

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-9266

Exam Date: 6/8/2007

1. Current Owner: DUNS N ROSES RANCH LLC
PO BOX 3527
POST FALLS ID 83877
(208)777-8479
2. Accompanied by: Gena Loper
Phone No: (208) 755.7922
Address: PO Box 3527, Post Falls, ID 83877
Relationship to Permit Holder: Owner

3. SOURCETRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 95-4082, 95-7189, 95- (See attached memo)
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 NW1/4SE1/4 Sec. 13., Twp 50N, Rge 06W, B.M., KOOTENAI County

GROUND WATER NW1/4SE1/4 Sec. 13., Twp 50N, Rge 06W, B.M., KOOTENAI County

Method of Determination: Garmin GPS, USGS 7.5' Quadrangle 'Post Falls' (F3)

PLACE OF USE:STOCKWATER

Twp	Rge	Sec	NE	NW	SW	SE	Totals
50N	06W	13	X				

PLACE OF USE:IRRIGATION

Twp	Rge	Sec	NE	NW	SW	SE	Totals
50N	06W	13					
Total Acres:			11.0	2.5			13.7

PLACE OF USE:DOMESTIC

Twp	Rge	Sec	NE	NW	SW	SE	Totals
50N	06W	13					

Method of Determination:

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

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4.

	Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Well 1	D13231	N/A	2	N/A	N/A	Rated as 2 HP 18 GPM
Well 2	D10956	N/A	3	N/A	N/A	Rated as 3 HP 18 GPM

*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
Watch	Wrist	Remington	-	-	-	-
Bucket	-	-	-	-	5 Gallon	-

2. Measurements: (Well 1 Spigot) $\frac{5 \text{ GAL}}{15 \text{ Seconds}} \times \frac{4}{4} = \frac{20 \text{ GAL}}{60 \text{ sec}} = 20 \text{ GPM} = .0445 \text{ cfs} = .04 \text{ CFS}$

E. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method:

PUMP	EQUATIONS	WATER RIGHT No.	95-9266	Efficiency as a Decimal	Well #1 Pumping lift in feet	Near Home System pressure in PSI
		HP	H in feet			
Q =	HP*8.8*Eff/H	2	107.8912	.75	20	38
Q =	0.123 cfs	Cfs = 53.86 GPM				
PUMP	EQUATIONS	WATER RIGHT No.	95-9266	Efficiency as a Decimal	Well #2 Pumping lift in feet	Near Arena System pressure in PSI required for reel
		HP	H in feet			
Q =	HP*8.8*Eff/H	3	132.8912	.75	45	38
Q =	0.149 cfs	Cfs = 67.32 GPM				

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = (13.7) \times (3) = 41.1 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = (.27) \times (246) \times (1.9835) = 131.7 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 41.1 \text{ AF}$$

2. Volume Calculations for Other Uses:

$$\text{Domestic} = .6 \text{ AF} = .6 \text{ AF}$$

$$\text{Stockwater} = .7 \text{ AF}$$

$$40 \text{ horses} = .02 \text{ cfs} \times .7 \text{ AF} = .7 \text{ AF}$$

per App. Proc. Memo. #3

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G. NARRATIVE/REMARKS/COMMENTS

Exam conducted June 8 2007. See the attached memo for information on overlapping water rights.

The owners (Gena and Ken Lober) have a house on the property and operate an Equestrian Center with facilities for approximately 40 horses at any given time. The Eastern part of the property is located on a partially wooded hillside and the remainder is a former hayfield and pasture. The property is bordered on the East by Milsap Loop road and bordered on the South by part of Hardison Road.

The two wells on the Center property are used for domestic irrigation and stockwater. Well One is used for irrigation and supplies domestic water for the owners home on the Northeast part of the property. Well Two provides irrigation and stockwater. Irrigation includes use of water for pasture and in barns, stalls, and arena etc.

Irrigated area includes the hillside between Milsap Loop road and the barns and corrals that are located on flatter ground to the West. This hill side irrigated area is used for pasture. Part of this area is shown on Kotenai County Tax Lots and plats as Hardison Road. Hardison Road ends at the Equestrian Center entrance and does not continue all the way across the Southern part of the property to meet Milsap Loop.

Both wells are located on a hill side on the East side of the property and above a hayfield and pasture area. Well One Tag D0013231 is located near a gate leading to the Loper home from Milsap Loop Road at the Northeast end of the property. This well is on higher ground than the barns and corrals of the Equestrian Center. Well Two Tag D0010956 is located about 5 feet below the elevation of an outdoor horse arena in the Southern part of the property. The wells are not connected by water lines. Well Two has a decal bearing the Permit number C437250 which indicates United Pump Company performed the electrical work and pump installation on the well.

