

May 5, 2020

Nick Miller, Western Region Manager
Idaho Department of Water Resources
2735 W Airport Way
Boise, Idaho 83705

SUBJECT: GROUNDWATER MONITORING-REPORTING PLAN

Dear Mr. Miller,

On January 21, 2016, Water Right No. 78356 was approved by the Idaho Department of Water Resources (IDWR). The approved transfer included six water rights: 61-12283, 61-12284, 61-12285, 61-12281, 61-12280, and 61-12282. A Condition of Approval of each water right was that “the diversion and use in connection with the water right is subject to a Monitoring-Reporting Plan”. As outlined in the Condition of Approval, the right holder shall provide the IDWR with a plan for monitoring-reporting of aquifer levels, diversion flow rates, and volumes.

It is Mountain Waterworks’ understanding the Shekinah Industries, Inc. (Shekinah) water rights have been further subdivided by the four primary landowners owning approximately 765-acres and designated as the place of use. The table below summarizes the land ownership and associated water right percentage that will ultimately modify water rights currently under the ownership of Shekinah.

Table 1: Shekinah Water Right Ownership

Land Owner	Acres	Water Ownership (%)	Water Vol. (AFA)
Duane & Cheryl Amyx	32.14	3.39	50.0
Paul & Sheila Hudson	100.00	10.56	155.9
J&M Solid Rock, LLC	160.00	16.89	249.3
Shekinah Industries Inc.	481.76	69.16	1020.8
Totals	773.90	100.00	1,476.0

On behalf of J&M Solid Rock, LLC and Shekinah, Mountain Waterworks is proposing the following groundwater monitoring plan associated with the Transfer of Water Right No. 78356.

Background Information

Two new groundwater wells were drilled on land owned by J&M Solid Rock during 2018, 2019 and will be the initial points of diversion under the new water rights. In addition to the production wells, a shallow groundwater monitoring well (MW No.1) was constructed and developed for monitoring of shallow groundwater. The wells are identified as J&M PW No. 1 (D0080123) and J&M PW No. 2 (D0082843) and will be the primary points of diversion to complete the transfer. The water rights in total will divert 1,476 acre-feet annually at a maximum diversion rate of 5,56 cfs. The place of use is identified on a total of 765-acres and will be limited to irrigation of 369-acres within the approved place of use.

Shekinah Groundwater Monitoring-Reporting Plan

Monitoring Well (J&M MW No.1), J&M PW. No.1 (D0080123), J&M PW No. 2 (D0082843)

May 4, 2020

Groundwater Monitoring-Reporting Plan

1. Groundwater Monitoring

- 1.1. Installation of pressure transducers in the pumping wells (J&M PW. No.1 D0080123, J&M PW No. 2 D0082843), with a reading frequency of every six hours for the first year, and re-evaluation thereafter.
- 1.2. Installation of a barometric pressure recorder in the shallow observation well, with a reading frequency of every six hours for the first year, and re-evaluation thereafter.
- 1.3. Quarterly hand measurement of water levels for the first year for production wells and the monitoring well, and re-evaluation of measurement frequency thereafter.
- 1.4. Monitoring at an increased frequency (1-hour) in the pumping well at the end of the irrigation season to facilitate water level recovery analysis.

2. Flow Monitoring

- 2.1. Installation of a flowmeter on the production wells (e.g. magmeter) to record discharge over the first year with re-evaluation thereafter.
- 2.2. The flowmeter should meet IDWR's minimum acceptable standards for measurement and reporting of surface and groundwater diversions;
 - ✓ Minimum manufacturers' design accuracy of +/- 2 percent of reading
 - ✓ Installed accuracy of at least +/- 10 percent of reading
 - ✓ Must read instantaneous flow or be capable of flow rate calculation
 - ✓ Must record total volume
 - ✓ Non-volatile memory (power outage does not zero volume reading)
 - ✓ Sufficient digits to assure "roll-over" to zero does not occur within 2 years
 - ✓ Volume reading cannot be "reset" to zero
 - ✓ Installed to manufacturers' specifications

3. Facility Operation

- 3.1. Initiation of pumping using an uninterrupted, constant withdrawal rate, over 2-day time period, to evaluate the effects of extended pumping.

4. IDWR Reporting

- 4.1. Reporting of water level data on a monthly basis to IDWR for the first year, and re-evaluation of submittal frequency thereafter.
- 4.2. Submission of an annual report to IDWR that would include:
 - ✓ Analysis of water level trends in the production wells, and shallow monitoring well.
 - ✓ Reporting of discharge rates over time and analysis in relation to water level trends.
 - ✓ Reporting of crops grown and acres irrigated during the year.

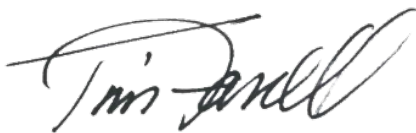
Pumping Equipment Installation and Sequence of Pumping

Due to timing of how the production wells will be equipped, and how the land will be farmed and irrigated, the operational sequencing for PW No. 1 and PW No. 2 will differ during the spring of 2020. PW No. 2 will be the first on-line and will be utilized to supply two (2) center pivots, irrigating approximately 148 acres. PW No. 1 will be equipped in May 2020 and will supply two (2) center pivots. Both wells together will supply four (4) center pivots and irrigate 369 total acres at a maximum diversion rate of 5.56 cfs.

Please contact me directly with questions or concerns on the proposed Groundwater Monitoring and Reporting Plan. I can be reached directly at 208.850.9978, or tfarrell@mountainwtr.com.

Respectfully submitted,

Mountain Waterworks

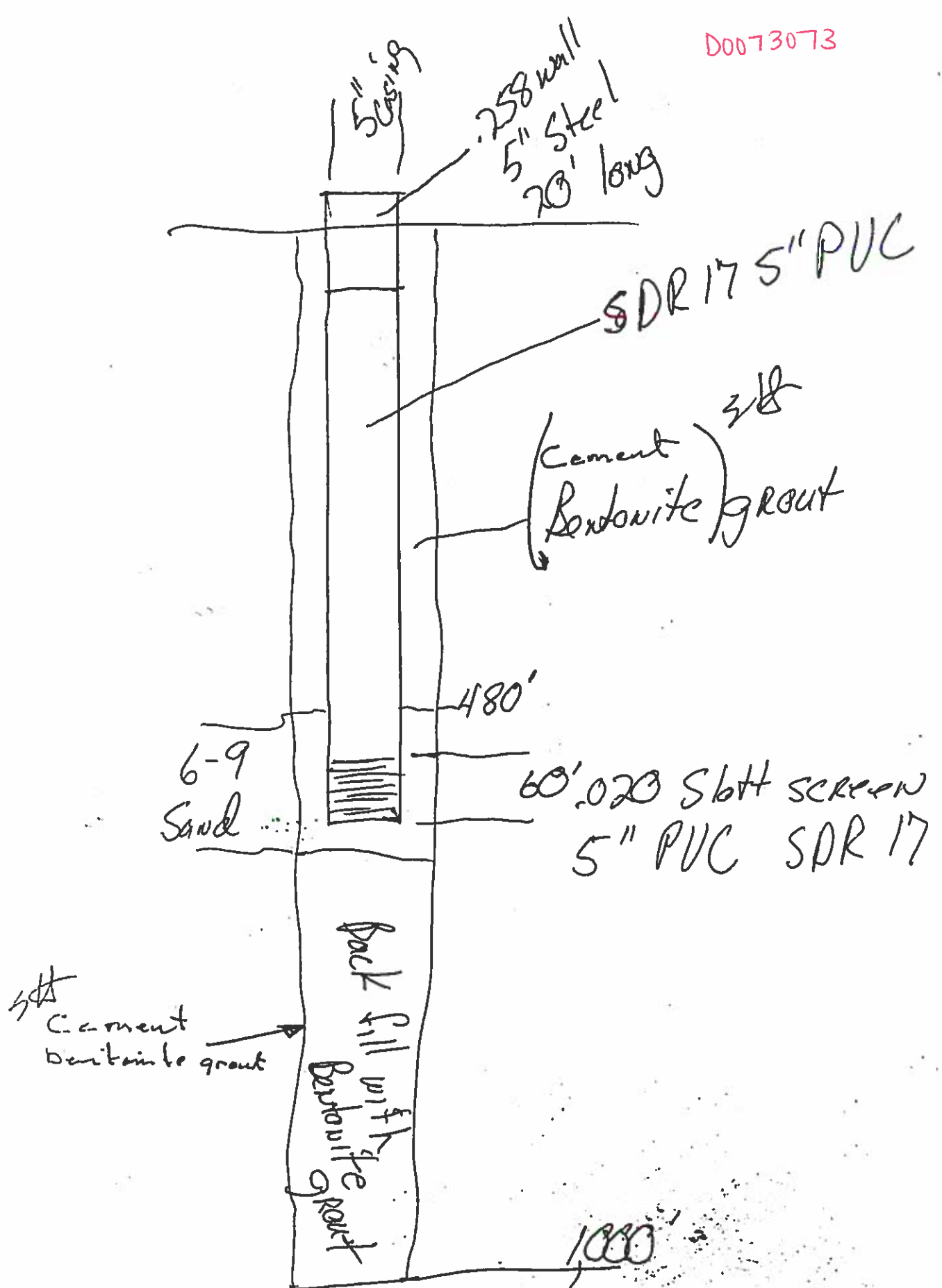


Tim Farrell, P.E.
Vice President and Principal Engineer

Attachments:

1. J&M MW No. 1
2. J&M PW- 1 Drillers Report
3. J&M No. 1 – As Built
4. J&M PW-2 Drillers Report
5. J&M No. 2 – As Built

D0073073



MAY 08 2019

WATER RESOURCES
WESTERN REGIONIDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. WELL TAG NO. D 0080123

Drilling Permit No. 887433
Water right or injection well # Transfer #78356

2. OWNER:

Name J&M Solid Rock LLC
Address 1761 S. Phillippi
City Boise State Id Zip 83705

3. WELL LOCATION:

Twp. 1 North ☒ or South ☐ Rge. 4 East ☒ or West ☐
Sec. 14 10 acres 1/4 40 acres 1/4 160 acres 1/4Gov't Lot _____ County Elmore
Lat. 43 20.052' N (Deg. and Decimal minutes)
Long. 115 57.240' W (Deg. and Decimal minutes)
Address of Well Site 3,400' South of I 84 on Simco Rd.

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

Lot _____ Blk. _____ Sub. Name _____

4. USE:

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

5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well
☐ Abandonment ☐ Other _____

6. DRILL METHOD:

☐ Air Rotary ☐ Mud Rotary ☐ Cable ☒ Other Reverse Rotary

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
Bentonite chips	0'	90'	5 yards	Poured
Cement	90'	556'	21 yards	Pumped

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
18"	+2'	556'	.375	Steel	☒	☐	☐	☒
10"	540'	580'	.365	Steel	☐	☒	☐	☒
10"	680'	710'	.365	Steel	☐	☒	☐	☒
10"	750'	770'	.365	Steel	☐	☒	☐	☒

Was drive shoe used? ☐ Y ☒ N Shoe Depth(s) _____

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method _____Manufactured screen ☒ Y ☐ N Type Johnson Vee WireMethod of installation Lowered

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
580'	680'	.30	100'	10"	Stainless	250'
710'	750'	.30	40'	10"	Stainless	250'
770'	800'	.30	30'	10"	Stainless	250'

Length of Headpipe _____ Length of Tailpipe 5'Packer ☒ Y ☐ N Type Figure K Swedge Packer

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
8-12	808'	765'	3,000 lbs	Poured
6-9	765'	540'	16,200 lbs	Poured

11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG) _____

Describe control device _____

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 345' Static water level (ft) 345'
Water temp. (°F) 64 Bottom hole temp. (°F) 64
Describe access port Will be added 2" pipe

Well test:

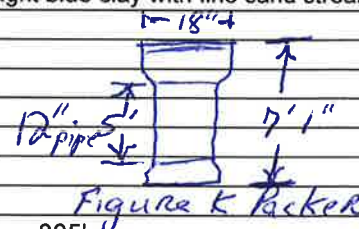
Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
<u>124'</u> <u>124'</u>	<u>1500</u> <u>1230</u>	<u>480</u> <u>960</u>	☒	☐	☐	☐

Test method:

Water quality test or comments: _____

13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
24"	0'	10'	Clay topsoil		X
	10'	120'	Cemented sand & gravel		X
	120'	129'	Sand & gravel		X
	129'	170'	Cemented sand & gravel		X
	170'	183'	Sand & gravel		X
	183'	203'	Tan clay		X
	203'	225'	Sand & gravel		X
	225'	270'	Tan clay		X
	270'	285'	Sand & gravel	X	
	285'	400'	Cemented sand & gravel		X
	400'	430'	Basalt		X
	430'	450'	Sandstone		X
	450'	480'	Cemented sand & gravel	X	
	480'	498'	Basalt		X
	498'	515'	Cemented sand		X
	515'	525'	Hard sandstone		X
	525'	578'	Cemented sand & clay streaks	X	
	578'	680'	Course sand with clay streaks	X	
	680'	691'	Brown clay		X
	691'	705'	Cemented fine sand		X
	705'	710'	Blue clay		X
	710'	741'	Fine blue sand	X	
	741'	769'	Blue clay		X
	769'	800'	Fine blue sand	X	
	800'	840'	Light blue clay with fine sand streaks		X

