

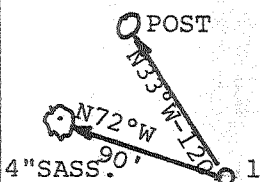
Jamil
8/21/95

Latitude 38° 35' 00"

5420' SOUTH
6070' WEST

Longitude 82° 07' 30"

CREAMEANS

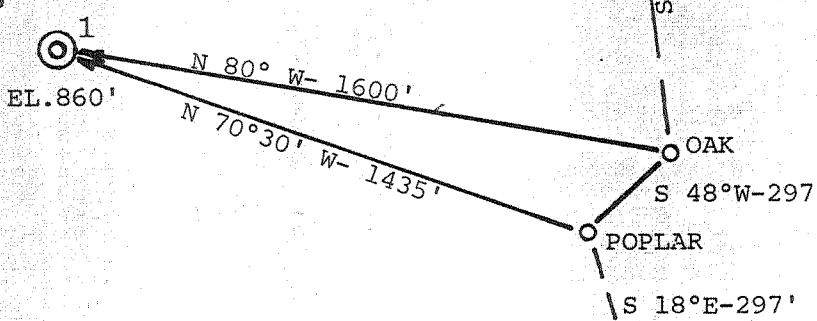
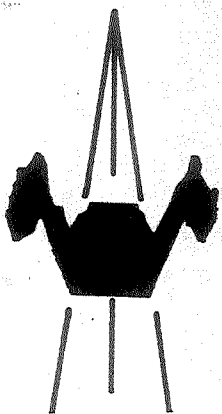


ERROR OF CLOSURE (DEED)

EFFINGHAM

EDMONDS

92 ACRES



ACCURACY: 1/200'

- New Location
- Drill Deeper EDMONDS
- Abandonment
- Fracture
- Redrill
- Other

Formation DEVONIAN SHALE Oil
 Est. Depth 4065 Gas
 Other

Source of Elevation B.M. ON BLACKTOP (722')

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Company Steve Duckworth
P.O. Box 6871-Charleston, WVa. 25362

Address _____

Surface Owner S.L. HARRIS

Mineral Owner S.L. HARRIS

Well No. 1 Acres 92

Elevation 860'

Quadrangle GLENWOOD Series 7.5'

County MASON District HANNAN 6

Date 9/21/79 Scale 1" = 500'

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL & GAS
 NITRO, WEST VIRGINIA 25143

WELL LOCATION MAP

Oil Well No. 47 - 053 - 00217-P
 STATE COUNTY PERMIT

+ Denotes location of well on United States Topographic Maps.

Engineer CHET WATERMAN NOV 13 1995

Engineer's Registration No. 3788 File No. 79-649

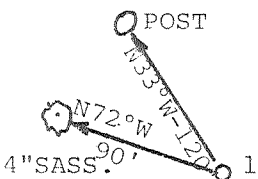
MASON 0217-P

2/13/80 P

Latitude 38° 35' 00"

5420' SOUTH
6070' WEST

CREAMEANS + 15'



ERROR OF CLOSURE (DEED)

EFFINGHAM

EDMONDS

92 ACRES

1
EL. 860'

N 80° W - 1600'

N 70° 30' W - 1435'

S 7° E - 1617'

OAK

POPLAR

S 48° W - 297'

S 18° E - 297'

ACCURACY: 1/200'

- New Location
- Drill Deeper EDMONDS
- Abandonment
- Fracture
- Redrill
- Other

Formation DEVONIAN SHALE

Est. Depth 4065

Oil

Gas

Other

Source of Elevation B.M. ON BLACKTOP (722')

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Chet Waterman

Company CABOT OIL & GAS 149
 Address CHARLESTON, WV
 Surface Owner S.L. HARRIS
 Mineral Owner S.L. HARRIS

Well No. 1 Acres 92
 Elevation 860'
 Quadrangle GLENWOOD Series 7.5'
 County MASON District HANNAN
 Date 9/21/79 Scale 1" = 500'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
47 - 053 - 0217-P
 STATE COUNTY PERMIT

