

COPPER EAGLE 1-24 SUNCOR  
SW SW 24-2N-2W (909)

October 4, 2018

Mr. Nicholas Fischer  
Vice President  
Merit Partners  
2555 E. Camelback Road, Suite 180  
Phoenix, Arizona 85016

**SUBJECT: WELL ABANDONMENT – SUNCOR 1-24 OIL & GAS STORAGE WELL,  
GOODYEAR, AZ**

Dear Mr. Fischer:

Southwest Groundwater Consultants (SGC) has prepared the following report documenting the abandonment of the SunCor 1-24 Oil & Gas Storage Well located northeast of the intersection of Indian School Road and Cotton Lane in Goodyear, Arizona. The location of the well is shown in Figure 1 included as Attachment 1.

### **BACKGROUND INFORMATION**

Information regarding 1-24 Oil & Gas well is presented below.

	SunCor 1-24
Cadastral Well Location	B (2-2) 24 CCC
Date Installed	February 2002
Total Depth (feet)	6,053

#### **Abandonment Application**

SGC prepared a well abandonment application and submitted it to the Oil & Gas Conservation Commission for approval. Final approval was granted by the Oil & Gas Conservation Commission in a letter dated March 8, 2018. A copy of the approval letter is included as Attachment 2.

#### **Abandonment Procedures**

Southwest Waterworks Contractors, Inc. (Southwest Waterworks) was contracted to abandon the well. Southwest Waterworks contracted Longmire Well Service (Longmire) to conduct a downhole color video survey of the well on August 22, 2018 to confirm the well casing was open to a depth of at least 2,100 feet below land surface (bls). Visibility throughout much of the video was poor. A soft fill material was encountered at approximately 1,810 feet bls and the video camera could not be advanced beyond that depth. The well casing was observed to be in good condition and was open to the depth approximately 1,810 feet bls. Although the well was listed as being greater than 6,000 feet deep, it was assumed that the well had been previously plugged



with cement from total depth to just below approximately 1,800 feet bls. A copy of the well video on CD is included as Attachment 3.

Instead of simply placing cement of top of the existing surface, Longmire was contracted to install a steel bridge plug in Well 1-24 at the approximate depth of 1,800 feet bls to ensure that a confirmed bridge was in place prior to placing cement slurry. Longmire installed a custom made corrugated steel plug that had a diameter slightly less than the existing well casing. The plug was swaged in place on September 11, 2018. Photographs of the bridge plug are included in Attachment 4.

No documentation of the completion of a cement bond log was available for the 1-24 well. In order to confirm that no annular space was “open” to the surface behind the well casing, SGC contracted Geolog, LLC (Geolog) to perform a cement bond log from the depth of 1,800 feet bls to the ground surface. Geolog conducted a cement bond log of well 1-24 on August 28, 2018. The cement bond log performed by Geolog confirmed the annular space behind the casing was cemented. A copy of the cement bond log conducted by Geolog is included as Attachment 5.

Well 1-24 was abandoned by filling with a cement slurry in two lifts by pumping through a tremie pipe. Prior to pumping through the tremie pipe, the cement grout was passed through a 2-inch slotted bar strainer, in order to remove any unmixed lumps. Approximately 6 cubic yards of cement slurry were placed during the initial lift on September 19, 2018 followed by a second lift of approximately 30 cubic yards on September 20, 2018. The second lift brought the cement in the well to within approximately 10 feet of ground surface.

Final abandonment activities included removing the upper 10 feet of well casing materials; placing a permanent steel plate with the well name, former operator, lease number, and well location permanently engraved over the remaining casing materials; placing a granular material infused with a bright colored permanent dye; and backfilling the remaining portion of the excavation with clean imported fill material. The fill material was compacted using a hand operated vibrating compactor, bucket tamping, and wheel rolling. A sign post, with pertinent well information, was placed at the abandoned well location; although it is understood the need for a permanent marker post was waived by the Oil & Gas Conservation Commission and this sign may be removed pending future development of the property. Photographs documenting the abandonment procedures are included as Attachment 4.

The well location was surveyed by an Arizona Licensed surveyor on September 26, 2018. A copy of the survey information is included as Attachment 6. A completed “Plugging Record” was prepared for the abandonment and is included as Attachment 7.



Mr. Nicholaus Fischer  
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If you have any questions or require additional information, please call.

Sincerely,

**Southwest Groundwater Consultants**

Kevin D. Hebert, R.G.  
Senior Project Hydrogeologist

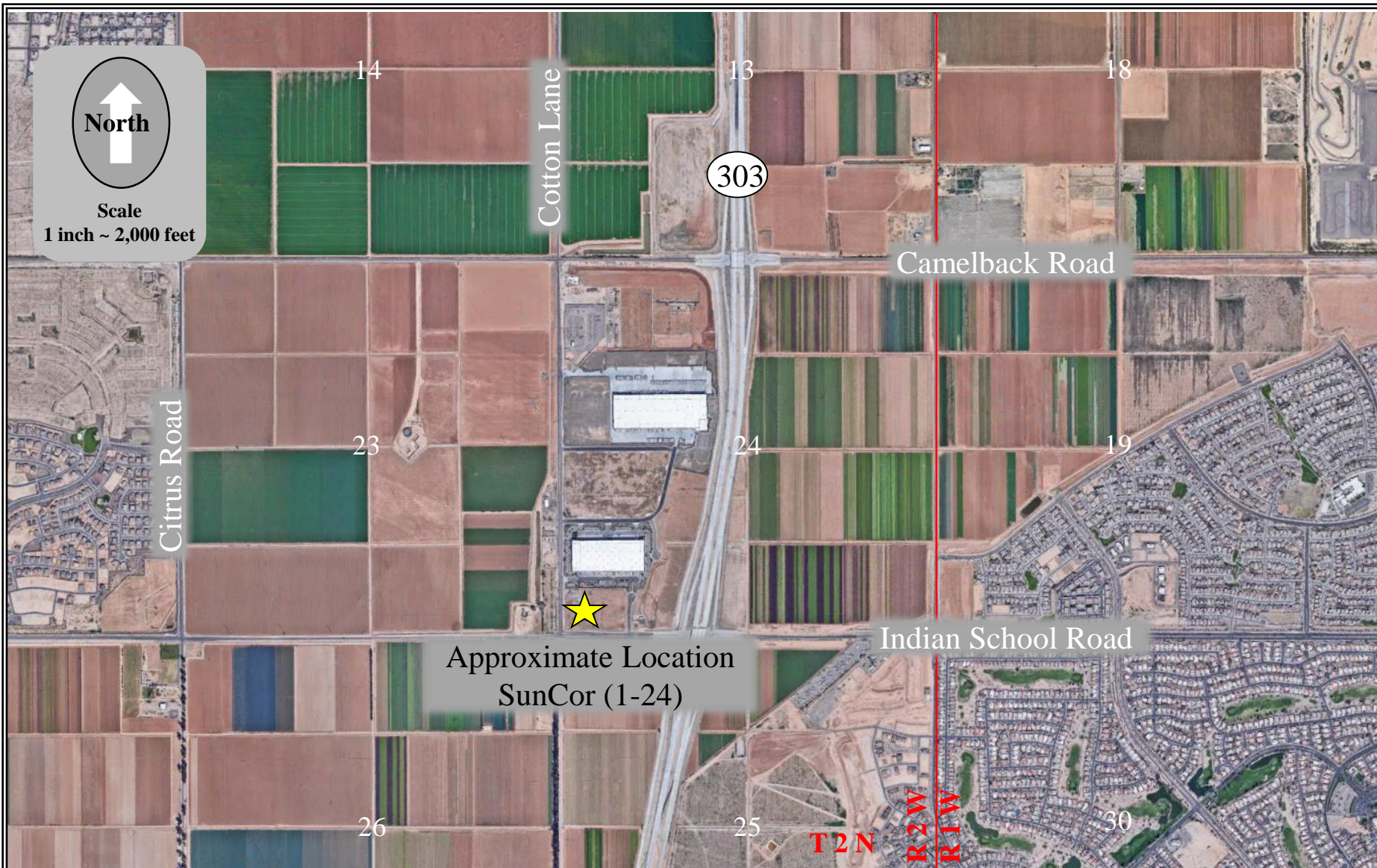
Attachments: Attachment 1: Figure 1  
Attachment 2: Application Approval Letter  
Attachment 3: Well Video  
Attachment 4: Abandonment Photographs  
Attachment 5: Cement Bond Log  
Attachment 6: Well Coordinate Survey  
Attachment 7: Plugging Record



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## **ATTACHMENT 1**

### **FIGURE 1**



## WELL LOCATION MAP SUNCOR 1-24 OIL & GAS WELL



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## **ATTACHMENT 2**

### **APPLICATION APPROVAL LETTER**



Douglas A. Ducey  
Governor

State of Arizona  
**Oil and Gas Conservation Commission**

1110 W. Washington Street, Phoenix, AZ 85007

602-771-4501

[www.azogcc.az.gov](http://www.azogcc.az.gov)

Dennis L. Turner, Oil and Gas Administrator

Commissioners:  
Frank Thorwald, Chair  
Vice Chair, vacant  
Stephen R. Cooper  
William C. Feyerabend  
J. Dale Nations, Ph.D.

**VIA EMAIL and US MAIL**

March 8, 2018

Mr. Bob Bambauer  
Senior Vice President  
Sunbelt Holdings  
6720 North Scottsdale Road, Suite 250  
Scottsdale, AZ 85253-4424

**RE: Arizona Oil and Gas Conservation Commission Reconsideration of Approval of the Sunbelt Holdings Plug and Abandonment of the Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909) Wells at the Meeting of January 12, 2018**

Dear Mr. Bambauer:

As you may recall, the Arizona Oil and Gas Conservation Commission (OGCC or Commission) approved the plug and abandonment process for Sunbelt Holdings (Sunbelt) for wells Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909) in the meeting of January 12, 2018. Sunbelt requested modification of the Commission's ruling and clarification of the Dennis Turner follow up letter of January 31, 2018. The Commission properly noticed the Sunbelt request for modification of the previous order, which was brought forward at the Commission meeting of February 23, 2018.

The Commission again appreciates your time and input at the public meeting on February 23, 2018 to reconsider two of the Commission's eleven directives as approved in the January 12, 2018 meeting. The directives were described in my letter of January 31, 2018.

At the February 23, 2018 meeting, the OGCC voted to amend two of the directives that were reflected in my previous letter. The two directives are modified as follows:

2. Sunbelt Holdings shall install a permanent bridge plug at the approximate top of the salt body in each well. At Sunbelt's discretion, the bridge plug may be either cast iron or steel. The Commission recommended the bridge plug be placed at a minimum depth of 2100 feet in both wells.
3. In each well, below the permanent bridge plug, the borehole may remain filled with brine or water (its current state), instead of filling it with plugging mud, as required by Arizona Administrative Code (A.A.C.) R12-7-127(D).

Other than the two directives as modified above, the remaining directives are unchanged. In placing the permanent bridge plug, Sunbelt shall fill the entire wellbore with plugging cement to the surface. The preferred plugging cement slurry is that recommended by the American Petroleum Institute (API) Environmental Guidance Document: Well Abandonment and Inactive Well Practices for U.S. Exploration and Production Operations, i.e., a neat cement slurry mixed to API standards. The plugging cement slurry shall be allowed to cure for the times specified by API before proceeding with excavation work.



