

ADDITIONAL VIRGINIA
OIL AND GAS WELL
SUMMARY REPORT

API No. 45-169-20396-00-03 VDMR Well Rep. No. W-6630

DMQ File No. sc-9

Operator HIGHLANDER RESOURCES INCORPORATED

Farm URCHEL S. SOURBEER

Co. Well No. SOURBEER # 1

County SCOTT Quadrangle MENDOTA - 7 1/2

Location (UTM) N4, 056, 710; E382, 140 UTM Zone 17

(Lat. and Long.)

Field EARLY GROVE Province VALLEY AND RIDGE

Elev. (specify) 1619.6' GR. TD 5153 Form. at TD CHEMUNG

INITIAL FLOW - 4,600,000 Cu. Ft. Age DEVONIAN

Date compl. or abandoned SEPTEMBER 8, 1981

Result GAS WELL

Gas Shows 3518' to 3526'; 3180' to 3190'; 3228' to 3232'

Gas Pays 3366' to 3370'; 3420 to 3424'; 3486' to 3494'; 3498' to 3502';

Main Production 3820' to 3832' Prod. Form. MACCRADY

Age MISSISSIPPIAN

Treatment: FRACTURED PERFORMATIONS 5047' to 5056', 5062' to 5072'

WITH 50,000 POUNDS OF SAND, 420,000 SCF NITROGEN. ACIDIZED PERFORATIONS 3180' to 3190', 3228' to 3232', WITH 1500 GALLONS OF 28% ACID.

Initial Production _____

FINAL FLOW- _____

Oil shows _____

Water FW _____ at _____ at _____ at _____

SW _____ at _____ at _____ at _____

Coal _____

Plat x Plotted x Completion Report x

Drillers Log x Geologic Log _____

Samples x Interval Sheet x

Sample Interval 50' to 5150

Remarks _____

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

Density _____ Sonic _____ Other _____

Stratigraphic Data Source TOM BIGGS: BARTLETT AND ASSOCIATES,

ABINGDON, VIRGINIA

<u>Formation</u>	<u>Top</u>	<u>Datum (Subsea)</u>	<u>Thickness</u>
FIDO	0	+1619.6	75.
GASPER	75'	+1544.6	995
STE.GENEVIEVE	1070	+ 549.6	1244
ST. LOUIS	2314	- 694.4	491
LITTLE VALLEY	2805	-1185.4	458
LITTLE LOWER VALLEY	3263	-1643.4	295
MACCRADY	3558	-1938.4	548
PRICE	4106	-2496.4	969
HAYTERS MEMBER	4106	-2486.4	100
GREENDALE MEMBER	4206	-2586.4	838
BEREA MEMBER	5044	-3424.4	31
CHEMUNG	5075	-3455.4	78

Remarks

References

Released to Open File: Completion December 8, 1981

Samples YES

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

(To be filled in by Division of Mines)

COMMONWEALTH OF VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

(To be filled in by Division of Mines)

Scott

County

FULLERSON

District

Mendota

Quadrangle

SC-9

File

DIVISION OF MINES

BIG STONE GAP, VIRGINIA

DEEPENED OIL AND GAS WELL COMPLETION REPORT ABANDONMENT

Well No. Sourbeer #1

Permit No. 396

County Code 169

Well Classification DEVELOPMENT

(This report and a copy of electrical log, if made, must be submitted to the Division of Mines within 30 days after abandonment or completion of well, as required by Section 45-113, Code of Virginia, 1950.)

Company Highlander Resources, Inc.

Address 102 S. Court Street Abingdon, VA

Farm Urchel S. Sourbeer

Acres 158

County Scott

District

Well No. (Company) Sourbeer #1

Elevation (ground surface) 1619.6 ft.

Location: (Give direction and distance in feet from two (2) map coordinates (Latitude and Longitude) shown on location plat or map previously filed with the Division of Mines or shown on quadrangle topographic map of area.)

2045 feet south of 36 degrees 40' and

1520 feet east of 82 degrees 20'

Surface of tract is owned in fee simple by Mrs Urchel S. Sourbeer Address 17 Gate City Highway, Bristol, Virginia 24201

Mineral rights are owned by Mrs. Urchel S. Sourbeer Address 17 Gate City Highway, Bristol, Virginia 24201

Location made by Ray Resources

Drilling commenced 6-14-81 Drilling contractor Ray Resources

Drilling completed 7-25-81 Address 718 Kanawba Valley Bldg., Charleston, W VA 25301

Well completed as gas well on 9-8-81

Well abandoned at feet on Reason

Well plugged on 19 Affidavit filed 19

Total depth feet. Steel line measurement feet.

