



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

May 19, 2015

WELL WORK PERMIT

Re-Work

This permit, API Well Number: 47-7700005, issued to COLUMBIA GAS TRANSMISSION, LLC, 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: 7369
Farm Name: LEWIS, C. E.
API Well Number: 47-7700005
Permit Type: Re-Work
Date Issued: 05/19/2015

Promoting a healthy environment.

05/22/2015

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

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 §22-6-20, 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. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. 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.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.
8. 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.

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

1) Well Operator: Columbia Gas Transmission, LLC

307032	Preston	Portland	Terra Alta
--------	---------	----------	------------

Operator ID County District Quadrangle

2) Operator's Well Number: Terra Alta 7369 (existing well) 3) Elevation: 2002

4) Well Type: (a) Oil _____ or Gas X
(b) If Gas: Production _____ / Underground Storage X
Deep X / Shallow _____

5) Proposed Target Formation(s): Chert & Oriskany Proposed Target Depth: 5390 - 6170

6) Proposed Total Depth: 6227 (existing) Feet Formation at Proposed Total Depth: Helderberg

7) Approximate fresh water strata depths: 40', 550', 1280' (as reported by driller in 1947)

8) Approximate salt water depths: 1466', 3384' (as reported by driller in 1947)

9) Approximate coal seam depths: none reported by driller in 1947

10) Approximate void depths,(coal, Karst, other): none reported by driller in 1947

11) Does land contain coal seams tributary to active mine? no

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)
Obtain pipe inspection and cement bond log. Clean wellbore using coil tubing and perform acid stimulation.

* Casing and tubing listed below are existing.

13) **CASING AND TUBING PROGRAM**

MJK 3/13/2015

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	12.5 / 10.75	?? / J-55	48 / 32.75	25 / 129	25 / 129	likely cemented but no record
Fresh Water	8.625	J-55	24	1503	1503	likely cemented but no record
Coal						
Intermediate	7	J-55	17	5358	5358	likely cemented but no record
Production	4.5	J-55	12.6	6210	6210	Stage 1: 135 sx / Stage 2: 415 sx
Tubing						
Liners						

Received
Office of Oil & Gas
MAR 30 2015

Packers: Kind: _____
Sizes: _____
Depths Set _____

WORK ORDER

REQUEST NO. 1882
 DATE April 13, 1959

BUDGET NO. 454 WORK ORDER NO. 2928
 DATE ISSUED April 21, 1959

COMPANY Atlantic Seaboard Corporation DEPT. Storage DIVISION Elkins
 DISTRICT

PROPOSED WORK To recondition well for storage.

KNOWN AS Well X-76-7369 Addition NO. _____ ORIGINAL INSTALLATION DATE _____
 PURPOSE AND NECESSITY To recondition well for storage in Pool X-76

LOCATION: Cora E. Lewis Farm
 IN _____ DISTRIBUTION PLANT _____ MAGISTERIAL DISTRICT _____ JAKING DISTRICT _____ COUNTY _____ STATE _____

RELATED PROJECT WORK ORDER NO. 2884 FOR Drill Deeper Part Removal

APPROVED BY H. C. Mefford, Jr. APPROVED BY _____

DETAIL OF EXPENDITURES

MATERIAL TO BE INSTALLED	UNIT PRICE	SIZE	ESTIMATE		ACTUAL		VARIATION
			QUANTITY	AMOUNT	QUANTITY	AMOUNT	
Steel Casing 12.6# J-55	1.44	4-1/2"	5,825'	8,388.00			
Float Shoe		4-1/2"	1	49.00			
Float Collar		4-1/2"	1	50.00			
Casing Centralizers	15.25	4-1/2"	16	244.00			
Wellhead & Misc. Fittings			1	1,000.00			
TOTAL MATERIAL				9,731.00			
INSTALLATION OPERATIONS COST							
Direct Labor Engineering and Supervision				2,500.00			
Use of Spudder				3,500.00			
Use of Equipment - Special Packer Rental				330.00			
Use of Auto and Hauling				2,500.00			
Tools, Supplies and Miscellaneous Expense				1,000.00			
Stores Expense & Freight				1,362.00			
Mud Acid				1,000.00			
Pressure Test Casing				1,100.00			
Cement and Services				6,000.00			
Logging, Perforating and Fracturing.				8,350.00			
Labor Overheads				426.00			
Administrative and General Labor Overheads				75.00			
TOTAL INSTALLATION OPERATIONS COST				28,143.00			
TOTAL ESTIMATE				37,874.00			

INDICATE NORTH _____ SKETCH (CORRECT TO ACTUAL) _____ INVENTORY MAP NO. _____

Note: Move in spudder to remove string of tools lost in hole. Following drill deeper by rotary, move in spudder to recondition well for storage by testing casing, running and cementing casing, logging and stimulating formation.

