

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-35147
Exam Date: 09/14/2023

1. Current Owner:
KEN SANGHA 1309 W FORT ST BOISE ID 83702-5004
- 2 Accompanied by: Randi McCallum
Phone No: 208-870-0519
Address: 6780 Willis Rd, Star ID 83669
Relationship to permit Holder: Facility Manager for the High Desert Station horse arena

3. **SOURCE:**
GROUND WATER

Method of Determination: On-site inspection

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
63-35145	Ground Water	Commercial/ Stockwater	License
63-35146	Ground Water	Stockwater	License

Comments:

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
N/A			

Comments:

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SE¼ SW¼, Sec. 36, Twp 05N, Rge 02W, B.M. CANYON County

Method of Determination: On-site inspection and Garmin GPS

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	02W	36												9.8			1.2		11.0

Total Acres: 11.0

Method of Determination: On-site inspection

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
Drilling Permit 63-92-W-161		30			

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
N/A						

2. Measurements: No power to well

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method: Theoretical Yield:

$$Q = \frac{8.8 \times (Hp) \times (Eff)}{H}$$

H

Where Hp = 30 Hp

Eff = Efficiency = 70% assumed

H = total head = pumping level (112') + (2.31 x system pressure (open discharge = 0))

$$Q = \frac{8.8 \times 30 \times .70}{112} = 1.65 \text{ cfs}$$

112

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 11.0 \text{ acres} \times 4.5 \text{ af} = 49.5 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.22 \text{ cfs} \times 260 \text{ Days} \times 1.9835 = 113.5 \text{ af}$$

$V = \text{Smaller of } V_{I.R} \text{ and } V_{D.R} = \underline{49.5 \text{ af}}$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS

On 9/14/2023, I visited this property to conduct an irrigation field exam for this permit. I checked in with Randi McCallum, the facility manager for the High Desert Station horse arena, and then went out to inspect the irrigation system and grounds. What I found was a system in disrepair and completely overgrown with weeds. At the wellhead, there was no power to the system, so there was no way to obtain a direct measurement.

The remnants of the system consisted of a well that would open discharge to a pond, and a relift pump that would pump water from a culvert adjacent to the pond into buried mainlines with risers that could be connected to handlines (see system diagram and photos). The relift pump had been completely disconnected from the pipe system and there were no handlines or sprinklers visible anywhere on the property. I located the mainlines by walking the now fallow field and locating risers on the pipelines. The buried mainlines appeared to run east-west along the length of the largest field and then north-south on another field on the west side of the property. The main field was partially cleared using a brush hog, with approximately half of the field overgrown with weeds. The field to the west had also been cleared. There was some grass growing on the fields, so I came to the assumption that when the fields were irrigated, they were growing pasture grass, although I can't be certain.

On 2/8/2024, I contacted Sharon Skinner with Can-Ada Well Drilling to see if in addition to drilling the well (in 1992) if they had installed the pump. She indicated they had installed a 30 Hp pump and motor also. She sent me a copy of a handwritten note breaking down costs associated with the pump and motor installation that was attached to the well driller's report in their files (Attachment #1). I'm not sure what happened between installation of the pump and motor in 1992 to the filing of proof of beneficial use (by new owners) in 2023, but there was no motor at the well, along with the missing irrigation pipe and no power, it became obvious that I would not be able to obtain a direct measurement from the well. Fortunately, 2021 imagery in ArcMap, provided a fairly clear picture of what had been irrigated in the now fallow fields.

Typically under the IDAPA 37.03.02 Beneficial Use Examination Rules, a direct measurement of systems irrigating more than 5 acres is required. I would like to point out that under the rules for uses other than irrigation or storage, a direct measurement is not required for diversion rates of 0.24 cfs or less. I was only able to verify the irrigation of 11 acres during the exam and by using satellite imagery. Based on 0.02 cfs diversion allowed per acre for irrigation, that results in a calculated flow rate of 0.22 cfs, which falls under the threshold requiring measurement for other uses. Additionally, after talking with the owner on multiple occasions, it was obvious to me that I would not be able to convince him to get the system up and running anytime in the near future. However, it was also clear an irrigation system had been developed and utilized, so licensing that previous use seems to be the best path forward. The Theoretical Yield equation indicates that the well, when operable, could have produced a diversion rate of up to 1.65 cfs.

