



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

March 15, 2016

WELL WORK PERMIT

Re-Work

This permit, API Well Number: 47-3901264, 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: COCA B 7043
Farm Name: HARDWAY, NELSON
API Well Number: 47-3901264
Permit Type: Re-Work
Date Issued: 03/15/2016

Promoting a healthy environment.

03/18/2016

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, drilling ceased, completion of any other permitted well work and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WW - 2B
(Rev. 8/10)

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 | Kanawha | Elk | Blue Creek, WV |
|--------|---------|-----|----------------|

Operator ID County District Quadrangle

2) Operator's Well Number: Coco B 7043 3) Elevation: 896.2 ft

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

5) Proposed Target Formation(s): Oriskany Proposed Target Depth: 5206

6) Proposed Total Depth: 5320 (existing) Feet Formation at Proposed Total Depth: Helderberg

7) Approximate fresh water strata depths: none reported by driller in 1946

8) Approximate salt water depths: 1039' in Salt Sand (as reported by driller in 1946)

9) Approximate coal seam depths: none reported by driller

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

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 logs. Perform coiled tubing clean-out and fracture stimulate.

Avery
2-17-16

13) **CASING AND TUBING PROGRAM** * existing tubulars

| TYPE | SPECIFICATIONS | | | FOOTAGE INTERVALS | | CEMENT |
|--------------|----------------|-------|---------------|-------------------|--------------|--------------------|
| | Size | Grade | Weight per ft | For Drilling | Left in Well | Fill -up (Cu. Ft.) |
| Conductor | 13.375 | | 48 | 515 | 0 | none |
| Fresh Water | 10.75 | H-40 | 32.75 | 1680 | 1680 | no record of cmt |
| Coal | 8.625 | J-55 | 28 | 2048 | 2048 | 23 sx |
| Intermediate | 7 | K-55 | 22 | 5162 | 5162 | 125 sx |
| Production | 4.5 | N-80 | 11.60 | 5282 | 5282 | 90 sx |
| Tubing | | | | | | |
| Liners | | | | | | |

| TYPE | SPECIFICATIONS | | | FOOTAGE INTERVALS | | CEMENT |
|--------------|----------------|-------|---------------|-------------------|--------------|--------------------|
| | Size | Grade | Weight per ft | For Drilling | Left in Well | Fill -up (Cu. Ft.) |
| Conductor | 13.375 | | 48 | 515 | 0 | none |
| Fresh Water | 10.75 | H-40 | 32.75 | 1680 | 1680 | no record of cmt |
| Coal | 8.625 | J-55 | 28 | 2048 | 2048 | 23 sx |
| Intermediate | 7 | K-55 | 22 | 5162 | 5162 | 125 sx |
| Production | 4.5 | N-80 | 11.60 | 5282 | 5282 | 90 sx |
| Tubing | | | | | | |
| Liners | | | | | | |

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Office of Oil and Gas
FEB 19 2016

Packers: Kind: _____
 Sizes: _____
 Depths Set _____

WV Department of
Environmental Protection

03/18/2016

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: HARDWAY, NELSON Operator Well No.: COCA B 7043

LOCATION: Elevation: 897.30 Quadrangle: BLUE CREEK

District: ELK County: KANAWHA
Latitude: 2200 Feet South of 38 Deg. 25Min. 0 Sec.
Longitude 3020 Feet West of 81 Deg. 27 Min. 30 Sec.

Company: COLUMBIA GAS TRANSMISSION
P. O. BOX 1273
CHARLESTON, WV 25325-1273

Agent: RICHARD L. COTY

Inspector: CARLOS HIVELY
Permit Issued: 02/20/98
Well work Commenced: 03/18/98
Well work Completed: 05/02/98
Verbal Plugging
Permission granted on: _____
Rotary Cable Rig
Total Depth (feet) 5327'
Fresh water depths (ft) N/A

Salt water depths (ft) 1039'

Is coal being mined in area (Y/N)? N
Coal Depths (ft) 288' - 293', 360' - 363'

| Casing & Tubing Size | Used in Drilling | Left in Well | Cement Fill Up Cu. Ft. |
|----------------------|------------------|--------------|------------------------|
| 10-3/4" | | 1680' | |
| 8-5/8" | | 2048' | 23 sx |
| 7" | | 5162' | 125 sx |
| 4-1/2" | | 5282' | 90 sx |

OPEN FLOW DATA

5218' - 5250'

Producing formation Oriskany Storage Pay zone depth (ft) _____
 Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d
 Final open flow N/A MCF/d Final open flow N/A Bbl/d
 Time of open flow between initial and final tests N/A Hours
 Static rock Pressure N/A psig (surface pressure) after N/A Hours

Second producing formation _____ Pay zone depth (ft) _____
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow _____ MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: COLUMBIA GAS TRANSMISSION CORP.

