GROUND-WATER SUPPLY EVALUATION FOR THE MAYFIELD TOWNSITE PROPERTY

Prepared for

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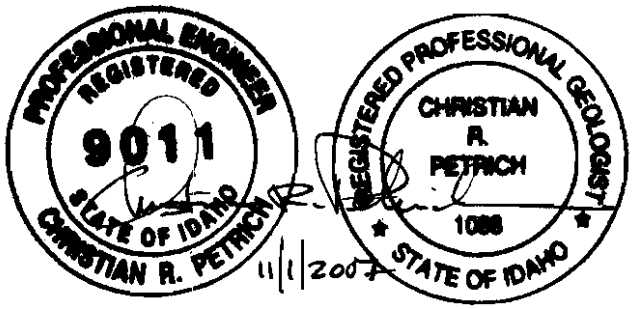


November 1, 2007

SPF Water Engineering, LLC
water resource consultants

Executive Summary

On July 28, 2006 Mayfield Townsite LLC submitted a water right application (63-32499) to appropriate 10 cfs of ground water from up to eight wells in the Mayfield, Idaho area. The water would be used for municipal uses in approximately 8,000 housing units within a 6,363-acre area. IDWR is seeking information about the availability and sustainability of ground-water at the Mayfield Townsite property.

SPF Water Engineering, LLC (SPF) conducted an assessment of potential ground water availability in the Mayfield Townsite area. The primary conclusion from this assessment is that there is likely sufficient water available for application 63-32499. Specific conclusions include the following:

Water Demand

1. The annual water use for domestic and irrigation uses by 8,000 units is projected to be approximately 4,860 acre feet. This includes 2,240 acre feet for domestic purposes and 2,620 net acre feet for irrigation (it was assumed that 50 percent of domestic effluent, or approximately 1,120 acre feet annually, will be treated and re-used for irrigation). This may require (a) above-ground storage and/or (b) aquifer storage and recovery of reclaimed effluent.
2. The net consumptive use (representing the net impact on local aquifers) is projected to be approximately 3,960 acre feet. This represents an annual average withdrawal rate of 5.5 cfs. This net value accounts for the infiltration of treated wastewater (approximately 900 acre feet per year) into the aquifer system.
3. The combined maximum-day domestic and irrigation water demand for 8,000 units is approximately 21.1 cfs. This demand will be met by public water system wells authorized under proposed permit 63-32499 (10 cfs), ground water under water right 63-12447 (4 cfs), use of reclaimed domestic wastewater (5 cfs), and surface water under water right 63-2046 (up to 2.57 cfs, when available). Late-season non-availability of water under water right 63-2046 will result in reduced late-season irrigation.

Water Availability

4. Currently stable (or slightly increasing) water levels in the general Mayfield area indicate that water is available for additional appropriation.
5. The estimated annual recharge to aquifers in the Mayfield Townsite property area ranges from approximately 6,000 to 31,590 acre feet per year. Estimated current and permitted ground-water withdrawals (excluding permit 63-12447) are approximately 2,500 acre feet per year. Thus, the average annual volume of water likely available for appropriation ranges from approximately 2,600 to 28,000 acre feet per year. The projected net consumptive use for the Mayfield

Townsite project (3,960 acre feet, and which includes water use authorized under permit 63-12447) is within the lower range of estimated available water.

6. Withdrawals for the Mayfield Townsite project are not expected to impact the Mountain Home Ground Water Management Area (GWMA).
7. The ultimate carrying capacity of aquifers in the Mayfield Townsite area is unknown. If the actual aquifer recharge falls in the upper two-thirds of our recharge estimates then the chances of developing the entire water supply for this project from ground water sources are good.
8. Aquifer mining will not occur as long as aggregate net ground water withdrawals do not exceed available recharge.
9. Ground-water level monitoring should be conducted in the area prior to and following the construction of new public water system wells. Monitoring should occur on a periodic basis for an extended period of time during and following construction. Monitoring should include the Indian Creek valley from the base of the foothills near Mayfield to the south side of Interstate 84.
10. Water conservation measures (e.g., water-efficient fixtures and appliances, drought-tolerant landscaping, and other water conservation measures) are strongly recommended to maximize the use of existing ground-water resources.
11. Water supplies from an alternate source may be required for full project build-out if on-site water supplies are insufficient.

Aquifer Characteristics

12. Aquifers underlying the Mayfield Townsite area are present in layers of unconsolidated sediments and volcanic materials.
13. Primary water-bearing zones are found in coarser-grained sedimentary zones (such as sand and gravel layers) or in fractured basalt or cinder zones.
14. Coarse-grained sediments in the Mayfield area originated in nearby highlands and are consistent with alluvial fan deposits.
15. Clay layers or unfractured basalt may form partial aquitards in the Mayfield area. However, it is unlikely that these aquitards are areally extensive because of varying geologic materials and proximity to basin margins.
16. Structural features and/or contacts with bedrock likely create aquifer boundary conditions.
17. Shallower existing wells (e.g., less than about 250 feet deep) are generally found within about one mile of Indian Creek. Some of these wells are likely completed in perched aquifer zones.
18. Most of the wells further than about one mile from Indian Creek are at least 400 feet in depth (the deepest well extends 811 feet below ground surface). Wells southwest of the property are generally deeper, extending to depths of over 1,100 feet.

Aquifer Recharge and Discharge

19. Recharge to shallow zones occurs through areal infiltration and seepage from surface water bodies (e.g., Indian Creek and tributaries to Indian Creek).
20. Recharge to deeper zones occurs as downward flow from overlying shallow aquifers and infiltration at geologic contact zones.
21. Total aquifer recharge in an average year likely ranges from approximately 6,000 to 31,590 acre feet.

Depth to Water

22. Static water levels in existing wells in the general Mayfield area range from less than 100 feet to over 600 feet.
23. All wells with static water levels less than 200 feet are located within approximately one mile of Indian Creek. These wells may be completed in perched aquifer zones.

Existing Well Yields

24. Well yields listed on most drillers' reports in the project vicinity range from less than 5 gpm to 70 gpm. Some of these yields may have been limited by testing method (airlift) and/or well construction.
25. The 627-foot ARK Properties well (Mayfield Irrigation Well No. 1) was pumped for 8 hours at a rate of 1,700 gpm resulting in a maximum drawdown of 133 feet and an estimated aquifer transmissivity of 25,000 gpd/ft. This well is located within the Mayfield Townsite project area.
26. The Ken Agenbroad Well, located approximately 1.5 miles southwest of the Mayfield Townsite Property), was tested at a rate of 550 gpm for 6 hours and 795 gpm for 1 hour. The aquifer transmissivity in this area was estimated to be approximately 7,300 gpd/ft (based on an aggregate screened thickness of 130 feet), indicating moderate aquifer productivity. It is likely that overall aquifer transmissivity is greater based on experience with other alluvial-fan aquifers and because the effective aquifer thickness is greater than that penetrated by the Agenbroad well.
27. All of the wells listing an initial yield greater than 50 gpm are located within approximately one mile of Indian Creek or Indian Creek Reservoir.

Water Levels

28. Ground water levels in the Mayfield Townsite area are generally stable (or rising slightly).
29. Ground water flow directions (based on contours drawn from available water-level data) are generally from the northeast to southwest.

Water Quality

30. Water quality data from the ARK Properties well (Mayfield Irrigation Well No. 1) shows excellent water quality and suitable for public water system use.

31. Additional water quality data for the area are limited, but available data suggest that ground water quality is good. Arsenic and fluoride concentrations were less than current Maximum Contaminant Levels (MCLs).

New Well Construction

32. The most productive areas for new wells will be the southern and western portions of the property. Wells constructed in granitic rocks in the eastern portion of the property would likely be poor producers.

33. New wells will likely extend to depths ranging from 600 to over 800 feet, with static water levels ranging from approximately 300 to 600 feet below ground surface.

34. Wells should be constructed so as to minimize the potential for downward movement of ground water from perched aquifers to lower zones.

Potential Impacts to Existing Water Rights

35. Impacts on existing water rights are unlikely as long as recharge in the Mayfield Townsite and Indian Creek area exceeds the amount of existing and new water demands.

Potential Impacts to Water Levels in the Mountain Home GWMA

36. It is unlikely that new withdrawals for the Mayfield Townsite area will have a significant impact on water levels or water rights within the Mountain Home Ground Water Management Area (GWMA), for several reasons:

    New wells are not being proposed within the Mountain Home GWMA.

    Current ground water levels within the GWMA in the Mayfield area are stable (or rising slightly).

    The primary recharge source in the Mayfield area is seepage from Indian Creek and tributaries to Indian Creek, which are outside of the GWMA.

    Ground water flow is generally parallel to the northwest boundary of the Mountain Home GWMA – new uses will likely not reduce underflow into the Mountain Home GWMA.

37. The Mountain Home GWMA boundary appears to be based on the drainage divide between the Indian Creek watershed and Sand Hollow, which also is the boundary between administrative basins 61 and 63. Ground water withdrawals in the Mayfield Townsite area are not expected to have a hydrologic impact on this administrative GWMA boundary.

Table of Contents

Appendices

List of Figures

List of Tables

1. INTRODUCTION

1.1. Property Description

Farwest LLC (Farwest) has proposed a development for the Mayfield Townsite area, which is located about 20 miles southeast of Boise in eastern Ada County (see Figure 1). The Mayfield Townsite property, which encompasses approximately 6,363 acres (Figure 2), lies in a high desert environment at an elevation ranging from about 3,400 to 4,200 feet. Indian Creek, which drains a higher-elevation basin northeast of the property, bisects the property in the Mayfield vicinity.

1.2. Proposed Water Supply

The Mayfield development is being planned for approximately 12,000 residential housing units and/or Equivalent Domestic Units (EDUs). On July 28, 2006 Mayfield Townsite LLC submitted a water right application (63-32499) to appropriate 10 cfs of ground water from up to eight wells for municipal uses to be used in approximately 8,000 housing units. Water supplied under application 63-32499 will be augmented by water supplied under water rights 63-2046 (authorizing the use of 2.7 cfs from Indian Creek for the irrigation of 135 acres with a November 7, 1906 priority date) and permit 63-12447 (authorizing the use of 4 cfs of ground water for the irrigation of 200 acres with an April 28, 1998 priority date).

1.3. Purpose and Objectives

The Idaho Department of Water Resources requested additional information regarding permit application 63-32499 (see letter from Dan Nelson to Scott King dated May 24, 2007 - Appendix A). Specifically, IDWR is seeking information about the availability and sustainability of ground-water at the Mayfield Townsite property. The purpose of this water-supply assessment was to provide information requested by IDWR. Specific objectives of this water-supply assessment included the following:

1. Estimate maximum-day and annual average water demands;
2. Describe local geology based on existing reports and information;
3. Obtain and review drillers' reports from local wells;
4. Obtain and evaluate available water level data;
5. Obtain and review available water quality data;
6. Assess water availability based on general aquifer characteristics and estimated aquifer recharge and discharge;
7. Evaluate potential impacts on existing water rights; and

8. Evaluate potential impacts to water levels in the Mountain Home Ground Water Management Area (GWMA).

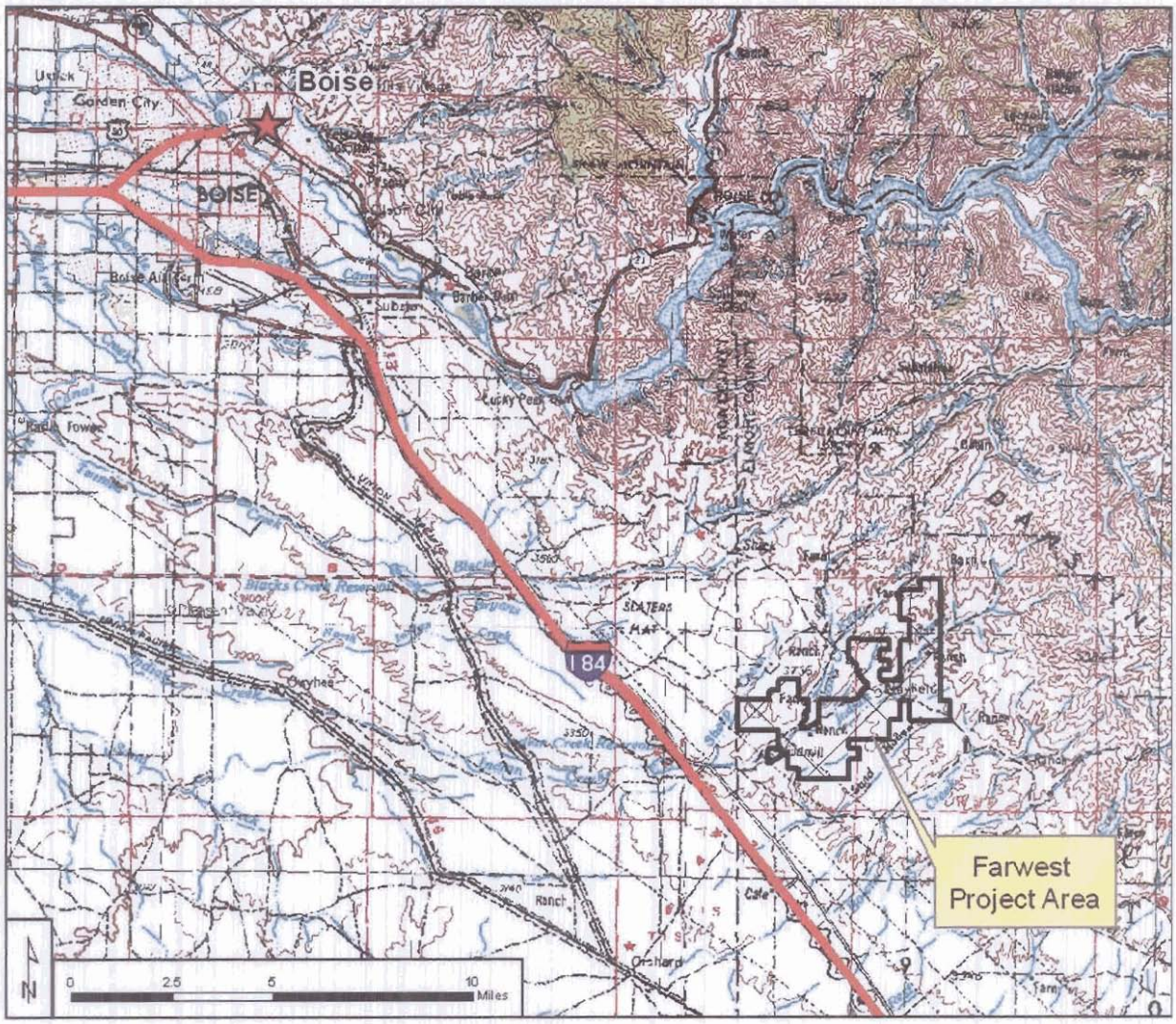


Figure 1: General location map for the Farwest (Mayfield Townsite) project area.

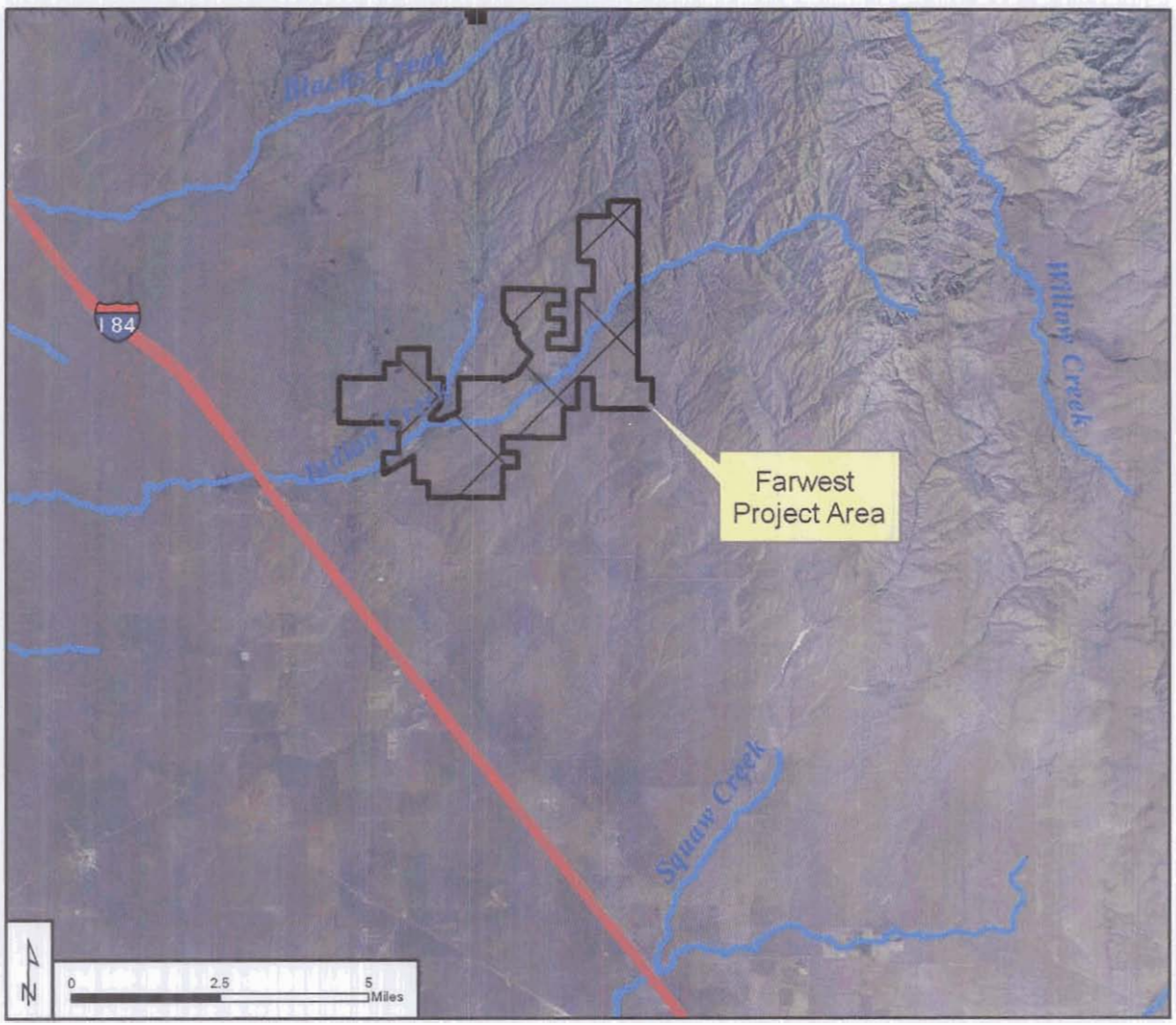


Figure 2: Local location map for the Farwest (Mayfield Townsite) project area.

2. WATER DEMAND

This section provides peak-hour, maximum-day, and average-annual water demands for the portion of the project to be supplied under water right 63-32499. The water demands were estimated based on preliminary project information; it is anticipated that water-demand estimates will be refined as project plans progress. The preliminary water-demand estimates based are on the following assumptions:

1. The project will include, for the purpose of this analysis, approximately 7,200 residential units and 800 equivalent residential units (EDUs). The ultimate project plan calls for a greater number of homes, but the 8,000 units used for this analysis is consistent with the number of residential units listed in permit application 63-32499.
2. Average annual domestic use will average 250 gallons per day (gpd) per residential unit. For comparison, average domestic-use rates in the Boise area range from about 175 to 225 gpd per unit.
3. On average, each residential unit will have 3,600 ft^2 or less of irrigated area. Equivalent residential units (representing commercial and retail space) will have an average of 2,000 ft^2 irrigated area per unit. Based on these assumptions, at total of 696 acres will be irrigated within residential and commercial areas.
4. The portion of the Mayfield Townsite project representing the initial 8,000 dwelling units will also include 200 acres of irrigated common spaces, parks, and institutional landscaping. These areas will be irrigated with reclaimed wastewater and/or irrigation water rights.
5. Up to 50 percent of domestic, non-irrigation water will be re-used on an annual basis. This will require above-ground storage of reclaimed effluent during the non-irrigation season (i.e., in ponds) or an aquifer storage and recovery program.
6. 90 percent of the remaining wastewater returns to the subsurface as infiltration.
7. The annual irrigation application rate is 4.5 feet of water per acre.
8. The peak-hour irrigation rate will be 15 gpm/acre. The maximum-day irrigation rate will be 9 gpm/acre.
9. Water for fire-protection purposes will be supplied from ponds and/or reservoir storage.

Based on these assumptions, and using Idaho Department of Environmental Quality guidance for estimating water demand (Marchus, 2006), we estimate the maximum-day domestic water demand (Table 1) under water right 63-32499 to be approximately 2,000 gpm (4.4 cfs) for the 8,000 residential units. The domestic water demand will be met by up to eight public water system wells constructed within the Mayfield Townsite property.

The combined maximum-day demand (Table 1) for domestic and irrigation uses is projected to be approximately 21.1 cfs (9,470 gpm). This demand will be met by public water system wells authorized under proposed permit 63-32499 (10 cfs), ground water under water right 63-12447 (4 cfs), use of reclaimed domestic wastewater (5 cfs), and surface water under water right 63-2046 (up to 2.57 cfs, when available). Late-season unavailability of water under water right 63-2046 would result in less late-season irrigation.

The peak-hour demand (Table 1) for in-home domestic uses was projected to be approximately 5,800 gpm. The peak-hour demand will be met from on-site public water system wells, on-site irrigation wells, surface-water diversions, reservoir storage, and pond storage.

Category	Peak Hour (gpm)	Peak hour (cfs)	Max day (gpm)	Max day (cfs)
Domestic (in home)				
Residential domestic (combined domestic and equivalent domestic units):	5,800	12.9	1,995	4.4
Irrigation				
Residential irrigation (assume 496 acres):	9,477	21.1	5,686	12.7
Non-residential irrigation (assume 200 acres):	2,998	6.7	1,800	4.0
Combined irrigation demand:	12,475	27.8	7,486	16.7
Irrigation water supplied as reclaimed wastewater:	(2,240)	(5.0)	(2,240)	(5.0)
Total peak domestic and irrigation demand:	16,034	36	7,241	12
Other				
Fire protection:	2,500	5.6	0	0.0
Total Water Demand	**24,334**	**54.2**	**9,236**	**16.1**

Notes and assumptions:

Number of residential units:	7,200	
Number of Equivalent Domestic Units (EDUs):	800	
Combined residential and non-residential EDUs:	8,000	
Irrigated residential and commercial area:	632	acres
Irrigated common areas:	200	acres
Maximum irrigation application rate:	0.03	cfs/acre
Peak-hour irrigation rate:	15	gpm/acre
Maximum-day irrigation rate:	9	gpm/acre
Peak-hour fire-protection rate:	2500	gpm
Maximum-day fire protection rate:	2000	gal (balance met from storage)

*Peak-hour domestic requirments were estimated in aggregate using DEQ guidance (2007)

Table 1: Estimated peak-hour and maximum-day water demand.

The annual water demand (Table 2) for domestic and irrigation uses is projected to be approximately 4,860 acre feet. This includes 2,240 acre feet for domestic purposes and an approximate net of 2,620 acre feet for irrigation (assuming that 50

percent of domestic effluent, or approximately 1,120 acre feet annually, is reclaimed for irrigation).

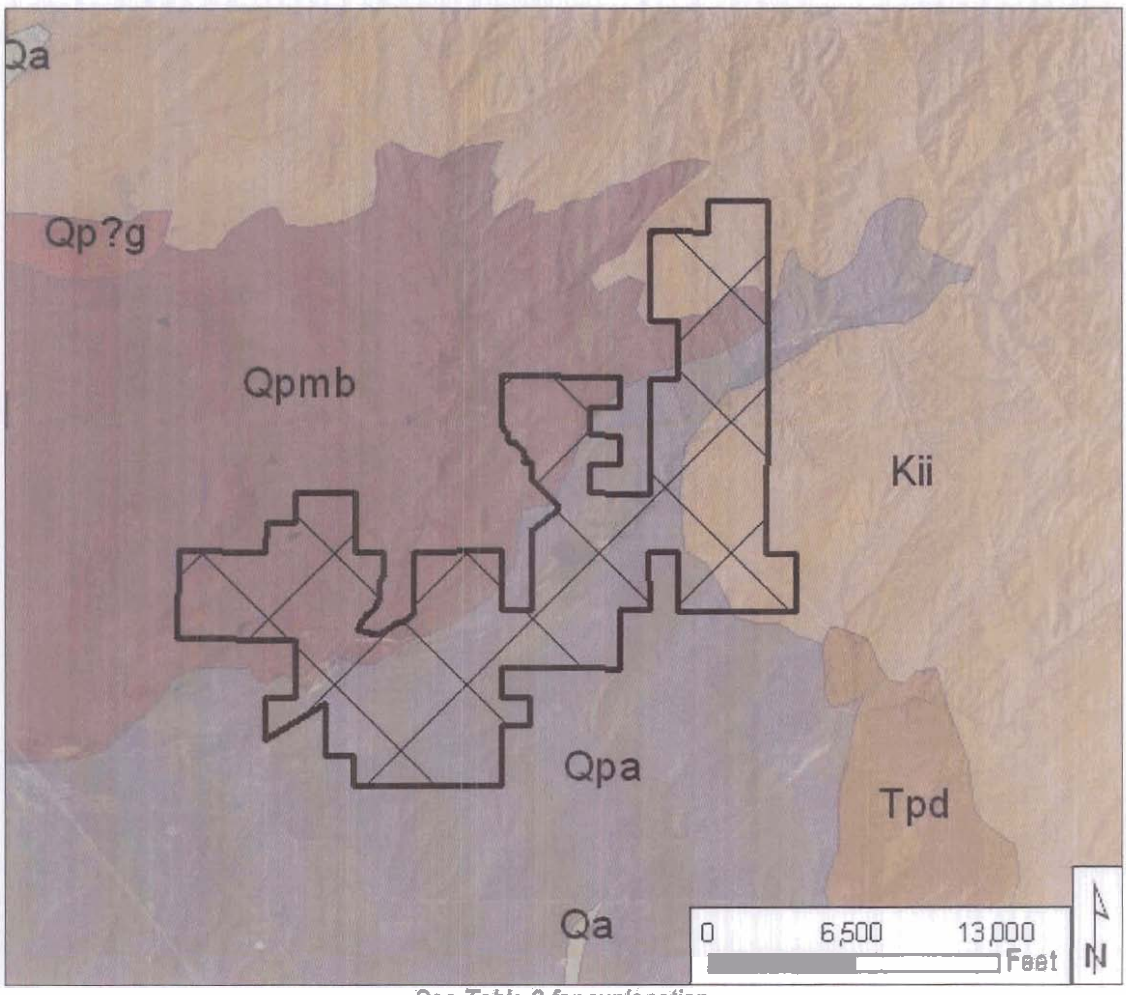
Category	Value	Units	Estimated annual volume (afa)
Residential			
Number of residential units:	7,200	units	
In-home domestic use (per unit, annual average):	250	gpd	
Annual residential domestic volume:			2,016
Residential irrigated area, per unit:	3,600	ft^2	
Total irrigated residential area:	595	acres	
Annual residential irrigation volume:			2,678
Commercial water demand			
Assumed commercial EDUs:	800		
Potable use (per EDU, annual average):	250	gpd	
Annual residential domestic volume:			224
Commercial irrigated area, per EDU:	2,000	ft^2	
Total irrigated residential area:	37	acres	
Total annual commercial irrigation volume:			165
Non-Residential Irrigation			
Common areas, parks, institutional landscaping:	200	acres	
Total non-residential irrigated area:	200	acres	
Annual non-residential irrigation:			900
Wastewater re-use			
Percentage of annual wastewater re-use:	50	%	
Total wastewater (i.e., non-irrigation water):	2,240		
Water available for re-use:			(1,120)
Estimated annual water demand			4,863
Wastewater infiltration			
Wastewater that is not re-used for irrigation:	907		
Wastewater infiltration:			(907)
Net consumptive use:			3,956
Additional assumptions:			
Annual irrigation application rate:	4.5	feet/acre/year	

Table 2: Estimated annual water use

3. HYDROLOGIC CONDITIONS IN VICINITY OF FARWEST, LLC MAYFIELD TOWNSITE PROPERTY

3.1. General Geology

Surficial geology (Figure 3 and Table 3) in the vicinity of Mayfield Townsite property consists of Cretaceous-age granitic rocks (primarily granodiorite) associated with the Idaho batholith (Kii), Middle Pleistocene-age basalt (Qpmb), Pleistocene-age unconsolidated alluvium (Qpg), Pleistocene-age alluvium (Qpa), and Quaternary alluvium (Qa) (Bond and Wood, 1978). Sediments in this area appear to be mostly alluvial fan sediments that are interfingered with basalt flows from the Kuna-Mountain Home basalt field (Wood, 1996).



See Table 3 for explanation.

Figure 3: Geology in the vicinity of Mayfield Townsite property.

Symbol	Material
Qpg	Pleistocene outwash, fanglomerate, flood and terrace gravels
Qpmb	Middle Pleistocene plateau and canyon-filling basalt in and near Snake Plain
Qpa	Pleistocene waterlaid detritus
Qa	Quaternary alluvium
Kii	Cretaceous plutons - intermediate
Tpd	Pliocene stream and lake deposits

Table 3: Explanation of geologic materials.

Normal faulting has been inferred along the base of the foothills in the Mayfield area (Wood, 1996) based on offsets observed in the sedimentary section. Wood notes, however, that the youngest depositional and volcanic units do not appear to be faulted.

3.2. Drillers' Report Review

A search for drillers' reports for the Mayfield Townsite property area wells was conducted using the Idaho Department of Water Resources' (IDWR) online well construction database[1]. The search area consisted of a 2-mile radius around the Mayfield Townsite property (Figure 4).

The IDWR well construction database contained drillers' reports for 49 wells in this area (Table 4, page 10). Copies of drillers' reports for these wells are provided in Appendix B. Of the 49 wells, 41 wells are used for domestic purposes, four are used for irrigation, and one is used for commercial purposes. One driller's report lists an industrial use, one lists a stockwater use, and one well was drilled as a test well.

The depths of these wells range from 36 to 1140 feet. Well depths fall into two general categories (Figure 5, page 12): shallow wells with depths ranging from 36 to about 250 feet and deeper wells ranging from 300 to 1140 feet. Wells located to the southwest of the property are generally deeper that those that are located near Indian Creek, Sheep Creek, and other streams.

Most wells south of the Mayfield Townsite property (wells 1, 4, 5, 7-12, 24, and 30-32) penetrated brown and tan clay with interbedded sand, silt, and occasional gravel layers. Coarse-grained sediments (e.g., sand or gravel), if saturated, were listed as water-producing zones. Wells 45 and 47, to the northwest of the property, seem to have similar properties, though the drillers' reports lack detail.

[1] Drillers' reports for wells in the IDWR database are catalogued based on locations provided by the driller. Some wells may have been omitted from this search because of incorrectly listed well locations, and some wells listed in this search area may be incorrectly located.

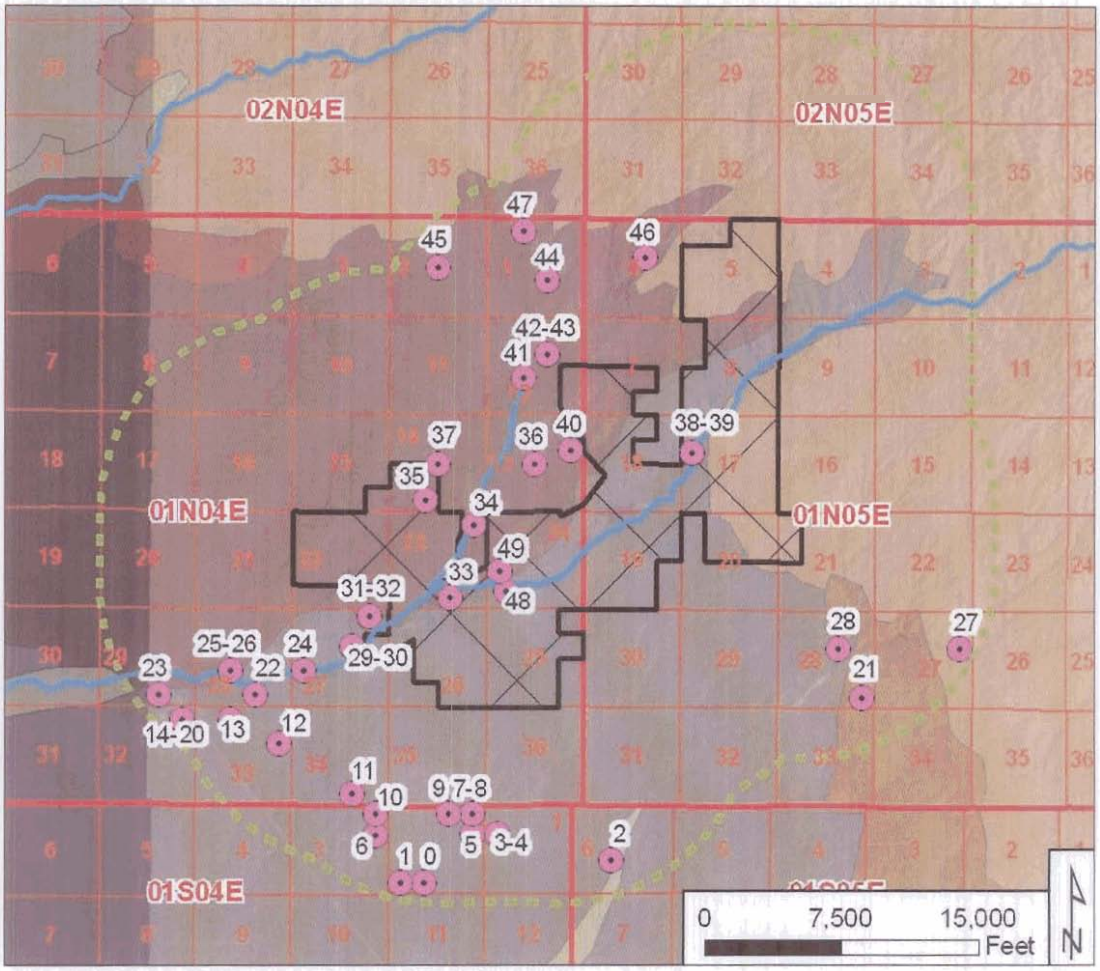


Figure 4. Wells with drillers' reports within 2 miles of Mayfield Townsite property.

A few wells south of the property (e.g., wells 0 and 6) penetrated brown and tan clay with interbedded sand, silt, and occasional gravel layers, but these wells also encountered zones volcanic (e.g., basalt) rocks at depth. Water in these wells was generally first encountered between 350 to 500 feet.

Shallower wells in close proximity to Indian Creek and other streams (wells 26, 29, 34-39, and 41) penetrated clay, silt, sand, and gravel layers and first encountered water between 9 and 135 feet. The eastern-most well on the property (well 39) struck granite at 76 feet.

Just south of Indian Creek on the Mayfield Townsite property are two wells penetrating clay, sand and gravel layers with a few thin zones of igneous rock (likely igneous sediments). Water was encountered in sandy layers at depths of about 250 feet.

Well ID	Owner	Well Use	TWP	RNG	SEC	Tract	Gallons Per Minute	Static Water Level	Surface Diameter	Casing Diameter	Casing Depth	Total Depth	Construction Date	Permit Number	Tag Number
0	BIG VIEW BUILDERS	Domestic-Single Residence	01S	04E	2	SESW	15	365	6	6	278	504	Feb 15 2004	810178	D0030779
1	GLEN & Janet JORGENSEN	Domestic-Single Residence	01S	04E	2	SWSW	20	388	6	5	608	633	Nov 17 2000	767572	D0015631
2	RICK MILLINGTON	Domestic-Single Residence	01S	05E	6	NESW	30	387	6		575	566	Jul 18 1997	721802	
3	CHRIS RENINGER	Domestic-Single Residence	01S	04E	1	SWNW	70	342	6	6	502	516	Apr 10 2001	768411	D0018029
4	BOB WICKHAM	Domestic-Single Residence	01S	04E	1	SWNW	20	337	6	6	444	460	Jan 11 2002	775948	D0019537
5	JACK BUCHANAN	Domestic-Single Residence	01S	04E	2	SENE	50	331	6	7	469	476	May 5 2003	799883	D0029374
6	RONALD B & ROSANNA K CASTLE	Commercial	01S	04E	3	SENE	40	435	6		550	678	Apr 25 1996	721699	
7	MARY BOTTS	Domestic-Single Residence	01S	04E	2	NENE	20	310	8		158	540	Jun 2 1999	721929	D0009421
8	DALE MEEKS	Domestic-Single Residence	01S	04E	2	NENE	30	331	6	6	428	435	Nov 1 2002	788349	D0025803
9	RICH CORNELL	Domestic	01S	04E	2	NWNE	20	300	6	6	383	390	Nov 28 2002	789257	D0025928
10	JERRY MORTON	Domestic-Single Residence	01S	04E	3	NENE	25	460	6		584	586	Nov 11 1989	721253	
11	RONALD & PAMELA MILLER	Domestic-Single Residence	01N	04E	34	SWSE		450	5		596	620	Sep 23 1999	721957	D0012097
12	TIM ANDERSON	Domestic-Single Residence	01N	04E	33	SENE	20	528	6	6	660	665	Nov 9 2000	767235	D0015791
13	JIM PHAGAN	Domestic-Single Residence	01N	04E	33	NENW	17	481	6	6	560	572	Nov 17 2001	772052	D0019379
14	BOISE STAGE STOP	Domestic-Single Residence	01N	04E	32	NENE	20	40	8		54	56	May 17 1999	721925	D0009418
15	KINGS MEN	Domestic-Single Residence	01N	04E	32	NENE	20	636	6		810	811	May 7 1982	721990	
16	BOISE STAGE STOP	Domestic-Single Residence	01N	04E	32	NENE	3	115	8	8	57	140	Oct 1 1996	721744	
17	BOISE STAGE STOP	Domestic-Single Residence	01N	04E	32	NENE		115	8		56	180	Oct 2 1996	721745	
18	BOISE STAGE STOP	Domestic-Single Residence	01N	04E	32	NENE	15	80	8	4	120	160	Oct 8 1996	721748	
19	BOISE STAGE STOP	Domestic	01N	04E	32	NENE	20	34				92	Nov 14 1986	818250	
20	BOISE STAGE STOP	Industrial	01N	04E	32	NENE	20	58	6	4	130	130	May 31 2002	776954	D0019974
21	RICH CORNELL	Domestic	01N	05E	28	SESE		64				300	Mar 24 1971	820141	
22	GUY VAN BEEK	Irrigation	01N	04E	28	SWSE		160				375	May 17 1978	776251	
23	GEORGE WINJE	Domestic-Single Residence	01N	04E	29	SWSE			6		46	203	Jun 10 1994	728344	
24	NEIL HELMICK	Domestic-Single Residence	01N	04E	27	NWSW	20	340	6		404	510	Aug 7 1992	721450	
25	KEN D AGENBROAD	Irrigation	01N	04E	28	NESW		390				763	Sep 4 1979	776260	
26	KEN D AGENBROAD	Irrigation	01N	04E	28	NESW						85	Apr 28 1979	820312	
27	RICH CORNELL	Domestic-Single Residence	01N	05E	27	SENE	7	10				36	Apr 19 1990	721276	
28	RICH CORNELL	Stockwater	01N	05E	28	SWNE	5	18				467	Mar 21 1977	788089	
29	JAMES UNDERWOOD	Domestic-Single Residence	01N	04E	27	SWNE	55	15	8		68	75	Oct 13 1993	727552	
30	DANSKIN PROPERTIES LTD	Domestic-Single Residence	01N	04E	27	SWNE			12		480	480	Oct 20 1993	726607	
31	JAMES UNDERWOOD	Domestic-Single Residence	01N	04E	27	NENE	60	338	6		459	485	May 17 1985	722191	
32	JAMES UNDERWOOD	Domestic-Single Residence	Deepening of well number 31				9	343	5		515	568	May 7 1991	724581	
33	RONALD D AMBROSE	Domestic-Single Residence	01N	04E	23	SWSE	40	205	8		255	256	Mar 13 1992	725434	
34	LARRY FARNSWORTH	Domestic-Single Residence	01N	04E	23	NENE	60	69	6	6	147	147	May 21 2004	815531	D0031310
35	TODD NEWSOM	Domestic	01N	04E	14	SESW	30	9				74	Dec 24 1977	776254	
36	LEO ZUMMERS	Domestic-Single Residence	01N	04E	13	SW	20	92				200	Sep 4 1988	722626	
37	LEO ZIMMERS	Domestic	01N	04E	14	SE		35				110	Oct 9 1986	785579	
38	WESTERN LAND CONSTRUCTION RESOURCES	Domestic	01N	05E	17	SWNW	25	12				82	Dec 1 1972	813148	
39	WESTERN LAND & CATTLE CO	Test	01N	05E	17	SWNW	40	15				76	Nov 6 1972	828728	
40	JEFF LORD	Domestic-Single Residence	01N	04E	13	SENE	10	62	6	6	95	100	Nov 21 2001	771926	D0019348
41	ERIN LORD	Domestic-Single Residence	01N	04E	12	NESW	40	39	6	6	90	95	Dec 3 2002	789248	D0025929
42	ALZOLA BROTHERS	Domestic-Single Residence	01N	04E	12	SWNE		196				360	Jun 2 1988	722548	
43	I PROSHOLD	Domestic	01N	04E	12	SWNE	10	23				80	Aug 12 1977	822368	
44	ERIN LORD	Domestic-Single Residence	01N	04E	1	NWSE						60	Sep 29 1991	724381	
45	A L CLARK	Domestic	01N	04E	2	NE						1140	Dec 31 9999	807886	
46	ERIN LORD	Domestic-Single Residence	01N	05E	6	SWNE	5	22	6	4	170	200	Nov 2 2001	771741	D0019343
47	A L CLARK	Domestic	01N	04E	1	NENW		18				815	Dec 31 9999	807887	
48	ARC PROPERTIES LLC	Irrigation	01N	04E	24	SWSW	1700	229	16	10	612	690	Jan 23 2007	843964	D0047651

Table 4. Wells with drillers' reports within 2 miles of Mayfield Townsite property.

Wells 13-20, 22, and 25, located southwest of the Mayfield Townsite property, encountered basalt and cinders from as shallow as 41 feet to as deep as about 100 feet. Several of these wells extend through the volcanic materials to clay, sand, or gravel sediments. Water-producing zones were noted in cinder zones within the basalt and/or coarse-grained sediments underlying the volcanics.

North of the property, drillers' reports for wells 40, 42-44, and 46 describe clay, sand and gravel layers interrupted by zones of weathered igneous materials beginning at around 20 feet. Most of these zones are listed as water-bearing and all 5 of the wells encountered water before reaching 150 feet. The northernmost driller's report (well 46) also lists a water-bearing basalt layer around 150 feet deep.

Two wells located southeast of the Mayfield Townsite property area (wells 21 and 27) penetrated primarily clay, sand and gravel layers, with some weathered igneous rock zones. Both wells encountered water between 30 and 45 feet in the sand and gravel layers. A third and deeper well southeast of the property (well 28) penetrated primarily weathered granite.

Well 49 (the Owings Well) was drilled to a depth of approximately 1,200 feet in the SW quarter of Section 24, T1N, R4E. A driller's report is unavailable, but a cuttings log (described by BSU geology student Jim Braendle in 1980) is provided in Appendix B. The inferred normal faulting in this area (Wood, 1996) is based on the depth of sediments observed in the Owings Well, which is within 2 miles of the granite-basin contact. A water temperature of 110°F was noted at the bottom of the Owings well.

Most of the shallower existing wells (e.g., less than 300 feet) are within about a mile of Indian Creek or its tributaries. Most of the wells further away from Indian Creek or its tributaries are at least 400 feet in depth (the deepest well extends 811 feet below ground surface).

Initial static water levels recorded on the drillers' reports range from 9 to 636 feet below ground surface. Static water levels generally correspond with well depth (Figure 5). All wells with static water levels less than 200 feet are located within approximately one mile of Indian Creek or its tributaries, with the exception of three wells southeast of the property (wells 21, 27, and 28), which are close to Bowns Creek.

According to IDWR records, there are currently five wells located on the Mayfield Townsite property (wells 33, 35, 38, 39, and 48). These five wells have depths ranging from 74 to 690 feet. Static water levels for these wells ranged from 9 to 229 feet below ground surface. All of the wells were tested at the time of completion. Four of the wells produced from 25 to 40 gallons per minute. The 690-foot ARK Properties Well (well 48 on Figure 4) was tested at higher rates (see Section 3.4).

The Owings well (well 49) is also located on the property. A static water level of 275 feet was measured on December 17, 1996. The well had reportedly been test

pumped at rates between 500 and 800 gpm until caving sand covered the pump bowls.

