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

July 03, 2013

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-1706248, 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: 514316
Farm Name: JORDAN FAMILY PARTNERSHIP
API Well Number: 47-1706248
Permit Type: Horizontal 6A Well
Date Issued: 07/03/2013

PERMIT CONDITIONS

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. 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 fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.

2. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the fill material shall be within plus or minus 2% (unless soil test results show a greater range of moisture content is appropriate and 95% compaction can still be achieved) of the optimum moisture content as determined by the standard proctor density test, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort. Each lift must meet 95 % compaction of the optimum density based on results from the standard proctor density test of the actual soils used in specific engineered fill sites. 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.

3. 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.

4. 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.

5. 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.

NW - 6B
1/12)

4701706248

App. Rec. 4-1-13

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
W.VA. CODE §22-6A - WELL WORK PERMIT APPLICATION

) Well Operator: EQT Production Company

Operator ID	County	District	Quadrangle
	017	3	286

2) Operator's Well Number: 514316 Well Pad Name CPT11

Elevation, current ground: 1,130.0 Elevation, proposed post-construction: 1,111.0

·) Well Type: (a) Gas ▪ Oil

Other

(b) If Gas: Shallow ▪ Deep

Horizontal ▪

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) Existing Pad? Yes or No: No

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

Target formation is Marcellus at a depth of 6979' with the anticipated thickness to be 46' feet and anticipated target pressure of 4691 PSI

) Proposed Total Vertical Depth: 7,101

) Formation at Total Vertical Depth: Onondaga

) Proposed Total Measured Depth: 13,715

0) Approximate Fresh Water Strata Depths: 66,337,386, 406, 616, 704

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

2) Approximate Saltwater Depths: 1661 & 1389

3) Approximate Coal Seam Depths: 852 & 1264

4) Approximate Depth to Possible Void (coal mine, karst, other): None Reported

5) Does land contain coal seams tributary or adjacent to, active mine? None Reported

6) Describe proposed well work: Drill and complete a new horizontal well. The vertical drill to go down to approximately depth of 7101' Tagging the Onondaga not more than 100' then plug back to approximately 6401' and kick off the horizontal leg into the marcellus using a slick water frac.

7) Describe fracturing/stimulating methods in detail:

ydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from eshwater sources. This water is mixed with sand and a small percentage (less than 0.3%) of chemicals (including 15% Hydrochloric acid, elling agent, gel breaker, friction reducer, biocide, and scale inhibitor). Stage lengths vary from 150 to 450 feet. Average approximately)0,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 400,000 pounds of sand per stage.

3) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 43.82

9) Area to be disturbed for well pad only, less access road (acres): 15.68

DCN
4-19-2013

07/05/2013

NW - 6B
1/12)

4701706248

CASING AND TUBING PROGRAM

20)

TYPE	Size	New or Used	Grade	Weight per ft.	FOOTAGE: for Drilling	INTERVALS: Left in Well	CEMENT: Fill- up (Cu.Ft.)
Conductor	20	New	MC-50	81	40	40	38
Fresh Water	13 3/8	New	MC-50	54	804	804	705
Coal	-	New	-	-	-	-	-
Intermediate	9 5/8	New	MC-50	40	5,242	5,242	2,066
Production	5 1/2	New	P-110	20	13,715	13,715	See Note 1
Tubing	2 3/8		J-55	4.6			will be set 100' less than TD
Liners							

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield
Conductor	24	20	0.635	-	Construction	1.18
Fresh Water	17 1/2	13 3/8	0.38	2,480	1	1.21
Coal	-	-	-	-	-	-
Intermediate	12 3/8	9 5/8	0.395	3,590	1	1.21
Production	8 1/2	5 1/2	0.361	12,640	-	1.27/1.86
Tubing						
Liners						

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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.

DCW
4-19-2013

07/05/2013

WW - 6B
(1/12)

4701706248

CASING AND TUBING PROGRAM

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Coal	-	New	-	-	-	-	-
Intermediate	9 5/8	New	MC-50	40	5,242	5,242	2,066
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Liners						

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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.

07/05/2013

WW-9
Rev. 1/12

API No. 47 - 017 - 0248
Operator's Well No. 514316

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name CPT11 OP Code

Watershed Flint Run of McElroy Creek Quadrangle Center Point 7.5'

Elevation 1111.0 County Doddridge District Grant

Description of anticipated Pit Waste: N/A

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

Will a synthetic liner be used in the pit? N/A If so, what mil.? N/A

Proposed Disposal Method For Treated Pit Wastes:

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

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air and water based mud

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

Additives to be used? MILBAR, Viscosifer, Alkalinity Control, Lime, Chloride Salts, Filtration Control, Deflocculant, Lubricant, Detergent, Defoaming, Walnut Shell, X-Cide, SOLTEX Terra Rate

Will closed loop system be used ? YES

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, n/a

Landfill or offsite name/permit number? See Attached List

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

Subscribed and sworn before me this 28 day of MARCH, 20 13

Notary Public

My commission expires 6/27/2018

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APR 2013
WV Department of Environmental Protection

OFFICIAL SEAL
Notary Public, State Of West Virginia
NICHOLAS L. BUMGARDNER
Rt. 1 Box 4
Liberty, WV 25124
My Commission Expires June 27, 2018

07/05/2013

4701706248

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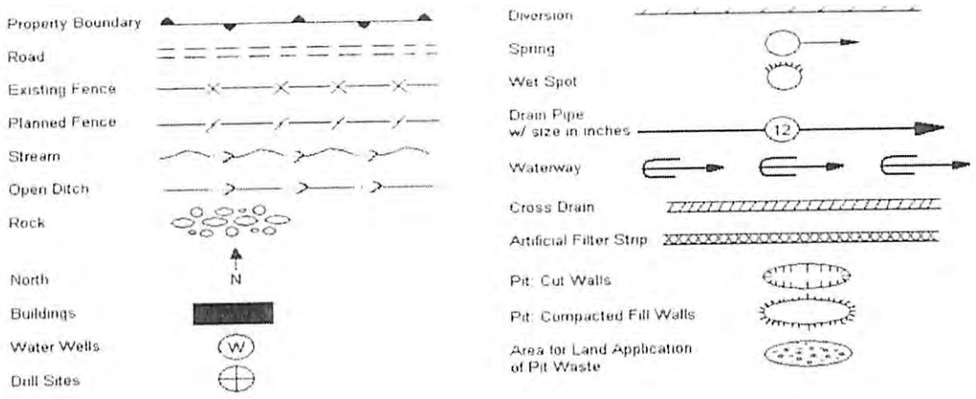
API No. 47 - 017 - 0
Operator's Well No. 514316



Proposed Revegetation Treatment: Acres Disturbed 43.82 Prevegetation pH 7.6

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 1/3 lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

