



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

August 18, 2015

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-10303110, issued to EQT PRODUCTION COMPANY, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto.

Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: 513922
Farm Name: DALLISON, RICHARD
API Well Number: 47-10303110
Permit Type: Horizontal 6A Well
Date Issued: 08/18/2015

Promoting a healthy environment.

08/21/2015

PERMIT CONDITIONS

4710303110

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

4710303110

API NO. 47 - 103 - 03110
OPERATOR WELL NO. 513922
Well Pad Name: BIG 192

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION 7655

1) Well Operator: EQT Production Company
Operator ID 306686 County 103 District 4 Quadrangle 254

2) Operator's Well Number: 513922 Well Pad Name BIG 192

3) Farm Name/Surface Owner : Richard Dallison et al Public Road Access: RT 20

4) Elevation, current ground: 1,452.0 Elevation, proposed post-construction: 1,452.0

5) Well Type: (a) Gas Oil Underground Storage

Other _____

(b) If Gas: Shallow Deep

Horizontal

6) Existing Pad? Yes or No: yes

Dmit
8-3-15

7) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):

Target formation is Marcellus at a depth of 7655 with the anticipated thickness to be 53 feet and anticipated target pressure of 2620 PSI
Top of Marcellus at 7631

8) Proposed Total Vertical Depth: 7655

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 13850

11) Proposed Horizontal Leg Length 4,870

12) Approximate Fresh Water Strata Depths: 549, 581, 780

13) Method to Determine Fresh Water Depth: By offset wells

14) Approximate Saltwater Depths: 2257, 2370

15) Approximate Coal Seam Depths: 743, 804, 919, 1009, 1240

16) Approximate Depth to Possible Void (coal mine, karst, other): None reported

17) Does proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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Office of Oil & Gas
AUG 10 2015

4710303110

API NO. 47 - 103 - 03110

WW - 6B
(4/15)

OPERATOR WELL NO. 513922

Well Pad Name: BIG192

CASING AND TUBING PROGRAM

18)

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu.Ft.)
Conductor	26	New	MC-50	77	40	40	49 C.T.S.
Fresh Water	13 3/8	New	J-55	54.5	974	974	847 C.T.S.
Coal	-	-	-	-	-	-	-
Intermediate	9 5/8	New	A-500	40	2,765	2,765	1,079 C.T.S.
Production	5 1/2	New	P-110	20	13,850	13,850	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run, if run will be set 100' less than TD
Liners							

DMH 8-3-15

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	26	30	0.312	-	18	Construction	1.18
Fresh Water	13 3/8	17 1/2	0.38	2,730	2184	* See Note 2	1.21
Coal							
Intermediate	9 5/8	12 3/8	0.395	3,950	3160	* See Note 2	1.21
Production	5 1/2	8 1/2	0.361	12,640	10112	-	1.27/1.86
Tubing							
Liners							

Packers

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			

Note 1: EQT plans to bring the TOC on the production casing cement job 1,000' above kick off point, which is at least 500' above the shallowest production zone, to avoid communication.

Note 2: Reference Variance 2014-17. (Attached)

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19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and complete a new horizontal well in the Marcellus formation. The vertical drill to go down to an approximate depth of 4239'. Then kick off the horizontal leg into the Marcellus using a slick water frac.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.3%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to average approximately 8500 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 200,000 barrels of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.

21) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 0.15

22) Area to be disturbed for well pad only, less access road (acres): No Additional

- 23) Describe centralizer placement for each casing string.
 - Surface: Bow spring centralizers – One at the shoe and one spaced every 500'.
 - Intermediate: Bow spring centralizers – One cent at the shoe and one spaced every 500'.
 - Production: One spaced every 1000' from KOP to Int csg shoe

24) Describe all cement additives associated with each cement type. Surface (Type 1 Cement): 0-3% Calcium Chloride
Used to speed the setting of cement slurries.

0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a thief zone.
Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature formations to speed the setting of cement slurries. 0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of whole drilling fluid or cement slurry (not filtrate) to a thief zone.

Production:

DH
8-3-15

Lead (Type 1 Cement): 0.2-0.7% Lignosulfonate (Retarder). Lengthens thickening time.

0.3% CFR (dispersant). Makes cement easier to mix.

Tail (Type H Cement): 0.25-0.40% Lignosulfonate (Retarder). Lengthens thickening time.

0.2-0.3% CFR (dispersant). This is to make the cement easier to mix.

60 % Calcuim Carbonate. Acid solubility.

0.4-0.6% Halad (fluid loss). Reduces amount of water lost to formation.

25) Proposed borehole conditioning procedures. Surface: Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. To ensure that there is no fill, short trip two stands with no circulation. If there is fill, bring compressors back on and circulate hole clean. A constant rate of higher than expected cuttings volume likely indicates washouts that will not clean up.

Intermediate: Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. If foam drilling, to enhance hole cleaning use a soap sweep or increase injection rate & foam concentration.

Production: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume. Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

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*Note: Attach additional sheets as needed.

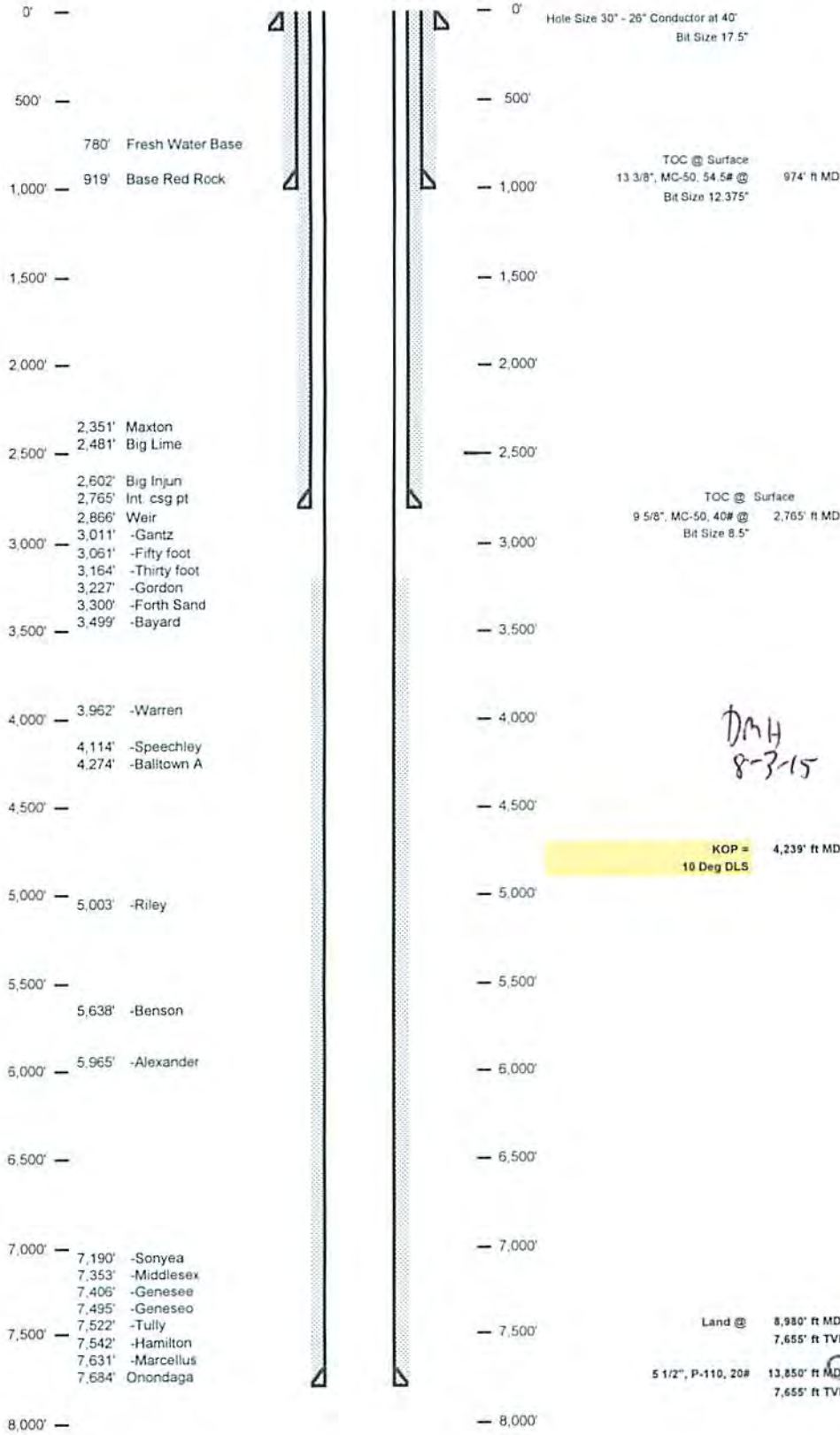
4710303110

Well Schematic
EQT Production

Well Name 513922 (BIG192H18)
County Wetzel
State West Virginia

Elevation KB:
Target
Prospect
Azimuth
Vertical Section

1465
Marcellus
138
7059

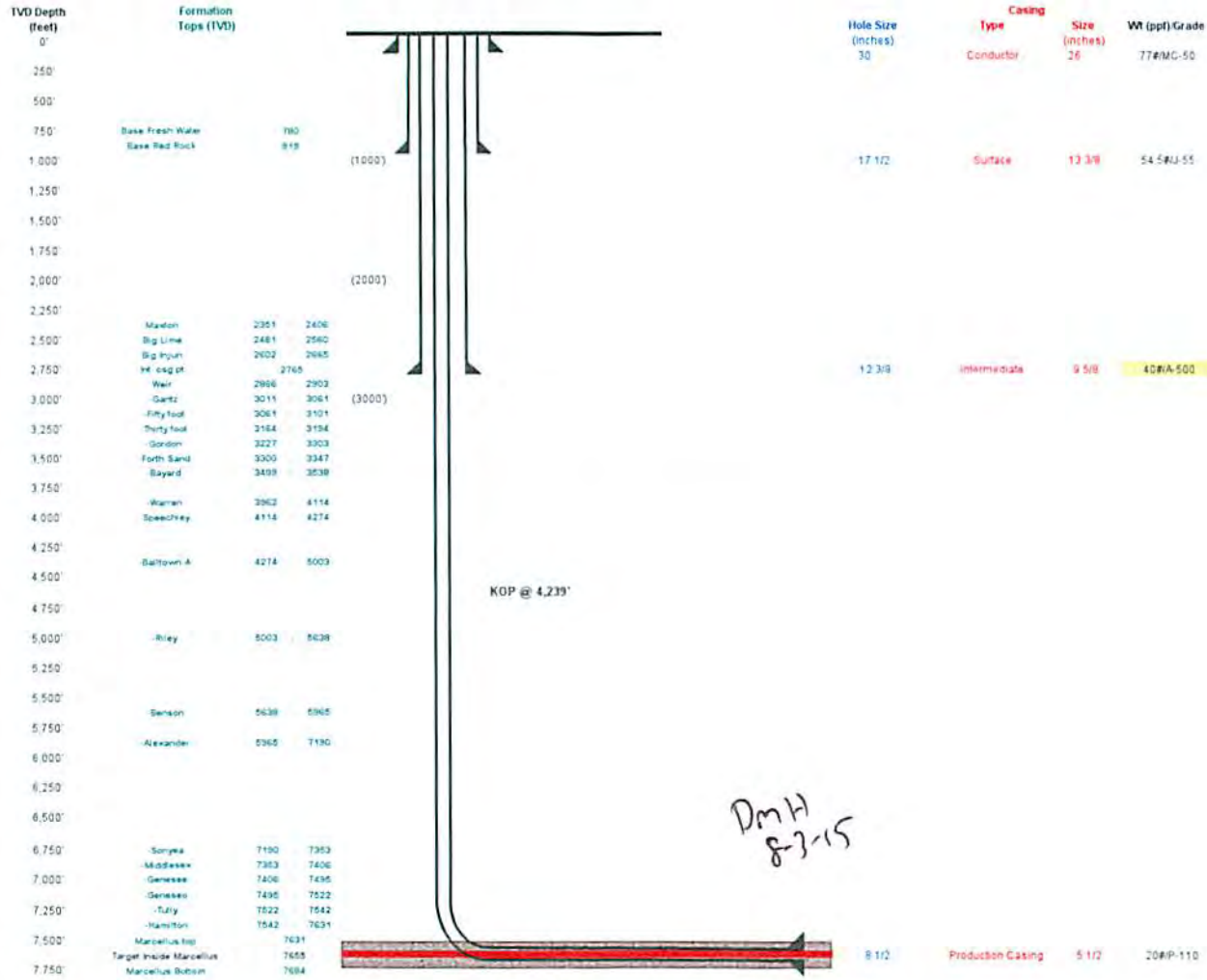


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Well 513922 (BIG192H18)
 EQT Production
 Big Run
 Wetzel West Virginia

Azimuth 136
 Vertical Section T059

4710303110



DMH
8-3-15

Land curve @ 7,655' #TVD
 8,980' #MD
 Est TD @ 7,655' #TVD
 13,850' #MD
 4,870' #Lateral

Proposed Well Work:
 Drill and complete a new horizontal well in the Marcellus formation.
 The vertical drill to go down to an approximate depth of 4239'.
 Then kick off the horizontal leg into the Marcellus using a slick water frac.

WW-9
(2/15)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
Fluids/Cuttings Disposal & Reclamation Plan

Operator Name EQT Production Company OP Code 306686

Watershed (HUC10) Aunty Run of South Fork Fishing Creek Quadrangle Big Run 7.5

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes: No:

If so please describe anticipated pit waste: flowback water & residual solids

Will a synthetic liner be used in the pit? Yes No If so, what ml.? 60

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 0014, 8462, 4037)
- Reuse (at API Number Various)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? Yes, The closed loop system will remove drill cuttings from the drilling fluid. The drill cuttings are then prepared for transportation to an off-site disposal facility.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.

Air is used to drill the top-hole sections of the wellbore (surface, intermediate, and pilot). Water based mud may be necessary depending on hole conditions to stabilize and drill the intermediate section. The pilot hole, curve, and lateral sections will be drilled with either air, water based mud, or oil based mud

- If oil based, what type? Synthetic, petroleum, etc Synthetic mud

Additives to be used in drilling medium? Air - biodegradable oil lubricant, detergent, defoaming, water. Water based mud - Barte, viscosifer, alkalinity control, lime, filtration control, deflocculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates.

Oil based mud - synthetic base oil, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, deflocculates, biodegradable oil lubricant, defoaming, carbonates.

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

- If left in pit and plan to solidify what medium will be used? (Cement, Lime, sawdust) n/a

- Landfill or offsite name/permit number? See Attached List

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]
Company Official (Typed Name) Victoria J. Roark
Company Official Title Permitting Supervisor

Subscribed and sworn before me this 7 day of Aug, 2015

[Signature]
Notary Public

My commission expires 8-24-22

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Office of Oil & Gas
AUG 10 2015

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Pamela Sykes
EQT Production
PO Box 280
Bridgmont, WV 26330
My Commission Expires Aug 24, 2022

Form WW-9

Operator's Well No. 513922

Proposed Revegetation Treatment: Acres Disturbed 0.15 Prevegetation pH 6.5

Lime 3 Tons/acre or to correct to pH 6.5

Fertilize type Granular 10-20-20

Fertilizer Amount 13 lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

Attach: Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: [Blank lines for handwritten notes]

Title: Oil + Gas Inspector Date: 4-27-15

Field Reviewed? () Yes () No

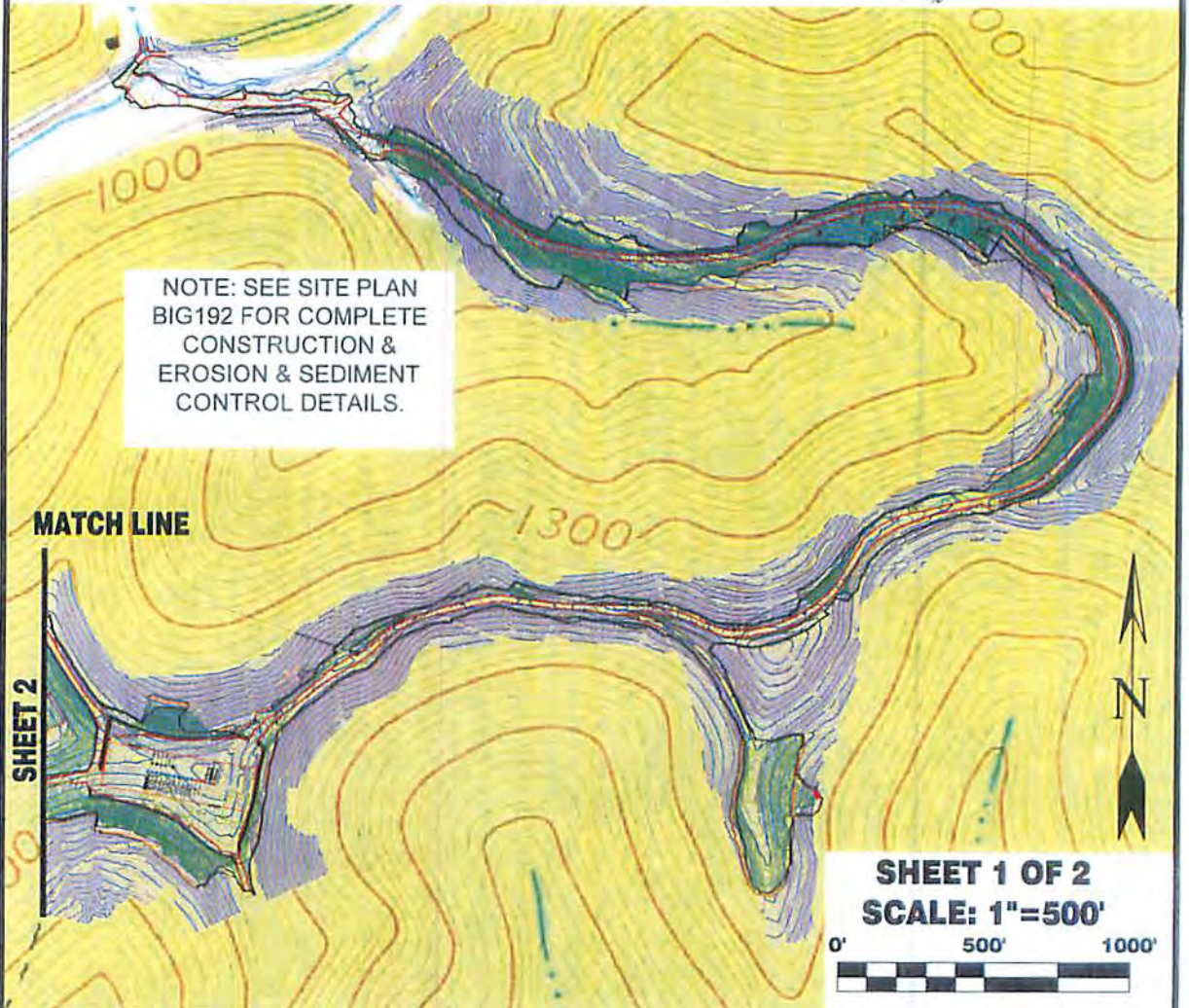
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MAY 04 2015

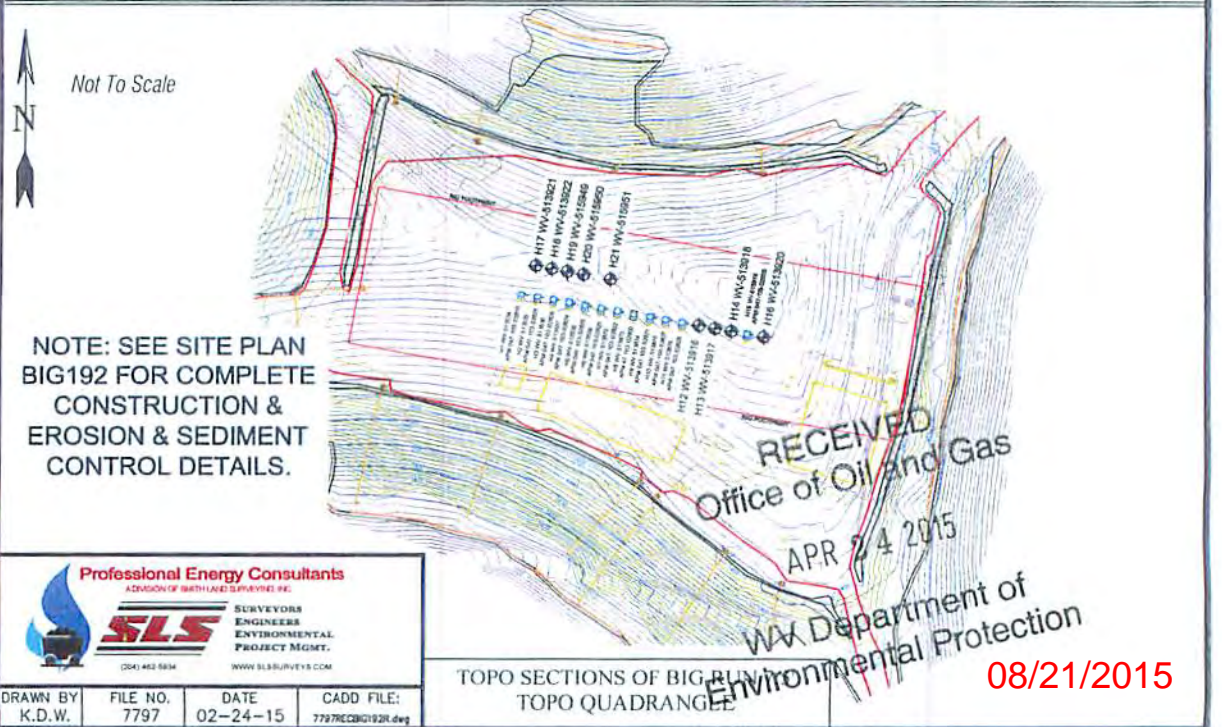
WV Department of Environmental Protection

