

API WELL NO. 45 - 105 - 20535
State County PermitDate: May 18, 1987
Operator's Well
Name Cope #1 151-SVLLE-104
STONEWALL GAS CO.
STARLING
#1 COPE
ROSEHILL 7 1/2'
EL. 1686VIRGINIA OIL AND GAS INSPECTOR
P. O. BOX 1416
ABINGDON, VA 24210
703-628-8115REPORT OF COMPLETION OF WELL WORK

Pursuant to Regulation 4.06 of the Regulations under the Virginia Oil and Gas Act, the undersigned well operator reports completion of the type(s) of well work specified below on the referenced well in White Shoals District, Lee County, Virginia on 21 day, July month, 19 84.

WELL TYPE: Oil X / Gas X / Enhanced recovery ___ / Waste Disposal ___ / If "Gas", Production X / Underground Storage ___ / Exempt by Code Section 45.1-300.B.1. from general oil and gas conservation law: yes ___ / no X /

WELL WORK: Drill ___ / Deepen ___ / Redrill ___ / Stimulate X / Plug off old formation ___ / Perforate new formation ___ / Plug ___ / Replug ___ / Other physical change in well (specify) _____

The well work was done as shown in the Appendix(es) applicable to the type(s) of well work involved.

CONFIDENTIALITY STATUS UNDER CODE OF VIRGINIA SECTION 45.1-332.

___ Ninety days from the filing of this report
OR
X Two years from July 31, 1984, the date on which the referenced well was COMPLETED, the well being an exploratory well as defined in Code of Virginia Section 45.1-288.21.

APPLICANT: Stonewall Gas Company
BY Ray M. Frear Jr
ITS _____
ADDRESS P.O. Drawer R, Jane Lew, WV 26378
TELEPHONE 304-884-7881

Form 16
Appendix A, Sheet 1 (Reverse)
Continued from Obverse side

OTHER GENERAL INFORMATION

An electric log survey was ___/ was not X/ conducted pursuant to Code of Virginia Section 45.1-333.B.2, at the coal owner's or operator's request.

An electric log survey was X/ was not ___/ run for other purposes. This survey did ___/ did not X/ disclose the vertical location of a coal seam.

Note: If a coal seam was located, the part of the survey from the surface through the coal is attached in accordance with Code of Virginia Section 45.1-333.B.3.

Deviation surveys were ___/ were not X/ required under Code of Virginia Section 45.1-333.C "to the bottom of the lowest published coal seam depth."

Note: If deviation surveys were required, the survey results are attached.

A continuous survey was ___/ was not X/ required under Code of Virginia Section 45.1-333.C.

Note: If a continuous directional survey was required, the survey results are attached.

CHANGES IN THE PERMITTED WELL WORK

The well operator did ___/ did not X/ make any change(s) in the permitted well work, verbally approved by the Inspector or Assistant Inspector under Regulation 4.03 of the Regulations under the Virginia Oil and Gas Act, for the purpose of insuring successful completion of the well work.

Note: The nature and purpose of each such change, if any, is set out below or on additional sheets if such are required.

FORM 16
APPENDIX A,
SHEET 1, (OBVERSE)

API WELL NO. 45 - 105 - 20535
State County Permit
Date: May 18, 1987
Operator's Well
Name Cope #1 151-SVL

REPORT OF COMPLETION OF WELL WORK
IF DRILLING, REDRILLING, OR DEEPENING IS INVOLVED

DRILLING CONTRACTOR Union Drilling
ADDRESS Rt 33 West, Drawer 40, Buckhannon, WV 26201
TELEPHONE (304) 472-4610

GEOLOGICAL TARGET FORMATION Trenton Limestone
DEPTH OF COMPLETED WELL 2537 FEET
DATE DRILLING COMMENCED 10/19/82
DATE DRILLING COMPLETED 11/01/82
DRILLING RIG: ROTARY X / CABLE TOOL /

GEOLOGICAL DATA	Depth		Thickness
	Top	Bottom	
Fresh Water	349		
Salt water	None		
Coal Seams	None		Name MINING IN AREA Yes No Mined Out No
Oil	None		Formation
Gas	2019		Formation Trenton

below: The data on depth of strata is based on the source(s) checked

- Applicant's own drilling experience in the area
- Information supplied by the coal operator in the area
- Information already in possession of the Inspector
- Other (as follows) _____

