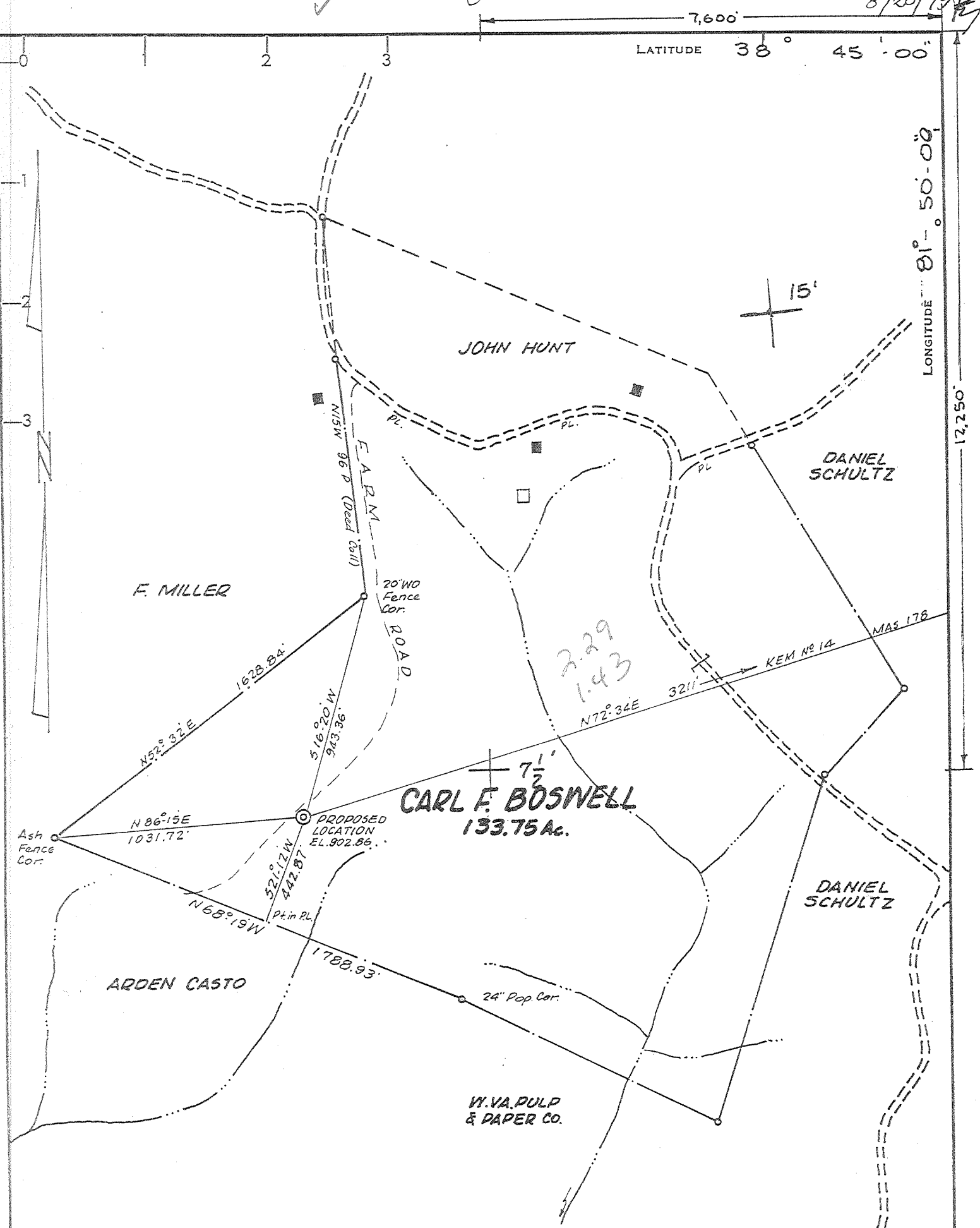


8/20/1979



CERTIFICATE

"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."