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Environmental Protection

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Douglas Newlon

Comments: Preseed + mulch install RTS to Dep regulations

Title: Oil + Gas inspector Date: 4-19-2013

Field Reviewed? (/) Yes ( ) No

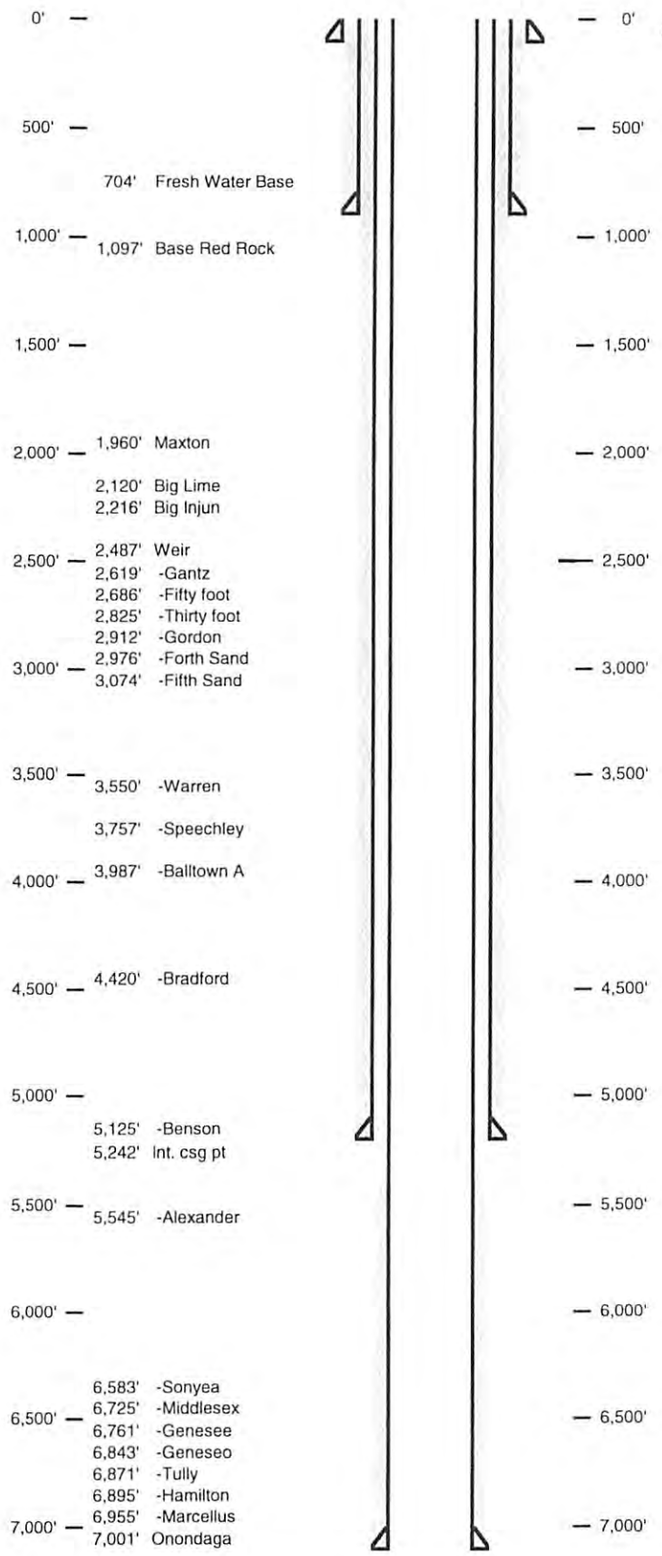
07/05/2013

4701706248

Well Schematic
EQT Production

Well Name	514316 (CPT11H1)
County	Doddridge
State	West Virgina

Elevation KB:	1121
Target	Marcellus
Prospect	
Azimuth	165.87
Vertical Section	6480



Hole Size 24" - 20" Conductor at 40'
Bit Size 17.5"

TOC @ Surface
13 3/8", MC-50, 54.5# @ 804' ft MD
Bit Size 12.375"

TOC @ Surface
9 5/8", MC-50, 40# @ 5,242' ft MD
Bit Size 8.5"

KOP = 6,401' ft MD
10 Deg DLS

Land @ 7,315' ft MD
6,979' ft TVD

5 1/2", P-110, 20# 13,215' ft MD
6,979' ft TVD

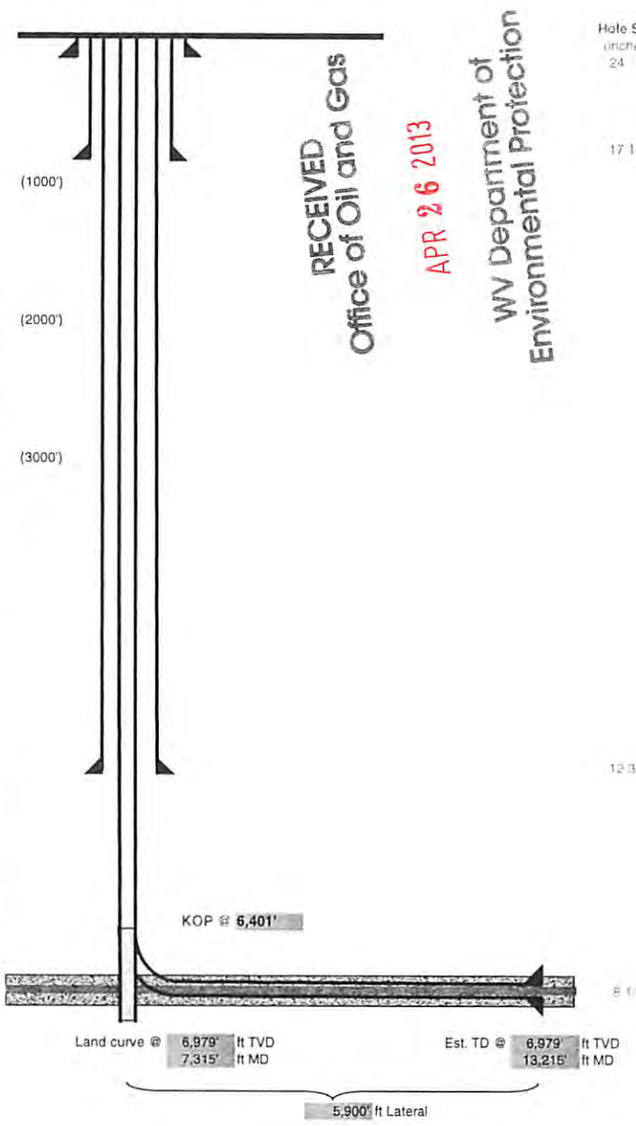
DCN
4-19-2013

07/05/2013

4701706248

Well 514316 (CPT11H1)
EQT Production
Center Point
Doddridge West Virginia

Azimuth 165.87
Vertical Section 6480



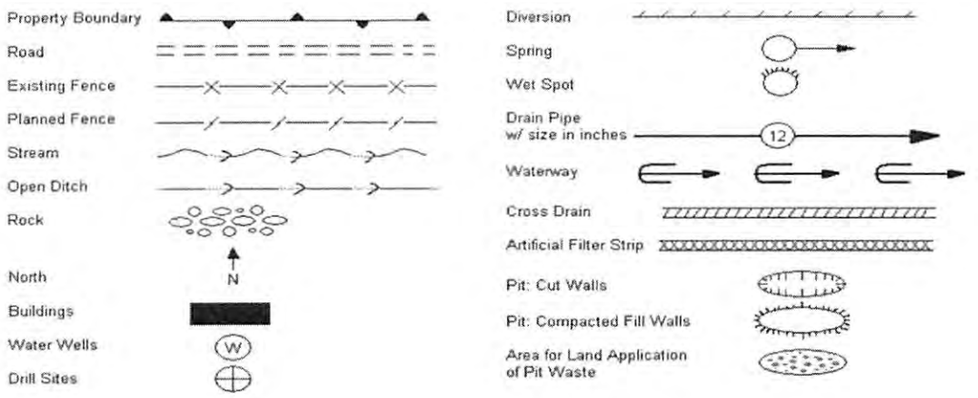
TVD Depth (feet)	Formation Tops (TVD)		
0'			
250'			
500'			
750'	Base Fresh Water	714	
1,000'			
1,250'	Base Red Rock	1297	
1,500'			
1,750'			
2,000'	Maxton	1960	2032
	Big Lime	2120	2216
	Big Injun	2216	2383
2,250'	Weir	2487	2552
	Gantz	2619	2674
2,500'	Fifty foot	2686	2734
	Thirty foot	2825	2850
2,750'	Gordon	2912	2976
	Forth Sand	2976	3074
3,000'	Fifth Sand	3074	3151
3,250'			
3,500'	Warren	3550	3606
3,750'	Speechley	3757	3856
	Balltown A	3987	4110
4,000'			
4,250'			
4,500'	Bradford	4420	4442
4,750'			
5,000'			
	Benson	5125	5192
5,250'	Int. csg pt	5242	
5,500'	Alexander	5545	5669
5,750'			
6,000'	Sonyea	6583	6677
	Middlesex	6725	6761
6,250'	Genesee	6761	6843
	Geneseo	6843	6871
6,500'	Tully	6871	6895
	Hamilton	6895	6955
6,750'	Marcellus top	6955	
	Target Inside Marcellus	**6979**	
7,000'	Marcellus Bottom	7001	
7,250'			

