

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 47-17179

Exam Date: 01/22/2013

1. Current Owner: UNITED STATES OF AMERICA ACTING THROUGH
USDI BUREAU OF LAND MANAGEMENT
IDAHO STATE OFFICE
1387 S VINNELL WAY
BOISE ID 83709-1657
(208) 373-4000
2. Accompanied by: Field Exam completed in house utilizing Department resources and information submitted by the B.L.M.

3. SOURCE

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER L3 SE1/4NW1/4SW1/4 Sec. 7, Twp 14S, Rge 13E, B.M.
TWIN FALLS County

Method of Determination: Point of diversion determined utilizing Bing Map 2010 satellite imagery and 2009 Google Earth imagery.

2.

PLACE OF USE: STOCKWATER

[illegible]

13S	13E	29				X
13S	13E	31	X			X
14S	13E	4			X	
14S	13E	6		X		
14S	13E	7			X L 4	
14S	13E	8		X		

PLACE OF USE:

STOCKWATER STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
13S	12E	11	X																
13S	13E	16				X													
13S	13E	20									X								
13S	13E	29												X					
14S	13E	7										X							

PLACE OF USE:

WILDLIFE

Twp Rge Sec			NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12S	13E	34												X					
13S	12E	11	X																
13S	13E	4												X					
13S	13E	7										X	L 3						
13S	13E	10					X												
13S	13E	16				X		X											
13S	13E	17								X									
13S	13E	19	X														X		
13S	13E	21								X									
13S	13E	29													X				
13S	13E	31			X									X					
14S	13E	4											X						
14S	13E	6								X									
14S	13E	7											X	L 4					
14S	13E	8					X												

PLACE OF USE: WILDLIFE STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
13S	12E	11	X																
13S	13E	16				X													
13S	13E	20									X								
13S	13E	29													X				
14S	13E	7										X							
												L 4							

Method of Determination: Place of use determined utilizing Bing Map 2010 satellite imagery and 2009 Google Earth imagery.

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.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
		5 Hp		Jacuzzi	

- D. FLOW MEASUREMENTS** Applicant reported the system produces 32 gpm which is approximately 0.07 cfs.
No measurement performed by IDWR staff.

E. FLOW CALCULATIONS☐ Additional Computation Sheets Attached

Measured Method:

Theoretical yield:

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

Where: Hp = 5 Hp (per application)

Eff = efficiency = 70% assumed

H = total head = pumping level + (2.31 x system pressure)

assume pumping level of 600 feet (per Drillers Report)

assume system pressure = 10 psi

$$H = 600 + (2.31 \times 10) = 623.1$$

$$Q = \frac{8.8 \times 5.0 \times .70}{623.1} = \underline{0.05 \text{ cfs}}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

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

2. Volume Calculations for Other Uses: Storage volume:

Tank #1 - 20' tall x 6' wide = 30,000 gals

Tank #2 - 20' long x 6' wide = 4,200 gals

Tank #3 - 10' long x 6' wide = 2,100 gals

Tank #4 - 10' long x 6' wide = 2,100 gals

Tank #5 - 15' long x 6' wide = 3,200 gals

Total Storage Capacity = 41,600 = 0.1 AF

G. NARRATIVE/REMARKS/COMMENTS

Permit 47-17179 was permitted for 0.07 cfs stockwater and wildlife and 0.01 af stockwater storage and wildlife storage.

Application for Permit 47-17179 was submitted by the Bureau of Land Management on November 22, 2004 and Proof of Beneficial Use was submitted on February 28, 2005.

System consists of a well with a 5 Hp pump that is used to fill a pipeline that runs approximately 10 miles downhill in a northeast direction along House Creek Road and is used to fill 5 storage tanks and 17 troughs. The well pump is run using a propane powered 15 Kw generator. According to the application, the pump is normally run 4.5 hours per day which would yield approximately 8,640 gallons per day (gpd). Total storage for the 5 tanks is 41,600 gals or approximately 0.1 acre feet. At each trough site there is a rectangular trough and a round shallow excavated pit (radius of typically 15'), except for one site near the well, where there is one rectangular trough and two pits.

