SPF WATER ENGINEERING

TECHNICAL MEMORANDUM

DATE: January 5, 2011

TO: John Erickson

FROM: Mike Martin, P.E.
Christian Petrich, P.E.

CC:

RE: Elk Creek Village Shallow Observation Well Completion

JOB NO.: 591.0040

This memo summarizes the completion of the Elk Creek Canyon Shallow Observation Well. This well was drilled to (1) serve as a test well for a subsequent public water supply system well and (2) monitoring well for "shallow" water levels. It includes a brief description of the well, as-built construction drawing, well driller's report, test-pumping data, water quality reports, and other pertinent information.

Drilling and Geophysical Logging. The well is located in the southern portion of the property along Desert Wind Road. The public land survey description is the NW ¼ of the SE ¼ of Section 11, Township 1 South Range 4 East. Figure 1 shows the location of the well relative to the property.

Well drilling began on September 29, 2010 and completed on October 23, 2010. Stevens and Sons Drilling (Stevens) was the drilling contractor. The Application for Drilling Permit is provided in Attachment A.

Stevens initially began drilling an 8-inch borehole with mud-rotary. However, they switched to air-rotary because of lost mud circulation between 170 feet and 211 feet. To prevent further problems, Stevens drilled with air-rotary method a 12-inch diameter borehole to a depth of 211 feet below ground surface and installed 8-inch steel casing (0.250-inch wall thickness) from +1 foot to 211 feet (the purpose of this casing was to prevent loss of drilling fluids). Bentonite chips were poured into the annular space between the 12-inch borehole and 8-inch casing to form a surface seal. Upon completion of the surface seal, Stevens returned to drilling with mud through the bottom of the 8-inch casing. The 8-inch borehole was extended to approximately 539 feet below ground surface, at which time the borehole was downsized to 6-inch diameter. The 6-inch borehole extended from 539 feet to 1,000 feet below ground surface.

The driller's report (Attachment B) describes interbedded layers of sand, gravel, basalt, and cinders to the regional water table at a depth of 354 feet below ground surface. The driller's report lists interbedded layers of cemented sand, sand, silt, and clay to a final depth of 1,000 feet below ground surface.

300 E. Mallard Drive, Suite 350, Boise, Idaho 83706 Tel: 208-383-4140 Fax: 208-383-4156

A geophysical log of the borehole was conducted by Materials Testing and Inspection (Attachment C). The geophysical log shows numerous 10- to 20-foot thick layers of higher resistivity (likely good-producing zones) from about 280 feet to 880 feet below ground surface. A high-resistivity (likely good-producing) zone begins at approximately 875 feet and extends at least to the terminal depth of 1,000 feet. A temperature log indicated a bottom-hole temperature of approximately 26°C (79°F).

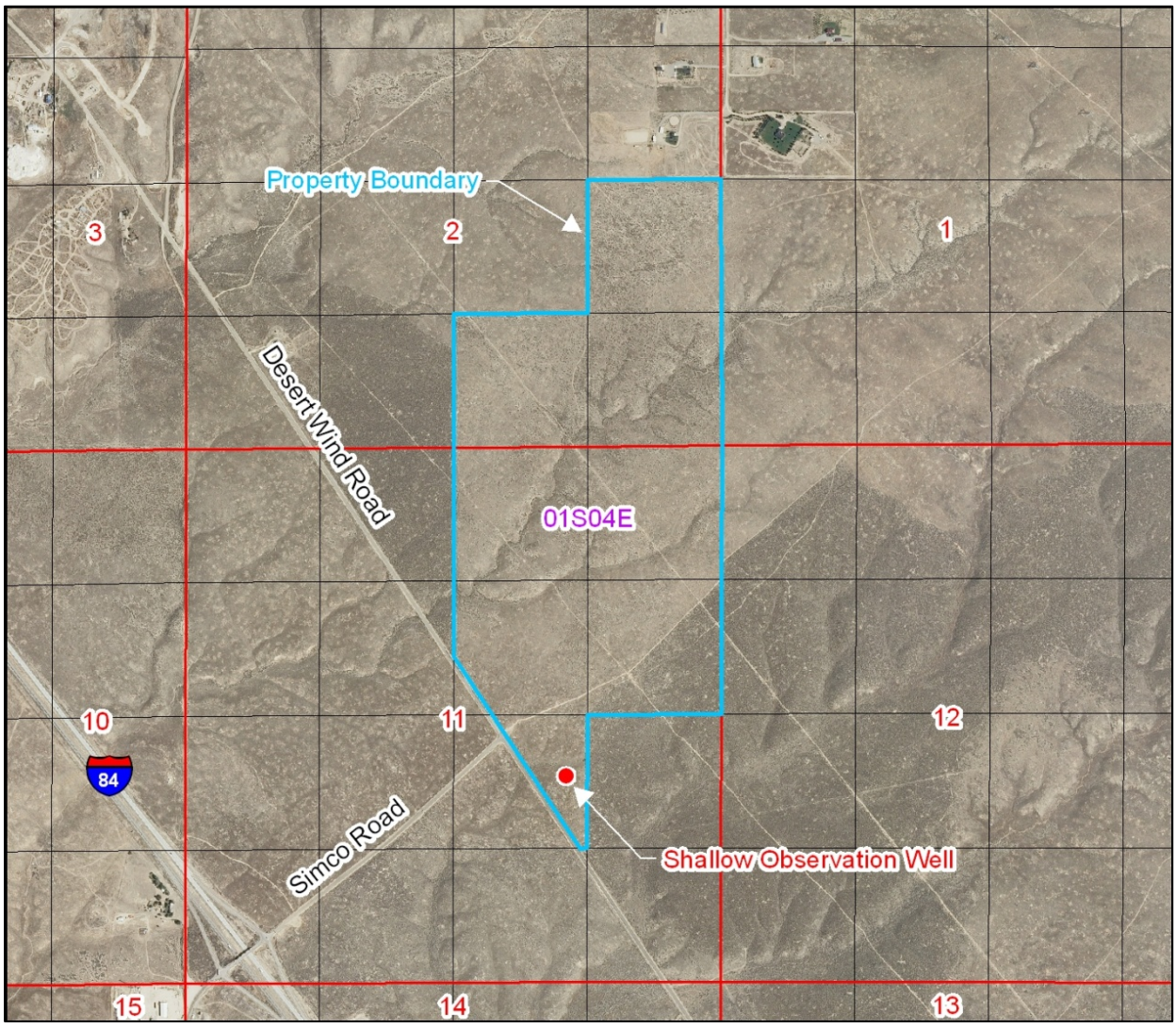


Figure 1 - Shallow Observation Well Location.

Design and Construction. After geophysical logging, Stevens completed the well with a continuous string of 5-inch diameter SDR17 PVC well casing and 20-slot well screen. The screen was placed from 419 feet to 539 feet, which included 3 interbedded sand layers shown in the geophysical logged as having moderately higher resistivity. The casing extends from the top of the screen (419 feet) to 1 foot above ground surface. Between the 8-inch borehole and the 5-inch screen, Stevens installed 8-12 Colorado Silica Sand filter pack from 380 feet to 540 feet. Above the filter pack, bentonite chips were used to seal the borehole to ground surface. Attachment D contains an as-built construction drawing of the observation well.

Testing and Water Quality. A constant-rate test pumping test was conducted following well development. The pump installed for the constant rate test was a Goulds 10-Hp 55 Series pump. Pump setting depth was approximately 438 ½ feet. The flow rate was measured with a 5-gallon bucket and stop watch. Water levels were measured with an air line. Attachment E contains photos of the well test and air line measurement device.

The constant-rate test was conducted on November 2, 2010. The test lasted approximately 7 ½ hours. The average flow rate was 60 gallons per minute (gpm). The pre-test static water level was 370 feet. At the end of the test, the pumping water level was approximately 387 feet below ground surface (with approximately 17 feet of drawdown). The transmissivity was estimated to be approximately 48,000 gpd/ft. The specific capacity was estimated to be approximately 3.5 gpm per foot of drawdown (which, in part, reflects well construction). The recovery last 23 minutes with full recovery within two minutes of the pump being turned off.

The static water level after recovery was higher than the static water level prior to the test. We suspect an issue with the air line since there were water level discrepancies near the end of the test. Constant-rate test data are provided in Attachment F.

Water quality samples were taken on November 2, 2010 during the constant rate test. The well was pumped for approximately 7 hours prior to sampling. Samples were taken by Mike Martin from the discharge pipe (at a discharge of approximately 60 gpm). The water temperature was measured in the field at 65.8 ^{o}F. The water was clear with no sediment. Sample parameters included arsenic, calcium, iron, magnesium, manganese, potassium, sodium, uranium, bicarbonate, chloride, sulfate, and total dissolved solids. Samples were taken to Analytical Laboratories for analysis the following day. Results are provided in Attachment G and are summarized in Table 1.

Parameter	Result (mg/L)	MCL (mg/L)[1]
Arsenic	0.004	0.010
Calcium	22.6	
Iron	<0.05	0.3
Magnesium	4.61	
Manganese	<0.05	0.05
Potassium	2.7	
Sodium	15.6	
Uranium	<1	30
Bicarbonate	89.7	
Chloride	4	250
Sulfate	7	250
Total Dissolved Solids	150	500
Note: [1]Maximum Contaminant Level (MCL) is the highest level of a contaminant that is allowed in drinking water.		

Table 1 - Water Quality Summary.

Summary. The well was constructed to meet the requirements set by the Idaho Department of Water Resources as outlined in the Application for Drilling Permit. An additional 8-inch casing was installed to enable drilling below 211 feet (the casing prevented loss of drilling fluids). The geophysical log and well driller's report indicate productive zones at the completion depth (between 419 feet and 539 feet) as well as at depths between 600 feet and 1,000 feet (the geophysical log indicates an especially productive zone between 875 and 1,000 feet).

The constant rate test demonstrates the shallow aquifer (419 feet to 539 feet) is productive. Estimated transmissivity is approximately 48,000 gallons per day per foot. The specific capacity was estimated to be 3.5 gpm per foot of drawdown. Water quality results indicate uranium and arsenic concentrations at the completed interval (419 to 539 feet below ground surface) to be below drinking water standards.

ATTACHMENTS

Attachment A: Drilling Permit

Attachment B: Driller's Report

Attachment C: Geophysical Log

Attachment D: As-Built Construction Diagram

Attachment E: Photos of Well Test

Attachment F: Constant-Rate Pumping Test Data

Attachment G: Water Quality Data

Attachment A: Drilling Permit

Lot

Form 235-1
10/1/03

Drilling Permit No. 911425-860070
Drilling Permit I.D. Tag No. D0059098
Water Right Permit No. ———
Injection Permit No. ———

State of Idaho
Department of Water Resources

Shallow Observation well

APPLICATION FOR DRILLING PERMIT
(FOR THE CONSTRUCTION OF A WELL)

1. **Owner (please print):** Nevid, LLC

2. **Mailing Address:** c/o John Erickson, 1349 Galleria Drive, Suite 200

City: Henderson State: NV Zip Code: 89014 Telephone 702-433-9696

3. **Proposed Well Location:** Twp. 1S, Rge. 4E, Sec. 11, ¼ NW ¼ SE ¼;

Gov't Lot No. _____ County Elmore Lat. 43° : 20' : 57.4" Long. 115° : 56' : 27.7".

Street Address of Well Site approximately 1 mile NW of the Simco Road interchange / Old Hwy 30 city Mtn Home/~~Boise~~
Give at least name of road + Distance to Road or Landmark

Lot, block and subdivision Elk Creek Village

4. **Proposed Use of Well:**

☐ DOMESTIC: The use of water for homes, organization camps, public campgrounds, livestock and for any other purpose in connection therewith, including irrigation of up to % acre of land, if the total use is not in excess of 13,000 gpd; or any other uses, if the total use does not exceed a diversion rate of 0.04 cfs and a diversion volume of 2500 gpd.

Domestic does not include water for multiple ownership subdivisions, mobile home parks, commercial or business establishments, unless the use does not exceed a diversion rate of 0.04 cfs and a diversion volume of 2500 gpd.

