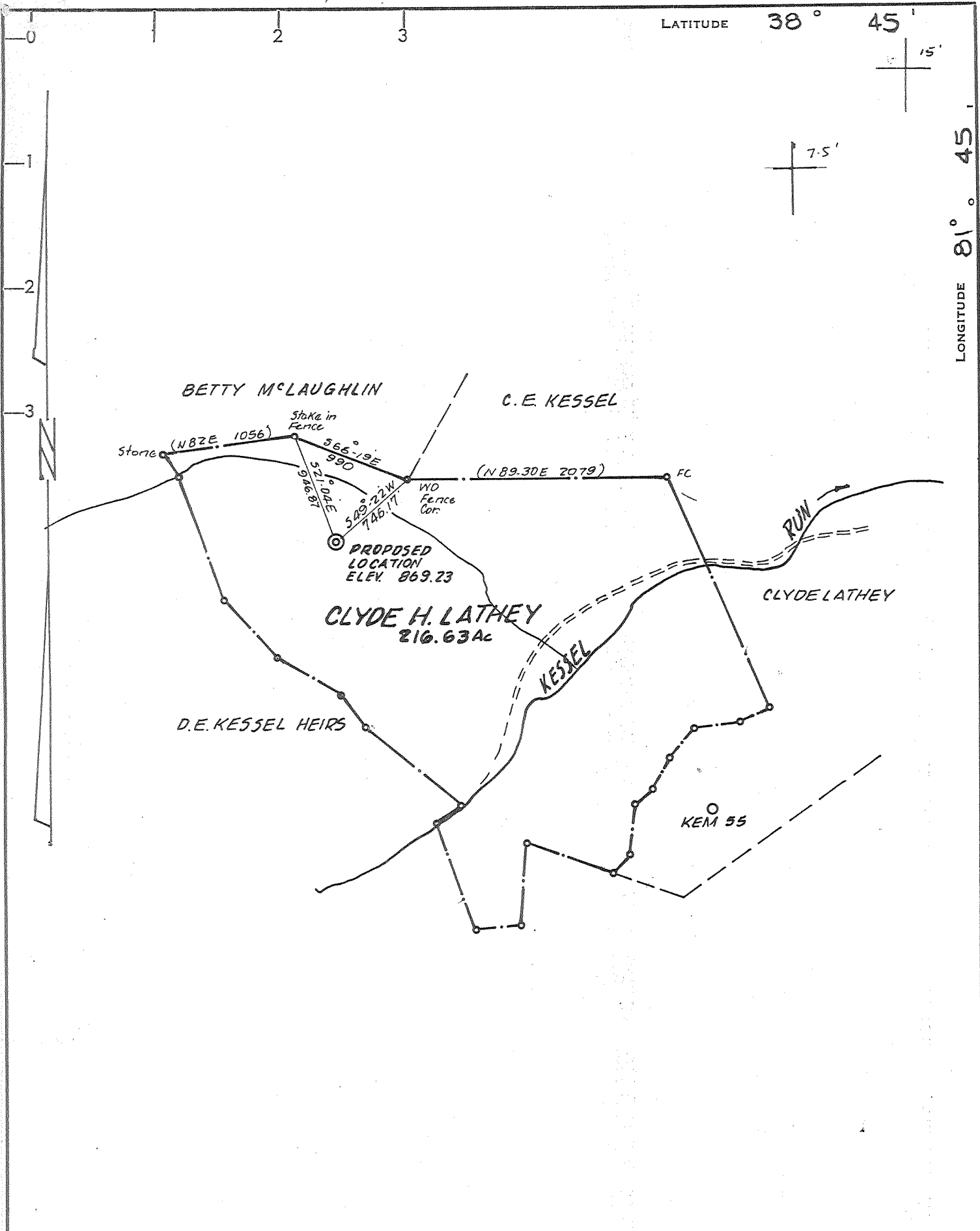


11/10/80 2730



LONGITUDE 81° 45'

