

CODE _____

CARD _____

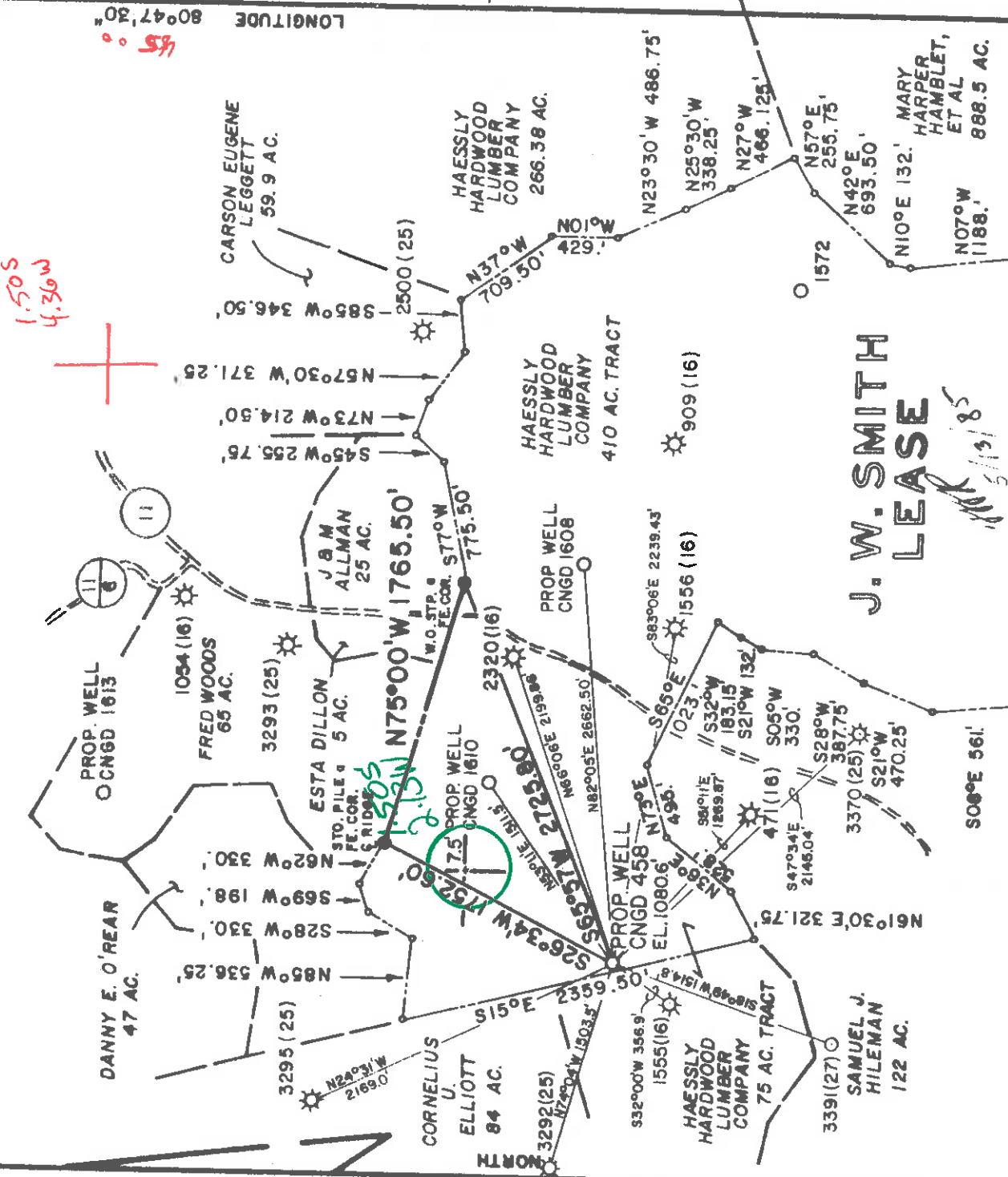
PLAT _____

LATITUDE 39° 15' 00"

MAGNETIC REFERENCE TIES
CNGD 458 TO 20" BEECH N17°00'E 120.7'
CNGD 458 TO 18" C.O. N47°00'W 138.0'

LONGITUDE 80° 47' 30"

7950'



FILE NO. MSES 85-444

DRAWN BY SARC,TAL

SCALE 1" = 1000'

MINIMUM DEGREE OF ACCURACY 1 PART IN 200

PROVEN SOURCE OF ELEVATION BM ON CO. RT. 11; ELEV. 944'

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

FORM IV - 6 (8-78)

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*
R.P.E. _____ E.F.S. 652



Department of Mines
Oil & Gas Division

DATE JANUARY 10 19 85

OPERATOR'S WELL NO. CNGD 458

API WELL NO. REVISED

47-017-3713 Rev

STATE COUNTY PERMIT

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

LOCATION: ELEVATION 1080.6 WATER SHED RIGHT FORK

DISTRICT WEST UNION 8 COUNTY DODDRIDGE

QUADRANGLE OXFORD, WV 7.5' 526 Helbrook 058 NE 2

OIL & GAS SURFACE OWNER HAESSLY HARDWOOD LUMBER SALES ACREAGE 485

ROYALTY OWNER HAESSLY HARDWOOD LUMBER SALES LEASE ACREAGE 485

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REGRILL FRACTURE OR

STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW

FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

FLUG AND ABANDON CLEAN OUT AND REPLUS

TARGET FORMATION ALEXANDER 142 ESTIMATED DEPTH 5375'

WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS

ADDRESS ONE PARK RIDGE CENTER ADDRESS RT. 2, BOX 698

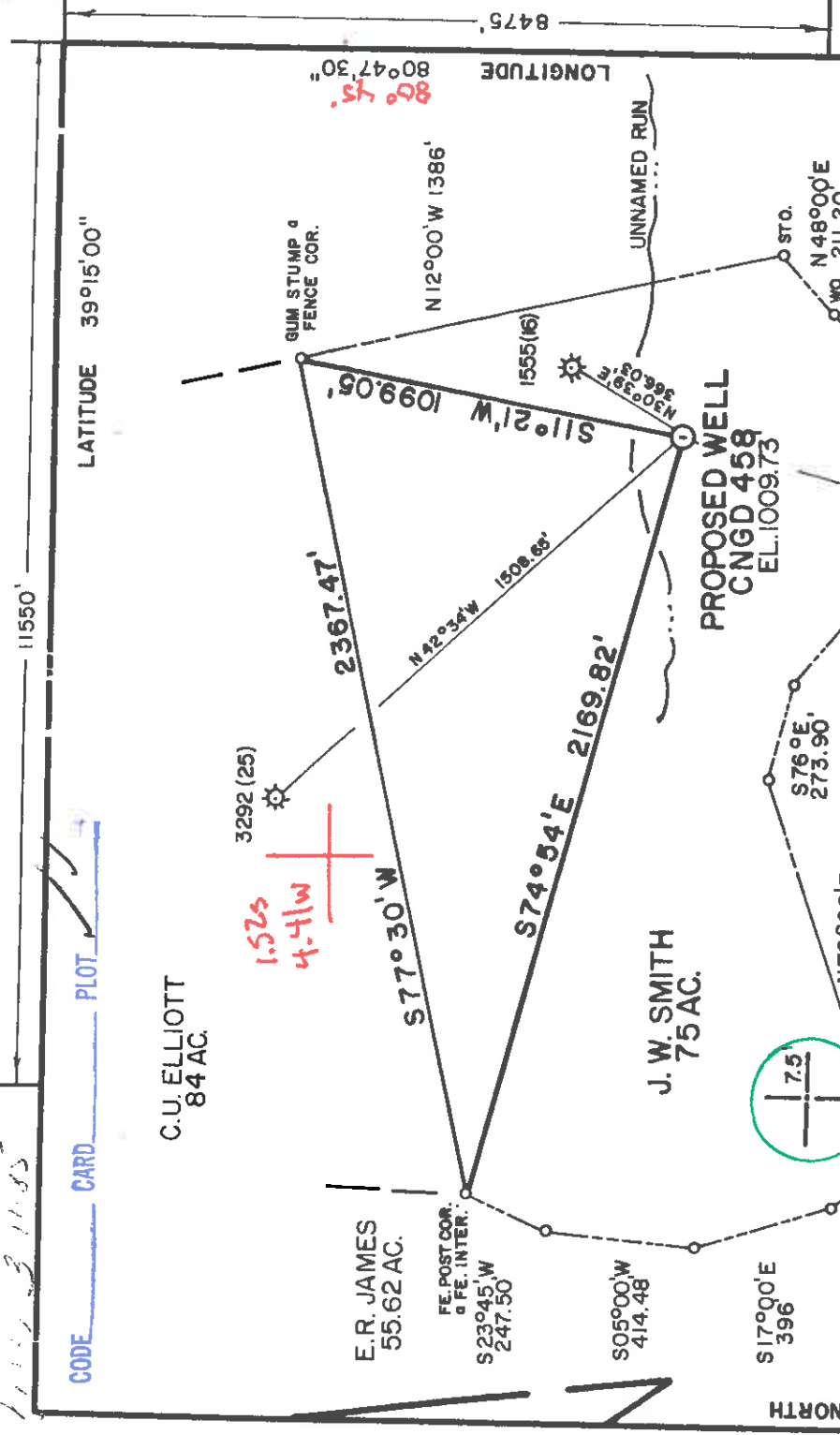
PITTSBURGH, PA 15244 BRIDGEPORT, WV 26330