By: John V. McCallister
Date: 2/24/99

03/18/2016

- 3/24/98 Drilled 6-1/8" hole to 5327' (Helderbury Lime).
- 3/27/98 Ran 5282' of 4-1/2", 11.6 lb, N-80 casing cemented with 90 sx of Class "A".
- 4/24/98 Baker NC-1 bridgeplug set at 5270', 4' cal-seal on plug.
- 4/27/98 Perforated Oriskany from 5240' - 5244' and 5248' - 5250', and 5218' - 5236' with 6 spf.
- 4/29/98 Fractured Oriskany with N2Assist Deltafrac using 413 bbls of H2O, 200 mscf N2, 29,000# of 20/40 sand at 1 - 4 ppg.

3901264W
7043

United Fuel Gas Company
COMPANY

SERIAL WELL NO. 5569 LEASE NO. 924 MAP SQUARE 70-63

| RECORD OF WELL NO. <u>5569</u> on the <u>Elitha J. Gillispie</u> farm of <u>100</u> Acres in <u>Elk</u> District <u>Kanawha</u> County State of: <u>West Virginia</u> Field: <u>Clendenin</u> Rig Commenced <u>Contractor's Rig</u> 194 Rig Completed 194 Drilling Commenced <u>March 29,</u> 194 ⁶ Drilling Completed <u>August 29,</u> 194 ⁶ Drilling to cost _____ per foot Contractor is: <u>Liming & Summers</u> Address: <u>Clendenin, W. Va</u> Driller's Name <u>Freak Harris</u> <u>Willard Elkins</u> Elevation: <u>997.3 Gr.</u> | CASING AND TUBING | | | | TEST BEFORE SHOT |
|--|-------------------|---------------|---------------------------------|----------------|--|
| | SIZE | WEIGHT | USED IN DRILLING | LEFT IN WELL | |
| | <u>13-3/8"</u> | <u>48#</u> | <u>515'9"</u> | <u>Pulled</u> | /10 of Water in _____ inch <u>10</u> /10 of Merc. in <u>7"22"</u> inch Volume <u>6,166.000</u> Cu. ft. |
| | <u>10-3/5"</u> | <u>32.75#</u> | <u>1680'5"</u> | <u>1680'5"</u> | |
| | <u>8-5/8"</u> | <u>28#</u> | <u>2048'3"</u> | <u>2048'3"</u> | TEST AFTER SHOT |
| | <u>7"-OD</u> | <u>22#</u> | <u>5162'7"</u> | <u>5162'7"</u> | /10 of Water in _____ inch |
| | <u>2"</u> | <u>4#</u> | <u>5267'4"</u> | <u>5267'4"</u> | /10 of Merc. in _____ inch Volume _____ Cu. ft. |
| | | | | | Hours After Shot _____ |
| | | | | | Rock Pressure <u>14 1/2</u> <u>1160</u> |
| | | | | | Date Shot _____ |
| | | | | | Size of Torpedo _____ |
| | | | SHUT IN | | Oil Flowed _____ bbls. 1st 24 hrs. |
| | | | Date _____ | | Oil Pumped _____ bbls. 1st 24 hrs. |
| | | | _____ in. Tubing on Casing | | |
| | | | Size of Packer _____ | | Well abandoned and |
| | | | Kind of Packer _____ | | Plugged _____ 194 |
| | | | 1st. Perf. Set _____ from _____ | | |
| | | | 2nd Perf. Set _____ from _____ | | |

DRILLER'S RECORD

| FORMATION | TOP | BOTTOM | THICKNESS | REMARKS |
|-------------------|-----|--------|-----------|---------|
| Red Rock | 0 | 28 | 28 | |
| Slate & Shells | 28 | 150 | 222 | |
| Sand | 150 | 185 | 35 | |
| Slate & Shells | 185 | 225 | 40 | |
| Sand | 225 | 275 | 50 | |
| Slate | 275 | 288 | 13 | |
| Coal | 288 | 293 | 5 | |
| Sand | 293 | 360 | 67 | |
| Coal | 360 | 363 | 3 | |
| Black Lime | 363 | 405 | 42 | |
| Slate | 405 | 440 | 35 | |
| Sand | 440 | 515 | 75 | |
| Slate & Shells | 515 | 540 | 25 | |
| Sand | 540 | 585 | 45 | |
| Slate-Lime Shells | 585 | 636 | 51 | |
| Sand | 636 | 676 | 40 | |
| Slate & Shells | 676 | 760 | 84 | |