Commenced producing on waiting on pipeline 19

Oil Well

Initial production, Barrels per day.

Stimulation Record

Breakdown Pressure psi; Average Injection Pressure psi;

Average Injection Rate BPM; Instant Shut-in Pressure psi;

Min. Shut-in Pressure psi;

Final Production Barrels per day.

Gravity and grade of oil

Oil pays at (1) feet to feet. Oil shows at (1) feet to feet. (2) feet to feet. (2) feet to feet. (3) feet to feet. (3) feet to feet. (4) feet to feet. (4) feet to feet. Main production at feet to feet. (5) feet to feet.

Gas Well

Initial open flow, gas: Gaged /10ths. Water in inch. Volume 4600 Mcf.; Rock Pressure 1235 lbs. 48 hrs. /10ths. Mercury in inch.

Stimulation Record

Fracced perfs 5047' - 56', 5062' - 72' w/50,000 lbs. sand, 420,000 SCF nitrogen. Acidized perfs 3180' - 90', 3228' - 32', w/1500 gals. 28% acid.

Breakdown Pressure Frac 2700 psi Acid 800 psi; Average Injection Pressure Frac 2600, Acid 800 psi;

Average Injection Rate Frac 15 bpm, Acid 3-1/4 bpm BPM; Instant Shut-in Pressure Frac 2900, Acid 400 psi;

5 Min. Shut-in Pressure Frac 2600 Acid -0- psi.

Final Openflow Mcf.; Rock Pressure lbs. hrs.

Gas pays at (1) 3366 feet to 3370 feet. Gas shows at (1) 3518 feet to 3526 feet. (2) 3420 feet to 3424 feet. (2) 3180 feet to 3190 feet. (3) 3486 feet to 3494 feet. (3) 3228 feet to 3232 feet.

Final Production _____ Barrels per day.

Gravity and grade of oil _____

Oil pays at (1) _____ feet to _____ feet. Oil shows at (1) _____ feet to _____ feet.
 (2) _____ feet to _____ feet. (2) _____ feet to _____ feet.
 (3) _____ feet to _____ feet. (3) _____ feet to _____ feet.
 (4) _____ feet to _____ feet. (4) _____ feet to _____ feet.
 Main production at _____ feet to _____ feet. (5) _____ feet to _____ feet.

Gas Well _____ Gaged _____ /10ths. Water in _____ inch.
 Initial open flow, gas: _____ /10ths. Mercury in _____ inch.
 Volume 4600 Mcf.; Rock Pressure 1235 lbs. 48 hrs.

Stimulation Record
 Fraced perfs 5047' - 56', 5062'-72' w/50,000 lbs. sand, 420,000 SCF nitrogen
 Acidized perfs 3180' -90', 3228'-32', w/1500 gals. 28% acid.

Breakdown Pressure Frac 2700 psi Acid 800 psi; Average Injection Pressure Frac 2600, Acid 800 psi;
 Average Injection Rate Frac 15 bpm, Acid 3-1/4 bpm BPM; Instant Shut-in Pressure Frac 2900, Acid 400 psi;
 5 Min. Shut-in Pressure Frac 2600 Acid -0- psi.

Final Openflow _____ Mcf.; Rock Pressure _____ lbs. _____ hrs.
 Gas pays at (1) 3366 feet to 3370 feet. Gas shows at (1) 3518 feet to 3526 feet.
 (2) 3420 feet to 3424 feet. (2) 3180 feet to 3190 feet.
 (3) 3486 feet to 3494 feet. (3) 3228 feet to 3232 feet.
 (4) 3498 feet to 3502 feet. (4) _____ feet to _____ feet.
 Main production 3820 feet to 3832 feet. (5) _____ feet to _____ feet.

Fresh water at (1) _____ feet, _____ GPM; (2) _____ feet, _____ GPM; (3) _____ feet, _____ GPM.
 Salt water at (1) _____ feet; (2) _____ feet; (3) _____ feet; (4) _____ feet.
 Coal: from _____ feet _____ inches to _____ feet _____ inches; from _____ feet _____ inches to _____ feet _____ inches; from _____ feet _____ inches, to _____ feet _____ inches.

