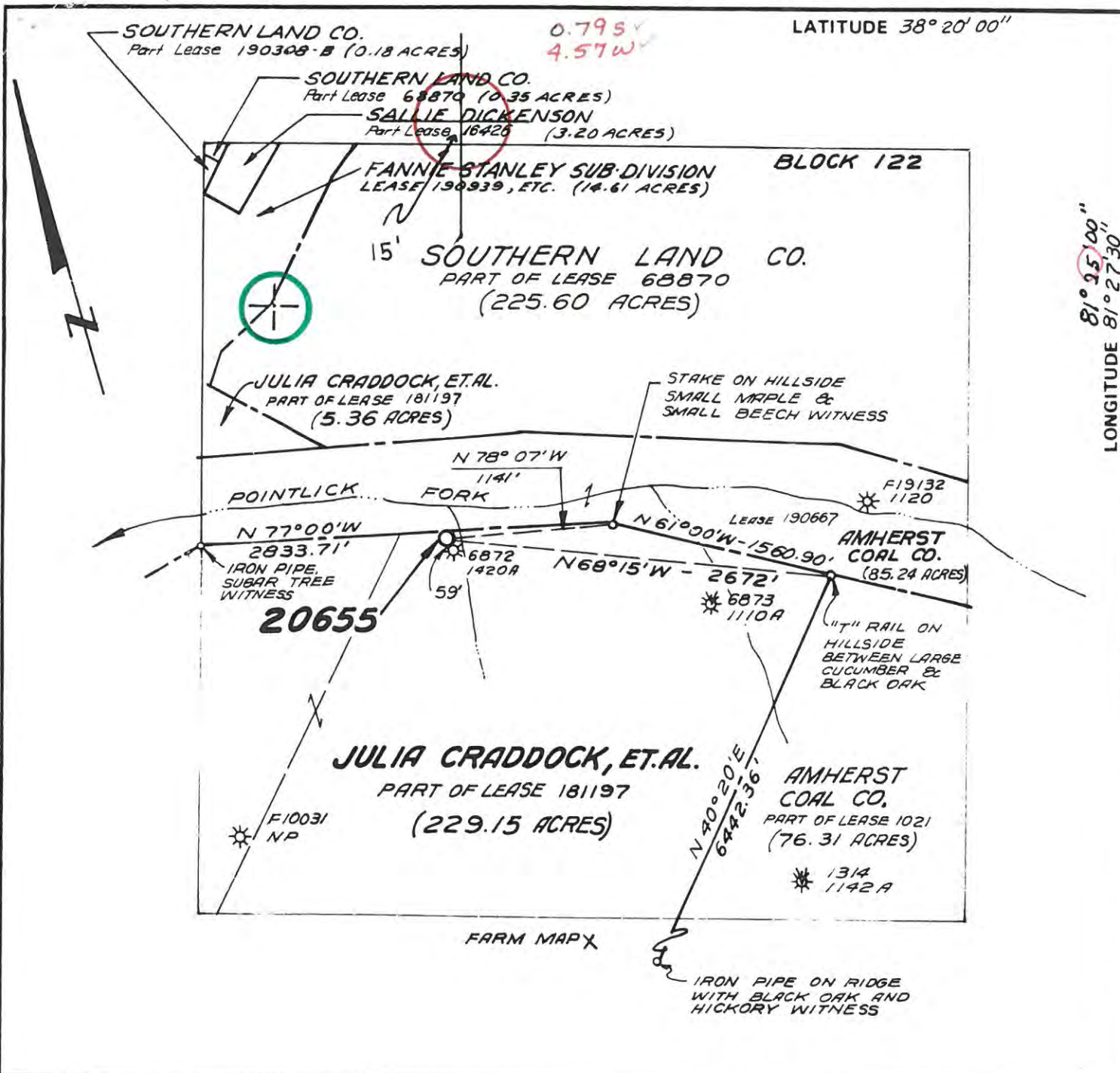


0.795
4.57W



FARM MAP X

FILE NO. 68-57
 DRAWING NO. 20655
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200
 PROVEN SOURCE OF ELEVATION U.S. GOV'T B.M.
ELEV. 632.90'

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) [Signature]
 R.P.E. _____ L.L.S. 99

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FORM IV-6

(8-78) LAT: 38° 19' 19"
 LONG: 81° 29' 59"



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

DATE MAY 10, 19 82
 OPERATOR'S WELL NO. 20655
 API WELL NO. _____
47 - 039 - 3937
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
 LOCATION: ELEVATION 742' WATER SHED POINTCLICK FORK OF CAMPBELLS CREEK
 DISTRICT MALDEN COUNTY KANAWHA
 QUADRANGLE QUICK Clendenin 15' SW
 SURFACE OWNER JULIA CRADDOCK, ET.AL. ACREAGE _____
 OIL & GAS ROYALTY OWNER JULIA CRADDOCK, ET.AL. LEASE ACREAGE 640 ACRES UNIT
 LEASE NO. 181197
 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 6400'
 WELL OPERATOR CO. GAS TRANS. CORP. DESIGNATED AGENT J. L. Weekley
 ADDRESS P. O. BOX 1273 ADDRESS SAME
CHARLESTON, W. VA. 25325

