



1) Date: September 20, 1983, 19
 2) Operator's Well No. KEM #450
 3) API Well No. 47 - 035 - 1910
 State County Permit

RECEIVED
 SEP 26 1983
 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: 907 Watershed: Mill Creek
 District: Ripley County: Jackson Quadrangle: Ripley
- 6) WELL OPERATOR Kaiser Exploration and Mining Co. 7) DESIGNATED AGENT R. A. Pryce
 Address P. O. Box 8 Address Same
Ravenswood, WV 26164
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Homer Dougherty
 Address Linden Rt., Box 3A, Looneyville, WV
- 9) DRILLING CONTRACTOR: Name Clint Hurt
 Address P. O. Box 388
Elkview, WV
- 10) PROPOSED WELL WORK: Drill X / Drill deeper / Redrill / Stimulate
 Plug off old formation / Perforate new formation
 Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, Devonian Brown Shale
- 12) Estimated depth of completed well, 5112 feet
- 13) Approximate strata depths: Fresh, feet; salt, feet.
- 14) Approximate coal seam depths: Is coal being mined in the area? Yes / No
- 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	10 3/4"			X		300 250	300 250	150 sks class A	to surface
Coal								65 sks 50/50	pozmix
Intermediate	7"			X		2332	2332	100 sks class A	
Production						5112	5112		Depths set
Tubing	4 1/2"			X				225 sks 50/50	pozmix
Liners									Perforations: Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-035-1910 Date October 18, 19 83

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 October 18, 1985 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>BB</u>	Agent: <u>mt</u>	Plat: <u>[Signature]</u>	Casing: <u>[Signature]</u>	Fee: <u>965</u> <u>100</u>
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Margaret J. Nasse
 Administrator, Office of Oil and Gas

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



OFFICE USE ONLY

PERMIT MODIFICATIONS AND CONDITIONS (IF ANY) TO THE PROPOSED WELL WORK

1) WELL LOCATION: 2) LOCATION: 3) WELL OPERATOR: 4) OIL & GAS INSPECTOR TO BE NOTIFIED: 5) PROPOSED WELL WORK: 6) GEOLOGICAL TARGETFORMATION: 7) ESTIMATED DEPTH OF COMPLETED WELL: 8) APPROXIMATE TEST DEPTH: 9) APPROXIMATE COST AND DEPTH:

OFFICE USE ONLY

This part of Form IV-2(b) is to record the dates of certain occurrences and any follow-up inspections.

Date	Date(s)
Application received	Follow-up inspection(s)
Well work started	" "
Completion of the drilling process	" "
Well Record received	" "
Reclamation completed	" "

OTHER INSPECTIONS

Reason: _____

Reason: _____

Reason	Date	Inspector	Signature
100	09/08/2026	MT	[Signature]

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

09/08/2026



1) Date: September 20, 1983, 19____
 2) Operator's Well No. KEM #450
 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: 907 Watershed: Mill Creek
 District: Ripley County: Jackson Quadrangle: Ripley
- 6) WELL OPERATOR Kaiser Exploration and Mining Co. 7) DESIGNATED AGENT R. A. Pryce
 Address P. O. Box 8 Address Same
Ravenswood, WV 26164
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Homer Dougherty Name Clint Hurt
 Address Linden Rt., Box 3A, Looneyville, WV Address P. O. Box 388
Elkview, WV
- 10) PROPOSED WELL WORK: Drill X / Drill deeper _____ / Redrill _____ / Stimulate _____
 Plug off old formation _____ / Perforate new formation _____
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Devonian Brown Shale
 12) Estimated depth of completed well, 5112 feet
 13) Approximate strata depths: Fresh, _____ feet; salt, _____ feet.
 14) Approximate coal seam depths: _____ Is coal being mined in the area? Yes _____ / No _____
- 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		Kinds	Sizes
Conductor										
Fresh water										
Coal	<u>10 3/4"</u>			<u>X</u>		<u>250</u>	<u>250</u>	<u>150 sks class A to surface</u>		
Intermediate										
Production	<u>7"</u>			<u>X</u>		<u>2332</u>	<u>2332</u>	<u>65 sks 50/50 pozmix</u>		
Tubing						<u>5112</u>	<u>5112</u>	<u>100 sks class A</u>		
Liners	<u>4 1/2"</u>			<u>X</u>				<u>225 sks 50/50 pozmix</u>		
									Perforations:	
									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: Margaret J. House

Its _____

09/08/2023
 Coal Owner



IV-9
(Rev 8-81)

