



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1 in 7,000
 PROVEN SOURCE OF ELEVATION USC & GS of Burnwell

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) John L. Burnett
 R.P.E. 1442 L.L.S. _____

PLACE SEAL HERE

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

FORM IV-6 (8-78)

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___

LOCATION: ELEVATION 1320.7 WATER SHED Tenmile Fork of Paint Creek
 DISTRICT CABIN CREEK COUNTY KANAWHA
 QUADRANGLE ESKDALE Montgomery 15' SC

SURFACE OWNER BRIAR MOUNTAIN COAL & COKE CO. ET AL. ACREAGE 3000 +
 OIL & GAS ROYALTY OWNER BRIAR MOUNTAIN COAL & COKE CO. ET AL. LEASE ACREAGE 3085.26
 LEASE NO. 9967

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

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION NEWBURG ESTIMATED DEPTH 6885'
 WELL OPERATOR ASHLAND EXPLORATION, INC. DESIGNATED AGENT H.H. GRIFFITH
 ADDRESS PO Box 391, ASHLAND, KY 41114 ADDRESS PO Box 156 BRENTON, W.Va. 24818

DATE Dec 23, 19 81
 OPERATOR'S WELL NO. 9-Ser 092841
 API WELL NO. _____
47 - 039 - 3796
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

JAN 26 1982



IV-35
(Rev 8-81)

Date 9/16/82
Operator's _____
Well No. 9
Farm Briar Mountain Coal & Coke
API No. 47 - 039 - 3796

State of West Virginia
Department of Mines
Oil and Gas Division

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SEP 20 1982
OIL & GAS DIVISION
DEPT. OF MINES

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas X / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production X / Underground Storage ___ / Deep X / Shallow ___ /)

LOCATION: Elevation: 1320.7' Watershed Tenmile Fork of Paint Creek
District: Cabin Creek County Kanawha Quadrangle Eskdale

COMPANY Ashland Exploration, Inc.
ADDRESS P. O. Box 391, Ashland, Ky. 41114
DESIGNATED AGENT Forrest Burkett
ADDRESS P. O. Box 156, Brenton, WV 24818
SURFACE OWNER Briar Mt. Coal & Coke Co.
ADDRESS P. O. Box 831, Charleston, WV
MINERAL RIGHTS OWNER Briar Mt. Coal & Coke Co.
ADDRESS P. O. Box 831, Charleston, WV
OIL AND GAS INSPECTOR FOR THIS WORK Martin Nichols
ADDRESS P. O. Box 554, Clendenin, WV
PERMIT ISSUED 12/24/81
DRILLING COMMENCED 4/20/82
DRILLING COMPLETED 5/7/82

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size <u>20-16X</u> Cond.	<u>41'</u>	<u>41'</u>	Drive Pipe
<u>13-10"</u>	<u>230'</u>	<u>230'</u>	<u>200 sks</u>
<u>9 5/8</u>	<u>1467'</u>	<u>1467'</u>	<u>340 sks</u>
<u>8 5/8</u>			
<u>7</u>	<u>6115'</u>	<u>6115'</u>	<u>274 sks</u>
<u>5 1/2</u>			
<u>4 1/2</u>			
<u>3</u>			
<u>2 3/8</u>	<u>Siphon</u>	<u>5662'</u>	<u>Pkr @2714'</u>
Liners used			

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON Plug back bottom hole 6895-6782
6240-6040 w/54 sks Class A cmt
GEOLOGICAL TARGET FORMATION Newburg Depth 6885 feet
Depth of completed well 6968 DTD feet Rotary X / Cable Tools _____
Water strata depth: Fresh _____ feet; Salt 950' feet
Coal seam depths: 170' Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Dev. Shale(Marcellus) Gordon Pay zone depth 3024' feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 1553 Mcf 954 Mcf/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 3 hours
Static rock pressure 740 psig (surface measurement) after 456 hours shut in
(If applicable due to multiple completion--)
Second producing formation Weir Pay zone depth 2599' feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 599 Mcf/d Oil: Final open flow _____ Bbl/d
Time of open flow between initial and final tests 3 hours
Static rock pressure 260 psig (surface measurement) after 456 hours shut in

(Continue on reverse side)

SEP 28 1982

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.
 1st Stage - Perf Marcellus Shale 32H/5415-5941-2000 gal 28% HCl - frac w/75 Quality foam @ 40 B/M, 500 sks 20/40 sd, 710,000 SCF N₂, 8 perf balls-BD @ 2500#, ATP 2500#, ISIP 1700#, 15 min 1500#. TL&FW 320 bbl, TSLF 164 bbl.
 2nd Stage - Perf Dev. Shale 32H/4796-4954 - Dump 500 gal 15% acid-frac w/75 Quality foam using 50,000# 20/50 sd, 710,000 SCF N₂, 16 perf balls-BD @ 1650#, ATP 1500#, ISIP 2000#, 15 min 1500# - TSLF 164 bbl, TL&FW 305 bbl.
 3rd Stage - Perf Gordon 14H/3205-3218-Frac w/75 Quality foam using 10,000# 80/100, 40,000# 20/50, 461 MCF N₂, ATP 1067# @ 20 B/M, ISIP 1000#, 15 min 800#. TSLF 192 bbl TL&FW 192 bbl.
 4th Stage - Perf Middle Weir 23H/2603-2674-Frac w/75 Quality foam using 50,000# 20/50 sd, 471 MCF N₂ - BD @ 1500#, ATP 1450# @ 50 B/M, ISIP 1100#, 15 min 700#.
 Completed as dual gas producer in Dev. Shale/Gordon (954 MCF/D) and Weir (599 MCF/D)

