

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1 in 102700
 PROVEN SOURCE OF ELEVATION USCGS BM F-162 Metal Plate in N. end Bridge across Guyan River at Verner Elev 764.57

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) Stephen N. Parks
 R.P.E. 8982 L.L.S. _____

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6 (8-78)

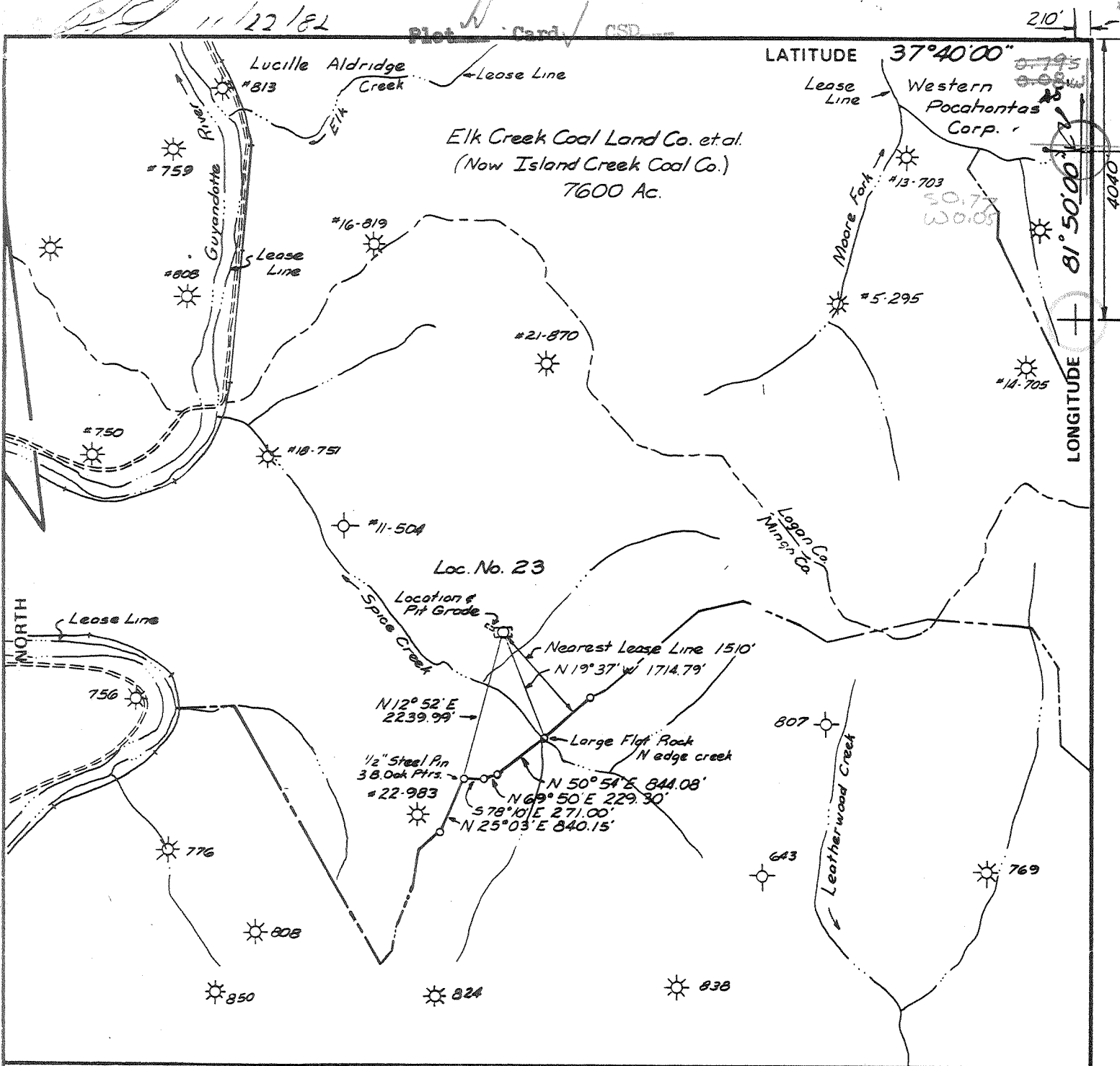


DATE Nov 22, 1982
 OPERATOR'S WELL NO. 23-Ser 096331
 API WELL NO. _____
47 - 059 - 1035-Frac.
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
 LOCATION: ELEVATION 1169.9 WATER SHED Spice Creek of Guyandotte River
 DISTRICT Stafford COUNTY Mingo
 QUADRANGLE Mallory Gilbert c. 049
 SURFACE OWNER Georgia Pacific Corp. ACREAGE 7000+
 OIL & GAS ROYALTY OWNER Island Creek Coal Company LEASE ACREAGE 7600
 LEASE NO. 5658
 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 Orondaga Lime ESTIMATED DEPTH 5480'
 WELL OPERATOR Ashland Exploration Inc DESIGNATED AGENT Forrest Burkett
 ADDRESS P.O. Box 391 Ashland Ky 41114 ADDRESS P.O. Box 156 Brenton WV 24818
OWWO DEEP WELL 6-6 man Access (216) 271