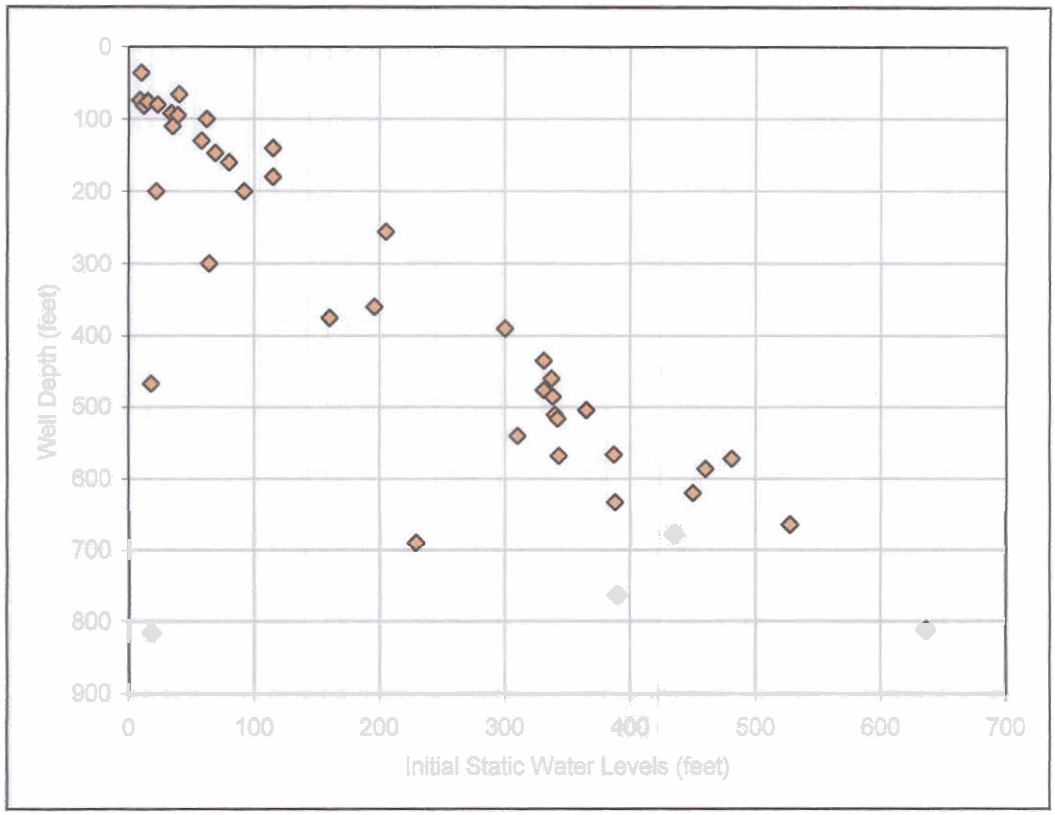


Figure 5: Static water levels recorded on drillers' reports for wells in the Mayfield Townsite property area.

3.3. Reported Well Yields

About ¾ of the wells in the vicinity of the Mayfield Townsite property had well yields recorded on the drillers' reports. Most of the yields are based on short-duration airlift pumping and ranged from 3 to 70 gallons per minute (gpm). Most wells produced in the 15-40 gpm range. Many of the wells in this area were designed and constructed as domestic wells – as such, they are incapable of higher discharge rates. Two of the 6 wells rated at more than 40 gpm were less than 150 feet deep; the remaining four wells producing 40 gpm or more were more than 450 feet deep. The production rate in some of the deeper wells may have been limited by the pumping method (airlift). One well (the ARK Properties irrigation well, constructed in January of 2007 to a depth of 622 feet) produced 1,700 gpm (see section 3.4).

3.4. Well Tests

An 8-hour well test was conducted in the 627-foot deep ARK Properties well (Mayfield Irrigation Well No. 1) on January 22, 2007 (well 48 on Figure 4). The results of this well test are included as Appendix C. The well was pumped at 1,700 gpm for 8 hours. The maximum drawdown and pumping level during this time were 133 and 371 feet, respectively. The well test data yielded an aquifer transmissivity estimate of approximately 25,000 gpd/ft, indicating moderate to high aquifer productivity.

A 7-hour well test was conducted in the 763-foot deep Neil Helmick Well on May 20, 1999 (this well is listed as the Ken Agenbroad Well in the driller's report and is shown as well 25 on Figure 4). The results of this well test are included as Appendix D. The well was pumped at 550 gpm for 6 hours, resulting in 73 feet of drawdown. An additional hour of pumping at 795 gpm resulted in a total drawdown of 92 feet. The well test data yielded an aquifer transmissivity estimate of approximately 7,300 gpd/ft, indicating moderate aquifer productivity.

The conclusion from these well tests was that wells of moderate productivity (400 to 800 gpm) could likely be developed in some portions of the Mayfield Townsite property.

3.5. Water Levels

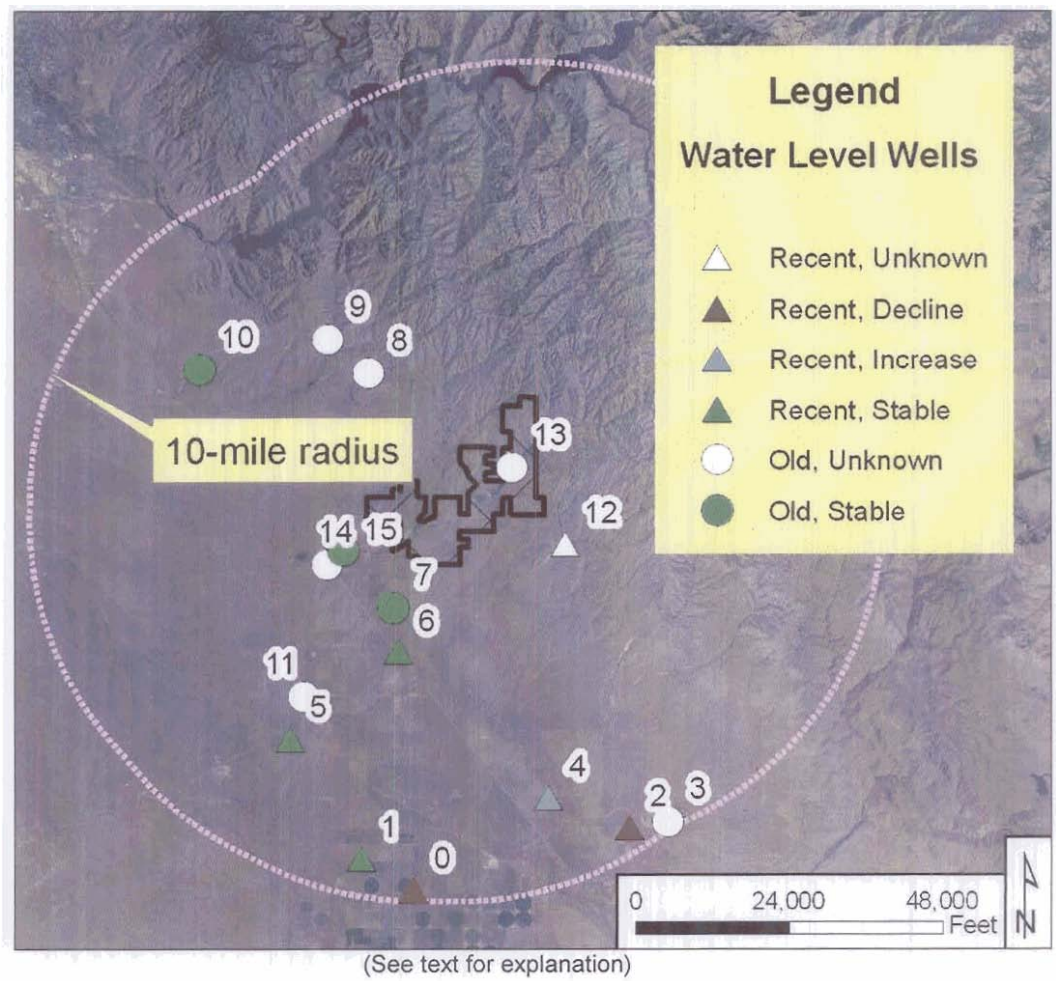
The IDWR "Well_Log" database has water level data for 16 wells within 10 miles of the Mayfield Townsite property. Hydrographs for the wells are provided in Appendix E.

Figure 6 provides a summary of local water level trends. Wells that include water level data collected in the last 5 years are labeled as "recent" and are indicated with a "Δ" in Figure 6. Wells for which all water level data are at least 5 years old are labeled as "old" and are indicated with a "O" in Figure 6. Water-level trends were characterized (Figure 6) as increasing, decreasing, stable, or "unknown" (in which there were too few data points to describe a water level trend). Water levels were defined as increasing if measurements increased by at least 10 feet during the last 10 years of the sampling record (based on at least three measurements). Water levels are defined as decreasing if at least three measurements resulted in a decrease of at least 10 feet. Water levels were defined as stable if water level changes during the last 10 years of the sampling record were less than 10 feet.

With these criteria, two wells with older measurement data had stable water levels and six wells were classified as unknown (i.e., there were insufficient water level data to determine a water level trend). Of the recently monitored wells, three had stable water levels, two wells experienced decreasing water levels, and one well experienced increasing water levels. One of the recently monitored wells was classified as unknown. In total, 6 of the 16 wells had stable water levels, two wells

had decreasing water levels, one well had increasing water levels, and 7 of the hydrographs could not be classified.

Based on these observations, there have been no widespread ground-water level declines in the Mayfield Townsite property area over the last 30 years. In most of these wells, water levels have remained steady over the data period, with some short-interval variations associated with seasonal ground-water levels and/or usage. At two of the wells with the longest sampling record (wells 5 and 6 on Figure 6), water levels have increased over time (although the increase has been less than 10 feet). The water level in one well (well 4 on Figure 6) has been mostly stable over its data period, but has increased just over 10 feet in the last 10 years of record. There are two wells far to the south of the Mayfield Townsite property (wells 0 and 2) where water levels declined by more than 10 feet, but these declines do not appear to be representative of general ground water conditions in the Mayfield area. The two wells with ground-water level declines are located within the Cinder Cone Butte CGWA.



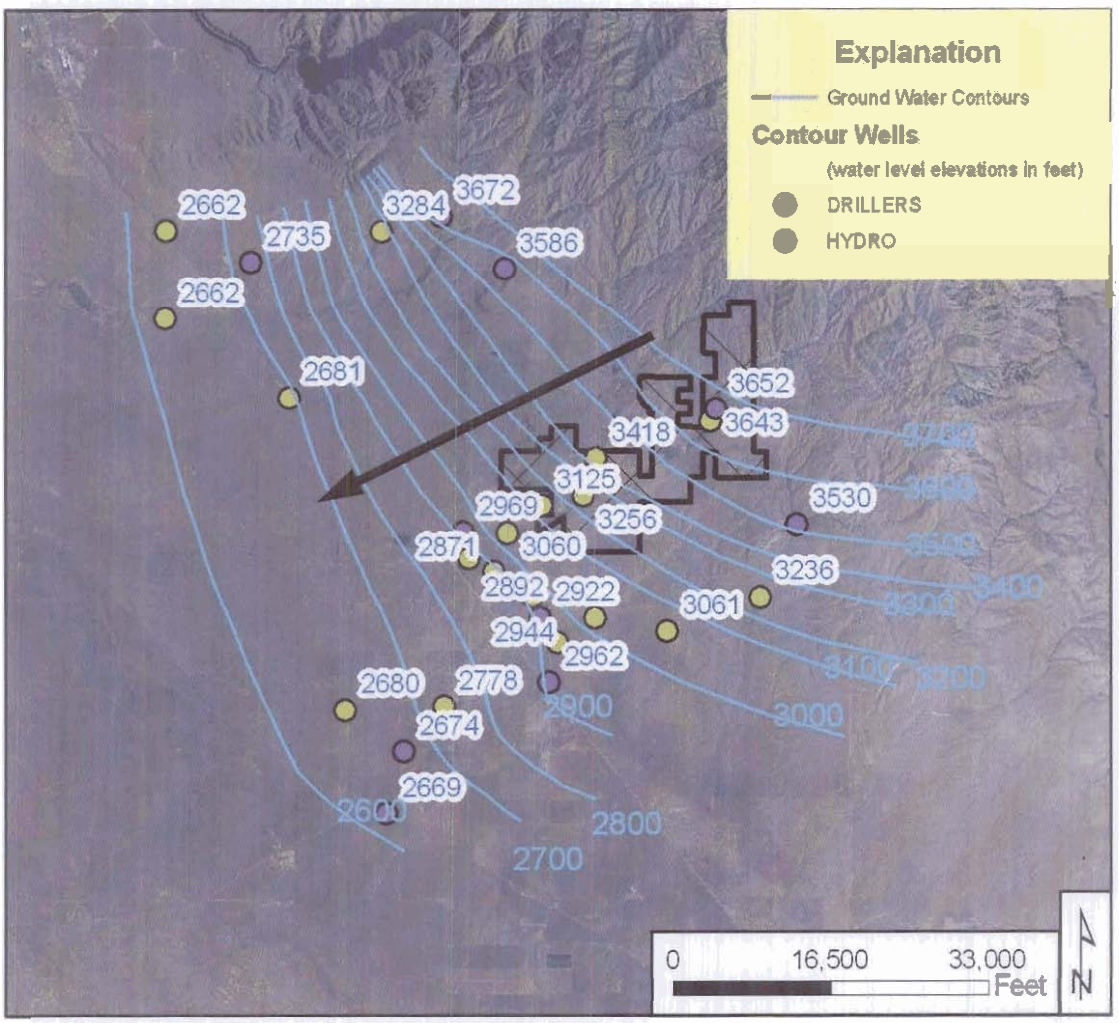
(See text for explanation)

Figure 6. Wells with water level measurements near Mayfield Townsite property.

3.6. Ground Water Flow Direction

Because of the scarcity of wells in this area, ground-water contours (Figure 7) in the Mayfield Townsite property area were drawn using water levels from two sources: (1) selected data from recently-measured IDWR monitoring wells and (2) initial static water levels listed on drillers' reports. Measurement points used for contours are highlighted in the Appendix E hydrographs. Wells for which static water levels from drillers' reports were used are indicated in Figure 7; drillers' reports for these wells are provided in Appendix F. Ground-surface elevations are taken at the centroid of the quarter-quarter in which the well is located (unless more precise location data were available). Potential errors in these contours may include incorrect well locations, incorrect ground surface elevations, and/or incorrect measurements.

In general, ground water flows from high elevation to lower elevation (northeast to southwest). This general ground water flow direction is consistent with conclusions based on USGS measurements in 1980 (Newton, 1991).



(Water levels based on driller's reports (DRILLERS) or IDWR Well_Log database (HYDRO)

Figure 7. Ground water flow directions in Mayfield Townsite property area.

3.7. Recharge and Discharge

Recharge to aquifers in the Mayfield Townsite property area occurs as (1) seepage from surface channels (primarily Indian Creek and its tributaries), (2) infiltration from precipitation in the immediate Mayfield Townsite property area, and (3) underflow from the Danskin Mountains northeast of the site. Seepage from surface channels recharges shallow aquifers; shallow aquifers leak to lower, deeper aquifers. Underflow from northeast of the Mayfield Townsite property area originates as infiltration in highland areas; surface runoff from these highlands is the primary source of water for Indian Creek.

There is very little (if any) natural ground water discharge to Indian Creek in the Mayfield Townsite property area downstream of the original Mayfield town site because regional aquifer water levels (especially in deeper zones) are far below the creek elevation. Ground water may discharge to Indian Creek upstream of the original Mayfield town site, but it is generally lost to seepage as it flows downstream. The ultimate discharge point for aquifers in the Mayfield Townsite property area is the Snake River. The primary local aquifer discharge is to wells.

3.8. Water Quality

There are eight wells within five miles of the Mayfield Townsite property from which water samples have been analyzed for water quality since 1991 (Figure 8). Sampling results for selected analytes are included in Appendix G.

Other than the presence of coliform bacteria in isolated wells (which generally indicates site-specific well contamination and is not indicative of regional ground water quality), water quality in these wells appears to be very good. The average concentration of arsenic at these monitoring wells was generally around 2.5 µg/l, below the Maximum Concentration Limit (MCL) of 10 µg/l. One water sample taken from station 01N 04E 23DDC1 in 1991 had an arsenic concentration of 9.0 µg/l, which is close to the MCL. The maximum fluoride concentration in these wells was less than 1.0 mg/l (the MCL for fluoride is 4.0 mg/l). The maximum concentration of nitrate at these stations was 6.1 mg/l, below the MCL of 10.0 mg/l. The maximum gross alpha concentration was less than 3.0 pCi/l, well below the MCL of 15.0 pCi/l. The secondary standards for iron, manganese, and total dissolved solids were not exceeded at any of these wells.

Total dissolved solids (TDS) for the wells ranged from 134 to 195 mg/L. In the lower Boise River Basin TDS values less than about 200 mg/L are typically associated with infiltration from drainages in granitic areas (Petrich and Urban, 2004); ground water with low TDS values has generally experienced little chemical interaction with aquifer minerals.

Water from the Neil Helmick Well (i.e., Ken Agenbroad Well or well 25 on Figure 4) was analyzed in 1999. Water quality in samples from this well was excellent

(Appendix D), with no parameters exceeding primary or secondary water quality standards.

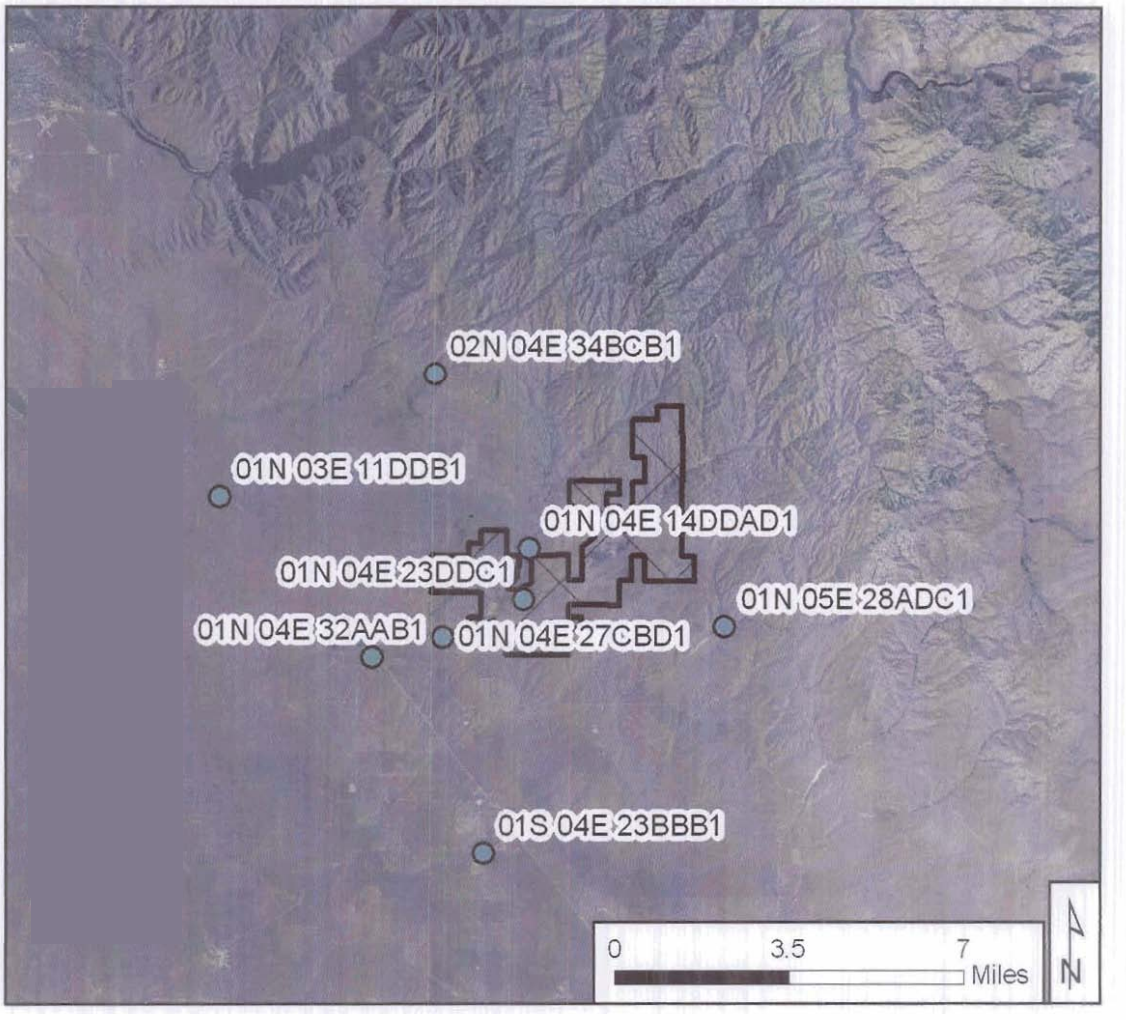


Figure 8. Wells with water quality data near Mayfield Townsite property.

In addition, water analyses from the ARK Properties well (Mayfield Irrigation Well No. 1, shown as Well No. 48 on Figure 4) show that overall quality of the water is excellent:

- The water has low concentrations of arsenic (0.005 mg/L), nitrate (0.8 mg/L), iron (0.12 mg/L), and manganese (<0.05 mg/L).
- The water has low concentrations of radiological contaminants, with concentrations of 1.63+/-0.88 pCi/L gross alpha, <3.24 pCi/L gross beta, <1 µg/L uranium, <0.73 pCi/L radium 226 and 0.35+/-0.59 pCi/L radium 228.
- The water has low total dissolved solids (166 mg/L), and is moderately aggressive, with a Langelier index of -1.3.

- Electrical conductivity and specific conductance were measured in the field at 175 µS and 187 µS, respectively. Laboratory conductivity was 205 uS. Temperature was measured in the field at 21.8 degrees C (71.2 degrees F), while pH was measured at 7.4 to 7.5 in the field and 6.9 in the laboratory.
- There was no reported odor and no measurable sulfide.
- Aluminum is slightly elevated at 0.40 mg/L, and color was measured at 5 color units.

The sand concentration was 16.2 mg/L. Sand concentration is expected to diminish with extended pumping.

3.9. Mountain Home Ground Water Management Area

The Mayfield Townsite property overlaps the northern edge of the Mountain Home Ground Water Management Area (GWMA). The Mountain Home GWMA was designated as such on November 9, 1982 because of declining ground water levels. A GWMA is designated by the IDWR when a ground water basin may be approaching the point of having insufficient ground water supplies for existing users. New ground water applications may be approved by the IDWR Director only after it is determined that sufficient ground water supply is available and the new appropriation will not negatively impact other senior water rights.

The Mayfield Townsite property area is also located about 3 miles northwest of the Cinder Cone Butte Critical Ground Water Area (CGWA). The Cinder Cone Butte CGWA was designated on May 7, 1981 because of declining ground water levels (Harrington and Bendixsen, 1999). A CGWA is designated by the IDWR when evidence suggests insufficient ground water supplies for users at current or projected rates of withdrawal. The IDWR Director can deny new ground water applications if the proposed point of diversion lies within a CGWA.

Declining ground water levels that led to the designation of the Mountain Home GWMA and the Cinder Cone Butte CWMA do not extend into the Mayfield Townsite property area. Three of the 5 wells within the Mountain Home GWMA near the Mayfield Townsite property (Wells 5, 6, and 7 in Figure 6) have either stable or rising ground water levels (there are too few data points for a meaningful hydrograph in Wells 11 and 12). Furthermore, ground water level contours (Section 3.6) indicate a ground water flow direction that is roughly parallel to the Ground Water Management Area Boundary (Figure 9). Therefore, use of ground water in the Mayfield Townsite property area will not result in less recharge entering the Mountain Home GWMA or the Cinder Cone Butte CWMA.

3.10. Water Budget

A general basin water budget was prepared to estimate aquifer recharge in the Farwest project area. Water budget components included precipitation, evapotranspiration, infiltration, seepage from surface channels, and well withdrawals. These water budget components are described in the following sections and summarized in Section 3.10.7.

3.10.1. Contributing Basins

The upper and lower Indian Creek watershed areas, which define surface-water flow in and upgradient of the Mayfield Townsite property, are shown in Figure 10 (page 21). However, these surface water drainages do not necessarily define subsurface flow divides. Aquifers in the Farwest project area extend beyond, and can be influenced by, recharge and discharge from areas beyond the upper and lower Indian Creek watershed areas. For this analysis it was assumed that the contributing basin for aquifers in the project area, and the area of well withdrawals near the Mayfield Townsite property, is the area within approximately 2 miles of the Mayfield Townsite property but limited by contacts with granitic rocks (Figure 10). Surface and ground water tributary to this radial area originates primarily from the Indian Creek watersheds. This assumed capture area covers approximately 27,500 acres.

3.10.2. Precipitation

Average annual precipitation in the Indian Creek area, based on data obtained from the IDWR, range from approximately 12 to 14 inches per year in lower elevations of the water budget area. Higher elevations in the Indian Creek Basin receive 24 to 28 inches of precipitation in an average year (Figure 11). The average precipitation volume over the assumed capture area and upper Indian Creek basin is approximately 65,730 acre feet (Figure 11). This estimate is based on an average of 13 inches per year over 2,306 acres, 15 inches per year over 12,205 acres, 17 inches per year over 8,438 acres, 19 inches per year over 3,581 acres, 21 inches per year over 6,115 acres, 23 inches per year over 8,504 acres, and 25 inches per year over 456 acres. The estimated precipitation over the assumed capture area is 37,180 acre feet (Figure 12).

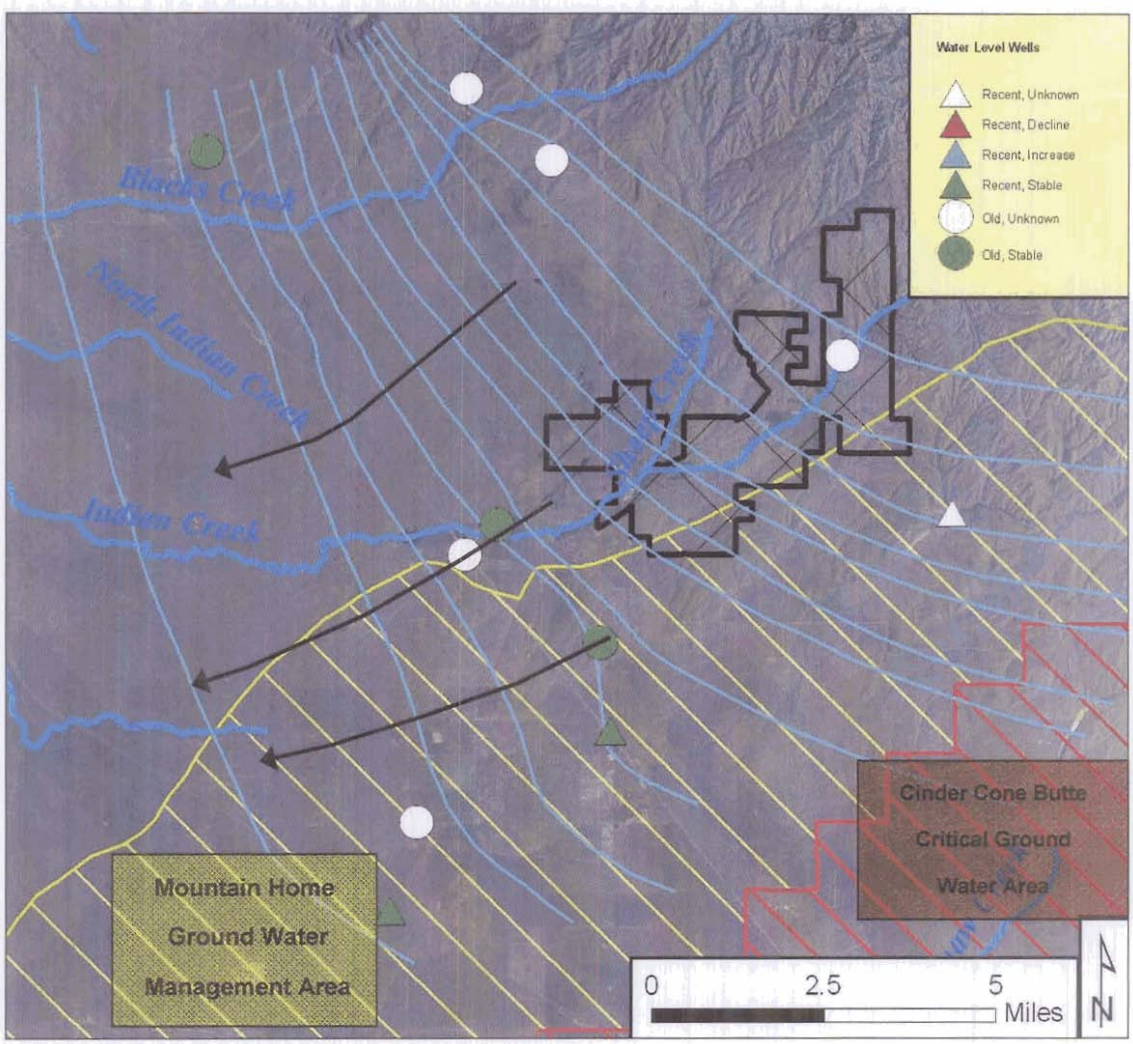


Figure 9. Mountain Home Ground Water Management Area boundary (with ground water contours and general ground water flow directions – see also Figure 7).

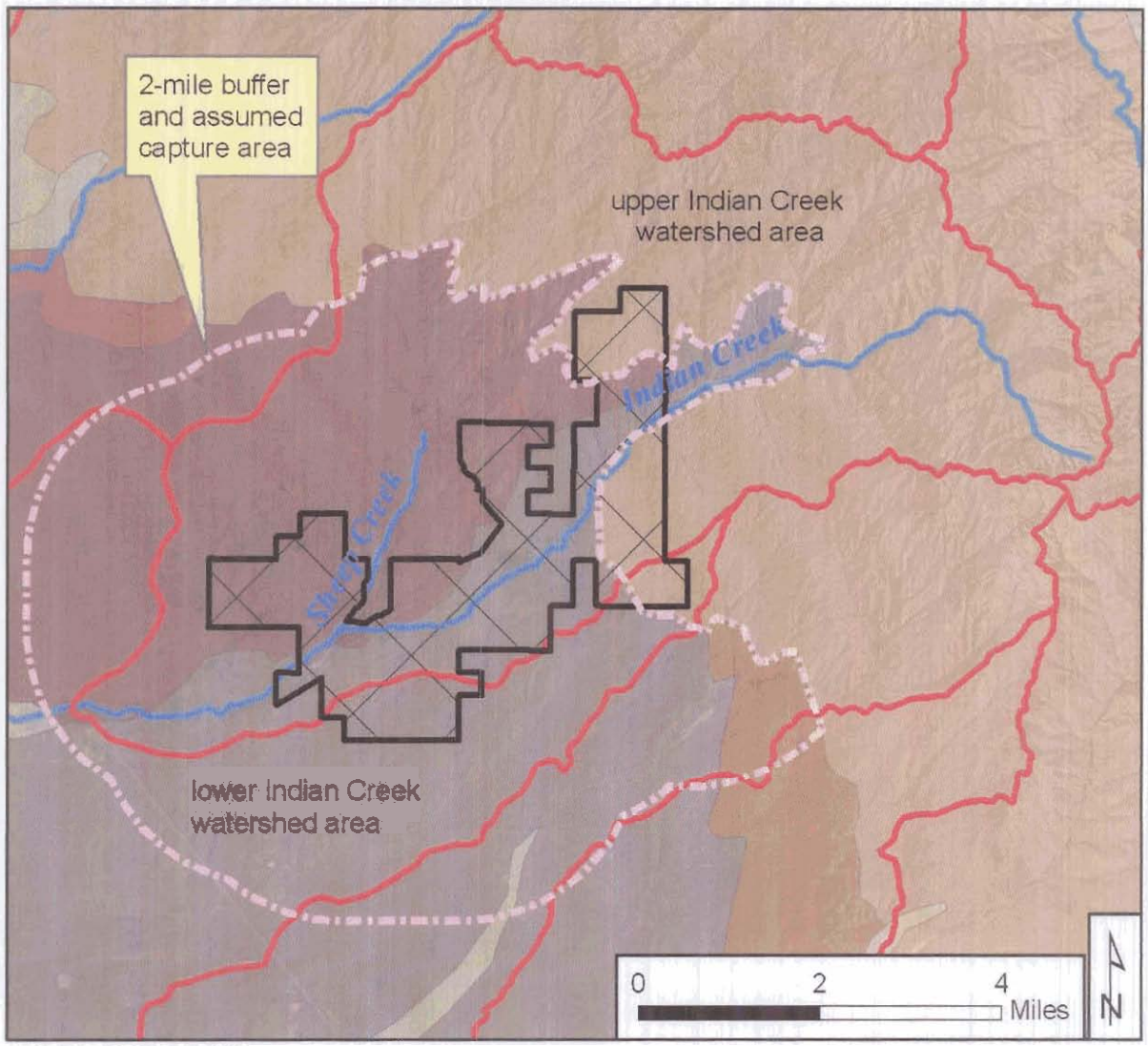


Figure 10. Ground water capture area in the vicinity of Mayfield Townsite property.

3.10.3. Evapotranspiration

A preliminary 2002 SEBAL[2] estimate for seasonal rangeland evapotranspiration in the lower Boise River basin was 9.5 inches (Morse et al., 2003). Assuming that this rough approximation applies to the Indian Creek watersheds, the annual volume of evapotranspiration from the assumed capture area and upper Indian Creek watershed area is 34,142 acre feet. The estimated evapotranspiration in assumed capture area is approximately 21,770 acre feet.

[2] "Surface Energy Balance Algorithm for Land"

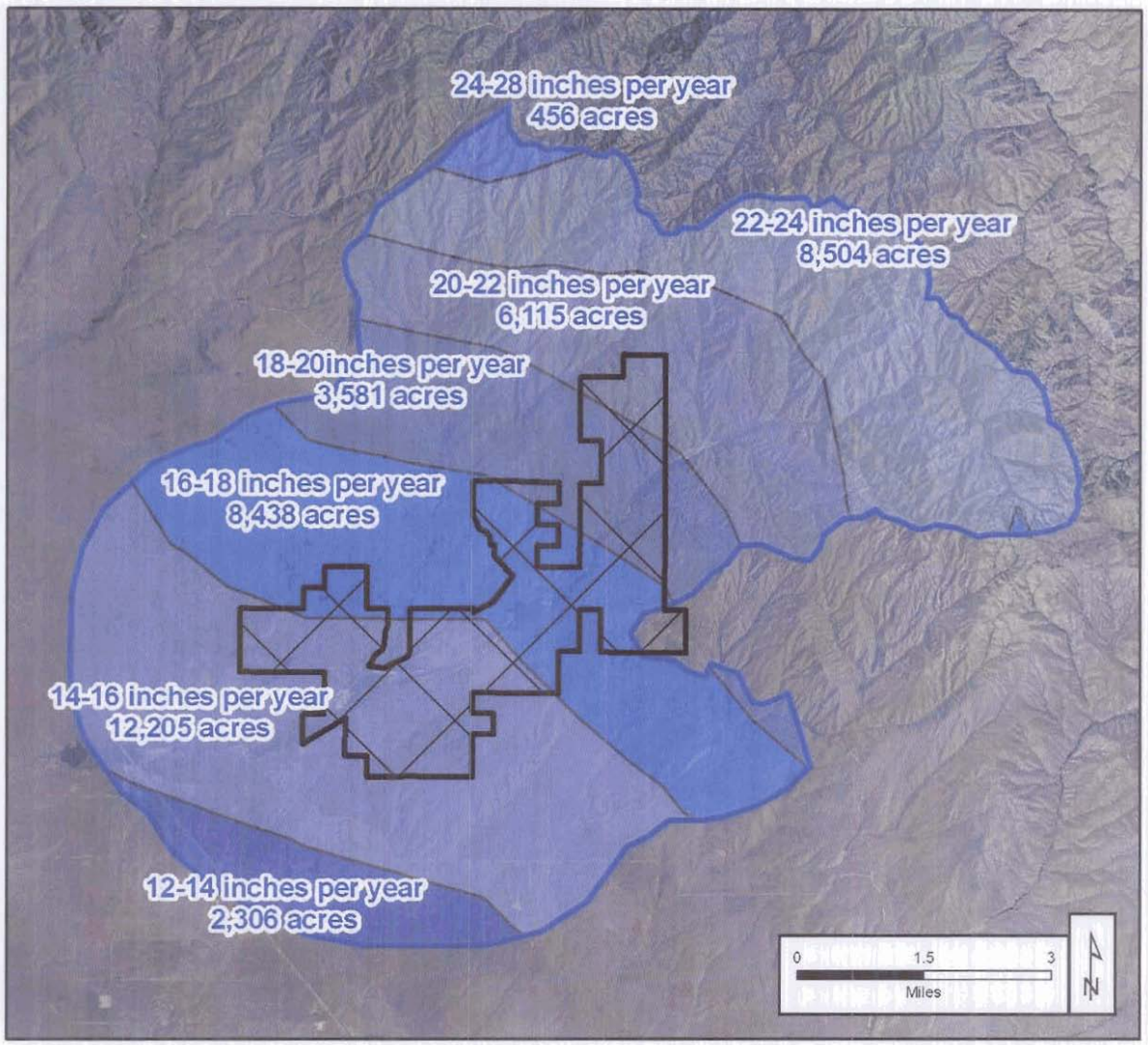


Figure 11. Annual precipitation rates in the Mayfield Townsite property area.

3.10.4. Infiltration

Only a small portion of precipitation infiltrates through the soil; the remainder is lost to evaporation, transpiration by plants, or is collected as surface runoff. Estimates of areal infiltration rates might range from about 2 to 8 percent. An average infiltration rate of 5 percent of precipitation was assumed for this analysis. This assumption is based on (1) abundant sandy areas and/or fractured basalt in low-lying areas that readily accept infiltration water, (2) the presence of decomposed granitic soils, granitic fractures, and alluvial sediments in upland areas that readily accept infiltration, and (3) higher rates of precipitation during months of lowest evapotranspiration (i.e., winter). However, infiltration of water into the plutonic rocks in the northeastern highlands of the water budget area is negligible, and assumed to

be zero. The estimated average areal infiltration, based on the assumption that 5 percent of precipitation becomes deep infiltration, is about 1,860 acre feet.

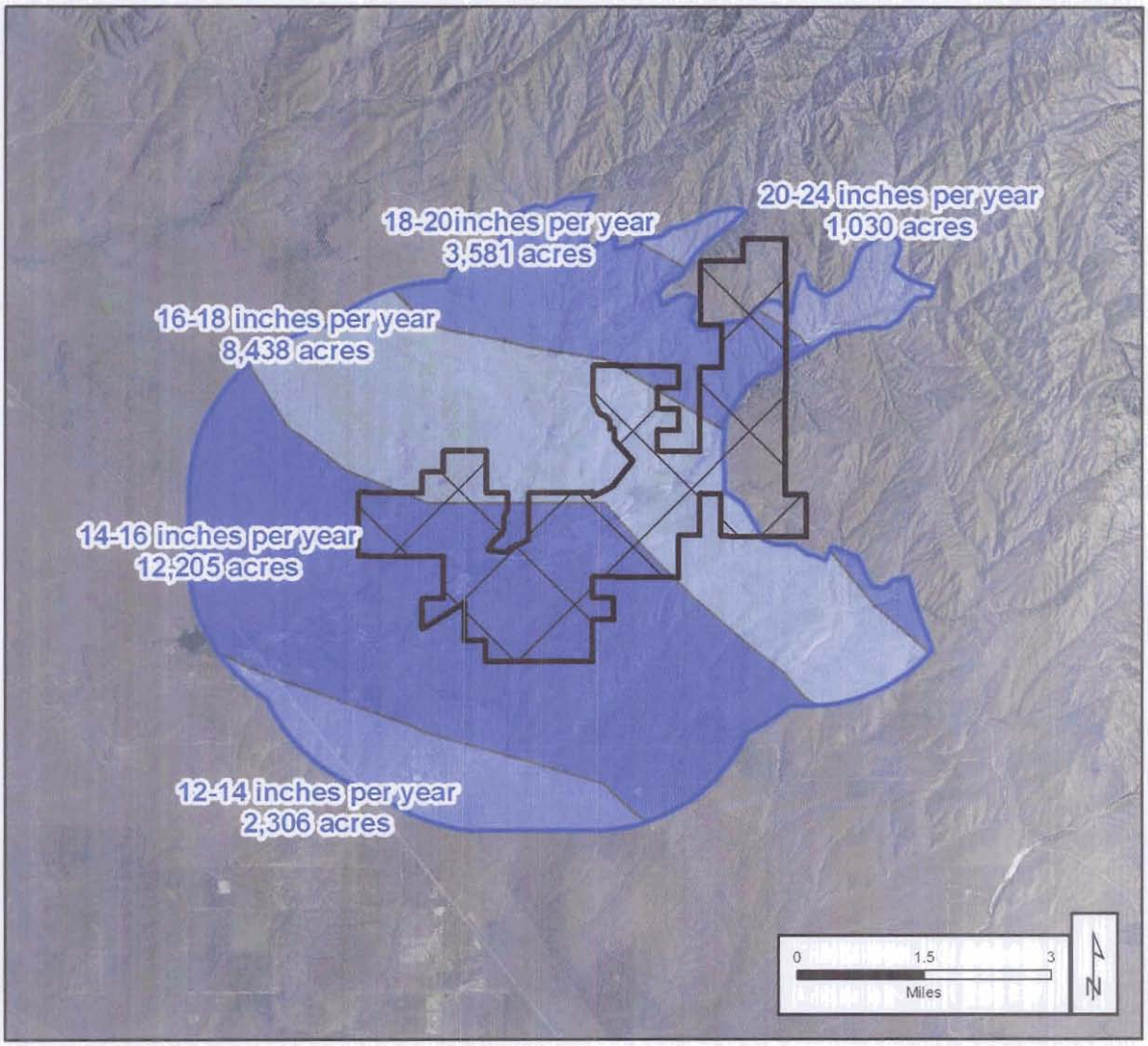


Figure 12: Annual precipitation rates in the assumed capture area.

3.10.5. Stream Seepage

Water that does not infiltrate or is not lost to evapotranspiration becomes surface runoff. Basin evapotranspiration and capture-area infiltration (approximately 34,140 acre feet and 1,860 acre feet, respectively) is substantially less than the estimated average basin precipitation (65,730 acre feet). Much of the difference (29,730 acre feet) becomes surface runoff.

A substantial portion of the surface runoff seeps into the subsurface from the Indian Creek channel and its tributary channels. Evidence for this seepage includes observed channel losses, the presence of shallow coarse-grained alluvial sediments (which enable seepage to the subsurface), substantial wetland and riparian areas in the Mayfield area, shallow (likely perched) aquifers in the vicinity of Indian Creek, and low TDS values in ground water reflecting infiltration of surface runoff from a granitic area.

The flow in Indian Creek is variable. Channel morphology suggests possible flood flows that carry 100 cfs or more. Two flow measurements were made by the USGS in Indian Creek approximately 2,000 feet northeast of Mayfield (Section 17, T1N, R5E – Site 13211100) in 1954. Flow rates of 0.6 cfs and 1.66 cfs were measured on February 2, 1954 and June 26, 1954, respectively.

Approximately 8-10 cfs was observed flowing in Indian Creek at the Mayfield Bridge (Figure 13) during a reconnaissance visit to the Mayfield Townsite property on March 13, 2006. The Indian Creek channel downstream of the Farwest and Mayfield Townsite properties was dry. All of the water entering the Indian Creek Valley at Mayfield on March 6, 2006 was lost to subsurface seepage upstream of Interstate 84.

Anecdotal information suggests that seepage losses in Indian Creek represents a common pattern. Neil Helmick (a local resident) suggests that flow from Indian Creek into the Indian Creek Reservoir is rare. Mr. Helmick indicates that a large portion of Indian Creek Reservoir water comes from Sheep and Caldwell Creeks.

The observed flow on March 13, 2006 (8-10 cfs) was likely less than typical for March because of cool basin temperatures. A typical spring flow in Indian Creek at Mayfield is likely higher than 10 cfs, especially in good water years. An average flow of 20 cfs (combined Indian Creek flow and shallow subsurface flow into the Mayfield area) over a 3-month period would result in an aquifer gain of approximately 3,600 acre feet (assuming that all of this water is lost to channel seepage). In addition, temporary higher flows would also contribute to seepage losses from either the channel or Indian Creek Reservoir. A temporary, 3-day flow of 100 cfs (resulting from a possible rain-on-snow event during the winter) could result in a seepage loss of about 600 acre feet (representing a combined estimated seepage of 4,200 acre feet).

Seepage losses from Indian Creek are likely higher than the amount estimated above. The 4,200 acre feet seepage is substantially less than the 29,730 acre foot difference between precipitation and other estimated surface water losses. Reasons for the discrepancy could include (1) lower than estimated precipitation, (2) higher than estimated evapotranspiration, (3) higher than estimated areal infiltration rates, (4) higher than estimated stream seepage rates, or (5) surface irrigation.

