

8,125'

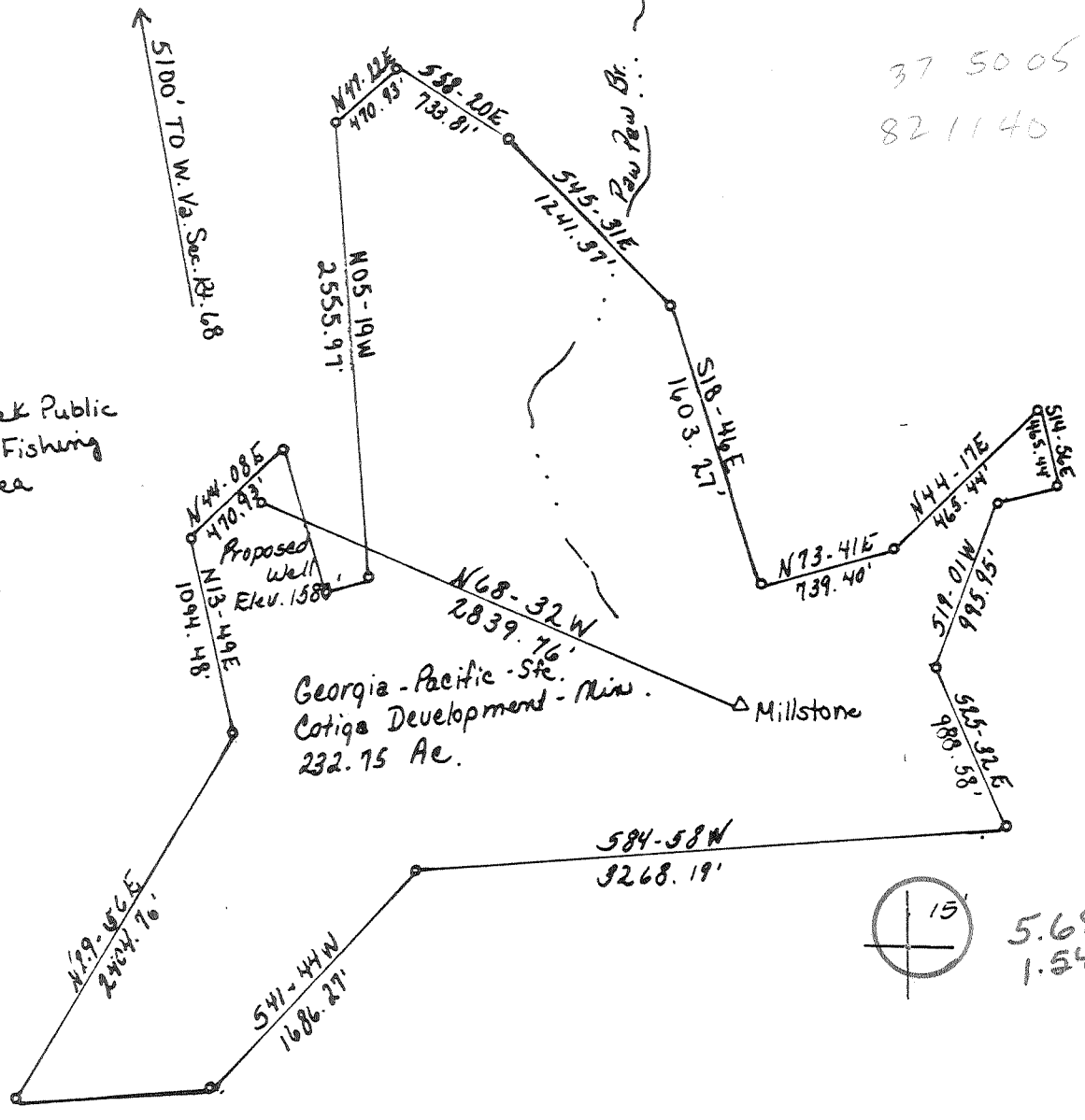
LATITUDE 37° 52' 00"
37° 55'

37 50 05
82 11 40

LONGITUDE 82° 10' 00"

NORTH

Laurel Creek Public
Hunting + Fishing
Area



Georgia-Pacific Ste.
Cotiga Development - Min.
232.75 Ac.

Millstone



5.685
1.54W

7.5' Appo.

