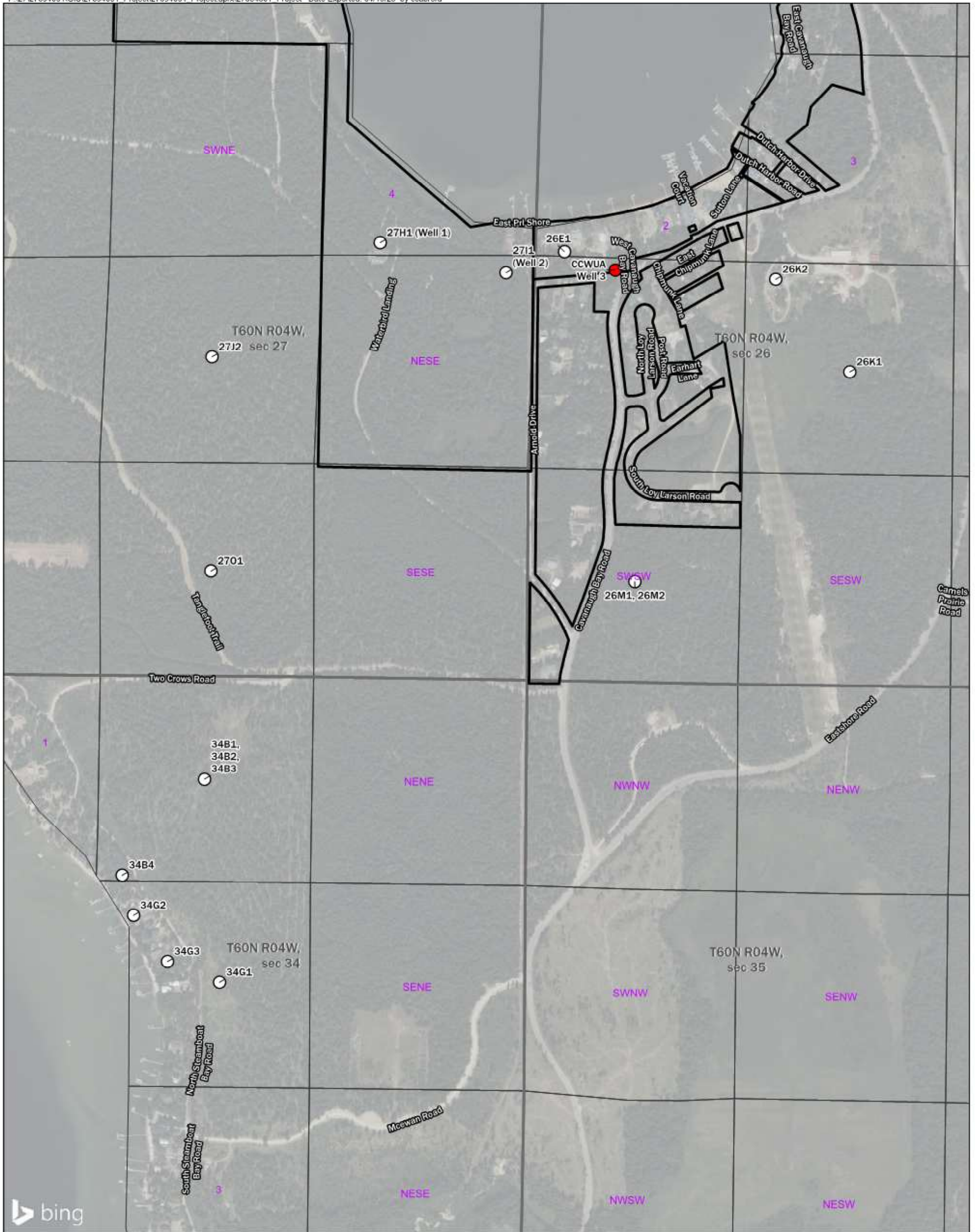
Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate, GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

Vicinity Map

**Cougar Creek Water Users Association Water System
 Bonner County, Idaho**



Figure 1



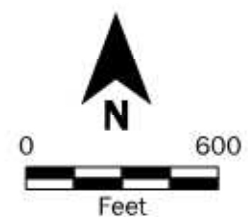
Legend

- Existing Production Wells
- Proposed Well 3 Location
- ▭ Site Boundary

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Existing wells were identified using Well Driller's Reports on file with Idaho Department of Water Resources. Well Driller's Reports are provided in Appendix B.
4. Existing wells greater than or equal to 100 feet in depth are shown in this figure.

Data Source: Bing Imagery. Idaho Dept. of Lands Public Land Survey System (PLSS) data. Bonner County, Idaho GIS.
 Projection: NAD 1983 StatePlane Idaho West FIPS 1103 Feet

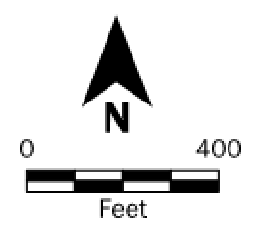


Well Inventory Area	
Cougar Creek Water Users Association Water System Bonner County, Idaho	
	Figure 3



- Legend**
- Existing Production Wells
 - Proposed Well 3 Location
 - ▨ Fixed Radius

- Potential Contaminants Inventory Locations**
- General Waste Site: ID DOL Priest Lake Area Office
 - ▲ UST/LUST Site: Cavanaugh Bay Marina
 - ◆ TierII (formerly CAMEO): Idaho Department of Lands - Priest Lake Supervisory Area