Completed Depth (Measurable): 805'Date Started: 7-10-18Date Completed: 4-23-19

14. DRILLER'S CERTIFICATION:

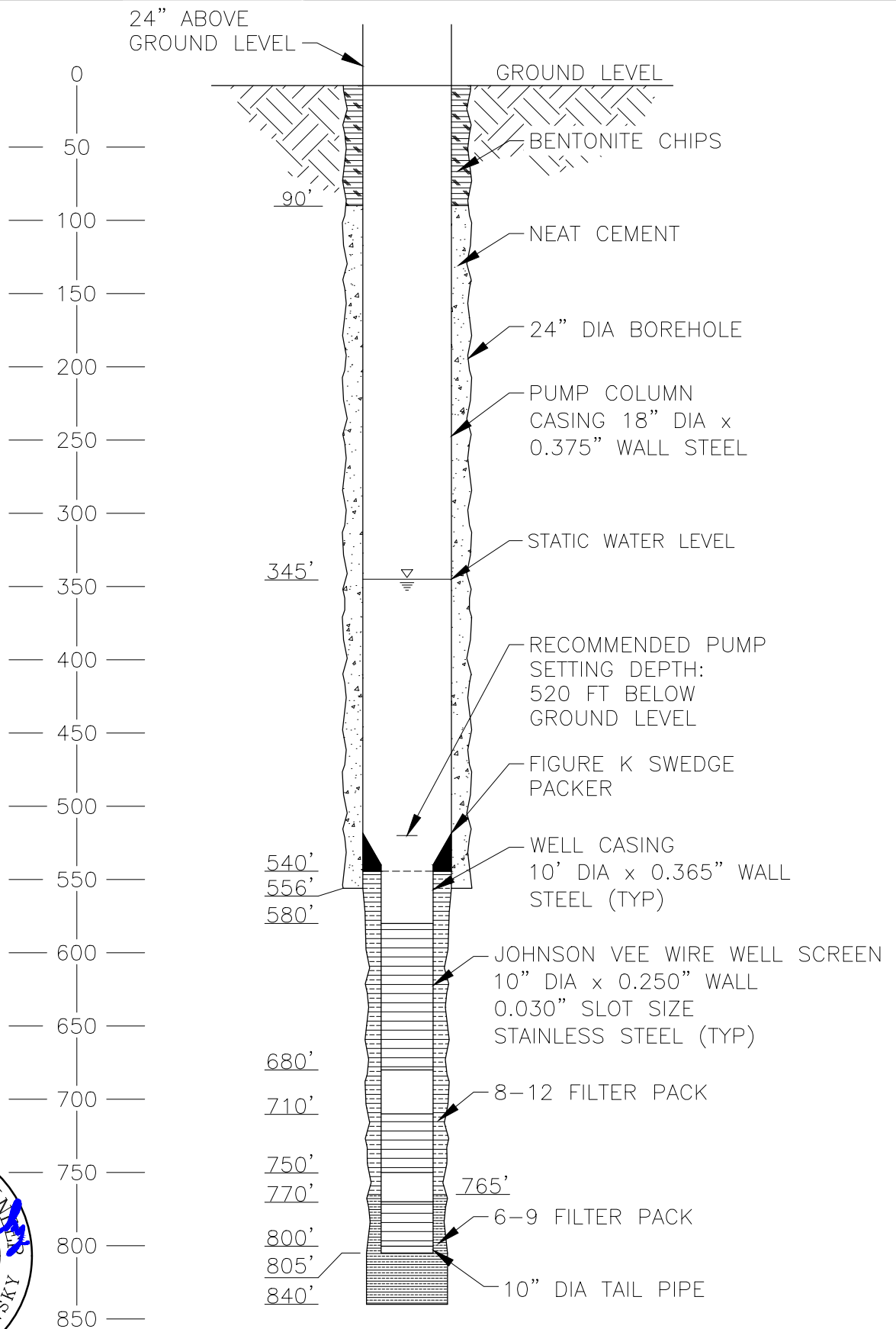
I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Stevens & Sons Co. No. 153*Principal Driller [Signature] Date 4-24-19*Driller [Signature] Date 4-24-19

*Operator II _____ Date _____

Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.



ENGINEERING AND ENVIRONMENTAL SOLUTIONS
1161 W. RIVER ST. SUITE 130
BOISE, IDAHO 83702
208.780.3990

IDAHO OFFICES
BOISE · LEWISTON · COEUR D'ALENE

SIMCO ROAD WELL NO.1

AS-BUILT

PROJECT NO.:
217.0020

SHEET NO.
FIGURE 3

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

1. WELL TAG NO. D 0082843

Drilling Permit No. _____

Water right or injection well # Transfer No. 783566 61-12280

2. OWNER: 61-12281 61-12282 61-12283 61-12284

Name J&M Solid Rock

Address 1761 S. Phillippi

City Boise State Id. Zip 83705

3. WELL LOCATION:

Twp. 1 North ☐ or South ☒ Rge. 4 East ☒ or West ☐

Sec. 14 10 acres 1/4 N.E. 40 acres 1/4 S.W. 160 acres 1/4

Gov't Lot _____ County Elmore

Lat. 43 20.184 (Deg. and Decimal minutes)

Long. 115 56.770 (Deg. and Decimal minutes)

Address of Well Site 34,00' South of I 84 on Simco Road.

