

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 57-11630

Exam Date: 9/14/2012

1. Current Owner: J & M CATTLE INC
12971 BAILEY RD
MELBA ID 83641
(208) 495-1075
2. Accompanied by: John Mortenson
Phone No: 208-899-1570
Address: 12971 Bailey Rd, Melba, ID 83641
Relationship to Permit Holder: (Manager/Owner)

3. **SOURCE****TRIBUTARY**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 57-7392
2. Other water rights with the same point of diversion: 57-7392

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

GROUND WATER L9 NW1/4NE1/4 Sec. 24, Twp 01S, Rge 03W, B.M. OWYHEE County
GROUND WATER L9 NW1/4NE1/4 Sec. 24, Twp 01S, Rge 03W, B.M. OWYHEE County
GROUND WATER L1 NE1/4NE1/4 Sec. 24, Twp 01S, Rge 03W, B.M. OWYHEE County

Method of Determination: Field visit, GPS

2.

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
01S	02W	19						X											
								L 1											
01S	03W	24	X	X															
			L 1	L 9															

PLACE OF USE: COMMERCIAL

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
01S	03W	24	X	X															
			L 1	L 9															

Method of Determination: Field visit, digitizing from aerial photos.

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 – See photo of Domestic/Stockwater well in file 57-7392.

4.

<u>Well or Diversion ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Size</u>	<u>Serial No. or Discharge</u>
D0029767 (North well)		7.5		Sta-Rite L50		
South well		15	155QE15			
Booster Pump #1	Baldor	5	F0511180536	Berkley		
Booster Pump #1	Baldor	5	F0606223206	Berkley		
Domestic/Stock well	U/K	0.75 (2)				

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

D. FLOW MEASUREMENTS

1. N/A

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
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2. Measurements:

E. FLOW CALCULATIONS☒ Additional Computation Sheets Attached

Measured Method: Theoretical for each well. See attached sheets.

North Well – 0.1 cfs

D & S Well – 0.05 cfs

South Well – 0.53 cfs

0.68 cfs total of three wells.

Stockwater will be limited to 0.33 cfs per calculations on attached Dairy Requirements sheet.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

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

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

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

2. Volume Calculations for Other Uses: Dairy Requirement spreadsheet

☒ Attached.

G. NARRATIVE/REMARKS/COMMENTS

System is comprised of three wells piped together to provide water for both stock and commercial use in a feedlot. Stockwater is for 4000 calves and 3500 cows. Commercial use is comprised of shop use, dust abatement, cleaning, and feed and milk mixing. At the time of my visit, the South and domestic wells were not being used. The domestic well has two 0.75 hp pumps and has a valve to allow water from this well to enter the system. All three wells are piped to a 5000 gallon storage tank, from which two 5 hp booster pumps can deliver water to the facilities and stock tanks.

While at the property, I noticed that calf feeding pens were on another property to the east of the described POU in T01S R02W Section 19 NWNW Lot 1. I talked with the manager, John Mortenson, about this and he leases 10 acres from the neighbor to the east for additional calf operations. These stock are included in the numbers above.

A fourth well, located 35' SW of the South well, was decommissioned/abandoned in 2006.

Total capacity for the three wells is 0.68 cfs. This is what was requested in the permit. This rate will be reduced to 0.33 cfs per calculations in the Dairy Requirements spreadsheet, attached.

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	0.330 CFS	20.20 AF
COMMERCIAL	01/01 to 12/31	0.020 CFS	10.10 AF
<u>Totals:</u>		0.350 CFS	30.30 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

