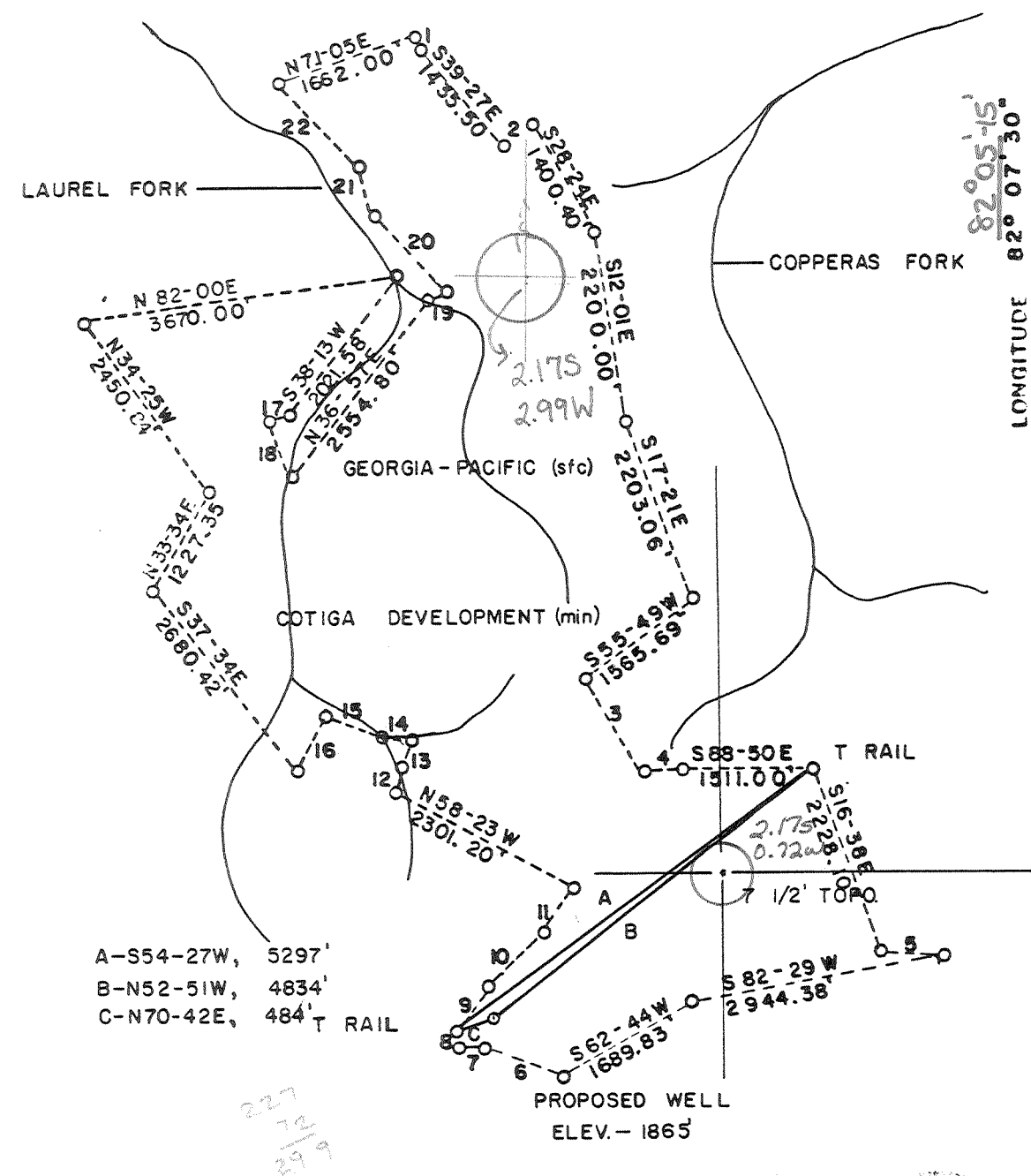


REVISED



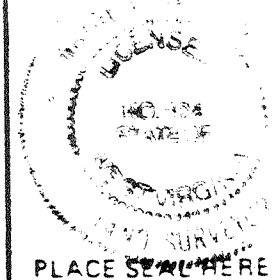
1=S24-50 E	181.50'
2=N53-11E	469.71'
3=S28-24E	122.972'
4=S83-49E	484.85'
5=S83-52E	758.07'
6=N67-17 W	960.73'
7=S87-15 W	309.02'
8=N02-32W	215.14'
9=N35-37E	670.23'
10=N48-18E	878.32'
11=N36-07E	644.87'
12=N6-45E	330.00'
13=N22-38E	368.11'
14=N78-40W	383.5'
15=N67-30W	660.00'
16=S27-32W	746.08'
17=S72-40W	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	1346.00'

