

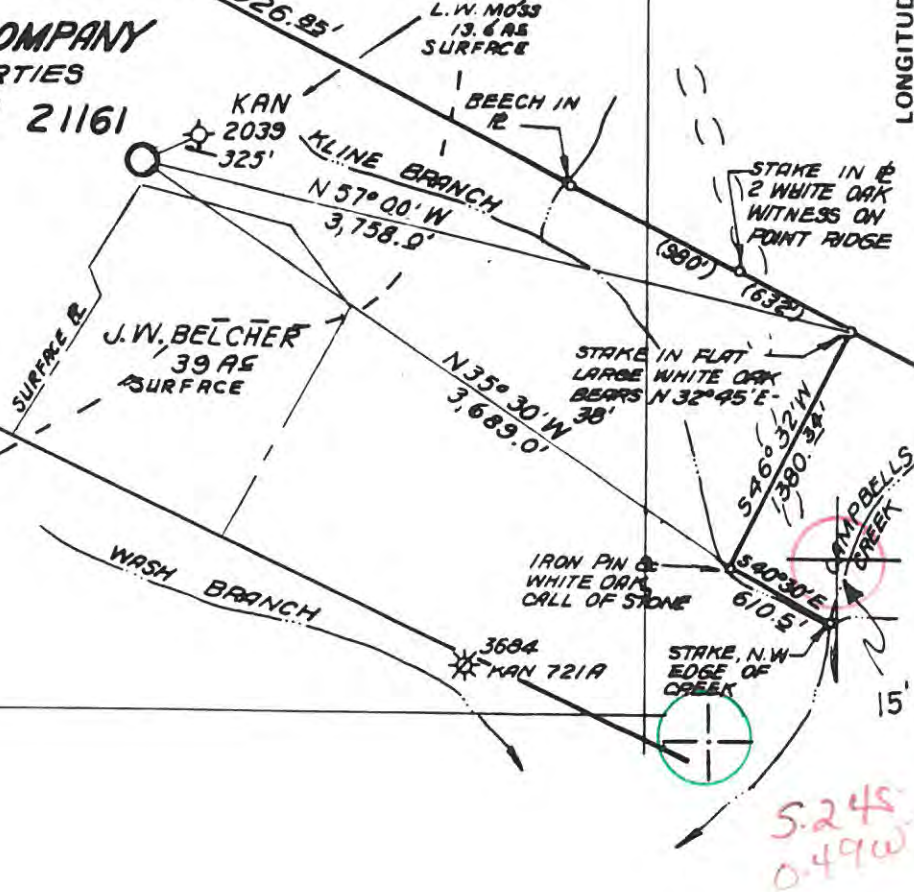
CALL OF STAKE IN FENCE ABOUT 155' S.W. OF TOP OF RIDGE 17.9' FROM GUM TREE

LATITUDE 38° 22' 30"
38° 25' 00"

COLUMBIA GAS TRANSMISSION CORP.
PART DEED 17417
(165.00 AC)

SOUTHERN LAND COMPANY
DICKENSON PROPERTIES
PART LEASE 68870 21161
(334.50 AC)

SOUTHERN LAND COMPANY
DICKENSON PROPERTIES
PART LEASE 190308-B
(140.50 AC)



NOTE:
COAL NOT LEASED
OR OPERATED

REVISION 2/14/83

FILE NO. 68-57
DRAWING NO. 21161
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY 1 PART IN 200
PROVEN SOURCE OF ELEVATION U.S. GOV'T BM AT TAD SCHOOL ELEV. 659'

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) James S. Browning
S.P.E. _____ L.L.S. 398



PLACE SEAL HERE

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION
LAT: 38° 20' 25"
LONG: 81° 30' 29"



DATE DECEMBER 21 19 82
OPERATOR'S WELL NO. 21161
API WELL NO. 47 - 039 - 3943
STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
LOCATION: ELEVATION 1083' WATER SHED CLINE BRANCH OF CAMPBELLS CREEK
DISTRICT MALDEN COUNTY KANAWHA
QUADRANGLE CHARLESTON, EAST Charleston 15' EC
SURFACE OWNER L.W. MOSS ACREAGE 13.6
OIL & GAS ROYALTY OWNER SOUTHERN LAND CO, DICKENSON PROP. LEASE ACREAGE 640 AS UNIT
LEASE NO. 68870-1121.18 AS
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 TUSCARORA ESTIMATED DEPTH 6590'
WELL OPERATOR COL. GAS TRANS. CORP. DESIGNATED AGENT J. L. WEEKLEY
ADDRESS P. O. BOX 1273 ADDRESS SAME
DEEP WELL 6-6 Indian Creek p001 (358)

