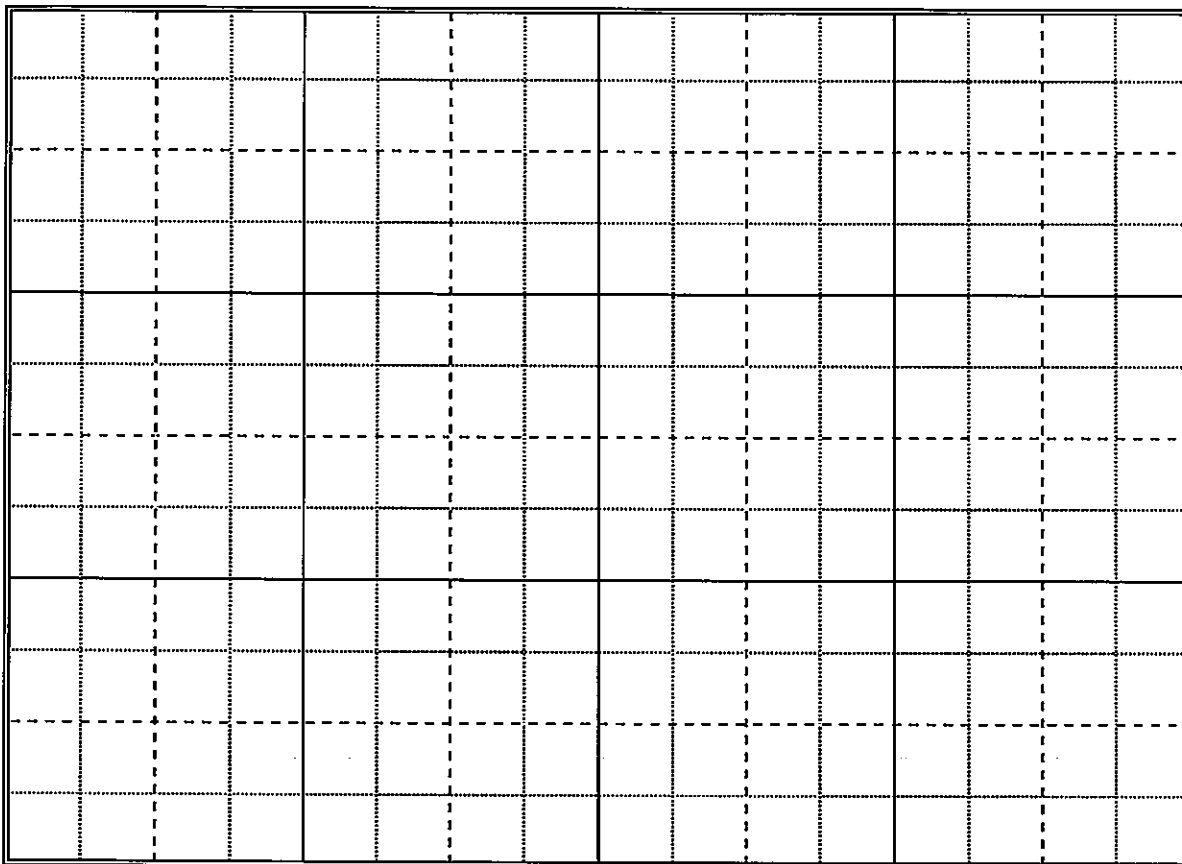


[illegible]

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable. **Please see attached photos and maps



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)

 X 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
Well 12	U.S. Motors	75	H075V2SL5-C	Natl. Pump Co.	2K7-0502

*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
(Totalizer/Flow meter)	Propeller	McCrometer	MMC08	07-11755	8" Rated	11/13/2007
			E7000-010		1,500gpm	

transmitter

2.

Measurements:

E. NARRATIVE/REMARKS/COMMENTS

Kevin Boggs completed a beneficial use field exam on November 6, 2008 for the Sun Valley Water and Sewer District (Well 12). The pump has an adjustable frequency drive, allowing the pump to slowly increase RPMs to its maximum rate. Water from the well is pumped to waste for several minutes upon startup, then the water is diverted to the flowmeter/totalizer where it enters the District's water distribution system. On November 6, 2008, I observed a maximum instantaneous flow rate at Well 12 of 925 gallons per minute (gpm). The well pumped at this maximum rate for less than one minute, then slowly decreased to an average rate of about 600 gpm.

Have conditions of this permit been met? ☒ Yes ☐ No

(at a lower rate of the maximum rate on the permit)

F. FLOW CALCULATIONS

Measured Method: totalizer/flowmeter

____ Additional Computation Sheets Attached

G. VOLUME CALCULATIONS (NA)

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
Municipal	From 01/01 To 12/31	Q (cfs) 2.06	V (afa) NA

Totals: 2.06 cfs

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 (recommend an amendment of the
instantaneous rate on the permit;
2.06 cfs rather than 3.35 cfs)

I. AUTHENTICATION

Field Examiner's Name Kevin Boggs Date 11/26/2008

Reviewer _____ Date _____

SEAL



ATTACHMENT A
**SUN VALLEY WATER AND SEWER DISTRICT WELL 12 WATER RIGHT PERMIT REPORT, PUMP
AND MOTOR DETAILS, WELL LOG, PHOTOS, AND PLACE OF USE MAP**