In the February 23, 2018 meeting, the OGCC also discussed the absence of any data verifying casing integrity and cement bonding in the 1-24 well. During this meeting, Sunbelt agreed to confer with Schlumberger, the logging company who originally ran the logs in both wells, to determine the best way to evaluate whether the cement bond and casing integrity are adequate for plugging the 1-24. Sunbelt agreed to provide the Commission with the results of that discussion with Schlumberger. The first directive of the Commission, as contained in my January 31, 2018 letter, remains unchanged; the Commission expects assurance from the operator that the 1-19 wellbore is isolated from the formations it penetrated above the Luke salt deposit.

Enclosed is your copy of the approved Application to Plug and Abandon the 1-19 well. Please advise me via email (preferred) or phone at least 48 hours in advance of the work commencing on this well. When the plugging work is completed on this well, in accordance with R12-7-127(I), submit a completed Form 10 within 15 days. Download this form at <http://www.azogcc.az.gov/forms> . Forms 9 and 10 should be submitted both electronically and via US Mail.

Please direct any questions and address all correspondence to:

Dennis L. Turner  
Oil & Gas Administrator  
Arizona Oil & Gas Conservation Commission  
c/o Arizona Department of Environmental Quality  
1110 W. Washington Street  
Phoenix, AZ 85007  
[ogcc@azdeq.gov](mailto:ogcc@azdeq.gov)

Sincerely,



Dennis L. Turner  
Oil & Gas Program Administrator

cc: Frank Thorwald, Chairman, Arizona Oil and Gas Conservation Commission (email only)  
Kevin Hebert, Southwest Groundwater Consultants



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## **ATTACHMENT 3**

**WELL VIDEO  
(ON CD)**





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## **ATTACHMENT 4**

### **ABANDONMENT PHOTOGRAPHS**



View of swage tool and bridge plug



View of base of bridge plug



View of cement being poured into on-site strainer



View of cement being placed down 1-24 well through tremie pipe



Upper 10' of 1-24 well casing being removed



Backfill material being compacted in 1-24 excavation



View of metal plate placed over tubular casing at base of 1-24 excavation



View of permanent dyed granular material over top of metal plate





View of imported fill material being compacted in excavation



View of imported fill material being compacted in excavation



View of final site surface with well identification marker



View of surface well identification marker



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## **ATTACHMENT 5**

### **CEMENT BOND LOG**



**Geolog, LLC**  
 P.O. Box 2571 Cottonwood AZ. 86326  
 (928) 899-6491  
 geologllc@gmail.com

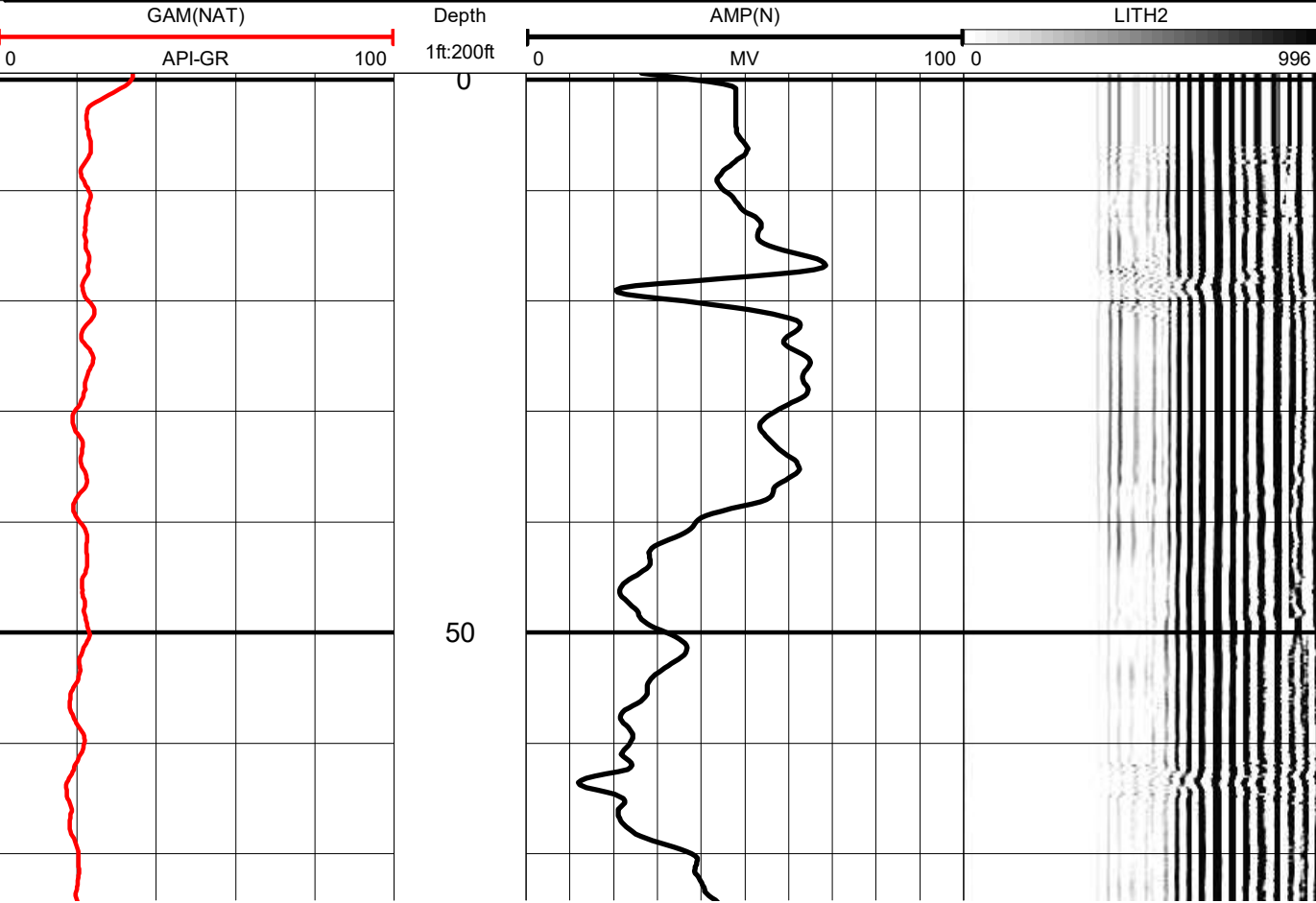
**WELL** Sunbelt Holdings 1-24  
**TYPE of LOGS** Cement Bond  
**Date** 08-28-18  
**SYSTEM NAME**

CLIENT	Southwest Groundwater Consultants	CEMENT BOND	OTHER SERVICES
WELL ID	1-24		N/A
PROJECT	Sunbelt Holdings		
COUNTY	Maricopa	STATE	Arizona
LOCATION	N 33 deg 29.675 min W 112 deg 25.548 min		
SEC	TWP	RGE	

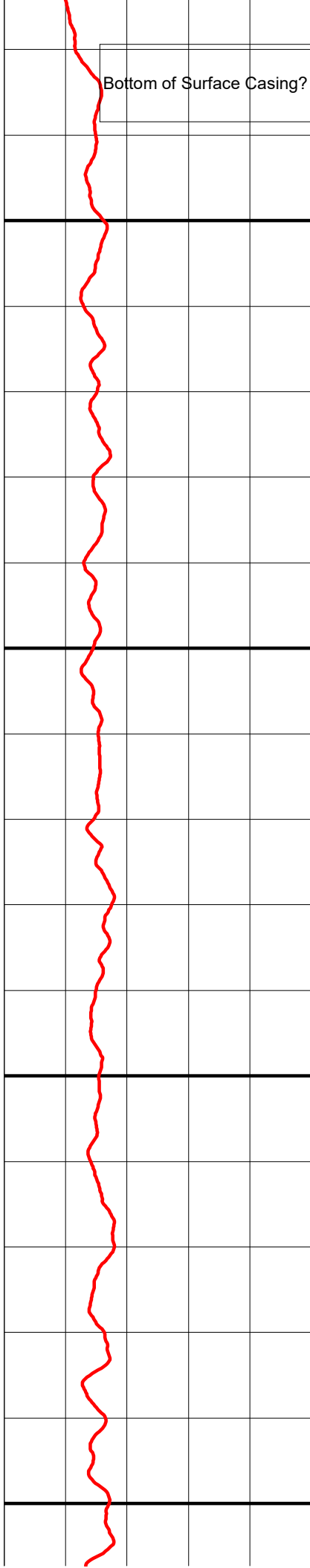
PERMANENT DATUM Ground Level ELEVATION G.L. 970 ft-amsl  
 SURFACE CONDUCTOR N/A feet  
 LOGS MEAS. FROM Ground Level  
 DRILLING MEAS. FROM Ground Level

DATE	08-28-18	TYPE FLUID IN HOLE	Salt Water
RUN No	1	RES. MUD	N/A
WELL TYPE	N/A	RES. MUD FILTRATE	
DEPTH-DRILLER	N/A	RES. WALL CAKE	
DEPTH-LOGGER	1,790 ft-bgl	MAX. REC. TEMP.	
ADDITIVES	N/A		
BIT TYPE	N/A		
DRILLING METHOD	N/A		
RECORDED BY	Chris Catalano		
WITNESSED BY	Southwest Groundwater		

RUN	Logging Tools Used / Century System VI	CASING RECORD / BIT RECORD	
NO.	TOOL S/N	FROM	TO
RUN 1	Sonic	0	1,790 ft-bgl
RUN 2			
RUN 3			
RUN 4			
RUN 5			
RUN 6			



Bottom of Surface Casing?

