



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

FEB 22 1980

Oil and Gas Division
OIL AND GAS WELL PERMIT APPLICATION

OIL & GAS DIVISION
DEPT. OF MINES

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

DATE February 20, 1980

Surface Owner Malcolm O'Brien Company Kaiser Exploration and Mining Company
 Address 1725 Forrest Hills Drive, Vienna, WV 26105 Address P. O. Box 8, Ravenswood, WV 26164
 Mineral Owner Malcolm O'Brien Farm Malcolm O'Brien Acres 86.01
 Address 1725 Forrest Hills Drive, Vienna, WV 26105 Location (waters) Bill King Branch of Sapsucker
 Coal Owner Union Carbide Corporation Well No. KEM 35 Elevation 923.95
 Address 32 Sanderson Road, Clendenin, WV 25045 District Union County Mason
 Coal Operator None Quadrangle Elmwood
 Address None

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 10-25-80

Robert H. [Signature]
Deputy Director - Oil & Gas Division

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

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 September 20 1978 by Smith & Louise Daubenspeck made to Kaiser Exploration and Mining Co. and recorded on the 14th. day of November 1978, in Mason County, Book 44 Page 112

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,
(Sign Name) R. A. Pryce
R. A. Pryce, Well Operator / Operations Manager
P. O. Box 8
Street
Ravenswood
City or Town
West Virginia
State

08/25/2023

*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 Robert A. Pryce
 ADDRESS _____ ADDRESS P. O. Box 8, Ravenswood, WV 26164
 TELEPHONE _____ TELEPHONE (304) 273-5371
 ESTIMATED DEPTH OF COMPLETED WELL: 4970 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 10 3/4	250	250	Cement to surface
9 - 5/8			
8 - 5/8			
7	2620	2620	165 sk = 1300'
5 1/2			
4 1/2	4970	4970	225 sks = 2300'
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