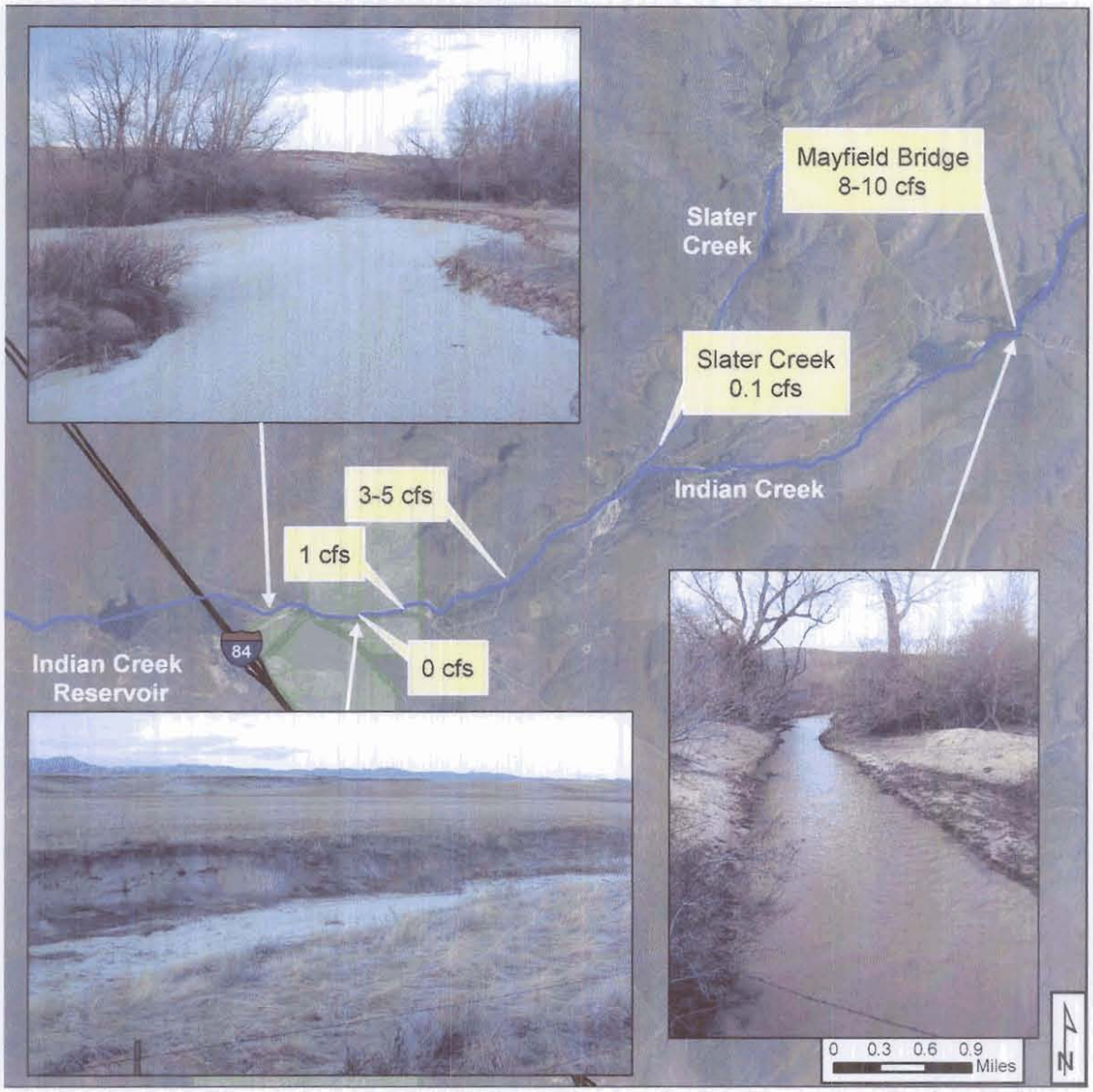


Figure 13: Approximate Indian Creek flows on March 13, 2006.

The amount of water drawn for surface irrigation from Indian Creek and its tributaries is relatively small and would not account for the difference between estimated precipitation and other surface water losses. A text-based search of the IDWR water rights database for water rights in Twp. 1N, Rge. 4E and 5E revealed two surface-water irrigation rights: 63-2118, which authorizes diversions of 1.37 cfs from Slater Creek for the irrigation of 68.4 acres and 63-2046, which authorizes diversion of 2.58 cfs from Indian Creek for the irrigation of 129 acres. All other irrigation water rights list ground water sources. Diversions under these surface water rights, even if they resulted in an annual withdrawal volume of 4.5 acre feet per acre, or a total of 888 acre feet, would not account for the discrepancy in water budget estimates listed above.

3.10.6. Aquifer Outflow

Most of the subsurface flow from aquifers in this area is (1) withdrawals by wells and (2) underflow to toward the Snake River. There are 73 wells listed in the IDWR well construction database as located within the basin boundary (as defined in Figure 10). Of these 73 wells, 57 are for domestic uses, four are for irrigation, two are for industrial (Boise Stage Stop), two are for cathodic protection, four are for commercial purposes, one is for stockwater, one is a test well, and two have unknown uses. The amount of land irrigated by ground water in this basin appears to be small, likely less than 175 acres. Assuming 175 acres of irrigation (at an average 4.0 acre feet per year per acre for delivery and consumptive purposes), domestic use for 57 homes (at 0.3 acre feet per year per household), commercial/industrial from six wells (at 1.0 acre feet per year per well), and stockwater use for 100 cattle (1.4 acre feet per year), the annual average consumption of ground water might be approximately 810 acre feet per year. This is likely a high estimate of total withdrawals because an irrigation application rate of 4.5 feet per acre implies some inefficiency which would result in returns (recharge) to the shallow subsurface. In addition, ARK Properties LLC is developing a permit (63-12447) to irrigate 200 acres within the Mayfield Townsite property with ground water, and the Intermountain Sewer and Water Company has been granted a permit (63-32225) for a 10-cfs diversion but with an annual 1,815 acre-foot volume limit. Thus combined ground water withdrawals (not including the ARK Properties permit 63-12447 for the irrigation of 200 acres) are estimated to be approximately 2,630 acre feet per year (700 acre feet in existing withdrawals plus 1,815 acre feet under permit 63-32225).

3.10.7. Water Budget Summary

A summary of estimated basin and aquifer inflows and outflows is listed in Table 5. Recharge in the immediate vicinity of the Mayfield Townsite property likely ranges from about 6,000 to 31,590 acre feet per year. Existing or permitted diversion volumes are approximately 2,630 acre feet per year. Seepage losses from surface channels are likely greater than the initial estimate of 4,200 acre feet. Thus, the amount available for appropriation likely ranges from approximately 3,430 to 28,960 acre feet per year.

Water Budget Components	Annual volume (acre feet)
Precipitation in assumed capture area and upper Indian Creek Basin	65,730
Precipitation in assumed capture area	37,180
Estimated infiltration (5% of precipitation in assumed capture area)	1,860
Evapotranspiration in assumed capture zone and upper Indian Creek basin	34,140
Evapotranspiration in assumed capture area	21,770
High estimate of surface channel seepage into shallow aquifers[1]	29,730
Low estimate of infiltration from surface channels into shallow aquifers[2]	4,200
Estimated aquifer recharge (high estimate)[3]	31,590
Estimated aquifer recharge (low estimate)[4]	6,060
Discharge to wells[5]	2,627
Available for appropriation (high estimate)[6]	**28,963**
Available for appropriation (low estimate)[7]	**3,433**
Mayfield Townsite Project demand estimate	**3,956**

Notes

(1) Precipitation less areal infiltration

(2) See Section 3.10.3

(3) Areal infiltration plus high infiltration estimate

(4) Areal infiltraiton plus low infiltration estimate

(5) Includes approximately 812 af in estimated existing rights and 1,815 af for permit 63-32225 (held by Intermountain Sewer and Water Corp). This does not include the 900 af authorized under permit 63-12447 (held by ARK Properties) as this volume is included in the Mayfield Townsite demand estimate below.

(6) High recharge estimate less estimated discharge

(7) Low recharge estimate less estimated discharge

Table 5: Water budget summary.

4. WATER SUPPLY ASSESSMENT

4.1. Ground Water Availability for Appropriation

Additional ground water is available for appropriation in the Mayfield Townsite property area. This opinion is based on estimated recharge in excess of current uses and on steady (or slightly rising) water levels in this area (stable water levels suggest that ground water is available for appropriation). This opinion was affirmed by IDWR, which recently granted Permit 63-32225 for diversions just south of the Mayfield Townsite property following a review of available information for this area.

The estimated amount of water required for 8,000 homes in the Mayfield project is approximately 3,660 acre feet per year (Section 2). The volume recharging aquifers in the Mayfield Townsite property area likely ranges from about 6,000 to 31,590 acre feet per year (Table 5). The amount of recharge less estimated current ground water withdrawals ranges from approximately 3,430 and 28,960 acre feet. The volume required for the Mayfield Townsite project (3,960 acre feet, which includes irrigation diversions under permit 63-12447) falls within the lower end of this range of estimated available ground water.

The ultimate carrying capacity of aquifers in the Mayfield Townsite area is unknown. If the actual aquifer recharge falls in the upper three-quarters of our recharge estimates then the chances of developing the entire water supply for this project from ground water sources are good.

As with many aquifers, the best way for determining ultimate ground-water availability is to begin development while carefully monitoring ground-water level responses. Ground-water level monitoring is therefore recommended prior to and during development of additional permits in this area.

The ultimate ground-water supply in the Mayfield area is limited. Use of water-efficient fixtures and appliances, drought-tolerant landscaping, and other water conservation measures are strongly encouraged to maximize water resources in this area.

4.2. Potential Impact on Existing Water Rights

Little impact on existing water rights and water users is anticipated as a result of proposed new diversions for the Mayfield project. The preceding water budget analysis suggests that there is likely sufficient water for existing and proposed uses.

Again, development of the proposed permit 63-32499 should be accompanied by careful ground-water level monitoring. Monitoring should include the Mayfield Townsite area as well as the Mayfield Springs area (for which water supplies will be developed under permit 63-32225). Monitoring data will confirm the availability of

water for appropriation under proposed permit 63-32499 and the extent of impacts on local ground-water levels. Excessive ground water level declines and/or insufficient supply will require the development of an alternative water supply for full buildout of the Mayfield Townsite project.

4.3. Potential Impacts on Mountain Home GWMA

The Mountain Home GWMA boundary crosses a portion of the Mayfield Townsite property in Section 33 of T1N R4E. The boundary appears to be based on a local surface water divide in this area. Based on hydrographs for three wells, ground-water levels within the Mountain Home GWMA near the Mayfield Townsite property have been stable or rising since the 1960s (see Section 3.5) Ground-water level declines seen in other parts of the GWMA or in the Cinder Cone Butte Critical Groundwater Area are not apparent in these wells. Stable (or rising) ground water levels in the Mayfield Townsite property area suggest the availability of water for appropriation.

New ground water pumping in the Mayfield Townsite property area may cause a local depression in ground water levels. Some depression is required for water to move toward new pumping wells. This pumping is not expected to exacerbate water level changes that have lead to the creation of the Mountain Home GWMA.

The predominant ground water flow direction in the Mayfield Townsite property area is to the southwest (Figure 7). General ground water flow in the Mayfield Townsite property area is parallel to the northwestern Mountain Home GWMA boundary – new uses in the Mayfield Townsite area will not reduce underflow into the Mountain Home GWMA.

5. REFERENCES

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APPENDIX A
LETTER FROM DAN NELSON (IDWR) TO SCOTT KING (SPF)

State of Idaho
DEPARTMENT OF WATER RESOURCES

WESTERN REGION

May 24, 2007

SPF WATER ENGINEERING LLC
ATTN SCOTT KING
600 EAST RIVER PARK LANE SUTIE 105
BOISE ID 83706

RE: APPLICATION FOR PERMIT 63-32499. FOR MARTY GOLDSMITH

Dear Mr. King:

Our office received the above application for permit for Mr. Goldsmith on 7/28/2006. At the time the application was received, staff had been re-allocated to address department obligations to the Snake River Basin Adjudication (SRBA). Most of those obligations have been satisfied, and I have been asked to review this application for permit. During my initial review, several questions and concerns have been raised that will need to be addressed before processing can continue. Please address the following items:

The application is in the sole name of Marty Goldsmith. Idaho code § 42-202B, section (5) describes a municipal provider as:

(a) A municipality that provides water for municipal purposes to its residents and other users within its service area;
(b) Any corporation or association which supplies water for municipal purposes, or a political subdivision of the state of Idaho authorized to supply water for municipal purposes, and which does supply water, for municipal purposes through a water system regulated to users within its service area; or
(c) A corporation or association which supplies water for municipal purposes through a water system regulated by the state of Idaho as a "public water supply" as described in section 39-103(10, Idaho Code.

According to the above code, and individual cannot under Idaho law be a municipal provider. Therefore, Mr. Goldsmith will need to meet the requirements of this section of Idaho Code to qualify as a municipal provider, and allow processing of this application to continue.

This application does not state whether or not this application is for current beneficial needs or for future anticipated needs for this development. If the application were for future anticipated needs, then documentation that could be used to demonstrate substantial planning, design, and investment in the unconstructed capacity of the complete system would be required. This documentation would include the following.

a.) Provision of an overall detailed design of the full capacity system for meeting reasonably anticipated future needs;
b.) Financing plan demonstrating ability to fully pay the costs of the constructing the full capacity system needed to meet reasonably anticipated needs;
c.) Completed environmental studies needed to satisfy legal or permitting requirements for some unconstructed portion or for all of the full capacity system;
d.) Acquisition of lands needed for future wells, pumping stations, and other facilities consistent with the overall design for he full capacity system;
e.) Substantial construction of distribution mains shown to be essential and integral potions of the full capacity system through water distribution network analysis:
f.) Construction for distribution system or regulatory storage consistent with the overall design of the full capacity system; and development of operations protocol and infrastructure needed to operate the full capacity system consistent with the overall system design.

I have enclosed a copy of Administrative Memorandum 63, which discusses reasonably anticipated future needs in more details. However, if the project will be fully completed within the 5-year development period, then the above information would not be needed.

We will also need additional information required by I. C. § 42-203A(5)(a-e) for "large diversion projects." This requirement includes the following items discussed in the enclosed copy of Water Appropriation Rule 40, Rule Subsections 040.05c through 040.05g:

1. effect on existing water rights
2. sufficiency of water supply
3. good faith, delay or speculative purposes
4. financial resources
5. local public interest.

For local public interest factors, please provide information as follows:

- Describe work the applicant has completed or will complete to become a municipal provider pursuant to I. C. § 42-202B(5).
- Describe work the applicant has completed or will complete to satisfy Elmore County approval requirements.
- Send a comment letter to IDEQ. Provide a copy of that letter, and any response, to IDWR.

Also include information for the following points in your response:

- The proposed wells are close to the Mountain Home Ground Water Management Area boundary. Describe what impacts, if any, could be expected on this boundary by pumping up to 10.0 cfs over time. Would aquifer dynamics cause the boundary to migrate and/or change in other ways?
- Provide information about long-term sustainability of the water supply for this project to show that mining of the aquifer will not occur.
- The above two bullets address individual impacts of the proposed project. Also provide information for the same two issues but about cumulative impacts for Application 63-32499 when combined with the adjacent Mayfield Springs project that was recently approved under Permit 63-32225.

We will need the above information to continue processing your application for permit. This information will be reviewed and may require the department to request even more information, if more clarification is required. Due to the large amount of information requested in this letter, we will extend the 30-day standard deadline to return this information out to 60 days.

Please submit the requested information to allow final evaluation of your application to be completed. You may seek additional time to provide the information by making a written request to delay or interrupt processing. **Your written response including the requested information, or a request for more time to seek the information must be received by July 24, 2007.** The application will be voided without a timely reply.

If you have any questions or concerns please contact me at the above address.

Respectfully,

Daniel A. Nelson
Sr. Water Right Agent

Enclosures: Water Appropriation Rules 50.05.c though 40.05.g
Administrative memo Application Processing No. 63

Water Appropriation Rules 40.05.c through 40.05.g

c. Information relative to the effect on existing water rights, Section 42-203A(5)(a), Idaho Code, shall be submitted as follows:

i. For applications appropriating springs or surface streams with five (5) or fewer existing users, either the identification number, or the name and address of the user, and the location of the point of diversion and nature of use for each existing water right shall be submitted.

ii. For applications appropriating groundwater, a plat shall be submitted locating the proposed well relative to all existing wells and springs and permitted wells within a one-half mile radius of the proposed well.

iii. Information shall be submitted concerning any design, construction, or operation techniques which will be employed to eliminate or reduce the impact on other water rights.

d. Information relative to sufficiency of water supply, Section 42-203A(5)(b), Idaho Code, shall be submitted as follows:

i. Information shall be submitted on the water requirements of the proposed project, including, but not limited to, the required diversion rate during the peak use period and the average use period, the volume to be diverted per year, the period of year that water is required, and the volume of water that will be consumptively used per year.

ii. Information shall be submitted on the quantity of water available from the source applied for, including, but not limited to, information concerning flow rates for surface water sources available during periods of peak and average project water demand, information concerning the properties of the aquifers that water is to be taken from for groundwater sources, and information on other sources of supply that may be used to supplement the applied for water source.

e. Information relative to good faith, delay, or speculative purposes of the applicant, Section 42-203A(5)(c), Idaho Code, shall be submitted as follows:

i. The applicant shall submit copies of deeds, leases, easements or applications for rights-of-way from federal or state agencies documenting a possessory interest in the lands necessary for all project facilities and the place of use or if such interest can be obtained by eminent domain proceedings the applicant must show that appropriate actions are being taken to obtain the interest. Applicants for hydropower uses shall also submit information required to demonstrate compliance with Sections 42-205 and 42-206, Idaho Code.

ii. The applicant shall submit copies of applications for other needed permits, licenses and approvals, and must keep the department apprised of the status of the applications and any subsequent approvals or denials.

f. Information Relative to Financial Resources, Section 42-203A(5)(d), Idaho Code, shall be submitted as follows:

i. The applicant shall submit a current financial statement certified to show the accuracy of the information contained therein, or a financial commitment letter along with the financial statement of the lender or other evidence to show that it is reasonably probable that financing will be available to appropriate the water and apply it to the beneficial use proposed.

ii. The applicant shall submit plans and specifications along with estimated construction costs for the project works. The plans shall be definite enough to allow for determination of project impacts and implications.

g. Information Relative to Conflict with the Local Public Interest, Section 42-203A(5)(e), Idaho Code, shall be submitted as follows:

The applicant shall seek comment and shall submit all letters of comment on the effects of the construction and operation of the proposed project from the governing body of the city and/or county and tribal reservation within which the point of diversion and place of use are located, the Idaho Department of Fish and Game, the Idaho Department of Environmental Quality, and any irrigation district or canal company within which the proposed project is located and from other entities as determined by the director.

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

ADMINISTRATIVE MEMORANDUM

Application Processing No. 63

To: Distribution List

From: L. Glen Saxton, P.E.

RE: **MUNICIPAL WATER RIGHTS**

Date: June 15, 1999

Attached is the Director's June 14, 1999, letter to Christopher H. Meyer in connection with municipal water rights. This letter provides guidance how the department will treat system capacity and other aspects of municipal uses.

Please discard my prior memo dated March 18, 1998, in connection with municipal use.

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208)327-7900 FAX: (208)327-7866 www.idwr.state.id.us/idwr/idwrhome.htm

DIRK KEMPTHORNE
Governor
KARL J. DREHER
Director

June 14, 1999

Mr. Christopher H. Meyer
Givens Pursley LLP
Suite 200
277 North 6th Street
P. O. Box 2720
Boise, ID 83701

Re: Municipal Water Rights

Dear Chris:

I have finally been able to focus on the issues you framed in your various letters dating back to January 25, 1999, regarding municipal water rights under the 1996 Municipal Water Rights Act (Idaho Code §§ 42-202, 42-202B, 42-217, 42-219, and 42-222). I very much appreciate your patience in waiting for me to have sufficient time to respond to these issues, even though this matter is of some urgency for one of your clients, United Water Idaho ("United Water"). My response is divided into three general topics: (1) System-Wide Change Application; (2) System Capacity; and (3) Forfeiture of Municipal Water Rights.

System-Wide Change Application.

It is my understanding that when an existing well in United Water's system suffered reduced production over a period of time or when a well was damaged, United Water obtained new water rights to divert ground water from new wells. As a result, United Water holds water rights that authorize the diversion of more ground water than the current system of wells has the capacity to produce. As I suggested in our meeting on October 21, 1998, the difference between the total quantity of ground water authorized for diversion and use by all of the water rights held by United Water, versus the total capacity of the current system of wells, could be considered a portion of the amount of water necessary for United Water to provide for "reasonably anticipated future needs" within its service area. This could require meeting all of the conditions set forth in Idaho Code § 42-202B as well as the "capacity of the system" limitation in § 42-219(1).

To initiate the process through which a determination can be made whether a portion of the water rights held by United Water could be considered necessary to provide for reasonably anticipated future needs, United Water could file an application under Idaho Code § 42-222 to change the point of diversion authorized under each water right for ground water to include as

alternate points of diversion some or most of the wells in United Water's system that are currently operated as production wells. The location of each well to be used as an alternate point of diversion would have to be specifically identified. Together with identifying each well location by quarter-quarter section, it would be helpful if the longitude-latitude or geographic coordinates for each well could be provided as well. Similarly, for those water rights wherein the place of use is defined differently than the service area of United Water, the application could also propose to change the place of use for those water rights to the service area.

If United Water chooses to file a system-wide change application, notice of the application would be provided and the application processed as set forth in Idaho Code § 42-222. If the application is approved, the approval would be conditioned to prevent enlargement of the water rights and injury to other water rights. Conditions of approval would likely include limiting the diversion rate from each well to the diversion rate authorized by the original water right established at each well and setting forth the priority date of the original water right at each well as the effective implementation date of the alternate point of diversion. The effective implementation dates would be used in resolving any future claims of well interference by other well owners, but would not be viewed as secondary priority dates. Another condition that would be considered would not allow wells in ground water management areas to be used as alternate points of diversion for water rights established outside of those areas.

System Capacity

As we have previously discussed and as noted in your January 25 letter, Idaho Code § 42-219(1) was modified by the 1996 Municipal Water Rights Act to allow the issuance of a water right license to a municipal provider for "an amount up to the full capacity of the system constructed or used in accordance with the original permit . . . ." Some might construe this limitation to require that a municipal provider fully construct the system used to divert or deliver water associated with a water right for an amount "reasonably necessary to provide for the existing uses and reasonably anticipated future needs within the service area . . . ." However, such interpretation would not be consistent with the intent of the 1996 Municipal Water Rights Act.

The purpose of the language in Idaho Code § 42-219(1) that refers to "an amount up to the full capacity of the system constructed or used in accordance with the original permit" is to define the beneficial use requirement for a municipal water right which includes "reasonably anticipated future needs." If a municipal provider is limited to the amount of water which is actually diverted and used under a permit, then there would never be any amount of water included under a water right for reasonably anticipated future needs. Similarly, if a municipal provider is required to fully construct the system used to divert or deliver water for reasonably anticipated future needs, the provider would not have any flexibility in its water supply/distribution system to make adjustments as the reasonably anticipated future needs become reality. Such inflexibility would likely result in system modifications that would be inefficient and increase consumer costs; a result that would be incompatible with the objective of encouraging municipal providers to implement well-planned, efficient water supply/distribution systems. Consequently, the beneficial use requirement of "the full capacity of the system constructed or used in accordance with the original permit" for a municipal water

right which includes an amount of water for "reasonably anticipated future needs" must lie between the one extreme of fully constructing the system used to divert or deliver water for reasonably anticipated future needs and the other extreme of simply intending to construct the system at some future date.

The appropriate criteria for determining whether "the full capacity of the system [has been] constructed or used in accordance with the original permit" are the degree to which the full capacity of the system has been constructed and the consistency of the constructed capacity with a definitive plan for fully constructing the system, both of which can only be evaluated on a case by case basis. To provide some guidance as to how these criteria should be applied, the following hypothetical examples are offered.

Consider the case of a municipal water provider with a permit to appropriate an amount of surface water for "reasonably anticipated future needs." If the municipal provider fully constructed the necessary water treatment plant and the distribution mains needed to deliver the full amount of water under the water right, the "full capacity of the system" requirement (termed herein as the "full beneficial use requirement") would clearly be satisfied, whether or not water lines for individual users were connected to the distribution mains. But less constructed capacity could also satisfy the full beneficial use requirement. For example, if the municipal provider constructed only a portion of the necessary water treatment plant and only a portion of the distribution mains, and those constructed portions of the system were shown to be significant, integral parts of a detailed plan or design to provide the full capacity of the system, the full beneficial use requirement could still be satisfied provided a substantial investment in the unconstructed capacity of the total system had been made. However, if the municipal water provider constructed a water treatment plant with limited potential for expansion which could treat only a small portion of the water authorized under the permit to appropriate water, constructed an isolated portion of the distribution mains needed to deliver the full amount of water, or otherwise made only a small investment in the unconstructed capacity of the planned system, the water right license might appropriately be issued for an amount of water less than the amount authorized by the permit or the planned full capacity of the system.

For a municipal provider with a permit to appropriate an amount of ground water for reasonably anticipated future needs, construction of the well or wells and the distribution mains needed to divert and deliver the full amount of ground water authorized under the permit should clearly satisfy the full beneficial use requirement. But like the hypothetical provider of treated surface water, less constructed capacity for a ground water system could also satisfy the requirement if the constructed portions of the system were shown to be significant, integral phases of implementing a detailed plan to provide the full capacity of the system and there was substantial planning, design, and investment in the unconstructed capacity of the complete system. Documentation that could be used to demonstrate substantial planning, design, and investment in the unconstructed capacity of the complete system includes the following:

- provision of an overall detailed design of the full capacity system for meeting reasonably anticipated future needs;

- financing plan demonstrating ability to fully pay the costs of constructing the full capacity system needed to meet reasonably anticipated needs;

- completed environmental studies needed to satisfy legal or permitting requirements for some unconstructed portion or for all of the full capacity system;

- acquisition of lands needed for future wells, pumping stations, and other facilities consistent with the overall design for the full capacity system;

- substantial construction of distribution mains shown to be essential and integral portions of the full capacity system through water distribution network analysis;

- construction of distribution system or regulatory storage consistent with the overall design of the full capacity system; and

- development of operations protocol and infrastructure needed to operate the full capacity system consistent with the overall system design.

There may be other information that a municipal water provider could also provide to demonstrate that constructed portions of the system were significant phases of implementing a detailed plan to construct the full capacity of the system and that substantial investment had been made in the unconstructed capacity of the complete system. However, any single factor alone probably would not be sufficient to demonstrate that the full beneficial use requirement for a municipal water right had been satisfied. Rather, constructed capacity and all of the information used to demonstrate substantial planning, design, and investment in unconstructed capacity of the complete system would be weighed as a whole in determining whether the beneficial use requirement had been met.

The type of information outlined above that could be used to satisfy the full beneficial use requirement for a municipal water right is similar to the information required in Colorado to establish and maintain a conditional water right. In fact, under the 1996 Municipal Water Rights Act, that portion of a municipal water right in Idaho that includes an amount of water for reasonably anticipated future needs could be viewed as somewhat analogous to a conditional water right in Colorado.

Please note that I have not attempted to outline the type of information that should be considered in supporting the "reasonably anticipated future needs" that a municipal water provider might claim. However, Idaho Code § 42-202B(5) describes in general the information that would be required to support an appropriation of water for "reasonably anticipated future needs."

Forfeiture of Municipal Water Rights

In your recent letter dated June 3, 1999, you provided some information that could be interpreted to suggest that a water right held by a municipal corporation, or another municipal provider as defined by the 1996 Municipal Water Rights Act, may not generally be subject to

forfeiture. Although the basis for forfeiture is different for a municipal water right, just as the standard for beneficial use is different as discussed above, I would disagree with a conclusion that municipal water rights are immune from forfeiture.

When a municipal provider is granted a permit to appropriate water for "reasonably anticipated future needs" within the planning horizon for the municipality, the permit will be conditioned to require that the full system capacity needed to provide water for the reasonably anticipated future needs be constructed by the end of the municipality's planning horizon. The municipal provider will then be required to submit proof of beneficial use evidenced by construction of system capacity and substantial planning, design, and investment in the unconstructed capacity of the complete system by the end of the permit development period. If proof is not submitted and an extension to the permit development period has not been granted, as provided under Idaho Code § 42-204, the municipal provider shall be deemed to have lost all rights under its permit.

If sufficient proof of beneficial use is submitted before the end of the permit development period and the municipal water right is licensed for an amount of water for "reasonably anticipated future needs," the requirement that the full system capacity needed to provide water for the reasonably anticipated future needs be constructed by the end of the municipality's planning horizon will continue as a condition of the license. If the municipal provider fails to construct the full system capacity needed to provide water for the reasonably anticipated future needs by the end of the planning horizon for the municipality, or the anticipated future needs do not materialize by the end of the planning horizon, the quantity of water under the license may be reduced to the capacity of the constructed system or the amount of water required to meet the needs that actually exist at the end of the planning horizon. Although a municipal provider can revise the planning horizon and amend its projections of reasonably anticipated future needs subsequent to the water right license being issued, provided the criteria in Idaho Code § 42-202B(5) are fully satisfied, the water right remains subject to being reduced or forfeited if actual use of the water does not occur. Municipal water rights established prior to the 1996 Municipal Water Rights Act might also be subject to common law abandonment or forfeiture if the rights are not required to satisfy reasonable future needs of the municipality.

I hope these thoughts on the issues you raised are helpful to you and your clients. I intend to have these concepts incorporated in a guidance memorandum for staff of the Department of Water Resources so that the 1996 Municipal Water Rights Act is implemented uniformly. If you have additional questions or would like to discuss these issues or others further, we can arrange to meet again.

Sincerely,

Karl J. Dreher
Director

cc: IDWR Water Management Division
Ed Squires / Scott Rhead – United Water

APPENDIX B
COPIES OF SELECTED WELL DRILLERS' REPORTS

810178

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. __-__-__-____-____
Other IDWR No. D0030779

2. OWNER:
Name Big View Builders
Address 5006 Man O War
City Nampa State ID Zip 83686

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N / W / E / S

Twp. 1 North ☐ or South ☒
Rge. 4 East ☒ or West ☐
Sec. ___ 1/4 (10 acres) SE 1/4 (40 acres) SW 1/4 (160 acres)
Gov't lot _____ County Elmore
Lat: : : Long: : :
Address of Well Site 1020 Desert Wind Rd
City Mountain Home,
(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/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	0	20	12	overbore

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 278
Was drive shoe seal tested? ☐ Y ☒ N How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6"	+2	278	250	steel	☒	☐	☒	☐
5"	6"	491	188	steel	☐	☒	☒	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
☒ Screens Screen Type sand blocker

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
492	504	n/a	n/a	4"	stst	☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
365 ft. below ground Artesian Pressure ____ lb
Depth flow encountered 485 ft. Describe access port or control devices: _____

11. WELL TESTS:
☒ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Pumping Level	Time
15	50	415	3 hrs

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____
Depth first Water Encountered 408

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10'	0	18	Sandy brown clay		☒
8	18	36	Sandy brown clay		☒
8	36	42	Cemented gravel		☒
8	42	185	Brown clay		☒
8	185	243	Brown clay w/ sand strips		☒
8	243	278	Black cinders		☒
8	278	408	Black lava		☒
8	408	485	Brown clay w/ sand strips	☒	
8	485	504	Coarse white sand & some gravel	☒	

RECEIVED
MAR 08 2004
WATER RESOURCES
WESTERN REGION

Completed Depth: 504 (Measurable)
Date: Started 01/12/04 Completed 02/15/04

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

Firm Name Skinner & Son Well Drilling Firm No. 635
Firm Official _____ Date 3-2-04
Supervisor or Operator _____ Date 3-2-04
(Sign once if Firm Official & Operator)

Date: 3/2/04 Time: 3:50 PM

76757Z

1

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. - - - - -
Other IDWR No. D0015631

2. OWNER:
Name Glen & Janet Jorgensen
Address 1386 N. Little Creek
City Meridian State ID Zip 83642

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N / W / E / S — X

Twp. 1 North ☐ or South X
Rge. 4 East X or West ☐
Sec. 2 1/4 (10 acres) SW 1/4 (40 acres) SW 1/4 (160 acres)
Gov't lot ____ County Elmore
Lat: : : Long: : :
Address of Well Site Base Line Rd.
City Mtn Home
(Give at least name of road + Distance to Road or Landmark)
Lt. ____ Blk. ____ Sub. Name ____

4. USE:
X Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other ____

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Bentonite	0	18	800 lbs	Overbore

Was drive shoe used? X Y ☐ N Shoe Depth(s) ____
Was drive shoe seal tested? ☐ Y X N How? ____

8. CASING/LINER:

Diameter	From	To	Gauge	Materia	Casing	Liner	Welded	Threaded
6.625	+2	608	250	Steel	X	☐	X	☐
5.563	602	608			☐	X	X	☐
5.563	618	633	188	Steel	☐	X	X	☐

Length of Headpipe 6' Length of Tailpipe 15'

9. PERFORATIONS/SCREENS
☐ Perforations Method ____
X Screens Screen Type Johnson

From	To	Slot Size	Number	Diameter	Materia	Casing	Liner
608	618	.010		5.563	SS	☐	X
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
388 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control

11. WELL TESTS:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Pumping Level	Time
20			

Water Temp. ____ Bottom hole temp. ____
Water Quality test or comments: ____
Depth first Water Encountered ____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10	0	2	Top Soil		X
10	2	18	Sandy Clay		X
6	18	120	Tan Sand & Clay Seams		X
6	120	175	Brown Sand & Clay		X
6	175	200	Sand Stone		X
6	200	290	Tan Clay & Sand Seam		X
6	290	400	Tan Sand & Clay Seams		X
6	400	465	Tan Clay & Sand Seams		X
6	465	500	Tan Sand & Clay Seam		X
6	500	510	Coarse Sand – Rusty	X	
6	510	540	Tan Clay & Sand Seam		X
6	540	551	Brown Clay		X
6	551	620	Gray Sand	X	
6	620	633	Gray Sand & Hard Clay Seam		X

RECEIVED
DEC 1 2 2000
Department of Water Resources
RECEIVED
DEC 0 8 2000
WATER RESOURCES
WESTERN REGION

Completed Depth: 633 (Measurable)
Date. Started 11-09-00 Completed 11-17-00

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

Firm Name Hiddleston & Sons Inc. Firm No. 35
Firm Official ____ Date 12-5-00
Supervisor or Operator ____ Date 11-30-00
(Sign once if Firm Official & Operator)

76757

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

Form 238-7
3/95-C96

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. DRILLING PERMIT NO. - - - - -
Other IDWR No. D0015631

2. OWNER:
Name Glen & Janet Jorgensen
Address 1386 N. Little Creek
City Meridian State ID Zip 83642

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W E
S
X

Twp. 1 North ☐ or South X
Rge. 4 East X or West ☐
Sec. 2 1/4 (10 acres) SW 1/4 (40 acres) SW 1/4 (160 acres)
Gov't lot _____ County Elmore
Lat: : : Long: : :
Address of Well Site Base Line Rd.
City Mtn Home
(Give at least name of road + Distance to Road or Landmark)
Lt. _____ Blk. _____ Sub. Name _____

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

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	0	18	800 lbs	Overbore

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6.625	+2	608	250	Steel	X	☐	X	☐
5.563	602	608	.188	Steel	☐	X	X	☐
5.563	618	633	188	Steel	☐	X	X	☐

Length of Headpipe 6' Length of Tailpipe 15'

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
X Screens Screen Type Johnson

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
608	618	.010		5.563	SS	☐	X
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
388 ft. below ground Artesian Pressure _____ lb
Depth flow encountered ft. Describe access port or control

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
20			

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____
Depth first Water Encountered 500

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10	0	2	Top Soil		X
10	2	18	Sandy Clay		X
6	18	120	Tan Sand & Clay Seams		X
6	120	175	Brown Sand & Clay		X
6	175	200	Sand Stone		X
6	200	290	Tan Clay & Sand Seam		X
6	290	400	Tan Sand & Clay Seams		X
6	400	465	Tan Clay & Sand Seams		X
6	465	500	Tan Sand & Clay Seam		X
6	500	510	Coarse Sand – Rusty	X	
6	510	540	Tan Clay & Sand Seam		X
6	540	551	Brown Clay		X
6	551	620	Gray Sand	X	
6	620	633	Gray Sand & Hard Clay Seam		X

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DEC 27 2000
Department of Water Resources

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DEC 12 2000
WATER RESOURCES
WESTERN REGION

Completed Depth: 633 (Measurable)
Date: Started 11-09-00 Completed 11-17-00

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

Firm Name Hiddleston & Son, Inc. Firm No. 35
Firm Official _____ Date 12/6/00
Supervisor or Operator _____ Date 12-7-00
(Sign once if Firm Official & Operator)

2

Form 238-7
3/95 296

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT 65952

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

1. DRILLING PERMIT NO. 61 -97 -W -0033 -000
Other IDWR No. ______

2. OWNER:
Name Rick Millington
Address 8011 Ustick Rd.
City Boise State ID Zip 83704

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N / W / E / S

Twp. 1 North ☐ or South ☒
Rge. 5 East ☒ or West ☐
Sec. 6 ___ 1/4 (10 acres) NE 1/4 (40 acres) SW 1/4 (160 acres)

Gov't lot ______ County Elmore
Lat: __ : __ : __ Long: __ : __ : __
Address of Well Site Baseline Rd
City Mayfield
(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/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
bentonite	2	18	6	overbore

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
6"	+1	575	.250	steel	☒	☐	☒	☐
8"	0	80	.250	steel	☒	☐	☒	☐
					☐	☐	☐	☐

Length of Headpipe ______ Length of Tailpipe ______

9. PERFORATIONS/SCREENS
☐ Perforations Method ______
☐ Screens Screen Type ______

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
387 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices: ______

11. WELL TESTS:
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
30		560	2 hrs.

Water Temp. ______ Bottom hole temp. ______
Water Quality test or comments: ______
Depth first Water Encountered 455

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10"	0	1	brown top soil		☒
10"	1	3	brown clay		☒
10"	3	5	brown hardpan clay		☒
10"	5	20	brown sand		☒
8"	20	24	brown clay		☒
8"	24	60	brown clay & strips brown sand		☒
8"	60	114	white & brown soft granite		☒
8"	114	117	black granite		☒
8"	117	160	white & brown granite		☒
8"	160	175	brown granite chips		☒
8"	175	225	white & brown granite		☒
8"	225	338	brown clay		☒
8"	338	365	clear & white grnt. w/strps brn clay		☒
8"	365	402	brown fine sand		☒
8"	402	440	brn snad w/strips of clay		☒
6"	440	455	brown sandy clay		☒
6"	455	473	brown sand w/small gravel	☒	
6"	473	495	brown clay		☒
6"	495	528	brown sand & small gravel	☒	
6"	528	533	brown sandy clay		☒
6"	533	561	brown & white sand		☒
6"	561	566	light brown clay		☒
6"	566		gray sand	☒	

Completed Depth: 387 (Measurable)
Date: Started 07-11-97 Completed 07-18-97

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

Firm Name SOS Welldrilling & Pump Co Firm No. 212
Firm Official [signature] Date 9-2-97
Supervisor or Operator [signature] Date 9-2-97
(Sign once if Firm Official & Operator)

Date: 08/22/97 Time: 4:11 PM

768411 3

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. __ - __ - __ ___ - ____
Other IDWR No. D0018029

2. OWNER:
Name Chris Reninger
Address P.O. Box 190782
City Boise State ID Zip 83719

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W E
S

Twp. 1 North ☐ or South ☒
Rge. 4 East ☒ or West ☐
Sec. 1 1/4 (10 acres) SW 1/4 (40 acres) NW 1/4 (160 acres)

Gov't lot _____ County Elmore
Lat: : : Long: : :
Address of Well Site Baseline Rd just past Old Hwy. 30 cut-off City Boise
(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/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
bentonite	0'	18+'	25 sacks	overbore

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
6"	+2'	502'	.250	steel	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe 12' Length of Tailpipe _____

9. PERFORATIONS/SCREENS
☐ Perforations Method pull back
☒ Screens Screen Type telescoping

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
504'	514'	.020		5.5"	StSt	☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
342 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices:

11. WELL TESTS:
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
70 GPM		500'	2 hrs.

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____
Depth first Water Encountered 355'

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia	From	To	Remarks:Lithology, Water Quality & Temp.	Water Y	Water N
10"	0'	2'	brown top soil		☒
10"	2'	4'	brown hard pan		☒
10"	4'	6'	hard brown clay		☒
10"	6'	8'	coarse brown sand		☒
10"	8'	18'	brown clay		☒
8"	18'	21'	brown clay		☒
8"	21'	65'	brown clay & coarse sand strips		☒
8"	65'	72'	brown & white decomposed granite		☒
8"	72'	85'	bron clay		☒
8"	85'	150'	soft brown & white granite		☒
8"	150'	166'	soft white granite		☒
8"	166'	203'	black & brown granite		☒
8"	203'	240'	soft white granite		☒
8"	240'	290'	brown clay & coarse sand strips		☒
8"	290'	305'	white & brown granite		☒
8"	305'	312'	hard brown clay		☒
8"	312'	355'	brown clay & coarse white sand strip		☒
8"	355'	358'	white & brown sand	☒	
8"	358'	361'	brown clay		☒
6"	361'	381'	brown clay		☒
6"	381'	384'	brown sand	☒	
6"	384'	397'	brown clay		☒
6"	397'	415'	coarse brown sand w/sandy clay strip	☒	
6"	415'	448'	coarse white & brown sand	☒	
6"	448'	457'	brown clay		☒
6"	457'	461'	crse/fine brn & wht sand w/gravel	☒	
6"	461'	470'	sandy clay & sm sand & gravel strips		☒
6"	470'	502'	coarse/fine brown sand packed		☒
6"	502'	504'	brown clay		☒
6"	504'	515'	white sand & small gravel	☒	

Completed Depth: 516 (Measurable)
Date: Started 4-3-01 Completed 4-10-01

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

Firm Name _____ Firm No. ____
Firm Official Tony Hackett Date 5-17-00
Supervisor or Operator Tony Hackett Date 5-17-0
(Sign once if Firm Official & Operator)

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MAY 17 2001
WATER RESOURCES WESTERN REGION

Date: 5/16/01 Time:9:18 AM

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JUN - 4 2001
Department of Water Resources

870655-775948

4

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. - - - - ____ ____
Other IDWR No. **D0019537**

2. OWNER:
Name **Bob Wickham**
Address **730 S. Prairie Grass Dr.**
City **Boise** State **ID** Zip **83716**

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W [X] E
S

Twp. **1** North ☐ or South **X**
Rge. **4** East **X** or West ☐
Sec. **1** 1/4 (10 acres) **SW** 1/4 (40 acres) **NW** 1/4 (160 acres)
Gov't lot ____ County **Elmore**
Lat: : : Long: : :
Address of Well Site **730 S. Prairie Dr.**
City **Mtn Home**
(Give at least name of road + Distance to Road or Landmark)
Lt. ____ Blk. ____ Sub. Name ____

4. USE:
X Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other ____

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Bentonie	**0**	**20**	**700 lbs.**	**Overbore**

Was drive shoe used? X Y ☐ N Shoe Depth(s) ____
Was drive shoe seal tested? ☐ Y X N How? ____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6.625	**+1**	**444**	**.250**	**Steel**	X	☐	X	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe **6'** Length of Tailpipe **3'**

9. PERFORATIONS/SCREENS
☐ Perforations Method ____
X Screens Screen Type **Johnson**

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
445	**450**	**.030**		**5"**	**SS**	☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
337 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices: ____

11. WELL TESTS:
☐ Pump ☐ Bailer **X** Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
20			**1 hr**

Water Temp. **68** Bottom hole temp. ____
Water Quality test or comments: ____
Depth first Water Encountered **415'**

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temp.	Y	N
10"	**0**	**2**	**Top Soil**		**X**
10"	**2**	**7**	**Cleache**		**X**
10"	**7**	**18**	**Sand & Gravel**		**X**
6"	**18**	**30**	**Sand & Gravel**		**X**
6"	**30**	**34**	**Brown Clay**		**X**
6"	**34**	**225**	**Sand & Gravel w/ Clay Seams**		**X**
6"	**225**	**236**	**Brown Clay**		**X**
6"	**236**	**250**	**Tan Sand Stone**		**X**
6"	**260**	**415**	**Sand & Gravel w/ Clay Seams**		**X**
6"	**415**	**428**	**Coarse Sand**	**X**	
6"	**428**	**441**	**Brown Clay**		**X**
6"	**441**	**455**	**Coarse Sand**	**X**	
6"	**455**	**460**	**Brown Clay**		**X**

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APR 26 2002
WATER RESOURCES
WESTERN REGION

Completed Depth: **455'** (Measurable)
Date: Started **1-04-02** Completed **1-11-02**

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

Firm Name **Hiddleston & Son, Inc.** Firm No. **35**
Firm Official [signature] Date **04-22-02**
Supervisor or Operator **Matt Hiddleston** Date **4-17-02**
(Sign once if Firm Official & Operator)

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Form 238-7
3/95-C96

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. DRILLING PERMIT NO. - - - - -
Other IDWR No. **D0029374**

2. OWNER:
Name **Jack Buchanan**
Address **731 S. Prairie Grass Rd.**
City **Boise** State **ID** Zip **83716**

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W [X] E
S

Twp. 15 North ☐ or South X
Rge. 4 East X or West ☐
Sec. 2 1/4 (10 acres) SE 1/4 (40 acres) NE 1/4 (160 acres)
Gov't lot ____ County ~~Ada~~
Lat: : : Long: : :
Address of Well Site **731 S. Prairie Grass Rd.**
City **Boise**
(Give at least name of road + Distance to Road or Landmark)
Lt. _____ Blk. _____ Sub. Name _____

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

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	**0**	**18**	**700 lbs**	**Overbore**

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

8. CASING/LINER:

Diameter	From	To	Gauge	Materia	Casing	Liner	Welded	Threaded
6.625	**+2**	**469**	**.250**	**Steel**	X	☐	X	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe **20'** Length of Tailpipe **N/A**

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
X Screens Screen Type **Johnson**

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
471	**476**	**.020**		**5"**	**SS**	☐	☐
451	**471**	**N/A**		**5"**	**Steel**		X
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
331 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices: _____

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
50			**1 hr**

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

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10"	**0**	**2**	**Top Soil**		X
10"	**2**	**7**	**Cleache**		X
10"	**7**	**16**	**Tan Sand W/ Gravel**		X
10"	**16**	**18**	**Tan Clay**		X
6"	**18**	**22**	**Tan Clay**		X
6"	**22**	**80**	**Tan Coarse Sand**		X
6"	**80**	**83**	**Tan Clay**		X
6"	**83**	**217**	**Coarse Sand**		X
6"	**217**	**227**	**Brown SandStone**		X
6"	**227**	**460**	**Tan Sand w/ Clay Seams**		X
6"	**460**	**476**	**Coarse Tan Sand & Gravel**	X	

RECEIVED
JUN 0 2 2003
WATER RESOURCES
WESTERN REGION

Completed Depth: **476'** (Measurable)
Date: Started **4-28-03** Completed **5-5-03**

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

Firm Name **Hiddleston & Son, Inc.** Firm No. **35**
Firm Official _____ Date **5-27-03**
Supervisor or Operator Matt Hiddleston Date _____
(Sign once if Firm Official & Operator)

Form 238-7
4/92

POOR QUALITY

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

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AUG 0 3 1993
Department of Water Resources

USE TYPEWRITER OR BALLPOINT PEN

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.