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF
 ACCURACY 1 in 200
 PROVEN SOURCE OF
 ELEVATION 525 gm Pickering
 Knob, 1955 USGS Holden 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) Hager
 R.P.E. _____ L.L.S. 624

PLACE SEAL HERE

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



DATE Sept 25, 19 80
 OPERATOR'S WELL NO. Cotiga #19
 API WELL NO. _____
47 - 059 - 0985
 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 1580' WATER SHED Laurel Fork
 DISTRICT Harvey Harvey COUNTY Mingo
 QUADRANGLE Mingo Holden's 602
 SURFACE OWNER Georgia-Pacific ACREAGE 232.75
 OIL & GAS ROYALTY OWNER Cotiga Development Co. LEASE ACREAGE 232.75
 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 DEV. SHALE ESTIMATED DEPTH 4500
 WELL OPERATOR Seneca-Upshur Pet. Co. DESIGNATED AGENT Wagon Hager
 ADDRESS P.O. Box P ADDRESS P.O. Box P

6-6 Dempsey School (368) SEP 22 1981

DEEP WELL

RECEIVED



AUG 13 1982

IV-35 (Rev 8-81)

OIL AND GAS DIVISION WV DEPARTMENT OF MINES

State of West Virginia Department of Mines Oil and Gas Division

Date August 10, 1982 Operator's Well No. C-19 Farm API No. 47-059-0985

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: 1580' Watershed Laurel Fork District: Hardee, Harvey County Mingo Quadrangle Myrtle

COMPANY Seneca-Upshur Petroleum, Inc.

ADDRESS P.O. Box 2048, Buckhannon, WV 26201

DESIGNATED AGENT Seneca-Upshur Petroleum, Inc.

ADDRESS P.O. Box 2048, Buckhannon, WV 26201

SURFACE OWNER Georgia-Pacific

ADDRESS P.O. Box 1808, Augusta, GA 30909

MINERAL RIGHTS OWNER Cotiga Development Company

ADDRESS 25 Darby Road, Paoli, PA 19301

OIL AND GAS INSPECTOR FOR THIS WORK Arthur

St. Clair ADDRESS P.O. Box 157, Brenton, WV

PERMIT ISSUED 9/8/81

DRILLING COMMENCED 10/29/81

DRILLING COMPLETED 11/4/81

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

Table with 4 columns: Casing & Tubing, Used in Drilling, Left in Well, Cement fill up Cu. ft. Rows include sizes 20-16 Cond., 13-10", 9 5/8, 8 5/8, 7, 5 1/2, 4 1/2, 3, 2, and Liners used.

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 4500 feet

Depth of completed well 4912 feet Rotary X / Cable Tools

Water strata depth: Fresh 176 feet; Salt 2345 feet

Coal seam depths: 239,494 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3486 feet

Gas: Initial open flow Trace Mcf/d Oil: Initial open flow 0 Bbl/d

Final open flow 870 Mcf/d Final open flow 0 Bbl/d

Time of open flow between initial and final tests 2 hours

Static rock pressure 550 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.

DATE:	12/2/81	12/9/81
WATER:	421 BBLs.	456 BBLs.
SAND:	90,000#	120,000#
PERFS:	12 <u>4568'-4757'</u>	12 <u>4220'4407'</u>
NITROGEN:	8820 SCF	8750 SCF

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Clay			0	6	
Sand			6	51	
Shale			51	195	
Sand & Shale			195	239	
Coal			239	245	
Sand & Shale			245	494	
Coal			494	502	
Sand & Shale			502	1200	
Shale			1200	1358	
Sand & Shale			1358	1432	
Shale			1432	1590	
Sand & Shale			1590	1683	
Sand			1683	1799	
Sand & Shale			1799	2129	
Sand			2129	2458	
Red Rock			2458	2464	
Big Lime			2464	2742	
Big Injun			2742	2774	
Sand & Shale			2774	2894	
Weir			2894	2994	
Sand & Shale			2994	3322	
Sudbury Shale			3322	3391	
Berea			3391	3486	
Gray Shale			3486	4114	
Brown Shale			4114	4716	
Marcellus Huron			4716	4899	T.D.
					Onondaga at 4883' (with elev = 1590ft)

(Attach separate sheets as necessary)

Seneca-Upshur Petroleum, Inc.

Well Operator

By: 

Date: August 10, 1982

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."