☐ IRRIGATION
☐ INJECTION
☐ LIVESTOCK
No. Head _____
Type _____

☐ INDUSTRIAL
☐ MUNICIPAL
☐ TEST
☐ Other _____
(Describe)

☒ MONITORING: A well bore schematic and map is required for each blanket permit. No. of proposed wells: 1

5. **Well Construction Information:**

A. ☒ New well ☐ Modify ☐ Replace

B. Proposed Casing Diameter 5-inch Proposed Maximum Depth 1000 ft

C. Anticipated bottom hole temperature:
☒ 85 F or less (Cold Water Well)
☐ 85F to 212F (Low Temp. Geothermal Well)
☐ 212 F. or more (Geothermal Well)

6. **Construction Start Date:** ~~October 4, 2010~~ 9.27.2010

7. **Anticipated Well Driller:** Stevens and Sons Well Drilling Driller's License No. 153
NOTE: The actual well driller must be identified prior to drilling.

8. **Applicant's Signature:** _____ Date _____

Address (if different than owner): _____

City: _____ State: ____ Zip Code: _____ Telephone _____

Title: _____
(Owner, Firm Representative, Other)

RECEIVED
SEP 27 2010
WATER RESOURCES
WESTERN REGION

D0059098

ACTION OF THE DEPARTMENT OF WATER RESOURCES

This Permit is ____APPROVED_____ Date 9-27-10

If approved, this permit authorizes the construction or modification of a well subject to the following conditions. **READ CAREFULLY!**

GENERAL CONDITIONS:

1. This drilling permit is valid for two (2) months from the above approval date for the start of construction and is valid for one(1) year from the approval date for completion of the well unless an extension has been granted.

2. This permit does not constitute an approval of the District Health Department or the Idaho Department of Health and Welfare, which may be required before construction of the well. All wells must be drilled a minimum distance of 100 feet from a drain field. Domestic and Public Water Supply wells must be drilled a minimum of 50 feet and 100 feet respectively from a septic tank.

3. The well shall be constructed by a driller currently licensed in the State of Idaho who must maintain a copy of the drilling permit and the well ID tag at the drilling site.

4. Approval of this drilling permit does not authorize trespass on the land of another party.

5. This permit does not constitute other local, county, state, or federal approvals which may be required for construction of a well.

6. This drilling permit does not represent a right to divert and use the water of the State of Idaho. If the well being drilled is associated with approved water right(s) use of the well must comply with conditions of said water right(s).

7. If a bottom hole temperature of 85°F or greater is encountered, well construction shall cease and the well driller and the well owner shall contact the Department immediately.

8. Idaho Code, S 55-2201 - 55-2210 requires the applicant and/or his contractors to contact "Digline" (DigLine is a one-call center for utility notification) not less than 2 working days prior to the start of any excavation for this project. The "DigLine" Number for your area is 1-800-342-1585.

9. Please be advised that this drilling permit should be considered and treated as a preliminary permit. If you are in disagreement with this preliminary permit you have fourteen (14) days of the service date of this permit to petition the Department for reconsideration pursuant to Section 67-5243, Idaho Code.

10. The stainless steel I. D. tag must be securely and permanently attached to the well casing by the Driller upon completion of the well, and prior to removing the drill rig from the drill site and must remain permanently attached above ground level for the life of the well. The well tag shall be attached by welding at least 3 sides or using four (4) stainless steel, closed-end pop rivets.

11. The possession of a well tag does not authorize construction of a well.

12. Any well being replaced by a new well shall be properly abandoned by the well driller prior to removing the drilling equipment, unless otherwise authorized by the department.

SPECIFIC CONDITIONS: well construction must be consistent with Attachment I and all Seal materials must consist of. Neat Cement, Neat Cement grout and/or dry bentonite Chips or granules

Signature of Authorized Department Representative — SENIOR WATER RESOURCE AGENT, Title

Receipt No. W0387751 Receipted by SB Fee $75.00 Date 9-27-10

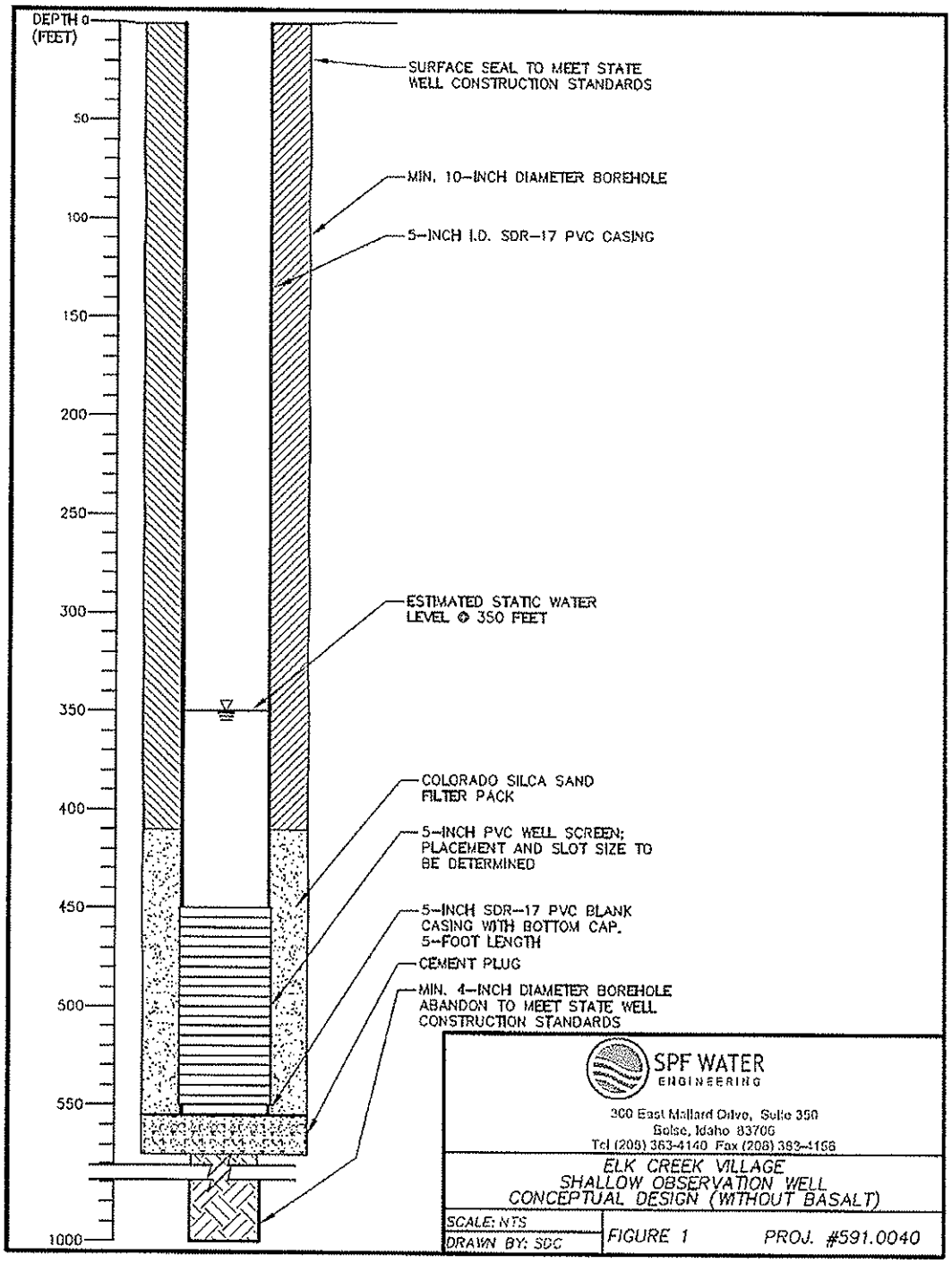
EXTENSION OF DRILLING PERMIT

Extension approved by _____ Approval Date _____

This extension expires: _____

Attach I D0059098

ATTACHMENT D: CONCEPTUAL DESIGN



Attachment B: Driller’s Report

Form 238-7
6/07

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

860070

1. WELL TAG NO. D 0059098
Drilling Permit No. 911425-860070
Water right or injection well #

2. OWNER: Nevid LLC
Name c/o John Erickson
Address 1349 Galleria Drive Suite 200
City Henderson State NV Zip 89014

3.WELL LOCATION:
Twp. 1 North ☐ or South ☒ Rge. 4 East ☒ or West ☐
Sec. 11 10 acres 1/4 N/W 40 acres 1/4 S/E 160 acres 1/4
Gov't Lot ____ County Elmore
Lat. 43 ° 20 . 957 (Deg. and Decimal minutes)
Long. 115 ° 56 . 462 (Deg. and Decimal minutes)
Address of Well Site Desert Wind Rd & Simco Rd
(Give at least name of road + Distance to Road or Landmark) City Mountain Home
Lot. ____ Blk. ____ Sub. Name Elk Creek Village

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

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft³)	Placement method/procedure
bentonite chip	0	211	110 sk	poured
bentonite chip	0	380	65 sk	poured

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/ Schedule	Material	Casing	Liner	Threaded	Welded
8"	+1	210'	.250	steel	☒	☐	☐	☒
5"	+1	418'	SDR17	PVC	☐	☒	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 211'

9. PERFORATIONS/SCREENS:
Perforations ☐ Y ☐ N Method
Manufactured screen ☒ Y ☐ N Type certilock
Method of installation

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
418	538	.20		5"	PVC	SDR17

Length of Headpipe ____ Length of Tailpipe ____
Packer ☐ Y ☒ N Type

10.FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft³)	Placement method
8-12	380	540	3000	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) 354 Static water level (ft) 354'
Water temp. (°F) ____ Bottom hole temp. (°F) ____
Describe access port

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)
	70	300
17'	60	480

Test method: ☒ Pump ☐ Bailer ☐ Air ☐ Flowing artesian

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	Water N
12"	0	5	dust & clay topsoil		X
	5	18	cemented sand & gravel		X
	18	40	clay		X
	40	160	sandy clay & coarse cemented sand		X
	160	174	brown black sandy cinders		X
8"	174	208	broken lava & cinders		X
	208	230	solid lava		X
	230	248	soft sandstone		X
	248	273	cemented gravel & coarse sand		X
	273	365	cemented gravel, coarse sand & sandy clay streaks		X
	365	411	cemented sand	X	
	411	480	sand	X	
	480	505	cemented sand & silty clay		X
	505	530	sand	X	
	530	550	cemented sand & silty clay		X
6"	550	580	sand	X	
	580	602	cemented sand & silty clay		X
	602	622	sand	X	
	622	631	silty sand		X
	631	641	clay		X
	641	653	sand	X	
	653	725	streaky sand & clay	X	
	725	750	sand	X	
	750	790	clay		X
	790	795	sand	X	
	795	820	streaky	X	
	820	833	clay		X

Completed Depth (Measurable):
Date Started: Date Completed:

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 See Pg 2 Co. No.
*Principal Driller Date
*Driller Date
*Operator II Date
Operator I Date

*** Signature of Principal Driller and rig operator are required.**

Form 238-7
6/07

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. WELL TAG NO. D 0059098

Drilling Permit No. _____

Water right or injection well # _____

2. OWNER: Nevid LLC

Name _____

Address _____

City _____ State _____ Zip _____

3.WELL LOCATION:

Twp. _____ North ☐ or South ☐ Rge. _____ East ☐ or West ☐

Sec. _____ _____ 1/4 _____ 1/4 _____ 1/4
(10 acres) (40 acres) (160 acres)

Gov't Lot _____ County _____

Lat. _____ ° _____ (Deg. and Decimal minutes)

Long. _____ ° _____ (Deg. and Decimal minutes)

Address of Well Site _____

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

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 _____

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft³)	Placement method/procedure
Cement	550	1000	65 sacks	Pump

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/ Schedule	Material	Casing	Liner	Threaded	Welded
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

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

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☐ N Method _____

Manufactured screen ☐ Y ☐ N Type _____

Method of installation _____

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☐ N Type _____

10.FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft³)	Placement method

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) _____ Static water level (ft) _____

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

Describe access port _____

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)

Test method: Pump ☐ Bailer ☐ Air ☐ Flowing artesian ☐

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	Water N
6"	833	841	sand	X	
	841	845	clay		X
	845	880	good sand	X	
	880	1000	very good sand	X	

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NOV 03 2010
WATER RESOURCES
WESTERN REGION

