



1) Date: June 11, 19 84
 2) Operator's Well No. KEM 589
 3) API Well No. 47 - 035 - 1978
 State County Permit

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

- 4) WELL TYPE: A Oil Gas
 B (If "Gas", Production Underground storage Deep Shallow)
 5) LOCATION: Elevation: 819' Watershed: McGraw Run (03656)
 District: Grant County: Jackson Quadrangle: Liverpool 439
 6) WELL OPERATOR Kaiser Expl. & Mining Co. 2550 7) DESIGNATED AGENT R. A. Pryce
 Address P.O. Box 8 Address P.O. Box 8
Ravenswood, WV 26164 Ravenswood, WV 26164
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Jerry Tephabock Name Clint Hurt
 Address Rt. 1, Box 101A Address P.O. Box 388
Ripley, WV 25271 Elkview, WV
 10) PROPOSED WELL WORK: Drill Drill deeper Redrill Stimulate
 Plug off old formation Perforate new formation
 Other physical change in well (specify) _____
 11) GEOLOGICAL TARGET FORMATION, Oriskany
 12) Estimated depth of completed well, 5209 feet
 13) Approximate trata depths: Fresh, _____ feet; salt, _____ feet.
 14) Approximate coal seam depths: _____ Is coal being mined in the area? Yes No

RECEIVED
 JUN 27 1984
 OIL & GAS DIVISION
 DEPT. OF MINES

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	Size	Grade	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
			Weight per ft.	New	Used	For drilling		
Conductor								
Fresh water	10 3/4"			X		250 350'	250 350'	Kinds
Coal							150 sks Class A (to surface)	
Intermediate	7"			X		2309	2309	Sizes
Production	4 1/2"			X		5209	5209	65 sks 50/50 pozmix, 100sks Class
Tubing							225 50/50 pozmix	Depths set
Liners								Perforations: Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-035-1978

July 16, 19 84
 Date

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 July 16, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: BLANKET	Agent: <u>LD</u>	Plat: <u>MD</u>	Casing: <u>MH</u>	Fee: <u>967-633</u>
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Margaret J. Hass
 Administrator, Office of Oil and Gas

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

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

09/08/2023



IV-9
(Rev 8-81)

DATE June 11, 1094
WELL NO. KEM 589
API NO. 47-035-1978

State of West Virginia
Department of Mines
Oil and Gas Division

CONSTRUCTION AND RECLAMATION PLAN

COMPANY NAME Kaiser Exploration and Mining Co. DESIGNATED AGENT Same
Address P. O. Box 8, Ravenswood, WV 26164 Address _____
Telephone 273-5371 Telephone _____
LANDOWNER BERNARD LOCKHART SOIL CONS. DISTRICT Western
Revegetation to be carried out by Kaiser Exploration and Mining Company (Agent)

This plan has been reviewed by Western SCD. All corrections
and additions become a part of this plan: 6-11-84
(Date)
Steven B. Foese
(SCD Agent)

ACCESS ROAD

LOCATION

Structure Cross Drains (A)
Spacing 45', 250', 60'
Page Ref. Manual 2 - 4
Structure Drainage Ditch (B)
Spacing Earthen
Page Ref. Manual 2 - 12
Structure Road Culverts (C)
Spacing 20" Diameter
Page Ref. Manual 2 - 7

Structure Top Diversion Ditch (1)
Material Earthen
Page Ref. Manual 2 - 12
Structure _____ (2)
Material _____
Page Ref. Manual _____
Structure _____ (3)
Material _____
Page Ref. Manual _____

All structures should be inspected regularly and repaired if necessary. All commercial timber is to be cut and stacked and all brush and small timber to be cut and removed from the site before dirt work begins.

