

POCAHONTAS LAND CORP. LEASE

2577.73 AC±

WELL NO. WV 6168

N/P
GEORGIA PACIFICWELL NO.
WV 6168
STATE PLANE
COORDINATES(N) 175,915
(E) 1,808,498N/P
MARY MITCHELL ESTATEPAINTED LINE ON
ROCK CLIFFLEASE BOUNDARY
FOLLOWS TUG FORK

WELL WV 6168

TWIN BRANCH

LEASE BOUNDARY
FOLLOWS RAILROAD
R/W

DAVY

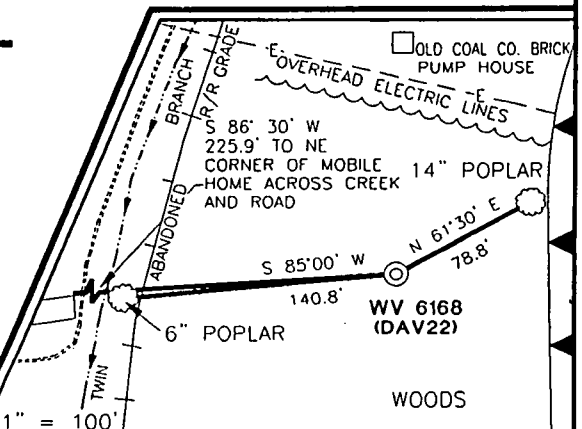
THERE APPEAR TO BE
NO PERMITTED WELLS WITHIN
2400'

WELL NO. WV 6168

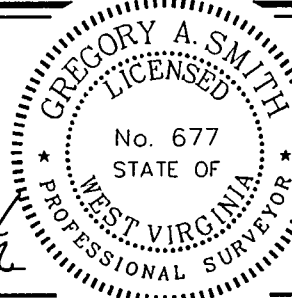
NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 10/30/00.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 243 PAGE 395 AND A MAP SHOWING 2577.73 ACRES AND IDENTIFIED AS NO. 1285-C DATED AUGUST 9, 1984.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MCDOWELL COUNTY IN DECEMBER, 2000.
5. WELL LAT./LONG. ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

REFERENCES



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

P.S.
677*Gregory A. Smith*

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

DATE JANUARY 9, 20 01

OPERATORS WELL NO. WV 6168

API
WELL NO. 47 - 047 - 01511
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 4552P6168(87-50)
PROVEN SOURCE OF ELEVATION SCALE 1"=2000'
JCT. OF OLD RAILROAD GRADE & CO. RD. 1160'

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



WELL TYPE : OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☒ IF "GAS" PRODUCTION ☒ STORAGE ☐ DEEP ☐ SHALLOW ☒

LOCATION : ELEVATION 1165' WATERSHED TWIN BRANCH OF TUG FORK
DISTRICT BROWNS CREEK COUNTY MCDOWELL QUADRANGLE DAVY 7.5'
SURFACE OWNER POCAHONTAS LAND CORPORATION ACREAGE 4254.38 AC±
ROYALTY OWNER PENN VIRGINIA OIL AND GAS CORPORATION LEASE ACREAGE 2577.73 AC±
PROPOSED WORK : LEASE NO. 70545
DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒ PLUG OFF OLD ☐
FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG ☐ OTHER ☐
PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION BERA
ESTIMATED DEPTH 2180'

WELL OPERATOR EQUITABLE PRODUCTION - EASTERN STATES INC.
ADDRESS P.O. BOX 2347 CHARLESTON, WV 25328

DESIGNATED AGENT STEPHEN G. PERDUE
ADDRESS P.O. BOX 2347 CHARLESTON, WV 25328

COUNTY NAME

PERMIT



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

July 27, 2011

FINAL INSPECTION REPORT

WELL PERMIT RELEASED

EQT PRODUCTION COMPANY,

The FINAL INSPECTION REPORT for the permit, API Well Number: 47-4701511, issued to EQT PRODUCTION COMPANY, and listed below has been received in this office, and reclamation requirements approved. The well designated by the permit number below has been released under reclamation and will remain under your bond.

James Martin
Chief

Operator: EQT PRODUCTION COMPANY
Operator's Well No: 506168
Farm Name: POCAHONTAS LAND CORP.
API Well Number: 47-4701511
Date Issued: 04/09/2001
Date Released: 07/27/2011

Promoting a healthy environment.

DATE STARTED/LOCATION: _____ API# 47-1511 WELL NO. 506168
 DRILLING COMMENCED: _____ OPERATOR: Equitable
 TD DATE: _____ DEPTH: _____ FARM: Pocahontas Land

WATER DEPTHS

COAL DEPTHS

IS THE OPERATOR KEEPING DETAILED DRILLING AND CEMENT RECORDS: YES ☐ NO ☐ (6 PTS)

FEET OF _____	" PIPE ON _____	CEMENT WITH _____	SKS (CIR.) YES <input type="checkbox"/> NO <input type="checkbox"/>
FEET OF _____	" PIPE ON _____	CEMENT WITH _____	SKS (CIR.) YES <input type="checkbox"/> NO <input type="checkbox"/>
FEET OF _____	" PIPE ON _____	CEMENT WITH _____	SKS (CIR.) YES <input type="checkbox"/> NO <input type="checkbox"/>
FEET OF _____	" PIPE ON _____	CEMENT WITH _____	SKS (CIR.) YES <input type="checkbox"/> NO <input type="checkbox"/>
FEET OF _____	" PIPE ON _____	CEMENT WITH _____	SKS (CIR.) YES <input type="checkbox"/> NO <input type="checkbox"/>
FEET OF _____	" PIPE ON _____	CEMENT WITH _____	SKS (CIR.) YES <input type="checkbox"/> NO <input type="checkbox"/>

YES ☐ NO ☐

PIT DISCHARGE DATE: _____ TYPE: _____ (LAND, DISPOSAL WELL, RE-USE, ETC.) API # _____

ACRES DISCHARGED: _____ : PIT VOLUME: _____ PIT ADDITIVES _____

FIELD ANALYSIS: pH _____ Fe _____ mg/l Cl _____ mg/l D.O. _____ mg/l TOC _____ mg/l

QUESTIONS FOR THIS REPORT ARE IN ACCORDANCE OF WV CODE 22-6-30
 AND REGULATION 35CSR 4-12.1 AND 35CSR-4-16 AND THE GENERAL WATER POLLUTION CONTROL PERMIT.

2. DID OPERATOR GIVE PROPER NOTICE TO INSPECTOR BEFORE THE FOLLOWING:

- A. CONSTRUCTION YES ☐ NO ☐ (2 PTS) B. DRILLING YES ☐ NO ☐ (2 PTS)
 C. PIT TREATMENTS YES ☐ NO ☐ (2 PTS) D. PIT DISCHARGE YES ☐ NO ☐ (2 PTS)
 E. RECLAMATION YES ☐ NO ☐ (2 PTS)

POINTS AVAILABLE FOR QUESTION 2: (10 PTS) _____

3. DID THE OPERATOR HAVE PERMIT ON SITE? YES ☐ NO ☐

(4 PTS) _____

4. WAS THE TIMBER CUT, STACKED, AND BRUSH USED FOR SEDIMENT BARRIERS BEFORE
 DIRT WORK STARTED? YES ☐ NO ☐

(4 PTS) _____

5. ARE ALL LOCATION AND/OR ROAD BANKS BEING SLOPED? YES ☐ NO ☐

(4 PTS) _____

6. WERE THE FOLLOWING SEDIMENT CONTROL STRUCTURES PROPERLY INSTALLED/MAINTAINED?

- A. ROAD DITCHES YES ☐ NO ☐ (3PTS) B. CROSS DRAINS YES ☐ NO ☐ (3 PTS)
 C. CULVERTS YES ☐ NO ☐ (3PTS) D. CREEK CROSSINGS YES ☐ NO ☐ (3PTS)
 E. DIVERSION DITCHES YES ☐ NO ☐ (3PTS) F. BARRIERS YES ☐ NO ☐ (3PTS)
 G. TEMPORARY SEEDING YES ☐ NO ☐ (3PTS)

