

BHL is located on topo map 12,234 feet south of Latitude: 40° 00' 00"
 SHL is located on topo map 4,587 feet south of Latitude: 39° 52' 30"

- NOTES:
- There are no water wells or developed springs within 250' 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.
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 - There are no existing buildings within 625' of proposed well.

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS



SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83(M)
 N:4421774.991
 E:524715.854
 NAD83, WV NORTH
 N:528875.214
 E:1629069.145

APPROX. LANDING POINT
 UTM 17-NAD83(M)
 N:4421835.29
 E:524266.28
 NAD83, WV NORTH
 N:529097.760
 E:1627597.162

BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83(M)
 N:4424062.86
 E:522500.23
 NAD83, WV NORTH
 N:536504.484
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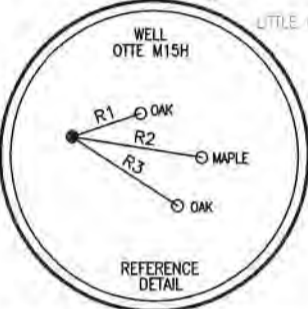
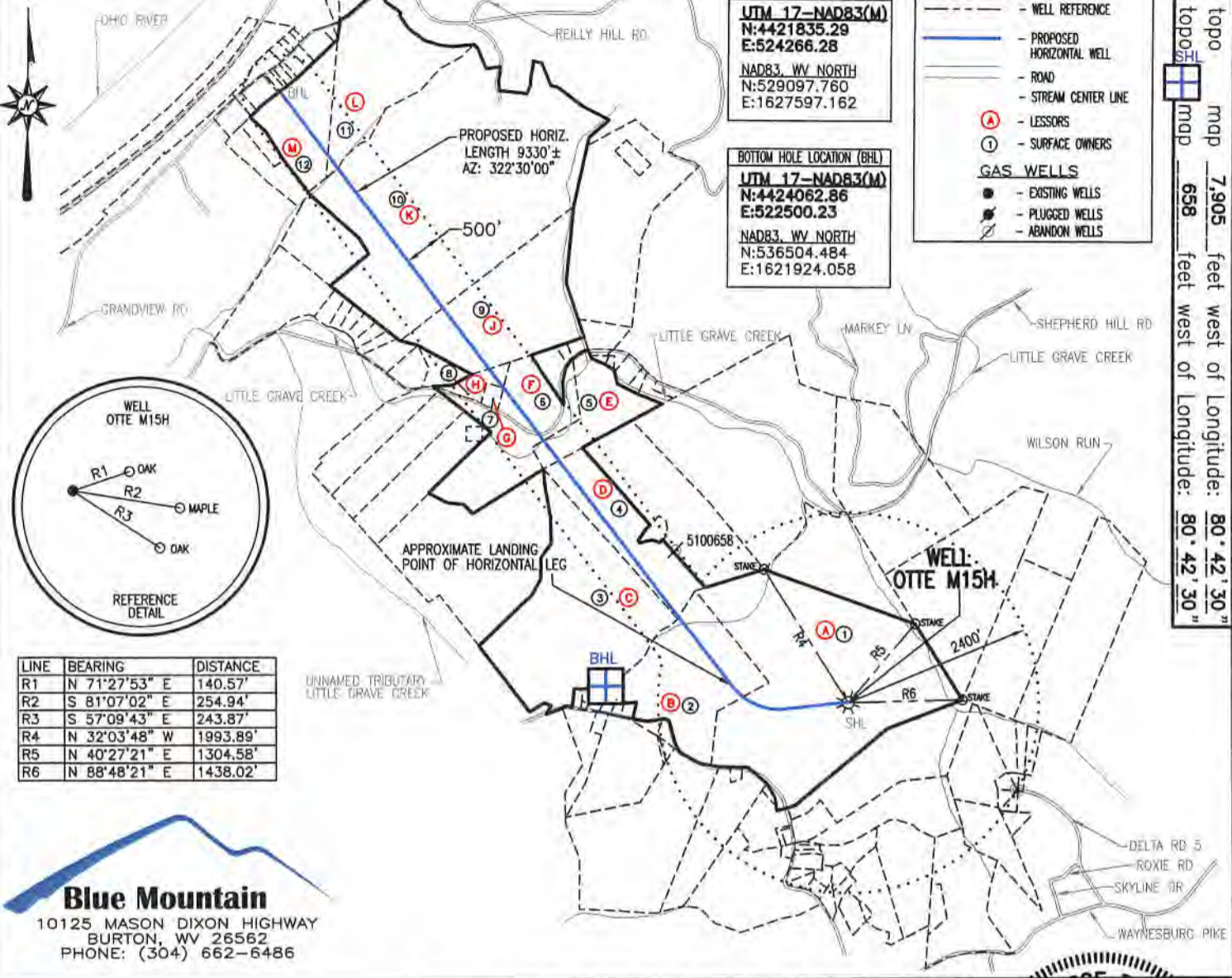
LEGEND

