



west virginia department of environmental protection

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

June 19, 2014

TRIANA ENERGY, LLC
900 VIRGINIA STREET, EAST - SUITE 400
CHARLESTON, WV 25301

Re: Permit Modification Approval for API Number 9101292 , Well #: DUNHAM 5H
Add leaseholder

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
Regulatory/Compliance Manager
Office of Oil and Gas



June 13, 2014

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

Re: Triana Energy, LLC – Horizontal Well Work Permit Modification Request
API # 47-9101290 Dunham 1H,
API # 47-9101285 Dunham 2H,
API # 47-9101292 Dunham 5H,
Booth's Creek District, Taylor County, West Virginia

Dear Mr. Martin:

Triana Energy, LLC hereby requests to modify the Well Work Permit for the referenced wells located in Booth's District, Taylor County, West Virginia. During the drilling of the vertical section of the Dunham 1H, bore-hole conditions caused a natural deviation in the planned well bore path. Our evaluation of directional drilling survey data shows that it would be more economically beneficial to Triana and the mineral owners if the horizontal section of the original 2H well lateral path is drilled from the current 1H kick-off point. Conversely, the same is true for the drilling the original horizontal section of the 1H well lateral path from the current 2H kick-off point. The original well surface locations have not changed.

Therefore, Triana respectfully requests the Office of Oil and Gas to approve this request to modify the horizontal well lateral paths, effectively swapping the original Dunham 1H and 2H lateral sections with each other. Please find enclosed revised Forms WW-6B and WW-6A1 for the respective wells, as well as revised well plats reflecting the change.



Additionally, upon further evaluation of the Dunham 5H well bore path, Triana believes the vertical section travels through a portion of parcel 3-16-2 (West Virginia Department of Agriculture), which lease was not listed on the original Dunham 5H WW-6A1 in the well work application. Therefore, please also find enclosed a revised WW-6A1 that now includes the West Virginia Department of Agriculture as lessor.

Please feel free to contact me should you have any questions or need additional information. Thank you for your attention to this matter.

Sincerely,

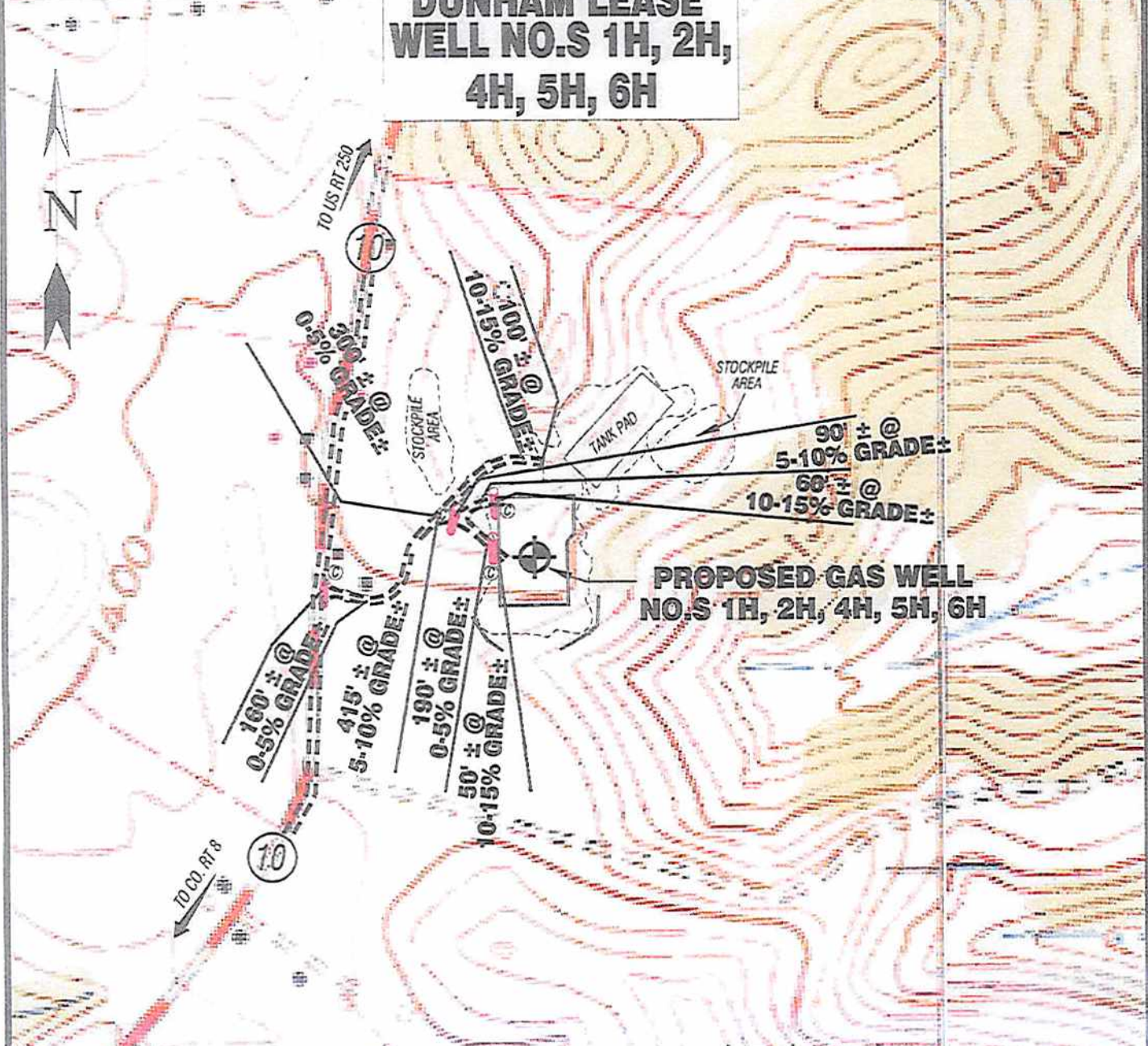
A handwritten signature in blue ink that reads 'Walter C. Showen, III'.