08/25/2023

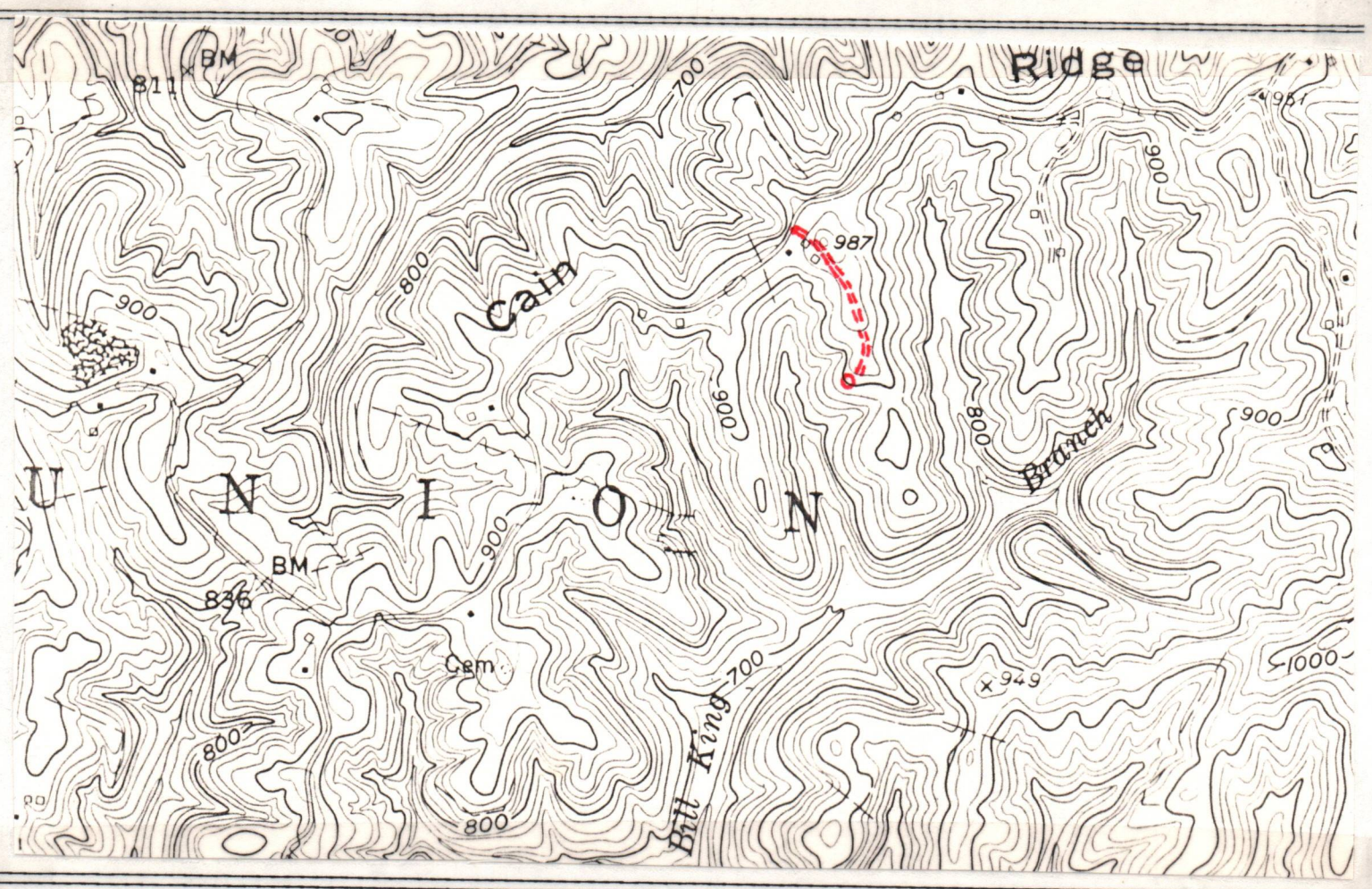
RECLAMATION PLAN

WELL NO. KEM #35

QUADRANGLE Elmwood

SCALE 1" = 1320'

Locate and show: (1) Well Location, (2) Access Road, (3) Well Site, (4) Drilling Pit and (5) Necessary Drainage Features.



COMPANY NAME: KAISER EXPLORATION AND MINING COMPANY PERMIT NO. _____

FARM: Malcolm O'Brien DISTRICT: Union COUNTY: Mason

STATEMENT OF RECLAMATION PLAN:

The location road starts at an existing farm road
road and follows the crest of the ridge which is
open field to the location which is on a bench,
No timber will be cut for construction. A pit
will be constructed, and a plastic liner will be
used to prevent seepage. Upon completion of the
well, as soon as practical, the pit will be returned
to its original grade, leaving only an access road for the operation of the well,
Seeding, mulching and fertilizing will be used in restoring this location

RECEIVED
 FEB 22 1980

This plan was observed and agreed upon between the well operator, contractor, and the district oil and gas inspector.

Kenneth Butcher
 RFD #1, Barboursville, WV 25504

Please indicate () "YES" if the district inspector was present.

"I have read and understand the reclamation requirements as set forth in Chapter 2, Article 4, Section 12-b and will carry out the specified requirements."

Submitted By: E.A.P. Title: Operations Manager Date: February 21, 1980



STATE OF WEST VIRGINIA
OIL AND GAS CONSERVATION COMMISSION

CHARLESTON 25305

February 25, 1980

Mr. Robert L. Dodd, Administrator
Department of Mines
Office of Oil and Gas

RE: APPLICATION FOR PERMIT #47- 053-0220 TO DRILL DEEP WELL

COMPANY: KAISER EXPLORATION AND MINING COMPANY

FARM: MALCOLM O'BRIEN

COUNTY: MASON DISTRICT: UNION

The application of the above company is APPROVED FOR ORISKANY COMPLETION
(APPROVED-DISAPPROVED)

Applicant HAS (HAS-HAS NOT) complied with the provisions of chapter twenty-two, article four-a, (§22-4A), of the code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation, as follows:

1. Provided a certified copy of duly acknowledged and recorded consent and easement from all surface owners; Yes
2. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of the deep well, well name, and the name and address of the operator, and, **
3. Provided a plat showing that the proposed location is a distance of 600 feet from the nearest unit boundary and showing the following wells drilling to or capable of producing from the objective formation within 3000 feet of the proposed location: None

