



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. 636.01
 DRAWING NO. 87-1
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION Well N^o. 1877
Elev. - 952'

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 ENERGY.

(SIGNED) Ruffard L. Ristrandus
 R.P.E. _____ L.L.S. 555
Buckhannon, WV

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE 13 May, 19 87
 OPERATOR'S WELL NO. D-11
 API WELL NO. 47 017 3614
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION STORAGE ___ DEEP ___ SHALLOW
 LOCATION: ELEVATION 975' WATERSHED Sheep Run To South Fork Hughes River
 DISTRICT Southwest 7 COUNTY Doddridge
 QUADRANGLE Oxford 526 058 NE3 Holbrook
 SURFACE OWNER Norman E. Haessler, dba ACREAGE 84
 OIL & GAS ROYALTY OWNER Eli Hutter LEASE ACREAGE 615
 LEASE NO. 6125

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 6050'
 WELL OPERATOR UNITED OPERATING CO. DESIGNATED AGENT LYLE T. COFFMAN
 ADDRESS SUITE 930, COMMERCE SQUARE ADDRESS SAME
CHARLESTON, WV 25301

NOV 23 1987

6-6 Straight Fork-Bluestone Creek (133)



WR-35

Date December 22, 1987
Operator's Well No. Haessley D-11
Farm _____
API No. 47 - 017 - 3614

State of West Virginia
DEPARTMENT OF ENERGY
Oil and Gas Division

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 ___ / Shallow x /)

LOCATION: Elevation: 978 Watershed Sheeps Run of S.F. Hughes River
District: Southwest County Doddridge Quadrangle Oxford 7.5'

COMPANY United Operating Company 25301
ADDRESS 930 Commerce Square, Charleston, WV
DESIGNATED AGENT Lyle T. Coffman
ADDRESS 930 Commerce Sq. Charleston, WV 25301
SURFACE OWNER N. Haessley dba
ADDRESS Marietta, Ohio
MINERAL RIGHTS OWNER Eli Nutter, Heirs
ADDRESS Marietta, Ohio
OIL AND GAS INSPECTOR FOR THIS WORK Mike Underwood
ADDRESS Salem, WV
PERMIT ISSUED November 19, 1987
DRILLING COMMENCED December 7, 1987
DRILLING COMPLETED December 13, 1987
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"	206	206	Surf
9 5/8"			
8 5/8"	1440	1440	Surf
7"			
5 1/2"			
4 1/2"		6371	625 sks
3"			
2"			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Depth 6050 feet
Depth of completed well 6408 feet Rotary x / Cable Tools _____
Water strata depth: Fresh 584 feet; Salt None feet
Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Shale, Alexander, Benson Pay zone depth See Treatment feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 993 Mcf/d Final open flow Show Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1525 psig (surface measurement) after 48 hours shut in
(If applicable due to multiple completion--)
Second producing formation Riley, Balltown, Speechly Pay zone depth See Treatment 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 PERFORMED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

- 1st. Stage: Shale
- 2nd. Stage: Alexander
- 3rd. Stage: Benson Riley
- 4th. Stage: Riley Balltown
- 5th. Stage: Speechly

depth?

WELL LOG

REMARKS	TOP FEET	BOTTOM FEET	FORMATION COLOR HARD OR SOFT
	0	6	Clay
	6	43	Sand, Shale
	43	901	Sand, Shale, Redrock
	901	1722	Sand, Shale
	1722	1736	Little Lime
	1736	1765	Shale
	1765	1824	Big Lime
	1824	1904	Big Injun
	1904	3136	Sand, Shale
	3136	3457	Speechly Section
	3457	3494	Shale
	3494	3494	Balltown Section
	3494	4180	Riley Section
	4180	4681	Shale
	4681	4724	Benson
	4724	4730	Shale
	4730	4730	Alexander
	4730	5002	Shale
	5002	5069	Shale
	5069	6408	Shale
3/4" Fresh H ₂ O @ 584'			
T.D.			

(Attach separate sheets as necessary)

United Operating Company
Well Operator

By: Daniel R. Chapman, Geologist

Date: December 22, 1987

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."
432

update

FORM WW-2(B) - FILE COPY
(Obverse)
7/85

RECEIVED
NOV 18 1987



- 1) Date: November 17, 1987
- 2) Operator's Well No. Haessley D-11
- 3) API Well No. 47 017 3614
State County Permit

STATE OF WEST VIRGINIA

DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A. Oil / Gas / Other
Address Charleston, WV 25301 United Operating Co. Address Suite 750, Commerce Square Charleston, WV 25301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Mike Underwood Address Route 2, Box 135 Salem, WV 26426
- 9) DRILLING CONTRACTOR: Name I. L. Morris Well Service, Inc. Address P. O. Box 397 Glenville, WV 26351
- 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
- 12) Estimated depth of completed well, 6050 feet
- 13) Approximate strata depths: Fresh, 50' 60' 40' 210' feet; salt, 750' Damp Pit 1400' feet.
- 14) Approximate coal seam depths: None Is coal being mined in the area? Yes / No
- 15) CASING AND TUBING PROGRAM From Doddridge, 649, 1003, 1877, 3097, 3384

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									Kinds
Fresh water	11 3/4	API	40.#	X		40'	40'	C.T.S.	38CSR18-11.3
Coal									Sizes 38CSR18-11.2.2
Intermediate	8 5/8	ERW	20.#	X		1200'	1200'	C.T.S.	
Production	4 1/2	J-55	10.5#	X		6000'	6000'	625 sks.	Depths set 38CSR18-11.1
Tubing									
Liners									Perforations: Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47 017 3614 Date 11/19 19 87

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 11/19/89 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing:	Fee:	WPGP:	SWP:	Other:
				238			

13295

NOTE: Keep one copy of this permit posted at the drilling location.

Director, Division of Oil and Gas

File

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.