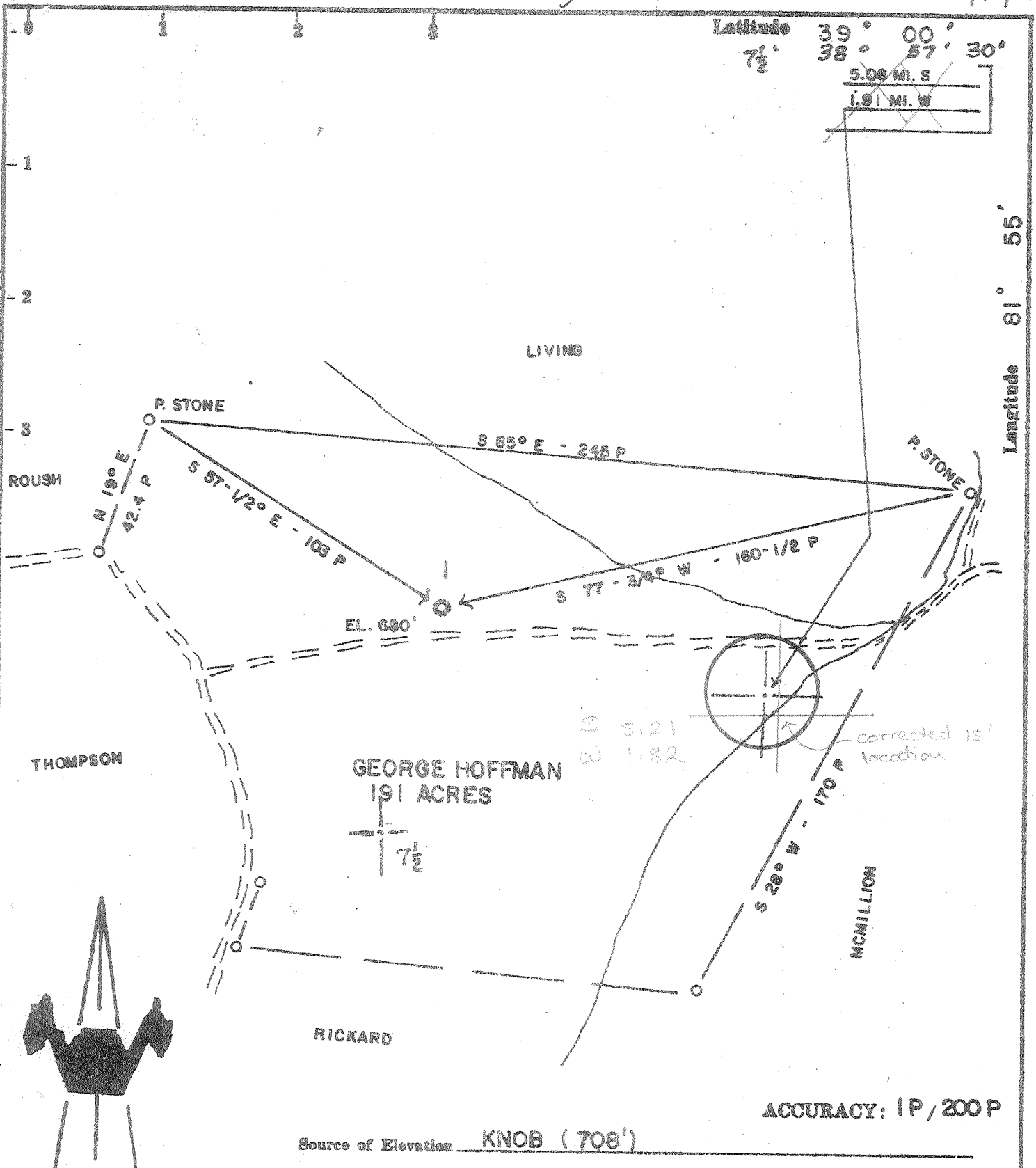


11/15/78



Source of Elevation KNOB (708')

- New Location
- Drill Deeper
- Abandonment
- Fracture
- Redrill

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

*Chet Waterman*

Company CARL E. SMITH, INC.  
 Address SANDYVILLE, WV  
 Farm GEORGE HOFFMAN  
 Tract Acres 191 Lease No. \_\_\_\_\_  
 Well (Farm) No. 1 Serial No. (45-78-012)  
 Elevation (Spirit Level) 680' NW  
 Quadrangle RAVENSWOOD, NEW HAVEN 7 1/2  
 County MASON District GRAHAM  
 Engineer CHET WATERMAN  
 Engineer's Registration No. 3788  
 File No. 78003-582 Drawing No. \_\_\_\_\_  
 Date 11/14/78 Scale 1" = 40 P

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION  
CHARLESTON

**WELL LOCATION MAP**  
FILE NO. 47-053-0169

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.  
- Denotes one inch spaces on border line of original tracing.

FEB 6 1979

LOC. REVISED 1/5/79 *4200' Contour Deep well 2-2 Unnamed or 1-1*

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES, OIL AND GAS DIVISION

Date: July 9  
Operator's Hoffman  
Well No. 1-AS-78-010

FORM IV-35  
(Obverse)

[08-78]

WELL OPERATOR'S REPORT OF  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

API Well No. 47 - 053 - 0169  
State County

WELL TYPE: Oil \_\_\_ / Gas X / Liquid Injection \_\_\_ / Waste Disposal \_\_\_ /  
(If "Gas", Production) X / Underground storage \_\_\_ / Deep X / Shallow \_\_\_ /

LOCATION: Elevation: 690 Watershed: West Creek  
District: Graham County: Mason Quadrangle: Ravenswood 15'  
New Haven 7 1/2"

WELL OPERATOR Carl E. Smith, Inc. DESIGNATED AGENT Carl E. Smith, Inc.  
Address P.O. Box 4 Address P.O. Box 4  
Sandyville, WV 25275 Sandyville, WV 25275

PERMITTED WORK: Drill X / Convert \_\_\_ / Drill deeper \_\_\_ / Redrill \_\_\_ / Fracture or stimulate  
Plug off old formation \_\_\_ / Perforate new formation \_\_\_ /  
Other physical change in well (specify) \_\_\_\_\_

OIL & GAS DIVISION  
DEPT. OF MINES

PERMIT ISSUED ON December, 19 79 OIL & GAS INSPECTOR FOR THIS WORK:  
(IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED) Name Kenneth Butcher  
Address RFD #1  
Barboursville, WV

GEOLOGICAL TARGET FORMATION: Oriskany - Devonian Shale Depth 4200' feet  
Depth of completed well, 4170 feet Rotary X / Cable Tools \_\_\_  
Water strata depth: Fresh, 100 feet; salt, 1882 feet.  
Coal seam depths: None Encountered Is coal being mined in the area? No  
Work was commenced February 9, 19 79, and completed February 21, 19 79

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	10 3/4	H-40	32.75	X		259	259	125	Kinds
Fresh water									
Coal									Sizes
Intermediate	7"	K-55	20#	X		2001	2001	125	
Production	4 1/2	K-55	10.5	X		4157	4157	203 cu. ft	Depth set
Tubing	1 1/2	J-55	2.75	X			3959		
Liners									Perforations:
									Top Bottom
									2870-3924

OPEN FLOW DATA

Producing formation Oriskany Pay zone depth 3809-3944 feet  
Gas: Initial open flow, Show Mcf/d Nat. Oil: Initial open flow, 0 Bbl/d  
Final open flow, 50 Mcf/d Acidizing Initial open flow, 0 Bbl/d  
Time of open flow between initial and final tests, 24 hours  
Static rock pressure, 870 psig (surface measurement) after 72 hours shut in.

[If applicable due to multiple completion--]

Second producing formation Devonian Shale Pay zone depth 2870-3229 feet  
Gas: Initial open flow, Show Mcf/d Nat. Oil: Initial open flow, 0 Bbl/d  
Final open flow, 216 Mcf/d After Frac Final open flow, 0 Bbl/d  
Time of open flow between initial and final tests, 24 hours Combined

AUG 1 1979

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

STAGE I

Perf: 3789-3799 w/3, 3805-3814 w/3, 3914-3924 w/4 in Oriskany and Big Lime; HOWCO Acidizid on 4-4-79 w/600 gal HCL, BD 1,000# ATP 800#, ISICP 800#, est Flow 50 MCFPd

STAGE II

Perf: 2870-73, 2991-2994, 3061-3069, 3281-3285, 3229-3233 w/12 holes in Devonian Shale HOWCO Frac on 4-13-79 w/365 bbl Water, 594 MSCF Nitrogen 75% Quality Foam, 20,000# 80 /100 Sd, 60,000# 20/40 Sd, 65 Gal. Pen-5, 15 Gal Cla-Sta-B, BD 1400#, ATP 1800# ATR 13 bpm Water, 52 bpm Foam, ISICP 1100#, 5 min 900#, Combined Flow 216 MCFPd both Zones after Frac.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Mississippian	-	-	0	1882	Not Logged
Berea	White	Soft	1882	1900	Salt Water
Devonian Shale	Black-Brown	Soft	1900	3750	Gas @ 3210, 3250, 3280, 3290, 3306, 3360, 3385
Onondaga	White	Hard	3750	3836	Sg 3800-3850
Oriskany	White	Hard	3836		Dor abs, tite, hard, trace of Sand.
Helderburg	White	Hard	3836	3984	Sg 3952
Bass Islands	Tan-Brown	Hard	3984	4170	
TOTAL DEPTH				4170	

(Attach separate sheets to complete as necessary)

Carl E. Smith, Inc.  
Well Operator  
By *Thomas P. Sanders*  
Thomas P. Sanders  
Its Manager - Exploration & Development

**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."



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED  
JAN 12 1979  
OIL & GAS DIVISION  
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,  
Charleston, W. Va.

DATE December 18, 1978

Surface Owner George H. Hoffman  
Address Rt. 1, Box 31, Letart, WV 25253

Company CARL E. SMITH, INC.  
Address P. O. Box 4, Sandyville, WV 25275

Mineral Owner George H. Hoffman, etal  
Address Rt. 1, Box 31, Letart, WV 25253

Farm George H. Hoffman Acres 191

Coal Owner Same

Location (waters) West Creek

Address \_\_\_\_\_

Well No. 1 (AS-78-010) Elevation 690'

Coal Operator \_\_\_\_\_

District Graham County Mason

Address \_\_\_\_\_

Quadrangle Ravenswood 15'  
New Haven 7 1/2'

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All work 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 9-15-79

INSPECTOR  
TO BE NOTIFIED Kenneth Butcher

ADDRESS R.F.D. #1, Barboursville, WV

PHONE 736-4885

[Signature]  
Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated November 2 1974 by Herbert Sayre made to CARL E. SMITH, INC. and recorded on the 21st day of Nov. 1974 in Mason County, Book 39 Page 291

NEW WELL  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  
 OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. \*

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address \_\_\_\_\_ day \_\_\_\_\_ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL  
GEOPHYSICAL LOGS DIRECTLY TO:

Very truly yours, CARL E. SMITH, INC.  
(Sign Name) [Signature]  
Well Operator

W. VA. OIL & GAS CONSERVATION COMMISSION  
613 WASHINGTON STREET, EAST  
CHARLESTON, WEST VIRGINIA 25311

Address  
of  
Well Operator

P. O. Box 4  
Street  
Sandyville  
City or Town  
WV 25275  
State

\*SECTION 3 ... If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the time of such plat, that no objections have been made by the coal operators or found thereof by the department and that the same is approved and the well operator authorized to proceed.

47-053-0169 PERMIT NUMBER

BLANKET BOND

THIS IS AN ESTIMATE ONLY  
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO X DRILL \_\_\_\_\_ DEEPEN \_\_\_\_\_ FRACTURE STIMULATE \_\_\_\_\_  
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT  
 NAME CARL E. SMITH, INC. NAME CARL E. SMITH, INC.  
 ADDRESS P.O. Box 4, Sandyville, WV 25275 ADDRESS P.O. Box 4, Sandyville, WV 25275  
 TELEPHONE (304) 273-9313 TELEPHONE (304) 273-9313  
 ESTIMATED DEPTH OF COMPLETED WELL: 4200' ROTARY X CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Oriskany  
 TYPE OF WELL: OIL \_\_\_\_\_ GAS X COMB \_\_\_\_\_ STORAGE \_\_\_\_\_ DISPOSAL \_\_\_\_\_  
 RECYCLING \_\_\_\_\_ WATER FLOOD \_\_\_\_\_ OTHER \_\_\_\_\_

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LIFT IN WELL	CEMENT LIFT UP OR SACKS (CUBIC FT)
20 - 16			
13 - 10 3/4"	250'	250'	200
9 - 5 8			
8 - 4 8			
7"	2000'	2000'	150
4 1/2"	4200'	4200'	350
			Perf. Top
			Perf. Bottom
			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 150 FEET SALT WATER \_\_\_\_\_ FEET  
 APPROXIMATE COAL DEPTHS None expected

IS COAL BEING MINED IN THE AREA? No BY WHOM? \_\_\_\_\_

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for \_\_\_\_\_ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the \_\_\_\_\_ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title