



LATITUDE $37^{\circ}42'30''$
 $37^{\circ}45'15''$

2490'

LONGITUDE $81^{\circ}35'00''$

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY 1 in @ 300
PROVEN SOURCE OF ELEVATION USC&GS BM #Q-44
Metal Disc in bridge corner
Elev 1363.82

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 Parkes
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 April 29, 1983
OPERATOR'S WELL NO. 224-Ser 097181
API WELL NO. _____
47 - 109 - 0908
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 1495.8 WATER SHED Bull Branch of Laurel Fork of Clear Fork of Guyan River
DISTRICT Oceana COUNTY Wyoming
QUADRANGLE Matheny Pineville 15' NC
SURFACE OWNER Charles E & Zelda Sullivan ACREAGE 58 ±
OIL & GAS ROYALTY OWNER Georgia-Pacific Corporation LEASE ACREAGE 67244.09
LEASE NO. 4157
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 Onondaga Lime ESTIMATED DEPTH 6155
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

MAY 09 1983
deep

1-1-86 DEED WELL Mary ... (200)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.
 Devonian Shale - open hole foam frac w/75 Quality foam w/650 sks 20/50 sd & 100 sks
 10/20 sd & 1230 MCFN₂. BD @ 3400#, ATP 3700#, MTP 3900#, ISIP 1500#,
 15 min 1175#, ATR 63.5 B/M, TL&FW 340 bbl, TSLF 240 bbl.
 Berea & L. Weir - perf 31H/3151-3535 w/75 Quality foam frac w/50,000# 20/40 sd &
 420 MCFN₂. BD @ 1500#, MTP 1700#, ATP 1650# @ 10 B/M, ISIP 950#,
 15 min 750#. TL&FW 332 bbl., TSLF 220 bbl.
 S. Maxton & Ravencliff - perf 25H/1656-1839 - water frac w/40,000# 20/50 sd & 5
 balls (active) BD @ 2300#, ATP 3000# @ 18 B/M. MTP 3300#,
 ISIP 1500#, TL&FW 710 bbl, TSLF 528 bbl.
 Princeton - perf 30H/1526-1556 - Frac w/20#/M gal gel system w/50,000# 20/40 sd.
 BD @ 1900#, ATP 2500# @ 25 B/M. MTP 2700#, ISIP 1800#, 15 min 1100#.
 TL&FW 588 bbl, TSLF 520 bbl.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
			0	228	Fresh wtr @ 165'
Sand & Shale			228	414	
Shale & Sand			414	514	
Sand			514	572	
Sand & Shale			572	698	
Sand			698	724	
Sand & Shale			724	914	
Sand			914	1380	
Lower Salt Sand			1380	1521	
Shale			1521	1568	
Princeton			1568	1605	
Shale			1605	1699	
Ravencliff			1699	1700	
Shale			1700	1740	
Avis LS			1740	1832	
Shale			1832	1845	
Stray Maxton			1845	1908	
Shale			1908	1970	
Upper Maxton			1970	2084	
Shale			2084	2133	
Middle Maxton			2133	2331	
Shale & Sand			2331	2370	
Lower Maxton			2370	2424	
Shale			2424	2501	
Little Lime			2501	2519	
Pencil Cave			2519	2946	
Big Lime			2946	3150	
Shale			3150	3169	
Lower Weir			3169	3482	
Shale & Sand			3482	3514	
Coffee Shale			3514	3544	
Berea			3544	3677	
Devonian Shale			3677	3702	
Gordon			3702	6072	
Devonian Shale			6072	TD	
Onondaga LS					
DTD	6126				
LTD	6126				

(Attach separate sheets as necessary)

ASHLAND EXPLORATION, INC.

Well Operator

By: Robert A. King

Date: October 4, 1983

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 ... encountered in the drilling of a well."



1) Date: April 29, 1983
 2) Operator's Well No. 224 - Serial No. 097181
 3) API Well No. 47 - 109 0908
 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 X / Underground storage _____ / Deep X / Shallow _____)
- 5) LOCATION: Elevation: 1495.8 Watershed: Gull Cr. of Laurel Rk of Clear Rk of Guyan River
 District: Oceana County: Wyoming Quadrangle: Matheny
- 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 Georgia-Pacific Corp. 12) COAL OPERATOR None
 Address 133 Peachtree Address _____
Atlanta, GA 30303
 Acreage 67,244
- 8) SURFACE OWNER Charles E. & Zelda Sullivan 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
 Address P.O. Box 81 Name None
Matheny, WV 24860 Address _____
 Acreage 58 Name _____
 Address _____
- 9) FIELD SALE (IF MADE) TO:
 Address _____
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Rue Schoolcraft Address _____
P.O. Box 706
Pineville, WV 24874
- 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, Onondaga Lime
- 17) Estimated depth of completed well, 6155 feet top of salt sand
- 18) Approximate water strata depths: Fresh, 775 feet; salt, _____ feet.
- 19) Approximate coal seam depths: _____ Is coal being mined in the area? Yes _____ / No X /

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	16	H-40	65	X		40	40	30 sks	Kinds
Fresh water	11 3/4	H-40	42	X		550	550	Circulate	
Coal									Sizes
Intermediate	8 5/8	K-55	24	X		1401	1401	150 sks	
Production	4 1/2	K-55	11.6	X		6155	6155	as needed	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: Walter M. Davis
 My Commission Expires March 23 1986

Signed: John E. Burkett
 Its: Regional Civil Engineer

OFFICE USE ONLY

DRILLING PERMIT

Permit number _____

19

Date

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 January 5, 1983 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond: <u>250</u>	Agent: _____	Plat: _____	Casing: _____	Fee: <u>600467</u>
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Administrator, Office of Oil and Gas

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