

6-6

Boulden

(376)

1,325

| FORM WW-2B | | | | | Issued op | 09/27/89 |
|---------------|-----------|---------------------------|--|---------------------------------|--|--|
| | DEPAR | STA TMENT OF WELL W | TE OF WEST ENERGY, DI ORK PERMIT | VIRGINIA VISION OF O APPLICATIO | IL AND GAS | Exprés 9/27/91 |
| 1) Well Op | erator:_ | CNG DEV | VELOPMENT CON | 1PANY 0// | 0 (1) | 260 |
| | | | | | | levation: 2863 |
| | | | or Ga | | | |
| | (b) | If Gas: | Productio Dee | n/ Underg: p <u>X_</u> / | round Stora Shall | |
| 5) Propose | d Target | Formatio | n(s): <u>Orisk</u> | tany 4.5 | | |
| 6) Propose | d Total I | Depth: 765 | 50 | feet | | |
| 7) Approxi | mate fres | sh water : | strata dep | ths: 186, 1 | 036 | |
| 8) Approxi | mate salt | : water d | epths: | | | |
| 9) Approxi | mate coal | seam de | pths: | | | • |
| 10) Does la | nd contai | n coal s | eams tribut | tary to acti | ive mine? | Yes/ No <u>x_</u> / |
| | | ork: Drill | | | | |
| 12) | | | | | | |
| | | CASI | NG AND TUB | ING PROGRAM | | |
| TYPE | S | PECIFICAT | TIONS | FOOTAGE IN | ITERVALS | CEMENT |
| | Size | Grade | Weight per ft. | For drilling | Left in well | Fill-up (cu. ft.) |
| Conductor | | | | | | 100.10.7 |
| Fresh Water | 13 3/8 | K-55 | 54.5 | 40 | 40 | To surface 38CSR-18-11.3 |
| Joal : | | | | | - Mariana da Mariana d | |
| Intermediate | 9 5/8 | K-55 | 36 | 2050 | 2050 | To surface 38CSR-18-11.3 |
| Production | 5 1/2 | M-75 | 17 | 7650 | 7650 | 250-350 sks 38CSR18-11.1 |
| l'ubing | 2 3/8 | J-55 | 4.7 | | | |
| Liners | | | | | Tasa | THE CONTRACTOR STATES |
| PACKERS : Kin | ıd | P | | | | E COLUMN |
| Siz | es | | | | <u>()</u> | SEP 27 1989 🖫 |
| 14 | | | n of Oil a | nd Gas Use | | <u>VISION OF OIL & G</u> AS PARTMENT OF ENERG |
| Fee(s) p | aid: _ | _ _ Well W | ork Permit | Recl | amation Fun | d WPCP |
| Plat _ | WW-9 | 1 <u> </u> | 2B B | ond | | Agent |
| | | | - | | Type) | |

| Page 1 of Form WW2-A | SEP 27 198 |
|-------------------------|-------------------|
| (09/87) | DIVISION OF OHL & |

DIVISION OF OIL & GXS
DEPARTMENT OF ENERGY

| 1) | Date: May 10 | 0. 19 | 89 |
|----|--------------|-------|----|
| | Operator's w | | |
| | | | |

CNGD 3570

3) API Well No: 47 - 083 - 1097

State - County - Permit

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

| NOTICE AND APPLICAT | ION FOR A WELL WORK PERMIT |
|--|---|
| 4) Surface Owner(s) to be served (a) Name Forest Supervisor Address Monongahela National Fore 200 Sycamore Street, *********************************** | Name |
| (b) Name26241 Address | (b) Coal Owner(s) with Declaration Name Jerry M. & Mary C. Coberly Address 6840 Holter Road |
| (c) NameAddress | Middletown, MD 21769 Name Address |
| 6) Inspector Phillip Tracy Address Rt. 2, Box 37-A Montrose, WV 26283 Telephone (304)- 636-8798 | NameAddress |
| TO THE PERSON(S) NAM | ED ABOVE TAKE NOTICE THAT: |
| contracts by which I hold the right X Included is the information of Section 8(d) of the Code of West V I certify that as required un I have served copies of this notice. | required by Chapter 22B, Article 1, Virginia (see page 2) adder Chapter 22B of the West Virginia Code re and application, a location plat, and rough on the above named parties, by: avit attached) red postal receipt attached) reduction attached) |
| to the terms and conditions of any I certify under penalty of la familiar with the information submattachments, and that based on my responsible for obtaining the info is true, accurate, and complete. | ator CNG Development Company |
| Its: Address | Supervisor Purchasing/Production Services One Park Ridge Center, P. O. Box 15746 |
| - | Pittsburgh, PA 15244 |
| Telephone Subscribed and sworn before me that | |
| My commission expires 5/2/1 | NOTARIAL SEAL SHELA L MERICH, NOTARY PUBLICATIVE PUBLIC FINDLAY TOWNSHIP, ALLEGHENY COUNTY MY COMMISSION EXPIRES MAY 21, 1990 |
| | Member, Pennsylvania Association of Notaries |