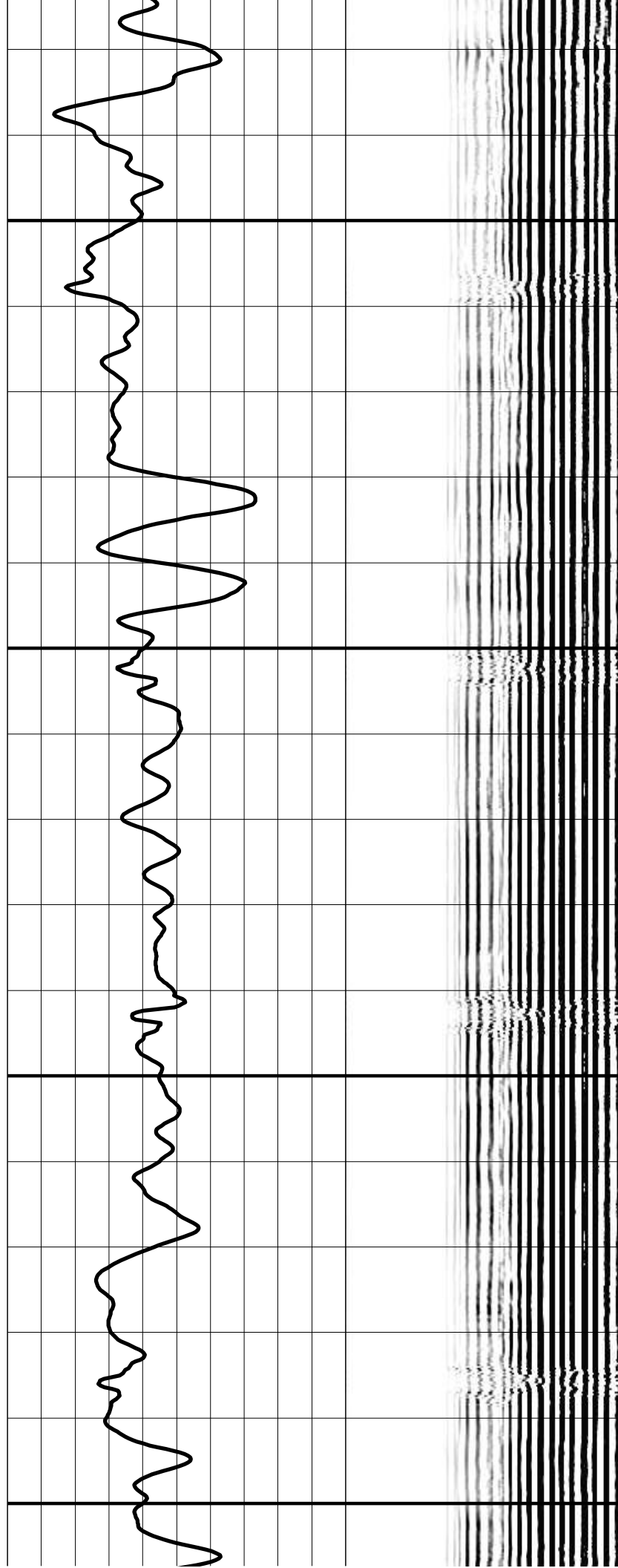


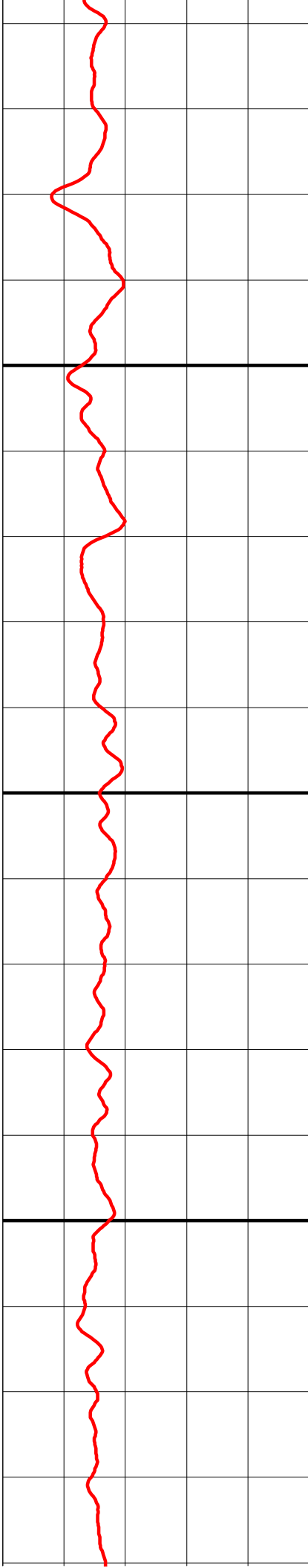
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150