This system of troughs overlaps three grazing units and provides water for 325 range cattle, 4,185 sheep and undetermined numbers and species of wildlife. Based on consumptive rates for livestock (12 gpd for range cattle and 2 gpd for sheep), if all the cattle and sheep were present and watering on the range on any given day, the demand would be approximately 12,270 gals, which is less than the 13,000 gpd allowed under Idaho Code 42-111.

Overlap review indicated potential overlap with water right 47-16575 for stockwater/wildlife storage of 0.5 af in the SWSW1/4 of Twp 14S, Rge 13E, Sec 6. Review of the QQ using Bing Satellite Imagery indicates no trough is present in this QQ. I have dropped this location from the draft license as there is no evidence that beneficial use under this permit was developed in this QQ.

The application for permit indicates the well produces a rate of 32 gpm, approximately 0.07 cfs. The well drillers report stated the depth to static water in this well is approximately 600', and well drillers reports from other wells in the area indicate a very similar depth. The application for permit also states that a 5 Hp pump is used in the well. If the static water level and the horsepower information are correct, the only way I can calculate a rate of 0.07 cfs from this well is by setting pump efficiency to 100% and system pressure to zero. Using more realistic conditions, (70% pump efficiency and an assumed pressure of 10 psi), a theoretical yield equation calculates a flow rate of 0.05 cfs. Based on the theoretical yield calculation results, I'm going to recommend a flow rate of 0.05 cfs. Additionally, as the well pump is operated manually using a propane powered generator and the recommended flow rate can produce 13,000 gals in 9.65 hours of continuous operation, I'm placing a condition on the

draft license limiting the operation of the pump to 9.5 hours daily.

Recommend licensing 0.05 cfs for stockwater/wildlife and a volume 0.1 af for stockwater/wildlife storage.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER	01/01 to 12/31	0.050 CFS	
STOCKWATER STORAGE	01/01 to 12/31		0.10 AF
WILDLIFE	01/01 to 12/31	0.050 CFS	
WILDLIFE STORAGE	01/01 to 12/31		0.10 AF
<u>Totals:</u>		0.050 CFS	

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

*Added
Div to Storage 0.05 cfs
Ann*

I. AUTHENTICATION

Field Examiner's Name

Date

Reviewer

Date

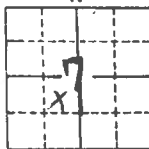
Bill Mott

1-25-2013

Andrew

1/31/2013

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORTUSE TYPEWRITER OR
BALLPOINT PENState 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.