Plugging Permit cancelled
 + Denotes location of well on United States Topographic Maps.
 Engineer CHET WATERMAN JAN 12 1987
 Engineer's Registration No. 3788 File No. 79-649

MASON 0217-P

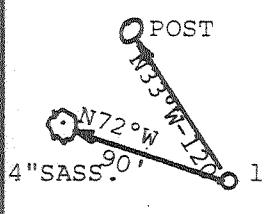
2/13/80 P

Plot Card

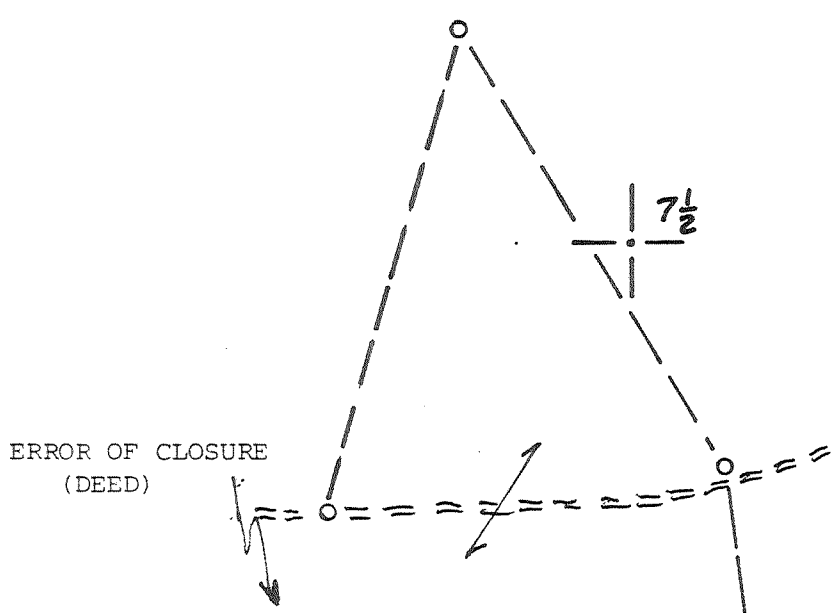
Latitude 38° 35' 00"

5420' SOUTH
6070' WEST

CREAMEANS + 15'



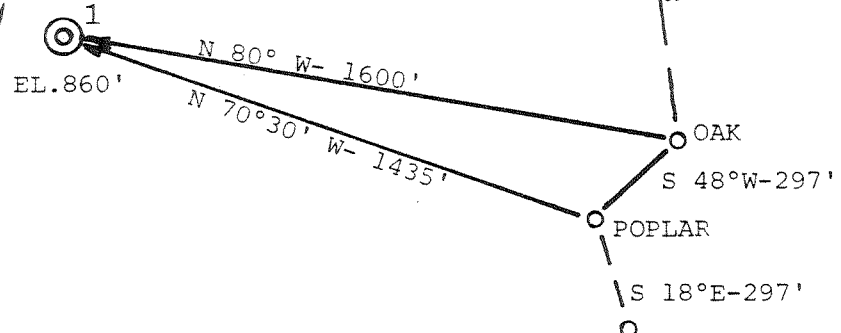
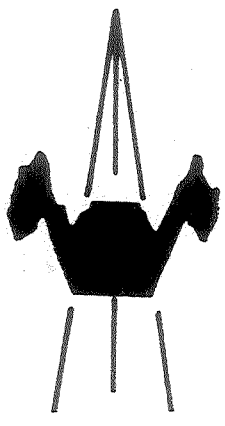
30
05'
07
82°
82
Longitude (15')



EFFINGHAM

EDMONDS

92 ACRES



- ACCURACY: 1/200'
- New Location
 - Drill Deeper EDMONDS
 - Abandonment
 - Fracture
 - Redrill
 - Other