1. WELL OWNER
Name RONALD & ROSEANNA CASTLE
Address HC 85, BX 237 GRANDVIEW, ID 83624
Drilling Permit No. 61-93-C-0031-000
Water Right Permit No. 61-07683 (upon approval)

2. NATURE OF WORK NEW WELL
☐ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase ☐ Modification
☐ Abandoned (describe abandonment or modification procedures such as liners, screen, materials, plug depths, etc. in lithologic log, section 9.)

3. PROPOSED USE NON-DOMESTIC
☐ Domestic ☐ Irrigation ☐ Monitor
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED AIR&MUD ROTARY
☐ Rotary ☐ Air ☐ Auger ☐ Reverse rotary
☐ Cable ☐ Mud ☐ Other _____ (backhoe, hydraulic, etc.)

5. WELL CONSTRUCTION
Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.25 inches	8 inches +	1 feet	490 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

Was casing drive shoe used? ☐ Yes ☒ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation? _____ inches by _____ inches

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

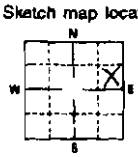
Well screen installed? ☐ Yes ☒ No
Manufacturer _____ Type _____
Top Packer or Headpipe _____
Bottom of Tailpipe _____

Diameter ____ Slot size ____ Set from ____ feet to ____ feet
Diameter ____ Slot size ____ Set from ____ feet to ____ feet
Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____
Placed from _____ feet to _____ feet

Surface seal depth 27.0 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 WELL CAP

6. LOCATION OF WELL
Sketch map location must agree with written location.



Subdivision Name _____
Lot No. _____ Block No. _____
County ELMORE
Address of Well Site HC 34 MAYFIELD STAGE BOX 100
(give at least name of road)
SE ¼NE ¼ Sec. 5, T. 01S N ☐ or S ☐, R. 04E E ☐ or W ☐

7. WATER LEVEL
Static water level 338 feet below land surface.
Flowing? ☐ Yes ☒ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature 65 °F. Quality Good
Describe artesian or temperature zones below.

8. WELL TEST DATA AIR
☐ Pump ☐ Bailer ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
30	338'	1

081538

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
10"	0	5	CLEACHEY		X
	5	50	CLAY & DECOMPOSED GRANIT USED		X
			GRANIT AND SAND mix		X
	50	60	SAND		X
	60	90	CLAY AND SAND MIXED		X
	90	170	BOULDERS & SAND		X
	170	225	CLAY, & SAND MIXED		X
	225	240	HARD GRANIT		X
	240	270	DECOMPOSED GRANIT		X
	270	275	BROWN CLAY		X
	275	330	DECOMPOSED GRANIT		X
	330	485	SAND		X
	485	497	CLAY		X
	497	510	LAVA ROCK	X	
8"	510	535	SWITCHED TO AIR ROTARY BROCKEN LAVA ROCK, & SOME ROUND LAVA	X	

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AUG 0 2 1993
Department of Water Resources
Western Regional Office

FEB 09 1994

10. Work started 7/6/93 finished 7/28/93

11. DRILLER'S CERTIFICATION
I/We certify that all minimum well construction standards were complied with at the time the rig was removed.
Firm Name PETE CORE DRILL Firm No. 212
Address 6505 W. CHINDEN Date 7/29/93
Signed by Drilling Supervisor _____
and
(Operator) _____
(If different than the Drilling Supervisor)

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

6

Form 238-7
3/95

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT 083341

Use Typewriter or Ballpoint Pen

Office Use Only
Inspected by _____
Twp____ Rge____ Sec____
____1/4 ____1/4 ____1/4
Lat: : : Long: : :

1. DRILLING PERMIT NO. 61 - 96 - W - 10 - 100
Other IDWR No. 61-07683
Previous permit 61-93-C-003I-000

2. OWNER:
Name RONALD R & ROSANNA K CASTLE
Address HC 34 BOX 34-106
City BOISE State ID Zip 83706

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

N / W / E / S

Twp. 1 S North ☐ or South ☐
Rge. 4 E East ☐ or West ☐
Sec. 3 ____ 1/4 SE 1/4 NE 1/4
(10 acres / 40 acres / 160 acres)
Gov't Lot ____ County ELMORE
Lat: : : Long: : :
Address of Well Site HC 34 MAYFIELD STAGE
BOX 100 City MAYFIELD
(Give at least name of road + Distance to Road or Landmark)

Lt.____ Blk.____ Sub. Name____

4. USE: NON-DOMESTIC MULTIPLY HOME DOMESTIC
☒ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other____

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

6. DRILL METHOD AIR ROTARY
☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
REFER TO FIRST WELL LOG				

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
REFER TO FIRST WELL LOG				0 TO 535	☐	☐	☐	☐
6"	+2	550	.250	STEEL	☒	☐	☒	☐
4.5"	498	678	40	PVC	☐	☒	☐	☒

Length of Headpipe____ Length of Tailpipe____

9. PERFORATIONS/SCREENS
☒ Perforations Method SKill SAW
☐ Screens Screen Type____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
578	678	7/8"	3 per ft	4.5"	PVC	☐	☒
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
435 ft. below ground Artesian pressure ____ lb.
Depth flow encountered ____ ft. Describe access port or control devices: WELL CAP

11. WELL TESTS:
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
40 GPM	N/A	616 FT	2 HRS

Water Temp. COLD Bottom hole temp. COLD
Water Quality test or comments: GOOD, CLEAR, NO SMELL
Depth first Water Encountered 629

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water Y	Water N
		0	TO 535 REFER TO FIRST WELL LOG		X
6"	535	550	CAVING LAVA ROCK		X
	550	565	LAVA & GRANITE		X
	565	570	BROWN CINDERS		X
	570	584	LAVA		X
	584	588	BROWN CINDERS		X
	588	597	LAVA ROCK		X
	597	609	GREEN GRANITE		X
	609	618	WHITE & GREEN GRANITE W/LAVA		X
	618	619	GRAY GRANITE		X
	619	629	WHITE GRANITE W/ LAVA	X	
	629	638	BROWN CINDERS	X	
	638	670	BRN CINDERS FINE & CRS SND	X	
	670	678	LAVA ROCK & SAND		

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MAY 30 1996
Department of Water Resources
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MAY 22 1996
WATER RESOURCES
WESTERN REGION
AUG 21 1996

Completed Depth 678 FEET (Measurable)
Date: Started [redacted] 4/10/96 Completed [redacted] 4-25-96

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

Firm Name PETE COPE DRILLING CO., INC. Firm No. 213
Firm Official [signature] Date 5/16/96
and
Supervisor or Operator____ Date____
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

C

Form 238-7
3/95-C96

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT 053590

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

1. DRILLING PERMIT NO. 61-99-W-0028-000
Other IDWR No. D0009421

2. OWNER:
Name Mary Botts
Address 5625 Baseline Rd.
City Boise State ID Zip 83617

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W — X — E
S

Twp. 1 North ☐ or South X
Rge. 4 East X or West ☐
Sec. 2 1/4 (10 acres) NE 1/4 (40 acres) NE 1/4 (160 acres)
Gov't lot ____ County Elmore
Lat: : : Long: : :
Address of Well Site 5625 Baseline Rd. - Tippanuk
City Boise
(Give at least name of road + Distance to Road or Landmark)
Lt. ____ Blk. ____ Sub. Name ____

4. USE:
X Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other ____

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	0	158	4000 lbs	Overbore

Was drive shoe used? ☐ Y X N Shoe Depth(s) ____
Was drive shoe seal tested? ☐ Y X N How? ____

8. CASING/LINER:

Diameter	From	To	Gauge	Materia	Casing	Liner	Welded	Threaded
8.625	+6"	158'	.250	SS	X	☐	X	☐
8.625	+2	523	.250	SS	X	☐	X	☐
5.563	523	537	.250	STEEL	☐	☐	☒	☐

Length of Headpipe 523' Length of Tailpipe 3'

9. PERFORATIONS/SCREENS
☐ Perforations Method ____
☐ Screens Screen Type ____

From	To	Slot Size	Number	Diameter	Materia	Casing	Liner
523	533	.020		5.563	SS	X	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
310 ft. below ground Artesian Pressure ____ lb
Depth flow encountered Describe access port or control devices: ____

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
20+			

Water Temp. ____ Bottom hole temp. ____
Water Quality test or comments: ____
Depth first Water Encountered ____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia	From	To	Remarks:Lithology, Water Quality & Temp.	Water Y	Water N
12"	0	2	Top Soil	☐	X
12"	2	10	Sandy Clay	☐	X
12"	10	138	Tan Sand & Clay Seam	☐	X
12-8	138	175	Brown Sand & Clay Seam	☐	X
8"	175	195	Sand Stone	☐	X
8"	195	210	Brown Clay	☐	X
8"	210	215	Sand & Clay Seam	☐	X
8"	215	290	Tan Clay & Sand Seam	☐	X
8"	290	312	Sand-10/20	☐	X
8"	312	330	Sand & Clay Seam	☐	X
8"	330	350	Coarse Sand	☐	X
8"	350	367	Clay & Sand Seam	☐	X
8"	367	400	Brown Clay & Sand Seam	☐	X
8"	400	462	Tan Clay & Sand Seam	☐	X
8"	462	465	Tan Clay & Some Pea Gravel	☐	X
8"	465	514	Light Tan Clay & Some Stone	☐	X
8"	514	522	Sand Stone	☐	X
8"	522	534	Coarse Sand	X	
8"	534	540	Ash Color Clay	☐	X
				☐	☐
				☐	☐
				☐	☐
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				☐	☐

MICROFILMED
OCT 13 1999

RECEIVED
JUL - 1 1999
Department of Water Resources

RECEIVED
JUN 22 1999
WATER RESOURCES
WESTERN REGION

Completed Depth: 537' (Measurable)
Date: Started 5-18-99 Completed 6-2-99

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

Firm Name Hiddleston & Son, Inc. Firm No. 35
Firm Official ____ Date 6/17/99
Supervisor or Operator John Smith Date 6/17/99

788349

8

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. - - - -
Other IDWR No. D0025803

2. OWNER:
Name Dale Meeks
Address 977 N. Ethridge Pl
City Boise State ID Zip 83704

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W [X] E
S

Twp. 1 North ☐ or South X
Rge. 4 East X or West ☐
Sec. 2 1/4 (10 acres) NE 1/4 (40 acres) NE 1/4 (160 acres)
Gov't lot ____ County Elmore
Lat: : : Long: : :
Address of Well Site Prairie Grass Rd. off baseline rd.
City Mtn Home
(Give at least name of road – Distance to Road or Landmark)
Lt. ____ Blk. ____ Sub. Name ____

4. USE:
X Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other ____

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Bentonite	0	19	500 lbs	Overbore

Was drive shoe used? X Y ☐ N Shoe Depth(s) ____
Was drive shoe seal tested? ☐ Y X N How? ____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6.625	+2	428	.250	Steel	X	☐	X	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe N/A Length of Tailpipe ____

9. PERFORATIONS/SCREENS
☐ Perforations Method ____
X Screens Screen Type Johnson

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
429	434	.025		5"	SS	☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
331 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices: ____

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Pumping Level	Time
30			1

Water Temp. 60 Bottom hole temp. ____
Water Quality test or comments: ____
Depth first Water Encountered 409'

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10	0	2	Top Soil		X
10	2	5	Cleache		X
10	5	15	Sand & Gravel		X
10	15	18	Tan Clay		X
6	18	22	Tan Clay		X
6	22	78	Tan Coarse Sand		X
6	78	83	Tan Clay		X
6	83	213	Coarse Sand		X
6	213	225	Brown Sandstone		X
6	225	290	Coarse Sand		X
6	290	409	Tan Sandy Clay		X
6	409	414	Coarse Sand	X	
6	414	421	Tan Sand w/ Clay Seams		X
6	421	434	Tan Sand	X	
6	434	435	Tan Clay		X

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NOV 13 2002
WATER RESOURCES
WESTERN REGION

Completed Depth: 434' (Measurable)
Date: Started 10-28-02 Completed 11-01-02

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

Firm Name Hiddleston & Son, Inc. Firm No. 35
Firm Official Kenneth Koch Date 11-11-02
Supervisor or Operator Matt Hiddleston Date 11-11-02
(Sign once if Firm Official & Operator)

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JAN 0 2 2003

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9

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. - - - -
Other IDWR No. D0025928

2. OWNER:
Name Rich Cornell
Address HC 87 Box 700
City Mtn Home State ID Zip 83647

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N

W [X] E

Twp. 1 North ☐ or South X
Rge. 4 East X or West ☐
Sec. 2 1/4 (10 acres) NW 1/4 (40 acres) NE 1/4 (160 acres)

S

Gov't lot County Elmore
Lat: : : Long: : :
Address of Well Site ½ mile off baseline rd.
City Mtn Home
(Give at least name of road + Distance to Road or Landmark)
Lt. ____ Blk. ____ Sub. Name ____

4. USE:
X Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other ____

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Bentonite	0	19	600 lbs	Overbore

Was drive shoe used? X Y ☐ N Shoe Depth(s) ____
Was drive shoe seal tested? ☐ Y X N How? ____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6.625	+2	383	.250	Steel	X	☐	X	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe 5' Length of Tailpipe N/A

9. PERFORATIONS/SCREENS
☐ Perforations Method ____
X Screens Screen Type Johnson

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
385	390	.030		5"	SS	☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
300 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices: ____

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
20			

Water Temp. 62 Bottom hole temp. ____
Water Quality test or comments: ____
Depth first Water Encountered 185

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia.	From	To	Remarks:Lithology, Water Quality & Temp.	Water Y	Water N
10	0	2	Top Soil		X
10	2	10	Silty Sand		X
10	10	12	Big Sand & Gravel		X
10	12	19	Coarse Sand & Gravel		X
6	19	21	Tan Clay		X
6	21	88	Coarse Sand & Gravel		X
6	88	92	Brown Clay		X
6	92	165	Sand		X
6	165	185	Sandstone		X
6	185	250	Sand	X	
6	250	255	Tan Clay		X
6	255	380	Sand		X
6	380	382	Tan Clay		X
6	382	390	Coarse Sand	X	

Completed Depth: 390' (Measurable)
Date: Started 11-22-02 Completed 11-28-02

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

Firm Name Hiddleston & Son, Inc. Firm No. 35
Firm Official [signature] Date 12-20-02
Supervisor or Operator Matt Hiddleston Date ____
(Sign once if Firm Official & Operator)

10

Form 238-7
6/89

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

U PEWRITER OR
BALLPOINT PEN

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.

1. WELL OWNER

Name Jerry Morton

Address Box 48 Mayfield Stage & Boise

Owner's Permit No. 61-89-7-026 83707

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	6 5/8 inches	+ 2 feet	584 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
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 _____
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 _____
Placed from _____ feet to _____ feet
Surface seal depth 50 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 location.

N / W / E / S

Subdivision Name _____

Lot No. _____ Block No. _____

County Elmore

SW ¼ NW ¼ Sec. 34, T. 1 ☒N ☐S R. 4 ☒E ☐W

7. WATER LEVEL

Static water level 460 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.

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
25		2

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
8"	0	10	Sand		
8"	10	28	Clay w/some sand		
8"-6"	28	260	Clay w/ sand		
6"	260	510	Cemented sand & Gravel & Clay		
6"	510	583	Fine sand (gray) w/very little gravel	X	
6"	583	586	sand & gravel	X	

NOV 15 1989
Department of Water Resources

DEC 13 1989
Department of Water Resources
Western Regional Office

MICROFILMED
JUN 05 1990

10.

Work started 10-24-89 finished 11-11-89

11. DRILLERS CERTIFICATION

OL

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

Firm Name Hiddleston & Son, Inc Firm No. 35

Address Mt. Home, Id Date 11-12-89

Signed by (Firm Official) Mark S Hiddleston

and

(Operator) Mark S Hiddleston

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

/95-C96

Inspected by _____
Twp ____ Rgc ____ Sec ____
____ 1/4 ____ 1/4 ____ 1/4
Lat: : : Long: : :

11

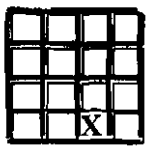
IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. DRILLING PERMIT NO. 61-99-W-0059-000
Other IDWR No. D0012097

2. OWNER:
Name Ronald & Pamela Miller
Address HC 34 Mayfield Stage
City Boise State ID Zip 83716

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N



E

S

Twp. 1 North X or South ☐
Rge. 4 East X or West ☐
Sec. 34 1/4 (10 acres) SW 1/4 (40 acres) SE 1/4 (160 acres)
Gov't lot _____ County Elmore
Lat: : : Long: : :
Address of Well Site Mayfield Road
City Mayfield
(Give at least name of road + Distance to Road or Landmark)
Lt. _____ Blk. _____ Sub. Name _____

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

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

6. DRILL METHOD
☐ Air Rotary ☐ Cable X Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	0	18	900 lbs	Overbore

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
5.438	+2	596	288	Steel	X	☐	X	☐
5.563	606	616	288	Steel	X	☐	X	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
596	606	020		5.563	SS	X	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
450 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ Describe access port or control devices: _____

11. WELL TESTS: 59137
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time

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

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
12	0	3	Top Soil		X
12	3	15	Hard Pan		X
12	15	18	Sand & Clay Seams		X
8	18	22	Tan Clay		X
8	22	257	Tan Sand & Clay Seams		X
8	257	260	Tan Clay		X
8	260	320	Brown Silt & Sand		X
8	320	400	Tan Clay & Some Sand		X
8	457	469	White Clay & Large Stone		X
8	469	471	Sand – 015		X
8	471	500	Tan Clay & Some Sand		X
8	500	520	White Clay & Some Sand		X
8	520	594	Tan Clay & Some Sand		X
8	594	610	White Clay & Some Sand		X
8	610	615	Medium Sand & White Clay		X
8	615	620	White Clay & Some Stone		X

MICROFILMED NOV 30 1999

RECEIVED OCT 13 1999 WATER RESOURCES WESTERN REGION

Completed Depth: 616 (Measurable)
Date: Started 9-18-99 Completed 9-23-99

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

Firm Name Hiddleston & Son, Inc. Firm No. 35
Firm Official Mark R. Hiddleston Date 10/11/99
Supervisor or Operator John M. Smith Date _____
(Sign once if Firm Official & Operator)

Form 238-7
3/95-C96

767235

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

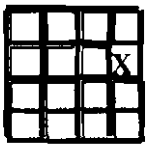
12

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. DRILLING PERMIT NO. __-__-__-____-____
Other IDWR No. D0015796

2. OWNER:
Name Tim Anderson
Address 4450 S. Timridge Way
City Boise State ID Zip 83716

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location



Twp. 1 North X or South ☐
Rge. 4 East X or West ☐
Sec. 33 1/4 (10 acres) SE 1/4 (40 acres) NE 1/4 (160 acres)

Gov't lot _____ County Ada
Lat: : : Long: : :
Address of Well Site 24601 S. Old Hwy 30
City Boise
(Give at least name of road + Distance to Road or Landmark)

Lt. _____ Blk. _____ Sub. Name _____

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

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	0	18	800lbs	Overbore

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6.625	+2	660	250	Steel	X	☐	X	☐
5.563	654	660	188	Steel	☐	X	X	☐
					☐	☐	☐	☐

Length of Headpipe 6' Length of Tailpipe N/A

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
X Screens Screen Type Johnson

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
660	665	020		5.563	SS	☐	X
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
528ft below ground Artesian Pressure _____ lb
Depth flow encountered ____ Describe access port or control devices: _____

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Pumping Level	Time
20		~650	1hr

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____
Depth first Water Encountered 583'

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks:Lithology, Water Quality & Temp.	Water Y	Water N
10	0	2	Top soil		X
10	2	10	Tan sand		X
10-6	10	120	Sand & Clay seam		X
6	120	260	Sand & small gravels		X
6	260	583	Cemented sand & gravel		X
6	583	620	Fine sand	X	
6	620	630	Tan clay		X
6	630	665	Med. Sand	X	

RECEIVED
DEC 27 2000
Department of Water Res...

RECEIVED
DEC 12 2000
WATER RESOURCES
WESTERN REGION

Completed Depth: 665' (Measurable)
Date: Started 10/27/00 Completed 11/09/00

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

Firm Name Hiddleston & Son, Inc Firm No. 35
Firm Official _____ Date 12-7-00
Supervisor or Operator _____ Date 12-7-00
(Sign once if Firm Official & Operator)

869364-772052

13

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. __-__-__-____-____
Other IDWR No. D0019379

2. OWNER:
Name JIM PHAGAN
Address 4200 PASADENA DR. #30
City BOISE State ID Zip 83705

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W E
S

Twp. 1 North ☒ or South ☐
Rge. 4 East ☒ or West ☐
Sec. 33 1/4 (10 acres) NE 1/4 (40 acres) NW 1/4 (160 acres)
Gov't lot _____ County ADA
Lat: : : Long: : :
Address of Well Site 23735 DESERT WIND
City BOISE
(Give at least name of road + Distance to Road or Landmark)
Lt. _____ Blk. _____ Sub. Name REGINA HEIGHTS

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/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
BENTONITE	0	18	9 SACKS	OVERBORE

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
6	+2	560	250	ST	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe 10'8" Length of Tailpipe _____

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
☒ Screens Screen Type telescoping

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
559	569	20		5"	ST ST	☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
481 ft. below ground Artesian Pressure _____ lb
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
17		560	2 HRS

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____
Depth first Water Encountered 487

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10	0	3	BROWN TOPSOIL		☒
10	3	14	BROWN SANDY CLAY		☒
10	14	18	TAN SANDY CLAY		☒
8	18	29	TAN SANDY CLAY		☒
8	29	57	BROWN CLAY, SAND & SMALL		
			GRAVEL		☒
8	57	81	BLACK LAVA		☒
8	81	212	TAN CLAY W/SAND		☒
8	212	244	STICKY TAN CLAY		☒
8	244	309	STICKY TAN CLAY W/STRIPS BROWN		
			SAND		☒
8	309	376	BROWN SAND W/SMALL STRIPS		
			TAN CLAY		☒
8	376	421	CEMENTED BROWN SAND		☒
8	421	480	STRIPS BROWN SAND & TAN CLAY		☒
6	480	487	STRIPS BROWN SAND & TAN CLAY		☒
6	487	511	FINE BROWN & CLEAR QUARTZ SAND	☒	
6	511	539	STICKY TAN CLAY		☒
6	539	541	VERY FINE BROWN & MICA SAND	☒	
6	541	545	DIRTY BROWN SAND & SOFT TAN		
			CLAY		☒
6	545	562	MEDIUM STICKY TAN CLAY		☒
6	562	572	COARSE CLEAR QUARTZ SAND &		
			PEA GRAVEL	☒	

RECEIVED
JAN 03 2002
WATER RESOURCES
WESTERN REGION

Completed Depth: 569 (Measurable)
Date: Started 11/12/01 Completed 11/17/01

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

Firm Name SOS Welldrilling & Pump Co Firm No. 212
Firm Official Frank Skinner Date 12-5-01
Supervisor or Operator Dale Date 12-28-01
(Sign once if Firm Official & Operator)

Date: 12/5/01 Time: 12:12 PM

14

Form 238-7
3/95-C96

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT 95988

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

1. DRILLING PERMIT NO. 61-99-W-0024-000
Other IDWR No. D0009418

2. OWNER:
Name Boise Stage Stop
Address I-84 Exit 71
City Boise State ID Zip 83716

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N / W / E / S — X

Twp. 1 North X or South ☐
Rge. 4 East X or West ☐
Sec. 32 1/4 (10 acres) NE 1/4 (40 acres) NE 1/4 (160 acres)
Gov't lot County Ada
Lat: Long:
Address of Well Site
City Boise
(Give at least name of road + Distance to Road or Landmark)
Lt. Blk. Sub. Name

4. USE:
X Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	0	54	1000 lbs	overbore

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8 5/8	+2	54	.250	Steel	X	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe N/A Length of Tailpipe N/A

9. PERFORATIONS/SCREENS
☐ Perforations Method
☐ Screens Screen Type

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
40 ft. below ground Artesian Pressure lb
Depth flow encountered Describe access port or control devices:

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
20+			

Water Temp. Bottom hole temp.
Water Quality test or comments:
Depth first Water Encountered

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
12	0	2	Top Soil	☐	X
12	2	16	Sand	☐	X
12	16	22	Tan Clay	☐	X
8	22	54	Decon Granite	☐	X
8	54	65	Gray Lava	☐	X
8	65	66	Gravels	X	☐

RECEIVED
JUN 04 1999
WATER RESOURCES
WESTERN REGION

Completed Depth: 65' (Measurable)
Date: Started 5/17/99 Completed 5/17/99

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

Firm Name Hiddleston & Son, Inc. Firm No. 35
Firm Official Ron Date 6/3/99
Supervisor or Operator John A Smith Date 5/27/99
(Sign once if Firm Official & Operator)

MICROFILMED
AUG 25 1999

Form 238-7
1/78

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.

RECEIVED MAY 20 1982 Department of Water Resources Western Regional Office

15

1. WELL OWNER

Name King's men (Streeper Realty)

Address Mtn Home, Id

Owner's Permit No. ______

2. NATURE OF WORK

☐ New well ☑ Deepened ☐ Replacement
☐ Abandoned (describe method of abandoning) ______

3. PROPOSED USE

☑ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other ______ (specify type)

4. METHOD DRILLED

☑ Rotary ☑ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other ______

5. WELL CONSTRUCTION

Casing schedule: ☑ Steel ☐ Concrete ☐ Other ______

Thickness		Diameter		From		To	
.250	inches	6 5/8	inches	+ 1	feet	810	feet
	inches		inches		feet		feet
	inches		inches		feet		feet
	inches		inches		feet		feet

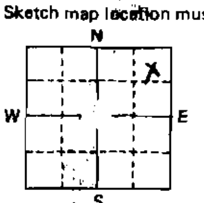
Was casing drive shoe used? ☑ Yes ☐ No
Was a packer or seal used? ☐ Yes ☑ No
Perforated? ☐ Yes ☑ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation ______ inches by ______ inches

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

Well screen installed? ☐ Yes ☑ No
Manufacturer's name ______
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 ______
Placed from ______ feet to ______ feet
Surface seal depth ______ Material used in seal: ☐ Cement grout ☐ Puddling clay ☐ Well cuttings
ok 24
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 location.



Subdivision Name ______

Lot No. ______ Block No. ______

County Ada

NE ¼ NE ¼ Sec. 32, T. 1 N/S, R. 4 E/W.

7. WATER LEVEL

Static water level 636 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 ______

8. WELL TEST DATA

☐ Pump ☐ Bailer ☑ Air ☐ Other ______

Discharge G.P.M.	Pumping Level	Hours Pumped
20		2.0

9. LITHOLOGIC LOG 85689

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
6	710	740	Clay & Fine Sand (caving)	✓	
6	740	805	Sand (coarser) heaving	✓	
6	805	807	Coarse Sand & Gravel	✓	
6	807	811	White coarse Sand & G	✓	

RECEIVED MAY 17 1982 Department of Water Resources

10. Work started 26 APR 82 finished 7 May 82

11. DRILLERS CERTIFICATION

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

Firm Name Hiddleston Firm No. 35

Address Mountain Home Date 10 May 82

Signed by (Firm Official) [signature]

and

(Operator) [signature]

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

16

721744

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. 61 -96 -W -0054 -000
Other IDWR No.

2. OWNER:
Name **Boise Stage Stop**
Address **I-84 Exit 71**
City **Boise** State **ID** Zip **83709**

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W E
S

Twp. **1** North **X** or South ☐
Rge. **4** East **X** or West ☐
Sec. **29** 1/4 (10 acres) **SW** 1/4 (40 acres) **SE** 1/4 (160 acres)

Gov't lot ____ County **Ada**
Lat: : : Long: : :
Address of Well Site **I-84 Eixt 71**
City **Boise**
(Give at least name of road + Distance to Road or Landmark)

Lt. ____ Blk. ____ Sub. Name ____

4. USE:
X Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other ____

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Bentonite	**0**	**57**	**900 lbs**	**Overbore**

Was drive shoe used? **X** Y ☐ N Shoe Depth(s) ____
Was drive shoe seal tested? ☐ Y **X** N How? ____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8.625	**3**	**57**	**250**	**Steel**	**X**	☐	**X**	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe ____ Length of Tailpipe ____

9. PERFORATIONS/SCREENS
☐ Perforations Method ____
☐ Screens Screen Type ____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
115 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices: ____

11. WELL TESTS:
☐ Pump ☐ Bailer **X** Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
3 gpm			

Water Temp. ____ Bottom hole temp. ____
Water Quality test or comments: ____
Depth first Water Encountered ____

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10.75	**0**	**2**	**Top Soil**		**X**
10.75	**2**	**57**	**Sand**		**X**
10-8	**57**	**63**	**Gray Lava**		**X**
8	**63**	**66**	**Brown Cinder**	**X**	
8	**66**	**75**	**Gray Lava**		**X**
8	**75**	**80**	**Brown Cinder & Clay**		**X**
8	**80**	**140**	**Decomposed Granite**		**X**

RECEIVED
JUN 25 2002
WATER RESOURCES
WESTERN REGION

Completed Depth: **130'** (Measurable)
Date: Started **10-01-96** Completed **10-01-96**

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

Firm Name **Hiddleston & Son, Inc.** Firm No. **35**
Firm Official [signature] Date **6-18-02**
Supervisor or Operator **John Smith** Date **10-26-96**
(Sign once if Firm Official & Operator)

05735

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. 61 -96 -W -0054 -000
Other IDWR No. _____

2. OWNER:
Name BOISE STAGE STOP
Address I-84 EXIT 71
City BOISE State ID Zip 83647

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W E S

Twp. 1 North X or South ☐
Rge. 4 East X or West ☐
Sec. 32 NE 1/4 (10 acres) NE 1/4 (40 acres) 1/4 (160 acres)
Gov't lot _____ County ADA
Lat: : : Long: : :
Address of Well Site SAME
City BOISE
(Give at least name of road + Distance to Road or Landmark)
Lt. _____ Blk. _____ Sub. Name _____

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

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
BENTONITE	0	57	900 LBS	OVERBORE

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8.625	3	57	250	STEEL	X	☐	X	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
115 ft. below ground Artesian Pressure _____ lb
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
3			

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

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Water Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temp.	Y	N
10 ¾	0	2	TOP SOIL		
10 ¾	2	57	SAND		
10-8	57	63	GRAY LAVA		
8	63	66	BROWN CINDER	X	
8	66	75	GRAY LAVA		
8	75	80	BROWN CINDER & CLAY		
8	80	140	DECOP GRANITE		

RECEIVED
NOV 0 1 1996
Department of Water Resources

RECEIVED
OCT 2 2 1996
MICROFILMED WATER R... WESTERN REGION
DEC 0 6 1996

Completed Depth: 130' (Measurable)
Date: Started 10/01/96 Completed 10/01/96

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

Firm Name HIDDLESTON & SON, INC. Firm No. 35
Firm Official Ken Kent Date 10-21-96
Supervisor or Operator John H Smith Date _____
(Sign once if Firm Official & Operator)

Date: 10/9/96 Time: 9:14 AM

721745

17

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. 61 -96 -W -0055 -000
Other IDWR No. _____

2. OWNER:
Name **Boise Stage Stop**
Address **I-84 Exit 71**
City **Boise** State **ID** Zip **83709**

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W E
S

Twp. 1 North X or South ☐
Rge. 4 East X or West ☐
Sec. 29 1/4 (10 acres) SW 1/4 (40 acres) SE 1/4 (160 acres)

Gov't lot _____ County **Ada**
Lat: : : Long: : :
Address of Well Site **I-84 Eixt 71**
City **Boise**
(Give at least name of road + Distance to Road or Landmark)

Lt. _____ Blk. _____ Sub. Name _____

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

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	**0**	**56**	**900 lbs**	**Overbore**

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8.625	4	56	250	Steel	X	☐	X	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Materia	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
115 ft. below ground Artesian Pressure ___ lb
Depth flow encountered ___ ft. Describe access port or control devices: _____

11. WELL TESTS:
☐ Pump ☐ Bailer Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
N/A			

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

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia.	From	To	Remarks; Lithology, Water Quality & Temp.	Water Y	Water N
10.75	0	2	Top Soil		X
10.75	2	18	Sand & Seam Gravels		X
10.75	18	50	Sand		X
10.75	50	56	Tan Clay		X
10.75	56	70	Gray Lava & Black Clay		X
8	70	75	Brown Clay & Brown Cinders		X
8	75	85	Gray Lava		X
8	85	92	Gray Lava & Brown Cinders		X
8	92	115	Decomposed Granite		X
8	115	130	Green Sand Stone		X
8	130	150	Green & Brown Clay		X
8	150	180	Decomposed Granite & Clay Seams		X

RECEIVED
JUL 12 2002
WATER RESOURCES WESTERN REGION
RECEIVED
JUN 25 2002
WATER RESOURCES WESTERN REGION

Completed Depth: 180' (Measurable)
Date: Started 10-02-96 Completed 10-02-96

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

Firm Name **Hiddleston & Son, Inc.** Firm No. 35
Firm Official Kenneth Hol Date 6-18-02
Supervisor or Operator **John Smith** Date **10-26-96**
(Sign once if Firm Official & Operator)

C

Form 238-7 3/95 C96

057357

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. DRILLING PERMIT NO. 61 -96 -W -0055 -000
Other IDWR No.

2. OWNER:
Name BOISE STAGE STOP
Address I-84 EXIT 71
City BOISE State ID Zip ~~83647~~ 83706

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N / W / E / S

Twp. 1 North X or South ☐
Rge. 4 East X or West ☐
Sec. 32 NE1/4 (10 acres) NE 1/4 (40 acres) 1/4 (160 acres)

Gov't lot ____ County ADA
Lat: : : Long: : :
Address of Well Site SAME
City BOISE
(Give at least name of road + Distance to Road or Landmark)
Lt. ____ Blk. ____ Sub. Name ____

4. USE:
X Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
BENTONITE	0	56	900 LBS	OVERBORE

Was drive shoe used? X Y ☐ N Shoe Depth(s) ____
Was drive shoe seal tested? ☐ Y X N How? ____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8.625	4	56	250	STEEL	X	☐	X	☐
					☐		☐	
					☐	☐	☐	☐

Length of Headpipe ____ Length of Tailpipe ____

9. PERFORATIONS/SCREENS
☐ Perforations Method ____
Screens Screen Type ____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
____ ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices: ____

11. WELL TESTS:
☐ Pump ☐ Bailer Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time

Water Temp. ____ Bottom hole temp. ____
Water Quality test or comments: ____
Depth first Water Encountered ____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	N
10 ¾	0	2	TOP SOIL		
10 ¾	2	18	SAND & SEAM GRAVELS		
10 ¾	18	50	SAND		
10 ¾	50	56	TAN CLAY		
10 ¾	56	70	GRAY LAVA & BLACK CLAY		
8	70	75	BROWN CLAY & BROWN CINDERS		
8	75	85	GRAY LAVA		
8	85	92	GRAY LAVA & BROWN CINDERS		
8	92	115	DECON GRANITE		
8	115	130	GREEN SAND STONE		
8	130	150	GREEN & BROWN CLAY		
8	150	180	DECON GRANITE & CLAY SEAMS		

RECEIVED
NOV 01 1996
Department of Water Resources

RECEIVED
OCT 22 1996
WATER RESOURCES

MICROFILMED
DEC 06 1996

Completed Depth: 180' (Measurable)
Date: Started 10/02/96 Completed 10/02/96

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

Firm Name HIDDLESTON & SON, INC. Firm No. 35

Firm Official [signature] Date 10-21-96

Supervisor or Operator [signature] Date ____
(Sign once if Firm Official & Operator)

Date: 10/9/96 Time: 9:34 AM

721748

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. 61 -96 -W -0058 -000
Other IDWR No.

2. OWNER:
Name **Boise Stage Stop**
Address **I-84 Exit 71**
City **Boise** State **ID** Zip **83709**

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W [X] E
S

Twp. 1 North X or South ☐
Rge. 4 East X or West ☐
Sec. 29 1/4 (10 acres) SW 1/4 (40 acres) SE 1/4 (160 acres)
Gov't lot ____ County **Ada**
Lat: : : Long: : :
Address of Well Site **I-84 Eixt 71**
City **Boise**
(Give at least name of road + Distance to Road or Landmark)
Lt. ____ Blk. ____ Sub. Name ____

4. USE:
X Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	**0**	**44.6**	**650 lbs**	**Overbore**

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8.625	2	44.6	250	Steel	X	☐	X	☐
4	-10	120	40	PVC	☐	X	☐	X
					☐	☐	☐	☐

Length of Headpipe **110'** Length of Tailpipe **2"**

9. PERFORATIONS/SCREENS
☐ Perforations Method
X Screens Screen Type **Johnson**

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
120	140	.020		4"	PVC	☐	X
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
80 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices:

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
15 gpm			

Water Temp. ____ Bottom hole temp. ____
Water Quality test or comments:
Depth first Water Encountered ____

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia.	From	To	Remarks:Lithology, Water Quality & Temp.	Water Y	Water N
10.75	0	2	**Top Soil**		X
10.75	2	44.6	**Sand**		X
10-8	44.6	62	**Gray Lava**		X
8	62	66	**Brown Cinder & Gray Lava**	X	
8	66	74	**Gray Lava**		X
8	74	80	**Brown Cinder & Clay**		X
8	80	160	**Decomposed Granite**		X

RECEIVED
JUN 25 2002
WATER RESOURCES
WESTERN REGION

Completed Depth: **140'** (Measurable)
Date: Started **10-07-96** Completed **10-0896**

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

Firm Name **Hiddleston & Son, Inc.** Firm No. **35**
Firm Official Kenneth Kah Date **6-18-02**
Supervisor or Operator **John Smith** Date **10-21-96**
(Sign once if Firm Official & Operator)

057358

Form 238-7
1/95-C96

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. DRILLING PERMIT NO. 61 -96 -W -0058 -000
Other IDWR No. _____

2. OWNER:
Name BOISE STAGE STOP
Address I-84 EXIT 71
City BOISE State ID Zip 83647

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W E S

Twp. 1 North X or South ☐
Rge. 4 East X or West ☐
Sec. 32 NE1/4 (10 acres) NE 1/4 (40 acres) ____ 1/4 (160 acres)
Gov't lot ____ County ADA
Lat: : : Long: : :
Address of Well Site SAME
City BOISE
(Give at least name of road + Distance to Road or Landmark)
Lt. ____ Blk. ____ Sub. Name ____

4. USE:
X Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other ____

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
BENTONITE	0	44.6	650 LBS	OVERBORE

Was drive shoe used? X Y ☐ N Shoe Depth(s) ____
Was drive shoe seal tested? ☐ Y X N How? ____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8.625	2	44.6	250	STEEL	X	☐	X	☐
4	-10	120	40	PVC	☐	X	☐	X
					☐	☐	☐	☐

Length of Headpipe 110 Length of Tailpipe 2'

9. PERFORATIONS/SCREENS
☐ Perforations Method ____
X Screens Screen Type JOHNSON

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
120	140	.020		4"	PVC	☐	X
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
80 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices:

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Pumping Level	Time
15			

Water Temp. ____ Bottom hole temp. ____
Water Quality test or comments: ____
Depth first Water Encountered ____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10 ¾	0	2	TOP SOIL		
10 ¾	2	44.6	SAND		
10-8	44.6	62	GRAY LAVA		
8	62	66	BROWN CINDER GRAY LAVA	X	
8	66	74	GRAY LAVA		
8	74	80	BROWN CINDER & CLAY		
8	80	160	DECOP GRANITE		

RECEIVED
NOV 0 1 1996
Department of Water Resources

RECEIVED
OCT 22 1996
WATER RESOURCES
WESTERN REGION

MICROFILMED
DEC 0 6 1996

Completed Depth: 140' (Measurable)
Date: Started 10/07/96 Completed 10/08/96

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

Firm Name HIDDLESTON & SON, INC. Firm No. 35
Firm Official [signature] Date 10-21-96
Supervisor or Operator [signature] Date ____
(Sign once if Firm Official & Operator)

Date: 10/9/96 Time: 9:24 AM

Form 238-7
9/82

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

[redacted] USE TYPEWRITER OR BALLPOINT PEN

19

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.

9

1. WELL OWNER

Name Boise Stage Stop

Address _____

Owner's Permit No. _____

2. NATURE OF WORK

☑ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☑ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☑ Rotary ☑ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☑ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	8-5/8 inches	+ 2 feet	53 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ 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 _____
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 _____
Placed from _____ feet to _____ feet
Surface seal depth 53 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 location.

N / W / E / S

Subdivision Name _____

Lot No. _____ Block No. _____

County Ada

NE ¼ NE ¼ Sec. 32, T. 1 N/S, R. 4 E/W.

7. WATER LEVEL

Static water level 34 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.

8. WELL TEST DATA

☐ Pump ☐ Bailer ☑ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
20		2

9. LITHOLOGIC LOG

87169

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
10	0	8	Soil + Hard Pan		
	8	35	Sand + Gravel		
	35	45	Sand + Clay		
	45	52	Clay		
10-8	52	65	Gray Lava		
8	65	69	Gray + Brown cinder	X	
	69	72	Gray Lava		
	72	74	Gray Lava clay + cinder		
	74	82	Gray Lava		
	82	83	Brown cinder		
	83	84	Gray Lava		
	84	88	Brown cinder + Clay		
	88	89	Red Clay		
	89	92	Sand		

RECEIVED
DEC 8 1986
Department of Water Resources

RECEIVED
MAR 11 1987
Department of Water Resources
Western Regional Office

Department of Water Resources

10.

Work started 11-7-86 finished 11-14-86

11. DRILLERS CERTIFICATION

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

Firm Name Middleton Drilling Firm No. 35

Address Mt Home Date 11-24-86

Signed by (Firm Official) _____

and

(Operator) Ken Rod

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

20

776954

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. - - - - ____ ____
Other IDWR No. **D0019974**

2. OWNER:
Name **Boise Stage Stop – George Winge**
Address **I-84 Exit 71**
City **Boise** State **ID** Zip **83716**

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W — X — E
S

Twp. **1** North **X** or South ☐
Rge. **4** East **X** or West ☐
Sec. **32** 1/4 (10 acres) **NW** 1/4 (40 acres) **NE** 1/4 (160 acres)
Gov't lot ____ County **Emore**
Lat: : : Long: : :
Address of Well Site **I-84 Exit 71**
City **Mtn Home**
(Give at least name of road – Distance to Road or Landmark)
Lt. ____ Blk. ____ Sub. Name ____

4. USE:
☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection X Other **Industrial**

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	1	18		

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
6.625	+2	69	250	Steel	☐	X	X	☐
4	-10	130	Sch40	PVC	☐	X	☐	X
					☐	☐	☐	☐

Length of Headpipe **60'** Length of Tailpipe **10**

9. PERFORATIONS/SCREENS
☐ Perforations Method ____
☐ Screens Screen Type ____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
70	120	020		4"	PVC	☐	X
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
58 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices: ____

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

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

Water Temp. ____ Bottom hole temp. ____
Water Quality test or comments: ____
Depth first Water Encountered ____

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
6	67	89	Gravel		X
6	69	90	Gray Lava & Some Clay		X
6	90	104	Red Cinder & Quartz Sand		X
6	104	107	Quartz Sand		X
6	107	130	Quartz Sand & Some Clay		X
6	130		Fine Sand		X

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JUN 04 2002
WATER RESOURCES
WESTERN REGION

Completed Depth: 130' (Measurable)
Date: Started 5/30/02 Completed 5/31/02

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

Firm Name **Hiddleston & Son, Inc.** Firm No. **35**
Firm Official ____ Date ____
Supervisor or Operator ____ Date ____
(Sign once if Firm Official & Operator)

21

USE TYPEWRITER OR BALL POINT PEN

State of Idaho
Department of Water Administration

WELL DRILLER'S REPORT

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

1. WELL OWNER

Name Richard Cornell

Address Mountain Home, Idaho

Owner's Permit No.

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test

☐ Municipal ☐ Industrial ☐ Stock

4. METHOD DRILLED

☒ Cable ☐ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 6 inches Total depth 300 feet
Casing schedule: ☒ Steel ☐ Concrete

Thickness	Diameter	From	To
¼ inches	6 inches	0+12 feet	71 feet
inches	inches	feet	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 inches by inches

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

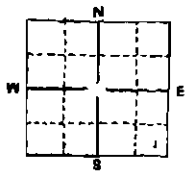
Well screen installed? ☐ Yes ☒ No
Manufacturer's name
Type Model No.
Diameter Slot size Set from feet to feet
Diameter Slot size Set from feet to feet

Gravel packed? ☐ Yes ☒ No Size of gravel
Placed from feet to 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 Elmore

SE ¼ SE ¼ Sec. 28 T. 1 N/S, R. 5 E/W

7. WATER LEVEL

Static water level 64 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

8. WELL TEST DATA

☐ Pump ☒ Bailer ☐ Other

Discharge G.P.M.	Draw Down	Hours Pumped

104259

9. LITHOLOGIC LOG

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
6	0	20	Sand and clay.		X
	20	45	Coarse sand.		
	45	95	Cemented sand and gravel.	X	
	95	131	Cemented sand, gravel, some clay.		
	131	203	Boulders, clay seams.		
	203	300	Decomposed granit and clay.		
			0505		

10.

