

NOTES:
THIS MAP IS FOR WELL LOCATION PURPOSES ONLY & DOES NOT REPRESENT A COMPLETE BOUNDARY SURVEY. NO WATER WELLS OR HOUSES WITHIN 200'.

LATITUDE 38°52'30"
R.C. STARCHER, HRS. & EMILY ANN STARCHER PACE
TM-8 PAR 12

LONGITUDE 81°40'00"
9310'

FILE NO. _____
DRAWING NO. 7289
SCALE 1" = 400'
MINIMUM DEGREE OF ACCURACY 1/2500
PROVEN SOURCE OF ELEVATION USGS BM DISK SET
IN TOP NE END OF SE HEADWALL 22' SE OF CENTERLINE OF RT. 21 STAMPED T-103

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) *[Signature]*
R.P.E. _____ L.L.S. 2153



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

DATE MAY 2, 2009
OPERATOR'S WELL NO. 7289
API WELL NO. 47 035 000529 W
STATE COUNTY PERMIT

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

LOCATION: ELEVATION 742.36 WATER SHED SYCAMORE CREEK
DISTRICT RIPLEY COUNTY JACKSON
QUADRANGLE RIPLEY COORDINATES LAT: 38°50'58" LONG: 81°41'53"

SURFACE OWNER KRISTINA WINTER ACREAGE 14.73
ORIGINAL OIL & GAS ROYALTY OWNER KATE COAST, ET. AL. LEASE ACREAGE 24
COAL OWNER _____ LEASE NO. 1041920

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 _____ ESTIMATED DEPTH _____

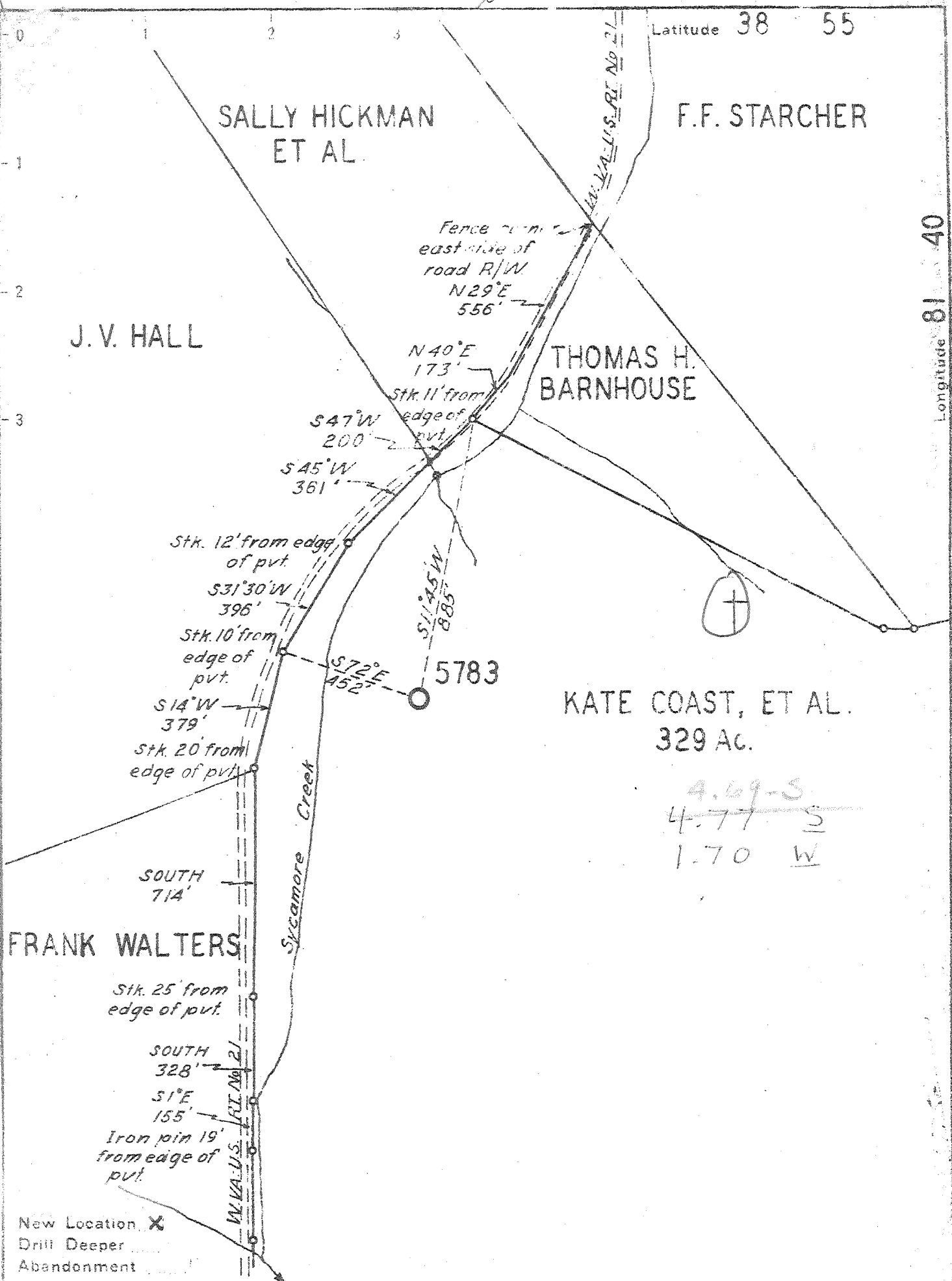
WELL OPERATOR COLUMBIA GAS TRANSMISSION CORP DESIGNATED AGENT PAUL AMICK
ADDRESS PO BOX 1273, CHARLESTON, WV ADDRESS PO BOX 1273, CHARLESTON, WV
25325-1273 25325-1273

