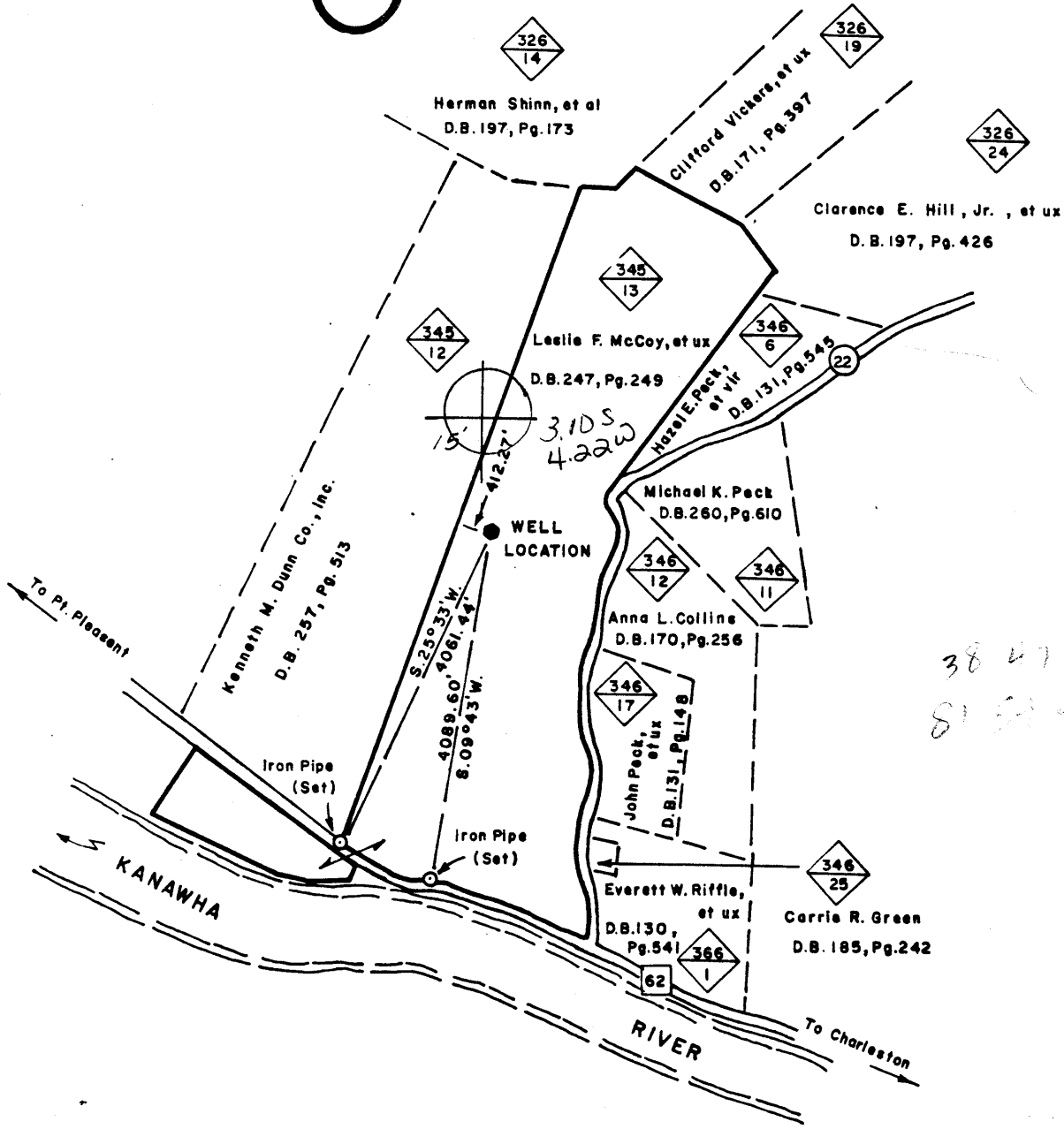


7.5' Topo  
Location (+)

NORTH

LONGITUDE 81° 57' 30"  
81° 55'



FILE NO. \_\_\_\_\_  
DRAWING NO. \_\_\_\_\_  
SCALE 1" = 2,000'  
MINIMUM DEGREE OF ACCURACY 1" : 200'  
PROVEN SOURCE OF ELEVATION NGS B.M. "A-6"  
Elev. = 565.786

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) Ronald L. Castle  
R.P.E. \_\_\_\_\_ L.L.S. 150

