

CODE

CARD

PLOT

11,690'

LATITUDE 39° 20' 00"

LAND SURVEYING SERVICES
1412 N. 18 TH ST.
CLARKSBURG, WV 26301
PHONE: 304-623-1214

GORE

ARLINGTON

WEST FORK RIVER

COON

COTTRILL

JAMES GREEN
172 AC.

FALL RUN

NORTH

SHCRAFT

GOFF

CITY OF CLARKSBURG

WELL REFERENCES:
N25°45'E, 118.50' TO 6" CHERRY
N10°45'W, 139' TO 5" R. MAPLE

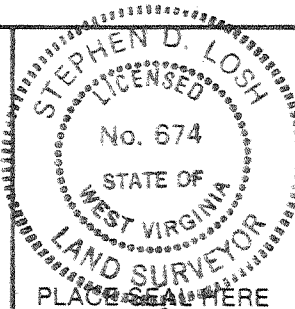
L.R.H. 7-18-85

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

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1 in 2500
PROVEN SOURCE OF ELEVATION BM 1700' N.W. OF
LOCATION ELEV. - 941'

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



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE MAY 13, 19 85
OPERATOR'S WELL NO. 1896
API WELL NO. _____

WELL TYPE: OIL _____ GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW

LOCATION: ELEVATION 1275' WATER SHED WEST FORK RIVER

DISTRICT COAL 3 COUNTY HARRISON

QUADRANGLE CLARKSBURG, 7.5 min. 297 027 SEg

SURFACE OWNER HAROLD W. GAINS ACREAGE 158.77

OIL & GAS ROYALTY OWNER JAMES GREEN LEASE ACREAGE 172

LEASE NO. 91370

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 BENSON ESTIMATED DEPTH 4880'

WELL OPERATOR CNB DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS

ADDRESS ONE PARK RIDGE CENTER 142 ADDRESS CROSSWIND CORPORATE PARK

PITTSBURGH, PA 15224 RT. 2, BOX 698 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

FORM IV-6 (8-78) HT. HALL



IV-35
(Rev 8-81)

Date August 12, 1986
Operator's
Well No. 1896
Farm James Green
API No. 47 - 033 - 3250

State of West Virginia
Department of Mines
Oil and Gas Division

RECEIVED
AUG 18 1986
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: 1275 Watershed West Fork River
District: Coal County Harrison Quadrangle Clarksburg

COMPANY CNG Development Company
ADDRESS P. O. Box 15746
Pittsburgh, PA 15244
DESIGNATED AGENT Gary A. Nicholas
ADDRESS Rt. 2 Box 698
Bridgetort, WV 26330
SURFACE OWNER Harold W. Gains
ADDRESS Rt. 3 Sun Valley
Clarksburg, WV 26301
MINERAL RIGHTS OWNER James Green
ADDRESS _____

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	265	265	To Surf.
9 5/8			
8 5/8	1214	1214	To Surf.
7			
5 1/2			
4 1/2	4893	4893	475 sks
3			
2 1/2	4657	4657	-----
Liners used			

OIL AND GAS INSPECTOR FOR THIS WORK
Stephen Casey ADDRESS Rt. 2, Box 232-D
Jane Lew, WV 26378
PERMIT ISSUED Sept. 5, 1985
DRILLING COMMENCED March 31, 1986
DRILLING COMPLETED April 6, 1986

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

GEOLOGICAL TARGET FORMATION Benson Depth 4880 feet
Depth of completed well 4919 feet Rotary x / Cable Tools _____
Water strata depth: Fresh 130 feet; Salt _____ feet
Coal seam depths: 75 - 77 Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Speechley Pay zone depth 3365-3375 feet
Benson 4697-4704
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 492 Mcf/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 200 psig (surface measurement) after 1 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.

Perforated Benson 4697 - 4704, 28 holes, .39 HSC
Halliburton Foam Frac (70Q) Benson - Break 2456, Did not Ballout using 40 perf. balls -
18.5 bbls/mix - 2550#, Avg. TPSI 3615, Avg Rate 25 BPM, HHP used 989, ISI 2129,
5 min 1916, used 250 gals 15% MOD 202, 8000# 80/100, 57,500# 20/40, 634,400 SCFN₂
Max Sand Conc. 4#/gal.

