

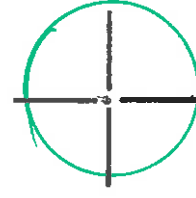
87B 5/4/87

LATITUDE 7070' 39°12'30"

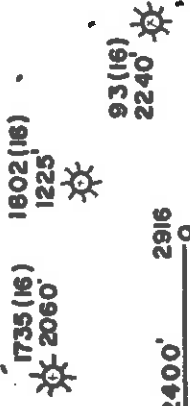
LONGITUDE 80°47'30"

WELL REFERENCES:
S57°45'E, 112' TO 18" SYCAMORE
S16°45' W, 135' TO 12" SYCAMORE

0.826
0.326
0.262



SCHWARTZMAN



1735(16)
1225
2060

93(16)
2240

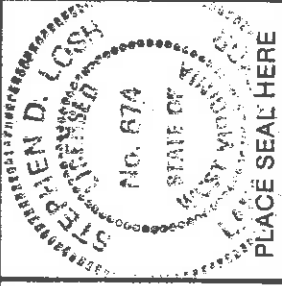
1342(17)
1620

PJH 4-13-87
LAND SURVEYING SERVICES
21 CEDAR LANE
BRIDGEPORT, WV 26330
PHONE: 304-842-2018

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

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 400'
MINIMUM DEGREE OF ACCURACY 1 in 200
PROVEN SOURCE OF ELEVATION BM 3300' E. OF LOCATION ELEV. - 865'

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) *Stephen D. Losh*
R.P.E. _____ I.L.S. 674
STEPHEN D. LOSH



STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



DATE MARCH 18, 19 87
OPERATOR'S WELL NO. 2916
API WELL NO. 47-017-3537

WELL TYPE: OIL _____ GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW
LOCATION: ELEVATION 859' WATER SHED SOUTH FORK OF HUGHES RIVER
DISTRICT SOUTHWEST 7 COUNTY DODDRIDGE
QUADRANGLE OXFORD 7.5 min. - 526 058 NE, Holbrook
SURFACE OWNER BEATRICE H. SCHWARTZMAN ACREAGE 4583.20
OIL & GAS ROYALTY OWNER SUSAN MAXWELL TUTENBERG, ET AL. LEASE ACREAGE 400

PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
LEASE NO. DV - 13756

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 5030'
WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS
ADDRESS ONE PARK RIDGE CENTER RT. 2, BOX 698
PITTSBURGH, PA 15244 142 ADDRESS BRIDGEPORT, WV 26330

MAY 26 1987

6-6 Straight Fork-Bluestone Creek (133)

COUNTY NAME

PERMIT



RECEIVED
JUL 16 1987

State of West Virginia
Department of Mines
Oil and Gas Division

Date July 7, 1987
Operator's
Well No. CNGD WN 2916
Farm S. Tutenberg
API No. 47 - 017 - 3537

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

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 X /)

LOCATION: Elevation: 858 Watershed South Fork of Hughes River
District: Southwest County Doddridge Quadrangle Oxford

COMPANY CNG Development Company
ADDRESS P.O. Box 15746
Pittsburgh, PA 15244
DESIGNATED AGENT Gary A. Nicholas
ADDRESS Rt. 2 Box 698
Bridgeport, WV 26330
SURFACE OWNER Beatrice H. Schwartzman
ADDRESS 2520 30th Street N.W.
Washington, DC 20008
MINERAL RIGHTS OWNER Susan Maxwell Tutenberg
ADDRESS P.O. Box 2950; Clarksburg, WV 26301

OIL AND GAS INSPECTOR FOR THIS WORK
Mike Underwood ADDRESS Rt. 2, Box 114
Salem, WV 26426

