

POCAHONTAS LAND CORP. COORDINATES

HDH-2 57,697.91 N  
13,368.79 E

USGS BM 21 AFK  
57,696.59 N  
13,368.25 E

CORNER 185  
N 33347  
E 8402

N 50844  
E 8008  
NER 168

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1:2500  
 PROVEN SOURCE OF ELEVATION USGS BM 21 AFK

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

(SIGNED) *[Signature]*  
 R.P.E. 2430 L.L.S. \_\_\_\_\_

PLACE SEAL HERE

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



DATE NOVEMBER 26, 19 91  
 OPERATOR'S WELL NO. HDH-2  
 API WELL NO. \_\_\_\_\_

WELL TYPE: OIL \_\_\_\_\_ GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 IF GAS PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW   
 LOCATION: ELEVATION 1957 WATERSHED SULFUR BRANCH OF LITTLE WHITE OAK OF PINNACLE CREEK  
 DISTRICT CENTER COUNTY WYOMING  
 QUADRANGLE PINEVILLE

SURFACE OWNER POCAHONTAS LAND CORPORATION ACREAGE \_\_\_\_\_  
 OIL & GAS ROYALTY OWNER \_\_\_\_\_ 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) \_\_\_\_\_

PLUS AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_  
 TARGET FORMATION POCA NO. 3 SEAM ESTIMATED DEPTH 700' BOTTOM EL. 1257  
 WELL OPERATOR U.S. STEEL MINING CO., INC. DESIGNATED AGENT L. J. SIMPKINS  
 ADDRESS BOX 338, PINEVILLE, WV 24874 ADDRESS BOX 338, PINEVILLE, WV 24874

COUNTY NAME - PERMIT

8-0-251

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.: HDH-2  
 Location: Elevation: 1,957.0 Quadrangle: Pineville  
 District: CENTER County: WYOMING  
 Latitude: 6,000 Feet South of 37 Deg. 32 Min. 30 Sec.  
 Longitude: 1,340 Feet West of 81 Deg. 30 Min. 00 Sec.  
 Company: U.S. STEEL MINING CO.  
 P.O. Box 338  
 Pineville, WV  
 24874-0338

Agent: J. A. Zupanick

Inspector: Offie Helmick  
 Permit Issued: 12/23/92  
 Well work commenced: (see note below)  
 Well work completed: \_\_\_\_\_  
 Verbal plugging permission granted on: \_\_\_\_\_  
 Rotary \_\_\_\_\_ Cable \_\_\_\_\_ Rig \_\_\_\_\_  
 Total depth (ft) 700  
 Fresh water depths (ft) \_\_\_\_\_  
 Salt water depths (ft) \_\_\_\_\_  
 Is coal being mined in the area (Y/N)? Y  
 Coal depths (ft): 265-269, 696-700

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill up
8-5/8"		700'	244 ft <sup>3</sup>

OPEN FLOW DATA

Producing formation Pocahontas No. 3 Seam Pay zone depth (ft) 700  
 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 \_\_\_\_\_ psig (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 \_\_\_\_\_ psig (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 casing previously served as a coal mine de-watering borehole. The borehole was drilled under DEP Permit No. U-204-83 (NPDES WV0090000) prior to the issuance of this permit.

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



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

- NOV 25 92
- 1) Permitting Office of Oil & Gas Operator: U. S. Steel Mining Co., Inc. <sup>890</sup> 50510 (3) 548
- 2) Operator's Well Number: HDH-2 3) Elevation: 1957
- 4) Well type: (a) Oil    / or Gas X /  
(b) If Gas: Production X / Underground Storage    /  
Deep    / Shallow X /
- 5) Proposed Target Formation(s): 998  
Pocahontas No. 3 Seam
- 6) Proposed Total Depth: 700' 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. 1257)
- 10) Does land contain coal seams tributary to active mine? Yes X / No
- 11) Proposed Well Work: Existing Borehole Access (to an underground mine area which will be used to transport gas collected from seam to surface for commercialization.
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT Fill-up (cu. ft.)
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor						
Fresh Water						
Coal						
Intermediate						
Production	8" Steel	Casing			700'	244 ft. 3
Tubing						
Liners	<i>Regulation variance of 99CSR/2.1</i>					

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)

43/39

RECEIVED  
Environmental Protection  
NOV 25 02  
Permitting  
Office of Oil & Gas

1) Date: November 18, 1992  
2) Operator's well number  
HDH-2  
3) API Well No: 47 - 109 - 1301  
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 \_\_\_\_\_  
6) Inspector Rodney Dillon  
Address P.O. Box 1526  
Sophia, WV 25921  
Telephone (304)- 683-3989

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 \_\_\_\_\_  
(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:

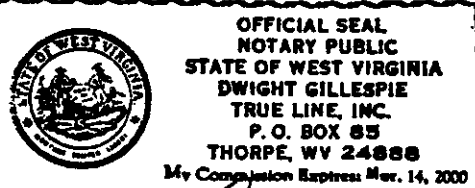
   Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
  X   Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

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: [Signature]  
Its: John L. Schroder, III - General Manager  
Address Box 338  
Pineville, WV 24874  
Telephone (304) 732-5249

subscribed and sworn before me this 24 day of November, 1992

[Signature] Notary Public  
My commission expires March 14, 2000



Dated: November 23, 1992

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

109-1301

ATTN: Jamie Stevens

**RE: Oil & Gas Permit Application  
U. S. Steel Mining Co., Inc. (USM)  
Coal Seam Gas Ventilation Borehole  
Borehole No. HDH-2**

Dear Mr. Streit:

Included herewith is an application for permitting a currently operating 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 vertical borehole is currently operating and is permitted under the West Virginia Division of Environmental Protection, inclusive of site access roads.

USM is in the process of finalizing an agreement with a West Virginia gas production company for commercializing production of the 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 was drilled and cased from the surface to the underground work area of the mine. The borehole casing extends into the mine work area and is connected to an underground pipe network which collects coal seam gas produced from the coal prior to mining. The vertical borehole contains only casing and no "production pipe" as would be installed in a natural gas well. The borehole is only used to transport the coal seam gas to the surface area for venting. The gas in the vertically cased borehole should never exceed about 2 psi pressure or 10" Hg vacum. We, therefore, do not anticipate any problems with a single casing for this special application.

Additionally, since the borehole is existing and provides continuous degasification of our mine operations, we cannot shut the system down to make modifications to the borehole (ie, add a production pipe). A shutdown would impact on our longwall mining operations and be very costly. We do plan to add a production pipe to vertical boreholes which are installed for future coal seam gas venting. However, there may be areas where a single casing is the most practical for our mining and degas procedures and, at that time, we would seek special approval from the Oil & Gas Board.

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.