M.M. - 1035




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 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1 in 102700
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 QUADRANGLE Mallory Gilbert 15' BE C
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 PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION Onondaga Lime ESTIMATED DEPTH 5480'
 WELL OPERATOR Ashland Exploration Inc DESIGNATED AGENT Forrest Burkett
 ADDRESS P.O. Box 391 Ashland Ky 41114 ADDRESS P.O. Box 156 Brenton WV 24818



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

DATE Nov 22, 1982
 OPERATOR'S WELL NO. 23-Ser 096331
 API WELL NO. _____
47 - 059 - 1035
 STATE COUNTY PERMIT

DEC 6 1982



Rec - 2297

WR-35

State of West Virginia
DEPARTMENT OF ENERGY
Oil and Gas Division

Date Jan. 9, 1986
Operator's Well No. 23
Farm Elk Creek
API No. 47 - 059 - 1035 FRAC

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: 1169.9' ^{1180k} Watershed Spice Creek of Guyandotte River
District: Stafford County Mingo Quadrangle Mallory

COMPANY ASHLAND EXPLORATION, INC.
ADDRESS P. O. Box 391, Ashland, KY 41114
DESIGNATED AGENT Forrest Burkett
ADDRESS P. O. Box 690, Brenton, WV 24818
SURFACE OWNER Georgia-Pacific Corp.
ADDRESS Wyoming, WV 24898
MINERAL RIGHTS OWNER Island Creek Coal Co.
ADDRESS Box 1275, Paintsville, KY 41240
OIL AND GAS INSPECTOR FOR THIS WORK Arthur St. Clair
ADDRESS Box 157, Brenton, WV 24818
PERMIT ISSUED 12/14/84
RECOMPLETION ~~DRILLING~~ COMMENCED 12/5/85
RECOMPLETION ~~DRILLING~~ COMPLETED 1/1/86

Casing Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16 Cond.	*45'	45'	20 sks
13-10"			
9 5/8			
8 5/8	*1538'	1538'	310 sks
7			
5 1/2			
4 1/2	*5497'	5497'	450 sks
3			
2			
Liners used	*From original well		

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

GEOLOGICAL TARGET FORMATION Devonian Shale, Berea, Big Lime Depth 5505 feet
Depth of completed well 5505 feet Rotary X / Cable Tools ___
Water strata depth: Fresh 445 feet; Salt 900 feet
Coal seam depths: ___ Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 4450-5350 feet
Gas: Initial open flow show Mcf/d Oil: Initial open flow ___ Ebl/d
Final open flow 622 Mcf/d Final open flow ___ Ebl/d
Time of open flow between initial and final tests 3 hours
Static rock pressure 450 psig (surface measurement) after 72 hours shut in

(If applicable due to multiple completion--)
Second producing formation Berea & Big Lime Pay zone depth 3360-3380 feet
Gas: Initial open flow show Mcf/d Oil: Initial open flow ___ Ebl/d
Final open flow 959 Mcf/d Oil: Final open flow ___ Ebl/d
Time of open flow between ___ and final tests 3 hours
Static rock pressure ___ (surface measurement) after 72 hours shut in

OF = 1581 MCF

JAN 21 1986

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perf L. Dev. Shale 30H/5330-5350 - N₂ frac using 300 gal 15% HCl & 1,500,000 SCF N₂. BD @ 3610#, ATP 4148# @ 15,100 SCF/m, MTP 4330#, ISIP 2160#.

Perf Stray Dev. Shale 30H/4450-4470 - N₂ frac using 500 gal 15% HCl & 700,000 SCF N₂. BD @ 1700#, ATP 3880# @ 24,000 SCF/m. MTP 4700#, ISIP 1450#.

Perf Berea 30H/3360-3380 - Foam frac using 500 gal 15% HCl, 373,000 SCF N₂ @ 12,700 SCF/m, 40,000# 20/50 sand & 290 bbl. TF. BD @ 1400#, ATP 1400# @ 9.0 B/M, MTP 1500#, ISIP 700#.

Perf Big Lime 14H/2553-2760 - Acidize w/3000 gal 15% HCl. BD @ 1700#, ATP 1000# @ 5 B/M, ISIP 300#.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Submitted on original report dated 6/9/83					

(Attach separate sheets as necessary)

ASHLAND EXPLORATION, INC.

