

NOTE: ALL PROPERTY LINES PRINTED & SURVEY CORRECTED TO DEED CALLS

FILE NO. P.D.C. # 5-PAJ
 DRAWING NO. 1
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION HIGH PT = 1123'
 & WELL HEAD 5340 = 1038'

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) *Paul & Dean, Inc.*
 R.P.E. 1856 L.L.S.

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE MAR. 17, 1983
 OPERATOR'S WELL NO. 1
 API WELL NO. 47-085-6365-P
 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 1019' WATER SHED LOCUST RUN
 DISTRICT BRANT COUNTY RITCHIE
 QUADRANGLE 7 1/2 MAGEARLAN ACREAGE 321
 SURFACE OWNER W.V. PULP & PAPER LEASE ACREAGE 321
 OIL & GAS ROYALTY OWNER MARY E. SEWELL & G. KIBBEE LEASE NO. 369900
 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 UNDEVELOPED SOURCE ESTIMATED DEPTH 5500'
 WELL OPERATOR TRU-FUL DEVELOPMENT INC. AGENT JOHN R. MITCHELL
 ADDRESS P.O. BOX 26
BRIDGEPORT, WV

0.145 TOPO 7 1/2
2.23 W

JAMES WILLIAMS
250 Ac.

HOWARD WILSON
150 Ac.

STONEPILE & PTRS.

BERNARD JACKSON
284 Ac.

MARY E. SEWELL &
GORDON KIBBEE
321 Ac.
W.VA. PULP & PAPER
TAX SHEET 52-13

NORTH

STONEPILE & PTRS.

HICKORY

ROBERT COKELY
206 Ac.

WEST

N85°44'E 1852'

S67°19'W 190'

5340 H-1285

587°47'W 1672'

S20°45'W 402'

N78°28'W 1560'

N27°0'E 1531'

N45°E 495'

N33°E 396'

N48°E 280.5'

N36°E 495'

N17°30'E 165'

N40°E 1089'

N44°E 511.5'

N7°30'E 396'

N40°E 1089'

N44°E 511.5'

N7°30'E 396'

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N44°E 511.5'

N7°30'E 396'

N40°E 1089'

N44°E 511.5'

N7°30'E 396'

24° PINE & PTRS.

M. KERN'S

104 Ac.

N35°17'E 551'

N35°17'E 551'

N35°17'E 551'

N35°17'E 551'

N35°17'E 551'

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NOTE ALL PROPERTY LINES PRINTED & SURVEY CORRECTED TO DEED CALLS

FILE NO. P.D.C. # 5-191
DRAWING NO. I
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY 1 IN 200
PROVEN SOURCE OF ELEVATION HIGH PT = 1123'
& WELL HEAD 5340 = 1038'

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) Paul G. Dean, Sr.
R.P.E. 1856 L.L.S.

PLACE SEAL HERE

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE MAR. 17, 1983
OPERATOR'S WELL NO. I
API WELL NO. 47-085-6365-P
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 1019' WATER SHED LOCUST RUN
DISTRICT GRANT COUNTY RITCHIE
QUADRANGLE 7 1/2' MACFARLAN
SURFACE OWNER W.VA. PULP & PAPER ACREAGE 321
OIL & GAS ROYALTY OWNER MARY SEWELL & G. KIBBEE LEASE ACREAGE 321
LEASE NO. 363900
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 MARCELLUS SHALE ESTIMATED DEPTH 5500'
WELL OPERATOR PETROLEUM DEVELOPMENT DESIGNATED AGENT JOHN R. MITCHELL
ADDRESS PO BOX 26 ADDRESS PO BOX 26

