



1) Date: October 17, 1984
 2) Operator's Well No. 1233
 3) API Well No. 47 - 109 - 0947
 State County Permit

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

- 4) WELL TYPE: A Oil / Gas /
 B (If "Gas", Production / Underground storage / Deep / Shallow /)
- 5) LOCATION: Elevation: 1829.39' Watershed: Bans Branch
 District: Oceana County: Wyoming Quadrangle: Oceana
- 6) WELL OPERATOR CNG Development Company
 Address c/o Paul W. Garrett, P.O. Box 15746
Pittsburgh, PA 15244 10/10
- 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 Mr. Arthur St. Clair
 Address P. O. Box 157
Brenton, WV 24818
- 9) DRILLING CONTRACTOR:
 Name Sam Jack Drilling Company
 Address P. O. Box 48
Buckhannon, WV 26201
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate /
 Plug off old formation / Perforate new formation /
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Big Lime
- 12) Estimated depth of completed well, 3370 feet
- 13) Approximate trata depths: Fresh, 1125, 1382 feet; salt, _____ feet.
- 14) Approximate coal seam depths: 1320, 1430, 1626 Is coal being mined in the area? Yes / No /
- 15) CASING AND TUBING PROGRAM

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 OIL & GAS DIVISION
 DEPT. OF MINES

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILLUP OR SACKS (Cubic feet)	PERFORATIONS
	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		1660	1660	To surface	By Rule 15.05
Production	4-1/2	J-55	10.5	X		3370	3370	200-400 sks	Depths set
Tubing	1-1/2	CN-55	2.75	X					By Rule 15.01
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-109-0947 Date November 5, 19 84

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 November 5, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<u>28</u>	<u>TS</u>	<u>MU</u>	<u>MU</u>	<u>3998</u>

Margaret J. Hasser
 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

OFFICE USE ONLY

PERMIT MODIFICATIONS AND CONDITIONS (IF ANY) TO THE PROPOSED WELL WORK

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OFFICE USE ONLY

This part of Form IV-2(b) is to record the dates of certain occurrences and any follow-up inspections.

	Date	Date(s)
Application received		
Well work started		
Completion of the drilling process		
Well Record received		
Reclamation completed		

OTHER INSPECTIONS

Reason: _____

Reason: _____

3 Field Reviewed
7-24-84



IV-9
(Rev 8-81)

DATE 7/16/84
WELL NO. C.N.G.D. No. 1233
API NO. 47-109-0947

State of West Virginia
Department of Mines
Oil and Gas Division

CONSTRUCTION AND RECLAMATION PLAN

COMPANY NAME C.N.G. Development Company
Address 1 Park Ridge Center
Pittsburgh, PA 15244
Telephone 412/429-2390

DESIGNATED AGENT Gary A. Nicholas
Address Crosswind Corporate Park
Route 2, Box 698
Bridgeport, WV 26330
Telephone 304/623-8134

LANDOWNER Robert & Edgar Crouch
Revegetation to be carried out by _____

SOIL CONS. DISTRICT Southern
Gary A. Nicholas (Agent)

This plan has been reviewed by Southern SCD. All corrections
and additions become a part of this plan: 7-24-84 (Date)

Gary W. Boschain
(SCD Agent)

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ACCESS ROAD

Structure Drainage Ditch (A)
Spacing Along Access Road
Page Ref. Manual 2:12

Structure Culvert (B)
Spacing 12" Min. - 42" Max. I.D. as shown on sketch
Page Ref. Manual 2:7 to 2:11

Structure Cross Drains (C)
Spacing As shown on sketch
Page Ref. Manual 2:1 to 2:6

LOCATION OIL & GAS DIVISION
DEPT. OF MINES

Structure Diversion Ditch
Material Earthen
Page Ref. Manual 2:12 to 2:13

Structure _____ (2)
Material Mulching
Page Ref. Manual 3:6 to 3:7

Structure Sediment Barrier (3)
Material Hay Bales & Brush from site
Page Ref. Manual 2:16 & 2:18

All structures should be inspected regularly and repaired if necessary. All commercial timber is to be cut and stacked and all brush and small timber to be cut and removed from the site before dirt work begins.

REVEGETATION

Treatment Area I

Lime 3.0 Tons/acre
or correct to pH 6.5
Fertilizer 600 lbs/acre
(10-20-20 or equivalent)
Mulch Hay or Straw 2.0 Tons/acre
Seed* Ky. 31 Tall Fescue 45 lbs/acre
Birdsfoot Trefoil 10 lbs/acre
Rye Grass 10 lbs/acre

Treatment Area II

Lime 3.0 Tons/acre
or correct to pH 6.5
Fertilizer 600 lbs/acre
(10-20-20 or equivalent)
Mulch Hay or Straw 2.0 Tons/acre
Seed* Ky. 31 Tall Fescue 45 lbs/acre
Birdsfoot Trefoil 10 lbs/acre
Rye Grass 10 lbs/acre

*Inoculate all legumes such as vetch, trefoil and clovers with the proper bacterium. Inoculate with 3X recommended amount.

