

Permit No: 67-7980

RECEIVED
Page 1 **AUG - 5 2005**
DEPARTMENT OF WATER RESOURCES

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 67-7980

Exam Date: 10/6/1997

1. Current Owner: TIMOTHY L BORDGES
4940 OLD FRENCH TOWN RD
SHINGLE SPRINGS CA 95682
(530)672-8705
2. Accompanied by: Tim Bordges
Phone No:
Address:
Relationship to Permit Holder:

3. **SOURCE**

TRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
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

NE1/4NE1/4

Sec. 33, Twp 15N, Rge 01W, B.M.

ADAMS County

Method of Determination:

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
15N	01W	33	17.0		32.0	23.0													72.0

Total Acres: 72

Method of Determination:

3. Y Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- Y Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- Y Aerial Photo Attached (required for irrigation of 10+ acres).
- Y Photo of Diversion and System Attached

4.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
NENE _____	_____	20	Submersible	Grundfos	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Pump Curve	_____	_____	_____	_____	_____	_____
Theoretical	_____	_____	_____	_____	_____	_____

2. Measurements: Rob Dawson stated that the pump capacity was 225 gpm and submitted a supporting pump curve. This amount matches the theoretical calculation. Rob stated the pump was set at 189 feet.

E. FLOW CALCULATIONS

__Y__ Additional Computation Sheets Attached

Measured Method: Theoretical

1996 NENE Well: Pump set @ 189', sprinkler irrigation
TDH based on 170' lift and 45 psi

See attached system capacity calculation sheet (excel program created by Scott King 1/6/2000)

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 72 \times 4 = 288$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = .50 \times 231 \times 1.9835 = 229$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 229$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

Proof was filed in 1997. An SRBA claim was not required or filed. The permit is in the name of Tim and Marla Bordges. Included in the file is a change in ownership received 6/29/05 from Tim to list his rights in his name only because Marla and Tim have divorced.

The original permit listed a well in the SENE and a well in the SENW. The well listed in the SENE was actually drilled in the NENE and is the only diversion used for this permit. The well in the SENW is used for right 67-7507 and is not physically connected to the mainline system used to irrigate the recommended 72 acres. The recommended NENE well was drilled in 1996 and deepened in 1997. Both logs list the well in the wrong quarter. The drilling program has been notified.

Tim contacted Idaho Power to turn on the power to the pump in time for my exam, however they failed to do so. As a result, a theoretical and a pump curve were used to estimate the pump capacity. Rob Dawson worked for All State Drilling at the time the NENE well was drilled and deepened. He installed the pump and sent a pump curve included in the file. The theoretical and pump curve system capacity calculated .50 cfs. Tim estimated that his sprinklers ran between 40 and 50 psi. The wheel lines used for irrigation of the 72 acres consisted of 73 5/32 inch nozzles. Tim stated that he can only operate a portion of his sprinkler system at one time: either 1.5 lines @ 33 birds or one line @ 40 birds. Based on this information, 40 nozzles @ 5 gpm/nozzle equates to 200 gpm or .45 cfs. This supports the recommended theoretical and pump curve system capacity calculation of .50 cfs.

A site visit was made in 1997 verifying the well and irrigated acres, however, system details were not obtained at that time because the owner was not present. The photos and FSA map from that visit are located in the permit file. No other rights are used. Tim stated that he has 10 shares of Little Weiser Irrigation District water. This water appears appurtenant to 10 acres recommended on right 67-7507 that Tim owns in the SENW S33, as listed on district claim 67-2385. No acres in the NE S33 are included on the district claim.