03/18/2016

3901264W 7043

SERIAL WELL NO. 2162

LEASE NO. 924

MAP SQUARE 71-63

DRILLER'S RECORD

| FORMATION | TOP | BOTTOM | THICKNESS | REMARKS |
|-----------------------|------|--------|-----------|-----------------------------|
| Sand | 760 | 798 | 38 | |
| Slate & Shells | 798 | 830 | 32 | |
| Gas Sand | 830 | 860 | 30 | |
| Slate & Shells | 860 | 925 | 65 | |
| Salt Sand | 925 | 1435 | 510 | Hole full of water at 1035' |
| Black Limestone | 1435 | 1452 | 17 | |
| Red Rock | 1452 | 1465 | 13 | |
| Limestone | 1465 | 1541 | 76 | |
| Slate | 1541 | 1557 | 16 | |
| Maxon Sand | 1557 | 1572 | 15 | |
| Slate | 1572 | 1575 | 3 | |
| Little Limestone | 1575 | 1612 | 37 | |
| Pencil Cave | 1612 | 1612 | 0 | |
| Big Limestone | 1612 | 1796 | 184 | |
| Injun Sand | 1796 | 1860 | 64 | Gas at 1800' No Test |
| Limestone Shells | 1860 | 1957 | 97 | Show of oil at 1970' |
| Wier Sand | 1957 | 2090 | 133 | Steel Line Measurement |
| Black Limestone | 2090 | 2090 | 0 | |
| Slate & Shells | 2090 | 2168 | 78 | |
| Brown Shale | 2168 | 2174 | 6 | |
| Berea Sand | 2174 | 2180 | 6 | |
| Slate & Shells | 2180 | 3400 | 1220 | |
| Brown Shale | 3400 | 3448 | 48 | |
| Limestone Shells | 3448 | 3732 | 284 | |
| Slate | 3732 | 3817 | 85 | |
| Brown Shale | 3817 | 3903 | 86 | |
| Slate & Shells | 3903 | 4170 | 267 | |
| White Slate | 4170 | 4592 | 422 | |
| Blue Slate | 4592 | 4662 | 70 | |
| Brown Shale | 4662 | 4978 | 316 | |
| White Slate | 4978 | 5008 | 30 | |
| Brown Shale | 5008 | 5089 | 81 | |
| Carniferous Limestone | 5089 | 5206 | 117 | Steel Line Measurement |
| Oriskany Sand | 5206 | 5237 | 31 | |

03/18/2016

**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 |
|------------------------|--------------------------------|---------------------------|------------|
| L. H. Gillispie, et al | Columbia Gas Transmission, LLC | Storage lease 1000924-000 | 126 / 1771 |

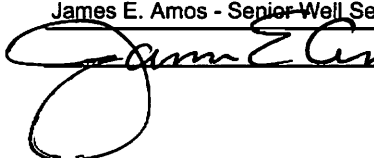
**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

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 Service Engineer


Office of Oil and Gas
 FEB 10 2016
 WV Department of Environmental Protection
 Environmental Protection
 03/18/2016

WW-2A Coal Waiver

* COAL NOT OPERATED

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County Kanawha
Operator Columbia Gas Transmission, LLC

Operator's Well Number Coco B 7043

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

To the coal operator, owner, or lessee named on page WW2-A. You are hereby notified that any objection you wish to make or are required to make by WV Code 22-6-15, 16 or 17, must be filed with the Chief of the Office of Oil and Gas within fifteen (15) days after the receipt of this application by the Office. Mail objections to:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0499 extension 1654

WAIVER

The undersigned coal operator ____ / owner ____ / lessee ____ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of well location, the well location has been added to the mine map. 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.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Signature Date

Company Name _____
By _____
Its _____ Date

Signature Date

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Office of Oil and Gas

FEB 19 2016

WV Department of
Environmental Protection

03/18/2016

WW-9
(2/15)

API Number 47 - 039 - 01264
Operator's Well No. Coco B 7043

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Columbia Gas Transmission, LLC OP Code 307032

Watershed (HUC 10) Pinch Creek Quadrangle Blue Creek, WV

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: _____

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 34-105-23619, 34-121-22459, 34-059-20965)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Rumpke Beech Hollow Landfill, Wellston, OH)

Will closed loop system be used? If so, describe: yes - steel lines to steel portable tank

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? N/A

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) _____

-Landfill or offsite name/permit number? _____

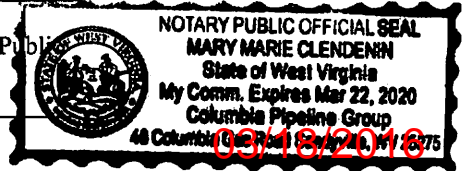
Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on 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

Subscribed and sworn before me this 16th day of February, 20 16
Mary Marie Clendenen
My commission expires 3/22/2020



Columbia Gas Transmission, LLC

Proposed Revegetation Treatment: Acres Disturbed 0.5 Prevegetation pH 6

Lime 2 Tons/acre or to correct to pH 6.5

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 |
| Orchard Grass and/or Tall Fescue | 29 | (if Tall Fescue is used, plant endophyte-free certified seed) | |
| Birdsfoot Trefoil (Empire) | 9 | (legumes to be inoculated by manufacturer's recommendation) | |
| Annual Rye | 12 | | |

* seed rate must be doubled for broadcast seeding

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: Upper Pinch ROAD

Title: Field Insp Oil & Gas

Date: 2-17-16

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Field Reviewed? Yes No

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WV Department of
Environmental Protection

03/18/2016

3901264 W

(ROMANCE)



