

"I, The undersigned hereby certify that this map is correct to the best of my knowledge and belief and shows all of the information required by Paragraph 5 of The Rules and Regulations of the Oil and Gas section of the Mining laws of west Virginia."

By = Albert L. Payne, P.E.

DEGREE of ACCURACY = One-Part in 2500

LATITUDE 39° 30'
~~39° 23' 41"~~

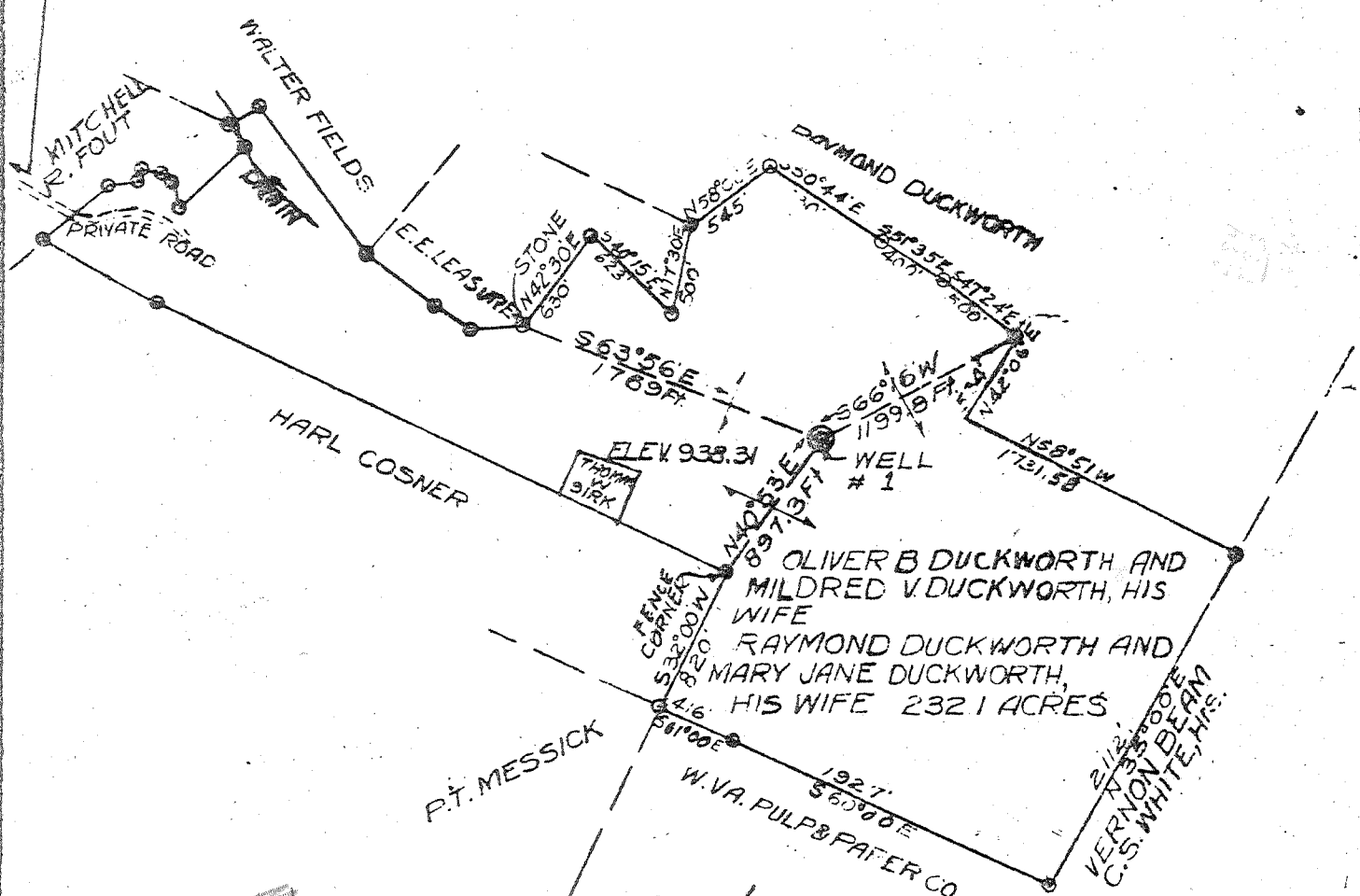
LONGITUDE 78° 35'
~~78° 35' 15"~~

~~0.365~~
~~2.83W~~
~~2.83W~~



APPROXIMATE MEAN DECLINATION 1963

Approximately 1100 Ft to Green Spring - Springfield Road and B&O Railroad Crossing approximately 2.9 Mi SW of main line of railroad at Green Spring W.Va.



~~2.38~~ S. 39° 30'
2.84 W. 78° 35'
 2 NC (F-17)

New Location
 Drill Deeper
 Abandonment

Coord conv.
 calculates 0.5
 0.365
 2.83W

Company	Shell Oil Company
Address	1200 First Nat'l Bldg. Okla. City, Oklahoma
Farm	Duckworth
Tract	Acres 232.1 Lease No.
Well (Farm) No.	1 Serial No.
Elevation (Spirit Level)	938.31 Springfield
Quadrangle	HANGING ROCK - N.C.
County	HAMPSHIRE District SPRINGFIELD
Engineer	Albert L. Payne
Engineer's Registration No.	986
File No.	Drawing No.
Date	Scale 1" = 1000'

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

WELL LOCATION MAP
 FILE NO. HAMP-12

+ 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.

Samples 0 - T.P. 1364H (1-00) Deep Well