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>
IRRIGATION	03/15 to 10/31	0.500 CFS	229.00 AF
<u>Totals:</u>		0.500 CFS	229.00 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 Lo' Gnaner Date 7/21/05

Reviewer _____ Date _____

Idaho Department of Water Resources
Estimated Pumping Rate Computer

ed 1/6/2000

Flow Analysis Performed by: Lori Graves

Date: 6/30/2005

Page 1 of 1

Record ID		Measured Flow:	
Water Right No. 67-7980		Designed Flow: 0.50 cfs <<--Max	
Name Bordges		HP/Eff Flow: 0.50 cfs	
pod		Sprinkler Flow: 0.44 cfs	
year:		Pivot/System Flow:	
Flow Measurement: gpm =			
Curve/Pump Design: 225 gpm = 0.50 cfs			
Horsepower / Efficiency Method			
Horsepower	20 hp		
PWL	170 ft		
Disch Psi	45 psi		
PUMP Eff Estimate	0.77 %		
TDH	274 ft		
OHP	15.4 hp		
Flow	223 gpm	= 0.50 cfs	
System Method:			
No Lines	1	Nozzle Equation: $Q = C \cdot A \cdot \sqrt{2 \cdot g \cdot h} / \sqrt{1 - r^4}$	
Birds per line	40	C=	1.00 Nozzle coefficient; typical 0.97 to 1.00
Ttl no nozzles	40	r=	0.0065 ft Nozzle radius
Nozzle size	5/32 in	A=	0.00013 ft^2 Nozzle area
Nozzle pressure	45 psi	h=	104 ft Head
Flow per nozzle	4.89 gpm	g=	32.2 ft/sec^2 Gravitational constant
Sprinkler Flow	196 gpm	Q=	0.011 cfs Flow per nozzle
Percent Leaks	%	=	4.890 gpm Flow per nozzle
Total Flow	196 gpm	= 0.44 cfs	
Pivot / System rating gpm =			

Comments / Data Supplied:

Liqui.e Graves

Performance Curves

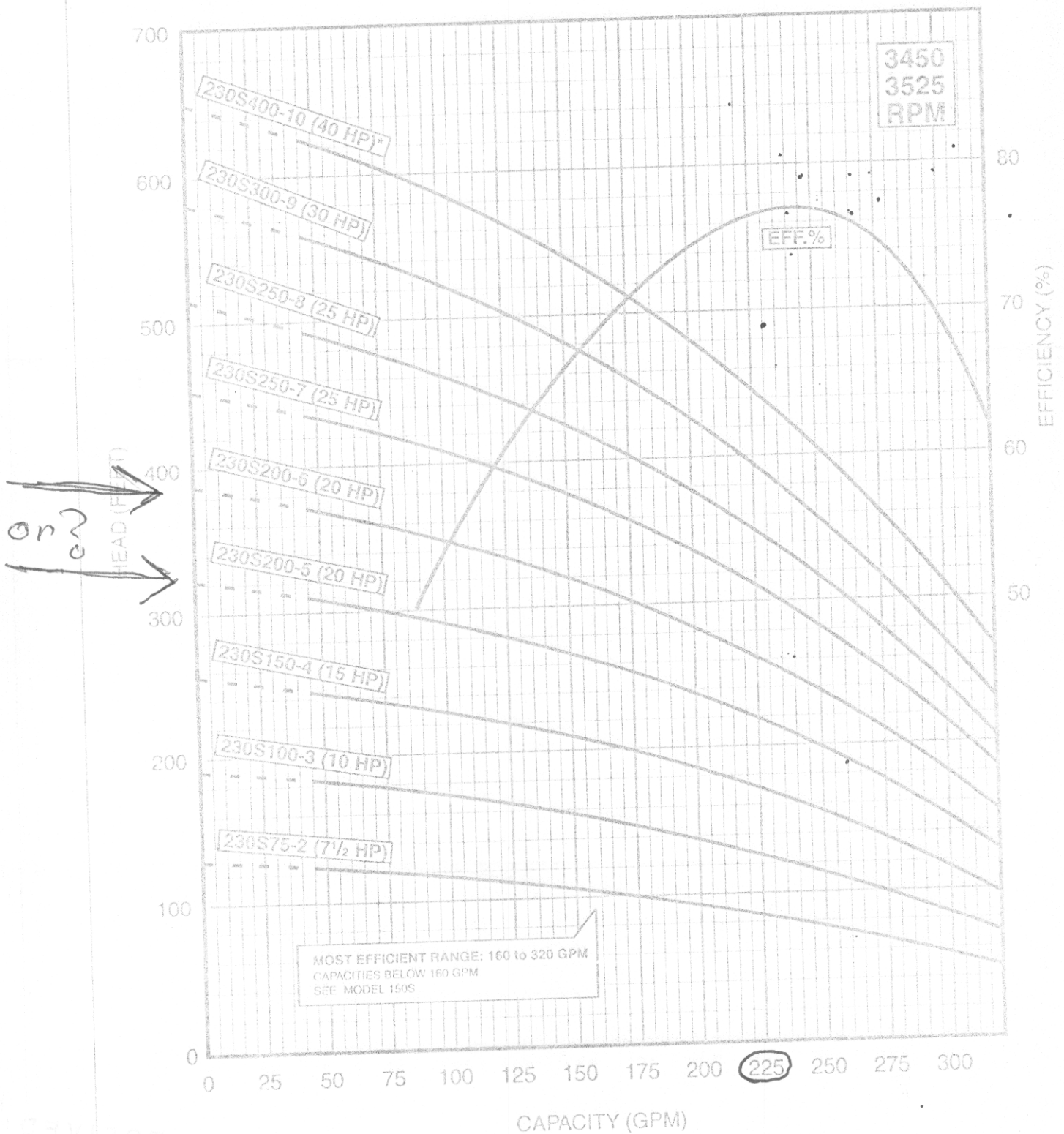
230 GPM

Model 230S

FLOW RANGE: 160 -320 GPM

OUTLET SIZE: 3" NPT

NOMINAL DIA. 6"



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

4" MOTOR STANDARD, 7.5 HP/3450 RPM

6" MOTOR STANDARD, 10-60 HP/3450 RPM.

8" MOTOR STANDARD, 75 HP/3525 RPM.

* Alternate motor sizes available.

Performance conforms to ISO 2548 Annex B
@ 8 ft. min. submergence.