POINTS AVAILABLE FOR QUESTION 6: (21 PTS) _____

7. HAS TOP SOIL (IF ANY) BEEN STOCKED PILED? YES ☐ NO ☐

(2 PTS) _____

8. IS THE WELL STAKE IN THE PROPER SPOT IN ACCORDANCE WITH 35CSR4-9.2.c
 AFTER CONSTRUCTION? YES ☐ NO ☐

(3 PTS) _____

9. IS THE PIT PROPERLY INSTALLED AND MAINTAINED? YES ☐ NO ☐

(6 PTS) _____

10. IS EQUIPMENT AND SITE BEING PROPERLY MAINTAINED TO PREVENT SPILLS? YES ☐ NO ☐

(3PTS) _____

11. IS EQUIPMENT BEING PROPERLY OPERATED TO MAINTAIN SAFE CONDITIONS? YES ☐ NO ☐

(3PTS) _____

14. WAS ROAD AND LOCATION PROPERLY RECLAIMED? YES ☐ NO ☐

- | | |
|--|---|
| A. ROADWAY YES <input type="checkbox"/> NO <input type="checkbox"/> (2PTS) | B. LOCATION YES <input type="checkbox"/> NO <input type="checkbox"/> (2PTS) |
| C. PITS YES <input type="checkbox"/> NO <input type="checkbox"/> (2PTS) | D. PIPELINES YES <input type="checkbox"/> NO <input type="checkbox"/> (2PTS) |
| E. TANK DIKES YES <input type="checkbox"/> NO <input type="checkbox"/> (2PTS) | F. GATES & FENCES YES <input type="checkbox"/> NO <input type="checkbox"/> (2PTS) |
| G. API INSTALLED YES <input type="checkbox"/> NO <input type="checkbox"/> (2PTS) | H. ADEQUATE SEEDING MATERIALS YES <input type="checkbox"/> NO <input type="checkbox"/> (2PTS) |
| I. WAS SEED BED ADEQUATE YES <input type="checkbox"/> NO <input type="checkbox"/> (2PTS) | |

POINTS AVAILABLE FOR QUESTION 14: (18 PTS) _____

15. WAS RECLAMATION COMPLETED WITHIN:

POINTS AVAILABLE FOR QUESTION 15: (15 PTS) _____

6 MTHS OF TD YES ☐ NO ☐ 8 PTS; 4 MTHS OF TD YES ☐ NO ☐ 3 PTS; 2 MTHS OF TD YES ☐ NO ☐ 4 PTS.

01-16-03
 DATE RELEASED

Ronald Scott
 INSPECTOR

TOTAL RECLAMATION SCORE: _____

no score

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Discharge Monitoring Report
Oil and Gas General Permit

Date Report Completed

06 / 13 / 02

fuB

Company Name: **Equitable Production**

API **47-047-01511**

County: **McDowell**

District: **Browns Creek**

Farm Name: **Pocahontas Land Corporation**

Well No. **6168**

Discharge Date/s From: (MMDDYY) **05 / 23 / 02**

To: (MMDDYY) **05 / 23 / 02**

Discharge Times **11:15pm**

To: **1:15pm**

Disposal Option Utilized: UIC (2): Permit No.

Centralized Facility (5): Permit No.

Reuse (4): Alternate Permit No.

Offsite Disposal (3) Site Location:

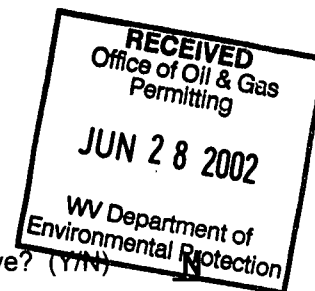
Land Application (1): ☒ (Include a topographical map of the Area.)

Other Method (6) (Include an explanation)

PIT DISCHARGED BY
J.W. PIT WELL SERVICING, INC
William Russell
SIGNATURE

Follow Instructions below to determine your treatment category.

Optional Pretreatment test: **5,000** Cl - mg/l **9** DO Mg/l



1. Do you have permission to use expedited treatment from the Director or his representative? (Y/N)
If yes who? _____, and place a four (4) on line 7. If not go to line 2.
2. Was Frac Fluid or flowback put into the pit? (Y/N) **Y** If yes go to line 5 if not go to line 3
3. Do you have a chloride value pretreatment (see above)? (Y/N) _____ If yes go to line 4 if not go to line 5
4. Is that chloride level less than 5000 mg/l? (Y/N) _____ If yes then enter a one (1) on line 7
5. Do you have a pretreatment value for DO? (see above) (Y/N) **Y** If yes then go to line 6 if not enter a three (3) on line 7
6. Is that DO greater than 2.5 mg/l? (Y/N) **Y** If yes then enter a two (2) on line 7 if not enter a three (3) on line 7
7. **2** is the category of your pit. Use the Appropriate section.

Name of Principle Exec. Officer **David Matz**

Title of Officer **V.P. Drilling and Completion**

Date Completed: **06-13-02**

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

Signature of a Principle Exec. Officer or Authorized agent

David Matz

Signature

API NO. **47-047-01511**

Parameter	Predischarge Limit Reported	Discharge Limits Reported	Units
pH 6-10		6-10	S.U.
Settling Time 5		N/A N/A	Days
Fe 6		6	mg/l
D.O. 2.5		2.5	mg/l
Settleable Sol. .5		.5	mg/l
Cl 5000		5000	mg/l
Oil Trace		Trace	Obs.
TOC		Monitor	mg/l
Oil and Grease		Monitor	mg/l
Al***		Monitor	mg/l
TSS		Monitor	mg/l
Mn Monitor		Monitor	mg/l
Volume		Monitor	Gals
Flow		Monitor	Gals
Disposal Area		Monitor	Acres

***Al is only reported if the pH is above 9.0

Category 2
Sampling Results

API NO. **47-047-01511**

Parameter	Predischarge Limit Reported	Discharge Limits Reported	Units
pH 6-10	<u>7</u>	6-10 <u>7</u>	S.U.
Settling Time 10	<u>10</u>	N/A N/A	Days
Fe 6	<u>.1</u>	6 <u>.28</u>	mg/l
D.O. 2.5	<u>9</u>	2.5 <u>9</u>	mg/l
Settleable Sol. .5	<u>.1</u>	.5 <u>ND</u>	mg/l
Cl* 12,500	<u>5,000</u>	12,500 <u>227</u>	mg/l
Oil Trace	<u>None</u>	Trace <u>None</u>	Obs.
TOC**		Monitor <u>N/A</u>	mg/l
Oil and Grease		Monitor <u>ND</u>	mg/l
Al***		Monitor <u>N/A</u>	mg/l
TSS		Monitor <u>N/A</u>	mg/l
Mn Monitor	<u>.03</u>	Monitor <u>.03</u>	mg/l
Volume		Monitor <u>23,310</u>	Gals
Flow		Monitor <u>19</u>	Gals / min.
Disposal Area		Monitor <u>2</u>	Acres

* Can Be 25,000 with inspectors approval, _____ Date:

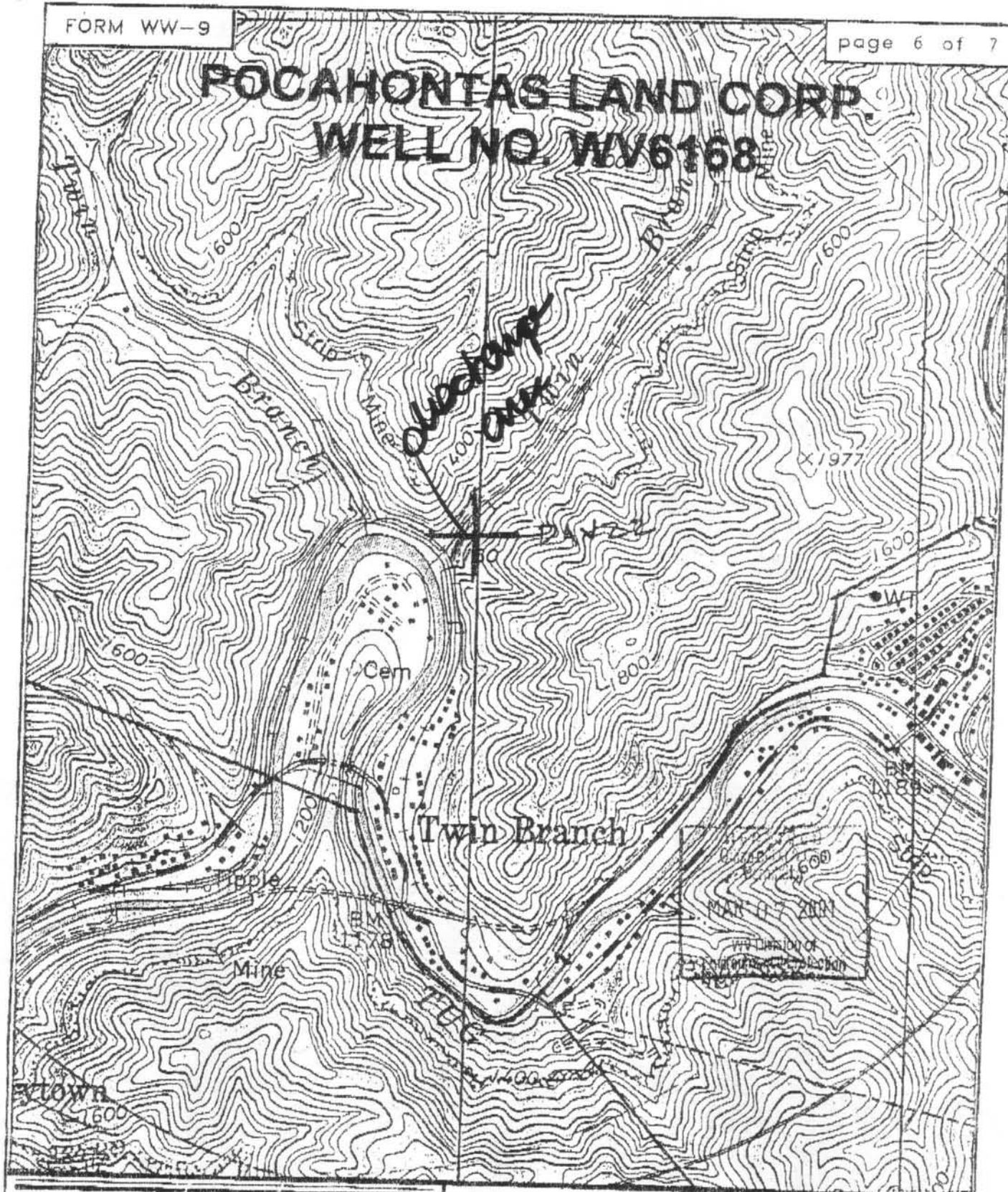
** Include a description of your aeration technique. = CODE 3

*** Al is only reported if the pH is above 9.0

FORM WW-9

page 6 of 7

POCAHONTAS LAND CORP. WELL NO. WV6168

**SLS**SMITH LAND SURVEYING
P.O. BOX 150 GLENVILLE, WV. 26351

TOPO SECTION OF Davy 7.5'

FILE NO. 4552 DATE 12/06/00 SCALE 1"=1000'

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Discharge Monitoring Report
Oil and Gas General Permit

Date Report Completed

12 / 18 / 01

APR

Company Name: **Equitable Production**

API **47-047-01511**

County: **McDowell**

District: **Browns Creek**

Farm Name: **Pocahontas Land Corporation**

Well No. **WV 506168**

Discharge Date/s From: (MMDDYY) **11 / 12 / 01**

To: (MMDDYY) **11 / 12 / 01**

Discharge Times **12:00pm**

To: **3:00pm**

Disposal Option Utilized: UIC (2): Permit No.

Centralized Facility (5): Permit No.

Reuse (4): Alternate Permit No.

Offsite Disposal (3) Site Location:

Land Application (1): **X** (Include a topographical map of the Area.)

Other Method (6) (Include an explanation)

PIT DISCHARGED BY
J.W. PIT WELL SERVICING, INC

William F. H.
SIGNATURE
Office of Oil & Gas
Permitting

DEC 21 2001

WV Department of
Environmental Protection

Follow Instructions below to determine your treatment category.

Optional Pretreatment test: **5,000** Cl - mg/l **9** DO Mg/l

1. Do you have permission to use expedited treatment from the Director or his representative? (Y/N) **N**
If yes who? _____, and place a four (4) on line 7. If not go to line 2.
2. Was Frac Fluid or flowback put into the pit? (Y/N) **Y** If yes go to line 5 if not go to line 3
3. Do you have a chloride value pretreatment (see above)? (Y/N) _____ If yes go to line 4 if not go to line 5
4. Is that chloride level less than 5000 mg/l? (Y/N) _____ If yes then enter a one (1) on line 7
5. Do you have a pretreatment value for DO? (see above) (Y/N) **Y** If yes then go to line 6 if not enter a three (3) on line 7
6. Is that DO greater than 2.5 mg/l? (Y/N) **Y** If yes then enter a two (2) on line 7 if not enter a three (3) on line 7
7. **2** is the category of your pit. Use the Appropriate section.

Name of Principle Exec. Officer **David Matz**

Title of Officer **V.P., Drilling and Completion**

Date Completed: **12/18/01**

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

Signature of a Principle Exec. Officer or Authorized agent

David Matz

Signature

WR-34
Page 2 of 3
Category 1
Sampling Results

API NO. **47-047-01511**

Parameter	Predischarge Limit Reported	Discharge Limits Reported	Units
pH 6-10		6-10	S.U.
Settling Time 5		N/A N/A	Days
Fe 6		6	mg/l
D.O. 2.5		2.5	mg/l
Settleable Sol. .5		.5	mg/l
Cl 5000		5000	mg/l
Oil Trace		Trace	Obs.
TOC		Monitor	mg/l
Oil and Grease		Monitor	mg/l
Al***		Monitor	mg/l
TSS		Monitor	mg/l
Mn Monitor		Monitor	mg/l
Volume		Monitor	Gals
Flow		Monitor	Gals
Disposal Area		Monitor	Acres

***Al is only reported if the pH is above 9.0

Category 2
Sampling Results

API NO. **47-047-01511**

Parameter	Predischarge Limit Reported	Discharge Limits Reported	Units
pH 6-10	<u>7</u>	6-10 <u>7</u>	S.U.
Settling Time 10	<u>10</u>	N/A N/A	Days
Fe 6	<u>.1</u>	6 <u>.57</u>	mg/l
D.O. 2.5	<u>9</u>	2.5 <u>9</u>	mg/l
Settleable Sol. .5	<u>.1</u>	.5 <u><0.2</u>	mg/l
Cl* 12,500	<u>5,000</u>	12,500 <u>914</u>	mg/l
Oil Trace	<u>None</u>	Trace <u>None</u>	Obs.
TOC**		Monitor <u>N/A</u>	mg/l
Oil and Grease		Monitor <u><5.0</u>	mg/l
Al***		Monitor <u>N/A</u>	mg/l
TSS		Monitor <u>N/A</u>	mg/l
Mn Monitor	<u>.36</u>	Monitor <u>.36</u>	mg/l
Volume		Monitor <u>42,630</u>	Gals
Flow		Monitor <u>236</u>	Gals / min.
Disposal Area		Monitor <u>2</u>	Acres

* Can Be 25,000 with inspectors approval, _____ Date:

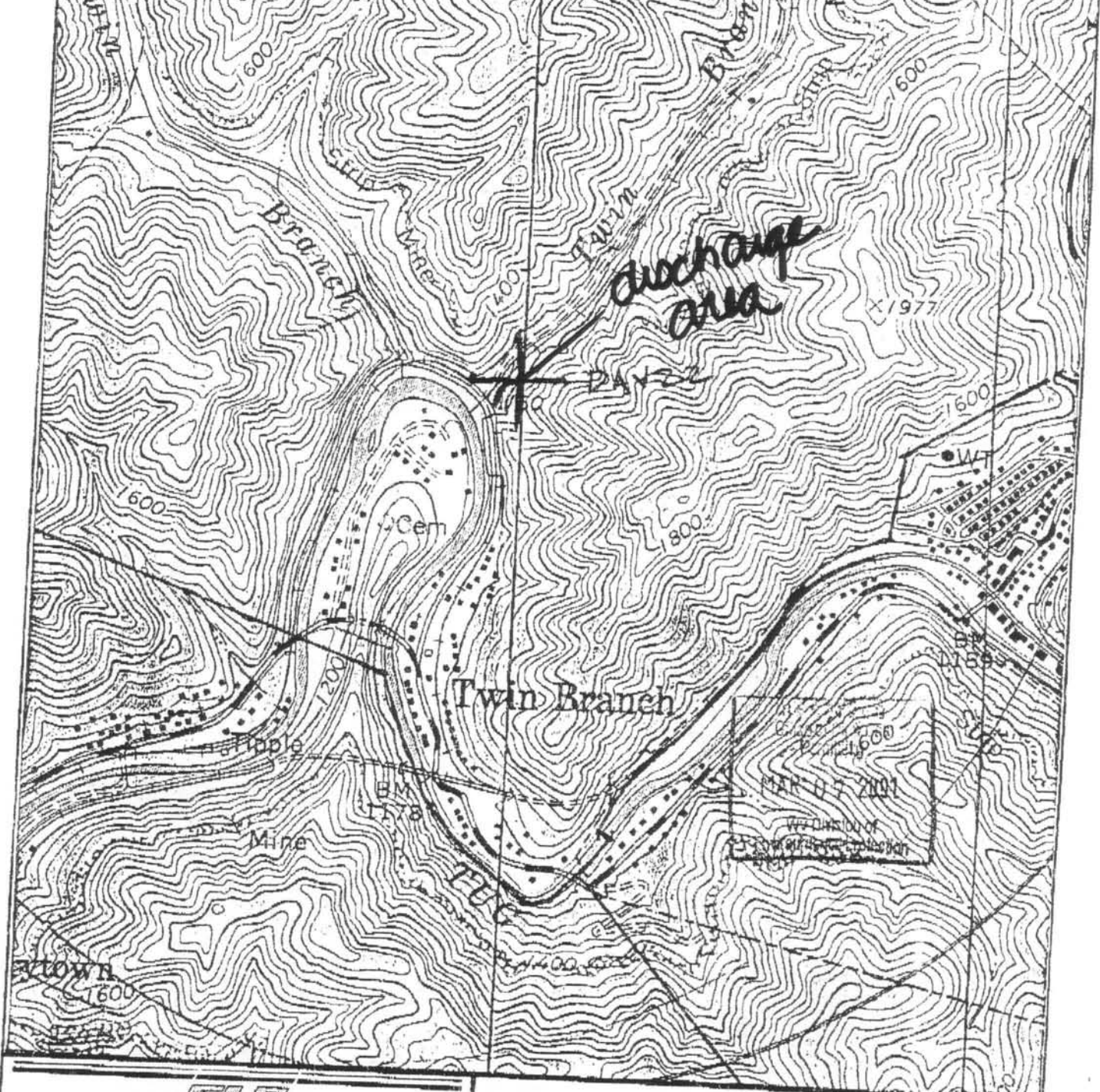
** Include a description of your aeration technique. = CODE 3

*** Al is only reported if the pH is above 9.0

FORM WW-9

page 6 of 7

POCAHONTAS LAND CORP. WELL NO. WV6168



SLS

SMITH LAND SURVEYING
P.O. BOX 150 CLEVELAND, WV. 26351

TOPO SECTION OF Davy 7.5'

FILE NO. 4552 DATE 12/06/00 SCALE 1"=1000'

WR-35
Rev (8-10)

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

DATE: _____
API #: 47-047-01511

Farm name: Pocahontas Land Corporation Operator Well No.: 506168

LOCATION: Elevation: 1165' Quadrangle: Davy 7.5'

District: Browns Creek County: McDowell
Latitude: 37.48133 Feet South of _____ Deg. _____ Min. _____ Sec.
Longitude -81.66656 Feet West of _____ Deg. _____ Min. _____ Sec.

Company:

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
EQT Production 550 Eagan St. Charleston, WV 25301				
Agent: Kenneth Kirk, EVP				
Inspector:				
Date Permit Issued:				
Date Well Work Commenced: 10/8/2001				
Date Well Work Completed: 11/7/2001				
Verbal Plugging: n/a				
Date Permission granted on:				
Rotary X Cable _____ Rig _____				
Total Vertical Depth (ft):	3554'		3554'	510.3
Total Measured Depth (ft):	3554'		3554'	
Fresh Water Depth (ft.):	11.75'		360'	208.5(CTS)
Salt Water Depth (ft.):				
Is coal being mined in area (N/Y)? Y				
Coal Depths (ft.):	8.625'		1020'	333.6(CTS)
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Berea (injection) Pay zone depth (ft) 3412-3468
Gas: Initial open flow n/a MCF/d Oil: Initial open flow n/a Bbl/d
Final open flow n/a MCF/d Final open flow n/a Bbl/d
Time of open flow between initial and final tests n/a Hours
Static rock Pressure n/a psig (surface pressure) after n/a Hours

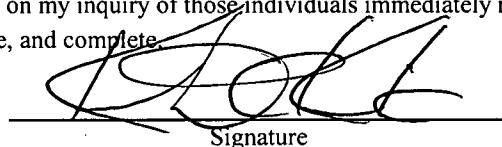
Second producing formation n/a Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after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

RECEIVED
Office of Oil & Gas

JUL 25 2011

WV Department of
Environmental Protection

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature

07/13/11
Date

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes X No _____

Were Y Electrical, N Mechanical, N or Geophysical logs recorded on this well?
Y/N Y/N Y/N

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

3412-3468 with 108 holes, frac with linear gel water frac

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		

See attached Driller's Log

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Office of Oil & Gas

JUL 25 2011

WV Department of
Environmental Protection

Gasco Drilling Inc.

Cedar Bluff, Va 24609
(540)964-2696

Rig No. 5

Driller's Log

Operator's Well Name & Number:

506168

API No. 47-4701511

AFE No. _____

RECEIVED
Office of Oil & Gas

County: Wyoming

JUL 25 2011

WV Department of
Environmental Protection

District: Clear Fork

State: West Virginia

Gasco Drilling

(Drilling Contractor)

[illegible]

DESCRIPTION (HARD, SOFT, COLOR ?)	REMARKS: (OIL, FRESH/SALT WATER, GAS)
	85 water 1' stringer
	111 " " 2' stringer
	250 6" stringer
	✓
Ran 81 Joints of 5 1/2"	
15.5" pipe 3549 set at 3554	
cement with B.J.	
270 SKs of 5-4-3 Blend /	
pump 9.5 Barrel of HCL ACID	
15%	
Plug down AT	P.M.
	10-18-01
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Office of Oil & Gas	
JUL 25 2011	
WV Department of Environmental Protection	

PLUGGING RECORD

REMARKS

DATE WELL PLUGGED: _____

PLUGGING CONTRACTOR: _____

PIPE LEFT IN HOLE: _____

Size: _____

Footage: _____

CEMENT/GEL PLUGS SET AS FOLLOWS:

From: _____

To: _____

Sacks/Type: _____

set 21' on well #1
set 23.3 on well #2
of 16" conduct

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Office of Oil & Gas

JUL 25 2011

WV Department of
Environmental Protection

SIZE	WEIGHT	GRADE	THREAD
11 $\frac{3}{4}$			<i>off</i>

SIZE	WEIGHT	GRADE	THREAD
------	--------	-------	--------

WV Department of
Environmental Protection

Office of Oil and Gas
1356 Hansford Street
Charleston, WV 25301
Phone: (304) 558-6075
Fax: (304) 558-6047

West Virginia Department of Environmental Protection

Bob Wise,
Governor

Stephanie R. Timmermeyer,
Cabinet Secretary

September 22, 2004

NOTIFICATION OF NON-COMPLIANCE

WR-35

EQUITABLE PRODUCTION COMPANY,

The FINAL INSPECTION REPORT for the permit, API Well Number: 47-4701511, issued to EQUITABLE PRODUCTION COMPANY, and listed below has been received in this office, and reclamation requirements approved. However, according to our records, the reports identified (WR-34, WR-35, WR-38) have not been filed. Consequently, the permit cannot be released. Additionally, failure to submit these reports within 15 days will result in enforcement action.

JAMES MARTIN
Chief,
Office of Oil and Gas

Operator: EQUITABLE PRODUCTION COMPANY

Operator's Well No: 506168

Farm Name: POCAHONTAS LAND CORP.

API Well Number: 47-4701511

Date Issued: 04/09/2001

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

WELL WORK PERMIT

Brine Disposal

This permit, API Well Number: 47-4701511, issued to EQUITABLE PRODUCTION COMPANY, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-654-3312 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable.

Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

This permit will expire in two (2) years from the issue date.

If there are any questions, please feel free to contact me or Mr. Al Blankenship at 304-558-6342.



JOHN JOHNSTON

Chief,
Office of Oil and Gas

Operator's Well No: 506168

Farm Name: POCAHONTAS LAND CORP.

API Well Number: 47-4701511

Permit Type: Brine Disposal

Date Issued: 04/09/2001

10/91



1) Date: March 7, 2001
2) Operator's Well No. Pocahontas Land 506168
3) SIC Code _____
4) API Well NO. 47 State 47 County 0154 Permit
5) UIC Permit No. _____

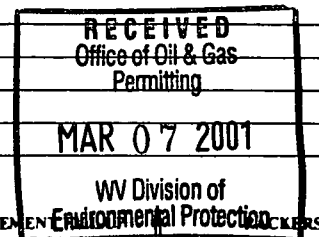
STATE OF WEST VIRGINIA
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

6) WELL TYPE: Liquid injection _____ / Gas injection (not storage) _____ / Waste disposal X _____
7) LOCATION: Elevation: 1165' Watershed: Twin Branch of Tug Fork
District: Browns Creek County: McDowell Quadrangle: Davy 7.5'
8) WELL OPERATOR Equitable Prod. - Eastern St. Inc. 9) DESIGNATED AGENT Stephen G. Perdue
Address P.O. Box 2347 Address P.O. Box 2347
Charleston, WV 25328 Charleston, WV 25328

10) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Mr. Ofie Helmick
Address P.O. Box 398
Brenton, WV 24818

11) DRILLING CONTRACTOR:
Name Unknown at this time
Address _____

12) PROPOSED WELL WORK: Drill X / Drill deeper _____ / Redrill _____ / Stimulate X /
Plug off old formation _____ / Perforate new formation _____ / Convert _____ /
Other physical change in well (specify) _____
13) GEOLOGICAL TARGET FORMATION, Berea Sandstone Depth 3370 feet (top) to 3420 feet (bottom)
14) Estimated depth of completed well, (or actual depth of existing well) 3565 ft.
15) Approximate water strata depths: Fresh, 50 feet; salt, None Rep. feet.
16) Approximate coal seam depths: None reported
17) Is coal being mined in the area? Yes _____ / No X /
18) Virgin reservoir pressure in target formation 859 est. psig. Source offset well 47-047-00944 (12 hr SIP)
19) Estimated reservoir fracture pressure 1998 (using .58 fg) psig (BHFP)
20) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour: 47.7 bbls Bottom hole pressure 1900
21) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES:
SEE ATTACHMENT
22) FILTERS (IF ANY): SEE ATTACHMENT
23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL:
SEE ATTACHMENT
24) CASING AND TUBING PROGRAM



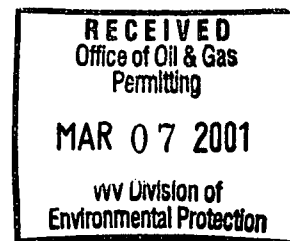
CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT OR OTHER CEMENTS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well	
Conductor	20"			X		28' KB	28' KB	C.T.S. Kinds
Fresh water	11 3/4"	H-40	42	X		110' KB	110' KB	C.T.S.
Coal	8 5/8"	J-55	24	X		1000'	1000'	C.T.S. Sizes 5 1/2"
Intermediate								
Production	5 1/2"	J-55	15.5	X		3515'	3515'	200' into 8" Depths set within 50' of
Tubing	2 3/8"						3365' + packer setting	top Berea perf
Liners	or 2 7/8"							Perforations:
								Top Bottom

25) APPLICANT'S OPERATING RIGHTS were acquired from Pocahontas Land Corporation
by deed _____ / lease X / other contract _____ / dated April 2nd, 19 85, of record in the
McDowell County Clerk's office in Lease Book 378 at page 596

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

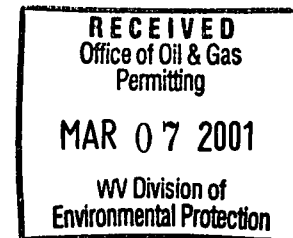
ATTACHMENT TO WW-3(B)

- 21) Biocide to be injected to control aerobic and anaerobic bacteria.
- 22) Cartridge filters – minimum 25u
- 23) Corrosion inhibitor in annular fluid between tubing and injection casing. Injection tubing to be internally coated; all surface piping and tankage to be lined or constructed of fiberglass, plastic or stainless steel.



ATTACHMENT TO WW3(B)

The frac gradient provided on the attached WW-3(B) form is based on the frac gradients determined in the Berea intervals for wells to the south of the proposed disposal well. The two wells for which Berea frac gradients of .58 were calculated were API Nos. 47-047-00296 and 47-047-00377. A third well, API No. 47-047-00944 had records showing a frac gradient of .48 in the Berea. An accurate determination of frac gradient in the Berea will be established for the proposed disposal well – and the gradients shown are used only for estimation purposes. A step-rate test for the proposed well can also be performed to further define the frac gradient.



1) Date March 7, 2001
Operator's
2) Well No. Pocahontas Land 506168
3) SIC Code
4) API Well No. 47 - -
State County Permit

STATE OF WEST VIRGINIA

NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the

OFFICE OF OIL AND GAS, DIVISION OF ENVIRONMENTAL PROTECTION

6) SURFACE OWNER(S) OF RECORD TO BE SERVED

(i) Name Pocahontas Land Corporation
Address P.O. Box 1517
Bluefield, WV 24701

(ii) Name
Address

(iii) Name
Address

7 (i) COAL OPERATOR N/A
Address

7 (ii) COAL OWNER(S) WITH DECLARATION ON RECORD:
Name Penn Va. Oil and Gas Corporation
Address P.O. Box 387
Duffield, VA 24244

7 (iii) COAL LESSEE WITH DECLARATION ON RECORD:
Name Marianna Coal Co./Robinson Phillips
Address P.O. Box 1116
Grundy, VA 24614

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents:

- (1) The Application for a Liquid Injection or Waste Disposal Well Work Permit on Form WW-3(B), which sets out the parties involved in the drilling or other work, and
- (2) The plat (surveyor's map) showing the well location on Form WW-6; and
- (3) The Construction and Reclamation Plan on Form WW-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

The date proposed for the first injection or waste disposal is April 20, 2001.

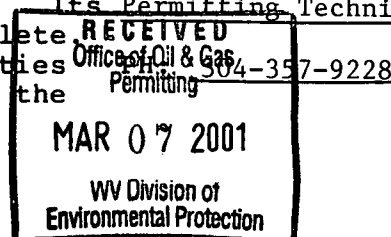
THE REASON YOU RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION (FORM WW-3(B)) DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22B of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Chief of the Office of Oil and Gas, West Virginia Division of Environmental Protection, with respect to a well at the location described on the attached Application and depicted on attached form WW-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan 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.

The person signing this document shall make the following certification:

"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.

