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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Thursday, May 13, 2021

WELL WORK PLUGGING PERMIT  
Vertical Plugging

COLUMBIA GAS TRANSMISSION, LLC  
STORAGE TECHNICAL SERVICES - 6TH FLOOR  
1700 MACCORKLE AVE. SE.  
CHARLESTON, WV 25314

Re: Permit approval for 7503  
47-077-00031-00-00

This well work permit 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 any additional specific 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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of 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.

Per 35 CSR 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- 0450.

James A. Martin  
Chief

Operator's Well Number: 7503  
Farm Name: NINE, C. W.  
U.S. WELL NUMBER: 47-077-00031-00-00  
Vertical Plugging  
Date Issued: 5/13/2021

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## PERMIT CONDITIONS

West Virginia Code §22-6-11 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

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1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.

05/14/2021

1) Date 12/24, 2020  
2) Operator's  
Well No. Terra Alta South 7503  
3) API Well No. 47-077-00031

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

4707700031F

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil \_\_\_ / Gas \_\_\_ / Liquid injection \_\_\_ / Waste disposal \_\_\_ /  
(If "Gas, Production \_\_\_ or Underground storage  ) Deep  / Shallow \_\_\_

5) Location: Elevation 1889 feet Watershed Kinsinger Run of Saltlick Creek  
District Union County Preston Quadrangle Terra Alta

6) Well Operator Columbia Gas Transmission LLC 7) Designated Agent James Amos  
Address 1700 MacCorkle SE Address 48 Columbia Gas Road  
Charleston, WV 25325 Sandyville, WV 25275

8) Oil and Gas Inspector to be notified Name Gayne Knitowski  
Address PO Box 108  
Gorman, WV 26720  
9) Plugging Contractor Name Contractor Services Inc.  
Address 929 Charleston Road  
Spencer, WV 25276

10) Work Order: The work order for the manner of plugging this well is as follows:

Refer to enclosed:

- 1) Well job plan.
- 2) Prior to P&A wellbore schematic.
- 3) Proposed P&A wellbore schematic.

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Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector Gayne J Knitowski Date 1/21/21

05/14/2021

Objective: Plug and Abandon LAST PROFILE UPDATE:

TITLE: Plug and Abandon WORK TYPE: WR

FIELD: Terra Alta South WELL: 7503

STATE: WV SHL (Lat/ Long) API:

DIST: BHL (Lat/Long) CNTY:

EXISTING TUBULAR CONFIGURATION OD (inches) WEIGHT (PPF) GRADE THREAD DEPTH (ft) TOP BOTTOM FORMATION: Oriskany See below.

Conductor PAY: ELEVATIONS

Surface TD: TMG:

Intermediate1 PBTD: KB-RF:

Intermediate2 KB-GL: GL:

Production CSG DEPTH WELLBORE SCHEMATIC

Tubing

Perforations

Perforations

Perforations

Wellhead

D.H. EQUIPMENT TYPE DEPTH (ft)

PACKER INFO: Upper Lower

NIPPLE PROFILE INFO: Upper Lower

SSSV INFO:

CEMENT INFO TOC (ft)

MISC INFORMATION

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**REFER TO WELL SUMMARY REPORT and WELLBORE DIAGRAM**

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PROPOSED YEAR: 2020 ERCB PERMIT REQD: YES \_\_\_ NO \_\_\_ X \_\_\_ (Internal) PDS Required: YES \_\_\_ NO \_\_\_

PREPARED BY: Jim Amos DT. APPLIED: ISSUED: APPROVED:  Recoverable Signature

PREP DATE: 12/21/2020 REVIEWED BY: APPROVED: X *Jim Amos*

James Amos  
Principal Engineer  
Signed by: 83aa62d7-b683-404d-8328-f042f2e33502

05/14/2021



<b>WELL JOB PLAN</b>		<b>Well Engineering &amp; Technology</b>		PAGE 3	DATE JOB PREPARED: 12/21/2020
Objective: Plug and Abandon				LAST PROFILE UPDATE:	
TITLE: Plug and Abandon			WORK TYPE: WR		
FIELD: Terra Alta South	WELL: 7503				
STAT: WV	SHL (Lat/Long):	0 0	API:	0	
TWP: 0	BHL (Lat/Long):	0 0	CNTY:	0	
<b>PROCEDURE</b>					

**\*\*Note: All cement used will be Class A, slurry weight 15.6ppg, slurry yield 1.18 cuft/sk. All spacers will be 6% Bentonite gel\*\***

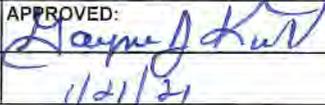
4707700031P

- 1 Obtain State plugging permit, FERC-authorization, EM&CP, pipeline crossing evaluation, call before you dig, etc. Prepare site specific SPCC.
- 2 Notify landowner.
- 3 Obtain General Work Permit and Wellsite Review & Turnover Form from Operations.
- 4 Notify environmental inspector prior to beginning work.
- 5 Notify State O&G inspector prior to beginning work.
- 6 Disconnect well-line.
- 7 Install ECD's per EM&CP.
- 8 Prepare access road and well site.
- 9 Document and report to WET engineer the casing and annular pressures.
- 10 Blow down all annuli and replace fittings as necessary. Leave annuli open to atmosphere for monitoring.
- 11 Run caliper (note that unsure whether there is tubing hung in well or if there is how much).
- 12 Load/top 7x8 and 8x10 annuli with kill fluid. Top off all remaining annuli with FW. Document volumes.
- 13 Kill well with viscosified fluid. If no tubing spearhead with LCM - if tubing present, after well is dead spot 10 bbl LCM pill on bottom.
- 14 Dig around base of wellhead to uncover casing tops and remove cement if present.
- 15 MIRU service rig.
- 16 NU 7-1/16" Cameron 5K BOPE (blind/shear + pipe + annular). Need kill and choke outlets below blind/shear.
- 17 Function and pressure test BOPE to low (250 psig) and high (3000 psig).
- 18 Pull tubing, if necessary.
- 19 Obtain CBL inside 7" casing from TD to surface - keep hole full. Send digital copy of CBL to WET engineer and consult on next Steps.
- 20 RIH with 2-3/8" work string w/ cut-lip shoe, wash to TD, and install balanced cement plug from TD to depth of cement top behind 7" csg.
- 21 PU above cement top, reverse circulate to clean tubulars, pull 10 joints, close pipe rams, and WOC.
- 22 WOC minimum 8 hours, RIH and tag cement. If cement top is deeper than 4700' then spot a second balanced cmt plug.
- 23 Install 7" CIDBP above cement plug.
- 24 Top off 7" with kill fluid and perform 500 psig pressure test to verify integrity of BP.
- 25 Plumb 7x8 annulus to flowback tank with adjustable choke.