A-S54-27W, 5297'
B-N52-51W, 4834'
C-N70-42E, 484'

227
72
29/9

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) Raymond D. Pore
R.P.E. _____ L.L.S. 624



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



DATE SEPTEMBER 8, 1983
OPERATOR'S WELL NO. C-51
API WELL NO. 47-059-1088
STATE WEST VIRGINIA COUNTY MINGO PERMIT

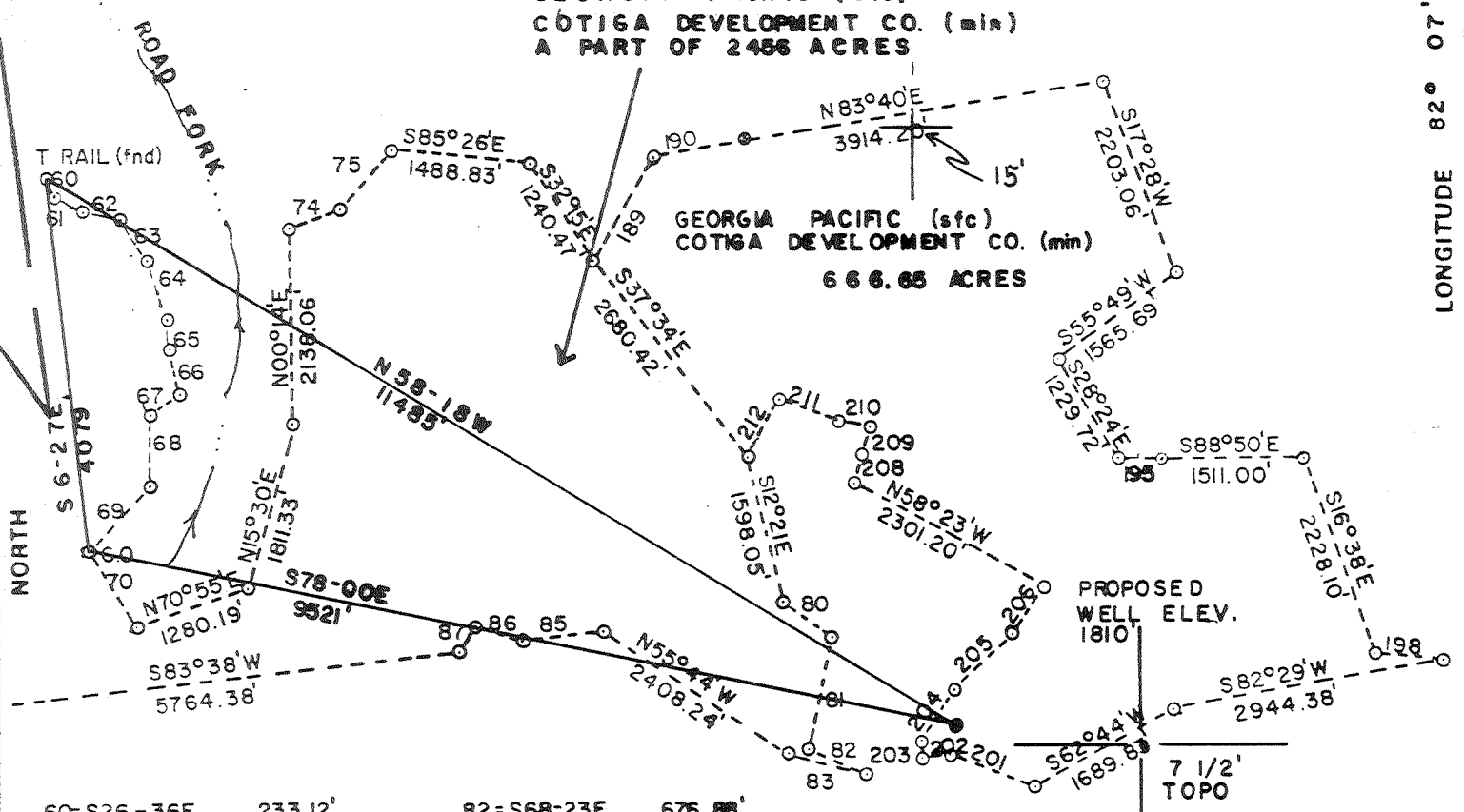
STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL TYPE OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION ELEVATION 1865' WATER SHED LAUREL FORK
DISTRICT HARDEE COUNTY MINGO
QUADRANGLE MYRTLE Holden 15'se
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) _____