REVEGETATION

Treatment Area I

Treatment Area II

Lime 4 Tons/acre
or correct to pH _____
Fertilizer 14-14-14 600 lbs/acre
(10-20-20 or equivalent)
Mulch Hay 2 Tons/acre
Seed* 81% Orchard Grass/15% Rye 32 lbs/acre
Red Clover 8 lbs/acre
lbs/acre

Lime 4 Tons/acre
or correct to pH _____
Fertilizer 14-14-14 600 lbs/acre
(10-20-20 or equivalent)
Mulch Hay 2 Tons/acre
Seed* 81% Orchard Grass/15% Rye 16 lbs/acre
Kentucky 31 Fescue 16 lbs/acre
Red Clover 8 lbs/acre

*Inoculate all legumes such as vetch, trefoil and clovers with the proper bacterium. Inoculate with 3X recommended amount.

NOTES: Please request landowner's cooperation to protect new seedling for one growing season. Attach separate sheets as necessary for comments.

PLAN PREPARED BY Vincent Wood 09/08/2023
ADDRESS 116 Pfof Avenue
Ripley, WV 25271
PHONE NO. 372-2709

1) Date: June 11, 1984
2) Operator's Well No. KEM 589
3) API Well No. 47-035-1978
State County Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OFFICE OF OIL & GAS

NOTICE OF APPLICATION FOR A WELL WORK PERMIT

4) SURFACE OWNER(S) OF RECORD TO BE SERVED

- (i) Name Bernard & Wilda Lockhart
Address Rt. 3, Box 109
Sandyville, WV 25275
- (ii) Name _____
Address _____
- (iii) Name _____
Address _____

5(i) COAL OPERATOR
Address _____

5(ii) COAL OWNER(S) WITH DECLARATION ON RECORD:
Name _____
Address _____

Name _____
Address _____

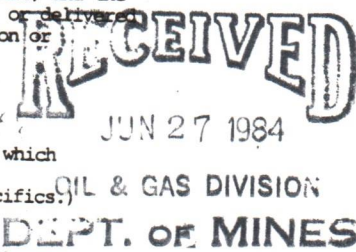
5(iii) COAL LESSEE WITH DECLARATION ON RECORD:
Name _____
Address _____

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents:

- (1) The Application for a Well Work Permit on Form IV-2(B) (or Form IV-4 if the well is to be plugged, which sets out the parties involved in the drilling or other work, and describes the well and its location and, if applicable, the proposed casing and cementing program;
- (2) The plat (surveyor's map) showing the well location on Form IV-6; and
- (3) The Construction and Reclamation Plan on Form IV-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

THE REASON YOU RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION (FORM IV-2(B) OR FORM 4, DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Administrator of the Office of Oil and Gas, West Virginia Department of Mines, with respect to a well at the location described on attached Application and depicted on attached Form IV-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Administrator.



6) EXTRACTION RIGHTS

Check and provide one of the following:

- Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.
- The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)

7) ROYALTY PROVISIONS

Is the right to extract, produce or market the oil or gas based upon a lease or leases or other contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes No

If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.

See the reverse side for line item instructions, and for instructions concerning the required copies of the Notice and Application, plat, and Construction and Reclamation Plan.

The truth of the information on the Notice and Application is verified and sworn to and the Notice is signed on behalf of the Well Operator in my County and State by Robert A. Price this 11 day of June, 1984. My commission expires 8/30, 1993.

Dorise Carney
Notary Public, Jackson County,
State of West Virginia

WELL OPERATOR Kasier Exploration and Mining Co.
By R.A.P.
Its General Manager
Address P.O. Box 8
Ravenswood, WV 26164
Telephone 273-5371

09/08/2023

I N S T R U C T I O N S T O A P P L I C A N T

CONCERNING THE LINE ITEMS:

- 1) Date of Notice.
- 2) Your well name and number.
- 3) To be filled out by the Office of Oil & Gas.
- 4) & 5) Use separate sheet if necessary.
- 4) Surface owner(s) of record to be served with Notice and Application. However, see also Code § 22-4-1b(b) if "more than three tenants in common or other co-owners of interest described in subsection (a) of this section hold interests in such lands".
- 5(i) "Coal Operator" means any person, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine.
- 5(ii, iii) See Code § 22-4-20.
- 6) See Code § 22-4-11(c). However, in lieu of filing the lease(s) or other continuing contract(s), the Applicant may fill out the information in the space provided below.
- 7) See Code § § 22-4-11(d, e).

