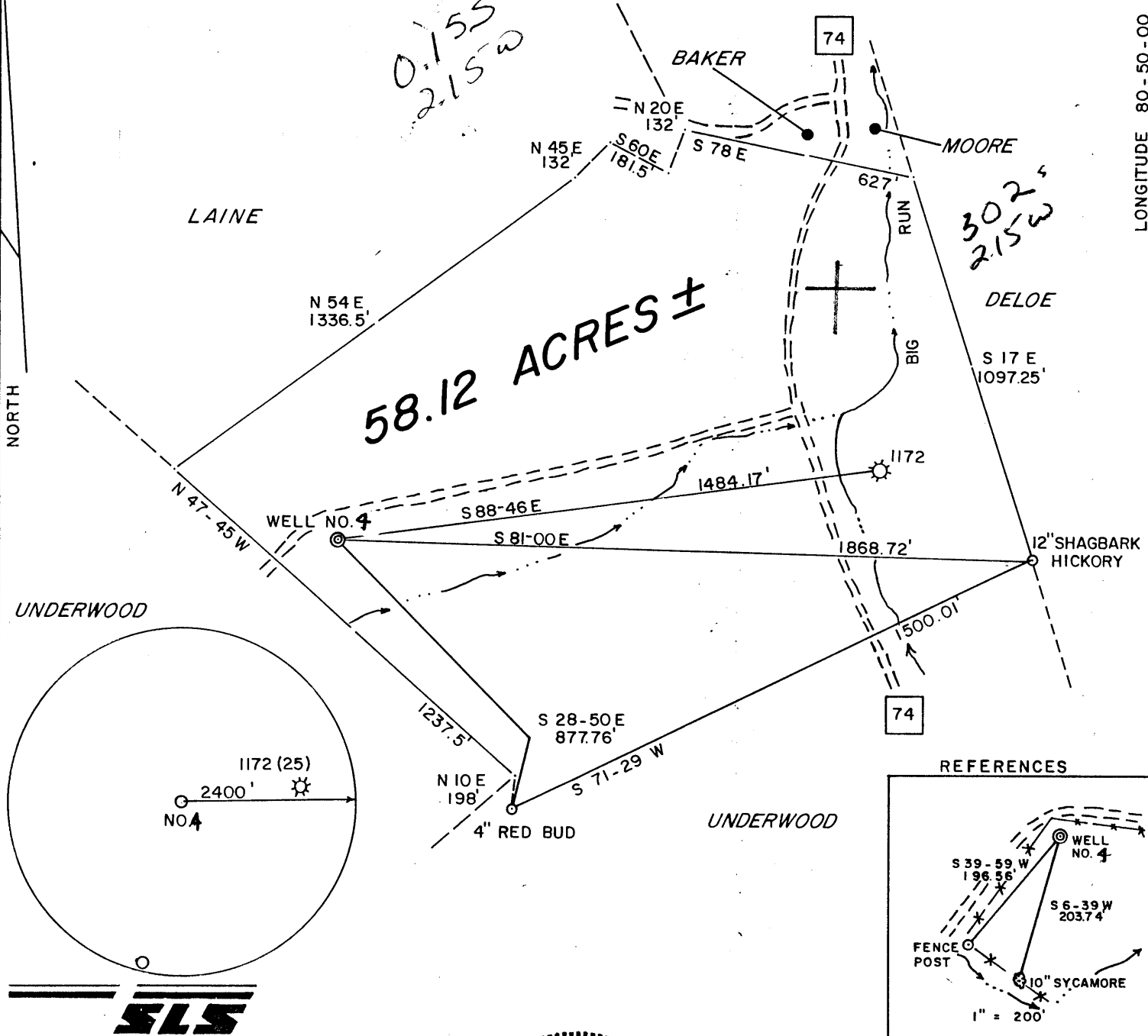


# UNDERWOOD LEASE

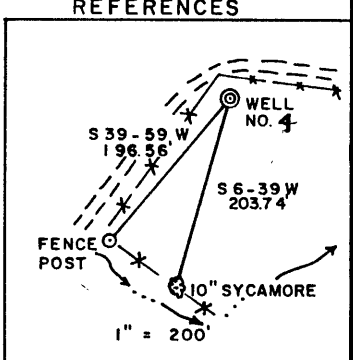
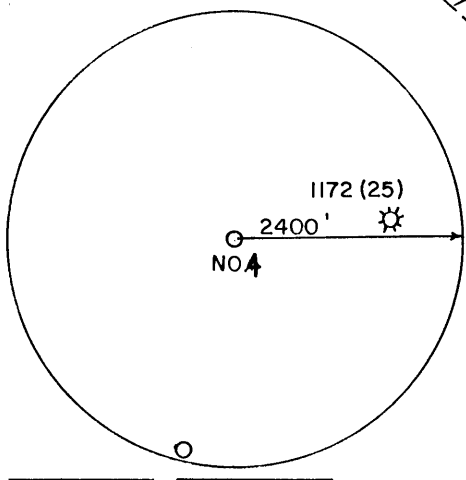
# WELL NO. 4



NORTH

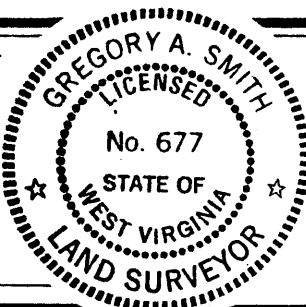
00-05-08 LONGITUDE

## 58.12 ACRES ±



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.

L.L.S. Gregory A. Smith  
677



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE SEPT. 28, 19 87  
 OPERATORS WELL NO. UNDERWOOD NO. 4  
 API WELL NO. 47 - 095 - 1215  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. (1602) 20-49  
 PROVEN SOURCE OF ELEVATION BM ELEV. 721' SCALE 1" = 400'

**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENERGY  
**OIL AND GAS DIVISION**



WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  IF "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION 762' WATERSHED BIG RUN OF MIDDLE ISLAND CREEK COUNTY TYLER QUADRANGLE WEST UNION 7.5' 671

SURFACE OWNER RALPH & ETHEL UNDERWOOD ACREAGE 58.12 LEASE ACREAGE 58.12

ROYALTY OWNER RALPH & ETHEL UNDERWOOD LEASE NO. 5

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION BENSON ESTIMATED DEPTH 5000'

WELL OPERATOR CHESTERFIELD ENERGY CORP. DESIGNATED AGENT SAMUEL J. CANN OCT 5 1987  
 ADDRESS 203 W. MAIN ST., CLARKSBURG, WV 26301 ADDRESS 203 W. MAIN ST., CLARKSBURG, WV 26301

COUNTY NAME PERMIT

163  
6-6 unpaired (6)



IV-35  
(Rev 8-81)

**RECEIVED**  
OCT 27 1987

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date October 20, 1987  
