



15 MIN. TOPO 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 U.S.G.S. Elev. 672' Road Intersection  
SOUTH OF Well 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, W. VA.  
Farm LLOYD STEPHENS  
Tract \_\_\_\_\_ Acres 64 Lease No. 4344  
Well (Farm) No. DEK # 39 Serial No. \_\_\_\_\_  
Elevation (Spirit Level) 756' 0  
Quadrangle 7.5' COTTAGEVILLE  
15' RAVENSWOOD EC  
County JACKSON District UNION  
Engineer N. L. Sefton  
Engineer's Registration No. 1832  
File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
Date 6-15-77 Scale 1" = 500'

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

WELL LOCATION MAP  
FILE NO. JAC-1408

+ 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.

47-035

N21664 Deep well 4600' down to 6 1/2 North Ripley (342)

AUG 12 1977



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MAR - 6 1978

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
Oil and Gas Division

OIL & GAS DIVISION  
DEPT. OF MINES

WELL RECORD 17

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

Quadrangle Cottageville

Permit No. JAC - 1408

Company Kaiser Exploration & Mining Co.  
Address Box 98, Ravenswood, WV  
Farm Lloyd E. Stephens Acres 64  
Location (waters) Log Lick Run  
Well No. DEK #39 Elev. 756  
District Union County Jackson  
The surface of tract is owned in fee by \_\_\_\_\_  
Lloyd & Margaret Stephens  
Address Rt. 2, Box 205, Cottageville, WV  
Mineral rights are owned by Same as above  
Address \_\_\_\_\_  
Drilling Commenced 7/30/77  
Drilling Completed 8/7/77  
Initial open flow Show cu. ft. \_\_\_\_\_ bbls.  
Final production 35 MCFD ~~cu. ft.~~ per day \_\_\_\_\_ bbls.  
Well open \_\_\_\_\_ hrs. before test 1700 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	246'	246'	110 Sax
8 5/8			
7	2364	2364	75 Sax
5 1/2			
4 1/2	4590	4590	150 Sax
3			
2		4540	
Liners Used			

Well treatment details: Attach copy of cementing record. Halliburton  
Perforated Oriskany Section at 4509'-4511' and 4522'-4524' with 8 Omega Shots/foot.  
Fractured Oriskany with 730 bbl water, 7700 lbs. of 80/100 and 30,500 lbs. 20/40 sand.

Coal was encountered at None Feet \_\_\_\_\_ Inches \_\_\_\_\_  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Producing Sand Oriskany Sand Depth 4509' - 4524'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Red Shales			0	126		
Shale			126	214		
Sand			214	249		
Shale			249	287		
Red Rock			287	508		
Shale			508	552		
Sand			552	563		
Red Rock			563	622		
Sand			622	634		
Red Rock			634	706		
Sand			706	719		
Red Rock			719	821		
Shale			821	878		
Red Rock			878	893		
Shale			893	940		
Red Rock			940	1000		
Shale			1000	1060		
Salt Sand			1060	1151		
Shale			1151	1255		
Sand			1255	1264		
Shale			1264	1360		
Sand			1360	1384		
Shale			1384	1423		
Sand			1423	1492		

(over)

\* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shale			1492	1530		
Sand			1530	1552		
Shale			1552	1640		
Maxon			1640	1702		
Big Lime			1702	1789		
Shale			1789	1820		
Injun Sand			1820	1940		
Shale			1940	2246		
Coffee Shale			2246	2264		
Berea Sand			2264	2270		
Shale			2270	3424		
Brown Shale			3424	3884		
Shale			3884	4296		
Marcellus Shale			4296	4434		
Onondaga L.S.			4434	4512		
Oriskany Sand			4512	4532		
Helderberg L.S.			4532	TD		
Log Total Depth				4609		

Date March 2 19 78

APPROVED *Richard A. Poyner* Owner

By Operations Manager

(Title)



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JUL 25 1977

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

OIL & GAS CONSERVATION  
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

Surface Owner Lloyd & Margaret Stephens  
Address Rt. 2, Box 205, Cottageville, WVa.  
Mineral Owner Lloyd & Margaret Stephens  
Address Rt. 2, Box 205, Cottageville, WVa.  
Coal Owner SAME AS ABOVE  
Address \_\_\_\_\_  
Coal Operator NOT OPERATED  
Address \_\_\_\_\_

DATE June 30, 1977  
Company Kaiser Exploration & Mining Co.  
Address Box 98, Ravenswood, WVa.  
Farm Lloyd Stephens Acres 64  
Location (waters) Log Lick Run  
Well No. DEK #39 Elevation 756  
District Union County Jackson  
Quadrangle Cottageville

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 11-26-77.

INSPECTOR TO BE NOTIFIED Richard Morris  
ADDRESS Grantsville, W. Va.  
PHONE 354-7259

Robert A. Pryce  
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 Jan. 19 19 77 by Lloyd & Margaret Stephens made to Devon & Eason and recorded on the 1st day of Feb. 19 77 in Jackson County, Book 143 Page 48

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:

Very truly yours, Kaiser Exploration & Mining Co.  
(Sign Name) R.A. Pryce  
R.A. Pryce Well Operator

W. VA. OIL & GAS CONSERVATION COMMISSION  
613 WASHINGTON STREET, EAST  
CHARLESTON, WEST VIRGINIA 25311

Address  
of  
Well Operator

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

JAC-1408 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."

47-035

Signed by Robert A. Pryce

*Signature*

**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, WVa. ADDRESS Box 1433, Charleston, WVa.  
 TELEPHONE 965-3379 TELEPHONE 342-3171  
 ESTIMATED DEPTH OF COMPLETED WELL: 4600 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	2375	650	75 sax = 625'
5 1/2			
4 1/2	4600	4600	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