

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-8687

Exam Date: 10/26/2007

1. Current Owner: AVONDALE IRRIGATION DIST
PO BOX 81
HAYDEN LAKE ID 83835
(208)772-5657
2. Accompanied by: Chad Coy
Phone No: (208) 772.5657, (208) 704.5726
Address: Same As Above
Relationship to Permit Holder: Manager

3. SOURCE**TRIBUTARY**

GROUND WATER

B. OVERLAP REVIEW

1. ~~Other~~ water rights with the same place of use: 95-7558, 95-8144, 95-8321, 95-8909
95-465, 95-465A, 95-465B, 95-8774, 95-8867,
2. ~~Other~~ water rights with the same point of diversion: 95-8774, 95-8867, 95-8909, 95-7558
95-8144, 95-8321

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER

SW1/4SW1/4

Sec. 24, Twp 51N, Rge 04W, B.M.

KOOTENAI County

Method of Determination: USGS 7.5' Quadrangles 'Coeur d'Alene' Hayden,
Garmin GPS Receiver

2.

PLACE OF USE:

WITHIN SERVICE AREA OF AVONDALE IRRIGATION DISTRICT

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
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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 DiversionPump Serial No. or Discharge

ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Size
Finucane		75			
miles #1	Westinghouse	350	2S-77	Peerless	76F66124 (Motor) F20954
miles #2	U.S.E.M.	200	AA-71	Peerless	
miles #3	Westinghouse	350	1F-77	Peerless	USW 1
Airport #1	GE	200			5K44DP (Partly visible)
Airport #2	U.S.E.M.	250			725B/POIN 322DR067R/1

*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	NA	NA	NA	NA
Flowmeters	(SEE BELOW)					

2. Measurements:

Water	Right	No.	95-	Finucane Well		
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	75	406.4626	0.819	270	59
Q =	1.332	CFS	=	587.843 GPM		

~~95-8867~~

Flowmeter reading 500 GPM = 1.1 CFS

Water	Right	No.	95-	Miles AVE Well 1		
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	350	601.2925	.85	370	100
Q =	4.361	CFS	=	1957.353 GPM		

Flowmeter 913958.0

913957.0

 $1.0 \times 1000 = 1000 \text{ Gallons/min} = 1000 \text{ GPM} = 2.22 \text{ CFS}$

Water	Right	No.	95-	Miles AVE Well 2		
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	200	571.2925	.85	340	100
Q =	2.623	CFS	=	177.284 GPM		

Flowmeter 913959.0

913958.0

 $1.0 \times 1000 = 1000 \text{ Gallons/min} = 1000 \text{ GPM} = 2.22 \text{ CFS}$

Water	Right	No.	95-	Miles AVE Well 3		
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	350		.85	340	100
Q =	4.590	CFS	=	2060.135 GPM		

Flowmeter 913960.0

913959.0

 $1.0 \times 1000 \text{ Gallons/min} = 1000 \text{ GPM} = 2.22 \text{ CFS}$

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Water	Right	No.	95-	Airport Well 1	95-8774	
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	200	575.292517	.9	344	100
Q =	2.758	CFS	=	1237.876	GPM	

Flowmeter showing 1250 - 1275 GPM in real time

$$1275 \text{ GPM} = 2.84 \text{ CFS}$$

Water	Right	No.	95-	Airport Well 2	95-8909	
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	250	581.292517	0.9	350	100
Q =	3.412	CFS	=	1531.412	GPM	

Accuwell International Flowmeter 227,387,000

227,384,000

$$3,000 \div 2 \text{ MIN} = 1500 \text{ GPM}$$

$$1500 \text{ GPM} = 3.34 \text{ CFS}$$

E. FLOW CALCULATIONS

Measured Method:

(See Above)

Additional Computation Sheets Attached

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses:

$$(1.31 \text{ CFS}) \times (365 \text{ days}) \times (1.9835) = 948.4 \text{ AF}$$

MUNICIPAL

95-8687

G. NARRATIVE/REMARKS/COMMENTS

Well logs are with W.R 95-8867 Field Exam. Flow calculations for POD well in NWSWSW, S.24, T51N, R04W indicate 500 GPM. GPS Coordinates indicate this well is located just inside the SW SW T51NR04W instead of the NWSW T51NR04W indicated on Permit 95-8867.