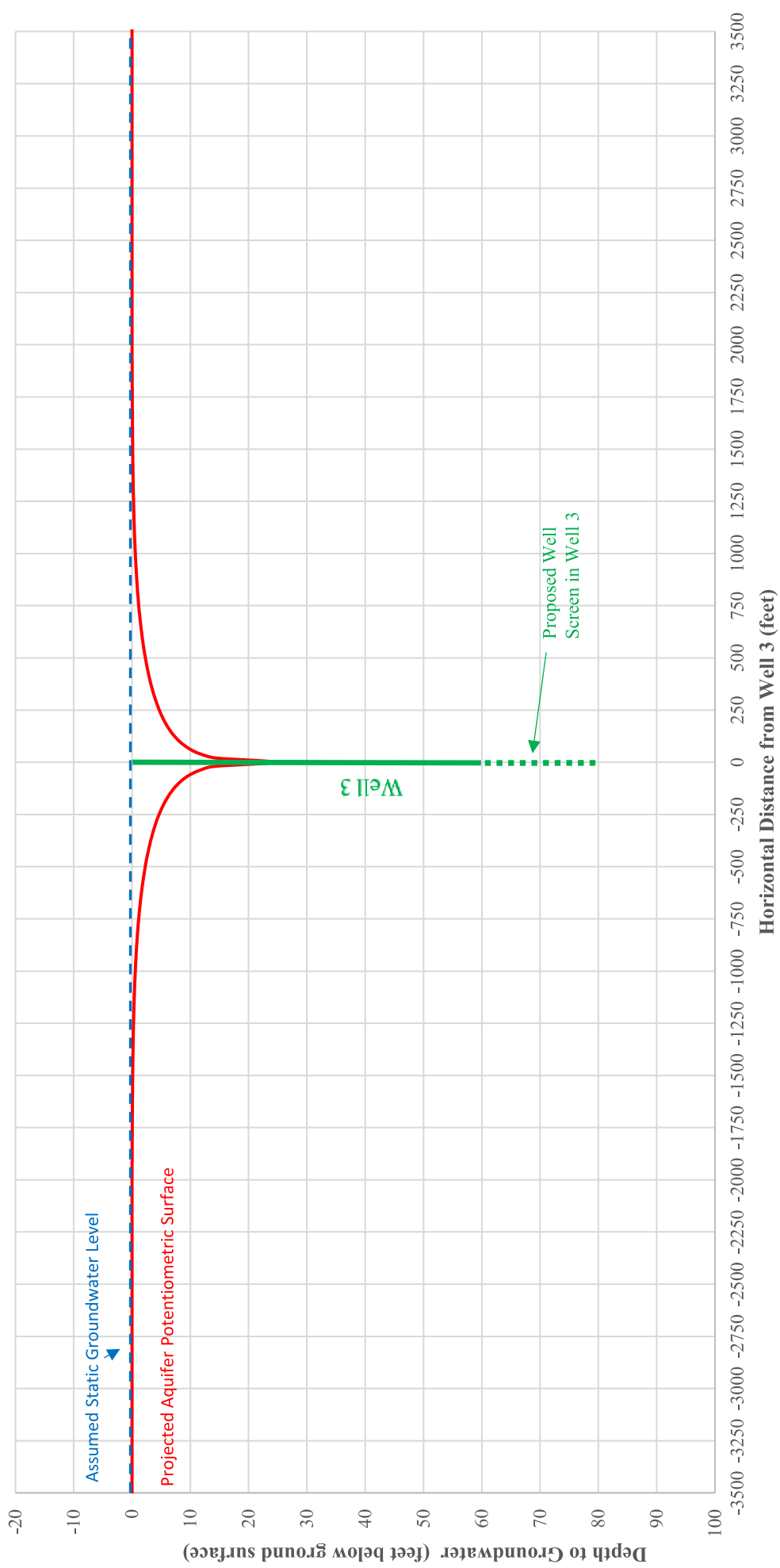


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 Projection: NAD 1983 StatePlane Idaho West FIPS 1103 Feet

Source Water Assessment Area	
Cougar Creek Water Users Association Water System Coolin, Idaho	
	Figure 4



Note:

1. Projected groundwater levels were simulated using a simplified wellfield analytical model based on the Theis (1935) non-equilibrium well equation for confined aquifers. The analysis is based on existing data and the set of assumptions described in the associated Well Site Evaluation Report and should be considered approximate.
2. Static groundwater at ground surface was assumed.
3. The screen setting in Well 3 is anticipated to be between 60 and 80 feet below ground surface (bgs) but will be modified based on encountered hydrostratigraphic conditions.

Projected Groundwater Levels

Cougar Creek Water Users Association Water System
Bonner County, Idaho



Figure 5

Appendices

Appendix A
Well Driller's Reports
CCWUA Production Wells

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

RECEIVED
MAR 02 2004

Office Use Only		
Well ID No.		
Inspected by		
Twp	Rge	Sec
1/4	1/4	1/4
Lat:	:	Long:

1. WELL TAG NO. D Dao 28727
 DRILLING PERMIT NO. 811147
 Water Right or Injection Well No. _____

2. OWNER:
 Name Caugar Creek Water Users Assoc.
 Address 100 Waterbird Landing
 City Coalinga State ID Zip 83821

3. LOCATION OF WELL by legal description:
 You must provide address or Lot, Blk, Sub. or Directions to well.
 Twp. 60 North or South
 Rge. 4 East or West
 Sec. 27 1/4 SE 1/4 SE 1/4
 Gov't Lot _____ County Banner
 Lat: _____ Long: _____
 Address of Well Site 100 Waterbird Landing
 City Coalinga
 Lt. _____ Blk. _____ Sub. Name _____

4. USE:
 Domestic Municipal Monitor Irrigation
 Thermal Injection Other _____

5. TYPE OF WORK check all that apply (Replacement etc.)
 New Well Modify Abandonment Other _____

6. DRILL METHOD:
 Air Rotary Cable Mud Rotary Other _____

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
<u>Bentonite</u>	<u>0</u>	<u>50</u>	<u>2250 lb</u>	<u>Brown Jug</u>

Was drive shoe used? Y N Shoe Depth(s) 114
 Was drive shoe seal tested? Y N How? Butted

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
<u>8"</u>	<u>+2'</u>	<u>114</u>	<u>320</u>	<u>Steel</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Length of Headpipe 5' Length of Tailpipe 0'
 Packer Y N Type "K"

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method _____
 Screen Type & Method of Installation Talescope Stainless

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
<u>115</u>	<u>120</u>	<u>.014</u>		<u>7"</u>	<u>Stainless</u>	<input type="checkbox"/>	<input type="checkbox"/>

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
16 ft. below ground Artesian pressure _____ lb.
 Depth flow encountered _____ ft. Describe access port or control devices: _____

12. WELL TESTS:
 Pump Bailor Air Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
<u>30</u>	<u>35</u>		<u>2 hr.</u>

Water Temp. cold Bottom hole temp. _____
 Water Quality test or comments: clear
 Depth first Water Encounter 16'

13. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
	0	18	Brown clayey coarse sand		X
	18	33	Lite brn fine clayey sand	X	
	33	50	Grey hard silt		X
	50	60	Very hard grey silt		X
	60	68	softer, grey silty sand	X	
	68	70	harder grey coarse sand	X	
	70	85	stratified, hard & soft silty fine sand	X	
	85	88	Grey silty sand		X
	88	96	Grey stratified clay, silt & fine sand		X
	96	115	Grey silty medium sand	X	
	115	120	Grey medium sand	X	

Completed Depth 120' (Measurable)
 Date: Started Feb 4, 04 Completed Feb 26, 04

14. DRILLER'S CERTIFICATION
 I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Fogle Pump & Supply Firm No. 537
 Principal Driller James Noran Date 2-27-04
 and Driller or Operator II James Noran Date 2-27-04
 Operator I _____ Date _____

Principal Driller and Rig Operator Required.
 Operator I must have signature of Driller/Operator II.

60N 4W 27



Appendix B
Well Driller's Reports
Well Inventory Area

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.



N

1. WELL OWNER

Name Idaho Dept of Lands

Address Cavanaugh Bay

Owner's Permit No. Coalin Idaho

7. WATER LEVEL

Static water level 15 feet below land surface.

Flowing? Yes No G.P.M. flow _____

Artesian closed-in pressure _____ p.s.i.

Controlled by: Valve Cap Plug

Temperature _____ °F. Quality H.S. & Iron High

Describe artesian or temperature zones below.

2. NATURE OF WORK 97-86-N-22

New well Deepened Replacement

Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

8. WELL TEST DATA

Pump Bailer Air Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
<u>15</u>	<u>40'</u>	<u>3</u>
<u>10</u>	<u>34'</u>	<u>2</u>

3. PROPOSED USE

Domestic Irrigation Test Municipal

Industrial Stock Waste Disposal or Injection

Other _____ (specify type)

9. LITHOLOGIC LOG

Bore Diam.	Depth		Material	Water	
	From	To		Yes	No
8	0	20	Clay + Fine Sand		
	20	25	Clay + Gravel	✓	
	25	35	Coarse Sand		✓
	35	45	Sand		✓
	45	55	Sand - Finer		✓
	55	130	Fine Sand - Dirty	✓	

4. METHOD DRILLED

Rotary Air Hydraulic Reverse rotary

Cable Dug Other _____

5. WELL CONSTRUCTION

Casing schedule: Steel Concrete Other _____

Thickness	Diameter	From	To
<u>.250</u> inches	<u>8</u> inches	<u>1</u> feet	<u>35</u> feet
<u>.250</u> inches	<u>7"</u> inches	<u>45</u> feet	<u>55</u> feet

Was casing drive shoe used? Yes No

Was a packer or seal used? Yes No

Perforated? Yes No

How perforated? Factory Knife Torch

Size of perforation _____ inches by _____ inches

Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? Yes No

Manufacturer's name Johnson

Type Telescope Model No. _____

Diameter 8 Slot size 30 Set from 35 feet to 45 feet

Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Gravel packed? Yes No Size of gravel _____

