



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION USGS BM at Nutter Fork, Elev. 733'

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) _____
 R.P.E. 7723 L.L.S. _____

PLACE SEAL HERE

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



DATE Nov 1, 1982, 19 82
 OPERATOR'S WELL NO. D 10
 API WELL NO. 47 - 085 - 6052
 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 1040' WATER SHED Goose Creek
 DISTRICT GRANT COUNTY RITCHIE
 QUADRANGLE CAIRO 7 1/2 Quads Harrisville 15' NW
 SURFACE OWNER WEST VIRGINIA INVESTMENT CORP. ACREAGE 493
 OIL & GAS ROYALTY OWNER WEST VIRGINIA INVESTMENT CORP. LEASE ACREAGE 493
 LEASE NO. _____
 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 Marshall ESTIMATED DEPTH 5700'
 WELL OPERATOR DERBY OIL & GAS DESIGNATED AGENT STEVE LANDVOIGHT
 ADDRESS 5255 West Pike St ZANESVILLE OH 43701 ADDRESS BOX 56 ELLENBORO WV
DEEP WELL 6-6 unnamed (6)

DEC 13 1982

RECEIVED

DEC 8 - 1983



IV-35
(Rev 8-81)

OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia

Department of Mines
Oil and Gas Division

Date 12/1/83
Operator's
Well No. D10
Farm WVI
API No. 085 - 6052

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: 1040 Watershed Goose Creek
District: Grant County Ritchie Quadrangle Cairo 7 1/2

COMPANY Derby Oil & Gas
ADDRESS 5255 West Pike, Zanesville, OH 43701
DESIGNATED AGENT Steve Landvoigt
ADDRESS Box 56, Ellenboro, WV 26436
SURFACE OWNER West Virginia Investment
ADDRESS _____
MINERAL RIGHTS OWNER West Virginia Investment
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK Sam
Hersman ADDRESS _____
PERMIT ISSUED _____
DRILLING COMMENCED 12-4-82
DRILLING COMPLETED 12-8-82
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 Cord.			
13-10"			
9 5/8			
8 5/8	2105	2105	60 sacks
7			
5 1/2			
4 1/2	5774	5774	1st stage 2nd stage
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth _____ feet
Depth of completed well 5600 feet Rotary / Cable Tools _____
Water strata depth: Fresh 100 feet; Salt 1500 feet
Coal seam depths: N/A Is coal being mined in the area? _____

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 2990-5600 feet
Gas: Initial open flow 100 Mcf/d Oil: Initial open flow 100 Bbl/d
Final open flow 100 Mcf/d Final open flow 40 Bbl/d
Time of open flow between initial and final tests 48 hours

Static rock pressure _____ psig (surface measurement) after _____ hours shut in
(If applicable due to multiple completion--)

NOV 05 1984

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

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

Three stage frac 1.2mmcf N₂ 80,000 lb. Co₂
Treated Devonian Shale 2900-5600

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Pennsylvania sand & shale			0	1200	Fresh Water at 100'+
Dunkard			1200	1280	No water encountered below 100'
Homewood			1360	1420	
Salt Sands			1480	1660	
Maxton			1670	1710	
Big Lime			1765	1850	Gas
Big Injun			1900	1990	5bb1 Oil
Gordon			2770	2800	Oil show
Devonian Shale Pay		Huron	3620	3920	Oil
Devonian Shale Pay		Huron	4230	4240	Gas
<u>Onondaga</u>			5778		
TD			5780		

57
24
—
33

5780
1040
—
4740
3660
—
1080
~~3660~~

(Attach separate sheets as necessary)

Derby Oil & Gas Corporation
Well Operator

By: [Signature]

Date: 12/1/83

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



1) Date: November 1, 19 82
 2) Operator's Well No. D-10
 3) API Well No. 47 085 6052
 State West Virginia County Putnam Permit 47 085 6052

DRILLING CONTRACTOR:

S.W. Jack
49 S. 9th St., Indiana, PA

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

OIL AND GAS WELL PERMIT APPLICATION

- 4) WELL TYPE: A Oil / Gas
 B (If "Gas", Production / Underground storage / Deep / Shallow)
- 5) LOCATION: Elevation: 1040' Watershed: Goose Creek
 District: Grant County: Ritchie Quadrangle: Cairo 7 1/2
- 6) WELL OPERATOR Derby Oil & Gas 11) DESIGNATED AGENT Steve Landvoight
 Address 5255 West Pike St. Address BOX 2c ELLENBORO WV
Zanesville, OH 43701 86346
- 7) OIL & GAS ROYALTY OWNER West Virginia Investment Corp. 12) COAL OPERATOR N/A
 Address BOX 292 Address _____
WYNEWOOD, PA 19096
 Acreage 493
- 8) SURFACE OWNER WEST VA INVESTMENT CORP. 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
 Address SAME Name N/A
 Acreage _____ Address _____
 Name _____ Address _____
- 9) FIELD SALE (IF MADE) TO:
 Address N/A
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Samuel N. Hershman Address _____
 Address P.O. Box 66 **OIL & GAS DIVISION**
Smithville, WV 26128 **DEPT. OF MINES**
- 15) PROPOSED WORK: Drill / Drill deeper / Redrill / Fracture or stimulate
 Plug off old formation / Perforate new formation
 Other physical change in well (specify) _____
- 16) GEOLOGICAL TARGET FORMATION, Marcellus
- 17) Estimated depth of completed well, 5700 feet
- 18) Approximate water strata depths: Fresh, 240 200 feet; salt, 1800 feet.
- 19) Approximate coal seam depths: N/A Is coal being mined in the area? Yes / No

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 OCT 29 1982
 OIL & GAS DIVISION
 DEPT. OF MINES

20) 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	10"					27'-200'	27'-200'		Kinds	
Fresh water									Sizes	
Coal									Depths set	
Intermediate	8 1/2"		24#	X		1900'	1900'	200 bags		
Production	4 1/2"		10.5#	X		3700'	3700'	200 bags		
Tubing									Perforations:	
Liners									Top	Bottom
									3300'	3400'
									4200'	4300'

- 21) EXTRACTION RIGHTS
 Check and provide one of the following:
 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.
 The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)
- 22) ROYALTY PROVISIONS
 Is the right to extract, produce or market the oil or gas based upon a lease or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes No
- If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.
- 23) Required Copies (See reverse side.)

24) 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.

Notary: JOHN C. HEMPEL Signed: _____
 My Commission Expires Sept 1992 Its: _____

OFFICE USE ONLY

Permit number 47-085-6052 **DRILLING PERMIT** Date December 2 19 82

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. 10) 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.)

Permit expires August 2, 1983 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee

 Administrator, Office of Oil and Gas