Operator's  
Well No. Underwood #4 Well  
Farm  
API No. 47 - 095 - 1215

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

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 \_\_\_ / Underground Storage \_\_\_ / Deep \_\_\_ / Shallow X /)

LOCATION: Elevation: 762' Watershed Big Run of Middle Island Creek  
District: Centerville County Tyler Quadrangle West Union 7.5

COMPANY Chesterfield Energy Corporation  
ADDRESS 203 West Main St., Clarksburg, WV 26301  
DESIGNATED AGENT Samuel J. Cann  
ADDRESS 203 West Main St., Clarksburg, WV 26301  
SURFACE OWNER Ralph & Ethel Underwood  
ADDRESS Rt. #2, Box 177, Pennsboro, WV 26415  
MINERAL RIGHTS OWNER Ralph & Ethel Underwood  
ADDRESS Rt. #2, Box 177, Pennsboro, WV 26415  
OIL AND GAS INSPECTOR FOR THIS WORK Robert Lowther  
General Delivery  
ADDRESS Middlebourne, WV 26149  
PERMIT ISSUED October 2, 1987  
DRILLING COMMENCED October 9, 1987  
DRILLING COMPLETED October 14, 1987

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"		13'	
9 5/8			
8 5/8		924'	230 sks
7			
5 1/2			
4 1/2		4767'	210 sks
3			
2			
Liners used			

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

GEOLOGICAL TARGET FORMATION Benson Depth                      feet  
Depth of completed well 4825 feet Rotary XX / Cable Tools                       
Water strata depth: Fresh 45', 108' feet; Salt                      feet  
Coal seam depths: None Is coal being mined in the area?                     