SEP 18 2009

(ELK - Pocahontas No - 192) B-0

FORM WW-6

JACKSON COUNTY NAME PERMIT 529



Company UNITED FUEL GAS CO.
 Address CHARLESTON, W.VA.
 Farm KATE COAST, ET AL
 Tract _____ Acres 329 Lease No. 41920
 Well (Farm) No. _____ Serial No. 5783
 Elevation (Spirit Level) 745.54 GR.
 Quadrangle RIPLEY - WC.
 County JACKSON District RIPLEY
 Engineer [Signature]
 Engineer's Registration No. 662
 File No. 58-93 Drawing No. _____
 Date JUNE 25, 1946 Scale 1" = 400'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. JAC - 529

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

Deep Well

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

Permit No. Jac 529			Gas Well
Ripley Quad.			CASING & TUBING
Company	United Fuel Gas Co.		
Address	P.O. Box 1273, Charleston 25, W.Va.	13 3/8	755 755
Farm	Kate Coast et al. Acres 329 A	10 1/2	847 847
Location	Sycamore Creek	8 5/8	2085 2085
Well No.	5783 Elev. 745.54 Gr	7	4877 4877
District	Ripley Jackson County	2 tubing	4955
Surface			
Mineral	Frank Walters et al, Ripley, W.Va.		
	Rt. 1		
Commenced	8-3-46		
Completed	2-3-47		
Date shot	2-4-47 Depth 4928 to 4958 with 300# EL-409 & 75# gel.		
Rock Pressure	975 lbs. 24 hrs.		
Fresh Water	320-325'		
Salt Water	1670'		
Clay	1	25 ✓ Black Shale - <i>MARCELLUS</i>	4790 4835
Red Rock	25	75 ✓ Corniferous - <i>463</i>	4835 4928
Slate	75	125 ✓ Oriskany	4928 4957
Red Rock	125	175 ✓ Lime - <i>held</i>	4957 4958
Slate	175	225 Total Depth	4958
Red Rock	225		
Lime	275	300 Gas 4933-4938 Oriskany	
Sand	300	350	
Slate	350	360	
Red Rock	360	365	
Lime	365	400	
Red Rock	400	420	
White Slate	420	490	
Lime	490	540	
Sand	540	580	
Slate	580	585	
Black Slate	585	590	
Slate	590	630	
Sand	630	640	
Slate	640	735	
Red Rock	735	745	
Blue Slate	745	767	
Sand	767	797	
Slate	797	805	
Lime	805	815	
Sand	815	830	
Red Rock	830	865	
Lime	865	889	
Slate & Shells	889	937	
Red Rock	937	954	
Sand	954	987	
Red Rock	987	1003	
Slate & Shells	1003	1220	
Sand	1220	1240	
Slate & Shells	1240	1330	
Sand	1330	1375	
Slate, Black	1375	1440	
Sand	1440	1495	
Slate	1495	1610	
Sand	1610	1620	
Slate & Shells	1620	1670	
→ Salt Sand	1670	1775	
→ Little Lime - <i>2</i>	1775	1800	
→ Big Lime	1800	1905	
→ Injun	1905	2000	
Lime	2000	2005	
Sand - <i>SQUAW OR WEP</i>	2005	2072	Gas 2040 show
Black Lime	2072	2095	
Slate & Shells	2095	2415	
→ Br. Shale	2415	2430	
→ Berea Sand	2430	2448	
Slate & Shells	2448	3871	Gas and oil 3110' show
Br. Shale - <i>441</i>	3871	4240	
White Slate	4240	4590	
Br. Shale	4590	4790	

