

Pocahontas Land Corp. Coordinates

USM-3 52,425.45 N  
5,353.36 W

(\*) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. USM/USM-3  
DRAWING NO. USM-3  
SCALE 1" = 2000'  
MINIMUM DEGREE OF ACCURACY 1:2500  
PROVEN SOURCE OF ELEVATION USGS

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

(SIGNED) [Signature]  
P.E. No. 3091 L.L.S.



STATE OF WEST VIRGINIA  
OIL AND GAS DIVISION



DATE December 02 19 92  
OPERATOR'S WELL NO. USM-3  
API WELL NO. 47-109-1306  
STATE COUNTY PERMIT

(\*) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
(IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
LOCATION: ELEVATION 1630 WATER SHED Indian Creek of Guyandotte  
DISTRICT Center 3 COUNTY Wyoming  
QUADRANGLE Pineville 215  
SURFACE OWNER Pocahontas Land Corporation ACREAGE \_\_\_\_\_  
OIL & GAS ROYALTY OWNER Pocahontas Land Corp. LEASE ACREAGE \_\_\_\_\_  
LEASE NO. \_\_\_\_\_

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

PLUG AND ABANDON  CLEAN OUT AND REPLUG   
TARGET FORMATION Poca No. 3 Seam ESTIMATED DEPTH 824' Bottom El. 806  
WELL OPERATOR U. S. Steel Mining Co. DESIGNATED AGENT L. J. Simpkins  
ADDRESS Box 338 Pineville, WV 24874 ADDRESS Box 338 Pineville, WV 24874

8-0251

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: POCAHONTAS LAND CORP. Operator Well No.: USM-3

Location: Elevation: 1,630.0 Quadrangle: Pineville

District: CENTER County: WYOMING  
Latitude: 11,250 Feet South of 37 Deg. 32 Min. 30 Sec.  
Longitude: 7,930 Feet West of 81 Deg. 32 Min. 30 Sec.

Company: U.S. STEEL MINING CO.  
P.O. Box 338  
Pineville, WV  
24874-0338

Agent: J. A. Zupanick

Inspector: Offie Helmick  
Permit Issued: 01/01/93  
Well work commenced: (see note below)  
Well work completed: \_\_\_\_\_  
Verbal plugging \_\_\_\_\_  
permission granted on: \_\_\_\_\_  
Rotary \_\_\_\_\_ Cable \_\_\_\_\_ Rig \_\_\_\_\_  
Total depth (ft) 927  
Fresh water depths (ft) \_\_\_\_\_  
Salt water depths (ft) \_\_\_\_\_  
Is coal being mined in the area (Y/N)? Y  
Coal depths (ft): 411-412, 685-688, 779-783, 810-814

| Casing & Tubing                         | Used in Drilling | Left in Well | Cement Fill up      |
|---|------------------|--------------|---------------------|
| 8-5/8"                                  | 225'             | 225'         | 175 ft <sup>3</sup> |
| 4-1/2"                                  |                  | 927'         | 221 ft <sup>3</sup> |
| <i>Temporarily plugged solid cmt to</i> |                  |              |                     |
| <i>SURFACE</i>                          |                  |              |                     |
|   |                  |              |                     |

OPEN FLOW DATA

Producing formation Pocahontas No. 3 Seam Pay zone depth (ft) 814  
 Gas: Initial open flow n/a 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 \_\_\_\_\_ pig (surface pressure) after \_\_\_\_\_ hours

Second Producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
 Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow \_\_\_\_\_ Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests: \_\_\_\_\_ hours  
 Static rock pressure \_\_\_\_\_ pig (surface pressure) after \_\_\_\_\_ hours

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

Note: This well is permitted as a CBM vent well. The borehole was previously used in a test of the reservoir properties of the Pocahontas coal formations. The borehole was drilled under DEP Prospect Permit No. \_\_\_\_\_ prior to the issuance of this permit.

*well Bore is temporarily plugged until mining in area proceeds*

For: J. A. Zupanick  
U.S. Steel Mining Co., Inc.  
By: Joseph A. Zupanick  
Date: February 13, 1995

Operator: USM-3  
 API: 47-109-1306  
 Location: Hurricane Br.

