

6,615'

LATITUDE 38°57'30"

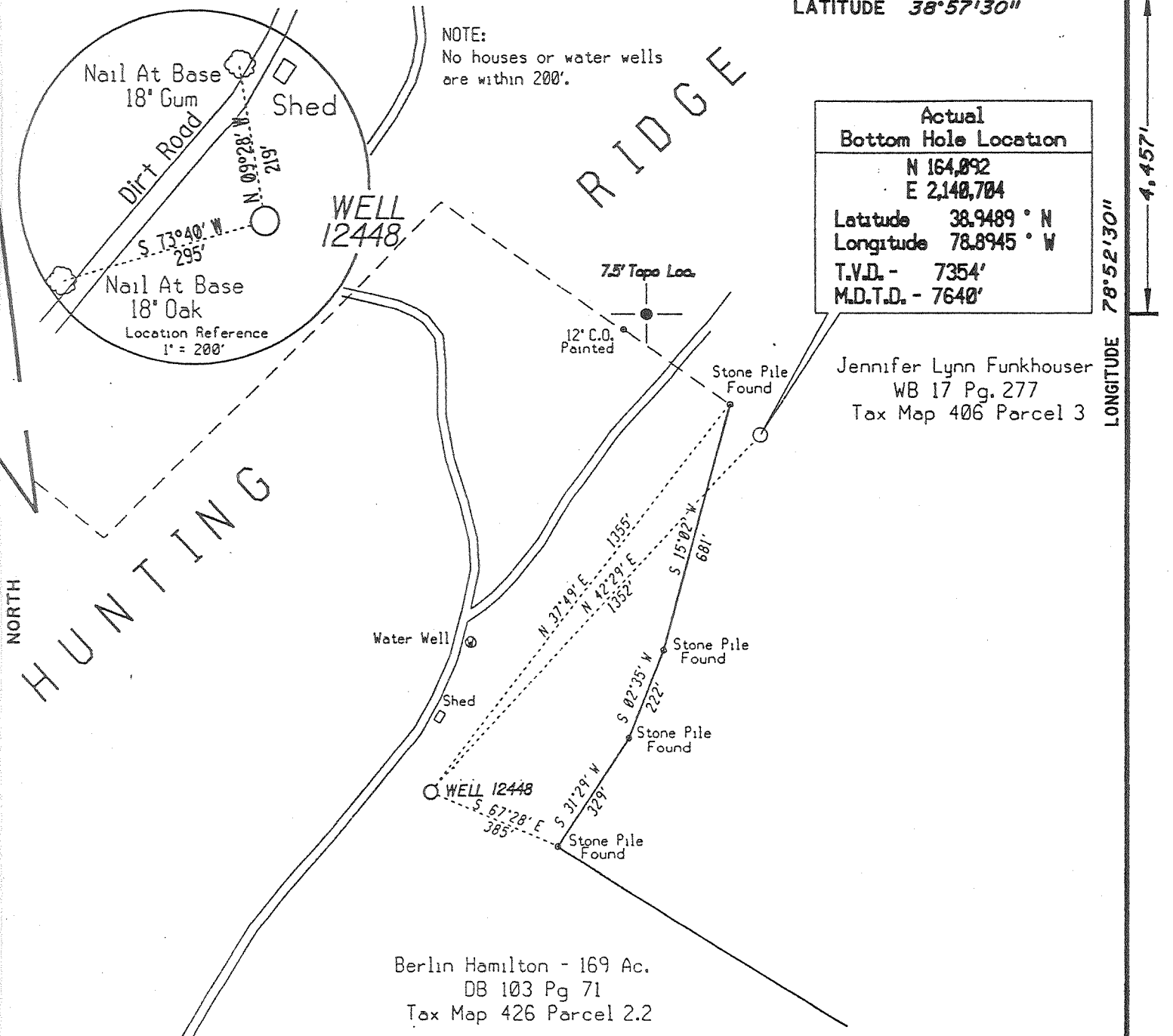
4,457'

LONGITUDE 78°52'30"

NOTE:  
No houses or water wells  
are within 200'.

Actual Bottom Hole Location	
N	164,892
E	2,140,704
Latitude	38.9489° N
Longitude	78.8945° W
T.V.D.	- 7354'
M.D.T.D.	- 7640'

Jennifer Lynn Funkhouser  
WB 17 Pg. 277  
Tax Map 406 Parcel 3



Berlin Hamilton - 169 Ac.  
DB 103 Pg 71  
Tax Map 426 Parcel 2.2

Notes:  
This Map is For  
Well Location Only &  
Does Not Represent  
A Complete Property Survey.

All wells within 1200' are as shown

Coordinates Well No 12448 WV-N Nad83 U.S. Feet	
N	163,095.47
E	2,139,791.42

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS (7 1/2")

FILE NO. \_\_\_\_\_  
DRAWING NO. \_\_\_\_\_  
SCALE 1" = 400'  
MINIMUM DEGREE OF  
ACCURACY 1/200  
PROVEN SOURCE OF  
ELEVATION GPS CP NO. 21  
ELEV. 2241.23'

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 REGU-  
LATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF  
ENVIRONMENTAL PROTECTION.

(SIGNED) \_\_\_\_\_  
R.P.E. \_\_\_\_\_ L.L.S. 798



PLACE SEAL HERE

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



DATE JULY 2, 2007  
OPERATOR'S WELL NO. 12448  
API WELL NO.

WELL TYPE: OIL \_\_\_ GAS  LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS," ) PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_  
LOCATION: ELEVATION 2537' WATER SHED DOVE HOLLOW OF KIMSEY RUN  
DISTRICT LOST RIVER COUNTY HARDY  
QUADRANGLE LOST RIVER STATE PARK COORDINATES LAT: 38°56'46" LONG: 78°53'52"  
SURFACE OWNER BERLIN HAMILTON ACREAGE 162  
ORIGINAL OIL & GAS ROYALTY OWNER COLUMBIA GAS TRANS. CORP. LEASE ACREAGE 169  
COAL OWNER \_\_\_\_\_ LEASE NO. 48722

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

JUL 27 2007

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
TARGET FORMATION ORISKANY ESTIMATED DEPTH 7800' MD  
WELL OPERATOR COLUMBIA GAS TRANSMISSION CORP DESIGNATED AGENT PAUL AMICK  
ADDRESS PO Box 1273, Charleston, WV ADDRESS PO Box 1273, Charleston, WV  
25325-1273 25325-1273