CONCERNING THE REQUIRED COPIES FOR FILING AND SERVICE:

Filing. Code § 22-4-1k and Regulation 7.02 provide that the original and required copies of the Notice and Application must be filed with the Administrator, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-1k(d) and the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fees required by Code § 22-4-1a(c) and 22-3-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well on dwelling within 200 feet of the proposed well.

Service. In addition, service must be made on the surface owner(s) and the person(s) with an interest in the coal. See Code § § 22-4-1m, 22-4-2, 22-4-2a, and 22-4-2b.

INFORMATION SUPPLIED UNDER CODE § 22-4-11(d)

IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on the obverse side of this Notice, I depose and say that I am the person who signed the Notice for the Applicant, and that--

- (1) the tract of land is the same tract described in the Application to which this Notice applies, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

<u>Grantor, lessor, etc.</u>	<u>Grantee, lessee, etc.</u>	<u>Royalty</u>	<u>Book Page</u>
Bernard & Wilda Lockhart	Kaiser Expl. & Mining Co.	1/8th of prevailing field price	228/122

09/08/2023

AFFIDAVIT OF PERSONAL SERVICE ON SURFACE OWNER

STATE OF West Va,
COUNTY OF Jackson:

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of--

- (1) Notice on Form IV-2(A) X / Form IV-3(A) / Form IV-4(A) /
- (2) Application on Form IV-2(B) X / Form IV-3(B) / Form IV-4(B) /
- (3) Plat showing the well location on Form IV-6, and
- (4) Construction and Reclamation Plan on Form IV-9 (unless the application is to plug a well)

--all with respect to operator's Well No. K-589 located in Grant District, Jackson County, West Virginia, upon the person or organization named--

Bernard Lockhart & Wilda Lockhart

--by delivering the same in Jackson County, State of WV on the 18 day of June, 1984 in the manner specified below.

[COMPLETE THE APPROPRIATE SECTION]

For an individual:

Handing it to him X / her X / or, because he / she / refused to take it when I offered it, by leaving it in his / her / presence.

Handing it to a member of his or her family above the age of 16 years named _____ who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

For a partnership:

Handing it to _____, a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:

Handing it to the general partner, named _____, or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation:

Handing it to the corporation's employee / officer / director / attorney in fact / named _____.

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JUN 27 1984

OIL & GAS DIVISION
DEPT. OF MINES

William K. Sloan
(Signature of person executing service)

Taken, subscribed and sworn before me this 20 day of June, 1984.
My commission expires Oct 28, 1993

Stephen W. Kelly
Notary Public

(AFFIX SEAL IF NOTARIZED IF OUTSIDE THE STATE)

COMMISSIONER FOR OIL & GAS OF WV



RECEIVED
JUN 27 1924
OFF & GAS DIVISION
DEPT. OF MINES



1) Date: June 11, 1984
 2) Operator's Well No. KEM 589
 3) API Well No. 47
 State _____ County _____ Permit _____

**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: 819' / Watershed: McGraw Run
 District: Grant / County: Jackson / Quadrangle: Liverpool
- 6) WELL OPERATOR Kaiser Expl. & Mining Co.
 Address P.O. Box 8
Ravenswood, WV 26164
- 7) DESIGNATED AGENT R. A. Pryce
 Address P.O. Box 3
Ravenswood, WV 26164
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Jerry Tephabock
 Address Rt. 1, Box 101A
Ripley, WV 25271
- 9) DRILLING CONTRACTOR
 Name Clint Hurt
 Address P.O. Box 388
Elkview, WV
- 10) PROPOSED WELL WORK: Drill X / Drill deeper _____ / Redrill _____ / Stimulate X
 Plug off old formation _____ / Perforate new formation _____
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Oriskany
- 12) Estimated depth of completed well, 5209 feet
- 13) Approximate trata depths: Fresh, N/A feet; salt, N/A feet.
- 14) Approximate coal seam depths: _____ Is coal being mined in the area? Yes _____

