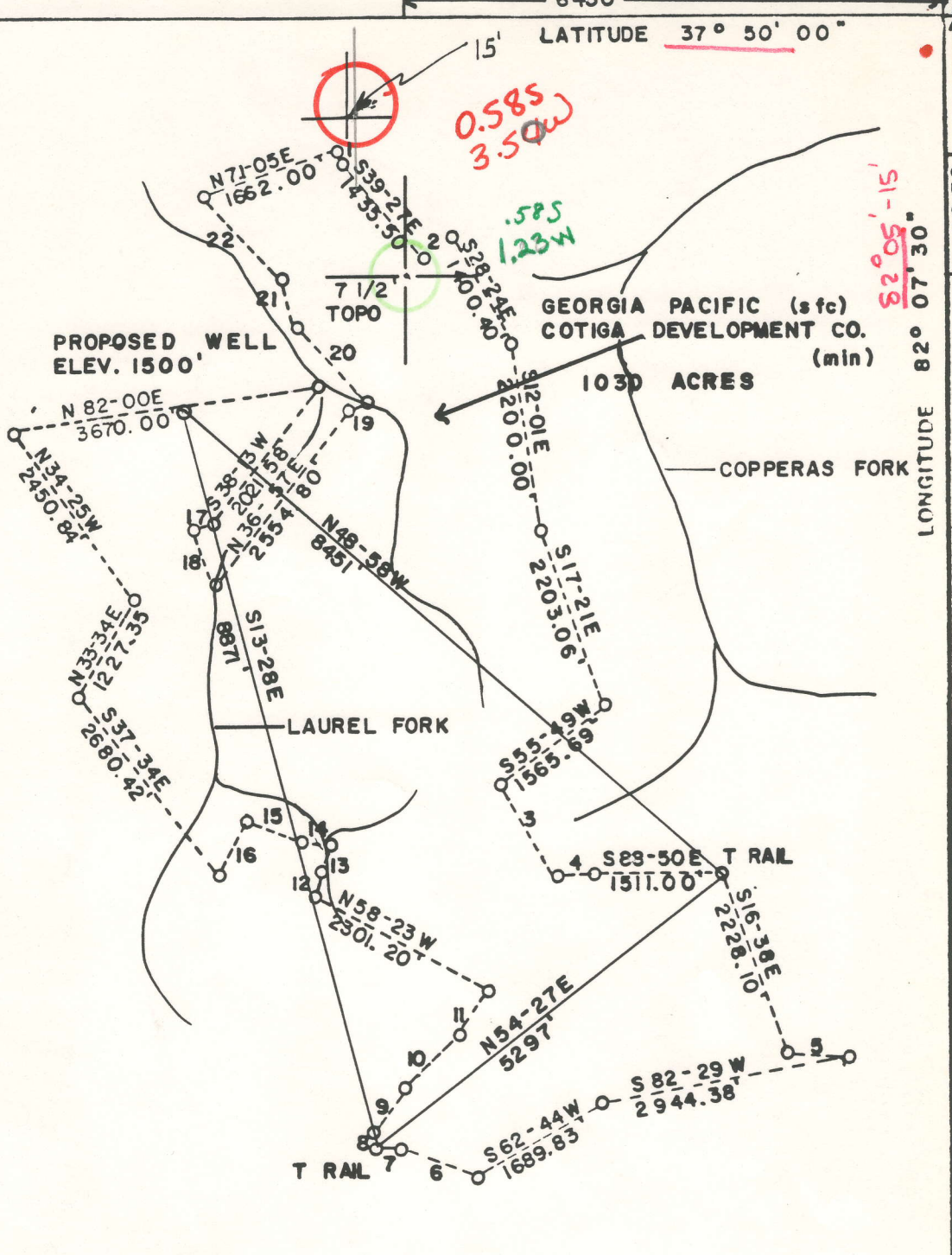


Plot Card CSD-1

LATITUDE 37° 50' 00"

