

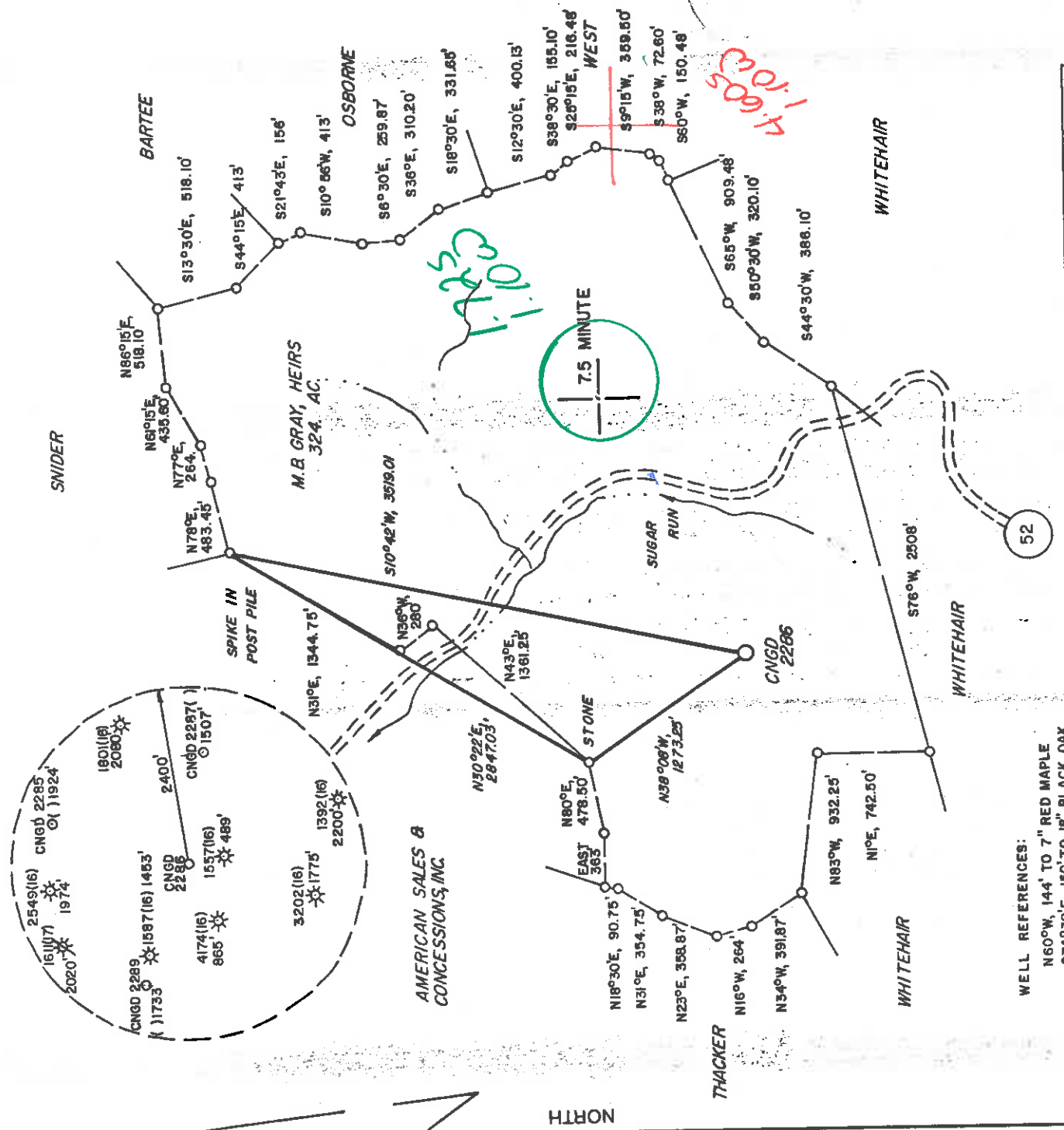
25 4/19/86

5900' 39' 15"

CODE CARD PLOT

LATITUDE 39° 12' 30"

LONGITUDE 80° 50' 00"