Olin Shockey

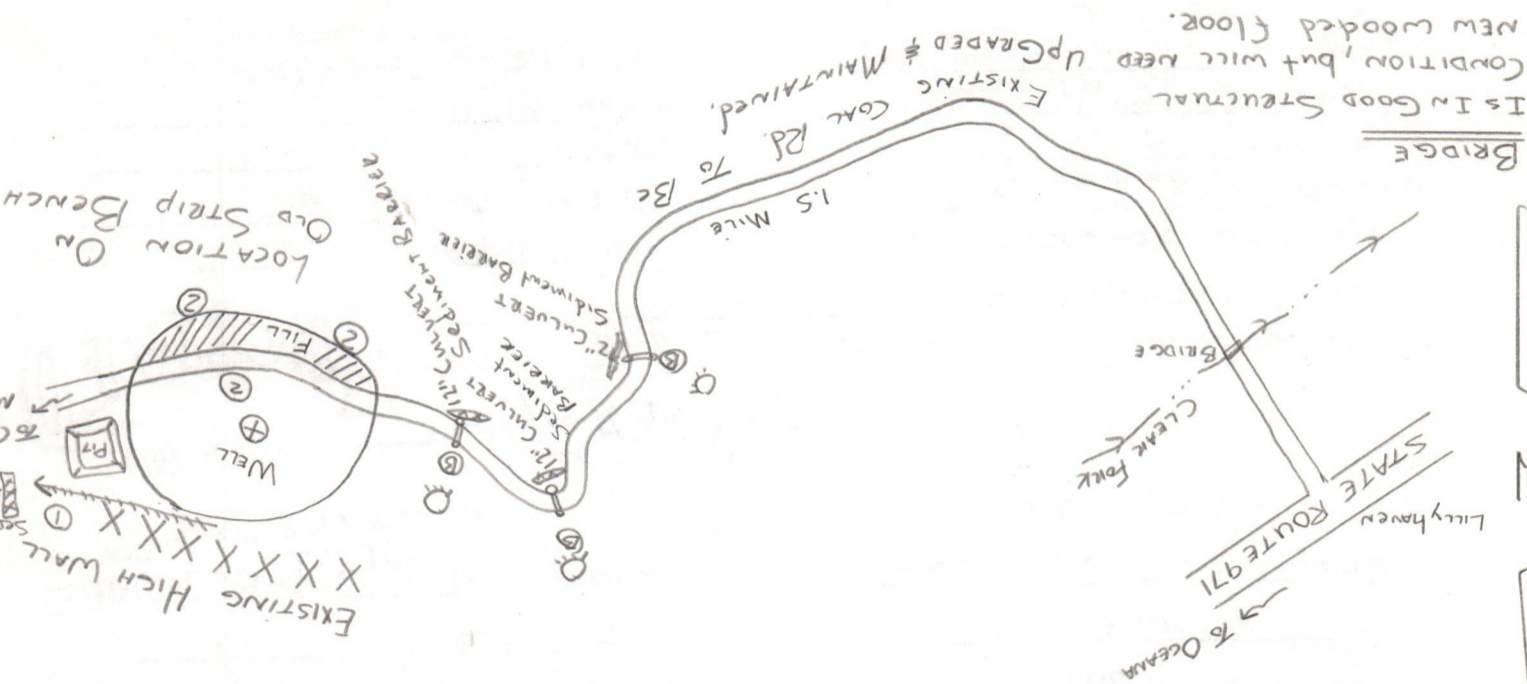
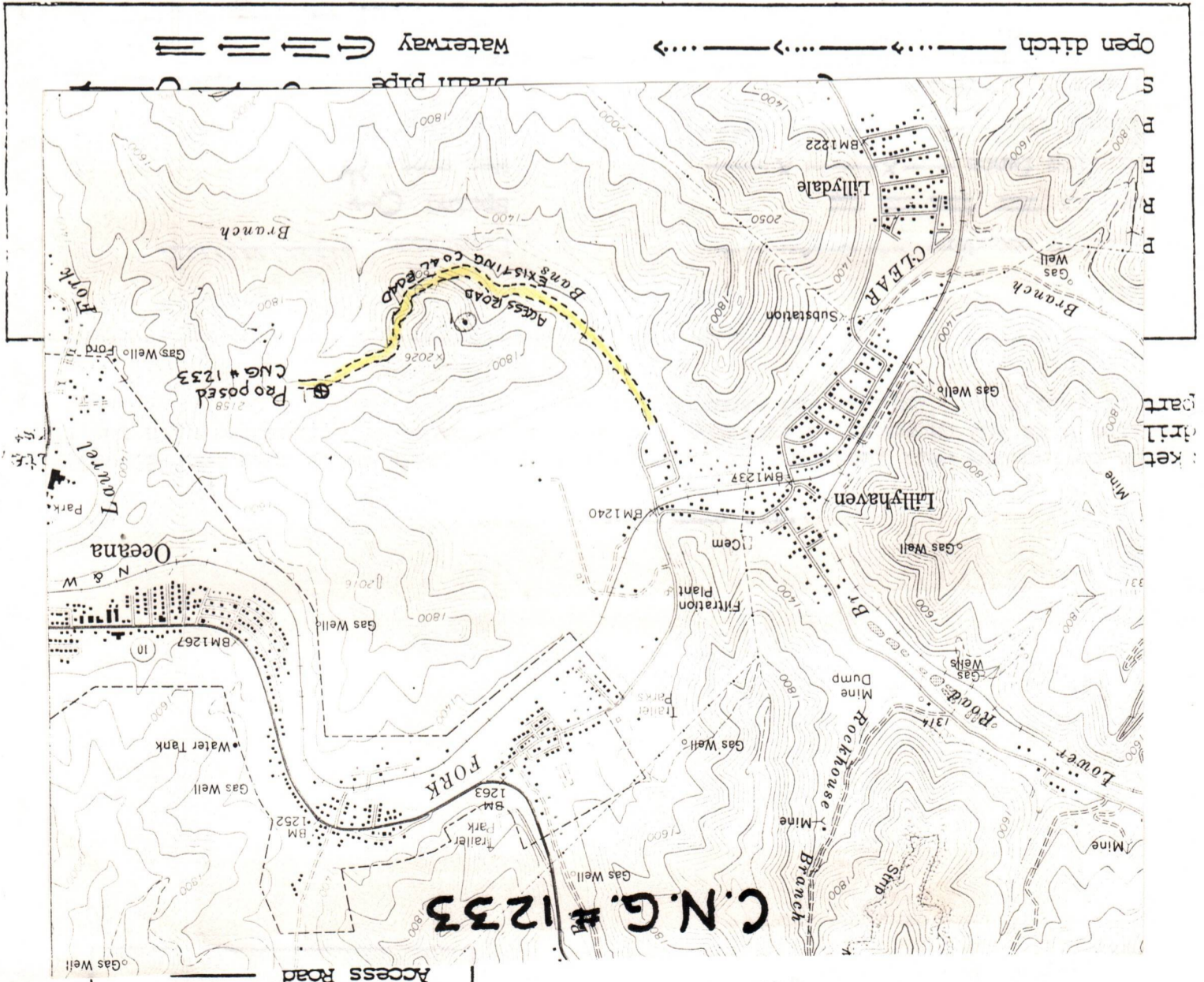
PLAN PREPARED BY A E Associates, Ltd.

ADDRESS 1206 Virginia Street, East
Charleston, WV 25301
PHONE NO. 304/346-0505

NOTES: Please request landowner's cooperation to protect new seedling for one growing season. Attach separate sheets as necessary for comments.

ATTACH OR PHOTOGRAPHY SECTION OF INVOLVED TOPOGRAPHIC MAP. QUADRANGLE Oceana (7.51)

LEGEND
 Well Site ⊕
 Access Road



COMMENTS: Access to the well site will be gained by upgrading 1.5 miles of existing coal road, and constructing approximately 50 feet of new access road, beginning at a junction point in State Route 971. The well location will be located on the side of an existing coal road now covered with brush and large timber. All brush and timber 6" and above will be cut and stacked prior to any earth moving activities. The road and well site will be brought to desired grade with erosion control structures being installed in conjunction with the grading. Due to right-of-way acquisition, the plan may change, but proper erosion and sediment control measures will be installed. Reclamation will be done 6 months after well is completed.

