

**NOTE:**

This map is for well location only and does not represent a complete property survey. FB 2679 Pg 45

**NOTE:**

No houses or water wells are within 200'.

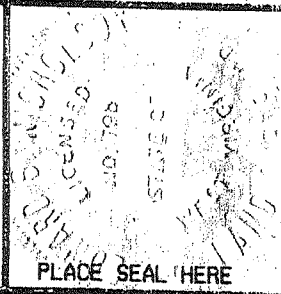
Coordinates Well No 12452 WV-N Nad83 U.S. Feet
N 181,383.6
E 2,152,475.8

All wells within 1200' are as shown

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 400'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION \_\_\_\_\_  
 GPS CP No. 24 Elevation 1681.49'

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.P.E. \_\_\_\_\_ L.L.S. 798



**STATE OF WEST VIRGINIA**  
**DIVISION OF ENVIRONMENTAL PROTECTION**  
**SECTION OF OIL & GAS**



DATE November 20 20 06  
 OPERATOR'S WELL NO. 12452  
 API WELL NO. \_\_\_\_\_

47 - 031 - 000299  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_\_\_ GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION \_\_\_\_\_ STORAGE  DEEP \_\_\_\_\_ SHALLOW \_\_\_\_\_  
 LOCATION: ELEVATION 1992' WATER SHED Stone Lick Run of Kimsay Run  
 DISTRICT Lost River COUNTY Hardy  
 QUADRANGLE Lost City

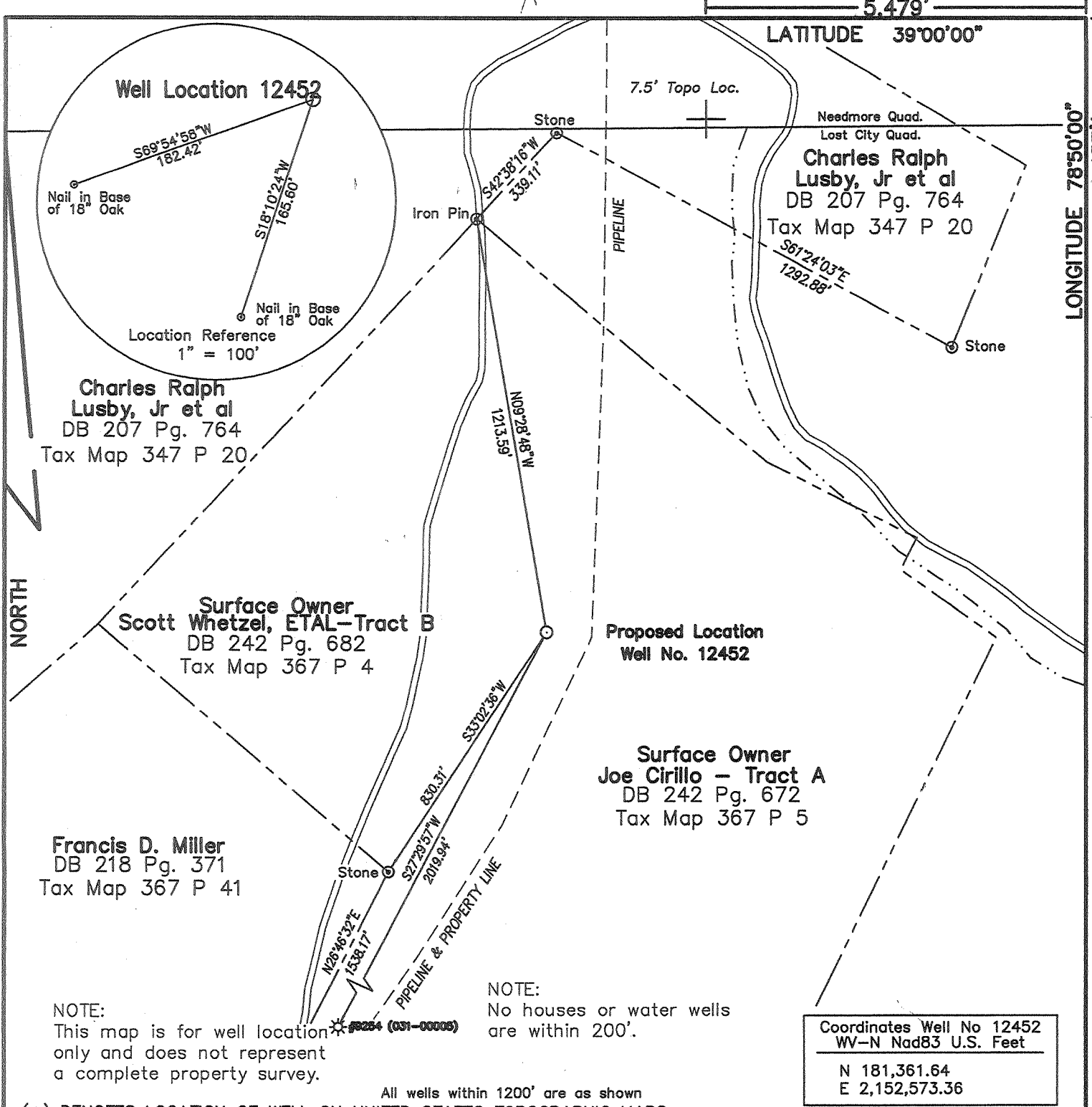
SURFACE OWNER Scott Whetzel, et al ACREAGE 41.16  
 OIL & GAS ROYALTY OWNER Columbia Gas Trans., et al LEASE ACREAGE 41.16