Placed from _____ feet to _____ feet

Surface seal depth 20' Material used in seal: Cement grout

Bentonite Puddling clay _____

Sealing procedure used: Slurry pit Temp. surface casing

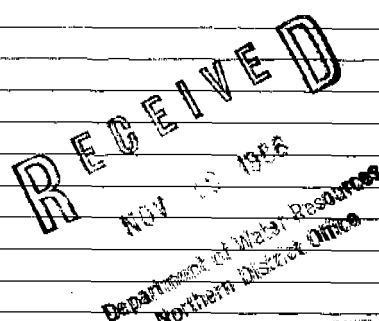
Overbore to seal depth

Method of joining casing: Threaded Welded Solvent

Weld _____

Cemented between strata

Describe access port _____



6. LOCATION OF WELL

Sketch map location must agree with written **RECORDED**

Subdivision Name Cavanaugh

Bay

Lot No. _____ Block No. _____

County Bonner

N 1/4 S/W 1/4 Sec. 26 T. 600 S. R. 4 E/D

10. Work started 9-29-86 finished 11/3/86

11. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name H2O well service Firm No. 448

Address 582 Hayden Ave Date 10/31/86

Signed by (Firm Official) John Wheeler

and Carl Potts

(Operator)

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.

Handwritten initials and a large 'N' mark.

1. WELL OWNER

Name Jack Martin

Address Cherry Wash 99004

Owner's Permit No. 97-86-N-14

7. WATER LEVEL

Static water level 65 feet below land surface.

Flowing? Yes No G.P.M. flow _____

Artesian closed-in pressure _____ p.s.i.

Controlled by: Valve Cap Plug

Temperature _____ °F. Quality _____

Describe artesian or temperature zones below.

2. NATURE OF WORK

New well Deepened Replacement

Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

8. WELL TEST DATA

Pump Bailer Air Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
<u>57</u>	<u>73</u>	<u>1</u>

3. PROPOSED USE

Domestic Irrigation Test Municipal

Industrial Stock Waste Disposal or Injection

Other _____ (specify type)

9. LITHOLOGIC LOG

Bore Diam.	Depth		Material	Water	
	From	To		Yes	No
<u>6</u>	<u>0</u>	<u>20</u>	<u>Sand</u>		<input checked="" type="checkbox"/>
	<u>20</u>	<u>35</u>	<u>Sand & Gravel</u>		<input checked="" type="checkbox"/>
	<u>35</u>	<u>65</u>	<u>Sand & Clay</u>		<input checked="" type="checkbox"/>
	<u>65</u>	<u>73</u>	<u>Sand Fine</u>		<input checked="" type="checkbox"/>
	<u>73</u>	<u>83</u>	<u>Coarse Sand</u>		<input checked="" type="checkbox"/>

4. METHOD DRILLED

Rotary Air Hydraulic Reverse rotary

Cable Dug Other _____

5. WELL CONSTRUCTION

Casing schedule: Steel Concrete Other _____

Thickness 4 inches Diameter 6 inches + 1 feet 78 feet

Was casing drive shoe used? Yes No

Was a packer or seal used? Yes No

Perforated? Yes No

How perforated? Factory Knife Torch

Size of perforation _____ inches by _____ inches

Number _____ From _____ To _____

_____ perforations _____ feet _____ feet

_____ perforations _____ feet _____ feet

_____ perforations _____ feet _____ feet

Well screen installed? Yes No

Manufacturer's name Johnson

Type Telescope Model No. _____

Diameter 6 Slot size 30 Set from 78 feet to 83 feet

Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Gravel packed? Yes No Size of gravel _____

Placed from _____ feet to _____ feet

Surface seal depth 18 Material used in seal: Cement grout

Bentonite Puddling clay _____

Sealing procedure used: Slurry pit Temp. surface casing

Overbore to seal depth

Method of joining casing: Threaded Welded Solvent

Weld

Cemented between strata

Describe access port _____

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Department of Water Resources

RECEIVED
MAR 5 1987

Department of Water Resources
Northern District Office

6. LOCATION OF WELL

Sketch map location must agree with written _____

Subdivision Name _____

Lot No. _____ Block No. _____

County Donner

SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 26, T. 60 N, R. 4 E (W)

10. Work started Sept 11-86 finished Sept 13-86

11. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name Carl Pitts & Sons Firm No. 168

Address Rt 2 Box 145 Oldtown, Idaho Date Sept 20-86

Signed by (Firm Official) Carl Pitts

and
(Operator) Carl Pitts

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

USE TYPEWRITER OR
BALLPOINT PEN

State law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.