Minimum degree of accuracy is one part in 200

Signed

Frank W. Barber #415289

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

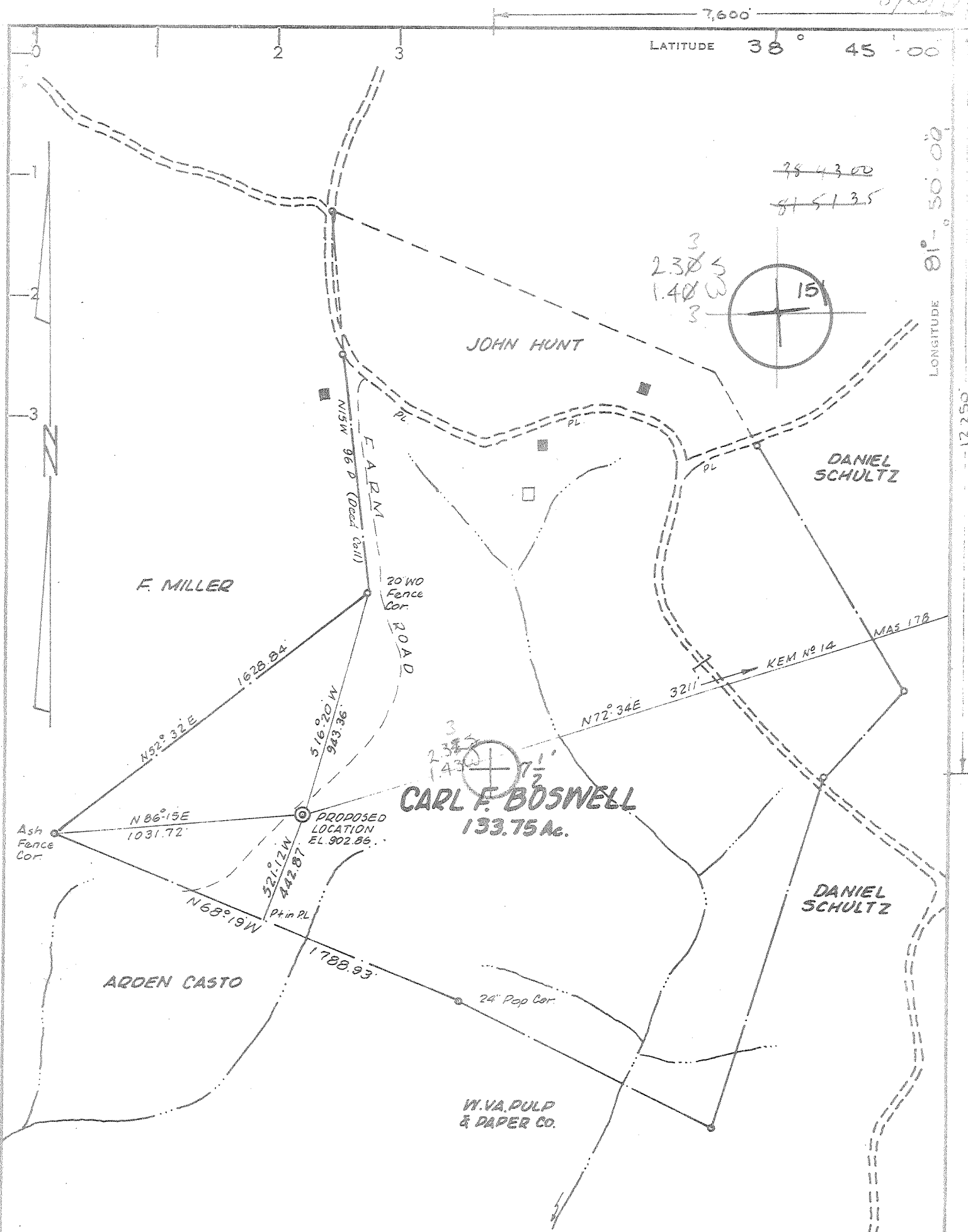
COMPANY KAISER EXPLORATION & MINING COMPANY	
ADDRESS P.O. BOX 8 RAVENSWOOD, WEST VIRGINIA	
FARM CARL F. BOSWELL	
MAP _____ ACRES 133.75	LEASE NO. _____
WELL (FARM) NO. 1	SERIAL NO. KEM 16
ELEVATION (SPIRIT LEVEL) 902.86	
QUADRANGLE ELMWOOD (WINEFIELD 15)	
COUNTY MASON	DISTRICT UNION
POINT OF PROVEN ELEVATION BM. EL. 836	
FILE NO. _____	DRAWING NO. _____
DATE AUG. 15, 1979	SCALE 1" = 500 FT.

