(4/25)

CK 637097 5000

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	Prime Operating Company		
Existing UIC Permit ID Number	UIC2D0873432	UIC Well API Number	47-087-03432

Office of Oil and Gas Office Use Only	
Permit Reviewer	ZGS
Date Received	6/17/2014
Administratively Complete Date	6/17/2014
Approved Date	
Permit Issued	

Please check the fees and payment included.

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

* Pd earlier this year, when first submitted.

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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WV Department of
Environmental Protection

dep

- [ ] Appendix D Public Service District Affidavit
- [x] Appendix E Water Sources
- [ ] Appendix F Area Permit Wells
- [x] Section 8 – Geological Data on Injection and Confining Zones
- [x] Section 9 – Operating Requirements / Data
  - [x] Appendix G Wells Serviced by Injection Well
- [x] Section 10 – Monitoring
- [x] Section 11 – Groundwater Protection Plan (GPP)
  - [x] Appendix H Groundwater Protection Plan (GPP)
- [x] Section 12 – Plugging and Abandonment
- [ ] Section 13 – Additional Bonding
- [x] Section 14 – Financial Responsibility
  - [x] Appendix I Financial Responsibility
- [x] Section 15 – Site Security Plan
  - [ ] Appendix J Site Security for Commercial Wells
- [x] Section 16 – Additional Information
  - [x] 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): ~~Halsey Whitney~~ Zachary Stevison ZDS

Reviewed by (Sign): ~~Halsey M. Whitney~~ ZDS

Date Reviewed: ~~06/16/2014~~ 6/24/2014

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Environmental Protection

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 # UIC2D0873432 API # 47-087-03432 WELL # 495

Section I. Facility Information

Facility Name: Hall 495 SWD

Address: 708 1/2 Lee Street E.

City: Rushville State: WV Zip:

County: Roane

Location description:

Location description: Smithville District, Looneyville Quad., Roane County, WV
Directions: Stringtown Rd, left on Slab Fork Rd. 2 miles to double gate on left, 3/4 mile to SWD on right.

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

Northing: 4283629.92 Easting: 470720.20

Environmental Contact Information:

Name: Halsey Whitney Title: District Manager

Phone: 304-342-0121 Email: hwhitney@primeenergy.com

Section 2. Operator Information

Operator Name: Prime Operating Company

Operator ID: 306837

Address: 708 1/2 Lee Street E.

City: Charleston State: WV Zip: 25301

County: Kanawha

Contact Name: Halsey Whitney Contact Title: District Manager

Contact Phone: 304-342-0121 Contact Email: hwhitney@primeenergy.com

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JUN 17 2014
WV Department of
Environmental Protection

Promoting a healthy environment.

dep

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:

The Hall 495 SWD well is a brine disposal well that has been used since 1981 to dispose of produced water from various oil and gas producing wells operated by Prime Operating Company, an upstream oil and gas producer.

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: Halsey M. Whitney

Print Title: District Manager - Designated Agent

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: Halsey M. Whitney

Date: 6/16/14

[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.

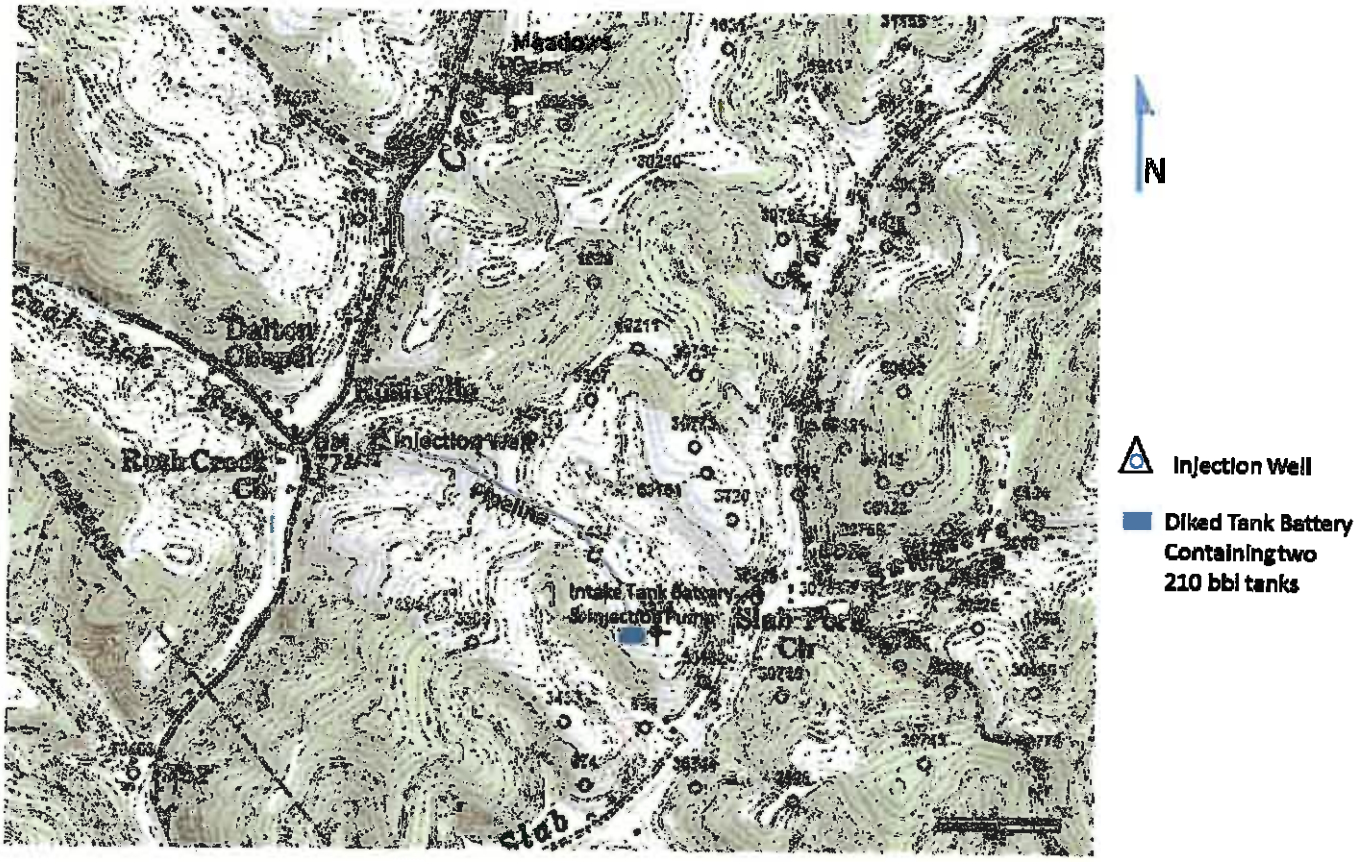
The written authorization is submitted to the Director.

Section 1 through 5 – See UIC-1 Form

Section 6 – Construction:

Section 6-1 – Areal Map showing UIC Injection Well and Facilities

Section 6: Exhibit 6-1
Map of Existing Wellbore, Tank Battery, Injection Pump and Pipeline

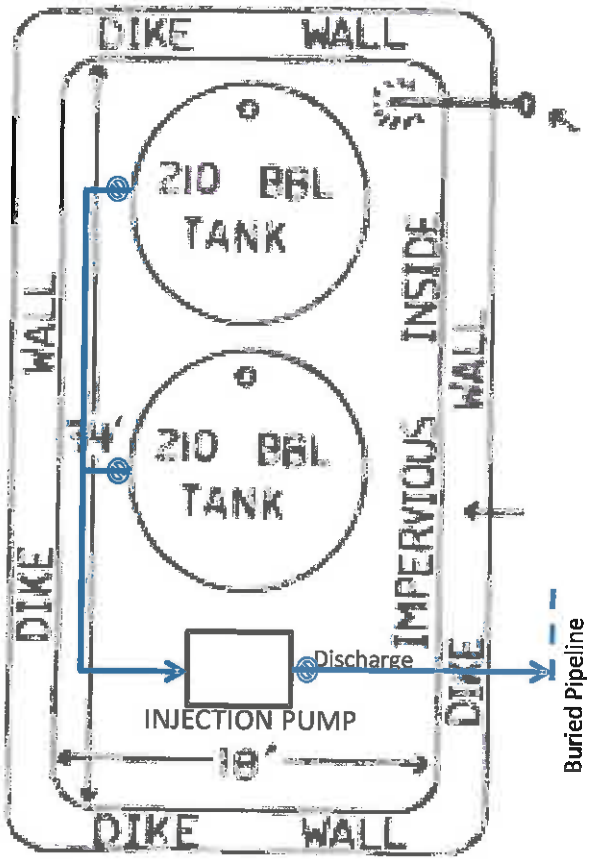


Section 6: Exhibit 6-1
Aerial Map of Existing UIC Facility:
Injection Well, Tank Battery, Injection Pump and Pipeline

Exhibit 6-2 Areal UIC Facility Construction Drawing

N

2 – 210 BBL TANKS
PLAN VIEW



WATER DRAIN

COMPACTED ABOVE GROUND
3' X 6'

UTM: 4283105.62 N, 471393.92 E

⊗ = Shut off Valve

SCALE 1" = 8'

(4/25)

APPENDIX A
Injection Well Form

1) GEOLOGIC TARGET FORMATION: Big Injun and Big Lime (Existing)

Depth: 1982 Feet (top) 2077 Feet (bottom)

2) Estimated Depth of Completed Well, (or actual depth of existing well): 2087 Feet

3) Approximate water strata depths: Fresh 175 Feet Salt 1670 Feet

4) Approximate coal seam depths: none

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

6) Virgin reservoir pressure in target formation 600 psig Source Drilling Log

7) Estimated reservoir fracture pressure 2800 psig (BHFP)

8) MAXIMUM PROPOSED INJECTION OPERATIONS:

Injection rate (bbl/hour)	20
Injection volume (bbl/day)	210
Injection pressure (psig)	600
Bottom hole pressure (psig)	1853

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

Brine water from producing oil and gas wells.

Temperature of injected fluid: (°F) 65

10) FILTERS (IF ANY)

None

11) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL

No cathodic protection is installed at this time. Corrosion of steel is controlled by regularly painting all above ground tanks, flanges and piping.

(4/25)

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							
Fresh Water	8 5/8"	New	LS	24#	410'	410'	to Surface
Coal							
Intermediate 1							
Intermediate 2							
Production	4 1/2"	New	CW	10.5#	2114'	2114'	to Surface
Tubing	2 3/8"		J	11.6#		1922'	50/50 poz
Liners							

TYPE	Wellbore Diameter	Casing Size	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./sk)	Cement to Surface ? (Y or N)
Conductor							
Fresh Water	11"	8 5/8"			50/50 poz	4.5	Y
Coal							
Intermediate 1							
Intermediate 2							
Production	7 7/8"	4 1/2"			50/50 poz	4.5	Y
Tubing		2 3/8"					
Liners							

PACKERS	Packer #1	Packer #2	Packer #3	Packer #4
Kind:	Nowsco R-4			
Sizes:	4 1/2" R-4			
Depths Set:	1922'			

(4/25)

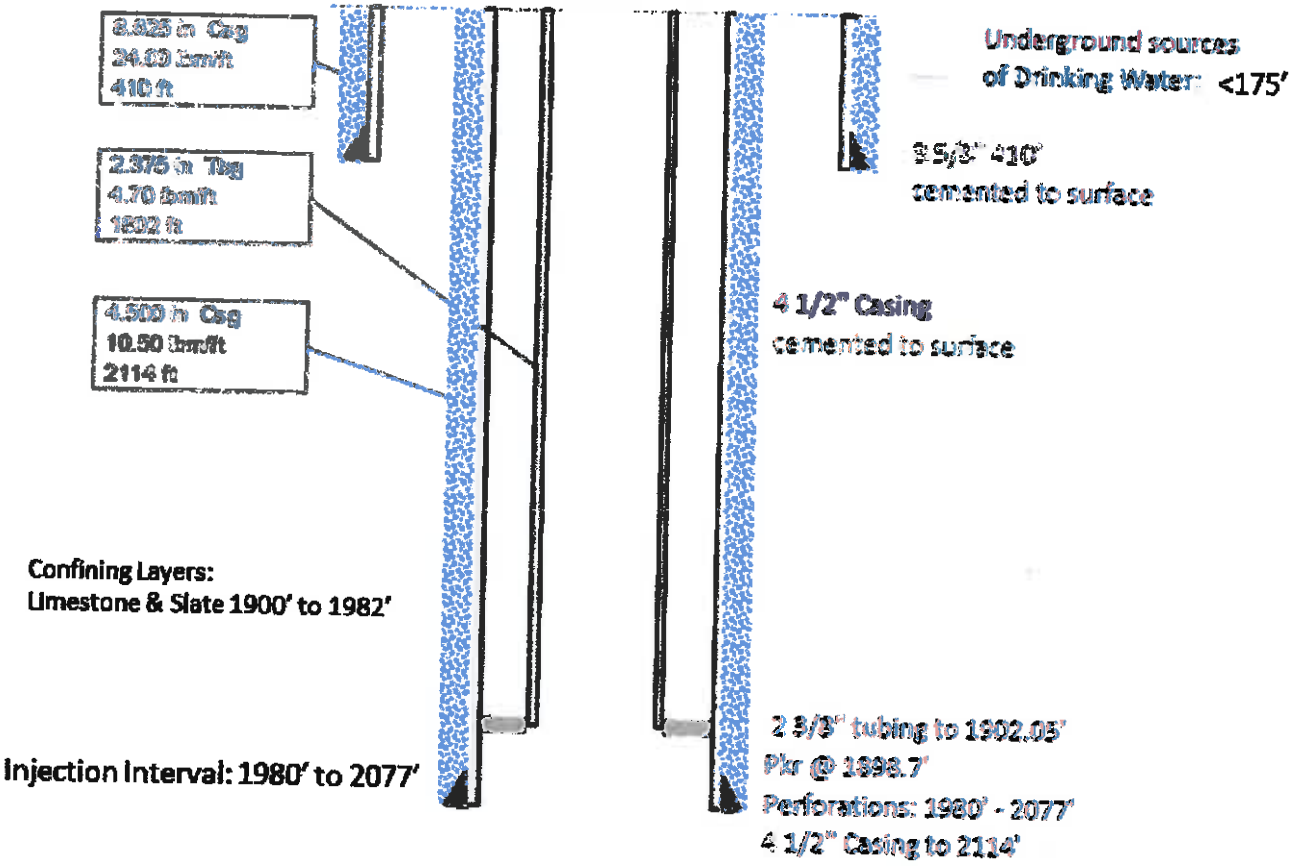
APPENDIX B
Storage Tank Inventory

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							
47-087-03432	SWD1	4283149	471416	6/1/2006	96	Steel	210	Brine Wtr	8800	Single
	SWD2	4283149	471416	6/1/2006	96	Steel	210	Brine Wtr	8800	Single

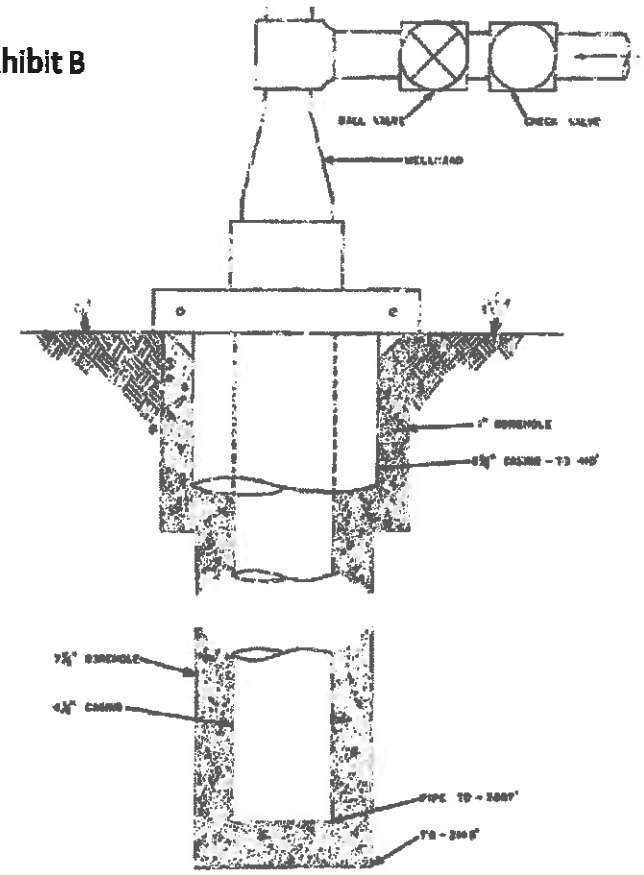
Section 6-2 Detailed Wellbore Schematic

Hall 495 SWD - Well Bore Schematic
API #4708703432
UIC 2D0873432
Roane County, WV

Section 6-2 Exhibit A



Section 6-2 Exhibit B



Section 6-3 Completed injection well form: See Appendix A and B

Section 6-4 Descriptive Report of All logs and other tests:

This well was originally intended for production and was drilled, stimulated and completed as such. Later it was repermitted and converted to an injection well. The well injects the produced formation brines of wells operated by Prime Operating Company.

