

Camp Creek Disposal Services

P.O. 555

Rosedale, VA 24280

UIC Re-Permit Application
UIC Disposal Well: 2D0550319

September, 2014



SUBMITTED BY:
D.R. PRICE ENGINEERING & LAND SURVEYING, INC., P.C.
P.O. BOX 1270
HONAKER, VIRGINIA 24260
PHONE: 276-991-9100 FAX: 276-991-9103

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Section 1

Facility Information

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	Thomas Shrader		
Existing UIC Permit ID Number	2D0550319	UIC Well API Number	47-05500319

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

Please check the fees and payment included.

Fees		Payment Type	
UIC Permit Fee: \$500	<input checked="" type="checkbox"/>	Check	<input checked="" type="checkbox"/>
Groundwater Protection Plan (GPP) Fee: \$50.00	<input checked="" type="checkbox"/>	Electronic	<input type="checkbox"/>
		Other	<input type="checkbox"/>

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



Appendix D Public Service District Affidavit

Appendix E Water Sources

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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): _____

Reviewed by (Sign): _____

Date Reviewed: _____

	<p>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</p>	<p>UNDERGROUND INJECTION CONTROL (UIC) PERMIT APPLICATION</p>
<p>UIC PERMIT ID # <u>2D0550319</u> API # <u>47-05500319</u> WELL # <u>14397</u></p>		

Section I. Facility Information

Facility Name: Camp Creek Disposal Services	
Address: P.O. Box 555	
City: Rosedale	State: VA Zip: 24280
County: Russell	
Location description: Well is located in the Jumping Branch District of Mercer County in the Camp Creek watershed in the Athens 7.5 Quadrangle at an elevation of 1967'.	
Location of well(s) or approximate center of field/project in UTM NAD 83 (meters): Northing: 54965.188 Easting: 590700.520	
Environmental Contact Information: Name: Thomas Shrader Title: President Phone: 276-880-2323 Email: pitstop@mounet.com	

Section 2. Operator Information

Operator Name: C. Thomas Shrader	
Operator ID: 14397	
Address: P.O. Box 555	
City: Rosedale	State: VA Zip: 24280
County: Russell	
Contact Name: Tommy Shrader	Contact Title: President
Contact Phone: 276-880-2323	Contact Email: pitstop@mounet.com



Section 3. Applicant Information

Ownership Status: <input checked="" type="checkbox"/> PRIVATE <input type="checkbox"/> PUBLIC <input type="checkbox"/> FEDERAL <input type="checkbox"/> STATE <input type="checkbox"/> OTHER (explain):
SIC code: <input checked="" type="checkbox"/> 1311 (2D, 2H, 2R) <input type="checkbox"/> 1479 (3S) <input type="checkbox"/> OTHER (explain):

Section 4. Applicant / Activity Request and Type:

A. Apply for a new UIC Permit: <input type="checkbox"/> 2D <input type="checkbox"/> 2H <input type="checkbox"/> 2R <input type="checkbox"/> 3S
B. Reissue existing UIC Permit: <input checked="" type="checkbox"/> 2D <input type="checkbox"/> 2H <input type="checkbox"/> 2R <input type="checkbox"/> 3S
C. Modify existing UIC Permit: <input type="checkbox"/> 2D <input type="checkbox"/> 2H <input type="checkbox"/> 2R <input type="checkbox"/> 3S (Submit only documentation pertaining to the modification request)
2D COMMERCIAL FACILITY: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

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

To dispose of produced fluids from various production wells and coalbed methane wells, along with pipeline fluids and drilling pit fluids.
--



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 ¹duly authorized representative in accordance with 47CSR13-13.11.b.

A. Name and title of person applying for permit:

Print Name: C. Thomas Shrader

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: *Tommy Shrader*

Date: 9/12/14

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.

Appendix A

Injection Well Form

APPENDIX A

Injection Well Form

1) GEOLOGIC TARGET FORMATION	Big Lime and Huron Shale		
Depth	<u>2262, 4608</u>	Feet (top)	<u>2572, 5720</u> Feet (bottom)
2) Estimated Depth of Completed Well, (or actual depth of existing well):	<u>5876</u> Feet		
3) Approximate water strata depths:	Fresh	<u>93':225':310'</u> Feet	Salt <u>N/A</u> Feet
4) Approximate coal seam depths:	N/A		
5) Is coal being mined in the area?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
6) Virgin reservoir pressure in target formation	<u>780</u> psig	Source	<u>Field Estimate</u>
7) Estimated reservoir fracture pressure	<u>3985</u> psig (BHFP)		
8) MAXIMUM PROPOSED INJECTION OPERATIONS:			
Injection rate (bbl/hour)	<u>300</u>		
Injection volume (bbl/day)			
Injection pressure (psig)			
Bottom hole pressure (psig)	<u>3687</u>		
9) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES:			
Produced fluids from various production wells and coalbed methane wells, along with pipeline fluids and drilling pit fluids. Additives to be determined.			
Temperature of injected fluid: (°F)	<u>Unknown</u>		
10) FILTERS (IF ANY)			
<u>3 phase filtering from 100 micron to 5 micron.</u>			
11) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL			
N/A			

APPENDIX A (cont.)

12. Casing and Tubing Program

TYPE	<u>Size</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling</u>	<u>INTERVALS: Left in Well</u>	<u>CEMENT: Fill-up (Cu. Ft.)</u>
Conductor	12 3/4"	new	LS		21'	21'	Sand In
Fresh Water	9 5/8"	new	LS	26	225'	225'	410 sks
Coal	2 3/8" x 4 1/2"						
Intermediate 1	7"	new	LS	17	1281'	1281'	230 sks
Intermediate 2							
Production	4 1/2"	new	M-65	9.5	5828'	5828'	410 sks
Tubing	2 3/8"	new	J-55	4.6	4595'	4595'	
Liners							

* See Well Operator's Report Below*

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

PACKERS	Packer #1	Packer #2	Packer #3	Packer #4
Kind:	Tension Packer			
Sizes:	2 3/8"			
Depths Set:	4563'			

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

Well Operator's Report of Well Work

Farm name: Mills, Ray O. Operator Well No.: 14397 Rev

LOCATION: Elevation 1967' Quadrangle: Athens 7.5'

District: Jumping Branch County Mercer
Latitude: 1790 Feet South of 37 Deg. 30 Min. 00 Sec.
Longitude 6390 Feet West of 81 Deg. 05 Min. 00 Sec.

Company: Dominion Exploration & Production, Inc

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P O Box 1248 Jane Lew, WV 26378				
Agent: Rodney J. Biggs				
Inspector: Barry Stollings				
Date Permit Issued: 12/01/2006				
Date Well Work Commenced: 03/30/2007	12 3/4"	21'	21'	Sand In
Date Well Work Completed: 04/17/2007				
Verbal Plugging N/A	9 5/8"	225'	225'	410 sks
Date Permission granted on: N/A				
Rotary X Cable Rig	7"	1281'	1281'	230 sks
Total Depth (feet): 5873'				
Fresh Water Depth (ft.): 22', 93', 225', 310'	4 1/2'	5828'	5828'	410 sks
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): N/A				

OPEN FLOW DATA

Lower Huron 5540-5720'
Upper Huron 5120-5124'
Shale Fracture 4608-4910'
Producing formation Pickaway Pay zone depth (ft) 2566-2572'
Gas: Initial open flow Trace MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 12 Hours
Static rock Pressure psig (surface pressure) after 12 Hours

Second producing formation Lime Fracture Pay zone depth (ft) 2262-2272'
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

*Commingled with previous formations

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

Signed: _____
By: Rodney J. Biggs
Date: _____

4/17/07

PERFORMED 5 STAGE FRAC.

LOWER HURON (1) 5540'- 5720' (20 HOLES) - 75 Q FOAM FRAC - 15,171# 20/40 SAND, 152 BBL CLEAN FLUID, 444,000 SCF N2, BDP 2555#, ATP 2810#, AIR 25.1 BPM.

UPPER HURON (2) 5120'- 5124' (20 HOLES) PUMPED 500 GAL 15% HCL

DROPPED 3 1/4" FRAC BALL) - 75 Q FOAM FRAC - 20,024# 20/40 SAND, 159 BBL CLEAN FLUID, 420,700 SCF N2, BDP 3000#, ATP 2667#, AIR 25.1 BPM.

SHALE FRACTURE (3) 4608'- 4910' (21 HOLES) PUMPED 500 GAL 15% HCL

(DROPPED 3 3/8" FRAC BALL) - 75 Q FOAM FRAC - 15,279# 20/40 SAND, 147 BBL CLEAN FLUID, 272,200 SCF N2, BDP 2515#, ATP 2118#, AIR 25.1 BPM.

PICKAWAY (4) 2566'- 2572' (12 HOLES) - PUMPED 500 GAL 15% HCL

(DROPPED 3 1/2" FRAC BALL) - ACID/ N2 ASSIST - 3000 GAL OF 28% HCL, 98 BBL CLEAN FLUID, 46,200 SCF N2, BDP 1500#, ATP 960#, AIR 10 BPM.

LIME FRACTURE (5) 2262'-2272' PUMPED 500 GAL 15% HCL

(DROPPED 3 3/4" FRAC BALL) - ACID / N2 ASSIST - 3000 GAL OF 28% GELLED ACID, 70 BBL CLEAN FLUID, 50,400 SCF N2, BDP 1466#, ATP 947#, AIR 10 BPM, ISIP 1154#, 3 MIN SIP 1071#.

Fill	0	5
Sandy Shale	5	15
Sandstone	15	290
Ravencliff	290	333
Avis	333	410
Shale	410	951
U Maxton	951	1130
Shale	1130	1509
L Maxton	1509	1624
Shale	1624	

**GAMMA
RAY /
FORMATION
TOPS**

DEPI # 14397rev

047-055-00319

			TOP	BASE	
LOWER MAXTON			1672	1694	
LITTLE LIME			1820	2289	
BIG LIME			2289	3187	
PRICE FORMATION			3187	3980	
WEIR SAND			3537	3574	
SUNBURY SHALE			3910	3980	
BEREA			3980	4000	
UPPER HURON			4620	5750	
LOWER HURON			5750	TD	
LTD				5876	

