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

February 20, 2015

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-10303051, issued to GASTAR EXPLORATION INC., 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: LACKAWANNA 6H
Farm Name: M. B. INVESTMENTS
API Well Number: 47-10303051
Permit Type: Horizontal 6A Well
Date Issued: 02/20/2015

Promoting a healthy environment.

API Number: 4710303051

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. 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 fifty (50) 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.

WW-6B
(9/13)

4710303051

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

1) Well Operator: Gastar Exploration Inc. | 494487685 (Operator ID) | Wetzel (County) | Magnolia (District) | Porters Falls (Quadrangle)

2) Operator's Well Number: 6H Well Pad Name: Lackawanna

3) Farm Name/Surface Owner: M.B, Investments Public Road Access: County Route 30 Whiteman Hill Road

4) Elevation, current ground: 1335' Elevation, proposed post-construction: 1302'

5) Well Type (a) Gas ■ Oil ____ Underground Storage ____
Other ____
(b)If Gas Shallow ■ Deep ____
Horizontal ■

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
The Marcellus is the target formation at a depth of 6829', thickness of 46' and an anticipated pressure of approx. 3200 psi.

8) Proposed Total Vertical Depth: 6975'

9) Formation at Total Vertical Depth: Onondaga

10) Proposed Total Measured Depth: 13,137'

11) Proposed Horizontal Leg Length: 5800'

12) Approximate Fresh Water Strata Depths: 750'

13) Method to Determine Fresh Water Depths: Noticeable flow at flowline or when needed to start soaping

14) Approximate Saltwater Depths: 1740'

15) Approximate Coal Seam Depths: Sewickley at 1079' and Pittsburgh at 1220'

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

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: ____

Received
Office of Oil & Gas
FEB 11 2015

4710303051

18) **CASING AND TUBING PROGRAM**

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	20"	New	PE	54.5#/ft		40'	241 cuft (CTS)
Fresh Water	13 3/8"	New	H-40	48#/ft		1275'	885 cuft (CTS)
Coal	13 3/8"	New	H-40	48#/ft		1275'	885 cuft (CTS)
Intermediate	9 5/8"	New	J-55	36#/ft		2650'	901 cuft (CTS)
Production	5 1/2"	New	P-110	20#/ft		13,137'	3361 cuft (CTS)
Tubing	2 3/8"	New	N-80	4.7#/ft		7009'	N/A
Liners							

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	26"	.25"	880 psi	Class A	1.2
Fresh Water	13 3/8"	17.5"	.33"	1730 psi	Class A	1.2
Coal	13 3/8"	17.5"	.33"	1730 psi	Class A	1.2
Intermediate	9 5/8"	12.25"	.352"	3520 psi	Class A	1.2
Production	5.5"	8.875" & 8.75"	.361"	12,640 psi	Class H	1.18
Tubing	2 3/8"	4.653"	.19"	11,200 psi		
Liners						

2/13/15

PACKERS

Kind:	n/a			
Sizes:	n/a			
Depths Set:	n/a			

Received
Office of Oil & Gas
FEB 11 2015

4710303051

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

Drill through the Marcellus tagging less than one hundred (100') feet from the top of the Onondaga to get depths and log data. Then plug the well back to proposed kick off point (TBD). Drill the horizontal section to planned and proposed TD. Run casing and cement back to surface. Run a bond log from approximately 60 degrees back to surface, pressure test casing and set a master valve. Make a clean out run on the casing and perforate then stimulate.

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

Gastar Exploration plans to fracture the well using a typical slickwater fracture design. Gastar will pump roughly 7000 bbls of water and 320,000 lbs of sand per stage. There will be approximately 27 stages. The designed frac rate will be 80 bpm and an anticipated max pressure of 8500 psi.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 25.45

22) Area to be disturbed for well pad only, less access road (acres): 4.01

23) Describe centralizer placement for each casing string:

Gastar will run 3 centralizers on the surface casing at an equal distance. The intermediate casing will have 7 centralizers at 300' spacing. The production casing will have one centralizer every other joint in the lateral, one centralizer per joint through the curve and one centralizer every other joint in the vertical section.

24) Describe all cement additives associated with each cement type:

Class A + 2% CaCl2 + 1/4# Flake - Surface Cement mixed at 15.6 ppg. CaCl2 (calcium chloride), Flake (cellophane flake) Class A + 1% CaCl2 + 1/4# Flake - Intermediate Cement mixed at 15.6 ppg. 50:50 Class H .2%CD32 1.2%FL62 .1% ASA301 .4%SMS - Long String Lead mixed 14.5 ppg. CD32 (cement dispersant), FL 62 (fluid loss), SMS (sodium metasilicate), ASA (minimizes free fluid). 50:50 TYPE 1 .4% R3 1%FL62 .15%ASA301 .3%CD32-Long String Tail-14.5ppg