RECEIVED
 JUN 27 1984
 OIL & GAS DIVISION
 DEPT. OF MINES

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
Fresh water	<u>10 3/4"</u>			<u>X</u>		<u>250</u>	<u>250</u>	<u>150 sks Class A (to surface)</u>	Sizes
Coal									Depths set
Intermediate	<u>7"</u>			<u>X</u>		<u>2309</u>	<u>2309</u>	<u>65 sks 50/50 pozmix, 100sks Class</u>	
Production	<u>4 1/2"</u>			<u>X</u>		<u>5209</u>	<u>5209</u>	<u>225 50/50 pozmix</u>	
Tubing									Perforations:
Liners									Top Bottom

The law requires a comment period for surface owners. However, the permit can be issued in less than 15 days from the filing of the Application if the surface owner(s) of record sign(s) the following "Voluntary Statement of No Objection" on a facsimile of this surface owner's copy of the Application.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners on the reverse side of this Application for a Well Work Permit, and that I have received copies of (1) a Notice of Application for a Well Work Permit on Form IV-2(A), (2) an Application for a Well Work Permit on Form IV-2(B), (3) a survey plat on Form IV-6, and (4) a Construction and Reclamation Plan on Form IV-9, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued based on those materials.

(For execution by corporation, partnership, etc.)
 NAME: _____
 By _____
 Its _____ Date _____

(For execution by natural persons)
Bernard Lockhart Date: 6/18/84
 (Signature)
Kilda Lockhart Date: 6/18/84
 (Signature)

09/08/2023
 Surface Owner

RECEIVED
JUN 27 1964
OIL & GAS DIVISION
DEPT. OF MINES

09/08/2023



STATE OF WEST VIRGINIA
 OIL AND GAS CONSERVATION COMMISSION
 CHARLESTON 25305

Theodore M. Streit, Administrator
 Department of Mines
 Office of Oil and Gas

RE: APPLICATION FOR PERMIT #47- 035 - 1978 TO DRILL DEEP WELL

COMPANY: KAISER EXPLORATION AND MINING COMPANY

FARM: BERNARD AND WILDA LOCKHART

COUNTY: JACKSON DISTRICT: GRANT

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

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

1. *Provided a certified copy of duly acknowledged and recorded consent and easement form 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, None*
3. *Provided a plat showing that the proposed location is a distance of 427 feet from the nearest unit boundary and showing the following wells drilling to or capable of producing from the objective formation within 3,000 feet of the proposed location: None*

Very truly yours,

Brett Loflin
 Brett Loflin
 Petroleum Engineer

LBL/rf

09/08/2023



IV-35
(Rev 8-81)

State of West Virginia
Department of Mines
Oil and Gas Division

Date 11/02/84
Operator's
Well No. KEM 589
Farm Bernard Lockart
API No. 47 - 035 - 1978

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: 819 Watershed McGraw Run
District: Grant County Jackson Quadrangle Liverpool

COMPANY Kaiser Exploration and Mining Co.
ADDRESS P. O. Box 8 Ravenswood, WV 26164
DESIGNATED AGENT R. A. Pryce
ADDRESS Same
SURFACE OWNER Bernard and Wilda Lockart
ADDRESS _____
MINERAL RIGHTS OWNER Bernard and Wilda Lockart
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK Jerry
Tephabock ADDRESS Ripley, WV 25271
PERMIT ISSUED 7/16/84
DRILLING COMMENCED 8/09/84
DRILLING COMPLETED 8/17/84
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.			
<u>13-10^{3/4}</u>	<u>772</u>	<u>772</u>	<u>310 sks class A</u>
<u>9 5/8</u>			
<u>8 5/8</u>			
<u>7</u>	<u>2317</u>	<u>2317</u>	<u>175 sks 50/50 poz</u> <u>100 sks class A</u>
<u>5 1/2</u>			
<u>4 1/2</u>	<u>5289</u>	<u>5289</u>	<u>225 sks</u> <u>50/50 poz</u>
<u>3</u>			
<u>2</u>			
Liners used			

