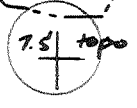
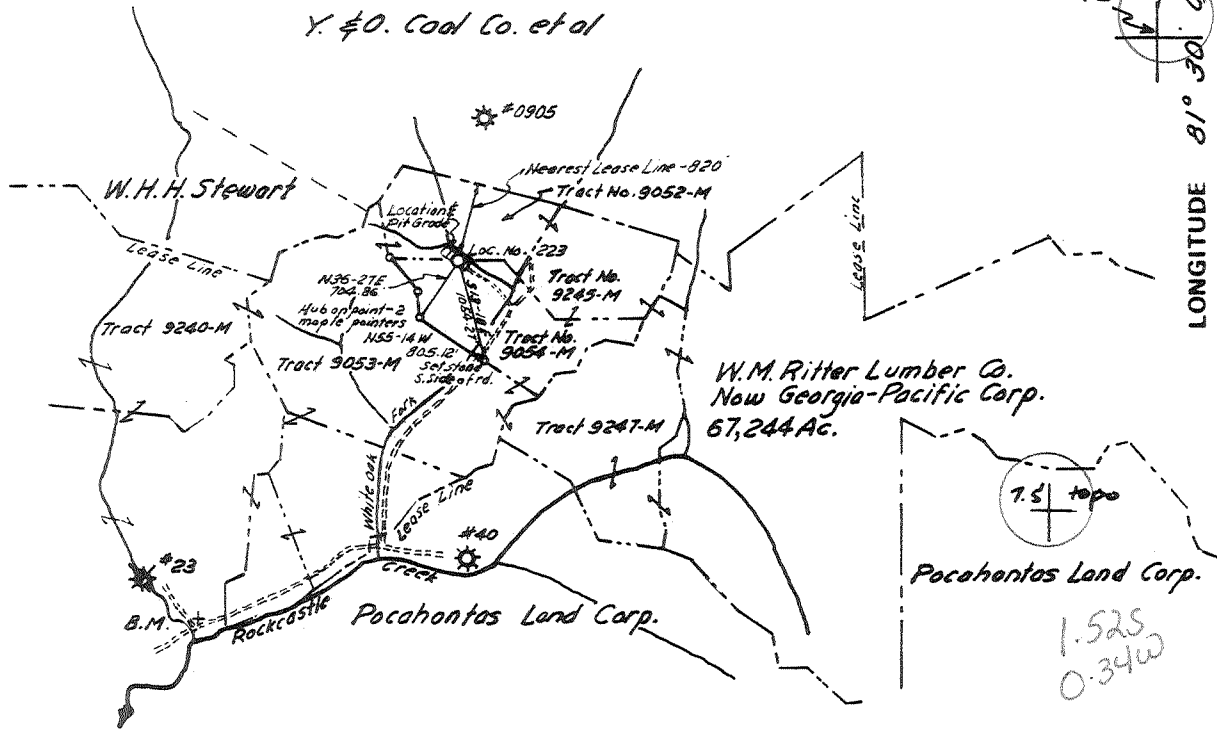
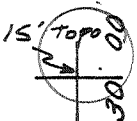


1.505
0.300w



1.525
0.340w

Reference points for Location:
N 45-11 W 167.20' to roof bolt by 18" hickory.
N 47-35 E 123.32' to roof bolt across
creek & below road.

FILE NO. _____
DRAWING NO. _____
SCALE 1"=2,000'
MINIMUM DEGREE OF ACCURACY 1 in 4130
PROVEN SOURCE OF ELEVATION U.S.C. & G.S. #33-AFK
El.=1796.34= Metal disk in boulder
See plat for location

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 K. Burkett
R.P.E. 1442 L.L.S. _____

PLACE SEAL HERE

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



DATE March 30, 19 84
OPERATOR'S WELL NO. 223-Ser.#10171
API WELL NO. 47-109-0929
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 ___ STORAGE ___ DEEP X SHALLOW ___
LOCATION: ELEVATION 1871.7 WATER SHED White Oak Fork of Rockcastle Creek
DISTRICT Center 3 COUNTY Wyoming
QUADRANGLE Matheny 463 Pineville 15 EC 6
SURFACE OWNER James M. & Constance B. Jewell ACREAGE 21.86
OIL & GAS ROYALTY OWNER Georgia-Pacific Corporation LEASE ACREAGE 67,244
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 6425
WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Forrest Burkett
ADDRESS P.O. Box 391, Ashland, Ky. 41114 043 ADDRESS P.O. Box 156, Brenton, W.V. 24818

APR 30 1984

deep well



REVISED

IV-35
(Rev 8-81)

Date 8/31/84
Operator's
Well No. 223
Farm W. M. Ritter Lumber Co.
API No. 47 - 109 - 0929

State of West Virginia
Department of Mines
Oil and Gas Division

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: 1871.7' Watershed White Oak Fork of Rock Castle Creek
District: Center County Wyoming Quadrangle Matheny

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 James M. & Constance B. Jewell
ADDRESS Box 91, Pineville, WV 24874
MINERAL RIGHTS OWNER Georgia-Pacific Corp.
ADDRESS 133 Peachtree - Atlanta, GA 30703
OIL AND GAS INSPECTOR FOR THIS WORK Arthur
St. Clair ADDRESS Box 157, Brenton, WV 24818
PERMIT ISSUED 4/17/84
DRILLING COMMENCED 5/26/84
DRILLING COMPLETED 6/13/84
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.	49'	49'	80 sks
13-10"	86'	86'	71 sks
9 5/8			
8 5/8	1309'	1309'	315 sks
7			
5 1/2			
4 1/2	5263'	5263'	150 sks
3			
2		6104'	w/R-4 pkr @ 3827'
Liners used			