2,400' East City _____

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

Lot. _____ Blk. _____ Sub. Name _____

4. USE:

☐ Domestic ☐ Municipal ☐ Monitor ☒ Irrigation ☐ Thermal ☐ Injection

☐ Other _____

5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well

☐ Abandonment ☐ Other _____

6. DRILL METHOD:

☐ Air Rotary ☐ Mud Rotary ☐ Cable ☐ Other Reverse Rotary

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
Bentonite chips	0'	165'	7 Yards	Poured
Cement	165'	503.5'	20 Yards	Pumped

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
18"	+ 2'	503.	.375	Steel	☒	☐	☐	☒
10"	490'	510'	.365	Steel	☐	☒	☐	☒
10"	550'	640'	.365	Steel	☐	☒	☐	☒
10"	670'	700'	.365	Steel	☐	☒	☐	☒

Was drive shoe used? ☐ Y ☒ N Shoe Depth(s) 8' 800'

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method _____

Manufactured screen ☒ Y ☐ N Type 304 Stainless V-wire

Method of installation Lowered

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
510'	550'	.030	40'	10"	Stainless	
640'	670'	.030	30'	10"	Stainless	
700'	730'	.030	30'	10"	Stainless	

Length of Headpipe 20' Length of Tailpipe 5'

Packer ☐ Y ☐ N Type _____

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
6-9 Sand	490'	785'	21,700 lbs	Poured

11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG) _____

Describe control device _____

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 330 Static water level (ft) 326

Water temp. (°F) 66 Bottom hole temp. (°F) _____

Describe access port _____

Well test:			Test method:			
Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
108'	1,500	1,740	☒	☐	☐	☐
			☐	☐	☐	☐

Water quality test or comments: _____

13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
24"	0'	4'	Clay topsoil		X
	4'	19'	Course cemented sand		X
	19'	230'	Clay, course sand, sandy clay		X
	230'	240'	Basalt		X
	240'	250'	Cemented sand tan		X
	250'	265'	Darker brown cemented sand		X
	265'	300'	Course cemented sand tan		X
	300'	322'	Sand stone		X
	322'	325'	Tan clay		X
	325'	330'	Sand clay		X
	330'	345'	Sand	X	
	345'	363'	Sandy clay		X
	363'	388'	Tan clay		X
	388'	405'	Cemented sand	X	
	405'	415'	Sandy clay		X
	415'	500'	Course compacted sand	X	
17"	500'	510'	Clay		X
	510'	550'	Sand and gravel	X	
	550'	580'	Clay		X
	580'	630'	Cemented finer sand	X	
	630'	643'	Clay		X
	643'	666'	Sand	X	
	666'	703'	Cemented finer sand	X	
	703'	730'	Sand	X	
	730'	750'	Blue clay		X
	750'	770'	Sand	X	
8' 800'	770'	1005'	Blue, gray clay and very fine sand	X	
			Casing		
10"	730'	750'	.365 Steel Liner Welded		
10"	770'	775'	.365 Steel Liner Welded		
			Screen		
10"	750'	770'	.030 30' Stainless		

Completed Depth (Measurable): 775'