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

GAS WELLS

- EXISTING WELLS
- PLUGGED WELLS
- ABANDON WELLS

BHL is located on topo map 7,905 feet west of Longitude: 80° 42' 30"
 SHL is located on topo map 658 feet west of Longitude: 80° 42' 30"



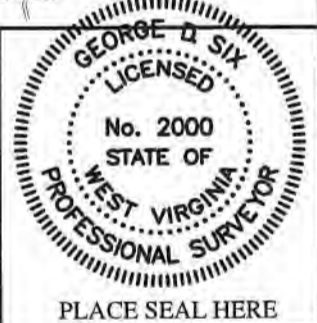
LINE	BEARING	DISTANCE
R1	N 71°27'53" E	140.57'
R2	S 81°07'02" E	254.94'
R3	S 57°09'43" E	243.87'
R4	N 32°03'48" W	1993.89'
R5	N 40°27'21" E	1304.58'
R6	N 88°48'21" E	1438.02'

Blue Mountain
 10125 MASON DIXON HIGHWAY
 BURTON, WV 26562
 PHONE: (304) 662-6486

FILE #: OTTE M15H
 DRAWING #: OTTE M15H
 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: George D. Six
 R.P.E.: _____ L.L.S.: P.S. No. 2000



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



DATE: DECEMBER 13, 2018
 OPERATOR'S WELL #: OTTE M15H
 API WELL #: 47 51 02210 HGA
 STATE COUNTY PERMIT

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

WATERSHED: SHORT CREEK-OHIO RIVER ELEVATION: 1304.87'

COUNTY/DISTRICT: MARSHALL / WASHINGTON QUADRANGLE: MOUNDSVILLE, WV 7.5'

SURFACE OWNER: HUBERT C. & JANET E. OTTE ACREAGE: 126.00±

OIL & GAS ROYALTY OWNER: MICHAEL P. OTTE AND MARK DOUGLAS OTTE ACREAGE: 632.455±

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: 6,360± TMD: 16,662.43±

WELL OPERATOR CHEVRON APPALACHIA, LLC DESIGNATED AGENT KENNETH E. TAWNEY
 Address 700 CHERRINGTON PARKWAY Address 500 LEE STREET, EAST SUITE 1600
 City CORAOPOLIS State PA Zip Code 15108 City CHARLESTON State WV Zip Code 25301-3202

