

LAND SURVEYING SERVICES  
 21 CEDAR LANE  
 BRIDGEPORT, WV 26330  
 PHONE: 304-842-2018

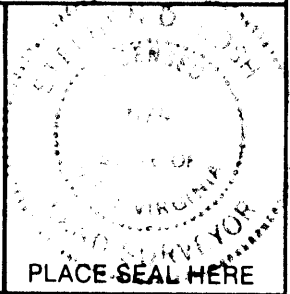
3.82 S  
 2.72 W  
 West U. WC

WELL REFERENCES:  
 S88°E, 144' TO 6" B. WALNUT  
 N39°E, 149' TO 6" HICKORY

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION RD. INTER. 600' S.E. OF LOCATION ELEV. - 850'

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 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 SEPTEMBER 07, 19 89  
 OPERATOR'S WELL NO. 3845  
 API WELL NO. 47-095-1334  
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION 826' WATERSHED JOSEPHS FORK OF MCKIM CREEK  
 DISTRICT MEADE 4 COUNTY TYLER  
 QUADRANGLE PENNSBORO 7.5 min. West Union Wc

SURFACE OWNER RITCHIE PETROLEUM CORP. ACREAGE 97.11  
 OIL & GAS ROYALTY OWNER VICTOR AYRES LEASE ACREAGE 97  
 LEASE NO. DV-19800

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 BENSON ESTIMATED DEPTH 5034'

WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT RODNEY BIGGS **OCT 27 1989**  
 ADDRESS ONE PARK RIDGE CENTER ADDRESS RT. 2, BOX 698  
PITTSBURGH, PA 15244 142 BRIDGEPORT, WV 26330

6-6 Shiloh Wick (086)

FORM WW-6  
 HT HALL

COUNTY NAME  
 PERMIT

DEC 15 1989

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

DIVISION OF OIL AND GAS  
DEPARTMENT OF ENERGY

Well Operator's Report of Well Work

Farm name: RITCHIE PETROLEUM CORP. Operator Well No.: CNGD 3845

LOCATION: Elevation: 826.00 Quadrangle: PENNSBORO

District: MEADE County: TYLER  
Latitude: 5030 Feet South of 39 Deg. 22Min. 30 Sec.  
Longitude 2660 Feet West of 80 Deg. 57 Min. 30 Sec.

Company: CNG DEVELOPMENT CO. A DEL  
P. O. BOX 15746  
PITTSBURGH, PA 15244-0000

Agent: RODNEY J. BIGGS

Inspector: GLEN P. ROBINSON  
Permit Issued: 10/23/89  
Well work Commenced: 11/13/89  
Well work Completed: 11/19/89  
Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth (feet) 5045  
Fresh water depths (ft) 50', 70', 225'

Salt water depths (ft) \_\_\_\_\_

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): \_\_\_\_\_

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
16"	33	33	---
11 3/4"	141	141	To Surf.
8 5/8"	1393	1393	To Surf.
4 1/2"	4981	4981	300 sks
1 1/2"	4692	4692	---

OPEN FLOW DATA

Producing formation Benson Pay zone depth (ft) 4712-4718  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
12/5/89 Final open flow 215 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure 1125 psig (surface pressure) after 24 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ 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. Biggs, Manager  
For: CNG DEVELOPMENT CO. A DEL. CORP.

By: \_\_\_\_\_  
Date: December 7, 1989

DEC 22 1989

Perforate Benson Sand 4712 - 4718, 18 holes, .39 HSC  
 Foam Frac 70Q - Benson - Break 1750, Avg TPSI 2903, Ave Rate 20 BPM, HHP used 1067,  
 ISIP 1600, 5 min 1236, Max Sand Conc. 6#/gal, used 500 gals 15% HCL, 5000# 80/100,  
 70,000# 20/40 Sand and 533,000 SCFN<sub>2</sub>

Red Clay	0	3	@ 50' - 1/2" stream water
Sd, Sh & RR	3	1656	70' - 1" stream water
L. Lime	1656	1675	225' - 2" stream water
Shale	1675	1691	
B. Lime & Injun	1691	1905	
Sd & Sh	1905	5045	

LOG TOPS

Big Lime	1686	1770
Big Injun	1770	1906
Weir	2147	2223
Berea	2300	2316
Warren	3250	3310
Base of Bradford	4026	
Benson	4710	4750

**RECEIVED**  
 DEC 13 1989

DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

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

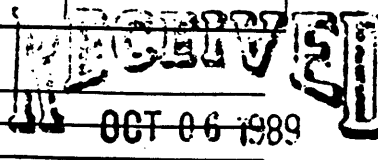
- 1) Well Operator: CNG DEVELOPMENT COMPANY 10/10 (4) 538
- 2) Operator's Well Number: CNGD 3845 3) Elevation: 826
- 4) Well type: (a) Oil   / or Gas X/  
 (b) If Gas: Production X/ Underground Storage   /  
                   Deep   / Shallow X/
- 5) Proposed Target Formation(s): Benson 485
- 6) Proposed Total Depth: 5034 feet
- 7) Approximate fresh water strata depths: 650, 261'
- 8) Approximate salt water depths: 960, 1300
- 9) Approximate coal seam depths: n/a
- 10) Does land contain coal seams tributary to active mine? Yes   / No X/
- 11) Proposed Well Work: Drill new well

**CASING AND TUBING PROGRAM**

*Drill & Stimulate New Well*

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT Fill-up (cu. ft.)
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor						
Fresh Water	11 3/4	H-40	42	120	<u>ds</u> 120	To Surface
Coal						To surface
Intermediate	8 5/8	X-42	23	1400	<u>ds</u> 1400	38CSR1811.2.2 & 38CSR18-11.3
Production	4 1/2	J-55	10.5	5035	5035	200-400 sks 38CSR18-11.1
Tubing	1 1/2	CN-55	2.75	4900	4900	
Liners						

PACKERS : Kind             
 Sizes             
 Depths set           



For Division of Oil and Gas Use Only

DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

32927  
 27 Fee(s) paid:    Well Work Permit    Reclamation Fund    WPCP  
   Plat    WW-9    WW-2B    Bond Blanket Sure    Agent  
 (Type)

**RECEIVED**  
**OCT 06 1989**

**DIVISION OF OIL & GAS**  
**DEPARTMENT OF ENERGY**

1) Date: September 22, 1989  
2) Operator's well number  
CNGD 3845  
3) API Well No: 47 - 095 - 1334  
State - County - Permit

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

4) Surface Owner(s) to be served:  
(a) Name Ritchie Petroleum Corp.  
Address 110 Oak Street  
Pennsboro, WV 26405  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Glen P. Robinson  
Address Rt. 1, #6 Mt. Pleasant Est.  
Mineralwells, WV 26150  
Telephone (304)- 489-9162

5) (a) Coal Operator:  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
 X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_\_\_ on the above named parties, by:  
\_\_\_\_\_ Personal Service (Affidavit attached)  
 X Certified Mail (Postmarked postal receipt attached)  
\_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.  
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.  
Well Operator CNG Development Company  
By: [Signature]  
Its: Supervisor Purchasing/Production Services  
Address One Park Ridge Center, P. O. Box 15746  
Pittsburgh, PA 15244  
Telephone (412) 787-4117

Subscribed and sworn before me this 7 day of June, 1989

Barbara L. Randall  
My commission expires \_\_\_\_\_

NOTARIAL SEAL  
BARBARA L. RANDALL, NOTARY PUBLIC  
FINDLAY TOWNSHIP, ALLEGHENY COUNTY  
MY COMMISSION EXPIRES APRIL 5 1993

Notary Public