

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-31597

Exam Date: 9/6/2012

1. Current Owner: NAMPA SCHOOL DISTRICT # 131
619 S CANYON ST
NAMPA ID 83686
(208)468-4600
2. Accompanied by: Bill James
Phone No: Cell (208) 573-9011
Address: Same
Relationship to Permit Holder: Maintenance Crew

3. SOURCE TRIBUTARY
GROUND WATER N/A

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 63-5025 (domestic use school) & surface water shares (irrigation)
2. Other water rights with the same point of diversion: 63-5025

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NW1/4SW1/4 Sec. 20, Twp 02N, Rge 02W, B.M.
CANYON County

Method of Determination: GPS (verified existing GPS data for well) and Bing (2011) Aerial Photo

2. PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
02N	02W	20											X						

Method of Determination: Bing (2011) Aerial Photo w/ field verification

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☒ Photo of Diversion and System Attached

4. **Well or Diversion**

ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0025989	Grundfos	5	unknown – submersible	Grundfos - Model 60S series	unknown - 2" Discharge

D. FLOW MEASUREMENTS1. **Measurement**

Equipment	Type	Make/Model No.	Serial No.	Size	Calib. Date
No physical measurement @ exam	N/A	N/A	N/A	N/A	N/A

See Flow Calculations Section below for Theoretical HP Equation & Pipe Diameter Flow Estimations.

Measurements: None taken. Well discharge piping not suitable (buried) for polysonic measurement.

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method: Theoretical HP Equation:

$$HP = 5$$

$$PSI = 40 \text{ (est. domestic system)}$$

Z = 73 ft (reported as drawdown on well log pump test, but likely pumping level considering pumping level reported as 100 ft when static level was 46 ft. Likely driller reported pump depth as pumping level on log. Pump depth 100 ft for current pump in well.)

$$Q = (8.8 \times 0.7 \times HP) / [Z + (2.31 \times PSI)] = (8.8 \times 0.7 \times 5) / [73 + (2.31 \times 40)] = \mathbf{0.19 \text{ cfs}}$$
 est. capacity of pumping system

Measured Method: Pipe Diameter Flow Estimation:

$$\text{Discharge Pipe Dia} = 2 \text{ in}$$

$$A = \pi r^2 = 3.14 \times (1/2 \text{ Dia})^2 = \pi \times 1 \text{ in}^2 = 3.14 \text{ in}^2 \approx 0.02 \text{ ft}^2$$

$$V = 5 \text{ ft/sec (est. for well designed closed pipe system)}$$

$$Q = AV = 0.02 \text{ ft}^2 \times 5 \text{ ft/sec} = \mathbf{0.11 \text{ cfs}}$$
 est. flow through discharge pipe

Theoretical HP Equation est. = **0.19 cfs**

Pipe Diameter Flow Estimation = **0.11 cfs**

Permitted Rate = **0.05 cfs**

Beneficial Use Limit = N/A no standard rate of flow for domestic use within school

Proof of Beneficial Use fee paid = \$50.00 = up to **0.20 cfs**

Recommend Permitted Rate = 0.05 cfs

Permitted rate recommended as system is capable of producing 0.05 cfs for this permit plus 0.06 cfs for overlapping right 63-5025.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: **N/A – limited irrigation associated with domestic use was permitted, but all irrigation via other surface water rights – no irrigation use of ground water under this permit.**

2. Volume Calculations for Domestic (internal) Use:

$$V_R = \sim 100 \text{ people (55-60 students} + \frac{1}{2} \text{ students children} + 14 \text{ staff)} \times 100 \text{ gpd/person} \times 180 \text{ day/school yr} \div 325,850 \text{ gal/af} = \mathbf{5.5 \text{ afa}}$$

$$V_{DR} = 0.05 \text{ cfs} \times 180 \text{ days/yr} \times 1.9835 = \mathbf{17.9 \text{ afa}}$$

$$V = \text{Smaller of } V_R \text{ and } V_{DR} = 5.5 \text{ afa} < 17.9 \text{ afa} = \mathbf{\text{Recommend 5.5 afa}}$$

Overall System:

$$V_R = \text{Overlapping WR 63-5025 Vol (22.0 afa)} + 63-31597 \text{ Vol (5.5 afa)} = \mathbf{27.5 \text{ afa}}$$

$$V_{DR} = [\text{Overlapping WR 63-5025 Rate (0.06 cfs)} + 63-31597 \text{ Rate (0.05 cfs)}] \times 180 \text{ days/yr} \times 1.9835 = \mathbf{39.3 \text{ afa}}$$