200

250

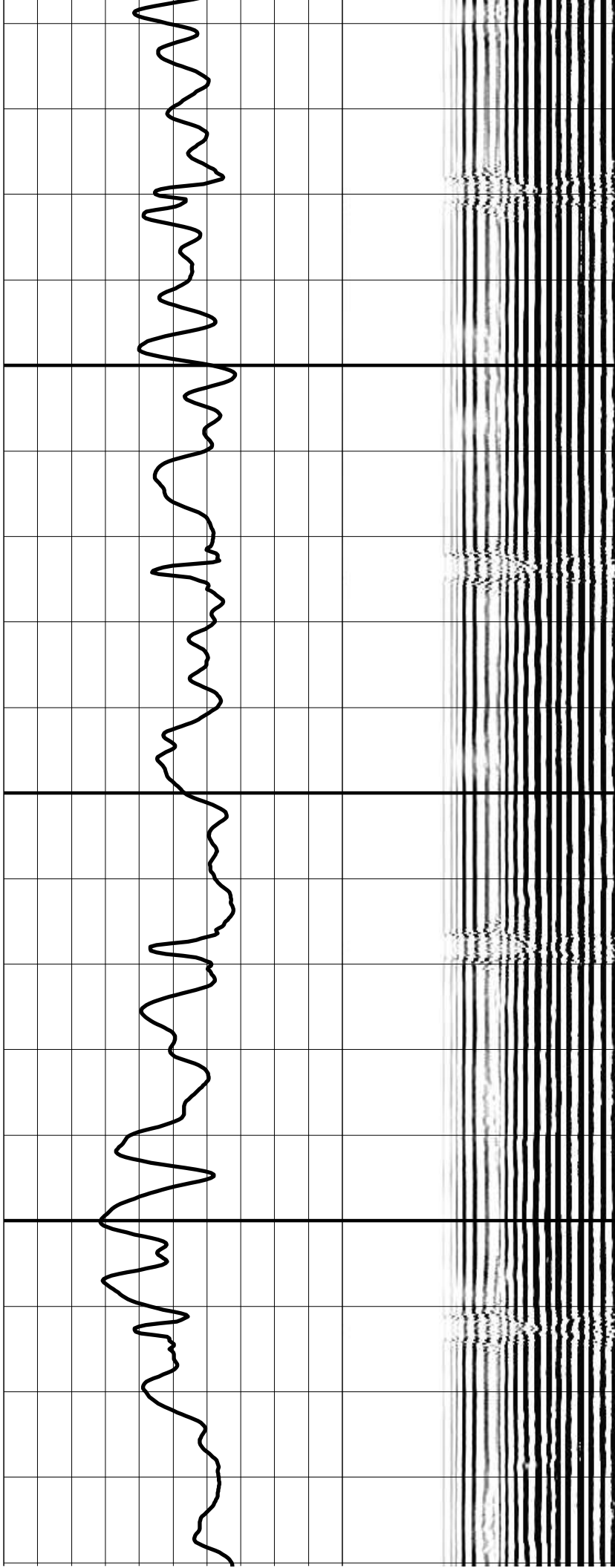


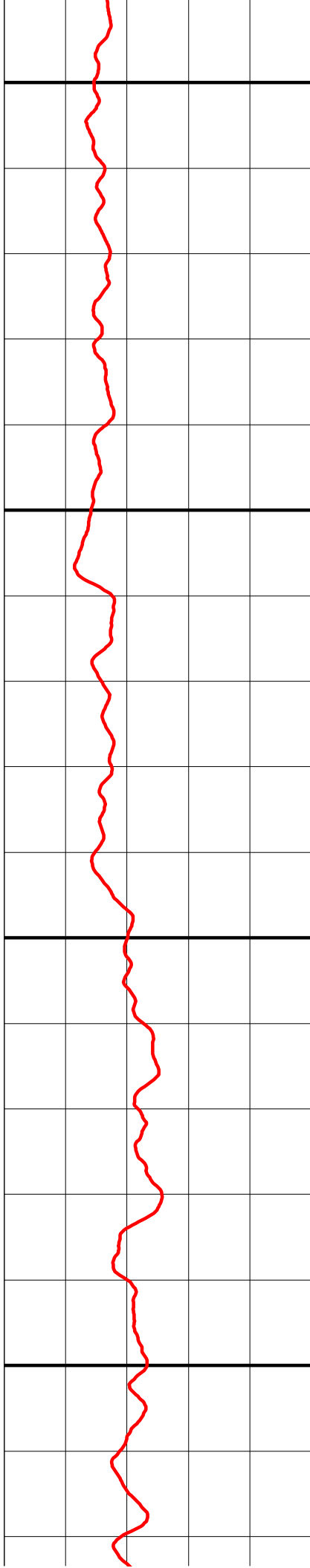


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350

400



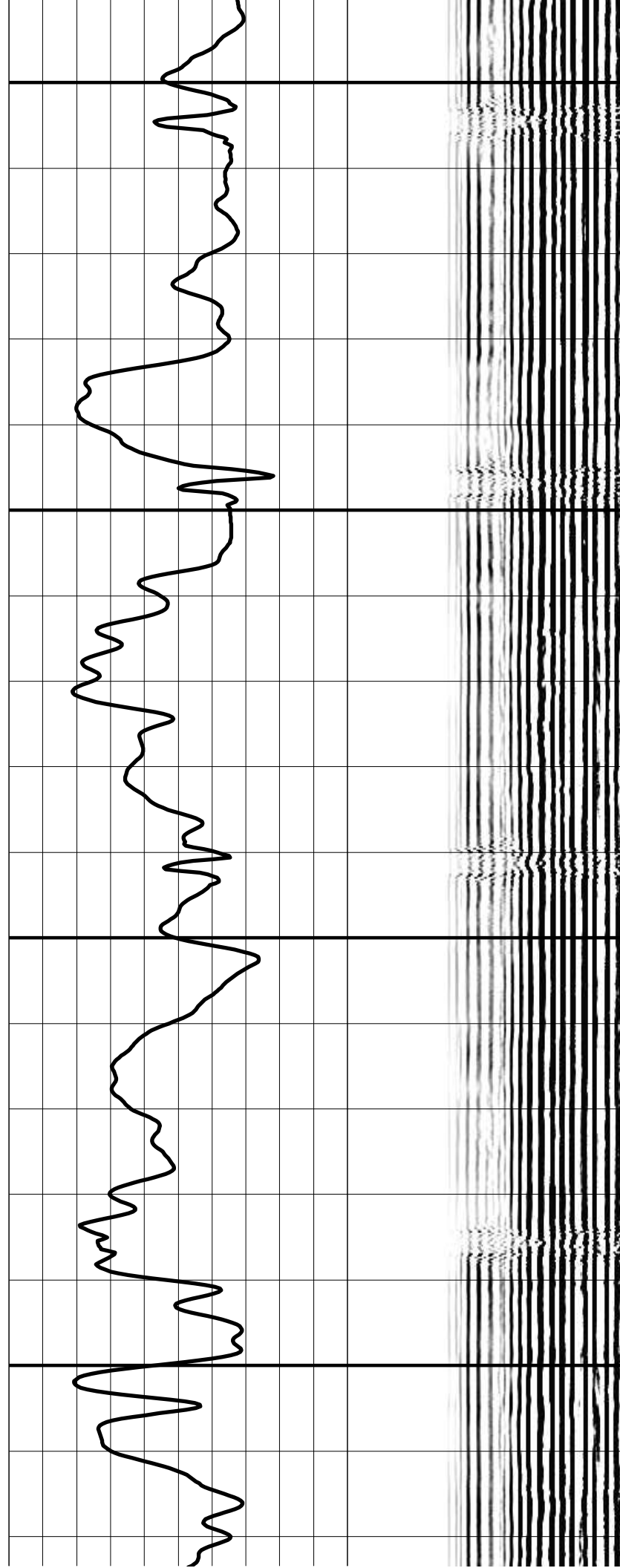


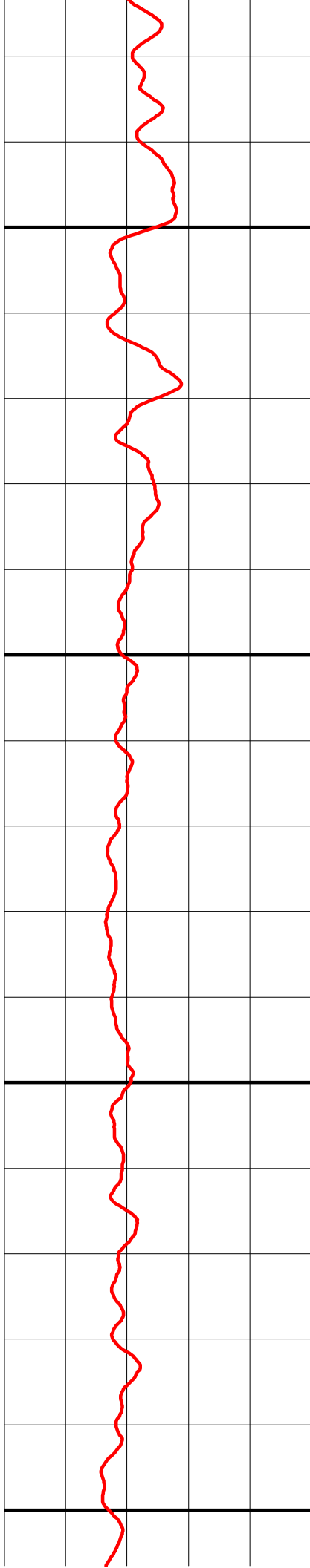
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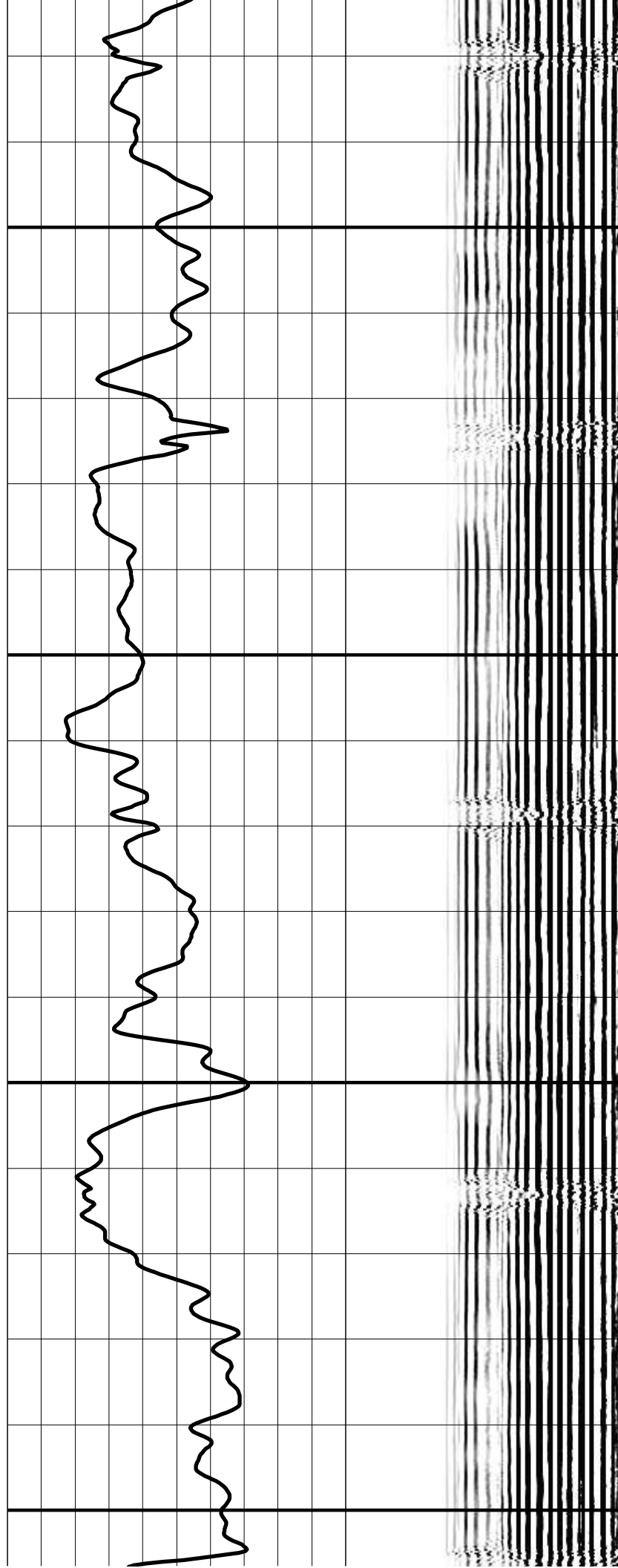


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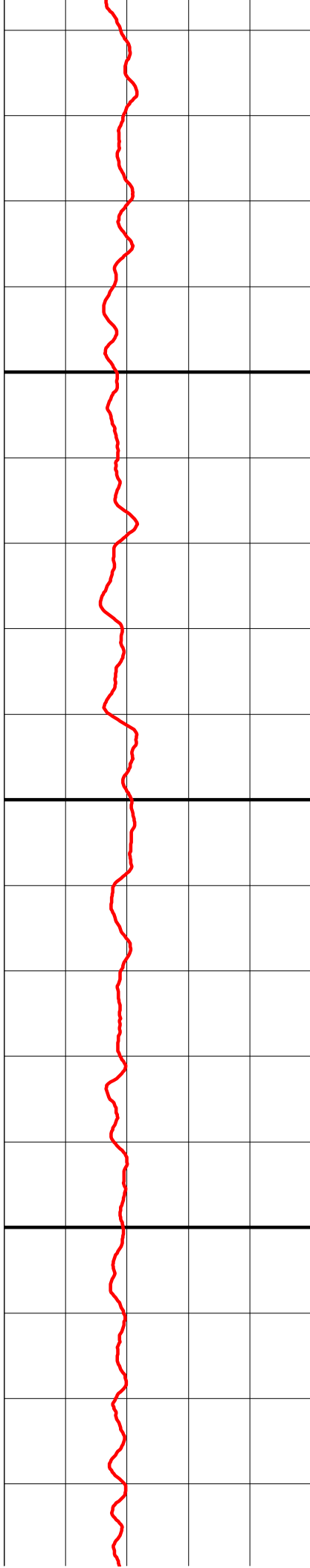
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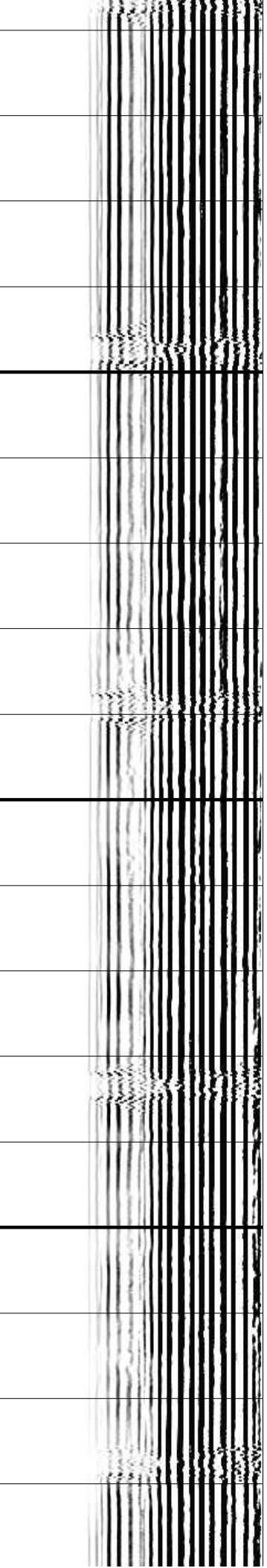
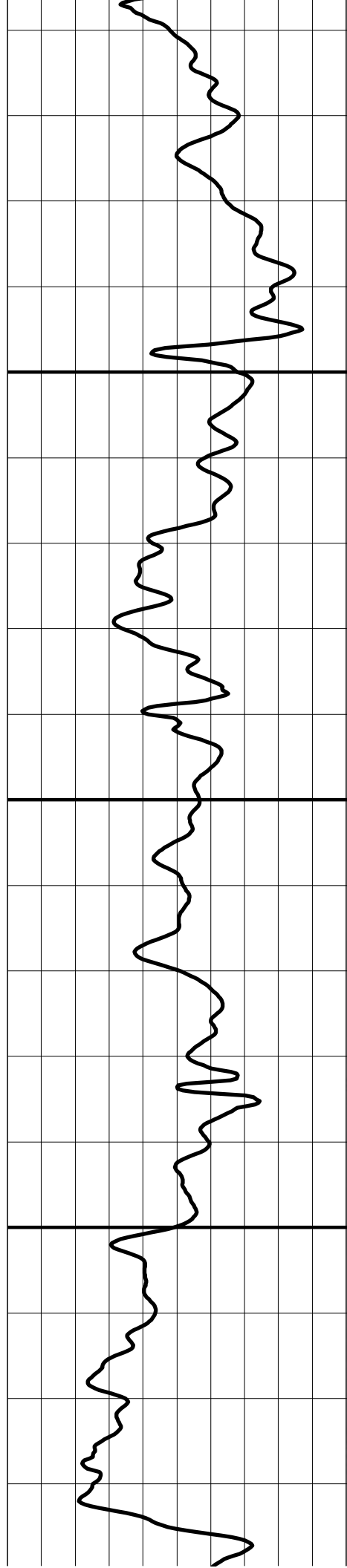