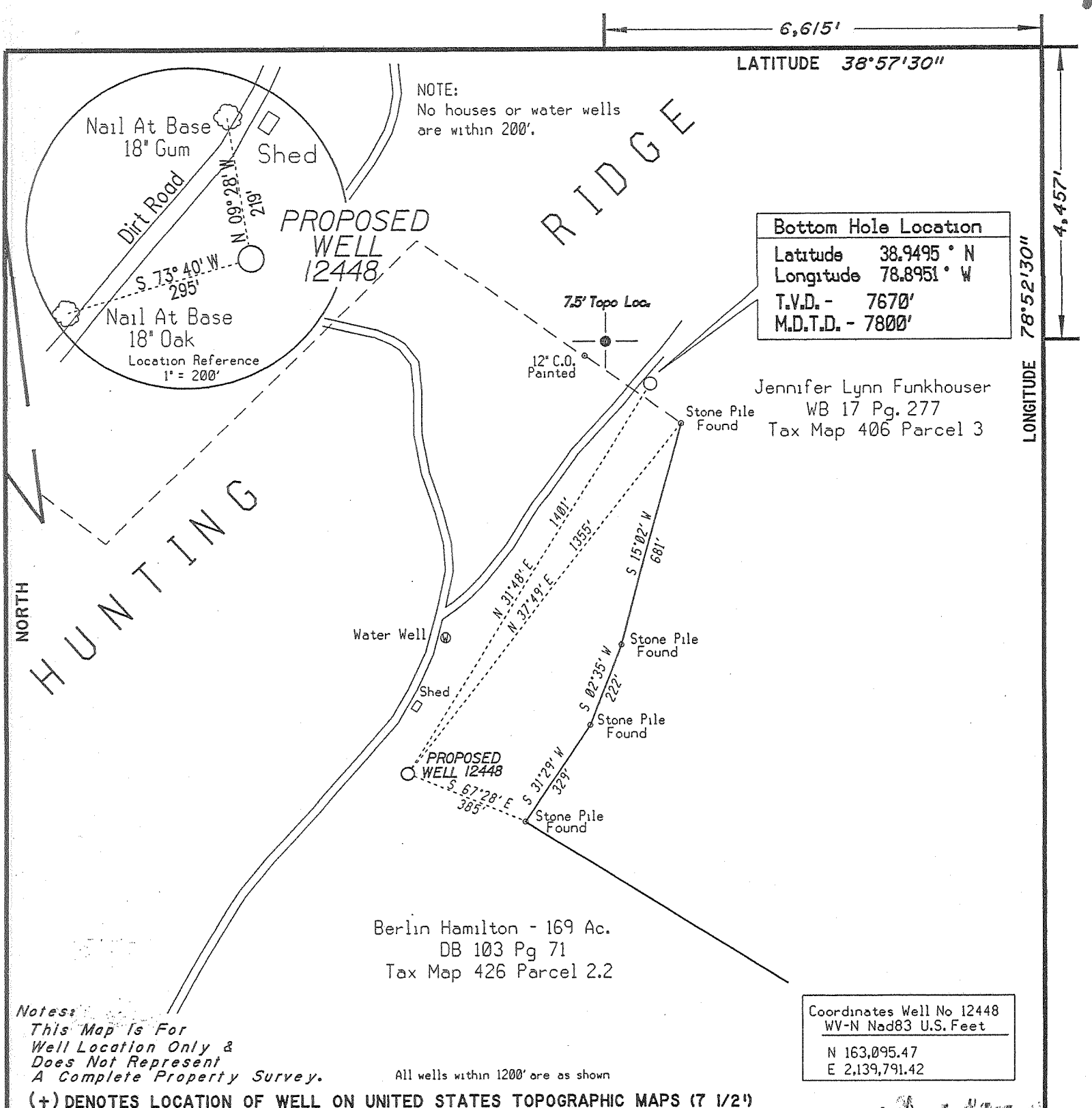
COUNTY NAME

PERMIT

031

00026

R



Notes:  
 This Map is For  
 Well Location Only &  
 Does Not Represent  
 A Complete Property Survey.

All wells within 1200' are as shown

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS (7 1/2")

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 400'  
 MINIMUM DEGREE OF  
 ACCURACY 1/200  
 PROVEN SOURCE OF  
 ELEVATION GPS CP NO. 21  
 ELEV. 2241.23'

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 REGU-  
 LATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF  
 ENVIRONMENTAL PROTECTION.  
 (SIGNED) \_\_\_\_\_  
 R.P.E. \_\_\_\_\_ L.L.S. 798

