



1.345  
0.86W

15' loc.  
34.225  
0.86W

NO WELLS WITHIN 2400'  
OF PROPOSED SITE

FILE NO. \_\_\_\_\_  
DRAWING NO. \_\_\_\_\_  
SCALE 1" = 1,000'  
MINIMUM DEGREE OF ACCURACY 1:200  
PROVEN SOURCE OF ELEVATION SPOT ELEV. 926 AT INTER. RT. 25 AND 36

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

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
FORM IV-6 (8-78)



DATE MARCH 9, 1982  
OPERATOR'S WELL NO. KEM 192  
API WELL NO. \_\_\_\_\_  
47 - 035 - 1671  
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP X SHALLOW \_\_\_  
LOCATION: ELEVATION 958 WATER SHED MILL CREEK  
DISTRICT RIPLEY COUNTY JACKSON  
QUADRANGLE RIPLEY 415' SW  
SURFACE OWNER WILLIAM O. AND BUDDIE E. HALL ACREAGE 175.1  
OIL & GAS ROYALTY OWNER WILLIAM O. AND BUDDIE E. HALL LEASE ACREAGE 175.1  
LEASE NO. 83-02-1085  
PROPOSED WORK: DRILL X 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 5330' APR 6 1982  
WELL OPERATOR KAISER EXPLOR. & MIN. CO. DESIGNATED AGENT KAISER EXPLORATION AND MINING CO.  
ADDRESS P.O. BOX B RAVENSWOOD, W. V. 26164 ADDRESS P.O. BOX B RAVENSWOOD, W. V. 26164

IV-35  
(Rev 8-81)



State of West Virginia  
Department of Mines  
Oil and Gas Division

Date October 19, 1982  
Operator's  
Well No. KEM #192  
Farm William Hall  
API No. 47 - 035 - 1671

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 x / Shallow \_\_\_ /)

LOCATION: Elevation: 958' 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 R. A. Pryce

ADDRESS Same

SURFACE OWNER William O. & Buddie E. Hall

ADDRESS Rt. 6, Ripley, WV 25271

MINERAL RIGHTS OWNER Same

ADDRESS \_\_\_\_\_

OIL AND GAS INSPECTOR FOR THIS WORK Richard

Morris ADDRESS P. O. Box 372, Grantsville, WV

PERMIT ISSUED 3/24/82

DRILLING COMMENCED 4/12/82

DRILLING COMPLETED 4/19/82

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

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cord.			
13-10"		354'	175 sks surface
9 5/8			
8 5/8		2495'	165 sks
7			
5 1/2			
4 1/2		5310'	225 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Oriskany Sandstone Depth 5260' feet

Depth of completed well 5340' (KB) 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 5260' - 5292' KBfeet

Gas: Initial open flow N/A Mcf/d Oil: Initial open flow -- Bbl/d

Final open flow 625 Mcf/d Final open flow -- Bbl/d

Time of open flow between initial and final tests N/A hours

Static rock pressure 1500 psig (surface measurement) after \_\_\_\_\_ 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 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 PERFORMED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

- 4/22/82 Oriskany sandstone perforation:  
5260'-5266', 5271'-5276', 5288'-5292', 5316'-5320'; 57 shots, .5" holes
- 4/27/82 Oriskany Sandstone frac:  
15,000# 80/100 sand, 45,000# 20/40 sand; treatment pressure was 3400 psig;  
instantaneous shut in pressure = 3080 psig; total fluid: 854 bbl water +  
163,000 SCF nitrogen.

## 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			0	90	
Sandstone			90	165	
Shale & Siltstone			165	220	
Sandstone			220	470	
Shale & Sandstone			470	810	
Sandstone			810	857	
Siltstone			857	1134	
Sandstone			1134	1166	
Shale			1166	1290	
Sandstone			1290	1380	
Shale			1380	1475	
Sandstone			1475	1503	
Shale			1503	1520	
Sandstone			1520	1614	
Shale			1614	1830	
Limestone			1830	2160	
Siltstone			2160	2182	
Sandstone			2182	2290	
Shale			2290	2635	
Coffee Shale			2635	2657	
Berea Sandstone			2657	2668	S/g at 2664'
Shale			2668	3910	S/g at 3296, 3345, 3657, 3730
Brown Shale			3910	4470	S/g at 3930, 4071, 4081, 4098, 4138
Shale			4470	4886	
Marcellus			4886	5143	S/g at 5110'
Onondaga Limestone			5143	5260	S/g at 5263'
Oriskany Sandstone			5260	5296	
Helderberg			5296	5336	T.D.