[Close](#)IDAHO DEPARTMENT OF WATER RESOURCES
Water Permit Report

11/19/2008

WATER RIGHT NO. 37-21151

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	SUN VALLEY WATER & SEWER DIST PO BOX 2410 SUN VALLEY, ID 83353-2410 (208) 622-7610

Priority Date: 09/08/2003
Status: Active

<u>Source</u>	<u>Tributary</u>
GROUND WATER	

<u>Beneficial Use</u>	<u>From</u>	<u>To</u>	<u>Diversion Rate</u>	<u>Volume</u>
MUNICIPAL	01/01	12/31	3.35 CFS	
Total Diversion			3.35 CFS	

Location of Point(s) of Diversion:

GROUND WATER	NENENW Lt 1	Sec. 18	Township 04N	Range 18E	BLAINE County
--------------	-------------	---------	--------------	-----------	---------------

Place(s) of use: No POUs found for this right

Conditions of Approval:

1.	26A	Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which permit holder had no control.
2.	046	Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department.
3.	126	Place of use is within the service area of the Sun Valley Water and Sewer District as provided for under Idaho law.
4.	102	The right holder shall not provide water diverted under this right for the irrigation of land having appurtenant surface water rights as a primary source of irrigation water except when the surface water rights are not available for use. This condition applies to all land with appurtenant surface water rights, including land converted from irrigated agricultural use to other land uses but still requiring water to irrigate lawns and landscaping.
5.	070	The irrigation occurring under this municipal use shall not exceed 1/2 acre within each platted subdivision lot upon which a home has been constructed. This right does not provide for irrigation of common areas or for irrigation of lots upon which homes have not been constructed.
6.	075	Irrigation of large projects such as parks, golf courses, or sports activities fields is not authorized under this right.
7.	022	The daily diversion volume for non-domestic uses under this municipal right shall not exceed 2,500 gallons per use and the daily diversion volume for domestic uses under this right shall not exceed 13,000 gallons per dwelling in accordance with Section 42-111, Idaho Code.
8.	01M	After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to determine the amount of water diverted from power records and shall annually report the information to the Department.
9.	051	Any license issued by IDWR pursuant to the right or portion thereof for the use of trust water is subject to a term review of 20 years after the date of this approval to determine availability of water for the use and to re-evaluate the public interest at the end of the term.

Dates:

Proof Due Date: 12/01/2008

Proof Made Date:

Approved Date: 12/18/2003

Moratorium Expiration Date:

Enlargement Use Priority Date:

Enlargement Statute Priority Date:

Application Received Date: 09/08/2003

Protest Deadline Date: 10/21/2003

Number of Protests: 0

Field Exam Date::

Date Sent to State Off:

Date Received at State Off:

Other Information:

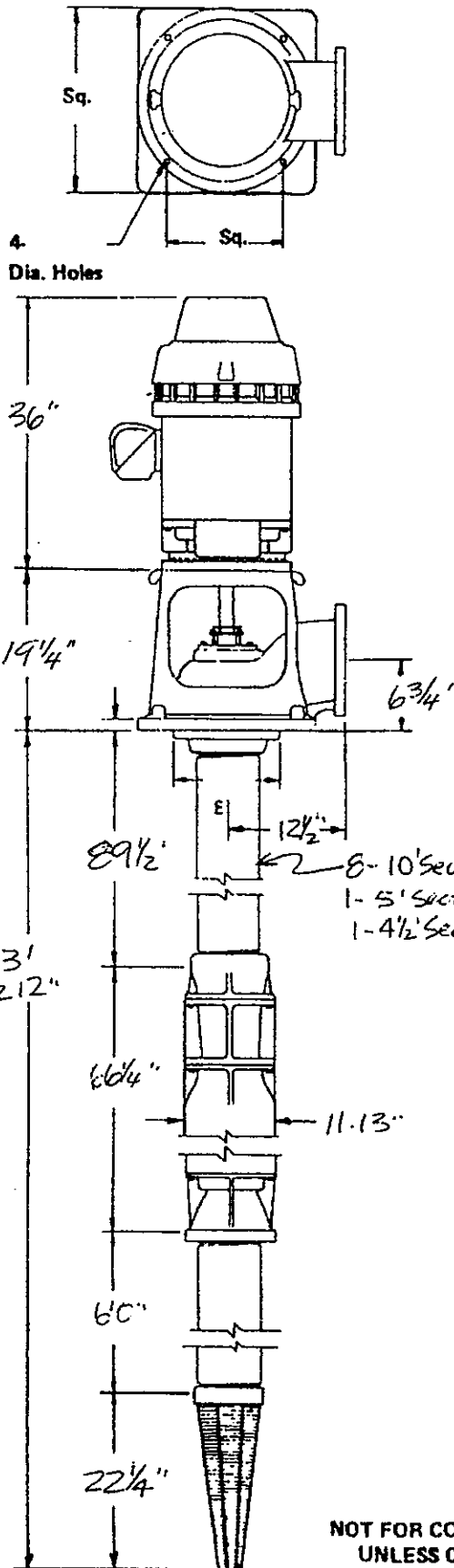
State or Federal:

Owner Name Connector:

Water District Number:
Generic Max Rate per Acre:
Generic Max Volume per Acre:
Swan Falls Trust or Nontrust: T
Swan Falls Dismissed:
DLE Act Number:
Cary Act Number:
Mitigation Plan: False

Close

VERTICAL TURBINE PUMP



MOTOR
 75 H. P. 3 Phase 60 Cycle 460 Volts
 1800 R. P. M. Mfg. U.S. Motors
 Vertical Hollow Shaft with NRR Coupling.
 Enclosure WP-1, premium efficiency,
 Inverter duty.

