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west virginia department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
www.dep.wv.gov

**PERMIT MODIFICATION APPROVAL**

September 10, 2015

TRIANA ENERGY, LLC  
900 VIRGINIA STREET, EAST - SUITE 400  
CHARLESTO, WA 25301

Re: Permit Modification Approval for API Number 9101291, Well #: DUNHAM 4H

**Wellbore Path**

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

Gene Smith  
Assistant Chief of Permitting  
Office of Oil and Gas

Promoting a healthy environment.

09/11/2015



September 1, 2015

Mr. James Martin, Chief  
Office of Oil and Gas  
West Virginia Department of Environmental Protection  
601 57<sup>th</sup> Street, S. E.  
Charleston, West Virginia 25304

**Re: Triana Energy, LLC – Well Plat Modification Requests  
Dunham 2H, 4H and 6H Horizontal Wells, Booth's Creek District, Taylor County, WV**

Dear Mr. Martin:

Upon completion of as-drilled plats for its Dunham 2H, 4H and 6H horizontal natural gas wells drilled in Booth's Creek District, Taylor County, West Virginia, Triana Energy discovered that the surface location of each well was inadvertently relocated exactly 30 feet south from their permitted locations. Triana has conducted an exhaustive investigation to determine the cause of the relocation, however no conclusion was reached. The well pad was originally designed to accommodate six wells, but was later reduced to five wells, due to mineral lease constraints. Inasmuch as the approved well locations are spaced 30 feet apart, we can only presume that an error occurred in stakeout during the transition from six wells to five wells.

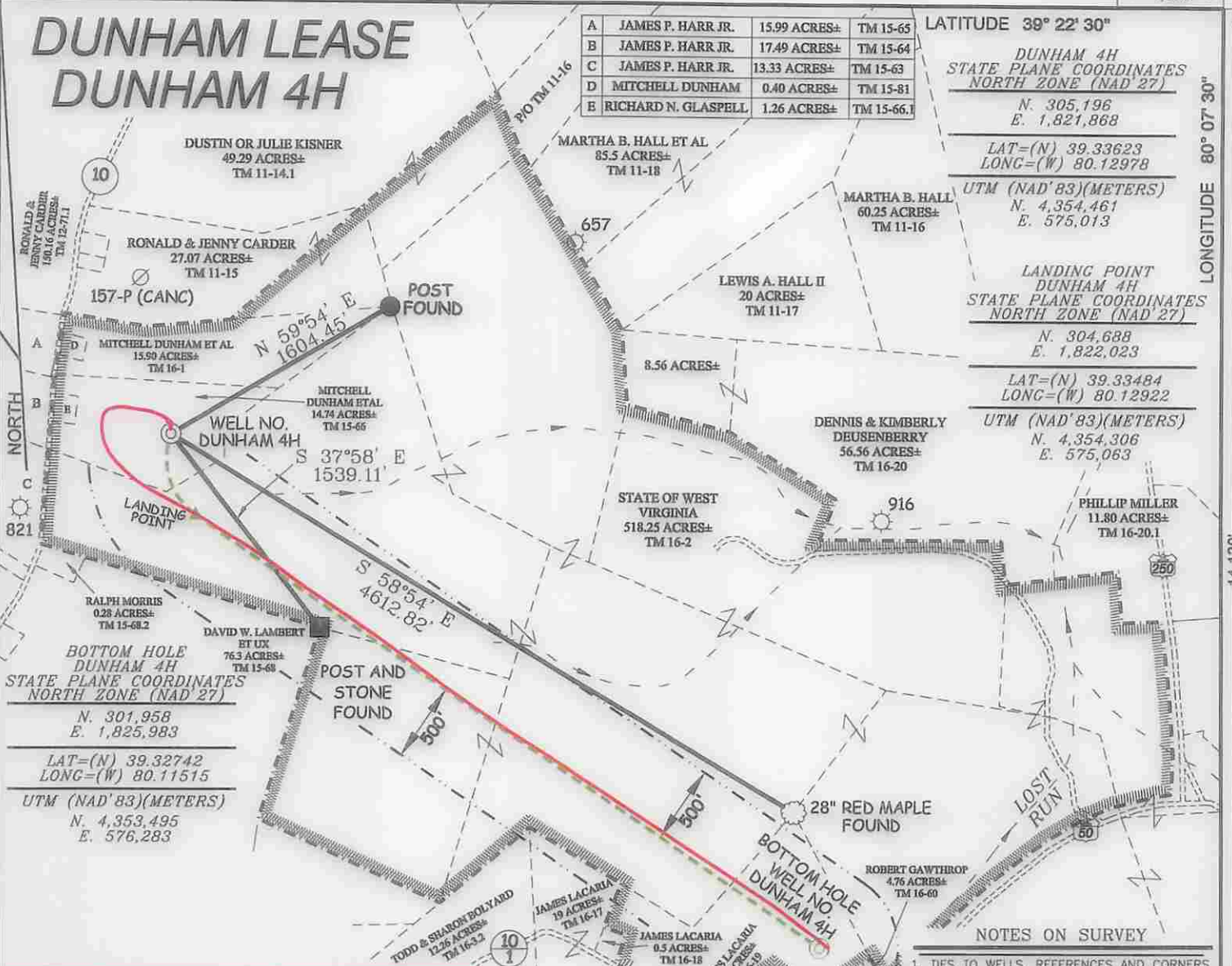
In any event, Triana apologizes for any inconvenience and hereby requests that the well permits and records for the three wells are modified to reflect the accurate surface hole locations. Corrected plats for the wells are included herewith. Mylar plats were submitted to your office with corrected WR-35 Completion Reports.

