PILLAR ENERGY, LLC

UIC APPLICATION

2D093000-004

API 4709300081

NESTOR B-1

UNDERGROUND INJECTION CONTROL (UIC) PERMIT APPLICATION PACKAGE CLASS 2 & 3

Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0450

"Promoting a healthy environment"

CK # 15707
$ 550.00
12/3/2024

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INSTRUCTIONS/GUIDANCE TO COMPLETE A CLASS 2 and CLASS 3 UNDERGROUND INJECTION CONTROL (UIC) PERMIT APPLICATION

A. GENERAL INSTRUCTIONS

The Office of Oil and Gas (OOG) has developed a comprehensive permit package and instruction/guidance document to assist in the preparation of a UIC permit application. Where possible, standardized forms have been created and identified as Appendices to the UIC application package. **NOTE** the instruction/guidance document identifies additional requirements to be submitted with the application.

B. FEES

The application fee for a UIC permit is $500.00. There will be an additional $50.00 fee for a groundwater protection plan (GPP).

C. SUBMITTAL

Please submit an original and a complete copy of the UIC permit application package along with the application fee of $550.00 to:

West Virginia Department of Environmental Protection
Office of Oil and Gas
Underground Injection Control (UIC)
601 57th Street, SE
Charleston, WV 25304

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CHECKLIST FOR FILING A UIC PERMIT APPLICATION

Please utilize this checklist to ensure you have prepared, completed, and enclosed all required documentation and payment to ensure a timely review of your submittal.

Operator	Pillar Energy LLC		
Existing UIC Permit ID Number	2D09300081	UIC Well API Number	4709300081

Office of Oil and Gas Office Use Only	
Permit Reviewer	
Date Received	
Administratively Complete Date	
Approved Date	
Permit Issued	

Please check the fees and payment included.

Fees		Payment Type	
UIC Permit Fee: $500	✔	Check	✔
Groundwater Protection Plan (GPP) Fee: $50.00	✔	Electronic	
		Other	

Please check the items completed and enclosed.

- ✔ Checklist
- ✔ UIC-1
  - ✔ Section 1 – Facility Information
  - ✔ Section 2 – Operator Information
  - ✔ Section 3 – Application Information
  - ✔ Section 4 – Applicant/Activity Request and Type
  - ✔ Section 5 – Brief description of the Nature of the Business
  - ✔ CERTIFICATION
- ✔ Section 6 – Construction
  - ✔ Appendix A Injection Well Form
  - ✔ Appendix B Storage Tank Inventory
- ✔ Section 7 – Area of Review
  - ✔ Appendix C Wells Within the Area of Review

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N/A Appendix D Public Service District Affidavit

✓ Appendix E Water Sources

N/A Appendix F Area Permit Wells

✓ Section 8 – Geological Data on Injection and Confining Zones

✓ Section 9 – Operating Requirements / Data

✓ Appendix G Wells Serviced by Injection Well

✓ Section 10 – Monitoring

✓ Section 11 – Groundwater Protection Plan (GPP)

✓ Appendix H Groundwater Protection Plan (GPP)

✓ Section 12 – Plugging and Abandonment

✓ Section 13 – Additional Bonding

✓ Section 14 – Financial Responsibility

✓ Appendix I Financial Responsibility

N/A Section 15 – Site Security Plan

N/A Appendix J Site Security for Commercial Wells

✓ Section 16 – Additional Information

✓ Appendix K Other Permit Approvals

NOTE: For all 2D wells an additional bond in the amount of $5,000 is required.

Reviewed by (Print Name): Trevor Schaffer

Reviewed by (Sign): Trevor Schaffer

Date Reviewed: 11/25/24

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Section 1 – 5

UIC-1 Form

PILLAR
ENERGY

UIC Permit 2D09300081 Renewal

UIC-1

Section 1 – Facility Information

Section 2 – Operator Information

Section 3 – Application Information

Section 4 – Applicant/Activity Request and Type

Section 5 – Brief Description of the Nature of the Business

CERTIFICATION

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UIC-1
(4/25)

WEST VIRGINIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
601 57th Street, SE
Charleston, WV 25304
(304) 926-0450
www.dep.wv.gov/oil-and-gas

UNDERGROUND INJECTION CONTROL (UIC) PERMIT APPLICATION

UIC PERMIT ID # 2D09300081 **API #** 4709300081 **WELL #** Nestor B-1

Section I. Facility Information

Facility Name: Nestor B-1

Address: 1642 Horseshoe Run Rd

City: Saint George State: WV Zip: 26287

County: Tucker District: St. George 7.5' Quad: St. George

Location description:
Traveling South on WV-72, turn left onto CR-5 (0.4 miles), turn right to stay on Holly Meadows Rd (3.0 miles), turn left on Horseshoe Run Rd (1.7 miles), 1642 Horseshoe Run Rd on the right

Location of well(s) or approximate center of field/project in UTM NAD 83 (meters):
Northing: 4336179.5 Easting: 618482.9 Lat: 39.166773 Long: -79.628511

Environmental Contact Information:
Name: Trevor Schaffer Title: Operations Manager
Phone: 681-205-8599 Email: trevor.schaffer@pillarenergy.com

Section 2. Operator Information

Operator Name: Pillar Energy LLC
Operator ID: 494495012

Address: 1244 Martins Branch Rd
City: Charleston State: WV Zip: 25312
County: Kanawha

Contact Name: Jeff Isner Contact Title: CEO
Contact Phone: 681-205-8599 Contact Email: jeff.isner@pillarenergy.com

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Section 3. Applicant Information

Ownership Status: ☒ PRIVATE ☐ PUBLIC ☐ FEDERAL ☐ STATE
☐ OTHER (explain):

SIC code: ☒ 1311 (2D, 2H, 2R) ☐ 1479 (3S) ☐ OTHER (explain):

Section 4. Applicant / Activity Request and Type:

A. Apply for a new UIC Permit: ☐ 2D ☐ 2H ☐ 2R ☐ 3S
B. Reissue existing UIC Permit: ☒ 2D ☐ 2H ☐ 2R ☐ 3S
C. Modify existing UIC Permit: ☐ 2D ☐ 2H ☐ 2R ☐ 3S
(Submit only documentation pertaining to the modification request)
2D COMMERCIAL FACILITY: ☐ YES ☒ NO

Section 5. Briefly describe the nature of business and the activities to be conducted:

Water produced from Pillar Energy LLC wells within the area to be injected/disposed into the Huntersville Chert Formation (3,528' to 3,548'). This is a non-commercial disposal well and disposes of Class II compliant fluids.

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dep

REPLACE

APPLICATION CERTIFICATION

In accordance with WV Code 47CSR13.13.11, all UIC permit applications must be signed by one of the following:

1. For a corporation: by a principle corporate officer of at least the level of vice-president;
2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
3. For a municipality, State, Federal, or other public agency: by either a principle executive officer or ranking elected official;
4. Or a duly authorized representative in accordance with 47CSR13.13.11.b.
   (A person may be duly authorized by one of the primary entities (1-3) listed above by submitting a written authorization to the Chief of the WVDEP Office of Oil and Gas designating an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

Pillar Energy LLC

(Company Name)

2D09300081

(UIC Permit Number)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (47CSR13.13.11.d)

Jeff Isner

(Print Name)

CEO

(Print Title)

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(Signature)

12/2/24

(Date)

Section 6

Construction

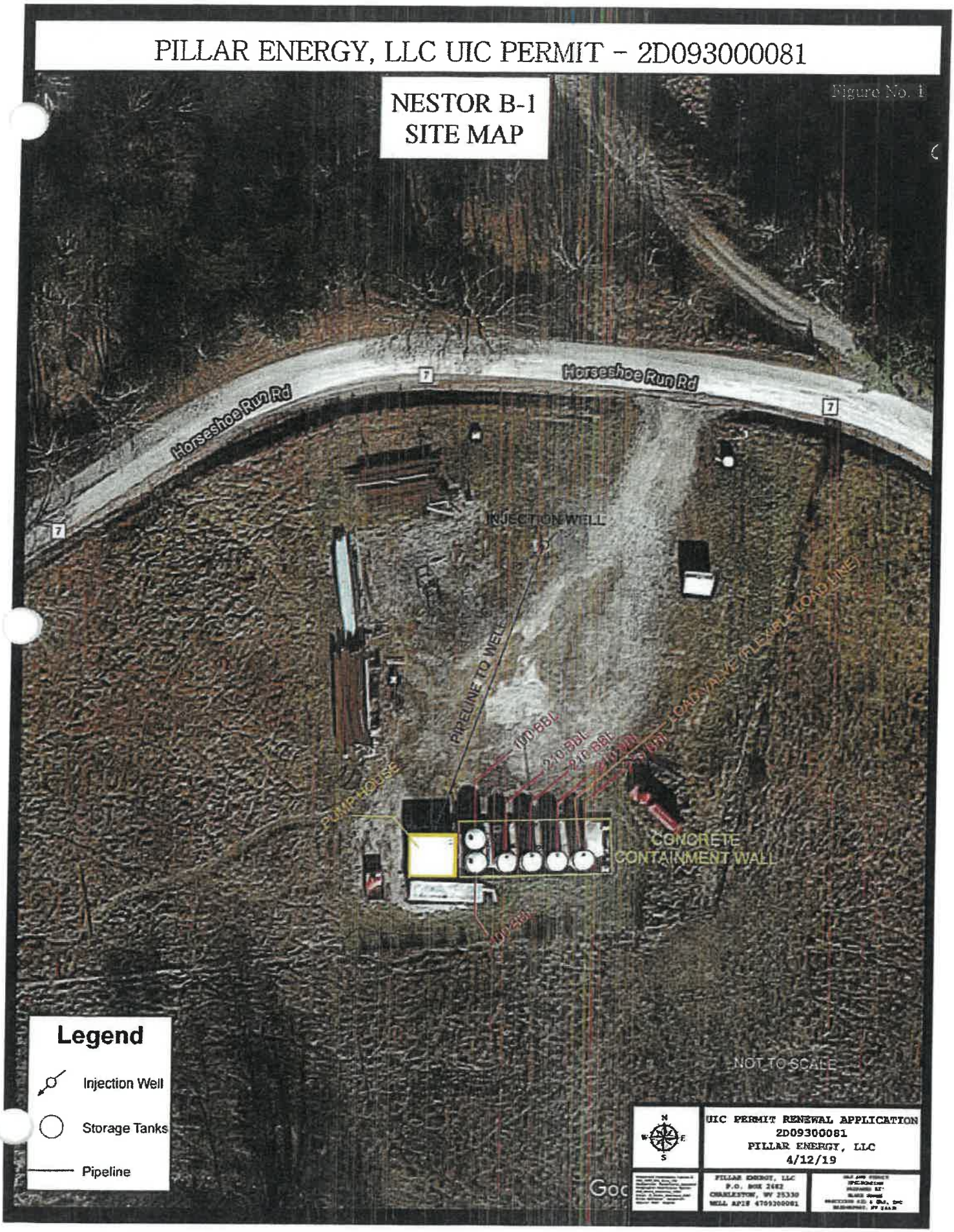
PILLAR ENERGY

UIC Permit 2D09300081 Renewal

Section 6 – Construction

1. **Aerial Map**
2. **Well Schematic**
3. **Appendix A Injection Well Form**
   Appendix B Storage Tank Inventory
4. **Log Reports**

PILLAR ENERGY, LLC UIC PERMIT – 2D093000081



4709300081

WVGES GEOLOGY UNDERLIES IT ALL
"Pipeline"

Select County: (093) Tucker
Enter Permit #: 81
Get Data | Reset

Select datatypes: (Check All)
Location | Production | Plugging
Owner/Completion | Stratigraphy | Sample
Pay/Show/Water | Logs | Btm Hole Loc

Table Descriptions
County Code Translations
Permit-Numbering Series
Usage Notes
Contact Information
Disclaimer
WVGES Main
"Pipeline-Plus" New

WV Geological & Economic Survey:

Well: County = 093 Permit = 81 Link to all digital records for well

Report Time: Tuesday, March 25, 2025 12:54:54 PM

Location Information: View Map

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4709300081	Tucker	81	Saint George	Saint George	Parsons	39.166773	-79.628508	618482.9	4336179.5

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4709300081	5/11/2001	Original Loc	Completed	Marshall A Nestor		B-1			Marshall A Nestor	MegaEnergy Operating, Inc.			
4709300081	-/-/-	Worked Over	Completed	Marshall A Nestor	B-1				Marshall A Nestor	MegaEnergy Operating, Inc.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_A
4709300081	5/11/2001	3/22/2001	1650	Ground Level	Leadmine	Helderberg	Helderberg	Development Well	Development Well	Gas	Rotary	Acid+Frac	4304		4304			
4709300081	-/-/-	-/-/-	1650	Ground Level	Leadmine	Helderberg	Huntersville Chert	Service Well	Unsuccessful	Salt Water Disp	unknown	unknown	4304		0			

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4709300081	5/11/2001	Water	Fresh Water	Vertical			110	Pennsylvanian System					
4709300081	5/11/2001	Pay	Gas	Vertical	3528	Huntersville Chert	3548	Huntersville Chert					
4709300081	-/-/-	Horizon	Injection	Vertical	3528	Huntersville Chert	3548	Huntersville Chert					
4709300081	5/11/2001	Pay	Gas	Vertical	3672	Oriskany	3676	Oriskany					
4709300081	5/11/2001	Pay	Gas	Vertical	3738	Oriskany	3742	Oriskany					
4709300081	5/11/2001	Pay	Gas	Vertical	3757	Oriskany	3770	Oriskany					
4709300081	5/11/2001	Pay	Gas	Vertical	4060	Helderberg	4064	Helderberg					
4709300081	5/11/2001	Pay	Gas	Vertical	4067	Helderberg	4072	Helderberg					
4709300081	5/11/2001	Pay	Gas	Vertical	4106	Helderberg	4110	Helderberg					

There is no Production Gas data for this well

There is no Production Oil data for this well ** some operators may have reported NGL under Oil

There is no Production NGL data for this well ** some operators may have reported NGL under Oil

There is no Production Water data for this well

Stratigraphy Information:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
4709300081	Original Loc	Tully Ls	Well Record	3150	Reasonable		Qstnble Pick	1650	Ground Level
4709300081	Original Loc	Onondaga Ls	Well Record	3466	Reasonable	30	Reasonable	1650	Ground Level
4709300081	Original Loc	Huntersville Chert	Well Record	3496	Reasonable	156	Reasonable	1650	Ground Level
4709300081	Original Loc	Oriskany	Well Record	3652	Reasonable	150	Reasonable	1650	Ground Level
4709300081	Original Loc	Helderberg	Well Record	3802	Reasonable		Qstnble Pick	1650	Ground Level

Wireline (E-Log) Information:
* Scanned/Raster Log Information:

API	STATUS	LOG_TOP	LOG_BOT	DEEPEST_FML	LOGS_AVAIL	SCAN	GR_TOP	GR_BOT	D_TOP	D_BOT	N_TOP	N_BOT	I_TOP	I_BOT	T_TOP	T_BOT	S_TOP	S_BOT	O_TOP	O_BOT	INCH2	IN(
4709300081	Regular Entry	88	4310		G,D,N,I,T,C,*	Y	88	4262	1213	4304	1213	4290	1192	4310	1213	4304			88	4310	Y	Y

Scanned/Raster Comment: *logs: caliper, tension, PE, audio

* There is no Digitized/LAS Log data for this well

Downloadable Log Images/Data: We advise you to save the scanned log or digitized log file(s) to your PC for viewing. To do so, right-click the file of interest and select the save option. Then you can direct the file to a location of your choice. Please note the scanned log images vary in size and some may take several minutes to download.

Scanned/Raster Logs

FILENAME
4709300081gdnteco.tif
4709300081gjco.tif

Quick Reference Guide for Log File Names For more info about WVGES scanned logs click here

geologic log types:
- d density (includes bulk density, compensated density, density, density porosity, grain density, matrix density, etc.)
- e photoelectric adsorption (PE or Pe, etc.)
- g gamma ray
- i induction (includes dual induction, medium induction, deep induction, etc.)
- l laterolog
- m dipmeter
- n neutron (includes neutron porosity, sidewall neutron--SWN, etc.)
- o other[1]
- s sonic or velocity
- t temperature (includes borehole temperature, BHT, differential temperature, etc.)
- z spontaneous potential or potential

mechanical log types:
- b cement bond
- c caliper
- o other[1]
- p perforation depth control or perforate

[1]other logs may include, but are not limited to, such curves as audio, bit size, CCL--casing collar locator, continuous meter, directional survey, gas detector, guard, NCTL--Nuclear Cement Top Locator, radioactive tracer, tension

There is no Plugging data for this well

There is no Sample data for this well

4709300081

WR-35
Rev (5-01)

DATE: August 29, 2005
API #: 47-093-00081

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Nestor, Marshall A. Operator Well No.: Nestor B-1

LOCATION: Elevation: 1650' Quadrangle: Saint George 7.5'

District: Saint George County: Tucker
Latitude: 10 Feet South of 39 Deg. 10 Min. 0 Sec.
Longitude 1100 Feet West of -79 Deg. 37 Min. 30 Sec.

Company: MeanEnergy Operating, Inc.

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 9885 E. Mineral Cir, Ste 270	20" csg	10.2'	10.2'	
Englewood, CO 80112	16" csg	35'	35'	Sanded in
Agent: Carry Ranson	11-3/4" H40	206'	206'	200 sxs
Inspector: Craig Duckworth	8-5/8" J55	1221.1'	1221.1'	280 sxs
Date Permit Issued: 3-14-2001	4-1/2" N80	4240'	4240'	280 sxs
Date Well Work Commenced: 3-22-2001				
Date Well Work Completed: 5-11-2001				
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary Rig: SW Jack Rig #7				
Total Depth (feet): 4304				
Fresh Water Depth (ft.): 110				
Salt Water Depth (ft.):				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				

OPEN FLOW DATA

Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure 0 psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

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NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: _____
By: J. Scott Hornafius
Date: August 29, 2005

TUC 00081

4709300081

Nestor B-1: 47-093-00081

Operator: MegaEnergy Operating, Inc.
County: Tucker, WV

KB Elevation:	1660'
GL Elevation:	1650'
T/Tully:	3150'
T/Onondaga:	3466'
T/Huntersville:	3496'
T/Oriskany:	3652'
T/Helderberg:	3802'

Final Rock Pressure: 0 psig. Fluid level at 300'

Huntersville Chert

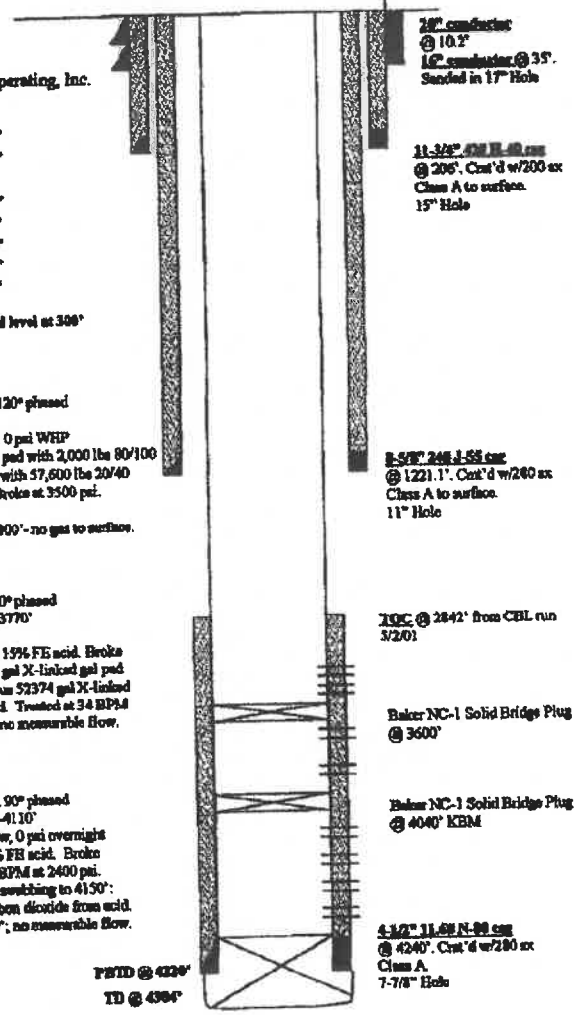
Perforated w/ 3-1/8" HSC, 3 SPF, 120° phased
3520'- 3548'
Pre frac rate – no measurable flow, 0 psi WHP
Frac Job – 11,760 gal X-linked gel pad with 2,000 lbs 80/100 mesh plus 22,000 gal X-linked gel with 57,600 lbs 20/40 mesh sand with 200 SCF/bbl N2. Broke at 3500 psi.
Treated at 26.5 BPM to 3150 psi.
Post frac job - Swabbed brine to 1800' - no gas to surface.

Oriskany

Perforated w/ 3-1/8" HC 4 SPF, 90° phased
3672'-3676', 3738'-3742', 3757'-3770'
Pre frac job – no measurable flow
Acid/Frac Job - pumped 5040 gal 15% FE acid. Broke down at 2950 psi. Pumped 10,000 gal X-linked gel pad with 4500 lb 80/100 Mesh sand plus 52374 gal X-linked gel with 63,000 lb20/40 mesh sand. Treated at 34 BPM @ 2200 psi. Swabbed to 3700' – no measurable flow.

Helderberg Limestone

Perforated w/ 3-1/8" HSC 4 SPF, 90° phased
4060'-4064', 4067'-4072', 4105'-4110'
Pre acid job – no measurable flow, 0 psi overnight
Acid Job - pumped 7500 gal 15% FE acid. Broke down at 3900 psi, treated at 13.5 BPM at 2400 psi.
Post acid job – 8.5 MCFPD after swabbing to 4150': gas would not burn; probably carbon dioxide from acid.
Fluid level after 12 hours at 3000'; no measurable flow.



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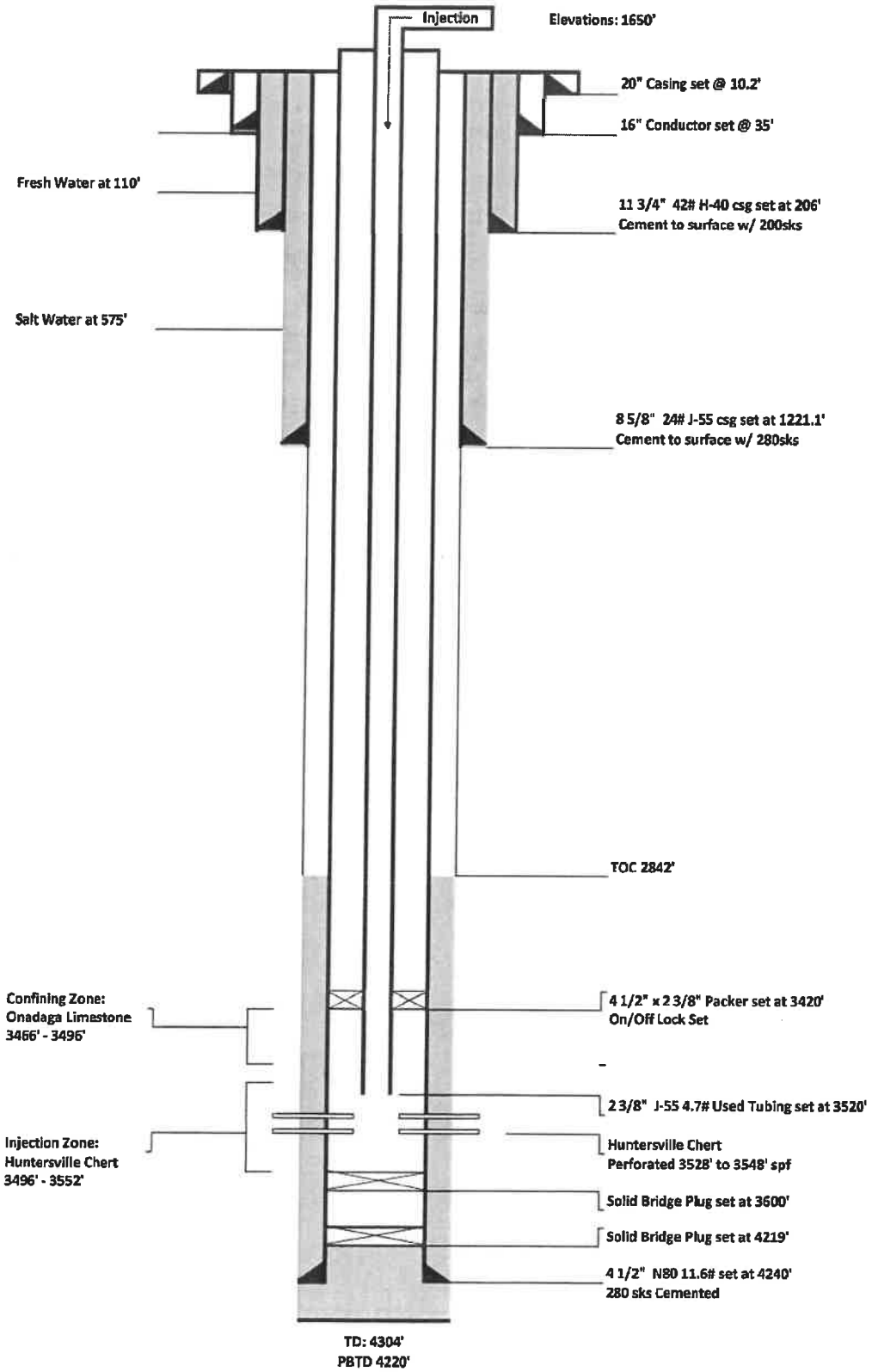
Nestor B-1
API 47-093-00081



4709300081

APPENDIX A
Injection Well Form

1) GEOLOGIC TARGET FORMATION Huntersville Chert

Depth 3496 Feet (top) 3552 Feet (bottom)

2) Estimated Depth of Completed Well, (or actual depth of existing well): 4304 Feet

3) Approximate water strata depths: Fresh 110 Feet Salt 575 est Feet

4) Approximate coal seam depths: N/A

5) Is coal being mined in the area? Yes ☐ No ☑

6) Virgin reservoir pressure in target formation 0 psig Source Tested before stimulation

7) Estimated reservoir fracture pressure 3500 psig (BHFP)

8) MAXIMUM PROPOSED INJECTION OPERATIONS:

Injection rate (bbl/hour)

Injection volume (bbl/day) 590

Injection pressure (psig) 1142

Bottom hole pressure (psig) 1294

9) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES:

Formation water from Oriskany, Huntersville Chert, and Tuscarora formations

Temperature of injected fluid: (°F) Ambient

10) FILTERS (IF ANY)

None

11) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL

None

4709300081

APPENDIX A (cont.)

12. Casing and Tubing Program

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	20"				10.2	10.2	
Fresh Water	16"	X			35'	35'	
Coal	11-3/4"	X	H-40	42	206'	206'	200sks
Intermediate 1	8-5/8"	X	J-55	24	1221.1'	1221.1'	280 sks
Intermediate 2	4-1/2"	X	N-80	11.6	4240'	4240'	280 sks
Production							
Tubing	2-3/8"	X	J-55	4.7		3520'	
Liners							

TYPE	Wellbore Diameter	Casing Size	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./sk)	Cement to Surface ? (Y or N)
Conductor							
Fresh Water							
Coal							
Intermediate 1							
Intermediate 2							
Production							
Tubing							
Liners							

PACKERS	Packer #1	Packer #2	Packer #3	Packer #4
Kind:	Solid Bridge Plug	Solid Bridge Plug	Packer	
Sizes:				
Depths Set:	3600'	4219'	3420'	

APPENDIX B
Storage Tank Inventory

API #	Tank ID	Tank Location (UTM NAD 83 Meters)		Installation Date	Tank Age (Months)	Construction Material (Steel, plastic, etc.)	Capacity (gallons)	Type of Fluid Stored	Volume of Fluid Stored (gallons)	Tank Type Single/Double Wall
		Northing	Easting							
4709300081	047-00000075	4336179.5	618482.9			Plastic	8820	Disposal Water		
4709300081	047-00000076	4336179.5	618482.9			Plastic	8820	Disposal Water		
4709300081	047-00000077	4336179.5	618482.9			Plastic	8820	Disposal Water		
4709300081	047-00000078	4336179.5	618482.9			Plastic	4200	Disposal Water		
4709300081	047-00000079	4336179.5	618482.9			Plastic	4200	Disposal Water		
4709300081	047-00000080	4336179.5	618482.9			Plastic	8820	Disposal Water		

4709300081

Figure No. 3

Meeks Wireline Services

GAMMA RAY CCL
CEMENTBOND VDL

Company MEGAENERGY OPERATING INC

Well NESTOR B-1

Field LEADMINE

County TUCKER State/Prv WV

Location

Other Services

PERFORATE

47-930-0081

Company
Well
Field
County
State/Prv

Permanent Datum	G.L.	Elevation	1650'
Log Measured From	G.L.		
Drilling Measured From	K.B.		

Elevation
K.B. 1660'
D.F. 1659'
G.L. 1650'

Date	05/02/01
Run Number	ONE
Depth Driller	4300'
Depth Logger	4220'
Bottom Logged Interval	4215'
Top Log Interval	SURFACE
Open Hole Size	
Type Fluid	WATER
Density / Viscosity	
Max. Recorded Temp.	
Estimated Cement Top	284Z'
Time Well Ready	
Time Logger on Bottom	
Equipment Number	05*
Location	BRIDGEPORT
Recorded By	D.RIFFLE
Witnessed By	MR. HOOVER

Borehole Record

Run Number	Bit	From	To	Size	Weight	From	To

Tubing Record

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	4.5"	11.6 N/80	SURFACE	

<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

CORRECTED LOG 20'
CREW
D.RIFFLE
D. HINZMAN
E. BUTCHER
K. SPROUSE

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WV Department of
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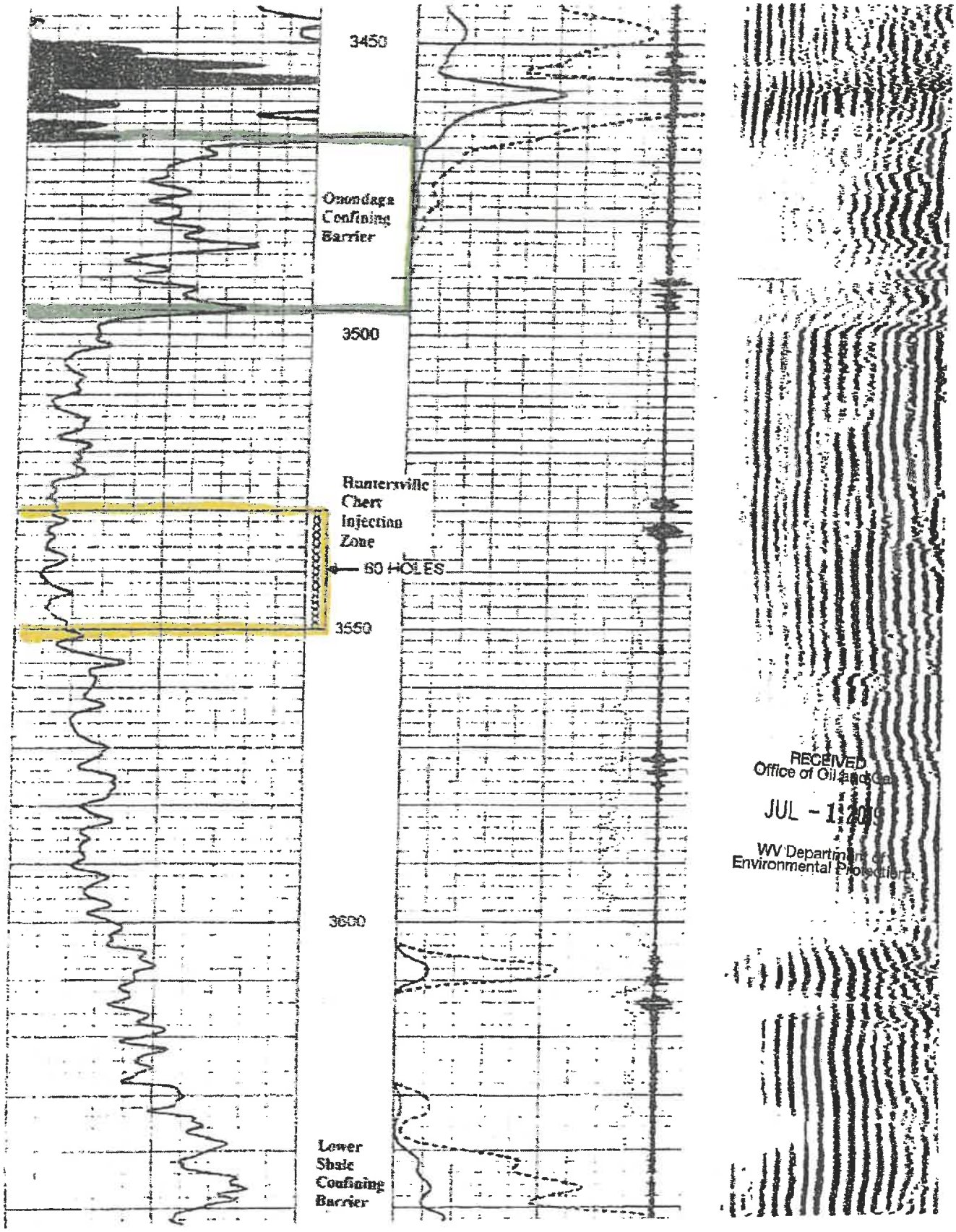

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LITHO-DENSITY
COMPENSATED NEUTRON
GAMMA RAY/TEMP

COMPANY: MERGENERGY OPERATING INC
WELL: NESTOR B-1
FIELD: LEADMINE
COUNTY: TUCKER
STATE: WV

Schlumberger
LITHO-DENSITY
COMPENSATED NEUTRON
GAMMA RAY/TEMP

COUNTY: TUCKER
State: LEADMINE
Location: 1100FT W OF 20-01-00
Well: NESTOR B-1
Company: MERGENERGY OPERATING INC

LOCATION
Permanent Datum: Log Measured From: Drilling Measured From:
API Serial No. 47-093-0081
SECTION
DISTRICT SR. ENGINEER
COUNTY/PARISH SR. ENGINEER #

Elev.: KB: DF: GL:
Date: 19/03/19
Run No.: ONE
Depth-Driller: 1010 ft
Depth-Logger: 1010 ft
Bottom Log Interval: 1010 ft
Top Log Interval: 0 ft
Casing-Driller: 0 @ 0 ft
Casing-Logger: 0 ft
Bit Size: 6 1/8 in
Type Fluid in Hole: AIR
Density: n/a lb/gal
Viscosity: n/a s
Max Rec. Temp.: 0 degF
Estimated Cement Top: n/a
Time Logger on Bottom: 19:00
Unit Number: 10103
Location: Ohio, Parkersburg
Recorded By: BRIAN MCCLOSKEY
Witnessed By: MR. JAMES MCCLOSKEY

DISCLAIMER
THE USE OF AND RELIANCE UPON THIS RECORDED DATA BY THE PERSON NAMED "COMPANY" (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING RESTRICTIONS ON USE OF THE RECORDED DATA, IN CERTAINERS AND WARRANTY OF WORKMANSHIP AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED DATA, AND ITS CUSTOMERS FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THE RECORDED DATA.