**

- 47-053-0178 - 3550'
- 47-053-0206 - 5350'
- 47-053-0182 - 3150'
- 47-053-0184 - 4250'
- 47-053-0177 - 4700'
- 47-053-0204 - 3900'

Very truly yours,
Thomas E. Huzzey
Thomas E. Huzzey
Commissioner



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

Quadrangle Elmwood

Permit No. MAS -0220

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

Company <u>Kaiser Exploration and Mining Company</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P. O. Box 8, Ravenswood, WV 26164</u>				
Farm <u>Malcolm O'Brien</u> Acres _____				
Location (waters) <u>Bill King Branch of Sapsucker Run</u>	Size			
Well No. <u>KEM #35</u> Elev. <u>923.95</u>	<u>20-16</u>			
District <u>Union</u> County <u>Mason</u>	Cond.			
The surface of tract is owned in fee by _____	<u>13-10" 10 3/4"</u>	<u>251'(KB)</u>	<u>251'(KB)</u>	<u>150 sks class A</u>
<u>Same as above</u>	<u>9 5/8</u>			<u>3% calcium chloride</u>
Address _____	<u>8 5/8</u>			<u>(to surface)</u>
Mineral rights are owned by <u>Same as above</u>	<u>7</u>	<u>2679'(KB)</u>	<u>2679'(KB)</u>	<u>165 sks</u>
Address _____	<u>5 1/2</u>			<u>(1500' fillup)</u>
Drilling Commenced <u>6/26/80</u>	<u>4 1/2</u>	<u>4920'(KB)</u>	<u>4920'(KB)</u>	
Drilling Completed <u>7/5/80</u>	<u>3</u>			
Initial open flow <u>53 MCFD</u> cu. ft. -- bbls.	<u>2</u>			
Final production _____ cu. ft. per day _____ bbls.	Liners Used			
Well open <u>20</u> hrs. before test <u>1850</u> RP.				

Well treatment details:

Attach copy of cementing record.

15% HCL acid in hole; perforated Oriskany 4850'-4855' (K.B.) with 3 1/8" nuline jets
4 holes/ft, 20 holes, .39" diameter; hydrofractured formation with 30,000# 80/100 sand,
30,000# 20/40 sand, and 195,000 SCF of nitrogen at an average pressure of 4650 psig,
and an average rate of 20 BPM; used a total of 868 BBL of water in treatment.

Coal was encountered at -- Feet -- Inches
Fresh water -- Feet -- Salt Water -- Feet
Producing Sand Oriskany sandstone Depth 4850'-4855'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shale			0	118		
Siltstone			118	191		
Sand			191	254		
Sand & Shale			254	301		
Red Rock			301	520		
Siltstone			520	544		
Sand			544	560		
Shale			560	591		
Siltstone			591	686		
Sand			686	694		
Shale			694	755		
Siltstone			755	858		
Sand			858	872		
Siltstone			872	955		
Sand & Shale			955	1088		
Shale			1088	1134		
Sand			1134	1170		
Shale			1170	1182		
Sand			1182	1258		
Shale			1258	1362		
Sand			1362	1388		
Sand & Siltstone			1388	1532		

08/25/2023

MAS - 0220

(over)

* Indicates Electric Log tops in the remarks section.

62

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand			1532	1546		
Shale			1546	1570		
Sand			1570	1574		
Siltstone			1574	1678		
Sand			1678	1686		
Siltstone			1686	1803		
Sand			1803	1826		
Siltstone & Shale			1826	1936		
Big Lime			1936	2072		
Shale			2072	2120		
Big Injun			2120	2200		
Siltstone			2200	2543		
Coffee Shale			2543	2566		
Berea			2566	2580		
Shale			2580	3750		
Brown Shale			3750	4200	Show/Gas	3888', 3996'
Shale			4200	4539	Show/Gas	4268', 4290'
Marcellus			4539	4757		
Onondaga			4757	4828		
Oriskany			4828	4866	Gas	4851'
Helderberg			4866	4926		
Total Depth			4926			