CASING AND TUBING				PACKERS OR BRIDGE PLUGS			
SIZE	USED IN DRILLING	LEFT IN WELL	PERFORATED	KIND	SIZE	SET AT	
(inch)	(feet)	(feet)	(feet) to (feet)				
13 3/8	-	39'	-	Baker	4 1/2" C.I.B.	4020' w/lx.	
7"		3307'	3180-3190 3228-3232	Mod. 'S'		Cal-Seal	
4 1/2		5155	5062-72, 5047-56 3880-86, 3820-32 3795-98, 3690-94 3670-74, 3651-61 3518-26, 3498-02 3486-94, 3420-24' 3360-70, 3228-32 3180-90	Otis	4 1/2"		
				Peram-latch		3320	
				LINERS			
				SIZE	USED IN DRILLING	LEFT IN WELL	PERFORATED
				(inch)	(ft.)	(ft.)	(ft. to ft.)
2 3/8"	J-55 tbq	3304'					
9-5/8"		884'					

Casing Cemented: 13 3/8 inch. from 39 feet to surface Date 6-16-81
 7 inch. from 3307 feet to 2019 Date 7-10-81
 4 1/2 inch. from 5155 feet to 2398 Date 7-25-81

Remarks: (Shut down, depths, dates; fishing jobs, depths, dates; caving; other notes)

Samples or cuttings will be available for examination by a member of the Virginia Geological Survey yes (Yes) (No)
 Will be furnished the Virginia Geological Survey upon request yes (Yes) (No), if sacks for same are furnished by the Survey _____ (Yes) (No)

Electrical log made X or not made _____ (check which.)
 Copy furnished herewith X or will be submitted on or by _____, 19____
 Depths _____

To operator requests that information given herein and log or logs be kept confidential for a period of ninety days after completion of the well covered by this report. yes (Yes) (No)

LOG

RECEIVED

Furnished by Bartlett & Assoc. Date 9-8-81

OCT 2 1981

Compiled by Tom Biggs Date 9-8-81

DIVISION OF MINES

GEOLOGIC AGE	FORMATION	GENERAL LITHOLOGY	COLOR	TOP (feet)	BOTTOM (feet)	THICKNESS (feet)	REMARKS OIL, GAS WATER DEPTHS SHUT DOWN FISHING, ETC.
Mississippian	Fido	SS	red	Surface	75'	75'	
Mississippian	Gasper	LS	gray	75'	1070'	995'	
Mississippian	Ste. Genevieve	LS w/limy shale	gray	1070'	2314'	1244'	H2O @1079'
Mississippian	St. Louis	LS	gray	2314'	2805'	491'	Lost circ. 2545' possible gas 2444' -76'
Mississippian	Little Val.	Argil. LS	gray	2805'	3263'	458'	Show gas 3181'
Mississippian	"Little lower Valley"	Dolomitic Limestone Anhydrite	gray, white	3263'	3558'	295'	Gas 3359' Show gas 3315'
Mississippian	Maccrady	Shale, Argil. Limestone Dolostone Anhydrite Sandstone	gray, white	3558'	4106'	548'	Slight increase gas @3777'
Mississippian	Price	SS, Sltst., sh; minor coal	gray to white	4106'	5075'	969'	
	Hayters Mbr.	SS	lt. gy.	4106'	4206'	100'	
	Greendale Mbr.	Silty ss., Sh.	gray	4206'	5044'	838'	Thrust fault 4470' 160 foot repeat.
	Berea Mbr.	SS., Cgl.	lt. gray	5044'	5075'	31'	
Devonian	Chemung	Sltst., Ss.	Dk. gray	5075'	5153' T.D.	78'	

Commonwealth of Virginia
DEPARTMENT OF LABOR AND INDUSTRY
Division of Mines
Big Stone Gap, Virginia

#1 Sourbeer "A"
Early Grove Field

~~XXXXXXXXXX~~
NOTICE OF INTENTION TO DRILL OIL OR GAS WELL
~~XXXXXXXXXX~~

(One copy of this report and three identical copies of a plat or map, on a scale not smaller than 400 feet to the inch, and showing information required by Section 45-114, Code of Virginia, 1950, must be submitted to the Division of Mines, and copies sent by registered mail to all persons defined in above law, prior to obtaining a permit to drill.)