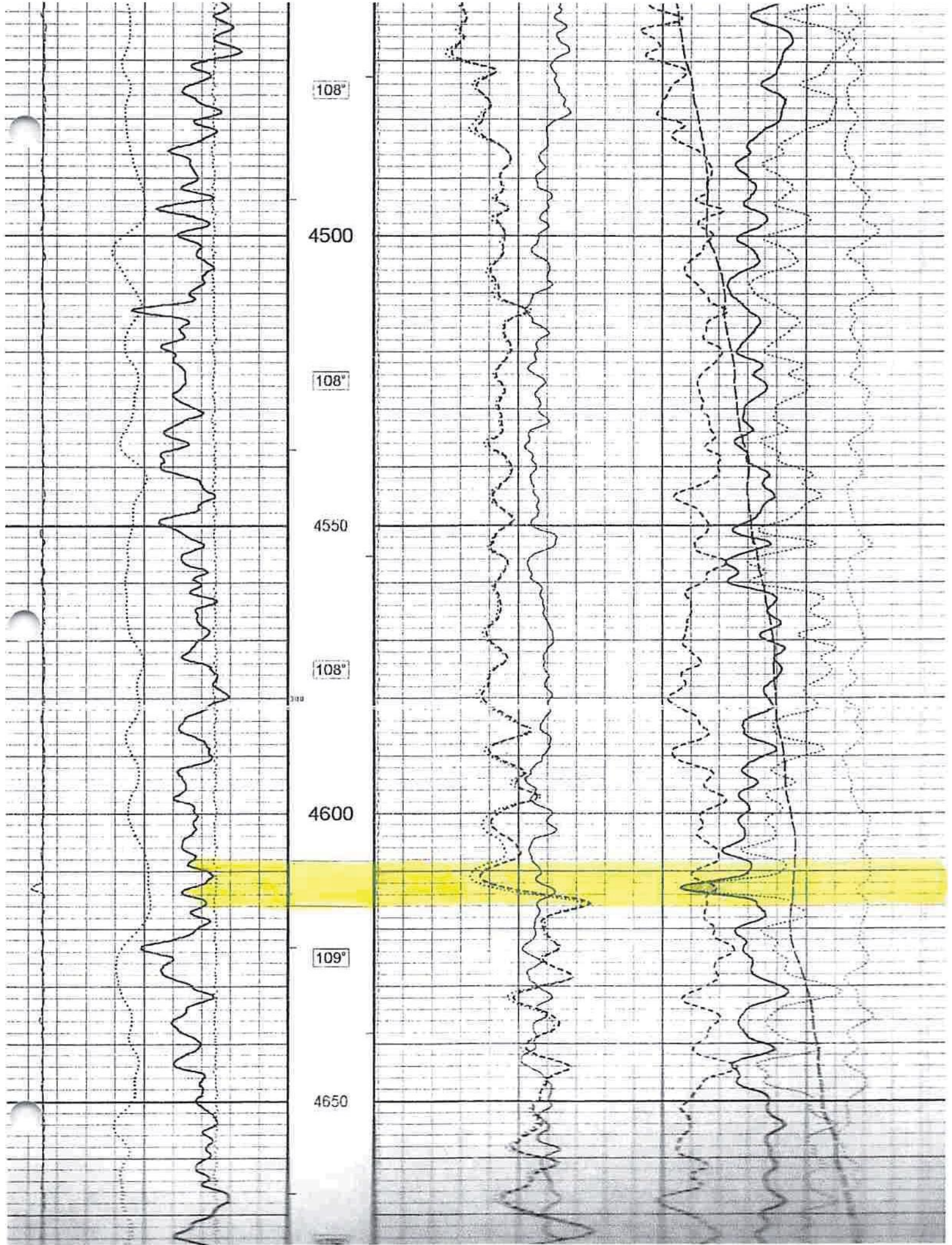
Zone 1: Huron Shale

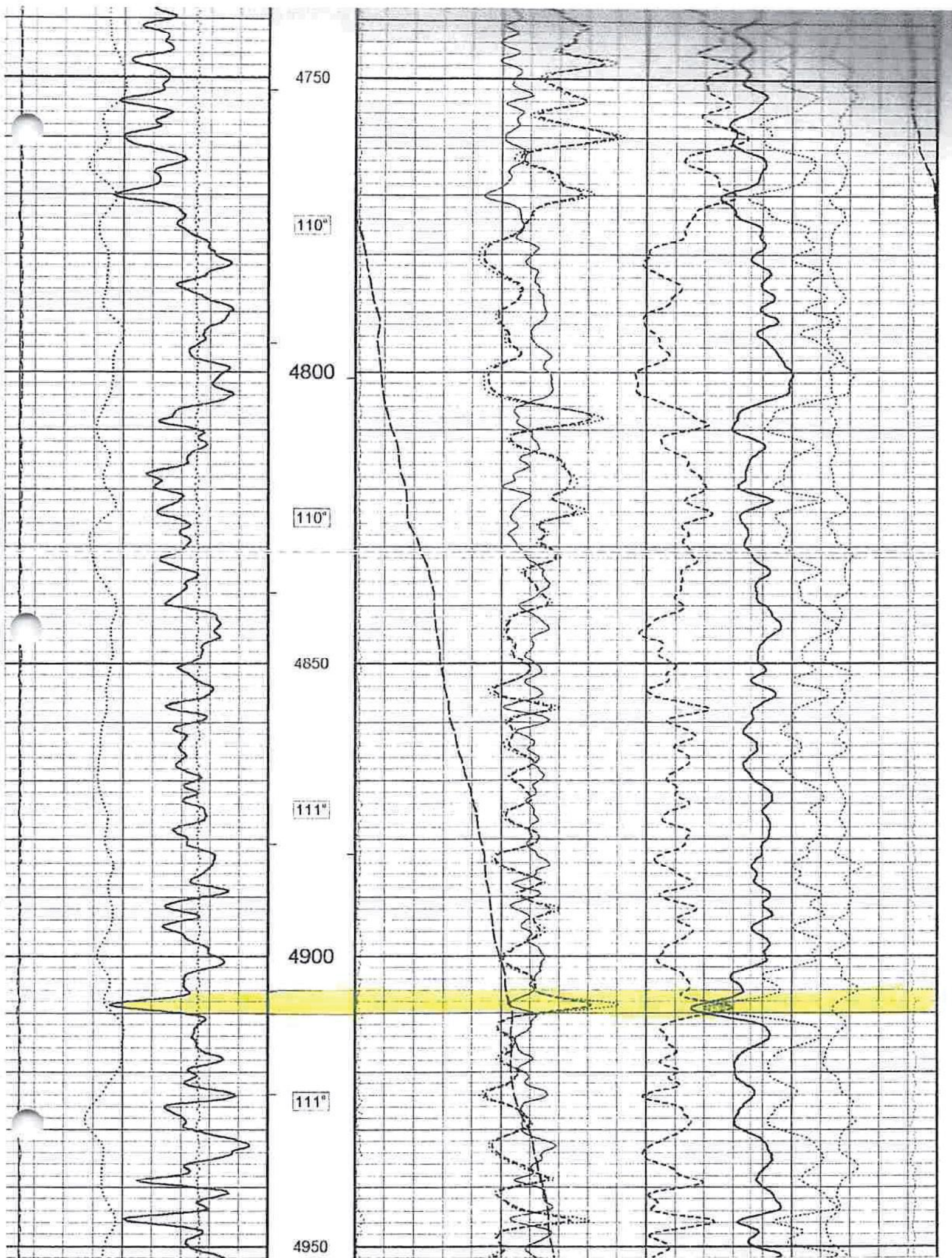
The Huron Shale in this well is proposed as the primary disposal zone and has a total interval length of 1256' extending from the top at 4620' to 5876' (TD of the well) with eight specific sections of the interval for a total of 36 feet being perforated with a total of 61 holes to be utilized for disposal. Copies of log sections on the adjacent page show the perforated sections highlighted in yellow.

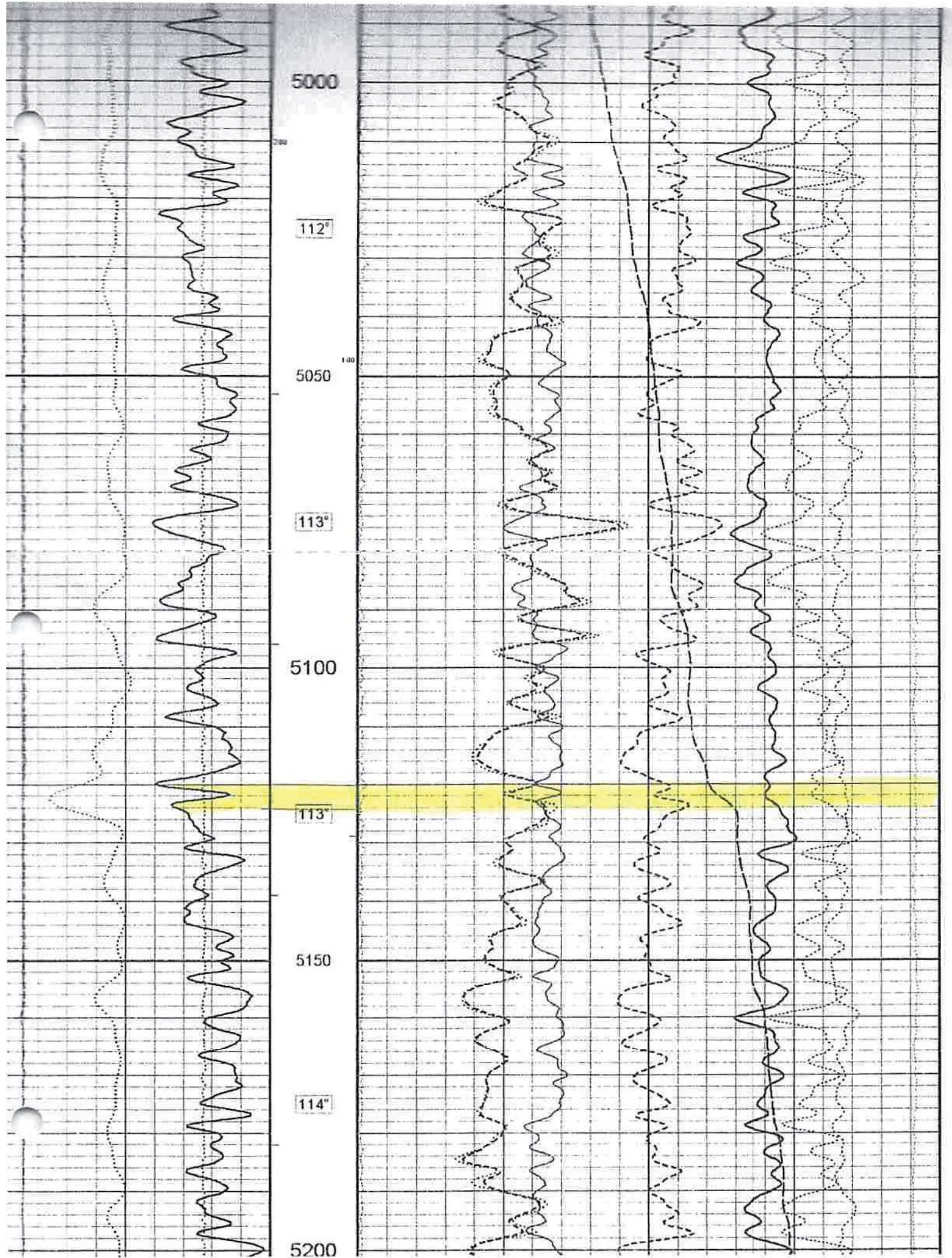
The Huron Shale in this area appears to be wet and lays south and east of primary production in the Huron Shale. Few wells exist in the immediate area due to a lack of production potential and high water saturations in the Huron Shale. Porosity values are difficult to determine and vary greatly within shale intervals due to primary porosity being fracture porosity rather than matrix porosity but appear to vary from on average 2 to 6 percent as derived from the well log.

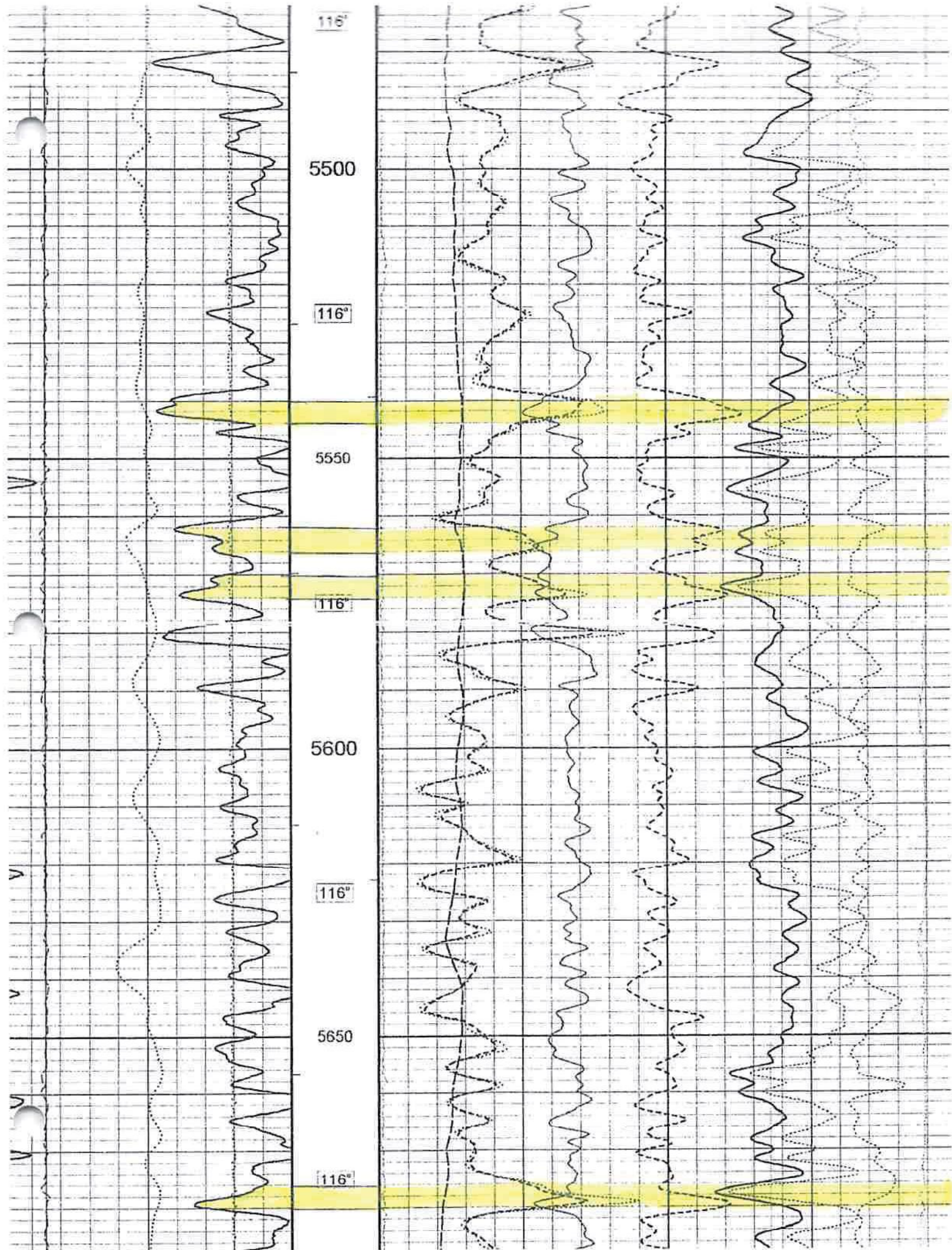
The Huron Shale is a member of the Upper Devonian Shale and is composed of fractured black and gray shales and siltstones and encompasses a large area within the state in which the stratigraphy, thickness, organic geochemistry and thermal maturity of shale sequence varies widely. Porosities historically range from 1 to 3 percent with permeability ranging from 0.1 to 10 microdarcies. The Huron Shale is overlain by the Berea Sandstone and underlain by the Hanover Shale.