25) Proposed borehole conditioning procedures:

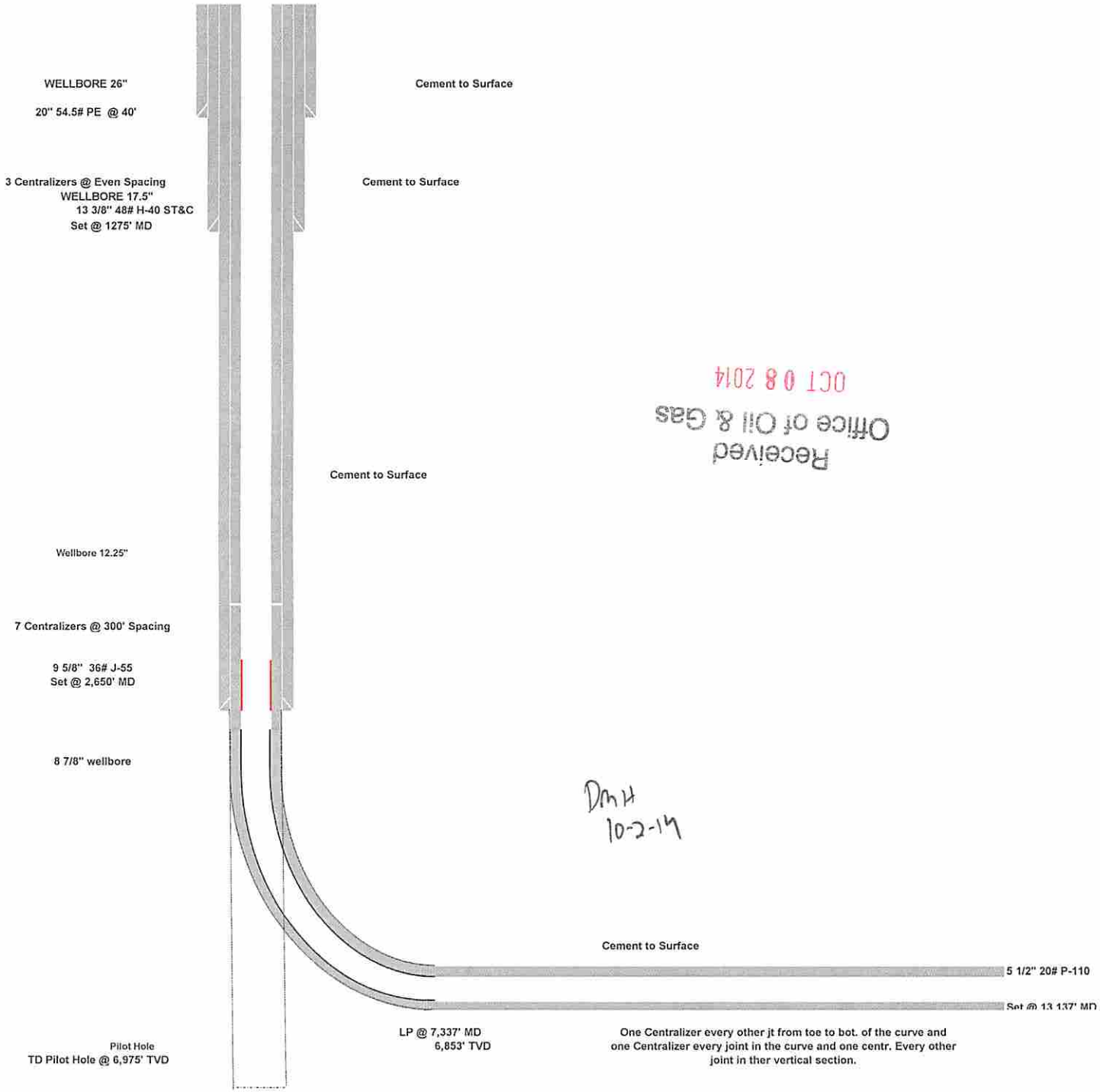
Gastar will circulate the hole a minnimum of 3 hours upon TD. We will then pull out to the bottom of the curve and circulate for another 2 hours. Then come out of the hole.

Received
Office of Oil & Gas
FEB 11 2015

*Note: Attach additional sheets as needed.

4710303051

Lackawanna 6H
Wetzel County, WV



Received
Office of Oil & Gas
OCT 08 2014

DMH
10-2-14

WW-9
(9/13)

API Number 47 - 103 4710303051
Operator's Well No. 16H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Gastar Exploration Inc. OP Code 494487685

Watershed (HUC 10) Outlet Middle Island Creek (undefined) Quadrangle Porters Falls 7.5'

Elevation 1302' County Wetzel District Magnolia

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: Frac water for frac and flow back water

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 UIC 359; UIC 2D0732540; UIC 2D0732523)
- ____ Reuse (at API Number ____)
- ■ Off Site Disposal (Supply form WW-9 for disposal location)
- ____ Other (Explain ____

Will closed loop system be used? If so, describe: Yes, for vertical and horizontal drilling

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

-If oil based, what type? Synthetic, petroleum, etc. Synthetic oil base

Additives to be used in drilling medium? Barite for weight

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. All drill cuttings will be disposed of in Wetzel County Sanitary Landfill (SWF-1021/ WV0109185)

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) ____

-Landfill or offsite name/permit number? Wetzel County Sanitary Landfill (SWF-1021/WV0109185)

DMH
10-2-14

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.

