

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-18512

Exam Date: 06/27/2024

1. Does this qualify for an in-office field exam (IDAPA 37.03.02.035.01.r)? X Y ___ N
- a. N/A Irrigation of 5 acres or less
- b. N/A Storage of up to 14.6 AF for stockwater purposes only
- c. X Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less.
- d. N/A Other < >

2. Current Owner: MELISSA N RIX AND/OR CHRISTIAN W RIX

Owner of Record Correct? X Y ___ NAddress of Record Correct? X Y ___ N

If No Explain:

- Kootenai County Tax Parcel information shows Melissa N Rix as the owner of parcel RP088750000110. I don't see any issues with the ownership of this permit or proposed license.

3. Beneficial Use Fees have been paid: **N/A** – Groundwater source and beneficial use for which a license examination fee is not required IAW Statement of Completion instruction guidelines.

4. **SOURCE:** Groundwater

Method of Determination: ArcMap GIS and Tax Parcel Data.

Change in Source: ___ Y X N**B. OVERLAP REVIEW**1. Other water rights with the same place of use: NO Overlap2. Other water rights with the same point of diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
95-12720	Groundwater	Domestic	Decreed

Comments: Decreed Right 95-12720 and this Permit share the same GW POD. Each Right accesses the shared well located on property not owned by the WR Holder, in the case of the Permit an easement is in place granting access to the POD. I have added condition F06 which described the shared well POD between Rights 95-12720 and 95-18512. I used a theoretic pump equation to derive the well's pump performance which is estimated at 0.12 cfs. As the pump is capable of producing greater diversion rates than the two Rights combined, and there may be unknown deferrable domestic water uses from the shared well for the well lots property owner, I don't recommend combined use conditions toward licensing this Permit.

C. DIVERSION AND DELIVERY SYSTEM

1. Location of Point(s) of Diversion:

Source	Govt. Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.		County
GROUNDWATER			SW	SW	28	50N	02W	B.M.	KOOTENAI

Method of Determination: ArcMap aerial imagery.

Change in POD? ___ Y X N Amendment Required? ___ Y X N

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	
50N	02W	33						X											

Method of Determination: GIS and Tax Parcel Data.

Change in POU? X N Amendment Required? X N

3. Diversion System Information:

Description: Groundwater well D5218 (95-98-N-135) constructed on 8/11/1998 with an unknown brand pump & 5 hp Pentair (Pentek) motor serving as the diverting works for the water system.

 Delivery System Diagram Attached. (mark all major components and distances between components) X Aerial Photo Attached (required) Photo of Diversion and System Attached

3. Diversion Id No.*	Motor Make	HP	Motor Model No.	Pump Make	Pump Serial No. or Discharge Size
D5218	Pentair	5	033E18Y S/N#5691071	Unkown	Unknown

D. FLOW MEASUREMENTS

1. Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurement Comments: No measurement required for an in-office exam.

E. FLOW CALCULATIONS

Domestic:

- Measurement = 1 home authorized a diversion rate of 0.04 cfs based on Administrator's Memorandum, Application Processing No. 22: Definition of "Domestic".
- Permit allowed = 0.04 cfs
- Theoretic Pump Equation derived value = 0.12 cfs. This is a shared well source & the larger diversion rate is mitigated by other well user(s) on the system.
- License recommendation = **0.04 cfs** based Department standards for 1 home with ½ ac irrigation included.

Comments:

Due to flow measurements not being required, I calculated a theoretic pump equation based on well driller report for the well and well pump motor information received from the Permit Holder by email on 6/26/2024 as illustrated below:

Theoretical Pumping Equation derived using the following information: pump is estimated to lift 190 ft and running at 45 psi.					
PUMP EQUATION					
WATER RIGHT No. 95-18512					
Well D5218 95-98-N-135	HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
$Q = \frac{HP * 8.8 * \text{Eff}}{H}$	5	294.0816	0.8	190	45
Q = 0.120 cfs 53.8 gpm					

The theorized flow rate is excessive for the 0.04 cfs authorized by Permit, but the well is a shared well with other WR holders & potential deferred domestic water user(s) on the system which serve to mitigate enlargement concerns.

