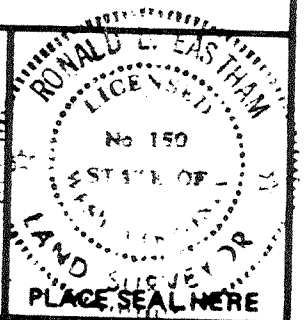


LATITUDE 38° 35'

LONGITUDE 82° 12' 30"

FILE NO. _____
 DRAWING NO. _____
 SCALE 1"=200'
 MINIMUM DEGREE OF ACCURACY 1:8,800
 PROVEN SOURCE OF ELEVATION Intersection of W.V. Rte. Nos. 1 and 7/1, Elev=574'

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. East
 R.P.E. _____ L.L.S. 150



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

DATE Aug 28, 19 81
 OPERATOR'S WELL NO. 1733
 API WELL NO. _____
 STATE 47 COUNTY 011 PERMIT 0694



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 598.93' WATER SHED Left Fork of Sparlock Creek
 DISTRICT Union COUNTY Cabell
 QUADRANGLE Glenwood 415 360
 SURFACE OWNER George Spurlock, Jr., et ux ACREAGE 13.50
 OIL & GAS ROYALTY OWNER George Spurlock, Jr., et ux LEASE ACREAGE 13.50
 LEASE NO. C-2-443
 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 5,500'
 WELL OPERATOR Union Drilling, Inc. DESIGNATED AGENT Joseph C. Petty
 ADDRESS Drawer 40 ADDRESS Drawer 40
Buckhannon, W.V. 26201 Buckhannon, W.V. 26201

UOT 1-3-1981

TRASCO:

Deep Well

RECEIVED

Plot Card OSD-7

JUL 2 - 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES



IV-35
(Rev 8-81)

Date May 17, 1982

Operator's

Well No. 1 - 1733 - U

State of West Virginia

Department of Mines

Oil and Gas Division

Farm George Spurlock, Jr. #1

API No. 47 - 011 - 0694

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 x / Shallow /)

LOCATION: Elevation: 598.93' Watershed Left Fork of Spurlock Creek
District: Union County Cabell Quadrangle Glenwood

COMPANY UNION DRILLING, INC.
P. O. Drawer 40
ADDRESS Buckhannon, WV 26201

DESIGNATED AGENT UNION DRILLING, INC.
P. O. Drawer 40
ADDRESS Buckhannon, WV 26201

SURFACE OWNER Mr. & Mrs. George Spurlock
Route #1, Box 94
ADDRESS Glenwood, WV 25520

MINERAL RIGHTS OWNER Same as Surface
ADDRESS

OIL AND GAS INSPECTOR FOR THIS WORK Kenneth
Butcher ADDRESS RFD #1
Barboursville, WV 25504

PERMIT ISSUED 9/17/81

DRILLING COMMENCED 10/25/81

DRILLING COMPLETED 11/20/82¹

IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON Partial Plugging on 11/21/81

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cord.	35'	35'	177 cf
13-10"			
9 5/8			
8 5/8	2119.70'	2119.70'	100 cf
7			
5 1/2			
4 1/2	none	none	
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Tuscarora Depth 5500 feet

Depth of completed well 4697 feet Rotary x / Cable Tools

Water strata depth: Fresh 1195^{30'} 635¹ feet; Salt feet

Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Brown Shale Pay zone depth 3106 feet

Gas: Initial open flow show Mcf/d Oil: Initial open flow none Bbl/d

Final open flow 5 Mcf/d Final open flow none Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure 200 psig (surface measurement) after 24 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)

JUL 12 1982

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

On 11-22-81 Basin Surveys shot 540' of Brown Shale with 5½" Judymite in the 7 7/8" hole. 2850'/3394' *lower than through observation*

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Red Clay			0	10	
Shale & Mud			10	15	Water at 30' ½"
Sand and Shale			15	83	Hole Damm at 635'
Red Rock and Shale			33	330	Water at 1195' 4" to 5"
Sand and Shale			330	1147	
Maxson			1147	1360	
Big Lime			1360	1408	
Shale			1408	1444	
Injun			1444	1520	
Sand and Shale			1520	2008	
Berea			2008	2021	
Sand and Shale			2021	2852	
Brown Shale			2852	3104	
Marcellus			3104	3403	
Onondaga			3403	3748	
Helderberg			3748	4160	
Sand and Shale			4160	4520	
Clinton			4520	4553	
Sand and Shale			4553	TD 4697	Odor of gas

(Attach separate sheets as necessary)

UNION DRILLING, INC.

Well Operator

By: Joseph C. Pettev
Date: Joseph C. Pettev, Vice President of Production
5/18/82

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."

Date: September 16, 19 81

Operator's Well No. 1 - 1733 - U

API Well No. 47 - 011 - 0694

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

State County Permit George Spurlock, Jr. #1 (1733)

OIL AND GAS WELL PERMIT

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

LOCATION: Elevation: 598.93' Watershed: Left Fork of Spurlock Creek
District: Union County: Cabell Quadrangle: Glenwood

WELL OPERATOR UNION DRILLING, INC. DESIGNATED AGENT UNION DRILLING, INC.
Address P. O. Drawer 40 Address P. O. Drawer 40
Buckhannon, WV 26201 Buckhannon, WV 26201

OIL & GAS ROYALTY OWNER (FEE SIMPLE TITLE)
Mr. & Mrs. George Spurlock, etal COAL OPERATOR
Address Route #1, Box 94 Address
Glenwood, WV 25520

ACREAGE COAL OWNER(S) WITH DECLARATION ON RECORD:
SURFACE OWNER Name
Address Address
ACREAGE Name **RECEIVED**
 SEP 17 1981
Address **OIL AND GAS DIVISION**
 WV DEPARTMENT OF MINES

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

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Kenneth Butcher (736-4885) Address
Address RFD #1
Barboursville, WV 25504

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 April 30, 19 77, to the undersigned well operator from Mr. & Mrs. George Spurlock to Cyclops Corp. and assigned to Union Drilling, Inc.
(If said deed, lease, or other contract has been recorded:)
Recorded on June 24, 19 77, in the office of the Clerk of the County Commission of Cabell County, West
West, in O/G Book 228 at page 392. A permit is requested as follows:

PROPOSED WORK: Drill X / Drill deeper / Redrill / Fracture or stimulate X /
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 Joseph C. Petty
Its Joseph C. Petty, Vice President for Production

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, 5500 feet Rotary X / Cable tools /

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

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

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS			New	Used	FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft			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			5100'	400 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 5-29-82.

J. B. Hargrett
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