GEOLOGICAL TARGET FORMATION Onondaga Lime Depth 6425 feet
Depth of completed well 6587 feet Rotary X / Cable Tools _____
Water strata depth: Fresh 100 feet; Salt 596 feet
Coal seam depths: _____ Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 5263 feet
Gas: Initial open flow 21 Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 539 Mcf/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 3 hours
Static rock pressure 1490 psig (surface measurement) after 168 hours shut in
(If applicable due to multiple completion--)
Second producing formation Gordon, B & L Lime Pay zone depth 1422 feet
Gas: Initial open flow 63 Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 1715 Mcf/d Oil: Final open flow _____ Bbl/d
Time of open flow between initial and final tests 3 hours
Static rock pressure 530 psig (surface measurement) after 168 hours shut in

539
1715
2254
MCF
FOP

SEP 10 1984

Huron Rhinestreet

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

Open hole N₂ frac Devonian Shale 5263-6400 using 2.6 MMCF N₂ @ 100,000 SCF/min
BD @ 3220#, ATP 3240#, ISIP 1740#, 15 min 1740#

Perf Gordon 15H/3708-3714 & 5H/3687-3699. 75 Quality foam frac using 500 gal
15% HCl, 40,000# 20/50 sd, 320 MCF N₂. BD @ 1450#, ATP 1400# @ 20 B/M foam.
MTP 1600#, ISIP 1000#, 15 min 925#. TL&FW 254 bbl, TSLF 204 bbl.

Perf Big & Little Lime 10H/2807-2814 & 10H/2422-2429. Acidize using 5000 gal
15% HCl. BD @ 1700#, ATP 1900# @ 10 B/M. ISIP 800#, 15 min 800#. TL&AW 164 bbl.

Perf Ravencliff 24H/1422-1440, 6H/1457-1462, 4H/1467-70. 20#/1000 gal gel wtr.
Frac using 40,000# 20/40 sd, 600 bbl TL&FW, 430 bbl TSLF. BD @ 2400#, ATP 2500#
@ 25 B/M, ISIP 1500#, 15 min 1050#

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			0	105	Fresh wtr @ 100'
Shale			105	161	
Sand & Shale			161	444	
Sand			444	514	
Shale			514	576	
Lower Salt Sand			576	1258	Salt Water @ 596'
Shale			1258	1418	
Ravencliff			1418	1477	Gas
Shale			1477	1500	
Avis Ls.			1500	1540	
Shale			1540	1895	
Sand & Shale			1895	2252	
Lower Maxton			2252	2363	
Little Lime			2363	2441	Gas
Pencil Cave			2441	2480	
Big Lime			2480	2912	Gas
Shale			2912	2971	
Weir			2971	3187	
Shale			3187	3523	
Coffee Shale			3523	3540	
Berea			3540	3557	
Shale			3557	3671	
Gordon			3671	3718	Gas
Devonian Shale			3718	6428	Gas
Marcellus			6428	6524	
Onondaga LS			6524	TD	
DTD	6587				
LTD	6575				

5263
3557
1706

6587
3557
3030 expl ftg

(Attach separate sheets as necessary)

ASHLAND EXPLORATION, INC.

Well Operator

By: Alvin S. Vinea

Date: August 31, 1984

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



1) Date: March 30, 19 84
 2) Operator's W. M. Ritter Lumber Co.
 Well No. 223 - Serial No. 101171
 3) API Well No. 47 - 109 - 0929
 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 /
 B (If "Gas", Production / Underground storage / Deep / Shallow)
 5) LOCATION: Elevation: 1871.7 Watershed: White Oak Fork of Rockcastle Creek
 District: Center County: Wyoming Quadrangle: Matheny
 6) WELL OPERATOR Ashland Exploration, Inc. 7) DESIGNATED AGENT Forrest Burkett
 Address P.O. Box 391 Address Box 156
Ashland, KY 41114 Brenton, WV 24818
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Arthur St. Clair Name Ray Resources Drilling Company
 Address Box 157 Address 2101 Washington St., East
Brenton, WV 24818 Charleston, WV 25311
 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate
 Plug off old formation / Perforate new formation /
 Other physical change in well (specify) _____
 11) GEOLOGICAL TARGET FORMATION, Onondaga Lime
 12) Estimated depth of completed well, 6425 feet
 13) Approximate strata depths: Fresh, _____ feet; salt, salt sand top of _____ feet.
 14) Approximate coal seam depths: _____ Is coal being mined in the area? Yes / No

RECEIVED

APR 2 - 1984

OIL & GAS DIVISION

DEPT. OF MINES

15) 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	H-40	48.0	X		30	30	20 sks	Kinds
Fresh water									
Coal	8 5/8	K-55	24.0	X		1312	1312	Circulate	to surface NEAT
Intermediate									
Production	4 1/2	K-55	10.5	X		5245	5245	As Needed	Depths set
Tubing								by rule	15.01
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-109-0929 Date April 23, 1984

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 April 23, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent: <input checked="" type="checkbox"/>	Plat:	Casing	Fee
	<u>AS</u>	<u>MN</u>	<u>MN</u>	<u>600-865</u>

T. R. ...
 Administrator, Office of Oil and Gas

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