08/21/2015

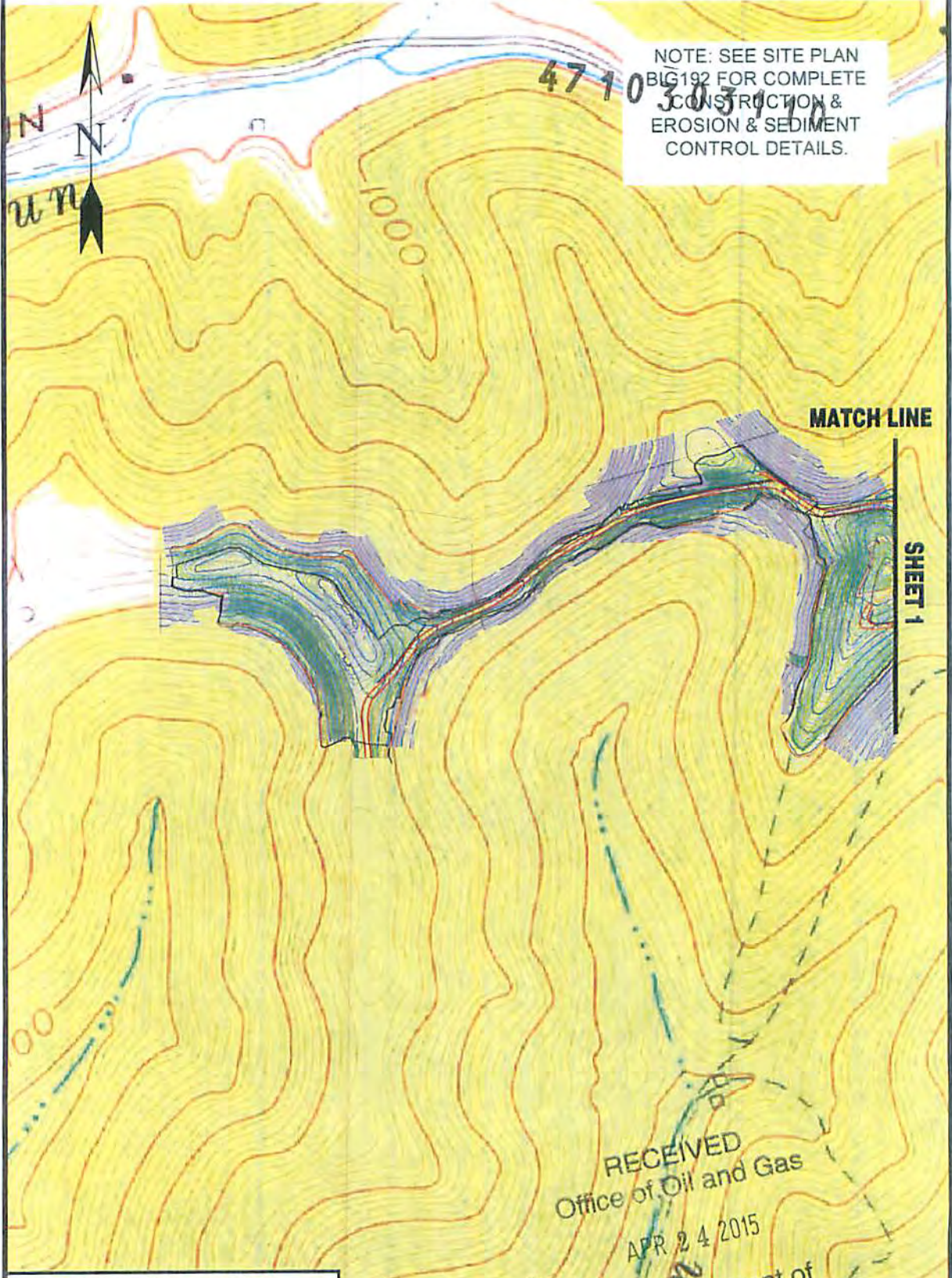
BIG192 WELL NO.S WV 513916, WV 513917, WV 513918, WV 513920, WV 513921, WV 513922, WV 515949, WV 515950 & WV 515951



Detail Sketch for Proposed BIG192 Well No.s WV 513916, WV 513917, WV 513918, WV 513920, WV 513921, WV 513922, WV 515949, WV 515950 & WV 515951



BIG192 WELL NO.S WV 513916, WV 513917, WV 513918, WV 513920, WV 513921, WV 513922, WV 515949, WV 515950 & WV 515951



NOTE: SEE SITE PLAN
BIG192 FOR COMPLETE
CONSTRUCTION &
EROSION & SEDIMENT
CONTROL DETAILS.

MATCH LINE

SHEET 1

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APR 24 2015

WV Department of
Environmental Protection
SHEET 2 OF 2
SCALE: 1"=500'

Professional Energy Consultants
A DIVISION OF EARTH LAND SURVEYS, INC.

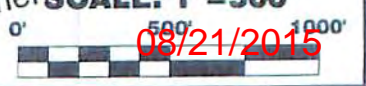


**SURVEYORS
ENGINEERS
ENVIRONMENTAL
PROJECT MGMT.**

(304) 482-5834
WWW.SLSURVEYS.COM

DRAWN BY K.D.W.	FILE NO. 7797	DATE 02-24-15	CADD FILE: 7797REC0192R.dwg
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TOPO SECTIONS OF BIG RUN 7.5'
TOPO QUADRANGLE





4710303110

Where energy meets innovation.SM

Site Specific Safety Plan

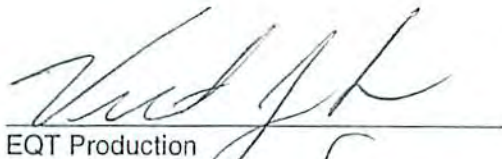
EQT BIG 192 Pad

Jacksonburg

Wetzel County, WV

For Wells:

513922



EQT Production

Permitting Supervisor

Title

4-14-15

Date

Date Prepared:

August 21, 2014



WV Oil and Gas Inspector

Oil & Gas Inspector

Title

4-27-15

Date

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WV Department of
Environmental Protection

08/21/2015

LEGEND

LEASE LINE	---
SURFACE LINE	----
WELL LATERAL	----
OFFSET LINE	----
TIE LINE	----
CREEK	~~~~~
ROAD	====
COUNTY ROUTE	====
PROPOSED WELL	⊙
PLUGGED WELL	⊙
EXISTING WELL	⊙
TAX MAP--PARCEL	⊙

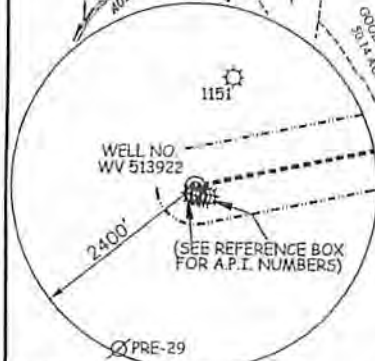
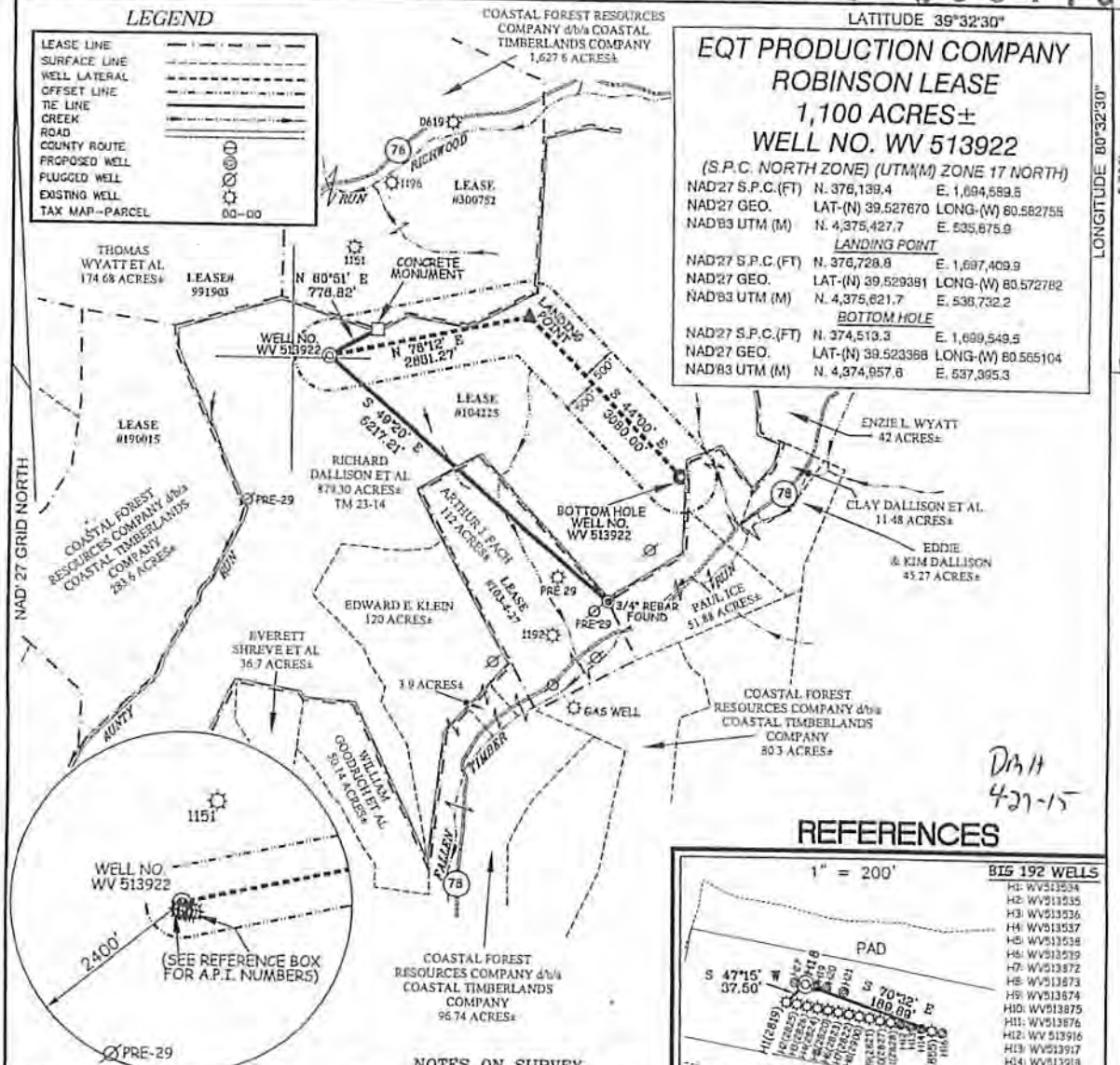
**EQT PRODUCTION COMPANY
ROBINSON LEASE
1,100 ACRES±
WELL NO. WV 513922**

(S.P.C. NORTH ZONE) (UTM/M) ZONE 17 NORTH)

NAD27 S.P.C.(FT) N. 376,139.4 E. 1,694,589.5
 NAD27 GEO. LAT-(N) 39.527670 LONG-(W) 80.582754
 NAD83 UTM (M) N. 4,375,427.7 E. 535,875.9

LANDING POINT
 NAD27 S.P.C.(FT) N. 376,728.8 E. 1,697,409.9
 NAD27 GEO. LAT-(N) 39.529391 LONG-(W) 80.572782
 NAD83 UTM (M) N. 4,375,621.7 E. 535,732.2

BOTTOM HOLE
 NAD27 S.P.C.(FT) N. 374,519.3 E. 1,699,549.5
 NAD27 GEO. LAT-(N) 39.523368 LONG-(W) 80.565104
 NAD83 UTM (M) N. 4,374,957.8 E. 537,395.3



REFERENCES

1" = 200'

BIG 192 WELLS	
H1:	WV513534
H2:	WV513535
H3:	WV513536
H4:	WV513537
H5:	WV513538
H6:	WV513539
H7:	WV513872
H8:	WV513873
H9:	WV513874
H10:	WV513875
H11:	WV513876
H12:	WV513916
H13:	WV513917
H14:	WV513918
H15:	WV513919
H16:	WV513920
H17:	WV513921
H18:	WV513922
H19:	WV515949
H20:	WV515950
H21:	WV515951

Professional Energy Consultants
 A DIVISION OF SOUTH LAND SURVEYING INC.
SLS
 SURVEYOR ENGINEER ENVIRONMENTAL PROTECT. MONIT.
 (304) 424434 WWW.SLSURVEYING.COM

- NOTES ON SURVEY**
1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS
 2. 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.

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. 849 *C. Victor Moyers*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE FEBRUARY 23 20 15
 REVISED MARCH 25 20 15
 OPERATORS WELL NO. WV 513922
 API WELL NO. 47
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 7797P513922R2
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)
 SCALE 1" = 2000'

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS

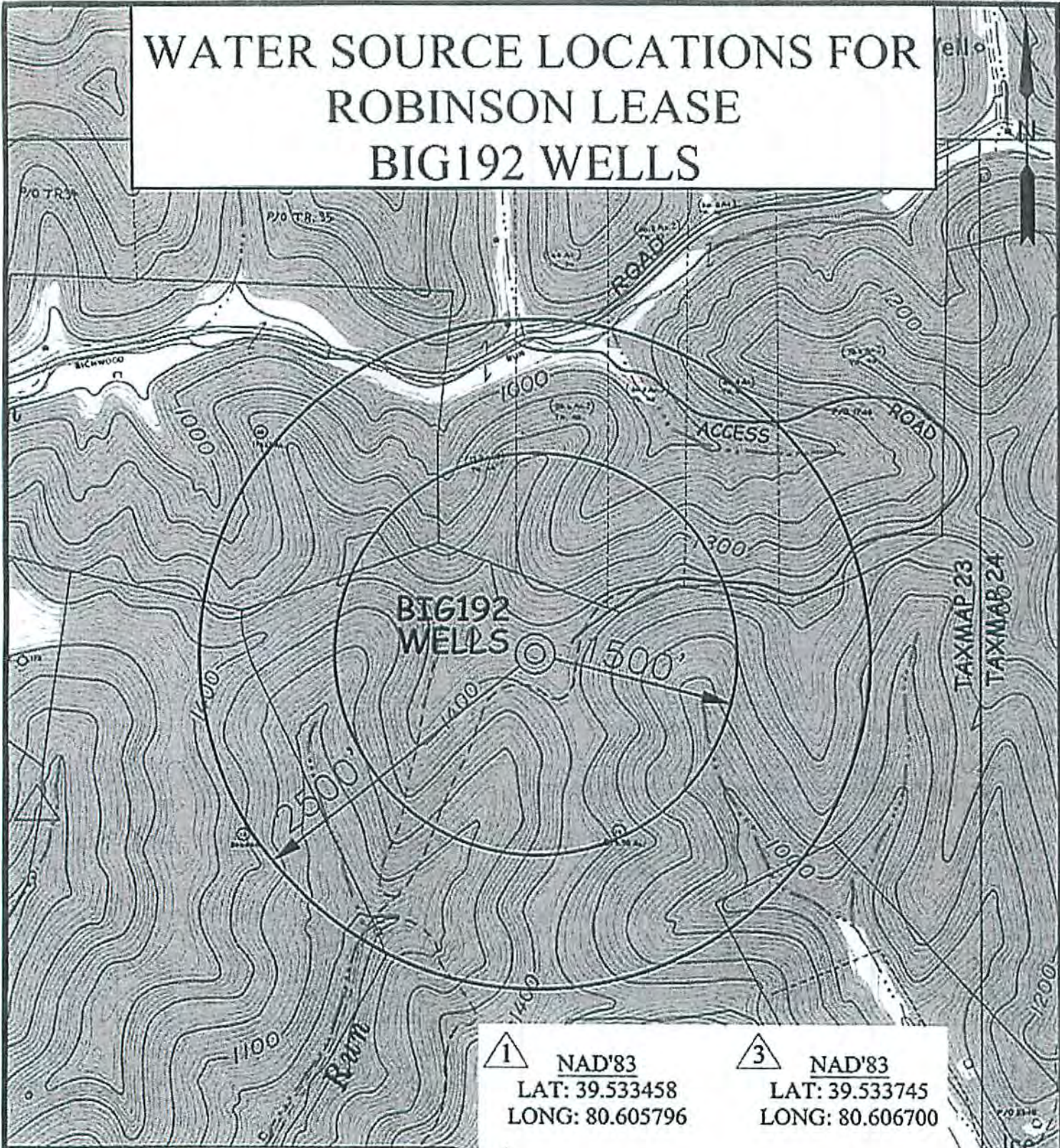
WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION STORAGE ___ DEEP ___ SHALLOW

LOCATION: ELEVATION 1,452' (PAD ELEVATION) WATERSHED AUNTY RUN OF SOUTH FORK FISHING CREEK
 DISTRICT GRANT COUNTY WETZEL QUADRANGLE BIG RUN 7.5'
 SURFACE OWNER RICHARD DALLISON ET AL
 ROYALTY OWNER ED BROOME, INC ET AL
 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

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED BY ENVIRONMENTAL PROTECTION
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

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WATER SOURCE LOCATIONS FOR ROBINSON LEASE BIG192 WELLS




- | | |
|---|---|
| <p>① NAD'83
LAT: 39.533458
LONG: 80.605796</p> | <p>③ NAD'83
LAT: 39.533745
LONG: 80.606700</p> |
| <p>② NAD'83
LAT: 39.533377
LONG: 80.607097</p> | |

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4-27-15
MAY 04 2015

SCALE: 1-INCH=1000-FEET



	TOPO SECTION OF: BIG RUN, WV 7.5' QUAD			OPERATOR: EQT PRODUCTION COMPANY 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330		
	DRAWN BY K.E.S.	FILE NO. 7797	DATE 02/27/15	CADD FILE: 7797DC162WATER.dwg	DISTRICT GRANT	COUNTY WETZEL

Anticipated Frac Additives
Chemical Names and CAS numbers

<u>Material</u>	<u>Ingredient</u>	<u>CAS Number</u>
Water		
Sand	Hydrotreated light petroleum distillate	14808-60-7
Friction Reducer	Tributyl tetradecyl phosphonium chloride	64742-47-8
Biocide	Ammonium chloride	81741-28-8
Scale Inhibitor	Hydrochloric Acid	12125-02-9
15% Hydrochloric Acid	Propargyl Alcohol	7647-01-0
Corrosion Inhibitor	Methanol	107-19-7
Corrosion Inhibitor	Guar Gum	67-56-1
Gelling Agent	Sodium Persulfate	9000-30-0
Oxidizing Breaker	Potassium Carbonate	7775-27-1
Buffering Agent		584-08-7

DMH
4-29-15

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Office of Oil and Gas

MAY 04 2015

WV Department of
Environmental Protection

05/21/2015



4-28-2015

Mr. Gene Smith
WV Department of Environmental Protection
Division of Oil and Gas
601 57th Street East
Charleston, WV 25304

47 103 031 10

Re: Corrected Permit App's on Disk for 47-103-03110 and 47-103-03111

Dear Mr. Smith,

Enclosed is the corrected permit app's on a Disk for 47-103-03110 and 47-103-03111.

If you have any questions, please do not hesitate to contact me at (304) 848-0082.

Sincerely,

Nick Bumgardner
Landman II - Permitting

Received
Office of Oil & Gas
APR 29 2015



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
dep.wv.gov

4710303110

March 18, 2014

Nabors Completion & Production Services Company
1380 Route 286 Hwy E #121
Indiana PA 15701

Re: Cement Variance Request

Dear Sir or Madam,

This agency is approving a variance request for the cement blend listed below to be used on surface and coal protection strings for the drilling of oil and gas wells in the state of West Virginia. The variance cannot be used without requesting its use on a permit application and approval by this agency:

- Type 1 (2% Calcium Chloride-Accelerator, 0.25% Super Flake-Lost Circulation, 5.2% Water, 94% Type "1" Cement)

If you have any questions regarding this matter feel free to contact me at 304-926-0499, ext. 1653.

Sincerely,

James Peterson
Environmental Resources Specialist / Permitting

Promoting a healthy environment.

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APR 24 2015
WV Department of
Environmental Protection
08/21/2015



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
(304) 926-0450
(304) 928-0452 fax

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

4780303710

**BEFORE THE OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF WEST VIRGINIA**

**IN THE MATTER OF A VARIANCE FROM) ORDER NO. 2014 - 17
REGULATION 35 CSR § 4-11.4/11.5/14.1)
AND 35 CSR § 8-9.2.h. 4/5/6/8 OF THE)
THE OPERATIONAL)
REGULATIONS OF CEMENTING OIL)
AND GAS WELLS)**

REPORT OF THE OFFICE

Nabors Completion & Production Services Co. requests approval of a different cement blend for use in cementing surface and coal protection casing of oil and gas wells.

FINDINGS OF FACT

- 1.) Nabors Completion & Production Services Co. proposes the following cement blend:
- 2% Calcium Chloride (Accelerator)
 - 0.25 % Super Flake (Lost Circulation)
 - 94% Type "1" Cement
 - 5.20 % Water
- 2.) Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500 psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24 hours.

Promoting a healthy environment.

08/21/2015

CONCLUSIONS OF LAW

Pursuant to Articles 6 and 6A, Chapter 22 of the Code of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter embraced in said notice, and the persons interested therein, and jurisdiction to promulgate the hereinafter prescribed Order.

Pursuant to 35 CSR § 4-11.5 and 35 CSR § 8-9.2.h.8 the Chief of the Office of Oil and Gas may approve different cement blends upon the well operator providing satisfactory proof that different cement types are adequate.

ORDER

It is ordered that Nabors Completion & Production Services Co. may use the cement blend listed in Findings of Fact No.1 for the cementing of surface and coal protection casing of oil and gas wells in the State as may be requested by oil and gas operators. The waiting time on the cement blend shall be 8 hours. The cement blend shall be mixed in strict accordance with the specifications for each blend and weight measurements made on-site to assure the cement slurries meet the minimum weight specifications. A sample shall be collected and, if after 8 hours the cement is not set up, additional time will be required. Nabors Completion & Production Services Co. shall keep a record of cement blend jobs in which the cement blend approved under this order is to be used and made available to the Office of Oil and Gas upon request.

Dated this, the 18th day of March, 2014.

IN THE NAME OF THE STATE OF WEST VIRGINIA

OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OF THE STATE OF WEST VIRGINIA



James Martin, Chief
Office of Oil and Gas

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WV Department of
Environmental Protection

08/21/2015

EQT Production Water plan
Offsite disposals for Marcellus wells

CWS TRUCKING INC.

P.O. Box 391
Williamstown, WV 26187
740-516-3586
Noble County/Noble Township
Permit # 3390

LAD LIQUID ASSETS DISPOSAL INC.

226 Rankin Road
Washington, PA 15301
724-350-2760
724-222-6080
724-229-7034 fax
Ohio County/Wheeling
Permit # USEPA WV 0014

TRI COUNTY WASTE WATER MANAGEMENT, INC.

1487 Toms Run Road
Holbrook, PA 15341
724-627-7178 Plant
724-499-5647 Office
Greene County/Waynesburg
Permit # TC-1009

Waste Management - Meadowfill Landfill

Rt. 2, Box 68 Dawson Drive
Bridgeport, WV 26330
304-326-6027
Permit #SWF-1032-98
Approval #100785WV

Waste Management - Northwestern Landfill

512 E. Dry Road
Parkersburg, WV 26104
304-428-0602
Permit #SWF-1025 WV-0109400
Approval #100833WV

471030 **BROAD STREET ENERGY LLC**

37 West Broad Street
Suite 1100
Columbus, Ohio 43215
740-516-5381
Washington County/Belpre Twp.
Permit # 8462

TRIAD ENERGY

P.O. Box 430
Reno, OH 45773
740-516-6021 Well
740-374-2940 Reno Office Jennifer
Nobel County/Jackson Township
Permit # 4037

KING EXCAVATING CO.