<p>1. WELL OWNER</p> <p>Name <u>Jay Randall</u> Address <u>Coalin Idaho</u> Owner's Permit No. <u>97-86-N-13</u></p>	<p>7. WATER LEVEL</p> <p>Static water level <u>63</u> feet below land surface. Flowing? <input type="checkbox"/> Yes <input type="checkbox"/> No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: <input type="checkbox"/> Valve <input type="checkbox"/> Cap <input type="checkbox"/> Plug Temperature _____ °F. Quality _____ <i>Describe artesian or temperature zones below.</i></p>																																								
<p>2. NATURE OF WORK</p> <p><input checked="" type="checkbox"/> New well <input type="checkbox"/> Deepened <input type="checkbox"/> Replacement <input type="checkbox"/> Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)</p>	<p>8. WELL TEST DATA</p> <p><input type="checkbox"/> Pump <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Air <input type="checkbox"/> Other _____</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Discharge G.P.M.</th> <th>Pumping Level</th> <th>Hours Pumped</th> </tr> <tr> <td style="text-align: center;"><u>57</u></td> <td style="text-align: center;"><u>70</u></td> <td style="text-align: center;"><u>1</u></td> </tr> </table>	Discharge G.P.M.	Pumping Level	Hours Pumped	<u>57</u>	<u>70</u>	<u>1</u>																																		
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<u>57</u>	<u>70</u>	<u>1</u>																																							
<p>3. PROPOSED USE</p> <p><input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Irrigation <input type="checkbox"/> Test <input type="checkbox"/> Municipal <input type="checkbox"/> Industrial <input type="checkbox"/> Stock <input type="checkbox"/> Waste Disposal or Injection <input type="checkbox"/> Other _____ (specify type)</p>	<p>9. LITHOLOGIC LOG</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Bore Diam.</th> <th colspan="2">Depth</th> <th rowspan="2">Material</th> <th colspan="2">Water</th> </tr> <tr> <th>From</th> <th>To</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><u>6</u></td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;"><u>20</u></td> <td style="text-align: center;"><u>Sand</u></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td></td> <td style="text-align: center;"><u>20</u></td> <td style="text-align: center;"><u>45</u></td> <td style="text-align: center;"><u>Sand & Gravel</u></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td></td> <td style="text-align: center;"><u>45</u></td> <td style="text-align: center;"><u>60</u></td> <td style="text-align: center;"><u>Sand & Clay</u></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td></td> <td style="text-align: center;"><u>60</u></td> <td style="text-align: center;"><u>75</u></td> <td style="text-align: center;"><u>Sand Fine</u></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td></td> <td style="text-align: center;"><u>75</u></td> <td style="text-align: center;"><u>85</u></td> <td style="text-align: center;"><u>Coarse Sand</u></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table>	Bore Diam.	Depth		Material	Water		From	To	Yes	No	<u>6</u>	<u>0</u>	<u>20</u>	<u>Sand</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<u>20</u>	<u>45</u>	<u>Sand & Gravel</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<u>45</u>	<u>60</u>	<u>Sand & Clay</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<u>60</u>	<u>75</u>	<u>Sand Fine</u>	<input type="checkbox"/>	<input type="checkbox"/>		<u>75</u>	<u>85</u>	<u>Coarse Sand</u>	<input type="checkbox"/>	<input type="checkbox"/>
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<p>4. METHOD DRILLED</p> <p><input type="checkbox"/> Rotary <input type="checkbox"/> Air <input type="checkbox"/> Hydraulic <input type="checkbox"/> Reverse rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Dug <input type="checkbox"/> Other _____</p>	<div style="text-align: center; border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>RECEIVED MAR 11 1987 Department of Water Resources</p> </div>																																								
<p>5. WELL CONSTRUCTION</p> <p>Casing schedule: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Concrete <input type="checkbox"/> Other _____</p> <table style="width:100%;"> <tr> <td>Thickness <u>5</u> inches</td> <td>Diameter <u>6</u> inches</td> <td>From <u>1</u> feet</td> <td>To <u>80</u> feet</td> </tr> <tr> <td>_____ inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> </table> <p>Was casing drive shoe used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was a packer or seal used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Perforated? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No How perforated? <input type="checkbox"/> Factory <input type="checkbox"/> Knife <input type="checkbox"/> Torch Size of perforation _____ inches by _____ inches</p> <table style="width:100%;"> <tr> <td>Number _____</td> <td>From _____</td> <td>To _____</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> </table> <p>Well screen installed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Manufacturer's name <u>Johnson</u> Type <u>Telescope</u> Model No. _____ Diameter <u>6</u> Slot size <u>30</u> Set from <u>80</u> feet to <u>85</u> feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Size of gravel _____ Placed from _____ feet to _____ feet Surface seal depth <u>18</u> Material used in seal: <input type="checkbox"/> Cement grout <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Pudding clay <input type="checkbox"/> _____ Sealing procedure used: <input type="checkbox"/> Slurry pit <input checked="" type="checkbox"/> Temp. surface casing <input type="checkbox"/> Overbore to seal depth Method of joining casing: <input type="checkbox"/> Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Solvent <input type="checkbox"/> Cemented between strata Weld _____ Describe access port _____</p>	Thickness <u>5</u> inches	Diameter <u>6</u> inches	From <u>1</u> feet	To <u>80</u> feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	Number _____	From _____	To _____	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	<div style="text-align: center; border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>RECEIVED Department of Water Resources Northern District Office</p> </div>												
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_____ perforations	_____ feet	_____ feet																																							
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<p>6. LOCATION OF WELL</p> <p>Sketch map location <u>must</u> agree with written location.</p> <div style="display: flex; align-items: center;"> <div style="text-align: center; margin-right: 20px;"> <p>N</p> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td> </td><td> </td><td> </td></tr> <tr><td>W</td><td><u>26</u></td><td>E</td></tr> <tr><td> </td><td> </td><td> </td></tr> </table> <p>S</p> </div> <div> <p>Subdivision Name _____ Lot No. _____ Block No. _____</p> </div> </div> <p>County <u>Bonner</u> <u>SW 1/4 SW 1/4 Sec. 26, T. 60 N, R. 4 E</u></p>				W	<u>26</u>	E				<p>10. Work started <u>Sept 11-86</u> finished <u>Sept 13-86</u></p> <p>11. DRILLERS CERTIFICATION</p> <p>I/We certify that all minimum well construction standards were complied with at the time the rig was removed.</p> <p>Firm Name <u>Carl Pitts & Sons</u> Firm No. <u>168</u> Address <u>RT 2 Box 145 Oldtown, Idaho</u> Date <u>Sept 20-86</u> Signed by (Firm Official) <u>Carl Pitts</u> and (Operator) <u>Carl Pitts</u></p>																															
W	<u>26</u>	E																																							

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

RECEIVED
MAR 02 2004

Office Use Only			
Well ID No.			
Inspected by			
Twp	Rge	Sec	
1/4	1/4	1/4	
Lat:	:	Long:	:

1. WELL TAG NO. D Dao 28727
DRILLING PERMIT NO. 811147
Water Right or Injection Well No. _____

2. OWNER:
Name Caugar Creek Water Users Assoc.
Address 100 Waterbird Landing
City Coalinga State ID Zip 83821

3. LOCATION OF WELL by legal description:
You must provide address or Lot, Blk, Sub. or Directions to well.
Twp. 60 North or South
Rge. 4 East or West
Sec. 27 1/4 SE 1/4 SE 1/4
Gov't Lot _____ County Banner
Lat: _____ Long: _____
Address of Well Site 100 Waterbird Landing
City Coalinga
Lt. _____ Blk. _____ Sub. Name _____



4. USE:
 Domestic Municipal Monitor Irrigation
 Thermal Injection Other

5. TYPE OF WORK check all that apply (Replacement etc.)
 New Well Modify Abandonment Other

6. DRILL METHOD:
 Air Rotary Cable Mud Rotary Other

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
<u>Bentonite</u>	<u>0</u>	<u>50</u>	<u>2250 lb</u>	<u>Brown Jug</u>

Was drive shoe used? Y N Shoe Depth(s) 114
Was drive shoe seal tested? Y N How? Boiled

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
<u>8"</u>	<u>+2'</u>	<u>114</u>	<u>320</u>	<u>Steel</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Length of Headpipe 5' Length of Tailpipe 0'
Packer Y N Type "K"

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method _____
Screen Type & Method of Installation Talescope Stainless

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
<u>115</u>	<u>120</u>	<u>.014</u>		<u>7"</u>	<u>Stainless</u>	<input type="checkbox"/>	<input type="checkbox"/>

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
16 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

12. WELL TESTS:

Pump Bailor Air Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
<u>30</u>	<u>35</u>		<u>2 hr.</u>

Water Temp. cold Bottom hole temp. _____
Water Quality test or comments: clear
Depth first Water Encounter 16'

13. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
<u>12"</u>	<u>0</u>	<u>18</u>	<u>Brown clayey coarse sand</u>		<input checked="" type="checkbox"/>
<u>12"</u>	<u>18</u>	<u>33</u>	<u>Lite brn fine clayey sand</u>	<input checked="" type="checkbox"/>	
<u>12"</u>	<u>33</u>	<u>50</u>	<u>Grey hard silt</u>		<input checked="" type="checkbox"/>
<u>8"</u>	<u>50</u>	<u>60</u>	<u>Very hard grey silt</u>		<input checked="" type="checkbox"/>
<u>8"</u>	<u>60</u>	<u>68</u>	<u>softer, grey silty sand</u>	<input checked="" type="checkbox"/>	
<u>8"</u>	<u>68</u>	<u>70</u>	<u>harder grey coarse sand</u>	<input checked="" type="checkbox"/>	
<u>8"</u>	<u>70</u>	<u>85</u>	<u>stratified hard & soft silty fine sand</u>	<input checked="" type="checkbox"/>	
<u>8"</u>	<u>85</u>	<u>88</u>	<u>Grey silty sand</u>		<input checked="" type="checkbox"/>
<u>8"</u>	<u>88</u>	<u>96</u>	<u>Grey stratified clay, silt & fine sand</u>		<input checked="" type="checkbox"/>
<u>8"</u>	<u>96</u>	<u>115</u>	<u>Grey silty medium sand</u>	<input checked="" type="checkbox"/>	
<u>8"</u>	<u>115</u>	<u>120</u>	<u>Grey medium sand</u>	<input checked="" type="checkbox"/>	

Completed Depth 120' (Measurable)
Date: Started Feb 4, 04 Completed Feb 26, 04

14. DRILLER'S CERTIFICATION
I/We certify that all minimum well construction standards were complied with at the time the rig was removed.
Company Name Fogle Pump & Supply Firm No. 537
Principal Driller James Noran Date 2-27-04
and Driller or Operator II James Noran Date 2-27-04
Operator I _____ Date _____
Principal Driller and Rig Operator Required.
Operator I must have signature of Driller/Operator II.

