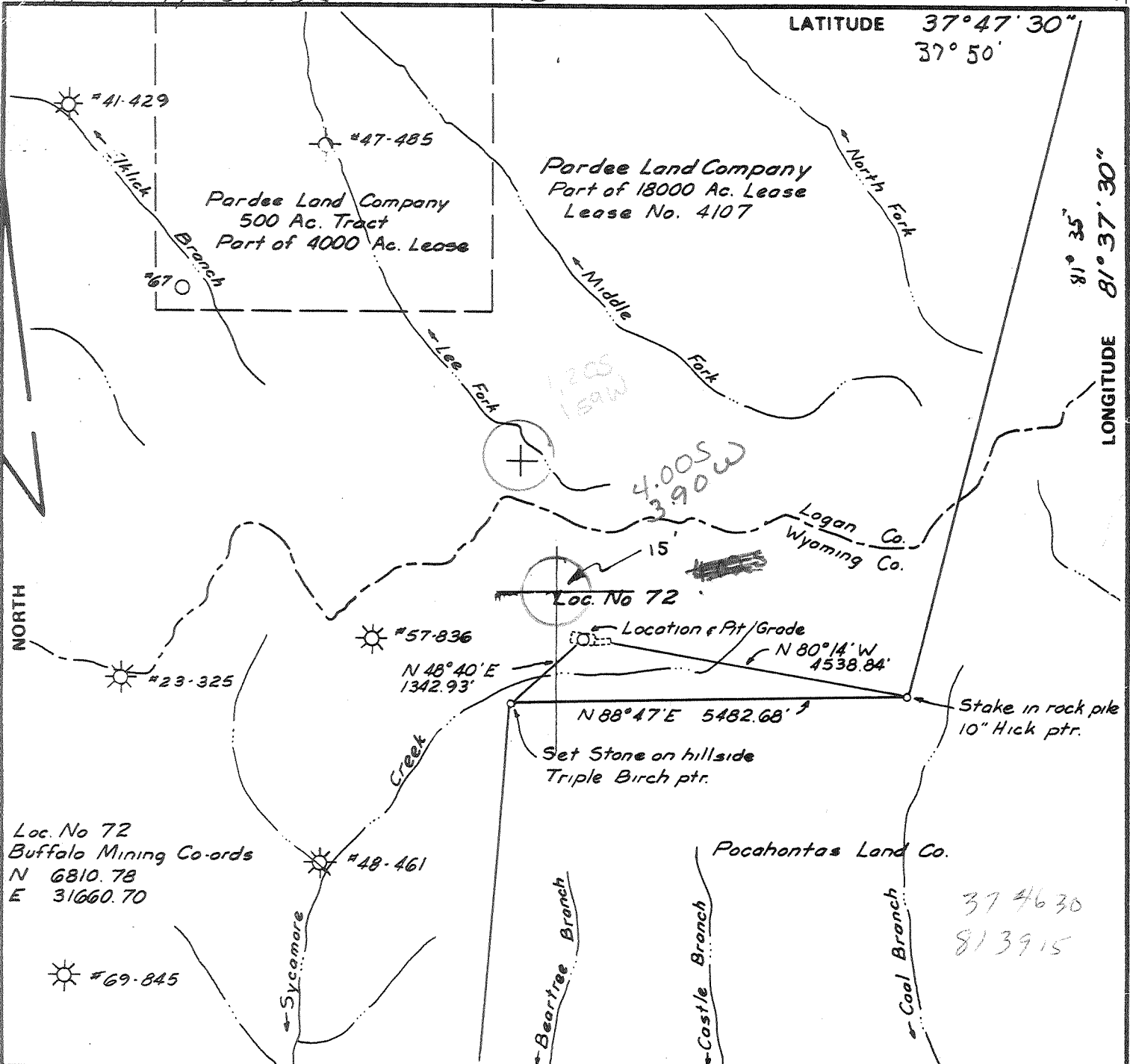


10.7 7/12/82

Plots Card CSDLA

8380



LATITUDE 37° 47' 30" 37° 50'

LONGITUDE 81° 37' 30" 81° 35'

Loc. No 72  
Buffalo Mining Co-ords  
N 6810.78  
E 31660.70

37 46 30  
81 39 15

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1 in 11740  
 PROVEN SOURCE OF ELEVATION 1565 BM on Buffalo Cr. 200' below mouth of Ellick Cr.

