

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

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. 63-342821. Owner Deer Flat Methodist Church IncPhone No. 208-459-3845Current address 17703 Beet Rd, Caldwell, ID 836072. Examiner's name Cody ParkerEXAM DATE January 22, 20183. Accompanied by Rick DayEmail rickday@deerflat.orgAddress sameRelationship to permit holder Executive AdministratorPhone No. 208-459-38454. Source Groundwater

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use 63-12225, 63-21444, 63-339792. Other water rights with the same source and point of diversion 63-21444**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
			SE	NE	3	03N	04W	Canyon	GPS, digital PLS mapping

2. Place(s) of Use:

Method of determination tax parcel spatial data, aerial imagery, digital PLS mapping

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	04W	3	FS			S,FS													
			L1																

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
		1.5		Grundfos	22SQE15-220 variable speed

*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
Theoretical						

2. **Measurements:** _____

Static Water Level => 26' Pumping Water Level => 36' (assumed 10' drawdown) Pressure => 60 psi

Distance from well to tank => 530' Head loss to friction => 15' (estimated from distance to tank)

Storage tank height => 18' TDH = 36+15+18+2.31(60) Diversion rate ~ 26 gpm = 0.06 cfs (pump curve)

F. FLOW CALCULATIONS☐ Additional computation sheets attached

Measured Method:

Diversion to storage = 0.06 cfs (pump curve)

Well Capacity = 0.07 cfs (pump curve)

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

 $V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{NA}$ $V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = \underline{NA}$ $V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{NA}$

2. Volume Calculations for Other Uses:

100,000 gallon storage tank = 0.3 acre-feet = FP Storage/ FP from Storage

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Diversion to Storage	01/01	12/31	0.06 cfs	
Fire Protection Storage	01/01	12/31		0.3 afa
Fire Protection from Storage	01/01	12/31		0.3 afa
Totals:			0.06 cfs	0.3 afa

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

2/28/18

Reviewer

Date

2/28/18

SEAL

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT
Narrative

This permit authorizes the diversion of 0.17 cfs from groundwater and the storage of 0.4 afa for fire protection storage and use. Proof of beneficial use was submitted on April 12, 2017. I completed the field exam on January 22, 2018.

Water is diverted from a 6-inch, 78-ft deep, well using a 1.5 hp Grundfos variable-speed pump through a 2" mainline to a 100,000 gallon storage tank approximately 530 ft to the southwest. The well is located at N43°37'42.3" by W116°47'34.2". System pressure is held at 60 psi. The well also provides water for the domestic uses associated with the church (63-21444).

The storage tank and well are located in the SENE of Sec. 3, T03N, R04W, B.M. The right will need an amendment at licensing to update the location of the point of diversion. The place of use for fire protection from storage is the entire tax parcel owned by the church and is located in the SENE and Gov Lot 1 (NENE) of Sec. 3.

The well driller's report shows the static water level at 26 ft BGS. The pump is only 1.5 hp, so I have assumed a drawdown of around 10 ft (pumping water level = 36 ft BGS). Because the storage tank is around 530 ft from the well, I have accounted for 15 ft head loss to friction. The height of the water column in the storage tank is assumed to be the height of the tank (18 ft). 60 psi is equivalent to 138.6 ft of head. Therefore, I determined the total hydraulic head to be 207.6 ft. The flow rate corresponding to that TDH is around 26 gpm (0.06 cfs) according to the pump curve.

From the same curve, I determined that the well capacity is 0.07 cfs. That rate is not sufficient to divert water to storage, and for domestic use simultaneously. However Rick Day, the executive administrator, says that water is not diverted for both purposes at the same time. I recommend an X35 condition which limits the total diversion rate to 0.07 cfs when this right and 63-21444 are combined.