DATE September 12, 1983

WELL NO. KEM #450

State of West Virginia
Department of Mines
Oil and Gas Division

API NO. 47-035-1910

RECEIVED
SEP 26 1983

CONSTRUCTION AND RECLAMATION PLAN

COMPANY NAME Kaiser Exploration and Mining Co DESIGNATED AGENT R. A. Pryce
Address P. O. Box 8, Ravenswood, WV Address Same
Telephone 273-5371 Telephone _____
LANDOWNER J. B. Heilman heirs SOIL CONS. DISTRICT Western

OIL & GAS DIVISION
DEPT. OF MINES

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: Sept 16 1983
(Date)
Wayne W. Hughes
(SCD Agent)

ACCESS ROAD	LOCATION
Structure <u>Drainage Ditch</u> (A)	Structure <u>Diversion Ditch</u> (1)
Spacing <u>Earthen</u>	Material <u>Earthen</u>
Page Ref. Manual <u>2:12</u>	Page Ref. Manual <u>2:12</u>
Structure <u>Road Culvert</u> (B)	Structure _____ (2)
Spacing <u>16" diameter</u>	Material _____
Page Ref. Manual <u>2:7</u>	Page Ref. Manual _____
Structure <u>Cross Drains</u> (C)	Structure _____ (3)
Spacing <u>135'</u>	Material _____
Page Ref. Manual <u>2:4</u>	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

OK

Treatment Area I

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% Ryegrass 16 lbs/acre

Kentucky 31 Fescue 16 lbs/acre

Red Clover 8 lbs/acre

Treatment Area II

Lime Same as Area I Tons/acre
or correct to pH _____

Fertilizer _____ lbs/acre
(10-20-20 or equivalent)

Mulch _____ Tons/acre

Seed* _____ lbs/acre

_____ lbs/acre

_____ lbs/acre

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

PLAN PREPARED BY Vincent Wood

09/08/2023

ADDRESS 116 Ppost Avenue
Ripley, WV 25271

FWCWE NO. 372-2709

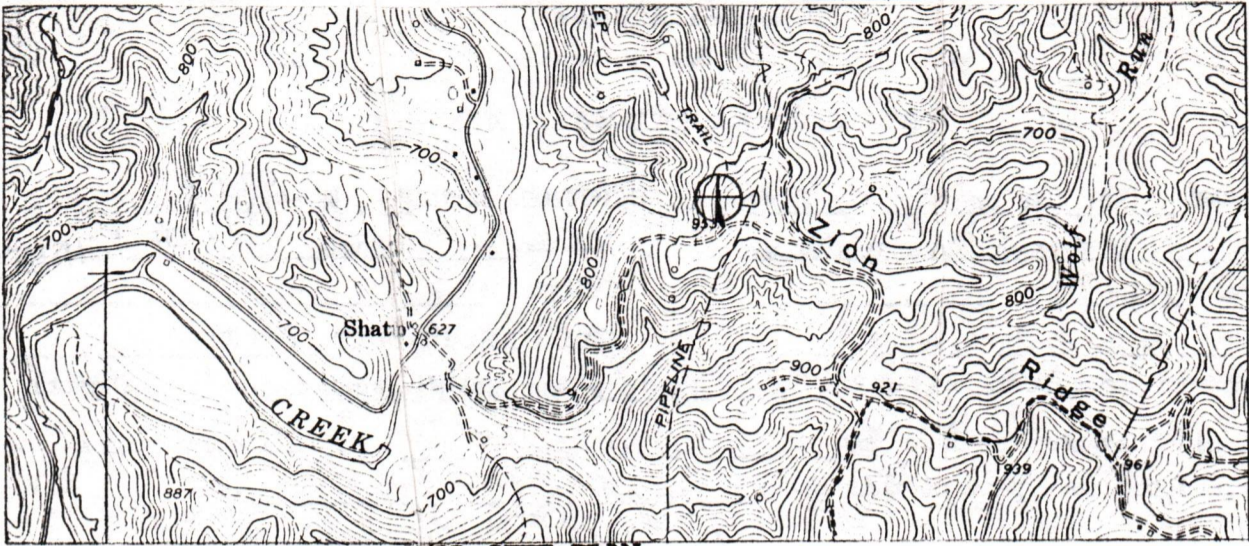
NOTES: Please request landowner's cooperation to protect new seedling for one growing season. Attach separate sheets as necessary for comments.