DISCHARGE HEAD

N260 Discharge Head
 8" Discharge Matches 125 ANSI Dimensions
 Shaft Seal: ☒ Packing Box ☐ Oil Lube

COLUMN

8" x 1.277" Wall Column Pipe
☒ Open Lineshaft ☐ Enclosed Lineshaft
 1 1/2" Dia. Lineshaft
 —" Sch. — Enclosing Tube
 w/ 1 1/4" 304 SS Sleeve

PUMP

5 Stage J11LC Bowl Assembly
 600 USGPM @ 315 Ft. T. D. H.
 8-10' Sections Suction Pipe: ☒ Yes ☐ No 8" x 6" Size
 1-5' Section Strainer: ☒ Yes ☐ No 8" Cone Type
 1-4 1/2' Section

MATERIALS

Bowls Cast Iron Column Pipe Steel
 Impellers Bronze Enclg. Tube —
 Bowl Shaft 416 SS. Brg. Retainer Bronze
 Bowl Brgs. Bronze Lineshaft Brgs. Rubber
 Strainer Galvanized Lineshaft C-1045 w/304 SS
 Head Cast Iron
 Packing Graphite

Customer Sun Valley Well #12
 Furnished By: Pump Tech Co. Inc.
 4444 So. Yellowstone Hwy
 Idaho Falls, Idaho 83402
 P. O. No.
 Pump Serial No. 2K7-0502

MFG. BY NATIONAL PUMP CO. GLENDALE, ARIZONA

Dwn. Bv

Date

Drawing No.

Company: PumpTech Company, Inc.
Name: Barry Cazier
Date: 10/23/2007

Sun Valley Well # 12



Pump:

Size: J11LC (5 stage)
Type: VERT. TURBINE
Synch speed: 1800 rpm
Curve: CVJ11L4P6CY
Specific Speeds:

Dimensions:

Speed: 1770 rpm
Dia: 8.7225 in
Impeller:
Ns: 2115
Nss: 12039
Suction: 8 in
Discharge: 8 in

Search Criteria:

Flow: 600 US gpm

Head: 315 ft

Fluid:

Water
SG: 1
Viscosity: 1.105 cP
NPSHa: —

Temperature: 60 °F
Vapor pressure: 0.2563 psi a
Atm pressure: 14.7 psi a

Motor:

Standard: NEMA
Enclosure: ODP

Size: 75 hp
Speed: 1800
Frame: 365T

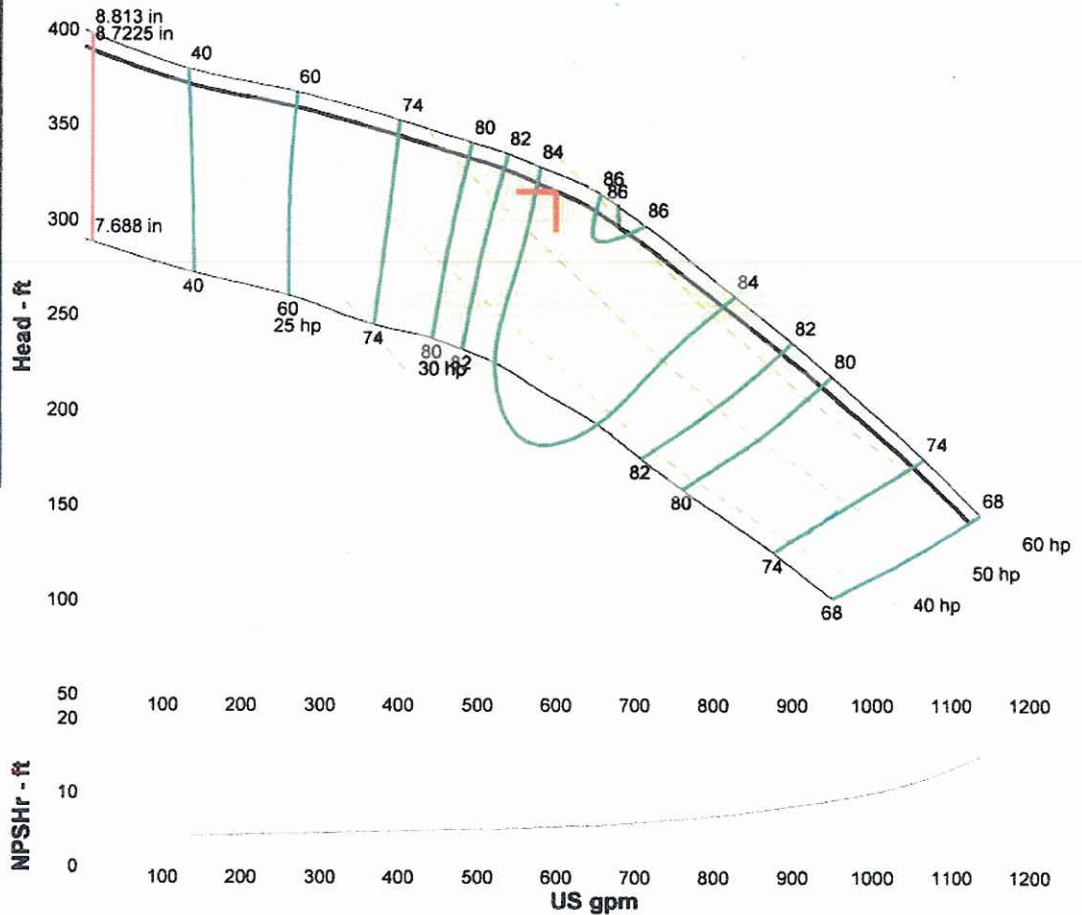
Sizing criteria: Max Power on Design Curve

