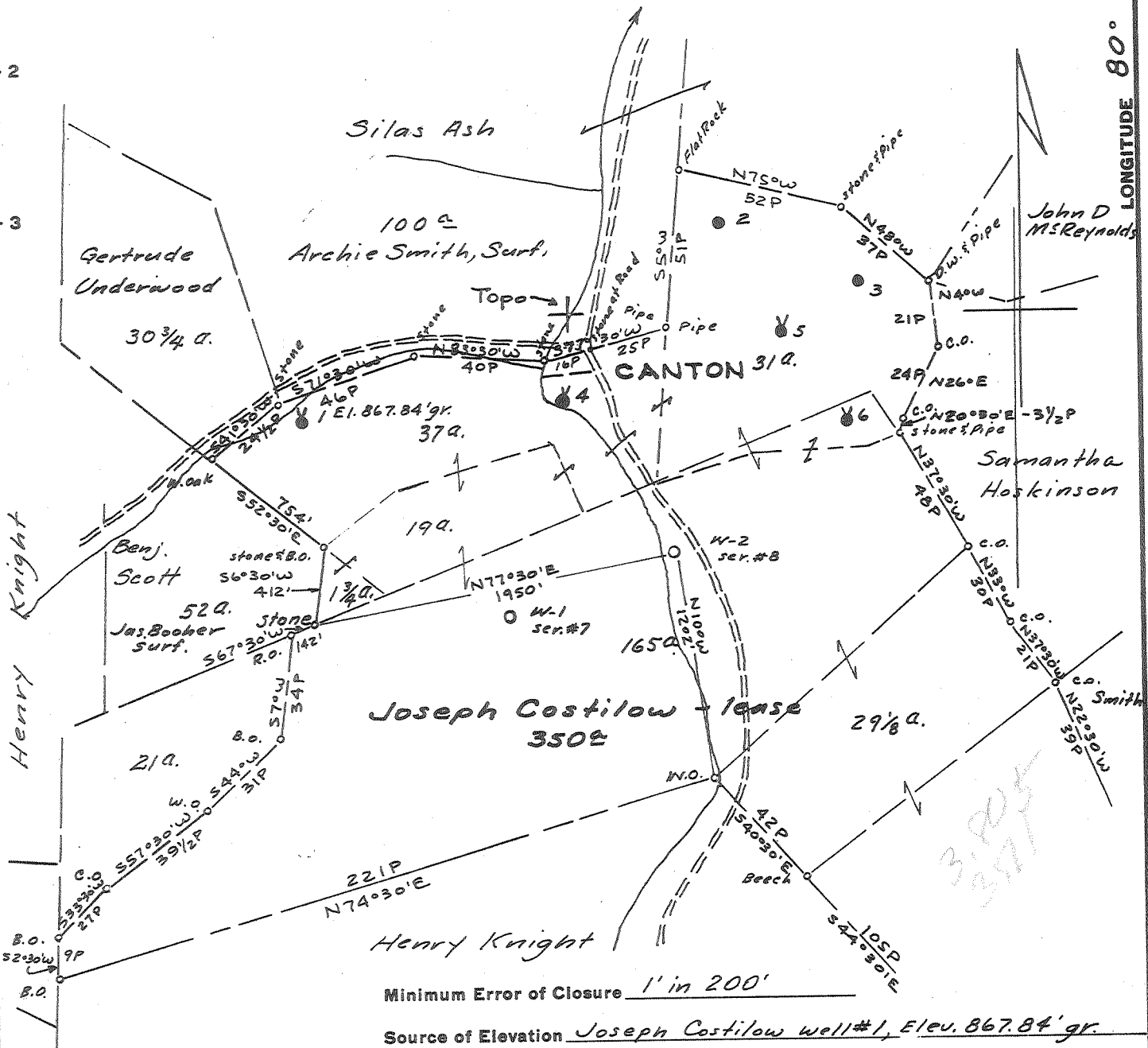


LATITUDE 39° 25'

LONGITUDE 80° 40'

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

Surf: 9/0 Alice Knight, West Union, W.Va.