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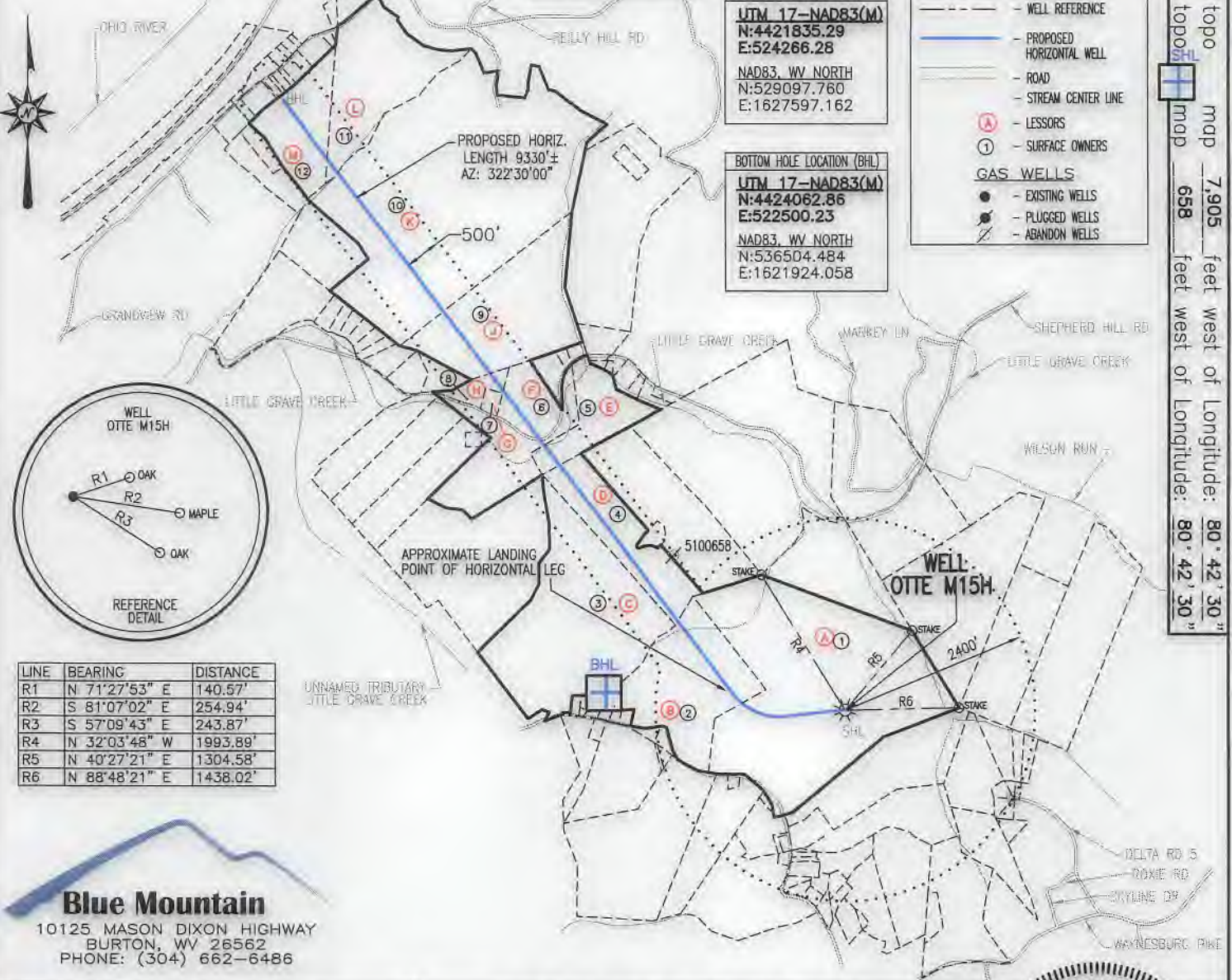
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Signed: George D. Six
 R.P.E.: _____ L.L.S.: P.S. No. 2000