Geophysical Logs

The available openhole logs that were run are the Compensated Density Log and the Induction Electrical Log. The section of interest is presented on the log segments attached below as Exhibit 8a and Exhibit 8b . Cased Hole Logs include a Perforation Depth Control Log and a Cement Bond Log which shows good cement bond and fillup.

Section 7 – Area of Review:

Section 7-2 The attached Topographic Map delineates the ¼ mile Area Of Review and is extended one mile from the Injection well to show all wells, with API numbers and shows all water sources, residences and roads, etc.

- See Exhibit 7-2 below

- Appendix C provides a list of wells within the AOR and associated Completion Reports.

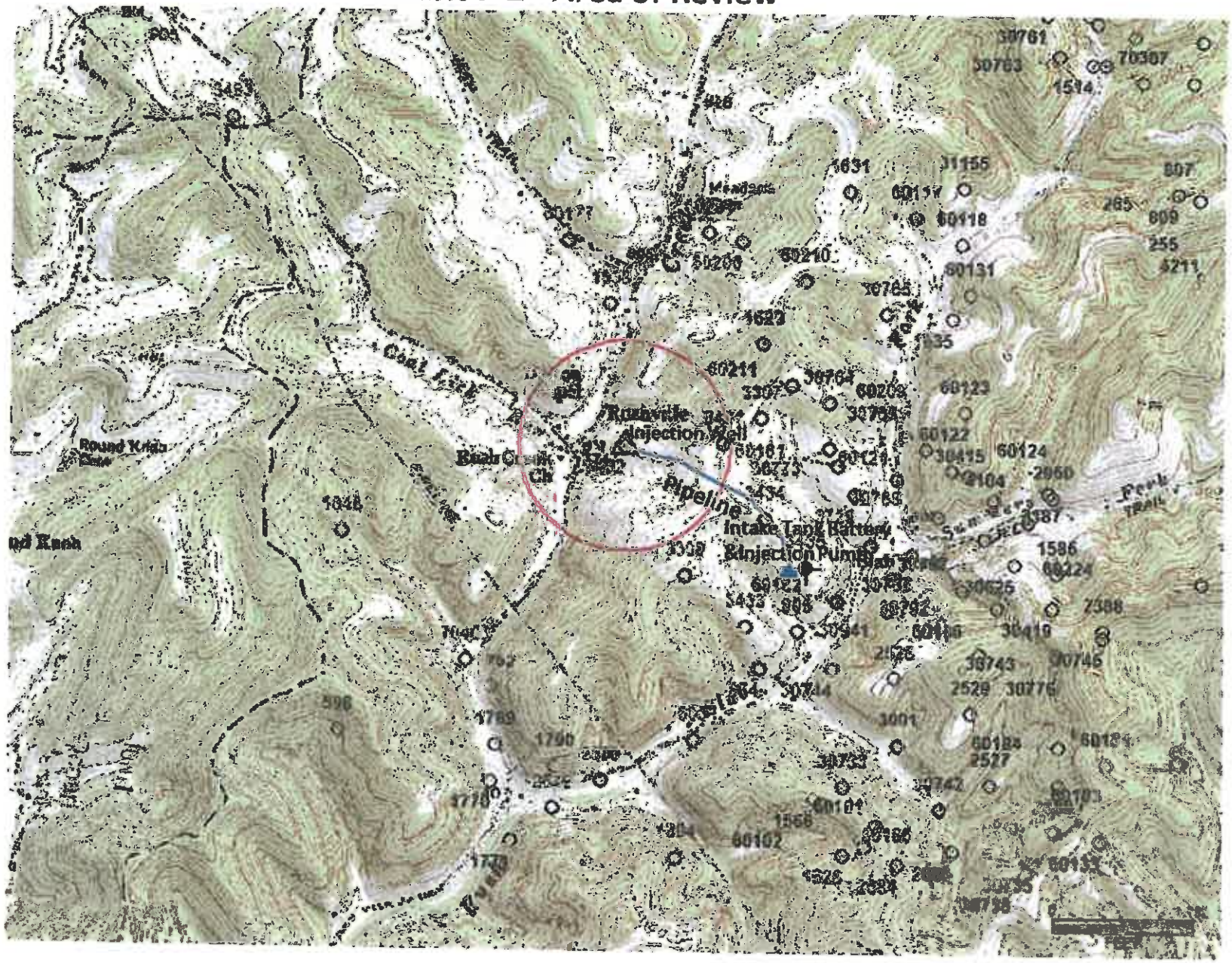
Section 7-3 Depth to the bottom of all USDWs:

There are five water supply wells within the Area of Review. These wells are all reported to be less than 100 feet deep and believed to be drawing water from Conemaugh Group - consisting primarily of shale, siltstone, and sandstone with some thin units of coal and limestone. There are no shallow electric logs in the immediate area, however, based on driller's log notes, the deepest source water is estimated to be 175'. Driller's logs in the immediate area describe sandstone to 150 feet in depth and then shale to the top of the first Salt Sand at 1620 feet.

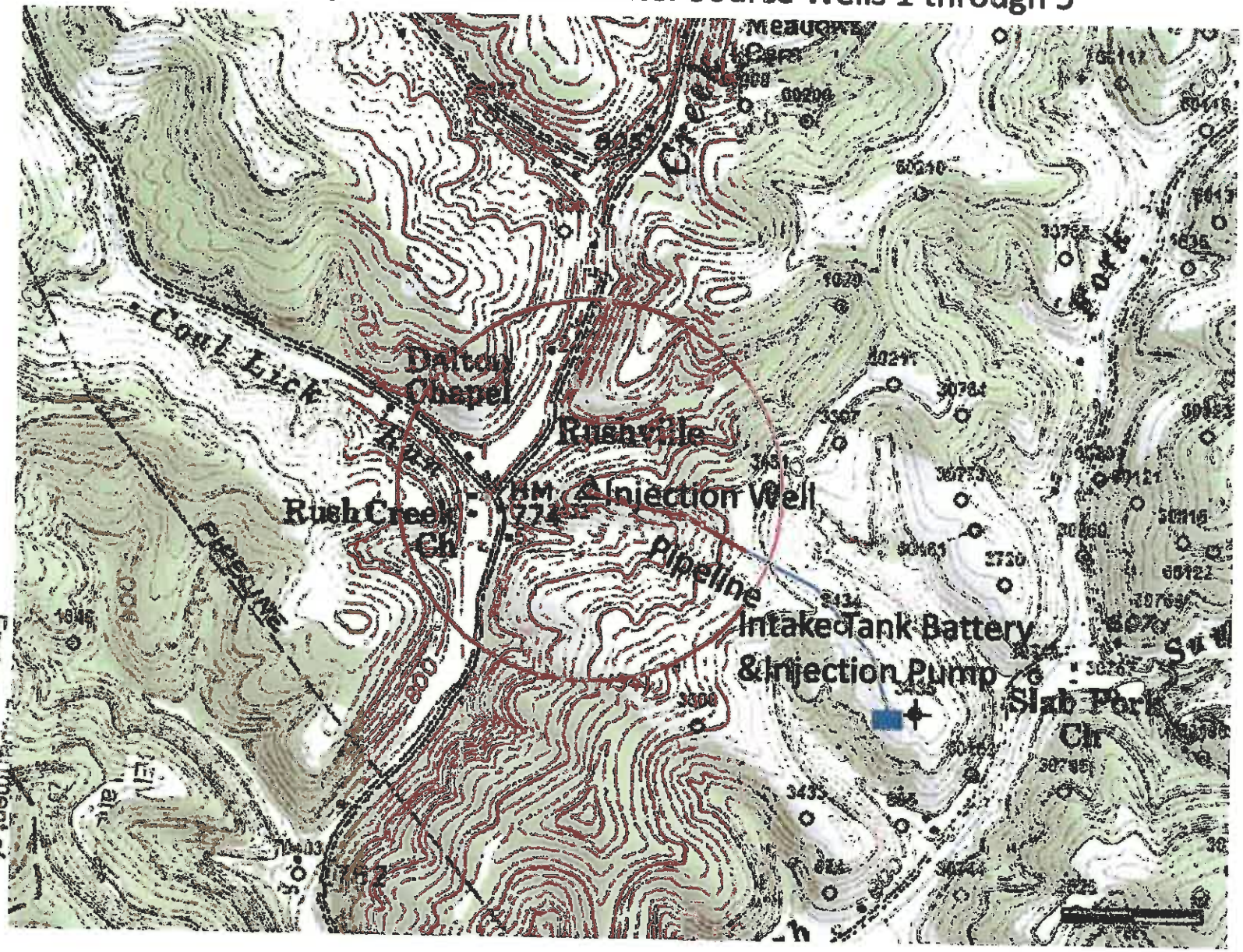
Section 7-4 Plat of all water wells within the AOR

- see Exhibit 7-4 below
- See Appendix E – Summary Analysis of Water Source wells

Exhibit 7-2-- Area of Review



Section 7, Exhibit 7-4: 7.5 Min Topo. Map – ¼ mile AOR
Showing the Injection well and Water Source Wells 1 through 5



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
87-03431	Production	Active	4283619.81	471111.95	Y	Y	2311	1035

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

APPENDIX E
Water Sources

Operator: Prime Operating Company Year 2014 UIC Permit # UIC2D0873432

		Source # 1	Source # 2	Source # 3	Source # 4
Water Source Name		K Nicely -1645 Speed Rd	K Nicely - 29 Rush Ck	RD Jarvis - 54 Rush Ck	Rush Ck Baptist Church
Northing		4283675.75	4283903.53	4283714.69	4283591.27
Easting		470480.98	470649.94	470703.59	470487.67
Parameter	Units				
TPH - GRO	mg/L	ND	ND	ND	ND
TPH - DRO	mg/L	ND	ND	ND	ND
TPH - ORO	mg/L	ND	ND	ND	ND
BTEX	mg/L	ND	ND	ND	ND
Chloride	mg/L	7.3	19	4.5	41
Sodium	mg/L	120	94	4.7	260
Total Dissolved Solids (TDS)	mg/L	380	270	85	620
Aluminum	mg/L	0.0061	0.0056	0.086	ND
Arsenic	mg/L	0.015	0.0053	ND	0.0068
Barium	mg/L	0.027	0.067	0.0544	0.061
Iron	mg/L	ND	0.22	0.80	ND
Manganese	mg/L	ND	0.0059	0.0068	0.0079
pH	SU	8.79	7.57	5.80	8.58
Calcium	mg/L	1.1	200	29	510
Sulfate	mg/L	13	6.7	19	-
MBAS	mg/L	ND	ND	ND	ND
Dissolved Methane	mg/L	22	36	51	810
Dissolved Ethane	mg/L	ND	4.6	ND	ND
Dissolved Butane	mg/L	ND	ND	ND	ND
Dissolved Propane	mg/L	ND	ND	ND	ND
Bacteria (Total Coliform)	c/100ml	<10	<10	19	<10

ND=Not Detected

APPENDIX E
Water Sources

Operator: Prime Operating Company Year 2014 UIC Permit # UIC2D0873432

		Source # 5	Source #	Source #	Source #
Water Source Name		Lane - 1701 Speed Rd			
Northing		4283508.06			
Easting		470568.04			
Parameter	Units				
TPH - GRO	mg/L	ND			
TPH - DRO	mg/L	ND			
TPH - ORO	mg/L	ND			
BTEX	mg/L	ND			
Chloride	mg/L	18			
Sodium	mg/L	150			
Total Dissolved Solids (TDS)	mg/L	380			
Aluminum	mg/L	0.085			
Arsenic	mg/L	0.012			
Barium	mg/L	0.028			
Iron	mg/L	ND			
Manganese	mg/L	ND			
pH	SU	8.94			
Calcium	mg/L	290			
Sulfate	mg/L	11			
MBAS	mg/L	ND			
Dissolved Methane	mg/L	96			
Dissolved Ethane	mg/L	25			
Dissolved Butane	mg/L	ND			
Dissolved Propane	mg/L	ND			
Bacteria (Total Coliform)	c/100ml	<10			

ND = Not Detected

Appendix E - Supplemental

ALS Group USA, Corp

Date: 26-Dec-13

Client: Prime Operating
Project: Speed, WV
Work Order: 1312180

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1312180-01	KNicely - 1645 Speed Rd	Water		12/4/2013 09:27	12/4/2013 13:20	
1312180-02	KNicely - 29 Rush Ck	Water		12/4/2013 09:45	12/4/2013 13:20	
1312180-03	RD Jarvis - 54 Rush Ck	Water		12/4/2013 09:50	12/4/2013 13:20	
1312180-04	Rush Ck Baptist Church	Water		12/4/2013 10:00	12/4/2013 13:20	
1312180-05	Lane - 1701 Speed Rd	Water		12/4/2013 10:17	12/4/2013 13:20	

ALS Group USA, Corp

Date: 26-Dec-13

Client: Prime Operating
Project: Speed, WV
WorkOrder: 1312180

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
cfu/100ml	Colony Forming Units per 100 Milliliters
mg MBAS/L	Milligrams Methylene Blue Active Substances per Liter
mg/L	Milligrams per Liter
n.t.u.	Nephelometric Turbidity Units
s.u.	Standard Units

ALS Group USA, Corp

Date: *26-Dec-13*

Client: Prime Operating
Project: Speed, WV
Sample ID: KNicely - 1645 Speed Rd
Collection Date: 12/4/2013 09:27 AM

Work Order: 1312180
Lab ID: 1312180-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH (FIELD)			**A4500-H B**			Analyst: **ALS**
pH (field)	8.79			s.u.	1	12/4/2013
METALS ANALYSIS BY ICP			**E200.7**		Prep Date: **12/10/2013**	Analyst: **ALS**
Iron	ND		0.060	mg/L	1	12/10/2013 03:08 PM
Manganese	ND		0.0050	mg/L	1	12/10/2013 03:08 PM
ALKALINITY			**A4500-CO2 D**			Analyst: **JB**
Alkalinity, Total (as CaCO3)	260		12	mg/L	1	12/10/2013 12:30 PM
FECAL COLIFORM			**A9222D**			Analyst: **JC**
Fecal Coliform	*<10*		10	cfu/100ml	1	12/4/2013 03:40 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **ED**
Chloride	7.3		1.0	mg/L	1	12/10/2013 05:23 PM
ANIONIC SURFACTANTS AS MBAS			**A5540C**			Analyst: **KF**
Anionic Surfactants as MBAS	ND		0.40	mg MBAS/L	1	12/5/2013 01:50 PM
OIL AND GREASE			**E1664A**			Analyst: **ND**
Oil and Grease	ND		5.0	mg/L	1	12/6/2013 12:00 PM
TOTAL DISSOLVED SOLIDS			**A2540 C-97**		Prep Date: **12/6/2013**	Analyst: **MAM**
Total Dissolved Solids	380		10	mg/L	1	12/6/2013 03:30 PM
TURBIDITY			**A2130 B**			Analyst: **KF**
Turbidity	0.29		0.10	n.t.u.	1	12/5/2013 02:15 PM

Notes: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: *26-Dec-13*

Client: Prime Operating
Project: Speed, WV
Sample ID: KNicely - 29 Rush Ck
Collection Date: 12/4/2013 09:45 AM

Work Order: 1312180
Lab ID: 1312180-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH (FIELD)			A4500-H B			Analyst: ALS
pH (field)	7.57			s.u.	1	12/4/2013
METALS ANALYSIS BY ICP			E200.7		Prep Date: 12/10/2013	Analyst: ALS
Iron	0.22		0.060	mg/L	1	12/10/2013 03:24 PM
Manganese	0.0059		0.0050	mg/L	1	12/10/2013 03:24 PM
ALKALINITY			A4500-CO2 D			Analyst: JB
Alkalinity, Total (as CaCO3)	200		12	mg/L	1	12/10/2013 12:30 PM
FECAL COLIFORM			A9222D			Analyst: JC
Fecal Coliform	<10		10	cfu/100ml	1	12/4/2013 03:40 PM
ANIONS BY ION CHROMATOGRAPHY			E300.0			Analyst: ED
Chloride	19		2.0	mg/L	2	12/10/2013 05:43 PM
ANIONIC SURFACTANTS AS MBAS			A5540C			Analyst: KF
Anionic Surfactants as MBAS	ND		0.40	mg MBAS/L	1	12/5/2013 01:50 PM
OIL AND GREASE			E1664A			Analyst: ND
Oil and Grease	ND		5.0	mg/L	1	12/6/2013 12:00 PM
TOTAL DISSOLVED SOLIDS			A2540 C-97		Prep Date: 12/6/2013	Analyst: MAM
Total Dissolved Solids	270		10	mg/L	1	12/6/2013 03:30 PM
TURBIDITY			A2130 B			Analyst: KF
Turbidity	1.6		0.10	n.t.u.	1	12/5/2013 02:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: *26-Dec-13*

Client: Prime Operating
Project: Speed, WV
Sample ID: RD Jarvis - 54 Rush Ck
Collection Date: 12/4/2013 09:50 AM