Completed Depth (Measurable): 538'

Date Started: 10/4/10 Date Completed: 10/23/10

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 10/23/10

*Driller _____ Date _____

*Operator II Kevin Chastain Date _____

Operator I Kevin Chastain Date 10/23/10

*** Signature of Principal Driller and rig operator are required.**

Attachment C: Geophysical Log

MSI

CO Stevens Well Drilling
WELL Permit # 911425-860070
FLD
CTY Elmore
STE ID
FILING No

COMPANY Stevens Well Drilling
WELL ID Elk Creek Village Permit #911425-860070
FIELD
COUNTRY STATE ID

LOCATION
Simco Road
Elmore County

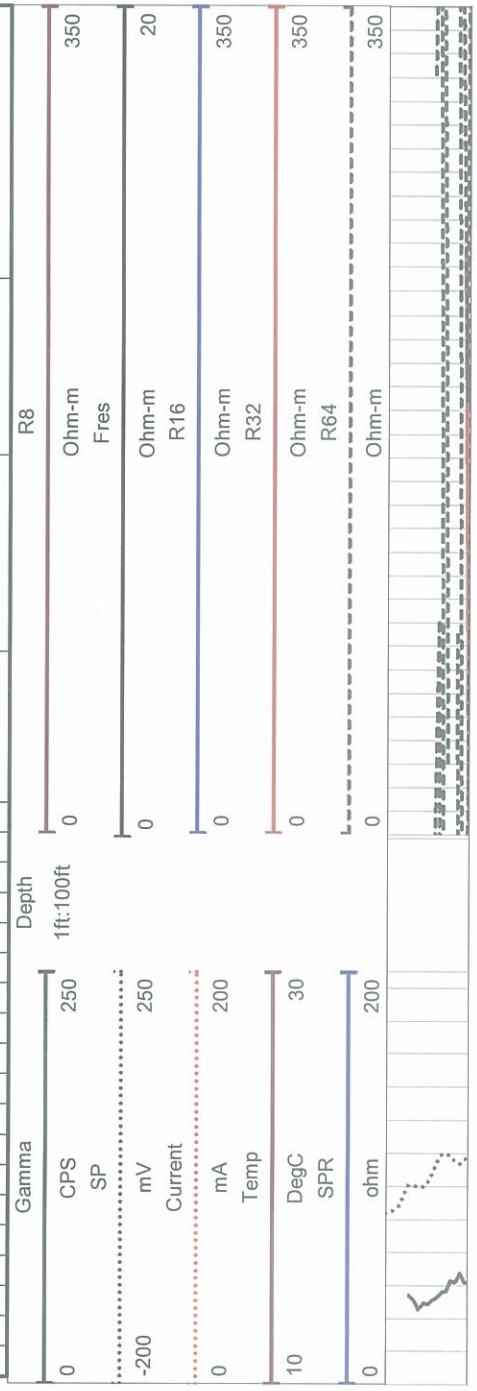
SEC 11 TWP 1 South RGE 4 East

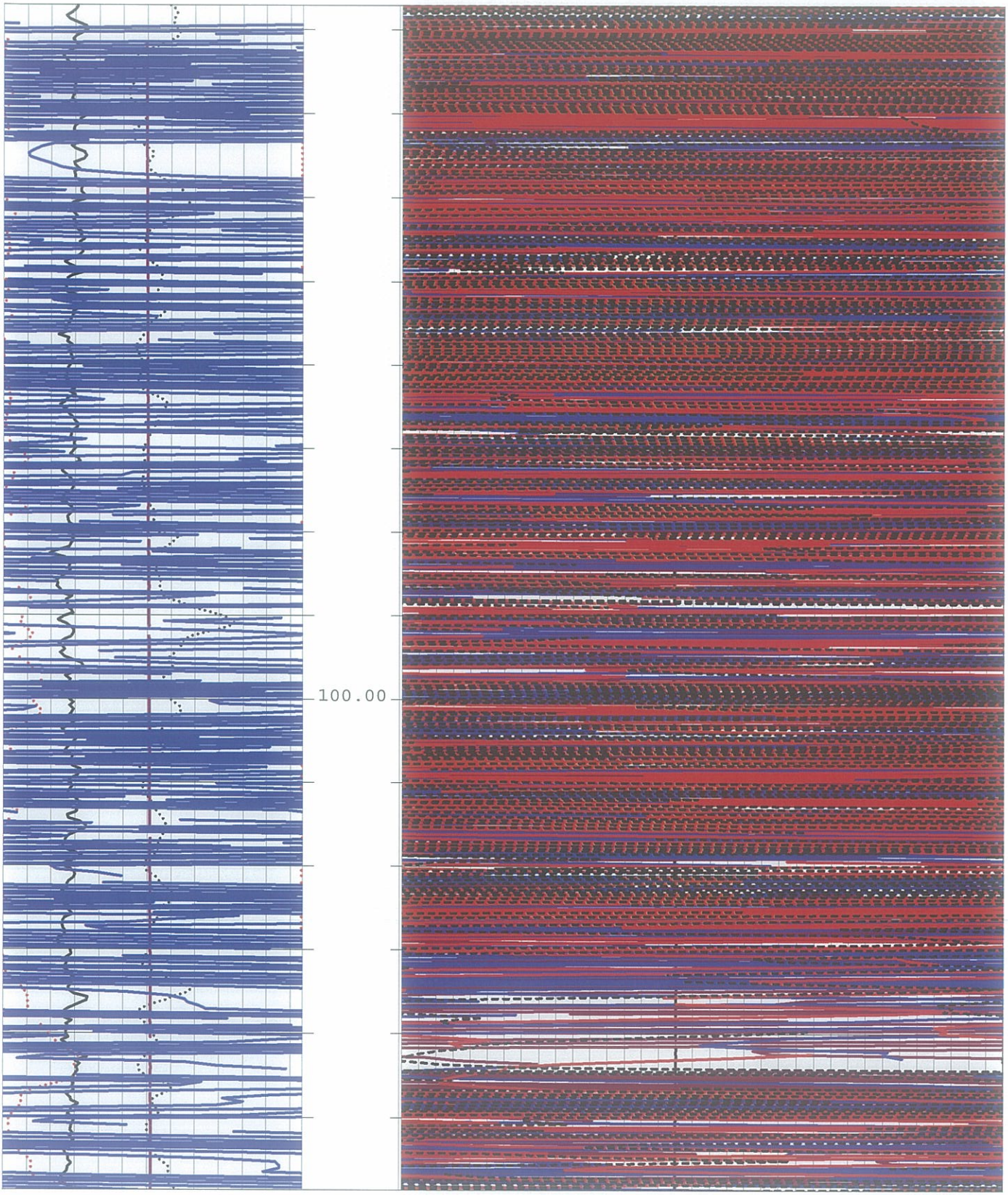
OTHER SERVICES

PERMANENT DATUM		ELEVATION	K.B.
LOG MEAS. FROM	-32.98 ft to	ABOVE PERM. DATUM	D.F.
DRILLING MEAS. FROM			G.L.

DATE	Completed 23 October 2010	TYPE FLUID IN HOLE	
RUN No	1 UP	SALINITY	
TYPE LOG		DENSITY	
DEPTH-DRILLER	1000 feet	LEVEL	
DEPTH-LOGGER		MAX. REC. TEMP.	
BTM LOGGED INTERVAL			
TOP LOGGED INTERVAL			
OPERATING RIG TIME			
RECORDED BY	J Kruck		
WITNESSED BY			

RUN	BOREHOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO
					steel	0.0	210