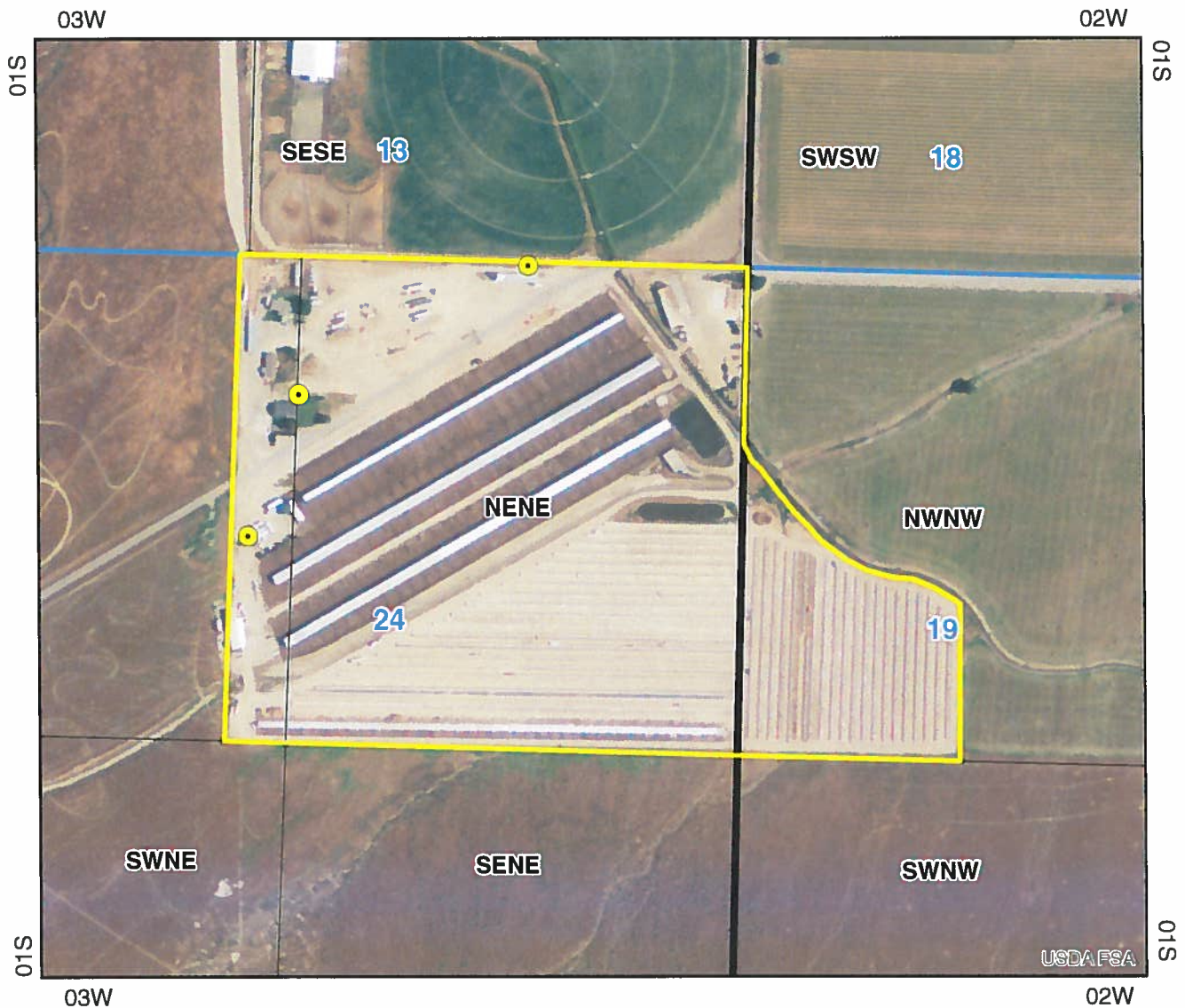
I. AUTHENTICATION

Field Examiner's Name [Signature] Date 1/17/2014

Reviewer [Signature] Date 1-21-2014

State of Idaho
Department of Water Resources
Field Exam for Water Right License
57-11630

This map depicts the STOCKWATER 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.