Received
Office of Oil & Gas
OCT 08 2014

Company Official Signature Michael McCown

Company Official (Typed Name) Michael McCown

Company Official Title Senior VP & COO

Subscribed and sworn before me this 29th day of September, 2014

David W. Perkinson Notary Public

My commission expires 06/11/2020

OFFICIAL SEAL
Notary Public, State of West Virginia
DAVID W. PERKINSON
377 Eastview Drive
Parkersburg, WV 26104
My commission expires June 11, 2020

4710303051

Form WW-9

Operator's Well No. 6H

Gastar Exploration Inc.

Proposed Revegetation Treatment: Acres Disturbed 25.45 Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 1/3 ton lbs/acre

Mulch 2.5 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	40	Fox / Grassy	40
		Perennial Rye	30
		Crown Vetch	20

Attach:
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [signature]

Comments:

Received
Office of Oil & Gas
OCT 08 2014

Title: Oil + Gas Inspector Date: 10-2-14

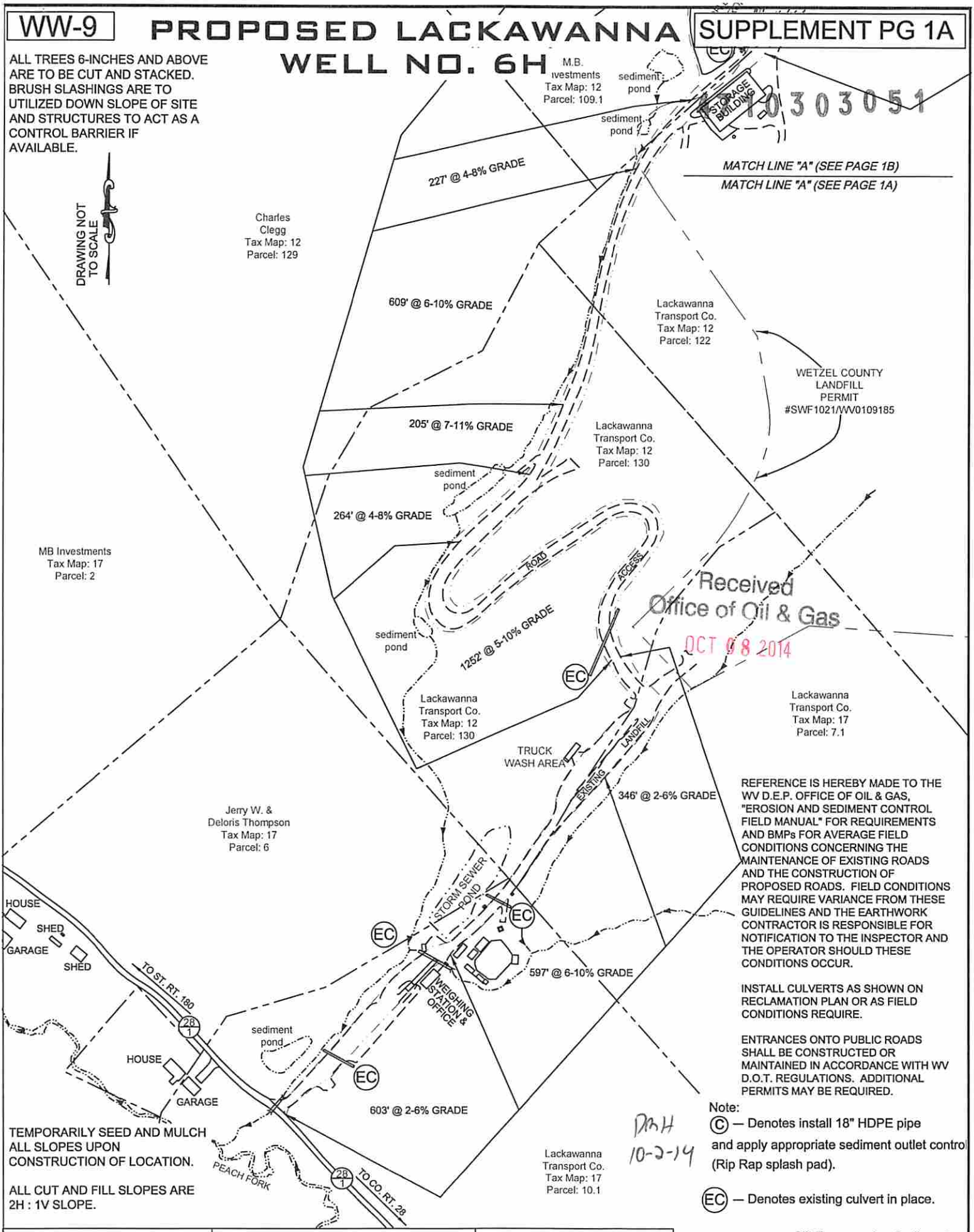
Field Reviewed? (✓) Yes ( ) No

WW-9

PROPOSED LACKAWANNA WELL NO. 6H

SUPPLEMENT PG 1A

ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASHINGS ARE TO UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.



REFERENCE IS HEREBY MADE TO THE WV D.E.P. OFFICE OF OIL & GAS, "EROSION AND SEDIMENT CONTROL FIELD MANUAL" FOR REQUIREMENTS AND BMPs FOR AVERAGE FIELD CONDITIONS CONCERNING THE MAINTENANCE OF EXISTING ROADS AND THE CONSTRUCTION OF PROPOSED ROADS. FIELD CONDITIONS MAY REQUIRE VARIANCE FROM THESE GUIDELINES AND THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE INSPECTOR AND THE OPERATOR SHOULD THESE CONDITIONS OCCUR.

INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.

ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.

TEMPORARILY SEED AND MULCH ALL SLOPES UPON CONSTRUCTION OF LOCATION.

ALL CUT AND FILL SLOPES ARE 2H : 1V SLOPE.

DAH 10-2-14

Note:

(C) — Denotes install 18" HDPE pipe and apply appropriate sediment outlet control (Rip Rap splash pad).

(EC) — Denotes existing culvert in place.

—x—x— Silt Fence and or Sediment and Erosion Control Measure.

DATE: 09/17/14	PROJECT NO: W0110309	DRAWN BY: J.N.W.