GEOLOGICAL TARGET FORMATION Oriskany Sandstone Depth 5210-5290 feet
Depth of completed well 5313 feet Rotary x / Cable Tools _____
Water strata depth: Fresh N/A feet; Salt N/A feet
Coal seam depths: N/A Is coal being mined in the area? NO
Drilled on fluid - not known

OPEN FLOW DATA

Producing formation Devonian Brown Shale Pay zone depth 4147-4376 feet
Gas: Initial open flow 0 Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 216.5 Mcf/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 4 hours

Static rock pressure 1180 psig (surface measurement) after 72 hours shut in
(If applicable due to multiple completion--)

09/08/2023

Second producing formation _____ Pay zone depth _____ feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ Mcf/d Oil: 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

(Continue on reverse side)

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

Oriskany Sandstone was water wet; well was plugged back and completed in the Devonian Brown Shale.
 8/27/84 NL McCullough set permanent plug at 4510 and perf Brown Shale 20 holes (.39" dia) from 4147-4376.
 8/28/84 NOWSCO foam frac Brown Shale. Used: 60,000 lbs 20/40 sand; 680 mscf total N₂; 310 bbls total fluid.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Shale and Siltstone			0	515	
Sand			515	550	
Shale and Siltstone			550	722	
Sand			722	775	
Shale and Siltstone			775	1290	
Dunkard Sands			1290	1745	
Shale			1745	1820	
Salt Sands			1820	1905	
Big Lime (Greenbrier)			1905	2040	
Shale			2040	2074	
Big Injun Sand			2074	2165	
Shale			2165	2500	
Coffee Shale (Sunbury)			2500	2522	
Berea Horizon			2522		No Sand
Shale			2522	3769	
Brown Shale			3769	4382	S/G @ 4220
Shale			4382	5094	
Onondaga Limestone			5094	5210	
Oriskany Sandstone			5210	5298	Salt Water @ 5215
Helderberg Limestone			5298	5334	
Total Depth			5334		

(Attach separate sheets as necessary)

Kaiser Exploration and Mining Company
Well Operator

By: E. A. P.

09/08/2023

Date: November 2, 1984

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 coal, encountered in the drilling of a well."

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

RECEIVED

AUG 20 1984

OIL & GAS DIVISION
DEPT. OF MINES

INSPECTOR'S WELL REPORT

Permit No. 035 1978

Oil or Gas Well _____
(KIND)

Company <u>Kaiser Exploration</u>	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Address _____	Size			
Farm <u>Lockhart</u>	16			Kind of Packer _____
Well No. _____	13			
District _____ County <u>Jackson</u>	10			Size of _____
Drilling commenced _____	8 1/4			
Drilling completed _____ Total depth _____	6 5/8			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 _____

Remarks: _____

8 13 84 Ran 55 jts csg 7'' set 2327 kb plug down 6:00 am.

8 15 84 Drilling 6 1/4 hole at 4359'/.

