



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

August 01, 2013

NOBLE ENERGY, INC.
333 TECHNOLOGY DRIVE, SUITE 110
CANONSBURG, PA 15317

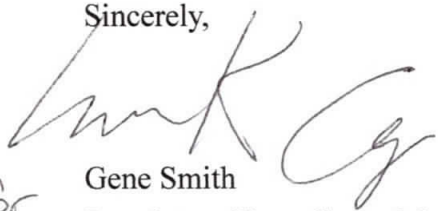
Re: Permit Modification Approval for API Number 5101625 , Well #: MNDS9AHS
shortened intermediate casing

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,


for Gene Smith
Regulatory/Compliance Manager
Office of Oil and Gas



51-1625 MOD

Dee Swiger
Regulatory Analyst

July 22, 2013
West Virginia Department of Environmental Protection
Office of Oil and Gas,
601 57th Street, SE
Charleston, WV 25304

Received

JUL 25 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

MNDS 9AHS

Re: Drilling Permit Application – Well “MNDS9AHS API# 47-051-01625”

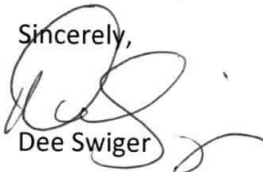
↑
S

Dear Laura,

Enclosed please find a request to modify the 9 5/8” casing to 2500’ or 100’ below the Big Injun. We would like to make this change to try and avoid issues with the red rock in the area. This well is located in Marshall County, WV.

If any further information or correspondence is required, please contact me at Office (724)820-3061 Cell 412-310-8967 or Dswiger@nobleenergyinc.com.

Sincerely,



Dee Swiger

DS/

Enclosure(s):

20) CASING AND TUBING PROGRAM

| TYPE | Size | New or Used | Grade | Weight per ft. | FOOTAGE: For Drilling | INTERVALS: Left in Well | CEMENT: Fill -up (Cu. Ft.) |
|--------------|---------|-------------|-------|----------------|--------------------------------|--------------------------------|---|
| Conductor | 20" | N | LS | 52 | 40' | 40' | CTS / 15.6 ppg Yield 1.2 |
| Fresh Water | 13 3/8" | N | J55 | 54.5 | 906' | 906' | CTS / 15.6 ppg Yield 1.2 |
| Coal | 13 3/8" | N | J55 | 54.5 | 1200' | 1200' | CTS / 15.6 ppg Yield 1.2 |
| Intermediate | 9 5/8" | N | J55 | 36.0 | 2500' or 100' below Big Injoin | 2500' or 100' below Big Injoin | CTS / 15.6 ppg Yield 1.19 |
| Production | 5 1/2" | N | P110 | 20.0 | 17704' | 17704' | 14.8 ppg yield 1.27 TOC 200' above 9 625 shoe |
| Tubing | | | | | | | |
| Liners | | | | | | | |

We would like to drill through all the freshwater and coal bearing zones before running casing. we plan to drill no more than 100' below the deepest freshwater and/or coal bearing zone(s) and run casing which will be circulated with cement to the surface.