PLUG AND ABANDON CLEAN OUT AND REPLUG
FORMATION MARCELLUS ESTIMATED DEPTH 5200' DEEP WELL
WELL OPERATOR SENECA-UPSHUR PET. INC. DESIGNATED AGENT JOSEPH HAGER
ADDRESS P.O. BOX 2048 BUCKHANNON, W. VA. 26201

GEORGIA PACIFIC (sfc)
COTIGA DEVELOPMENT CO. (min)
A PART OF 2486 ACRES

GEORGIA PACIFIC (sfc)
COTIGA DEVELOPMENT CO. (min)
666.65 ACRES



60=S26-36E	233.12'
61=S66-14E	358.33'
62=S79-27E	395.30'
63=S34-33E	537.76'
64=S17-30E	683.36'
65=S02-36E	317.36'
66=S12-01E	491.26'
67=S56-10W	398.23'
68=S01-03W	741.78'
69=S48-29W	91.27'
70=S29-19E	965.79'
74=S69-32E	601.12'
75=N39-31E	835.37'
80=S54-18E	656.34'
81=S2-31W	1261.68'

82=S68-23E	676.88'
83=N75-37W	868.74'
85=S83-47W	883.60'
86=N70-32W	528.67'
87=S31-25W	292.68'
189=N33-34E	1227.35'
190=N79-24E	981.70'
196=S83-49E	484.85'
198=S83-52E	758.07'
201=N67-17W	960.73'
202=S87-5W	309.02'
203=N02-32E	215.14'
204=N35-37E	670.23'
205=N48-18E	878.32'
206=N36-07E	644.87'

207=N58-23W	2301.20'
208=N16-45E	330.00'
209=N22-38E	368.11'
210=N76-40W	383.15'
211=N67-30W	660.00'
212=S27-32W	746.08'

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION USGS BM TRACEFORK 665, USGS 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) [Signature]
 R.P.E. _____ L.L.S. 624
Norton Surveys & Consulting, Inc.

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6 (8-78)



DATE APRIL 4, 19 83
 OPERATOR'S WELL NO. C-51
 API WELL NO. _____
47 - 059 - 1053
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

CANCELLED
REISSUED AS "1088"

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1810' WATER SHED LAUREL FORK
 DISTRICT HARVEY COUNTY MINGO
 QUADRANGLE MYRTLE
 SURFACE OWNER GEORGIA PACIFIC ACREAGE 666.65
 OIL & GAS ROYALTY OWNER COTIGA DEVELOPMENT CO. LEASE ACREAGE 666.65
 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) _____

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION MARCELLUS 5000'
 WELL OPERATOR SENECA-UPSHUR PET. INC DESIGNATED AGENT JOSEPH HAGER
 ADDRESS P.O. BOX 2048 ADDRESS P.O. BOX 2040
BUCKHANNON, WVA 26201 BUCK HANNON, W. VA. 26201

APR 20 1984

3550'