Pump Limits:

Temperature: 180 °F
Pressure: 400 psi g
Sphere size: 0.75 in

Power: —
Eye area: 15.9 in²

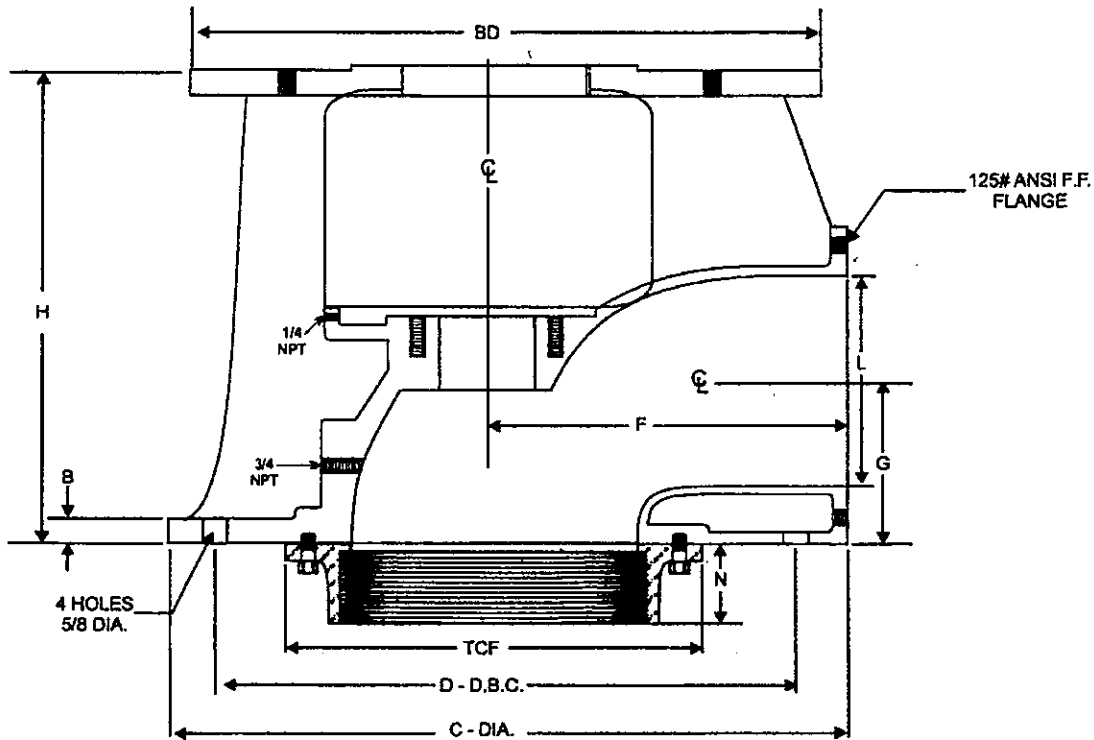
Data Point	
Flow:	600 US gpm
Head:	315 ft
Eff:	84.7%
Power:	56.3 hp
NPSHr:	5.58 ft
Design Curve	
Shutoff head:	391 ft
Shutoff dP:	169 psi
Min flow:	10 US gpm
BEP:	86% @ 678 US gpm
10L power:	63 hp @ 937 US gpm
Max Curve	
Max power:	65.3 hp @ 950 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
720	1770	284	85.5	60.2	6.29
600	1770	315	84.7	56.3	5.58
480	1770	334	79.5	50.9	5.17
360	1770	349	69.8	45	4.89
240	1770	362	55.8	38.7	4.56