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION 17

Quadrangle Hanging Rock

Permit No. Hamp 12

WELL RECORD

Oil or Gas Well Dry

Company Shell Oil Company
Address 1200 First Natl. Bank Bldg. Oklahoma City, Okla.
Farm Duckworth Acres 265
Location (waters) _____
Well No. 1 Elev. 938
District Springfield County Hampshire
The surface of tract is owned in fee by Oliver Duckworth
Et al Address Greensprings, W. Va.
Mineral rights are owned by Oliver Duckworth, Et al
Address Greensprings, W. Va.

Drilling commenced September 2, 1963
Drilling completed March 10, 1964
Date Shot _____ From _____ To _____
With _____

Open Flow /10ths Water in _____ Inch
/10ths Merc. in _____ Inch
Volume _____ Cu. Ft.
Rock Pressure _____ lbs. _____ hrs.
Oil _____ bbls., 1st 24 hrs.

WELL ACIDIZED _____
WELL FRACTURED _____

Casing and Linings	Used in Drilling	*Left in Well	Packers
Size			
16 20"	84'	84'	Kind of Packer _____
18 18"	304'	304'	
10 13-3/8"	1198	1198	Size of _____
8 9-5/8"	8744	8744	
6 5/8"			Depth set _____
5 3/16"			
3"			Perf. top _____
2"			Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

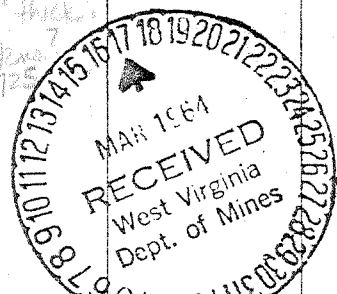
20" 84' 9/4/63
CASING CEMENTED 18" SIZE 304' No. Ft. 9/15/63 Date
13-3/8" 1197' 9/30/63
9-5/8" 8744' 1/14/64
COAL WAS ENCOUNTERED AT No. coal FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

