

LATITUDE 38° 47' 30"

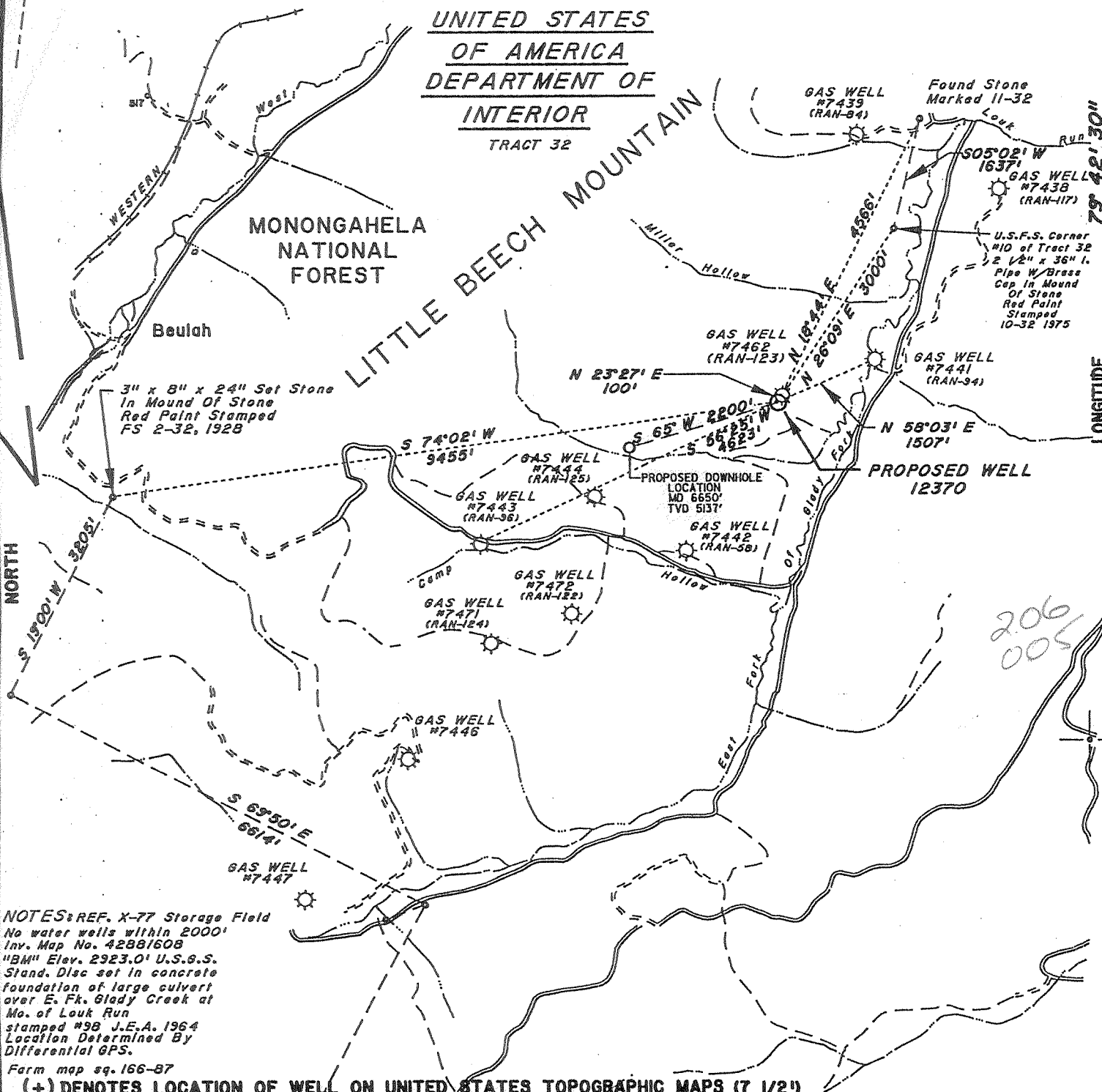
UNITED STATES OF AMERICA DEPARTMENT OF INTERIOR TRACT 32

MONONGAHELA NATIONAL FOREST

LITTLE BEECH MOUNTAIN

NORTH

LONGITUDE 106° 01' 30"



NOTES: REF. X-77 Storage Field No water wells within 2000' Inv. Map No. 42881608 'BM' Elev. 2923.0' U.S.G.S. Stand. Disc set in concrete foundation of large culvert over E. Fk. Glady Creek at Mo. of Louk Run stamped #98 J.E.A. 1964 Location Determined By Differential GPS. Farm map sq. 166-87 (+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS (7 1/2')