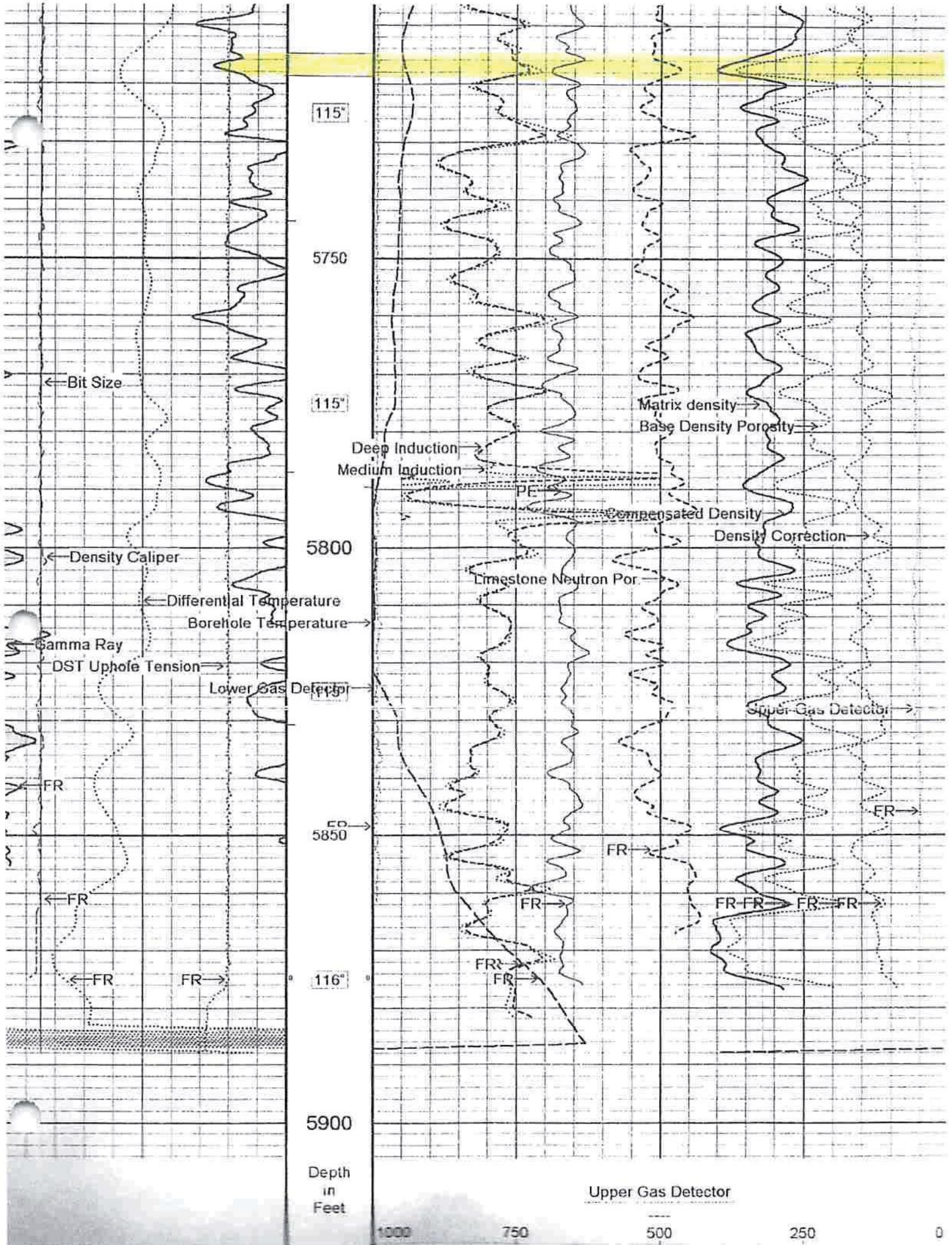
Also included within this section is a copy of the injection/step rate test data from testing conducted on 9/29/2008. This data indicates the shale section of this well to readily accept fluid at good injection rates with minimal pressures that are well within the WVDEP guidelines. It is anticipated that the Huron Shale will make an excellent disposal zone with no likelihood of affecting production in the area.





