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	Mountain V Oil & Gas, Inc.		
Existing UIC Permit ID Number	2D0973422	UIC Well API Number	47-097-03422

Office of Oil and Gas Office Use Only	
Permit Reviewer	JEN
Date Received	6/10/15
Administratively Complete Date	
Approved Date	
Permit Issued	

Please check the fees and payment included. ck 48156 $50.00

Fees		Payment Type	
UIC Permit Fee: $500	X	Check	X
Groundwater Protection Plan (GPP) Fee: $50.00	X	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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✓ Appendix D Public Service District Affidavit

✓ Appendix E Water Sources

✓ 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

✓ Section 15 – Site Security Plan

✓ 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): Jamie Andrews

Reviewed by (Sign): [signature]

Date Reviewed: 6/8/15

cK 48156
35005

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"

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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

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

UIC-1
SECTION 1-5
CERTIFICATION

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.

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 # 2D0973422 **API #** 47-097-03422 **WELL #** Anna Cutright #1 WV0150

Section I. Facility Information

Facility Name: Anna Cutright D Well

Address: 7517 Alton Road

City: French Creek State: WV Zip: 26218

County: Upshur

Location description: Existing Well Site. Directions to Site: From exit 99 of I-79 proceed East on U.S. Route 33 & 119 for approx. 10.5 miles; Turn right on County Route 7 (Brushy Fork) and follow for approx. 2.3 miles; Turn left on County Route 14 (Stoney Run) and follow for approx. 2.6 miles; Turn right on State Route 20 and follow for approx. 5.2 miles; Turn left on County Route 20/10 (Alton Road) and follow for approx. 2.5 miles; Turn right onto County Route 32/7 and follow for approx. 1.6 miles to Evergreen; Turn left onto County Route 32 and follow for approx. 2.7 miles; Turn left onto existing well road for approximately 0.3 miles to site.

Location of well(s) or approximate center of field/project in UTM NAD 83 (meters):

Northing: 4,297,490 Easting: 567,709

Environmental Contact Information:

Name: Jamie Andrews Title: Land & Business Development

Phone: 304-203-7555 Email: jandrews@mountainvoilandgas.com

Section 2. Operator Information

Operator Name: Mountain V Oil & Gas, Inc.

Operator ID: 310020

Address: PO Box 470

City: Bridgeport State: WV Zip: 26330

County: Harrison

Contact Name: Jamie Andrews Contact Title: Land & Business Development Coordinator

Phone: 304-203-7555 Contact Email: jandrews@mountainvoilandgas.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:

Mountain V Oil & Gas, Inc. is an oil and gas producer, who utilizes this UIC well to dispose of produced and/or brine water from wells operated by Mountain V Oil & Gas, Inc.

CERTIFICATION

All permit applications must be signed by a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency, or a [1]duly authorized representative in accordance with 47CSR13-13.11.b.

A. Name and title of person applying for permit:

Print Name: Mike Shaver

Print Title: President

B. Signature and Date.

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.

Signature: Mike Shaver

Date: 6-8-13

[1] A person is a duly authorized representative if:

The authorization is made in writing by a person described in subdivision 47CSR13-13.11.a.

The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of the plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility.

The written authorization is submitted to the Director.

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

SECTION 6

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.

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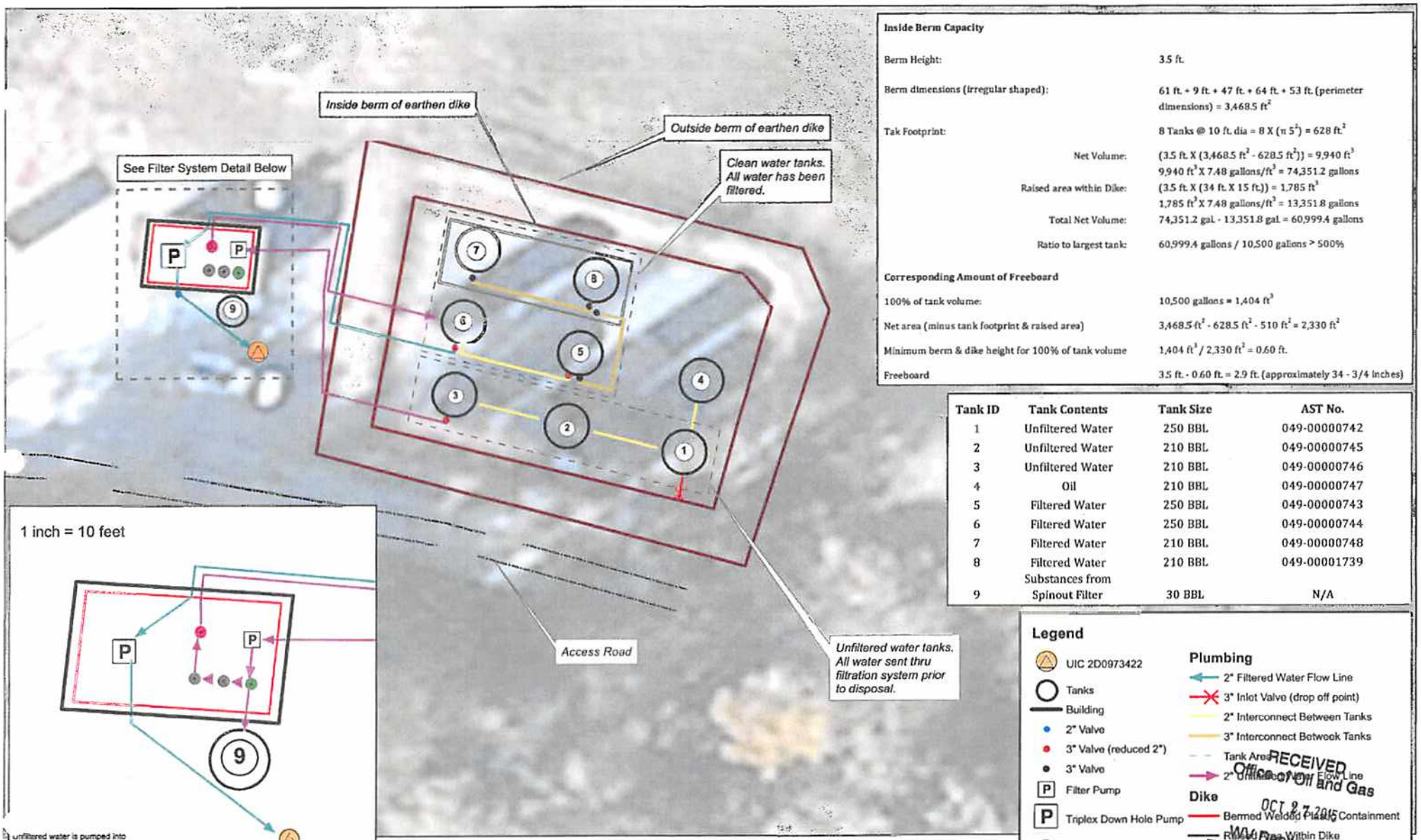


Inside Berm Capacity

Berm Height:	3.5 ft.
Berm dimensions (irregular shaped):	61 ft. + 9 ft. + 47 ft. + 64 ft. + 53 ft. (perimeter dimensions) = 3,468.5 ft^2
Tak Footprint:	8 Tanks @ 10 ft. dia = 8 X (π 5^2) = 628 ft^2
Net Volume:	(3.5 ft. X (3,468.5 ft^2 - 628.5 ft^2)) = 9,940 ft^3
	9,940 ft^3 X 7.48 gallons/ft^3 = 74,351.2 gallons
Raised area within Dike:	(3.5 ft. X (34 ft. X 15 ft.)) = 1,785 ft^3
	1,785 ft^3 X 7.48 gallons/ft^3 = 13,351.8 gallons
Total Net Volume:	74,351.2 gal. - 13,351.8 gal. = 60,999.4 gallons
Ratio to largest tank:	60,999.4 gallons / 10,500 gallons > 500%

Corresponding Amount of Freeboard

100% of tank volume:	10,500 gallons = 1,404 ft^3
Net area (minus tank footprint & raised area)	3,468.5 ft^2 - 628.5 ft^2 - 510 ft^2 = 2,330 ft^2
Minimum berm & dike height for 100% of tank volume	1,404 ft^3 / 2,330 ft^2 = 0.60 ft.
Freeboard	3.5 ft. - 0.60 ft. = 2.9 ft. (approximately 34 - 3/4 inches)

Tank ID	Tank Contents	Tank Size	AST No.
1	Unfiltered Water	250 BBL	049-00000742
2	Unfiltered Water	210 BBL	049-00000745
3	Unfiltered Water	210 BBL	049-00000746
4	Oil	210 BBL	049-00000747
5	Filtered Water	250 BBL	049-00000743
6	Filtered Water	250 BBL	049-00000744
7	Filtered Water	210 BBL	049-00000748
8	Filtered Water	210 BBL	049-00001739
9	Substances from Spinout Filter	30 BBL	N/A

Legend

- UIC 2D0973422
- Tanks
- Building
- 2" Valve
- 3" Valve (reduced 2")
- 3" Valve
- P — Filter Pump
- P — Triplex Down Hole Pump
- Sock Filter
- Cartrige Filter
- Spin Out Filter

Plumbing

- 2" Filtered Water Flow Line
- 3" Inlet Valve (drop off point)
- 2" Interconnect Between Tanks
- 3" Interconnect Between Tanks
- Tank Area
- 2" Unfiltered Water Flow Line

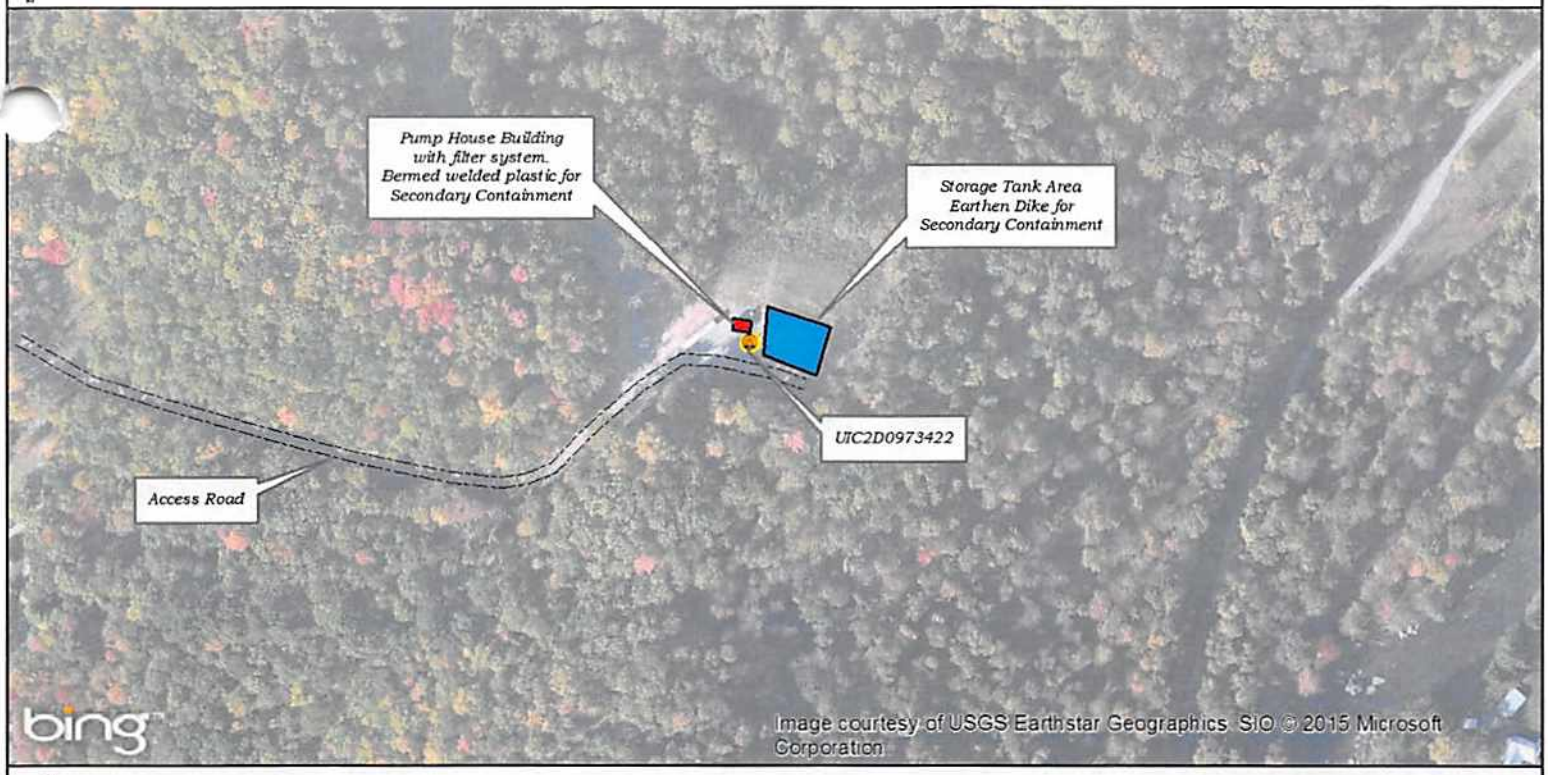
Dike

- Bermed Welded Plastic Containment
- Raised Area Within Dike
- Earthen Containment

Facility Map
Meade District, Upshur County, WV
Alton 7.5' Quad
1 inch = 20 feet

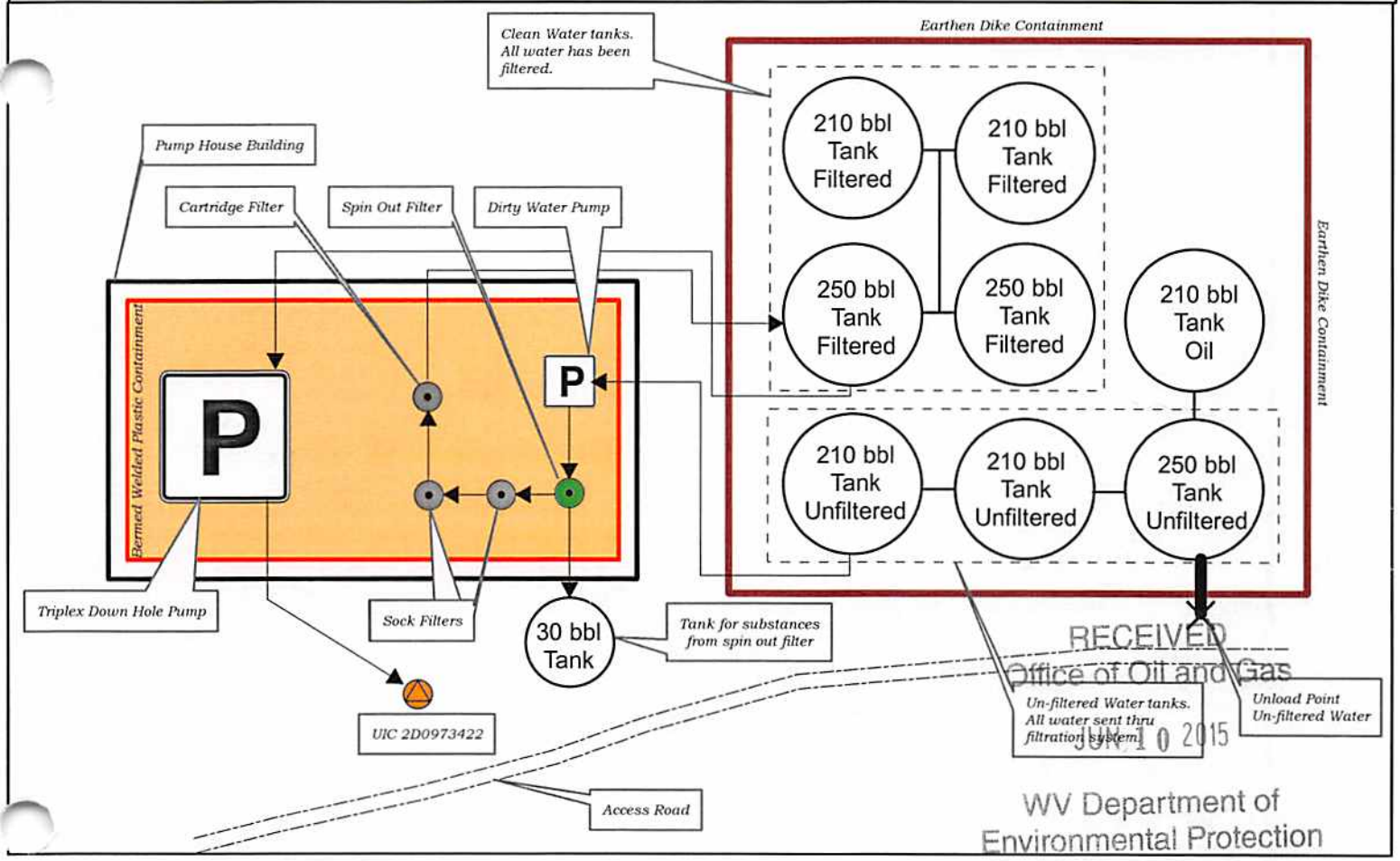
Aerial Location Map

1 inch = 250 feet



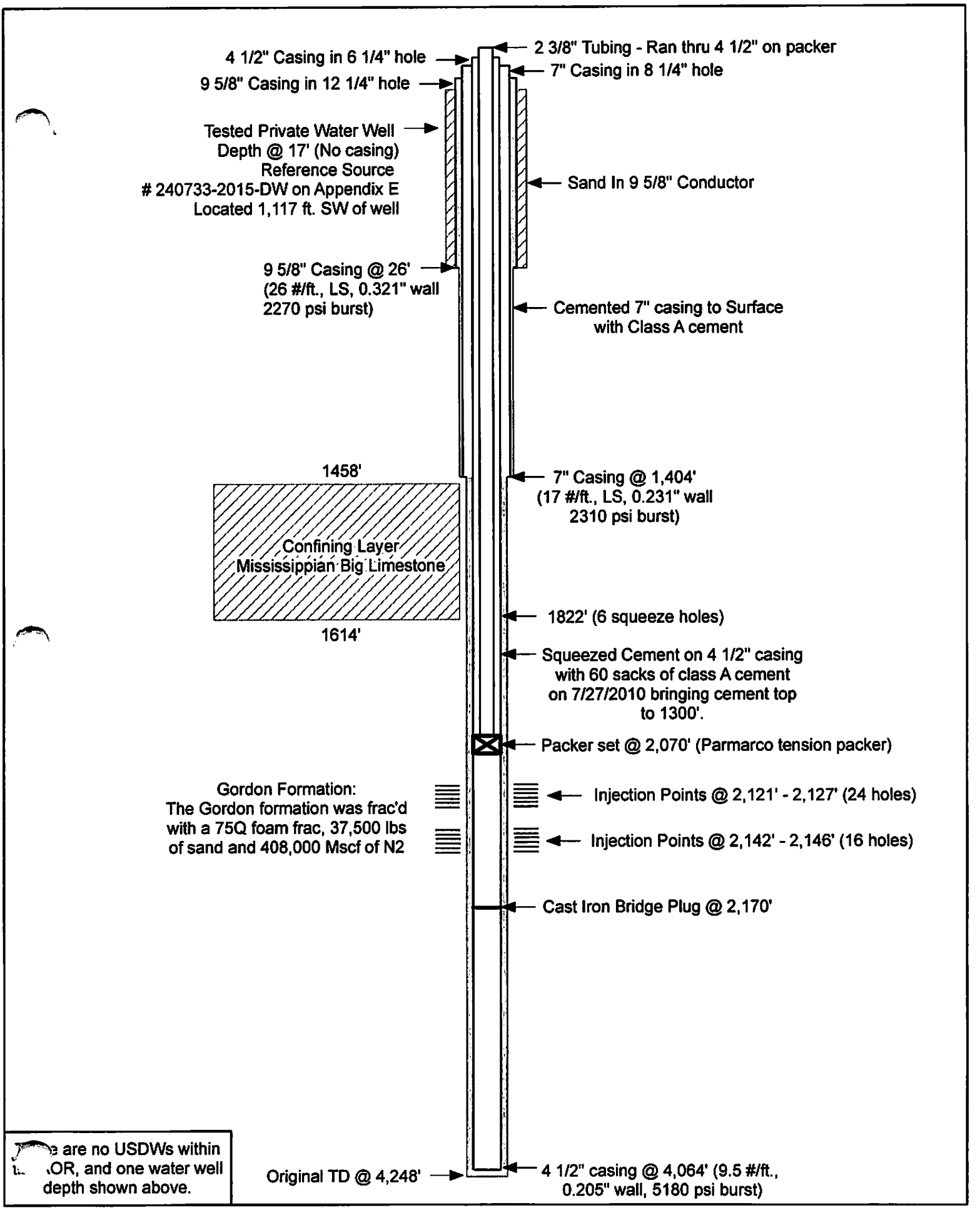
Detail Location Map

Not to Scale



Anna Cutright UIC2D0973422
Facility Map
Meade District, Upshur County, WV
Alton 7.5' Quad

MOUNTAIN V OIL & GAS INC



e are no USDWs within
OR, and one water well
depth shown above.

N

Anna Cutright UIC2D0973422 Well Schematic
Meade District, Upshur County, WV
Alton 7.5' Quad

MOUNTAIN V OIL & GAS INC

INVOICE NO. 25-30429

STAGE NO. 1

UNIVERSAL
WELL SERVICES, INC.
A PATTERSON-UTI ENERGY COMPANY

JOB LOG

COPY

CUSTOMER [illegible]

LEASE NAME Anna Cutright #1

DATE 7-27-10

	NO. OF SACKS	COMPOSITION OF CEMENT	YIELD	GAL. WTR/SK	DENSITY	BBL. OF MIX WTR.	CU. FT. OF SLURRY	BBL. OF SLURRY
1.	60	Class A	1.18	5.2	15.6	7.4	71	12.6
2.								
3.								
					TOTAL	7.4	71	12.6

CIRCULATE CEMENT TO SURFACE

☐ Yes ☒ No ☐ Not Applicable

JOB TYPE

☐ Surface ☐ Longstring ☐ Acid

☒ Other Squeeze Job

	NEW USED	SIZE	FROM	TO	WEIGHT	MAXIMUM PSI ALLOWANCE
CASING	U	4½	GL	1822	10.5	
TUBING						
~~OPEN HOLE~~ Bridge Plug			2170			
PERFORATIONS			1830			

DISPLACEMENT CAPACITY 29.5 BBL. DISPLACEMENT DEPTH 1822 FT.

TIME	RATE (BPM)	VOLUME (BBL)	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF STAGE OR EVENT
0730					Arrived on loc / spot truck's
0735					Rig in / hold safty meeting
0755	3	28.2		0-500	load Hole with H2o
0815					wait on Prof to shoot hole's
0902	4	3		261	pump H2o Break cir
0905	4	25		256	pump Gel
0910	4	5		263	H2o
0912	4	14		262	Cement
0915	4-.5				wash up / line / Drop plug
0916	4-.5	29.5		33-250	Start Dis
0936				200	Shut Down
0945					wash up / Rack Down
1030					leave loc

REMARKS

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SERVICE ENGINEER	Donald [illegible]
CUSTOMER REPRESENTATIVE	Richard Moody

APPENDIX A
Injection Well Form

1) GEOLOGIC TARGET FORMATION Gordon

Depth 2,122 Feet (top) 2,147 Feet (bottom)

2) Estimated Depth of Completed Well, (or actual depth of existing well): 2,170 Feet

3) Approximate water strata depths: Fresh 160 Feet Salt N/A Feet

4) Approximate coal seam depths: 66-70 & 346-349

5) Is coal being mined in the area? Yes _____ No X

6) Virgin reservoir pressure in target formation 919 psig Source Calculation based on fresh water gradiant

7) Estimated reservoir fracture pressure 380 psig (BHFP)

8) MAXIMUM PROPOSED INJECTION OPERATIONS:

Injection rate (bbl/hour) 120

Injection volume (bbl/day) ~~720~~ 575

Injection pressure (psig) 540

Bottom hole pressure (psig) 1459

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

Production water and/or brine

Temperature of injected fluid: (°F) Ambient temperature

10) FILTERS (IF ANY)

2 – 30 micron & 9 – 25 micron

11) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL

Scale inhibitor (S2101) 1 gal per 100 PPM Iron Oxide Control (SS-5395) 1 gal @ 100 PPM or 0.5 gal / 100 bbls

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	9 5/8"	New		26		26	
Fresh Water	7"	New		17		1400	200 sks
Coal							
Intermediate 1							
Intermediate 2							
Production	4 ½"	New		9.5		4064	205 sks
Tubing	2 3/8"	Used		4.7			
Liners							

TYPE	Wellbore Diameter	Casing Size	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./sk)	Cement to Surface ? (Y or N)
Conductor	12 ¼"	9 5/8"	0.312	2270 PSI	N/A	N/A	N/A
Fresh Water	8 ¼"	7"	0.231	2310 PSI	Class A	1.44 / 200 SKS	Y
Coal							
Intermediate 1							
Intermediate 2							
Production	6 ¼"	4 ½"	0.205	5180 PSI	CBL POZ	1.53 / 205 SKS	N
Tubing	N/A	2 3/8"	0.190	7700 PSI	N/A	N/A	N/A
Liners							

PACKERS	Packer #1	Packer #2	Packer #3	Packer #4
Kind:	Parmaco			
Sizes:	4 1/2			
Depths Set:	2070			

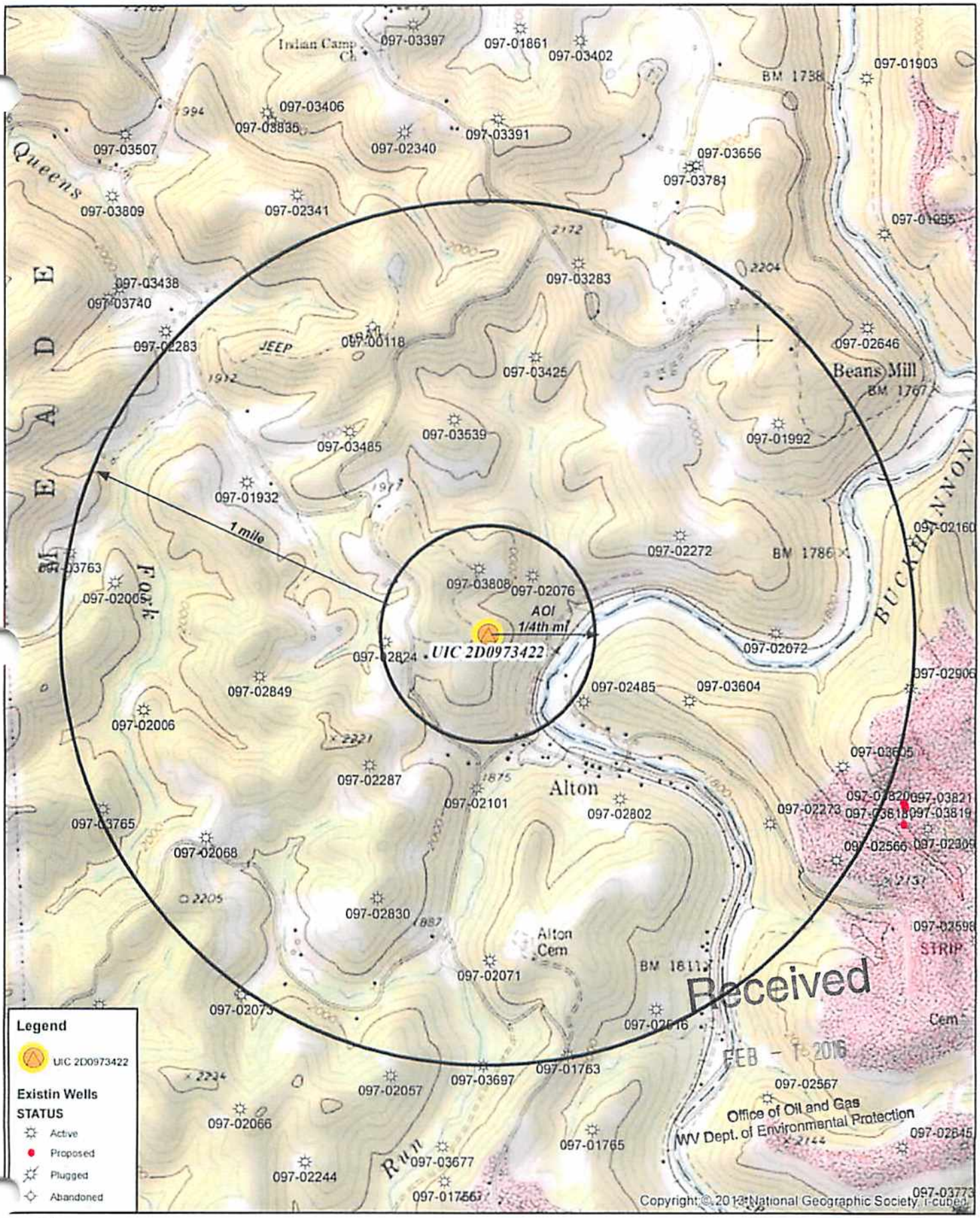
APPENDIX B
Storage Tank Inventory

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							
47-097-03422	DWV0150-T1	4,297,490	567,738	12/2010	60	Steel	10,500	Brine	Varies	S
47-097-03422	DWV0150-T2	4,297,492	567,731	12/2010	60	Steel	8,820	Brine	Varies	S
47-097-03422	DWV0150-T3	4,297,494	567,725	12/2010	60	Steel	8,820	Brine	Varies	S
47-097-03422	DWV0150-T4	4,297,495	567,738	12/2010	60	Steel	8,820	Brine	Varies	S
47-097-03422	DWV0150-T5	4,297,497	567,732	12/2010	60	Steel	10,500	Brine	Varies	S
47-097-03422	DWV0150-T6	4,297,499	567,726	12/2010	60	Steel	10,500	Brine	Varies	S
47-097-03422	DWV0150-T7	4,297,504	567,726	12/2010	60	Steel	8,820	Brine	Varies	S
47-097-03422	DWV0150-T8	4,297,502	567,733	12/2010	60	Steel	8,820	Brine	Varies	S
47-097-03422	DWV0150-T9	4,297,499	567,713	12/2010	60	Poly	1,260	Brine	Varies	S

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

SECTION 7

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.



Anna Cutright UIC2D0973422
Meade District, Upshur County, WV
Alton 7.5' Quad

1 inch = 1,500 feet

OG-10
Rev. - 9-71

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OIL & GAS DIVISION
DEPT. OF MINES

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

WELL RECORD

Quadrangle Alton

Permit No. 47-097-2485

Rotary X Oil ____
Cable ____ Gas X
Recycling ____ Comb. ____
Water Flood ____ Storage ____
Disposal ____ ____ (Kind)

Company George Jackson
Address F.O. Box 1698, Clarksburg, WV
Farm CHARLES DePOY Acres 7.84
Location (waters) Buckhannon River
Well No. 1 Elev. 1825'
District Washington County Upshur
The surface of tract is owned in fee by
Charles DePoy
Address Star Rt. Box 143, Adrian, WV
Mineral rights are owned by Charles DePoy
____ Address Adrian, WV
Drilling Commenced August 21, 1982
Drilling Completed August 29, 1982
Initial open flow Show of gas ft. ____ bbls
Final production 762,000 cu. ft. per day ____ bbls
Well open 17 hrs. before test 1200# RP
Well treatment details:
Well fractured with 1,000 bbls. of water

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16 Cond.			
13-10" 11 3/4	21'	21'	
9 5/8			
8 5/8	315'	315'	Cemented top to bottom
7			
5 1/2			
4 1/2	3806	3806	Cemented
3			
2			
Liners Used			

Attach copy of cementing record.

Coal was encountered at 408 Feet ____ Inches
Fresh water 156 Feet ____ Salt Water ____ Feet ____
Producing Sand Benson Depth 3775'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sd. & Shale	Gray	Hard	4	46		
Shale	Dark	Soft	46	69		
Sand & Shale	Gray	Hard	69	148	1" Stream water	156
Sand	White	Hard	148	198		
Sand & Shale	Gray	Hard	198	253		
Shale	Gray	Med.	253	293		
Sand & Shale	Gray	Hard	293	356		
Sand	White	Hard	356	390		
Shale	Gray	Med.	390	408		
Coal	Black	Soft	408	411	½" Stream water	408
Shale	Gray	Med.	411	425		
Coal	Black	Soft	425	428		
Shale & Sand	Gray	Med.	428	446		
Sand	Gray	Hard	446	496		
Shale	Gray	Soft	496	553		
Sand	White	Hard	553	575	½" Stream water	570
Shale	Gray & Dark	Soft	575	584		
Sand	White	Hard	584	768		
RR & Shale	Gray & Red	Med.	768	798	TD 798	
Sd. Shale & RR			798	1143		
. Lime	Redish	Hard	1143	1155		
B. Lime	Redish	Hard	1164	1297		

(over)

* Indicates Electric Log tops in the remarks section.

UPSHUR - 3495

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Injun	Pink	Hard	1301	1385		
Shale	Gray	Soft	1385	1572		
Shale	Reddish	Soft	1572		Gas 2222	No show
Sand	Gray	Med.	2575	2600		
Shale	Gray	Soft	2600	3690	Gas 3366	No show
Benson	Brown	Soft	3690	3715	Gas 3549	No show
Shale	Gray	Soft	3715		Gas 3722	5/10 - ½" - w/w
					Gas 3840	No show
					T.D. 3840	

GAMMA RAY TOPS

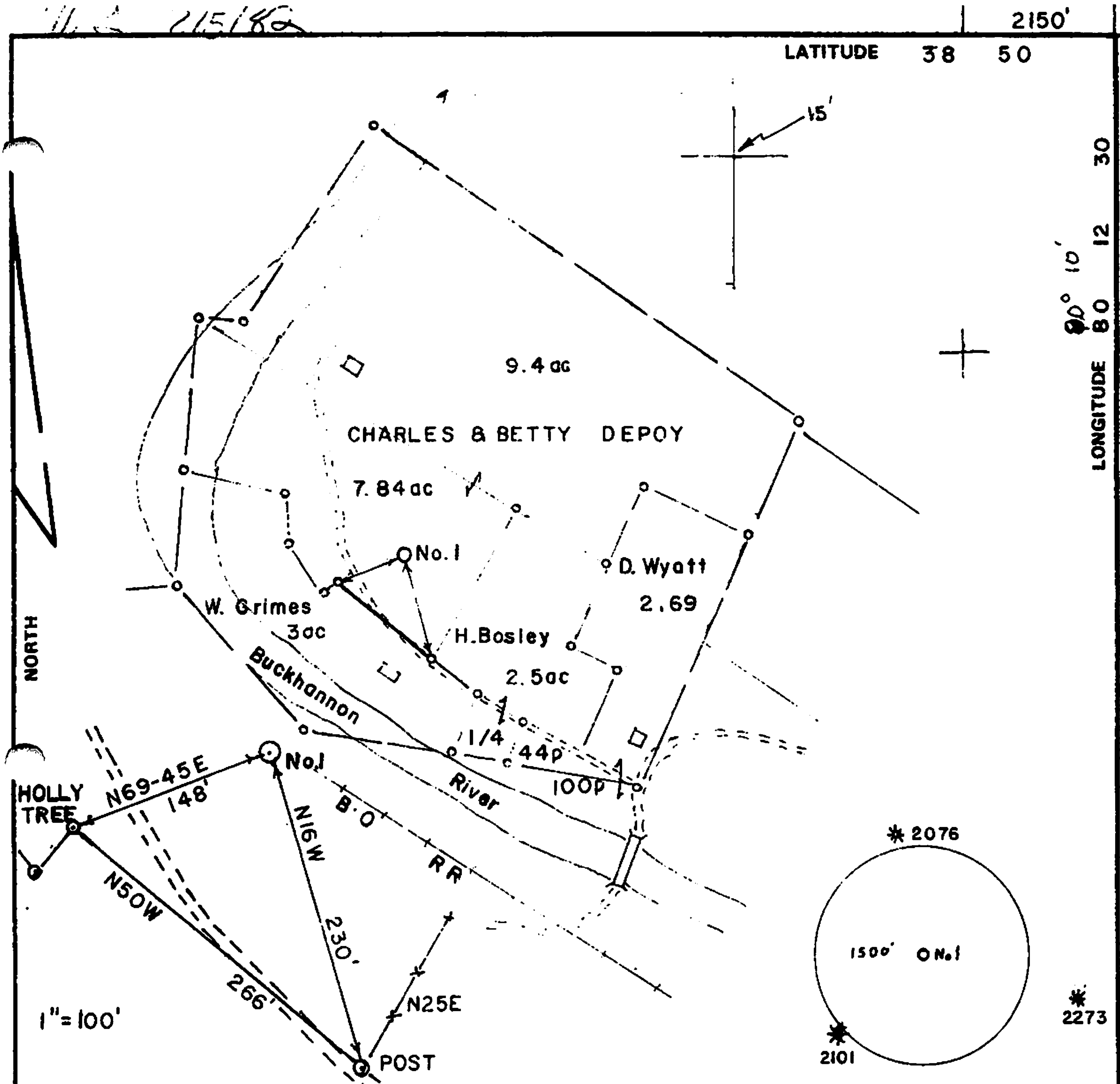
Big Lime	1159	1293
Big Injun	1298	1386
50 Foot	1411	1468
30 Foot	1474	1508
Gordon Stray	1524	1570
Gordon	1621	1684
4th Sand	1738	1772
4th "A" Sand	1776	1800
5th Sand	1818	1888
Bayard	1891	1945
Lower Bayard	1962	2028
Elizabeth	2104	2127
Warren	2173	2212
Balltown	2632	2781
Bradford	2944	3066
Riley	3170	3495
Benson	3660	3676

Date ____ 19 ____

APPROVED ____ Owner

By ____

W.S. 215182



FILE NO. 235/148
DRAWING NO. ___
SCALE 1" = 300'
MINIMUM DEGREE OF ACCURACY 1 in 200
PROVEN SOURCE OF ELEVATION B M 1802'

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.

(SIGNED) R. S. McWilliams

R.P.E. ___ L.L.S. 105

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FORM IV-6
(8-78)

DATE JULY 24, 1982
OPERATOR'S WELL NO. ___
API WELL NO.
47 - 097 - 2485
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW X

LOCATION: ELEVATION 1825 WATER SHED BUCKHANNON RIVER
DISTRICT WASHINGTON COUNTY UPSHUR
QUADRANGLE ALTON

SURFACE OWNER CHARLES-BETTY DEPOY ACREAGE 7.84
OIL & GAS ROYALTY OWNER C.-B. DEPOY et.al. LEASE ACREAGE 75 UNIT
LEASE NO. ___

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ___

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
TARGET FORMATION BENSON ESTIMATED DEPTH 3700'
WELL OPERATOR GEORGE JACKSON DESIGNATED AGENT SAME
ADDRESS BOX 1698
CLARKSBURG, WV 26302
ADDRESS ___

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
47-097-03808	Production	Active	4,297,740	567,678	Y	Y	7320	2072
47-097-02076	Production	Active	4,297,715	567,882	Y	Y	5310	1916
47-097-02824	Production	Active	4,297,467	567,330	Y	Y	4040	1996

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

MOUNTAIN V
OIL & GAS, INC.

PO Box 470
Bridgeport, WV 26330

Office: 304-842-6320
Fax: 304-842-0016

December 23, 2015

WV DEP
Office of Oil & Gas
Underground Injection Control (UIC)
601 57th Street, SE
Charleston, WV 25304

RE: UIC 2D0973422
Section 7 USDW & Water Source Statement

Dear Department:

Please note that the deepest USDW found in our investigations of wells within the AOR is 163 feet shown on the completion records of well with API 097-03808.

Should you have any further questions please contact me.

Sincerely

Jamie Andrews
Mountain V Oil & Gas, Inc.

MOUNTAIN V
OIL & GAS, INC.

PO Box 470
Bridgeport, WV 26330

Office: 304-842-6320
Fax: 304-842-0016

November 19, 2015

WV DEP
Office of Oil & Gas
Underground Injection Control (UIC)
601 57th Street, SE
Charleston, WV 25304

RE: UIC 2D0973422
Section 10 API 097-03808 Cement Issue
7.6

Dear Department:

It has been brought to our attention that the Department is concerned with well with API 097-03808 lacking cement through the injection zones. Please allow this statement to serve as our commitment, that Mountain V will monitor that well to ensure that no fluids migrate into the well bore of the well listed above.

Should you have any further questions please contact me.

Sincerely,

S. Michael Shaver
Mountain V Oil & Gas, Inc.

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 04-10-2012
API #: 47-097-03608

Monitor

Farm name: CUTRIGHT , BOYD Operator Well No.: ANNA CUTRIGHT 2 WV0426

LOCATION: Elevation: 2072 Quadrangle: ALTON 7.5

District: MEADE County: UPSHUR
Latitude: 38.49 32.8 Feet South of ____ Deg. ____ Min. ____ Sec.
Longitude 80.12 33.1 Feet West of ____ Deg. ____ Min. ____ Sec.

Company: MOUNTAIN V OIL and GAS

Address: P.O.BOX BRIDGEPORT WV 26330	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
	13 3/8		40	SAND IN
Agent: Mike Shaver	9 5/8		252	87 SK
Inspector: Bill Hatfield	7 "		1732	240 SK
Date Permit Issued: 09-08-2011	4 1/2 N 80		7315	150 SK10-23-2011
Date Well Work Commenced: 12-20-2011				
Date Well Work Completed: 01-05-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary ☑ Cable ☐ Rig ☐				
Total Vertical Depth (ft): 7320				
Total Measured Depth (ft): 7320				
Fresh Water Depth (ft.): 163				
Salt Water Depth (ft.): 1260				
Is coal being mined in area (N/Y)?				
Coal Depths (ft.): 216				
Void(s) encountered (N/Y) Depth(s)				

RECEIVED
Office of Oil & Gas
APR 17 2012
WV Department of
Environmental Protection

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)
Producing formation MARCELLUS Pay zone depth (ft) 7203 - 7308
Gas: Initial open flow 380,000 MCF/d Oil: Initial open flow 1200 Bbl/d
Final open flow 250,000 MCF/d Final open flow ____ Bbl/d
Time of open flow between initial and final tests 24 Hours
Static rock Pressure 2000 psig (surface pressure) after 24 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

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the 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.

Signature Date 4-16-12

RECEIVED
Office of Oil and Gas
JUN 10 2015
WV Department of
Environmental Protection

Were core samples taken? Yes_____ No X Were cuttings caught during drilling? Yes X No_____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list ELECTRICAL

NOTE: IN THE AREA BELOW 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 THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

PERFS 7296 -729024 HOLES, 7288 - 7282 24 HOLES, 7246 4 HOLES, 7276 - 7268 16 HOLES
7264.5 - 7259 22 HOLES
15927 BBL H2O, 16617 SLURRY, 2000 SK 80/100, 4014 40/70
AVG PRESURE 4487 AVG RATE 76.8
ISIP 2193

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered: Surface: Top Depth / Bottom Depth

GROUND EL	2072
GREENBRIER BIG LIME	1354 - 1580
INJUN	1580 - 1499
BENSON	3870 - 3899
ALEXANDER	4090 - 4370
ELK	4370 - 6632
GENESEO	7080 - 7096
TULLY	7096 - 7134
HAMILTON SHALE	7134 - 7203
UPPER MARCELLUS	7203 - 7238
PURCELL	7238 - 7242
LOWER MARCELLUS	7242- 7308
ONONDAGA	7308 - 7320

FORM IV-35
(Obverse)
1-31-77

Date: May 30, 1980
Operator's Well No. A-864
API Well No. 47 - 097 - 2076
State County Permit

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

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___/ Gas X / Liquid Injection ___/ Waste Disposal ___/
(If "Gas", Production ___/ Underground storage ___/ Deep ___/ Shallow XX /)

LOCATION: Elevation: 1916' Watershed: Buckhannon River
District: Meade County: Upshur Quadrangle: Alton 7.5'

WELL OPERATOR ALLEGHENY LAND & MINERAL CO.
Address P. O BOX 1740
CLARKSBURG, W. VA. 26301

DESIGNATED AGENT ALLEGHENY LAND & MINERAL CO.
Address P. O. BOX 1740
CLARKSBURG, W. VA. 26301

PERMITTED WORK: Drill X / Convert ___/ Drill deeper ___/ Redrill ___/ Fracture or stimulate ___/
Plug off old formation ___/ Perforate new formation ___/
Other physical change in well (specify) _____

PERMIT ISSUED ON March 24, 1980

(IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ___, 19___)

OIL & GAS INSPECTOR FOR THIS WORK:
Name Robert S. Stewart
Address P. O. Box 345
Jane Lew, WV 26378

GEOLOGICAL TARGET FORMATION: Elk Depth 5,500 feet

Depth of completed well, 5310 feet Rotary X / Cable Tools ___

Water strata depth: Fresh, ___ feet; salt, ___ feet.