Work started 2/23/71 finished 3/24/71

11. DRILLER'S CERTIFICATION

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

Ron Hiddleston-Driller
C. L. Hiddleston & Son 35
Driller's or Firm's Name Number

Mountain Home, Idaho
Address

C. L. Hiddleston 4/26/71
Signed By Date

USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT

22

USE TYPEWRITER OR BALL POINT PEN

tate of Idaho
Depa_ .nt of Water Resources

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.

1. WELL OWNER

Name Gary Dan Beck

Address Middleton

Owner's Permit No. 63-8720

2. NATURE OF WORK

☑ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

3. PROPOSED USE

☐ Domestic ☐ Irrigation ☐ Test ☐ Other (specify type)

☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection

4. METHOD DRILLED

☑ Cable ☐ Rotory ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 8 inches Total depth 375 feet

Casing schedule: ☐ Steel ☐ Concrete

Thickness	Diameter	From	To
250 inches	8 inches	+ 1 feet	375 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ 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 ¼ inches by 2 inches

Number		From		To	
200	perforations	103	feet	200	feet
80	perforations	228	feet	250	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 _____

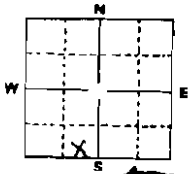
Placed from _____ feet to _____ feet

Surface seal depth 20' Material used in seal ☐ Cement grout ☑ Puddling clay ☐ Well cuttings

Sealing procedure used ☐ Slurry pit ☐ Temporary surface casing ☐ Overbore to seal depth

6. LOCATION OF WELL 63

Sketch map location must agree with written location.



Subdivision Name _____

Lot No. _____ Block No. _____

County [redacted] Ada

SW ¼ SE ¼ Sec. 28 T. 1 N. R. 4 E.

7. WATER LEVEL

Static water level 160 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

8. WELL TEST DATA

☐ Pump ☑ Bailer ☐ Other

Discharge G.P.M.	Draw Down	Hours Pumped

9. LITHOLOGIC LOG 106023

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
8"	0	3	Top soil		
	3	56	Sand + Clay		
	56	69	Coarse Sand		
	69	103	Lava		
	103	200	Coarse Sand	✓	
	200	228	Sand + Clay Streaks		
	228	245	Coarse Sand	✓	
	245	265	Fine Sand		
	265	305	Sand + Clay		
	305	340	Coarse Sand	✓	
	340	375	Coarse Sand + Clay		

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DEC 12 1978
Department of Water Resources
Western Regional Office

10.

Work started 2/14/78 finished 5/17/78

11. DRILLERS CERTIFICATION

Firm Name Middleton Pump Co. Firm No. 260

Address Middleton Id. Date 12/1/78

Signed by (Firm Official) Harold Wheyer

and

(Operator) Harold Wheyer

USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMENT

23

Form 238-7
1/94

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Use Typewriter
or
Ball Point Pen

1. DRILLING PERMIT NO. 63-94-W-0489 - 000
Other IDWR No.

2. OWNER:
Name GEORGE WINJE
Address HC34/MAYFIELD STG.52
City BOISE State ID Zip 83706

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

N / W / E / S

Twp. 1 North ☒ or South ☐
Rge. 4 East ☒ or West ☐
Sec. 29, 10 acre 1/4 SW 40 acre 1/4 SE 160 acre 1/4
Gov't Lot ____ County ADA

Address of Well Site
ORCHARD/MAYBER EXIT City
(Give at least name of road + Distance to Road or Landmark)

Lt. Blk. Sub. Name

4. PROPOSED USE:
☒ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK
☒ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD
☐ Mud Rotary ☒ Air Rotary ☐ Cable ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
BENT	0	18	25	OVERBORE

Was drive shoe used? Y ☒ N ☐
Was drive shoe seal tested? Y ☐ N ☒ How?

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6"	+1	46	250	STEEL	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe Length of Tailpipe

9. PERFORATIONS/SCREENS
☐ Perforations Method
☐ Screens Screen Type NIDDOCUMED

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

FEB 08 1995

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
NO ft. below ground Artesian pressure lb.
Depth flow encountered ft. Describe access port or control devices:

11. WELL TESTS:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
NO		NO	NO

Water Temp. Bottom hole temp.
Water Quality test or comments: 091183

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water Y	Water N
9"	0	1	TOPSOIL	NO	
9"	1	7	BLACK HARD LAVA	NO	
9"	7	12	YELLOW SOAP STONE	NO	
9"	12	18	BEIGE COARSE SANDSTONE	NO	
6"	18	25	BEIGE COARSE SANDSTONE	NO	
6"	25	30	BRN CLAY	NO	
6"	30	41	GRAY PEA GRAVEL	YES	
6"	41	46	BRN SOFT CLAY	NO	
6"	46	68	BLACK LAVA	NO	
6"	68	72	GRAY PACKED FINE SAND	NO	
6"	72	80	RUSTY BRN CLAY	NO	
6"	80	87	PACKED GRAY SAND COARSE	NO	
6"	87	95	BRN CLAY	NO	
6"	95	110	PACKED BRN COARSE SAND	NO	
6"	110	120	BRN CLAY	NO	
6"	120	130	BRN SANDY CLAY	NO	
6"	130	140	BRN CLAY	NO	
6"	140	150	PACKED BRN SAND	NO	
6"	150	160	BRN SAND	NO	
6"	160	162	BRN CLAY	NO	
6"	162	180	BRN COARSE SAND	NO	
6"	180	185	BRN CLAY	NO	
6"	185	202	BRN COARS SAND	NO	

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SEP 15 1994
Department of Water Resources

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JUN 21 1994
WATER RESOURCES
WESTERN REGION

Completed Depth 203' FROM TOP OF CASING (Measurable)
Date: Started 6/8/94 Completed 6/10/94

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

Firm Name S.O.S.WELLDRILLING Firm No. 212
Firm Official Frank Skinner Date 6-14-94
and
Supervisor or Operator Tony Hackett Date 6-14-94
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Form 238-7
4/92

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

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.

24

1. WELL OWNER

Name Neil Helmick

Address HC 34 Mayfield, Boise, ID 83706

Drilling Permit No. 61-92-W-044

Water Right Permit No. _____

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase ☐ Modification
☒ Abandoned (describe abandonment or modification procedures such as liners, screen, materials, plug depths, etc. in lithologic log, section 9.)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Monitor
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☒ Air ☐ Auger ☐ Reverse rotary
☐ Cable ☐ Mud ☐ Other _____ (backhoe, hydraulic, etc.)

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☒ Other PVC

Thickness	Diameter	From	To
.250 inches	6 5/8 inches	+ 3 feet	404 feet
Sch 40 inches	4 inches	240 feet	440 feet
_____ inches	_____ inches	_____ feet	_____ feet

Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation? _____ inches by _____ inches

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

Well screen installed? ☒ Yes ☐ No
Manufacturer Johnson Type PVC
Top Packer or Headpipe 240
Bottom of Tailpipe 510

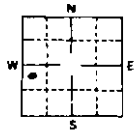
Diameter 4" Slot size .010 Set from 410 feet to 440 feet
Diameter 4" Slot size .020 Set from 440 feet to 510 feet
Gravel packed? ☐ Yes ☐ No ☐ Size of gravel _____
Placed from _____ feet to _____ feet

Surface seal depth 38 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: PVC ☒ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata

Describe access port Top of 6"

6. LOCATION OF WELL

Sketch map location must agree with written location.



Subdivision Name _____
Lot No. _____ Block No. _____
County Elmore
Address of Well Site Indian Creek or Mayfield Rd.
(give at least name of road)
NW ¼ SW ¼ Sec. 27, T. 1 N ☒ or S ☐, R. 4 E ☒ or W ☐

MICROFILMED
DEC 03 1992

7. WATER LEVEL

Static water level 340 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.

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
20		5HR

9. LITHOLOGIC LOG

082152

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	2	Top Soil		
"	2	10	Brown Clay		
"	10	11	Coarse Sand		
8-6	11	40	Brown Clay		
6	40	105	Clay & Sand Seams		
"	105	120	Sand & ¼ Gravel		
"	120	143	Cement and Sand		
"	143	162	Clay Tan		
"	162	190	Sand & Gravel		
"	190	200	Tan Clay		
"	200	260	Tan Sand & Gravel		
"	260	268	Tan Clay		
"	268	298	Tan Sand		
"	298	305	Clay		
"	305	336	Tan Sand		
"	336	375	Tan Clay		
"	375	420	Tan Coarse Sand	X	
"	420	510	Clay - Sand Seam	X	

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AUG 17 1992
Department of Water Resources
Western Region

AUG 17 1992
Department of Water Resources

10.

Work started 7-29-92 finished 8-7-92

11. DRILLER'S CERTIFICATION

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

Firm Name Hiccleston & Son, INC. Firm No. 35
Address Rt 3, Box 610-D Mtn Home, ID 83647 Date 8-10-92
Signed by Drilling Supervisor _____
and
(Operator) John A Smith
(If different than the Drilling Supervisor)

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

Form 238-7
/73

STATE OF IDAHO
DEPART. OF WATER RESOURCES

TYPEWRITER OR
BALLPOINT PEN

25

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.

1. WELL OWNER

Name Ken Agenbroad

Address Mayfield Stage, Boise, Idaho 83706

Owner's Permit No. _____

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe method of abandoning) _____

3. PROPOSED USE

☐ Domestic ☒ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☐ Rotary ☐ Air ☐ Hydraulic ☒ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness		Diameter		From		To	
.250	inches	16	inches +	2	feet	500	feet
.250	inches	16	inches	510	feet	608	feet
.250	inches	16	inches	~~688~~	feet	712	feet
~~.250~~	inches	~~16~~	inches	~~752~~	feet	~~763~~	feet
.281	inches	26	inches	0	feet	72	feet

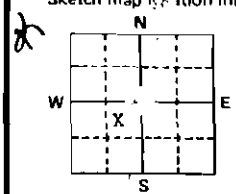
Was casing drive shoe used? ☐ Yes ☒ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation _____ inches by _____ inches

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

Well screen installed? ☒ Yes ☐ No
Manufacturer's name Roscoe Moss
Type _____ Model No. _____
Diameter 16 Slot size 80 Set from 500 feet to 510 feet
Diameter 16 Slot size 80 Set from 712 feet to 752 feet
Gravel packed? ☒ Yes ☐ No ☐ Size of gravel 3/8 minus
Placed from 6 feet to 763 feet
Surface seal depth 72 Material used in seal: ☒ Cement grout ☐ Puddling clay ☐ Wall cuttings
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 To be determined

6. LOCATION OF WELL

Sketch map location must agree with written location.



Subdivision Name _____
Lot No. _____ Block No. _____
County Ada
NE ¼ SW ¼ Sec. 28 T. 1N N/S, R. 4E E/W.

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SEP 28 1979
Department of Water Resources
Western Regional Office

7. WATER LEVEL

Static water level 390 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 _____

8. WELL TEST DATA

☐ Pump ☐ Bailer ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped

9. LITHOLOGIC LOG

106C20

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
28	0	6	Topsoil & Clay		
	6	25	Sand - Crsse. & Sharp		
	25	67	Brn. Sand - Crse w/some Clay		
	67	74	Siltstone & Cinders		
24	74	78	Siltstone & Cinders		
	78	98	Brn. Clay w/some Sand & Gravel		
	98	208	Brn. Clay w/Sand Streaks		
	208	224	Brn. Clay		
	224	268	Brn. Clay w/some Brn. Sand		
	268	272	Cemented Gravel		
	272	278	Sand & Gravel		
18	278	286	Brn. Clay w/some Sand & Gravel		
	286	311	Brn. Sand w/Gravel Streaks		
	311	384	Brn, Clay w/traces of Sand		
	384	390	Brn. Clay		
	390	396	Brn. Sand w/some Clay Streaks		
	396	444	Brn, Clay		
	444	466	Sand & Sm. Gravel w/some Clay		
	466	494	Sand & Clay		
	494	500	Blue Clay		
	500	509	Blue Sand w/some Gravel		
	509	513	Blue Clay w/Sand & Gravel streaks		
	513	530	Brn. Clay w/some Sand		
	530	574	Clay w/traces of Sand		
	574	596	White Clay w/traces of Sand		
	596	607	White & Blue Clay w/some Sand		
	607	621	Blue Clay w/some Sand		
	621	653	Blue Sand w/some Clay Streaks		
	653	660	Blue Clay		
	660	700	Blue Sand		
	700	736	Blue Clay		
	736	740	Green Clay w/Sand Streaks		
	740	744	Blue Clay w/traces of Sand		
	744	752	Green & Blue Sand		
	752	763	Blue Sand w/some Clay & Granite		

10. Work started 9-2-79 Completed 9-4-79

RECEIVED
OCT 1 1979
Department of Water Resources

DRILLER'S CERTIFICATION

We certify that all minimum well construction standards were complied with. Department of Water Resources was notified.

Firm Name Pete Cope Drilling Co. Inc. Firm No. 218
Address P.O. Box 561 Meridian, ID 83642 Date 9-11-79
Signed by (Firm Official) Pete Cope President
and
(Operator) Jamie E. Jones

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

Form 238-7
/73

TATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

TYPEWRITER OR
BALLPOINT PEN

26

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.

1. WELL OWNER

Name Ken Agenbroad

Address Mayfield Stage, Boise, Idaho 83706

Owner's Permit No. _____

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe method of abandoning) _____

3. PROPOSED USE

☐ Domestic ☒ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☐ Rotary ☐ Air ☐ Hydraulic ☒ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	14 inches +	2 feet	18 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

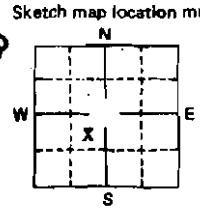
Was casing drive shoe used? ☐ Yes ☒ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation _____ inches by _____ inches

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

Well screen installed? ☒ Yes ☐ No
Manufacturer's name Roscoe Moss
Type _____ Model No. _____
Diameter 14 Slot size 80 Set from 18 feet to 85 feet
Diameter ___ Slot size ___ Set from ___ feet to ___ feet
Gravel packed? ☒ Yes ☐ No ☐ Size of gravel 3/8 minus
Placed from 18 feet to 85 feet
Surface seal depth 18' Material used in seal: ☐ Cement grout ☒ Puddling clay ☐ Well cuttings
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 To be determined

6. LOCATION OF WELL

Sketch map location must agree with written location.



Subdivision Name _____

Lot No. _____ Block No. _____

County Ada

NE ¼ SW ¼ Sec. 28, T. 1N N/S, R. 4E E/W.

7. WATER LEVEL

Static water level _____ 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 _____

8. WELL TEST DATA

☐ Pump ☐ Bailer ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped

9. LITHOLOGIC LOG

104110

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
28	0	6	Topsoil		
	6	18	Brn. Clay & Sand		
	18	23	White Sand - Fine to Crse.		
	23	31	Brn. Sand & Gravel		
	31	32	Brn. Clay		
	32	39	Sand & Small Gravel		
	39	52	Brn. Clay w/Sand Streaks		
18	52	69	Silt Stone		
	69	85	Brn. Clay & Gravel		

RECEIVED
MAY 11 1979
Department of Water Resources
Western Regional Office

10.

Work started 4-26-79 finished 4-28-79

11. DRILLERS CERTIFICATION

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

Firm Name Pete Cope Drilling Co., Inc. Firm No. 213
Address P.O. Box 561 Meridian, Id. 83642 Date 5-3-79
Signed by (Firm Official) Pete Cope
and
(Operator) Jesse Jones

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

27

Form 238-7
9/82

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALL POINT PEN

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.

1. WELL OWNER

Name Rick Cornell

Address c/o Mayfield Stage, Boise 83707

Owner's Permit No. 61-90-Z-007

2. NATURE OF WORK

☑ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materiels, plug depths, etc. in lithologic log)

3. PROPOSED USE

☑ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☑ Rotary ☑ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☑ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	6⅝ inches +	2 feet	26 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ 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 AAedvark
Type PVC Model No. _____
Diameter 4" Slot size .010 Set from 25 feet to 36 feet
Diameter ____ Slot size ____ Set from ____ feet to ____ feet
Gravel packed? ☐ Yes ☑ No ☐ Size of gravel _____
Placed from _____ feet to _____ feet
Surface seal depth 25 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 location.

N / W / E / S

Subdivision Name _____

Lot No. _____ Block No. _____

County Elmore

SE ¼ NE ¼ Sec. 27, T. 1 N/S R. 5 E/W

7. WATER LEVEL

Static water level 10 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.

8. WELL TEST DATA 71249

☑ Pump ☐ Bailer ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
6.5	34	5

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	12	Soil		
8	12	25	Sand		
8-6	25	27	Gray Clay		
6	27	34	Sand + Gravel	✓	
6	34	36	De-Granite		

RECEIVED
MAY 02 1990
Department of Water Resources

RECEIVED
APR 30 1990
Department of Water Resources
Western Regional Office

RECEIVED
APR 26 1990
Department of Water Resources

RECEIVED
NOV 25 1991

10. Work started 4-17-90 finished 4-19-90

11. DRILLERS CERTIFICATION DL

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

Firm Name Middleton Drilling Firm No. 35

Address Mt Home Date 4-19-90

Signed by (Firm Official) _____

and

(Operator) _____

USE ADDITIONAL SHEETS IF NECESSARY -- FORWARD THE WHITE COPY TO THE DEPARTMENT

USE TYPEWRITER OR BALL POINT PEN

State of Idaho
Department of Water Resources

RECEIVED
1978

28

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.

1. WELL OWNER

Name Rich Cornell

Address Boise, Id

Owner's Permit No. _____

2. NATURE OF WORK

☑ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

_____

3. PROPOSED USE

☐ Domestic ☐ Irrigation ☐ Test ☐ Other (specify type)

☐ Municipal ☐ Industrial ☑ Stock ☐ Waste Disposal or Injection

4. METHOD DRILLED

☐ Cable ☑ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 8 inches Total depth 467 feet

Casing schedule: ☑ Steel ☐ Concrete

Thickness	Diameter	From	To
250 inches	8⅝ inches	+ 1 feet	32 feet
250 inches	6⅝ inches	2 feet	467 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ 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 ¼ inches by 3 inches

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

1920 Every 3rd joint Form 60-420

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 _____

Placed from _____ feet to _____ feet

Surface seal depth 23 Material used in seal ☐ Cement grout ☑ Puddling clay ☑ Well cuttings

Sealing procedure used ☐ Slurry pit ☐ Temporary surface casing ☑ Overbore to seal depth

6. LOCATION OF WELL

Sketch map location must agree with written location. 61

N / W / E / S

Subdivision Name _____

Lot No. _____ Block No. _____

County Elmore

SW ¼ NE ¼ Sec. 28 T. 1 N/S R. 5 E/W

7. WATER LEVEL

Static water level 18 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

8. WELL TEST DATA

☐ Pump ☐ Bailer ☑ Other

Discharge G.P.M.	Draw Down	Hours Pumped
5		

9. LITHOLOGIC LOG

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
10	0	6	Soil + DE-GRANITE		
10	6	23	DE-GRANITE GRAVEL		
10-8	23	467	DEGRANITE + GRANITE	✓	

10. Work started 3/11/77 finished 3/21/77

11. DRILLERS CERTIFICATION

Firm Name Hollerton Drilling Firm No. 35

Address Mt Home Idaho Date 3/28/77

Signed by (Firm Official) _____

and

(Operator) Ken Kail

USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMENT

38-7

C

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Use Typewriter or Ball Point Pen

108844

1. DRILLING PERMIT NO. 93 93 W 1045 .000
Other IDWR No.

2. OWNER:
Name JIM UNDERWOOD
Address HC 34 MAYFIELD STAGE
City BOISE State ID Zip 83706

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

N / W / E / S

T. 1N North ☐ or South ☐ 15 L.F. ft. below surface Depth artesian flow found
R. 4E East ☐ or West ☐
Sec 27 SW 10 acres 1/4 NE 40 acres 1/4 160 ac max 1/4
Gov't Lot County ELMORE

Address of Well Site HC 34 INDIAN CREEK RD HC 34 Mayfield Stage Stop
(Give at least Direction + Distance to Road or Landmark)

Lot No. Block No. Subd. Name

4. PROPOSED USE: DOMESTIC
☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK NEW WELL
☐ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD AIR ROTARY
☐ Mud Rotary ☐ Air Rotary ☐ Cable ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
*BENTONITE	0	20	750#	POURED

Was drive shoe seal tested? Yes ☐ No ☒ How?

8. CASING/LINER:

Diameter	From	To	Guage	Casing	Liner	Steel	Plastic	Welded	Threaded
*8"	+1	68	.250			☒	☐	☒	☐
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐

Final location of shoes *68
Top Packer or Headpipe Bottom Tailpipe

9. PERFORATIONS/SCREENS
☒ Perforations Method FACTORY
☐ Screens Type Material

From	To	Slot Size	Number	Diameter	Tele/Pipe Size	Casing	Liner
*28	68	1/8"		8"	PIPE	☒	☐
						☐	☐
						☐	☐
						☐	☐

10. WELL TESTS: PUMP
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Depth	Time
55	48	63	80

Temperature of water 65 Was a water analysis done? Yes ☐ No ☒
By whom?
Water Quality (odor, etc.) GOOD
Bottom Hole Temperature 65

11. STATIC WATER LEVEL:
15 L.F. ft. below surface Depth artesian flow found
Artesian pressure lb. Describe access port WELL CAP
Describe Controlling Devices:

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	GPM	SWL
	0	9	TOPSOIL		N
10	9	20	SAND		Y
8	20	23	GRAVEL		Y
	23	27	SAND		Y
	27	29	CLAY		N
	29	48	SAND		Y
	48	49	BROWN CLAY		N
	49	58	SAND		Y
	58	75	BROWN CLAY		N
	75		SAND		Y

RECEIVED
OCT 20 1993
WATER RESOURCES
WESTERN REGION

MICROFILMED
FEB 28 1994

Date: Started 10/12/93 Completed 10/13/93

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

Firm Name PETE COPE DRILLING Firm No. 213
Firm Official Date 10/19/93
and
Supervisor or Operator Date 10/19/93
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Form 238-7
6/90

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Use Typewriter or Ball Point Pen

1 OF 3 RECEIVED

NOV 03 1993

Department of Water Resources

1. DRILLING PERMIT NO 63 93 C - 869 - 0
Other IDWR No. 63-11382

2. OWNER:
Name DANSKIN PROPERTIES LTD
Address INDIAN CR. RD. HC 34 MAYFIELD STAGE
City BOISE State ID Zip 83706

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

N / W / E / S

T. 01 N North ☐ or South ☐
R. 04 E East ☐ or West ☐
Sec. 27, 10 acres 1/4 SW 40 acres 1/4 NE 40 acres 1/4
Gov't Lot ____ County ELMORE

Address of Well Site INDIAN CK RD HC34 MAYFIELD STAGE
(Give at least Direction + Distance to Road or Landmark)

Lot No. 19 Block No. 1 Sub DANSKIN PROPERTIES

4. PROPOSED USE: DOMESTIC DANSKIN
☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK NEW WELL
☐ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD REVERSE CIRCULATION
☐ Mud Rotary ☐ Air Rotary ☐ Cable ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
BENTONITE	0	126	22,500#	POURED
BENTONITE	368	386	2500#	POURED

Was drive shoe seal tested? YES NO How?

8. CASING/LINER:

Diameter	From	To	Guage	Casting	Liner	Steel	Plastic	Welded	Threaded
12"	+3	428	.250			☒	☐	☒	☐
10"	468	488	.250			☒	☐	☒	☐
						☐	☐	☐	☐
						☐	☐	☐	☐

Final location of shoes
Top Packer or Headpipe Bottom Tailpipe

9. PERFORATIONS/SCREENS
☐ Perforations Method
☒ Screens Type HOUSTON Material STAINLESS STEEL

From	To	Slot Size	Number	Diameter	Tele/Pipe Size	Casting	Liner
428	468	.20		10"		☐	☐
						☐	☐
						☐	☐
						☐	☐

10. WELL TESTS: N/A
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Depth	Time
NA	NA	NA	NA

Temperature of water 65 Was a water analysis done? Yes ☐ No ☒
By whom?
Water Quality (odor, etc.) GOOD
Bottom Hole Temperature 65

11. STATIC WATER LEVEL:
NA ft. below surface Depth artesian flow found
Artesian pressure lb. Describe access port WELL CAP
Describe Controlling Devices:

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	GPM	SWL
26"	0	10	TOPSOIL		N
	10	35	COURSE SAND		Y
	35	55	CLAY & COSE SAND MIX		Y
	55	65	CRS & FINE SAND SOME CLAY MIX		Y
	65	75	CRS SAND W/BRN CLAY MIX		N
	75	105	CRS SAND W/BRN CLAY & GRAVEL MIX		Y
	105	115	BRN CLAY W/CRS SAND&SMALL ROCK MIX		N
	115	120	BRN CLAY		N
	120	125	FINE TO COURSE SAND, WITH CLAY		N
			AND SMALL GRAVEL & LARGE ROCKS MIXED		
	125	140	CRS SAND, CLAY, SMALL & LARGE		N
			GRAVEL MIXED		N
	140	160	FINE TO CRS SAND		N
	160	165	BROWN CLAY		N
	165	195	FINE TO CRS SAND W/CLAY & GRAVEL MIX		N
	195	210	FINE TO CRS SAND & GRAVEL		N
	210	223	FINE TO CRS SAND & CLAY MIX		N
	223	235	FINE TO CRS SAND & GRAVEL		N
	235	245	FINE TO CRS SAND & SMALL GRAVEL		N
	245	255	FINE TO CRS SAND W/ CLAY MIX		N
	255	260	FINE TO CRS SAND		N
	260	265	FINE SAND & CLAY MIX		N
	265	271	FINE TO CRS SAND W/CLAY&GRAVEL MIX		N
	271	275	FINE SAND		Y
	275	285	FINE SAND WITH CLAY MIX		N
	285	295	FINE TO CRS SAND		N
	295	305	CLAY & FINE SAND MIX		N

FEB 28 1994

Date: Started 10-15-93 Completed 10-20-93

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

Firm Name PETE COPE DRILLING Firm No. 213
Firm Official [signature] Date 10/29/93
and
Supervisor or Operator Date 10/29/93
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Form 238-7
6/93

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Use Typewriter or Ball Point Pen

2 of 3

108846

1. DRILLING PERMIT NO. 63 93 C - 869 - 0
Other IDWR No.

2. OWNER:
Name DANSKIN PROPERTIES LTD
Address
City State Zip

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

N / W / E / S

T. 1 North ☒ or South ☐
R. 4 East ☒ or West ☐
Sec. 27 , 10 acres 1/4 40 acres SW 1/4 160 acres NE 1/4
Gov't Lot ____ County Elmore

Address of Well Site INDIAN CREEK RD
(Give at least Direction + Distance to Road or Landmark)
Lot No. ____ Block No. ____ Subd. Name ____

4. PROPOSED USE:
☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK
☐ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD
☐ Mud Rotary ☐ Air Rotary ☐ Cable ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD

Was drive shoe seal tested? YES NO How?

8. CASING/LINER:

Diameter	From	To	Guage	Casing	Liner	Steel	Plastic	Welded	Threaded
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐

Final location of shoes
Top Packer or Headpipe Bottom Tailpipe

9. PERFORATIONS/SCREENS
☐ Perforations Method
☐ Screens Type Material

From	To	Slot Size	Number	Diameter	Tele/Pipe	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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10. WELL TESTS:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Depth	Time

Temperature of water ____ Was a water analysis done? Yes ☐ No ☐
By whom?
Water Quality (odor, etc.)
Bottom Hole Temperature

11. STATIC WATER LEVEL:
____ ft. below surface Depth artesian flow found ____
Artesian pressure ____ lb. Describe access port
Describe Controlling Devices:

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	GPM	SWL
	305	315	FINE SAND AND CLAY MIX		N
	315	325	CLAY & FINE SAND MIX		N
	325	335	LIGHT BRN CLAY		N
	335	339	LIGHT BRN CLAY		N
	339	341	FINE TO CRS SAND		N
	341	351	SANDY LIGHT BRN CLAY		N
	351	355	FINE TO CRS SAND & GRAVEL		N
	355	365	FINE SAND W/SMALL AMOUNT CLAY MIX		N
	365	370	FINE SAND		N
	370	372	FINE TO CRS SAND & BOULDERS		N
	372	374	FINE TO CRS SAND W/BOULDERS & BROKEN ROCK		N
	374	376	SAND & CLAY MIXED		N
	376	382	SANDY CLAY LIGHT BROWN COLOR		N
	382	387	SANDY CLAY & SHALE MIXED		N
	387	400	CRS SAND & CLAY MIXED		N
	400	407	FINE TO MED SAND		N
	407	413	SAND & CLAY MIXED		Y
	413	423	FINE TO MED SAND & CLAY MIXED SOME PEA GRAVEL MIXED		Y
	423	429	FINE TO MED SAND & PEA GRAVEL		Y
	429	433	FINE SAND, & SMALL AMOUNT CLAY MIXED		Y
	433	440	FINE MED SAND		Y
	440	443	FINE TO CRS SAND W/GRAVEL&CLAY MIXED		Y
	443	449	FINE TO COURSE SAND		Y
	449	450	BRN CLAY		N
	450	453	SAND, GRAVEL & CLAY MIXED		Y

Date: Started Completed

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

Firm Name Firm No.
Firm Official Date
and
Supervisor or Operator Date
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Form 238-7
6/93

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Use Typewriter or Ball Point Pen

3 OF 3

108847

1. DRILLING PERMIT NO. 63 93 C - 869 - 0
Other IDWR No.

2. OWNER:
Name DANSKIN PROPERTIES LTD
Address
City State Zip

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

N / W / E / S

T. 1 North ☒ or South ☐
R. 4 East ☒ or West ☐
Sec. 27, 10 acres 1/4, 40 acres SW 1/4, 160 acres NE 1/4
Gov't Lot SE County Elmore

Address of Well Site
(Give at least Direction + Distance to Road or Landmark)
Lot No. Block No. Subd. Name

4. PROPOSED USE:
☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK
☐ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD
☐ Mud Rotary ☐ Air Rotary ☐ Cable ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD

Was drive shoe seal tested? YES NO How?

8. CASING/LINER:

Diameter	From	To	Guage	Casing	Liner	Steel	Plastic	Welded	Threaded
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐

Final location of shoes
Top Packer or Headpipe Bottom Tailpipe

9. PERFORATIONS/SCREENS
☐ Perforations Method
☐ Screens Type Material

From	To	Slot/Perf. Size	Number	Diameter	Tele/Pipe Size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐

FEB 28 1994

10. WELL TESTS:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Depth	Time

Temperature of water Was a water analysis done? Yes ☐ No ☐
By whom?
Water Quality (odor, etc.)
Bottom Hole Temperature

11. STATIC WATER LEVEL:
ft. below surface Depth artesian flow found
Artesian pressure lb. Describe access port
Describe Controlling Devices:

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	GPM	SWL
	453	456	CLAY, SAND, SOME GRAVEL		Y
	456	460	FINE TO COURSE SAND (GREEN COLOR)		Y
	460	463	FINE SAND &BLUISH-GREEN CLAY MIXED		Y
	463	473	LIGHT BLUE CLAY		N
	173	480	VERY FINE BLUE SAND & LIGHT BLUE CLAY		N

Date: Started Completed

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

Firm Name Firm No.
Firm Official Date
and
Supervisor or Operator Date
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Form 238-7
9/82

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALL POINT PEN

31

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.

1. WELL OWNER

Name Jim Underwood

Address Mayfield, Idaho

Owner's Permit No. 63-85-C-0001-000

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	6 inches	+ 3' feet	459' feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

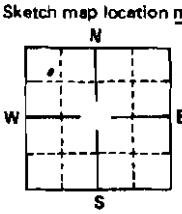
Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation _____ inches by _____ inches

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

Well screen installed? ☐ Yes ☒ No
Manufacturer's name _____
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 _____
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 location.



Subdivision Name _____
Lot No. _____ Block No. _____
County ELMORE
¼ NW ¼ Sec. 27, T. 1 N/S, R. 4 E/W.

7. WATER LEVEL

Static water level 338' 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.

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
60		2

70045

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	2	boulders		x
8	2	20	coarse sand		x
6	20	100	brown clay/sand seams		x
6	100	150	sand/clay seams		x
6	150	158	clay/sand seams		x
6	158	185	sand & gravel		x
6	185	240	brown clay/sand seams		x
6	240	410	brown clay/sand seams		x
6	410	450	sand	x	
6	450	465	clay		x
6	465	485	sand	x	

RECEIVED
JUL 5 1985
Department of Water Resources
Western Regional Office

RECEIVED
JUL 8 1985
Department of Water Resources

MICROFILMED

10.
Work started 5-09-85 finished 5-17-85

11. DRILLERS CERTIFICATION

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

Firm Name BILL DOTY WELL DRILLING Firm No. 42
Address RT. 7 BOX 311 CALDWELL, IDAHO 83605 Date 6-01-85
Signed by (Firm Official) Bill Doty
and
(Operator) Bill Doty

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

Form 238-7
6/89

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

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.

1. WELL OWNER

Name James & Darla Underwood
HC34, Mayfield Stage
Address Boise, ID 83706
Drilling Permit No. 63-9159-127-100
Owner's Permit No. _____

2. NATURE OF WORK

☐ New well ☒ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log).

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
☒ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION * = Depth Referenced to Top of 6 Inch Casing.

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
_____ inches	_____ inches	+ 3 feet	159 feet
(See original log) inches	_____ inches	well feet	_____ feet
0.258 inches	5 9/16 inches	443.4* feet	504.5 feet
0.237 inches	4 1/2 inches	475.9* feet	513.9 feet

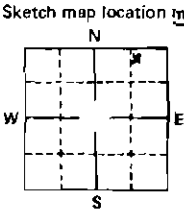
Was casing drive shoe used? ☐ Yes ☒ No - liners bailed,
Was a packer or seal used? ☐ Yes ☒ No top & Bottom
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation _____ inches by _____ inches

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

Well screen installed? ☐ Yes ☒ No
Manufacturer's name _____
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 _____
Placed from _____ feet to _____ feet
Surface seal depth _____ Material used in seal: ☐ Cement grout ☐ Bentonite ☐ Puddling clay ☐ _____
Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing liners ☐ Overbore to seal depth
Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata
Describe access port Remove pitless cap for 5" diam access.

6. LOCATION OF WELL

Sketch map location must agree with written location.



Subdivision Name _____
Lot No. _____ Block No. _____
County Elmore NW¼NE¼NE¼ 27 T1N R4E
NW¼ NW¼ NE¼ Sec. 27, T. 1N N ☒ S ☐ R. 4E E ☒ W ☐

AUG 28 1991

7. WATER LEVEL * Depth Reference @ top of casing.

Static water level 343.3* feet below ~~land surface~~
Flowing? ☐ Yes ☒ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature 71 °F. Quality Excellent
Describe artesian or temperature zones below.

8. WELL TEST DATA

☒ Pump ☐ Bailer ☐ Air ☐ Other installed.
Caution, keep sounding device out of well bottom

Discharge G.P.M.	Pumping Level	Hours Pumped
3.7	less than 378 ft.	65

9. LITHOLOGIC LOG --* = Depth referenced to 6 inch casing.

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
		475'	See original log by Bill Doty Drillo		
5"	475	506*	Rusty, poorly sorted fine sand fines on down to silt size	x	
	506	507	Streak of Clay Brown to grey		x
	507	513	Sand, Fine, Poorly Sorted, lighter colored, w/ Grey cast.	x	
	513	529	Sand & Gravel, Bank Run, Tight	x	
	529	530	Silty Sand	x	
	530	545	Tight Sand & Gravel	x	
	545	549	Rock, Basalt? Sandstone? Cemented Gravel? Boulder?	?	
	549	551	Silt-Clay, Light Grey		x
[redacted]	551	553	Sand	x	
	553	563	Sandstone, Clay binder		x
	565	580*	Sand	x	
			Bridged hard at 551'*, Caved back to 520'* and eventually on back to [redacted] liner at 514'.		

RECEIVED
MAY 8 1991
Department of Water Resources
Western Regional Office

10. Work started March 25, 1991 Finished May 7, 1991

11. DRILLERS CERTIFICATION

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

Firm Name Artesian Co. Firm No. 318
7225 N. 36th S.
Address Mountain Home, ID Date May 7, 1991
83647-9613
Signed by (Firm Official) Hugh Harden
and Hugh Harden
(Operator) Hugh Harden

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

Form 238-7
6/89

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

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.

1. WELL OWNER

Name James & Darla Underwood
HC34, Mayfield Stage
Address Boise, ID 83706
Drilling Permit No. 63-3179-127-100
Owner's Permit No. _____

2. NATURE OF WORK

☐ New well ☒ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
☒ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION * = Depth Referenced to Top of 6 Inch Casing.

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
_____ inches	_____ inches	+ 3 feet	359 feet
(See original) inches	well log) inches	feet	feet
0.253 inches	5 9/16 inches	443.4* feet	505.5 feet
0.237 inches	4 1/2 inches	475.3* feet	515.9 feet

Was casing drive shoe used? ☐ Yes ☒ No - liners pulled
Was a packer or seal used? ☐ Yes ☒ No top & Bottom
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
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 _____
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 _____
Placed from _____ feet to _____ feet
Surface seal depth _____ Material used in seal: ☐ Cement grout ☐ Bentonite ☐ Puddling clay ☐ _____
Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing liners ☐ Overbore to seal depth
Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata
Describe access port Remove pitless cap for 6" diam access.

6. LOCATION OF WELL

Sketch map location must agree with written location.

N / W / E / S

Subdivision Name _____
Lot No. _____ Block No. _____

County Elmore NW¼NE¼NE¼ 27 T1N R4E
NW¼ NE¼ NE¼ Sec. 27 , T. 1N N ☒ S ☐ R. 4E E ☒ W ☐

AUG 28 1991

7. WATER LEVEL

*4 Depth Reference @ top of casing.

Static water level 343.4* feet below ~~land surface~~
Flowing? ☐ Yes ☒ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature 71 °F. Quality Excellent
Describe artesian or temperature zones below

8. WELL TEST DATA

☒ Pump ☐ Bailer ☐ Air ☐ Other installed.
Caution, keep sounding device out of well w/pump

Discharge G.P.M.	Pumping Level	Hours Pumped
3.7	less than 370 ft.	65

9. LITHOLOGIC LOG --* = Depth referenced to top of 6 inch casing.

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
		475'	See original log by Bill Doty Drlg		
5"	475	506*	Rusty, poorly sorted fine sand fines on down to silt size	x	
	506	507	Streak of Clay brown to grey		x
	507	513	Sand, Fine, Poorly Sorted, lighter colored, w/ Grey cast,	x	
	513	529	Sand & Gravel, Bank Run, Tight	x	
	529	530	Silty Sand	x	
	530	545	Tight Sand & Gravel	x	
	545	549	Rock, Basalt? Sandstone? Cemented Gravel? Boulder?	?	
	549	551	Silt-Clay, Light Grey		x
[redacted]	551	561	Sand	x	
	561	565	Sandstone, Clay binder		x
	565	580*	Sand	x	
			Bridge? hard at 551'*, Caved back to 520'* and eventually on back to [redacted] liner at 515'.		

MAY 8 1991
Department of Water Resources
Western Regional Office

10.

Work started March 25, 1991 finished May 7, 1991

11. DRILLERS CERTIFICATION

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

Firm Name Artesian Co. Firm No. 318
7425 W. 36th S.
Address Mountain Home, ID Date May 7, 1991
83647-3413
Signed by (Firm Official) Hugh Harden
and
(Operator) Hugh Harden

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

Form 238-7
8/90

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

US EWRITER OR
B. POINT PEN

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.

R-2

1. WELL OWNER

Name Ron Ambrose

Address 2295 E. 3100 South, Wendell, ID 83355

Drilling Permit No. 63-92-W-119

Water Right Permit No. _____

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	8 5/8 inches	+ 2 feet	255 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

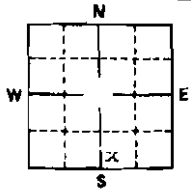
Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation _____ inches by _____ inches

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

Well screen installed? ☐ Yes ☒ No
Manufacturer's name _____
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 _____
Placed from _____ feet to _____ feet
Surface seal depth 98 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 location.



Subdivision Name _____
Lot No. _____ Block No. _____
County Elmore
SW ¼ SE ¼ Sec. 23, T. 1 ☐ S ☒ N R. 4 ☐ W ☒ E

7. WATER LEVEL

Static water level 205 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

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
40		3

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
10	0	20	Decomposed granite		
"	20	24	Decomp granite and red clay		
"	24	60	Tan clay and sand		
10	60	98	Gravel and sand		
8	98	110	Tan clay		
"	110	160	Tan clay sand		
"	160	180	Sand and ½ gravel		
"	180	225	Sand		
"	225	250	Tan clay and sand		
"	250	253	Sand	X	
8	253	256	Sand and gravel		

RECEIVED
MAR 31 1992
Department of Water Resources

RECEIVED
MAR 24 1992
Department of Water Resources
Regional Office

10.

Work started 3/10/92 finished 3/13/92

11. DRILLERS CERTIFICATION

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

Firm Name Hiddleston & Son, Inc Firm No. 35
Address Rt. 3, Box 610-D Mtn Home, ID 83647 Date 3/16/92
Signed by (Firm Official) Jack Hiddleston
and
(Operator) John W Smith

RECEIVED
APR 09 1992

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

81553, 34

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. __ - __ - __ - ____ - ____
Other IDWR No. D0031310

2. OWNER:
Name Larry Farnsworth
Address 1020 N. Breezy Lane
City Mayfield State ID Zip 83716

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W E
S

Twp. 1 North ☒ or South ☐
Rge. 4 East ☒ or West ☐
Sec. 23 1/4 (10 acres) NE 1/4 (40 acres) NE 1/4 (160 acres)
Gov't lot _____ County Elmore
Lat: : : Long: : :
Address of Well Site 1 Mile North on Slater Creek
City Mayfield
(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/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Bentonite	0	18	600 Lbs	overbore

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
6.625	+2	147	250	Steel	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
☐ Screens Screen Type _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
69 ft. below ground Artesian Pressure ___ lb
Depth flow encountered ___ ft. Describe access port or control devices: _____

11. WELL TESTS:
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
60			1 Hr

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____
Depth first Water Encountered 138'

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10	0	1	Topsoil		☒
10	1	8	Sandy clay, tan		☒
10	8	10	Tan clay		☒
10	10	12	Tan sand & clay		☒
10	12	18	Sandy clay, tan		☒
6	18	30	Sandy clay, tan		☒
6	30	38	Clay, cream		☒
6	38	58	Sandy clay, cream		☒
6	58	65	Tan sand		☒
6	65	88	Clay		☒
6	88	98	Sandy clay, tan		☒
6	98	118	Sandy clay		☒
6	118	135	Sandy clay		☒
6	135	138	Clay, wet	☒	
6	138	147	Sand, white	☒	

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JUN 28 2004
WATER RESOURCES
WESTERN REGION

Completed Depth: 147 (Measurable)
Date: Started 05/20/04 Completed 05/21/04

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

Firm Name Hiddleston & Son Inc-Boise Firm No. 35
Firm Official _____ Date 6-18-04
Supervisor or Operator _____ Date 6-18-04
(Sign once if Firm Official & Operator)

Date: 6/11/2004 Time: 12:36 PM

USE TYPEWRITER OR BALL POINT PEN

State of Idaho
Department of Water Resources

RECEIVED
FEB 7 1978
Department of Water Resources

35

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.

1. WELL OWNER

Name Todd Newsom

Address 3190 Hardness Lane Boise, Id.

Owner's Permit No. _____

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Other (specify type)

☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection

4. METHOD DRILLED

☒ Cable ☐ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 6 inches Total depth 74 feet

Casing schedule: ☐ Steel ☐ Concrete

Thickness	Diameter	From	To
360 inches	6 inches	+ 1 feet	74 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ 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 _____

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 _____

Placed from _____ feet to _____ feet

Surface seal depth 18 ft. Material used in seal ☐ Cement grout ☐ Puddling clay ☐ Well cuttings

Sealing procedure used ☐ Slurry pit ☐ Temporary surface casing ☒ Overbore to seal depth

6. LOCATION OF WELL

Sketch map location must agree with written location. 63

N / W / E / S

Subdivision Name Randall Acres

Lot No. 4 Block No. 5

County Ada

SE ¼ SW ¼ Sec. 14 T. 1 N/S, R. 4 E/W

7. WATER LEVEL

Static water level 9 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

8. WELL TEST DATA

☐ Pump ☒ Bailer ☐ Other

Discharge G.P.M.	Draw Down	Hours Pumped
30	40 ft.	2

9. LITHOLOGIC LOG 106022

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
9	0	4	Top Soil		X
9	4	18	Cemented Gravel		X
6	18	40	Cemented Gravel	X	
6	40	45	Brown Clay		X
6	45	70	Sandy Brown Clay		X
6	70	74	Sand & Gravel	X	

10. Work started Dec. 13, 1977 finished Dec. 24, 1977

11. DRILLERS CERTIFICATION

Firm Name Can-Ada Well Drilling Firm No. 304

Address Box 328 Kuna, Id. Date 1/25/78

Signed by (Firm Official) Earl Skinner

and (Operator) Earl Skinner

USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMENT

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

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.

