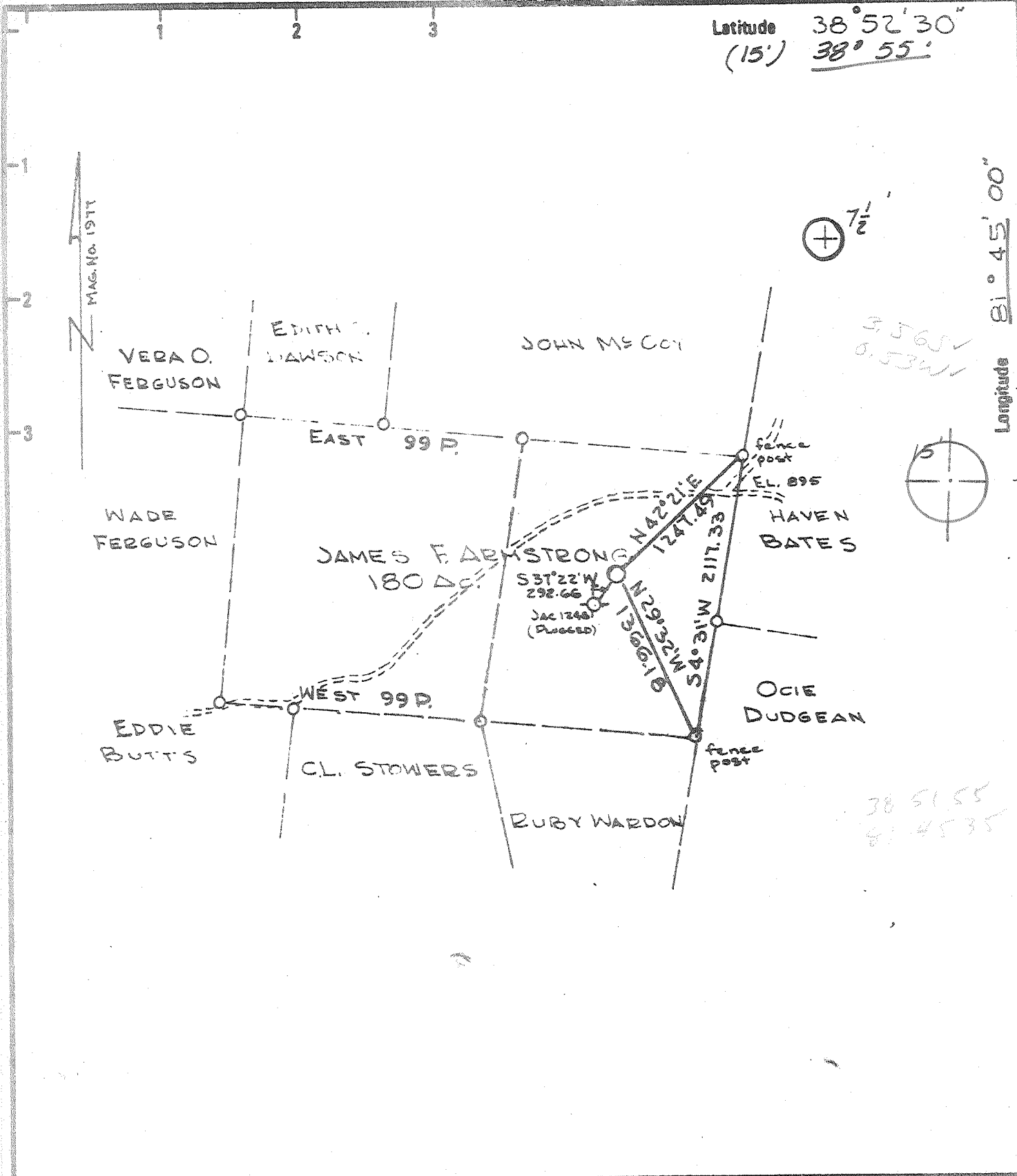


Latitude 38° 52' 30"
(15') 38° 55'



Minimum Error of Closure 1" in 200'
Source of Elevation USGS DATA ROAD INTERSECTION
SHOWN ABOVE

- New Location
- Drill Deeper
- Abandonment

"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 P.O. Box 537 RIPLEY WVA.
 Farm JAMES F. ARMSTRONG
 Tract _____ Acres 180 Lease No. _____
 Well (Farm) No. DEK 53 Serial No. FC
 Elevation (Spirit Level) 851.05 RAVENSWOOD IS'
 Quadrangle 7.5 MIN. COTTAGEVILLE
 County JACKSON District RIPLEY
 Surveyor [Signature]
 Engineer's Registration No. 597
 File No. _____ Drawing No. _____
 Date APRIL 20, 1978 Scale 1" = 1000'