OPEN FLOW DATA

Producing formation Benson Pay zone depth 4698'-4714' feet  
Gas: Initial open flow 68 Mcf/d Oil: Initial open flow                      Ebl/d  
Final open flow 620 Mcf/d Final open flow                      Ebl/d  
Time of open flow between initial and final tests                      hours  
Static rock pressure 1480 psig (surface measurement) after                      hours shut in  
(If applicable due to multiple completion--)  
Second producing formation Riley Pay zone depth 4295'-4330' feet  
Gas: Initial open flow                      Mcf/d Oil: Initial open flow                      Ebl/d  
"COMMINGLED WITH FIRST STAGE"  
Final open flow                      Mcf/d Oil: Final open flow                      Ebl/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)

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

Benson 75 Quality Foam  
35,000# 20/40 Sand

Riley 75 Quality Foam  
35,000# 20/40 Sand

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OCT 27 1987

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Fill			0	15	
Sand & Shale			15	25	
Sand			25	108	1" stream @ 45'
Sand & Shale			108	264	1 1/2" stream water @ 108'
Red Rock			264	273	
Sand & Shale			273	439	
Red Rock			439	477	
Shale & Red Rock			477	1640	
Big Lime			1640	1696	
Injun			1696	1870	
Shale			1870	2018	Gas Ck @ 1981' Odor
Weir			2018	2130	Gas Ck @ 2477' 34/10-1" w/w
Sand & Shale			2130	2710	Gas Ck @ 4829' 44/10-1" w/w
Shale			2710	3136	Gas Ck @ DC 42/10-1" w/w
Sand			3136	3208	
Sand & Shale			3208	3710	
Shale			3710	4295	
Riley			4295	4330	
Shale			4330	4698	
Benson			4698	4714	
Shale			4714	4825	
TD			<u>4825</u>		

(Attach separate sheets as necessary)

CHESTERFIELD ENERGY CORPORATION

Well Operator

By:

Date: October 20, 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 coal, encountered in the drilling of a well."

FORM WV-2(B) FILE COPY  
**RECEIVED**  
 OCT 02 1987



1) Date: Sept. 28, 19 87  
 2) Operator's Well No. Underwood No. 4  
 3) API Well No. 47 095 1215  
                   State           County           Permit

STATE OF WEST VIRGINIA  
 DIVISION OF OIL & GAS DEPARTMENT OF ENERGY  
 DEPARTMENT OF ENERGY, OIL AND GAS DIVISION  
**APPLICATION FOR A WELL WORK PERMIT**

- 4) WELL TYPE: A Oil  / Gas   
 B (If "Gas", Production  / Underground storage  / Deep  / Shallow )
- 5) LOCATION: Elevation: 762' Watershed: Big Run of Middle Island Creek  
 District: Centerville County: Tyler Quadrangle: West Union 7.5'
- 6) WELL OPERATOR Chesterfield Energy Corp. CODE: 9550 7) DESIGNATED AGENT Samuel J. Cann  
 Address 203 W. Main St. Address 203 W. Main St.  
Clarksburg, WV 26301 Clarksburg, WV 26301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Robert Lowther Name \_\_\_\_\_  
 Address General Delivery Address \_\_\_\_\_  
Middlebourne, WV 26149
- 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, Benson  
 12) Estimated depth of completed well, 5000 feet  
 13) Approximate strata depths: Fresh, 55 feet; salt, N/A feet.  
 14) Approximate coal seam depths: N/A Is coal being mined in the area? Yes  / No

15) 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	H-40	42	X		16'	0'	0	Kinds
Fresh water	8 5/8	ERW	23	X		999'	999'	CTS by Rule 15.05	<u>3BCRB-11.3</u>
Coal									Sizes
Intermediate								<u>38-5R18-11.1</u>	
Production	4 1/2	J-55	10.5	X		5000'	4950'	By Rule 15.01	Depths set
Tubing									Perforations:
Liners									Top Bottom

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-095-1215 Date October 2 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 October 2, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <u>MU</u>	Casing: <u>MW</u>	Fee: <u>7451</u>	WPCP: <u>MW</u>	S&E: <u>MW</u>	Other: <input type="checkbox"/>
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John W. Johnston by Margaret J. Hesse  
 Director, Division of Oil and Gas File

NOTE: Keep one copy of this permit posted at the drilling location.  
 See the reverse side of the APPLICANT'S COPY for instructions to the well operator.