## Details of Perforated Intervals, Fracturing or Stimulation, Physical Change, Etc.

CBM vent hole located at Hurricane Branch. Well was originally used to test reservoir properties of Pocahontas coal formations. Poca No. 3 was perforated and stimulated with 50,728 gal. 75% quality nitrogen foam containing 100,128 lbs 20/50 mesh sand. The Poca No. 4 & 5 were perforated and fracture stimulated together with 50,400 gal. 75 % quality foam containing 97,855 lbs 20/50 mesh sand.

## Well Log & Geologic Record

| Formation     | Top | Bottom |
|---------------|-----|--------|
|               |     |        |
| Sand & Shale  | 0   | 225    |
| Sand          | 225 | 256    |
| Shale         | 256 | 302    |
| Sand & Shale  | 302 | 361    |
| Shale         | 361 | 411    |
| Coal          | 411 | 412    |
| Sand & Shale  | 412 | 523    |
| Sand          | 523 | 595    |
| Quartz        | 595 | 644    |
| Sand          | 644 | 685    |
| Coal (Poca 6) | 685 | 688    |
| Sand          | 688 | 779    |
| Coal (Poca 4) | 779 | 783    |
| Sand & Shale  | 783 | 810    |
| Coal (Poca 3) | 810 | 814    |
| Sand & Shale  | 814 | 933    |

*Recd 12/17/92*

109-1306

*Issued 11/1/93*

*Expires 11/1/95*

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

- 1) Well Operator: U. S. Steel Mining Co., Inc. 50510 (3) 548
- 2) Operator's Well Number: USM-3 3) Elevation: 1630
- 4) Well type: (a) Oil  or Gas   
(b) If Gas: Production  Underground Storage   
Deep  Shallow
- 5) Proposed Target Formation(s): Pocahontas No. 3 Seam
- 6) Proposed Total Depth: 824 feet
- 7) Approximate fresh water strata depths: None
- 8) Approximate salt water depths: None
- 9) Approximate coal seam depths: Poca. No. 3 Seam - 700' (Est. Bottom El. 306)
- 10) Does land contain coal seams tributary to active mine? Yes  No
- 11) Proposed Well Work: *Drill & Stimulate New Coal Meth well*
- 12)

CASING AND TUBING PROGRAM

| TYPE              | SPECIFICATIONS |        |                | FOOTAGE INTERVALS                  |              | CEMENT            |
|-------------------|----------------|--------|----------------|------------------------------------|--------------|-------------------|
|                   | Size           | Grade  | Weight per ft. | For drilling                       | Left in well | Fill-up (cu. ft.) |
| Conductor         | 8" Steel       | Casing |                | <i>→</i>                           | 824          | 287.              |
| Fresh Water       |                |        |                |                                    |              |                   |
| Coal              |                |        |                |                                    |              |                   |
| Intermediate      |                |        |                |                                    |              |                   |
| <u>Production</u> | 6" Steel       | Casing |                |                                    | 824          |                   |
| Tubing            |                |        |                | <i>Formation Packer of cement.</i> |              |                   |
| Liners            |                |        |                |                                    |              |                   |

PACKERS : Kind \_\_\_\_\_  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_

For Division of Oil and Gas Use Only

Fee(s) paid:     Well Work Permit     Reclamation Fund     WPCP  
 Plat     WW-9     WW-2B     Bond \_\_\_\_\_     Agent  
(Type)

16570

*244/44*

1) Date: December 01, 1992  
2) Operator's well number  
USM-3  
3) API Well No: 47 - 109 - 1306  
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:  
(a) Name Pocahontas Land Corp.  
Address 800 Princeton Avenue  
Bluefield, WV 24701  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_

5) (a) Coal Operator:  
Name U. S. Steel Mining Co., Inc.  
Address Box 338  
Pineville, WV 24874  
(b) Coal Owner(s) with Declaration  
Name Pocahontas Land Corp.  
Address 800 Princeton Avenue  
Bluefield, WV 24701  
Name \_\_\_\_\_  
Address \_\_\_\_\_

6) Inspector Rodney Dillon  
Address P. O. Box 1526  
Sophia, WV 25921  
Telephone (304) - 683-3989

(c) Coal Lessee with Declaration  
Name USX Corporation  
Address P. O. Box 5686  
Princeton, WV 24740

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 6 on the above named parties, by:

- X Personal Service (Affidavit attached)
- \_\_\_\_\_ Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

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, 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.