WELL REFERENCES:
N60°W, 144' TO 7" RED MAPLE
S74°30'E, 150' TO 18" BLACK OAK

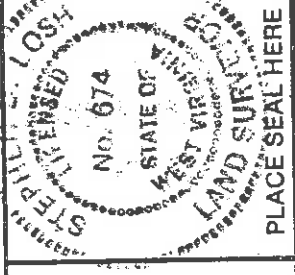
LAND SURVEYING SERVICES
1412 NORTH 18 TH ST.
CLARKSBURG, WV 26301
PHONE: 304-623-1214

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

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 1,000'
MINIMUM DEGREE OF
ACCURACY 1 IN 200
PROVEN SOURCE OF
ELEVATION TOP OF KNOB 1605' WEST
OF LOCATION AT ELEVATION 1277'

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 REGU-
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-
MENT OF ENERGY.
(SIGNED) *Stephen D. Losh*

R.P.E. _____ L.L.S. NO. 674
STEPHEN D. LOSH PLACE SEAL HERE



STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



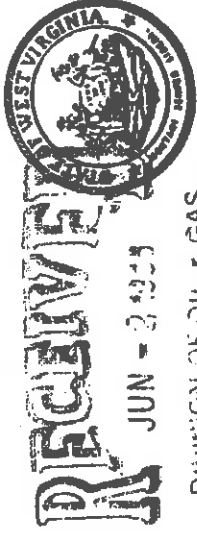
DATE JANUARY 30, 19 86
OPERATOR'S WELL NO. CNGD 2286
API WELL NO. _____
WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL STATE COUNTY PERMIT
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
LOCATION: ELEVATION 1133 WATER SHED SUGAR RUN
DISTRICT SOUTHWEST 7 COUNTY DODDRIDGE
QUADRANGLE OXFORD 7.5 MINUTE 586 ACREAGE 324
SURFACE OWNER JEFFREY LOWMYER
OIL & GAS ROYALTY OWNER M. B. GRAY, HEIRS LEASE ACREAGE 324

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 ALEXANDER ESTIMATED DEPTH 5300'
WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS
ADDRESS ONE PARK RIDGE CENTER 142 ADDRESS RT. 2, BOX 698
PITTSBURGH, PA 15244 BRIDGEPORT, WV 26330

PERMIT
APR 28 1986

6-4 Straight Fork - Bluestone Ct (133)



IV-35
(Rev 8-81)

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
Department of Mines
Oil and Gas Division

Date May 20, 1986
Operator's Well No. CNGD WN 2286
Farm M B. Gray
API No. 47-017-3497

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: 1133 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
Bridgport, WV 26330
SURFACE OWNER Jeffrey Lowther
ADDRESS 6481 Silverleaf Ave
Reynoldsville, OH 43068
MINERAL RIGHTS OWNER Jeffrey Lowther
ADDRESS 6481 Silverleaf Ave
Reynoldsville, OH 43068
OIL AND GAS INSPECTOR FOR THIS WORK
Mike Underwood ADDRESS Rt. 2 Box 114
Salem, WV 26426
PERMIT ISSUED April 18, 1986
DRILLING COMMENCED May 5, 1986
DRILLING COMPLETED May 10, 1986

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

Casing Tubing Size 20-16 Cond.	Used in Drilling	Left in Well	Cement fill up Cu. ft.
13-10"	241	241	To Surf.
9 5/8			
8 5/8	1601	1601	To Surf.
7			
5 1/2			
4 1/2	5364	5364	320 sks
3			
<u>2 1/4</u>	5119	5119	
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5300 feet
Depth of completed well 5372 feet Rotary X / Cable Tools
Water strata depth: Fresh 130 feet; Salt 1109 feet
Coal seam depths: 1527 - 1533 Is coal being mined in the area? NO

OPEN FLOW DATA
Producing formation Alexander Pay zone depth 5192-5144 feet
Benson 4820-4816 Bbl/d
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow 805 Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure 210 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)
JUN 9 1986