**\* Note that following procedure assumes cement top behind 7" casing is deeper than 1900'**

- 26 Perforate 7" csg above BP and attempt to circulate to surface or establish injection.  
**\* Consult with WET engineer on results.**
- 27A If circulation to surface established, consult with WET engineer for procedure:
  - Circulate kill weight fluid until good kill density fluid is returned.
  - RIH with sliding-sleeve style cement retainer on work string
  - Set retainer above perfs
  - Establish circulation
  - Squeeze cement behind 7" casing with pre-determined cement volume that occupies no more annular volume than that required to place top of cement at 1900'.
  - Disengage from retainer, reverse circulate to clean tubulars, and TOH.
  - WOC 24 hours.
  - Obtain CBL
- 27B If no circulation to surface, but injection established, consult with WET engineer for procedure:
  - RIH with sliding-sleeve style cement retainer on work string
  - Set retainer above perfs
  - Establish injection
  - Disengage from retainer and spot cement at bottom of work string
  - Squeeze cement behind 7" casing with pre-determined cement volume that occupies no more than annular volume that required to place top of cement at 1900'.
  - Disengage from retainer, reverse circulate to clean tubulars, and TOH.
  - WOC 24 hours.
  - Obtain CBL
- 27C If circulation/injection not established; Perforate (per WET engineer) and repeat process above.

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PREPARED BY: Jim Amos	REVIEWED BY:	APPROVED: 
PREP DATE: 12/21/2020		1/21/21

05/14/2021

<b>WELL JOB PLAN</b>		<b>Well Engineering &amp; Technology</b>		PAGE 4	DATE JOB PREPARED: 12/21/2020
Objective: Plug and Abandon				LAST PROFILE UPDATE:	
TITLE: Plug and Abandon			WORK TYPE: WR		
FIELD: Terra Alta South	WELL: 7503				
STAT: WV	SHL (Lat/Long):	0 0	API:	0	
TWP: 0	BHL (Lat/Long):	0 0	CNTY:	0	
PROCEDURE CONTINUED					

\* Note that during steps above cement plugs must be installed across all perf zones, casing shoes, and O/G/W zones. If needed install cement plugs across all perf intervals and spot cement plug to 1900'.

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- 28 Release all annular pressure and top off.
- 29 ND BOPE and tubing spool.
- 30 Weld pulling nipple on 7" csg and pull seals and slips.
- 31 NU 11" BOPE (blind ram + pipe ram + annular) on top of 8-5/8" csg. Need kill/choke outlets below blind/shear.
- 32 Function and attempt to pressure test BOPE to low (250 psig) and high (2500 psig). Report results to WET engineer.
- 33 Wireline freepoint and cut/pull all 7" casing that is free.
- 34 Obtain CBL inside 8-5/8" csg. Send digital copy to WET engineer to evaluate and confirm next Steps.
- 35 TIH with work string and install balanced cement plugs from top of last cement plug to depth of cement top behind the 8-5/8" csg.
- 36 POOH to above cement, reverse circulate to clean tubulars, close BOP, and WOC.
- 37 WOC minimum 6 hours. RIH and tag cement. If cement top is less than 100' above top of 7" csg stub then install second cement plug.
- 38 TOOH and ND BOPE and remainder of wellhead.
- 39 Weld pulling nipple on 8-5/8" csg and dress top of 10-3/4" csg to accommodate BOPs.
- 40 NU 11" spool (with kill/choke outlets) and 11" annular BOP on top of 10-3/4" csg.
- 41 Function and attempt to pressure test BOPE to low (250 psig) and high (500 psig). Report results to WET engineer.
- 42 Wireline freepoint and cut/pull all 8-5/8" casing that is free.
- 43 TIH with work string and install balanced cement plug from top of last cement plug to 400'.
- 44 POOH to above cement, reverse circulate to clean tubulars, and WOC.
- 45 WOC minimum 4 hours. RIH and tag cement. If cement top is less than 100' above top of 8-5/8" csg stub then install second cement plug.
- 46 TOOH and ND BOP.
- 47 Weld pulling nipple on 10-3/4" csg.
- 48 Attempt to pull all 10-3/4" csg. If can't pull all csg, then freepoint and cut/pull all csg that is free.
- 49 TIH with work string and install balanced cement plugs from top of last cement plug to surface.
- 50 Grout all annuli as deep as possible.
- 51 RDMO service rig.
- 52 Erect monument per state regulations. Reclaim location and lease road.
- 53 P&A complete.