60N 4W 27

RECEIVED

27J1

Form 238-7

11/98 AUG 24 1998

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only
Inspected by
Twp Rge Sec
1/4 1/4 1/4
Lat: Long:

1. WELL TAG NO. D 5-232
DRILLING PERMIT NO. 97-98-N-31-100
Other IDWR No.

78236
11. WELL TESTS:
Pump Bailer Air Flowing Artesian

2. OWNER:
Name DON CHAPPELL
Address 209 STEAMBOAT BAY RD.
City COOLIN State ID Zip 83821

Table with 4 columns: Yield gal./min., Drawdown, Pumping Level, Time. Values: 3, 8.3, 1.01, 2 hrs.

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.
Twp. 60 North or South
Rge. 4 East or West
Sec. 27 NW 1/4 SE 1/4
Gov't Lot 6 County BONNER



Address of Well Site
SAME AS ABOVE
City

Lt. Blk. Sub. Name

4. USE:

- Domestic, Municipal, Monitor, Irrigation, Thermal, Injection, Other

5. TYPE OF WORK check all that apply (Replacement etc.)

- New Well, Modify, Abandonment, Other

6. DRILL METHOD

- Air Rotary, Cable, Mud Rotary, Other

7. SEALING PROCEDURES

Table with columns: SEAL/FILTER PACK (Material, From, To), AMOUNT (Sacks or Pounds), METHOD. Entry: BENTONITE 0 18 200# TEMP. CASE

Was drive shoe used? Yes No Shoe Depth(s) 104
Was drive shoe seal tested? Yes No How?

8. CASING/LINER:

Table with columns: Diameter, From, To, Gauge, Material, Casing, Liner, Welded, Threaded. Entry: 6 11.5 104 250 STEEL

Length of Headpipe 1.5' Length of Tailpipe

9. PERFORATIONS/SCREENS

Perforations Method DROP SCREEN FULL CASE
Screens Screen Type STAINLESS-TELESCOPE

Table with columns: From, To, Slot Size, Number, Diameter, Material, Casing, Liner. Entry: 104 109 10 5 1/2 SS

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

18 ft. below ground Artesian pressure lb.
Depth flow encountered 23 ft. Describe access port or control devices: FITLESS CASE

12. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Lithologic log table with columns: Bore Dia., From, To, Remarks: Lithology, Water Quality & Temperature, Y, N. Entries include TOPSOIL-CLAY, SANDY CLAY, GRAY CLAY-PEAT, BROWN CLAY FINE SAND, GRAY CLAY, SAND-GRAY CLAY, GRAY CLAY.

Completed Depth 109' (Measurable)
Date: Started 8/4/98 Completed 8/10/98

13. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name WOOD WELL DRILLING Firm No. 389

Firm Official Shiley Wood Date 8/20/98

and Driller or Operator Date

(Sign once if Firm Official & Operator)

60N 4W 27 FORWARD WHITE COPY TO WATER RESOURCES

USE TYPEWRITER OR BALL POINT PEN

34B1

State of Idaho Department of Reclamation

WELL DRILLER'S REPORT

RECEIVED

State law requires that this report be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

DEC 26 1972

AUG 21 1972

1. WELL OWNER

Name Orval Mark - Robert B. Johnson

Address N. 8219 Howard - Spokane Wa

Owner's Permit No. 97-72-N-14

7. WATER LEVEL

Static water level 27 feet below land surface

Flowing? Yes No G.P.M. flow _____

Temperature _____ ° F. Quality _____

Artesian closed-in pressure _____ p.s.i.

Controlled by Valve Cap Plug

2. NATURE OF WORK

New well Deepened Replacement

Abandoned (describe method of abandoning)

8. WELL TEST DATA

Pump Bailer Other

Discharge G.P.M.	Draw Down	Hours Pumped
<u>35 GPM</u>	<u>2 ft</u>	<u>4 hrs</u>

3. PROPOSED USE

Domestic Irrigation Test

Municipal Industrial Stock

9. LITHOLOGIC LOG

Hole Diam.	Depth		Material	Water	
	From	To		Yes	No
<u>8</u>	<u>0</u>	<u>2</u>	<u>Brown top soil</u>		
	<u>2</u>	<u>5</u>	<u>Gray silt</u>		
	<u>5</u>	<u>31</u>	<u>Fine Br. silt</u>		
	<u>31</u>	<u>39</u>	<u>Greenish gray Clay</u>		
	<u>39</u>	<u>58</u>	<u>Gray silty duck sand</u>		
	<u>58</u>	<u>64</u>	<u>Coarse sand & gravel some 1" & 2" Round</u>	<input checked="" type="checkbox"/>	
	<u>64</u>	<u>67</u>	<u>Coarse granite sand & gravel up to 1"</u>	<input checked="" type="checkbox"/>	
	<u>67</u>	<u>70</u>	<u>Coarse granite sand some gravel</u>	<input checked="" type="checkbox"/>	
	<u>70</u>	<u>73</u>	<u>Fine Brown sand</u>	<input checked="" type="checkbox"/>	

4. METHOD DRILLED

Cable Rotary Dug Other

5. WELL CONSTRUCTION

Diameter of hole 8 inches Total depth 73 feet

Casing schedule: Steel Concrete

Thickness	Diameter	From	To
<u>.280</u> inches	<u>8</u> inches	<u>+1</u> feet	<u>73</u> feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

Was a packer or seal used? Yes No

Perforated? Yes No

How perforated? Factory Knife Torch

Size of perforation 1/4 inches by 1/8 inches

Number	From	To
<u>90</u> perforations	<u>62</u> feet	<u>68</u> feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? Yes No

Manufacturer's name _____

Type _____ Model No. _____

Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Gravel packed? Yes No Size of gravel 1/2" up to 1"

Placed from 66 feet to 73 feet

Surface seal? Yes No To what depth 18 feet

Material used in seal Cement grout Puddling clay

6. LOCATION OF WELL

Sketch map location must agree with written location.

County BANNER

NW 1/4 NE 1/4 Sec. 34 T. 60 N. R. 4 E

Lot 2

10. Work started Aug. 3-72 finished Aug. 9-72

11. DRILLER'S CERTIFICATION

This well was drilled under my supervision and this report is true to the best of my knowledge.

Zinkgraf Well Drilling Number 59

E. 1606 Sharp - Spokane Wash. Address

James J. Zinkgraf Signed By Aug. 15-1972 Date

WELL DRILLER'S REPORT

RECEIVED

FEB 19 2004

IDWR/North

Office Use Only

Well ID No. _____
 Inspected by _____
 Twp _____ Rge _____ Sec _____
 1/4 _____ 1/4 _____ 1/4 _____
 Lat: : : Long: : :
 k

1. WELL TAG NO. D 0033486
 DRILLING PERMIT NO. 310300
 Water Right or Injection Well No. _____

2. OWNER:
 Name HOWARD KRAUS
 Address Sherwood Beach
 City PRIEST RIVER State ID Zip 83886

3. LOCATION OF WELL by legal description:
 You must provide address or Lot, Blk, Sub. or Directions to well.
 Twp. 60 North or South
 Rge. 4 East or West
 Sec. 34 1/4 NW 1/4 NE 1/4
 Gov't Lot _____ County Bonneville 10 acres 40 acres 160 acres
 Lat: : : Long: : :
 Address of Well Site same City PRIEST LR.
 (Give at least name of road + Distance to Road or Landmark)
 Lt. _____ Blk. _____ Sub. Name _____



12. WELL TESTS:
 Pump Bailer Air Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
20	29'	30'	1hr

Water Temp. CO 11 Bottom hole temp. _____
 Water Quality test or comments: _____

Depth first Water Encounter 20'

