

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

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JUL 27 2016

WATER RESOURCES
WESTERN REGION

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 63-33481, 33745, 338851. Owner Highland Livestock & Land Co. Ltd / Little Enterprises LLLP Phone No. (208) 365-4611Current address PO Box 488, Emmett, ID 836172. Examiner's name David Shaw EXAM DATE 7-19-20163. Accompanied by David Little Email dalittle61@hotmail.comAddress PO Box 488, Emmett, ID 83617Relationship to permit holder Manager Phone No. (208) 365-46114. Source Ground Water tributary to _____**B. OVERLAP REVIEW**1. Other water rights with the same place of use None2. Other water rights with the same source and point of diversion 63-3173, 7140, 18509 for emergency purposes**C. DIVERSION AND DELIVERY SYSTEM**

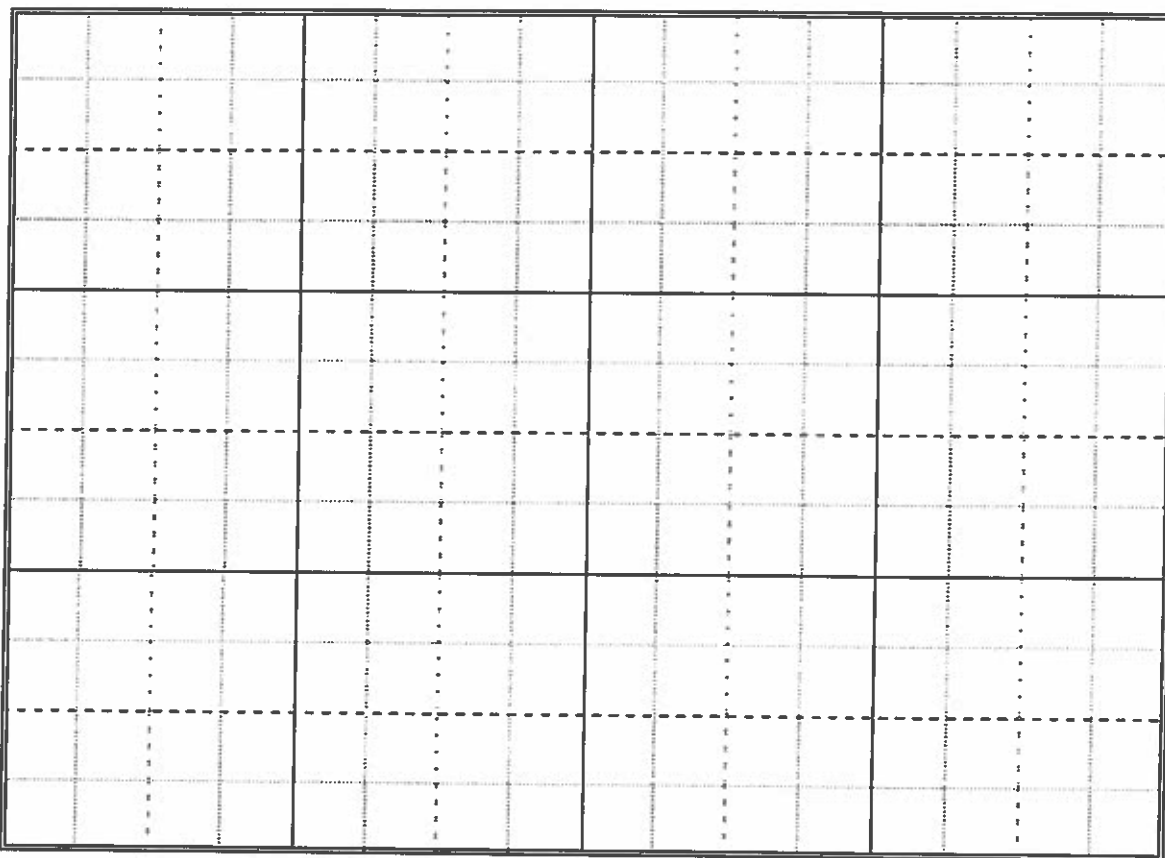
1. Point(s) of Diversion:

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
New 1			NE	NW	25	5N	2W	Canyon	Aerial Photo/GIS
New 2			NE	NW	19	5N	1W	Ada	Aerial Photo/GIS
Existing			NE	SW	19	5N	1W	Ada	Existing for emergency purposes

2. Place(s) of Use: Method of determination Aerial Photo/GIS

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
5N	1W	17				36					37	37	6	11	34	34	24	29	248
		18													7		9	12	28
		19	4	17															21
	2W	24											3	23					26
		25					22	37											59
		26				39									39				78

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☒ see attached.