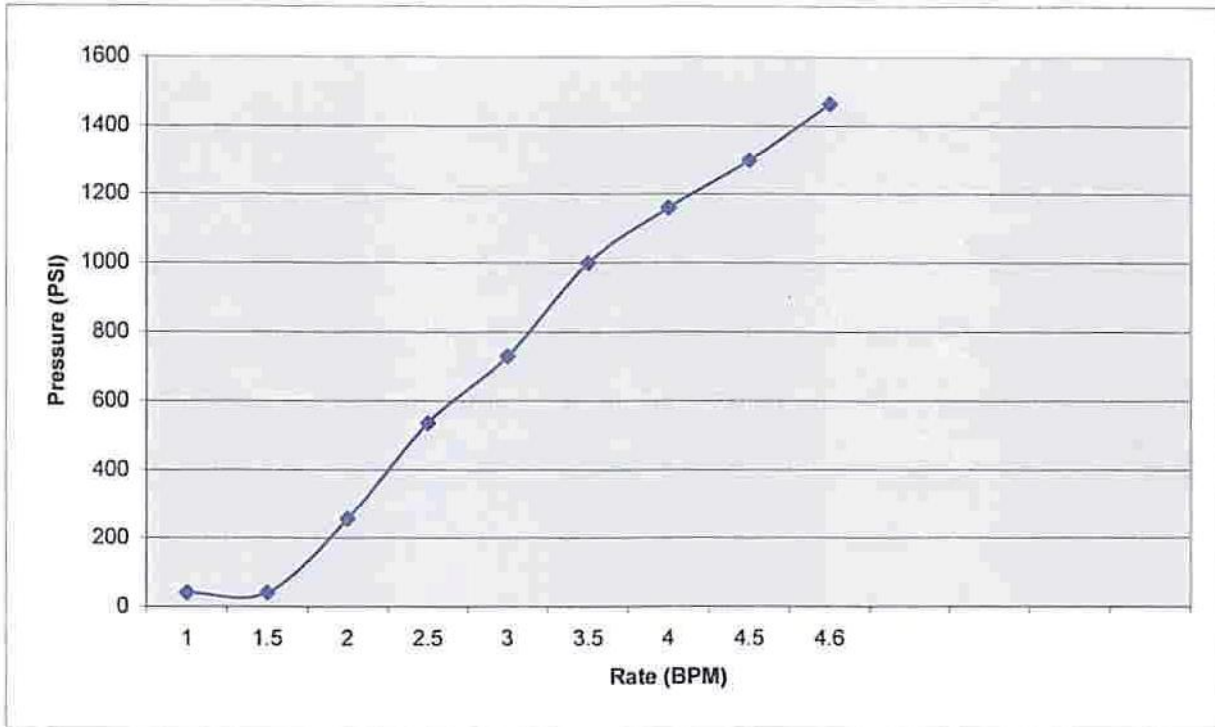






Gas Field Services Well No. 14397 Injection Test/Shale

9/29/2008



Rate	Pressure
1	41
1.5	41
2	256
2.5	536
3	730
3.5	1000
4	1160
4.5	1300
4.6	1465

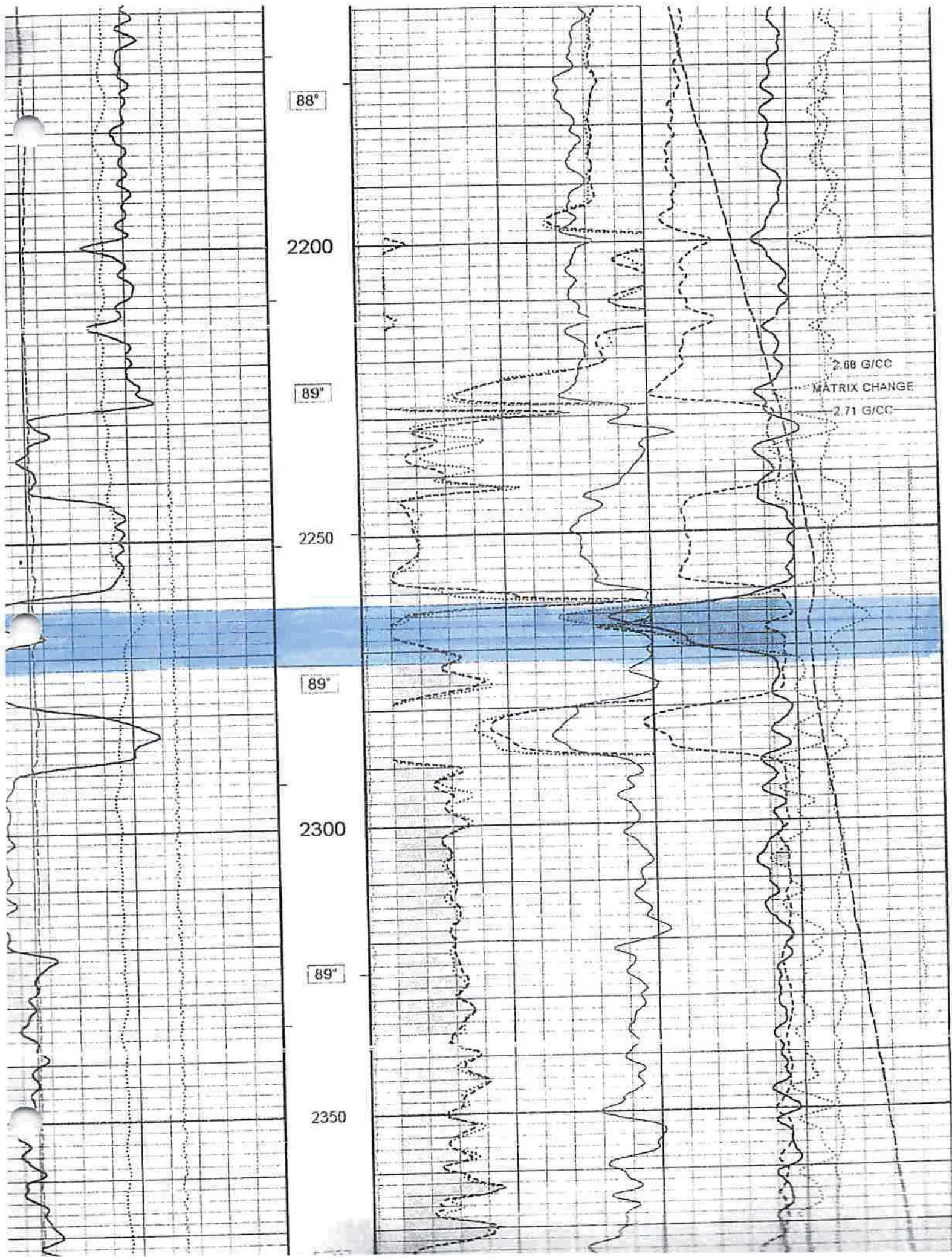
Zone 2: Big Lime/Greenbrier Limestone

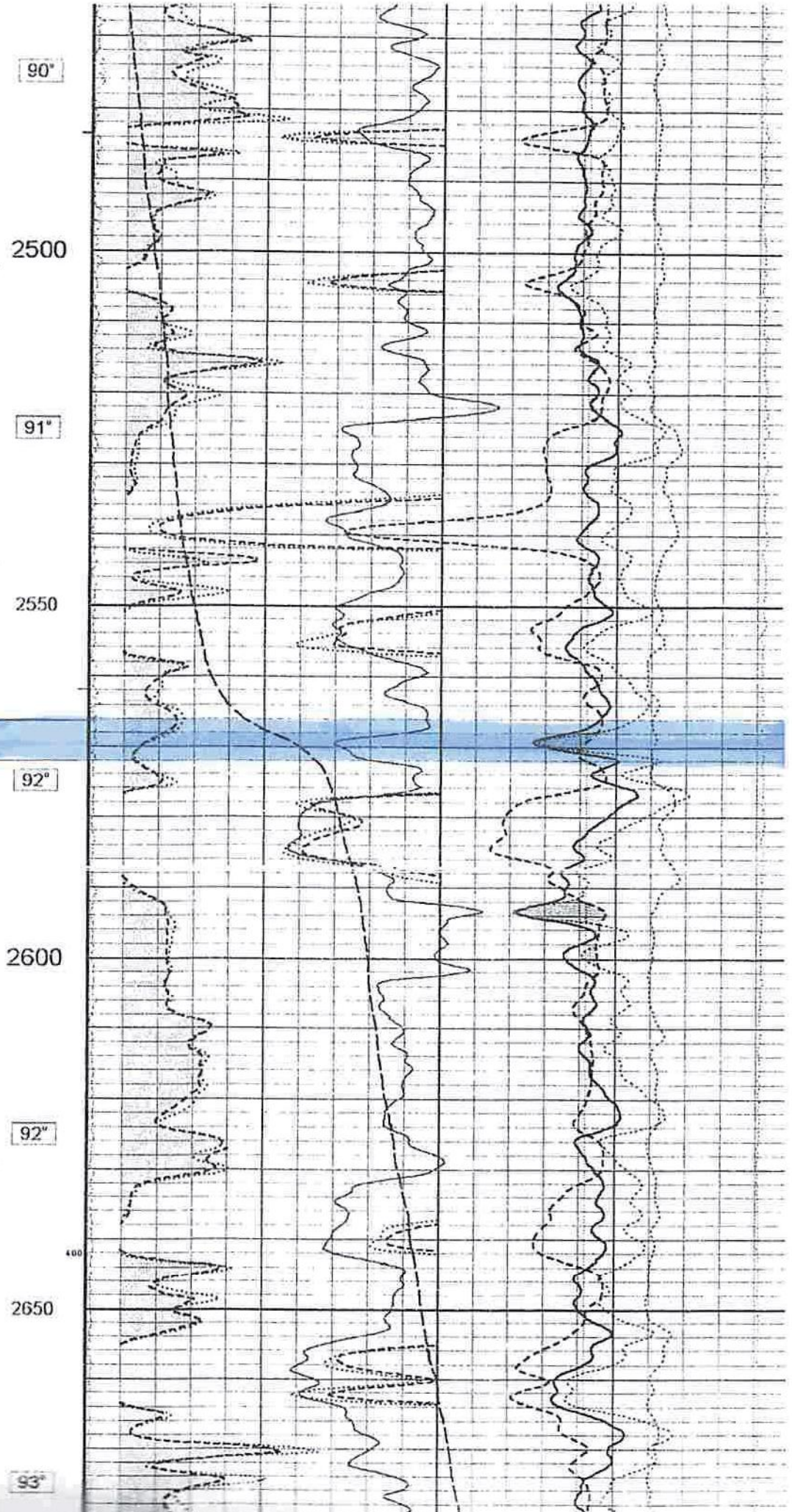
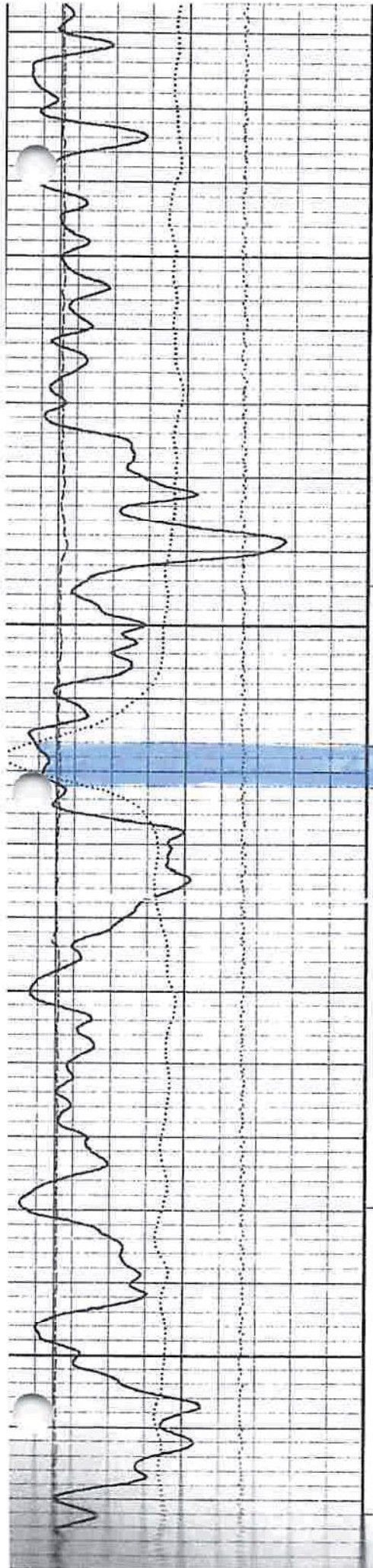
The Greenbrier Limestone and more specifically the Big Lime formation in this well is proposed as the secondary disposal zone and has a total interval length of 1367' extending from the top at 1820' in the Little Lime to 3187' at the bottom of the Big Lime. There are two specific sections of the interval for a total of 16 feet being perforated with a total of 32 holes to be utilized for disposal with the top of the perforated interval at 2262' and the bottom at 2572'. Copies of log sections on the adjacent page show the perforated sections highlighted in blue.

The Lime in this area appears to also be wet and lays east of established production in the Big Lime. Few wells exist in the immediate area due to a lack of production potential and high water saturations in the Lime. Porosity values from the well log range from 6 to 14 percent with density values running in the 2.50 grams/cc range.

The Greenbrier Limestone is a member of the Upper Mississippian Group and is a carbonate composed of limestone and dolomite and encompasses a large area within the state and is generally considered to be a marker bed in the state with statewide areal range. Porosities historically range from 3 to 28 percent averaging 11 percent with permeability ranging from 1.0 to 15 microdarcies. The Big Lime is overlain by the Big Lime and various shale stringers and is underlain by the Big Injun sandstone.

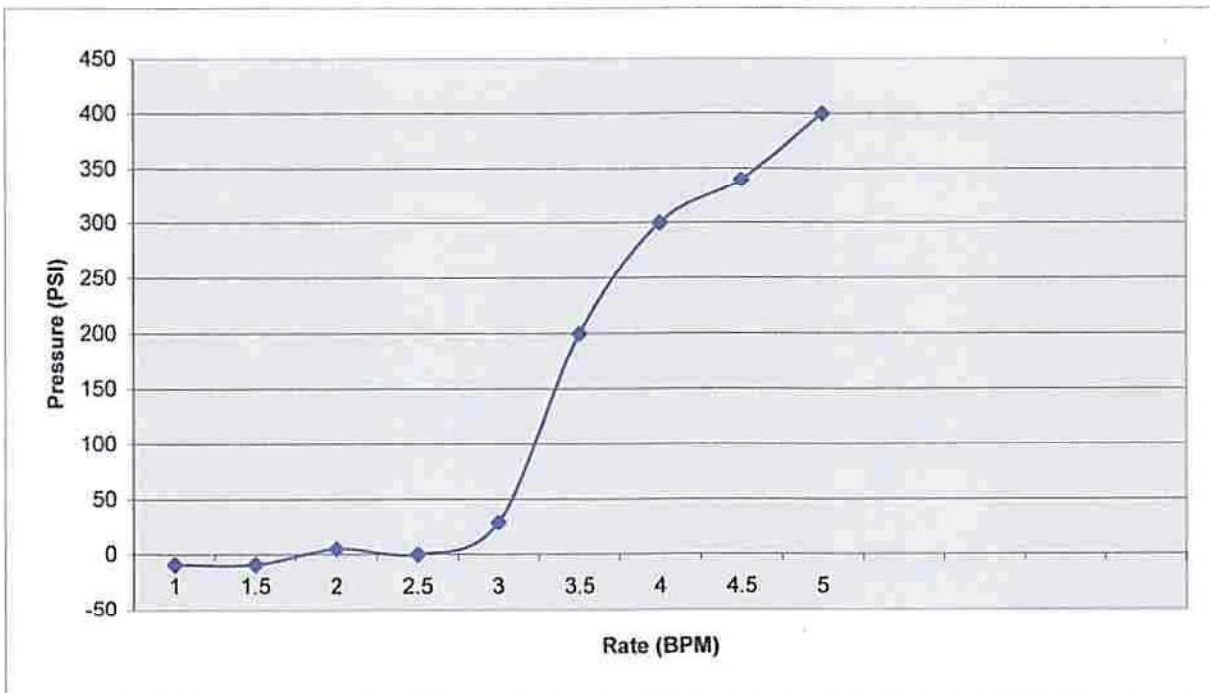
Also included within this section is a copy of the injection/step rate test data form testing conducted on 9/29/2008. This data indicates the shale section of this well to readily accept fluid at good injection rates with minimal pressures that are well within the WVDEP guidelines. It is anticipated that the Big Lime will make an excellent disposal zone with no likelihood of affecting production in the area.





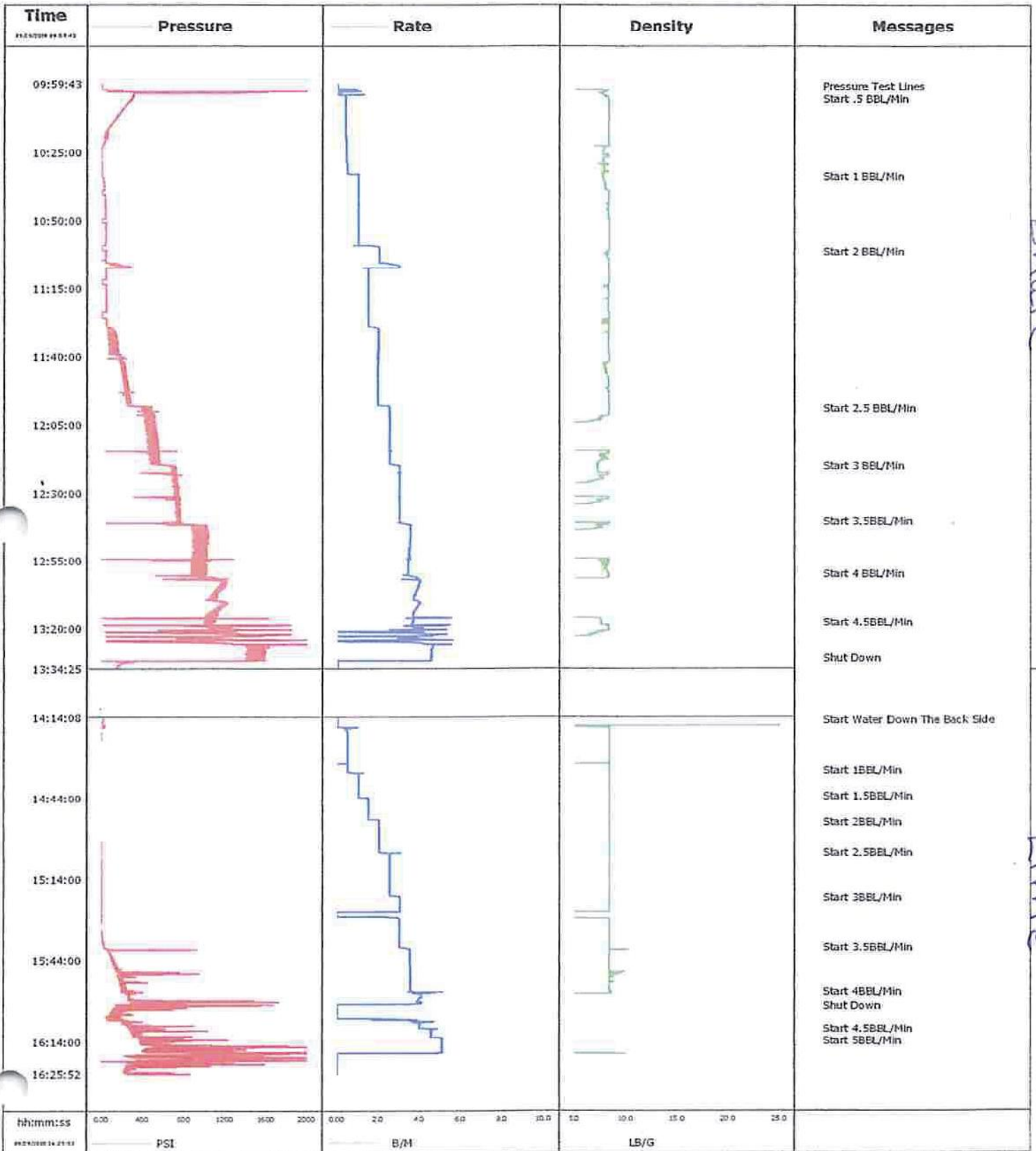
Gas Field Services Well No. 14397 Injection Test / Lim e

9/29/2008



Rate	Pressure
1	-9
1.5	-9
2	5
2.5	0
3	29
3.5	200
4	300
4.5	340
5	400

Well	DEPI 14397	Client	Dominion EP INC
Field		SIR No.	2200457387
Engineer	Chris Gilbert	Job Type	Pump Rental
Country	United States	Job Date	09-29-2008