WRH
2-A
73

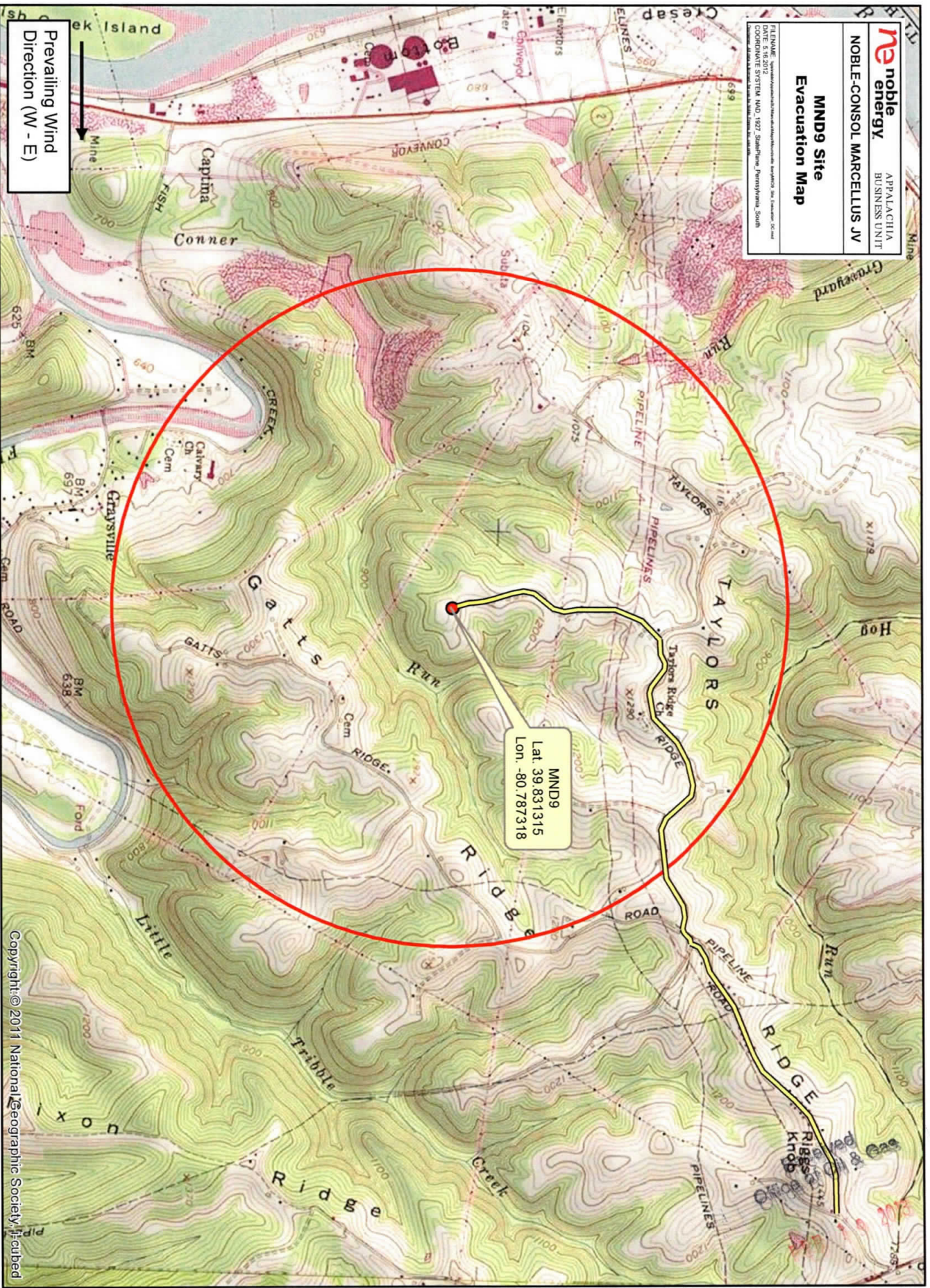
| TYPE | Size | Wellbore Diameter | Wall Thickness | Burst Pressure | Cement Type | Cement Yield |
|--------------|---------|-------------------|----------------|----------------|-------------|--------------|
| Conductor | 20" | 26" | .25 | | Type 1 | CTS |
| Fresh Water | 13 3/8" | 17 1/2" | .380 | 2730 | Type 1 | 1.2 |
| Coal | 13 3/8" | 17 1/2" | .380 | 2730 | Type 1 | 1.2 |
| Intermediate | 9 5/8" | 12 3/8" | .352 | 3520 | Class A | 1.19 |
| Production | 5 1/2" | 8 3/4" & 8 1/2" | .361 | 12,630 | Class A | 1.27 |
| Tubing | | | | | | |
| Liners | | | | | | |

PACKERS

| | | | |
|-------------|--|--|--|
| Kind: | | | |
| Sizes: | | | |
| Depths Set: | | | |

noble energy APPALACHIA BUSINESS UNIT
NOBLE-CONSOL MARCELLUS JV
MND9 Site
Evacuation Map

FILENAME: G:\mnd9\mnd9\evacuation\evacuation.mxd DATE: 5/16/2012
 COORDINATE SYSTEM: NAD_1983_StatePlane_Pennsylvania_South
 Author: [unreadable]



Prevailing Wind Direction (W - E)

1 inch = 2,000 feet

Leave well site heading North on Unknown Rd towards Taylors Ridge
 Turn Right onto Taylors Ridge Rd
 Head towards Co Route 21/ Roberts Ridge St Joseph Rd

● MND9
 Site Evacuation Rt.
 1 Mile Buffer



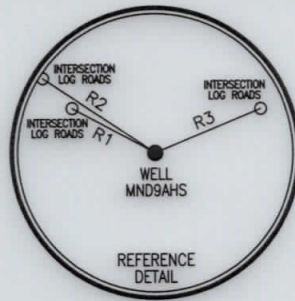
Well is located on topo map 737 feet south of Latitude: 39° 50' 00"