OTHER SERVICES
OS1: AUDIO
OS2: TEMPERATURE
OS3: DRT-DIRECTIONAL

OTHER SERVICES
OS4:
OS5:
OS6:
OS7:
OS8:

REMARKS RUN NUMBER 1
DRILLED 8" BIT JOB NO 97

REMARKS RUN NUMBER 2

DENSITY MATRIX SET ON LOG
NEUTRON MATRIX = LIMESTONE

THANK YOU FOR USING SCHLUMBERGER
SUP DREW LEW SMITH / DONNELL ROBINSON

RUN 1
SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

MEASURED INTERVAL	START	STOP

RUN 2
SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

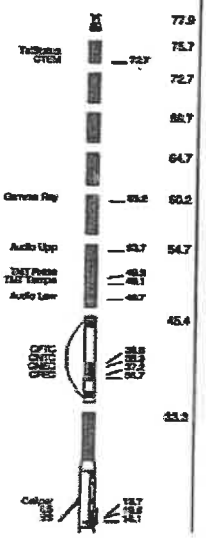
LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1

SURFACE EQUIPMENT
CMS-AS-3148 W2M (CTS)-A
HCT-G
HCS-G
GSR-ULY-494

DOWNHOLE EQUIPMENT



RUN 2

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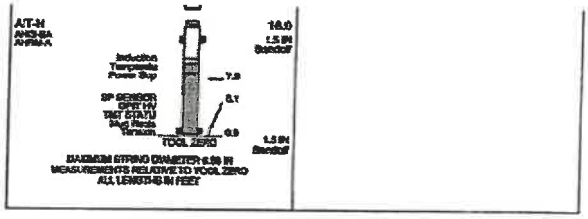

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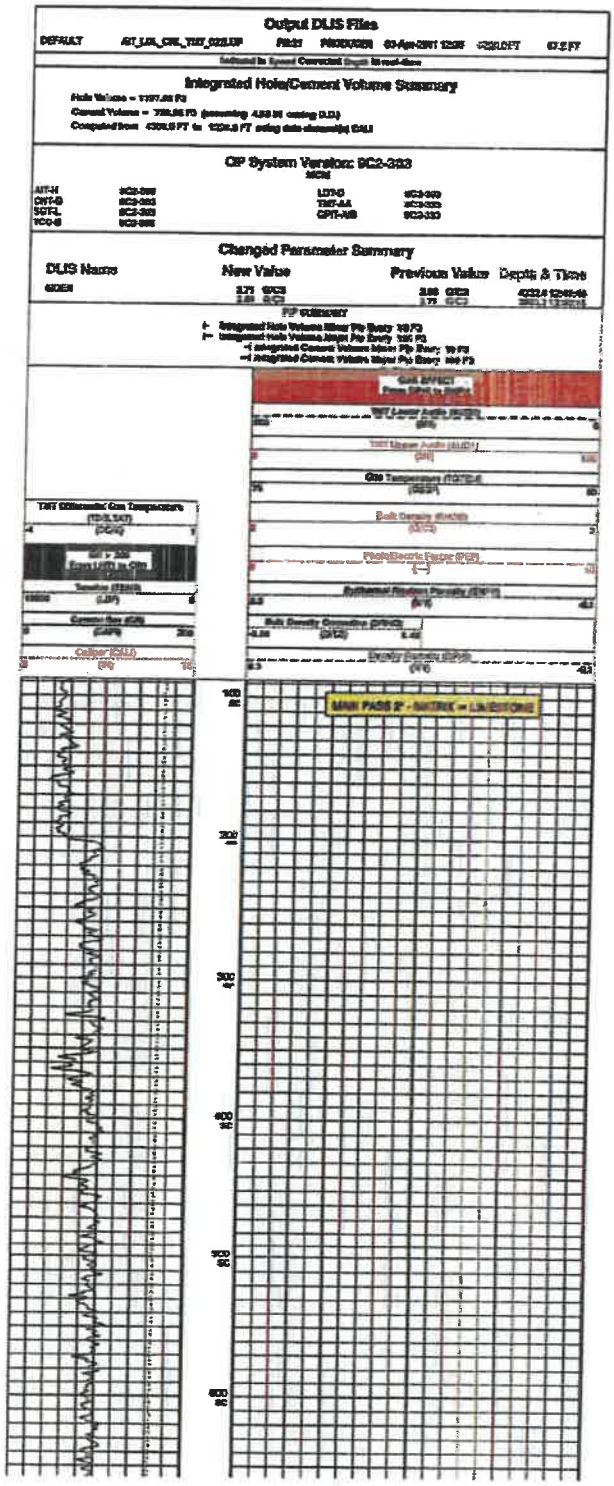

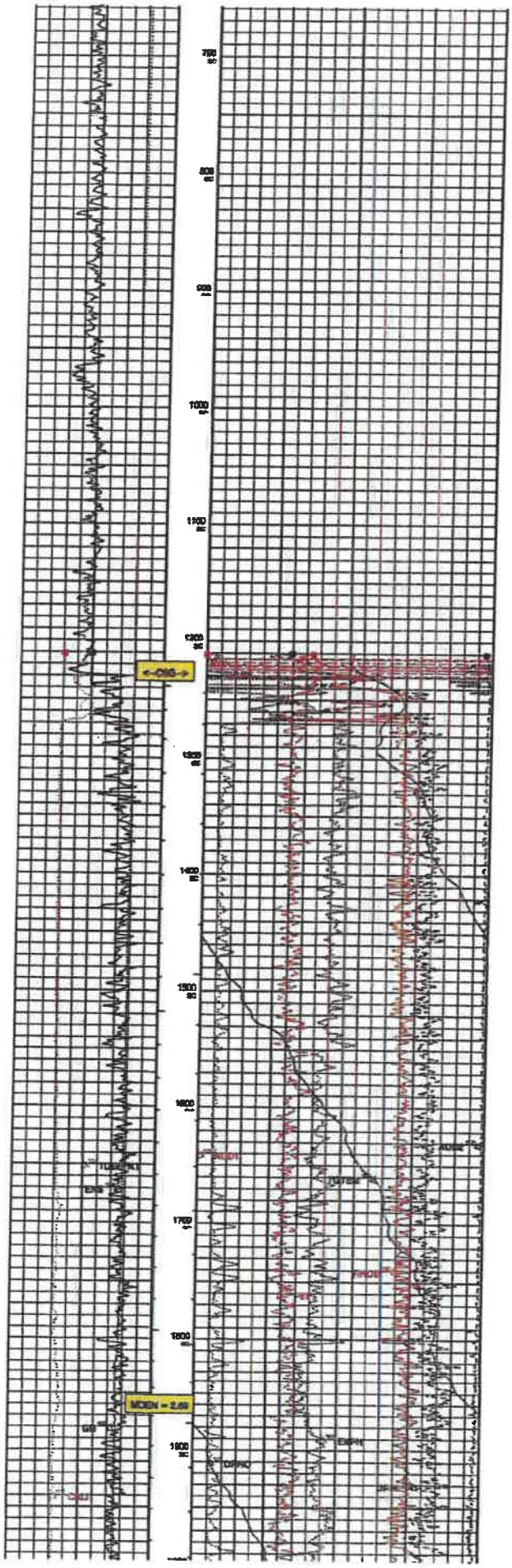

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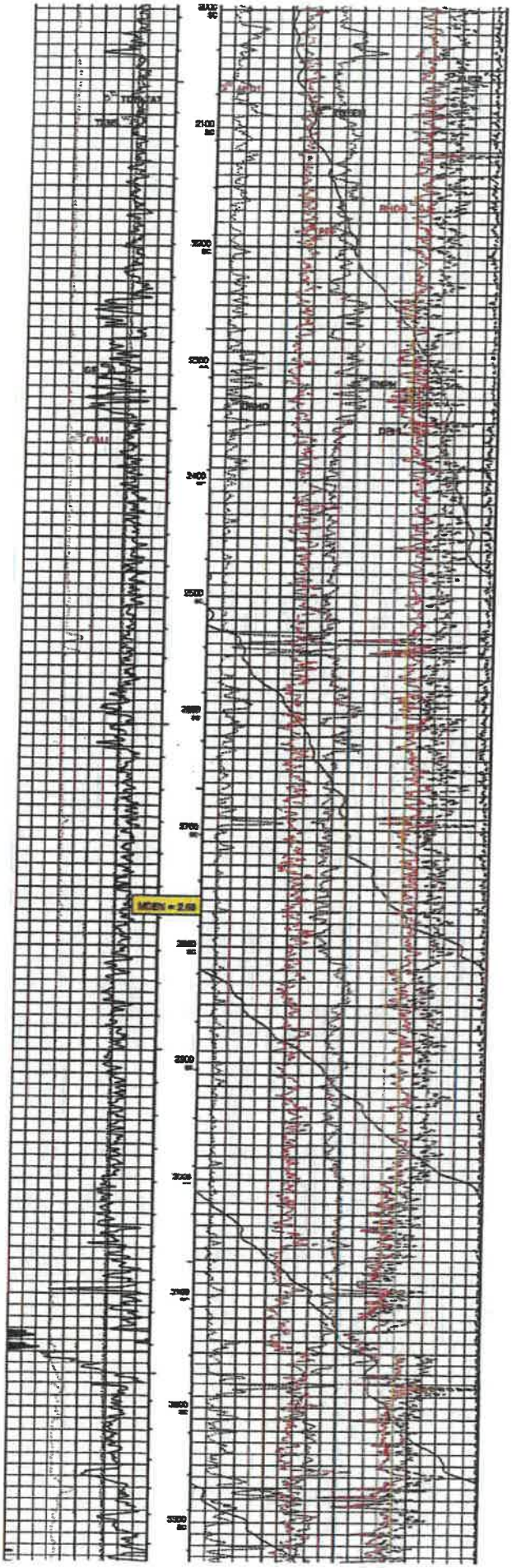

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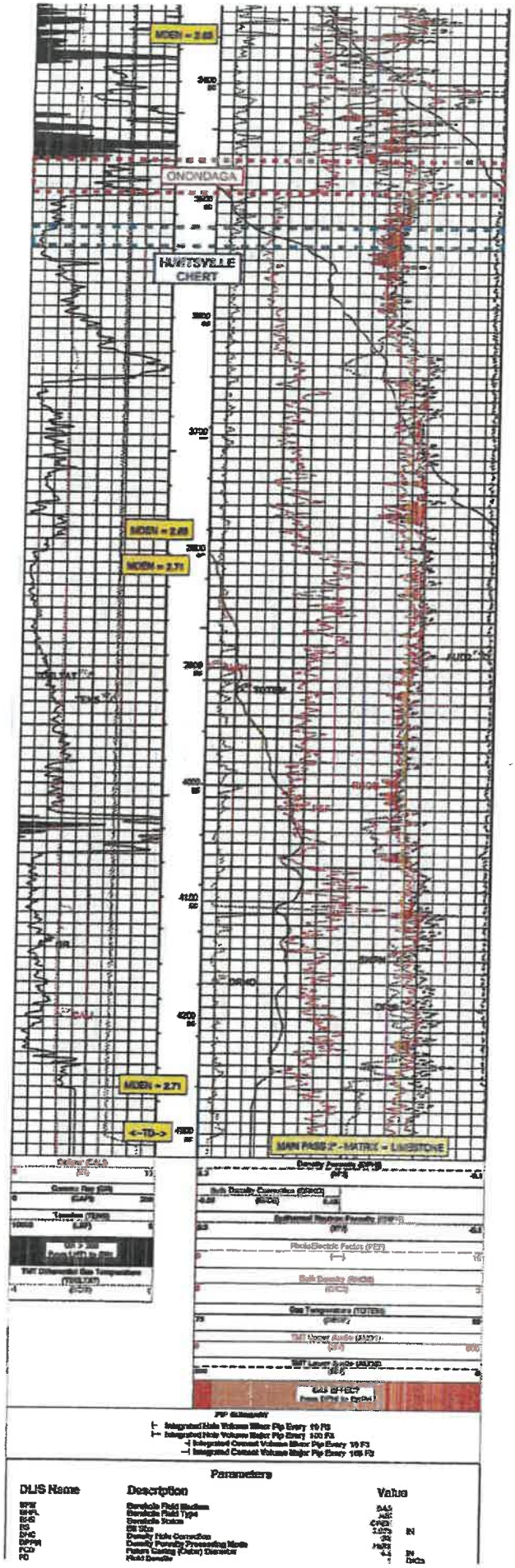

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OP System Version: 9C2-303

Output DLIS Files

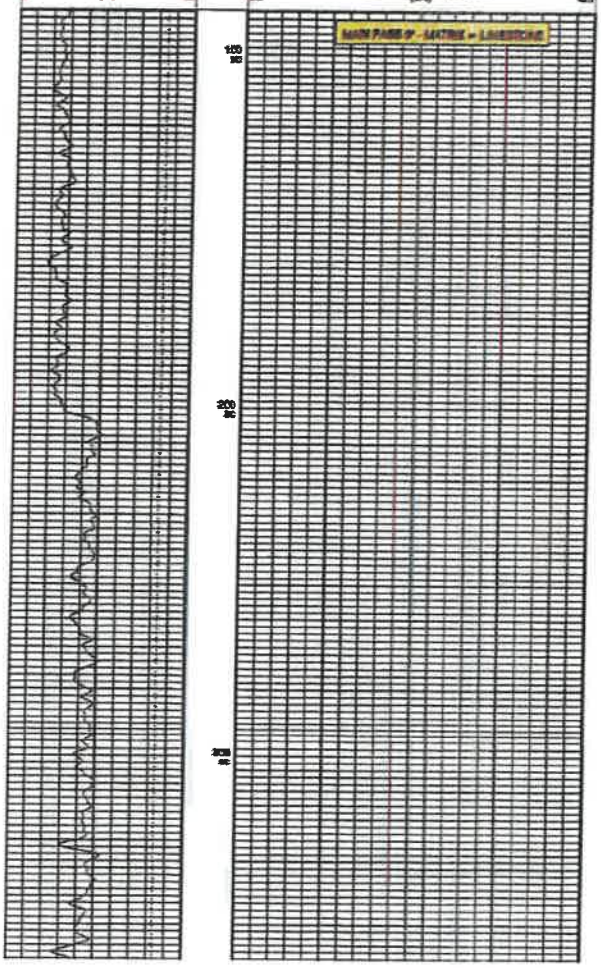
Output DLIS Files

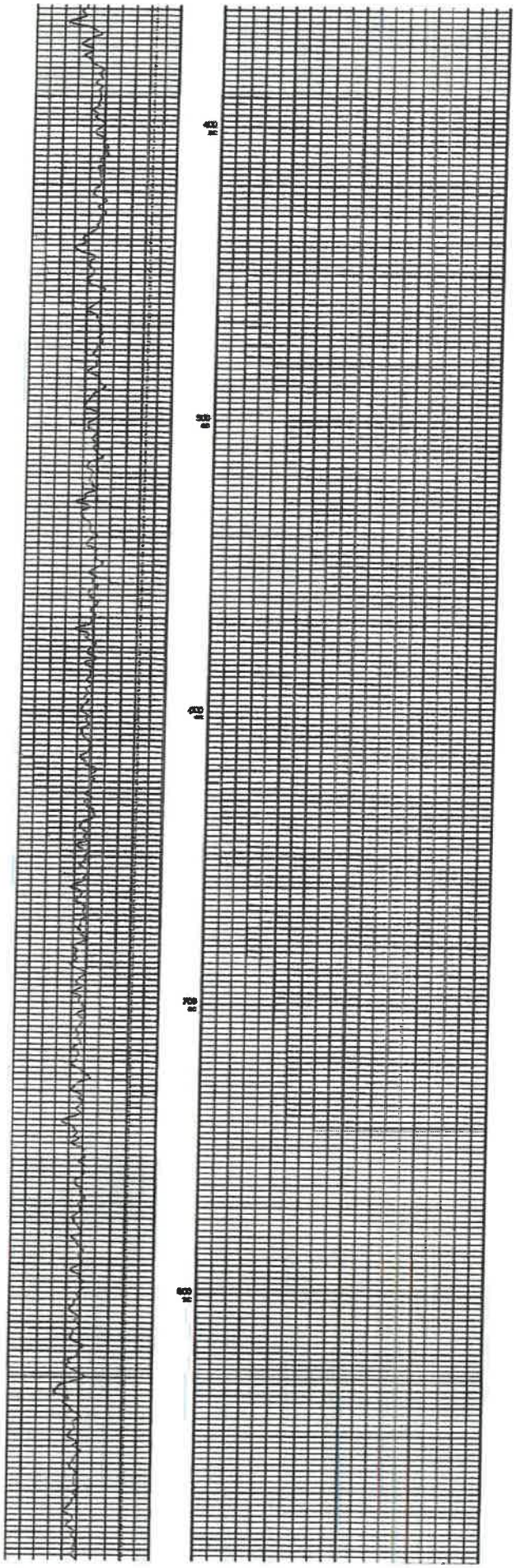
Integrated Hole/Cement Volume Summary

OP System Version: 9C2-303

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
MDEN	2.71 G/C3	2.33 G/C3	[illegible]
	2.48 G/C3	2.71 G/C3	[illegible]





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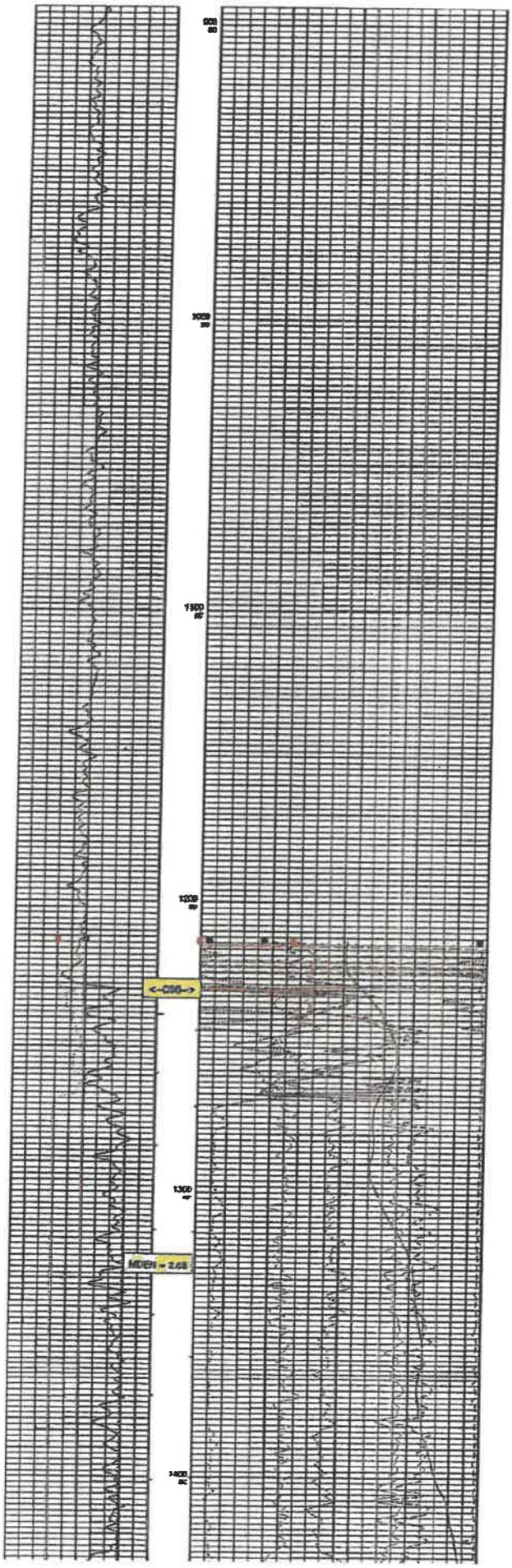

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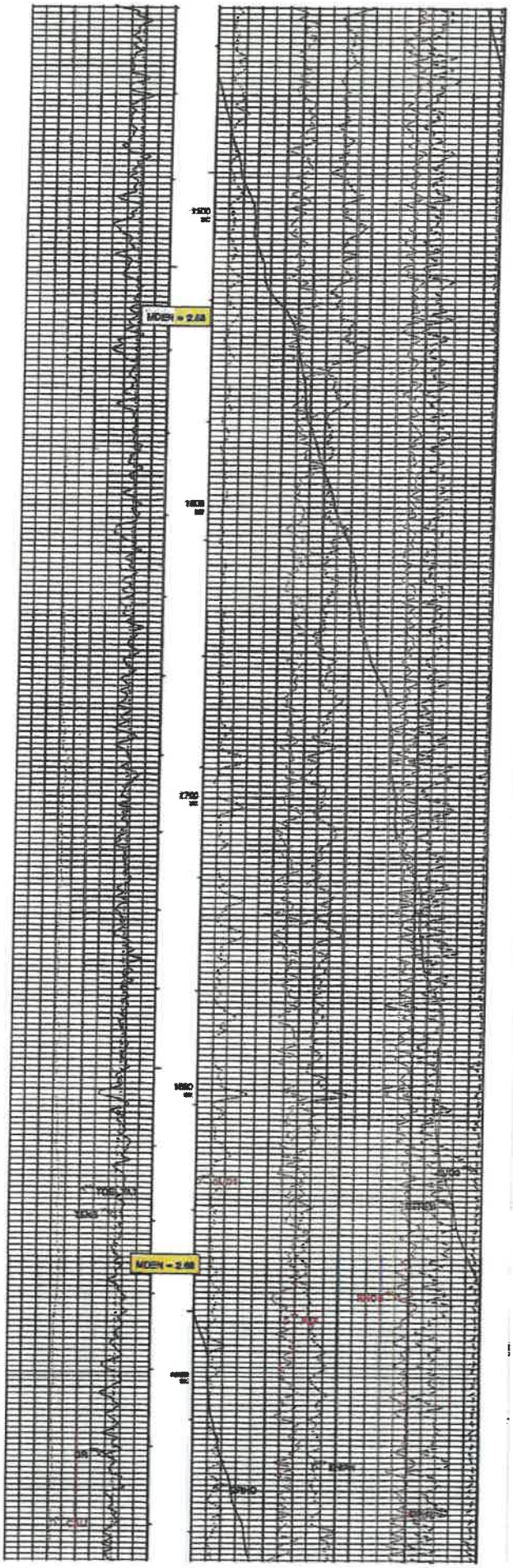

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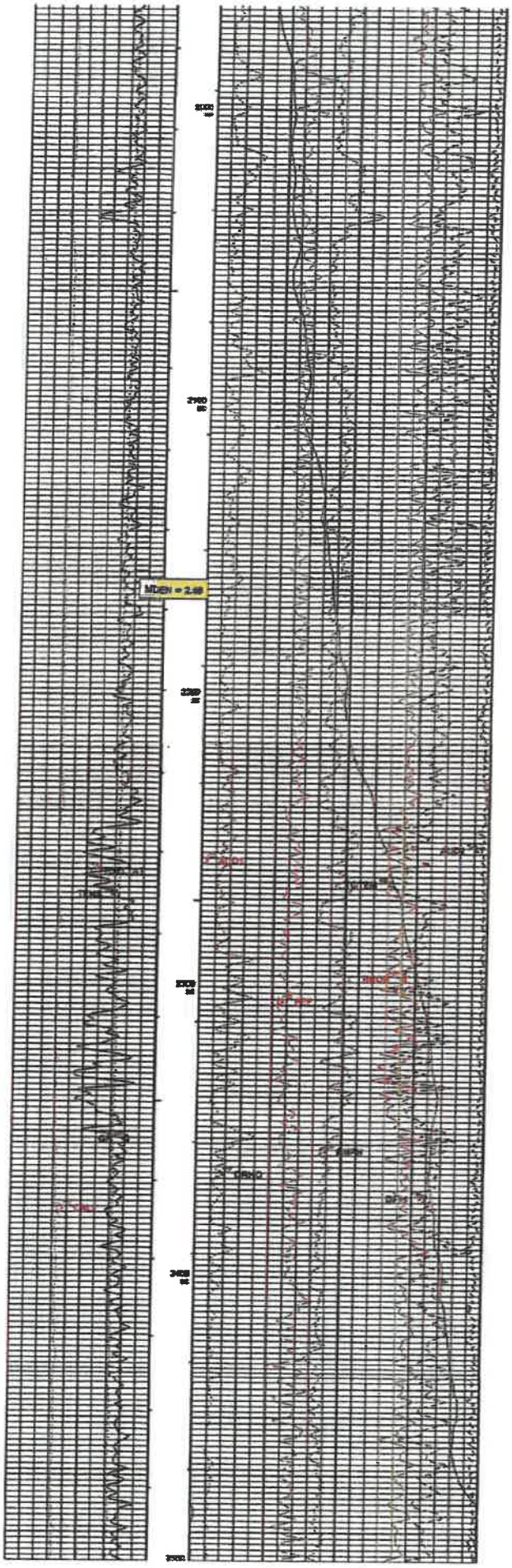

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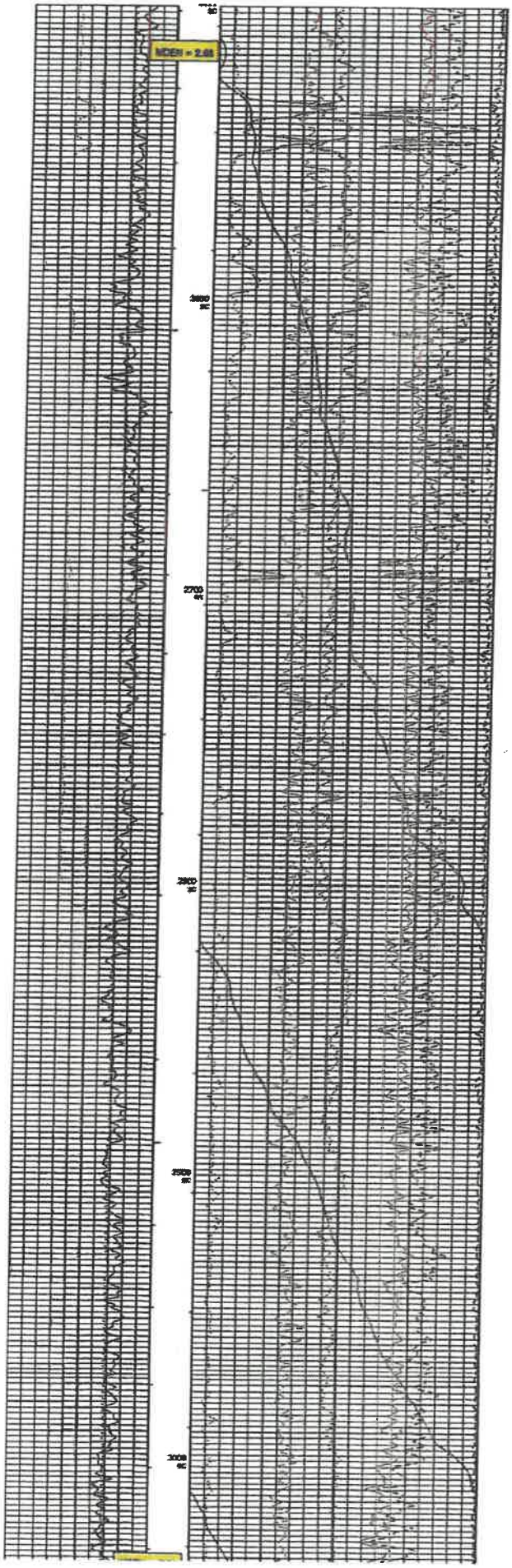

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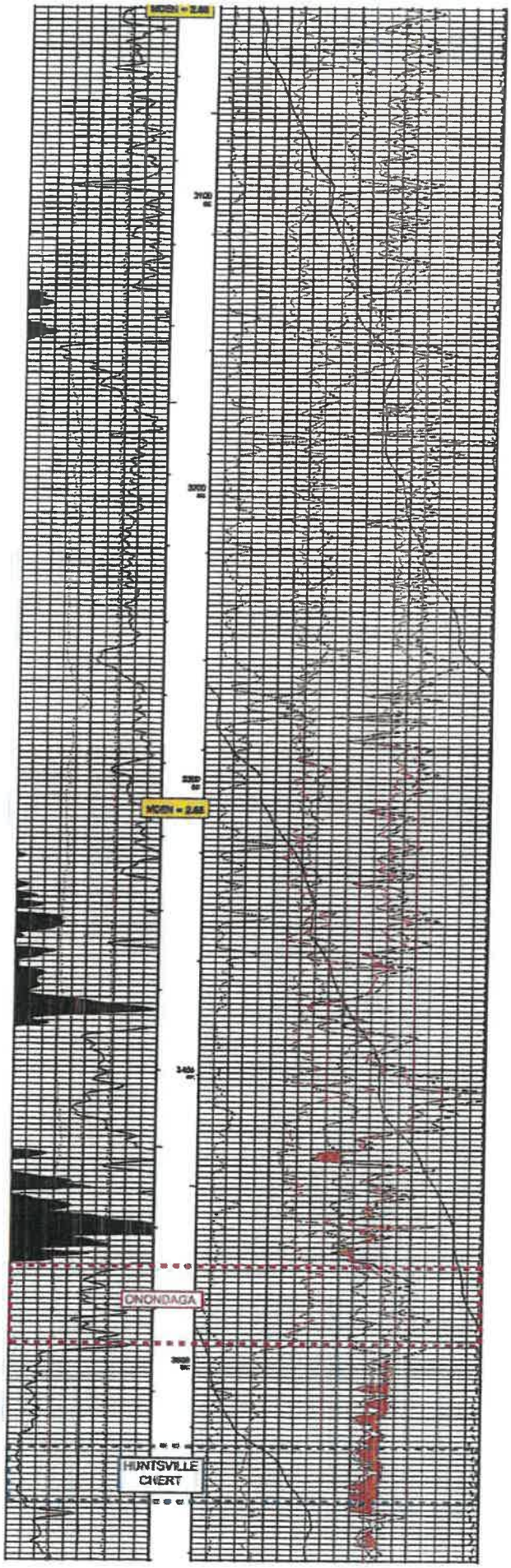

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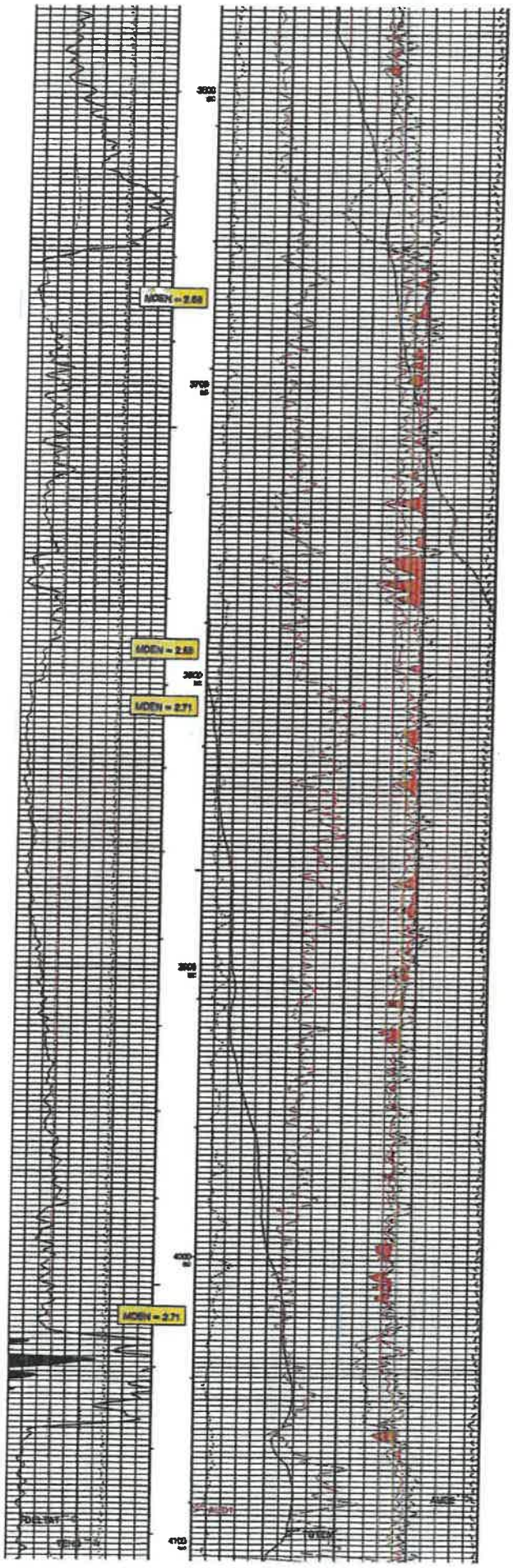

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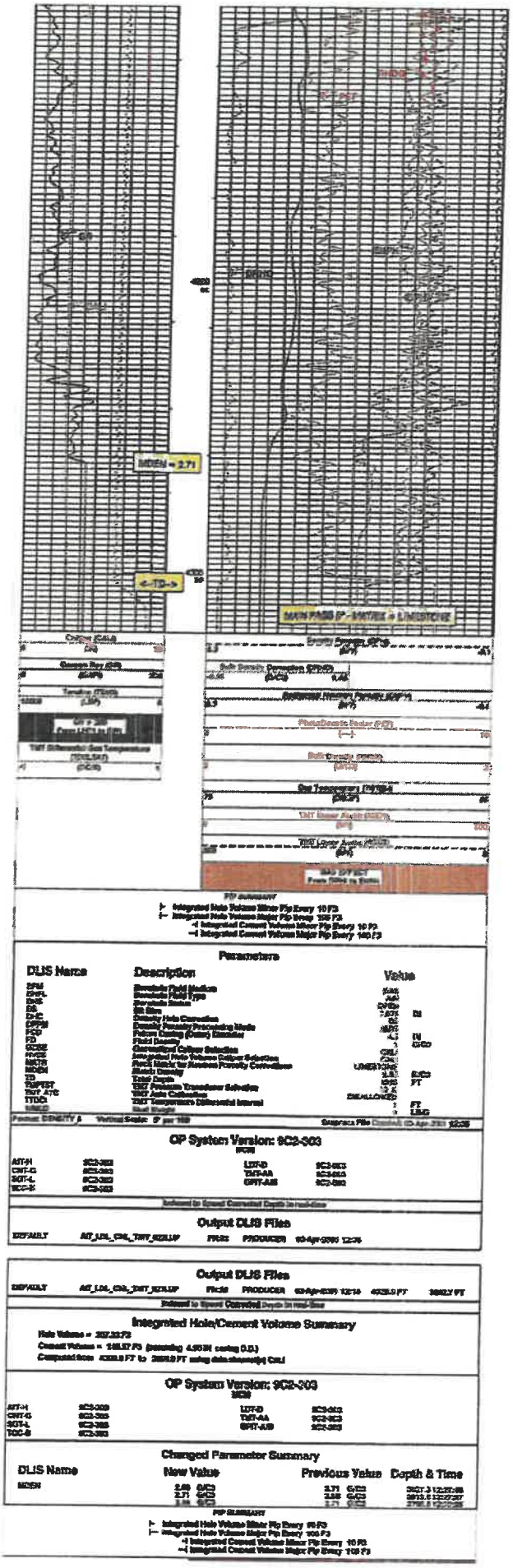