NORTH

1=S 24-50 E	181.50'
2=N 53-11 E	483.71'
3=S 28-24 E	122.92'
4=S 83-49 E	487.85'
5=S 83-52 E	753.07'
6=N 67-17 W	950.73'
7=S 97-15 W	379.02'
8=N 02-32 W	215.14'
9=N 35-37 E	670.23'
10=N 48-18 E	878.32'
11=N 36-07 E	644.87'
12=N 6-45 E	330.00'
13=N 22-38 E	368.11'
14=N 78-40 W	383.5'
15=N 67-30 W	660.00'
16=S 27-32 W	746.08'
17=S 72-40 W	280.67'
18=S 19-02 E	719.17'
19=N 66-12 E	243.53'
20=N 41-53 W	1268.84'
21=N 13-51 W	610.50'
22=N 42-10 W	1346.00'



FILE NO _____
DRAWING NO. _____
SCALE 1" = 2000'
MINIMUM DEGREE OF
ACCURACY 1 IN 200
PROVEN SOURCE OF
ELEVATION USGS BM TRACEFORK
665 MYRTLE QUAD.

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 REGU-
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-
MENT OF MINES.
(SIGNED) Hayma R. Holden
R.P.E. _____ L.L.S. 624
Norton Surveys + Consulting, Inc.



(-) DENOTES LOCATION OF
WELL ON UNITED STATES
TOPOGRAPHIC MAPS
FORM IV-6
(878)



DATE MAY 16, 19 83
OPERATOR'S WELL NO. C-66
API WELL NO. _____
47 - 059 - 1061
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

JUN 27 1983

WELL TYPE OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS.") PRODUCTION STORAGE ___ DEEP ___ SHALLOW ___
LOCATION ELEVATION 1500 WATERSHED LAUREL FORK
DISTRICT HARVEY COUNTY MINGO
QUADRANGLE MYRTLE Holden 15' SC
SURFACE OWNER GEORGIA PACIFIC ACREAGE 1030
OIL & GAS ROYALTY OWNER COTIGA DEVELOPMENT CO. LEASE ACREAGE 1030
LEASE NO. _____
PROPOSED WORK DRILL CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR
STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW DEEP WELL
FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

WELL'S AND ABANDON ___ CLEAN OUT AND REPLUG ___
FORMATION MARCELLUS ESTIMATED DEPTH 5200' 6-6 Logan-Holden-Dingess
WELL OPERATOR SENECA-UPSHUR PET. INC. DESIGNATED AGENT JOSEPH HAGER (274)
ADDRESS P.O. BOX 2048 MICKHANNON, W. VA. 26201



IV-35
(Rev 8-81)

Date December 13, 1983
Operator's
Well No. C-66
Farm _____
API No. 47 - 059 - 1061

State of West Virginia
Department of Mines
Oil and Gas Division

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

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

LOCATION: Elevation: 1500' Watershed Laurel Fork
District: Harvey County Mingo Quadrangle Myrtle

COMPANY Seneca-Upshur Petroleum Company
ADDRESS P.O. Box 2048, Buckhannon, WV 26201
DESIGNATED AGENT Joseph G. Hager
ADDRESS P.O. Box 2048, Buckhannon, WV 26201
SURFACE OWNER Georgia-Pacific
ADDRESS 133 Teachtree St., Atlanta, GA 30303
MINERAL RIGHTS OWNER Cotiga Development Company
ADDRESS 2nd Floor Rear, 14 E. Lancaster Ave. Paoli, PA 19301
OIL AND GAS INSPECTOR FOR THIS WORK Arthur St. Clair ADDRESS P.O. Box 157, Brenton, WV
PERMIT ISSUED 6/24/83
DRILLING COMMENCED 11/25/83
DRILLING COMPLETED 12/4/83

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.	20	20	10
13-10"	972	972	460
9 5/8			
8 5/8	2408	2408	500
7			
5 1/2			
4 1/2		4922	185
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Depth 5200 feet
Depth of completed well 4934 feet Rotary x / Cable Tools _____
Water strata depth: Fresh 1000 feet; Salt _____ feet
Coal seam depths: 817 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3354 feet
Gas: Initial open flow Trace Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 852 Mcf/d Oil: Final open flow 0 Bbl/d
Time of open flow between initial and final tests 2 hours
Static rock pressure 500 psig (surface measurement) after 24 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.