Work Order: 1312180
Lab ID: 1312180-03
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH (FIELD)			A4500-H B			Analyst: ALS
pH (field)	5.80			s.u.	1	12/4/2013
METALS ANALYSIS BY ICP			E200.7		Prep Date: 12/10/2013	Analyst: ALS
Iron	0.80		0.060	mg/L	1	12/10/2013 03:28 PM
Manganese	0.0068		0.0050	mg/L	1	12/10/2013 03:28 PM
ALKALINITY			A4500-CO2 D			Analyst: JB
Alkalinity, Total (as CaCO3)	29		12	mg/L	1	12/10/2013 12:30 PM
FECAL COLIFORM			A9222D			Analyst: JC
Fecal Coliform	19		10	cfu/100ml	1	12/4/2013 03:40 PM
ANIONS BY ION CHROMATOGRAPHY			E300.0			Analyst: ED
Chloride	4.5		1.0	mg/L	1	12/10/2013 06:44 PM
ANIONIC SURFACTANTS AS MBAS			A5540C			Analyst: KF
Anionic Surfactants as MBAS	ND		0.40	mg MBAS/L	1	12/5/2013 01:50 PM
OIL AND GREASE			E1664A			Analyst: ND
Oil and Grease	ND		5.0	mg/L	1	12/6/2013 12:00 PM
TOTAL DISSOLVED SOLIDS			A2540 C-97		Prep Date: 12/6/2013	Analyst: MAM
Total Dissolved Solids	85		10	mg/L	1	12/6/2013 03:30 PM
TURBIDITY			A2130 B			Analyst: KF
Turbidity	9.8		0.10	n.t.u.	1	12/5/2013 02:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *26-Dec-13*

Client: Prime Operating
Project: Speed, WV
Sample ID: Rush Ck Baptist Church
Collection Date: 12/4/2013 10:00 AM

Work Order: 1312180
Lab ID: 1312180-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH (FIELD)			A4500-H B			Analyst: ALS
pH (field)	8.58			s.u.	1	12/4/2013
METALS ANALYSIS BY ICP			E200.7		Prep Date: 12/10/2013	Analyst: ALS
Iron	ND		0.050	mg/L	1	12/10/2013 03:32 PM
Manganese	0.0079		0.0050	mg/L	1	12/10/2013 03:32 PM
ALKALINITY			A4500-CO2 D			Analyst: JB
Alkalinity, Total (as CaCO3)	510		12	mg/L	1	12/10/2013 12:30 PM
FECAL COLIFORM			A9222D			Analyst: JC
Fecal Coliform	<10		10	cfu/100ml	1	12/4/2013 03:40 PM
ANIONS BY ION CHROMATOGRAPHY			E300.0			Analyst: ED
Chloride	41		3.0	mg/L	3	12/10/2013 07:04 PM
ANIONIC SURFACTANTS AS MBAS			A5540C			Analyst: KF
Anionic Surfactants as MBAS	ND		0.40	mg MBAS/L	1	12/5/2013 01:50 PM
OIL AND GREASE			E1664A			Analyst: ND
Oil and Grease	ND		5.0	mg/L	1	12/6/2013 12:00 PM
TOTAL DISSOLVED SOLIDS			A2540 C-97		Prep Date: 12/6/2013	Analyst: MAM
Total Dissolved Solids	620		10	mg/L	1	12/6/2013 03:30 PM
TURBIDITY			A2130 B			Analyst: KF
Turbidity	0.46		0.10	n.t.u.	1	12/5/2013 02:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: *26-Dec-13*

Client: Prime Operating
Project: Speed, WV
Sample ID: Lane - 1701 Speed Rd
Collection Date: 12/4/2013 10:17 AM

Work Order: 1312180
Lab ID: 1312180-05
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH (FIELD)			**A4500-H B**			Analyst: **ALS**
pH (field)	8.94			s.u.	1	12/4/2013
METALS ANALYSIS BY ICP			**E200.7**		Prep Date: **12/10/2013**	Analyst: **ALS**
Iron	ND		0.060	mg/L	1	12/10/2013 03:42 PM
Manganese	ND		0.0050	mg/L	1	12/10/2013 03:42 PM
ALKALINITY			**A4500-CO2 D**			Analyst: **JB**
Alkalinity, Total (as CaCO3)	280		12	mg/L	1	12/10/2013 12:30 PM
FECAL COLIFORM			**A9222D**			Analyst: **JC**
Fecal Coliform	*<10*		10	cfu/100ml	1	12/4/2013 03:40 PM
ANIONS BY ION CHROMATOGRAPHY			**E300.0**			Analyst: **ED**
Chloride	18		2.0	mg/L	2	12/10/2013 07:44 PM
ANIONIC SURFACTANTS AS MBAS			**A5540C**			Analyst: **KF**
Anionic Surfactants as MBAS	ND		0.40	mg MBAS/L	1	12/5/2013 01:50 PM
OIL AND GREASE			**E1664A**			Analyst: **ND**
Oil and Grease	ND		5.0	mg/L	1	12/6/2013 12:00 PM
TOTAL DISSOLVED SOLIDS			**A2540 C-97**		Prep Date: **12/6/2013**	Analyst: **MAM**
Total Dissolved Solids	380		10	mg/L	1	12/6/2013 03:30 PM
TURBIDITY			**A2130 B**			Analyst: **KF**
Turbidity	0.60		0.10	n.t.u.	1	12/5/2013 02:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: *29-Jul-14*

Client: Prime Operating
Project: Speed, WV
Sample ID: Trip Blank
Collection Date: 7/21/2014

Work Order: 14071040
Lab ID: 14071040-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
GASES IN WATER			**RSK-175**			Analyst: ALS
Butane	ND		4.3	µg/L	1	7/24/2014 01:02 PM
Ethane	ND		3.3	µg/L	1	7/24/2014 01:02 PM
Methane	ND		1.5	µg/L	1	7/24/2014 01:02 PM
Propane	ND		3.2	µg/L	1	7/24/2014 01:02 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260**			Analyst: RS
Benzene	ND		1.0	µg/L	1	7/23/2014 07:56 PM
Ethylbenzene	ND		1.0	µg/L	1	7/23/2014 07:56 PM
m,p-Xylene	ND		2.0	µg/L	1	7/23/2014 07:56 PM
o-Xylene	ND		1.0	µg/L	1	7/23/2014 07:56 PM
Toluene	ND		1.0	µg/L	1	7/23/2014 07:56 PM
Xylenes, Total	ND		3.0	µg/L	1	7/23/2014 07:56 PM
Surr: 1,2-Dichloroethane-d4	*90.0*		*75-120*	*%REC*	1	7/23/2014 07:56 PM
Surr: 4-Bromofluorobenzene	*96.9*		*80-110*	*%REC*	1	7/23/2014 07:56 PM
Surr: Dibromofluoromethane	*96.4*		*85-115*	*%REC*	1	7/23/2014 07:56 PM
Surr: Toluene-d8	*97.1*		*85-110*	*%REC*	1	7/23/2014 07:56 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *28-Jul-14*

Client: Prime Operating
Project: Speed WV
Sample ID: Trip Blank
Collection Date: 7/18/2014

Work Order: 1407976
Lab ID: 1407976-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
GASES IN WATER		Method: RSK-175					Analyst: ALS
Butane	U		0.50	4.3	µg/L	1	7/22/2014 22:17
Ethane	U		0.18	3.3	µg/L	1	7/22/2014 22:17
Methane	U		0.31	1.5	µg/L	1	7/22/2014 22:17
Propane	U		0.32	3.2	µg/L	1	7/22/2014 22:17
VOLATILE ORGANIC COMPOUNDS		Method: SW8260					Analyst: AK
Benzene	U		0.25	1.0	µg/L	1	7/21/2014 13:06
Ethylbenzene	U		0.22	1.0	µg/L	1	7/21/2014 13:06
m,p-Xylene	U		0.40	2.0	µg/L	1	7/21/2014 13:06
o-Xylene	U		0.21	1.0	µg/L	1	7/21/2014 13:06
Toluene	U		0.20	1.0	µg/L	1	7/21/2014 13:06
Xylenes, Total	U		0.62	3.0	µg/L	1	7/21/2014 13:06
Surr: 1,2-Dichloroethane-d4	*93.2*			*75-120*	*%REC*	1	7/21/2014 13:06
Surr: 4-Bromofluorobenzene	*93.9*			*80-110*	*%REC*	1	7/21/2014 13:06
Surr: Dibromofluoromethane	*97.7*			*85-115*	*%REC*	1	7/21/2014 13:06
Surr: Toluene-d8	*102*			*85-110*	*%REC*	1	7/21/2014 13:06

Note: See Qualifiers page for a list of qualifiers and their definitions.

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Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

ALS Project Manager: | ALS Work Order #: 1312180

Customer Information		Project Information	
Purchase Order		Project Name	Speed, WV
Work Order		Project Number	
Company Name	Prime Operating	Bill to Company	
Send Report To	Randy Whited	Invoice Attn	
Address	714 1/2, Lee St. East	Address	
City/State/Zip	Charleston, WV	City/State/Zip	
Phone	1-304-342-0121	Phone	
Fax		Fax	
e-Mail Address			

	Parameter/Method Request for Analysis
A	Oil and Grease
B	Surfactants
C	Alkalinity, Chloride, TDS
D	T. Fe, Mn
E	Turbidity, pH (Field)
F	Fecal Coliform (MPN) (MF)
G	
H	
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	KNicely - 1645 Speed Rd.	12-4-13	0927	W	2,3,8	7	X	X	X	X	X	X					
2	KNicely - 29 Rush Ck.	12-4-13	0945	W	2,3,8	7	X	X	X	X	X	X					
3	RD Jarvis 54 Rush Ck.	12-4-13	0950	W	2,3,8	7	X	X	X	X	X	X					
4	Rush Ck. Baptist Church	12-4-13	10:00	W	2,3,8	7	X	X	X	X	X	X					
5	Fellowship House	12-4-13	10:09	W	2,3,8	7	X	X	X	X	X	X					
6	Lucas 1701 Speed Rd.	12-4-13	10:17	W	2,3,8	7	X	X	X	X	X	X					
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Justin Carpenter Justin Carpenter

Shipment Method:

Required Turnaround Time: (Check Box) ☐ 10 Wk Days ☐ 5 Wk Days ☐ 3 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other ____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by: Justin Carpenter	Date: 12-4-13	Time: 13:20	Received by (Laboratory):	Date: 12/4/13	Time: 1320
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

Notes: RAD 12/5/13 0900 Ashley Bank 6.0°C

ALS Cooler ID	Cooler Temp
	0
	0

QC Package: (Check Box Below)
☐ Level II: Standard QC ☐ Level III: Raw Data
☐ TRRP LRC ☐ TRRP Level IV
☐ Level IV: SW846 Methods/CLP like
☐ Other: ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS.

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Middletown, PA +1 717 944 5541
Spring City, PA +1 610 948 4903
Salt Lake City, UT +1 801 266 7700
South Charleston, WV +1 304 356 3168
York, PA +1 717 505 5280

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Chain of Custody Form

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COC ID: 16281

ALS Project Manager: | ALS Work Order #: 1312702

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Hall 495 Well	A	Specific Gravity
Work Order		Project Number		B	TDS, Cl, pH
Company Name	PRIME Operating	Bill To Company	SAME	C	Ba, Mn, Fe, Na
Send Report To	Randy Whites	Invoice Attn		D	
Address	714½ Lee St.	Address		E	
City/State/Zip	Charleston	City/State/Zip		F	
Phone	304-348-0191	Phone		G	
Fax		Fax		H	
e-Mail Address		e-Mail Address		I	
				J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Hall Lease Well 495	12-13-13	0900	W	B	3	X	X	X								
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign

Shipment Method

Required Turnaround Time: (Check Box) ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other ____

Results Due Date:

Relinquished by:	Date: 12-13-13	Time: 15:30	Received by:	Notes:	12/14/13 1130 28°
Relinquished by:	Date:	Time:	Received by (Laboratory):		
Logged by (Laboratory): KE	Date: 12/14/13	Time: 1315	Checked by (Laboratory):		

Cooler ID	Cooler Temp
	0.5

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Chain of Custody Form

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(Fax) 616.399.6185

ALS Project Manager: | ALS Work Order #: | Page:

Customer Information		Project Information	
Purchase Order		Project Name	
Work Order		Project Number	
Company Name	Prime Operating	Bill To Company	
Send Report To	Randy Whited	Invoice Attn:	
Address	714 1/2, Lee St. East	Address	
City/State/Zip	Charleston, WV	City/State/Zip	
Phone	1-304-342-0121	Phone	
Fax		Fax	
e-Mail Address			

Parameter/Method Request for Analysis	
A	Sulfate
B	Al, As, Ba, Ca, Na (200.8)
C	TPH DRO/ORO (8015)
D	TPH GRO (8015)
E	BTEX (8260)
F	Dissolved Butane, Ethane, Methane, Propane (RSK_175)
G	
H	
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Rush Ck Baptist Church	7-21-14	11:56	W	1,2,3,8	12	X	X	X	X	X	X					
2	Trip Blank	7-21-14		W	1,8	4					X	X					
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Ariel Crockett

Shipment Method:

Required Turnaround Time: (Check Box) ☐ 10 Wk Days ☐ 5 Wk Days ☐ 3 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other ____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Notes:
	7-21-14	13:05		7/21/14	1308	

Relinquished by:	Date:	Time:	Received by (Laboratory):	Date:	Time:
	7/21/14	1730		7/22/14	0930

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

ALS Cooler ID	Cooler Temp.
ALSCC	0°C
A054N	1.5°C

QC Package: (Check Box Below)
☐ Level II: Standard QC ☐ Level III: Raw Data
☐ TRRP LRC ☐ TRRP Level IV
☐ Level IV: SW846 Methods/CLP like
☐ Other: ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS.

Chain of Custody Form

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Page ____ of ____

ALS Project Manager: | ALS Work Order #: 1407934

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name		A	Sulfate
Work Order		Project Number		B	Al, As, Ba, Ca, Na (200.8)
Company Name	Prime Operating	Bill To Company		C	TPH DRO/ORO (8015)
Send Report To	Randy Whited	Invoice Attn		D	TPH GRO (8015)
Address	714 1/2, Lee St. East	Address		E	BTEX (8260)
				F	Dissolved Butane, Ethane, Methane, Propane (RSK_175)
City/State/Zip	Charleston, WV	City/State/Zip		G	
Phone	1-304-342-0121	Phone		H	
Fax		Fax		I	
e-Mail Address				J	

No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	K. Nicely - 1645 Speed Rd	7/18/14	1320	W	1,2,3,8	12	X	X	X	X	X	X					
2	K. Nicely - 29 Rush Ck	7/18/14	1325	W	1,2,3,8	12	X	X	X	X	X	X					
3	RD Jarvis - 54 Rush Ck	7/18/14	1335	W	1,2,3,8	12	X	X	X	X	X	X					
4	Rush Ck Baptist Church Not Collected		—	W	1,2,3,8	12	X	X	X	X	X	X					
5	Lane - 1701 Speed Rd	7/18/14	1345	W	1,2,3,8	12	X	X	X	X	X	X					
6	Trip Blank			W	1,8	4					X	X					
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Ariel Crockett [signature]

Shipment Method:

Required Turnaround Time: (Check Box) ☐ Other ____ ☐ 10 Wk Days ☐ 5 Wk Days ☐ 3 Wk Days ☐ 2 Wk Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Notes:
[signature]	7-18-14	1539	[signature]	7/18/14	1539	
Relinquished by: [signature]	7/18/14	1730	Received by (Laboratory): [signature]	7/18/14	1800	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			

ALS Cooler ID	Cooler Temp
A5tic	0.6/2.8
A5win	2.8

QC Package: (Check Box Below)
☐ Level II: Standard QC ☐ Level III: Raw Data
☐ TRRP LRC ☐ TRRP Level IV
☐ Level IV: SW846 Methods/CLP like
☐ Other: ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS.

Section 8 – Geological Data on the Injection and Confining Zone:

Injection interval

The existing injection interval is from 1982 to 2077 feet measured depth and is depicted on the log segment in Exhibit 8a. The injection interval is in the lower Big Lime and the Big Injun Sand. Net thickness of the injection interval, greater than 6% porosity, is 40 feet. Porosities of the injection interval range from 5-15% and permeability are estimated to range from 10-30 md based on core data in the southern part of the Rock Creek field, reported in a CO2 flood study by Watts and Komar, 1989. The injection interval is represented by the Structure Contour Map of the Base of the Injun shown in Exhibit 8c and by the Isopach Map shown below as Exhibit 8d. The Rock Fracture Pressure as measured at the time of completion was approximately 2800 psi.

Confining Layers

Immediately above the injection interval are the tight limes and shale of the upper Big Lime, Pencil Cave shale and Little Lime. These are the confining layers that prevent the upward migration of injection fluids. This 85 foot thick section is made up of 75 feet of tight lime with less than 2 percent porosity, as well as, 10 feet of impervious shale.