[08-78]

Operator's Well No. C-19

API Well No. 059 - 0985

OIL AND GAS WELL PERMIT APPLICATION

WELL TYPE: Oil / Gas /
(If "Gas", Production / Underground storage Deep Shallow
LOCATION: Elevation: 1580' Watershed: Laurel Fork
District: Hardee, Harvey County: Mingo Jurisdiction: Myrtle

WELL OPERATOR Seneca-Upshur Petroleum, Inc. OPERATOR'S AGENT Seneca-Upshur Petroleum, Inc.
Address P.O. Drawer P Address P.O. Drawer P
Buckhannon, West Virginia 26201 Buckhannon, West Virginia 26201

OIL & GAS ROYALTY OWNER Cotiga Development Company COAL OPERATOR Hobet Mining & Construction
Address 24 Darby Road Address P.O. Box 8674
Paoli, Pennsylvania 19301 South Charleston, WV 25303
Acreage 232.75

SURFACE OWNER Georgia-Pacific, Exchange Oil & Gas Name Island Creek Coal Company
Address 1250 Poydras St., 24th Floor Address Pantsville, Kentucky 41240
New Orleans, Louisiana 70112
Acreage 232.75

FIELD SALE (IF MADE) TO:
Name _____
Address _____

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Arthur St. Clair
Address P.O. Box 157
Brenton, WV 24818 732-6227

RECEIVED

AUG 24 1981

OIL & GAS DIVISION

The undersigned well operator is entitled to operate for all or gas purposes at the above location under a deed / lease / other contract August 1, 1979, to undersigned well operator from Cotiga Development Company
[If said deed, lease, or other contract has been recorded]

Recorded on _____, 19____, in the office of the Clerk of the County Commission of _____ County, West Virginia, in _____ Book _____ of said _____.

PROPOSED WORK: Drill / Drill deeper / Re-drill / Re-work / Plug off old formation / Perform new formation / Other physical change in well (specify) _____

--planned as shown on the work order on the reverse side here--

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 § 22-2-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.

Copies of this Permit Application and the enclosed plat and declaration shall be delivered by registered mail or delivered by hand to the above named well 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, Charleston, West Virginia.

Seneca-Upshur Petroleum, Inc.
Well Operator

By [Signature]
Vice President

PLEASE SUBMIT COPIES OF ALL
OF PHYSICAL LOGS DIRECTLY TO:
WEST VIRGINIA DEPT. OF MINES
CONSERVATION DIVISION
100 WASHINGTON STREET, SUITE
CHARLESTON, WV 25302

[09-78]

DEPARTMENT OF MINES

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

DRILLING CONTRACTOR OR OWNER Little Swiss Drilling Company

Address P.O. Drawer P

Buckhannon, West Virginia 26201

GEOLOGICAL TARGET FORMATION, Devonian Shale

Estimated depth of completion well, 4500 feet X

Approximate water depth beyond bottom of well, _____ feet

Approximate production depths: _____ Is coal being mined in the area Yes _____ / No X

LOGGING AND TESTING OR TESTS

CASING OR TUBING TYPE	DIMENSIONS				POSTAGE INTERVALS		CURRENT FILL - TO BE MADE	REMARKS
	ID	Weight	Flow	Use	From Drilling	From Well		
Production	16"			X	20	20	To Surface	Iron
Fresh water								
Gas								
Production	8 5/8"	20.00	X		1600	1600	To Surface	
Production	4 1/2"	10.50	X			4500	As Required by Rule 15.01	
Testing								
Miners								

Permit No. _____

Department of Mines provides that the original copy of this permit shall be filed with the Department of Mines, Office of the Director, Department of Mines, 1000 Kanawha Blvd. E., Charleston, West Virginia 25304. The permit shall be valid only if the permittee complies with the provisions of the Department of Mines, Office of the Director, Department of Mines, 1000 Kanawha Blvd. E., Charleston, West Virginia 25304. The permit shall be valid only if the permittee complies with the provisions of the Department of Mines, Office of the Director, Department of Mines, 1000 Kanawha Blvd. E., Charleston, West Virginia 25304.

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All operations being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 5-8-82.

[Signature]
Deputy Director - Oil & Gas Division

The undersigned hereby certifies that the information furnished herein is true and correct to the best of his knowledge and belief.

WAIVER

The undersigned hereby certifies that the information furnished herein is true and correct to the best of his knowledge and belief. If a mine has been abandoned, the well location has been abandoned, the permittee shall be held liable for the cost of the permit, provided, the well location has been abandoned within the time specified in the West Virginia Code and the applicable regulations.

By _____
Title _____