Shale

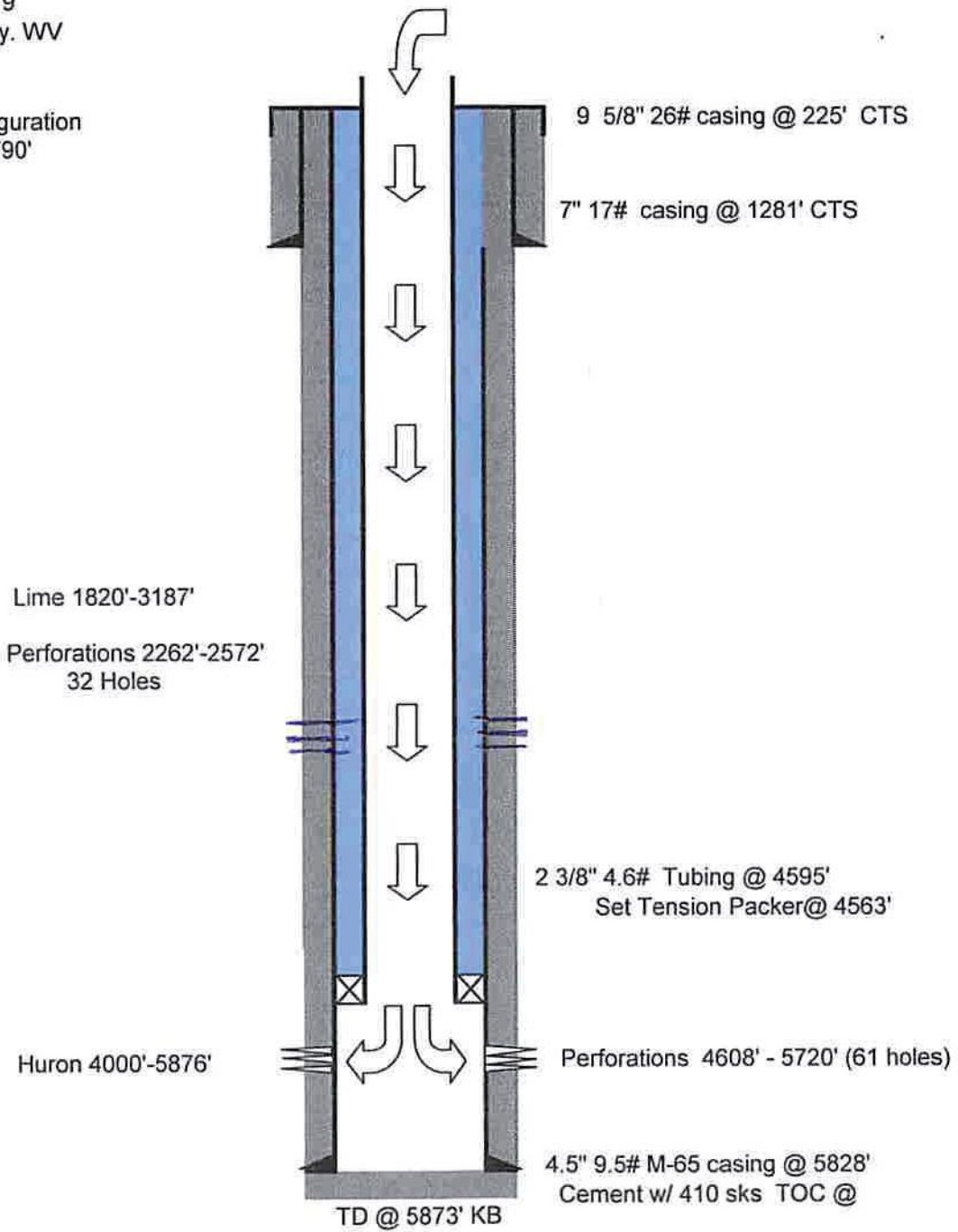
lime

hh:mm:ss	0.00 400 800 1200 1600 2000	0.00 2.0 4.0 6.0 8.0 10.0	10 10.0 15.0 20.0 25.0	
#BXND08 14 21 01	PSI	B/M	LB/G	

Well No. 14397
047-055-00319
Mercer County, WV

Camp Creek Disposal Services Inc.

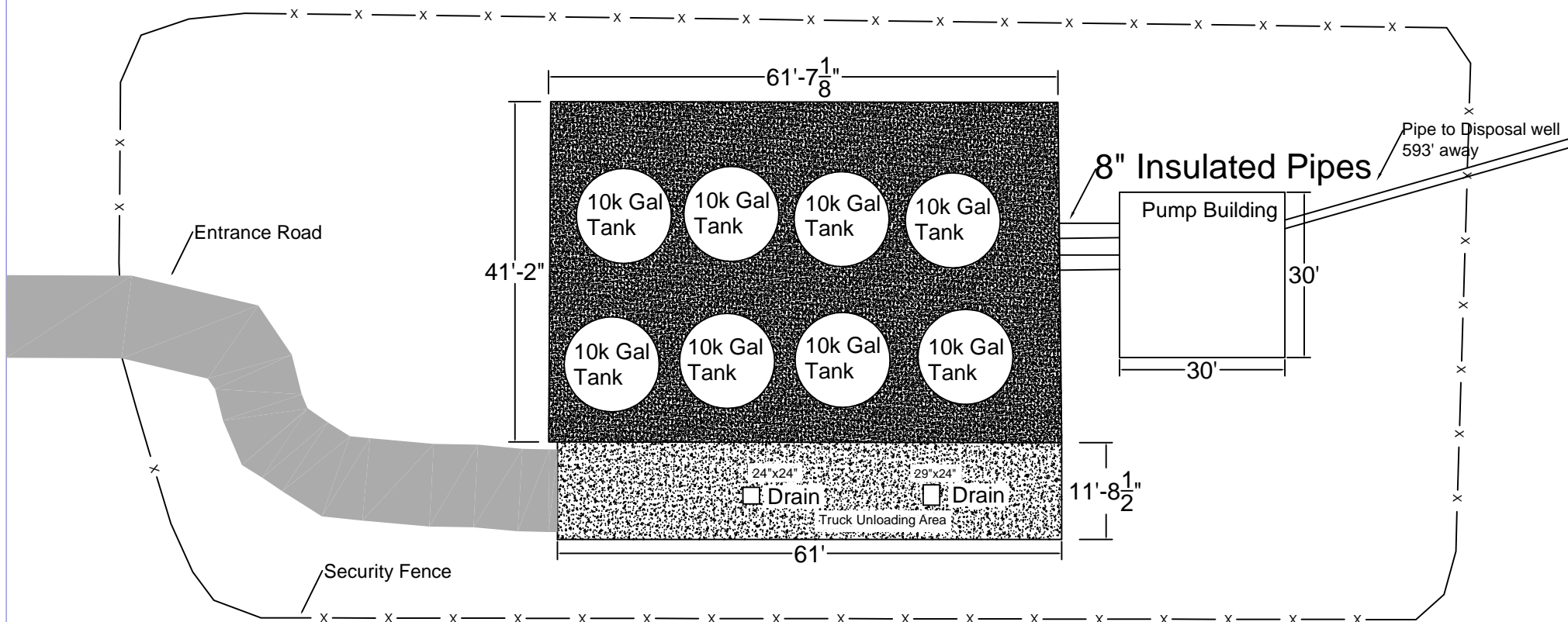
Current Configuration
Elevation: 1790'



Appendix B

Storage Tank Inventory

Aerial View



1. The drains in the truck unloading area are recirculated back into the disposal well.
2. First two tanks closest to pump building are used for containment.
3. Two 8" insulated pipes transport fluid to the pump

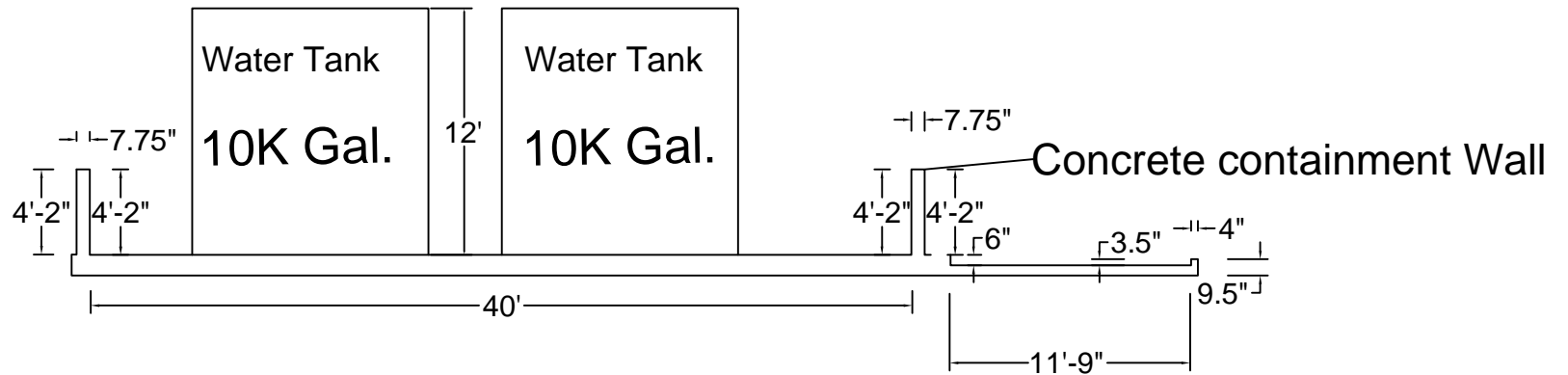


Camp Creek Disposal Services
P.O. BOX 555
Resedale, VA. 24260

SECONDARY CONTAINMENT
 SYSTEM
 AERIAL VIEW

Scale: ~1"=20'

Cross Section View



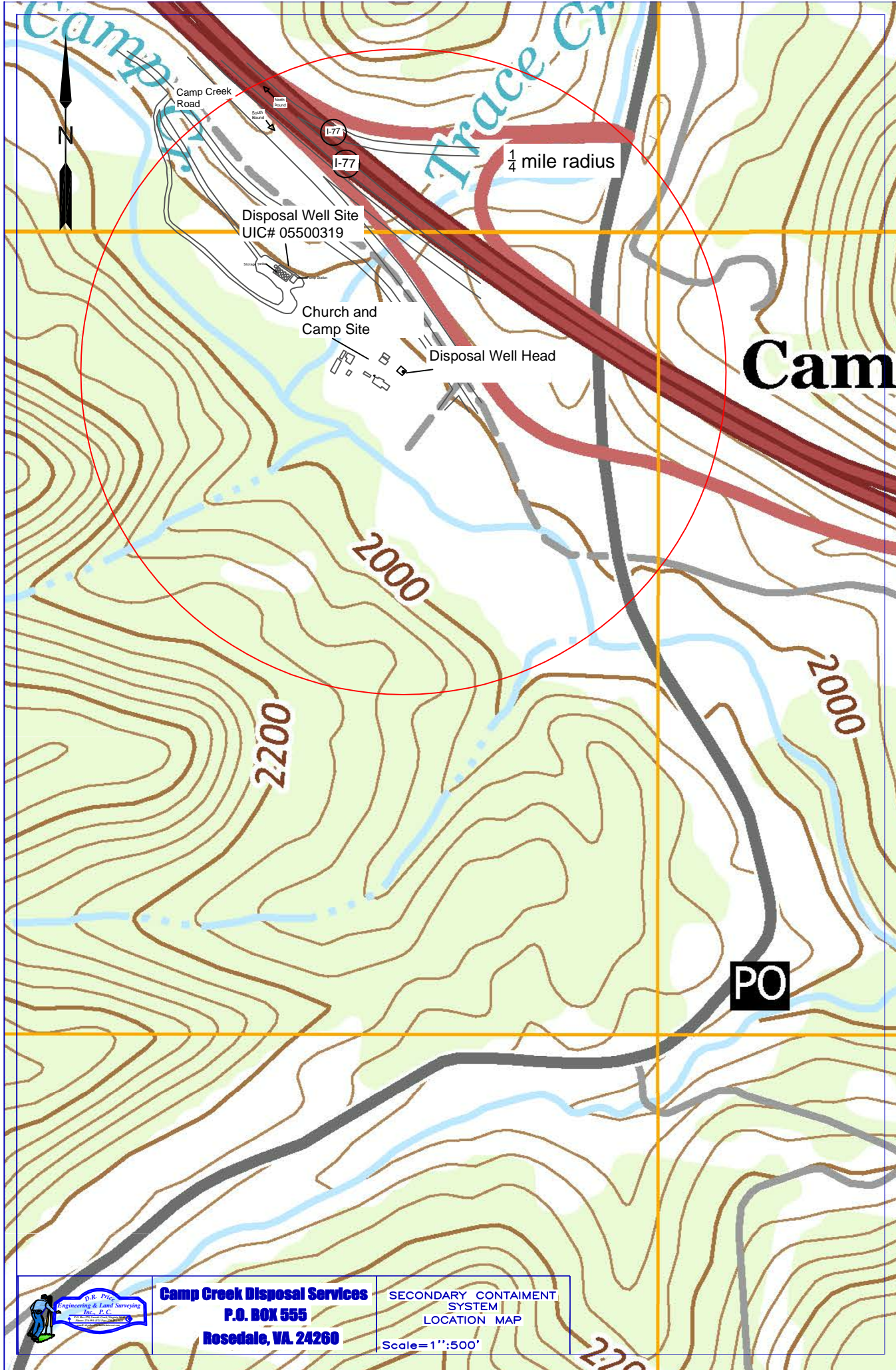
1. The volume of the containment is 7,660.9 cf. (54,926 gal.)
2. Tanks are single walled plastic.
3. Containment is constructed of cinder block and concrete



Camp Creek Disposal Services
P.O. BOX 555
Rosedale, VA. 24260

SECONDARY CONTAINMENT
 SYSTEM
 CROSS SECTION VIEW

Scale: ~1"=10'



Camp Creek Road

I-77

I-77

1/4 mile radius

Disposal Well Site
UIC# 05500319

Church and
Camp Site

Disposal Well Head

Cam

2000

2200

2000

PO



Camp Creek Disposal Services
P.O. BOX 555
Rosedale, VA. 24260

SECONDARY CONTAINMENT
SYSTEM
LOCATION MAP
Scale=1":500'

2200

Appendix C

Wells Within the Area of Review (N/A)

There are no wells within the area of review.