UIC #2D0873432
API #47-087-03432
UIC Permit Application Renewal
Submitted by Prime Operating Company

Supplemental Information
10-15-2014

1.) Hydrostatic Fluid Level: the current Hydrostatic fluid level of the Injection well is 1350'
2.) See attached trip blank for VOC sample results pursuant 47CRS32-5.1.3
3.) See attached Chain of Custody for all samples submitted with the application
4.) See attached Groundwater use and dependence assessment and historical practices
5.) See attached Chemical compatibility assessment of the injected and formation fluids

Exhibit 8a – Geophysical Log of Injection Well
Identifying the Injection Zone and Confining Layers

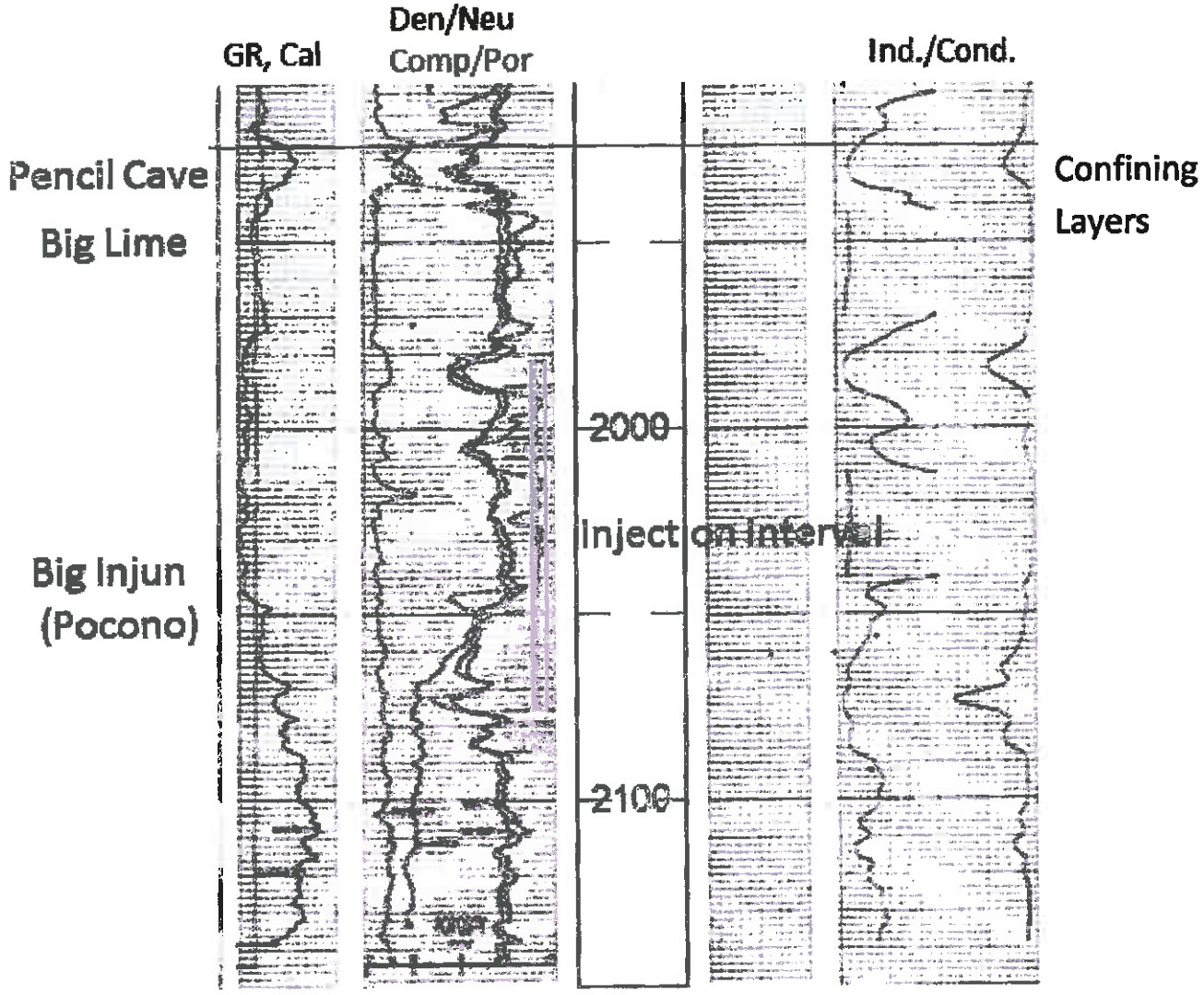


Exhibit 8b – Geophysical Log of Injection Well Identifying the Injection Zone and Confining Layers

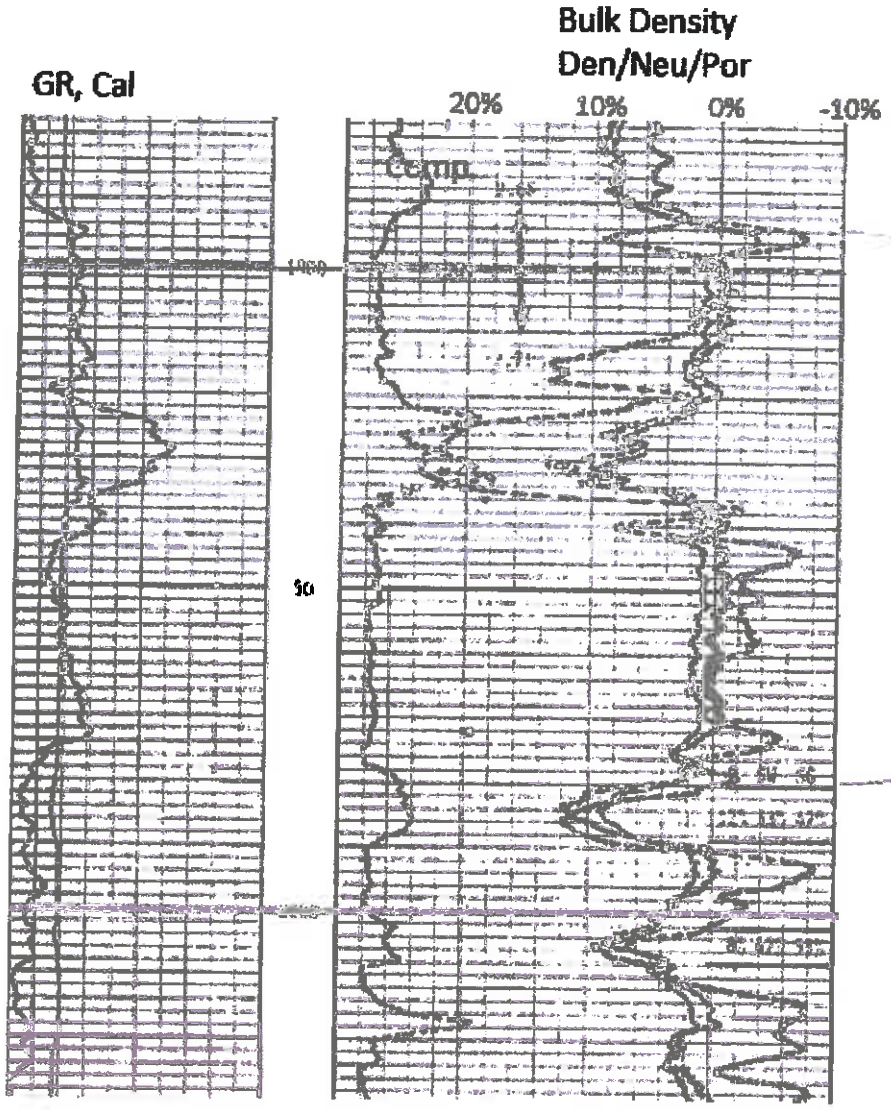
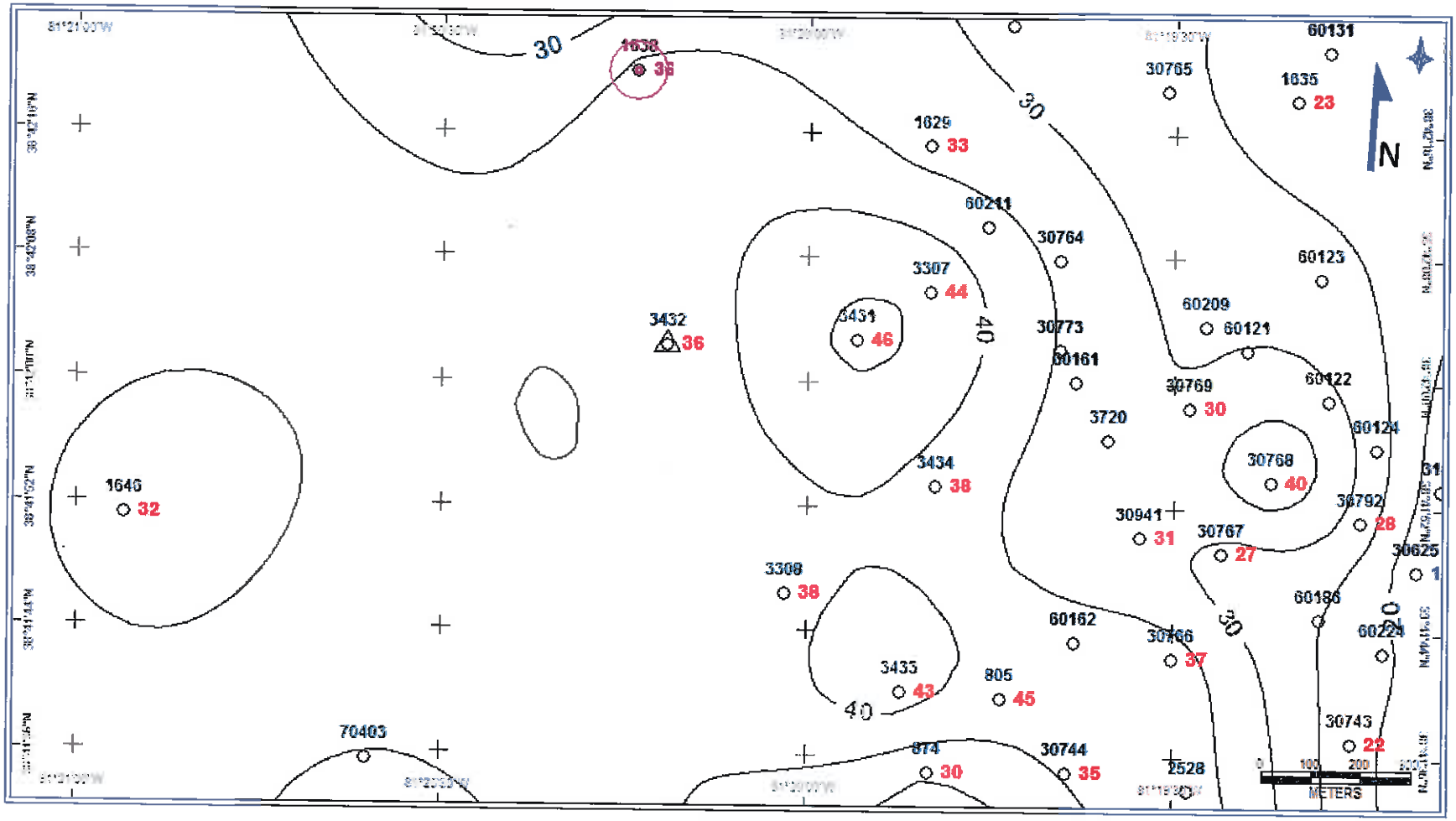


Exhibit 8f.) Isopach Map of Big Injun

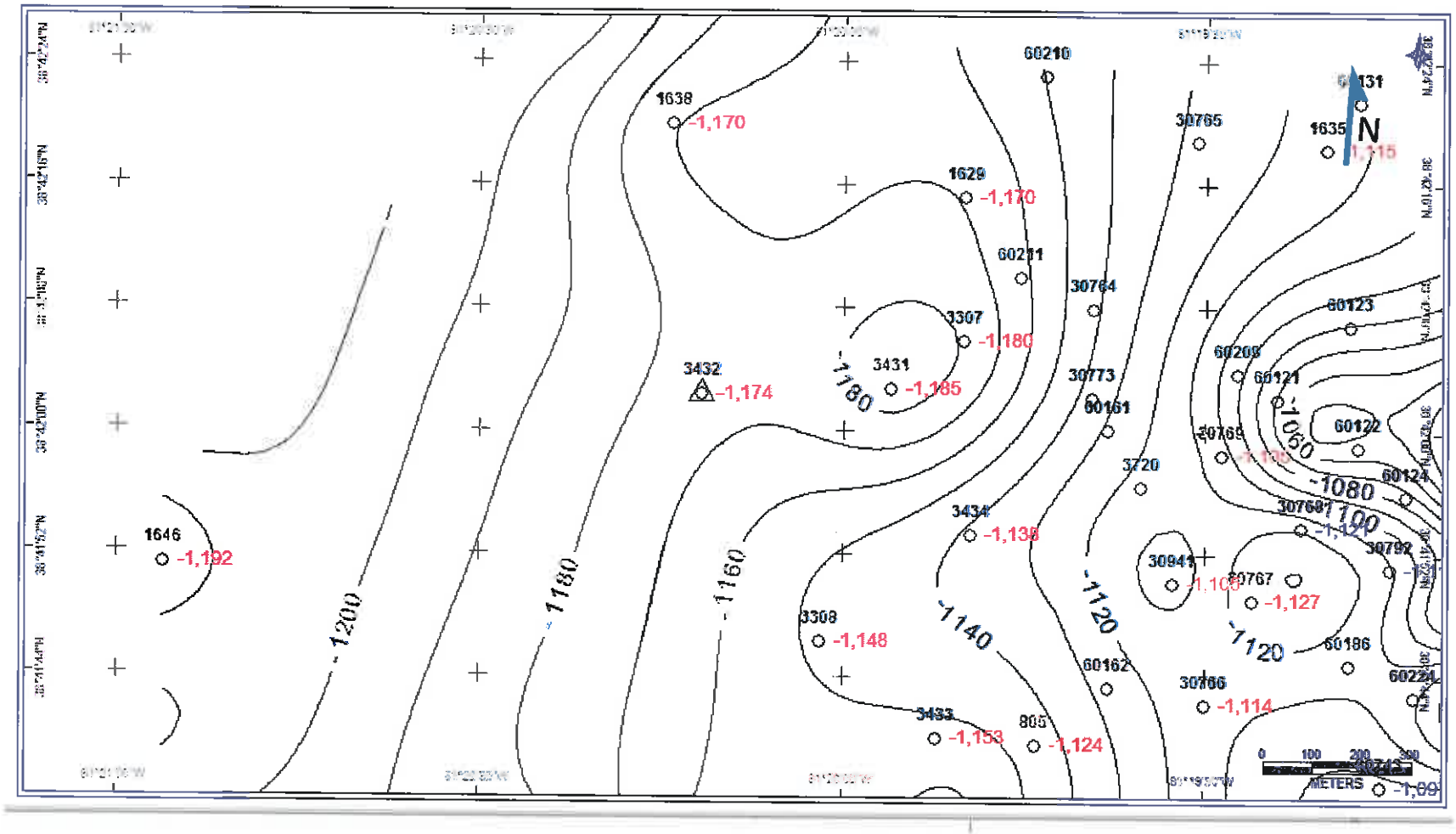


= UIC well API #087-03432

1646 = API #

36 = Thickness

Exhibit 8e.) Structural Contour Map on Base of the Big Injun

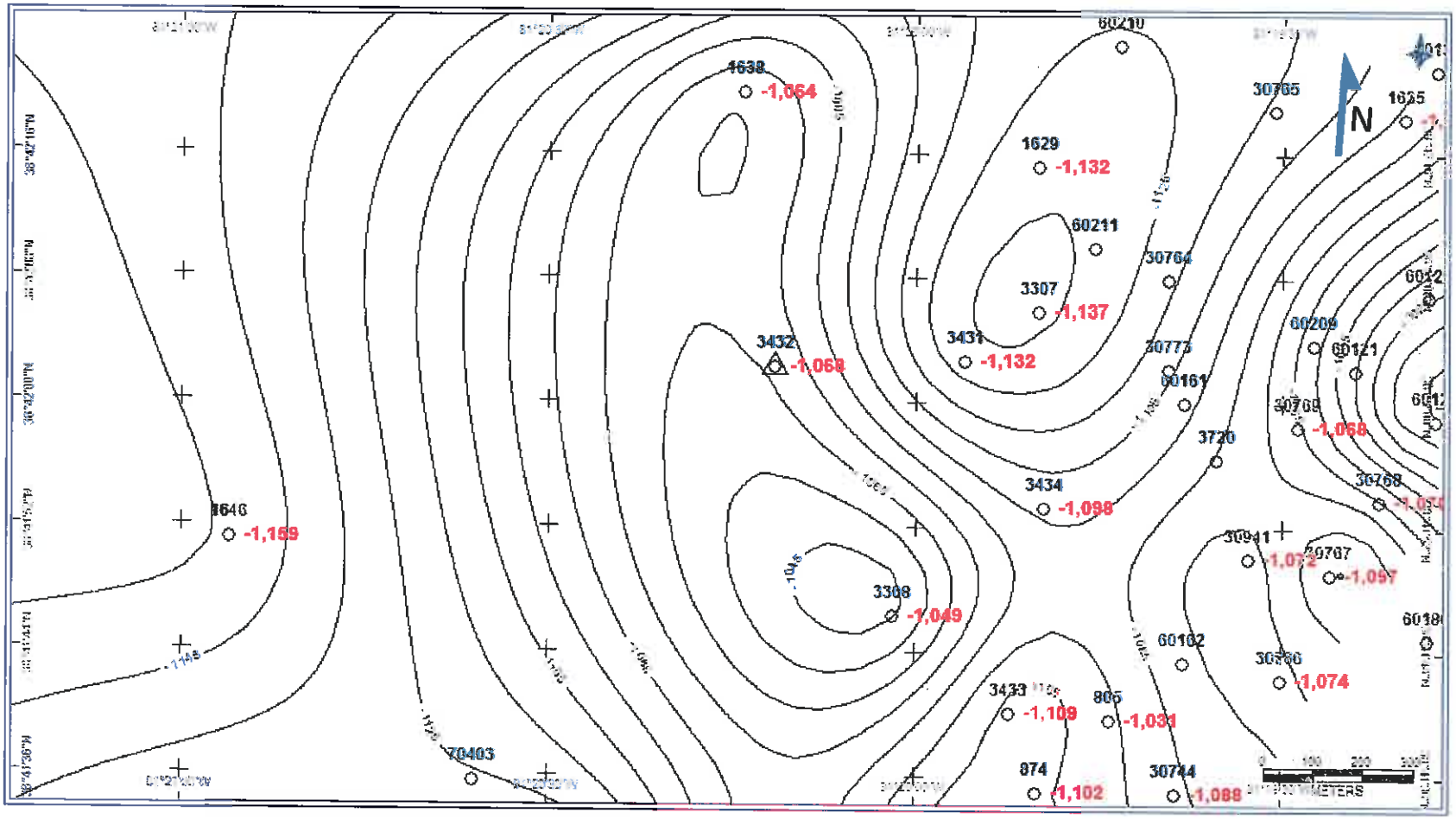


△ = UIC well API #087-03432

1646 = API #

○ -950 = Base Big Injun

Exhibit 8g.) Structural Contour Map Base of Confining Layer Immediately above Injection Zone