11,400

**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 J. Barker LLS 289

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY KAISER EXPLORATION & MINING COMPANY 485  
 ADDRESS P.O. BOX 8, RAVENSWOOD, WEST VIRGINIA  
 FARM CLYDE H. LATHEY  
 MAP \_\_\_\_\_ ACRES 216.63 LEASE NO. \_\_\_\_\_  
 WELL (FARM) NO. 1 SERIAL NO. KEM 57  
 ELEVATION (SPIRIT LEVEL) 869.23  
 QUADRANGLE ELMWOOD W. 11th 5th 11th  
 COUNTY JACKSON DISTRICT RIPLEY  
 POINT OF PROVEN ELEVATION BM EL. 636  
 FILE NO. \_\_\_\_\_ DRAWING NO. \_\_\_\_\_  
 DATE OCT 31, 1980 SCALE 1"=1000FT.

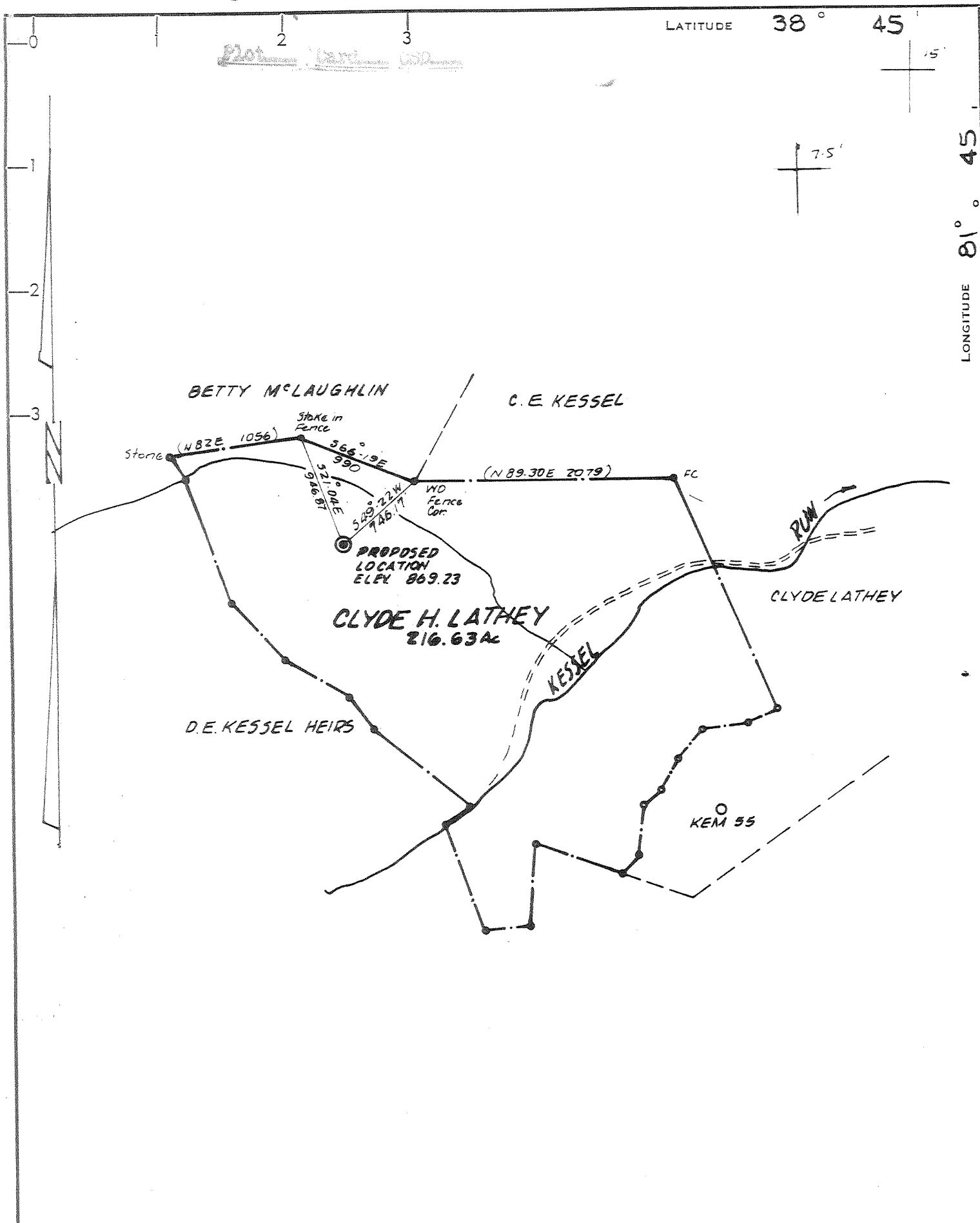
STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION  
 CHARLESTON  
 WELL LOCATION MAP  
 FILE NO. 035-1541-~~1541~~  
*Fracture Permit Cancelled*  
 + DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC  
 MAPS. SCALE 1 TO 62,500 LATITUDE AND LONGITUDE LINES  
 BEING REPRESENTED BY BORDER LINES AS SHOWN  
 - DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