DIMENSIONS "N-260" DISCHARGE HEAD



THREADED COLUMN

MODEL	DRIVER BD	COL. SIZE	MAX. SHAFT. SIZE	DIMENSIONS IN INCHES								WEIGHT LBS.
				B	C	D	F	G	H	L	N	
N4	10, 12	3, 4	1-11/16"	3/4	16	14-1/2	8-1/2	5-3/8	15-3/4	4	2	195
N6	10, 12, 16-1/2	5, 6		3/4	19	17	9-3/4	6-3/4	17-1/4	6	2-1/2	245
N8	10, 12, 16-1/2	6, 8		3/4	25	23	12-1/2	6-3/4	19-1/4	8	3-3/4	275
N10	10, 12, 16-1/2	8, 10		7/8	25	23	12-11/16	8-5/8	21-1/4	10	3-1/16	350

MODEL	COLUMN	MAX. SETTING FEET		MIN. (1) WELL CASING
		OH. LUBE	PRODUCT LUBE	
N4	3"	280	330	8"
	4"	230	250	8"
N6	5"	330	375	10"
	6"	240	280	10"
N8	6"	370	410	12"
	8"	270	320	12"
N10	8"	260	300	16"
	10"	210	250	16"

MODEL	RPM	HORSE POWER LIMIT	MODEL	RPM	HORSE POWER LIMIT
N4-260	3600	60	N8-260	3600	200
	1800	40		1800	100
	1200	20		1200	60
N6-260	3600	125	N10-260	3600	250
	1800	60		1800	200
	1200	40		1200	125

CONTACT FACTORY FOR HIGHER RATINGS

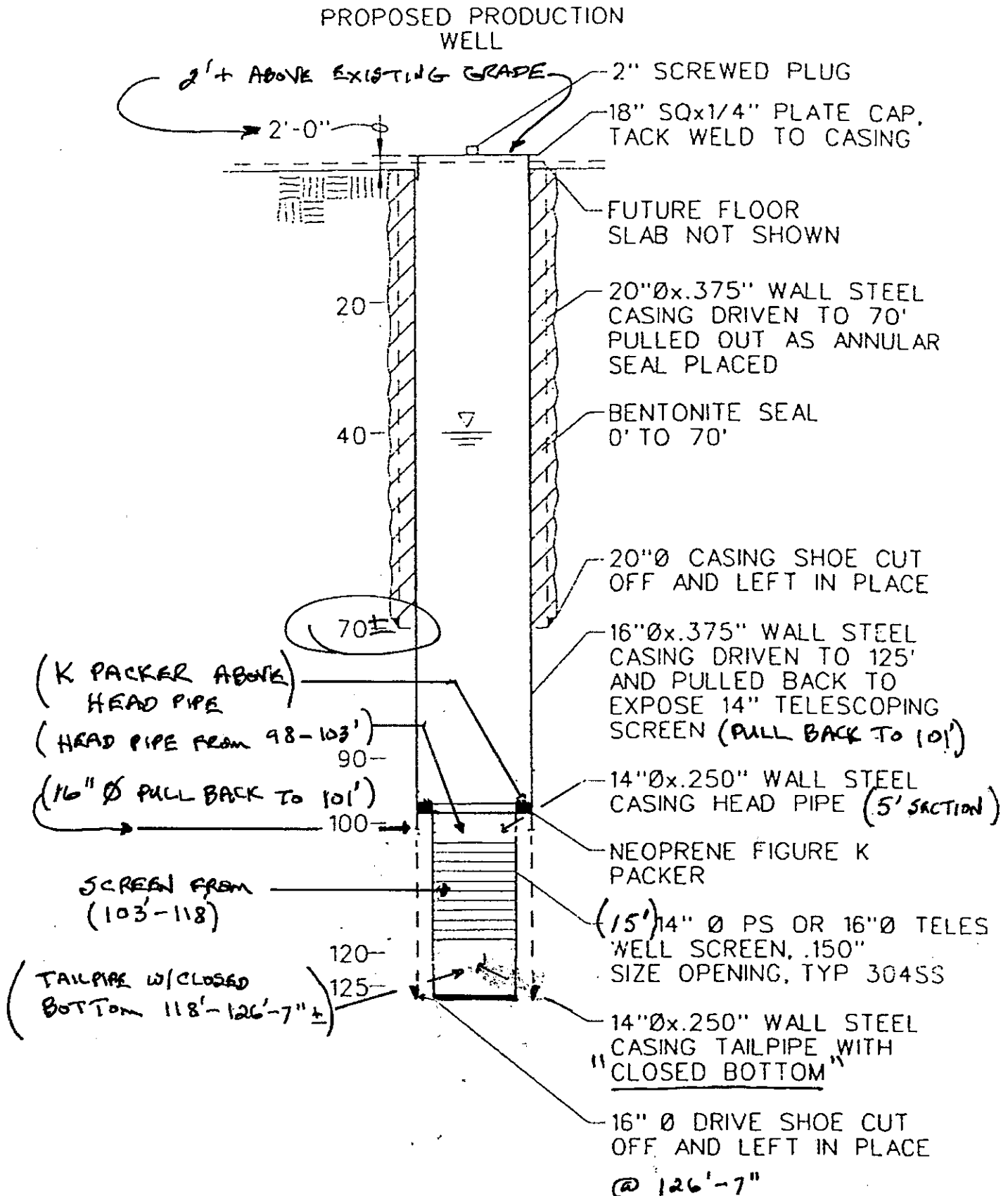
NOTE: (1) MIN. CASING SIZE WHEN CASING IS FLUSH WITH FOUNDATION.