Perforated Speechley 3365 - 3375, 20 holes, .39 HSC
Halliburton Foam Frac 70Q Speechley - Break 1900, Avg TPSI 2700, Avg Rate 20 BPM,
HHP used 628, ISI 1647, 5 min 1475, 500 gals 15% FE Acid, 6,000# 80/100 Sand,
77,000# 20/40 Sand, 517,000 SCFN₂, 6# Max Sand Conc./gal.

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	Approx. 1/2" stream water @ 130' 1/2" stream water @ 300'
Clay			10	20	
Sand & Shale			20	75	Coal 75 - 77'
Coal			75	77	
Sand & Shale			77	240	
Open Mine			240	246	
Sand & Shale			246	1640	
Big Lime			1640	1800	
Sand & Shale			1800	4705	
Benson Sand ✓			4705	4720	
Sand & Shale			4720	4919	
					TD
<u>LOG TOPS</u> ✓					
B. Lime/ B. Inj.			1646	1810	
Berea/Gantz A			2130	2182	
50'			2210	2324	
Gord. St./ Gordon			2410	2504	
5th			2656	2704	
Warren			3050	3070	
U. Speech.			3250	3284	
Speechley			3364	3389	
Balltown			3496	3598	
Bradford			3950	4074	
Riley			4314	4600	
Benson			4690	4706	

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY

Well operator

By:

Date:

August 12, 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."



1) Date: July 24, 19 85
 2) Operator's Well No. 1896
 3) API Well No. 47 -033-3250
 State _____ County _____ Permit _____

RECEIVED
AUG 15 1985

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

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

- 4) WELL TYPE: A Oil _____ / Gas X /
 B (If "Gas", Production X / Underground storage _____ / Deep _____ / Shallow X /)
- 5) LOCATION: Elevation: 1275 / Watershed: West Fork River
 District: Coal / County: Harrison / Quadrangle: Clarksburg
- 6) WELL OPERATOR CNG Development Company 10110 / 7) DESIGNATED AGENT Gary Nicholas
 Address c/o Paul W. Garrett, P.O. Box 15746 / Address Crosswind Corporate Park
Pittsburgh, PA 15244 / Rt. 2, Box 698, Bridgeport, WV 26330
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED / 9) DRILLING CONTRACTOR:
 Name Stephen Casey / Name Sam Jack Drilling Co.
 Address Rt. 2, Box 232D / Address P.O. Box 48
Jane Lew, WV 26378 / Buckhannon, WV 26201
- 10) PROPOSED WELL WORK: Drill X / Drill deeper _____ / Redrill _____ / Stimulate X /
 Plug off old formation _____ / Perforate new formation _____ /
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Benson
 12) Estimated depth of completed well, 4880 feet
 13) Approximate trata depths: Fresh, 210, 1050 feet; salt, _____ feet.
 14) Approximate coal seam depths: 65, 240, 925 Is coal being mined in the area? Yes _____ / No X /
- 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	<u>1-3/4</u>	<u>H-40</u>	<u>42</u>	<u>X</u>		<u>40</u>	<u>40</u>	<u>To Surface</u>	<u>By Rule 15.05</u>
Coal									Sizes
Intermediate	<u>8-5/8</u>	<u>X-42</u>	<u>23</u>	<u>X</u>		<u>1125</u>	<u>1125</u>	<u>To Surface</u>	<u>By Rule 15.05</u>
Production	<u>4-1/2</u>	<u>J-55</u>	<u>10.5</u>	<u>X</u>		<u>4880</u>	<u>4880</u>	<u>200-400</u>	<u>Depths set</u>
Tubing	<u>1-1/2</u>	<u>CN-55</u>	<u>2.75</u>	<u>X</u>					<u>By Rule 15.01</u>
Liners									Perforations: Top _____ Bottom _____

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-033-3250 / Date September 5 1985

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 Note 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 September 5, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>✓</u>	Agent: <u>AS</u>	Plat: <u>Int</u>	Casing: <u>Int</u>	Fee: <u>9782</u>
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[Signature]
Administrator, Office 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.

File