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water	
				Y	N
8	0	20	CLAY, SAND, S. H.		X
6	20	30	SAND	X	
6	30	80	SAND	X	

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 MAR 11 2004
 IDWR/North

4. USE:
 Domestic Municipal Monitor Irrigation
 Thermal Injection Other _____

5. TYPE OF WORK check all that apply (Replacement etc.)
 New Well Modify Abandonment Other _____

6. DRILL METHOD:
 Air Rotary Cable Mud Rotary Other _____

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
Bentonite	0	18	250lbs	Temp Casing

Was drive shoe used? Y N Shoe Depth(s) 73'
 Was drive shoe seal tested? Y N How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6	1	73	250	Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Length of Headpipe _____ Length of Tailpipe _____
 Packer Y N Type K

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method _____
 Screen Type & Method of Installation Johnson pullback

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
73	78	20		6	SS.	<input type="checkbox"/>	<input type="checkbox"/>

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
1 ft. below ground Artesian pressure _____ lb.
 Depth flow encountered _____ ft. Describe access port or control devices: _____

14. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.
 Company Name Curtis Sons Firm No. 168
 Principal Driller and Operator I Steve Pitts Date 1/18/04
 Driller or Operator II _____ Date _____
 Operator I _____ Date _____

Principal Driller and Rig Operator Required.
 Operator I must have signature of Driller/Operator II.

60N 4W 34

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only			
Well ID No.	_____		
Inspected by	_____		
Twp	Rge	Sec	
_____	1/4	1/4	1/4
Lat:	:	:	Long: : :

1. WELL TAG NO. D 0041152
 DRILLING PERMIT NO. 838426
 Water Right or Injection Well No. _____

2. OWNER:
 Name Robert Wendel
 Address 12121 E. Broadway Ave.
 City Spokane State WA Zip 99206

3. LOCATION OF WELL by legal description:
 You must provide address or Lot, Blk, Sub. or Directions to well.
 Twp. 60 North or South
 Rge. 4 East or West
 Sec. 34 1/4 NW 1/4 NE 1/4
 Gov't Lot _____ County Bonner
 Lat: : : Long: : :
 Address of Well Site Steamboat by Rd. City Coolin
 (Give at least name of road + Distance to Road or Landmark)
 Lt. _____ Blk. _____ Sub. Name _____

4. USE:
 Domestic Municipal Monitor Irrigation
 Thermal Injection Other _____

5. TYPE OF WORK check all that apply (Replacement etc.)
 New Well Modify Abandonment Other _____

6. DRILL METHOD:
 Air Rotary Cable Mud Rotary Other _____

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
<u>Bentonite</u>	<u>0</u>	<u>18</u>	<u>250 lbs</u>	<u>Temp Casing</u>

Was drive shoe used? Y N Shoe Depth(s) 70'
 Was drive shoe seal tested? Y N How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
<u>6</u>	<u>+1</u>	<u>70</u>	<u>280</u>	<u>Steel</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Length of Headpipe _____ Length of Tailpipe _____
 Packer Y N Type K

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method Frac
 Screen Type & Method of Installation CRK-Telescoping

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
<u>70</u>	<u>75</u>	<u>30</u>	<u>304</u>	<u>6"</u>	<u>SS</u>	<input type="checkbox"/>	<input type="checkbox"/>

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
0 ft. below ground Artesian pressure _____ lb.
 Depth flow encountered _____ ft. Describe access port or control devices: _____

12. WELL TESTS:
 Pump Bailer Air Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
<u>10+</u>	<u>5'</u>	<u>5'</u>	<u>1hr</u>

Water Temp. COLD Bottom hole temp. _____
 Water Quality test or comments: _____

13. LITHOLOGIC LOG: (Describe repairs or abandonment) Depth first Water Encounter 20'

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water	
				Y	N
	<u>8</u>	<u>0</u>	<u>TOP SOIL, SAND</u>		<input checked="" type="checkbox"/>
	<u>10</u>	<u>18</u>	<u>SAND, CLAY</u>		<input checked="" type="checkbox"/>
	<u>10</u>	<u>30</u>	<u>SAND, CLAY</u>		<input checked="" type="checkbox"/>
	<u>10</u>	<u>30</u>	<u>SAND, CLAY</u>		<input checked="" type="checkbox"/>
	<u>10</u>	<u>60</u>	<u>SAND</u>		<input checked="" type="checkbox"/>
	<u>10</u>	<u>60</u>	<u>SAND</u>		<input checked="" type="checkbox"/>

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 MAY 11 2006
 IDWR/North

Completed Depth 75' (Measurable)
 Date: Started 2/13/06 Completed 2/15/06

14. DRILLER'S CERTIFICATION
 I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name G. H. R. Rigs & Sons Firm No. 1018
 Principal Driller Steve Ritts Date 2/20/06
 and _____
 Driller or Operator II _____ Date _____
 Operator I _____ Date _____

Principal Driller and Rig Operator Required.
 Operator I must have signature of Driller/Operator II.

60N 4W 34

STATE OF IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

N



USE TYPEWRITER OR BALLPOINT PEN

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER
Name: Bruce Hunt
Address: Coaling Idaho
Owner's Permit No.: 97-78-N-19

7. WATER LEVEL
Static water level: 30 feet below land surface.
Flowing? No
Temperature: ___ of. Quality: ___
Artesian closed-in pressure: ___ p.s.i.
Controlled by: ___ Valve ___ Cap ___ Plug

2. NATURE OF WORK
[X] New well
___ Deepened
___ Replacement
___ Abandoned (describe method of abandoning)

8. WELL TEST DATA
___ Pump
[X] Bailer
___ Other

Table with 3 columns: Discharge G.P.M., Drawdown, Hours Pumped. Values: 20, 40', 2hr.

3. PROPOSED USE
[X] Domestic
___ Irrigation
___ Test
___ Other (specify type)
___ Municipal
___ Industrial
___ Stock
___ Waste Disposal or Injection

9. LITHOLOGIC LOG

Lithologic log table with columns: Hole Diam., Depth (From, To), Material, Water (Yes, No). Entries include Sand, Sand + Mud, fine Sand, Clay & Sand, Blue Clay + Sand, Clay + Gravel, Blue Clay-Gravel, Fine Sand + Clay, Fine Sand + Clay, Clay + Gravel, Coarse Sand.

4. METHOD DRILLED
[X] Cable
___ Rotary
___ Dug
___ Other

5. WELL CONSTRUCTION
Diameter of hole: 6 inches
Total depth: 185 feet
Casing schedule: [X] Steel
Thickness: 4 inches
Diameter: 6 inches
From: 1 foot
To: 185 feet
Was casing drive shoe used? [X] Yes
Was a packer or seal used? [X] No
Perforated? [X] No
How perforated? ___ Factory ___ Knife ___ Torch
Size of perforation: ___ inches by ___ inches
Well screen installed? [X] Yes
Manufacturer's name: Johnson
Type: Telescope
Diameter: 6 Slot size: 30 Set from: 180 feet to: 185 feet
Gravel packed? [X] No
Surface seal depth: 18
Material used in seal: [X] Puddling clay
Sealing procedure used: [X] Temporary surface casing

101822
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AUG 2 1978
Department of Water Resources
Northern District Office

6. LOCATION OF WELL
Sketch map location must agree with written location.
Subdivision Name:
Lot No.:
Block No.:
County: Bonner
SW 1/4 NE 1/4 Sec. 34, T. 600N, R. 4 E

10. Work started 4-25-78 finished 4-14-78

11. DRILLERS CERTIFICATION
Firm Name: Carl Gutts + Sons Firm No: 168
Address: Rt 2 Newport Wash Date: 6-4-78
Signed by (Firm Official): Carl Gutts
and
(Operator): John Gutts