JACK. 1541

*DEEP*

5090' (ORISKANY)

APR 4 1986



**CERTIFICATE**

- 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 J. Barker* LLS 289

COMPANY KAISER EXPLORATION & MINING COMPANY  
 ADDRESS P.O. BOX 8, RAVENSWOOD, WEST VIRGINIA  
 FARM CLYDE H. LATHEY  
 MAP \_\_\_\_\_ ACRES 216.63 LEASE NO. \_\_\_\_\_  
 WELL (FARM) NO. 1 SERIAL NO. KEM 57  
 ELEVATION (SPIRIT LEVEL) 869.23  
 QUADRANGLE ELMWOOD (MIN) 1-1  
 COUNTY JACKSON DISTRICT RIPLEY  
 POINT OF PROVEN ELEVATION BM EL. 636  
 FILE NO. \_\_\_\_\_ DRAWING NO. \_\_\_\_\_  
 DATE OCT 31, 1980 SCALE 1"=1000 FT.

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

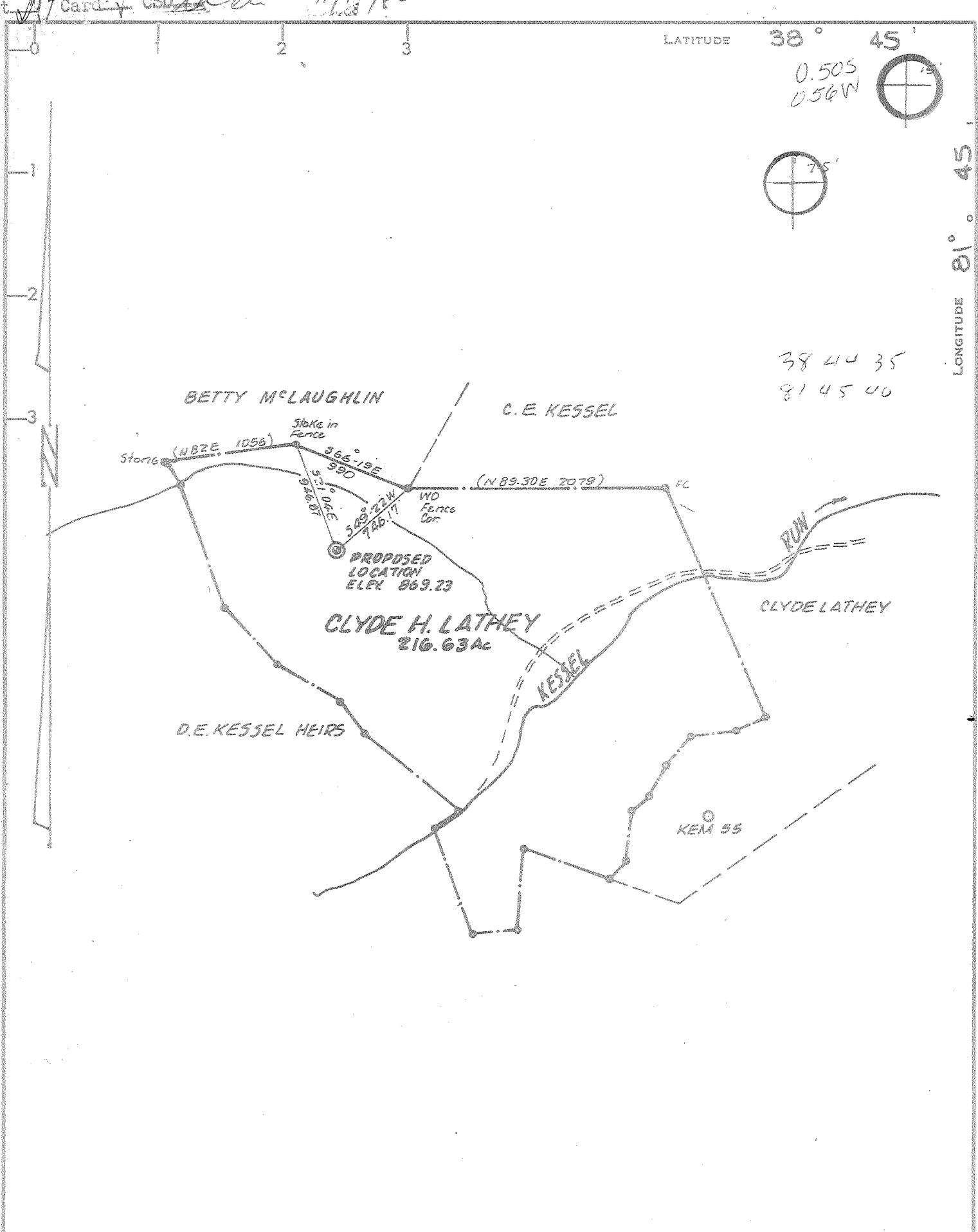
**WELL LOCATION MAP**

FILE NO. 035-1541-Frac

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO ~~24,000~~ 24,000 LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.

- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

5090' (ORISKANY)



38 44 35  
81 45 00

LONGITUDE 81° 45'

**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 H. Barker LLS 289

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY KAISER EXPLORATION & MINING COMPANY  
 ADDRESS P.O. BOX 8, RAVENSWOOD, WEST VIRGINIA  
