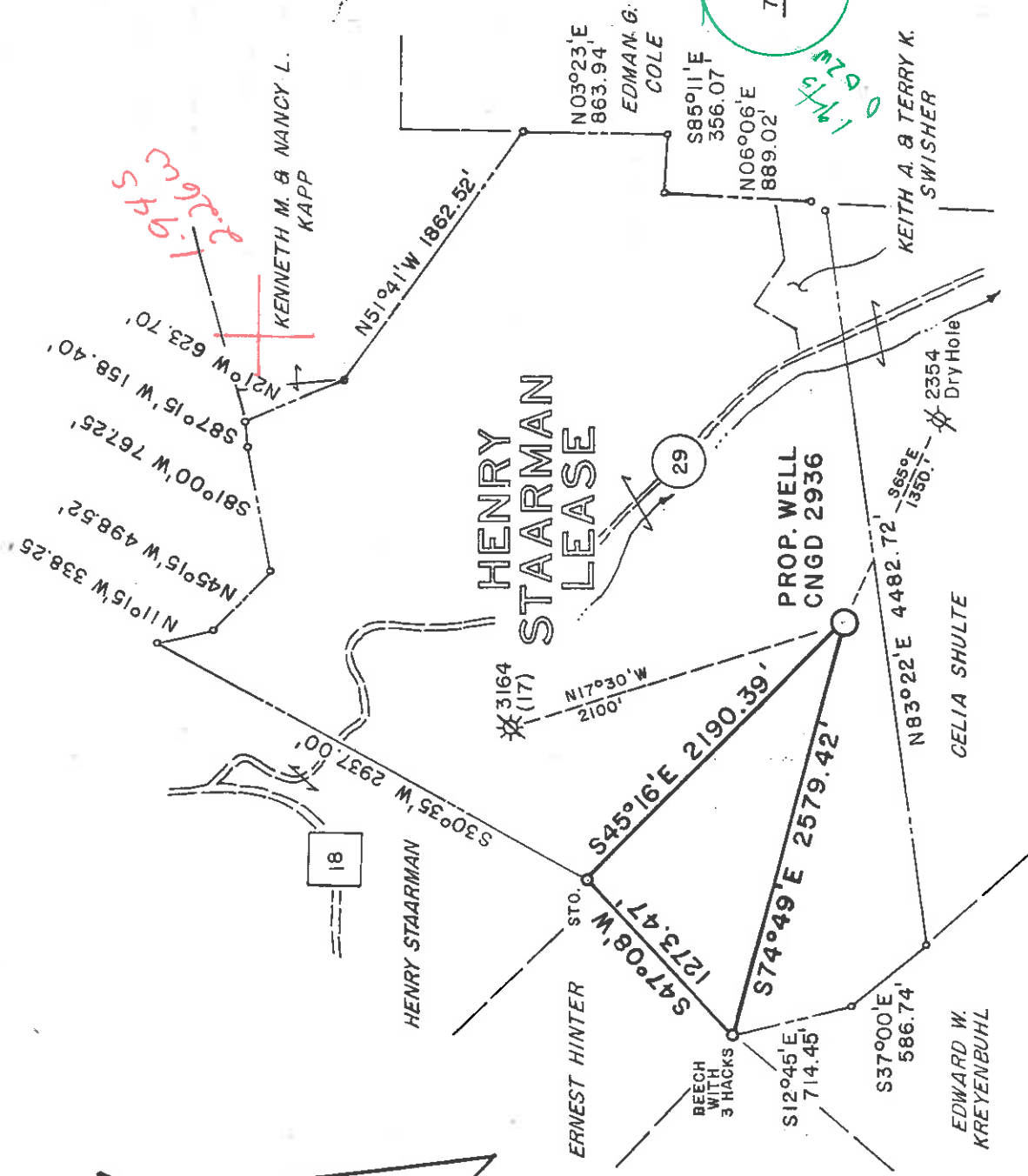


(---) DENOTES LOCATION OF WELL ON U.S.G.S. TOPOGRAPHIC MAP

LATITUDE 39°10'00"

LONGITUDE 80°42'30"



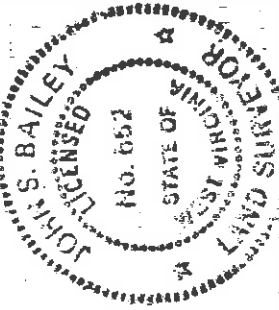
MAGNETIC REFERENCE TIES

N25°47'E 184.57' 14" HY.
N17°16'E 173.57' 12" MAPLE

PSH 5-27-87

MSES consultants, inc.

FILE NO. MSES 87-744
DRAWN BY RRC/SARC
SCALE 1" = 1000'
MIN. DEGREE OF ACCURACY 1/200
PROVEN SOURCE OF ELEVATION
ELEV. 888', 4200' SE OF LOCATION



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) *John S. Bailey*
P.E. L.L.S. 652

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



DATE MAY 1, 1987
OPERATOR'S WELL NO. CNGD 2936

API WELL NO. 47-017-3560
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
IF "GAS", PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 1132.99' WATERSHED BUCK RUN OF HUGHES RIVER

DISTRICT COVE 2 COUNTY DODDRIDGE

QUADRANGLE NEW MILTON, WV 7.5' 511 NEAREST TOWN LEOPOLD

SURFACE OWNER HENRY STAARMAN VADIS 123 WCY ACREAGE 329

OIL & GAS ROYALTY OWNER HENRY STAARMAN LEASE ACREAGE 331

LEASE NO. DV 17700

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 5670'

WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS

ADDRESS P. O. BOX 15746 ROUTE 2, BOX 698

PITTSBURGH, PA 15244 BRIDGEPORT, WV 26330

PERMIT

JUL 6 1987

6-6 New Milton South (307)