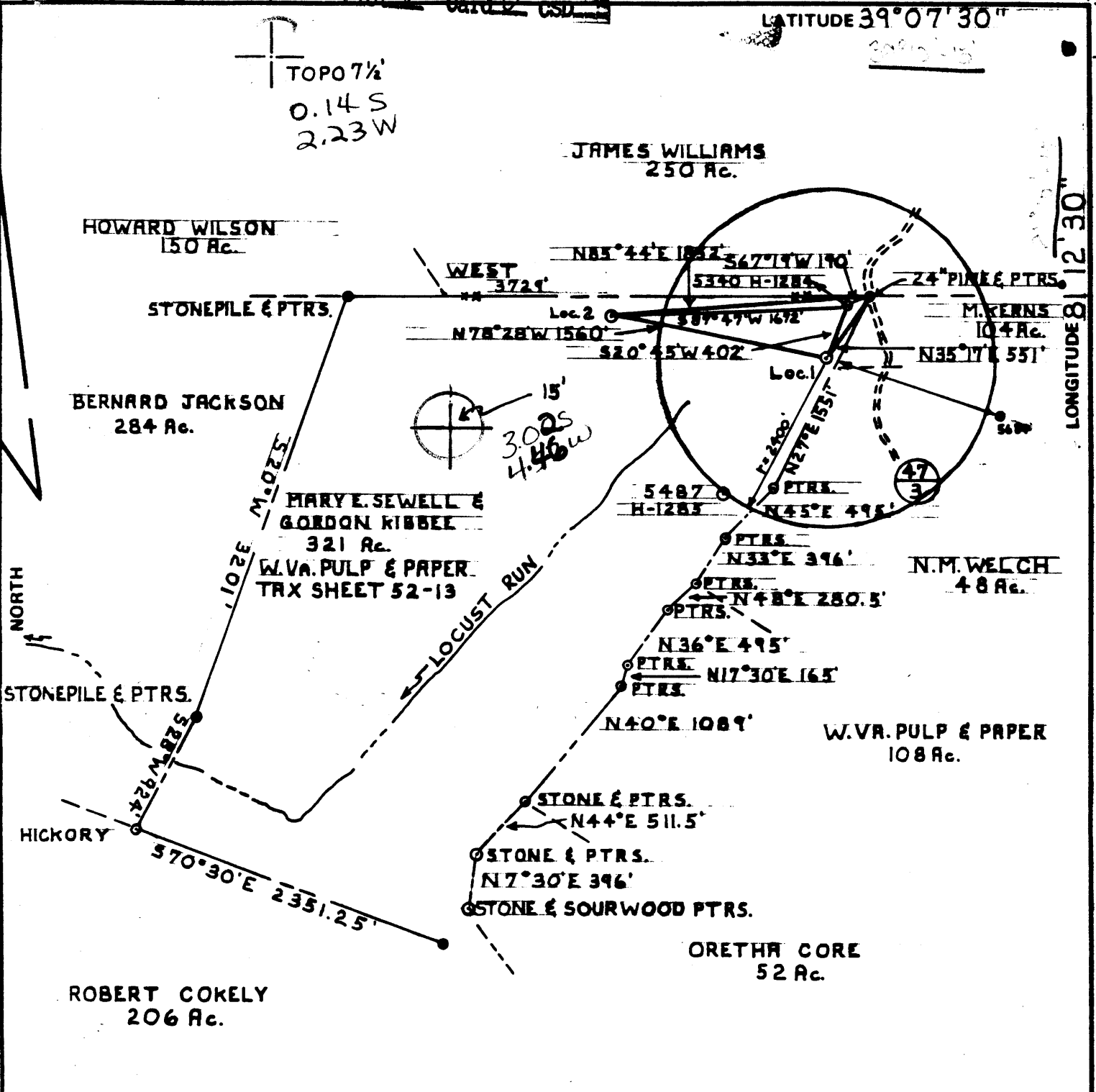
750' S
12' 30"

4-5-83

Plot V Card CSD 11,725'

LATITUDE 39° 07' 30"

TOPO 7 1/2
0.14 S
2.23 W



NOTE ALL PROPERTY LINES PAINTED & SURVEY CORRECTED TO DEED CALLS

FILE NO. P.D.C. # 5-PS1
 DRAWING NO. 1
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION HIGH PT = 1123'
& WELL HEAD 5340 = 1038'

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) Paul G. Dean, Jr.
 R.P.E. 1856 L.L.S. _____

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE MAR. 17, 1983
 OPERATOR'S WELL NO. 1
 API WELL NO. 47 - 085 - 6365
 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 1019' WATER SHED LOCUST RUN
 DISTRICT GRANT COUNTY RITCHIE
 QUADRANGLE 7 1/2 MACFARLAN Narrisville 15' Wc
 SURFACE OWNER W.VA. PULP & PAPER ACREAGE 321
 OIL & GAS ROYALTY OWNER MARY SEWELL & G. KIBBEE LEASE ACREAGE 321
 LEASE NO. 363900
 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 MARCELLUS SHALE ESTIMATED DEPTH 5500'
 WELL OPERATOR PETROLEUM DEVELOPMENT DESIGNATED AGENT JOHN R. MITCHELL 6-6
 ADDRESS P.O. BOX 26 ADDRESS P.O. BOX 26 Gillespie Run
BRIDGEPORT W.V. BRIDGEPORT W.V.