Based on what became a "forensic" field exam, I am recommending this permit be licensed with a diversion rate of 0.22 cfs, a volume of 49.5 af for a total of 11 acres.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	
IRRIGATION	03/01 to 11/15	0.22 CFS	49.5 AF
<u>Totals:</u>		0.22 CFS	49.5 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 ☒ None

I. AUTHENTICATION

Bill Mills -

Field Examiner's Name Bill Mills Date 2-16-2024

Reviewer By Shinn Date 2/20/2024



Figure 1: The well on date of the field exam



Figure 2: Close up of well head with no pump motor attached



Figure 3: Look closely, relift pump



Figure 4: Looking northeast across the previously irrigated field



Figure 5: A riser on the buried mainline



Figure 6: Looking west across partially cleared field



Figure 7: Field on west side of property

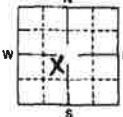
System Diagram



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCESUSE 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 <u>SCHMIDT, BILL</u> Address <u>PO BOX 375</u> Drilling Permit No. <u>STAR, ID 83669</u> Water Right Permit No. <u>63-92-W-161</u>	7. WATER LEVEL Static water level <u>112</u> feet below land surface. Flowing? ☐ Yes ☒ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature _____ °F. Quality _____ Describe artesian or temperature zones below.																																																																																								
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Well diameter increase ☐ Modification ☐ Abandoned (describe abandonment or modification procedures such as liners, screen, materials, plug depths, etc. in lithologic log, section 9.)	8. WELL TEST DATA ☐ Pump ☐ Bailor ☒ Air ☐ Other _____ <table border="1"><thead><tr><th>Discharge G.P.M.</th><th>Pumping Level</th><th>Hours Pumped</th></tr></thead><tbody><tr><td>300</td><td>343</td><td>3</td></tr></tbody></table>	Discharge G.P.M.	Pumping Level	Hours Pumped	300	343	3																																																																																		
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3. PROPOSED USE ☐ Domestic ☒ Irrigation ☐ Monitor ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)	9. LITHOLOGIC LOG <u>082324</u> <table border="1"><thead><tr><th rowspan="2">Bore Diam.</th><th colspan="2">Depth</th><th rowspan="2">Material</th><th colspan="2">Water</th></tr><tr><th>From</th><th>To</th><th>Yes</th><th>No</th></tr></thead><tbody><tr><td>10"</td><td>0</td><td>5</td><td>TOP SOIL</td><td>NO</td><td></td></tr><tr><td>10"</td><td>5</td><td>40</td><td>BROWN CLAY</td><td>NO</td><td></td></tr><tr><td>10"</td><td>40</td><td>80</td><td>CEMENTED GRAVEL</td><td>NO</td><td></td></tr><tr><td>8"</td><td>80</td><td>100</td><td>CEMENTED GRAVEL</td><td>NO</td><td></td></tr><tr><td>8"</td><td>100</td><td>160</td><td>SANDY CLAY</td><td>NO</td><td></td></tr><tr><td>8"</td><td>160</td><td>180</td><td>SANDSTONE</td><td>NO</td><td></td></tr><tr><td>8"</td><td>180</td><td>195</td><td>HEAVING SAND</td><td>YES</td><td></td></tr><tr><td>8"</td><td>195</td><td>205</td><td>BROWN CLAY</td><td>NO</td><td></td></tr><tr><td>8"</td><td>205</td><td>258</td><td>HEAVING SAND</td><td>YES</td><td></td></tr><tr><td>8"</td><td>258</td><td>275</td><td>BROWN SANDY CLAY</td><td>NO</td><td></td></tr><tr><td>8"</td><td>275</td><td>305</td><td>HEAVING SAND</td><td>YES</td><td></td></tr><tr><td>8"</td><td>305</td><td>310</td><td>BROWN CLAY</td><td>NO</td><td></td></tr><tr><td>8"</td><td>310</td><td>348</td><td>COURSE SAND</td><td>YES</td><td></td></tr></tbody></table>	Bore Diam.	