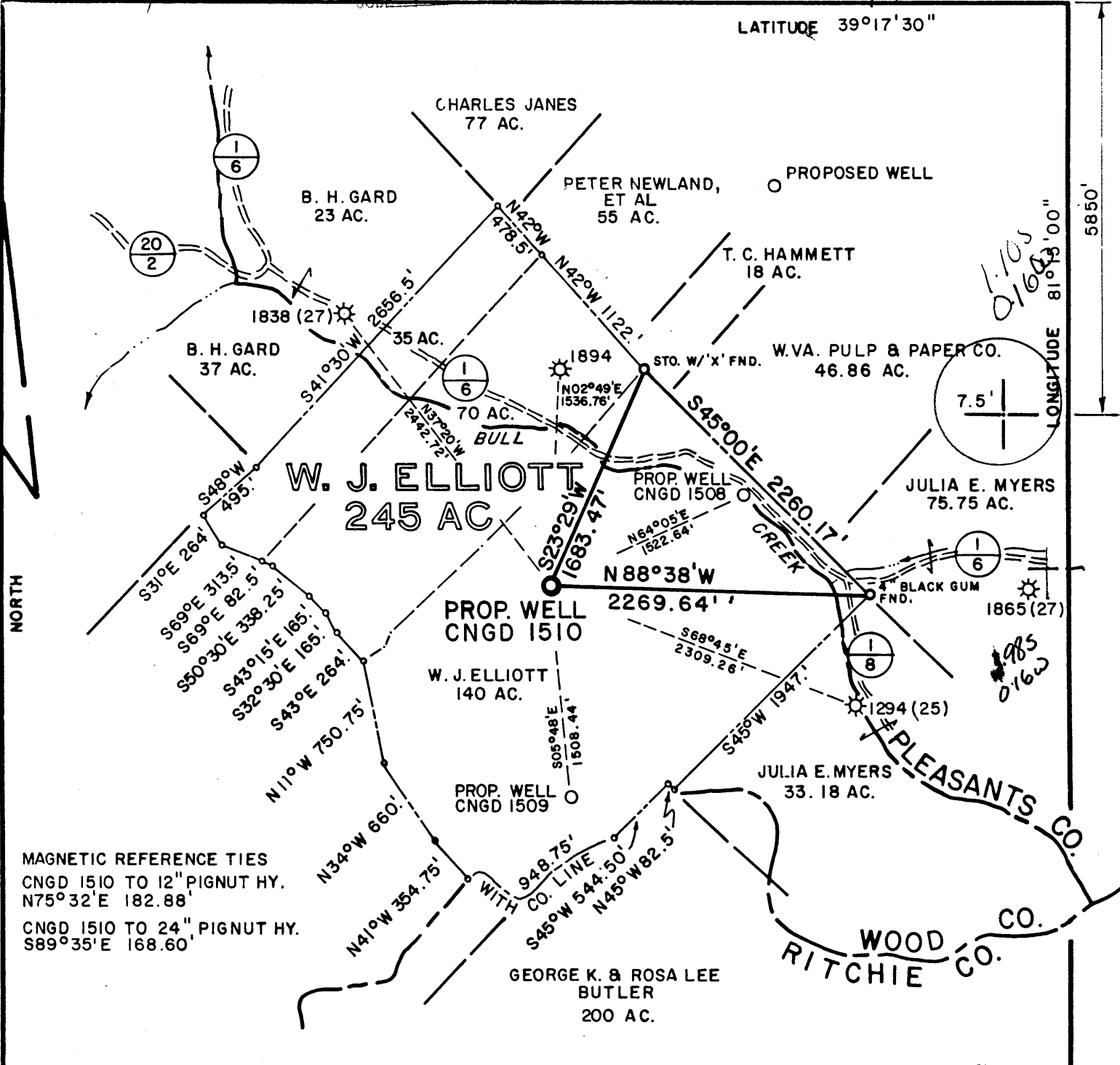


11217/84

CODE CARD PLOT 39 20

920'

LATITUDE 39°17'30"



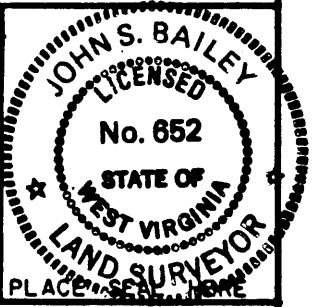
LONGITUDE 81°13'00"

5850'

MAGNETIC REFERENCE TIES
 CNGD 1510 TO 12" PIGNUT HY.
 N75°32'E 182.88'
 CNGD 1510 TO 24" PIGNUT HY.
 S89°35'E 168.60'

FILE NO. MSES 84-561
 DRAWN BY SARC
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200
 PROVEN SOURCE OF ELEVATION RD. INT. PLEAS. CO. RTS. 1/6 & 1/8; EL. 823.'

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) John S. Bailey
 R. P. E. _____ L. L. S. 652



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6
 (8-78)



Department of Mines
 Oil & Gas Division

DATE NOVEMBER 6 1984
 OPERATOR'S WELL NO. CNGD 1510
 API WELL NO. 47-107-1339
 STATE WOOD COUNTY PLACER PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS", PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 887.51' WATER SHED BULL CREEK
 DISTRICT WALKER A COUNTY WOOD
 QUADRANGLE WILLOW ISLAND, W.VA. - OH 7.5' 1957 (1976) Marietta 151 504
 SURFACE OWNER W. J. ELLIOTT ACREAGE 245 AC. 073
 OIL & GAS ROYALTY OWNER W. J. ELLIOTT LEASE NO. 76360 LEASE ACREAGE 245 AC.

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 DEVONIAN SHALE ESTIMATED DEPTH 3825'
 WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS
 ADDRESS ONE PARK RIDGE CENTER ADDRESS RT. 2, BOX 698
112 PITTSBURGH, PA 15219 BRIDGEPORT, WV 26330

RECEIVED



IV-35 (Rev 8-81)

FEB 15 1985

OIL & GAS DIVISION DEPT. OF MINES

State of West Virginia Department of Mines Oil and Gas Division

Date January 29, 1985 Operator's Well No. CNGD WN 1510 Farm W. J. Elliott API No. 47 - 107 - 1339

WELL OPERATOR'S REPORT OF DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 887.51 Watershed Bull Creek District: Walker County Wood Quadrangle Willow Island

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 W. J. Elliott

ADDRESS Rt. 3, St. Marys, WV 26170

MINERAL RIGHTS OWNER W. J. Elliott

ADDRESS Rt. 3, St. Marys, WV 26170

OIL AND GAS INSPECTOR FOR THIS WORK

Glen Robinson Rt. 1 #6 Mt. Pleasant Est. ADDRESS Minerwells, WV 26150

PERMIT ISSUED 12-17-84

DRILLING COMMENCED 1-8-85

DRILLING COMPLETED 1-13-85

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

Table with 4 columns: Casing Tubing, Used in Drilling, Left in Well, Cement fill up Cu. ft. Rows include sizes 20-16, 11-3/4, 9 5/8, 8 5/8, 7, 5 1/2, 4 1/2, 3, 2, and Liners used.

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 3825 feet

Depth of completed well 3985 feet Rotary x / Cable Tools

Water strata depth: Fresh Damp 1125 feet; Salt feet

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

OPEN FLOW DATA

Producing formation Shale Pay zone depth 3256 - 3467 / 2322 - 2400 feet

Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d

Final open flow (est) 140 Mcf/d & Final open flow 180 Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure (est) 750psig (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 28 1985

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

Huron

Perfco Perforated Shale 3256 - 3467; 24 holes; .39
Up Dev. 2322 - 2400; 30 holes; .39
 B. J. Hughes Break 2760, 10 pumps, Avg. BPM 80,000, Avg. PSI 2700, 750 gal 15% HCL,
 ISIP 1940, 5 min 1740, Total N₂ 800,000.
 Break 1860, 11 pumps, Avg. BPM 88,000, Avg. PSI 2180, 500 gal 15% HCL,
 ISIP 1540, 5 min 1480, Total N₂ 800,000

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand, Shale, RR			0	1346	Hole Damp 1125'
B. Lime			1346	1395	
Sand, Shale			1395	<u>3985</u>	<i>Huron @ 73</i>
<u>Log Tops</u> ✓					
Big Lime			1335		
Big Injun				1516	
Berea			1924	1930	

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY
 Well Operator
 By: *[Signature]*
 Date: January 29, 1985

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

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NOV 28 1984



1) Date: November 16, 19 84
2) Operator's Well No. 1510
3) API Well No. 47 - 107 - 1339
State County Permit

OIL & GAS DIVISION
DEPT. OF MINES

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

- 4) WELL TYPE: A Oil X / Gas
5) LOCATION: Elevation: 887.51, Watershed: Bull Creek, District: Walker, County: Wood, Quadrangle: Willow Island
6) WELL OPERATOR: CNG Development Co., Address: C/o Paul W. Garrett, P.O. Box 15746, Pittsburgh, PA 15244
7) DESIGNATED AGENT: Mr. Gary Nicholas, Address: Crosswind Corporate Park, Rt. 2, Box 698, Bridgeport, WV 26330
8) OIL & GAS INSPECTOR TO BE NOTIFIED: Name: Mr. Glen P. Robinson, Address: Rt. 1, #6, Mt. Pleasant Estate, Mineralwells, WV 26150
9) DRILLING CONTRACTOR: Name: Sam Jack Drilling Co., Address: P.O. Box 48, Buckhannon, WV 26201
10) PROPOSED WELL WORK: Drill X / Drill deeper / Redrill / Stimulate X
11) GEOLOGICAL TARGET FORMATION: Devonian Shale
12) Estimated depth of completed well: 3825 feet
13) Approximate trata depths: Fresh: -2140 feet; salt: - feet.
14) Approximate coal seam depths: - Is coal being mined in the area? Yes / No X

15) CASING AND TUBING PROGRAM

Table with columns: CASING OR TUBING TYPE, SPECIFICATIONS (Size, Grade, Weight per ft., New, Used), FOOTAGE INTERVALS (For drilling, Left in well), CEMENT FILL-UP OR SACKS (Cubic feet), PACKERS (Kinds, Sizes, Depths set, Perforations: Top, Bottom)

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-107-1339 Date December 17, 19 84

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.

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 December 17, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Table with columns: Bond, Agent, Plat, Casing, Fee. Values: 28, MJ, MJ, MJ, 084.

Margaret J. Hassi
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