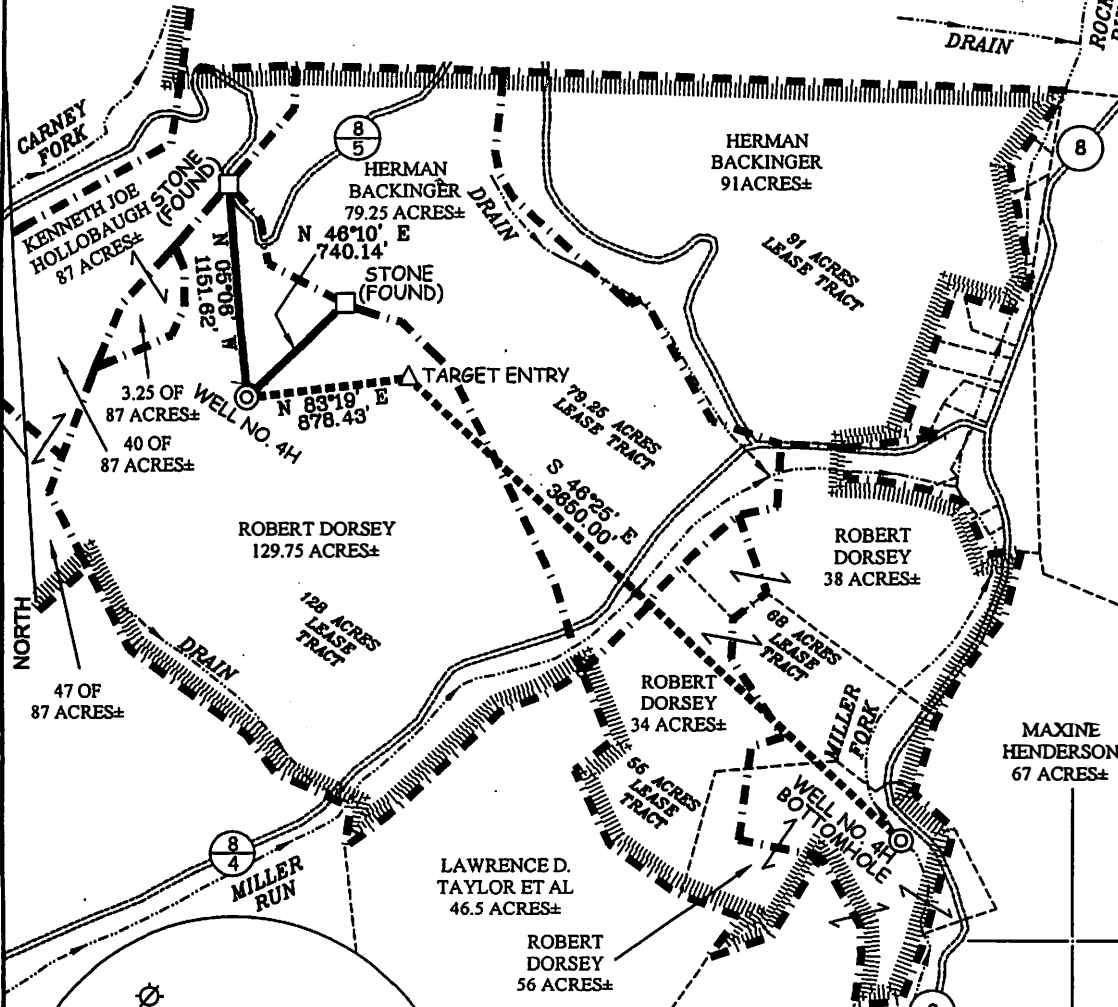


# CHARLES MUSGRAVE UNIT 4H



**WELL NO. 4H**  
**STATE PLANE COORDINATES**  
 (NORTH ZONE NAD '27)  
 N. 431,083  
 E. 1,691,103

**WELL NO. 4H (NAD '27)**  
 LAT=(N) 39°40'43.2"  
 LONG=(W) 80°35'51.0"

**WELL NO. 4H (NAD '27)**  
 LAT=(N) 39.67839  
 LONG=(W) 80.59750

**WELL NO. 4H UTM (NAD '83)**  
 N. 4,392,149  
 E. 534,535

**WELL NO. 4H**  
**TARGET ENTRY POINT**  
**STATE PLANE COORDINATES**  
 (NORTH ZONE NAD '27)  
 N. 431,185  
 E. 1,691,975

