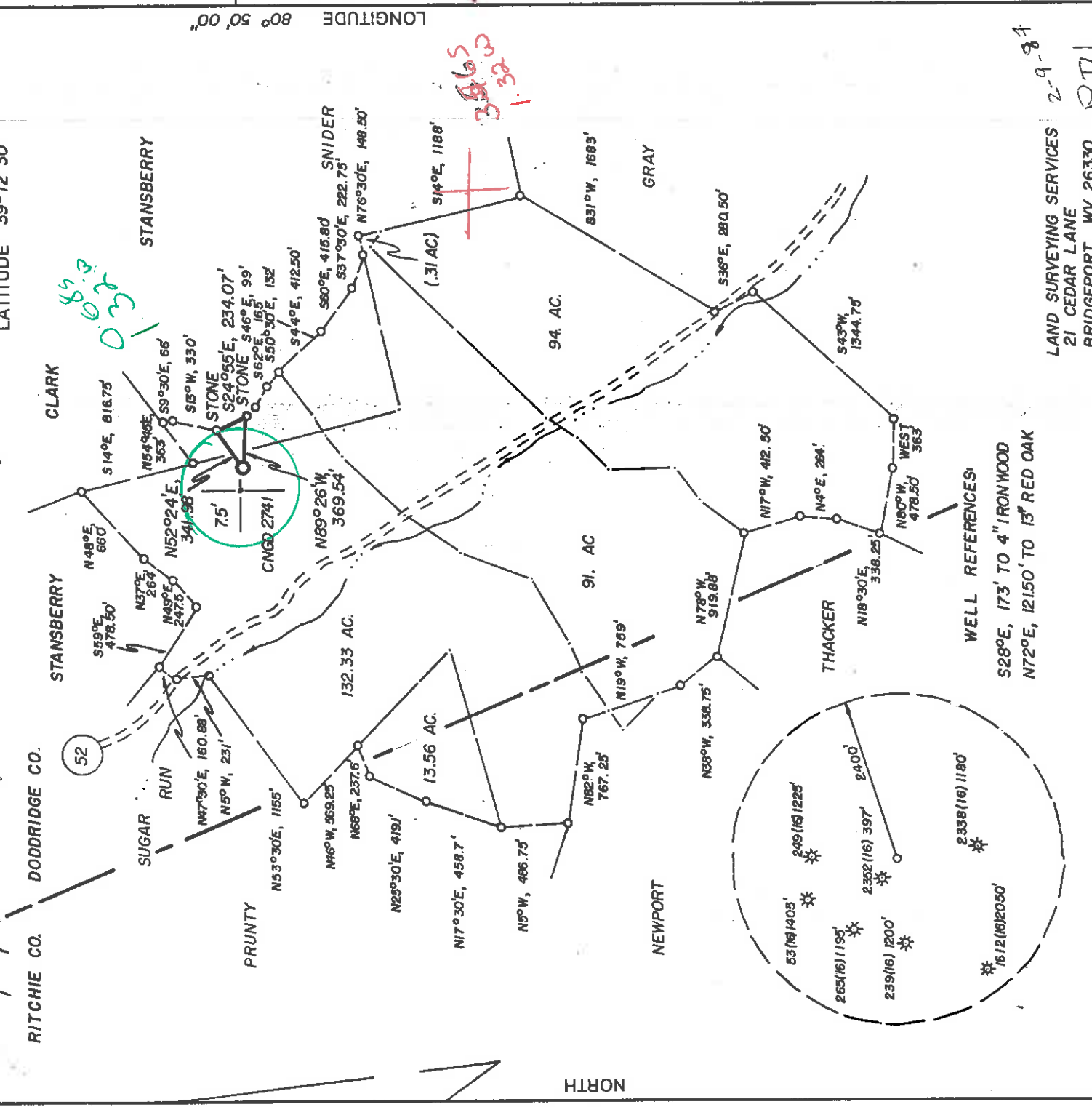


AS 2/23/87

7000' 3915

7580'

LATITUDE 39°12'30" LONGITUDE 80°50'00"



WELL REFERENCES:  
 S28°E, 173' TO 4" IRONWOOD  
 N72°E, 121.50' TO 13" RED OAK

LAND SURVEYING SERVICES 2-9-87  
 21 CEDAR LANE  
 BRIDGEPORT, WV 26330  
 PHONE: 304-842-2018  
 RJH

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 IN 200  
 PROVEN SOURCE OF ELEVATION EXISTING WELL 2352  
 397' NW OF LOCATION AT ELEV. 1005'

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. NO. 674  
 STEPHEN D. LOSH



STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION

PLACE SEAL HERE

DATE JANUARY 5, 1987  
 OPERATOR'S WELL NO. CNGD 2741  
 API WELL NO. \_\_\_\_\_

47-017-3523

WELL TYPE: OIL \_\_\_\_\_ GAS \_\_\_\_\_ LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION \_\_\_\_\_ STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW \_\_\_\_\_  
 LOCATION: ELEVATION 1036' WATER SHED SUGAR RUN  
 DISTRICT SOUTHWEST 7 COUNTY DODDRIDGE  
 QUADRANGLE OXFORD 7.5 526 NCA Holbrook ACREAGE 132.33  
 SURFACE OWNER VENOCHIA GRAY  
 OIL & GAS ROYALTY OWNER D. W. GRAY LEASE ACREAGE 343

PROPOSED WORK: DRILL \_\_\_\_\_ 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 ALEXANDER ESTIMATED DEPTH 5350'  
 WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS  
 ADDRESS ONE PARK RIDGE CENTER 147 ADDRESS ROUTE 2, BOX 698  
 PITTSBURGH, PA 15244 BRIDGEPORT, WV 26330