TD Pilot Hole @ 7101
100' below top of Onondaga
Run Logs, Plug back to KOP at 6401
Kick off for horizontal well in Marcellus

Hole Size (inches)	Casing Type	Size (inches)	Wt (ppf)/Grade
24	Conductor	20	
17 1/2	Surface	13 3/8	54#/MC-50
12 3/8	Intermediate	9 5/8	40#/MC-50
8 1/2	Production Casing	5 1/2	20#/P-110

WW-9
Rev. 1/12

API No. 47 - 017 - 06248
Operator's Well No. 514316



Proposed Revegetation Treatment: Acres Disturbed 43.82 Prevegetation pH 7.6

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 1/3 lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

Seed Mixtures

Area I		Area II	
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: _____

Comments: _____

Title: _____ Date: _____

Field Reviewed? (_____) Yes (_____) No

07/05/2013

Water Management Plan:
Primary Water Sources

WMP-01218 API/ID Number: 047-017-06248 Operator: EQT Production Company

514316 (CPT11H1)

Important:

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and
- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and are enforceable as such.

DEP is aware that some intake points will be used for mutiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interepreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov.

APPROVED JUN 1 1 2013

07/05/2013

Source Summary

WMP-01218 | API Number: 047-017-06248 | Operator: EQT Production Company

514316 (CPT11H1)

Stream/River

- Source **Ohio River at Hannibal, OH** Owner: **Richard Potts/Rich Merryman**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
6/1/2013	6/1/2014	9,500,000		39.655883	-80.86678

☑ Regulated Stream? **Ohio River Min. Flow** Ref. Gauge ID: **9999999** **Ohio River Station: Willow Island Lock & Dam**

Max. Pump rate (gpm): 1,500 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs)**

DEP Comments: **Refer to the specified station on the National Weather Service's Ohio River forecast website: http://www.erh.noaa.gov/ohrfc//flows.shtml**

- Source **Ohio River @ Westbrook Trucking Site** Owner: **Stephen R. and Janet Sue Westbrook**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
6/1/2013	6/1/2014	9,500,000		39.384455	-81.25645

☐ Regulated Stream? **Ohio River Min. Flow** Ref. Gauge ID: **9999999** **Ohio River Station: Willow Island Lock & Dam**

Max. Pump rate (gpm): 1,260 **Min. Gauge Reading (cfs): 6,468.00** **Min. Passby (cfs)**

DEP Comments: **Refer to the specified station on the National Weather Service's Ohio River forecast website: http://www.erh.noaa.gov/ohrfc//flows.shtml**

- Source **Ohio River @ Select Energy** Owner: **Select Energy**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
6/1/2013	6/1/2014	9,500,000		39.346473	-81.338727

☑ Regulated Stream? **Ohio River Min. Flow** Ref. Gauge ID: **9999998** **Ohio River Station: Racine Dam**

Max. Pump rate (gpm): 1,500 **Min. Gauge Reading (cfs): 7,216.00** **Min. Passby (cfs)**

DEP Comments: **Refer to the specified station on the National Weather Service's Ohio River forecast website: http://www.erh.noaa.gov/ohrfc//flows.shtml**

- Source **Middle Island Creek @ Travis Truck Pad** Owner: **Michael J. Travis**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
6/1/2013	6/1/2014	9,500,000		39.308545	-80.781102

☐ Regulated Stream? Ref. Gauge ID: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): 4,200 **Min. Gauge Reading (cfs): 72.16** **Min. Passby (cfs) 28.33**

DEP Comments:

- Source **Middle Island Creek @ Rock Run** Owner: **William Whitehill**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
6/1/2013	6/1/2014	9,500,000		39.298763	-80.760682

☐ Regulated Stream? Ref. Gauge ID: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): 1,680 **Min. Gauge Reading (cfs): 62.89** **Min. Passby (cfs) 26.43**

DEP Comments:

- Source **McElroy Creek @ Wine Withdrawal Site** Owner: **Elton Wine**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
6/1/2013	6/1/2014	9,500,000		39.39402	-80.70576

☐ Regulated Stream? Ref. Gauge ID: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): 1,260 **Min. Gauge Reading (cfs): 72.54** **Min. Passby (cfs) 10.66**

DEP Comments:

Source	Tygart River @ Kuhnes Withdrawal Site A	Owner:	Charlie & Peggy Kuhnes

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
6/1/2013	6/1/2014	9,500,000		39.35692	-80.05474

☑ Regulated Stream? **Tygart Valley Dam** Ref. Gauge ID: **3057000** **TYGART VALLEY RIVER AT COLFAX, WV**

Max. Pump rate (gpm): 1,260 **Min. Gauge Reading (cfs): 404.79** **Min. Passby (cfs) 392.62**

DEP Comments:

Source Detail

WMP-01218 API/ID Number: 047-017-06248 Operator: EQT Production Company

514316 (CPT11H1)

Source ID: 17820 Source Name: Ohio River at Hannibal, OH
Richard Potts/Rich Merryman

Source Latitude: 39.655883
Source Longitude: -80.86678

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 25000 County: Wetzel

Anticipated withdrawal start date: 6/1/2013
Anticipated withdrawal end date: 6/1/2014
Total Volume from Source (gal): 9,500,000
Max. Pump rate (gpm): 1,500
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

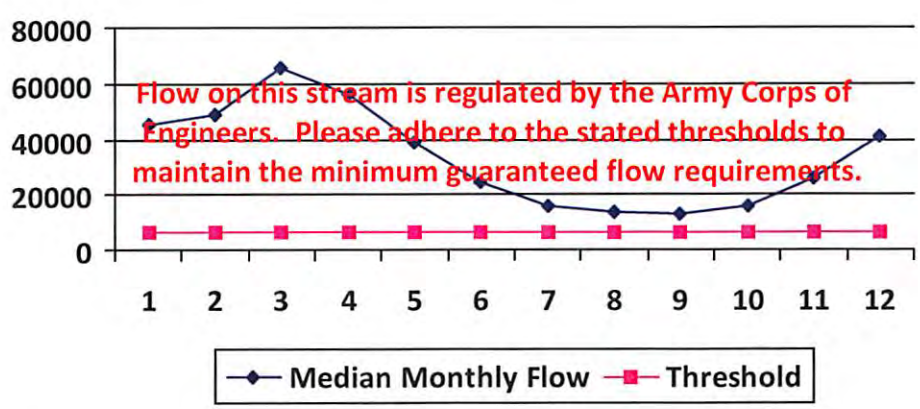
- [ ] Endangered Species?
- [ ] Mussel Stream?
- [ ] Trout Stream?
- [ ] Tier 3?
- [x] Regulated Stream? Ohio River Min. Flow
- [x] Proximate PSD? New Martinsville
- [x] Gauged Stream?

