



FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION HIGH POINT ELEV. 988, EAST OF SITE

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-8 (8-78)



DATE AUGUST 2, 1982  
 OPERATOR'S WELL NO. KEM 256  
 API WELL NO. \_\_\_\_\_  
47 - 107 - 1222  
 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 \_\_\_ STORAGE X DEEP X SHALLOW \_\_\_  
 LOCATION: ELEVATION 854 WATER SHED SOUTH FORK OF LEE CREEK  
 DISTRICT HARRIS COUNTY WOOD  
 QUADRANGLE LUBECK Bellville 15' WC  
 SURFACE OWNER LEON E. BYRD, ET AL. ACREAGE 37  
 OIL & GAS ROYALTY OWNER LEON E. BYRD, ET AL. LEASE ACREAGE 37  
 LEASE NO. 84-03-864  
 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 1558'  
 WELL OPERATOR KAISER EXPLOR. & MIN. CO. DESIGNATED AGENT KAISER EXPLORATION AND MINING CO.  
 ADDRESS P.O. BOX 8 RAVENSWOOD, W. V. 26164 ADDRESS P.O. BOX 8 RAVENSWOOD, W. V. 26164



IV-35  
(Rev 8-81)

FERC file

Date October 26, 1982  
Operator's  
Well No. KEM #256  
Farm Leon E. Byrd  
API No. 47 - 107 - 1222

State of West Virginia  
Department of Mines  
Oil and Gas Division

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

WELL TYPE: Oil  / Gas  / Liquid Injection  / Waste Disposal   
(If "Gas," Production  / Underground Storage  / Deep  / Shallow )  
LOCATION: Elevation: 854' Watershed South Fork of Lee Creek  
District: Harris County Wood Quadrangle Lubeck

COMPANY KAISER EXPLORATION AND MINING COMPANY

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

DESIGNATED AGENT R. A. Pryce

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

SURFACE OWNER Leon E. Byrd

ADDRESS Box 46A, Rt. 1, Belleville, WV

MINERAL RIGHTS OWNER Same

ADDRESS \_\_\_\_\_

OIL AND GAS INSPECTOR FOR THIS WORK Sam

Hershman ADDRESS P. O. Box 66, Smithville, WV

PERMIT ISSUED 8/12/82

DRILLING COMMENCED 8/27/82

DRILLING COMPLETED 9/01/82

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.			
13-10"		254'	150 sks
9 5/8			
8 5/8			
7		2060	265 sks
5 1/2			
4 1/2		4534	215 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Oriskany Sandstone Depth 4440-4504 feet

Depth of completed well 4585 feet Rotary  / 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 4478-4486 feet

Gas: Initial open flow 58 Mcf/d Oil: Initial open flow -- Bbl/d

Final open flow 4,061 Mcf/d Final open flow -- Bbl/d

Time of open flow between initial and final tests -- hours

Static rock pressure 1580 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

MAR 18 1985

(Continue on reverse side)

(REVERSE)

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

9/08/82 Oriskany Sandstone Perforations: 4478-4486' (4 shots/ft) 33 shots, .50" diameter.

9/10/82 Oriskany Sandstone Frac: 60,000# of 20/40 sand; average rate: 10 BPM; average pressure: 1300 psig; ISIP: 1140 psig; total of 325,000 SCF of 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
Sandstone & Shale			0	1331	
Sandstone			1331	1405	
Sandstone & Shale			1405	1512	
Limestone			1512	1773	
Shale			1773	2130	
Coffee Shale			2130	2149	
Berea Sandstone			2149	2151	
Shale			2151	3288	S/g @ 3197'
Brown Shale			3288	3821	S/g @ 3318'
Shale			3821	4162	S/g @ 4097'
Marcellus			4162	4382	S/g @ 4183', 4197'
Onondaga Limestone			4382	4440	
Oriskany Sandstone			4440	4504	S/g @ 4498'
Helderberg			4504	4585 TD	

(Attach separate sheets as necessary)

KAISER EXPLORATION AND MINING COMPANY  
Well Operator

By: K. A. P.

Date: October 26, 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 all, encountered in the drilling of a well."



Operator's Well No. KEM #256

API Well No. 47 107 1222

State County Permit

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

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

LOCATION: Elevation: 854' Watershed: South Fork of Lee Creek  
District: Harris County: Wood Quadrangle: Lubeck

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 Leon E. Byrd, et al  
Address Box 46A, Rt. 1 Belleville, WV 26133

COAL OPERATOR None  
Address

Acreege 37

COAL OWNER(S) WITH DECLARATION ON RECORD:

SURFACE OWNER Same

Name Same

Address

RECEIVED

AUG 11 1982

Name

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

Address

FIELD SALE (IF MADE) TO:

COAL LESSEE WITH DECLARATION ON RECORD:

Address

Name

Address

OIL & GAS INSPECTOR TO BE NOTIFIED

Name

Address

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed  / lease  / other contract  / dated February 12, 1982, to the undersigned well operator from Leon E. & L. Sue Byrd

(If said deed, lease, or other contract has been recorded:)  
Recorded on March 1, 1982, in the office of the Clerk of the County Commission of Wood County, West Va., in Lease Book 767 at page 546. A permit is requested as follows:

PROPOSED WORK: Drill  / 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 522-4-3 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 R. A. Pryce  
Its General Manager

BLANKET BOND

DRILLING CONTRACTOR (IF KNOWN) Clint Hurt & Associates, Inc.

Address P. O. Box 388

Elkview, WV 25071

GEOLOGICAL TARGET FORMATION, Oriskany

Estimated depth of completed well, 4558 feet Rotary X / Cable tools \_\_\_\_\_ /

Approximate water strata depths: Fresh, \_\_\_\_\_ 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
Conductor							Kinds	
Fresh Water	10 3/4"					250'	250'	150 sks class A (to surface)
Coal								Sizes
Intermediate	7"					2067'	2067'	65 sks 50/50 pozmix 100 sks Class A
Production	4 1/2"					4558'	4558'	225 sks 50/50 pozmix 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 4-12-83  
 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 \_\_\_\_\_