Avondale Irrigation District built a pumping station on Hayden Lake to withdraw water from the Lake. It is no longer in use and has not been operated for this exam and is covered by separate Water Rights.

District facilities include a 50,000 Gallon reservoir located on a hill immediately West of the Hayden Lake pumping station and a main distribution line which that runs West along Miles Avenue, past the three District wells at the Miles Avenue site, to the Coeur d Alene Airport (Pappy Boyington Field). Two District operated wells are located at the Airport on either side of a square concrete reservoir that was formerly operated by Kootenai County. Lines connect to the Finucane well (operates nearly continuously) and to a large new 675,000 Gallon reservoir in the Whispering Pines area.

Amendment(s) are to add all District wells as PODs (6 wells total) and correct well locations. The District has 21.12 CFS of groundwater water right diversion capacity. The District will have licensed simultaneous diversion capacity of 13.94 CFS upon completion of amendments at licensing.

The maximum diversion capacity for water rights 95-8687, 95-8774, and 95-8909 at licensing was calculated using (maximum diversion rate CFS) x (365 days) x (1.9835). Water Right 95-8867 began as a municipal only permit.

The combined use condition for 95-8687, 95-8774, 95-8867 and 95-8909 was determined by using the sum of the measured CFS for each right plus the CFS from previously licensed rights 95-7558, 95-8321, and 95-8144. The total measured CFS from these rights is 13.94 CFS. The combined use maximum diversion volume was determined by (13.94 CFS) x (365 days) x (1.9835) = 10092.2 AF

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>
MUNICIPAL	1/01 to 12/31	1.310 CFS	948.4
<u>Totals:</u>		1.310 CFS	948.4

2. Recommended Amendments

☒ Change P.D. as reflected above ☒ Add P.D. as reflected above ☐ None Amend to Municipal
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Shirley M. May Date 3/3/09
 Reviewer Hester Sankar Date 3/4/09

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5/12/95

AN EXAM WAS CONDUCTED BUT NOT COMPLETED FOR WATER RIGHT NUMBER 95-08687. AT THE TIME OF THE EXAM TODD ZIMMERMAN OF AVONDALE IRRIGATION STATED HE WANTED WATER RIGHT 95-08774 TO BE COMPLETED AT THE SAME TIME AS 95-08687. AN EXTENSION OF TIME WAS GRANTED FOR 95-08774. CONTACT TODD AT 772-5657 TO SEE WHEN THE WORK WILL BE COMPLETED.

