STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-31511
Exam Date: 10/11/2012

1. Current Owner: TRELLIS SUBDIVISION HOA
660 E WATERTOWER LN
MERIDIAN ID 83642
(208) 286-0566

2. Accompanied by: Kim Bray & Norm Revels
Phone No: Same
Address: Same
Relationship to Permit Holder: HOA Representative & Eagle Water Co. Operations Manager

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	SW1/4SE1/4	Sec. 33,	Twp 05N,	Rge 01W, B.M.
ADA County				
GROUND WATER	L2 NW1/4NE1/4	Sec. 4,	Twp 04N,	Rge 01W, B.M.
ADA County				

Method of Determination: Arc Map (Aerial Photo)

2.

PLACE OF USE: FIRE PROTECTION

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
04N 01W 4		X			X												
		L 2			L 3												
05N 01W 33									X			X			X		

PLACE OF USE: DOMESTIC

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
04N 01W 4		X			X												
		L 2			L 3												
05N 01W 33									X			X			X		

Method of Determination:

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

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
___D0029063___	Unknown_	_125	_____	___WEG____	_____(8")_____
___D0029062___	Unknown_	_125	_____	___WEG____	_____(8")_____
_____	_____	____	_____	_____	_____
_____	_____	____	_____	_____	_____

*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
____N/A_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

2. Measurements: No field measurement.

E. FLOW CALCULATIONS _____Additional Computation Sheets Attached

Measured Method: (Theoretical Horsepower Equation)

HP = 125
Z = 215' (Estimated)
P = 60 psi (Gauge)

Q = 8.8 x 0.7 x 125/215 + (2.31 x 60) = 770/353.6 = 2.2cfs
Q(theoretical) = 2.2 cfs x 2 pumps = 4.4 cfs
Q(theoretical) = 4.4 cfs > 3.9 cfs Q(permit)

Appears that the current two pump system can attain the 3.9 cfs permit diversion rate for domestic use and fire protection. Recommend the permit diversion rate of 3.9 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

   $V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) =

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

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

2. Volume Calculations for Other Uses: (Domestic Use – Internal)

   V = 0.6 AFA/home — 200 Residents (Assumed)

   Total Number of Homes = 48 + Golf Pro Shop = 49 — 100 Occupants (Pro Shop – Assumed)

   V = 49 x 0.6 AFA = 29.4 AFA — 10 gpd (Assumed)

   Vr = (200 x 365 x100)/325,850 = 22.4 AFA — 250 days (Assumed)

   Vr = (100 x 250 x 10)/325,850 = 0.8 AFA

   Vc = 3.9 cfs x 365 x 1.9835 = 2,823.5 AFA

   Vr = 22.4 + 0.8 = 23.2 AFA < 29.4 AFA V(domestic) < 2,823.5 AFA Vd

   Recommended, V = 23.2 AFA

G. NARRATIVE/REMARKS/COMMENTS

WATER SUPPLY SYSTEM:

Two ground water wells, each with a 125-hp vertical turbine pump, provide water to The Trellis Subdivision, a 48-Lot residential development, and the pro shop for the River Birch Golf Course, for domestic use and fire protection. Fire hydrants are distributed throughout the development to provide water for fighting fires.

The two-well water supply system provides redundancy for the operator to maintain water service to the development during pump failure and maintenance. During normal operation, which excludes fire fighting, only one ground water well pump is required to meet the homeowner's domestic internal needs.

Domestic use for 48 homes and a golf pro shop, are for internal use only. Irrigation water for irrigation of the lawns and landscaping is provided by the Farmers Union Ditch Company.

Have conditions of permit approval been met? __X___Yes _____No

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	3.9	&/or	N/A
Beneficial Use Limit	3.9	&/or	N/A
System Measurement	4.4 (theoretical)	&/or	N/A
Proof Fee Amount	4.0	&/or	N/A
Recommended Amount	3.9	&/or	N/A

H. RECOMMENDATIONS

1. Recommended Amounts

BENEFICIAL USE	PERIOD OF USE	DIVERSION RATE	ANNUAL VOLUME
FIRE PROTECTION	01/01 to 12/31	3.900 CFS	N/A
DOMESTIC	01/01 to 12/31	0.330 CFS	23.2 AFA
	Totals:	3.900 CFS	23.2 AFA

