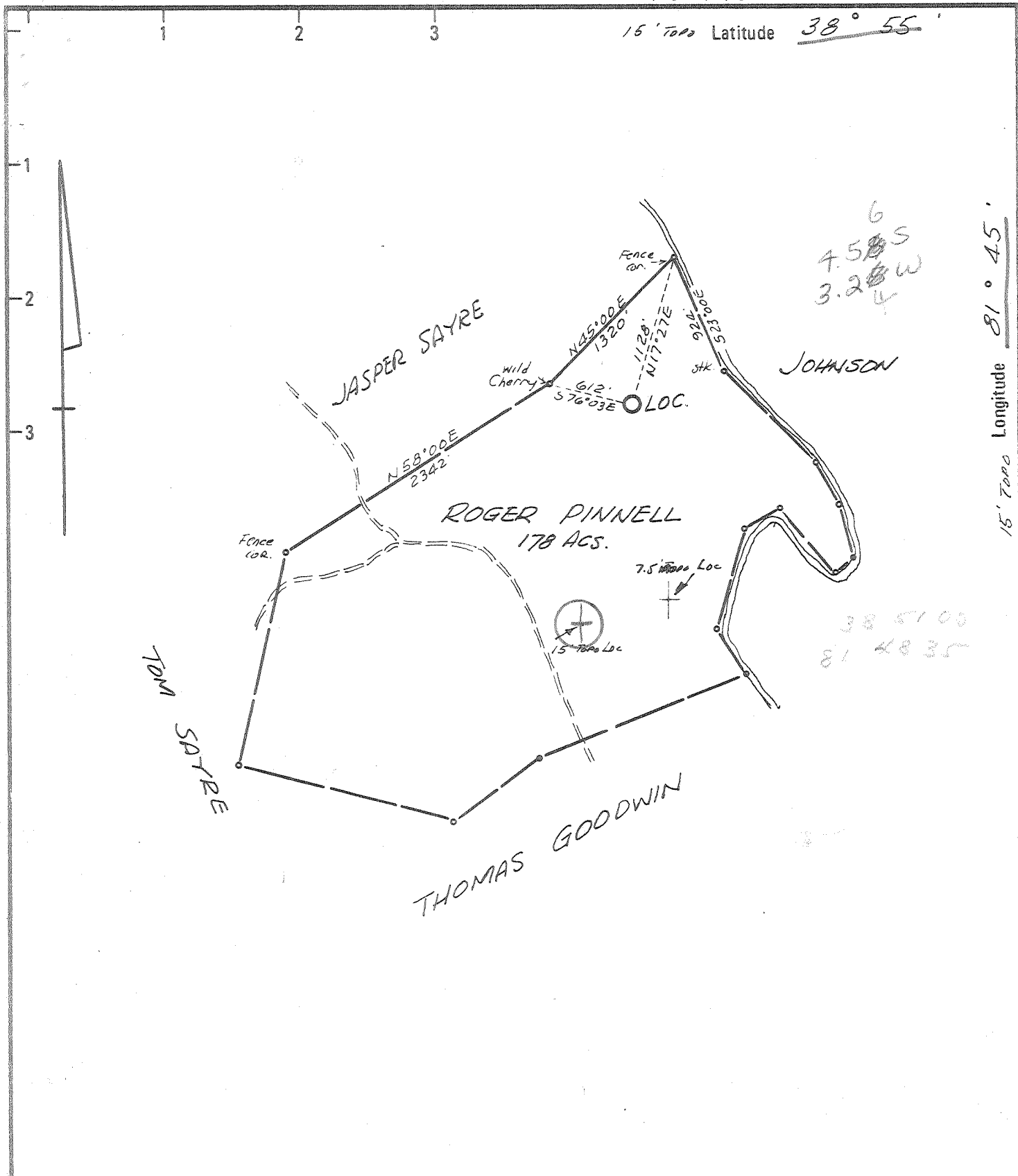


7.5' Topo = 38° 52' 30"
 15' Topo Latitude 38° 55'



15' Topo Longitude 81° 45'
 7.5' Topo = 81° 47' 30"

- New Location
- Drill Deeper
- Abandonment

Minimum Error of Closure 1 IN 200
 Source of Elevation USGS Elev. on Road Intersection 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, WVA.
 Farm ROGER PINNELL
 Tract _____ Acres 180 Lease No. 3006
 Well (Farm) No. DEK # 28 Serial No. _____
 Elevation (Spirit Level) 612'
 Quadrangle 7.5' COTTAGEVILLE EC
15' RAVENSWOOD
 County JACKSON District UNION
 Engineer N. L. Sefton
 Engineer's Registration No. 1832
 File No. _____ Drawing No. _____
 Date 3-18-77 Scale 1" = 1000'