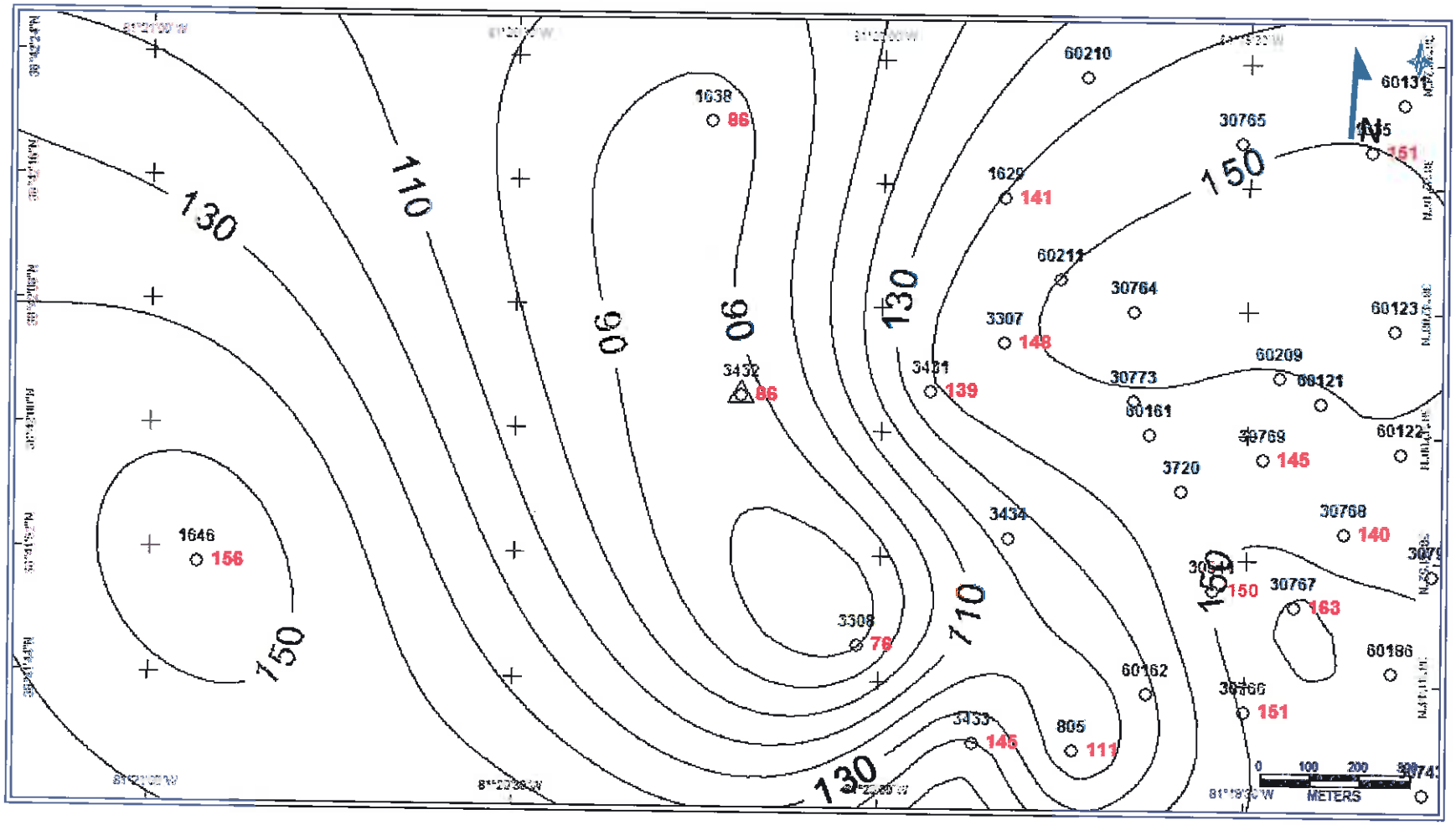
△ = UIC well API #087-03432

○ = Well Spot

1646 = API #

○ -1100 = SS Base of Confining Layer

Exhibit 8h.) Isopach Map of Confining Layers Immediate above Injection Interval



△ = UIC well API #087-03432

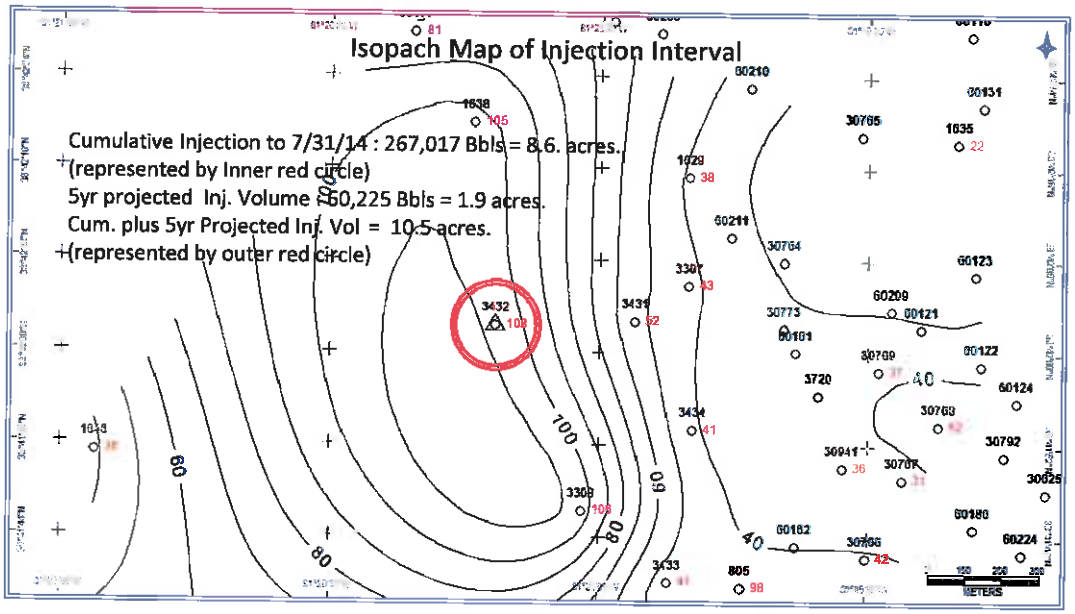
1646 = API #

○ 100 = Thickness

Fluid Migration Model for UIC 2D0873432

Year	Inj. Rate/yr (bbls)	Total Inj. Vol. (bbls)
1	12045	12045
2	12045	24090
3	12045	36135
4	12045	48180
5	12045	60225

Avg. Inj. Rate	33	bbls/day
Porosity	0.10	fraction
cf/ac/ft	4356	cf/ac/ft
cf/bbl	5.615	given
Bbls/ac/ft	776	in place
Thickness	40	feet
Bbls/ac	31031	Bbls
Cum Inj. As of 7/31/14	267,017	
Acres	8.6	
Radius	105	meters
Projected 5yr. Inj. Volume	60225	Bbls
Inj. Acres in 5yrs	**1.9**	**acres**
Total area Affected by Inj	**10.5**	**acres**
Radius	116.3	meters



Section B: Investigation and Assessment for the presence of faults, fractures and the potential for seismically active features:

- Review of USGS Earthquake hazards website: - Shows there have been no recorded seismic activity in Roane County, WV

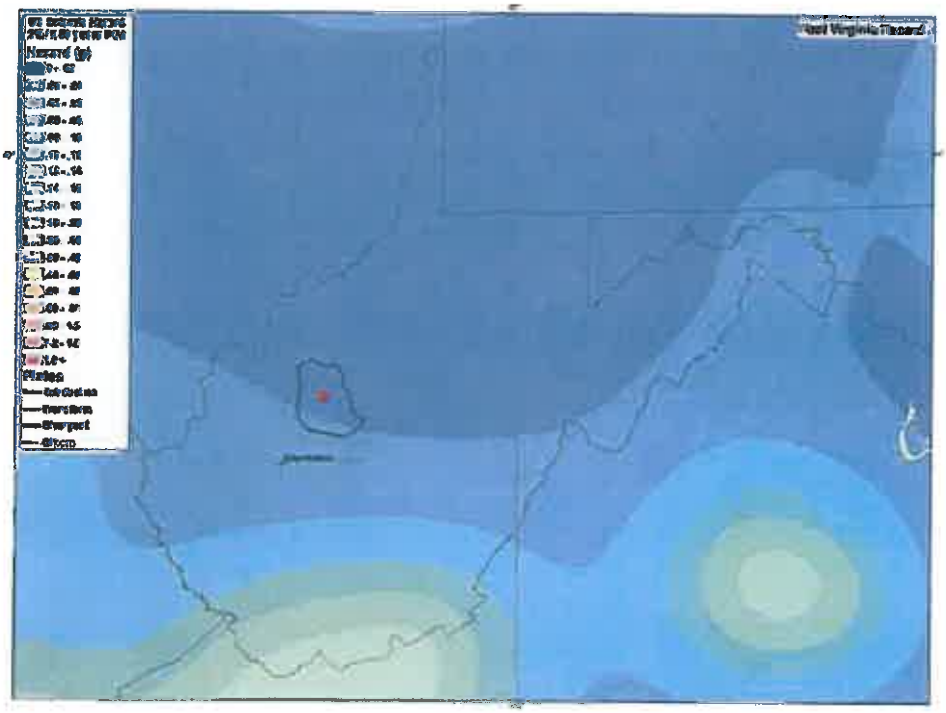
http://earthquake.usgs.gov/earthquakes/states/?region=West%20Virginia

Exhibit 8e - USGS Seismic Hazard Map

Latest Earthquakes
Real-time Feeds & Notifications
Significant EQ Archive
Search EQ Archives
"Top 10" Lists & Map
Info by Region

West Virginia

Seismic Hazard Map - Low Seismic Hazard risk for Roane County, WV

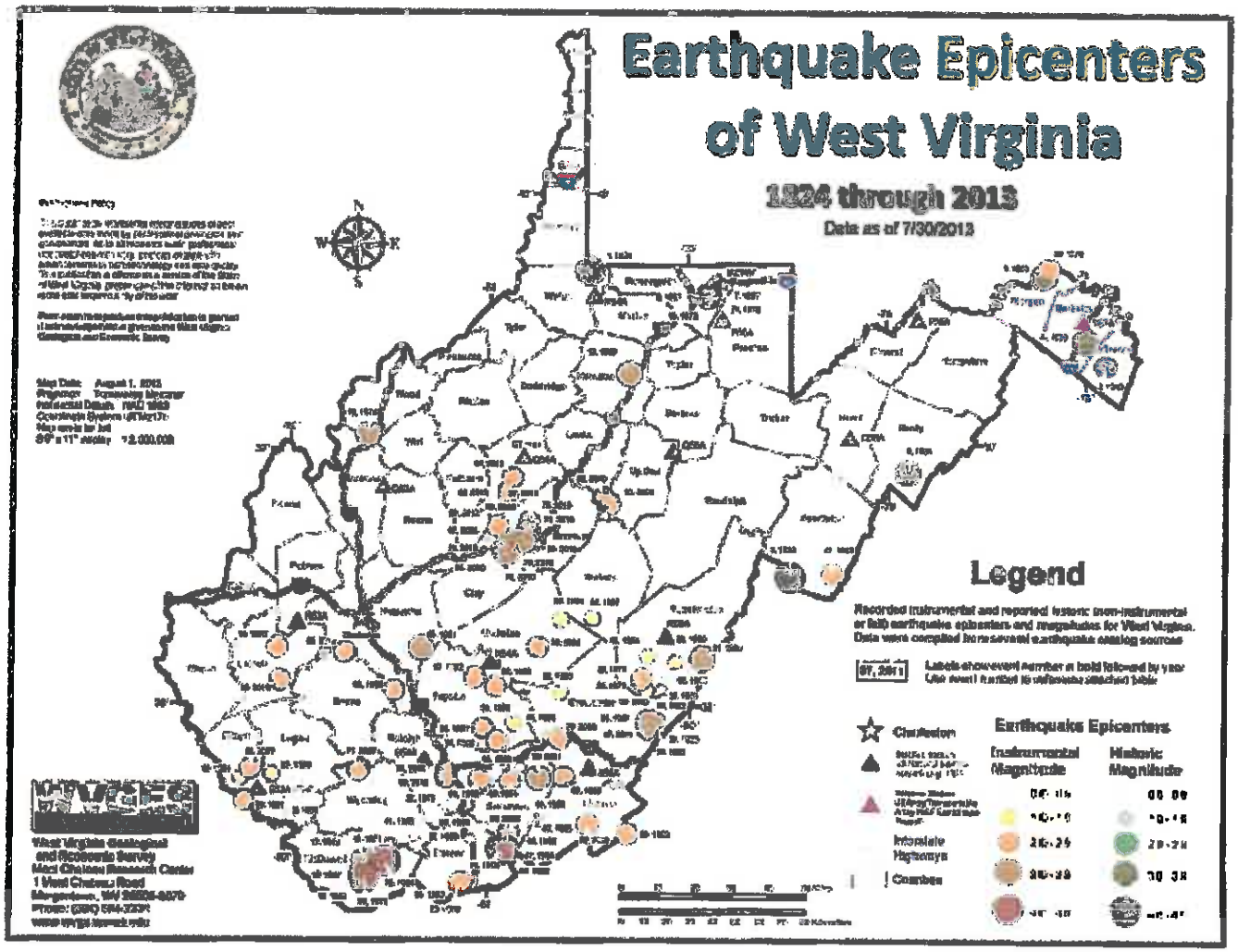


- Review of West Virginia Geological and Economic Survey publications:

Review of WV Geological and Economic Survey Data

Exhibit 8f:

Shows no Seismic Activity in Roane County, WV Since 1824.