STATE OF WEST VIRGINIA DEPARTMENT OF MINES
OIL AND GAS DIVISION CHARLESTON
WELL LOCATION MAP
FILE No. 47-053-0200
+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO 24,000 . LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.
- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

DEEP WELL DISTANCE 5100'

MASON 10000

8/10/79



- NEW LOCATION
- RECONDITION
- 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."

Minimum degree of accuracy is one part in 200

Signed Frank D. Barber # LLS 289

CERTIFICATE

COMPANY KAISER EXPLORATION & MINING COMPANY
 ADDRESS P.O. BOX 8 RAVENSWOOD, WEST VIRGINIA
 FARM CARL F. BOSWELL
 MAP _____ ACRES 118.75 LEASE NO. _____
 WELL (FARM) NO. 1 SERIAL NO. KEM 16
 ELEVATION (SPIRIT LEVEL) 902.86
 QUADRANGLE ELMWOOD (WINEFIELD 15)
 COUNTY MASON DISTRICT UNION
 POINT OF PROVEN ELEVATION BM. EL. 836
 FILE NO. _____ DRAWING NO. _____
 DATE AUG. 15, 1979 SCALE 1" = 500 FT.

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON
WELL LOCATION MAP
 FILE NO. **47-053-0200**
 NC
 Deep Well
 + DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO 24,000. LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN. **AUG 24 1979**
 - DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

5-5 Rock Cast (e 1344)



RECORDED

FEB 20 1980

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

WELL RECORD 45

Quadrangle Elmwood
Permit No. 47-053-0200

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

Company Kaiser Exploration and Mining Company
Address P. O. Box 8, Ravenswood, WV 26164
Farm Carl F. Boswell Acres 118.75
Location (waters) Thirteen Mile Creek
Well No. KEM 16 Elev. 902.86
District Union County Mason
The surface of tract is owned in fee by _____
Carl F. Boswell
Address Rt. 3, Leon, WV 25123
Mineral rights are owned by Same
Address _____
Drilling Commenced 8/28/79
Drilling Completed 9/6/79
Initial open flow 15,000 cu. ft. -- bbls.
Final production 600 M cu. ft. per day -- bbls.
Well open 24 hrs. before test 1800 RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10" 10 3/4'	260' (KB)	Same	125 sx class A (To surface) (Dowell)
9 5/8			
8 5/8			
7	2645' (KB)	Same	65 sx pozmix 100 sx class A (Dowell)
5 1/2			
4 1/2	4854' (KB)	Same	225 sx pozmix (Dowell)
3			
2		4770'	(KB)
Liners Used			

Well treatment details: Attach copy of cementing record.
Perforated the Oriskany S.S. from 4774' - 4780' (K.B.) w/ 4 holes/ft (9/11/79);
Halliburton and Aircowell fractured zone w/30,000# 80/100 mesh sand, 30,000#
20/40 mesh sand, 500 gal 28% HCl, 908 BBL water, 195,000 SCF nitrogen.

600 MCF

Coal was encountered at _____ Feet _____ Inches
Fresh water _____ Feet Salt Water _____ Feet
Producing Sand Oriskany Depth 4774-80

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Soil			0	10		TOPS PROBABLY FROM KB - ABOUT 915'
Shale			10	50		
Siltstone			50	258		
Shale			258	270		
Siltstone			270	294		
Red Rock			294	454		
Sand			454	470		
Shale			470	481		
Red Rock			481	534		
Shale			534	552		
Red Rock			552	732		
Sand			732	752		
Red Rock			752	824		
Sand			824	856		
Red Rock			856	1038		
Sand			1038	1062		
Shale			1062	1116		
Sand			1116	1150		
Shale			1150	1172		
Salt Sand			1172	1239		
Shale			1239	1260		
Siltstone			1260	1274		
Shale			1274	1332		

(over)

* Indicates Electric Log tops in the remarks section.