Equitable Production - Eastern St.
Well Operator
By [Signature]
Its Permitting Technician



West Virginia Division of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

If no water well or spring is located within 1000 feet, the Chief may require the operator to sample and analyze water from a water well or spring within 2000 feet of the proposed well site.

Be advised, you have the right to sample and analyze any water supply at your own expense.

The laboratory used by the operator to analyze the samples will be approved by the Chief. The operator named below has decided to use the following laboratory to analyze the water samples:

<u>X</u>	Contractor Name	<u>SLS Inc. – Environmental Division</u>
<u> </u>	Well operator's private laboratory	
	Well Operator	<u>EQUITABLE PRODUCTION – EASTERN STATES, INC.</u>
	Address	<u>P.O. Box 2347</u>
		<u>Charleston, WV 25328</u>
	Telephone	<u>304-343-9566</u>

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underlining which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site please indicate such.

There were samples taken on 3 water wells within ½ mile of this proposed location. Results and map are attached.

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name EQUITABLE PRODUCTION - EASTERN STATES, INC. OP ID

Watershed Twin Branch of Tug River Quadrangle Davy 7.5'

Elevation 1165' County McDowell District Browns Creek

Description of anticipated Pit Waste: Drill water, frac blow back and various formation cuttings

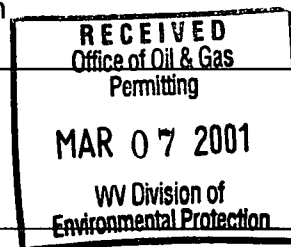
Will a synthetic liner be used in the pit? Yes, if impervious material is not available on site

Proposed Disposal Method for Treated Pit Wastes:

- ☒ Land Application
- ☐ Underground Injection - UIC Permit Number
- ☐ Reuse (at API Number)
- ☐ Offsite Disposal (Supply form WW-9 disposal location)
- ☐ Other (Explain)

Proposed Work for Which Pit Will be Used:

- ☒ Drilling Swabbing
- ☐ Workover Plugging
- ☐ Other (Explain)



I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION Permit issued on June 14, 1994, by the Office of Oil and Gas of the West Virginia Division of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any terms or conditions 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.

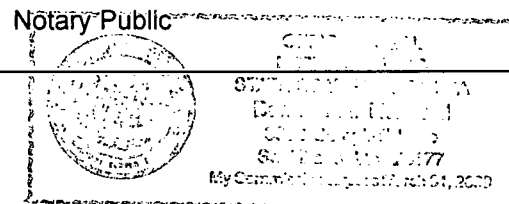
Company Official Signature

Company Official (Typed or Printed) Bryant Wayne Bowman II

Company Official Title Permitting Technician

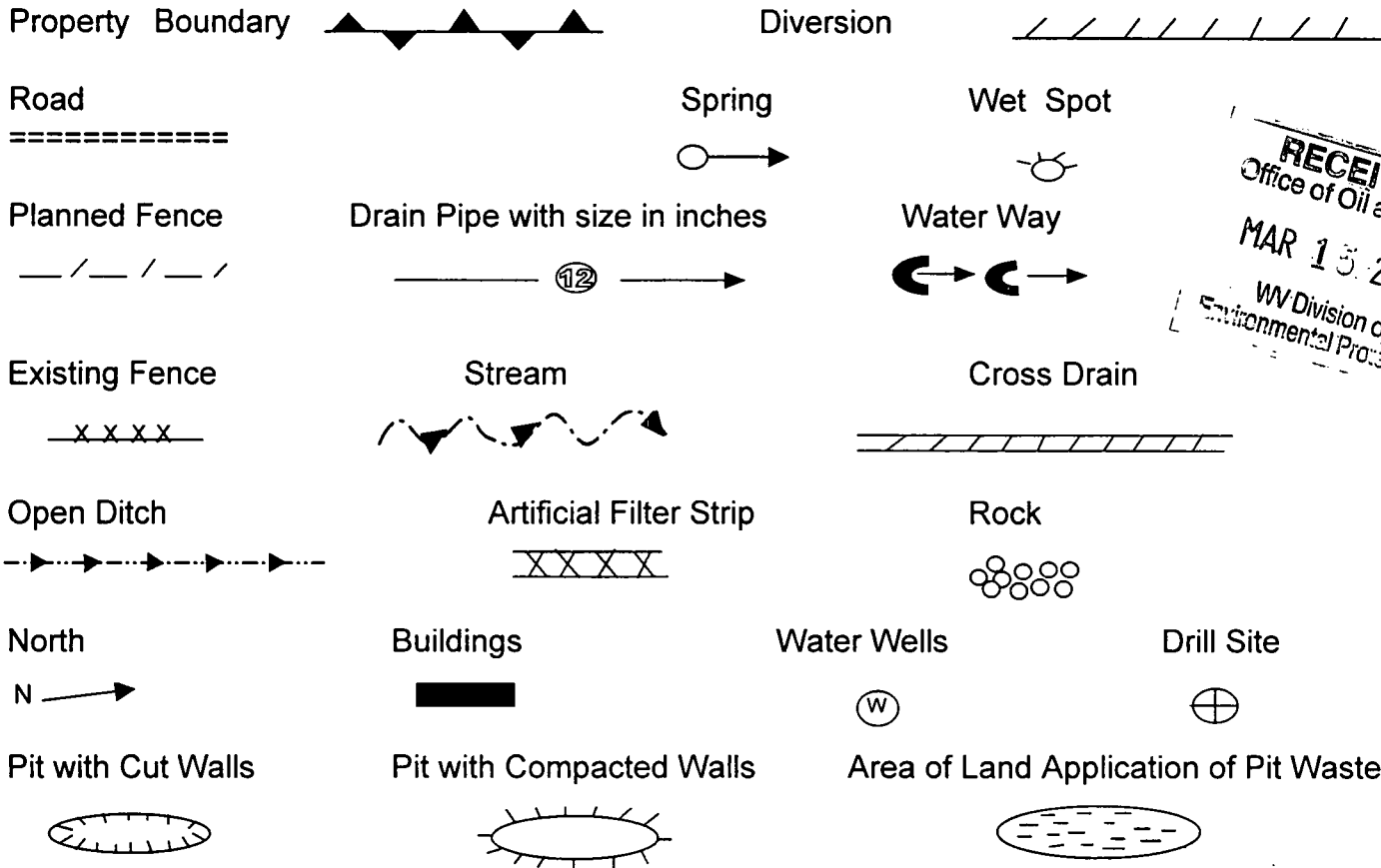
Subscribed and sworn before me this 7th day of March, 2001

My Commission Expires March 31, 2009



LEGEND

47-01511



RECEIVED
Office of Oil and Gas
MAR 15 2001
WV Division of
Environmental Protection

Proposed Revegetation Treatment: Acres Disturbed 2.0 Prevegetation pH

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20) or equivalent 1/3 Ton Lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre or hydroseed

SEED MIXTURES

Area I		Area II	
Seed Type	Lbs/acre	Seed Type	Lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	10	Alsike Clover	5
Annual Rye	5		
Redtop	2		

ATTACH:

Drawing(s) of road, location, pit and proposed area for land application.