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

PLACE SEAL HERE

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 601 57TH STREET
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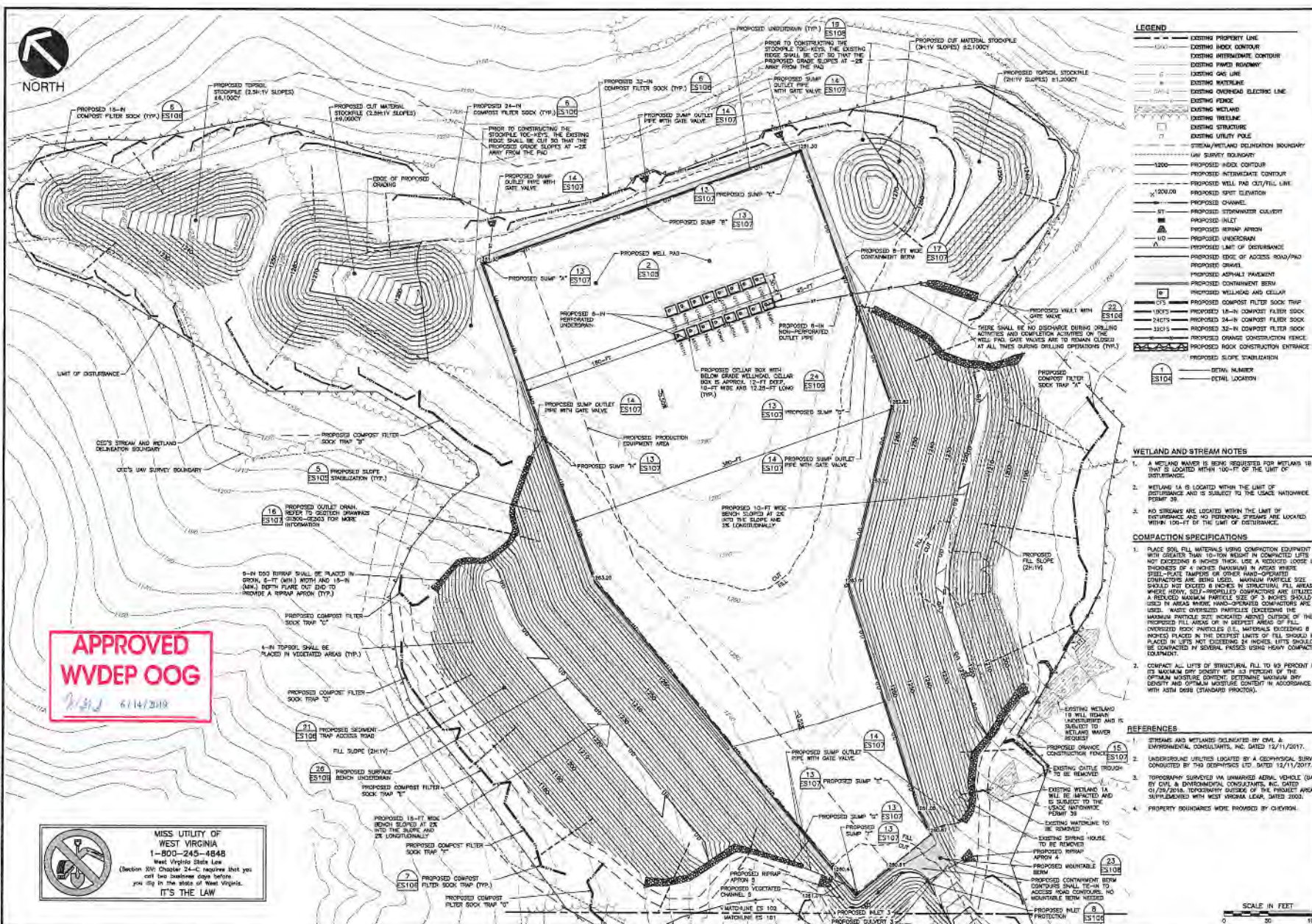
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 Address 700 CHERRINGTON PARKWAY Address 500 LEE STREET, EAST SUITE 1600
 City CORAOPOLIS State PA Zip Code 15108 City CHARLESTON State WV Zip Code 25301-3202

DATE: DECEMBER 13, 2018

OPERATOR'S WELL #: OTTE M15H

API WELL #: 47 51 02210
 STATE COUNTY PERMIT





LEGEND

- EXISTING PROPERTY LINE
- EXISTING BOUNDARY
- EXISTING WETLAND BOUNDARY
- EXISTING POWER RIGHTWAY
- EXISTING GAS LINE
- EXISTING WATERLINE
- EXISTING ELECTRICAL LINE
- EXISTING FENCE
- EXISTING WETLAND
- EXISTING WETLINE
- EXISTING STRUCTURE
- EXISTING UTILITY POLE
- STREAM/WETLAND DELINEATION BOUNDARY
- LAW SURVEY BOUNDARY
- PROPOSED INDEX CONTOUR
- PROPOSED INTERIM CONTOUR
- PROPOSED WELL PAD CUT/FILL LINE
- PROPOSED SPOT ELEVATION
- PROPOSED CHANNEL
- PROPOSED STORMWATER CULVERT
- PROPOSED INLET
- PROPOSED BERM APRON
- PROPOSED UNDERDRAIN
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED EDGE OF ACCESS ROAD/PAV
- PROPOSED DRIVEWAY
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONTAINMENT BERM
- PROPOSED WELLSHAFT AND SELLAR
- PROPOSED COMPOST FILTER SOCK TRAP
- PROPOSED 18-IN COMPOST FILTER SOCK
- PROPOSED 24-IN COMPOST FILTER SOCK
- PROPOSED 30-IN COMPOST FILTER SOCK
- PROPOSED ORANGE CONSTRUCTION FENCE
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED SLOPE STABILIZATION
- DETAIL NUMBER
- DETAIL LOCATION

WETLAND AND STREAM NOTES

1. A WETLAND WAIVER IS BEING REQUESTED FOR WETLAND 1B THAT IS LOCATED WITHIN 100-FT OF THE LIMIT OF DISTURBANCE.
2. WETLAND 1A IS LOCATED WITHIN THE LIMIT OF DISTURBANCE AND IS SUBJECT TO THE USAGE WAIVER PERM 39.
3. NO STREAMS ARE LOCATED WITHIN THE LIMIT OF DISTURBANCE AND NO PERMANENT STREAMS ARE LOCATED WITHIN 100-FT OF THE LIMIT OF DISTURBANCE.