Material Supplied

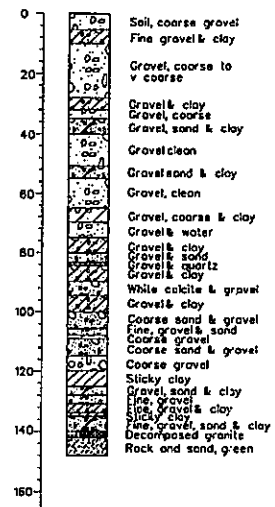
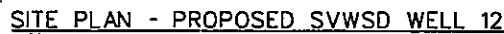
- 1- 75 HP vertical hollowshaft electric motor
- 1- National Pump 8" cast iron discharge head
- 89.5- Feet of column and shaft assembly
 - 8- 10' sections
 - 1- 5' section
 - 1- 4.5' section
 - Total setting with bowls and strainers = 103'
- 1- National Pump bowl assembly
- 1- 8" suction pipe
- 1- 8" Galvanized cone strainer
- 1- 1 1/4" poly tube for sounding equipment

J.V.W.S.D.

WELL 12 SCREEN SETTING



JOHN WISKUS 8/13/04



1. BASED ON CH2M HILL TECHNICAL MEMORANDUM OF TEST WELL RESULTS, JULY 14, 1989, WELL PRODUCTION COAL IS BETWEEN 1000 AND 1500 GALLONS PER MINUTE.
2. WELL IS DESIGNED FOR MAXIMUM EFFICIENCY, LARGE DIAMETER, NATURAL GRAVEL PACK DEVELOPMENT.
3. DRILLING METHODS USED MUST BE CAPABLE OF PULLING 16" AND 20" CASING.
4. SANITARY SEAL PRIMARILY, BENTONITE SOLIDS DUE TO STRONG LIKELIHOOD OF LOSING SLURRIES INTO SHALLOW GRAVELS.
5. VIGOROUS DEVELOPMENT WILL BE REQUIRED.
6. WELL TO CONFORM TO IDAPA 37, TITLE 03, CHAPTER 02, WELL CONSTRUCTION STANDARD RULES AND APPROVED BY IDADO DEQ.



CH2MHILL

SUN VALLEY WATER AND
SEWER DISTRICT
WELL No. 12

DESIGN
WELL NO. 12

SHEET NO. 1 OF 1
DWG NO.
DATE NOV. 2001
PROJ 154047.A0.2B

FILENAME: SV12_CO2.DLV PLOT DATE: 18-APR-2001 PLOT TIME: 12:00:00

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Official Use Only

Inspected by _____

Twp _____ Rge _____ Sec _____
1/4 1/4 1/4

Lat: : : Long: : :

1. WELL TAG NO. D - 0034157

DRILLING PERMIT NO 816660

Other IDWR No. 37-21154

2. OWNER

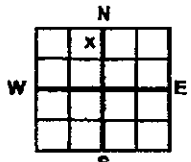
Name SUN VALLEY WATER & SEWER

Address P.O. BOX 2410

City SUN VALLEY State ID Zip 83353

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location


 Twp. 4 ☒ North or ☐ South
 Rge. 18 ☒ East or ☐ West
 Sec. 18 NE 1/4 NE 1/4 NW 1/4
 Gov't Lot _____ County BLAINE
 Lat: : : Long: : :

 Address of Well Site 101 SILVERWEED
 City SUN VALLEY

(Give at least name of road + Distance to Road or Landmark)

Lt. _____ Blk. _____ Sub. Name _____

4. USE:

☐ Domestic ☒ ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK check all that apply (replacement ect.)

☒ New Well ☐ Modify ☐ Abandonment ☐ Other

6. DRILL METHOD

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other

7. SEALING PROCEDURES

Seal/Filter Pack			Amount	Method
Material	From	To	Sacks or Pounds	
BENT	0	70	30500 LBS	PUMP/DRY
				POUR

Was drive shoe used? ☒ Y ☐ N Shoe depth(s) 102'Was drive shoe seal tested? ☐ Y ☒ N How?

8. CASING/LINER

Dia.	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
16"	+ 2	102	.375	STEEL	☒	☐	☒	☐

Length of Headpipe 6' 4" Length of Tailpipe 7'

9. PERFORATIONS/SCREENS

 Perforations _____ Methods _____
 Screens _____ Screen Type SS TELESCOPING

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
103	118	0.15			S STEEL	☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

 49 ft below ground Artesian pressure _____
 depth flow encountered _____ ft. Describe access port _____
 r control devices PLATE

11. WELL TESTS:

☒ Pump ☐ Bailor ☐ Air ☐ Flowing Artesian

Yield gpm	Drawdown	Pumping Level	Time
477	41'	83'	9 HRS

Water Temp. 48°

Bottom hole temp. _____

Water Quality test or comments: _____

Depth first water encounter _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Water

Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
20	0	6	GRAVEL -BOULDERS		
	6	10	CLAY & GRAVEL		
	10	20	GRAVEL W/LITTLE CLAY/SAND		
	20	18	SMALL GRAVEL/SAND		
	28	35	SAND/ CLAY		
	35	44	SMALL GRAVEL/SAND		
	44	55	SAND/ SMALL GRAVEL	X	
	55	64	BOULDERS/ GRAVEL	X	
	64	70	BOULDERS CLAY CEMENTED		
16	70	77	GRAVEL/ SAND/ CLAY		
	77	80	GRAVEL/ SAND	X	
	80	90	GRAVEL/ SAND	X	
	90	100	GRAVEL/ SAND CLAY		
	100	105	SAND/ GRAVEL	X	
	105	109	CLAY SAND	?	
	109	118	COARSE GAVEL/ SAND	X	
	118	121	CLAY/ GRAVEL/ SAND		
	121	125	CLAY		

RECEIVED

NOV 09 2004

Department of Water Resources
Southern Region

Completed depth 125 ft. (measurable)

Date: Started June 24, 2004

Completed November 3, 2004

13. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

 Company Name WALKER WATER SYSTEMS Firm No. 15
 624 PIERCE ST. TWIN FALLS, ID 83301

Firm Official

Date 11-8-04

and

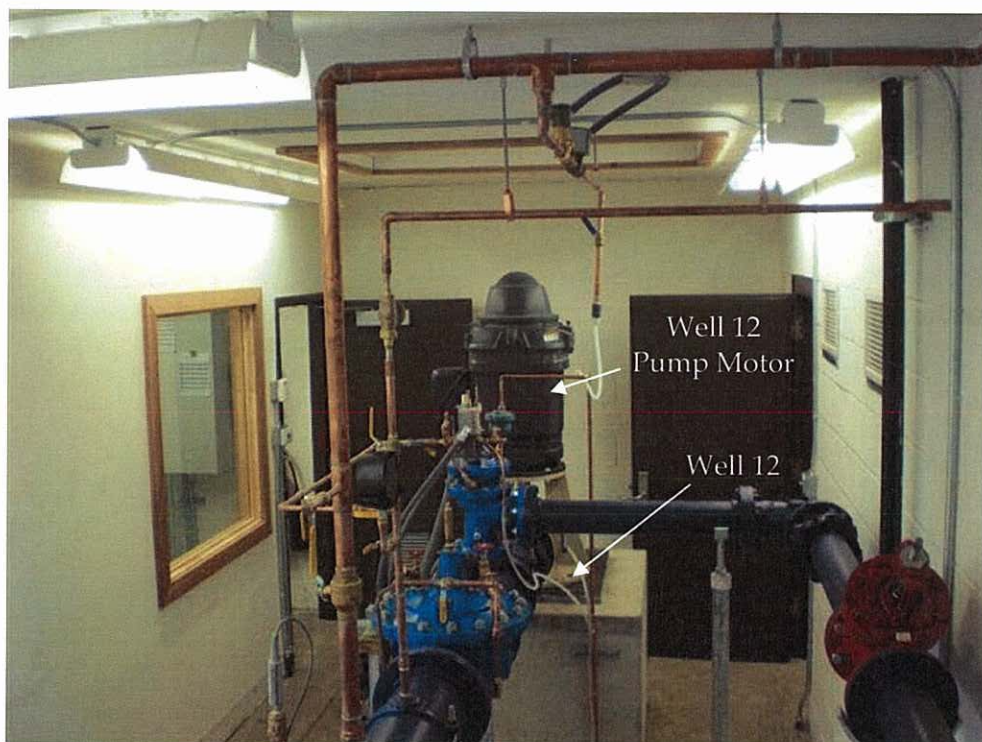
Driller or Operator

Date 11-8-04

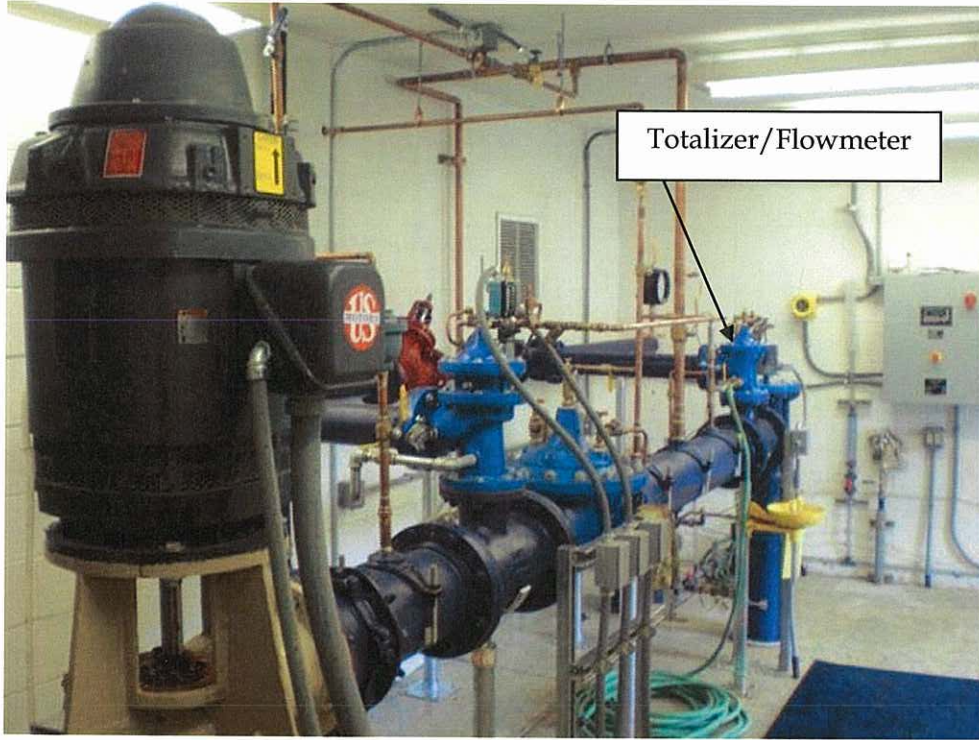
(Sign once if Firm Official & Operator)