A separate right (63-12555) also authorizes fire protection for this place of use. However, the POD for that right is separate. I do not recommend any combined use limit for the overlapping fire protection rights.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT
Picture Attachment

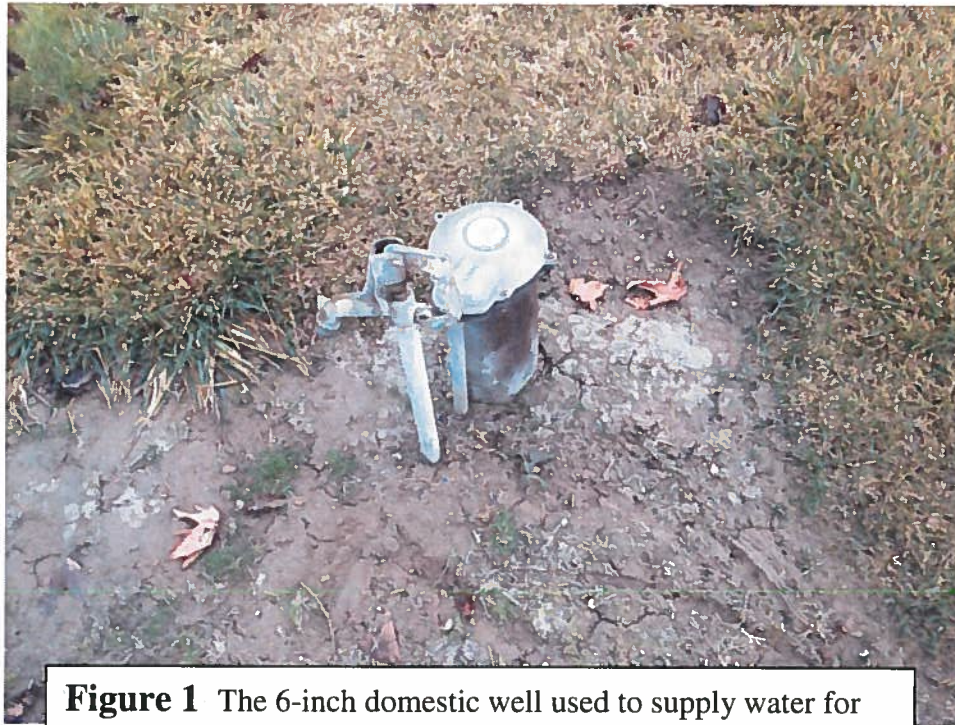


Figure 1 The 6-inch domestic well used to supply water for domestic uses of the church and fire protection storage.



Figure 2 A second domestic well located in Gov. Lot 1 (NENE) of Sec. 3. The original intent was to run the fire protection system from this well, but it was too far from the storage tank. Now, the well is used for irrigation and fire protection without storage.

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DEPARTMENT OF WATER RESOURCES
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Picture Attachment

