

J-1683
KEM 193
☼

FILE NO _____
DRAWING NO _____
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY 1:200
PROVEN SOURCE OF ELEVATION SPOT EL. 926
Shown Above

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) Frank J. Barker
R P E _____ L L S 289

PLACE SEAL HERE

(-) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
FORM IV 6
(8.781)



DATE JUNE 9 19 82
OPERATOR'S WELL NO KEM 236
API WELL NO 47-035-1732-
STATE COUNTY PERMIT FRAC.

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

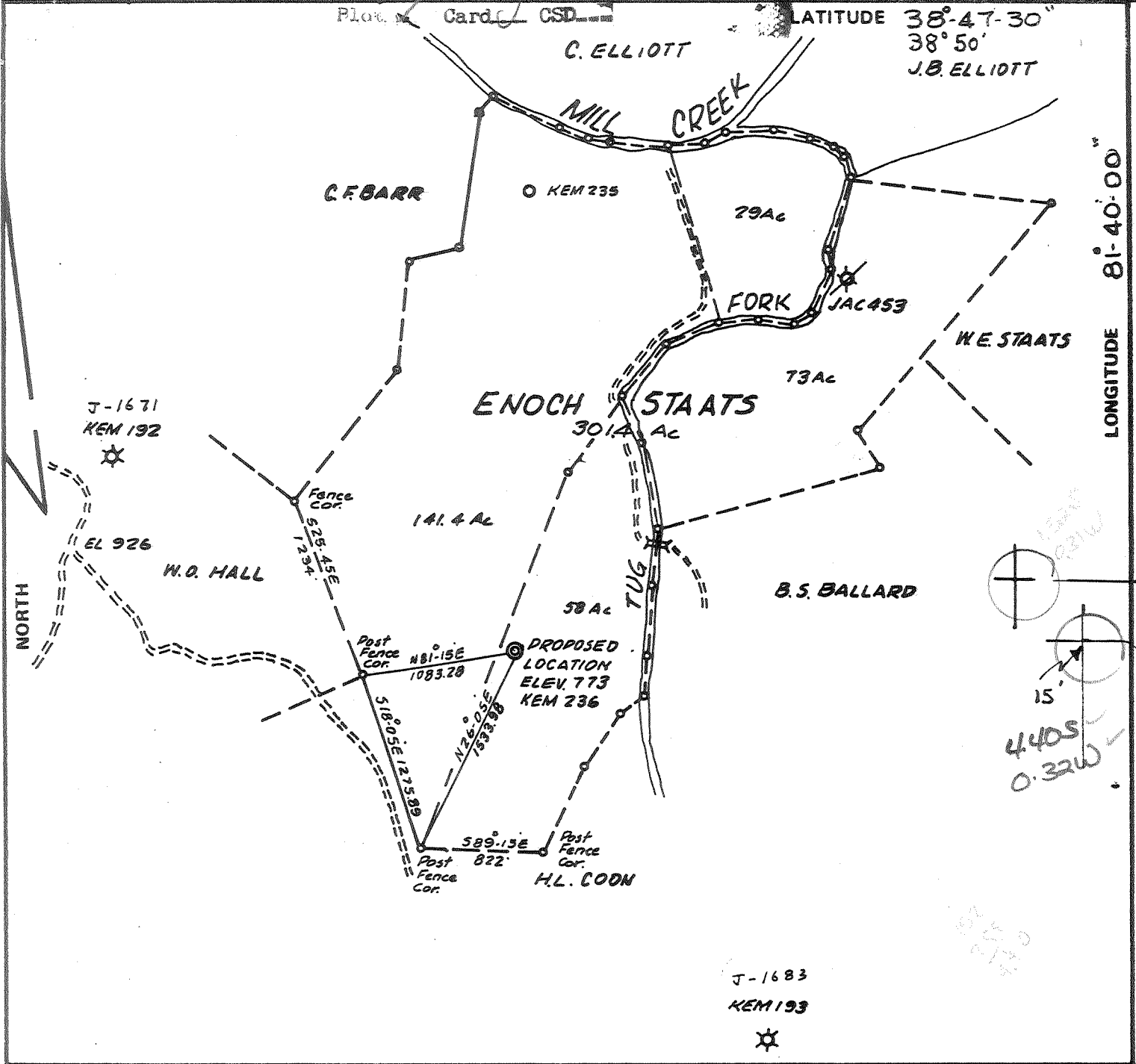
WELL TYPE OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
LOCATION ELEVATION 773 WATER SHED TUG FORK
DISTRICT RIPLEY COUNTY JACKSON
QUADRANGLE RIPLEY
SURFACE OWNER ENOCH STAATS ACREAGE 2.72
OIL & GAS ROYALTY OWNER CLARA L. STAATS LEASE ACREAGE 2.72
LEASE NO. 87-06-1680
PROPOSED WORK DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
TARGET FORMATION DRISKANY ESTIMATED DEPTH 5179'
WELL OPERATOR KAISER EXPLORATION & MINING CO DESIGNATED AGENT KAISER EXPLORATION & MINING CO
ADDRESS P.O. BOX 8 ADDRESS SAME
RAYENSWOOD, IN VA. 26164

MAY 14 1982

W.D. HALL — DWWD - DEEP WELL 6-6 Elk-Poca (Sissonville) (192)

111.7 6/25/82

1,650'



J-1683
KEM 193

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY 1:200
PROVEN SOURCE OF ELEVATION SPOT EL. 926
Shown Above

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) Frank J. Barlow
R.P.E. _____ L.L.S. 289

PLACE SEAL HERE

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



DATE JUNE 9, 19 82
OPERATOR'S WELL NO. KEM 236
API WELL NO. 47-035-1732
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 773 WATER SHED TUG FORK
DISTRICT RIPLEY COUNTY JACKSON
QUADRANGLE RIPLEY DIS SW
SURFACE OWNER ENOCH STAATS ACREAGE 2.72
OIL & GAS ROYALTY OWNER CLARA L. STAATS LEASE ACREAGE 2.72
LEASE NO. 87-06-1680
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 5179'
WELL OPERATOR KAISER EXPLORATION & MINING CO DESIGNATED AGENT KAISER EXPLORATION & MINING CO
ADDRESS P.O. BOX B ADDRESS SAME
RAVENSWOOD, IN VA. 26164

JUL 20 1982

DEEP WELL 66 Elk Poca, (Bissonville) (192)

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

See previous IV-35

2476 - 395

3/28/86 Young's Wireline perf Berea with 4 holes from 2426'-2480'.

4/05/86 Halliburton foam frac Berea. Break down pressure: 2000 psig; sand: 45,000# 20/40; total fluid: 298 bbls; ISIP: 1050 psig; 5 MIN SIP: 1500 psig

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fres and salt water, coal, oil and ga
See previous IV-35					

(Attach separate sheets as necessary)

R. A. P. -

Well Operator

By: KAISER EXPLORATION AND MINING COMPANY

Date: June 20, 1986

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 December 1, 1982
 Operator's Well No. KEM - 236
 Farm Staats
 API No. 47 - 035 - 1732

RECEIVED State of West Virginia
 Department of Mines
 Oil and Gas Division

DEC 14 1982

OIL AND GAS DIVISION WV DEPARTMENT OF MINES 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 ___ /)

LOCATION: Elevation: 773' Watershed Tug Fork
 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 P. O. Box 8, Ravenswood, WV 26164
 SURFACE OWNER Enoch Staats
 ADDRESS 202 Edgewood, Ripley, WV 25271
 MINERAL RIGHTS OWNER Clara L. Staats
 ADDRESS South Ritchie, Ravenswood, WV 26164
 OIL AND GAS INSPECTOR FOR THIS WORK Richard Morris
 ADDRESS P.O. Box 372, Grantsville
 PERMIT ISSUED 7/14/82
 DRILLING COMMENCED 7/18/82
 DRILLING COMPLETED 7/25/82

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"		304'	175 sx
9 5/8			
8 5/8			
7		2366'	175 sx
5 1/2			
4 1/2		5167'	235 sx
3			
2			
Liners used			

IF APPLICABLE: PLUGGING OF DRY HOLE ON
 CONTINUOUS PROGRESSION FROM DRILLING OR
 REWORKING. VERBAL PERMISSION OBTAINED
 ON _____

GEOLOGICAL TARGET FORMATION Oriskany S.S. Depth 5064-5129 feet
 Depth of completed well 5186 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 S.S. Pay zone depth 5098-5160 feet
 Gas: Initial open flow N/A Mcf/d Oil: Initial open flow _____ Bbl/d
 Final open flow To small to test Mcf/d 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
 (If applicable due to multiple completion--)
 Second producing formation Huron Devonian Brown Shale Pay zone depth 4129-4296 feet
 Gas: Initial open flow -- Mcf/d Oil: Initial open flow -- Bbl/d
 Final open flow 164 Mcf/d Oil: Final open flow -- Bbl/d
 Time of open flow between initial and final tests _____ hours
 Static rock pressure 950 psig (surface measurement) after _____ hours shut in

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

7/28/82 Oriskany S.S. Perforation: 5098-5160 Shot selectively
50 holes

7/30/82 Oriskany S.S. Fracture:

11/11/82 Devonian Brown Shale Perforation: Set permanent bridge plug at 4350'
4129-4296 shot selectively, 21 holes, 0.39" dia.

11/18/82 Devonian Brown Shale Fracture: 20# gel system with 60,000# 20/40 sand, 890 MSCF N₂
Breakdown at 800 psig
Treat: 3250 psig
ISIP: 1050 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
Sandstone and shale			0	1119	
Sandstone			1119	1230	
Sandstone and shale			1230	1800	
Limestone			1800	1966	
Sandstone and shale			1966	2093	
Shale			2093	2443	
Coffee Shale			2443	2466	
Berea S.S.			2466	2476	
Shale			2476	3716	s/g @ 3008, 3028, 3076, 3250, 3316
Brown shale			3716	4285	s/g @ 3780, 3805, 3855, 3885, 3946,
Shale			4285	4670	4143
Marcellus			4670	4980	s/g @ 4696
Onondaga L.S.			4980	5064	
Oriskany S.S.			5064	5129	s/g @ 5085, 5115
Helderberg			5129	5186T.D.	s/g @ 5143

(Attach separate sheets as necessary)

KAISER EXPLORATION AND MINING COMPANY
Well Operator

By: R.A.P.

Date: December 1, 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: June 18, 19 82

Operator's Well No. KEM #236

API Well No. 47 035 1732

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: 773 Watershed: Top Fork 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

OIL & GAS ROYALTY OWNER Clara L. Staats Address South Ritchie Ravenswood, WV

Acreage 272

SURFACE OWNER Enoch Staats Address 202 Edgewood Ripley, WV 25271

Acreage 272

FIELD SALE (IF MADE) TO: Address

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

COAL OPERATOR None Address

COAL OWNER(S) WITH DECLARATION ON RECORD: Name Same as minerals Address

Name Address

COAL LESSEE WITH DECLARATION ON RECORD: Name Address JUN 22 1982

RECEIVED OIL AND GAS DIVISION WV DEPARTMENT OF MINES

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 January 11, 19 82, to the undersigned well operator from Clara Staats

(If said deed, lease, or other contract has been recorded:) Recorded on, 19, in the office of the Clerk of the County Commission of Jackson County, West Va., in Lease Book 168 at page 542. 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 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, 5179' feet Rotary X / Cable tools /

Approximate water strata depths: Fresh, 273 feet; salt, feet.

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

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS			New	Used	FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft			For drilling	Left in well		
Conductor									Kinds
Fresh Water	10 3/4					250'	250'	150 sks class	A (to surface)
Coal									Sizes
Intermediate	7"					2359	2359	65 sks 50/50 100 sks class	pozmix A
Production	4 1/2"					5179	5179	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 3-14-83,

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

FILE COPY

RECEIVED
APR 26 1984



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

1) Date: April 5, 19 84
2) Operator's Well No. KEM-236
3) API Well No. 47 - 035 - 1732 - FRA
State County Permit

- 4) WELL TYPE: A Oil / Gas /
B (If "Gas", Production / Underground storage / Deep / Shallow)
- 5) LOCATION: Elevation: 773' / Watershed: Tug Fork
District: Ripley / County: Jackson / Quadrangle: Ripley
- 6) WELL OPERATOR KEMAS Kaiser Exp & 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 J. Tephabock
Address Ripley, WV 25271
- 9) DRILLING CONTRACTOR: Name Kaiser Drilling Rig #1
Address Ravenswood, WV 26164
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate /
Plug off old formation / Perforate new formation /
Other physical change in well (specify) Squeeze Berea; treat Berea; isolate Shale, Berea
- 11) GEOLOGICAL TARGET FORMATION, Berea Sandstone with tubing and packer
- 12) Estimated depth of completed well, 4350' (PBD) feet
- 13) Approximate trata depths: Fresh, 200' feet; salt, 800' feet.
- 14) Approximate coal seam depths: None 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 <u>None</u>
Fresh water	<u>10 3/4</u>	<u>H</u>	<u>32.75</u>	<u>X</u>		<u>304' (KB)</u>	<u>304' (KB)</u>	<u>175 sx Neat</u>	Sizes <u>-</u>
Coal								<u>75 sx Pozin</u>	Depths set <u>-</u>
Intermediate	<u>7</u>	<u>K</u>	<u>20</u>	<u>X</u>		<u>2366' (KB)</u>	<u>2366' (KB)</u>	<u>100 sx Neat</u>	
Production	<u>4 1/2</u>	<u>N</u>	<u>11.60</u>	<u>X</u>			<u>5167' (KB)</u>	<u>235 sx Pozin</u>	
Tubing									
Liners									Perforations: Top Bottom <u>4129</u> <u>4296' (KB)</u>

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-035-1732-FRAC Date May 4, 1984

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 4, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: BLANKET	Agent: <u>TS</u>	Plat: <u>TS</u>	Casing: <u>TS</u>	Fee: <u>967-2357</u>
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[Signature]
Administrator, Office of Oil and Gas

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