



FILE NO. _____
 DRAWING NO. 21237
 SCALE 1"=400'
 MINIMUM DEGREE OF ACCURACY 1/2500
 PROVEN SOURCE OF ELEVATION U.S.G.S. BM#X-125
EL. 1441' - 540' S. OF S. LEASE
COR. ALONG RTE. 89

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 MINES.
 (SIGNED) Wayne C. Hart
 R.P.E. _____ L.L.S. 99

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
OIL AND GAS DIVISION

DATE JULY 16, 19 84
 OPERATOR'S WELL NO. 21237
 API WELL NO. 051
47 MARS 0704
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS _____ LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW _____
 LOCATION: ELEVATION 1309' WATERSHED PENNSYLVANIA FORK - FISH CREEK
 DISTRICT LIBERTY 4 COUNTY MARSHALL
 QUADRANGLE LITTLETON - 7 1/2' 439 Littleton 057 NC2

SURFACE OWNER WESLEY HARRIS ACREAGE 148.12
 OIL & GAS ROYALTY OWNER BRUCE C. & DAVID N. PYLES LEASE ACREAGE 46
 LEASE NO. 26387

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 GORDON 15 ESTIMATED DEPTH 3500'
 WELL OPERATOR COLUMBIA GAS TRANSMISSION CORP. DESIGNATED AGENT J.L. WEEKLEY
 ADDRESS P.O. BOX 1273 CHARLESTON, WVA. 25325 ADDRESS P.O. BOX 1273 CHARLESTON, WVA. 25325

OCT 15 1984

FORM IV-6 (8-78)

COUNTY NAME PERMIT

666 1400 Camp (36)



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IV-35 (Rev 8-81)

JUL 22 1985

OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division

Date July 17, 1985
Operator's Well No. 21237
Farm Wanda Pyles (Wesley Harris)
API No. 47 - 051 - 00704

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil^X / Gas / Liquid Injection / Waste Disposal /
(If "Gas," Production / Underground Storage / Deep / Shallow /)

LOCATION: Elevation: 1309 Watershed Pennsylvania Fork - Fish Creek
District: Liberty County Marshall Quadrangle Littleton

COMPANY Columbia Gas Transmission Corp.
ADDRESS P. O. Box 1273, Charleston, WV
DESIGNATED AGENT James L. Weekley
ADDRESS P. O. Box 1273, Charleston, WV
SURFACE OWNER Wesley Harris
ADDRESS Route 2, Cameron, WV 26033
MINERAL RIGHTS OWNER Bruce & David Pyles
ADDRESS RD#12, P. O. Box 67, Ontario, OH 44862
OIL AND GAS INSPECTOR FOR THIS WORK Robert Lowther
General Delivery
ADDRESS Middlebourne, WV 26149
PERMIT ISSUED October 10, 1984
DRILLING COMMENCED 11/18/84
DRILLING COMPLETED 12/7/84

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	95.3	95.3	60 sks.
9 5/8	1147.2	1147.2	370 sks.
8 5/8			
7	2606	2606	320 sks.
5 1/2			
4 1/2	3486.9	3486.9	75 sks.
3			
2 3/8	3263.08	3263.08	
Liners used			

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

GEOLOGICAL TARGET FORMATION Gordon Depth 3500 feet
Depth of completed well 3493 feet Rotary X / Cable Tools
Water strata depth: Fresh 43' feet; Salt feet
Coal seam depths: 795', 994' and 1094' Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Gordon Pay zone depth 3132-3198 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow (26) Mcf/d Final open flow (37) Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure 460 psig (surface measurement) after hours shut in
(If applicable due to multiple completion--)
Second producing formation Pay zone depth feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow Mcf/d Oil: Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure psig (surface measurement) after hours shut in

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated from 3132-3136' with 6 holes, from 3141-3143' with 4 holes and from 3194-3198' with 6 holes. *Gordon*
 Treated from 3132-3143' and 3194-3198' with 250 gallons 15% Hcl, 1900 gallons gel and 40,000# 20/40 sand.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Shale				98	
Red Shale and Sand			98	178	
Gray Shale			178	229	
Gray Sandy Shale			229	288	
Gray Shale			288	300	
Red Shale			300	307	
Red and Gray Sandy Shale			307	312	
Gray Shale			312	340	
Gray Sandy Shale			340	368	
Red Shale			368	410	
Gray Sandy Shale			410	478	
Red Shale			478	533	
Gray Shale			533	775	
Red Shale			775	785	
Gray Sand and Shale			785	795	
Waynesburg Coal			795	805	
Mapeltown Coal			994	999	
Pittsburgh Coal			1094	1101	
Little Dunkard			1478	1500	
Big Dunkard			1646	1680	
1st Gas Sand			1798	1822	
2nd Salt Sand			1974	2000	
3rd Salt Sand			2025	2051	
Big Lime			2235	2295	
Big Injun <i>GER & PO</i>			2295	2530	
Murrysville?			2881	2894	
Gordon			3118	3143	
4th			3154	3170	
5th			3190	3200	
LTD				3493	
DTD				3500	

(Attach separate sheets as necessary)

Columbia Gas Transmission Corporation

Well Operator

By: *J. Weckley*
 Date: July 17, 1985

Note: Regulation 2.02(i) provides as follows:
 "The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including soil, encountered in the drilling of a well."



1) Date: August 17, 19 84
 2) Operator's Well No. 21237
 3) API Well No. 47 - 051 - 0704
 State County Permit

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES, OIL AND GAS DIVISION
APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil / Gas _____
 B (If "Gas", Production _____ / Underground storage _____ / Deep _____ / Shallow)
- 5) LOCATION: Elevation: 1309 Watershed: Pennsylvania Fork - Fish Creek
 District: Liberty County: Marshall Quadrangle: Littleton
- 6) WELL OPERATOR Columbia Gas Trans. 7) DESIGNATED AGENT J. L. Weekley
 Address P. O. Box 1273 Address P. O. Box 1273
Charleston, WV 25325 Charleston, WV 25325
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Robert Lowther Name _____
 Address General Delivery Address _____
Middlebourne, WV 26149
- 10) PROPOSED WELL WORK: Drill / Drill deeper _____ / Redrill _____ / Stimulate
 Plug off old formation _____ / Perforate new formation _____
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Gordon OIL & GAS DIVISION
 12) Estimated depth of completed well, 3500 feet DEPT. OF MINES
 13) Approximate strata depths: Fresh, _____ feet; salt, _____ feet.
 14) Approximate coal seam depths: 1195 Is coal being mined in the area? Yes _____ / No
- 15) CASING AND TUBING PROGRAM

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 OIL & GAS DIVISION
 DEPT. OF MINES

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor									Kinds
Fresh water	13-3/8	H	48#	X		90'	90'	To surface	
Coal	9-5/8	H	32#	X		1250'	1250'	To surface	by rule 15.05
Intermediate	7	K	20#	X		2200'			
Production	4-1/2	K	10.5	X		3500'	3500	as requested by rule	15.01
Tubing									
Liners									Perforations: Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-051-0704 Date October 9, 19 84

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector, (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires October 9, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>43</u>	Agent: <u>LO</u>	Plat: <u>TS</u>	Casing: <u>MU</u>	Fee: <u>4060</u>
BLANKET				<u>0917</u>

[Signature]
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.