SEE 95-8687

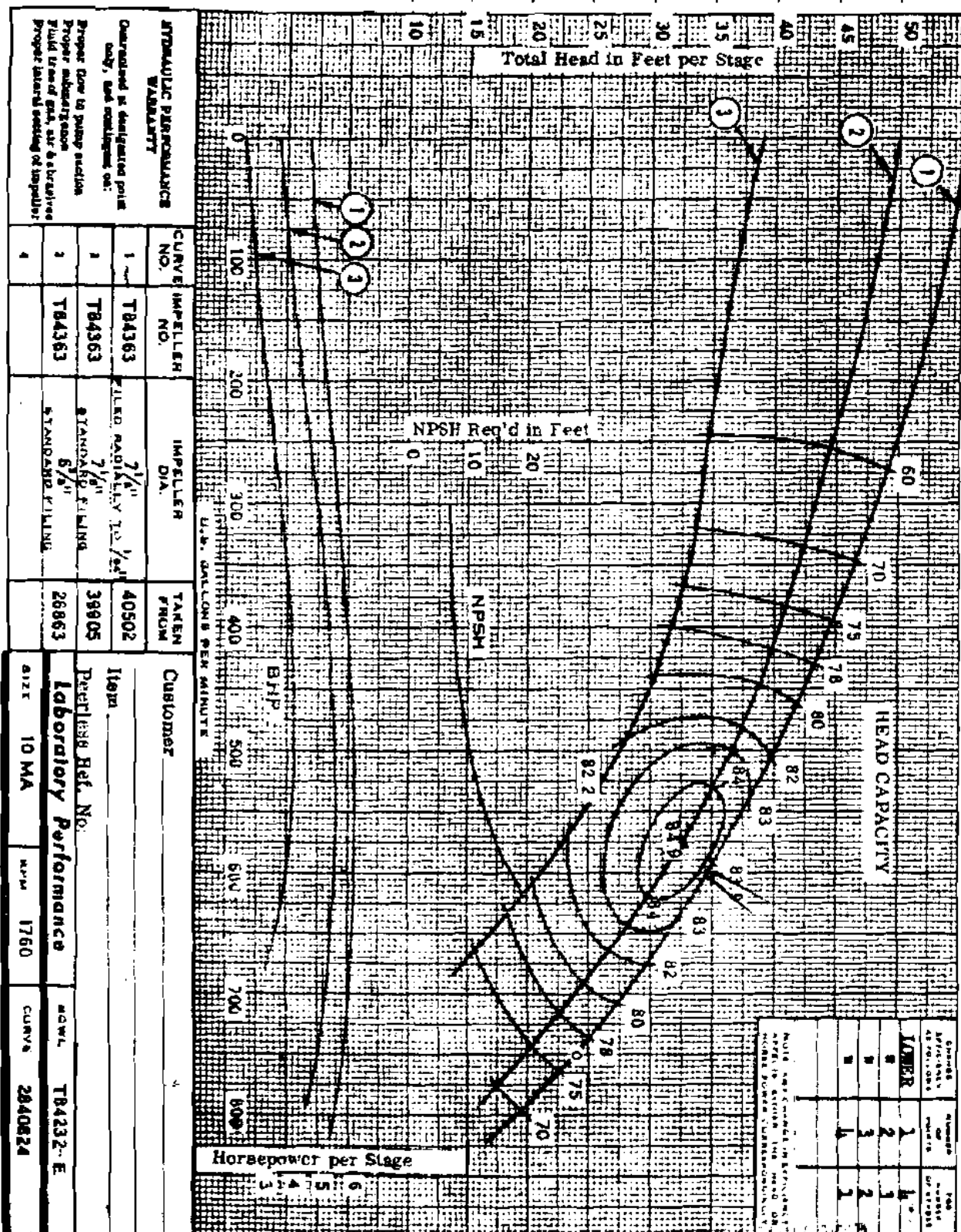
95-8687

FINUCANE CO'S MAY WELL

600

500

Total Head in Feet for _____ Stages



PUMP DESCRIPTION: Driver _____ Head _____ Column _____
 GUARANTEED BOWL PERFORMANCE: Capacity 600 gpm; Head 420 ft; Eff 81% BHP 78