Coal seam depths: 346-349' Is coal being mined in the area? ___

Work was commenced May 5, 1980, and completed May 10, 1980

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS Size	Grade	Weight per ft.	New	Used	FOOTAGE INTERVALS For drilling	Left in well	CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
Conductor	16"			X		10'	10'		Kinds
Fresh water									
Coal	8-5/8"			X		1116½'	1116½'	Cemented to surface	
Intermediate									Depth 650'
Production	4½"			X		3842'	3842'	" "	
Tubing									Perforations:
Liners									Top Bottom

OPEN FLOW DATA

Producing formation Riley Sand / 4th Sand ---------- Pay zone depth 3420-3438 / 1958-2018' feet

Gas: Initial open flow, ___ Mcf/d Oil: Initial open flow, ___ Bbl/d
Final open flow, 852 Mcf/d Final open flow, ___ Bbl/d
All sands -
Time of open flow between initial and final tests, ___ hours
Static rock pressure, 840# psig (surface measurement) after 72 hours shut in

(If applicable due to multiple completion--)
Second producing formation Benson Sand / Riley Sand ---------- Pay zone depth 3754-3766 / 3462-3485' feet

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 measurement) after ___ hours shut in

(Continued on reverse side)

FORM IV-35
Reverse

(38-78)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Fractured - May 15, 1980 by Dowell

Perforations: 1959 - 2005' - 16 holes

3422 - 3574' - 16 "

3749 - 3754' - 16 " (Bottom log not on depth)

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Clay			0	15	
Sand & Shale			15	346	
COAL *****			346	349	Coal *****
Sand & Shale			349	1252	
Big Lime			1252	1372	
Injun Sand			1372	1466	
Sand & Shale			1466	1958	
4th Sand			1958	2018	
Sand & Shale			2018	2058	
5th Sand			2058	2096	
Sand & Shale			2096	2264	
Speechly Sand			2264	2274	
Sand & Shale			2274	3420	
Riley Sand			3420	3438	
Sand & Shale			3438	3462	
Riley Sand			3462	3485	
Sand & Shale			3485	3754	
Benson Sand			3754	3766	
Sand & Shale			3766	5310	
	total depth			5310(Driller)	

Partial Abandonment:

Total depth - 5310'
Cement - 5310 - 5100'
Aquagel - 5100 - 3850'
Cement - 3850 - 1650'

(Attach separate sheets to complete as necessary)

Allegheny Land & Mineral Company
Well Operator

By Claron Dawson

Its Supt.

NOTE: *Regulation 2.02(i) provides as follows:*

"The term 'log' or 'well log' shall mean a systematic, detailed geological record of all formations, including coal, encountered in the drilling of a well."

IV-35
(Rev 8-81)

RECEIVED
APR 18 1988
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
Department of Mines
Oil and Gas Division

Date April 13, 1988
Operator's
Well No. Gillum #1 Well
Farm
API No. 47 - 097 - 2824

Monitor

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas X / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production ___ / Underground Storage ___ / Deep ___ / Shallow X /)

LOCATION: Elevation: 1996.80' Watershed Queens Fork of French Creek
District: Meade County Upshur Quadrangle Alron 7.5'

COMPANY Chesterfield Energy Corporation
ADDRESS 203 West Main St.,Clarksburg, WV 26301
DESIGNATED AGENT Samuel J. Cann
ADDRESS 203 West Main St.,Clarksburg, WV 26301
SURFACE OWNER A.A. Gillum & Lucy Gillum
ADDRESS Rt. #2, Box 151, French Creek, WV 26218
MINERAL RIGHTS OWNER A.A. Gillum & Lucy Gillum
ADDRESS Rt. #2, Box 151, French Creek, WV 26218
OIL AND GAS INSPECTOR FOR THIS WORK
Phillip Tracy ADDRESS
PERMIT ISSUED October 7, 1987
DRILLING COMMENCED March 31, 1988
DRILLING COMPLETED April 4, 1988
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8		928'	225 sks
7			
5 1/2			
4 1/2		3967'	120 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Benson Depth ___ feet
Depth of completed well 4040 feet Rotary X / Cable Tools ___
Water strata depth: Fresh 111' feet; Salt ___ feet
Coal seam depths: 66'-70' Is coal being mined in the area? ___

OPEN FLOW DATA
Producing formation Benson Pay zone depth ___ feet
Gas: Initial open flow -0- Mcf/d Oil: Initial open flow ___ Bbl/d
Final open flow 527 Mcf/d Final open flow ___ Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1020 psig(surface measurement) after 24 hours shut in
(If applicable due to multiple completion--)
Second producing formation ___ Pay zone depth ___ feet
Gas: Initial open flow ___ Mcf/d Oil: Initial open flow ___ Bbl/d
Final open flow ___ Mcf/d Oil: Final open flow ___ Bbl/d
Time of open flow between initial and final tests ___ hours
Static rock pressure ___ psig(surface measurement) after ___ hours shut in

(Continue on reverse side)

UPSH. 2824

FORM IV-35
(REVERSE)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Benson 55,000# 20/40
422,000 SCF Nitrogen
574 BBLS Sand Laden Fluid

WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Surface	0	12	½" stream water @ 111'
Sand	12	66	
Coal	66	70	
Shale	70	137	
Sand	137	327	
Sand & Shale	327	353	
Sand	353	391	Gas Ck @ 1470' No Show
Sand & Shale	391	455	Gas Ck @ 1751' No Show
Shale	455	960	Gas Ck @ 1847' No Show
Red Rock & Shale	960	1093	Gas Ck @ 2377' No Show
Sand	1093	1350	Gas Ck @ 3534' No Show
Big Lime	1350	1448	Gas Ck @ 3722' No Show
Injun	1448	1570	
Sand & Shale	1570	1852	
Red Rock	1852	2148	
5th Sand	2148	2198	
Shale	2198	2294	
Bayard	2294	2315	
Sand & Shale	2315	2650	
Shale	2650	3480	
Riley	3480	3550	
Shale	3550	3899	
Benson	3899	3950	
Shale	3950	4040	
TD	4040		

(Attach separate sheets as necessary)

CHESTERFIELD ENERGY CORPORATION
Well Operator
By: Samuel J. Cain
Date: April 13, 1988

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

(Revised)

RECEIVED
SEP 2 1980
OIL & GAS DIVISION
DEPT. OF MINES

Date: August 20, 1980
Operator's
Well No. 4-1577-UC

API Well No. 47- 097-2101
Floria Dinser #4

State of West Virginia
Department of Mines
Oil and Gas Division
WELL RECORD

Well Type: Oil ____ / Gas X / Liquid Injection ____ / Waste Disposal ____ /
(If "Gas", Production ____ / Underground storage ____ / Deep ____ / Shallow X /

Location: Elevation: 1820' Watershed Big Run into Buckhannon River
District: Meade County: Upshur Quadrangle: Alton

Well Operator Union Drilling, Inc. Designated Agent Union Drilling, Inc.
Address P.O. Drawer 40 Address P.O. Drawer 40
Buckhannon, WV 26201 Buckhannon, WV 26201

Permitted Work: Drill X / Covert ____ / Drill deeper ____ / Redrill ____ /
Fracture or stimulate X / Plug off old formation ____ /
Preforate new formation ____ / Other physical change in well (specify) ____

Permit Issued on April 25, 1980

Oil & Gas Inspector for This Work:
Name: Robert Stewart
Address: P.O. Box 345
Jane Lew, WV 26378

Geological Target Formation: Benson Depth 4000 feet
Depth of completed well, 3899 feet Rotary X / Cable Tools ____ /
Water strata depth: Fresh 3'@57', 2'@68', 2'@130', 3'@362' feet; Salt, ____ feet.
Coal seam depths: None Is coal being mined in the area? No
Work was commenced June 15, 1980, and completed June 22, 1980

Casing and Tubing Program

Casing or Tubing Type	Specifications: Size	Grade	Weight per ft	New	Used	Footage Intervals: For drilling	Left in well	Cement Fill-Up Or Sacks (cubic feet)
Conductor	16 "			X		30'	30'	
~~Conductor~~ Fresh Water	11 3/4"			X		85'	85'	100 sks.
Coal								
Intermediate	8 5/8"		23#	X		817.60'	817.60'	210 sks.
Production	4 1/2"		10½#	X		3760.25'	3760.25'	200 sks.
Tubing								
Liners								

Well Treatment details:
Dowell - Cross Link Fractured - July 29,1980
--Benson ——— 315 Bbls.————30,000# Sand———Depth 3668/70', 3673/75'

Gas: Initial open flow, Show Mcf/d Oil: Initial open flow, ____ Bbl/d
Final open flow, 581 Mcf/d Final open flow, ____ Bbl/d
Static Rock Pressure, 1425# psig (surface measurement) after 24 hours shut in.

(Well log on reverse side)

Formation Color Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Clay	0	31		
Sand	31	237		
Sand & Shale	237	639		
Sand	639	705		
Sand, Shale & Red Rock	705	1118		
Little Lime	1118	1133		
Sand & Shale	1133	1170		
Big Lime	1170	1264		
Sand & Shale	1264	1429		
Gantz	1429	1450		
Sand & Shale	1450	1766		
4th Sand	1766	1804		
Sand & Shale	1804	1876		
5th Sand	1876	1911		
Shale	1911	1927		
Bayard	1927	2013		
Sand & Shale	2013	2110		
Elizabeth	2110	2130		
Sand & Shale	2130	3486		
2nd Riley	3486	3514		
Sand & Shale	3514	3675		
Benson	3675	3691		
Sand &Shale	3691	3899 TD		

Date August 20, 19 80

APPROVED Union Drilling, Inc. Owner

By Joseph C. Pettey

Joseph C. Pettey, Production Manager

Rev. - 9-71

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

RECEIVED
OCT 26 1981
OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

Rotary X Oil ____
Cable ____ Gas X
Recycling ____ Comb. ____
Water Flood ____ Storage ____
Disposal ____ ____ (Kind)

Quadrangle Alton

Permit No. 47-097-2287

Company Consolidated Gas Supply Corp.
Address 445 W. Main St., Clarksburg, WV
Farm Jay A. Samples Acres 1/2 of 95.2
Location (waters) Big Run
Well No. 12732 Elev. 2094'
District Meade County Upshur
The surface of tract is owned in fee by
Ernest C. & Diane Y. Austin
Address Rt 1, Box 152 French Creek, WV
Mineral rights are owned by Jay Samples
Address Rt 5 Box 32A, Buckhannon, WV
Drilling Commenced 9-07-81
Drilling Completed 9-12-81
Initial open flow 71 M cu. ft. - bbls.
Final production 1799M cu. ft. per day ____ bbls.
Well open 4 hrs. before test 1 DAY 1425# RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16 Cond.			
13"-10" 11 3/4"	29	29	Surface
9 5/8			
8 5/8	1020	1020	Surface
7			
5 1/2			
4 1/2	4072	4072	180 sks
3			
2			
Liners Used			

Well treatment details:
Attach copy of cementing record.

Well fractured in Benson with 90,000# sand, 900 bbls. of water & 500 gals. 15% Hcl.
Perforations: 3968 - 3978' with 10 holes.

Coal was encountered at 68, 73, 83, 124, 330 Feet 24, 24, 24, 36, 36 Inches
660, 690
Fresh water 15 Feet ____ Salt Water 72, 120 Feet ____
Producing Sand Benson Depth 3968 - 3978'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Soil			0	12		
Sandy Shale			12	20	Hole wet	
Sand & Shale			20	68		
Coal			68	70		
Shale			70	73		
Coal			73	75		
Sandy Shale			75	83		
Coal			83	85		
Shale & Sand			85	124		
Coal			124	127		
Sand & Shale			127	330		
Coal			330	333		
Sand			333	450		
Sand and Shale			450	660		
Coal			660	666		
Sand & Shale			666	690		
Coal			690	700		
Sand & Shale			700	1050		
Red Rock			1050	1110		
Sand & Shale			1110	1290		
Red Rock			1290	1320		
Sand & Shale			1320	1457		
Lime			1457	1569		
Red Rock			1569	1580		
Shale & Sand			1580	1750		

(over)

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Red Rock			1750	1825		
Shale			1825	2090		
Red Rock & Shale			2090	2140		
Sand & Shale			2140	3300		
Shale			3300	3406		
Sand & Shale			3406	3680		
Shale			3680	3975		
Benson			3975	3990		
Sand & Shale			3990	4123 T.D.		
Gamma Ray Tops						
Little Lime			1344	1371		
Blue Monday			1393	1406		
Big Lime			1414	- -		
Big Injun			- -	1637		
Gantz A			1641	1663		
Fifty Foot			1679	1723		
Thirty Foot			1733	1785		
Gordon Stray			1794	- -		
Gordon			- -	1948		
Fourth			2004	- -		
Fourth A			- -	2063		
Fifth			2080	2152		
Bayard			2160	2218		
Lower Bayard			2233	2300		
Elizabeth			2377	2398		
Warren			2448	2484		
Balltown			2914	3046		
Bradford			3205	3313		
Riley			3468	3796		
Benson			3961	3983		
Total Depth				4129		

Date October 22, 1981

APPROVED Consolidated Gas Supply Corp. Owner

By L E Brown Manager of Prod.

IV-35
(Rev 8-81)

Date September 17, 1987
Operator's
Well No. 1 - 2534
Farm W.A. Love #1
API No. 47 - 097 - 2802

RECEIVED
SEP 18 1987
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
Department of Mines
Oil and Gas Division

WELL OPERATOR'S REPORT OF DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas X / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production ___ / Underground Storage ___ / Deep ___ / Shallow XX /)

LOCATION: Elevation: 1925 feet Watershed Buckhannon River
District: Meade County Upshur Quadrangle Alton

COMPANY Union Drilling, Inc.
ADDRESS P.O. Drawer 40, Buckhannon, WV 26201
DESIGNATED AGENT Joseph C. Pettey
ADDRESS P.O. Drawer 40, Buckhannon, WV 26201
SURFACE OWNER Kenneth B. & Joan K. Harmon
ADDRESS 18 Foxmill Dr., Buckhannon, WV 26201
MINERAL RIGHTS OWNER Winston A. & Helen H. Love
ADDRESS P.O. Box 671, Marietta, Ohio 45740
OIL AND GAS INSPECTOR FOR THIS WORK Phillip Tracy ADDRESS P.O. Box 2536, Elkins, WV 26241
PERMIT ISSUED 5-22-87
DRILLING COMMENCED 8-12-87
DRILLING COMPLETED 8-17-87
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8	928.65	928.65	289.10 cf
7			
5 1/2			
4 1/2		3881.40	264 cf
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Benson Depth 4100 feet
Depth of completed well 3972 feet Rotary X / Cable Tools ___
Water strata depth: Fresh 170 feet; Salt none feet
Coal seam depths: 80/85, 463/466, 563/568, 730/732, 791/794 Is coal being mined in the area? ___

OPEN FLOW DATA
Producing formation Benson Pay zone depth 3804 feet
Gas: Initial open flow 21 Mcf/d Oil: Initial open flow ___ Bbl/d
Final open flow 581 Mcf/d Final open flow ___ Bbl/d
Time of open flow between initial and final tests 2 hours
Static rock pressure 1050 psig (surface measurement) after 24 hours shut in
(If applicable due to multiple completion--)
Second producing formation ___ Pay zone depth ___ feet
Gas: Initial open flow ___ Mcf/d Oil: Initial open flow ___ Bbl/d
Final open flow ___ Mcf/d Oil: Final open flow ___ Bbl/d
Time of open flow between initial and final tests ___ hours
Static rock pressure ___ psig (surface measurement) after ___ hours shut in

WPSH - 2802

(Continue on reverse side)

FORM IV-35
(REVERSE)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Halliburton - 1 stage foam frac - 8-27-87

3799/3804 - Benson - 90,000# sand, 1115 gal. fluid, 800,000 scf nitrogen

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale			0	80	
Coal			80	85	
Sand & Shale			85	463	1/2" stream H20 at 170 feet
Coal			463	466	
Sand & Shale			466	563	
Coal			563	568	
Sand & Shale			568	730	
Coal			730	732	
Sand & Shale			732	791	
Coal			791	794	
Shale			794	801	
Red Rock			801	823	
Sand & Shale			823	827	
Red Rock			827	858	
Sand & Shale			858	908	
Red Rock & Shale			908	948	
Sand & Shale			948	1028	
Red Rock			1028	1047	
Sand & Shale			1047	1060	
Red Rock			1060	1160	
Little Lime			1160	1205	
Big Lime			1237	1366	
Big Injun			1370	1464	
4th Sand			1838	1881	
5th Sand			1953	2002	Gas Check at 2000 feet - no show
Lower Bayard			2045	2908	
Elizabeth			2186	2214	
Warren			2261	2297	Gas Check at 2287 feet - sm. odor
Speechley			2507	2522	
Balltown			2734	2817	
Bradford			3731	3119	
1st Riley			3399	3432	
2nd Riley			3542	3600	
3rd Riley			3691	3740	
Benson			3793	3810	
				3972 TD	Gas check at TD - 4/10 thru 1" w/ water = 21 Mcf

RECEIVED
SEP 18 1987
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

Union Drilling, Inc.
Well Operator

By: Joseph C. Pettey
Joseph C. Pettey, Vice President of Production

Date: 9-17-87

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

IV-35
(Rev 8-81)

RECEIVED
DEC 06 1988
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
Department of Mines
Oil and Gas Division

Date November 30, 1988
Operator's
Well No. Gillum #2 Well
Farm
API No. 47 - 097 - 2849

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas X / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production ___ / Underground Storage ___ / Deep ___ / Shallow X /)

LOCATION: Elevation: 2075' Watershed Queens Fork of French Creek
District: Meade County Upshur Quadrangle Alton 7.5

COMPANY Chesterfield Energy Corporation
ADDRESS 203 West Main St.,Clarksburg, WV 26301
DESIGNATED AGENT Samuel J. Cann
ADDRESS 203 West Main St.,Clarksburg, WV 26301
SURFACE OWNER Artsel A. Gillum
ADDRESS Rt. 2, Box 151, French Creek, WV 26218
MINERAL RIGHTS OWNER Artsel A. Gillum
ADDRESS Rt. 2, Box 151, French Creek, WV 26218
OIL AND GAS INSPECTOR FOR THIS WORK Phillip Tracy ADDRESS P.O.Box 2536, Elkins, WV
PERMIT ISSUED November 10, 1988
DRILLING COMMENCED November 16, 1988
DRILLING COMPLETED November 19, 1988
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8		890'	225 sks
7			
5 1/2			
4 1/2		4010'	200 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Benson Depth ___ feet
Depth of completed well 4059 feet Rotary XX / Cable Tools ___
Water strata depth: Fresh 48',454' feet; Salt ___ feet
Coal seam depths: 127'-131', 372'-378', 630', 454'-458' Is coal being mined in the area? ___

OPEN FLOW DATA
Producing formation Benson Pay zone depth 3905'-3922' feet
Gas: Initial open flow 21.06 Mcf/d Oil: Initial open flow ___ Bbl/d
Final open flow 169 Mcf/d Final open flow ___ Bbl/d
Time of open flow between initial and final tests 72 hours
Static rock pressure 1050 psig(surface measurement) after 48 hours shut in
(If applicable due to multiple completion--)
Second producing formation ___ Pay zone depth ___ feet
Gas: Initial open flow ___ Mcf/d Oil: Initial open flow ___ Bbl/d
Final open flow ___ Mcf/d Oil: Final open flow ___ Bbl/d
Time of open flow between initial and final tests ___ hours
Static rock pressure ___ psig(surface measurement) after ___ hours shut in

(Continue on reverse side)

FORM IV-35
(REVERSE)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Benson 75 Quality Foam
15 Holes 3905' - 3912'
56,000# 20/40, 266 BBLS, 22 GAL F18, 8 Gal U42
422,000 SCF Nitrogen

WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Ground Level	0	10	
Sand & Shale	10	127	½" stream water @ 48'
Coal	127	131	½" stream water @ 454'
Sand & Shale	131	372	½" stream water @ 630'
Coal	372	378	
Sand & Shale	378	454	
Coal	454	458	
Shale	458	806	
Sand	806	920	
Sand & Shale	920	1349	
Little Lime	1349	1364	
Shale	1364	1410	
Big Lime	1410	1554	
Injun	1554	1620	Gas Ck @ 1565' No Show
Sand & Shale	1620	1942	Gas Ck @ 1939' No Show
Gordon	1942	1964	Gas Ck @ 2218' Odor
Sand & Shale	1964	2216	Gas Ck @ 2374' Odor
Fifth Sand	2216	2268	Gas Ck @ TD 4/10-1" w/w
Shale	2268	2362	
Bayard	2362	2385	
Sand & Shale	2385	3555	
1st Riley	3555	3578	
Shale	3578	3730	
2nd Riley	3730	3744	
Shale	3744	3905	
Benson	3905	3922	
Shale	3922	4059	
TD	4059		

(Attach separate sheets as necessary)

CHESTERFIELD ENERGY CORPORATION
~~Well Operator~~
By: [signature]
Date: November 30, 1988

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

MOUNTAIN V
OIL & GAS, INC.

PO Box 470
Bridgeport, WV 26330

Office: 304-842-6320
Fax: 304-842-0016

November 19, 2015

WV DEP
Office of Oil & Gas
Underground Injection Control (UIC)
601 57th Street, SE
Charleston, WV 25304

RE: UIC 2D0973422
Section 7 USDW & Water Source Statement

Dear Department:

It has been brought to our attention that the Department is confused as to the difference between USDW statements and the possible water sources contained within our UIC re-permit as noted in Section 7 of permit. As noted in Section 7, Mountain V consulted the Upshur County Health Department and the Adrian PSD in efforts to establish any USDW's within a one (1) mile radius. As you can see there are NO USDWs within that perimeter, and we obtained letters from both authorities stating as such. There are, however, seven (7) possible water sources (private potable water sources) within the one (1) mile radius. In order to establish a testing result baseline for potable drinking water in the area, our contractor locates all residences within that area in order to properly notify them of our intent and to inquire as to their source of drinking water (that is why there are seven (7) "possible" water sources). As you can see by the results of those contacts, we found two residences that permitted their water sources to be tested. Those tests were submitted per Section 7(4) in order to establish a baseline for water sources in the area.

Should you have any further questions please contact me.

Sincerely,

S. Michael Shaver
Mountain V Oil & Gas, Inc.

UPSHUR-BUCKHANNON HEALTH DEPARTMENT

15 N. LOCUST STREET

BUCKHANNON, WV 26201

PHONE: 304-472-2810 FAX: 304-472-2945

Jamie Andrews

Mountain V Oil and Gas Inc.

Mr. Andrews:

I am pleased to respond to your inquiry regarding any drinking water facilities located in the Alton area within a one (1) mile radius. The Upshur-Buckhannon Health Department is not aware of any water wells located within that radius that would meet the definition of the EPA Safe Drinking Water Act.

Should you have any further questions or comments about the above, please contact me at 304/472-2810.

Sincerely,

Mark S. Whittaker, R.S.

Upshur-Buckhannon Health Department

(4/25)

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)

Adrian Public Service District

that there are no such publically recorded sources.

Linda L Weaver

(Signature of Authorized Representative)

Sworn and subscribed to before me this 8th day of June, 2015.

_____, my commission expires October 28, 2018

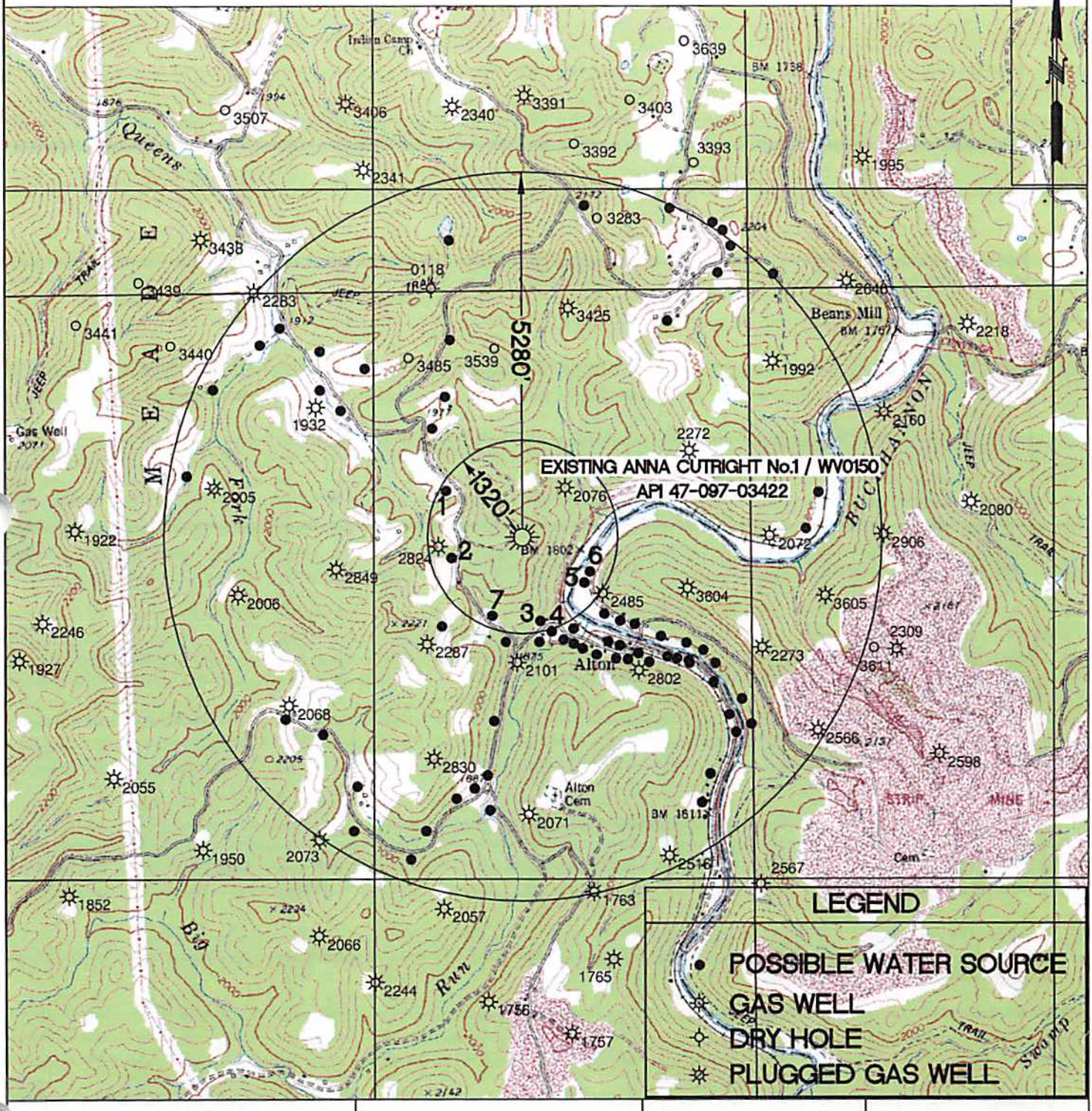
(Notary Signature)

Nina Monroe.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
NINA MONROE
86 FAYETTE STREET
BUCKHANNON, WV 26201
My commission expires October 28 2018

EXISTING ANNA CUTRIGHT No.1 / WV0150
API 47-097-03422

There appears to be One (7) possible water sources with in 1320'.
There appears to be One (71) possible water sources with in 5280'.



	OPERATOR	TOPO SECTION	LEASE NAME
ANGLE RIGHT LAND SURVEYING, LLC 795 W. 2ND ST. WESTON, WV 26452 (304) 269-5608	MOUNTAIN V OIL & GAS, INC. 104 HELIPORT ROAD P.O. BOX 470 BRIDGEPORT, WV 26330	ALTON 7.5'	ANNA CUTRIGHT
		SCALE:	DATE:
W090191		1"=2000'	05/28/15

APPENDIX E
Water Sources

Operator: Mountain V Oil & Gas, Inc Year 2015 UIC Permit # 2D0973422

		Source # 240732-2015-DW	Source # 240733-2015-DW	Source # 240734-2015-DW	Source #
Water Source Name		Cutright Spring	Cutright 2	Depoy	
Northing		4,297,391	4,297,391	4,297,320	
Easting		567,389	567,389	567,994	
Parameter	Units				
TPH - GRO	mg/L	ND	ND	ND	
TPH - DRO	mg/L	ND	ND	ND	
TPH - ORO	mg/L	ND	ND	ND	
BTEX	mg/L	ND	ND	ND	
Chloride	mg/L	0.48	2.30	2.38	
Sodium	mg/L	ND	1.11	25.0	
Total Dissolved Solids (TDS)	mg/L	102	70	84	
Aluminum	mg/L	ND	0.07	0.13	
Arsenic	mg/L	ND	ND	ND	
Barium	mg/L	0.17	0.07	0.48	
Iron	mg/L	0.03	1.44	0.97	
Manganese	mg/L	ND	ND	ND	
pH	SU	7.69	6.67	7.72	
Calcium	mg/L	40.0	17.0	17.1	
Sulfate	mg/L	13.0	5.00	ND	
MBAS	mg/L	ND	ND	ND	
Dissolved Methane	mg/L	ND	25.3	7500	
Dissolved Ethane	mg/L	ND	ND	56.8	
Dissolved Butane	mg/L	ND	ND	6.09	
Dissolved Propane	mg/L	ND	ND	ND	
Bacteria (Total Coliform)	c/100mL	Present	PRESENT	PRESENT	

Angle Right Land Surveying LLC
PO BOX 681
Grantsville,WV 26147

MT V Oil & Gas
PO BOX 470
Bridgeport,WV 26330
Anna Cutright #1/WV0150
Api 47-097-03422
12-5-15
water samples

Orville Cutright	water sample #1 was taken from kitchen sink which is used for 2 households.
Orville Cutright	water sample #2 is taken from a well in which the water is stored in a concrete holding tank (4x8) this water is used for gardening etc.
Brenda Depoy	water sample was taken from well that had a frost free water spigot.
Community Building	water not in use see attached
Charles Depoy Jr	city water

ANGLE RIGHT
LAND SURVEYING, LLC.
GRANTSVILLE, WV 26147
(304) 354-0065

TO WHOM IT MAY CONCERN,

ON BEHALF OF MPV, ANGLE RIGHT LAND SURVEYING, LLC, HAS BEEN CONTRACTED TO TAKE CARE OF SOME OFTHE PRELIMINARY PREPARATION WORK FOR A PROPOSED OIL AND GAS WELL PERMIT APPLICATION. THIS INCLUDES OBTAINING WATER WELL SAMPLES FROM SOME OF THE NEARBY RESIDENTS. COLLECTED SAMPLES WILL BE SENT OFF BY ANGLE RIGHT LAND SURVEYING LLC FOR TESTING BY AN INDEPENDENT LABORATORY.

DUE TO 1994 REGULATIONS SET BY THE STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION, DEPARTMENT OF OIL AND GAS, OPERATORS ARE REQUIRED TO OFFER WATER WELL TESTING FOR WATER WELLS THAT FALL WITHIN 1000 FEET OF THE PROPOSED GAS/OIL WELL. THIS TEST WILL ONLY HELP INSURE THE WATER QUALITY CONTROL WHICH IN TURN BENEFITS YOU AS THE RESIDENT.

IF YOU ARE INTERESTED IN HAVING YOUR WATER TESTED BEFORE THE DRILLING PROCESS BEGINS PLEASE NOTIFY TERRY A. SHREVE AT THE ABOVE PHONE. PLEASE HAVE THIS LETTER WITH YOU AT THE TIME OF CONTACT SO THAT THE WELL NUMBER LISTED AT THE BOTTOM OF THE PAGE MAY BE REFERENCED. YOU WILL RECEIVE THE RESULTS FROM THE AFOREMENTIONED TEST AS SOON AS THE LABORATORY TEST IS RECEIVED BY ANGLE RIGHT LAND SURVEYING LLC.

THANK YOU FOR YOUR COOPERATION ON THIS MATTER AND I LOOK FORWARD TO HEARING FROM YOU . IF YOU HAVE ANY QUESTIONS FEEL FREE TO CONTACT ME AT:

ANGLE RIGHT LAND SURVEYING LLC
P.O. BOX 681
GRANTSVILLE, WV 26147
(304) 354-0065 (VOICE OR FAX)
(304) 354-9464 (VOICE OR FAX)
(304) ~~488-3580~~ 613-5040 (CELL AND VOICEMAIL)

DATE: 5/27/15
LEFT BY: KS
WELL NO.: Anna Cutright

YOUR RESPONSE WITHIN 14 DAYS WOULD BE GREATLY APPRECIATED.

SINCERELY,

TERRY A. SHREVE PS 1098

formerly owned in Charles Depoy Jr Roger
Depoy well not in use City water wants well location

IF YOU DO NOT FEEL THE NEED TO HAVE YOUR WATER WELL SAMPLED, PLEASE SIGN ON THE LINE BELOW AND RETURN TO THE ABOVE ADDRESS. THIS WILL SIGNIFY THAT A WATER TEST HAS BEEN OFFERED TO THE SURFACE OWNER AND HAS BEEN DECLINED.

Jessie Depoy DATE: 5/27/15

ANGLE RIGHT
LAND SURVEYING, LLC.
GRANTSVILLE, WV 26147
(304) 354-0065

TO WHOM IT MAY CONCERN,

ON BEHALF OF MTV ANGLE RIGHT LAND SURVEYING, LLC, HAS BEEN CONTRACTED TO TAKE CARE OF SOME OFTHE PRELIMINARY PREPARATION WORK FOR A PROPOSED OIL AND GAS WELL PERMIT APPLICATION. THIS INCLUDES OBTAINING WATER WELL SAMPLES FROM SOME OF THE NEARBY RESIDENTS. COLLECTED SAMPLES WILL BE SENT OFF BY ANGLE RIGHT LAND SURVEYING LLC FOR TESTING BY AN INDEPENDENT LABORATORY.

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THANK YOU FOR YOUR COOPERATION ON THIS MATTER AND I LOOK FORWARD TO HEARING FROM YOU . IF YOU HAVE ANY QUESTIONS FEEL FREE TO CONTACT ME AT:

ANGLE RIGHT LAND SURVEYING LLC
P.O. BOX 681
GRANTSVILLE, WV 26147
(304) 354-0065 (VOICE OR FAX)
(304) 354-9464 (VOICE OR FAX)
(304) ~~488-3680~~ 613-5040 (CELL AND VOICEMAIL)

DATE: 5/27/15
LEFT BY: KS
WELL NO.: Anna Cutright

YOUR RESPONSE WITHIN 14 DAYS WOULD BE GREATLY APPRECIATED.

SINCERELY,

TERRY A. SHREVE PS 1006

Community building well not in use

IF YOU DO NOT FEEL THE NEED TO HAVE YOUR WATER WELL SAMPLED, PLEASE SIGN ON THE LINE BELOW AND RETURN TO THE ABOVE ADDRESS. THIS WILL SIGNIFY THAT A WATER TEST HAS BEEN OFFERED TO THE SURFACE OWNER AND HAS BEEN DECLINED.

Francis Depoy DATE: 5/27/15
Board Member

RELIANCE LABORATORIES, IN - CHAIN OF CUSTODY RECORD

☐ 2044 MEADOWBROOK ROAD
POST OFFICE BOX 4657
BRIDGEPORT, WV 26330
TEL. (304) 842-5285 • FAX (304) 842-5351
E-MAIL reliancelabs@wvdsl.net
INTERNET www.RelianceLabs.net

☐ RIDGEFIELD BUSINESS CENTER
25 CRIMSON CIRCLE
MARTINSBURG, WV 25403
TEL. (304) 596-2084 • FAX (304) 596-2086

*CLIENT NAME Angle Right Land

*ADDRESS POBOX 1681 Grantsville WV 26147

CUSTOMER # C05493 *TEL.# 354-0065 FAX # _____

*SAMPLER (S) Karen Shreve E-MAIL _____

SHEET NO. 1 OF 1

LABORATORY #	*DATE	*TIME	COMP	GRAB	MATRIX W, DW, S, O, M	TEMP. ≤ 4°C Yes No	*# OF CONTAIN.	HN03	H2S04	HCL	NaOH	BAC-T	NO PRES.	Intrusion	Intrusenmetals	TSS, Sulfate	As, Ca	DRO/ORO	GRO/BTEX	Methane/Ethane/Ethene	Propane	*PROJECT/REMARKS
240732	11/2015	9:00		✓	DW	15.0	9	1		4v		1	1P 2J	✓	✓	✓	✓	✓	✓	✓		Cutright 1 Spring
240733	11/2015	9:20		✓	DW	↓	8	1		3v		1	1P 2J	↓	↓	↓	↓	↓	↓	↓		Cutright 2
240734	11/2015	10:00		✓	DW	↓	7	1	1v	2v		1	1P 1J	↓	↓	↓	↓	↓	↓	↓		Depoy

Received
Office of Oil & Gas
DEC 11 2015

SAMPLES DO ✓ DO NOT _____ MEET USEPA GUIDELINES FOR HOLDING TIMES
SAMPLES DO ✓ DO NOT _____ MEET USEPA GUIDELINES FOR CHEMICAL PRESERVATIVES
SAMPLES DO ✓ DO NOT _____ MEET USEPA GUIDELINES FOR SAMPLE CONTAINERS
SAMPLES ARE ✓ ARE NOT _____ FOR REGULATORY COMPLIANCE PURPOSES

*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT: Karen Shreve	DATE: 11/20/15	PRINT: D. Davis
SIGN: [signature]	TIME: 11:35	SIGN: [signature]
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT:
SIGN:	TIME:	SIGN:
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT:
SIGN:	TIME:	SIGN:
*COURIER:	*DATE/TIME	*RECEIVED BY:
TRACKING #:	DATE:	PRINT:
	TIME:	SIGN:

REMARKS:

PWS# _____

WEATHER/TEMPERATURE:

☐ ***RUSH STATUS*** (INITIAL ACCEPTANCE _____)

*** ADDITIONAL LABORATORY FEES MAY APPLY***

EXTENT OF LIABILITY

SHOULD RELIANCE LABORATORIES, INC. BE AT FAULT AND ANY DISPUTE ARISE REGARDING ANALYTICAL DATA GENERATED BY THE LABORATORY, THE EXTENT OF THE LIABILITY TO RELIANCE WILL BE A DUPLICATE ANALYSIS OF THAT SAMPLE (PROVIDING ADEQUATE SAMPLE REMAINS) OR A REFUND OF THE ANALYTICAL FEE. IN NO EVENT WILL RELIANCE LABORATORIES BE LIABLE FOR DAMAGES INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FROM SUCH DISPUTE.

NOTE: TYPICAL SAMPLE TURN AROUND FOR ROUTINE SAMPLES IS 5 TO 10 WORKING DAYS. THIS IN NOT A GUARANTEE THAT SAMPLES WILL BE COMPLETED IN THIS TIME FRAME, HOWEVER. NON-ROUTINE SAMPLES MAY REQUIRE ADDITIONAL TIME.