Water from Well One at N 47 Degrees 40.740 W 117 Degrees 01.857 filled a five gallon bucket of water in 15 seconds. This measurement was taken at a spigot located within a few feet of the well head. The spigot is connected to a water line running from Well One to the owners home.

Well Two N 47 Degrees at 40.613 W 117 Degrees 01.846 supplies water for irrigation and stockwater via underground water lines to two horse barns. The well also supplies 10 outdoor spigots and six 100 gallon outdoor watering tanks.

A KIFCO B110s Water Reel is used for irrigation. The Reel is moved between spigots located next to each well head and spigots on water lines with a small four wheel utility vehicle. A one and one half inch water line is used to supply water from spigots to the Water Reel Machine Inlet Connection. Hose on the Water Reel is unrolled by connecting the Machine Inlet Connection to a spigot and then towing the Reel sprinkler head to a distance between zero and 200 feet from the Machine Inlet Connection on the Reel. Water pressure causes the sprinkler head to retract coiling up hose as it moves back toward the Machine Inlet Connection and spigot. The sprinkler head at the front of the Water-Reel applies water to the desired area.

Ms. Loper said the KIFCO Water Reel used by Duns and Roses usually requires a minimum of 40 Pound Per Square Inch (PSI) of water pressure in order to avoid an automatic shutdown. A sign on the Reel B110 Performance guide attached to the machine indicates a minimum pressure of 45 PSI is required. A gauge on the Reel indicated that the system was operating at 38 Pounds per Square Inch while watering the arena next to Well Two during the exam.

The Reel's observed performance during 30 minutes of operation during the Field Exam exceeded specifications printed on the B110 Performance Guide decal attached to the Reel. The sprinkler was deployed at the end of the 200 foot hose while the Machine Inlet connection at the Reel was connected

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to a spigot by a 50 foot length of one and one half inch diameter high pressure hose. The sprinkler was seen supplying water 5 to 10 feet beyond each side of a 100 foot wide horse arena for a total wetted area 120 feet wide. The decal indicates maximum width of wetted area is 106 feet. The Reel Machine Inlet gauge was sitting 5 feet above Well Two and read 38 PSI during the exam. 38 PSI is below the minimum pressure required to operate the Reel according to the decal and manufacturers web site. Theoretical calculations using well data were used to calculate the performance of the irrigation system due to the inaccurate data for the Reel.

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	0.020 CFS	0.70 AF
IRRIGATION	03/15 to 11/15	0.270 CFS	41.1 AF
DOMESTIC	01/01 to 12/31	0.040 CFS	0.60 AF
<u>Totals:</u>		0.270 CFS	42.4 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

Shawn M. M. M. M. M.