JUL 01 1985

PREPARED BY MSES consultants, inc. 6-6 Straight Fork-Bluestone Creek (133) Clarksburg, WV

11113105

CODE CARD PLOT



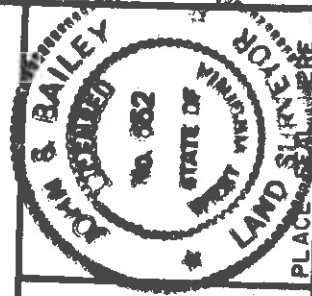
REFERENCE WELL TIES
 CNGD 458 TO 14" SO. N 45° 20' W 236.47'
 CNGD 458 TO 18" MN. HY. N 27° 48' W 213.29'

PREPARED BY MSES CONSULTANTS, INC.

FILE NO. MSES 84-444
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF
 ACCURACY 1 IN 200'
 PROVEN SOURCE OF
 ELEVATION USGS DISK EL 944 11/2 ML
EAST OF LOC. ROUTE 11

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

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 H. Bailey
 R.P.E. L.L.S. 652



Department of Mines
 Oil & Gas Division

DATE JULY 14 1984
 OPERATOR'S WELL NO. CNGD 458
 API WELL NO. _____
47-017-3413
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS", PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1009.73 WATER SHED RIGHT FORK
 DISTRICT WEST UNION COUNTY DODDRIDGE
 QUADRANGLE 52° OXFORD 7.5' (1976) Holbrook 1st NE 3
 SURFACE OWNER HAESSLY HARDWOOD SALES, INC. 050 ACREAGE 75
 OIL & GAS ROYALTY OWNER J.W. SMITH LEASE NO. 41929 LEASE ACREAGE 486

PROPOSED WORK: DRILL CONVEYIT DRILL DEEPER REDRILL FR CTURE OR
 STIMULATE PLUG OFF OLD MATHIC PERFORATE NEW
 FORMATION OTHER PHYSICAL CHANGE IN WELL SPECIFY _____

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5270
 WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS
 ADDRESS ONE PARK RIDGE CENTER ADDRESS CROSSWIND CORPORATE PARK
110 PITTSBURGH, PA. 15219 BRIDGEPORT, W.V. 26330

MAR 25 1985

ALLEN REIDPRINT CO.