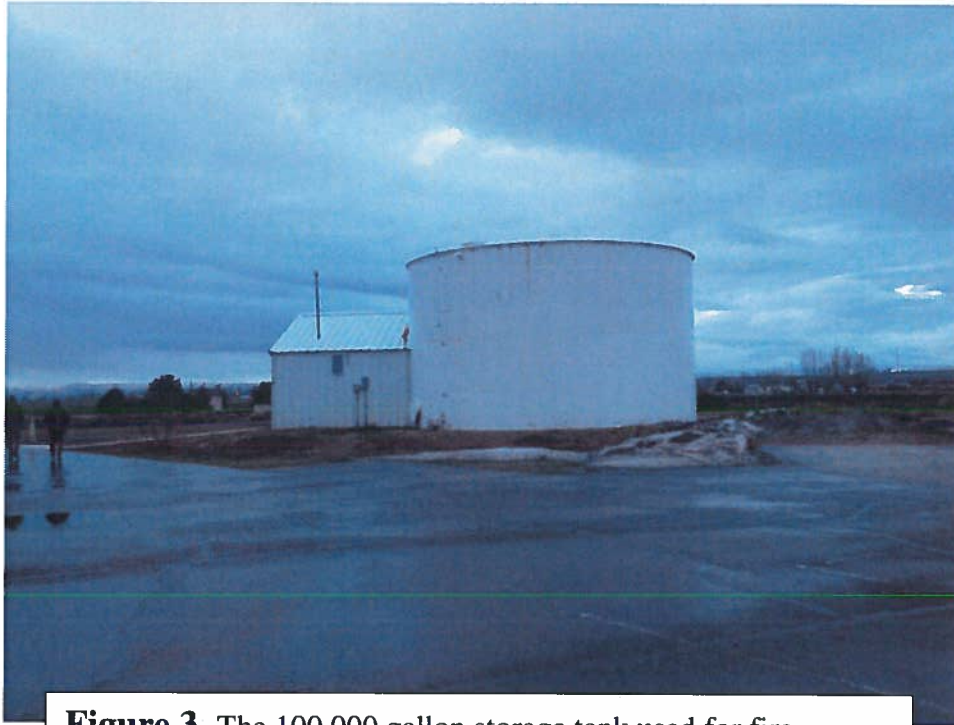


Figure 3 The 100,000 gallon storage tank used for fire protection purposes.



Figure 4 There are two fire hydrants on the property which are attached to the storage system to be used in the event of a fire.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT
Picture Attachment