ATTACH OR PHOTOCOPY SECTION OF INVOLVED TOPOGRAPHIC MAP. QUADRANGLE RIPLEY

LEGEND

Well Site ⊕

Access Road ———

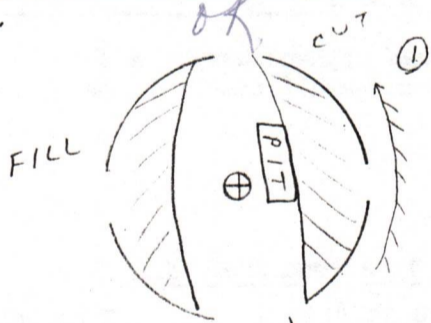


WELL SITE PLAN

Sketch to include well location, existing access road, roads to be constructed, wellsite, drilling pits and necessary structures numbered or lettered to correspond with the first part of this plan. Include all natural drainage.

LEGEND

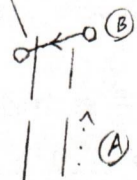
Property boundary ———▲———	Diversion //////////////
Road = = = = =	Spring ○→
Existing fence — x — x —	Wet spot ☉
Planned fence — / — / —	Building ■
Stream ~~~~~	Drain pipe —○→○→○→
Open ditch —●●●→	Waterway ⇄⇄⇄⇄



PROPOSED LOCATION
ON WOODED HILLSIDE

PROPOSED ACCESS ROAD
UPGRADE EXISTING TRAIL
500 FT. 5% GRADE

JEEP TRAIL



HEILMAN
BURNHAM

W.M. SEC. PT. 34/1

09/08/2023

1) Date: September 20, 1983

2) Operator's Well No. KEM #450

3) API Well No. 47

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 Eunice Heilman Address 306 Church Street Ripley, WV 25271

(ii) Name James B. Heilman, Jr. Address 212 West Street Ripley, WV 25271

(iii) Name Mary Jo Heilman McCoy Address 6353 57th Avenue St. Petersburg, FL 33709

Charles B. Heilman 3193 Sumner Avenue Huntington, WV 25705

5(i) COAL OPERATOR None Address

5(ii) COAL OWNER(S) WITH DECLARATION ON RECORD: Name None Address

Name Address

5(iii) COAL LESSEE WITH DECLARATION ON RECORD: Name None 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.
[X] 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

R. A. Pryce this 21 day of September, 1983. My commission expires 8/30, 1993.

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

WELL

OPERATOR Kaiser Exploration and Mining Company

By R.A.P. Its General Manager

Address P. O. Box 8 Ravenswood, WV 26164

Telephone 304 273 5371

DEPT. OF MINES OIL & GAS DIVISION

RECEIVED SEP 26 1983

09/08/2023

INSTRUCTIONS TO APPLICANT

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(1) "Coal Operator" means any person, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine.

5(1), 11) 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

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 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:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book Page
Eunice Heilman et al	Kaiser Exploration and Mining Company	1/8 of prevailing field price	172/161
			172/158
			172/191
			172/164

172/161
172/158
172/191
172/164

P 261 531 011

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

450
Dense Carney - Ken
PS Form 3800, Apr. 1976

SENT TO		Charles B. Heilman	
STREET AND NO.		3193 Summer Ave.	
P.O., STATE AND ZIP CODE		Huntington, WV	
POSTAGE		25705 \$	
CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	CERTIFIED FEE	¢
		SPECIAL DELIVERY	¢
		RESTRICTED DELIVERY	¢
	RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES		\$	
POSTMARK OR DATE			



P 261 531 012

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

450
Dense Carney - Ken
PS Form 3800, Apr. 1976

SENT TO		Eunice Heilman	
STREET AND NO.		306 Church St.	
P.O., STATE AND ZIP CODE		Ripley, WV 25271	
POSTAGE		\$	
CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	CERTIFIED FEE	¢
		SPECIAL DELIVERY	¢
		RESTRICTED DELIVERY	¢
	RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES		\$	
POSTMARK OR DATE			



P 261 531 013

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

450
Dense Carney - Ken
PS Form 3800, Apr. 1976

SENT TO		James Heilman Jr.	
STREET AND NO.		212 West Street	
P.O., STATE AND ZIP CODE		Ripley, WV 25271	
POSTAGE		\$	
CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	CERTIFIED FEE	¢
		SPECIAL DELIVERY	¢
		RESTRICTED DELIVERY	¢
	RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES		\$	
POSTMARK OR DATE			