Well Operator U. S. Steel Mining Co., Inc.  
By: John L. Schroder III  
Its: John L. Schroder, III - General Manager  
Address Box 338  
Pineville, WV 24874  
Telephone (304) 732-5249

Subscribed and sworn before me this 17 day of December, 1992

Norma J. Warner  
My commission expires August 14, 1994 Notary Public

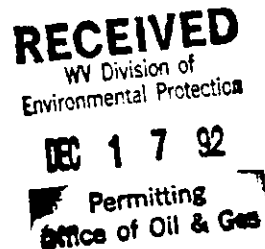
U.S. Steel Mining Co., Inc  
P.O. Box 338  
Pineville, WV 24874

Central Division



Dated: December 02, 1992

Theodore M. Streit  
Chief-Office Oil & Gas  
# 10 McJunkin Rd  
Nitro, West Virginia 25143



ATTN: Jamie Stevens

RE: Oil & Gas Permit Application  
U. S. Steel Mining Co., Inc. (USM)  
Coal Seam Gas Ventilation Borehole  
Borehole No. USM-3

109-1306

Dear Mr. Streit:

Included herewith is an application for permitting a coal seam gas vertical vent borehole. We are requesting the assistance of your department in completing an expeditious review of the application in order that any comments or concerns regarding the permitting can be addressed, and permit approval received, prior to December 31, 1992. As you are aware, West Virginia does not currently have regulations applicable to coal seam gas production. We, therefore, need special assistance and consideration for approval of this application.

The vertical borehole is a necessary part of our coal mine operations and is used to transport coal seam gas produced in our underground mine work area to the surface for venting. The coal seam gas must be removed prior to mining in order to maintain safe working conditions in the mine area and mitigate exorbitant mine ventilation costs.

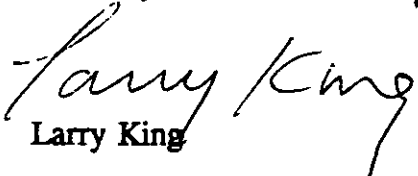
The borehole has been drilled, cased and sealed, and has not been used to transport coal seam gas from the underground mine area. Once underground mine development accesses the borehole area we will remove the borehole seal and install an inner pipe or "production pipe" within the cased borehole prior to operation as a coal seam gas ventilation borehole.

USM is in the process of finalizing an agreement with a West Virginia gas production company for commercializing production of currently vented and wasted coal seam gas. In order to make the commercial project economically feasible it is necessary that the coal seam gas production from any vertical boreholes qualify for federal tax credits under Section 29 of the Federal Revenue Code. Qualification procedures must be completed by December 31, 1992 to take advantage of the federal credits. Once qualified, the tax credits are allowed on all production from a borehole through year 2002.

The vertical borehole will only be used to transport coal seam gas to the surface area for venting and commercialization. The gas in the inner production pipe should never exceed about 2 psi pressure or 10" Hg vacuum. We plan to add production pipes to vertical boreholes which are installed for future coal seam gas venting and commercialization. However, there may be applications where a single casing is the most practical for our mining and degas procedures. We would seek special approval from the Oil & Gas Board if this became necessary.

Commercial coal seam gas production would be beneficial to USM and West Virginia. We have spent over two years trying to complete a commercial project for this area. We need your departments assistance in completing the permitting process prior to December 31, 1992. Please contact me at 412-223-5554 at the earliest opportunity if there are any questions regarding the application or our coal seam degasification methods or procedures.

Sincerely,

  
Larry King

**Attachments**

c.c. Michael Lewis  
w/o Att.