BLUE CREEK QUADRANGLE
WEST VIRGINIA
TOPOGRAPHIC SERIES

(CLIO)

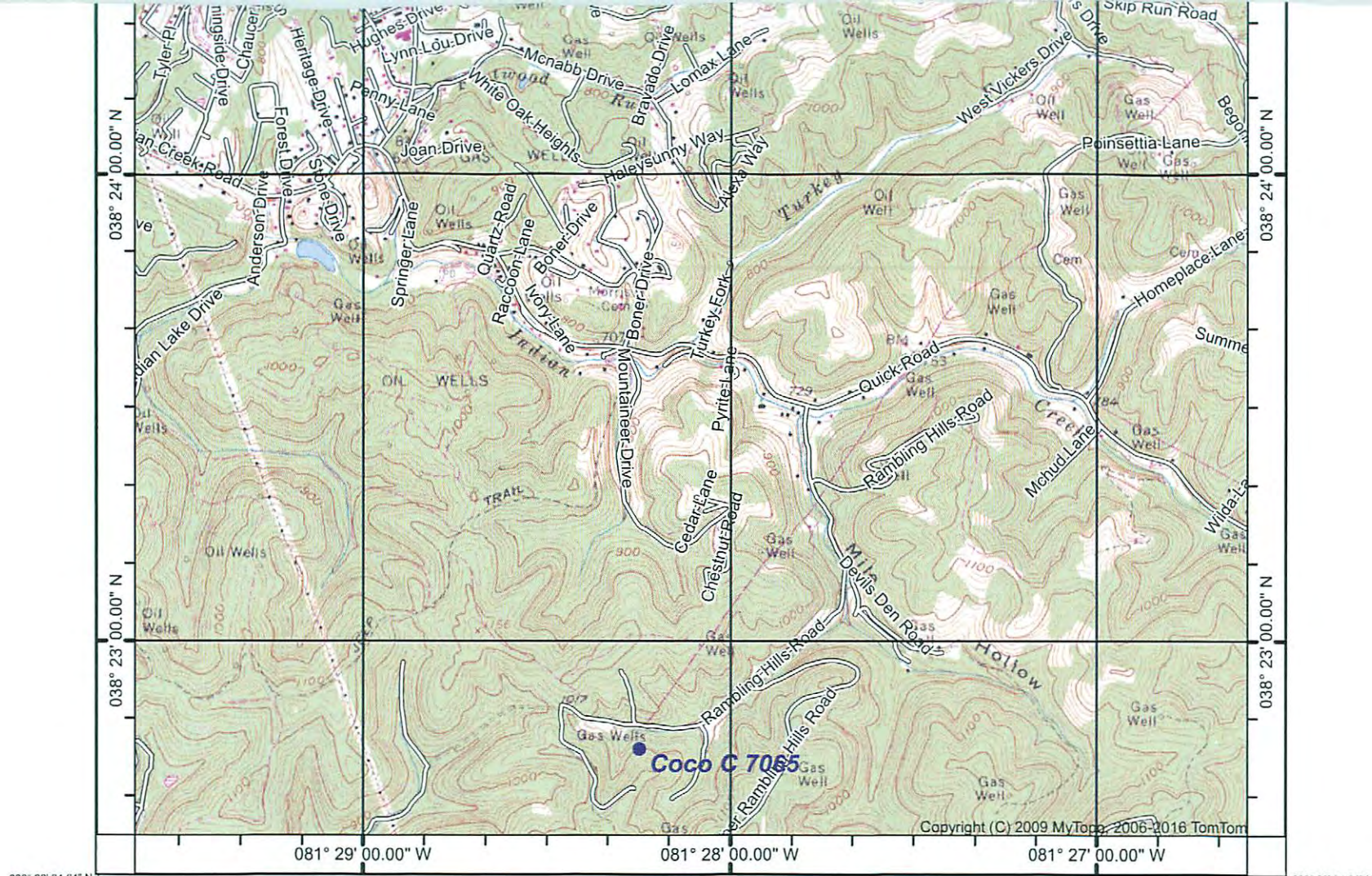
081° 29' 37.67" W (KETTLE) 081° 26' 34.80" W 038° 26' 43.76" N



(BIG CHIMNEY)

(CLEDENIN)

081° 29' 00.00" W 081° 28' 00.00" W 081° 27' 00.00" W 038° 26' 00.00" N 038° 25' 00.00" N



(CHARLESTON EAST)

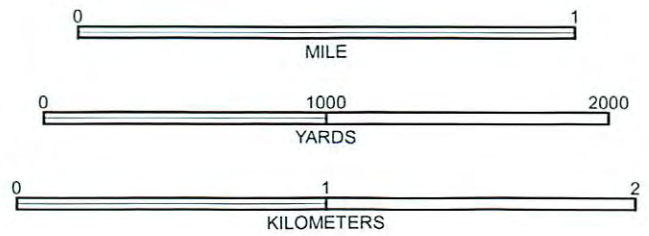
Produced by MyTopo Terrain Navigator
 Topography based on USGS 1:24,000 Maps
 North American 1983 Datum (NAD83)
 Polyconic Projection