2. Recommended Amendments

___Change P.D. as reflected above ___Add P.D. as reflected above _X__None

___Change P.U. as reflected above ___Add P.U. as reflected above ___Other

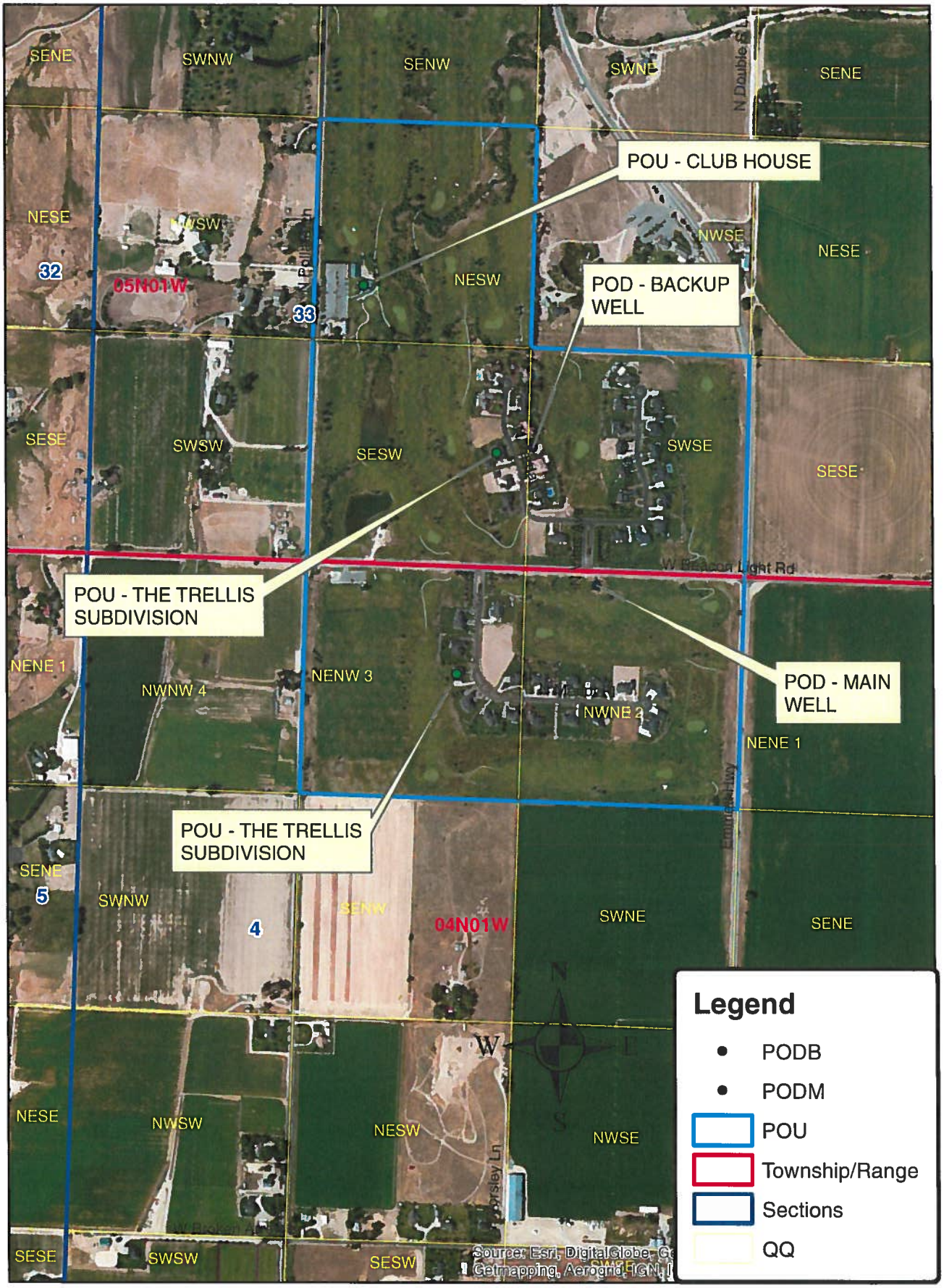
I. AUTHENTICATION

Field Examiner's Name Rick Collingwood Date 3/12/13

Reviewer_____ Date_____

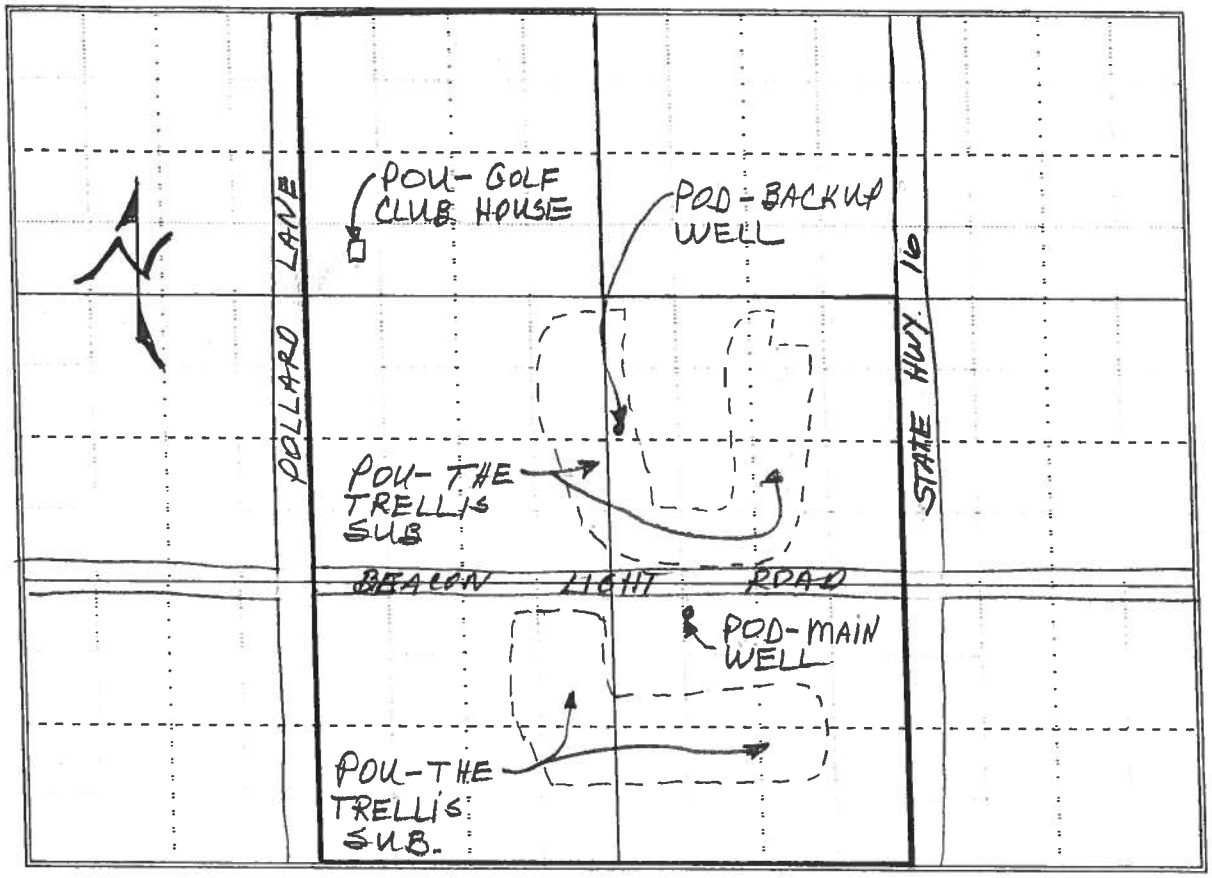
63-31511
GOV'T. LOTS 2 & 3

ESRI AERIAL PHOTO - 2012



Form 219 07/11

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" = NTS

☐ 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

MAIN WELL
LOT 2, BLK 5

Form 238-7
6/02

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

782932

Office Use Only
Well ID No.
Inspected by
Twp ____ Rge ____ Sec ____
____ 1/4 ____ 1/4 ____ 1/4
Lat: : : Long: : :

1. WELL TAG NO. D 0029063
DRILLING PERMIT NO.
Water Right or Injection Well No. 63 31511

2. OWNER: Trellis Subdivision/Donald B Jensen
Name
Address 3661 W Beacon Light Rd
City Star State ID Zip 83669

3. LOCATION OF WELL by legal description:
You must provide address or Lot, Blk, Sub. or Directions to well.
Twp. 4 North ☒ or South ☐
Rge. 1 East ☐ or West ☒
Sec. 4 ____ 1/4 (10 acres) ____ 1/4 (40 acres) ____ 1/4 (160 acres)
Gov't Lot 2 County Ada
Lat: 116 : 27 : 30 Long: 43 : 43 : 30
Address of Well Site 1100'W-150' S intersection Beacon Light & Hwy 16 City Star
(Give at least name of road + Distance to Road or Landmark)
Lt. ____ Blk. ____ Sub. Name not platted