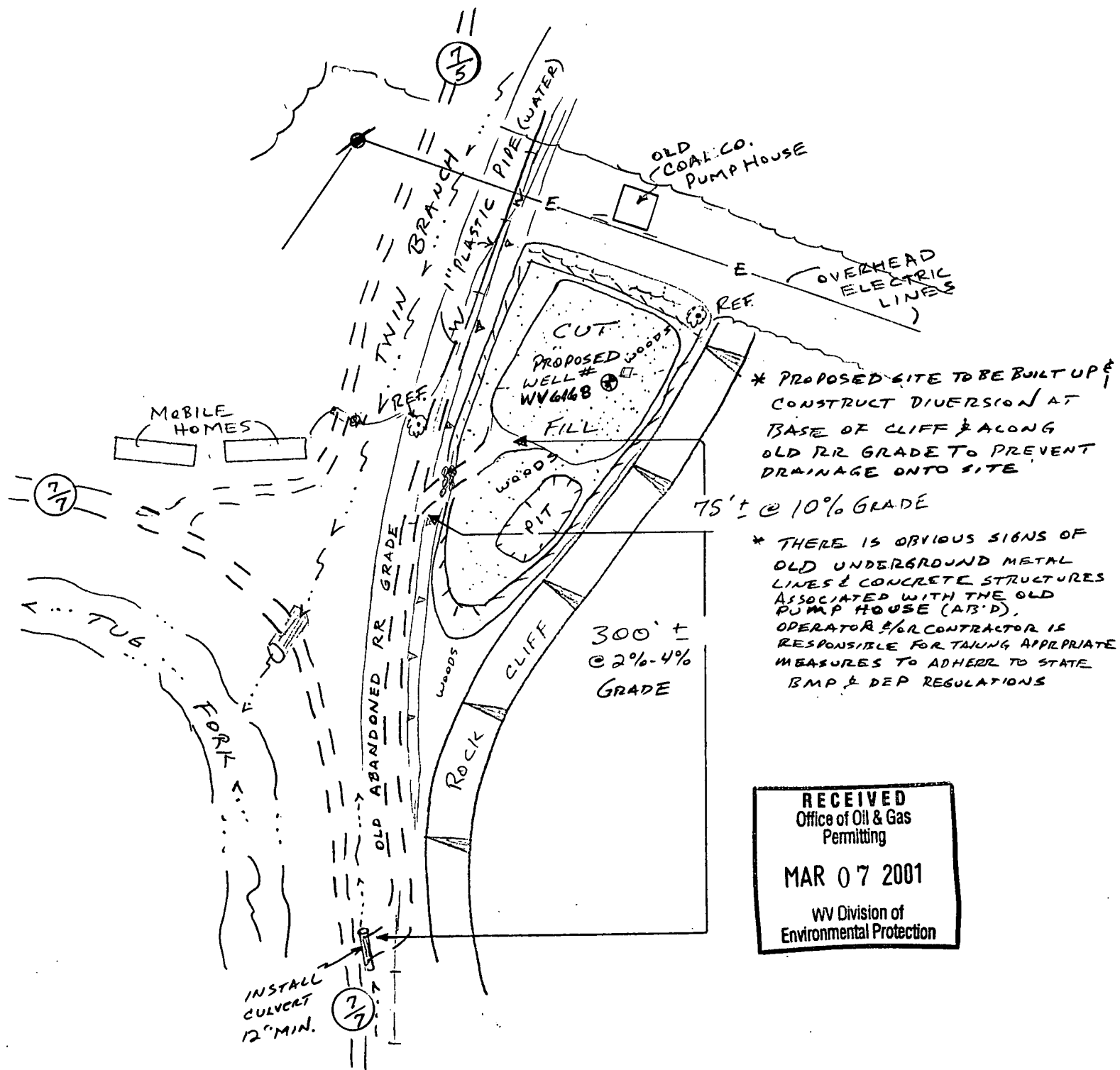
Photocopies section of involved 7.5' topographic sheet.

Plan approved by: [Signature]

Title: [Signature] Date: 3-12-01

Field Reviewed? ☒ Yes ☐ No

POCAHONTAS LAND CORP. WELL NO. WV6168



RECEIVED
Office of Oil & Gas
Permitting

MAR 07 2001

WV Division of
Environmental Protection



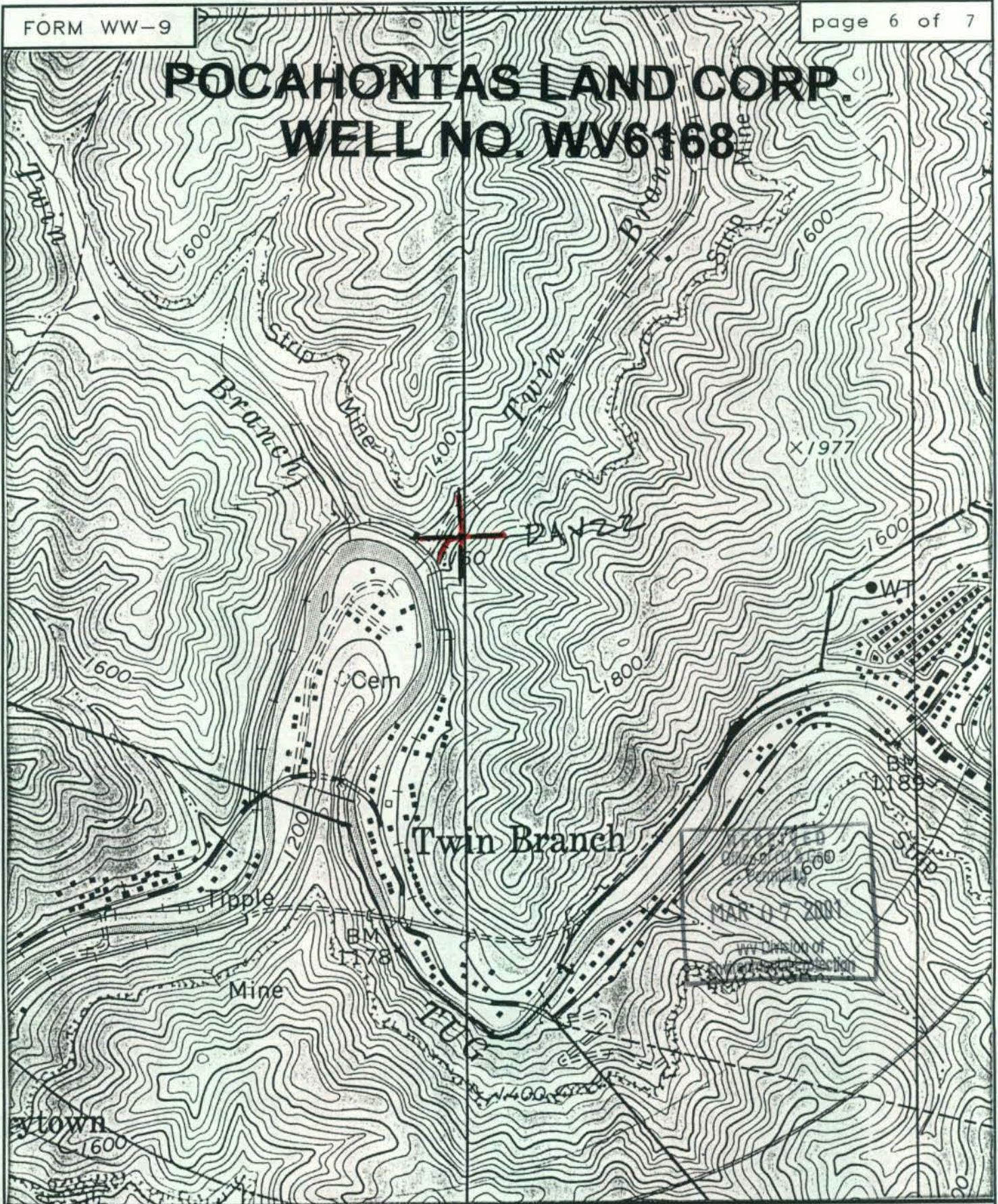
SMITH LAND SURVEYING, INC.