Well is located on topo map 10,492 feet west of Longitude: 80° 45' 00"

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83
 N:4409065.125
 E:518215.041
 NAD27, WV NORTH
 N:487488.053
 E:1638476.814

APPROX. LANDING POINT
UTM 17-NAD83
 N:4408863.88
 E:517641.68
 NAD27, WV NORTH
 N:486859.149
 E:1636584.349

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83
 N:4411184.58
 E:515958.21
 NAD27, WV NORTH
 N:494566.945
 E:1631187.294



| LINE | BEARING | DISTANCE |
|------|---------------|----------|
| R1 | N 61°43'25" W | 204.67' |
| R2 | N 56°24'22" W | 292.26' |
| R3 | N 67°48'03" E | 248.63' |
| R4 | S 18°00'20" W | 1718.90' |
| R5 | S 19°07'47" E | 1309.13' |
| R6 | S 88°23'41" E | 1449.67' |

LEGEND

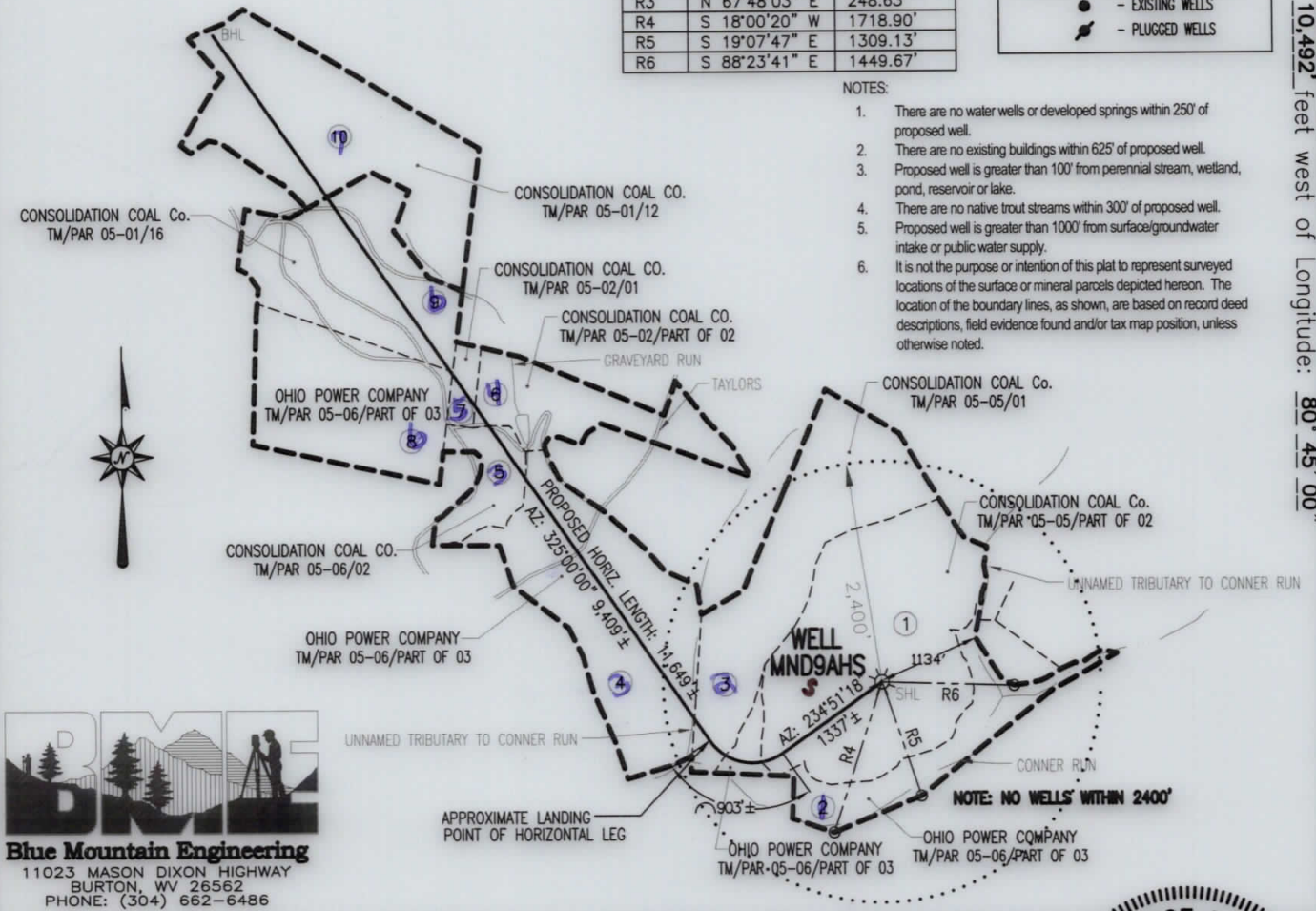
- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- WATER SOURCE
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE

WELLS WITHIN 2,400'

- EXISTING WELLS
- PLUGGED WELLS

NOTES:

- There are no water wells or developed springs within 250' of proposed well.
- There are no existing buildings within 625' of proposed well.
- Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
- There are no native trout streams within 300' of proposed well.
- Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
- It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.