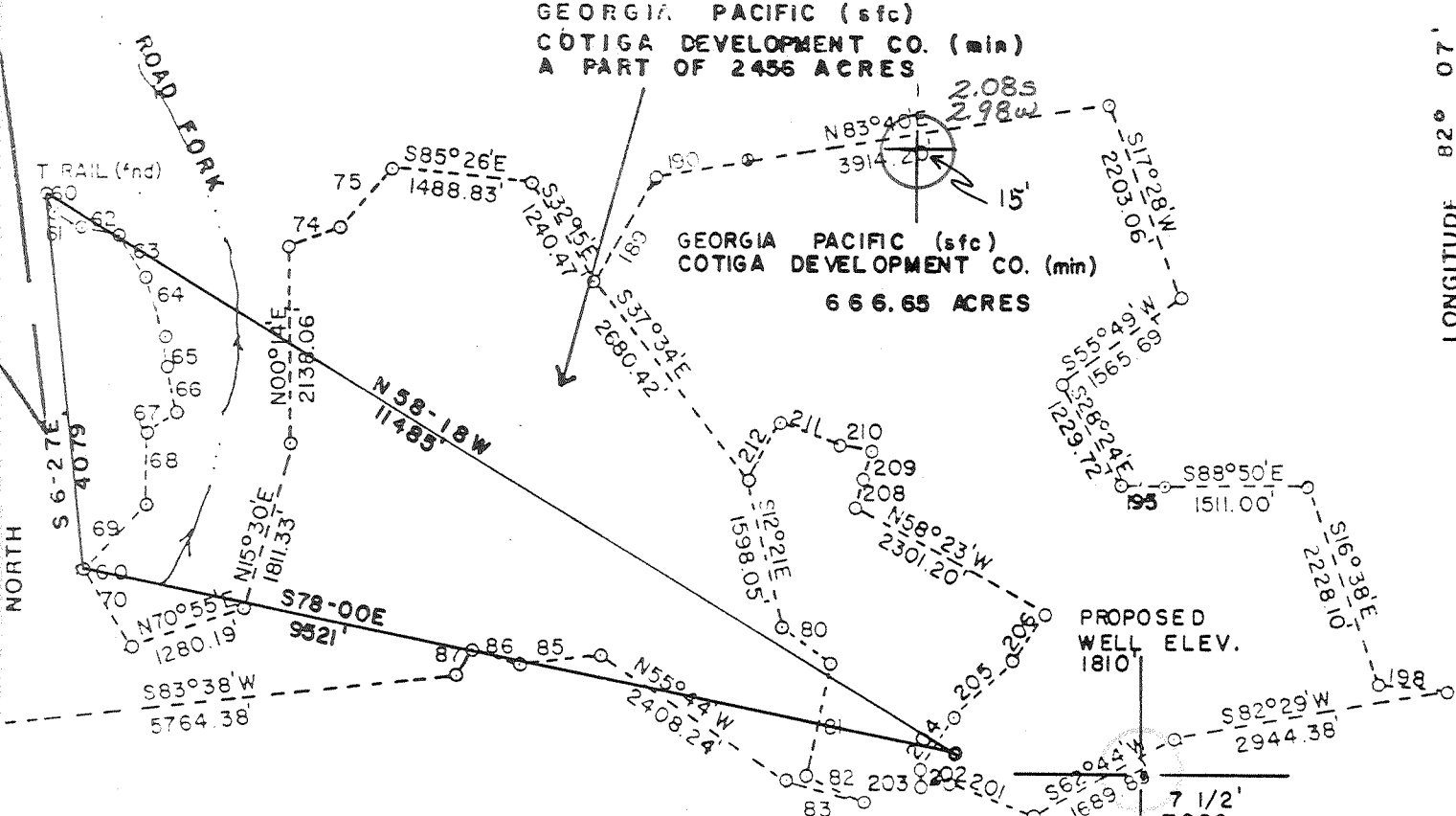
37° 50' 00"

LONGITUDE 82° 07' 30"

10 980'

GEORGIA PACIFIC (sfc)
COTIGA DEVELOPMENT CO. (min)
A PART OF 2456 ACRES

GEORGIA PACIFIC (sfc)
COTIGA DEVELOPMENT CO. (min)
666.65 ACRES



60-S26-36E	233.12'
61-S66-14E	358.33'
62-S79-27E	395.30'
63-S34-33E	537.76'
64-S17-30E	683.36'
65-S02-36E	317.36'
66-S12-01E	491.26'
67-S56-10W	398.23'
68-S01-03W	741.78'
69-S43-29W	91.27'
70-S29-19E	945.79'
74-N69-32E	601.12'
75-N39-31E	835.37'
80-S54-18E	656.34'
81-S12-31W	1261.68'