CASING AND TUBING PROGRAM

PRELIMINARY INFORMATION

Is the subject well underlaid by the red shales? Yes ___/ No X/
If Yes, was a coal protection string set to the red shales? Yes ___/ No X

	SIZE	TOP	BOTTOM	LENGTH	PERFORATIONS FROM TO
<u>CONDUCTOR:</u>					
<u>CASING CIRCULATED AND CEMENTED IN TO SURFACE:</u>	13'	0'	65'	65'	
<u>COAL PROTECTION CASING SET UNDER SPECIAL RULE OF CODE OF VIRGINIA 45.1-334.B:</u>	None				
<u>OTHER CASING AND TUBING LEFT IN WELL;</u>	8 5/8" 4 1/2"	0' 0'	850' 2499.85'	850' 2499.85'	<u>1 shot each</u> 2013.9' 2044 2082 2108.1 2137.8
<u>LINERS LEFT IN WELL UNDER CODE OF VIRGINIA SECTION 45.1-336 OR OTHERWISE:</u>	None				

PACKERS OR BRIDGE PLUGS: KIND SIZE SET AT
None

REMARKS: SHUT DOWN DEPTHS, DATES; FISHING JOB DEPTHS, DATES; CAVING; ETC.)

None

SAMPLES AND CUTTINGS

WILL ___ WILL NOT X BE AVAILABLE FOR EXAMINATION BY A MEMBER OF THE VIRGINIA DIVISION OF MINERAL RESOURCES
WILL ___ WILL NOT X BE FURNISHED THE VIRGINIA DIVISION OF MINERAL RESOURCES UPON REQUEST
WILL ___ WILL NOT X REQUIRE SACKS TO BE FURNISHED BY THE VIRGINIA DIVISION OF MINERAL RESOURCES.

DRILLER'S LOG

Compiled by Ray M. Frear Jr.

Geolo- gical Age	Formation	General Lithology	Color	Depth (feet)		Thickness	Remarks
				Top	Bottom		
Silurian	Clinton	Shale	Rd/Gy	745	1051	306'	
Silurian	Clinch	Sandstone	Gy	1051	1148	97'	
				1148	1217	69'	
NO SAMPLES							
Ordovician	Sequatchie	Shale	Rd/Gy	1217	1466	249'	
Ordovician	Reedsville	Shale	Gy	1466	1786	320'	
Ordovician	Trenton	Limestone	Gy	1786	2358	572'	
Ordovician	Eggliston	Limestone	Gy	2358	T.D.	179'	

Complete on supplemental sheet as necessary

APPENDIX TO REPORT OF COMPLETION OF WELL WORK
ON A WELL DRILLED IN SEARCH OF OIL OR GAS

DISCOVERY OF OIL OR INDICATIONS THEREOF

Indicated potential flow before stimulation N/A BOD
Gravity and grade: _____

DISCOVERY OF GAS OR INDICATIONS THEREOF

Indicated potential flow before stimulation 211 MCFD @ T.D.
Rock pressure: _____ psig _____ hour test

RECORD OF STIMULATION

Full description of stimulation:

Zone 1: Trenton Formation

Zone was not stimulated only perforated and perforations
cleaned with acid. Well blew down to 200 MCF after 8 hrs.
Perforated 2014 - 2144' # Perfs. 38 Perf. Size .39
Breakdown _____ psig. Avg. Injection _____ psig.
Avg. I.R. BPM Init. S.I.P. _____ psig 15 Min. S.I.P. 800 psig

Zone 2: _____ Formation

Perforated _____ # Perfs. _____ Perf. Size _____
Breakdown _____ psig. Avg. Injection _____ psig.
Avg. I.R. _____ BPM Init. S.I.P. _____ psig 15 Min. S.I.P. _____ psig

Zone 3: _____ Formation

Perforated _____ # Perfs. _____ Perf. Size _____
Breakdown _____ psig. Avg. Injection _____ psig.
Avg. I.R. _____ BPM Init. S.I.P. _____ psig 15 Min. S.I.P. _____ psig

Final production () natural () after stimulation

	BOD	MCFD	Hours Tested	Rock Pressure	Hours Tested
Zone 1:	_____	_____	_____	_____	_____
Zone 2:	_____	_____	_____	_____	_____
Zone 3:	_____	_____	_____	_____	_____

Final production if gas zones are comingled: _____ MCFD

_____ hours tested: _____ psig. _____ hours tested

VIRGINIA DIVISION OF MINERAL RESOURCES
 Box 3667, Charlottesville, VA 22903

INTERVAL SHEET

LE-104

Page 1 of 2

Well Repository No.: W-6800

Date rec'd: 2/18/86 Date Processed: 2/18/86

Sample Interval: from 190 to: 2535

PROPERTY: Cope #1

Number of samples: 178

COMPANY: Stonewall Gas Co.