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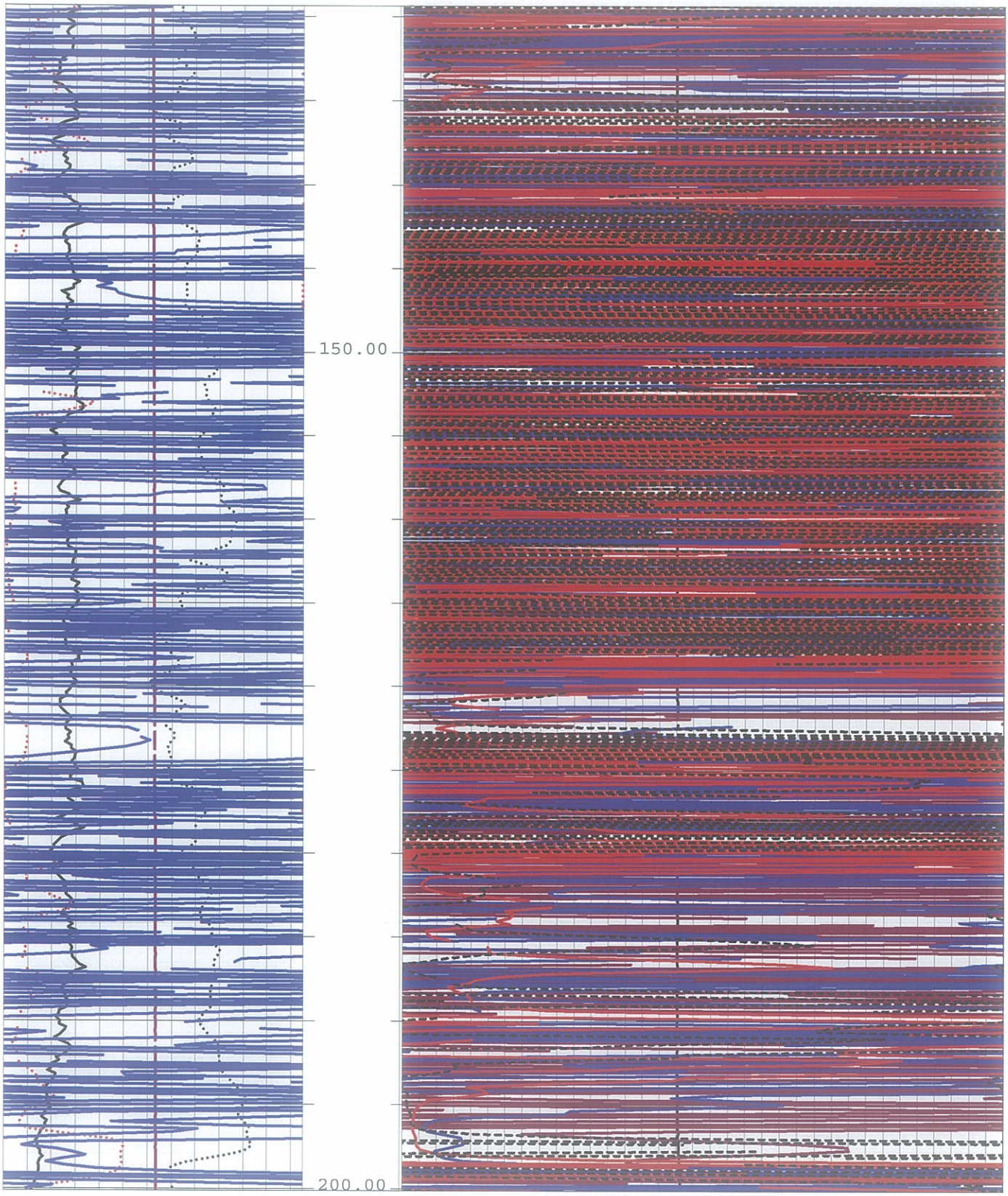
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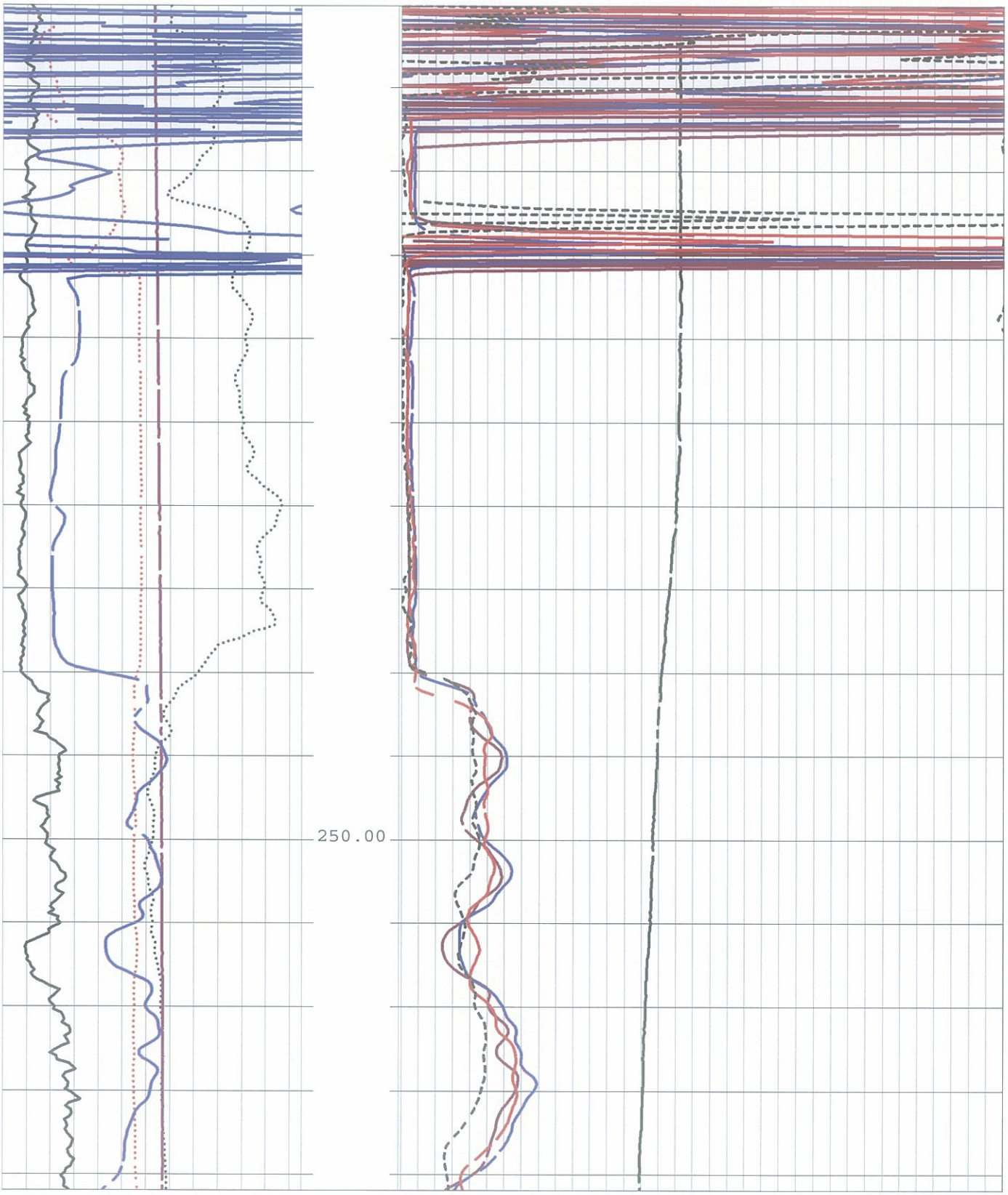
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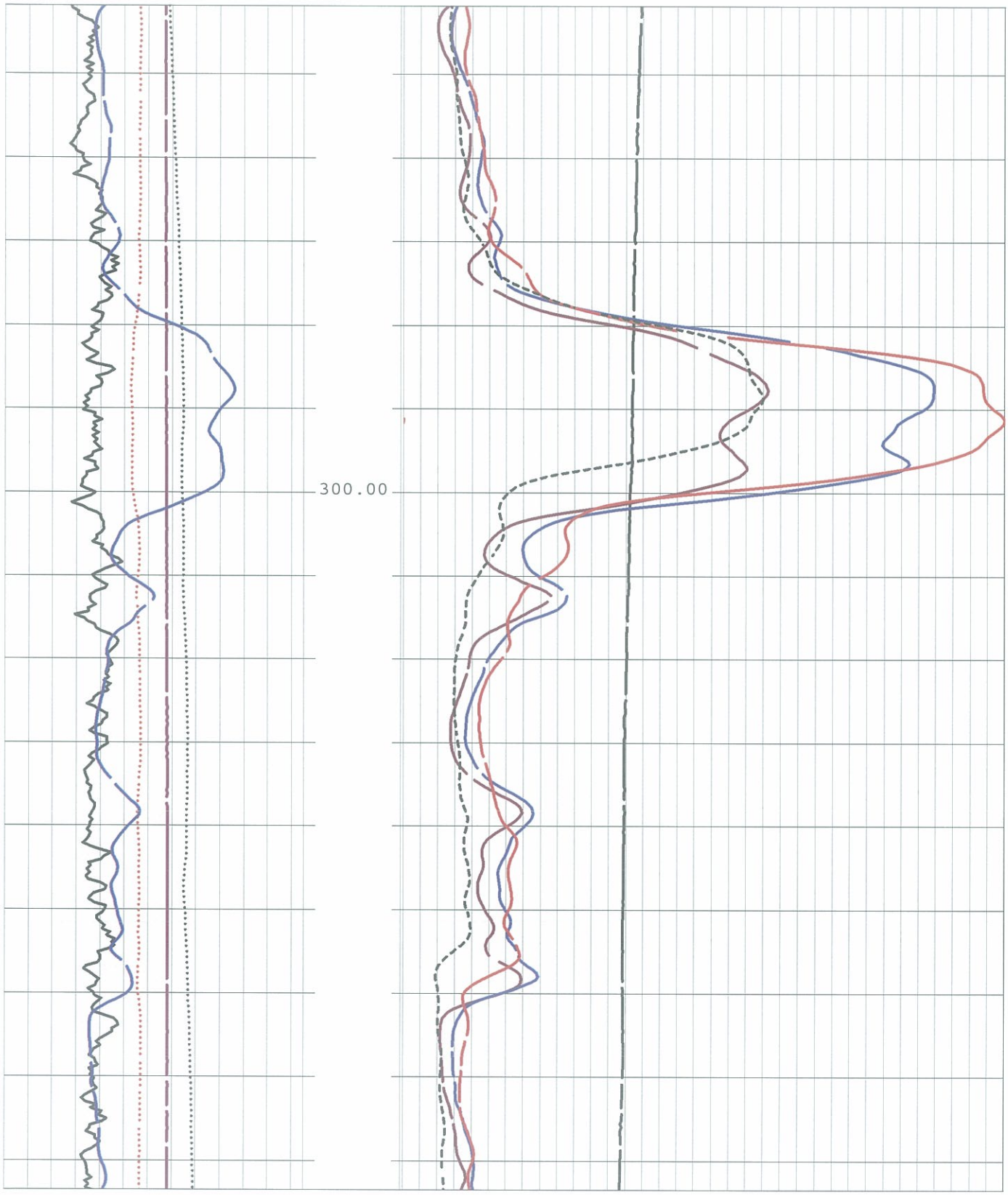
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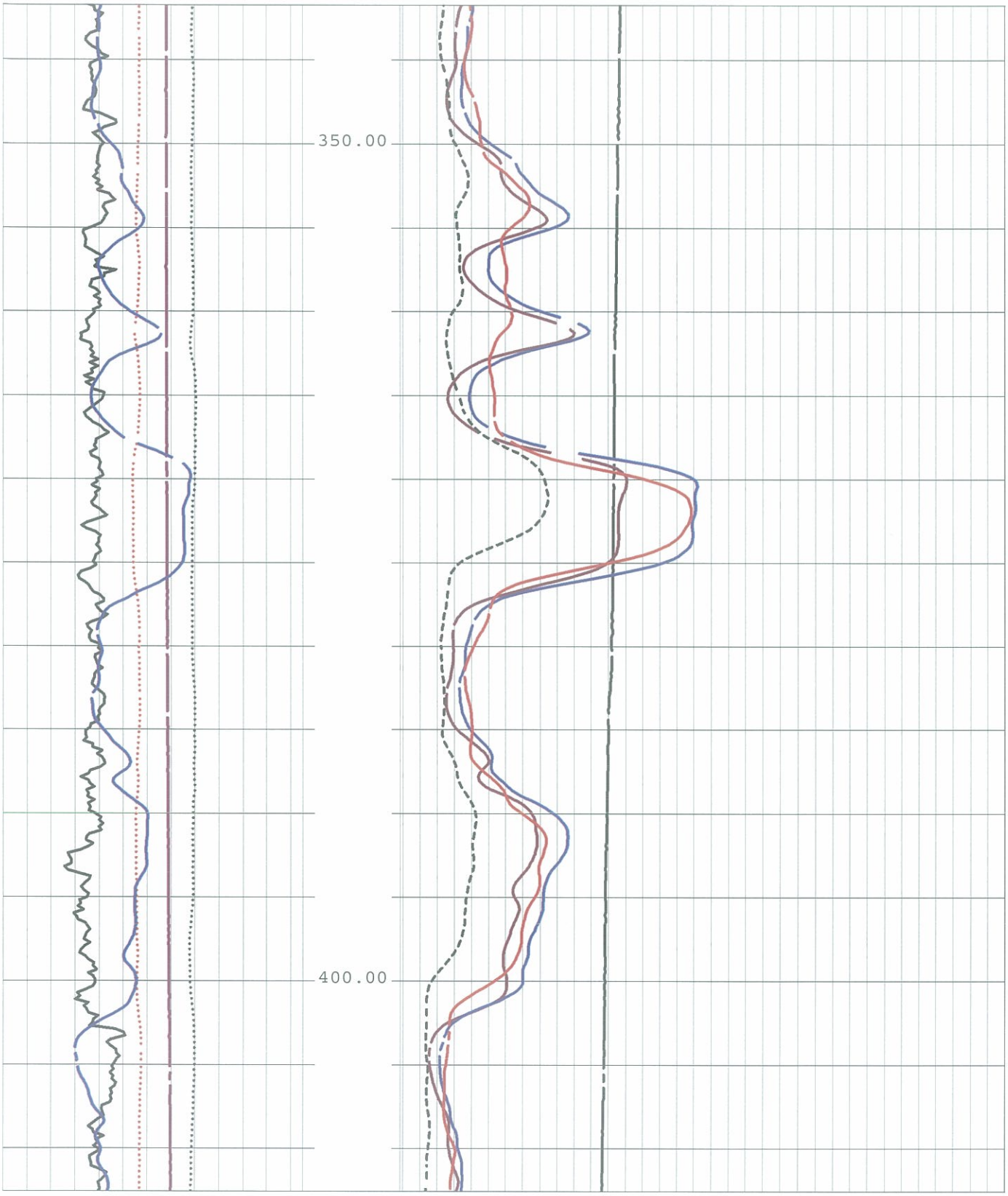