P 261 531 014

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

450
Dense Carney - Ken
PS Form 3800, Apr. 1976

SENT TO		Mary Jo Heilman McCoy	
STREET AND NO.		6353 57th Avenue	
P.O., STATE AND ZIP CODE		St. Petersburg, FL	
POSTAGE		33709 \$	
CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	CERTIFIED FEE	¢
		SPECIAL DELIVERY	¢
		RESTRICTED DELIVERY	¢
	RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES		\$	
POSTMARK OR DATE			



09/08/2023

RECEIVED

DEC 13 1984

OIL & GAS DIVISION
DEPT. OF MINES
(Rev 8-81)



State of West Virginia
Department of Mines
Oil and Gas Division

Date May 21, 1984
Operator's Well No. KEM 450
Farm Heilman heirs
API No. 47 - 035 - 1910

CONFIDENTIAL

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: 907' Watershed Mill Creek
District: Ripley County Jackson Quadrangle Ripley

COMPANY Kaiser Exploration and Mining Company
ADDRESS P.O. Box 8, Ravenswood, WV 26164
DESIGNATED AGENT Robert Pryce
ADDRESS P.O. Box 8, Ravenswood, WV 26164
SURFACE OWNER J. B. Heilman heirs
ADDRESS J.B. Heilman, 212 West St., Ripley, WV
MINERAL RIGHTS OWNER J.B. Heilman heirs
ADDRESS 212 West Street, Ripley, WV 25271
OIL AND GAS INSPECTOR FOR THIS WORK Jerry Tephabock
ADDRESS Rt. 1, Box 101A, Ripley
PERMIT ISSUED _____
DRILLING COMMENCED April 25, 1984
DRILLING COMPLETED May 2, 1984
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" 13-10"		299'	200 sks Class A 3% CaCl 1/4#/sk cell of 1
9 5/8			
8 5/8			
7		2331'	150 sks 50/50 po 10% salt 1/4#/sk cell of 1
5 1/2			100 sks Class A 1/4#/sk cell of 1
4 1/2		4435'	200 sks 50/50 pozmix, 10% salt 12.5#/sk gilson
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Brown Shale Depth 4385 KB feet
Depth of completed well 4445' KB 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

OPEN FLOW DATA
Producing formation Devonian Brown Shale Pay zone depth 4280' KB feet
Gas: Initial open flow 10 Mcf/d Oil: Initial open flow 0 Bbl/d
*Final open flow 974 Mcf/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 825 psig (surface measurement) after 72 hours shut in
(If applicable due to multiple completion--)
Second producing formation Berea Sandstone Pay zone depth 2582' KB feet
Gas: Initial open flow 10 Mcf/d Oil: Initial open flow 0 Bbl/d
*Final open flow 974 Mcf/d Oil: Final open flow 0 Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1100 psig (surface measurement) after 72 hours shut in

09/08/2023

* Initial open flow is combined
* Final flow is combined open flow - 974 mcf/d

(Continue on reverse side)

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

- 5/08/84 Young's Wireline Perforated the Brown Shale with 20 holes (.41" dia) from 4149' to 4410' KB.
- 5/09/84 NOWSCO & Halliburton foam fractured the Brown Shale. Breakdown pressure: 1900 psig. Treated with 75% Quality foam at 2311 psig. Used 60,000 lbs 20/40 sand; total Nitrogen was 700 mscf; total sand laden fluid was 262 bbls; total fluid was 332 bbls; ISIP: 1500 psig and 5 min SIP was 1260 psig.
- 5/09/84 Young's Wireline perforated the Berea with 18 holes with(.39" dia) 3 holes/ft from 2585' - 2579'.
- 5/09/84 NOWSCO & Halliburton foam fractured the Berea. Breakdown pressure: 1840 psig; Treated at 1060 psig. Used 60,000 lbs of 20/40 sand. Total Nitrogen: 700 mscf. Total sand laden fluid: 262 bbls; total fluid: 335 bbls; ISIP: 1550 psig. 5 min SIP: 1460 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 and Shale			0	200	
Sand			200	247	
Shale			247	285	
Sand			285	300	
Shale			300	367	
Sand			367	433	
Siltstone and Shale			433	666	
Sand			666	707	
Shale			707	807	
Sand			807	862	
Siltstone and Shale			862	1292	
Little Dunkard Sand			1292	1386	
Sand and Shale			1386	1890	
Salt Sands			1890	2040	
Big Ling (Greenbrier)			2040	2110	
Big Injun			2110	2202	
Shale			2202	2556	
Coffee Shale			2556	2580	
Berea Sand			2580	2588	S/g
Shale			2588	3825	S/g @ 3147, 3650
Brown Shale			3825	4414	S/g @ 3852, 3966
Shale			4414	4495	
Total Depth			4495		

(Attach separate sheets as necessary)

KAISER EXPLORATION AND MINING COMPANY

Well Operator

By: R. A. P.

