

SOURCE OF ELEVATION Equit. Well No 4993 Dod. Permit No. 147A
Elev. 866.0

New Location
 Drill Deeper
 Abandonment
 7-24-69

"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."

Company Quaker State Oil Refg. Corp.
 Address PO Box 1327 Parkersburg, W. Va.
 Farm F.R. Wanstreet
 Tract 52 Acres Lease No. _____
 Well (Farm) No. No. 1 QS Serial No. _____
 Elevation (Spirit Level) 1051
 Quadrangle Holbrook 6C
 County Doddridge District Southwest
 Engineer H.A. [Signature]
 Engineer's Registration No. 2492
 File No. _____ Drawing No. _____
 Date Dec. 22, 1965 Scale 1" = 330'

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

WELL LOCATION MAP
 FILE NO. DOD-1347-P

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 Holbrook
Permit No. DOD-1347

WELL RECORD 4

Oil or Gas Well Oil & Gas
(KIND)

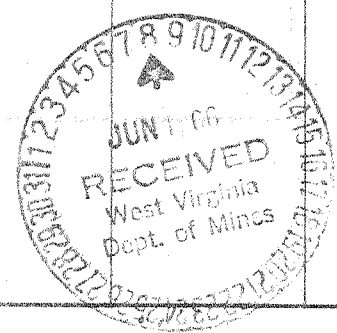
Company Quaker State Oil Refining Corporation
 Address P. O. Box 1327, Parkersburg, W. Va.
 Farm F. R. Wanstreet Acres 52
 Location (waters) Branch of Bear Fork
 Well No. 1 (Q.S.) Elev. 1051
 District Southwest County Doddridge
 The surface of tract is owned in fee by ---
 Address ---
 Mineral rights are owned by F. R. Wanstreet Hrs.
 Address Auburn, W. Va.
 Drilling commenced 2-28-66
 Drilling completed 3-22-66
 Date Shot From To
 With ---
 Open Flow /10ths Water in Inch
/10ths Merc. in Inch
 Volume 45,000 Cu. Ft.
 Rock Pressure 75 lbs. 22 hrs.
 Oil 1 bopd bbls., 1st 24 hrs.
 WELL ACIDIZED (DETAILS) ---

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
14 14"	35	35'	
10	450	---	Size of
8 1/4	1058	---	
6 5/8			Depth set
5 3/16			
4 1/2	2129	2129	
3			Perf. top
2		2115	Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Attach copy of cementing record.
 CASING CEMENTED 4 1/2" SIZE 2129 No. Ft. 3-25-66 Date
 Amount of cement used (bags) 75 cf pozmix
 Name of Service Co. Dowell
 COAL WAS ENCOUNTERED AT None FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES
 WELL FRACTURED (DETAILS) 4-1-66 by Dowell - used 27,000 gal. of water & 10,000# of 10-20 sand.
 RESULT AFTER TREATMENT (Initial open Flow or bbls.) 42,000 cf/day & 1.5 bopd
 ROCK PRESSURE AFTER TREATMENT 110# in 12 HOURS
 Fresh Water --- Feet Salt Water 515-20 Feet
 Producing Sand Injun Depth

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Clay			Surface	20			
Stone			20	25			
Clay			25	50			
Sand			50	70			
R. Rock			70	90			
Sand			90	105			
R. Rock			105	300			
Sand			300	335			
R. Rock			335	395			
Slate & shells			395	445			
R. Rock			445	450			
Slate & shells			450	455			
R. Rock			455	485			
Sand			485	500			
Pink rock			500	512			
Sand			512	530			
Slate & shells			530	547			
Lime			547	560			
Red rock			560	575			
Slate & shells			575	605			
Sand			605	615			
Slate & shells			615	650			
Red rock			650	665			
Lime			665	685			
R. rock			685	700			
Lime			700	710			
R. rock			710	785			
Lime			785	815			
R. rock & lime			815	855			
Slate & shells			855	875			

Water 515-20 1/2 of 10" bailer/hr.



Formation	Color	Hard or Soft	Top ⁹	Bottom	Oil, Gas or Water	Depth Found	Remarks	
P. Rock			875	1020				
Slate & shells			1020	1030				
Pink rock			1030	1050				
Sand			1050	1065				
Slate & shells			1065	1285				
Sand			1285	1300				
Slate			1300	1325				
1st Salt sand			1325	1455				
Black slate			1455	1495				
Slate & shells			1495	1550				
2nd salt sand			1550	1580				
Slate & shells			1580	1610				
3rd Salt sand			1610	1655				
Slate & shells			1655	1750				
Lime			1750	1760				
Maxton sand			1760	1797				
Slate & shells			1797	1855				
Maxton sand			1855	1915				
Little Lime			1915	1923				
Slate			1923	1928				
Sandy lime			1928	1946	Oil 1928-37	light show		
Big Lime			1946	2010				
Injun Sand			2010	2082	Oil 2055-72	2 bailers/day; gas 2042-62		
Lime			2082	2102	Show oil 2099-02	(85000 cf)		
Slate & shells			2102	2153	Gas 2099-02	(7000 cf)		
				2153	TOTAL DEPTH			
LOGS RUN: by Birdwell 3-22-66					PERFORATIONS:			
Gamma Ray					(GR-Density)	2043	2051	2059
Density						2044	2054	2060
Neutron						2047	2056	2065
Temperature						2048	2057	

Date June 7, 1966

APPROVED QUAKER STATE OIL REFINING CORPORATION, Owner

By Thomas H. Richards
(Title) Engineer