05/22/2015

2-454-2928

C & A 468
7700005W

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
W E L L R E C O R D

Permit No: Pres 5
Kingwood Quad.

TERRA ALTA 7369

Gas Well
CASING & TUBING

Company	Wm. E. Snee & Orville Eberly			
Address	P.O. Box 313, West Elizabeth, Pa.	12½	24'6	Same
	& Union Trust Bldg., Uniontown, Pa.	10	149'1	129'1
Farm	Cora E. Lewis Acres 117	8½	1503'5	Same
Location	Salt Lick	7 OD	5358'	Same
Well No.	1			
District	Elev. 1995'			
Surface	Portland Preston County			
Mineral	Cora E. Lewis, Terra Alta, W.Va.			
Commenced	Cora E. Lewis, Terra Alta, W.Va.			
Completed	Dec. 21, 1946			
Open flow	June 20, 1947			
Volume	35/10ths W in 7" ID Opening			
Rock Pressure	3,005,000 C.F.			
Fresh Water	2320 lbs. -- hrs.			
Salt Water	40'; 550'; 1280';			
	1466' 10 blrs. W in 1 1/2 hrs.			
	3384-86'			

Gravel	0	24	Sand	2415	2478
Lime	24	72	Slate & Shell	2478	3381
Slate	72	80	Sand	3381	3400
Lime	80	97	Slate & Shell	3400	3968
Slate	97	100	Br. Shale	3968	4075
Lime	100	116	Gr. Shale	4075	4092
Slate	116	119	Br. Shale Grad.	4092	4983
Lime	119	132	Lime Shells	4983	5058
Slate	132	135	Lime Shale	5058	5081
Lime	135	150	Lime	5081	5091
Slate	150	172	Shale	5091	5327
Broken Lime	172	205	Onondago Lime	5327	5385
Slate	205	222	Chert	5385	5426
Lime	222	362	Total Depth		5426
Slate	362	375			
Lime	375	553	Gas pocket 1360		
Slate	553	570	Gas show 2475		
Lime	570	605	Water and gas 3384-86		
Slate	605	638			
Lime & Sand	608	669	First Gas 5413 about 15,000 C.F. per day		
Slate	669	672	Gas 5413-5416-125,000 C.F. per day		
Lime	672	705	Gas 5416-5418 313,000 C.F.		
Slate	705	715	Gas 5418-5422 795,000 C.F.		
Lime	715	730	Gas 5422-5424 1,000,000 C.F.		
Slate & Shells	730	760	Gas 5424-5426, 3,055,000 C.F.		
Slate	760	775			
Slate & Shells	775	835			
Slate	835	902	NOTE: Gas turned into pipe line 6-2-47		
Lime & Sand	902	984			
Slate	984	988			
Lime	988	1063			
Slate	1063	1150			
Lime	1150	1231			
Slate	1231	1250			
Lime	1250	1278			
Sand	1278	1282	Water and Gas 1280'		
Slate	1282	1289			
Sand	1289	1310			
Slate	1310	1325			
Sand	1325	1433			
Br. Sand Benson	1433	1466			
Slate	1466	1470			
Lime	1470	1499			
Slate	1499	1531			
Lime	1531	1550			
Slate	1550	1570			
Lime	1570	1730			
Slate & Shell	1730	1835			
Sandy Lime	1835	1950			
Slate & Shell	1950	2415			

F 24368

05/22/2015

7700005W

COMPLETION REPORT

MAKE NECESSARY REVISIONS ON SKETCH TO SHOW WORK ACTUALLY PERFORMED, INDICATING LOCATION AND DIMENSIONS OF SPECIAL CONSTRUCTION.

FOR LINE WORK ON ESTABLISHED STREET OR HIGHWAY, INDICATE ON SKETCH THE DISTANCE OF LINE FROM ADJOINING PROPERTY, ALSO PORTION UNDER PAVING.