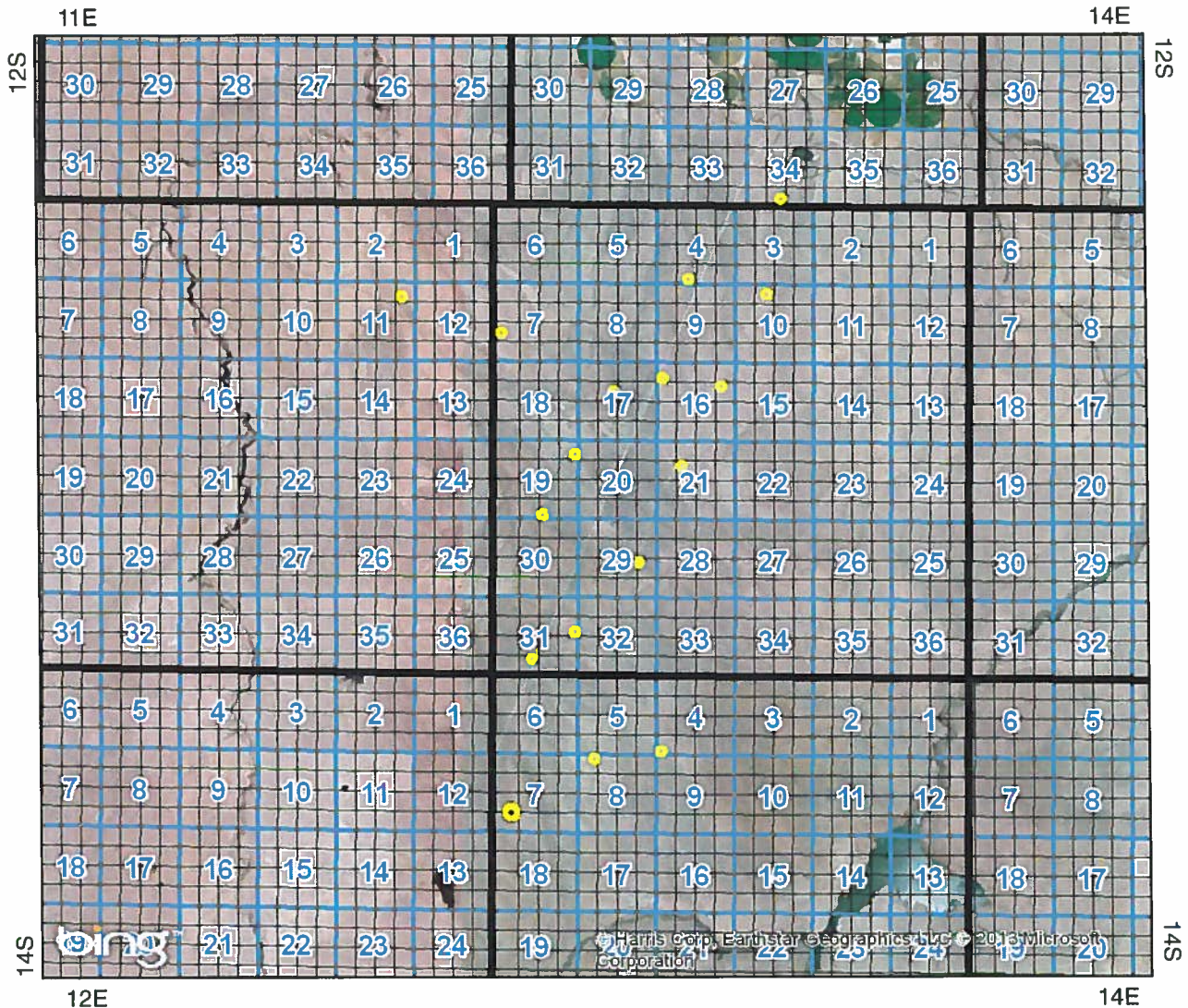
1. WELL OWNER Name <u>B. L. M.</u> Address <u>BOISE, IDAHO</u> Owner's Permit No. _____	7. WATER LEVEL Static water level <u>600</u> feet below land surface Flowing? ☐ Yes ☒ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature _____ °F. Quality _____																																																																																																																																		
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (describe method of abandoning) _____	8. WELL TEST DATA ☐ Pump ☐ Bailer ☐ Air ☐ Other _____ <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th>Discharge G.P.M.</th><th>Pumping Level</th><th>Hours Pumped</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>	Discharge G.P.M.	Pumping Level	Hours Pumped																																																																																																																															
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3. PROPOSED USE ☐ Domestic ☐ Irrigation ☐ Test ☐ Municipal ☐ Industrial ☒ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)	9. LITHOLOGIC LOG 105939 <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th rowspan="2">Hole 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>6"</td><td>0</td><td>16</td><td>TOP SOIL</td><td> </td><td>X</td></tr><tr><td> </td><td>16</td><td>18</td><td>GREY LAVA</td><td> </td><td> </td></tr><tr><td> </td><td>18</td><td>19</td><td>MED BROWN LAVA</td><td> </td><td> </td></tr><tr><td> </td><td>19</td><td>30</td><td>GREY LAVA</td><td> </td><td> </td></tr><tr><td> </td><td>30</td><td>35</td><td>CLAY</td><td> </td><td> </td></tr><tr><td> </td><td>35</td><td>75</td><td>GREY LAVA</td><td> </td><td> </td></tr><tr><td> </td><td>75</td><td>100</td><td>GREY LAVA & TALC + CLADERS</td><td> </td><td> </td></tr><tr><td> </td><td>100</td><td>106</td><td>CLAY</td><td> </td><td> </td></tr><tr><td> </td><td>106</td><td>180</td><td>BROWN LAVA @ CLAY</td><td> </td><td> </td></tr><tr><td> </td><td>180</td><td>190</td><td>GREY LAVA</td><td> </td><td> </td></tr><tr><td> </td><td>190</td><td>200</td><td>CLAY</td><td> </td><td> </td></tr><tr><td> </td><td>200</td><td>210</td><td>GREY LAVA @ CLAY STRIPS</td><td> </td><td> </td></tr><tr><td> </td><td>210</td><td>260</td><td>HARD GREY LAVA</td><td> </td><td> </td></tr><tr><td> </td><td>260</td><td>270</td><td>GREY LAVA @ STRIPS OF TALC</td><td> </td><td> </td></tr><tr><td> </td><td>270</td><td>355</td><td>SANDSTONE</td><td> </td><td> </td></tr><tr><td> </td><td>355</td><td>390</td><td>GREY LAVA</td><td> </td><td> </td></tr><tr><td> </td><td>390</td><td>600</td><td>RIOLITE</td><td> </td><td> </td></tr><tr><td> </td><td>600</td><td>602</td><td>BROWN RIOLITE</td><td>X</td><td> </td></tr><tr><td> </td><td>602</td><td>645</td><td>HARD RIOLITE</td><td> </td><td>X</td></tr><tr><td> </td><td>645</td><td>1000</td><td>MED HARD BROWN BLAST ROCK @ TALC, CLADERS, & A LITTLE GRAVEL</td><td>X</td><td> </td></tr></tbody></table>	Hole Diam.	