82-S68-23E	676.83'
83-N75-37W	868.74'
85-S83-47W	883.60'
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206-N36-07E	644.87'

207=N58-23W	2301.20'
208=N16-45E	330.00'
209=N22-38E	368.11'
210=N76-40W	383.15'
211=N67-30W	680.00'
212-S27-32W	746.08'

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION USGS BM TRACEFORK 665, USGS 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) [Signature]
 R.P.E. _____ L.L.S. 624

PLACE SEAL HERE

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



DATE APRIL 4, 19 83
 OPERATOR'S WELL NO. C-51
 API WELL NO. _____
47 - 059 - 1053
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL TYPE OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION ELEVATION 1810' WATER SHED LAUREL FORK
 DISTRICT HARVEY COUNTY MINGO
 QUADRANGLE MYRTLE Holden 15 SC
 SURFACE OWNER GEORGIA PACIFIC ACREAGE 666.65
 OIL & GAS ROYALTY OWNER COTIGA DEVELOPMENT CO. LEASE ACREAGE 666.65

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) _____

MAY 16 1983

PLUG AND ABANDON CLEAN OUT AND REFLOW SET FORMATION MARCELLUS
 5000'

MINGO 1053

IV-35
(Rev 8-81)



Date December 19, 1983
Operator's
Well No. C-51
Farm _____
API No. 47 - 059 - 1088

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: 1865' Watershed Laurel Fork
District: Hardee 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., N.E., Atlanta, GA
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 10/24/83
DRILLING COMMENCED 11/14/83
DRILLING COMPLETED 11/28/83
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 up Cu. ft.
Size 20-16 Cond.	20	20	10
13-10"	1218	1218	400
9 5/8			
8 5/8	2700	2700	420
7			
5 1/2			
4 1/2		5217	185
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Depth 5000 feet
Depth of completed well 5310 feet Rotary x / Cable Tools _____
Water strata depth: Fresh 106 feet; Salt _____ feet
Coal seam depths: 163', 179', 395', 496', 654', 1192' Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Devonian Shale Pay zone depth 3714 feet
Gas: Initial open flow Trace Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 880 Mcf/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 2 hours
Static rock pressure 595 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

(Continue on reverse side)

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

FOAM FRAC

DATE: 12/13/83
 WATER: 946 BBLs.
 SAND: 210,000#
 PERFS: 4450' - 5143' 33 .49 Perfs
 NITROGEN: 22,260 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	48	
Sand			48	104	
Sand & Shale			104	163	
Coal			163	168	
Sand & Shale			168	179	
Coal			179	182	
Sand & Shale			182	368	
Sand			368	395	
Coal			395	399	
Sand & Shale			399	496	
Coal			496	499	
Sand & Shale			499	654	
Coal			654	657	
Sand & Shale			657	730	
Shale			730	960	
Sand & Shale			960	1135	
Mine			1135	1145	
Sand & Shale			1145	1192	
Coal			1192	1196	
Sand & Shale			1196	2350	
Sand			2350	2389	
Sand & Shale			2389	2440	
Red Rock			2440	2474	
Shale			2474	2484	
Sand & Shale			2484	2745	
Big Lime			2745	3023	
Big Injun			3023	3050	
Sand & Shale			3050	3204	
Weir			3204	3302	
Sand & Shale			3302	3601	
Sudbury Shale			3601	3650	
Berea			3650	3714	
Gray Shale			3714	4526	
Brown Shale			4526	5140	
Marcellus			5140	5310	

Onondaga at 5300'

T.D. Huron
 5310
 3714
 1596

(Attach separate sheets as necessary)