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only			
Well ID No.	_____		
Inspected by	_____		
Twp	Rge	Sec	
1/4	1/4	1/4	
Lat: _____	: _____	Long: _____	: _____

1. WELL TAG NO. D 0054703
 DRILLING PERMIT NO. 852375
 Water Right or Injection Well No. _____

2. OWNER:
 Name Robert + Mary CAMRON
 Address 1428 N. WINDSTER LN
 City Liberty Lake State WA Zip 99019

3. LOCATION OF WELL by legal description:
 You must provide address or Lot, Blk, Sub. or Directions to well.
 Twp. 60 N North or South
 Rge. 4 W East or West
 Sec. 34 1/4 NW 1/4 SW 1/4
 Gov't Lot _____
 County Benton
 Lat: _____ Long: _____
 Address of Well Site Lot 302 N. Steamboat Bay Rd
 City Coolin
 Lt. _____ Blk. _____ Sub. Name _____

4. USE:
 Domestic Municipal Monitor Irrigation
 Thermal Injection Other _____

5. TYPE OF WORK check all that apply (Replacement etc.)
 New Well Modify Abandonment Other _____

6. DRILL METHOD:
 Air Rotary Cable Mud Rotary Other _____

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
<u>Bentonite</u>	<u>0</u>	<u>18</u>	<u>450 lbs</u>	<u>TEMP CASING</u>

Was drive shoe used? Y N Shoe Depth(s) _____
 Was drive shoe seal tested? Y N How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
<u>1</u>	<u>71</u>	<u>250</u>	<u>Steel</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Length of Headpipe _____ Length of Tailpipe _____
 Packer Y N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method _____
 Screen Type & Method of Installation Johnson SS

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
<u>71</u>	<u>76</u>	<u>6</u>	<u>304</u>	<u>4</u>	<u>STAINLESS STEEL</u>	<input type="checkbox"/>	<input type="checkbox"/>

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
1 ft. below ground Artesian pressure _____ lb.
 Depth flow encountered _____ ft. Describe access port or control devices: _____

12. WELL TESTS:

Pump Bailer Air Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
<u>5+</u>	<u>60'</u>	<u>66'</u>	<u>2 hrs</u>

Water Temp. _____ Bottom hole temp. _____
 Water Quality test or comments: _____

13. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
<u>6</u>	<u>0</u>	<u>2</u>	<u>TOP SOIL</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>6</u>	<u>2</u>	<u>42</u>	<u>SAND + CLAY</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>6</u>	<u>42</u>	<u>60</u>	<u>CLAY + GRAVEL</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>6</u>	<u>60</u>	<u>70</u>	<u>FINE SAND 6+5</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>6</u>	<u>70</u>	<u>76</u>	<u>FINE SAND</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

RECEIVED
 AUG 15 2008
 IDWR/North

RECEIVED
 AUG 22 2008
 IDWR/North

Completed Depth 76' (Measurable)
 Date: Started 7-20-08 Completed 7-25-08

14. DRILLER'S CERTIFICATION
 I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Carl Potts & Sons Drilling Firm No. 168
 Principal Driller Steve Potts Date 8/5/08
 and Driller or Operator II John Potts Date _____
 Operator I _____ Date _____

60N 04W 34

Principal Driller and Rig Operator Required.
 Operator I must have signature of Driller/Operator II.
 FORWARD WHITE COPY TO WATER RESOURCES

34G3

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

1. WELL TAG NO. D 0061689
Drilling Permit No. 869750

Water right or injection well # _____
2. OWNER: Dave Johnson
Name _____

Address P.O. Box 28786
City Spokane State WA Zip 99228

3. WELL LOCATION:
Twp. 60 North or South Rge. 04 East or West
Sec. 34 1/4 SW 1/4 N 1/4

Gov't Lot _____ County Bonner
Lat. 48 ° 30 ' 630 (Deg. and Decimal minutes)
Long. 116 ° 50 ' 239 (Deg. and Decimal minutes)
Address of Well Site 232 N Steamboat Bay Rd
city Coalin 83821

(Give at least name of road + Distance to Road or Landmark)
Lot. 4 Blk. _____ Sub. Name North Sherwood Addition

4. USE:
 Domestic Municipal Monitor Irrigation Thermal Injection
 Other _____

5. TYPE OF WORK:
 New well Replacement well Modify existing well
 Abandonment Other _____

6. DRILL METHOD:
 Air Rotary Mud Rotary Cable Other _____

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
<u>Bentonite</u>	<u>0</u>	<u>18</u>	<u>550</u>	<u>Pour</u>

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
<u>6</u>	<u>+3</u>	<u>74</u>	<u>250</u>	<u>steel</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Was drive shoe used? Y N Shoe Depth(s) 74'

9. PERFORATIONS/SCREENS:
Perforations Y N Method _____
Manufactured screen Y N Type Stainless Steel
Method of installation telescoping

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
<u>74</u>	<u>79</u>	<u>20</u>	<u>5'</u>	<u>5"</u>	<u>SS</u>	<u>304</u>

Length of Headpipe _____ Length of Tailpipe _____
Packer Y N Type 8" K-Packer

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

11. FLOWING ARTESIAN:
Flowing Artesian? Y N Artesian Pressure (PSIG) _____

12. STATIC WATER LEVEL and WELL TESTS:
Depth first water encountered (ft) 16' Static water level (ft) +2
Water temp. (°F) Cold Bottom hole temp. (°F) _____
Describe access port Well Cap

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
	<u>20+</u>	<u>3hr</u>

Test method:
Pump Bailer Air Flowing artesian

Water quality test or comments: good

13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
<u>10</u>	<u>0</u>	<u>9</u>	<u>Sand</u>		<input checked="" type="checkbox"/>
<u>10</u>	<u>9</u>	<u>16</u>	<u>Blue Clay</u>	<input checked="" type="checkbox"/>	
<u>10</u>	<u>16</u>	<u>18</u>	<u>Blue Silt (fine)</u>	<input checked="" type="checkbox"/>	
<u>6</u>	<u>18</u>	<u>45</u>	<u>Blue Silt</u>	<input checked="" type="checkbox"/>	
<u>6</u>	<u>45</u>	<u>60</u>	<u>Brown Sand (Fine)</u>	<input checked="" type="checkbox"/>	
<u>6</u>	<u>60</u>	<u>70</u>	<u>Sand Fine (sum) coarse</u>	<input checked="" type="checkbox"/>	
<u>6</u>	<u>70</u>	<u>79</u>	<u>Sand coarse (sum) gravel</u>	<input checked="" type="checkbox"/>	