Formation DEVONIAN SHALE Oil
 Est. Depth 4065 Gas
 Other

Source of Elevation B.M. ON BLACKTOP (722')

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Chet Waterman

Company CABOT OIL + GAS
 Address CHARLESTON, WV
 Surface Owner S.L. HARRIS
 Mineral Owner S.L. HARRIS

Well No. 1 Acres 92
 Elevation 860'
 Quadrangle GLENWOOD Series 7.5'
 County MASON District HANNAN
 Date 9/21/79 Scale 1" = 500'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

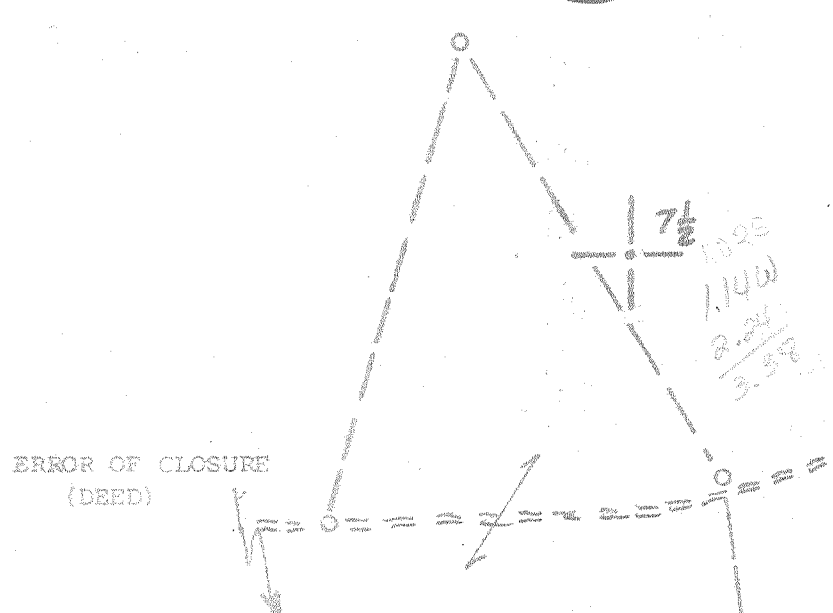
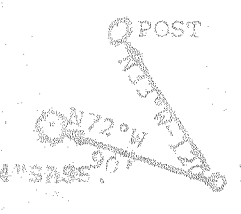
WELL LOCATION MAP
47 - **053** - **0217** - P
 STATE COUNTY PERMIT

+ Denotes location of well on United States Topographic Maps.
 Engineer **CHET WATERMAN**
 Engineer's Registration No. 3788 File No. 79-649

MASON 0217-P

5420' SOUTH
5070' WEST

CREAMPAIN
15
1.02 S
3.35 W

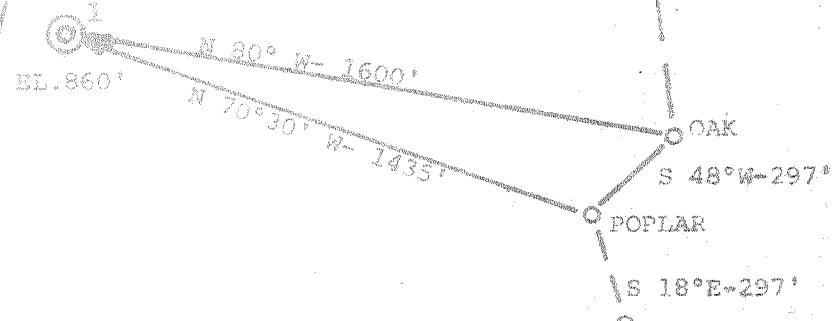
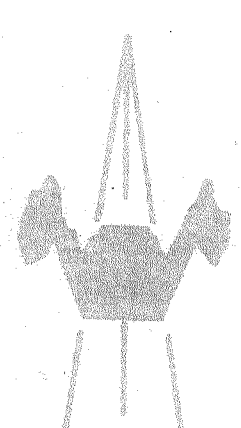


ERROR OF CLOSURE (DEED)

EFFINGHAM

EDMONDS

92 ACRES



ACCURACY: 1/200'

New Location
 Drill Deeper EDMONDS
 Abandonment
 Fracture
 Redrill
 Other _____

Formation DEVONIAN SHALE Oil
 Est. Depth 4065 Gas
 Other _____

Source of Elevation B.M. ON BLACKTOP (722')
 I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the relevant regulations of the oil and gas section of the mining laws of West Virginia.