Well Operator

By: Mark A. Nona Engineering Technician

Date: January 9, 1986

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."

IV-35
(Rev 8-81)

RECEIVED
JUN 16 1983



OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division

Date 6/9/83
Operator's
Well No. 23
Farm Elk Creek Coal Land Co.
API No. 47 - 059 - 1035

JUN 27 1983

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 / DeepXX / Shallow /)

LOCATION: Elevation: 1180' G Watershed Spice Creek of Guyandotte River
District: Stafford County Mingo Quadrangle Mallory

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 Georgia-Pacific Corp.
ADDRESS 133 Peachtree, Atlanta, GA 30303
MINERAL RIGHTS OWNER Island Creek Coal Co.
ADDRESS Box 1259, Paintsville, Ky. 41240
OIL AND GAS INSPECTOR FOR THIS WORK Arthur
St. Clair ADDRESS Box 157, Brenton, WV 24818
PERMIT ISSUED 12/1/82
DRILLING COMMENCED 2/2/83
DRILLING COMPLETED 2/12/83
IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.	45'	45'	20 sks
13-10"			
9 5/8			
8 5/8	1538'	1538'	310 sks
7			
5 1/2			
4 1/2	5497'	5497'	210 sks
3			
2			
Liners used			

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JUN 15 1983
OIL & GAS DIVISION

GEOLOGICAL TARGET FORMATION Onondaga Lime Depth 5480 feet
Depth of completed well 5505 feet Rotary X / Cable Tools
Water strata depth: Fresh 445 feet; Salt 1900 feet
Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Devonian Shale Pay zone depth 4744 feet
Gas: Initial open flow 561 Mcf/d Oil: Initial open flow Bbl/d
Final open flow 467 Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests 3 hours
Static rock pressure 860 psig (surface measurement) after 312 hours shut in
(If applicable due to multiple completion--)
Second producing formation Pay zone depth feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow Mcf/d Oil: Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure psig (surface measurement) after hours shut in

JUN 27 1983

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated Devonian Shale 20H/4744-4766 Huron
Load hole w/N₂. BD @ 1990#. Pumped 200 MCFN₂, started to screen out.
MTP 4270#, 15 min 2920#. Flow back 2 hrs. Load hole w/N₂ again. Pumped
800 MCFN₂ without sand. ATP 1950#, ISIP 1640#, 15 min 1210#, ATR 40,000
SCF/min. Total N₂ 1,350 MCF.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh water and salt water, coal, oil and gas
Shale & Sand			Surface	105	
Shale			105	205	
Sand & Shale			205	515	Fresh wtr @ 445'
Shale			515	565	
Sand			565	660	
Shale			660	720	
Sand			720	765	
Shale			765	800	
Lower Salt Sand			800	1535	
Shale			1535	1645	
Ravencliff			1645	1740	
Shale & Sand			1740	1789	
Upper Maxton			1789	1962	Salt wtr @ 1900'
Shale			1962	2112	
Middle Maxton			2112	2196	
Shale			2196	2312	
Lower Maxton			2312	2350	
Shale			2350	2388	
Little Lime			2388	2452	
Shale			2452	2458	
Big Lime			2458	2799	Show of gas @ 2600
Shale			2799	2885	Show of gas @ 2808
Weir			2885	2998	
Shale			2998	3330	
Coffee Shale			3330	3356	
Berea			3356	3389	
Devonian Shale			3389	5498	Show of gas @ 3996'
Onondaga LS			5498	TD	

DTD 5515
LTD 5505

ellog: top surface
 upr dev unit 3389 1020
 Huron 4409 458
 Java 4867 139
 Angola 5006 231
 Rineheart 5237 261
 Onondaga 5498

4744
 3389
 1355
 5498
 3389
 2109

(Attach separate sheets as necessary)

ASHLAND EXPLORATION, INC.

Well Operator

By: Derek A. Nima

Date: June 9, 1983

Note: Regulation 2.00(i) provides as follows:
 "The term 'log' or 'well log' shall mean a systematic
 detailed geological record of all formations, including
 strata, encountered in the drilling of a well."