Total Depth: 2537

COUNTY: Lee

Oil or Gas: XX Water: Exploratory:

From-To	From-To	From-To	From-To	From-To
190 - 200	955 - 965	1265 - 1275	1565 - 1575	1865 - 1875
200 - 230	955 - 965	1275 - 1285	1575 - 1585	1875 - 1885
XXX - XXX	965 - 975	1285 - 1295	1585 - 1595	1885 - 1895
260 - 290	975 - 985	1295 - 1305	1595 - 1605	1895 - 1905
XXX - XXX	985 - 995	1305 - 1315	1605 - 1615	1905 - 1915
320 - 330	995 - 1005	1315 - 1325	1615 - 1625	1915 - 1925
330 - 340	1005 - 1015	1325 - 1335	1625 - 1635	1925 - 1935
340 - 350	1015 - 1025	1335 - 1345	1635 - 1645	1935 - 1945
XXX - XXX	1025 - 1035	1345 - 1355	1645 - 1655	1945 - 1955
740 - 750	1035 - 1045	1355 - 1365	1655 - 1665	1955 - 1965
750 - 760	1045 - 1055	1365 - 1375	1665 - 1675	1965 - 1975
760 - 770	1055 - 1065	1375 - 1385	1675 - 1685	1975 - 1985
770 - 780	1065 - 1075	1385 - 1395	1685 - 1695	1985 - 1995
780 - 790	1075 - 1085	1395 - 1405	1695 - 1705	1995 - 2005
790 - 800	1085 - 1095	1405 - 1415	1705 - 1715	2005 - 2015
800 - 810	1095 - 1105	1415 - 1425	XXXX - XXXX	2015 - 2025
810 - 820	1105 - 1115	1425 - 1435	1725 - 1735	2025 - 2035
XXX - XXX	1115 - 1125	1435 - 1445	XXXX - XXXX	2035 - 2045
830 - 840	1125 - 1135	1445 - 1455	1745 - 1755	2045 - 2055
840 - 850	1135 - 1145	1455 - 1465	1755 - 1765	2055 - 2065
850 - 860	1145 - 1155	1465 - 1475	1765 - 1775	2065 - 2075
860 - 870	1155 - 1165	1475 - 1485	1775 - 1785	2075 - 2085
870 - 880	1165 - 1175	1485 - 1495	1785 - 1795	2085 - 2095
885 - 895	1175 - 1185	1495 - 1505	1795 - 1805	2095 - 2105
895 - 905	XXXX - XXXX	1505 - 1515	1805 - 1815	2105 - 2115
905 - 915	1215 - 1225	1515 - 1525	1815 - 1825	2115 - 2125
XXX - XXX	1225 - 1235	1525 - 1535	1825 - 1835	2125 - 2135
925 - 935	1235 - 1245	1535 - 1545	1835 - 1845	2135 - 2145
XXX - XXX	1245 - 1255	1545 - 1555	1845 - 1855	2145 - 2155
945 - 955	1255 - 1265	1555 - 1565	1855 - 1865	2155 - 2165

VIRGINIA DIVISION OF MINERAL RESOURCES
 Box 3667, Charlottesville, VA 22903

INTERVAL SHEET
 Continued

Page 2 of 2

Well Repository No.: W-6800

From-To	From-To	From-To	From-To	From-To
2165 - 2175	-	-	-	-
2175 - 2185	-	-	-	-
2185 - 2195	-	-	-	-
2195 - 2205	-	-	-	-
2205 - 2215	-	-	-	-
2215 - 2225	-	-	-	-
2225 - 2235	-	-	-	-
2235 - 2245	-	-	-	-
2245 - 2255	-	-	-	-
2255 - 2265	-	-	-	-
2265 - 2275	-	-	-	-
2275 - 2285	-	-	-	-
2285 - 2295	-	-	-	-
2295 - 2305	-	-	-	-
2305 - 2315	-	-	-	-
2315 - 2325	-	-	-	-
2325 - 2335	-	-	-	-
2335 - 2345	-	-	-	-
2345 - 2355	-	-	-	-
2355 - 2365	-	-	-	-
2365 - 2375	-	-	-	-
2375 - 2385	-	-	-	-
2385 - 2395	-	-	-	-
2395 - 2405	-	-	-	-
2405 - 2415	-	-	-	-
2415 - 2425	-	-	-	-
2425 - 2435	-	-	-	-
2435 - 2445	-	-	-	-
2445 - 2455	-	-	-	-
2455 - 2465	-	-	-	-
2465 - 2475	-	-	-	-
2475 - 2485	-	-	-	-
2485 - 2495	-	-	-	-
2495 - 2505	-	-	-	-
2505 - 2515	-	-	-	-
2515 - 2525	-	-	-	-
2525 - 2535	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