WHEN LINE EXTENDS INTO TWO OR MORE TAX DISTRICTS, LIST BELOW PORTION INSTALLED OR RETIRED, IN EACH

Table with 4 columns: FT. OF, SIZE, KIND, TOWN TWP, DIST., COUNTY. Multiple rows for recording location data.

MATERIAL INSTALLED OR RETIRED

MATERIAL INSTALLED OR RETIRED

Main table with 6 columns: QUANTITY, SIZE, DESCRIPTION, QUANTITY, SIZE, DESCRIPTION. Contains handwritten entries for various materials like tubing, metal baskets, concrete, cement, etc.

MATERIAL TRANSFER NUMBERS: 9-11, 10-3, 11-37 - P.O. 11449, 193, 7097, TRK # 12-66

PIPE COATING

ORIGINAL INSTALLATION DATES OF PROPERTY RETIRED

Table with 7 columns: QUANTITY, KIND, FT. OF PIPE, QUANTITY, KIND, DATE. For recording pipe coating and installation dates.

TYPE OF JOINTS
EXCAVATION: BY HAND FT. MACHINE FT.
WIDTH OF TRENCH FT. AVG. DEPTH FT.
TYPE OF PAVING
PAVING CUT: WIDTH FT. LENGTH FT.
DESCRIBE NATURE OF SOIL:
REPORT UNUSUAL CONDITIONS ENCOUNTERED IN CONSTRUCTION:

INFORMATION TO BE FURNISHED FOR SMALL STRUCTURES.
OUTSIDE DIM. LENGTH WIDTH
HEIGHT TO EAVES HEIGHT TO RIDGE
FOUNDATION: KIND
FOUNDATION: THICKNESS HEIGHT ABOVE GROUND DEPTH BELOW GROUND
FLOOR: KIND THICKNESS
WALL: KIND THICKNESS
ROOF: TYPE KIND
DOORS: NO. SIZE KIND
WINDOWS: NO. SIZE KIND
PAINTING
MISCELLANEOUS

05/22/2015

REASON FOR OVERRUN - UNDERRUN:

DATE WORK STARTED August 12, 19 59 DATE WORK COMPLETED October 13, 19 59
COMPILED BY DATE 19 APPROVED BY [Signature] DATE 12-14 19 59

2700005W

7007 0710 0003 2294 8204

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

OFFICIAL USE

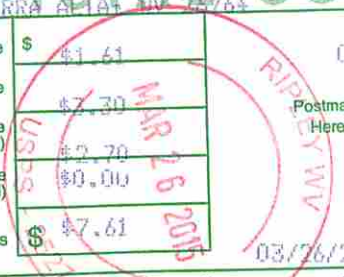
Postage	\$ 41.61	0271
Certified Fee	\$ 7.30	06
Return Receipt Fee (Endorsement Required)	\$ 2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	
Total Postage & Fees	\$ 51.61	03/26/2015

Sent To **Dorothy A. Bolyard**

Street, Apt. No.,
or PO Box No. **60 Lewis Lane**

City, State, ZIP+4 **Terra Alta, WV 26764**

PS Form 3800, August 2006 See Reverse for Instructions



05/22/2015

7700005W

WW-2A1
(Rev. 1/11)

Operator's Well Number Terra Alta 7369

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

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

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

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Roy L. Lewis, et ux	Columbia Gas Transmission, LLC	Storage Lease 90395	339 / 616

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

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

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

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

Well Operator:
By: Its:

Columbia Gas Transmission, LLC
 James E. Amos
 Senior Well Services Engineer

James E. Amos
 Received
 Office of Oil & Gas

MAR 30 2015
05/22/2015

7700005W

WW-9
Rev. 5/10

Page _____ of _____
API Number 47 - 077 - 00005
Operator's Well No. Terra Alta 7369

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 Columbia Gas Transmission, LLC OP Code 307032

Watershed Saltlick Creek Quadrangle Terra Alta

Elevation 2002 County Preston District Portland

Description of anticipated Pit Waste: no earthen pit to be utilized

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

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

Proposed Disposal Method For Treated Pit Wastes:
 Land Application
 Underground Injection (UIC Permit Number 34-009-03761, 34-121-20459, 47-093-00103, 34-167-23862)
 Reuse (at API Number _____)
 Off Site Disposal (Supply form WW-9 for disposal location)
 Other (Explain Pinegrove Landfill - Amanda, OH)

WELL EFFLUENT MUST BE CONTAINED
IN TANKS. JMM

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

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

Additives to be used? biocide, surfactant

Will closed loop system be used? yes

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. not anticipated

-If left in pit and plan to solidify what medium will be used? Cement, lime, sawdust _____