Date 02/04/08

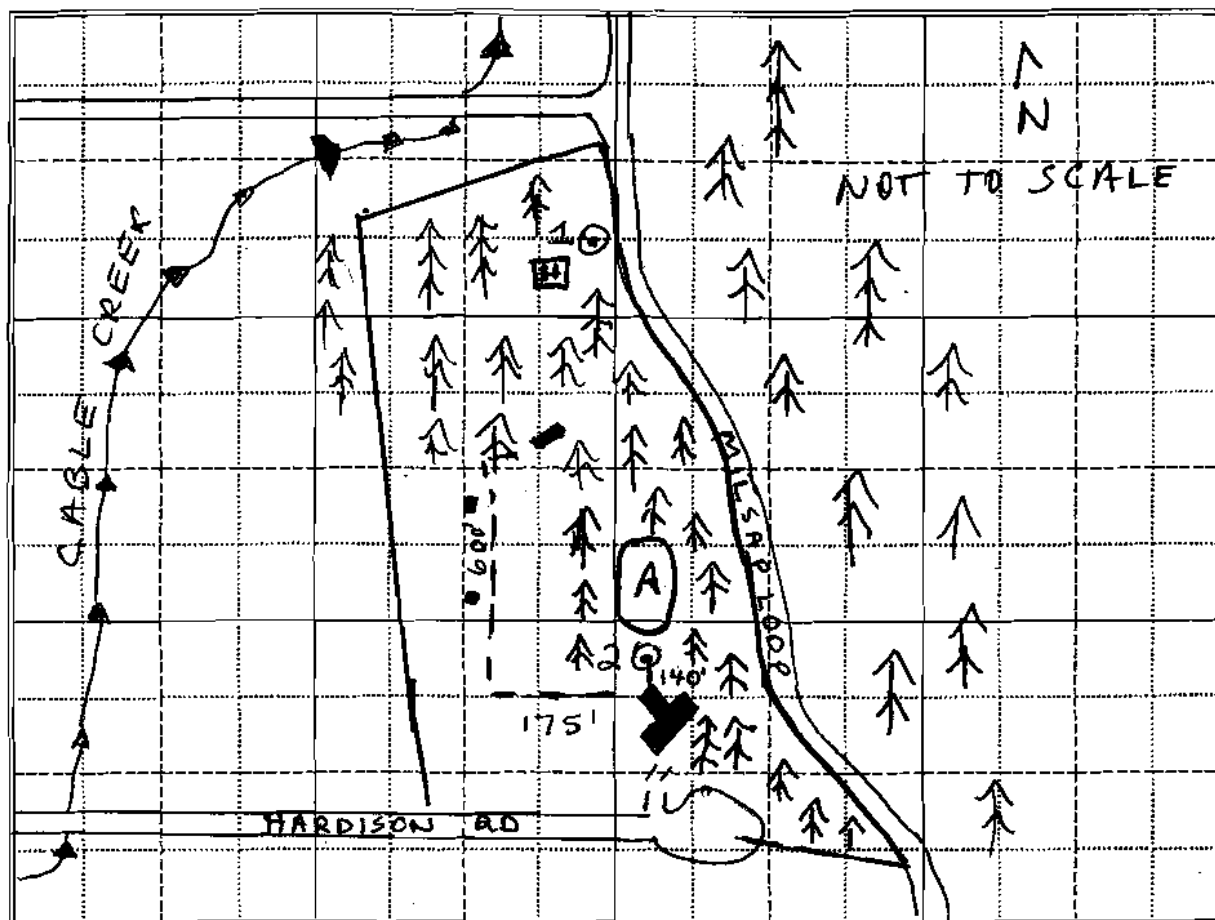
Reviewer

[Signature]

Date 3/5/8

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3. Delivery System Diagram: Indicate major components and distances between components. Indicate well size/ditch size/pipe i.d. as applicable.



1 ⊙ Well 1

2 ⊙ Well 2

(A) Horse Arena

■ Horse Barn / Shed

⌚ House

↑ Trees

— Property Boundary

~ Cable Creek

--- Water Line

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-  Kootenai taxlots
-  GCDB50N06W GCDB
-  Right POD
-  Pod.shp
-  Place of use.shp
-  Administrative BasinsAdminbas.shp



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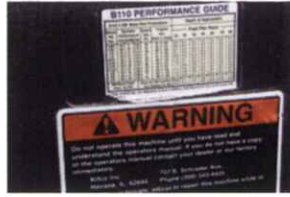
38 PSI Machine Inlet Pressure indicated.jpg



