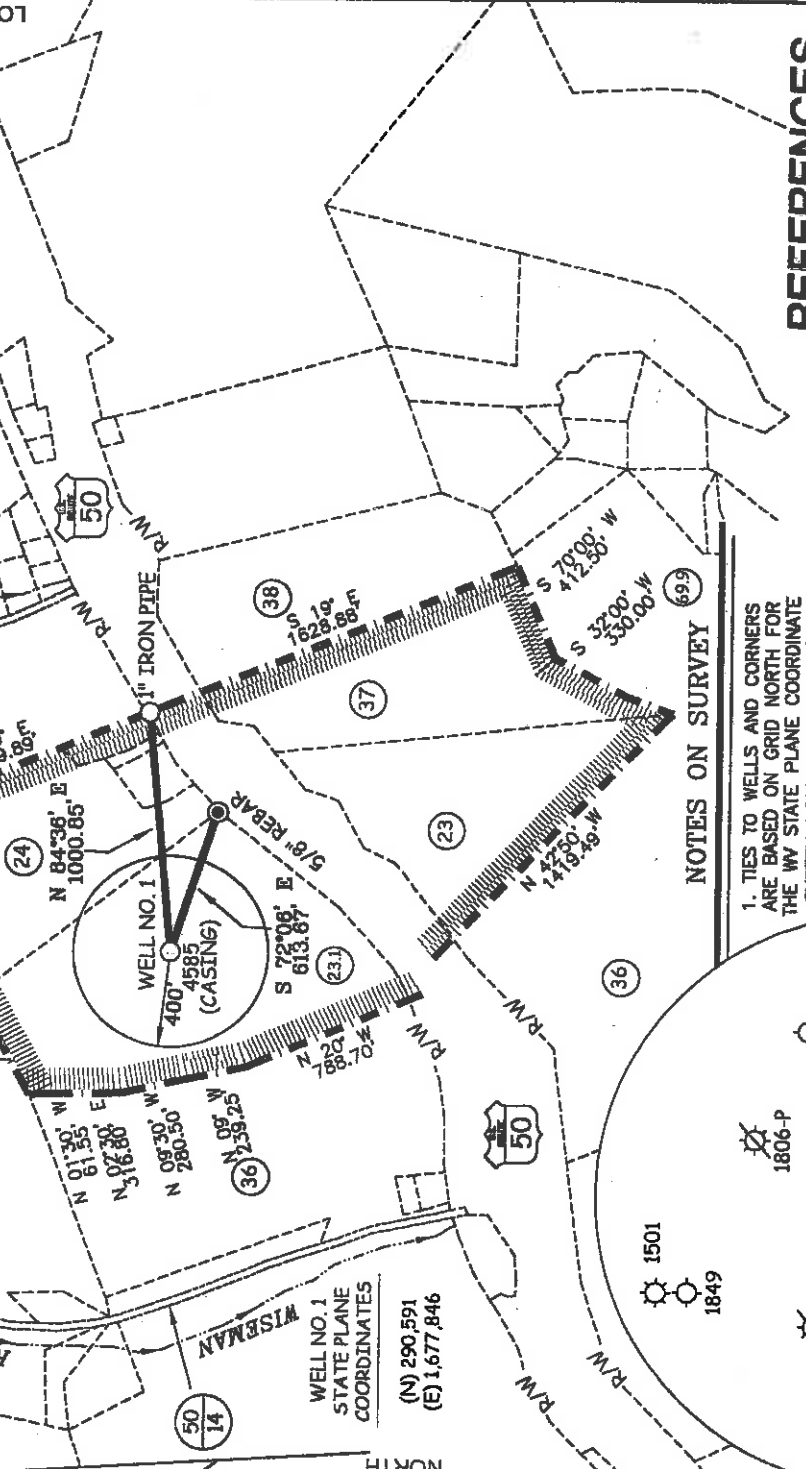


# UNDERWOOD LEASE 90 ACRES ± WELL NO. 1

LATITUDE 39°20'00"