-Landfill or offsite name/permit number? IF NEEDED: Pinegrove Landfill - Amanda, OH

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 James E. Amos

Company Official (Typed Name) James E. Amos

Company Official Title Senior Well Services Engineer

Received
Office of Oil & Gas
MAR 30 2015

Subscribed and sworn before me this 11th day of March, 2015

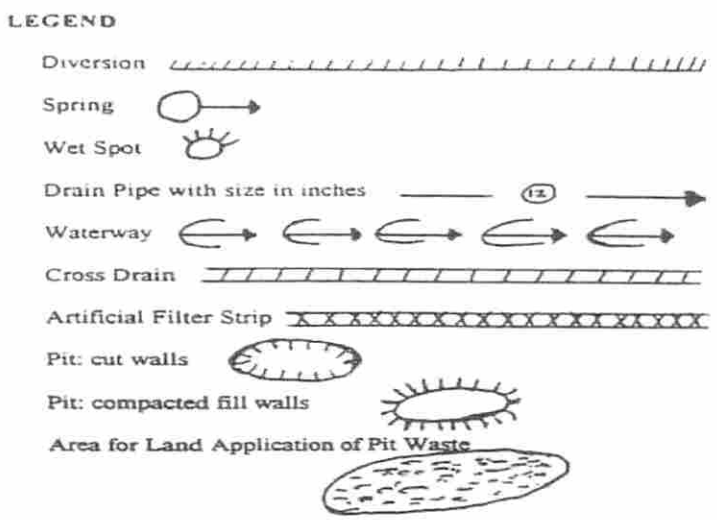
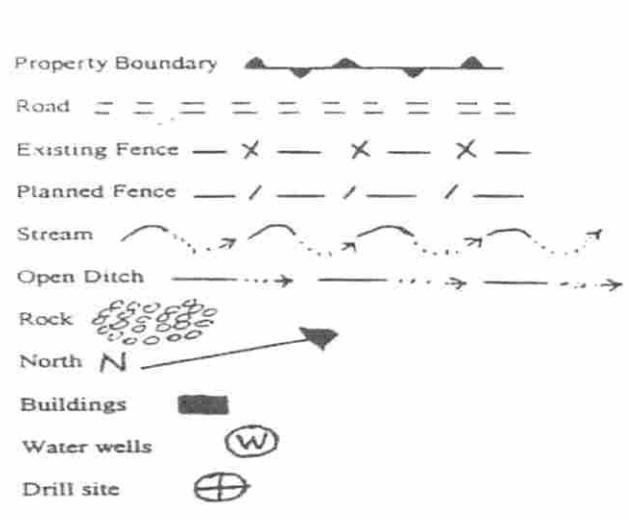
Mary Marie Clendenen

My commission expires 3/22/2015

Notary Public



770005W



Proposed Revegetation Treatment: Acres Disturbed < 0.5 Prevegetation pH 6

Lime 2 Tons/acre or to correct to pH 6.5

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

Mulch 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Orchard Grass	20	Orchard Grass	20
Ledino Clover	10	Ledino Clover	10
Annual Rye	20	Annual Rye	20

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: _____

Title: Inspection

Date: 3/13/2015

Field Reviewed? (X) Yes () No

Received
Office of Oil & Gas
MAR 30 2015

05/22/2015



WV DEP Reclamation Plan - Overview
 Terra Alta 7369 Stimulation

- Existing road surface and culverts to be maintained
 - BMPs to be utilized per WV DEP guidelines

Terra Alta 7369

access road

51

Sallick Rd

Google earth

© 2015 Google



Googleearth

Received
 Office of Oil & Gas
 MAR 30 2015

05/22/2015



Received
Office of Oil & Gas
MAR 30 2015

(VALLEY POINT)



039° 26' 05.91" N

079° 35' 00.00" W

(CUZZART)