P.O. BOX 150, GLENVILLE, WV 26351

Phone (304) 462-5656 or 462-5634

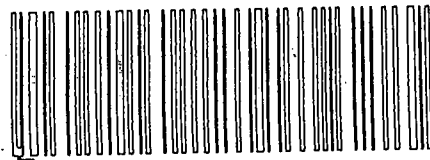
DRAWN BY C.V.M. DATE 12-06-00 FILE NO. 4552

POCAHONTAS LAND CORP. WELL NO. WV6168

**SLS**SMITH LAND SURVEYING
P.O. BOX 150 GLENVILLE, WV. 26351

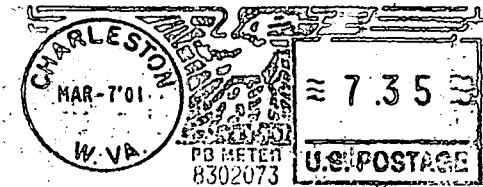
TOPO SECTION OF Davy 7.5'

FILE NO. 4552 DATE 12/06/00 SCALE 1"=1000'



7000 1670 0009 5034 3270

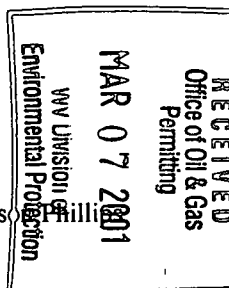
RETURN RECEIPT REQUESTED



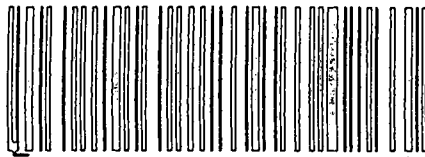
1710 Pennsylvania Avenue
P.O. Box 2347
Charleston, WV 25302

EQUITABLE
PRODUCTION

Mr. Mark Goff
Marianna Coal Co./Robins Hill
P.O. Box 1116
Grundy, VA 24614

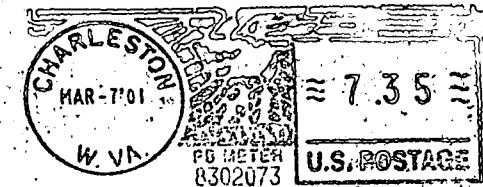


47-01511



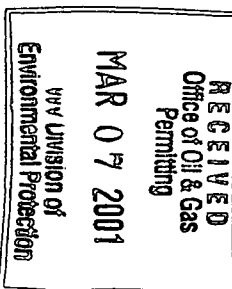
7000 1670 0009 5034 3287

RETURN RECEIPT REQUESTED



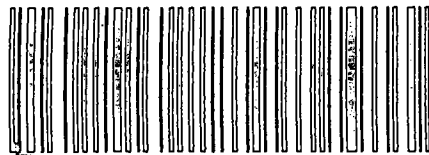
1710 Pennsylvania Avenue
P.O. Box 2347
Charleston, WV 25302

EQUITABLE
PRODUCTION



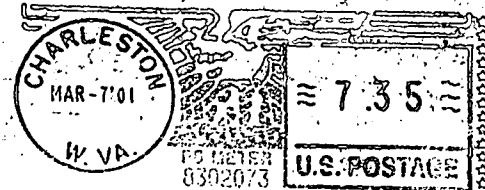
Mr. James T. Harsha
Penn Virginia Oil and Gas Corporation
P.O. Box 387
Duffield, VA 24244

47-01511



7000 1670 0009 5034 3294

RETURN RECEIPT REQUESTED



1710 Pennsylvania Avenue
P.O. Box 2347
Charleston, WV 25302

EQUITABLE
PRODUCTION

Mr. John W. Payne
Pocahontas Land Corporation
P.O. Box 1517
Bluefield, WV 24701

RECEIVED
Office of Oil & Gas
Permitting
MAR 07 2001
WV Division of
Environmental Protection

47-01511

EQUITABLE
PRODUCTION

1710 Pennsylvania Avenue
Charleston, WV 25302
www.eqt.com

TEL 304.343.9566
FAX 304.344.0363

March 15, 2001

Mr. John W. Payne
Pocahontas Land Corporation
P.O. Box 1517
Bluefield, WV 24701

RE: Pocahontas Land 506168 Permit Application

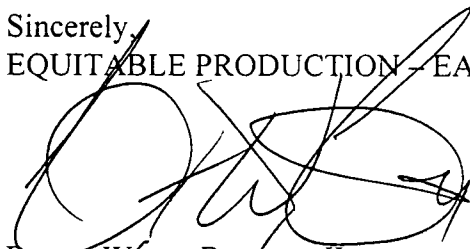
Dear Mr. Payne:

We had an error on the WW-3(a) form sent to you originally. We listed Penn Virginia as the coal owner, which is incorrect. Enclosed, please find a revised WW-3(a) form and a coal waiver. We respectfully request, you sign, as coal owner, the attached waiver and return it to me in the enclosed SASE.

If you have any questions, please feel free to contact me at (304) 357-9228.

Sincerely,

EQUITABLE PRODUCTION - EASTERN STATES, INC.:

A handwritten signature in black ink, appearing to read 'Bryant Wayne Bowman II', is written over the company name.

Bryant Wayne Bowman II
Permitting Technician



7099 3220 0009 4810 3777

RETURN RECEIPT REQUESTED



1710 Pennsylvania Avenue
P.O. Box 2347
Charleston, WV 25302

EQUITABLE
PRODUCTION

Mr. John W. Payne
Pocahontas Land Corporation
P.O. Box 1517
Bluefield, WV 24701

9
Issue

9-01-00

New drill for a brine disposal well.

API # 47-1511
Operator: Equitable
Well #/Name: 506168
Reviewed By: JS

CHECK LIST FOR FILING A PERMIT

I. New Drill

- ☒ WW-2B
- ☒ WW-2B signed off by inspector *OK*
- ☒ WW-2A
- ☐ Surface Owner Waiver
- ☐ Coal Owner/Lessee/Operator Waiver
- ☒ WW-2A (1) including page and book and royalty percentage
- ☒ WW-2B (1) (If there are sources to be tested - we need names, addresses and location on topo listed as water testing)
- ☒ WW-9 (page 1 and 2)
- ☒ 3/12/01 Inspector Signature on WW-9 *OK*
- ☒ Reclamation Plan
- ☒ Mylar Plat
- ☒ Topography Map of the proposed location
- ☒ Certified Mail Receipts or affidavit of personal service
- ☒ Bond
- ☒ A check for \$450.00
- ☒ Workers Comp/Employ. OK

Bottom of
WW-2B

+ Mailed app to
Robinson Phillips with
new address. Rec'd in
006 3/22. Issue

II. Re-Work, Frac and Drill Deeper Permits

- ☐ WW-2B
- ☐ WW-2B signed off by inspector
- ☐ WW-2A
- ☐ Surface Owner Waiver
- ☐ Coal Owner/Lessee/Operator Waiver
- ☐ WW-2A (1) including book and page and royalty percentage.
- ☐ WW-9 (page 1 and 2)
- ☐ Inspector Signature on WW-9
- ☐ Reclamation Plan
- ☐ Mylar Plat
- ☐ Topography Map of location for the well and pit
- ☐ Certified Mail Receipts or affidavit of person service
- ☐ Completion/Well Records of previous work
- ☐ Bond
- ☐ A check for \$350.00 if no pit \$250.00
- ☐ Workers Comp/Employ. OK

4/9

OIL AND GAS RECLAMATION NOTICE

TO:

Name Pocahontas Land Corp
Address P.O. Box 1517
Bluefield, WV 24701

Name
Address

Name Ron Scott
Address 150 Prospect Street
Spencer, WV 25276

Pursuant to West Virginia Code 22-7-5, notice is hereby given that the undersigned Well Operator is commencing the reclamation required by West Virginia Code 22-6-30 of the surface disturbance caused by well work described as follows:

API Number: 47-047-01511
Operator's Well Number: Poca TXO 506168
District: Browns Creek County: McDowell
Generally Used Farm Name: POCAHONTAS LAND CORP

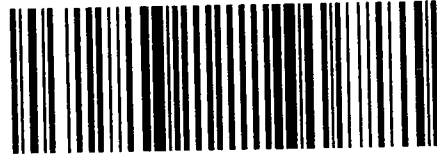
Any claim for oil and gas production damage compensation pursuant to Article 7, Chapter 22 of the Code must be made within two years of the receipt of this notice.

WELL OPERATOR: EQUITABLE PRODUCTION COMPANY

By: Victoria Sugar
Title of Signatory Landman
Address P.O. Box 2341
Charleston, WV 25328
Telephone (304) 348-3845

1710 Pennsylvania Avenue
Charleston, WV 25302

CERTIFIED MAIL



7001 0360 0000 0260 5910

RETURN RECEIPT REQUESTED

EQUITABLE
PRODUCTION

Todd Dunn
Pocahontas Land Corporation
P.O. Box 1517
Bluefield, WV 24701

An EQUITABLE RESOURCES Company