 FARM CLYDE H. LATHEY  
 MAP \_\_\_\_\_ ACRES 216.63 LEASE NO. \_\_\_\_\_  
 WELL (FARM) NO. 1 SERIAL NO. KEM 57  
 ELEVATION (SPIRIT LEVEL) 869.23  
 QUABRANGLE ELMWOOD WINDFIELD NE  
 COUNTY JACKSON DISTRICT RIPLEY  
 POINT OF PROVEN ELEVATION BM EL. 636  
 FILE NO. \_\_\_\_\_ DRAWING NO. \_\_\_\_\_  
 DATE OCT 31, 1980 SCALE 1"=1000FT.

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

WELL LOCATION MAP  
FILE No. 035-1541

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO  $\frac{62,660}{24,000}$ . LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.  
 - DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

1983 ONWD-6-6(348)  
new zone completed 5090' (ORISKANY)  
6-6 Foster Chapel (348) → DEEP WELL ←

DEC 5 1980



REVISED

IV-35  
(Rev 8-81)

Date May 27, 1983  
Operator's  
Well No. KEM #57  
Farm Clyde Lathey  
API No. 47 - 035 - 1541

State of West Virginia  
Department of Mines  
Oil and Gas Division

WELL OPERATOR'S REPORT  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil \_\_\_ / Gas X / Liquid Injection \_\_\_ / Waste Disposal \_\_\_ /  
(If "Gas," Production X / Underground Storage \_\_\_ / Deep \_\_\_ / Shallow X /)