F. VOLUME CALCULATIONS

2. Volume Calculations for Other Uses: Maximum Diversion Volume equals **1.2 af** for 1 home with up to ½ acre irrigation covered under domestic use.

G. PURPOSE OF USE

Irrigation N/A N # Stock N/A Domestic # of Homes: 1

Other: < N/A >

Change in Purpose of Use? X N

Method of Determination: Kootenai County tax lot data, information assessed on the Statement of Completion form, and email correspondence received from the Permit Holder.

H. NARRATIVE/REMARKS/COMMENTS

This permit qualifies for an in-house examination. Overlapping water right concerns have been evaluated there are no concerns toward licensing this Permit. I used ArcMap to assign the groundwater POD which I assigned as in the same location as Right 95-12720's Recommendation Centroid (shared well). The Permit's **0.04 cfs** diversion rate is recommended for licensing based on Department standard rate allowances. The well driller report identifies a well test yield of 35+ gpm at time of construction and a theoretical pump equation illustrates the well pump is capable of producing 0.04 cfs.

The applicant's parcel shows a year-built date of 2019 according to Kootenai Co. tax parcel data. ArcMap imagery year 2023 shows 1 home with a shop/garage on the parcel and lawn/landscape irrigation occurring. Mrs. Rix responded to an email inquiry for additional pump information via email response on 6/26/2024, and I've included the correspondence and photograph of the pump motor relay control panel as supporting documentation to this report.

I used ArcMap aerial imagery, Google Earth software, and Kootenai County GIS tax parcel maps to evaluate the domestic POU and assigned a 0.85 ac rectangular POU shape that encompasses the residence and allows for up to ½ acre irrigation which occurs on the property. The POU shape is for illustrative purposes and the Right Holder is authorized up to ½ acre irrigation which coincides with the residence which may fall outside the Arcmap POU shape due to aerial shift/drift. I've designated a maximum diversion volume of **1.2 af** for 1 home with ½ acre irrigation included for licensing purposes.

I removed condition 046 during licensing review. I've added condition F06 as described above on PG1 of this report. Conditions X59 & X60 were added describing POD & POU locations falling within named subdivision lots. I have added condition 187 to describe the 1/2 acre irrigation occurring under domestic water use; as filed, the Application for Permit specifically declared 1/2 acre irrigation in step No.8 of the filing but was left off during the permit approval process.

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

I. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
DOMESTIC	01/01 to 12/31	0.04 CFS	1.2 AF