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 H. 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 July 9 1982  
 OPERATOR'S WELL NO. 72-Gen 095151  
 API WELL NO. 47-109-0902  
 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 1940.1 WATER SHED Sycamore Creek of Huff Creek of Guyandotte River  
 DISTRICT Oceana COUNTY Wyoming  
 QUADRANGLE Lorado Bald Knob 15' SE  
 SURFACE OWNER Pardee Land Company ACREAGE 18000  
 OIL & GAS ROYALTY OWNER Pardee Land Company LEASE ACREAGE 18000  
 LEASE NO. 4107

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 Onondago Lime ESTIMATED DEPTH 6500  
 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

AUG 2 1982



IV-35  
(Rev 8-81)

NOV 18 1982  
OIL & GAS DIVISION  
DEPT. OF MINES

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date November 17, 1982  
Operator's Well No. 72  
Farm Pardee Land Company  
API No. 47 - 109 - 0902

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 \_\_\_ / Shallow \_\_\_ /)

LOCATION: Elevation: 1940.1 Watershed Sycamore Creek of Huff Creek of Guyan River  
District: Oceana County Wyoming Quadrangle Lorado

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 Pardee Land Company  
ADDRESS 1510 Two Girard Plaza, Phila., PA 19102  
MINERAL RIGHTS OWNER Pardee Land Company  
ADDRESS 1510 Two Girard Plaza, Phila., PA 19102  
OIL AND GAS INSPECTOR FOR THIS WORK Rue  
Schoolcraft ADDRESS Box 706 Pineville, WV 24874  
PERMIT ISSUED 7/12/82  
DRILLING COMMENCED 8/8/82  
DRILLING COMPLETED 8/22/82

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	38'KB	38'KB	20 sks.
9 5/8			
8 5/8	2198'KB	2198'KB	600 sks.
7			
5 1/2			
4 1/2	6469'KB	6469'KB	235 sks.
3			
2	6103'	6103'	
Liners used			

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

GEOLOGICAL TARGET FORMATION Onondaga Lime Depth 6500 feet  
Depth of completed well 6468 feet Rotary X / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh \_\_\_\_\_ feet; Salt 1456 feet  
Coal seam depths: \_\_\_\_\_ Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Berea Sandstone Pay zone depth 3934-3946 feet  
Gas: Initial open flow 464 Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 297 Mcf/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests 3 hours

Static rock pressure 643 psig (surface measurement) after 408 hours shut in  
(If applicable due to multiple completion--)

Second producing formation Devonian Shale Pay zone depth 5072-6289 feet  
Gas: Initial open flow 1200 Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 902 Mcf/d Oil: Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests 2 hours

Static rock pressure 1085 psig (surface measurement) after 408 hours shut in

(Continue on reverse side)

902  
297  
1199  
MCF  
FOP

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

Perforated Devonian Shale 1st Stage w/40H/6020-6289 2nd Stage w/43H/5072-5494

Fractured Devonian Shale 1st Stage Dump 1000 gal. 28% HCL, Ran 50 perf balls foam frac w/4500# 20/50 sd. 860 MCFN<sub>2</sub> ATR @ 36 BPM, ATP 3300#, MTP 3450# ISIP 2200# 15 min. 1800#. 4 perf balls, TL & FW 240 Bbl, TSLF 170 Bbl. 2nd Stage Dump 500 gal 15% HCL, 20 Bbl KCL wtr. 500 gal 15% HCL w/50 perf balls BD @ 900# @ 10 B/M ISIP 400# 15 min. 300# No ball action, load hole w/foam frac Dev. Shale w/50,000# 20/50 sd. 815 MCFN<sub>2</sub>, ATP @ 3200# MTP @ 3300# ISIP 1700#, 15 min. 1500# TL&FW 264 Bbl. TSLF 170 Bbl.

Perforate Berea w/20H/3934-3946

Fracture Berea Foam Frac w/500 gal 15% HCL 40,000# 20/50 sd. BD @ 1700#, N<sub>2</sub> @ 500,000 SCF, ATP 1500#, ISIP 600#, 15 min. 500# TL&FW 195 Bbl. TSLF 150 Bbl.

Well completed as a dual gas producer - Devonian Shale (902 MCF/D) & Berea (297 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	375	
Shale			375	405	
Sand			405	550	
Shale			550	635	
Sand & Shale			635	990	
Shale			990	1065	
Sand			1065	1315	
Sand & Shale			1315	1362	
Salt Sand			1362	2160	Salt Water
Shale & Sand			2160	2322	
Ravencliff			2322	2342	
Shale			2342	2398	
Avis Limestone			2398	2441	
Shale			2441	2580	
Upper Maxton			2580	2670	
Shale & Sand			2670	2715	
Middle Maxton			2715	2758	
Shale			2758	2912	
Lower Maxton			2912	2953	
Shale			2953	2983	
Little Lime			2983	3050	
Pencil Cave			3050	3080	
Big Lime			3080	3381	
Shale & Sand			3381	3669	
Shale			3669	3901	
Coffee Shale			3901	3920	
Berea			3920	3947	
Devonian Shale			3947	6426	
<u>Onondaga LS</u>			6426	TD	Small Show Gas TSTM
DTD 6480'					
LTD 6468'					

3947  
300-oldest  
4247-deepest pay

5072  
3947  
9125  
6020 Huron 6289  
3947 3947  
2073 2342

6480 6468  
4247 4247  
23 (2221)  
Sepl. Atg.