Date Started: Jun 12, 2019 Date Completed: Sep 4, 2019

14. 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 Co. No. 153

*Principal Driller _____ Date Sep 10, 2019

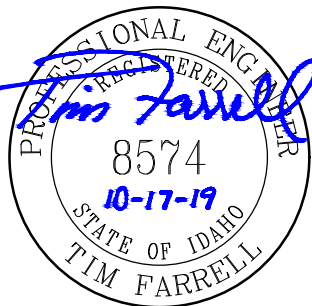
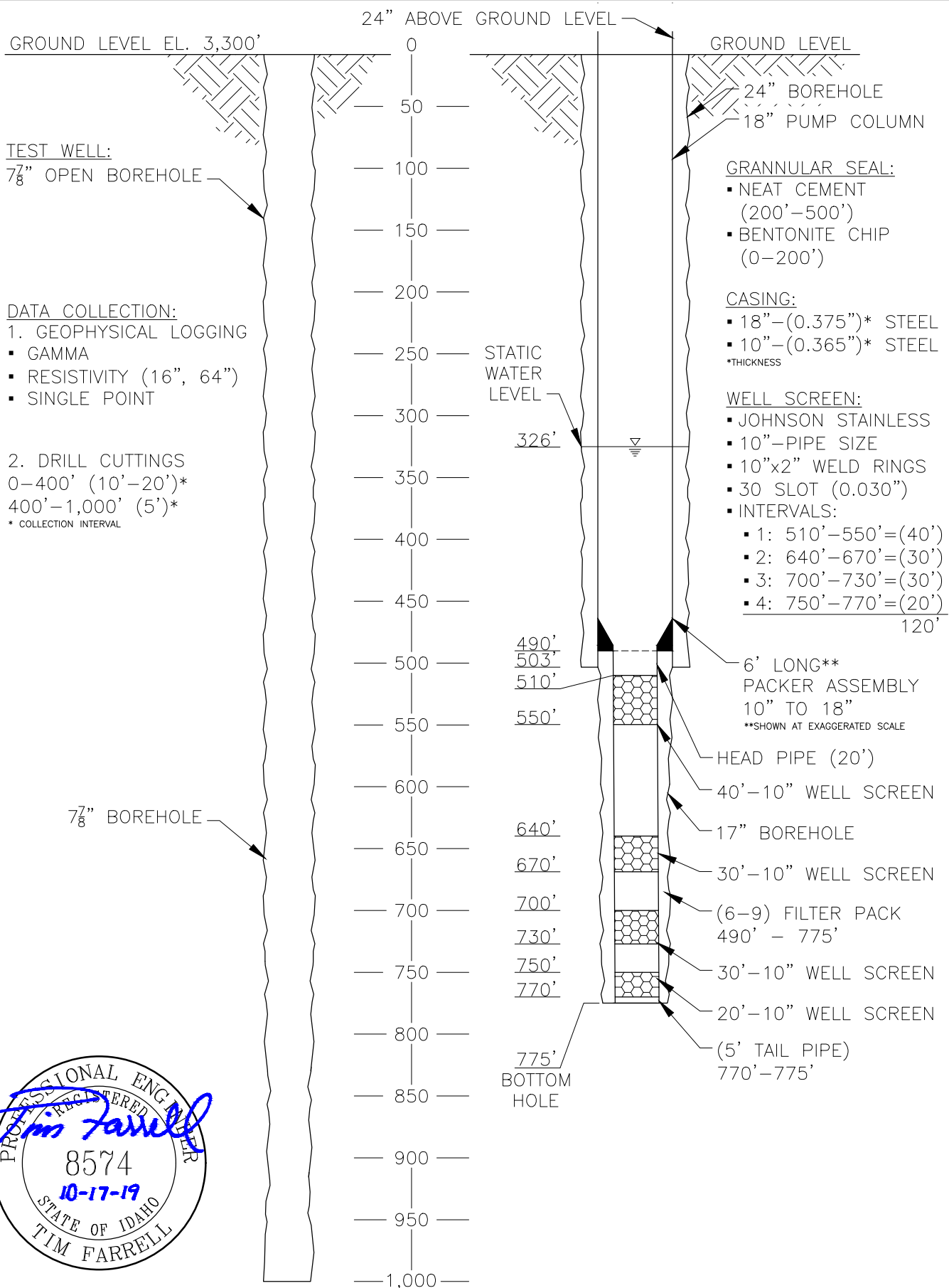
*Driller _____ Date Sep 10, 2019

*Operator II _____ Date _____

Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

Back filled From 800' to 1005' with Bentonite & well cuttings



ENGINEERING AND ENVIRONMENTAL SOLUTIONS
1161 W. RIVER ST. SUITE 130
BOISE, IDAHO 83702
208.780.3990

IDAHO OFFICES
BOISE · LEWISTON · COEUR D'ALENE

SIMCO ROAD DWS

SIMCO WELL NO. 2 AS BUILT

PROJECT NO.:
217.0020

SHEET NO.
FIGURE 2-4