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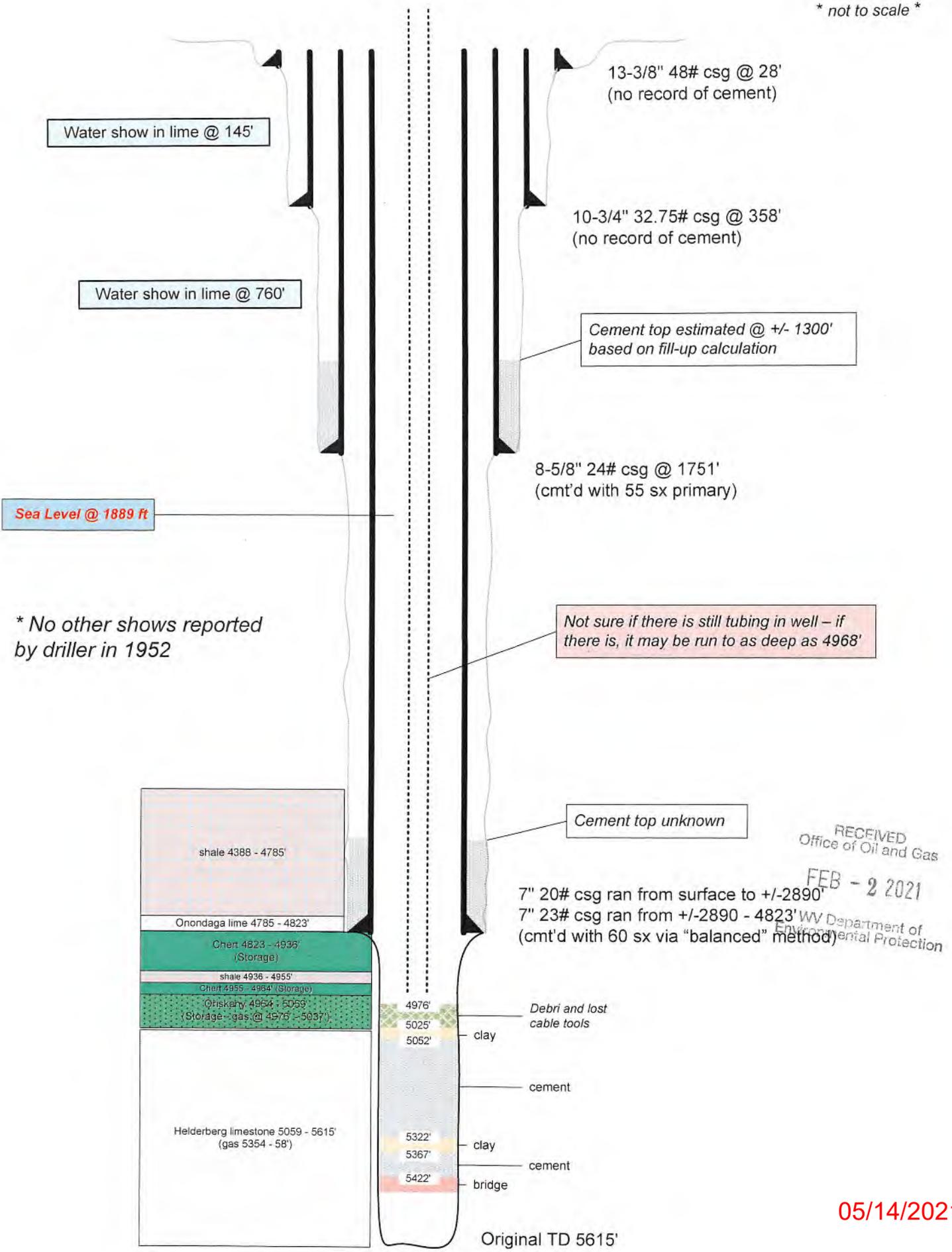
PREPARED BY:	Jim Amos	REVIEWED BY:	APPROVED:
PREP DATE:	12/21/2020		<i>[Signature]</i> 1/21/21

05/14/2021



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\* not to scale \*



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Original TD 5615'

7503

obs

Record of Hope Natural Gas Company N. 7 S. 55 W. Acres 86

Well No. 5077 Lease No. 62141 Name D. C. Bishoff District Bridgeport

District Union County Preston State West Virginia

Location Made Nov. 8, 1951 (Chgd. Nov. 28, 1951) First Work Done November 28, 1951

Rig Commenced (Elev. 1892) Rig Completed \_\_\_\_\_

Drilling Commenced February 25, 1952 Drilling Completed July 30, 1952

Rig Contractor Guy L. Warner { Drilling Contractor } Guy L. Warner

Drillers Orville Moore, Howard Bennett { If H.N.G.Co. Tools, String No. } Guy Tonkin, Harold Abrams

FORMATION	Open or Close Hard or Soft	TOP	BOTTOM	Steel Line Measurement	Water Found Depth	Oil Found Depth	Gas Found Depth	REMARKS
Line		0	25					4707700031P
Slate		25	45					
Sand		45	62					
Line		62	145		145 Water			
Slate and Shells		145	435					
Line Grey		435	1100		760 Water (Almost exhausted)			
Slate, Shells		1100	1103					
Sand (Brown)	✓	1103	1109					
Slate, Shells		1109	1668					
Benson Sand	✓	1668	1700					
Slate, Shells		1700	3440					
Line		3440	3740					
Brown Shale	✓	3740	4358					
Willy Lias	✓	4358	4358					
Brown Shale	✓	4358	4705	Casing Point				
(Brown Break)	✓	4705	4823	4823				
Monongia Lias	✓	4705	4823					
Chert	✓	4823	4936					
Shale (Break)	✓	4936	4975					
Chert and Lias	✓	4975	4984					
Triskany Sand	✓	4984	4980				4976 14/10 H 1° P.M.	
Triskany (Broken)		4980	5031				4983 16/10 H 1° P.M.	
							4986 20/10 H 1° P.M.	
							5020-23 22/10 H 1° P.M.	
							5037-37 26/10 H 1° P.M.	
Triskany Solid (Light)		5031	5059					
Shale (dark) Helderberg								
Top		5059	5072					
Lias (dark)		5072	5092					
Helderberg Cherty Lias		5092	5370					
Helderberg Lias (dark)		5370	5384				5374-58 31/10 H 1° P.M.	
Helderberg Lias (dark)								
Broken		5384	5552					
Helderberg Lias (Cherty)		5552						
<b>TOTAL DEPTH</b>			<b>5615</b>					

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32 h R.P. - 2260\*  
05/14/2021

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SIZE	Charged to Well		Put in Well		Pulled Out		Left in Well		Transferred Before Completing		Left at Well Not in Use		Steel Line Measurement		If more than two strings of casing are left in hole, give reasons for leaving additional strings.
	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	
3 3/8	40	4	28	4	None		28	4			12	0	28	0	48
0 3/4	411	0	363	0	"		363	0			7	0	368	0	32,750
0 5/8	1621	0	1760	0	"		1760	0			61	0	1751	0	240
7	2018	0	1985	0	"		1985	0			33	0	4823	0	230
7	3001	0	2890	0	"		2890	0			111	0	( )	( )	200 ✓

