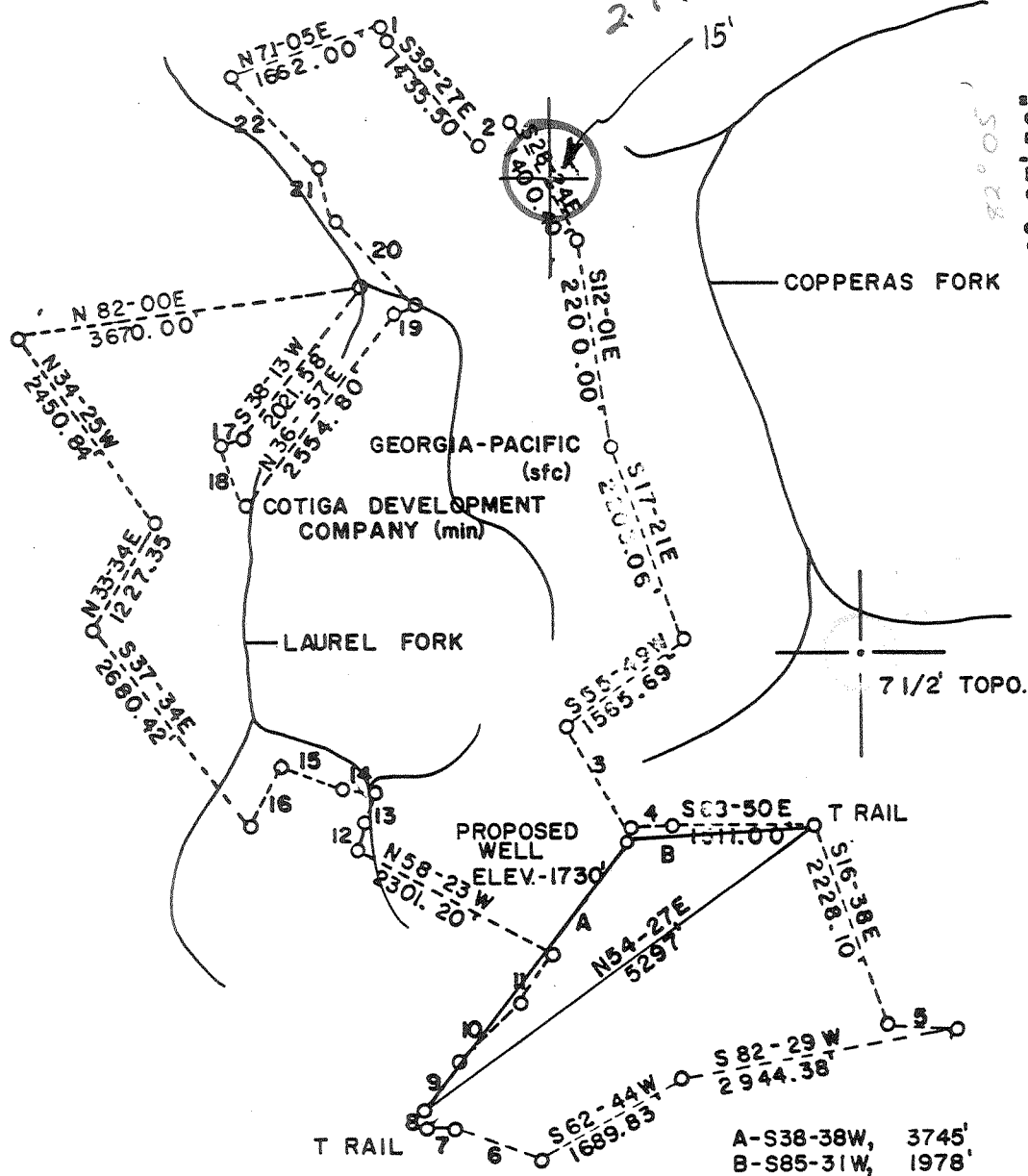


37° 50' 00"

1.60S  
2.74W



NORTH

LONGITUDE 82° 07' 30"

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=N02-32 W	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'

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) [Signature]  
 R.P.E. \_\_\_\_\_ L.L.S. 624



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



DATE MAY 19, 19 83  
 OPERATOR'S WELL NO. C-70  
 API WELL NO. \_\_\_\_\_  
47 - 045 - 1086  
 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 1730' WATER SHED COPPERAS FORK  
 DISTRICT ISLAND CREEK COUNTY LOGAN  
 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 FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUS AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_  
 FORMATION MARCELLUS ESTIMATED DEPTH 5200' 66 Logan-Holden-Dingess (274)  
 WELL OPERATOR SENECA-UPSHUR PET. INC. REPRESENTATIVE JOSEPH HAGER  
 ADDRESS P.O. BOX 2048 6600 Popwell P.O. BOX 2048  
 FICKMAN, W. VA. 26001 FICKMAN, W. VA. 26001

IV-35  
(Rev 8-81)



Date January 10, 1984  
Operator's  
Well No. C-70  
Farm \_\_\_\_\_  
API No. 47 - 045 - 1086

**RECEIVED** State of West Virginia  
Department of Mines  
Oil and Gas Division  
AUG 22 1984

OIL & GAS DIVISION  
**DEPT. OF MINES** 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: 1730' Watershed Copperas Fork  
District: Island Creek County Logan 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, Pennsylvania 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.	30	30	10
13-10"	1204	1204	140
9 5/8			
8 5/8	2649	2649	420
7			
5 1/2			
4 1/2		5088	175
3			
2			
Liners used			

DRILLING COMMENCED 10/19/83  
DRILLING COMPLETED 10/29/83

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 5141 feet Rotary X / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh \_\_\_\_\_ feet; Salt \_\_\_\_\_ feet  
Coal seam depths: 10', 151', 336', 349', 523', 665', 1180' Is coal being mined in the area? No

OPEN FLOW DATA  
Producing formation Devonian Shale Pay zone depth 3510 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 590 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

SEP 24 1984

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

FOAM FRAC:

DATE: 12/21/83  
 WATER: 838 BBLs.  
 SAND: 210,000#  
 PERFS: 4368' - <sup>Huron</sup>4969' 30 .49 Perfs  
 NITROGEN: 20,180 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
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 and Shale			2340	2566	
Big Lime			2566	2844	
Big Injun			2844	2878	
Sand & Shale			2878	3000	
Weir			3000	3062	
Sand & Shale			3062	3400	
Sudbury Shale			3400	3452	
Berea			3452	3510	
Gray Shale			3510	4370	
Brown Shale			4370	4942	
Marcellus ?			4942	5141	

Onondaga @ 5128'

T.D. Huron @ T.D.

5141  
3510  
-----  
1631

(Attach separate sheets as necessary)

Seneca-Upshur Petroleum Company  
Well Operator

By: \_\_\_\_\_

Date: \_\_\_\_\_

January 10, 1984

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 those encountered in the drilling of a well."