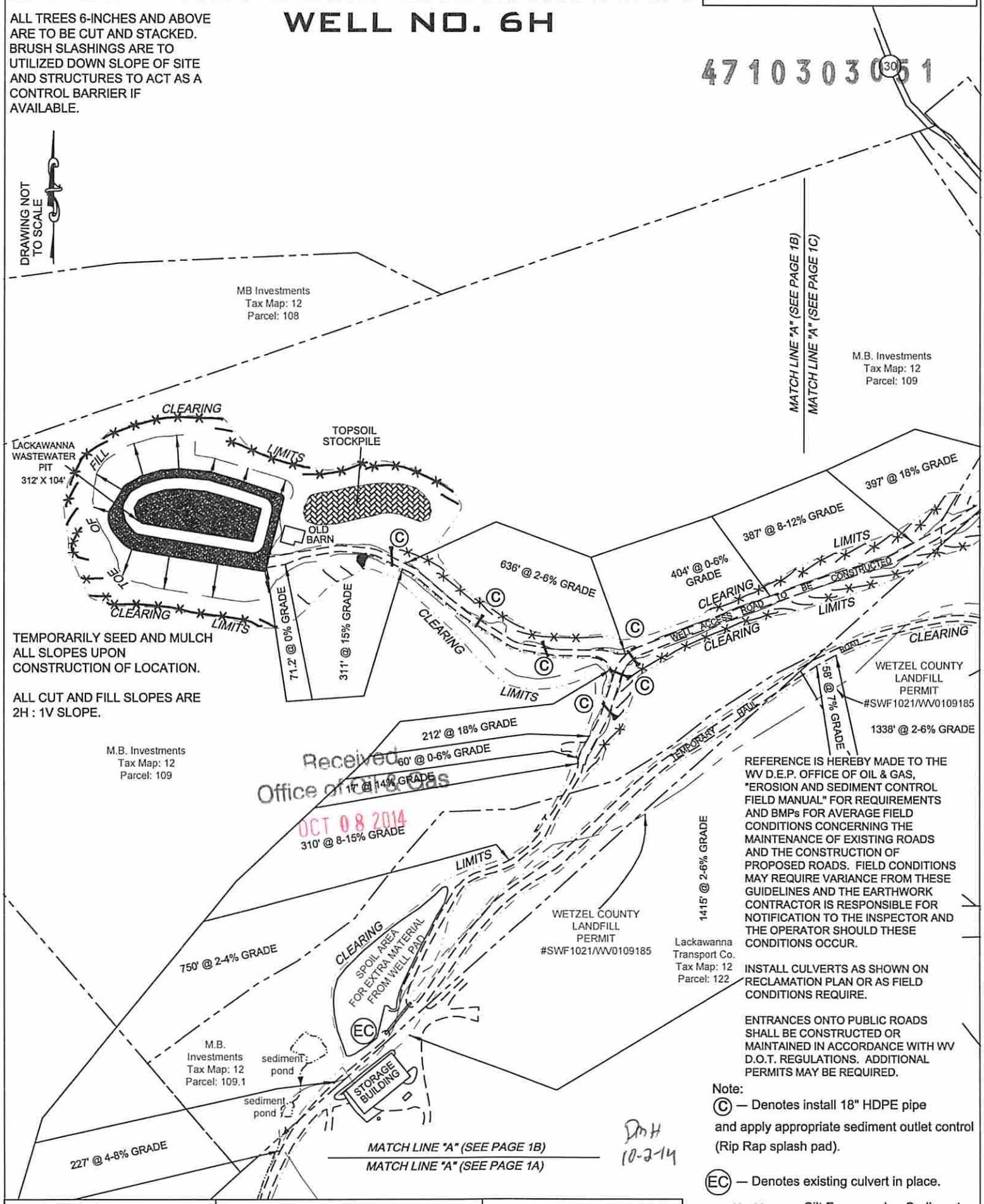
WW-9

PROPOSED LACKAWANNA WELL NO. 6H

SUPPLEMENT PG 1B

ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASHINGS ARE TO UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.

4710303051



TEMPORARILY SEED AND MULCH ALL SLOPES UPON CONSTRUCTION OF LOCATION.

ALL CUT AND FILL SLOPES ARE 2H : 1V SLOPE.

Received
Office of Oil & Gas
OCT 08 2014

REFERENCE IS HEREBY MADE TO THE WV D.E.P. OFFICE OF OIL & GAS, "EROSION AND SEDIMENT CONTROL FIELD MANUAL" FOR REQUIREMENTS AND BMPs FOR AVERAGE FIELD CONDITIONS CONCERNING THE MAINTENANCE OF EXISTING ROADS AND THE CONSTRUCTION OF PROPOSED ROADS. FIELD CONDITIONS MAY REQUIRE VARIANCE FROM THESE GUIDELINES AND THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE INSPECTOR AND THE OPERATOR SHOULD THESE CONDITIONS OCCUR.

INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.

ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.

Note:

(C) — Denotes install 18" HDPE pipe and apply appropriate sediment outlet control (Rip Rap splash pad).

(EC) — Denotes existing culvert in place.

—x—x— Silt Fence and or Sediment and Erosion Control Measure.

DMH 10-2-14

DATE: 09/17/14	PROJECT NO: W0110309	DRAWN BY: J.N.W.