Seneca-Upshur Petroleum Company
 Well Operator
 By: 
 Date: December 19, 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: September 30, 19 83
 2) Operator's Well No. C-51
 3) API Well No. 47 - 059 - 1088
 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 X /
 B (If "Gas", Production X / Underground storage / Deep / Shallow X /)
- 5) LOCATION: Elevation: 1865' Watershed: Laurel Fork
 District: Hardee County: Mingo Quadrangle: Myrtle
- 6) WELL OPERATOR Seneca-Upshur Petroleum, Inc. 7) DESIGNATED AGENT Joseph G. Hager
 Address P.O. Box 2048 Address P.O. Box 2048
Buckhannon, West Virginia 26201 Buckhannon, West Virginia 26201
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Arthur St. Clair Name Little Swiss Drilling Company
 Address P.O. Box 157 Address P.O. Box 2048
Brenton, West Virginia 24818 Buckhannon, West Virginia 26201
- 10) PROPOSED WELL WORK: Drill X / Drill deeper / Redrill / Stimulate
 Plug off old formation / Perforate new formation
 Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, Marcellus
- 12) Estimated depth of completed well, 5000 feet
- 13) Approximate trata depths: Fresh, 780, 550 feet; salt, 1180 feet.
- 14) Approximate coal seam depths: 320 Is coal being mined in the area? Yes
- 15) CASING AND TUBING PROGRAM

RECEIVED
 OCT - 3 1983
 OIL & GAS DIVISION
 DEPT. OF MINES
 PACKERS

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	16"				X	20	20	To Surface	Kinds
Fresh water	11 3/4"					600	600	To Surface	By Rule 15.05
Coal									Sizes
Intermediate	8 5/8"		23.00	X		2710	2710	To Surface	
Production	4 1/2"		23.00	X			5000	As Required	Depths set
Tubing								by Rule 15.01	
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-059-1088 Date October 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. 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 24, 1985 unless well work is commenced prior to that date and prosecuted with due diligence.

Blanket Bond	Agent	Plat	Casing	Fee
	<i>[Signature]</i>	<i>[Signature]</i>		6194

[Signature]
 Administrator, Office of Oil and Gas



1) Date: April 26, 1983
 2) Operator's Well No. C-51
 3) API Well No. 47 - 059 - 1053
 State _____ County _____ Permit _____

DRILLING CONTRACTOR:

Little Swiss Drilling Company
Buckhannon, West Virginia

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 _____ / Shallow X /)
- 5) LOCATION: Elevation: 1810' Watershed: Laurel Fork
 District: Harvey County: Mingo Quadrangle: Wirtle
- 6) WELL OPERATOR Seneca-Ipschur Petroleum, Inc. 11) DESIGNATED AGENT Joseph G. Hayer
 Address P.O. Box 2048 Address P.O. Box 2048
Buckhannon, West Virginia 26201 Buckhannon, West Virginia 26201
- 7) OIL & GAS ROYALTY OWNER Otliga Development Company 12) COAL OPERATOR None
 Address 2nd Floor Near, 14 East Lancaster Ave. Address _____
PoLi, 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
Augusta, Georgia 30909 Address Paintsville, Kentucky 41240
 Acreage Part of 666.65 Name _____
 Address _____
- 9) FIELD SALE (IF MADE) TO:
 Address _____
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Arthur St. Clair Address _____
P.O. Box 157
Branton, West Virginia 24818
- 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, Murcallus
- 17) Estimated depth of completed well, 5000 feet
- 18) Approximate water strata depths: Fresh, 780 feet; salt, 1180 feet. Salt 1610'
- 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 3/8"</u>		<u>23.00</u>	<u>X</u>		<u>2710</u>	<u>2710</u>	<u>to surface</u>	Depths set
Production	<u>4 1/2"</u>		<u>23.00</u>	<u>X</u>			<u>5000</u>	<u>AS REQUIRED</u>	Depths set
Tubing								<u>BY RULE 15.1</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. 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: _____ Signed: [Signature]
 My Commission Expires June 6, 1983 Its: Vice President

OFFICE USE ONLY

Permit number 47-059-1053 **DRILLING PERMIT** Date May 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 January 12, 1984 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond: <u>B.P.</u>	Agent: <u>[Signature]</u>	Plat: <u>[Signature]</u>	Casing: <u>[Signature]</u>	Fee: <u>[Signature]</u>
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Administrator, Office of Oil and Gas

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