

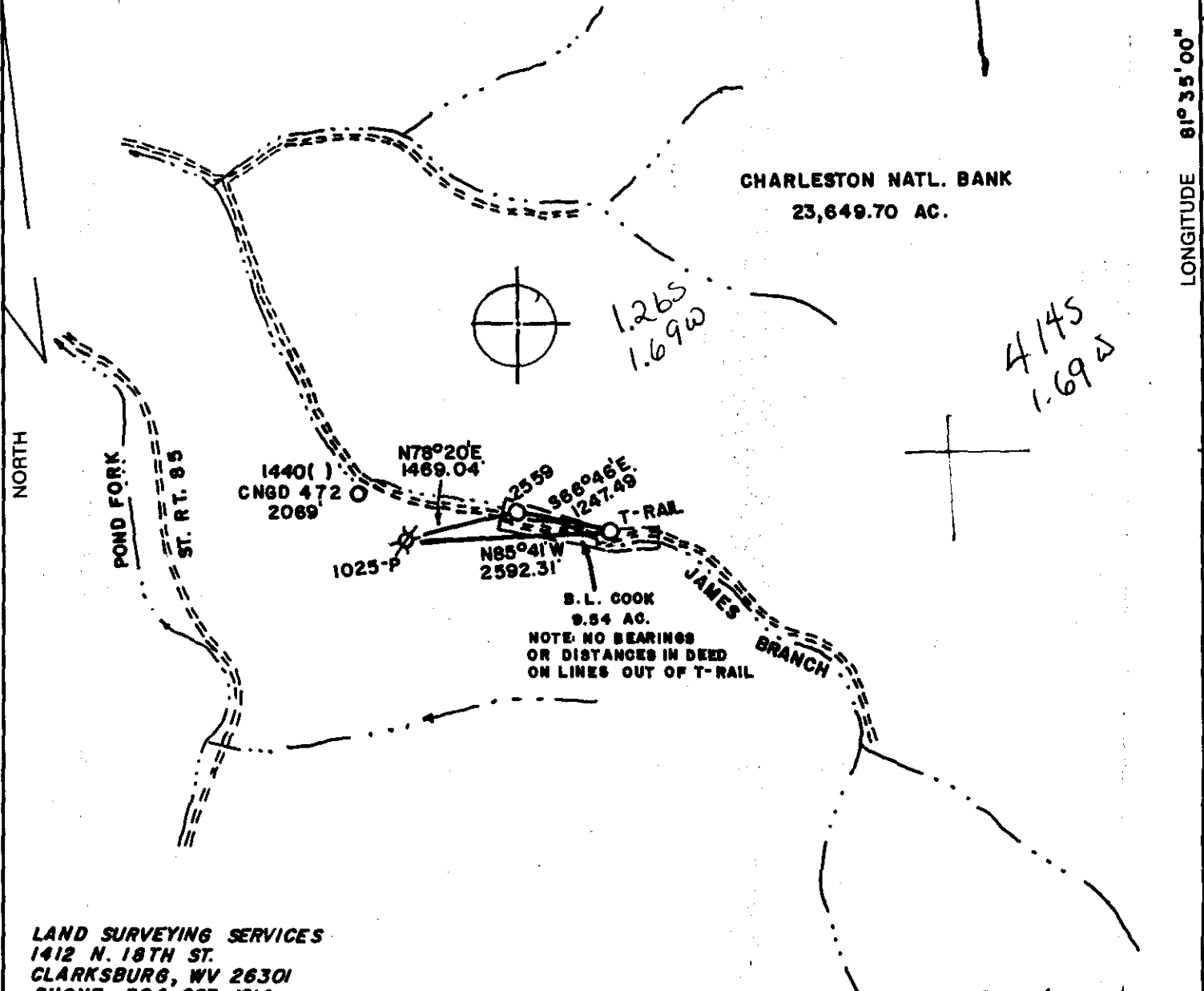
8/25 7/22/86

8970' 37 55

LATITUDE 37°52'30"

WELL REFERENCES:

S23°W, 119' TO 14" B. WALNUT
S67°W, 99.50' TO POWER POLE



CHARLESTON NATL. BANK
23,649.70 AC.

B. L. COOK
9.54 AC.

NOTE: NO BEARINGS
OR DISTANCES IN DEED
ON LINES OUT OF T-RAIL

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

Plat Approved
8-15-86

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

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF
 ACCURACY 1 in 2500
 PROVEN SOURCE OF
 ELEVATION EXIST. WELL 1025-P
ELEV. - 1378'

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 REGU-
 LATIONS ISSUED AND PRESCRIBED BY THE DEPART-
 MENT OF ENERGY.
 (SIGNED) *Stephen D. Losh*

R.P.E. _____ L.L.S. 674
STEPHEN D. LOSH



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE MAY 02, 19 86
 OPERATOR'S WELL NO. 2559
 API WELL NO. _____

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1325' WATER SHED JAMES BRANCH
 DISTRICT CROOK COUNTY BOONE
 QUADRANGLE PILOT KNOB 7.5 mln. 547 006 C S Bald Knob
 SURFACE OWNER BETHEL LEE COOK ACREAGE 9.54
 OIL & GAS ROYALTY OWNER CHARLESTON NATIONAL BANK LEASE ACREAGE 23,649.70
 LEASE NO. 80210