95-9266 View West to East.jpg



Detail of Spigot & water tank off lane.jpg



Performace Guide on Water-Reel.jpg



Water-Reel at Arena attached to Well 2.jpg



Retracting at end of 200' Water-Reel line.jpg



United Pump Sticker on Well Two.jpg



View N with 3 outdoor spigots & water tanks.jpg



View W to Horse Barn, & Hardison RD.JPG



View NE Well 1 & home from Milsap Loop RD.jpg



Well 1 View East.JPG



Well 1Tag 10956.JPG



Well 2, Arena and Reel.JPG

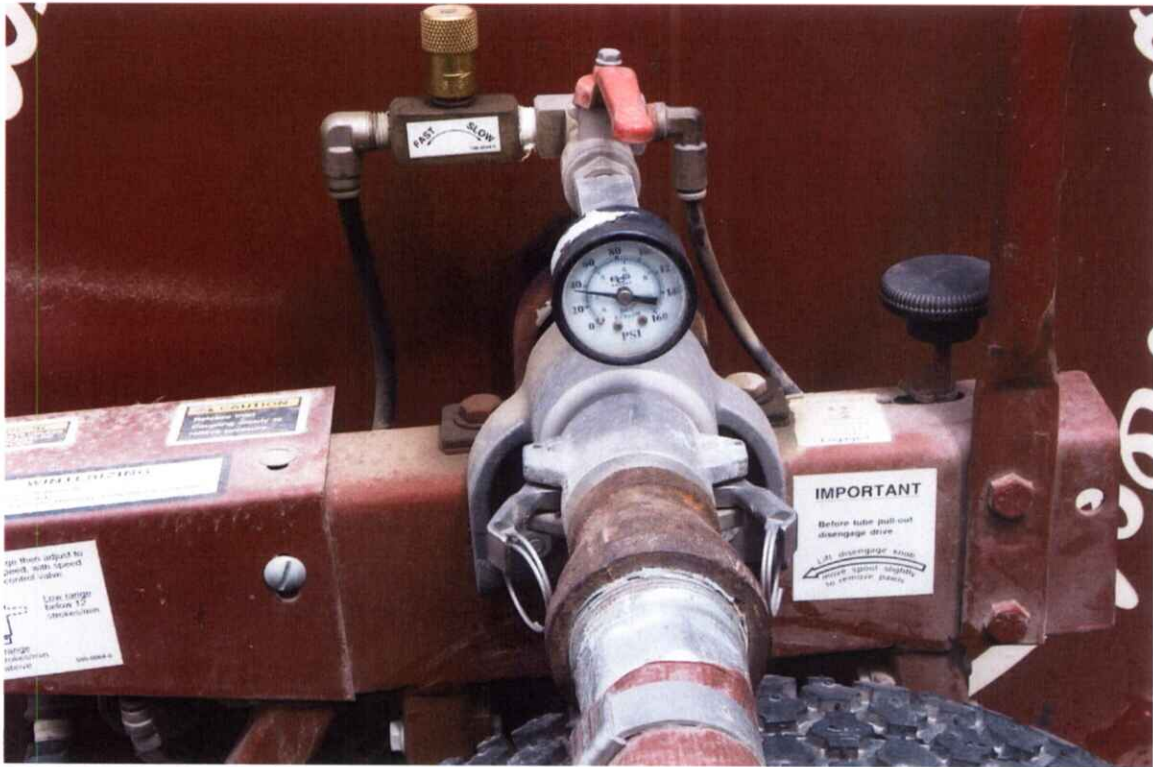


Well 2 & hose connection to reel.JPG



Well 2 IDWR tag 13231.JPG

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95-9266 38 PSI Machine Inlet Pressure Indicated.jpg