079° 34' 00.00" W

079° 33' 00.00" W

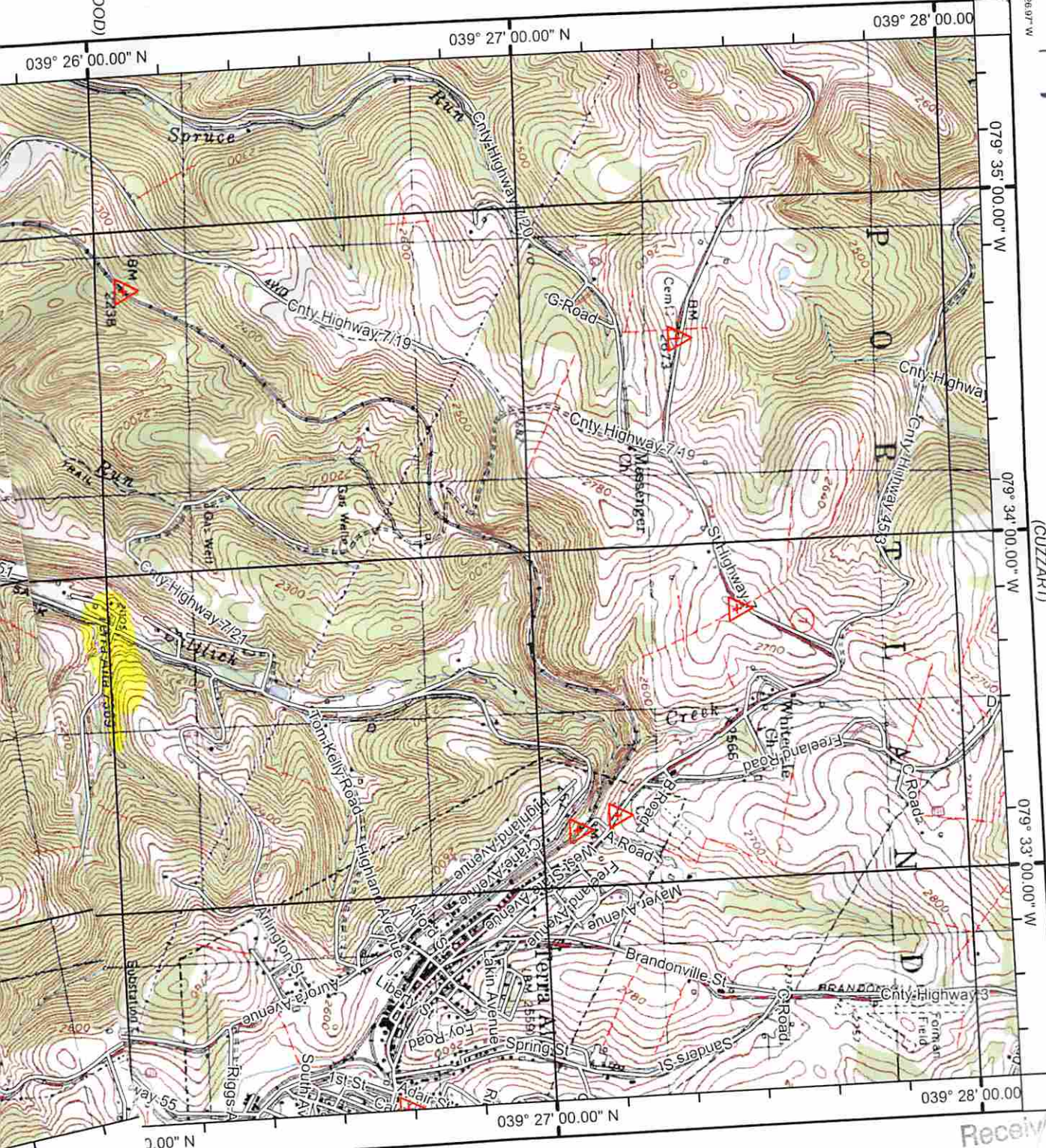
039° 28' 00.00" N

(KINGWOOD)