TO: DIVISION OF MINES Abingdon, Virginia 24210
BIG STONE GAP, VIRGINIA Place
October 30, 19 80
Date

Gentlemen: (Amended: 2/15/81)

The undersigned proposes to begin as soon as a permit therefor is obtained from the Division of Mines, to drill, redrill or deepen (strike out two) a well for oil or gas on the Urchel Sourbeer Farm, comprising 158 acres, in the Fulkerson District of Scott County, Virginia, having the fee title thereto, or as the case may be, under grant or lease dated February 4, 1980, made by (Mrs.) Urchel Sourbeer to W. D. Hale and recorded on the 2nd day of September, 19 80 in the office of the County Clerk for said County in Book 2, page 628.

The proposed location of the well, as shown on the attached plat or map, is about 1,500 feet East of Longitude 82°20'00" and about 2,050 feet South of Latitude 36°40'00".

It is proposed to drill this well to a depth of about -7,500 feet. Samples or cuttings therefrom ~~will~~ will be available for examination by a member of the staff of the Virginia Geological Survey. Cuttings ~~will not~~ will not be furnished the Survey.

A plat or map, in triplicate, on a scale not smaller than 400 feet to the inch, showing the proposed location of the well and other information, required in Section 45-114, Code of Virginia, 1950, is attached hereto. Copies of the plat and notice of intention to drill, redrill or deepen the aforementioned well have been sent to all interested persons as required by Section 45-114, above cited, as follows (List names and mail address of each. Use back of sheet if additional space is required):

- | | | | |
|----|----------------------------|--------------------|--------------------|
| 1. | Mrs. Urchel Smith Sourbeer | 817 Gate City Hwy. | Bristol, VA 24201 |
| 2. | George N. Bondurant | 616 Alabama Avenue | Bristol, VA 24201 |
| 3. | Claude Lane | 104 Brookshire Dr. | Bristol, TNN 37620 |
| 4. | Early Grove Gas Company | Meadow Drive | Bristol, VA 24201 |
| 5. | c/o: C. Tate Graham, III | | |
| 6. | | | |

Signature of officer or certifying party:

Rocky Arrell
Name

Rocky Arrell/Secretary-Treasurer

Title

Very truly yours,
HIGHLANDER RESOURCES, INC.
a/k/a HXR Company of Texas

~~XXXXXXXXXXXXXXXXXXXX~~ Operator

102 Soute Court Street, Suite 200

Street Address

Abingdon, Virginia 24210

City or Town, and State

File 50-9 Date Received December 29, 1980 Well No. HR-2-T

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF LABOR AND INDUSTRY
DIVISION OF MINES AND QUARRIES
BIG TONE GAP, VIRGINIA 24219
PHONE 703-523-0335

#1 Sourbeer "A"
Early Grove Field

APPLICATION FOR PERMIT TO (DRILL) (REDRILL) (DEEPEN) OIL OR GAS WELL

(Required by Section 45.1-115.1, Code of Virginia, 1950, 1954 and the 1966 Cumulative Supplement. To be accompanied by Permit fee of one hundred dollars and bond and surety therefor, as specified by Section cited. To be submitted in triplicate, one copy to be returned to applicant after action by Division of Mines and Quarries.

TO: Division of Mines and Quarries
219 Wood Avenue
Big Stone Gap, Virginia 24219

Abingdon, Virginia 24210

Place
October 30, 1980 (Amended 2/15/81)
Date

Gentlemen:

The undersigned hereby makes application for a Permit to drill, ~~redrill, or deepen~~ (strike out two) a well for oil or gas on the Urchel Sourbeer Farm, comprising 158 acres, in the Fulkerson District of Scott County, Virginia, having the fee title there- to or as the case may be, under grant or lease dated February 4, 1980 made by (Mrs.) Urchel S. Sourbeer to W. D. Hale d/b/a Hale Oil & Gas Properties and recorded on the 2nd day of September, 1980 in the office of the County Clerk for the said County in Book 2 page 628. The proposed location of the well is shown on a location plat or map submitted to the Division of Mines and Quarries, by the undersigned, together with Notice of Intention to Drill, Redrill or Deepen a Well for Oil or Gas on the 30th day of October, 1980. The proposed well will be known as Well No. One(1)"A"bf Highlander Resources, Inc. (company, etc.) It is proposed to drill this well to a depth of about -7,500 feet. The proposed location is about 675 feet distant from the nearest property or lease line; about N/A feet distant from the nearest mining opening, or quarry (strike out words not applicable) and/or about 1,700 feet distant from the nearest ~~drilling, abandon-~~ ed, producing, or applied for (strike out words not applicable) ~~oil or gas~~ (strike out words not applicable) well. (Early Grove Gas Co. #1 Bondurant)