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

WELL LOCATION MAP
 FILE NO. JAC-1400

+ 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



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JAN 17 1978

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

WELL RECORD 13

Quadrangle Ravenswood 15"

Permit No. JAC-1400
47-035

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

Company Kaiser Exploration & Mining Co.
Address Box 98, Ravenswood, WV
Farm R. Pinnell Acres 178
Location (waters) Mill Creek
Well No. DEK #28 Elev. 612
District Union County Jackson
The surface of tract is owned in fee by _____
Roger O. Pinnell
Address Rt. 2, Box 808, Millwood, WV
Mineral rights are owned by Same as above
Address _____
Drilling Commenced 7/12/77
Drilling Completed 7/31/77
Initial open flow Show cu. ft. _____ bbls.
Final production 97 cu. ft. per day _____ bbls.
Well open _____ hrs. before test _____ 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	189'	189'	100 Sax=Surface
8 5/8			
7	2184	2184	75
5 1/2			
4 1/2	4439	4439	150=1684'
3			
2			
Liners Used			

Well treatment details: Attach copy of cementing record. Halliburton
Perforated Oriskany section at 4375' - 4377' with 8 Omega Jet Shots/foot. Fractured Oriskany with 742 bbl. water, 10,000 lbs. 80/100 and 40,000 lbs. 20/40 sand at 18.3 bbl/min.

Initial Production = 97 MCF/Day

Coal was encountered at _____ Feet _____ Inches
Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand Oriskany Sand Depth 4375 - 4377

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shales			0	50		
Sand			50	115		
Shales			115	245		
Sand			245	259		
Shales			259	379		
Sand			379	406		
Shale			406	454		
Red Rock			454	484		
Sand			484	519		
Shale			519	573		
Sand			573	594		
Red Rock			594	648		
Shale			648	696		
Sand			696	705		
Red Rock			705	721		
Shale			721	780		
Sand			780	792		
Shale			792	904		
Salt Sand			904	1009		
Shale			1009	1027		
Sand			1027	1052		
Shale			1052	1088		
Sand			1088	1103		
Shale			1103	1190		

(over)

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet /3	Bottom Feet	Oil, Gas or Water	* Remarks
Sand			1190	1290		
Shale			1290	1341		
Sand			1341	1362		
Shale			1362	1427		
Sand			1427	1459		
Shale			1459	1463		
Maxon			1463	1566		
Big Lime			1566	1640		
Shale			1640	1668		
Injun Sand			1668	1802		
Shale			1802	2114		
Coffee Shale			2114	2131		
Berea Sand			2131	2140		
Shale			2140	3290		
Brown Shale			3290	3741		
Shale			3741	4150		
Marcellus Shale			4150	4284		
Onondaga L.S.			4284	4358		
Oriskany Sand			4358	4379		
Helderberg L.S.			4379	TD		
Log Total Depth				4471		

4284
612

3672

4358
612

3746

Date January 11, 19 78

APPROVED W. A. Poyner Owner

By Staff Petroleum Geologist
(Title)



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

DATE March 29, 1977

Surface Owner Roger O. Pinnell
Address Rt. 2 Box 808, Millwood, WV 25262

Company Kaiser Exploration & Mining Co.
Address Box 98, Ravenswood, WV

Mineral Owner Roger O. Pinnell
Address Rt. 2, Box 808, Millwood, WV 25262

Farm Roger Pinnell Acres 178
Location (waters) Mill Creek

Coal Owner Same as above
Address _____

Well No. DEK #28 Elevation 612
District Union County Jackson

Coal Operator Not Operated
Address _____

Quadrangle Cottageville 7½', Ravenswood 15'

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 9-11-77

INSPECTOR
TO BE NOTIFIED Richard Morris

ADDRESS Grantsville, W. Va.

PHONE 354-7259

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 March 10 1977 by Roger O. Pinnell, et ux made to Devon Corp. & Eason Oil Co. and recorded on the 23rd day of March 1977, in Jackson County, Book 143 Page 452

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) [Signature]
W. F. Wegener, Well Operator, Owner'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

JAC-1400 PERMIT NUMBER

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

47-035

Signed by [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, W. Va. ADDRESS Box 1433, Charleston, WV
 TELEPHONE 965-3379 TELEPHONE 342-3171
 ESTIMATED DEPTH OF COMPLETED WELL: _____ 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	200'	200'	100 Sax = To Surface
8 - 5/8			
7	2200'	650'	75 Sax = 625'
5 1/2			
4 1/2	4475'	4475'	125 Sax = 1500'
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