To place on the predicted North American 1927 move the
 projection lines 11M N and 14M E

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 OFFICE OF OIL AND GAS
 ENVIRONMENTAL PROTECTION
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 FEB 10 2016



(QUICK)
 SCALE 1:24000



CONTOUR INTERVAL 20 FEET
 NATIONAL GEODETIC VERTICAL DATUM 1929

BLUE CREEK, WV
 1957

(MAMMOTH)




Coco B well 7043

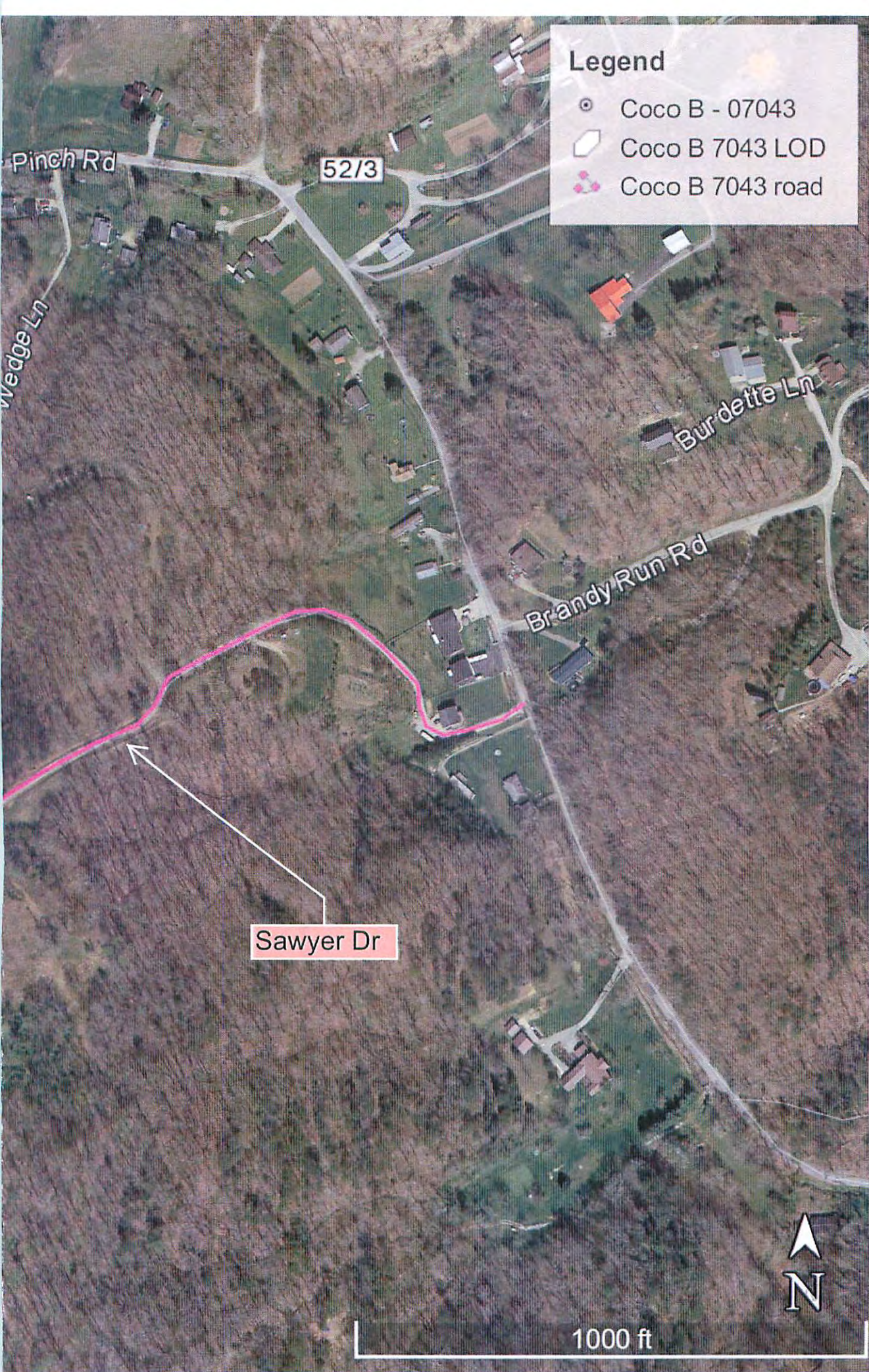
WV DEP Reclamation Plan 1 or 2 - Access Road Detail

- BMPs to be utilized per WV DEP guidelines
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and road surfacing material to be applied as needed



Legend

-  Coco B - 07043
-  Coco B 7043 LOD
-  Coco B 7043 road



Sawyer Dr

1000 ft



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 Department of
 Environmental Protection
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Coco B 7043