Advanced Waste Services
101 River Park Drive
New Castle, Pa. 16101
Facility Permit# PAR000029132

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WV Department of
Environmental Protection

08/21/2015

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

47 10 303 110

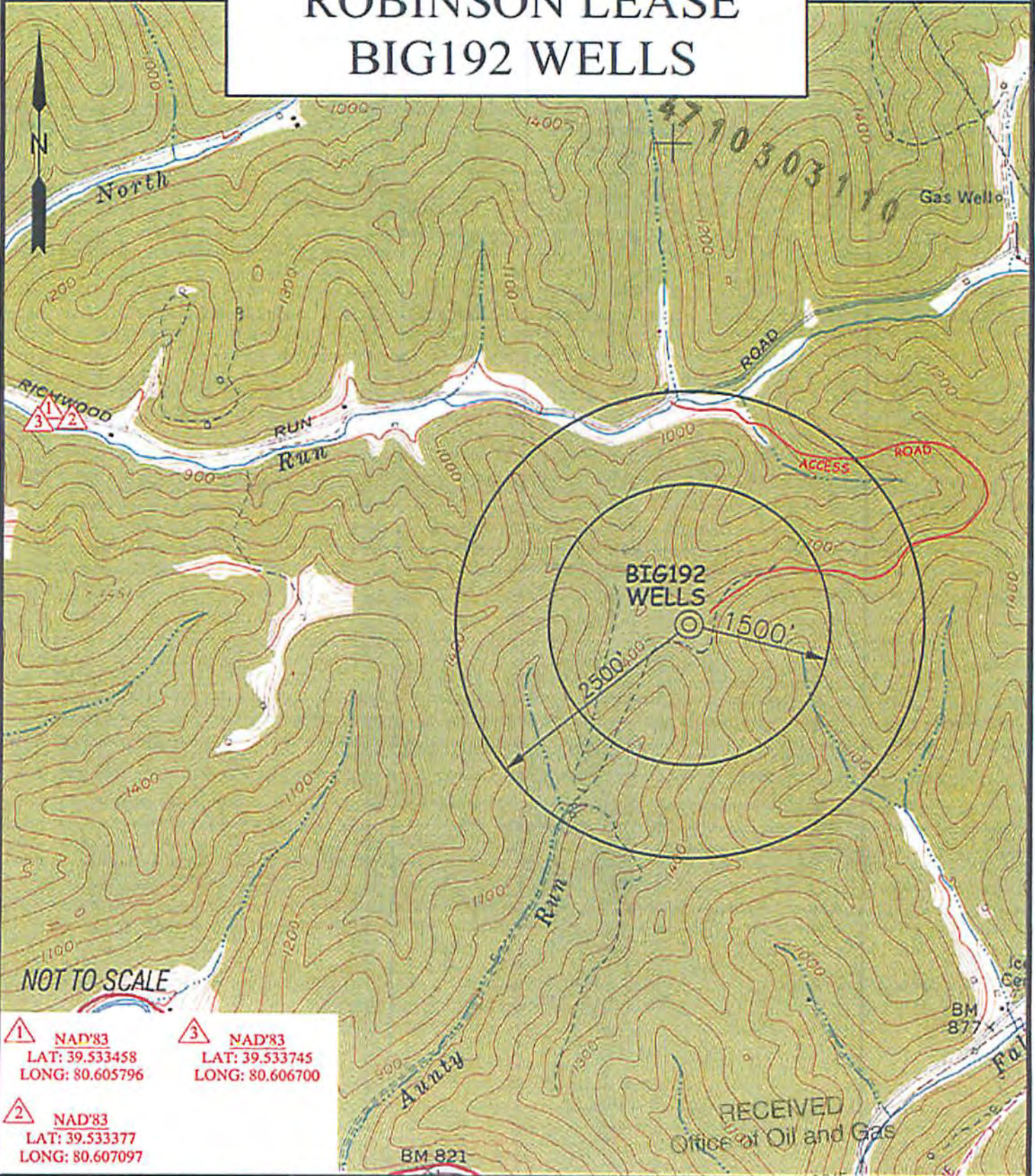
The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: EQT Production Company
By: 
Its: Permitting Supervisor

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Office of Oil and Gas
APR 24 2015
WV Department of
Environmental Protection

08/21/2015

ROBINSON LEASE BIG192 WELLS



NOT TO SCALE

- ① NAD'83
LAT: 39.533458
LONG: 80.605796
- ② NAD'83
LAT: 39.533377
LONG: 80.607097
- ③ NAD'83
LAT: 39.533745
LONG: 80.606700

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

SLS
SURVEYORS
ENGINEERS
ENVIRONMENTAL
PROJECT MGMT.

DRAWN BY: K.E.S. FILE NO: 7797 DATE: 02/27/15 CADD FILE: 7797S-2wel.dwg

TOPO SECTION OF:
BIG RUN, WV 7.5' QUAD

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
GRANT	WETZEL	23-14

OPERATOR: APR 24 2015
EQT PRODUCTION COMPANY
 115 PROFESSIONAL PLACE
 P.O. BOX 280
 BRIDGEPORT, WV 26330
 Environmental Protection
 08/21/2015



WELL INFORMATION AND POTENTIAL WATER WELL SAMPLE DATA SHEET

4710303110

OPERATOR: EQT Production Company
LEASE NAME AND NUMBER: BIG-192 Well Pad

COMMENTS

The initial field and/or mapping review of the area surrounding the proposed well site revealed the below listed surface owner(s) that were potentially utilizing groundwater (potable) for Human Consumption or other purposes within 2500' of the proposed well site. (For location of each site see attached area map.)

INDIVIDUAL CONTACTED OR NOTIFIED

Site: 1 Spacing 7250' Owner/Occupant: Susan Goodrich
Address: P.O. Box 43, Jacksonburg, WV 26377 Ph: (304)-889-2748
Field Contact Date: 09/08/2014 Located: Yes Date Located: 09/08/2014 Source: Water Well
If No, declined by who Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) N/A
Comments: Northing: 39.533458
Easting: 80.605796

Site: 2 Spacing 6975' Owner/Occupant: Harry Goodrich
Address: P.O. Box 144, Jacksonburg, WV 26377 Ph: (304)-889-2709
Field Contact Date: 09/08/2014 Located: Yes Date Located: 09/08/2014 Source: Water Well
If No, declined by who Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) N/A
Comments: Northing: 39.533377
Easting: 80.607097

Site: 3 Spacing 7315' Owner/Occupant: Susan Goodrich
Address: P.O. Box 43, Jacksonburg, WV 26377 Ph: (304)-889-2748
Field Contact Date: 09/08/2014 Located: Yes Date Located: 09/08/2014 Source: Creek
If No, declined by who Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) N/A
Comments: Northing: 39.533745
Easting: 80.606700

Site: 4 Spacing Owner/Occupant: Coastal Timberland CO.
Address: P.O. Box 709 Buckhannon, WV 26201 Ph:
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
If No, declined by who Letter/Notice Date: 1st 09/08/2014 2nd N/A Certified (3rd) 08/15/2014
Comments: Tax Map 23, Parcel 13 and Tax Map 17, Parcel 14
No response to certified letter as of 09/18/2014

Site: 5 Spacing _____ Owner/Occupant: Richard, Jaynee, Thomas & Trenton Dallison
Address: RT. 1 box 41 Folsom, WV 26348 Ph: _____
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
If No, declined by who Richard Dallison Letter/Notice Date: 1st 09/08/2014 2nd N/A Certified (3rd) 08/15/2014
Comments: Tax Map 23, Parcel 14
Letter of refusal signed 08/16/2014

Site: 6 Spacing _____ Owner/Occupant: Thomas E. Wyatt
Address: P.O. Box 14, Jacksonburg, WV 26377 Ph: _____
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
If No, declined by who _____ Letter/Notice Date: 1st 09/08/2014 2nd N/A Certified (3rd) 08/15/2014
Comments: Tax Map 23, Parcel 5
No response to certified letter as of 09/18/2014

Site: 7 Spacing _____ Owner/Occupant: Arthur J. Fach
Address: 7625 orchard view DR, SE East Canton, Ohio 44730 Ph: _____
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
If No, declined by who _____ Letter/Notice Date: 1st 09/08/2014 2nd N/A Certified (3rd) 08/15/2014
Comments: Tax Map 23, Parcel 16
No response to certified letter as of 09/18/2014

Site: 8 Spacing _____ Owner/Occupant: _____
Address: _____ Ph: _____
Field Contact Date _____ Located: _____ Date Located: _____ Source: _____
If No, declined by who _____ Letter/Notice Date: 1st _____ 2nd _____ Certified (3rd) _____
Comments: _____

Site: 9 Spacing _____ Owner/Occupant: _____
Address: _____ Ph: _____
Field Contact Date: _____ Located: _____ Date Located: _____ Source: _____
If No, declined by who _____ Letter/Notice Date: 1st _____ 2nd _____ Certified (3rd) _____
Comments: _____

Site: 10 Spacing _____ Owner/Occupant: _____
Address: _____ Ph: _____
Field Contact Date: _____ Located: _____ Date Located: _____ Source: _____
If No, declined by who _____ Letter/Notice Date: 1st _____ 2nd _____ Certified (3rd) _____
Comments: _____

RECEIVED AUG 25 2014



P.O. BOX 150, GLENVILLE, WV 26351

(304) 462-5634 • FAX 462-5656

To Whom It May Concern:

Smith Land Surveying, Inc. of Glenville, WV has been contracted by:

EQT

8770310

To do some preliminary work for a proposed oil and gas well permit application.

Due to 1994 regulations set by the State of West Virginia Division of Environmental Protection, Department of Oil and Gas, operators are required to offer water testing for water wells or other non-public water sources that fall within 1500 feet of the proposed well. The operator is testing within 2500 feet of the well, if they are requested to do so by the resident or owner. This test will only help ensure the water quality control, which in turn benefits you as the resident or landowner.

Since your residence falls within the 2500 foot radius, you are entitled to have your potable water source(s) sampled and analyzed at an independent lab. Your lab analysis results would then be mailed to your home. This is done at no expense to you.

Please notify Smith Land Surveying immediately if you are interested in having your potable water tested. Please have this letter with you at the time of contact so that the client and well number may be referenced.

Thank you for your cooperation in this matter. I look forward to hearing from you at your earliest convenience. If you have any questions, please feel free to contact me at:

Smith Land Surveying, Inc.
PO Box 150
Glenville, WV 26351
(304) 462-5634 (voice)
(304) 462-5656 (fax)
E-Mail DMcKee@slssurveys.com

Date: 8/15/14

Left/sent by: Daniel McKee

Well Number: BIG-192

Site Number: N/A

Wetzel County, WV Grant District

*If you do not have a water well or other non-public water source, please make note of it and include your name and address when you return this sheet. Please include your name in print as well as an address and phone number.

If you do not feel the need to have your Water well/spring/or other non-public water source sampled, please sign on the line below and return to the above address. This will signify that a sample has been offered to the surface owner and has been declined.

Signature: [Handwritten Signature] Date: 8-16-14

[Handwritten Signature] 8-16-14

08/21/2015

WEST VIRGINIA GEOLOGICAL PROGNOSIS

v 2015.1

Horizontal Well
513922 (BIG192H18)

4710303110

Drilling Objectives:

Marcellus

County:

Wetzel

Quad:

Big Run

Elevation:

1465 KB

1452 GL

Surface location

Northing: 376139.37

Easting: 1694589.58

TVD: 7655

Landing Point

Northing: 376570.56

Easting: 1697562.72

TVD: 7655

Toe location

Northing: 373067.91

Easting: 1700945.21

4,870'

Recommended Azimuth

136 Degrees

Recommended LP to TD:

Proposed Logging Suite:

Formation top depths based on open hole log run on pilot hole well 513538
Mudloggers to be on location at kickoff point to run samples and measure gas thru both the curve and lateral sections

Recommended Gas Tests:

1800, 2050, 2600, Intm Csg. Pt., 3400, 4900, 5250, KOP, (Gas test at any mine void)
Gas test during any trip or significant downtime while drilling the lateral section

ESTIMATED FORMATION TOPS

Formation	Top (TVD)	Base (TVD)	Lithology	Comments	Top RR	Base RR
Fresh Water Zone	1	780		FW @ 549,581,780, . .	73	919
Washington	743	745	Coal			
Coal	804	814	Coal			
Coal	919	924	Coal			
Coal	1009	1019	Coal			
Pittsburgh	1240	1245	Coal	No past, active, or planned mining in Pittsburgh seam		
Maxton	2351	2406	Sandstone	SW @ 2257,2370, . .		
Big Lime	2481	2560	Limestone			
Big Injun	2602	2665	Sandstone	Storage is not of concern		
Int csg pt	2765					
Weir	2866	2903	Sandstone			
Top Devonian	3011					
-Gantz	3011	3061	Silty Sand			
-Fifty foot	3061	3101	Silty Sand			
-Thirty foot	3164	3194	Silty Sand			
-Gordon	3227	3303	Silty Sand			
-Forth Sand	3300	3347	Silty Sand			
-Bayard	3499	3538	Silty Sand			
-Warren	3962	4114	Silty Sand			
-Speechley	4114	4274	Silty Sand			
-Balltown A	4274	5003	Silty Sand			
-Raley	5003	5638	Silty Sand			
-Benson	5638	5965	Silty Sand			
-Alexander	5965	7190	Silty Sand			
-Elks	7190	7190	Gray Shales and Silts			
-Sonyea	7190	7353	Gray shale			
-Middlesex	7353	7406	Shale			
-Genesee	7406	7495	Gray shale interbedded			
-Genesee	7495	7522	Black Shale			
-Tully	7522	7542	Limestone			
-Hamilton	7542	7631	Gray shale with some			
-Marcellus	7631	7684	Black Shale			
-Purcell	7641	7644	Limestone			
-Lateral Zone	7655	7655		Start Lateral at 7655 ft, drill to 7655 ft		
-Cherry Valley	7660	7664	Limestone			
Onondaga	7684		Limestone			

Target Thickness	53 feet
Max Anticipated Rock Pressure	2620 PSI

Comments:

Note that this is a TVD prog for a horizontal well (azimuth of 136 degrees, target formation = Marcellus). All measurements taken from estimated KB elevation. Water and coal information estimated from surrounding well data.
Intermediate casing point is recommended 100' beneath the Big Injun to shut off any water production from the Upper Devonian sands. Intermediate casing should be cemented into the surface string, per WV regulations.
The estimated TD is the TVD landing point for the horizontal section of well, with the plan to then drill to a final TVD of 7655' at the toe of the lateral. The geologic structure is unknown at this time.

Red rock information updated using offsetting wells in addition to subsea red rock encountered while drilling nearby laterals of the BIG190 pad.

LATERAL DRILLING TOLERANCES

Mapview - Left of borehole: Deviate as little as possible left to avoid planned lateral 515949
Mapview - Right of borehole: Deviate as little as possible right to avoid drilled lateral 513873
Mapview - TD: DO NOT EXTEND beyond recommended wellbore to avoid lease line

RECOMMENDED CASING POINTS

Fresh Water/Coal	CSG OD	13 3/8	CSG DEPTH	974	50' below coal seam
Intermediate 1:	CSG OD	9 5/8	CSG DEPTH	2765	100' past the base of the
Production:	CSG OD	5 1/2	CSG DEPTH	@ TD	

J Dereume/ E Glick	Author	Date Created	Plat Date
Prog created	JMD	2/3/2015	9/7/2014
updated	EVG	3/5/2015	2/23/2015
Surface casing revised to 150' below	EVG	4/21/2015	
revised surface casing to 50' below	EVG	7/8/2015	
revised LP coordinate	EVG	7/8/2015	
revised TD	EVG	7/21/2015	7/16/2015

- COAL
- PILOT HOLE
- CASING PROGRAM
- STORAGE

08/21/2015

47 10303110

Well Number: 513922 (BIG192H18)

Casing and Cementing		Deepest Fresh Water: 780'		
Type	Conductor	Surface	Intermediate	Production
Hole Size, In.	30	17 1/2	12 3/8	8 1/2
Casing Size, OD In.	26	13 3/8	9 5/8	5 1/2
Casing Wall Thickness, In.	0.312	0.380	0.395	0.361
Depth, MD	40'	974'	2,765'	13,850'
Depth, TVD	40'	974'	2,765'	7,655'
Centralizers Used	Yes	Yes	Yes	Yes
Weight/Grade	77#/MC-50	54.5#/J-55	40#/A-500	20#/P-110
New or Used	New	New	New	New
Pressure Testing	-	20% Greater than exp. Pressure	20% Greater than exp. Pressure	20% greater than exp. fracture pressure
After Fracture Pressure Testing	-	-	-	20% greater than exp. shut pressure
ID, in	25.376	12.615	8.835	4.778
Burst (psi)	-	2,730	3,950	12,640
Collapse (psi)	-	1,130	2,570	11,100
Tension (mlbs)	-	514	493	587
Cement Class	-	-	-	H
Cement Type	Construction	1	1	-
Cement Yield	1.18	1.21	1.21	1.27/1.86
Meets API Standards	-	Yes	Yes	Yes
WOC Time	-	Min. 8 hrs	Min. 8 hrs	Min. 8 hrs
Top of Cement (Planned)	Surface	Surface	Surface	3,239'
Fill (ft.)	40'	974'	2,765'	10,611'
Percent Excess	-	20	20	10
Est. Volume (cu ft)	49	847	1,079	2,700
Est. Volume (BBLs)	9	151	192	481

DMH
8-3-15

Received
Office of Oil & Gas
AUG 10 2015

08/21/2015

LEGEND

LEASE LINE	---
SURFACE LINE	----
WELL LATERAL	-----
OFFSET LINE	-----
TIE LINE	-----
CREEK	~~~~~
ROAD	=====
COUNTY ROUTE	○-----○
PROPOSED WELL	⊙
PLUGGED WELL	⊙
EXISTING WELL	⊙
TAX MAP-PARCEL	00-00

**EQT PRODUCTION COMPANY
ROBINSON LEASE
1,100 ACRES±
WELL NO. WV 513922**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

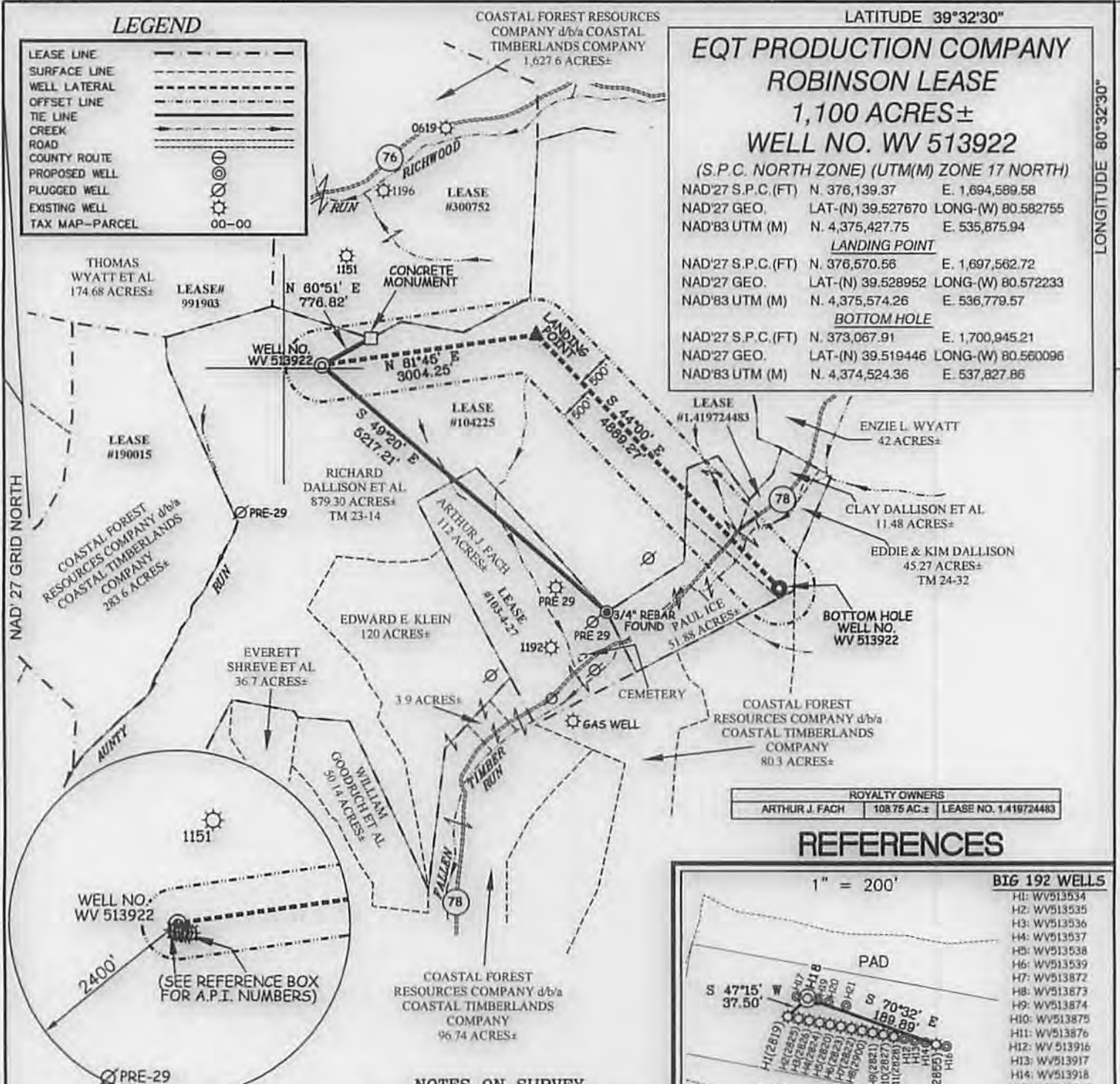
NAD'27 S.P.C. (FT) N. 376,139.37 E. 1,694,589.58
 NAD'27 GEO. LAT-(N) 39.527670 LONG-(W) 80.582755
 NAD'83 UTM (M) N. 4,375,427.75 E. 535,875.94

LANDING POINT

NAD'27 S.P.C. (FT) N. 376,570.56 E. 1,697,562.72
 NAD'27 GEO. LAT-(N) 39.528952 LONG-(W) 80.572233
 NAD'83 UTM (M) N. 4,375,574.26 E. 536,779.57

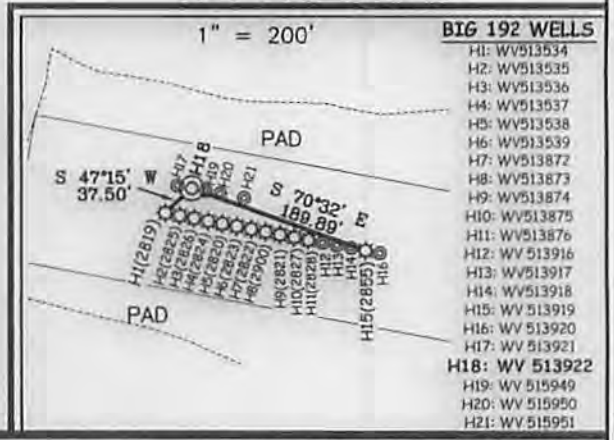
BOTTOM HOLE

NAD'27 S.P.C. (FT) N. 373,067.91 E. 1,700,945.21
 NAD'27 GEO. LAT-(N) 39.519446 LONG-(W) 80.560096
 NAD'83 UTM (M) N. 4,374,524.36 E. 537,827.86



ROYALTY OWNERS		
ARTHUR J. FACH	108.75 AC.±	LEASE NO. 1.419724483

REFERENCES



NOTES ON SURVEY

1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.