08/25/2023

Date November 12, 19 80

APPROVED Kath A. Payne Owner

By Operation Manager
(Title)

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

RECEIVED

JUL 7 1980

INSPECTOR'S WELL REPORT

OIL & GAS DIVISION
DEPT. OF MINES

Permit No. 47-053-0220

Oil or Gas Well _____
(KIND)

Company	CASING AND TUBING	USED IN DRILLING	Left in Well	PACKERS
<u>Kaiser Eng. & Mining Co.</u>	Size			
<u>Ravens Wood, WVA</u>	16			Kind of Packer
<u>Malcolm Farm</u>	13			
<u>Well No. Ken-35</u>	10			Size of
<u>District Union County Mason</u>	8 1/4			
<u>Drilling commenced 6-25-80</u>	6 3/4			Depth set
<u>Drilling completed at Total depth 3700</u>	5 3/16			
<u>Date shot _____ Depth of shot _____</u>	3			Perf. top
<u>Initial open flow _____ /10ths Water in _____ Inch</u>	2			Perf. bottom
<u>Open flow after tubing _____ /10ths Merc. in _____ Inch</u>	Liners Used			Perf. top
<u>Volume _____ Cu. Ft.</u>				Perf. bottom
<u>Rock pressure _____ lbs. _____ hrs.</u>	CASING CEMENTED _____ SIZE _____ No. FT. _____ Date _____			
<u>Oil _____ bbls., 1st 24 hrs.</u>	NAME OF SERVICE COMPANY _____			
<u>Fresh water _____ feet _____ feet</u>	COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES			
<u>Salt water _____ feet _____ feet</u>	_____ FEET _____ INCHES _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			

Drillers' Names Shoffner
Centr. Burdette Drilling Co.
Remarks:

7-3-80
DATE

H. E. B. T.
503
08/25/2023
DISTRICT WELL INSPECTOR

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

RECEIVED
JUL 11 1980

INSPECTOR'S WELL REPORT

OIL & GAS DIVISION
DEPT. OF MINES
Oil or Gas Well _____
(KIND)

Permit No. 47-053-0220

Company	CASING AND TUBING	USED IN DRILLING	Left in well	PACKERS
<u>Kaiser Exp. & Min. Co.</u>				
<u>Ravens wood, W. Va.</u>	Size			
<u>Malcolm</u>	16			Kind of Packer
<u>Kein-35</u>	13			
<u>Union</u> County <u>Marion</u>	10			Size of
<u>6-25-80</u>	8 1/4			
<u>7-6-80</u> Total depth <u>5000</u>	6 3/4			Depth set
	5 3/16			
	3			Perf. top
	2			Perf. bottom
	Liners Used			Perf. top
				Perf. bottom
	CASING CEMENTED _____ SIZE _____ No. FT. _____ Date _____			
	NAME OF SERVICE COMPANY _____			
	COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			

Drillers' Names Shoffner
Contr. Burdette Drilling Co.
Remarks:

7-8-80
DATE

R.E. Burdette
503
08/25/2023
DISTRICT WELL INSPECTOR

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

RECEIVED
JUN -1 1983

INSPECTOR'S WELL REPORT

OIL & GAS DIVISION
DEPT. OF MINES

Permit No. 053-0220

Oil or Gas Well _____
(KIND)

Company <u>Kaiser Exp. + Mining Co.</u>	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Address <u>Ravenswood, WVA</u>	Size			
Farm <u>Malcolm O'Brien</u>	16			Kind of Packer _____
Well No. <u>1-Kem-35</u>	13			
District <u>Union</u> County <u>Mason</u>	10			Size of _____
Drilling commenced _____	8 1/4			
Drilling completed _____ Total depth _____	6 3/8			Depth set _____
Date shot _____ Depth of shot _____	5 3/16			
Initial open flow _____ /10ths Water in _____ Inch	3			Perf. top _____
Open flow after tubing _____ /10ths Merc. in _____ Inch	2			Perf. bottom _____
Volume _____ Cu. Ft.	Liners Used			Perf. top _____
Rock pressure _____ lbs. _____ hrs.				Perf. bottom _____
Oil _____ bbls., 1st 24 hrs.	CASING CEMENTED _____ SIZE _____ No. FT. _____ Date _____			
Fresh water _____ feet _____ feet	NAME OF SERVICE COMPANY _____			
Salt water _____ feet _____ feet	COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			