USE TYPEWRITER OR BALLPOINT PEN

36

PH

1. WELL OWNER

Name: Leo Zimmer

Address: Mayfield Stage

Owner's Permit No.: 63-88-2-175

2. NATURE OF WORK

☐ New well ☐ Deepened ☒ Replacement

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

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal

☐ Industrial ☐ Stock ☐ Waste Disposal or Injection

☐ Other ______ (specify type)

4. METHOD DRILLED

☒ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary

☐ Cable ☐ Dug ☐ Other ______

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other ______

Thickness	Diameter	From	To
.260 inches	6 inches	+ 1 feet	117 feet
inches	inches	feet	feet
inches	inches	feet	feet
inches	inches	feet	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 ______

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 ______

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: Santa Seal

6. LOCATION OF WELL

Sketch map location must agree with written location.

N / S / E / W

Subdivision Name ______

Lot No. ______ Block No. ______

County: Elmore

W ¼ SW ¼ Sec. 13, T. 1 N/S, R. 4 E/W.

7. WATER LEVEL

Static water level 92 feet below land surface.

Flowing? ☐ Yes ☒ No G.P.M. flow ______

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

Controlled by: ☐ Valve ☐ Cap ☐ Plug

Temperature 59 °F. Quality Good

Describe artesian or temperature zones below.

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Air ☐ Other ______

Discharge G.P.M.	Pumping Level	Hours Pumped
20	125	2

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
10	0	½	Top Soil		
10	½	18	Silty Clay, Brown		
6	18	19	" " "		
	19	20	gravel Black, Sand white		
	20	49	Silty clay, yellow		
	49	50	clay, Rich Brown		
	50	54	Silty clay, yellow		
	54	57	Sand, white, corse		
	57	68	Sandy clay, Fine to corse yellow Brown		
	68	72	gravel, Small, Sands Fine to corse White		
	72	89	Sandy clay, Fine to corse yellow Brown		
	89	90	Sandy Clay, Rust Brown		
	90	114	Sandy clay, yellow		
	114	116	gravel, white, small, Sand, white corse	X	
	116	150	Sand Stone, white, Broken		
	150	155	Sand, corse, white, with clay Inter Beds		
	155	196	Consoladated Conglmert Broken (gravel - white + black, Sand corse white, Clay stone)		
	196	200	gravel Black + white Loose	X	

10.

Work started Sept 28 finished Sept 4-88

11. DRILLERS CERTIFICATION

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

Firm Name: Frank Shelley Firm No. 326

Address: 960 N W 4th Ave Date 9-12-88

Signed by (Firm Official): Frank Shelley

and

(Operator): Marvin Haines

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

Form 238-7
9/82

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

37

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.

90

1. WELL OWNER

Name Leo Zimmers

Address

Owner's Permit No.

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other

Thickness	Diameter	From	To
.250 inches	inches + 1½	feet	38 feet
inches	inches	feet	feet
inches	inches	feet	feet
inches	inches	feet	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
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
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

MICROFILMED
MAR 14 1988

Sketch map location must agree with written location.

N / W / E / S

Subdivision name

Lot No. Block No.

County Elmore County

E ½ SE ¼ Sec. 14, T. 1 N/S, R. 4 E/W.

7. WATER LEVEL

Static water level 35' 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

8. WELL TEST DATA

☐ Pump ☐ Bailer ☐ Air ☐ Other

Discharge G.P.M.	Pumping Level	Hours Pumped

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
8"	0	2	Sandy Soil		X
	2	34	Coarse Sand		X
	34	46	Clay		X
	46	110	Sand Clay w/Sand layers	X	

RECEIVED
JUN 29 1987
Department of Water Resources

RECEIVED
JUN 15 1987
Department of Water Resources
Western Regional Office

051296

10.

Work started 10-7 finished 10-9/86

11. DRILLERS CERTIFICATION

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

Firm Name Davis Well Drilling Co. No. 101
Address 4150 N. Rutledge Date 6-11-87
Signed by (Firm Official)
and
(Operator) Charles Davis
by CMD

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

USE TYPEWRITER OR BALL POINT PEN

State of Idaho
Department of Water Administration

WELL DRILLER'S REPORT

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

Received 1-15-73 WA D

1. WELL OWNER

Name Western Land & Cattle Co.

Address Mayfield, Idaho

Owner's Permit No. _____

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

3. PROPOSED USE

☐ Domestic ☐ Irrigation ☒ Test

☐ Municipal ☐ Industrial ☐ Stock

4. METHOD DRILLED

☒ Cable ☐ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 8 inches Total depth 82 feet

Casing schedule: ☒ Steel ☐ Concrete

Thickness	Diameter	From	To
.322 inches	8 inches	+1 feet	51 feet
.257 inches	5 inches	51 feet	68 feet
.257 inches	5 inches	68 feet	82 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 _____ 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 Stainless Model No. _____

Diameter 6 Slot size 30 Set from 57 feet to 58 feet

Diameter 6 Slot size 35 Set from 58 feet to 68 feet

Gravel packed? ☐ Yes ☒ No Size of gravel _____

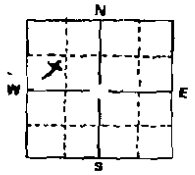
Placed from _____ feet to _____ feet

Surface seal? ☒ Yes ☐ No To what depth 20 feet

Material used in seal ☐ Cement grout ☐ Puddling clay Bentonite

6. LOCATION OF WELL

Sketch map location must agree with written location.



County Elmore

SW ¼ NW ¼ Sec. 17, T. 1 N., R. 5 E.

7. WATER LEVEL

Static water level 12 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

8. WELL TEST DATA

☒ Pump ☐ Bailer ☐ Other

Discharge G.P.M.	Draw Down	Hours Pumped
25	25 ft.	4

108633

9. LITHOLOGIC LOG

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	25	topsoil		X
	25	40	pea gravel	X	
	40	65	red sand	X	
	65	69	red gravel	X	
	69	82	White Clay		X

10.

Work started Nov. 9-72 finished Dec. 1-72

11. DRILLER'S CERTIFICATION

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

Engleman Well Drill. 47
Driller's or Firm's Name Number

1309 Rand - Boise, Idaho
Address

Signed by R. J. Engleman 12-1-72
Date

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT

USE TYPEWRITER OR BALL POINT PEN

State of Idaho
Department of Water Administration

test well #4 by

Received 11-13-72 WD

39

WELL DRILLER'S REPORT

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

1. WELL OWNER

Name Western Land & Cattle Co.

Address Mayfield Stage - Boise

Owner's Permit No. ____

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

3. PROPOSED USE

☐ Domestic ☐ Irrigation ☒ Test

☐ Municipal ☐ Industrial ☐ Stock

4. METHOD DRILLED

☒ Cable ☐ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 8 inches Total depth 76 feet

Casing schedule: ☒ Steel ☐ Concrete

Thickness	Diameter	From	To
.322 inches	8 inches	+2 feet	51½ feet
.257 inches	5 inches	49 feet	52 feet
.257 inches	5 inches	61 feet	69 feet
.257 inches	5 inches	74 feet	76 feet
inches	inches	feet	feet

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 Teles

Type Teles Stainless Model No. ____

Diameter 6 Slot size 30 Set from 52 feet to 56 feet

Diameter 6 Slot size 35 Set from 56 feet to 61 feet

6 20 69 74

Gravel packed? ☐ Yes ☒ No Size of gravel ____

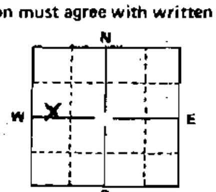
Placed from ____ feet to ____ feet

Surface seal? ☒ Yes ☐ No To what depth 20 feet

Material used in seal ☐ Cement grout ☐ Puddling clay Bentonite

6. LOCATION OF WELL

Sketch map location must agree with written location.



63

County Ada & Elmore

SW ¼ NW ¼ Sec. 17, T. 1 N, R. 5 E

7. WATER LEVEL

Static water level 15 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

8. WELL TEST DATA

☒ Pump ☐ Bailer ☐ Other

Discharge G.P.M.	Draw Down	Hours Pumped
40	26 ft.	4

108032

9. LITHOLOGIC LOG

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	48	sandy soil		X
	48	63	Coarse sand	X	
	63	68	Blue Clay & sand		X
	68	76	Coarse sand	X	
	76		rock, granite		X

10.

Work started Oct. 24 finished Nov. 6-72

11. DRILLER'S CERTIFICATION

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

Engleman Well Drill. 47
Driller's or Firm's Name Number

1309 Rand - Boise, Idaho
Address

R. J. Engleman 11-12-72
Signed By Date

USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT

869218-771926

40

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. __ - __ - __ - ____ - ____
Other IDWR No. **D0019348**

2. OWNER:
Name **Jeff Lord**
Address **1171 Mayfield Rd.**
City **Boise** State **ID** Zip **83716**

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W [X] E
S

Twp. **1** North **X** or South ☐
Rge. **4** East ☐ or West **X**
Sec. **13** 1/4 (10 acres) SE 1/4 (40 acres) NE 1/4 (160 acres)

Gov't lot _____ County **Elmore**
Lat: : : Long: : :
Address of Well Site **Mayfield Rd**
City **Boise**
(Give at least name of road + Distance to Road or Landmark)
Lt. _____ Blk. _____ Sub. Name _____

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

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	**0**	**18**	**400 lbs**	**Overbore**

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6.625	+2	95	250	Steel	X	☐	X	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe **6'** Length of Tailpipe _____

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
X Screens Screen Type **Johnson**

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
95	100	.010		5"	SS	☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
62 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices: _____

11. WELL TESTS:
☐ Pump ☐ Bailer **X** Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
10 GPM			**2 hr**

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____
Depth first Water Encountered **70'**

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10"	0	8	Soil		X
10-6"	8	50	Clay & Decomposed Granite		X
6"	50	63	Decomposed Granite		X
6"	63	70	Decomposed Granite & Clay		X
6"	70	80	Sand & Clay Seam	X	
6"	80	95	Clay		X
6"	95	100	Sand	X	

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WATER RESOURCES
WESTERN REGION

Completed Depth: **100'** (Measurable)
Date: Started **11-15-01** Completed **11-21-01**

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

Firm Name **Hiddleston & Son, Inc.** Firm No. **35**
Firm Official _____ Date _____
Supervisor or Operator _____ Date **12-18-01**
(Sign once if Firm Official & Operator)

789248 41

RECEIVED
JAN 0 2 2003
WATER RESOURCES
REGION

Form 238-7
3/95-C96

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. DRILLING PERMIT NO. _____
Other IDWR No. **D0025929**

2. OWNER:
Name **Erin Lord**
Address **1171 Mayfield Rd.**
City **Boise** State **ID** Zip **83716**

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W [X] E
S

Twp. **1** North **X** or South ☐
Rge. **4** East **X** or West ☐
Sec. **12** 1/4 (10 acres) NE 1/4 (40 acres) SW 1/4 (160 acres)
Gov't lot _____ County **Ada**
Lat: : : Long: : :
Address of Well Site **1171 Mayfiled Rd.**
City **Boise**
(Give at least name of road + Distance to Road or Landmark)
Lt. _____ Blk. _____ Sub. Name _____

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

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	**0**	**19**	**500 lbs**	**Overbore**

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6.625	+1	90	.250	Steel	X	☐	X	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe **5'** Length of Tailpipe **N/A**

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
X Screens Screen Type **Johnson**

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
90	95	.030		5'	SS	☐	X
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
39 ft. below ground Artesian Pressure ____ lb
Depth flow encountered ____ ft. Describe access port or control devices: _____

11. WELL TESTS:
☐ Pump ☐ Bailer X Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
40			1 hr

Water Temp. **57** Bottom hole temp. _____
Water Quality test or comments: _____
Depth first Water Encountered **20**

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10	0	2	**Top Soil**		X
10	2	8	**Caleche**		X
10	8	16	**Sand**		X
10	16	19	**Brown Clay**		X
6	19	20	**Brown Clay**		X
6	20	35	**Blue Sand**	X	
6	35	38	**Gray Clay**		X
6	38	65	**Coarse Sand**	X	
6	65	70	**Gray Clay**		X
6	70	75	**Coarse Sand**	X	
6	75	80	**Tan Clay**		X
6	80	95	**Coarse Sand**	X	

Completed Depth: **95'** (Measurable)
Date: Started **11-26-02** Completed **12-03-02**

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

Firm Name **Hiddleston & Son, Inc.** Firm No. **35**
Firm Official [signature] Date **12-20-02**
Supervisor or Operator [signature] Date _____
(Sign once if Firm Official & Operator)

42

Form 238-7
9/82

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

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.

RECEIVED JUL 15 1988 Department of Water Resources

1. WELL OWNER

Name Algola Brothers

Address Mayfield, Idaho

Owner's Permit No. 63-88-Z-99

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	6 5/8 inches +	3 feet	157 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ 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 Aardvark
Type PVC Model No. _____
Diameter 4" Slot size, .010 Set from 150 feet to 157 feet
Diameter 4" Slot size, .010 Set from 317 feet to 337 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 _____

6. LOCATION OF WELL

Sketch map location must agree with written location.

N / W / E / S

Subdivision Name _____
Lot No. _____ Block No. _____

County Elmore

SW ¼ NE ¼ Sec. 12, T. 1 N/S, R. 4 E/W.

7. WATER LEVEL

Static water level 146 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.

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
20		1

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	2	Topsoil		
	2	8	Gravel		
	8	10	Grey Clay		
	10	18	Grey Clay - Sandy		
	18	42	Decomposed Granite	X	
	42	60	Sandy Granite Grey Clay		
	60	77	Brown Clay		
	77	83	Decomposed Granite	X	
8	83	120	Granite & Clay Layers	X	
8	120	140	Brown Clay		
8"6"	140	160	Blue Clay		
6"	160	340	Decomposed Granite with Blue Clay Layers	X	

10.

Work started 5-27-88 finished 6-2-88

11. DRILLERS CERTIFICATION

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

Firm Name Hidalgo Drilling Firm No. 35
Address Mtn. Home, Id. Date June 3, 1988
Signed by (Firm Official) _____
and
(Operator) Casey Hicks

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

USE TYPEWRITER OR BALL POINT PEN

State of Idaho
Department of Water Resources

RECEIVED
SEP 27 1977

43

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.

1. WELL OWNER

Name J. Proebold

Address May Field, Idaho

Owner's Permit No. _____

2. NATURE OF WORK

☑ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

3. PROPOSED USE

☑ Domestic ☐ Irrigation ☐ Test ☐ Other (specify type)

☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection

4. METHOD DRILLED

☐ Cable ☑ Rotory ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 6 inches Total depth 80 feet

Casing schedule: ☑ Steel ☐ Concrete

Thickness	Diameter	From	To
250 inches	6 inches	+1 feet	29 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ 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 _____

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 _____

Placed from _____ feet to _____ feet

Surface seal depth 18 Material used in seal ☐ Cement grout ☐ Puddling clay ☑ Well cuttings

Sealing procedure used ☐ Slurry pit ☐ Temporary surface casing ☑ Overbore to seal depth

6. LOCATION OF WELL

Sketch map location must agree with written location.

63

N / W / E / S

Subdivision Name _____

Lot No. _____ Block No. _____

County Elmore

SW ¼ NE ¼ Sec. 12 T. 1 N/S R. 4 E/W

7. WATER LEVEL

Static water level 23 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

8. WELL TEST DATA

☐ Pump ☐ Bailer ☑ Other

Discharge G.P.M.	Draw Down	Hours Pumped
10		2

46577

9. LITHOLOGIC LOG

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
6	0	10	Soil		
6	10	24	Gray clay + Dk. Granite		
6	24	66	Dk. Granite	X	
6	66	80	Dk. Granite + clay		

10.

Work started 8-11-77 finished 8-12-77

11. DRILLERS CERTIFICATION

Firm Name Hollerston Drilling Firm No. 35

Address Mt Home Date 9-15-77

Signed by (Firm Official) Bob

and

(Operator) Ken Hall

USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMENT

44

Form 238-7
8/90

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

R-

USE TYPEWRITER OR BALLPOINT PEN

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.

1. WELL OWNER

Name Erin Lord

Address HC 34, Mayfield, Boise, ID 83706

Drilling Permit No. 63-91-Z-208

Water Right Permit No. _____

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

	Thickness		Diameter		From		To	
	.250	inches	6 5/8	inches	+ 2	feet	38	feet
PVC	.250	inches	4 ½	inches	10	feet	40	feet
		inches		inches		feet		feet
		inches		inches		feet		feet

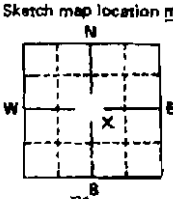
Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation _____ inches by _____ inches

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

Well screen installed? ☒ Yes ☐ No
Manufacturer's name Johnson
Type PVC Model No. _____
Diameter 4 Slot size 020 Set from 40 feet to 60 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 location.



Subdivision Name _____
Lot No. _____ Block No. _____
County Elmore
NW ¼ SE ¼ Sec. 1, T. 1 N ☐ S ☐ R. 4 E ☒ W ☐

7. WATER LEVEL

Static water level 18 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.

8. WELL TEST DATA 71248

☐ Pump ☐ Bailer ☒ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
10		1½

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	2	Top Soil		x
8	2	15	Decomposed grimite		x
8	15	20	Brown Clay		x
6	20	50	Decomposed grimite-white	x	
6	50	60	Decomposed grimite-Brown		

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SEP 26 1991
Department of Water Resources

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SEP 27 1991
Department of Water Resources
Western Regional Office

10. Work started 9/22/91 finished 9/23/91

11. DRILLERS CERTIFICATION JL

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

Firm Name Hiddleston & Son, Inc Firm No. 35
Address Mtn. Home, ID Date 9/25/91
Signed by (Firm Official) Mark S. Hiddleston
and
(Operator) John H Smith

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NOV 25 1991

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R7-135

UNITED STATES DEPARTMENT OF AGRICULTURE
IL CONSERVATION SERVICE

45

WELL SCHEDULE

Work Unit Ida GA-3 Owyhee Demonstration - Opaline

Land Owner A. L. Clark Address Marsing, Idaho Well No. 2 & 3

Location: State Idaho County Owyhee NE ¼ Sec. 2

Source A. L. C. 11/16/39 Confidential no

Drilling Commenced _____ Completed _____

Driller _____ Address _____

Topography gentle alluvial slope, valley of the Snake River

Elevation _____ ft. Datum _____ Meas. point _____

Type of Well drilled Method of Drilling churn drill

Depth 1140 Diameter: top _____ bottom _____

T1 N; R4 E

Chief Aquifer _____ from 940 ft. to 1140 ft.

Others probably 1 or 2 lengths

Casing: Type _____ Depth _____ Diameter _____ Screen _____

Water Level flowing ft. above / below _____ ; _____ ft. above / below _____

Pump _____ Power _____

Yield est. 1/3 in Drawdown _____ ft. pumping _____ G.P.M. Time _____

Use _____ Quality _____ Samples _____

Graphic Log

Geological Formation Record

Written Log by: _____ Casing Record

Correlation by: _____

From Feet	To Feet	Thickness ft.	Character of formation and remarks
			2 wells both 1140 ft. deep
0	40	40	Soil and probably alluvial gravel
40	940	900	Blue shale
940	941	1	Water, probably in sandstone
941	1140	199	Whitish formation, shaly with stony ribs or bars
1140+			Struck cavy sand and quit drilling
			At present barely flows, possibly 1/8 inch each

869017-771741

Inspected by _____
Twp _____ Rge _____ Sec _____
_____ 1/4 _____ 1/4
Lat: : : Long: : :

46

Form 238-7
3/95-C96

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. DRILLING PERMIT NO. - - - - - -
Other IDWR No. D0019343

2. OWNER:
Name Erin Lord
Address 1171 Mayfield Dr.
City Boise State ID Zip 83716

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W X E
S

Twp. 1 North X or South ☐
Rge. 5 East X or West ☐
Sec. 6 1/4 SW 1/4 NE 1/4
10 acres 40 acres 160 acres

Gov't lot _____ County Elmore
Lat: : : Long: : :
Address of Well Site End of Alzola Lane
City Boise
(Give at least name of road + Distance to Road or Landmark)
Lt. _____ Blk. _____ Sub. Name _____

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

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

6. DRILL METHOD
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Bentonite	0	18'	400 lbs	Overbore

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6.625	+2	38	250	Steel	X	☐	X	☐
4.5	-10	170	Sch40	PVC	☐	X	☐	X
					☐	☐	☐	☐

Length of Headpipe 110 Length of Tailpipe 20

9. PERFORATIONS/SCREENS
☐ Perforations Method _____
X Screens Screen Type Johnson

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
110	120	.020		4.5	PVC	☐	X
140	150	.020		4.5	PVC	☐	X
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
22 ft. below ground Artesian Pressure _____ lb
Depth flow encountered ft. Describe access port or control

11. WELL TESTS:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Level	Time
4-5			3 hrs

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

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10	0	10	Soil		X
10-6	10	24	Decomposed Granite, Clay, & Gravel		X
6	24	35	Decomposed Granite		X
6	35	146	Granite & Some Clay Seam		X
6	146	176	Granite with Black Lava	X	
6	171	200	Decomposed Granite & Clay Seam		X
			Filled back to 170' w/ Decomposed Granite		

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NOV 26 2001
WATER RESOURCES
WESTERN REGION

Completed Depth: 170' (Measurable)
Date: Started 10-24-01 Completed 11-02-01

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

Firm Name Hiddleston & Son, Inc. Firm No. 35
Firm Official _____ Date 11-19-01
Supervisor or Operator _____ Date 11-19-01
(Sign once if Firm Official & Operator)

R7-135

UNITED STATES DEPARTMENT OF AGRICULTURE
OIL CONSERVATION SERVICE

47

WELL SCHEDULE

Work Unit Ida CA-e — Cayuse Demonstration - Opaline

Land Owner A. L. Clark — Address Marsing, Idaho — Well No. 1

Location: State Idaho — County Owyhee — NE NW — ¼ Sec. 1

Source A. L. C. 11/16/39 — Confidential no

Drilling Commenced 1911 — Completed about 1912

Driller — Address

Topography gentle alluvial slope, valley of the Snake River

Elevation 2245 ft. Datum sea level Meas. point ground surface

Type of Well drilled — Method of Drilling churn

Depth 815 — Diameter: top 4 in. bottom 3 in.

T 1 N; R 4 E W

Chief Aquifer — from — to

Others

Casing: Type black pipe — Depth 36 ft. — Diameter 3 in. — Screen

Water Level flowing 18 in. ft. above / below ; ft. above / below

Pump — Power

Yield Est. 8 in. — Drawdown — ft. pumping — G.P.M. — Time

Use domestic & irrigated — Quality gas-slight H_2S, iron, sulpher, and salts — Samples Temp. 122°F.

Graphic Log

Geological Formation Record

Written Log by:

Correlation by:

Casing Record

From Feet	To Feet	Thickness ft.	Character of formation and remarks
0	30	30	Soil and gravel
30	31	1	Soapstone?
31	225	194	Shale - blue
225	525	300	White formation with rock ribs - enough water to drill with at 225 ft. - at 600 ft. swelling clay - about 20 ft. thick
525	725	200	2nd flow, about same formation
725	815	90	3rd flow - whitish shale and sand ? iron concretions - 4 increases in flow were noted. Original flow rose 16 inches above casing.

Pg#1 843964 <48

Form 238-7 6/02 63

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only	
Well ID No.	414141
Inspected by	
Twp ___ Rge ___ Sec ___	
___ 1/4 ___ 1/4 ___ 1/4	
Lat: : :	Long: : :

1. WELL TAG NO. D 0047651
DRILLING PERMIT NO. 897529-843964
Water Right or Injection Well No. 63-12447

2. OWNER:
Name ARK PROPERTIES LLC
Address 11204 N BAR 21 DR
City GLENNS FERRY State ID Zip 83623

3. LOCATION OF WELL by legal description:
You must provide address or Lot, Blk, Sub. or Directions to well.
Twp. 1 North ☒ or South ☐
Rge. 4 East ☒ or West ☐
Sec. 24 , ___ 1/4 (10 acres) SW 1/4 (40 acres) SW 1/4 (160 acres)
Gov't Lot ___ County ELMORE
Lat: 43 : 24 : 6 Long: 115 : 56 : 6
Address of Well Site 1/2 mi EAST, 1/4 mi SOUTH OF INDIAN CREEK RD SLATOR CREEK RD INTERSECTION City MAYFIELD
(Give at least name of road + Distance to Road or Landmark)
Lt. ___ Blk. ___ Sub. Name N/A

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 REVERSE

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
1" BENTONITE	0	394	37,000	Dry Pour
1" BENTONITE	630	650	5,000	Dry Pour

Was drive shoe used? ☐ Y ☒ N Shoe Depth(s) ___
Was drive shoe seal tested? ☐ Y ☒ N How? ___

8. CASING/LINER: 16" X 10" REDUCER @ 431'

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
16	+2	481	.375	STEEL	☒	☐	☒	☐
10	462	468	.365	STEEL	☒	☐	☒	☐
10	478	542	.365	STEEL	☒	☐	☒	☐

Length of Headpipe ___ Length of Tailpipe 5'
Packer ☐ Y ☒ N Type ___

9. PERFORATIONS/SCREENS PACKER TYPE
Perforation Method ___
Screen Type & Method of Installation JOHNSON WIRE WRAP

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
432	462	.030		10	S.S.	☒	☐
468	478	.030		10	S.S.	☒	☐
542	552	.030		10	S.S.	☒	☐

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method
#6-9 SAND	394	574	27,000	Dry Pour
#8-12 SAND	574	640	12,000	" "

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
229 ft. below ground Artesian pressure ___ lb.
Depth flow encountered ___ ft. Describe access port or control devices: 1 1/2" PIPE ON SIDE

12. WELL TESTS:
☒ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
1700 gpm	142	371	8 hrs

Water Temp. ___ Bottom hole temp. ___
Water Quality test or comments: ___
___ Depth first Water Encounter ___

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water Y	Water N
24	0	3	TOP SOIL		
	3	5	CLECHE		
	5	45	COARSE SAND		
	45	168	DECOMPOSED GRANITE w/sm CLAY LAYERS		
	168	212	FINE - COARSE SAND		
	212	221	BRN CLAY		
	221	223	COARSE SAND		
	223	245	BRN CLAY		
	245	265	FINE-MED SAND		
	265	273	GRANITE		
	273	335	BRN CLAY w/SAND LAYERS		
	335	343	DECOMPOSED GRANITE		
	343	404	CLAY w/sm DECOMPOSE GRANITE LAYER		
	404	410	FINE SAND		
	410	419	BRN CLAY		
	419	440	WHITE CLAY w/COARSE SAND LAYER		
19	440	483	COARSE SAND w/sm CLAY LAYERS		
	483	513	SAND w/SOME CLAY		
	513	541	BRN CLAY, SOME BLUE CLAY		
	541	622	FINE-COARSE SAND w/sm YELLOW CLAY LAYERS		
	622	636	CLAY w/SOME FINE SAND		
	636	641	FINE BLUE SAND		
	641	657	CLAY w/sm SAND LAYER		
	657	674	FINE WHITE SAND SOME CLAY		
	674	690	CLAY w/ SAND STONE LAYER		

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FEB 13 2007
WATER RESOURCES
WESTERN REGION

Completed Depth 622 (Measurable)
Date: Started 12-6-06 Completed 1-23-07

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 RIVERSIDE INC Firm No. 333
Principal Driller [signature] Date 2-8-07
and
Driller or Operator II [signature] Date 2-8-07
Operator I [signature] Date 2-8-07
Principal Driller and Rig Operator *Required.*
Operator I must have signature of Driller/Operator II.

FORWARD WHITE COPY TO WATER RESOURCES

Pg #2

Form 238-7
6/02

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 0047651
DRILLING PERMIT NO. 893529-843964
Water Right or Injection Well No. 63-12447

2. OWNER:
Name ARK PROPERTIES LLC
Address 11204 N BAR 21 DR
City GLENNS FERRY State ID Zip 83623

3. LOCATION OF WELL by legal description:
You must provide address or Lot, Blk, Sub. or Directions to well.
Twp. _____ North ☐ or South ☐
Rge. _____ East ☐ or West ☐
Sec. _____, ____ 1/4 (10 acres) ____ 1/4 (40 acres) ____ 1/4 (160 acres)
Gov't Lot _____ County _____
Lat: : : **Long:** : :
Address of Well Site _____
_____ City _____
(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

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
10	552	562	.365	STEEL	☒	☐	☒	☐
10	572	577	.365	STEEL	☒	☐	☒	☐
10	602	612	.365	STEEL	☒	☐	☒	☐

Length of Headpipe _____ Length of Tailpipe 5'
Packer ☐Y ☐N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE
Perforation Method _____
Screen Type & Method of Installation JOHNSON WIREWRAP

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
562	572	.030		10	S.S.	☒	☐
577	602	.030		10	S.S.	☒	☐
612	622	.030		10	S.S.	☒	☐

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
_____ 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

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

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water Y	Water N

Completed Depth _____ (Measurable)
Date: Started _____ Completed _____

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 _____ Firm No. _____
Principal Driller _____ Date _____
and
Driller or Operator II _____ Date _____
Operator I _____ Date _____
Principal Driller and Rig Operator *Required.*
Operator I must have signature of Driller/Operator II.

FORWARD WHITE COPY TO WATER RESOURCES

KENN. OWINGS WELL, MAYFIELD, ELMORE CO.

Samples washed and described by Jim Braendle, Geology student, BSU
April, 1980

49

300' Coarse quartz and feldspar sands, <5% dark rock chips

330' Fine to medium (½mm), quartz, feldspar
3-5% dark rock chips

360' Medium sand, quartz, feldspar, some pale brown clay-sized material

390' Very coarse sand w/rock chips ranging to ~7 mm (siltstone)

403' Fine quartz/feldspar sands w/approx. 15% clumps of dark yellowish brown clay

434' Poorly sorted quartz/feldspar sand mostly medium sand but w/some (chips?) ranging to 7 mm. Traces iron stain on some grains

465' Medium sand qtz and feldspar, traces iron oxide

496' Coarse grained sand, mostly quartz, some feldspar. No dark chips, but some (< 5%) stained w/iron oxides. Plastic and organic matter abundant

525' Medium to coarse qtz/feldspar sands, ~5% grains show stain from iron oxides. 10% clumps of dk. yellowish brown clay

557' Medium grained qtz & feldspar sand, shows considerable (10%) iron staining. Large amount of organic matter found in sample.

586' Coarse grained sand (qtz/feldspars), occasional larger stone (½") Also contains some balls of dusky brown mud ~10%

618' Very small sample mostly organic matter and fine mud. Some medium sand and some rock chips...dark grey (~5%)

648' Medium sand (qtz, feldspar, muscovite), large amount of organic matter.

678' Fine to medium sand primarily qtz. Some feldspar, muscovite, dark chips (1%)

708' Fine to medium qtz and feldspar sand w/occasional chips up to 3/8"

801' Coarse to very coarse sand, qtz & feldspar. small amount (<5%) dusky brown clay in chunks. (Snailshell found in sample) (Some plastic wrap found in sample)

832' Fine qtz/feldspar sand w/occasional grey rock chips

863' Very coarse to coarse sand, primarily quartz, feldspar ~10% of grains stained dark ~5% pieces dusky brown mud

894' Medium qtz. sand, sample contained mostly organic matter Plastic wrap, etc., alsc large amount light grey clay & mud

960' Medium to fine sand qtz, feldspar, also muscovite. Also very fine light grey mud. Very small sample.

990'
1021' Cuttings available but not washed
Samples not yet logged S.H. Wood 9/80
1052'

The above descriptions were made by Jim Braendle - not checked, but they look reasonable. S. H. Wood

Cuttings are available at BSU for examination.

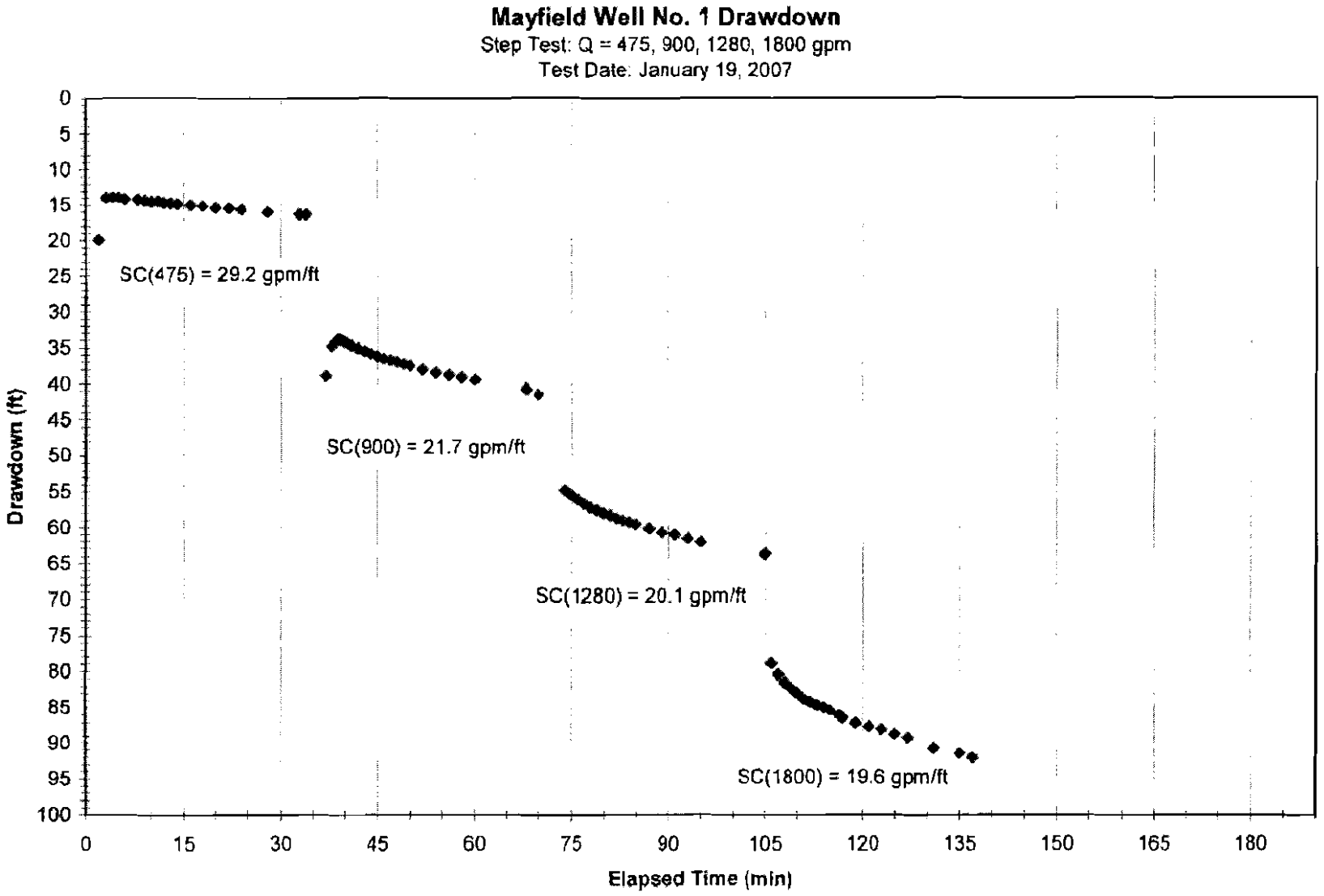
APPENDIX C
ARC PROPERTIES WELL TEST RESULTS

Mayfield
Well No. 1 Step Test

Turbine pump set at 416 feet; diesel motor
Flow measured with pipe orifice (10x7), Q = 475, 900, 1280, and 1800 gpm
Water level measured with electric well sounder
Measurement point 2.85 feet above ground surface (casing + tubing)

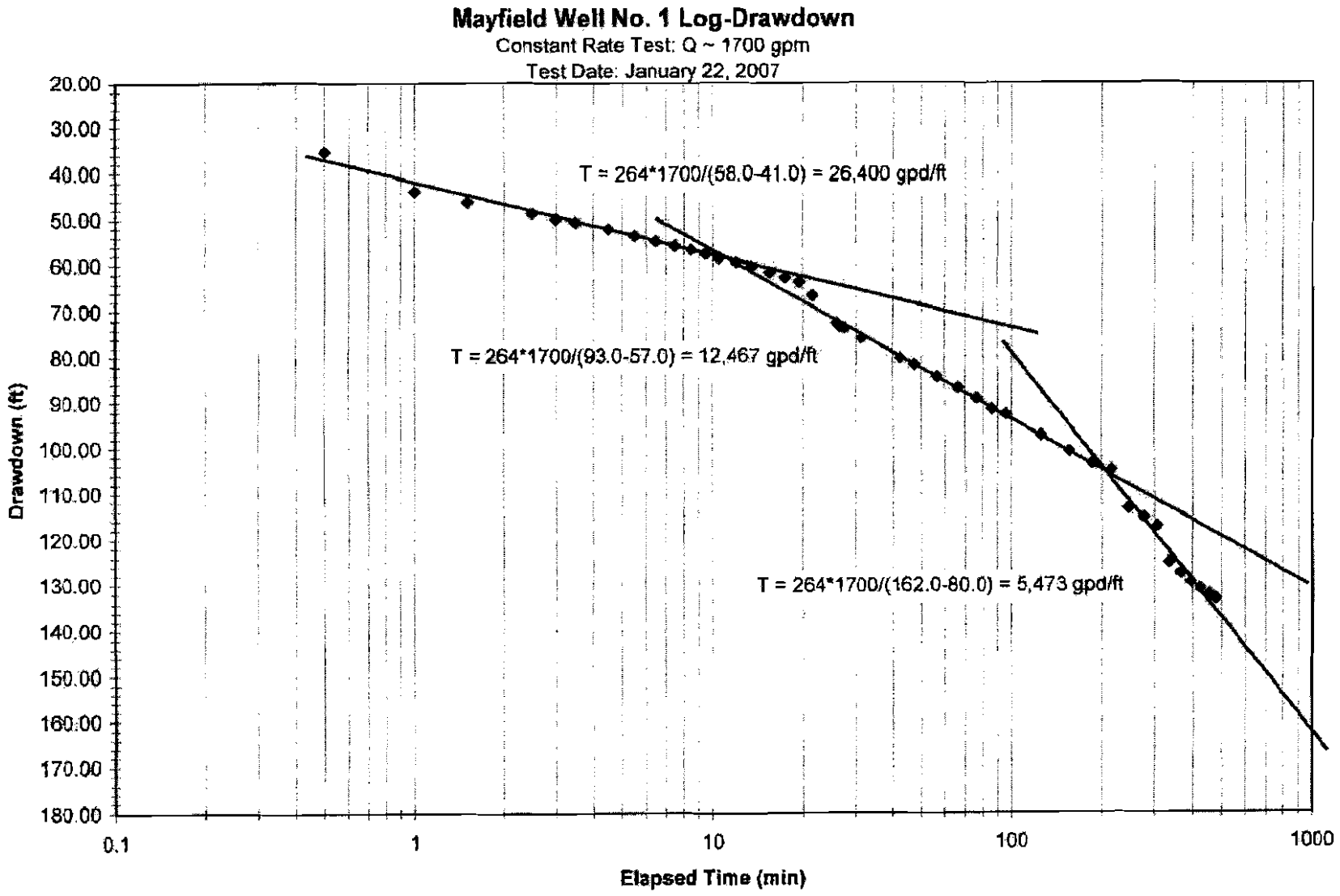
Date	Time	t (min)	t' (min)	t/t'	DTW (ft bgs)	Drawdown (ft)	Remarks
1/19/2007	10:55				243.17		static water level
1/19/2007	11:00	0					pump on
1/19/2007	11:02	2			263.08	19.91	adjusting Q
1/19/2007	11:03	3			257.08	13.91	adjusting Q
1/19/2007	11:04	4			257.00	13.83	Q set @ 475 gpm
1/19/2007	11:05	5			257.00	13.83	
1/19/2007	11:06	6			257.25	14.08	
1/19/2007	11:07	7					
1/19/2007	11:08	8			257.35	14.18	
1/19/2007	11:09	9			257.52	14.35	
1/19/2007	11:10	10			257.69	14.52	
1/19/2007	11:11	11			257.62	14.45	
1/19/2007	11:12	12			257.86	14.69	
1/19/2007	11:13	13			257.92	14.75	
1/19/2007	11:14	14			258.06	14.89	
1/19/2007	11:16	16			258.21	15.04	
1/19/2007	11:18	18			258.32	15.15	
1/19/2007	11:20	20			258.57	15.40	
1/19/2007	11:22	22			258.62	15.45	
1/19/2007	11:24	24			258.82	15.65	
1/19/2007	11:28	28			259.22	16.05	
1/19/2007	11:33	33			259.41	16.24	
1/19/2007	11:34	34			259.44	16.27	
1/19/2007	11:36	36					increase Q
1/19/2007	11:37	37			282.14	38.97	adjusting Q
1/19/2007	11:38	38			278.00	34.83	adjusting Q
1/19/2007	11:39	39			277.00	33.83	adjusting Q
1/19/2007	11:39:30	39.5			277.18	34.01	Q set @ 900 gpm
1/19/2007	11:40	40			277.40	34.23	
1/19/2007	11:41	41			277.95	34.78	
1/19/2007	11:42	42			278.33	35.16	
1/19/2007	11:43	43			278.67	35.50	
1/19/2007	11:44	44			279.09	35.92	
1/19/2007	11:45	45			279.38	36.21	
1/19/2007	11:46	46			279.71	36.54	
1/19/2007	11:47	47			279.84	36.67	
1/19/2007	11:48	48			280.10	36.93	
1/19/2007	11:49	49			280.35	37.18	
1/19/2007	11:50	50			280.66	37.49	
1/19/2007	11:52	52			281.14	37.97	
1/19/2007	11:54	54			281.62	38.45	
1/19/2007	11:56	56			281.96	38.79	
1/19/2007	11:58	58			282.31	39.14	
1/19/2007	12:00	60			282.68	39.51	
1/19/2007	12:04	64					T = 20.7 C (69.3 F), EC = 173.7, SC = 184.8
1/19/2007	12:08	68			284.00	40.83	
1/19/2007	12:10	70			284.73	41.56	
1/19/2007	12:13	73					increase Q
1/19/2007	12:14	74			298.00	54.83	adjusting Q
1/19/2007	12:14:30	74.5			298.40	55.23	Q set @ 1280 gpm
1/19/2007	12:15	75			298.75	55.58	

Date	Time	t (min)	t' (min)	t/t'	DTW (ft bgs)	Drawdown (ft)	Remarks
1/19/2007	12:16	76			299.40	56.23	
1/19/2007	12:17	77			299.98	56.81	
1/19/2007	12:18	78			300.44	57.27	
1/19/2007	12:19	79			300.83	57.66	
1/19/2007	12:20	80			301.25	58.08	
1/19/2007	12:21	81			301.56	58.39	
1/19/2007	12:22	82			301.95	58.78	
1/19/2007	12:23	83			302.25	59.08	
1/19/2007	12:24	84			302.50	59.33	
1/19/2007	12:25	85			302.83	59.66	
1/19/2007	12:27	87			303.37	60.20	
1/19/2007	12:29	89			303.95	60.78	
1/19/2007	12:31	91			304.26	61.09	
1/19/2007	12:33	93			304.78	61.61	
1/19/2007	12:35	95			305.26	62.09	
1/19/2007	12:39	99					T = 20.7 C (69.3 F), EC = 174.3, SC = 185.6
1/19/2007	12:43	103					
1/19/2007	12:45	105			306.91	63.74	increase Q
1/19/2007	12:46	106			322.14	78.97	adjusting Q
1/19/2007	12:47	107			323.70	80.53	Q set @ 1800 gpm
1/19/2007	12:48	108			324.84	81.67	
1/19/2007	12:49	109.00			325.55	82.38	
1/19/2007	12:50	110.00			326.23	83.06	
1/19/2007	12:51	111			327.00	83.83	
1/19/2007	12:52	112			327.51	84.34	
1/19/2007	12:53	113.00			327.94	84.77	
1/19/2007	12:54	114.00			328.20	85.03	
1/19/2007	12:55	115.00			328.61	85.44	
1/19/2007	12:56:30	116.50			329.26	86.09	
1/19/2007	12:57	117			329.65	86.48	
1/19/2007	12:59	119.00			330.36	87.19	
1/19/2007	13:01	121			330.82	87.65	
1/19/2007	13:03	123			331.20	88.03	
1/19/2007	13:05	125			331.83	88.66	
1/19/2007	13:07	127			332.41	89.24	
1/19/2007	13:11	131			333.90	90.73	
1/19/2007	13:15	135			334.64	91.47	
1/19/2007	13:17	137			335.22	92.05	pump off


Mayfield Well No. 1 Drawdown
Step Test: Q = 475, 900, 1280, 1800 gpm
Test Date: January 19, 2007
Drawdown (ft)
Elapsed Time (min)
SC(475) = 29.2 gpm/ft
SC(900) = 21.7 gpm/ft
SC(1280) = 20.1 gpm/ft
SC(1800) = 19.6 gpm/ft
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
0
15
30
45
60
75
90
105
120
135
150
165
180