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

Perf. Alexander 5188-92 (15 holes), 5172-78 (21 holes), 5167-69 (6 holes), 5154-56 (6 holes), 5144-47 (12 holes) .39 HSC. Dowell balled out Perfs. with a total of 800 gals acid. Break down 1900 - used 100 7/8" perf. balls 1.3 S.G. Foam Frac (70Q) Alexander - Break 1900, Avg. TPST 2500, Avg Rate 20 BPM, ISI - screened out @ 4000 - Max Sand Conc. 4#, used 800 gals 15% HCL, total 20/40 Sand in the formation 47,300 and 595,500 SCFN2.
Perf. Benson 4816-20 (16 holes) .39 HSC; Dowell Foam Frac (75Q) Benson - Break 3700, Avg. TPST 3000, Avg Rate 20 BPM, ISI screened out @ 4000# Max Sand Conc. 3# used 500 gals 15% HCL and 22,300# 20/40 sand in the formation and 432,700 SCFN2.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas.
Cond.			0	5	
Sand, Shale & RR			5	900	1/4" stream water @ 130'
Lime & Shale			900	907	1/2" stream water @ 1109'
Sand, Shale & RR			907	1527	
Coal			1527	1533	Coal @ 1527 - 1533
Sand & Shale			1533	1928	
Lime			1928	1955	
Shale			1955	1965	
Lime			1965	2028	
Injun Sand			2028	2095	
Sand & Shale			2095	2458	
Berea Sand			2458	2460	
Sand & Shale			2460	4035	
Balltown			2460	4075	
Shale			4035	4075	
Riley			4075	4436	
Shale			4436	4515	
Benson			4515	4820	
Sand & Shale			4820	4824	
			4824	5372	
- ELECTRIC LOG TOPS ✓					
Big Lime			1980	2024	
Big Injun GR			2024	2072	
Weir			2262	2390	
Berea			2453	2455	
Warren			3350	3376	
Riley			4473	4512	
Benson			4810	4850	
Alexander			5122	5200	

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY
Well Operator
By: [Signature]
Date: May 21, 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."



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

4) WELL TYPE: A Oil Gas B (If "Gas", Production 1133) Underground storage Sugar Run Shallow Deep
5) LOCATION: Elevation: 1133 Watershed: Doddridge County: Oxford
District: Southwest VA. County: Doddridge County: Gary Nicholas
6) WELL OPERATOR CNG Development Co CODE: 10110 7) DESIGNATED AGENT Crosswind Corporate Park
Address c/o Paul W. Garrett, P.O. Box 15746 Rt. 2, Box 698, Bridgeport, WV 26330
Address Pittsburgh, PA 15244
8) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Mike Underwood
Address Route 2, Box 114
Salem, WV 26426
9) DRILLING CONTRACTOR:
Name Sam Jack Drilling Co.
Address P.O. Box 48
Buckhannon, WV 26201

10) PROPOSED WELL WORK: Drill deeper Redrill Stimulate
Plug off old formation Perforate new formation
Other physical change in well (specify): Alexander 4-54

11) GEOLOGICAL TARGET FORMATION, 5300 feet
12) Estimated depth of completed well, 193 feet; salt, 1359 feet.
13) Approximate trata depths: Fresh, 1500 feet; Is coal being mined in the area? Yes No
14) Approximate coal seam depths: permit # Dadd. 1587

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	Size	SPECIFICATIONS		FOOTAGE INTERVALS		PACKERS
		Grade	Weight per ft.	For drilling	Left in well	
Conductor	1-3/4	H-40	42	X	223-400	To Surface
Fresh water						By Rule 15.05
Coal	8-5/8	X-42	23	X	1600	To Surface
Intermediate	4-1/2	J-55	10.5	X	5300	200-400
Production	1-1/2	CN-55	2.75	X		By Rule 15.01
Tubing						Perforations: Top Bottom
Lin...						

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-017-3497 Date April 18 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 April 18, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent: AS	Plat: AS	Casing Fee: 13956	WPCP Fee: AS	SSE Fee: AS	Other: AS
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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 D. Underwood
Director, Division of Oil and Gas