PLACE SEAL HERE

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

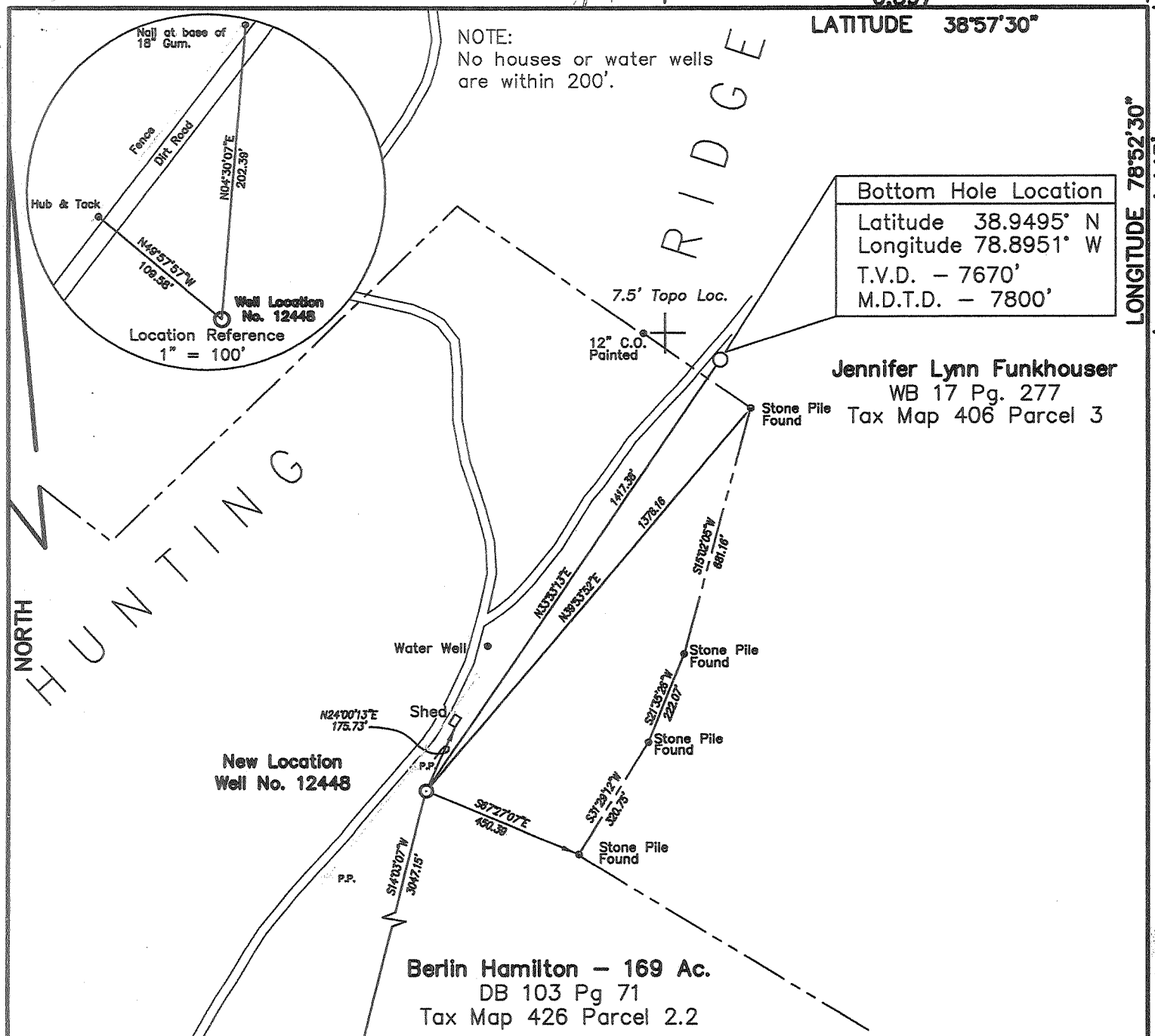


DATE AUGUST 23, 2006  
 OPERATOR'S WELL NO. 12448  
 API WELL NO. \_\_\_\_\_

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS," ) PRODUCTION \_\_\_ STORAGE X DEEP \_\_\_ SHALLOW \_\_\_  
 LOCATION: ELEVATION 2537' WATER SHED DOVE HOLLOW OF KIMSEY RUN  
 DISTRICT LOST RIVER COUNTY HARDY  
 QUADRANGLE LOST RIVER STATE PARK COORDINATES LAT: 38°56'46" LONG: 78°53'52"  
 SURFACE OWNER BERLIN HAMILTON ACREAGE 162  
 ORIGINAL OIL & GAS ROYALTY OWNER COLUMBIA GAS TRANS. CORP. LEASE ACREAGE 169  
 COAL OWNER \_\_\_\_\_ LEASE NO. 48722  
 PROPOSED WORK: DRILL X 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 7800' MD  
 WELL OPERATOR COLUMBIA GAS TRANSMISSION CORP DESIGNATED AGENT PAUL AMICK  
 ADDRESS PO Box 1273, Charleston, WV ADDRESS PO Box 1273, Charleston, WV  
25325-1273 25325-1273