WELL NAME ---------- 495
OPERATOR ---------- Prime Operating Company
PERMIT NUMBER ---------- 2D0873432
DATE OF ANALYSIS ---------- 12/2/2014
ANALYST ---------- ZGS

WELL AND FORMATION PARAMETERS

initial pressure at the top of the injection formation, p(i) (psia)	302
injection rate, q (bwpd)	-210
length of injection time, (months)	240
viscosity, mu (cp.)	1
specific gravity of liquid	1.12
formation volume factor, beta (1 for aqueous liquids)	1
permeability, k (md.)	10
reservoir thickness, h (ft.)	40
compressibility, c(t) 1/psi)	3.00E-06
porosity, phi, ratio	0.06
surface elevation KB, (ft.)	917
depth to injection zone, (ft)	1982
end of cross-section, (ft.)	1320

CALCULATION OF CRITICAL PRESSURE RISE

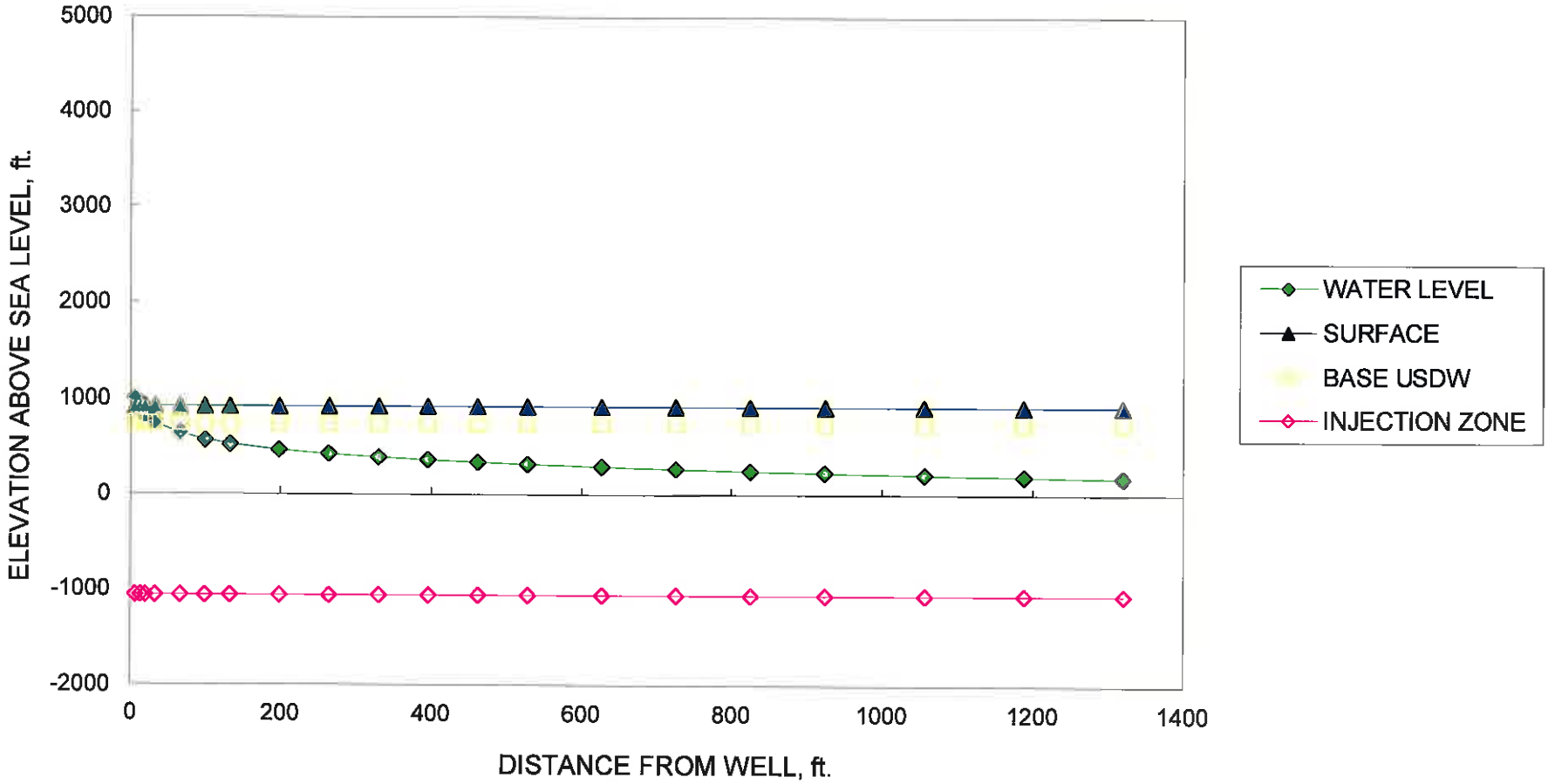
depth of concern, feet below KB (ft.)	175
critical pressure rise to lift liquid to depth of concern, (psi)	574.32272

DISTANCE	pressure	WATER LEVEL	SURFACE	BASE USDW	INJECTION
6	1001.7032	1000.53774	917	742	-1065
13.2	943.25484	880.0157504	917	742	-1065
19.8	913.19771	818.0371781	917	742	-1065
33	875.33021	739.9534114	917	742	-1065
66	823.94721	634.0003421	917	742	-1065
99	793.89008	572.0217697	917	742	-1065
132	772.56421	528.0472727	917	742	-1065
198	742.50708	466.0687004	917	742	-1065
264	721.1812	422.0942034	917	742	-1065
330	704.63957	387.9849337	917	742	-1065
396	691.12408	360.115631	917	742	-1065
462	679.69689	336.5524714	917	742	-1065
528	669.7982	316.1411341	917	742	-1065
627	657.05894	289.8724531	917	742	-1065
726	646.19123	267.462944	917	742	-1065
825	636.71494	247.9225946	917	742	-1065
924	628.31389	230.5994021	917	742	-1065
1056	618.4152	210.1880648	917	742	-1065
1188	609.68395	192.1839893	917	742	-1065
1320	601.87357	176.078795	917	742	-1065

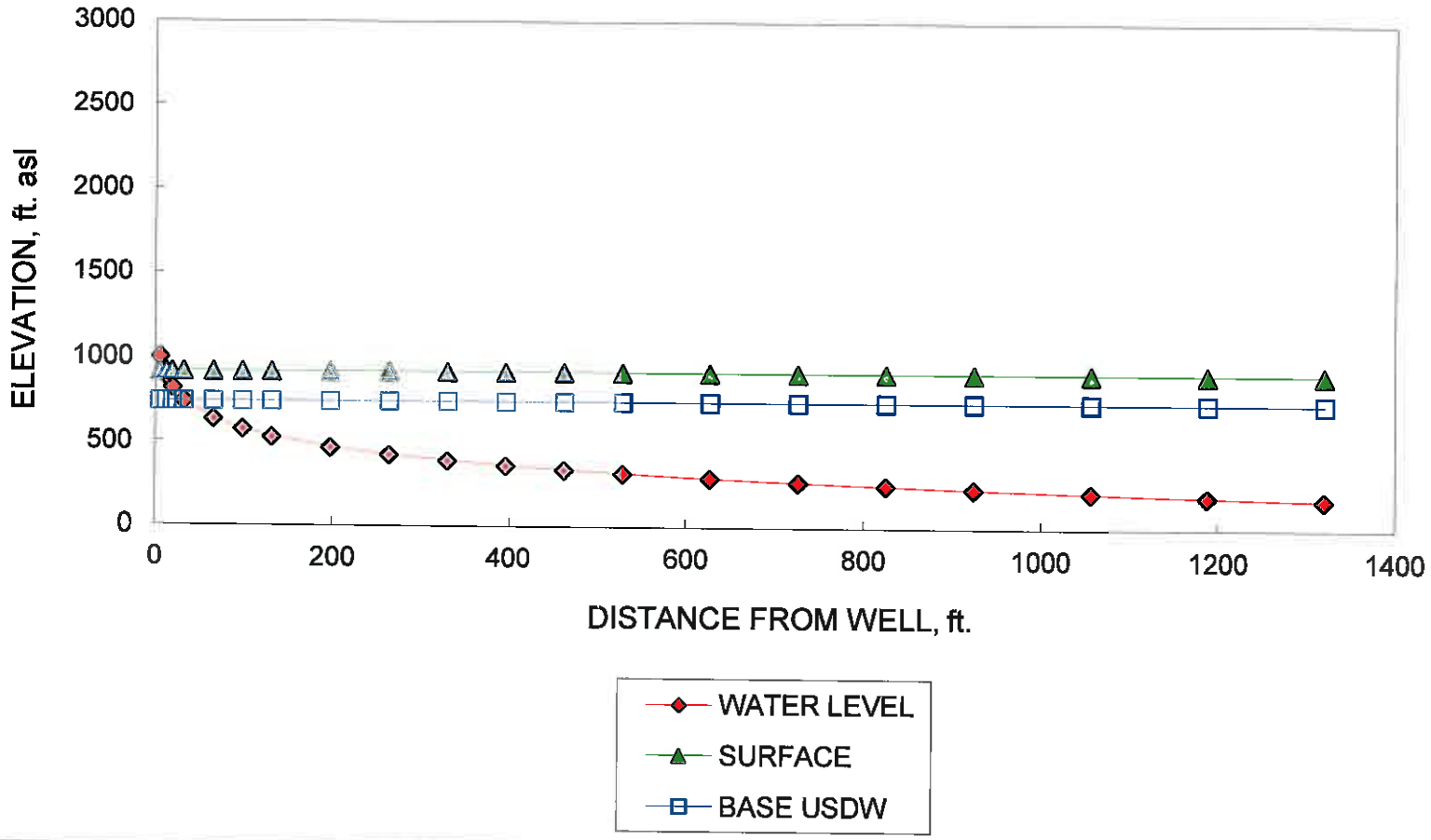
RADIAL DISTRIBUTION OF PRESSURE AROUND WELL OF CONCERN

linear term	-37.065
E(i) term	9.87503E-11

HYDRAULIC HEADS



HYDRAULIC HEAD
RELATION TO SURFACE AND BASE OF USDW



Section 9 - Operating Requirements/Data:

The average daily volume of fluid to be injected will be approximately 50 barrels. The Maximum daily rate will be 210 barrels. The Average injection pressure will be less than 50 psi and the maximum injection pressure will be 600 psi. When originally stimulated the fracture pressure was approximately 2800 psi. Current formation pressure is estimated to be 150 psi.

Section 9-2 – List of wells serviced by the brine disposal well.

- See Appendix G

Section 9-3 Physical and chemical characteristics of the injection fluid. See Exhibit 9-3

Section 9-4 Description of all injection fluid additives: None

Section 9-5 Fluid between the tubing and casing is air. There is no pressure between the tubing and casing.

Section 9-6 Contingency plan to prevent migration of fluids into any USDW in the event of well failure: The 8 5/8" casing is cemented to surface and the 4 ½" casing is also cemented to surface. If the tubing or packer should fail, pressure will be observed on the annulus. If this occurs, the injection well will be taken out of service and workover operations initiated. Given the low bottom-hole pressure of the well there is little or no risk of fluid migration to an USDW in a shut-in situation.

Exhibit 9-3: Injection Fluid Analysis

ALS Group USA, Corp **Date:** *24-Feb-14*

Client: Prime Operating
Project: Injection Fluid
Sample ID: Injection Fluid
Collection Date: 2/12/2014 10:30 AM

Work Order: 1402528
Lab ID: 1402528-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH (FIELD)			A4500-H B			Analyst: JC
pH (field)	6.79			s.u.	1	2/12/2014
DIESEL RANGE ORGANICS BY GC-FID			SW8015M		Prep: SW3510 / 2/14/14	Analyst: IT
DRO (C10-C28)	2.9		0.10	mg/L	1	2/18/2014 08:27 AM
ORO (C28-C40)	0.70		0.10	mg/L	1	2/18/2014 08:27 AM
Surr: 4-Terphenyl-d14	*57.3*		*21-90*	*%REC*	1	2/18/2014 08:27 AM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015			Analyst: IT
GRO (C6-C10)	5,600		200	µg/L	1	2/17/2014 07:31 PM
Surr: Toluene-d8	*97.8*		*70-130*	*%REC*	1	2/17/2014 07:31 PM
METALS BY ICP-MS			E200.8		Prep: E200.8 / 2/14/14	Analyst: ML
Barium	3.6		0.50	mg/L	100	2/20/2014 04:00 PM
Iron	170		8.0	mg/L	100	2/20/2014 04:00 PM
Manganese	5.8		0.50	mg/L	100	2/20/2014 04:00 PM
Sodium	41,000		200	mg/L	1000	2/21/2014 11:00 AM
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS
Benzene	160		10	µg/L	10	2/17/2014 02:47 PM
Ethylbenzene	37		10	µg/L	10	2/17/2014 02:47 PM
m,p-Xylene	200		20	µg/L	10	2/17/2014 02:47 PM
o-Xylene	74		10	µg/L	10	2/17/2014 02:47 PM
Toluene	550		10	µg/L	10	2/17/2014 02:47 PM
Xylenes, Total	280		30	µg/L	10	2/17/2014 02:47 PM
Surr: 1,2-Dichloroethane-d4	*98.8*		*70-120*	*%REC*	10	2/17/2014 02:47 PM
Surr: 4-Bromofluorobenzene	*98.2*		*75-120*	*%REC*	10	2/17/2014 02:47 PM
Surr: Dibromofluoromethane	*100*		*85-115*	*%REC*	10	2/17/2014 02:47 PM
Surr: Toluene-d8	*97.6*		*85-120*	*%REC*	10	2/17/2014 02:47 PM
ANIONS BY ION CHROMATOGRAPHY			E300.0			Analyst: ED
Bromide	1,000		50	mg/L	500	2/21/2014 01:29 PM
Chloride	110,000		10,000	mg/L	10000	2/21/2014 07:39 PM
Sulfate	350		100	mg/L	100	2/21/2014 01:09 PM
SPECIFIC CONDUCTANCE			A2510 B-97			Analyst: EE
Specific Conductance	190,000		5.0	µmhos/cm @ 25	1	2/17/2014 10:00 AM
SPECIFIC GRAVITY			D5057-90			Analyst: MB
Specific Gravity	1.12			none	1	2/18/2014 12:15 AM
TOTAL DISSOLVED SOLIDS			A2540 C-97		Prep: Water Ext. / 2/18/14	Analyst: KF
Total Dissolved Solids	170,000		10	mg/L	1	2/18/2014 10:00 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Feb-14*

Client: Prime Operating
Project: Injection Fluid
Sample ID: Injection Fluid
Collection Date: 2/12/2014 10:30 AM

Work Order: 1402528
Lab ID: 1402528-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ORGANIC CARBON, TOTAL			A5310C-96			Analyst: ED
Organic Carbon, Total	120		50	mg/L	100	2/17/2014 02:18 PM
TOTAL SUSPENDED SOLIDS			A2540 D-97		Prep: Water Ext. / 2/14/14	Analyst: YM
Total Suspended Solids	400		12	mg/L	1	2/14/2014 12:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 24-Feb-14

Client: Prime Operating
Project: Injection Fluid
Sample ID: Trip Blank
Collection Date: 2/12/2014 10:30 AM

Work Order: 1402528
Lab ID: 1402528-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260**			Analyst: **BG**
Benzene	ND		1.0	µg/L	1	2/14/2014 06:45 PM
Ethylbenzene	ND		1.0	µg/L	1	2/14/2014 06:45 PM
m,p-Xylene	ND		2.0	µg/L	1	2/14/2014 06:45 PM
o-Xylene	ND		1.0	µg/L	1	2/14/2014 06:45 PM
Toluene	ND		1.0	µg/L	1	2/14/2014 06:45 PM
Xylenes, Total	ND		3.0	µg/L	1	2/14/2014 06:45 PM
Surr: 1,2-Dichloroethane-d4	*97.0*		*70-120*	*%REC*	1	2/14/2014 06:45 PM
Surr: 4-Bromofluorobenzene	*91.4*		*75-120*	*%REC*	1	2/14/2014 06:45 PM
Surr: Dibromofluoromethane	*106*		*85-115*	*%REC*	1	2/14/2014 06:45 PM
Surr: Toluene-d8	*94.9*		*85-120*	*%REC*	1	2/14/2014 06:45 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 24-Feb-14

Client: Prime Operating
Project: Injection Fluid
WorkOrder: 1402528

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
µg/L	Micrograms per Liter
µmhos/cm @ 25°C	Micromhos per Centimeter at 25 Degrees Celcius
mg/L	Milligrams per Liter
none	
s.u.	Standard Units

Appendix G - List of Wells Serviced by Brine Disposal Well

Api #	Operator	Producing Formation
00501400	Prime Operating Company	Big Lime, Big Injun
00501409	Prime Operating Company	Big Lime, Big Injun
00701328	Prime Operating Company	Big Injun (Grnbr)
00701330	Prime Operating Company	Big Lime, Big Injun
00701331	Prime Operating Company	Big Injun (Grnbr)
00701333	Prime Operating Company	Big Injun (Grnbr)
00701334	Prime Operating Company	Big Injun (Grnbr)
00701335	Prime Operating Company	Big Injun (Grnbr)
00701339	Prime Operating Company	Big Injun (Grnbr)
00701340	Prime Operating Company	Big Lime
00701341	Prime Operating Company	Big Injun (Grnbr)
00701342	Prime Operating Company	Big Injun (Grnbr)
00701344	Prime Operating Company	Big Injun (Grnbr)
00701362	Prime Operating Company	Big Lime
00701363	Prime Operating Company	Big Lime
00701364	Prime Operating Company	Big Lime
00701366	Prime Operating Company	Big Lime
00701367	Prime Operating Company	Big Injun (Grnbr)
00701368	Prime Operating Company	Big Injun (Grnbr)
00701371	Prime Operating Company	Big Injun (Grnbr)
00701372	Prime Operating Company	Big Lime
00701377	Prime Operating Company	Big Injun (Grnbr)
00701378	Prime Operating Company	Big Injun (Grnbr)
00701447	Prime Operating Company	Big Injun (Grnbr)
00701619	Prime Operating Company	Big Injun (Grnbr)
01302009	Prime Operating Company	Big Injun (Grnbr)
01302596	Prime Operating Company	Big Injun (Grnbr)
01302961	Prime Operating Company	Big Lime
01302962	Prime Operating Company	Big Injun (Grnbr)
01302963	Prime Operating Company	Big Injun (Grnbr)
01302966	Prime Operating Company	Big Injun (Grnbr)
01302969	Prime Operating Company	Big Injun (Grnbr)
01302970	Prime Operating Company	Big Injun (undiff)
01302986	Prime Operating Company	Big Injun (Grnbr)
01303184	Prime Operating Company	Big Injun (Grnbr)
01303186	Prime Operating Company	Big Injun (Grnbr)
01303212	Prime Operating Company	Big Injun (Pocono)
01303213	Prime Operating Company	Big Injun (Grnbr)
01303316	Prime Operating Company	Big Injun (Grnbr)
01303394	Prime Operating Company	Big Injun (Grnbr)
01303415	Prime Operating Company	Big Injun (Grnbr)
01303431	Prime Operating Company	Big Injun (Grnbr)
01303436	Prime Operating Company	Big Injun (Grnbr)
01303437	Prime Operating Company	Big Injun (Grnbr)