8 15 84

DATE

Jerry R. Teph...
09/08/2023

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

RECEIVED

AUG 20 1984

OIL & GAS DIVISION
DEPT. OF MINES

INSPECTOR'S WELL REPORT

Permit No. 035 1978

Oil or Gas Well _____
(KIND)

Company <u>Kaiser Exploration</u>	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Address _____	Size			Kind of Packer _____
Farm _____	16			
Well No. <u>Kem 589</u>	13			Size of _____
District _____ County <u>Jackson</u>	10			
Drilling commenced _____	8 1/4			Depth set _____
Drilling completed _____ Total depth _____	6 5/8			
Date shot _____ Depth of shot _____	5 3/16			Perf. top _____
Initial open flow _____ /10ths Water in _____ Inch	3			
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 _____

Hurt Rig #4

Remarks: _____

8 16 84 TD 5318 Ran 4 1/2 csg 5289' set 5299 KB Cement Noscoe 225 sks 50/50
poz 10% salt 12.5 lbs per sk gibsonite. plug down 7:15 am.

8 17 84 moving to Kem ~~404~~ 035 ~~1859~~
414 1859

8 17 84

DATE

Jerry A. Toph...
09/08/2023

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

RECEIVED
DEC 18 1984

OIL & GAS DIVISION

INSPECTOR'S WELL REPORT
PT. OF MINES

Permit No. 035 1978

Oil or Gas Well _____
(KIND)

Company <u>Kaiser Exploration</u>	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Address _____	Size			Kind of Packer _____
Farm <u>Lockhart</u>	16			
Well No. <u>Kem 589</u>	13			Size of _____
District _____ County <u>Jackson</u>	10			
Drilling commenced _____	8 1/4			Depth set _____
Drilling completed _____ Total depth _____	6 5/8			
Date shot _____ Depth of shot _____	5 3/16			Perf. top _____
Initial open flow _____ /10ths Water in _____ Inch	3			Perf. bottom _____
Open flow after tubing _____ /10ths Merc. in _____ Inch	2			Perf. top _____
Volume _____ Cu. Ft.	Liners Used _____			Perf. bottom _____
Rock pressure _____ lbs. _____ hrs.	CASING CEMENTED _____ SIZE _____ No. FT. _____ Date _____			
Oil _____ bbls., 1st 24 hrs.	NAME OF SERVICE COMPANY _____			
Fresh water _____ feet _____ feet	COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES			
Salt water _____ feet _____ feet	_____ FEET _____ INCHES _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			

Drillers' Names _____

Remarks:

Smoothed ready for reseed in spring.

12 14 84
DATE

John T. Fiddell
09/08/2023
DISTRICT WELL INSPECTOR



RECEIVED
JUN 17 1985

OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division
Charleston 25305

FINAL INSPECTION REPORT
INSPECTORS COMPLIANCE REPORT
December 27, 1984

COMPANY Kaiser Exp. & Mining Co.
P. O. Box 8
Ravenswood, West Virginia 26164

PERMIT NO 035-1978
FARM & WELL NO Bernard & Wilda Lockhart
#KEM-589
DIST. & COUNTY Grant/Jackson

RULE	DESCRIPTION	IN COMPLIANCE	
		YES	NO
23.06	Notification Prior to Starting Work	X	
25.04	Prepared before Drilling to Prevent Waste	X	
25.03	High-Pressure Drilling		
16.01	Required Permits at Wellsite	X	
15.03	Adequate Fresh Water Casing	X	
15.02	Adequate Coal Casing		
15.01	Adequate Production Casing	X	
15.04	Adequate Cement Strength	X	
15.05	Cement Type	X	
23.02	Maintained Access Roads	X	
25.01	Necessary Equipment to Prevent Waste	X	
23.04	Reclaimed Drilling Pits	X	
23.05	No Surface or Underground Pollution	X	
23.07	Requirements for Production & Gathering Pipelines	X	
16.01	Well Records on Site		
16.02	Well Records Filed		
7.05	Identification Markings	X	

I HAVE INSPECTED THE ABOVE CAPTIONED WELL AND RECOMMEND THAT IT BE RELEASED:

SIGNED James T. Tophel
DATE 6 12 85

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

T. H. ...
Administrator-Oil & Gas Division

June 19, 1985
DATE

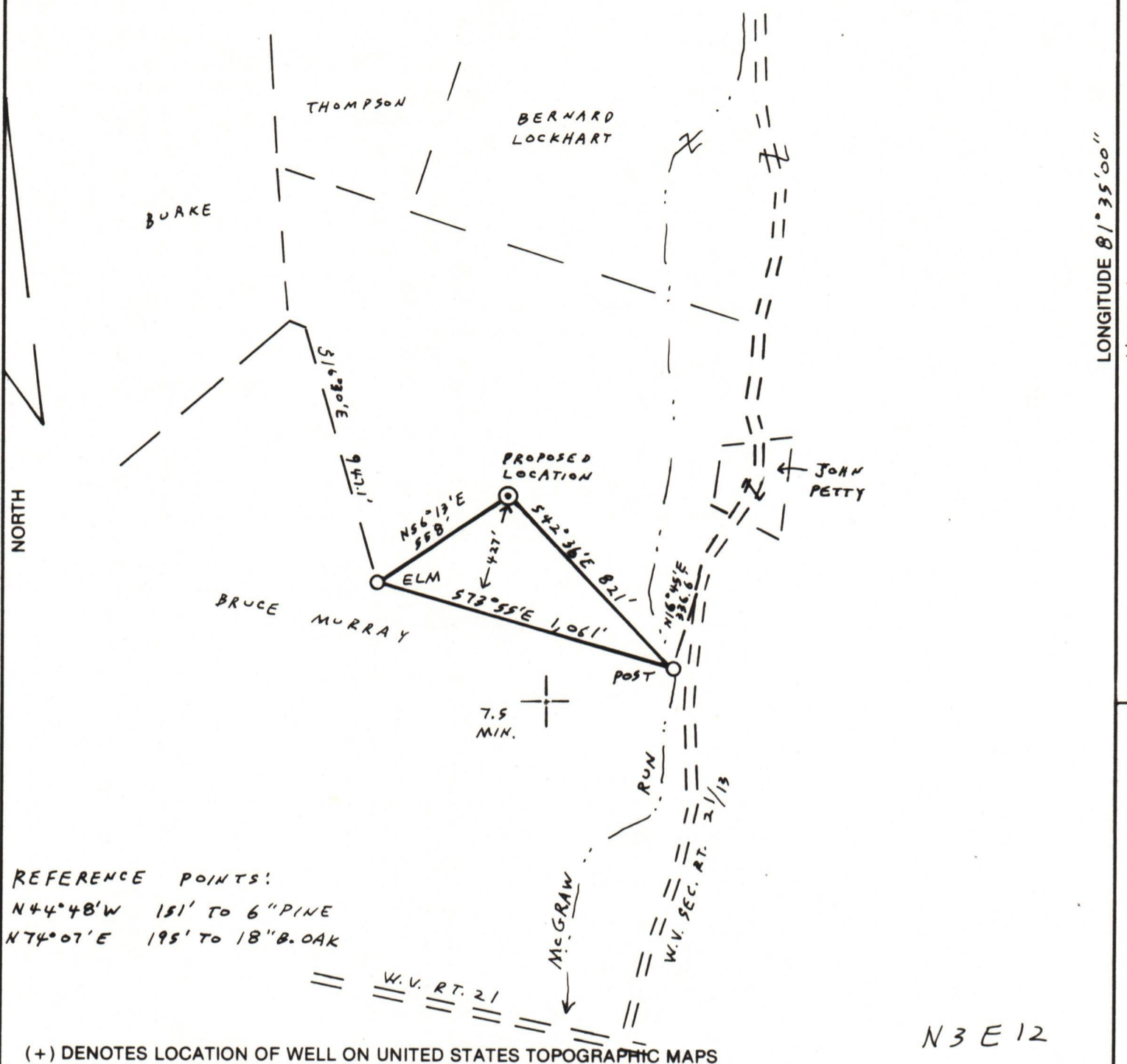
09/08/2023

MMN 7/2/84

8,050'