Professional Energy Consultants
 A DIVISION OF SMITH LAND SURVEYING, INC.
SLS
 SURVEYORS
 ENGINEERS
 ENVIRONMENTAL
 PROJECT MGMT.
 (304) 402-5434 WWW.SLSURVEYS.COM



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. 849 *C. Victor Moyers*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE FEBRUARY 23, 20 15

REVISED 03/25/15, 07/08/15 & 07/21/15

OPERATORS WELL NO. WV 513922

API NO. 47 - 103 - 03110
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 7797P513922R4
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)
 SCALE 1" = 2000'

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 1,452' (PAD ELEVATION) WATERSHED AUNTY RUN OF SOUTH FORK FISHING CREEK

DISTRICT GRANT COUNTY WETZEL QUADRANGLE BIG RUN 7.5'

SURFACE OWNER RICHARD DALLISON ET AL ACREAGE 879.30±

ROYALTY OWNER ED BROOME, INC ET AL ACREAGE 1,100± LEASE NO. 104225

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 7,631'

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY

ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

08/21/2015

47-10303110

WW-6A1
(5/13)

Operator's Well No. 513922

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that -

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
			Min 1/8 pd	
104225	L. G. Robinson, etal	H. L. Smith		LB111/452
	H. L. Smith	Philadelphia Company		LB47A/287
	Philadelphia Company	Pittsburgh & West Virginia Gas Company		DB146/98
	Pittsburgh & West Virginia Gas Company	Equitable Gas Company		DB187/321
	Equitable Gas Company	Equitrans, Inc.		CB71A/453
	Equitrans, LLC	EQT Production Company		DB192/19 Doc
			Min 1/8 pd	
<u>1.419724483</u>	Arthur J. Fach	EQT Production Company		LB 166A/3
	Eddie D. Dallison & Kim L. Dallison	EQT Production Company		LB 166A/22
	Clay D.C. Dallison	EQT Production Company		LB 166A/24

Upon information and belief, Operator's lease and/or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service

other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: EQT Production Company
 By: [Signature]
 Its: Permitting Supervisor

Received
Office of Oil & Gas
Page 1 of 1 AUG 10 2015

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION**

Date of Notice Certification: APR 22 2015

API No. 47 - 103 - 0
Operator's Well No. 513922
Well Pad Name: Big 192

47 103 031 10

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>WV</u>	UTM NAD 83 Easting: <u>535,875.90</u>
County: <u>Wetzel</u>	UTM NAD 83 Northing: <u>4,375,427.70</u>
District: <u>Grant</u>	Public Road Access: <u>RT 20</u>
Quadrangle: <u>Big Run 7.5'</u>	Generally used farm name: <u>Richard Dallison et al</u>
Watershed: <u>Aunty Run of South Fork Fishing Creek</u>	

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED OR</p> <p><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

08/21/2015

Certification of Notice is hereby given:

THEREFORE, I *[Signature]*, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator: EQT Production Company
By: Victoria J. Roark
Its: Permitting Supervisor
Telephone: 304-848-0076

Address: P.O. Box 280
Bridgeport, WV 26330
Facsimile: 304-848-0040
Email: vroark@eqt.com



Subscribed and sworn before me this 21 day of April 2015

[Signature]

Notary Public

My Commission Expires 8-24-20

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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08/21/2015

WW-6A
(9-13)

API NO. 47 - 103 - 0
OPERATOR WELL NO. 513922
Well Pad Name: BIG 192

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.

Date of Notice: 6-8-15 Date Permit Application Filed: 6-8-15

4710303110

Notice of:

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

- Application Notice
- WSSP Notice
- E&S Plan Notice
- Well Plat Notice is hereby provided to:

SURFACE OWNER(s)
Name: Richard B. and Jaynee C Dallison
Address: 28855 Shortline Hwy.
Folsom, WV 26348-6021

Name: Thomas P. Dallison
Address: 452 Trader Fork Road
Folsom, WV 26348-6021
See Attached

SURFACE OWNERS(s) (Road and/or Other Disturbance)
Name: Richard B. and Jaynee C Dallison
Address: 28855 Shortline Hwy.
Folsom, WV 26348-6021

Name: Thomas P. Dallison
Address: 452 Trader Fork Road
Folsom, WV 26348-6021
See Attached

SURFACE OWNER(s) (Impoundments/Pits)
Name: Richard B. and Jaynee C Dallison
Address: 28855 Shortline Hwy.
Folsom, WV 26348-6021
See Attached

COAL OWNER OR LESSEE
Name: CNX RCPC LLC
Address: CNX Center
1000 Consol Energy Dr.
Canonsburg, PA 15317-6506
See attached for additional coal owners.

COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: _____
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

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JUN 10 2015
WV Department of Environmental Protection

*Please attach additional forms if necessary

08/21/2015

WW-6A
(8-13)

API NO. 47 - 103 - 0
 OPERATOR WELL NO. 513922
 Well Pad Name: BIG 192

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section shall prevent an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

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API NO. 47 - 103 - 0
 OPERATOR WELL NO. 513922
 Well Pad Name: BIG 192

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
 Department of Environmental Protection
 601 57th St. SE
 Charleston, WV 25304
 (304) 926-0450

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons permitted to test water.
 NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

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(8-13)

API NO. 47 - 103 - 0
 OPERATOR WELL NO. 513922
 Well Pad Name: BIG 192

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have THIRTY (30) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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08/21/2015

Notice is hereby given by:

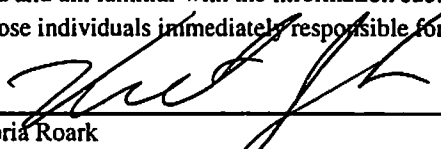
Well Operator: EQT Production Company
Telephone: 304-848-0082
Email: Vroark@eqt.com

Address: 115 Professional Place P.O. Box 280
Bridgeport, WV 26330
Facsimile: 304-848-0041

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.



By: Victoria Roark

Its: Permitting Supervisor

Subscribed and sworn before n 8th day of June, 2015

Rebecca L Heater Notary Public

My Commission Expir 4-7-2020



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WW6-A

Additional Surface Owners

Trenton Dallison
2975 Barker Run Road
Pine Grove, WV 26419-8325

Additional Surface Owner, PIT/ Impoundment

Thomas P. Dallison
452 Trader Fork Road
Folsom, WV 26348-6021

Trenton Dallison
2975 Barker Run Road
Pine Grove, WV 26419-8325

Additional Surface Owner Access Road

Trenton Dallison
2975 Barker Run Road
Pine Grove, WV 26419-8325

Coastal Forest Resources dba
Coastal Timberlands Company
P.O. Box 709
Buckhannon, WV 26201

Richard and Roxanne Funk
4832 Fairport Road
Newton Falls OH 44444

Larry Larew
12750 W Middletown Road
Salem OH 44460

Lydle M. Martyn
PO Box 7
Jacksonburg WV 26377

Additional Coal Owners

Consol Mining Company LLC
CNX Center
1000 Consol Energy Dr.
Canonsburg PA 15318-6506

CNX Land LLC
Engineer Operations Support Dept.
Coal
1000 Consol Energy Dr.
Canonsburg PA 15318-6506

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Environmental Protection

08/21/2015

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David Bowyer
12088 Middle Island Rd
Alma WV 26320-7211

Murray American Energy, Inc
1 Bridge Street
Monongah, WV 26554

Murray American Energy Inc
c/o Murray Energy Corporation
46226 National Road
St. Clairsville, OH 43950

CBM Only

CNX Gas Company, LLC
CNX Center
1000 Consol Energy Drive
Cannonsburg, PA 15317-6506

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WV Department of
Environmental Protection

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.

Date of Notice: 6/8/2015 Date Permit Application Filed: TBD

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

HAND DELIVERY

CERTIFIED MAIL RETURN RECEIPT REQUESTED

47 1 0 3 0 3 1 1 0

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: Provided, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: Provided, however, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Richard and Roxanne Funk
Address: 4832 Fairport Road
Newton Falls OH 44444

Name: Larry Larew
Address: 12750 W Middletown Road
Salem OH 44460

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83	Easting	<u>535,875.90</u>
County:	<u>Wetzel</u>		Northing	<u>4,375,427.70</u>
District:	<u>Grant</u>		Public Road Access:	<u>RT 20</u>
Quadrangle:	<u>Big Run 7.5</u>		Generally used farm name:	<u>Richard Dallison et al</u>
Watershed:	<u>Aunty Run of South Fork Fishing Creek</u>			

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx

Notice is hereby given by:

Well Operator: EQT Production Company
Address: 115 Professional Place, P.O Box 280
Bridgeport, WV 26330
Telephone: 304-848-0076
Email: vroark@egt.com
Facsimile: 304-848-0041

Authorized Representative: Victoria Roark
Address: 115 Professional Place, P.O Box 280
Bridgeport, WV 26330
Telephone: 304-848-0076
Email: vroark@egt.com
Facsimile: 304-848-0041

RECEIVED
Office of Oil and Gas
JUN 10 2015
WV Department of Environmental Protection

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

08/21/2015

47 10303110

WW-6A4
(1/12)

Operator Well No. 513922

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

47 10303110

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.

Date of Notice: 6/8/2015 Date Permit Application Filed: TBD

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

HAND DELIVERY CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: Provided, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: Provided, however, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Lydle M Martyn Name: _____
Address: PO Box 7 Address: _____
Jacksonburg WV 26377

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: WV UTM NAD 83 Easting 535,875.90
County: Wetzel Northing 4,375,427.70
District: Grant Public Road Access: RT 20
Quadrangle: Big Run 7.5 Generally used farm name: Richard Dallison et al
Watershed: Aunty Run of South Fork Fishing Creek

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx

Notice is hereby given by:

Well Operator: EQT Production Company
Address: 115 Professional Place, P.O Box 280
Bridgeport, WV 26330
Telephone: 304-848-0076
Email: vroark@eqt.com
Facsimile: 304-848-0041

Authorized Representative: _____
Address: 115 Professional Place, P.O Box 280
Bridgeport, WV 26330
Telephone: 304-848-0076
Email: vroark@eqt.com
Facsimile: 304-848-0041

RECEIVED Victoria Roark
Office of Oil and Gas
JUN 10 2015
WV Department of Environmental Protection

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

08/21/2015

WW-6A5
(1/12)Operator Well No. 513922

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF PLANNED OPERATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.

Date of Notice: 6/8/2015 Date Permit Application Filed: June 8, 2015

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: Richard and Roxanne Funk
Address: 4832 Fairport Road
Newtown Falls OH 44444

Name: Larry Larew
Address: 12750 W Middletown Road
Salem OH 44460

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>535,875.900000</u>
County:	<u>Wetzel</u>		Northing:	<u>4,375,427.700000</u>
District:	<u>Grant</u>	Public Road Access:	<u>RT 20</u>	
Quadrangle:	<u>Big Run 7.5'</u>	Generally used farm name:	<u>Richard Dallison et al</u>	
Watershed:	<u>Aunty Run of South Fork Fishing Creek</u>			

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator: EQT Production Company
Telephone: 304-848-0082
Email: vroark@eqt.com

Address: 115 Professional Place, P.O. Box 280
Bridgeport, WV 26330
Facsimile: 304-848-0040

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business if needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

RECEIVED
Office of Oil and Gas
JUN 10 2015
WV Department of
Environmental Protection 08/21/2015

JUN 1 0 2015

WW-6A5
(1/12)

Operator Well No. 513922

WV Department of
Environmental Protection

STATE OF WEST VIRGINIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

NOTICE OF PLANNED OPERATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.

Date of Notice: 6/8/2015 Date Permit Application Filed: June 8, 2015

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

CERTIFIED MAIL
RETURN RECEIPT REQUESTED HAND
DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: Lydle M. Martyn
Address: PO Box 7
Jacksonburg WV 26377

Name: _____
Address: _____

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>535,875.900000</u>
County:	<u>Wetzel</u>		Northing:	<u>4,375,427.700000</u>
District:	<u>Grant</u>	Public Road Access:	<u>RT 20</u>	
Quadrangle:	<u>Big Run 7.5'</u>	Generally used farm name:	<u>Richard Dallison et al</u>	
Watershed:	<u>Aunty Run of South Fork Fishing Creek</u>			

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Address: 115 Professional Place, P.O. Box 280
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Facsimile: 304-848-0040

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WW6-A

Additional Surface Owners

Trenton Dallison
2975 Barker Run Road
Pine Grove, WV 26419-8325

Additional Surface Owner, Pit/ Impoundment

Thomas P. Dallison
452 Trader Fork Road
Folsom, WV 26348-6021

Trenton Dallison
2975 Barker Run Road
Pine Grove, WV 26419-8325

Additional Surface Owner Access Road

Trenton Dallison
2975 Barker Run Road
Pine Grove, WV 26419-8325

Coastal Forest Resources dba
Coastal Timberlands Company
P.O. Box 709
Buckhannon, WV 26201

Additional Coal Owners

Consol Mining Company LLC
CNX Center
1000 Consol Energy Dr.
Canonsburg PA 15318-6506

CNX Land LLC
Engineer Operations Support Dept.
Coal
1000 Consol Energy Dr.
Canonsburg PA 15318-6506

David Bowyer
RT. 1 Box 4598
Salem, WV 26426-5217

Murray American Energy, Inc
1 Bridge Street
Monongah, WV 26554

Murray American Energy Inc
c/o Murray Energy Corporation
46226 National Road
St. Clairsville, OH 43950

4710303110

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Office of Oil and Gas
APR 24 2015
WV Department of
Environmental Protection
08/21/2015

CBM Only

CNX Gas Company, LLC
CNX Center
1000 Consol Energy Drive
Cannonsburg, PA 15317-6506

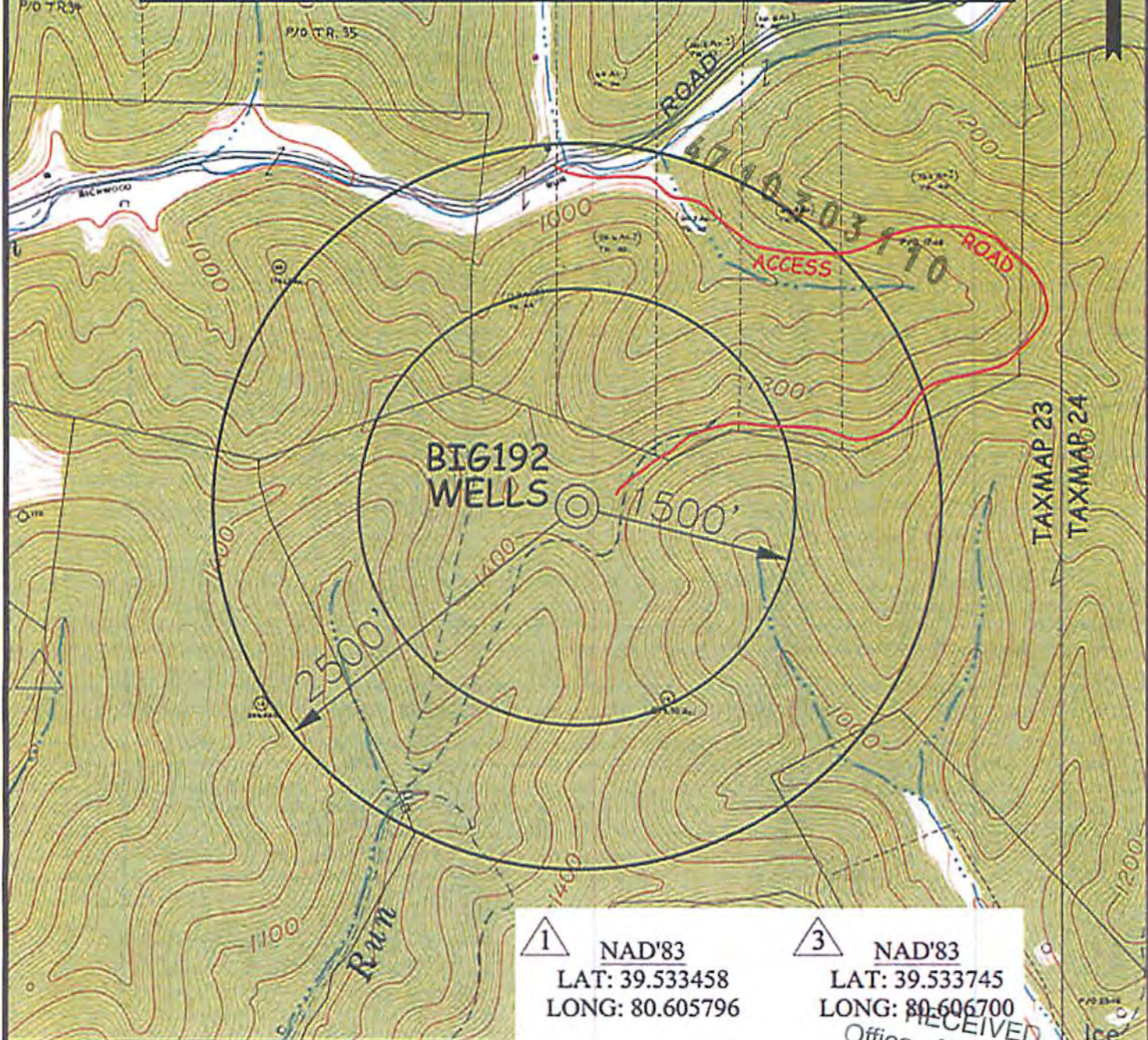


2015 APR 24 10 10 AM

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Office of Oil and Gas
APR 24 2015
WV Department of
Environmental Protection

08/21/2015

WATER SOURCE LOCATIONS FOR ROBINSON LEASE BIG192 WELLS




① NAD'83
 LAT: 39.533458
 LONG: 80.605796

② NAD'83
 LAT: 39.533377
 LONG: 80.607097

③ NAD'83
 LAT: 39.533745
 LONG: 80.606700

RECEIVED
 Office of Oil and Gas
 APR 24 2015

SCALE: 1-INCH=1000-FEET
 0' 1000' 2000' 3000'

Professional Energy Consultants
A DIVISION OF SMITH LAWSON ENGINEERS, PC

SLS
1336 402 5434
 SURVEYORS
 ENGINEERS
 ENVIRONMENTAL
 PROJECT MGMT.
WWW.SLSENGINEERS.COM

TOPO SECTION OF:
BIG RUN, WV 7.5' QUAD

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
GRANT	WETZEL	23-14

OPERATED BY
EQT PRODUCTION COMPANY
 115 PROFESSIONAL PLACE
 P.O. BOX 280
 BRIDGEPORT, WV 26330

WV Department of Environmental Protection
 08/21/2015

DRAWN BY: K.E.S.
 FILE NO.: 7797
 DATE: 02/27/15
 CADD FILE: 7797BIG192WATER.dwg



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

80308110

March 12, 2015

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Subject: DOH Permit for the BIG192 Pad Site, Wetzel County
513921 BIG192H17 513922 BIG192H18 513949 BIG192H19

Dear Dr. Martin,

This well site will be accessed from existing Permit # 06-12-0519 issued to EQT Production Company for access to the State Road for a well site located off of Wetzel County Route 76 SLS.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G Coordinator

Cc: Nick Bumgardner
EQT Production Company
CH, OM, D-6, File

RECEIVED
Office of Oil and Gas

APR 24 2015

WV Department of
Environmental Protection

**Anticipated Frac Additives
Chemical Names and CAS numbers**

<u>Material</u>	<u>Ingredient</u>	<u>CAS Number</u>
Water		
Sand	Hydrotreated light petroleum distillate	14808-60-7
Friction Reducer	Tributyl tetradecyl phosphonium chloride	64742-47-8
Biocide	Ammonium chloride	81741-28-8
Scale Inhibitor	Hydrochloric Acid	12125-02-9
15% Hydrochloric Acid	Propargyl Alcohol	7647-01-0
Corrosion Inhibitor	Methanol	107-19-7
Corrosion Inhibitor	Guar Gum	67-56-1
Gelling Agent	Sodium Persulfate	9000-30-0
Oxidizing Breaker	Potassium Carbonate	7775-27-1
Buffering Agent		584-08-7

47 10 CAS Number
303110

BIG 192 H1-H14 SITE PLAN EQT PRODUCTION COMPANY

(PROPOSED WELLS NO. WV 513534, WV 513535, WV 513536, WV 513537, WV 513538, WV 513539, WV 513872, WV 513873, WV 513874, WV 513875, WV 513876, WV 513916, WV 513917, WV 513918)

SITUATE ON THE WATERS OF TRIBUTARIES OF RICHWOOD RUN,
FALLEN TIMER RUN, & AUNTY RUN
IN GRANT DISTRICT, WETZEL COUNTY, WEST VIRGINIA.

PROJECT INFORMATION

PROJECT NAME: BIG 192 H1-H14
TAX PARCEL: GRANT DISTRICT MAP 23-14
SURFACE OWNER: RICHARD B. DALLISON ET AL GRANT DISTRICT WETZEL COUNTY WV TOTAL PROPERTY AREA: 879.30 ± ACRES
OIL AND GAS MINORITY OWNER: ED BIRKUM INC ET AL GRANT DISTRICT WETZEL COUNTY WV TOTAL PROPERTY AREA: 1100.0 ± ACRES

NOTE LOCATION: THE BIG 192 SITE IS LOCATED ON A RIDGE SOUTH OF CO. RT. 78, APPROXIMATELY 18,387 FT EAST OF THE CO. RT. 78 AND WV RT. 20 INTERSECTION.

LOCATION COORDINATES

BIG 192 H1-H14 WELL PAD ENTRANCE
LATITUDE: 39.524192 LONGITUDE: -80.563105 (NAD 83)
BIG 192 H1-H14 WELL PAD
LATITUDE: 39.527841 LONGITUDE: -80.563113 (NAD 83)
BIG 192 ASSOCIATED PIT
LATITUDE: 39.528941 LONGITUDE: -80.563420 (NAD 83)
BIG 192 ASSOCIATED IMPOUNDMENT
LATITUDE: 39.528941 LONGITUDE: -80.564008 (NAD 83)

SITE DISTURBANCE COMPUTATIONS

PAD/ASSOCIATED PIT/ASSOCIATED IMPOUNDMENT AREA - 33.08 ± ACRES
ACCESS ROAD - 38.37 ± ACRES
TOTAL SITE DISTURBANCE - 88.08 ± ACRES
*INCLUDES AREA OF THE WELL PAD, ASSOCIATED PIT, ASSOCIATED IMPOUNDMENT & STOCKPILES

ENTRANCE PERMIT

EQT PRODUCTION COMPANY WILL OBTAIN AN ENCROACHMENT PERMIT (FORM WA-109) FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

MISS UTILITY STATEMENT

MISS UTILITY OF WEST VIRGINIA WAS NOTIFIED FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN. TICKET #123083080. IN ADDITION, MISS UTILITY WILL BE CONTACTED PRIOR TO START OF THE PROJECT.

FLOODPLAIN NOTE

THE PROPOSED LIMITS OF DISTURBANCE FOR THIS PROJECT IS LOCATED IN FEMA FLOOD ZONE X. FOR THE FLOOD INSURANCE RATE MAP (FIRM) NUMBER 5423X0210C, DATED SEPT 25, 2005.

ENVIRONMENTAL NOTES

A WETLAND DELINEATION WAS PREPARED ON MARCH 22, 2011, MARCH 4 & 7, 2012, & JULY 10 & 18, 2012 BY POTEMTA ENGINEERS AND ENVIRONMENTAL CONSULTANTS TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY JURISDICTION OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE AUGUST 03, 2012 REPORT PROJECT # 010-11-0147-18023 WAS PREPARED BY POTEMTA ENGINEERS AND ENVIRONMENTAL CONSULTANTS. SUMMARIZED THE RESULTS OF THE FIELD DELINEATION. THE REPORT DOES NOT, IN ANY WAY, REPRESENT A JUDICIAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE APPLICANT/AGENCY BE CONSULTED IN AN EFFORT TO OBTAIN WRITTEN CONTRIBUTION OF THE DELINEATION DESCRIBED BY THIS REPORT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLANDS AND STREAM CROSSINGS.

GENERAL DESCRIPTION

THE WELL PAD, ASSOCIATED PIT & ASSOCIATED IMPOUNDMENT IS BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHAIR GAS WELLS.

MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV, Chapter 24-C)
Requires that you call two
business days before you dig in
the state of West Virginia.
IT'S THE LAW!

API#10302819
API#10302820
API#10302821
API#10302822
API#10302823
API#10302824
API#10302825
API#10302826
API#10302827
API#10302828

OPERATOR

EQT PRODUCTION COMPANY
OPERATOR ID: 304986
110 PROFESSIONAL PLACE
P.O. BOX 290
BRIDGEPORT, WV 26330
PHONE: (304) 348-3570

ENGINEER

NAVITUS ENGINEERING, INC.
151 WINDY HILL LANE
WICHITERS, VA 26062
PHONE: (800) 682-4185

SURVEYOR

SMITH LAND SURVEYING, INC.
208 WEST MAIN STREET
P.O. BOX 150
GLENTVILLE, WV 26031
PHONE: (304) 682-5638



LIST OF DRAWINGS

- 1 - COVER SHEET
- 2 - NOTES
- 3 - OVERALL PLAN VIEW
- 4 - WELL PAD ASSOCIATED PIT AND IMPOUNDMENT DETAILS
- 5 - STOCKPILE F & G
- 6 - STOCKPILE C, A, J AND ACCESS ROAD TO BIG 333
- 7 - STOCKPILE A, B, L & R AND ACCESS ROAD TO BIG 333
- 8-12 - WELL PAD ACCESS ROAD DETAILS
- 13 - ASSOCIATED PIT SECTIONS
- 14 - WELL PAD & ASSOCIATED IMPOUNDMENT SECTIONS
- 15 - STREAM CROSSING "A" DETAILS
- 16 - STREAM CROSSING "B" DETAILS
- 17 - STREAM CROSSING "C" DETAILS
- 18-22 - ROAD PROFILES
- 23-33 - ROAD SECTIONS
- 34 - TEMPORARY SLOPE DRAIN PROFILES
- 35-36 - WELL PAD, PIT AND IMPOUNDMENT RECLAMATION PLAN
- 37-40 - CONSTRUCTION DETAILS

APPROVED
WVDEP OOG

SAY 10/19/2012

LEGEND	
EX CHECK CONTOUR	PROP CHECK CONTOUR
EX INTERMEDIATE CONTOUR	PROP INTERMEDIATE CONTOUR
EX BOUNDARY LINE	PROP BOUNDARY LINE
EX ROAD EDGE OF GRAVEL/DIRT	PROP ROAD EDGE OF GRAVEL/DIRT
EX ROAD EDGE OF PAVEMENT	PROP ROAD EDGE OF PAVEMENT
EX ROAD CENTERLINE	PROP ROAD CENTERLINE
EX DITCHLINE	PROP DITCHLINE
EX ELEVATION	PROP ELEVATION
EX QUADRANT	PROP QUADRANT
EX FENCELINE	PROP FENCELINE
EX GATE	PROP GATE
EX OVERHEAD UTILITY	PROP OVERHEAD UTILITY
EX OVERHEAD UTILITY R/W	PROP OVERHEAD UTILITY R/W
EX POWER POLE	PROP POWER POLE
EX TELEPHONE POLE	PROP TELEPHONE POLE
EX LARKLINE	PROP LARKLINE
EX WATER WELL	PROP WATER WELL
EX GAS WELL	PROP GAS WELL
EX TREELINE	PROP TREELINE
EX REFERENCE TREE	PROP REFERENCE TREE
EX DELINEATED STREAM	PROP DELINEATED STREAM
EX UNDELINEATED STREAM	PROP UNDELINEATED STREAM
EX BUILDING	PROP BUILDING
EX BRIDGE	PROP BRIDGE
EX STOCKPILE	PROP STOCKPILE
EX PIT/IMPOUNDMENT CL.	PROP PIT/IMPOUNDMENT CL.
EX PROPOSED SAFETY FENCE	PROP PROPOSED SAFETY FENCE
EX ACCESS DATE NOTE	PROP ACCESS DATE NOTE
EX EMERGENCY LIFELINE	PROP EMERGENCY LIFELINE
EX CITY WIRE	PROP CITY WIRE
EX TELEPHONE WIRE	PROP TELEPHONE WIRE
EX LARKLINE	PROP LARKLINE
EX WATER WELL	PROP WATER WELL
EX GAS WELL	PROP GAS WELL
EX REFERENCE TREE	PROP REFERENCE TREE
EX DELINEATED STREAM	PROP DELINEATED STREAM
EX UNDELINEATED STREAM	PROP UNDELINEATED STREAM
EX BUILDING	PROP BUILDING
EX BRIDGE	PROP BRIDGE
EX STOCKPILE	PROP STOCKPILE
EX PIT/IMPOUNDMENT CL.	PROP PIT/IMPOUNDMENT CL.
EX PROPOSED SAFETY FENCE	PROP PROPOSED SAFETY FENCE
EX ACCESS DATE NOTE	PROP ACCESS DATE NOTE
EX EMERGENCY LIFELINE	PROP EMERGENCY LIFELINE
EX CITY WIRE	PROP CITY WIRE
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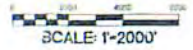
BIG-192 AS-BUILT SITE PLAN EQT PRODUCTION COMPANY

EXISTING WELLS API NO's: 47-103-02819, 47-103-02825, 47-103-02826, 47-103-02824, 47-103-02820, 47-103-02823, 47-103-02822, 47-103-02821, 47-103-02827, 47-103-02828, 47-103-02855, 47-103-02900, 47-103-03040, 47-103-03041, 47-103-03042 & 47-103-02855

PROPOSED WELLS: WV 513921, WV 513922, WV 515949, WV 515950, & WV515951.

SITUATE ON THE WATERS OF TRIBUTARIES OF RICHWOOD RUN,
FALLEN TIMBER RUN & AUNTY RUN
IN GRANT DISTRICT, WETZEL COUNTY, WEST VIRGINIA.

LOCATION MAP



PROJECT INFORMATION

PROJECT NAME: BIG-192 AS-BUILT SITE PLAN
TAX PARCEL: GRANT DISTRICT MAP 2514
SURFACE OWNER: RICHARD B. DALLISON ET AL. GRANT DISTRICT WETZEL COUNTY, WV TOTAL PROPERTY AREA: 112.25 ACRES

ROYALTY OWNER: T.E. BRIDGE, JR. ET AL. GRANT DISTRICT WETZEL COUNTY, WV TOTAL PROPERTY AREA: 112.25 ACRES

SITE LOCATION: THE BIG-192 SITE IS LOCATED ON A ROAD SOUTH OF CO. RT. 76 APPROXIMATELY 18,387 FEET EAST OF THE CO. RT. 75 AND 604 FEET WEST OF THE CO. RT. 76 INTERSECTION.

BIG 192 LOCATION COORDINATES

BIG-192 SITE ENTRANCE
LATITUDE: 38.674121 N
LONGITUDE: 80.526185 W
UTM X: 652180 E
UTM Y: 4200100 N

BIG-192 WELL PAD CENTER POINT
LATITUDE: 38.67041 N
LONGITUDE: 80.526185 W
UTM X: 652180 E
UTM Y: 4200100 N

BIG-192 ASSOCIATED PIT
LATITUDE: 38.67041 N
LONGITUDE: 80.526185 W
UTM X: 652180 E
UTM Y: 4200100 N

SITE DISTURBANCE COMPUTATIONS

ORIGINAL LOT AREA = 10.61 ACRES
PROPOSED ADDITIONAL LOT AREA = 15.4 ACRES
SELECTED UNDISTURBED LOT AREA = 8.4 ACRES
TOTAL ACRES AFTER MODIFICATION = 26.01 ACRES

GENERAL DESCRIPTION

THE WELL PAD AND ASSOCIATED PIT HAVE BEEN CONSTRUCTED TO ADJACENT TO THE UNDISTURBED LOT

BIG 192 AS-BUILT DISTURBANCE

SURFACE OWNER	TAX MAP PARCEL	AS-BUILT DISTURBANCE (AC)
COASTAL LOGGING COMPANY	19 23 14	12.01
COASTAL FOREST RESOURCES COMPANY	19 23 14	0.00
THOMAS & WHITT ET AL.	19 23 14	0.00
RICHARD B. DALLISON ET AL.	19 23 14	11.59
COASTAL LOGGING COMPANY	19 17 14	12.91
COASTAL FOREST RESOURCES COMPANY	19 17 14	0.00

MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV, Chapter 24-C)
Requires that you call two business days
before you dig in the state of West Virginia.
IT'S THE LAW!

LIST OF DRAWINGS

1. COVER SHEET
2. CONSTRUCTION NOTES
3. AREA SHEET
4. BIG-192 ACCESS ROAD PLAN
5. BIG-192 ACCESS ROAD PLAN
6. BIG-192 ACCESS ROAD PLAN
7. BIG-192 ACCESS ROAD PLAN
8. BIG-192 ACCESS ROAD PLAN
9. BIG-192 ACCESS ROAD PLAN
10. BIG-192 SITE AS-BUILT PLAN (PIT)
11. BIG-192 ACCESS ROAD PLAN (PIT)
12. BIG-192 ACCESS ROAD PLAN (PIT)
13. BIG-192 ACCESS ROAD PLAN
14. CONSTRUCTION DETAILS
15. CONSTRUCTION DETAILS
16. CONSTRUCTION DETAILS
17. ILLUMINATION DETAILS

LEGEND

LIMIT OF DISTURBANCE	SYMBOL
PROPERTY BOUNDARY	(---)
SETBACK LINE	(---)
ROAD EDGE OF GRAVEL PAVEMENT	(---)
ROAD EDGE OF PAVEMENT	(---)
ROAD CENTERLINE	(---)
BOUNDARY	(---)
ENCLOSURE	(---)
OVERHEAD UTILITY	(---)
OVERHEAD UTILITY R/W	(---)
POWER POLE	(---)
CITY WIRE	(---)
TELEPHONE LINE	(---)
GASLINE	(---)
CANALY R/W	(---)
RAILROAD	(---)
MONITORING WELL	(---)
TREATAGE	(---)
REFERENCE TREE	(---)
DECONTAMINATED STEAM	(---)
DECONTAMINATED WETLAND	(---)
STRUCTURE	(---)
FENCING BORDER	(---)
EDGE OF GRAVEL PAD	(---)
EDGE OF DRIVE	(---)
REINFORCED POST AND RAIL FENCE	(---)
GRAVEL	(---)
GRAVEL	(---)
ORIGINAL GROUND ELEVATION	(---)
AS-BUILT ELEVATION	(---)
AS-BUILT WELL LOCATION	(---)
PROPOSED WELL LOCATION	(---)
SPOT ELEVATION	(---)
WATERLINE	(---)
ADDITIONAL LOT AREA	(---)

DNAH
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BIG-192 AS-BUILT SITE PLAN CONSTRUCTION NOTES

CONSTRUCTION NOTES:

1. METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THE IMPROVEMENTS HEREIN SHALL CONFORM TO THE CURRENT COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS AND/OR CURRENT WASH EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL.
2. MEASURES TO CONTROL EROSION AND SILTATION, INCLUDING DETENTION PONDS SERVING AS SILT BASINS DURING CONSTRUCTION, MUST BE PROVIDED PRIOR TO OBTAINANCE OF THE SITE DEVELOPMENT PERMIT. THE APPROVAL OF THESE PLANS IN NO WAY RELIEVES THE DEVELOPER OR HIS AGENT OF THE RESPONSIBILITIES CONTAINED IN THE WASH EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL.
3. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE. ALSO, A REPRESENTATIVE OF THE DEVELOPER MUST BE AVAILABLE AT ALL TIMES.
4. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING MUD FROM TRUCKS AND/OR OTHER EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, ALLEY DUST AND TO TAKE WHATEVER MEASURES ARE NECESSARY TO ENSURE THAT THE STREETS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
5. NOTIFICATION SHALL BE GIVEN TO THE APPROPRIATE UTILITY COMPANY PRIOR TO CONSTRUCTION OF WATER AND/OR GAS PIPE LINES. INFORMATION SHOULD ALSO BE OBTAINED FROM THE APPROPRIATE AUTHORITY CONCERNING PERMITS, CUT SHEETS, AND CONNECTIONS TO EXISTING LINES.
6. THE LOCATION OF EXISTING UTILITIES SHOWN IN THESE PLANS ARE FROM FIELD LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES AS SNEEDED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE ENGINEER OF ANY CONFLICTS ARISING FROM HIS EXISTING UTILITY VERIFICATION AND THE PROPOSED CONSTRUCTION.
7. THE DEVELOPER WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING STREETS AND UTILITIES WHICH OCCURS AS A RESULT OF HIS CONSTRUCTION PROJECT WITHIN OR ADJACENT TO THE EXISTING RIGHT-OF-WAY.
8. WHEN SHADING IS PROPOSED WITHIN EASEMENTS OF UTILITIES, LETTERS OF PERMISSION FROM ALL REGULATED COMPANIES MUST BE OBTAINED PRIOR TO GRADING AND/OR SITE DEVELOPMENT.
9. THE DEVELOPER WILL BE RESPONSIBLE FOR THE RELOCATION OF ANY UTILITIES WHICH IS REQUIRED AS A RESULT OF HIS PROJECT. THE RELOCATION SHOULD BE DONE PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR IS TO VERIFY FIELD CONDITIONS PRIOR TO AND DURING CONSTRUCTION AND BATH LAND SURVEYING AT (204) 462-3634 IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLAN.
11. CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATING OR BLASTING AT LEAST TWO (2) WORKING DAYS, BUT NOT MORE THAN TEN (10) WORKING DAYS, PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION.
12. CONTRACTOR TO CONTACT OPERATOR AND ENGINEER IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION.
13. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR DAILY AND CHECKED AFTER EVERY RAINFALL. ALL DRAINAGE DEVICES SHALL BE FREE OF SILTATION AND DEBRIS. INEFFECTIVE MEASURES SHALL BE REPLACED AS NECESSARY.
14. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE EROSION AND SEDIMENT CONTROL INSPECTOR 3 DAYS PRIOR TO THE START OF CONSTRUCTION.

SITE CLEANUP & RECYCLE PROGRAM

1. GARBAGE, FUELS OR ANY SUBSTANCE HARMFUL TO HUMAN, AQUATIC OR FISH LIFE, SHALL BE PREVENTED FROM ENTERING STREAMS, STREAMS, PONDS, LAKES, WETLANDS OR ANY WATER COURSE OR WATER BODY.
2. OILS, FUELS, LUBRICANTS AND COOLANTS SHALL BE PLACED IN SUITABLE CONTAINERS AND DISPOSED PROPERLY.
3. ALL TRASH AND GARBAGE WILL BE COLLECTED AND DISPOSED PROPERLY.
4. ALL SEDIMENT REMOVED FROM SEDIMENT CAPTURING DEVICES SHALL BE PLACED AT AN AREA IN THE PLANT 1/4 MILE ROUND TRIP, THEN REEDED AND MAINTAINED.

MAINTENANCE PROGRAM

ALL MAINTENANCE ACTIVITIES WILL BE PERFORMED BY THE CONTRACTOR DURING THE ACTIVE CONSTRUCTION PHASE OF THE PROJECT. UPON COMPLETION OF THE ACTIVE CONSTRUCTION PHASE, FIELD ENGINEER/OPERATOR WILL PERFORM MAINTENANCE ACTIVITIES.

1. BMP'S WILL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH MEASURABLE RAINFALL EVENT DURING THE ACTIVE CONSTRUCTION PHASE OF THE PROJECT.
2. ALL REVEGETATED ACCESS ROADS AND FACILITIES ARE TO BE MAINTAINED THROUGHOUT THE LIFE OF EACH STRUCTURE.
3. GULLY CUTS, ROAD DITCHES, BROAD-BASED DIPS, DIVERSION DITCHES, AND ROCK CHECK DAMS MUST BE MAINTAINED IN PROPER WORKING ORDER AND WILL BE CLEANED, REPAIRED, OR REPLACED AS NECESSARY.
4. FILTER STRIPS AND/OR SILT FENCE WILL BE MAINTAINED.
5. ALL AREAS OF EARTH DISTURBANCE WILL BE REPAIRED WHERE SIGNS OF ACCELERATED EROSION ARE DETECTED.
6. SEEDING AND MULCHING WILL BE REPEATED IN THOSE AREAS THAT APPEAR TO BE FAILING OR HAVE FAILED.

CONSTRUCTION COMPACTION

1. ALL FILL AREAS WILL UTILIZE A TOR BENCH AND WILL BE REVEED IN FILL WILL BE PLACED IN 12" MAXIMUM LOOSE LIFT TO MAXIMUM PARTICLE SIZE OF 6" COMPACTED TO 95% PER STANDARD PROCTOR (ASTM D 1557) WITH A VIBRATING SHEEPSFOOT ROLLER AND ON A LEVEL SURFACE.
2. ANY AREAS BACKFILLED DURING RECLAMATION WILL BE COMPLETED USING A MAXIMUM OF LIFT THICKNESS AND WILL BE COMPACTED TO AT LEAST 90% OF THE STANDARD PROCTOR (ASTM D 1557).

CONSTRUCTION SEQUENCE

THE DEVELOPMENT OF THIS SITE SHALL BE CONSISTENT WITH THE FOLLOWING GENERAL SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHALL IMPLEMENT AND OPERATE ALL EROSION CONTROL AND SEDIMENT CONTROL MEASURES TO EFFECTIVELY MITIGATE THE HAZARD OF ACCUMULATED EROSION AND SEDIMENTATION TO ACCEPTABLE LEVELS. MINOR DEVIATIONS FROM THIS SEQUENCE WILL BE EXECUTED BY THE PROJECT'S SUPERINTENDENT AS NEEDED TO ELIMINATE ANY POTENTIAL PROBLEMS THAT MAY ARISE FOR THE DURATION OF THE PROJECT. THE WASH CHECKS OF OIL AND GAS SHALL BE MAINTAINED AT ALL TIMES AND ALL SUCH DEVIATIONS FROM THE APPROVED PLANS.

1. THE EXISTING WELL PAD AND ACCESS ROAD ARE MOSTLY STABILIZED WITH VEGETATION. ANY AREAS THAT APPEAR UNSTABLE AND/OR ERODING DURING THE DRILLING PROCESS SHALL BE IMMEDIATELY STABILIZED IMMEDIATELY.
2. ADEQUATE OUTLET PROTECTION SHALL BE INSTALLED AT ALL EXISTING CULVERTS.
3. ROCK CHECK DAMS SHALL BE INSTALLED IN ALL EXISTING DITCH LINES, AS NECESSARY.
4. ADDITIONAL GRAVEL SHALL BE PLACED ON THE WELL PAD AND ACCESS ROAD, AS NECESSARY.
5. ANY EXISTING SIXT FENCE ALONG THE TOP OF SLOPE SHALL BE REPAIRED, AS NECESSARY.

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MAY 04 2015

Department of Environmental Protection
When energy meets innovation.

Professional Energy Consultants
SLS
Environmental Engineering
PROJECT MANAGEMENT
CONSULTANTS

THIS DOCUMENT WAS PREPARED BY: SHERI LEE BURKHEAD, P.E. FOR: BOP

BIG-192 SITE PLAN MODIFICATION
THIS DOCUMENT WAS PREPARED BY: SHERI LEE BURKHEAD, P.E. FOR: BOP

DATE: 02-11-15
EQT:
SCALE: N/A
DESIGNED BY: BOP
FILE NO: 1507
SHEET 2 OF 11
SCALE:

DHL
4-27-15

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4710303110

BIG-192 AS-BUILT SITE PLAN

SITUATE ON THE WATERS OF
TRIBUTARIES OF RICHWOOD RUN,
FALLEN TIMBER RUN & AUNTY RUN
IN GRANT DISTRICT, WETZEL COUNTY, WEST VIRGINIA.

GRID NORTH
ELEVATIONS
HEREON WERE
ESTABLISHED BY
SURVEY



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BIG-192 AS-BUILT VOLUMES

PROJECT AS-BUILT BIG-192 ACCESS ROAD			
DATE OF SURVEY	PROJECT NO.	AS-BUILT NO.	SHEET NO.
12/15/14	1000000000	1000000000	1

* APPROXIMATE QUANTITY OF MATERIALS IS BASED ON THE
AS-BUILT DATA AND IS NOT A GUARANTEE OF QUANTITY.
FOR MORE INFORMATION CONTACT THE SURVEYOR.

PROJECT AS-BUILT BIG-192 WELLPAD			
DATE OF SURVEY	PROJECT NO.	AS-BUILT NO.	SHEET NO.
12/15/14	1000000000	1000000000	1

* APPROXIMATE QUANTITY OF MATERIALS IS BASED ON THE
AS-BUILT DATA AND IS NOT A GUARANTEE OF QUANTITY.
FOR MORE INFORMATION CONTACT THE SURVEYOR.