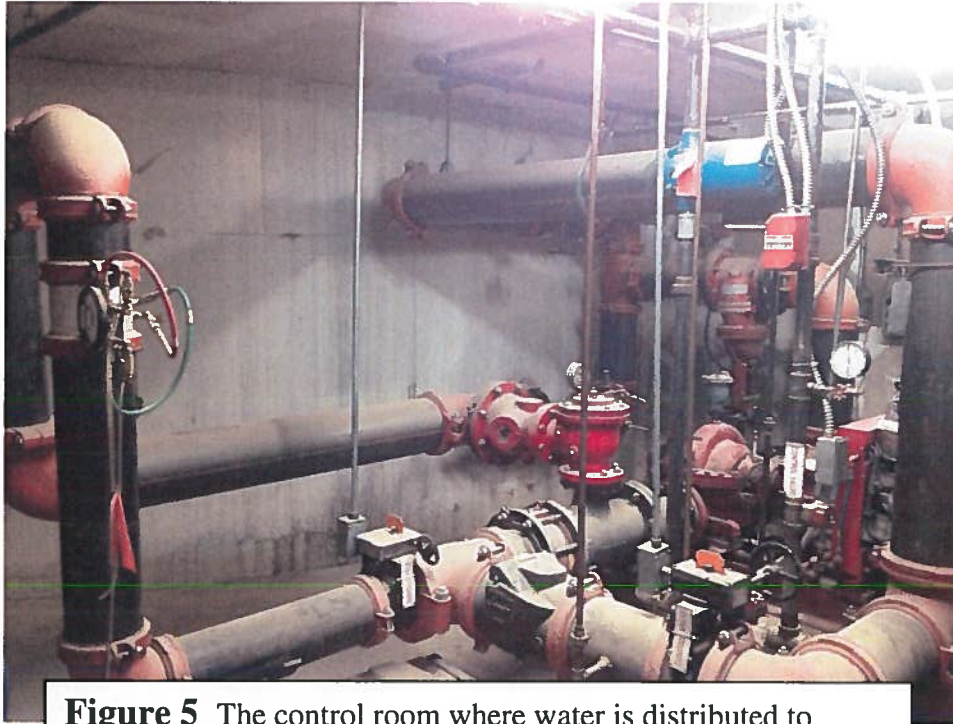
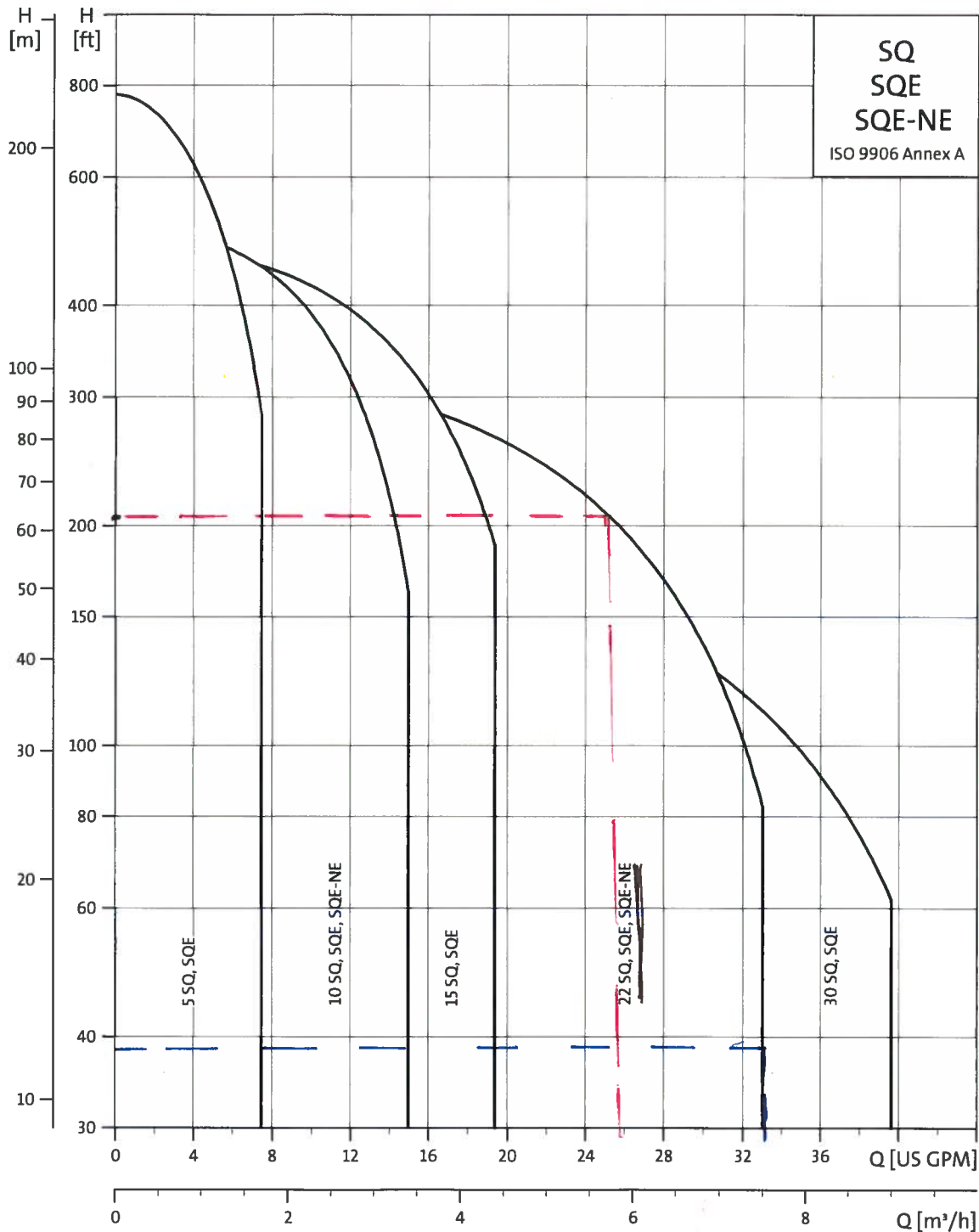


Figure 5 The control room where water is distributed to internal sprinklers to be used for fighting a fire.



Figure 6 A domestic water line to the new side of the church.

