

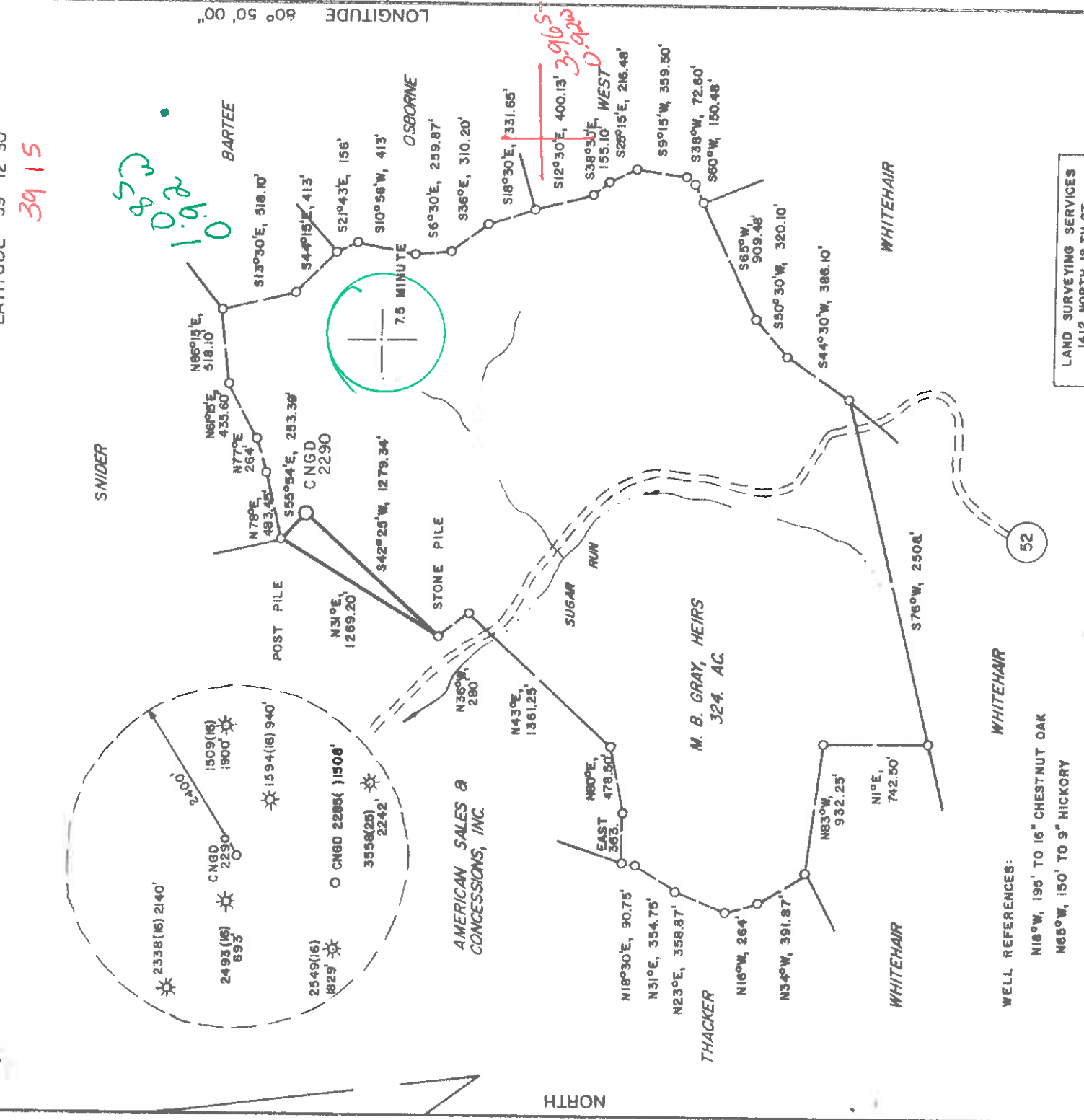
MS 1/09/86

CODE

FILE

LATITUDE 39° 12' 30" 4910'

LONGITUDE 80° 50' 00"



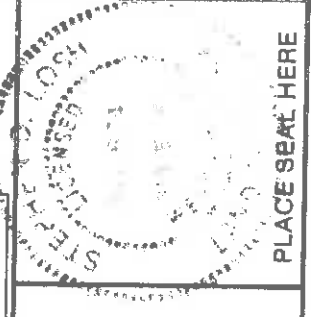
WELL REFERENCES:  
 WHITEHAIR  
 N18°W, 195' TO 16" CHESTNUT OAK  
 N65°W, 150' TO 9" HICKORY

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

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE \_\_\_\_\_ = 1,000'  
 MINIMUM DEGREE OF ACCURACY \_\_\_\_\_ IN \_\_\_\_\_  
 PROVEN SOURCE OF ELEVATION EXISTING WELL 2493'  
 693' WEST OF LOC. AT ELEV. 1083'

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) Alyce D. Losh  
 R.P.E. \_\_\_\_\_ I.L.S. NO. 674  
 STEPHEN D. LOSH



STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE NOVEMBER 20 19 85  
 OPERATOR'S WELL NO. CNGD 2290  
 API WELL NO. \_\_\_\_\_  
 PLACE SEAL HERE

47 017 3490  
 STATE COUNTY PERMIT

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS,") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1134' WATER SHED  SUGAR RUN  
 DISTRICT SOUTHWEST COUNTY DODDRIDGE  
 QUADRANGLE OXFORD 7.5 MINUTE 526 COUNTY NEZ Holbrook  
 SURFACE OWNER JEFFREY LOWTHER ACREAGE 324  
 OIL & GAS ROYALTY OWNER M. B. GRAY, HEIRS LEASE ACREAGE 324  
 LEASE NO. 64730