P/D
x

6.5

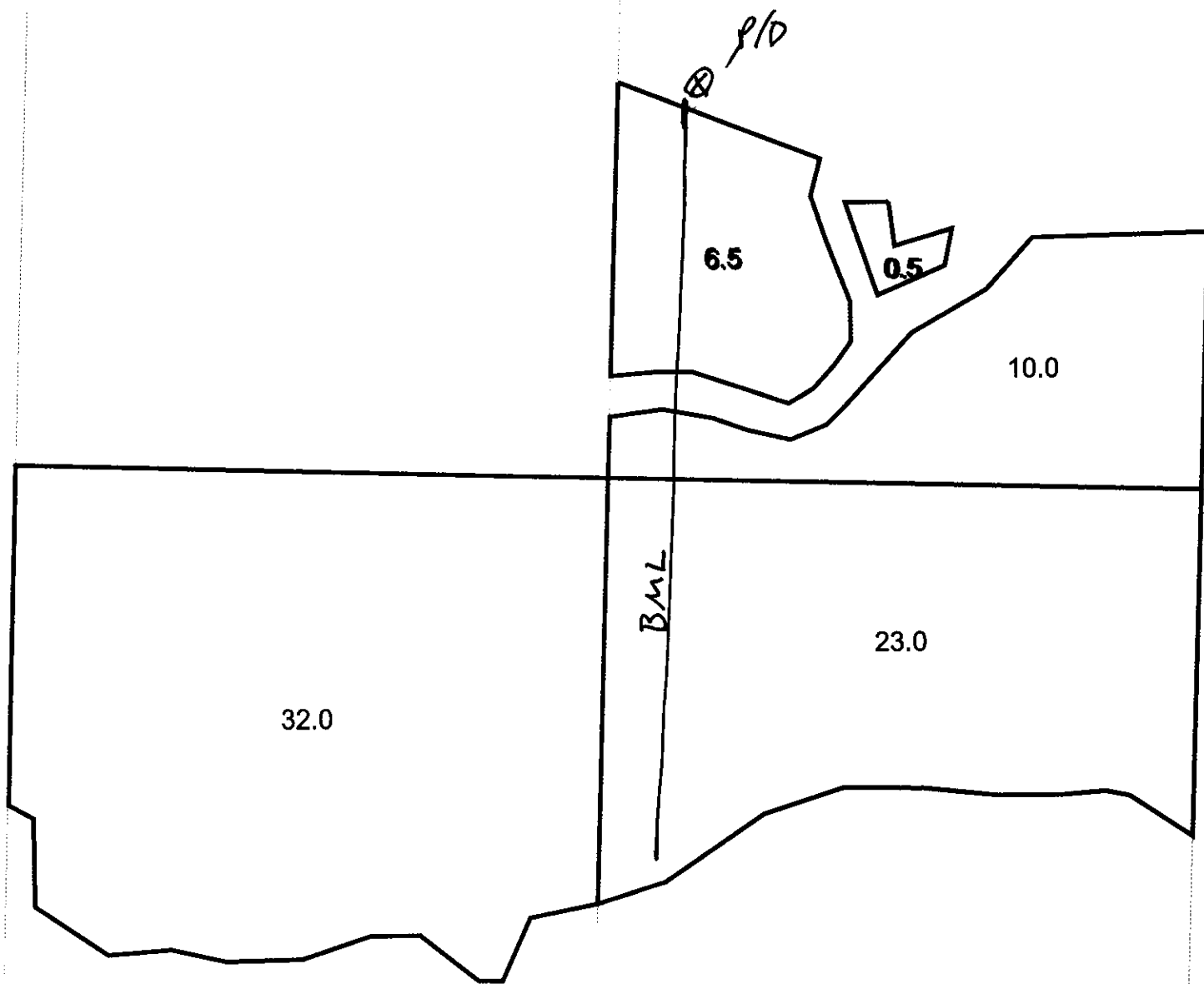
0.5

10.0

23.0

32.0

67-7980

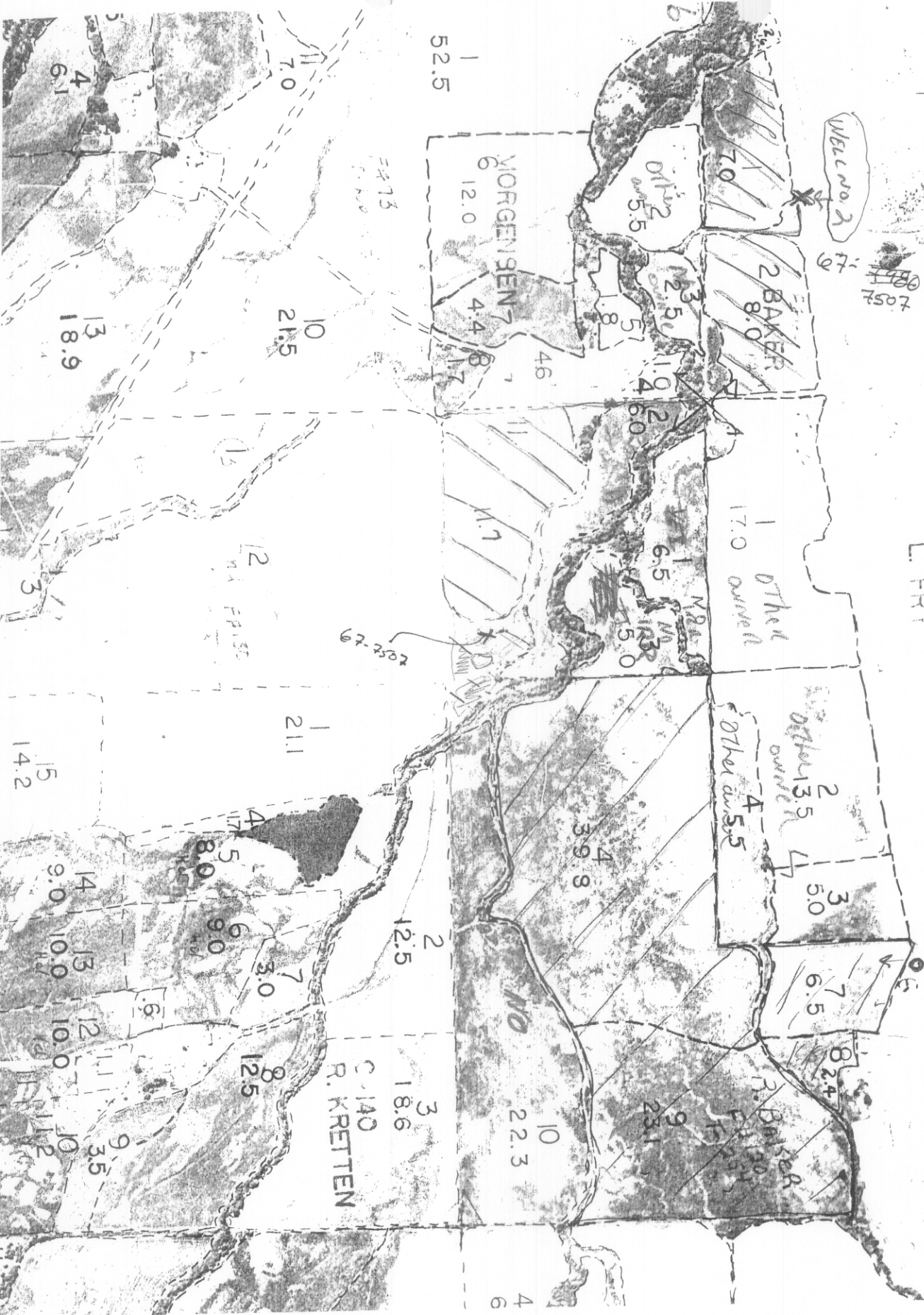


BML = Buried Mainline

Wheel line sprinklers used for irrigation

29	28
32	33

28	27
33	34



IDAHO DEPARTMENT OF WATER RESOURCES

WELL INSPECTION FORM

1. DRILLING PERMIT NO: 67-97-W-0003 OTHER APPLICABLE NO: 67-7980
2. OWNER: Tim Boderger Phone: 530-672-8705
Address: 4940 Old French Town Rd, Shingle Springs
CA 95682
3. WELL LOCATION: Twp 15N, Rge. 1W, Sec. 33, Ne 1/4 Ne 1/4
County Adams (Provide sketch map and photo on reverse.)
4. DRILLER: All State Lic. No. 561
When Drilled? 1996 Deepened in 1997 67-97-W-0003-501
5. WELL CONSTRUCTION:
- Casing Diameter 8 inches Water tight cap? ☒ Yes ☐ No Access Port: ☐ Yes ☒ No
Casing $\geq$ 12 inches above ground? ☒ Yes ☐ No - Describe _____
Depth of Casing 134 ft. Method Drilled air rotary
Condition of Well Casing: ☒ Good ☐ Fair ☐ Poor Describe _____
Control Valve? ☒ Yes ☐ No Pressure Gauge: ☐ Yes ☒ No
Condition of Piping and Valving good
Auger to a depth of _____ ft. Evidence of Annular Seal ☐ Yes ☐ No
Are there obvious construction problems that may be a source for contamination or waste of water?
☐ Yes ☒ No (Describe in Remarks and Attach Photo - On Reverse)
6. HYDROLOGIC INFORMATION:
- Depth to Static Water 20 ft. Water Temperature cold °F
Flowing Artesian ☐ Yes ☒ No Pressure: _____ (psi)
Water Sample Taken? ☐ Yes ☒ No If yes, describe purpose _____
Water Quality Measurements/Observations (Describe) _____
7. WELL USE:
- | | | |
|---------------------------------------|---|-------------------------------------|
| ☐ Domestic | ☒ Irrigation | ☐ Stock |
| ☐ Test | ☐ Municipal | ☐ Industrial |
| ☐ Abandoned | ☐ Waste Disposal/Injection | ☐ Not Used |
| ☐ Other: _____ | | |