APR 11 1983

RIT. 6365



IV-35
(Rev 8-81)

Date May 23, 1983
Operator's
Well No. #1
Farm Sewell-Kibee
API No. 47 - 085 - 6365

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 XX / Gas / Liquid Injection / Waste Disposal /
(If "Gas," Production / Underground Storage / Deep / Shallow /)

LOCATION: Elevation: 1019' Watershed Locust Run
District: Grant County Ritchie Quadrangle 7 1/2' MacFarlan

COMPANY Petroleum Development Corporation

ADDRESS P.O. Box 26, Bridgeport, WV 26330

DESIGNATED AGENT Michael L. Edwards

ADDRESS P.O. Box 26, Bridgeport, WV 26330

SURFACE OWNER West Vaco

ADDRESS c/o Woodland, MGR, Parkersburg, WV 26101

MINERAL RIGHTS OWNER Mary Sewell & G. Kibee

ADDRESS 1801 Dulancey Place, Philadelphia, PA 19108

OIL AND GAS INSPECTOR FOR THIS WORK Samuel

Hersman ADDRESS P.O. Box 66
Smithville, WV 26178

PERMIT ISSUED April 6, 1983

DRILLING COMMENCED May 5, 1983

DRILLING COMPLETED May 11, 1983

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"	30'	30'	Cement to surface
9 5/8			
8 5/8	1183'	1183'	266 sks.
7			
5 1/2			
4 1/2	4881'	4881'	483 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Shale Depth 5500 feet

Depth of completed well 5118 feet Rotary XX / Cable Tools _____

Water strata depth: Fresh 60 feet; Salt 1840 feet

Coal seam depths: N/A Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3520 - 3914 feet

Gas: Initial open flow 132 Mcf/d Oil: Initial open flow 0 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 364 psig (surface measurement) after 24 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

OCT 11 1983

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

(N₂ + CO₂) 1st Stage 30 perfs (^{Huron}3520-3914) N₂ - 1,175,000 scf CO₂ - 28,000 lbs.
Acid - 500 gals. Paraffin inhibitor - 300 gals.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
K.B.-G.L.			0	10	
Sand, shale, red rock			10	1819	Fresh H ₂ O @ 60'
Big Lime			1819	1850	Salt H ₂ O @ 1840'
Big Injun			1850	1950	
Squaw			1950	2019	
Sand, shale			2019	2383	
Sunbury Shale			2383	2389	
Berea			2389	2392	
Sand, shale			2392	2490	
Gantz			2490	2520	Show of oil @ 2518'
Sand, shale			2520	2770	
Gordon Stray/Gordon			2770	2793	
Sand, shale			2793	3276	
Huron			3276	4474	
Java			4474	4825	
<u>Angola</u>			4825	<u>5118 T.D.</u>	

(Attach separate sheets as necessary)

Petroleum Development Corporation

Well Operator

By: M. [Signature]

Date: _____

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."



1) Date: MARCH 25, 1982
2) Operator's Well No. 31
3) API Well No. 47 State County Permit

DRILLING CONTRACTOR:

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 WELL / Underground storage / Deep / Shallow)
- 5) LOCATION: Elevation: 1019' Watershed: Locust Run
District: Grant County: Ritchie Quadrangle: 71' MacFarlan
- 6) WELL OPERATOR Petroleum Development Corporation DESIGNATED AGENT Joseph Pasini III
Address PO Box 26 Address PO Box 26
Bridgeport, WV 26330 Bridgeport, WV 26330
- 7) OIL & GAS ROYALTY OWNER Mary Sewell & C. Kibee 12) COAL OPERATOR
Address 1801 Dulancey Place Address
Philadelphia, PA 19109
- 8) SURFACE OWNER WEST VACO 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
Address 2 WOODLANDS, MGR Name
Parkersburg, WV 26101 Address
- 9) FIELD SALE (IF MADE) TO: Name
Address Address
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED Name Samuel N. Heraman
Address PO Box 66 Address
Smithville, WV 26178
- 14) COAL LESSEE WITH DECLARATION ON RECORD:
Name
Address
- 15) PROPOSED WORK: Drill X / Drill deeper / Redrill / Fracture or stimulate
Plug off old formation / Perforate new formation
Other physical change in well (specify)
- 16) GEOLOGICAL TARGET FORMATION, Marcellus Shale
- 17) Estimated depth of completed well, 5500 feet
- 18) Approximate water strata depths: Fresh, 35 feet; salt, 1660 feet.
- 19) Approximate coal seam depths: None Is coal being mined in the area? Yes / No X

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	11 3/4	H-40	44			30	30	Cement to	Surface
Fresh water									
Coal									Sizes
Intermediate	7 5/8	H-40	23			1170	1170	Cement to	Surface
Production	4 1/2	I-55	10.5			5100	5100	340 SRS	Depths set
Tubing									
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:
My Commission Expires Its: Vice-President
Exploration, Production & Development

OFFICE USE ONLY
DRILLING PERMIT

Permit number: 47-083-0163 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. 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 December 3, 1982 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee

Administrator, Office of Oil and Gas

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