IV-35
(Rev 8-81)

Date August 19, 1985
 Operator's Well No. CNGD WN 458
 Farm J. W. Smith
 API No. 47 - 017 - 3413

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: 1081 Watershed Right Fork
 District: West Union County Doddridge Quadrangle Oxford (N)

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 Haessly Hardwood Lumber Sales
 ADDRESS Rt. 1 Newport Pike
Marietta, OH 45750
 MINERAL RIGHTS OWNER Haessly Hardwood Lbr Sales
 ADDRESS Rt. 1 Newport Pike
Marietta, OH 45750

OIL AND GAS INSPECTOR FOR THIS WORK

Mike Underwood ADDRESS Rt. 2 Box 114
Salem, WV 26426

PERMIT ISSUED June 18, 1985

DRILLING COMMENCED July 11, 1985

DRILLING COMPLETED July 17, 1985

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

Casing Tubing	Used in Drilling in Well	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	235	235	To Surf.
9 5/8			
8 5/8	1977	1977	To Surf.
7			
5 1/2			
4 1/2	5361	5361	150 sks
3			
2 1-1/2	5141	5141	
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5375 feet
 Depth of completed well 5375 feet Rotary X / Cable Tools
 Water strata depth: Fresh 137 feet; Salt feet
 Coal seam depths: 886 - 888 Is coal being mined in the area? No
970 - 975

OPEN FLOW DATA

Producing formation Alexander Pay zone depth 5137 - 5172 feet
 Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
 Final open flow 787 Mcf/d Final open flow Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure 300 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)

SEP 23 1985

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

Superior Perforated Alexander 5137 - 5172; 12 holes; .39
Halliburton 75Q Foam Frac Gel System (#/1000 gal) 20, Break 1200 psi, Ave. HHP 2 pumps,
Ave. Rate 16 BPM, Ave Pres. 2600 psi, Max Tr. Pres 2900 psi, 500 gal 15% FE Acid,
60,000# 20/40 Sand, Max Conc. 3, 820 BBL Total Fluid, 550 BBL S L Fluid, ISIP 1250 psi,
5 min SIP 1000 psi, Total Nitrogen 662,000 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
Sand & Shale			0	282	1/2" stream water @ 137'
Coal			282	288	
Sand & Shale			288	880	Coal 282 - 288
Coal			880	885	880 - 885
Sand, Shale & RR			885	970	970 - 975
Coal			970	975	
Sand, Shale & RR			975	1805	
Lime			1805	1875	
Sand & Shale			1875	5375	
<u>LOG TOPS</u> ✓					
Big Injun			2179	2017	
Weir			2376	2303	
Berea			3234	2380	
Warren			3385	3302	
Speechley			3810	3422	
Balltown			4185	4090	
Bradford			4700	4354	
Benson			4854	4796	
Riley			5046	4856	
Leopold			5100	5060	
Alexander				5180	

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY
Well Operator

By: Shawn A. [Signature]

Date: August 19, 1985

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 lithology, encountered in the drilling of a well."

RECEIVED
FEB 20 1985



1) Date: January 29, 19 85
 2) Operator's Well No. 458
 3) API Well No. 47 - 017 - 3413 State County Permit

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

OIL & GAS DIVISION
 DEPT. OF MINES

- 4) WELL TYPE: A Oil Gas B (if "Gas", Production Underground storage Deep Shallow
 Elevation: 1009.7' Watershed: Right Fork
 District: West Union County: Doddridge
 5) LOCATION: Gas
 6) WELL OPERATOR: CNG Development Company 7) DESIGNATED AGENT Mr. Gary Nicholas
 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 Mr. Mike Underwood 10110
 Address Rt. 2, Box 114
 Address Salem, WV 26426

- 9) DRILLING CONTRACTOR:
 Name Sam Jack Drilling Company
 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, 5270 feet
 12) Estimated depth of completed well, 5270 feet
 13) Approximate trata depths: Fresh, 470 feet; salt, 3109 feet.
 14) Approximate coal seam depths: 470 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							
Fresh water	11-3/4	H-40	42	X		510 30	To surface By Rule 15.05
Coal							
Intermediate	8-5/8	X-42	23	X		1700	To surface By Rule 15.05
Production	4-1/2	J-55	10.5	X		5270	200-400 sks
Tubing	1-1/2	CN-55	2.75	X			By Rule 15.01
Liners							Perforations: Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-017-3413 Date March 13, 19 85

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. March 13, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: 28	Agent: JH	Plat: M12	Casing: MX	Fee: 006955
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Margaret Shanley
 Administrator, Office of Oil and Gas

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.

File