PLACE SEAL HERE

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



DATE Oct. 2, 19 81  
OPERATOR'S WELL NO. 1737-5A  
API WELL NO. \_\_\_\_\_  
47 - 053 - 0266  
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_  
LOCATION: ELEVATION 788.39 WATER SHED Debby Creek  
DISTRICT Cooper COUNTY Mason  
QUADRANGLE Mount Alto Ravenswood 151 SW  
SURFACE OWNER Leslie F. McCoy, et ux ACREAGE 366.70 ac.  
OIL & GAS ROYALTY OWNER Leslie F. McCoy, et ux LEASE ACREAGE 366.70 ac.  
LEASE NO. C-2-236  
PROPOSED WORK: DRILL X 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 Tuscarora ESTIMATED DEPTH 5,700  
WELL OPERATOR Union Drilling, Inc. DESIGNATED AGENT Joseph C. Petty  
ADDRESS Drawer 40 ADDRESS Drawer 40  
DEEP WELL Buckhannon, WV 26201 Buckhannon, WV 26201  
TRASCO 1-1

NOV 5 1981



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

On 2/25/82 McCullough perforated at 3853/3933 with 15 shots. Halliburton Foam Fractured with 80 gallon 7½% acid, 220 Gallon Methanol & 1,437,000 SCF Nitrogen.

On 3/2/82 McCullough perforated at 3212/3518 with 20 shots, on 3/3/82 Halliburton fractured with 500 gallon Mod 202 acid, 1 gallon HAI-50 inhibitor, 65 gallon Pen-5, 12 Gallon Cla-Sta B, 465 CWT 20/40 sand, and 414,000 SCF nitrogen.

On 2/15/82 McCullough perforated at 5219/20, 5226/34, Halliburton fractured with 200 sks. of sand, 460 BBL Water and 90,000 scf Nitrogen. No show of gas. A solid plug was set at 3955.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Surface			0	10	
Sand and Shale			10	2220	No coal
Shale			2220	3101	
Sand			3101	3114	Water at 75', 665', 1500', & 4814'
Shale			3114	3170	
Brown Shale, Lower Huron			3170	3742	
Marcellus			3742	3936	
Onondaga			3936	4154	
Helderberg			4154	4860	
Shale and sand			4860	5221	
Clinton			5221	5256	
Sand and Shale			5256	5382	TD Show of gas at T.D.

LOG:  
5318-5332 - TERR

(Attach separate sheets as necessary)

UNION DRILLING, INC.

Well Operator

By: Joseph C. Pettey  
Date: Joseph C. Pettey, Vice President of Production

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 ..., encountered in the drilling of a well."

JUN 25 1982

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES



IV-35  
(Rev 8-81)

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date May 12, 1982  
Operator's  
Well No. 1 - 1737  
Farm Leslie F. McCoy #1  
API No. 47 - 053 - 0266

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 x / Shallow    /)

LOCATION: Elevation: 788.39' Watershed Debby Creek  
District: Cooper County Mason Quadrangle Mount Alto

COMPANY UNION DRILLING, INC.  
ADDRESS P. O. Drawer 40, Buckhannon, WV 26201  
DESIGNATED AGENT UNION DRILLING, INC.  
ADDRESS P. O. Drawer 40, Buckhannon, WV 26201  
SURFACE OWNER Leslie F. & Louise McCoy  
ADDRESS 1548 Summit Drive, Charleston, WV 25302  
MINERAL RIGHTS OWNER Same as surface owners  
ADDRESS     
OIL AND GAS INSPECTOR FOR THIS WORK Robert Stewart  
P. O. Box 345  
ADDRESS Jane Lew, WV 26378  
PERMIT ISSUED October 16, 1981  
DRILLING COMMENCED January 12, 1982  
DRILLING COMPLETED January 28, 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.	20'		
11 3/4" 13-10"	316.15'		206 cf
9 5/8			
8 5/8	2218.00'	2218.00'	88 1/2 cf
7			
5 1/2			
4 1/2	5354.30'	5354.30'	840 cf
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Tuscarora Depth 5700 feet  
Depth of completed well 5382 feet Rotary x / Cable Tools     
Water strata depth: Fresh 75', 665' feet; Salt 1500' and 4814' feet  
Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Clinton Pay zone depth 5256 feet  
Gas: Initial open flow 179 Mcf/d Oil: Initial open flow    Bbl/d  
Final open flow (combined with upper formation) 119 Mcf/d Final open flow (Combined   ) Bbl/d  
Time of open flow between initial and final tests    hours approx. 0.833 BBL/d  
Static rock pressure 300 psig (surface measurement) after 24 hours shut in  
(If applicable due to multiple completion--)  
Second producing formation Brown Shale Pay zone depth 3742 feet  
Gas: Initial open flow 163 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