PACKER RECORD

SIZE	KIND	Amount Anchor	Amount Above Anchor	REMARKS
0 3/4	Shoe Steel Line set at 358'			
0 5/8	" " " " " 1751'	56 bags of reg. Cem. and 12-bgs. Aquagel T-1350	1-1751	
7	Spang Shoe " " " 4823'	60 Uniflo Cement and 1 bg. " T-4300	1-4823	

SHOOTING RECORD (IF SHOT BEFORE OR UPON COMPLETION OF WELL)

DATE	Quarts	Top of Shell	Bottom of Shell	Diameter	Sand	TEST BEFORE SHOT			TEST AFTER SHOT			Test Taken After Shot No. Hours	By Whom Shot
						Reading	Liquid	Opening	Reading	Liquid	Opening		

CEMENTING RECORD

Date Cemented \_\_\_\_\_ Size Hole Cemented 100' \* Size Casing Cemented 1-5/8"  
 Top Pittsburgh Coal No Coal Top Cementing \_\_\_\_\_ Amount Cement Used \_\_\_\_\_  
 Bottom Pittsburgh Coal \_\_\_\_\_ Bottom Cementing \_\_\_\_\_ Amount Sand Used \_\_\_\_\_  
 Mr. \_\_\_\_\_ of \_\_\_\_\_ Coal Company on ground when coal was cemented.  
 Remarks: \_\_\_\_\_ Signature of persons who cemented well \_\_\_\_\_

Office of \_\_\_\_\_ Approved P. R. Coogray

District Superintendent.

FEB - 2 2021

Department of \_\_\_\_\_

32 R.P. - 2260\*  
 05/14/2021

WW-4A  
Revised 6-07

1) Date: 12/24/2020  
2) Operator's Well Number  
Terra Alta South 7503

3) API Well No.: 47 - 077 - 00031

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL**

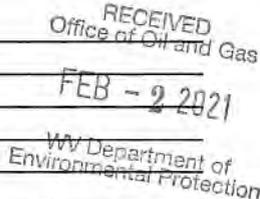
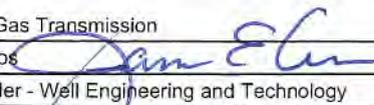
<b>4) Surface Owner(s) to be served:</b>	<b>5) (a) Coal Operator</b>
(a) Name <u>Mark A. and Susan M. Hooton</u>	Name <u>Not operated.</u>
Address <u>532 Kinsinger Road</u>	Address _____
<u>Terra Alta, WV 26764</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
<b>6) Inspector</b> <u>Gayne Knitowski</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 108</u>	Name _____
<u>Gormanian, WV 26720</u>	Address _____
Telephone <u>304.546.8171</u>	_____

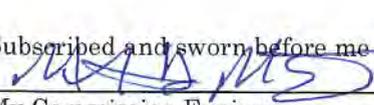
**TO THE PERSONS NAMED ABOVE:** You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator	<u>Columbia Gas Transmission</u>	
By:	<u>James Amos</u> 	
Its:	<u>Team Leader - Well Engineering and Technology</u>	
Address	<u>48 Columbia Gas Road</u>	
	<u>Sandyville, WV 25275</u>	
Telephone	<u>304.373.2412</u>	

Subscribed and sworn before me this 1st day of February  
  
My Commission Expires 10/19/22



**Oil and Gas Privacy Notice**

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a 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 of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

**SURFACE OWNER WAIVER**

Operator's Well  
Number

Terra Alta South 7503

**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A**

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.  
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

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

**Time Limits and methods for filing comments.** The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) 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.

**Comments must be in writing.** Your comments must 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.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

**If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.**

**VOLUNTARY STATEMENT OF NO OBJECTION**

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON  
ETC.

FOR EXECUTION BY A CORPORATION,

_____	Date _____	Name _____
Signature		By _____
		Its _____
		_____
		Date _____

Signature

Date  
**05/14/2021**

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Environmental Protection

WW-4B

4707700031 P

API No. 47-077-00031

Farm Name \_\_\_\_\_

Well No. Terra Alta South 7503

COAL NOT OPERATED

**INSTRUCTIONS TO COAL OPERATORS  
OWNERS AND LESSEE**

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less than five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

**WAIVER**

The undersigned coal operator \_\_\_\_/ owner \_\_\_\_/ lessee \_\_\_\_/ of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Its \_\_\_\_\_

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WV Department of  
Environmental Protection

05/14/2021

**Columbia Gas Transmission, LLC**

1700 MacCorkle Ave., SE, Charleston, WV, USA 25314



December 24, 2020

Mark and Susan Hooton  
532 Kinsinger Road  
Terra Alta, WV 26764

4707700031 P

Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to plug and abandon an existing underground natural gas storage well located on property owned by you. As reference, the field and well ID is Terra Alta South 7503 (API 47-077-00031).

As part of the well permitting process, Columbia, the well operator, is required to provide a copy of all applicable permit application forms for your review and record retention.

Regards,

Jim Amos  
Team Leader  
Well Engineering & Technology  
Columbia Gas Transmission, LLC

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SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	<p>A. Signature  <input checked="" type="checkbox"/> <i>Susan Hooton</i>      <input type="checkbox"/> Agent  <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name)  <i>Susan Hooton</i></p> <p>C. Date of Delivery</p>
<p>1. Article Addressed to:</p> <p><i>MARK &amp; SUSAN HOOTON 532 KINSINGER RD TERRA ALTA, WV 26764</i></p>  <p>9590 9402 3688 7335 3537 27</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes  if YES, enter delivery address below: <input type="checkbox"/> No</p> <p><i>4707700031</i></p>
<p>2. Article Number (Transfer from previous edition)</p> <p><i>7017 0660 0001 0359 5712</i></p>	<p>3. Service Type</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Adult Signature</li> <li><input type="checkbox"/> Adult Signature Restricted Delivery</li> <li><input type="checkbox"/> Certified Mail®</li> <li><input type="checkbox"/> Certified Mail Restricted Delivery</li> <li><input type="checkbox"/> Collect on Delivery</li> <li><input type="checkbox"/> Delivery Restricted Delivery</li> <li><input type="checkbox"/> Restricted Delivery</li> </ul> <ul style="list-style-type: none"> <li><input type="checkbox"/> Priority Mail Express®</li> <li><input type="checkbox"/> Registered Mail™</li> <li><input type="checkbox"/> Registered Mail Restricted Delivery</li> <li><input type="checkbox"/> Return Receipt for Merchandise</li> <li><input type="checkbox"/> Signature Confirmation™</li> <li><input type="checkbox"/> Signature Confirmation Restricted Delivery</li> </ul>
<p>PS Form 3811, July 2015 PSN 7530-02-000-9053 (over \$500) Domestic Return Receipt</p>	