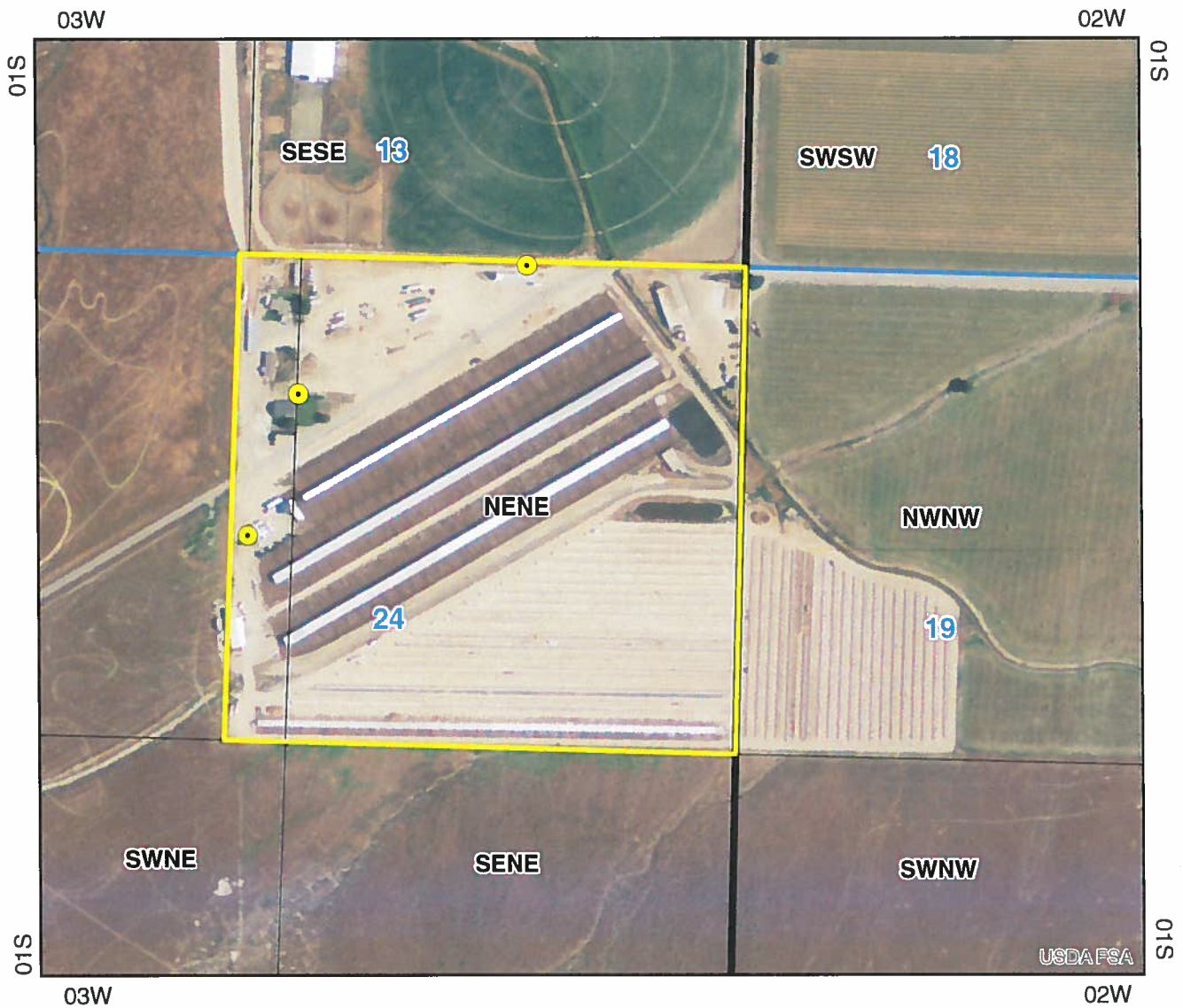
-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.05 0.1 0.2 Miles



State of Idaho
Department of Water Resources
Field Exam for Water Right License
57-11630

This map depicts the COMMERCIAL 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 0.05 0.1 0.2 Miles



SWSE

SESE

13

SWSW4

18

North Well - 7.5 hp pump

Buried pipes to Storage Tank

Domestic & Stockwater Well - 1.5 hp pump

NWNE 11
01S03W

Storage Tank

South Well in well house - 15 hp pump
Two 5 hp boosters in well house
pump from storage tank to facilities.

24

NENE 1

Leased land to be included in S

NWNW 1
01S02W

19

System diagram for 57-
11630 - J & M Cattle Inc.

North, D&S and South
wells are manifolded to
provide water to a 5000
gallon storage tank. Two 5
hp booster pumps, deliver
water from the tank to

SWNE

SENE 14

SWNW 2

Field Exam Photos – WR# 57-11630, J & M Cattle Inc.

9/14/2012



North Well



North Well meter



South Well wellhouse



Storage tank and discharge hose

Field Exam Photos – WR# 57-11630, J & M Cattle Inc.

9/14/2012



South Well Meters for Booster Pumps



Booster pumps and piping



Abandoned well SW of South Well



Equipment shed

Field Exam Photos – WR# 57-11630, J & M Cattle Inc.

9/14/2012



Feedlot looking NE from SW corner of feedlot



Looking west along south boundary of feedlot



Lease property in 01S 02W 19 NWNW looking North



North edge of lease property looking West

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)							
Water Right No.:	57-11630						
Reviewer:	Michael Ciscell						
Date of Review:	9/14/2012						
P/D No.:	North Well	Scenerio 1	Scenerio 2	Scenerio 3			
PUMP HORSEPOWER		7.5	7.5	7.5			
BOOSTER HORSEPOWER		0	0	0			
PUMPING LEVEL		336	336	336			
DISCHARGE PRESSURE		40	50	60			
RATE OF FLOW (cfs)		0.11	0.10	0.10	AVE		
(gpm)		48.4	45.9	43.7	0.10		
					46.01		
The above calculates the formula =	Q =	$8.8 * (\text{Efficiency}) * \text{hp}$ $\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}$					
Assumptions:	%70 efficiency.						
	No Friction						
Examiners Notes:	Data collected on 9/14/2012 during field exam. Wells piped into a storage tank. Two 5 hp boosters deliver water from the tank to facilities.						

