

LONGITUDE 81° 42' 30"

14900'

FILE NO. 6-3
 DRAWING NO. _____
 SCALE 1"=1,000'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION ROAD INTERSECTION ELEV.
= 612, 1100' NE. 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 APRIL 19, 1983
 OPERATOR'S WELL NO. KEM 379
 API WELL NO. _____
47 - 107 - 1260-Reg.
 STATE COUNTY PERMIT

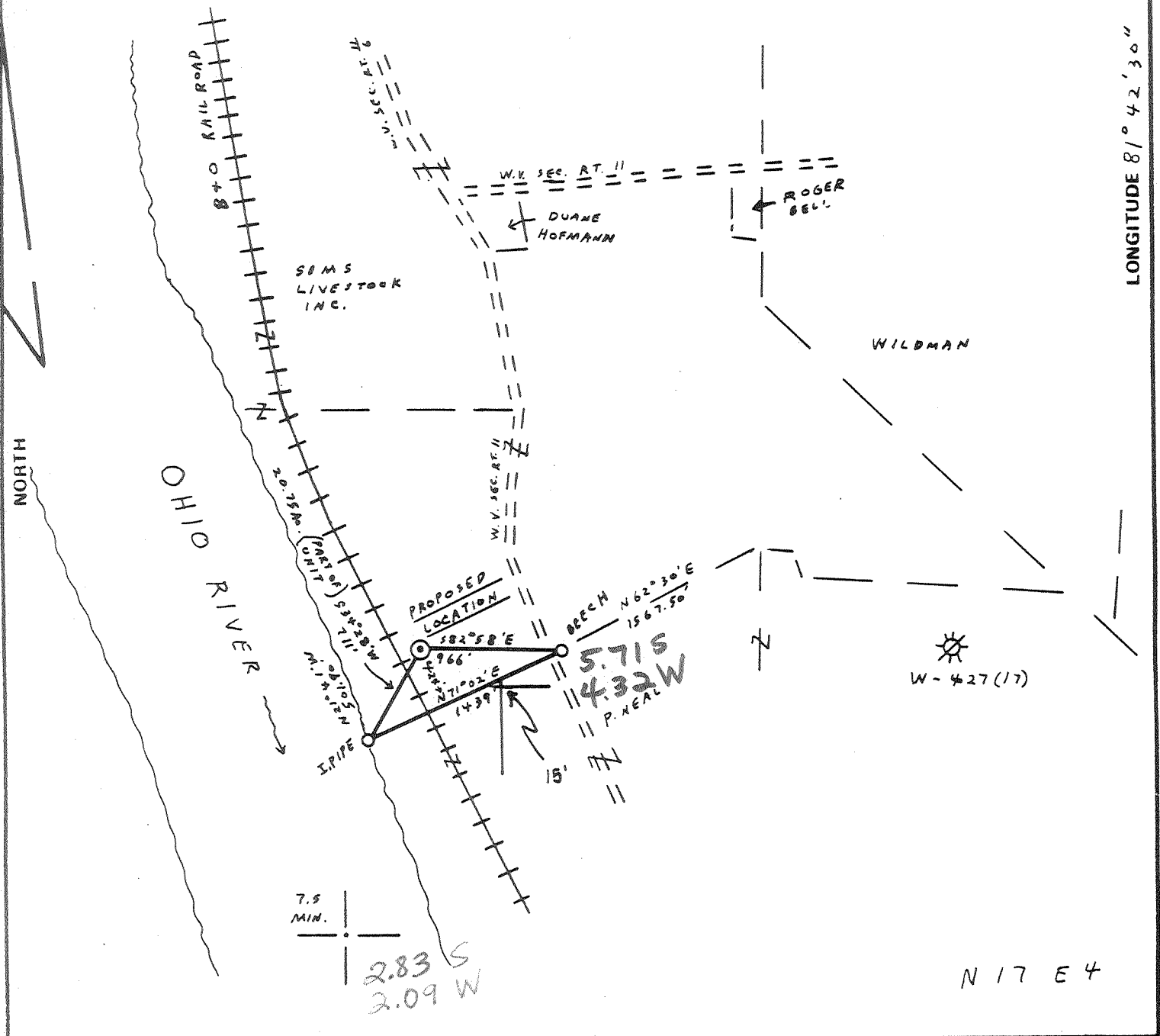
(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
 LOCATION: ELEVATION 594 WATER SHED OHIO RIVER
 DISTRICT HARRIS 2 COUNTY WOOD
 QUADRANGLE LUBECK 449 BELLEVILLE 0915' NW1
 SURFACE OWNER WILBERT G. AND CLARA L. HOFMANN ACREAGE 189.69
 OIL & GAS ROYALTY OWNER WILBERT G. AND CLARA L. HOFMANN LEASE ACREAGE 195
 LEASE NO. 86-02-1938
 PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

