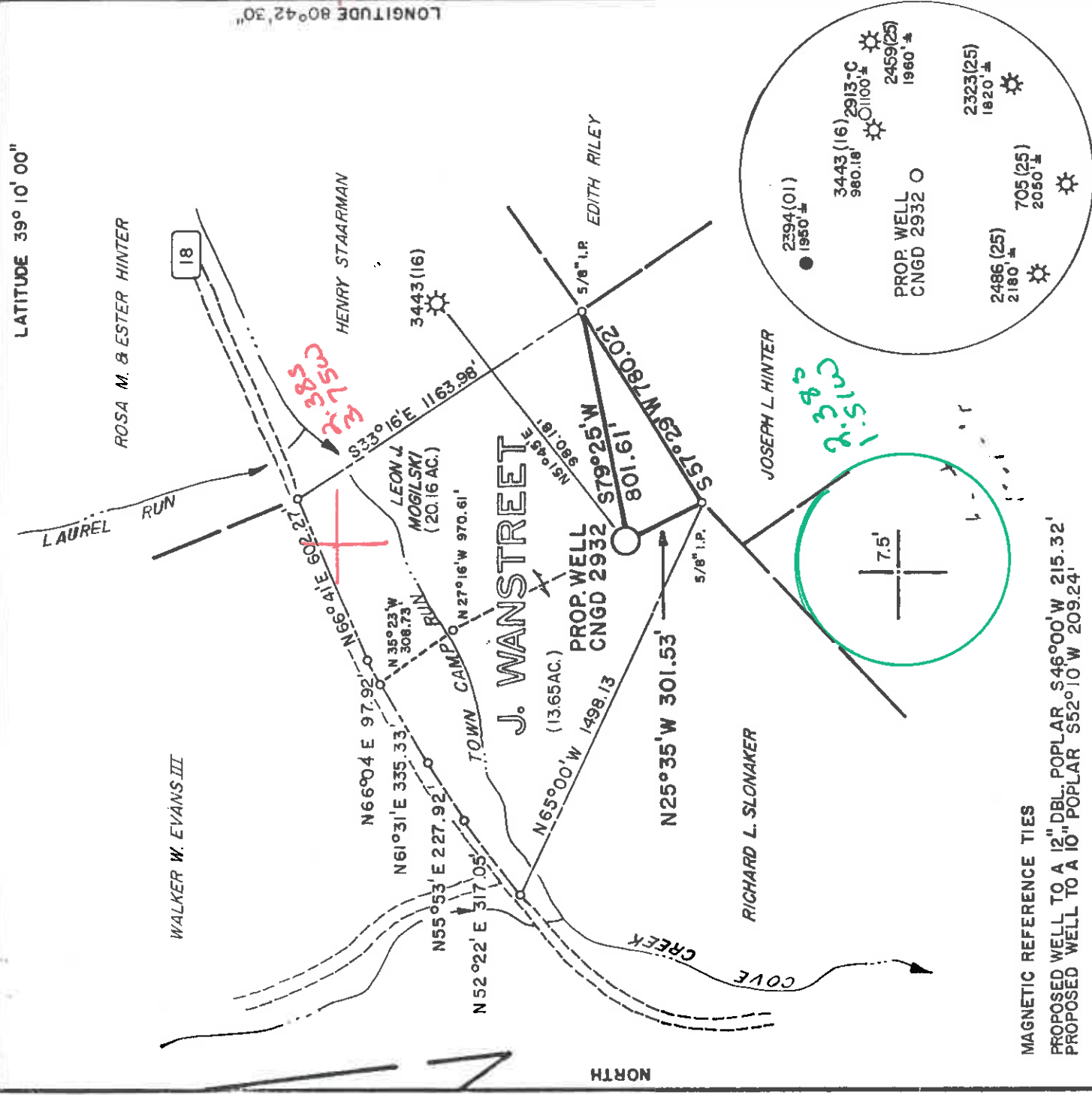


7,910'

LATITUDE 39° 10' 00"

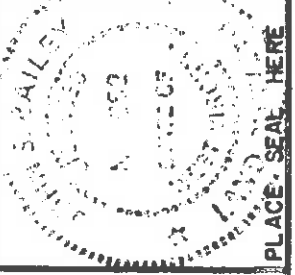
LONGITUDE 80° 42' 30"

12,525'



FILE NO. MSES 87-757
DRAWN BY VSH/HDW/SARC
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1 PART IN 200
PROVEN SOURCE OF ELEVATION WELL 47-017-3443 ELEV. 1090'

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) *Robert D. Barber*
R. P. E. L. S. 652



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

DATE MARCH 20 19 87
OPERATOR'S WELL NO. CNGD 2932
API WELL NO. 47-017-3547
STATE COUNTY PERMIT

PLACE SEAL HERE

Department of Mines
Oil & Gas Division

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL SHALLOW
(IF "GAS", PRODUCTION STORAGE DEEP
LOCATION: ELEVATION 1118.5' WATER SHED TOWN CAMP RUN OF THE LITTLE KANAWHA RIVER
DISTRICT COVE 2 Vads 511 123 COUNTY DODDRIDGE
QUADRANGLE NEW MILTON, WV 7.5 1 NEAREST TOWN LEOPOLD
SURFACE OWNER LEON J. MOGILSKI ACREAGE 20.16
OIL & GAS ROYALTY OWNER JOHN WANSTREET LEASE ACREAGE 2.16
LEASE NO. DV-11702
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 DEVONIAN SHALE ESTIMATED DEPTH 5660'
WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS
ADDRESS P. O. BOX 15746 142 ADDRESS ROUTE 2, BOX 698 BRIDGEPORT, WV 26330

