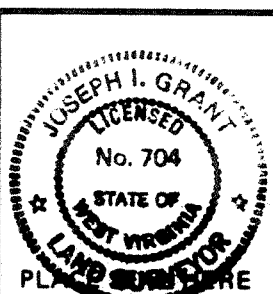


FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION Intersection Co. Routes 30 & 17 1089'

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) Joseph I. Grant
 R.P.E. _____ L.L.S. 704



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



DATE June 24, 19 82
 OPERATOR'S WELL NO. P-144-2
 API WELL NO. 47-085-5708
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW
 LOCATION: ELEVATION 957 WATER SHED Devil Hole Creek
 DISTRICT Grant COUNTY Ritchie
 QUADRANGLE Carro 7.50 Harrisville 15' C
 SURFACE OWNER Lawrence Morton ACREAGE 75.13
 OIL & GAS ROYALTY OWNER Clifton Valentine LEASE ACREAGE 75.13
 LEASE NO. P-144-2
 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 MARCELLUS ESTIMATED DEPTH 5990
 WELL OPERATOR Parther Fuel Co. DESIGNATED AGENT Donnolly Villers
 ADDRESS P.O. Box 245 ADDRESS P.O. Box 647
Shinnston, WV 26431 Weston, WV 26452

6-b. Carro - Ritchie Mine - Harted (20)

JUL 06 1982

COPY

SEP 2 - 1983



OCT 26 1983

OIL & GAS DIVISION
DEPT. OF MINES

OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia

Department of Mines
Oil and Gas Division

Date October 5, 1982
Operator's
Well No. P-144-2
Farm Marshall Valentine #2
API No. 47 - 085 - 5708

085-5708

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 957' Watershed Devilhole Creek
District: Grant County Ritchie Quadrangle Cairo 7.5'

COMPANY PANTHER FUEL COMPANY

ADDRESS P. O. Box 850, Bridgeport, WV 26330

DESIGNATED AGENT DONNALLY VILLERS

ADDRESS P. O. Box 647, Weston, WV 26452

SURFACE OWNER Lawrence Morton

ADDRESS Box 237, Rt. #1, Harrisville, WV

MINERAL RIGHTS OWNER Clifton Valentine

ADDRESS 4459 Edgerton Rd., N. Royalton, Ohio

OIL AND GAS INSPECTOR FOR THIS WORK D. O.

Mace ADDRESS Rt. #1, Box 65, Sandridge, WV

PERMIT ISSUED

DRILLING COMMENCED June 26, 1982

DRILLING COMPLETED July 1, 1982

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

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8	1,202	1,202	to surface
7			
5 1/2			
4 1/2		5,652	600 sacks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Shale Depth 5,990 feet

Depth of completed well 5,700 feet Rotary X / Cable Tools

Water strata depth: Fresh feet; Salt feet

Coal seam depths: Is coal being mined in the area?

OPEN FLOW DATA

Producing formation Hamilton Shale Pay zone depth 5,554 to 5,640 feet

Gas: Initial open flow Show Mcf/d Oil: Initial open flow -0- Bbl/d

Final open flow 500 Mcf/d Final open flow -0- Bbl/d

Time of open flow between initial and final tests 72 hours

Static rock pressure 1,310 psig (surface measurement) after 4 hours shut in

(If applicable due to multiple completion--)

Second producing formation Brallier Shale Pay zone depth 3,880 to 4,001 feet

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

Final open flow 500 Mcf/d Oil: Final open flow Show Bbl/d

Time of open flow between initial and final tests 72 hours

Static rock pressure N/A psig (surface measurement) after 4 hours shut in

NOV 05 1984

(Continue on reverse side)

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

Halliburton 1,018,000 N₂ Six High Volume

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fines and salt water, coal, oil and gas
Sand, shale & rock			0	1383	
1st Salt Sand			1383	1440	
2nd Salt Sand			1445	1495	
3rd Salt Sand			1555	1675	
Maxon Sand			1740	1770	
Big Lime			1820	1920	
Big Injun			1920	2040	Oil and Gas
Berea Cap			1403	2403?	
Gantz Sand			2607	2630	
Gordon Sand			2650	2670	Oil and Gas
Fifth Sand			2790	2800	Gas
Brallier Shale			2980	4198	Oil and Gas
Harrell Shale			4198	5094	Oil and Gas
Hamilton Shale			5094	5714	Gas

Rhine Street
@ T.D.