*TO BE COMPLETED BY CLIENT

ORIGINAL CHAIN OF CUSTODY DOCUMENT MUST BE EXECUTED IN INK

WHITE - LABORATORY YELLOW - CLIENT

Sample 1

WATER WELL SAMPLING SHEET

RESIDENT/DWELLING INFO
NAME: Orville Cutright
ADDRESS: 2566 Alton Rd Frenchcreek WV
CLIENT/COMPANY: MTV
WELL NO: Anna Cutright #1
LOCATION:

OWNER ✓ RENTER ____ Other ____
PHONE # 924-5506

TYPE OF WELL: DRILLED ____ DUG ____ Spring Concrete 4x8 to holding tank
DEPTH OF WELL: Spring
DEPTH OF CASING: ____ TYPE OF CASING: PVC black TYPE OF PUMP: blue tank pumps to 2 homes
DATE WELL WAS DRILLED: unknown

WATER VOLUME

Water well being tested is currently being utilized as follows:

✓ Primary water source ____ Secondary water source ____ Not currently in use

WATER WELL CAPACITY

Would you consider water source supply as:

✓ Plentiful year round ____ Intermittent ____ Unknown

Number of people utilizing water source, either currently or in past: 8

Do you currently use or have access to public water? ____ yes ✓ no

WATER CONDITION

PRESENT CONDITION OF WATER: good
IRON STAINS IN SINK: no BAD SMELL: ____ BAD TASTE: ____

REASON FOR SAMPLING: PRE-DRILL ____ POST-DRILL ____

WATER SAMPLE COLLECTION POINT:
KITCHEN SINK ✓ BATHROOM SINK ____ OUTSIDE SPIGOT ____
BAILED FROM WELL ____ OTHER ____

DATE SAMPLE COLLECTED: 11/2/15 SAMPLE COLLECTED BY: KAS
TIME SAMPLE COLLECTED: 9:00

Kitchen Sink in Main house

THE INFORMATION AND DATA CONTAINED ON THIS SHEET ARE TRUE TO THE BEST OF MY KNOWLEDGE.
SIGNATURE OF RESIDENT OR OWNER:

LAND SURVEYING, LLC
GRANTSVILLE, WV 25147
(304) 354-0265

WATER WELL SAMPLING SHEET

RESIDENT/DWELLING INFO:
NAME: Orville Cutright
ADDRESS: 7560 Alton Road

CLIENT/COMPANY MV
WELL NO: Mark Cutright #1
LOCATION:

OWNER ✓ RENTER ____ Other ____
PHONE # 924-5706

TYPE OF WELL: DRILLED ✓ DUG ____
DEPTH OF WELL: 17
DEPTH OF CASING: ____ TYPE OF CASING: None Plastic
DATE WELL WAS DRILLED: 505

TYPE OF PUMP Shallow

WATER VOLUME

Water well being tested is currently being utilized as follows:

____ Primary water source ✓ Secondary water source ____ Not currently in use

WATER WELL CAPACITY

Would you consider water source supply as:

✓ Plentiful year round ____ Intermittent ____ Unknown

Number of people utilizing water source, either currently or in past: gardening

Do you currently use or have access to public water? ____ yes ✓ no

WATER CONDITION

PRESENT CONDITION OF WATER: muddy
IRON STAINS IN SINK n/a BAD SMELL no BAD TASTE ____

REASON FOR SAMPLING: PRE-DRILL ____ POST-DRILL ____

WATER SAMPLE COLLECTION POINT:
KITCHEN SINK ____ BATHROOM SINK ____ OUTSIDE SPIGOT ____
BAILED FROM WELL ____ OTHER ____

DATE SAMPLE COLLECTED: 11/20/15 SAMPLE COLLECTED BY: KAS
TIME SAMPLE COLLECTED: 9:20

Received
Office of Oil & Gas
DEC 11 2015

THE INFORMATION AND DATA CONTAINED ON THIS SHEET ARE TRUE TO THE BEST OF MY KNOWLEDGE.
SIGNATURE OF RESIDENT OR OWNER:

11/20/15

RIGHT
LAND SURVEYING, LLC
GRANTSVILLE, WV 26147
(304) 354-0068

WATER WELL SAMPLING SHEET

RESIDENT/DWELLING INFO
NAME: Brenda Dupay
ADDRESS: 8107 Arnoldsburg Hwy

CLIENT/COMPANY MAV
WELL NO: Anna Cummings #1
LOCATION:

OWNER ✓ RENTER ____ Other ____
PHONE # 924-6707

TYPE OF WELL: DRILLED ✓ DUG ____
DEPTH OF WELL: Unknown
DEPTH OF CASING: Unknown TYPE OF CASING: PVC TYPE OF PUMP: Unknown
DATE WELL WAS DRILLED: Unknown

WATER VOLUME

Water well being tested is currently being utilized as follows:

____ Primary water source ____ Secondary water source ✓ Not currently in use

WATER WELL CAPACITY

Would you consider water source supply as:

✓ Plentiful year round ____ Intermittent ____ Unknown

Number of people utilizing water source, either currently or in past: 0

Do you currently use or have access to public water? ✓ yes ____ no

WATER CONDITION

PRESENT CONDITION OF WATER: good
IRON STAINS IN SINK: n/a BAD SMELL: no BAD TASTE ____

REASON FOR SAMPLING: PRE-DRILL ____ POST-DRILL ____

WATER SAMPLE COLLECTION POINT:
KITCHEN SINK ____ BATHROOM SINK ____ OUTSIDE SPIGOT ____
BAILED FROM WELL ____ OTHER ____

DATE SAMPLE COLLECTED: 11/2015 SAMPLE COLLECTED BY: NTS
TIME SAMPLE COLLECTED: 10:00

outdoor frostfree spigot

Received
Office of Oil & Gas
DEC 11 2015

THE INFORMATION AND DATA CONTAINED ON THIS SHEET ARE TRUE TO THE BEST OF MY KNOWLEDGE.
SIGNATURE OF RESIDENT OR OWNER:

[signature] 11/2015

RELIANCE LABORATORIES, INC. - CHAIN OF CUSTODY RECORD

☐ 2044 MEADOWBROOK ROAD
POST OFFICE BOX 4657
BRIDGEPORT, WV 26330
TEL. (304) 842-5285 • FAX (304) 842-5351
E-MAIL reliancelabs@wvdsl.net
INTERNET www.RelianceLabs.net

☐ RIDGEFIELD BUSINESS CENTER
25 CRIMSON CIRCLE
MARTINSBURG, WV 25403
TEL. (304) 596-2084 • FAX (304) 596-2086

*CLIENT NAME Angle Right Land

*ADDRESS POB Box 661 Grantsville WV 26147

CUSTOMER # C05493 *TEL.# 354-0065 FAX #

*SAMPLER (S) Karen Shreve E-MAIL

SHEET NO. 1 OF 1

LABORATORY #	*DATE	*TIME	COMP.	GRAB	MATRIX W, DW, S, O, M	TEMP. ≤4°C Yes No	*# OF CONTAIN.	HN03	H2S04	HCL	NaOH	BAC-T	NO PRES.	Intrusion	Intrusionmetals	TSS, Sulfate	As, Ca	DRO/ORO	GRO/BTEX	Methane/Ethane/Butane/Propane	*PROJECT/REMARKS
240732	11/20/15	9:01		✓	DW	15.0	9	1		4v		1	1P 2J	✓	✓	✓	✓	✓	✓	✓	Cutright Spring
240733	11/20/15	9:20		✓	DW	↓	8	1		3v		1	1P 2J	↓	↓	↓	↓	↓	↓	↓	Cutright 2
240734	11/20/15	10:00		✓	DW	↓	7	1	1v	2v		1	1P 1J	↓	↓	↓	↓	↓	↓	↓	Depoy

Received
Office of Oil & Gas
DEC 11 2015

SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR HOLDING TIMES
SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR CHEMICAL PRESERVATIVES
SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR SAMPLE CONTAINERS
SAMPLES ARE ✓ ARE NOT ____ FOR REGULATORY COMPLIANCE PURPOSES

*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT: Karen Shreve	DATE: 11/20/15	PRINT: K Davis
SIGN: K Shreve	TIME: 11:35	SIGN: K Davis
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT:
SIGN:	TIME:	SIGN:
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT:
SIGN:	TIME:	SIGN:
*COURIER:	*DATE/TIME	*RECEIVED BY:
TRACKING #:	DATE:	PRINT:
	TIME:	SIGN:

REMARKS:

PWS# ____

WEATHER/TEMPERATURE:

☐ ***RUSH STATUS*** (INITIAL ACCEPTANCE ____)

*** ADDITIONAL LABORATORY FEES MAY APPLY***

EXTENT OF LIABILITY

SHOULD RELIANCE LABORATORIES, INC. BE AT FAULT AND ANY DISPUTE ARISE REGARDING ANALYTICAL DATA GENERATED BY THE LABORATORY, THE EXTENT OF THE LIABILITY TO RELIANCE WILL BE A DUPLICATE ANALYSIS OF THAT SAMPLE (PROVIDING ADEQUATE SAMPLE REMAINS) OR A REFUND OF THE ANALYTICAL FEE. IN NO EVENT WILL RELIANCE LABORATORIES BE LIABLE FOR DAMAGES INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FROM SUCH DISPUTE.

NOTE: TYPICAL SAMPLE TURN AROUND FOR ROUTINE SAMPLES IS 5 TO 10 WORKING DAYS. THIS IN NOT A GUARANTEE THAT SAMPLES WILL BE COMPLETED IN THIS TIME FRAME, HOWEVER. NON-ROUTINE SAMPLES MAY REQUIRE ADDITIONAL TIME.

*TO BE COMPLETED BY CLIENT

ORIGINAL CHAIN OF CUSTODY DOCUMENT MUST BE EXECUTED IN INK

WHITE - LABORATORY YELLOW - CLIENT

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
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Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181
MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

LABORATORY REPORT SUMMARY

Client: C05493

Friday, December 04, 2015

ANGLE RIGHT SURVEYING
1584 ROAD FORK ROAD
P.O. BOX 681
GRANTSVILLE WV 26147-

Total Number of Pages: 7
(Not Including C.O.C.)

Lab ID	Sample ID	Sample ID 2	Sample Date
240732-2015-DW	CUTRIGHT 1 SPRING		11/20/2015
240733-2015-DW	CUTRIGHT 2		11/20/2015
240734-2015-DW	DEPOY		11/20/2015

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. All analysis performed by Reliance Laboratories, Bridgeport, WV unless otherwise noted. Parameters analyzed by Reliance Laboratories, Martinsburg, WV are noted with @ on laboratory report.This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By: Tenley Miller

Digitally signed by Tenley Miller
DN: cn=Tenley Miller, o=Reliance Laboratories, Inc., ou, email=tmiller@wvdsl.net, c=US
Date: 2015.12.04 08:48:07 -05'00'

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MD Department of Environment #: 338, 337 | US Environmental Protection Agency #: WV00042, WV00901

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1584 ROAD FORK ROAD
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GRANTSVILLE, WV 26147-

Lab Number: 240732-2015-DW **Sample ID:** CUTRIGHT 1 SPRING

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: Inorganics							
E. coli (Chromogenic)	ABSENT		SM9223B-97	11/20/2015 16:25	CP		
Total Coliform (Chromogenic)	PRESENT		SM9223B-97	11/20/2015 16:25	CP		
pH	# 7.69	S.U.	SM4500H+B-00	11/25/2015 16:11	KV		
Total Alkalinity	78.4	mg CaCO3/l	SM2320B-97	11/25/2015 16:11	KV	2	
Total Chloride	0.48	mg/l	EPA 300.0 R2.1	12/1/2015 14:33	MC	0.15	[250]
Total Dissolved Solids	102	mg/l	SM2540C-97	11/24/2015 10:45	KV	10	[500]
Total Organic Carbon	ND	mg/l	SM5310C-00	12/3/2015 12:30	MC	0.2	
Total Surfactant	ND	mg/l	SM5540C-00	11/20/2015 12:30	JL	0.2	[0.5]
Turbidity	3.50	N.T.U.	SM2130B-01	11/20/2015 13:45	JL	0.22	
Total Aluminum	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.04	[0.05]
Total Barium	0.17	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.05	2.0
Total Iron	0.03	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.01	[0.3]
Total Manganese	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.01	[0.05]
Total Sulfate	13.0	mg/l	EPA 300.0 R2.1	12/1/2015 14:33	MC	0.5	[250]
Total Suspended Solids	ND	mg/l	SM2540D-97	11/24/2015 10:45	KV	4	
Total Calcium	40.0	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.1	
Total Arsenic	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.01	0.01

Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 9:08
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
Sample temp. upon receipt: 15.0 Deg C
MDL - Minimum Detectable Limit
MCL - Maximum Contaminant Level, USEPA Regulated
ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS ONLINE ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample does not meet standards set for Total Coliform and E Coli by the State of West Virginia, 64-3-10, Code of State Regulations, adopted July 1, 2002 by the Bureau For Public Health. Sample Analyzed by Certified Laboratory #00354CM and #0044
NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve
NOTE: Sample temperature upon receipt exceeds 10 degrees C.

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GRANTSVILLE, WV 26147-

Friday, December 04, 2015

Lab Number: 240732-2015-DW **Sample ID:** CUTRIGHT 1 SPRING

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: Total Petroleum Hydrocarbons							
TPH - DRO	ND	mg/l	SW8015B/3535A	11/30/2015 11:11	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	11/30/2015 11:11	MC	1	
o-Terphenyl (Surrogate)	105	%	SW8015B	11/30/2015 11:11	MC		
Benzene	ND	mg/l	SW8021B/5030B	11/23/2015 13:43	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	11/23/2015 13:43	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	11/23/2015 13:43	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	11/23/2015 13:43	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	11/23/2015 13:43	MC	0.005	10
z4-Bromochlorobenzene (Surrogate)	86.7	%	SW8021B	11/23/2015 13:43	MC		

Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 9:08
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
Sample temp. upon receipt: 15.0 Deg C

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MDL - Minimum Detectable Limit
MRL - Minimum Reporting Limit
MCL - Maximum Contaminant Level, USEPA Regulated
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS ONLINE ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample does not meet standards set for Total Coliform and E Coli by the State of West Virginia, 64-3-10, Code of State Regulations, adopted July 1, 2002 by the Bureau For Public Health. Sample Analyzed by Certified Laboratory #00354CM and #0044
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MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

LABORATORY REPORT SUMMARY

Client: C05493

Wednesday, December 9, 2015

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P.O. BOX 681
GRANTSVILLE WV 26147-

Total Number of Pages: 7
(Not Including C.O.C.)

Lab ID	Sample ID	Sample ID 2	Sample Date
240732-2015-DW	CUTRIGHT 1 SPRING		11/20/2015
240733-2015-DW	CUTRIGHT 2		11/20/2015
240734-2015-DW	DEPOY		11/20/2015

* Note: Sodium was not tested, and lab had to reanalyze to include Sodium. Reason for second set of results.

Report Reviewed By: Tenley Miller

Digitally signed by Tenley Miller
DN: cn=Tenley Miller, o=Reliance Laboratories, Inc., ou, email=tmiller@wvdsl.net, c=US
Date: 2015.12.09 16:49:21 -05'00'

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Wednesday, December 9, 2015

Lab Number: 240732-2015-DW **Sample ID:** CUTRIGHT 1 SPRING

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: Inorganics							
E. coli (Chromogenic)	ABSENT		SM9223B-97	11/20/2015 16:25	CP		
Total Coliform (Chromogenic)	PRESENT		SM9223B-97	11/20/2015 16:25	CP		
pH	# 7.69	S.U.	SM4500H+B-00	11/25/2015 16:11	KV		
Total Alkalinity	78.4	mg CaCO3/l	SM2320B-97	11/25/2015 16:11	KV	2	
Total Chloride	0.48	mg/l	EPA 300.0 R2.1	12/1/2015 14:33	MC	0.15	[250]
Total Dissolved Solids	102	mg/l	SM2540C-97	11/24/2015 10:45	KV	10	[500]
Total Organic Carbon	ND	mg/l	SM5310C-00	12/3/2015 12:30	MC	0.2	
Total Surfactant	ND	mg/l	SM5540C-00	11/20/2015 12:30	JL	0.2	[0.5]
Turbidity	3.50	N.T.U.	SM2130B-01	11/20/2015 13:45	JL	0.22	
Total Aluminum	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.04	[0.05]
Total Barium	0.17	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.05	2.0
Total Iron	0.03	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.01	[0.3]
Total Manganese	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.01	[0.05]
Total Sulfate	13.0	mg/l	EPA 300.0 R2.1	12/1/2015 14:33	MC	0.5	[250]
Total Suspended Solids	ND	mg/l	SM2540D-97	11/24/2015 10:45	KV	4	
Total Calcium	40.0	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.1	
Total Arsenic	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:06	TH	0.01	0.01
Total Sodium	ND	mg/l	EPA 200.7 R4.4	12/9/2015 12:47	TH	1	[20]

Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 9:08
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
Sample temp. upon receipt: 15.0 Deg C

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ANGLE RIGHT SURVEYING
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P.O. BOX 681
GRANTSVILLE, WV 26147-

Wednesday, December 9, 2015

Lab Number: 240732-2015-DW **Sample ID:** CUTRIGHT 1 SPRING

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: Total Petroleum Hydrocarbons							
TPH - DRO	ND	mg/l	SW8015B/3535A	11/30/2015 11:11	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	11/30/2015 11:11	MC	1	
o-Terphenyl (Surrogate)	105	%	SW8015B	11/30/2015 11:11	MC		
Benzene	ND	mg/l	SW8021B/5030B	11/23/2015 13:43	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	11/23/2015 13:43	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	11/23/2015 13:43	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	11/23/2015 13:43	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	11/23/2015 13:43	MC	0.005	10
z4-Bromochlorobenzene (Surrogate)	86.7	%	SW8021B	11/23/2015 13:43	MC		

Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 9:08
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
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MRL - Minimum Reporting Limit
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[MCL] = Maximum Contaminant Level, Non-Regulated

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GRANTSVILLE, WV 26147-

Friday, December 04, 2015

Lab Number: 240733-2015-DW **Sample ID:** CUTRIGHT 2

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: Inorganics							
E. coli (Chromogenic)	PRESENT		SM9223B-97	11/20/2015 16:25	CP		
Total Coliform (Chromogenic)	PRESENT		SM9223B-97	11/20/2015 16:25	CP		
pH	# 6.67	S.U.	SM4500H+B-00	11/25/2015 16:14	KV		
Total Alkalinity	14.7	mg CaCO3/l	SM2320B-97	11/25/2015 16:14	KV	2	
Total Chloride	2.30	mg/l	EPA 300.0 R2.1	12/1/2015 15:04	MC	0.15	[250]
Total Dissolved Solids	70	mg/l	SM2540C-97	11/24/2015 10:45	KV	10	[500]
Total Organic Carbon	2.34	mg/l	SM5310C-00	12/3/2015 12:30	MC	0.2	
Total Surfactant	ND	mg/l	SM5540C-00	11/20/2015 12:30	JL	0.2	[0.5]
Turbidity	14.9	N.T.U.	SM2130B-01	11/20/2015 13:45	JL	0.22	
Total Aluminum	0.07	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.04	[0.05]
Total Barium	0.07	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.05	2.0
Total Iron	1.44	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.01	[0.3]
Total Manganese	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.01	[0.05]
Total Sulfate	5.00	mg/l	EPA 300.0 R2.1	12/1/2015 15:04	MC	0.5	[250]
Total Suspended Solids	20	mg/l	SM2540D-97	11/24/2015 10:45	KV	4	
Total Calcium	17.0	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.1	
Total Arsenic	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.01	0.01

Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 9:20
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
Sample temp. upon receipt: 15.0 Deg C
MDL - Minimum Detectable Limit
MCL - Maximum Contaminant Level, USEPA Regulated
ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
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***Method Code: STANDARD METHODS ONLINE ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

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Friday, December 04, 2015

Lab Number: 240733-2015-DW **Sample ID:** CUTRIGHT 2

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: Total Petroleum Hydrocarbons							
TPH - DRO	ND	mg/l	SW8015B/3535A	11/30/2015 11:51	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	11/30/2015 11:51	MC	1	
o-Terphenyl (Surrogate)	107	%	SW8015B	11/30/2015 11:51	MC		
Benzene	ND	mg/l	SW8021B/5030B	11/23/2015 14:18	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	11/23/2015 14:18	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	11/23/2015 14:18	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	11/23/2015 14:18	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	11/23/2015 14:18	MC	0.005	10
z4-Bromochlorobenzene (Surrogate)	88.3	%	SW8021B	11/23/2015 14:18	MC		

Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 9:20
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
Sample temp. upon receipt: 15.0 Deg C

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit
MRL - Minimum Reporting Limit
MCL - Maximum Contaminant Level, USEPA Regulated
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS ONLINE ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample does not meet standards set for Total Coliform and E Coli by the State of West Virginia, 64-3-10, Code of State Regulations, adopted July 1, 2002 by the Bureau For Public Health. Sample Analyzed by Certified Laboratory #00354CM and #0044
NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve
NOTE: Sample temperature upon receipt exceeds 10 degrees C.

Reliance Laboratories, Inc.
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Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181
MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

LABORATORY REPORT SUMMARY

Client: C05493

Wednesday, December 9, 2015

ANGLE RIGHT SURVEYING
1584 ROAD FORK ROAD
P.O. BOX 681
GRANTSVILLE WV 26147-

Total Number of Pages: 7
(Not Including C.O.C.)

Lab ID	Sample ID	Sample ID 2	Sample Date
240732-2015-DW	CUTRIGHT 1 SPRING		11/20/2015
240733-2015-DW	CUTRIGHT 2		11/20/2015
240734-2015-DW	DEPOY		11/20/2015

* Note: Sodium was not tested, and lab had to reanalyze to include Sodium. Reason for second set of results.

Report Reviewed By: Tenley Miller

Digitally signed by Tenley Miller
DN: cn=Tenley Miller, o=Reliance Laboratories, Inc., ou, email=tmiller@wvdsl.net, c=US
Date: 2015.12.09 16:49:21 -05'00'

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GRANTSVILLE, WV 26147-

Wednesday, December 9, 2015

Lab Number: 240733-2015-DW **Sample ID:** CUTRIGHT 2

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: Inorganics							
E. coli (Chromogenic)	PRESENT		SM9223B-97	11/20/2015 16:25	CP		
Total Coliform (Chromogenic)	PRESENT		SM9223B-97	11/20/2015 16:25	CP		
pH	# 6.67	S.U.	SM4500H+B-00	11/25/2015 16:14	KV		
Total Alkalinity	14.7	mg CaCO3/l	SM2320B-97	11/25/2015 16:14	KV	2	
Total Chloride	2.30	mg/l	EPA 300.0 R2.1	12/1/2015 15:04	MC	0.15	[250]
Total Dissolved Solids	70	mg/l	SM2540C-97	11/24/2015 10:45	KV	10	[500]
Total Organic Carbon	2.34	mg/l	SM5310C-00	12/3/2015 12:30	MC	0.2	
Total Surfactant	ND	mg/l	SM5540C-00	11/20/2015 12:30	JL	0.2	[0.5]
Turbidity	14.9	N.T.U.	SM2130B-01	11/20/2015 13:45	JL	0.22	
Total Aluminum	0.07	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.04	[0.05]
Total Barium	0.07	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.05	2.0
Total Iron	1.44	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.01	[0.3]
Total Manganese	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.01	[0.05]
Total Sulfate	5.00	mg/l	EPA 300.0 R2.1	12/1/2015 15:04	MC	0.5	[250]
Total Suspended Solids	20	mg/l	SM2540D-97	11/24/2015 10:45	KV	4	
Total Calcium	17.0	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.1	
Total Arsenic	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:08	TH	0.01	0.01
Total Sodium	1.11	mg/l	EPA 200.7 R4.4	12/9/2015 12:49	TH	1	[20]

Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 9:20
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
Sample temp. upon receipt: 15.0 Deg C

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit
MRL - Minimum Reporting Limit
MCL - Maximum Contaminant Level, USEPA Regulated
[MCL] = Maximum Contaminant Level, Non-Regulated

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GRANTSVILLE, WV 26147-

Wednesday, December 9, 2015

Lab Number: 240733-2015-DW **Sample ID:** CUTRIGHT 2

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Total Petroleum Hydrocarbons								
TPH - DRO	ND	mg/l	SW8015B/3535A	11/30/2015	11:51	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	11/30/2015	11:51	MC	1	
o-Terphenyl (Surrogate)	107	%	SW8015B	11/30/2015	11:51	MC		
Benzene	ND	mg/l	SW8021B/5030B	11/23/2015	14:18	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	11/23/2015	14:18	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	11/23/2015	14:18	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	11/23/2015	14:18	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	11/23/2015	14:18	MC	0.005	10
z4-Bromochlorobenzene (Surrogate)	88.3	%	SW8021B	11/23/2015	14:18	MC		

Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 9:20
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
Sample temp. upon receipt: 15.0 Deg C

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit
MRL - Minimum Reporting Limit
MCL - Maximum Contaminant Level, USEPA Regulated
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS Online ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample does not meet standards set for Total Coliform and E Coli by the State of West Virginia, 64-3-10, Code of State Regulations, adopted July 1, 2002 by the Bureau For Public Health. Sample Analyzed by Certified Laboratory #00354CM and #0044
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NOTE: Sample temperature upon receipt exceeds 10 degrees C.

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ANGLE RIGHT SURVEYING
1584 ROAD FORK ROAD
P.O. BOX 681
GRANTSVILLE, WV 26147-

Lab Number: 240734-2015-DW **Sample ID:** DEPOY

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: Inorganics							
E. coli (Chromogenic)	ABSENT		SM9223B-97	11/20/2015 16:25	CP		
Total Coliform (Chromogenic)	PRESENT		SM9223B-97	11/20/2015 16:25	CP		
pH	# 7.72	S.U.	SM4500H+B-00	11/25/2015 16:17	KV		
Total Alkalinity	84.7	mg CaCO3/l	SM2320B-97	11/25/2015 16:17	KV	2	
Total Chloride	2.38	mg/l	EPA 300.0 R2.1	12/1/2015 15:36	MC	0.15	[250]
Total Dissolved Solids	84	mg/l	SM2540C-97	11/24/2015 10:45	KV	10	[500]
Total Organic Carbon	0.94	mg/l	SM5310C-00	12/3/2015 12:30	MC	0.2	
Total Surfactant	ND	mg/l	SM5540C-00	11/20/2015 12:30	JL	0.2	[0.5]
Turbidity	25.6	N.T.U.	SM2130B-01	11/20/2015 13:45	JL	0.22	
Total Aluminum	0.13	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.04	[0.05]
Total Barium	0.48	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.05	2.0
Total Iron	0.97	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.01	[0.3]
Total Manganese	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.01	[0.05]
Total Sulfate	ND	mg/l	EPA 300.0 R2.1	12/1/2015 15:36	MC	0.5	[250]
Total Suspended Solids	40	mg/l	SM2540D-97	11/24/2015 10:45	KV	4	
Total Calcium	17.1	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.1	
Total Arsenic	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.01	0.01

Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 10:00
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
Sample temp. upon receipt: 15.0 Deg C
MDL - Minimum Detectable Limit
MCL - Maximum Contaminant Level, USEPA Regulated
ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
[MCL] = Maximum Contaminant Level, Non-Regulated

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Reliance LABORATORIES

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MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

ANGLE RIGHT SURVEYING
1584 ROAD FORK ROAD
P.O. BOX 681
GRANTSVILLE, WV 26147-

Lab Number: 240734-2015-DW **Sample ID:** DEPOY

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: Total Petroleum Hydrocarbons							
TPH - DRO	ND	mg/l	SW8015B/3535A	11/30/2015 12:32	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	11/30/2015 12:32	MC	1	
o-Terphenyl (Surrogate)	112	%	SW8015B	11/30/2015 12:32	MC		
Benzene	ND	mg/l	SW8021B/5030B	11/23/2015 15:01	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	11/23/2015 15:01	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	11/23/2015 15:01	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	11/23/2015 15:01	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	11/23/2015 15:01	MC	0.005	10
z4-Bromochlorobenzene (Surrogate)	96.3	%	SW8021B	11/23/2015 15:01	MC		

Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 10:00
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
Sample temp. upon receipt: 15.0 Deg C

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LABORATORY REPORT SUMMARY

Client: C05493

Wednesday, December 9, 2015

ANGLE RIGHT SURVEYING
1584 ROAD FORK ROAD
P.O. BOX 681
GRANTSVILLE WV 26147-

Total Number of Pages: 7
(Not Including C.O.C.)

Lab ID	Sample ID	Sample ID 2	Sample Date
240732-2015-DW	CUTRIGHT 1 SPRING		11/20/2015
240733-2015-DW	CUTRIGHT 2		11/20/2015
240734-2015-DW	DEPOY		11/20/2015

* Note: Sodium was not tested, and lab had to reanalyze to include Sodium. Reason for second set of results.

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. All analysis performed by Reliance Laboratories, Bridgeport, WV, unless otherwise noted. Parameters analyzed by Reliance Laboratories, Martinsburg, WV are noted with @ on laboratory report. This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By: Tenley Miller

Digitally signed by Tenley Miller
DN: cn=Tenley Miller, o=Reliance Laboratories, Inc., ou, email=tmiller@wvdsl.net, c=US
Date: 2015.12.09 16:49:21 -05'00'

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P.O. BOX 681
GRANTSVILLE, WV 26147-

Wednesday, December 9, 2015

Lab Number: 240734-2015-DW **Sample ID:** DEPOY

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: Inorganics							
E. coli (Chromogenic)	ABSENT		SM9223B-97	11/20/2015 16:25	CP		
Total Coliform (Chromogenic)	PRESENT		SM9223B-97	11/20/2015 16:25	CP		
pH	# 7.72	S.U.	SM4500H+B-00	11/25/2015 16:17	KV		
Total Alkalinity	84.7	mg CaCO3/l	SM2320B-97	11/25/2015 16:17	KV	2	
Total Chloride	2.38	mg/l	EPA 300.0 R2.1	12/1/2015 15:36	MC	0.15	[250]
Total Dissolved Solids	84	mg/l	SM2540C-97	11/24/2015 10:45	KV	10	[500]
Total Organic Carbon	0.94	mg/l	SM5310C-00	12/3/2015 12:30	MC	0.2	
Total Surfactant	ND	mg/l	SM5540C-00	11/20/2015 12:30	JL	0.2	[0.5]
Turbidity	25.6	N.T.U.	SM2130B-01	11/20/2015 13:45	JL	0.22	
Total Aluminum	0.13	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.04	[0.05]
Total Barium	0.48	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.05	2.0
Total Iron	0.97	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.01	[0.3]
Total Manganese	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.01	[0.05]
Total Sulfate	ND	mg/l	EPA 300.0 R2.1	12/1/2015 15:36	MC	0.5	[250]
Total Suspended Solids	40	mg/l	SM2540D-97	11/24/2015 10:45	KV	4	
Total Calcium	17.1	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.1	
Total Arsenic	ND	mg/l	EPA 200.7 R4.4	12/2/2015 13:11	TH	0.01	0.01
Total Sodium	25.0	mg/l	EPA 200.7 R4.4	12/9/2015 12:51	TH	1	[20]

Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 10:00
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
Sample temp. upon receipt: 15.0 Deg C

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GRANTSVILLE, WV 26147-

Wednesday, December 9, 2015

Lab Number: 240734-2015-DW **Sample ID:** DEPOY

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: **Total Petroleum Hydrocarbons**								
TPH - DRO	ND	mg/l	SW8015B/3535A	11/30/2015	12:32	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	11/30/2015	12:32	MC	1	
o-Terphenyl (Surrogate)	112	%	SW8015B	11/30/2015	12:32	MC		
Benzene	ND	mg/l	SW8021B/5030B	11/23/2015	15:01	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	11/23/2015	15:01	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	11/23/2015	15:01	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	11/23/2015	15:01	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	11/23/2015	15:01	MC	0.005	10
z4-Bromochlorobenzene (Surrogate)	96.3	%	SW8021B	11/23/2015	15:01	MC		

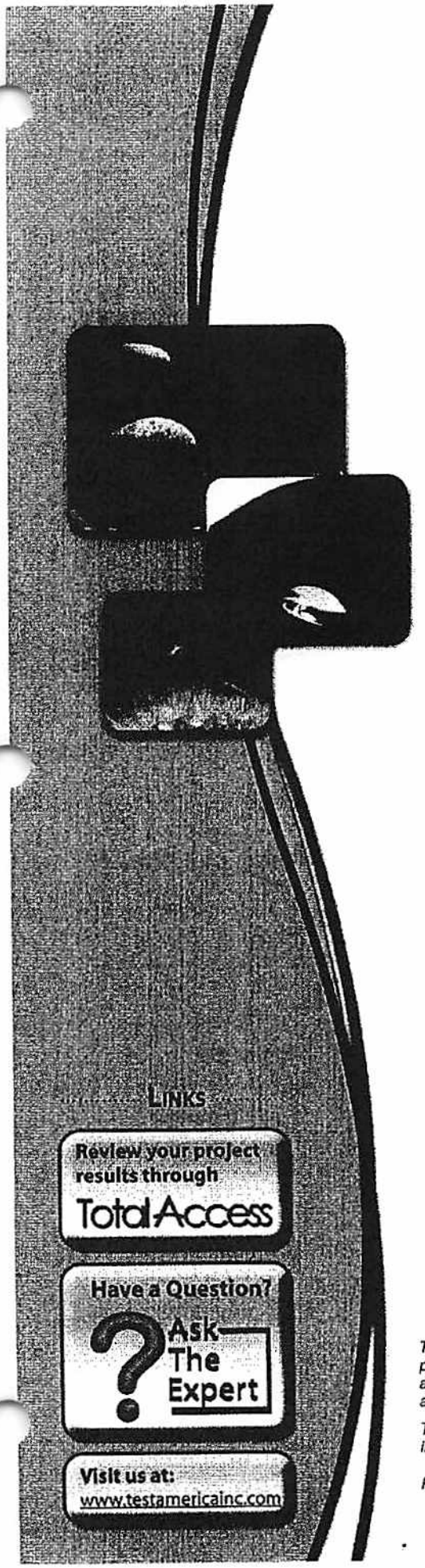
Remarks: #Holding time exceeded for this analysis.

Date Sample Collected: 11/20/2015 10:00
Sample Submitted By: K. SHREVE
Date Sample Received: 11/20/2015 11:35
Sample temp. upon receipt: 15.0 Deg C

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit
MRL - Minimum Reporting Limit
MCL - Maximum Contaminant Level, USEPA Regulated
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS Online ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample does not meet standards set for Total Coliform and E Coli by the State of West Virginia, 64-3-10, Code of State Regulations, adopted July 1, 2002 by the Bureau For Public Health. Sample Analyzed by Certified Laboratory #00354CM and #0044
NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve
NOTE: Sample temperature upon receipt exceeds 10 degrees C.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-92812-1
Client Project/Site: RSK / 240732, 240733, & 240734

For:
Reliance Laboratories Inc
PO BOX 4657
Bridgeport, West Virginia 26330

Attn: Tenley Miller

Jennifer Gambill

Authorized for release by:
12/2/2015 12:45:47 PM

Jennifer Gambill, Project Manager I
(615)301-5044
jennifer.gambill@testamericainc.com

Received
Office of Oil & Gas
DEC 11 2015

Table of Contents

Sample Summary

Client: Reliance Laboratories Inc
Project/Site: RSK / 240732, 240733, & 240734

TestAmerica Job ID: 490-92812-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-92812-1	240732-2015-DW	Drinking Water	11/20/15 09:08	11/24/15 09:15
490-92812-2	240733-2015-DW	Drinking Water	11/20/15 09:20	11/24/15 09:15
490-92812-3	240734-2015-DW	Drinking Water	11/20/15 10:00	11/24/15 09:15

Definitions/Glossary

Client: Reliance Laboratories Inc
Project/Site: RSK / 240732, 240733, & 240734

TestAmerica Job ID: 490-92812-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Reliance Laboratories Inc
Project/Site: RSK / 240732, 240733, & 240734

TestAmerica Job ID: 490-92812-1

Client Sample ID: 240732-2015-DW
Date Collected: 11/20/15 09:08
Date Received: 11/24/15 09:15

Lab Sample ID: 490-92812-1
Matrix: Drinking Water

Method: RSK-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butane	ND		5.00	2.50	ug/L			12/01/15 15:10	1
Ethane	ND		5.00	2.50	ug/L			12/01/15 15:10	1
Methane	ND		5.00	2.50	ug/L			12/01/15 15:10	1
Propane	ND		5.00	2.50	ug/L			12/01/15 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Acetylene (Surr)	122		62 - 124		12/01/15 15:10	1

Client: Reliance Laboratories Inc
Project/Site: RSK / 240732, 240733, & 240734

TestAmerica Job ID: 490-92812-1

Client Sample ID: 240733-2015-DW
Date Collected: 11/20/15 09:20
Date Received: 11/24/15 09:15

Lab Sample ID: 490-92812-2
Matrix: Drinking Water

Method: RSK-175 - Dissolved Gases In Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butane	ND		5.00	2.50	ug/L			12/01/15 15:44	1
Ethane	ND		5.00	2.50	ug/L			12/01/15 15:44	1
Methane	25.3		5.00	2.50	ug/L			12/01/15 15:44	1
Propane	ND		5.00	2.50	ug/L			12/01/15 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Acetylene (Surr)	*123*		*62 - 124*		*12/01/15 15:44*	*1*

Client: Reliance Laboratories Inc
Project/Site: RSK / 240732, 240733, & 240734

TestAmerica Job ID: 490-92812-1

Client Sample ID: 240734-2015-DW
Date Collected: 11/20/15 10:00
Date Received: 11/24/15 09:15

Lab Sample ID: 490-92812-3
Matrix: Drinking Water

Method: RSK-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butane	6.09		5.00	2.50	ug/L			12/01/15 15:22	1
Ethane	56.8		5.00	2.50	ug/L			12/01/15 15:22	1
Methane	7500		200	100	ug/L			12/01/15 15:26	40
Propane	ND		5.00	2.50	ug/L			12/01/15 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Acetylene (Surr)	*122*		*62 - 124*		*12/01/15 15:22*	*1*

Method: RSK-175 - Dissolved Gases in Water

Lab Sample ID: MB 490-302850/14
Matrix: Water
Analysis Batch: 302850

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butane	ND		5.00	2.50	ug/L			12/01/15 14:29	1
Ethane	ND		5.00	2.50	ug/L			12/01/15 14:29	1
Methane	ND		5.00	2.50	ug/L			12/01/15 14:29	1
Propane	ND		5.00	2.50	ug/L			12/01/15 14:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Acetylene (Surr)	*91*		*62 - 124*		*12/01/15 14:29*	*1*

Lab Sample ID: LCS 490-302850/15
Matrix: Water
Analysis Batch: 302850

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Butane	992	974.2		ug/L		98	80 - 120
Ethane	513	521.4		ug/L		102	60 - 120
Methane	279	278.4		ug/L		100	80 - 120
Propane	750	739.0		ug/L		99	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Acetylene (Surr)	*98*		*62 - 124*

Lab Sample ID: LCSD 490-302850/16
Matrix: Water
Analysis Batch: 302850

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Butane	992	998.1		ug/L		101	80 - 120	2	33
Ethane	513	513.2		ug/L		100	80 - 120	2	30
Methane	279	288.0		ug/L		103	80 - 120	3	33
Propane	750	749.9		ug/L		100	80 - 120	1	33

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Acetylene (Surr)	*98*		*62 - 124*

Lab Sample ID: 490-92727-E-2 MS
Matrix: Water
Analysis Batch: 302850

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Butane	ND		992	750.9		ug/L		76	70 - 130
Ethane	ND		513	493.6		ug/L		96	71 - 120
Methane	2980	E	279	3627	E 4	ug/L		234	46 - 142
Propane	ND		750	556.5		ug/L		74	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Acetylene (Surr)	*92*		*62 - 124*

GC VOA

Analysis Batch: 302850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-92727-E-2 MS	Matrix Spike	Total/NA	Water	RSK-175	
490-92812-1	240732-2015-DW	Total/NA	Drinking Water	RSK-175	
490-92812-2	240733-2015-DW	Total/NA	Drinking Water	RSK-175	
490-92812-3	240734-2015-DW	Total/NA	Drinking Water	RSK-175	
490-92812-3	240734-2015-DW	Total/NA	Drinking Water	RSK-175	
LCS 490-302850/15	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 490-302850/16	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 490-302850/14	Method Blank	Total/NA	Water	RSK-175	

Lab Chronicle

Client: Reliance Laboratories Inc
Project/Site: RSK / 240732, 240733, & 240734

TestAmerica Job ID: 490-92812-1

Client Sample ID: 240732-2015-DW

Lab Sample ID: 490-92812-1
Matrix: Drinking Water

Date Collected: 11/20/15 09:08
Date Received: 11/24/15 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	21 mL	21 mL	302850	12/01/15 15:10	SH	TAL NSH

Client Sample ID: 240733-2015-DW

Lab Sample ID: 490-92812-2
Matrix: Drinking Water

Date Collected: 11/20/15 09:20
Date Received: 11/24/15 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	21 mL	21 mL	302850	12/01/15 15:44	SH	TAL NSH

Client Sample ID: 240734-2015-DW

Lab Sample ID: 490-92812-3
Matrix: Drinking Water

Date Collected: 11/20/15 10:00
Date Received: 11/24/15 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	21 mL	21 mL	302850	12/01/15 15:22	SH	TAL NSH
Total/NA	Analysis	RSK-175		40	21 mL	21 mL	302850	12/01/15 15:28	SH	TAL NSH

Laboratory References:
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Reliance Laboratories Inc
Project/Site: RSK / 240732, 240733, & 240734

TestAmerica Job ID: 490-92812-1

Method	Method Description	Protocol	Laboratory
RSK-175	Dissolved Gases in Water	RSK	TAL NSH

Protocol References:

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Reliance Laboratories Inc
Project/Site: RSK / 240732, 240733, & 240734

TestAmerica Job ID: 490-92812-1

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
West Virginia DEP	State Program	3	219	02-28-16

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

Cooler Received/Opened On 11/24/2015 @ 0915

1. Tracking # 4111 (last 4 digits, FedEx)

Courier: Fed-ex IR Gun ID 97310166

490-92812 Chain of Custody

2. Temperature of rep. sample or temp blank when opened: 2.2 Degrees Celsius

3. If item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO..NA

4. Were custody seals on outside of cooler? YES..NO..NA

If yes, how many and where: _____

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) BLA

7. Were custody seals on containers: YES NO and intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (intial) LEV

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) LEV

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) LEV

I certify that I attached a label with the unique LIMS number to each container (intial) LEV

21. Were there Non-Conformance issues at login? YES...NO Was a PIPE generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 6/24/09

12/2/2015

RELIANCE LABORATORIES, INC. - CHAIN OF CUSTODY RECORD

2044 MEADOWBROOK ROAD
POST OFFICE BOX 4657
BRIDGEPORT, WV 26330
TEL. (304) 842-5285 • FAX (304) 842-5351
E-MAIL reliancelabs@wvdsl.net
INTERNET www.RelianceLabs.net

☐ RIDGEFIELD BUSINESS CENTER
25 CRIMSON CIRCLE
MARTINSBURG, WV 25403
TEL. (304) 596-2084 • FAX (304) 596-2086

Test America

12/2/2015

*CLIENT NAME Reliance Laboratories, Inc.

*ADDRESS 2044 Meadowbrook Rd. PO Box 4657 Bridgeport WV 26330

CUSTOMER # _____ *TEL.# 304-842-5285 (304) FAX# 842-5351

*SAMPLER (S) K. Shreve E-MAIL See above.

SHEET NO. 1 OF 1

LABORATORY #	*DATE	*TIME	GRAB	COMP	MATRIX W, DW, S, O, M	TEMP. ≤4°C Yes No	*# OF CONTAIN.	HNO3	H2SO4	HCL	NaOH	BAC-T	NO PRES.		Dissolved Methane	Ethane	Butane	Propane			*PROJECT/REMARKS
	11/20/15	9:08		✓	DW		1			1					✓	✓	✓	✓	✓			240732-2015-DW
	11/20/15	9:20		✓	DW		1			1					✓	✓	✓	✓	✓			240733-2015-DW
	11/20/15	10:00		✓	DW		1			1					✓	✓	✓	✓	✓			240734-2015-DW
															✓	✓	✓	✓	✓			

Loc: 490
92812

Page 15 of 16

SAMPLES DO ✓ DO NOT _____ MEET USEPA GUIDELINES FOR HOLDING TIMES
SAMPLES DO ✓ DO NOT _____ MEET USEPA GUIDELINES FOR CHEMICAL PRESERVATIVES
SAMPLES DO ✓ DO NOT _____ MEET USEPA GUIDELINES FOR SAMPLE CONTAINERS
SAMPLES ARE ✓ ARE NOT _____ FOR REGULATORY COMPLIANCE PURPOSES

*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT: K Davis	DATE: 11/23/15	PRINT: Fedex
SIGN: K Davis	TIME: 10:00	SIGN:
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT: JAN 11/24/15 0945
SIGN:	TIME:	SIGN:
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT:
SIGN:	TIME:	SIGN:
*COURIER:	*DATE/TIME	*RECEIVED BY:
TRACKING #:	DATE:	PRINT:
	TIME:	SIGN:

REMARKS:

PWS# _____

WEATHER/TEMPERATURE:

☐ ***RUSH STATUS*** (INITIAL ACCEPTANCE _____)

*** ADDITIONAL LABORATORY FEES MAY APPLY***

EXTENT OF LIABILITY

SHOULD RELIANCE LABORATORIES, INC. BE AT FAULT AND ANY DISPUTE ARISE REGARDING ANALYTICAL DATA GENERATED BY THIS LABORATORY, THE EXTENT OF THE LIABILITY TO RELIANCE WILL BE A DUPLICATE ANALYSIS OF THAT SAMPLE (PROVIDING ADEQUATE SAMPLE REMAINS) OR A REFUND OF THE ANALYTICAL FEE. IN NO EVENT WILL RELIANCE LABORATORIES BE LIABLE FOR DAMAGES INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FROM SUCH DISPUTE.

NOTE: TYPICAL SAMPLE TURN AROUND FOR ROUTINE SAMPLES IS 5 TO 10 WORKING DAYS. THIS IS NOT A GUARANTEE THAT SAMPLES WILL BE COMPLETED IN THIS TIME FRAME, HOWEVER. NON-ROUTINE SAMPLES MAY REQUIRE ADDITIONAL TIME.

[redacted]

ORIGINAL CHAIN OF CUSTODY DOCUMENT MUST BE EXECUTED IN INK

WHITE - LABORATORY YELLOW - CLIENT

Login Sample Receipt Checklist

Client: Reliance Laboratories Inc

Login Number: 92812
List Number: 1
Creator: Vest, Laura E

Job Number: 490-

List Source: TestAmerica Na

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	2.2
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

July 14, 2009
Mountain V Oil & Gas, Inc.
P. O. Box 470
Bridgeport, WV 26330

WATER WELL REPORT

Well: Anna Cutright No.1 / WV0150
District: Meade
County: Upshur
State: WV

There are eight (8) water sources within 1320 feet of the above referenced well location.

