

FILE NO. USM/HDH
 DRAWING NO. HDH-4
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1:2500
 PROVEN SOURCE OF ELEVATION USGS

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 MINES.

(SIGNED) *W. Claude Bannock*
 R.P.E. 2430 L.L.S. _____

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 OIL AND GAS DIVISION



DATE November 18, 1992
 OPERATOR'S WELL NO. HDH-4
 API WELL NO. _____
47 - 109 - 1303
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1660.3 WATER SHED Stanley Fork of Nancy Fork of Indian Creek
 DISTRICT Center 3 COUNTY Wyoming
 QUADRANGLE Pineville d 15 28
 SURFACE OWNER Pocahontas Land Corp. ACREAGE _____
 OIL & GAS ROYALTY OWNER Pocahontas Land Corp. LEASE ACREAGE _____
 LEASE NO. _____
 PROPOSED WORK: DRILL ___ CONVERT X 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 740'
 WELL OPERATOR U.S. Steel Mining Co. DESIGNATED AGENT L. J. Simpkins
 ADDRESS Box 338 Pineville, WV 24874 ADDRESS Box 338 Pineville, WV 24874

8-0 251

990

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-4

Location: Elevation: 1,660.30 Quadrangle: Pineville
District: CENTER County: WYOMING
Latitude: 2,810 Feet South of 37 Deg. 32 Min. 30 Sec.
Longitude: 11,860 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) 740
Fresh water depths (ft) _____
Salt water depths (ft) _____
Is coal being mined in the area (Y/N)? Y
Coal depths (ft): 673-675, 683-686, 736-740

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill up
<u>8-5/8"</u>		<u>740'</u>	<u>258 ft³</u>

OPEN FLOW DATA

Producing formation Pocahontas No. 3 Seam Pay zone depth (ft) 740
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 is incorporated within the concrete wall of an 18 ft. diameter coal mine ventilation shaft. The shaft was constructed under DEP Permit No. U-204-83 (NPDES Permit No. 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

Operator: HDH-4
API: 47-109-1303
Location: S-Fork

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

CBM Vent Hole located at S-Fork Air Shaft. No stimulation performed.

Well Log & Geologic Record

Formation	Top	Bottom
Sand	0	107
Sand & Shale	107	195
Sand	195	228
Sand & Shale	228	263
Sand	263	370
Sand & Shale	370	468
Sand	468	569
Quartz	569	575
Sand	575	623
Sand & Shale	623	673
Coal	673	675
Shale	675	683
Coal	683	686
Sand & Shale	686	736
Coal	736	740

RECEIVED
 ENVIRONMENTAL PROTECTION
 MAY 25 92
 Permitting
 Office of Oil & Gas

109-1303 Issued 12/23/92

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

Page 3 of 6
 Expires 12/23/94

Operator: U. S. Steel Mining Co., Inc. ⁸⁵⁰ 50510 (3) 548

Operator's Well Number: HDH-4 3) Elevation: 1660.3

- 4) Well type: (a) Oil / or Gas /
 (b) If Gas: Production / Underground Storage /
 Deep / Shallow /
- 5) Proposed Target Formation(s): Pocahontas No. 3 Seam ⁹⁹⁸
- 6) Proposed Total Depth: 740 feet
- 7) Approximate fresh water strata depths: None
- 8) Approximate salt water depths: None
- 9) Approximate coal seam depths: Poca. No. 3 Seam - 740' (Est. Bottom El. 920)
- 10) Does land contain coal seams tributary to active mine? Yes / 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
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor						
Fresh Water						
Coal						
Intermediate						
Production	8" Steel Casing				740'	258 ft. ³
Tubing	<i>Regulation Variance of Rule 39CSR18.11a.2.1</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)

5193/39

NOV 25 92
Permitting
Office of Oil & Gas

- 1) Date: November 18, 1992
- 2) Operator's well number
HDH-4
- 3) API Well No: 47 - 047 - 1303
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: [Signature]
 Its: John L. Schroder, III - General Manager
 Address Box 338
Pineville, WV 24874
 Telephone (304) 732-5249



OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
DWIGHT GILLESPIE
TRUE LINE, INC.
P.O. BOX 65
THORPE, WV 24888

My Commission Expires Mar. 14, 2000

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

109-1303

ATTN: Jamie Stevens

**RE: Oil & Gas Permit Application
U. S. Steel Mining Co., Inc. (USM)
Coal Seam Gas Ventilation Borehole
Borehole No. HDH-4**

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

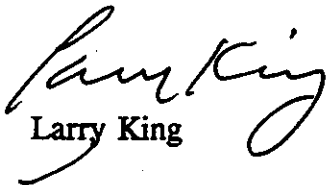
necessary that the coal seam gas production from any vertical boreholes qualify federal tax credits under Section 29 of the Federal Revenue Code. Qualification procedures must be completed by December 31, 1992 to take advantage of the federal credits. Once qualified, the tax credits are allowed on all 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.