LEASE NO. 1197280  
 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 Oriskany ESTIMATED DEPTH 8900'  
 WELL OPERATOR Columbia Gas Transmission Corp. DESIGNATED AGENT Paul Amick  
 ADDRESS P.O. Box 1273 ADDRESS P.O. Box 1273  
Charleston, WV 25325-1273 Charleston, WV 25325-1273

SEP 26 2008

COUNTY NAME HARDY PERMIT 00299 P



Coordinates Well No 12452  
 WV-N Nad83 U.S. Feet  
 N 181,361.64  
 E 2,152,573.36

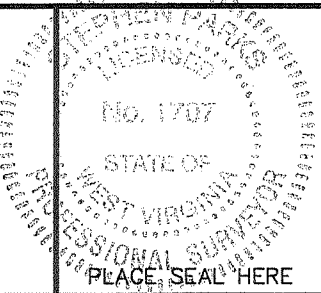
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 MINIMUM DEGREE OF  
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 ELEVATION \_\_\_\_\_  
 GPS CP No. 24 Elevation 1681.49'

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) Stephen Parks  
 R.P.E. 8982 L.L.S. 1707



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



DATE September 11 20 04  
 OPERATOR'S WELL NO. 12452  
 API WELL NO. \_\_\_\_\_

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION \_\_\_ STORAGE X DEEP \_\_\_ SHALLOW \_\_\_  
 LOCATION: ELEVATION 1999.56' WATER SHED Stone Lick Run of Kimsey Run  
 DISTRICT Lost River COUNTY Hardy  
 QUADRANGLE Lost City

SURFACE OWNER Scott Whetzel, et al ACREAGE 41.16  
 OIL & GAS ROYALTY OWNER Columbia Gas Trans., et al LEASE ACREAGE 41.16  
 LEASE NO. 1197280

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

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION Oriskany ESTIMATED DEPTH 6900'  
 WELL OPERATOR Columbia Gas Transmission Corp. DESIGNATED AGENT Paul Amick  
 ADDRESS P.O. Box 1273 ADDRESS P.O. Box 1273  
Charleston, WV 25325-1273 Charleston, WV 25325-1273

DEC 23 2005

(Lost River - 328) 8-0

FORM WV-6

HARDY COUNTY NAME PERMIT 0029

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WR-35  
Rev (5-01)

DATE: 9/10/2008  
API #: 47-031-00029 H

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Scott Whetzel Operator Well No.: 12452

LOCATION: Elevation: 1992 ft Quadrangle: Lost City

District: Lost River County: Hardy

Latitude: 1.435 Feet South of 39 Deg. 00 Min. 00 Sec.

Longitude 5.577 Feet West of 78 Deg. 50 Min. 00 Sec.

Company: Columbia Gas Transmission Corp

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 1700 MacCorkle Ave SE Charleston, WV 25325-1273	24" 94# Gr. B-35	60	56	none - sanded in
	20" 59# Gr. B-35	99	96	100 sks
Agent: Paul Amick				
Inspector: Craig Duckworth / Bill Hatfield	13-3/8" 48# H-40	507	486	475 sks
Date Permit Issued: 12/20/2005				
Date Well Work Commenced: 4/17/07	9-5/8" 36# J-55	1992	1973	585 sks
Date Well Work Completed: 9/1/08				
Verbal Plugging: yes - Bill Hatfield	7" 23# N-80	6683	6660	340 sks
Date Permission granted on: 8/31/08			* Note that 3327' pulled during P&A	
Rotary X Cable Rig				
Total Depth (feet):				
Original borehole	6996 ft			
Sidetrack #1	6399 ft			
Sidetrack #2	6600 ft			
Fresh Water Depth (ft.): 214, 270, 474, 763				
Salt Water Depth (ft.): none detected				
Is coal being mined in area (N/Y)? no				
Coal Depths (ft.): _____ ft				

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OPEN FLOW DATA

Producing formation Oriskany Sand Pay zone depth (ft) none  
Gas: Initial open flow 0 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 0 MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests N/A Days  
Static rock Pressure 0 psig (surface pressure) after N/A Hours

Second Producing formation not applicable

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.