1) Date: October 17, 1984
2) Operator's Well No. 1233
3) API Well No. 47-109-0947
State County Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OFFICE OF OIL & GAS
NOTICE OF APPLICATION FOR A WELL WORK PERMIT

4) SURFACE OWNER(S) OF RECORD TO BE SERVED

5 (i) COAL OPERATOR
Address _____

(i) Name Robert C. Crouch, 1/2 Interest
Address Box 770
Oceana, WV 24870

5 (ii) COAL OWNER(S) WITH DECLARATION ON RECORD
Name See Attached Sheet
Address _____

(ii) Name Judith H. Miles 1/6 Interest
Address 812 Tinkerbell Road
Chapel Hill, NC 27514

Name _____
Address _____

(iii) Name Kenneth Hartzog 1/6 Interest
Address Rt. 1, Box 283-A
Staunton, VA 24401

5 (iii) COAL LESSEE WITH DECLARATION ON RECORD:
Name _____
Address _____

Scottie E. Hartzog 1/6 Interest
Rt. 3, Box 839
Staunton, VA 24401

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents:

- (1) The Application for a Well Work Permit on Form IV-2(B) (or Form IV-4 if the well is to be plugged, which sets out the parties involved in the drilling or other work and describes the well and its location and, if applicable, the proposed casing and cementing program;
- (2) The plat (surveyor's map) showing the well location on Form IV-6; and
- (3) The Construction and Reclamation Plan on Form IV-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

RECEIVED
OCT 19 1984

THE REASON YOU RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION (FORM IV-2(B) OR FORM 4, DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Administrator of the Office of Oil and Gas, West Virginia Department of Mines, with respect to a well at the location described on attached Application and depicted on attached Form IV-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Administrator.

6) EXTRACTION RIGHTS

Check and provide one of the following:

- Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.
- The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)

7) ROYALTY PROVISIONS

Is the right to extract, produce or market the oil or gas based upon a lease or leases or other contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes No

If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.

See the reverse side for line item instructions, and for instructions concerning the required copies of the Notice and Application, plat, and Construction and Reclamation Plan.

The truth of the information on the Notice and Application is verified and sworn to and the Notice is signed on behalf of the Well Operator in my County and State by

Paul W. Garrett
this 17th day of October, 1984.
My commission expires 12/31, 1986.

WELL OPERATOR CNG Development Company

By Paul W. Garrett
Its Manager, Well Programs
Address P. O. Box 15746
Pittsburgh, PA 15244
Telephone 412-787-4090

William H. Draney
Notary Public, Allegheny County,
State of Pennsylvania

I N S T R U C T I O N S T O A P P L I C A N T

CONCERNING THE LINE ITEMS:

- 1) Date of Notice.
- 2) Your well name and number.
- 3) To be filled out by the Office of Oil & Gas.
- 4) & 5) Use separate sheet if necessary.
- 4) Surface owner(s) of record to be served with Notice and Application. However, see also Code § 22-4-1b(b) if "more than three tenants in common or other co-owners of interest described in subsection (a) of this section hold interests in such lands".
- 5(i) "Coal Operator" means any person, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine.
- 5(ii, iii) See Code § 22-4-20.
- 6) See Code § 22-4-11(c). However, in lieu of filing the lease(s) or other continuing contract(s), the Applicant may fill out the information in the space provided below.
- 7) See Code § § 22-4-11(d, e).

CONCERNING THE REQUIRED COPIES FOR FILING AND SERVICE:

Filing. Code § 22-4-1k and Regulation 7.02 provide that the original and required copies of the Notice and Application must be filed with the Administrator, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-1k(d) and the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fees required by Code § 22-4-1a(c) and 22-3-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well on dwelling within 200 feet of the proposed well.

Service. In addition, service must be made on the surface owner(s) and the person(s) with an interest in the coal. See Code § § 22-4-1m, 22-4-2, 22-4-2a, and 22-4-2b.

INFORMATION SUPPLIED UNDER CODE § 22-4-11(d)

IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on the obverse side of this Notice, I depose and say that I am the person who signed the Notice for the Applicant, and that--

- (1) the tract of land is the same tract described in the Application to which this Notice applies, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book	Page
Juanita Lawson, et vir	Consolidated Gas Supply Corporation	1/8	244	110
Robert C. Crouch, et al	CNG Development Company	1/8	344	551



CNGD Well No. 1233
Juanita Lawson, et al
Wyoming County, WV

COAL OWNERS

Robert C. Crouch
Box 770
Oceana, WV 24870

1/2 Interest

Arnold O. Epperly
408 Overlook Drive
Beckley, WV 25801

1/8 Life Interest

Judith H. Miles
812 Tinkerbell Road
Chapel Hill, NC 27514

1/8 Interest and 1/24 Interest subject to
Life Estate of Arnold O. Epperly

Kenneth Hartzog
Route 1, Box 283-A
Staunton, VA 24401

Same

Scottie E. Hartzog
Route 3, Box 839
Staunton, VA 24401

Same

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OCT 19 1984

OIL & GAS DIVISION
DEPT. OF MINES

P 691 309 337

P 691 309 338

P 691 309 339

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, Feb. 1982

★ U.S.G.P.O. 1983-403-517

Sent to	Mr. Robert C. Crouch
Street and No.	Box 770
P.O., State and ZIP Code	Oceana, WV 24870
Postage	\$
Certified Fee	<input checked="" type="checkbox"/>
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	<input checked="" type="checkbox"/>
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$ 1.89
Postmark or Date	OCT 17 1984 USPO

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, Feb. 1982

★ U.S.G.P.O. 1983-403-517

Sent to	Mr. Arnold O. Epperly
Street and No.	408 Overlook Drive
P.O., State and ZIP Code	Beckley, WV 25801
Postage	\$
Certified Fee	<input checked="" type="checkbox"/>
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	<input checked="" type="checkbox"/>
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$ 1.89
Postmark or Date	OCT 17 1984 USPO

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, Feb. 1982

★ U.S.G.P.O. 1983-403-517

Sent to	Ms. Judith H. Miles
Street and No.	812 Tinkerbell Road
P.O., State and ZIP Code	Chapel Hill, NC 27514
Postage	\$
Certified Fee	<input checked="" type="checkbox"/>
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	<input checked="" type="checkbox"/>
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$ 1.89
Postmark or Date	OCT 17 1984 USPO

P 691 309 340

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, Feb. 1982

★ U.S.G.P.O. 1983-403-517

Sent to	Mr. Kenneth Hartzog
Street and No.	Route 1, Box 283-A
P.O., State and ZIP Code	Staunton, VA 24401
Postage	\$
Certified Fee	<input checked="" type="checkbox"/>
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	<input checked="" type="checkbox"/>
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$ 1.89
Postmark or Date	OCT 17 1984 USPO