Blue Mountain Engineering
 11023 MASON DIXON HIGHWAY
 BURTON, WV 26562
 PHONE: (304) 662-6486

FILE #: MND9AHS
 DRAWING #: MND9AHS
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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 ENVIRONMENTAL PROTECTION.

Signed: [Signature]
 R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX
 LICENSED
 No. 2000
 STATE OF
 WEST VIRGINIA
 PROFESSIONAL SURVEYOR

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



DATE: MARCH 6, 2013
 OPERATOR'S WELL #: MND9AHS
 API WELL #: 47 51 01625 H6A
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: CONNER RUN ELEVATION: 1232.55'

COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWHATAN POINT, WV-OH 7.5'

SURFACE OWNER: CONSOLIDATION COAL COMPANY ACREAGE: 123.244±

OIL & GAS ROYALTY OWNER: SEE ATTACHED WW-6A1 ACREAGE: 640.066±

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

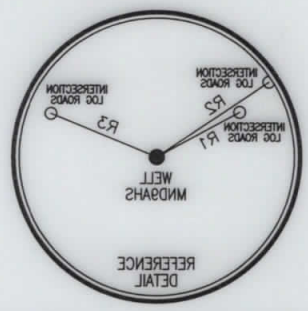
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,600'± TMD: 17,004'±

WELL OPERATOR NOBLE ENERGY INC. DESIGNATED AGENT STEVEN M. GREEN
 Address 333 TECHNOLOGY DRIVE Address 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 1001
 City CANONSBURG State PA Zip Code 15317 City CHARLESTON State WV Zip Code 25301

Well is located on top map 10' x 42.5' feet west of 90.42.00' longitude: subdivide: 10' x 42.5' feet west of 39.50' 00' latitude: on top map 10' x 42.5' feet west of 90.42.00' longitude: subdivide: 10' x 42.5' feet west of 39.50' 00' latitude: on top map

LEGEND

- TOPO MAP POINT
- WELL
- LAT. REF. POINTS UNLESS OTHERWISE NOTED.
- WATER SOURCE
- MINERAL TRACT
- BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED
- HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- WELLS WITHIN 2400'
- EXISTING WELLS
- PROPOSED WELLS