Signed:

James E. Amos

By: James E. Amos - Senior Storage Engineer - Columbia Gas Transmission Corp

Date: 9/10/08

DEC 18 2009

Summary of Well Work

- 2007 Original wellbore was drilled to 6996 ft thru the Oriskany Sandstone for underground natural gas storage. Reservoir quality deemed unsuitable for storage service. Oriskany cement plug was set 6312 to 6954 ft. Whipstock installed in 7" casing – top at 5261 ft. While shearing window mills, slide broke. Permission granted from Office of Oil & Gas to postpone well work to allow Columbia to evaluate. Released drilling rig, earthen pit was closed, and site stabilized 8/28/07.
- 2008 Sidetrack #1 – objective to obtain Needmore Shale core. Moved in drilling rig 8/10/08. Installed 2<sup>nd</sup> whipstock and cut window in 7" casing from 5203 to 5219 ft. Sidetrack borehole #1 was drilled to a depth of 6399 ft in the Upper Marcellus Shale. Bottomhole location was evaluated and deemed unsatisfactory. Cement plug was set 5529 to 6389 ft 8/19/08.
- 2008 Sidetrack #2 – objective to obtain Needmore Shale core. Drilled off cement plug at 5529 ft and directionally drilled/cored to a depth of 6600 ft in the Needmore Shale. Well plugged and abandoned 9/4/08 (refer to Affidavit of Plugging and Filling Well – form WR-38).

Formation and Directional Survey Data

Original Borehole

- o Directionally drilled to a total depth of 6996 ft.
  - o Directional survey data (NAD 27 SPC WV-North Zone)
    - Surface: N/S = 181,340 ft E/W = 2,183,908 ft
    - Final Depth (projected): N/S = 181,484 ft E/W = 2,185,013 ft
    - MD = 6996 ft TVD = 6760 ft
- \* Refer to Schlumberger Final Survey Report – ORIGINAL BOREHOLE

<u>Formation Record (elog)</u>	<u>Top (MD ft)</u>	<u>Bottom (MD ft)</u>
Upper Marcellus	6404	6414
Purcell	6414	6521
Lower Marcellus	6521	6578
Needmore	6578	6678
Oriskany Sandstone	6678	
TD		6996

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Sidetrack Borehole #1

- o Departed original wellbore at 5219 ft via window.
  - o Drilled to a total depth of 6399 ft to the Upper Marcellus Shale.
  - o Directional survey data (NAD 27 SPC WV-North Zone)
    - Surface: N/S = 181,340 ft E/W = 2,183,908 ft
    - Final Depth (projected): N/S = 181,106 ft E/W = 2,184,561 ft
    - MD = 6399 ft TVD = 6115 ft
- \* Refer to Schlumberger Software Directional Surveying Worksheet – SIDETRACK #1

<u>Formation Record (elog)</u>	<u>Top (MD ft)</u>	<u>Bottom (MD ft)</u>
Upper Marcellus	6389	6397
Purcell	6397	
TD		6399

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Sidetrack Borehole #2

- o Departed Sidetrack #1 borehole at 5529 ft via kickoff cement plug.
  - o Drilled to a total depth of 6600 to the Needmore Shale.
  - o Directional survey data (NAD 27 SPC WV-North Zone)
    - Surface: N/S = 181,340 ft E/W = 2,183,908 ft
    - Final Depth (projected): N/S = 181,264 ft E/W = 2,184,859 ft
    - MD = 6600 ft TVD = 6400 ft
- \* Refer to Schlumberger Software Directional Surveying Worksheet – SIDETRACK #2

<u>Formation Record (elog)</u>	<u>Top (MD ft)</u>	<u>Bottom (MD ft)</u>
Upper Marcellus	6346	6356
Purcell	6356	6463
Lower Marcellus	6463	6530
Needmore	6530	
TD		6600

Perforations: none  
Stimulation: none

Electric Logs Ran:

7/21/07	CNL – Litho Density – Measured Depth	(original borehole)
7/21/07	CNL – Litho Density – Directional Survey	(original borehole)
7/28/07	CNL – Litho Density	(original borehole)
9/1/08	FMI	(sidetrack #2 borehole)

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