FOAM FRAC

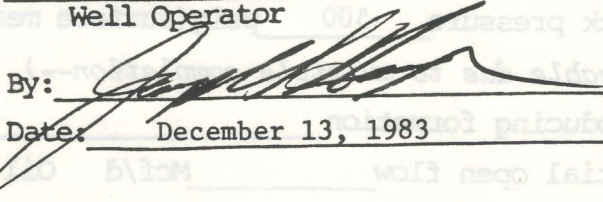
DATE: 12/8/83
 WATER: 740 BBLs.
 SAND: 210,000#
 PERFS: Huron → Angola 4228' - 4777' 30 .49 Perfs
 NITROGEN: 20180 CCF

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale			0	350	
Sand			350	510	
Sand & Shale			510	817	
Coal			817	820	
Sand & Shale			820	884	
Open Hole			884	889	
Sand & Shale			889	2394	From γ-ray log:
Big Lime			2394	2672	Big lime - top 2481 base 2696
Big Injun			2672	2700	Sudbury shale top 3257 base 3292
Sand & Shale			2700	2830	Berea top 3292 base 3333
Weir			2830	2900	Upr Devon top 3383 base 4202
Sand & Shale			2900	3245	Huron 4202 4477
Sudbury Shale			3245	3294	Jawa 4477 4596
Berea			3294	3354	Angola 4596 4772
Gray Shale			3354	4162	Rhinesheet 4772
Brown Shale			4162	4770	
Marcellus			4770	4934	T.D. <u>Huron @ T.D.</u>
					Onondaga at 4926' with elev. = 1510 K.F.
					4934
					3354
					1580

(Attach separate sheets as necessary)

Seneca-Upshur Petroleum Company
Well Operator

By: 
Date: December 13, 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 ..., encountered in the drilling of a well."



1) Date: May 24, 19 83
 2) Operator's Well No. C-66
 3) API Well No. 47 - 059 - 1061
 State _____ County _____ Permit _____

DRILLING CONTRACTOR:
Little Swiss Drilling Co.
Buckhannon, WV 26201

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 _____ / Underground storage _____ / Deep _____ / Shallow X /)
- 5) LOCATION: Elevation: 1500 Watershed: Laurel Fork
 District: Harvey County: Mingo Quadrangle: Myrtle
- 6) WELL OPERATOR: Carson-Ogden Petroleum, Inc. 11) DESIGNATED AGENT: Joseph G. Hager
 Address: P.O. Box 2043 Address: P.O. Box 043
Buckhannon, West Virginia 26201 Buckhannon, West Virginia 26201
- 7) OIL & GAS ROYALTY OWNER: Collins Development Company 12) COAL OPERATOR: None
 Address: 3rd Floor Near, 14 E. Lancaster Ave. Address: _____
Poole, Pennsylvania 19301
- 8) SURFACE OWNER: Georgia-Pacific 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
 Address: P.O. Box 1808 Name: Island Creek Coal Company
Acosta, Georgia 30909 Address: Paintsville, Kentucky 41240
- 9) FIELD SALE (IF MADE) TO:
 Address: _____
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name: _____ Address: _____
 Address: Buckhannon, West Virginia 26201
- 15) PROPOSED WORK: Drill _____ / Drill deeper _____ / Redrill _____ / Fracture or stimulate _____ /
 Plug off old formation _____ / Perforate new formation _____ /
 Other physical change in well (specify) _____
- 16) GEOLOGICAL TARGET FORMATION, _____
- 17) Estimated depth of completed well, _____ 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									Kinds
Fresh water									
Coal									Sizes
Intermediate	<u>3 5/8"</u>		<u>23.00</u>	<u>X</u>		<u>2300</u>	<u>2300</u>	<u>To Surface</u>	Depths set
Production	<u>4 1/2"</u>		<u>23.00</u>	<u>X</u>			<u>3200</u>	<u>As Required by Rule 15.0</u>	
Tubing									Perforations: Top Bottom
Liners									

- 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. On File 059-1017
 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: Radley A. Tackett Signed: _____
 My Commission Expires June 6, 1983 Its: Vice President
In and for the State of West Virginia.

OFFICE USE ONLY
DRILLING PERMIT
 Permit number _____ Date June 24 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 _____ unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond: _____	Agent: _____	Plat: _____	Casing _____	Fee _____
-------------	--------------	-------------	--------------	-----------

Administrator, Office of Oil and Gas