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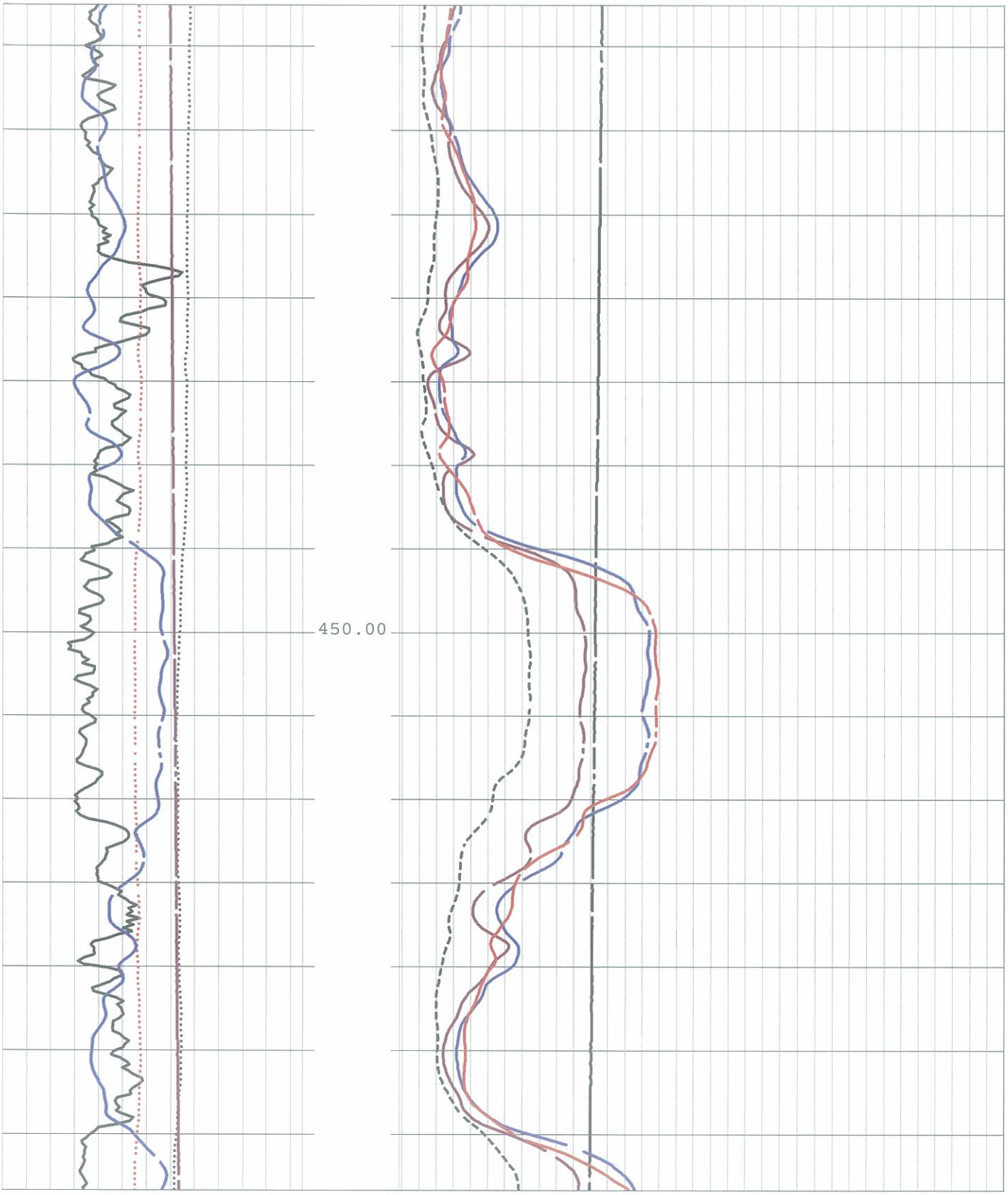
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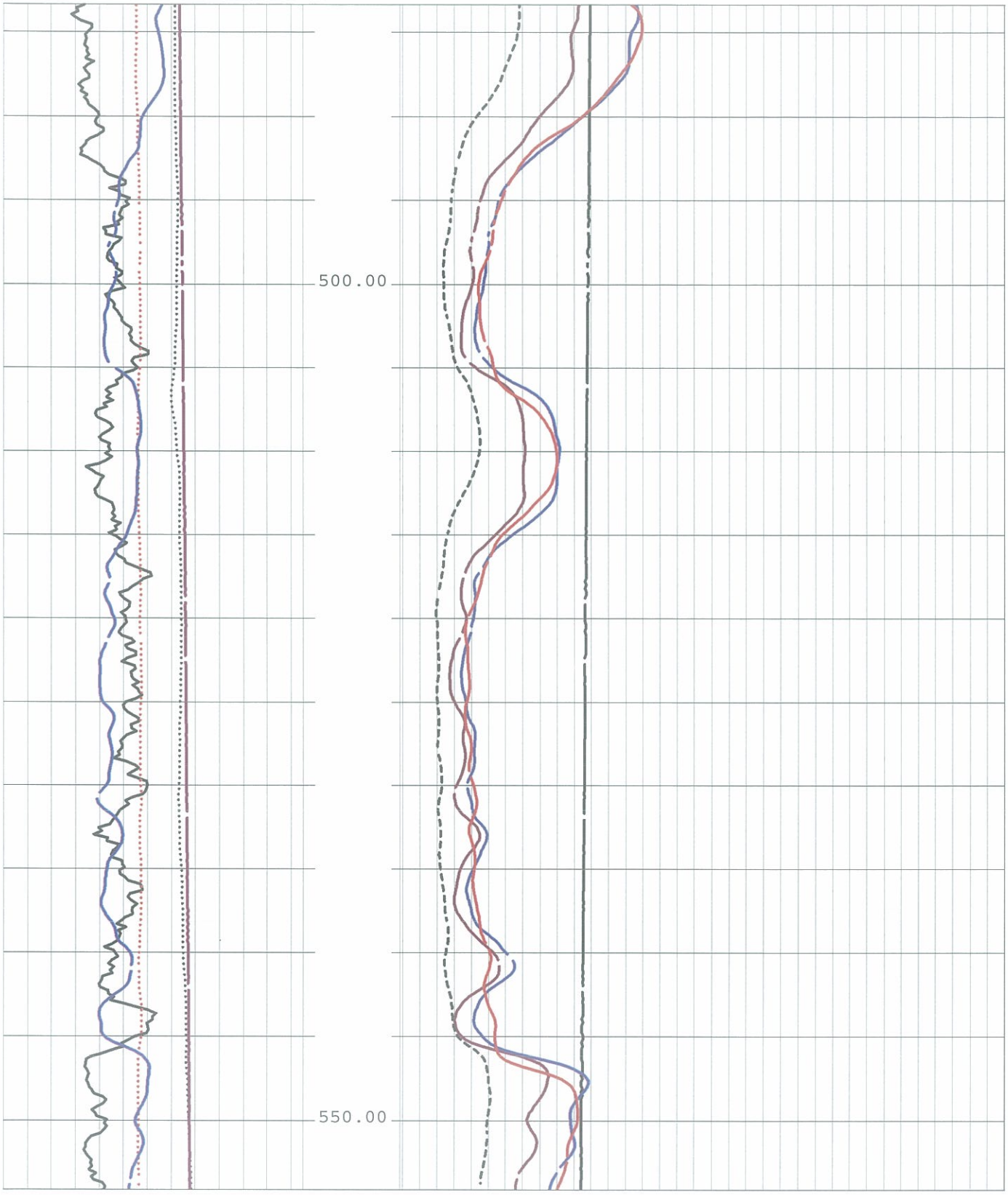
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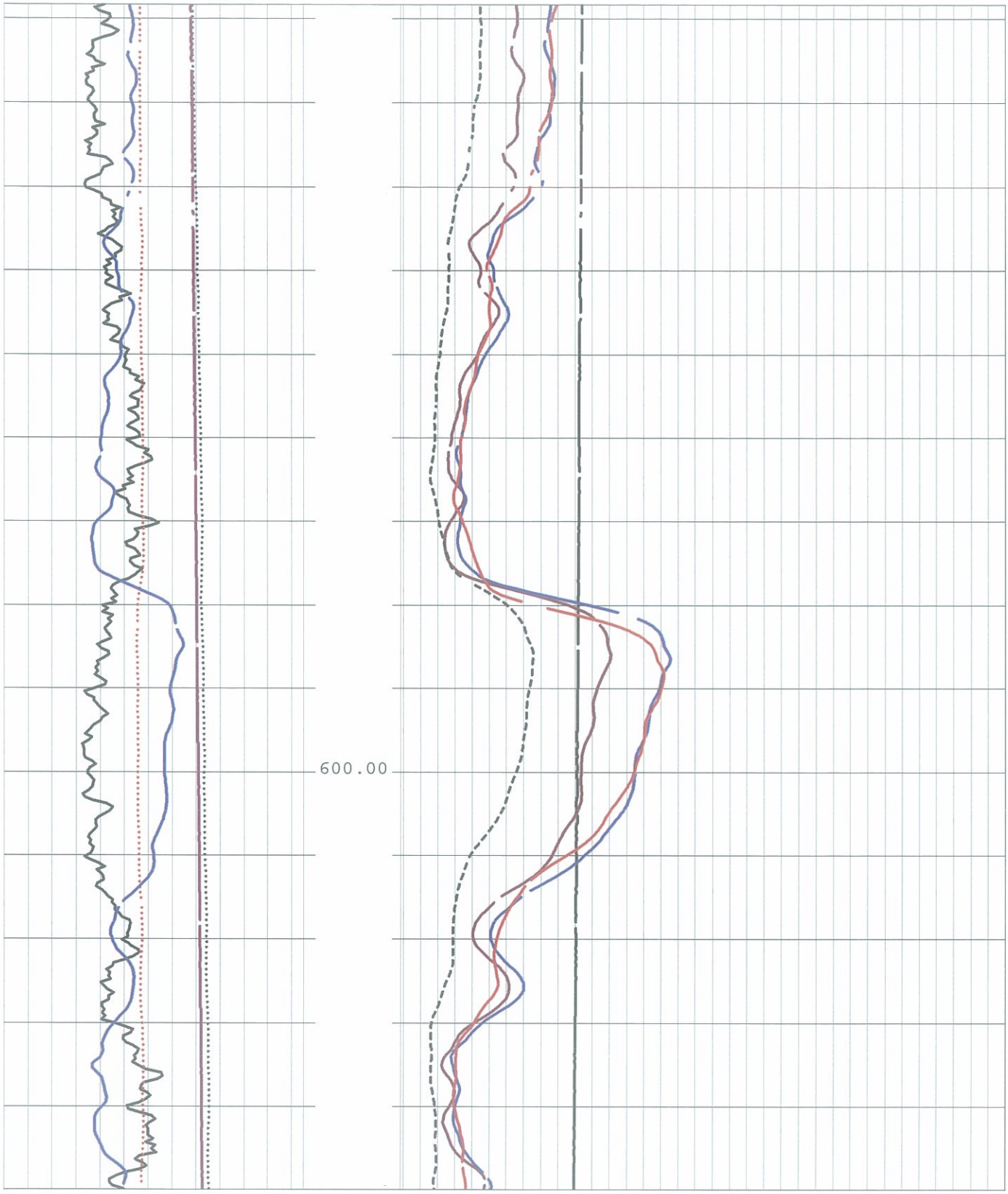
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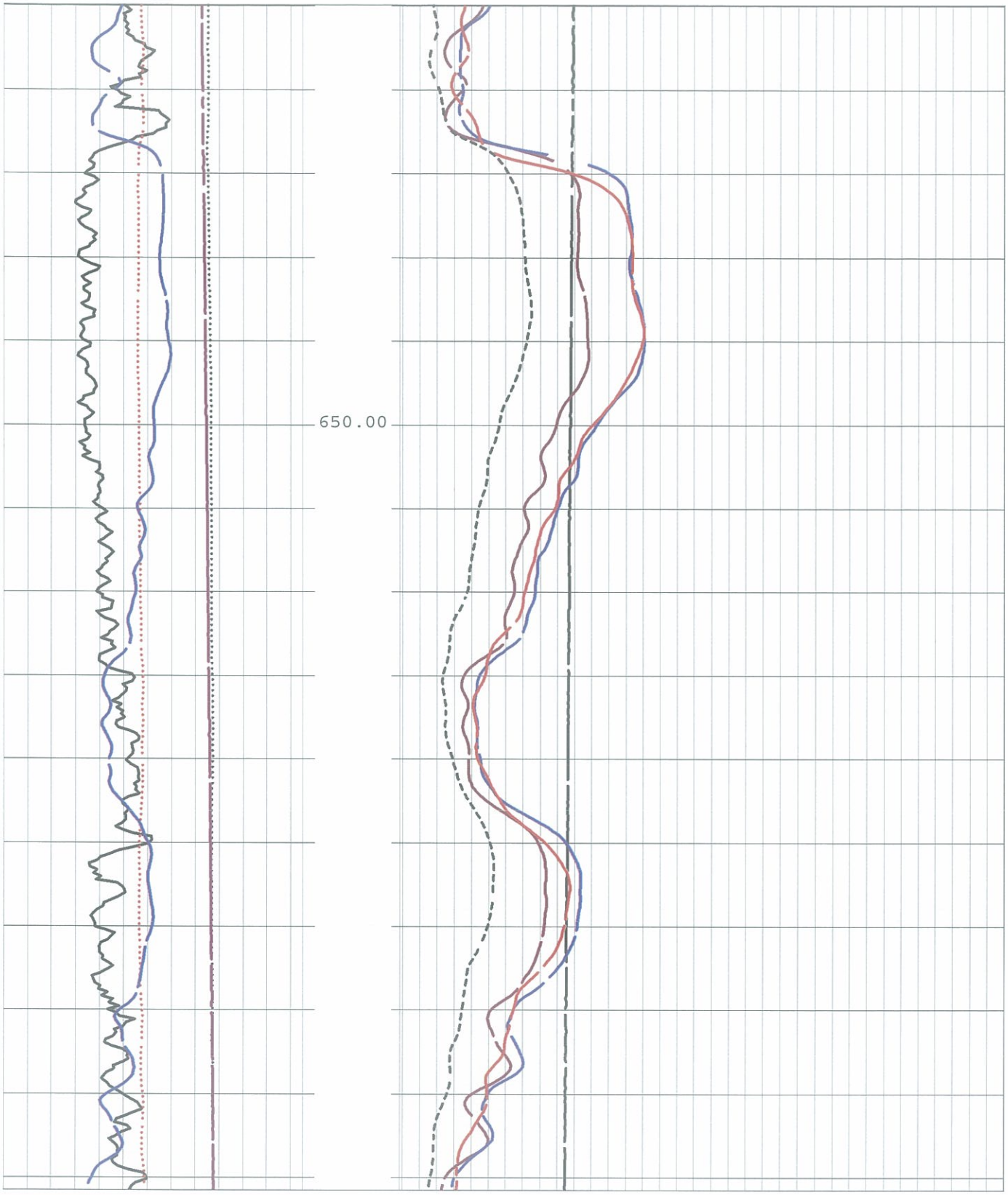
