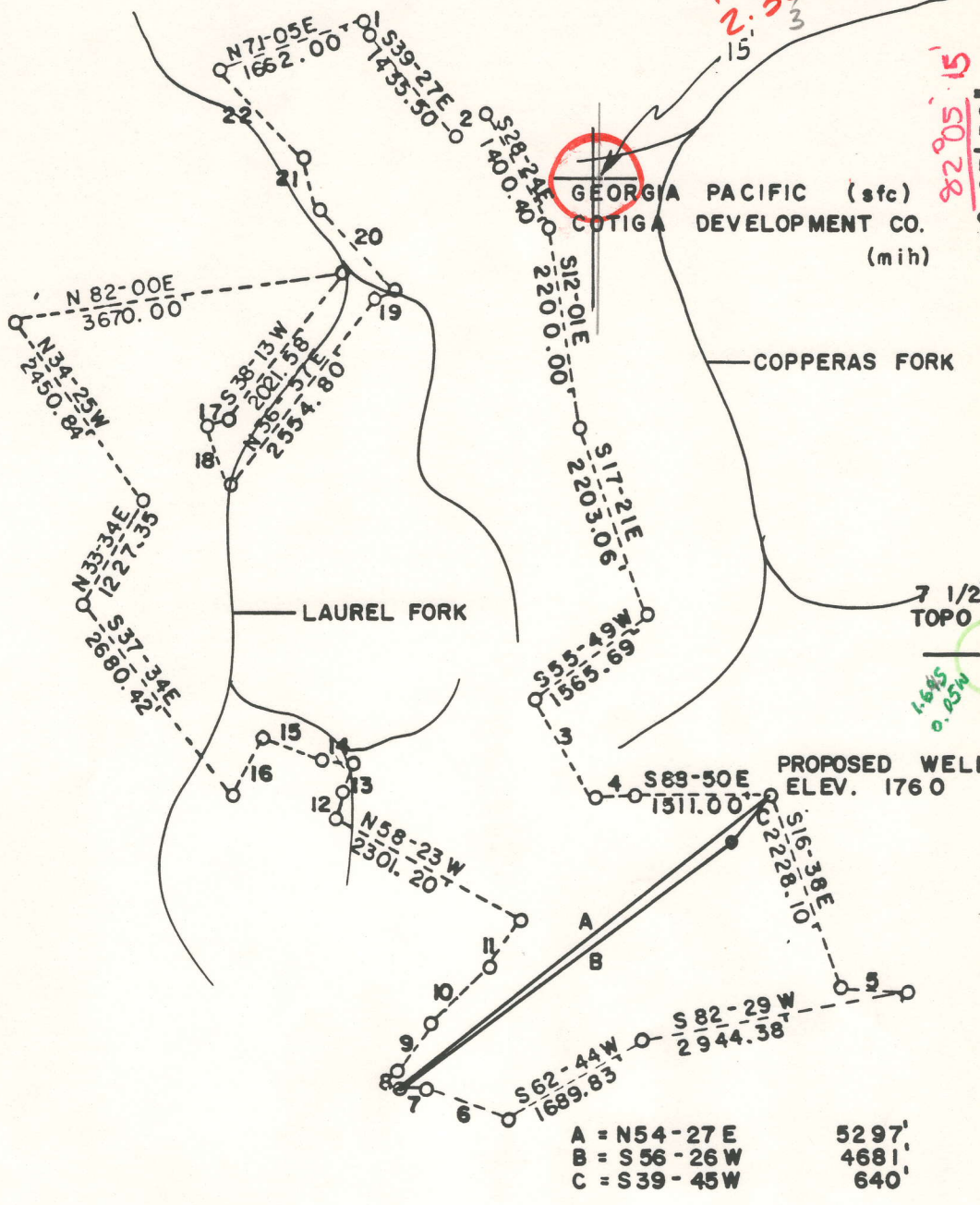


NORTH



1.645
2.380
3

82° 05' 15"

82° 07' 30"

8620

1= S24-50 E	181.50'
2= N53-11E	469.71'
3= S28-24 E	122.972'
4= S83-49E	484.85'
5= S83-52E	758.07'
6= N67-17 W	960.73'
7= S7-15 W	309.02'
8= N02-32W	215.14'
9= N35-37E	670.23'
10= N48-18E	878.32'
11= N36-07E	644.87'
12= N16-45E	330.00'
13= N22-38E	368.11'
14= N78-40W	383.5'
15= N67-30W	660.00'
16= S27-32W	746.08'
17= S72-40W	280.67'
18= S19-02E	719.17'
19= N66-12E	243.53'
20= N41-58W	1268.84'
21= N13-51W	610.50'
22= N42-10W	1348.00'

A = N54-27 E 5297'
 B = S56-26 W 4681'
 C = S39-45 W 640'

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
 (SIGNED) Wayne D. Holden
 R.P.E. _____ L.L.S. 624
Holden Surveys & Consulting, Inc.