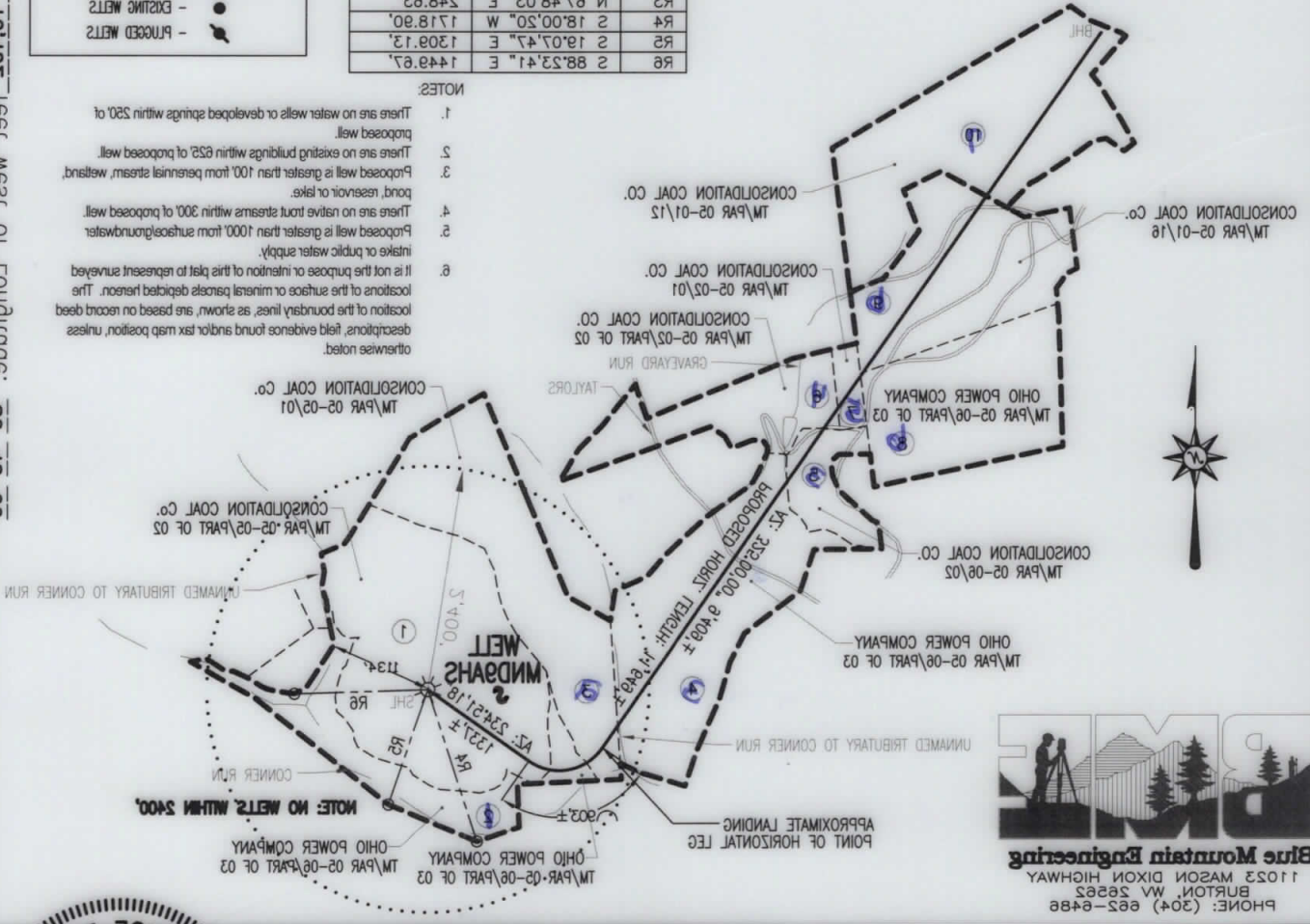


| LINE | BEARING | DISTANCE |
|------|---------------|----------|
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| R2 | N 58.24.22" W | 202.26' |
| R3 | N 67.48.03" E | 248.83' |
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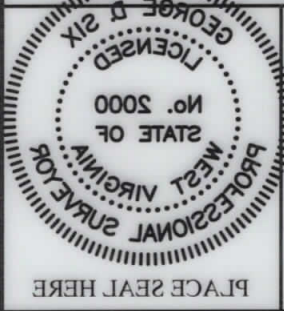
| APPROX. LANDING POINT | SURFACE HOLE LOCATION (SHL) | BOTTOM HOLE LOCATION (BHL) |
|---|--|--|
| NAD27 WV NORTH N: 48859.149 E: 163584.349 | U1M 17-1A083 N: 440863.125 E: 218212.041 | U1M 17-1A083 N: 441184.28 E: 215288.21 |

NOTES:

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 PHONE: (304) 682-6486



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Signed: _____
 R.P.E.: _____
 L.L.S.: P.S. No. 2000

FILE #: MINDAHS
 DRAWING #: MINDAHS
 SCALE: 1" = 200'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE: U.S.G.S. MONUMENT THOMAS 14881'
 OF ELEVATION:

DATE: MARCH 6, 2013

OPERATOR'S WELL #: MINDAHS

API WELL #: 47

STATE COUNTY PERMIT

WATERSHED: CONNER RUN

WELL TYPE: Gas Liquid Injection Oil Waste Disposal

Production Storage Deep Shallow

COUNTY/DISTRICT: MARSHALL \ FRANKLIN

SURFACE OWNER: CONSOLIDATION COAL COMPANY

OIL & GAS ROYALTY OWNER: SEE ATTACHED WW-6A1

ACREAGE: 123.244±

ACREAGE: 640.066±

QUADRANGLE: POWHATAN POINT, WV-04 75'

ELEVATION: 1232.25'

TARGET FORMATION: MARCELLUS

ESTIMATED DEPTH: TVD: 6'800'± TMD: 17'004'±

CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):

PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE

WELL OPERATOR: NOBLE ENERGY INC.

DESIGNATED AGENT: STEVEN M. GREEN

Address: 333 TECHNOLOGY DRIVE

City: CANONSBURG State: PA Zip Code: 15317

Address: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 1001

City: CHARLESTON State: WV Zip Code: 25301