Horsepower for _____ Stages

789-54

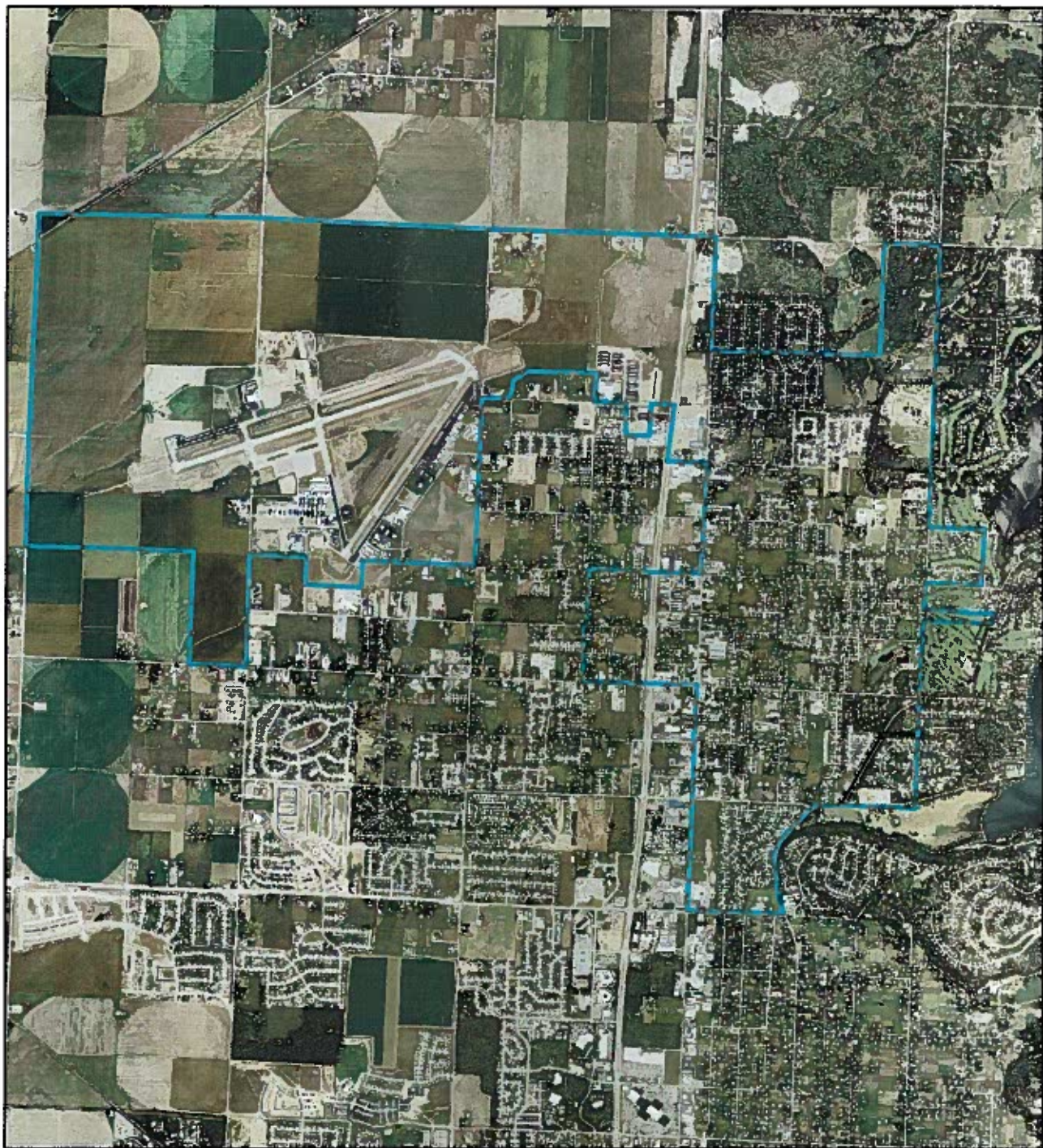
VERTICAL TURBINE PUMPS

10-74

Section 140

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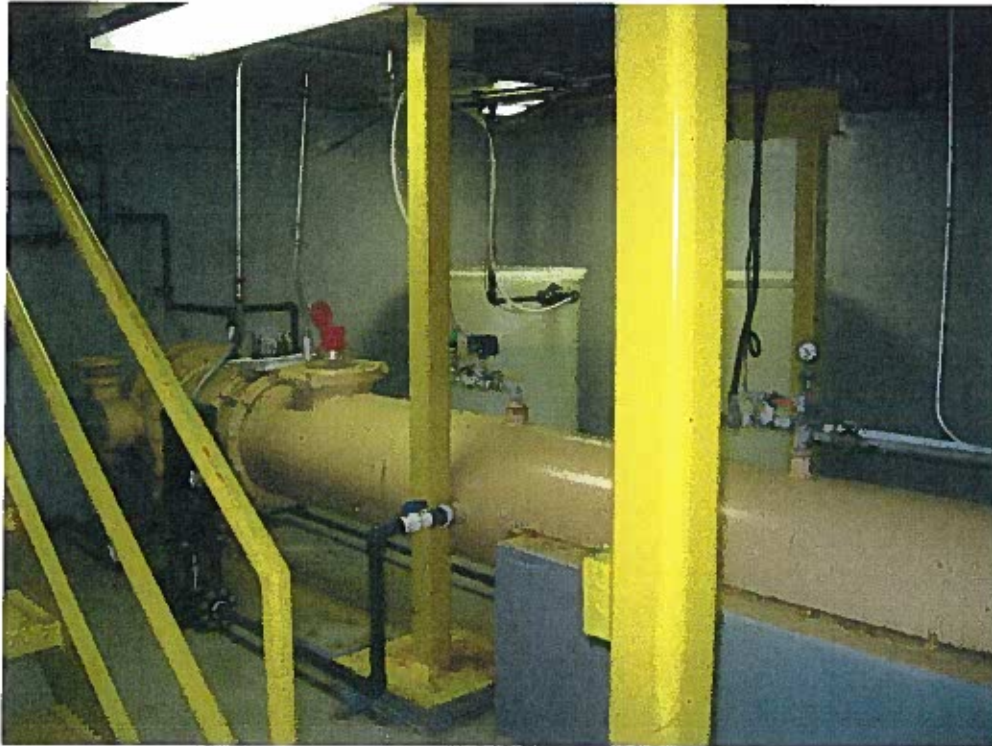
Prior to license