(Attach separate sheets as necessary)

KAISER EXPLORATION AND MINING COMPANY  
Well Operator

By: R. A. P.Date: October 19, 1982

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."



Date: March 15, 1982

Operator's Well No. KEM #192

API Well No. 47 035 1671

State County Permit

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

WELL TYPE: Oil \_\_\_ / Gas X /  
(If "Gas", Production X / Underground storage \_\_\_ / Deep X / Shallow \_\_\_ /)

LOCATION: Elevation: 958' Watershed: Mill Creek  
District: Ripley County: Jackson Quadrangle: Ripley

WELL OPERATOR Kaiser Exploration and Mining Co. DESIGNATED AGENT R. A. Pryce  
Address P. O. Box 8 Ravenswood, WV 26164  
Address P. O. Box 8 Ravenswood, WV 26164

OIL & GAS ROYALTY OWNER William O. & Buddie E. Hall  
Address Rt. 6 Ripley, WV 25271

COAL OPERATOR None  
Address

Acreage 175.1

COAL OWNER(S) WITH DECLARATION ON RECORD:

SURFACE OWNER Same  
Address

Name  
Address  
**RECEIVED**  
MAR 17 1982

Acreage

Name  
Address  
OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

FIELD SALE (IF MADE) TO:  
Address

COAL LESSEE WITH DECLARATION ON RECORD:  
Name  
Address

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Richard Morris  
Address P. O. Box 372 Grantsville, WV

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed \_\_\_ / lease X other contract \_\_\_ / dated February 9, 1981, to the undersigned well operator from Buddie Elliott Hall & William O. Hall (If said deed, lease, or other contract has been recorded:)

Recorded on February 24, 1981, in the office of the Clerk of the County Commission of Jackson County, West Va., in Lease Book 159 at page 461. A permit is requested as follows:

PROPOSED WORK: Drill X / Drill deeper \_\_\_ / Redrill \_\_\_ / Fracture or stimulate \_\_\_ /  
Plug off old formation \_\_\_ / Perforate new formation \_\_\_ /  
Other physical change in well (specify) \_\_\_  
—planned as shown on the work order on the reverse side hereof.

The above 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.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:  
WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION  
1615 WASHINGTON STREET EAST CHARLESTON, WV 25311  
TELEPHONE: (304) 348-3092

Kaiser Exploration and Mining Company  
Well Operator  
By  
Its General Manager

THIS IS AN ESTIMATE ONLY:  
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DILLING CONTRACTOR (IF KNOWN) Clint Hurt & Associates

Address P. O. Box 388

Elkview, WV 25071

GEOLOGICAL TARGET FORMATION, Oriskany

Estimated depth of completed well, 5330' feet Rotary X / Cable tools \_\_\_\_\_ /

Approximate water strata depths: Fresh, 300 feet; salt, \_\_\_\_\_ feet.

Approximate coal seam depths: \_\_\_\_\_ Is coal being mined in the area? Yes \_\_\_\_\_ / No \_\_\_\_\_ /

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		350'	350'	150 sks class A	(to surface)
Coal									Sizes
Intermediate	7"			X		2530'	2530'	65 sks 50/50 pozmix,	100 sks class A
Production	4 1/2"			X		5330'	5330'	225 sks 50/50 pozmix	Depth, set
Tubing									
Liners									Perforations:
									Top Bottom

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, 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 § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

THIS PERMIT MUST BE POSTED AT THE WELL SITE.  
ALL PROVISIONS BEING IN ACCORDANCE WITH CHAPTER 22,  
ARTICLE 4 OF THE W. VA. CODE, THE LOCATION IS HEREBY  
APPROVED FOR drilling. THIS PERMIT SHALL EXPIRE  
IF OPERATIONS HAVE NOT COMMENCED BY 11-24-82.  
BY [Signature]

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 receipt thereof.

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 \_\_\_\_\_

Its \_\_\_\_\_