P 691 309 341

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, Feb. 1982

★ U.S.G.P.O. 1983-403-517

Sent to	Mr. Scottie E. Hartzog
Street and No.	Route 3, Box 839
P.O., State and ZIP Code	Staunton, VA 24401
Postage	\$
Certified Fee	<input checked="" type="checkbox"/>
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	<input checked="" type="checkbox"/>
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$ 1.89
Postmark or Date	OCT 17 1984 USPO

OPEN FLOW DATA

779-781
1452-1456
1568-1574

Producing formation Ravencliff Sand Pay zone depth 2069-2089 feet

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

Final open flow 292 Mcf/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ hours

Static rock pressure 420 psig (surface measurement) after 24 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)

W
0947

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

McCullough Perforated Ravencliff Sand 2069 - 2089; 12 holes (.39)

Dowell Foam Frac (75Q) Ravencliff Sand - Break 3000, Avg. TPSI 2800, Avg. Rate 20 BPM,
ISI 1950, 5 min 1850, used 730,000 SCFN₂ 45,000# 20/40 Sand,
500 gals 15% HCL

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Sand, Shale			0	202	Water Fresh 550'
Coal			202	206	Coal 202 - 206
Sand, Shale			206	350	350 - 354
Coal			350	354	779 - 781
Sand, Shale			354	779	1452 - 1456
Coal			779	781	1568 - 1574
Sand, Shale			781	1452	
Coal			1452	1456	
Sand, Shale			1456	1568	
Coal			1568	1574	
Sand, Shale			1574	1931	
Princeton			1931	1983	
Sand, Shale			1983	2003	
Ravencliff			2003	2091	
Shale			2091	2094	
Avis L. S.			2094	2132	
Shale			2132	2154	
Sand, Shale			2154	2565	
Maxton			2565	2580	
Sand, Shale			2580	2672	
Lower Maxton			2672	2731	
Sand, Shale			2731	2760	
Little Lime			2760	2858	
Sand			2858	2888	
Big Lime			2888	3275	
Red Rock			3275	3378	
<u>Gamma Ray Tops</u>					
Princeton 1857-1901					
Ravencliff 2058-95					
Avis lime 2095-2137					
U. Max. Stray 2219-2322					
U. Maxton 2443-69					
L. Maxton 2677-2746					
L. Lime 2764-2930					
B. Lime 2946-3281					
LTD 3382					

(Attach separate sheets as necessary)

By: Gary A. Miller
Well Operator

CNG DEVELOPMENT COMPANY

Date: January 22, 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 coal, encountered in the drilling of a well."

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IV-35
(Rev. 8-81)
APR 5 - 1985

OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division

Date January 22, 1985
Operator's
Well No. CNGD WN 1233
Farm Juanita Lawson
API No. 47 - 109 - 0947

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1829.39 Watershed Bans Branch
District: Oceana County Wyoming Quadrangle Oceana

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 Robert C. Crouch, et al

ADDRESS Box 770, Oceana, West Virginia 24870

MINERAL RIGHTS OWNER Juanita Lawson, et al

ADDRESS 913 McQueen Blvd., St. Albans, WV 25117

OIL AND GAS INSPECTOR FOR THIS WORK _____

Arthur St. Clair ADDRESS P. O. Box 157, Brenton, WV 24818

PERMIT ISSUED 11-5-84

DRILLING COMMENCED 12-4-84

DRILLING COMPLETED 12-13-84

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.	26	26	--
13-10"			
9 5/8			
8 5/8	1685	1685	To Surf.
7			
5 1/2			
4 1/2	2318	2318	120 sks.
3			
X 1-1/2	2070	2070	--
Liners used			

GEOLOGICAL TARGET FORMATION Big Lime Depth 3370 feet

Depth of completed well 3378 feet Rotary X / Cable Tools _____

Water strata depth: Fresh 550 feet; Salt _____ feet

Coal seam depths: 202-206
350-354
779-781 Is coal being mined in the area? No

OPEN FLOW DATA 1452-1456
1568-1574

Producing formation Ravencliff Sand Pay zone depth 2069-2089 feet

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

Final open flow 927 Mcf/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ hours

Static rock pressure 400 psig (surface measurement) after 14 ^{day} ~~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)

WYOMING 0947

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

McCullough Perforated Ravencliff Sand 2069 - 2089; 12 holes (.39)

Dowell Foam Frac (75Q) Ravencliff Sand - Break 3000, Avg. TPSI 2800, Avg. Rate 20 BPM, ISI 1950, 5 min 1850, used 730,000 SCFN₂ 45,000# 20/40 Sand, 500 gals 15% HCL

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Sand, Shale			0	202	Water Fresh 550'
Coal			202	206	Coal 202 - 206
Sand, Shale			206	350	350 - 354
Coal			350	354	779 - 781
Sand, Shale			354	779	1452 - 1456
Coal			779	781	1568 - 1574
Sand, Shale			781	1452	
Coal			1452	1456	
Sand, Shale			1456	1568	
Coal			1568	1574	
Sand, Shale			1574	1931	
Princeton			1931	1983	
Sand, Shale			1983	2003	
Ravencliff			2003	2091	
Shale			2091	2094	
Avis L. S.			2094	2132	
Shale			2132	2154	
Sand, Shale			2154	2565	
Maxton			2565	2580	
Sand, Shale			2580	2672	
Lower Maxton			2672	2731	
Sand, Shale			2731	2760	
Little Lime			2760	2858	
Sand			2858	2888	
Big Lime			2888	3275	
Red Rock			3275	3378	
<u>Gamma Ray Tops</u>					
Princeton 1857-1901					
Ravencliff 2058-95					
Avis lime 2095-2137					
U. Max. Stray 2219-2322					
U. Maxton 2443-69					
L. Maxton 2677-2746					
L. Lime 2764-2930					
B. Lime 2946-3281					
LTD 3382					

(Attach separate sheets as necessary)

By: Gary A. Miller
Well Operator

CNG DEVELOPMENT COMPANY

Date: January 22, 1985

Note: Regulation 2.08(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including those encountered in the drilling of a well."

RECEIVED

JAN 7 - 1985

OIL & GAS DIVISION
DEPT. OF MINES

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS WELLS DIVISION

INSPECTOR'S WELL REPORT

Permit No. 109-0947

New Const.

Oil or Gas Well Gas
(KIND)

Company CNG Dev.
 Address Pittsburg Pa
 Farm Crouch
 Well No. 1233
 District Ocean County Wyoming
 Drilling commenced new work
 Drilling completed _____ Total depth _____
 Date shot _____ Depth of shot _____
 Initial open flow _____ /10ths Water in _____ Inch
 Open flow after tubing _____ /10ths Merc. in _____ Inch
 Volume _____ Cu. Ft.
 Rock pressure _____ lbs. _____ hrs.
 Oil _____ bbls., 1st 24 hrs.
 Fresh water _____ feet _____ feet
 Salt water _____ feet _____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer _____
13			
10			Size of _____
8 1/4			
6 3/4			Depth set _____
5 3/16			
3			Perf. top _____
2			Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

CASING CEMENTED _____ SIZE _____ No. FT. _____ Date _____
 NAME OF SERVICE COMPANY _____
 COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES
 _____ FEET _____ INCHES FEET _____ INCHES
 _____ FEET _____ INCHES FEET _____ INCHES

Drillers' Names Justice Const. - Excavating Cont.