Depth		Material	Water		From	To	Yes	No	6"	0	16	TOP SOIL		X		16	18	GREY LAVA				18	19	MED BROWN LAVA				19	30	GREY LAVA				30	35	CLAY				35	75	GREY LAVA				75	100	GREY LAVA & TALC + CLADERS				100	106	CLAY				106	180	BROWN LAVA @ CLAY				180	190	GREY LAVA				190	200	CLAY				200	210	GREY LAVA @ CLAY STRIPS				210	260	HARD GREY LAVA				260	270	GREY LAVA @ STRIPS OF TALC				270	355	SANDSTONE				355	390	GREY LAVA				390	600	RIOLITE				600	602	BROWN RIOLITE	X			602	645	HARD RIOLITE		X		645	1000	MED HARD BROWN BLAST ROCK @ TALC, CLADERS, & A LITTLE GRAVEL	X	
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4. METHOD DRILLED ☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary ☐ Cable ☐ Dug ☐ Other _____	10. Work started <u>12-13-78</u> finished <u>12-20-78</u>																																																																																																																																		
5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ <table border="0" style="width: 100%;"><tr><td>Thickness</td><td>Diameter</td><td>From</td><td>To</td></tr><tr><td><u>280</u> inches</td><td><u>6</u> inches</td><td><u>1</u> feet</td><td><u>1000</u> feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr></table> 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 <u>4</u> inches by <u>4</u> inches <table border="0" style="width: 100%;"><tr><td>Number</td><td>From</td><td>To</td></tr><tr><td>_____ perforations</td><td><u>600</u> feet</td><td><u>1000</u> feet</td></tr><tr><td>_____ perforations</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ perforations</td><td>_____ feet</td><td>_____ feet</td></tr></table> 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 <u>20'</u> 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 _____	Thickness	Diameter	From	To	<u>280</u> inches	<u>6</u> inches	<u>1</u> feet	<u>1000</u> feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	Number	From	To	_____ perforations	<u>600</u> feet	<u>1000</u> feet	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet																																																																																																			
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6. LOCATION OF WELL Sketch map location must agree with written location. N W  E S County <u>TWIN FALLS</u> <u>NE 1/4 SW 1/4 Sec. 7, T. 14 N. R. 13 E. W.</u> Subdivision Name _____ Lot No. _____ Block No. _____	11. DRILLERS CERTIFICATION I/We certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>ELSTING DRILLING</u> , Firm No. <u>31</u> Address <u>P.O. Box 919 T.F.</u> Date <u>Jan 4, 1978</u> Signed by (Firm Official) <u>Arnold Elsting</u> and (Operator) <u>Mike Wilson</u>																																																																																																																																		