Depth		Material	Water		From	To	Yes	No	10"	0	5	TOP SOIL	NO		10"	5	40	BROWN CLAY	NO		10"	40	80	CEMENTED GRAVEL	NO		8"	80	100	CEMENTED GRAVEL	NO		8"	100	160	SANDY CLAY	NO		8"	160	180	SANDSTONE	NO		8"	180	195	HEAVING SAND	YES		8"	195	205	BROWN CLAY	NO		8"	205	258	HEAVING SAND	YES		8"	258	275	BROWN SANDY CLAY	NO		8"	275	305	HEAVING SAND	YES		8"	305	310	BROWN CLAY	NO		8"	310	348	COURSE SAND	YES	
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4. METHOD DRILLED ☒ Rotary ☐ Air ☐ Auger ☐ Reverse rotary ☐ Cable ☐ Mud ☐ Other _____ (backhoe, hydraulic, etc.)	10. Work started <u>4/5/92</u> finished <u>4/25/92</u>																																																																																								
5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ <table border="1"><thead><tr><th>Thickness</th><th>Diameter</th><th>From</th><th>To</th></tr></thead><tbody><tr><td>250 inches</td><td>inches</td><td>1 feet</td><td>305 feet</td></tr></tbody></table> 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 <u>HOUSTON STAINLESS</u> Top Packer or Headpipe <u>294</u> Bottom of Tailpipe <u>348</u> Diameter <u>6</u> Slot size <u>25</u> Set from <u>308</u> feet to <u>328</u> feet Diameter <u>6</u> Slot size <u>30</u> Set from <u>328</u> feet to <u>348</u> feet Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____ Placed from _____ feet to _____ feet Surface seal depth <u>80</u> Material used in seal: ☐ Cement grout ☒ Bentonite ☐ Puddling clay ☐ _____ Sealing procedure used: ☐ Slurry pit ☒ Overbore to seal depth ☐ Temp. surface casing ☒ Overbore to seal depth Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata Describe access port <u>SANITARY WELL CAP</u>	Thickness	Diameter	From	To	250 inches	inches	1 feet	305 feet	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 <u>Can-Ada Well Drilling</u> Firm No. <u>304</u> Address <u>4250 Murphy Road</u> Date <u>8/27/92</u> <u>Kuna, Idaho</u> Signed by Drilling Supervisor <u>Carl Skinner</u> and _____ (Operator) <u>Bruce H.</u> (If different than the Drilling Supervisor)																																																																																
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6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name _____ Lot No. _____ Block No. _____ County <u>CANYON</u> Address of Well Site <u>SAME Blessinger Ln.</u> (give at least name of road) T. <u>5</u> S. ☒ or S. ☐ SE <u>1/4</u> SW <u>1/4</u> Sec. <u>36</u> R. <u>2</u> E. ☐ or W. ☒																																																																																									

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

Attachment #1

Bill Schmitt Call for prices!

Earl

1- LS 350-30 H.P. ^{pump} end. \$2207.⁰⁰
1-30 H.P. motor \$2882.⁰⁰
273 ft. 5" galv. pipe \$1863.⁰⁰
242 ft. #6-4 flat sub cable 605.⁰⁰
1- 5" valve + flanges + bolts 153.⁷⁴
1- #6 splice kit + heat shrink 14.⁰⁰
1- 5" X 12" black nipple welded } 34.⁸⁰
on flanges.
1- landing plate. 40.⁰⁰
Get pump 5 hrs. at \$75.⁰⁰ 375.⁰⁰
~~\$7808.~~
~~\$2808.⁰⁰~~
\$8104.54
\$7500.⁰⁰