State of West Virginia DEPARTMENT OF ENERGY Division of Oil and Gas

DIVISION OF OIL & GAS Well Operator's Report of Well Work

DEPARTMENT OF ENERGY

Farm name: MONONGAHELA NAT'L FOREST Operator Well No.: CNGD 3570

LOCATION:

Elevation: 2863.00 Quadrangle: BOWDEN

District: BEVERLY

County: RANDOLPH

Latitude: 11725 Feet South of 38 Deg. 57Min. 30 Sec. Longitude 1325 Feet West of 79 Deg. 42 Min. 30 Sec.

Company: CNG DEVELOPMENT CO. A DEL

P. O. BOX 15746

PITTSBURGH, PA 15244-0000

Agent: RODNEY J. BIGGS

Inspector: PHILLIP TRACY

Permit Issued: 09/27/89

Well work Commenced: 10/21/89 Well work Completed: 11/06/89

Verbal Plugging

Permission granted on:

Rotary X Cable _____ Total Depth (feet) ____ Fresh water depths (ft) 165'

Salt water depths (ft)

| | | 0.5 | 4.0 | The second | a vált | | | | |
|-----|----|-----|-----|------------|--------|----|------|--------|---|
| Is | C | oal | bei | ng m | ined | in | area | (Y/N)? | N |
| Coa | al | Dep | ths | (ft |): | | | | |

| Casing | Used in | Left | Cement Fill Up |
|--------|----------|-----------------|----------------------|
| Tubing | Drilling | in Well | Cu. Ft. |
| Size | | | |
| 13 3/8 | 40 | 40 | To Surf. |
| 9 5/8 | 2154 | 2154 | To Surf. |
| 5 1/2 | 7629 | 7629 | 250 sks |
| 2 3/8 | 7408 | 7408 | |
| | | | |
| I . | | | 1 |

OPEN FLOW DATA

Producing formation Oriskany Pay zone depth (ft) $\frac{7474-7503}{6as}$: Initial open flow MCF/d Oil: Initial open flow Bbl/d Final open flow 5.061 M MCF/d Final open flow Bbl/d Time of open flow between initial and final tests 4 Hours Producing formation Pay zone depth (ft) 7474-7503 Static rock Pressure 2450 psig (surface pressure) after 24 Hours

Second producing formation Chert Pay zone depth (ft) 19 Gas: Initial open flow MCF/d Oil: Initial open flow Final open flow 2.0M MCF/d Final open flow Pay zone depth (ft)7191-7256 KB Bbl/d Bbl/d Time of open flow between initial and final tests Hours Static rock Pressure 1200 psig (surface pressure) after 1 Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

| | | Rodney | J. Big | gs, N | Manager | |
|------|-----|--------|--------|-------|---------|------|
| For: | CNG | DEVELO | PMENT | CO. | A DEL. | CORP |

Perforated Oriskany7474 - 7484, 30 shots; 7490 - 7503, 65 shots. Broke Formation @ 3200#. Pump Acid with 4000 gal 15% HCL and 386 bbl of water, pumped 986 bbl 40# X-link, 10 ton CO₂, Total Sand 52 sks 80/100, 616 sks 20/40. Ave Rate 21 BPM, Ave Pres 4016, Ave HHP 2104.

| Red Clay | 0 | 10 | 1" stream water @ 165' |
|----------|-----|------|------------------------|
| Sand | 10 | 35 | |
| B. Lime | 35 | 425 | |
| SD & Sh | 425 | 7674 | |

Perforated Chert 7191 - 7256, 84 shots, .49 HSC

Acid Job - Breakdown 3050#, Pumped 8000 gal 28% Acid, Ave. Pres. 1500# on Tubing, 3000# on Annulus, Max. Pres. 1900# Tubing, 3600# Annulus, ISIP 1750#

| LOG TOPS | | |
|--------------------|------|-------------|
| Tully | 6058 | 7035 |
| U. Marcellus | 7035 | 7072 |
| Purcel1 | 7072 | 7125 |
| L. Marcellus | 7125 | 7150 |
| Onondaga | 7150 | 7179 |
| Huntersville Chert | 7179 | 7312 |
| Needmore Shale | 7312 | 7351 |
| Oriskany | 7351 | 7530 |
| Helderberg | 7530 | |
| | | |