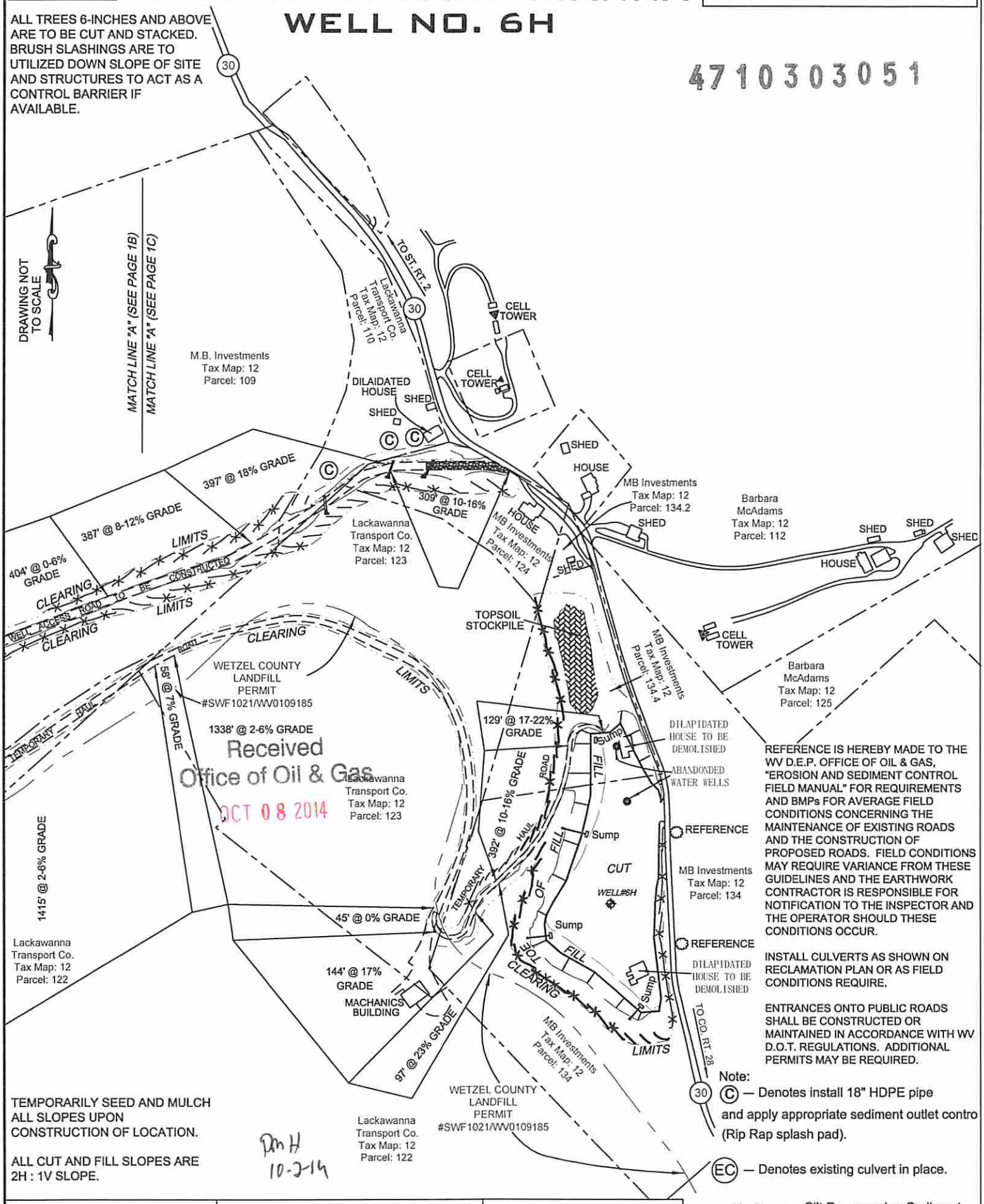
WW-9

PROPOSED LACKAWANNA WELL NO. 6H

SUPPLEMENT PG 1C

4710303051

ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASHINGS ARE TO UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.



REFERENCE IS HEREBY MADE TO THE WV D.E.P. OFFICE OF OIL & GAS, "EROSION AND SEDIMENT CONTROL FIELD MANUAL" FOR REQUIREMENTS AND BMPs FOR AVERAGE FIELD CONDITIONS CONCERNING THE MAINTENANCE OF EXISTING ROADS AND THE CONSTRUCTION OF PROPOSED ROADS. FIELD CONDITIONS MAY REQUIRE VARIANCE FROM THESE GUIDELINES AND THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE INSPECTOR AND THE OPERATOR SHOULD THESE CONDITIONS OCCUR.

INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.

ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.

TEMPORARILY SEED AND MULCH ALL SLOPES UPON CONSTRUCTION OF LOCATION.

ALL CUT AND FILL SLOPES ARE 2H : 1V SLOPE.

Dm H
10-2-14

Note:

(C) — Denotes install 18" HDPE pipe and apply appropriate sediment outlet contro (Rip Rap splash pad).

(EC) — Denotes existing culvert in place.

—x—x— Silt Fence and or Sediment and Erosion Control Measure.

DATE: 09/17/14	PROJECT NO: W0110309	DRAWN BY: J.N.W.

4710303051

SLR

global environmental solutions

Well Site Safety Plan

Gastar Exploration USA, Inc.