3. Performance range



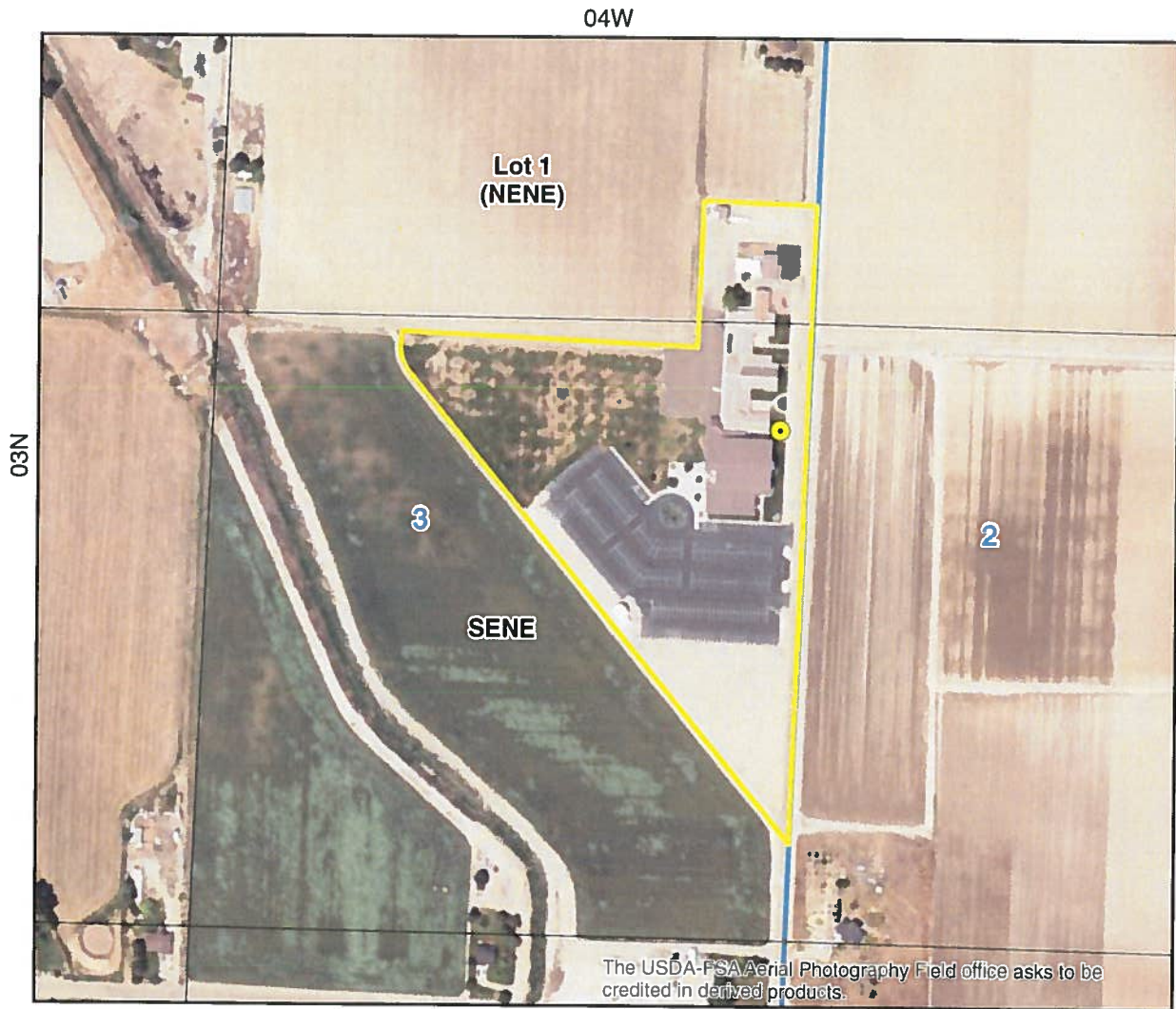
TM02 9975 2010

pressure = 60 psi
 tank height = 18 ft
 pumping WL = 36 ft
 Line dist = 530 ft (15 ft head loss)

— Diversion to Storage
 — Well Capacity

State of Idaho
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FIRE PROTECTION FROM STORAGE



