

*Jamie 6/29/88*

5760' <sup>55</sup>  
 LATITUDE 37° 52' 30"

BERMIND CORP. → N68°34'55"E  
 214.24'

T-RAIL (2843)  
 N08°30'W, 430'

WELL REFERENCES:  
 N89°15'W, 113' TO 12" VA. PINE  
 N76°30'W, 88' TO 14" R. OAK  
 EASTERN ASSOC. COAL COOR.  
 N. 180, 176. 385'  
 W. 115, 207. 297'

CHARLESTON NATIONAL BANK  
 23,649.70 AC.

CSX MINERALS

*OK, GTK 10/7/80*

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

NORTH

LONGITUDE 81° 35' 00" 4910

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 in 2500  
 PROVEN SOURCE OF ELEVATION TOP OF KNOB 2300'S.E. OF LOCATION ELEV. - 2540'

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 02, 19 88  
 OPERATOR'S WELL NO. 2168  
 API WELL NO. \_\_\_\_\_

WELL TYPE: OIL \_\_\_\_\_ GAS X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X  
 LOCATION: ELEVATION 2455' WATERSHED JAMES BRANCH

47 - 005 - 1483  
 STATE COUNTY PERMIT

DISTRICT CROOK COUNTY BOONE  
 QUADRANGLE PILOT KNOB 7.5 min. 547 006 & Bald Knob  
 SURFACE OWNER CHARLESTON NATIONAL BANK ACREAGE 18,804.55  
 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 WEIR ESTIMATED DEPTH 4510' JUL 1 1988  
 WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS  
 ADDRESS ONE PARK RIDGE CENTER ADDRESS RT. 2, BOX 698  
PITTSBURGH, PA 15244 142 BRIDGEPORT, WV 26330

*6-6 Mann-Oceana (266)*

H.T. HALL 4-8673 FORM WW-6

COUNTY NAME PERMIT



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

Well Operator's Report of Well Work

Farm name: CHARLESTON NAT'L BANK Operator Well No.: CNGD 2168  
 WATERSHED: James Branch  
 LOCATION: Elevation: 2455.00 Quadrangle: PILOT KNOR  
 District: CROOK County: BOONE  
 Latitude: 4910 Feet South of 37 Des. 52Min. 30 Sec.  
 Longitude: 5760 Feet West of 81 Des. 35 Min. 0 Sec.

Company: CNG DEVELOPMENT CO., A DE  
 P. O. BOX 15746  
 PITTSBURGH, PA

Agent: GARY A. NICHOLAS

Inspector: JERRY HOLCOMB  
 Permit Issued: 06/30/88  
 Well work Commenced: 07/05/88  
 Well work Completed: 07/13/88

Verbal Plugging  
 Permission granted on:  
 Rotary  Cable  Ris  
 Total Depth (feet) 4500'  
 Fresh water depths (ft)

Salt water depths (ft)

Is coal being mined in area (Y/N)? N  
 Coal Depths (ft): 70-79; 334-336;  
 425-430; 737-739; 1094-1097;  
 1126-1130; 1161-1166; 1184-1187;  
 OPEN FLOW DATA 1293-1300

Size	Used in	Left	Cement
	&		Fill Use
	Tubing	Drillings	in Well
			Cu. Ft.
11 3/4"	934	934	To surf.
8 5/8"	1366	1366	To surf.
4 1/2"	4441	4441	100 sk.+

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DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

POF  
 1,590 mcf

Producing formation Weir Pay zone depth (ft) 4152-4159  
 Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow 1.59 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests 4 Hours  
 Static rock Pressure 380 psis (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 \_\_\_\_\_ psis (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.

For: Rodney J. Biggs  
 CNG DEVELOPMENT CO., A DELAWARE CORP.