Totals: 0.04 CFS 1.2 AF

2. Recommended Amendments:

___ Change P.D. as reflected above ___ Add P.D. as reflected above X None

___ Change P.U. as reflected above ___ Add P.U. as reflected above X None

Other: < N/A >

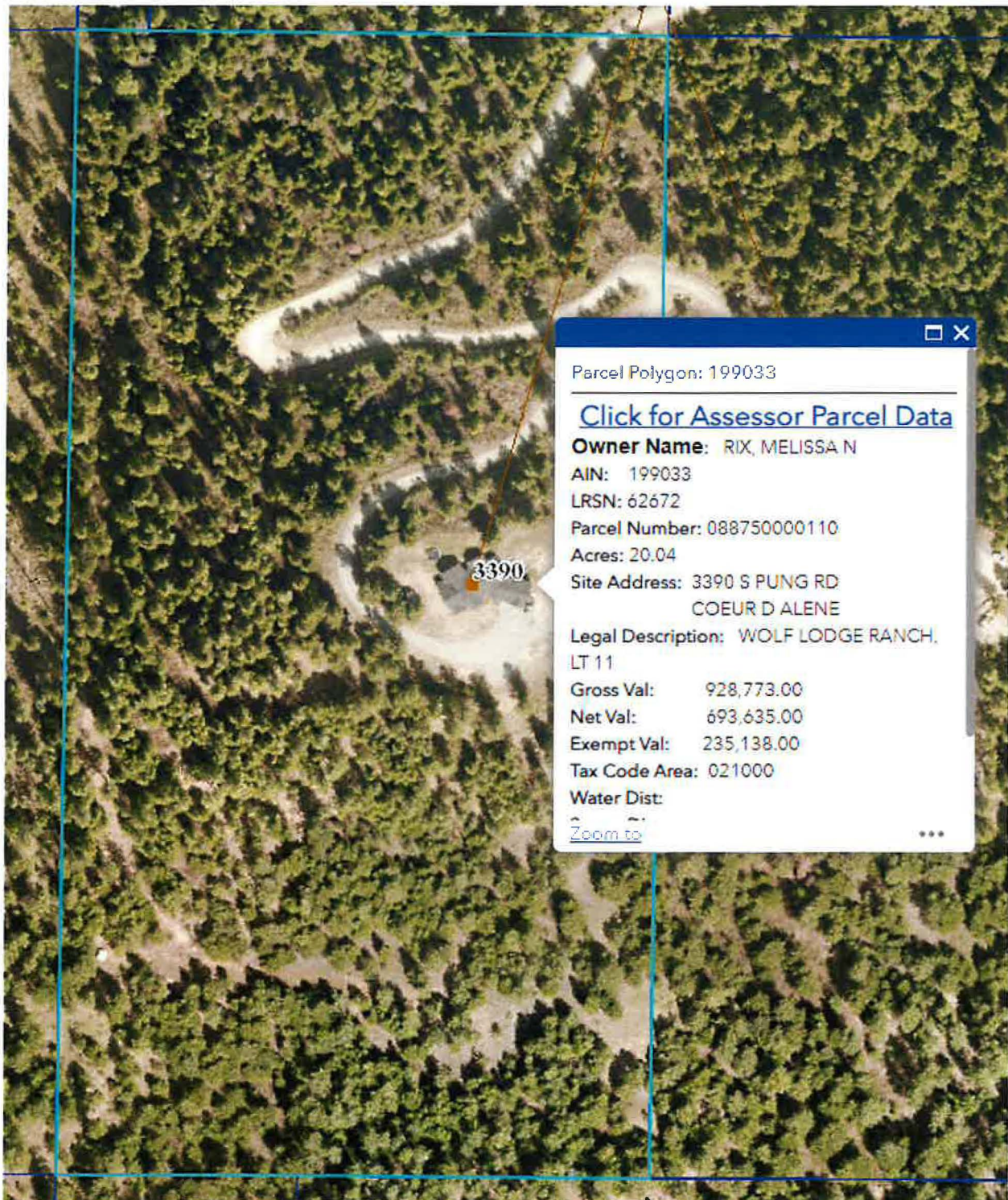
J. AUTHENTICATION Luke Bates – Sr Water Resource Agent

Field Examiner's  Date 6/27/2024

Reviewer  Date 6/27/2024

Field Exam Map(s): 3390 S Pung Rd, Coeur D Alene ID 83814. Lt 11, Wolf Lodge Ranch Subdivision.