Mayfield
Well No. 1 Constant Rate Test

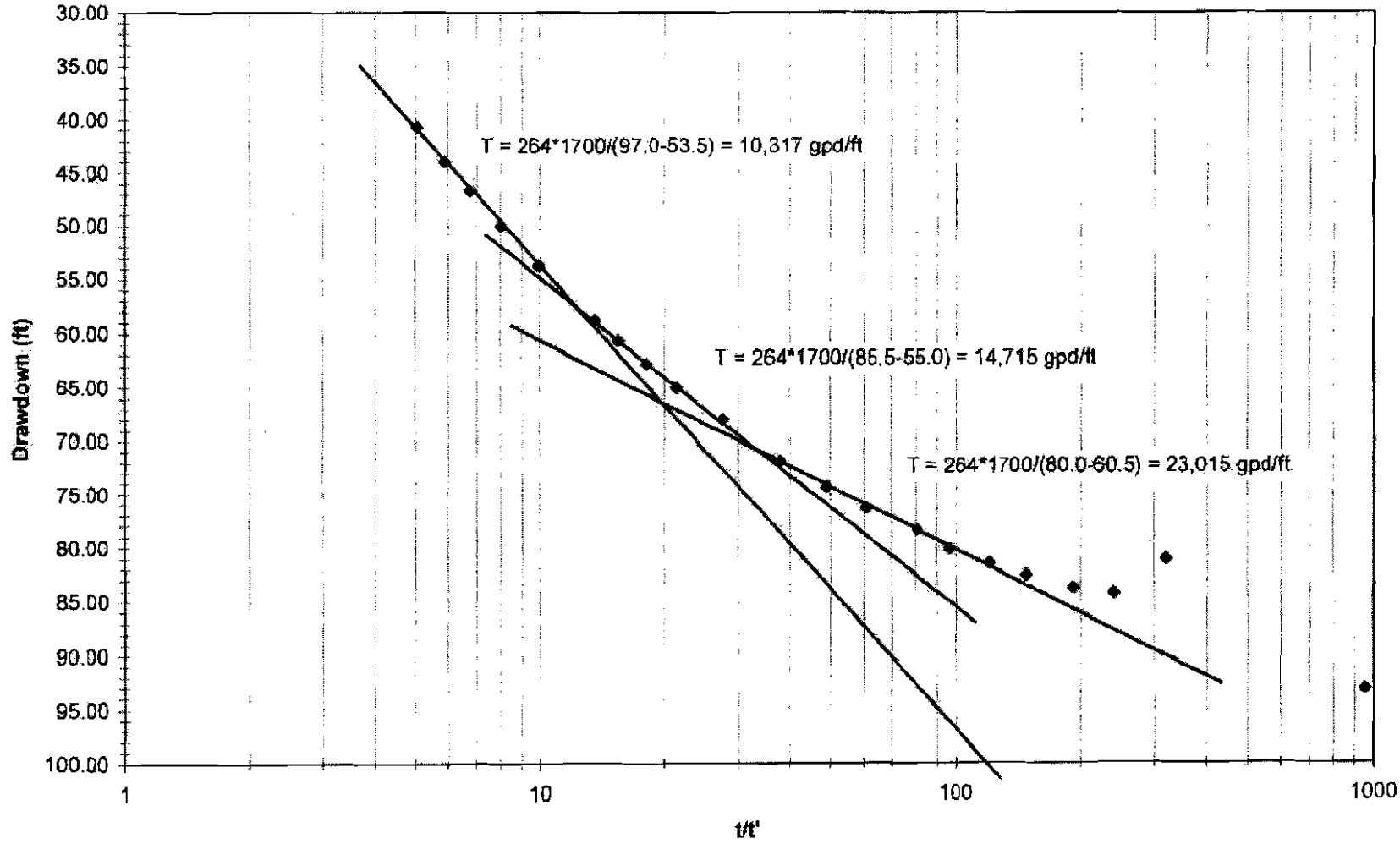
Turbine pump set at 416 feet, diesel motor							
Flow measured with pipe orifice (10x8), Q = 1600-1700 gpm							
Water level measured with electric well sounder							
Measurement point 2.21 feet above ground surface (casing + tubing)							
Date	Time	t (min)	t' (min)	t/t'	DTW (ft)	Drawdown (ft)	Remarks
1/22/2007	9:22:00 AM				237.83		static water level; Non-pumping well DTW = 174.73 ft
1/22/2007	9:23:30 AM	0			267.00	29.17	pump on
1/22/2007	9:24:00 AM	0.5			273.00	35.17	
1/22/2007	9:24:30 AM	1			281.58	43.75	
1/22/2007	9:25:00 AM	1.5			283.92	46.08	
1/22/2007	9:25:30 AM	2					Q set @ 1700 gpm
1/22/2007	9:26:00 AM	2.5			286.50	48.67	
1/22/2007	9:26:30 AM	3			287.75	49.92	
1/22/2007	9:27:00 AM	3.5			288.58	50.75	
1/22/2007	9:28:00 AM	4.5			290.00	52.17	
1/22/2007	9:29:00 AM	5.5			291.42	53.58	
1/22/2007	9:30:00 AM	6.5			292.50	54.67	
1/22/2007	9:31:00 AM	7.5			293.50	55.67	
1/22/2007	9:32:00 AM	8.5			294.42	56.58	
1/22/2007	9:33:00 AM	9.5			295.33	57.50	
1/22/2007	9:34:00 AM	10.5			296.25	58.42	
1/22/2007	9:35:30 AM	12			297.25	59.42	
1/22/2007	9:37:00 AM	13.5			298.25	60.42	
1/22/2007	9:39:00 AM	15.5			299.50	61.67	
1/22/2007	9:41:00 AM	17.5			300.50	62.67	
1/22/2007	9:43:00 AM	19.5			301.50	63.67	small upward throttle adjustment
1/22/2007	9:45:00 AM	21.5			304.50	66.67	
1/22/2007	9:49:30 AM	26			310.42	72.58	small upward throttle adjustment
1/22/2007	9:50:00 AM	26.5			311.00	73.17	
1/22/2007	9:51:00 AM	27.5			311.50	73.67	
1/22/2007	9:55:00 AM	31.5			313.75	75.92	
1/22/2007	10:06:00 AM	42.5			318.00	80.17	
1/22/2007	10:11:00 AM	47.5			319.50	81.67	
1/22/2007	10:20:00 AM	56.5			322.25	84.42	10:15 - took 1L sand sample in Imhoff cone, few particles
1/22/2007	10:30:00 AM	66.5			324.67	86.83	
1/22/2007	10:40:00 AM	76.5			327.00	89.17	
1/22/2007	10:50:00 AM	86.5			329.33	91.50	
1/22/2007	11:00:00 AM	96.5			330.46	92.63	
1/22/2007	11:30:00 AM	126.5			335.00	97.17	
1/22/2007	12:00:00 PM	156.5			338.54	100.71	
1/22/2007	12:30:00 PM	186.5			341.29	103.46	
1/22/2007	1:00:00 PM	216.5			342.75	104.92	
1/22/2007	1:30:00 PM	246.5			351.08	113.25	
1/22/2007	2:00:00 PM	276.5			353.08	115.25	
1/22/2007	2:30:00 PM	306.5			355.08	117.25	
1/22/2007	3:00:00 PM	336.5			363.00	125.17	
1/22/2007	3:30:00 PM	366.5			365.42	127.58	3:35 pm: Imhoff cone sample: cloudy with a fine particles settling (<0)
1/22/2007	4:00:00 PM	396.5			367.33	129.50	3:45 pm: T=21.8, pH=7.4-7.5, EC/SC=175.0 / 187.2
1/22/2007	4:30:00 PM	426.5			368.75	130.92	4:13 pm: Imhoff cone sample: 10-20 particles per sec falling to bottom
1/22/2007	5:00:00 PM	456.5			370.00	132.17	Q @ 1680 gpm (water level about 1" below 1710 gpm mark)
1/22/2007	5:22:00 PM	478.5			371.00	133.17	pump off
1/22/2007	5:22:30 PM	479	0.5	958.00	331.00	93.17	unsure of this value, originally wrote 311 ft
1/22/2007	5:23:30 PM	480	1.5	320.00	318.92	81.08	
1/22/2007	5:24:00 PM	480.5	2.0	240.25	322.08	84.25	
1/22/2007	5:24:30 PM	481	2.5	192.40	321.58	83.75	
1/22/2007	5:25:15 PM	481.75	3.3	148.23	320.42	82.58	
1/22/2007	5:26:00 PM	482.5	4.0	120.83	319.33	81.50	
1/22/2007	5:27:00 PM	483.5	5.0	96.70	318.00	80.17	
1/22/2007	5:28:00 PM	484.5	6.0	80.75	316.25	78.42	
1/22/2007	5:30:00 PM	486.5	8.0	60.81	314.17	76.33	
1/22/2007	5:32:00 PM	488.5	10.0	48.85	312.17	74.33	
1/22/2007	5:35:00 PM	491.5	13.0	37.81	309.75	71.92	
1/22/2007	5:40:00 PM	496.5	18.0	27.58	305.83	68.00	
1/22/2007	5:45:30 PM	502	23.5	21.36	302.92	65.08	
1/22/2007	5:50:00 PM	506.5	28.0	18.09	300.67	62.83	
1/22/2007	5:55:00 PM	511.5	33.0	15.50	298.50	60.67	
1/22/2007	6:00:00 PM	516.5	38.0	13.59	296.58	58.75	
1/22/2007	6:15:30 PM	532	53.5	9.94	291.58	53.75	
1/22/2007	6:30:00 PM	546.5	68.0	8.04	287.83	50.00	
1/22/2007	6:45:00 PM	561.5	83.0	6.77	284.50	46.67	
1/22/2007	7:00:00 PM	576.5	98.0	5.88	281.75	43.92	
1/22/2007	7:20:00 PM	596.5	118.0	5.06	278.50	40.67	end recovery; Non-pumping well DTW = 174.75 ft

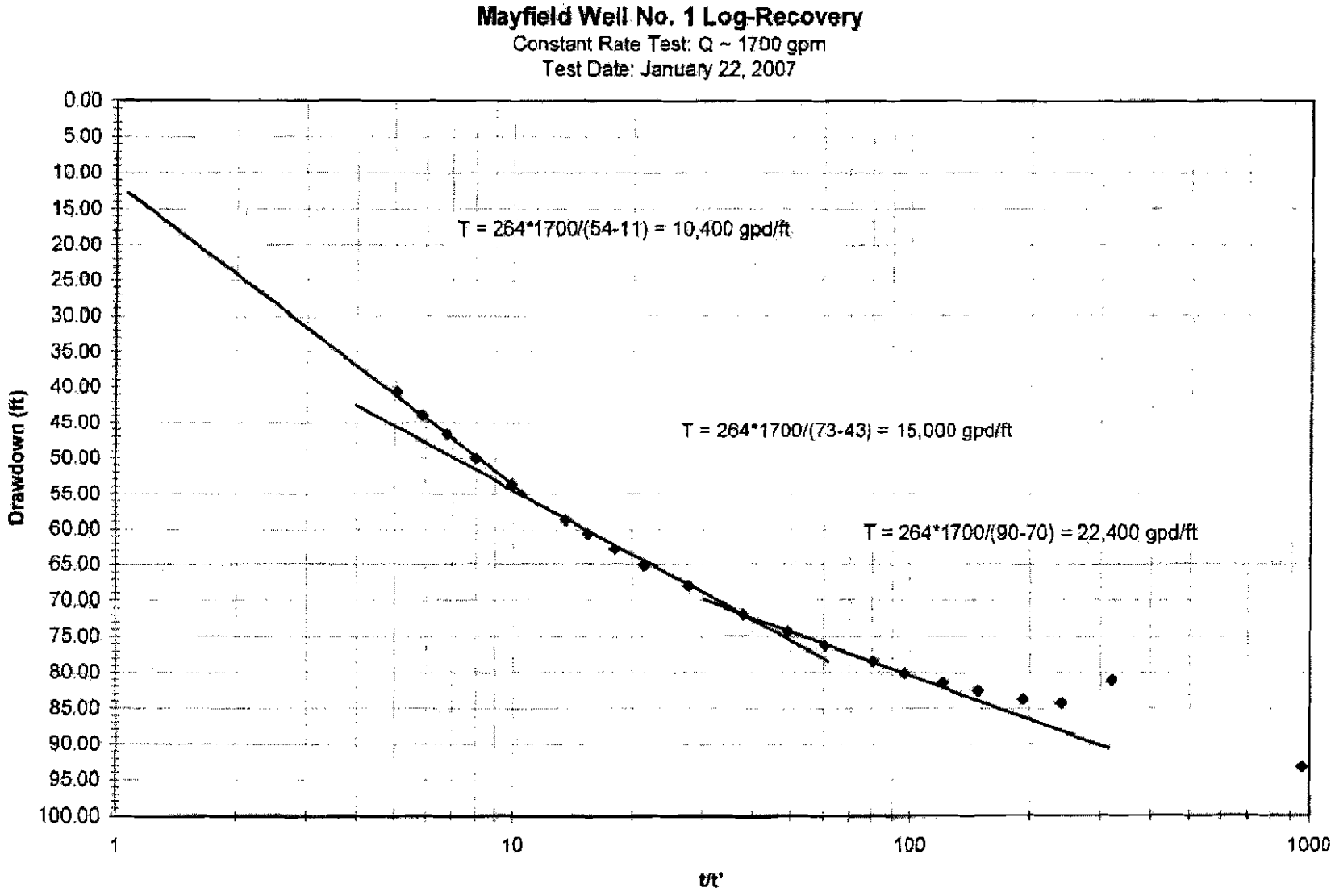

Mayfield Well No. 1 Log-Drawdown
Constant Rate Test: Q ~ 1700 gpm
Test Date: January 22, 2007
T = 264*1700/(58.0-41.0) = 26,400 gpd/ft
T = 264*1700/(93.0-57.0) = 12,467 gpd/ft
T = 264*1700/(162.0-80.0) = 5,473 gpd/ft
Drawdown (ft)
20.00
30.00
40.00
50.00
60.00
70.00
80.00
90.00
100.00
110.00
120.00
130.00
140.00
150.00
160.00
170.00
180.00
0.1
1
10
100
1000
Elapsed Time (min)

Mayfield Well No. 1 Log-Recovery

Constant Rate Test: Q ~ 1700 gpm

Test Date: January 22, 2007




Mayfield Well No. 1 Log-Recovery
Constant Rate Test: Q ~ 1700 gpm
Test Date: January 22, 2007
T = 264*1700/(54-11) = 10,400 gpd/ft
T = 264*1700/(73-43) = 15,000 gpd/ft
T = 264*1700/(90-70) = 22,400 gpd/ft
Drawdown (ft)
0.00
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
50.00
55.00
60.00
65.00
70.00
75.00
80.00
85.00
90.00
95.00
100.00
1
10
100
1000
t/t'

APPENDIX D
AGENBROAD WELL TEST RESULTS

September 17, 2005

Greg Johnson
Westpark Company
P.O. Box 344
Meridian, ID 83660

Subject: United Water Data - Neil Helmick Well

Dear Greg:

The data received from United Water Idaho for the Neil Helmick Well (i.e., Ken Agenbroad Well) are enclosed for your files. The data are summarized below.

1. Water quality from the well is excellent, with no parameters exceeding primary or secondary water quality standards. The water has a temperature of 73.5 degrees F, total dissolved solids of 193 mg/L, hardness of 60.4 mg/L (soft), and Langlier index of 0.12 (non-corrosive).

2. The Helmick Well is 763 feet, and is completed with 130 feet of 16-inch diameter steel shutter screens staggered between 500 and 752 feet. The well is gravel packed from 6 feet to 763 feet. A cement grout surface seal extends to 72 feet on the outside of a 20-inch surface.

3. Static water level on May 20, 1999 was 389 feet below ground surface.

4. The well was test pumped at 550 gpm for 6 hours on May 20, 1999 with 73 feet of drawdown, and an additional one hour at 795 gpm with 92 feet of drawdown. Based on projection of the pumping water level trend, the well can probably be operated continuously at a rate of 450 to 500 gpm without dewatering the uppermost well screens. If the uppermost well screen section (from 500 to 510 feet) were dewatered (likely resulting in cascading water), the well could potentially produce a higher yield. By dewatering the uppermost screen, an additional 100 feet of drawdown is possible.

5. The well produced sand during test pumping, but the sand content diminished to a non-detectable level after 150 minutes of continuous pumping.

6. Analysis of the test pumping water-level trend indicates an aquifer transmissivity of approximately 7,300 gpd/ft. This transmissivity value suggests that the aquifer

productivity or permeability is low to moderate. Aquifer transmissivity measured tests of wells in the Boise area is typically in the range of 10,000 to 30,000 gpd/ft.

7. A video survey of the well was conducted on May 10, 1999. My review of the video found that the screen slots appear to be open in most places, and the well casing looks to be in good condition. The video technician's notes suggest that the screens are plugged, but I believe his interpretation was based on the side-view appearance of the shutter screen, rather than the more appropriate downward view.

Review of the data suggests that wells of moderate productivity (400 gpm to 800 gpm) can likely be developed for the Mayfield Springs planned community. Pumping water levels will be 500 feet or more. The water quality is expected to be adequate for public water system use.

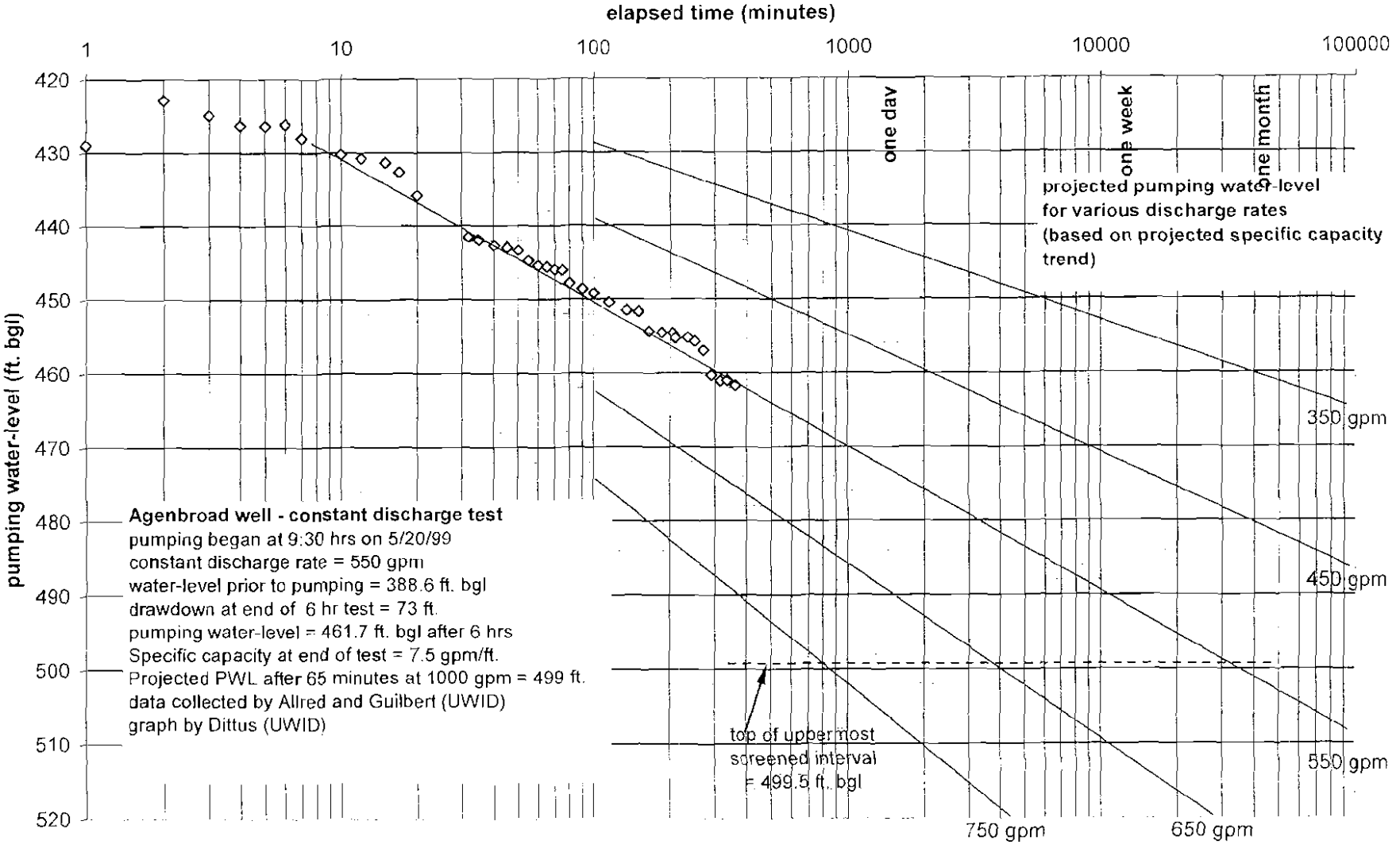
Please contact me with any questions.

Sincerely,

Terry M. Scanlan, P.E., P.G.

File: 329.0050

Agenbroad well - constant discharge test



ALCHEM LABORATORIES

Alchem Laboratories, Inc.
104 West 31st Street
Boise, Idaho 83714
Phone (208) 336-1172
FAX (208) 336-7124

Water, Waste Water and Soil Analysis

LABORATORY REPORT

UNITED WATER
P.O. BOX 7488
BOISE, IDAHO 83707-1488

ATTENTION: ED SQUIRES
SOURCE -: AGENBROAD

DATE COLLECTED - - -05/20/1999
TIME COLLECTED - - -15:30
DATE RECEIVED - - - 05/20/1999
DATE REPORTED - - - 06/10/1999
SUBMITTED :

LAB SAMPLE NUMBER - 64919

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
ANTIMONY by FURNACE	<0.002	06/02/1999	PM
ARSENIC	0.007	06/01/1999	PM
BARIUM	<0.10	06/01/1999	PM
BERYLLIUM	<0.0002	06/01/1999	PM
CADMIUM	<0.0005	06/01/1999	PM
CHROMIUM	<0.002	06/01/1999	PM
CYANIDE, TOTAL	<0.005	06/03/1999	SG
FLUORIDE	0.51	05/26/1999	CE
MERCURY	<0.0002	06/09/1999	MM
NICKEL	<0.003	06/01/1999	PM
NITRATE as N	<0.10	05/21/1999	HG
NITRITE as N	<0.01	05/20/1999	NH
SELENIUM by GRAPHITE	<0.005	06/09/1999	pm
SODIUM	24.3	06/01/1999	PM
SULFATE	8.26	05/21/1999	HG
THALLIUM GRAPHITE	<0.0006	06/07/1999	PM
CHLORIDE	2.63	05/21/1999	HG
COLOR	<1.0	05/20/1999	HG
IRON	0.19	06/01/1999	PM
IRON (DISS.)	0.14	06/01/1999	PM
SULFIDE	<0.05	05/21/1999	CE
MANGANESE	0.02	06/01/1999	PM
MANGANESE (DISS.)	0.02	06/01/1999	PM
ODOR	1.0	05/20/1999	HG
SURFACTANT	<0.025	05/21/1999	PM
TOTAL DISS. SOLIDS	190.0	05/25/1999	NH
ZINC	0.016	06/01/1999	PM

Continued on next page

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104 West 31st Street
Boise, Idaho 83714
Phone (208) 336-1172
FAX (208) 336-7124
Water, Waste Water and Soil Analysis

LABORATORY REPORT

continued

UNITED WATER
P.O. BOX 7488
BOISE, IDAHO 83707-1488

ATTENTION: ED SQUIRES
SOURCE -: AGENBROAD

DATE COLLECTED - - -05/20/1999
TIME COLLECTED - - -15:30
DATE RECEIVED - - - 05/20/1999
DATE REPORTED - - - 06/10/1999
SUBMITTED :

LAB SAMPLE NUMBER - 64919

Results reported unless noted: (Chemistry Analysis as mg/l: (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
SILVER	(0.02	06/01/1999	PM
ALUMINUM	0.02	06/01/1999	PM
ALKALINITY	142.0	05/26/1999	CE
AMMONIA as N	0.06	06/04/1999	SD
CALCIUM as CaCO3	56.5	06/01/1999	PM
HARDNESS	60.4	06/01/1999	PM
MAGNESIUM	0.91	06/01/1999	PM
POTASSIUM	1.20	05/28/1999	MM
SILICA	17.7	05/25/1999	MM
LEAD GRAPHITE	(0.002	05/25/1999	PM
COPPER	0.18	06/01/1999	PM
CORROSIVITY	0.12	06/02/1999	JD
CONDUCTIVITY (umhos/cm)	225.0	05/20/1999	NH
SUSPENDED SOLIDS	(1.0	05/25/1999	NH
pH (SU)	8.10	05/20/1999	TK

COMMENTS: FIELD pH = 8.23, FIELD COND = 201uS/cm, FIELD TEMP= 73.5 F
CORROSIVITY: THE WATER IS NON-AGGRESSIVE ACCORDING TO THE LANGLIER INDEX.
HARDNESS = 60.4 = 3.6 GRAINS PER GALLON = SOFT

Suzanne Howell, Laboratory Manager

ALCHEM LABORATORIES
Alchem Laboratories, Inc.
104 West 31st Street
Boise, Idaho 83714
Phone (208) 336-1172
FAX (208) 336-7124
Water, Waste Water and Soil Analysis

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DRINKING WATER RADIOLOGICAL ANALYSIS REPORT

EPDS	CONTAMINANT	RESULT mg/L	RESULT pCi/L	90 % Confidence Interval (± 1.65σ)	MCL	MDL	METHOD
4002	GROSS ALPHA		0.2		15.0		900.0
4100	GROSS BETA		1.8		50.0		900.0
4XXX	URANIUM (measure if gross alpha exceeds 15 pCi/L: activity in pCi/L = 0.68 x concentration in ug/L)						908.1
4000	ADJUSTED GROSS ALPHA (subtract uranium activity level from gross alpha)						
4020	RADIUM 226 [measure if gross alpha plus 90% confidence interval (1.65σ) is greater than 5 pCi/L]				3.0		903.1
4030	RADIUM 228 (measure if radium 226 exceeds 3 pCi/L)						904.0
4010	TOTAL MEASURED RADIUM (sum of Radium 226 & Radium 228)				5.0		
4100	BETA / PHOTON ACTIVITY (measure major constituents if activity exceeds 50 pCi/L)				4mREM		

NAME OF WATER SYSTEM : AGENBROAD WELL

COMPOSITE SAMPLE DATES:
1st quarterly sample:
2nd quarterly sample:
3rd quarterly sample:
4th quarterly sample:

COMMENTS:
Analyzed by Idaho Bureau of Labs, Boise, Idaho

Lab Supervisor Signature Date

PWS #	
LAB SAMPLE #	64917
DATE COLLECTED	05/20/99
SAMPLE TYPE	PLANT TAP
DATE RECEIVED	05/20/99
TIME COLLECTED	15:30 HRS
LOCATION TAG #	
COLLECTION LOCATION	INDIAN CREEK
DATE REPORTED	07/09/99
JURISDICTION	
PWS CONTACT PHONE #	362-7332

REPORT RESULTS TO:

UNITED WATER
ATTN: ED SQUIRES
P.O. BOX 7488
BOISE, IDAHO 83707

ALCHEM LABORATORIES
Alchem Laboratories, Inc.
104 West 31st Street
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Water, Waste Water and Soil Analysis

JUN
WATER

PUBLIC DRINKING WATER LABORATORY ANALYSIS REPORT

VOLATILE ORGANIC CONTAMINANTS - METHOD 502.2

FRDS	COMPOUND (MCL) (ug/L)	MDL (ug/L)	RESULT (ug/L)	FRDS	COMPOUND (MCL) (ug/L)	MDL (ug/L)	RESULT (ug/L)
REGULATED COMPOUNDS							
2990	Benzene (5.0)	0.5	ND	2987	Tetrachloroethylene (5.0)	0.5	ND
2982	Carbon Tetrachloride (5.0)	0.5	ND	2378	1,2,4-Trichlorobenzene (70.0)	0.5	ND
2977	1,1 - Dichloroethylene (7.0)	0.5	ND	2981	1,1,1 - Trichloroethane (200.0)	0.5	ND
2380	cis - 1,2 Dichloroethene (70.0)	0.5	ND	2985	1,1,2 - Trichloroethane (5.0)	0.5	ND
2979	trans-1,2 Dichloroethene (100.0)	0.5	ND	2984	Trichloroethylene (5.0)	0.5	ND
2980	1,2 - Dichloroethane (5.0)	0.5	ND	2991	Toluene (1000.0)	0.5	ND
2983	1,2 - Dichloropropane (5.0)	0.5	ND	2976	Vinyl Chloride (2.0)	0.2	ND
2968	o - Dichlorobenzene (600.0)	0.5	ND	2955	Xylenes - Total (10,000.0)	0.5	ND
2969	p - Dichlorobenzene (75.0)	0.5	ND	2950	Trihalomethanes -Total (100.0)	1.0	ND
2964	Dichloromethane (5.0)	0.5	ND	2943	Bromodichloromethane	0.2	ND
2992	Ethylbenzene (700.0)	0.5	ND	2942	Bromoform	1.0	ND
2989	Monochlorobenzene (100.0)	0.5	ND	2941	Chloroform	0.2	ND
2996	Styrene (100.0)	0.5	ND	2944	Dibromochloromethane	0.5	ND
UNREGULATED COMPOUNDS							
2993	Bromobenzene	0.5	ND	2416	2,2 - Dichloropropane	0.5	ND
2430	Bromochloromethane	0.5	ND	2410	1,1 - Dichloropropene	0.5	ND
2214	Bromomethane	2.0	ND	2413	cis - 1,3 - Dichloropropene	0.5	ND
2422	n - Butylbenzene	0.5	ND	2413	trans - 1,3 - Dichloropropene	0.5	ND
2428	sec - Butylbenzene	0.5	ND	2246	Hexachlorobutadiene	0.5	ND
2426	tert - Butylbenzene	0.5	ND	2994	Isopropylbenzene	0.5	ND
2216	Chloroethane	1.0	ND	2030	p - Isopropyltoluene	0.5	ND
2210	Chloromethane	0.5	ND	2248	Naphthalene	0.5	ND
2965	o - Chlorotoluene	0.5	ND	2998	n - Propylbenzene	0.5	ND
2966	p - Chlorotoluene	0.5	ND	2986	1,1,1,2 - Tetrachloroethane	0.5	ND
2408	Dibromomethane	4.0	ND	2988	1,1,2,2 - Tetrachloroethane	0.5	ND
2967	1,3 - Dichlorobenzene	0.5	ND	2420	1,2,3 - Trichlorobenzene	0.5	ND
2212	Dichlorodifluoromethane	0.5	ND	2218	Trichlorofluoromethane	0.5	ND
2978	1,1 - Dichloroethane	0.5	ND	2414	1,2,3 - Trichloropropane	0.5	ND
2412	1,3 - Dichloropropane	0.5	ND	2424	1,3,5 - Trimethylbenzene	0.5	ND
2931	1,2 - Dibromo-3-chloropropane	5.0	ND	2418	1,2,4 - Trimethylbenzene	0.5	ND
2946	1,2 - Dibromoethane	1.5	ND				

LAB RESULT REPORTING CODES:

ND = Not detected within sensivity of instrument

- - = No analysis performed for this contaminant

Numerical entry = Detection at level indicated

COMMENTS:

Lab Supervisor Signature

Date 5/26/99

REPORT RESULTS TO:

UNITED WATER
ATTN: ED SQUIRES
P.O. BOX 7488
BOISE, IDAHO 83707

WATER SYSTEM: **AGENBROAD WELL**

PWS #	
Lab Sample #	64918
Date Collected	05/20/99
Sample Type	PLANT TAP
Date Received	05/20/99
Time Collected	15:30
Sample Location	INDIAN CREEK
Location Tag #	
Analyst & Analysis Date	G. HAGEN - 05/25/99
Date Reported by Lab	05/26/99
Jurisdiction	
PWS Contact Phone	208-362-7332

ALCHEM LABORATORIES
Alchem Laboratories, Inc.
104 West 31st Street
Boise, Idaho 83714
Phone (208) 336-1172
FAX (208) 336-7124
Water, Waste Water and Soil Analysis

SYNTHETIC ORGANIC CHEMICAL ANALYSIS REPORT

REGULATED COMPOUNDS

FRDS#	COMPOUND (MCL) (ug/L)	MDL (ug/L)	RESULT (ug/L)	METHOD	FRDS#	COMPOUND (MCL) (ug/L)	MDL (ug/L)	RESULT (ug/L)	METHOD
2946	EDB (0.05)	0.01	ND	504.1	2031	Dalapon (200.0)	2.0	ND	552.1
2931	DBCP (0.2)	0.002	ND	504.1	2041	Dinoseb (7.0)	0.2	ND	515.2
2051	Alachlor (2.0)	0.2	ND	525.2	2326	PCP (1.0)	0.05	ND	515.2
2050	Atrazine (3.0)	0.1	ND	525.2	2040	Picloram (500.0)	0.1	ND	515.2
2037	Simazine (4.0)	0.1	ND	525.2	2105	2,4-D (70.0)	0.1	ND	515.2
2959	Chlordane (2.0)	0.20	ND	508	2110	2,4,5-TP (50.0)	0.2	ND	515.2
2005	Endrin (2.0)	0.02	ND	508	2306	Benzo(a)pyrene (0.2)	0.04	ND	525.2
2065	Heptachlor (0.4)	0.04	ND	508	2035	Di(2-ethylhexyl)adipate (400.0)	0.6	ND	525.2
2067	Heptachlor Epoxide (0.2)	0.04	ND	508	2298	Di(2-ethylhexyl)phthalate (6.0)	0.6	ND	525.2
2274	Hexachlorobenzene (1.0)	0.1	ND	525.2	2046	Carbofuran (40.0)	1.0	ND	531.1
2042	Hexachlorocyclopentadiene (50.0)	0.1	ND	525.2	2036	Oxamyl (200.0)	2.0	ND	531.1
2010	Lindane (0.2)	0.04	ND	508	2034	Glyphosate (700.0)	6.0	ND	547
2015	Methoxychlor (40.0)	0.10	ND	508	2033	Endothall (100.0)	9.0	ND	548.1
2020	Toxaphene (3.0)	1.00	ND	508	2032	Diquat (20.0)	0.4	ND	549.1
2383	PCB's (0.5)	0.10	ND	508					
UNREGULATED COMPOUNDS									
2076	Butachlor	0.1	ND	525.2	2047	Aldicarb	1.0	ND	531.1
2045	Metolachlor	0.1	ND	525.2	2044	Aldicarb Sulfone	0.5	ND	531.1
2595	Metribuzin	0.1	ND	525.2	2043	Aldicarb Sulfoxide	1.0	ND	531.1
2356	Aldrin	0.05	ND	508	2021	Carbaryl	1.0	ND	531.1
2070	Dieldrin	0.05	ND	508	2066	3-Hydroxycarbofuran	1.0	ND	531.1
2077	Propachlor	0.2	ND	525.2	2022	Methomyl	1.0	ND	531.1
2440	Dicamba	0.1	ND	515.2					

ANALYST	DATE	METHOD	ANALYST	DATE	METHOD
S. TANNER	05/22/99	504.1	S. TANNER	05/27/99	508
S. TANNER	06/04/99	515.2	B. BROKER	06/03/99	525.2
D. MYERS	06/15/99	531.1	D. MYERS	06/02/99	547
S. TANNER	05/26/99	548.1	D. MYERS	05/28/99	549.1
S. TANNER	06/09/99	552.1			

Lab result reporting codes:
ND = Not detected within sensitivity of instrument
- - - = No analysis performed for this contaminant
TR = Trace amount detected but so small it was not quantifiable
Numerical entry = Detection of contaminant at level indicated

Comments:

Lab Supervisor Signature

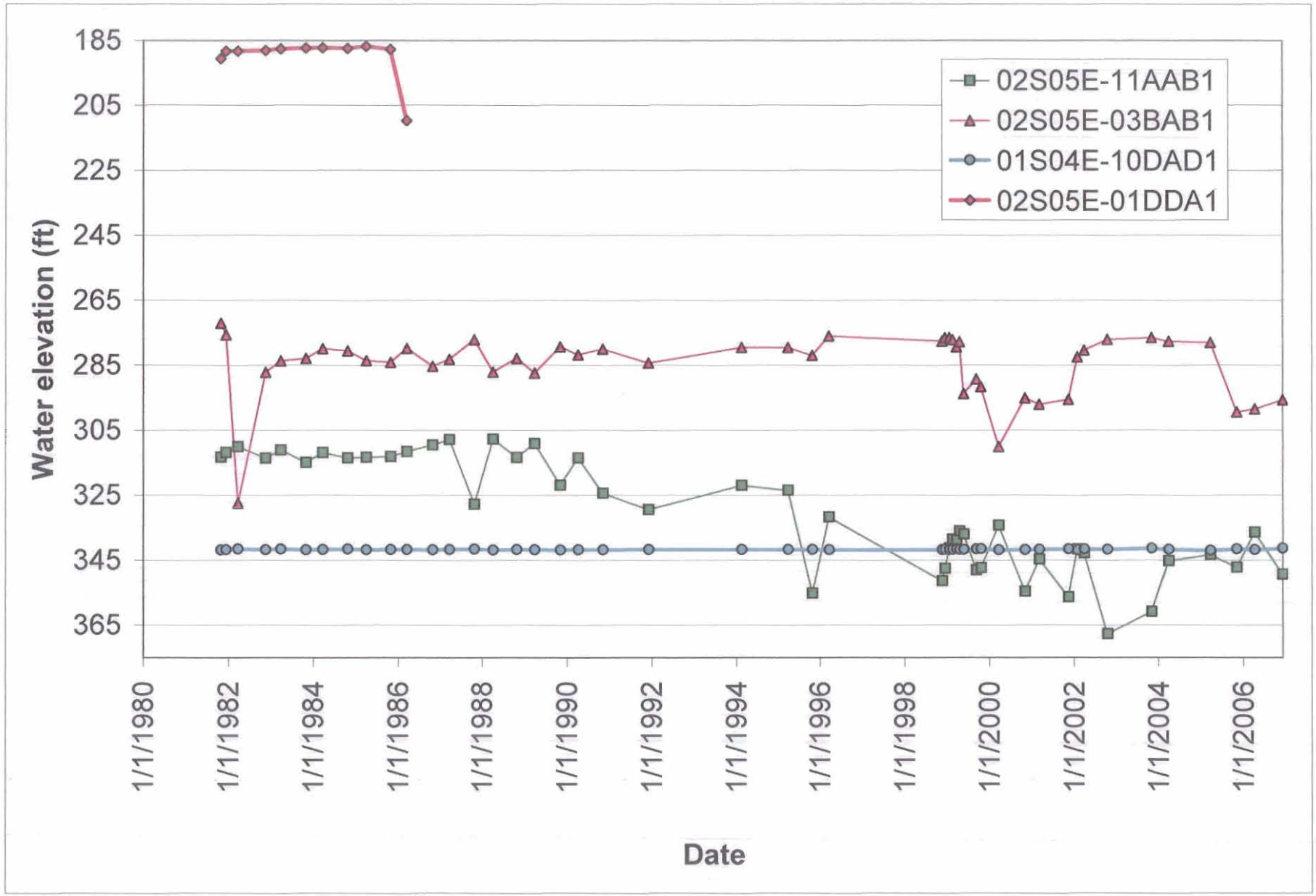
Date 6/17/99

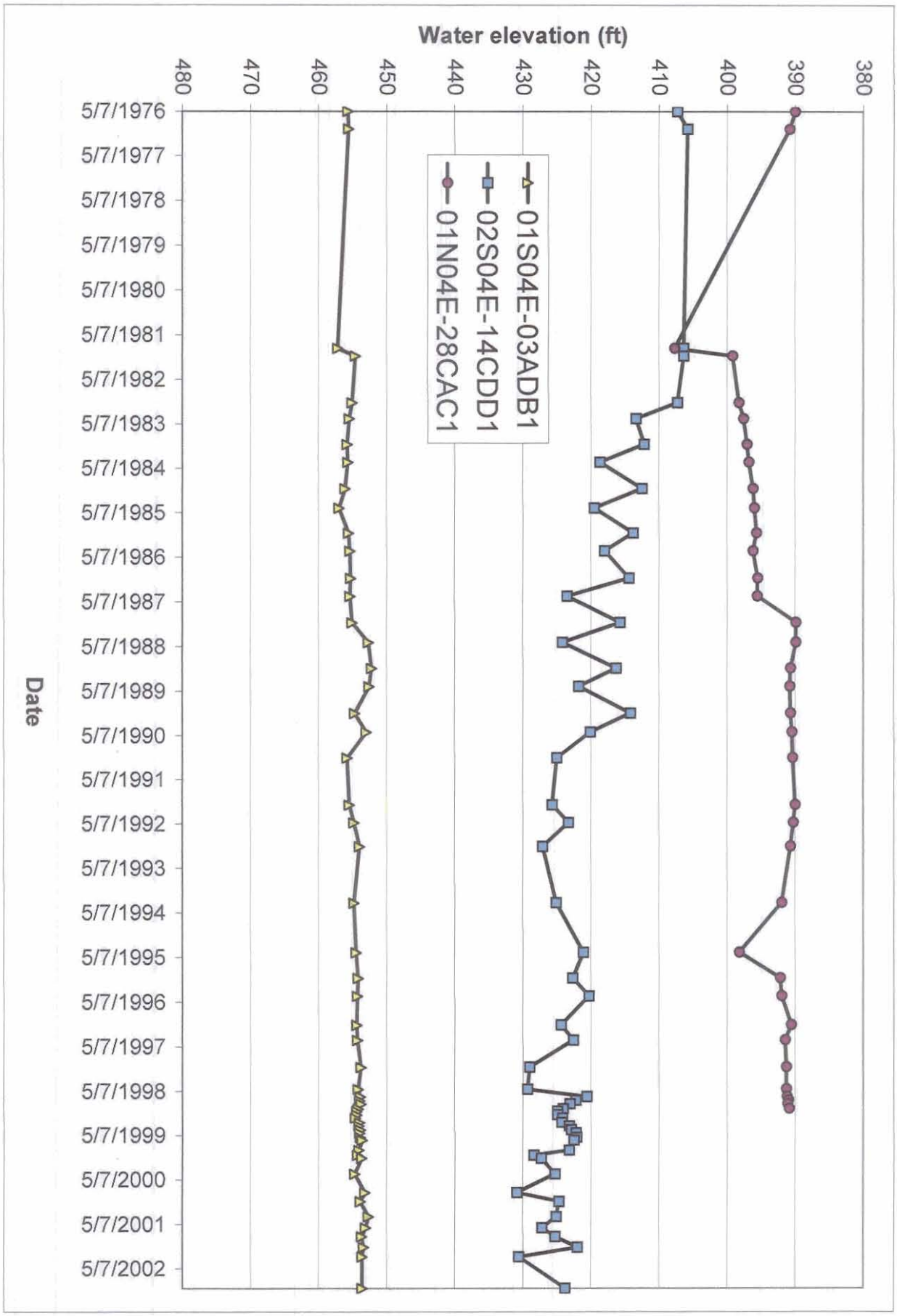
SAMPLE INFORMATION

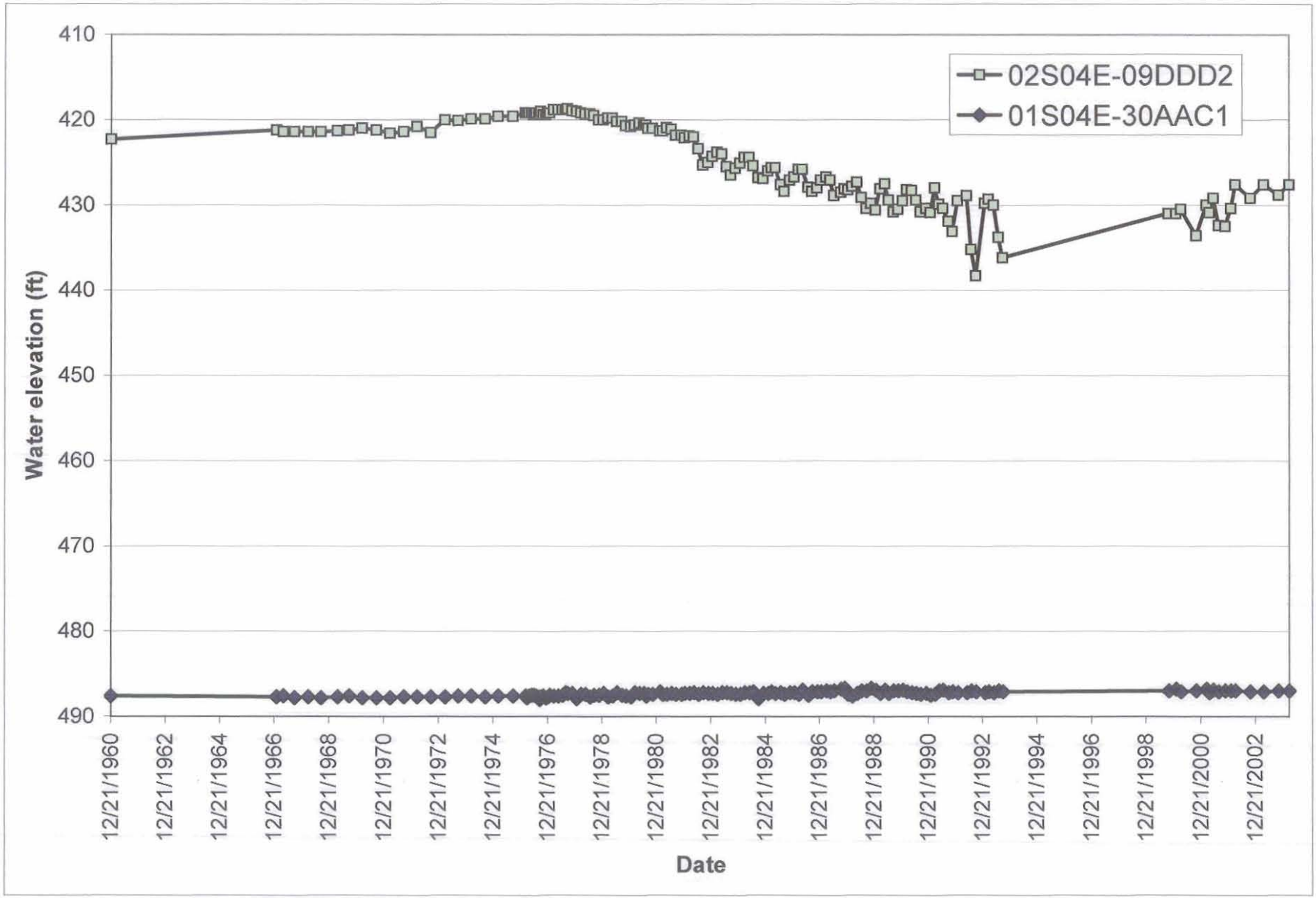
PWS# : SYSTEM : **AGENBROAD WELL**
LAB SAMPLE # : **64918**
DATE COLLECTED : **05/20/99** TIME : **15:30 HRS**
SAMPLE TYPE : **PLANT TAP**
DATE RECEIVED BY LAB : **05/20/99**
COLLECTED BY :
SAMPLE LOCATION : **INDIAN CREEK**
LOCATION TAG # :
DATE REPORTED : **06/17/99**
JURISDICTION :
PWS CONTACT PHONE (208): **362-7332**