State of Idaho
Department of Water Resources

Attachment To Water Right License

47-17179

This map depicts the STOCKWATER & WILDLIFE 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.



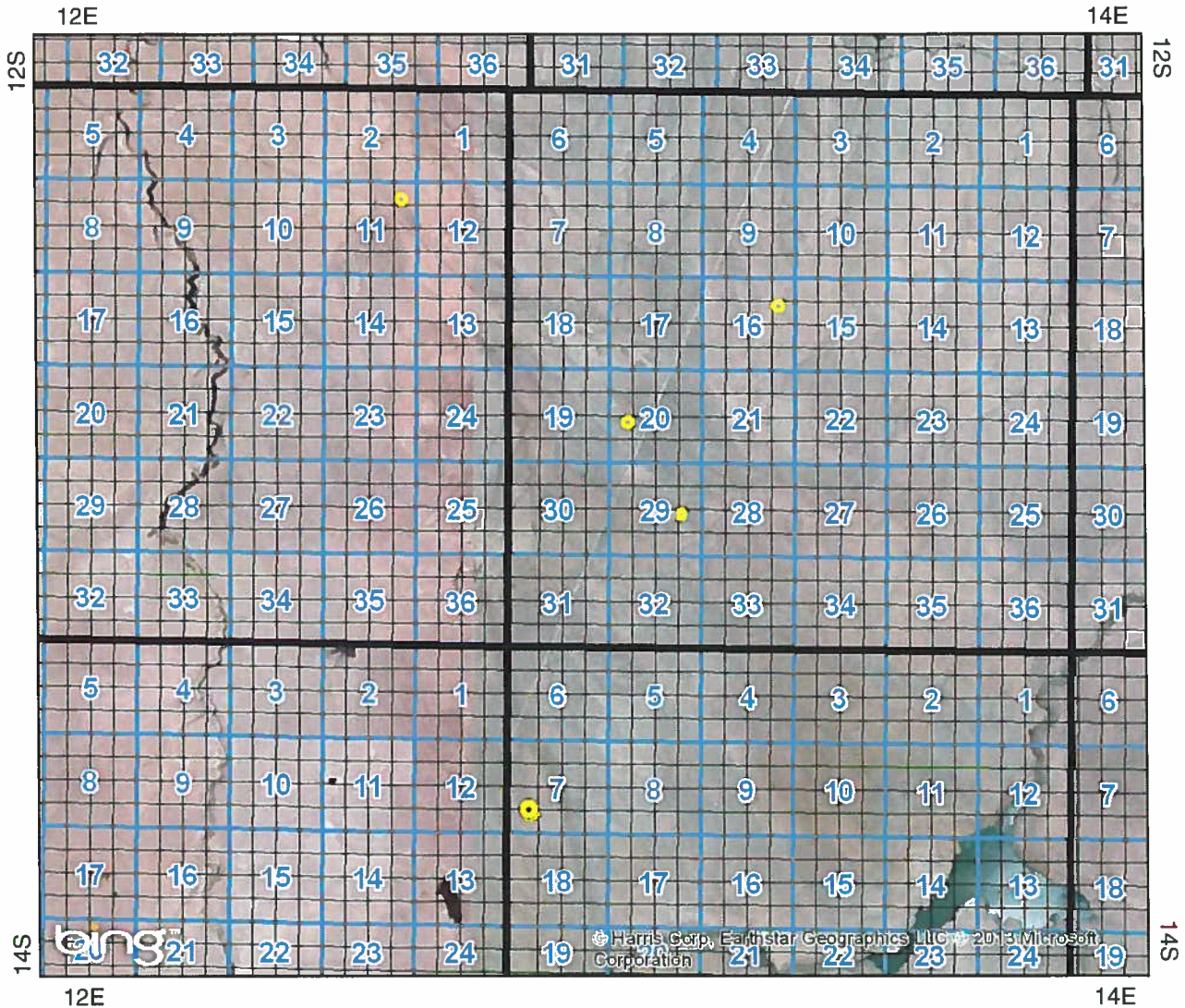
- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters

0 1.5 3 6 Miles



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



1.