Company APPALACHIAN EXPL. & DEV. INC.
 Address CHARLESTON, WV
 Surface Owner S.L. HARRIS
 Mineral Owner S.L. HARRIS
 Well No. 1 Acres 92
 Elevation 860'
 Quadrangle GLENWOOD SW Series 7.5
 County MASON District HANVAN
 Date 8/31/79 Scale 1" = 500'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 47 - 053 - 0217
 STATE COUNTY PERMIT

+ Denotes location of well on United States Topographic Maps.
 Engineer CHET WATERMAN
 Engineer's Registration No. 3788 File No. 79-610

1-0 0

MAR 5 1980

RECEIVED

JUL 27 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES



IV-35
(Rev 8-81)

Date July 20, 1982

Operator's Well No. #1

State of West Virginia
Department of Mines
Oil and Gas Division

Farm S. L. Harris

API No. 47 - 053 - 217

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 ___ / Underground Storage ___ / Deep ___ / Shallow xx /)

LOCATION: Elevation: 860' Watershed McCowon Branch
District: Hannan County Mason Quadrangle Glenwood

COMPANY Cabot Oil & Gas Corporation
ADDRESS P.O. Box 628, Chas., WV 25322
DESIGNATED AGENT Richard P. Parsons
ADDRESS P.O. Box 628, Chas., WV 25322
SURFACE OWNER S. L. Harris
ADDRESS Rt 1, Hannan Trace Rd, Glenwood, WV 25520
MINERAL RIGHTS OWNER S. L. Harris
ADDRESS Rt 1, Hannan Trace Rd, Glenwood, WV 25520
OIL AND GAS INSPECTOR FOR THIS WORK Kenneth
Butcher RFD #1 ADDRESS Barboursville, WV 25504
PERMIT ISSUED February 13, 1980
DRILLING COMMENCED May 1, 1980
DRILLING COMPLETED May 7, 1980

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8	523'	523'	200 sks
8 5/8			
7	2448'	2448'	450 sks
5 1/2			
4 1/2	3725'	3725'	75 sks
3			
1-1/2		3655'	
Liners used			

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

GEOLOGICAL TARGET FORMATION Brown Shale Depth 3872' feet
Depth of completed well 3900 feet Rotary xx / Cable Tools
Water strata depth: Fresh ___ feet; Salt ___ feet
Coal seam depths: ___ Is coal being mined in the area? ___

OPEN FLOW DATA

Producing formation Brown Shale Pay zone depth ___ feet
Gas: Initial open flow .44 Mcf/d Oil: Initial open flow ---- Bbl/d
Final open flow TSTM DRY Mcf/d Final open flow ---- Bbl/d
Time of open flow between initial and final tests ---- hours
Static rock pressure ---- psig (surface measurement) after --- 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 shut in

AUG 9 1982

(Continue on reverse side)