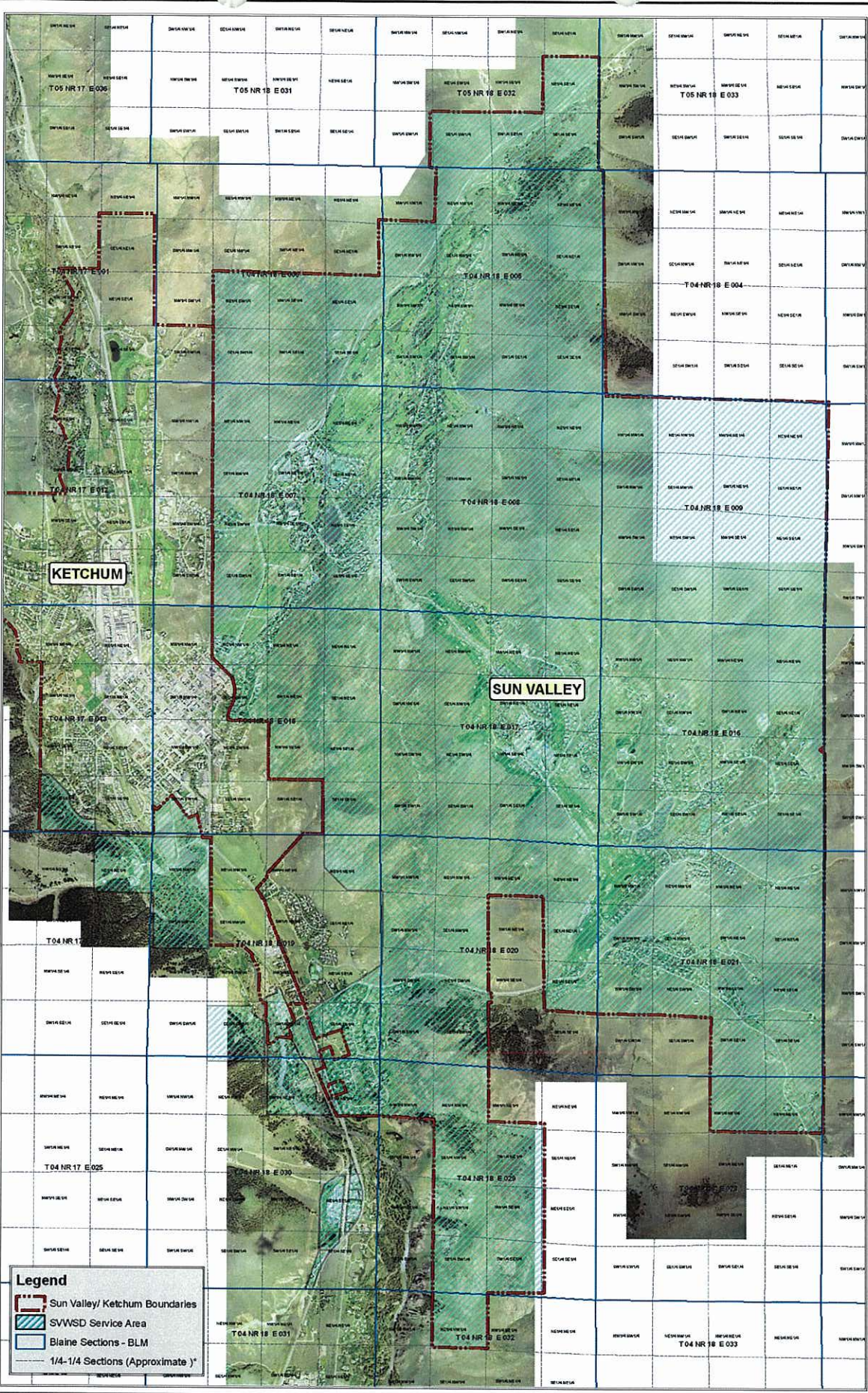
Sun Valley Water and Sewer District "Well 12"



Sun Valley Water and Sewer District "Well 12"



Sun Valley Water and Sewer District "Well 12"



Legend

- Sun Valley/ Ketchum Boundaries
- SVWS District Service Area
- Blaine Sections - BLM
- 1/4-1/4 Sections (Approximate) *