PROPOSED WORK: DRILL X 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 3440'
 WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS
 ADDRESS ONE PARK RIDGE CENTER ADDRESS RT. 2, BOX 698
PITTSBURGH, PA 15244 BRIDGEPORT, WV 26330

AUG 25 1986

6-6 Mann-Oceana (266)

H.T. HALL 48673 FORM WW-6

COUNTY NAME PERMIT

4



IV-35
(Rev 8-81)

REC'D
OCT 27 1986

State of West Virginia
Department of Mines
Oil and Gas Division

Date October 22, 1986
Operator's
Well No. CNGD WN 2559
Farm Chars. Nat'l Bank
API No. 47 - 005 - 1466

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1325 Watershed Jawwa Branch
District: Crook County Boone Quadrangle Pilot Knob

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 Bethel Lee Cook

ADDRESS RR #2, Box 56
Bald Knob, WV 25010

MINERAL RIGHTS OWNER Chars Nat'l Bank

ADDRESS _____

OIL AND GAS INSPECTOR FOR THIS WORK

Jerry Holcomb ADDRESS R.R. 1, Box 28
Hamlin, WV 25523

PERMIT ISSUED Aug. 15, 1986

DRILLING COMMENCED Sept. 5, 1986

DRILLING COMPLETED Sept. 10, 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"	41	41	To Surf.
9 5/8			
8 5/8	970	970	To Surf.
7			
5 1/2			
4 1/2	3355	3355	125 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Dev. Shale Depth 3440 feet

Depth of completed well _____ feet Rotary / Cable Tools _____

Water strata depth: Fresh 1364 feet; Salt _____ feet

Coal seam depths: 190 - 195 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Weir Pay zone depth 3045-53 feet

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

Final open flow 2,768 Mcf/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ hours

Static rock pressure 425 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

(Continue on reverse side)

NOV 03 1986

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

Perforated Weir 3045 - 53, 22 holes, .39 HS

75Q Fracture - Breakdown 700, Ave HHP 1000, Ave Pres. 1500, Max. Tr Pres. 1800,
500 gal 15% Acid, 6,000# 80/100, 90,000# 20/40, 20,000# 10/20 Sands, Max. Conc. 18,
Total Fluid 414 bbl, SL Fluid 298 bbl, ISIP 800, 5 min SIP 800, Total Nit. 340,000 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
Gravel - Shale			0	190	Hole Wet @ 1364'
Coal			190	195	
Sand & Shale			195	1815	Coal 190 - 195
Ravencliff			1815	1845	
Shale			1845	1860	
Lime			1860	1940	
Shale			1940	2030	
Maxton			2030	2115	
Sand & Shale			2115	2300	
L. Maxton			2300	2333	
Shale			2333	2364	
L. Lime			2364	2420	
Shale			2420	2435	
B. Lime			2435	2845	
Shale			2845	3070	
Lower Weir			3070	3080	
Shale			3080	3259	
Berea			3259	3269	
Sandy Shale			3269	3400	✓ T.D.
<u>LOG TOPS</u> ✓					
Avis Lime			1814	1850	
Upper Maxton			2020	2098	
Maxton			2132	2154	
Lower Maxton			2302	2338	
Little Lime			2366	2422	
Big Lime			2452	2784	
Weir			3043	3054	
Berea			3264	3272	

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY

Well Operator

By: *Larry A. Phillips*

Date: October 22, 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 sand, encountered in the drilling of a well."



1) Date: May 29, 19 86
 2) Operator's Well No. 2559
 3) API Well No. 47 - 005-1466
 State County Permit

RECEIVED
 JUL - 2 1986

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

- 4) WELL TYPE: A OIL GAS
 DEPARTMENT OF ENERGY (If "Gas", Production X / Underground storage / Deep / Shallow X /)
- 5) LOCATION: Elevation: 1325 Watershed: James Branch
 District: Crook 142 County: Boone Quadrangle: Pilot Knob 546
- 6) WELL OPERATOR: CNG Development Co CODE: 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: Name Jerry Holcomb
 Address: Rural Rt. #1, Box 28
Hamlin, WV 25523
- 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 /
 Plug off old formation / Perforate new formation
 Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, Berea 395
- 12) Estimated depth of completed well, 3440 feet
- 13) Approximate strata depths: Fresh, 4557 feet; salt, feet.
- 14) Approximate coal seam depths: 2525 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	For drilling	Left in well		
Conductor									Kinds
Fresh water	11-3/4	H-40	42	X		40	40	To surface	By Rule 15.05
Coal									Sizes
Intermediate	8-5/8	X-42	23	X		950	950	To surface	By Rule 15.05
Production	4-1/2	J-55	10.5	X		3440	3440	200 - 400 <u>OK</u>	Depths set
Tubing	1-1/2	CN-55	2.75	X				<u>OK</u>	By Rule 15.01
Lin.									Perforations:
									Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-005-1466 August 15 19 86
 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. 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 August 15, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u> </u>	Agent: <u>AB</u>	Plat: <u>AS</u>	Casing: <u>AS</u>	Fee: <u>14432</u> <u>125</u>	WPCP: <u>AS</u>	S&E: <u>AS</u>	Other: <u> </u>
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John H. Johnston by
 Director, Division of Oil and Gas File

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.