LOCATION: Elevation: 869.23 Watershed Kessel Run  
District: Ripley County Jackson Quadrangle Elmwood

COMPANY Kaiser Exploration and Mining Company

ADDRESS P. O. Box 8, Ravenswood, WV 26164

DESIGNATED AGENT R. A. Pryce

ADDRESS Same

SURFACE OWNER Clyde H. Lathey

ADDRESS Rt. 5, Ripley, WV 25271

MINERAL RIGHTS OWNER Same

ADDRESS \_\_\_\_\_

OIL AND GAS INSPECTOR FOR THIS WORK Homer

Dougherty ADDRESS Linden Rt., Box 3A, Looneyville, WV

PERMIT ISSUED 7/7/81

DRILLING COMMENCED 10/7/81

DRILLING COMPLETED 10/15/81

IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED  
ON \_\_\_\_\_

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
10 3/4" <del>13x10</del>	251(KB)	251(KB)	150 sks neat
9 5/8			
8 5/8			
7	2455(KB)	2455(KB)	85 sks pozmix 100 sks neat
5 1/2			
4 1/2		5090	225 sks pozmix
3			
2			
Liners used	None	JUN - 2 1983	

GEOLOGICAL TARGET FORMATION Oriskany Sandstone DEPTH 4981 feet

Depth of completed well 5120 feet Rotary X / Cable Tools \_\_\_\_\_

Water strata depth: Fresh -- feet; Salt -- feet

Coal seam depths: -- Is coal being mined in the area? \_\_\_\_\_

OPEN FLOW DATA

Producing formation Oriskany Sandstone Pay zone depth 4981' feet

Gas: Initial open flow Trace Mcf/d Oil: Initial open flow -- Bbl/d

Final open flow 100 Mcf/d Final open flow -- Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 1700 psig (surface measurement) after 24 hours shut in

(If applicable due to multiple completion--)

NOTE: Uneconomical to produce due to excessive salt water production

Second producing formation Huron Brown Shale Pay zone depth 4053-4227 feet

Gas: Initial open flow 0 Mcf/d Oil: Initial open flow -- Bbl/d

Final open flow 86 Mcf/d Oil: Final open flow -- Bbl/d

Time of open flow between initial and final tests 6 hours

Static rock pressure 475 psig (surface measurement) after -- hours shut in

OWWO - New zone completed (Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

- 4/26/83: Young Wireline set 4 1/2" SIE permanent bridge plug at 4260'(KB); selectively perforated Brown Shale interval using 3 1/8" O.D. selectfire, hollow steel carrier, 20 holes, .39" diameter, from 4053'-4227' (KB).
- 5/12/83: Halliburton foam fractured zone w/75 quality foam (30,000 SCF/min average nitrogen rate), 40 BPM downhole rate; 500 gal 15% HCL acid; 60,000# 20/40 mesh sand; 339 bbl water; 776,000 scf of nitrogen; 2775 psig average treating pressure; 2600 psig breakdown; ISIP: 960 psig.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
SAME AS ORIGINAL		OG-10			

(Attach separate sheets as necessary)

\_\_\_\_\_  
KAISER EXPLORATION AND MINING COMPANY  
Well Operator  
By:     K.A.P.      
Date:     May 27, 1983    

Note: Regulation 2.02(i) provides as follows:  
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including ..., encountered in the drilling of a well."