Re Instated

MAY 7 1984

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION ORISKANY ESTIMATED DEPTH 4125 New England (296)
 WELL OPERATOR KAISER EXPLOR. & MIN. CO. DESIGNATED AGENT KAISER EXPLORATION AND MINING CO.
 ADDRESS P.O. Box 8 465 ADDRESS P.O. Box 8
RAVENSWOOD, W.V. 26164 RAVENSWOOD, W.V. 26164

FORM IV 6 (8-78)



FILE NO. 6-3
 DRAWING NO. _____
 SCALE 1" = 1,000'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION ROAD INTERSECTION ELEV. = 612, 1100' NE. 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

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS.") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
 LOCATION: ELEVATION 594 WATER SHED OHIO RIVER
 DISTRICT HARRIS COUNTY WOOD
 QUADRANGLE LUBECK
 SURFACE OWNER WILBERT G. AND CLARA L. HOFMANN ACREAGE 189.69
 OIL & GAS ROYALTY OWNER WILBERT G. AND CLARA L. HOFFMANN LEASE ACREAGE 195
 LEASE NO. 86-02-1938
 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 4125'
 WELL OPERATOR KAISER EXPLOR. & MIN. CO. DESIGNATED AGENT KAISER EXPLORATION AND MINING CO.
 ADDRESS P.O. BOX 8 ADDRESS P.O. BOX 8
RAVENSWOOD, W.V. 26164 RAVENSWOOD, W.V. 26164



DATE APRIL 19, 1983
 OPERATOR'S WELL NO. KEM 379
 API WELL NO. _____
47 - 107 - 1260
 STATE COUNTY PERMIT

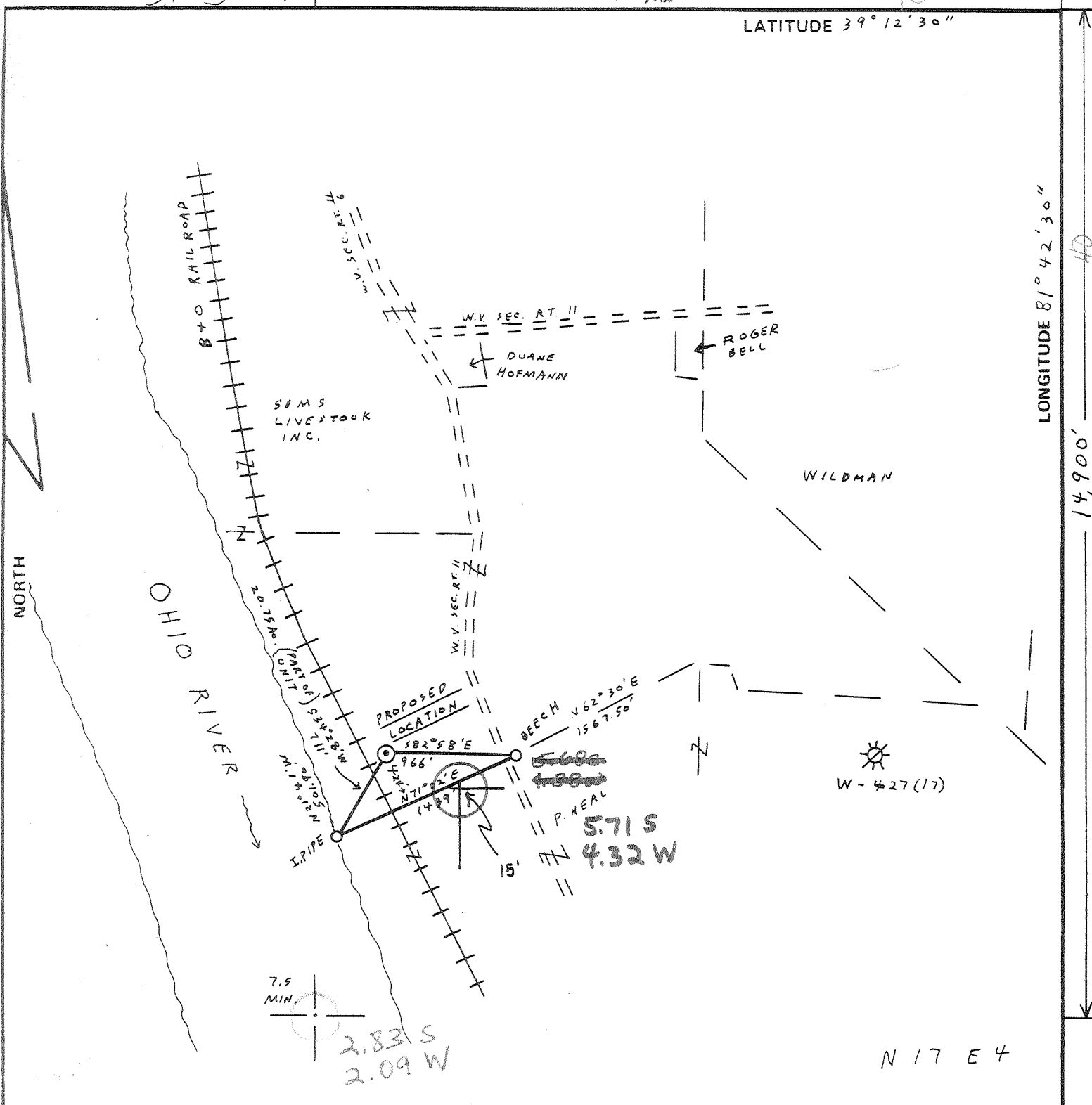
~~CANCELLED~~

JAN 3 1984

FORM IV-6 (8-78)

0921 000

Plot Card CSD 10,950' 15'



FILE NO. 6-3
 DRAWING NO. _____
 SCALE 1" = 1,000'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION ROAD INTERSECTION ELEV. = 612, 1100' NE. 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 APRIL 19 1983
 OPERATOR'S WELL NO. KEM 379
 API WELL NO. _____
47 - 107 - 1260
 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 X SHALLOW ___
 LOCATION: ELEVATION 594 WATER SHED OHIO RIVER
 DISTRICT HARRIS COUNTY WOOD
 QUADRANGLE LUBECK Bellville 15' NW
 SURFACE OWNER WILBERT G. AND CLARA L. HOFMANN ACREAGE 189.69
 OIL & GAS ROYALTY OWNER WILBERT G. AND CLARA L. HOFFMANN LEASE ACREAGE 195
 LEASE NO. 86-02-1938

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 MAY 16 1983

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION ORISKANY ESTIMATED DEPTH 425'
 WELL OPERATOR KAISER EXPLOR & MIN. CO. DESIGNATED AGENT KAISER EXPLORATORY AND MINING CO.

LONGITUDE 81° 42' 30" 14,900' 0921 1260



1) Date: April 27, 19 83
 2) Operator's Well No. KEM #379
 3) API Well No. 47 107 1260
 State County Permit

DRILLING CONTRACTOR:

Clint Hurt

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

OIL AND GAS WELL PERMIT APPLICATION

- 4) WELL TYPE: A Oil / Gas /
 B (If "Gas", Production / Underground storage / Deep / Shallow)
- 5) LOCATION: Elevation: 594 Watershed: OHIO RIVER
 District: Harris County: Wood Quadrangle: Lubeck
- 6) WELL OPERATOR Kaiser Exploration and Mining Co. 11) DESIGNATED AGENT R. A. Pryce
 Address P. O. Box 8 Address Same
Ravenswood, WV 26164
- 7) OIL & GAS ROYALTY OWNER Wilbert G. & Clara Hofmann 12) COAL OPERATOR None
 Address Rt. 1, Box 42 Address _____
New England, WV 26181
- 8) SURFACE OWNER Same 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
 Address _____ Name None
 Address _____
 Acreage 195 Name _____
 Address _____
- 9) FIELD SALE (IF MADE) TO: _____
 Address _____
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED DEPT. OF MINES Name None
 Name Homer Dougherty Address _____
Linden Rt. Box 3A
Looneyville, WV
- 15) PROPOSED WORK: Drill / Drill deeper _____ / Redrill _____ / Fracture or stimulate _____
 Plug off old formation _____ / Perforate new formation _____
 Other physical change in well (specify) _____
- 16) GEOLOGICAL TARGET FORMATION, Oriskany
- 17) Estimated depth of completed well, 4100 4125 feet
 18) Approximate water strata depths: Fresh, _____ feet; salt, _____ feet.
 19) Approximate coal seam depths: _____ Is coal being mined in the area? Yes / No