5714
2403

3311

5714
957

4757
3740

1017

3740
957

4697

(Attach separate sheets as necessary)

PANTHER FUEL COMPANY
Well Operator
By: Robert C. [Signature] VICE PRES.
Date: _____

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



Date: 6-24-, 19 82

Operator's Well No. P-144-2

API Well No. 47 085 5708
State County Permit

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

FORM IV-2
(Obverse)
(12-81)

WELL TYPE: Oil Gas
(If "Gas", Production Underground storage Deep Shallow)

LOCATION: Elevation: 957 Watershed: Devilhole Creek
District: GRANT County: Ritchie Quadrangle: Cairo 7.5'

WELL OPERATOR Panther Fuel Company DESIGNATED AGENT Donnelly Villers
Address P.O. Box 850 Address Weston, West Virginia
Bridgeport, West Virginia

OIL & GAS ROYALTY OWNER Clifton Valentine COAL OPERATOR _____
Address 4459 Edgerton Rd. Address _____
North Royalton, Ohio

Acreage 75.1 COAL OWNER(S) WITH DECLARATION ON RECORD:

SURFACE OWNER Lawrence Morton Name _____
Address Box 237 Rt. #1 Address _____
HARRISVILLE, West Virginia

Acreage 75.1 Name _____

FIELD SALE (IF MADE) TO: Address _____

OIL & GAS INSPECTOR TO BE NOTIFIED Name _____
Name D.O. MACE Address _____
Address Rt. 1 Box 65 _____
Sandridge, West Virginia

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed _____ / lease
other contract _____ / dated OCT. 4, 19 82, to the undersigned well operator from _____

(IF said deed, lease, or other contract has been recorded:
Recorded on OCT. 21, 19 82, in the office of the Clerk of the County Commission of Ritchie County, West
Va., in Lease Book 139 at page 150. A permit is requested as follows:

PROPOSED WORK: Drill / Drill deeper _____ / Redrill _____ / Fracture or stimulate
Plug off old formation _____ / Perforate new formation _____ /
Other physical change in well (specify) _____

—planned as shown on the work order on the reverse side hereof.
The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to
make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the
Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to
the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to
the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY
TO:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMIS-
SION
1615 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 348-3092

Panther Fuel Company
Well Operator
By Donnelly Villers
Its Super

(12-83)

THIS IS AN ESTIMATE ONLY:
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) Eastern Overthrust
Address Brushy Fork Rd.
2 IN MOORE, W. VA.

GEOLOGICAL TARGET FORMATION, Marcellus Shale

Estimated depth of completed well, 5,990 feet Rotary / Cable tools /

Approximate water strata depths: Fresh, _____ feet; salt, _____ feet.

Approximate coal seam depths: _____ Is coal being mined in the area? Yes _____ / No /

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	
Conductor	11 3/4				<input checked="" type="checkbox"/>	300'	300'	CTS	Kinds
Fresh Water									
Coal									Sizes
Intermediate	8 5/8		20	<input checked="" type="checkbox"/>		1000	1000	240	
Production	4 1/2		10.5			5950	5950	AS NEEDED	Depths set
Tubing								or 500	
Liners									Perforations:
									Top Bottom

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

THIS PERMIT MUST BE POSTED AT THE WELL SITE
ALL PROVISIONS BEING IN ACCORDANCE WITH CHARTER 22,
ARTICLE 4 OF THE W. VA. CODE, THE LOCATION IS HEREBY
APPROVED FOR Drilling. THIS PERMIT SHALL EXPIRE
IF OPERATIONS HAVE NOT COMMENCED BY 2-25-83
BY: [Signature]

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof.

WAIVER

The undersigned coal operator _____ / owner _____ / lessee _____ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____, 19 _____

[Signature]

By _____
Its _____