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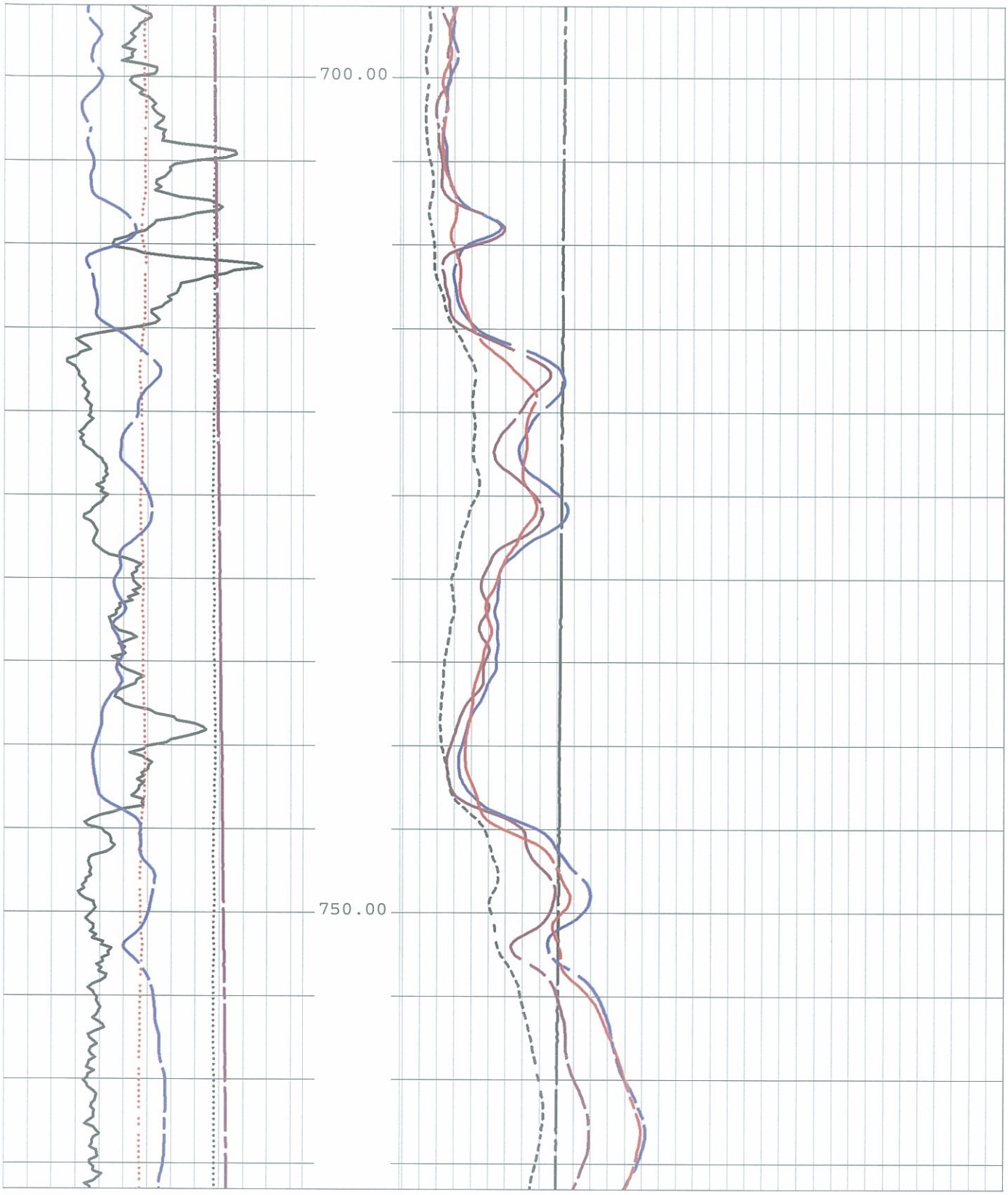
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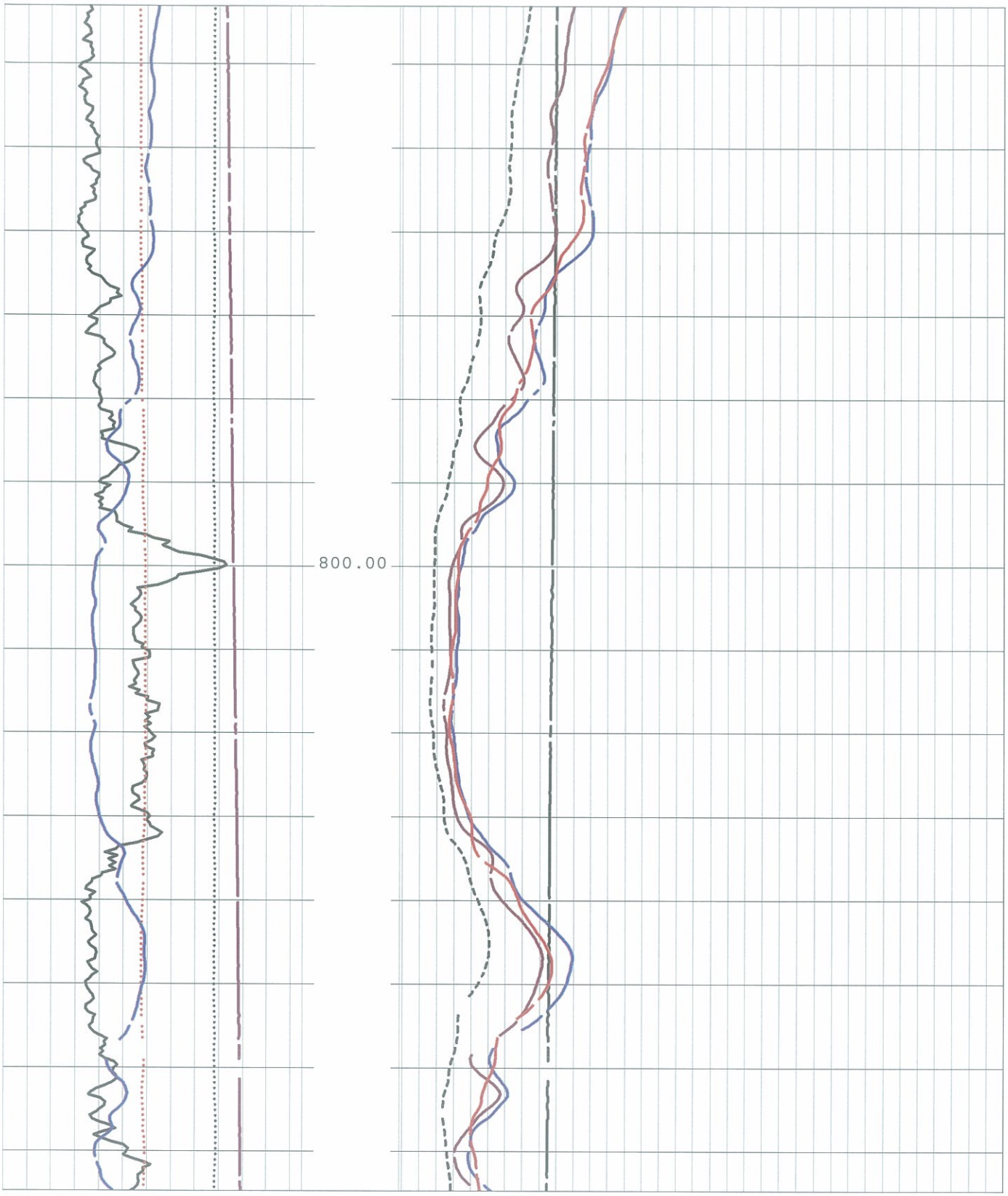
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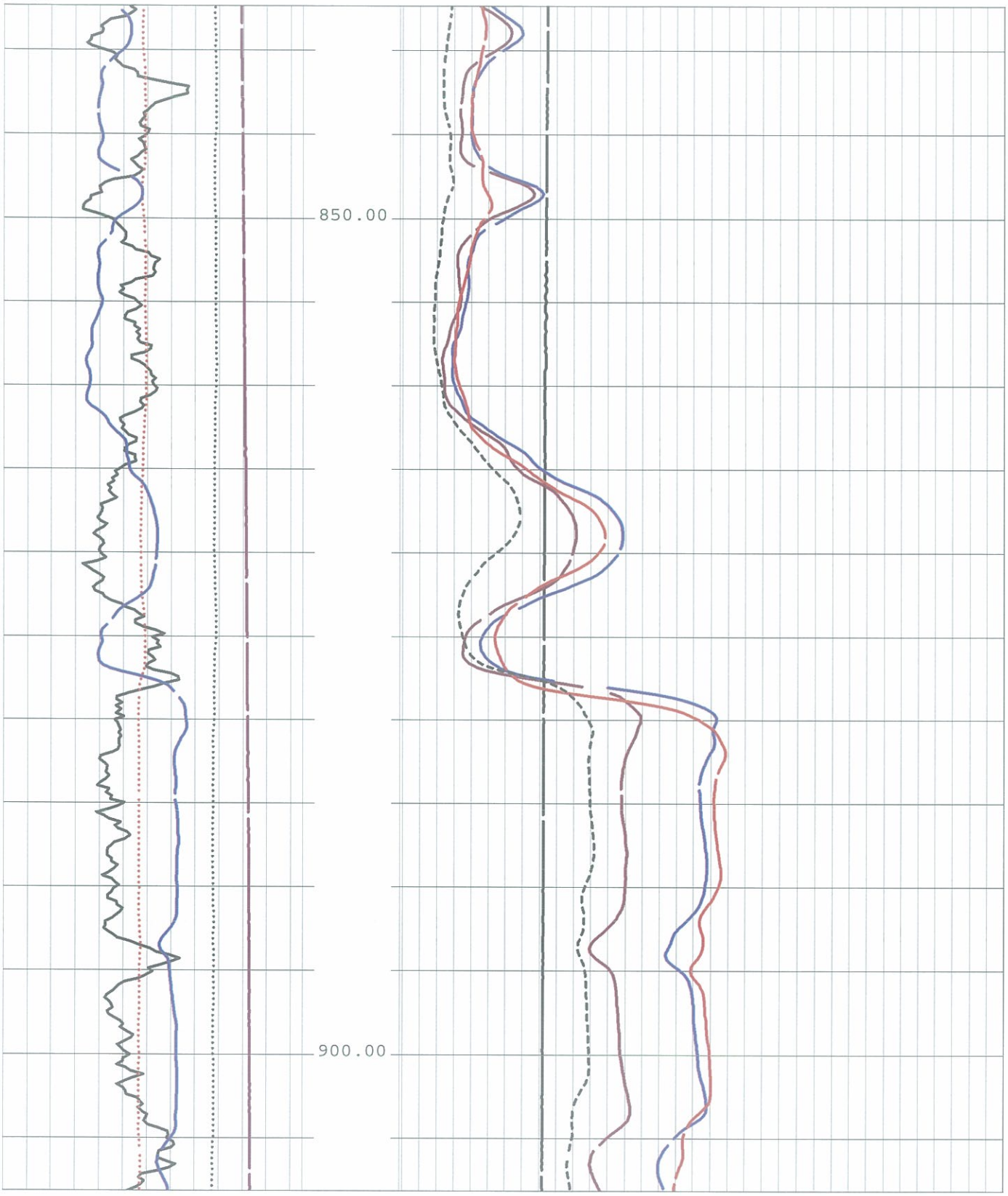
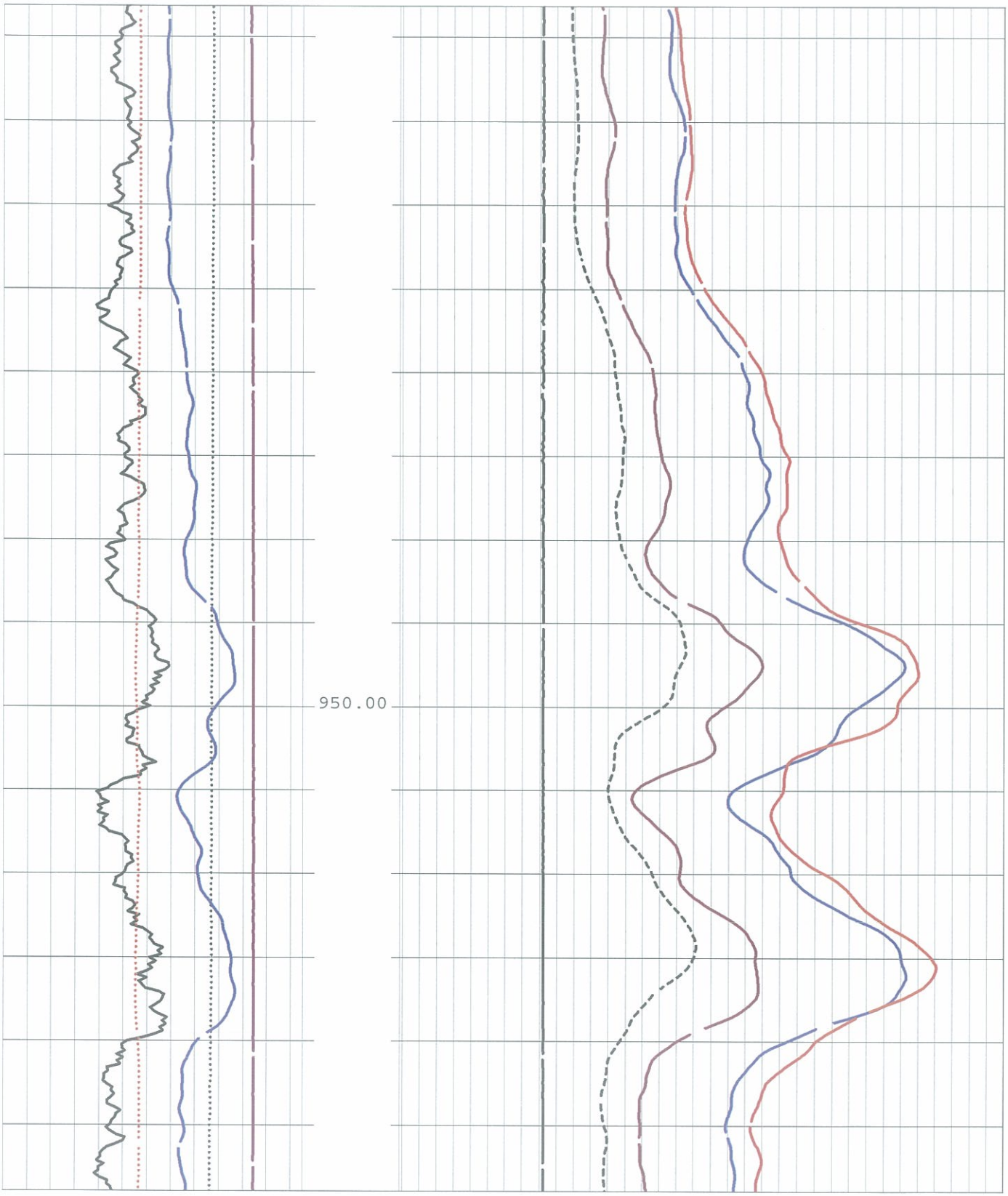