Remarks: work being done on location, Dig & Blasting, over access Road this sat. all work in primary stage no pipe Drains installed as yet

1-3-85
DATE

John C. ...

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS WELLS DIVISION

RECEIVED
NOV 17 1984

INSPECTOR'S WELL REPORT

OIL & GAS DIVISION
DEPT. OF MINES
Oil or Gas Well Gas
(KIND)

ump-109-0947
Permit No.

New Const

Company Address Farm Well No. District Drilling commenced Drilling completed Date shot Initial open flow Open flow after tubing Volume Rock pressure Oil Fresh water Salt water	CASING AND TUBING				PACKERS
	USED IN DRILLING	LEFT IN WELL	SIZE		
<u>CNG. Dev. Co.</u>					
<u>Pittsburg Pa.</u>					
<u>Crouch</u>					Kind of Packer
<u>1233</u>					Size of
<u>Oceana County</u>					Depth set
<u>none</u>					
					Perf. top
					Perf. bottom
					Perf. top
					Perf. bottom
	CASING CEMENTED				
	SIZE				
	No. FT.				
	Date				
	NAME OF SERVICE COMPANY				
	COAL WAS ENCOUNTERED AT				
	FEET INCHES				
	FEET INCHES FEET INCHES				
	FEET INCHES FEET INCHES				

Drillers' Names Justice Const Co. (Excavating Contractor)

Remarks: over access & on location this job found conditions good for location procedure good-

1-10-85
DATE

John C. St. Denis
DISTRICT WELL INSPECTOR

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS WELLS DIVISION

RECEIVED
JAN 21 1985

OIL & GAS DIVISION
DEPT. OF MINES

INSPECTOR'S WELL REPORT

Oil or Gas Well
(KIND)

Gas

Wyo 109-0947

Permit No. _____

Company CN B. Dev.
 Address Pittsburgh, Pa
 Farm Robert Crouch
 Well No. 1233
 District Beersna County Wyoming
 Drilling commenced 1-14-85
 Drilling completed @ Total depth 840
 Date shot _____ Depth of shot _____
 Initial open flow _____ /10ths Water in _____ Inch
 Open flow after tubing _____ /10ths Merc. in _____ Inch
 Volume _____ Cu. Ft.
 Rock pressure _____ lbs. _____ hrs.
 Oil _____ bbls., 1st 24 hrs.
 Fresh water 50' feet 240' feet
 Salt water - feet _____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16	<i>45' CTS</i>		Kind of Packer _____
13			
10			Size of _____
8 1/4			
6 3/4			Depth set _____
5 3/8	<i>Sand</i>		
3			Perf. top _____
2			Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

CASING CEMENTED 16 SIZE 45 No. FT. 1-15-84 Date
 NAME OF SERVICE COMPANY By hand
 COAL WAS ENCOUNTERED AT 210 FEET 36 INCHES
240' FEET 24" INCHES FEET INCHES
 FEET INCHES FEET INCHES

Drillers' Names Beverly Dry Co. Reg # 1

Remarks: *pits are good & holding
next csg at 1650' of 8 5/8 csg
all procedure good!*

1-17-85
DATE

Arthur J. Davis (509)
DISTRICT WELL INSPECTOR

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS WELLS DIVISION

RECEIVED
FEB 1 - 1985

OIL & GAS DIVISION

INSPECTOR'S WELL REPORT OF MINES

Wyo-109-0947

Permit No.

Completion of Dr. Oper.

Oil or Gas Well (KIND)

Gas

Company C.N.G. Dev.

Address Pittsburgh, Pa

Farm R. Crouch

Well No. 1233

District Oceana County Wyo

Drilling commenced 1-14-84

Drilling completed 1-26-84 Total depth 3350

Date shot _____ Depth of shot _____

Initial open flow _____ /10ths Water in _____ Inch

Open flow after tubing _____ /10ths Merc. in _____ Inch

Volume _____ Cu. Ft.

Rock pressure _____ lbs. _____ hrs.

Oil _____ bbls., 1st 24 hrs.

Fresh water 60' feet _____ feet

Salt water 1300 Pump feet _____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			Kind of Packer _____
16			
13	40 cts		Size of _____
10			
8 1/4	8 5/8 1602C. 45		Depth set _____
6 5/8			
5 3/16			
3	4 1/2 3262 = 300		Perf. top _____
2			Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

CASING CEMENTED 4 1/2 SIZE 3262 No. FT. 1-26-84 Date

NAME OF SERVICE COMPANY D-S.

COAL WAS ENCOUNTERED AT 210' FEET 36 INCHES

240 FEET 24 INCHES FEET INCHES

FEET INCHES FEET INCHES

Drillers' Names Beverly Dr. Co. Rig #1

Remarks: at Location this date well completed Big Lime will do - two stage job. Ravencliff 5' B-lime. procedure Good!
1-30-85

DATE

District Well Inspector

2 Wells

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS WELLS DIVISION

RECEIVED

APR 25 1985

INSPECTOR'S WELL REPORT OIL & GAS DIVISION

DEPT. OF MINES

Oil or Gas Well _____
(KIND)

Wyo - 109-0947 #1233
Wyo - 109-0944 #1075

Permit No. _____

Company C19.
 Address Pittsburgh, Pa
 Farm Crouch & Crouch
 Well No. 1233 #1075
 District Osceola County Wyo
 Drilling commenced _____
 Drilling completed _____ Total depth _____
 Date shot _____ Depth of shot _____
 Initial open flow _____ /10ths Water in _____ Inch
 Open flow after tubing _____ /10ths Merc. in _____ Inch
 Volume _____ Cu. Ft.
 Rock pressure _____ lbs. _____ hrs.
 Oil _____ bbls., 1st 24 hrs.
 Fresh water _____ feet _____ feet
 Salt water _____ feet _____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer _____
13			
10			Size of _____
8 1/4			
6 5/8			Depth set _____
5 3/16			
3			Perf. top _____
2			Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

CASING CEMENTED _____ SIZE _____ No. FT. _____ Date _____
 NAME OF SERVICE COMPANY _____
 COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES
 _____ FEET _____ INCHES FEET _____ INCHES
 _____ FEET _____ INCHES FEET _____ INCHES

Drillers' Names Beverly Drig Co. Reg #1
 Remarks: Justice Const. - doing Reclamation work
Justice working on these two (2 well) &
doing Reclamation work. not complete bc
procedure good final

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS WELLS DIVISION

RECEIVED

JUL 16 1985

OIL & GAS DIVISION

DEPT. OF MINES

INSPECTOR'S WELL REPORT

Wyo-109-0947
Permit No.