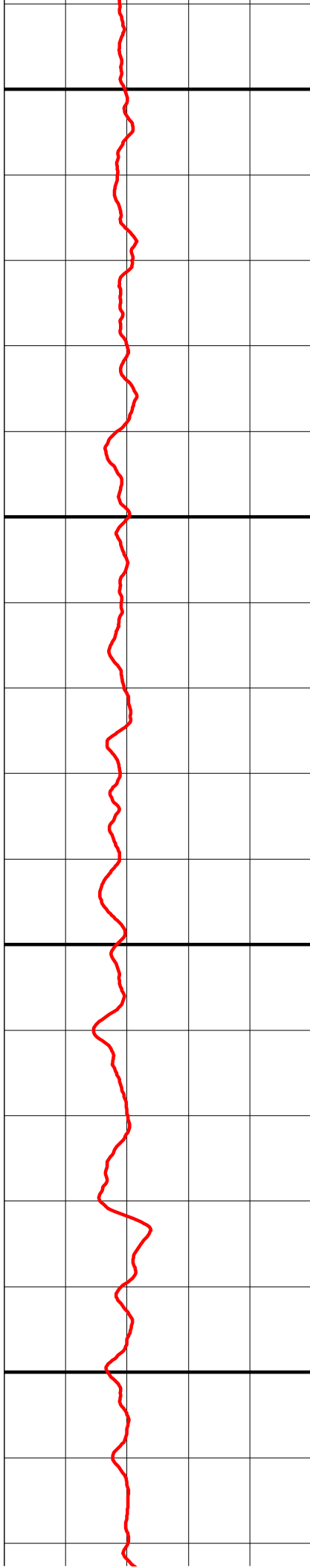


850

900

950



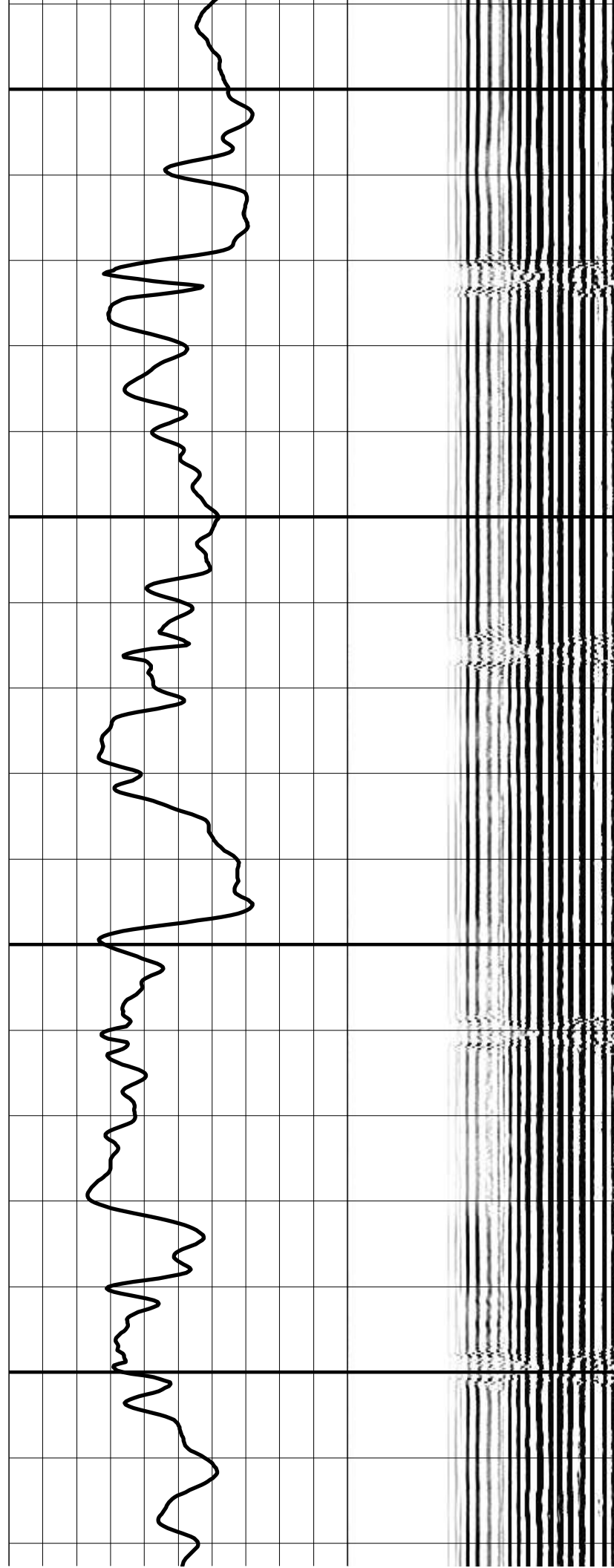


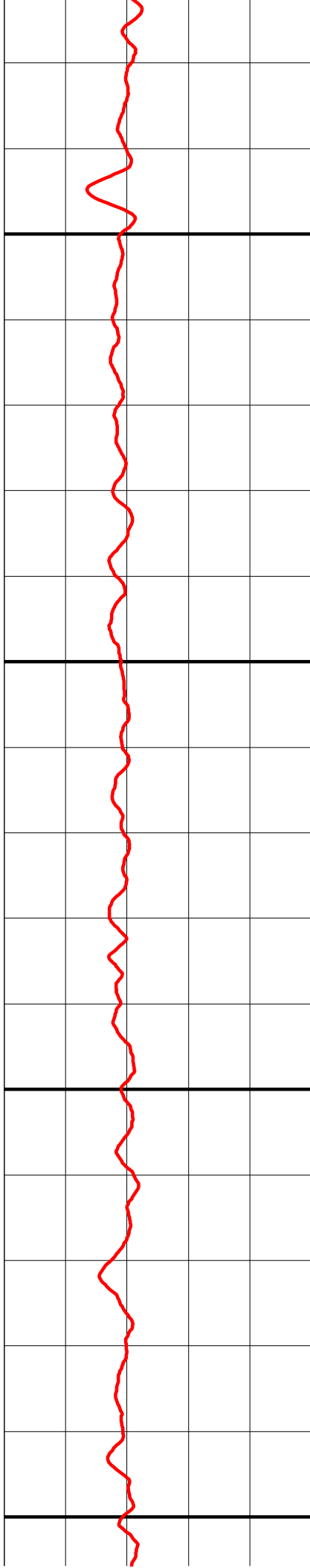
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1050

1100

1150



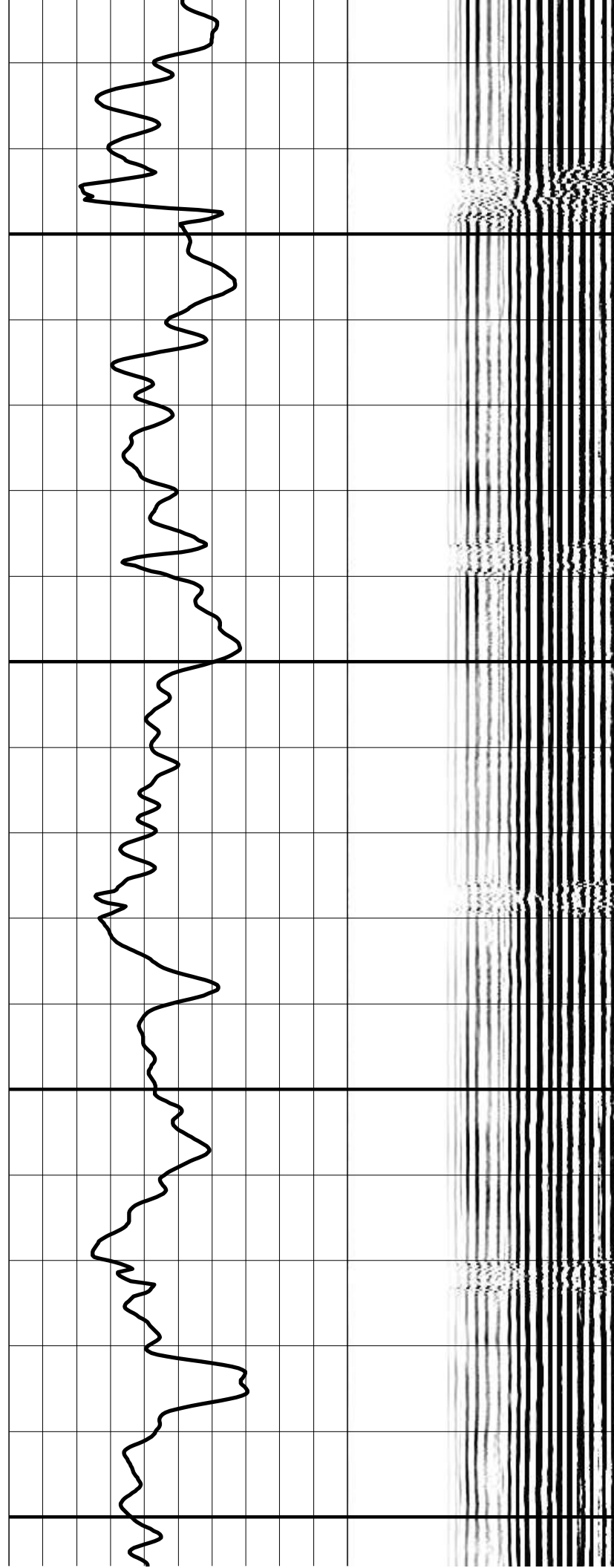


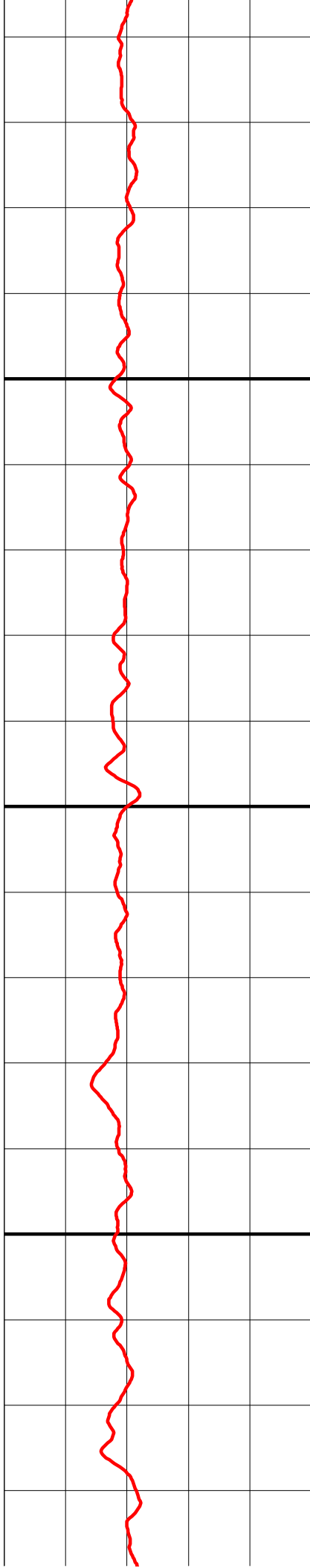
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1300

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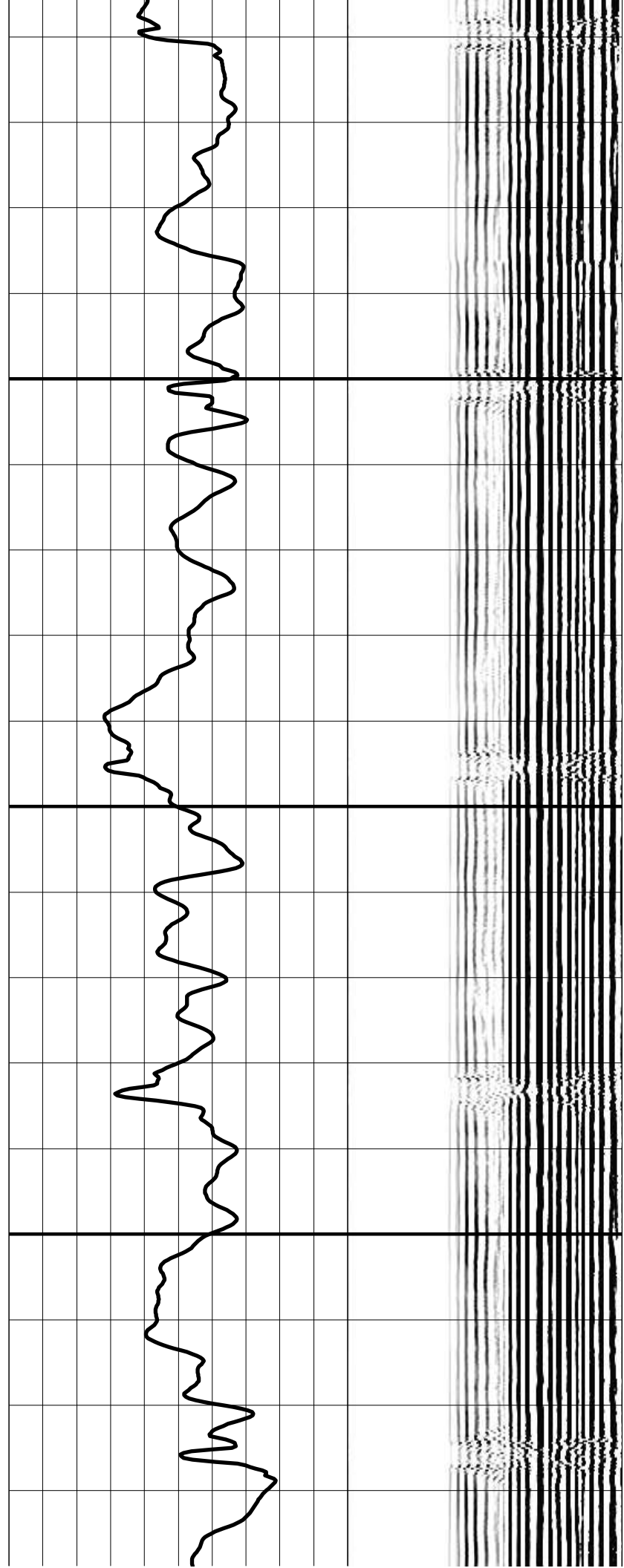