Reference Gaug 9999999 Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.) 25,000.00 Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	3.34
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

07/05/2013

Source Detail

WMP-01218 | API/ID Number: 047-017-06248 | Operator: EQT Production Company

514316 (CPT11H1)

Source ID: 17821 | Source Name: Ohio River @ Westbrook Trucking Site
Stephen R. and Janet Sue Westbrook

Source Latitude: 39.384455
Source Longitude: -81.25645

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 25000 | County: Pleasants

Anticipated withdrawal start date: 6/1/2013
Anticipated withdrawal end date: 6/1/2014
Total Volume from Source (gal): 9,500,000
Max. Pump rate (gpm): 1,260
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

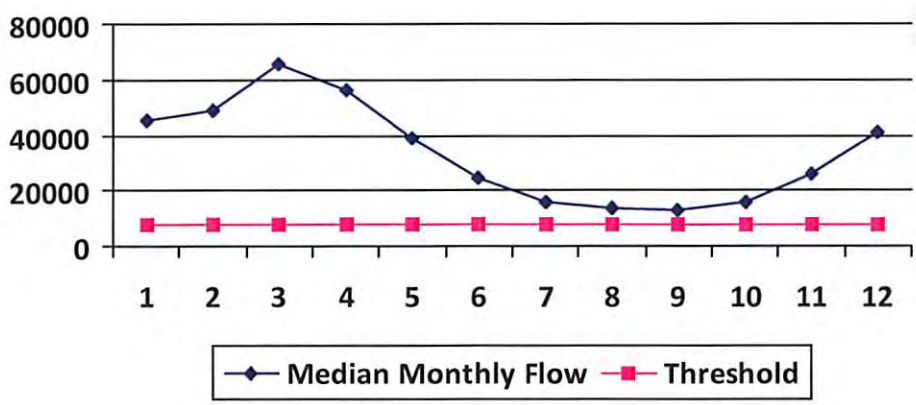
Ohio River Min. Flow

Reference Gaug: 9999999 | Ohio River Station: Willow Island Lock & Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 6468

Month	Median monthly flow (cfs)	Threshold (+ pump	Estimated Available water (cfs)
1	45,700.00	-	-
2	49,200.00	-	-
3	65,700.00	-	-
4	56,100.00	-	-
5	38,700.00	-	-
6	24,300.00	-	-
7	16,000.00	-	-
8	13,400.00	-	-
9	12,800.00	-	-
10	15,500.00	-	-
11	26,300.00	-	-
12	41,300.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	2.81
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	1,617.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

07/05/2013

Source Detail

WMP-01218 | API/ID Number: 047-017-06248 | Operator: EQT Production Company

514316 (CPT11H1)

Source ID: 17822 | Source Name: Ohio River @ Select Energy
Select Energy

Source Latitude: 39.346473
Source Longitude: -81.338727

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 25000 | County: Pleasants

Anticipated withdrawal start date: 6/1/2013
Anticipated withdrawal end date: 6/1/2014
Total Volume from Source (gal): 9,500,000
Max. Pump rate (gpm): 1,500
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] Trout Stream?
- [ ] Tier 3?
- [x] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

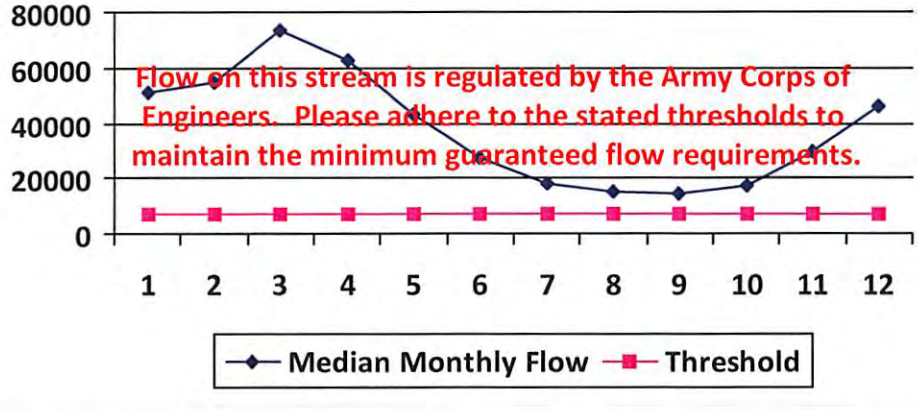
Ohio River Min. Flow

Reference Gaug: 9999998 | Ohio River Station: Racine Dam

Drainage Area (sq. mi.): 25,000.00 | Gauge Threshold (cfs): 7216

Month	Median monthly flow (cfs)	Threshold (+ pump	Estimated Available water (cfs)
1	50,956.00	-	-
2	54,858.00	-	-
3	73,256.00	-	-
4	62,552.00	-	-
5	43,151.00	-	-
6	27,095.00	-	-
7	17,840.00	-	-
8	14,941.00	-	-
9	14,272.00	-	-
10	17,283.00	-	-
11	29,325.00	-	-
12	46,050.00	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	3.34
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

07/05/2013

Source Detail

WMP-01218 API/ID Number: 047-017-06248 Operator: EQT Production Company

514316 (CPT11H1)

Source ID: 17823 Source Name: Middle Island Creek @ Travis Truck Pad
Michael J. Travis

Source Latitude: 39.308545
Source Longitude: -80.781102

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 122.83 County: Doddridge

Anticipated withdrawal start date: 6/1/2013
Anticipated withdrawal end date: 6/1/2014
Total Volume from Source (gal): 9,500,000
Max. Pump rate (gpm): 4,200
Max. Simultaneous Trucks: 10
Max. Truck pump rate (gpm) 420

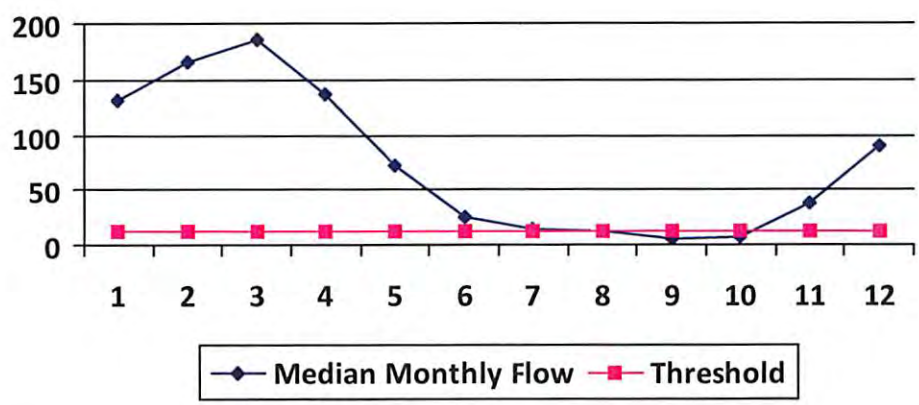
- [x] Endangered Species?
- [x] Mussel Stream?
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] Regulated Stream?
- [x] Proximate PSD? West Union Municipal Water
- [x] Gauged Stream?

Reference Gaug 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.) 458.00 Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump	Estimated Available water (cfs)
1	131.72	30.99	101.10
2	165.69	30.99	135.07
3	185.40	30.99	154.78
4	137.68	30.99	107.05
5	72.63	30.99	42.00
6	25.36	30.99	-5.26
7	14.35	30.99	-16.27
8	11.82	30.99	-18.81
9	6.05	30.99	-24.57
10	7.60	30.99	-23.02
11	37.14	30.99	6.51
12	90.73	30.99	60.11

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	12.07
Upstream Demand (cfs):	6.55
Downstream Demand (cfs):	13.24
Pump rate (cfs):	9.36
Headwater Safety (cfs):	3.02
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	**72.16**
Passby at Location (cfs):	**28.33**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

07/05/2013

Source Detail

WMP-01218 | API/ID Number: 047-017-06248 | Operator: EQT Production Company

514316 (CPT11H1)

Source ID: 17824 Source Name: Middle Island Creek @ Rock Run
William Whitehill

Source Latitude: 39.298763
Source Longitude: -80.760682

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 107.35 County: Doddridge

Anticipated withdrawal start date: 6/1/2013
Anticipated withdrawal end date: 6/1/2014
Total Volume from Source (gal): 9,500,000
Max. Pump rate (gpm): 1,680
Max. Simultaneous Trucks: 4
Max. Truck pump rate (gpm) 420

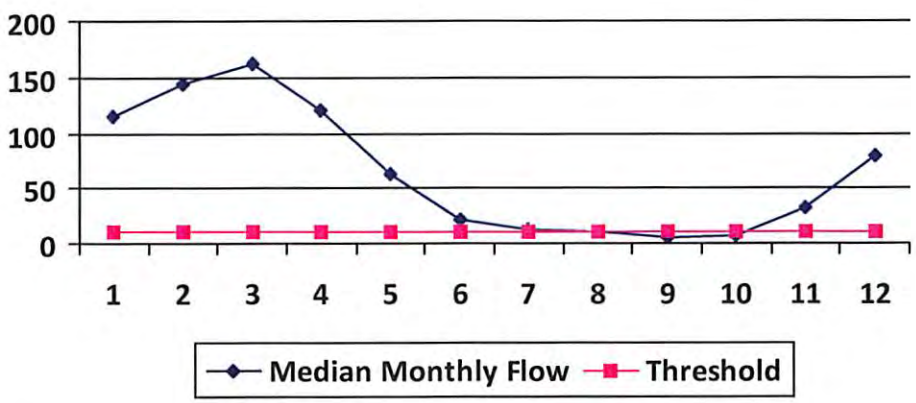
- [x] Endangered Species?
- [x] Mussel Stream?
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] Regulated Stream?
- [x] Proximate PSD? West Union Municipal Water
- [x] Gauged Stream?

Reference Gaug 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.) 458.00 Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump	Estimated Available water (cfs)
1	115.12	19.74	95.58
2	144.81	19.74	125.27
3	162.04	19.74	142.50
4	120.33	19.74	100.79
5	63.47	19.74	43.93
6	22.17	19.74	2.63
7	12.54	19.74	-7.00
8	10.33	19.74	-9.21
9	5.29	19.74	-14.25
10	6.65	19.74	-12.89
11	32.46	19.74	12.91
12	79.30	19.74	59.76

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	10.55
Upstream Demand (cfs):	2.81
Downstream Demand (cfs):	13.24
Pump rate (cfs):	3.74
Headwater Safety (cfs):	2.64
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	**62.80**
Passby at Location (cfs):	**26.42**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

07/05/2013

Source Detail

WMP-01218 | API/ID Number: 047-017-06248 | Operator: EQT Production Company

514316 (CPT11H1)

Source ID: 17825 | Source Name: McElroy Creek @ Wine Withdrawal Site
Elton Wine

Source Latitude: 39.39402
Source Longitude: -80.70576

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 57.19 | County: Doddridge

Anticipated withdrawal start date: 6/1/2013
Anticipated withdrawal end date: 6/1/2014
Total Volume from Source (gal): 9,500,000
Max. Pump rate (gpm): 1,260
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

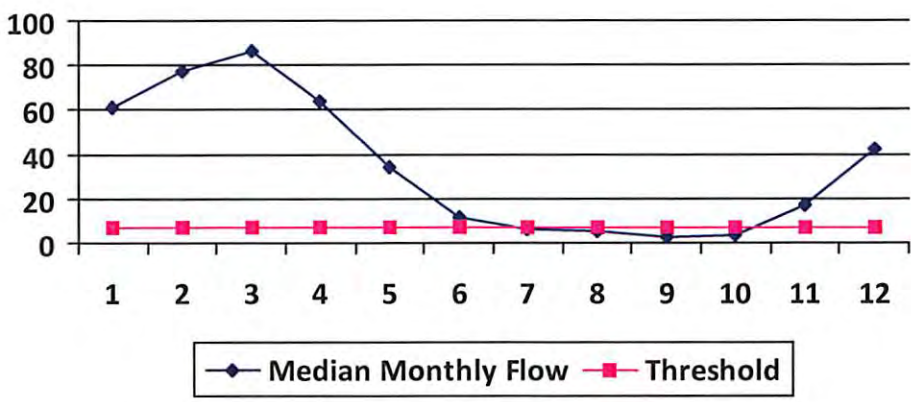
- [x] Endangered Species?
- [x] Mussel Stream?
- [ ] Trout Stream?
- [ ] Tier 3?
- [ ] Regulated Stream?
- [ ] Proximate PSD?
- [ ] Gauged Stream?

Reference Gaug: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.) 458.00 | Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump	Estimated Available water (cfs)
1	61.33	13.47	48.08
2	77.15	13.47	63.90
3	86.32	13.47	73.08
4	64.10	13.47	50.86
5	33.82	13.47	20.57
6	11.81	13.47	-1.44
7	6.68	13.47	-6.56
8	5.50	13.47	-7.74
9	2.82	13.47	-10.43
10	3.54	13.47	-9.71
11	17.29	13.47	4.04
12	42.25	13.47	29.00

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	5.62
Upstream Demand (cfs):	2.23
Downstream Demand (cfs):	2.23
Pump rate (cfs):	2.81
Headwater Safety (cfs):	1.40
Ungauged Stream Safety (cfs):	1.40
Min. Gauge Reading (cfs):	**72.54**
Passby at Location (cfs):	**10.66**

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

07/05/2013

Source Detail

WMP- 01218 | API/ID Number: 047-017-06248 | Operator: EQT Production Company

514316 (CPT11H1)

Source ID: 17826 Source Name: Tygart River @ Kuhnes Withdrawal Site A
Charlie & Peggy Kuhnes

Source Latitude: 39.35692
Source Longitude: -80.05474

HUC-8 Code: 5020001

Drainage Area (sq. mi.): 1302.2 County: Taylor

Anticipated withdrawal start date: 6/1/2013
Anticipated withdrawal end date: 6/1/2014
Total Volume from Source (gal): 9,500,000
Max. Pump rate (gpm): 1,260
Max. Simultaneous Trucks: 0
Max. Truck pump rate (gpm) 0

- [ ] Endangered Species?
- [x] Mussel Stream?
- [ ] Trout Stream?
- [ ] Tier 3?
- [x] Regulated Stream?
- [ ] Proximate PSD?
- [x] Gauged Stream?

Tygart Valley Dam

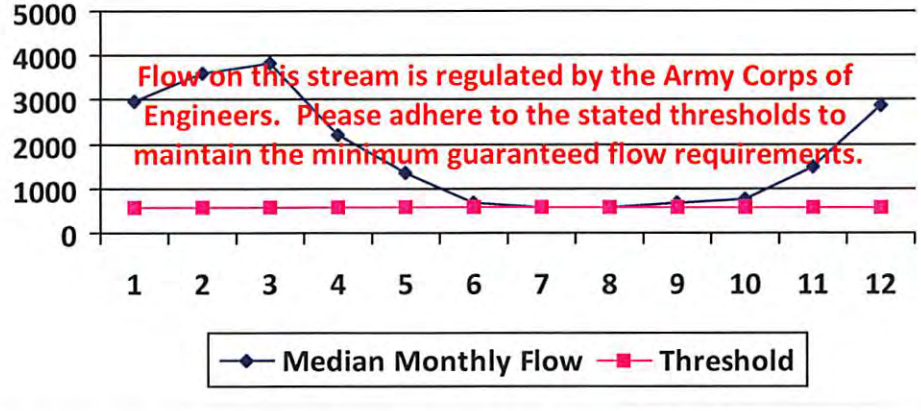
Reference Gaug 3057000 TYGART VALLEY RIVER AT COLFAX, WV

