



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. _____
 DRAWING NO. 1
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION Well No. 3106
1511' NE of Loc.: elev. 1037

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 ENERGY.
 (SIGNED) David L. Jackson
 R.P.E. _____ L.L.S. 708

DAVID L. JACKSON
 LICENSED
 NO. 118
 STATE OF WEST VIRGINIA
 LAND SURVEYOR
 PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE March 11, 19 86
 OPERATOR'S WELL NO. Sandusky No. 1
 API WELL NO. 47-033-3312
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 988 WATER SHED Simpson Creek
 DISTRICT Simpson 8 COUNTY Harrison
 QUADRANGLE Rosemont 7 1/2' 588 041 S 2 1/2 Fairmont
 SURFACE OWNER William Callison ACREAGE 25.61
 OIL & GAS ROYALTY OWNER William Callison, et al. LEASE ACREAGE 376
 LEASE NO. 377601
 PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR
 STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW
 FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

MAR 24 1986

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION Benson ESTIMATED DEPTH 5000'
 WELL OPERATOR Petroleum Development Corp. 687 DESIGNATED AGENT Steven Williams
 ADDRESS P.O. Box 26, Bridgeport, WV 26330 ADDRESS P.O. Box 26, Bridgeport, WV 26330
646 Bridgeport-Pruntytown (110)

HT. HALL 48073 FORM WW-6

LONGITUDE 80-12-30 W
 01 00



Date _____
 Operator's _____
 Well No. #1 _____
 Farm Sandusky Estate _____
 API No. 47 - 033 - 3312 _____

State of West Virginia
 DEPARTMENT OF ENERGY
 Oil and Gas Division

JUL 16 1986

WELL OPERATOR'S REPORT
 OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas xx / Liquid Injection ___ / Waste Disposal ___ /
 (If "Gas," Production xx / Underground Storage ___ / Deep ___ / Shallow xx /)

LOCATION: Elevation: 988' Watershed SIMPSON CREEK
 District: SIMPSON County HARRISON Quadrangle ROSEMONT 7 1/2'

COMPANY PETROLEUM DEVELOPMENT CORPORATION
 ADDRESS PO BOX 26, BRIDGEPORT, WV 26330
 DESIGNATED AGENT STEVEN R. WILLIAMS
 ADDRESS PO BOX 26, BRIDGEPORT, WV 26330
 SURFACE OWNER WILLIAM C. & ELOISE CALLISON
 ADDRESS PO BOX 420, BRIDGEPORT, WV 26330
 MINERAL RIGHTS OWNER WILLIAM C. & ELOISE CALLISON, ET AL
 ADDRESS PO BOX 420, BRIDGEPORT, WV 26330
 OIL AND GAS INSPECTOR FOR THIS WORK STEPHEN CASEY
 ADDRESS RT 2 BOX 232-D JANE LEW, WV 26378
 PERMIT ISSUED MARCH 20, 1986
 DRILLING COMMENCED APRIL 4, 1986
 DRILLING COMPLETED APRIL 7, 1986
 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"	40'	40'	
9 5/8			
8 5/8	792'	792'	170 sks
7			
5 1/2			
4 1/2	1871'	1871'	185 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION BENSON Depth 5000 feet
 Depth of completed well 1187 feet Rotary xx / Cable Tools _____
 Water strata depth: Fresh 32;50;325 feet; Salt _____ feet
 Coal seam depths: _____ Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation GORDON Pay zone depth 1796-1801 feet
 Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
 Final open flow 127 Mcf/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests 4 hours
 Static rock pressure 570 psig (surface measurement) after 72 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

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

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
KB - GL			0	10	
sand, shale, RR			10	1107	2" stream H2O @ 32'
Big Lime			1107	1166	Hole damp @ 50'
Keener			1166	1204	1/2" stream H2O @ 325'
sand, shale			1204	1214	
Big Injun			1214	1259	
sand, shale			1259	1614	gas check @ 1323' 4/10 - 1" H2O
Gantz			1614	1626	
sand, shale			1626	1632	
50 ft			1632	1686	
sand, shale			1686	1693	
30 ft			1693	1736	gas check @ 1700' 2/10 - 1" H2O
sand, shale			1736	1789	
Gordon			1789	1805	gas check @ 1802' 2/10 - 1" H2O
sand, shale			1805	1812	
Gordon Stray			1812	1831	
sand, shale			1831	1893	Driller TD 4/10 - 1" H2O
				1895	Logger TD 4/10 - 1" H2O

(Attach separate sheets as necessary)

PETROLEUM DEVELOPMENT

Well Operator

By:

Date:

[Handwritten Signature]

7/14/86

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 sand, encountered in the drilling of a well."

RECEIVED
MAR 20 1986



1) Date: March 14, 1986
 2) Operator's Well No. Sandusky #1
 3) API Well No. 47 - 033 - 3312
 State County Permit

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

- 4) WELL TYPE: A Oil / Gas XX /
 B (If "Gas", Production XX / Underground storage / Deep / Shallow XX /)
- 5) LOCATION: Elevation: 988 Watershed: Simpson Creek
 District: Simpson 687 County: Harrison Quadrangle: Rosemont 7 1/2'
- 6) WELL OPERATOR Petroleum Deve. CODE: 38200 7) DESIGNATED AGENT Steven R. Williams
 Address P. O. Box 26, Address P. O. Box 26
Bridgeport, WV 26330 Bridgeport, WV 26330
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Stephen Casey
 Address Rt. #2, Box 232-D
Jane Lew, WV 26378
- 9) DRILLING CONTRACTOR: Name
 Address
- 10) PROPOSED WELL WORK: Drill XX / Drill deeper / Redrill / Stimulate X /
 Plug off old formation / Perforate new formation /
 Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, Benson 435
- 12) Estimated depth of completed well, 5000 feet
 13) Approximate trata depths: Fresh, 40, 150 feet; salt, 1240 feet.
 14) Approximate coal seam depths: 600 Is coal being mined in the area? Yes / No XX /
- 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	11 3/4	H-40	42#	X		30	-	-	Kinds
Fresh water									
Coal									Sizes
Intermediate	8 5/8	J-55	20#	X		775	775	neat c.t.s.	<u>Per Rule 15.05</u>
Production	4 1/2	J-55	10.5#	X		5000	5000	450 sks	Depths set
Tubing								<u>Per Rule 15.01</u>	
Lin...									Perforations:
									Top Bottom

**OFFICE USE ONLY
 DRILLING PERMIT**

Permit number 47-033-3312 Date March 20, 1986

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 March 20, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee	WPCP	S&E	Other
	<u>ALB</u>	<u>AB</u>	<u>AB</u>	<u>841099</u>	<u>AS</u>	<u>AS</u>	

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.