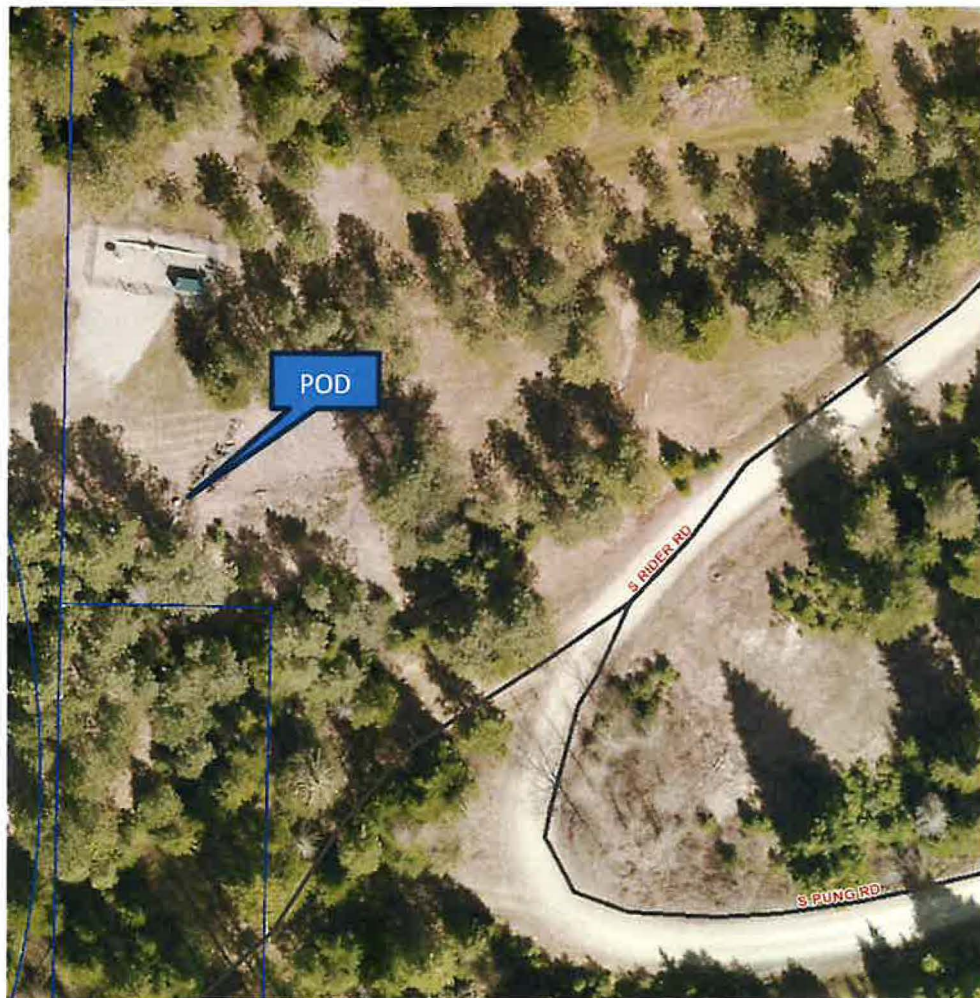
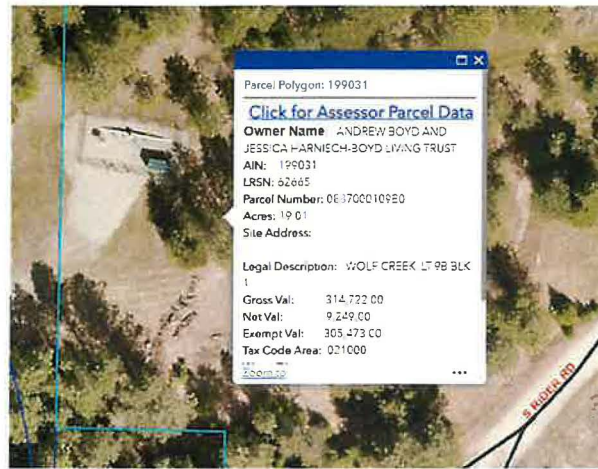
Kootenai County Tax Parcel map retrieved from <https://gis.kcgov.us/app/kcearth/> on 6/27/2024



Tax Parcel No. RP088750000110

Field Exam Map(s): Groundwater well location. Lt 9B, Blk 1; Wolf Creek Subdivision.

Kootenai County Tax Parcel map retrieved from <https://gis.kcgov.us/app/kcearth/> on 6/27/2024