COUNTY NAME HARDY  
 PERMIT 0026 R

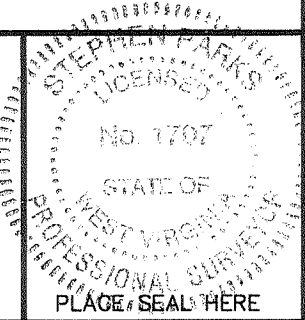
(Lost River - 328) # E-0



(+) 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. 21 Elevation 2241.23'

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 August 10 2004  
OPERATOR'S WELL NO. 12448  
API WELL NO. \_\_\_\_\_

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS,") PRODUCTION \_\_\_ STORAGE X DEEP \_\_\_ SHALLOW \_\_\_  
LOCATION: ELEVATION 2546.79' WATER SHED Dove Hollow of Kimsey Run  
DISTRICT Lost River COUNTY Hardy  
QUADRANGLE Lost River State Park

SURFACE OWNER Berlin Hamilton ACREAGE 162  
OIL & GAS ROYALTY OWNER Columbia Gas Transmission LEASE ACREAGE 169  
LEASE NO. 48722

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 7800' MD  
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 16 2005

FORM WW-6

COUNTY NAME HARDY  
PERMIT 00026

WR-35  
Rev (5-01)

DATE: 7/16/07  
API #: 47-031-00026

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

Well Operator's Report of Well Work

Farm name: Berlin Hamilton Operator Well No.: 12448

LOCATION: Elevation: 2537 ft Quadrangle: Lost River State Park

District: Lost River County: Hardy  
Latitude: 4.457 Feet South of 38 Deg. 57 Min. 30 Sec.  
Longitude 6.615 Feet West of 78 Deg. 52 Min. 30 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	120	114	88 sks
Agent: Paul Amick				
Inspector: Bill Hatfield / Craig Duckworth	13-3/8" 48# H-40	694	683	650 sks
Date Permit Issued: 12/15/05				
Date Well Work Commenced: 7/10/06	9-5/8" 36# J-55	1821	1800	560 sks
Date Well Work Completed: 4/17/07				
Verbal Plugging:	7" 23# N-80	7217	7197	340 sks
Date Permission granted on: not applicable				
Rotary X Cable Rig	2-3/8" 4.7# J-55	7228	7228	none
Total Depth (feet): 7640				
Fresh Water Depth (ft.): 357, 813				
Salt Water Depth (ft.): none observed				
Is coal being mined in area (N/Y)? no				
Coal Depths (ft.): _____ ft				

OPEN FLOW DATA

Producing formation Oriskany Sand Pay zone depth (ft) 7295 - 7400  
Gas: Initial open flow 4,000 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 5,000 MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests +72 Hours  
Static rock Pressure 1120 psig (surface pressure) after +72 Hours  
Second Producing formation not applicable Pay zone depth (ft) \_\_\_\_\_

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: 7/16/07

RECEIVED  
SEP 28 2007  
HARDY 0026

Well drilled to Oriskany Sandstone for underground natural gas storage.

<u>Formation Record</u>	<u>Top (MD ft)</u>
Hamilton Group	6075
Upper Marcellus	6771
Purcell	6822
Lower Marcellus	7025
Needmore	7105
Oriskany	7214
Helderberg	7498
TD	7640

Wellbore Telemetry (NAD 27 SPC WV-North Zone)

Surface: N/S = 163,051 ft E/W = 2,171,224 ft  
Final Depth: N/S = 164,048 ft E/W = 2,172,137 ft  
MD = 7640 ft TVD = 7354 ft

\* Refer to revised survey plat and Schlumberger survey data report.

Perforations: none  
Stimulation: Fractured  
2,000 gals 20% HCl acid  
938 bbls fresh water / guar  
409 MSCF N2  
50,400 lbs sand  
Avg BH rate: 25 BPM  
ATP: 3515 psig

Electric Logs Ran: 12/13/06 GR-Density-CNL  
12/13/06 Laterolog  
12/13/06 Dipole Sonic Porosity  
1/8/07 GR-Density-CNL  
1/8/07 Laterolog  
1/24/07 Dipole Sonic Imager

SEP 28 2007