WELL OPERATOR'S REPORT

OF DRILLING, THE WYTHING AND/OR STEEL LAYING, OR PHYSICAL CHANGE

[08-78]

WELL TYPE: Oil \_\_\_ / Gas X / Liquid Injection \_\_\_ / Waste Disposal \_\_\_  
(If "Gas", Production X / Underground storage \_\_\_ / Test X / Shallow \_\_\_)

LOCATION: Elevation: 869 Watershed: Kessel Run  
District: Ripley County: Jackson Quadrangle: Elmwood

WELL OPERATOR Kaiser Exploration and Mining Co. DESIGNATED AGENT SAME  
Address P. O. Box 8 Address \_\_\_\_\_  
Ravenswood, WV 26164

PERMITTED WORK: Drill X / Convert \_\_\_ / Drill deeper \_\_\_ / Re-drill \_\_\_  
Plug off old formation \_\_\_ / Perforate new formation \_\_\_  
Other physical change in well (specify) \_\_\_\_\_

Fracture or stimulate v  
**RECEIVED**  
FEB 9 - 1982

PERMIT ISSUED ON July 7th, 1981 OIL & GAS INSPECTOR FOR THIS WORK:  
(IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) Name Richard Morris  
Address Box 372  
Grantsville, WV

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

GEOLOGICAL TARGET FORMATION: Oriskany Depth 4981 feet  
Depth of completed well, 5120 feet Rotary X / Cable Tools \_\_\_  
Water strata depth: Fresh, \_\_\_ feet; salt, \_\_\_ feet.  
Coal seam depths: \_\_\_\_\_ Is coal being mined in the area? \_\_\_  
Work was commenced October 7, 1981, and completed October 15, 1981

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor								Kinds
Fresh water	10 3/4	H	32.75	X		251(KB)	251(KB)	150sks Class A
Coal								Sizes
Intermediate	7	K	20	X		2455(KB)	2455(KB)	65sks Pozmix 100sks Class A
Production	4 1/2	N	11.6	X		5090(KB)	225sks Pozmix	Depths set
Tubing	2 3/8	K	4.6	X		5008(KB)		
Liners								Perforations:
								Top Bottom
								4981 4985
								5020 5028

OPEN FLOW DATA

Producing formation Oriskany Sand Pay zone depth 4981-5028 feet  
Gas: Initial open flow, Trace Mcf/d Oil: Initial open flow, \_\_\_ Bbl/d  
Final open flow, 100 Mcf/d Final open flow, \_\_\_ Bbl/d  
Time of open flow between initial and final tests, \_\_\_ hours  
Static rock pressure, 1700 psig (surface measurement) after 24 hours shut in  
[If applicable due to multiple completion--]  
Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_ feet  
Gas: Initial open flow, \_\_\_ Mcf/d Oil: Initial open flow, \_\_\_ Bbl/d  
Final open flow, \_\_\_ Mcf/d Final open flow, \_\_\_ Bbl/d  
Time of open flow between initial and final tests, \_\_\_ hours  
Static rock pressure, \_\_\_ psig (surface measurement) after \_\_\_ hours shut in

NOV 15 1982

[08-78]

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

- 10/19/81: Perforate Oriskany w/50 holes using 3½" ceramic jet charges, from 4981'-to-4985' and from 5020- to - 5028'(KB) (Basin Surveys)
- 10/20/81: Hydrafracture Oriskany w/15,000# 80/100, 45,000# 20/40 sand, 344,000 SCF-nitrogen, 805 BBLs water @ 21.2 BPM and 4233 psig. Formation breakdown @ 3400 psig.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Soil & Shale			0	39	
Siltstone			39	84	
Shale			84	184	
Sand			184	270	
Shale			270	286	
Sand			286	300	
Shale & Sand			300	715	
Sand			715	758	
Shale			758	802	
Sand			802	830	
Shale			830	1170	
Sand			1170	1258	
Shale			1258	1322	
Sand			1322	1403	
Shale			1403	1452	
Sand			1452	1504	
Shale			1504	1711	
Salt Sand			1711	1804	
Shale			1804	1855	
Big Lime (Greenbrier)			1855	2040	
Shale			2040	2094	
Big Injun Sand			2094	2200	
Shale			2200	2524	
Coffee Shale (Sunbury)			2524	2553	
Berea Sand			2553	2564	
Shale			2564	3781	Gas show @ 2558
Brown Shale			3781	4280	Gas show @ 3214, 3447, 3606
Shale			4280	4632	Gas show @ 3785, 3800, 3846, 3900
Marcellus Shale			4632	4896	4060, 4224, 4276
Onondaga Lime			4896	4972	Gas show @ 4415, 4578
Oriskany Sand			4972	5038	Gas show @ 4684, 4742, 4748,
Helderberg Lime			5038	5113	4795, 4876
Total Depth			5113		Gas show @ 4920
					Gas show @ 4983, 5023

(Attach separate sheets to complete as necessary.)

