

REFERENCE LINES	
RL #1	S 80°55'05\"/>

REFERENCE NOTES
 Boundaries as shown taken from deeds, tax maps and field locations. A full boundary survey is not expressed nor implied. All bearings are based on true north. Ownership taken from public records Marshall County, West Virginia SEPTEMBER 2011 State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping grade GPS Drafted by: E.A.M.

TOP HOLE (NAD 83) N) 552942.7 E) 1656231.9 LAT.) 40°00'45.9\"/>	TP (NAD 83) N) 552749.6 E) 1657440.0 LAT.) 40°00'44.2\"/>
TOP HOLE (NAD 27) N) 552905.9 E) 1687666.8 LAT.) 40°00'45.7\"/>	TP (NAD 27) N) 552712.8 E) 1688874.8 LAT.) 40°00'43.9\"/>
KOP (NAD 83) N) 553204.4 E) 1657232.3 LAT.) 40°00'48.7\"/>	BOTTOM HOLE (NAD 83) N) 546774.3 E) 1660167.8 LAT.) 39°59'45.5\"/>
KOP (NAD 27) N) 553167.6 E) 1688667.2 LAT.) 40°00'48.4\"/>	BOTTOM HOLE (NAD 27) N) 546737.5 E) 1691802.7 LAT.) 39°59'45.2\"/>

FILE #: CHE 031
 DRAWING #: 1819
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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]*
 L.L.S. #2124 : Ernest J. Benchek III

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

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

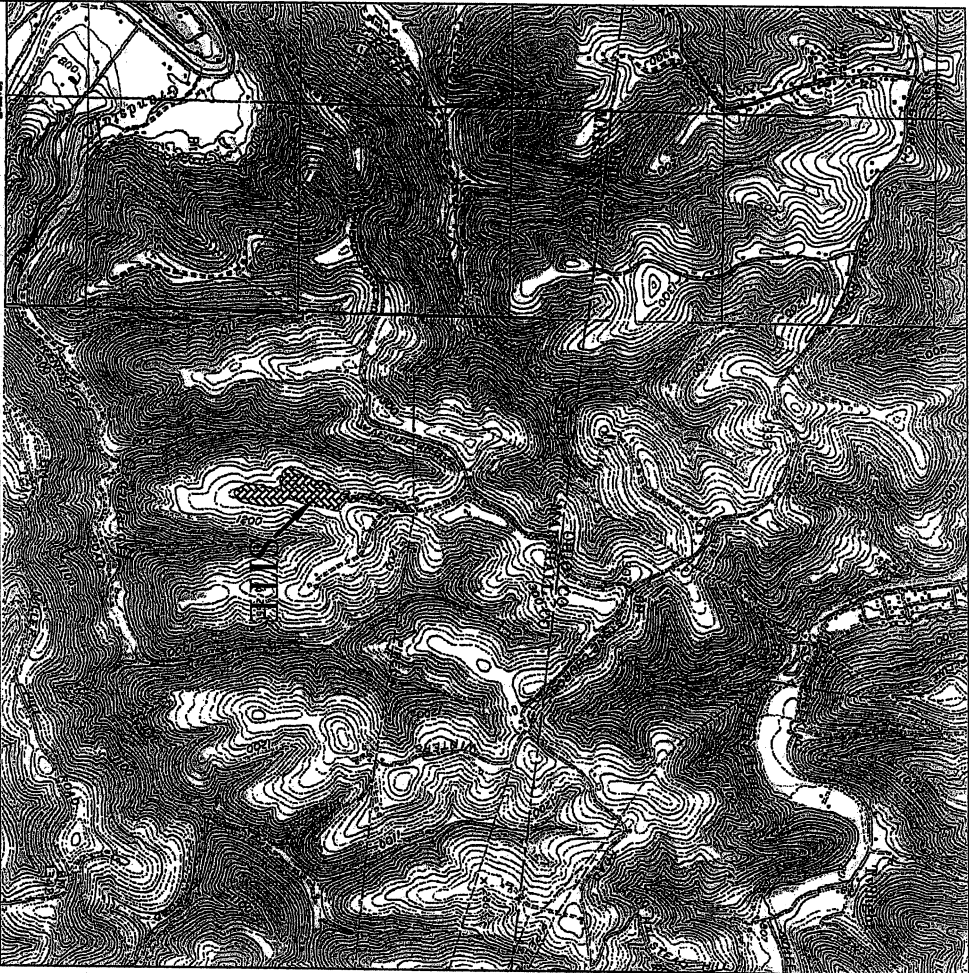
WATERSHED: UPPER OHIO SOUTH ELEVATION: 1,270'
 COUNTY/DISTRICT: MARSHALL / SANDHILL QUADRANGLE: VALLEY GROVE, WV.
 SURFACE OWNER: MICHAEL S. SOUTHWORTH ACREAGE: 166.26 +/-
 OIL & GAS ROYALTY OWNER: MICHAEL S. SOUTHWORTH ACREAGE: 756.96 +/-
 LEASE NUMBERS: _____

