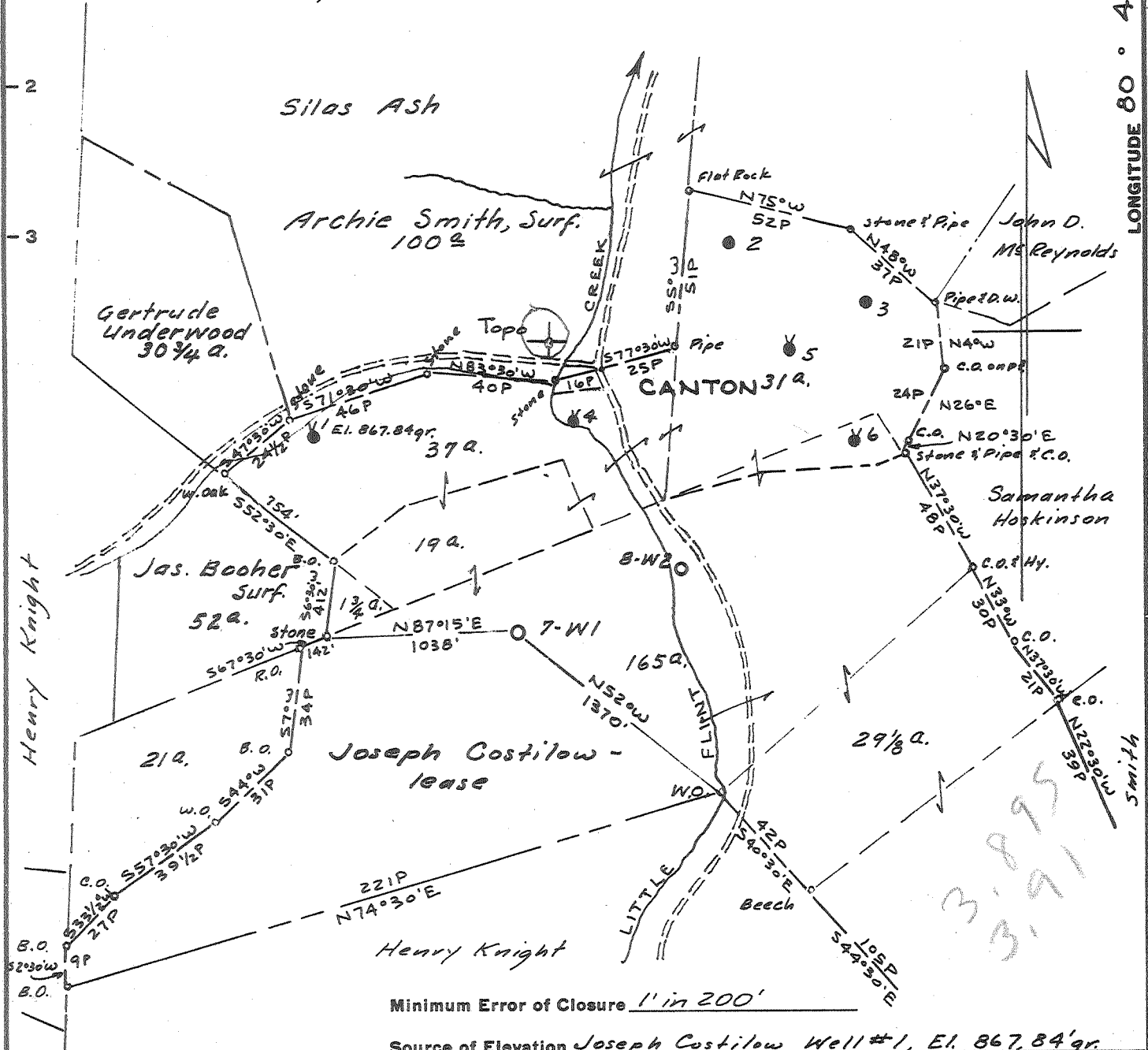


Coal: Burl Ball, et al. 228 South St. Clair St., Painesville, Ohio.

Surf: % Alice Knight, West Union, W. Va.



Minimum Error of Closure 1" in 200'

Source of Elevation Joseph Costilow Well #1, El. 867.84' gr.

- 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: A.C. Hillbert

Map No. N37 Squares: N S T E W 7

Company Wolf's Head Oil Refining Co. Inc.
 Address P.O. Box 1588, Parkersburg, W. Va.
 Farm Joseph Costilow
 Tract _____ Acres 350 Lease No. 11900
 Well (Farm) No. W-1 Serial No. 7
 Elevation (Spirit Level) 1040.83' ground
 Triangle CENTERPOINT-WC
 City DODDRIDGE District GRANT
 Surveyor A.C. Hillbert
 State's Registration No. 2534
388 Drawing No. _____
21, 1964 Scale 1" = 800'

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

WELL LOCATION MAP

FILE NO. DOD-1172

+ 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.