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)							
Water Right No.:	57-11630						
Reviewer:	Michael Ciscell						
Date of Review:	9/14/2012						
P/D No.:	D & S Well	Scenerio 1		Scenerio 2		Scenerio 3	
PUMP HORSEPOWER		1.5		1.5		1.5	
BOOSTER HORSEPOWER		0		0		0	
PUMPING LEVEL		60		60		60	
DISCHARGE PRESSURE		40		50		60	
RATE OF FLOW (cfs)		0.06		0.05		0.05	AVE
(gpm)		27.2		23.6		20.9	0.05
							23.91
The above calculates the formula =		Q =	$8.8 * (\text{Efficiency}) * \text{hp}$ $\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}$				
Assumptions:	%70 efficiency.						
	No Friction						
Examiners Notes:	Data collected on 9/14/2012 during field exam. Wells piped into a storage tank. Two 5 hp boosters deliver water from the tank to facilities.						

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)							
Water Right No.:	57-11630						
Reviewer:	Michael Ciscell						
Date of Review:	9/14/2012						
P/D No.:	South Well	Scenerio 1	Scenerio 2	Scenerio 3			
PUMP HORSEPOWER		15	15	15			
BOOSTER HORSEPOWER		0	0	0			
PUMPING LEVEL		60	60	60			
DISCHARGE PRESSURE		40	50	60			
RATE OF FLOW (cfs)		0.61	0.53	0.47	AVE		
(gpm)		272.1	236.3	208.8	0.53		
					239.08		
The above calculates the formula =	Q =	$8.8 * (\text{Efficiency}) * \text{hp}$ $\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}$					
Assumptions:	%70 efficiency.						
	No Friction						
Examiners Notes:	Data collected on 9/14/2012 during field exam.						
	Wells piped into a storage tank. Two 5 hp boosters deliver water from the tank to facilities.						

DAILY FRESH WATER REQUIREMENT FOR DAIRY FACILITY

FOR: 57-11630
BY: Michael Ciscell
DATE: 9/14/2012

STOCKWATER VOLUME REQUIREMENT

TYPE OF ANIMAL	NUMBER	USE/DAY	TOTAL GAL/DAY	TOTAL GAL/YEAR
YOUNG CALVES	4,000.00	1.00	4,000	1,460,000.00
CALVES < 200 LBS	3,500.00	4.00	14,000.00	5,110,000.00
HEIFERS	0.00		0.00	0.00
TOTAL GALLONS			18,000.00	6,570,000.00

STOCKWATER ANNUAL VOLUME NEEDED 20.16

COMMERCIAL VOLUME REQUIREMENT

WASH PEN ESTIMATE

GPM PER NOZZLE	NUMBER OF NOZZLES	TIME PER USE(IN MINUTES)	NUMBER OF USES	TOTAL GAL/DAY	TOAL GAL/YEAR
				0.00	0.00

MILKING PARLOR ESTIMATES

ITEM	GALS/OP	X'S/DAY	GALS/DAY	GALS/YEAR
BULK TANK			0.00	0.00
COW PREP			0.00	0.00
PIPELINES			0.00	0.00
PARLOR CLEANUP			0.00	0.00
WASHPEN CLEANUP			0.00	0.00
TOTAL MILK PARLOR USE			0.00	0.00

HOSPITAL BARN USE

ITEM	GALS/OP	X'S/DAY	GALS/DAY	GALS/YEAR
BULK TANK			0.00	0.00
FEED/MILK MIXING	4,000.00	1.00	4,000.00	1,460,000.00
PARLOR & HOLDING				
PEN CLEANUP			0.00	0.00
TOTAL HOSPITAL BARN USE			4,000.00	1,460,000.00

MISCELLANEOUS USES

ITEM	GALS/OP	X'S/DAY	GALS/DAY	GALS/YEAR
DUST ABATEMENT/CLEANUP	4,000.00	1.00	4,000.00	1,460,000.00
EMPLOYEE SHOWERS & RESTROOMS			0.00	0.00
MAINTENANCE SHOP	1,000.00	1.00	1,000.00	365,000.00
TOTAL MISCELLANEOUS USES			5,000.00	1,825,000.00

COMMERCIAL ANNUAL VOLUME NEEDED 10.08

STOCKWATER VOLUME REQUIREMENT =	20.16
COMMERCIAL REQUIREMENT =	10.08
TOTAL VOLUME REQUIRED =	30.24

Stockwater Rate is Based on the Amount of Water the Stock Can Drink in 24 Hour Period or 120 minutes.

Gallons Calves Drink Per Day =	18,000.00		
Gallons Per Day / 120 Minutes =	150 gpm	18000 gpm / 448.8 =	0.33 cfs