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,416' TMD: 13,391'
 WELL OPERATOR: CHESAPEAKE APPALACHIA, LLC. DESIGNATED AGENT: ERIC GILLESPIE
 ADDRESS: PO BOX 18496 ADDRESS: PO BOX 6070
 CITY: OKLAHOMA CITY STATE: OK ZIP CODE: 73154-0496 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

WHEELING, WV
QUAD MAP

VALLEY GROVE, WV
QUAD MAP



LOCATION MAP
SCALE: 1"=2000'

MICHAEL SOUTHWORTH
PAD "A" &
IMPOUNDMENT #1 & #2
(NAD 83):
40' 00" 46.2"
80' 36" 53.4"

**CONSTRUCTION SEQUENCE FOR
MICHAEL SOUTHWORTH PAD "A" AND
IMPOUNDMENT #1 AND #2**

- 1) Install rock construction entrance in proposed access road from station 0+0 to station 0+60.
- 2) Install super silt fence #1 and #2.
- 3) Install 30" R.F.F. #1 through #11.
- 4) Remove topsoil in proposed access road and place in topsoil area #1 and #2.
- 5) Construct proposed access road to well pad.
- 6) Install roadside channel #1 along with pipe crossing #1 through #4 with outlet protection.
- 7) Place geo-textile material on access road sub-grade.
- 8) Place clean stone on access road sub-grade (10 fines).
- 9) Seed and mulch all disturbed areas along the access road.
- 10) Install super silt fence #3.
- 11) Install 30" R.F.F. #12 through #15.
- 12) Install sediment trap #1 along with collection channel #1 and #2.
- 13) Remove topsoil in well pad area and place in topsoil area #2 and #3.
- 14) Construct well pad.
- 15) Seed and mulch all disturbed areas along well pad.
- 16) Drill wells.
- 17) Construct tank and GPU areas.
- 18) Seed and mulch all disturbed areas along tank and GPU areas.
- 19) Install diversion channel #1.
- 20) Install 30" R.F.F. #16 through #20.
- 21) Remove topsoil from impoundment #1 and place in topsoil area #3.
- 22) Construct impoundment #1 and access road.
- 23) Seed and mulch all disturbed areas along impoundment #1.
- 24) Place liner along interior of impoundment #1.
- 25) Fill impoundment #1.
- 26) Install super silt fence #4 through #10.
- 27) Install 30" R.F.F. #21 through #24.
- 28) Remove topsoil from impoundment #2 and place in topsoil area #4 and #5.
- 29) Construct impoundment #2 and access road.
- 30) Seed and mulch all disturbed areas along impoundment #2.
- 31) Place liner along interior of impoundment #2.
- 32) Fill impoundment #2.
- 33) Reclaim site as per reclamation plan.
- 34) Seed and mulch entire site.
- 35) Keep all erosion and sedimentation controls in place until there is 70% growth over the entire site.

RECEIVED
Office of Oil & Gas

SEP 30 2011

WV Department of
Environmental Protection

LOCATION MAP & INDEX

THIS DOCUMENT WAS PREPARED BY:
BOORD, BENCHEK AND ASSOC., INC.
FOR: CHESAPEAKE APPALACHIA, LLC.

BOORD, BENCHEK and ASSOC., INC.
Engineering, Surveying, Construction,
and Mining Services
Southpointe, PA 15317 Phone: 724-825-0421

DATE: 11/20/10
MICHAEL SOUTHWORTH
PAD "A" &
IMPOUNDMENT #1 & #2
SANDHILL DISTRICT,
MARSHALL COUNTY,
WV

SHEET #1

51-01511H