MAR 28 1983

IV-35
(Rev 8-81)

RECEIVED

NOV 21 1983

OIL & GAS DIVISION
DEPT. OF MINES



State of West Virginia
Department of Mines
Oil and Gas Division

Date November 17,
Operator's
Well No. 21161
Farm Southern Land
API No. 47-039

WELL OPERATOR'S REPORT
OF

039-3943

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1083 Watershed Cline Branch of Campbells Creek
District: Malden County Kanawha Quadrangle Charleston

COMPANY Columbia Gas Transmission Corporation

ADDRESS P. O. Box 1273, Charleston, WV 25325

DESIGNATED AGENT James L. Weekley

ADDRESS P. O. Box 1273, Charleston, WV 25325

SURFACE OWNER L. W. Moss

ADDRESS Campbells Creek, West Virginia

MINERAL RIGHTS OWNER Southern Land Company

ADDRESS P. O. Box 1385, Charleston, WV 25325

OIL AND GAS INSPECTOR FOR THIS WORK Homer Linden Rt., Box 3-A

Dougherty ADDRESS Looneyville, WV 25259

PERMIT ISSUED 3-24-83

DRILLING COMMENCED 4-14-83

DRILLING COMPLETED 5-15-83

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

Casing Tubing	Used in Drilling	Left in Well	Cement fill Cu.
Size 20- 18 Cond.	18	18	20 s
13- 12 "	723.36	723.36	420 s
9 5/8	2351.61	2351.61	435 s
8 5/8			
7	5233	5233	100 s
5 1/2			
4 1/2	6631.98	6631.98	187 s
3			
2	6564.30	6564.30	
Liners used			

GEOLOGICAL TARGET FORMATION Tuscarora Depth 6590

Depth of completed well 6686 feet Rotary X / Cable Tools

Water strata depth: Fresh 51,740 feet; Salt feet

Coal seam depths: 51' Is coal being mined in the area?

OPEN FLOW DATA

Producing formation Tuscarora Pay zone depth 6652-6658 f

Gas: Initial open flow Mcf/d Oil: Initial open flow Bb

Final open flow 750 Mcf/d Final open flow Bb

Time of open flow between initial and final tests hours

Static rock pressure 1580 psig (surface measurement) after 72 hours shut

(If applicable due to multiple completion--)

Second producing formation Pay zone depth f

Gas: Initial open flow Mcf/d Oil: Initial open flow Bb

Final open flow Mcf/d Oil: Final open flow Bb

Time of open flow between initial and final tests hours

Static rock pressure psig (surface measurement) after hours shut

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

Fractured Tuscarora 6-23-83 with 84,000 gals. MSR mud acid, 42,000 gals.
 15% Hcl. Broke down at 4300 psi then treated at 2100 psi at 4 bbls.
 per minute.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all and salt water, coal, oil and
Sail & Rock.			0	15.	
Sand Stone			15	51	
Coal			51	53	
Shale			53	68	
Sand			68	415	
Shale			415	542	
Sand			542	740	
Shale			740	890	
Salt Sand White			890	1063	
Shale Grey			1063	1083	
Salt Sand/Shale			1083	1095	
Salt Sand White			1095	1323	
Shale			1323	1342	
Maxon Sand			1342	1483	
Shale Grey			1483	1510	
Greenbrier			1580	1710	
Big Injun			1710	1750	
Pocono			1750	2200	
Devonian Shale			2200	5030	
Onondaga			5030	5130	
Williamsport			5910	5925	
<u>Tuscarora</u>			6615	6675	
LTD				6681	
DTD				6686	

(Attach separate sheets as necessary)

Columbia Gas Transmission Corporation
 Well Operator

By: [Signature]
 Date: November 17, 1983

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
 coal, encountered in the drilling of a well."



1) Date: March 7, 19 83
 2) Operator's Well No. 21161
 3) API Well No. 47 039 3943
 State West Virginia County Kanawha Permit 47-039-3943

DRILLING CONTRACTOR:

Ray Resources Corporation

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

OIL AND GAS WELL PERMIT APPLICATION

- 4) WELL TYPE: A Oil / Gas X /
 B (If "Gas", Production X / Underground storage / Deep X / Shallow)
- 5) LOCATION: Elevation: 1083' Watershed: Cline Branch of Campbells Creek
 District: Malden County: Kanawha Quadrangle: Charleston, East
- 6) WELL OPERATOR Columbia Gas Transmission Corp. 11) DESIGNATED AGENT J. L. Weekley
 Address P. O. Box 1273 Address P. O. Box 1273
Charleston, WV 25325 Charleston, WV 25325
- 7) OIL & GAS ROYALTY OWNER Southern Land Co. 12) COAL OPERATOR Unoperated
 Address P. O. Box 1385 Address
Charleston, WV 25325
- 8) SURFACE OWNER L. W. Mads 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
 Address Campbells Creek, WV Name Southern Land Company
 Address Address P. O. Box 1385
 Charleston, WV 25325
 Name Dickenson Properties Inc.
 Address Kanawha Valley Bank Building
Charleston, WV 25301
- 9) FIELD SALE (IF MADE) TO:
 Address
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Homer Dougherty
 Address Linden Rt. Box 3-A
Looneyville, WV 25259
- 14) COAL LESSEE WITH DECLARATION ON RECORD:
 Name None
 Address
- 15) PROPOSED WORK: Drill X / Drill deeper / Redrill / Fracture or stimulate /
 Plug off old formation / Perforate new formation /
 Other physical change in well (specify)
- 16) GEOLOGICAL TARGET FORMATION, Tuscarora
- 17) Estimated depth of completed well, 6590 feet
- 18) Approximate water strata depths: Fresh, feet; salt, feet.
- 19) Approximate coal seam depths: 600' Is coal being mined in the area? Yes / No X

20) CASING AND TUBING PROGRAM

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	20"			X		60'	60'	To surface	Kinds	
Fresh water										
Coal	13-3/8"			X		700'	700'	To surface	Sizes	
Intermediate	9-5/8"			X		2400'	2400'	To surface		
Production	7"			X		5200'	5200'	" "	Depths set	
Tubing	4-1/2"			X		6590'	6510'	" "		
Liners									Perforations:	
									Top	Bottom

- 21) EXTRACTION RIGHTS
 Check and provide one of the following:
 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.
 The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)
- 22) ROYALTY PROVISIONS
 Is the right to extract, produce or market the oil or gas based upon a lease or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes No
- If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.
- 23) Required Copies (See reverse side.)
- 24) Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

Notary: Signed:
 My Commission Expires Its: Director, Drilling & Operations

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-039-3943 Date March 23 19 83

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. 10) 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.)

Permit expires November 23, 1983 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
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Administrator, Office of Oil and Gas

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

Line Item Explanation

- 1) Date of Application
- 2) Your well name and number
- 3) To be filled out by office of oil & gas
- 4A) "Oil" means natural crude oil or petroleum and other hydrocarbons, regardless of gravity, which are produced at the well in liquid form by ordinary production methods and which are not the result of condensation of gas after it leaves underground reservoirs: "Gas" means all natural gas and all other fluid hydrocarbons not defined as oil.
- 4B) "Shallow well" means any well drilled and completed in a formation above the top of the uppermost member of the "Onondaga Group" or a depth less than six thousand feet, whichever is shallower.
"Deep well" means any well drilled and completed in a formation at or below the top of the uppermost member of the "Onondaga Group" or at a depth less than six thousand feet, whatever is shallower.
- 5) Where well is located
- 6) Before a permit can be issued in a corporation, company partnership, or fictitious name, the name must be registered with the Secretary of State Office
- 7) Use separate sheet if necessary
- 8) Present surface owner at time application is filed.
- 9) Optional
- 11) See Reg. 7.01 relating to code §22-4-1k
- 12) "Coal Operator" means any persons, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine. See Note 24
- 13 & 14) As per §22-4-20; See Note 24
- 15) Work that will be attempted—A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.
- 16) Anticipated formation for which well will be completed
- 17) Self explanatory
- 18) Depth to deepest freshwater, and shallowest salt water, taken from nearby wells corrected for differences in elevation
- 19) All coal seam depths
- 20) Proposed casing program and cementing refer to Code 22-4-5, 22-4-6, 22-4-7, 22-4-8, 22-4-8a Reg 9.01, 15.01, 15.02, 15.03, 15.04, 25.01, 25.02, 25.03, 25.04
- 21) Code 22-4-11(c) - In lieu of filing the lease or leases or other continuing contract or contracts, the applicant for a permit described herein may file the following:
 - (1) A brief description of the tract of land including the district and county wherein the tract is located;
 - (2) The identification of all parties to all leases or other continuing contractual agreements by which the right to extract, produce or market the oil or gas is claimed;
 - (3) The book and page number wherein each such lease or contract by which the right to extract, produce or market the oil or gas is recorded;
 - (4) A brief description of the royalty provisions of each such lease or contract.
- 22) Code 22-4-11(d) and 22-4-11(e).
- 23) Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code §22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code §22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code §22-4-12a, and (v) if applicable, the consent required by Code §22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.
- 24) **The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.**

.....

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof.

WAIVER

The undersigned coal operator _____ / owner _____ / lessee _____ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____, 19 _____

By _____

Its _____