39-00
4-54



JUL 20 1971

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS WELLS DIVISION

Rotary
Spudder
Cable Tools
Storage C. NOLT
Oil or Gas Well Gas
(KIND)

Quadrangle Ripley
Permit No. -Jac-529

WELL RECORD

Company United Fuel Gas Company
Address P. O. Box 1273
Farm Kate Coast, et al Acres 329
Location (waters) Sycamore Crk.
Well No. Orig. U-5783 -Now X59-7289 Elev. 745.54 Gr.
District Ripley County Jackson
The surface of tract is owned in fee by _____
Address _____
Mineral rights are owned by _____
Address _____
Drilling commenced 8/3/46
Drilling completed 2/3/47
Date Shot 2/4/47 From 4928 To 4958
With 300# EL 409 and 75# Gelatin

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13 3/8"	755'	755'	
10 3/4"	847'	847'	Size of
8 1/2"	2085'	2085'	
6 7/8"	4877'	4877'	Depth set
5 3/16"			
4 1/2"			
3"			Perf. top
2"	4955'	4955'	Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Open Flow 10ths Water in _____ Inch
6 /10ths Merc. in 7" 22# Inch
Volume 3,901 Mcf Cu. Ft.
Rock Pressure 975 lbs. 24 hrs.
Oil _____ bbls., 1st 24 hrs.

Attach copy of cementing record.
CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
Amount of cement used (bags) _____
Name of Service Co. _____
COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES
FEET _____ INCHES FEET _____ INCHES
FEET _____ INCHES FEET _____ INCHES

WELL ACIDIZED (DETAILS) _____
WELL FRACTURED (DETAILS) _____
RESULT AFTER TREATMENT (Initial open Flow or bbls.) _____
ROCK PRESSURE AFTER TREATMENT _____ HOURS _____
Fresh Water 320-325 Feet Salt Water 1670 Feet
Producing Sand Oriskany Depth 4933-4938

3,901 Mcf

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Clay			1	25			
Red Rock			25	75			
Slate			75	125			
Red Rock			125	175			
Slate			175	225			
Red Rock			225	275			
Lime			275	300	Water 320-325'		
Sand			300	350			
Slate			350	360	Salt Water 1670'		
Red Rock			360	365			
Lime			365	400	Show gas 2040'		
Red Rock			400	420			
White Slate			420	490	Oil & gas show 3110'		
Lime			490	540			
Sand			540	580			
Slate			580	585	Oriskany gas 4933-4938'		30/10 W 7" 22#
Black Slate			585	590	2,363 M		
Slate			590	630			
Sand			630	640	Test before shot 16/10 W 7" 22# 1,726		
Slate			640	735	Shot 2-4-47 with 300# EL 409 and 75#		
Red Rock			735	745	Gelatin from 4928-4958		
Blue Slate			745	767	Test 1 hour after shot 6/10 Merc. 7"		
Sand			767	797	22# 3,901 M		
Slate			797	805			
Lime			805	815			
Sand			815	830			
Red Rock			830	865	Shut in 2-4-47 in 2" and 7"		
Lime			865	889			
Slate & Shells			889	937			