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

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



Appendix D

Public Service District Affidavit

APPENDIX D

Public Service District Affidavit

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

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

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

that there are no such publically recorded sources.

(Signature of Authorized Representative)

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

_____, my commission expires _____

(Notary Signature)

Appendix E

Water Sources

APPENDIX E

Water Sources

Operator: _____ Year _____ UIC Permit # _____

Water Source Name		Source # <u> 1 </u>	Source # <u> </u>	Source # <u> </u>	Source # <u> </u>
Northing					
Easting					
Parameter	Units				
TPH - GRO	mg/L				
TPH - DRO	mg/L				
TPH - ORO	mg/L				
BTEX	mg/L				
Chloride	mg/L				
Sodium	mg/L				
Total Dissolved Solids (TDS)	mg/L				
Aluminum	mg/L				
Arsenic	mg/L				
Barium	mg/L				
Iron	mg/L				
Manganese	mg/L				
pH	SU				
Calcium	mg/L				
Sulfate	mg/L				
MBAS	mg/L				
Dissolved Methane	mg/L				
Dissolved Ethane	mg/L				
Dissolved Butane	mg/L				
Dissolved Propane	mg/L				
Bacteria (Total Coliform)	c/100m L				



Appendix F

Area Permit Wells

Appendix G

Wells Serviced by Injection Well

Appendix H

Groundwater Protection Plan

APPENDIX H

GROUNDWATER PROTECTION PLAN

Facility Name: Camp Creek Disposal Services

County: Mercer

Facility Location:

Postal Service Address:	P.O. Box 555 Rosedale, Va	24280
Latitude and Longitude:	54965.188	590700.520

Contact Information:

Person:	C. Thomas Shrader	
Phone Number:	276-880-2323	
E-mail Address:	pitstop@mounet.com	

Date: 8/26/2014

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

The well is grouted the entire depth to the confining layer. The disposal layer is confined above and below by shale that lacks porosity and that has no fractures or porosity streaks. These characteristics make the shale great at containing fluids. Therefore, any groundwater contamination would originate from surface contamination. The main possibility of a contamination comes from the pipes and pumping station on the site (i.e. a leak or break down of a section of pipe or a pump malfunction).

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

Berms are constructed around the above ground storage tanks and the well head itself to prevent and contain any type of spillage. Several pumps are in place on the pipes and pumping station to immediately stop and depressurize the system in case of a spill or malfunction of the system. Also, the initial two inch steel pipe leading to the well head is double cased within a four inch pipe.

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

A lock out and tag out procedure will be used to shut down all pumps while new equipment is being installed. The pipes will be depressurized and drained before any parts of the system will be serviced or replaced. ENPAC portable spill pallets will be used to catch any small remnants of fluid from the exposed pipes. Any fluid caught will be placed back into the storage tanks to be processed through the pumping system and disposed of into the well.

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

The well is grouted, there is a cinder block containment with a concrete base in place around the above ground storage tanks. Also, the brine water is stored in storage tanks to prevent spillage onto the ground and the tanks themselves are in a concrete containment to catch any leakage in case a tank does malfunction. Pipes are used to safely transport the material from the tanks to the well. Gauges are used to monitor this transport of fluids.

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

There is currently no groundwater quality data for the well or any water wells on adjacent property.

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 from the well or above ground storage tanks will be used for deicing or fill material. All fluid on site being stored in the above ground storage tanks will be pumped directly into the disposal well.

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.

The employees will be trained and familiar with the GPP and will be trained in the maintenance and inspection of the equipment on site to better prevent a spill. Employees will also be trained in proper cleanup procedures according to the GPP.

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

All pipes and pumps will be inspected to insure no leaks or spills. Storage tanks will also be inspected to prevent any leakage. The pumps and pipes will be regularly tested to insure they are functioning properly (i.e. that the pumps and pipes are pressurized normally).

Signature: Tommy J. Hulse

Date: 9/12/14

Appendix I

Requirement of Financial Responsibility

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: Camp Creek Disposal Services
P.O. Box 555
Rosedale, VA 24280

Date: 9-12-14

Subject: Underground Injection Control (UIC) Permit Application
047-055-00319
Requirement for Financial Responsibility

I, Tommy SHRADER, 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: Tommy SHRADER

Signature: Tommy Shrader

Date: 9/12/14

Appendix J

Site Security

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.

There is a chain link fence around the perimeter of the disposal well and around the AGSTs. The gate to the well is to be locked while unattended. Also, the pump house is locked at all times while unattended.

Appendix K

Permit Approvals

APPENDIX K

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

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



SUBMITTED BY:
D.R. PRICE ENGINEERING & LAND SURVEYING, INC., P.C.
P.O. BOX 1270
HONAKER, VIRGINIA 24260
PHONE: 276-991-9100 FAX: 276-991-9103



Plugging and Abandonment Plan
For
UIC# 2D0550319

Camp Creek Disposal Services Inc.
P.O. Box 555
Rosedale, VA 24280
Phone: (276) 880-2323

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SEP 8 2015

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WV Dept. of Environmental Protection

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 WV Dept. of Environmental Protection

Introduction

This Plugging and Abandonment (P&A) Plan for this facility has been prepared to meet all the applicable requirements of the West Virginia Department of Environmental Protection Office of Oil and Gas.

Unsealed or improperly sealed wells may threaten public health and safety, and the quality of groundwater resources. Therefore, the proper abandonment of a well is a critical final step in its service life.

This plan will ensure that this facility properly plugs and abandons their disposal well if and when its ability to accept brine fluid has reached its maximum potential and economic operations have ended, the well encounters a problem that cannot be economically repaired, or the bottom hole location of the well will be moved to a higher elevation.

This plan shall isolate and protect all fresh and near fresh water zones, isolate and protect all commercial producing horizons for future development, and prevent leaks from or into the well.

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West Virginia Department of Environmental Protection

1.0 General Facility Information

Name: Camp Creek Disposal Services Inc.

Address: Exit 20, I-77 N
Camp Creek, WV
(276) 880-2323

Geographic Location USGS Quadrangle: Princeton, WV
Latitude: 37°29'32.68N
Longitude: 81°06'14.61"W
County: Mercer

Owner/Operator: Camp Creek Disposal Services Inc.
19708 Highway 19
Rosedale, VA 24280
(276) 880-2323

Primary Contacts: 1. Tommy Shrader, President
Office: (276) 880-2323

2. Zachary Reed, Vice-President
Office: (276) 880-2323

1.1 Location and Activities

The Camp Creek Disposal Services Inc. brine water storage is located in Mercer County, West Virginia near I-77. The facility is a brine water storage and disposal facility on an area of approximately 3-7 acres, off Interstate 77 North, Exit 20, Near Camp Creek. A Location Map (Figure A-1) is included in Appendix A depicting the location of this facility.

The facility is a brine water disposal plant, which disposes of brine water products used in gas well production. Brine water is stored on site in bulk containers for disposal.

The plant operates 6 days per week, year round. This office is attended from 8:00 am to 5:00 pm, Monday through Friday, with variable operation on Saturday, Sunday and holidays. A facility layout drawing (Figure A-2) showing the location of brine water storage structures is shown in Appendix A.

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2.0 Well Characterization

Effective abandonment will depend on knowledge of the wells construction, geology, and the hydrogeology. The importance of a full characterization increases as the complexity of the well construction, site geology, and the risk of aquifer contamination increases. A Drill Log for Camp Creek Disposal Services well is included in Appendix B.

2.1 Well Preparation

If possible, the borehole must be cleared of obstructions prior to abandonment. Obstructions such as pumps, pipes, wiring, and air lines must be pulled. All obstacles must be removed from the borehole. An attempt should be made to pull the casing when it will not jeopardize the integrity of the borehole.

Damaged or poorly constructed wells may need to be redrilled in order to apply proper abandonment techniques. In a situation where intermixing of aquifers is likely, the borehole may need to be redrilled.

3.0 Materials and Methods

Sealant will be used the plugging and abandonment of the well to provide a watertight barrier to the migration of water into the well bore, in the annular spaces or in fractures and openings adjacent to the well bore. Sealants usually consist of Portland cement based grouts, "bentonite" clay "pills", or combinations of these substances. Additives are frequently used to enhance or delay specific properties such as viscosity, setting time, shrinkage, or strength.

This disposal well shall use a combination of neat cement grout and concrete grout as its sealants. Neat cement grout is generally formulated using a ratio of one 94lb. bag of Portland cement to no more than 6 gallons of water. This grout is typically used for sealing small openings, for penetrating any annular space outside the casings, and for filling voids in the surrounding rocks. Concrete grout consists of a ratio of not more than 6 gallons of water, one 94lb. bag of Portland cement, and an equal volume of sand. This grout is typically used for filling the upper part of the well above the water bearing zone, for plugging short sections of casings, or for filling large-diameter wells.

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3.1 Recommendations and Methods

Using the Drillers Log attached Appendix B, the location of cement plugs shall be determined. The Drillers Log should identify the depths to perforations, joints, packers, etc. Cement to be pumped into the borehole using a tremie pipe.

1. Prior to the plugging and abandonment of the injection well the applicant will submit a revised plugging and abandonment plan to the director of the Underground Injection Control program (UIC) for review and approval.
2. A pressure mechanical integrity test should be performed on the well. The pressure test will be witnessed by the UIC and the test procedure will follow UIC Program procedures for pressure testing the disposal well. If leakage is indicated by the test, the location of the leakage will be identified, the impact to the environment evaluated, and this information submitted to UIC. An environmental remediation plan and implementation schedule and/or a repair plan will be submitted to the UIC for review and approval. No work will commence until the plan has been approved by the UIC.
3. The tubing and packers will be removed from the well.
4. A cement bond log and a gamma ray-neutron log will be run on the well and any other tests or logs determined necessary by UIC. The logs and test results will be submitted to UIC for review and approval. The logs and test results will include an interpretation of the log and tests by a person with the technical expertise to evaluate the data.
5. Based on the evaluation of the logs and tests conducted on the well, a plan for remedial work must be submitted to UIC for review and approval. The remedial work, determined necessary by UIC, will be performed. Remedial work will not commence until the plan has been approved by the UIC.
6. A cement retainer will be set at the base of the long string casing just above the injection interval. Failure risk shall be minimized by ensuring crossflow can be stopped. Use a tubing end plug with circulation to the side and upward, not downward. Use a heavily gelled bentonite "pill" below the cement plug depth. Use a custom spacer to separate the pill and the cement slurry. Use viscous thixotropic cement with setting time equal to the job time plus ½ hour. Rotate the centralized tubing during placement and gently withdraw at the end of pumping.
7. Cement will be displaced through the retainer, squeezing the injection interval with cement.
8. Perforations shall be identified and cement plugs shall be placed 100 ft. above and below perforations.
9. The well will be filled with neat cement grout and abandonment mud as needed.
10. Within 150 feet of the surface, a surface plug of concrete grout shall be placed in the borehole for strength.
11. The cement level will be observed in the casing after cement has set for 24 hours. If cement has fallen back, the casing will be filled with cement back to surface.
12. A metal cap will be welded to the casing inscribed with the UIC permit number and the date the well plugging was completed.
13. A map showing the tri-coordinate location (includes elevation) of the remaining wellhead prepared by a licensed professional land surveyor or professional engineer licensed to practice will be submitted to the UIC.
14. A plugging report with related details will be submitted to the UIC within 30 days of completing the plugging operation on a form provided by UIC. The work done with appropriate service company cementing reports and "day" reports will be submitted to the UIC.

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4.0 Plugging Permit Packet
See Appendix D.