Date Aug. 12, 1987

Operator's

Well No. CNGD WN 2936DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia

Department of Mines

Oil and Gas Division

Farm StaarmanAPI No. 47 - 017 - 3560

WELL OPERATOR'S REPORT

OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGEWELL TYPE: Oil / Gas X / Liquid Injection / Waste Disposal /
(If "Gas," Production X / Underground Storage / Deep / Shallow X /)LOCATION: Elevation: 1132.99 Watershed Buck Run of Hughes RiverDistrict: Cove County Doddridge Quadrangle New MiltonCOMPANY CNG Development CompanyADDRESS P. O. Box 15746Pittsburgh, PA 15244DESIGNATED AGENT Gary A. NicholasADDRESS Rt. 2 Box 698Bridgeport, WV 26330SURFACE OWNER Henry StaarmanADDRESS Rt. 1 Box 78New Milton, WV 26411MINERAL RIGHTS OWNER Henry StaarmanADDRESS Rt. 1 Box 78New Milton, WV 26411

OIL AND GAS INSPECTOR FOR THIS WORK

Mike Underwood ADDRESS Rt. 2, Box 114Salem, WV 26426PERMIT ISSUED July 2, 1987DRILLING COMMENCED July 23, 1987DRILLING COMPLETED July 29, 1987IF 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"	254	254	To Surf.
9 5/8			
8 5/8	1428	1428	To Surf.
7			
5 1/2			
4 1/2	5587	5587	250 sks
3			
2 1/2	5309	5309	---
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5670 feetDepth of completed well 5682 feet Rotary X / Cable ToolsWater strata depth: Fresh 70 feet; Salt 1327 feetCoal seam depths: _____ Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Alexander Benson5385-5339Pay zone depth 5074-5079 feet

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

Final open flow 442 Mcf/d Final open flow _____ Bbl/dTime of open flow between initial and final tests 4 hoursStatic rock pressure 100 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)

AUG 31 1987

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

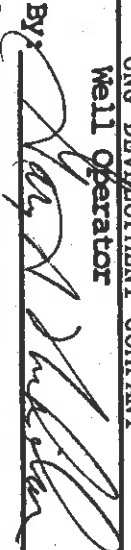
Perforated Alexander 5385-5396, 16 holes; 5354-5360, 8 holes; 5339-5344, 8 holes; .39 HS Water Frac (30# Gel) Alexander - Break 2200, Avg TPST 1807, Avg Rate 35 BPM, HHP used 1550, ISI 1350, 5 min 1200, used 900 gals 15% FE Acid & 5000# 80/100 Sand, 55,000# 20/40 Sand and 10,000# 16/30 Sand.
 Perforated Benson 5074-5079, 18 holes, .39 HSC
 Water Frac (30# Gel) Benson - Break 1500, Avg TPST 2223, Avg Rate 35 BPM, HHP used 1907, ISI 1400, 5 min 1270, used 500 gals 15% FE Acid, 5000# 80/100, 55,000# 20/40 and 10,000# 16/30 Sand.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas.
Clay			0	3	
Sand, Shale & RK			3	2150	1/2" stream water @ 70'
L. Lime			2150	2162	1/2" stream water @ 1327'
Sand			2162	2200	Damp @ 1920
B. Lime & Injun			2200	2345	Damp @ 2276
Sand & Shale			2345	4172	
Balltown			4172	4182	
Sand & Shale			4182	5682	Elk @ 70'
LOG TOPS ✓					
Big Lime			2162	2287	
Big Injun			2287	2339	
Weir			2408	2530	
Berea			2612	2628	
5th			3160	3169	
Warren			3480	3490	
Bradford			4620	4660	
Benson			5072	5146	
Alexander			5323	5440	
3rd Elk			5554	-	

RECEIVED
AUG 19 1987
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY
Well Operator
By: 
Date: Aug. 12, 1987

Note: Regulation 2.03(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."
 10305

FORM WW-2 (B) FILE COPY
 (Reverse)
 7/85



1) Date: May 28, 19 87
 2) Operator's Well No. CNGD 2936
 3) API Well No. 47 017 3560
 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
 B (If "Gas", Production Undergrnd storage Deep Shallow
 Elevation: 1132.99
 District: Cove
 5) LOCATION: Buck Run of Hughes River
 Doddridge 017 Quadrangle: New Milton 510
 6) WELL OPERATOR: CNG Development Co. CODE: 10110
 Address c/o Cheryl S. Hattle P.O. Box 15746
 Pittsburgh, PA 15244
 7) DESIGNATED AGENT: Gary Nicholas
 Address: Crosswind Corporate Park
 Rt. 2, Box 698, Bridgeport, WV 26330
 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

11) GEOLOGICAL TARGET FORMATION, No info available
 12) Estimated depth of completed well, 5670 feet
 13) Approximate trata depths: Fresh, salt, Is coal being mined in the area? Yes No
 14) Approximate coal seam depths:

CASING OR TUBING TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS				
	Size	Grade	Weight per ft.	New			Used	Left in well	Feet drilling	
Conductor	1 1/2 - 3/4	H-40	42	X			250	40	To surface	By rule 15.05
Fresh water										
Coal	8-5/8	X-42	23	X			1425	5670	To surface	By rule 15.05
Intermediate	4-1/2	J-55	10.5	X					200 - 400	Depths set
Production	1-1/2	CN-55	2.75	X						By rule 15.01
Tubing										Perforations:
Liners										Top
										Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-017-3560 Date July 2 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 July 2, 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: <input checked="" type="checkbox"/>	Fee: 18894	WPCP: <input checked="" type="checkbox"/>	S&E: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>
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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 H. Johnson
 Director, Division of Oil and Gas
 File

10305