PROJECT AS-BUILT BIG-192 ADJUSTED PILE			
DATE OF SURVEY	PROJECT NO.	AS-BUILT NO.	SHEET NO.
12/15/14	1000000000	1000000000	1

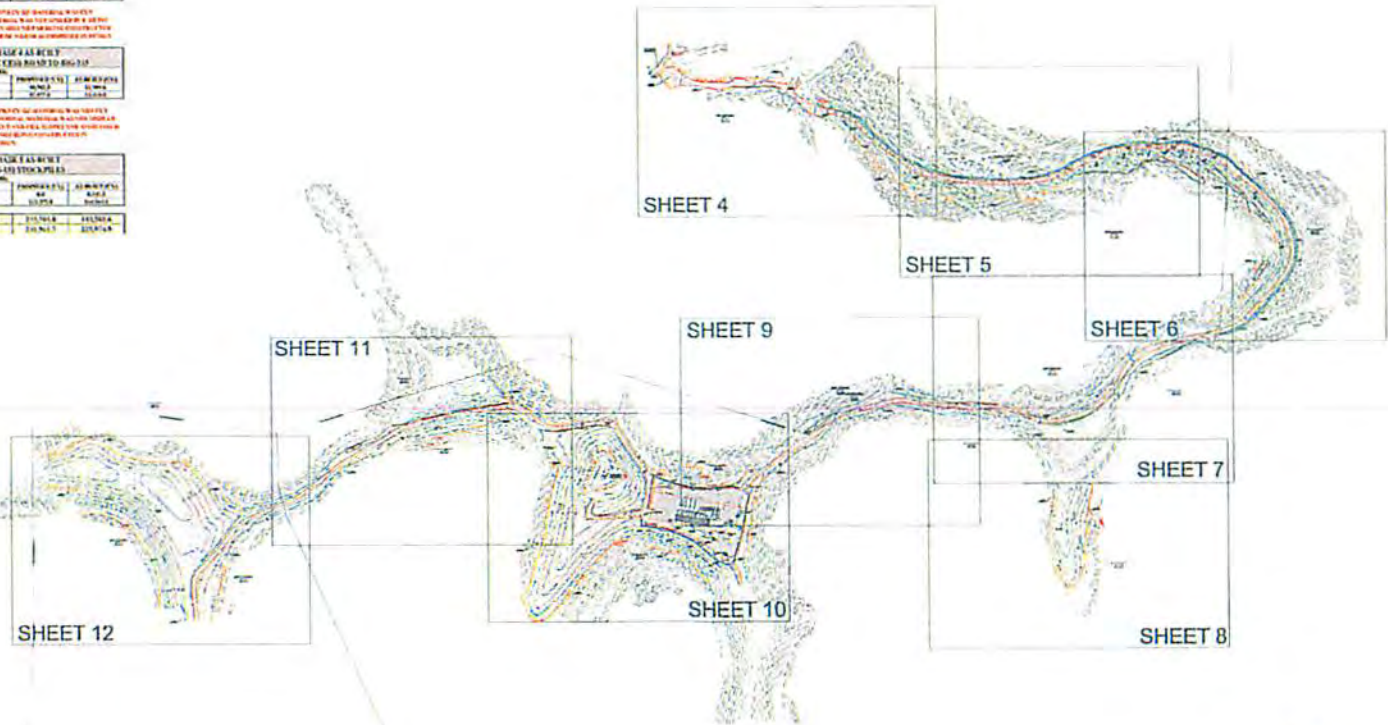
* APPROXIMATE QUANTITY OF MATERIALS IS BASED ON THE
AS-BUILT DATA AND IS NOT A GUARANTEE OF QUANTITY.
FOR MORE INFORMATION CONTACT THE SURVEYOR.

PROJECT AS-BUILT BIG-192 AT CROSS ROAD TO ENG-310			
DATE OF SURVEY	PROJECT NO.	AS-BUILT NO.	SHEET NO.
12/15/14	1000000000	1000000000	1

* APPROXIMATE QUANTITY OF MATERIALS IS BASED ON THE
AS-BUILT DATA AND IS NOT A GUARANTEE OF QUANTITY.
FOR MORE INFORMATION CONTACT THE SURVEYOR.

PROJECT AS-BUILT BIG-192 TRENCH PILE			
DATE OF SURVEY	PROJECT NO.	AS-BUILT NO.	SHEET NO.
12/15/14	1000000000	1000000000	1

* APPROXIMATE QUANTITY OF MATERIALS IS BASED ON THE
AS-BUILT DATA AND IS NOT A GUARANTEE OF QUANTITY.
FOR MORE INFORMATION CONTACT THE SURVEYOR.



DMH
4-22-15



Professional Energy Consultants
ADVANCED SURVEYING & ENGINEERING
SLS
SURVEYING & ENGINEERING
1000 W. MAIN STREET, SUITE 100
MARTINSBURG, WV 26151
WWW.SLSURV.COM

**BIG-192 SITE PLAN
MODIFICATION**
THIS DOCUMENT WAS PREPARED BY
THE CONSULTANT FOR THE PROJECT
FOR THE PRODUCER COMPANY

DATE	02-11-15
BY	
SCALE	1" = 300'
DESIGNED BY	ISB
FILE NO.	9907
SHEET	3 OF 17

Department of
Environmental Protection
WHERE ENERGY MEETS PROTECTION

4710303110

BIG-192 SITE PLAN MODIFICATION

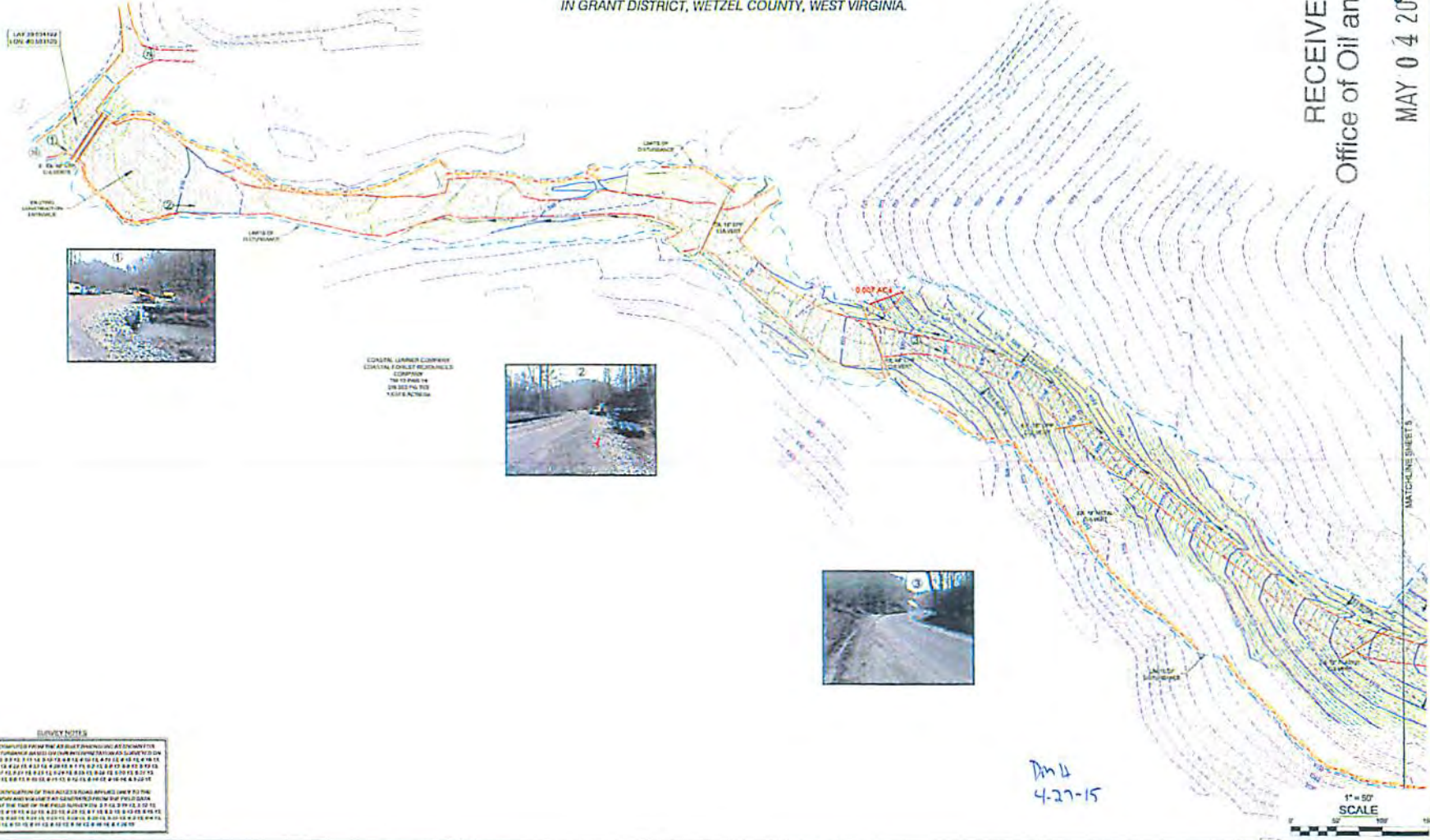
SITUATE ON THE WATERS OF
TRIBUTARIES OF RICHWOOD RUN,
FALLEN TIMBER RUN & AUNTY RUN
IN GRANT DISTRICT, WETZEL COUNTY, WEST VIRGINIA.

GRID NORTH AND
ELEVATIONS SHOWN
HEREON WERE
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SURVEY COMPANY



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SURVEY NOTES
1. AREA OF COMPLETION FROM THE ABOVE INFORMATION AS DETERMINED BY THE SURVEYOR IS SHOWN BY A DASHED LINE. THE AREA OF COMPLETION IS THE AREA OF THE SURVEY WHICH IS TO BE COMPLETED BY THE CONTRACTOR. THE AREA OF COMPLETION IS NOT TO BE CONSIDERED AS A GUARANTEE OF THE SURVEYOR'S ACCURACY OR AS A GUARANTEE OF THE CONTRACTOR'S PERFORMANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR OBTAINING ALL NECESSARY INFORMATION FROM THE LOCAL AUTHORITIES. THE SURVEYOR'S LIABILITY IS LIMITED TO THE AREA OF COMPLETION AS DETERMINED BY THE SURVEYOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR OBTAINING ALL NECESSARY INFORMATION FROM THE LOCAL AUTHORITIES. THE SURVEYOR'S LIABILITY IS LIMITED TO THE AREA OF COMPLETION AS DETERMINED BY THE SURVEYOR.

REVISION DATE DESCRIPTION

Professional Energy Consultants
SLS
SPECIALIZED SURVEYING & LAND SERVICES, INC.
1000 W. MAIN ST., SUITE 100
MARTINSBURG, WV 26150
TEL: 304.263.1111

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**BIG-192 SITE PLAN
MODIFICATION**

DATE: 08-11-15
FUT
SCALE: 1" = 50'
DESIGNED BY: EBB
FILE NO: 7727
SHEET: 4 OF 17
JOB NO: 15127

Am 4
4-27-15

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BIG-192 SITE PLAN MODIFICATION

SITUATE ON THE WATERS OF
TRIBUTARIES OF RICHWOOD RUN,
FALLEN TIMBER RUN & AUNTY RUN
IN GRANT DISTRICT, WETZEL COUNTY, WEST VIRGINIA.

GRID NORTH AND
ELEVATIONS SHOWN
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ESTABLISHED BY DE
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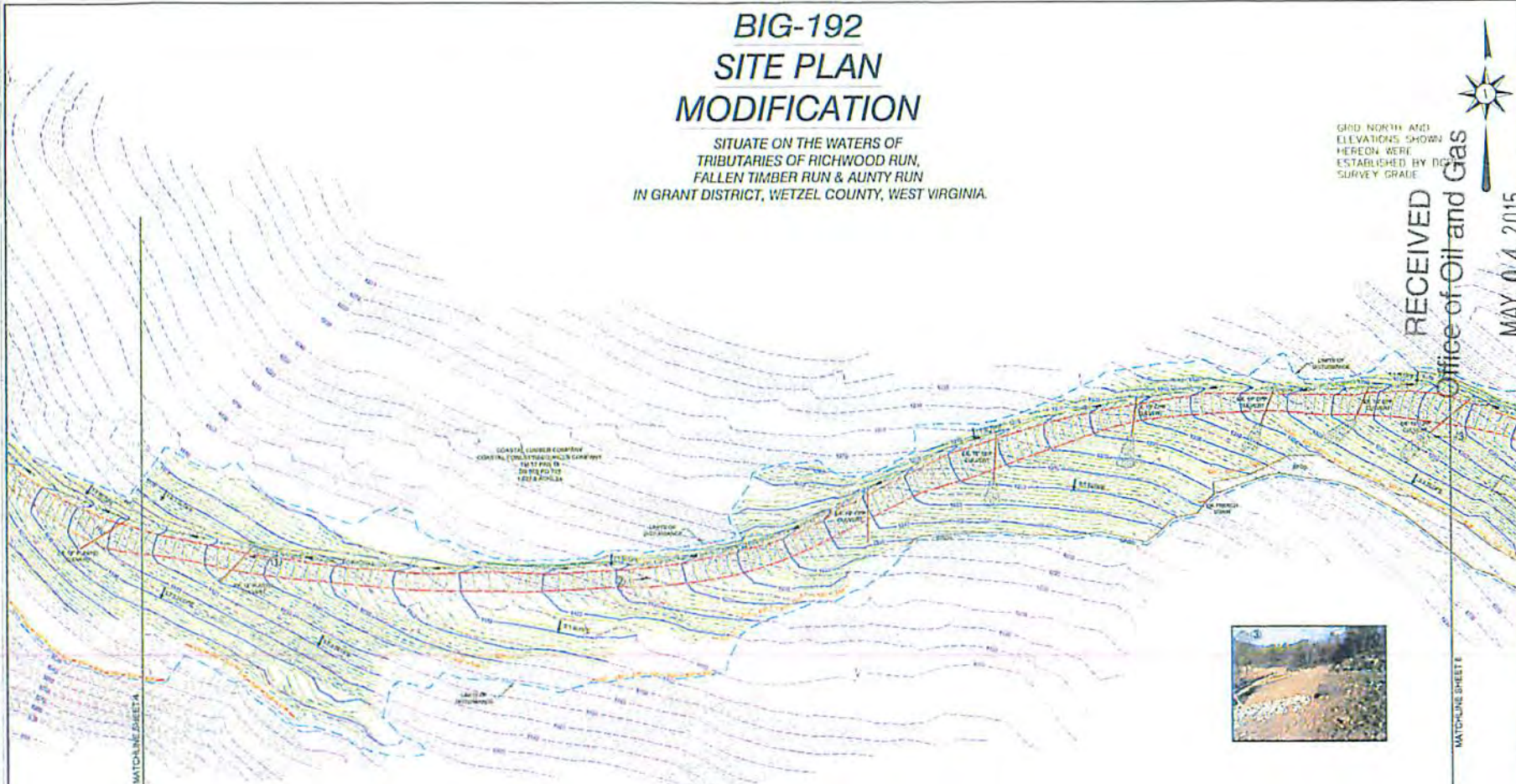
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SURVEYING, INC.
FOR EOGIT

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THIS DOCUMENT WAS PREPARED BY
SUNBELT LAND SURVEYING, INC.
FOR EOG PRODUCTION COMPANY

DATE: 02-11-15
EUT
SCALE: 1" = 50'
DESIGNED BY: LNS
FILE NO: 7707
SHEET 5 OF 17



EDGEMO LUMBER COMPANY
COURTAIN FOREST MANAGEMENT
COMPANY
TO 17 PAR 16
28.00 ACRES
157.8 ACRES

1. THIS SITE PLAN IS A MODIFICATION OF THE SITE PLAN FOR BIG-192, WHICH WAS APPROVED BY THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION ON 02-11-15. THE MODIFICATION IS LIMITED TO THE PROPOSED CONSTRUCTION OF A NEW 157.8 ACRE TRACT OF LAND, WHICH IS SHOWN IN RED ON THIS SITE PLAN. THE MODIFICATION IS LIMITED TO THE PROPOSED CONSTRUCTION OF A NEW 157.8 ACRE TRACT OF LAND, WHICH IS SHOWN IN RED ON THIS SITE PLAN. THE MODIFICATION IS LIMITED TO THE PROPOSED CONSTRUCTION OF A NEW 157.8 ACRE TRACT OF LAND, WHICH IS SHOWN IN RED ON THIS SITE PLAN.



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BIG-192 SITE PLAN MODIFICATION

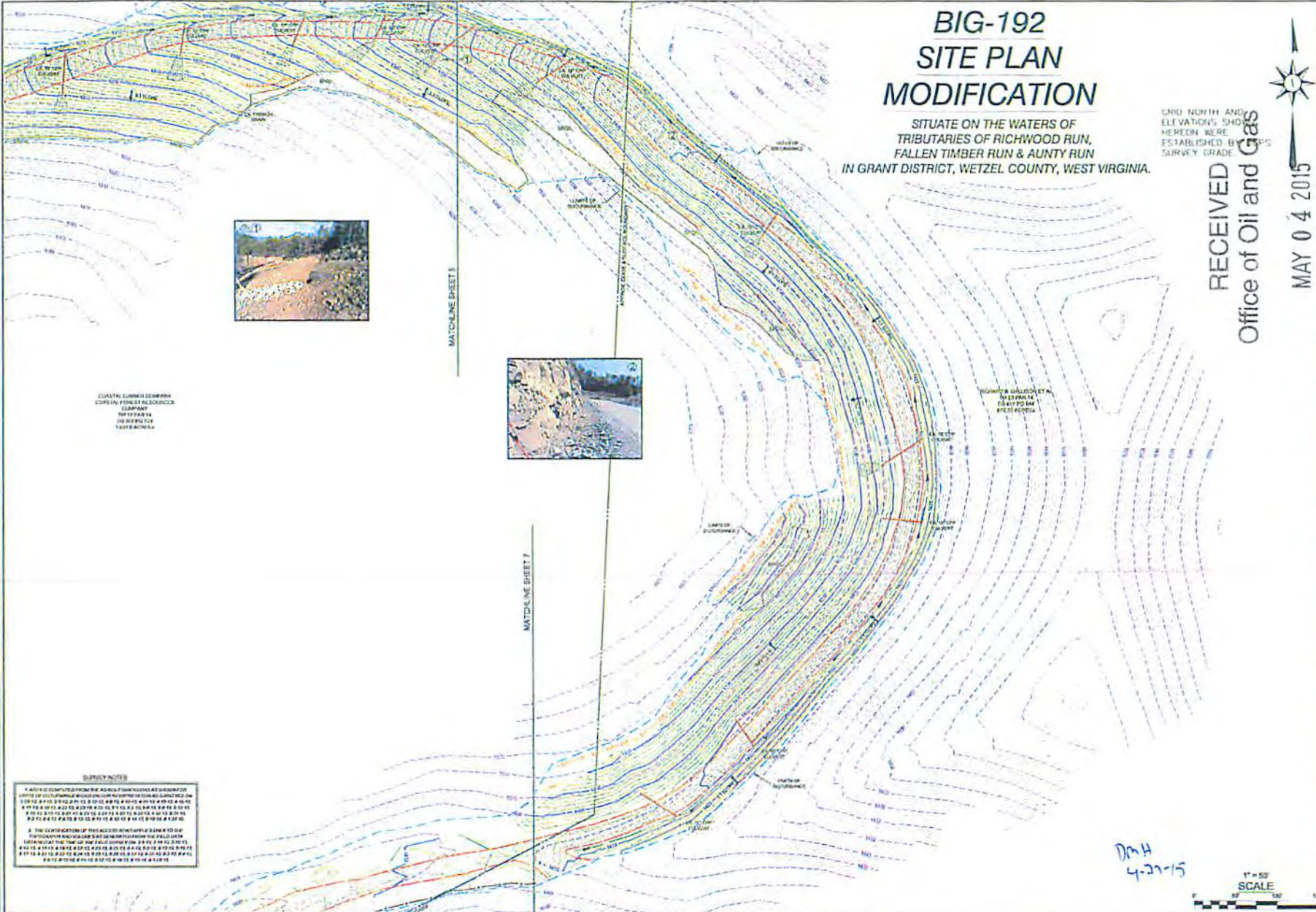
SITUATE ON THE WATERS OF
TRIBUTARIES OF RICHWOOD RUN,
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IN GRANT DISTRICT, WETZEL COUNTY, WEST VIRGINIA.

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SURVEY NOTES

1. ALL DATA COMPUTED FROM THE ORIGINAL SURVEY DATA AND THE ORIGINAL SURVEY DATA IS THE BASIS FOR ALL DATA SHOWN ON THIS PLAN.

2. THE LOCATION OF THIS ACCESS STRUCTURE IS SHOWN TO BE IN THE CENTER OF THE ACCESS STRUCTURE AS SHOWN ON THE PLAN.

3. THE LOCATION OF THIS ACCESS STRUCTURE IS SHOWN TO BE IN THE CENTER OF THE ACCESS STRUCTURE AS SHOWN ON THE PLAN.



Department of
Environmental Protection

BIG-192 SITE PLAN
MODIFICATION

DATE: 03-11-15
EQT
SCALE: 1" = 50'
DESIGNED BY: EOB
FILE NO: 7797
SHEET 0 OF 19

DMH
4-27-15



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BIG-192 SITE PLAN MODIFICATION

SITUATE ON THE WATERS OF
TRIBUTARIES OF RICHWOOD RUN,
FALLEN TIMBER RUN & AUNTY RUN
IN GRANT DISTRICT, WETZEL COUNTY, WEST VIRGINIA.

GRID NORTH AND
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Environmental Protection
Department of

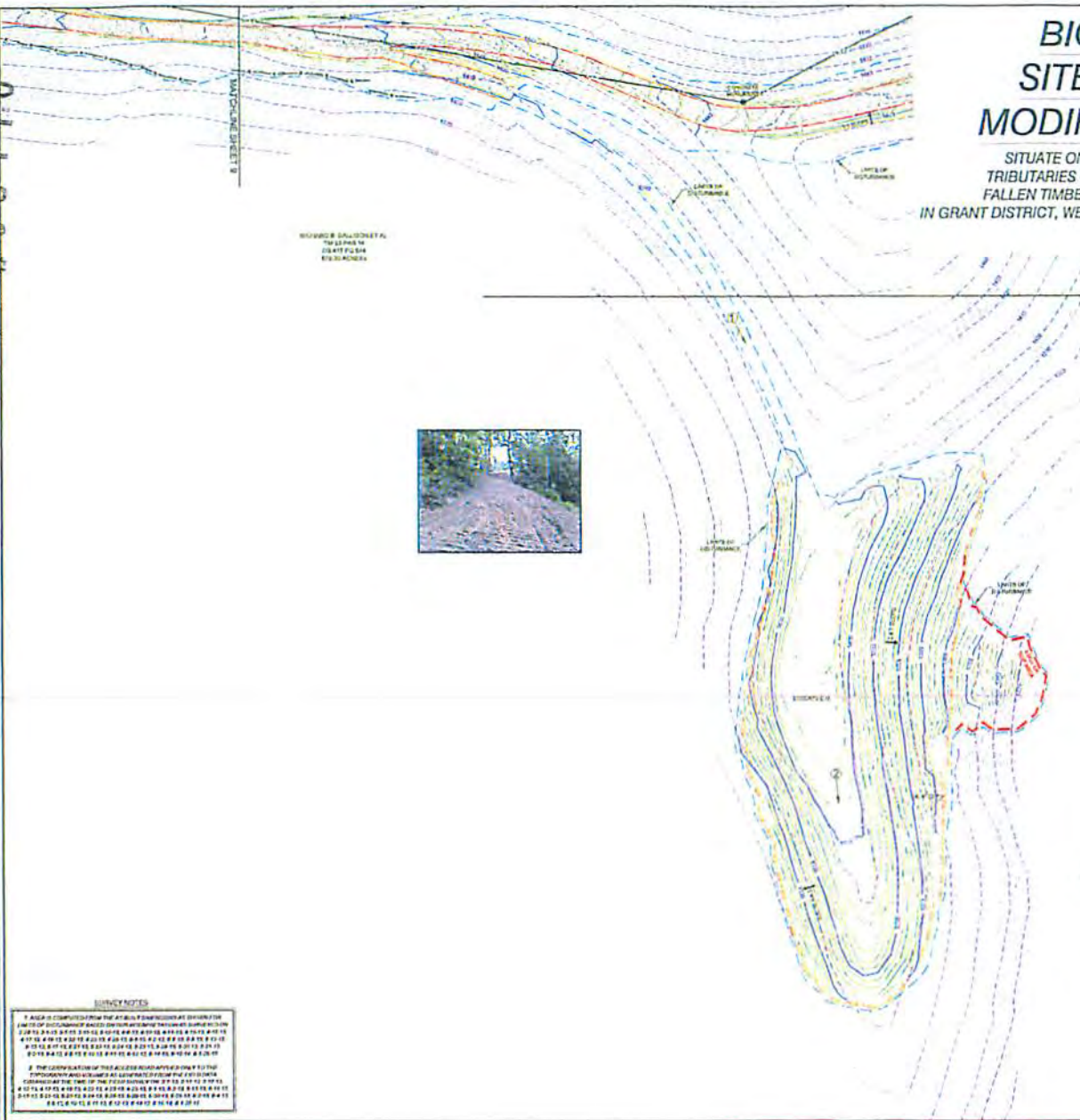


THIS DOCUMENT WAS
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EMERALD
SURVEYING, INC.
FOR EOT

**BIG-192 SITE PLAN
MODIFICATION**

DATE 02-11-15
EOT
SCALE 1" = 50'
DESIGNED BY EHS
FILE NO 7799
SHEET 6 OF 17

Environmental Protection



SURVEY NOTES
1. ALL DATA OBTAINED FROM THIS SURVEY IS THE PROPERTY OF EMERALD SURVEYING, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF EMERALD SURVEYING, INC.
2. THE LOCATION OF THIS SURVEY IS ONLY TO THE EXTENT OF THE LOCATION OF THE SURVEY POINTS AND IS NOT TO BE CONSIDERED AS A GUARANTEE OF THE LOCATION OF THE SURVEY POINTS.
3. THE LOCATION OF THIS SURVEY IS ONLY TO THE EXTENT OF THE LOCATION OF THE SURVEY POINTS AND IS NOT TO BE CONSIDERED AS A GUARANTEE OF THE LOCATION OF THE SURVEY POINTS.
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5. THE LOCATION OF THIS SURVEY IS ONLY TO THE EXTENT OF THE LOCATION OF THE SURVEY POINTS AND IS NOT TO BE CONSIDERED AS A GUARANTEE OF THE LOCATION OF THE SURVEY POINTS.

EMERALD SURVEYING, INC.
12345 MAIN ST.
PO BOX 1234
WETZEL COUNTY, WV 26062

Dist
4-27-15



4710303110

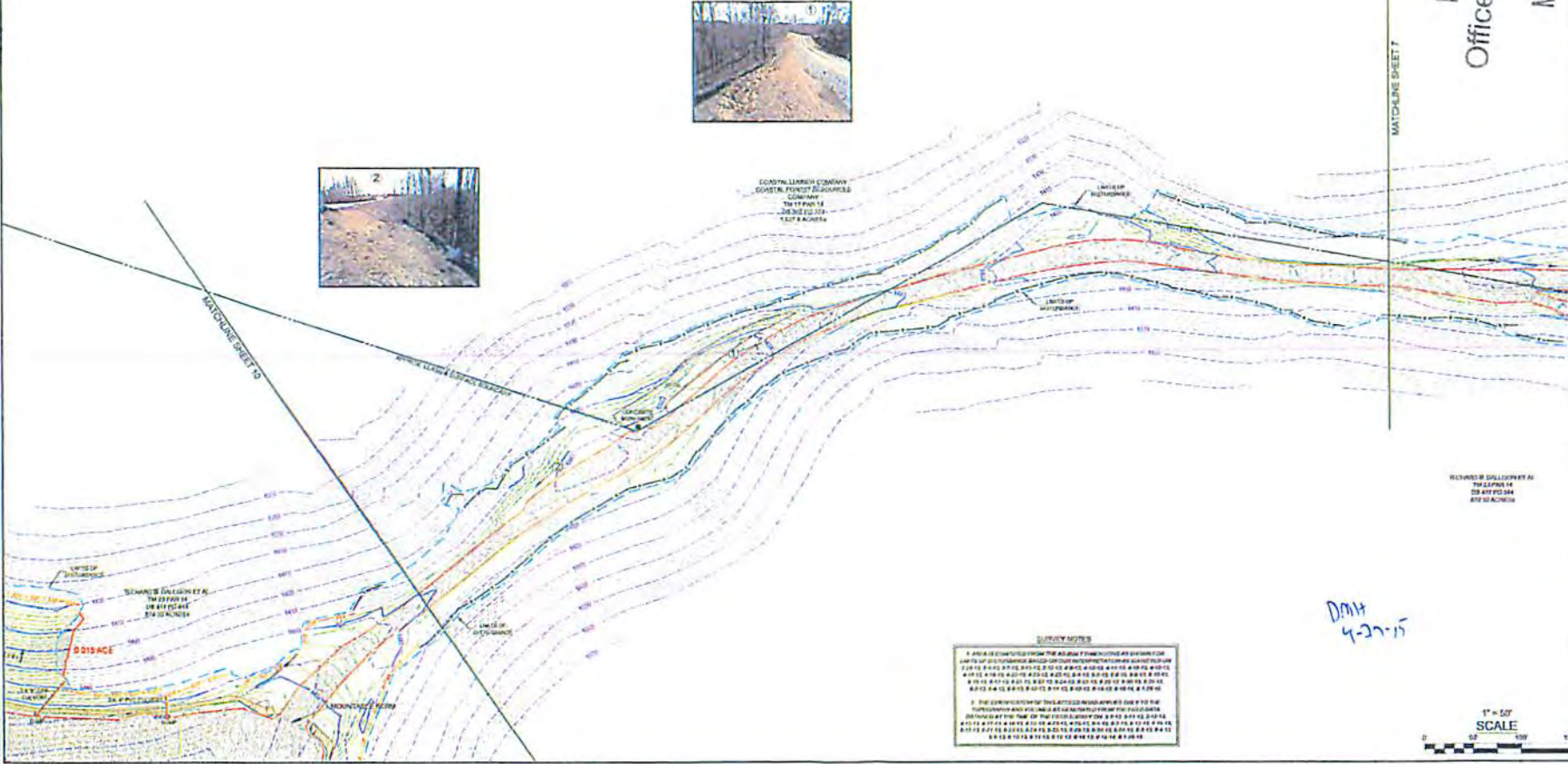
BIG-192 SITE PLAN MODIFICATION

SITUATE ON THE WATERS OF
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COASTAL LUMBER COMPANY
COASTAL POINT LOGGING
CONTRACT
TRIP # 111
2012-12-12
11:17 AM
11:17 AM

REVISIONS COLLECTED BY
TRIP # 111
2012-12-12
11:17 AM

SURVEY NOTES
1. ALL DATA COMPILED FROM THE ABOVE TITLED SURVEY AND SHOWN ON THIS PLAN IS THE PROPERTY OF THE SURVEYOR AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE SURVEYOR.
2. THE SURVEYOR HAS CONDUCTED A VISUAL INSPECTION OF THE SITE AND HAS FOUND THAT THE INFORMATION SHOWN ON THIS PLAN IS CORRECT AND ACCURATE TO THE BEST OF HIS KNOWLEDGE AND BELIEF.
3. THE SURVEYOR HAS CONDUCTED A VISUAL INSPECTION OF THE SITE AND HAS FOUND THAT THE INFORMATION SHOWN ON THIS PLAN IS CORRECT AND ACCURATE TO THE BEST OF HIS KNOWLEDGE AND BELIEF.
4. THE SURVEYOR HAS CONDUCTED A VISUAL INSPECTION OF THE SITE AND HAS FOUND THAT THE INFORMATION SHOWN ON THIS PLAN IS CORRECT AND ACCURATE TO THE BEST OF HIS KNOWLEDGE AND BELIEF.

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4-27-15



Professional Energy Consultants
AN ASSOCIATED BUSINESS OF
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SOLUTIONS
ENVIRONMENTAL
PROJECT SOLUTIONS
1000 ALBERTSON BLVD
WETZEL COUNTY, WV 26062
PH: 304.751.1111
WWW.SLS-PC.COM

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FOR SLS

**BIG-192 SITE PLAN
MODIFICATION**
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SOLUTIONS SURVEYING, INC.
FOR SLS PROFESSIONAL ENERGY CONSULTANTS

DATE: 02-11-15
EQT
SCALE: 1" = 50'
DESIGNED BY: CBB
FILE NO: 7777
SHEET 9 OF 17
SLS
1000 ALBERTSON BLVD
WETZEL COUNTY, WV 26062

4710303110

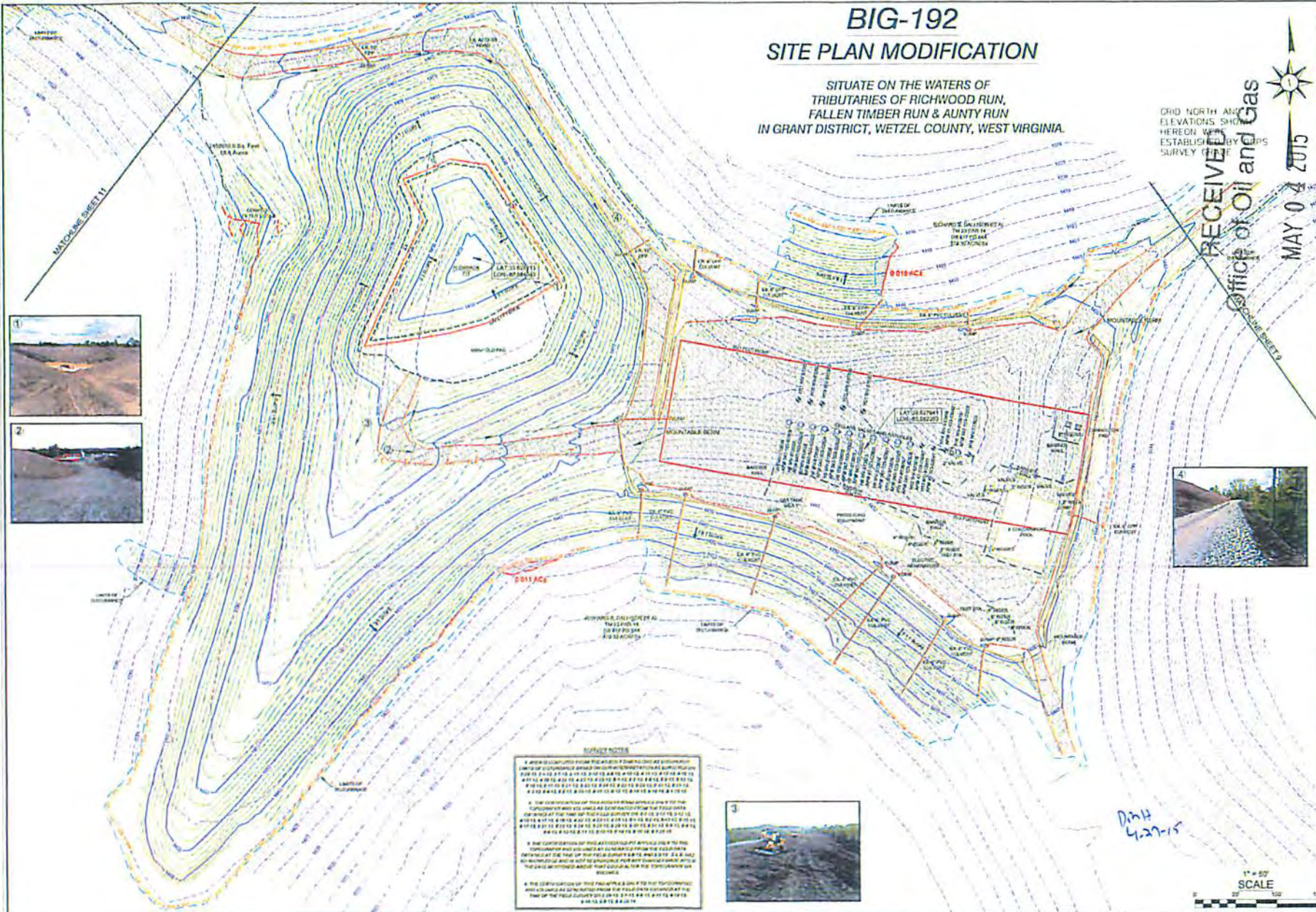
BIG-192 SITE PLAN MODIFICATION

SITUATE ON THE WATERS OF
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GRID NORTH AND
ELEVATIONS SHOWN
HEREON WERE
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SURVEY COMPANY

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MAY 04 2015



SURVEY NOTES

1. ALL DISTURBANCES SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION AND SHALL BE SUBJECT TO INSPECTION BY THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP) AND THE WEST VIRGINIA DEPARTMENT OF MINES, ENERGY AND NATURAL GAS (MINE RECLAMATION DIVISION) PRIOR TO ANY FURTHER DEVELOPMENT OF THE SITE.

2. THE CONSTRUCTION OF THIS PROJECT SHALL BE IN ACCORDANCE WITH THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP) AND THE WEST VIRGINIA DEPARTMENT OF MINES, ENERGY AND NATURAL GAS (MINE RECLAMATION DIVISION) REQUIREMENTS.

3. THE CONSTRUCTION OF THIS PROJECT SHALL BE IN ACCORDANCE WITH THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP) AND THE WEST VIRGINIA DEPARTMENT OF MINES, ENERGY AND NATURAL GAS (MINE RECLAMATION DIVISION) REQUIREMENTS.

4. THE CONSTRUCTION OF THIS PROJECT SHALL BE IN ACCORDANCE WITH THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP) AND THE WEST VIRGINIA DEPARTMENT OF MINES, ENERGY AND NATURAL GAS (MINE RECLAMATION DIVISION) REQUIREMENTS.

D.M.H
6-27-15



Department of Environmental Protection

Professional Energy Consultants
AN ASSOCIATION OF THE
ENVIRONMENTAL PROTECTION SOCIETY OF WEST VIRGINIA

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FOR THE ENERGY INDUSTRY

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BIG-192 SITE PLAN MODIFICATION

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DATE: 6-2-15
BY: [Signature]
SCALE: 1" = 50'
DESIGNED BY: JMM
FILE NO: 7792
SHEET 10 OF 17

4710303110

BIG-192 SITE PLAN MODIFICATION

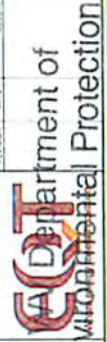
SITUATE ON THE WATERS OF
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GRID NORTH AND
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HEREON WERE
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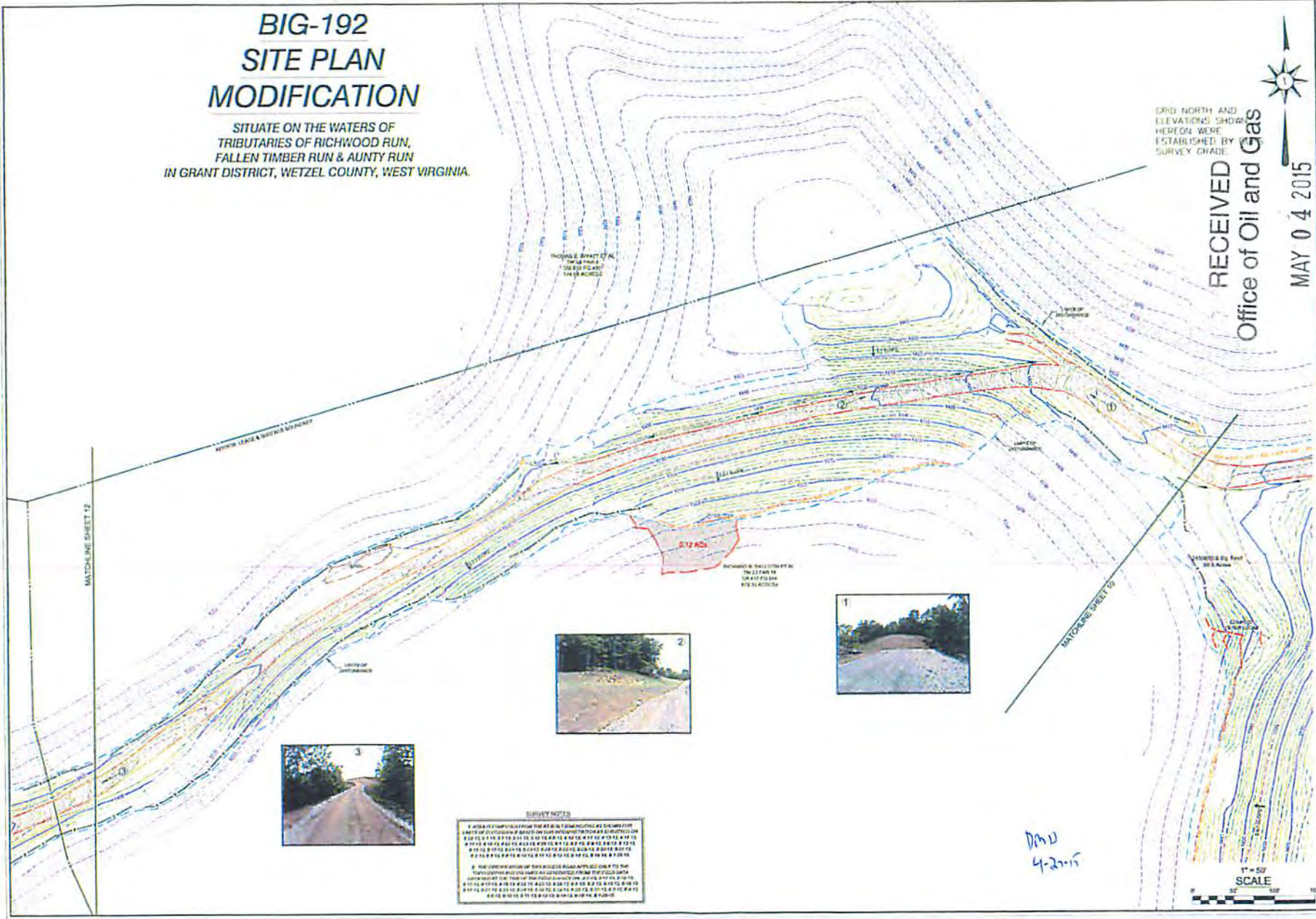
MAY 04 2015



THIS DOCUMENT WAS
PREPARED BY
SUSAN L. SMITH
REGISTERED PROFESSIONAL ENGINEER
NO. 10000

**BIG-192 SITE PLAN
MODIFICATION**
THIS DOCUMENT WAS PREPARED BY
TERRY L. COOPER, REGISTERED PROFESSIONAL ENGINEER
NO. 10000

DATE 02-11-15
V27
SCALE 1" = 50'
DESIGNED BY TSC
FILE NO. 7727
SHEET 11 OF 17
11.3.2
11/15/15



SURVEY NOTES
1. AREA TO BE EMPLOYED FOR THE BIG-192 PRODUCTION IS SHOWN FOR
LIMITS OF JURISDICTION BASED ON SURVEY GRADE DATA COLLECTED ON
02/11/15. THE SURVEY GRADE DATA WAS COLLECTED ON 02/11/15. THE
SURVEY GRADE DATA WAS COLLECTED ON 02/11/15. THE SURVEY GRADE
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2. THE JURISDICTION OF THIS AREA IS APPLIED ONLY TO THE
TERRITORY AND IS NOT TO BE APPLIED TO THE TERRITORY
UNLESS THE PART OF THE PRODUCTION IS APPLIED TO THE
TERRITORY. THE SURVEY GRADE DATA WAS COLLECTED ON 02/11/15.
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BIG-192 SITE PLAN MODIFICATION

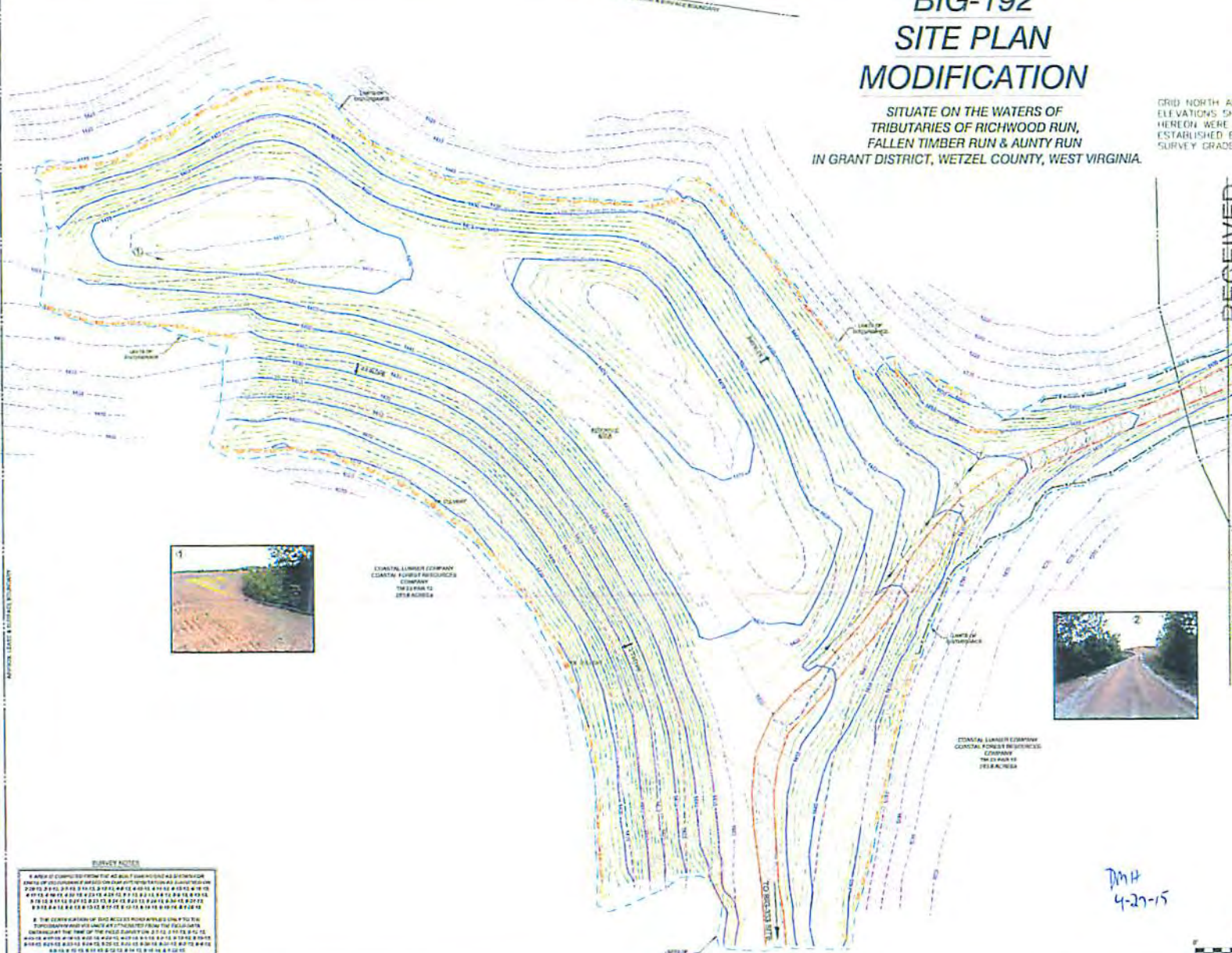
SITUATE ON THE WATERS OF
TRIBUTARIES OF RICHWOOD RUN,
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HEREON WERE
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MAY 04 2015



SURVEY NOTES
1. AREA IS COMPRISED FROM THE ADJACENT SURVEY RECORDS AND IS NOT A RE-SURVEY.
2. THE CONTOUR INTERVAL IS 10 FEET.
3. THE ELEVATION OF THE SURFACE OF THE GROUND IS SHOWN BY THE DOTTED LINES.
4. THE ELEVATION OF THE SURFACE OF THE PROPOSED ROAD IS SHOWN BY THE SOLID LINES.
5. THE ELEVATION OF THE SURFACE OF THE PROPOSED DRIVEWAY IS SHOWN BY THE DASHED LINES.
6. THE ELEVATION OF THE SURFACE OF THE PROPOSED SIDEWALK IS SHOWN BY THE DASHED LINES.
7. THE ELEVATION OF THE SURFACE OF THE PROPOSED CURB IS SHOWN BY THE DASHED LINES.
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12. THE ELEVATION OF THE SURFACE OF THE PROPOSED GUTTER IS SHOWN BY THE DASHED LINES.

EDWALD LAMBER COMPANY
CORPORATE FOREST RESOURCES
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THE SURVEY IS
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EDWALD LAMBER COMPANY
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ENGINEERING, INC.
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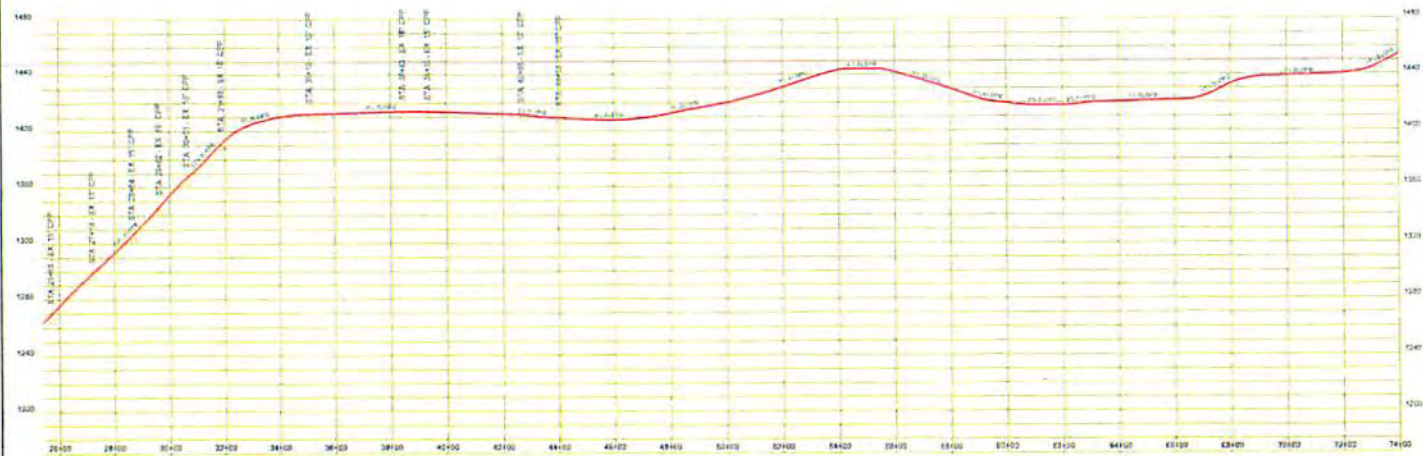
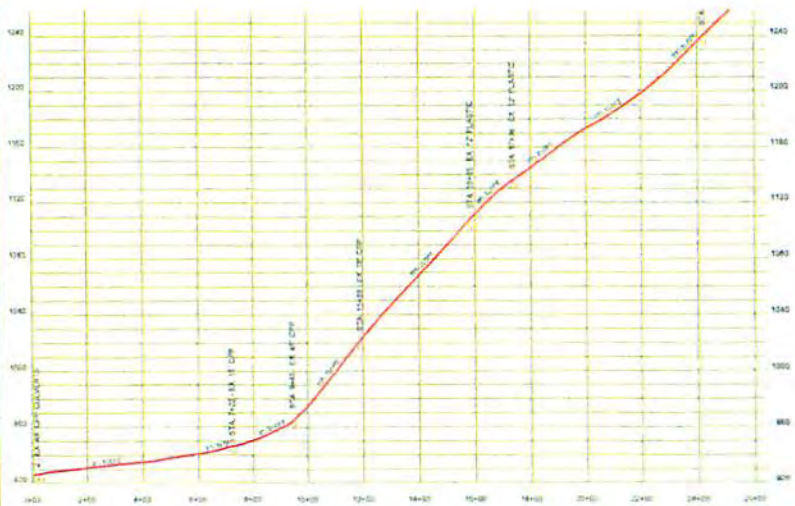
**BIG-192 SITE PLAN
MODIFICATION**
THIS DOCUMENT HAS BEEN PAID FOR BY
EDWALD LAMBER COMPANY
FOR THE PRODUCTION COMPANY

DATE: 08-13-15
FEE:
SCALE: 1" = 50'
DESIGNED BY: EDS
FILE NO: 7707
SHEET 13 OF 17
SLS

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4-27-15

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BIG-192 SITE AS-BUILT ROAD PROFILE



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BIG-192 SITE PLAN
MODIFICATION

DATE: 02/11/14
SCALE: 500' HORIZ
4" VERT
DESIGNED BY: ESE
FILE NO: 1992V
SHEET 13 OF 17



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FOR ESE

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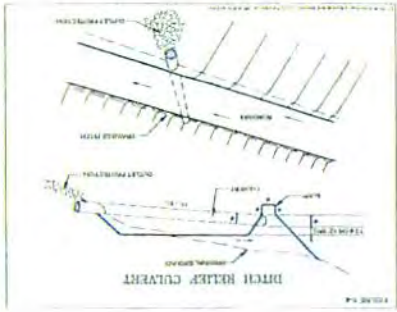
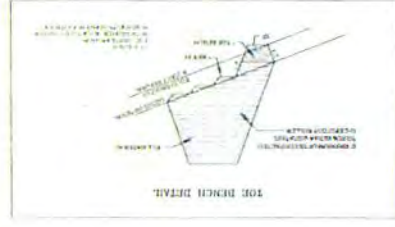
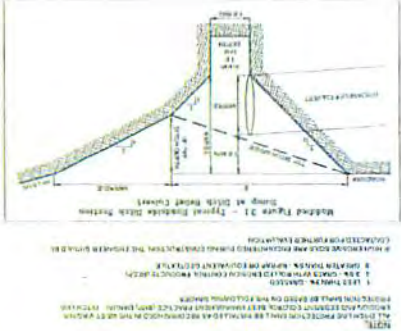
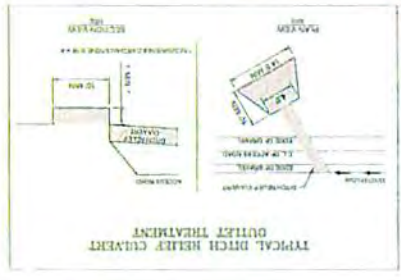
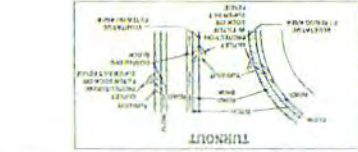
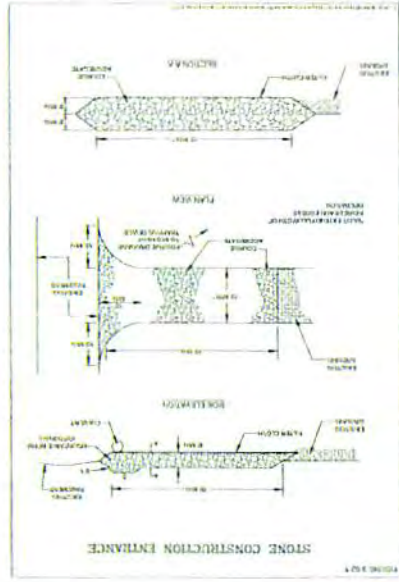
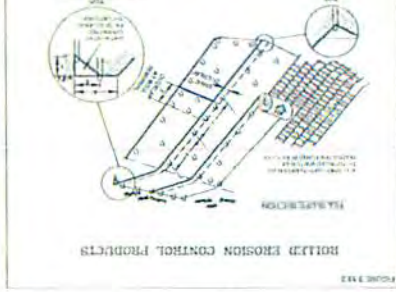
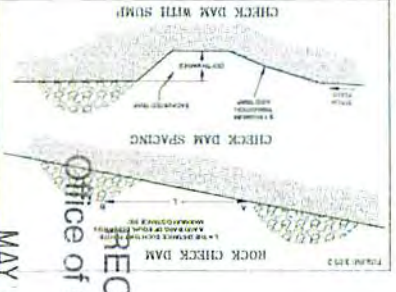
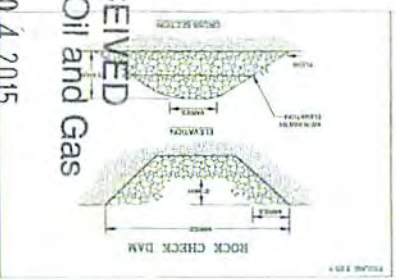
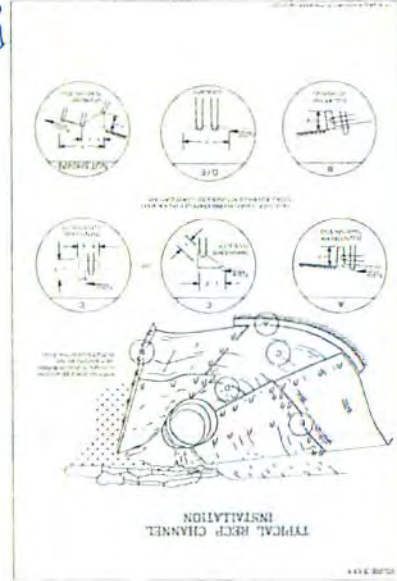


Table 3 6: Pipe Sizes for Culverts Access Roads

Access Road	Flow (cfs)	Flow (MGD)	Flow (MGD)	Flow (MGD)
1.5'	1.5	0.01	0.01	0.01
2.0'	4.0	0.03	0.03	0.03
2.5'	10.0	0.07	0.07	0.07
3.0'	16.0	0.11	0.11	0.11
3.5'	22.0	0.15	0.15	0.15
4.0'	28.0	0.19	0.19	0.19
4.5'	34.0	0.23	0.23	0.23
5.0'	40.0	0.27	0.27	0.27
5.5'	46.0	0.31	0.31	0.31
6.0'	52.0	0.35	0.35	0.35
6.5'	58.0	0.39	0.39	0.39
7.0'	64.0	0.43	0.43	0.43
7.5'	70.0	0.47	0.47	0.47
8.0'	76.0	0.51	0.51	0.51
8.5'	82.0	0.55	0.55	0.55
9.0'	88.0	0.59	0.59	0.59
9.5'	94.0	0.63	0.63	0.63
10.0'	100.0	0.67	0.67	0.67



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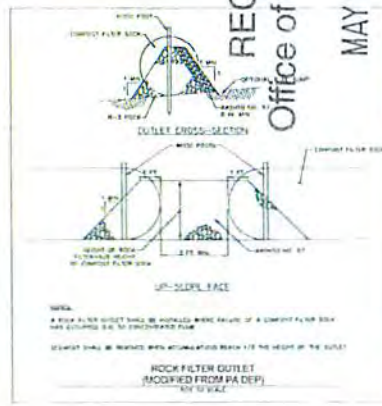
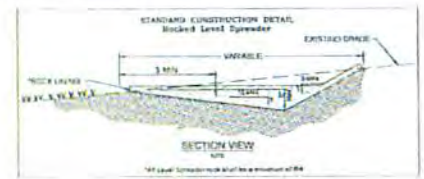
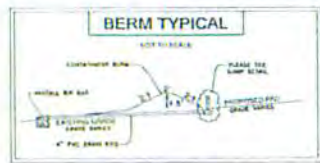
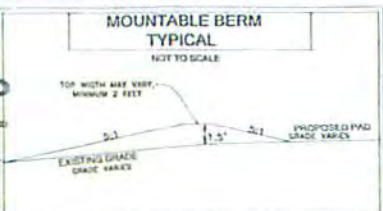


Table 8.1
Design Rock Filter Minimum Specifications

Material Type	Min. Size	100% Retention		90% Retention		75% Retention	
		Openings	Apertures	Openings	Apertures	Openings	Apertures
100% Retention	10"	10"	10"	10"	10"	10"	10"
90% Retention	10"	10"	10"	10"	10"	10"	10"
75% Retention	10"	10"	10"	10"	10"	10"	10"

Notes:
1. Filter fabric shall be installed in accordance with the manufacturer's instructions.
2. Filter fabric shall be installed in accordance with the manufacturer's instructions.
3. Filter fabric shall be installed in accordance with the manufacturer's instructions.

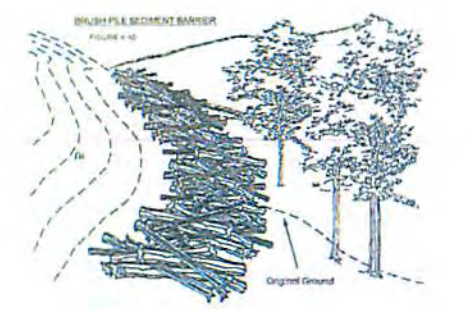
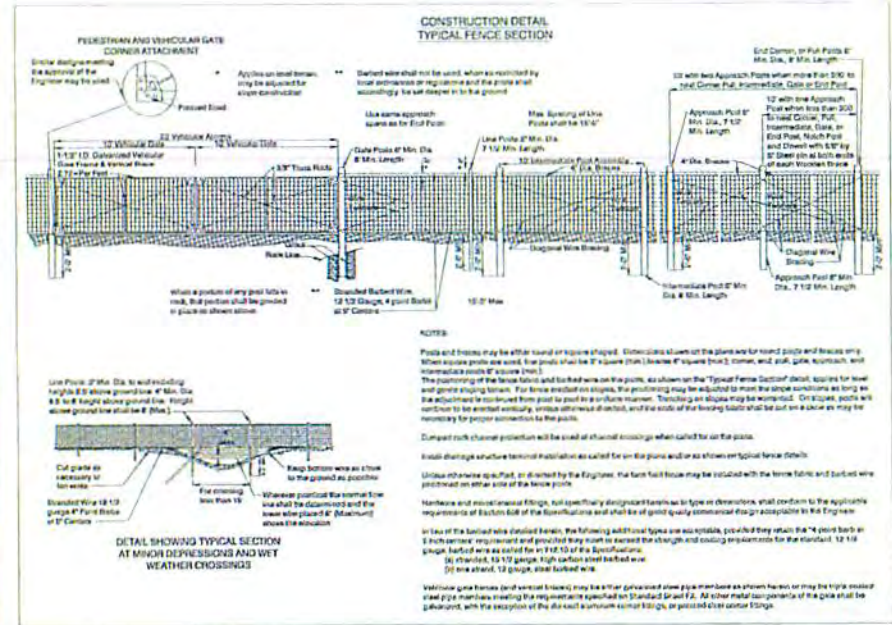
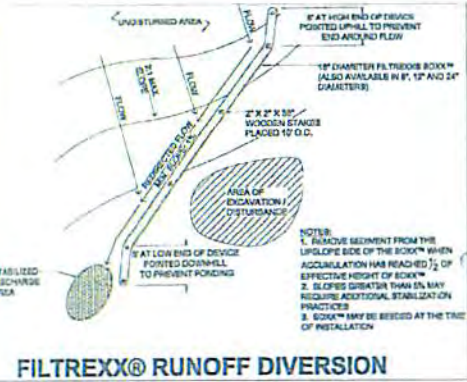
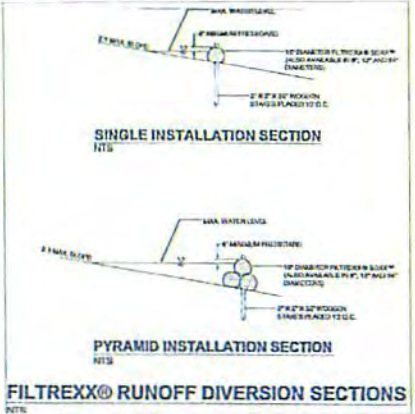
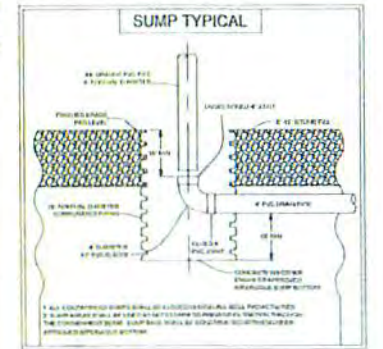


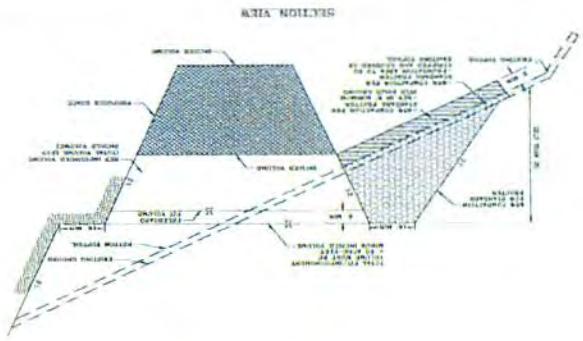
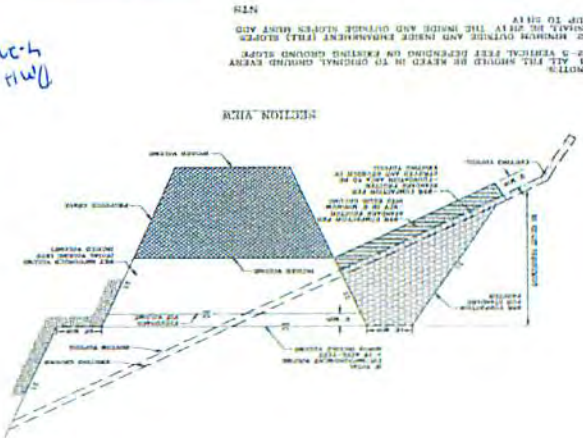
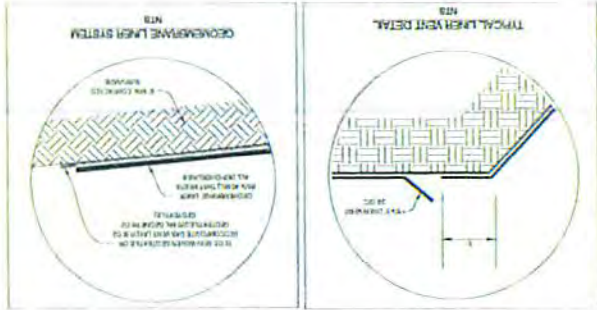
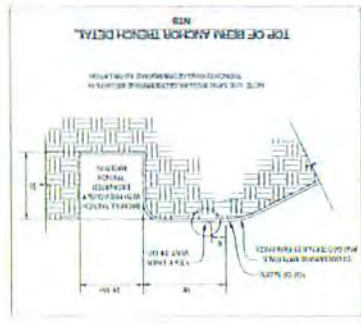
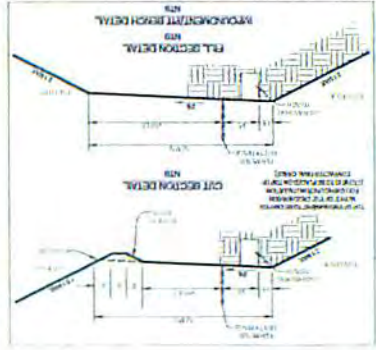
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RESTORATION

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1. The proposed plan for the site is to be used for agricultural purposes. The site is currently used for agricultural purposes and the proposed plan is consistent with the surrounding land use. The site is located in an area that is zoned for agricultural purposes and the proposed plan is consistent with the zoning regulations. The site is located in an area that is zoned for agricultural purposes and the proposed plan is consistent with the zoning regulations. The site is located in an area that is zoned for agricultural purposes and the proposed plan is consistent with the zoning regulations.

Table 2: Proposed Remedial Action Schedule. Columns: Remedial Action, Start Date, End Date, Frequency. Rows include: Site Assessment, Remedial Investigation, Remedial Design, Remedial Action, and Monitoring.

Table 3: Remedial Action Schedule. Columns: Remedial Action, Start Date, End Date, Frequency. Rows include: Site Assessment, Remedial Investigation, Remedial Design, Remedial Action, and Monitoring.

Table 4: Remedial Action Schedule. Columns: Remedial Action, Start Date, End Date, Frequency. Rows include: Site Assessment, Remedial Investigation, Remedial Design, Remedial Action, and Monitoring.

Table 5: Remedial Action Schedule. Columns: Remedial Action, Start Date, End Date, Frequency. Rows include: Site Assessment, Remedial Investigation, Remedial Design, Remedial Action, and Monitoring.

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Table 7: Remedial Action Schedule. Columns: Remedial Action, Start Date, End Date, Frequency. Rows include: Site Assessment, Remedial Investigation, Remedial Design, Remedial Action, and Monitoring.

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