4. USE: well #2
☐ Domestic ☒ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other fire protection etc

5. TYPE OF WORK check all that apply (Replacement etc.)
☒ New Well ☐ Modify ☐ Abandonment ☐ Other

6. DRILL METHOD:
☐ Air Rotary ☐ Cable ☒ Mud Rotary ☐ Other

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
bentonite grout	0	315	80 sx	pumped
609 sand	306	351	1900#	poured

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

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
12	-1'6"	315	375	steel	☒	☐	☐	☐
8	306	326	322	steel	☐	☒	☐	☐
8	346	351	322	steel	☐	☒	☐	☐

Length of Headpipe 20'3" Length of Tailpipe 5'
Packer ☐ Y ☐ N Type

9. PERFORATIONS/SCREENS PACKER TYPE
Perforation Method
Screen Type & Method of Installation Johnson V-wire 45 slot

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
326	346	45		8	stnls	☐	☒
						☐	☐
						☐	☐

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
60 ft. below ground Artesian pressure ____ lb.
Depth flow encountered ____ ft. Describe access port or control devices:

12. WELL TESTS: ☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
950	110'	170'	3 hr

Water Temp. Bottom hole temp.
Water Quality test or comments:
Depth first Water Encounter

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water Y	Water N
8	0	1	road mix backfill		X
	1	3	brown sandy topsoil		X
	3	6	tan sand		X
	6	11	brown sand		X
	11	48	coarse brown sandw/ ½" gravel		X
	48	52	clay streak		
	52	71	coarse sand		
	71	80	tan clay		
	80	99	sand & gravel	X	
	99	122	tan, brown clay		X
	122	125	blue clay		X
	125	133	tan clay		X
	133	166	blue clay		
	166	169	sand	X	
	169	197	sandy brown clay		
	197	205	blue clay		
	205	209	sand		X
	209	223	blue clay		X
	223	230	tan clay		
	230	250	sand	X	
	250	252	tan clay		
	252	320	blue clay, some tan, & wood		
	320	326	tan clay		
	326	346	coarse sand		
	346	365	blue clay		
	365	400	fine sand & blue clay		
			swedge type packer 5'10" pipe		

SCANNED
MAR 19 2003
RECEIVED
MAR 18 200
WATER RESOUR
WESTERN REG

Completed Depth 351'
Date: Started 2/1/03 Completed 2/15/03

14. DRILLER'S CERTIFICATION
I/We certify that all minimum well construction standards were complied with at t time the rig was removed.

Company Name Stevens & Sons Firm No 15
Principal Driller Ron Stevens Date
and
Driller or Operator II Nic Stevens Date
Operator I Date
Principal Driller and Rig Operator required.
Operator I must have signature of Driller/Operator II.

WATER RESOURCES

BACKUP WELL
LOT 16, BLK 1

782882

Form 238-7
11/97

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only
Inspected by _____
Twp ____ Rge ____ Sec ____
____ 1/4 ____ 1/4 ____ 1/4
Lat: : : Long: : :

1. WELL TAG NO. 0029062
DRILLING PERMIT NO. 782882
Other IDWR No. 63-31511

2. OWNER:
Name Donald B Jensen/Trellis Sub.
Address 8661 W Beacon Light RD
City XXXXXXStar State ID Zip 83669

3. LOCATION OF WELL by legal description:
Sketch map location must agree with written location.

N / W / E / S

Twp. 5 North XX or South ☐
Rge. 1 East ☐ or West XX
Sec. 33, ____ 1/4 (10 acres) S/W 1/4 (40 acres) S/E 1/4 (160 acres)
Gov't Lot ____ County Ada
Lat: : : Long: : :
Address of Well Site 1200' west, 600' northof intersection beacon Lt & Hwy 16 City Star
(Give at least name of road + Distance to Road or Landmark)
Lt. _____ Blk. _____ Sub. Name unplatted

4. USE:
☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other 48 lot subgolf pro shop

5. TYPE OF WORK check all that apply (Replacement etc.)
XX New Well ☐ Modify ☐ Abandonment ☐ Other _____

6. DRILL METHOD
☐ Air Rotary ☐ Cable XX Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK Material	From	To	AMOUNT Sacks or Pounds	METHOD
bentonite groat	0	326	90 sk	pumped
#6-9 sand	318	364	1900#	poured