Scale: 1" = _____

- ☐ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
New 1	NIDEC	250	7584255-0001		12"
New 2	General Electric	400	AJFT028U002		12"

*Code to correspond with no. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Acoustic Transit Time	Portable	Polysonics	DCT7008	33508		6/17/16

2. Measurements:

New 1 left pipe in Photo 1 = 377 gpm, middle pipe in Photo 1 = 508 gpm, right pipe in Photo 1 = 733 gpm

New 1 total diversion = 1,618 gpm = 3.60 cfs measured with all pipes open, no adjustment between measurements

New 2 total diversion = 2,630 gpm = 5.86 cfs Total diversion from new wells = 9.46 cfs



E. NARRATIVE/REMARKS/COMMENTS

See attached narrative.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

[illegible]

Field Exam Narrative
for
63-33481, 63-33745, and 63-33885
July 19, 2016 Field Exam Date

The permit holder has developed the above permits on new land adjacent to lands developed for irrigation in the 1950s through the 1970s. The permits were granted to develop three separate areas under the three permits but as development occurred it became more convenient and efficient to treat the three permits as a common water supply with a permissible place of use. The new lands are serviced entirely by water from 2 new wells but the mainline system for the ranch is interconnected such that in an emergency, water from any well, including the existing well for the early water rights, can provide a limited amount of water to any of the lands. At the time of the field exam, all of the new lands were being supplied water solely from the 2 new wells.

New well 1, the most westerly well, is equipped with a 250 hp vertical turbine pump with a 12" discharge and no booster pumps. As shown in Photo 1, the main discharge pipe is too short for an acceptable measurement of the total discharge. Three measurements were made, one for each of the distribution pipes with the transducers installed as shown on the west (right) pipe in Photo 1. The measurements were taken consecutively without adjustments to any valves or changes in operation between measurements. The nameplate for the pump motor for this well is shown in Photo 3.

The measurement at new well 2 was taken on the pump discharge pipe as shown in Photo 2. The nameplate for the pump motor for new well 2 is shown in Photo 4. The 400 hp vertical turbine pump distributes some water directly to the fields it serves and part of the discharge is boosted through 2 sets of booster pumps. The first booster pump is located adjacent to the well as shown in Photos 5 and 6. Photo 5 shows the location of the 7½ hp booster with the valves in position for the booster to be operating and it was operating at the time of the field exam. Photo 6 shows this booster takes only a portion of the well discharge and does not limit the potential discharge from the well. The pictures also show the piping is arranged so this booster pump can be bypassed with water delivered directly from the well pump. Photos of the booster motor and pump nameplates are available on request.

A second set of booster pumps are located in the NW¼SW¼ Sec 17 Twp 5N Rge 1W, B.M. as shown on the attached map. There are 2 pumps and motors at this location as shown in Photo 7. The pump near the top of the photo is a 50 hp and the pump near the lower right of the photo is a 7½ hp. Both of the pumps were operating at the time of the field exam and the valves are open as shown in the photo. These pumps do not take the full discharge of the second new well and are not a limitation on the discharge of the well. Photos of the pump and motor nameplates are available on request.

The location of the existing well was visited during the field exam to confirm it was in operation. The 3 wells running simultaneously is the normal operating procedure for irrigation on the ranch.

The three permits referenced above authorize the development and use of enough water and land for the development that has occurred on the ground. As is often the case, the 460 acres actually developed are somewhat different than the 460.5 acres proposed for development at the time the permits were approved. The permit holder is requesting the 3 permits be amended to show each permit has a permissible place of use covering all 460 acres but each permit is limited to the acres originally permitted. No change in irrigated acres is requested for the location of the original water rights on the property.

Three applications for amendment accompany this field exam to accomplish the permissible place of use and the use of either of the new wells as the water supply for the new permits. The connection of the new permits to the existing well is solely for emergency water supply should either of the well pumps on the 2 new wells malfunction.

All of the new land developed under these permits is irrigated with pivots.

F. FLOW CALCULATIONS

☐ Additional computation sheets attached

Measured Method:

Read directly from portable acoustic flow meter, 4 measurements total, 3 at well New 1 and one at well New 2.

