

Deep well

(S) = Surveyed Lines
(D) = Deed C.

New Location
 Drill Depth
 Abandonment

The well is located on 1/4 N 250' ...
 KGS - Farm in Quadrangle - Knob
 Elev 3/4 M. south of Location = 4109.0'

Company Hampshire Gas Co.
 Address 6801 Industrial Road, Springfield, Va.
 From Darrell Bolyard
 Tract 160 Acres
 Farm No. 27
 Elevation (Spirit Level) 3693.01
 Quadrangle Horton EC (W. State)
 County Franklin District 1
 Engineer William D. ...
 Engineer's Registration No. 5953
 Date Nov. 3, 1978 Drawing No. 1" = 500'

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

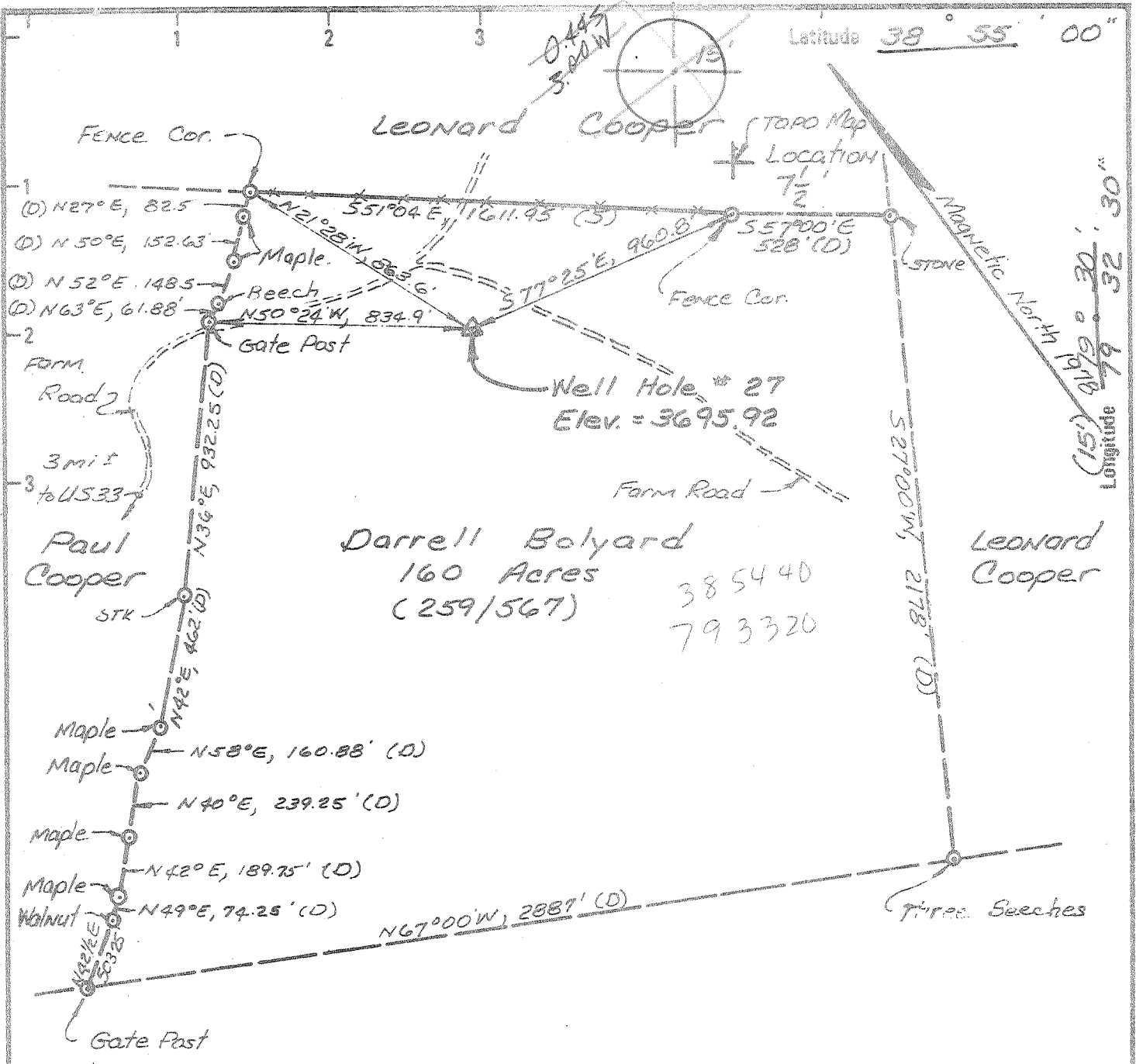
REVISED
WELL LOCATION MAP
 FILE NO. 083-0229-P
 REVISED

+ 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

SEP 9 1980
DEEPWELL

5/15/78



Mason P. Harper

(S) Surveyed Line.
(D) Deed Call.

New Location <input checked="" type="checkbox"/> Drill Deeper <input type="checkbox"/> Abandonment <input type="checkbox"/>	Minimum Error of Closure <u>1 IN 2500</u> Source of Elevation <u>USGS - Harman Quadrangle - Knob</u> <u>Elev. 3/4 Mi South of Location = 4109.0'</u> "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."
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Company	<u>Hampshire Gas Co.</u>		
Address	<u>6801 Industrial Rd., Springfield Va.</u>		
Farm	<u>Darrell Bolyard Farm</u>		
Tract	Acres <u>160</u>	Lease No.	<u>3</u>
Well (Farm) No.	<u>27</u>	Serial No.	<u>EC</u>
Elevation (Spirit Level)	<u>3695.92 HORTON 15</u>		
Quadrangle	<u>Harman (7 1/2 Minute)</u>		
County	<u>Randolph</u>	District	<u>Dry Fork</u>
Engineer	<u>William D. Swecker</u>		
Engineer's Registration No.	<u>5953</u>		
File No.	Drawing No.	<u>H-27</u>	
Date	<u>Apr. 10, 1978</u> Scale <u>1" = 500'</u>		

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

WELL LOCATION MAP
 FILE NO. RAN-229

+ 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.

47-083 **MAY 15 1978**

4700 ... Deep Well 1-0

Under lease or grant dated the 8th. day of September, 1951, by Ernest Hutton and Frances S. Hutton, his wife, unto M. C. F. Gas Company, containing 1187 acres, more or less, in Middle Fork District of Randolph County, West Virginia. This lease is of record in the office of the Clerk of Randolph County, in Deed Book 188 at Page 404.

By virtue of an agreement dated the 7th. day of June, 1976, Randolph Gas Company, the subsequent owner of the leasehold oil and gas and the oil and gas leasehold estate, assigned unto Allegheny Land and Mineral Company 320 acres a part of the subject lease as shown on a plat attached hereto. This assignment is only for the horizons or formations from the top of the Onendago Sand through the bottom of the Tuscarora.

GW

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JUN 17 1976
OIL & GAS DIVISION
DEPT. OF MINES

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS

Date: August 19, 1980

FORM 10-35
(Obverse)

[08-72]

WELL IDENTIFICATION NUMBER

Hamp. Well No. 27

47 - 083 - 0229

WELL TYPE: XX Drill Refracture

Well "Log", in location XX

LOCATION: Well No. 3695.92 Between Dry Fork & Laurel Fork

County: Dry Fork State: Randolph Harman

WELL OPERATOR: Hampshire Gas Company
Address: 6801 Industrial Road
Springfield, Virginia 22151

DEPARTMENT: Charles Griffith
Address: P.O. Box 368
Romney, West Virginia 26757

ABSTRACTED WORK: Drill XX Refracture Drill deeper Practure or stimulate
Plug off old formation XX Perforate new formation
Other abstracted work in well identify XX

WELL LOGGED ON May 6, 1978

WELL & LOGGING WITH FIELD WORK:

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

Name: Robert Stewart
Address: Box 3A5
Jane Lew, West Virginia 26378

August 5, 1980

IS A TYPICAL TARGET FORMATION: XX Depth: XX feet

Depth of completed well, 9300 feet Rotary XX / Core Tools

Water strata depth: Fresh, 100 feet; salt, n/a feet.

Coal seam depths: n/a Is coal being mined in the area? no

Work was commenced December 10, 1978, and completed August 15, 1980

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AUG 2 1980
OIL & GAS DIVISION
DEPARTMENT OF MINES

LOGGING AND TUBING PROGRAM

LOGS OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CURRENT FILL - IN PIPES (Cubic Feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling		
Water	13-3/8	H-40	48	x		56	56	100 Sks. Thixo
Water	9-5/8	H-40	47	x		2902.85	2902.85	910 Sks. Thixo 580 Sks. Reg. Class A
Water	7	J-55	26		x	2520.11	-0-	
Water	7	N-80	23	x		3180.35	3104.35	
Water	7	N-80	26		x	402.31	402.31	
Water	7	N-80	26		x	2913.69	2913.69	150 Sks. Reg. Perforations:
								Pozmix w/ Top Bottom 18% Salt

WELL FLOW DATA

Producing Formation: Oriskany Sandstone Pay zone depth: 9010 feet

Test: Initial open flow, 8.0 Mcf/d Date: Initial open flow, 0 Mcf/d
Final open flow, n/a Mcf/d Final open flow, n/a Mcf/d

Time: Open flow between initial and final tests, n/a hours

Static well pressure, n/a psia (surface measurement) after n/a hours shut in

[If applicable due to multiple completion--]

Perforating Formation: n/a Pay zone depth: XX feet

Test: Initial open flow, XX Mcf/d Date: Initial open flow, XX Mcf/d
Final open flow, XX Mcf/d Final open flow, XX Mcf/d

Time: Open flow between initial and final tests, XX hours

SEP 16 1980

[08-78]

DETAILS OF PREPARATION, INTERVALS, FRACTURING OR STIMULATION, PERIODS, ETC.

1st Treatment

Oriskany formation was treated with 11,000 gals. 28% Mcl; 9,500 gals. 5% acid at an average rate of 16 barrels per minute at 2500 psi.

2nd Treatment

Oriskany formation was hydraulically fractured with 820 barrels of gelled water and 20,000 lbs. 80/100 mesh sand and 15,000 lbs. 20/40 mesh sand. Average rate was 12 Bbl/Min. at 4500 psi.

WELL LOG

FORMATION	Color	Hardness	Top Feet	Bottom Feet	Remarks including indication of all fresh and old water, coal, oil and gas
Shale with interbedded sandstone	Red	Hard-Medium	0	762	
Limestone	Brown	Soft	762	1210	Greenbriar
Shales & Sandstones	Red to Gray	Soft w/ hard streaks	1210	3300	Catskill
Silty Shales w/ some siltstones and sands	Med. Gray	Soft	3300	7434	Chemung
Shales	Med. Gray	Soft	7434	8390	Portage
Shale, calcareous	Dk. Gray	Soft	8390	8437	Harrell
Shale	Dk. Gray	Soft	8437	8740	Hamilton
Shale	Black	Soft	8740	8806	Marcellus
Metabeutonite	Red/Brown	Soft	8806	8807	Tioga
Limestone	Dk. Gray	Soft	8807	8907	Onondaga
Chert	White	Hard	8907	8978	Huntersville
Shale	Gray	Soft	8978	9008	Needmore
Sand, v. calcareous	Milky-Clear White	Hard	9008	9265	Oriskany
Limestone	Lt. Brown to Gray	Hard	9265	9300	Helderberg

(Attach separate sheets if complete as necessary.)

Well Operator

By Charles E. Johnson, Jr.
Its Superintendent - Holzer Gas Production & Storage

NOTE: Population of gas samples is follows:
"The term 'gas' as used in this report 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
MAY - 5 1978

Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

DATE April 28, 1978

Surface Owner Darrell & Norma June Bolyard

Company Hampshire Gas Company

Address _____

Address 6801 Industrial Road, Springfield, Va.

Mineral Owner Same as above

Farm Darrell Bolyard Farm Acres 160

Address _____

Location (waters) Between Dry Fork & Laurel Fork

Coal Owner _____

Well No. 27 Elevation 3695.92

Address _____

District Dry Fork County Randolph

Coal Operator _____

Quadrangle Harman

Address _____

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions 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 9-8-78.

INSPECTOR
TO BE NOTIFIED Robert S. Stewart

ADDRESS Box 345, Jane Lew, West Virginia 26378

PHONE 884-7782

Deane K. Ridd
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 July 27, 1974 by Darrel & Norma June Bolyard made to Hampshire Gas Company and recorded on the 1st day of August 1974 in Randolph County, Book 289 Page 336

XX 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:

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

Very truly yours, HAMPSHIRE GAS COMPANY
(Sign Name) [Signature]
Well Operator
6801 Industrial Road
Street
Springfield, Virginia 22151
City or Town

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 filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

RAN-229 PERMIT NUMBER

47-083

[Handwritten signature]

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

PROPOSED WORK ORDER TO XX DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT: _____
 NAME _____ NAME Harry L. Ketcham, Jr.
 ADDRESS _____ ADDRESS 6801 Industrial Road, Springfield, Va.
 TELEPHONE _____ TELEPHONE (703) 750-4871
 ESTIMATED DEPTH OF COMPLETED WELL: 9700' ROTARY XX CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Oriskany Sand
 TYPE OF WELL: OIL _____ GAS XX COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10 13-3/8"	60'	60'	70 sacks
9 - 5/8 9-5/8"	3,000'	3,000'	1,200 sacks
8 - 5/8			
7 7"	9,500'	1,000'	160 sacks
5 1/2			
4 1/2			
3			Perf. Top
2 2-3/8"	9,600'	0	Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS N/A FEET N/A SALT WATER N/A FEET N/A
 APPROXIMATE COAL DEPTHS N/A
 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

Date: August 19, 19 80

Operator's Well No. Hamp. Well No. 27

API Well No. 47 - 083 - 0229
State County Permit

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

AFFIDAVIT OF PLUGGING AND FILLING WELL

WELL TYPE: Oil ___/ Gas xx/ Liquid Injection ___/ Waste Disposal ___/
(If "Gas", Production ___/ Underground storage ___/ Deep xx/ Shallow ___/
LOCATION: Elevation: 3695.92 Watershed: Between Dry Fork & Laurel Fork
District: Dry Fork County: Randolph Quadrangle: Harman
WELL OPERATOR Hampshire Gas Company DESIGNATED AGENT Charles Griffith
Address 6801 Industrial Road Address P.O. Box 368
Springfield, Virginia 22151 Romney, West Virginia 26757

STATE OF WEST VIRGINIA,)
COUNTY OF _____) SS:

Charles Griffith and Ronnie A. Miller

being first duly sworn according to law, depose and say that they are experienced in the work of plugging and filling oil and gas wells; that they were employed by Hampshire Gas Company, the well operator, and participated in the work of plugging and filling the above well; that the work was commenced on August 6, 19 80, and completed on August 15, 19 80, in the following manner:

RECEIVED

PERMITTED WORK: Plug and abandon xx/ Clean out and replug ___/

PLUGGING MATERIALS

Type of Cement	Other Materials	Depth	Thickness
Class A	6% Gel.	9190	50 Sks.
"	"	4352	20 Sks.
"	"	2804	110 Sks.
"	"	150	55 Sks.

Bridge Plugs Used--Type and Depth

VENT PIPE 1" Pipe

MISCELLANEOUS MATERIALS

CASING LOST 56' 13-3/8" 2903' 9-5/8"
6420' 7"

TYPE OF RIG: Cooper Service Rig.

Owner: Well Op'r ___/ Contractor xx/

Rig time: 10 days plus ___ hours

COAL SEAMS (NAMES AND DEPTHS) SEP - 2 1980

None

OIL & GAS DIVISION
DEPT. OF MINES

DESCRIPTION OF WELL MONUMENT

9-5/8" Casing screwed and welded
to Surface Casing: approximately
6' above ground with 1" Vent on
top. The number 47-083-0229 is
inscribed upon said monument.

Charles Griffith (SEAL)
Ronnie A Miller (SEAL)

Subscribed and sworn to before me this

20 day of August, 19 80

My commission expires Jan 7, 19 80.

Earl O. Cabard
Notary Public