FILE NO. DRAWING NO. 12370 SCALE 1" = 2000' MINIMUM DEGREE OF ACCURACY 1/200 PROVEN SOURCE OF ELEVATION 'BM' See Note Above

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 DEPARTMENT OF ENERGY. (SIGNED) R.P.E. 9936 L.L.S. 798

PLACE SEAL HERE

STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION SECTION OF OIL & GAS. DATE July 15, 1998 OPERATOR'S WELL NO. 12370 API WELL NO. 47 003 011697. WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL STATE COUNTY PERMIT. LOCATION: ELEVATION 3179 WATER SHED East Fork of Glady Fork DISTRICT Dry Fork COUNTY Randolph QUADRANGLE Gladys, WV COORDINATES LAT: 38°45'41" LONG: 79°42'33". SURFACE OWNER United States Of America (Tract 32) ACREAGE 1863.61 OIL & GAS ROYALTY OWNER United States Of America (Fee) LEASE ACREAGE 27804.07 (Randolph) COAL OWNER (Dept of Interior) LEASE NO. 90700. PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) Storage Recondition. PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION Oriskany ESTIMATED DEPTH TVD 5137' WELL OPERATOR COLUMBIA GAS TRANS CORP DESIGNATED AGENT Richard L Coty ADDRESS PO Box 1273, Charleston, WV ADDRESS PO Box 1273, Charleston, WV 25325-1273

DEEP WELL

9-0 261

JUL 17 1998

Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Farm name: US FOREST SERVICE Operator Well No.: GLADY STG #12370

LOCATION: Elevation: 3,179.00 Quadrangle: GLADY

District: DRY FORK County: RANDOLPH
Latitude: 10,990 Feet South of 38 Deg. 47 Min. 30 Sec.
Longitude: 310 Feet West of 79 Deg. 42 Min. 30 Sec.

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

Agent: RICHARD L. COTY
Inspector: CRAIG DUCKWORTH [for PHILLIP TRACY]

Permit Issued: 06/04/99
Well work Commenced: 09/17/99
Well work Completed: 09/5/00

Verbal Plugging
Permission granted on: _____

Rotary X Cable _____ Rig

Total Depth (feet) 6,300'

Fresh water depths (ft) N/A

Salt water depths (ft) N/A

Is coal being mined in area (Y/N) ? No

Coal Depths (ft) : N/A

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
24"	46'	46'	Cemented w/ 20 sks Quickcrete from surface
16"	186'	186'	Cmtd to surf w/ 200 sks of neat
10-3/4"	2,265'	2,265'	Cmtd to surf w/ 210 sks neat, & 575 sks Mid Con II
7-5/8"	*5,309'	*5,309'	Cmtd w/ 125 sks Mid Con II, & 110 sks neat
*Measured Depth - Directional survey Attached. ?			

OPEN FLOW DATA * Gas Storage - Open flows and pressures fluctuate seasonally

Producing formation Oriskany Sandstone Pay zone depth (ft) 5,270'-5,981'MD

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

Second producing formation _____ Pay zone depth (ft) _____

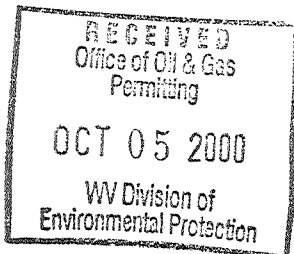
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

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: William H. Foraker
COLUMBIA GAS TRANSMISSION CORP.
By: William H. Foraker
Date: 10/02/00

OCT 06 2000

RAN 1169 T

Division of Environmental Protection
 Section of Oil and Gas
 Well Operator's Report of Well Work

<u>Formation</u>	<u>Top (MD)</u>	<u>Bottom (MD)</u>
Tully Lime	4442'	4473'
Upper Marcellus Shale	4562'	4618'
Purcell Lime	4618'	4670'
Lower Marcellus Shale	4670'	4749'
Onondaga Lime	4749'	4830'
Huntersville Chert	4830'	5140'
Needmore Shale	5140'	5270'
Oriskany Sand	5270'	5981'
Helderberg Lime	5981'	-

TD @ 6300' MD

- 11/8/99 Stimulated Oriskany Sandstone w/16,000 gal of 20% FE Acid, 952 bbls of water, 72,000 Scf N₂, and 4000 lbs. Naphthalene diverter @ 22 bpm.
- 08/31/00 Stimulated Oriskany Sandstone using coiled tubing unit; 5,000 gallons of 15% hydrochloric acid, 180 bbls of water, 551,244 Scf N₂.
- 09/01/00 Stimulated Oriskany Sandstone using coiled tubing unit; 2,000 gallons of 20% hydrochloric acid, 8,000 gallons of 15% hydrochloric acid 195 bbls of water, 563,316 Scf N₂.

5270
 3179

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