PERMIT ISSUED May 19, 1987
DRILLING COMMENCED June 6, 1987
DRILLING COMPLETED June 11, 1987

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

Casing Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16 Cond.	19	19	
13-10"	43	43	To Surf.
9 5/8			
8 5/8	1019	1019	To Surf.
7			
5 1/2			
4 1/2	5034	5034	200 sks
3			
1-1/2	4794	4794	
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5030 feet
Depth of completed well 5052 feet Rotary X / Cable Tools
Water strata depth: Fresh 30.180 feet; Salt 174 feet
Coal seam depths: ----- Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Alexander * Pay zone depth 4830-48 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow 531 Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 950 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
JUL 20 1987
(Continue on reverse side)

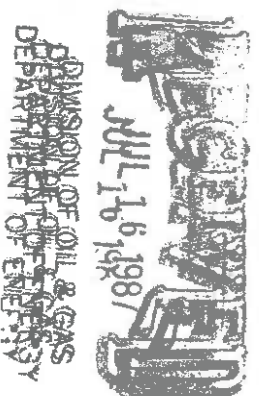
DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated Alexander 4830-48

Foam Frac - Breakdown 950, Ave HHP 7 pumps, Ave Rate 20, Ave Pr. 2682, Max Tr Pr 2810,
Total Acid 500, Total Sand 115,000, Max Conc. 6, Total Fluid 536, Sl Fluid 355,
Total Nit. 688,000 SCF, ISIP 1320, 5 min. 1000

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas.
Fill			0	5	
Sand, Shale & RR			5	1525	1" stream water @ 15'
L. Lime			1525	1550	1" stream water @ 30'
Sand & Shale			1550	1560	1/2" stream water @ 80'
Big Lime & Injun			1560	1695	1/2" stream water @ 110'
Sand, Shale & RR			1695	4470	1-1/2" stream water @ 174'
Benson			4470	4510	Oil Odor at 1630'
Sand & Shale			4510	<u>5052</u>	
ELECTRIC LOG TOPS ✓					
Big Lime			1560	1624	
Big Injun			1624	1700	
Weir			1856	1980	
Berea			2056	2060	
Warren			2940	2978	
U. Speechley			3036	3090	
Bradford			4108	4158	
Riley			4458	4490	
Benson			4543	4592	
Leopold			4702	4710	
Alexander			4800	4890	



(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY
Well Operator
By: [Signature]
Date: July 7, 1987

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 well, encountered in the drilling of a well."



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: 859 Waterhed: South Fork of Hughes River
 District: Southwest County: Doddridge Quadrangle: Oxford
 6) WELL OPERATOR/ENG Development Co. CODE: 10110 DESIGNATED AGENT Gary Nicholas
 Address c/o Cheryl S. Harile P.O. Box 15746
Pittsburgh, PA 15244
 Address Grosswind Corporate Park
Rt. 2, Box 698, Bridgeport, WV 26330
 8) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Mike Underwood
 Address Route 2, Box 114
Salem, WV 26426

9) DRILLING CONTRACTOR:
 Name Sam Jack Drilling Co.
 Address P.O. Box 48
Buckhannon, WV 26201
 10) PROPOSED WELL WORK: Drill deeper Redrill Stimulate
 Plug off old formation Perforate new formation
 Other physical change in well (specify) _____

11) GEOLOGICAL TARGET FORMATION, Alexander
 12) Estimated depth of completed well, 5030 feet
 13) Approximate traia depths: Fresh, _____ feet; salt, _____ feet.
 14) Approximate coal seam depths: _____ feet. 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		
Conductor							
Fresh water	11-3/4	H-40	42	X		40	To surface
Coal							By rule 15.05
Intermediate	8-5/8	X-42	23	X		1000	To surface
Production	4-1/2	J-55	10.5	X		5030	By rule 15.05
Tubing	1-1/2	CN-55	2.75	X		200 - 400	Depth set
Liners							By rule 15.01
							Performance:
							Top
							Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-017-3537 Date May 19 19 87

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, localions 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 19, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee	WPCP	S&E	Other
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	18129		<input checked="" type="checkbox"/>	
				198			

[Signature]
 Director, Division of Oil and Gas

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

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

10029