LATITUDE 39°00'00"

LONGITUDE 81°35'00"



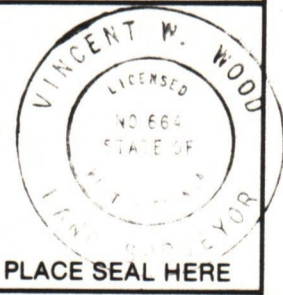
REFERENCE POINTS:
 N44°48'W 151' TO 6" PINE
 N74°07'E 195' TO 18" B. OAK

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

N3 E 12

FILE NO. 7-46
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION B.M. "T102" ELEV. 617, 1860' SOUTH OF LOCATION

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
 (SIGNED) Vincent W. Wood
 R.P.E. _____ L.L.S. 664



PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE JUNE 8, 19 84
 OPERATOR'S WELL NO. KEM 589
 API WELL NO. _____

WELL TYPE: OIL _____ GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION STORAGE _____ DEEP SHALLOW _____

LOCATION: ELEVATION 819 WATERSHED Mc GRAW RUN
 DISTRICT GRANT COUNTY JACKSON
 QUADRANGLE LIVERPOOL

SURFACE OWNER BERNARD AND WILDA LOCKHART ACREAGE 44.526
 OIL & GAS ROYALTY OWNER BERNARD AND WILDA LOCKHART LEASE ACREAGE 44.526
 LEASE NO. 86-04-611 09/08/2023

PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION ORISKANY ESTIMATED DEPTH 5209' R. A. PRYCE
 WELL OPERATOR KAISER EXPLORATION AND MINING CO. DESIGNATED AGENT KAISER EXPLOR. AND MINING CO.
 ADDRESS P.O. BOX 8, RAVENSWOOD, W.V. 26164 ADDRESS P.O. BOX 8, RAVENSWOOD, W.V. 26164

COUNTY NAME

PERMIT

FORM IV-6 (8-78)

H.T. HALL



1) Date: June 11, 19 84
 2) Operator's Well No. KEM 589
 3) API Well No. 47 State _____ County _____ Permit _____

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 X / Shallow X /)
- 5) LOCATION: Elevation: 819' Watershed: McGraw Run (03656)
 District: Grant County: Jackson Quadrangle: Liverpool
- 6) WELL OPERATOR Kaiser Expl. & Mining Co. 7) DESIGNATED AGENT R. A. Pryce
 Address P.O. Box 8 Address P.O. Box 8
Ravenswood, WV 26164 Ravenswood, WV 26164
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Jerry Tephahock Name Clint Hurt
 Address Rt. 1, Box 101A Address P.O. Box 388
Ripley, WV 25271 Elkview, WV
- 10) PROPOSED WELL WORK: Drill X / Drill deeper _____ / Redrill _____ / Stimulate X /
 Plug off old formation _____ / Perforate new formation _____ /
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Oriskany
- 12) Estimated depth of completed well, 5209 feet
- 13) Approximate strata depths: Fresh, _____ feet; salt, _____ feet.
- 14) Approximate coal seam depths: _____ 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
Fresh water	<u>10 3/4"</u>			<u>X</u>		<u>250</u>	<u>250</u>	<u>150 sks Class A (to surface)</u>	Sizes
Coal									Depths set
Intermediate	<u>7"</u>			<u>X</u>		<u>2309</u>	<u>2309</u>	<u>65 sks 50/50 pozmix, 100sks Class A</u>	
Production	<u>4 1/2"</u>			<u>X</u>		<u>5209</u>	<u>5209</u>	<u>225 50/50 pozmix</u>	
Tubing									Perforations:
Liners									Top Bottom

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

The named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code §22-4-20, if the permit is to be issued within fifteen (15) days of the filing of the Application.

WAIVER

The undersigned coal operator _____ / owner _____ / lessee _____ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____, 19 _____ By: [Signature]
 Its _____

09/08/2023
 Coal Owner