There is enclosed herewith a certified check or U. S. Postal Money Order, in the amount of one hundred dollars (\$100), payable to the Treasurer of Virginia, covering fee for a Permit to Drill a Well for Oil or Gas, as required by Section 45.1-115.1, Code of Virginia, 1950, 1954 and the 1966 Cumulative Supplement. Bond and Surety therefor to insure compliance with the provisions of Chapter 8, Title 45, Code of Virginia, 1950 and the 1966 Supplement, for this well, in the amount of \$ 7,000.00 is submitted herewith of (give status of) \$5,000.00 Stabilization Bond-DMQ5A + \$2,000.00 Indemnity Bond, DMQ5B

Correspondence regarding this well should be addressed to HIGHLANDER RESOURCES, INC. P. O. Box 1018 Graham, Texas 76046

Signature of officer or certifying party:
Rocky Arrell
Name
Rocky Arrell/Secretary-Treasurer
Title

Very truly yours,
HIGHLANDER RESOURCES, INC.
d/b/a HXR Company of Texas
~~Drilling Company~~ Operator
102 South Court Street, Suite 200
Street
Abingdon, Virginia 24210
City or Town
State

Space below this line is for the use of the Board only.

ACTION OF DIVISION OF MINES AND QUARRIES

Received on December 29, 1980.
Approved and Permit (no. 396) granted on March 11, 1981
Reasons for denial _____

Division of Mines and Quarries
By B. T. Palmer State Mine & Gas Inspector
Title

File No. 50-9 Well No. HR-2-T Permit No. 396

Latitude 36° 40'

Longitude 82°

approximately 5,200 feet South

approximately 4,600 feet East

Approximate County Line
Scott Co. Washington Co.

Urstiel S. Sourbeer
Part of 158 AC.

T.B.M. + chiseled on
ROCK, Elev. 1607.85

LOC. No. 1

N 80° 23' 44"
W 353.55
1.988

N 67° 11'
W 67.61

S 76° 10' W
542.1

Pin Set
Pin Set
Pin Set
Pin Set

Cave Creek
Route 617

George Sanderson

W.S. Hensley

Earl Ridgeway

William Smith
(Formerly)

New Location
Drill Deeper
Abandonment

Company Highlander Resources, Inc.
Address 102 S. Court St., Abingdon, Va.

Form Urstiel S. Sourbeer

Tract Acres 158, Lease No.

Well (Farm) No. 1 Serial No. 1

Elevation (Spirit Level) 1619.6

Drangle Mendota

County Scott District Fulkerson

Operator Charles D. Clark

Survey Certificate No. 748 Va.

Drawing No. 5-80 scale 1" = 400'

