



15' Topo Longitude 81° 45'
7.5' Topo 81° 45'

7 1/2 Location:
1.52 mi S. 38° 55'
0.41 mi W. 81° 47' 30"
SEE JAC-1374 (DEK#1)

New Location
Drill Deeper
Abandonment

Minimum Error of Closure 1 IN 200
Source of Elevation U.S.G.S. EL. 605' ROAD INTERSECTION
LICK RUN

"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 ENMA BIBBEE
Tract _____ Acres 87 Lease No. 2574
Well (Farm) No. DEK #50 Serial No. _____
Elevation (Spirit Level) 701.0
7.5 MIN COTTAGEVILLE
Quadrangle 15 MIN RAVENSWOOD EC
County JACKSON District UNION
SURVEYOR Emma D. Jeffers
Engineer's Registration No. 149
File No. _____ Drawing No. _____
Date 7-20-77 Scale 1" = 500'

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

WELL LOCATION MAP
FILE NO. JAC-1411

+ 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 AUG 29 1977

N72061
DEEP WELL 5-5 Mt. A (158)



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STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

WELL RECORD 15

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

Quadrangle Cottageville 7½

Permit No. JAC-1411
47-035

Company Kaiser Exploration & Mining Co.
Address P.O. Box 98, Ravenswood, WV
Farm Emma Bibbee Acres 87
Location (waters) Lick Run of Mill Creek
Well No. DEK #50 Elev. 701
District Union County Jackson
The surface of tract is owned in fee by _____
John W. Bibbee, Et al
Address 378 S Witcher Road, Belle, WV
Mineral rights are owned by Same as above
Address _____
Drilling Commenced 8/19/77
Drilling Completed 8/30/77
Initial open flow 280 M cu. ft. _____ bbls.
Final production 332 cu. ft. per day _____ bbls.
Well open _____ hrs. before test 475 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	204'	204'	110 Sax=To Surf.
8 5/8			
7	2201'	2201'	75 Sax=625'
5 1/2			
4 1/2			
3			
2		4280	
Liners Used		1295	Set on bottom
5 1/2			

Well treatment details: Shot Marcellus & Brown Shale section from 3300' to 4299' with 10,000# Atlas gaswell explosives, tamped with 10,000# pea gravel.

Attach copy of cementing record. Halliburton

Coal was encountered at None Feet _____ Inches _____
Fresh water Dev. Feet _____ Salt Water _____ Feet _____
Producing Sand Brown Shale and Marcellus Depth 3294 - 4301

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shales			0	124		
Sand			124	183		
Red Shales			183	375		
Sand			375	414		
Red Rock			414	444		
Sand			444	485		
Shales			485	525		
Sand			525	547		
Red Rock			537	602		
Sand			602	633		
Red Rock			633	698		
Shale			698	729		
Red Rock			729	808		
Sand			808	824		
Shale			824	847		
Sand			847	873		
Red Rock			873	894		
Shale			894	938		
Sand			938	973		
Shale			973	995		
Sand			995	1001		
Shale			1001	1010		
Sand			1010	1018		
Shale			1018	1053		

(over)

* Indicates Electric Log tops in the remarks section.

JAN 23 1978

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand			1053	1064		
Shale			1064	1091		
Sand			1091	1130		
Shale			1130	1246		
Sand			1246	1261		
Shale			1261	1285		
Sand			1285	1341		
Shale			1341	1569		
Maxon			1569	1609		
Big Lime			1609	1676		
Shale			1676	1752		
Injun			1752	1836		
Shale			1836	2130		
Coffee Shale			2130	2150		
Shale			2150	3294		
Brown Shale			3294	3746		
Shale			3746	4152		
Marcellus		TD	4152	TD		
Log Total Depth				4301		

0700 4282-WTL

Date January 6, 19 78

APPROVED Zach A. Payer, Owner

By Staff Petroleum Geologist
(Title)



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

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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 August 1, 1977
Company Kaiser Exploration & Mining Co.
Address Box 98, Ravenswood, W. Va.
Farm Emma Bibbee Acres 87
Location (waters) Lick Run of Mill Creek
Well No. DEK #50 Elevation 701
District Union County Jackson
Quadrangle Cottageville 7 1/2'

Surface Owner John W. Bibbee, et al
Address 378 S. Witcher Road, Belle, WV
Mineral Owner Same as above
Address _____
Coal Owner Same as above
Address _____
Coal Operator Not operated
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 12-4-77.

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

[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 January 16 1975 by John W. Bibbee, et al made to Devon & Eason and recorded on the 20th day of February 1975 in Jackson County, Book 130 Page 83

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) * Robert A. Pryce
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-1411 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

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 Company NAME Bill W. Backus
 ADDRESS Box 448, Elkview, W. Va. ADDRESS PO Box 1433, Charleston, WV
 TELEPHONE 965-3379 TELEPHONE 342-3171
 ESTIMATED DEPTH OF COMPLETED WELL: 4300 ROTARY _____ CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Marcellus Shale
 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	200	200	110 Sax= To Surface
8 - 5/8			
7	2225	2225	75 Sax= 625'
5 1/2			
4 1/2			
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