LONGITUDE 80°37'30"

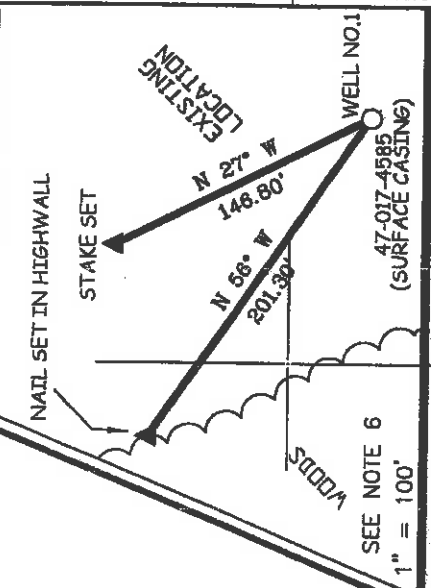
PARCEL TABLE	
23	J. WICKLAND 13.22 ACRES±
23.1	V. UNDERWOOD 28.75 ACRES±
24	W. McCLAIN 16.64 ACRES±
07	G. & M. REYNOLDS 38 ACRES±
36	G. & M. REYNOLDS 73.37 ACRES±
37	G. PATSY 19.3 ACRES±
38	C. FORD 16.06 ACRES±
59.9	R. & I. LACKEY 24.24 ACRES±



### NOTES ON SURVEY

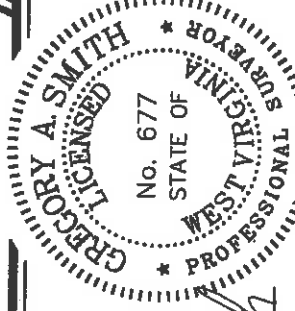
- TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
- TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 12/17/07.
- LEASE BOUNDARY SHOWN HEREDON TAKEN FROM A PLAT DATED 03/20/01 AS PREPARED BY WILLIAM R. MOSSOR FOR A.P.I. NO. 47-017-4585.
- SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF DODDRIDGE COUNTY IN JULY, 2007.
- WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).
- WELL BORE IS UTILIZING SURFACE CASING OF PERMITTED WELL 47-017-4585-CANCELLED.

### REFERENCES



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 DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 677  
*Gregory A. Smith*



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

DATE JULY 28, 20 08  
OPERATORS WELL NO. UNDERWOOD #1  
API WELL NO.

47-17-04585D  
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 6693PIR(252-12)  
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 800'

WELL TYPE: OIL  GAS  INJECTION  WASTE DISPOSAL  IF "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW  
LOCATION: ELEVATION 1,065' WATERSHED BUCKEYE RUN

DISTRICT GRANT COUNTY DODDRIDGE  
SURFACE OWNER VERNON LEE UNDERWOOD  
ROYALTY OWNER E. UNDERWOOD ETAL

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 MARCELLUS  
ESTIMATED DEPTH 7800'