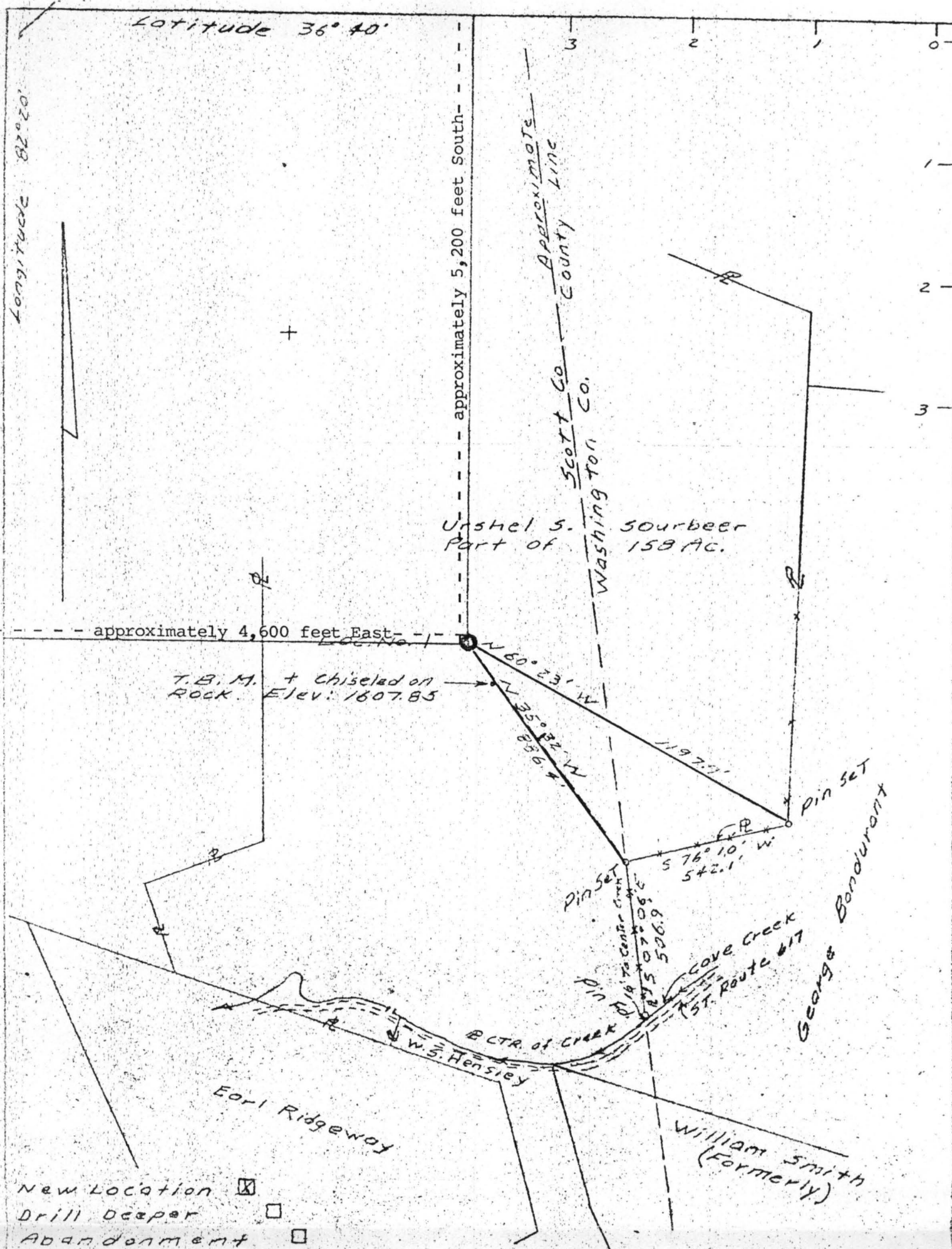
Commonwealth of Virginia
Division of Mines

Big Stone Gap, Va.
WELL LOCATION MAP

File No. _____

+ Denotes location of well on United States Topographic Maps, scale 1" = 2,000', latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.



Company Highlander Resources Inc
 Address 102 S. Court St., Abingdon, Va.
 Form Urshel S. Sourbeer
 Tract Acres 158 Lease No.
 Well (Form) No. 1 Serial No.
 Elevation (Spirit level) 1619.6
 Quadrangle Mendota
 County Scott District Fulkerson
 Operator Charles D. Clark
 Miners Certificate No. 749 Va.
 Drawing No. 5-80
 Scale 1" = 400'

Commonwealth of Virginia
 Division of Mines
 Big Stone Gap, Va.
WELL LOCATION MAP
 File No. SC-9

⊕ Denotes location of well on United States Topographic Maps, Scale 1 to 25,000, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

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

INTERVAL SHEET

Page 1 of 3

Well Repository No.: W- 6630

Date rec'd: Date Processed: 2/24/83

Sample Interval: from 50 to: 5150

PROPERTY: Urchel Sourbeer (#1)

Number of samples: 427

COMPANY: Highlander Resources, Inc.