05/14/2021

WW-9  
(5/16)

API Number 47 - 077 - 00031  
Operator's Well No. \_\_\_\_\_

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS  
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Columbia Gas Transmission OP Code 307032

Watershed (HUC 10) Kinsinger Run of Saltlick Creek Quadrangle Terra Alta

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: fresh water, brine, cement returns, bentonite gel

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? 20

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection ( UIC Permit Number 34-119-28776-, 34-167-23862 )
- Reuse (at API Number \_\_\_\_\_)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Appalachian Water Services, Station W1 Ronco WTP, Masontown, PA - Permit 2608201)

Will closed loop system be used? If so, describe: no

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

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

Additives to be used in drilling medium? \_\_\_\_\_

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

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

-Landfill or offsite name/permit number? \_\_\_\_\_

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 April 1, 2016, 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 James E. Amos

Company Official (Typed Name) James E. Amos

Company Official Title Team Leader, Well Engineering & Technology

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WV Dept. of Environmental Protection

Subscribed and sworn before me this 1st day of February, 2021

Michael D McClung

Notary Public

My commission expires 6/19/22



05/14/2021

Proposed Revegetation Treatment: Acres Disturbed <1.0 Prevegetation pH 6.5

Lime 2 Tons/acre or to correct to pH 7

Fertilizer type 10-10-10

Fertilizer amount 600 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Rye	40	Orchard Grass and/or Tall Fescue	29
		Birdsfoot trefoil (empire)	9
		Annual Rye	12

For wetland areas: Annual Rye (40 lbs/acre) until indigenous plants re-establish cover.

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Maime J. Kuster

Comments: \_\_\_\_\_

Reclaim SITE ASAP

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Environmental Protection

Title: Inspector Date: 1/21/21

Field Reviewed? ( X ) Yes ( ) No

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

Operator Name: Columbia Gas Transmission LLC  
Watershed (HUC 10): Kinsinger Run of Saltlick Creek Quad: Terra Alta  
Farm Name: \_\_\_\_\_

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

No fertilizer will be stored on site. Small quantities of fuel, oil, and lubrications will be stored on site, but located within secondary containment.  
Accidental release from well fluids and spills from construction equipment are the only sources of contaminate to groundwater.  
All accumulated fluids to be hauled off site to UIC disposal facility.

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

All construction equipment will be inspected daily for leaks. Spill kits will be on site.

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

Kinsinger Run - 0.07 miles. Aurora Elementary and Jr High (WV9939036) - 3.98 miles.

4. Summarize all activities at your facility that are already regulated for groundwater protection.

N/A

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5. Discuss any existing groundwater quality data for your facility or an adjacent property.

N/A

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

No waste material will be used for deicing or fill material on the property.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

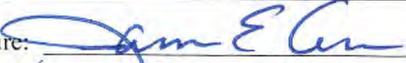
During routine tailgate meetings, groundwater protection will be a topic of discussion.

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8. Provide provisions and frequency for inspections of all GPP elements and equipment.

WV Department of  
Environmental Protection

No fertilizer will be stored on site. Small quantities of fuel, oil, and lubricants will be stored on site, but located within secondary containment. Construction equipment will be inspected daily for leaks or spills.

Signature: 