KAISER EXPLORATION AND MINING COMPANY

Well Operator

By

*[Signature]*

Its

General Manager

NOTE: Regulation 8.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic, detailed geological record of all formations, including coal, encountered in the drilling of a well."

FILE COPY



1) Date: April 3, 19 84  
 2) Operator's Well No. KEM-57  
 3) API Well No. 47 - 035 - 1541 - FRAC  
 State County Permit

OIL & GAS DIVISION  
 DEPT. OF MINES  
 STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES, OIL AND GAS DIVISION  
**APPLICATION FOR A WELL WORK PERMIT**

4) WELL TYPE: A Oil        / Gas X /  
 B (If "Gas", Production X / Underground storage        / Deep        / Shallow X /)  
 5) LOCATION: Elevation: 869.23 Watershed: Kessel Run  
 District: Ripley County: Jackson Quadrangle: Elmwood  
 6) WELL OPERATOR ~~KEM-57~~ Kaiser Exp & Mining Co DESIGNATED AGENT R. A. Pryce  
 Address P. O. Box 8 Address Same  
Ravenswood, WV 26164  
 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name J. Tephabock  
 Address Ripley, WV 25271  
 9) DRILLING CONTRACTOR: Name Kaiser Drilling Rig #1  
 Address Ravenswood, WV 26164

10) PROPOSED WELL WORK: Drill        / Drill deeper        / Redrill        / Stimulate X /  
 Plug off old formation        / Perforate new formation X /  
 Other physical change in well (specify) Squeeze 4 1/2" casing; treat Berea; isolate Ber  
 11) GEOLOGICAL TARGET FORMATION, Berea Sandstone Shale with tubing and packer  
 12) Estimated depth of completed well, 4260' (KB) (PBSD)  
 13) Approximate trata depths: Fresh, 150 feet; salt, 650 feet.  
 14) Approximate coal seam depths: None Is coal being mined in the area? Yes        / No X /

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor									Kinds <u>None</u>
Fresh water	<u>10 3/4</u>	<u>H</u>	<u>40.50</u>	<u>X</u>		<u>251' (KB)</u>	<u>251' (KB)</u>	<u>150 sks Neat</u>	
Coal								<u>65 sks Pozmix</u>	Sizes <u>-</u>
Intermediate	<u>7</u>	<u>K</u>	<u>20</u>	<u>X</u>		<u>2455' (KB)</u>	<u>2455' (KB)</u>	<u>100 sks Neat</u>	
Production	<u>4 1/2</u>	<u>N</u>	<u>11.60</u>	<u>X</u>			<u>5090' (KB)</u>	<u>225 sks Pozmix</u>	set <u>-</u>
Tubing							<u>4205' (KB)</u>		
Liners									Perforations:
						<u>(4260' PBSD)</u>			Top <u>4053</u> Bottom <u>4227 (KB)</u>

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-035-1541-FRAC Date May 7, 19 84

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires May 7, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>1000</u>	Agent: <u>TS</u>	Plat: <u>TS</u>	Casing: <u>TS</u>	Fee: <u>967 038</u>
-------------------	------------------	-----------------	-------------------	---------------------

*[Signature]*  
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.





STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RENEW  
**RECEIVED**  
JUL - 6 1981  
OIL & GAS DIVISION  
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

Surface Owner Clyde H. Lathey  
Address Rt. 5, Ripley, WV 25271  
Mineral Owner Same as above  
Address \_\_\_\_\_  
Coal Owner Same as above  
Address \_\_\_\_\_  
Coal Operator Same as above  
Address \_\_\_\_\_

DATE July 1, 1981  
Company Kaiser Exploration and Mining Company  
Address P. O. Box 8, Ravenswood, WV 26164  
Farm Clyde H. Lathey Acres 216.63  
Location (waters) Kessel Run  
Well No. KEM #57 Elevation 869.23  
District Ripley County Jackson  
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 3-7-82.

INSPECTOR  
TO BE NOTIFIED Richard Morris  
ADDRESS P. O. Box 372, Grantsville, WV  
PHONE 354-7259

J. P. Haggerty  
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 thereunto, (or as the case may be) under grant or lease dated August 4 1980 by Clyde H. Lathey & Jane K. made to Kaiser Exploration and Mining Company and recorded on the \_\_\_\_\_ day of \_\_\_\_\_ in Jackson County, Book 157 Page 577

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 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 coal owners at their above shown respective address \_\_\_\_\_ day \_\_\_\_\_ before, or on the \_\_\_\_\_ 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  
7-304 - 292-6331

Very truly yours,  
(Sign Name) \_\_\_\_\_  
Well Operator  
Kaiser Exploration and Mining Company  
P. O. Box 8  
Street  
Ravenswood  
City or Town  
West Virginia 26164  
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 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-1541)

47-035-1541-REn

PERMIT NUMBER 2

PROPOSED WORK ORDER TO X DRILL \_\_\_\_\_ DEEPEN \_\_\_\_\_ FRACTURE-STIMULATE \_\_\_\_\_  
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:  
 NAME Clint Hurt & Associates, Inc. NAME Robert A. Pryce  
 ADDRESS P. O. Box 388, Elkvjow, WV 25071 ADDRESS P. O. Box 8, Ravenswood, WV 26164  
 TELEPHONE 273-5371 TELEPHONE 273-5371  
 ESTIMATED DEPTH OF COMPLETED WELL: 5090' 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			
- 10			
5/8 10 3/4	250'	250'	Cement to surface
- 5/8			
7	2600'	2600'	65 sks 50/50 pozmix
5 1/2			100 sks Class A
4 1/2	5225'	5225'	225 sks 50/50 pozmix
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? None 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



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED  
NOV - 6 1980

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 November 5, 1980

Surface Owner Clyde H. Lathey  
Address Rt. 5, Ripley, WV 25271  
Mineral Owner Same as above  
Address \_\_\_\_\_  
Coal Owner Same as above  
Address \_\_\_\_\_  
Coal Operator Same as above  
Address \_\_\_\_\_

Company Kaiser Exploration and Mining Company  
Address P. O. Box 8, Ravenswood, WV 26164  
Farm Clyde H. Lathey Acres 216.63  
Location (waters) Kessel Run  
Well No. KEM #57 Elevation 869.23  
District Ripley County Jackson  
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 7-14-81.

INSPECTOR  
TO BE NOTIFIED Richard Morris

ADDRESS P. O. Box 372, Grantsville, WV

PHONE 354-7259

John D. Bussell  
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 August 4 1980 by Clyde H & Jane K. Lathey made to Kaiser Exploration and Mining Co. and recorded on the \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_ in Jackson County, Book 157 Page 577

\_\_\_\_\_ 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  
Well Operator

R. A. Pryce  
P. O. Box 8

Street:

Ravenswood

City or Town

West Virginia 26164

State

47-035-1541

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 Robert Pryce  
 ADDRESS \_\_\_\_\_ ADDRESS P. O. Box 8, Ravenswood, WV  
 TELEPHONE \_\_\_\_\_ TELEPHONE 273-5371  
 ESTIMATED DEPTH OF COMPLETED WELL: 5090' ROTARY \_\_\_\_\_ 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	DEPTH IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8	10 3/4'	250'	To surface
8 - 5/8			
7		2600'	125 sks = 570'
5 1/2			
4 1/2		5090'	125 sks = 1500'
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