Walter C. Showen, III
Manager, Permitting

Cc: Mr. Gene Smith
Mr. Chad Carmichael

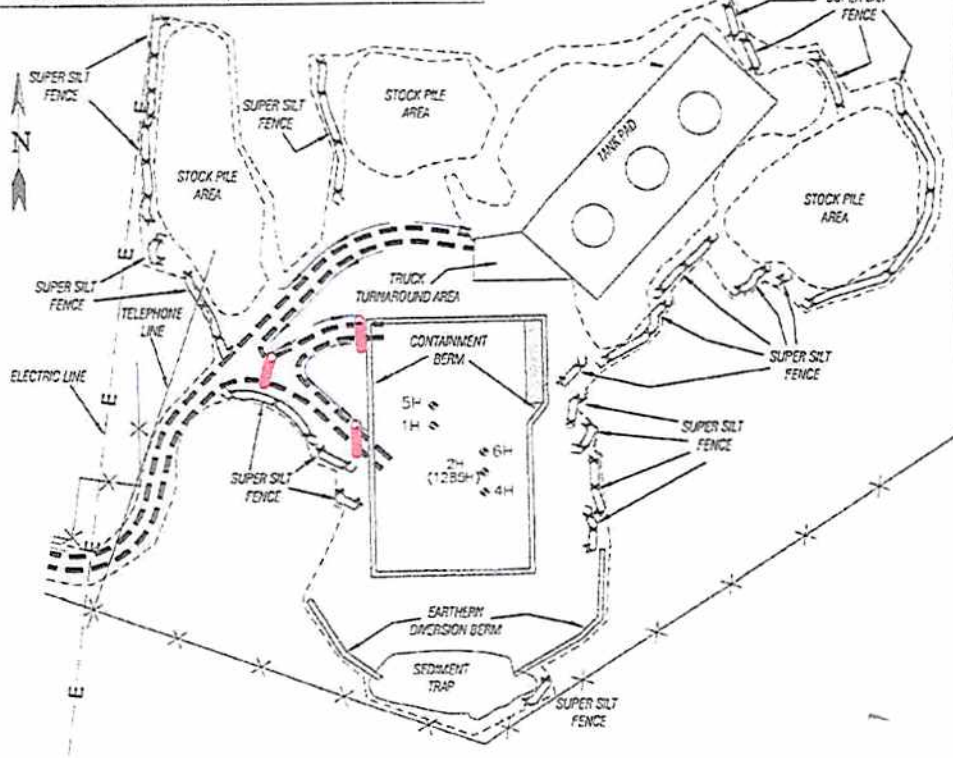
Form WW-9

DUNHAM LEASE WELL NO.S 1H, 2H, 4H, 5H, 6H



Detail Sketch for Proposed Dunham Wells

SCALE: 1"=500'



ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH WY D.E.P. OIL AND GAS BMP MANUAL ENTRANCES AT COUNTY STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WY D.O.T. REGULATION. SEPARATE PERMITS MAY BE REQUIRED BY THE D.O.T.