East (left) pipe in Photo 1, 12.89" OD, 12.36" ID, 10.66" transducer spacing = 377 gpm @ 12:50 pm

Middle (center) pipe in Photo 1, 10.90" OD, 10.40" ID, 8.93" transducer spacing = 508 qpm

West (right) pipe in Photo 1, 10" OD, 9.77" ID, 7.94" transducer spacing = 733 gpm

New 2 discharge in Photo 2, 12" OD, 11.74" ID, 9.67" transducer spacing = 2,630 gpm @ 11:00 am

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 460 \times 4.5 = 2,070 \text{ AF}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 8.68 \times 246 \times 1.9835 = 4,235 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 2,070 \text{ AF}$$

2. Volume Calculations for Other Uses:

None

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
63-33481 - Irrigation	3/1	11/15	2.23	501.8
63-33745 - Irrigation	3/1	11/15	1.60	360
63-33885 - Irrigation	3/15	11/15	4.85	1,208.2
	Totals:		8.68	2,070

2. Recommended Amendments

☐ Change P.D. as reflected on page 1☒ Add P.D. as reflected on page 1☐ None☒ Change P.U. as reflected on page 1☒ Add P.U. as reflected on page 1☐ Other

I. AUTHENTICATION

Field Examiner's Signature

Date 1-26-16

Reviewer

Date _____

Prepared for Little Enterprises LLLP by ERO July 2016

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. WELL TAG NO. D 0063710

Drilling Permit No 914570-863204

Water right or injection well # 63-33481

2. OWNER: Highland Livestock & Land Co.LTD

Name

Address P.O. Box 488

City Emmett State ID Zip 83617

3. WELL LOCATION:

Twp. 05 North ☒ or South ☐ Rge. 02 East ☐ or West ☒

Sec. 25 1/4 NE 1/4 NW 1/4

Gov't Lot County Canyon

Lat. 43 44.977 (Deg. and Decimal minutes)

Long. 116 31.408 (Deg. and Decimal minutes)

Address of Well Site Driveway 1/2 mile East of Blessinger Rd
on Edna Lane City Middleton

Lot Blk. Sub Name

4. USE:

☐ Domestic ☐ Municipal ☐ Monitor ☒ Irrigation ☐ Thermal ☐ Injection
☐ Other

5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well
☐ Abandonment ☐ Other

6. DRILL METHOD:

☐ Air Rotary ☐ Mud Rotary ☐ Cable ☒ Other Reverse

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
Bentonite Chips	0	93	12,000	Dry pour
Bentonite Chips	105	490	49,600	Dry pour

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing Liner	Threaded	Welded
16	+2	512	.375	Steel	☒	☐	☒
16	532	547	.375	Steel	☒	☐	☒
					☐	☐	☐
					☐	☐	☐

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

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N MethodManufactured screen ☒ Y ☐ N Type Johnson Wire Wrap

Method of installation Lower in

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
512	532	.025		16	S.S.	
547	607	.025		16	S.S.	

Length of Headpipe Length of Tailpipe 5'

Packer ☐ Y ☒ N Type

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
#6-9 Sand	490	615	24,000	Dry pour

11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG)

Describe control device

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 177 Static water level (ft) 177

Water temp (°F) 63.4° Bottom hole temp (°F) 64.67°

Describe access port 2" pipe on side Hobo Temp Logger

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
250	1235	450

Test method:

Pump	Bailer	Air	Flowing artesian
☒	☐	☐	☐
☐	☐	☐	☐

Water quality test or comments:

13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
24	0	4	Top soil		X
24	4	17	Cemented gravel, hard pan		X
24	17	55	Fine-coarse sand		X
24	55	62	Brown clay		X
24	62	75	Fine sand		X
24	75	105	Fine-coarse sand, sm clay seams		X
24	105	158	Tan clay, small sand seams		X
24	158	211	Fine sand, small clay seams	X	
24	211	248	Brown clay, small sand seams		X
24	248	270	Fine sand, small clay seams	X	
24	270	307	Brown clay		X
24	307	391	Fine-coarse sand, sm clay seams	X	
24	391	414	Blue clay		X
24	414	429	Med - coarse sand	X	
24	429	453	Blue clay		X
24	453	464	Med sand	X	
24	464	476	Blue clay		X
24	476	493	Med-coarse sand, small clay seam	X	
24	493	502	Grey clay		X
24	502	509	Fine sand	X	
24	509	515	Blue clay		X
24	515	532	Blue clay, coarse sand streaks		X
24	532	547	Blue clay		X
24	547	565	Coarse sand, pea gravel	X	
24	565	570	Blue clay		X
24	570	607	Coarse sand, pea gravel	X	
24	607	615	Grey clay		X
			Lost water, hole caved in from		
			93-105 IDWR approved filling void		
			with fill sand. Dry poured 30 yards		
			of fill sand to fill void.		