Final Refused

Oil or Gas Well
(KIND)

Gas

Company	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
<i>C. N. G. Dev. Co</i>	Size			
<i>Pittsburgh, Pa</i>	16			Kind of Packer
<i>Robert Crouch Etc</i>	13			
Well No. <i>1233</i>	10			Size of
District <i>Adena</i> County <i>Wyo.</i>	8 1/4			
Drilling commenced	6 5/8			Depth set
Drilling completed	5 3/16			
Date shot	3			Perf. top
Initial open flow	2			Perf. bottom
Open flow after tubing	Liners Used			Perf. top
Volume				Perf. bottom
Rock pressure	CASING CEMENTED	SIZE	No. FT.	Date
Oil	NAME OF SERVICE COMPANY			
Fresh water	COAL WAS ENCOUNTERED AT			
Salt water	FEEET INCHES			

Drillers' Names *Beverly Dig Co Reg #1*

Remarks: *Final Refused due to following*
1- all areas need seed & mulch
2- Drainage control needed ditch lines -
3- Sedimentation Barrier need replaced (new)
4- Drain pipes plugged.

7-15-85

Arthur C. H. Davis
DISTRICT WELL INSPECTOR

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS WELLS DIVISION

RECEIVED
AUG 16 1985
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

INSPECTOR'S WELL REPORT

Wyo-109-0947
Permit No. _____

Final Incomplete

Oil or Gas Well _____
(KIND) *Gas*

Company C.M. Dev. Co.
 Address Pittsburgh Pa.
 Farm Couch Robert
 Well No. #1233
 District Oceana County Wayne
 Drilling commenced 1984
 Drilling completed 1984 Total depth _____
 Date shot _____ Depth of shot _____
 Initial open flow _____ /10ths Water in _____ Inch
 Open flow after tubing _____ /10ths Merc. in _____ Inch
 Volume _____ Cu. Ft.
 Rock pressure _____ lbs. _____ hrs.
 Oil _____ bbls., 1st 24 hrs.
 Fresh water _____ feet _____ feet
 Salt water _____ feet _____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer _____
13			
10			Size of _____
8 1/4			
6 5/8			Depth set _____
5 3/16			
3			Perf. top _____
2			Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

CASING CEMENTED _____ SIZE _____ No. FT. _____ Date _____
 NAME OF SERVICE COMPANY _____
 COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES
 _____ FEET _____ INCHES FEET _____ INCHES
 _____ FEET _____ INCHES FEET _____ INCHES

Drillers' Names Beverly Dry Co. Rig #1

Remarks: *Final Incomplete will wait for Gas to show. Final Refused*

8-13-85
DATE

Arthur C. St. Clair
DISTRICT WELL INSPECTOR

1R-21
2 Wells

STATE OF WEST VIRGINIA
DEPARTMENT OF ~~MINES~~ Energy
OIL AND GAS WELLS DIVISION

DEPARTMENT OF OIL & GAS
DIVISION OF ENERGY

RECEIVED
SEP 25 1985

1075
Wyo-109-0944 INSPECTOR'S WELL REPORT

Permit No. Wyo-109-0947-#1233

Final Release

Oil or Gas Well Oil
(KIND)

Company C. N. G. Dev. Co.
 Address Pettsburgh WV.
 Farm Crouch
 Well No. 1075 91233
 District Boona County Wyo.
 Drilling commenced _____
 Drilling completed _____ Total depth _____
 Date shot _____ Depth of shot _____
 Initial open flow _____ /10ths Water in _____ Inch
 Open flow after tubing _____ /10ths Merc. in _____ Inch
 Volume _____ Cu. Ft.
 Rock pressure _____ lbs. _____ hrs.
 Oil _____ bbls., 1st 24 hrs.
 Fresh water _____ feet _____ feet
 Salt water _____ feet _____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer
13			
10			Size of
8 1/4			
6 5/8			Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED _____ SIZE _____ No. FT. _____ Date _____
 NAME OF SERVICE COMPANY _____
 COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES
 _____ FEET _____ INCHES _____ FEET _____ INCHES
 _____ FEET _____ INCHES _____ FEET _____ INCHES

Drillers' Names Big Justice - Excavating & Reclaiming

Remarks: Finals Refused due to grass not growing both wells & roads need Reseeding & mulch

9-20-85
DATE

Robert G. Veit
DISTRICT WELL INSPECTOR

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

INSPECTOR'S PLUGGING REPORT

VEGETATED

Permit No. _____

Well No. _____

COMPANY _____ ADDRESS _____

FARM _____ DISTRICT _____ COUNTY _____

Filling Material Used _____

Liner		Location		Amount	Packer	Location		
PLUGS USED AND DEPTH PLACED			BRIDGES			CASING AND TUBING		
CEMENT-THICKNESS	WOOD-SIZE	LEAD	CONSTRUCTION-LOCATION		RECOVERED	SIZE	LOST	

Drillers' Names _____

Remarks:

_____ I hereby certify I visited the above well on this date.

DATE

DISTRICT WELL INSPECTOR

INSPECTOR'S PERMIT SUMMARY FORM

11-5-84

WELL TYPE Gas - Shallow
ELEVATION 1829.25
DISTRICT OCEANA
QUADRANGLE OCEANA
COUNTY WYOMING

API# 47-109-~~0147~~ 0947
OPERATOR CMG. Dev. Corp
TELEPHONE _____
FARM Robert E. Crouch
WELL # 1075

SURFACE OWNER R. Crouch COMMENTS _____ TELEPHONE _____
TARGET FORMATION B-Lime DATE APPLICATION RECEIVED _____

DATE STARTED _____
LOCATION 1-3-85 NOTIFIED 1-3-85 DRILLING COMMENCED 1-14-85

WATER DEPTHS 740', _____, _____, _____
COAL DEPTHS 210-, 740', _____, _____

CASING

Ran 11 3/4 feet of 40' "pipe on C.T.S with 1-15-85 fill up
Ran 8 5/8 feet of 1602- "pipe on C.T.S with 1-19-85 fill up
Ran _____ feet of _____ "pipe on _____ with _____ fill up
Ran _____ feet of _____ "pipe on _____ with _____ fill up