REPORT RESULTS TO: UNITED WATER
ATTN: ED SQUIRES
P.O. BOX 7488
BOISE, IDAHO 83707

APPENDIX E
HYDROGRAPHS


Water elevation (ft)
185
205
225
245
265
285
305
325
345
365
1/1/1980
1/1/1982
1/1/1984
1/1/1986
1/1/1988
1/1/1990
1/1/1992
1/1/1994
1/1/1996
1/1/1998
1/1/2000
1/1/2002
1/1/2004
1/1/2006
Date
02S05E-11AAB1
02S05E-03BAB1
01S04E-10DAD1
02S05E-01DDA1


Water elevation (ft)
480
470
460
450
440
430
420
410
400
390
380
Date
5/7/1976
5/7/1977
5/7/1978
5/7/1979
5/7/1980
5/7/1981
5/7/1982
5/7/1983
5/7/1984
5/7/1985
5/7/1986
5/7/1987
5/7/1988
5/7/1989
5/7/1990
5/7/1991
5/7/1992
5/7/1993
5/7/1994
5/7/1995
5/7/1996
5/7/1997
5/7/1998
5/7/1999
5/7/2000
5/7/2001
5/7/2002
01S04E-03ADB1
02S04E-14CDD1
01N04E-28CAC1


02S04E-09DDD2
01S04E-30AAC1
Water elevation (ft)
410
420
430
440
450
460
470
480
490
12/21/1960
12/21/1962
12/21/1964
12/21/1966
12/21/1968
12/21/1970
12/21/1972
12/21/1974
12/21/1976
12/21/1978
12/21/1980
12/21/1982
12/21/1984
12/21/1986
12/21/1988
12/21/1990
12/21/1992
12/21/1994
12/21/1996
12/21/1998
12/21/2000
12/21/2002
Date

APPENDIX F
DRILLERS' REPORTS FOR WELLS WITH WATER LEVEL DATA

Form 238-7
6/93

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

56232

Use Typewriter or Ball Point Pen

Page 1 of 2

1. DRILLING PERMIT NO. 63 94 W 371 D
Other IDWR No. Abandoned see 63-94-W-0371-300

2. OWNER:
Name BOB & JOAN PRIGGE
Address 10521 LAKE HAZEL RD
City BOISE State ID Zip 83709

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

N / W / E / S — X

T. 4N North ☐ or South ☐
R. 3E East ☐ or West ☐
Sec. 4 SE 1/4 (10 acres) NW 1/4 (160 acres) 1/4
Gov't Lot ____ County ADA

Address of Well Site BLACKS CREEK ROAD
(Give at least Direction + Distance to Road or Landmark)
Lot No. ____ Block No. ____ Subd. Name ____

4. PROPOSED USE: DOMESTIC
☒ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other ____

5. TYPE OF WORK NEW WELL
☒ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD MUD ROTARY
☒ Mud Rotary ☐ Air Rotary ☐ Cable ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
BENTONITE	0	50	25 [illegible]	POURED

Was drive shoe seal tested? YES NO If NO, NONE USED

8. CASING/LINER:

Diameter	From	To	Gauge	Casing	Liner	Steel	Plastic	Welded	Threaded
6"	+1	627	.250			☒	☐	☒	☐
6"	647	653	.250			☒	☐	☒	☐
6"	663	675	.250			☒	☐	☒	☐
6"	730	735	.250			☒	☐	☒	☐

Final location of shoes NONE USED
Top Packer or Headpipe ____ Bottom Tailpipe ____

9. PERFORATIONS/SCREENS SCREENS
☐ Perforations Method ____
☒ Screens Type WIRE Material STAINLESS STEEL

From	To	Slot Size	Number	Diameter	Tele/Pipe Size	Casing	Liner
627	647	.20	304 STA	6"	PIPE	☐	☐
653	663	.20	304 STA	6"	PIPE	☐	☐
						☐	☐
						☐	☐

10. WELL TESTS: NOT AVAILABLE
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Depth	Time

Temperature of water NA Was a water analysis done? Yes ☐ No ☒
By whom? ____
Water Quality (odor, etc.) GOOD
Bottom Hole Temperature NA

11. STATIC WATER LEVEL:
605 (605) ft. below surface Depth artesian flow found ____
Artesian pressure ____ lb. Describe access port WELL CAP
Describe Controlling Devices: ____

2

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	GPM	SWL
14"	0	2	TOPSOIL		
11"	2	3	CLAY		
	3	25	BOULDERS, GRAVEL, SAND MIX		
	25	27	SAND		
	27	32	BOULDERS		
	32	33	SAND, GRAVEL MIX		
	33	50	BOULDERS		
	50	54	SAND		
	54	68	BOULDERS		
	68	71	SAND, GRAVEL MIX		
	71	73	SAND		
	73	78	SAND & GRAVEL MIX		
	78	92	SAND		
	92	97	BOULDERS		
	97	99	SAND		
	99	125	SAND & GRAVEL MIX		
	125	132	SAND		
	132	135	GRAVEL		
	135	137	SAND		
	137	158	GRAVEL		
	158	197	VERY HARD SAND		
	197	201	GRAVEL		
	201	219	BOULDERS		
	219	245	SAND, SOME GRAVEL, VERY SOLID		
	245	269	GRAVEL, SAND MIX		
	269	272	CLAY		
	272	281	SAND		

Date: Started 6/1/94 Completed 6/23/94

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WESTERN REGION

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

Firm Name PETE COPE DRILLING Firm No. 213
Firm Official Joseph [illegible] Date 6/23/94
and
Supervisor or Operator Jerry Foster Date 6/23/94
(Signature of Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Form 238-7
6/93

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT 56233

Use Typewriter or Ball Point Pen

Page 2 of 2

1. DRILLING PERMIT NO. 63 94 W 371 Q
Other IDWR No.

2. OWNER:
Name BOB & JOAN PRIGGE
Address 10521 LAKE HAZEL RD
City BOISE State ID Zip 83709

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

N / W / E / S

T. ____ North ☐ or South ☐
R. ____ East ☐ or West ☐
Sec. ____, ____ 1/4 ____ 1/4 ____ 1/4
(10 acres / 40 acres / 160 acres)
Gov't Lot ____ County ____

Address of Well Site ____
(Give at least Direction + Distance to Road or Landmark)
Lot No. ____ Block No. ____ Subd. Name ____

4. PROPOSED USE:
☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other: ____

5. TYPE OF WORK
☐ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD
☐ Mud Rotary ☐ Air Rotary ☐ Cable ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD

Was drive shoe seal tested? YES NO How? ____

8. CASING/LINER:

Diameter	From	To	Gauge	Casing	Liner	Steel	Plastic	Welded	Threaded
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐

Final location of shoes ____
Top Packer or Headpipe ____ Bottom Tailpipe ____

9. PERFORATIONS/SCREENS PERFORATIONS
☒ Perforations Method TORCH PERFORATED
☐ Screens Type ____ Material ____

From	To	Slot Size	Number	Diameter	Tele/Pipe Size	Casing	Liner
675	680	1/8"	5 PER FT.	6"	PIPE	☐	☐
680	730	1/8"	5 PER FT	6"	PIPE	☐	☐
						☐	☐
						☐	☐

10. WELL TESTS:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Depth	Time

Temperature of water ____ Was a water analysis done? Yes ☐ No ☐
By whom? ____
Water Quality (odor, etc.) ____
Bottom Hole Temperature ____

11. STATIC WATER LEVEL:
____ ft. below surface Depth artesian flow found ____
Artesian pressure ____ lb. Describe access port ____
Describe Controlling Devices: ____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	GPM	SWL
	281	283	CLAY		
	283	285	CEMENTED SAND		
	285	287	CLAY		
	287	326	CEMENTED SAND		
	326	327	CLAY		
	327	335	SAND		
	335	341	CLAY		
	341	342	SAND		
	342	346	GRAVEL		
	346	351	SAND		
	351	355	CLAY		
	355	359	CEMENTED SAND		
	359	370	VERY HARD PEA GRAVEL		
	370	371	CEMENTED SAND		
	371	449	CLAY		
	449	455	LARGE GRAVEL, SOME SAND MIX		
	455	508	SAND, GRAVEL, CLAY MIX		
	508	512	SAND, SOME CLAY MIX		
	512	627	BRN SAND, CLAY MIX		
	627	651	CEMENTED SANDSTONE, SOME CLAY MIX		
	651	657	SAND & CLAY MIX		
	657	686	CEMENTED SANDSTONE & STREAKS OF CLAY		
	686	689	SAND		
	689	719	SAND & BRN CLAY MIX		
	719	721	SAND		
	721	730	SAND & CLAY MIX		
	730	735	CLAY		

735 CLAY
Date Started ____ Completed ____

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Department of Water Resources

MAY 08 1995

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

Firm Name PETE COPE DRILLING Firm No. 213
Firm Official ____ Date ____
and
Supervisor or Operator ____ Date ____
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Form 238-7
9/82

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

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.

RECEIVED
JUL 26 1988
Department of Water Resources

1. WELL OWNER

Name State of Idaho-Transportation Dept

Address Statehouse Mail Box 8028

Owner's Permit No. 63-87-2 077

63-10530

2. NATURE OF WORK

XX New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

XX Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
XX Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: XX Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	8 inches	2 feet	865 feet
.250 inches	6 inches	843'6" feet	863'6" feet
.250 inches	6 inches	894'10" feet	904'10" feet
_____ inches	_____ inches	_____ feet	_____ feet

Was casing drive shoe used? XX Yes ☐ No
Was a packer or seal used? XX Yes ☐ No 6" pipe 2'
Perforated? ☐ Yes XX No 822'6"-843'6"
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation _____ inches by _____ inches

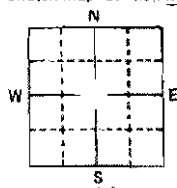
Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? XX Yes ☐ No
Manufacturer's name Johnson
Type stainless steel Model No. 304
Diameter 6 Slot size 30 Set from 863'6" feet to 894'10" feet
Diameter ___ Slot size ___ Set from ___ feet to ___ feet
Gravel packed? XX Yes ☐ No ☐ Size of gravel 8-12 sand
Placed from 843'6" feet to 863'6" feet
Surface seal depth 80 Material used in seal: ☐ Cement grout
XX Bentonite ☐ Puddling clay ☐ _____
Sealing procedure used: XX Slurry pit XX Temp. surface casing
XX Overbore to seal depth
Method of joining casing: ☐ Threaded XX Welded ☐ Solvent Weld
☐ Cemented between strata
Describe access port _____

AUG - 4 1988

6. LOCATION OF WELL

Sketch map location must agree with written location.



East Boise POE (along I84)
Subdivision Name _____
IR-84-2(33) 66
Lot No. _____ Block No. _____
County Ada
S/E ¼ S/E ¼ Sec. 11 T. 1 (N) S. R. 3 (E) W.

7. WATER LEVEL

Static water level 687 feet below land surface
Flowing? ☐ Yes XX No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature 78 °F. Quality _____
Describe artesian or temperature zones below.

8. WELL TEST DATA

XX Pump ☐ Bailer ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
38	738	2
45	748	2
55	755	4

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
12	0	2	clay topsoil		X
	2	4	hardpan & lava boulders		X
	4	55	brown sand, clay & lava bou.		X
	55	60	cemented brown sand & gravel		X
	60	63	loose brown sand & gravel		X
	63	116	cemented sand & gravel & clay streaks		X
	116	126	sand & gravel		X
	126	130	sandy clay & gravel		X
8	130	145	cemented sand & sandy clay		X
	145	148	brown clay		X
	148	175	cemented gravel		X
	175	204	cemented sand		X
	204	225	sandy clay		X
	225	245	cemented sand & streaks clay		X
	245	410	sandy clay & gravel		X
	410	455	sand & fine gravel		X
	455	460	sandy clay		X
	460	500	cemented sand		X
	500	558	sandy clay		X
	558	600	sand & fine gravel		X
	600	628	sandy clay		X
	628	661	sand		X
	661	665	sand & gravel		X
	665	720	sandy brown clay		X
	720	750	dirty sand, clay streaks	X	
	750	775	sandy clay		X
	775	802	brown clay		X
	802	820	sand & clay streaks	X	
	820	870	clay with sand streaks		X
	870	879	cemented sand	X	
	879	893	sand & clay streaks	X	
	893	1000	clay		X

10. 1988 Work started 4/12/88 finished 6/23/88

11. DRILLERS CERTIFICATION

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

Firm Name W.E. Stevens & Sons No. 153
Address 3709 Hawthorne Dr Date 6/26/88
Signed by (Firm Official) _____
and
(Operator) _____

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

RECEIVED JUN 08 1999 WATER RESOURCES WESTERN REGION

Form 238-7 8-93

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Use Typewriter or Ball Point Pen

PAGE 1 OF 3 PAGES 95106

1. DRILLING PERMIT NO. 61-98-W-0075-000
Other IDWR No. D000 7483

2. OWNER:
Name FRANK [redacted] BONESSA
Address 1979 BORCHERS DRIVE
City SAN JOSE State CA Zip 95124

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

T. 1S North ☐ or South ☑
R. 3E East ☑ or West ☐
Sec. 13, SE 1/4 NE 1/4 NE 1/4
Gov't Lot ____ County ADA

Address of Well Site 1 MILE WEST OF ORCHARD ACCESS RD ON ORCHARD RANCH LANE; THEN 1 MILE NORTH
(Give at least Direction + Distance to Road or Landmark)
Lot No. ____ Block No. ____ Subd. Name ____

4. PROPOSED USE:
☑ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other ____

5. TYPE OF WORK
☑ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD
☐ Mud Rotary ☐ Air Rotary ☑ Cable ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
				DISPLACED
NEAT CEMENT [redacted]	124.64	115	17 EA	THROUGH 8"
GROUT	↓	115	94# BAGS	CASING
BENTONITE	115	4	16 BAGS	SLURRY PIT
NEAT CEMENT GROUT	0-4'		1 BAG	POURED

Was drive shoe seal tested? Y☐ N☑ How? ____

8. CASING/LINER:

Diameter	From	To	Gauge	Casing	Liner	Steel	Plastic	Welded	Threaded
8 5/8	+1.83	124.64	1/4 wall	✓		☑	☐	☑	☐
6 5/8	1	551	0.28	✓		☐	☑	☑	☐
5 9/16	514	629.7	0.188		✓	☑	☐	☑	☐
4 1/2	560.2	581.4	0.237		✓	☑	☐	☑	☐

Final location of shoes 8" SHOE @ [redacted] 124.64'
Top Packer or Headpipe 514 Bottom Tailpipe 629.7F

9. PERFORATIONS/SCREENS
☑ Perforations Method SAWED IN PVC, TORCH
☑ Screens Type JOHNSON Material CONTINUOUS SLOT WIRE WOUND

From	To	Slot Size	Number	Diameter	Tele/Pipe Size	Casing	Liner
410	550	3/32	1064	6 5/8	PIPE	☑	☐
560.2	570.45	.020	N.A	5 9/16	(6" TELESCOPING)		☑
560.2	581.0	3/32	78	4 1/2	PIPE	☐	☑

10. WELL TESTS:
☑ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Depth	Time
9.7	< 1 FT	500.8	12 HRS

Temperature of water 66°F Was a water analysis done? Yes ☐ No ☑
By whom? ____
Water Quality (odor, etc.) EXCELLENT
Bottom Hole Temperature 66°F

11. STATIC WATER LEVEL:
500 ft. below surface Depth artesian flow found ____
Artesian pressure ____ lb. Describe access port 8" CASING [redacted] BY REMOVING WELL CAP

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	WATER Yes	No
8	0	551			
6	551	634			
	0	2	SOIL		
	2	6	SOIL, SUBSOIL, CLAYEY HARDPAN		
	6	8	SANDY CLAY		
	8	16	CLAY		
	16	18	SAND		
	18	34.5	SANDY CLAY		
	34.5	35	ROCK		
	35	63	[redacted] CLAYEY SAND		
	63	64	GRAVEL		
	64	69	CLAYEY SAND		
	69	70	GRAVEL		
	70	96	CLAYEY SAND		
	96	107	GRAVEL		
	107	116	CLAY		
	116	122	GRAVEL		
	122	194	BASALT		
	194	197	RUBBLE & CINDERS		
	197	216	BASALT		
	216	217	BASALT, CREVICED, RED IN SEAMS		
	217	255	BASALT		
	255	257	BOULDERS, HARD, RED MATRIX		
	257	272	BASALT, RED IN SEAMS		
	272	273	RUBBLE & CINDERS		
	273	311	BASALT		
	311	312	RUBBLE & CINDERS		

RECEIVED JUN 14 1999 Department of Water Resources

Date: Started NOV 30, 1998 Completed SEE PAGE 3

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

Firm Name ARTESIAN CO Firm No. 318

Firm Official HUGH HARDEN Date 7 June 1999
and
Supervisor or Operator Hugh Harden Date 7 June 1999
(Sign once if Firm Official & Operator)

MICROFILMED AUG 25 1999

FORWARD WHITE COPY TO WATER RESOURCES

Form 238-7
6/93

RECEIVED IDAHO DEPARTMENT OF WATER RESOURCES
JUN 0 8 1999
WATER RESOURCES REGION

RECEIVED
JUN 14 1999
Department of Water Resources

Use Typewriter or Ball Point Pen

WELL DRILLER'S REPORT

PAGE 2 OF 3 PAGES

95107

61-98-W 0075-000

1. DRILLING PERMIT
Other IDWR No. D 000 7483

2. OWNER:
Name FRANK [redacted] BONESSA
Address
City State Zip

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

OFFICE USE ONLY
T. North ☐ or South ☐
R. East ☐ or West ☐
Twp 01S Rge 03E Sec 13
1/4 1/4 1/4
40 acres 160 acres
Gov't Lot County
SE NE 1/4 NE 1/4

Address of Well Site
(Give at least Direction + Distance to Road or Landmark)
Lot No. Block No. Subd. Name

4. PROPOSED USE:
☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK
☐ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD
☐ Mud Rotary ☐ Air Rotary ☐ Cable ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD

Was drive shoe seal tested? YES NO How?

8. CASING/LINER:

Diameter	From	To	Gauge	Casing	Liner	Steel	Plastic	Welded	Threaded
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐

Final location of shoes 6" PVC COUPLING @ 551FT
Top Packer or Headpipe Bottom Tailpipe

9. PERFORATIONS/SCREENS
☐ Perforations Method
☐ Screens Type Material

From	To	Slot Size	Number	Diameter	Tele/Pipe Size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐

MICROFILMED
AUG 25 1999

10. WELL TESTS:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Depth	Time

Temperature of water Was a water analysis done? Yes ☐ No ☐
By whom?
Water Quality (odor, etc.)
Bottom Hole Temperature

11. STATIC WATER LEVEL:
ft. below surface Depth artesian flow found
Artesian pressure lb. Describe access port
Describe Controlling Devices:

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

WATER

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	other	water
	312	317	BASALT SOFTER, BROWN		✓
	317	320	BASALT HARD, GREY		✓
	320	327	BASALT SOFTER, BROWN		✓
	327	330.5	BASALT MED. HARD, GREY		✓
	330.5	334	RUBBLE & CINDERS, BROWN		✓
	334	336	CLAY, BROWN		✓
	336	342	BASALT, HARD, BROWN		✓
	342	379	SANDSTONE, TAN		✓
	379	383	CLAY, TAN		✓
	383	401	SAND, TAN		✓
	401	403	CLAY, TAN		✓
	403	434	CLAYEY SAND, TAN		✓
	434	435	CLAY, TAN		✓
	435	438	SANDY CLAY, TAN		-
	438	439	CONGLOMERATE, TAN		✓
	439	471	CLAYEY SAND, TAN		✓
	471	472	CONGLOMERATE TAN		✓
	472	479	CLAYEY SAND, TAN		✓
	479	482	CLAY, TAN		✓
	482	484	SAND, TAN		✓
	484	487	CLAYEY SAND, TAN		✓
	487	487.2	SAND TAN		✓
	487.2	500	CLAYEY SAND TAN		✓
	500	500.2	SAND TAN		✓
	500	2.5M	CLAYEY SAND & CLAY		✓
	5M	5M.2	SAND TAN	✓	
	5M.2	517	CLAYEY SAND TAN		✓

Date: Started PAGE 1 Completed PAGE 3

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

Firm Name ARTESIAN CO Firm No. 318
Firm Official Hugh Harlan Date June 1999
and
Supervisor or Operator Date
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Form 238-7
6/93

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

Use Typewriter or Ball Point Pen

(PAGE 3) OF 3 PAGES   95108

1. DRILLING PERMIT NO. 61-98-W-0075-000

Other IDWR No. D 0000 7483

2. OWNER:

Name FRANK [redacted] BONESSA

Address 1979 BORCHERS DRIVE

City SAN JOSE State CA Zip 95124

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

OFFICE USE ONLY

Twp 21 S Rge 03E Sec 13

SE 1/4 NE 1/4 NE 1/4

North ☐ or South ☐
East ☐ or West ☐

Gov't Lot ____ County ____

Address of Well Site ____

(Give at least Direction + Distance to Road or Landmark)

Lot No. ____ Block No. ____ Subd. Name ____

4. PROPOSED USE:

☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other ____

5. TYPE OF WORK

☐ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD

☐ Mud Rotary ☐ Air Rotary ☐ Cable ☐ Other ____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD

Was drive shoe seal tested? Y☐ N☐ How? ____

8. [redacted] **LINER:** 4 1/2 OD HANGER 5" OD COUPLING CUT OFF, BEVELED TO INSIDE HARDFACED, & GROUND SMOOTH

Diameter	From	To	Gauge	Casing	Liner	Steel	Plastic	Welded	Threaded
						☐			☐
						☐			☐
						☐			☐
						☐	☐	☐	☐

Final location of shoes — 4" LINER — NO SHOE

~~Top Packer or Headpipe~~ ~~Bottom Tailpipe~~

BOTTOM END CUT ANGLE = 54.2° FROM PIPE AXIS, CHAMFERED INTERNALLY & GROUND

9. PERFORATIONS/SCREENS

~~☐ Perforations~~ ~~Method~~
~~☐ Screens~~ ~~Type~~ ~~Material~~

From	To	Slot Size	Number	Diameter	Tele/Pipe Size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐

10. WELL TESTS:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min.	Drawdown	Pumping Depth	Time

Temperature of water ____ Was a water analysis done? Yes ☐ No ☐

By whom? ____

Water Quality (odor, etc.) ____

Bottom Hole Temperature ____

11. STATIC WATER LEVEL:

____ ft. below surface Depth artesian flow found ____

Artesian pressure ____ lb. Describe access port ____

Describe Controlling Devices: ____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	WATER Y	WATER N
	517	518	SAND TAN	✓	
	518	524	CLAYEY SAND, TAN		✓
	524	541.5	SAND, TAN	✓	
	541.5	544	CLAYEY SAND, TAN		✓
	544	546	SAND, TAN	✓	
	546	559	ROCK BASALT? BAILS DRY		✓
	559	562	SAND, TAN		✓
	562	567	SANDY CLAY, TAN		✓
	567	568	SAND, TAN	✓	
	568	572	ROCK CONGLOMERATE ? TAN		✓
	572	573	CLAY, TAN		✓
	573	575.5	CONGLOMERATE? TAN		✓
	575.5	578	CLAYEY GRAVEL	✓	✓
	578	581	CLAYEY SAND TAN	✓	✓
	581	601	ALTERNATING LAYERS SAND&CLAY	✓	✓
	601	602	CLAYEY GRAVEL, TAN		✓
	602	604	CLAY, TAN	[redacted]	✓
	604	605	SAND, TAN	✓	
	605	633	ALTERNATING LAYERS SAND&CLAY	✓	✓

Date: Started SEE PAGE 1 Completed JUNE 1, 1999

13. DRILLER'S CERTIFICATION

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

Firm Name ARTESIAN Co Firm No. 318

Firm Official Hugh Harden Date JUNE 7, 1999

and

Supervisor or Operator ____ Date ____

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

RECEIVED
JUL 10 1967
Department of Reclamation

REPORT OF WELL DRILLER
State of Idaho

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

WELL OWNER:
Name State Highway Dept. (Black Creek Rest Area
Address Boise, Idaho

Owner's Permit No. G-83956
NATURE OF WORK (check): Replacement well ☐
New well [*] Deepened ☐ Abandoned ☐
Water is to be used for: Drinking & Rest Area

METHOD OF CONSTRUCTION: Rotary ☐ Cable [*]
Dug ☐ Other ____ (explain)

CASING SCHEDULE: Threaded __ Welded *
8 "Diam. from 0 ft. to 904 ft.
____ "Diam. from ____ ft. to ____ ft.
____ "Diam. from ____ ft. to ____ ft.
____ "Diam. from ____ ft. to ____ ft.
Thickness of casing: ¼" wall Material:
Steel [*] concrete ☐ wood ☐ other ☐

(explain)
PERFORATED? Yes [*] No ☐ Type of perforator used: Machine

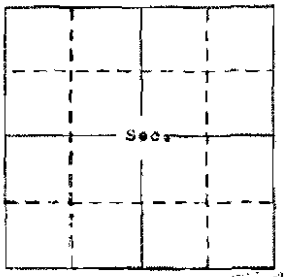
Size of perforations: 1/8 " by 3 "
____ perforations from 866 ft. to 890 ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
WAS SCREEN INSTALLED? Yes ☐ No ☐
Manufacturer's name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ Set from ____ ft. to ____ ft.
Diam. ____ Slot size ____ Set from ____ ft. to ____ ft.

CONSTRUCTION: Well gravel packed? Yes [*]
No. ☐ size of gravel ⅜" minus Gravel placed from 818 ft. to 975 ft. Surface seal provided? Yes [*] No ☐ To what depth? ____ ft. Material used in seal: ____

Did any strata contain unusable water? Yes ☐
No. ☐ Type of water: ____
Depth of strata ____ ft. Method of sealing strata off: ____

Surface casing used? Yes ☐ No. ☐
Cemented in place? Yes ☐ No ☐

Locate well in section



LOCATION OF WELL: County Ada
NE¼ SW¼ Sec. 28 T. 2 N/S R. 3 E/W

Size of drilled hole: 8" Total depth of well: 975 ft. Standing water level below ground: 695 ft. Temp. Fahr. 71 ° Test delivery: 55-75 gpm or ____ cfs Pump? [*] Bail ☐
Size of pump and motor used to make test: 20 h.p. Sub. pump
Length of time of test: 48 Hrs. ____ Min.
Drawdown: No ft. Artesian pressure: ft. above land surface ____ Give flow ____ cfs or ____ gpm. Shutoff pressure: ____
Controlled by: Valve ☐ Cap ☐ Plug ☐
No control ☐ Does well leak around casing? Yes ☐ No [*]

DEPTH FROM FEET	DEPTH TO FEET	MATERIAL 1104073	WATER YES OR NO
0	2	Top Soil	
2	8	White hardpan	
8	105	Cemented gravel	
105	120	Gravel & sand-small amount yellow clay	
120	130	Small gravel & reddish clay	
130	165	Light brown clay & small gravel	
165	245	Yellowish sand & clay	
245	280	Yellowish sand & clay (floaters of decomposed granite)	
280	353	Sand & clay	
353	392	Sticky brown clay	
392	435	Brown sand & clay	
435	500	Brown sand & clay (some gravel)	
500	555	Layers of sand & clay	
555	680	Sand, gravel & clay	
680	690	Light brown clay	
690	730	Sand, gravel & clay	
730	845	Clay--small amount of sand	
845	904	Sand & gravel--small layers of clay	
		Casing perforated 866-890 ft.	
904	975	Layers of clay, sand & gravel	
		4" liner installed from 818' to 975' and gravel packed	

Work started: November 23, 1966
Work finished: June 14, 1967
Well Driller's Statement: This well was drilled under my supervision and this report is true to the best of my knowledge.
Name: Wayne E. Stevens
Address: 3709 Hawthorne Drive, Boise, Idaho
Signed by: Wayne E. Stevens
License No. 524 Date: June 25, 1967
no helper used

Use other side for additional remarks

USGS

Form 238-7
6/89

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

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.

1. WELL OWNER

Name RAY MCFALL

Address 5217 MALAD ST BOISE

Owner's Permit No. 63-90-Z-055 extensions granted

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

.250 Thickness 6 Diameter 1 From 532 To

_____	inches	_____	inches +	_____ feet	_____ feet
_____	inches	_____	inches	_____ feet	_____ feet
_____	inches	_____	inches	_____ feet	_____ feet
_____	inches	_____	inches	_____ feet	_____ feet

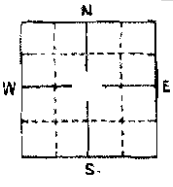
Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☒ Yes ☐ No
How perforated? ☐ Factory ☐ Knife ☒ Torch ☐ Gun
Size of perforation .040 inches by 3 inches

Number		From		To	
200	perforations	460	feet	531	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 3/8 minus
Placed from 80 feet to 532 feet
Surface seal depth 80 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 location.



Black's Creek Rd

Subdivision Name _____

Lot No. _____ Block No. _____

County Ada

N/W¼ S/E¼ Sec. 30 T. 2 ☒ S ☐ N R. 4 ☒ E ☐ W

7. WATER LEVEL

Static water level 395 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

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
6	450	2

9. LITHOLOGIC LOG 075765

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	43	reddish brown sandy clay with gravel & boulders		X
	43	80	sandy reddish brown clay		X
	80	84	loose sand & gravel		X
	84	140	light brown sandy clay		X
	140	460	sandy reddish brown clay with thin streaks of sand & gravel		X
	460	470	brown cemented sand & gravel	X	
	470	509	sandy reddish brown clay		X
	509	511	cemented sand & gravel	X	
	511	535	sandy reddish brown clay		X

RECEIVED
MAY - 1 1992
Department of Water Resources
Western Regional Office

10. Work started 4/8/92 finished 4/14/92

11. DRILLERS CERTIFICATION

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

Firm Name Stevens & Sons Firm No. 153
Address 3709 Hawthorne Dr Date 4/15/92
Signed by (Firm Official) Wayne Stevens
and
(Operator) Don Stevens

MICROFILMED
JUL 08 1992

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

Form 238-7
3/95

#49003

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Use Typewriter or Ballpoint Pen

0647767

Office Use Only
Inspected by _____
Twp.____ Rge.____ Sec.____
____1/4 ____1/4 ____1/4
Lat: : : Long: : :

1. DRILLING PERMIT NO. 61-98-W-0078-000
Other IDWR No. _____

2. OWNER:
Name Jim Hutchings
Address 13690 S Cloverdale
City Kuna State ID Zip 83634

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

N / W / E / S

Twp. 1 North ☑ or South ☐
Rge. 5 East ☑ or West ☐
Sec 32 1/4 SW (10 acres) 1/4 SW (160 acres) 1/4
Gov't Lot ____ County Elmore
Lat: : : Long: : :
Address of Well Site Bruneau Loop Rd.
City Mountain Home
(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/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
Bentonite	0	201	600	Pour

Was drive shoe used? ☑ Y ☐ N Shoe Depth(s) 518
Was drive shoe seal tested? ☑ Y ☐ N How? Air

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6	+2	518	250	Steel	☑	☐	☑	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe ____ Length of Tailpipe ____

9. PERFORATIONS/SCREENS
☐ Perforations Method ____
☐ Screens Screen Type ____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
260 ft. below ground Artesian pressure ____ lb.
Depth flow encountered 525 ft. Describe access port or control devices: CAP

11. WELL TESTS:
☐ Pump ☐ Bailer ☑ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
50	500	500	4 Hr.

Water Temp. 56 Bottom hole temp 56
Water Quality test or comments: ____
Depth first Water Encountered 260

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water Y	Water N
8	0	2	Top Soil		
	2	4	Hard Rock		
	4	18	Brn Clay		
8	18	190	Brn Sand & Clay		
	190	222	Lava		
	222	260	Brn Sand Clay		
	260	440	Clay & Sand Layers	✓	
6	440	470	Gravel	✓	
	470	525	Clay & Shale Sand Layers	✓	
	525	540	Sand & Gravel	✓	

RECEIVED
DEC 21 1998
Department of Water Resources

RECEIVED MICROFILMED
DEC 16 1998 MAR 08 1999
WATER RESOURCES
WESTERN REGION

Completed Depth 525 (Measurable)
Date: Started 12-10-98 Completed 12-11-98

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

Firm Name [illegible] Firm No. 560
Firm Official [signature] Date 12-12-98
and
Supervisor or Operator ____ Date ____
(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

Form 238-7
3/95-696

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT 065952

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

1. DRILLING PERMIT NO. 61 -97 -W -0033 -000
Other IDWR No. _____

2. OWNER:
Name Rick Millington
Address 8011 Ustick Rd.
City Boise State ID Zip 83704

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location

N
W E
S

Twp. 1 North ☐ or South ☒
Rge. 5 East ☒ or West ☐
Sec. 6 1/4 NE 1/4 (40 acres) SW 1/4 (160 acres)
Gov't lot _____ County Elmore
Lat: : : Long: : :
Address of Well Site Baseline Rd
City Mayfield
(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/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
bentonite	2	18	6	overbore

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
6"	+1	575	250	steel	☒	☐	☒	☐
8"	0	80	250	steel	☒	☐	☒	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS
☐ Perforations Method
☐ Screens Screen Type

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
387 ft. below ground Artesian Pressure _____ lb
Depth flow encountered _____ ft. Describe access port or control devices:

11. WELL TESTS:
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Pumping Level	Time
30		560	2 hrs.

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments:
Depth first Water Encountered 455

12. LITHOLOGIC LOG: (Describe repair or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temp.	Water Y	Water N
10"	0	1	brown top soil		☒
10"	1	3	brown clay		☒
10"	3	5	brown hardpan clay		☒
10"	5	20	brown sand		☒
8"	20	24	brown clay		☒
8"	24	60	brown clay & strips brown sand		☒
8"	60	114	white & brown soft granite		☒
8"	114	117	black granite		☒
8"	117	160	white & brown granite		☒
8"	160	175	brown granite chips		☒
8"	175	225	white & brown granite		☒
8"	225	338	brown clay		☒
8"	338	365	clear & white grnt. w/strps brn clay		☒
8"	365	402	brown fine sand		☒
8"	402	440	brn snad w/strips of clay		☒
6"	440	455	brown sandy clay		☒
6"	455	473	brown sand w/small gravel	☒	
6"	473	495	brown clay		☒
6"	495	528	brown sand & small gravel	☒	
6"	528	533	brown sandy clay		☒
6"	533	561	brown & white sand		☒
6"	561	566	light brown clay		☒
6"	566		gray sand	☒	

RECEIVED SEP 11 1997 Department of Water Resources
RECEIVED SEP - 4 1997 WATER RESOURCES WESTERN REGION

Completed Depth: 387 (Measurable)
Date: Started 07-11-97 Completed 07-18-97

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

Firm Name SOS Welldrilling & Pump Co Firm No. 212
Firm Official _____ Date 9-2-97
Supervisor or Operator _____ Date 9-2-97
(Sign once if Firm Official & Operator)

Date: 08/22/97 Time: 4:11 PM

MICROFILMED JAN 23 1998

USE TYPEWRITER OR BALL POINT PEN

State of Idaho
Department of Water Administration

WELL DRILLER'S REPORT 1150

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

1. WELL OWNER

Name El Paso Natural Gas

Address

Owner's Permit No.

2. NATURE OF WORK Anode Bed

☒ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

Not a Water Well

3. PROPOSED USE

☐ Domestic ☐ Irrigation ☐ Test ☐ Municipal ☐ Industrial ☐ Stock

Not a Water Well

4. METHOD DRILLED

☒ Cable ☐ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 12 inches Total depth 570 feet

Casing schedule: ☒ Steel ☐ Concrete

Thickness	Diameter	From	To
1/4 inches	10 3/4 inches	+1 feet	508 feet
inches	inches	feet	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 ______ inches by ______ inches

Number	From	To
perforations	feet	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 ______

Placed from ______ feet to ______ feet

Surface seal? ☒ Yes ☐ No To what depth 118 feet

Material used in seal ☐ Cement grout ☒ Puddling clay

6. LOCATION OF WELL

Sketch map location must agree with written location.

N / W / E / S

61 D.R.

County Ada

NE ¼ NE ¼ Sec. 17 T. 1 N/S, R. 4 E/W

7. WATER LEVEL

Static water level 450 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

8. WELL TEST DATA

☐ Pump ☐ Bailer ☐ Other

Discharge G.P.M.	Draw Down	Hours Pumped
None		

Was not Tested

9. LITHOLOGIC LOG 028863

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
12	0	8	Surface		
12	8	114	Clay Fine gravel Sand		✓
12	114	118	Gravel		✓
12	118	177	Black Basalt		✓
12	177	187	Red Basalt		✓
12	187		Caving		✓
12	187	197	Red Basalt		✓
12	197	223	Black Basalt		✓
12	223	237	Red BASALT		✓
12	237	277	Fine gravel Sand		✓
			Clay Enough to Drill		✓
12	277	284	Gravel & Sand		✓
			Caving		✓
			Run Casing		✓
10	284	288	gravel & Sand		✓
10	288	360	LAYER Clay & white Sand		✓
	360	450	Sand & Clay		✓
		450	Water Caving	✓	
	450	550	Clay with layers		
			Sand Could be		
			Water at 550 ?		
			Caving 550-558		
	550	571	Clay		
			Clay Was Sticky		
			Sand white quartz		
			Glenn Ferry Formation		
			Not a Water Well		
			Could not drive Pipe further		

10.

Work started 14 Feb 73 finished 30 April 1973

11. DRILLER'S CERTIFICATION

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

USGS

EUGENE W WALKER 15
Driller's or Firm's Name / Number

629 Pierce St Twin Falls
Address

Eugene W Walker 14 June 1973
Signed By / Date

USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT

USE TYPEWRITER OR BALL POINT PEN

State of Idaho
Department of Water Administration

WELL DRILLER'S REPORT

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

Received 1-15-73 NA D

1. WELL OWNER

Name Western Land & Cattle Co.

Address Mayfield, Idaho

Owner's Permit No. _____

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

_____

3. PROPOSED USE

☐ Domestic ☐ Irrigation ☒ Test

☐ Municipal ☐ Industrial ☐ Stock

4. METHOD DRILLED

☒ Cable ☐ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 8 inches Total depth 82 feet

Casing schedule: ☒ Steel ☐ Concrete

Thickness	Diameter	From	To
.322 inches	8 inches	+1 feet	51 feet
.257 inches	5 inches	51 feet	53 feet
.257 inches	5 inches	68 feet	82 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 _____ 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 Stainless Model No. _____

Diameter 6 Slot size 10 Set from 53 feet to 58 feet

Diameter 6 Slot size 35 Set from 58 feet to 68 feet

Gravel packed? ☐ Yes ☒ No Size of gravel _____

Placed from _____ feet to _____ feet

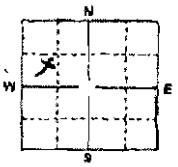
Surface seal? ☒ Yes ☐ No To what depth 20 feet

Material used in seal ☐ Cement grout ☐ Puddling clay

Bentonite

6. LOCATION OF WELL

Sketch map location must agree with written location.



County Elmore

SW ¼ NW ¼ Sec. 17 T. 1 N. R. 5 E.

7. WATER LEVEL

Static water level 12 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

8. WELL TEST DATA

☒ Pump ☐ Bailer ☐ Other

Discharge G.P.M.	Draw Down	Hours Pumped
25	25 ft.	4

108033

9. LITHOLOGIC LOG

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	25	topsoil		X
	25	40	pea gravel	X	
	40	65	Sd-sand	X	
	65	69	sand gravel	X	
	69	82	Bentonite Clay		X

10.

Work started Nov. 9-72 finished Dec. 1-72

11. DRILLER'S CERTIFICATION

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

Engleman Well Drill 47
Driller or Firm's Name Number

1309 Rand - Boise, Idaho
Address

Signed By Ralf Engleman 12-1-72
Date

USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT

APPENDIX G
WATER QUALITY DATA

Section	Analyte	Units	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Maximum
01S 04E 23B8B1	Arsenic	ug/L	3				3				2					2.7	3
	Fecal Coliform	col/100 ml	<1				45				<1					<1	45
	Fluoride	mg/L	0.40				0.40				.44					0.5	0.5
	Nitrate	mg/L	0.79				0.790				.765					0.79	0.79
	Alpha, Gross	pCi/l	0.4 ± 1				0.5 ± 1.3										0.6
	Iron	ug/L	<3				<3				<10					<6	
	Manganese	ug/L	<1				<1				<2.2					<0.8	
	Solids	mg/L	134				163				161					147	163
01N 04E 32AAB1	Arsenic	ug/L	3				2				2					2.3	3
	Fecal Coliform	col/100 ml	<1				<1				<1					<1	
	Fluoride	mg/L	0.50				0.50				.41					0.4	0.5
	Nitrate	mg/L	0.11				0.110				.086					0.09	0.11
	Alpha, Gross	pCi/l	0.2 ± 1.1				2.6 ± 1.5										2.6
	Iron	ug/L	6				6				<10					E6	6
	Manganese	ug/L	<1				<1				<3.0					<0.8	
	Solids	mg/L	150				153				151					147	153
01N 04E 27CBD1	Arsenic	ug/L			2				3					3			3
	Fecal Coliform	col/100 ml			<1				<1					<1			
	Fluoride	mg/L			0.30				0.30					0.3			0.3
	Nitrate	mg/L			4.60				2.92					0.45			4.6
	Alpha, Gross	pCi/l			1.1 ± 1.3												1.1
	Iron	ug/L			10				10					42			42
	Manganese	ug/L			2				1.2					E1.2			2
	Solids	mg/L			185				185					162			185
01N 04E 23DDC1	Arsenic	ug/L	9														9
	Fecal Coliform	col/100 ml	2														2
	Fluoride	mg/L	0.30														0.30
	Nitrate	mg/L	0.29														0.29
	Alpha, Gross	pCi/l	0.1 ± 1														0.1
	Iron	ug/L	6														6
	Manganese	ug/L	<1														
	Solids	mg/L	134														134
01N 04E 14DDAD1	Arsenic	ug/L				2				3					2.12		3
	Fecal Coliform	col/100 ml				<1				<1					<1		
	Fluoride	mg/L				0.30				31					0.3		0.31
	Nitrate	mg/L				2.50				3.05					2.7		3.05
	Alpha, Gross	pCi/l				1.7 ± 1.3											1.7
	Iron	ug/L				<3				11					15.5		15.5
	Manganese	ug/L				<1				<4.0					1.2		1.2
	Solids	mg/L				153				160					0.21 (Vaf)		160
01N 03E 11DDB1	Arsenic	ug/L		4				4				4.2					4.2
	Fecal Coliform	col/100 ml		<1				<1				<1					
	Fluoride	mg/L		0.30				0.3				0.3					0.3
	Nitrate	mg/L		0.49				0.56				0.459					0.56
	Alpha, Gross	pCi/l		1.7 ± 1.5				1.1 ± 1.7									1.7
	Iron	ug/L		<3				<3				<10					
	Manganese	ug/L		1				<1				<2					1
	Solids	mg/L		177				171				176					177
01N 05E 28ADC1	Arsenic	ug/L	2				2				2					1.8	2
	Fecal Coliform	col/100 ml	<1				<1				<1					<1	
	Fluoride	mg/L	0.5				0.3				0.33					0.4	0.5
	Nitrate	mg/L	2.9				6.1				4.86					3.69	6.1
	Alpha, Gross	pCi/l	0				0.6										0.6
	Iron	ug/L	<3				4				5.5					3	5.5
	Manganese	ug/L	<1				<1				<2.2					<0.8	
	Solids	mg/L	169				195				187					169	195
02N 04E 34BCB1	Arsenic	ug/L			2				2				1.7				2
	Fecal Coliform	col/100 ml			<1				<1				<1				
	Fluoride	mg/L			0.3				0.3				0.3				0.3
	Nitrate	mg/L			2.6				2.54				2.4				2.6
	Alpha, Gross	pCi/l			0.8				1.2								1.2
	Iron	ug/L			9				<3				<10				9
	Manganese	ug/L			<1				<1				<3				
	Solids	mg/L			168				169				162				169