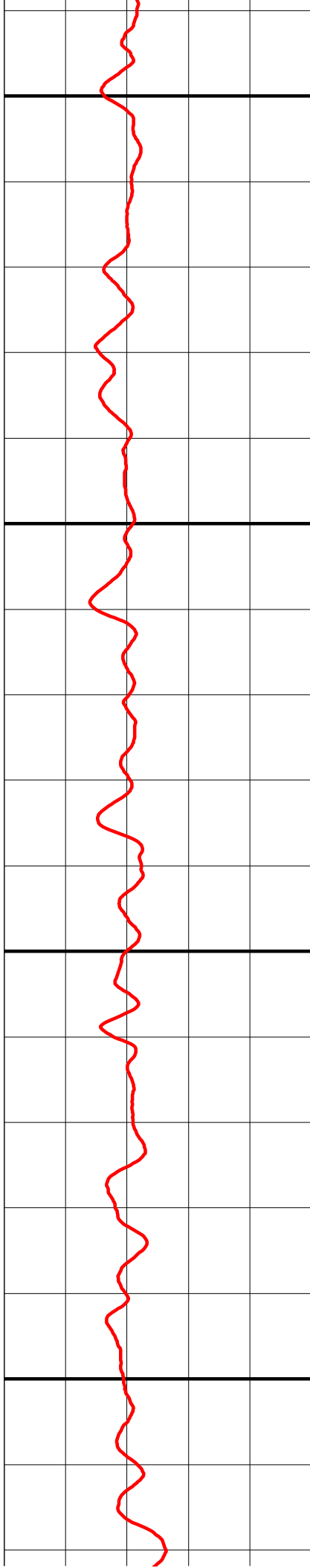


1400

1450

1500



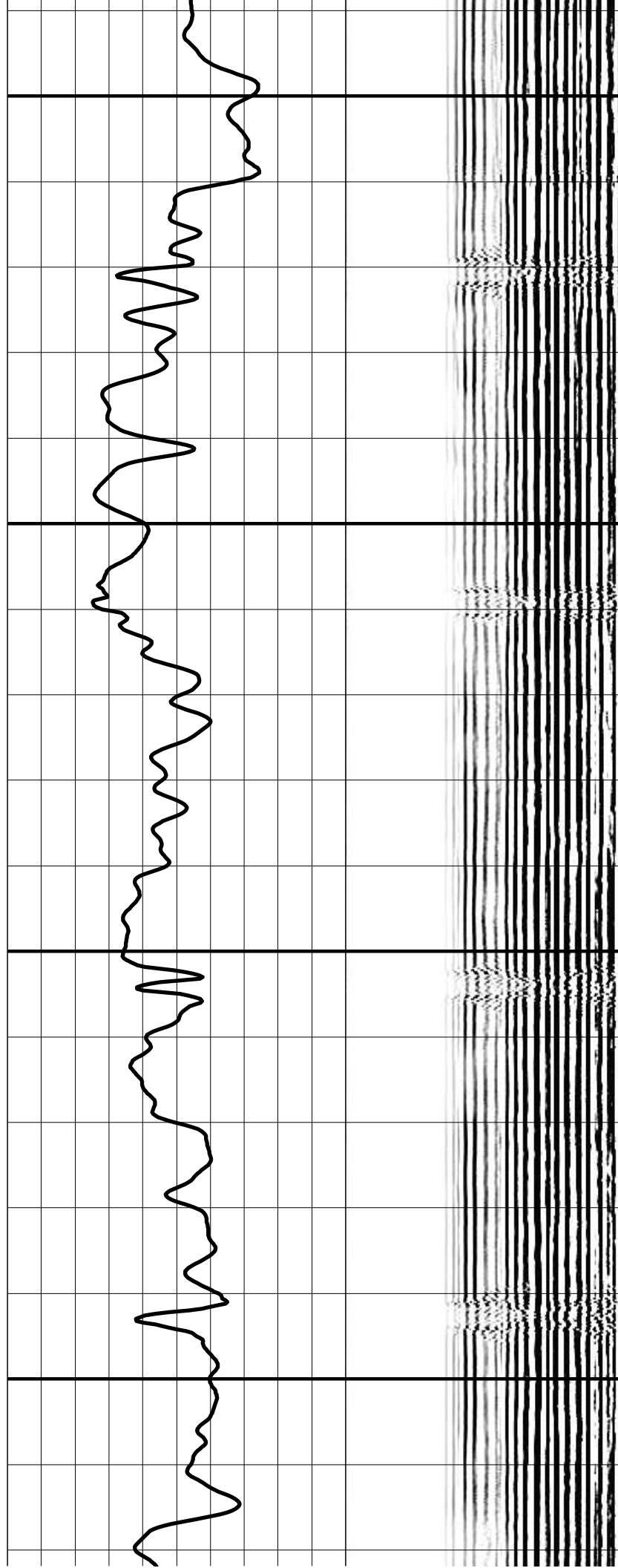


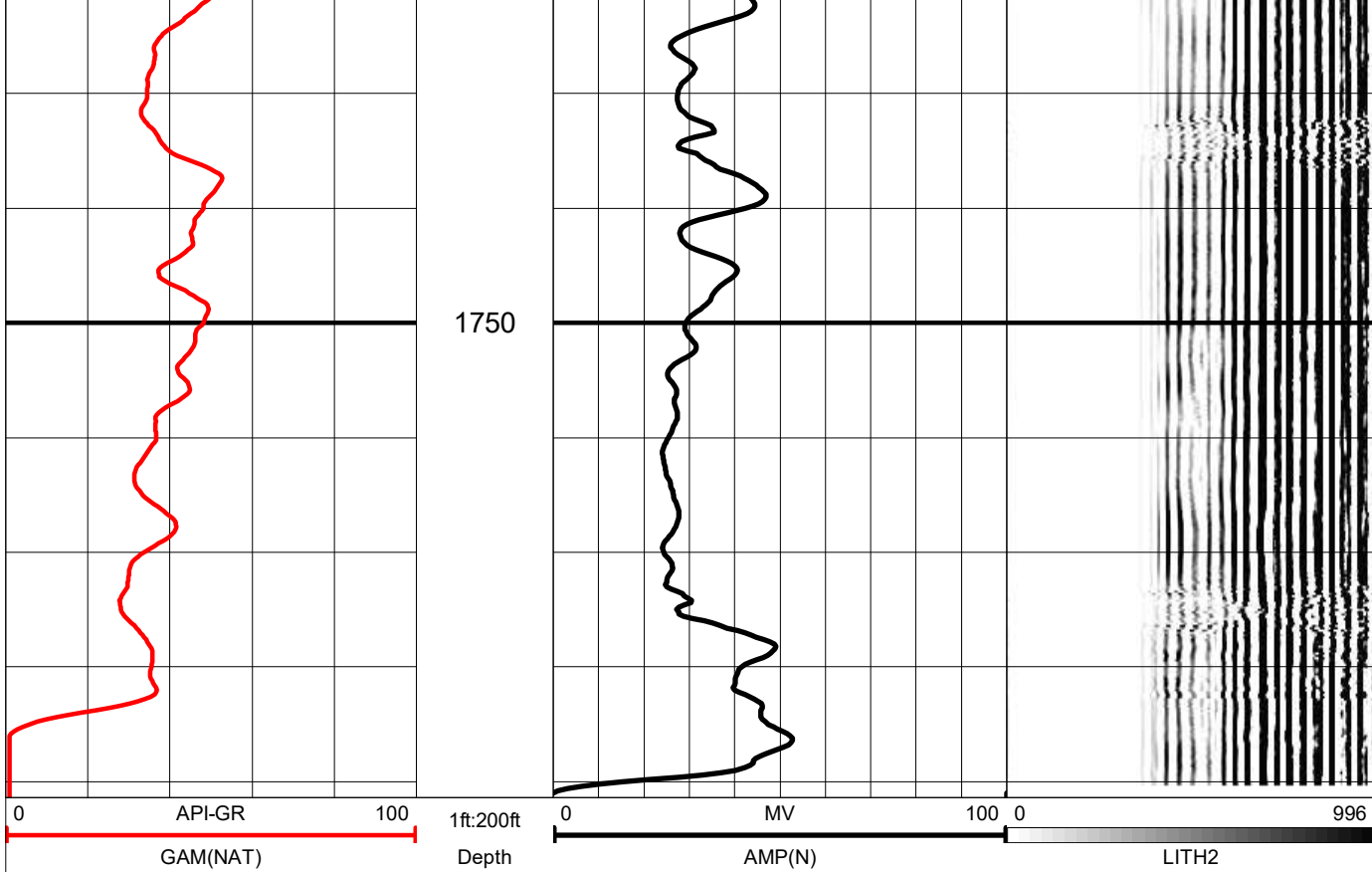
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1600

1650

1700



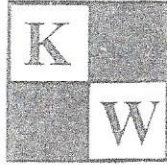




Mr. Nicholas Fischer  
SunCor 1-24 Abandonment Report  
October 4, 2018

## **ATTACHMENT 6**

### **WELL COORDINATE SURVEY**



**K – WEST SURVEYING, INC.**  
**P.O. BOX 509**  
**AVONDALE, AZ 85323**

**PHONE: 623-536-8248**  
**FAX: 623-536-8247**  
**CELL: 602-320-2333**  
**E-MAIL: [kwestsurvey@cox.net](mailto:kwestsurvey@cox.net)**

September 26, 2018

Southwest Groundwater Consultants

Attn.: Kevin D. Herbert

Re: Copper Eagle Gas Storage, LLC  
Luke-Glendale (Wildcat)  
SUNCOR Development 1-24  
B(2-2) 24CCC  
NE. Corner Indian School Road & Cotton Lane  
Goodyear, Arizona

	NORTHING	EASTING
1-24 Well (3" Dia. Post)	907888.165	544798.641

Coordinates are State Plane NAD 83, Central Arizona Zone.