Received
Office of Oil & Gas
OCT 08 2014

Well Name: Lackawanna 6H

Pad Location: Lackawanna Pad

Wetzel County, West Virginia

UTM (meters), NAD 83, Zone 17:
Northing – 4,384,031.0
Easting – 512,300.7

DMH
10-2-14

SLR Ref: 116.01034.00008

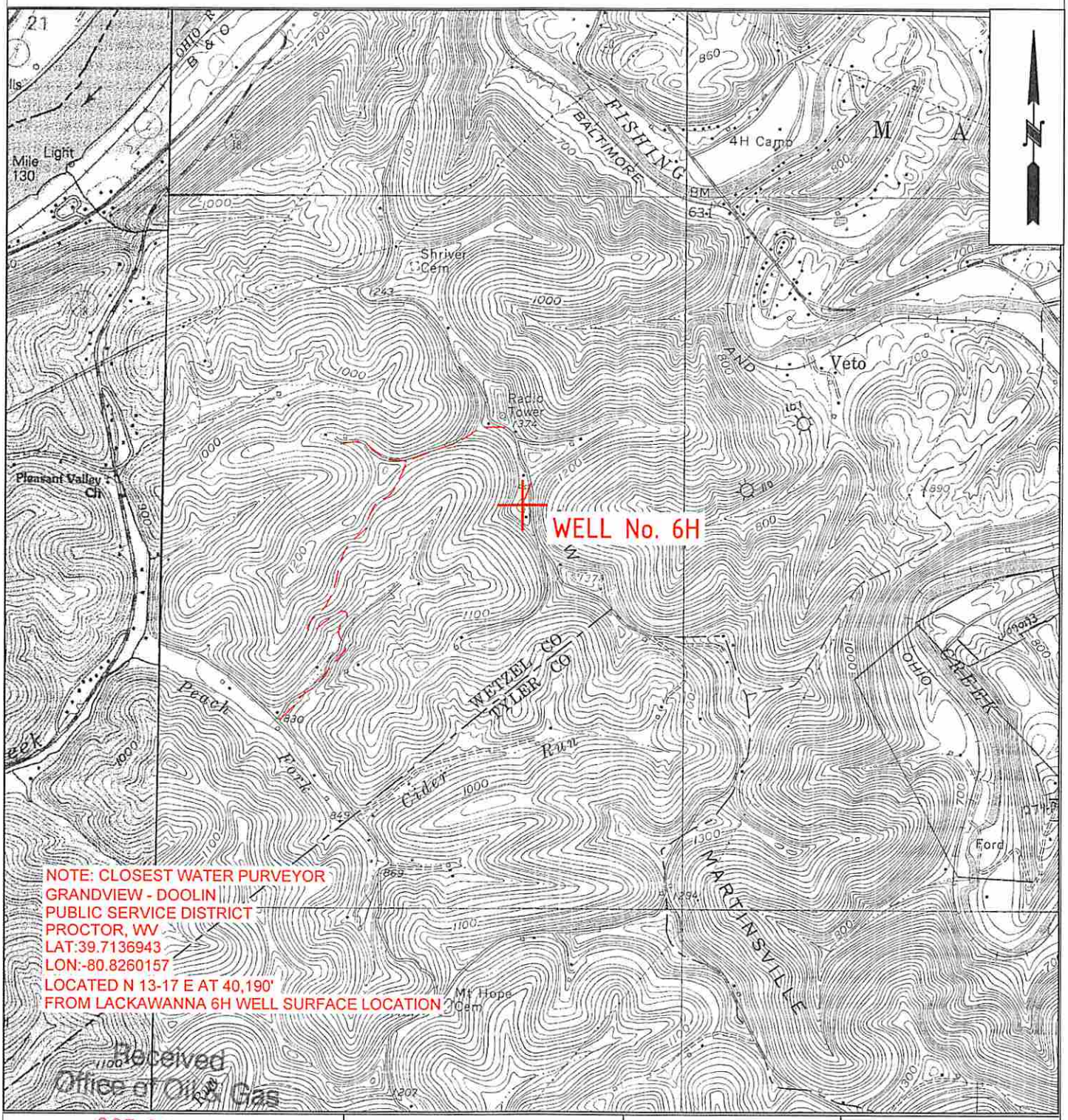
October 2014

WW-9

PROPOSED LACKAWANNA WELL No. 6H

SUPPLEMENT PG 2

4710303051



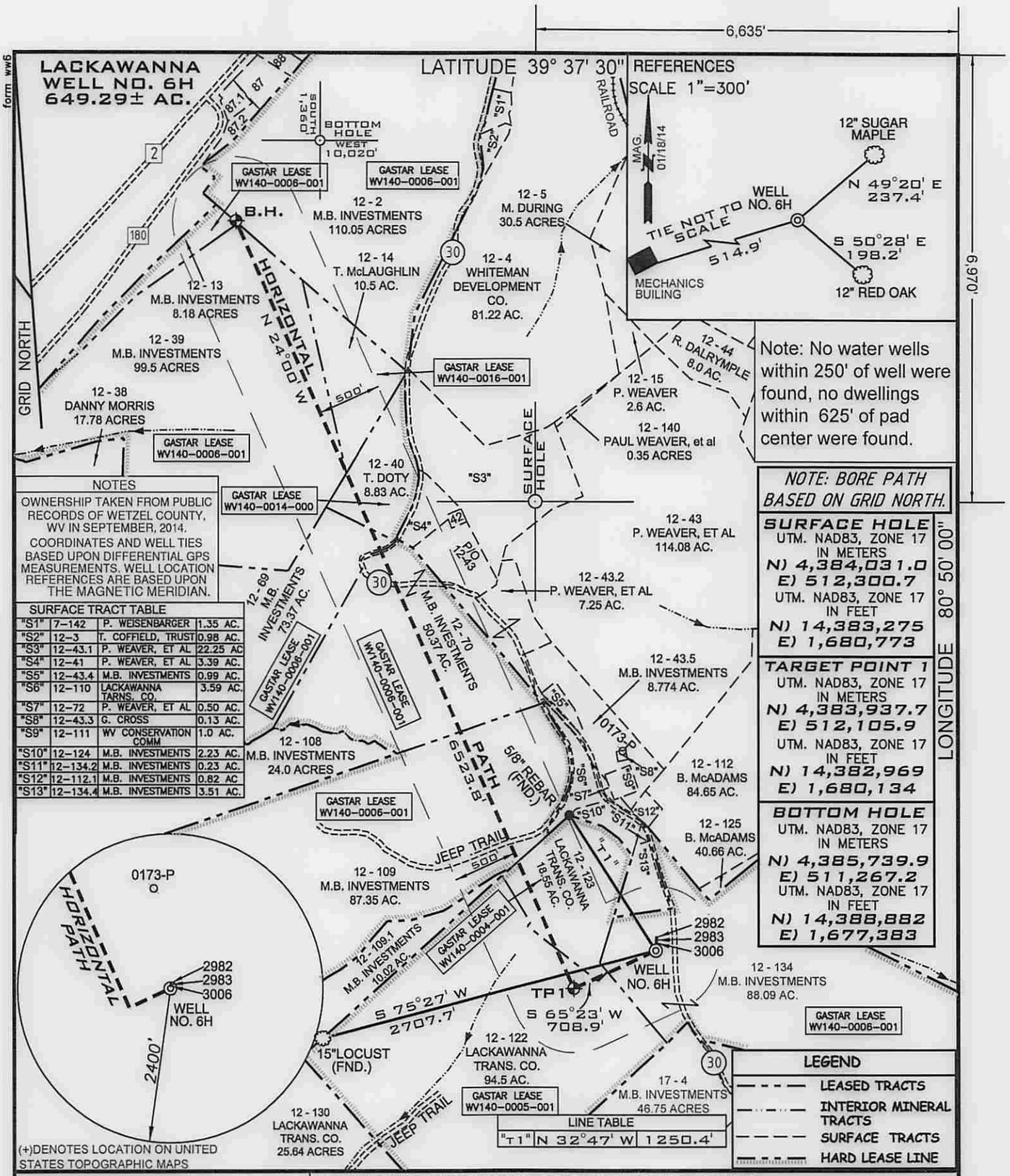
OCT 08 2014

DmH
10-2-14

OPERATOR	TOPO SECTION	LEASE NAME
GASTAR EXPLORATION INC. 229 W Main Street, Suite 301 Clarksburg, WV 26301	PORTERS FALLS 7.5'	LACKAWANNA
	SCALE:	DATE:
	1"=2000'	DATE: 09/17/14

W0110309

form ww6



NOTES

OWNERSHIP TAKEN FROM PUBLIC RECORDS OF WETZEL COUNTY, WV IN SEPTEMBER, 2014.
COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS. WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.

SURFACE TRACT TABLE

"S1"	7-142	P. WEISENBARGER	1.35 AC.
"S2"	12-3	T. COFFIELD, TRUST	0.98 AC.