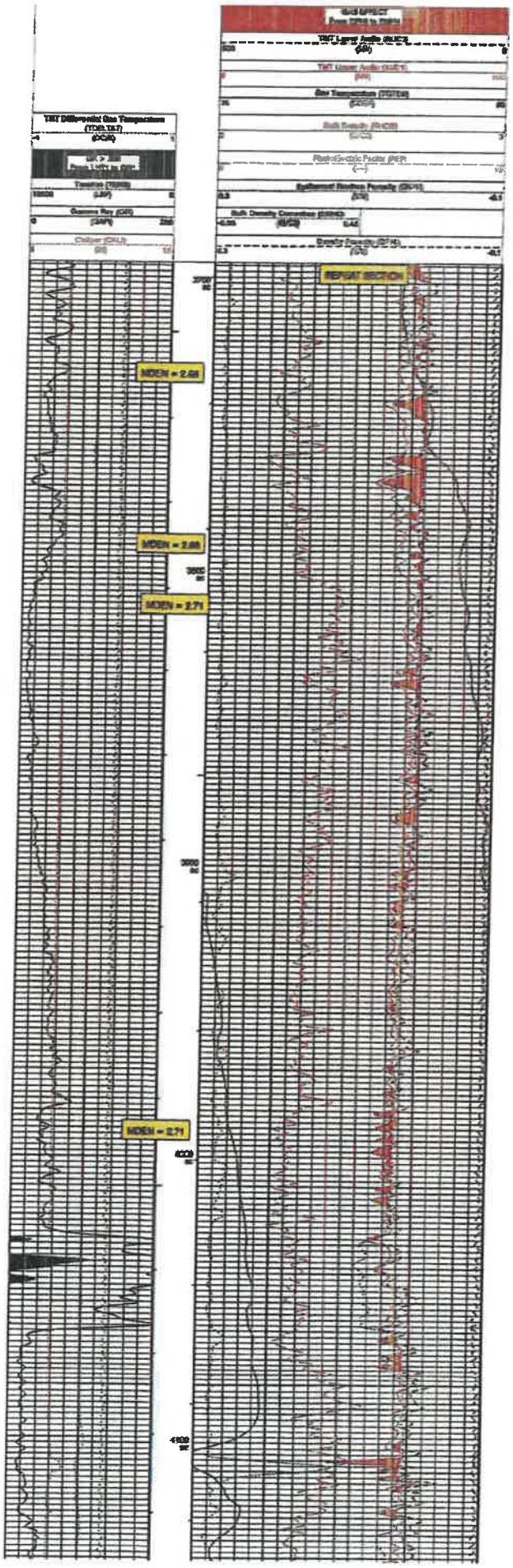

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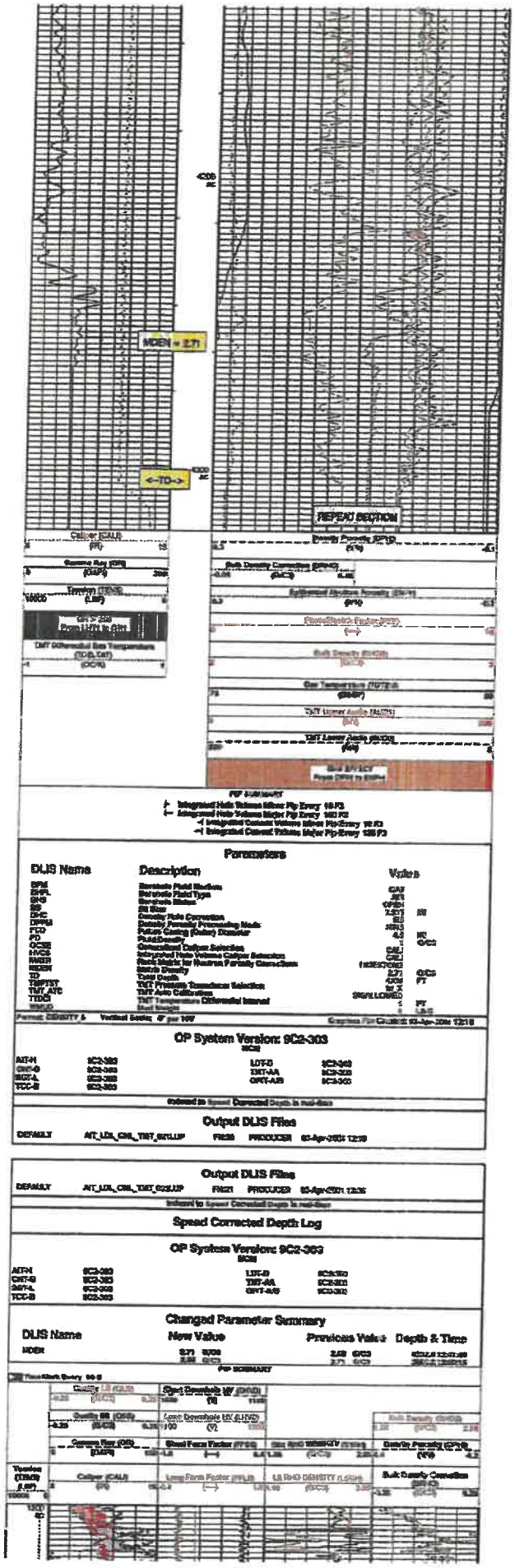

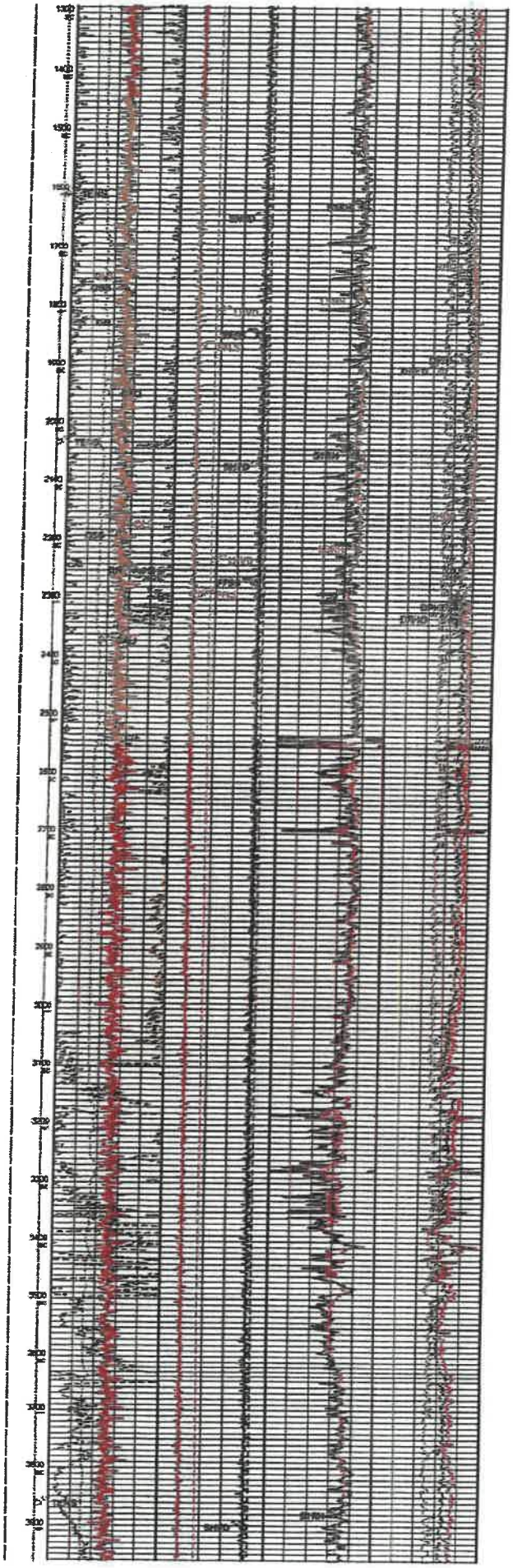

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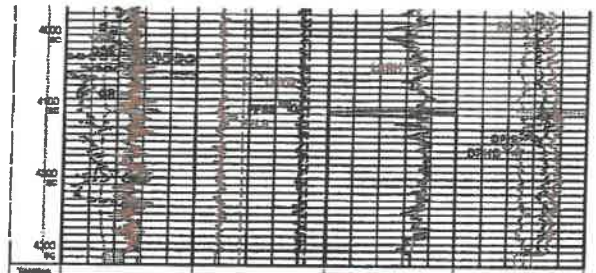

Third Mark Every 50 ft

Parameters

DLIS Name	Description	Value
BSN	Borehole Fluid Medium	SALT
BS	Bit Size	7.875 IN
CHO	Density Hole Correction	BH
DPRM	Density Porosity Processing Mode	HRAM
FD	Fluid Density	1 G/CC
MDEN	Matrix Density	2.65 G/CC
WMUD	Mud Weight	0 LB/G

Format LOTD_LOG Vertical Scale: 1" per 100' Graphics File Created: 10-Apr-2001 12:36

OP System Version: 903-403

NGM

AIT-H	903-005	LDT-D	903-003
CNT-D	903-003	TRT-AA	903-033
SDT-L	903-008	OPT-A/B	903-033
TCC-B	903-003		

Speed Corrected Depth Log

Indexed to Speed Corrected Depth in real-time

Output DLIS Files

DEFAULT AIT_LDL_CNL_TRT_003.RP FN:31 PRODUCER 10-Apr-2001 12:35

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Stat
Array Induction Tool - H Website Calibration - Electronics Calibration Check - Thru Cal Mag. & Phase							
Before: 1-Apr-2001 8:31							
Thru Cal Magnitude - 0	0	N/A	0.0402	N/A	N/A	N/A	V
Thru Cal Magnitude - 1	0	N/A	1.301	N/A	N/A	N/A	V
Thru Cal Magnitude - 2	0	N/A	0.0007	N/A	N/A	N/A	V
Thru Cal Magnitude - 3	0	N/A	0.7103	N/A	N/A	N/A	V
Thru Cal Magnitude - 4	0	N/A	1.000	N/A	N/A	N/A	V
Thru Cal Magnitude - 5	0	N/A	0.007	N/A	N/A	N/A	V
Thru Cal Magnitude - 6	0	N/A	0.015	N/A	N/A	N/A	V
Thru Cal Magnitude - 7	0	N/A	1.035	N/A	N/A	N/A	V
Phase - 0	0	N/A	85.70	N/A	N/A	N/A	DEG
Phase - 1	0	N/A	88.80	N/A	N/A	N/A	DEG
Phase - 2	0	N/A	87.03	N/A	N/A	N/A	DEG
Phase - 3	0	N/A	87.05	N/A	N/A	N/A	DEG
Phase - 4	0	N/A	84.88	N/A	N/A	N/A	DEG
Phase - 5	0	N/A	82.88	N/A	N/A	N/A	DEG
Phase - 6	0	N/A	82.70	N/A	N/A	N/A	DEG
Phase - 7	0	N/A	48.84	N/A	N/A	N/A	DEG
Array Induction Tool - H Website Calibration - Electronics Calibration Check - Auxiliary							
Before: 1-Apr-2001 8:31							
Array Induction BPM Plus	990.0	N/A	996.8	N/A	N/A	N/A	BPM
Array Induction BPM Bias	0	N/A	-0.3604	N/A	N/A	N/A	BPM
Array Induction Temperature (F)	0-110	N/A	0.7225	N/A	N/A	N/A	V
Array Induction Temperature 2D	0	N/A	-0.0003479	N/A	N/A	N/A	V
Litho Density - D Website Calibration - Background Measurement							
Master: 8-Mar-2001 14:48 Before: 31-Mar-2001 19:30							
LS Background	30.00	18.78	18.80	N/A	N/A	1.000	CPS
LU Background	70.00	65.40	65.50	N/A	N/A	1.000	CPS
LB Background	67.00	63.88	63.30	N/A	N/A	1.000	CPS
LTH Background	5.000	5.351	5.200	N/A	N/A	0.2000	CPS
SS1 Background	15.00	14.07	14.00	N/A	N/A	0.2000	CPS
SS2 Background	11.00	10.31	10.21	N/A	N/A	0.2000	CPS
Litho Density - D Website Calibration - Test Quality Control Information HV							
Master: 8-Mar-2001 14:48 Before: 31-Mar-2001 19:30							
LB-HV Background	1500	1379	1300	N/A	N/A	N/A	V
SS-HV Background	1500	1178	1170	N/A	N/A	N/A	V
Litho Density - D Website Calibration - Detectors Resolution Pure SKO Measurement							
Master: 8-Mar-2001 14:48 Before: 31-Mar-2001 19:30							
LS Resolution Background	0.000	0.000	0.000	N/A	N/A	N/A	
SS Resolution Background	0.000	0.548	0.597	N/A	N/A	N/A	
Litho Density - D Website Calibration - Caliper Calibration							
Before: 31-Mar-2001 19:27							
Caliper Small Ring	5.000	N/A	5.134	N/A	N/A	N/A	IN
Caliper Large Ring	10.00	N/A	10.01	N/A	N/A	N/A	IN
Compensated Neutron - D Website Calibration - Zero Measurement							
Master: 15-Feb-2001 9:53 Before: 31-Mar-2001 19:30							
CNTC Background	1,000	0	0	N/A	N/A	N/A	CPS
CFTC Background	0	0	0	N/A	N/A	N/A	CPS
CNEC Background	1,000	0	0	N/A	N/A	N/A	CPS
CFEC Background	0	0	0	N/A	N/A	N/A	CPS
Compensated Neutron - D Website Calibration - Jig Measurement							
Master: 15-Feb-2001 9:53 Before: 31-Mar-2001 19:30							
CNTC Jig	2001	2001	2016	N/A	N/A	N/A	CPS
CFTC Jig	1479	1473	1485	N/A	N/A	N/A	CPS
CNTC/CFTC Jig	1.354	1.364	1.359	N/A	N/A	N/A	
CNEC Jig	995.0	998.0	972.0	N/A	N/A	N/A	CPS
CFEC Jig	675.0	678.0	663.1	N/A	N/A	N/A	CPS
CNEC/CFEC Jig	0.3941	0.3941	0.3951	N/A	N/A	N/A	
General Purpose Inclinometer Website Calibration - CROSSEY ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: 31-Mar-2001 19:30							
TEMPERATURE REFERENCE :	N/A	N/A	25	N/A	N/A	N/A	DEGF
YEAR OF CALIBRATION :	N/A	N/A	91	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	7	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	450	N/A	N/A	N/A	
General Purpose Inclinometer Website Calibration - EPS MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: 31-Mar-2001 19:30							
TEMPERATURE REFERENCE :	N/A	N/A	212	N/A	N/A	N/A	DEGF
YEAR OF CALIBRATION :	N/A	N/A	94	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	10	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	70	N/A	N/A	N/A	

The CNT Master Calibration Was Done With The Following Parameters :

NCT-B Water Temperature	68.0	DEGF.
Thermal Housing Size	3.375	IN.
Epithermal Housing Size	0.375	IN.

Array Induction Tool - H / Equipment Identification

Primary Equipment:
Rev/OP Before Hole: AIRM - A
Array Induction Sonde: ARIS - EA

Auxiliary Equipment:

Array Induction Tool - H Website Calibration

Electronics Calibration Check - Thru Cal Mag. & Phase

Mk	Phase	Value	Thru Calibration, V	Received	Value	Phase DEG	Received
0	Before	0.0402	[redacted]	0.0402	85.70	[redacted]	71.09
1	Before	1.301	[redacted]	1.301	88.80	[redacted]	70.00
2	Before	0.0007	[redacted]	0.0007	87.03	[redacted]	68.00

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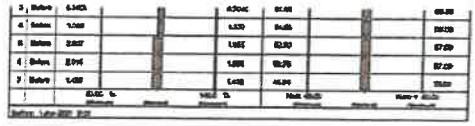

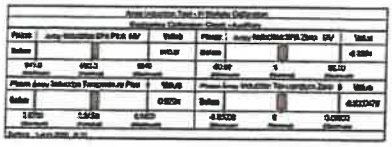

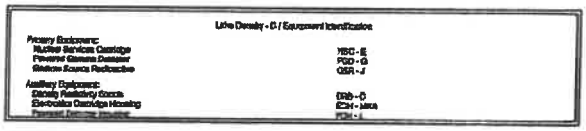

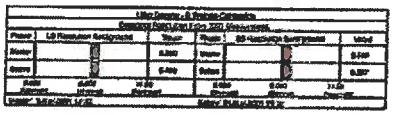

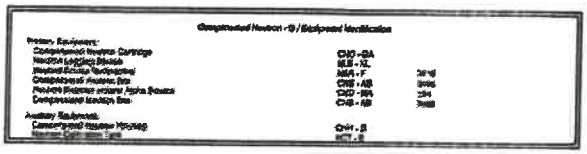

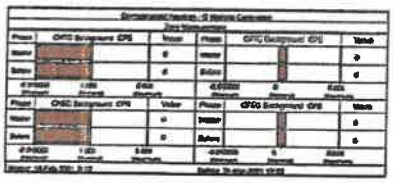

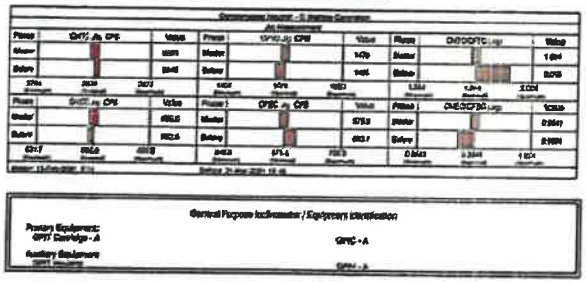

COMPANY	MEGAENERGY OPERATING INC	BOTTOM LOG INTERVAL	[illegible]
		SCHLUMBERGER DEPTH	[illegible]
WELL	NEUTOR B-1	DEPTH DRILLER	[illegible]
FIELD	LEADMINE	KELLY BUSHING	[illegible]
COUNTY	TUCKER	DRILL FLOOR	[illegible]
STATE	WV	GROUND LEVEL	[illegible]

Schlumberger

LITHO-DENSITY
COMPENSATED NEUTRON
GAMMA RAY/TEMP

4709300081

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ARRAY INDUCTION GAMMA RAY

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COMPANY: MEGAENERGY OPERATING INC
WELL: NESTOR B-1
FIELD: LEADMINE
COUNTY: TUCKER STATE: WV

Schlumberger
ARRAY INDUCTION
GAMMA RAY

COUNTY: TUCKER
Field: LEADMINE
Location: 1100 FT W OF 80-00-00
Well: NESTOR B-1
Company: MEGAENERGY OPERATING IN

LOCATION
11000 FT W OF 80-00-00
10 FT S OF 70-37-44
LONG: 80-00-00.0 LONG: 70-37-44.0

Permanent Datum: GROUND LEVEL
Log Measured From: KELLY BUSHING
Drilling Measured From: KELLY BUSHING

Elev.: K.B. 1660 ft
G.L. 1650 ft
D.F. 1659 ft

Elev.: 1650 ft
10.0 ft Above Permn. Datum

API Serial No.
47-000-0001

SECTION

DISTRICT
ST. GEORGE

COUNTY
ST. GEORGE 7.5'

Logging Date	3-Apr-2001
Run Number	ONE
Depth Driller	4300 ft
Depth Logger	4303 ft
Schlumberger Depth	4302 ft
Bottom Log Interval	4300 ft
Top Log Interval	0 ft
Casing Driller Size @ Depth	@ 1221 ft
Casing Schlumberger	1221 ft
Bit Size	7.875 in
Type Fluid in Hole	AIR
Density	@ lbm/gal
Fluid Loss	
MUD Viscosity	
Source Of Sample	N/A
PH	
RM @ Measured Temperature	@
RMF @ Measured Temperature	@
RMC @ Measured Temperature	@
Source RMF	@
Source RMC	@
RM @ MRT	N/A
RMF @ MRT	658.067 @ 120
RMC	N/A
Maximum Recorded Temperatures	658.067 @ 120
Circulation Stopped	120
Time	
Logger On Bottom	@
Time	10:00
Unit Number	8509
Location	CHARLESTON WV
Recorded By	WILLIAM MACPHERSON
Witnessed By	MR. JIM HOOVER

DISCLAIMER
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (A) AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES1
OS1: CNL / LDT
OS2: GAMMA RAY
OS3: AUDIO
OS4: TEMPERATURE
OS5: GPIT-DIRECTIONAL

OTHER SERVICES2
OS1:
OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 1
DRILLED BY SW JACK RG #7
.
DENSITY MATRIX NOTED ON LOG
NEUTRON MATRIX = LIMESTONE
.
.
.
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.
.
.
.
.
THANK YOU FOR USING SCHLUMBERGER!!!
SLB CREW: LEW SMITH / DONNELL ROBINSON

REMARKS: RUN NUMBER 2

RUN 1
SERVICE ORDER #: 6711248
PROGRAM VERSION: 9C2-903
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2
SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

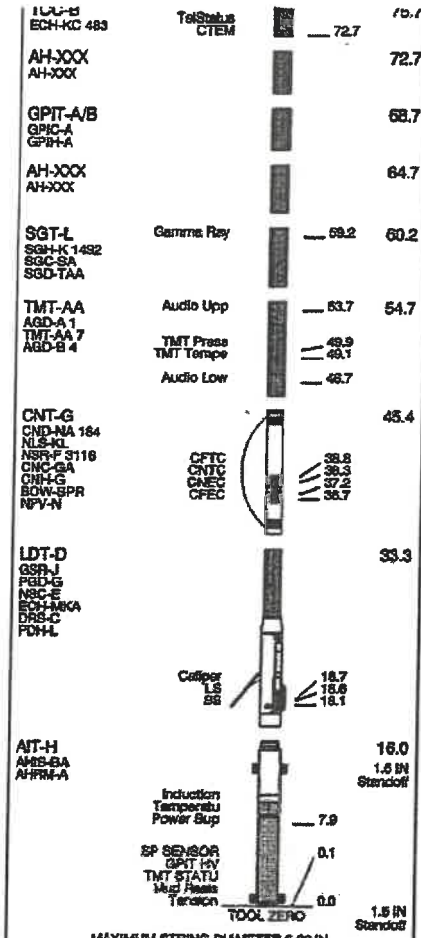
RUN 1

SURFACE EQUIPMENT
CNB-AB 3155 WTM (CTS)-A
NCT-B
NCS-VB
GSR-U/Y 494

DOWNHOLE EQUIPMENT

LEH-Q 77.9
LEH-Q 3080

RUN 2



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Output DLIS Files

DEFAULT AIT_LDL_CNL_TMT_022LUP FN:21 PRODUCER 03-Apr-2001 12:35

Indexed to Speed Corrected Depth in real-time

OP System Version: 9C2-303

MCM

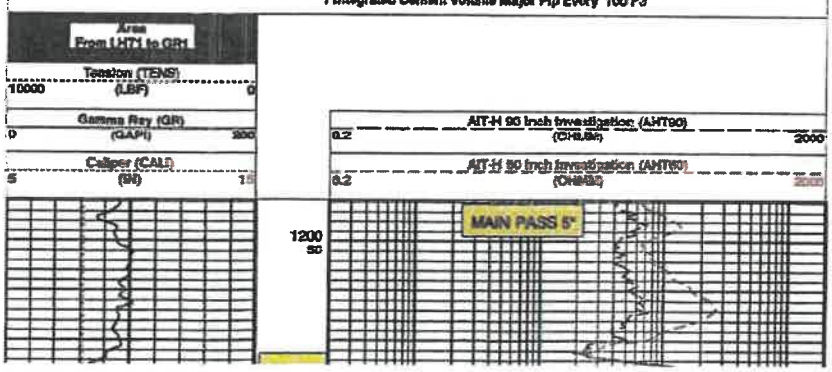
AIT-H	9C2-303	LDT-D	9C2-303
CNT-G	9C2-303	TMT-AA	9C2-303
SGT-L	9C2-303	GPIT-A/B	9C2-303
TCC-B	9C2-303		

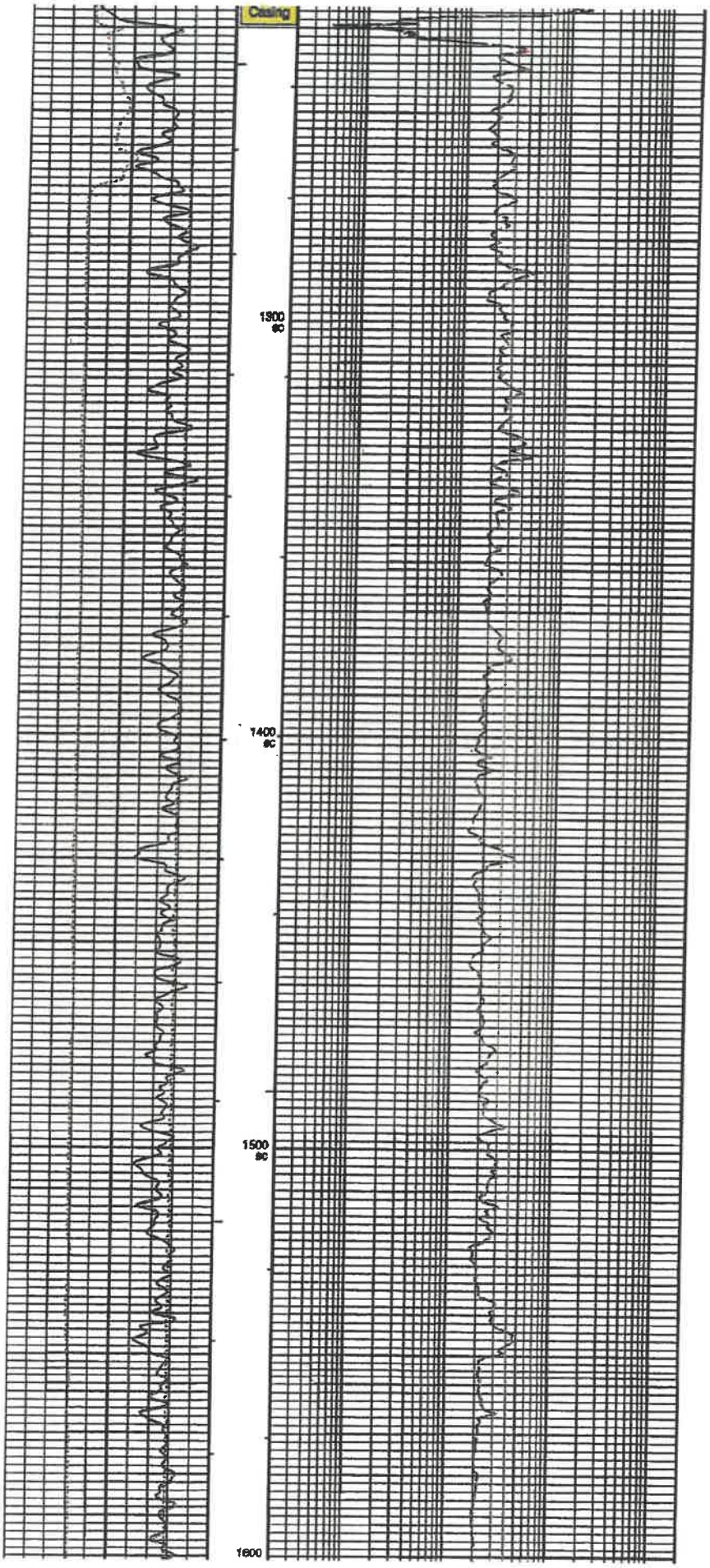
Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
BHT	120 DEGF	100 DEGF	4279.9 12:40:43

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 10 F3
- Integrated Hole Volume Major Pip Every 100 F3
- Integrated Cement Volume Minor Pip Every 10 F3
- Integrated Cement Volume Major Pip Every 100 F3





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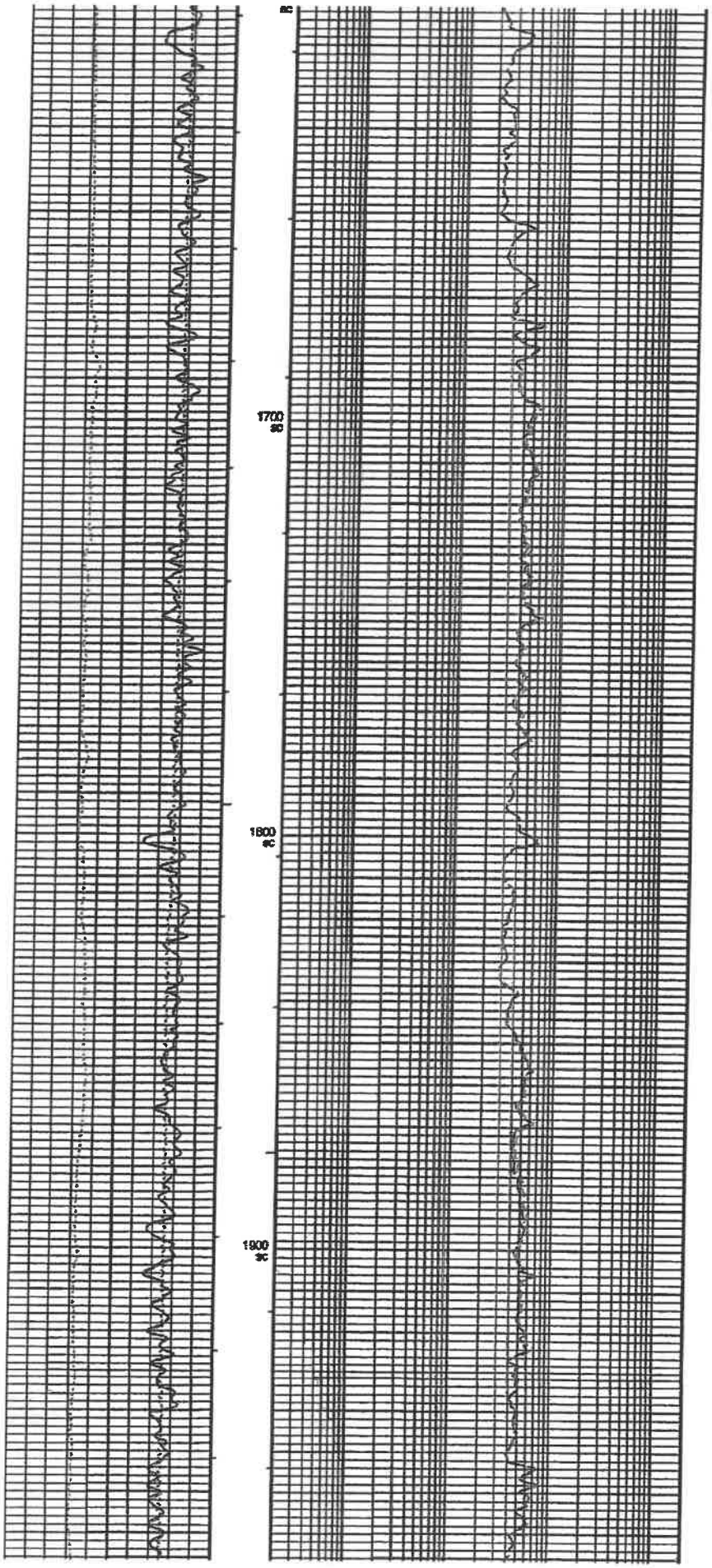

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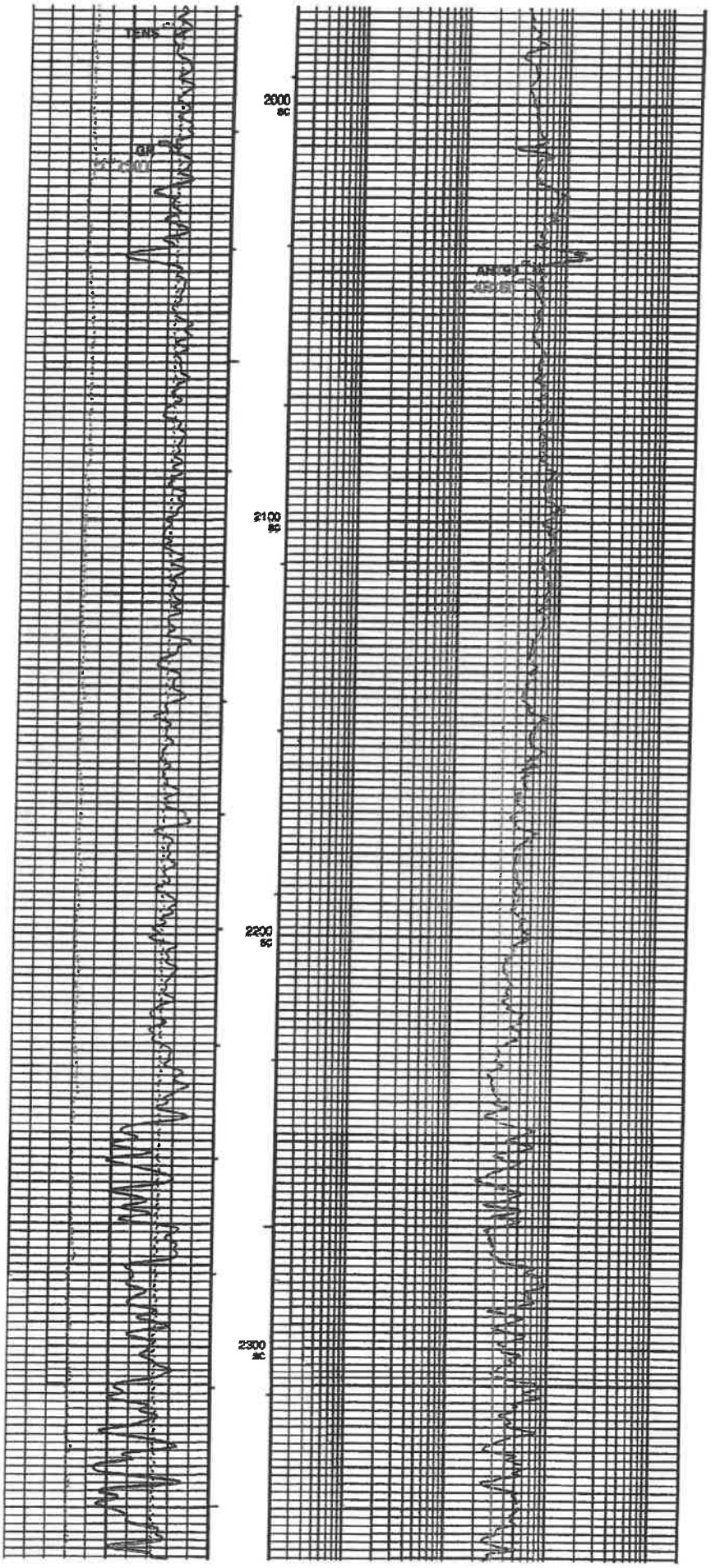