**BASIS OF COORDINATES:**

Record of Survey PLSS Subdivision GDACS: Book 652 of Maps, Page 22.

Coordinates Point No.'s: 51080-1M and 51076-1

Any question regarding this matter please contact K-West Surveying at the above information.

Wade H. Shaffer R.L.S.  
Vice-President







Mr. Nicholas Fischer  
SunCor 1-24 Abandonment Report  
October 4, 2018

## **ATTACHMENT 7**

### **PLUGGING RECORD**

## PLUGGING RECORD

Operator Formerly Copper Eagle Gas Storage, LLC		Address & Phone number Not Applicable	
Federal, State, or Indian Lease No. or lessor's name if fee lease Not Applicable		Well No. 1-24	Field & Reservoir Luke-Glendale (Wildcat)
Location of Well Cadastral Location: B (2-2) 24 CCC			County Maricopa
Application to drill this well was filed in name of <b>Copper Eagle Gas Storage, LLC</b>		Has this well ever produced oil or gas? No	Character of well at completion (initial production) Oil (bbls/day) <b>Not Applicable</b> Gas (MCF/day) <b>Not Applicable</b> Dry?
Date plugged <b>September 20, 2018</b>		Total depth <b>1,800 feet</b>	Amount well producing when plugged: Oil (bbls/day) <b>Not Applicable</b> Gas (MCF/day) <b>Not Applicable</b> Water (bbls/day)
Name of each formation containing oil or gas. Indicate which formation open to wellbore at time of plugging	Fluid content of each formation	Depth interval of each formation	Size, kind & depth of plugs used. Indicate zones squeeze cemented, giving amount of cement
Not Applicable			

### CASING RECORD

Size pipe	Put in well (ft.)	Pulled out (ft.)	Left in well (ft.)	Give depth and method of parting casing (shot, etc.)	Packers and shoes
24"	80'	10'	70'		
13 3/8"	3,060'	10'	3,050'		
9 5/8"	5,730'	10'	5,720'		
Was well filled with heavy drilling mud, according to regulations? Well was cemented from 10' to 1,800 feet				Indicate deepest formation containing fresh water	

### NAME AND ADDRESSES OF ADJACENT LEASE OPERATORS OR OWNERS OF THE SURFACE

Name	Address	Direction from this well
None		

In addition to other information required on this form, if this well was plugged back for use as a fresh water well, give all pertinent details of plugging operations to base of fresh water sand, perforated interval to fresh water sand, name and address of surface owner, and attach letter from surface owner authorizing completion of this well as a water well and agreeing to assume full liability for any subsequent plugging which might be required.

Not Applicable

Use reverse side for additional detail

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Project Hydrogeologist of the Southwest Groundwater Consultants (company) and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

10/3/18

Date

  
Signature

Permit No. \_\_\_\_\_

**Mail one copy of completed form to:**  
Oil and Gas Program Administrator  
Arizona Department of Environmental Quality  
1110 W. Washington Street  
Phoenix, AZ 85007

email **one** copy to: [ogcc@azdeq.gov](mailto:ogcc@azdeq.gov)

**STATE OF ARIZONA**  
**OIL & GAS CONSERVATION COMMISSION**  
Plugging Record

File two copies: one by mail, one electronically

Form No. 10



Douglas A. Ducey  
Governor

State of Arizona  
**Oil and Gas Conservation Commission**

1110 W. Washington Street, Phoenix, AZ 85007

602-771-4501

[www.azogcc.az.gov](http://www.azogcc.az.gov)

Dennis L. Turner, Oil and Gas Administrator

Commissioners:  
Frank Thorwald, Chair  
J. Dale Nations, Ph.D., Vice Chair  
Stephen R. Cooper  
William C. Feyerabend

September 11, 2018

**VIA EMAIL and U.S. MAIL**

Mr. Nicholas Fischer  
Vice President  
Merit Partners Inc.  
2555 East Camelback Road, Suite 180  
Phoenix, Arizona 85016

**RE: Inspection Report for Copper Eagle 1-24 Inspected on August 28, 2018**

Dear Mr. Fischer:

Enclosed are is an Inspection Report for the subject wellsite. This was a routine inspection/ site visit by the Arizona Oil and Gas Conservation Commission to observe the cement bond log run. There were no compliance issues associated with this site visit.

The enclosed document is for your records.

Feel free to contact me at [ogcc@azdeq.gov](mailto:ogcc@azdeq.gov) or (602) 771 – 4501, if you have any questions.

Sincerely,

Dennis L. Turner  
Oil & Gas Program Administrator

cc: Kevin Hebert, R.G., Southwest Groundwater Consultants (email only)



Douglas A. Ducey  
Governor

State of Arizona

**Oil and Gas Conservation Commission**  
 1110 W. Washington Street, Phoenix, AZ 85007  
 602-771-4501  
[www.azogcc.az.gov](http://www.azogcc.az.gov)  
 Dennis L. Turner, Oil and Gas Administrator

Commissioners:  
 Frank Thorwald, Chair  
 J. Dale Nations, Ph.D., Vice Chair  
 Stephen R. Cooper  
 William C. Feyerabend

**Oil and Gas Administrator's Field Inspection Report**

<b>Company Name:</b> Merit Partners Inc. <b>Customer ID #:</b> 77563		<b>Inspection ID #:</b> 308483	<b>Case ID #:</b> N/A
<b>Place Name:</b> Copper Eagle 1-24 <b>Place ID #:</b> 180967		<b>Inspector(s):</b> Dennis L. Turner	
<b>County:</b> Maricopa		<b>Arrival Date and Time:</b> 8/28/2018, 1:00 pm.	
<b>Physical Location:</b> NE cor. Cotton Lane and Indian School Rd., Phoenix, AZ		<b>Reason for Inspection:</b> <input type="checkbox"/> Complaint Complaint No.: _____ <input checked="" type="checkbox"/> Routine Inspection <input type="checkbox"/> Follow-Up Original Inspection Report No.:	
<b>Mailing Address:</b> 2555 East Camelback Road, Suite 180 Phoenix, Arizona 85016			
<b>Physical Address:</b> NE cor. Cotton Lane & Indian School Rd., Phoenix, AZ			
<b>Coordinates (for new locations):</b> Latitude: Deg.: 33° 29' 40.3" N Longitude: Deg.: 112 ° 25' 32.8" W ; el.: _____ ft.			
<b>Permit No.:</b> 0912		<b>Was Inspection Announced?</b>	
<b>Onsite Contact Person(s)/Title(s)/phone:</b>  Kevin D. Hebert, R.G., Southwest Groundwater Consultants 602.515.0295 ofc. 602.908.2973 cell		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>Operational Status:</b> Spud date: 12/22/2001 T.D. and date: 6052' temp. abdn. 2/3/2002	
<b>Other Names for Site/Facility:</b> SunCor Development Co.		<b>Last Inspection:</b> enter a date. N/A	
<b>Inspection Report Issued:</b> Via email from ADEQ office		<b>Facility Initial:</b>	<b>OGCC Initial:</b>
<b>Results of Inspection:</b> <input checked="" type="checkbox"/> No deficiencies were noted during the course of the inspection. No OGCC action will result from this inspection. <input type="checkbox"/> Potential deficiencies were noted during the course of the inspection. Additional correspondence regarding this inspection may be forthcoming.			
<b>Comments:</b> Observe cement bond log run.  Chris Catalano, GeoLog, LLC., logging operator			
<b>Attachments:</b> Notice of Inspection Rights Choose an item.			



## ARIZONA OIL AND GAS CONSERVATION COMMISSION NOTICE OF INSPECTION RIGHTS

FACILITY INFORMATION	OGCC INFORMATION
<b>Facility Name (Place):</b> Copper Eagle 1-24	<b>Date of Inspection:</b> 8/28/2018
<b>Physical Location (Facility):</b> NE cor. Cotton Lane and Indian School Rd., Phoenix, AZ	<b>County:</b> Maricopa
	<b>Inspector:</b> Dennis Turner
<b>Mailing Address:</b> 2555 East Camelback Road, Suite 180 Phoenix, Arizona 85016	<b>Telephone:</b> 602/ 771-4501
	<b>Accompanied by:</b>
<b>Responsible Party:</b> Nicholaus Fischer, VP	<b>ADEQ Follow-up Contact:</b> Balaji Vaidyanathan Facilities Emissions Control Section
<b>Telephone:</b> 602-316-3754	
<b>On-Site Representative:</b> Kevin D. Hebert, R.G. , 602/515-0295	<b>Title:</b> Manager
<b>Title:</b> Senior Project Hydrogeologist	<b>Telephone:</b> (602) 771-4527
<b>Email:</b> <a href="mailto:khebert@swgroundwater.com">khebert@swgroundwater.com</a>	

The Arizona Oil And Gas Conservation Commission (OGCC) representative(s) identified above were present at the above address on the above listed date and time. Upon entry to the premises, the OGCC representative(s) met with me, presented photo identification indicating that they are OGCC representative(s) and explained:

That the purpose of the inspection is to determine:

Compliance with Title 27 of the Arizona Revised Statutes, Title 12 of the Arizona Administrative Code\* and/or:  
Permit/Agreement Numbers: 0912

Qualification for a license issued pursuant to:  
A.R.S. § 27-513, and A.A.C. R12-7-104

That this inspection is conducted pursuant to the authority granted in A.R.S. § 27-503 and/or:  
A.A.C. R12-7-110(D)

That the state shall not be barred by the statutes of limitations of actions, according to A.R.S. § 12-510, except as provided in A.R.S. § 12-529 concerning certain claims based on navigability of watercourses. According to 28 U.S.C. § 2462, the U.S. government must commence an action within 5 years after the date the claim first accrued.

Possible applicability of Small Business Bill of Rights pursuant to Arizona Revised Statutes § 41-1001(21)

**That the fee for this inspection is:** No fee for the inspection

\*The Arizona Revised Statutes (A.R.S.) can be found on the internet: [www.azleg.state.az.us/ArizonaRevisedStatutes.asp](http://www.azleg.state.az.us/ArizonaRevisedStatutes.asp) while the Arizona Administrative Code (A.A.C.) can be found at <https://www.azsos.gov/rules/arizona-administrative-code>

While I have the right to refuse to sign this form, the OGCC representatives may still proceed with the inspection

I have read this notice and discussed any questions or concerns with the OGCC representatives and I have received the Small Business Bill of Rights

	Enter a date.
--	---------------

Signature of Regulated Person or Authorized On-Site Representative

\_\_\_\_\_  
Signature of Regulated Person or Authorized On-Site Representative

The regulated person or authorized on-site representative refused to sign.

\_\_\_\_\_  
Name of Regulated Person or Authorized On-Site Representative

\_\_\_\_\_  
Title

The regulated person or an authorized on-site representative was not present at the facility.