09/08/2023

Date: June 18, 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

MAY 2 - 1984

OIL & GAS DIVISION
DEPT. OF MINES

INSPECTOR'S WELL REPORT

Permit No. 035 1910

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>Kem 450</u>	16			
Well No. _____	13			Size of _____
District _____ County <u>Jackson</u>	10			
Drilling commenced <u>4 25 84</u>	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			
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 _____

Hurt Riig #4

Remarks: _____

4 25 84 Spud Date

4 26 84 Ran 299' set 309' 10 3/4 csg cement nosccoe 250 sacs class a.

4 26 84

DATE

John R. Taylor
09/08/2023

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

RECEIVED
MAY 7 - 1984

OIL & GAS DIVISION
DEPT. OF MINES

INSPECTOR'S WELL REPORT

Permit No. 035 1910

Oil or Gas Well _____
(KIND)

Company <u>Kaiser Exploration</u>	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Address _____	Size			
Farm _____	16			Kind of Packer _____
Well No. <u>Kem 250</u>	13			Size of _____
District _____ County <u>Jackson</u>	10			Depth set _____
Drilling commenced _____	8 1/4			
Drilling completed _____ Total depth _____	6 5/8			Perf. top _____
Date shot _____ Depth of shot _____	5 3/16			Perf. bottom _____
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			
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 _____

Hurt Rig #2

Remarks: _____

Ran 2341 feet 7'' csg cement NOSCOE 150 sacs 50/50 poz 1/4 lb persac selflake plus 100 sacs class A neat plus 3% cacl and 1/4lb/sac selflake plug down 11:30 pm 4 29 84

4 30 84

DATE

[Signature]
09/08/2023

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

RECEIVED
MAY 7 - 1984
OIL & GAS DIVISION
DEPT. OF MINES

INSPECTOR'S WELL REPORT

Permit No. 035 1910

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>Cole</u>	16			
Well No. <u>Kem 536</u>	13			Size of _____
District _____ County <u>Jackson</u>	10			Depth set _____
Drilling commenced _____	8 1/4			
Drilling completed _____ Total depth _____	6 5/8			Perf. top _____
Date shot _____ Depth of shot _____	5 3/16			Perf. bottom _____
Initial open flow _____ /10ths Water in _____ Inch	3			Perf. top _____ Perf. bottom _____
Open flow after tubing _____ /10ths Merc. in _____ Inch	2			
Volume _____ Cu. Ft.	Liners Used			Perf. top _____ 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: _____

Ran 107 jts 4 1/2 csg Set 4344' Cement BJ Hughes 175 sacs 50/50 poz plus
10% salt 12102 lb per sac Gibsonite. TD 4365' 11:00am 5 2 84