Drillers' Names Reclamation Done Well in production and Identified
Remarks: OK to Release

Request Well Record

5/24/83
DATE

Homer H. Douglas
08/25/2023
DISTRICT WELL INSPECTOR

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
FINAL INSPECTION REQUEST
INSPECTOR'S COMPLIANCE REPORT

RECEIVED

FEB 7 - 1984

OIL & GAS DIVISION
 DEPT. OF MINES

Permit No. 053 220 County Mason
 Company Kaiser Farm O'Brien
 Inspector Jrt. Well No. 1 Kam 35
 Date 2/28/84

RULE	DESCRIPTION	IN COMPLIANCE	
		Yes	No
23.06	Notification Prior to starting Work	_____	_____
25.04	Prepared before Drilling to prevent waste	_____	_____
25.03	High-Pressure Drilling	_____	_____
16.01	Required Permits at wellsite	_____	_____
15.03	Adequate Fresh Water Casing	_____	_____
15.02	Adequate Coal Casing	_____	_____
15.01	Adequate Production Casing	_____	_____
15.04	Adequate Cement Strength	_____	_____
23.02	Maintained Access Roads	_____✓	_____
25.01	Necessary Equipment to prevent Waste	_____✓	_____
23.03	Reclaimed Drilling Site	_____✓	_____
23.04	Reclaimed Drilling Pits	_____✓	_____
23.05	No surface or underground Pollution	_____✓	_____
7.03	Identification Markings	_____✓	_____

COMMENTS: _____

I have inspected the above well and (HAVE/HAVE NOT) found it to be in compliance with all of the rules and regulations of the Office of Oil and Gas Department of Mines of the State of West Virginia.

SIGNED: Jerry W. Tephald
 DATE: 2/28/84

08/25/2023



State of West Virginia

BARTON B. LAY, JR.
DEPUTY DIRECTOR

Department of Mines
Oil and Gas Division
Charleston 25305

THEODORE M. STREIT
ADMINISTRATOR

February 14, 1985

Kaiser Exploration & Mining Corporation
P. O. Box 8
Ravenswood, WV 26164

In Re: Permit No: 47-053-0220
Farm: Malcolm O'Brien
Well No: 1-KEM-35
District: Union
County: Mason
Issued: 1-25-80

Gentlemen:

The FINAL INSPECTION REPORT for the above captioned well has been received in this office. Only the column checked below applies:

The well designated by the above captioned permit number has been released under your Blanket Bond.

Please return the enclosed cancelled single bond which covered the well designated by the above permit number to the surety company who executed said bond in your behalf, in order that they may give you credit on their records.

Your well record was received and reclamation requirements approved. In accordance with Chapter 22, Article 4, Section 2, the above captioned well will remain under bond coverage for life of the well.