System capable of diverting volume for both rights. **HOWEVER** number of students + children + staff provided for this exam nearly identical to those provided during adjudication of overlapping right 63-5025. Right 63-31597 should not provide any additional volume in excess of volume already authorized via right 63-5025. A combined volume limit condition (63-5025 + 63-31597 when combined shall not exceed 22.0 afa) should be included in licensing. 22.0 afa recommended for 63-5025 (based on diversion volume) should provide more than enough volume for domestic use at this facility.

G. NARRATIVE/REMARKS/COMMENTS**SYSTEM DESCRIPTION:**

System consists of a 6" dia well with a 2" discharge line piped to a pump house. Inside the pump house, 2 in line has McPropeller flow meter in line before connection to 2 pressure tanks piped to 1 in bypass lines into buildings (usually closed) and two 1 in lines to water softener in basement of main building. Water softener to treat water for phosphorus levels before use. Several 1 in lines inside the pump house can bypass water softener should the water softener become inoperable. Water from well used for internal domestic uses associated with the Scjism School. Historically this has been an alternative school for students with children. Currently the school is not in operation, but the school district plans to reopen the school potentially as a new elementary school.

OVERLAP:

Well serves as POD for this right and right 63-5025. The original well drilled for 63-5025 was abandoned in 2003 when the current well was drilled as a replacement. Current system capable of producing at least 0.11 cfs, enough for both right 63-5025 (0.06 cfs) and this right (0.05 cfs), based on flow estimations noted above. Both right 63-5025 and 63-31597 authorize diversion of water for domestic purposes for the school. During adjudication of right 63-5025, owner provided estimation of approximately 100 people (50-60 students + 20-25 infants + 10 personnel) within the school during the 180 day school year. This estimation nearly identical to numbers provided for this exam (see V_R calculation above) indicating no additional volume of water in excess of that authorized under the existing right is required. Therefore, a condition limiting rights 63-5025 and 63-31597 when combined to no more than 22.0 afa (volume 63-5025) should be placed on right 63-31597 during licensing. The condition should NOT include a rate limit considering the system produces the combined rate of both rights. There are no other applicable overlapping rights associated with the POD.

When permitted, 63-31597 authorized minimal diversion under the domestic use for occasional landscape irrigation for the school. According to the owner representative, all irrigation on the property is done by gravity/flood irrigation with farmer's wastewater (surface water shares). Therefore, this right is being recommended for internal domestic uses only. There are no other applicable overlapping rights associated with the POU.

COMPLIANCE WITH PERMIT CONDITIONS:

Permitted water bearing zone 340 to 400 ft. Well screens installed various depths from 336 to 370 ft, per well log. Screened interval(s) in well different than permitted water bearing zone. However, well is outside the Bs 63 GW Restricted Area, therefore the water bearing zone condition can be removed at time of licensing. Permit also conditioned domestic use is for a school and includes landscape irrigation of ½ acre or less supplemental to surface water. Only surface water has been used for irrigation on the property, well not used for irrigation of any kind. Condition(s) indicating domestic use for internal uses associated with the school should be applied during licensing. Also, any condition(s) regarding irrigation should be removed from the right considering the only use is for internal domestic uses. To the best of my knowledge, owner has complied with all other permit conditions.

Have conditions of permit approval been met? ☒ Yes* ☐ No

*Conditions met provided WB Zone condition removed as discussed above.

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
DOMESTIC	01/01 to 12/31	0.05 CFS	5.5 AF
<u>Totals:</u>		0.05 CFS	5.5 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

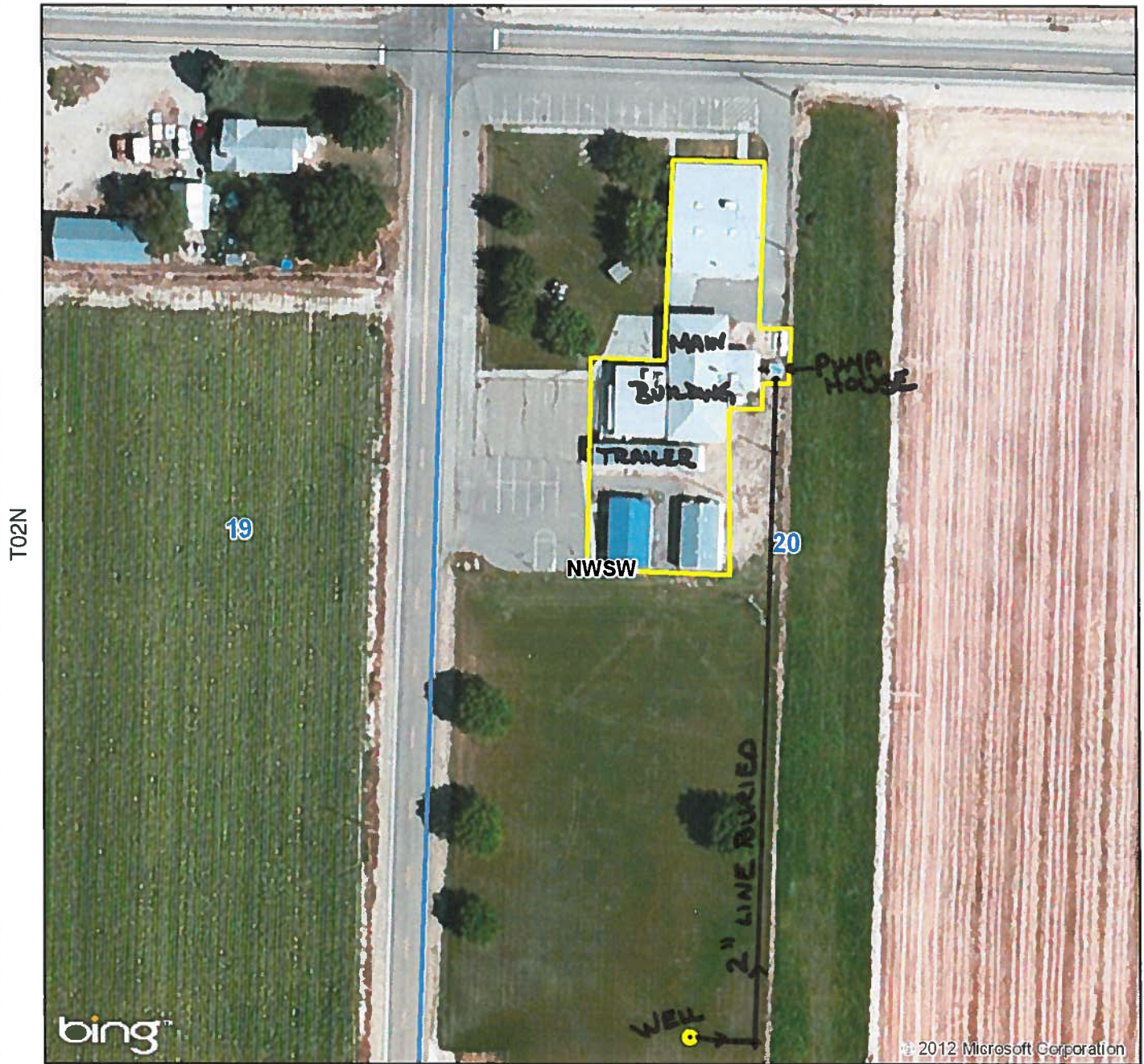
I. AUTHENTICATION

Field Examiner's Name Angela M. Gumm Date 11/14/2012
 Reviewer _____ Date _____

Beneficial Use Field Report System Diagram & Map

63-31597

R02W

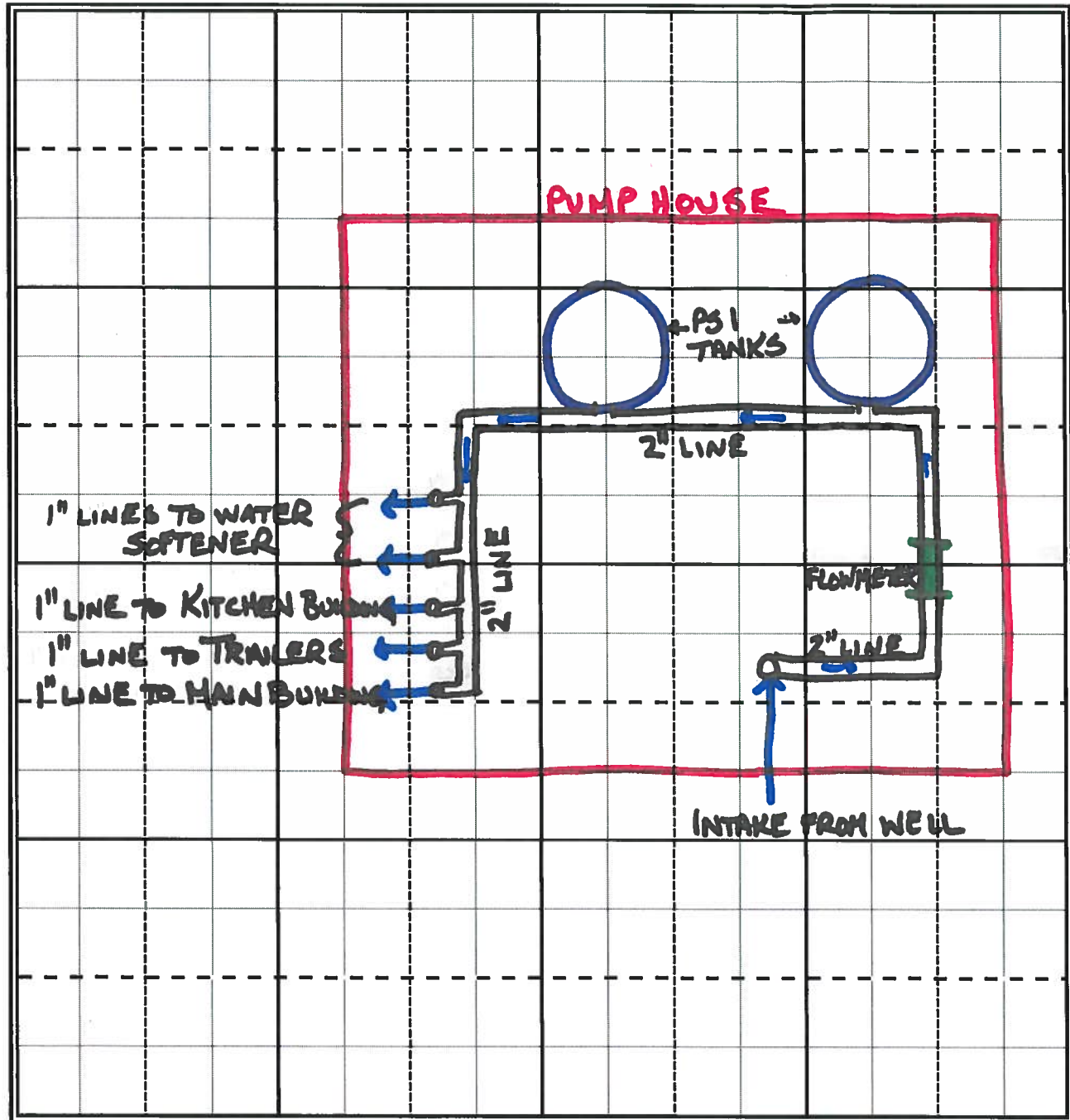


0 0.025 0.05 0.1 Miles

- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters



63-31597 Beneficial Use Field Report Diversion System Diagram



Not to Scale

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

789181

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

1. WELL TAG NO. D 0025989
DRILLING PERMIT NO. _____
Other IDWR No. _____

11. WELL TESTS:

☐ Pump ☐ Bailor ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
100-150	—	340 FT	24 HRS
100+	73	100 FT	12 HRS

Water Temp. 70° Bottom hole temp. _____

Water Quality test or comments: _____

Depth first Water Encounter 46'

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

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
10	0	26	top soil & hard pan		
	26	46	lava		
	46	50	crevas	X	
	50	88	lava rock		
	88	106	crevas & lava rocks	X	
	106	124	lava rock		
	124	126	crevas	X	
	126	134	lava rock		
	134	135	crevas		
	135	137	lava		
	137	145	fractures	X	
	145	162	lava w/ fractures	X	
	162	170	crevas	X	
	170	172	lava		
	172	200	crevas, small coarse sand, lava rocks	X	
6	200	215	gravel, cobbles		
	215	218	blue sand		
	218	225	gravel, sand, blue clay mix		
	225	238	blue clay w/ gravel & sand		
	238	255	pea gravel, sand, clay	X	
	255	264	blue sandy clay		
	264	266	blue clay		
	266	271	sandy clay		
	271	275	clay		
	275	278	sand		
	278	280	short clay layers		
	280	287	sand	X	
	287	297	clay, blue w/ soft spots		
	297	299	clay		
	299	310	blue sand	X	
	310	314	sandy clay		