039° 26' 00.00" N

039° 27' 00.00" N

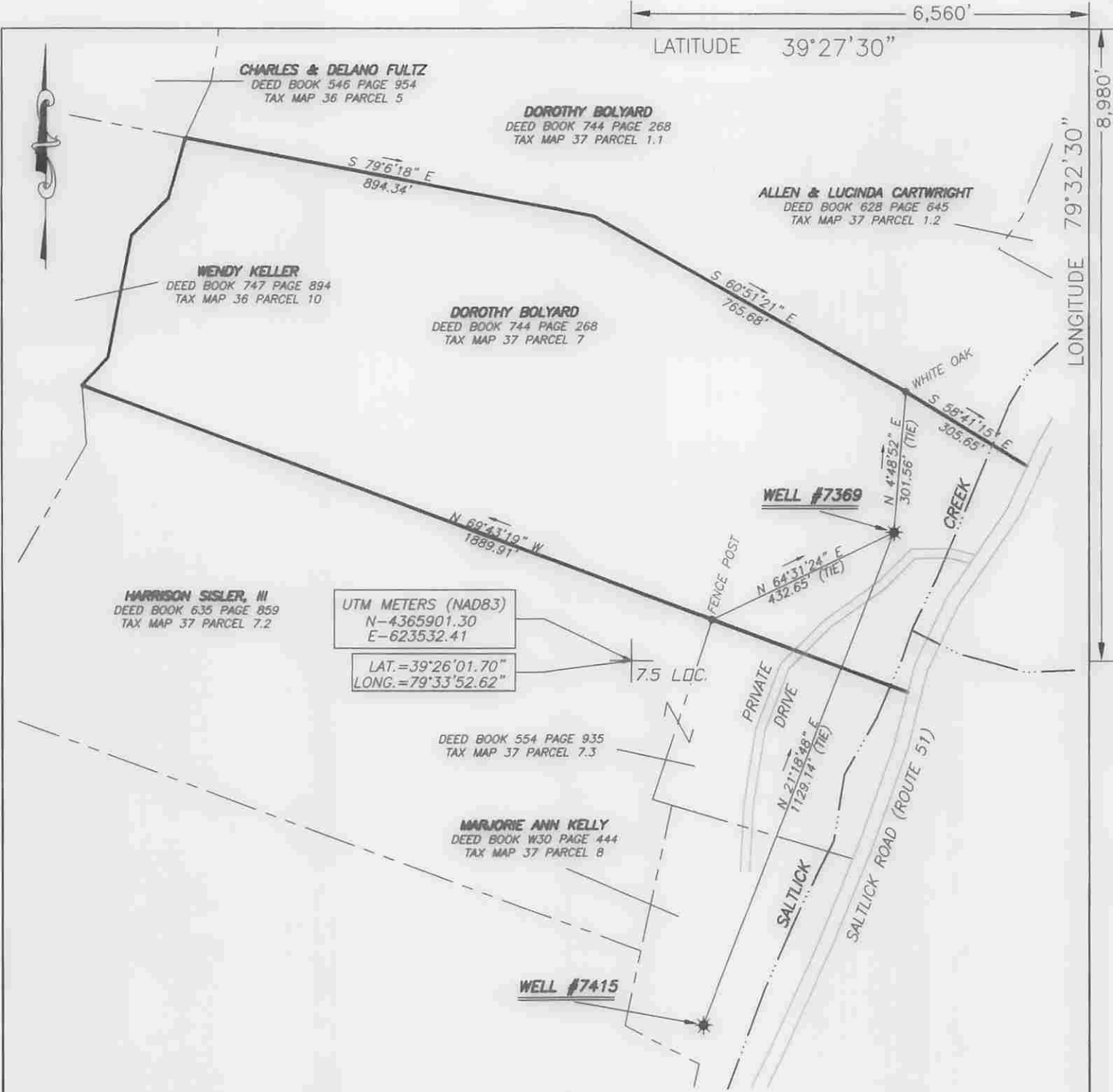
039° 28' 00.00" N



Received
Office of C
MAR 3

Received
Office of Oil & Gas
MAR 30 2015

05/22/2015



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

FILE No. 14-100-033
 DRAWING No. 14-100-033
 SCALE 1"=300'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION TRIMBLE PRO XH 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) *Richard J. Prine*
 RICHARD J. PRINE PS #851



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

DATE FEBRUARY 23 20 15
 OPERATOR'S WELL No. 7369
 API WELL No. 47 077 - 00005 W

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

LOCATION: ELEVATION 2002 WATER SHED SALTICK CREEK
 DISTRICT PORTLAND COUNTY PRESTON
 QUADRANGLE TERRA ALTA

SURFACE OWNER DOROTHY A. BOLYARD ACREAGE 27.52
 OIL & GAS ROYALTY OWNER ROY L. LEWIS, ET UX LEASE ACREAGE 118
 LEASE No. 90395

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ACID TREATMENT

PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION CHERT & ORISKANY ESTIMATED DEPTH 6227
 WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT PAUL AMICK
 ADDRESS PO BOX 1273, CHARLESTON, WV ADDRESS P.O. BOX 1273, CHARLESTON W.V.
25325-1273 25325-1273

05/22/2015

FORM IV-6 (8-78)