RECORDED
DEPT. OF ENERGY
OIL AND GAS

TD 3370 feet on 1-26-85

PLUGGING

JUN 2 1986

Type	From	To	Pipe Removed

Pit Discharge date: _____ Type _____

Field analysis ph _____ fe _____ cl _____

Well Record received unknown

Date Released 5-30-86

X

William C. St. Clair (509)
Inspector's signature

API# 47 109 - 0947

LIST ALL VISITS FOR THIS PERMIT

	DATE	TIME	PURPOSE	COMMENTS
1				
2	5-1-85		New Const.	
3	1-10-85		Moving on Location	
4				
5	1-17-85		Status Dig at 840' SAND	
6				
7	1-19-85		Run 1602' of 8 5/8 CTS	
8				
9	1-19-85-		Status. Dig at 1990 Dusting	
10				
11				
12	1-26-85		Completed Dig at 3370'	
13				
14				
15				
16				
17				
18				
19				
20				

Notes

Violation No. V
86-2412
VI-27



Date: 5-1-86
Well No: #1233
API NO: 47-109-0947
State County Permit

RECEIVED
DEPARTMENT OF ENERGY
AND GAS
SD Add
5-12-86

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

MAY 5 1986

Well TYPE: Oil ___ / Gas ___ Liquid Injection ___ / Waste Disposal ___ /
Of "Gas" - Production Storage ___ / Deep ___ / Shallow
LOCATION: Elevation: 1829 Watershed: Ban Br. CLEAR Fork
District: OCEANA County: WYOMING Quadrangle: OCEANA
WELL OPERATOR CNG Dev. Corp DESIGNATED AGENT GARY NICHOLAS
Address P.O. Box 15746 Address CROSSWIND Corp.
P. Ft. S.burgh, Pa. 15244 Box 698 - Bridgeport W.V.

The above well is being posted this ___ day of ___, 19___, for a violation of Code 22B-130 and/or Regulation A, B, C, D, set forth in detail as follows:
(USE REVERSE SIDE OF THIS NOTICE IF NECESSARY)

Failure to Re seed 5' Fert Lize OR Sod.
LOCATION:
Results - Burn out of grass.

A copy of this notice has been posted at the well site and sent by certified or registered mail to the indicated well operator or his designated agent.
You are hereby granted until MAY 9, 1986, to abate this violation.
Failure to abate the violation may result in action by the Department under Code 22B, Article 1.

James E. St. Clair 509
Oil and Gas Inspector
Address Box 468
BRENTON, W.V. 24818
Telephone: 732-6227



Violation No. 82-2412
 VI-21
 ENERGY
 GAS

Date: 5-1-82
 Well No. #1233
 Well No. 109-0747
 State County Permit

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

MAY 5 1982

Well Type: Oil - Gas
 OF "Gas" - Production / Storage / Shallow / Waste Disposal
 Location: Elevation: 1829
 Waterbody: Rambo, Clear Fork
 District: Oceana County
 Well Operator: CME Dev Corp
 Address: 708-1274
 The above well is being posted this day of _____ 1982 for a violation of Code 22B-130 and/or Regulation 22B-130 in detail as follows:
 (USE REVERSE SIDE OF THIS NOTICE IF NECESSARY)

Failure to record & fertize or soil
 Location: Rambo - Run out of dam

A copy of this notice has been posted at the well site and sent by certified or registered mail to the indicated well operator or his designated agent. You are hereby directed to show this violation. Failure to abate the violation may result in action by the department under Code 22B, Article 1.

William E. St. Clair, Sr.
 Oil and Gas Inspector

Address: 708-1274
 Brenton, W.V. 26118

Telephone: 752-0227

FORM IV-31

9-83

VIOLATION #2418
86

SD 6-2-86
Add

Date: 5-30-86

Operator's #1233

Well Number

API Well No.: 47 - 109 - 0947
State County Permit

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

NOTICE OF ABATEMENT

WELL TYPE: Oil / Gas Liquid Injection / Waste disposal

Underground
If "Gas" - Production Storage / Deep / Shallow

LOCATION: Elevation: 1829 Watershed: Fountler-Charlton DAN Br.

District: OCEANA County: Wyoming Quadrangle: OCEANA

WELL OPERATOR: CNA Dev. Corp.
Address: PO Box 15246
Pittsburgh P. 15244

DESIGNATED AGENT: GAY NICHOLS
Address: GOS ROAD PARK
BY 698
BRIDGEPORT, W.V. 26201

Notice is hereby given that the undersigned authorized oil and gas inspector made a special inspection of the above named well on 5-30, 1986.

The violation of Code § 22-B-1-30 heretofore found to exist on 5-1, 1986, by Form IV-27, "Notice of Violation" Form IV-28, "Imminent Danger Order" of that date has been totally abated. If the abated violation was found by an Imminent Danger Order requiring operations to cease, such requirement is hereby rescinded, and the well operator is hereby notified that he may resume operations.