Date: 1/29/21

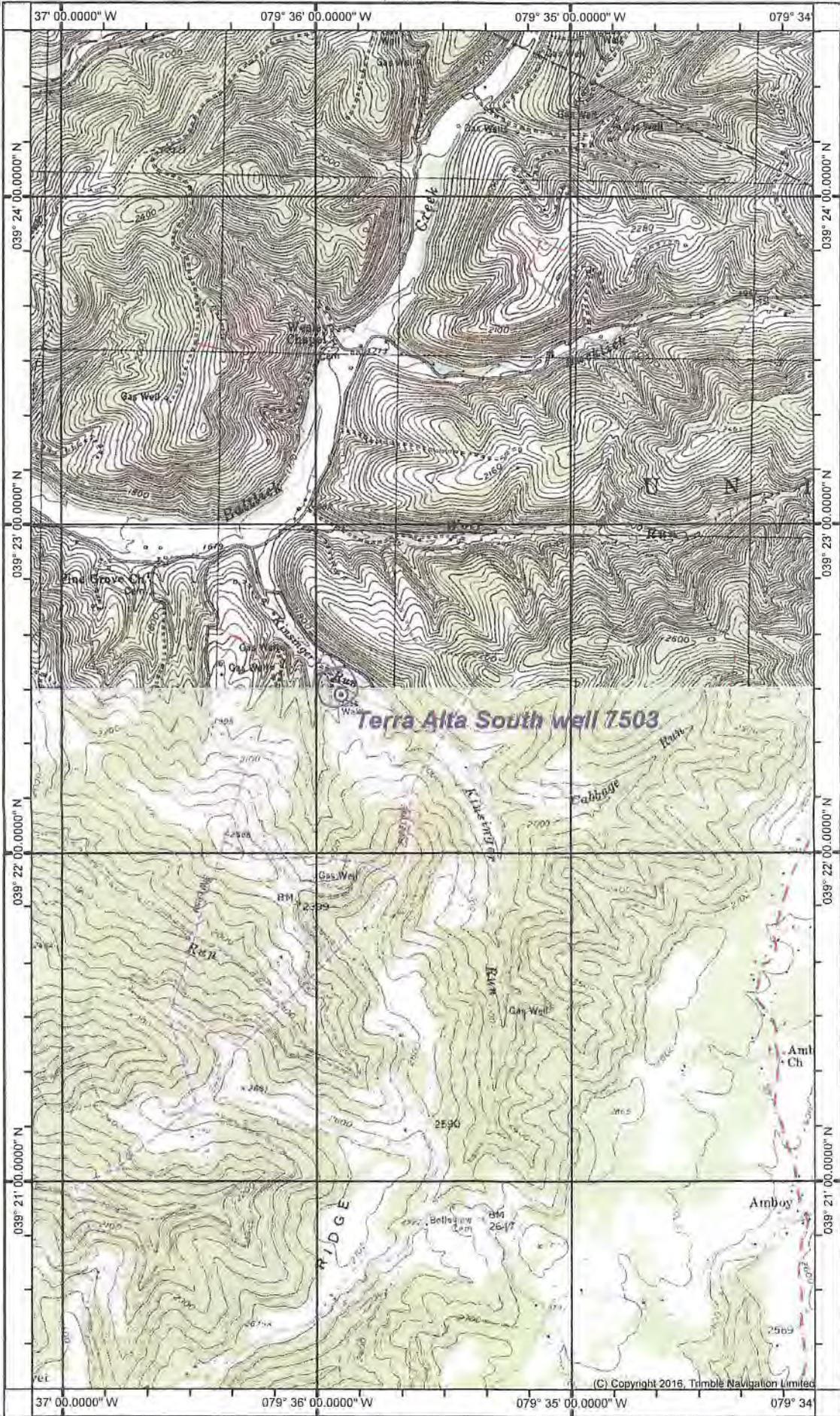


AURORA QUADRANGLE  
WEST VIRGINIA  
TOPOGRAPHIC SERIES

(KINGWOOD)

(OAKLAND)

679° 37' 07.2041" W (TERRA ALTA) 079° 34' 01.9280" W  
039° 24' 30.2025" N 039° 24' 00.0000" N



(ROWLESBURG)

(TABLE ROCK)

Terra Alta South well 7503

(C) Copyright 2016, Trimble Navigation Limited

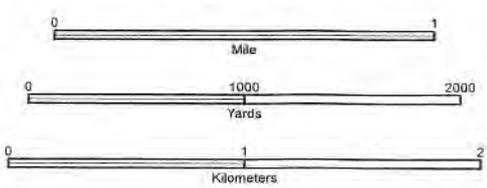
039° 20' 21.0821" N 079° 37' 07.2041" W (LEAD MINE) SCALE 1:24000 079° 34' 01.9280" W 039° 20' 21.0821" N

(ST GEORGE)

05/14/2021 (DAVIS)

Produced by Trimble Terrain Navigator Pro  
Topography based on USGS 1:24,000 Maps  
North American 1983 Datum (NAD83)

To place on the predicted North American 1927 move the  
projection lines 11M N and 19M E  
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CONTOUR INTERVAL 20 FT

39079-C4-TM-024  
AURORA, WV  
JAN 1, 1976

4707700031P

**WV DEP Reclamation Plan - Site Detail**  
**Terra Alta South well 7503 (API 077-00031)**

- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and surface material to be applied as needed

Kinsinger Run Rd

N

Terra Alta South - 07503

1.1 acres

**Limit of Proposed Disturbance  
on existing well site**

Google Earth

© 2020 Google

300 ft

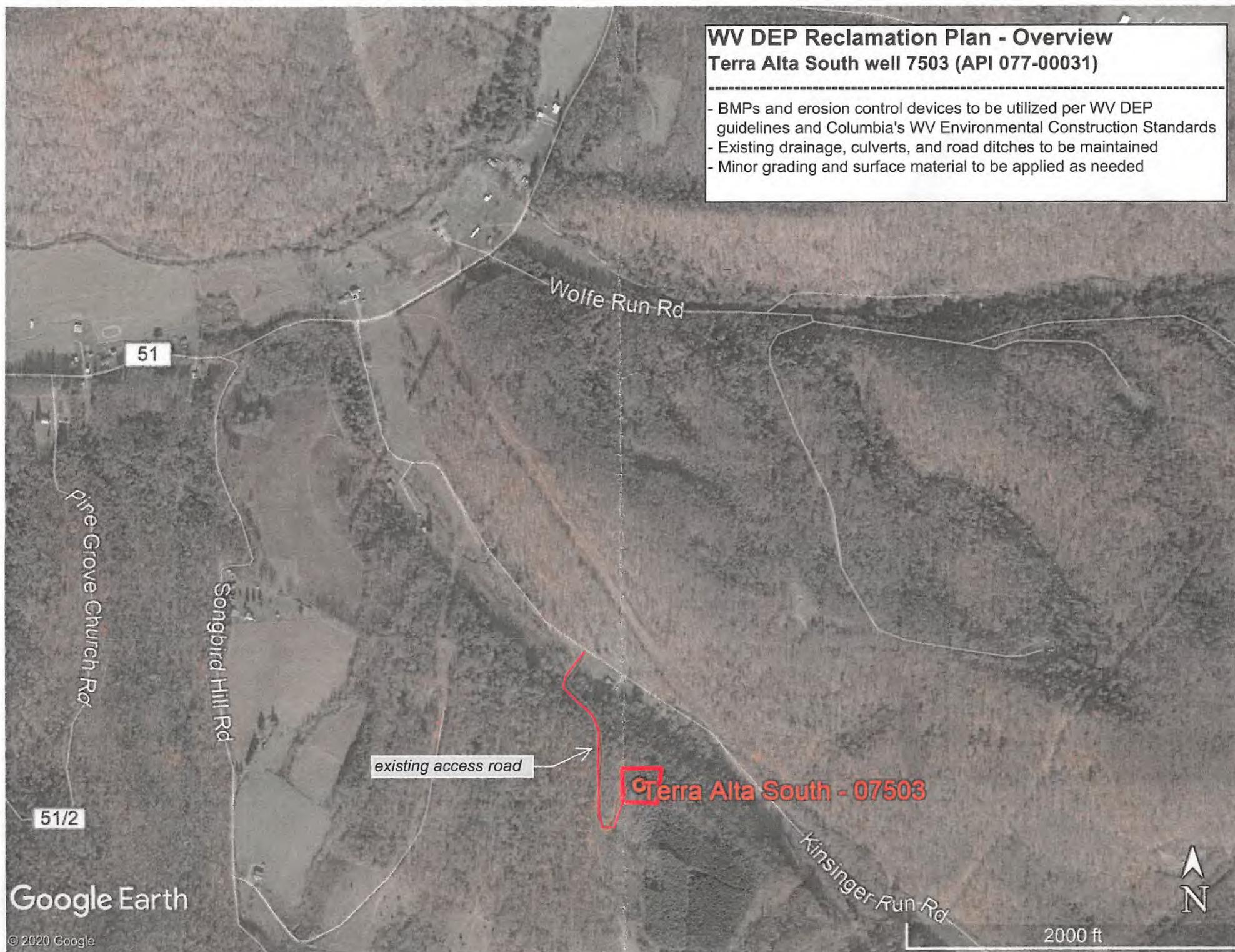
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**WV DEP Reclamation Plan - Overview**  
**Terra Alta South well 7503 (API 077-00031)**