8. **POSSIBLE CONTAMINATION SOURCES:**

Is there evidence of Chemigation? ☐ Yes ☒ No

If yes, is there a check-valve present? ☐ Yes ☒ No

Is there a possible source of contamination nearby? ☐ Yes ☒ No

If yes, what Type? _____

How far away from the well is this source? _____

9. **REMARKS:** _____

Lon Brewer

Signature of Dept. Representative & Title

6/28/05

Inspection Date

PHOTOS, DRAWINGS, OTHER ATTACHMENTS:

Use Typewriter or Ballpoint Pen

☒ Air ☐ Flowing Artesian

(Sign once if Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

To; Id. Dept H₂O

From; Rob Dawson, inc

ATT: Laurie Graves

RE: Tim Bondress- Indian Valley

pump- 20 HP Grundfos

225 GPM ±

inlet 170' ±

4" Drop pipe

Well Proof Report

Receipt #
Permit No. 739465
Metal Tag No.
Well ID # 288666
Water Right No. 67-7980

no log req'd

Relationship: Owner/Operator
Name: MARLA H BORDGES Phone:(916)677-3594
Address: 4940 OLD FRENCH TOWN RD
SHINGLE SPRINGS CA 95682

Relationship: Owner/Operator
Name: TIMOTHY L BORDGES Phone:(916)677-3594
Address: 4940 OLD FRENCH TOWN RD
SHINGLE SPRINGS CA 95682

Permit Status: Permitted

Well Location: Township 15N, Range 01W, Section 33, NW, NE
COUNTY ADAMS

Address of Well Site: HWY 95 N
INDIAN VALLEY ID

Use of Well: Irrigation

Activity: Hydro-fracture

Region: Western

Construction Method:

Const Start Date: Jul 07 1997 Const End Date: Jul 10 1997

Well Drilling Company: ALLSTATE WELL DRILLING (No. 561)

Card Hold Name: GARY D JONES (No. 4252)

Certifying Official:

Date Received: Mar 18 1998

Date Approved: Jul 11 1997

Date Inspected:

Completed Depth: 227 FT Drilled Depth: Surface Diameter: 8 inches

Primary Flow Depth: Overall Temp: Static Water Level: 20

Head Pipe Length: Tail Pipe Length Production Rate: 400 GPM

Closed in Pressure: 0 Psi Bottom Hole Temp: 0 F. Low Temp Geothermal: NO

Control Device Desc:

Access Port Desc:

Casing

From	To	Diam	Type	Gauge	Join Type	Material
	134					

Seal

From	To	Material	Amount	Method
------	----	----------	--------	--------

Screen

From	To	Dia	Type	Slot Size	# of Slots	Material	Perforation Meth	Screen Type
------	----	-----	------	-----------	------------	----------	------------------	-------------

Lithologic Layer

From	To	Diam	Water	Color	Material	Texture
------	----	------	-------	-------	----------	---------

Drive Shoe

Depth	Test Description
-------	------------------

67-7980



NENE S33 1996 Well
20 HP Submersible Pump



72 acres in NE S33
Irrigation via Wheel Line Sprinklers

67-7980

1997 SITE VISIT



NENE WELL
20 HP SUBMERSIBLE
PUMP

P/u —