1) Date: October 19, 1984
 2) Operator's Elk Creek Coal Company
 Well No. 23, Serial No. 096331
 3) API Well No. 47 - 059 - 1035-FRAC
 State County Permit

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES, OIL AND GAS DIVISION
APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil _____ / Gas X /
 B (If "Gas", Production X / Underground storage _____ / Deep X / Shallow _____ /)
- 5) LOCATION: Elevation: 1169.9' Watershed: Spice Creek of Guyandotte River
 District: Stafford County: Mingo Quadrangle: Mallory
- 6) WELL OPERATOR Ashland Exploration, Inc. 7) DESIGNATED AGENT Forrest Burkett
 Address P.O. Box 391 Address P.O. Box 690
Ashland, KY 41114 Brenton, WV 24818
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Arthur St. Clair Name Tri-State Well Service
 Address P.O. Box 157 Address Box 299, 1 Berea Plaza
Brenton, WV 24818 - 304/732-6227 Bridgeport, WV 26330
- 10) PROPOSED WELL WORK: Drill _____ / Drill deeper _____ / Redrill _____ / Stimulate X /
 Plug off old formation _____ / Perforate new formation X /
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Devonian Shale, Berea, Big Lime
 12) ~~Estimated~~ depth of completed well, 5505 feet
 13) Approximate strata depths: Fresh, 445 feet; salt, 900 feet.
 14) Approximate coal seam depths: _____ Is coal being mined in the area? Yes _____

RECEIVED
 OCT 20 1984
 No. 1984

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well	
Conductor	16	H-40	65	X		45	45	20 sks
Fresh water								
Coal								Sizes
Intermediate	8 5/8	J-55	24	X		1538	1538	310 sks
Production	4 1/2	J-55	10.5	X		5497	5497	450 sks
Tubing								Depths set
Liners								Perforations:
								Top Bottom

OIL & GAS DIVISION
 DEPT. OF MINES

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-059-1035-FRAC Date December 14, 19 84

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires December 14, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<u>10</u>	<u>JS</u>	<u>MA</u>	<u>MH</u>	<u>506237</u>

Margaret J. Hoar
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

File



1) Date: November 22, 1982
2) Operator's Well No. 23, Serial No. 096331
3) API Well No. 47 - 059 - 1035
State _____ County _____ Permit _____

DRILLING CONTRACTOR:

Ray Resources Drilling Co.
2101 Washington St. East
Charleston, WV 25311

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

OIL AND GAS WELL PERMIT APPLICATION

- 4) WELL TYPE: A Oil _____ / Gas X /
B (If "Gas", Production _____ / Underground storage _____ / Deep X / Shallow _____)
- 5) LOCATION: Elevation: 1169.9 / Watershed: Spice Creek of Guyandotte River
District: Stafford / County: Mingo / Quadrangle: Mallory
- 6) WELL OPERATOR Ashland Exploration, Inc. 11) DESIGNATED AGENT Forrest Burkett
Address P. O. Box 391 Address P. O. Box 156
Ashland, KY 41114 Brenton, WV 24818
- 7) OIL & GAS ROYALTY OWNER Island Creek Coal Company 12) COAL OPERATOR None
Address Box 1259 Address _____
Paintsville, KY 41240
- 8) SURFACE OWNER Georgia - Pacific Corp. 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
Address 133 Peachtree Name Island Creek Coal Company
Atlanta, GA 30303 Address Box 1259
Acreage 7000+ Paintsville, KY 41240
- 9) FIELD SALE (IF MADE) TO:
Address _____
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Arthur St. Clair 14) COAL LESSEE WITH DECLARATION ON RECORD:
Address P. O. Box 157 Name _____
Brenton, WV 24818 Address _____
- 15) PROPOSED WORK: Drill X / Drill deeper _____ / Redrill _____ / Fracture or stimulate X /
Plug off old formation _____ / Perforate new formation _____
Other physical change in well (specify) _____
- 16) GEOLOGICAL TARGET FORMATION, _____
- 17) Estimated depth of completed well, _____ feet
- 18) Approximate water strata depths: Fresh, _____ feet; salt, top of salt feet.
- 19) Approximate coal seam depths: _____ Is coal being mined in the area? Yes _____ / No X /

RECEIVED
NOV 22 1982
OIL & GAS DIVISION
DEPT. OF MINES

20) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor	13 3/8	K-40	45	X		30	30	15 ska.	Kinds
Fresh water									
Coal									Sizes
Intermediate	8 5/8	K-35	24	X		1535	1535	Circulate	
Production	4 1/2	K-35	10.5	X		5400	5400	as required	Depths set
Tubing									
Liners									Perforations:
									Top Bottom

21) EXTRACTION RIGHTS

Check and provide one of the following:

- Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.
 The requirement of Code 22-4-1(c) (1) through (4). (See reverse side for specifics.)

22) ROYALTY PROVISIONS

Is the right to extract, produce or market the oil or gas based upon a lease or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes No

If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.

23) Required Copies (See reverse side.)

24) 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 lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

Notary: Sheri S. Burkett
My Commission Expires March 19, 1986

Signed: John H. Burkett
Its: Regional Civil Engineer

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-059-1035 Date December 1982

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 10) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

Permit expires _____ unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee

Administrator, Office of Oil and Gas