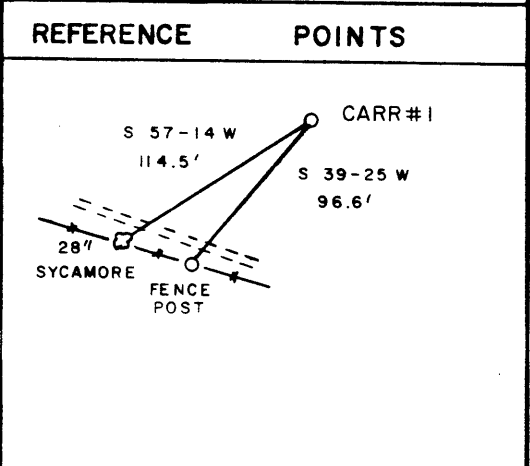


NOTE
NO WELLS WITHIN 1200'



FILE NO. _____
DRAWING NO. _____
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1:200
PROVEN SOURCE OF ELEVATION ROAD INTERSECTION
670'

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) Paul K. Moulden
R.P.E. _____ L.L.S. 580



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE SEPT 23, 19 85
OPERATOR'S WELL NO. CARR #1
API WELL NO. 47 -107- 1381
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS,") PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW
LOCATION: ELEVATION 670' WATERSHED NEAL RUN
DISTRICT LUBECK 3 COUNTY WOOD
QUADRANGLE SOUTH PARKERSBURG 615 7.5' 009 Near Belleville
SURFACE OWNER LARRY CARR ACREAGE 25.7
OIL & GAS ROYALTY OWNER LARRY CARR LEASE ACREAGE 25.7

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 SHALE ESTIMATED DEPTH 3900'
WELL OPERATOR LARRY MORRIS DESIGNATED AGENT LARRY MORRIS
ADDRESS RT.1 WASHINGTON, W.V. 26181 ADDRESS SAME

COUNTY NAME
PERMIT



IV-35
(Rev 8-81)

Date May 15, 1986
 Operator's Carr #1
 Well No. Carr #1
 Farm Larry Carr
 API No. 47 - 107 - 1381

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State of West Virginia
 Department of Mines
 Oil and Gas Division

DIVISION OF OIL & GAS
 DEPARTMENT OF ENERGY

WELL OPERATOR'S REPORT
 OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas / Liquid Injection / Waste Disposal
 (If "Gas," Production / Underground Storage / Deep / Shallow /)

LOCATION: Elevation: 670 Watershed Meal Run
 District: Lubeck County Wood Quadrangle S. Parkersburg

COMPANY Larry Morris
 ADDRESS Rt. #1, Washington, WV
 DESIGNATED AGENT Same
 ADDRESS _____
 SURFACE OWNER Larry Carr
 ADDRESS Parkersburg, WV
 MINERAL RIGHTS OWNER Same
 ADDRESS _____

OIL AND GAS INSPECTOR FOR THIS WORK Robinson
 ADDRESS Mineral Wells, WV

PERMIT ISSUED October 1, 1985
 DRILLING COMMENCED December 31, 1986
 DRILLING COMPLETED April 10, 1987

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

Casing Tubing Size Cond.	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16			
13-10"		350	Surf.
9 5/8	1050		
8 5/8			
7	1700		
5 1/2			
4 1/2		3850	270SK.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Shale Depth 3900 feet
 Depth of completed well 3850 feet Rotary / Cable Tools
 Water strata depth: Fresh 150 feet; Salt 1600 feet
 Coal seam depths: None Is coal being mined in the area?

OPEN FLOW DATA

Producing formation Shale Pay zone depth 3700 feet
 Gas: Initial open flow 12,000 Mcf/d Oil: Initial open flow None Bbl/d
 Final open flow 350,000 Mcf/d Final open flow None Bbl/d
 Time of open flow between initial and final tests _____ hours

Static rock pressure 700 psig (surface measurement) after 48 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

JUN 15 1987

(Continue on reverse side)

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

Perforated 25 holes between 2765 - 3700, treated with 1,500,000 cubic feet nitrogen.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all free gas and salt water, coal, oil and c
Top soil			0	5	
Red Rock			5	275	
Slate			275	1195	
Sand			1195	1415	
Slate			1415	1687	Hole full of water 1470
Sand			1687	1715	
Slate			1715	2024	
Lime			2024	2085	Show of oil 1950 - 1953
Slate			2085	2765	
Shale			2765	<u>3850</u>	Gas show <u>3700</u>
				T.P.	

404 1960
813 3110

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

Larry Morris

Well Operator

By: Larry Morris

Date: May 15, 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 coal, encountered in the drilling of a well."

168

(Obverse)

7/85

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OCT - 9 1985



1) Date: October 1, 19 85
 2) Operator's Well No. Carr #1
 3) API Well No. 47 State 107 County -1381 Permit

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

- 4) WELL TYPE: A Oil / Gas
 B (If "Gas", Production / Underground storage _____ / Deep _____ / Shallow /)
- 5) LOCATION: Elevation: 670' Watershed: Neal Run
 District: Lubeck 588 County: Wood Quadrangle: South Parkersburg 7.5'
- 6) WELL OPERATOR Larry M. Morris CODE: _____ 7) DESIGNATED AGENT Larry M. Morris
 Address Route 1 Address Same
Washington, W.V. 26181
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Glen P. Robinson
 Address Route 1, #6 Mt. Pleasant Estate
Mineralwells, W.V. 26150
- 9) DRILLING CONTRACTOR: Name _____ Address _____
- 10) PROPOSED WELL WORK: Drill / Drill deeper _____ / Redrill _____ / Stimulate /
 Plug off old formation _____ / Perforate new formation _____
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Marcellus Shale 401
- 12) Estimated depth of completed well, 3900' feet
 13) Approximate trata depths: Fresh, 90' feet; salt, 1670' feet.
 14) Approximate coal seam depths: _____ 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	For drilling	Left in well		Kinds	Sizes
Conductor										
Fresh water	10"			X			350' CTS	by rule	15.05	
Coal	8"			X		1100'				
Intermediate	7"			X		1700'				
Production	4 1/2"			X			3900' Cemented to 1200'			Depths set
Tubing							270 sacks or by Rule 15.03			
Lin...										Perforations: Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-107-1381

October 9 19 85
 Date

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 October 9, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>\$B</u>	Agent: <u>#17</u>	Plat: <u>MU</u>	Casing: <u>MU</u>	Fee: <u>1339</u>	WPCP: <u>MU</u>	S&E: <u>MU</u>	Other: _____
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Margaret J. Hase
 Director, Division 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