Completed Depth (Measurable): 612'

Date Started: May 8, 2012

Date Completed: Jul 20, 2012

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

Co. No. 333

*Principal Driller

Date 8-18-12

*Driller

Date 8-18-12

*Operator II

Date

Operator

Date 8-18-12

*Signature of Principal Driller and rig operator are required.

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FORWARD WHITE COPY TO WATER RESOURCES

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Field Exam Photos
for
63-33481, 63-33745 and 63-33885
Taken on July 19, 2016



Photo 1 – New Well 1



Photo 2 – New Well 2

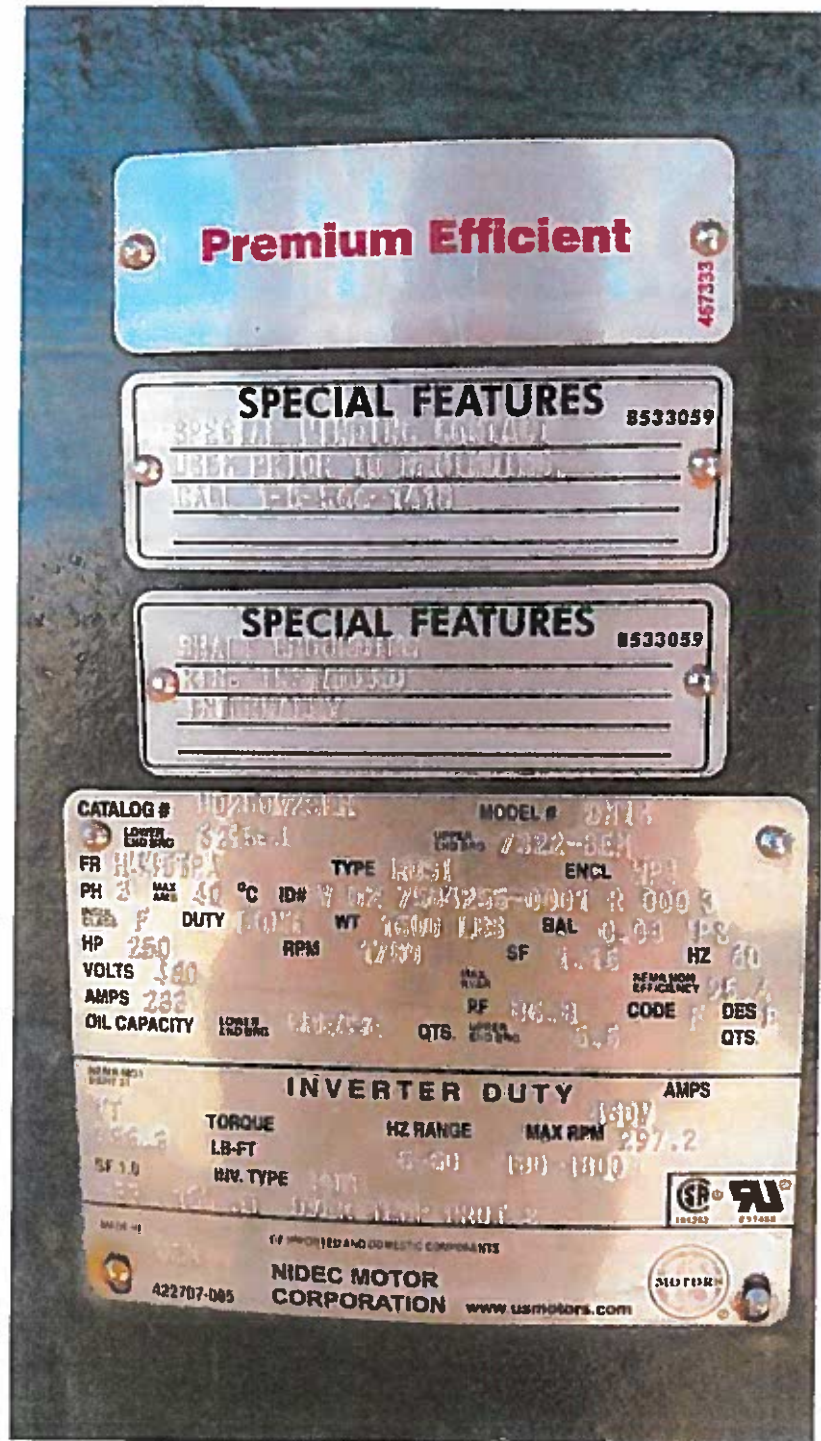


Photo 3 – Name Plate for New Well 1 Pump Motor



Photo 6 – Booster Pump Connection at New Well 2



Photo 7 – Booster Pumps Located in Section 17