(Attach separate sheets as necessary)

Angola + Rhinestreet

ASHLAND EXPLORATION, INC.

Well Operator

*Derek Hina*

By: Derek Hina, Engineering Technician

Date: November 17, 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."

(Revised 3-81)



Well No. 72, Serial No. 095151  
Farm Pardee Land Company  
API #47 - 109- 0902  
Date July 9, 1982

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 X / Shallow \_\_\_ /  
LOCATION: Elevation: 1940.1 Watershed: Sycamore Creek of Huff Creek of Guyan River  
District: Oceana County: Wyoming Quadrangle: Lorado

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

DESIGNATED AGENT Forrest Burkett  
Address P. O. Box 156  
Brenton, WV 24818

OIL AND GAS ROYALTY OWNER Pardee Land Company  
Address 1510 Two Girard Plaza  
Philadelphia, PA 19102  
Acreage 18,000

COAL OPERATOR NONE  
Address \_\_\_\_\_

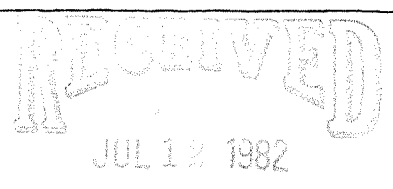
SURFACE OWNER Pardee Land Company  
Address 1510 Two Girard Plaza  
Philadelphia, PA 19102  
Acreage 18,000

COAL OWNER(S) WITH DECLARATION ON RECORD:  
NAME Pardee Land Company  
Address 1510 Two Girard Plaza  
Philadelphia, PA 19102  
NAME \_\_\_\_\_  
Address \_\_\_\_\_

FIELD SALE (IF MADE) TO:  
NAME \_\_\_\_\_  
Address \_\_\_\_\_

COAL LESSEE WITH DECLARATION ON RECORD:  
NAME Buffalo Mining Company  
Address Lyburn, WV 25632

OIL AND GAS INSPECTOR TO BE NOTIFIED:  
NAME Rue Schoolcraft  
Address P. O. Box 706  
Pineville, WV 24874  
Telephone (304) 732-7245



OIL AND GAS DIVISION  
DEPT. 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 July 1, 1942, to the ~~undersigned well operator~~ from Pardee Land Company United Carbon Company  
(If said deed, lease, or other contract has been recorded:)

Recorded on December 14, 1942, in the office of the Clerk of County Commission of Wyoming County, West Virginia, in Deed 103 Book at page 349. 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

Ashland Exploration, Inc.  
Well Operator  
By: John H. Burnett  
John H. Burnett  
Regional Civil Engineer  
Its: \_\_\_\_\_

BLANKET BOND

(Revised 3-81)

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:  
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) Ray Resources Drilling Company

Address 2101 Washington Street, East

Charleston, WV 25311

GEOLOGICAL TARGET FORMATION Onondaga Lime

Estimated depth of completed well 6500 feet. Rotary X / Cable tools     /

Approximate water strata depths: Fresh, 740 feet; salt, Top of 290 feet.

Approximate coal seam depths: 290', 380' & 420' Salt Sand

Is coal being mined in this area: Yes     / No X /

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL UP OR SACKS Cubic ft.	PACKERS
	Size	Grade	Weight per ft	New	Used	For Drill-ling	Left in Well		
Conductor	13 3/8	H-40	48	X		30	30	15 sks	Kinds
Fresh water						450'	450'	CTS	
Coal									Sizes
Intermed.	8 5/8	K-55	24	X		2240	2240	Circulate	
Production	4 1/2	K-55	10.5	X		6500	6500	As Required	Depths set
Tubing								By Rule	15.01
Liners									Perforations:
									Top Bottom

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code §22-4-2, (iii) Form W-9, "Reclamation Plan" applicable to the reclamation required by Code §22-4-10b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code §22-4-12a, and (v) if applicable, the consent required by Code §22-4-8a from the owner of any water well or drilling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

THIS PERMIT MUST BE POSTED AT THE WELL SITE.

ALL PROVISIONS BEING IN ACCORDANCE WITH CHAPTER 22,

ARTICLE 4 OF THE W. VA. CODE, THE LOCATION IS HEREBY

APPROVED FOR drilling. THIS PERMIT SHALL EXPIRE

IF OPERATIONS HAVE NOT COMMENCED BY 3-27-83

BY [Signature]

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code §22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof:

W A I V E R

The undersigned coal operator     / owner     / lessee     / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date:    , 19    .

By:    

Its: