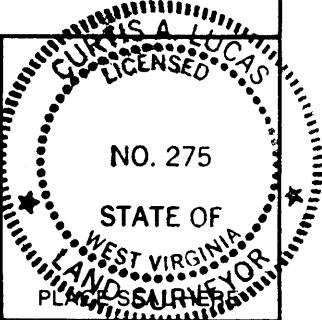


LOCATION REFERENCES
 N69°33'W 131.9' 24" W0
 N53°25'W 102.7' 8" HY
 N53°38'W 151.5' 8" HY

FILE NO. 1280
 MAP N47 SQS NI W4
 SCALE 1" = 800'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION R HORNER *11
ELEV. = 1189.90'

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) Curtis A. Lucas
 CURTIS A. LUCAS LLS 275



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE NOVEMBER 1, 19 85
 FARM F. R. BALL NO. 19
 API WELL NO.

47 - 095 - 1126-4
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1139' WATER SHED INDIAN CREEK
 DISTRICT McELROY S COUNTY TYLER
 QUADRANGLE CENTER POINT +15' NW

SURFACE OWNER RALPH HAYES ACREAGE _____
 OIL & GAS ROYALTY OWNER PENNZOIL CO. LEASE ACREAGE 250
 LEASE NO. 15459

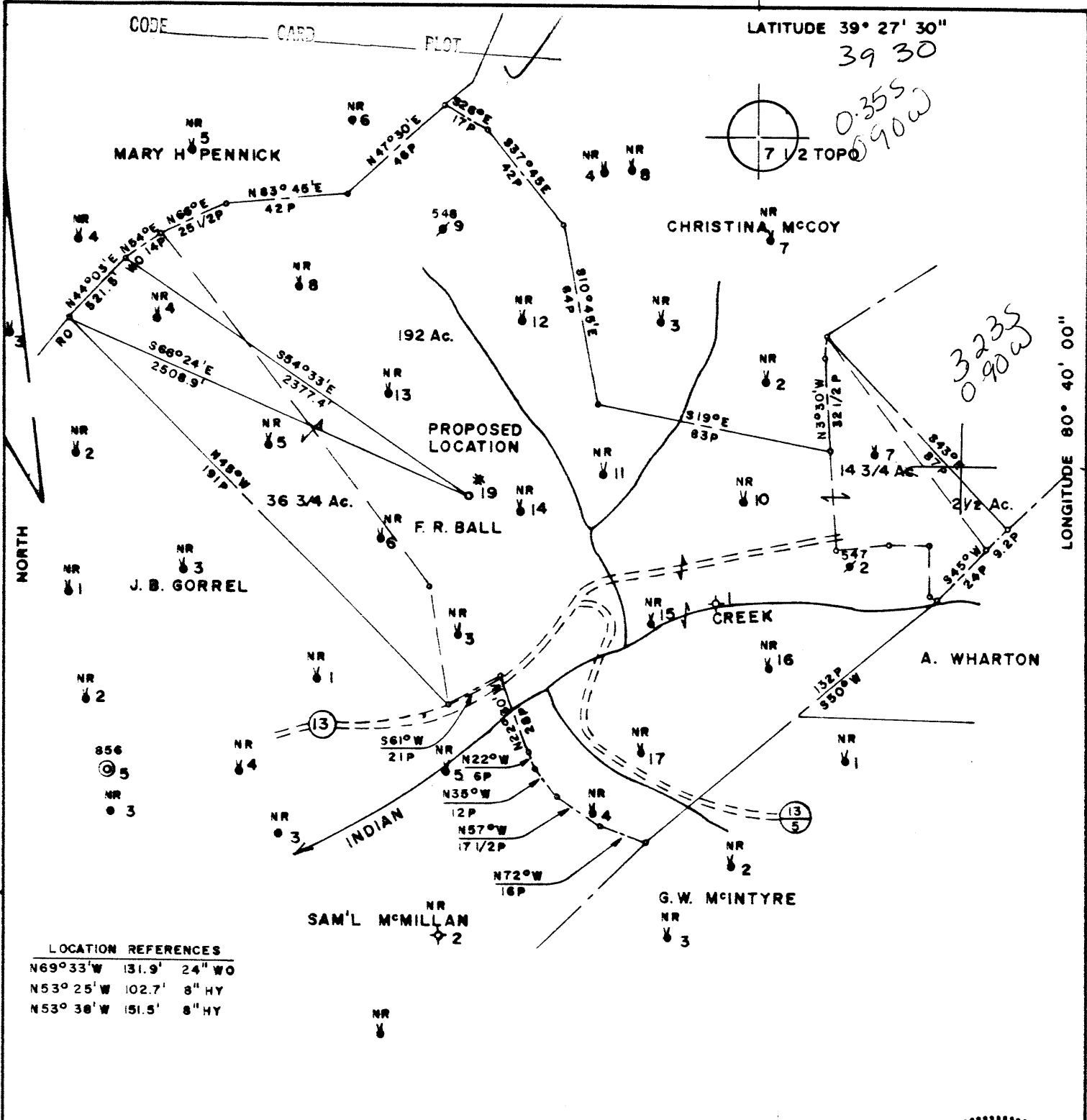
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION GORDON ESTIMATED DEPTH 3,169'
 WELL OPERATOR PENNZOIL COMPANY DESIGNATED AGENT JAMES A. CREWS
 ADDRESS P.O. BOX 1588 ADDRESS P.O. BOX 1588
673 ADDRESS PARKERSBURG, W.V. 26101 ADDRESS PARKERSBURG, W.V. 26101

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

TYLER 1126

80 Jacksonburg - Stringtown (095)

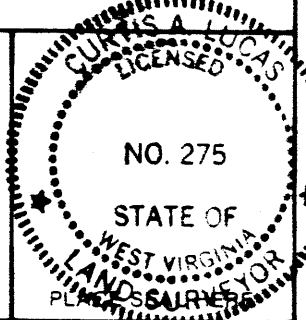


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FILE NO. 1280
 MAP N47 SQS NI W4
 SCALE 1" = 800'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION P. HORNER *11
ELEV. = 1189.90'

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) Curtis A. Lucas
 CURTIS A. LUCAS LLS 275



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE NOVEMBER 1, 1985
 FARM F. R. BALL NO. 19
 API WELL NO.

47 - 095 - 1126
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS.") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1139' WATER SHED INDIAN CREEK

DISTRICT McELROY 5 COUNTY TYLER
 QUADRANGLE CENTER POINT 286 022 NW 1
 SURFACE OWNER RALPH HAYES ACREAGE _____
 OIL & GAS ROYALTY OWNER PENNZOIL CO. LEASE ACREAGE 250
 LEASE NO. 15459

PROPOSED WORK: DRILL 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 GORDON ESTIMATED DEPTH 3,169'
 WELL OPERATOR PENNZOIL COMPANY DESIGNATED AGENT JAMES A. CREWS
 ADDRESS P.O. BOX 1588 ADDRESS P.O. BOX 1588
673
 PARKERSBURG, W.V. 26101 PARKERSBURG, W.V. 26101

DEC 2 1985

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

RECEIVED
Division of Oil and Gas
APR 15 1991

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: HAYES, RALPH & BETTY Operator Well No.: F. R. BALL 19

LOCATION: Elevation: 1196.50 Quadrangle: CENTER POINT

District: MCELROY County: TYLER
Latitude: 1850 Feet South of 39 Deg. 27Min. 30 Sec.
Longitude 4700 Feet West of 80 Deg. 40 Min. 0 Sec.

Company: PENNZOIL PRODUCTS COMPANY
P. O. BOX 5519
VIENNA, WV 26105-5519

Agent: JAMES A. CREWS

Inspector: GLEN P. ROBINSON
Permit Issued: 07/30/90
Well work Commenced: 11-21-90
Well work Completed: 12-7-90

Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 3171
Fresh water depths (ft) _____

Salt water depths (ft) _____

Is coal being mined in area (Y/N)? N
Coal Depths (ft): N/A

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
SEE OLD WELL RECORD			

OPEN FLOW DATA

Producing formation Gordon Pay zone depth (ft) 3092-3112
Gas: Initial open flow * _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation N/A Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

* No tests - water injection well.

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: PENNZOIL PRODUCTS COMPANY

By: Timothy P. Roush Timothy P. Roush
Date: April 11, 1991

9 1991

Stimulation

Perforated: Gordon 3092-3112 - 20 holes

Treated w/300 gal. reg. HF acid, 292 Bbls. gelled water and 1500# 80/100 and 3500# 20/40 sand.

Well Log

See original record.

10803

RECEIVED
Division of Energy

JUN 13 90

Permitting
Oil and Gas Section



- 1) Date: June 12, 19 90
 2) Operator's Well No. F. R. BALL NO. 19
 3) SIC Code
 4) API Well NO. 47 - 095 - 1126-LI
 State County Permit
 5) UIC Permit No. UIC2209501AP

*Issued 7/30/90
Expire 7/30/92*

STATE OF WEST VIRGINIA
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the

DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

- 6) WELL TYPE: Liquid injection / Gas injection (not storage) _____ / Waste disposal _____
 7) LOCATION: Elevation: 1196.5 Watershed: Indian Creek 286
 District: McElroy (5) County: Tyler Quadrangle: Center Point 7.5'
 8) WELL OPERATOR Pennzoil Products Company 37450 9) DESIGNATED AGENT James A. Crews
 Address P.O. Box 5519 Address P.O. Box 5519
Vienna, W. Va. 26105-5519 Vienna, WV 26105-5519
 10) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name GLENN P. ROBINSON
 Address Rt. 1, #6 Mt. Pleasant Est.
Mineral Wells, W. Va. 26150
 11) DRILLING CONTRACTOR:
 Name _____
 Address _____
 12) PROPOSED WELL WORK: Drill _____ / Drill deeper _____ / Redrill _____ / Stimulate
 Plug off old formation _____ / Perforate new formation _____ / Convert
 Other physical change in well (specify) _____
 13) GEOLOGICAL TARGET FORMATION, Gordon Depth 3069 feet(top) to 3116 feet(bottom)
 14) Estimated depth of completed well, (or actual depth of existing well) 3145 ft.
 15) Approximate water strata depths; Fresh, N/A feet; salt, N/A feet.
 16) Approximate coal seam depths: N/A
 17) Is coal being mined in the area? Yes _____ / No
 18) Virgin reservoir pressure in target formation 1260 psig. Source Estimated
 19) Estimated reservoir fracture pressure 3500 psi _____ psig (BHFP)
 20) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour: 25 Bbl/Hr. Bottom hole pressure 2332 psi
 21) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES: Fresh/produced water
treated w/bactericides and other chemicals as is necessary to maintain water quality.
 22) FILTERS (IF ANY): Cartridge and/or coal bed filters
 23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL: _____

24) 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	8-5/8	H-40	24#			1094'	1094'	Existing Csg. 750 SKS	Sizes
Coal									
Intermediate									
Production	4-1/2	J-55	10.6#			3139'	3139'	Existing Csg. 225 SKS	Depths set
Tubing									
Liners									Perforations: Top Bottom

- 25) APPLICANT'S OPERATING RIGHTS were acquired from F. R. Ball
 by deed _____ / lease / other contract _____ / dated September 11, 1895, of record in the
Tyler County Clerk's office in Lease Book 27 at page 309

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

RECEIVED
Division of Oil and Gas

JUN 13 90
Permitting
Oil and Gas Section

1) Date June 12, 1990
Operator's
2) Well No. F. R. BALL NO. 19
3) SIC Code _____
4) API Well No. 47 - 095 - 1126-4
State County Permit

STATE OF WEST VIRGINIA

NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the

DIVISION OF OIL AND GAS, DEPARTMENT OF ENERGY

- 6) SURFACE OWNER(S) OF RECORD TO BE SERVED
- 7 (i) COAL OPERATOR _____
Address _____
- (i) Name Ralph O. & Betty J. Hayes
Address Jacksonburg, WV 26377
- 7 (ii) COAL OWNER(S) WITH DECLARATION ON RECORD:
Name _____
Address _____
- (ii) Name _____
Address _____
- 7 (iii) COAL LESSEE WITH DECLARATION ON RECORD:
Name _____
Address _____
- (iii) Name _____
Address _____

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents:

- (1) The Application for a Liquid Injection or Waste Disposal Well Work Permit on Form WW-3(B), which sets out the parties involved in the drilling or other work, and
- (2) The plat (surveyor's map) showing the well location on Form WW-6; and
- (3) The Construction and Reclamation Plan on Form WW-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 date proposed for the first injection or waste disposal is _____, 19____.

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 WW-3(B)) DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22B 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 Director of the Division of Oil and Gas, West Virginia Department of Energy, with respect to a well at the location described on the attached Application and depicted on attached Form WW-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 Director.

The person signing this document shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Pennzoil Products Company
Well Operator
By Timothy P. Roush
Supervisor, Surveying/Mapping
Telephone 304-422-6565



1) Date: November 1, 1985
 2) Operator's Well No. F. R. Ball No. 19
 3) API Well No. 47-095-1126
 State _____ County _____ Permit _____

RECEIVED
NOV 7 1985

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

- 4) WELL TYPE: A Oil / Gas _____
 B (If "Gas", Production _____ / Underground storage _____ / Deep _____ / Shallow _____)
- 5) LOCATION: Elevation: 1196.5' Watershed: Indian Creek
 District: McElroy 673 County: Tyler Quadrangle: Centerpoint 7.5'
- 6) WELL OPERATOR Pennzoil Company CODE: 37450 7) DESIGNATED AGENT James A. Crews
 Address P.O. Box 1588 Address P.O. Box 1588
Parkersburg, West Virginia 26102 Parkersburg, W. Va.
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Robert Lowther 9) DRILLING CONTRACTOR:
 Address General Delivery Name _____
Middlebourne, WV 26149 Address _____
- 10) PROPOSED WELL WORK: Drill / Drill deeper _____ / Redrill _____ / Stimulate
 Plug off old formation _____ / Perforate new formation _____
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, 419
- 12) Estimated depth of completed well, 3169 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	8-5/8	H-40	24#	X		1055	1055	Cement to surface	Size <i>by rule 15.05</i>
Coal									
Intermediate									
Production	4-1/2	J-55	10.60#	X		3169	3169	350 sks.	Depths set
Tubing								50/50 p/z	Perforations:
Lin...									Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-095-1126

November 25 1985
 Date

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 November 25, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <u>RLB</u>	Plat: <u>MU 10188</u>	Casing	Fee	WPCP	S&E	Other
---	-------------------	-----------------------	--------	-----	------	-----	-------

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

[Signature]
 Director, Division of Oil and Gas

File

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.