SEDIMENT BASINS (TRAPS) AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL CULVERT AND CROSS DRAIN INLETS AND OUTLETS AS REQUIRED IN THE WY D.E.P. OIL AND GAS BMP MANUAL. FIELD CONDITIONS (ROCK OUTCROPS AND BEDROCK) MAY PROHIBIT INLET TRAPS BEING INSTALLED. WHEN THESE CONDITIONS EXIST ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.

EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFICATION TO THE OPERATOR AND INSPECTOR PRIOR TO ANY DEVIATION FROM THIS PLAN.

TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.

CUT & STACK ALL MARKETABLE TIMBER.

STACKED BRUSH MAY BE USED FOR SEDIMENT CONTROL.

APPLICATIONS FOR SEPARATE PLC PERMITS ON THE ACCESS ROAD STREAM CROSSINGS HAVE BEEN PREPARED (IF APPLIES).

07/04/2014

Professional Energy Consultants
A DIVISION OF SOUTH LAND SURVEYING, INC.

**SURVEYORS
ENGINEERS
ENVIRONMENTAL
PROJECT MGMT.**

Not To Scale

TOPO SECTION OF ROSEMONT 7.5'
USGS TOPO QUADRANGLE

- EXISTING CULVERT
- PROPOSED CULVERT 15' MIN. UNLESS OTHERWISE NOTED
- PROPOSED STREAM CROSSING
- APPROXIMATE LIMITS OF DISTURBANCE

DRAWN BY K.D.W.	FILE NO. 7754	DATE 01/14/14	CADD FILE: 7754ARECP_ANS.dwg
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Section

DUNHAM LEASE DUNHAM 5H

**BOTTOM HOLE
DUNHAM 5H
STATE PLANE COORDINATES
NORTH ZONE (NAD 27)**

N. 308,646
E. 1,819,133

LAT=(N) 39.34565
LONG=(W) 80.13954

UTM (NAD'83)(METERS)
N. 4,355,498
E. 574,163

**LANDING POINT
DUNHAM 5H
STATE PLANE COORDINATES
NORTH ZONE (NAD 27)**

N. 306,285
E. 1,822,559

LAT=(N) 39.33923
LONG=(W) 80.12736

UTM (NAD'83)(METERS)
N. 4,354,796
E. 575,218

LATITUDE 39° 22' 30"

A	ROY R. BAUER ET AL	1 ACRE±	TM 12-72.1
B	EVA HURSEY ET AL	0.65 ACRES±	TM 12-73
C	PAUL J. TENNANT	0.33 ACRES±	TM 12-73.1
D	PAUL J. TENNANT	0.04 ACRES±	TM 12-73.2
E	MITCHELL C. DUNHAM	0.40 ACRES±	TM 15-84
F	RONALD & JENNY CARDER	6 ACRES±	TM 12-71.4
G	RICHARD N. GLASPELL	1.26 ACRES±	TM 15-66.1
H	PAUL J. TENNANT	0.447 ACRES±	TM 12-73.4
I	MARY ANN BOYLES	0.35 ACRES±	TM 12-173.5