JAN 24 1983

6-6 Indian Creek (2687) 35-8

RECEIVED

JUL 14 1983



OIL & GAS DIVISION
DEPT. OF MINES

IV-35
(Rev 8-81)

Date July 12, 1983
Operator's
Well No. 20655
Farm Julia Craddock, et al.
API No. 47 - 039 - 39

State of West Virginia
Department of Mines
Oil and Gas Division

JUL 25 1983

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

WELL TYPE: Oil / Gas / Liquid Injection / Waste Disposal
(If "Gas," Production / Underground Storage / Deep / Shallow
LOCATION: Elevation: 632.90' ^{wrong see plot} Watershed Pointlick Fork of Campbells Creek
District: Malden County Kanawha Quadrangle Quick

COMPANY Columbia Gas Transmission Corporation
ADDRESS 1700 MacCorkle Ave., Charleston, WV
DESIGNATED AGENT James L. Weekley
ADDRESS 1700 MacCorkle Avenue, Charleston, WV
SURFACE OWNER Julia Craddock, et al.
ADDRESS P.O. Box 1113, Charleston, WV 25324
MINERAL RIGHTS OWNER Julia Craddock, et al.
ADDRESS P.O. Box 1113, Charleston, WV 25324
OIL AND GAS INSPECTOR FOR THIS WORK Homer Linden Rt. Box 3-A
H. Dougherty ADDRESS Looneyville, WV 25259
PERMIT ISSUED 1-23-83
DRILLING COMMENCED 2-23-83
DRILLING COMPLETED 3-17-83

Casing & Tubing	Used in Drilling	Left in Well	Content fill up Cu. ft.
Size 20- 1 1/2 Cond.	35'	35'	15 sks.
13- 1 1/2	196'	196'	270 sks.
9 5/8	1837'	1837'	200 sks.
8 5/8			
7	4882'	4882'	100 sks.
5 1/2			
4 1/2	6228'	6228'	100 sks.
3			
2 -3/8	6165'	6165'	
Liners used			

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

GEOLOGICAL TARGET FORMATION Clinton Depth 6330' feet
Depth of completed well 6300' feet Rotary / Cable Tools _____
Water strata depth: Fresh 47', 457 feet; Salt _____ feet
Coal seam depths: 245-250' Is coal being mined in the area? _____

OPEN FLOW DATA
Producing formation Clinton Tusc. Pay zone depth 6162-6280' feet
Gas: Initial open flow 1,500 Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 2,900 Mcf/d Oil: Final open flow _____ Bbl/d
Time of open flow between initial and final tests 6 hours
Static rock pressure 1780 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

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

Test before acidizing 1,500 Mcf
 Acidized Clinton 6-6-83 with 2,000 gallons mud acid,
 Test after acidized (6 hours) 2,900 Mcf

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fre: and salt water, coal, oil and g
Fill			0	18	
Sand and Shale			18	215	Water 47'
Sand			215	230	
Shale			230	245	
Coal			245	250	
Shale and Sand			250	678	Water 457'
Salt Sand			678	765	
Shale Grey			765	809	
Salt Sand, White			809	878	
Shale			878	1001	
Lime			1001	1055	
Shale			1055	1125	
Lime - Big Lime (see 4/83)			1125	1357	
Sand, Grey			1357	1685	
Lime			1685	1790	
Sand			1790	1837	
Shale			1837	4422	
Lime			4422	4550	
Sand - Ordinary			4550	4600	
Lime and Shale			4600	5785	
Shale			5785	6028	
Sand			6028	6038	
Shale			6038	6162	
Clinton Sand - Tusc.			6162	6280	
Shale			6280	6300	
Total Depth				6300'	

(Attach separate sheets as necessary)

COLUMBIA GAS TRANSMISSION CORPORATION

Well Operator

By:

Date:

[Signature]
7-12-83

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



1) Date: January 17, 1983
 2) Operator's Well No. 20655
 3) API Well No. 47 035 3037
 State County Permit

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: 742 Watershed: Point Lick fork of Campbell Creek
 District: Malden County: Kanawha Quadrangle: Quick
- 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: Charleston National Bank 12) COAL OPERATOR: Unoperated
 Address: Estate of Julia Craddock etal Address:
P. O. Box 1113
Charleston, WV 25324
- 8) SURFACE OWNER: Same as Royalty Owners 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
 Name: Same as Royalty
 Address:
- 9) FIELD SALE (IF MADE) TO:
 Name:
 Address:
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED 14) COAL LESSEE WITH DECLARATION ON RECORD:
 Name: Homer H. Dougherty Name: None
 Address: Linden Rt. Box 3-A Address:
Looneville, WV 25259
- 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, 6400 feet
- 18) Approximate water strata depths: Fresh, feet; salt, feet.
- 19) Approximate coal seam depths: 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	1-40	94	X		60	60	To surface	Kinds
Fresh water	13-3/8	1-40	48	X		200	200	To surface	
Coal	9-5/8	1-55	36	X		1850	1850	To surface	Sizes
Intermediate	7	1-80	26	X		4900			
Production	4-1/2	1-75	13.5	X		6330			Depths set
Tubing									
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: Director, Drilling & Operations
 My Commission Expires Its:

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-035-3037 Date January 21, 1983

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 September 21, 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

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 _____