



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1 in 21842
 PROVEN SOURCE OF ELEVATION USC & GS BM Approx. 1200' Upstream from Skitter Cr. Along Point Cr. Elev 1166.58

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 W. 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 April 2, 1982
 OPERATOR'S WELL NO. 4-Ser 094261
 API WELL NO. _____
47 - 019 - 0482
 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 1726.3 WATER SHED Right Fork of Spring Branch of Point Creek
 DISTRICT Valley COUNTY Fayette
 QUADRANGLE Powellton Montgomery 13' 5E
 SURFACE OWNER Christian Colliery Co. ACREAGE 4051.78
 OIL & GAS ROYALTY OWNER Christian Colliery Co. LEASE ACREAGE 4051.78
 LEASE NO. 9968
 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 Morcellus Shale ESTIMATED DEPTH 6421'
 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

DEEP WELL

IV-35
(Rev 8-81)



Date October 12, 1982
 Operator's Well No. 4
 Farm Christian Colliery
 API No. 47 - 019 - 0482

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: 1726.3' Watershed Right Fork of Spring Branch of Paint Creek
 District: Valley County Fayette Quadrangle Powellton

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 Christian Colliery Co.
 ADDRESS 214 Orchard Way, Wayne, PA
 MINERAL RIGHTS OWNER Christian Colliery Co.
 ADDRESS 214 Orchard Way, Wayne, PA
 OIL AND GAS INSPECTOR FOR THIS WORK D. Craig Duckworth
 ADDRESS Rt. 2, Box 2-D, Sandyville, WV
 PERMIT ISSUED 4/6/82
 DRILLING COMMENCED 7/19/82
 DRILLING COMPLETED 7/30/82
 IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON N/A

Casing & Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16 Cond.			
13-10 3/8	25	25	18 sks
9 5/8			
8 5/8	1497	1497	100 sks
7			
5 1/2			
4 1/2	6483	6483	272 sks
3			
2 3/8		6009'	Pkr @ 2813
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Depth 6421 feet
 Depth of completed well 6502 feet Rotary X / Cable Tools
 Water strata depth: Fresh feet; Salt 863 feet
 Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA
 Producing formation Devonian Shale Gordon Pay zone depth 3409-3422 feet
 Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
 Final open flow 619 Mcf/d Oil: Final open flow Bbl/d
 Time of open flow between initial and final tests 5 hours
 Static rock pressure 200 psig (surface measurement) after 120 hours shut in
 (If applicable due to multiple completion--)
 Second producing formation Upper Weir Pay zone depth 2742-2755 feet
 Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
 Final open flow 848 Mcf/d Oil: Final open flow Bbl/d
 Time of open flow between initial and final tests 5 hours
 Static rock pressure 600 psig (surface measurement) after 120 hours shut in

Huron + Rhinastreet (see back)
 ← 4907-6162

619
848
1467
MCF
FOP

(REVERSE)

Completed as dual gas producer w/initial (total potential 1467 MCF/D) Gordon & Devonian Shale @ 619 MCF/D & Upper Weir & L. Maxton @ 848 MCF/D.

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

1st Stage - Perf Devonian Shale 36H/5715-6162, foam frac w/1500gal 28% HCl, 75 Quality foam. BD @ 1800#, ATP 4000# @ 10 B/M (wtr) 25,000# 20/50 sand. BD @ 1800#, ISIP @ 2350#, 15 min 1500#, TSLF 125 bbl, TL&FW 232 bbl.

Rhinestreet

2nd Stage - Perf Devonian Shale 40H/4907-5146 w/1500 gal 15% HCl & ball out. BD @ 900# 60 perf balls, foam frac w/75 Quality foam @ 45 B/M (foam) using 25,000# 20/50 sand, 600 MCFN₂, ATP 2836#, ISIP 1500#, 15 min 975#, TSLF 164 bbl, TL&FW 230 bbls.

Huron

3rd Stage - Perf Gordon 16H/3409-3422. Foam frac w/75 Quality foam, 500 gal 15% inh HCl acid. ATR @ 20 B/M, 30,000# 20/40 sand, 252 MCFN₂, BD @ 1380#, ATP 1300#, ISIP 810 15 min 710#. TSLF 104 bbl, TL&FW 154 bbls.

4th Stage - Perf Upper Weir 16H/2742-2755, frac w/75 Quality foam, 500 gal 15% HCl acid 30,000# 20/40 sand, 198 MCFN₂ @ 20 B/M (foam) BD @ 1040#, ATP 1120#, ISIP 750#, 15 min 690#.

5th Stage - Perf Lower Maxton 14H/2192-2203 - foam frac w/75 Quality foam, 500 gal 15% HCl acid, 30,000# 20/40 sand, 100 MCFN₂, ATR @ 20 B/M, BD @ 1400#, ISIP 700#, ATP 1050 15 min 400#, TSLF 134 bbls., TL&FW 184 bbls. LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all f and salt water, coal, oil and
Sand & Shale			0	205	
Shale			205	267	
Sand			267	340	
Shale			340	448	
Sand & Shale			448	703	
Shale			703	750	
Sand			750	820	
Shale			820	853	
Salt Sand			853	1488	
Shale			1488	1623	
Avis Ls.			1623	1654	
Shale			1654	1733	
Upper Maxton			1733	1768	
Shale			1768	1802	
Stray Sand			1802	1828	
Shale			1828	1872	
Middle Maxton			1872	1900	
Shale			1900	2172	
Lower Maxton			2172	2216	
Shale			2216	2218	
Little Lime			2218	2279	
Pencil Cave			2279	2312	
Big Lime			2312	2611	
Shale			2611	2651	
Injun			2651	2692	
Shale			2692	2718	
Upper Weir			2718	2759	
Shale			2759	2847	
Lower Weir			2847	2869	
Shale			2869	3100	
Coffee Shale			3100	3122	
Berea			3122	3155	
Devonian Shale			3155	3400	
Gordon			3400	3424	
Devonian Shale			3424	6460	
Onondaga Ls.			6460	6493	

LTD 6493
 DTD 6502

(Attach separate sheets as necessary)

ASHLAND EXPLORATION, INC.

Well Operator

By: David J. Belcher

Date: October 12, 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 ... constructed in the drilling of a well."

SEP 12 1982