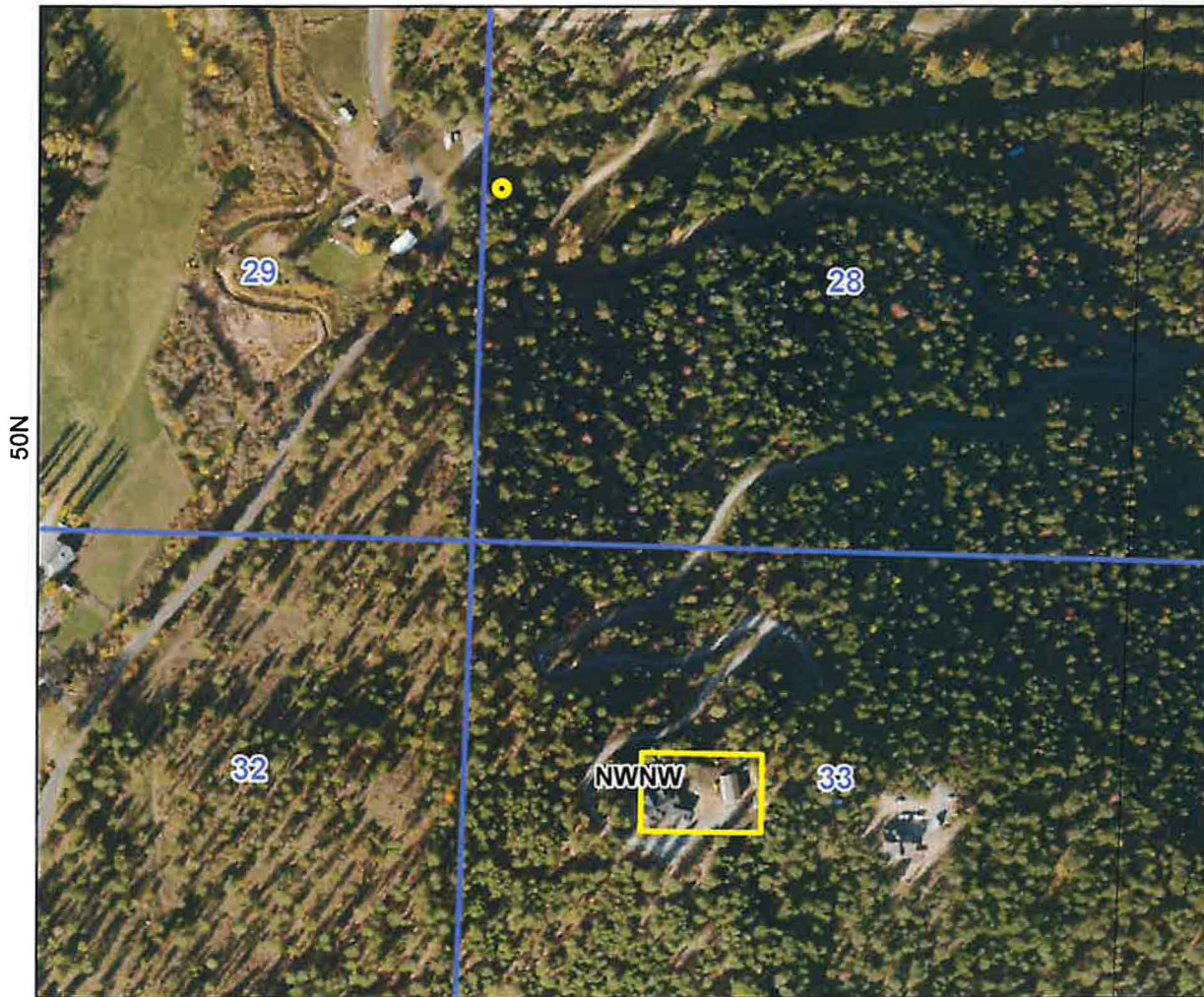


Tax Parcel No. RP0887000109B0

State of Idaho
Department of Water Resources
Attachment to Water Right
.95-18512

This map depicts the DOMESTIC place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

02W



0 0.045 0.09 0.18 Miles

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



Bates, Luke

From: Melissa Rix <melissa.rix@aol.com>
Sent: Wednesday, June 26, 2024 5:41 PM
To: Bates, Luke
Subject: Rix IDWR 95-18512

CAUTION: This email originated outside the State of Idaho network. Verify links and attachments BEFORE you click or open, even if you recognize and/or trust the sender. Contact your agency service desk with any concerns.

I think this is what you need.

Thanks,

Melissa Rix



Bates, Luke

From: Bates, Luke
Sent: Monday, June 24, 2024 2:47 PM
To: 'Melissa.rix@aol.com'
Subject: IDWR Permit 95-18512

Melissa & Christian Rix,

Good afternoon. I've been tasked with licensing review for Permit **95-18512**, which authorized development of a shared Groundwater well for Domestic use 1 home with up to ½ acre irrigation. I note your Statement of Completion was received by the Department on 4/17/2024.

The next step is a beneficial use field examination, which I plan to attempt accomplishing via an In-Office exam process. To expedite finalizing this permit for license approval I'm requesting additional water system information related to the groundwater well diversion system:

1. Do you have access to the pump station and or pump controller which describes the pump motor make/model & horsepower (HP) of the pump? There should be a gray relay control panel associated with the pump motor which typically has a data plate describing the HP paired with the pump. If possible, could you send me a photograph of the relay control panel box and close-up of the data plate? I understand this is a shared well not located on your parcel, but perhaps the property owner can confirm the HP of the pump motor installed in the well.

Thank you in advance for considering the question detailed above.

Please do respond to this email within 5 days, NLT 6/28/2024, as I work to finalize it for license approval. If I'm unable to obtain adequate information I may need to complete a site visit to complete the field examination process.

Luke Bates

Sr. Water Resource Agent
Northern Region
P: 208-762-2817



IDAHO DEPARTMENT OF
WATER RESOURCES

7600 N. Mineral Dr., Suite 100
Coeur D'Alene, ID 83815-7763

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

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

1. WELL TAG NO. D5218

Drilling Permit No: 95-98-N-135
Other IDWR No.

2. OWNER

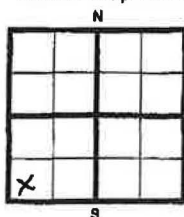
Name Castleberry, Bob Well Number: 746

Address 3152 S Pang Rd.

City CDA State ID Zip 83814

3. LOCATION OF WELL by legal description

sketch map location must agree with written location



Twp. 50 North or South
Rge. 02 East or West
Sec. 28 1/4 SW 1/4 SW 1/4

Gov't Lot County KOOTENAI

Lat: : : Long: : :

Address of Well Site WOLF LODGE RANC
City CDA

(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	20	6 BAGS	OVERBORE

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 85

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6	+2	85	.250	STEEL	☒	☐	☒	☐
4	-15	205	.160	PVC				

Length of Headpipe Length of Tailpipe

9. PERFORATIONS/SCREENS

☒ Perforations Method DOWN HOLE /SKILLSAW

☐ Screens Screen Type

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
60	75	1/4X2	320	6	STEEL	☒	☐
185	205	1/8x6	60	4	PVC		

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

25 ft. below ground Artesian pressure lb.

Depth flow encountered ft. Describe access port or control devices:

50N 2W 28

11. WELL TESTS:

☐ Pump ☐ Bailor ☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
35+			2 HRS

Water Temp. Bottom Hole Temp

Water Quality test or comments:

Depth first Water encountered 28'

12. LITHOLOGIC LOG:(Describe repairs or abandonment)

				Water	
Bore Diam	From	To	Remarks: Lithology, Water Quality, Temperature	Y	N
10	0	18	Soil w/Cobble & Clay	☐	☒
8	18	24	Soil W/Gravel & Clay	☐	☒
8	24	60	Clay Silty Brown	☐	☐
8	60	79	Gravels & Sand W/Clay Seems W/Wat	☒	☐
8	79	85	Clay & Silty Sand W/Water	☒	☐
6	85	179	Shale Greenish Gray Medium	☐	☒
6	179	184	Shale Fractured W/Water 15 gpm	☒	☐
6	184	205	Shale Green Gray	☐	☒
Note: Gravel Pack -16' to 205' 2 yards Pea Gravel .					
RECEIVED SEP 04 1998 NORTHERN REGION IDWR					
Completed Depth 205' (Measurable)					
Date: Started 8/10/98 Completed 8/11/98					

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 H2O WellService Inc. Firm No. 448

Firm Official Date 8-25-98

and Date 8-15-98

Supervisor or Operator Date

(Sign Once if Firm Official and Operator)