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 5300'  
 WELL OPERATOR CNG DEVELOPMENT COMPANY 142 DESIGNATED AGENT GARY A. NICHOLAS  
 ADDRESS 1 PARK RIDGE CENTER ADDRESS RT. 2, BOX 698

PITTSBURGH, PA 15244  
6-6 Straight Fork-Quaestone Creek (133)  
 BRIDGEPORT, WV 26330

FORM IV-6 (8-78)

H.T. HALL

**RECEIVED**

IV-35  
(Rev 8-81)

DEC 22 1986

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date December 16, 1986  
Operator's  
Well No. CNGD WN 2290  
Farm M. B. Gray Heirs  
API No. 47-017 - 3490

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: 1134 Watershed Sugar Run  
District: Southwest County Doddridge Quadrangle Oxford

COMPANY CNG Development Company  
ADDRESS O. Box 15746  
Pittsburgh, PA 15244  
DESIGNATED AGENT Gary A. Nicholas  
ADDRESS Rt. 2 Box 698  
Bridgeport, WV 26330  
SURFACE OWNER Jeffrey Lowther  
ADDRESS 6481 Silver Leaf Ave  
Reynoldsburg, OH 43068  
MINERAL RIGHTS OWNER M. B. Gray Heirs  
ADDRESS

OIL AND GAS INSPECTOR FOR THIS WORK  
Mike Underwood ADDRESS Rt. 2, Box 114  
Salem, WV 26426  
PERMIT ISSUED January 10, 1986  
DRILLING COMMENCED Nov. 10, 1986  
DRILLING COMPLETED Nov. 15, 1986

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"	203	203	To Surf.
9 5/8			
8 5/8	1619	1619	To Surf.
7			
5 1/2			
4 1/2	5326	5326	140 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5300 feet

Depth of completed well 5403 feet Rotary X / Cable Tools  
Water strata depth: Fresh 60 feet; Salt 1205 at feet

Coal seam depths: -- Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Alexander Pay zone depth 5158-5206 feet  
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d  
Final open flow 839 Mcf/d Final open flow Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 230 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)

DEC 30 1986

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

Perforated Alexander 5158-5206, 44 shots, .39 HSC  
 Fractured - Break 1000, Ave HHP 4 pumps, Ave Rate 20 BPM, Ave Pres. 2500, Max. Tr.  
 Pres. 2783, Total Acid 750, Total Sand 11,000# 80/100, 142,000# 20/40, Max Conc. 7#/gal,  
 Total Fluid 1222 bbl, SL Fluid 1057 bbl, ISIP 1400, 5 min 1250, Total Nit. 896,000 SCF.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
KB - GL			0	10	
Soil, Sand, Shale & RR			10	1921	Wet @ 60'
Lime			1921	1937	Damp @ 1465'
Sand & Shale			1937	1950	
Big Lime & Injun			1950	2100	
Sand & Shale			2100	4020	
Balltown			4020	4070	
Sand & Shale			4070	4895	
Benson			4895	4915	
Shale			4915	5139	
Alex. ✓			5139	5403	
LOG TOPS ✓					
Big Lime			1965	2057	
Big Injun			2057	2092	
Greenbrier Unconf			2092	2390	
Well			2262	2453	
Berea			2453	2454	
Warren			3346	3420	
Speechley			3726	3794	
Bradford			4462	4540	
Benson			4892	4942	
Alexander			5144	5226	

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY  
 Well Operator

By: 

Date: December 16, 1986

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."

FORM WV-2 (B)  
 RECEIVED  
 DEC 19 1985



1) Date: December 10, 1985  
 2) Operator's Well No. 2290  
 3) API Well No. 47-017-3490  
 State County Permit

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

4) WELL TYPE: A Oil  / Gas   
 B (If "Gas", Production  / Undergrnd storage  / Deep  / Shallow   
 5) LOCATION: Elevation: 1134 Watershed: Sugar Run  
 District: Southwest 142 County: Doddridge Quadrangle: Oxford  
 6) WELL OPERATOR CNG Development Co CODE: 10110 7) DESIGNATED AGENT Gary Nicholas  
 Address c/o Paul W. Garrett, P.O. Box 15746 Address Crosswind Corporate Park  
 Pittsburgh, PA 15244 Rt. 2, Box 698, Bridgeport, WV 26330  
 8) OIL & GAS INSPECTOR TO BE NOTIFIED  
 Name Mike Underwood  
 Address Route 2, Box 114 P.O. Box 48  
 Salem, WV 26426 Buckhannon, WV 26201

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

11) GEOLOGICAL TARGET FORMATION, Alexander 424  
 Other physical change in well (specify) \_\_\_\_\_  
 12) Estimated depth of completed well, 5300 feet  
 13) Approximate trata depths: Fresh, 1460-1465 feet; salt, \_\_\_\_\_ feet.  
 14) Approximate coal seam depths: 1460, 1465 Is coal being mined in the area? Yes  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.	New	Used		
Conductor	11-3/4	H-40	42	X			
Fresh water							
Coal							
Intermediate	8-5/8	X-42	23	X			
Production	4-1/2	J-55	10.5	X			
Tubing	1-1/2	CN-55	2.75	X			
Lim...							

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-017-3490 Date January 10 19 86

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 January 10, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee	WPCP	S&E	Other
	h-d	25	WV 12278	25	25	25	

NOTE: Keep one copy of this permit posted at the drilling location.

Director, Division of Oil and Gas

See the reverse side of the APPLICANT'S COPY for instructions to the well operator. File

7/10