Appendix G - List of Wells Serviced by Brine Disposal Well

Api #	Operator	Producing Formation
01303446	Prime Operating Company	Big Injun (Grnbr)
01303447	Prime Operating Company	Big Injun (Grnbr)
01303448	Prime Operating Company	Big Injun (Grnbr)
01303450	Prime Operating Company	Big Injun (Grnbr)
01303456	Prime Operating Company	Big Injun (Grnbr)
01303457	Prime Operating Company	Big Injun (Grnbr)
01303458	Prime Operating Company	Big Injun (Grnbr)
01303459	Prime Operating Company	Big Injun (Grnbr)
01303464	Prime Operating Company	Big Injun (Grnbr)
01303483	Prime Operating Company	Big Injun (Grnbr)
01303486	Prime Operating Company	Big Injun (Grnbr)
01303487	Prime Operating Company	Big Injun (Grnbr)
01303497	Prime Operating Company	Big Injun (Grnbr)
01303521	Prime Operating Company	Big Injun (Grnbr)
01501280	Prime Operating Company	Big Injun (Grnbr)
01501282	Prime Operating Company	Big Injun (Grnbr)
01501284	Prime Operating Company	Big Injun (Grnbr)
01501285	Prime Operating Company	Big Injun (Grnbr)
01501287	Prime Operating Company	Big Injun (Grnbr)
01501291	Prime Operating Company	Big Injun (Grnbr)
01501294	Prime Operating Company	Big Injun (Grnbr)
01501301	Prime Operating Company	Big Injun (Grnbr)
01501303	Prime Operating Company	Big Injun (Grnbr)
01501304	Prime Operating Company	Big Injun (Grnbr)
01501316	Prime Operating Company	Big Injun (Grnbr)
01501505	Prime Operating Company	Big Injun (Grnbr)
01501506	Prime Operating Company	Big Injun (Grnbr)
01501508	Prime Operating Company	Big Injun (Grnbr)
01501514	Prime Operating Company	Big Injun (Grnbr)
01501516	Prime Operating Company	Big Injun (Grnbr)
01501544	Prime Operating Company	Big Injun (Grnbr)
01501547	Prime Operating Company	Big Injun (Grnbr)
01501548	Prime Operating Company	Big Injun (Grnbr)
01501549	Prime Operating Company	Big Injun (Grnbr)
01501560	Prime Operating Company	Big Injun (Grnbr)
01501606	Prime Operating Company	Big Injun (Grnbr)
01501607	Prime Operating Company	Big Injun (Grnbr)
01501608	Prime Operating Company	Big Injun (Grnbr)
01501609	Prime Operating Company	Big Injun (Grnbr)
01501610	Prime Operating Company	Big Injun (Grnbr)
01501638	Prime Operating Company	Big Injun (Grnbr)
01501656	Prime Operating Company	Big Injun (Grnbr)
01501662	Prime Operating Company	Big Injun (Grnbr)
01501663	Prime Operating Company	Big Injun (Grnbr)
01501668	Prime Operating Company	Big Injun (Grnbr)
01501674	Prime Operating Company	Big Injun (Grnbr)

Appendix G - List of Wells Serviced by Brine Disposal Well

Api #	Operator	Producing Formation
01501675	Prime Operating Company	Big Injun (Grnbr)
01501676	Prime Operating Company	Big Injun (Grnbr)
01501678	Prime Operating Company	Big Injun (Grnbr)
01501679	Prime Operating Company	Big Injun (Grnbr)
01501685	Prime Operating Company	Big Injun (Grnbr)
01501686	Prime Operating Company	Big Injun (Grnbr)
01501687	Prime Operating Company	Big Injun (Grnbr)
01501691	Prime Operating Company	Big Injun (Grnbr)
01501699	Prime Operating Company	Big Injun (Grnbr)
01501706	Prime Operating Company	Big Injun (Grnbr)
01501717	Prime Operating Company	Big Injun (Grnbr)
01501794	Prime Operating Company	Big Injun (Grnbr)
01501796	Prime Operating Company	Big Injun (Grnbr)
01501800	Prime Operating Company	Big Injun (Grnbr)
01501827	Prime Operating Company	Big Injun (Grnbr)
01501828	Prime Operating Company	Big Injun (Grnbr)
01501829	Prime Operating Company	Big Injun (Grnbr)
01501830	Prime Operating Company	Big Injun (Grnbr)
01501843	Prime Operating Company	Big Injun (Grnbr)
01501846	Prime Operating Company	Big Injun (Grnbr)
01501862	Prime Operating Company	Big Injun (Grnbr)
01501866	Prime Operating Company	Big Injun (Grnbr)
01501869	Prime Operating Company	Big Injun (Grnbr)
01501870	Prime Operating Company	Big Injun (Grnbr)
01501873	Prime Operating Company	Big Injun (Grnbr)
01501878	Prime Operating Company	Big Injun (Grnbr)
01501888	Prime Operating Company	Big Injun (Grnbr)
01501910	Prime Operating Company	Big Injun (Pocono)
01501927	Prime Operating Company	Big Injun (Grnbr)
01501930	Prime Operating Company	Big Injun (Grnbr)
01501961	Prime Operating Company	Big Injun (Grnbr)
01501962	Prime Operating Company	Big Injun (Grnbr)
01501972	Prime Operating Company	Big Injun (Grnbr)
01501973	Prime Operating Company	Big Injun (Grnbr)
01501974	Prime Operating Company	Big Injun (Grnbr)
01501980	Prime Operating Company	Big Injun (Grnbr)
01501987	Prime Operating Company	Big Injun (Grnbr)
01501988	Prime Operating Company	Big Injun (Grnbr)
01501989	Prime Operating Company	Big Injun (Grnbr)
01502003	Prime Operating Company	Big Injun (Grnbr)
01502004	Prime Operating Company	Big Injun (Grnbr)
01502005	Prime Operating Company	Big Injun (Grnbr)
01502011	Prime Operating Company	Big Injun (Grnbr)
01502013	Prime Operating Company	Big Injun (Grnbr)
01502014	Prime Operating Company	Big Injun (Grnbr)
01502016	Prime Operating Company	Big Injun (Grnbr)

Appendix G - List of Wells Serviced by Brine Disposal Well

Api #	Operator	Producing Formation
01502017	Prime Operating Company	Big Injun (Grnbr)
01502018	Prime Operating Company	Big Injun (Grnbr)
01502019	Prime Operating Company	Big Injun (Grnbr)
01502022	Prime Operating Company	Big Injun (Grnbr)
01502023	Prime Operating Company	Big Injun (Grnbr)
01502029	Prime Operating Company	Big Injun (Grnbr)
01502030	Prime Operating Company	Big Injun (Grnbr)
01502031	Prime Operating Company	Big Injun (Grnbr)
01502032	Prime Operating Company	Big Injun (Grnbr)
01502036	Prime Operating Company	Big Injun (Grnbr)
01502037	Prime Operating Company	Big Injun (Grnbr)
01502038	Prime Operating Company	Big Injun (Grnbr)
01502039	Prime Operating Company	Big Injun (Grnbr)
01502040	Prime Operating Company	Big Injun (Grnbr)
01502046	Prime Operating Company	Big Injun (Grnbr)
01502047	Prime Operating Company	Big Lime
01502048	Prime Operating Company	Big Injun (Grnbr)
01502049	Prime Operating Company	Big Injun (Grnbr)
01502050	Prime Operating Company	Big Injun (Grnbr)
01502051	Prime Operating Company	Big Injun (Grnbr)
01502054	Prime Operating Company	Big Injun (Grnbr)
01502160	Prime Operating Company	Big Injun (Grnbr)
01502176	Prime Operating Company	Big Injun (Grnbr)
01502177	Prime Operating Company	Big Injun (Grnbr)
01502178	Prime Operating Company	Big Injun (Grnbr)
01502194	Prime Operating Company	Big Injun (Grnbr)
01502195	Prime Operating Company	Big Injun (Grnbr)
01502196	Prime Operating Company	Big Injun (Grnbr)
01502197	Prime Operating Company	Big Injun (Grnbr)
01502198	Prime Operating Company	Big Injun (Grnbr)
01502199	Prime Operating Company	Big Injun (Grnbr)
01502200	Prime Operating Company	Big Injun (Grnbr)
01502206	Prime Operating Company	Big Injun (Grnbr)
01502207	Prime Operating Company	Big Injun (Grnbr)
01502208	Prime Operating Company	Big Injun (Grnbr)
01502211	Prime Operating Company	Big Injun (Grnbr)
01502233	Prime Operating Company	Big Injun (Grnbr)
01502258	Prime Operating Company	Big Injun (Grnbr)
02103701	Prime Operating Company	Big Injun (undiff)
02103702	Prime Operating Company	Big Injun (undiff)
02103724	Prime Operating Company	'Mauch Chunk'
02103725	Prime Operating Company	Little Lime
02103727	Prime Operating Company	Big Lime
02103824	Prime Operating Company	Big Injun (Grnbr)
06100267	Prime Operating Company	Big Injun (Grnbr)
01303315	Prime Operating Company	Big Injun (Grnbr)

Appendix G - List of Wells Serviced by Brine Disposal Well

Api #	Operator	Producing Formation
02103654	Prime Operating Company	Big Injun (Grnbr)
03903756	Prime Operating Company	Big Injun (Pocono)
04102923	Prime Operating Company	Big Injun (Grnbr)
04102924	Prime Operating Company	Big Injun (Grnbr)
04102925	Prime Operating Company	Big Injun (Grnbr)
06700591	Prime Operating Company	Ravencliff/Avis Ss
07301406	Prime Operating Company	Maxton
08500007	Prime Operating Company	Salt Sands (undiff)
08703198	Prime Operating Company	Big Injun (Pocono)
08703199	Prime Operating Company	Big Injun (Pocono)
08703200	Prime Operating Company	Big Injun (Pocono)
08703203	Prime Operating Company	Big Injun (Pocono)
08703205	Prime Operating Company	Big Injun (Pocono)
08703208	Prime Operating Company	Big Injun (Grnbr)
08703216	Prime Operating Company	Big Injun (Grnbr)
08703217	Prime Operating Company	Big Injun (Grnbr)
08703218	Prime Operating Company	Big Injun (Grnbr)
08703221	Prime Operating Company	Big Injun (Grnbr)
08703222	Prime Operating Company	Big Injun (Grnbr)
08703224	Prime Operating Company	Big Injun (Pocono)
08703227	Prime Operating Company	Big Injun (Pocono)
08703299	Prime Operating Company	Big Lime
08703304	Prime Operating Company	Big Injun (Pocono)
08703307	Prime Operating Company	Big Injun (Pocono)
08703308	Prime Operating Company	Big Injun (Grnbr)
08703309	Prime Operating Company	Big Injun (Pocono)
08703310	Prime Operating Company	Big Injun (Grnbr)
08703325	Prime Operating Company	Big Injun (Grnbr)
08703326	Prime Operating Company	Big Injun (Pocono)
08703327	Prime Operating Company	Big Injun (Grnbr)
08703329	Prime Operating Company	Big Injun (Pocono)
08703332	Prime Operating Company	Big Injun (Grnbr)
08703342	Prime Operating Company	Big Injun (Grnbr)
08703344	Prime Operating Company	Big Injun (Pocono)
08703345	Prime Operating Company	Big Injun (Grnbr)
08703350	Prime Operating Company	Big Injun (Grnbr)
08703351	Prime Operating Company	Big Injun (Pocono)
08703352	Prime Operating Company	Big Injun (Pocono)
08703353	Prime Operating Company	Big Injun (Pocono)
08703361	Prime Operating Company	Big Injun (Grnbr)
08703376	Prime Operating Company	Big Injun (Pocono)
08703380	Prime Operating Company	Big Injun (Grnbr)
08703385	Prime Operating Company	Big Injun (Grnbr)
08703386	Prime Operating Company	Big Injun (Grnbr)
08703402	Prime Operating Company	Big Injun (Grnbr)
08703432	Prime Operating Company	Big Injun (Pocono)

Appendix G - List of Wells Serviced by Brine Disposal Well

Api #	Operator	Producing Formation
08703433	Prime Operating Company	Big Injun (Pocono)
08703434	Prime Operating Company	Big Injun (Pocono)
08703435	Prime Operating Company	Big Injun (Pocono)
08703443	Prime Operating Company	Big Injun (Grnbr)
08703449	Prime Operating Company	Big Injun (Grnbr)
08703456	Prime Operating Company	Big Injun (Grnbr)

(4/25)

APPENDIX H

GROUNDWATER PROTECTION PLAN

Facility Name: Hall SWD Well

County: Roane

Facility Location:

Postal Service Address:	None, Rushville, WV	
Latitude and Longitude:	38.70081, -81.336722	

Contact Information:

Person:	Halsey Whitney
Phone Number:	304-342-0121
E-mail Address:	hwhitney@primeenergy.com

Date: 06/05/2014

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

Accidental discharge of brine water on the surface.

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

Secondary Containment structure (Dike) is capable of holding 110% of the largest of two tanks in the tank battery and impervious to prevent seepage for a minimum of 72 hours. Dike construction has adequate freeboard and was revegetated with grass for added stability. Tank valves are equipment with locking devices.

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

All procedures to be used will be designed to protect groundwater and reviewed by safety personnel. During facility transfer operations valves, piping and connections are inspected upon routine visits, which usually occur weekly. Personnel are on site for injection activity. Flowline Maintenance and inspection is done regularly and required maintenance is done immediately.

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

All activities at our facility are covered by an SPCC plan.

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

All groundwater sources within 1/4 mile have been tested for quality.

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

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

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

Training is an essential element to maintain a high level of personnel efficiency and awareness of the importance of spill prevention, aid in prevention of operational error and equipment failure, through proper maintenance and inspections. Training is carried out b a designated coordinator. The training program covers SPCC, Environmental, & Safety Issues, is conducted for new and old employees. All employees participate in safety training monthly. Training Session Topics include: SPCC Plan review, Environmental & Safety Regulations, Facility inspections, maintenance and record keeping, OSHA Hazcom, Waste Management practices of associated oil field waste, clean-up material inventory and equipment & material inspection for readiness / preparedness.

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

A welltender is routinely at the site weekly and often multiple times per week. During routine visits, and not less than quarterly, inspections of the GPP elements and equipment (tanks, valves, flanges, piping, flowlines, tank dike containment, etc.) are conducted.

Signature: Holly M. Wirtz

Date: 6/16/14

FACILITY & OPERATIONS INFORMATION

TYPE OF FACILITY:

Oil Production Wells
(Oil, Saltwater, Condensate, and/or Fluid Storage Facilities)

Appalachian Basin / onshore
SIC 1381 / Standard Industrial Classification

FACILITY DESCRIPTION:

Surface production equipment, used in the production, storage, and transportation of the hydrocarbon products and bi-products, such as crude oil, saltwater, and condensate.
The surface production equipment may include, but is not limited to; wellhead assembly, values, gages, flowlines, drips, pipelines, gas separator units, inline heaters, meters, tanks, pump jack units, stuffing boxes, and associated items.

The storage tanks are made of steel or poly material and are compatible with the material being stored. The tanks have been tested for defects in material and workmanship. The tanks have been sized, per site, for adequate capacity to assure overflow won't occur if a welltender is late in making his rounds. The poly tanks are used for saltwater storage.

The tanks which are located at the sites are 30, 50, 100 or 210 bbl. in size, with 1, 2, or 3 tanks at various sites. Multiple tank setups have equalization piping. Exact locations can be found on the Topo Maps. Exact information concerning tanks, (size and number), can be found in the "Well & Tank Information Lists" of this Plan.

The tank dike containment structures are constructed of compacted earthen material.

SAFETY / FIRE PROTECTION:

Tanks are equipped with vents, 2" diameter size, so as to vent any fumes to the atmosphere and allow any ignited flame, possibly from lightning, to be away from the stored fluid.

Tank ladders and walkways are securely attached to the tanks.

OSHA Tank Labels should be affixed to the tanks, indicating the contents, fire, and health hazards.

SECURITY: (112.7 (g) exempts oil production facilities from requirements listed in the rule)

Tank valves are equipped with steel plugs and / or valve locking devices.

Containment area, fresh water drains, are equipped with plugs and/or end plugs.

Some access roads have locked gates, thus restricting access to the area, for un-authorized people.

FACILITY CLASSIFICATION:

These well production sites are classified as a "small capacity facility", which has less than 100,000 gallons of oil or fluid storage. These facilities could not cause "Substantial Harm" to the environment and don't require Facility Response Plans.

POTENTIAL TANK STORAGE CONTENTS:

Field Tanks
1) Crude Oil
2) Condensate Liquid
3) Saltwater

TANK SPILL POTENTIAL: (Causes)

1) Overflow
2) Rupture
3) Valve failure
4) Vandalism
5) Lightning Strike

POTENTIAL SPILL VOLUME: (based on single largest tank per site / per regs.)

30 bbls. / 1,260 gallons
50 bbl. / 2,100 gallons
100 bbls. / 4,200 gallons
210 bbls. / 8,820 gallons

Worst Case Disaster: Total contents of the tank.

Government Regulations only require containment capacity of the single largest tank per site plus 10% . The tank dike designs exceed the regulations as written.