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HARVESTING AND PLUGGING DIVISION

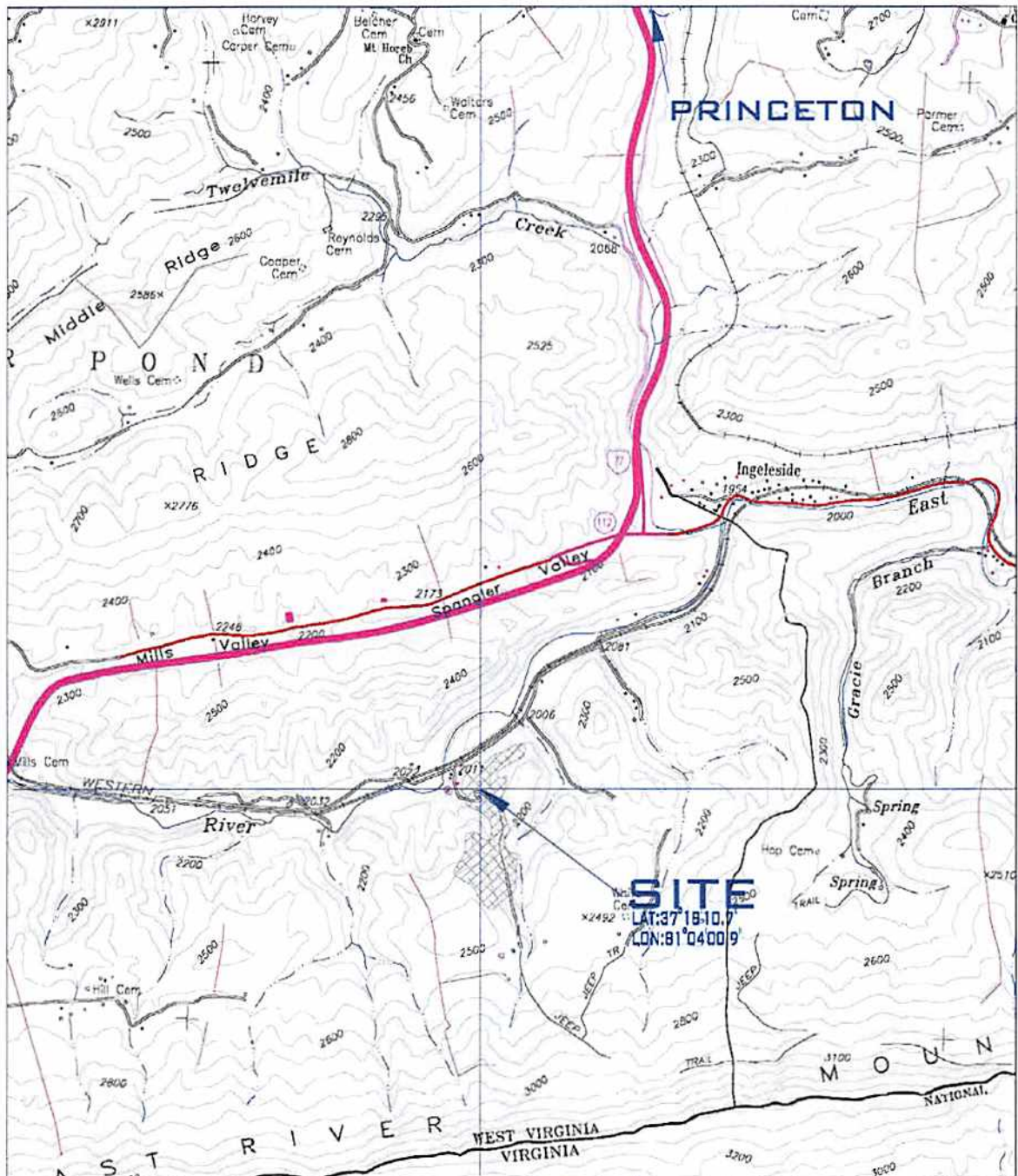
**Appendix A
Location Map**

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<p>D.R. Price Engineering & Land Surveying Inc., P.C. 1000 W. 10th Street, Bluefield, WV 26005 Phone: 304-328-1111 Fax: 304-328-1112 www.drprice.com</p>	<p>WEST VIRGINIA</p> <p>VIRGINIA</p> <p>QUADRANGLE LOCATION</p>	<p>ATHENS</p> <p>BLUEFIELD</p> <p>PRINCETON</p> <p>ROCKY GAP</p>	<p>APPENDIX A</p> <p>LOCATION MAP</p> <p>SCALE: 1" = 2000' DATE: 1/07/14</p>
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**Appendix B
Well Drillers Log**

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WELL DETAIL SUMMARY REPORT

Today: 4/16/2009 Page 8
As Of: 4/16/2009

WELL: SWY 14557 W.LLS.R01 C

Event: 1

Description: DEVELOPMENT DRILL & COMPL

WELL ID# WYV14337	API# 470500010
PLD# 86552	State: WV County: WERCER
Company ID: DEPI	Operator: DOMINION EXPLORAT ON & PRODUCT I
Well Type: DEV	Plan Features: LOWER BURON
PLAN MD: 5800 Ref: STOVALL RIDGE	Permit:
Sale Date: 03/31/2007 Permit:	T.L. Date: TO Date: 04/16/2007
TD: 3670 TVD: 0 PBD: 0 000'	Contract#:
CWC#:	Phone Number:
GL: 2010 A#:	Rig Name: GASCO RIG #3

Operations (Report Time: WELL SOLD (SHELDG))

Initial Production Rate, MCFD:	SOPD:	BWPD:	SIGP:	ROP:	Tubing:
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CASING DATA

Casing String	OD size	Weight	Grade	Conn	How Sha	Stick Depth	Run Date	in Cent	Contract
---------------	---------	--------	-------	------	---------	-------------	----------	---------	----------

CEMENT DATA

Casing Subg	Plug Type	CMT Type	Secks	BB. Returns	Assigned
-------------	-----------	----------	-------	-------------	----------

ZONE PERFORATION DATA

ZONE	DATE	Start Depth(ft)	End Depth(ft)	Temp. Stab	How Sha	Comments
------	------	-----------------	---------------	------------	---------	----------

STIMULATION DATA

ZONE	DATE	Volume	in Trip	Max SD Conc	Total IN2 (mcs)	Max Pres(psi)	Avg Freshing Equipment	Contract
------	------	--------	---------	-------------	-----------------	---------------	------------------------	----------

Operations Summary

Date: 4/15/2009
04/14/09 WELL SOLD TO GAS FIELD SERVICES APRIL 1, 2009.

Date: 4/14/2009
04/22/08 RU SLS W/ PUMPED 12 BBL FRESH WATER DOWN THE TUBING INTO THE SHALE THEN WELL WENT ON VACUUM. PUMPED @ 3.0 BBL/MIN - OR. 4.5 BBL/MIN - @ 50'. PUMPED 510 BBL INTO THE SHALE. INJECTED THROUGH THE ANNULUS OF TUBING AND 4-1/2" CASING INTO 5" C LIME. PUMPED 500 BBL OF FRESH WATER. 2.0 BBL/MIN - OR. 4.0 BBL/MIN - 100% SIGN EVALUATING.

Date: 3/30/2008
03/29/08 RU SLS W/ PUMPED 12 BBL FRESH WATER DOWN THE TUBING INTO THE SHALE THEN WELL WENT ON VACUUM. PUMPED @ 3.0 BBL/MIN - OR. 4.5 BBL/MIN - @ 50'. PUMPED 510 BBL INTO THE SHALE. INJECTED THROUGH THE ANNULUS OF TUBING AND 4-1/2" CASING INTO 5" C LIME. PUMPED 500 BBL OF FRESH WATER. 3.0 BBL/MIN - OR. 4.5 BBL/MIN - 100% SIGN EVALUATING.

Date: 9/29/2008
09/28/08 RAN 145 JTS 2 3/8" IN 7 7/8" TUBING. SET @ 4593.45' 4-1/2" PACKER SET @ 4693.15'

Date: 9/29/2008
09/25/08 MIRA GFS SERVICE RIG. CALLED EX - 250 BBL TANKS FOR INJECTION TEST. S.O.N.

Date: 9/25/2008
4/27/07 EVALUATING

Date: 6/17/2007
4/27/07 165# SIGP. SWABBED HIT FLUID @ 3650. SWABBED TO 4800. FLUID STAYING AT 4600. 8 HR OPEN FLOW - 30 TENTHS ON 1" - 47 MCF/D. EVALUATING

Date: 4/27/2007
4/28/07 165# SIGP. SWABBED TO 5100. FLUID (BRINE) LEVEL STAYING @ 5100' MARKING @ 10 BBL/HR OF BRINE. IF SWABBED. 8 HR OPEN FLOW - COULD NOT MEASURE ON 2" - <50 MCF/D

Date: 4/26/2007
04/26/07 SIGP - 260#. SWABBED TO 4500' WELL SURGING. 8 HR OPEN FLOW - 18 TENTHS ON 2" - 175 MCF/D.

Date: 4/26/2007
4/24/07 700# SIGP. DRD OUT REMAINING BAFFLES AND CHECKED TO @ 5700' SAND PUMPED TO 5705'. WELL SURGING. 8 HR OPEN FLOW - 16 TENTHS ON 2" - 165 MCF/D. SIGN

Date: 4/24/2007
04/23/07 M. GFS SWAB RIG. 700# SIGP. DRD OUT BAFFLE @ 2335'. WELL SURGING. 8 HR OPEN FLOW - 20 TENTHS ON 2" - 155 MCF/D. SIGN.

Date: 4/22/2007
04/17/07 FLOWED WELL ON THROUGHOUT DAY. BLOWING WITH STEADY W/ LIGHT MIST. 24 HR OPEN FLOW - 24" ON 2" - 130 MCF/D.

Date: 4/18/2007
4/17/07 PERFORMED 3 STAGE FRAC W/ SLS AND KEY ENERGY

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West Virginia Dept. of Environmental Protection



Dominion

WELL DETAIL SUMMARY REPORT

Today: 4/16/2009 Page 9
As Of: 4/15/2009

WELL: SWW 14297 MILLS, ROY O

Event: 1

Description: DEVELOPMENT DRILL & COMP.

Operations Summary

LOWER HURON (1) 5510'- 5720' (20 HOLES) - 75 Q FOAM FRAC - 15.171# 20/40 SAND, 152 BBL CLEAN FLUID, 444,000 SCF N2, BDP 2555#, ATP 2810#, AIR 25.1 BPM.
UPPER HURON (2) 5120'- 5124' (20 HOLES) PUMPED 500 GAL 15% HCL (DROPPED 3 1/4" FRAC BALL) - 75 Q FOAM FRAC - 20,024# 20/40 SAND, 159 BBL CLEAN FLUID, 420,700 SCF N2, BDP 3000#, ATP 2667#, AIR 25.1 BPM.
SHALE FRACTURE (3) 4608'- 4910' (21 HOLES) PUMPED 500 GAL 15% HCL (DROPPED 3 3/8" FRAC BALL) - 75 Q FOAM FRAC - 15,279# 20/40 SAND, 147 BBL CLEAN FLUID, 272,200 SCF N2, BDP 2515#, ATP 2118#, AIR 25.1 BPM.
PICKAWAY (4) 2500'- 2572' (12 HOLES) - PUMPED 500 GAL 15% HCL (DROPPED 3 1/2" FRAC BALL) - ACID/ N2 ASSIST - 3000 GAL OF 28% HCL, 98 BBL CLEAN FLUID, 46,200 SCF N2, BDP 1500#, ATP 960#, AIR 10 BPM
LIME FRACTURE (5) 2282'-2272' PUMPED 500 GAL 15% HCL (DROPPED 3 3/4" FRAC BALL) - ACID/ N2 ASSIST - 3000 GAL OF 28% GELLED ACID, 70 BBL CLEAN FLUID, 50,400 SCF N2, BDP 1458#, ATP 947#, AIR 10 BPM. ISIP 1154# 3 MIN SIP 1071#. OPENED WELL ON 3/8" CHOKE TO PIT AND WORKED UP TO 2" OVERNIGHT. 1 1/4" ON 2" AND RECOVERED 2 FRAC BALLS, 2 FRAC BALL REMAINING. FLOWING WELL TO PIT ON 2" (REPORT TIME 4/15)