MAR 10 1980

Formation	Color	Hard or Soft	Top Feet <i>45</i>	Bottom Feet	Oil, Gas or Water	* Remarks
Sand			1332	1367		
Shale			1367	1383		
Sand			1383	1460		
Shale			1460	1507		
Sand			1507	1510		
Shale			1510	1530		
Sand			1530	1548		
Shale			1548	1604		
Siltstone			1604	1752		
Sand			1752	1804		
Shale			1804	1828		
Sand			1828	1848		
Shale			1848	1860		
Sand			1860	1866		
Shale			1866	1880		
Sand			1880	1894		
Shale			1894	1902		
Maxton Sand			1902	1946		
Big Lime			1946	2038		
Shale			2038	2075		
Sand			2075	2085		
Shale			2085	2103		
Big Injun Sand			2103	2220		
Shale			2220	2524		
Coffee Shale			2524	2542		
Berea			2542	2561		
Shale			2561	3693		
Brown Shale			3693	4484		
Marcellus			4484	4682		
Onondaga			4682	4765		
Oriskany			4765	4794		
Helderberg			4794	4866		
T.D.			4866			

Date February 12, 1980

APPROVED: Kaiser Exploration and Mining Company

By: *[Signature]*
Operations Manager

SEL



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED
AUG 20 1979

Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

DATE August 17, 1979

Surface Owner Carl F. Boswell
Address Rt. 3, Leon, WV 25123
Mineral Owner Same as above
Address Same as above
Coal Owner Delinquent - Sold to the state in 1954
Address _____
Coal Operator None
Address None

Company Kaiser Exploration and Mining Company
Address P. O. Box 8, Ravenswood, WV 26164
Farm Carl F. Boswell Acres 118.75
Location (waters) Thirteen Mile Creek
Well No. KEM 16 Elevation 902.86
District Union County Mason
Quadrangle Elmwood

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 4-20-80.

INSPECTOR
TO BE NOTIFIED Kenneth Butcher
ADDRESS RFD #1, Barboursville, WV 25504
PHONE 736-4885

[Signature]
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 December 28 1978 by Carl F. Boswell made to Kaiser Exploration and Mining Co. and recorded on the 14 day of June 1979, in Mason County, Book 45 Page 729

XX 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

Very truly yours,
(Sign Name) R. A. Pryce Operations Manager
Well Operator
R. A. Pryce
Address Kaiser Exploration and Mining Company
Street
of P. O. Box 8,
Well Operator Ravenswood, West Virginia 26164
City or Town
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

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

PROPOSED WORK ORDER TO X DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT: _____
 NAME Not known at this time. NAME R. A. Pryce
 ADDRESS _____ ADDRESS P. O. Box 8, Ravenswood, WV 26164
 TELEPHONE _____ TELEPHONE 273-5371
 ESTIMATED DEPTH OF COMPLETED WELL: 5100 ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Oriskany
 TYPE OF WELL: OIL _____ GAS X 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 10 3/4	300	300	To surface (100 sks)
8 - 5/8			
7	2700	2700	125 sks = 570 feet
5 1/2			
4 1/2	5100	5100	125 sks - 1500 feet
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS _____ FEET SALT WATER _____ FEET

APPROXIMATE COAL DEPTHS _____

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

WR-35
(Reverse)

January 25, 1999

API/Permit #: 470530179

'Peake' Well #: KEM 16

Elevation: 902.

DETAILS OF PERFORATING, FRACTURING, OR PHYSICAL CHANGE, ETC.

7/24/98

Frac Shale: Rates are at 500,000 SCFN2 pumped.
Started dropping 6 BBL of 15% Acid and four (4) perf balls
per BBL/Acid. At 642,000 SCFN2 pumped. Acid and balls
gone. Had four (4) N2 Pumpers. Lost One (1) pumper for
approx. 50,000 SCFN2 at 350,000. One (1) N2 pumper
ran out of N2 at approx. 860,000 SCFN2 away. Ran till the
second N2 pumper ran out of N2.

Perforated Shale: Single- 3673 3674 3757 3758 3759 3760
3946 3951 3956 3960 4000 4010 4016 4019 4031 4038
4044 4061 4078 (did not go), 4083 (did not go), 4111 4113
4116 4119 4142 4145. DOUBLE- 3944 3949 3958 4004
4007 4013 4034 4042 4046 4069

Bridge Plug 3.50: 4,200'

No Drop in Fluid Level During Perforating

BHTP	SCF/BBL	Breakdown	1,557	ISIP.	1,370
Max Pressure	Avg Pressure	1,750 N2 PAD	53,000	Rate	27,000
Total N2	929,990	Total Sand	Total Fluid/BBL		

WELL LOG

ROCK TYPE OR FORMATION NAME	TOP	BOTTOM	REMARKS
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N/A