By: Rodney J. Biggs  
 Date: July 26, 1988

AUG 5 - 1988

Perf. Weir from 4152 - 4159, 24 shots, .39 EHD 3 1/8" HSC in acid. Newsco loaded hole with 500 gal acid, 3000 gal treated water, no break observed. Newsco foam frac with 298 bbls, 394,600 SCFN<sub>2</sub>, Ave Rate 6.5 BPM, Ave Pr 1520, ISIP 1100, 5 min SICP 900#, Total Sand 52,000# 20/40, 18,000# 16/30, flushed with foam and 10 bbl water cap.

Sand & Stone	0	70	Coal Seams;
Coal	70	79	70 - 79
Sand & Shale	79	334	334 - 336
Coal	334	336	425 - 430
Sand & Shale	336	425	737 - 739
Coal	425	430	1094 - 1097
Sand	430	737	1126 - 1130
Coal	737	739	1161 - 1166
Sand & Shale	739	1094	1184 - 1187
Coal	1094	1097	1293 - 1300
Shale	1097	1126	
Coal	1126	1130	
Sand	1130	1161	
Coal	1161	1166	
Sand	1166	1184	
Coal	1184	1187	
Sand	1187	1293	
Coal	1293	1300	
Shale	1300	<del>4500</del> 70	

LOG TOPS ✓

✓ Avis Ls.	2929	2962
Upper Maxton	3146	3199
Maxton	3232	3264
Lower Maxton	3408	3432
Little Lime	3467	3522
Big Lime	3553	3876
Weir	4141	4150
✓ Berea	4361	4364

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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: <sup>142</sup> CNG Development Company 10110, 1, 546
- 2) Operator's Well Number: CNGD 2168 3) Elevation: 2455
- 4) Well type: (a) Oil  / or Gas  /  
 (b) If Gas: Production  / Underground Storage  /  
 Deep  / Shallow  /
- 5) Proposed Target Formation(s): Weir 387
- 6) Proposed Total Depth: 4510 feet
- 7) Approximate fresh water strata depths: - 0.557, 750, 1687'
- 8) Approximate salt water depths: - 2200'
- 9) Approximate coal seam depths: 343, 423, 1131, 1351 possible opening at 465'
- 10) Does land contain coal seams tributary to active mine? Yes  / No  /
- 11) Proposed Well Work: Drill new well
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor						38CSR18-11.1 38CSR18-11.2
Fresh Water	13-3/8	H-40	48	400	400	To surface
Coal	9-5/8	H-40	32	800	800	To surface
Intermediate	7	H-40	17	<del>1100</del> 1380	<del>1100</del> 1380	To surface
Production	4-1/2	J-55	10.5	4510	4510	200-400 sks
Tubing	1-1/2	CN-55	2.75			38CSR18-11.1
Liners						

PACKERS : Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_

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For Division of Oil and Gas Use Only DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

023899  
 Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond 50 Blanket  Agent  
 (Type)

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Page 1 of Form WW2-A (09/87) File Copy

DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

1) Date: May 18, 1988
2) Operator's well number CNGD 2168
3) API Well No: 47 - 005 - 1483 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 Charleston National Bank, Trustee Address P.O. Box 1113 Charleston, WV 25325
5) (a) Coal Operator: Name Address
(b) Coal Owner(s) with Declaration Name Charleston National Bank, Trustee Address P.O. Box 1113 Charleston, WV 25325
Name Address
(c) Coal Lessee with Declaration Name Eastern Associated Coal Corp Address 300 Laidley Tower, P.O. Box 1233 Charleston, WV 25324
6) Inspector Jerry Holcomb Address Route 2, Box 159 - Hwy #34 Hamlin, WV 25523 Telephone (304)-824-5963

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, Well Programs
Address One Park Ridge Center, P.O. Box 15746 Pittsburgh, PA 15244
Telephone (412) 787-4117

Subscribed and sworn before me this 9th day of February, 1988
[Signature] Notary Public
My commission expires June 18, 1990

SHARON L. BROWN, NOTARY PUBLIC
FINDLAY TWP., ALLEGHENY COUNTY
MY COMMISSION EXPIRES JUNE 18, 1990
Member Pennsylvania Association of Notaries