95-8687



New Avondale Reservoir



Miles AVE Well Site Control BLDG

95-8687



Miles Control BLDG Flowmeter Wells 1-3

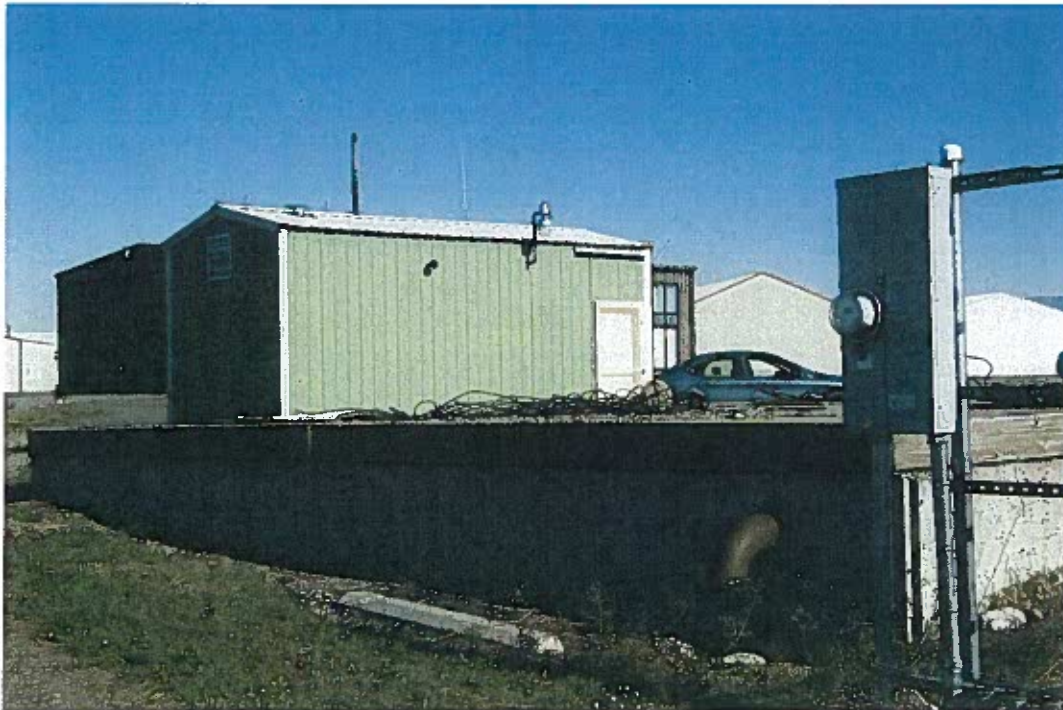


Miles AVE Baldor 3 HP Booster Pump

95-8687



Well 3 Miles AVE



Airport Well 1, POU & Unused Reservoir

95-8687



Airport Well 2 Flowmeter