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale			0	460	Coal @ 170'
Shale & Sand			460	575	
Sand			575	905	
Shale			905	950	
Salt Sand			950	1481	Wet @ 1045'
Shale			1481	1544	
Ravencliff			1544	1575	
Shale			1575	1591	
Avis Lime			1591	1622	
Shale			1622	1680	
Upper Maxton			1680	1770	
Shale			1770	1826	
Middle Maxton			1826	1854	
Shale & Sand			1854	2051	
Lower Maxton			2051	2086	
Shale			2086	2107	
Little Lime			2107	2178	Gas test
Pencil Cave			2178	2194	4218' 2/10 Wtr 1" = 14.9 MCF/D
Big Lime			2194	2494	5750' 26/10 Wtr 2" = 214 MCF/D
Shale			2494	2502	6137' 2/10 Wtr 2" = 15 MCF/D
Injun			2502	2546	
Shale			2546	2599	
Middle Weir			2599	2683	
Shale			2683	2713	
Lower Weir			2713	2745	
Shale			2745	2958	
Coffee Shale			2958	2982	
Berea			2982	3024	
Devonian Shale			3024	3203	
Gordon			3203	3220	
Devonian Shale			3220	6103	
Onondaga			6103	6205	
Oriskany			6205	6222	
Limestone			6222	6465	
Dolomite			6465	6884	
Newburg			6884	6900	
Dolomite			6900	6972	

6972
 6205

 667 EXPL RT

DTD 6972' KB
 LTD 6968' KB
 Note 10' KB

13' - on log -

(Attach separate sheets as necessary)

ASHLAND EXPLORATION, INC.

Well Operator

By: David J. Belcher

Date: September 16, 1982

Note: Regulation 2.02(i) provides as follows:
 "The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



STATE OF WEST VIRGINIA
OFFICE OF OIL AND GAS - DEPARTMENT OF MINES

OIL AND GAS WELL PERMIT APPLICATION

WELL TYPE: Oil ___ / Gas x /

(If "Gas", Production x / Underground storage ___ / Deep ___ / Shallow ___ /

LOCATION: Elevation: 1320.7 Watershed: Tenmile Fork of Paint Creek
District: Cabin Creek County: Kanawha Quadrangle: Eskdale

WELL OPERATOR Ashland Exploration, Inc.
Address P. O. Box 391
Ashland, Ky. 41114

DESIGNATED AGENT H. H. Griffith
Address P. O. Box 148
Brenton, WV 24818

OIL AND GAS ROYALTY OWNER Briar Mountain Coal & Coke Co.
Address P. O. Box 831
Charleston, WV 25323
Acreage 3085.26

COAL OPERATOR None
Address _____

SURFACE OWNER Briar Mountain Coal & Coke Co.
Address P. O. Box 831
Charleston, WV 25323
Acreage 3000+

COAL OWNER(S) WITH DECLARATION ON RECORD:
NAME Briar Mountain Coal & Coke Co. etal
Address P. O. Box 831
Charleston, WV

NAME Carbon Fuel Co.
Address 1300 One Valley Square
Charleston, WV 25301

FIELD SALE (IF MADE) TO:
NAME _____
Address _____

COAL LESSEE WITH DECLARATION ON RECORD:
NAME Carbon Fuel Co.
Address 1300 One Valley Square
Charleston, WV 25301

OIL AND GAS INSPECTOR TO BE NOTIFIED:
NAME Martin Nichols
Address P. O. Box 554
Clendenin, WV 25045
Telephone 304-548-0993

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DEC 24 1981

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed ___ / lease x / other contract ___ / dated April 5, 1956, to ~~the undersigned well operator~~ from Briar Mountain Coal & Coke Co. & Bedford Land Co. United Producing Co., Inc.
(If said deed, lease, or other contract has been recorded:)

Recorded on April 6, 1956, in the office of the Clerk of County Commission of Kanawha County, West Virginia, in Lease Book ¹³⁹ at page 436. A permit is requested as follows:

PROPOSED WORK: Drill x / Drill Deeper ___ / Redrill ___ / Fracture or stimulate x / Plug off old formation ___ / Perforate new formation ___ / Other physical change in well (specify) _____

--planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after receipt of this Application by the Dept. Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessees on or before the day of the mailing or delivery of this Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION
1613 WASHINGTON ST., E.
CHARLESTON, WV 25311
Telephone - 304/348-3092

BLANKET COPY

ASHLAND EXPLORATION, INC.
Well Operator
By: J. H. Burnett
J. H. Burnett
Its: Regional Civil Engineer