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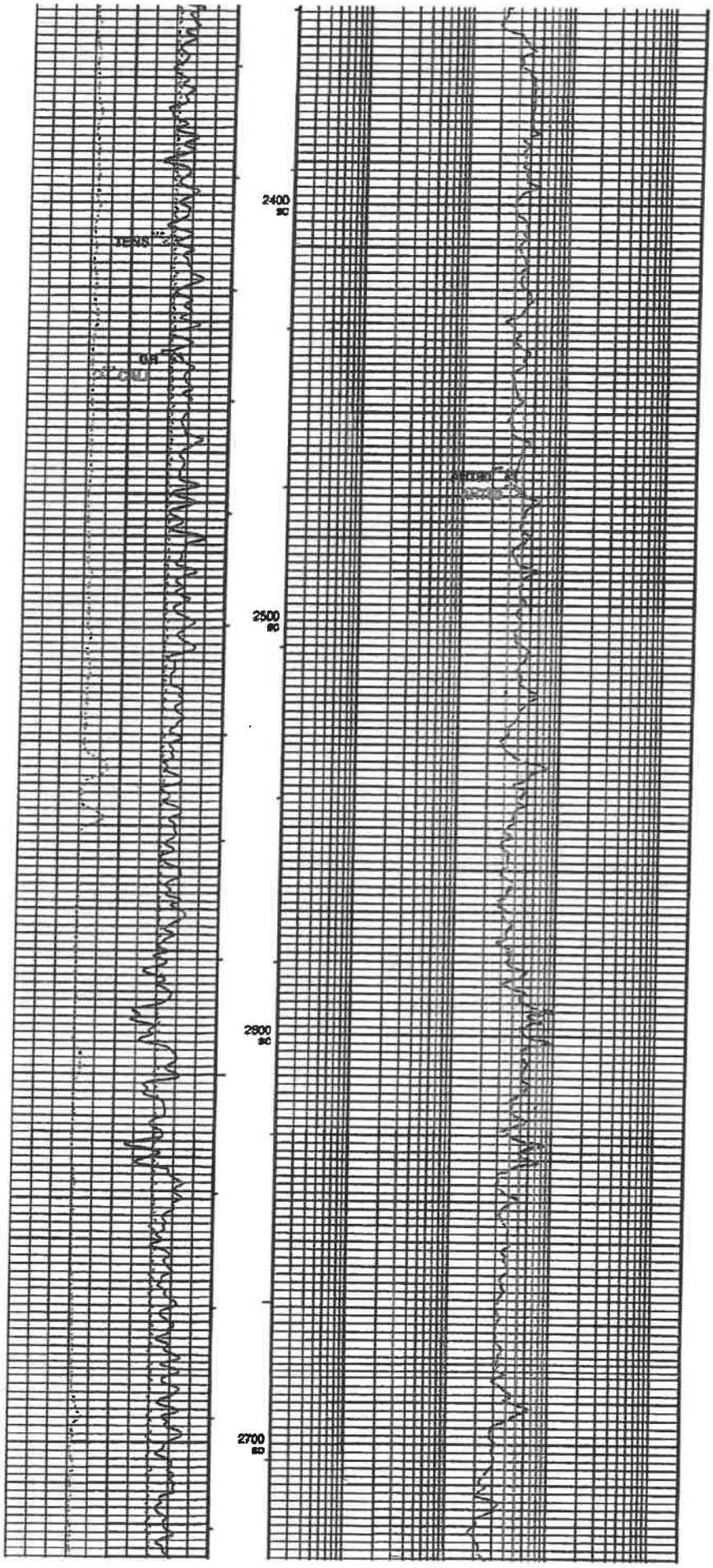

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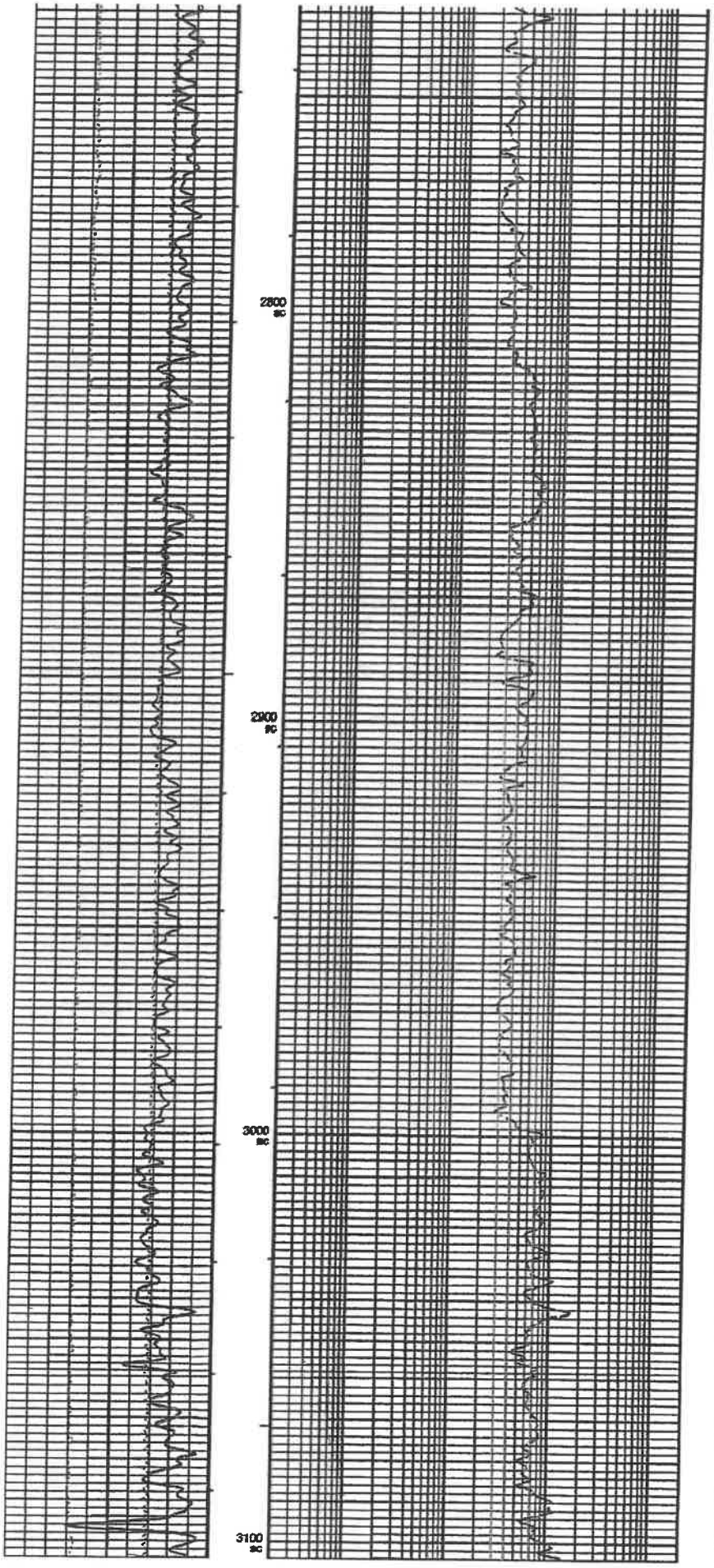

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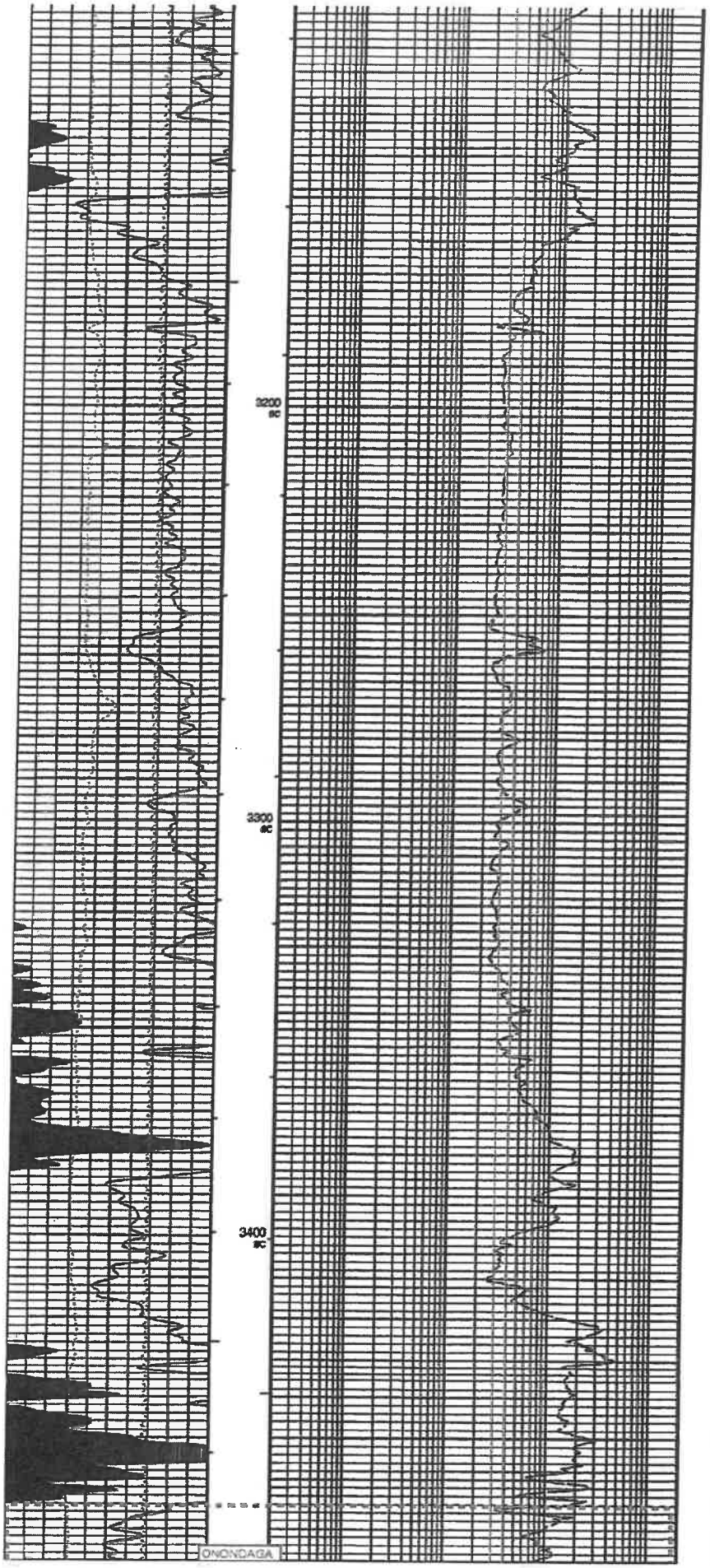

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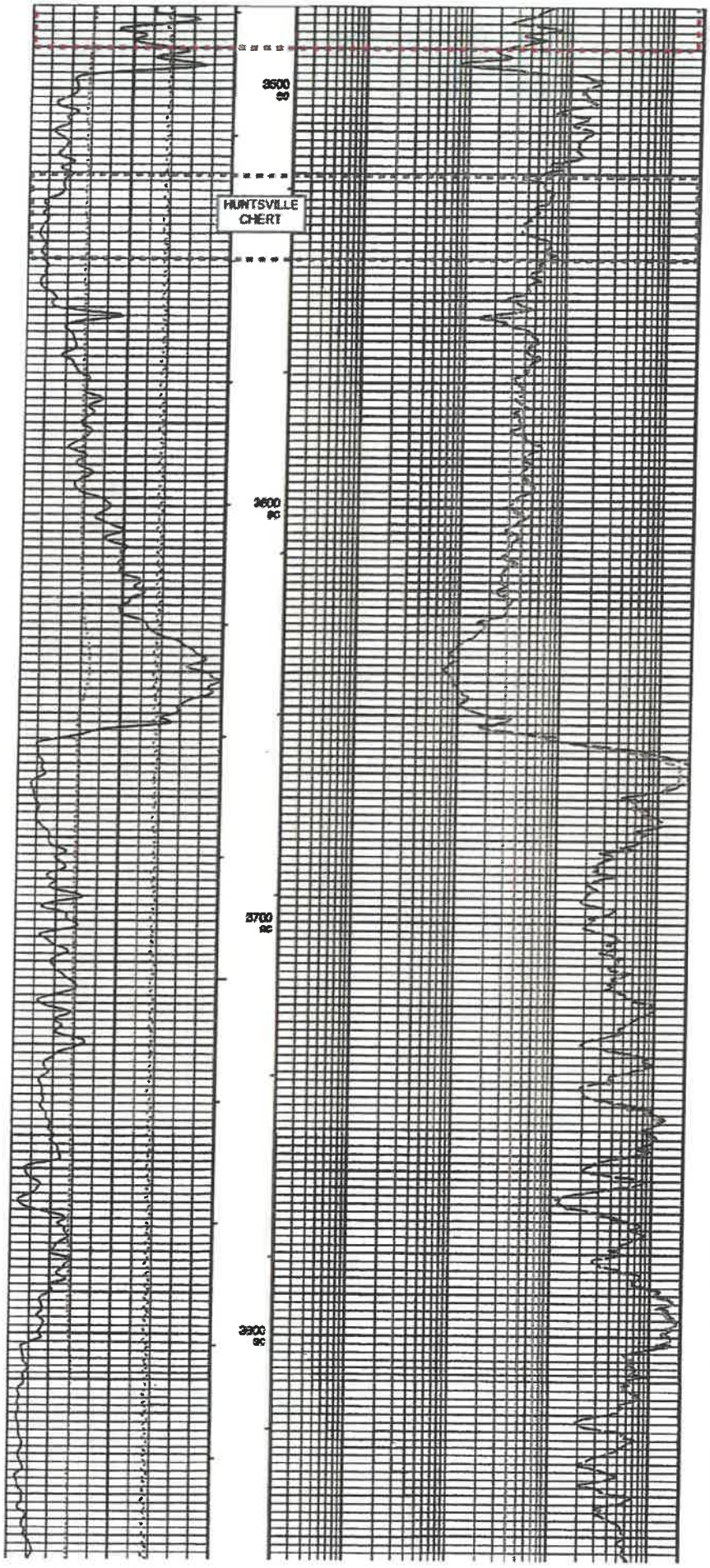

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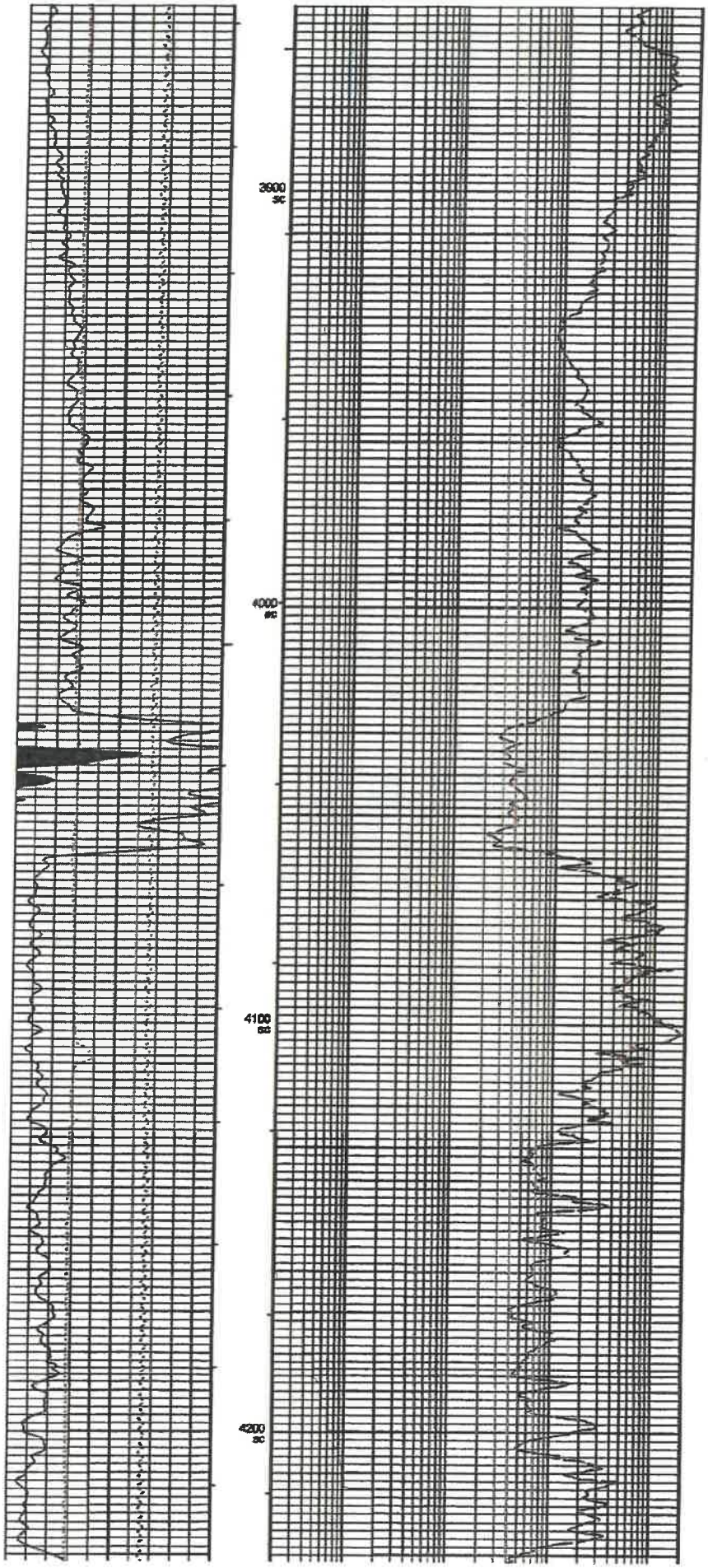

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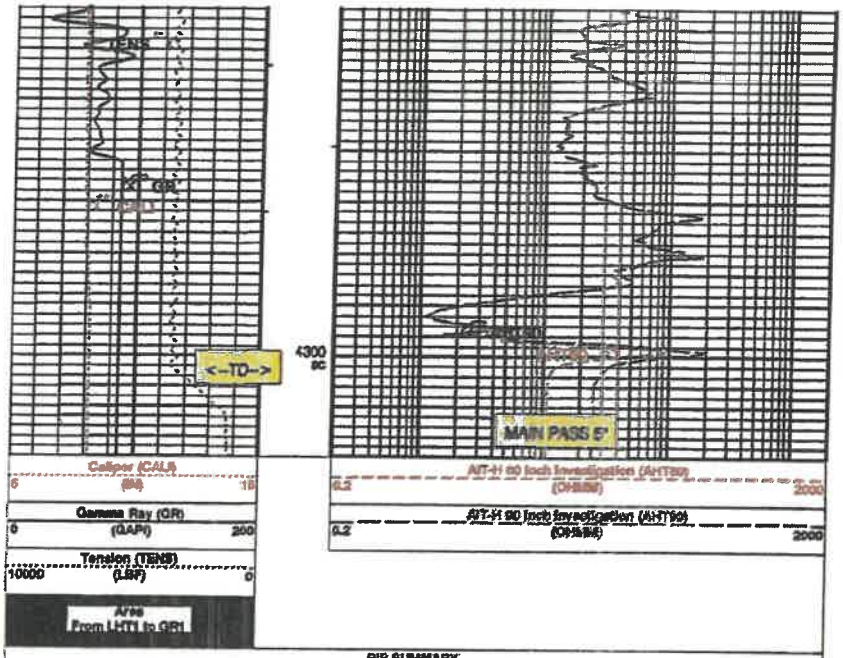

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 10 F3
- Integrated Hole Volume Major Pip Every 100 F3
- Integrated Cement Volume Minor Pip Every 10 F3
- Integrated Cement Volume Major Pip Every 100 F3

AIT-H Answer Product Processing Summary. Data taken with Tool # 216 (AHTAO)

***** Borehole Correction *****

Effective Tool Standoff computed. Borehole diameter and mud res. taken as input (see BCSE and GRSE parameters)

Tool is run in ECCENTERED mode with a tool stand-off of 9.50 IN. BS Size is 7.875 IN.

***** Input Selections to AIT-H Answer Product Processing *****

Caliper (GCSE): CALI Mud Resistivity (GRSE): GEN_8 Temperature (GTSE): LINEAR_ESTIMATE Porosity (FPHI): DPHI

***** Other Parameters used by AIT-H Answer Product Processing *****

Mud Sample Resistivity (RMS)	-50000.000 OHMM	Mud Sample Temperature (MST)	-50000.000 DEGF
Surface Hole Temperature (SHT)	50.000 DEGF	Bottom Temperature (BHT)	100.000 DEGF
Total Depth (TD)	4300.000 FT		

***** AIT-H Answer Product Processing Control Parameters *****

(AHAPL): 2_BholeCorr_BasicLogs

(AHBHM): 2_ComputeStandoff (AHBLM): 6_One_Two_and_Four

(AHBPO): Standard_Processing

Parameters

DLIS Name	Description	Value	
AHBHM	Array Induction Borehole Correction Mode	2_ComputeStandoff	
AHBHV	Array Induction Borehole Correction Code Version Number	879	
AHBLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
AHBLV	Array Induction Basic Logs Code Version Number	884	
AHBPO	Array Induction Basic Logs Processing Option	Standard_Processing	
AHCDE	Array Induction Casing Detection Enable	No	
AHCEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered	
AHCSED	Array Induction Casing Shoe Estimated Depth	-50000	FT
AHFRSV	Array Induction Response Set Version for Four ft Resolution	22.66.23.11	
AHMRF	Array Induction Mud Resistivity Factor	1	
AHORSV	Array Induction Response Set Version for One ft Resolution	22.66.23.11	
AHRPV	Array Induction Radial Profiling Code Version Number	708	
AHRPV	Array Induction Radial Parameterization Code Version Number	214	
AHSTA	Array Induction Tool Standoff	0.5	IN
AHTRSV	Array Induction Response Set Version for Two ft Resolution	22.66.23.11	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGF
BS	Bit Size	7.875	IN
DFD	Drilling Fluid Density	9.00	LB/G
FCD	Future Casing (Outer) Diameter	4.5	IN
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_8	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HVCS	Integrated Hole Volume Caliper Selection	CALI	
MST	Mud Sample Temperature	-50000.00	DEGF
SHT	Surface Hole Temperature	50	DEGF
TD	Total Depth	4300	FT

Format: AIT_MAIN Vertical Scale: 5" per 100' Graphics File Created: 03-Apr-2001 12:35

OP System Version: 9C2-303

WCM

AIT-H	9C2-303	LDT-D	9C2-303
CNT-G	9C2-303	TMT-AA	9C2-303
SGT-L	9C2-303	GPIT-A/B	9C2-303
TCC-B	9C2-303		

Indexed to Speed Corrected Depth in real-time

Output DLIS Files

DEFAULT	AIT_LDL_CNL_TMT_022.LIP	FN:21	PRODUCER	03-Apr-2001 12:35

Output DLIS Files

DEFAULT	AIT_LDL_CNL_TMT_021.LIP	FN:20	PRODUCER	03-Apr-2001 12:16	4320.0 FT	3682.7 FT

Indexed to Speed Corrected Depth in real-time

Integrated Hole/Cement Volume Summary

Hole Volume = 207.33 F3
Cement Volume = 149.57 F3 (assuming 4.50 IN casing O.D.)
Computed from 4300.0 FT to 3696.0 FT using data channel(s) CALI

OP System Version: 9C2-303

MCM

AIT-H	9C2-303	LDT-D	9C2-303
CNT-G	9C2-303	TNT-AA	9C2-303
SGT-L	9C2-303	GPIT-AB	9C2-303
TCC-B	9C2-303		

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 10 F3
- Integrated Hole Volume Major Pip Every 100 F3
- Integrated Cement Volume Minor Pip Every 10 F3
- Integrated Cement Volume Major Pip Every 100 F3

Area From LATS to GR1

Tension (TENS) 10000 (LBF) 0

Gamma Ray (GR) 0 (GAPI) 200

Caliper (CALI) 5 (IN) 15

AIT-H 90 Inch Investigation (AHT90) 0.2 (OHMM) 2000

AIT-H 20 Inch Investigation (AHT20) 0.2 (OHMM) 2000

3700 sc

REPEAT SECTION

3600 sc

3500 sc

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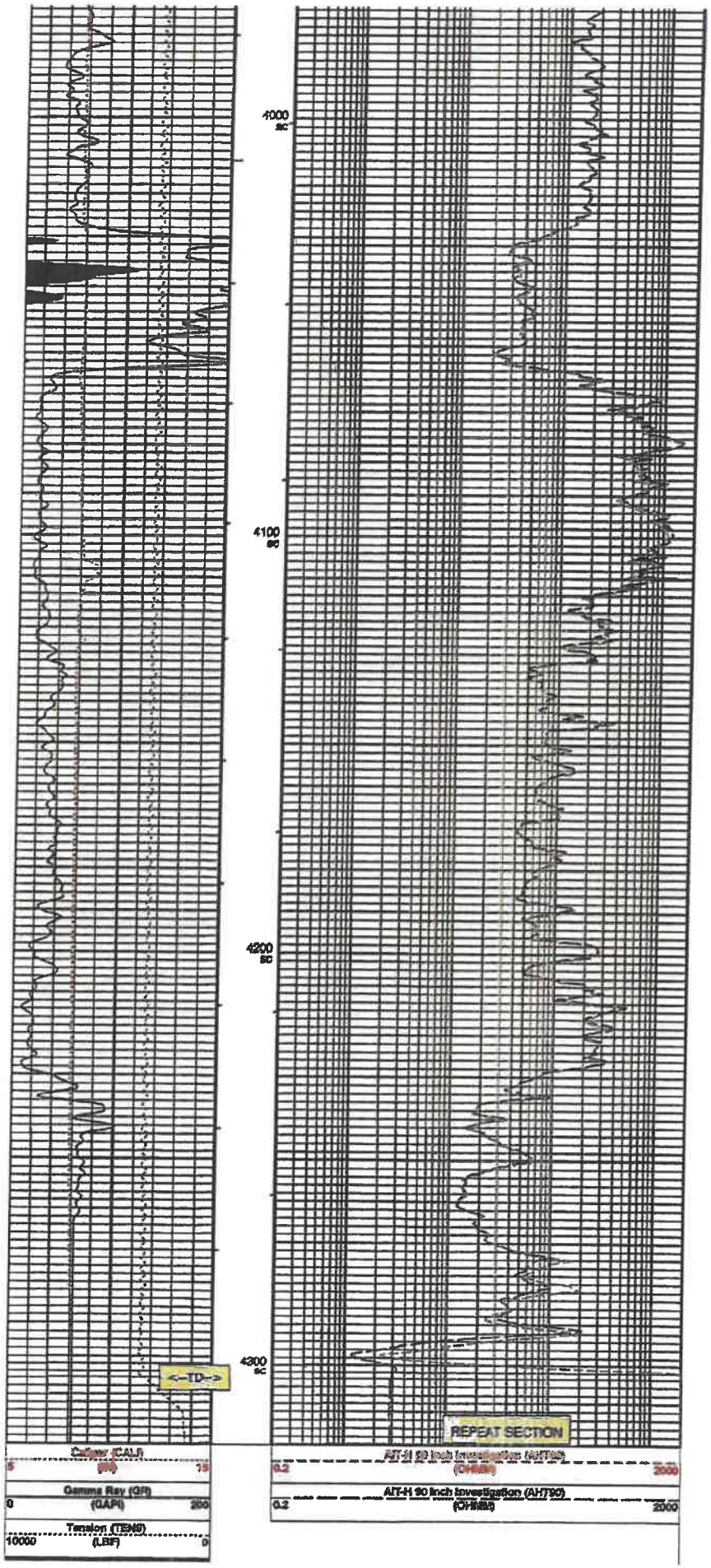

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Area
From 4300.0 to 0.0

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 10 F3
- Integrated Hole Volume Major Pip Every 100 F3
- Integrated Cement Volume Minor Pip Every 10 F3
- Integrated Cement Volume Major Pip Every 100 F3

AIT-H Answer Product Processing Summary. Data taken with Tool # 218 (AHTNC)

***** Borehole Correction *****

Effective Tool Standoff computed. Borehole diameter and mud res. taken as input (see GCSE and GRSE parameters)

Tool is run in ECCENTERED mode with a tool stand-off of 6.50 IN. Bit Size is 7.88 IN.

***** Input Selections to AIT-H Answer Product Processing *****

Caliper (GCSE): CALI Mud Resistivity (GRSE): GEN_9 Temperature (GTSE): LINEAR_ESTIMATE Porosity (FPHI): DPHI

***** Other Parameters used by AIT-H Answer Product Processing *****

Mud Sample Resistivity (RMS)	-50000.000 OHMM	Mud Sample Temperature (MST)	-50000.000 DEGF
Surface Hole Temperature (SHT)	50.000 DEGF	Bottom Temperature (BHT)	100.000 DEGF
Total Depth (TD)	4300.000 FT		

***** AIT-H Answer Product Processing Control Parameters *****

(AHAPL): 2_BholeCorr_BasicLogs
(AHBHM): 2_ComputeStandoff (AHBLM): 6_One_Two_and_Four
(AHBPO): Standard_Processing

Parameters

DLIS Name	Description	Value	
AHBHM	Array Induction Borehole Correction Mode	2_ComputeStandoff	
AHBHV	Array Induction Borehole Correction Code Version Number	370	
AHBLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
AHBLV	Array Induction Basic Logs Code Version Number	064	
AHBPO	Array Induction Basic Logs Processing Option	Standard_Processing	
AHCDE	Array Induction Casing Detection Enable	No	
AHCEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered	
AHCSED	Array Induction Casing Shoe Extrapolated Depth	-50000	FT
AHFRSV	Array Induction Response Set Version for Four ft Resolution	32.66.23.11	
AHMRF	Array Induction Mud Resistivity Factor	1	
AHORSV	Array Induction Response Set Version for One ft Resolution	32.66.23.11	
AHRPV	Array Induction Radial Profiling Code Version Number	700	
AHRPV	Array Induction Radial Parameterization Code Version Number	214	
AHSTA	Array Induction Tool Standoff	0.5	IN
AHTRSV	Array Induction Response Set Version for Two ft Resolution	32.66.23.11	
BHT	Bottom Hole Temperature (used in calculations)	100	DEGF
BS	Bit Size	7.875	IN
DFD	Drilling Fluid Density	0.00	LB/G
FCD	Future Casing (Outer) Diameter	4.5	IN
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HVCS	Interpolated Hole Volume Caliper Selection	CALI	
MST	Mud Sample Temperature	-50000.00	DEGF
SHT	Surface Hole Temperature	50	DEGF
TD	Total Depth	4300	FT

Format: AIT_MAIN Vertical Scale: 5" per 100' Graphics File Created: 03-Apr-2001 12:16

OP System Version: 9C2-303

MCM

AIT-H	9C2-303	LDT-D	9C2-303
CNT-G	9C2-303	TMT-AA	9C2-303
SGT-L	9C2-303	GPIT-A/B	9C2-303
TCC-B	9C2-303		

Indexed to Speed Corrected Depth in real-time

Output DLIS Files

DEFAULT AIT_LDL_CNL_TMT_021.LIS FN:20 PRODUCER 03-Apr-2001 12:10

Output DLIS Files

DEFAULT AIT_LDL_CNL_TMT_022.LIS FN:21 PRODUCER 03-Apr-2001 12:35

Indexed to Speed Corrected Depth in real-time

Speed Corrected Depth Log

OP System Version: 9C2-303

MCM

AIT-H	9C2-303	LDT-D	9C2-303
CNT-G	9C2-303	TMT-AA	9C2-303
SGT-L	9C2-303	GPIT-A/B	9C2-303
TCC-B	9C2-303		

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
BHT	120 DEGF	100 DEGF	4279.9 12:40:43

AIT-H Bocated Borehole Corrected Average Conductivities

Average performed from depth 4229.00 ft/ 1288.26 m with 12778 samples

A1: 100.690 A2: -149.923 A3: 18.596 A4: 34.589

A5: 33.623 A6: 24.745 A7: 24.033 A8: 23.757

PIP SUMMARY

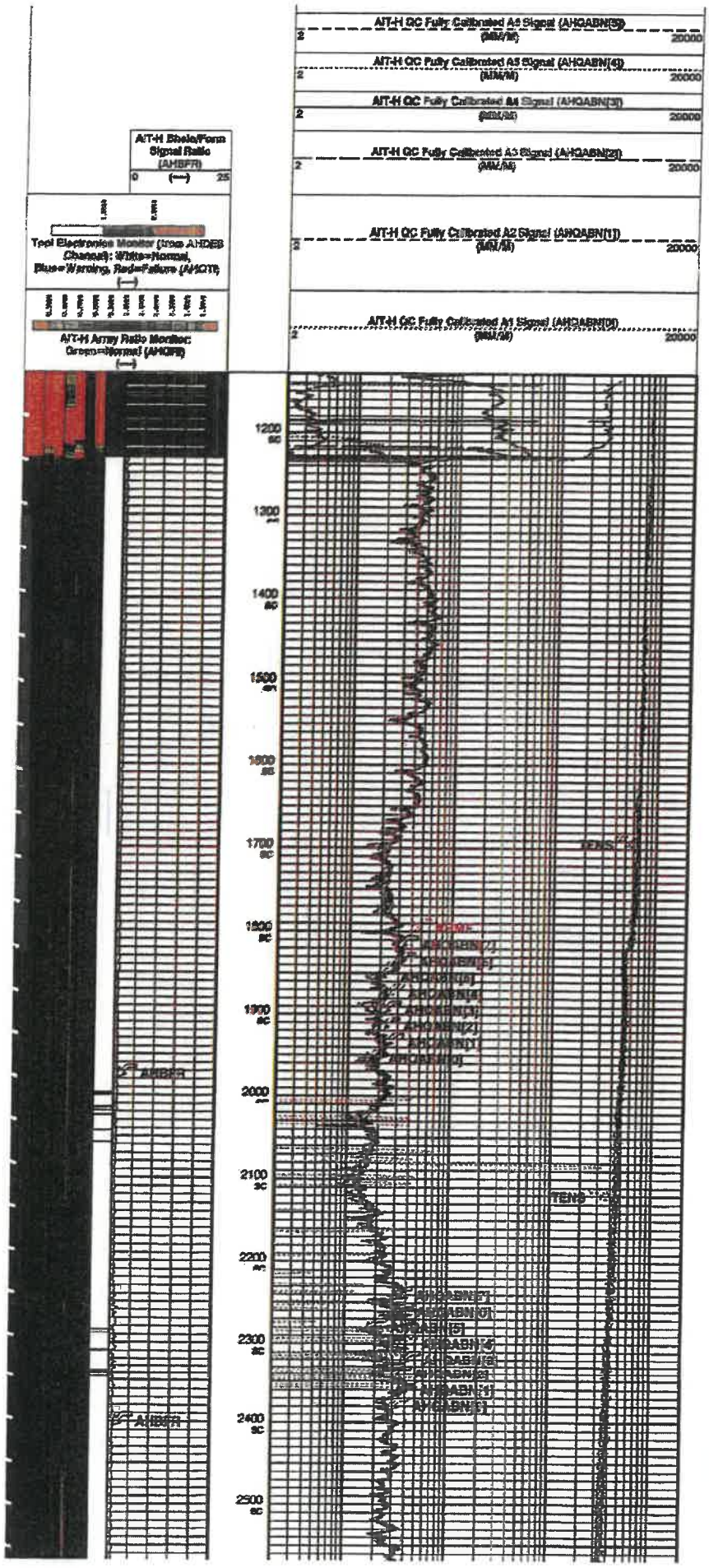
Time Mark Every 60 S

Tension (TENS) 6000 (LBF) 1000

AIT-H Mud Full Cal (AHMF) 0.02 (OHMM) 200

AIT-H QC Fully Calibrated A6 Signal (AHQABN[7]) 2 (mV/V) 20000

AIT-H QC Fully Calibrated A7 Signal (AHQABN[8]) 2 (mV/V) 20000



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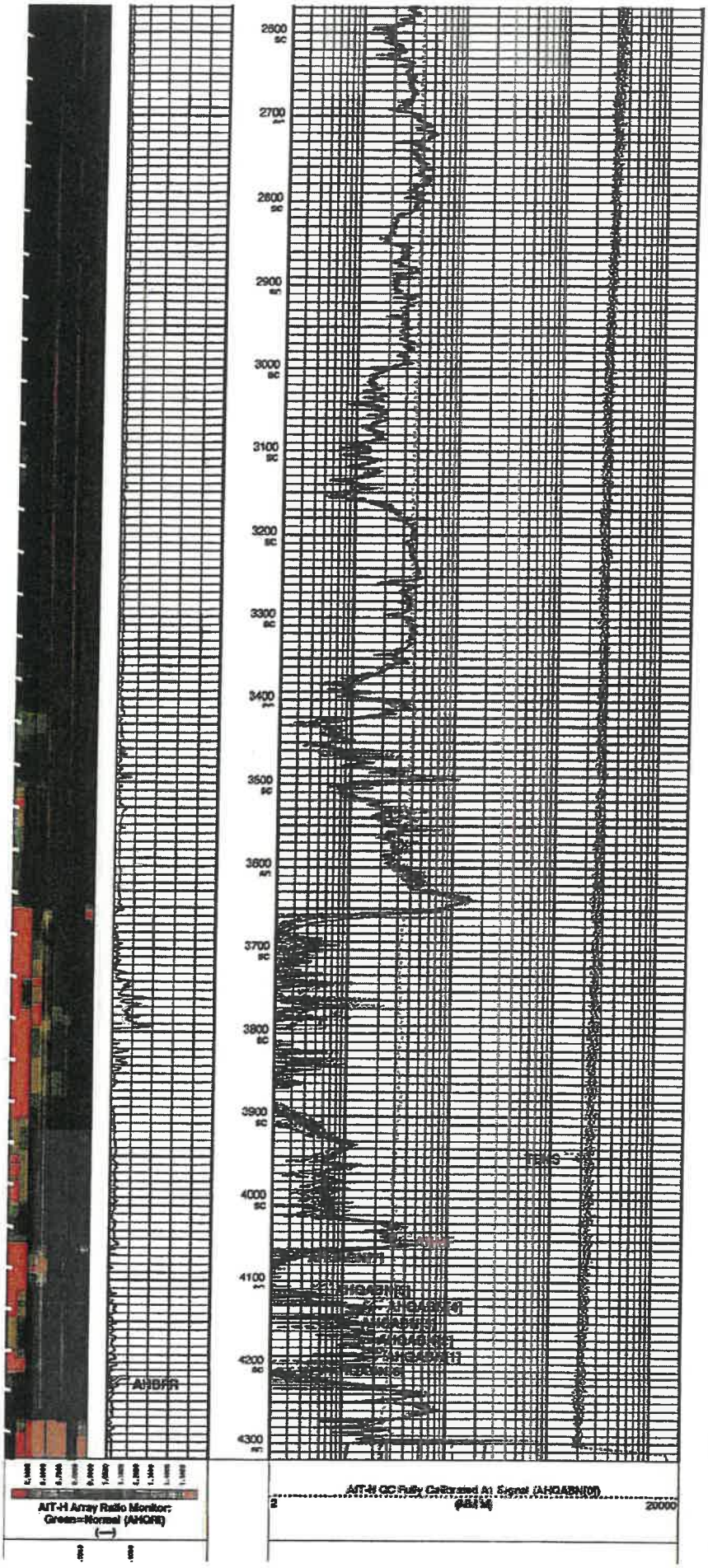

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Tool Electronics Monitor (from AHOES Channel): White=Normal, Blue=Warning, Red=Failure (AHCTI)

AIT-H BholeFocus Signal Ratio (AHBFR) 0 (---) 25

AIT-H QC Fully Calibrated A2 Signal (AHQABN(1)) 2 (MM/M) 20000

AIT-H QC Fully Calibrated A3 Signal (AHQABN(2)) 2 (MM/M) 20000

AIT-H QC Fully Calibrated A4 Signal (AHQABN(3)) 2 (MM/M) 20000

AIT-H QC Fully Calibrated A5 Signal (AHQABN(4)) 2 (MM/M) 20000

AIT-H QC Fully Calibrated A6 Signal (AHQABN(5)) 2 (MM/M) 20000

AIT-H QC Fully Calibrated A7 Signal (AHQABN(6)) 2 (MM/M) 20000

AIT-H QC Fully Calibrated A8 Signal (AHQABN(7)) 2 (MM/M) 20000

AIT-H Mud Full Cal (AHMF) 0.02 (OHMM) 200

Tension (TENS) 5000 (LBF) 1000

PIP SUMMARY

Time Mark Every 60 S

AIT-H Answer Product Processing Summary. Data taken with Tool # 215 (AHTNO)

***** Borehole Correction *****

Effective Tool Standoff computed. Borehole diameter and mud res. taken as input (see GCSE and GRSE parameters)

Tool is run in ECCENTERED mode with a tool stand-off of 0.50 IN. Bit Size is 7.88 IN.

***** Input Selections to AIT-H Answer Product Processing *****

Caliper (GCSE): CALI Mud Resistivity (GRSE): GEN_9 Temperature (GTSE): LINEAR_ESTIMATE Porosity (FPHI): DPHI

***** Other Parameters used by AIT-H Answer Product Processing *****

Mud Sample Resistivity (RMS)	-50000.000 OHMM	Mud Sample Temperature (MST)	-50000.000 DEGF
Surface Hole Temperature (SHT)	50.000 DEGF	Bottom Temperature (BHT)	100.000 DEGF
Total Depth (TD)	4300.000 FT		

***** AIT-H Answer Product Processing Control Parameters *****

(AHAPL): 2_BholeCorr_BasicLogs

(AHBHM): 2_ComputeStandoff (AHBLM): 6_One_Two_and_Four

(AHBPO): Standard_Processing

Parameters

DLIS Name	Description	Value	
AHBHM	Array Induction Borehole Correction Mode	2_ComputeStandoff	
AHBLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
AHCEN	Array Induction Tool Centering Flag (In Borehole)	Eccentered	
AHMRF	Array Induction Mud Resistivity Factor	1	
AHSTA	Array Induction Tool Standoff	0.5	IN
BHT	Bottom Hole Temperature (used in calculations)	100	DEGF
BS	Bit Size	7.875	IN
DFD	Drilling Fluid Density	0.00	LB/G
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	CALI	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
MST	Mud Sample Temperature	-50000.00	DEGF
SHT	Surface Hole Temperature	50	DEGF
TD	Total Depth	4300	FT

Format: AIT_LOC Vertical Scale: 1" per 100' Graphics File Created: 03-Apr-2001 12:35

OP System Version: 9C2-303

MCM

AIT-H	9C2-303	LDT-D	9C2-303
CNT-G	9C2-303	TNT-AA	9C2-303
SGT-L	9C2-303	GPIT-A/B	9C2-303
TCC-B	9C2-303		

Speed Corrected Depth Log

Indexed to Speed Corrected Depth in real-time

Output DLIS Files

DEFAULT AIT_LDL_CNL_TNT_022LUP FN:21 PRODUCER 03-Apr-2001 12:35

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Array Induction Tool - H Wellsite Calibration - Electronics Calibration Check - Thru Cal Mag. & Phase							
Before: 1-Apr-2001 8:21							
Thru Cal Magnitude - 0	0	N/A	0.6432	N/A	N/A	N/A	V
Thru Cal Magnitude - 1	0	N/A	1.321	N/A	N/A	N/A	V
Thru Cal Magnitude - 2	0	N/A	0.6359	N/A	N/A	N/A	V
Thru Cal Magnitude - 3	0	N/A	0.7403	N/A	N/A	N/A	V
Thru Cal Magnitude - 4	0	N/A	1.269	N/A	N/A	N/A	V
Thru Cal Magnitude - 5	0	N/A	2.007	N/A	N/A	N/A	V
Thru Cal Magnitude - 6	0	N/A	2.016	N/A	N/A	N/A	V
Thru Cal Magnitude - 7	0	N/A	1.438	N/A	N/A	N/A	V
Phase - 0	0	N/A	66.73	N/A	N/A	N/A	DEG
Phase - 1	0	N/A	65.90	N/A	N/A	N/A	DEG
Phase - 2	0	N/A	61.83	N/A	N/A	N/A	DEG
Phase - 3	0	N/A	61.05	N/A	N/A	N/A	DEG
Phase - 4	0	N/A	54.88	N/A	N/A	N/A	DEG
Phase - 5	0	N/A	52.80	N/A	N/A	N/A	DEG
Phase - 6	0	N/A	52.78	N/A	N/A	N/A	DEG
Phase - 7	0	N/A	48.34	N/A	N/A	N/A	DEG
Array Induction Tool - H Wellsite Calibration - Electronics Calibration Check - Auxiliary							
Before: 1-Apr-2001 8:31							
Array Induction SPA Plus	990.5	N/A	988.8	N/A	N/A	N/A	MV
Array Induction SPA Zero	0	N/A	-0.3994	N/A	N/A	N/A	MV

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Array Induction Temperature Zo	0	N/A	-0.0003479	N/A	N/A	N/A	V

Litho Density - D Wellsite Calibration - Background Measurement
Master: 3-Mar-2001 14:43 Before: 31-Mar-2001 19:20

LL Background	20.00	18.78	18.55	N/A	N/A	1.000	CPS
LU Background	78.00	69.46	69.59	N/A	N/A	1.000	CPS
LS Background	57.00	53.52	53.35	N/A	N/A	1.000	CPS
LITH Background	6.600	6.331	6.298	N/A	N/A	0.3000	CPS
SS1 Background	16.00	14.97	15.09	N/A	N/A	0.5000	CPS
SS2 Background	11.00	10.21	10.21	N/A	N/A	0.5000	CPS

Litho Density - D Wellsite Calibration - Tool Quality Control Information HV
Master: 3-Mar-2001 14:43 Before: 31-Mar-2001 19:20

LSHV Background	1500	1278	1278	N/A	N/A	N/A	V
SSHV Background	1500	1173	1174	N/A	N/A	N/A	V

Litho Density - D Wellsite Calibration - Detectors Resolution From BKG Measurements
Master: 3-Mar-2001 14:43 Before: 31-Mar-2001 19:20

LS Resolution Background	8.000	8.530	8.458	N/A	N/A	N/A	
SS Resolution Background	8.000	8.546	8.557	N/A	N/A	N/A	

Litho Density - D Wellsite Calibration - Caliper Calibration
Before: 31-Mar-2001 19:27

Caliper Small Ring	8.000	N/A	8.764	N/A	N/A	N/A	IN
Caliper Large Ring	12.00	N/A	12.91	N/A	N/A	N/A	IN

Compensated Neutron - G Wellsite Calibration - Zero Measurement
Master: 15-Feb-2001 9:12 Before: 31-Mar-2001 19:22

CNTC Background	1.000	0	0	N/A	N/A	N/A	CPS
CFTC Background	0	0	0	N/A	N/A	N/A	CPS
CNEC Background	1.000	0	0	N/A	N/A	N/A	CPS
CFEC Background	0	0	0	N/A	N/A	N/A	CPS

Compensated Neutron - G Wellsite Calibration - Jig Measurement
Master: 15-Feb-2001 9:51 Before: 31-Mar-2001 19:45

CNTC Jig	2931	2931	2946	N/A	N/A	N/A	CPS
CFTC Jig	1479	1479	1463	N/A	N/A	N/A	CPS
CNTC/CFTC (Jig)	1.984	1.984	2.010	N/A	N/A	N/A	
CNEC Jig	685.0	685.0	682.0	N/A	N/A	N/A	CPS
CFEC Jig	675.8	675.8	683.1	N/A	N/A	N/A	CPS
CNEC/CFEC (Jig)	0.9641	0.9641	0.9087	N/A	N/A	N/A	

General Purpose Inclinometer Wellsite Calibration - CROUZET ACCELEROMETER FROM HAS BEEN READ CORRECTLY
Before: 31-Mar-2001 19:20

TEMPERATURE REFERENCE :	N/A	N/A	68	N/A	N/A	N/A	DEGF
YEAR OF CALIBRATION :	N/A	N/A	94	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	7	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	450	N/A	N/A	N/A	

General Purpose Inclinometer Wellsite Calibration - EPS MAGNETOMETER FROM HAS BEEN READ CORRECTLY
Before: 31-Mar-2001 19:20

TEMPERATURE REFERENCE :	N/A	N/A	212	N/A	N/A	N/A	DEGF
YEAR OF CALIBRATION :	N/A	N/A	88	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	10	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	79	N/A	N/A	N/A	

The CNT Master Calibration Was Done With The Following Parameters :

NCT-B Water Temperature	65.0	DEGF.
Thermal Housing Size	3.375	IN.
Epithermal Housing Size	3.375	IN.

Array Induction Tool - H / Equipment Identification

Primary Equipment:

Rm/SP Bottom Hose	AHRM - A
Array Induction Sonde	AHIS - BA

Auxiliary Equipment:

Array Induction Tool - H Wellsite Calibration
Electronics Calibration Check - Thru Cal Mag. & Phase

Kit	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Phase DEG	Nominal
0	Before	0.9435		0.9993	69.73		71.00
1	Before	1.321		1.279	69.80		70.00
2	Before	0.6830		0.6220	61.83		63.00
3	Before	0.7435		0.7040	61.08		63.00
4	Before	1.999		1.927	54.69		56.00
5	Before	2.007		1.956	52.80		57.00
6	Before	2.016		1.958	62.76		57.00
7	Before	1.438		1.415	48.94		53.00
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Max -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)

Before 1-Apr-2001 8:21

Array Induction Tool - H Wellsite Calibration
Electronics Calibration Check - Auxiliary

Phase	Array Induction SPA Plus MV	Value	Phase	Array Induction SPA Zero MV	Value
Before		996.6	Before		-0.3694
	941.0 (Minimum) 990.6 (Nominal) 1040 (Maximum)			-60.00 (Minimum) 0 (Nominal) 60.00 (Maximum)	

Phase	Array Induction Temperature Plus V	Value	Phase	Array Induction Temperature Zero V	Value
Before		0.9224	Before		-0.0003479
	0.9700 (Minimum) 0.9150 (Nominal) 0.9600 (Maximum)			-0.05000 (Minimum) 0 (Nominal) 0.05000 (Maximum)	

Before 1-Apr-2001 8:31

Litho Density - D / Equipment Identification

Primary Equipment:

Nuclear Service Cartridge	NSC - E
Powered Gamma Detector	PGD - G
Gamma Source Radioactive	GSR - J

Auxiliary Equipment:

Density Resistivity Sonde	DRS - C
Electronics Cartridge Housing	ECH - MKA
Powered Detector Housing	PDH - L

Litho Density - D Wellsite Calibration
Background Measurement

Phase	LL Background CPS	Value	Phase	LU Background CPS	Value	Phase	LS Background CPS	Value
Master		18.78	Master		69.46	Master		53.52
Before		18.55	Before		69.59	Before		53.35
	15.00 (Minimum) 20.00 (Nominal) 25.00 (Maximum)			58.00 (Minimum) 78.00 (Nominal) 94.00 (Maximum)			43.00 (Minimum) 57.00 (Nominal) 72.00 (Maximum)	

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Phase	LS1 Background CPS	Value	Phase	SS1 Background CPS	Value	Phase	SS2 Background CPS	Value
Master		5.531	Master		14.97	Master		10.21
Before		5.238	Before		15.03	Before		10.21
4.000 (Minimum)	5.369 (Nominal)	7.030 (Maximum)	10.20 (Minimum)	14.50 (Nominal)	19.69 (Maximum)	8.000 (Minimum)	11.00 (Nominal)	13.50 (Maximum)

Master: 3-Mar-2001 14:43 Before: 31-Mar-2001 19:30

Litho Density - D Website Calibration

Detectors Resolution From SGS Measurements

Phase	LS Resolution Background	Value	Phase	SS Resolution Background	Value
Master		5.530	Master		8.540
Before		5.438	Before		8.537
5.000 (Minimum)	5.000 (Nominal)	11.00 (Maximum)	5.000 (Minimum)	8.000 (Nominal)	11.00 (Maximum)

Master: 3-Mar-2001 14:43 Before: 31-Mar-2001 19:30

Compensated Neutron - G / Equipment Identification

Primary Equipment:

Compensated Neutron Cartridge	CNC - GA	
Neutron Logging Source	NLS - KL	
Neutron Source Radioactive	NSR - F	3118
Compensated Neutron Box	CNB - AS	3185
Neutron Detector without Alpha Source	CND - NA	184
Compensated Neutron Box	CNB - AS	3185

Auxiliary Equipment:

Compensated Neutron Housing	CNH - G
Neutron Calibration Tank	NCT - B

Compensated Neutron - G Website Calibration

Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		0	Master		0
Before		0	Before		0
-0.010000 (Minimum)	1.000 (Nominal)	5.000 (Maximum)	-0.010000 (Minimum)	0 (Nominal)	5.000 (Maximum)

Phase	CNEC Background CPS	Value	Phase	CFEC Background CPS	Value
Master		0	Master		0
Before		0	Before		0
-0.010000 (Minimum)	1.000 (Nominal)	5.000 (Maximum)	-0.010000 (Minimum)	0 (Nominal)	5.000 (Maximum)

Master: 15-Feb-2001 9:12 Before: 31-Mar-2001 19:22

Compensated Neutron - G Website Calibration

Jig Measurement

Phase	CNTC Jig CPS	Value	Phase	CFTC Jig CPS	Value	Phase	CNTC/CFTC Log	Value
Master		2931	Master		1478	Master		1.984
Before		2945	Before		1486	Before		2.010
2714 (Minimum)	2935 (Nominal)	3077 (Maximum)	1400 (Minimum)	1479 (Nominal)	1591 (Maximum)	1.954 (Minimum)	1.984 (Nominal)	2.024 (Maximum)

Phase	CNEC Jig CPS	Value	Phase	CFEC Jig CPS	Value	Phase	CNEC/CFEC Log	Value
Master		665.0	Master		675.0	Master		0.9841
Before		682.0	Before		683.1	Before		0.9841
631.7 (Minimum)	665.0 (Nominal)	699.2 (Maximum)	642.0 (Minimum)	675.0 (Nominal)	709.8 (Maximum)	0.9441 (Minimum)	1.0441 (Nominal)	1.024 (Maximum)

Master: 15-Feb-2001 9:34 Before: 31-Mar-2001 19:46

General Purpose Inclinometer / Equipment Identification

Primary Equipment: GPIT Cartridge - A	GPIC - A
Auxiliary Equipment: GPIT Housing	GPIH - A

COMPANY	MEGAENERGY OPERATING INC	BOTTOM LOG INTERVAL	4292 ft
		SCHLUMBERGER DEPTH	4388 ft
WELL	NESTOR B-1	DEPTH DRILLER	4390 ft
FIELD	LEADMINE	KELLY BUSHING	1650 ft
COUNTY	TUCKER	DRILL FLOOR	1650 ft
STATE	WV	GROUND LEVEL	1650 ft

Schlumberger

ARRAY INDUCTION
GAMMA RAY

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Section 7

Area of Review

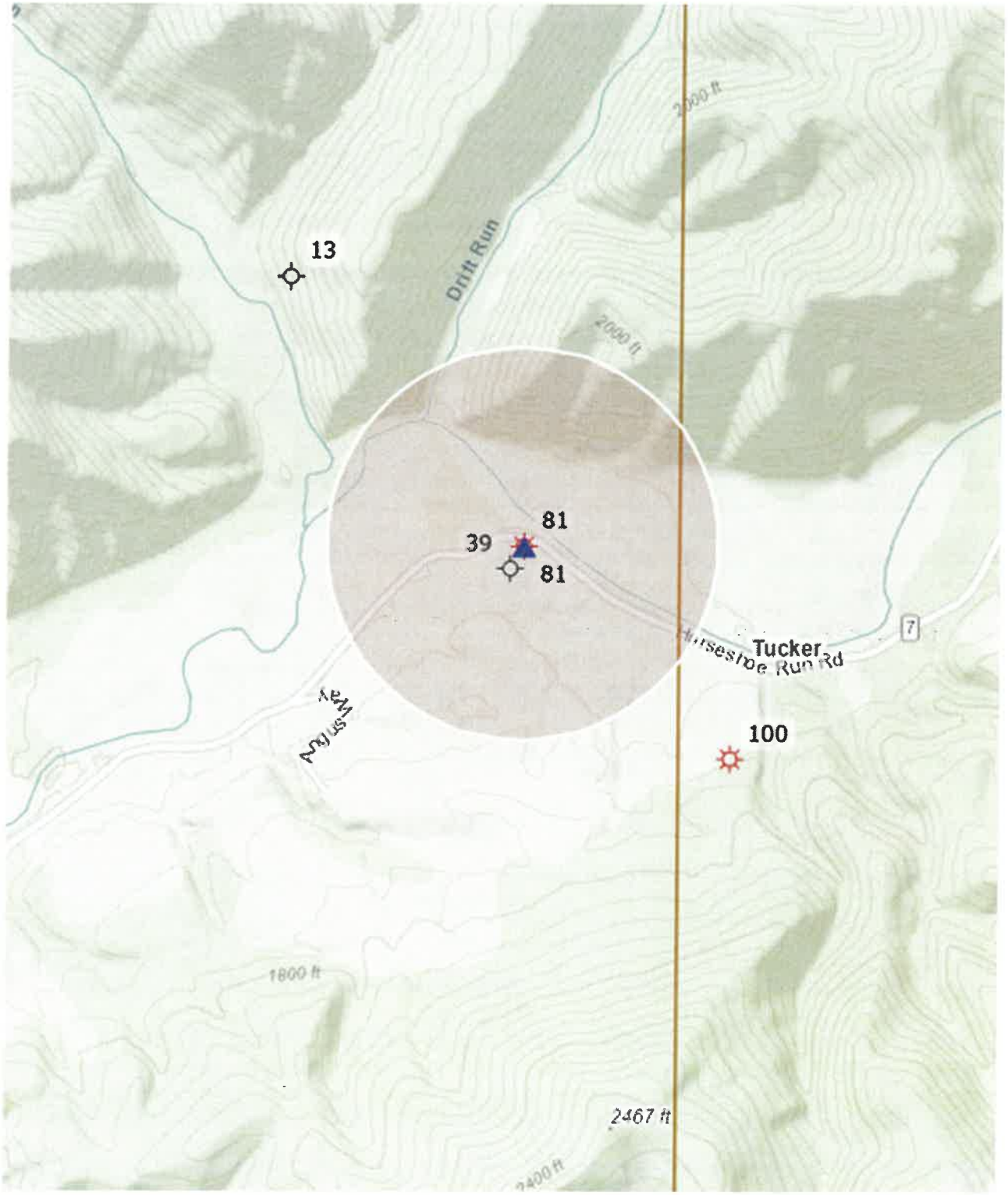
PILLAR ENERGY

UIC Permit 2D09300081 Renewal

Section 7 – Area of Review

1. AOR ¼ mile radius
2. AOR 1 mile boundary
   Appendix C Wells Within the Area of Review
   4709300081 WR-35
   4709300039 WR-38
   4709300100 WR-35
   Appendix D Public Service District Affidavit – NOT APPLICABLE
3. Depth to the bottom of all USDWs
4. Domestic water wells and springs
   Appendix E Water Sources – The Terry Hiles water well that was tested for the last permit renewal is no longer in use. The residents are connected to the local PSD. This information was verified on 12/04/24.
5. Sample collection and analysis
6. Correction Action – There is no immediate threat of fluid migration from the subject disposal well.
7. Appendix F Area Permit Wells – NOT APPLICABLE

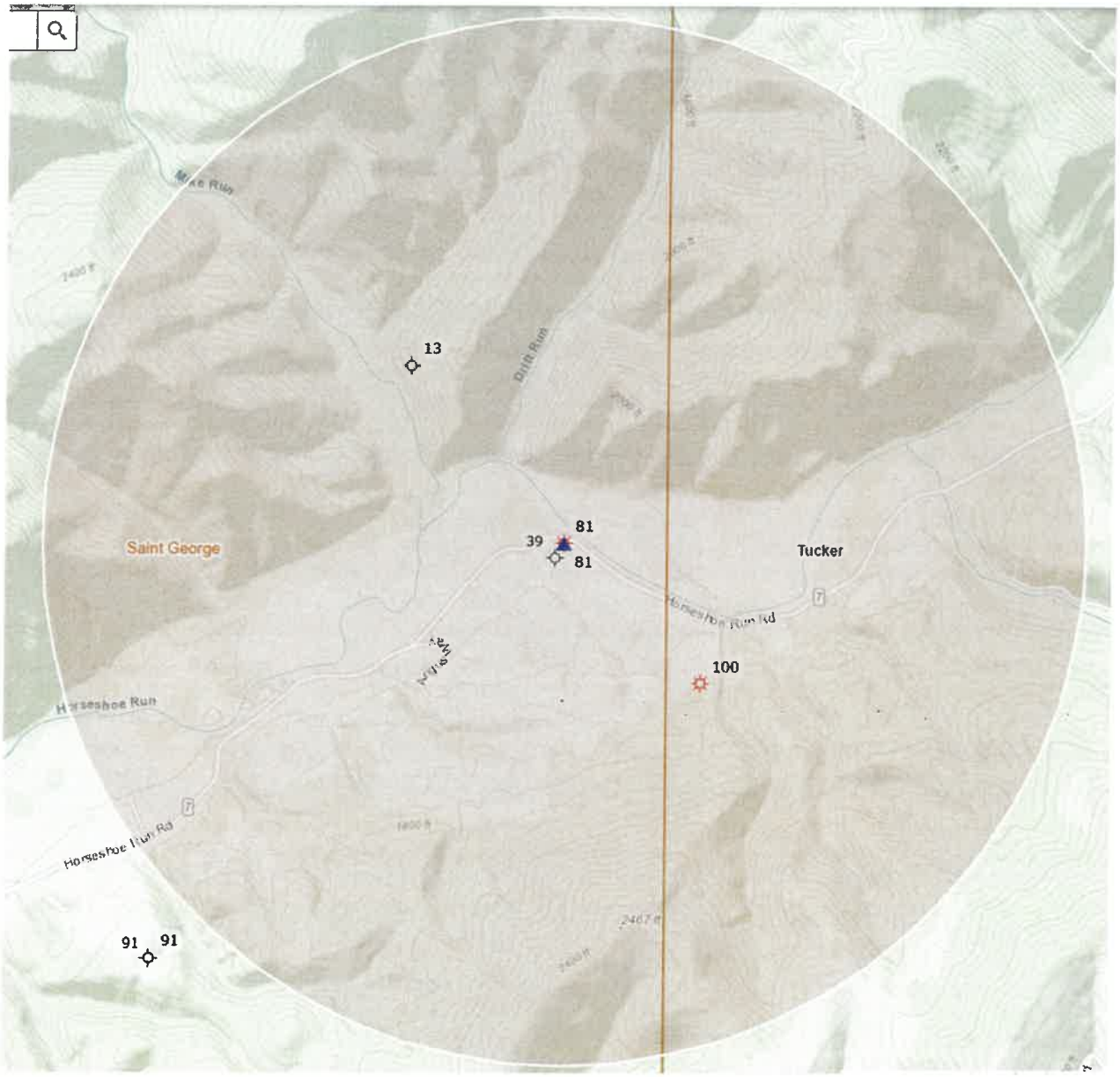
Pillar Energy, LLC
UIC Permit – 2D09300081
Nestor B-1 Area of Review (1/4 Mile AOR)



Pillar Energy, LLC

UIC Permit – 2D09300081

Nestor B-1 Area of Review (1 mile boundary)



APPENDIX C

Wells within the Area of Review

API #	Well Type	Well Status (Active, Abandoned, Shut-in, Plugged)	Northing (UTM NAD 83 Meters)	Easting (UTM NAD 83 Meters)	Penetrate Injection Zone (Y or N)	Penetrate Confining Zone (Y or N)	Total Vertical Depth	Surface Elevation
4709300081	Disposal Well	Active	4336179.5	618482.9	Y	Y	4304	1650
4709300039	Dry Hole	Plugged	4336133.6	618455.6	Y	Y	6836	1652
4709300100	Producing	Active	4335751.0	618917.8	Y	Y	6712	1710

Make as many copies as necessary and include page numbers as appropriate.

Promoting a healthy environment.

dep

4709300081
Nestor B-1

WR-35
Rev (5-01)

DATE: August 29, 2005
API #: 47-093-00081

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Nestor, Marshall A. Operator Well No.: Nestor B-1

LOCATION: Elevation: 1650' Quadrangle: Saint George 7.5'

District: Saint George County: Tucker
Latitude: 10 Feet South of 39 Deg. 10 Min. 0 Sec.
Longitude 1100 Feet West of -79 Deg. 37 Min. 30 Sec.

Company: MegaEnergy Operating, Inc.

Address: 9685 E. Mineral Cir, Ste 270
Englewood, CO 80112
Agent: Carry Ransom
Inspector: Craig Duckworth
Date Permit Issued: 3-14-2001
Date Well Work Commenced: 3-22-2001
Date Well Work Completed: 5-11-2001
Verbal Plugging: N/A
Date Permission granted on: N/A
Rotary Rig: SW Jack Rig #7
Total Depth (feet): 4304
Fresh Water Depth (ft.): 110

Salt Water Depth (ft.):

Is coal being mined in area (N/Y)? N
Coal Depths (ft.):

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
	20" csg	10.2'	10.2'	
	16" csg	35'	35'	Sanded in
	11-3/4" H40	206'	206'	200 sxs
	8-5/8" J55	1221.1'	1221.1'	280 sxs
	4-1/2" N80	4240'	4240'	280 sxs

OPEN FLOW DATA

Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure 0 psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

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NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: _____
By: J. Scott Hornafius
Date: August 29, 2005

7UL 0081

4709300039

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OIL & GAS DIVISION
DEPT. OF MINES

FORM OG-8

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS WELLS DIVISION

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE MADE IN TRIPLICATE, ONE COPY MAILED TO THE DEPARTMENT, ONE COPY TO BE RETAINED BY THE WELL OPERATOR AND THE THIRD COPY (AND EXTRA COPIES IF REQUIRED) SHOULD BE MAILED TO EACH COAL OPERATOR AT THEIR RESPECTIVE ADDRESSES.

Gerald Nestor & Opal Nestor H/W
COAL ~~SURFACE~~ OWNER & Surface
RFD. #2, Parsons, W. Va.
Texas Eastern ~~Gas~~ Transmission Corp.
1515 Four Gateway Center
~~ADDRESS OF OWNER~~
Pittsburg, Pa. 15222
~~ADDRESS~~
U. S. Geological Survey
~~ADDRESS OF OWNER~~
3227 GSA Bldg., Washington, D.C. 20242
~~ADDRESS~~
N. Mae Hile & Albert S. Hile H/W
RFD #2, Parsons, W. Va. (See attached)

Cities Service Oil Company
NAME OF WELL OPERATOR
Box 873, Charleston, W. Va. 25323
COMPLETE ADDRESS
May 11, 19 72
WELL AND LOCATION
St. George District
Tucker County
Well. No. "A" #1, GW-1707
Gerald Nestor Farm

STATE INSPECTOR SUPERVISING PLUGGING Paul Thomas

AFFIDAVIT

STATE OF WEST VIRGINIA,
County of Tucker } ss:

_____ and _____
being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by _____, well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the 12 day of May, 19 72, and that the well was plugged and filled in the following manner:

SAND OR ZONE RECORD	FILLING MATERIAL	PLUGS USED	CASING	
FORMATION	Filled hole w/6% Bentonite Mud	SIZE & KIND	CSG PULLED	CSG LEFT IN
Tuscarora	Cement 6786-6450'	Cement	4200'	700' - 9-5/8"
Heldeberg	Cement 4904-4884'	Cement		
Heldeberg	Cement 4154-4114'	Cement		1263' -13-3/8"
Devonian	Cement 1273-1253'	Cement		105' - 20"
Devonian	80' to Surface	Cement		12 - 26"

COAL SEAMS		DESCRIPTION OF MONUMENT
(NAME)		Cities Service Oil Company
(NAME)		Nestor "A" #1
(NAME)		5/17/72.
(NAME)		

and that the work of plugging and filling said well was completed on the 17 day of May, 19 72.