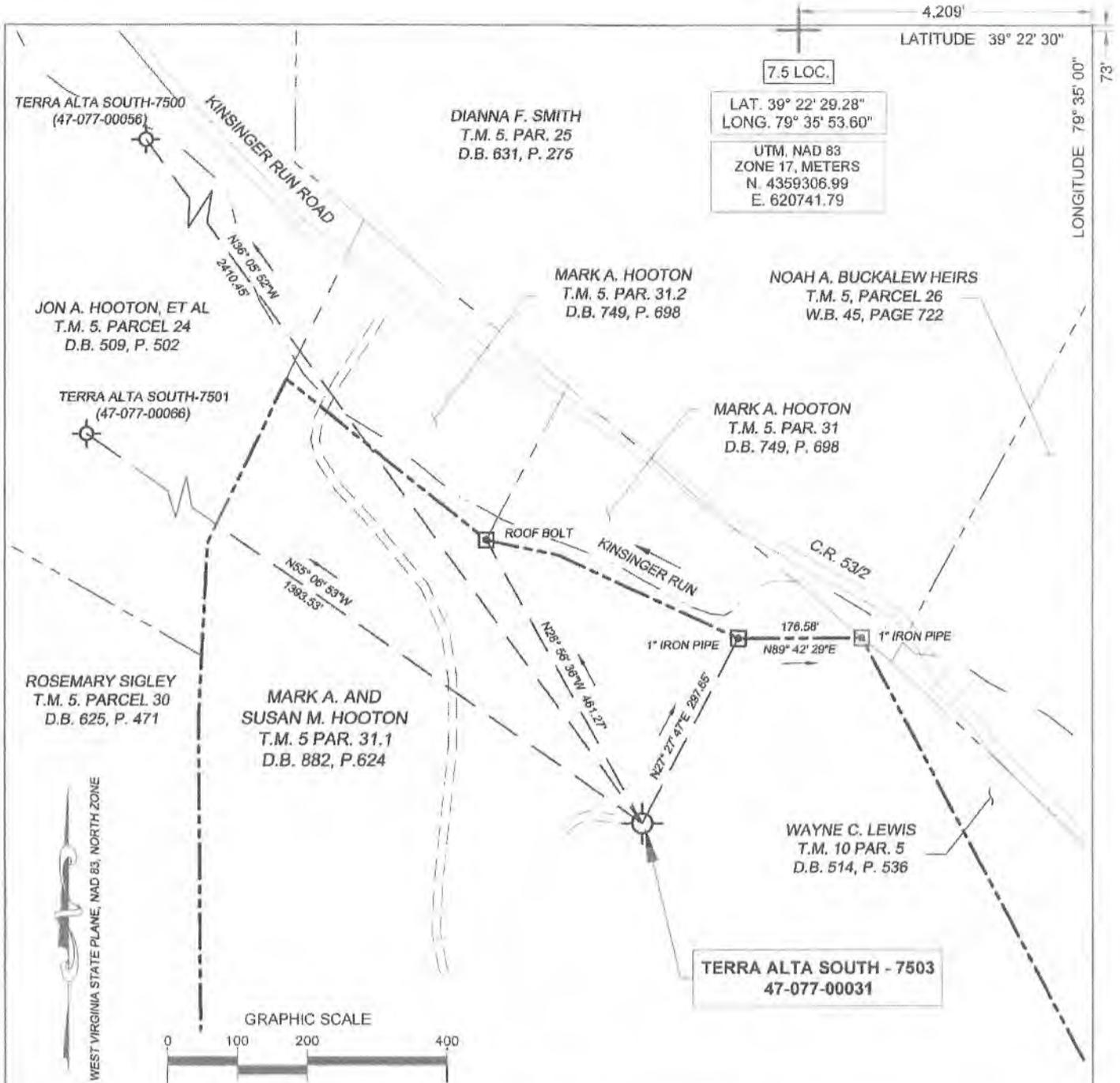
- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and surface material to be applied as needed

↑N



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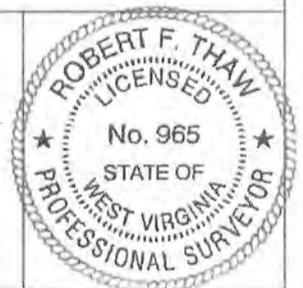
(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE No **2001-3079-001-018**  
 DWG No. **TERRA ALTA SOUTH-7503**  
 SCALE **1"=200'**  
 MINIMUM DEGREE OF ACCURACY **1:200**  
 PROVEN SOURCE OF ELEVATION **TRIMBLE R10**  
 GPS UNIT

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.

(SIGNED) *R. Thaw*  
**ROBERT F. THAW**

PS #965



STATE OF WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS  
 NITRO, WV



DATE **NOVEMBER 24** 2020  
 OPERATOR'S WELL No. **7503**  
 API WELL No.