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

7/16/80 - Perforated from 3316'-3674' (26 holes).
 7/19/80 - Broke down with 1000 gals 15% HF acid. Broke down with 1600# N₂. Fract with 15,000# 80/100 & 60,000# 20/40 sand. Avg Inj Rate - 12.5 BPM. Avg Treat Press - 1800#. Ins Shut In Press - 900#. Total fluid - 329 bbls.w/425 SCF N₂.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Shale			0	103	
Sand			103	129	
Shaly Sand			129	425	
Sand			425	444	
Shale			444	616	
Sand			616	627	
Shale			627	755	
Sand			755	804	
Shale			804	905	
Sand			905	923	
Shale			923	935	
Sand			935	960	
Shale			960	1003	
Sand			1003	1049	
Shale			1049	1090	
Sand			1090	1158	
Shale			1158	1209	
Sand			1209	1223	
Shale			1223	1271	
Sand			1271	1300	
Shale			1300	1333	
Shaly Sand			1333	1543	
Salt Sand			1543	1791	
Shale			1791	1793	
Big Lime			1793	1832	
Shale			1832	1855	
Injun			1855	1922	
Shale			1922	1947	
Sand			1947	1953	
Shale			1953	1962	
Sand			1962	1975	
Shale			1975	1984	
Weir			1984	2112	
Sandy Shale			2112	2348	
Shale			2348	2378	

(Attach separate sheets as necessary)

Cabot Oil & Gas Corporation

Well Operator

By: R. M. Carson

District Drilling
Superintendent

Date: July 21, 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 ... encountered in the drilling of a well."

<u>FORMATION</u>	<u>TOP FEET</u>	<u>BOTTOM FEET</u>	<u>REMARKS</u>
Berea	2378	2390	
Shale	2390	2401	
Sandy Shale	2401	2414	
Shale	2414	3252	
Brown Shale	3252	3271	
Shale	3271	3312	
Brown Shale	3312	3369	Temp. show 3320-3335
Shale	3369	3408	
Brown Shale	3408	3447	
Shale	3447	3472	
Brown Shale	3472	3562	Noise show 3550
Shale	3562	3872	
Brown Shale	3872	3896	Gas check at T.F. 444 cu. ft./day
			D.T.D. 3900'
			L.T.D. 3896'

2378 - 3896'

- 4- 3239
- 3- 3609
- A- 3717
- B- 3872

RECEIVED

JUL 27 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

AUG 9 1982



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED
FEB 13 1980
OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE February 7, 1980

Surface Owner S. L. Harris Company Appalachian Exploration & Development, Inc.

Address Rt. 1, Hannan Trace Rd., Glenwood, WV 25520 Address Box 628, Charleston, WV 25322

Mineral Owner Same as listed above Farm S. L. Harris Acres 92

Address " " " " Location (waters) McCowon Branch

Coal Owner Same as listed above Well No. 1 Elevation 860'

Address " " " " District Hannan County Mason

Coal Operator Not operated Quadrangle Glenwood

Address _____

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 10-13-80.

INSPECTOR
TO BE NOTIFIED Kenneth Butcher
ADDRESS RFD #1, Barboursville, WV 25504
PHONE 736-4885

Robert H. [Signature]
Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated September 17 1975 by S.L. Harris et ux made to Columbia Gas Transmission Corp and recorded on the 9th day of October 1975 in Maxon County, Book 40 Page 243

NEW WELL DRILL DEEPER REDRILL FRACTURE OR STIMULATE

OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND
ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Very truly yours,
Appalachian Exploration & Development, Inc.
(Sign Name) [Signature]
Well Operator

Box 628 _____
Street

Charleston _____
City or Town

West Virginia 25322 _____
State

*SECTION 3 If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

47-053-0217 _____ PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by _____

MARKET BOND

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO X DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT: _____
 NAME Unknown _____ NAME R. P. Parsons _____
 ADDRESS _____ ADDRESS Box 628, Charleston, WV 25322 _____
 TELEPHONE _____ TELEPHONE 344-8355 _____
 ESTIMATED DEPTH OF COMPLETED WELL: 4065' _____ ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Brown Shale _____
 TYPE OF WELL: OIL _____ GAS X COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8	500'	500'	circ.
8 - 5/8			
7	2440'	2440'	circ.
5 1/2			
4 1/2			
3			Perf. Top
2			Perf. Bottom
Liners 2-7/8"	1700'	1700'	Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 100 FEET _____ SALT WATER _____ FEET _____
 APPROXIMATE COAL DEPTHS 475' _____
 IS COAL BEING MINED IN THE AREA? NO BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title