No. 1 on topo Sent certified letter (no response) TM 6P Par 7 Carl Foster 174 West Park Drive Shelby, OH 44875	No. 2 on topo See attached lab results for 2 water sources TM 6P Par 9 Orval Cutright 7560 Alton Road French Creek, WV 26218	No. 3 on topo Sent certified letter (no response) TM 6 Par 1 Danny Carte P.O. Box 124 Blue Creek, WV 25026
No. 4 on topo No longer in use Declines test See attached sheet TM 6P Par 4 Alton Community Action Group Adrian, WV 26210	No. 5 on topo See attached lab results for 1 water sources TM 6P Par 3.1 (Washington District) Charles Depoy Jr. Rt.2 Box 146 Adrian, WV 26210	No. 6 on topo Previous sample sites no longer in use see attached TM 6P Par 3.2 (Washington District) Charles Depoy Jr. Rt.2 Box 146 Adrian, WV 26210

No. 7 on topo
City water only
TM 6P Par 11
Ernest Austin
7768 Alton Road
French Creek, WV 26218

ANGLE RIGHT
LAND SURVEYING, LLC.
GRANTSVILLE, WV 26147
(304) 354-0065

TO WHOM IT MAY CONCERN,

ON BEHALF OF ________, ANGLE RIGHT LAND SURVEYING, LLC, HAS BEEN CONTRACTED TO TAKE CARE OF SOME OFTHE PRELIMINARY PREPARATION WORK FOR A PROPOSED OIL AND GAS WELL PERMIT APPLICATION. THIS INCLUDES OBTAINING WATER WELL SAMPLES FROM SOME OF THE NEARBY RESIDENTS. COLLECTED SAMPLES WILL BE SENT OFF BY ANGLE RIGHT LAND SURVEYING LLC FOR TESTING BY AN INDEPENDENT LABORATORY.

DUE TO 1994 REGULATIONS SET BY THE STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION, DEPARTMENT OF OIL AND GAS, OPERATORS ARE REQUIRED TO OFFER WATER WELL TESTING FOR WATER WELLS THAT FALL WITHIN 1000 FEET OF THE PROPOSED GAS/OIL WELL. THIS TEST WILL ONLY HELP INSURE THE WATER QUALITY CONTROL WHICH IN TURN BENEFITS YOU AS THE RESIDENT.

IF YOU ARE INTERESTED IN HAVING YOUR WATER TESTED BEFORE THE DRILLING PROCESS BEGINS PLEASE NOTIFY TERRY A. SHREVE AT THE ABOVE PHONE. PLEASE HAVE THIS LETTER WITH YOU AT THE TIME OF CONTACT SO THAT THE WELL NUMBER LISTED AT THE BOTTOM OF THE PAGE MAY BE REFERENCED. YOU WILL RECEIVE THE RESULTS FROM THE AFOREMENTIONED TEST AS SOON AS THE LABORATORY TEST IS RECEIVED BY ANGLE RIGHT LAND SURVEYING LLC.

THANK YOU FOR YOUR COOPERATION ON THIS MATTER AND I LOOK FORWARD TO HEARING FROM YOU . IF YOU HAVE ANY QUESTIONS FEEL FREE TO CONTACT ME AT:

ANGLE RIGHT LAND SURVEYING LLC
P.O. BOX 681
GRANTSVILLE, WV 26147
(304) 354-0065 (VOICE OR FAX)
(304) 354-9464 (VOICE OR FAX)
(304) ~~488-3880~~ 613-5040 (CELL AND VOICEMAIL)

DATE: 5/27/15
LEFT BY: KS
WELL NO.: Anna Cutright

YOUR RESPONSE WITHIN 14 DAYS WOULD BE GREATLY APPRECIATED.

SINCERELY,

formerly taxed in Charles Roger Depoy Jr
Depoy well not in use city water wants 1 well location

TERRY A. SHREVE PS 1098

IF YOU DO NOT FEEL THE NEED TO HAVE YOUR WATER WELL SAMPLED, PLEASE SIGN ON THE LINE BELOW AND RETURN TO THE ABOVE ADDRESS. THIS WILL SIGNIFY THAT A WATER TEST HAS BEEN OFFERED TO THE SURFACE OWNER AND HAS BEEN DECLINED.

Irene Depoy DATE: 5/27/15

ANGLE RIGHT
LAND SURVEYING, LLC.
GRANTSVILLE, WV 25147
(304) 354-0065

TO WHOM IT MAY CONCERN,

ON BEHALF OF MHV, ANGLE RIGHT LAND SURVEYING, LLC, HAS BEEN CONTRACTED TO TAKE CARE OF SOME OFTHE PRELIMINARY PREPARATION WORK FOR A PROPOSED OIL AND GAS WELL PERMIT APPLICATION. THIS INCLUDES OBTAINING WATER WELL SAMPLES FROM SOME OF THE NEARBY RESIDENTS. COLLECTED SAMPLES WILL BE SENT OFF BY ANGLE RIGHT LAND SURVEYING LLC FOR TESTING BY AN INDEPENDENT LABORATORY.

DUE TO 1994 REGULATIONS SET BY THE STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION, DEPARTMENT OF OIL AND GAS, OPERATORS ARE REQUIRED TO OFFER WATER WELL TESTING FOR WATER WELLS THAT FALL WITHIN 1000 FEET OF THE PROPOSED GAS/OIL WELL. THIS TEST WILL ONLY HELP INSURE THE WATER QUALITY CONTROL WHICH IN TURN BENEFITS YOU AS THE RESIDENT.

IF YOU ARE INTERESTED IN HAVING YOUR WATER TESTED BEFORE THE DRILLING PROCESS BEGINS PLEASE NOTIFY TERRY A. SHREVE AT THE ABOVE PHONE. PLEASE HAVE THIS LETTER WITH YOU AT THE TIME OF CONTACT SO THAT THE WELL NUMBER LISTED AT THE BOTTOM OF THE PAGE MAY BE REFERENCED. YOU WILL RECEIVE THE RESULTS FROM THE AFOREMENTIONED TEST AS SOON AS THE LABORATORY TEST IS RECEIVED BY ANGLE RIGHT LAND SURVEYING LLC.

THANK YOU FOR YOUR COOPERATION ON THIS MATTER AND I LOOK FORWARD TO HEARING FROM YOU . IF YOU HAVE ANY QUESTIONS FEEL FREE TO CONTACT ME AT:

ANGLE RIGHT LAND SURVEYING LLC
P.O. BOX 681
GRANTSVILLE, WV 26147
(304) 354-0065 (VOICE OR FAX)
(304) 354-9464 (VOICE OR FAX)
(304) ~~[illegible]~~ 613-5210 (CELL AND VOICEMAIL)

DATE: 5/27/15
LEFT BY: KS
WELL NO.: Anna Cutright

YOUR RESPONSE WITHIN 14 DAYS WOULD BE GREATLY APPRECIATED.

SINCERELY,

TERRY A. SHREVE PS 1006

Community building well not in use

IF YOU DO NOT FEEL THE NEED TO HAVE YOUR WATER WELL SAMPLED, PLEASE SIGN ON THE LINE BELOW AND RETURN TO THE ABOVE ADDRESS. THIS WILL SIGNIFY THAT A WATER TEST HAS BEEN OFFERED TO THE SURFACE OWNER AND HAS BEEN DECLINED.

Irene Espy DATE: 5/27/15
Board Member

ANGLE RIGHT
LAND SURVEYING, LLC
GRANTSVILLE, WV 26147
(304) 354-0065

WATER WELL SAMPLING SHEET

RESIDENT/DWELLING INFO: Orville & Georgia
NAME: Cutright
ADDRESS: 7560 Altman Rd Frenchton WV 26218
OWNER ✓ RENTER ______
PHONE # ______

CLIENT/COMPANY M&V
WELL NO: A Cutright #1
LOCATION: ______

TYPE OF WELL: DRILLED ✓ DUG ______
DEPTH OF WELL: ______
DEPTH OF CASING: ______ TYPE OF CASING ______ TYPE OF PUMP ______
DATE WELL WAS DRILLED: ______

HISTORY OF WELL/FLOW TIMES/PLENTY OF WATER??, ETC: ______

PRESENT CONDITION OF WATER: clear
IRON STAINS IN SINK no BAD SMELL no BAD TASTE ______

REASON FOR SAMPLING: PRE-DRILL ______ POST-DRILL ______

WATER SAMPLE COLLECTION POINT:
KITCHEN SINK ______ BATHROOM SINK ✓ OUTSIDE SPIGOT ______
BAILED FROM WELL ______ OTHER ______

DATE SAMPLE COLLECTED: ______ SAMPLE COLLECTED BY: ______

no filter

THE INFORMATION AND DATA CONTAINED ON THIS SHEET ARE TRUE TO THE BEST OF MY KNOWLEDGE.
SIGNATURE OF RESIDENT OR OWNER:

[signature] 5/27/15

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5285 | Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181
MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

LABORATORY REPORT SUMMARY

Client: C05493

Tuesday, June 09, 2015

ANGLE RIGHT SURVEYING
1584 ROAD FORK ROAD
P.O. BOX 681
GRANTSVILLE WV 26147-

Total Number of Pages: 3
(Not Including C.O.C.)

Lab ID	Sample ID	Sample ID 2	Sample Date
231494-2015-DW	CUTRIGHT		5/27/2015
231495-2015-DW	DEPOY		5/27/2015

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. All analysis performed by Reliance Laboratories, Bridgeport, WV unless otherwise noted. Parameters analyzed by Reliance Laboratories, Martinsburg, WV are noted with @ on laboratory report.This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By:

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5285 | Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Reliance LABORATORIES

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181
MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

ANGLE RIGHT SURVEYING
1584 ROAD FORK ROAD
P.O. BOX 681
GRANTSVILLE, WV 26147-

Tuesday, June 09, 2015

Lab Number: 231494-2015-DW **Sample ID:** CUTRIGHT

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: Inorganics							
E. coli (Chromogenic)	PRESENT		SM9223B-97	5/28/2015 11:20	CP		
Total Coliform (Chromogenic)	PRESENT		SM9223B-97	5/28/2015 11:20	CP		
pH	# 7.82	S.U.	SM4500H+B-00	5/29/2015 13:07	KV		
Total Alkalinity	82.9	mg CaCO3/l	SM2320B-97	5/29/2015 13:07	KV	2	
Total Chloride	0.44	mg/l	EPA 300.0 R2.1	5/28/2015 15:40	MC	0.15	[250]
Total Dissolved Solids	130	mg/l	SM2540C-97	6/1/2015 10:15	JL	10	[500]
Total Organic Carbon	ND	mg/l	SM5310C-00	6/5/2015 9:13	MC	0.1	
Total Surfactant	ND	mg/l	SM5540C-00	5/29/2015 8:45	KD	0.2	[0.5]
Turbidity	2.80	N.T.U.	SM2130B-01	5/28/2015 16:00	JL	0.22	
Total Aluminum	ND	mg/l	EPA 200.7 R4.4	6/3/2015 10:12	TH	0.04	[0.05]
Total Barium	0.18	mg/l	EPA 200.7 R4.4	6/3/2015 10:12	TH	0.05	2.0
Total Iron	0.28	mg/l	EPA 200.7 R4.4	6/3/2015 10:12	TH	0.01	[0.3]
Total Manganese	ND	mg/l	EPA 200.7 R4.4	6/3/2015 10:12	TH	0.01	[0.05]

Remarks:

Date Sample Collected: 5/27/2015 9:10
Sample Submitted By: K. SHREVE
Date Sample Received: 5/27/2015 16:25
Sample temp. upon receipt: 7.2 Deg C
MDL - Minimum Detectable Limit
MCL - Maximum Contaminant Level, USEPA Regulated

ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS ONLINE ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a**

NOTE: This sample does not meet standards set for Total Coliform and E Coli by the State of West Virginia, 64-3-10, Code of State Regulations, adopted July 1, 2002 by the Bureau For Public Health. Sample Analyzed by Certified Laboratory #00354CM and #0044
NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve
NOTE: #Holding time exceeded for this analysis.

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
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MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

ANGLE RIGHT SURVEYING
1584 ROAD FORK ROAD
P.O. BOX 681
GRANTSVILLE, WV 26147-

Lab Number: 231495-2015-DW **Sample ID:** DEPOY

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MRL	MCL
Analyte Group: inorganics							
E. coli (Chromogenic)	ABSENT		SM9223B-97	5/28/2015	11:20 CP		
Total Coliform (Chromogenic)	ABSENT		SM9223B-97	5/28/2015	11:20 CP		
pH	# 7.93	S.U.	SM4500H+B-00	5/29/2015	13:11 KV		
Total Alkalinity	93.2	mg CaCO3/l	SM2320B-97	5/29/2015	13:11 KV	2	
Total Chloride	2.21	mg/l	EPA 300.0 R2.1	5/28/2015	16:12 MC	0.15	[250]
Total Dissolved Solids	110	mg/l	SM2540C-97	6/1/2015	10:15 JL	10	[500]
Total Organic Carbon	0.56	mg/l	SM5310C-00	6/5/2015	9:13 MC	0.1	
Total Surfactant	ND	mg/l	SM5540C-00	5/29/2015	8:45 KD	0.2	[0.5]
Turbidity	1.90	N.T.U.	SM2130B-01	5/28/2015	16:00 JL	0.22	
Total Aluminum	ND	mg/l	EPA 200.7 R4.4	6/3/2015	10:15 TH	0.04	[0.05]
Total Barium	0.52	mg/l	EPA 200.7 R4.4	6/3/2015	10:15 TH	0.05	2.0
Total Iron	0.67	mg/l	EPA 200.7 R4.4	6/3/2015	10:15 TH	0.01	[0.3]
Total Manganese	0.02	mg/l	EPA 200.7 R4.4	6/3/2015	10:15 TH	0.01	[0.05]

Remarks:

Date Sample Collected: 5/27/2015 9:40
Sample Submitted By: K. SHREVE
Date Sample Received: 5/27/2015 16:25
Sample temp. upon receipt: 7.2 Deg C

ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
MDL - Minimum Detectable Limit
[MCL] = Maximum Contaminant Level, Non-Regulated
MCL - Maximum Contaminant Level, USEPA Regulated

*Method Code: STANDARD METHODS ONLINE ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a

NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia, 64-3-10, Code of State Regulations, adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M.
NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve.
NOTE: #Holding time exceeded for this analysis.

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

SECTION 8

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.

RECEIVED
Office of Oil and Gas
JUN 10 2015
WV Department of
Environmental Protection

Hayward Natural Resources, Inc.

William C. Hayward, President & Geologist

130 Longvue Drive, White Oak, Pennsylvania 15131-1200
Office & Personal 412-600-3822 / Fax 412-673-8936
haywardnr@aol.com

5/30/2010

Mr. Jamie Andrews

MtnV Oil and Gas, Inc.
P.O. Box 470
Bridgeport, WV 26330

Re: Geologic Interpretation of the proposed "storage disposal" well **Anna Cutright #1**; 47-097-03422.

Mr. Andrews,

The following Geologic opinions and professional interpretations are based available well log data, my local and regional structure and stratigraphy of the Upper Devonian aged Venango Group Gordon Sandstone across West Virginia.
Reservoir characteristics are based on log data, no core data or seismic data was available.

The Gordon Sandstone in the Anna Cutright #1 well has a combined net thickness of 23 feet (see attached e-log) and will be perforated from 2122-2128 and 2143-2147. The porosity in the interval exceeds 12% at some 21 feet in thickness.

The proposed disposal well is roughly located on the eastern flank of the Fayetteville Anticline at an interpreted and estimated 35 feet below sea level (see attached Structure Maps).

The interpreted net sandstone thickness across the immediate subsurface is estimated between 20 to 25 feet (see attached Isopach Map). This formation strikes northeast-southwest across Upshur County, WV and regionally across West Virginia.

On a local scale the confining layers are interpreted as the immediate Shale layers that encase the sandstone intervals, see attached e-log. On a regional scale across Upshur County the Drillers' Big Lime formation with a total thickness of 156 feet (see attached e-log) as exits in this well is sufficient to act as a seal confining layer.

Fluid migration by interpretation will be up dip and along the maximum thickness of the formation through secondary inter granular porosity and permeability and associated secondary fractures created by the formation of the Fayetteville Anticline; see the attached interpretation.

William C Hayward

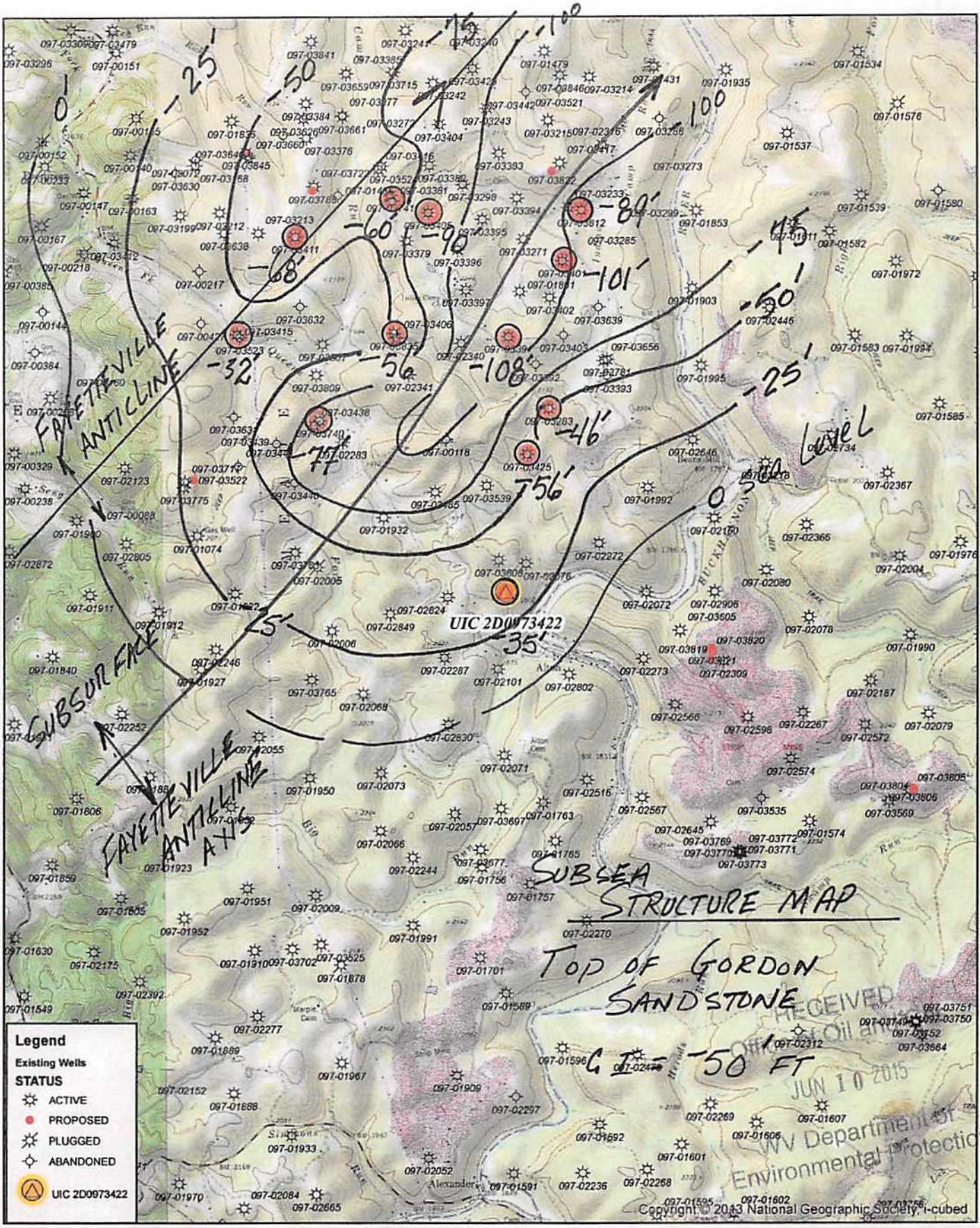
Geologist and President.
Hayward Natural Resources, Inc.

GORDON SANDSTONE/SILTSTONE DESCRIPTION:

The Gordon formation is one of the members of the Upper Devonian Venango sandstone and siltstone reservoirs that extend from southern West Virginia to north-central Pennsylvania and is largely confined to the eastern half of the structural basin. The Venango is the shallowest and most sandstone-rich of three quasi-chronostratigraphic plays that bracket major progradational episodes of the Catskill delta complex. The Catskill delta complex of the central Appalachian basin consists of a massive, eastward thickening wedge of clastic rocks that was deposited in response to the Middle and Upper Devonian Acadian orogeny.

The Venango play is defined to include all reservoirs, including the Gordon, occurring between the horizons of maximum regional transgression marked by the Chadakoin Formation of Pennsylvania and the marine shales directly underlying the Berea Sandstone. The interval of the Venango that includes the Gordon is characterized by an extremely well-developed belt of multiple amalgamated sandstones with conspicuous overall strike-trend that can be correlated from the oil fields of northwestern Pennsylvania to central West Virginia. Reservoirs of the Venango group include sandstones and siltstones formed in fluvial, deltaic, interdeltaic shoreline, shelf and slope environments at the close of the Catskill deposition. Two major siltstone bundles can be traced far to the west of the main Venango shoreline trends. The lower bundle, generally called the Warren, marks the base of the Venango group in West Virginia. The upper siltstone package is thicker, coarser-grained, and correlates with the zone of the Gordon, and can occur as broad sheets that extend far westward into eastern Ohio. The Gordon unit was deposited at the height of the Catskill progradation when basin slopes were low and large areas of the shelf may have been above storm-wave base. In the area of West Virginia where the Anna Cutright #1 disposal well is located, the porosity in the Gordon zone can typically range from 3 percent to 12 percent and permeability rarely exceeds 0.1 millidarcies.

The shales that surround the Gordon act as a confining layer locally, however, the Missippian Big Lime formation is the primary seal confining layer locally and regionally.



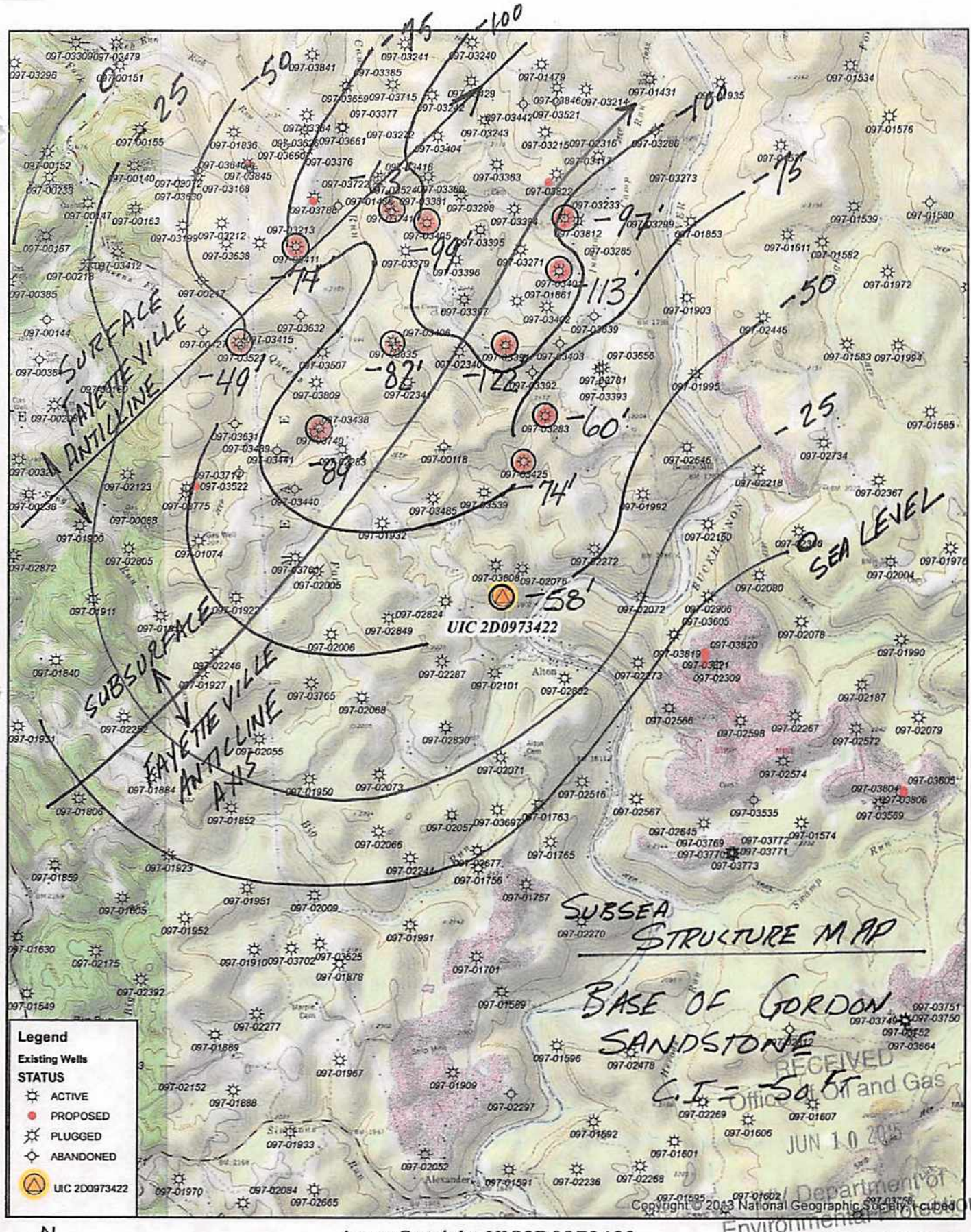
N

MAY 2015
GEOLOGY:
William C Hayward

Anna Cutright UIC2D0973422
Meade District, Upshur County, WV
Alton 7.5' Quad

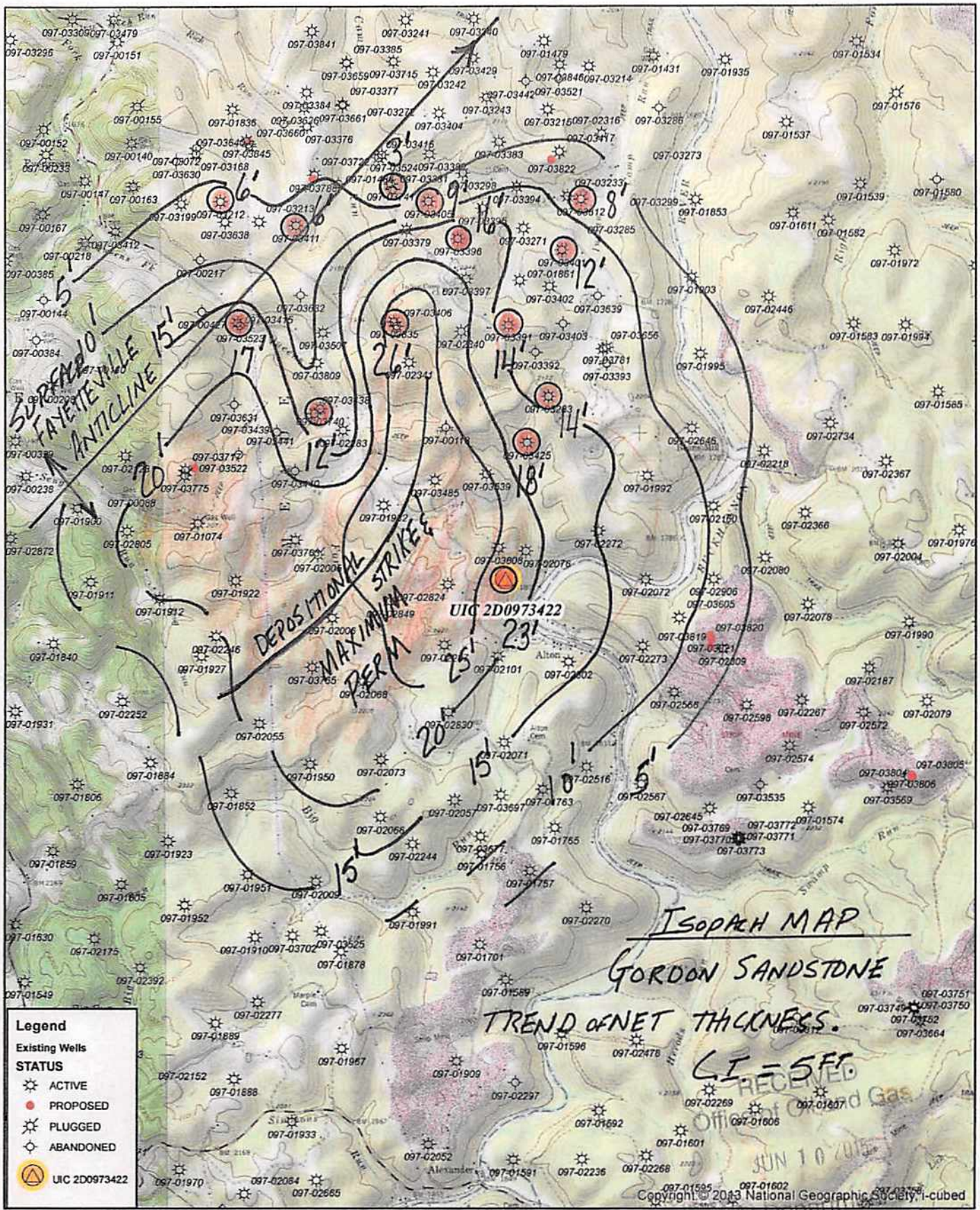
1 inch = 3,000 feet

MOUNTAIN V OIL & GAS INC.



Anna Cutright UIC2D0973422
Meade District, Upshur County, WV
Alton 7.5' Quad

1 inch = 3,000 feet



N

MAY 2015
GEOLOGY:
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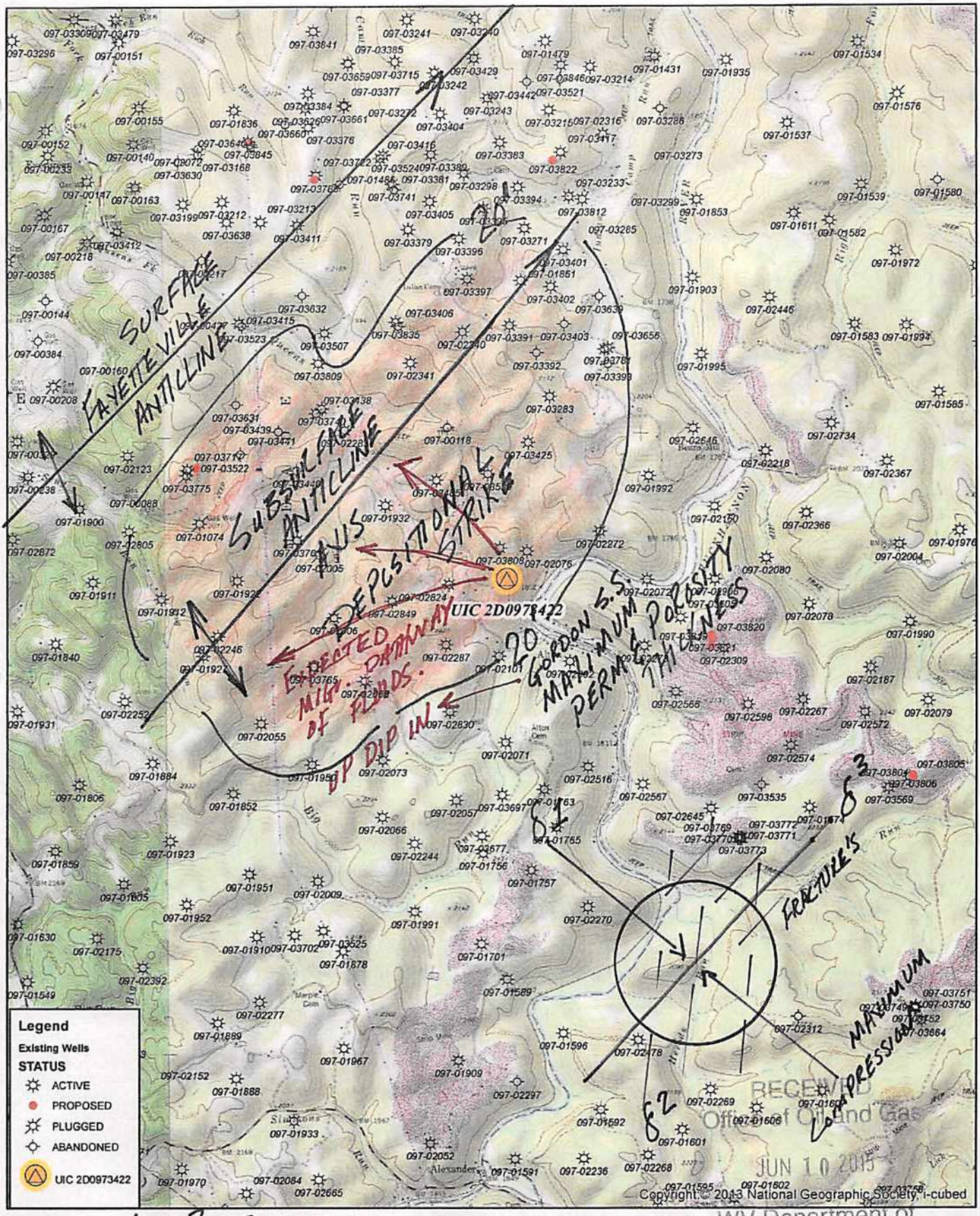
Anna Cutright UIC2D0973422
Meade District, Upshur County, WV
Alton 7.5' Quad

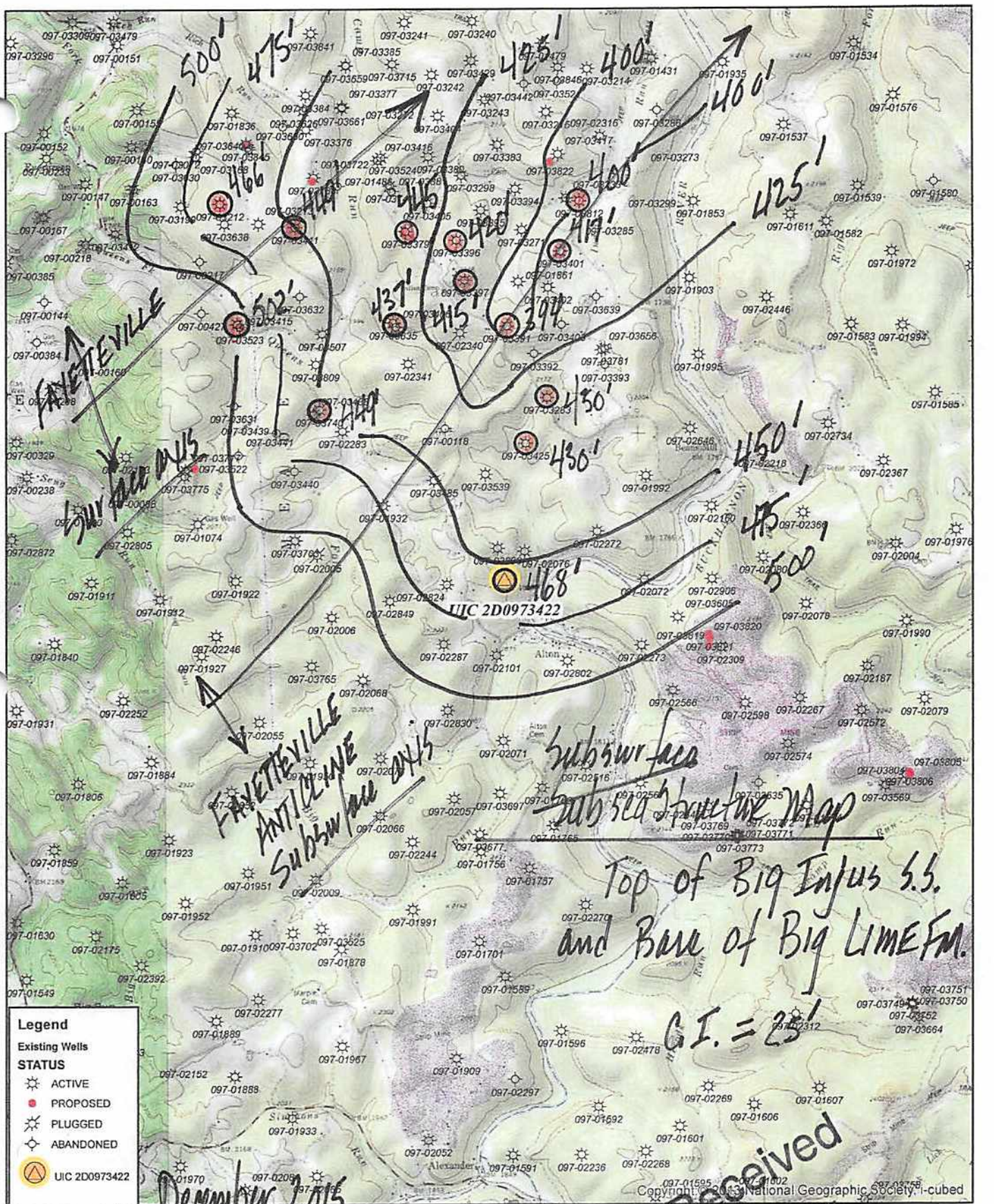
1 inch = 3,000 feet



MAY 2015
GEOLOGY:
William C Hayward

Anna Cutright UIC2D0973422
Meade District, Upshur County, WV
Alton 7.5' Quad

1 inch = 3,000 feet

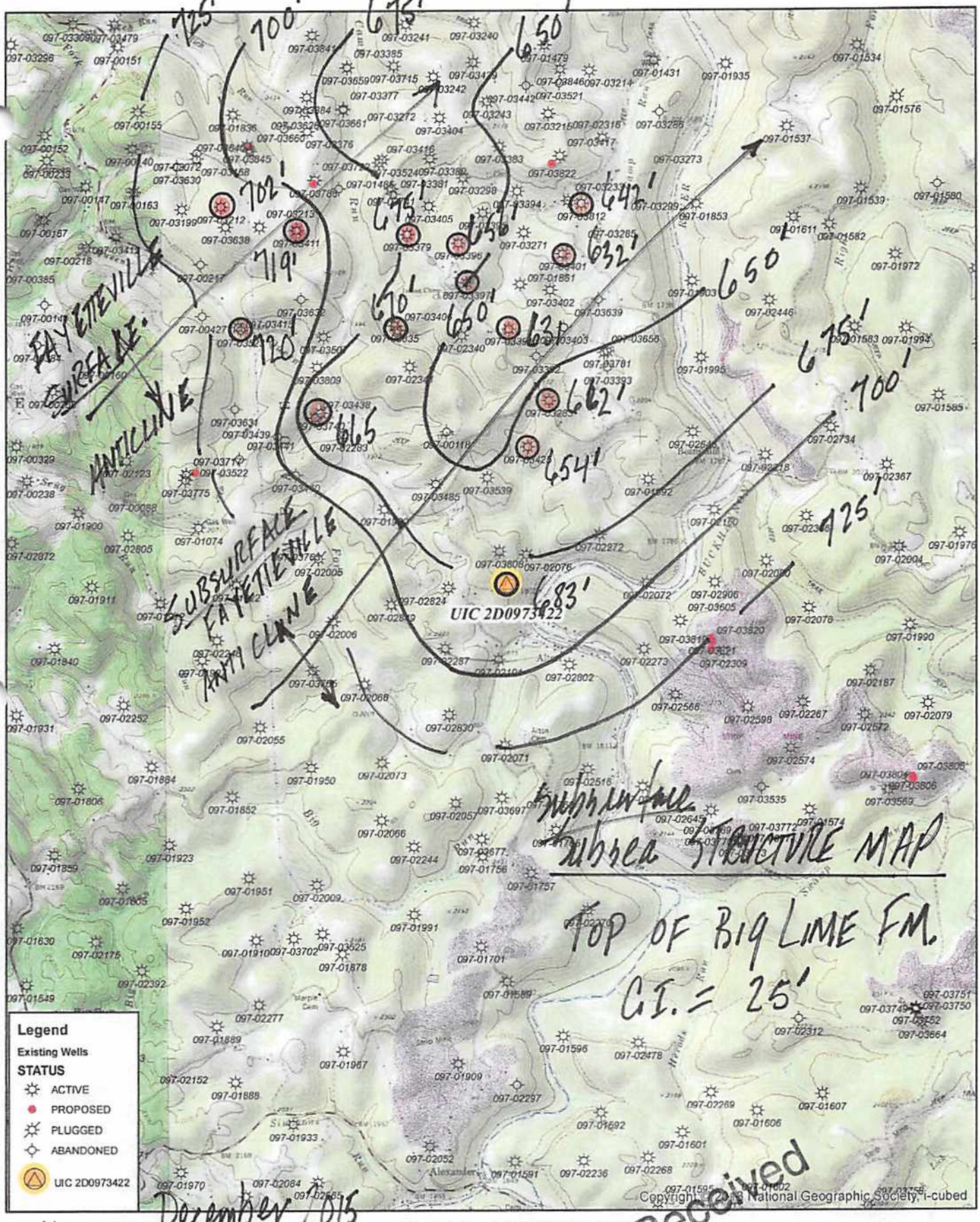


Anna Cutright UIC2D0973422
Meade District, Upshur County, WV
Alton 7.5' Quad

1 inch = 3,000 feet

December 2015
Geology: William L. Hayward.

Received
DEC 21 2015
Office of Oil and Gas
WV Dept. of Environmental Protection



Anna Cutright UIC2D0973422
Meade District, Upshur County, WV
Alton 7.5' Quad

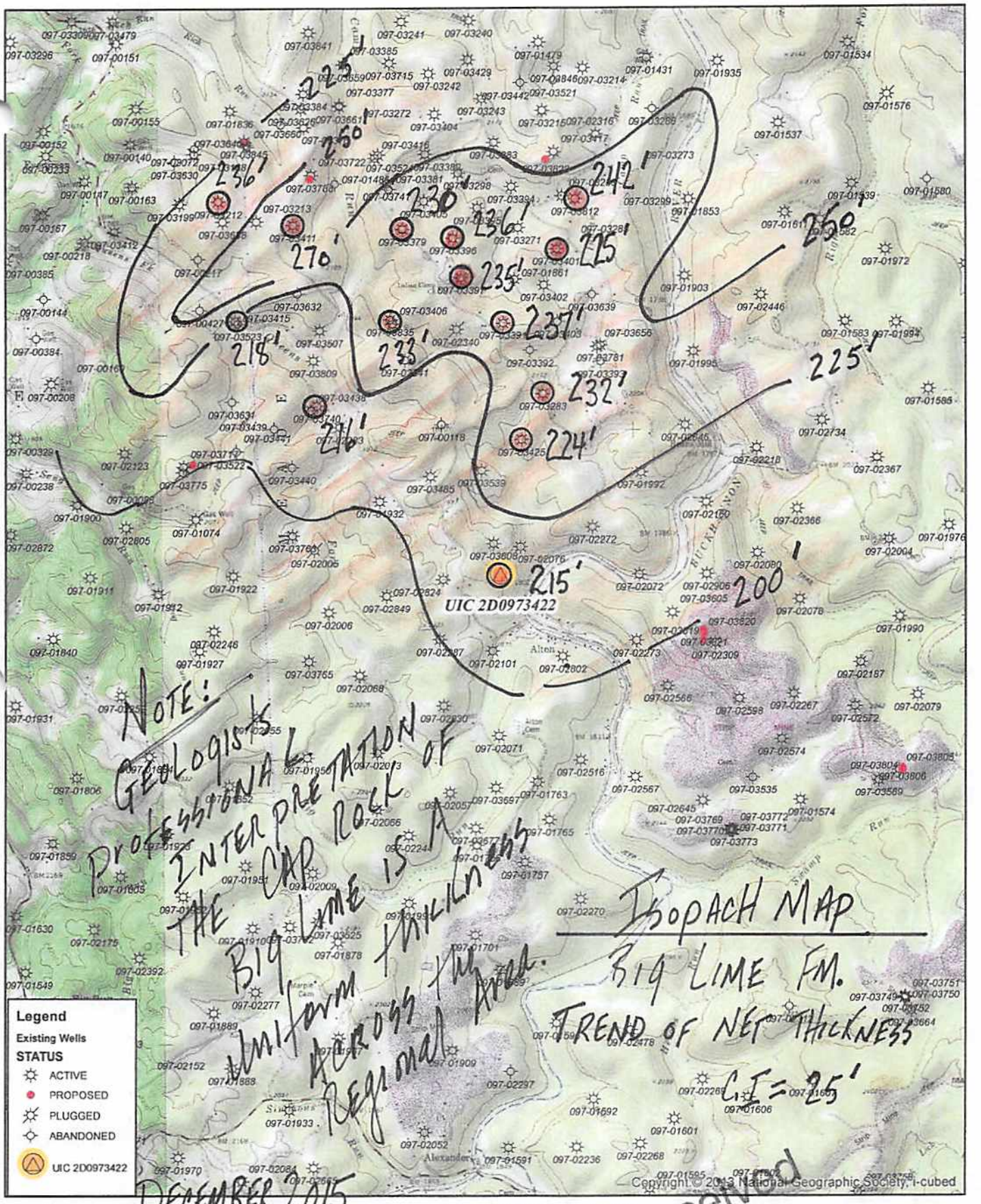
1 inch = 3,000 feet

December 2015

GEOLOGY:
William C Hayward

Received
DEC 21 2015

Office of Oil and Gas
WV Dept. of Environmental Protection



NOTE:
GEOLOGIST'S PROFESSIONAL INTERPRETATION OF THE CAP ROCK BIG LIME IS A UNIFORM THICKNESS ACROSS THE REGIONAL AREA.