**TARGET ENTRY (NAD '27)**  
 LAT=(N) 39°40'43.3"  
 LONG=(W) 80°35'51.8"

**TARGET ENTRY (NAD '27)**  
 LAT=(N) 39.67870  
 LONG=(W) 80.59440

**TARGET ENTRY UTM (NAD '83)**  
 N. 4,392,185  
 E. 534,800

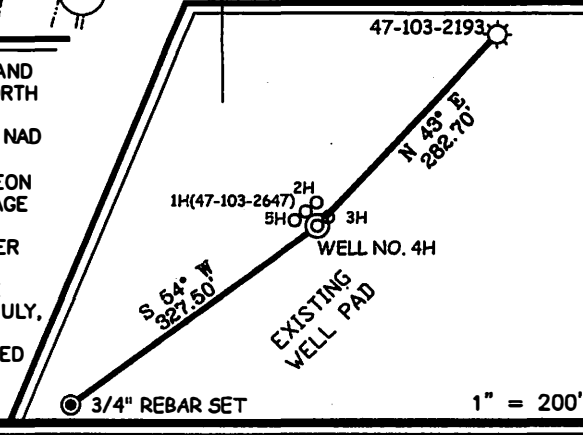
**WELL NO. 4H**  
**BOTTOM HOLE**  
**STATE PLANE COORDINATES**  
 (NORTH ZONE NAD '27)  
 N. 428,689  
 E. 1,694,819

**BOTTOM HOLE (NAD '27)**  
 LAT=(N) 39°40'18.8"  
 LONG=(W) 80°35'05.6"

**BOTTOM HOLE (NAD '27)**  
 LAT=(N) 39.67188  
 LONG=(W) 80.58490

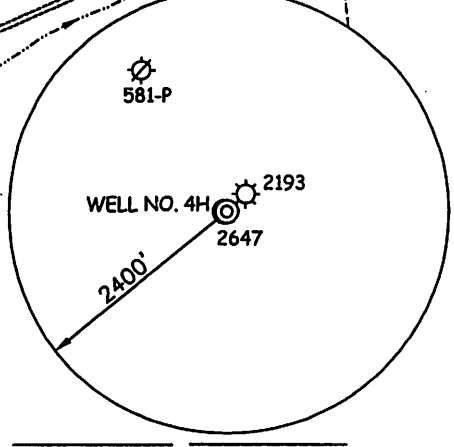
**BOTTOM HOLE UTM (NAD '83)**  
 N. 4,391,432  
 E. 535,618

## REFERENCES



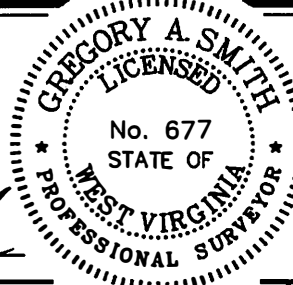
### NOTES ON SURVEY

1. TIES TO WELLS, REFERENCES, AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 142 PAGE 50 AND ADJOINING DEEDS.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF WETZEL COUNTY IN JULY, 2010.
4. WELL COORDINATES ESTABLISHED BY DGPS(SURVEY GRADE).



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 SEPTEMBER 6, 20 10  
 OPERATORS WELL NO. CHARLES MUSGRAVE UNIT 4H  
 API WELL NO. 47-103-02753 H  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7507P4HR(340-09)  
 PROVEN SOURCE OF ELEVATION DGPS (SURVEY GRADE) SCALE 1" = 1,000'

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

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

LOCATION:  
 ELEVATION 1,344' WATERSHED MILLER RUN & CARNEY FORK  
 DISTRICT CENTER COUNTY WETZEL QUADRANGLE LITTLETON 7.5'  
 SURFACE OWNER ROBERT DORSEY ACREAGE 129.75±  
 ROYALTY OWNER CHARLES E. MUSGRAVE, ET AL LEASE ACREAGE 129.75, 79.25, 55, & 68±  
 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 7,472' + HORIZONTAL LEG

WELL OPERATOR GRENADIER ENERGY PARTNERS, LLC DESIGNATED AGENT SHARON BARTH-CT CORP.  
 ADDRESS 1610 WOODSTEAD COURT, SUITE 330 ADDRESS 707 VIRGINIA ST. EAST 15TH FL.  
THE WOODLANDS, TX 77380 CHARLESTON, WV 25301