Total Depth: 5150

COUNTY: Scott

Oil or Gas: X Water: Exploratory:

From-To	From-To	From-To	From-To	From-To
50 - 60	350 - 360	650 - 660	950 - 960	1250 - 1260
60 - 70	360 - 370	660 - 670	960 - 970	1260 - 1270
70 - 80	370 - 380	670 - 680	970 - 980	1270 - 1280
80 - 90	380 - 390	680 - 690	980 - 990	1280 - 1290
90 - 100	390 - 400	690 - 700	990 - 1000	1290 - 1300
100 - 110	400 - 410	700 - 710	1000 - 1010	1300 - 1310
110 - 120	410 - 420	710 - 720	1010 - 1020	1310 - 1320
120 - 130	420 - 430	720 - 730	1020 - 1030	1320 - 1330
130 - 140	430 - 440	730 - 740	1030 - 1040	1330 - 1340
140 - 150	440 - 450	740 - 750	1040 - 1050	1340 - 1350
150 - 160	450 - 460	750 - 760	1050 - 1060	1350 - 1360
160 - 170	460 - 470	760 - 770	1060 - 1070	1360 - 1370
170 - 180	470 - 480	770 - 780	1070 - 1080	1370 - 1380
180 - 190	480 - 490	780 - 790	1080 - 1090	1380 - 1390
190 - 200	490 - 500	790 - 800	1090 - 1100	1390 - 1400
200 - 210	500 - 510	800 - 810	1100 - 1110	1400 - 1410
210 - 220	510 - 520	810 - 820	1110 - 1120	1410 - 1420
220 - 230	520 - 530	820 - 830	1120 - 1130	1420 - 1430
230 - 240	530 - 540	830 - 840	1130 - 1140	1430 - 1440
240 - 250	540 - 550	840 - 850	1140 - 1150	1440 - 1450
250 - 260	550 - 560	850 - 860	1150 - 1160	1450 - 1460
260 - 270	560 - 570	860 - 870	1160 - 1170	1460 - 1470
270 - 280	-	870 - 880	1170 - 1180	1470 - 1480
280 - 290	580 - 590	880 - 890	1180 - 1190	1480 - 1490
290 - 300	590 - 600	890 - 900	1190 - 1200	1490 - 1500
300 - 310	-	900 - 910	1200 - 1210	1500 - 1510
310 - 320	610 - 620	910 - 920	1210 - 1220	1510 - 1520
320 - 330	620 - 630	920 - 930	1220 - 1230	1520 - 1530
330 - 340	630 - 640	930 - 940	1230 - 1240	1530 - 1540
340 - 350	640 - 650	940 - 950	1240 - 1250	1540 - 1550

Washed samples

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

INTERVAL SHEET
Continued

Page 2 of 3

Well Repository No.: W- 6630

From-To	From-To	From-To	From-To	From-To
1550 - 1560	1950 - 1960	2350 - 2360	3630 - 3640	4030 - 4040
1560 - 1570	1960 - 1970	2360 - 2370	3640 - 3650	4040 - 4050
1570 - 1580	1970 - 1980	2370 - 2380	3650 - 3660	4050 - 4060
1580 - 1590	1980 - 1990	2380 - 2390	3660 - 3670	4060 - 4070
-----	1990 - 2000	2390 - 2400	3670 - 3680	4070 - 4080
1600 - 1610	2000 - 2010	2400 - 2410	3680 - 3690	4080 - 4090
1610 - 1620	2010 - 2020	2410 - 2420	3690 - 3700	4090 - 4100
1620 - 1630	2020 - 2030	2420 - 2430	3700 - 3710	4100 - 4110
1630 - 1640	2030 - 2040	2430 - 2440	3710 - 3720	4110 - 4120
-----	2040 - 2050	2440 - 2450	3720 - 3730	4120 - 4130
1650 - 1660	2050 - 2060	2450 - 2460	3730 - 3740	4130 - 4140
1660 - 1670	2060 - 2070	2460 - 2470	3740 - 3750	4140 - 4150
-----	2070 - 2080	2470 - 2480	3750 - 3760	4150 - 4160
1680 - 1690	2080 - 2090	2480 - 2490	3760 - 3770	4160 - 4170
1690 - 1700	2090 - 2100	2490 - 2500	3770 - 3780	4170 - 4180
1700 - 1710	2100 - 2110	-----	3780 - 3790	4180 - 4190
1710 - 1720	2110 - 2120	2510 - 2520	3790 - 3800	4190 - 4200
1720 - 1730	2120 - 2130	2520 - 2530	3800 - 3810	4200 - 4210
1730 - 1740	2130 - 2140	2530 - 2540	3810 - 3820	4210 - 4220
1740 - 1750	2140 - 2150	2540 - 2550	3820 - 3830	4220 - 4230
1750 - 1760	2150 - 2160	3430 - 3440	3830 - 3840	4230 - 4240
1760 - 1770	2160 - 2170	-----	3840 - 3850	4240 - 4250
1770 - 1780	2170 - 2180	3450 - 3460	3850 - 3860	4250 - 4260
1780 - 1790	2180 - 2190	3460 - 3470	3860 - 3870	4260 - 4270
1790 - 1800	2190 - 2200	3470 - 3480	3870 - 3880	4270 - 4280
1800 - 1810	2200 - 2210	3480 - 3490	3880 - 3890	-
1810 - 1820	2210 - 2220	-----	3890 - 3900	4290 - 4300
1820 - 1830	2220 - 2230	3500 - 3510	3900 - 3910	4300 - 4310
1830 - 1840	2230 - 2240	3510 - 3520	3910 - 3920	4310 - 4320
1840 - 1850	2240 - 2250	3520 - 3530	3920 - 3930	4320 - 4340
1850 - 1860	2250 - 2260	3530 - 3540	3930 - 3940	4340 - 4350
1860 - 1870	2260 - 2270	3540 - 3550	3940 - 3950	4350 - 4360
1870 - 1880	2270 - 2280	3550 - 3560	3950 - 3960	4360 - 4370
1880 - 1890	2280 - 2290	3560 - 3570	3960 - 3970	4370 - 4380
1890 - 1900	2290 - 2300	3570 - 3580	3970 - 3980	4380 - 4390
1900 - 1910	2300 - 2310	3580 - 3590	3980 - 3990	4390 - 4400
1910 - 1920	2310 - 2320	3590 - 3600	3990 - 4000	4400 - 4410
1920 - 1930	-----	3600 - 3610	4000 - 4010	4410 - 4420
1930 - 1940	2330 - 2340	3610 - 3620	4010 - 4020	4420 - 4430
1940 - 1950	2340 - 2350	3620 - 3630	4020 - 4030	4430 - 4440