ISOPACH MAP
BIG LIME FM.
TREND OF NET THICKNESS
C.I. = 25'

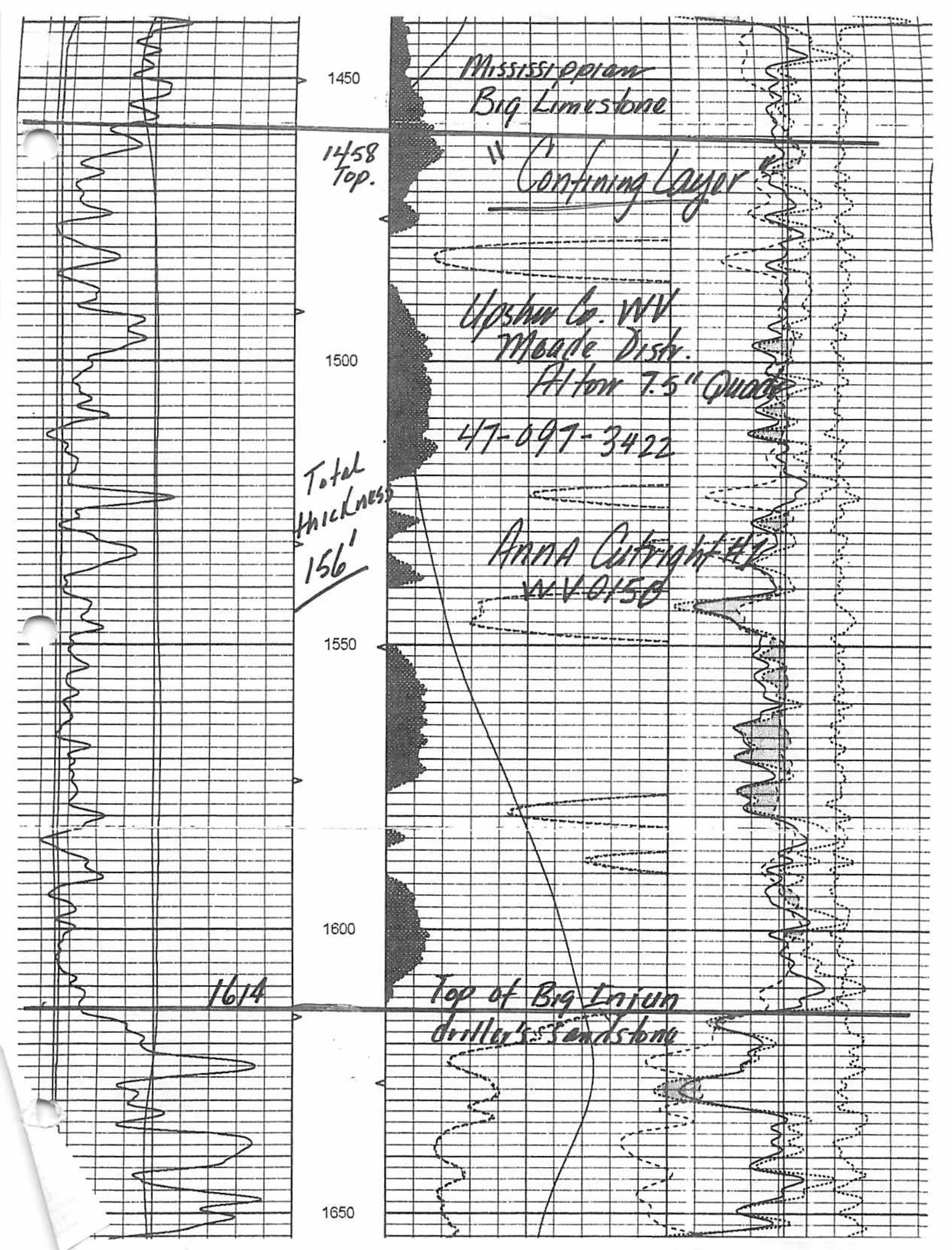
DECEMBER 2015
GEOLOGY:
William G Hayward

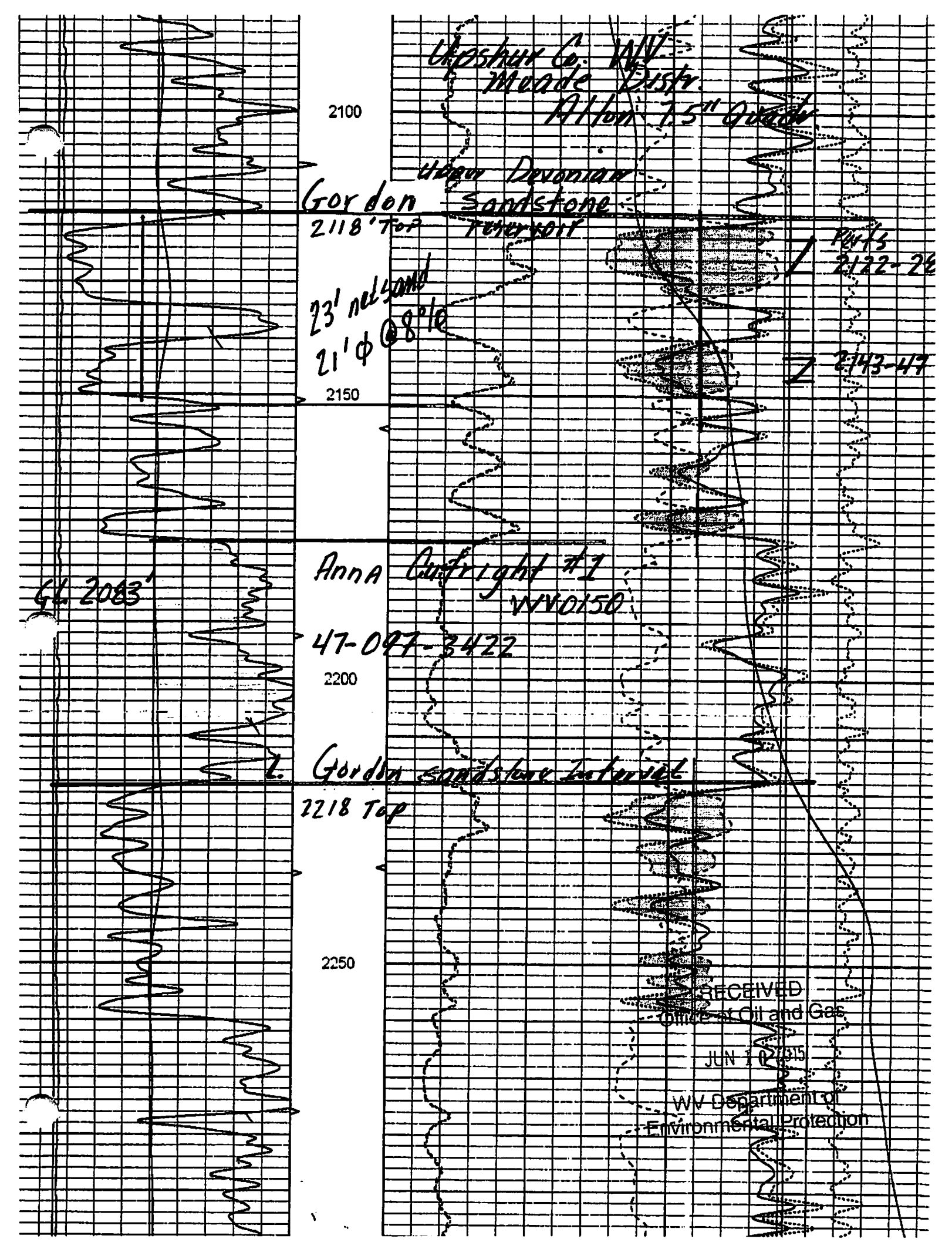
Anna Cutright UIC2D0973422
Meade District, Upshur County, WV
Alton 7.5' Quad

1 inch = 3,000 feet

MOUNTAIN V OIL & GAS INC.

Received
DEC 21 2015
Office of Oil and Gas
WV Dept. of Environmental Protection


1450
Mississippian
Big Limestone
1458
Top.
"Confining Layer"
Upshur Co. WV
Meade Distr.
Hilton 7.5" Quad
47-097-3422
1500
Total
Thickness
156'
Anna Cutright #1
WV-0150
1550
1600
1614
Top of Big Injun
driller's Sandstone
1650



SUPERIOR WELL SERVICES

SUPERIOR
Black Lick, Pa.
Mercer, Pa.
Wooster, Ohio
Cleveland, Ohio

GAMMA RAY / NEUTRON DENSITY / INDUCTION TEMPERATURE

Company MOUNTAIN V OIL & GAS INC.
Well ANNA CUTRIGHT #1 WV 0150
Field MEADE DISTRICT
County UPSHUR State WV

Location: API # : 47-097-3422
ALTON 7.5 QUAD
SEC N/A TWP N/A RGE N/A

Other Services
BHT
TIF

Permanent Datum GROUND LEVEL Elevation 2083 FT
Log Measured From GROUND LEVEL
Drilling Measured From K.B. 10 FT.

Elevation
K.B. 2093 FT.
D.F. 2093 FT.
G.L. 2083 FT.

Company MOUNTAIN V OIL & GAS INC.
Well ANNA CUTRIGHT #1 WV 0150
Field MEADE DISTRICT
County UPSHUR
State WV

Date	15 DEC 07		
Run Number	ONE		
Depth Driller	4250 FT.		
Depth Logger	4250 FT.		
Bottom Logged Interval	4248 FT.		
Top Log Interval	SURFACE		
Casing Driller	1401 FT.		
Casing Logger	1404 FT.		
Bit Size	6.50 IN.		
Type Fluid in Hole	AIR / GAS		
Density / Viscosity	N/A		
pH / Fluid Loss	N/A		
Source of Sample	N/A		
Rm @ Meas. Temp	N/A		
Rmf @ Meas. Temp	N/A		
Rmc @ Meas. Temp	N/A		
Source of Rmf / Rmc	N/A		
Rm @ BHT	N/A		
Time Circulation Stopped	N/A		
Time Logger on Bottom	N/A		
Maximum Recorded Temperature	94.8 DEG.		
Equipment Number	0058		
Location	BUCKHANNON		
Recorded By	MARK LEWIS		
Witnessed By	MIKE SHAVER	LUKE SANDS	

Comments

CREW: S.SQUIRES A.ALLEN
MATRIX DENSITY:2.71~
FLUID DENSITY:1.0
TEMPERATURE RAN IN HOLE
THANK YOU FOR CHOOSING SUPERIOR WELL SERVICE
FLUID LEVEL:4208 FT.

Weatherford

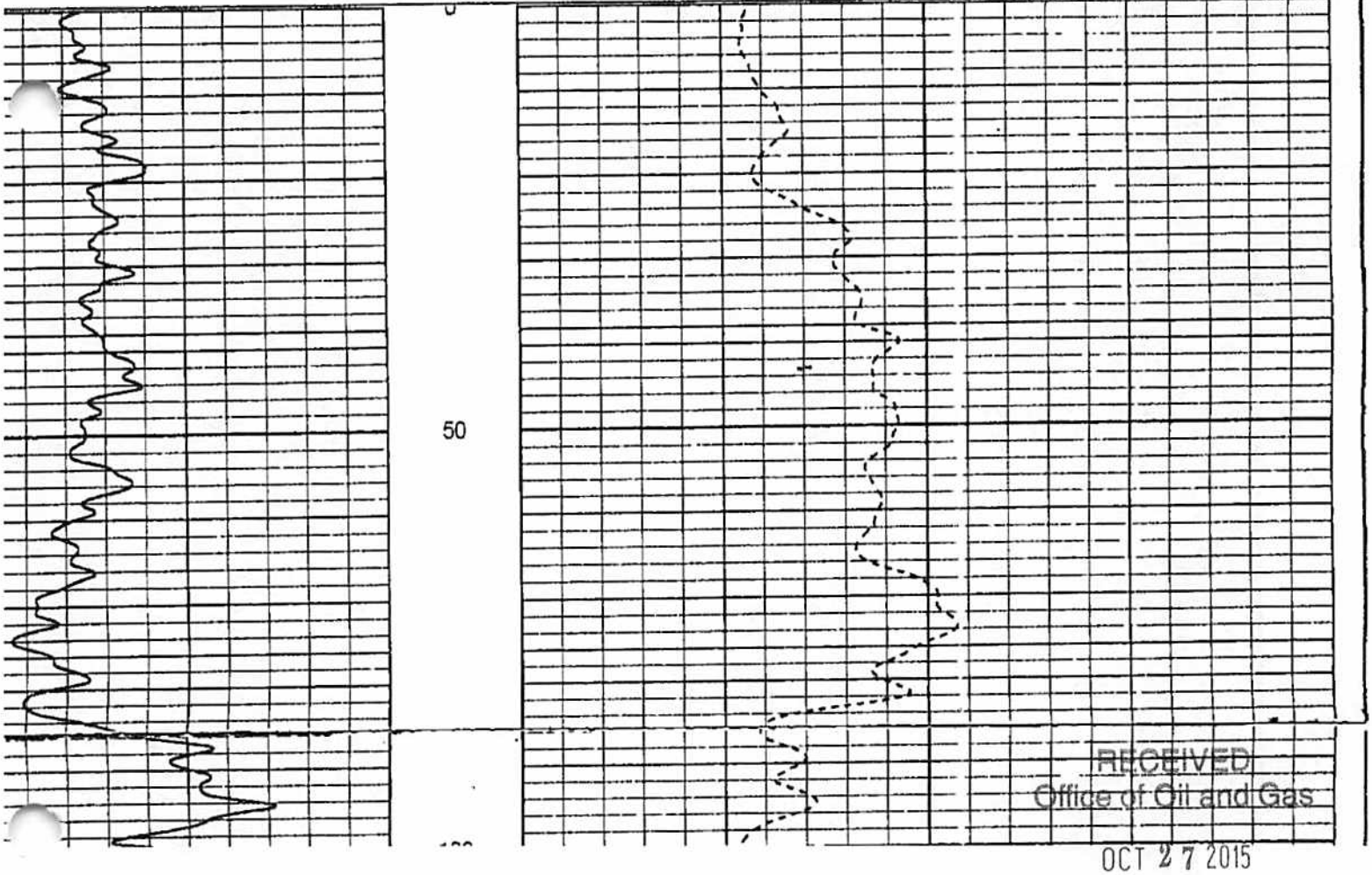
Anna Cutright 1 Log

SUPERIOR
Black Lick, Pa.
Mercer, Pa.
Wooster, Ohio
Cleveland, Oh.

5 INCH MAIN LOG

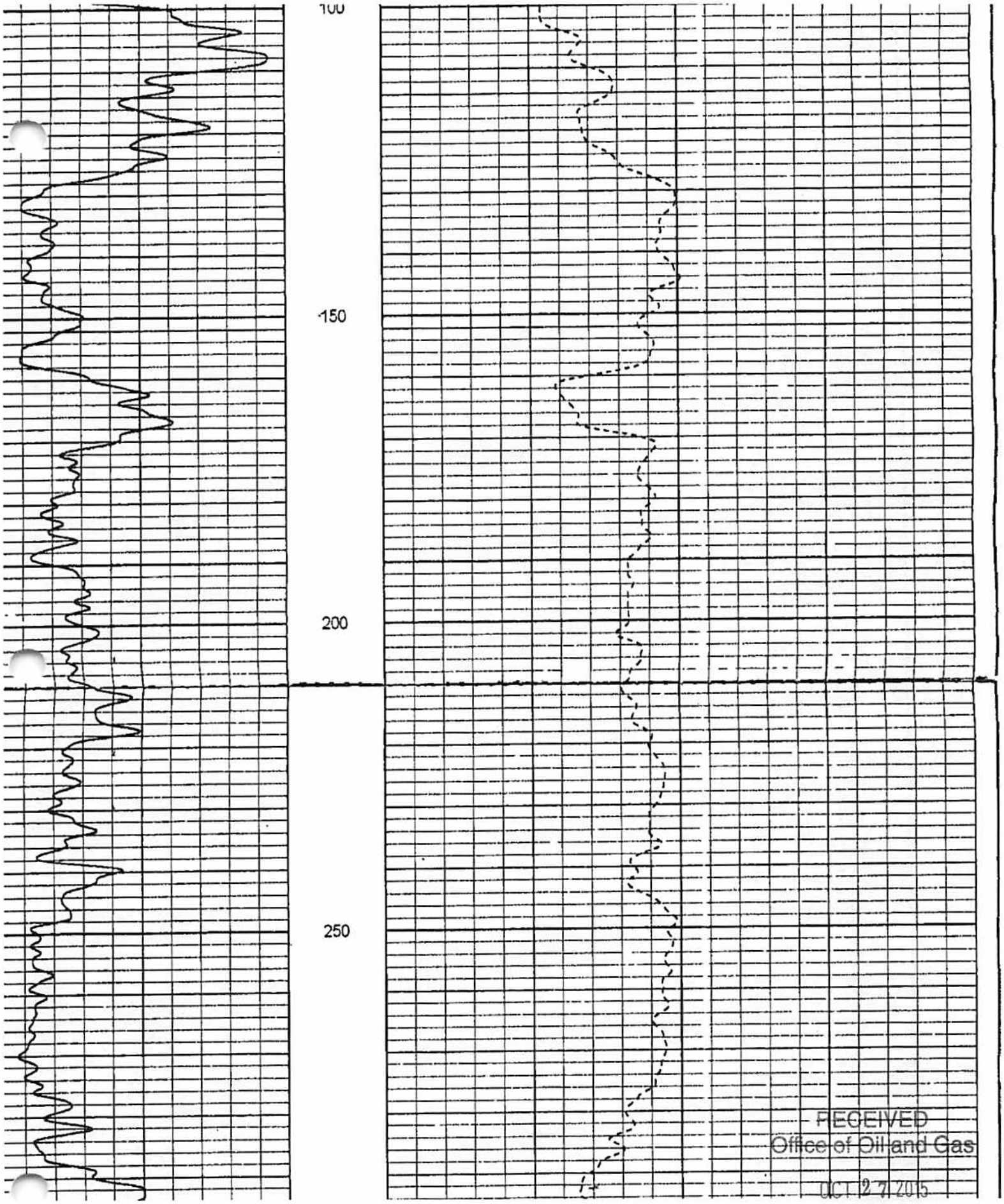
Database File: 15 dec 07 mtv anna cutright 1.db
Dataset Pathname: pass2.1A
Presentation Format: LITHOS~1
Dataset Creation: Sat Dec 15 06:28:55 2007
Charted by: Depth in Feet scaled 1:240

	Gamma Ray (GAPI)	200	TBHV	2	Bulk Density (g/cc)			3
	BOREID (in)	15	ABHV	30	Density Porosity (pu)			-10
25	DTMP (degF)	0.25		30	Neutron Porosity (pu)			-10
0000	LTEN (lb)	0		2	MATRXDEN (g/cc)			3
00	GR (GAPI)	400		67	TEMP (degF)			70
	DCAL (in)	15		0	RILM (Ohm-m)	100	-0.45 Correction (g/cc)	0.25
				0	DEEP INDUCTION (Ohm-m)	103		
				100	RILM (Ohm-m)	1000		



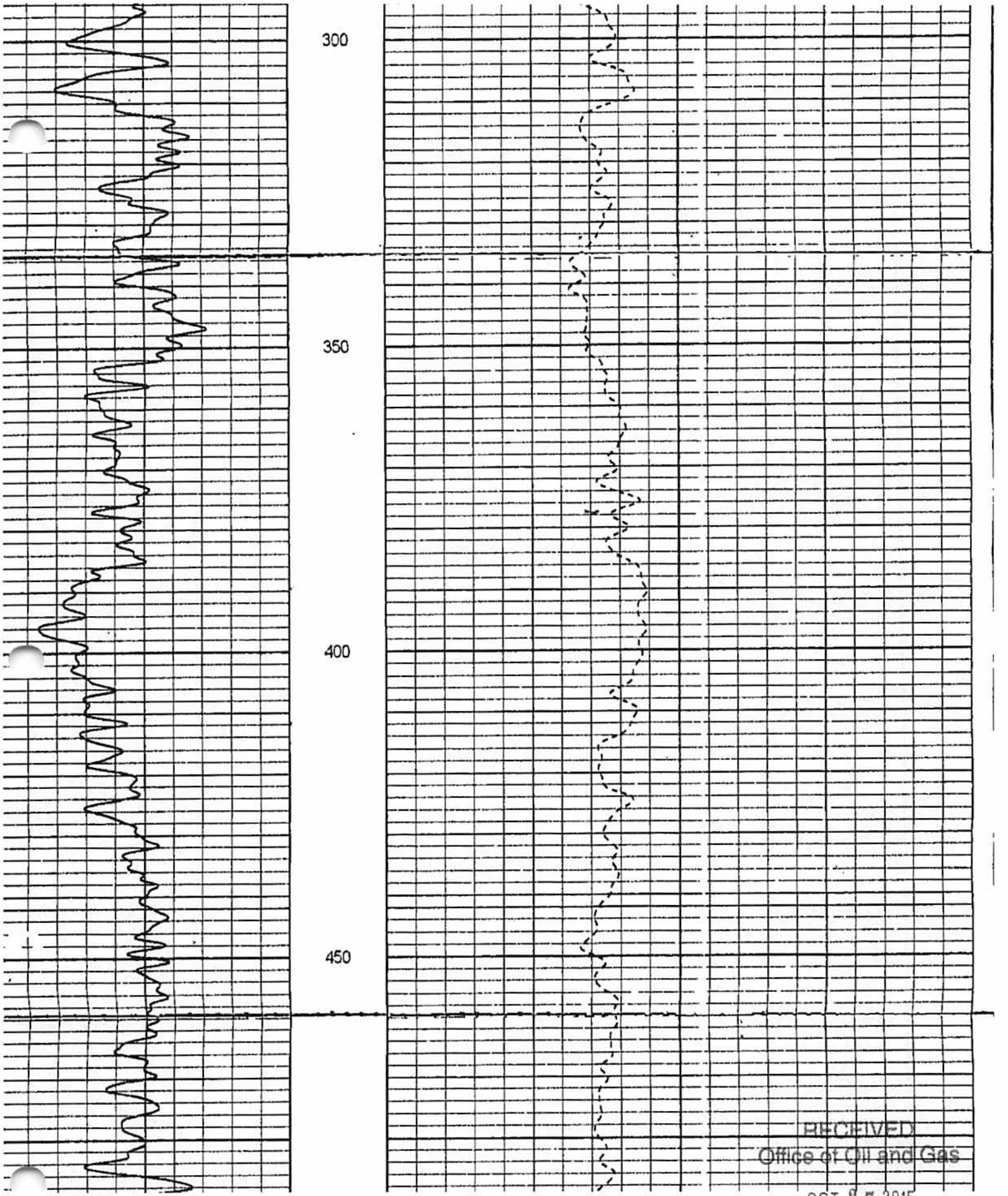
Weatherford

Anna Cutright 1 Log



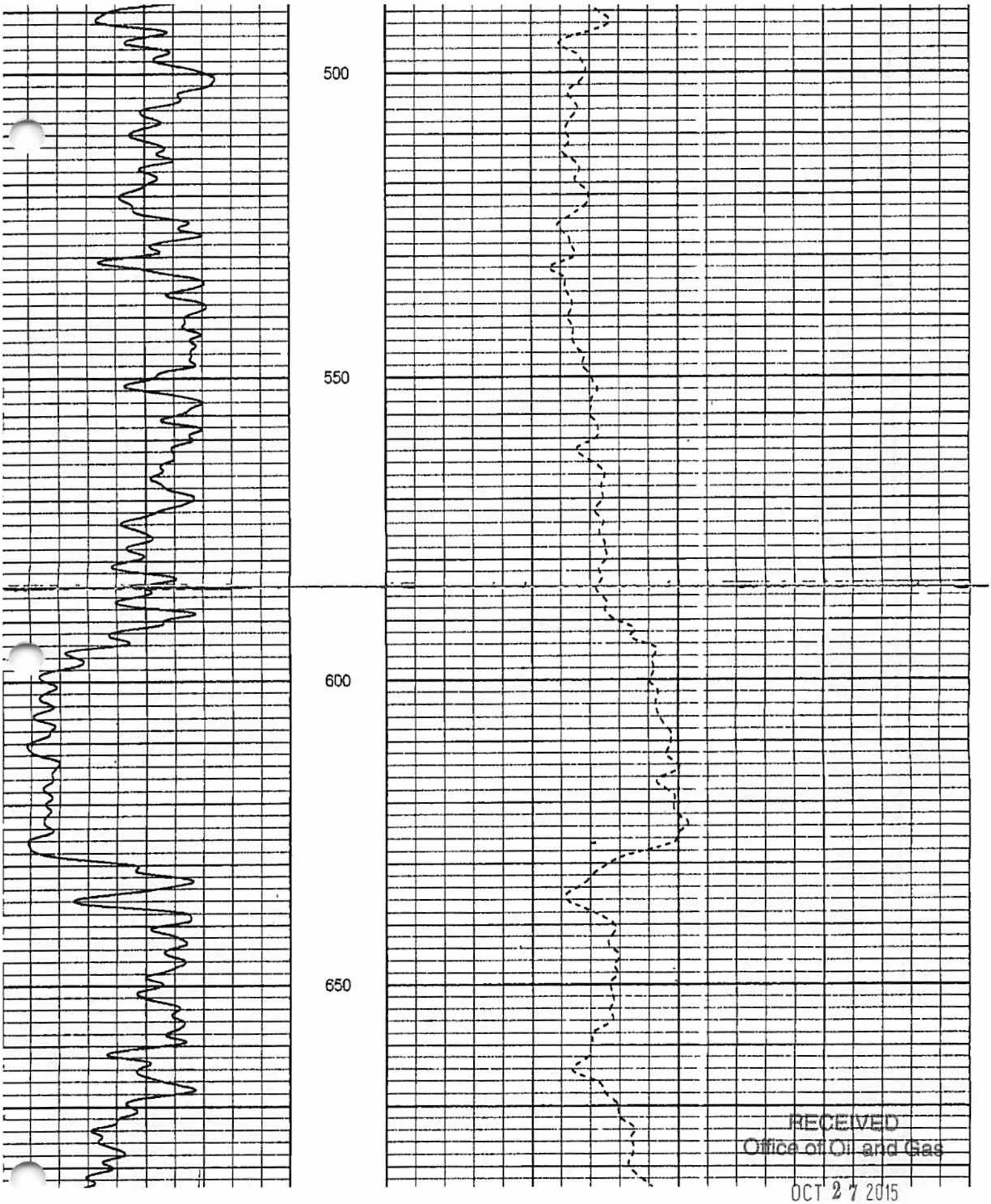
Weatherford

Anna Cutright 1 Log



Weatherford

Anna Cutright 1 Log



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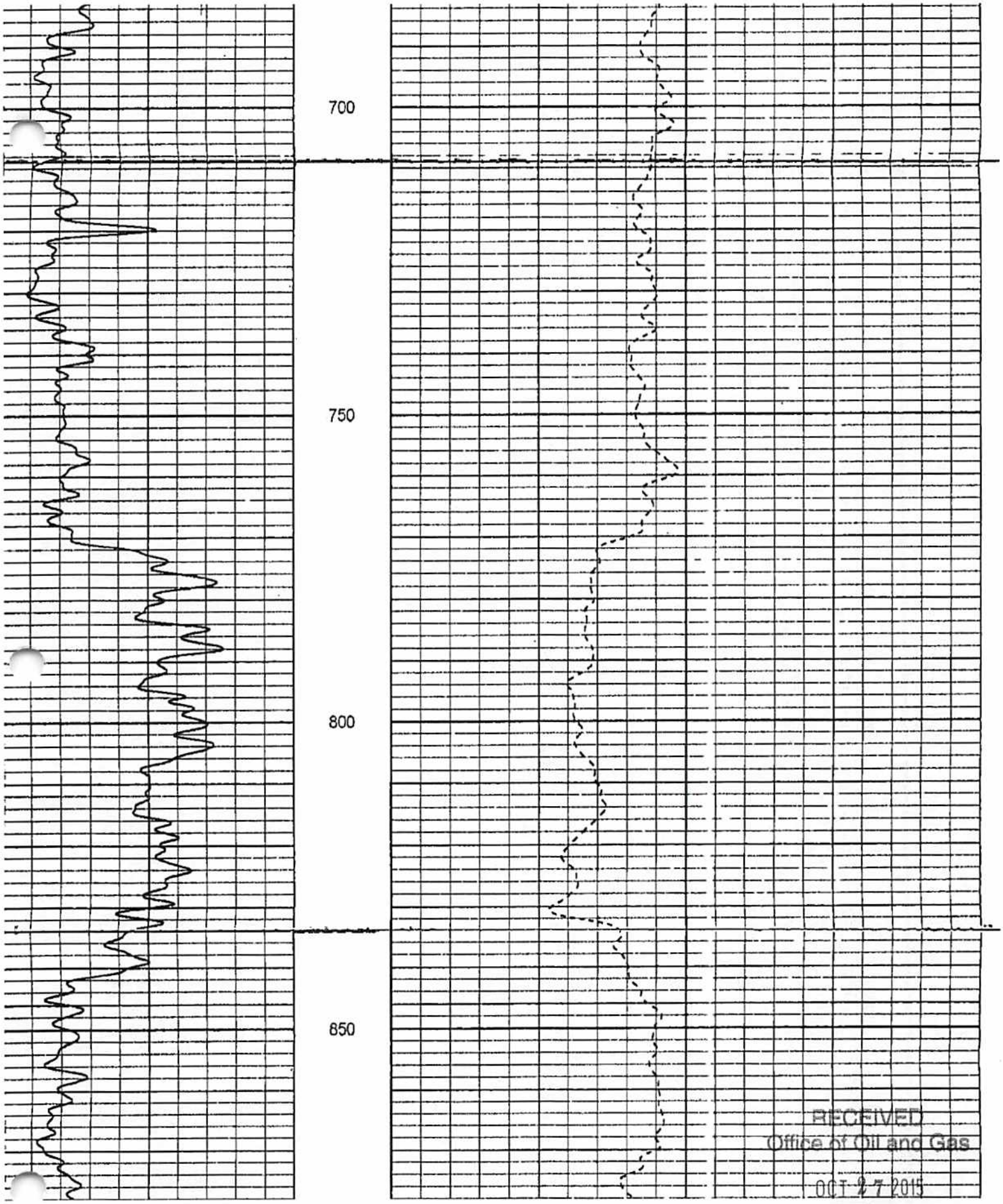
Anna Cutright 1 Log



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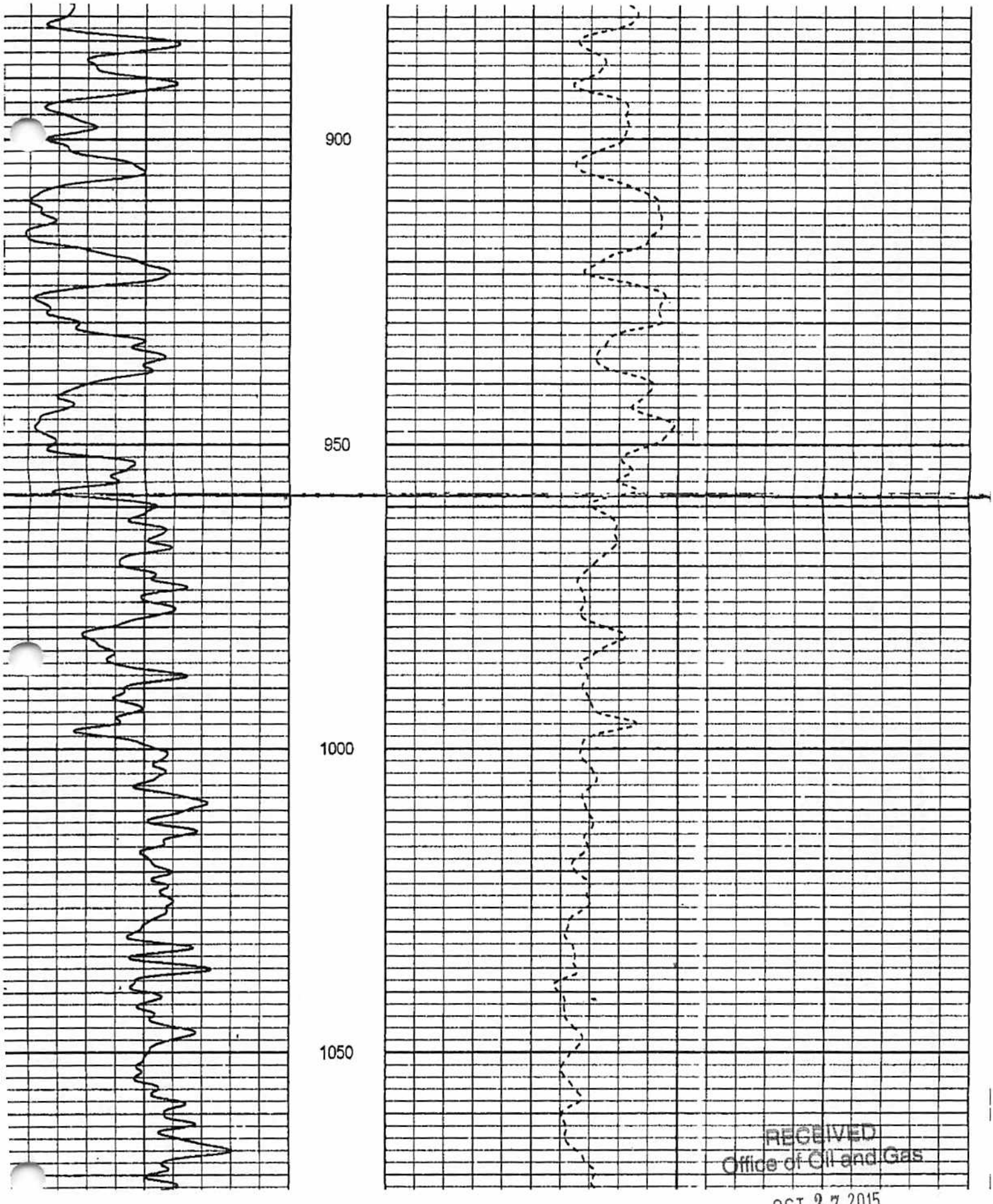

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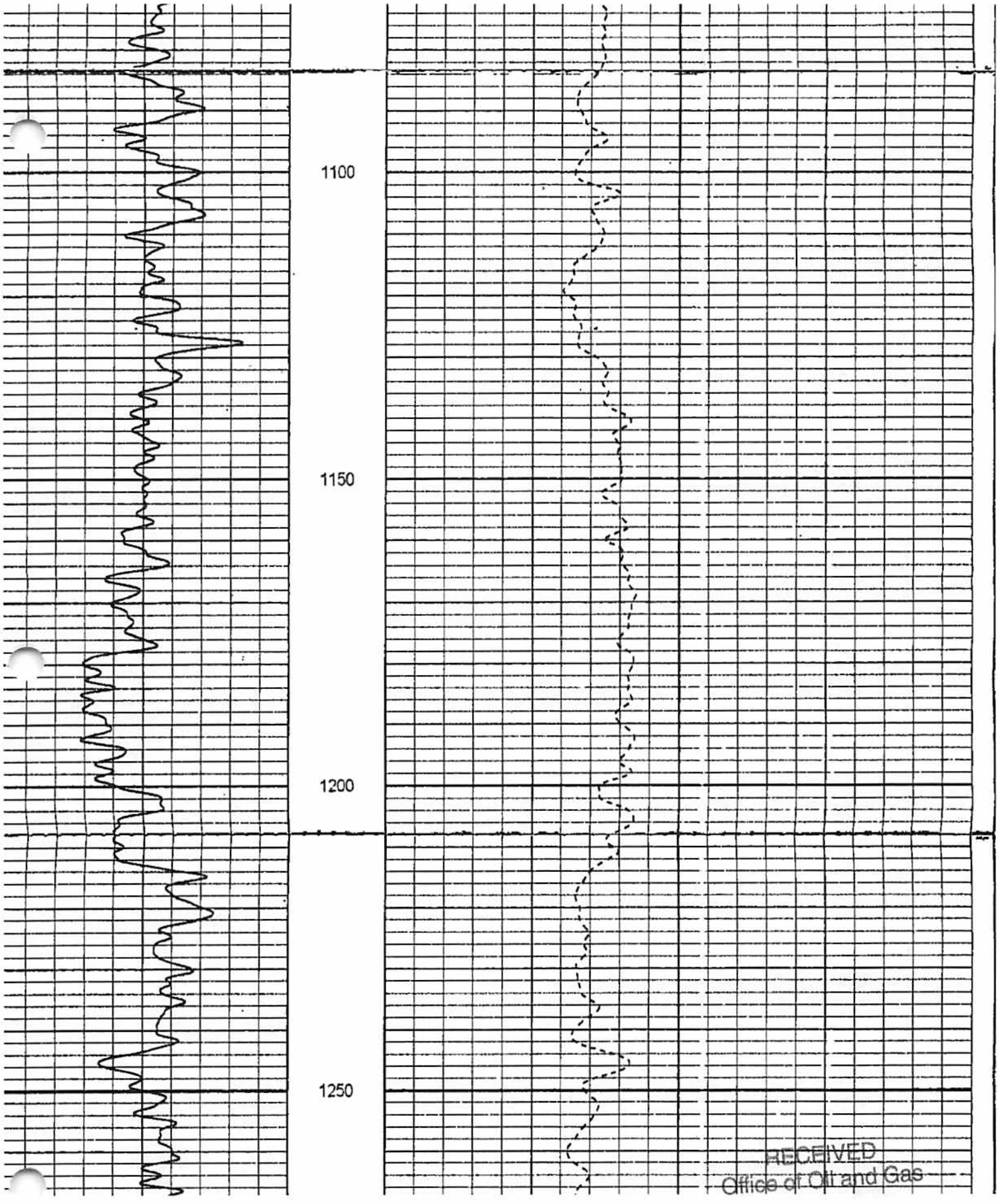

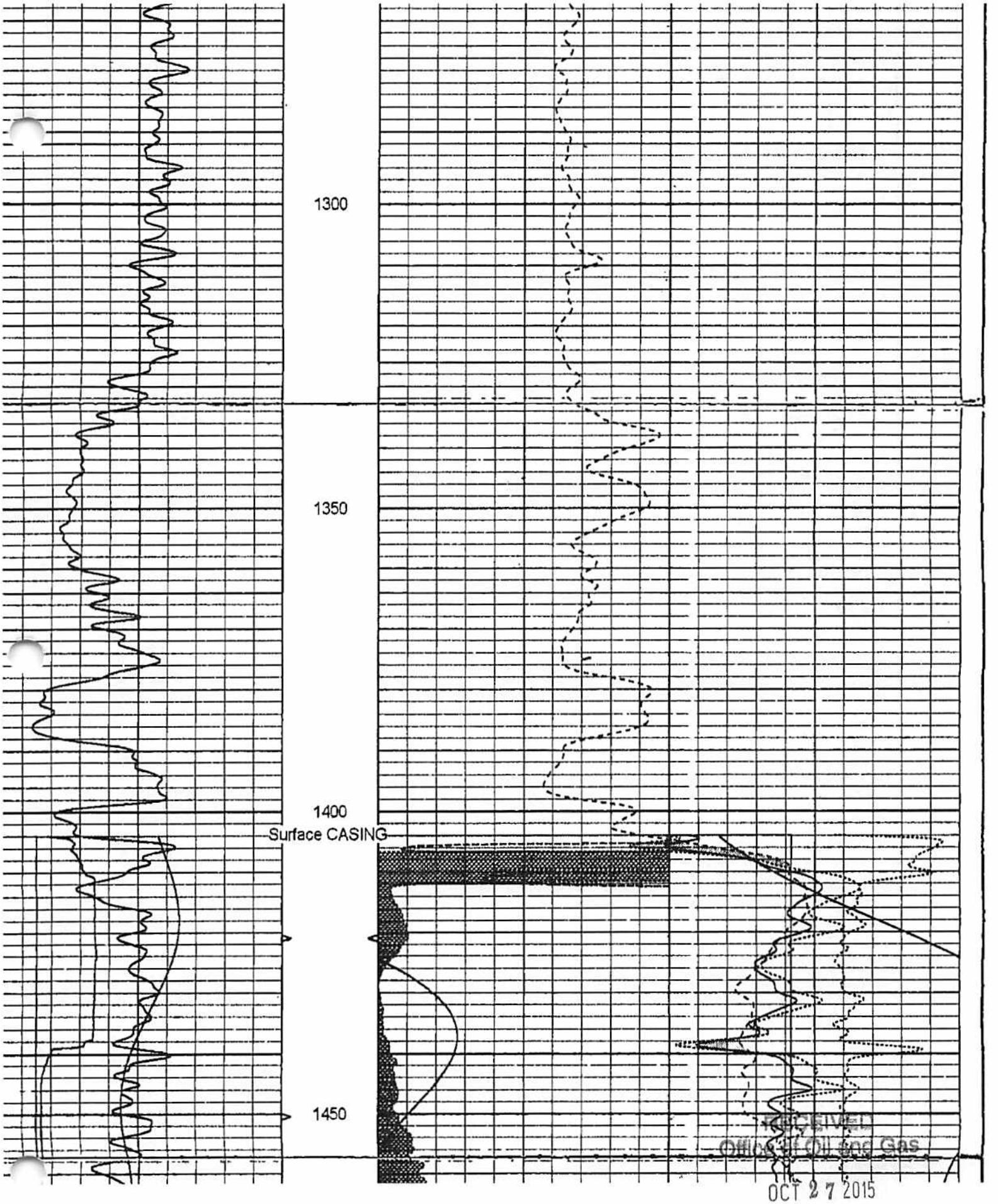

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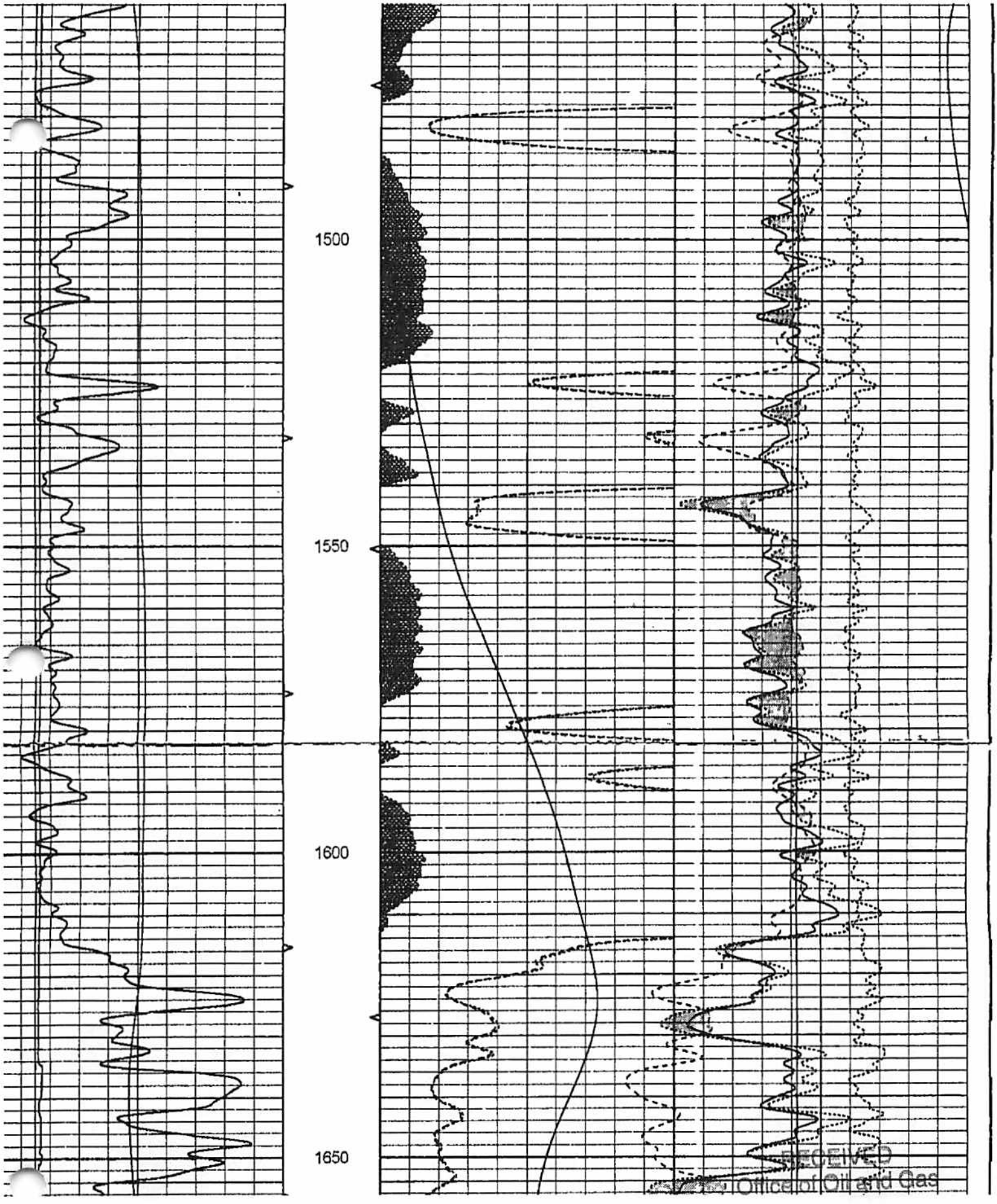