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  STATE **47** COUNTY **077** PERMIT **00031P**

LOCATION: ELEVATION **1888.9'** WATER SHED **KINSINGER RUN OF SALTICK CREEK**

DISTRICT **UNION** COUNTY **PRESTON**  
 QUADRANGLE **TERRA ALTA, WV** ACREAGE **56**

SURFACE OWNER **MARK A. HOOTON, SUSAN M. HOOTON**  
 OIL & GAS ROYALTY OWNER **D.C. BISHOFF, ET UX** LEASE No. **1090480-000** LEASE ACREAGE **86**

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
 PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION   
 OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG

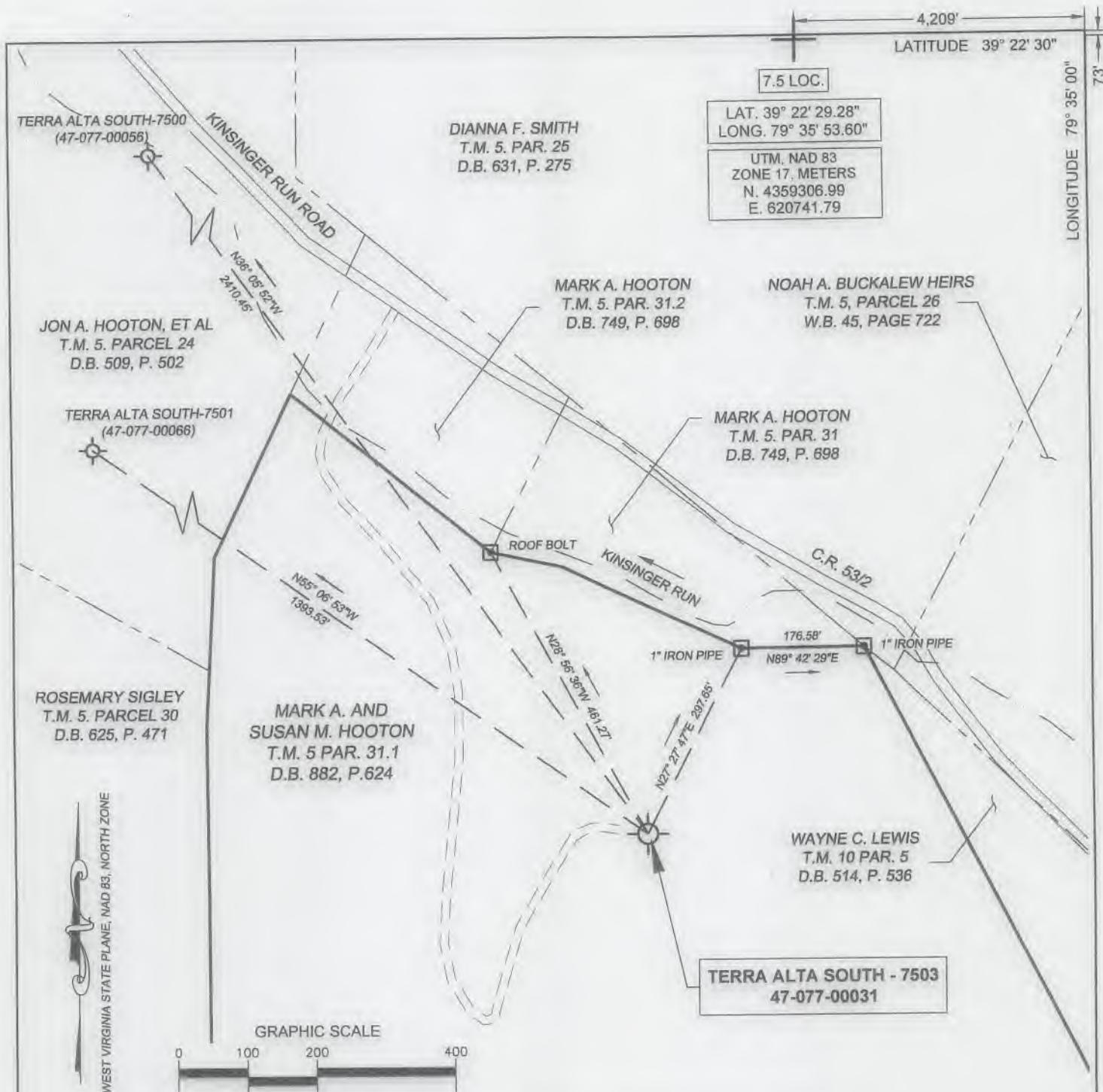
05/14/2021

TARGET FORMATION **CHERT/ORISKANY** ESTIMATED DEPTH **5615**

WELL OPERATOR **COLUMBIA GAS TRANSMISSION, LLC** DESIGNATED AGENT **JAMES AMOS**

ADDRESS **PO BOX 1273, CHARLESTON, WV 25325-1273** ADDRESS **48 COLUMBIA GAS ROAD SANDYVILLE, WV 25275**

FORM IV-6 (8-78)

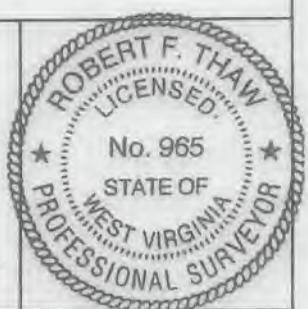


(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE No. 2001-3079-001-018  
 DWG No. TERRA ALTA SOUTH-7503  
 SCALE 1"=200'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION TRIMBLE R10  
 GPS UNIT

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.

(SIGNED) *R. F. Thaw*  
**ROBERT F. THAW PS #965**



FORM IV-6 (8-78)

**STATE OF WEST VIRGINIA**  
**DIVISION OF ENVIRONMENTAL PROTECTION**  
**OFFICE OF OIL AND GAS**  
 NITRO, WV

DATE NOVEMBER 24 2020  
 OPERATOR'S WELL No. 7503  
 API WELL No. 47 077 - 00031P

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  STATE 47 COUNTY 077 PERMIT 00031P  
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION 1888.9' WATER SHED KINSINGER RUN OF SALTICK CREEK  
 DISTRICT UNION COUNTY PRESTON  
 QUADRANGLE TERRA ALTA, WV

SURFACE OWNER MARK A. HOOTON, SUSAN M. HOOTON ACREAGE 56  
 OIL & GAS ROYALTY OWNER D.C. BISHOFF, ET UX  
 LEASE No. 1090480-000 LEASE ACREAGE 86

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
 PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION   
 OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG

TARGET FORMATION CHERT/ORISKANY ESTIMATED DEPTH 5615

WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT JAMES AMOS  
 ADDRESS PO BOX 1273, CHARLESTON, WV 25325-1273 ADDRESS 48 COLUMBIA GAS ROAD SANDYVILLE, WV 25275

05/14/2021