DATE MARCH 20 19 87
OPERATOR'S WELL NO. CNGD 2932
API WELL NO. 47-017-3547
STATE COUNTY PERMIT

MSES consultants, inc. 6-6 Leopold (306)

Clarksburg, WV

JUN 1 1987



Date July 15, 1987
 Operator's Well No. 2932
 Farm Wanstreet
 API No. 47-017-3547

State of West Virginia
 Department of Mines
 Oil and Gas Division

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: 1118.5 Watershed Town Camp Run of the Little Kanawha River
 District: Cove County Doddridge Quadrangle New Milton

COMPANY CNG Development Company
 ADDRESS P.O. Box 15746 Pittsburgh, PA 15244
 DESIGNATED AGENT Gary A. Nicholas
 ADDRESS Rt. 2 Box 698 Bridgmont, WV 26330
 SURFACE OWNER Leon J. Mogilski
 ADDRESS Rt. 18, Box 87 New Milton, WV
 MINERAL RIGHTS OWNER John Wanstreet
 ADDRESS _____

OIL AND GAS INSPECTOR FOR THIS WORK
 MIKE Underwood ADDRESS Rt. 2, Box 1426 Salem, WV 26426
 PERMIT ISSUED May 29, 1987
 DRILLING COMMENCED June 15, 1987
 DRILLING COMPLETED June 21, 1987

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

Casing Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16 Cond.			
13-10"			
9 5/8			
8 5/8	1427	1427	To Surf.
7			
5 1/2			
4 1/2	5592	5592	825 sks
3			
2 1-1/2	5293	5293	--
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5660 feet
 Depth of completed well 5715 feet Rotary X / Cable Tools
 Water strata depth: Fresh 120 feet; Salt 1588 damp 1970 damp feet
 Coal seam depths: --- Is coal being mined in the area? No

OPEN FLOW DATA
 Producing formation Alexander Leopold Pay zone depth 5378-87;5357-61;5346-51;5332-35;532 feet
 Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
 Final open flow 712 Mcf/d Final open flow Bbl/d
 Time of open flow between initial and final tests 4 hours

Static rock pressure 1350 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)

AUG 03 1987

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

Perforated Alexander 5378-5387, 12 holes; 5357-5361, 6 holes; 5346-5351, 6 holes; 5332-5335, 4 holes; 5322-5324, 3 holes; .39 HSC.
 Water Frac 30# Gel - Alexander- Break 2000, Avg TPST 2183, Avg Rate 35 BPM, HHP used 1871, ISI Screened off @ 3500#, used 900 gals 15% FE Acid, 5000# 80/100, 50,000# 20/40, 17,850 16/30 (8,000# 16/30 in FM)
 Perforated Leopold 5167-5175, 24 holes, .39 HSC
 Water Frac 30# Gel Leopold - Break 2000, Avg TPST 1940, Avg Rate 35 BPM, HHP used 1664, ISI screened off @ 3500#, used 500 gals 15% FE acid, 5000# 80/100, 40,000# 20/40, (31,585 20/40 in FM)

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
E-LOGS TOPS ✓					
Sand, Shale & RR			0	742	1/8" stream water @ 120' Damp @ 1588' Damp @ 1970'
Lime			742	752	
Sand, Shale & RR			752	1792	
Limestone			1792	1836	
Sand & Shale			1836	5715	
Big Lime			2144	2250	
Big Injun			2250	2290	
Weir			2376	2490	
Berea			2570	2592	
Gordon			2794	2808	
Bayard			3125	3183	
Warren			3428	3460	
U. Speechley			3480	3544	
Speechley			3674	3685	
Balltown			4168	4200	
Bradford			4594	4686	
Benson			5038	5088	
Leopold			5150	5180	
Alexander			5284	5390	

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY
Well Operator

By: 

Date: July 15, 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."

FORM WW-2 (B) FILE COPY
 (Reverse)
 7/8



1) Date: April 29, 19 87
 2) Operator's Well No. CNGD 2932
 3) API Well No. 47 017 3547
 State County Permit

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

4) WELL TYPE: A Oil / Gas / Production / Deep / Shallow
 B (if "Gas", Production / Deep / Shallow
 5) LOCATION: Elevation: 1118.5 / Watershed: Town Camp Run of the Little Kanawha River
 District: Cove / County: Doddridge 017 / Quadrangle: New Milton 570
 6) WELL OPERATOR: Development Co. CODE: 10110 / DESIGNATED AGENT Gary Nicholas
 Address c/o Cheryl S. Hartle 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 / 9) DRILLING CONTRACTOR: Name Sam Jack Drilling Co.
 Address Route 2, Box 114 / Address P.O. Box 48
 Salem, WV 26426 / Buckhannon, WV 26201

10) PROPOSED WELL WORK: Drill / Redrill / Stimulate
 Plug off old formation / Perforate new formation
 Other physical change in well (specify)
 11) GEOLOGICAL TARGET FORMATION, Alexander
 12) Estimated depth of completed well, 5660 feet
 13) Approximate trata depths: Fresh, - feet; salt, - feet.
 14) Approximate coal seam depths: - feet; 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.	For drilling	Left in well		
Conductor	1-3/4	H-40	42	X	40	To surface	By rule 15.05
Fresh water							By rule 15.05
Coal							By rule 15.01
Intermediate	8-5/8	X-42	23	X	1400	To surface	By rule 15.05
Production	4-1/2	J-55	10.5	X	5660	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 47-017-3547 Date May 29 19 87

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 May 29, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <input checked="" type="checkbox"/>	Casing Fee: 18857	WPCP Fee: 204	SEP Fee: <input checked="" type="checkbox"/>	Other Fee: <input checked="" type="checkbox"/>
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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.

1012