PREDICTION OF POTENTIAL SPILLS, (DISCHARGES)

Type Failure	Quantity (bbls.)	Flow Rate	Direction of Flow	Containment
Complete Tank Failure	30, 50, 100, 210 bbl.	Instantaneous	Contained	Dike
Partial Tank Failure		Gradual to Instantaneous	Contained	Dike
Tank Overflow		Gradual	Contained	Dike
Leaking Pipe / Flow Line	< 1 bbl.	Gradual	Contained or puddle on site	Dike
Leaking Valve Packing	< 1 bbl.	Gradual	Contained or puddle on site	Dike
Leak during Truck Loading	< 1 bbl.	Gradual to Instantaneous	Contained or puddle on site	Dike

- Un-contained spills will dealt with under the Contingency Plan Section

WATERCOURSE INFORMATION:

Watercourse / Watershed, potential flow directions can be found in the Well &Watershed Information List. The stream which would be impacted from an uncontrolled spill, (discharge), is listed under the Watershed Info. The exact location of the stream and the wells & facilities can be found on the Topographic Maps, which are located in the Topo Map Book, which is in a separate book, but is part of this Plan.

SECONDARY CONTAINMENT DESIGN DATA:

1) Secondary containment structures, (dikes), are constructed of compacted earthen material, with the inside area being impervious to prevent seepage for a minimum of 72 hours. The dikes are designed to withstand the hydraulic pressure of a full loading of water.

2) All earthen fills and slopes of containment areas are approximately 2:1

3) Earthen containment areas are revegetated with grass to give added stability and reduce erosion.

4) The dike area measurements, as shown in the detail, are inside bottom measurements and allows for adequate freeboard, for precipitation above the 110% tank capacity requirements.

5) The containment dike sketches and measurements used, are typical and may vary somewhat in their actual field placement, due to the rugged terrain of West Virginia.

6) In some settings, where an adequate highwall exists, or where space may be limited, the highwall may be utilized as a dike wall.

7) Note: Over a course of years, between the time of the original SPCC Plan and this one, some tanks have been removed, from various sites, as they were no longer needed. In most of those cases the original tank dike containment area size, was not changed, thus additional containment area exists. Examples: Originally 3 – 210 bbl tanks, now 2 or 1 – 210 bbl tank. Originally 4 – 100 bbl tanks, now 2 or 1 – 100 bbl tank. In a couple cases, a 30 or 12 bbl. Poly tank may be setting in a containment structure where a 100 or 210 bbl. Tank was removed, again the original structure size was not changed, thus more than adequate containment area is present.

CONTAINMENT DIKE DESIGN SPECIFICATIONS: (Facility Information)

Tank Facility: 1-30 bbl. Tank

Single largest tank: 30 bbl. / 1,260 gallons

MCV 1,260 gal. x .1337 cu.ft. = 168.46 cu.ft.

Containment Dike: 12' x 14' x 2' = 336 cu.ft.

Excess area: 49.86%

- Containment area exceeds requirements

Tank Facility: 1-50 bbl. Tank

Single largest tank: 50 bbl. / 2,100 gallons

MCV 2,100 gal. x .1337 cu.ft. = 280.77 cu.ft.

Containment Dike: 14' x 18' x 2' = 504 cu.ft.

Excess area = 44.29%

- Containment area exceeds requirements

Tank Facility: 1-100 bbl. Tank

Single largest tank: 100 bbl. / 4,200 gal.

MCV 4,200 gal. x .1337 cu.ft. = 561.54 cu.ft.

Containment Dike: 14' x 22' x 3' = 924 cu.ft.

Excess area: 39.23%

- Containment area exceeds requirements

Tank Facility: 2-100 bbl. Tanks

Single largest tank: 100 bbl. / 4,200 gal.

MCV 4,200 gal. x .1337 cu.ft. = 561.54 cu.ft.

Containment Dike: 14' x 26' x 3' = 1,092 cu.ft.

Excess area: 48.58%

- Containment area exceeds requirements

Tank Facility: 3-100 bbl. Tanks

Single largest tank: 100 bbl. / 4,200 gal.

MCV 8,820 gal. x .1337 cu.ft. = 561.54 cu.ft.

Containment Dike: 14' x 36' x 3' = 1,512 cu.ft.

Excess area: 62.86%

- Containment area exceeds requirements

Tank Facility: 1-210 bbl. Tank

Single largest tank: 210 bbl. / 8,820 gal.

MCV 8,820 gal. x .1337 cu.ft. = 1,179.23 cu.ft.

Containment Dike: 16' x 34' x 3' = 1,632 cu.ft.

Excess area: 27.74%

- Containment area exceeds requirements

Tank Facility: 2-210 bbl. Tanks

Single largest tank: 210 bbl. / 8,820 gal.

MCV 8,820 gal. x .1337 cu.ft. = 1,179.23 cu.ft.

Containment Dike: 18' x 34' x 3' = 1,836 cu.ft.

Excess area: 35.77%

- Containment area exceeds requirements

CONTAINMENT AREA AND SITE DRAINAGE:

1) Fresh water drainage from within the dike containment area: After conducting the appropriate tests for possible pollutants, thus effluent will meet State Water Quality Standards, the fresh water may be released into vegetated filter areas. "NO DIRECT STREAM DISCHARGES"

2) Fresh water drain device: For the purpose of dewatering fresh water from within the containment dike area, a manually operated drain device may be installed, which is closed and sealed or plugged, when not in use or unattended, by authorized personnel.
3) Inspection for any oil present within the dike containment areas, drainage ditches, road ditches, sumps, or on location will be removed by skimming, pumping, or absorbing with the appropriate materials and disposed of in a legally approved method.

Any oil contaminated soil will be reclaimed in the appropriate manner, in accordance with the "API Environmental Guidance Document" (Onshore Solid Waste Management / Production Operations) and with the WV D.E.P. Office of Oil & Gas "General Permit for Associated Waste Management". More detail concerning this can be found in the "Action Plan" of Section II & Section III, of this Plan.

* Any required records will be completed and maintained.

FACILITY TRANSFER OPERATION:

Inspections of above ground piping, valves, flange joints, valve glands & bodies, drip pans, pipe supports, pumping well polish rod stuffing boxes, bleeder & gauge valves, connections, and other related items are inspected upon routine facility visits, which usually occur weekly.

Facilities which produce, stores, or disposes of saltwater are also inspected upon routine visits.

Flowline Maintenance Program: The Flowline Maintenance Program is to maintain the integrity of the flowline and its components so as to minimize releases of oil and other potential pollutants into the environment. Visual inspections occur, upon each routine site visit, which occur usually

weekly but no later than monthly. Inspections include checking for leaks. corrosion. pitting, flaking, and deterioration. Buried lines may be checked visually or pressure tested as needed. Any required maintenance is done immediately with appropriate records maintained.

Secondary containment of flowlines are impracticable and are exempt from such. per Final Amendment 12-5-08. If a leak or discharge is found in the flowline - pipeline, spill containment and clean-up procedures, per the Action Plan, are followed, with needed repairs being done immediately. The Contingency Plan and Written Commitment is a part of this Plan.

Tank Truck Loading:

Tank truck loading and unloading procedures meet the minimum requirements of the D.O.T. The hose will be connected to the tank truck and tank, prior to opening any valves. Upon completion of loading or unloading, the tank valve will be closed first and the hose connection loosened, at the tank, for fluid suction from the hose, into the tank truck. The tank truck valve is then closed and pump shut down.

Any spillage during the loading operation, from the site tanks into a tank truck, will be contained on site or within the dike containment area. During loading and line unhooking, buckets and/or absorbent materials are used to catch any load line spillage. Truck drivers are knowledgeable of the federal and state pollution laws, OSHA Hazard Communication Standard, D.O.T regulations, & spill clean-up procedures. The tank trucks are equipped with quick emergency "stop-gap" equipment and radio communications and/or mobile telephone equipment. If a leak in the tank truck tank would occur, reverse flow pumping can be accomplished to transfer the oil back to the storage tank. within minutes. (Oil production facilities are exempt from loading / unloading rack requirements per Final Amendment 12-5-08)

RE-DRILLING, SERVICE, AND WORK-OVER OPERATIONS:

DRILLING AND WORK-OVER OPERATIONS: Rigs and portable tanks should be positioned or located so as to prevent spilled oil from reaching navigable waters. Rigs use blow-out preventors and/or well control systems to control any well head pressures which may be incountered. Earthen pits are present to contain any spillage and/or fluids incurred during the operation. Dozers are present at this time, thus any additional pits, berms, diversions can be constructed immediately. Radio communication equipment and/or mobile telephones are present at the rigs. Any accidental spillage of liquids from the rig, would be contained in the constructed pit, which is on site. The mobile rig is to meet the requirements if 112.10.
EARTHEN PITS: Constructed of compacted soil, 2:1 slopes, insides are of impervious material to prevent seepage, adequate freeboard allowance to prevent overflow. Construction of pits are in accordance to State Regulations and Best Management Practices.

SERVICE RIGS: Rigs use oil saver devices and swab fluid into tanks or emergency pits. Any portable tanks brought onto site, should be positioned or located so as to prevent any spilled oil from reaching navigable waters. Radio communication equipment and/or mobile telephones are present. Spill containment and clean-up materials are readily available at site. Any accidently

spilled fluids would be contained on site or in emergency constructed pits.

PARAFFIN REMOVAL: Any paraffin removed from the well is contained in drums or pits. The paraffin will be disposed of in an approved state & federal method. Refer to WV Associated Waste Guidance Document.

WASTE MANAGEMENT PRACTICES: Waste management practices such as control and disposal of associated oil field wastes and drilling fluid treatment and disposal are utilized as according to state and federal guidelines. Refer to WV General Permit for Associated Waste Management & API Environmental Guidance Document "Onshore Solid Waste Management". SPILL CONTAINMENT & CLEAN-UP MATERIALS are readily available during these operations in case of emergency.

FACILITY INSPECTION:

Welltenders are at the wellsites and containment facilities usually 1 time per week, thus any problems are discovered and corrected immediately.

During routine visits to the wellsite, inspections of the production equipment, valves, flanges, pumping well stuffing boxes, flowlines, pipelines, gages, meters, tanks, and tank dike containment structures are conducted. Fluid levels are gaged in the tanks, which aids in inventory control.

Visual inspections include looking for corrosion, rusting, flaking, scaling, fractures, and damp areas of production equipment and tanks. Ground support and foundation condition of tanks, pump jack units, and containment dikes are checked for their integrity.

At facilities where oil field brine water is present, weekly to monthly inspections are done. more frequent inspections may be needed, particularly in periods of low temperature conditions, sudden temperature changes, or periods of low flow rates, to detect possible system upsets that could cause an oil discharge.

Tanks located in low lying areas, flood plains, which may have potential of flooding problems, should be anchored down and checked frequently during heavy rain periods.

Secondary containment structures are inspected upon routine visits, looking for wall breaches or erosion issues, along with rainwater drainage needs, tank & piping integrity.

The "Production Equipment - Flowline Maintenance Program" includes routine. (weekly, monthly, and periodic) inspections, corrosion protection, repair, replacement, and renovation as needed. To be more specific, production tanks will be inspected at a minimum of at least once per year. Flowlines, piping, values, and all other production equipment will be inspected on a monthly basis, with any equipment over 5 years old being pressure tested annually. Exact schedules will be developed by the company management. Tank monitoring and integrity testing will be in compliance with (67 Fed. Reg. 47042, 40 CFR Part 112 / 8-16-02) Records are maintained, signed by the appropriate person doing the inspection or work, and maintained by the company for a minimum of 5 years.

TRAINING PROGRAM

The Training Program is an essential element so as to maintain a high level of personnel efficiency and awareness of the importance of spill prevention, aid in prevention of operational error and equipment failure, through proper maintenance and inspections.

The Training Program, will be carried out by the designated coordinator, listed on the Company Contact Information Sheet.

The Training Program, which covers SPCC, Environmental, & Safety issues, is conducted for new and old employees. New employees shall have training in these areas within the first week of employment. All employees, shall undergo training exercises, and/or meetings, briefings, at a minimum of 1 per year, but should be conducted quarterly. Supervisors, On-Site Coordinator, and Management personnel, should attend Governmental and Trade Organization Seminars and Workshops pertaining to environmental and safety issues, when available, for updates and refresher information.

Training Session Topics:

1) S.P.C.C. Plan review
2) Oil spill prevention & clean-up procedures
3) Environmental & Safety Regulations
4) Facility inspections, maintenance, record keeping
5) O.S.H.A. "Hazard Communication Standard"
6) MSDS for crude oil, natural gas, chemicals used on the job
7) Waste Management practices of associated oil field waste
8) Clean-up Material Inventory
9) Clean-up Equipment maintenance
10) Equipment & Material Inspections for readiness / preparedness

Meeting Records maintained, may be kept in separate file, but becomes part of this Plan.

Section 10 – Monitoring:

- Section 10-1: Injection pressure, annulus pressure, flow rate, and cumulative volume of injection fluid will be monitored by the well tender.
- Section 10-2: A Manifest shall be maintained for Class 2D disposal wells – N/A

Section 11 – Groundwater Protection Plan (GPP): See Appendix H

Section 12 – Plugging and Abandonment:

When this brine disposal well is to be plugged an approved permit will be received by the DEP before work begins. A workover will be proposed to pull the packer, run tubing, pump 6% gel to surface, spot 200 feet of cement across and above the perforated interval, pull tubing and pump 6% gel to surface and set a 200' cement plug from 1400 to 1200 feet, pull tubing and spot a third plug from 900 to 700 feet and a final plug from 410 feet to surface. All casing will remain in the well.

Section 13 - Class 2D Only – N/A

Section 14 – Financial Responsibility: See Appendix I and information regarding surety bond on file with the DEP OOG.

Section 15 – Site Security Plan:

Tank valves are equipped with steel plugs and/or valve locking devices.

Containment area - fresh water drains - are equipped with plugs and/or end plugs. Access road has locked gates, thus restricting access to the area, for un-authorized people.

Section 16 – List of All Permits – See Appendix K

Groundwater Use and Dependence Assessment: In the ¼ mile area of review there are five known shallow water wells in use. Four of these are for home use and one well is used intermittently by a small church. There are no other known sources of water and no known use of surface waters. There have been no changes in historical use or disposal in the immediate area, however, approximately one mile away a water injection

Chemical compatibility assessment of the injected and formation fluids: The produced water from the Big Injun and Big Lime that is being disposed of in the injection interval are compatible with each other and compatible with the waters of the injection interval.

9.Nature of Annulus between the injection tubing & production string:
Fresh water. Pressure in the annulus is zero and monitored with a 300 psi gauge checked weekly to ensure injection well integrity.

10. Alternative disposal method.
In the event that the UIC #2D0873432 injection well is required to be shut-in, the alternative method of disposal will be to use the UIC # 2D0871212 well.

****

Please let me know if these materials sufficiently meet the requirements, or if additional information is needed. Feel free to email or call me to discuss.

Thank you.

Best Regards,

Halsey M. Whitney
District Manager - Appalachian Basin
Prime Operating Company
708 1/2 Lee Street E.
Charleston, WV 25301
304-342-0121 office
203-536-7913 cell

(4/25)

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: Prime Operating Company
708 1/2 Lee Street East
Charleston, WV 25301
304-342-0121

Date: 06/12/2014

Subject: Underground Injection Control (UIC) Permit Application
UIC2D0873432
Requirement for Financial Responsibility

I, Halsey M. Whitney, 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: Halsey M. Whitney (acting agent for Prime Operating Company)

Signature: Halsey M. Whitney

Date: 06/12/2014

RECEIVED
Office of Oil and Gas
JUN 17 2014
WV Department of
Environmental Protection

VERIFICATION CERTIFICATE FOR INDEFINITE TERM SURETY BOND

THIS IS TO CERTIFY that Bond No. 04128212 issued by Fidelity and Deposit Company of Maryland dated this 11th day of May , 2001, in the amount of Dollars ($50,000.00), on behalf of Prime Operating Company (as Principal), and in favor of State of West Virginia Division of Oil and Gas (as Obligee) , covers a term which began on the 11th day of May , 2001, and ends only with the cancellation of said bond or other legal termination thereof; and that the said bond remains in effect, subject to all its agreements, conditions and limitations.

Signed, sealed and dated 9/19/13

Fidelity and Deposit Company of Maryland

BY: Jana M. Forrest
Jana M. Forrest
Attorney-in-Fact

SEAL

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **THOMAS O. MCCLELLAN, Vice President,** in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Bret S. BURTON, Jana M. FORREST, Tim H. HEFFEL, Desiree E. WESTMORELAND, Kathleen A. SNYDER and Emily R. TERHUNE, all of Wichita, Kansas, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings,** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY,** and **FIDELITY AND DEPOSIT COMPANY OF MARYLAND,** this 9th day of May, A.D. 2012.

ATTEST:

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: _____
Assistant Secretary
Eric D. Barnes

_____
Vice President
Thomas O. McClellan

State of Maryland
City of Baltimore

On this 9th day of May, A.D. 2012, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Assistant Secretary,** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

_____
Maria D. Adamski, Notary Public
My Commission Expires: July 8, 2015

POA-F 076-66928

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)	UIC2D0873432
Toxic Substances Control Act (TSCA)	
Best Management Plans	
Management of Used Oil	
Other Relevant Permits (Specify):	