850.00
900.00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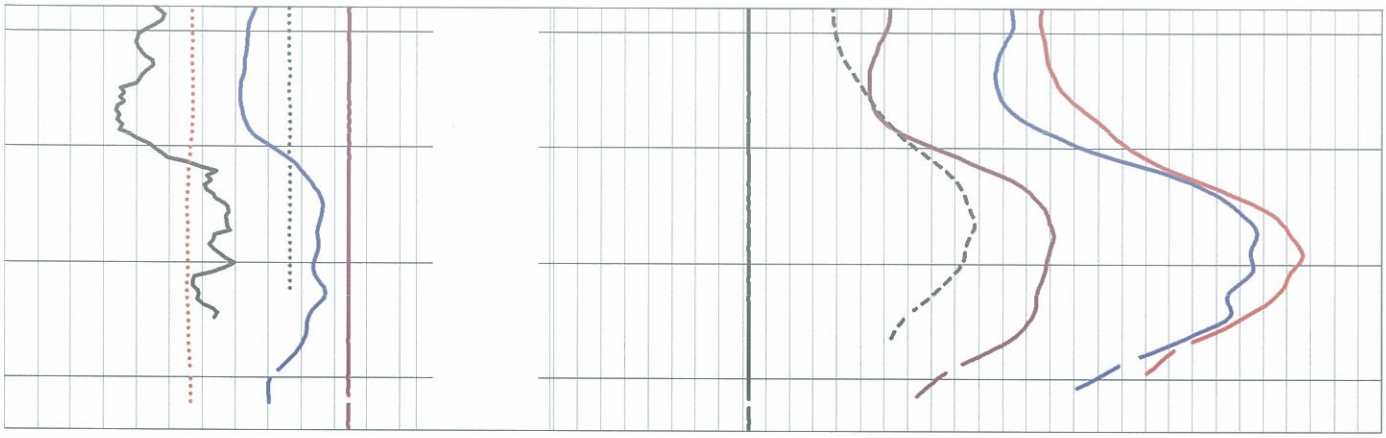
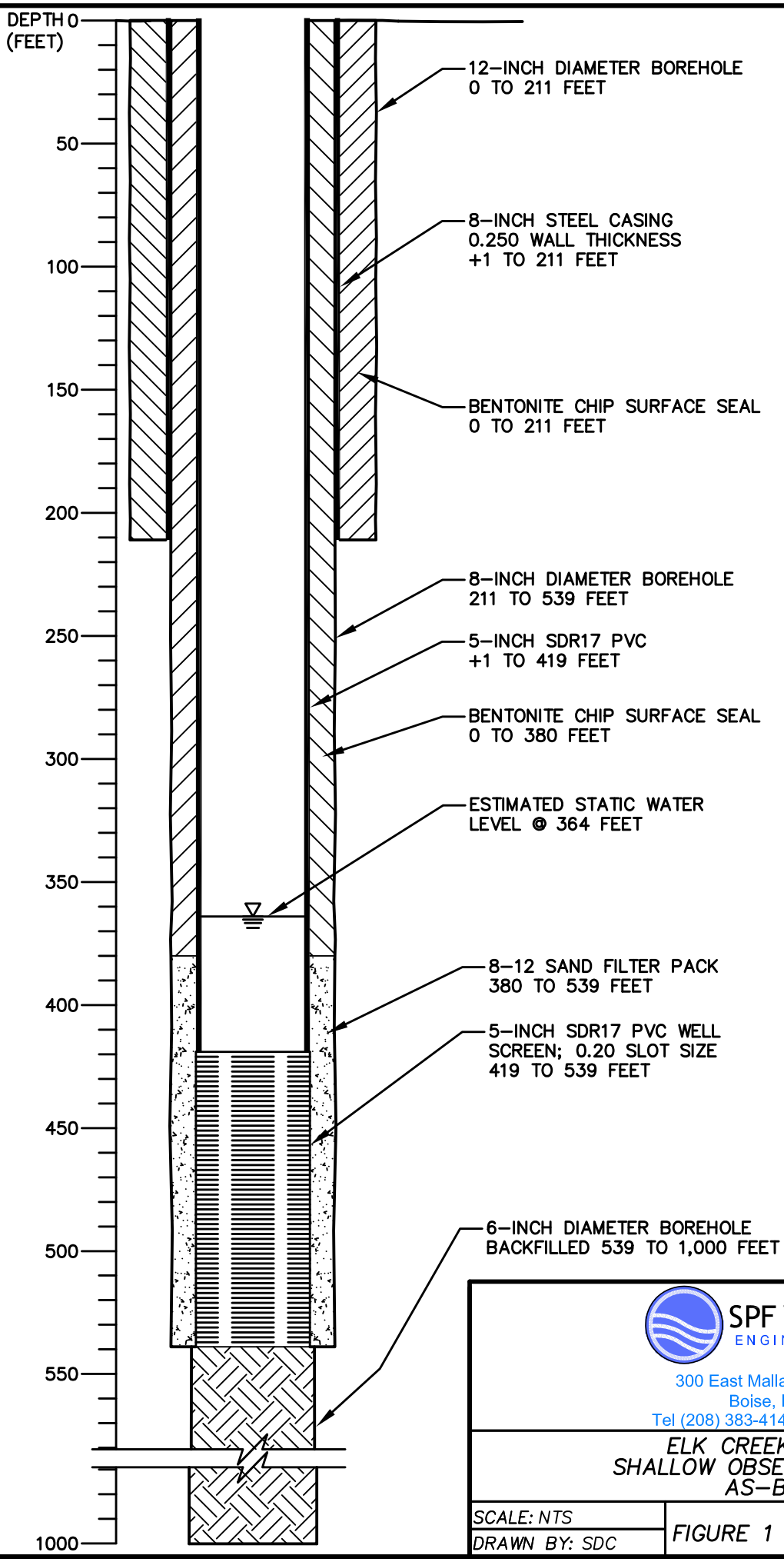