And further deponents saith not.

Roger Schmidt
Robert Morgan

Sworn to and subscribed before me this 19 day of May, 19 72

Hugh Spencer
Notary Public.

My commission expires:
September 6, 1972

Permit No. Tuc-39-P

4709300100

WR-35
Rev (5-01)

DATE:
API # : 47-093-00100

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Marshall Nestor Operator Well No.: Nestor C-1

LOCATION: Elevation: 1710' Quadrangle: Leadmine

District: St. George County: Tucker
Latitude: 1,400 Feet South of 39 Deg. 10 Min. 00 Sec.
Longitude 11,450 Feet West of 79 Deg. 35 Min. 00 Sec.

Company: MegaEnergy Operating, Inc.

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 9085 E. Mineral Cir., Suite 270	29-1/2"	25'	25'	CTS
Englewood, CO 80112	24"	60'	60'	CTS
Agent: Paul Smith	16"	194.5'	194.5'	CTS 350 sx cls A
Inspector: Craig Duckworth	11-3/4"	1254.33'	1254.33'	CTS 507 sx
Date Permit Issued: 12/5/2005	8-5/8"	4803.91'	4803.91'	460 sx cls A
Date Well Work Commenced: 1/20/2006 (spud)	5-1/2"	6590.17'	6590.17'	145 sx cls A
Date Well Work Completed: 2/21/2006 (TD)				
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary Rig: Union Drilling Rig #21				
Total Depth (feet): 6,712'				
Fresh Water Depth (ft.): 30', 50'				
Salt Water Depth (ft.): None				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				

OPEN FLOW DATA

Producing formation Medina Pay zone depth (ft) 6,666'
Gas: Initial open flow 500 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 500 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 8 Hours
Static rock Pressure 2250 psig (surface pressure) after 48 Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

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WV Department of
Environmental Protection

Signed: _____
By: J. Scott Hornetivs
Date: 8/15/2007

Not Applicable

APPENDIX D

Public Service District Affidavit

Underground Injection Control Permit applicants must identify all publically recorded drinking water sources within a one (1) mile radius of the proposed injection well facility. If no drinking water sources are present within this radius a written affidavit shall be supplied by the local Public Service District (PSD) as ample verification.

"I certify under penalty of law that (state name of business)

_____

has verified with the public service district (state name of PSD)

_____

that there are no such publically recorded sources.

_____

(Signature of Authorized Representative)

Sworn and subscribed to before me this _____ day of _____, 20_____.

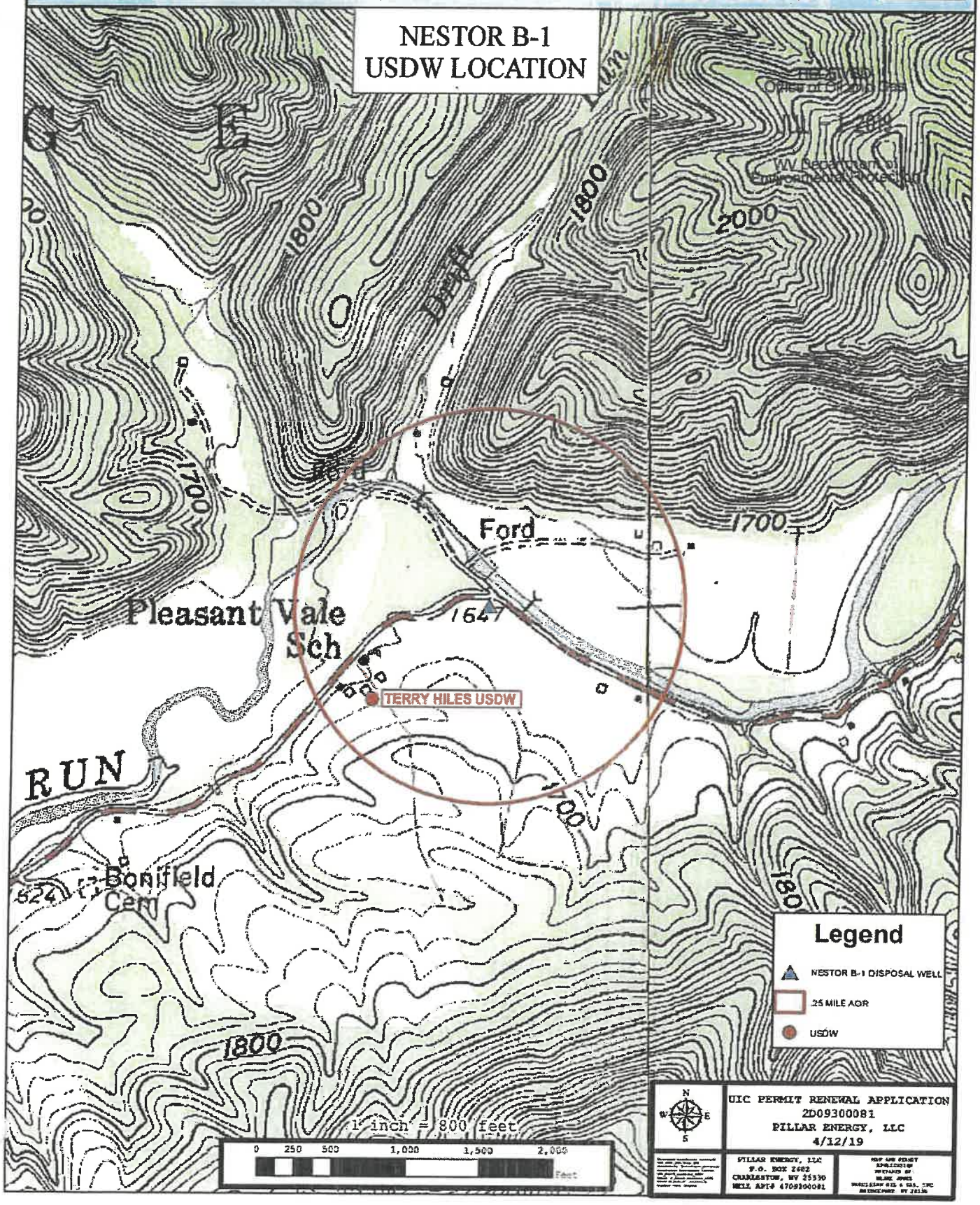
_____, my commission expires _____

(Notary Signature)

_____.

PILLAR ENERGY, LLC UIC PERMIT - 2D09300081

Figure No. 6



(4/25)

No Sample
Well not in use

APPENDIX E
Water Sources

Operator: Pillar Energy LLC Year 2024 UIC Permit #UIC2D09300081

		Source # 1	Source # ___	Source # ___	Source # ___
Water Source Name		Terry Hiles			
Northing		39.1644			
Easting		-79.6325			
Parameter	Units	WATER WELL IS NO LONGER IN USE			
TPH - GRO	mg/L				
TPH - DRO	mg/L				
TPH - ORO	mg/L				
BTEX	mg/L				
Chloride	mg/L				
Sodium	mg/L				
Total Dissolved Solids (TDS)	mg/L				
Aluminum	mg/L				
Arsenic	mg/L				
Barium	mg/L				
Iron	mg/L				
Manganese	mg/L				
pH	SU				
Calcium	mg/L				
Sulfate	mg/L				
MBAS	mg/L				
Dissolved Methane	mg/L				
Dissolved Ethane	mg/L				
Dissolved Butane	mg/L				
Dissolved Propane	mg/L				
Bacteria (Total Coliform)	c/100mL				

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Not Applicable

APPENDIX F

Area Permit Wells

API #	Well Type (Injection, Production, Observation, Monitoring)	Well Status (Active, Abandoned, Shut-in, Plugged)	Northing (UTM NAD 83 Meters)	Easting (UTM NAD 83 Meters)

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Section 8

Geological Data Injection and Confining Zones

PILLAR ENERGY

UIC Permit 2D09300081 Renewal

Section 8 – Geological Data on Injection and Confining Zones

Structural Contouring Map

Isopach Map

West Virginia Nomenclature

Geophysical logs from the Nestor B-1 well, showing both the confining zones and injection zone have been identified in Section 6.

Confining Layer Description

The confining layer for the Nestor B-1 Disposal well is the very dense and impermeable Devonian Onondaga Limestone. This impermeable limestone layer of rock directly overlying the Huntersville Chert will prevent any upward migration of injected fluid out of the injection zone. A shale layer at the base of the Huntersville Chert serves as the underlying barrier to downward migration. Additionally, the Purcell Limestone and Marcellus Shale, which overlay the confining Onondaga Limestone, are very thick and non-permeable. This would also prevent any upward migration of fluid in the event that the Onondaga Limestone formation would fracture.

Injection Layer Description

The injection layer for the Nestor B-1 Disposal well is the permeable Devonian Huntersville Chert Formation. The injection zone, between 3528' and 3548', is 20' thick and highly fractured. The porosity is 3-5% and permeability are estimated to be .02 millidarcies.

Earthquake Date

As shown in the attached, there have been no recorded earthquakes in Tucker County, WV as of 02/17/2023, where the Nestor B-1 well is located. As the Nestor B-1 is a non-commercial disposal well, only servicing approximately 12 wells, the likelihood of the injection process causing a seismic event is highly unlikely.

Figure No. 7

STRUCTURAL CONTOUR MAP ON THE TOP OF THE HUNTERSVILLE CHERT INJECTION ZONE

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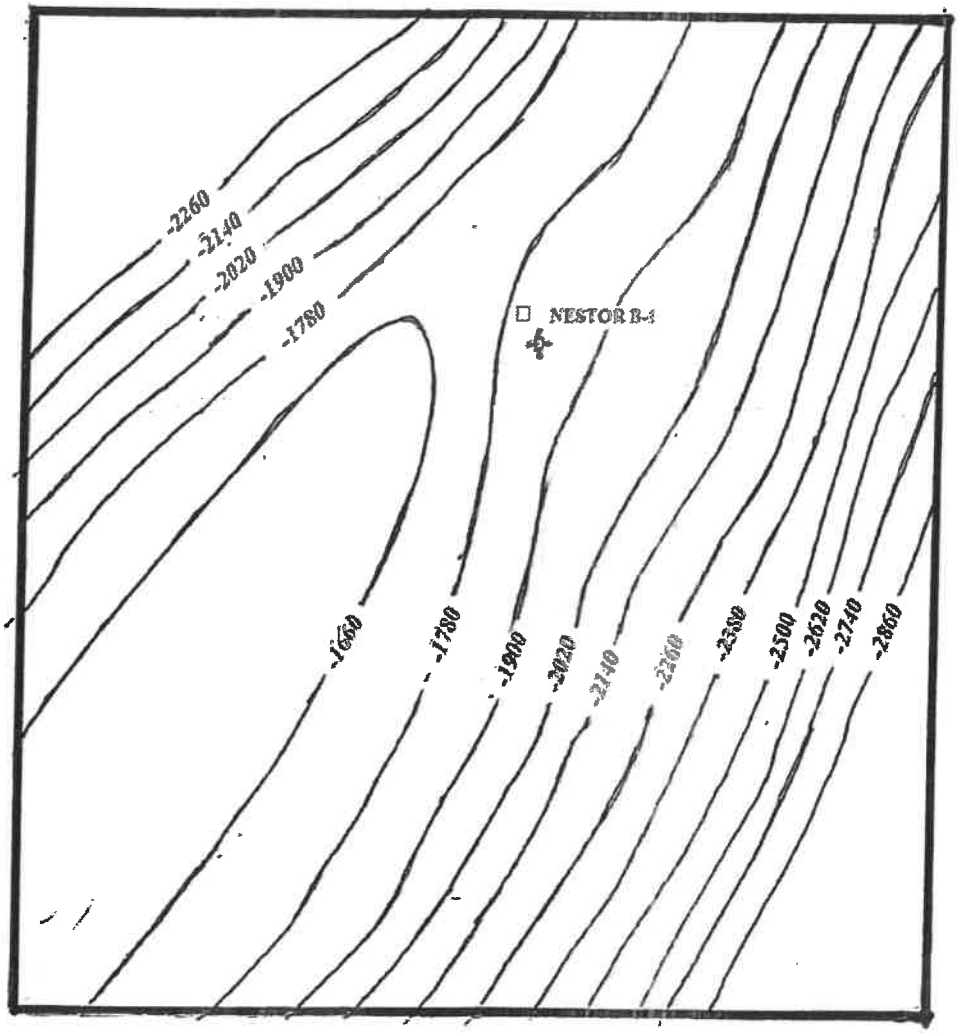

120 FOOT CONTOUR INTERVAL
SCALE 1:22189
1 INCH = 1849 FEET

☐ ***INDICATES BOTTOM HOLE LOCATION OF NESTOR B-1 AT THE HUNTERSVILLE CHERT HORIZON.***

Figure No. 8

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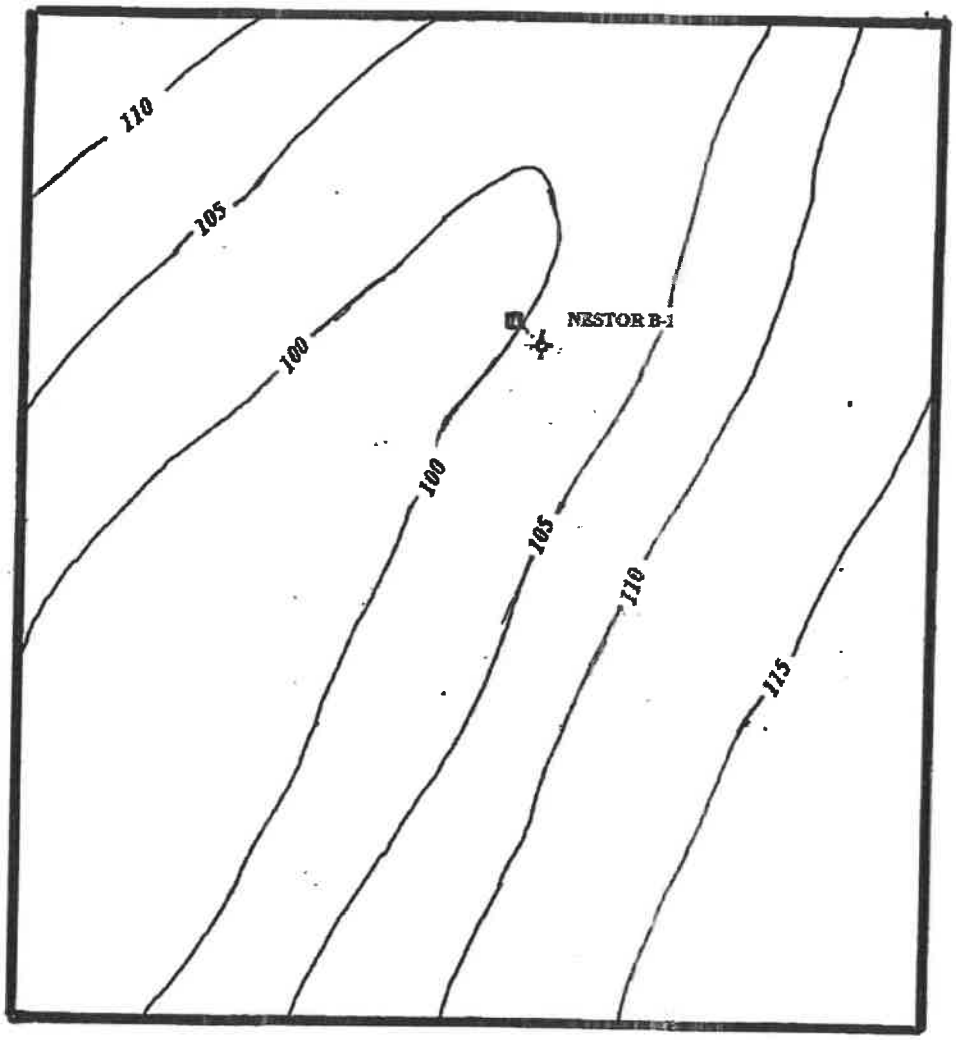
ISOPACH MAP OF THE HUNTERSVILLE CHERT INJECTION ZONE



5 FOOT CONTOUR INTERVAL
SCALE 1:22189
1 INCH = 1849 FEET

□ ***INDICATES BOTTOM HOLE LOCATION OF NESTOR B-1 AT THE HUNTERSVILLE CHERT HORIZON.***

West Virginia Nomenclature

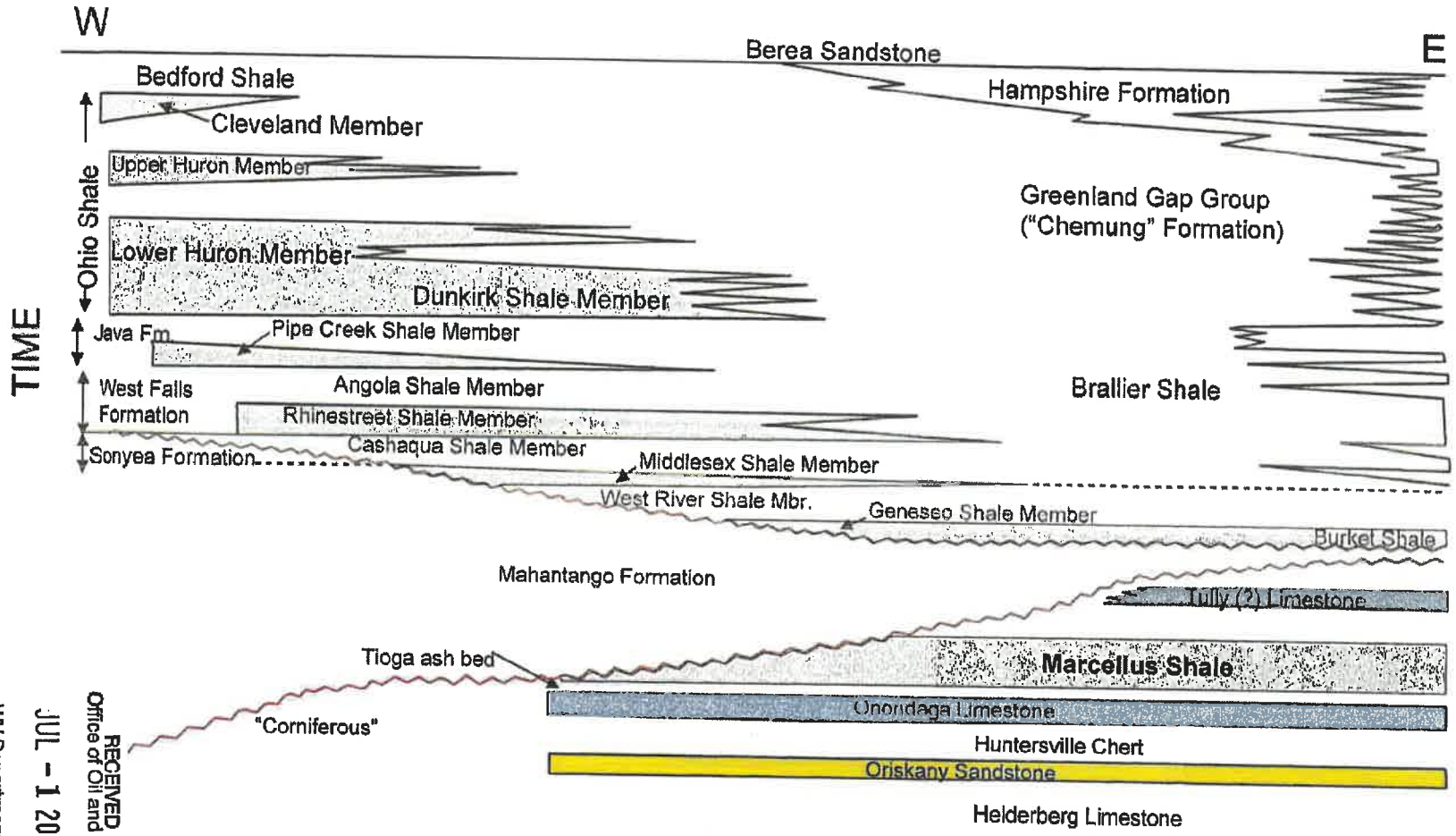


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Figure No. 9

Earthquake Epicenters of West Virginia

1824 through 2023

Publications Policy:

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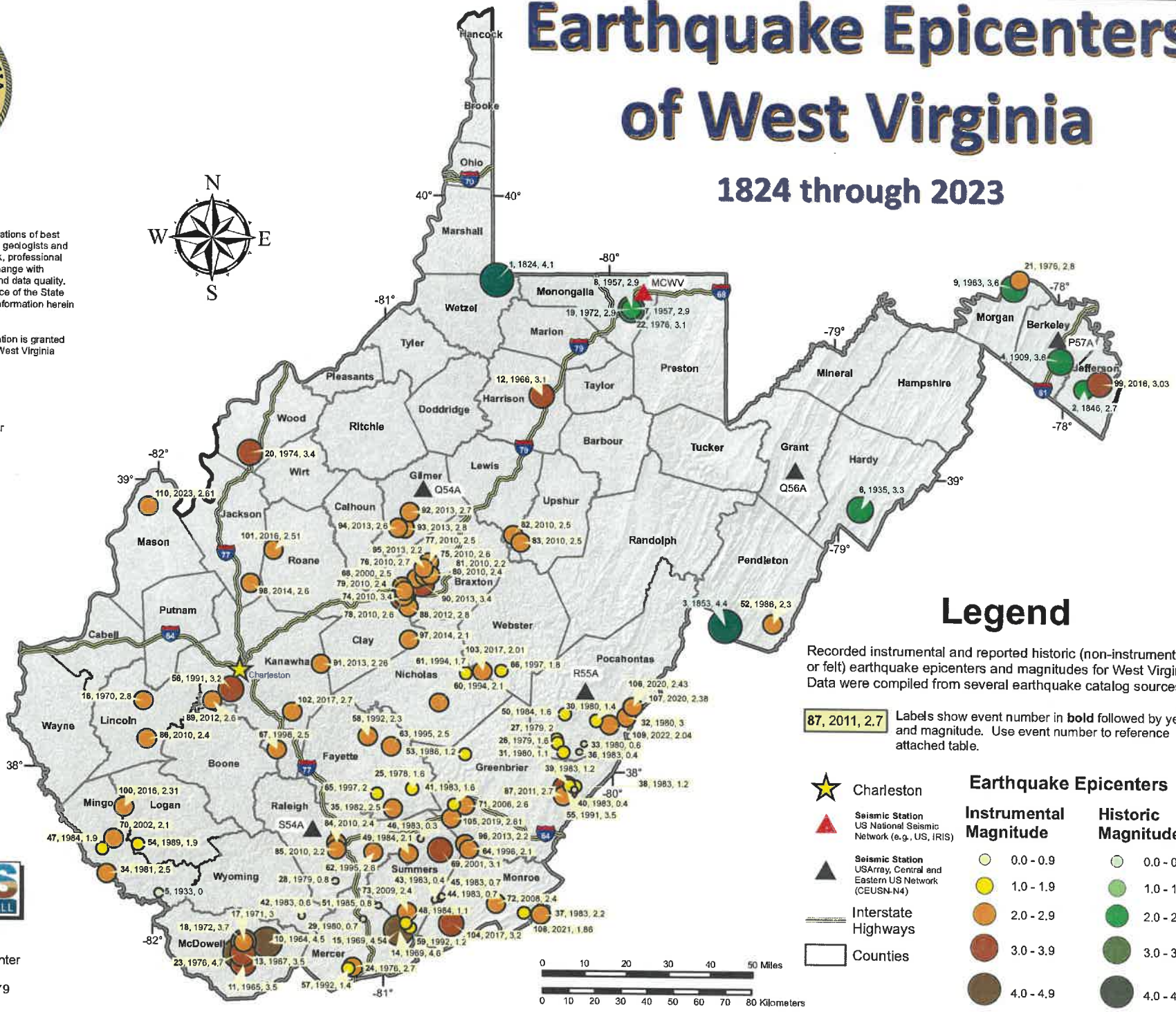
Map Date: 3/10/2023
Earthquake Data: 2/17/2023
Projection: Transverse Mercator
Horizontal Datum: NAD 1983
Map scale for full 8.5" x 11" display: 1:2,000,000



Legend

Recorded instrumental and reported historic (non-instrumental or felt) earthquake epicenters and magnitudes for West Virginia. Data were compiled from several earthquake catalog sources.

87, 2011, 2.7 Labels show event number in **bold** followed by year and magnitude. Use event number to reference attached table.

Charleston

Seismic Station US National Seismic Network (e.g., US, IRIS)

Seismic Station USArray, Central and Eastern US Network (CEUSN-N4)

Interstate Highways

Counties

Earthquake Epicenters

Instrumental Magnitude	Historic Magnitude
0.0 - 0.9	0.0 - 0.9
1.0 - 1.9	1.0 - 1.9
2.0 - 2.9	2.0 - 2.9
3.0 - 3.9	3.0 - 3.9
4.0 - 4.9	4.0 - 4.9

WVGES GEOLOGY UNDERLIES IT ALL

West Virginia Geological and Economic Survey
Mont Chateau Research Center
1 Mont Chateau Road
Morgantown, WV 26508-8079
Phone: (304) 594-2331
www.wvgs.wvnet.edu

Map Num	Time (event ID)	County	UTC Year	UTC Month	UTC Day	UTC Hour	UTC Minute	UTC Seconds	Latitude	Longitude	Magnitude	Magnitude Type	Recorded	MMI	Event URL
1	1824-07-15T16:20:00	Wetzel	1824	07	15	16	20	00	39.70000	-80.50000	4.1	mb	Historic	4.0	<NULL>
2	1846-10-19T02:00:00	Jefferson	1846	10	19	02	00	00	39.30000	-77.90000	2.7	<NULL>	Historic	3	<NULL>
3	1853-05-02T14:20:00	Pendleton	1853	05	02	14	20	00	38.50000	-79.50000	4.4	<NULL>	Historic	5	<NULL>
4	1909-04-02T07:25:00	Berkeley	1909	04	02	07	25	00	39.40000	-78.00000	3.6	mb	Historic	5	<NULL>
5	1933-06-15T01:14:36.8	Mingo	1933	06	15	01	14	36.8	37.56800	-81.97300	0.0	<NULL>	Historic	<NULL>	<NULL>
6	1935-11-01T08:30:00	Hardy	1935	11	01	08	30	00	38.90000	-78.90000	3.3	<NULL>	Historic	4	<NULL>
7	1957-03-07T21:05:09	Monongalia	1957	03	07	21	05	09	39.60000	-79.90000	2.9	mb	Historic	3	<NULL>
8	1957-03-13T21:00:41	Monongalia	1957	03	13	21	00	41	39.60000	-79.90000	2.9	mb	Historic	3	<NULL>
9	1963-10-10T00:00:00	Morgan	1963	10	10	00	00	00	39.65500	-78.19700	3.6	<NULL>	Historic	<NULL>	<NULL>
10	1964-11-25T02:50:05	McDowell	1964	11	25	02	50	05	37.40000	-81.50000	4.5	mb	Instrumental	<NULL>	<NULL>
11	1965-04-26T15:26:19.7	McDowell	1965	04	26	15	26	19.7	37.32500	-81.60200	3.5	mblg	Instrumental	<NULL>	<NULL>
12	1966-09-28T00:00:00	Harrison	1966	09	28	00	00	00	39.30000	-80.30000	3.1	<NULL>	Instrumental	4	<NULL>
13	1967-12-16T12:23:33.4	McDowell	1967	12	16	12	23	33.4	37.36000	-81.60400	3.5	mb	Instrumental	<NULL>	<NULL>
14	1969-11-20T01:00:09.3	Mercer	1969	11	20	01	00	09.3	37.44900	-80.93200	4.6	mblg	Instrumental	6	<NULL>
15	1969-11-20T01:00:10.700Z	Mercer	1969	11	20	01	00	10.700	37.449000	-80.932000	4.54	mw	Instrumental	5	https://earthquake.usgs.gov/earthquakes/eventpage/ushis3082/
16	1970-08-11T06:14:25.5	Lincoln	1970	08	11	06	14	25.5	38.23000	-82.05000	2.8	mblg	Instrumental	4	<NULL>
17	1971-04-01T05:05:11	McDowell	1971	04	01	05	05	11	37.40000	-81.60000	3.0	mb	Instrumental	0	<NULL>
18	1972-01-09T23:24:29	McDowell	1972	01	09	23	24	29	37.40000	-81.60000	3.7	mblg	Instrumental	0	<NULL>
19	1972-09-12T15:17:13.7	Monongalia	1972	09	12	15	17	13.7	39.60000	-79.90000	2.9	mb	Historic	3	<NULL>
20	1974-10-20T15:13:55.100Z	Wood	1974	10	20	15	13	55.100	39.095000	-81.593000	3.40	lg	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/usp00008g9/
21	1976-01-30T18:58:49.800Z	Morgan	1976	01	30	18	58	49.800	39.683000	-78.170000	2.80	lg	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/usp0000eu9/
22	1976-05-06T18:46:08.1	Monongalia	1976	05	06	18	46	08.1	39.60000	-79.90000	3.1	mb	Historic	4	<NULL>
23	1976-06-19T05:54:13.900Z	McDowell	1976	06	19	05	54	13.900	37.362000	-81.624000	4.70	mb	Instrumental	6	https://earthquake.usgs.gov/earthquakes/eventpage/usp0000gyg/
24	1976-07-03T20:53:45.08	Mercer	1976	07	03	20	53	45.08	37.32000	-81.13000	2.7	mblg	Instrumental	<NULL>	<NULL>
25	1978-08-14T04:50:05.4	Fayette	1978	08	14	04	50	05.4	37.93900	-80.87400	1.6	mc	Instrumental	<NULL>	<NULL>
26	1979-09-16T09:39:22.6	Pocahontas	1979	09	16	09	39	22.6	38.09900	-80.24000	1.6	mc	Instrumental	<NULL>	<NULL>
27	1979-09-19T00:45:57.4	Pocahontas	1979	09	19	00	45	57.4	38.11000	-80.24300	2.0	mc	Instrumental	<NULL>	<NULL>
28	1979-10-31T08:32:47.3	Raleigh	1979	10	31	08	32	47.3	37.61700	-81.20700	0.8	mc	Instrumental	<NULL>	<NULL>
29	1980-04-10T22:33:15.7	Mercer	1980	04	10	22	33	15.7	37.48700	-81.08600	0.7	mc	Instrumental	<NULL>	<NULL>
30	1980-09-21T10:02:46.3	Pocahontas	1980	09	21	10	02	46.3	38.17500	-80.07000	1.4	mc	Instrumental	<NULL>	<NULL>
31	1980-10-16T03:48:07.6	Pocahontas	1980	10	16	03	48	07.6	38.06600	-80.21500	1.1	mc	Instrumental	<NULL>	<NULL>
32	1980-11-05T21:48:14.2	Pocahontas	1980	11	05	21	48	14.2	38.18800	-79.93600	3.0	ml	Instrumental	<NULL>	<NULL>
33	1980-11-25T07:44:04	Pocahontas	1980	11	25	07	44	04	38.09500	-80.12300	0.6	md	Instrumental	<NULL>	<NULL>
34	1981-11-30T17:33:11	Mingo	1981	11	30	17	33	11	37.63000	-82.20000	2.5	mc	Instrumental	<NULL>	<NULL>
35	1982-06-23T16:17:34.1	Fayette	1982	06	23	16	17	34.1	37.87000	-80.95700	2.5	md	Instrumental	<NULL>	<NULL>
36	1983-01-21T05:33:20.4	Pocahontas	1983	01	21	05	33	20.4	38.06700	-80.14400	0.4	md	Instrumental	<NULL>	<NULL>
37	1983-05-26T01:04:44.8	Monroe	1983	05	26	01	04	44.8	37.50600	-80.31600	2.2	md	Instrumental	<NULL>	<NULL>
38	1983-06-10T00:18:40.4	Greenbrier	1983	06	10	00	18	40.4	37.94800	-80.16300	1.2	md	Instrumental	<NULL>	<NULL>
39	1983-06-10T00:24:57	Greenbrier	1983	06	10	00	24	57	37.95100	-80.18900	1.2	md	Instrumental	<NULL>	<NULL>
40	1983-06-10T00:31:08.3	Greenbrier	1983	06	10	00	31	08.3	37.93800	-80.16800	0.4	md	Instrumental	<NULL>	<NULL>
41	1983-07-20T04:41:40.9	Greenbrier	1983	07	20	04	41	40.9	37.88500	-80.69100	1.6	md	Instrumental	<NULL>	<NULL>
42	1983-07-25T03:27:00.2	Wyoming	1983	07	25	03	27	00.2	37.49600	-81.35200	0.6	md	Instrumental	<NULL>	<NULL>
43	1983-11-13T16:51:06.7	Summers	1983	11	13	16	51	06.7	37.55600	-80.77500	0.4	md	Instrumental	<NULL>	<NULL>
44	1983-11-13T17:50:50.1	Monroe	1983	11	13	17	50	50.1	37.55900	-80.75300	0.7	md	Instrumental	<NULL>	<NULL>
45	1983-11-25T16:27:47.8	Monroe	1983	11	25	16	27	47.8	37.56800	-80.74500	0.7	md	Instrumental	<NULL>	<NULL>
46	1983-12-23T10:51:21.9	Summers	1983	12	23	10	51	21.9	37.76600	-80.83700	0.3	md	Instrumental	<NULL>	<NULL>
47	1984-02-02T05:10:19.7	Mingo	1984	02	02	05	10	19.7	37.71700	-82.21800	1.9	md	Instrumental	<NULL>	<NULL>
48	1984-03-11T04:01:38.9	Summers	1984	03	11	04	01	38.9	37.47400	-80.90000	1.1	md	Instrumental	<NULL>	<NULL>
49	1984-10-09T05:33:31.5	Summers	1984	10	09	05	33	31.5	37.71300	-80.89100	2.1	md	Instrumental	<NULL>	<NULL>
50	1984-12-21T13:12:21.9	Pocahontas	1984	12	21	13	12	21.9	38.19800	-80.20800	1.6	md	Instrumental	<NULL>	<NULL>
51	1985-06-14T07:57:10.2	Mercer	1985	06	14	07	57	10.2	37.53400	-81.02000	0.8	md	Instrumental	<NULL>	<NULL>
52	1986-02-26T21:53:20.8	Pendleton	1986	02	26	21	53	20.8	38.50700	-79.29200	2.3	md	Instrumental	<NULL>	<NULL>
53	1986-12-20T08:13:12.8	Greenbrier	1986	12	20	08	13	12.8	38.05800	-80.64300	1.2	md	Instrumental	<NULL>	<NULL>
54	1989-03-19T10:07:55.8	Logan	1989	03	19	10	07	55.8	37.73500	-82.06400	1.9	md	Instrumental	<NULL>	<NULL>
55	1991-04-22T01:01:20.270Z	Greenbrier	1991	04	22	01	01	20.270	37.941000	-80.207000	3.50	mblg	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/usp0004qn8/
56	1991-06-28T18:34:51.920Z	Kanawha	1991	06	28	18	34	51.920	38.276000	-81.668000	3.20	mblg	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/usp0004thc/
57	1992-03-29T20:16:48.2	Mercer	1992	03	29	20	16	48.2	37.31400	-81.14900	1.4	md	Instrumental	<NULL>	<NULL>
58	1992-05-06T21:20:23.9	Fayette	1992	05	06	21	20	23.9	38.11800	-81.06900	2.3	md	Instrumental	<NULL>	<NULL>
59	1992-11-24T02:26:50.7	Summers	1992	11	24	02	26	50.7	37.45700	-80.88400	1.2	md	Instrumental	<NULL>	<NULL>
60	1994-02-04T07:40:32.4	Nicholas	1994	02	04	07	40	32.4	38.23600	-80.75900	2.1	md	Instrumental	<NULL>	<NULL>

Map Num	Time (event ID)	County	UTC Year	UTC Month	UTC Day	UTC Hour	UTC Minute	UTC Seconds	Latitude	Longitude	Magnitude	Magnitude Type	Recorded	MMI	Event URL
61	1994-06-19T08:36:41.3	Nicholas	1994	06	19	08	36	41.3	38.33900	-80.64000	1.7	md	Instrumental	NULL	NULL
62	1995-11-15T10:29:24.8	Raleigh	1995	11	15	10	29	24.8	37.71700	-81.04300	2.6	md	Instrumental	NULL	NULL
63	1995-12-28T23:48:30.4	Fayette	1995	12	28	23	48	30.4	38.08400	-80.96800	2.5	md	Instrumental	NULL	NULL
64	1996-08-11T09:11:21.3	Greenbrier	1996	08	11	09	11	21.3	37.73100	-80.62800	2.1	mc	Instrumental	NULL	NULL
65	1997-02-22T14:32:33.1	Fayette	1997	02	22	14	32	33.1	37.92100	-81.02700	2.0	mc	Instrumental	NULL	NULL
66	1997-03-15T05:56:36.4	Webster	1997	03	15	05	56	36.4	38.34700	-80.48400	1.8	md	Instrumental	NULL	NULL
67	1998-10-02T10:01:06.9	Kanawha	1998	10	02	10	01	06.9	38.06800	-81.46600	2.5	md	Instrumental	NULL	NULL
68	2000-10-16T17:56:13.8	Braxton	2000	10	16	17	56	13.8	38.63600	-80.92000	2.5	md	Instrumental	NULL	NULL
69	2001-12-04T21:15:13.9	Summers	2001	12	04	21	15	13.9	37.72600	-80.75200	3.1	mb	Instrumental	NULL	NULL
70	2002-03-27T08:25:03.3	Mingo	2002	03	27	08	25	03.3	37.75300	-82.17100	2.1	md	Instrumental	NULL	NULL
71	2006-07-11T12:01:43.100Z	Greenbrier	2006	07	11	12	01	43.100	37.882167	-80.641333	2.60	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se606219/
72	2008-01-29T01:04:20.700Z	Monroe	2008	01	29	01	04	20.700	37.544833	-80.509833	2.40	mlg	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se606830/
73	2009-04-11T18:11:09.070Z	Summers	2009	04	11	18	11	09.070	37.513333	-80.895667	2.40	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se607139/
74	2010-04-04T09:19:14.010Z	Braxton	2010	04	04	09	19	14.010	38.599000	-80.916167	3.40	mlg	Instrumental	5	https://earthquake.usgs.gov/earthquakes/eventpage/se608185/
75	2010-04-29T01:36:21.260Z	Braxton	2010	04	29	01	36	21.260	38.685667	-80.814833	2.60	mlg	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se608194/
76	2010-04-29T12:38:53.430Z	Braxton	2010	04	29	12	38	53.430	38.664833	-80.856167	2.70	mlg	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se608196/
77	2010-04-29T23:26:39.470Z	Braxton	2010	04	29	23	26	39.470	38.722000	-80.803000	2.50	mblg	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/usp000hc39/
78	2010-05-07T10:26:03.540Z	Braxton	2010	05	07	10	26	03.540	38.602333	-80.912167	2.60	mlg	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se608197/
79	2010-05-08T03:03:00.620Z	Braxton	2010	05	08	03	03	00.620	38.623000	-80.911333	2.40	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se608198/
80	2010-07-24T09:15:44.130Z	Braxton	2010	07	24	09	15	44.130	38.675333	-80.820167	2.40	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se608209/
81	2010-07-25T03:48:35.550Z	Braxton	2010	07	25	03	48	35.550	38.679167	-80.797167	2.20	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se608210/
82	2010-08-15T04:38:47.380Z	Lewis	2010	08	15	04	38	47.380	38.818333	-80.429833	2.50	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se608213/
83	2010-08-21T03:16:21.990Z	Upshur	2010	08	21	03	16	21.990	38.792500	-80.397667	2.50	md	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se608214/
84	2010-08-26T04:22:15.190Z	Raleigh	2010	08	26	04	22	15.190	37.748333	-81.204667	2.40	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se608215/
85	2010-08-26T04:24:55.390Z	Raleigh	2010	08	26	04	24	55.390	37.727333	-81.204333	2.20	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se608216/
86	2010-09-13T15:08:46.470Z	Lincoln	2010	09	13	15	08	46.470	38.099833	-82.034000	2.40	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se608218/
87	2011-08-25T05:59:13.760Z	Greenbrier	2011	08	25	05	59	13.760	37.916000	-80.215333	2.70	md	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se609219/
88	2012-01-10T19:38:58.660Z	Braxton	2012	01	10	19	38	58.660	38.566833	-80.893833	2.80	mlg	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se609646/
89	2012-03-16T15:05:53.570Z	Kanawha	2012	03	16	15	05	53.570	38.234000	-81.748000	2.60	mblg	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/usp000jgbk/
90	2013-03-31T14:01:24.030Z	Braxton	2013	03	31	14	01	24.030	38.645000	-80.833167	3.40	mw	Instrumental	5	https://earthquake.usgs.gov/earthquakes/eventpage/se610164/
91	2013-05-29T21:06:11.100Z	Kanawha	2013	05	29	21	06	11.100	38.365333	-81.275667	2.26	ml	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/ld60041041/
92	2013-07-20T11:38:46.180Z	Gilmer	2013	07	20	11	38	46.180	38.895667	-80.887000	2.70	mlg	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se610199/
93	2013-07-30T06:09:04.850Z	Gilmer	2013	07	30	06	09	04.850	38.839333	-80.908667	2.80	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se610203/
94	2013-08-16T11:02:21.040Z	Gilmer	2013	08	16	11	02	21.040	38.841500	-80.938667	2.60	mlg	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se610207/
95	2013-10-13T09:20:58.550Z	Braxton	2013	10	13	09	20	58.550	38.701167	-80.824167	2.20	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se610225/
96	2013-10-19T08:41:57.430Z	Greenbrier	2013	10	19	08	41	57.430	37.747667	-80.643333	2.20	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se610227/
97	2014-04-14T17:44:27.380Z	Clay	2014	04	14	17	44	27.380	38.453000	-80.889500	2.10	ml	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/ld60066331/
98	2014-06-06T22:15:40.790Z	Jackson	2014	06	06	22	15	40.790	38.643833	-81.585500	2.60	md	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se610630/
99	2016-01-17T19:12:49.050Z	Jefferson	2016	01	17	19	12	49.050	39.319333	-77.828333	3.03	ml	Instrumental	1	https://earthquake.usgs.gov/earthquakes/eventpage/ld60108801/
100	2016-08-06T12:39:14.210Z	Mingo	2016	08	06	12	39	14.210	37.863000	-82.128833	2.31	md	Instrumental	1	https://earthquake.usgs.gov/earthquakes/eventpage/se60029113/
101	2016-12-01T01:27:04.780Z	Roane	2016	12	01	01	27	04.780	38.760833	-81.485333	2.51	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se60032413/
102	2017-06-21T08:01:32.720Z	Kanawha	2017	06	21	08	01	32.720	38.199500	-81.398500	2.70	md	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se60172362/
103	2017-08-13T06:52:15.080Z	Webster	2017	08	13	06	52	15.080	38.345833	-80.568500	2.01	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se60042903/
104	2017-09-13T17:33:10.930Z	Monroe	2017	09	13	17	33	10.930	37.472833	-80.703000	3.20	md	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se60179327/
105	2019-03-04T07:41:54.780Z	Greenbrier	2019	03	04	07	41	54.780	37.838167	-80.704167	2.61	md	Instrumental	2	https://earthquake.usgs.gov/earthquakes/eventpage/se60076828/
106	2020-07-29T00:36:35.820Z	Pocahontas	2020	07	29	00	36	35.820	38.222333	-79.911500	2.43	md	Instrumental	NULL	https://earthquake.usgs.gov/earthquakes/eventpage/se60322771/
107	2020-07-30T05:57:13.780Z	Pocahontas	2020	07	30	05	57	13.780	38.222000	-79.908333	2.38	md	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se60323026/
108	2021-12-07T10:06:15.620Z	Monroe	2021	12	07	10	06	15.620	37.512000	-80.388500	1.86	md	Instrumental	2	https://earthquake.usgs.gov/earthquakes/eventpage/se60139853/
109	2022-08-10T00:36:34.020Z	Pocahontas	2022	08	10	00	36	34.020	38.160667	-80.013167	2.04	md	Instrumental	2	https://earthquake.usgs.gov/earthquakes/eventpage/se60158843/
110	2023-02-17T21:54:05.740Z	Mason	2023	02	17	21	54	05.740	38.903170	-82.040340	2.61	md	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se60500438/

Data as of 3/7/2023. For a more detailed listing, please download the West Virginia Earthquake spreadsheet/workbook from http://www.wvgs.wvnet.edu/www/earthquakes/seismic.html.

If you view this map and data as a PDF, you can click any of the blue hyperlinked text to view further infromation on a website.

Some definition of terms are provided with this map. Please consult the West Virginia Earthquake Catalog 202208.xlsx spreadsheet/workbook for complete definitions.

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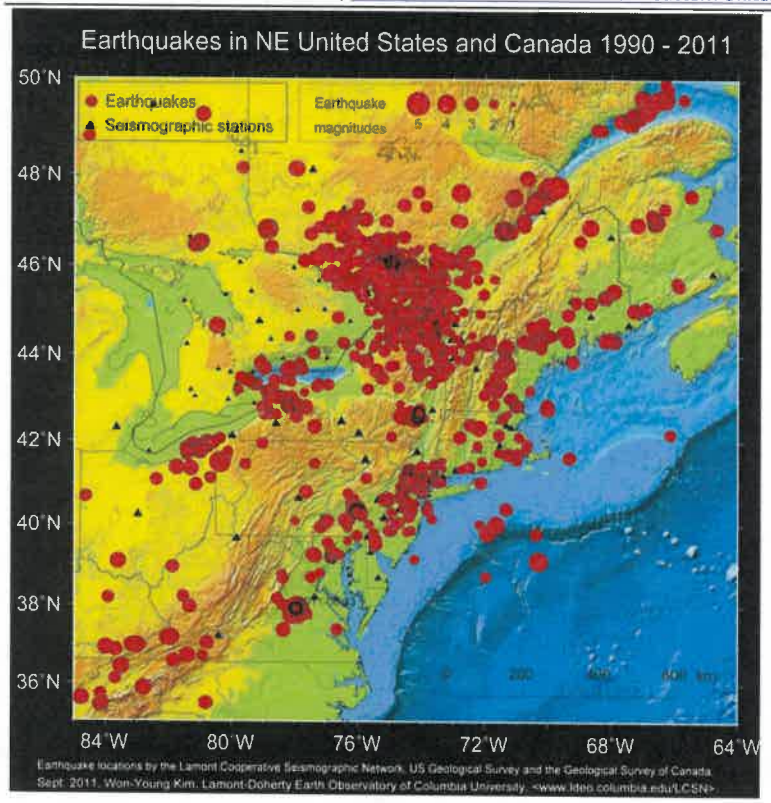
Some Definitions and Explanations:

- **County**: the name of the county where the epicenter was located, derived from spatial selection.
- Dates and times are in Coordinated Universal Time (UTC) for Year, Month, Day, Hours (HH), Minutes (MM) and Seconds (SS). (For Eastern Standard Time, the offset is - 5 hours).
- **Magnitude (Mag)**: Magnitude numbers indicative of an earthquake's relative size and is the measured maximum motion as recorded by a seismograph. The numbers are pulled from various sources; the primary source whenever possible.
- **Recorded**: refers to the means by which magnitudes were recorded: if they were reported as "felt" (Historical) or recorded via scientific instrumentation (Instrumental) as retrieved from Source1 or Source2.
- **Latitude** and **Longitude** values are expressed in decimal degrees for the northern and western hemispheres, respectively.
- **MMI**: The Modified Mercalli Intensity scale for epicenter intensity, usually designated with Roman numerals. Visit USGS at https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale for further information.
- **MagnitudeType:** Magnitude type code; the method used in measuring magnitudes (e.g., *Mb* for "body-wave", *Mc* for "coda amplitude", *Md* for "coda duration").

For other or more detailed earthquake and seismological definitions, please visit the USGS (https://earthquake.usgs.gov/learn/glossary/).

Sources (Source1 and Source2):

- USGS ENS – United States Geological Survey, Earthquake Hazards (A Primary Source)
- VTSO – Virginia Tech Seismological Observatory (A Secondary Source)
- ANSS – Advanced National Seismic System
- CERI – Center for Earthquake Research and Information
- LDEO – Lamont-Doherty Earth Observatory
- Wheeler I-2737 – Wheeler, Russell L., *Earthquakes In and Near the Northeastern United States, 1638-1998* (Used only as reference here)



Northeastern United States and southeastern Canadian earthquakes from 1990 to 2011.
Image courtesy of the Lamont-Doherty Earth Observatory (Won-Young Kim)
of Columbia University, New York. Used by permission.

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West Virginia Geological and Economic Survey
https://www.wvgs.wvnet.edu/

PILLAR
ENERGY

UIC Permit 2D09300081 Renewal

Section 9 – Operating Requirements / Data

1. All operating data for Nestor B-1 Disposal well is included in Appendix A.
2. Appendix G Wells Serviced by Injection Well
3. Injection Fluid Testing – Sample was taken 12/04/24. The results will be submitted when received from lab.
4. No injection fluid additives at this time.
5. The annulus fluid will be fresh water used to conduct the MIT.
6. In the event of well failure, the problematic well will be immediately shut in. As with most wells that inject water down cemented casing that has been drilled prior to using modern day techniques, a failure is tangibly going to occur in the casing. A corrective plan will be created and submitted to the WVDEP within 30 days. In such case of failure on a newer well with 2 3/8" tubing on a packer inside 4 ½" casing, it would also be shut in immediately. Tubing pressure would then be tested. If the tubing pressure's integrity is confirmed, a new packer will be replaced and a MIT pressure test completed. Before resuming operation, all results would be submitted to the WVDEP.

   Mechanical Integrity Tests are performed at least once every 5 years. Normally, pipeline pressure is raised to 100 psi above its normal operating pressure for a minimum time of 30 minutes. If allowable, the entire system can be tested as one but may also be tested in separate sections. Pressure recorder results are submitted to the WVDEP after testing.

4709300081

APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
4709300093	Pillar Energy LLC	Tuscarora
4707700324	Pillar Energy LLC	Huntersville Chert/Oriskany
4707700323	Pillar Energy LLC	Huntersville Chert/Oriskany
4709300100	Pillar Energy LLC	Tuscarora
4707700099	Pillar Energy LLC	Huntersville Chert/Oriskany
4709300034	Pillar Energy LLC	Tuscarora
4709300104	Pillar Energy LLC	Huntersville Chert/Oriskany
4709300101	Pillar Energy LLC	Huntersville Chert/Oriskany
4709300105	Pillar Energy LLC	Purcell/Lower Marcellus
4707100021	Pillar Energy LLC	Oriskany
4707100024	Pillar Energy LLC	Marcellus
4707700574	Pillar Energy LLC	Marcellus

Make as many copies as necessary and include page numbers as appropriate.

Promoting a healthy environment.

dep

Section 9

Operating Requirements

4709300081
INJECTATE

Sturm Environmental Services

VICTORIA L. HOOPS, PRESIDENT

COMPANY: PILLAR ENERGY

SAMPLE ID: NESTOR B1

SAMPLED BY: J. WEBB II

DATE/TIME SAMPLED:* 12-04-24 1030

DATE/TIME RECEIVED: 12-04-24 1321

LABORATORY ID: PE 241204-1

PARAMETER	TEST RESULTS	UNITS	METHOD	METHOD DETECTION LIMIT	MINIMUM REPORTING LIMIT	DATE/TIME ANALYZED	ANALYST
pH O	5.8 e	units	SM 22nd 4500 H B	.1	2.-10.	12-04-24 1350	JV
TDS	[1]273540	mg/L	USGS I-1750-85	4	50	12-06-24 1252	MRM/MK
SO_4	U	mg/L	EPA 300.0 Rev 2.1-1993	3.00	10.0	12-06-24 1857	DC
Cl^-	53200.	mg/L	EPA 200.8 Rev 5.4-1994	1.0	1.0	12-06-24 1910	DC
SPEC GRAV	1.18101	mg/L	Calculation			12-11-24 1856	SW
Br	1000.	mg/L	EPA 300.0 Rev 2.1-1993	.10	.50	12-06-24 1620	DC
Sr	3688.	mg/L	EPA 200.8 Rev 5.4-1994	.00025	.001	12-09-24 1109	DB
Ba	5117.	mg/L	EPA 200.8 Rev 5.4-1994	.00006	.001	12-09-24 1109	DB
Fe	250.	mg/L	EPA 200.8 Rev 5.4-1994	.05	.10	12-05-24 1321	DB
Mn	23.9	mg/L	EPA 200.8 Rev 5.4-1994	.001	.002	12-05-24 1321	DB
Al	U	mg/L	EPA 200.8 Rev 5.4-1994	.015	.02	12-05-24 1321	DB
As	4.40	ug/L	EPA 200.8 Rev 5.4-1994	.1	1.0	12-05-24 1321	DB
Na	61152.	mg/L	EPA 200.8 Rev 5.4-1994	.05	.1	12-09-24 1109	DB
Ca	18965.	mg/L	EPA 200.8 Rev 5.4-1994	.10	.10	12-09-24 1109	DB

*Client Provided

**See Attached. The following results meet or exceed requirements and standards set forth by the certifying authority except where noted.

Data Qualifiers

B Analyte found in reagent blank. Indicates possible reagent or background contamination.
E Estimated Reported value exceeded calibration range.
J Reported value is an estimate because concentration is less than reporting limit.
PND Precision not determined.
R Sample results rejected because of gross deficiencies in QC or method performance. Re-sampling and/or re-analysis is necessary.
RND Recovery not determined.
U Compound was analyzed for, but not detected.
O Out of holding. Time does not meet 40 CFR 136/141 compliance.
T This result is not supported by our certification ID.
A Does not meet 40 CFR 136/141 compliance.
C Does not meet 47 CSR 32 compliance.
e No Longer certifiable in WV unless analyzed within 15 minutes.

Narrative:[1]SAMPLE YIELDED >200 MG OF RESIDUE.

Approved _____

MAIN OFFICE AND LABORATORY—POST OFFICE BOX 650 • BRIDGEPORT, WEST VIRGINIA 26330 • (304) 623-6549
CHARLESTON FIELD OFFICE—POST OFFICE BOX 8337 • SOUTH CHARLESTON, WEST VIRGINIA 25303-0337 • (304) 744-9864

CHAIN OF CUSTODY RECORD

Sturm Environmental Services

STURM ENVIRONMENTAL
BRUSHY FORK ROAD
BRIDGEPORT, WV 26330
PHONE: 304-623-6549
FAX: 304-623-6552

STURM ENVIRONMENTAL SERVICES
610 D STREET
SO. CHARLESTON, WV 25303
PHONE: 304-744-9864
FAX: 304-744-7866

MAILING ADDRESSES ARE LISTED BELOW

REPORT TO: Client Name: PILLAR ENERGY
Address: UNKNOWN
City/State/Zip:
Contact Person:
Telephone Number: Fax No.
Email Address:
Sampler Name: (Print) X Johnny L. Webb II
Sampler Signature: X
Project Name:
Special Reporting: ☐ Email Results ☐ Fax Results

BILL TO: Client Name:
Address:
City/State/Zip:
Contact Person:
Telephone Number: Fax No.
Email Address:
Purchase Order #:
TURN AROUND TIME: ___ Standard
___ RUSH (pre-scheduled; surcharges may apply) *Please Check One*
___ Date Needed

1 DAY	2 DAY	3 DAY

Sample ID / Description	COMPOSITE SAMPLE START DATE	START TIME	END DATE	END TIME	GRAB SAMPLE DATE	TIME	PRESERVATIVE Ice	OTHER	$Na_2S_2O_3$ TB/FC	HCl	NaOH	H_2SO_4 Plastic	H_2SO_4 Glass	None	HNO_3	MATRIX Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	METHOD/ANALYSES	# of Bottles	Field pH	Flow (gpm, cfs, mgd) circle one	Field Conductivity	Field DO	Field Chlorine (mg/L or ug/L) circle one	Field Temp (F° or C°) circle one
X Nestor B1			12-4	1030																			2						
																							2						

Comments

Records retained for 5 years

Laboratory Comments:
Temperature Upon Receipt:
Bottles Preserved? (Y) N

Relinquished by:	Date	Time	Received by:	Date	Time	Temp upon Receipt:
Johnny L. Webb II	12/4/24	13:21	L	12-4-24	1321	
Relinquished by:	Date	Time	Received by:	Date	Time	

CHAIN OF CUSTODY RECORD

Sturm Environmental Services

STURM ENVIRONMENTAL
BRUSHY FORK ROAD
BRIDGEPORT, WV 26330
PHONE: 304-623-6549
FAX: 304-623-6552

STURM ENVIRONMENTAL SERVICES
610 D STREET
SO. CHARLESTON, WV 25303
PHONE: 304-744-9864
FAX: 304-744-7866

MAILING ADDRESSES ARE LISTED BELOW

REPORT TO: Client Name: PILLAR ENERGY
Address: HWY 119
City/State/Zip:
Contact Person:
Telephone Number: Fax No.
Email Address:
Sampler Name: (Print) X Johnny L. Webb
Sampler Signature: X
Project Name:
Special Reporting: ☐ Email Results ☐ Fax Results

BILL TO: Client Name:
Address:
City/State/Zip:
Contact Person:
Telephone Number: Fax No.
Email Address:
Purchase Order #:
TURN AROUND TIME: ____ Standard
____ RUSH (pre-scheduled; surcharges may apply) *Please Check One*
____ Date Needed

1 DAY	2 DAY	3 DAY

Sample ID / Description	COMPOSITE SAMPLE: START DATE	START TIME	END DATE	END TIME	GRAB SAMPLE: DATE	TIME	PRESERVATIVE: Ice	OTHER	$Na_2S_2O_3$ TR/FC	HCl	NaOH	H_2SO_4 Plastic	H_2SO_4 Glass	None	HNO_3	MATRIX: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	METHOD/ANALYSES	# of Bottles	Field pH	Flow (gpm, cfs, mgd) circle one	Field Conductivity	Field DO	Field Chlorine (mg/L or ug/L) circle one	Field Temp (F° or C°) circle one
X Nestor B1			12-4	1030																			6						

Comments

Laboratory Comments:
Temperature Upon Receipt:
Bottles Preserved? (Y) N
Temp upon Receipt:

Records retained for 5 years

Relinquished by:	Date	Time	Received by:	Date	Time
John L Webb	12/4/24	13:21		12-4-24	1321
Relinquished by:	Date	Time	Received by:	Date	Time

UIC
2D0930008 1

Pace Analytical Services, LLC
225 Industrial Park RD
Beaver, WV 25813
(800)999-0105

4709300081
Nestor B-1
Radiologics

January 07, 2025

Missy Hoops
STURM ENVIRONMENTAL SERVICES
P O BOX 650
Bridgeport, WV 26330

RE: Project: 24142 PO:11130
Pace Project No.: 30739970
PILLAR ENERGY

Dear Missy Hoops:

Enclosed are the analytical results for sample(s) received by the laboratory on December 05, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Cynthia Walker

Cynthia Walker
cynthia.walker@pacelabs.com
Project Manager

Enclosures

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Beaver, WV 25813
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CERTIFICATIONS

PILLAR ENERGY
Project: 24142 PO:11130
Pace Project No.: 30739970

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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SAMPLE SUMMARY

PILLAR ENERGY
Project: 24142 PO:11130
Pace Project No.: 30739970

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30739970001	24142 / NESTOR B1	Water	12/04/24 10:30	12/05/24 18:00

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SAMPLE ANALYTE COUNT

PILLAR ENERGY
Project: 24142 PO:11130
Pace Project No.: 30739970

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30739970001	24142 / NESTOR B1	EPA 900.0	DMC	2	PASI-PA
		EPA 901.1	MAH	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS - RADIOCHEMISTRY

PILLAR ENERGY
Project: 24142 PO:11130
Pace Project No.: 30739970

Sample: 24142 / NESTOR B1 **Lab ID: 30739970001** Collected: 12/04/24 10:30 Received: 12/05/24 18:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Gross Alpha	EPA 900.0	**36,980 ± 7,021 (1,503) C:NA T:NA**	pCi/L	01/06/25 16:01	12587-46-1	
Gross Beta	EPA 900.0	**11,550 ± 2,321 (926) C:NA T:NA**	pCi/L	01/06/25 16:01	12587-47-2	
	Pace Analytical Services - Greensburg					
Radium-226	EPA 901.1	**8760.000 ± 762.500 (574.100) C:NA T:NA**	pCi/L	12/26/24 13:18	13982-63-3	RA
Radium-228	EPA 901.1	**1769.200 ± 120.810 (69.480) C:NA T:NA**	pCi/L	12/26/24 13:18	15262-20-1	

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Beaver, WV 25813
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QUALIFIERS

PILLAR ENERGY
Project: 24142 PO:11130
Pace Project No.: 30739970

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

RA The reported Ra-226 results were determined using a direct gamma emission (186 keV) shared by both Ra-226 and naturally-occurring U-235. The reported Ra-226 results were determined assuming the shared energy peak is attributable exclusively to Ra-226. Reported results for Ra-226 may be biased high if U-235 is present in the sample.

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Office of Oil and Gas
JAN 13 2025
WV Department of
Environmental Protection

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Pace Analytical Services, LLC
225 Industrial Park RD
Beaver, WV 25813
(800)999-0105

QUALITY CONTROL DATA CROSS REFERENCE TABLE

PILLAR ENERGY
Project: 24142 PO:11130
Pace Project No.: 30739970

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30739970001	**24142 / NESTOR B1**	EPA 900.0	715890		
30739970001	**24142 / NESTOR B1**	EPA 901.1	717445		

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Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

WO# : 30739970

30739970

Pace Workorder Number or

B USE ONLY

Company: STORM ENVIRONMENTAL SERVICES

Billing Information:

Address: ON FILE

Report To: M-HOOPS

Email To:

Copy To:

Site Collection Info/Address:

Customer Project Name/Number:

State: / County/City: Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Phone: 304 623 6584
Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [ ] No

Collected By (print): J. WEBB

Purchase Order #: 11130
Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature): SEE ATTACHED

Turnaround Date Required:

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Project Manager:

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Gross Alpha / Gross Beta	Radium 226/228
24142/NESTOR B1	WATER	G	12-4-24	1030				3	X	X

Office of Oil and Gas RECEIVED JAN 13 2025 WV Department of Environmental Protection

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2570073

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: _____oC
Cooler 1 Therm Corr. Factor: _____oC
Cooler 1 Corrected Temp: _____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
L-P	12-5-24	R. Fox 12/5/24	12:20
R. Fox 12/5/24	1400	BMM / PACE	12/5/24 14:[illegible]
BMM / PACE	12/5/24 1600	TR 12-5-24	16:[illegible]

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

CHAIN OF CUSTODY RECORD

Sturm Environmental Services

STURM ENVIRONMENTAL
BRUSHY FORK ROAD
BRIDGEPORT, WV 26330
PHONE: 304-623-6549
FAX: 304-623-6552

STURM ENVIRONMENTAL SERVICES
610 D STREET
SO. CHARLESTON, WV 25303
PHONE: 304-744-9864
FAX: 304-744-7866

MAILING ADDRESSES ARE LISTED BELOW

REPORT TO: Client Name: PILLAR ENERGY
Address: UNKNOWN
City/State/Zip:
Contact Person:
Telephone Number: Fax No.
Email Address:
Sampler Name: (Print) X
Sampler Signature: X
Project Name:
Special Reporting: ☐ Email Results ☐ Fax Results

BILL TO: Client Name:
Address:
City/State/Zip:
Contact Person:
Telephone Number: Fax No.
Email Address:
Purchase Order #:
TURN AROUND TIME: ___ Standard
___ RUSH (pre-scheduled; surcharges may apply) *Please Check One*
___ Date Needed

1 DAY	2 DAY	3 DAY

Sample ID / Description	COMPOSITE SAMPLE START DATE	START TIME	END DATE	END TIME	GRAB SAMPLE DATE	TIME	PRESERVATIVE Ice	OTHER	$Na_2S_2O_3$ TB/FC	HCl	NaOH	H_2SO_4 Plastic	H_2SO_4 Glass	None	HNO_3	MATRIX Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	METHOD/ANALYSES	# of Bottles	Field pH	Flow (gpm, cfs, mgd) circle one	Field Conductivity	Field DO	Field Chlorine (mg/L or ug/L) circle one	Field Temp (F° or C°) circle one
[illegible] - 01			12-4	1030																			2						
																							6						

Comments

Laboratory Comments:
Temperature Upon Receipt
Bottles Preserved? (Y) N

Records retained for 5 years

Relinquished by:	Date	Time	Received by:	Date	Time	Temp upon Receipt
[illegible]			[illegible]	12-4-24	1321	
Relinquished by:	Date	Time	Received by:	Date	Time	

RECEIVED
JAN 13 2025
Office of Oil and Gas
WV Department of Environmental Protection

DC#_Title: ENV-FRM-BEAV-0058 v03_Pace WV Sample Condition Upon Receipt
Effective Date: 2/8/2023

WO#: 30739970

PM: CEW Due Date: 01/08/25
CLIENT: BV-STURMENVS

LIMS30 Lab Sample Condition Upon Receipt (West Virgi

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ 3rd Party Courier ☑ Pace ☐ Other _____

Tracking #: _____

Custody Seal on Cooler/Box/Containers Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Thermometer Used 24 **Type of Ice:** Wet Blue None

Cooler Temperature **Observed Temp** .4 °C Correction Factor: 0.0 °C Final Temp: .4 °C

Thermal Preservation Requirement Met Yes ☑ No ☐

pH paper Lot#	Date and Initials of person examining contents:
204524	RC 12-6-24

	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓	✓		2. City, State orgin
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC: -Includes date/time/ID Matrix: W	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous sample field filtered:			✓	13.
-pH adjusted within 24 hours? (If yes, indicate acid lot #)			✓	
Filtered volume received for Dissolved tests:			✓	14.
All containers have been checked for chemical preservation exceptions: VOA, coliform, O&G, LLMercury, Non-aqueous matrix			✓	15.
All containers meet method/chemical preservation requirements:			✓	Initial when completed RC Date: 12-6-24
				Tests not preserved:
Headspace in VOA Vials:		X	✓	16.
Trip Blank Present:			✓	17.
				Initial when completed: RC Date: 12-6-24

Comments: _____

*PM review is documented electronically in LIMS, when the Project Manager closes the SRF Review schedule in LIMS. The status may be reviewed in the Status section of the Workorder Edit Screen

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WV Department of
Environmental Protection

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

WO#: 30739970

30739970

Pace Workorder Number or

B USE ONLY

Project Manager

Company: STORM ENVIRONMENTAL SERVICES	Billing Information:
Address: ON FILE	
Report To: M-HOOPS	Email To:
Copy To:	Site Collection Info/Address:
Customer Project Name/Number:	State: / County/City: Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET
Phone: 304 623 6584 Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): J. WEBB	Purchase Order #: Quote #: 11130 DW PWS ID #: DW Location Code:
Collected By (signature): SEE ATTACHED	Turnaround Date Required: Immediately Packed on Ice: [ ] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [ ] No Analysis: ____

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Gross Alpha / Gross Beta	Radium 226/228
24142/NESTOR B1	WATER	G	12-4-24	1030				3	X	X

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: ____	
Sample pH Acceptable	Y N NA
pH Strips: ____	
Sulfide Present	Y N NA
Lead Acetate Strips: ____	

LAB USE ONLY:
Lab Sample # / Comments:

Received by Pace Greensburg
Therm ID 17 Corr Factor +/- 0.4
Receipt Temp 9.9
Corrected Temp 9.5
Correct Preservation - (Y)/N
Res. Chlorine - Y/N - Lot# —
Rad Samples Screened <0.05 mrem/hr - (Y)/N
Survey Meter 2504550

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2570073

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: ____
Cooler 1 Temp Upon Receipt: ____oC
Cooler 1 Therm Corr. Factor: ____oC
Cooler 1 Corrected Temp: ____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
L-P	12-5-24	R. Fu 12/5/24	12:20
R. Fu 12/5/24	1400	BMN / PACE	12/5/24 1410
BMN / PACE	12/5/24 1410	TA	

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): Page:

Pace® Location Requested (City/State):

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Log'n Label Here

Scan QR Code for instructions

Company Name:
Street Address:

Contact/Report To:
Phone #:
E-Mail:
Cc E-Mail:

Customer Project #:
Project Name:
Site Collection Info/Facility ID (as applicable):

Invoice to:
Invoice E-mail:
Purchase Order # (if applicable):
Quote #:

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s):

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other _____

Regulatory Program (DW, RCRA, etc.) as applicable:

Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day Other _____
Date Results Requested:

DW PWSID # or WW Permit # as applicable:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Biomass (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Residual Chlorine Result	Residual Chlorine Units	Sample Comment

Specify Container Size **
Identify Container Preservative Type***
Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj. Mgr: / AcctNum / Client ID: / Table #: / Profile / Template: / Prelog / Bottle Ord. ID:

Preservation non-conformance identified for sample.