Date: Sept. 28, 1982

Operator's Well No. #1 COPE

VIRGINIA OIL AND GAS INSPECTOR
DEPARTMENT OF LABOR AND INDUSTRY
DIVISION OF MINES
219 Wood Avenue
Big Stone Gap, Virginia 24219-1799
Phone 703-523-0335

LE-104

WELL PLAT

+ Denotes location of well on United States Topographic Maps, scale 1 to 24,000. Latitude and longitude lines are represented by border lines as shown.

This plat is new updated

This plat is is not based on a mine coordinate system established for the areas of the well location.

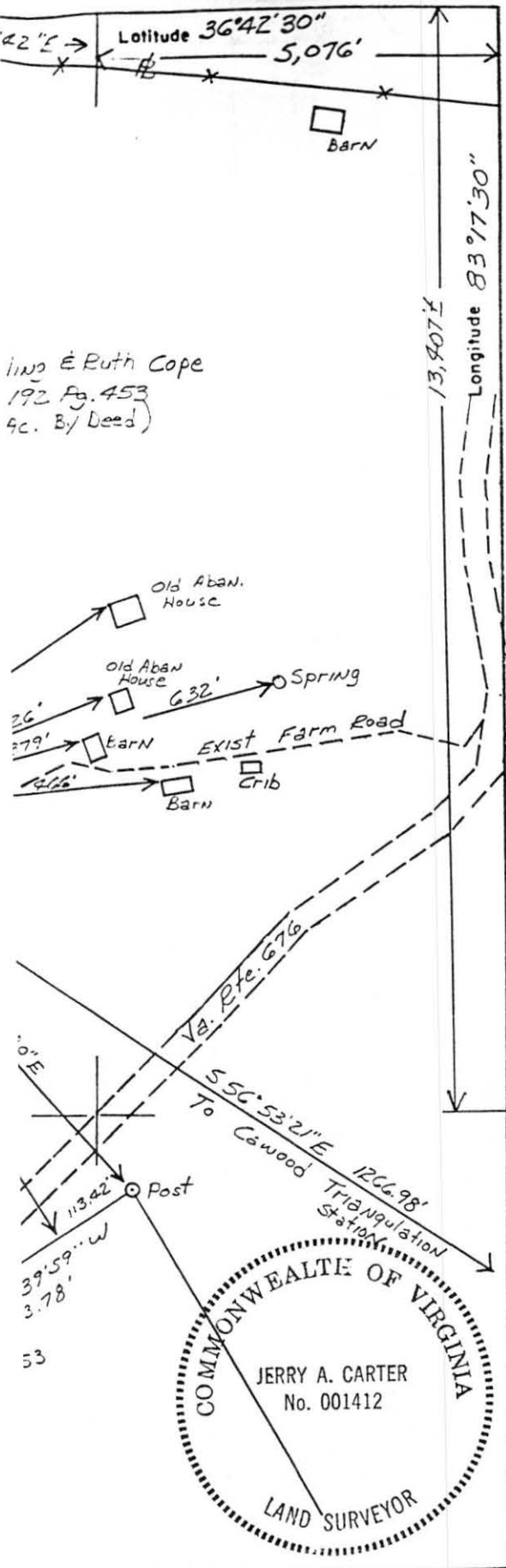
Well operator Stonewall Gas Co.