COMMENTS

Found violated conditions
Abated this date

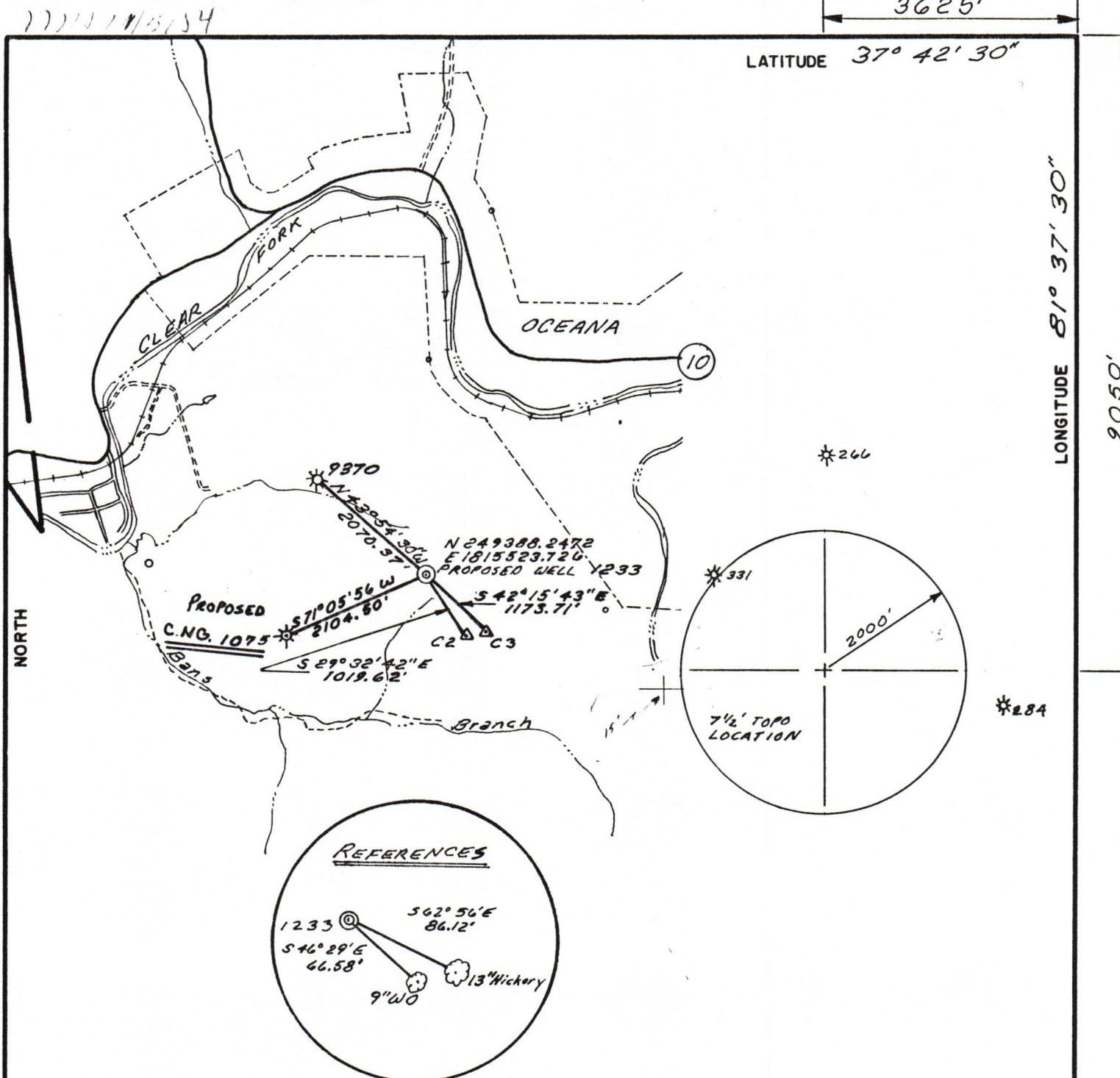
JUN 2 1986

A copy of this notice has been posted at the well site and sent by certified or registered mail to the indicated well operator or his designated agent.

Arthur C. St. Main 509
Oil and Gas Inspector

Address: BY 468
BAEN TOW. W.V. 24818

Telephone: 732-6227



FILE NO. 03-0015
 DRAWING NO. 84027
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1" IN 2500'
 PROVEN SOURCE OF ELEVATION BIG BEAR MINING
 ELEVATION ΔC-2 = 1874.04

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) Thomas P. Park
 R. P. E. 3698 L. L. S. _____

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6
 (8-78)



DATE JULY 25, 1984
 OPERATOR'S WELL NO. CNDG 1233
 API WELL NO. _____
47 - 109 - 0947
 STATE COUNTY PERMIT

Department of Mines
 Oil & Gas Division

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS", PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X)
 LOCATION: ELEVATION 1829.39 WATER SHED BANS BRANCH
 DISTRICT OCEANA COUNTY WYOMING
 QUADRANGLE OCEANA
 SURFACE OWNER ROBERT C. CROUCH, et al. ACREAGE 184.8
 OIL & GAS ROYALTY OWNER JUANITA LAWSON, et al. LEASE ACREAGE 184.8
 LEASE NO. 78229 DV-582
 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 BIG LIME ESTIMATED DEPTH 3370'
 WELL OPERATOR CNG DEVELOPMENT CO DESIGNATED AGENT GARY A NICHOLAS
 ADDRESS ONE PARK RIDGE CENTER ADDRESS CROSSWIND CORPORATE PARK
PITTSBURGH, PA 15224 RT 2 BOX 698
BRIDGEPORT, WVA 26330

WYOM 0947



IV-35
(Rev 8-81)

RECEIVED
FEB 15 1985

OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia

Department of Mines
Oil and Gas Division

Date January 22, 1985
Operator's
Well No. CNGD WN 1233
Farm Juanita Lawson
API No. 47 - 109 - 0947

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1829.39 Watershed Bans Branch
District: Oceana County Wyoming Quadrangle Oceana

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 Robert C. Crouch, et al
ADDRESS Box 770, Oceana, West Virginia 24870
MINERAL RIGHTS OWNER Juanita Lawson, et al
ADDRESS 913 McQueen Blvd., St. Albans, WV 25117
OIL AND GAS INSPECTOR FOR THIS WORK
Arthur St. Clair ADDRESS P. O. Box 157, Brenton, WV 24818
PERMIT ISSUED 11-5-84
DRILLING COMMENCED 12-4-84
DRILLING COMPLETED 12-13-84
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.	26	26	--
13-10"			
9 5/8			
8 5/8	1685	1685	To Surf.
7			
5 1/2			
4 1/2	2318	2318	120 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Big Lime Depth 3370 feet
Depth of completed well 3378 feet Rotary X / Cable Tools
Water strata depth: Fresh 550 feet; Salt feet
Coal seam depths: 202-206
350-354
779-781
1452-1456
1568-1574 Is coal being mined in the area? No
OPEN FLOW DATA
Producing formation Ravencliff Sand Pay zone depth 2069-2089 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow 292 Mcf/d Oil: Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure 420 psig (surface measurement) after 24 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)

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

McCullough Perforated Ravencliff Sand 2069 - 2089; 12 holes (.39)

Dowell Foam Frac (75Q) Ravencliff Sand - Break 3000, Avg. TPSI 2800, Avg. Rate 20 BPM,
ISI 1950, 5 min 1850, used 730,000 SCFN₂ 45,000# 20/40 Sand,
500 gals 15% HCL

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Sand, Shale			0	202	Water Fresh 550'
Coal			202	206	Coal 202 - 206
Sand, Shale			206	350	350 - 354
Coal			350	354	779 - 781
Sand, Shale			354	779	1452 - 1456
Coal			779	781	1568 - 1574
Sand, Shale			781	1452	
Coal			1452	1456	
Sand, Shale			1456	1568	
Coal			1568	1574	
Sand, Shale			1574	1931	
Princeton			1931	1983	
Sand, Shale			1983	2003	
Ravencliff			2003	2091	
Shale			2091	2094	
Avis L. S.			2094	2132	
Shale			2132	2154	
Sand, Shale			2154	2565	
Maxton			2565	2580	
Sand, Shale			2580	2672	
Lower Maxton			2672	2731	
Sand, Shale			2731	2760	
Little Lime			2760	2858	
Sand			2858	2888	
Big Lime			2888	3275	
Red Rock			3275	3378	
<u>Gamma Ray Tops</u>					
Princeton 1857-1901					
Ravencliff 2058-95					
Avis lime 2095-2137					
U. Max. Stray 2219-2322					
U. Maxton 2443-69					
L. Maxton 2677-2746					
L. Lime 2764-2930					
B. Lime 2946-3281					
LTD 3382					

(Attach separate sheets as necessary)

By: Gary A. Muller
Well Operator

CNG DEVELOPMENT COMPANY

Date: January 22, 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 ^{encountered}, encountered in the drilling of a well."