JUL 06 1982

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

*Marcellus*<sup>3</sup>  
On 2/25/82 McCullough perforated at 3853/3933 with 15 shots. Halliburton Foam Fractured with 80 gallon 7½% acid, 220 Gallon Methanol & 1,437,000 SCF Nitrogen

*Huron*  
On 3/2/82 McCullough perforated at 3212/3518 with 20 shots, on 3/3/82 Halliburton fractured with 500 gallon Mod 202 acid, 1 gallon HAI-50 inhibitor, 65 gallon Pen-5, 12 Gallon Cla-Sta B, 465 CWT 20/40 sand, and 414,000 SCF nitrogen.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Surface			0	10	
Sand and Shale			10	2220	No coal
Shale			2220	3101	
Sand <del>shale?</del>			3101	3114	Water at 75', 665', 1500', & 4800'
Shale			3114	3170	
Brown Shale			3170	3742	
Marcellus			3742	3936	
Onondaga			3936	4154	
Helderberg			4154	4860	
Shale and sand			4860	5221	
<u>Clinton</u>			5221	5256	
Sand and Shale			5256	5382	TD Show of gas at T.D.

(Attach separate sheets as necessary)

UNION DRILLING, INC.

Well Operator

By:

*Joseph C. Petty*  
Date: Joseph C. Petty, Vice President of Production

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 ..., encountered in the drilling of a well."

Date: October 15, 19 81

Operator's Well No. 1-1737

API Well No. 47 - 053 - 0266

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

State Leslie F. McCoy County Permit #1-1737

OIL AND GAS WELL PERMIT

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

LOCATION: Elevation: 788.39' Watershed: Debby Creek  
District: Cooper County: Mason Quadrangle: Mount Alto

WELL OPERATOR Union Drilling, Inc.  
Address P.O. Drawer 40  
Buckhammon, WV 26201

DESIGNATED AGENT Union Drilling, Inc.  
Address P.O. Drawer 40  
Buckhammon, WV 26201

OIL & GAS ROYALTY OWNER Leslie F. & Louise McCoy  
Address 1548 Summit Drive  
Charleston, WV 25302

COAL OPERATOR         
Address       

ACREAGE 366.70  
SURFACE OWNER (Same as Above)  
Address         
ACREAGE       

COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name Same as Oil & Gas Owners  
Address         
Name         
Address       

FIELD SALE (IF MADE) TO:  
Address Not determined at this time

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Kenneth Butcher  
Address Route 1  
Barboursville, WV 25504

COAL LESSEE WITH DECLARATION ON RECORD:  
Name         
Address         
OCT 16 1981  
OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed        / lease XX other contract        / dated February 27, 19 81, to the undersigned well operator from Leslie F. McCoy & Louise H. McCoy to Cyclops Corporation & Assigned to UDI  
(IF said deed, lease, or other contract has been recorded:)

Recorded on April 15, 19 81, in the office of the Clerk of the County Commission of Mason County, West West, in Lease Book 49 at page 717. A permit is requested as follows:

PROPOSED WORK: Drill XX / Drill deeper        / Redrill        / Fracture or stimulate XX /  
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 COMMISSION  
1615 WASHINGTON STREET EAST  
CHARLESTON, WV 25311  
TELEPHONE: (304) 348-3092

BLANKET BOND

UNION DRILLING, INC.  
Well Operator  
By Dean H. Bucher  
Its Dean H. Bucher, Petroleum Geologist

**PROPOSED WORK ORDER**

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

DRILLING CONTRACTOR (IF KNOWN) UNION DRILLING, INC.

Address P.O. Drawer 40  
Buckhannon, WV 26201

GEOLOGICAL TARGET FORMATION, Tuscarora

Estimated depth of completed well, 5700 feet Rotary XX / Cable tools        /

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

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

**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"			X		300'	300'	to surface	Kinds
Fresh Water									
Coal									Sizes
Intermediate	8 5/8"		23#	X		2000'	2000'	to surface	
Production	4 1/2"		10 1/2#	X		5500'	5500'	<sup>550</sup> <del>350</del> sks or as req. by rule 15.01	Depths set
Tubing									
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 Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 6-22-82.

  
Deputy Director Oil & Gas Division

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       

By         
Its