Washed samples

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

INTERVAL SHEET
Continued

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Well Repository No.: W-6630

From-To	From-To	From-To	From-To	From-To
4440 - 4450	4850 - 4860	5080 - 5085	-	-
4450 - 4460	4860 - 4870	5085 - 5090	-	-
4460 - 4470	4870 - 4880	-	-	-
4470 - 4480	4880 - 4890	5095 - 5100	-	-
4480 - 4490	4890 - 4900	5100 - 5105	-	-
4490 - 4500	4900 - 4910	5105 - 5110	-	-
4500 - 4510	4910 - 4915	5110 - 5115	-	-
4510 - 4520	4915 - 4920	5115 - 5120	-	-
4520 - 4530	4920 - 4925	5120 - 5125	-	-
4530 - 4540	4925 - 4930	5125 - 5130	-	-
4540 - 4550	4930 - 4935	5130 - 5135	-	-
4550 - 4560	4935 - 4940	5135 - 5140	-	-
4560 - 4570	4940 - 4945	5140 - 5145	-	-
4570 - 4580	4945 - 4950	5145 - 5150	-	-
4580 - 4590	4950 - 4955	-	-	-
4590 - 4600	4955 - 4960	-	-	-
4600 - 4610	4960 - 4965	-	-	-
4610 - 4620	4965 - 4970	-	-	-
4620 - 4630	4970 - 4975	-	-	-
4630 - 4640	4975 - 4980	-	-	-
4640 - 4650	4980 - 4985	-	-	-
4650 - 4660	4985 - 4990	-	-	-
4660 - 4670	4990 - 4995	-	-	-
4670 - 4680	4995 - 5000	-	-	-
4680 - 4690	5000 - 5005	-	-	-
4690 - 4700	5005 - 5010	-	-	-
4700 - 4710	5010 - 5015	-	-	-
4710 - 4720	5015 - 5020	-	-	-
4720 - 4730	5020 - 5025	-	-	-
4730 - 4740	5025 - 5030	-	-	-
4740 - 4750	5030 - 5035	-	-	-
4750 - 4760	5035 - 5040	-	-	-
4760 - 4770	5040 - 5045	-	-	-
4770 - 4780	5045 - 5050	-	-	-
4780 - 4790	5050 - 5055	-	-	-
4790 - 4800	5055 - 5060	-	-	-
4800 - 4810	5060 - 5065	-	-	-
4810 - 4820	5065 - 5070	-	-	-
4820 - 4830	5070 - 5075	-	-	-
4830 - 4840	-	-	-	-

Washed samples