*Dennis L. Turner*  
Signature of OGCC Representative

8/28/2018

## INSPECTION RIGHTS


- I understand that I can accompany the OGCC representative(s) on the premises, except during confidential interviews.
- I understand that I have right to, on request:
  - Copies of any original documents taken during the inspection, and that the OGCC will provide copies of those documents at the OGCC's expense;
  - A split of any samples taken during the inspection, if the split of the samples would not prohibit an analysis from being conducted or render an analysis inconclusive;
  - Copies of any analysis performed on samples taken during the inspection and that the OGCC would provide copies of this analysis at the OGCC's expense;
  - Copies of any documents to be relied on to determine compliance with licensure or regulatory requirements if the agency is otherwise permitted by law to do so.
- I also understand that:

Each person who is interviewed by the OGCC inspector during the inspection must be informed that:

- Participation in an interview is voluntary, unless legally compelled to participate;
- They have the right to have an attorney or other experts in their field present during the interview to represent or advise the regulated person;
- The OGCC inspector may not take any adverse action or treat less favorably or draw any inference as a result of the regulated person's decision to be represented by an attorney or advised by any other experts in their field;
- Statements made by the person may be included in the inspection report; and
- They have the right to 24 hours to review and revise any written witness statement drafted by the OGCC inspector on which the OGCC inspector requests that person's signature.
- If the information and documents provided to the OGCC inspector become a public record, trade secrets and proprietary and confidential information may be redacted, unless the information and documents are not confidential pursuant to statute.
- Each person interviewed during the inspection must be informed that statements made by the person may be included in the inspection report;
- Each person whose conversation is tape recorded during the inspection must be informed that the conversation is being tape recorded;
- If an administrative order is issued or a permit decision is made based on the results of the inspection, I have the right to appeal that administrative order or permit decision. I understand that my administrative hearing rights are set forth in Arizona Revised Statutes § 41-1092 et seq. and my rights relating to an appeal of a final agency decision are found in Arizona Revised Statutes § 12-901 et seq.
- If I have any questions or concerns about this inspection, I may contact the person listed as the ADEQ Follow-up Contact on the front of this form; ADEQ's Ombudsman at (602) 771-4322 (toll free inside Arizona at (800) 234-5677, extension, 771-4322); or the Arizona Ombudsman-Citizens' Aid office at (602) 277-7292 (toll free at (800) 872-2879);

If I have any questions concerning my rights to appeal an administrative order or permit decision, I may contact the OGCC's Administrative Counsel at (602) 542-8553.

## Oil and Gas Field Inspection Photograph Log

<b>Site Location:</b> Copper Eagle 1-24		NE cor. Cotton Lane and Indian School Rd., Phoenix, AZ	<b>Photographer:</b> Dennis Turner	<b>Camera:</b> Canon PowerShot 110SX
<b>Photo No.</b> 1	<b>Date:</b> 8/28/2018			
<b>Direction Photo Taken:</b> Southeast				
<b>Photo Description:</b> ID of wellhead				

<b>Photo No.</b> 2	<b>Date:</b> 8/28/2018			
<b>Direction Photo Taken:</b> Southeast				
<b>Photo Description:</b> View of cement bond log tool				



Douglas A. Ducey  
Governor

State of Arizona  
**Oil and Gas Conservation Commission**

1110 W. Washington Street, Phoenix, AZ 85007

602-771-4501

[www.azogcc.az.gov](http://www.azogcc.az.gov)

Dennis L. Turner, Oil and Gas Administrator

Commissioners:  
Frank Thorwald, Chair  
Vice Chair, vacant  
Stephen R. Cooper  
William C. Feyerabend  
J. Dale Nations, Ph.D.

**VIA EMAIL and US MAIL**

January 31, 2018

Mr. Bob Bambauer  
Senior Vice President  
Sunbelt Holdings  
6720 North Scottsdale Road, Suite 250  
Scottsdale, AZ 85253-4424

**RE: Plugging and Abandonment of Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909)**

Dear Mr. Bambauer:

The Arizona Oil and Gas Conservation Commission (OGCC or Commission) appreciates your time and input at the public meeting on January 12, 2018. As you recall, the OGCC discussed the matter of plugging and abandonment (P&A) of the two wells: Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909). The P&A application that Southwest Groundwater Consultants submitted via email on November 16, 2017 does not meet the minimum requirements of Arizona Administrative Code (A.A.C.) R12-7-127(C) through R12-7-127(F).

At the January 12, 2018 meeting, the Commission approved the following procedures to plug and abandon the two referenced wells:

1. Sunbelt Holdings shall comply with A.A.C. R12-7-127(C)(3) to ensure that no annular space in each well extends from above the top of salt to the surface through any casing string. To document this condition to the satisfaction of the Commission, the recommended method is either to run a cement bond log, or a casing integrity log. Cement and casing integrity may be determined with existing or new cement bond logs or other evidence that the well is sealed from the surrounding formations and aquifers and from the Luke salt body below.
2. Place a cast iron bridge plug (CIBP) in each well at the approximate top of the salt body. The Commission recommended the CIBP be placed at a minimum depth of 2100 feet in both wells.
3. Below the CIBP, the entire wellbore shall be filled with plugging mud at the minimum weight specified in R12-7-127(D). Above the CIBP, the entire wellbore shall be filled with plugging cement to the surface. The preferred plugging cement slurry is that recommended by the American Petroleum Institute (API) Environmental Guidance Document: Well Abandonment and Inactive Well Practices for U.S. Exploration and Production Operations, i.e., a neat cement slurry mixed to API standards. The plugging cement slurry shall be allowed to cure for the times specified by API before proceeding with excavation work.
4. Remove the upper ten (10) feet of all well casing materials and all surface structures and install a heavy metal plate over all tubulars. The well location and identity shall be permanently inscribed on the plate as required in A.A.C. R12-7-106(A).



5. The excavated portion around well shall be backfilled first with three (3) to five (5) feet of granular material, liberally infused with bright colored, highly visible and permanent dye.
6. Over this layer, place clean imported fill material, compacted with wheel and bucket tamping.
7. The installation of a permanent above-ground well marker, pursuant to A.A.C. R12-7-127(F), is waived. Upon completion of placement of the five (5) feet of clean imported fill as cited in item 7 above, the ground surface shall be returned to its current condition.
8. The site shall be surveyed by a surveyor licensed in the state of Arizona, which shall include geodetic coordinates. The location shall be surveyed before the site is backfilled with the specified materials.
9. A temporary marker, the same or similar to that currently at the site, shall be placed above ground at the location of the well after all work is completed.
10. Photo-document the above required closure steps to confirm completion of the plug and abandonment of the wells to statute and rule.
11. The Application to Plug and Abandon, Attachment A, is hereby incorporated by reference as to Details of Proposed Plan of Work that are in agreement with the above stated conditions. The conditions as noted above control where there is any disagreement with Attachment A.

For existing well log interpretation to satisfy the requirements in 1. above, the Commission notes that Schlumberger provided a large portion of the electric downhole logs of record for the two wells and may be a good source for help with data interpretation. Additionally, the Commission recommends that Sunbelt review the OGCC well files for the two subject wells for logs available.

The Commission strongly recommends the use of drilling contractors experienced in the oilfield services with workovers and plugging and abandonment work. If additional cement work must be performed on either well, the commission suggests use of an oil field service contractor that is equipped to perform the additional cement work behind casing. If you require a list of suggested experienced contractors in this area, the Commission recommends that you contact the Interstate Oil and Gas Compact Commission, 405/522-8380 or [communications@iogcc.ok.gov](mailto:communications@iogcc.ok.gov) .

Please advise me via phone or email at least 48 hours in advance of the work commencing on each well. When the plugging work is completed on each well, in accordance with R12-7-127(I), submit a completed Form 10 within 15 days. Download this form at <http://www.azogcc.az.gov/forms> .

Please direct any questions and address all correspondence to:

Dennis L. Turner  
Oil & Gas Administrator  
Arizona Oil & Gas Conservation Commission  
c/o Arizona Department of Environmental Quality  
1110 W. Washington Street  
Phoenix, AZ 85007  
[ogcc@azdeq.gov](mailto:ogcc@azdeq.gov)

Sincerely,



Dennis L. Turner

Oil & Gas Program Administrator

cc: Frank Thorwald, Chairman, Arizona Oil and Gas Conservation Commission (email only)  
Kevin Hebert, Southwest Groundwater Consultants

APPLICATION TO PLUG AND ABANDON

FIELD Luke - Goodyear, Arizona

OPERATOR Formerly SunCor ADDRESS & PHONE N/A

LEASE NUMBER (Lessor's name if fee) N/A WELL NO. SunCor 1-24

LOCATION Cadastral Well Location - B(2-2) 24 CCC

TYPE OF WELL Oil and Gas Storage Well TOTAL DEPTH 6,053 ft (Oil, Gas, or Dry)

ALLOWABLE (If Assigned) N/A

LAST PRODUCTION TEST OIL N/A (Bbls.) WATER N/A (Bbls.)

GAS N/A (MCF) DATE OF TEST N/A

PRODUCING HORIZON N/A PRODUCING FROM N/A TO N/A

1. COMPLETE CASING RECORD:

- Conductor Pipe (0 ft to 80 ft) - 24" pipe
• Surface Casing (0 ft to 3,060 ft) - 13 3/8" pipe
• Production Casing (0 ft to 5,730 ft) - 9 5/8" pipe

2. FULL DETAILS OF PROPOSED PLAN OF WORK:

See Attachment A

DATE COMMENCING OPERATIONS November/December 2017

NAME OF PERSON DOING WORK Southwest Waterworks Contractors, Inc. ADDRESS 2205 W. Grant Street, Phoenix, AZ 85005

Signature [Handwritten Signature]

Title Senior Project Hydrogeologist

Address 3033 N. 44th Street, Ste. 120, PHOENIX, AZ 85018

Date 11/13/17

Mail two copies of completed form to: Oil and Gas Program Administrator, Arizona Department of Environmental Quality, 1110 W. Washington Street, Phoenix, AZ 85007

Date Approved
STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
By

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Application to Plug and Abandon
File Two copies
Form No. 9

Permit No.

# **ATTACHMENT A**

## **Details of Proposed Plan of Work**

### **Details of Proposed Plan of Work**

- Measure and record depth to groundwater.
- Install bridge plug, consisting of a rubber packer or similar, at least 60 feet into well.
- Confirm depth of bridge plug by tagging with a weighted measuring tape.
- Once bridge plug is confirmed to be at appropriate depth, a cement slurry, consisting of two (2) 94 lb sacks of Portland Type II cement, will be placed into the well using a centralized tremie pipe.
- Allow cement to set for a minimum of one hour.
- Tag surface of the plug to confirm placement.
- An additional cement mixture, consisting of two (2) 94 lb sacks of Portland Type II cement, will be placed in the well using a centralized tremie pipe.
- The second lift of the bridge plug will be allowed to cure for period of at least 8 hours.
- Place a final cement slurry from the top of the plug to a depth of within 10 feet of the surface.
- Remove the upper 10 feet of all well casing materials and all surface structures.
  - Excavate trench box to sufficient depth to facilitate removal of top 10-feet of casing materials.
  - Excavated portion around well will be backfilled and compacted with wheel and bucket tamping using clean imported fill material.
- Because future development of the site is proposed, it is requested that the requirement to install a permanent well marker be waived. A GPS measurement of the well location is proposed instead.