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

Rotary
Spudder
Cable Tools
Storage

Quadrangle CENTERPOINT

Permit No. DOD-1172

WELL RECORD

Oil or Gas Well Gas-Oil
(KIND)

Company WOLF'S HEAD OIL REFINING COMPANY, INC.
Address P. O. Box 1588, Parkersburg, W. Va.
Farm Joseph Costilow Acres 350.00
Location (waters) Little Flint Creek
Well No. W-1 Elev. 1040.83
District Grant County Doddridge
The surface of tract is owned in fee by c/o Alice Knight
Address West Union, W. Va.
Mineral rights are owned by James E. Knight & Ronald L. Knight
Address West Union, W. Va.
Route #2
Drilling commenced September 8, 1964
Drilling completed September 27, 1964
Date Shot From To
With
Open Flow /10ths Water in Inch
/10ths Merc. in Inch
Volume Drilled w/Rotary Tools Cu. Ft.
Rock Pressure lbs. hrs.
Oil bbls., 1st 24 hrs.
WELL ACIDIZED

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
13			Steel Shoe
10			Float Collar
8 5/8"	867.84'	867.84'	Guide Shoe
6 5/8"			Size of OD
5 1/2"	2958.61'	2958.61'	5 1/2" OD
3			Depth, set
2			2934'
Liners Used			Perf. top
			Perf. bottom
			Perf. top
			Perf. bottom

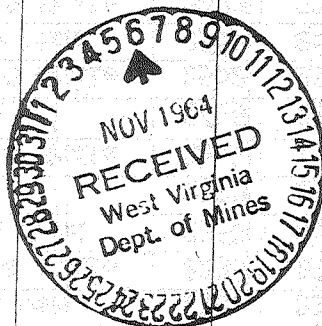
CASING CEMENTED 8 5/8" SIZE 848 No. Ft. 9/12/64 Date
5 1/2" 2934 9/29/64

COAL WAS ENCOUNTERED AT 230 FEET 36 INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

WELL FRACTURED October 8, 1964 - Used: 932 Bbl. Water, 60,000# Sand, 600 Gals. Mud Acid, 9 - DS9 Perf. Balls, 1 - Ball Injector, 25 Gals. Deterger, 40 Gals. Freflo, 450# J-84 & 225# J-98.
RESULT AFTER TREATMENT Gas = 250,000 Cu. Ft.
Oil = 20 Bbls.
ROCK PRESSURE AFTER TREATMENT 500 Lbs.

Fresh Water Feet Salt Water Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
SEE OTHER SIDE FOR FORMATION RECORD							



R/G/Ba

(11) FORMATION RECORD										
KIND	TOP	BOTTOM	STEEL LINE MEAS.	TEST	KIND	TOP	BOTTOM	STEEL LINE MEAS.	TEST	
Red Rock	0	40			Oil & Gas	2181	2188		Show	
Green Shale	40	90			Sand & Shale	2235	2358			
Red Rock	90	200			Gantz Sand	2358	2444			
Blue Sand	200	230			Oil	2370	2380		Show	
Coal	230	233			Sand & Shale	2444	2545			
Blue Sand	233	270			Slate	2545	2562			
Red Rock	270	400			Sand & Shale	2562	2569			
Sand & Shale	400	420			Sandy Lime	2569	2623			
Shale & Red Rock	420	460			Sand & Shale	2623	2716			
Sand & Shale	460	520			Sand & Slate	2716	2784			
Shale & Red Rock	520	550			Stray Sand	2784	2803			
Sand & Shale	550	600			Oil	2785	2802		Show	
Limey Shale	600	640			Shale	2803	2814			
Shale & Sand	640	695			Gordan	2814	2820			
Slate & Shale	695	710			Oil & Gas	2814	2819		Show	
Sand & Shale	710	727			Shale	2820	2860			
Lime & Shale	727	734			Fourth Sand	2860	2884			
Sand & Shale	734	835			Shale	2884	2915			
Lime & Shale	835	848	848		Sand	2915	2934			
Sand & Shale	848	1025			5 1/2" Casing		2934	2934		
Sand & Lime	1025	1240								
Shale & Sand	1240	1245			TOTAL DEPTH		2934			
Black Shale	1245	1265								
Sand & Shale	1265	1275								
Sand	1275	1305								
Grey Shale	1305	1455								
Sand	1455	1645								
Shale	1645	1660								
Lime	1660	1685								
Sand	1685	1740								
Lime & Shale	1740	1820								
Lime	1820	1840								
Lime & Shale	1840	1850								
Sandy Shale	1850	1966								
Little Lime	1966	1988								
Lime, Sand & Shale	1988	2010								
Big Lime	2010	2064								
Big Injun	2064	2235								
Oil & Gas	2074	2088		Show						
Oil & Gas	2106	2118		Show						
Oil & Gas	2120	2130		Show						
Oil & Gas	2152	2164		Show						
Oil & Gas	2172	2174		Show						
					(OVER)					

Date November 5, 19 64

APPROVED WOLF'S HEAD OIL REFINING COMPANY, INC. Owner

By George W. Wilsman
George W. Wilsman, (Title) Agent