20) 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		250	250	150 sks class A to surface	
Coal									Sizes
Intermediate	7"			X		1774	1774	65 sks 50/50 pozmix	
Production	4 1/2"			X		4125	4125	100 sks class A	
Tubing								225 sks 50/50 pozmix	
Liners									Perforations:
									Top Bottom

21) 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.)

22) ROYALTY PROVISIONS

Is the right to extract, produce or market the oil or gas based upon a lease or other continuing 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.

23) Required Copies (See reverse side.)

24) 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.

Notary: _____

Signed: RAP

My Commission Expires _____

Its: General Manager

OFFICE USE ONLY

DRILLING PERMIT

Permit number 47-107-1260 Date May 10 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. 10) 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.)

Permit expires January 10, 1984 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond: <u>BB</u>	Agent: <u>la</u>	Plat: <u>[Signature]</u>	Casing: <u>[Signature]</u>	Fee: <u>963020</u>
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Fred B. [Signature]
Administrator, Office of Oil and Gas



1) Date: March 15, 19 84
 2) Operator's Well No. KEM #379
 3) API Well No. 47 - 107 - 1260-REN
 State County Permit

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

RENEW

- 4) WELL TYPE: A Oil / Gas X /
 B (If "Gas", Production X / Underground storage / Deep X / Shallow)
 5) LOCATION: Elevation: 594 Watershed: Ohio River
 District: Harris County: Wood Quadrangle: Lubeck
 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 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
 Plug off old formation / Perforate new formation /
 Other physical change in well (specify)
 11) GEOLOGICAL TARGET FORMATION, Oriskany
 12) Estimated depth of completed well, 4125 feet
 13) Approximate trata depths: Fresh, feet; salt, feet.
 14) Approximate coal seam depths: Is coal being mined in the area? Yes / No

RECEIVED
 MAR 29 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	10 3/4"			X		250	250	150 sks class A	A to surface
Coal								55 sks 50/50	Sizes
Intermediate	7"			X		1774	1774	100 sks class A	pozmix
Production	4 1/2"			X		4125	4125	225 sks 50/50	Depth set
Tubing									pozmix
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-107-1260-REN Date May 2, 19 84

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 May 2, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond <u> </u>	Agent: <u> </u>	Plat: <u> </u>	Casing <u> </u>	Fee <u>966-698</u>
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[Signature]

Administrator, Office of Oil and Gas

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

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

6/27/84 YOUNG'S WIRELINE TO PERF ORISKANY SANDSTONE - 20(.39" DIA.) HOLES - 4003/4008.

6/27/84 BJ HUGHES TO FOAM FRAC ORISKANY: BREAKDOWN PRESS - 3320 psig, BRKDOWN FLUID - FOAM, TREATING PRESS - 2070 psig, TREATING FLUID - FOAM, TOTAL SAND - 30,000 # of 20/40, TOTAL N₂ - 392,000 scf, TOTAL FLUID - 202 bbl, ISIP - 1610, 5 min SIP - 1550 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	85	
SHALE	85	143	
SAND	143	177	
SHALE	177	295	
SAND	295	392	
SHALE and SAND	392	686	
SHALE and SILTSTONE	686	1100	
DUNKARD SAND	1100	1192	
SHALE	1192	1290	
SALT SANDS	1290	1440	
SHALE	1440	1782	
COFFEE SHALE	1782	1802	
BEREA SAND	1802	1804	
SHALE	1804	2934	S/G @ 2835
BROWN SHALE	2934	3402	S/G @ 3386
SHALE	3402	3634	
MARCELLUS SHALE	3634	3911	S/G @ 3760
ONONDAGA LIME	3911	3994	
ORISKANY SAND	3994	4027	S/G @ 4000
HELDERBERG LIME	4027	4110	
TOTAL DEPTH	4110		

(Attach separate sheets as necessary)

KAISER EXPLORATION and MINING COMPANY

Well Operator

By: RA P

Date: July 17, 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