



- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

CERTIFICATE

"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."

Minimum degree of accuracy is one part in 200

Signed Frank H. Barber 6/18/80

COMPANY KAISER EXPLORATION & MINING CO.

ADDRESS P.O. Box 8, Ravenswood, W.Va. 26164

FARM GRANT BARNETTE

MAP _____ ACRES 287A & 90A LEASE NO. _____

WELL (FARM) NO. 1 SERIAL NO. KEM. 25

ELEVATION (SPIRIT LEVEL) 988.2'

QUADRANGLE ELMWOOD 7.5 WINFIELD 15' NE

COUNTY MASON DISTRICT UNION

POINT OF PROVEN ELEVATION KERR ELEV. 1061

FILE NO. _____ DRAWING NO. _____

DATE APRIL 26 1980 SCALE 1" = 1000'

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

WELL LOCATION MAP
053-0226

FILE NO. _____

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1" TO 24,000' LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.

- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

Deep well G-6 Rock Castle (346)

3106 JUN 23 1980



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

WELL RECORD

Rotary Oil _____
Cable _____ Gas
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind) _____

Quadrangle Elmwood ³³⁸

Permit No. MAS-0226

434

Company Kaiser Exploration and Mining Company
Address P. O. Box 8, Ravenswood, WV 26164
Farm McKinley Grant Barnette Acres N/A
Location (waters) _____
Well No. KEM #25 Elev. 966
District Union 9 County Mason
The surface of tract is owned in fee by _____
McKinley Grant Barnette
Address 119 Ohio River Road, Pt. Pleasant, WV
Mineral rights are owned by Same as above
Address Same as above
Drilling Commenced 6/16/80
Drilling Completed 6/24/80
Initial open flow 8 MCFD cu ft -- bbls
Final production 175 M cu ft per day -- bbls
Well open 20 hrs before test 1850 RP

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size			
20-16			
Cond.			
13-10" 10 3/4	245 (KB)	245' (KB)	150 sks class 3% calcium cl (to surface)
9 5/8			
8 5/8			
7	2707' (KB)	2707' (KB)	165 sks (1500' fillup)
5 1/2			
4 1/2			
3	5047' (KB)	5047' (KB)	225 sks (2500' fillup)
2			
Liners Used			

Well treatment details. Attach copy of cementing record
25% HCL acid in hole; perforated Oriskany 4971'-4979' (K.B.) w/4 holes/ft, 33 holes, .39 diameter. Dowell & B.J. Hughes hydrofractured Oriskany w/15,000# 80/100 sand and 30,000# 20/40 sand, and 200,000 SCF of nitrogen; used a total of 762 bbl of water in treatment; treated at average rate of 22 BPM at 3600 psig; instantaneous shut in pressure was 3200 psig.

Coal was encountered at _____ Feet _____ Inches
Fresh water _____ Feet _____ Salt Water _____ Feet
Producing Sand Oriskany sandstone Depth 4971'-4979' (K.B.)

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Siltstone			0	48		
Shale			48	268		
Red Rock			268	429		
Sand & Siltstone			429	453		
Shale			453	539		
Siltstone & Shale			539	676		
Sand			676	682		
Shale			682	700		
Sand			700	709		
Shale			709	765		
Sand			765	784		
Shale			784	796		
Sand & Siltstone			796	1083		
Shale			1083	1144		
Sand			1144	1187		
Shale			1187	1204		
Sand			1204	1305		
Shale			1305	1360		
Sand			1360	1411		
Siltstone			1411	1426		
Sand			1426	1490		
Siltstone & Shale			1490	1536		
Sand			1536	1563		

(over)

* Indicates Electric Log tops in the remarks section

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Siltstone			1563	1746		
Sand & Siltstone			1746	1853		
Shale			1853	1916		
Maxton Sand			1916	1948		
Siltstone			1948	1972		
Big Lime			1972	2120		
Shale			2120	2152		
Big Injun			2152	2203		
Siltstone			2203	2594		
Coffee Shale			2594	2621		
Berea			2621	2631		
Siltstone			2631	2702		
Shale			2702	3820		
Brown Shale			3820	4288		Show Gas - 4175'
Shale			4288	4634		
Marcellus			4634	4864		Show Gas - 4690'
Onondaga			4864 ⁷⁴	4954		Show Gas - 4975'
Oriskany			4954	4982		
Helderberg			4982	5059		
Total Depth			5059			

Toos From KB = 976'

Show Gas - 4175'
 Show Gas - 4690'
 Show Gas - 4975'

Date SEPTEMBER 23

1980

APPROVED

Koll A. P.

Operations Manager



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED
APR 30 1980

Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

DATE April 30, 1980

Surface Owner McKinley Grant Barnette
Address 119 Ohio River Road, Pt. Pleasant 25550
Mineral Owner Same as above
Address Same as above
Coal Owner Union Carbide Corporation
Address 32 Sanderson Road, Clendenin, WV
Coal Operator None
Address None

Company Kaiser Exploration and Mining Company
Address P. O. Box 8, Ravenswood, WV 26164
Farm McKinley Grant Barnette Acres
Location (waters) _____
Well No. KEM #25 Elevation 966
District Union County Mason
Quadrangle Elmwood

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 1-16-81

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

Robert T. [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 October 11 1979 by McKinley Grant
Barnette made to Kaiser Exploration and Mining Co. and recorded on the 23 day of October
1979, in Mason County, Book 46 Page 572

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
WC-304 - 292-6331

Very truly yours,
(Sign Name) [Signature]
Well Operator
R. A. Pryce
Kaiser Exploration and Mining Company
Street
P. O. Box 8, Ravenswood
City or Town
West Virginia 26164
State

Address
of
Well Operator

*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.

BLANKET BOND

47-053-0226

PERMIT NUMBER

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 Not known at this time NAME Robert A. Pryce
 ADDRESS _____ ADDRESS P. O. Box 8, Ravenswood, WV 26164
 TELEPHONE _____ TELEPHONE 273-5371
 ESTIMATED DEPTH OF COMPLETED WELL: 5100' ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Oriskany
 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 10 3/4"	250	250	125 sx Class A to surface
8 - 5/8			
7	2750	2750	165 Sx Pozmix Cement 1400' fill-up
5 1/2			
4 1/2		5100	225 sx pozmix 2500' fill-up
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS _____ FEET SALT WATER _____ FEET

APPROXIMATE COAL DEPTHS _____

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.

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.

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