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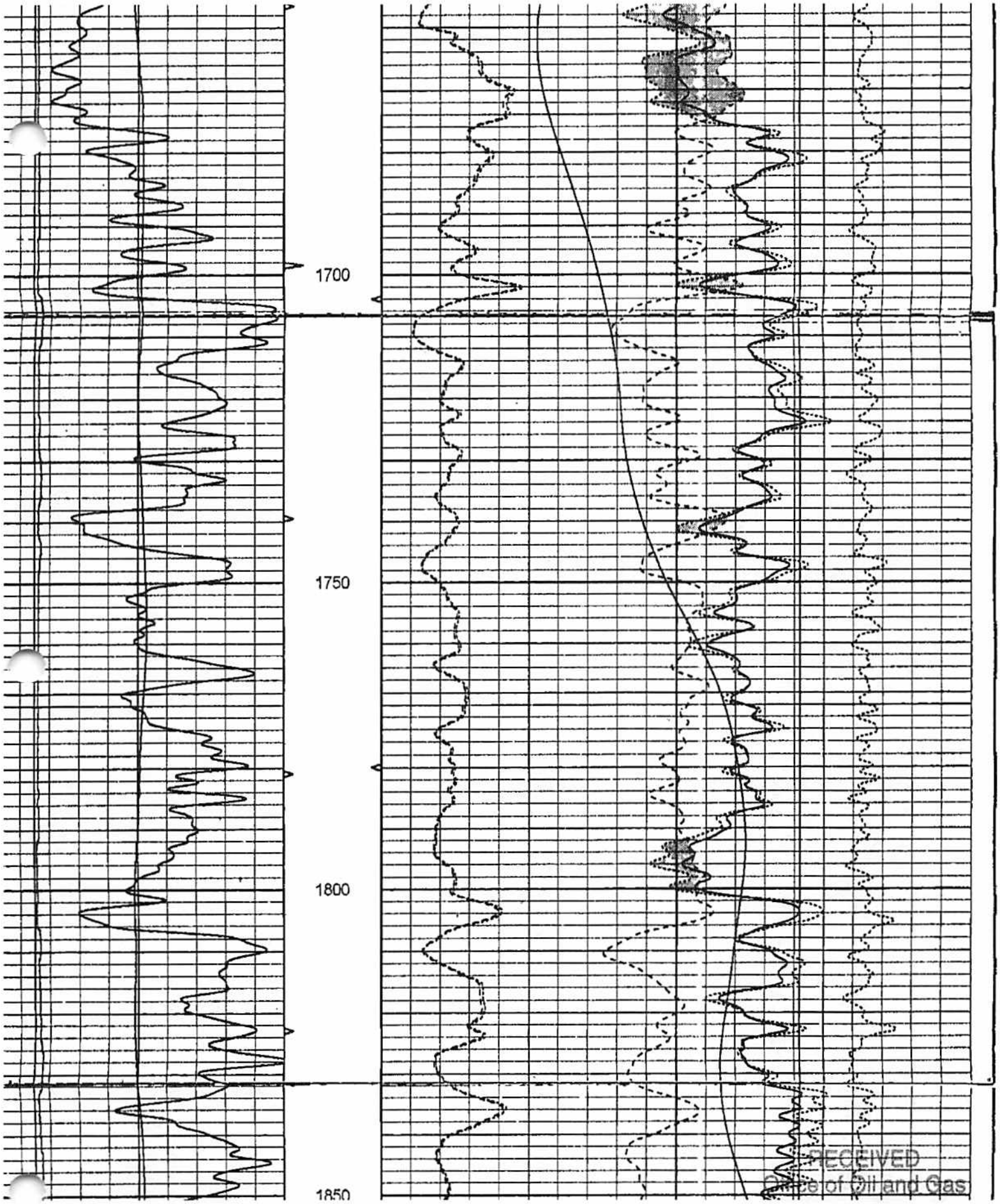

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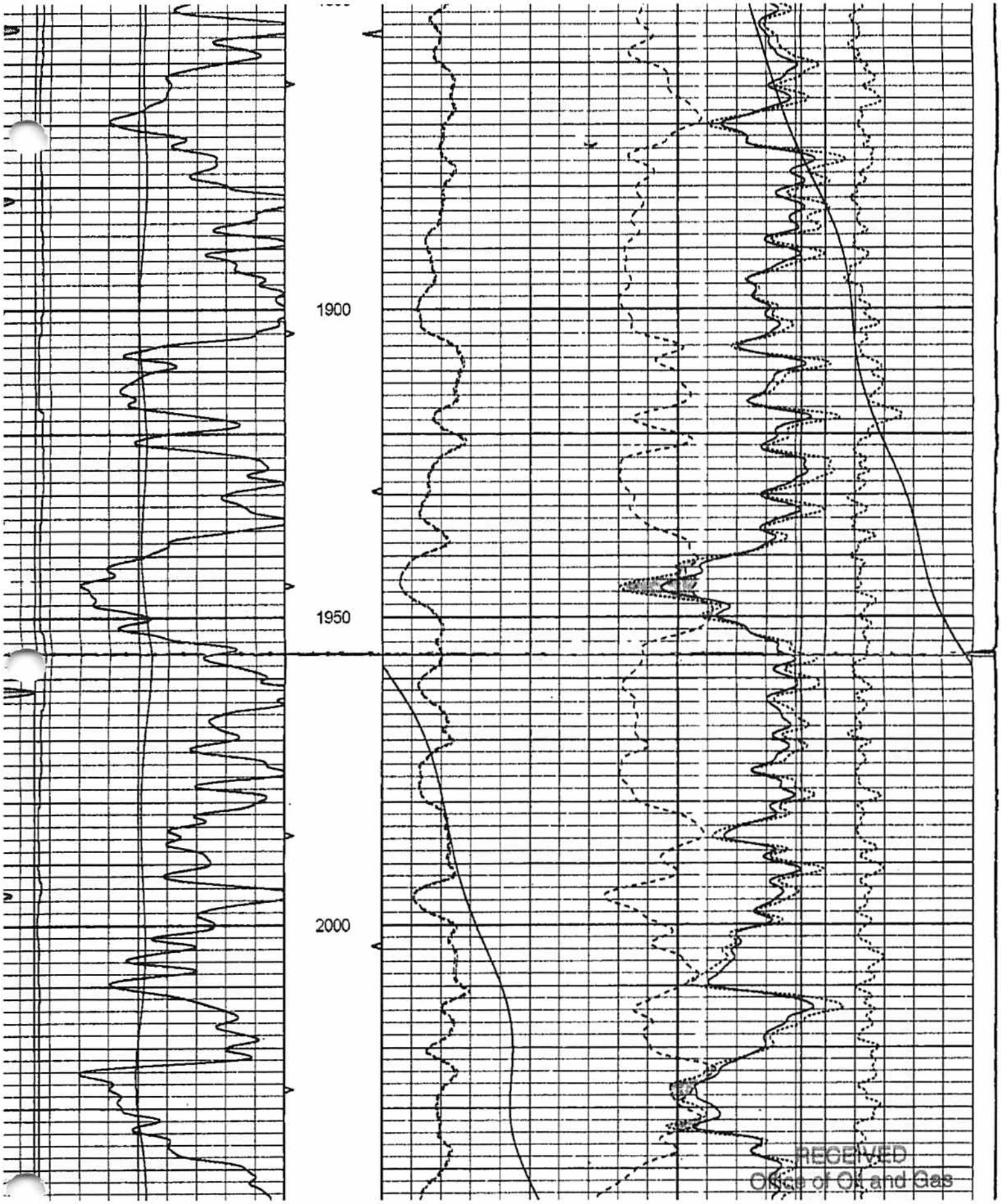

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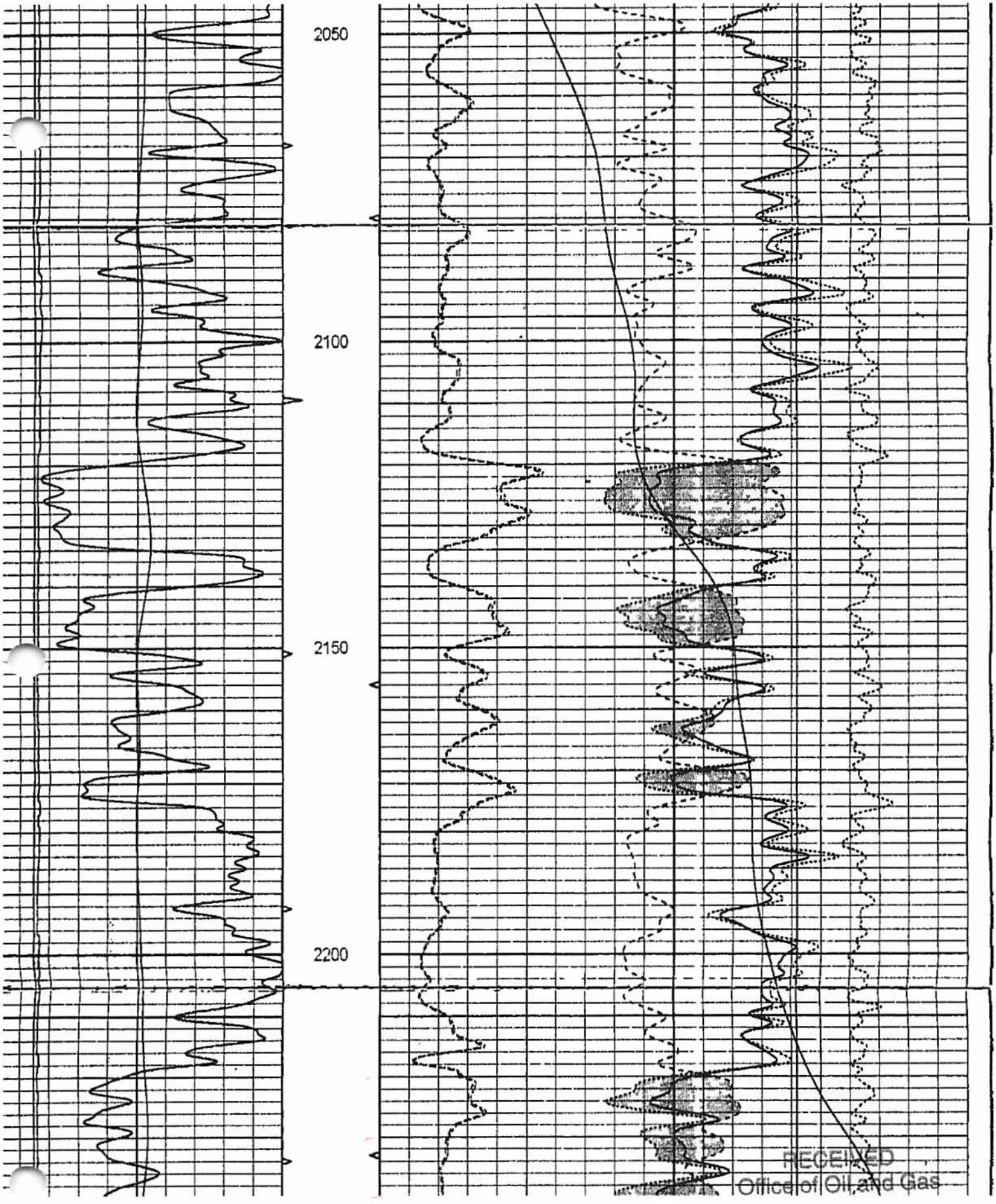

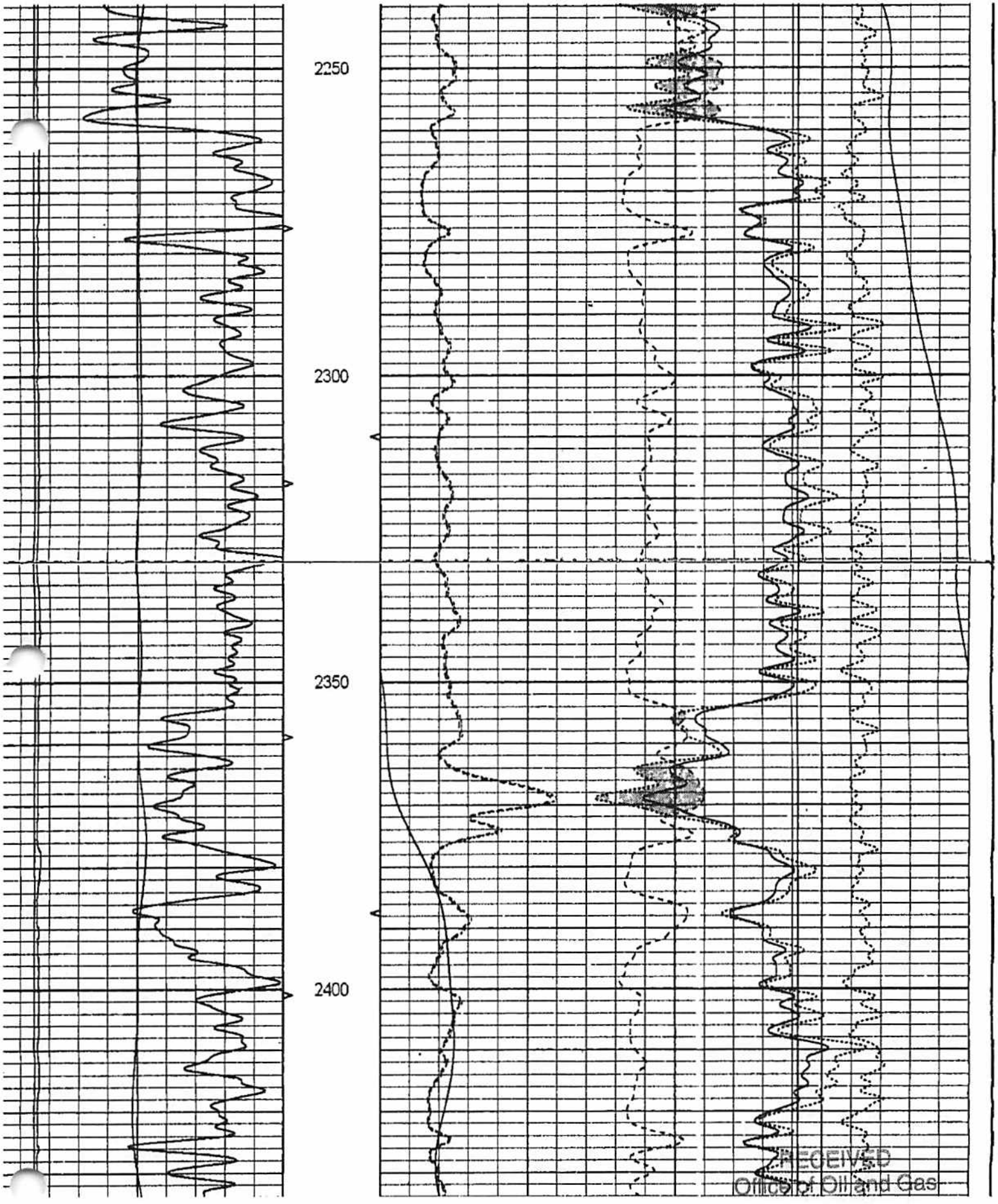

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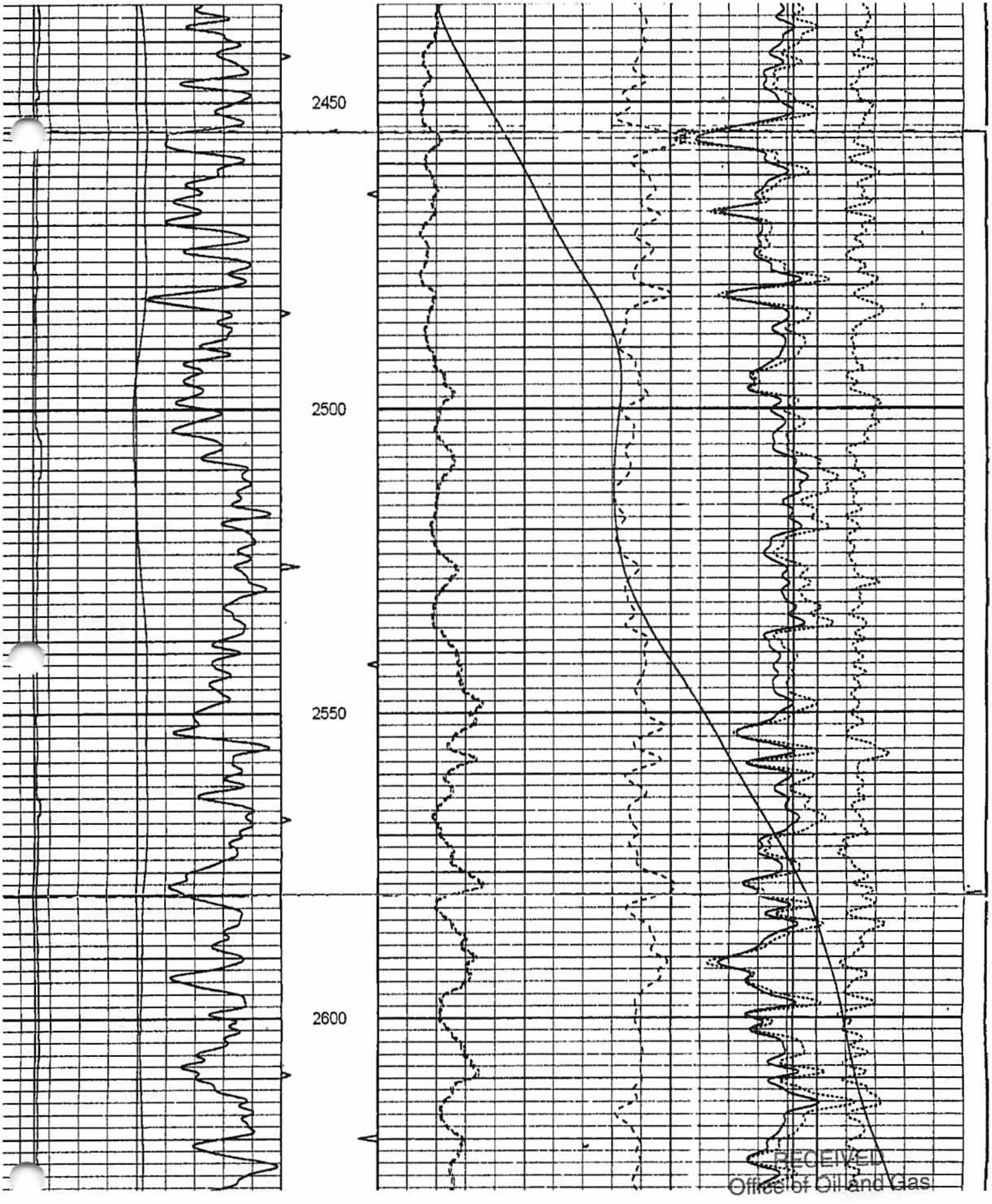

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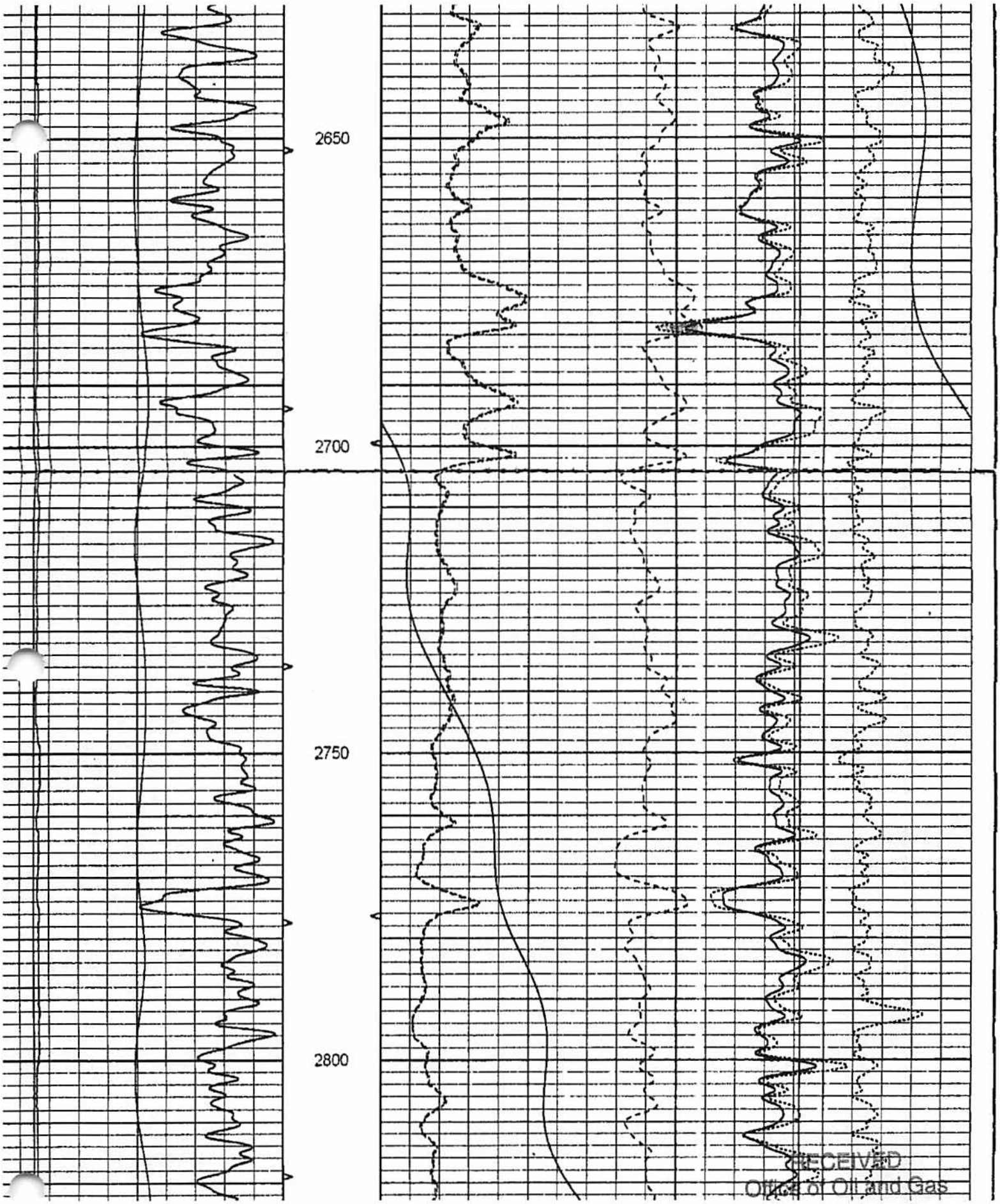

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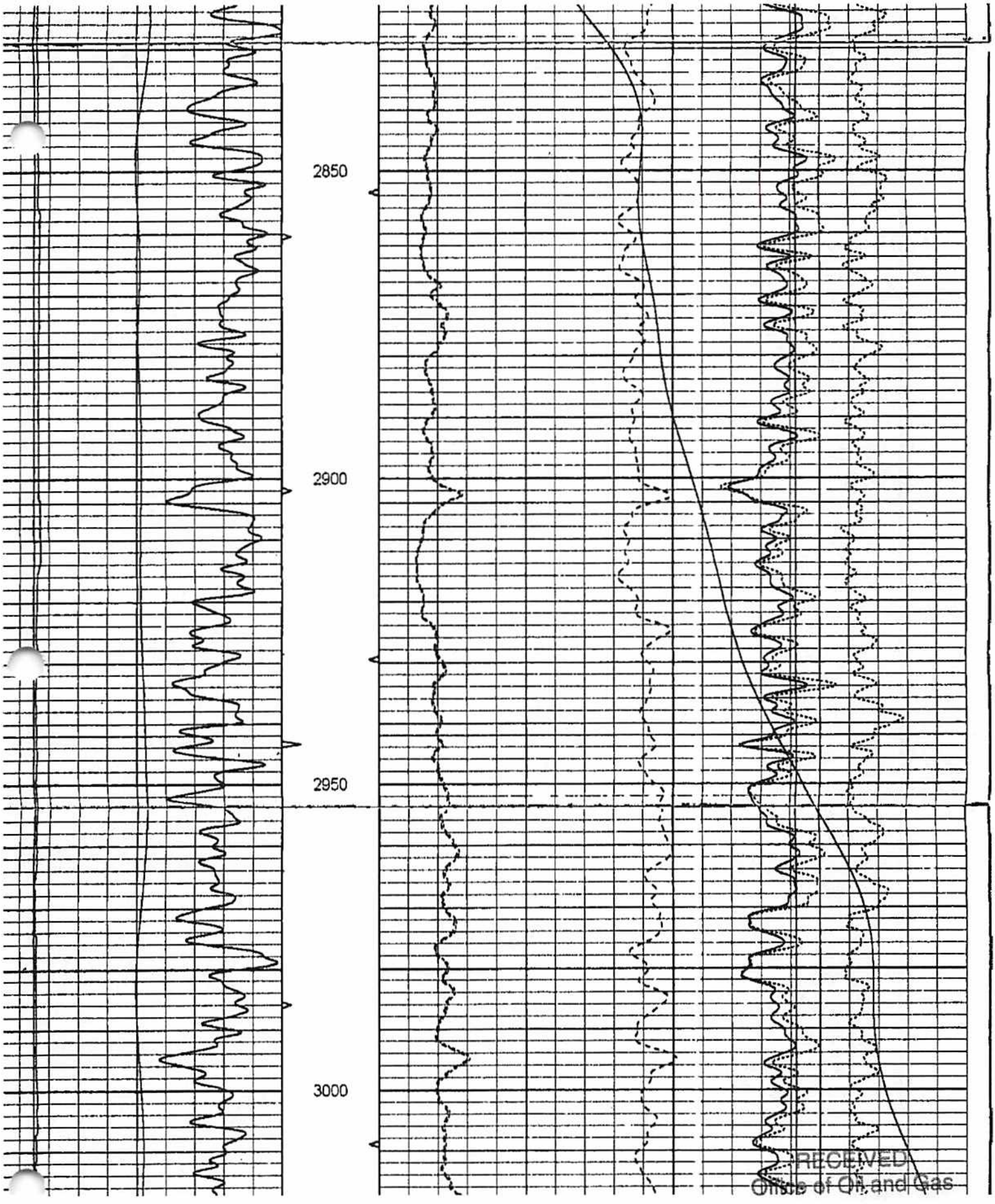

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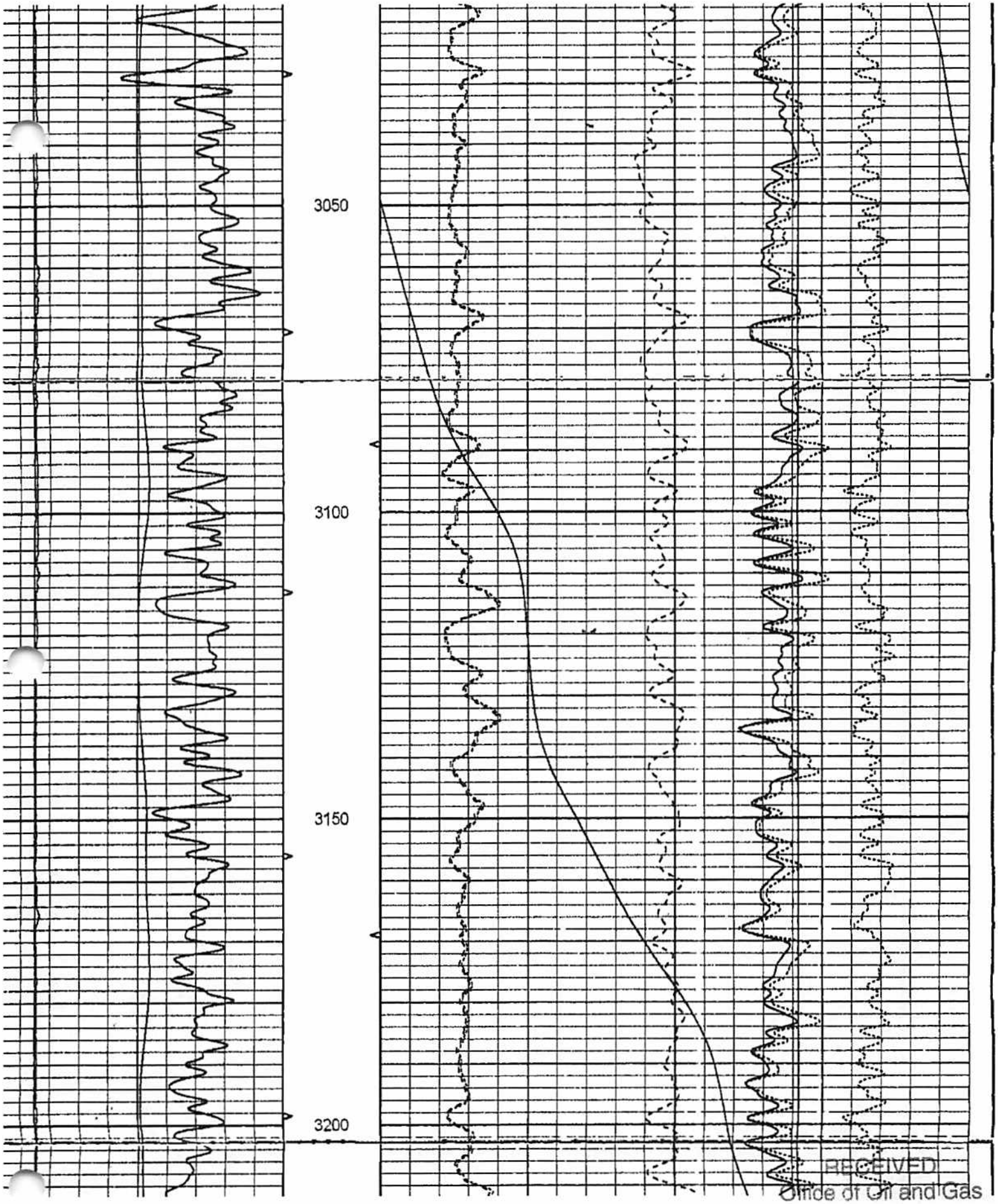

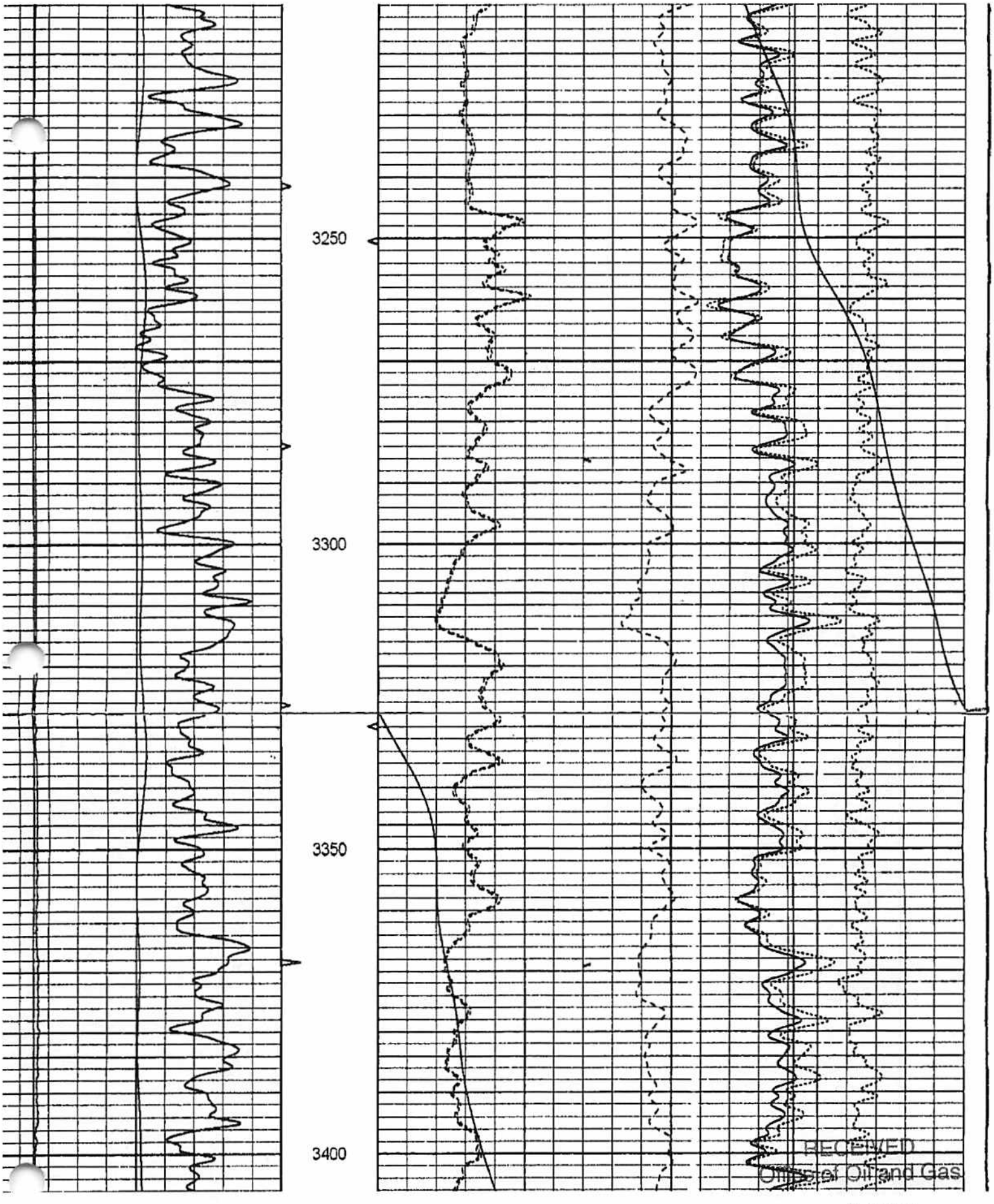

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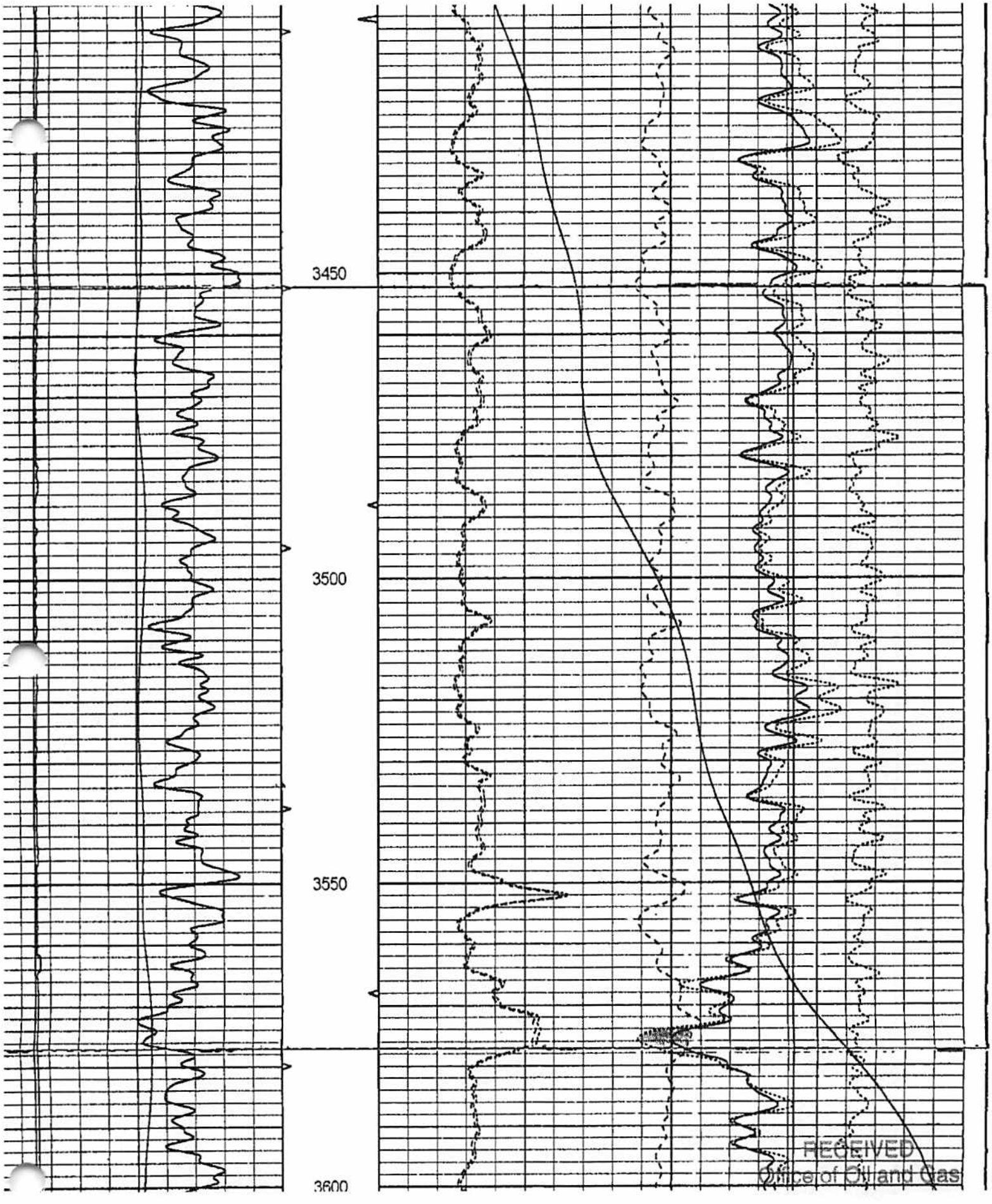

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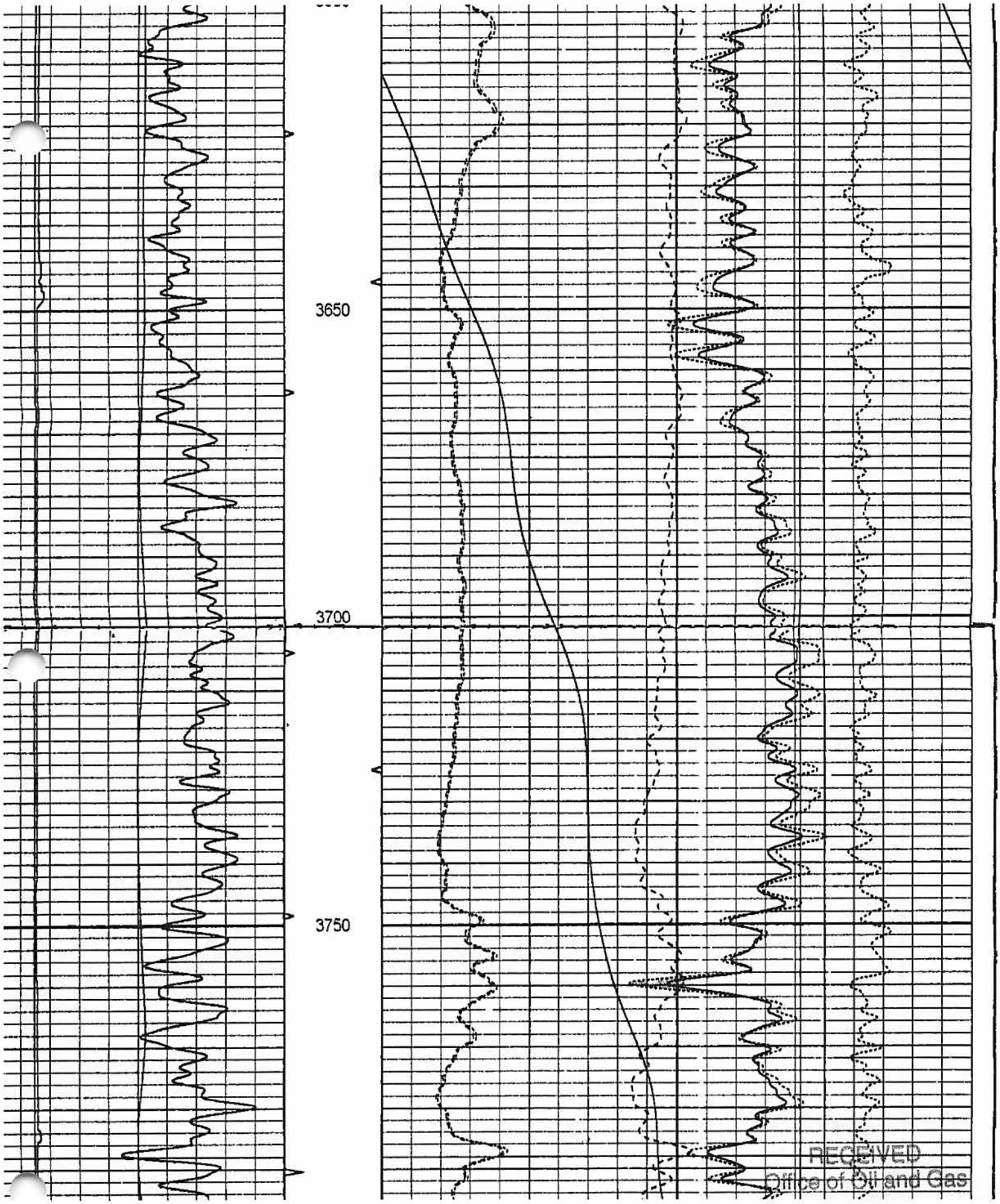