"S3"	12-43.1	P. WEAVER, ET AL	22.25 AC
"S4"	12-41	P. WEAVER, ET AL	3.39 AC.
"S5"	12-43.4	M.B. INVESTMENTS	0.99 AC.
"S6"	12-110	LACKAWANNA TARNS. CO.	3.59 AC.
"S7"	12-72	P. WEAVER, ET AL	0.50 AC.
"S8"	12-43.3	G. CROSS	0.13 AC.
"S9"	12-111	WV CONSERVATION COMM	1.0 AC.
"S10"	12-124	M.B. INVESTMENTS	2.23 AC.
"S11"	12-134.2	M.B. INVESTMENTS	0.23 AC.
"S12"	12-112.1	M.B. INVESTMENTS	0.82 AC
"S13"	12-134.4	M.B. INVESTMENTS	3.51 AC.

LINE TABLE

"T1"	N 32°47' W	1250.4'

FILE NUMBER W0110309
DRAWING NUMBER LACKAWANNA_WP_6H_Rev1
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY 1/200
PROVEN SOURCE OF ELEVATION SUBMETER MAPPING / GRADE GPS

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

P.S. 2122 Jonathan N. White

Jonathan N. White LICENSED NO. 2122 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR SEAL

STATE OF WEST VIRGINIA MONTAM SEMPER LIBERI

WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE REVISED: FEBRUARY 09, 2015
OPERATORS WELL NO. LACKAWANNA NO. 6H
API WELL NO. 47 — 103 — 03051H6A (STATE COUNTY PERMIT)

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION ELEVATION 1302' WATERSHED (HUC 10) OUTLET MIDDLE ISLAND CREEK (UNDEFINDED)
DISTRICT MAGNOLIA COUNTY WETZEL
QUADRANGLE PORTERS FALLS 7.5' LEASE NUMBER WV140-0006-001, WV140-0016-001 WV140-0014-000, WV140-0004-001, WV140-0005-001
SURFACE OWNER M.B. INVESTMENTS ACREAGE 88.09
OIL & GAS ROYALTY OWNER M.B. INVESTMENTS, ET AL LEASE ACREAGE 649.29
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___
PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE (SPECIFY) ___
PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD: 6975' TMD: 13,137'
WELL OPERATOR GASTAR EXPLORATION INC. DESIGNATED AGENT MICHAEL McCOWN
ADDRESS 229 W MAIN STREET, SUITE 301 CLARKSBURG WV, 26301 ADDRESS 229 W MAIN STREET, SUITE 301 CLARKSBURG WV, 26301

COUNTY NAME PERMIT