RESULT AFTER TREATMENT

ROCK PRESSURE AFTER TREATMENT

Fresh Water _____ Feet Salt Water _____ Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Shale	Gray	Soft	0	260			
Ss. & Shale	Gray/brown	Hard	260	295	Water	260	Fresh, flowed while drilling
Sandstone	White	Hard	295	660			
Limestone	Gray/brown	Hard	660	1,385			
Dol., ls. & Anhydrite	Brown/Brown/gray	Hard & Soft	1,385	2,360			
Ss. and shale	Gray/brown/green	Hard	2,360	2,560			
Sh. & ls.	Gray/green	Hard	2,560	2,760			
Ss., sh., & ls.	Gray/red	Hard	2,760	3,140			
Ss. & Shale	Gray	Hard	3,140	3,188			
Shale	Red brown	Hard	3,188	3,620	Small gas show	3238-3239 3337-3338	Note: All gas shows reflect minor recording on Baroid mud logger No shows at surface.
Shale	Green	Hard	3,620	3,780			
Sandstone	Red	Hard	3,780	3,850			
Ss. & shale	Gray/green	Hard	3,850	4,025			
Ss. some sh.	Gray/green	Hard	4,025	4,144			
Sandstone	White	Hard	4,144	5,308	Water	4370	12,000 ppm chloride (estimated)
Ss. and S.	Red/green/gray	Hard	5,308	5,600	Small gas show	5243-5244 5282-5293	



(over)

Formation	Color	Hard or Soft	Top 17	Bottom	Oil, Gas or Water	Depth Found	Remarks
Ss. & shale	Red brown	Hard	5,600	6,350			
Ss. & shale	Red/brown /green	Hard	6350	6,510	Small gas show	6354-6355 6396-6404	Juniata
Ss., ls. & shale	Gray/white	Hard	6,510	6,660	Small gas show	6562-6596	Osage
Ss. & shale	Gray/green	Hard	6,660	6,810	Small gas show	6687-6690 6694-6695 6706-6714	
Ss. & shale	Dark gray	Hard	6,810	7,000	Small gas shows	6833-6834 6887-6888 6960-6976	Martinsburg
Sh. & minor siltstone	Dark gray	Hard	7,000	8,000	Small gas show	7000-7007	
Shale	Dark gray to black	Hard	8,000	8,560	Small gas show	8422-8446	
Shale	Black	Hard	8,560	8,707			
Limestone	Brown	Hard	8,707	8,740			
Shale, ls., & siltstone	Brown/Black	Hard	8,740	9,010			
Shale, limy	Gray	Hard	9,010	9,190			
ls. & shale	Brown/	Hard	9,190	9,300			
Limestone	Gray/brown	Hard	9,300	9,390			
ls. & Dol.	Gray/brown	Hard	9,390	9,850			
Dolomite	Brown/gray	Hard	9,850	10,600	Water & Trace H ₂ S	10496-10631	13,000 ppm chloride
Dolomite	Gray	Hard	10,600	11,360			
Limestone	Dark gray	Hard	11,360	11,900	Trace H ₂ S	11,860-11,975	
Dolomite silty	Gray/brown	Hard	11,900	12,175			
Dolomite & sandstone	Gray/brown	Hard	12,175	12,610	Trace H ₂ S	12,415-12,475	9880 938
Limestone	Gray/brown	Hard	12,610	12,680			
Dol. ls. & sandstone	Gray/brown	Hard	12,680	12,850			
Dolomite, silty	Medium gray /brown	Hard	12,850	13,580	Trace H ₂ S	12,860-12,130 13,110-13,130	
Limestone & Dolomite	Brown/gray	Hard	13,580	13,760			
Dolomite, silty	Gray/brown	Hard	13,760	13,999			
Total depth	13999 (Driller)			747			

Check E-log for top joint
Hampshire-12

Elev. 960; TNLV-422, WILCK-1402, WLMP-1803, KEFR-2178,
RSHL-2229, TCRR-3183, JUNT-4350, OSWG-5550? SG,
MRDG-5868, TRNN-7746, BKRV-8215, BKMN-8935? Trace H₂S,
CCCG-10955 Trace H₂S, ELBK-12,610

Date 11/22/64 10, 1964

APPROVED SHELL OIL COMPANY, Owner
By John C. Marshall (Title)
Division Land Manager