Was drive shoe used? ☐Y XX N Shoe Depth(s) _____
Was drive shoe seal tested? ☐ Y ☐ XX N How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
12"	+2	326'6"	375	steel	XX	☐	☒	☐
8	318	339	322	steel	☐	XX	☒	☐
8	359	364	322	steel	☐	XX	☒	☐

Length of Headpipe 21' Length of Tailpipe 5'

9. PERFORATIONS/SCREENS
Perforations Method _____
Screens Screen Type Johnson V wire

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
339	359	45		8	stnls	☐	XX
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:
70 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

11. WELL TESTS:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
950	100	170	2 Hours

Water Temp. _____ Bottom hole temp. _____
Water Quality test or comments: _____
Depth first Water Encounter _____

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water Y	Water N
17	0	2	brown clay topsoil		X
	2	11	tan sand		X
	11	42	sand & ½" gravel		X
	42	46	gravel & sand		X
	46	48	brown clay & gravel		X
	48	80	sand & gravel	X	
	80	87	brown clay		X
	87	106	gravel	X	
	106	129	tan clay & gravel		X
	129	138	blue clay		X
	138	156	tan clay		X
	156	175	blue clay		X
	175	185	brown clay		X
	185	193	sand	X	
	193	217	blue clay		X
	217	222	sand & gravel	X	
	222	310	blue clay with sand streaks	X	
12	310	339	brown clay & blue clay		X
	339	359	coarse sand & gravel	X	
8	359	373	tan clay		X
	373	500	blue clay& fine sand streaks	X	
			swedge packer 10" pipe 5' long		

RECEIVED
MAR 26 2003
WATER RESOURCES
WESTERN REGION

SCANNED
APR 01 2003

Completed Depth 364 (Measurable)
Date: Started 1/17/03 Completed 3/19/03

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

Company Name Stevens & Sons Firm No. 153
Firm Official _____ Date 3/20/03
and
Driller or Operator _____ Date _____
(Sign once if Firm Official & Operator)

FIELD EXAM PHOTOS

Water Right Permit: 63-31511 Field Exam Date: 10-11-12
PLS: SW1/4, SE1/4 Section 33, T.5N, R.01W
PLS: NW1/4NE1/4 Section 4, T.4N, R.01W
Field Examiner: RC

Point of Diversion: View inside of the main pump house of the ground water well and a 125-hp vertical turbine pump. The ground water well and pump house are located on Lot 2, Block 5, of The Trellis Subdivision.

Point of Diversion: View inside the main pump house of the 8" steel pipe discharge line and reducing to a 6" steel main through the floor of the pump station.

View inside the main pump station of the pressure relief valve and the 4" steel discharge pipe. The 4" drain line discharges to a drain facility outside of the pump station.

View easterly of the 4" steel drain line from the main pump house.

Note: The pump, piping, and mechanical equipment in the backup pump house are identical to the main pump house. Therefore, photos for the backup pump house are not shown.

Place of Use: View northerly of the typical homes within the development which are served by the two domestic wells.

State of Idaho
DEPARTMENT OF WATER RESOURCES
Western Region, 2735 Airport Way • Boise, Idaho 83705-5082
Phone: (208) 334-2190 • Fax: (208) 334-2348 • Web Site: www.idwr.idaho.gov

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Interim Director

July 6, 2012

Trellis Subdivision HOA
660 E. Watertower Lane
Meridian, ID 83642

RE: Scheduling Field Exam for Water Right Permit No. 63-31511

We are planning to **conduct water right field examinations** in the vicinity of the above-referenced permit **during the week of July 16, 2012**. An examination is needed to verify your water use in order to issue a water right license.

Please be advised that you will need to operate your system under normal operating conditions during the examination. The permit authorizes the diversion of ground water of 3.90 cfs. for fire protection and domestic use.

In order to conduct your exam as efficiently as possible, we ask that you call this office to schedule a day and time convenient for you. **Please call me at 208-334-2190 by July 13, 2012, to conduct the exam during the week of July 16, 2012.** If there is a problem with scheduling or conducting the examination at this time, please let me know so we can reschedule or make other arrangements.

I appreciate your attention to this matter and I look forward to hearing from you.

Sincerely,

Rick Collingwood

Rick Collingwood, P.E.
Water Resource Agent, Sr.