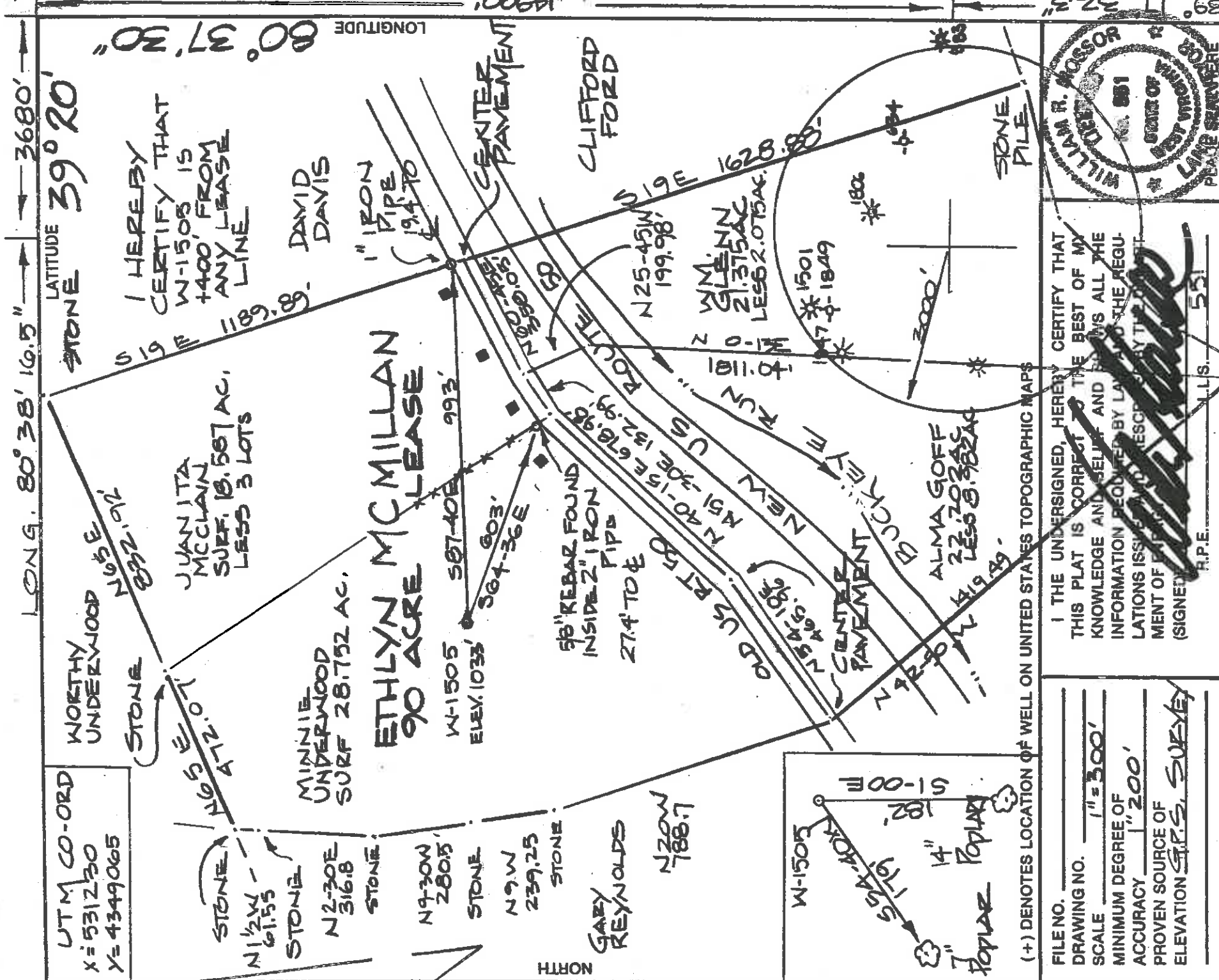
WELL OPERATOR HALL DRILLING, LLC  
ADDRESS P.O. BOX 249 ELLENBORO, WV 26346  
DESIGNATED AGENT MIKE HALL  
ADDRESS P.O. BOX 249 ELLENBORO, WV 26346



STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

COUNTY NAME D000 PERMIT 4585 D

AUG 15 2008

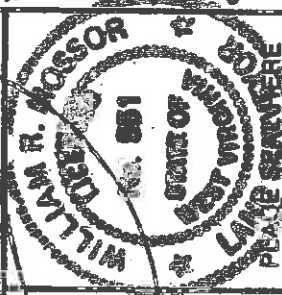


UTM CO-ORD  
 X = 531230  
 Y = 4349065

I HEREBY CERTIFY THAT W-1505 IS 1400' FROM ANY LEASE LINE

ETHLYN MCMILLAN  
 90 ACRE LEASE

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND CONTAINS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED BY THE COMMISSIONER OF THE DEPARTMENT OF REVENUE, IN CONNECTION WITH THE REGISTRATION OF THIS PLAT.