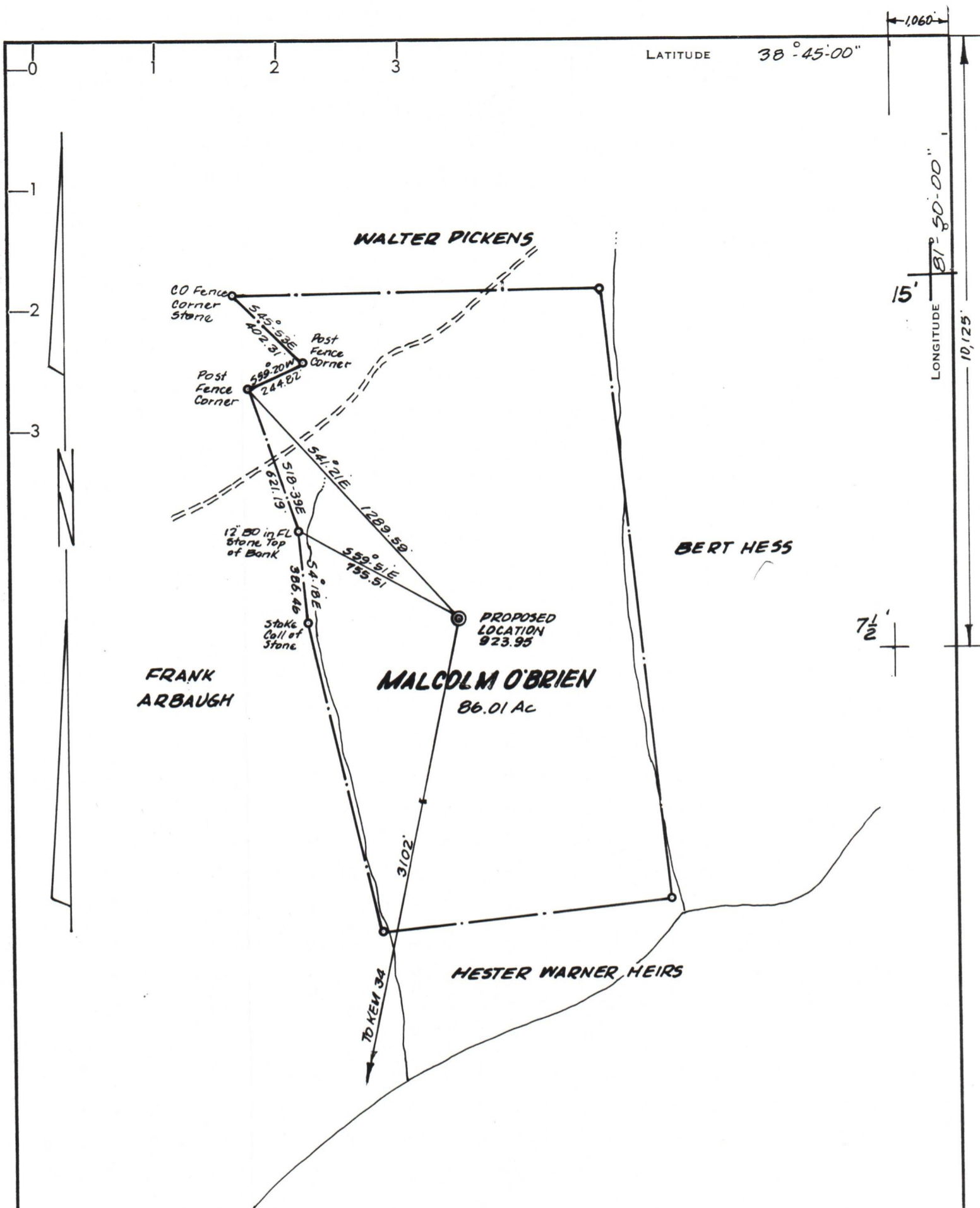
XXXXX

Very truly yours,

Theodore M. Streit, Administrator
Dept. Mines-Office of Oil & Gas

TMS/nw

08/25/2023



- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

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

COMPANY KAISER EXPLORATION & MINING COMPANY
 ADDRESS P.O. BOX 8, RAVENSWOOD, WEST VIRGINIA
 FARM MALCOLM O'BRIEN
 MAP _____ ACRES 86.01 LEASE NO. _____
 WELL (FARM) NO. 1 SERIAL NO. KEM 35
 ELEVATION (SPIRIT LEVEL) 923.95
 QUADRANGLE ELMWOOD
 COUNTY MASON DISTRICT UNION
 POINT OF PROVEN ELEVATION Pt. on Knob ELEV. 987

FILE NO. _____ DRAWING NO. _____
 DATE FEB. 16, 1980 SCALE 1"=500 FT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON 08/25/2023

WELL LOCATION MAP

FILE No. 47-053-0220

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO ~~22,500~~ 24,000 LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.

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

4970 *Cuskey*