Please feel free to contact me should you have any questions or need additional information. We look forward to working with you and your staff on this project.

Sincerely,

Walter C. Showen, III  
Manager, Permitting

# DUNHAM LEASE DUNHAM 4H



A	JAMES P. HARR JR.	15.99 ACRES±	TM 15-65
B	JAMES P. HARR JR.	17.49 ACRES±	TM 15-64
C	JAMES P. HARR JR.	13.33 ACRES±	TM 15-63
D	MITCHELL DUNHAM	0.40 ACRES±	TM 15-81
E	RICHARD N. GLASPELL	1.26 ACRES±	TM 15-66.1

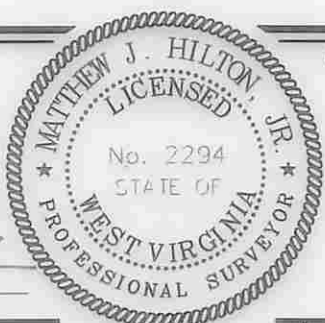
LATITUDE 39° 22' 30"  
 DUNHAM 4H  
 STATE PLANE COORDINATES  
 NORTH ZONE (NAD '27)  
 N. 305,196  
 E. 1,821,868  
 LAT=(N) 39.33623  
 LONG=(W) 80.12978  
 UTM (NAD'83)(METERS)  
 N. 4,354,461  
 E. 575,013

LANDING POINT  
 DUNHAM 4H  
 STATE PLANE COORDINATES  
 NORTH ZONE (NAD '27)  
 N. 304,688  
 E. 1,822,023  
 LAT=(N) 39.33484  
 LONG=(W) 80.12922  
 UTM (NAD'83)(METERS)  
 N. 4,354,306  
 E. 575,063

BOTTOM HOLE  
 DUNHAM 4H  
 STATE PLANE COORDINATES  
 NORTH ZONE (NAD '27)  
 N. 301,958  
 E. 1,825,983  
 LAT=(N) 39.32742  
 LONG=(W) 80.11515  
 UTM (NAD'83)(METERS)  
 N. 4,353,495  
 E. 576,283

**AS DRILLED COORDINATES  
 FOR WELL NO. DUNHAM 4H**  
 (S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)  
 NAD'27 S.P.C.(FT) N. 305,226 E. 1,821,868  
 NAD'27 GEO. LAT=(N) 39.33631 LONG=(W) 80.12978  
 NAD'83 UTM (M) N. 4,354,470 E. 575,013  
**BOTTOM HOLE**  
 NAD'27 S.P.C.(FT) N. 301,955 E. 1,826,043  
 NAD'27 GEO. LAT=(N) 39.32741 LONG=(W) 80.11494  
 NAD'83 UTM (M) N. 4,353,494 E. 576,302

- 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 MULTIPLE DEEDS PROVIDED BY TRIANA ENERGY LLC AND VARIOUS WELL PLATS.
  3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF TAYLOR COUNTY IN JULY, 2013.
  4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SURVEY GRADE).
  5. NO DWELLINGS OR AGRICULTURAL BUILDINGS WITHIN 625 FEET OF CENTER OF PAD. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE PAD LIMITS OF DISTURBANCE.
  6. AS DRILLED INFORMATION PROVIDED BY TRIANA ENERGY, LLC.
  7. THIS PERMITTED PLAT REVISED TO SHOW THE AS DRILLED PATH AND COORDINATES RELATIVE TO THE PROPOSED WELL.



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. *Matthew J. Hilton, Jr.*  
 2294

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE DECEMBER 17, 20 13  
 REVISED JULY 29, 20 15  
 OPERATORS WELL NO. DUNHAM 4H  
 API WELL NO. 47-091-01291H  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7754AD4H  
 PROVEN SOURCE OF ELEVATION DGPS (SURVEY GRADE GPS TIES TO COORS)  
 SCALE 1" = 1000'

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 1,420' WATERSHED TRIBUTARY OF LOST RUN  
 DISTRICT BOOTH'S CREEK COUNTY TAYLOR QUADRANGLE ROSEMONT 7.5'

SURFACE OWNER MITCHELL DUNHAM ET AL ACREAGE 14.74±  
 ROYALTY OWNER MITCHELL DUNHAM ET AL (14.74 & 15.90 AC.±) AND W.V. DEPT. OF AGRICULTURAL (518.25 AC.±) MITCHELL CARL DUNHAM (0.4 AC.±)

PROPOSED WORK: LEASE NO. \_\_\_\_\_  
 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 TVD 7,800' / TMD

WELL OPERATOR TRIANA ENERGY, L.L.C. DESIGNATED AGENT RACHELLE A. KING  
 ADDRESS 900 VIRGINIA STREET EAST, SUITE 400 ADDRESS 900 VIRGINIA STREET EAST, SUITE 400  
 CHARLESTON, WV 25301 CHARLESTON, WV 25301

09/11/2015

COUNTY NAME  
 PERMIT