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Additional Instructions from Pace® :

Collected By:
Printed Name
Signature

Customer Remarks / Special Conditions / Possible Hazards:

Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C): Corrected Temp. (°C): [ ] On Ice

Relinquished by/Company: (Signature)	Date/Time	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Nicely's Del. Service	12-7-24 0800	[signature]	12-7-24 0800	
Relinquished by/Company: (Signature)	Date/Time	Received by/Company: (Signature)	Date/Time	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time	Received by/Company: (Signature)	Date/Time	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time	Received by/Company: (Signature)	Date/Time	Page: of

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

CHAIN OF CUSTODY RECORD

Sturm Environmental Services

STURM ENVIRONMENTAL
BRUSHY FORK ROAD
BRIDGEPORT, WV 26330
PHONE: 304-623-6549
FAX: 304-623-6552

STURM ENVIRONMENTAL SERVICES
610 D STREET
SO. CHARLESTON, WV 25303
PHONE: 304-744-9864
FAX: 304-744-7866

MAILING ADDRESSES ARE LISTED BELOW

RECEIVED
Office of Oil and Gas
JAN 13 2025
WV Department of Environmental Protection

REPORT TO: Client Name: PILLAR ENERGY
Address: HARRISVILLE
City/State/Zip:
Contact Person:
Telephone Number: Fax No.
Email Address:
Sampler Name: (Print) X Johnny L Hibbs
Sampler Signature: X
Project Name:
Special Reporting: ☐ Email Results ☐ Fax Results

BILL TO: Client Name:
Address:
City/State/Zip:
Contact Person:
Telephone Number: Fax No.
Email Address:
Purchase Order #:
TURN AROUND TIME: ____ Standard
____ RUSH (pre-scheduled; surcharges may apply) *Please Check One*
____ Date Needed

1 DAY	2 DAY	3 DAY

Sample ID / Description	COMPOSITE SAMPLE START DATE	START TIME	END DATE	END TIME	GRAB SAMPLE DATE	TIME	PRESERVATIVE Ice	OTHER	$Na_2S_2O_3$ TC/FC	HCl	NaOH	H_2SO_4 Plastic	H_2SO_4 Glass	None	HNO_3	MATRIX Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	METHOD/ANALYSES	# of Bottles	Field pH	Flow (gpm, cfs, mgd) circle one	Field Conductivity	Field DO	Field Chlorine (mg/L or ug/L) circle one	Field Temp (F° or C°) circle one
X Nestor-B1			12-4	1030																			2						
																							6						

Comments

Records retained for 5 years

Relinquished by:	Date	Time	Received by:	Date	Time
Johnny L Hibbs	12/4/24	13:21	L	12-4-24	1321
Relinquished by:	Date	Time	Received by:	Date	Time

Laboratory Comments:
Temperature Upon Receipt:
Bottles Preserved? (Y) N
Temp upon Receipt:

DC#_Title: ENV-FRM-BEAV-0058 v03_Pace WV Sample Condition Upon Receipt
Effective Date: 2/8/2023

WO#: 30739970

PM: CEW Due Date: 01/08/25
CLIENT: BV-STURMENVS

LIMS30 Lab Sample Condition Upon Receipt (West Virgi

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ 3rd Party Courier ☑ Pace ☐ Other _____

Tracking #: _____

Custody Seal on Cooler/Box/Containers Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Thermometer Used 24 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp .4 °C Correction Factor: 0.0 °C Final Temp: .4 °C

Thermal Preservation Requirement Met Yes ☑ No ☐

pH paper Lot#	Date and initials of person examining contents:
204524	RC 12-6-24

	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓	✓		2. City, State orgin
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC: -Includes date/time/ID , Matrix: WW	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓ ✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous sample field filtered: -pH adjusted within 24 hours? (If yes, indicate acid lot #)			✓ ✓	13.
Filtered volume received for Dissolved tests:			✓	14.
All containers have been checked for chemical preservation: exceptions: VOA, coliform, O&G, LLMercury, Non-aqueous matrix			✓	15.
All containers meet method/chemical preservation requirements:			✓	Initial when completed RC Date: 12-6-24
				Tests not preserved:
Headspace in VOA Vials:		X	✓	16.
Trip Blank Present:			✓	17.
				Initial when completed: RC Date: 12-6-24

Comments: _____

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JAN 13 2025
WV Department of
Environmental Protection

*PM review is documented electronically in LIMS, when the Project Manager closes the SRF Review schedule in LIMS. The status may be reviewed in the Status section of the Workorder Edit Screen.

Pace

Chain-of-Custody Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

30739970

Scan QR Code for instructions

Company Name:
Street Address:

Customer Project #:
Project Name:
Site Collection Info/Facility ID (as applicable):

Contact/Report To:
Phone #:
E-Mail:
Cc E-Mail:

Invoice To:
Invoice E-Mail:
Purchase Order # (if applicable):
Quote #:

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s):

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units

Specify Container Size **
Identify Container Preservative Type***
Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) Terra Core, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr:
AcctNum / Client ID:
Table #:
Profile / Template:
Prelog / Bottle Ord. ID:

Sample Comment

Preservation non-conformance identified for sample.

RECEIVED
Office of Oil and Gas
JAN 13 2025
WV Department of Environmental Protection

Additional Instructions from Pace®:

Collected By:
(Printed Name)
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C) Corrected Temp. (°C) On Ice:

Relinquished by/Company: (Signature)	Date/Time	Received by/Company: (Signature)	Date/Time	Tracking Number:
Relinquished by/Company: (Signature) 12-6-24	1707	Nicely's Del. Service 12-6-24	1900	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 2

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

CHAIN OF CUSTODY RECORD

Sturm Environmental Services

STURM ENVIRONMENTAL
BRUSHY FORK ROAD
BRIDGEPORT, WV 26330
PHONE: 304-623-6549
FAX: 304-623-6552

STURM ENVIRONMENTAL SERVICES
610 D STREET
SO. CHARLESTON, WV 25303
PHONE: 304-744-9864
FAX: 304-744-7866

MAILING ADDRESSES ARE LISTED BELOW

RECEIVED
Office of Oil & Gas
JAN 13 2025
WV Department of Environmental Protection

REPORT TO: Client Name: Pillar Energy
Address: Harville
City/State/Zip:
Contact Person:
Telephone Number: Fax No.
Email Address:
Sampler Name: (Print) X Johnny L. Webb
Sampler Signature: X
Project Name:
Special Reporting: ☐ Email Results ☐ Fax Results

BILL TO: Client Name:
Address:
City/State/Zip:
Contact Person:
Telephone Number: Fax No.
Email Address:
Purchase Order #:
TURN AROUND TIME: ____ Standard
____ RUSH (pre-scheduled; surcharges may apply) *Please Check One*
_____ Date Needed

1 DAY	2 DAY	3 DAY

Sample ID / Description	COMPOSITE SAMPLE: START DATE	START TIME	END DATE	END TIME	GRAB SAMPLE: DATE	TIME	PRESERVATIVE: Ice	OTHER	$Na_2S_2O_3$ TC/FC	HCl	NaOH	H_2SO_4 Plastic	H_2SO_4 Glass	None	HNO_3	MATRIX: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	METHOD/ANALYSES	# of Bottles	Field pH	Flow (gpm, cfs, mgd) circle one	Field Conductivity	Field DO	Field Chlorine (mg/L or ug/L) circle one	Field Temp (F° or C°) circle one
X Waste - 151			12-4	1030																			2						
																							2						

Comments

Records retained for 5 years

Laboratory Comments:
Temperature Upon Receipt
Bottles Preserved? (Y) N

Relinquished by:	Date	Time	Received by:	Date	Time	Temp upon Receipt
Johnny L. Webb	12/4/24	1521		12-4-24	1321	
Relinquished by:	Date	Time	Received by:	Date	Time	

MITs

west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
Phone (304) 926-0450

Harold D. Ward, Cabinet Secretary
dep.wv.gov

By E-Mail Transmission

November 3, 2022

Pillar Energy, LLC
Attn: Jeff Isner
1244 Martins Branch Road
Charleston, WV 25312

Re: Mechanical Integrity Test — Authorization for Injection
Supplemental Pipeline MIT
47-093-00081 (Nestor B-1)

Dear Mr. Isner:

Attached is your WR-37 MIT record for the pipeline at the above referenced well. The supplemental mechanical integrity test performed on the pipeline, October 21, 2022, has been approved. Authorization is granted for injection at a maximum permitted injection pressure 1142 psi. If you have any questions, please contact Andrew Lockwood via email at Andrew.L.Lockwood@wv.gov or by phone at (304) 926-0499 Ext 41104.

Respectfully,

Taylor Brewer
Assistant Chief - Permitting
Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
Phone: 304-926-0499 ext. 41108
Charles.T.Brewer@wv.gov

MIT 4709300081

WR-37
12/23/19

WV DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
PRE-OPERATION CERTIFICATE FOR LIQUID INJECTION
MECHANICAL INTEGRITY TEST RECORD

RECEIVED
Office of Oil & Gas
OCT 28 2022
WV Department of
Environmental Protection

MIT Date: 10/21/2022
Operator's Well Name / #: Nestor B-1
API#: 47- 093-00081 -
UIC Permit #: 2D093000810003
Field Name (2R only):

WELL OPERATOR Pillar Energy, LLC
Address: 1244 Martins Branch Road
Charleston, WV 25312

DESIGNATED AGENT Jeff Isner
Address: 1244 Martins Branch Road
Charleston, WV 25312

INJECTION FORMATION Huntersville Chert Depth 3496 feet (top) to 3552 feet (bottom)
Perforation Interval 3528-3548 or Open Hole Interval N/A

INJECTION PERMIT TYPE
☐ 2D Commercial Disposal ☐ 2D Non-Commercial Disposal ☐ 2R Area Permit (EOR) ☐ 3S Solution Mining

INJECTATE TYPE (Check all that apply):
☑ Produced Water ☐ Fresh Water ☐ Completion Flowback Water ☐ Tank & Pipeline Residuals
☐ Drilling Waste Liquids ☐ Solution Mining Waste ☐ Gas (2R) ☐ Other (Specify)
Additives (ie. biocides, inhibitors, etc.)

WELL CONSTRUCTION / CASING PROGRAM

CASING OR TUBING TYPE	SIZE	GRADE	WEIGHT PER FT.	NEW	USED	FOOTAGE USED IN DRILLING	FOOTAGE LEFT IN WELL	CEMENT USED
CONDUCTOR	20"					10.2	10.2	
FRESH WATER	16"					35'	35'	
COAL	11-3/4	H-40	42			206'	206'	200 sks
INTERMEDIATE	8-5/8	J-55	24			1221.1'	1221.1'	280 sks
PRODUCTION	4-1/2	N-80	11.6			4240'	4240'	280 sks
TUBING	2-3/8	J-55	4.7				3520	
LINERS								

PACKER	TYPE:	SIZE:	DEPTH:

MECHANICAL INTEGRITY TEST TYPE
☐ Standard Annulus Pressure Test
Is Test Annulus Filled? ☑ Yes ☐ No If Yes, Specify Fluid Type?
☑ Pump Line Test ☐ Other (Specify)

MAXIMUM PERMITED WELLHEAD INJECTION PRESSURE 1142 psi **MIT PRESSURE** 1242 min. psi

MECHANICAL INTEGRITY TEST DESCRIPTION
Hydro tested injection pipeline with Approx 15 gallons of fresh water to a minimum of 1242 PSI. Pressures were recorded on a paper chart. Pressure was held on Pump Line for 30 minutes.
Approx

(2R Area Permits: If multiple pump lines are tested together, please list wells serviced by the tested pump lines.)

4709300081

WR-37
12/23/19

API#: 47-093-00081 -

NOTE:

- If the well and the pump line are tested together the MIT pressure must be 1.5 times the maximum permitted injection pressure held for a minimum of 20 minutes with no more than a 5% loss.
- If the well is tested separately, the MIT pressure must be 1.5 times the maximum permitted injection pressure held for a minimum of 20 minutes with no more than a 5% loss.
- If the pump line is tested separately, the MIT pressure shall be the maximum permitted injection pressure plus 100 psi held for a minimum of 20 minutes with no more than a 5% loss. Multiple pump lines can be tested together.
- All MITs must be witnessed by a state inspector. A valid recording chart containing the inspector's signature must accompany this completed form.
- All MITs that fail must be submitted using this form and chart.
- Submit all MIT required documentation to OOG within 30 days of test.
- The mechanical integrity of this well must be demonstrated at least 5 years from this test date and each time work is completed on the well or pump line to continue injection.

The undersigned certify:

The MIT was performed on 10/21/2022
The well and/or pump line:
☒ demonstrated mechanical integrity or ☐ failed to demonstrate mechanical integrity.

The MIT was witnessed by Gayne J Knitt 10/21/22, Inspector WVDEP - Office of Oil and Gas.

Pillar Energy, LLC
Permit Holder Company Name

10-24-22
Date

Jeff Isner
Agent or Responsible Party (Print Name)

Signature

CEO
Title

RECEIVED
Office of Oil & Gas
OCT 24 2022
WV Department of
Environmental Protection

----------**Office of Oil and Gas Use Only:**----------

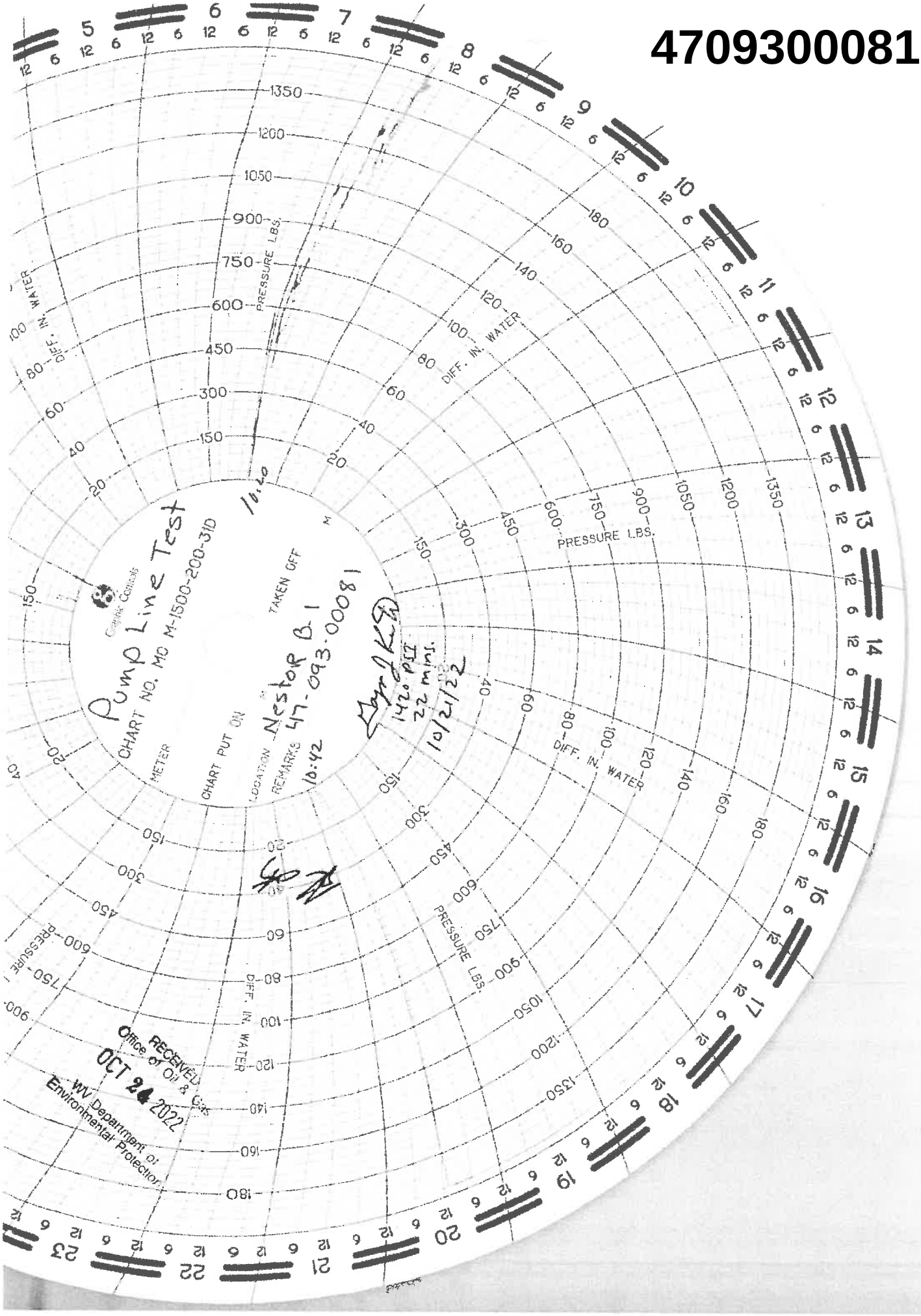
THIS WELL IS AUTHORIZED FOR INJECTION
UP TO A MAXIMUM WELLHEAD INJECTION PRESSURE OF 1142 psi

Special Conditions:

UIC Program Manager
WVDEP-Office of Oil and Gas

Date 11/3/22

4709300081


Pump Line Test
CHART NO. MP M-1500-200-3ID
Cyclic Canada
TAKEN OFF
10:20
METER
CHART PUT ON
LOCATION Nestor B 1
REMARKS 47-093-00081
10:42
142.0 PSI
22 min.
10/21/22
PRESSURE LBS.
DIFF. IN. WATER
RECEIVED
Office of Oil & Gas
OCT 24 2022
WV Department of
Environmental Protection

4709300081

WR-37
12/23/19

WV DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
PRE-OPERATION CERTIFICATE FOR LIQUID INJECTION MECHANICAL INTEGRITY TEST RECORD

MIT Date: 09/27/2022
Operator's Well Name / #: Nestor B-1
API#: 47- 093-00081 -
UIC Permit #: 2D093000810003
Field Name (2R only):

WELL OPERATOR Pillar Energy, LLC
Address: 1244 Martins Branch Road
Charleston, WV 25312

DESIGNATED AGENT Jeff Isner
Address: 1244 Martins Branch Road
Charleston, WV 25312

INJECTION FORMATION Huntersville Chert Depth 3496 feet (top) to 3552 feet (bottom)
Perforation Interval 3528-3548 or Open Hole Interval N/A

INJECTION PERMIT TYPE
☐ 2D Commercial Disposal ☐ 2D Non-Commercial Disposal ☐ 2R Area Permit (EOR) ☐ 3S Solution Mining

INJECTATE TYPE (Check all that apply):
☑ Produced Water ☐ Fresh Water ☐ Completion Flowback Water ☐ Tank & Pipeline Residuals
☐ Drilling Waste Liquids ☐ Solution Mining Waste ☐ Gas (2R) ☐ Other (Specify)
Additives (ie. biocides, inhibitors, etc.)

WELL CONSTRUCTION / CASING PROGRAM

CASING OR TUBING TYPE	SIZE	GRADE	WEIGHT PER FT.	NEW	USED	FOOTAGE USED IN DRILLING	FOOTAGE LEFT IN WELL	CEMENT USED
CONDUCTOR	20"					10.2	10.2	
FRESH WATER	16"					35'	35'	
COAL	11-3/4	H-40	42			206'	206'	200 sks
INTERMEDIATE	8-5/8	J-55	24			1221.1'	1221.1'	280 sks
PRODUCTION	4-1/2	N-80	11.6			4240'	4240'	280 sks
TUBING	2-3/8	J-55	4.7				3520	
LINERS								

PACKER	TYPE:	SIZE:	DEPTH:

MECHANICAL INTEGRITY TEST TYPE
☑ Standard Annulus Pressure Test
Is Test Annulus Filled? ☑ Yes ☐ No If Yes, Specify Fluid Type?
☐ Pump Line Test ☐ Other (Specify)

MAXIMUM PERMITED WELLHEAD INJECTION PRESSURE 1142 psi **MIT PRESSURE** 1713 psi

MECHANICAL INTEGRITY TEST DESCRIPTION
Hydro tested annulus with Approx 15 gallons of fresh water to a minimum of 1713 PSI. Pressures were recorded on a paper chart on both the annulus and tubing. pressure was held on annulus for 30 minutes.

(2R Area Permits: If multiple pump lines are tested together, please list wells serviced by the tested pump lines.)

4709300081

WR-37
12/23/19

API#: 47-093-00081 -

NOTE:

- If the well and the pump line are tested together the MIT pressure must be 1.5 times the maximum permitted injection pressure held for a minimum of 20 minutes with no more than a 5% loss.
- If the well is tested separately, the MIT pressure must be 1.5 times the maximum permitted injection pressure held for a minimum of 20 minutes with no more than a 5% loss.
- If the pump line is tested separately, the MIT pressure shall be the maximum permitted injection pressure plus 100 psi held for a minimum of 20 minutes with no more than a 5% loss. Multiple pump lines can be tested together.
- All MITs must be witnessed by a state inspector. A valid recording chart containing the inspector's signature must accompany this completed form.
- All MITs that fail must be submitted using this form and chart.
- Submit all MIT required documentation to OOG within 30 days of test.
- The mechanical integrity of this well must be demonstrated at least 5 years from this test date and each time work is completed on the well or pump line to continue injection.

The undersigned certify:

The MIT was performed on 09/27/2022

The well and/or pump line:

☑ demonstrated mechanical integrity or ☐ failed to demonstrate mechanical integrity.

The MIT was witnessed by _____, Inspector WVDEP - Office of Oil and Gas.

Pillar Energy, LLC
Permit Holder Company Name

09/27/2022
Date

Jeff Isner
Agent or Responsible Party (Print Name)

Signature

CEO
Title

----------**Office of Oil and Gas Use Only:**----------

THIS WELL IS AUTHORIZED FOR INJECTION
UP TO A MAXIMUM WELLHEAD INJECTION PRESSURE OF _____psi

Special Conditions:

_____

_____

_____

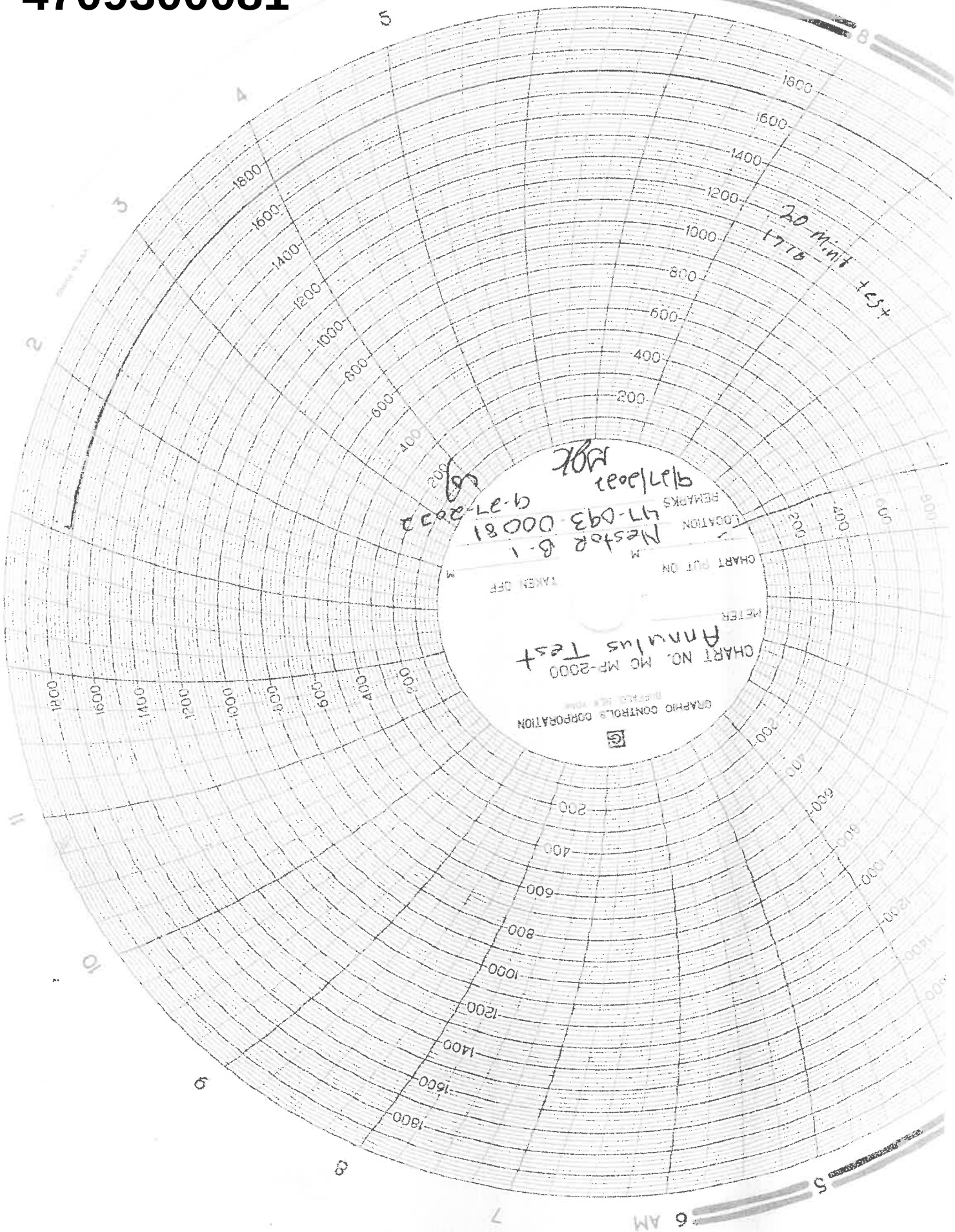
_____

_____

_____
UIC Program Manager
WVDEP-Office of Oil and Gas

_____
Date

4709300081


6 AM
7
8
9
10
11
NOON
1
2
3
4
5
6 PM
7
8
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
CHART NO. MC MP-2000
Annulus Test
METER
TAKEN OFF
CHART PUT ON
LOCATION
REMARKS
Meter 8-1
47-093-00081
9-17-2013
9/17/2013
20-Minute test
PSIG

Pillar Energy
Meter Report

4709300081

Purpose

Meter Test x	Meter Change	Plate Change	New Set	Deleted Set	Effective Date:

Type

Meter Type	Orifice	Turbine	PD	EM	EM S/N

Location

Station Number		Station Name	test meter	Area Operator	
County		State	wv		
Producer/Purchaser		Deduct Meter		From	

Meter Characteristics

Current/Existing/As Found					
Meter Model	202	Tube/PD Size		Orifice Size	
Differential Range		Static Range	2000	Chart Rotation	1 hour

Inspection/Calibration

Static/Meter Pressure								Differential Pressure							
As Found				As Left				As Found				As Left			
Up		Down		Up		Down		Up		Down		Up		Down	
Ref	Meter	Ref	Meter	Ref	Meter	Ref	Meter	Ref	Meter	Ref	Meter	Ref	Meter	Ref	Meter
0	0														
1000	1000														
1800	1810														
Temperature F															
Operating	Ref	Meter		Low	Mid	High									
As Found			Ref												
As Left			Meter												
Transfer Prover Report Attached															
Turbine Spin Test seconds			Actual		Req			Turbine Spin Test seconds				Actual		Req	
PD Diff PSI Test inches			Actual		Req			PD Diff PSI Test inches				Actual		Req	

Remarks

test meter for injection well

State Inspector requested calibration record of the chart recorder to be submitted with the WR-37.

Note: A Static Spring gauge was also used during test to confirm Pressures

Performed by	jeff lykins	Time		Date	9/19/2022
Witnessed by					

Section 10

Monitoring

PILLAR ENERGY

UIC Permit 2D09300081 Renewal

Section 10 – Monitoring

1. **Pillar Energy personnel visit the Nestor B-1 Disposal well several times per week. During active injection operations, field personnel monitor the entire wellsite. Operating hours, injection pressure, annulus pressure, shut in pressure, and the volume of the injection fluid that is disposed of will be monitored and documented on Form WR-40. All recorded data is submitted to the WVDEP.**
2. **For every barrel of disposal waste that is received at the Nestor B-1, a haul ticket from the trucking company is submitted to Pillar Energy. The ticket indicates from which well the fluid was hauled from along with the quantity of the load and the date hauled.**

Section 11

Groundwater Protection Plan

PILLAR ENERGY

UIC Permit 2D09300081 Renewal

Section 11 – Groundwater Protection Plan (GPP)

Appendix H Groundwater Protection Plan (GPP)

MIT Approval Letters

APPENDIX H

GROUNDWATER PROTECTION PLAN

Facility Name: Nestor B-1

County: Tucker

Facility Location:

Postal Service Address:	1642 Horseshoe Road		
Parsons WV 26287			
Latitude :	39.166773	Longitude:	-79.628508

Contact Information:

Person:	Trevor Schaffer
Phone Number:	681-205-8599
E-mail Address:	trevor.schaffer@pillarenergy.com

Date: 11/04/24

1. A list of all operations that may contaminate the groundwater.

Delivery of brine water
Storage of brine water
Injecting brine water in well
Fuel/oil leaks from equipment at site

2. A description of procedures and facilities used to protect groundwater quality from the list of potential contaminant sources above.

All transportation trucks are equipped with secondary spill containment buckets. All aboveground storage tanks are located inside a concrete secondary containment berm. Injection of brine into the well is only operated with trained personnel on site. Spill kits are located at site.

3. List procedures to be used when designing and adding new equipment or operations.

No new operation is planned at this time.

4. Summarize all activities at your facility that are already regulated for groundwater protection.

WVDEP UIC Injection
Aboveground Storage Tanks

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

DIsposal fluids were sampled and analyzed at an approved water testing facility. Analytical results included in section

6. Provide a statement that no waste material will be used for deicing or fill material on the property unless allowed by another rule.

No waste material will be used for deicing or fill material on the property unless allowed by another rule.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

All significant Pillar Energy employees undergo safety training that includes spill response and how to protect the groundwater from being contaminated. Also, employees are trained in the visual inspection of tanks, pipelines, and equipment.

8. Include provisions for inspections of all GPP elements and equipment. Inspections must be made quarterly at a minimum.

While the injection well is in operation, inspections are made on a daily basis. These inspections include, but are not limited to visual inspection of all equipment, pipelines, storage tanks, pumps, and overall operations. The injection well is subject to MIT every 5 years. The latest MIT approval letter from the WVDEP is attached herein.

Signature: _____

Date: 12/2/24

Section 12

Plugging and Abandonment

PILLAR ENERGY

UIC Permit 2D09300081 Renewal

Section 12 – Plugging and Abandonment

A well work plugging permit must be obtained from the West Virginia Department of Environmental Protection Office of Oil and Gas before beginning any well plugging operation. The plan will follow all applicable plugging and abandonment regulations including 35-4-14 and 22-6-24. The guidelines provided in Oil and Gas rule and code will be followed to complete the necessary application to plug and abandon. All cement plugs will be a minimum of 100 feet in thickness. A cement plug will be set above any perforation(s) and/or shot hole(s). All casings will be free pointed and as much casing as possible will be removed. A cement plug will be used to separate oil and gas bearing formations. A cement plug will be placed across all casing cuts. An elevation plug will be placed in each. If surface casing is cemented to surface, a cement plug will be placed across the shoe and at the surface. If there is no cemented surface casing, then a cement plug will be placed across the freshwater zone and at the surface. Gel will be used as a spacer between all cement plugs.

Section 13

Additional Bonding

PILLAR
ENERGY

UIC Permit 2D09300081 Renewal

Section 13 – Additional Bonding

Pillar Energy is reapplying for a Class 2D UIC Permit and is in full compliance with permit regulations and requirements, therefore, previous disposal well bonding is valid.

Section 14

Financial Responsibility

PILLAR ENERGY

UIC Permit 2D09300081 Renewal

Section 14 – Financial Responsibility

Appendix I Financial Responsibility

APPENDIX I

Requirement for Financial Responsibility to Plug/Abandon an Injection Well

In accordance with WV Code 47CSR13.13.7.g, all UIC permits shall require the permittee to maintain financial responsibility and resources to close, plug, and abandon underground injection wells in a manner prescribed by the Chief. The permittee must show evidence of financial responsibility to the Chief by submission of a surety bond, or other adequate assurance, such as a financial statement or other material acceptable to the Chief. This certification must be signed by one of the following:

1. For a corporation: by a principle corporate officer of at least the level of vice-president;
2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
3. For a municipality, State, Federal, or other public agency: by either a principle executive officer or ranking elected official;
4. Or a duly authorized representative in accordance with 47CSR13.13.11.b.
   (A person may be duly authorized by one of the primary entities (1-3) listed above by submitting a written authorization to the Chief of the WVDEP Office of Oil and Gas designating an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

Pillar Energy LLC

(Company Name)

2D09300081

(UIC Permit Number)

I certify in accordance with 47CSR13.13.7.g., that the company/permit holder cited above will maintain financial responsibility and resources to close, plug, and abandon underground injection wells(s) in a manner prescribed by the Chief of the Office of Oil and Gas and that documents to support this requirement are on record with the same.

Jeff Isner

(Print Name)

CEO

(Print Title)

(Signature)

12/2/24

(Date)

Section 15

Site Security Plan

PILLAR ENERGY

UIC Permit 2D09300081 Renewal

Section 15 – Site Security Plan – NOT APPLICABLE

Appendix J Site Security for Commercial Wells – NOT APPLICABLE

Not Applicable

APPENDIX J

Site Security for Commercial Facilities

Provide a detailed description of the method(s) utilized at the facility to restrict or prohibit illegal dumping of unauthorized waste or vandalism at the facility.

1. Complete enclosure of all wells, holding tank/pits and manifold assemblies within a chain link or other suitable fencing; and

2. Require that all gates and other entry points be locked when the facility is unattended; or

3. Providing tamper-proof seals for the master valve on each well (a "lock-out" or chain & padlock system would be more secure; however, these devices could create a potential safety hazard if the well needed to be quickly shut in due to an emergency); and

4. Installing locking caps on all valves and connections on holding tanks, unloading racks, and headers.

Section 16

Additional Information

PILLAR ENERGY

UIC Permit 2D09300081 Renewal

Section 16 – Additional Information

Appendix K Other Permit Approvals

APPENDIX K

Identify permit or construction approvals received or applied for under the following programs:

Permit/approvals	ID Number
Hazardous Waste Management Program under RCRA	
NPDES Program	
Prevention of Significant Deterioration (PSD)	
Nonattainment Program	
Dredge or Fill	
NPDES/NPDES – Stormwater	
WVDEP – Office of Waste Management (OWM) – Solid Waste Facility	
WVDEP – OWM – RCRA (Hazardous Waste TSD or Transporter)	
WVDEP – OWM – UST	
CERCLA – Superfund	
WV Voluntary Remediation – Brownfields	
FIFRA – Federal Insecticide, Fungicide and Rodenticide Act	
Well Head Protection Program (WHPP)	
Underground Injection Control (UIC)	UIC2D09300081
Toxic Substances Control Act (TSCA)	
Best Management Plans	
Management of Used Oil	
Other Relevant Permits (Specify):	
047-00000075	047-00000080
047-00000076	
047-00000077	
047-00000078	
047-00000079	