WV DEP Reclamation Plan 2 or 2 - Site Detail

- 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 surfacing material to be applied as needed



Limit of Proposed Disturbance on existing well site

< 5 degree slope

Google earth

© 2016 Google

03/18/2016

Legend

- ⊙ Coco B - 07043
- ▭ Coco B 7043 LOD
- ⋯ Coco B 7043 road

existing access road

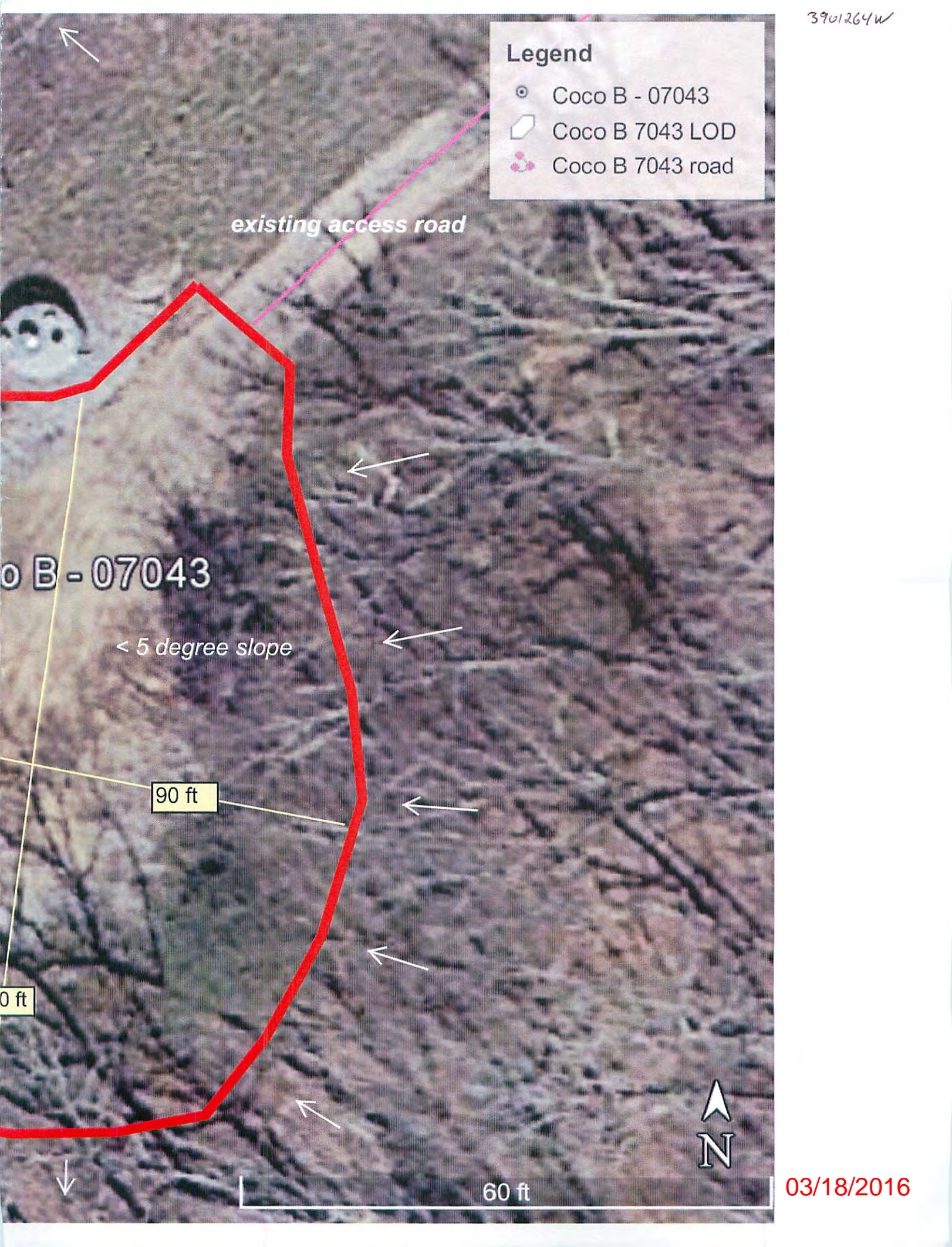
o B - 07043

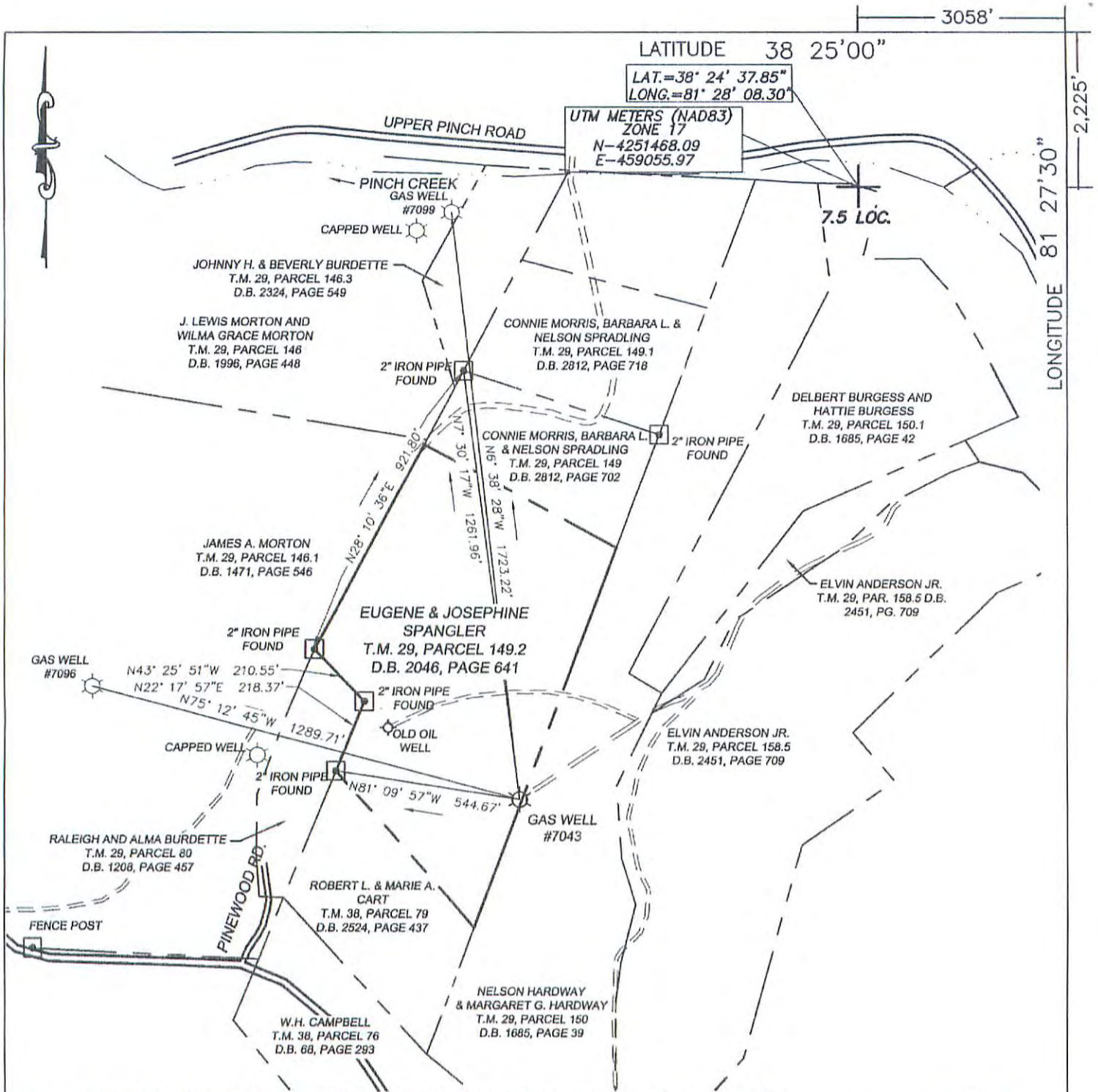
< 5 degree slope

90 ft

0 ft

60 ft



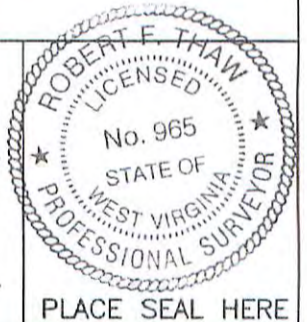


(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE No 1601-2345-002
 DRAWING No. 1601-2345-002
 SCALE 1"=400'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION TRIMBLE R8-3
 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



PLACE SEAL HERE

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



DATE FEBRUARY 10 20 16
 OPERATOR'S WELL No. 7043
 API WELL No. 47 039 - 01264
 Office of Oil and Gas
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 896.2' WATER SHED PINCH CREEK
 DISTRICT ELK COUNTY KANAWHA
 QUADRANGLE BLUE CREEK, WV