5 2 84

DATE

James Taylor
09/08/2023



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

FINAL INSPECTION REPORT
INSPECTORS COMPLIANCE REPORT

RECEIVED
 SEP 25 1984
 OIL & GAS DIVISION
 DEPT. OF MINES

COMPANY Kaiser Exploration
P. O. Box 8
Ravenswood, WV 26164

PERMIT NO 035 1910
 FARM & WELL NO Kem 450 Hielman
 DIST. & COUNTY Jackson

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

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

SIGNED *John Tephala*
 DATE 9 20 84

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

January 30, 1985

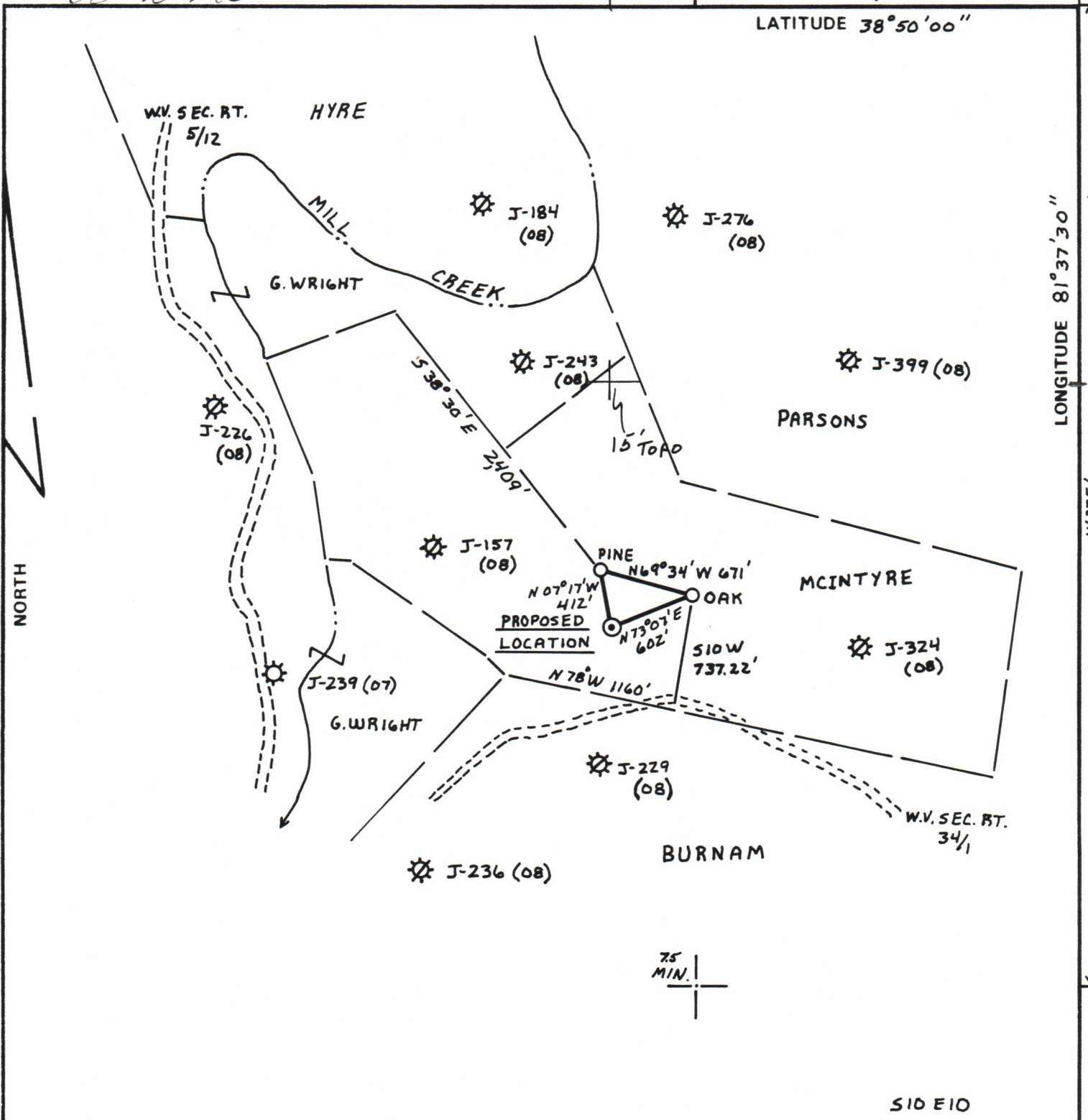
DATE

09/08/2023

08-10-7-83

5575' LATITUDE 38°50'00"

LONGITUDE 81°37'30" 02.0428 1427' 1427'



SID EIO

FILE NO. 6-52
 DRAWING NO. _____
 SCALE 1"=1000'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION ROAD INTER. ELEV.= 953'; 480' 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



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE AUGUST 18, 19 83
 OPERATOR'S WELL NO. KEM 450
 API WELL NO. _____
47 - 035 - 1910
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 907' WATER SHED MILL CREEK
 DISTRICT RIPLEY COUNTY JACKSON
 QUADRANGLE RIPLEY
 SURFACE OWNER J.B. HEILMAN HEIRS ACREAGE 80
 OIL & GAS ROYALTY OWNER J.B. HEILMAN HEIRS LEASE ACREAGE 80
 LEASE NO. _____
 PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

09/08/2023

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION DEVONIAN BROWN SHALE ESTIMATED DEPTH 5112'
 WELL OPERATOR KAISER EXPLOR. AND MIN. CO. DESIGNATED AGENT KAISER EXPLORATION AND MINING CO.
 ADDRESS P.O. BOX 8 ADDRESS P.O. BOX 8
BAVENSWOOD, WV. 26164 BAVENSWOOD, WV. 26164

FORM IV-6 (8-78) H. T. HALL

JACK 1710