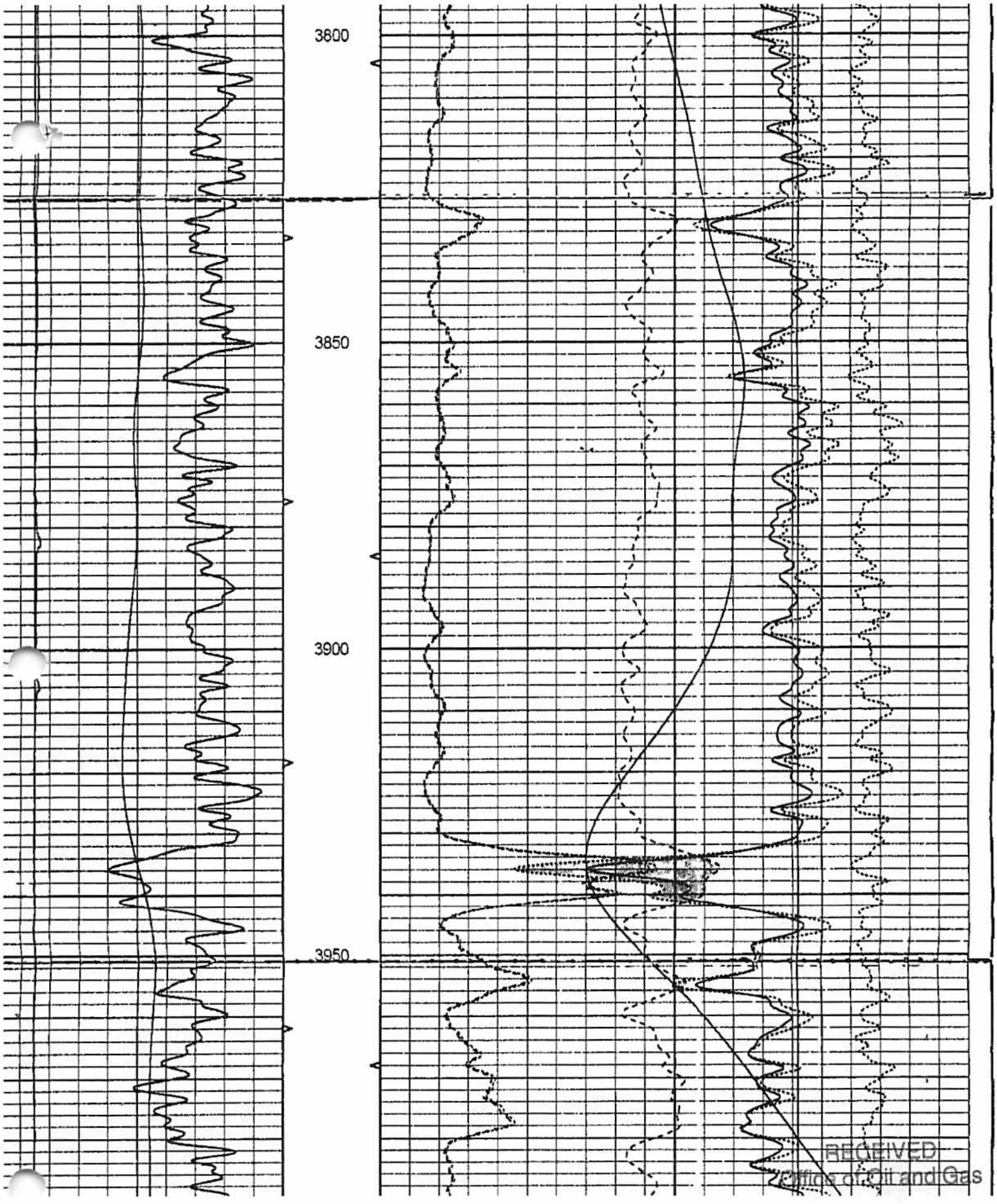

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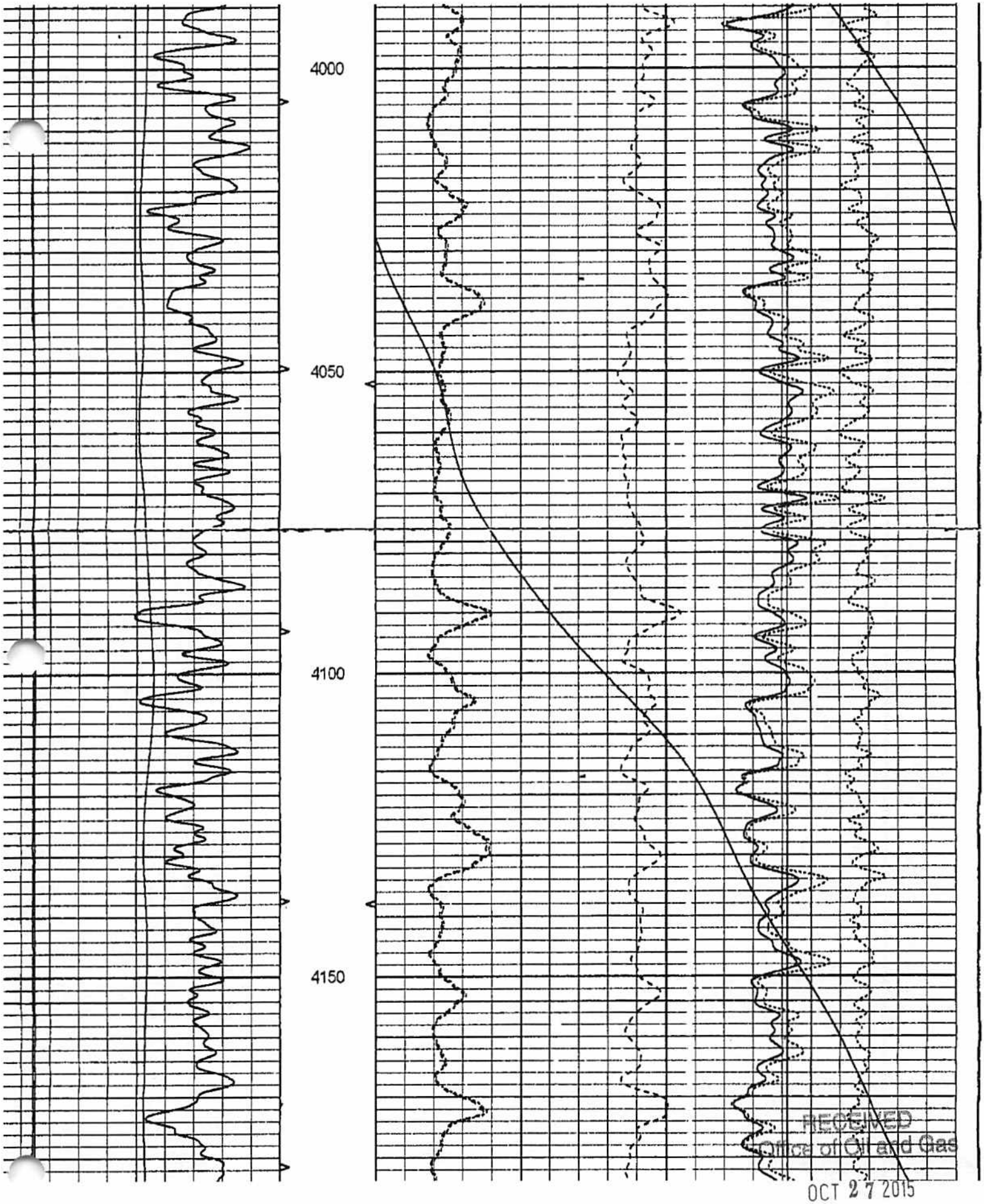

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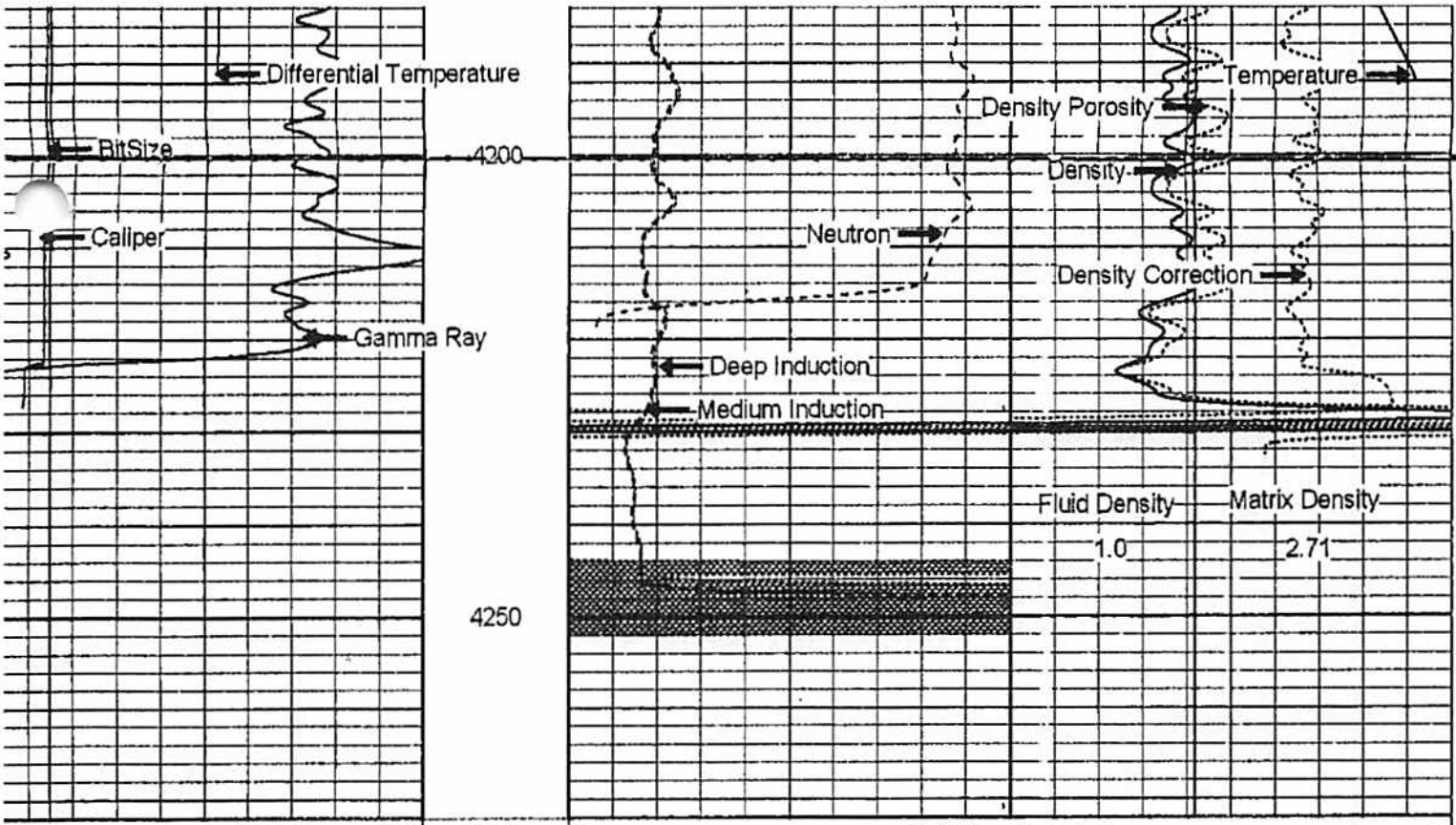


	Gamma Ray (GAPI)	200	TBHV	2	Bulk Density (g/cc)		3
	BOREID (in)	15	ABHV	30	Density Porosity (pu)		-10
.25	DTMP (degF)	0.25		30	Neutron Porosity (pu)		-10
0000	LTEN (lb)	0		2	MATRXDEN (g/cc)		3
00	GR (GAPI)	400		67	TEMP (degF)		70
	DCAL (in)	15		0	RILM (Ohm-m) 100	-0.45 Correction (g/cc)	0.25
				0	DEEP INDUCTION (Ohm-m) 103		
				100	RILM (Ohm-m) 1000		

SUPERIOR WELL SERVICES
Black Lick, Pa
Mercer, Pa
Woodsfield, Ohio
Cleveland, Ok

5 INCH MAIN LOG

Calibration Report

Database File:	15 dec 07 mtv anna cutright 1.db
Dataset Pathname:	pass2.1A
Dataset Creation:	Sat Dec 15 06:28:55 2007

Dual Induction Calibration Report

Serial-Model:	DIL1-GEAR
Surface Cal Performed:	Fri Dec 14 17:58:48 2007
Downhole Cal Performed:	Wed Nov 07 17:11:21 2007
After Survey Verification Performed:	Wed Nov 07 17:11:21 2007

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.022	0.660	V	15.000	400.000	mmho-m	603.113	-8.825
Medium	0.005	0.733	V	12.000	464.000	mmho-m	620.497	3.902
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-0.133	0.784	V	0.000	400.000	mmho-m	436.174	57.884
Medium	-0.195	0.960	V	0.000	464.000	mmho-m	401.840	78.212

Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	0.000	mmho-m	-77.839	475.811	mmho-m	1.000	0.000
Medium	0.000	0.000	mmho-m	-110.046	586.355	mmho-m	1.000	0.000
Shallow	3.129	3.126	V	0.000	1.000	Ohm-m	-122.268	1321.130

After Survey Verification

	Readings			Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho-m	0.000	0.000	mmho-m	1.000	0.000
Medium	0.000	0.000	mmho-m	0.000	0.000	mmho-m	1.000	0.000
Shallow	0.000	0.000	Ohm-m	0.000	1.000	Ohm-m	1.000	0.000

Temperature Calibration Report

Serial Number: PRB-001
Tool Model: PROBE
Performed: Sat Dec 15 02:27:32 2007

Point #	Reading		Reference	
1	0.00	V	0.00	degF
2	2.65	V	67.00	degF
3	3.06	V	86.00	degF
4		V		degF
5		V		degF
6		V		degF
7		V		degF
8		V		degF
9		V		degF
10		V		degF

Compensated Density Calibration Report

Serial-Model: 103-GEARHEART
Source / Verifier: /
Master Calibration Performed: Fri Dec 14 16:12:40 2007
Before Survey Verification Performed:
After Survey Verification Performed:

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	608.39	215.10	cps
Aluminum	2.600	g/cc	128.58	144.92	cps

Spine Angle = 75.74 Density/Spine Ratio = 0.530

	Size		Reading	
Small Ring	6.30	in	4.45	V
Large Ring	9.75	in	6.30	V

Before Survey Verification

Target		Measured	
	g/cc		g/cc
	g/cc		g/cc
	g/cc		g/cc

After Survey Verification

Target		Measured	
	g/cc		g/cc
	g/cc		g/cc
	g/cc		g/cc

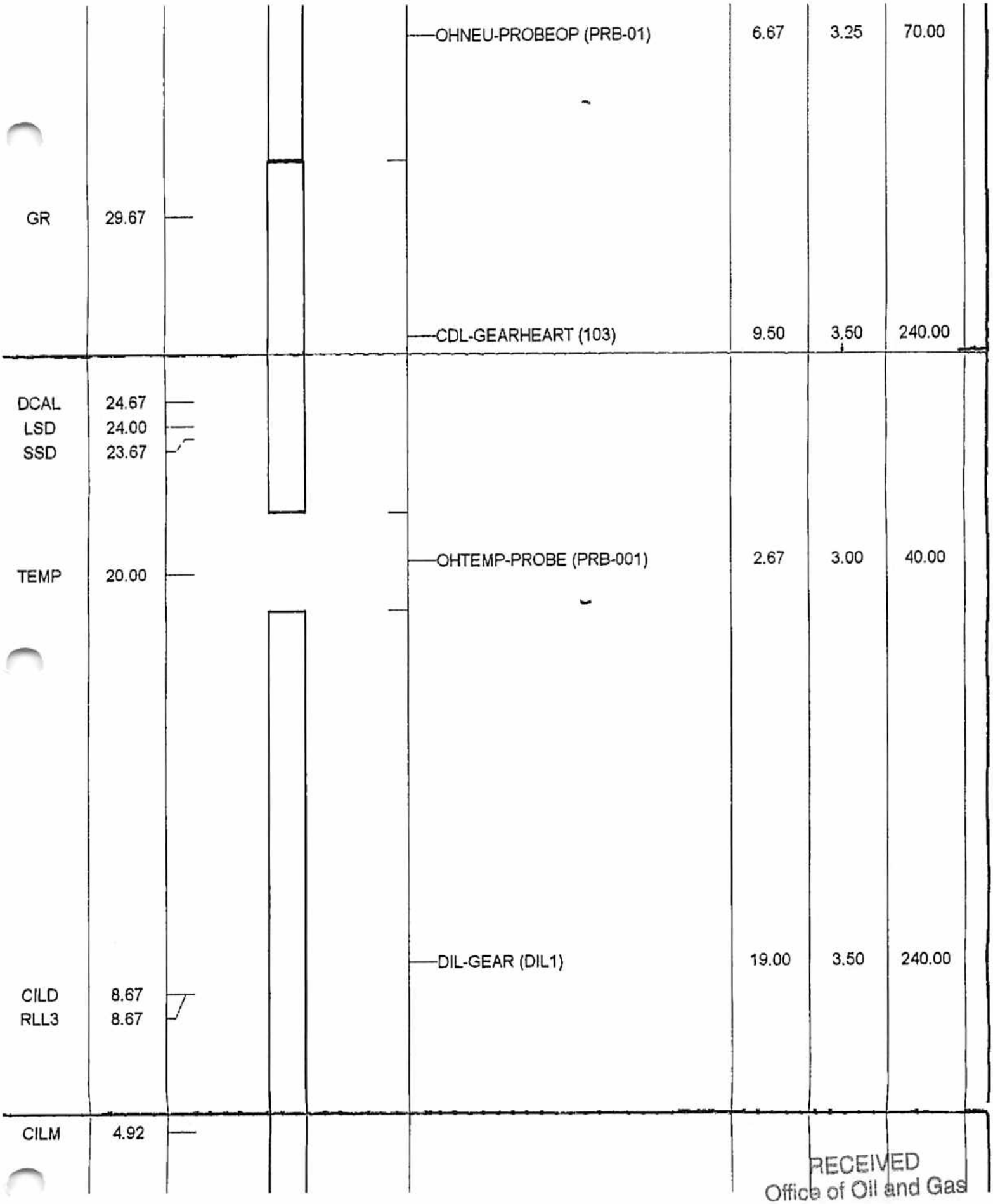
Gamma Ray Calibration Report

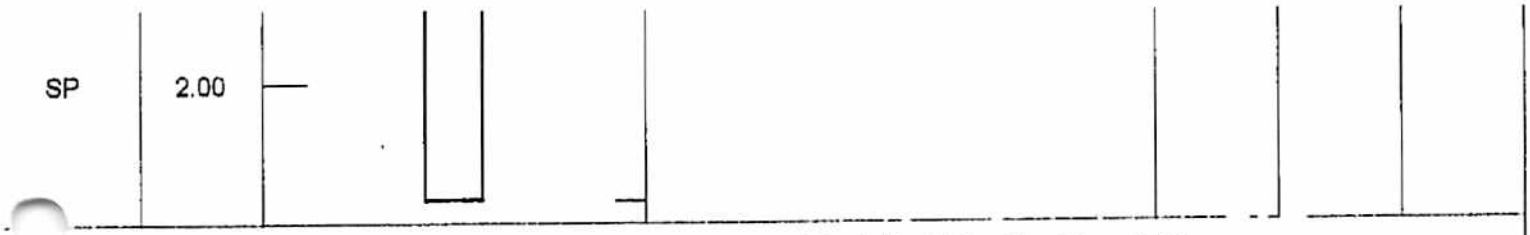
Serial Number:	103	
Tool Model:	GEARHEART	
Performed:	Fri Dec 14 20:47:12 2007	
Calibrator Value:	1.5	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	0.9	cps
Sensitivity:	1.6667	GAPI/cps

Neutron Calibration Report

Serial Number:	PRB-01		
Tool,Model:	PROBEOP		
Performed:	Sat Nov 10 01:30:46 2007		
Calibrator Values:	0	1	NAPI
Calibrator Readings:	1.28692	1.41053	cps
Sensitivity:	1	NAPI/cps	

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
NEU	36.17					





Dataset:	15 dec 07 mtv anna cutright 1.db: field/well/run1/pass2.1A
Total Length:	37.83 ft
Total Weight:	590.00 lb
O.D.	3.50 in

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

SECTION 9

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.

RECEIVED
Office of Oil and Gas

JUN 10 2015

WV Department of
Environmental Protection

Section 9 – Operating Requirements / Data:

- Average daily rate or volume of fluid to be injected: 433 BBLS
- Maximum daily rate or volume of fluid to be injected: 700 BBLS
- Average injection pressure: 415 psi
- Maximum injection pressure: 540 psi (permitted) – 430 psi (observed)

575 bbl/day

2. See attached Appendix G.

3. Results analysis of injection fluid:
   - Oil and Grease = 101 mg/l
   - pH = 5.52
   - Total Chloride = 79975 mg/l
   - Total Dissolved Solids = 133350 mg/l
   - Total Suspended Solids = 4170 mg/l
   - See attached sample results.

4. See attached MSDA.

5. Annulus fluid consists of fresh water. There are no chemicals being used in the annulus between the tubing and the casing, and has a pressure of zero (0) psi.

6. There are no USDWs within 1 mile of the injection well. However, if there were, two scenarios could potentially allow fluids to migrate to a USDW: 1) A failure within the wellbore itself and 2) a failure of surface equipment. In order for fluids to migrate to any USDW from a wellbore failure, three different casing/tubing systems would all have to fail at the same time: 1) A hole could develop in the tubing which would allow fluids to migrate into the space between the tubing and the production casing or 2) the packer on the tubing could lose its sealing ability which could allow fluids to migrate into the space between the tubing and the production casing, and 3) only if 1 or 2 happens then the production casing would be breached only if a hole develops in the production casing above the top of the cement behind the production casing, and 4) Only if 1 or 2 and 3 occur then the fresh water casing would have to be breached as a result of a hole in that casing in order for fluids to migrate from the injection well to a USDW.
   Contingency plan in case of a wellbore failure:
   The pressure between the tubing and the production casing is continuously monitored, so any failure of the tubing or the packer should be promptly identified.

If a tubing or packer failure occurs: 1) injection would immediately cease, 2) the tubing and packer would be pulled utilizing a stripper head that confines wellbore fluids to the wellbore, 3) the faulty packer or damaged tubing would be identified and replaced, 4) the repaired tubing/packer assembly would be run back into the well and set utilizing the stripping head, and 5) a mechanical integrity test would be performed prior to resuming injection operations.

Contingency plan in case of a production casing failure:

The pressure between the tubing and the production casing is continuously monitored, so any failure of the production casing should be promptly identified. If a hole is detected in the production casing: 1) injection would immediately cease, 2) the tubing and packer would be
pulled utilizing a stripper head that confines wellbore fluids to the wellbore, 3) a pipe integrity log would be secured to identify the location of the leak, 4) a retrievable bridge plug would be immediately placed into the production casing at a point below the hole which would block any fluids from migrating up the wellbore from the injection zone, 5) the production casing hole would be repaired using whichever method is suitable for the size and type of the hole, 6) the production casing would be pressure tested to ensure that the production casing is not leaking, 7) the bridge plug would be removed, 8) the tubing/packer assembly would be run back into the well and set utilizing the stripping head, and 9) a mechanical integrity test would be performed prior to resuming injection operations.

Contingency plan in case of a surface equipment leak:

The facility is visited daily by operations personnel, so any failure of surface equipment would be promptly identified. If a leak is detected in any surface equipment: 1) injection would immediately cease, 2) the tubing valve would be immediately shut to prevent injected fluids from returning to surface through the tubing, 3) if the leak occurred outside of the secondary containment, berms, ditches, or other means of diversion would be immediately employed to prevent the spilled fluids from migrating beyond the location, 4) the location of the leak would be determined and isolated from the remainder of the surface facilities, 5) any spilled fluids would be returned to tankage on location, 6) the leaking equipment will be repaired or replaced, 7) the surface equipment will be checked for leaks, and 8) the tubing valve will be opened and injection operations resumed.

Fluid Disposal Alternative:

The fluid disposal alternative would be to have the fluids transported by third party haulers to commercial disposal facilities servicing oil and gas operators in West Virginia.

MOUNTAIN V
OIL & GAS, INC.

PO Box 470
Bridgeport, WV 26330

Office: 304-842-6320
Fax: 304-842-0016

November 19, 2015

WV DEP
Office of Oil & Gas
Underground Injection Control (UIC)
601 57th Street, SE
Charleston, WV 25304

RE: UIC 2D0973422
Static Fluid Level

Dear Department:

The static fluid level is at the surface.

Should you have any further questions please contact me.

Sincerely,

S. Michael Shaver
Mountain V Oil & Gas, Inc.

MOUNTAIN V
OIL & GAS, INC.

PO Box 470
Bridgeport, WV 26330

Office: 304-842-6320
Fax: 304-842-0016

November 19, 2015

WV DEP
Office of Oil & Gas
Underground Injection Control (UIC)
601 57th Street, SE
Charleston, WV 25304

RE: UIC 2D0973422
Fluid Compatibility

Dear Department:

The fluids that are being injected are compatible with the fluids present in the injection zone.

Should you have any further questions please contact me.

Sincerely,

S. Michael Shaver
Mountain V Oil & Gas, Inc.

RELIANCE LABORATORIES, INC. - CHAIN OF CUSTODY RECORD

☐ 2044 MEADOWBROOK ROAD
POST OFFICE BOX 4657
BRIDGEPORT, WV 26330
TEL. (304) 842-5285 • FAX (304) 842-5351
E-MAIL reliancelabs@wvdsl.net
INTERNET www.RelianceLabs.net

☐ RIDGEFIELD BUSINESS CENTER
25 CRIMSON CIRCLE
MARTINSBURG, WV 25403
TEL. (304) 596-2084 • FAX (304) 596-2086

*CLIENT NAME Mountain V Oil & Gas Inc

*ADDRESS PO Box 470 Bridgeport, WV 26330

CUSTOMER # C06059 *TEL.# 304-842-6320 FAX # 304-842-0016

*SAMPLER (S) J. Andrews E-MAIL

SHEET NO. 1 OF 1

LABORATORY #	*DATE	*TIME	COMP	GRAB	MATRIX W, DW, S, O, M	TEMP. ≤ 4°C Yes No	*# OF CONTAIN.	HN03	H2S04	HCL	NaOH	BAC-T	NO PRES.	∂	DRO/ORO/GRO	BTEX/PH	Al/As/BA/CA	Chloride/FE	MG/NA/TDS/TSS	TKN/SO4/AMBAS	Diss Methane	Bact/RADiation Speci	Norm Gravity	*PROJECT/REMARKS
240987	12/1/15	10:50		✓	W	11.6	11	1		HV		1	3	Cubes	✓	✓	✓	✓	✓	✓	✓			Anna Cutright disposal well

Received
DEC 16 2015
Office of Oil and Gas
WV Dept. of Environmental Protection

SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR HOLDING TIMES
SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR CHEMICAL PRESERVATIVES
SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR SAMPLE CONTAINERS
SAMPLES ARE ✓ ARE NOT ____ FOR REGULATORY COMPLIANCE PURPOSES

*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT: Jamie Andrews	DATE: 12/1/2015	PRINT: KDAVIS
SIGN:	TIME: 12:05	SIGN:
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT:
SIGN:	TIME:	SIGN:
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT:
SIGN:	TIME:	SIGN:
*COURIER:	*DATE/TIME	*RECEIVED BY:
TRACKING #:	DATE:	PRINT:
	TIME:	SIGN:

REMARKS:

PWS# ____

WEATHER/TEMPERATURE:

☒ ***RUSH STATUS*** (INITIAL ACCEPTANCE JEA)

*** ADDITIONAL LABORATORY FEES MAY APPLY***

EXTENT OF LIABILITY

SHOULD RELIANCE LABORATORIES, INC. BE AT FAULT AND ANY DISPUTE ARISE REGARDING ANALYTICAL DATA GENERATED BY THE LABORATORY, THE EXTENT OF THE LIABILITY TO RELIANCE WILL BE A DUPLICATE ANALYSIS OF THAT SAMPLE (PROVIDING ADEQUATE SAMPLE REMAINS) OR A REFUND OF THE ANALYTICAL FEE. IN NO EVENT WILL RELIANCE LABORATORIES BE LIABLE FOR DAMAGES INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FROM SUCH DISPUTE.

NOTE: TYPICAL SAMPLE TURN AROUND FOR ROUTINE SAMPLES IS 5 TO 10 WORKING DAYS. THIS IN NOT A GUARANTEE THAT SAMPLES WILL BE COMPLETED IN THIS TIME FRAME, HOWEVER. NON-ROUTINE SAMPLES MAY REQUIRE ADDITIONAL TIME.

TO BE COMPLETED BY CLIENT

FINAL CHAIN OF CUSTODY DOCUMENT MUST BE EXECUTED IN INK

WHITE - LABORATORY YELLOW - CLIENT

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5285 | Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181
MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

LABORATORY REPORT SUMMARY

Client: C06059

Monday, December 07, 2015

MOUNTAIN V OIL & GAS
P.O. BOX 470
BRIDGEPORT WV 26330-

Total Number of Pages: 3
(Not Including C.O.C.)
Page 1 of 3

Lab ID	Sample ID	Sample ID 2	Sample Date
240987-2015-W	ANNA CUTRIGHT	DISPOSAL WELL	12/1/2015

Received
DEC 16 2015
Office of Oil and Gas
WV Dept. of Environmental Protection

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. All analysis performed by Reliance Laboratories, Bridgeport, WV unless otherwise noted. Parameters analyzed by Reliance Laboratories, Martinsburg, WV are noted with @ on laboratory report.This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By: Tenley Miller

Digitally signed by Tenley Miller
DN: cn=Tenley Miller, o=Reliance Laboratories, Inc., ou, email=tmiller@wvdsl.net, c=US
Date: 2015.12.16 08:28:21 -05'00'

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5285 | Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181
MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

MOUNTAIN V OIL & GAS
P.O. BOX 470

BRIDGEPORT, WV 26330-

Monday, December 07, 2015

Lab Number: 240987-2015-W **Sample ID:** ANNA CUTRIGHT DISPOSAL WELL

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MDL	MCL
Analyte Group: Inorganics							
Total Organic Carbon	< 1.00	mg/l	SM5310C-00	12/2/2015 10:27	MC	0.1	
pH	# 5.67	S.U.	SM4500H+B-00	12/2/2015 15:17	KV		
Total Chloride	152452	mg/l	SM4500CLB-97	12/4/2015 14:30	KV	2.52	
Total Surfactant	8.50	mg/l	SM5540C-00	12/3/2015 8:30	CH	0.05	
Total Dissolved Solids	223850	mg/l	SM2540C-97	12/3/2015 13:00	KV	10	
Total Suspended Solids	7780	mg/l	SM2540D-97	12/3/2015 13:00	KV	4	
Total Barium	812	mg/l	EPA 200.7 R4.4	12/4/2015 10:26	TH	0.003	
Total Arsenic	ND	mg/l	EPA 200.7 R4.4	12/4/2015 10:26	TH	0.007	
Specific Gravity	1.193	g/cc	ASTM D1429-08	12/4/2015 8:40	MC	0.001	
Total Aluminum	1.30	mg/l	EPA 200.7 R4.4	12/4/2015 10:26	TH	0.009	
Total Iron	129	mg/l	EPA 200.7 R4.4	12/4/2015 10:26	TH	0.004	
Total Sodium	75670	mg/l	EPA 200.7 R4.4	12/4/2015 10:26	TH	0.011	
Total Calcium	16300	mg/l	EPA 200.7 R4.4	12/4/2015 10:26	TH	0.078	
Total Magnesium	2053	mg/l	EPA 200.7 R4.4	12/4/2015 10:26	TH	0.03	
Total Sulfate	ND	mg/l	ASTM D516-02	12/2/2015 13:30	CH	0.75	
E.coli (Chromogenic)	ABSENT		SM9223B-97	12/1/2015 16:10	CP		
Total Coliform (Chromogenic)	PRESENT		SM9223B-97	12/1/2015 16:10	CP		

Remarks:

Date Sample Collected: 12/1/2015 10:50
Sample Submitted By: J.ANDREWS
Date Sample Received: 12/1/2015 12:05
Sample temp. upon receipt: 11.6 Deg C
MDL - Minimum Detectable Limit
MCL - Maximum Contaminant Level, USEPA Regulated
ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS ONLINE ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample does not meet standards set for Total Coliform and E Coli by the State of West Virginia, 64-3-10, Code of State Regulations, adopted July 1, 2002 by the Bureau For Public Health. Sample Analyzed by Certified Laboratory #00354CM and #0044
NOTE: #Holding time exceeded for this analysis.

NOTE: 40CFR136 sets criteria for sample temperature and preservation. This sample fell outside of this criteria.

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5285 | Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181
MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

MOUNTAIN V OIL & GAS
P.O. BOX 470

BRIDGEPORT, WV 26330-

Monday, December 07, 2015

Lab Number: 240987-2015-W **Sample ID:** ANNA CUTRIGHT DISPOSAL WELL

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MDL	MCL
Analyte Group: Total Petroleum Hydrocarbons							
TPH - DRO	2.11	mg/l	SW8015B/3535A	12/7/2015 12:58	MC	0.68	
TPH - ORO	0.92	mg/l	SW8015B/3535A	12/7/2015 12:58	MC	0.54	
o-Terphenyl (Surrogate)	109	%	SW8015B	12/7/2015 12:58	MC		
Benzene	ND	mg/l	SW8021B/5030B	12/1/2015 15:57	MC	0.0007	
Ethylbenzene	ND	mg/l	SW8021B/5030B	12/1/2015 15:57	MC	0.0014	
Toluene	ND	mg/l	SW8021B/5030B	12/1/2015 15:57	MC	0.002	
TPH - GRO	0.081	mg/l	SW8015B/5030B	12/1/2015 15:57	MC	0.04	
Xylene	ND	mg/l	SW8021B/5030B	12/1/2015 15:57	MC	0.003	
4-Bromochlorobenzene (Surrogate)	83.0	%	SW8021B/8015B	12/1/2015 15:57	MC		

Remarks:

Date Sample Collected: 12/1/2015 10:50
Sample Submitted By: J.ANDREWS
Date Sample Received: 12/1/2015 12:05
Sample temp. upon receipt: 11.6 Deg C
MDL - Minimum Detectable Limit
MCL - Maximum Contaminant Level, USEPA Regulated
ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS ONLINE ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample does not meet standards set for Total Coliform and E Coli by the State of West Virginia, 64-3-10, Code of State Regulations, adopted July 1, 2002 by the Bureau For Public Health. Sample Analyzed by Certified Laboratory #00354CM and #0044
NOTE: #Holding time exceeded for this analysis.

NOTE: 40CFR136 sets criteria for sample temperature and preservation. This sample fell outside of this criteria.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-93127-1
Client Project/Site: RSK / 240987

For:
Reliance Laboratories Inc
PO BOX 4657
Bridgeport, West Virginia 26330

Attn: Tenley Miller

Jennifer Gambill

Authorized for release by:
12/8/2015 2:34:45 PM

Jennifer Gambill, Project Manager I
(615)301-5044
jennifer.gambill@testamericainc.com

Table of Contents

Sample Summary

Client: Reliance Laboratories Inc
Project/Site: RSK / 240987

TestAmerica Job ID: 490-93127-1

3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-93127-1	240987-2015-W	Water	12/01/15 10:50	12/02/15 10:15

Job ID: 490-93127-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-93127-1

Comments
No additional comments.

Receipt
The sample was received on 12/2/2015 10:15 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

GC Semi VOA
Method(s) RSK-175: Surrogate recovery for the following sample was outside of acceptance limits: 240987-2015-W (490-93127-1). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Reliance Laboratories Inc
Project/Site: RSK / 240987

TestAmerica Job ID: 490-93127-1

Client Sample ID: 240987-2015-W
Date Collected: 12/01/15 10:50
Date Received: 12/02/15 10:15

Lab Sample ID: 490-93127-1
Matrix: Water

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butane	ND		5.00	2.50	ug/L			12/04/15 17:24	1
Ethane	**4.13**	**J**	5.00	2.50	ug/L			12/04/15 17:24	1
Methane	**61.3**		5.00	2.50	ug/L			12/04/15 17:24	1
Propane	ND		5.00	2.50	ug/L			12/04/15 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Acetylene (Surr)	*127*	*X*	*62 - 124*		*12/04/15 17:24*	*1*

Client: Reliance Laboratories Inc
Project/Site: RSK / 240987

TestAmerica Job ID: 490-93127-1

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 490-303875/8
Matrix: Water
Analysis Batch: 303875

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butane	ND		5.00	2.50	ug/L			12/04/15 15:52	1
Ethane	ND		5.00	2.50	ug/L			12/04/15 15:52	1
Methane	ND		5.00	2.50	ug/L			12/04/15 15:52	1
Propane	ND		5.00	2.50	ug/L			12/04/15 15:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Acetylene (Surr)	*121*		*62 - 124*		*12/04/15 15:52*	*1*

Lab Sample ID: LCS 490-303875/9
Matrix: Water
Analysis Batch: 303875

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Butane	992	1023		ug/L		103	80 - 120
Ethane	513	542.4		ug/L		106	80 - 120
Methane	279	281.9		ug/L		101	80 - 120
Propane	750	762.9		ug/L		102	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Acetylene (Surr)	*101*		*62 - 124*

Lab Sample ID: 490-93079-B-2 MS
Matrix: Water
Analysis Batch: 303875

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Butane	ND		992	940.5		ug/L		95	70 - 130
Ethane	ND		513	551.5		ug/L		108	71 - 120
Methane	ND		279	263.9		ug/L		95	46 - 142
Propane	ND		750	715.1		ug/L		95	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Acetylene (Surr)	*115*		*62 - 124*

Lab Chronicle

Client: Reliance Laboratories Inc
Project/Site: RSK / 240987

TestAmerica Job ID: 490-93127-1

Client Sample ID: 240987-2015-W
Date Collected: 12/01/15 10:50
Date Received: 12/02/15 10:15

Lab Sample ID: 490-93127-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	21 mL	21 mL	303875	12/04/15 17:24	SH	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Reliance Laboratories Inc
Project/Site: RSK / 240987

TestAmerica Job ID: 490-93127-1

Method	Method Description	Protocol	Laboratory
RSK-175	Dissolved Gases (GC)	RSK	TAL NSH

Protocol References:

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

10

Certification Summary

Client: Reliance Laboratories Inc
Project/Site: RSK / 240987

TestAmerica Job ID: 490-93127-1

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
West Virginia DEP	State Program	3	219	02-28-16

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-93127 Chain of Custody

Cooler Received/Opened On 12/2/2015 @ 1015

1. Tracking # 2420 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 12080142

2. Temperature of rep. sample or temp blank when opened: 3.1 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

If yes, how many and where: _____

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) DA

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (intial) LF

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) LF

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) LF

I certify that I attached a label with the unique LIMS number to each container (intial) LF

21. Were there Non-Conformance issues at login? YES NO Was a NCM generated? YES NO #: _____

Received
DEC 16 2015
Office of Oil and Gas
WV Dept. of Environmental Protection

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
Revised 11/28/12
End of Form

RELIANCE LABORATORIES, INC. - CHAIN OF CUSTODY RECORD

☐ 2044 MEADOWBROOK ROAD
POST OFFICE BOX 4657
BRIDGEPORT, WV 26330
TEL. (304) 842-5285 • FAX (304) 842-5351
E-MAIL reliancelabs@wvdsl.net
INTERNET www.RelianceLabs.net

☐ RIDGEFIELD BUSINESS CENTER
25 CRIMSON CIRCLE
MARTINSBURG, WV 25403
TEL. (304) 596-2084 • FAX (304) 596-2086

12/8/2015

*CLIENT NAME Reliance Laboratories, Inc.

*ADDRESS

CUSTOMER # *TEL.# FAX #

*SAMPLER (S) J. Andrews E-MAIL

SHEET NO. OF

LABORATORY #	*DATE	*TIME	COMP.	GRAB	MATRIX W, DW, S, O, M	TEMP. ≤ 4°C Yes No	*# OF CONTAIN.	HN03	H2S04	HCL	NaOH	BAC-T	NO PRES.	diss methane	diss ethane	dissbutane	dispropane				*PROJECT/REMARKS
	12/1/15	10:50		✓	W		1			1				✓	✓	✓	✓				240987-2015-W

Loc: 490
93127

Page 13 of 14

SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR HOLDING TIMES
SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR CHEMICAL PRESERVATIVES
SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR SAMPLE CONTAINERS
SAMPLES ARE ✓ ARE NOT ____ FOR REGULATORY COMPLIANCE PURPOSES

*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT: KDAVIS	DATE: 12/1/15	PRINT: Fedex
SIGN: KDavis	TIME: 16:00	SIGN:
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT: TAN 12/3/15
SIGN:	TIME:	SIGN:
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT:
SIGN:	TIME:	SIGN:
*COURIER:	*DATE/TIME	*RECEIVED BY:
TRACKING #:	DATE:	PRINT:
	TIME:	SIGN:

REMARKS:

PWS#

WEATHER/TEMPERATURE:

☒ ***RUSH STATUS*** (INITIAL ACCEPTANCE JK) 5-day RUSH

*** ADDITIONAL LABORATORY FEES MAY APPLY***

EXTENT OF LIABILITY

SHOULD RELIANCE LABORATORIES, INC. BE AT FAULT AND ANY DISPUTE ARISE REGARDING ANALYTICAL DATA GENERATED BY THE LABORATORY, THE EXTENT OF THE LIABILITY TO RELIANCE WILL BE A DUPLICATE ANALYSIS OF THAT SAMPLE (PROVIDING ADEQUATE SAMPLE REMAINS) OR A REFUND OF THE ANALYTICAL FEE. IN NO EVENT WILL RELIANCE LABORATORIES BE LIABLE FOR DAMAGES INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FROM SUCH DISPUTE.

NOTE: TYPICAL SAMPLE TURN AROUND FOR ROUTINE SAMPLES IS 5 TO 10 WORKING DAYS. THIS IN NOT A GUARANTEE THAT SAMPLES WILL BE COMPLETED IN THIS TIME FRAME, HOWEVER. NON-ROUTINE SAMPLES MAY REQUIRE ADDITIONAL TIME.