Attachment D: As-Built Construction Diagram



SPF WATER
ENGINEERING
300 East Mallard Drive, Suite 350
Boise, Idaho 83706
Tel (208) 383-4140 Fax (208) 383-4156

ELK CREEK VILLAGE
SHALLOW OBSERVATION WELL
AS–BUILT

SCALE: NTS
DRAWN BY: SDC

FIGURE 1

PROJ. #591.0040

Attachment E: Photos of Well Test

Elk Creek Canyon
Shallow Observation Well

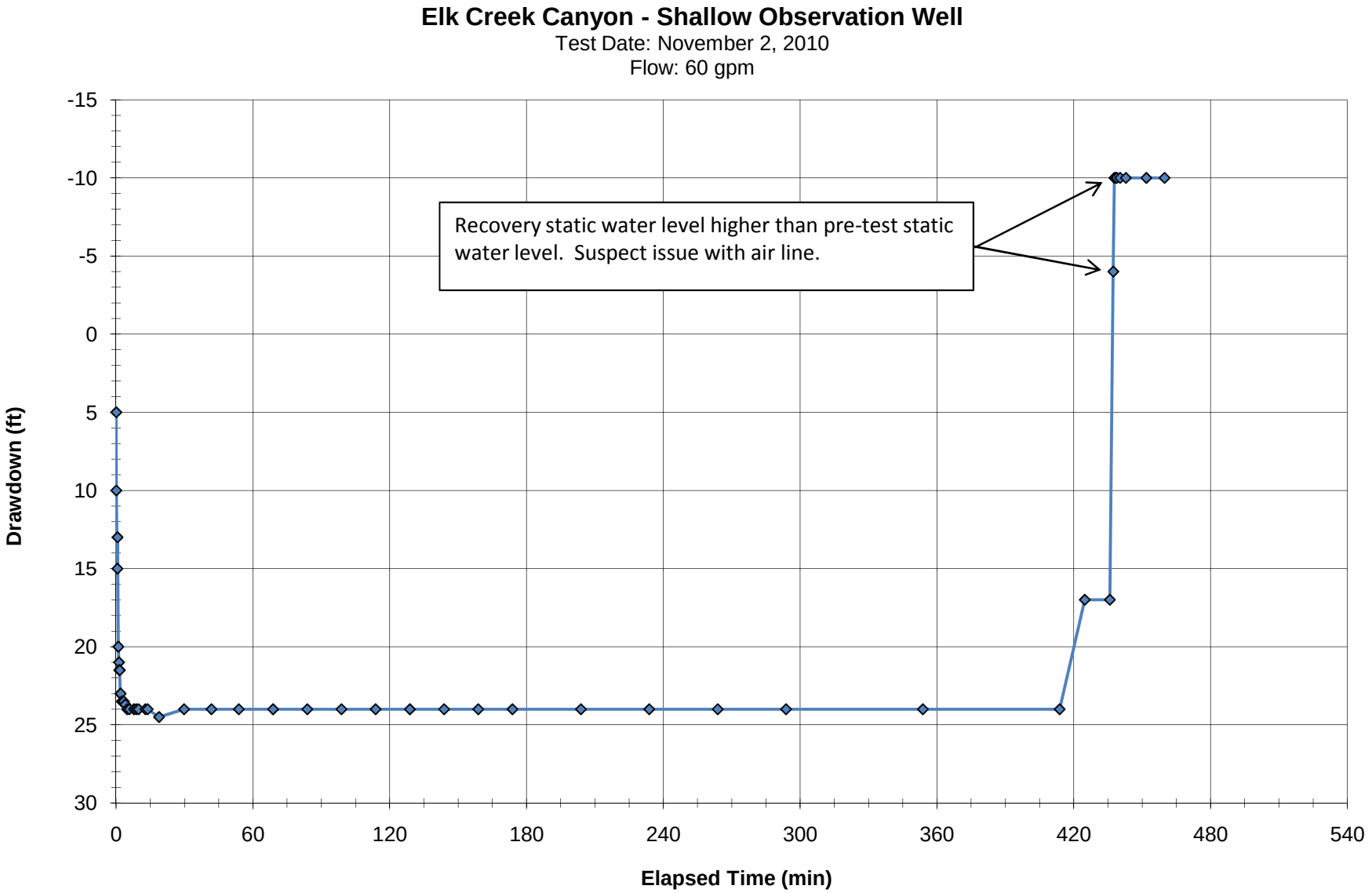
Constant Rate Test

11/02/2010

Attachment F: Constant-Rate Pumping Test Data

Elk Creek Canyon Constant Rate Test Q = 60 gpm
Test performed by: SPF and Stevens
Measurements taken by: SPF and Stevens
Measurement point: Air gauge
Static water level: 364 feet

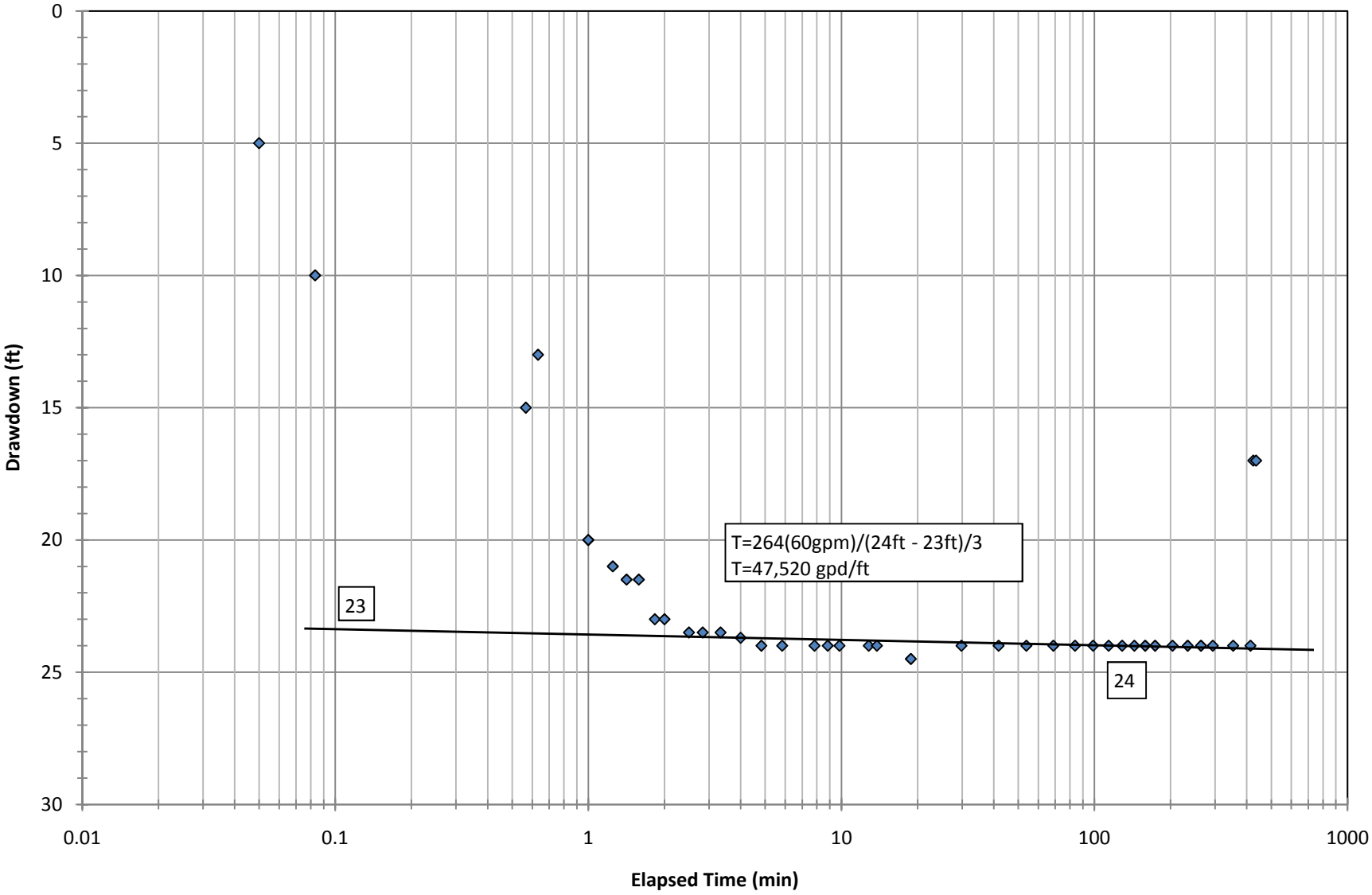
Date	Time	Elapsed Time, t (min)	t' (min)	t/t'	DTW (ft)	DD (ft)	Remarks
11/2/2010	8:45				370		static WL
11/2/2010	9:06				370		pump on
11/2/2010	9:06	0.05			375	5	
11/2/2010	9:06	0.1			380	10	
11/2/2010	9:06	0.6			385	15	
11/2/2010	9:06	0.6			383	13	
11/2/2010	9:07	1.0			390	20	
11/2/2010	9:07	1.3			391	21	
11/2/2010	9:07	1.4			391.5	21.5	
11/2/2010	9:07	1.6			391.5	21.5	
11/2/2010	9:08	1.8			393	23	
11/2/2010	9:08	2.0			393	23	
11/2/2010	9:08	2.5			393.5	23.5	
11/2/2010	9:09	2.8			393.5	23.5	
11/2/2010	9:09	3.3			393.5	23.5	
11/2/2010	9:10	4.0			393.7	23.7	
11/2/2010	9:11	4.8			394	24	
11/2/2010	9:12	5.8			394	24	Q check 60 gpm
11/2/2010	9:14	7.8			394	24	
11/2/2010	9:15	8.8			394	24	
11/2/2010	9:16	9.8			394	24	
11/2/2010	9:19	12.8			394	24	
11/2/2010	9:20	13.8			394	24	
11/2/2010	9:25	18.8			394.5	24.5	
11/2/2010	9:36	29.8			394	24	
11/2/2010	9:48	41.8			394	24	
11/2/2010	10:00	53.8			394	24	
11/2/2010	10:15	68.8			394	24	
11/2/2010	10:30	83.8			394	24	
11/2/2010	10:45	98.8			394	24	
11/2/2010	11:00	113.8			394	24	
11/2/2010	11:15	128.8			394	24	
11/2/2010	11:30	143.8			394	24	
11/2/2010	11:45	158.8			394	24	
11/2/2010	12:00	173.8			394	24	
11/2/2010	12:30	203.8			394	24	
11/2/2010	13:00	233.8			394	24	
11/2/2010	13:30	263.8			394	24	
11/2/2010	14:00	293.8			394	24	
11/2/2010	15:00	353.8			394	24	
11/2/2010	16:00	413.8			394	24	
11/2/2010	16:11	424.8			387	17	
11/2/2010	16:14	427.8					Q check 60 gpm
11/2/2010	16:21	434.8					T = 65.8 ^{o}F, water quality samples taken
11/2/2010	16:22	435.8			387	17	
11/2/2010	16:23	436.8					pump off
11/2/2010	16:23	437.3	0.5	875	366	-4	
11/2/2010	16:24	437.8	1.0	438	360	-10	
11/2/2010	16:24	438.3	1.5	292	360	-10	
11/2/2010	16:25	438.8	2.0	219	360	-10	
11/2/2010	16:26	440.3	3.5	126	360	-10	
11/2/2010	16:29	442.8	6.0	74	360	-10	
11/2/2010	16:38	451.8	15.0	30	360	-10	
11/2/2010	16:46	459.8	23.0	20	360	-10	end recovery


Elk Creek Canyon - Shallow Observation Well
Test Date: November 2, 2010
Flow: 60 gpm
Recovery static water level higher than pre-test static water level. Suspect issue with air line.
Drawdown (ft)
-15
-10
-5
0
5
10
15
20
25
30
0
60
120
180
240
300
360
420
480
540
Elapsed Time (min)

Elk Creek Canyon - Shallow Observation Well

Test Date: November 2, 2010

Flow Rate: 60 gpm



Attachment G: Water Quality Data

Analytical Laboratories, Inc.

1804 N. 33rd Street
Boise, Idaho 83703
Phone (208) 342-5515

Date Report Printed: 12/2/2010 3:44:42
http://www.analyticallaboratories.com

Laboratory Analysis Report

Sample Number: 1034935

Attn: TERRY SCANLAN, P.E.,P.G.
S P F WATER ENGINEERING, LLC
300 E MALLARD DR STE 350
BOISE, ID 83706

Collected
Submitted M MARTIN

Source of Sample:
ELK CREEK CANYON ECC SHALLOW OBS WELL

Time of 16:20
Date of 11/2/2010
Date Received: 11/3/2010
Report Date: 11/15/2010

PWS#:

Field Temp: Temp Rcvd in Lab: **PWS Name:**

Test	MCL	Analysis Result	Units	MDL	Method	Date Completed	Analyst
Arsenic Low		0.004	mg/L	0.003	EPA 200.8	11/4/2010	JH
Calcium, Ca		22.6	mg/L	0.50	EPA 200.7	11/8/2010	KC
Iron, Fe		<0.05	mg/L	0.05	EPA 200.7	11/8/2010	KC
Magnesium, Mg		4.61	mg/L	0.50	EPA 200.7	11/8/2010	KC
Manganese, Mn		<0.05	mg/L	0.05	EPA 200.7	11/8/2010	KC
Potassium, K		2.7	mg/L	0.5	EPA 200.7	11/8/2010	KC
Sodium, Na		15.6	mg/L	0.50	EPA 200.7	11/8/2010	KC
Uranium, U		<1	ug/L	1	EPA 200.8	11/4/2010	JH
Bicarbonate		89.7	mg/L		SM 2320	11/5/2010	SS
Chloride, Cl		4	mg/L	1	EPA 300.0	11/4/2010	KC
Sulfate, SO4		7	mg/L	1	EPA 300.0	11/4/2010	KC
Total Dissolved Solids		150	mg/L	25	SM 2540C	11/9/2010	MG

MCL = Maximum Contamination Level
MDL = Method/Minimum Detection Limit
UR = Unregulated

Thank you for choosing Analytical Laboratories for your testing needs.
If you have any questions about this report, or any future analytical needs, please contact your client manager:
Michael Moore