Finucane 75 HP Well Interior

95-8687



95-08867

95-8687

CD

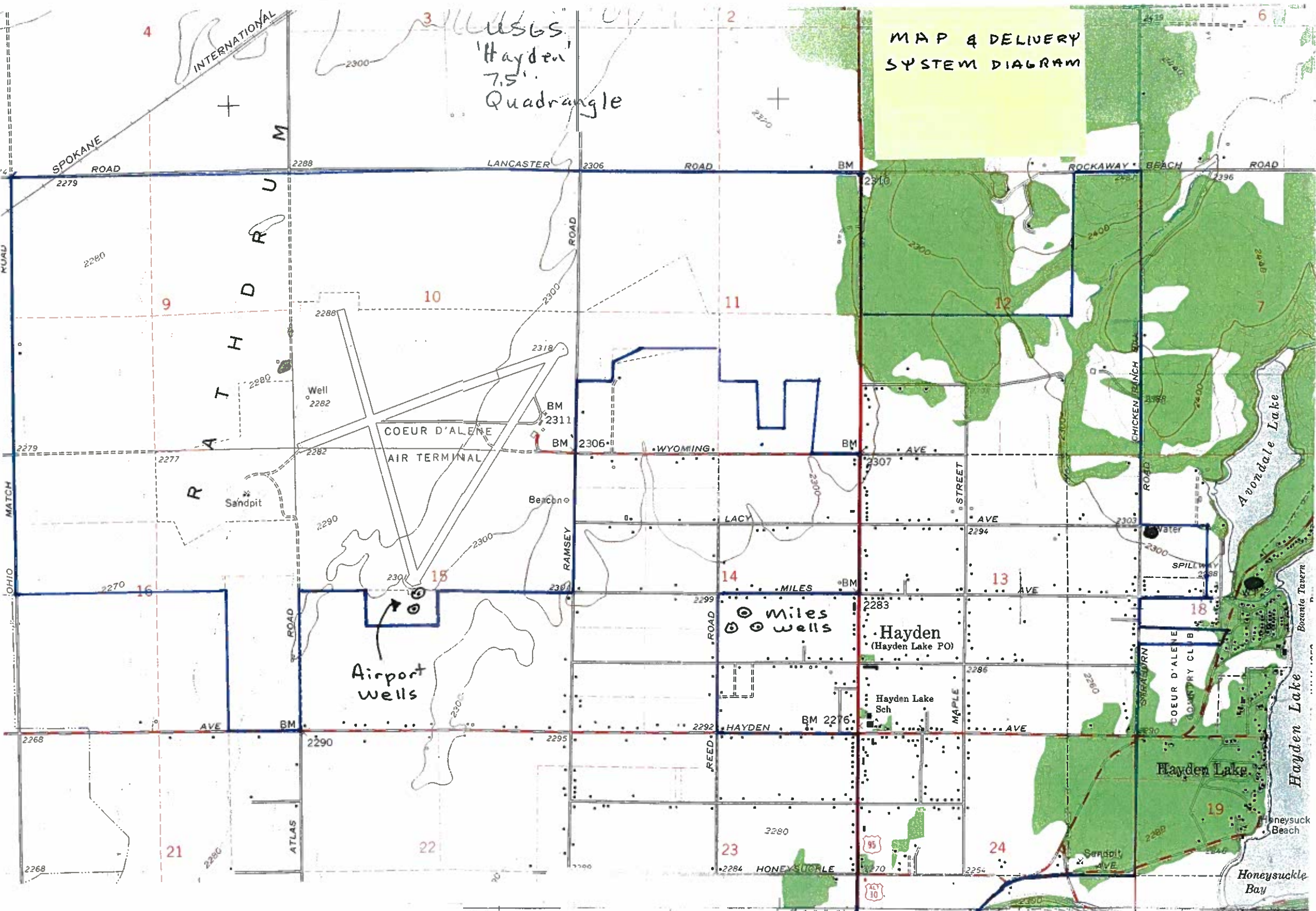


CD



CD

95-8687



COEUR D'ALENE 1:62,500
SCALE 1:24,000
ELEVATION INTERVAL 20
FEET REPRESENT 10-FOOT
ELEVATION MEAN SEA LEVEL

USGS
Coeur d'Alene
7.5' Quadrangle

95-8687

- well
- Reservoir Tower
- Service Area Boundary