*** TO BE COMPLETED BY CLIENT**

ORIGINAL CHAIN OF CUSTODY DOCUMENT MUST BE EXECUTED IN INK

WHITE - LABORATORY YELLOW - CLIENT

Login Sample Receipt Checklist

Client: Reliance Laboratories Inc

Job Number: 490-93127-1

Login Number: 93127
List Number: 1
Creator: Vest, Laura E

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

13

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

December 11, 2015

Ms. Tenley Miller
Reliance Laboratories, Inc.
2044 Meadowbrook Road
P.O. Box 4657
Bridgeport, WV 26330

RE: Project: 240987-2015-W
Pace Project No.: 30166627

Dear Ms. Miller:
Enclosed are the analytical results for sample(s) received by the laboratory on December 02, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 240987-2015-W
Pace Project No.: 30166627

Pennsylvania Certification IDs
Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
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 Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: 240987-2015-W
Pace Project No.: 30166627

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30166627001	**240987-2015-W**	Water	12/01/15 10:50	12/02/15 10:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 240987-2015-W
Pace Project No.: 30166627

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30166627001	**240987-2015-W**	EPA 901.1	MAH	10

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 240987-2015-W
Pace Project No.: 30166627

Method: **EPA 901.1**
Description: 901.1 Gamma Spec
Client: Reliance Laboratories, Inc.
Date: December 11, 2015

General Information:
1 sample was analyzed for EPA 901.1. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 240987-2015-W
Pace Project No.: 30166627

Sample: 240987-2015-W **Lab ID: 30166627001** Collected: 12/01/15 10:50 Received: 12/02/15 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Bismuth-212	EPA 901.1	**380.550 ± 252.250 (260.200) C:NA T:NA**	pCi/L	12/09/15 12:45	14913-49-6	
Bismuth-214	EPA 901.1	**1147.900 ± 139.570 (43.130) C:NA T:NA**	pCi/L	12/09/15 12:45	14733-03-0	
Lead-212	EPA 901.1	**83.118 ± 26.810 (38.250) C:NA T:NA**	pCi/L	12/09/15 12:45	15092-94-1	
Lead-214	EPA 901.1	**1031.300 ± 123.550 (41.700) C:NA T:NA**	pCi/L	12/09/15 12:45	15067-28-4	
Potassium-40	EPA 901.1	**2562.000 ± 378.240 (142.200) C:NA T:NA**	pCi/L	12/09/15 12:45	13966-00-2	
Radium-226	EPA 901.1	**4452.6 ± 672.53 (489.4) C:NA T:NA**	pCi/L	12/09/15 12:45	13982-63-3	
Radium-228	EPA 901.1	**1686.1 ± 198.47 (51.93) C:NA T:NA**	pCi/L	12/09/15 12:45	15262-20-1	
Thallium-208	EPA 901.1	**36.589 ± 20.357 (20.800) C:NA T:NA**	pCi/L	12/09/15 12:45	14913-50-9	
Thorium-234	EPA 901.1	**0.000 ± 241.870 (756.400) C:NA T:NA**	pCi/L	12/09/15 12:45	15065-10-8	
Uranium-235	EPA 901.1	**0.000 ± 84.211 (170.000) C:NA T:NA**	pCi/L	12/09/15 12:45	15117-96-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 240987-2015-W
Pace Project No.: 30166627

QC Batch: RADC/27143
QC Batch Method: EPA 901.1
Analysis Method: EPA 901.1
Analysis Description: 901.1 Gamma Spec
Associated Lab Samples: 30166627001

METHOD BLANK: 994112
Matrix: Water
Associated Lab Samples: 30166627001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Bismuth-212	32.152 ± 60.486 (69.850) C:NA T:NA	pCi/L	12/08/15 16:22	
Bismuth-214	3.470 ± 5.025 (20.660) C:NA T:NA	pCi/L	12/08/15 16:22	
Lead-212	12.360 ± 20.495 (11.090) C:NA T:NA	pCi/L	12/08/15 16:22	
Lead-214	13.818 ± 26.538 (15.120) C:NA T:NA	pCi/L	12/08/15 16:22	
Potassium-40	12.053 ± 59.161 (75.170) C:NA T:NA	pCi/L	12/08/15 16:22	
Radium-226	12.637 ± 125.300 (163.800) C:NA T:NA	pCi/L	12/08/15 16:22	
Radium-228	0.880 ± 19.045 (23.560) C:NA T:NA	pCi/L	12/08/15 16:22	
Thallium-208	3.128 ± 4.692 (6.697) C:NA T:NA	pCi/L	12/08/15 16:22	
Thorium-234	60.841 ± 91.468 (590.500) C:NA T:NA	pCi/L	12/08/15 16:22	
Uranium-235	0.000 ± 20.971 (54.180) C:NA T:NA	pCi/L	12/08/15 16:22	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 240987-2015-W
Pace Project No.: 30166627

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.

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.

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(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.

RELIANCE LABORATORIES, INC. - CHAIN OF CUSTODY RECORD

☐ 2044 MEADOWBROOK ROAD
POST OFFICE BOX 4657
BRIDGEPORT, WV 26330
TEL. (304) 842-5285 • FAX (304) 842-5351
E-MAIL reliancelabs@wvdsl.net
INTERNET www.RelianceLabs.net

☐ RIDGEFIELD BUSINESS CENTER
25 CRIMSON CIRCLE
MARTINSBURG, WV 25403
TEL. (304) 596-2084 • FAX (304) 596-2086

30166627

*CLIENT NAME Reliance Laboratories, Inc.

*ADDRESS

CUSTOMER # *TEL. # FAX #

*SAMPLER (S) J. Andrews E-MAIL

SHEET NO. ____ OF ____

LABORATORY #	*DATE	*TIME	COMP.	GRAB	MATRIX W. DW. S. O. M	TEMP. ≤ 4°C Yes No	*# OF CONTAIN.	HN03	H2S04	HCL	NaOH	BAC-T	NO PRES.	NORM							*PROJECT/REMARKS
	12/1/15	10:50		✓	W		1						X	X							240987-2015-W 001

Received DEC 1 2015

SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR HOLDING TIMES
SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR CHEMICAL PRESERVATIVES
SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR SAMPLE CONTAINERS
SAMPLES ARE ✓ ARE NOT ____ FOR REGULATORY COMPLIANCE PURPOSES

*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT: K Davis	DATE: 12/1/15	PRINT: Fedex
SIGN: K Davis	TIME: 16:00	SIGN:
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE: 12/2/15	PRINT: Ryan Bing
SIGN:	TIME: 1000	SIGN: Pdee
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT:
SIGN:	TIME:	SIGN:
*COURIER:	*DATE/TIME	*RECEIVED BY:
TRACKING #:	DATE:	PRINT:
	TIME:	SIGN:

REMARKS:

PWS# ____

WEATHER/TEMPERATURE:

☒ **RUSH STATUS** (INITIAL ACCEPTANCE ____) 5-day RUSH.

*** ADDITIONAL LABORATORY FEES MAY APPLY ***

EXTENT OF LIABILITY

SHOULD RELIANCE LABORATORIES, INC. BE AT FAULT AND ANY DISPUTE ARISE REGARDING ANALYTICAL DATA GENERATED BY THE LABORATORY, THE EXTENT OF THE LIABILITY TO RELIANCE WILL BE A DUPLICATE ANALYSIS OF THAT SAMPLE (PROVIDING ADEQUATE SAMPLE REMAINS) OR A REFUND OF THE ANALYTICAL FEE. IN NO EVENT WILL RELIANCE LABORATORIES BE LIABLE FOR DAMAGES INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FROM SUCH DISPUTE.

NOTE: TYPICAL SAMPLE TURN AROUND FOR ROUTINE SAMPLES IS 5 TO 10 WORKING DAYS. THIS IN NOT A GUARANTEE THAT SAMPLES WILL BE COMPLETED IN THIS TIME FRAME, HOWEVER. NON-ROUTINE SAMPLES MAY REQUIRE ADDITIONAL TIME.

*TO BE COMPLETED BY CLIENT

ORIGINAL CHAIN OF CUSTODY DOCUMENT MUST BE EXECUTED IN INK. WHITE - LABORATORY YELLOW - CLIENT

RELIANCE LABORATORIES, INC.

30166627

ENVIRONMENTAL ANALYSTS AND CONSULTANTS

BRIDGEPORT, WV www.RelianceLabs.net *MARTINSBURG, WV*

Certifications: WV Department of Health #: 00354, 00433 | WV Department of Environmental Protection #: 158, 181
MD Department of Environment #: 336, 337| US Environmental Protection Agency #: WV00042, WV00901

Tuesday, December 01, 2015

Pace Analytical Services
1638 Roseytown Road
Suites 2,3,4
Greensburg, PA 15601

Please analyze the following sample for: **NORM (Naturally Occurring Radioactive Material)**

Please identify as:

240987-2015-W Date/Time Sampled: 12/1/2015 10:50

Sampled by: J.Andrews

*****5 DAY RUSH*****

PLEASE SEND RESULTS & INVOICE TO:

RELIANCE LABORATORIES, INC.
ATTN: TENLEY MILLER
P.O. BOX 4657
BRIDGEPORT, WV 26330
tmiller@wvdsl.net

Thank You

Received

DEC 16 2015

2044 MEADOWBROOK ROAD | P.O. BOX 4657 | BRIDGEPORT, WV 26330 | VOICE: 304-842-5285 | FAX: 304-842-5351
RIDGEFIELD BUSINESS CENTER | 25 CRIMSON CIRCLE | MARTINSBURG, WV 25403 | VOICE: 304-596-2084 | FAX: 304-596-2086

BLM

Sample Condition Upon Receipt

Pace Analytical

Client Name: Reliance

Project # 30166627

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 7750 9045 9903

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap X Bubble Bags ___ None ___ Other _____

Thermometer Used 8 Type of Ice: (Wet) Blue None ☒ Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: 4.2 °C Correction Factor: +0.2 °C Final Temp: 4.4 °C

Date and Initials of person examining contents: 12/2/15 RTB

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☒Yes ☐No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing preservation have been checked.	☒Yes ☐No ☐N/A	13. Added 30.0 mL HNO_3 to sample.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☒No ☐N/A	RTB 12/2/15 1120
exceptions: VOA, coliform, TOC, O&G, Phenols	☐Yes ☒No	Initial when completed: 12/2/15 RTB; Lot # of added preservative: DL15-1099
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	15.
Trip Blank Present:	☐Yes ☐No ☒N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Received
DEC 16 2015
Office of Oil and Gas
WV Dept. of Environmental Protection

Project Manager Review: _____ Date: 12/2/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical

Project Number: 30166627

Client Name: Reliance

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y N	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubitainer (500 ml / 4L)	Ziploc	Other	Other
001	WT																			RTO 12/24	1			

Received

Office of Oil and Gas
WV Dept of Environmental Protection

SCURF Back (C016-4 15May2012).xls

RELIANCE LABORATORIES, IN[illegible] - CHAIN OF CUSTODY RECORD

☐ 2044 MEADOWBROOK ROAD
POST OFFICE BOX 4657
BRIDGEPORT, WV 26330
TEL. (304) 842-5285 • FAX (304) 842-5351
E-MAIL reliancelabs@wvdsl.net
INTERNET www.RelianceLabs.net

☐ RIDGEFIELD BUSINESS CENTER
25 CRIMSON CIRCLE
MARTINSBURG, WV 25403
TEL. (304) 596-2084 • FAX (304) 596-2086

*CLIENT NAME Ste Summit Transport & Env.

*ADDRESS

CUSTOMER # C06020 *TEL.# FAX #

*SAMPLER (S) Mike Bailey E-MAIL

SHEET NO. 1 OF 1

LABORATORY #	*DATE	*TIME	COMP.	GRAB	MATRIX W, DW, S, O, M	TEMP. ≤ 4°C Yes No	*# OF CONTAIN.	HN03	H2S04	HCL	NaOH	BAC-T	NO PRES.	Chloride	O&G	pH	TDS / TSS			*PROJECT/REMARKS
234581	7-28-15	7:30		✓	W	6.8	1						1							MTN V. Inj. Well

SAMPLES DO ✓ DO NOT ____ MEET USEPA GUIDELINES FOR HOLDING TIMES
SAMPLES DO ____ DO NOT ✓ MEET USEPA GUIDELINES FOR CHEMICAL PRESERVATIVES
SAMPLES DO ____ DO NOT ✓ MEET USEPA GUIDELINES FOR SAMPLE CONTAINERS
SAMPLES ARE ____ ARE NOT ✓ FOR REGULATORY COMPLIANCE PURPOSES

REMARKS: In drinking water bottle PWS# ____

WEATHER/TEMPERATURE:

☒ RUSH STATUS (INITIAL ACCEPTANCE ____) 5 day

*** ADDITIONAL LABORATORY FEES MAY APPLY ***

*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT: Mike Bailey	DATE: 7-28-15	PRINT: Misaki Coffman
SIGN:	TIME: 9:00	SIGN:
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT:
SIGN:	TIME:	SIGN:
*RELINQUISHED BY:	*DATE/TIME	*RECEIVED BY:
PRINT:	DATE:	PRINT:
SIGN:	TIME:	SIGN:
*COURIER:	*DATE/TIME	*RECEIVED BY:
TRACKING #:	DATE:	PRINT:
	TIME:	SIGN:

RECEIVED
Office of Oil and Gas
AUG 12 2015
WV Department of
Environmental Protection

EXTENT OF LIABILITY

SHOULD RELIANCE LABORATORIES, INC. BE AT FAULT AND ANY DISPUTE ARISE REGARDING ANALYTICAL DATA GENERATED BY THE LABORATORY, THE EXTENT OF THE LIABILITY TO RELIANCE WILL BE A DUPLICATE ANALYSIS OF THAT SAMPLE (PROVIDING ADEQUATE SAMPLE REMAINS) OR A REFUND OF THE ANALYTICAL FEE. IN NO EVENT WILL RELIANCE LABORATORIES BE LIABLE FOR DAMAGES INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FROM SUCH DISPUTE.

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* TO BE COMPLETED BY CLIENT

ORIGINAL CHAIN OF CUSTODY DOCUMENT MUST BE EXECUTED IN INK

WHITE - LABORATORY YELLOW - CLIENT

Reliance LABORATORIES

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5285 | Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181
MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

LABORATORY REPORT SUMMARY

Client: C06020 — **Tuesday, August 04, 2015**

SUMMIT TRANSPORT & ENVIRONMENTAL
45 HOPE STATION ROAD
WESTON WV 26452-

Total Number of Pages: 2
(Not Including C.O.C.)

Lab ID	Sample ID	Sample ID 2	Sample Date
234581-2015-W	MTN V. INJECTION WELL		7/28/2015

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. All analysis performed by Reliance Laboratories, Bridgeport, WV unless otherwise noted. Parameters analyzed by Reliance Laboratories, Martinsburg, WV are noted with @ on laboratory report. This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By: Tenley Miller (Digitally signed by Tenley Miller; Date: 2015.08.04 14:00:02 -04'00')

RECEIVED
Office of Oil and Gas
OCT 27 2015
WV Department of Environmental Protection

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5285 | Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181
MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

SUMMIT TRANSPORT & ENVIRONMENTAL
45 HOPE STATION ROAD

WESTON, WV 26452-

Tuesday, August 04, 2015

Lab Number: 234581-2015-W **Sample ID:** MTN V. INJECTION WELL

Parameter	Value	Units	Method	Date/Time Analyzed	Analyst	MDL	MCL
Analyte Group: Inorganics							
Oil and Grease	101	mg/l	EPA 1664A	8/3/2015	11:45 JL	8.23	
pH	# 5.52	S.U.	SM4500H+B-00	7/29/2015	13:15 KV		
Total Chloride	79975	mg/l	SM4500CLB-97	7/31/2015	14:30 KV	2.52	
Total Dissolved Solids	133350	mg/l	SM2540C-97	7/30/2015	11:00 JL	10	
Total Suspended Solids	4170	mg/l	SM2540D-97	7/30/2015	11:00 JL	4	

Remarks:

Date Sample Collected: 7/28/2015 7:30
Sample Submitted By: M.BAILEY
Date Sample Received: 7/28/2015 9:00
Sample temp. upon receipt: 6.8 Deg C

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit
MRL - Minimum Reporting Limit
MCL - Maximum Contaminant Level, USEPA Regulated
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS ONLINE ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: #Holding time exceeded for this analysis.

NOTE: Sample analyzed was improperly preserved or received in an improper container.

NOTE: 40CFR136 sets criteria for sample temperature and preservation. This sample fell outside of this criteria.

RLmu

APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
47-001-00320	Mountain V Oil & Gas, Inc.	Benson
47-001-00323	Mountain V Oil & Gas, Inc.	Benson
47-001-00336	Mountain V Oil & Gas, Inc.	Benson
47-001-00342	Mountain V Oil & Gas, Inc.	Benson
47-001-00362	Mountain V Oil & Gas, Inc.	Benson
47-001-00446	Mountain V Oil & Gas, Inc.	Benson
47-001-00472	Mountain V Oil & Gas, Inc.	Benson
47-001-00477	Mountain V Oil & Gas, Inc.	Benson
47-001-00482	Mountain V Oil & Gas, Inc.	Benson
47-001-00489	Mountain V Oil & Gas, Inc.	Benson
47-001-00515	Mountain V Oil & Gas, Inc.	Benson
47-001-00543	Mountain V Oil & Gas, Inc.	Benson
47-001-00567	Mountain V Oil & Gas, Inc.	Benson
47-001-02796	Mountain V Oil & Gas, Inc.	Balltown, Riley, Benson, Elk
47-001-02811	Mountain V Oil & Gas, Inc.	Balltown, Riley, Benson, Elk
47-001-02812	Mountain V Oil & Gas, Inc.	Balltown, Riley, Benson, Elk
47-001-02813	Mountain V Oil & Gas, Inc.	Balltown, Riley, Benson, Elk
47-001-02881	Mountain V Oil & Gas, Inc.	Balltown, Riley, Benson, Elk
47-001-02893	Mountain V Oil & Gas, Inc.	Squaw, 5th, Balltown, Riley, Benson
47-001-02918	Mountain V Oil & Gas, Inc.	Balltown, Riley, Benson
47-001-02974	Mountain V Oil & Gas, Inc.	Haverty, Elk, Benson-Riley, Gordon
47-001-02975	Mountain V Oil & Gas, Inc.	Haverty, Elk, Benson-Riley, Gordon
47-017-05455	Mountain V Oil & Gas, Inc.	Gordon, Benson
47-033-00430	Mountain V Oil & Gas, Inc.	Benson
47-033-00446	Mountain V Oil & Gas, Inc.	Benson
47-033-00481	Mountain V Oil & Gas, Inc.	Benson
47-033-04607	Mountain V Oil & Gas, Inc.	30ft, Gordon, Balltown

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

APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
47-033-04898	Mountain V Oil & Gas, Inc.	Gordon, Benson
47-033-04899	Mountain V Oil & Gas, Inc.	Gordon, Benson
47-033-04900	Mountain V Oil & Gas, Inc.	Gordon, Benson
47-033-04901	Mountain V Oil & Gas, Inc.	Gordon, Benson
47-033-04902	Mountain V Oil & Gas, Inc.	Gordon, Benson
47-033-05092	Mountain V Oil & Gas, Inc.	Gordon, Benson
47-033-05093	Mountain V Oil & Gas, Inc.	Gordon, Benson
47-033-05094	Mountain V Oil & Gas, Inc.	Gordon, Benson
47-033-05095	Mountain V Oil & Gas, Inc.	Gordon, Benson
47-033-05096	Mountain V Oil & Gas, Inc.	Gordon, Benson
47-033-05145	Mountain V Oil & Gas, Inc.	30ft., Gordon, 5th, Balltown
47-039-02055	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-02133	Mountain V Oil & Gas, Inc.	Injun
47-039-02463	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05694	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05810	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05811	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05812	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05813	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05814	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05815	Mountain V Oil & Gas, Inc.	Weir, Berea
47-039-05816	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05817	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05818	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05819	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05820	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05830	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05831	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea

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

APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
47-039-05832	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05833	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05834	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05943	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05944	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05945	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05946	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05947	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05948	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-05949	Mountain V Oil & Gas, Inc.	Injun, Squaw, Weir, Berea
47-039-06256	Mountain V Oil & Gas, Inc.	Big Injun Horizontal
47-041-04053	Mountain V Oil & Gas, Inc.	Injun
47-041-04054	Mountain V Oil & Gas, Inc.	Injun
47-041-04449	Mountain V Oil & Gas, Inc.	Injun
47-041-04976	Mountain V Oil & Gas, Inc.	Speechely, Balltown, Riley, Benson
47-041-05045	Mountain V Oil & Gas, Inc.	Bayard, Benson
47-041-05046	Mountain V Oil & Gas, Inc.	Bayard, Benson
47-041-05047	Mountain V Oil & Gas, Inc.	Bayard, Benson
47-041-05048	Mountain V Oil & Gas, Inc.	Bayard, Benson
47-041-05057	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-041-05058	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-041-05059	Mountain V Oil & Gas, Inc.	Gordon,5th,Riley, Benson
47-041-05060	Mountain V Oil & Gas, Inc.	Gordon,5th,Riley, Benson
47-041-05343	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-041-05375	Mountain V Oil & Gas, Inc.	Gordon, 5th, Benson
47-041-05421	Mountain V Oil & Gas, Inc.	5th, Balltown, Benson
47-041-05427	Mountain V Oil & Gas, Inc.	Marcellus Vertical

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

APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
47-043-02545	Mountain V Oil & Gas, Inc.	Huron Shale
47-043-03233	Mountain V Oil & Gas, Inc.	Berea
47-097-00140	Mountain V Oil & Gas, Inc.	5th Sand
47-097-00163	Mountain V Oil & Gas, Inc.	5th Sand
47-097-01015	Mountain V Oil & Gas, Inc.	Benson
47-097-01144	Mountain V Oil & Gas, Inc.	Gordon
47-097-01998	Mountain V Oil & Gas, Inc.	Benson
47-097-01999	Mountain V Oil & Gas, Inc.	Benson
47-097-02007	Mountain V Oil & Gas, Inc.	Benson
47-097-02008	Mountain V Oil & Gas, Inc.	Benson
47-097-02145	Mountain V Oil & Gas, Inc.	Benson
47-097-02146	Mountain V Oil & Gas, Inc.	Benson
47-097-02417	Mountain V Oil & Gas, Inc.	Benson
47-097-02418	Mountain V Oil & Gas, Inc.	Benson
47-097-02420	Mountain V Oil & Gas, Inc.	Benson
47-097-02421	Mountain V Oil & Gas, Inc.	Benson
47-097-02568	Mountain V Oil & Gas, Inc.	Benson
47-097-02569	Mountain V Oil & Gas, Inc.	Benson
47-097-02571	Mountain V Oil & Gas, Inc.	Benson
47-097-02618	Mountain V Oil & Gas, Inc.	Benson
47-097-02717	Mountain V Oil & Gas, Inc.	Benson
47-097-02718	Mountain V Oil & Gas, Inc.	Benson
47-097-02720	Mountain V Oil & Gas, Inc.	Benson
47-097-03168	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03178	Mountain V Oil & Gas, Inc.	Gordon, Riley, Benson
47-097-03179	Mountain V Oil & Gas, Inc.	Natural not stimulated
47-097-03183	Mountain V Oil & Gas, Inc.	Speechely, Balltown, Riley, Benson, Elk

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APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
47-097-03184	Mountain V Oil & Gas, Inc.	Speechely, Balltown, Riley, Benson, Elk
47-097-03185	Mountain V Oil & Gas, Inc.	Speechely, Balltown, Riley, Benson, Elk
47-097-03189	Mountain V Oil & Gas, Inc.	Speechely, Balltown, Riley, Benson, Elk
47-097-03199	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03204	Mountain V Oil & Gas, Inc.	Speechely, Balltown, Riley, Benson, Elk
47-097-03205	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03208	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03211	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03212	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03213	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03214	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03215	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03216	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03225	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03226	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03227	Mountain V Oil & Gas, Inc.	Gordon,5th,Riley, Benson
47-097-03228	Mountain V Oil & Gas, Inc.	Gordon,5th,Riley, Benson
47-097-03229	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03230	Mountain V Oil & Gas, Inc.	Natural not stimulated
47-097-03231	Mountain V Oil & Gas, Inc.	Gordon,5th,Riley, Benson
47-097-03232	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03233	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03238	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03239	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03240	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03241	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03242	Mountain V Oil & Gas, Inc.	5th, Riley, Benson

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APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
47-097-03243	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03266	Mountain V Oil & Gas, Inc.	Speechely, Balltown, Riley, Benson, Elk
47-097-03267	Mountain V Oil & Gas, Inc.	Gordon, 5th, Balltown, Riley, Benson
47-097-03268	Mountain V Oil & Gas, Inc.	Gordon,5th,Riley, Benson
47-097-03269	Mountain V Oil & Gas, Inc.	Gordon,5th,Riley, Benson
47-097-03270	Mountain V Oil & Gas, Inc.	Gordon,5th,Riley, Benson
47-097-03271	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03272	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03273	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03274	Mountain V Oil & Gas, Inc.	Gordon,5th,Riley, Benson
47-097-03276	Mountain V Oil & Gas, Inc.	Natural not stimulated
47-097-03283	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03284	Mountain V Oil & Gas, Inc.	Speechely, Balltown, Riley, Benson, Elk
47-097-03285	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03298	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03299	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03303	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03304	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03344	Mountain V Oil & Gas, Inc.	Gordon,5th,Riley, Benson
47-097-03345	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03346	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03347	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03360	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03361	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03362	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03367	Mountain V Oil & Gas, Inc.	Gordon,5th,Riley, Benson
47-097-03375	Mountain V Oil & Gas, Inc.	5th, Riley, Benson

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APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
47-097-03376	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03379	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03380	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03382	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03383	Mountain V Oil & Gas, Inc.	5th,Benson
47-097-03384	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03391	Mountain V Oil & Gas, Inc.	5th, Riley
47-097-03394	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03395	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03396	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03397	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03401	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03402	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03404	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03405	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03406	Mountain V Oil & Gas, Inc.	5th, Riley
47-097-03411	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03412	Mountain V Oil & Gas, Inc.	5th,Riley
47-097-03415	Mountain V Oil & Gas, Inc.	Marcellus, Oriskany
47-097-03416	Mountain V Oil & Gas, Inc.	Marcellus, Oriskany
47-097-03417	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03418	Mountain V Oil & Gas, Inc.	Natural not stimulated
47-097-03419	Mountain V Oil & Gas, Inc.	5th, Benson
47-097-03421	Mountain V Oil & Gas, Inc.	Balltown, Riley, Benson
47-097-03423	Mountain V Oil & Gas, Inc.	5th, Benson
47-097-03425	Mountain V Oil & Gas, Inc.	5th, Riley
47-097-03426	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson

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APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
47-097-03429	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03436	Mountain V Oil & Gas, Inc.	Balltown, Riley, Benson
47-097-03438	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03447	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03453	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03456	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03457	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03458	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03459	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03460	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03461	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03462	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03463	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03470	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03473	Mountain V Oil & Gas, Inc.	Gordon, 5th, Riley, Benson
47-097-03474	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03478	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03485	Mountain V Oil & Gas, Inc.	Riley, 5th, Bayard
47-097-03492	Mountain V Oil & Gas, Inc.	Benson, Riley, Injun, Squaw
47-097-03493	Mountain V Oil & Gas, Inc.	Benson, Bayard, 4th
47-097-03495	Mountain V Oil & Gas, Inc.	Gordon, Riley, Benson
47-097-03507	Mountain V Oil & Gas, Inc.	Riley, 5th, Gordon, 30-4
47-097-03508	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03519	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03520	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03524	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03532	Mountain V Oil & Gas, Inc.	Riley

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APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
47-097-03533	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03534	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03536	Mountain V Oil & Gas, Inc.	Benson, Riley, Gordon
47-097-03538	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03539	Mountain V Oil & Gas, Inc.	Benson, Riley, 5th, Injun
47-097-03540	Mountain V Oil & Gas, Inc.	Benson, Riley
47-097-03549	Mountain V Oil & Gas, Inc.	Benson Bayard 5th
47-097-03550	Mountain V Oil & Gas, Inc.	Benson Riley 4th 5th Speechley
47-097-03551	Mountain V Oil & Gas, Inc.	Riley, Benson, Alexander
47-097-03552	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03553	Mountain V Oil & Gas, Inc.	Benson
47-097-03560	Mountain V Oil & Gas, Inc.	Benson Riley 4th 5th
47-097-03566	Mountain V Oil & Gas, Inc.	Benson, Bayard, 4th 5th, Gordon
47-097-03567	Mountain V Oil & Gas, Inc.	Benson, Riley
47-097-03575	Mountain V Oil & Gas, Inc.	Benson Riley
47-097-03585	Mountain V Oil & Gas, Inc.	Benson Riley Gordon Injun
47-097-03589	Mountain V Oil & Gas, Inc.	Benson Speechley 5th
47-097-03590	Mountain V Oil & Gas, Inc.	5th, Benson
47-097-03592	Mountain V Oil & Gas, Inc.	Benson Riley 4th 5th
47-097-03597	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03598	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03603	Mountain V Oil & Gas, Inc.	Benson Riley 4th 5th
47-097-03626	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03633	Mountain V Oil & Gas, Inc.	Riley, Benson, Alexander
47-097-03638	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03646	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03655	Mountain V Oil & Gas, Inc.	5th, Riley, Benson

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APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
47-097-03656	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03657	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03659	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03660	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03661	Mountain V Oil & Gas, Inc.	5th, Riley, Benson
47-097-03713	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03715	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03717	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03732	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03733	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03736	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03738	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03740	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03741	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03742	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03746	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03753	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03754	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03762	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03763	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03765	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03766	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03767	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03779	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03780	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03781	Mountain V Oil & Gas, Inc.	Marcellus Horizontal
47-097-03782	Mountain V Oil & Gas, Inc.	Marcellus Horizontal

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APPENDIX G

Wells Serviced by Injection Wells

API #	Operator	Producing Formation
47-097-03798	Mountain V Oil & Gas, Inc.	Marcellus Horizontal
47-097-03801	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03808	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03809	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03810	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03812	Mountain V Oil & Gas, Inc.	Marcellus Horizontal
47-097-03822	Mountain V Oil & Gas, Inc.	Marcellus Horizontal
47-097-03835	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03841	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03842	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03843	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03844	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03845	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03853	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03854	Mountain V Oil & Gas, Inc.	Marcellus Vertical
47-097-03855	Mountain V Oil & Gas, Inc.	Marcellus Vertical

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MOUNTAIN V
OIL & GAS, INC.
P. O. Box 470
Bridgeport, WV 26330

Produced Water MSDS

Material Safety Data Sheet

1. Product and Company Identification

Product Name:	Produced Water
Synonym:	Formation water, Produced Brine.
Product use:	Disposal .
Manufacturer:	
Address:	

Emergency Contact:

2. Hazards Identification

EMERGENCY OVERVIEW

Potentially toxic based on impurities including salts. May be contaminated with crude oil or hydrocarbon condensate.

POTENTIAL HEALTH EFFECTS/ROUTES OF EXPOSURE

Eyes:	This product is an irritant to the eyes.
Skin:	This product is an irritant to the skin.
Ingestion:	If this product is ingested, vomiting and diarrhea may occur. Aspiration of the liquid into the lungs may produce chemical pneumonia, severe lung damage and/or respiratory failure.
Inhalation:	Not aniticpated to be an inhalation hazard.

3. Composition/Information on Ingredients

Ingredient Name	%	CAS No.
Dissolved minerals salts and water	100	Not applicable
Crude oil and hydrocarbons	Trace	8005-02-9

Produced water may contain a variety of dissolved mineral salts including sodium chloride, calcium chloride, and potassium carbonate.

This product is a complex mixture consistent with the definition within WHMIS regulation CPR section 2. The listed components are provided as guidance based on the available knowledge of the stream.

4. First Aid Measures

Eyes: Immediately flush eyes while holding eyelid open, with water for at least 20 minutes. Seek medical attention if irritation persists.

Skin: Remove contaminated clothing and launder before wearing. Wash exposed skin with soap and water (waterless hand cleaner may be used if clean water is not readily available). Seek medical attention if irritation persists.

Inhalation: Ensure your own safety and use the appropriate respiratory protection to immediately remove the victim to an area free of contaminants. Give CPR or artificial respiration as needed and give oxygen if breathing is difficult. Keep victim at rest and get immediate medical attention.

Ingestion: Do not induce vomiting because of the danger of aspiration of liquids into the lungs. Obtain immediate medical attention.

5. Fire Fighting Measures

FLAMMABLE PROPERTIES
Non-flammable water based liquid with the potential of entrained hydrocarbon gas.

HAZARDOUS COMBUSTION PRODUCTS
Will not support combustion.

FIRE AND EXPLOSION HAZARDS
Will not support combustion.

EXTINGUISHING MEDIA

Small Fires: Keep dry chemical fire extinguishers available.
Large Fires: Use extinguishing agent suitable for surrounding fire.

FIRE FIGHTING INSTRUCTIONS:
The Produced Water itself will not burn, however contaminants contained within or that could float on top of the produced water.

UNUSUAL FIRE & EXPLOSION HAZARDS
Produced water is rarely considered as a fire hazard.

6. Accidental Release Measures

ACTIVATE SITE SPECIFIC EMERGENCY RESPONSE PLAN, IF AVAILABLE.

Small Spills: Stop flow of liquid contain for disposal.

Large Leaks: CALL Emergency Response Activation Telephone Number. Keep unauthorized personnel away and stay upwind. Protect bodies of water by dyking, if possible.

Evacuation: Evacuate unnecessary personnel.

Caution: Consideration should be given to environmental clean-up and waste material generation when deciding if the use of large volumes of water is appropriate for non-fire emergency situations. Clean-up crews must be properly trained and must utilize proper protective equipment.

7. Handling and Storage

HANDLING PRECAUTIONS
Wash thoroughly after handling. DO NOT drink or siphon by mouth.

STORAGE PRECAUTIONS
Outside storage is recommended.

WORK/HYGIENIC PRACTICES

Avoid skin exposure and wash hands before eating, drinking, smoking, or using toilet facilities. Do not eat, drink or smoke in areas of use or storage. Promptly remove contaminated clothing and launder before reuse.

8. Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Ensure your own safety and use the appropriate respiratory protection. Showers and/or eyewash fountains should be provided within the immediate work area for emergency use when there is any possibility of liquids splashing.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: Wear safety glasses with side shields when handling this product.

Skin Protection: Avoid skin contact.

Respiratory Protection: Respiratory protection is not anticipated.

Exposure Limits

Ingredient Name	CAS No.	Exposure Limits
Dissolved minerals salts and water	Not applicable	Not applicable

9. Physical and Chemical Properties

Appearance and state:	Clear liquidr
Odour:	Hydrocarbon odor
Odour Threshold:	Not available
Boiling Point:	>100 C
Melting Point:	<0 C
Flash Point:	The water mixture itself is not flammable but flammable impurities are possible. Flashpoint data is >100 C.
Auto Ignition:	Not applicable
Lower Explosive Limit (%):	Not applicable
Upper Explosive Limit (%):	Not applicable
Vapour Pressure:	Similar to water
Vapour Density (Air = 1):	Not available
Viscosity:	Not available
Specific Gravity:	1.0 to 1.2

Solubility (H_2o):	Very soluble
pH	3-11
Percent Volatiles:	Not available
Evaporation Rate:	Not available

10. Stability and Reactivity

STABILITY
Stable

CONDITIONS TO AVOID (STABILITY)
Material is stable under normal conditions.

INCOMPATIBLE MATERIALS
Not applicable.

HAZARDOUS DECOMPOSITION PRODUCTS:
Not available.

HAZARDOUS POLYMERIZATION
Will Not Occur.

11. Toxicological Information

Chemical Name	CAS No.	LD50	LC50
Dissolved minerals salts and water	Not applicable	Not applicable	Not applicable

POTENTIAL HEALTH EFFECTS

Acute: Contact will damage or irritate eyes and skin.

Chronic effects: Not available..

Sensitization: Not available.

Mutagenicity: Not available

Reproductive effects: Not available

Carcinogenicity: Not listed by IARC, NTP or ACGIH

Target organs: Eyes, skin.

12. Ecological Information

May contain salts.

13. Disposal Considerations

Water injection in approved wells. Avoid contact of spilled material and runoff with soil and surface waterways. Consult an environmental professional to determine if local, regional or national regulations would classify spilled or contaminated materials as hazardous waste. Use only approved transporters, recyclers, treatment, storage or disposal facilities. Dispose of in accordance with all applicable local and national regulations.

14. Transport Information

PROPER SHIPPING NAME:	**Not applicable**
TDG CLASS:	**Not applicable**
TDG IDENTIFICATION NUMBER:	**Not applicable**
TDG SHIPPING LABEL:	**Not applicable**
NAERG:	**Not applicable**

15. Regulatory Information

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

Workplace Hazardous Materials Information Systems (WHMIS): This product has been classified in accordance with the hazard criteria of the CPR (Controlled Product Regulations), and the MSDS contains all of the information required by the CPR.

Class D2B – Materials Causing Serious and Other Toxic Effects

16. Other Information

Disclaimer of Expressed and Implied Warranties

The information presented in the Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. However, neither Keyera, Deerfoot Consulting Inc nor any of their subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use.

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

SECTION 10

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.

RECEIVED
Office of Oil and Gas

JUN 10 2015

WV Department of
Environmental Protection

Section 10 – Monitoring:

1. On a daily basis Mountain V's personnel visits the facility, and accounts for all the information required to fill-in the WR-40 "Report for Waste Disposal Wells", and on a monthly basis sends the department records of those reports.

2. For every barrel of fluid that is received at this facility, Mountain V receives a haul ticket from the trucking company hauling the fluid; on that ticket will be the oil and/or gas well where the fluid was hauled from and the quantity. This allows us to track where the fluid is from, and when it was received at the facility.

MOUNTAIN V
OIL & GAS, INC.

PO Box 470
Bridgeport, WV 26330

Office: 304-842-6320
Fax: 304-842-0016

February 1, 2016

WV DEP
Office of Oil & Gas
Underground Injection Control (UIC)
601 57th Street, SE
Charleston, WV 25304

RE: UIC 2D0973422
Section 10 API 097-03808 & API 097-02824 Cement Issue

Dear Department:

It has been brought to our attention that the Department is concerned that well with API 097-03808 and well with API 097-02824 are lacking cement through the injection zones. Please allow this letter to serve as our commitment, that Mountain V will monitor these wells to determine if fluids migrate into the well bore of the well listed above.

Mountain V will take monthly annulus pressures on the outside of the 4-1/2" casing and record those pressures. The records and history of those readings will be kept at our office location in Bridgeport, WV. At any time upon request Mountain V shall make those readings available to the department. Should any reading indicate that migration may have occurred, Mountain V will immediately stop injection and investigate the situation, and report the results to the department.

Should you have any further questions please contact me.

Sincerely,

S. Michael Shaver
Mountain V Oil & Gas, Inc.

MOUNTAIN V
OIL & GAS, INC.

PO Box 470
Bridgeport, WV 26330

Office: 304-842-6320
Fax: 304-842-0016

November 19, 2015

WV DEP
Office of Oil & Gas
Underground Injection Control (UIC)
601 57th Street, SE
Charleston, WV 25304

RE: UIC 2D0973422
Section 10 Reporting Statement

Dear Department:

It has been brought to our attention that we omitted our description on how we are going to document our activities at the site mentioned above. The site is equipped with a manifold system where the following items are monitored and recorded:

1. Injection Pressure
2. Shut In Pressure
3. Cumulative Volume injected
4. Time of active injection
5. Flow Rate is determined by volume injected vs the time of active injection

Our well tending staff delegated to monitor the site make multiple stops to the site on a daily basis recording the information as stated above. A daily report is submitted to the Company, and a monthly report is submitted to the WVDEP on the WR-40 form. Those reports are available on any given day upon request.

Should you have any further questions please contact me.

Sincerely,

S. Michael Shaver
Mountain V Oil & Gas, Inc.

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

SECTION 11

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.

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Office of Oil and Gas

JUN 10 2015

WV Department of
Environmental Protection

APPENDIX H

GROUNDWATER PROTECTION PLAN

Facility Name: Anna Cutright D Well

County: Upshur

Facility Location:

Postal Service Address:		
Latitude and Longitude:	4,297,490	567,709

Contact Information:

Person:	Jamie Andrews
Phone Number:	304-203-7555
E-mail Address:	jandrews@mountainvoilandgas.com

Date: May 26, 2015

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

   1. Storage of produced formation brine.
   2. Injection of produced formation brine.

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

   1. All storage facilities have secondary containment.
   2. Injected fluids are confined to the tubing in the injection well by utilizing, an isolated packer. The annulus pressure is continuously monitored to check for leaks.

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

   No new equipment or operations will be added to this facility.

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

None

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

See attached map and water analysis results.

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 at the facility, unless allowed by some other regulation or permit.

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.

1. Employees are trained in secondary containment construction, maintenance, and monitoring.
2. Employees are trained in leak detection.
3. Employees are trained in spill prevention and count or measure procedures.

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

1. Secondary containment is inspected monthly. 2. Tubing / casing annulus pressure is monitored daily. 3. Piping and fitting are inspected monthly for leaks.

Signature: _____

Date: 4-8-13

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

SECTION 12

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.

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Section 12 – Plugging and Abandonment:

1. The tubing/production casing annulus will be filled with gelled fresh water.

2. The packer will be released.

3. The tubing/packer assembly will be removed from the well and the packer will be removed from the tubing.

4. The open-ended tubing will be placed back into the well and will be lowered to a point 50' below the injection perforations.

5. A cement plug will be pumped down the tubing and across the injection zone such that the area adjacent to the injection perforations and to a point 100 feet above the injection perforations will be filled with cement.

6. The tubing will be pulled up the hole to 1,450' and a 200' cement plug will be spotted from 1,450' to 1,250'. This plug will cover the area from 50' below the bottom of the 7" casing to a point that is 50' above the cement top for the 4-1/2" production casing.
7. The tubing will be pulled from the wellbore.

8. The production casing will be cut at approximately 1,200'.

9. A 100' cement plug will be spotted down the 4-1/2" casing from 1,200' to 1,100' .

10. The 4-1/2" casing will be pulled from the well until 50' from surface, where a 50' cement plug will be spotted.

11. The remaining 4-1/2" casing will be removed from the well.

12. A plugging monument will be installed.

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

SECTION 13

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.

Section 13 – Additional Bonding:

UIC0973422 is currently in production, and since this permit is only to renew the existing permit, the existing bond should satisfy the department's request of an additional $5,000 bond for this well.

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

SECTION 14

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.

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JUN 10 2015

WV Department of
Environmental Protection

APPENDIX I

Requirement for Financial Responsibility to Plug/Abandon an Injection Well

To: WV Department of Environmental Protection
Office of Oil and Gas
601 57th Street, SE
Charleston, West Virginia 25304-2345
ATTN: Underground Injection Control Program

From: Mountain V Oil & Gas, Inc.
PO Box 470
Bridgeport, WV 26330

Date: 10-20-15

Subject: Underground Injection Control (UIC) Permit Application
2D0973422
Requirement for Financial Responsibility

I, Mike Shaver, verify in accordance with 47CSR13-13.7.g., that I 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.

Name: Mike Shaver

Signature:

Date: 10-20-15

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

SECTION 15

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.

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JUN 10 2015
WV Department of
Environmental Protection

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.

Security at the site is maintained by a locked gate at the entrance of the facility from the county road. The site is located approximately 0.2 of a mile from the county route and is not visible from the county road

UNDERGROUND INJECTION CONTROL (UIC)
PERMIT APPLICATION

SECTION 16

UIC #: 2D0973422
FACILITY NAME: Anna Cutright D Well
OPERATOR: Mountain V Oil & Gas, Inc.

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)	2D0973422
Toxic Substances Control Act (TSCA)	
Best Management Plans	
Management of Used Oil	
Other Relevant Permits (Specify):	

MOUNTAIN V
OIL & GAS, INC.

P. O. Box 470
Bridgeport, WV 26330

Office: 304-842-6320
Fax: 304-842-0016

November 13, 2015

Justin Nottingham
WV DEP
Office of Oil & Gas
601 57th Street SE
Charleston, WV 25304

Re: **UIC 2D0973422 – 2nd NOD**

Dear Justin,

Justin,

Pursuant to our phone conversation on the 18th of November 2015, we were made aware of a few NODs on the permit submitted on the 23rd of October 2015, as it pertained to the permit listed above. Please find attached the following data sets remedying those NODs we discussed:

1. Revised Appendix E along with supporting water source sampling analysis covering every parameter set forth by the department.
2. Injected fluid analysis covering every parameter set forth by the department.
3. New well schematic showing the depth of only private water well within AOR.
4. Letter statements covering: Section 7, Section 10, existing well with API 097-03808, fluid compatibility statement, static fluid lever statement.

Should you have any questions comments or concerns please don't hesitate to contact me.

Respectfully Yours,

Jamie Andrews
Mountain V Oil & Gas, Inc.

Received
Office of Oil & Gas
DEC 11 2015

MOUNTAIN V
OIL & GAS, INC.

P. O. Box 470
Bridgeport, WV 26330

Office: 304-842-6320
Fax: 304-842-0016

June 9, 2015

WV DEP
Office of Oil & Gas
601 57th Street SE
Charleston, WV 25304

Re: **UIC Renewal Permit**
UIC 2D0973422

To Whom It May Concern,

Please find enclosed with this letter the renewal permit for the following well located in Upshur County, West Virginia:

- **UIC 2D0973422**

Please note that we are awaiting the water samples from sources in our AOI, and upon receipt of those results, we will promptly send them into the department. Also, the analysis conducted on the fluids being injected has not arrived back to our office, but should soon, and upon receipt we will promptly send to the department.

Should you have any questions comments or concerns please contact me at your convenience.

Respectfully Yours,

Jamie Andrews
Mountain V Oil & Gas, Inc.