RECEIVED
SEP 18 2013
IDWR / NORTH

Completed Depth (Measurable): 79'
Date Started: 8/29/13 Date Completed: 9/3/13

14. DRILLER'S CERTIFICATION:
I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

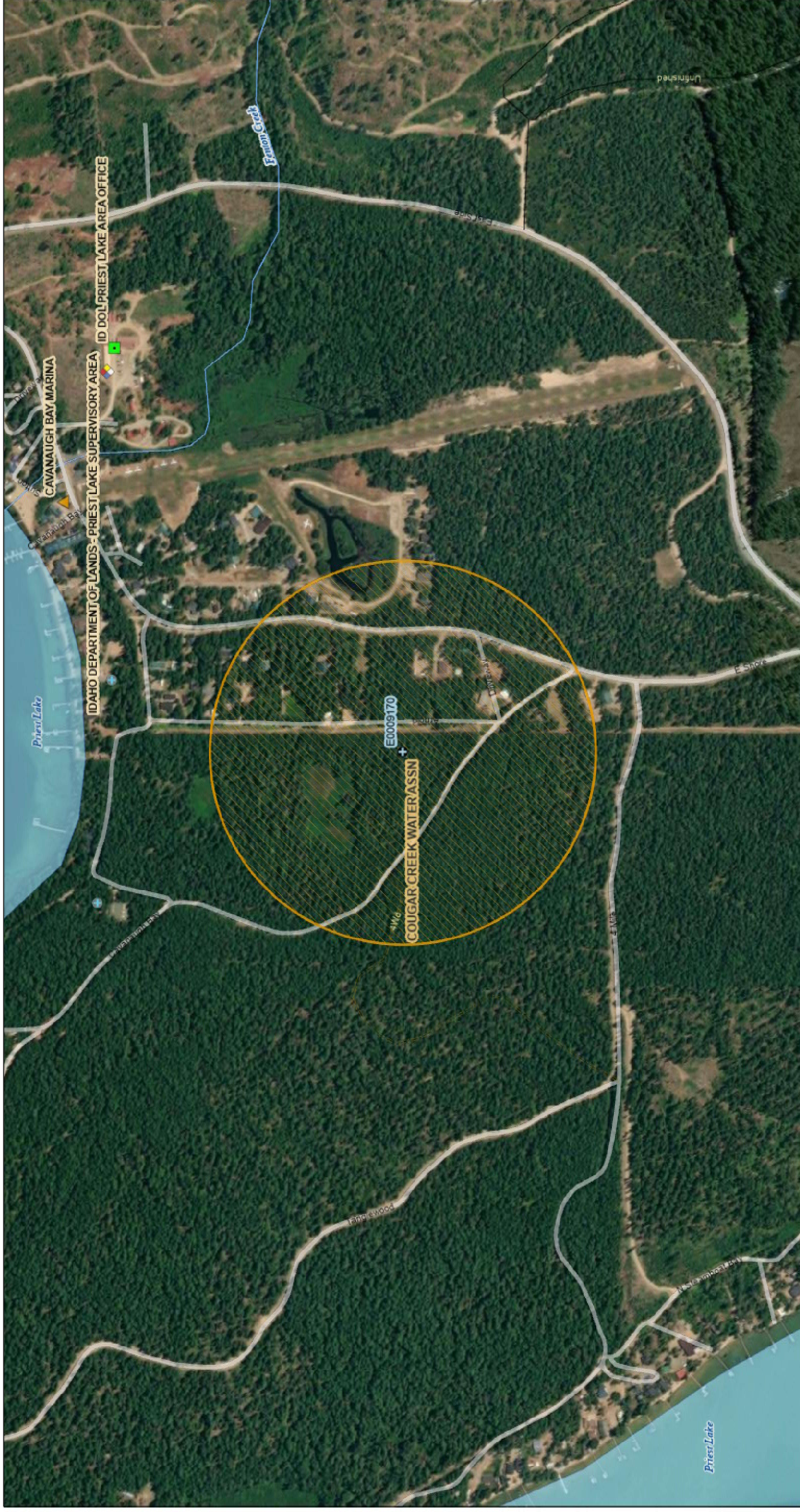
Company Name Pioneer Well Drilling Co. No. 725
*Principal Driller John McDaniel Date 9/14/13
*Driller John McDaniel Date 9/14/13
*Operator II _____ Date _____
Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

Appendix C

IDEQ Source Water Assessment and Protection Map

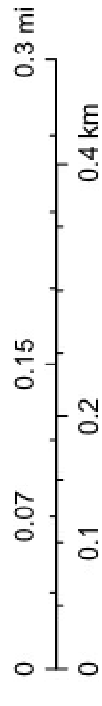
Idaho DEQ Source Water Assessment and Protection



January 7, 2025

- Streams
- Lakes
- Local Roads
- Streets (100k)
- Other Road
- 4WD
- Potential Contaminants Inventory Locations
- General Waste Site
- UST/LUST Site
- TierII (formerly CAMEO)
- Source Location (all)
- Source Water Delineation (TOT)
- Fixed Radius
- Source Location (selected)

1:9,028



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Appendix D
Report Limitations and Guidelines for Use

Appendix D

REPORT LIMITATIONS AND GUIDELINES FOR USE¹

This appendix provides information to help you manage your risks with respect to the use of this report.

Read These Provisions Closely

It is important to recognize that the geoscience practices (geotechnical engineering, hydrogeology and environmental science) rely on professional judgment and opinion to a greater extent than other engineering and natural science disciplines, where more precise and/or readily observable data may exist. To help clients better understand how this difference pertains to our services, GeoEngineers, Inc. (GeoEngineers) includes the following explanatory “limitations” provisions in its reports. Please confer with GeoEngineers if you need to know more how these “Report Limitations and Guidelines for Use” apply to your project or site.

Hydrogeological Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared for Coffman Engineers, Inc. and for the Project specifically identified in the report. The information contained herein is not applicable to other sites or projects.

GeoEngineers structures its services to meet the specific needs of its clients. No party other than the party to whom this report is addressed may rely on the product of our services unless we agree to such reliance in advance and in writing. We do not authorize, and will not be responsible for, the use of this report for any purposes or projects other than those identified in the report.

A Hydrogeologic Report is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the Cougar Creek Water Users Association planned Well 3 project in Bonner County, Idaho. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

- Not prepared for you,
- Not prepared for your project,
- Not prepared for the specific site explored, or
- Completed before important project changes were made.

For example, changes that can affect the applicability of this report include those that affect:

- The function of the proposed structure;
- Elevation, configuration, location, orientation or weight of the proposed structure;
- Composition of the design team; or
- Project ownership.

¹ Developed based on material provided by GBA, GeoProfessional Business Association; www.geoprofessional.org.

If changes occur after the date of this report, GeoEngineers cannot be responsible for any consequences of such changes in relation to this report unless we have been given the opportunity to review our interpretations and recommendations. Based on that review, we can provide written modifications or confirmation, as appropriate.

Environmental Concerns Are Not Covered

Unless environmental services were specifically included in our scope of services, this report does not provide any environmental findings, conclusions, or recommendations, including but not limited to, the likelihood of encountering underground storage tanks or regulated contaminants.

Information Provided by Others

GeoEngineers has relied upon certain data or information provided or compiled by others in the performance of our services. Although we use sources that we reasonably believe to be trustworthy, GeoEngineers cannot warrant or guarantee the accuracy or completeness of information provided or compiled by others.

Subsurface Conditions Can Change

This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the site, new information or technology that becomes available subsequent to the report date, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. If more than a few months have passed since issuance of our report or work product, or if any of the described events may have occurred, please contact GeoEngineers before applying this report for its intended purpose so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Geologic Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on geologic maps, our site observations and well logs completed by others. GeoEngineers reviewed these data and then applied its professional judgment to render an informed opinion about subsurface conditions at other locations. Actual subsurface conditions may differ, sometimes significantly, from the opinions presented in this report. Our report, conclusions and interpretations are not a warranty of the actual subsurface conditions.

Report Recommendations Are Not Final

We have developed our opinions on widely spaced wells observed and logged by others. These investigations sample just a small percentage of the site area and region. Such sampling on its own cannot provide a complete and accurate view of subsurface conditions for the entire site. Therefore, the recommendations included in this report are preliminary and should not be considered final. GeoEngineers' recommendations can be finalized only by observing actual subsurface conditions revealed during well drilling and construction. GeoEngineers cannot assume responsibility or liability for the recommendations in this report if we do not perform construction observation.

A Hydrogeologic Report Could Be Subject to Misinterpretation

Misinterpretation of this report by members of the design team or by contractors can result in costly problems. GeoEngineers can help reduce the risks of misinterpretation by conferring with appropriate members of the design team after submitting the report, reviewing pertinent elements of the design team's plans and specifications, participating in pre-bid and preconstruction conferences, and providing construction observation.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.