COMPACTION SPECIFICATIONS

1. PLACE SOIL FILL MATERIALS USING COMPACTION EQUIPMENT WITH GREATER THAN 10-TON WEIGHT IN COMPACTED LIFTS NOT EXCEEDING 6 INCHES THICK. USE A REDUCED SOLE LIFT THICKNESS OF 4 INCHES MAXIMUM IN AREAS WHERE STEEL-PLATE ROLLERS OR OTHER HAND-OPERATED COMPACTORS ARE BEING USED. MAXIMUM PARTICLE SIZE SHOULD NOT EXCEED 8 INCHES IN STRUCTURAL FILL AREAS WHERE HEAVY, SELF-PROPELLED COMPACTORS ARE UTILIZED. A REDUCED MAXIMUM PARTICLE SIZE OF 3 INCHES SHOULD BE USED IN AREAS WHERE HAND-OPERATED COMPACTORS ARE USED. MOST OVERSIZED PARTICLES EXCEEDING THE MAXIMUM PARTICLE SIZE INDICATED ABOVE) OUTSIDE OF THE PROPOSED FILL AREAS OF IN DEEPEST AREAS OF FILL. PROPOSED ROCK PARTICLES (E.G., MATERIALS EXCEEDING 8 INCHES) PLACED IN THE DEEPEST LIFTS OF FILL SHOULD BE PLACED IN LIFTS NOT EXCEEDING 24 INCHES LIFTS SHOULD BE COMPACTED IN SEVERAL PASSES USING HEAVY COMPACTION EQUIPMENT.
2. CONTACT ALL LIFTS OF STRUCTURAL FILL TO 95 PERCENT OF ITS MAXIMUM DRY DENSITY WITH 93 PERCENT OF THE OPTIMAL MOISTURE CONTENT, DETERMINED MAXIMUM DRY DENSITY AND OPTIMAL MOISTURE CONTENT IN ACCORDANCE WITH ASTM D998 (STANDARD PRACTICE).

REFERENCES

1. STREAMS AND WETLANDS DELINEATED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 12/11/2017.
2. UNDERGROUND UTILITIES LOCATED BY A GEOPHYSICAL SURVEY CONDUCTED BY T49 GEOPHYSICS LTD DATED 12/11/2017.
3. TOPOGRAPHY SURVEYED VIA UNMANNED AIRBORNE VEHICLE (UAV) BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 01/20/2018. TOPOGRAPHY OUTSIDE OF THE PROJECT AREA IS SUPPLEMENTED WITH BEST AVAILABLE LEGAL 2000.
4. PROPERTY BOUNDARIES WERE PROVIDED BY CHEVRON.

APPROVED WVDEP OOG
 2/21/2018 6/14/2018

MISS UTILITY OF WEST VIRGINIA
 1-800-245-4848
 West Virginia State Law
 (Section 20C Chapter 24-C, require that you call law enforcement before you dig in the state of West Virginia.)
IT'S THE LAW

CEC
 CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
 400 TRINITY LANE, SUITE 200, COOPER TOWN, WEST VIRGINIA 26038
 304.326.8000



REVISION RECORD

No.	Date	Description
1	02/21/2018	ISSUE FOR PERMIT
2	06/14/2018	APPROVED OOG

OTTE WELL SITE
 MARSHALL COUNTY, WEST VIRGINIA
 PREPARED FOR
CHEVRON APPALACHIA, LLC
 10000 CHEVRON DRIVE
 CORAOPOLIS, PA 15068

EROSION AND SEDIMENT CONTROL PLAN (2 OF 2)
 Project Number: 125-224
 Drawing Scale: 1"=50'
 Date Issued: 02/22/2018
 Issue Number:
 Drawn By: EKS
 Checked By: JBB
 Project Manager: MSB

ES 102

SCALE IN FEET
 0 30 100