(over)

AUG 3 1971

Formation	Color	Hard or Soft	Top \nearrow	Bottom	Oil, Gas or Water	Depth Found	Remarks
Red Rock			937	954			
Sand			954	987			
Red Rock			987	1003			
Slate & Shells			1003	1220			
Sand			1220	1240			
Slate & Shells			1240	1330			
Sand			1330	1375			
Slate, black			1375	1440			
Sand			1440	1495			
Slate			1495	1610			
Sand			1610	1620			
Slate & Shells			1620	1670			
Salt Sand			1670	1775			
Little Lime			1775	1800			
Big Lime			1800	1905			
Injun			1905	2000			
Lime			2000	2005			
Sand			2005	2072			
Black Lime			2072	2095			
Slate & Shells			2095	2415			
Brown Shale			2415	2430			
Berea Sand			2430	2448			
Slate & Shells			2448	3871			
Brown Shale			3871	4240			
White Slate			4240	4590			
Brown Shale			4590	4790			
Black Shale			4790	4835			
Corniferous			4835	4928			
Oriskany			4928	4957			
Lime <i>Helderberg</i>			4957	4958			
Total Depth			4958'				

Date....., 19.....

APPROVED....., Owner

By..... (Title)

WR-35
Rev (5-01)

DATE: 1/14/10
API #: 47-035-00529 W

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

Well Operator's Report of Well Work

Farm name: Henrich, Kristina Operator Well No.: 7289

LOCATION: Elevation: 743 ft Quadrangle: Ripley

District: Ripley County: Jackson
Latitude: 9.310 Feet South of 38 Deg. 52 Min. 30 Sec.
Longitude 9.090 Feet West of 81 Deg. 40 Min. 00 Sec.

Company: Columbia Gas Transmission, LLC

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 1700 MacCorkle Ave SE Charleston, WV 25325-1273	This is an existing storage well - no casing/tubing pulled or ran during permitted rework. Below is a record of current tubulars in well.			
Agent: Paul Amick				
Inspector: Jamie Stevens				
Date Permit Issued: 9/11/09	16	764	718 - 764	none
Date Well Work Commenced: 11/13/2009	13-3/8 54#	755	0 - 755	old well records indicate "cemented to surface"
Date Well Work Completed: 1/13/2010	10-3/4 33#	847	0 - 847	
Verbal Plugging:	8-5/8 28#	2085	0 - 2085	
Date Permission granted on:	7 22#	4877	0 - 4877	
Rotary X Cable Rig	3-1/2 9.2#	4958	0 - 4958	
Total Depth (feet): 4958				
Fresh Water Depth (ft.): not applicable - rework				
Salt Water Depth (ft.): not applicable - rework				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): none reported ft				

RECEIVED
Office of Oil & Gas
JAN 19 2010

OPEN FLOW DATA

Producing formation Oriskany Sand Pay zone depth (ft) 4928 - 4957
Gas: Initial open flow not applicable MCF/d Oil: Initial open flow none Bbl/d
Final open flow <1000 MCF/d Final open flow none Bbl/d
Time of open flow between initial and final tests not applicable Hours
Static rock pressure 1450 psig (surface pressure) after 24 Hours

Second Producing formation N/A 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.

Signed: James E Amos
By: James E. Amos - Senior Storage Engineer - Columbia Gas Transmission, LLC
Date: 1/14/10

01/22/2010

Ripley storage well 7289 (035 - 00529)

This is an existing storage well. Below is a summary of work performed.

Well was killed, pipe inspection and cement bond logs ran, installed new wellhead, and fracture stimulated.

Fracture stimulation: BJ Services
1000 gals 20% HCl acid
338 bbls gel
134 MSCF nitrogen
15,500 lbs 20/40 Ottawa sand
Avg bottomhole rate: 15 BPM
Break: 4585 psig
ATP: 4000 psig
ISIP: 4250 psig

* Note that no earthen pit was utilized. All fluids recovered via steel tanks and transported off site to waste water treatment facility.