continued - pg 2

Completed Depth 375' (Measurable)
Date: Started 12-16-02 Completed 1-14-03

13. DRILLER'S CERTIFICATION

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

Company Name Adamsen Pump & Drilling No. 457

Firm Official Dave Adamsen Date 1-24-03

and Driller or Operator Dave Johnson Date 1-24-03

(Sign once if Firm Official & Operator)

2. OWNER:
Name Nampa School District #131 AIR-
Address 619 S. Canyon PUMP-
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. 2 North ☒ or South ☐
Rge. 2 East ☐ or West ☒
Sec. 20 NW 1/4 SW 1/4
Gov't Lot _____ County Canyon 10 acres 40 acres 160 acres
Lat: _____ Long: _____

Address of Well Site Scism School
8444 Dearborne City Nampa
(Give at least name of road + Distance to Road or Landmark)

Lt. _____ Blk. _____ Sub. Name _____

4. USE:

☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☒ Other Public - School

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	200	7,750*	over base

Was drive shoe used? ☒ N Shoe Depth(s) 330'

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6"	+2	330	.280	Steel	☒	☐	☒	☐
5"	346	365	.280	Steel	☐	☐	☐	☐
5"	326	336	.280	Steel	☐	☐	☐	☐

Length of Headpipe 10' Length of Tailpipe 5'

9. PERFORATIONS/SCREENS

Perforations Method wash down
Screens Screen Type Johnson

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
336	346	.014		5"	SS	☐	☐
365	370	.014		5"	SS	☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

49 ft. below ground Artesian pressure _____ lb.

Depth flow encountered _____ ft. Describe access port or

control devices: well cap

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: : :
☐ Air ☐ Flowing Artesian

1. WELL TAG NO. D 0025989
 DRILLING PERMIT NO. - - - - -
 Other IDWR No. - - - - -

2. OWNER:
Name Nampa School District #131
Address 1619 S Canyon
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. 2 North ☒ or South ☐
 Rge. 2 East ☐ or West ☒
 Sec. 20 NW 1/4 SW 1/4 SE 1/4
 Gov't Lot _____ County Canyon 10 acres 40 acres 160 acres
 Lat. : : Long. : :
 Address of Well Site Scism School -
8444 Dearborne City Nampa
 (Give at least name of road & distance to road or landmark)

Li. _____ Blk. _____ Sub. Name _____

4. USE:

☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☒ Other Public - School

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	

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
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

9. PERFORATIONS/SCREENS

Perforations	Method
--------------	--------

Screens	Screen Type
---------	-------------

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

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

49 ft. below ground Artesian pressure _____ lb.

Depth flow encountered _____ ft. Describe access port or _____

control devices: 1xpl can

11. WELL TESTS:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
100 - 150		340 FT	24 HRS
100 +	73 FT	100 FT	12 HRS

Water Temp. 20° Bottom hole temp. _____

Water Quality test or comments: _____

Depth first Water Encounter 46

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

[illegible]

RECEIVED

FEB 10 2003

WATER RESOURCES
WESTERN REGION

Completed Depth 375' (Measurable)

Date: Started 12-16-02 Completed 1-14-03

13. DRILLER'S CERTIFICATION

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

Company Name Adams Pump & Drilling Firm No. 457

Firm Official Steve Thompson Date 1.24.03

and

Driller or Operator Dave Hansen Date 1.24.03

(Sign once if Firm Official & Operator)

63-31597 Beneficial Use Field Report Photos



63-31597 Exam 9/6/2012: POD well facing north. POU Scism School buildings in photo middle-ground. Pump house smallest building in photo on the east side.



63-31597 Exam 9/6/2012: Flow meter in-line between intake from well into pump house and pressure tanks.

63-31597 Beneficial Use Field Report Photos Continued



63-31597 Exam 9/6/2012: Pressure tanks in-line between flow meter and discharge lines to buildings inside pump house.



63-31597 Exam 9/6/2012: Distribution/discharge lines into school buildings from inside pump house.