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

WELL LOCATION MAP
FILE NO. JAC-1433

+ 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 MAY 10 1978

Deep Well 4860' Drilling 6 & NORTH RIPLEY 342



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division
WELL RECORD 9

RECEIVED

DEC - 6 1978

OIL & GAS DIVISION
DEPT. OF MINES

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

Quadrangle Cottageville

Permit No. JAC - 1433

(47-035-1433)

Company Kaiser Exploration & Mining Co.
Address PO Box 537, Ripley, WV
Farm James F. Armstrong Acres 180
Location (waters) Left Fork Mud Run
Well No. DEK 53 Elev. 851.05
District Ripley County Jackson
The surface of tract is owned in fee by _____
James F. Armstrong & Erik Armstrong
Address 4077 Raymond Dr. Brunswick, OH
Mineral rights are owned by Same
Address _____
Drilling Commenced May 8, 1978
Drilling Completed May 16, 1978
Initial open flow Show cu. ft. _____ bbls.
Final production 498,000 cu. ft. per day _____ bbls.
Well open 11 hrs. before test 1470 RP. 72 He

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	100 Sacks
8 5/8			
7	2436	2436	75 Sacks
5 1/2			
4 1/2	4862	4862	150 Sacks
3			
2		4788	
Liners Used			

Well treatment details: Attach copy of cementing record. Halliburton
Treated Oriskany Sand with 850 BBL of treated water, 15,000 lbs of 80/100 sand, 30,000 lbs of 20/40 sand and 135,000 SCF of nitrogen. Formation broke down at 2500 psi, treated at an average rate of 12.7 BPM at 4100 psi.

Coal was encountered at None Feet _____ Inches _____
Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand Oriskany Sand Depth 4751-4800

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shale			0	246		
Red Rock & Shale			246	318		
Sand			318	356		
Red Rock & Shale			356	499		
Broken Sand			499	540		
Shale			540	590		
Sand			590	634		
Shale & Red Rock			634	706		
Broken Sand			706	756		
Red Rock & Shale			756	1116		
Sand			1116	1178		
Shale			1178	1229		
Sand			1229	1254		
Shale			1254	1346		
Sand			1346	1425		
Slate & Shells			1425	1528		
Sand			1528	1555		
Broken Sand			1555	1575		
Shale			1575	1673		
Broken Sands			1673	1764		
Sand			1764	1809		
Shale			1809	1816		
Sand			1816	1832		
Big Lime			1832	1924		

4674
851

(over)

- 3823

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shale			1924	1945		
Injun Sand			1945	2082		
Shale			2082	2402		
Coffee Shale			2402	2426		
Berea Sand			2426	2429		
Shale			2429	3602		
Brown Shale			3602	4093		
Shale			4093	4532		
Marcellus Shale			4532	4674		
Onondaga L. S.			4674	4751		
Oriskany Sand			4751	4800		
Helderberg L. S.			4800	4879		
Total Depth			4879'			4751 - 851 ----- 3900

November 14

78

Date December 1, 1978

APPROVED Kaiser Exploration and Mining Co. Owner

By

John A. Payne

(Title)

Operations Manager



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

MAY 1 1978

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 April 24, 1978

Surface Owner James F. Armstrong & Erik Armstrong Company Kaiser Exploration & Mining Company
 Address 4077 Raymond Dr., Brunswick, OH 44212 Address P.O. Box 537, Ripley, WV 25271
 Mineral Owner James F. Armstrong & Erik Armstrong Farm James F. Armstrong Acres 180
 Address _____ Location (waters) Left fork Mud Run 851⁰⁵
 Coal Owner Same Well No. DEK 53 Elevation 856.94
 Address _____ District Union Ripley County Jackson
 Coal Operator None Quadrangle Cottageville
 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 9-2-78

INSPECTOR Richard Morris
TO BE NOTIFIED

ADDRESS P.O. Box 372, Grantsville, WV

PHONE 354-7259

Robert S. [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 June 1 19 76 by James F. Armstrong & Erik Armstrong made to Devon Corp. & Eason Oil Co and recorded on the 1 st day of June 19 76 in Jackson County, Book 139 Page 622

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 Company
(Sign Name) [Signature]

R. A. Pryce
Well Operator/Operations Manager
P. O. Box 537

Address
of
Well Operator

Ripley
City or Town
West Virginia 25271

State

OIL & GAS CONSERVATION COMMISSION
113 W. S. JINGTON STREET, EAST
CHARLESTON, WEST VIRGINIA 25311

*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-1433

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 F.W.A. Drilling NAME R. A. Pryce
 ADDRESS Box 448, Elkview, W. Va. ADDRESS P. O. Box 537, Ripley, WV 25271
 TELEPHONE 965-3379 TELEPHONE 372-2827
 ESTIMATED DEPTH OF COMPLETED WELL: 4860' 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	100 sacks to surface
8 - 5/8			
7	2450	2450	75 sacks = 625'
5 1/2			
4 1/2	4860	4860	125 sacks = 1500'
3			
2			Perf. Top
Liners			Perf. Bottom
			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