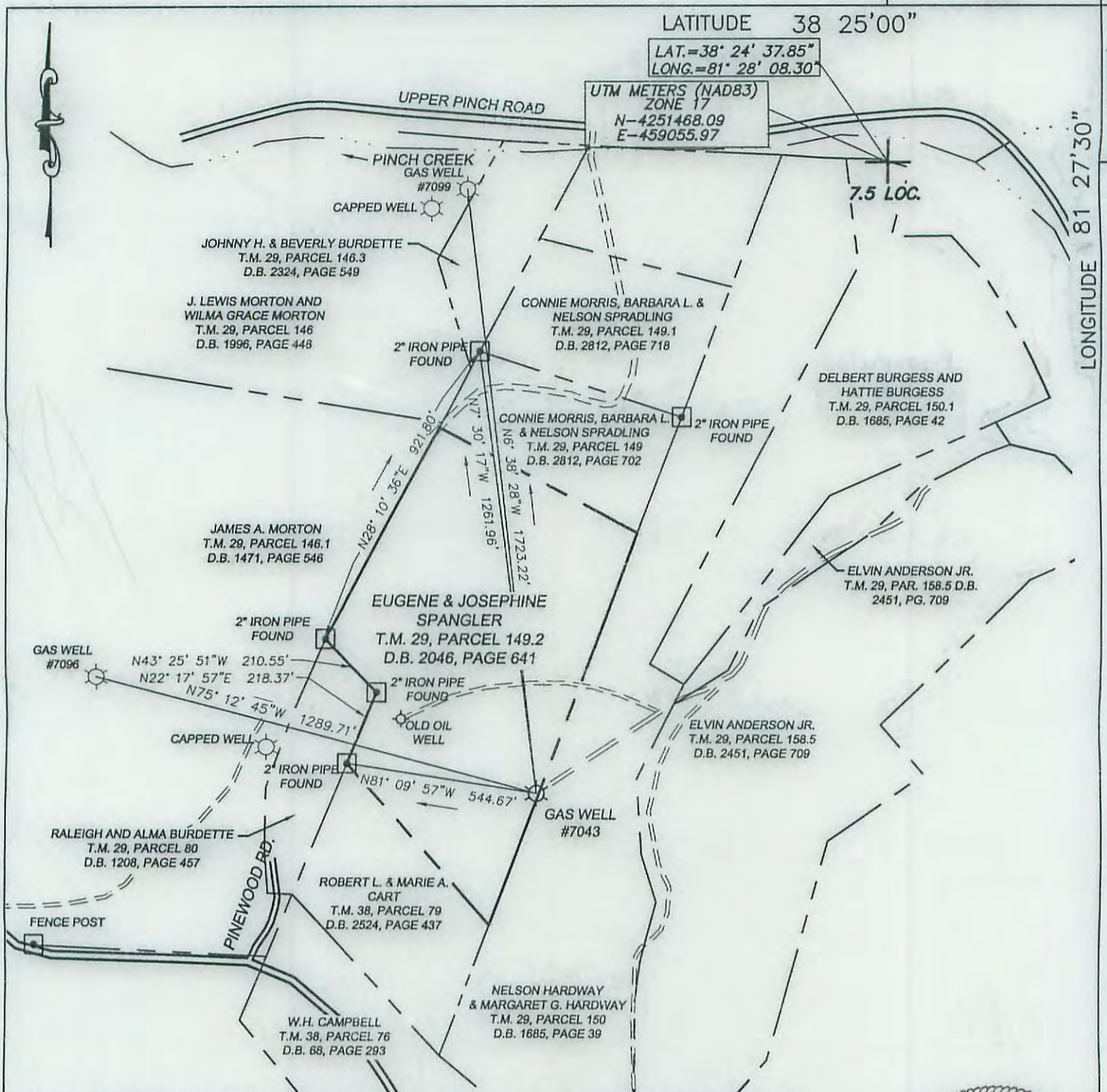
SURFACE OWNER EUGENE & JOSEPHINE SPANGLER ACREAGE 16.37
 OIL & GAS ROYALTY OWNER L. H. GILLISPIE, ET AL LEASE ACREAGE 109
 LEASE No. 1000924-000

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

03/18/2016

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION ORISKANY ESTIMATED DEPTH 5320
 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

FORM IV-6 (8-78)

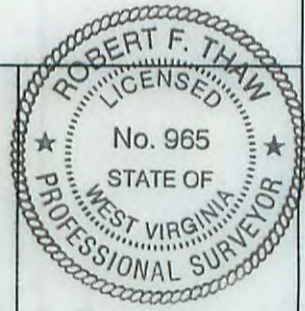


(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE No 1601-2345-002
 DRAWING No. 1601-2345-002
 SCALE 1"=400'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION TRIMBLE R8-3
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



PLACE SEAL HERE

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



DATE FEBRUARY 10 20 16
 OPERATOR'S WELL No. 7043
 API WELL No.

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL STATE 47 COUNTY 039 PERMIT 01264W
 (IF "GAS") PRODUCTION STORAGE X DEEP X SHALLOW
 LOCATION: ELEVATION 896.2' WATER SHED PINCH CREEK
 DISTRICT ELK COUNTY KANAWHA
 QUADRANGLE BLUE CREEK, WV

SURFACE OWNER EUGENE & JOSEPHINE SPANGLER ACREAGE 16.37
 OIL & GAS ROYALTY OWNER L. H. GILLISPIE, ET AL LEASE ACREAGE 109
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PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) **03/18/2016**

PLUG AND ABANDON CLEAN OUT AND REPLUG
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 WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT PAUL AMICK
 ADDRESS PO BOX 1273, CHARLESTON, WV 25325-1273 ADDRESS P.O. BOX 1273, CHARLESTON W.V. 25325-1273

FORM IV-6 (8-78)