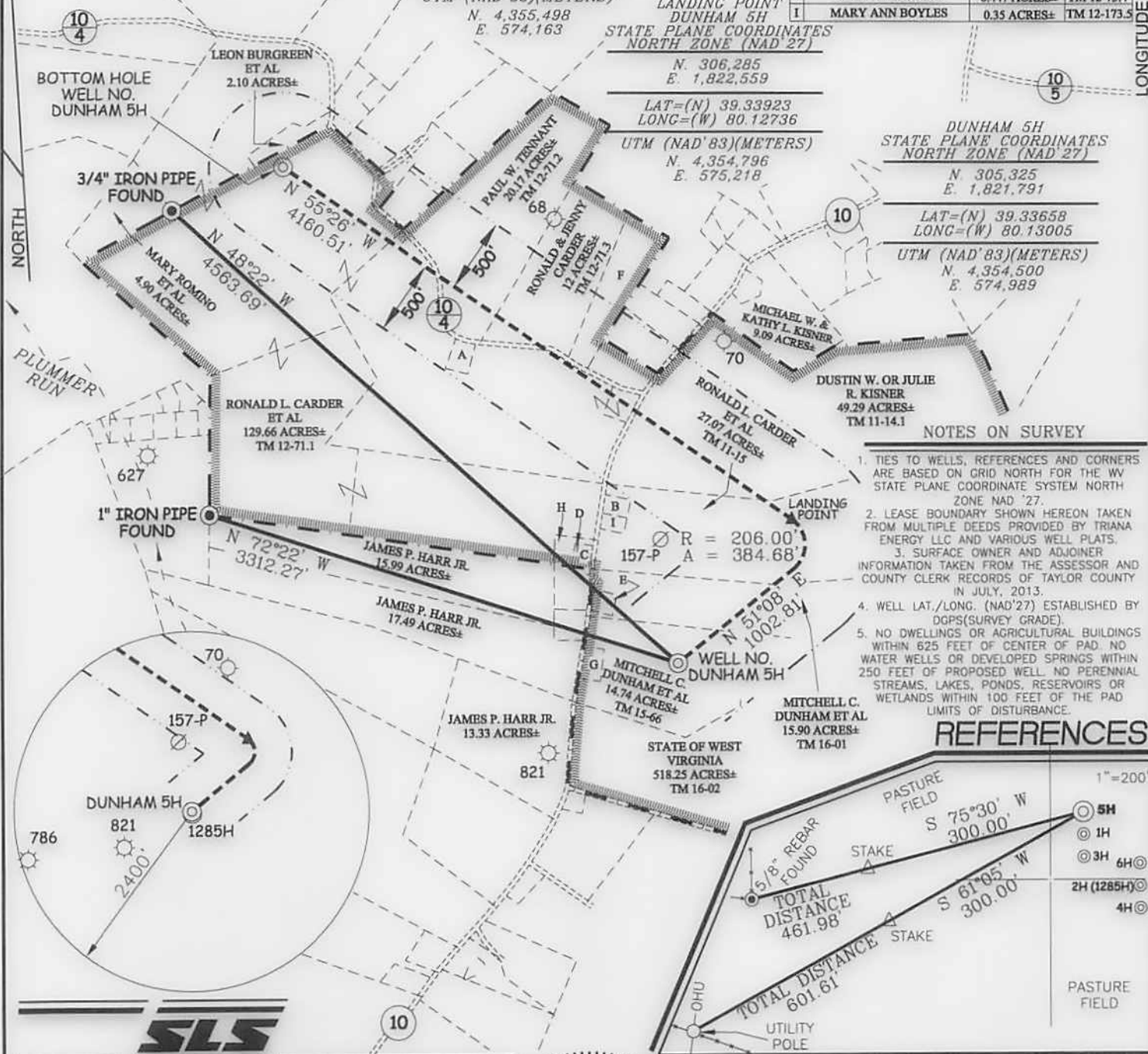
**DUNHAM 5H
STATE PLANE COORDINATES
NORTH ZONE (NAD 27)**

N. 305,325
E. 1,821,791

LAT=(N) 39.33658
LONG=(W) 80.13005

UTM (NAD'83)(METERS)
N. 4,354,500
E. 574,989

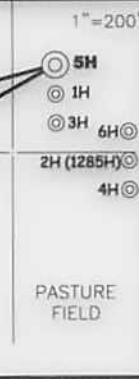
LONGITUDE 80° 07' 30"



NOTES ON SURVEY

- TIES TO WELLS, REFERENCES AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
- LEASE BOUNDARY SHOWN HEREON TAKEN FROM MULTIPLE DEEDS PROVIDED BY TRIANA ENERGY LLC AND VARIOUS WELL PLATS.
- SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF TAYLOR COUNTY IN JULY, 2013.
- WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SURVEY GRADE).
- 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.

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 DECEMBER 17, 20 13
 OPERATORS WELL NO. DUNHAM 5H
 API WELL NO. 47 - 091 - 01292
 STATE WV COUNTY H&A PERMIT 01292

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 7754P5H (391-20)
 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.±) / RONALD L. CARDER (27.07, 0.04, 0.33, 129.66, 12 & 6 AC.±) / PAUL W. TENNANT (0.447 AC.±) / MARY ANN BOYLES (0.35 AC.±) / DUSTIN KISNER ET AL (49.29 AC.±) / PAUL J. TENNANT (0.447 AC.±) / MITCHELL CARL DUNHAM (0.4 AC.±)

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 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

COUNTY NAME
PERMIT