

177N 2/26/85

Janie 7/12/88

5150'

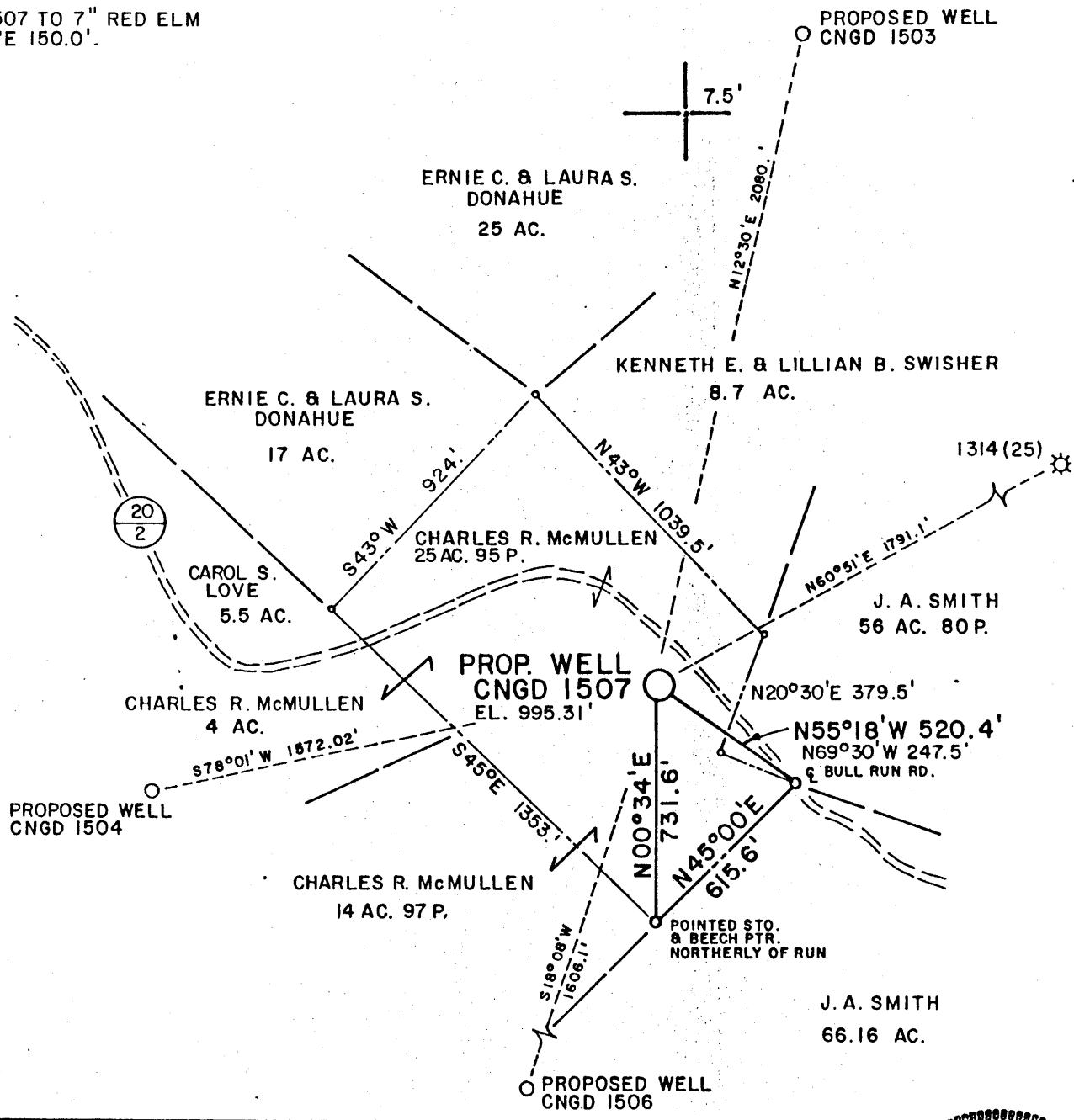
2692'

LONGITUDE 81°15'

MAGNETIC REFERENCE WELL TIES
CNGD 1507 TO 14" POPLAR
N29°39'W 144.9'
CNGD 1507 TO 7" RED ELM
N13°56'E 150.0'

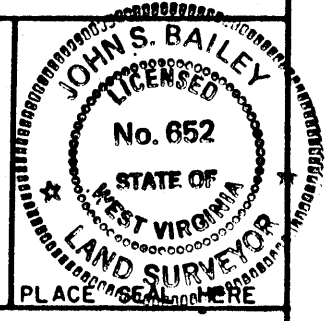
LATITUDE 39°17'30"

NORTH



FILE NO. MSES 84-558
 DRAWN BY SARC
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200
 PROVEN SOURCE OF ELEVATION BM 2700' SE OF LOCA. EL. 755'

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
 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 5 19 84
 OPERATOR'S WELL NO. CNGD 1507
 API WELL NO. 47-107-1351-P
 STATE WV COUNTY WOOD PERMIT 1351-P

WOOD 1351-P

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS", PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 995.31' WATER SHED LAUREL FORK
 DISTRICT WALKER COUNTY WOOD
 QUADRANGLE WILLOW ISLAND, WV-OH
 SURFACE OWNER CHARLES R. McMULLEN ACREAGE 44.19
 OIL & GAS ROYALTY OWNER CHARLES R. McMULLEN LEASE ACREAGE 44.19
 LEASE NO. DV-604
 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 3850'
 WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS
 ADDRESS ONE PARK RIDGE CENTER ADDRESS RT. 2, BOX 698
PITTSBURGH, PA 15219 BRIDGEPORT, WV 26330

177N 8/26/15

CARD

PLOT

5150'

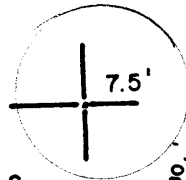
LATITUDE 39°17'30"
39°20'

2600'

LONGITUDE 81°15'

MAGNETIC REFERENCE WELL TIES
CNGD 1507 TO 14" POPLAR
N29°39'W 144.9'
CNGD 1507 TO 7" RED ELM
N13°56'E 150.0'

PROPOSED WELL
CNGD 1503



ERNIE C. & LAURA S.
DONAHUE
25 AC.

3505
097W

KENNETH E. & LILLIAN B. SWISHER
8.7 AC.

ERNIE C. & LAURA S.
DONAHUE
17 AC.

338S
097W

CHARLES R. McMULLEN
25 AC. 95 P.

J. A. SMITH
56 AC. 80 P.

CAROL S.
LOVE
5.5 AC.

CHARLES R. McMULLEN
4 AC.

PROP. WELL
CNGD 1507
EL. 995.31'

N20°30'E 379.5'

N55°18'W 520.4'
N69°30'W 247.5'
BULL RUN RD.

PROPOSED WELL
CNGD 1504

CHARLES R. McMULLEN
14 AC. 97 P.

POINTED STO.
& BEECH PTR.
NORTHERLY OF RUN

J. A. SMITH
66.16 AC.

PROPOSED WELL
CNGD 1506

FILE NO. MSES 84-558

DRAWN BY SARC

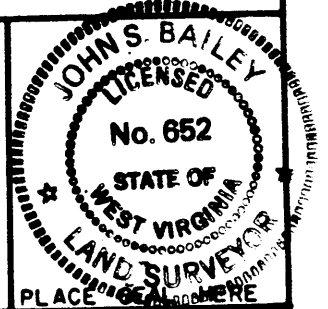
SCALE 1" = 500'

MINIMUM DEGREE OF
ACCURACY 1 PART IN 200

PROVEN SOURCE OF
ELEVATION BM 2700 SE OF LOCA.
EL. 755'

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
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 5 19 84
OPERATOR'S WELL NO. CNGD 1507
API WELL NO.
47 - 107 - 1351
STATE COUNTY PERMIT

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

LOCATION: ELEVATION 995.31' WATER SHED LAUREL FORK
DISTRICT WALKER COUNTY WOOD

QUADRANGLE WILLOW ISLAND, WV-OH 686 Marietta 151 SEg

SURFACE OWNER CHARLES R. McMULLEN ACREAGE 44.19
OIL & GAS ROYALTY OWNER CHARLES R. McMULLEN LEASE ACREAGE 44.19
LEASE NO. DV-604

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 04 1985

PLUG AND ABANDON CLEAN OUT AND REPLUG
TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 3850'
WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS
ADDRESS ONE PARK RIDGE CENTER ADDRESS RT. 2, BOX 698
PITTSBURGH, PA 15219 BRIDGEPORT, WV 26330

IV-35
(Rev 8-81)



Date August 20, 1985
 Operator's
 Well No. CNGD WN 1507
 Farm McMullen
 API No. 47 - 107 - 1351

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

LOCATION: Elevation: 995.31 Watershed Laurel Fork
 District: Walker County Wood Quadrangle Willow Island WV-OH

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 Charles R. McMullen
 ADDRESS Rt 3, Holly Drive
Elizabeth, WV 26143
 MINERAL RIGHTS OWNER Charles R. McMullen
 ADDRESS Rt. 3 Holly Drive
Elizabeth, WV 26143
 OIL AND GAS INSPECTOR FOR THIS WORK
Glen Robinson ADDRESS Rt. 1 #6 Mt. Pleasant Est
Minerwells, WV 26150
 PERMIT ISSUED February 26, 1985
 DRILLING COMMENCED June 3, 1985
 DRILLING COMPLETED June 7, 1985
 IF APPLICABLE: PLUGGING OF DRY HOLE ON
 CONTINUOUS PROGRESSION FROM DRILLING OR
 REWORKING. VERBAL PERMISSION OBTAINED
 ON

Casing & Tubing Size Cond.	Used in Drilling	Left in Well	Cement fill up Cu. ft.
13-10"	250	250	To Surf.
9 5/8			
8 5/8	1267	1267	To Surf
7			
5 1/2			
4 1/2	3658	3658	290 sks
3			
2-3/8	3451	3451	-----
Liners used			

GEOLOGICAL TARGET FORMATION Dev. Shale Depth 3850 feet
 Depth of completed well 3690 feet Rotary X / Cable Tools
 Water strata depth: Fresh 875 feet; Salt feet
 Coal seam depths: Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Dev. Shale Pay zone depth 1978-3577 feet
 Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
 Final open flow 140 Mcf/d Final open flow 5 Bbl/d
 Time of open flow between initial and final tests hours
 Static rock pressure 250 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.

Perfco Perf Dev. Shale ^{Huron → Java} 3388 - 3577, 18 holes, .39; ^{by 250' W/10'} 2997 - 3106, 22 holes, .39;
 ← 1978 - 2384, 26 holes, .39.

B. J. Titan Nit Frac 1st stage - Break 3640 psi, Ave. HHP 11, Ave Rate (BPM) 80,000,
 Ave. Pres. (psi) 3800, Max. Tr. Pres. 3840 psi, 500 gal 15% HCL, ISIP 2460, 5 min 2240,
 Total Nitrogen 800,000 SCF.

2nd stage - Break 4000 psi, Ave. HHP 11, Ave. Rate (BPM) 80,000,
 Ave. Pres. 2980 psi, Max Tr. Pres. 2980 psi, 500 gal 15% HCL, ISIP 1760, 5 min 1740,
 Total Nitrogen 800,000 SCF.

3rd Stage - Break 2980, Ave. HHP 11, Ave. Rate (BPM) 80,000,
 Ave. Pres. 2880 psi, Max. Tr. Pres. 2900 psi, 500 gal 15% HCL, ISIP 1600, 5 min 1560,
 Total Nitrogen 800,000 SCF.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Red Rock			0	20	Wet @ 875' - 1/2" stream
Clay			20	30	
Sand, Shale & RR			30	1010	
Big Lime & Injun			1010	1165	
Sand & Shale			1165	3690	
LOG TOPS ✓					Angola @ T.D.
Big Injun GBR & P ⁿ				1270	
Weir			1395	1540	
Berea			1582	1586	
Devonian Shale			1586		

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY

Well Operator

By: *Gary A. Neuber*

Date: August 20, 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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FEB 01 1985



1) Date: January 21, 19 85
2) Operator's Well No. 1507
3) API Well No. 47 - 107 - 1351
State County Permit

OIL & GAS DIV. 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: 995.31, Watershed: Laurel Fork, District: Walker, County: Wood, Quadrangle: Willow Island WV-OH
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: 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, 3850 feet
13) Approximate trata depths: Fresh, 595 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, Depths set, Perforations: Top, Bottom)

OFFICE USE ONLY DRILLING PERMIT

Permit number 47-107-1351

February 26, 19 85 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. 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 February 26, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Table with columns: Bond, Agent, Plat, Casing, Fee. Values: 28, MN, MN, MN, 6072

Margaret J. Hesse, 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

Jul-88

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AUG 31 1988

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
AFFIDAVIT OF PLUGGING AND FILLING WELL
DEPARTMENT OF ENERGY

AFFIDAVITE SHOULD BE IN TRIPPLICATE, one copy mailed to the Division, one copy to be retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their respective addresses.

Farm name: McMULLEN, CHARLES R. ETAL Operator Well No.: CNGD 1507

LOCATION: Watershed: Laurel Fork
Elevation: 995.31 Quadrangle: WILLOW ISLAND
District: WALKER County: WOOD
Latitude: 2600 Feet South of 39 Des. 17 Min. 30 Sec.
Longitude 5150 Feet West of 81 Des. 15 Min. 0 Sec.

Company: CNG Development Company
Rt. 2, Box 698
Bridgeport, WV 26330

Coal Operator: Charles McMullen, et al
or Owner Rt. 3, Holly Drive
Elizabeth, WV 26143

Agent: _____
Inspector: Glen P. Robinson
Permit Issued: 07/13/88

Coal Operator: _____
or Owner _____

AFFIDAVIT

STATE OF WEST VIRGINIA,
County of Wood ss:

_____ and _____ Halliburton _____ being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by CNG Development Company _____, well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the 3rd day of August, 1988, and that the well was plugged and filled in the following manner:

TYPE	FROM	TO	PIPE REMOVED	LEFT
150 sks common w/Gils.	3577	1695		11" - 250'
6% Gel	1695	782		8 5/8" - 1267'
Cut 4 1/2" casing @ 782			780'	2878'
60 sks common	782	582		
6% Gel	582	120		
60 sk common	120	0		

Description of monument: 48" x 8" cap - Vent Hole on Side; Plate Reads: CNGD WN 1507 47-107-1351-P

and that the work of plugging and filling said well was completed on the 3rd day of August, 1988.

And further deponents saith not.

Sworn and subscribe before me this 18th day of August, 1988
My commission expires: 07/11/93

Paul Biggs SEP 06 1988
Nathan Reiter
Mary Ellen Celjutt
Notary Public