



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1 in 22250
 PROVEN SOURCE OF ELEVATION USCGS BM Metal Plate at Locomo Elev 1203.19

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) Forrest 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 May 6, 1982
 OPERATOR'S WELL NO. 71-Ser#094301
 API WELL NO. 47-109-0891
 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 1986.6 WATER SHED Huff Creek of Guyandotte River
 DISTRICT Oceana COUNTY Wyoming
 QUADRANGLE Oceana Pineville 15' NW
 SURFACE OWNER Pardee Land Company ACREAGE 4000
 OIL & GAS ROYALTY OWNER Pardee Land Company LEASE ACREAGE 4000
 LEASE NO. 60622
 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 Marcellus Shale ESTIMATED DEPTH 6477' JUN 2 1982
 WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Forrest Burkett
 ADDRESS P.O. Box 391 Ashland Ky 41114 ADDRESS P.O. Box 156 Brenton WVa 24818
 DPD Desvsh.

H. T. HALL DEEP WELL 6-6 3-3 Mann-Oceana (266)

JUN 27 1983



State of West Virginia
Department of Mines
Oil and Gas Division

Date November 24, 1982
Operator's Well No. 71
Farm Pardee Land Company
API No. 47 - 109 - 0891

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

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

LOCATION: Elevation: 1986.6' Watershed Huff Creek of Guyandotte River
District: Oceana County Wyoming Quadrangle Oceana

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, Phil., PA 19102
MINERAL RIGHTS OWNER Pardee Land Company
ADDRESS 1510 Two Girard Plaza, Phil., PA 19102
OIL AND GAS INSPECTOR FOR THIS WORK Rue
Schoolcraft ADDRESS Box 706, Pineville, WV 24874

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	34'	34'	15 sks
9 5/8"			
8 5/8"	2235'	2235'	575 sks
7"			
5 1/2"			
4 1/2"	6398'	6398'	215 sks
3"			
2 3/8"		6050'	
Liners used			

PERMIT ISSUED 5/25/82
DRILLING COMMENCED 6/26/82
DRILLING COMPLETED 7/19/82
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

GEOLOGICAL TARGET FORMATION Marcellus Shale Depth 6477 feet
Depth of completed well 6432 feet Rotary X / Cable Tools
Water strata depth: Fresh 240 feet; Salt 1500 feet
Coal seam depths: Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Devonian Shale Pay zone depth 5097 feet *see back*
Gas: Initial open flow 1585 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 708 psig (surface measurement) after 96 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

JUN 27 1983

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

Perf Devonian Shale (1st Stage) 37H/5970-6240 - BD w/500 gal 15% HCl. Frac w/75 Quality foam using 50,000# 20/40 sd, 817.6 MCFN₂. BD @ 3900#, ATP 3555#, MTP 3900#, ISIP 2300#, 15 min 1950#, ATR 8 BPM (32 BPM foam) TL&FW 270 bbl, TSLF 189 bbl.
 Perf Devonian Shale (2nd Stage) 40H/5097-5596 - BD w/1500 gal 15% HCl - Frac w/75 Quality foam using 50,000# 20/40 sd, 600 MCFN₂ & 18 perf balls. ATR 40 BPM (foam) BD @ 2100#, ATP 2814#, MTP 3100#, ISIP 1600#, 15 min 1100#. TSLF 232 bbl, TL&FW 284 bbl.
 Perf Berea 22H/3986-4008 - BD W/1000 gal 15% inh HCl - diaplace w/39.5 bbl. Frac w/75 Quality foam using 40,000# 20/40 sd, 426 MCFN₂ - BD @ 1700#, ATP 1200#, MTP 1973#, ISIP 1200#, 15 min 1000#. TL&FW 195 bbl.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fres and salt water, coal, oil and ga
Sand & Shale			0	225	
Sand			225	390	Fresh Wtr @ 240'
Sand & Shale			390	710	
Shale & Sand			710	975	
Sand			975	1030	
Shale			1030	1070	
Sand			1070	1330	
Shale & Sand			1330	1485	
Salt Sand			1485	2005	Salt Wtr @ 1500'
Shale			2005	2369	
Ravencliff			2369	2430	
Shale			2430	2435	
Avis LS			2435	2472	
Shale & Sand			2472	2633	
Upper Maxton			2633	2712	
Shale			2712	2736	
Middle Maxton			2736	2771	
Shale & Sand			2771	2957	
Lower Maxton			2957	2988	
Shale			2988	3021	
Little Lime			3021	3092	
Pencil Cave			3092	3120	
Big Lime			3120	3436	
Shale & Sand			3436	3742	
Shale			3742	3958	
Coffee Shale			3958	3973	
Berea			3973	4010	
Devonian Shale			4010	6384	
Onondaga LS			6384	TD	
DTD 6440					
LTD 6432					

6440
4010

2430 - expl 45

6384
4010

2374

(Attach separate sheets as necessary)

ASHLAND EXPLORATION, INC.

Well Operator

By: *Leuk S. Wina*

Date: November 24, 1982

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic

(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 Co.
Address 630 Commerce Square
Charleston, WV 25301

GEOLOGICAL TARGET FORMATION Marcellus Shale
Estimated depth of completed well 6477' feet. Rotary X / Cable tools /
Approximate water strata depths: Fresh, feet; salt, Top of feet.
Approximate coal seam depths: 290', 380' & 420'. No open mines 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		
Conductor	13 3/8	H-40	48			30	30	Kinds
Fresh water								
Coal	11 3/4					500	500	CTS
Intermed.	8 5/8	K-55	24			2241	2241	2245X
Production Tubing	4 1/2	K-55	10.5			6447	6447	644 SRs
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 IV-9, "Reclamation Plan" applicable to the reclamation required by Code §22-4-15b 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 §22-4-2a from the owner of any water well or dwelling 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 1-25-83
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 regularions.

Date: , 19 .

By:

Its: