



NO	COURSE & DISTANCE	NO	COURSE & DISTANCE
1	S48° 45' E 1584.00'	12	N25° W 367.95'
2	S40° 30' W 308.55 (D) 298.65' (S)	13	N25° W 661.30'
3	S40° 45' E 379.50'	14	N17° E 495.00'
4	S57° 45' E 739.20'	15	N22° E 313.50'
5	S19° W 1178.10'	16	N63° W 297.00'
6	S66° E 957.00'	17	N43° W 561.00'
7	S52° E 1881.00 OR 2211.00 (D) S56° 38' 44" E, 2171.40' (S)	18	S42° W 230.25'
8	N36° E 3234.00'	19	N52° W 1254.00'
9	N62° 30' W 4405.50'	20	S36° W 2310.00'
10	N08° E 354.75'	21	S50° E 2425.50'
11	N68° W 478.50'	22	N61° 15' E 792.00'
		23	N65° 30' E 932.25'

75' loc
0.52 S 39° 22' 30"
1.12 W 78° 35'
calcs loc kls
2/18/2010

Minimum Error of Closure $\frac{1}{2000}$
Source of Elevation BM. USGS 818 HANGING ROCK QUADRANGLE
LATITUDE: 39° 23' 30" LONGITUDE: 78° 36' 00"

Fracture
New Location
Drill Deeper
Abandonment

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.

Signed: *W. Thomas Biggers*
Squares: N S E W

Map No.

Company HAMPSHIRE GAS CO.
Address 1100 H Street NW, Washington, D.C. 20005
(6801 INDUSTRIAL RD., SPRINGFIELD VA.)
Farm K 2 CARL & EDGAR SHANHOLTZER
Tract 1 Acres 323 1/2 Lease No. 355
Well (Farm) No. 21 Serial No. _____
Elevation (Spirit Level) + 1064.30'
Quadrangle HANGING ROCK C + 75' quad
County HAMPSHIRE District GORE
Engineer W. Thomas Biggers
Engineer's Registration No. 51 (W.VA. L.L.S.)
File No. _____ Drawing No. 7151
Date JUNE 12, 1971 Scale 1" = 2000'

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

WELL LOCATION MAP

FILE NO. HAMP-29

(converted to storage well)
+ 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.



RECEIVED
FEB 7 1972

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

OIL & GAS DIVISION
DEPT. OF MINES
Spudder
Cable Tools
Storage

Quadrangle Hanging Rock

WELL RECORD

Oil or Gas Well Gas
(KIND)

Permit No. HAMP-29

Company	Address	Farm	Location (waters)	Well No.	District	The surface of tract is owned in fee by	Mineral rights are owned by	Drilling commenced	Drilling completed	Date Shot	With	Open Flow	Volume	Rock Pressure	Oil	WELL ACIDIZED (DETAILS)	RESULT AFTER TREATMENT (Initial open flow or bbls.)	ROCK PRESSURE AFTER TREATMENT	Fresh Water	Producing Sand	Casing and Tubing	Used in Drilling	Left in Well	Packers
Hampshire Gas Company	6801 Industrial Rd., Springfield, Va. 22151	Carl & Edgar Shanholtzer	Little Capon	21	Gore	Carl Shanholtzer	Carl Shanholtzer & Edgar Shanholtzer	June 28, 1971	August 22, 1971			/10ths Water in	3,500,000	1575 psig		14,000 Gal. 3% HCl 7000 Gal. 3% My-T Gel, 7000 Gal. 3% HCl	See Reverse Side	1615 psig	95'	Oriskany Sandstone	13 3/8" csg.	None	42'	Kind of Packer... None
						Edgar Shanholtzer						/10ths Merc. in									9-5/8" csg.	None	1497'	Size of
																					8 1/4"	None	5543'	Depth set
																					5 3/16"	None		
																					4 1/2"	None		
																					3"	None	5704	Perf. top
																					2 3/8" tbg.	None		Perf. bottom
																					Liners Used			Perf. top
																								Perf. bottom

Attach copy of cementing record.
 CASING CEMENTED 7" SIZE 5543 No. Ft. 8/10/71 Date
 Amount of cement used (bags) See Reverse Side
 Name of Service Co. Halliburton
 COAL WAS ENCOUNTERED AT FEET INCHES
 FEET INCHES FEET INCHES
 FEET INCHES FEET INCHES
~~XXXXXXXXXXXXXXXXXXXX~~ 10,000 Gal. Gel, 6000 Gal. 20% HCl, followed by 9000 Gal. H₂O -
 2nd acidizing 12,200 Gal. 25% HCl, 2100 Gal. 3% HCl as overflush, 8000 Gal. H₂O to displace
 RESULT AFTER TREATMENT (Initial open flow or bbls.) See Reverse Side
 ROCK PRESSURE AFTER TREATMENT 1615 psig HOURS 24
 Fresh Water Feet 95' Salt Water Feet 2740'
 Producing Sand Oriskany Sandstone Depth 5534' - 5705'

5,300 Mcf

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Shale	L. Gray	Chimney	0	130	Fresh water		Silty
Shale & Sandstone	Red Brown		130	320			
Shale & Siltstone	L. Gray		320	470			
			470	570			Missing
Siltstone	Red Brown		570	770			
Siltstone	Gray		770	1020			
Shale	Gray		1020	1350			Interbedded Siltstone
Siltstone	Gray		1350	1420			Sandy
Shale	Med. Gray		1420	1630			
Siltstone	Mod. Gray		1630	2300			Some Shale
Shale	Med. Gray		2300	2980	Salt water		Silty
Shale	Dark Brn. to Black		2980	3590			

(over)

FEB 15 1972

Formation	Color	Hard or Soft	Top S	Bottom	Oil, Gas or Water	Depth Found	Remarks
Shale & Siltstone	Med. Gray		3590	3665			
Siltstone	Light & Dark Gray		3665	3770			Sandy
Shale	Med. Gray		3770	3980			
Shale	Med. Gray		3980	4200			Calcareous Fossiliferous Limestone streaks
Shale	Med. Gray		4200	4880			Silty
Shale	Dark Gray		4880	4990			Interbedded Siltstone
Shale	Dark Gray		4990	5060			Silty
Shale	Dark Gray to Black		5060	5150			Calcareous Limestone Stringers
Shale	Black		5150	5388			Calcareous
Metabentonite - Tioga			5388	5390			
Shale	Med. to Dark Gray	Needmore	5390	5541			Calcareous
Sandstone	White to Gray	Oriskany	5541	5705			Calcareous
Sandstone		HECO	5705	5712			Very fine Calcareous Some Limestone
			485				
<u>CEMENTING DATA</u>							
13-3/8" csg.	Cemented to surface with 50 sacks		Class "A" cement, 2% Calcium Chloride				
9-5/8" csg.	Cemented to surface with 427 sacks		Thixotropic followed by 100 sacks of Portland Class "A" cement				
7" csg.	Cemented to surface in two stages.		First stage required 220 sacks of Portland Class "A" cement and 50 sacks of Latex. Second stage required 603 sacks of Diacel "D" cement and 667 sacks of Portland Class "A" cement.				
<u>Initial Open Flow</u>							
Calculated on the basis of 1-1/2 hour isochromal backpressure curve:							
			5,300 MCFD				
			5390	5541	5710?		
			1064	1064	1064		
			4376	4477	4646		

Date: January 2, 197

APPROVED: *[Signature]*, Owner
 By: *[Signature]*, Function & Storage