Drainage Area (sq. mi.) 1,363.00

Gauge Threshold (cfs): 624

Month	Median monthly flow (cfs)	Threshold (+ pump	Estimated Available water (cfs)
1	2,968.50	-	-
2	3,584.04	-	-
3	3,829.89	-	-
4	2,188.80	-	-
5	1,373.55	-	-
6	695.24	-	-
7	584.64	-	-
8	593.45	-	-
9	661.90	-	-
10	755.75	-	-
11	1,477.45	-	-
12	2,905.01	-	-

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	-
Upstream Demand (cfs):	20.95
Downstream Demand (cfs):	11.59
Pump rate (cfs):	2.81
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00
Min. Gauge Reading (cfs):	-
Passby at Location (cfs):	-

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

Water Management Plan:
Secondary Water Sources

WMP-01218 | API/ID Number 047-017-06248 | Operator: EQT Production Company

514316 (CPT11H1)

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Ground Water

Source ID: 17827 Source Name Maxson Property Test Well #1

Source start date: 6/1/2013

Source end date: 6/1/2014

Source Lat: 39.14472 Source Long: -80.84664 County Doddridge

Max. Daily Purchase (gal)

Total Volume from Source (gal): 9,500,000

DEP Comments:

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Lake/Reservior

Source ID: 17849 Source Name Pennsboro Lake
Source start date: 6/1/2013
Source end date: 6/1/2014

Source Lat: 39.281689 Source Long: -80.925526 County Ritchie

Max. Daily Purchase (gal) Total Volume from Source (gal): 9,500,000

DEP Comments:

Recycled Frac Water

Source ID: 17850 Source Name Various
Source start date: 6/1/2013
Source end date: 6/1/2014

Source Lat: Source Long: County

Max. Daily Purchase (gal) Total Volume from Source (gal): 9,500,000

DEP Comments:

4701706248

Form WW-9

page of

J.D. McREYNOLDS LEASE
WELL NO. WV 514316

	DISTANCE	GRADE
A	95'±	5-10 %
B	50'±	10-15 %
C	60'±	15-20 %
D	90'±	0-5 %
E	60'±	15-20 %
F	40'±	10-15 %
G	60'±	15-20 %
H	50'±	10-15 %
I	40'±	5-10 %
J	50'±	15-20 %
K	75'±	15-20 %
L	50'±	10-15 %

MATCH LINE

215' ± @ 15-20% GRADE±
200' ± @ 10-15% GRADE±
80' ± @ 5-10% GRADE±
85' ± @ 15-20% GRADE±
85' ± @ 0-5% GRADE±
90' ± @ 5-10% GRADE±
280' ± @ 10-15% GRADE±
1000' ± @ 0-5% GRADE±
80' ± @ 5-10% GRADE±
1970' ± @ 0-5% GRADE±
95' ± @ 10-15% GRADE±
40' ± @ 15-20% GRADE±
40' ± @ 10-15% GRADE±
65' ± @ 5-10% GRADE±
50' ± @ 10-15% GRADE±
60' ± @ 15-20% GRADE±
65' ± @ 5-10% GRADE±
225' ± @ 10-15% GRADE±
265' ± @ 15-20% GRADE±
130' ± @ 10-15% GRADE±
60' ± @ 15-20% GRADE±
80' ± @ 10-15% GRADE±
175' ± @ 15-20% GRADE±
140' ± @ 10-15% GRADE±
85' ± @ 15-20% GRADE±
155' ± @ 10-15% GRADE±
45' ± @ 15-20% GRADE±
65' ± @ 10-15% GRADE±
45' ± @ 5-10% GRADE±

L K J I H G F E D C B A

3 1

3 1

SCALE: 1" = 500'

0' 500' 1000' 1500'

D.Coo 4-9-2013

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

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

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

TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.

CUT & STACK ALL MARKETABLE TIMBER.

STACKED BRUSH MAY BE USED FOR SEDIMENT CONTROL.

07/05/2013

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

= EXISTING CULVERT

© = PROPOSED CULVERT 15" MIN. UNLESS OTHERWISE NOTED

Ⓧ = PROPOSED STREAM CROSSING

= PROPOSED LIMITS OF DISTURBANCE

Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING
SURVEYORS PROJECT MGMT. SLS ENGINEERS ENVIRONMENTAL
226 West Main St. P.O. Box 150 Glenville, WV 26351 (304) 462-5634
38068 Dikes Ridge Road Reedsville, OH 43767 (740) 571-9111
HONESTY, INTEGRITY, QUALITY

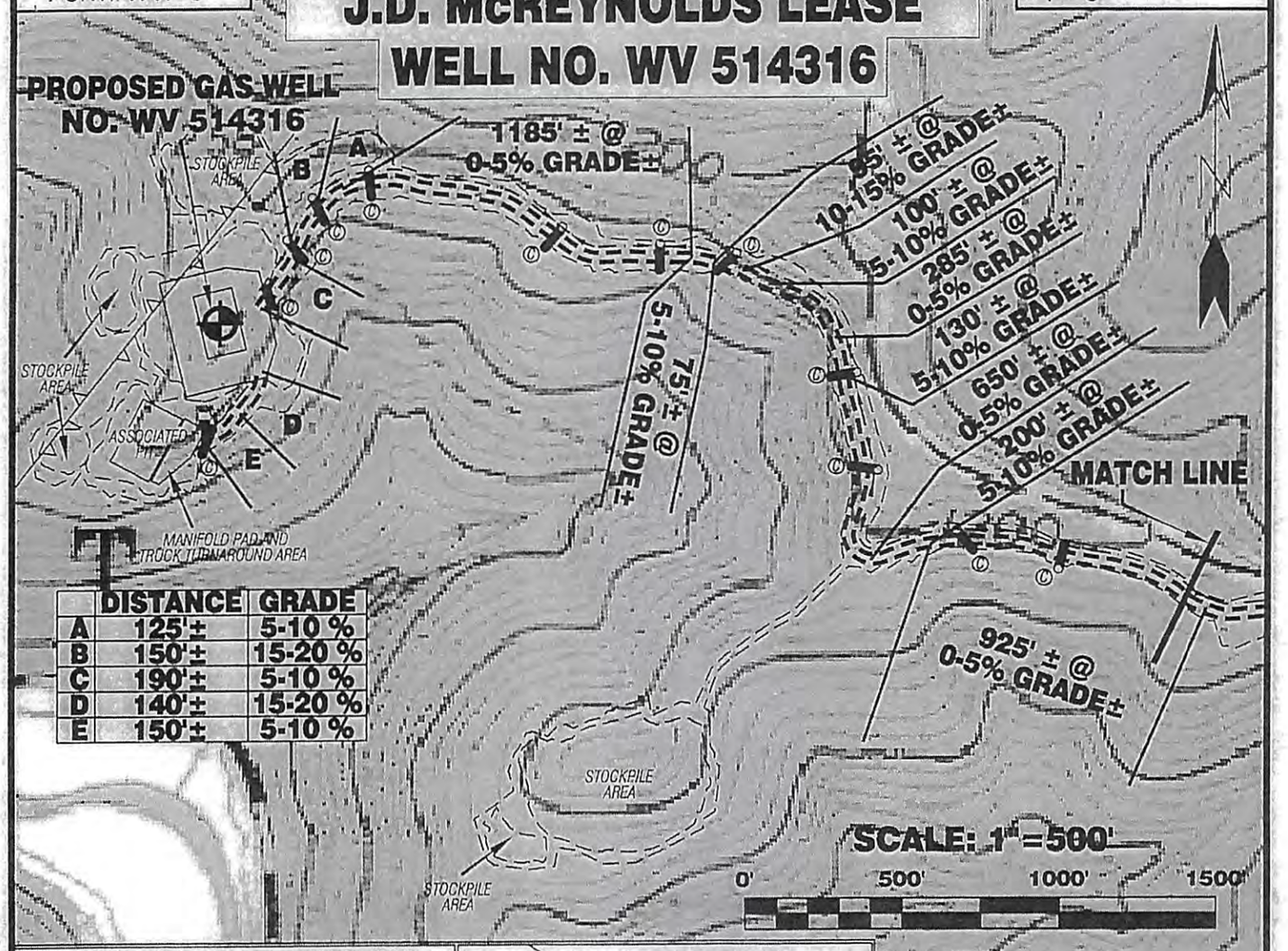
DRAWN BY	FILE NO.	DATE	CADD FILE:
K.D.W.	7749	03/27/13	7749REC514316R2.DWG

4701706248

Form WW-9

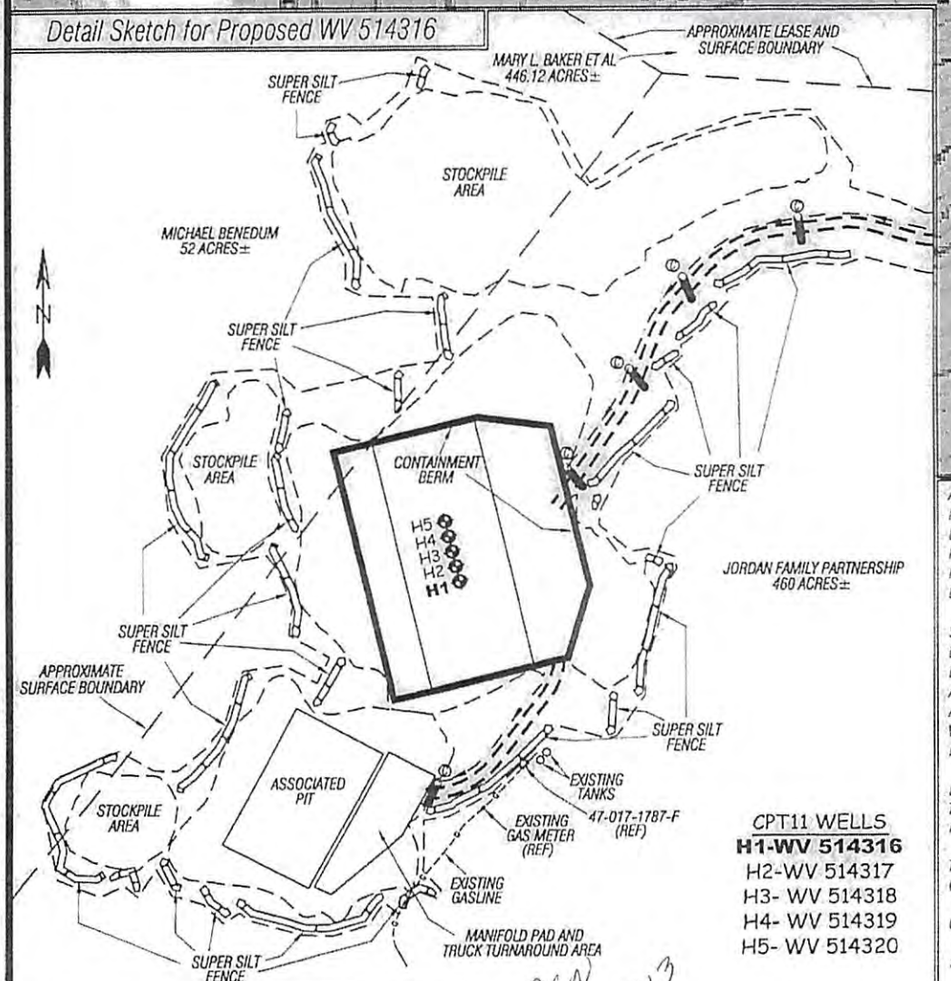
page of

J.D. McREYNOLDS LEASE
WELL NO. WV 514316



	DISTANCE	GRADE
A	125'±	5-10 %
B	150'±	15-20 %
C	190'±	5-10 %
D	140'±	15-20 %
E	150'±	5-10 %

Detail Sketch for Proposed WV 514316



CPT11 WELLS
H1-WV 514316
H2-WV 514317
H3- WV 514318
H4- WV 514319
H5- WV 514320

DCN 4-19-2013

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

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

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

TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.

CUT & STACK ALL MARKETABLE TIMBER.

STACKED BRUSH MAY BE USED FOR SEDIMENT CONTROL.

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

= EXISTING CULVERT

= PROPOSED CULVERT 15" MIN. UNLESS OTHERWISE NOTED

= PROPOSED STREAM CROSSING

= PROPOSED LIMITS OF DISTURBANCE

Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING
SURVEYORS Project Mgmt. SLS ENGINEERS Environmental
HONESTY, INTEGRITY, QUALITY
228 West Main St. P.O. Box 150 Glenville, WV 26351 (304) 462-5634
68063 Dilles Bottom Road Shadyside, OH 43947 (740) 671-9911

DRAWN BY	FILE NO.	DATE	CADD FILE:
K.D.W.	7749	03/27/13	7749REC514316R2.DWG

NOT TO SCALE

07/05/2013

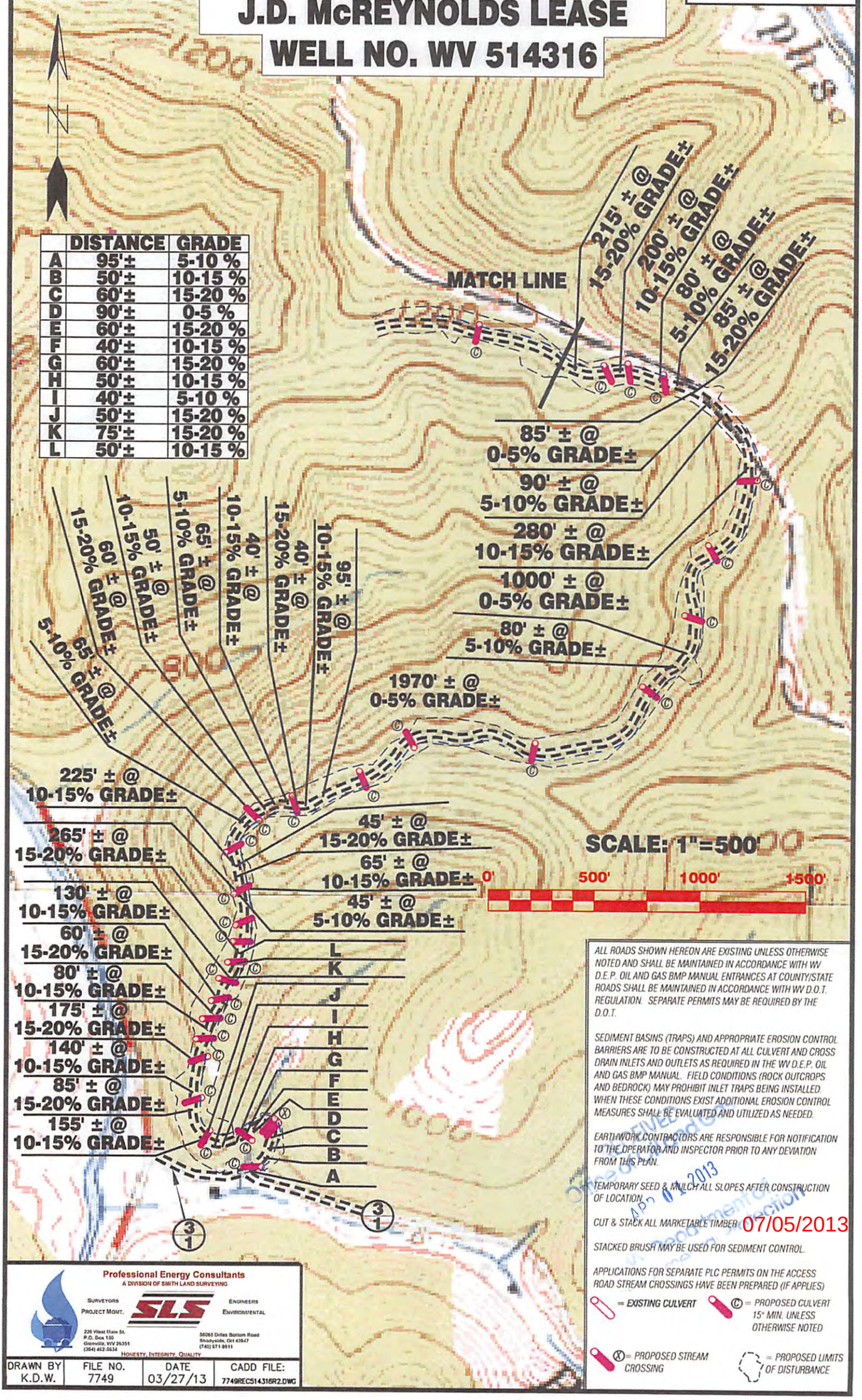
4701706248

plat spotted

Form WW-9

page of

J.D. McREYNOLDS LEASE
WELL NO. WV 514316



	DISTANCE	GRADE
A	95'±	5-10 %
B	50'±	10-15 %
C	60'±	15-20 %
D	90'±	0-5 %
E	60'±	15-20 %
F	40'±	10-15 %
G	60'±	15-20 %
H	50'±	10-15 %
I	40'±	5-10 %
J	50'±	15-20 %
K	75'±	15-20 %
L	50'±	10-15 %

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

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

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

TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.

CUT & STACK ALL MARKETABLE TIMBER.

STACKED BRUSH MAY BE USED FOR SEDIMENT CONTROL.

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

= EXISTING CULVERT

© = PROPOSED CULVERT 15" MIN. UNLESS OTHERWISE NOTED

⊗ = PROPOSED STREAM CROSSING

= PROPOSED LIMITS OF DISTURBANCE

Received
APR 01 2013
WV Dept. of Environmental Protection

07/05/2013

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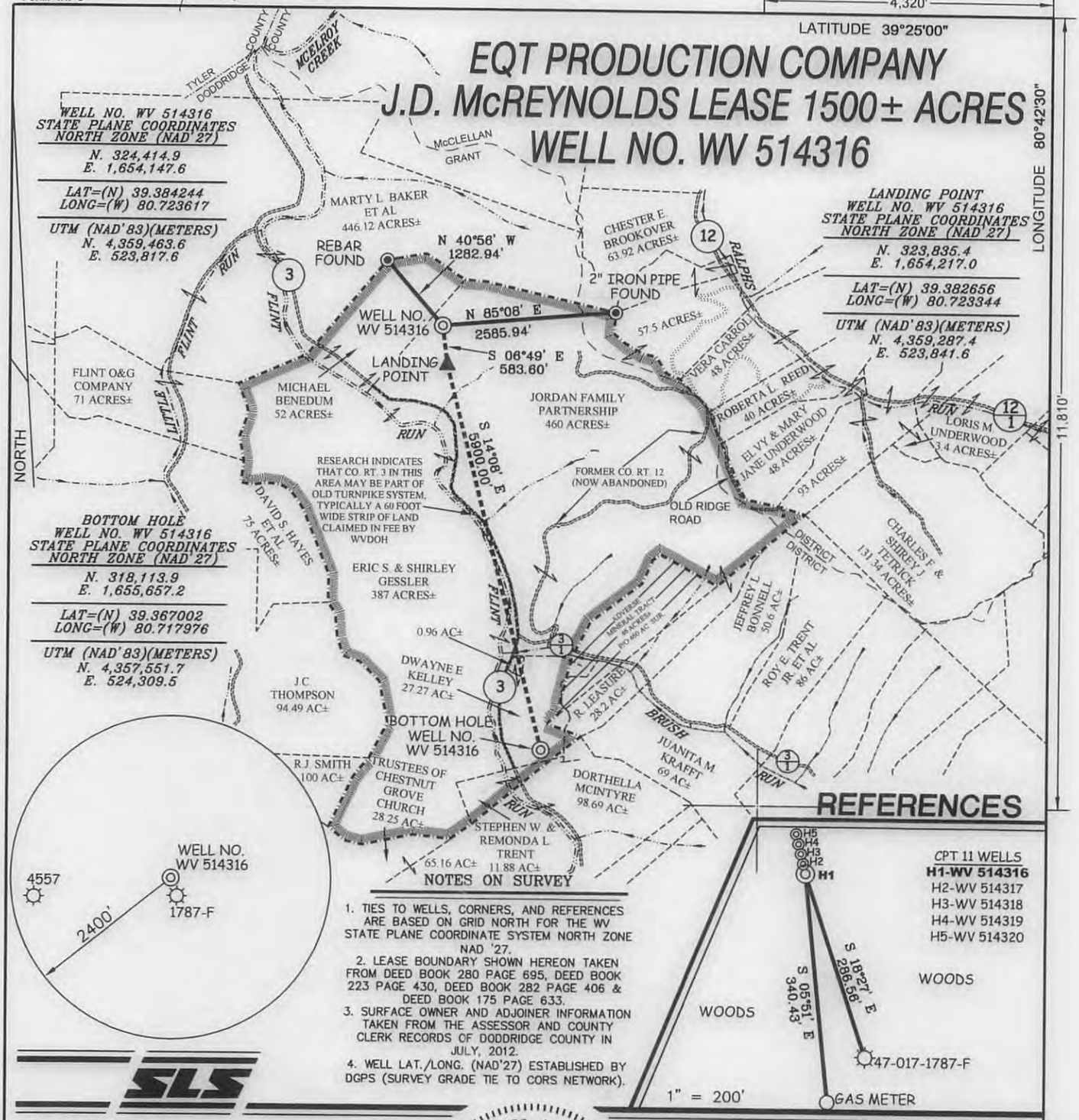
FORM WW 6

EQT PRODUCTION COMPANY
J.D. McREYNOLDS LEASE 1500± ACRES
WELL NO. WV 514316



NOTES ON SURVEY

1. TIES TO WELLS, CORNERS, AND REFERENCES ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 280 PAGE 695, DEED BOOK 223 PAGE 430, DEED BOOK 282 PAGE 406 & DEED BOOK 175 PAGE 633.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF DODDRIDGE COUNTY IN JULY, 2012.
4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK).

SLS

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 677 Gregory A. Smith

GREGORY A. SMITH LICENSED No. 677 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

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

DATE MARCH 15 , 20 13

OPERATORS WELL NO. WV 514316

API WELL NO. 47 — 017 — 06248
STATE — COUNTY — PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200

PROVEN SOURCE OF ELEVATION DGPS (SURVEY GRADE TIE TO CORS NETWORK)

FILE NO. 7749P514316R

SCALE 1" = 2000'

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

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

LOCATION :

ELEVATION 1,130' (GROUND) 1,111 (PROPOSED) WATERSHED FLINT RUN OF McELROY CREEK

DISTRICT GRANT COUNTY DODDRIDGE QUADRANGLE CENTER POINT 7.5'

SURFACE OWNER JORDAN FAMILY PARTNERSHIP ACREAGE 460±

ROYALTY OWNER J.D. McREYNOLDS HEIRS/ASSIGNS ACREAGE 1500± 07/05/2013

PROPOSED WORK : LEASE NO. 090500

DRILL X CONVERT ____ DRILL DEEPER ____ REDRILL ____ FRACTURE OR STIMULATE X 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 ____

COUNTY NAME

PERMIT

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY

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

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SLS

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