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

DATE 20 MARCH # 200  
 OPERATOR'S WELL NO. W-1505  
 API WELL NO. 47-017-04585

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1033' WATERSHED BUCKEYE COUNTY BUN CANCELLED PERMIT  
 DISTRICT GRANT QUADRANGLE SMITHBURG, WV  
 SURFACE OWNER MINNIE UNDERWOOD ACREAGE 28.752  
 OIL & GAS ROYALTY OWNER E. UNDERWOOD, ET AL LEASE ACREAGE 90

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 GRANITE-WASH ESTIMATED DEPTH BASEMENT  
 WELL OPERATOR TRANS-CAPitol INYEST. DESIGNATED AGENT GERALD LAUDERMAN  
 ADDRESS HC 68 BOX 14 SMITHVILLE, WV 26178 ADDRESS HC 68 BOX 14 SMITHVILLE, WV 26178

COUNTY NAME \_\_\_\_\_ PERMIT 4585 CANCEL  
 STATE \_\_\_\_\_ COUNTY \_\_\_\_\_ DATE 20 MARCH # 200  
 OPERATOR'S WELL NO. W-1505 API WELL NO. 47-017-04585

LONG. 80° 38' 16.5" LAT. 39° 32.3'  
 UTM CO-ORD X = 531230 Y = 4349065







WR-35  
Rev (5-01)

DATE: 02-07-09  
API #: 47-017-04585 -D ✓

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Vernon Lee Underwood

Operator Well No.: Underwood #1

LOCATION: Elevation: 1,065

Quadrangle: Smithburg 7.5'

District: Grant  
Latitude: 14,920 Feet South of 39 Deg. 20 Min. 00 Sec.  
Longitude 3,730 Feet West of 80 Deg. 37 Min. 30 Sec.

Company: Hall Drilling, LLC

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 249 Ellenboro WV 26346	13 3/8	250	250	100 sks
Agent: Mike Hall	9 5/8	339	339	225 sks
Inspector: Mike Underwood	6 5/8	2005	2005	320 sks
Date Permit Issued: 08/13/08	4 1/2	7100	7090	105 sks
Date Well Work Commenced: 08/16/08				
Date Well Work Completed: 08/23/08				
Verbal Plugging:				
Date Permission granted on:				
Rotary X Cable Rig				
Total Depth (feet): 7100				
Fresh Water Depth (ft.): 45'				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): N/A				

RECEIVED  
Office of Oil & Gas

WV Department of Environmental Protection

OPEN FLOW DATA

Producing formation Marcellus  
Gas: Initial open show MCF/d Oil: Initial open flow 6984-7036' Bbl/d  
Final open flow 500 MCF/d Final open flow Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure 1000# psig (surface pressure) after 48 Hours

Second producing formation  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

\* = commingled zones

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS,

Signed:

By: Michael T. Hall  
Date: 8/16/09

01/08/2010

Underwood #1  
47-017-04585

Stage #1	perfs	sand	avg rate	isip
Marcellus	6977-7025 100 holes	0000 sks	00 bpm	0000#

Drillers Log

Sh	0	20
Sd/Sh	20	155
Sd	155	390
Sd/Sh	390	795
Sd	795	860
Sd/Sh	860	1150
Sd	1150	1225
Sh	1225	1610
Sd	1610	1725
Sh	1725	1984
Lime	1984	2063
Sd	2063	2104
Sh	2104	2764
Sd	2764	2900
Sd/Sh	2900	6853
Lime	6853	6874
Shale	6874	6984
Bl Shale	6984	7036
Lime	7036	7100
TD	7100	

Electric Log Tops

Big Injun	2063
Benson	4738
Tully	6853
Marcellus	6984-7036
Onandoga	7036

gas ck @ TD = show

**RECEIVED**  
Office of Oil & Gas  
DEC 04 2009  
WV Department of  
Environmental Protection

01/08/2010