Address Buckhannon, West Va.
Farm Starling Cope
Tract _____ Acres 55 Lease No. _____
Elevation 1686.0
Quadrangle Rose Hill
County Lee District Rose Hill
Registered Engineer _____ Registration No. _____
Certified Land Surveyor Cert. No. 001412
File No. _____ Drawing No. 0-170-46-26
Date Sept. 8, 1982 Scale 1" = 200'

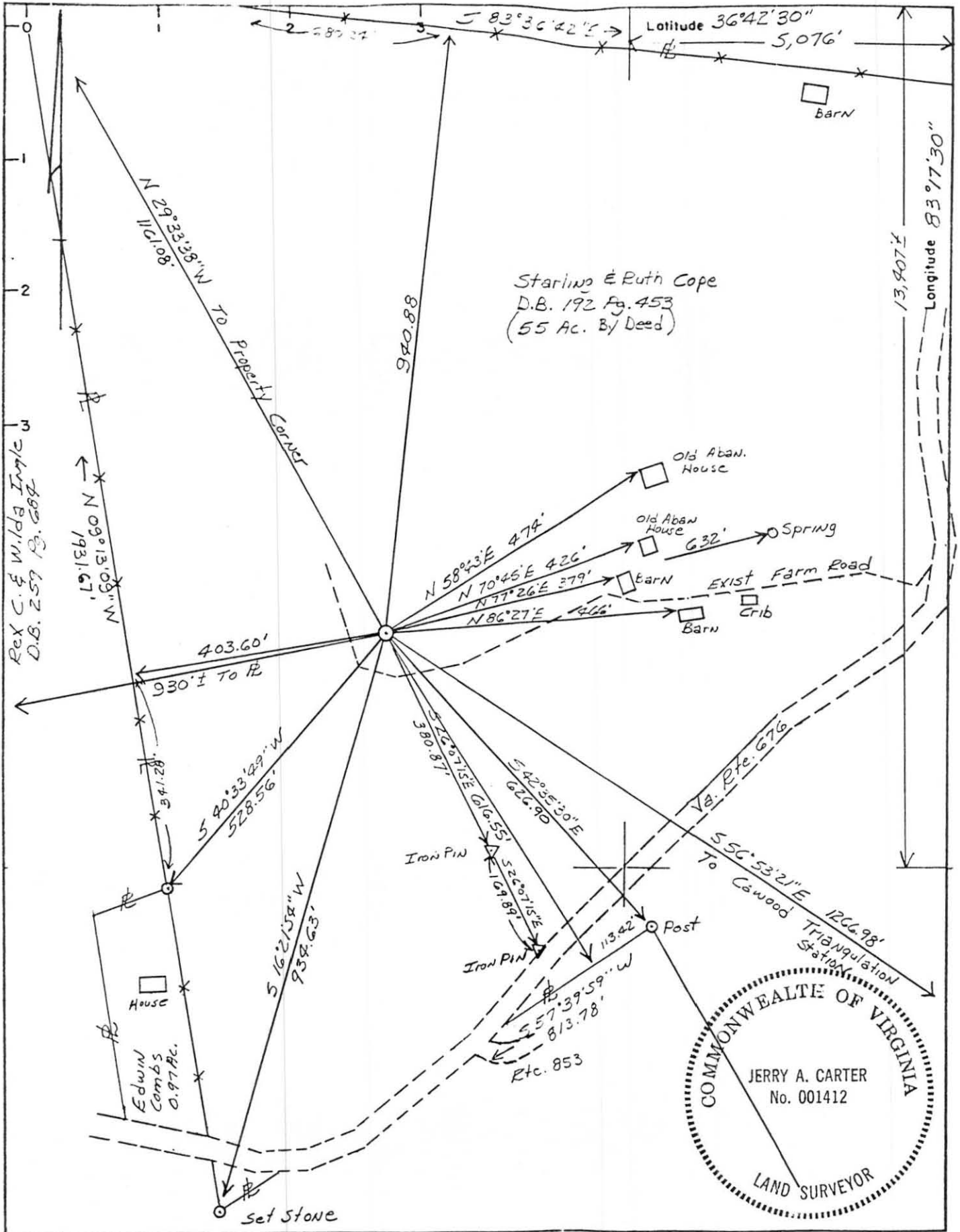
Certification of Well Plat

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 of the Virginia Well Review Board.