Minimum Error of Closure 1' in 200'

Source of Elevation Joseph Costilow well #1, Elev. 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 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-2 Serial No. 8
 Elevation (Spirit Level) 819.61' ground
 Quadrangle CENTERPOINT WC
 County DODDRIDGE District GRANT
 Engineer A.C. Hillbert
 Engineer's Registration No. 2534
 File No. 1388 Drawing No. _____
 Date Aug. 24, 1964 Scale 1" = 800'

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

WELL LOCATION MAP

FILE NO. DOD-1173

+ 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 12

Rotary
Spudder
Cable Tools
Storage

Quadrangle CENTERPOINT

Permit No. DOD-1173

WELL RECORD

Oil or Gas Well Oil
(KIND)

Company WOLF'S HEAD OIL REFINING COMPANY, INC.
Address P. O. Box 1588, Parkersburg, W. Va.
Name Joseph Costilow Acres 350
Location (waters) -
Well No. W-2 Elev. 819.61
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, et al.
Address West Union, W. Va.
Drilling commenced October 22, 1964
Drilling completed November 5, 1964
Rate Shot - From - To -
With -

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
13			Steel shoe
10			Guide Shoe
8 1/2 5/8"	232.26'	232.26'	Float Collar
6 5/8"			Size of liner
5 1/2"	2083.67'	2083.67'	5 1/2"
3			Depth set
2			2072'
Liners Used			2042'
			Perf. top
			Perf. bottom
			Perf. top
			Perf. bottom

Open Flow - /10ths Water in - Inch
/10ths Merc. in - Inch
Volume Show - Drilled with Rotary Cu. Ft.
Rock Pressure - lbs. - hrs.
Oil Show - Drilled with Rotary bbls., 1st 24 hrs.
WELL ACIDIZED -

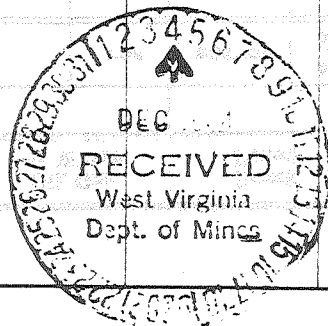
CASING CEMENTED 5 1/2" SIZE 2075 No. Ft. 11/6/64 Date
8 5/8" 225 10/24/64

COAL WAS ENCOUNTERED AT - FEET - INCHES
- FEET - INCHES - FEET - INCHES
- FEET - INCHES - FEET - INCHES

WELL FRACTURED November 16, 1964 - Used: 1,004 Bbls. Water, 60,000 Lbs. 20-40 Sand, 1,000 Gals. Mud Acid, 11 Perf Balls, 225 Lbs. J-111, 450 Lbs. J-84, 30 Gals. Detergent and 40 Gals. Free-Flow
Gas - 150,000 Cu. Ft.
Oil - 40 Bbls.

RESULT AFTER TREATMENT -
ROCK PRESSURE AFTER TREATMENT 430 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							



Formation	Color	Hard or Soft	Top 12	Bottom	Oil, Gas or Water	Depth Found	Remarks		
FORMATION RECORD									
KIND	TOP	BOTTOM	STEEL LINE MEAS.	TEST	KIND	TOP	BOTTOM	STEEL LINE MEAS.	TEST
R. Rock & Shale	0	200	-						
Sand	200	230	-						
Sand & Shale	230	300							
Red Rock	300	330							
Sandy Shale	330	635							
Red Rock	635	670							
Shale	670	770							
Sandy Shale	770	940							
Shale	940	1040							
Sand & Shale	1040	1110							
Sand	1110	1210							
Shale	1210	1225							
Sand	1225	1250							
Shale	1250	1270							
Sandy Lime	1270	1360							
Shale & Sand	1360	1415							
Sand	1415	1465							
Shale	1465	1520							
Sandy Lime	1520	1560							
Sandy Shale	1560	1635							
Shale	1635	1735							
Little Lime	1735	1750							
Shale & Sand	1750	1775							
Big Lime	1775	1844							
Big Injun	1844	1980							
	1846	1862		Show					
	1880	1910		Show					
	1934	1948		Show					
	1950	1954		Show					
Shale & Sand	1980	2075							
TOTAL DEPTH		2075	2075						
				(OVER)					

Date December 3, 1964
APPROVED WOLF'S HEAD OIL REFINING COMPANY, INC. Owner
By George W. Walsman
George W. Walsman, (Title) Agent