



15 MIN Longitude 81° 45'  
7.5 MIN TOPO 81° 47' 30"

New Location   
Drill Deeper   
Abandonment

Minimum Error of Closure 1 in 200  
Source of Elevation USGS Elev. 822' TOP OF KNDB NORTH WEST  
OF LOC.

"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 KAISER EXPL. & MINING Co.  
Address Box 98 RAVENSWOOD, WV  
Farm BERNARD JOHNSON  
Tract \_\_\_\_\_ Acres 53 Lease No. 2693  
Well (Farm) No. DEK #40 Serial No. \_\_\_\_\_  
Elevation (Spirit Level) 762'.0 EC  
Quadrangle RAVENSWOOD 15 MIN. & 7.5 MIN.  
County JACKSON District UNION  
Engineer N. L. Sefton  
Engineer's Registration No. 1832  
File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
Date 6-4-77 Scale 1" = 400'

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

WELL LOCATION MAP  
FILE NO. JAC-1406

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500 latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

(342) 47-035



**RECEIVED**

MAR - 6 1978

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

OIL & GAS DIVISION  
DEPT. OF MINES

Oil and Gas Division

WELL RECORD 5

Rotary XXX Oil \_\_\_\_\_  
Cable \_\_\_\_\_ Gas XXX  
Recycling \_\_\_\_\_ Comb. \_\_\_\_\_  
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind) \_\_\_\_\_

Quadrangle Ravenswood

Permit No. JAC-1406  
47-035

Company Kaiser Exploration & Mining Co.  
Address P.O. Box 98, Ravenswood, WV  
Farm Bernard Johnson Acres 53  
Location (waters) Lick Run of Mill Creek  
Well No. DEK #40 Elev. 762  
District Union County Jackson  
The surface of tract is owned in fee by \_\_\_\_\_  
Bernard L. & Hazel A. Johnson  
Address Cottageville, WV  
Mineral rights are owned by Same as above  
Address \_\_\_\_\_  
Drilling Commenced 7/21/77  
Drilling Completed 8/18/77  
Initial open flow 140 M cu. ft. -- bbls.  
Final production 10 MCFD cu. ft. per day \_\_\_\_\_ bbls.  
Well open \_\_\_\_\_ hrs. before test 1550 RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size			
20-16			
Cond.			
13-10"			
9 5/8	251'	251'	125 Sax
8 5/8			
7	2308	2308	75 Sax
5 1/2			
4 1/2	4533	4533	150 Sax=1508'
3			
2			
Liners Used			

Well treatment details: Attach copy of cementing record. Halliburton  
Perforated Oriskany section at 4439'-4440' and 4449'-4451' with 8 Omega Jet shots/foot.  
Fractured Oriskany with 1,000 gal. of 15% acid, 409 bbl. water, 1500 lbs. 80/100 and 1500 lbs. of 20/40 sand injected at 10 1/2 bbl/min.  
Perforated Br. Shale at 3713 to 3801 with 25 shots fractured with 74,500# sand and 1025 bbl water.

Coal was encountered at None Feet \_\_\_\_\_ Inches \_\_\_\_\_  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Producing Sand Oriskany, Br. Shale Depth See above

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Red Shales			0	211		
Sand			211	267		
Shale			267	459		
Sand			459	501		
Red Rock			501	557		
Shale			557	581		
Sand			581	596		
Red Rock			596	698		
Sand			698	708		
Red Rock			708	767		
Shale			767	800		
Red Rock			800	875		
Sand			875	895		
Shale			895	924		
Sand			924	933		
Red Rock			933	952		
Shale			952	1001		
Salt Sand			1001	1053		
Shale			1053	1088		
Sand			1088	1111		
Shale			1111	1134		
Sand			1134	1145		
Shale			1145	1186		

(over)

\* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand			1186	1207		
Shale			1207	1321		
Sand			1321	1347		
Shale			1347	1372		
Sand			1372	1421		
Shale			1421	1517		
Sand			1517	1532		
Shale			1532	1649		
Maxon			1649	1681		
Big Lime			1681	1753		
Shale			1753	1811		
Injun Sand			1811	1907		
Shale			1907	2214		
Coffee Shale			2214	2229		
Berea Sand			2229	2231		
Shale			2231	3374		
Brown Shale			3374	3827		
Shale			3827	4232		
Marcellus Shale			4232	4364		
Onondaga L.S.			4364	4438		
Oriskany Sand			4438	4462		
Helderberg L.S.			4462	TD		
Log Total Depth				4547		

Date March 2, 1978

APPROVED *Robert A. Poyner* Owner

By Operations Manager  
(Title)



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED  
JUN 24 1977  
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 June 8, 1977

Surface Owner Bernard L. & Hazel A. Johnson Company Kaiser Exploration & Mining Co.  
 Address Cottageville, W. Va. Address Box 98, Ravenswood, W. Va.

Mineral Owner Bernard L. Johnson, et ux Farm Bernard Johnson Acres 53 ac  
 Address Cottageville, W. Va. Location (waters) Lick Run of Mill Creek

Coal Owner Same as above Well No. DEK #40 Elevation 762  
 Address \_\_\_\_\_ District Union County Jackson

Coal Operator Not operated Quadrangle Ravenswood 15', Ravenswood 7 1/2'  
 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 TO BE NOTIFIED Richard Morris  
 operations have not commenced by 10-27-77 ADDRESS Grantsville, W. Va.  
 Deputy Director - Oil & Gas Division PHONE 354-7259

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 August 20th 1976 by Bernard L. Johnson, et ux made to Devon & Eason and recorded on the 3rd day of May 1976 in Jackson County, Book 138 Page 7

XXX 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

Address of Well Operator

Very truly yours, KAISER EXPLORATION & MINING CO.  
 (Sign Name) W. F. Wegener Well Operator's Representative  
 Box 98  
 Street  
 Ravenswood  
 City or Town  
 West Virginia  
 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.

BLANKET BOND

"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 W. F. Wegener

JAC-1406 PERMIT NUMBER

47-035

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

PROPOSED WORK ORDER TO XXX DRILL \_\_\_\_\_ DEEPEN \_\_\_\_\_ FRACTURE-STIMULATE \_\_\_\_\_  
 DRILLING CONTRACTOR: (If Known) \_\_\_\_\_ RESPONSIBLE AGENT: \_\_\_\_\_  
 NAME FWA Drilling Co. NAME Bill W. Backus  
 ADDRESS Box 448, Elkview, WV 25071 ADDRESS PO Box 1433, Charleston, WV  
 TELEPHONE 965-3379 TELEPHONE 342-3171  
 ESTIMATED DEPTH OF COMPLETED WELL: 4550 ROTARY XXX CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Oriskany  
 TYPE OF WELL: OIL \_\_\_\_\_ GAS XXX 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	250'	250'	110 sax = to surface
8 - 5/8			
7	2300'	650'	75 sax = 625'
5 1/2			
4 1/2	4550'	4550'	150 sax = 1800'
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS \_\_\_\_\_ FEET SALT WATER \_\_\_\_\_ FEET  
 APPROXIMATE COAL DEPTHS None anticipated  
 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