6-6 Straight Fork - Bluestone Creek (133)

COUNTY NAME PERMIT

MAR 16 1987

IV-35  
(Rev 8-81)



**RECEIVED**  
MAY 07 1987

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date 4-24-87  
Operator's  
Well No. CNGD WN 2741  
Farm D. W. Gray  
API No. 47 - 017 - 3523

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

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: 1036 Watershed Sugar Run  
District: Southwest County Doddridge Quadrangle Oxford

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 Venochia Gray  
ADDRESS c/o Englewood, OH 45322  
Shilt 293 Downing Place  
MINERAL RIGHTS OWNER D. W. Gray  
ADDRESS \_\_\_\_\_

OIL AND GAS INSPECTOR FOR THIS WORK  
Mike Underwood ADDRESS Rt. 2, Box 114,  
Salem, WV 26426  
PERMIT ISSUED March 10, 1987  
DRILLING COMMENCED March 31, 1987  
DRILLING COMPLETED April 5, 1987

IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED  
ON \_\_\_\_\_

Casing Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16 Cond.			
13-10"	245	245	To Surf
9 5/8			
8 5/8	1526	1526	To Surf.
7			
5 1/2			
4 1/2	5286	5286	200 sks
3			
2 1-1/4	5056	5056	
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5350 feet

Depth of completed well 5154 feet Rotary X / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh 30 feet; Salt \_\_\_\_\_ feet  
Coal seam depths: \_\_\_\_\_ Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Alexander Pay zone depth 5094-5124 feet  
Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 340 Mcf/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests 4 hours  
Static rock pressure 90 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)

MAY 11 1987

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

Perforate Alexander 5094 - 5124, 32 holes, .39 HSC  
 Nowasco 75Q Foam Frac - Breakdown 1680#, Ave HHP 2 pumps, Ave Rate 20 BPM, Ave Pr 2900#,  
 Max Tr Pres. 2930#, 500 gal Total Acid, 7,000# 80/100 Sand, 62,000# 20/40 Sand,  
 57,000# 10/30 Sand, Max. Conc. 6#/gal, Total Fluid 409 bbl, Sl Fluid 235 bbl,  
 Total Nit. 820,624 SCF, ISIP 1340, 5 min 960

**RECEIVED**  
MAY 07 1987

WELL LOG

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fires; and salt water, coal, oil and gas.
KB - GL			0	10	
Sand, Shale & RR			10	1875	
L. Lime			1875	1890	
Sand & Shale			1890	1900	
Big Lime			1900	1960	
Injun			1960	2036	
Sand & Shale			2036	3440	
U. Speechley			3440	3500	
Shale			3500	3681	
Speechley			3681	3766	
Shale			3766	4425	
Sand & Shale			4425	4578	
Riley			4578	4610	
Shale			4610	4860	
Benson			4860	4890	
Shale			4890	5078	
Alexander			5078	5154	
				712	
			1900	1960	
Big Lime			1960	2028	
Big Injun			2028	2326	
Weir			2196	2394	
Berea			2388	2620	
Gordon			2593	3320	
Warren			3233	3752	
Speechley			3670	4090	
Balltown			4040	4458	
Bradford			4400	4878	
Benson			4828	5154	
Alexander			5072		

LOG TOPS ✓

(Attach separate sheets as necessary)

ONG DEVELOPMENT COMPANY  
 Well Operator  
 By: [Signature]  
 Date: April 24, 1987

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: February 10, 19 87  
 2) Operator's Well No. GNGD 2741  
 3) API Well No. 47 017 3523  
 State County Permit



FEB 19 1987

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

DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

- 4) WELL TYPE: A Oil  Gas  B (If "Gas", Production  Undergrad storage  Deep  Shallow   
 5) LOCATION: Elevation: 1036 Watershed: Sugar Run  
 District: Southwest 7 County: Doddridge 017 Quadrangle: Oxford 523  
 6) WELL OPERATOR: Development Co. CODE: 10110 7) DESIGNATED AGENT Gary Nicholas  
 Address c/o Cheryl S. Hartle P.O. Box 15746 Crosswind Corporate Park  
 Pittsburgh, PA 15244 Rt. 2, Box 698, Bridgeport, WV 26330  
 8) OIL & GAS INSPECTOR TO BE NOTIFIED  
 Name: Mike Underwood Sam Jack Drilling Co.  
 Address: Route 2, Box 114 P.O. Box 48  
 Salem, WV 26426 Buckhannon, WV 26201

10) PROPOSED WELL WORK: Drill  / Plug off old formation  / Perforate new formation   
 Redrill  / Stimulate

- 11) GEOLOGICAL TARGET FORMATION, Alexander  
 12) Estimated depth of completed well, 5300 feet  
 13) Approximate trata depths: Fresh, None reported feet; salt, 1338 Damp  
 14) Approximate coal seam depths: None reported Is coal being mined in the area? Yes  
 Refer to Permit #3490, 3358 and 7472 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.	For drilling	Left in well		
Conductor							
Fresh water	1 1/4	H-40	42	X	25040	To surface	By rule 15.05
Coal							
Intermediate	8-5/8	X-42	23	X	1500	To surface	By rule 15.05
Production	4-1/2	J-55	10.5	X	5350	200 - 400	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 47-017-3523

March 10 19 87  
 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 March 10, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

9026

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <input checked="" type="checkbox"/>	Casing: <input checked="" type="checkbox"/>	Fee: 17263	WPCCP: <input checked="" type="checkbox"/>	SOE: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>
				177			

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.

*John U. Johnston*  
 Director, Division of Oil and Gas