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

0 0.05 0.1 0.2 Miles



State of Idaho
Department of Water Resources
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FIRE PROTECTION STORAGE

04W



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

0 0.035 0.07 0.14 Miles





BENEFICIAL USE FIELD REPORT

Basin/Sequence	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
03N04W3				42																42
63-33925	JOHNSON, GROUND V IRRIGATION			X																
63-34282	DEER FLAT, GROUND V FIRE PROTECTION			X																
63-34282	DEER FLAT, GROUND V FIRE PROTECTION			X																
63-12225	DEER FLAT, GROUND V FIRE PROTECTION			X																
63-136	BARKER RC BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-137B	BARKER RC BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-198AJ	DAVIS, THC BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-198AJ	DAVIS, THC BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-199B	DAVIS, THC BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-199B	DAVIS, THC BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-200A	BARKER RC BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-200B	DAVIS, THC BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-2106	UNITED ST, FIVE MILE C IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-2109	UNITED ST, MASON CR IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-21444	DEER FLAT, GROUND V DOMESTIC			X																
63-233K	AMERICAN BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-2388A	UNITED ST, BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-2392B	DRAINAGE WASTE WA IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-2392F	BOISE PRO, WASTE WA IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-251A	UNITED ST, BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-26185	MAMER, D GROUND V DOMESTIC			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-26185	MAMER, D GROUND V STOCKWATER			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-26886	WOOD, ALI GROUND V DOMESTIC			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-27042	ANDERSON GROUND V DOMESTIC			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-27089	CARSON, G GROUND V DOMESTIC			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-27476	MYERS, EN GROUND V DOMESTIC			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-27476	MYERS, EN GROUND V STOCKWATER			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-27761	DEER FLAT, GROUND V DOMESTIC			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-28133	HOLTZ, JOX GROUND V DOMESTIC			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-29033	WEST ONE GROUND V DOMESTIC			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-29409	RICE, CLAU GROUND V DOMESTIC			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-29410	RICE, CLAU GROUND V DOMESTIC			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-2968	FARWEST L GROUND V IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-30181	DAVIS, THC BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-30181	DAVIS, THC MOSES CR IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-301A	UNITED ST, BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-302A	UNITED ST, BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-32695A	NAMPA & I GROUND V IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-32695B	NAMPA & I GROUND V IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-33251	BOISE PRO, INDIAN CR IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-33253	BOISE PRO, TENMILE C IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-33739	NAMPA & ISPRINGS IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-33979	DEER FLAT, GROUND V IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
63-373A	UNITED ST, BOISE RIVE IRRIGATION			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4.1

Overlapping POU, same use
Overlapping POU, different use
Irrigation district

DEPARTMENT OF WATER RESOURCES

BENEFICIAL USE FIELD REPORT

03N04W3

Basin/Sequit Owner Source

	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE
63-33925 JOHNSON, DIRK GROUND WATER	X			X												
63-34282 DEER FLAT MET GROUND WATER																
63-12225 DEER FLAT FREE GROUND WATER	X															
63-21444 DEER FLAT FREE GROUND WATER				X												
63-26185 MAMER, DIANA GROUND WATER																
63-26886 WOOD, ALLEN GROUND WATER														X		
63-27042 ANDERSON, H C GROUND WATER											X					
63-27089 CARSON, GEORGE GROUND WATER												X				X
63-27476 MYERS, EMMA; GROUND WATER					X											
63-27761 DEER FLAT FREE GROUND WATER	X															
63-28133 HOLTZ, JOANNE GROUND WATER										X						
63-29033 WEST ONE BAN GROUND WATER							X									
63-29409 RICE, CLAUDE; F GROUND WATER		X														
63-29410 RICE, CLAUDE; F GROUND WATER		X														
63-33979 DEER FLAT FREE GROUND WATER	X															

POD Overlap

WELL DRILLER'S REPORT

State 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.

[illegible]