- Date: 4/17/2007
4/16/07 RU KEY ENERGY AND RAN BOND LOG. TD - 5817', TOC - 1140.
- Date: 4/16/2007
4/8/07 RD/MO GASCO RIG #3
- Date: 4/9/2007
4/8/07 DRLD 6-1/2" HOLE THROUGHOUT DAY. TD 6 1/2" HOLE @ 5873' ON A/D TOOH LOGGED W/ WFT. LTD - 5875' PAY ZONES IN LOWER HURON, UPPER HURON, DEVONIAN SHALE FRACTURES, PICKAWAY AND UNION. RAN 137 JTS 4 1/2" (M&S, 9.5#) CSG PLUS 3 PUPS, TP 5924' SET @ 5828' KB. LD INSERT - 5818'. RAN 7 CENTRALIZERS AND 3 BASKETS 3.06" BAFFLE - 5519', 3.285" BAFFLE - 4667' 3.385" BAFFLE - 2875', 3.56" BAFFLE - 2335'. MARKER JT - 2155' - 2185'. GAS CHECK @ TD AFTER CSG - TRACE. RU SLB AND CEMENT W/ 410 SAX CBL POZ (1.42 YLD). PUMPED 3 BBL FW AHEAD. DISPLACED W/ 500 GAL 15% HCL AND 83 BBL TW. GTS PD @ 7:20 AM. (4/7) BUMPED PLUG TO 600#. SDOW. WAITING TO BOND LOG. (REPORT 4/9) 323' LAST 24 HOURS
- 4/5/07 DRLD 6-1/2" HOLE THROUGHOUT DAY. DRLG 6-1/2" HOLE ON A/D @ 5855'. 1170' LAST 24 HOURS
- Date: 4/5/2007
4/4/07 DRLD 6-1/2" HOLE THROUGHOUT DAY DRLG 6-1/2" HOLE ON A/D @ 4366 GAS CHECKS - 3200' - 133 MCF/D, 3400' - 133 MCF/D, 3700' - 133 MCF/D, 4200' - 133 MCF/D RIG BROKE DOWN (REPORT 4/5 - 8:30AM) 1630' LAST 24 HOURS
- Date: 4/4/2007
4/3/07 FINISH WOC. TIH W/ 6-1/2" HAMMER BIT AND RESUME DRLG. DRLD 6-1/2" HOLE THROUGHOUT DAY. GAS CHECK @ 2281' - 12 TENTHS ON 7" - 1.519 MMCF/D. GAS CHECK @ 2503' - 4 TENTHS ON 7" - 877 MCF/D DRLG 6-1/2" HOLE ON A/D @ 2750'. (4/4) 1434' LAST 24 HOURS
- Date: 4/3/2007
4/2/07 TD 8-7/8" HOLE @ 1315' ON A/D. MADE BIT TRIP @ 1050'. TOOH. RAN 29 JTS 7" (17#, LS) CSG SET 123". RU SLB AND CEMENT W/ 290 SAX OF CLASS A - 2% CACL2 + 1/4 PPS FLAKE (1.20). GTS PD @ 11:30 PM. WOC. (REPORT TIME 4/3) 516' LAST 24 HOURS
- Date: 4/2/2007
4/1/07 FINISH WOC. TIH W/ 8-7/8" HAMMER BIT. RESUME DRLG. DRLD TO 310' HIT 2" WATER STREAM. CONT. DRLG TO 350'. TOOH. TIH W/ OPENENDED DRILL PIPE. RU SLB AND CEMENT 60 SKS CEMENT PLUG W/ TYPE I + 10 PPS GYPSUM + 2% CACL2 + 10 PPS KOLITE (13.8 PPG, 1.79 CF/SK). JOB COMPLETED @ 5:00 PM. WOC. TIH W/ 8-7/8" HAMMER BIT AND RESUME DRLG. DRLG 8-7/8" HOLE @ 800' ON A/D 450' LAST 24 HOURS
- 3/31/07 RU SLB AND CEMENT 9-5/8" W/ 290 SAX OF CLASS A + 2% CACL2 + 1/4 PPS FLAKE (1.20). GTS (100 SKS). PD @ 5:30AM. WOC. TIH W/ 8-7/8" HAMMER BIT AND RESUME DRLG. ENCOUNTERED 3" STREAM OF WATER @ 225'. TOOH. RU SUPERIOR AND SQUEEZED 50 SKS OF TYPE I + 10 PPS GYPSUM + 2% CACL2 + 10 PPS KOLITE (13.8 PPG, 1.79 CF/SK). JOB COMPLETED @ 11:30 PM. BEGIN WOC. 1' LAST 24 HOURS
- 3/30/07 MIRU GASCO RIG #3. SPUD WELL @ 7:00 PM. SET 21' 12-3/4" CONDUCTOR. TIH W/ 12-1/4" HAMMER BIT AND BEGIN DRLG. ENCOUNTERED 2" WATER STREAM @ 22' ENCOUNTERED 3" WATER STREAM @ 93'. TD 12-1/4" HOLE @ 225' ON FLUID TOOH. RAN 5 JTS 9-5/8" (28#, LS) CSG SET 225'. 225' LAST 24 HOURS
- Date: 2/27/2007
3/30/07 WILL MOVE IN GASCO RIG #3 TODAY
- Date: 2/26/2007
2/26/07 BUILDING LOCATION
- Date: 7/31/2006
07/27/06 BUILDING LOCATION

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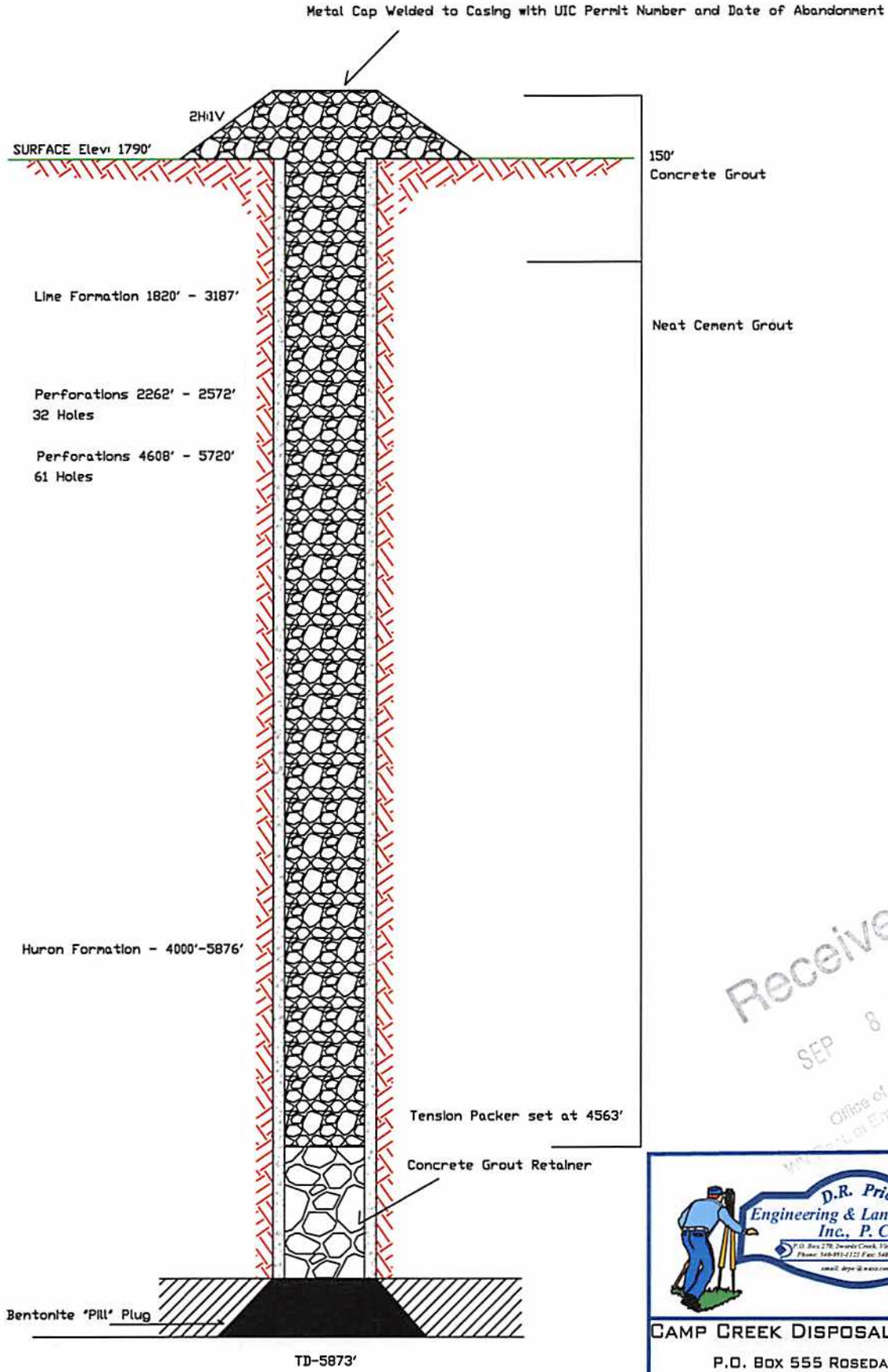
**Appendix C
Disposal Well Schematic**

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DISPOSAL WELL SCHEMATIC

Note: Not Drawn to Scale



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Department of Environmental Protection



CAMP CREEK DISPOSAL SERVICES, IN
P.O. Box 555 ROSEDALE, VA 24280
UNDERGROUND INJECTION WELL
Plugging and Abandonment Plan

**Appendix D
Plugging Permit Packet**

September 8, 2015

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WV Dept. of Environmental Protection

1) Date: _____
2) Operator's Well Number _____

3) API Well No.: 47 - _____ - _____

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

<p>4) Surface Owner(s) to be served:</p> <p>(a) Name _____ Address _____</p> <p>(b) Name _____ Address _____</p> <p>(c) Name _____ Address _____</p> <p>6) Inspector _____ Address _____ Telephone _____</p>	<p>5) (a) Coal Operator</p> <p>Name _____ Address _____</p> <p>(b) Coal Owner(s) with Declaration</p> <p>Name _____ Address _____</p> <p>(c) Coal Lessee with Declaration</p> <p>Name _____ Address _____</p>
--	---

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

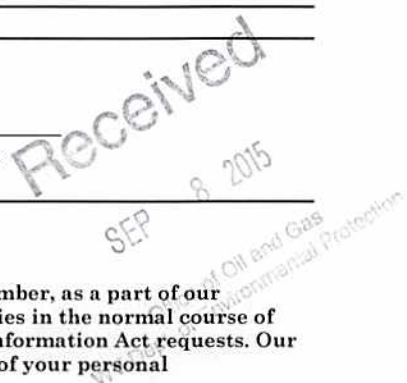
Well Operator _____
 By: _____
 Its: _____
 Address _____
 Telephone _____

Subscribed and sworn before me this _____ day of _____ Notary Public

My Commission Expires _____

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyoffier@wv.gov.



1) Date _____, 20____
2) Operator's
Well No. _____
3) API Well No. 47-____-_____

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ____/ Gas ____/ Liquid injection ____/ Waste disposal ____/
(If "Gas, Production ____ or Underground storage ____) Deep ____/ Shallow ____

5) Location: Elevation _____ Watershed _____
District _____ County _____ Quadrangle _____

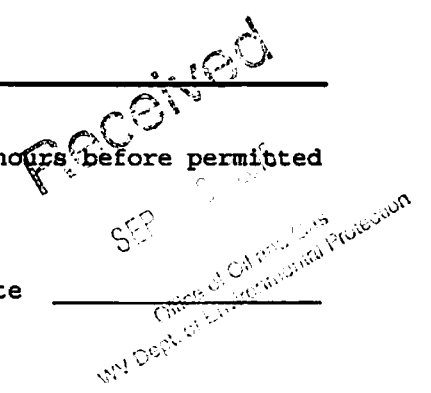
6) Well Operator _____ 7) Designated Agent _____
Address _____ Address _____

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name _____ Name _____
Address _____ Address _____

10) Work Order: The work order for the manner of plugging this well is as follows:

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector _____ Date _____



SURFACE OWNER WAIVER

Operator's Well
Number _____

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...".

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

**FOR EXECUTION BY A NATURAL PERSON
ETC.**

FOR EXECUTION BY A CORPORATION,

Received
2015

Signature

Date

Name
By
Its

Signature

Date

WW-4B

API No. _____
Farm Name _____
Well No. _____

**INSTRUCTIONS TO COAL OPERATORS
OWNERS AND LESSEE**

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less than five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

WAIVER

The undersigned coal operator ____ / owner ____ / lessee ____ / of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____

By: _____
Its _____

Received
SEP 8 2015
Office of Oil and Gas
Dept. of Environmental Protection

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS**

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name _____ OP Code _____

Watershed (HUC 10) _____ Quadrangle _____

Elevation _____ County _____ District _____

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes _____ No _____

Will a pit be used for drill cuttings? Yes _____ No _____

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes _____ No _____ If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- _____ Land Application
- _____ Underground Injection (UIC Permit Number _____)
- _____ Reuse (at API Number _____)
- _____ Off Site Disposal (Supply form WW-9 for disposal location)
- _____ Other (Explain _____)

Will closed loop system be used? _____

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. _____

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. _____

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto 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 or imprisonment.

Company Official Signature _____

Company Official (Typed Name) _____

Company Official Title _____

Subscribed and sworn before me this _____ day of _____, 20 _____

_____ Notary Public

My commission expires _____

Received

SEP 8 2015

Office of Oil and Gas
West Virginia Department of Environmental Protection

Proposed Revegetation Treatment: Acres Disturbed _____ Prevegetation pH _____

Lime _____ Tons/acre or to correct to pH _____

Fertilizer (10-20-20 or equivalent) _____ lbs/acre (500 lbs minimum)

Mulch _____ Tons/acre

Seed Mixtures

Seed Type	Area I		Seed Type	Area II	
		lbs/acre			lbs/acre
_____			_____		
_____			_____		
_____			_____		

Attach:
Drawing(s) of road, location, pit and proposed area for land application.
Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Comments: _____

Title: _____ Date: _____

Field Reviewed? () Yes () No

Received
SEP 8 2015
Office of Land & Gas
WV Dept. of Environmental Protection

WW-9
(2/15)

API Number 47 - _____ - _____
Operator's Well No. _____

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name _____ OP Code _____

Watershed (HUC 10) _____ Quadrangle _____

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- _____ Land Application
- _____ Underground Injection (UIC Permit Number _____)
- _____ Reuse (at API Number _____)
- _____ Off Site Disposal (Supply form WW-9 for disposal location)
- _____ Other (Explain _____)

Will closed loop system be used? If so, describe: _____

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. _____

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. _____

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto 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 or imprisonment.

Company Official Signature _____

Company Official (Typed Name) _____

Company Official Title _____

Subscribed and sworn before me this _____ day of _____, 20_____

Notary Public

My commission expires _____

Received
SEP 8 2015
BEP
Pittsburgh, PA
15412

Proposed Revegetation Treatment: Acres Disturbed _____ Prevegetation pH _____

Lime _____ Tons/acre or to correct to pH _____

Fertilizer type _____

Fertilizer amount _____ lbs/acre

Mulch _____ Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

_____	_____
_____	_____
_____	_____

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Comments: _____

Title: _____ Date: _____

Field Reviewed? () Yes () No

Received

SEP 8 2015

Office of Oil and Gas
WV Dept. of Environmental Protection