Jerry A. Carter
Registered Engineer or Certified Land Surveyor
in Charge



LE 104



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LE 104

ROSE HILL
5-1
SUMMARY REPORT

API No. 45-105-20535 VDMR Well
Rep. No. W-6800
DMQ File No. LE-104

Operator STONEWALL GAS COMPANY

Farm STARLING

Co. Well No. #1 COPE

County LEE Quadrangle ROSE HILL - 7½'

Location (UTM) N4,060,700; E293,640 UTM Zone 17

(Lat. and Long.) _____

Field ROSE HILL Province VALLEY AND RIDGE

Elev. (specify) 1686 GR TD 2537 Form. at TD EGGLESTON

INITIAL FLOW - 211,000 CU. FT. Age ORDOVICIAN

Date compl. or abandoned JULY 21, 1984

Result GAS WELL

Gas Shows 2019 - TRENTON

Gas Pays _____

Main Production _____ Prod. Form. TRENTON

FINAL FLOW - 200,000 CU. FT. Age ORDOVICIAN

Treatment: TRENTON WAS ONLY PERFORATED AND PERFORATING CLEANED WITH REID
WELL BLEW DOWN TO 200,000 CUBIC FEET AFTER 8 HOURS.

Initial Production _____

Oil shows _____

Water FW YES at 349' at _____ at _____
SW _____ at _____ at _____ at _____

Coal _____

Plat _____ Plotted _____ Completion Report X

Drillers Log X Geologic Log _____

Samples X Interval Sheet X

Sample Interval 190-2535

Remarks _____

Geophysical Logs S.P. _____ Res _____ Gamma _____ Neutron _____

Density _____ Sonic _____ Other _____

Stratigraphic Data Source

RAY M. FREAR, JR.

<u>Formation</u>	<u>Top</u>	<u>Datum (Subsea)</u>	<u>Thickness</u>
<u>NO SAMPLES</u>	<u>0</u>	<u>+1686</u>	<u>745</u>
<u>CLENTON</u>	<u>745</u>	<u>+ 941</u>	<u>306</u>
<u>CLINCH</u>	<u>1051</u>	<u>+ 635</u>	<u>97</u>
<u>NO SAMPLES</u>	<u>1148</u>	<u>+ 538</u>	<u>69</u>
<u>SEQUATCHIE</u>	<u>1217</u>	<u>+ 469</u>	<u>249</u>
<u>REEDSVILLE</u>	<u>1466</u>	<u>+ 220</u>	<u>320</u>
<u>TRENTON</u>	<u>1786</u>	<u>- 100</u>	<u>572</u>
<u>EGGLESTON</u>	<u>2358</u>	<u>- 672</u>	<u>179</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

Remarks

References

Released to Open File: Completion JULY 31, 1986

Samples YES

(Note: UTM measurements in meters, all others in feet)

OIL AND GAS WELL SUMMARY REPORT

API No.: 45-105-20535

VDMR Well Rep. No.: W-6800

Div. Gas & Oil File No.: LE-104

Operator: STONEWALL GAS COMPANY

Farm: STARLING

County: LEE

Co. Well No.: #1 COPE

Quadrangle: ROSE HILL - 7-1/2'

Location (UTM): N 4,060,700; E 293,640 UTM Zone: 17

Field: ROSE HILL Province: VALLEY AND RIDGE

Elev. (specify): 1686 GR TD: 2537 Formation at TD: EGGLESTON

Initial Gas Flow: 211,000 CU. FT. Age: ORDOVICIAN

Date compl. or abandoned: JULY 21, 1984

Result: GAS WELL

Gas Shows: 2019 - TRENTON

Gas Pays

Main Production Producing Formation: TRENTON

Final Gas Flow: 200,000 CU. FT. Age: ORDOVICIAN

Treatment: TRENTON WAS ONLY PERFORATED AND PERFORATING CLEANED WITH REID WELL BLEW DOWN TO 200,000 CUBIC FEET AFTER 8 HOURS.

Initial Oil Production:

Final Production:

Oil Shows

Water	FW: YES	at: 349'	at	at
	SW:	at:	at	at

Coal

Plat Plotted Completion Report: X

Drillers Log: X

Geologic Log

Samples: X

Interval Sheet: X

Sample Interval: 190-2535

Geophysical Logs

S.P.

Res

Gamma:

Neutron

Density

Sonic

Other:

Stratigraphic Data Source: RAY M. FREAR, JR.

<u>Formation</u>	<u>Top</u>	<u>Datum (Subsea)</u>	<u>Thickness</u>
NO SAMPLES	0	+1686	745
CLINTON	745	+ 941	306
CLINCH	1051	+ 635	97
NO SAMPLES	1148	+ 538	69
SEQUATCHIE	1217	+ 469	249
REEDSVILLE	1466	+ 220	320
TRENTON	1786	- 100	572
EGGLESTON	2358	- 672	179

Remarks:

References:

Released to Open File: Completion: JULY 31, 1986
Samples: YES

(Note: UTM measurements in meters, all others in feet)