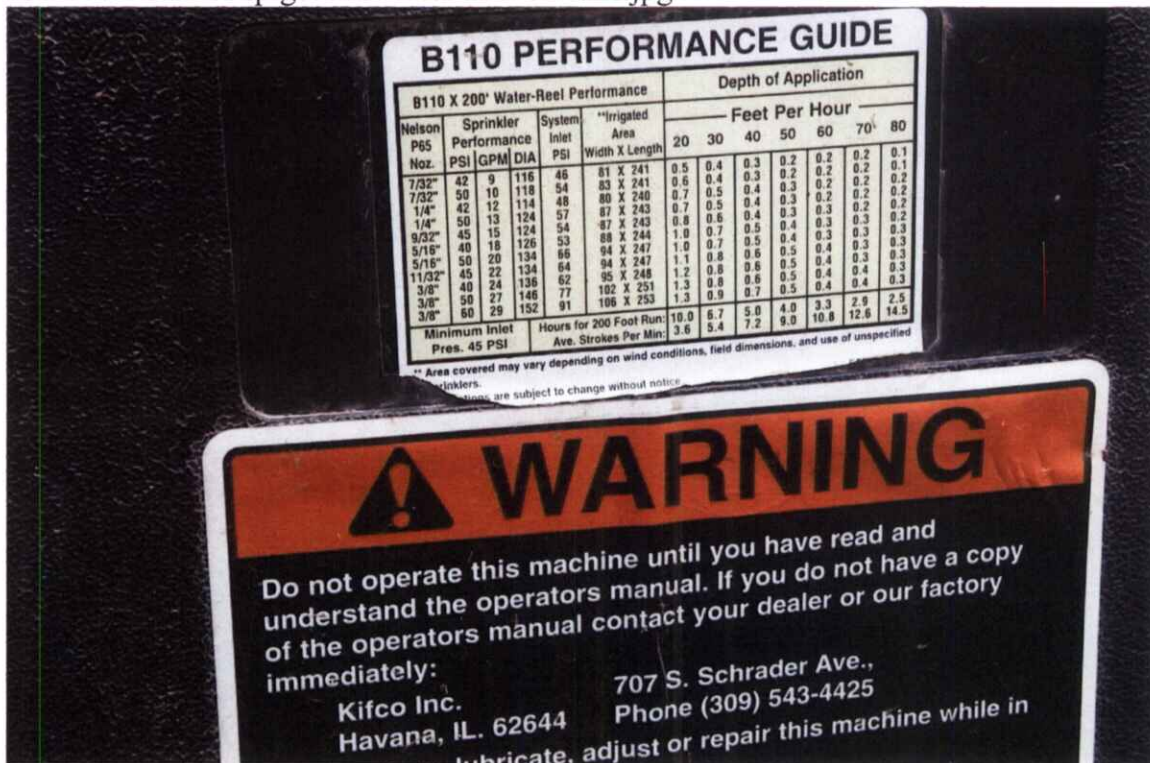


95-9266 View West to East.jpg

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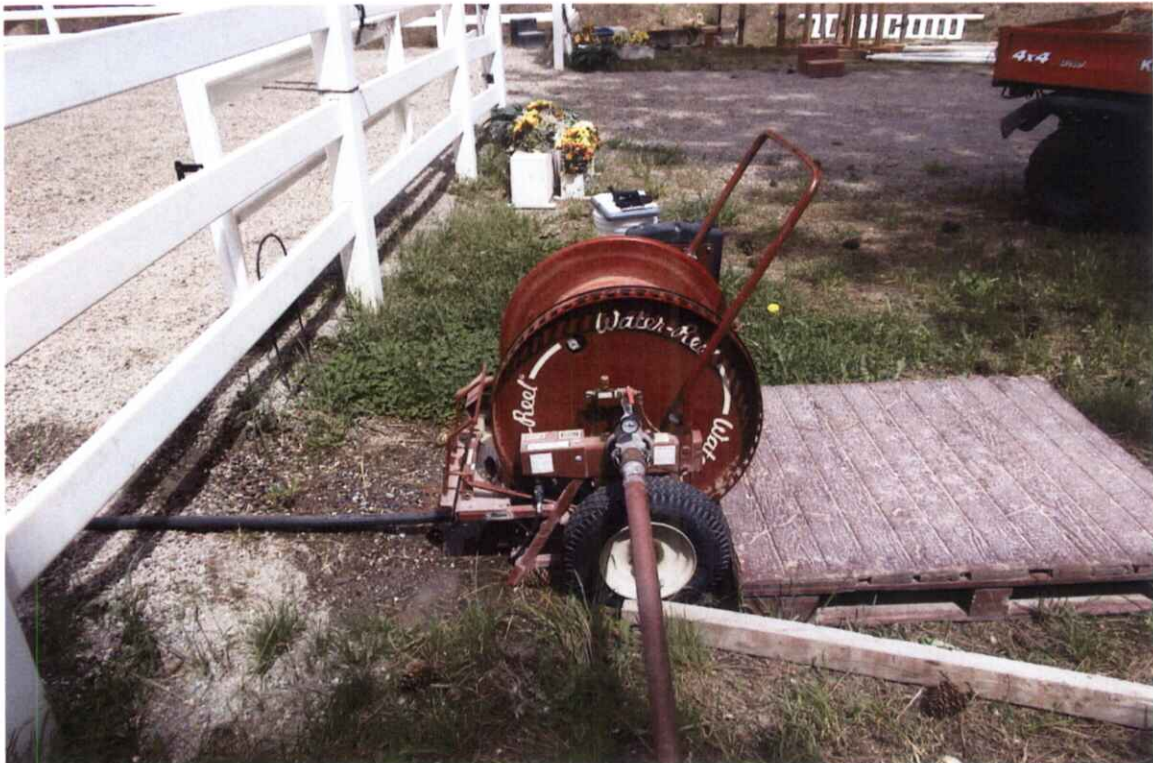


95-9266 Detail of spigot and water tank off lane.jpg



95-9266 Performance Guide on Water Reel.jpg

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95-9266 Water-Reel at Arena attached to Well 2.jpg



95-9266 Retracting at End of 200' Water-Reel line.jpg

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95-9266 United Pump Sticker on Well 2.jpg



95-9266 View N with 3 outdoor spigots and water tanks.jpg

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95-9266 View W to Horse Barn and Hardison RD.jpg



95-9266 View NE Well 1 and owners home from Milsap Loop RD.jpg

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95-9266 Well 1 View East.jpg



95-9266 Well 1 Tag 10956.jpg

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95-9266 Well 2, Arena and Reel.jpg



95-9266 Well 2 And Hose Connection to Reel.jpg

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95-9266 Well 2 IDWR Tag 13231.jpg

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