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



DATE MAY 16, 1983
 OPERATOR'S WELL NO. C-69
 API WELL NO. _____
47 - 059 - 1064
 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 1760 WATER SHED LAUREL FORK
 DISTRICT HARVEY COUNTY MINGO
 QUADRANGLE MYRTE Holden's, 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 FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) DEEP WELL

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



IV-35
(Rev 8-81)

Date December 23, 1983

State of West Virginia

Department of Mines
Oil and Gas Division

Operator's
Well No. C-69

Farm _____

API No. 47 - 059 - 1064

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: 1760' Watershed Laurel Fork
District: Harvey County Mingo Quadrangle Myrtle

COMPANY Seneca-Ipschur 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 Co.
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

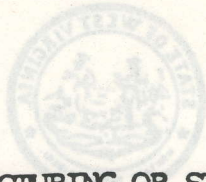
Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.	20	20	10
13-10"	1209	1209	490
9 5/8			
8 5/8	2632	2632	420
7			
5 1/2			
4 1/2		5135	175
3			
2			
Liners used			

DRILLING COMMENCED 11/8/83
DRILLING COMPLETED 11/16/83
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON _____

GEOLOGICAL TARGET FORMATION Marcellus Depth 5200 feet
Depth of completed well 5220 feet Rotary x / Cable Tools _____
Water strata depth: Fresh _____ feet; Salt _____ feet
Coal seam depths: 10', 151', 336', 349', 523', 665' Is coal being mined in the area? No
1180'

OPEN FLOW DATA
Producing formation Devonian Shale Pay zone depth 3566 feet
Gas: Initial open flow Trace Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 920 Mcf/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 2 hours
Static rock pressure 560 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

JAN 16 1984



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

FOAM FRAC

DATE: 12/16/83
 WATER: 878 BBLs.
 SAND: 210,000#
 PERFS: 4434' - 5039' ^{Huron} 33 .49 Perfs
 NITROGEN: 20,700 CSCF

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Surface			0	10	
Coal			10	13	
Shale			13	151	
Coal			151	155	
Shale			155	160	
Sand			160	336	
Coal			336	340	
Sand			340	348	
Coal			349	357	
Sand			357	446	
Shale			446	523	
Coal			523	527	
Shale			527	665	
Coal			665	678	
Sand & Shale			678	1180	
Coal			1180	1185	
Sand			1185	1356	
Sand & Shale			1356	2309	
Red Rock			2309	2313	
Sand & Shale			2313	2340	
Red Rock & Shale			2340	2569	
Big Lime			2569	2847	
Big Injun			2847	2868	
Sand & Shale			2868	3060	
Weir			3060	3114	
Sand & Shale			3114	3464	
Sudbury Shale			3464	3510	
Berea			3510	3566	
Gray Shale			3566	4410	
Brown Shale			4410	5040	
Marcellus			5040	5220	

T.D. Huron@T.D.

onondaga at 5206' with elev = 1770' kb. (from x-ray)

5220
3566

1654

(Attach separate sheets as necessary)

Seneca-Upshur Petroleum Company
Well Operator

By: Joseph S. [Signature]
Date: December 23, 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



1) Date: May 24, 19 83
2) Operator's C-69
Well No. _____
3) API Well No. 47 - 059 - 1064
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: 1705 Watershed: Laurel Fork
District: Harvey County: Mingo Quadrangle: Myrtle
- 6) WELL OPERATOR Sensco-Operator Petroleum, Inc. 11) DESIGNATED AGENT Joseph G. Hagar
Address P.O. Box 2048 Address P.O. Box 2048
Buckhannon, West Virginia 26201 Buckhannon, West Virginia 26201
- 7) OIL & GAS ROYALTY OWNER Cotiga Development Company 12) COAL OPERATOR None
Address 2nd Floor Near, 14 E. Lancaster Ave. Address _____
Paoli, Pennsylvania 19301
Acreage 1030
- 8) SURFACE OWNER Georgia-Pacific 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
Address P.O. Box 1803 Name Island Creek Coal Company
Augusta, Georgia 30909 Address Paintsville, Kentucky 41240
Acreage 1030
- 9) FIELD SALE (IF MADE) TO:
Address _____
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Arthur St. Clair
Address P.O. Box 157
Brenton, West Virginia 24813
- 14) COAL LESSEE WITH DECLARATION ON RECORD:
Name Three Rivers Coal Company
Address P.O. Box 118
Pittsburgh, PA 15230
- 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, Marcellus
- 17) Estimated depth of completed well, 5200 feet
- 18) Approximate water strata depths: Fresh, 700 feet; salt, 1100 feet.
- 19) Approximate coal seam depths: 320 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	<u>16"</u>				<u>X</u>	<u>20</u>	<u>20</u>	<u>To Surface</u>	Kinds
Fresh water									
Coal									Sizes
Intermediate	<u>8 5/8"</u>		<u>23.00</u>	<u>X</u>		<u>2640</u>	<u>2640</u>	<u>To Surface</u>	
Production	<u>4 1/2"</u>		<u>23.00</u>	<u>X</u>			<u>5200</u>	<u>As Required</u>	Depths set
Tubing								<u>By Rule 15.0</u>	
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.)

On file 059-101

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: Smiley K. Teets

Signed: _____
Its: Vice President

My Commission Expires June 6, 1983
In and for the State of West Virginia.

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-059-1064 Date June 14 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
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Administrator, Office of Oil and Gas