

UNIVERSITY OF TEXAS  
BUREAU OF ECONOMIC GEOLOGY  
AUSTIN, TEXAS

Mimeograph Circular No. 18  
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The mimeograph circulars issued from the Bureau of Economic Geology contain the record of cores and cuttings from wells received and described in the Bureau. In some instances drillers logs and other data are given although it is usually impracticable to include logs of all wells, the logs given being selected as representative of the county or area to which the circular relates. The elevations given are for the most part those reported with the drillers log. In some instances the elevation given, as indicated, is that obtained from the location of the well on the topographic map. In all cases the elevation is to be regarded as approximate only.

E. M. Sellards

SOME WELL RECORDS IN HOWARD COUNTY

Quinn 1, Big Spring Production Co.

Located on Section 21, Block 34, T. 13, T. & P. Ry. Co. survey; elevation approximately 2456 feet.

Drillers log

	Depth in Ft. to:		Depth in Ft. to:
white alkali formation	45	lime rock and red shale	654
water sand	61	hard white sand rock	661
white and red shale	124	gumbo, boulders, and	667
gypsum rock, gravel and		sand rock showing gas	669
red clay	144	gumbo, boulders and shale	671
red clay and boulders	205	sand rock	685
red shale	220	gumbo and boulders	690
red clay	260	sand rock and boulders	695
red clay and shale	325	hard sand	713
red clay	376	red shale and boulders	730
rock	374	soft shale and sand	736
red clay and boulders	420	hard sand	740
red gumbo	444	hard lime and sand rock	759
red shale	450	Set 10" casing at 742ft.	
red gumbo	450	Red shale and sand rock	780
red and blue gumbo	460	blue lime and sand rock	792
soft red shale	520	sand rock	815
red and blue rock		red clay and gravel	820
showing gas	532	lime and hard sand	823
shale and gumbo	565	red clay and gravel	828
soft white lime and red		lime rock	858
shale	590	hard sand	843
red gumbo	597	hard sand and red shale	849
lime rock	600	gumbo and boulders	855
red gumbo	612	red shale and hard sand	870

	Depth in Ft. to:		Depth in Ft. to:
soft shale, red and blue, and hard sand	896	shale, sand and bldrs. Much salt	1528
soft shale	901	flint rock	1529
red shale and sand	917	sand rock	1531
hard sand	930	hard sand and bldrs.	1539
hard shale and sand	940	hard shale and bldrs. showing much salt	1553
hard sand	947	hard red granite rock	1555
hard red shale	954	sand rock	1557
hard sand, shale & bldrs.	960	red shale and bldrs.	1593
sand rock	964	gypsum rock	1595
hard sand and red shale	976	red shale and bldrs.	1614
sand rock	978	hard sand rock	1620
hard sand and bldrs.	983	hard lime rock and pyrite	1625
hard sand, red shale & bldrs.	988	hard shale and bldrs.	1637
hard sand & bldrs.	996	pack sand	1643
sand rock	999	hard sand and bldrs.	1649
lime rock	1008	sand rock	1651
hard sand, shale & bldrs.	1002	lime rock	1659
hard rock, sand	1031	hard shale and bldrs.	1678
hard rock	1044	rock salt	1690
hard sand & bldrs.	1050	shale and bldrs.	1701
gumbo	1055	soft shale	1719
hard sand and shale	1064	hard sand	1736
hard sand and bldrs.	1069	red shale	1746
sand rock	1071	lime rock	1752
sand rock & bldrs.	1085	red shale and bldrs.	1772
hard sand	1122	lime rock	1781
chalk rock	1123	shale and bldrs. gas show.	1792
hard blue lime and sand	1129	white lime rock	1794
hard sand and boulders	1151	shale and bldrs.	1797
hard sand rock	1153	lime rock	1798
gypsum, blue and sand rock	1156	shale and bldrs.	1800
sand, shale and bldrs.	1180	lime rock	1810
lime and sand rock	1186	shale and bldrs.	1815
shale and sand	1206	Steel line measurement of hole shy 13 feet.	
gypsum and hard sand Salt water.	1211	grey sand rock with light show of oil	1820
sand and shale	1288	soft shale and bldrs.	1823
sand rock	1291	hard sand rock	1834
hard sand	1295	hard sand rock with light show of oil	1889
hard sand and bldrs.	1300	hard sand rock with light show of oil	1900
shale and bldrs.	1306		
shale, sandy, and bldrs.	1355	Changing from rotary to standard rig at 1900 feet. Casing record: Set 10" pipe at 724'. Set 8" pipe at 1902'. To be carried far- ther down. Dec. 1920.	
flint rock and gravel	1357		
shale and bldrs.	1375		
shale and bldrs.	1421		
hard sand	1426		
shale, sand and bldrs.	1470		
hard sand rock	1472		
shale and bldrs.	1465		
shale, sand, and bldrs.	1495	brown shale and lime	1925
sand and bldrs.	1506	hard black lime	1960

	Depth in Ft. to:		Depth in Ft. to:
black clay	1985	brown sand	3140
hard gray lime	1980	gray lime	3165
hard rock	1990	hard shell lime	3175
hard white sand	2000	gray shale	3190
brown shale	2010	white lime	3200
soft brown shale	2050	lime & sand	3280
hard shale & lime	2050	hard white lime	3290
brown shale	2070	hard gray lime & sand	3320
brown rock & shale	2100	hard gray lime & shale	3340
white lime	2110	fine brown lime	3350
soft brown sand	2140	gray lime	3370
brown shale & hard rock	2150	gray lime & sand, oil show	3380
brown sandy shale	2180	black sand	3400
brown shale & sand	2250	black sand, oil show	3410
brown shale & lime	2240	black sand	3420
brown shale	2300	blue sand, sticking sulfur	
brown lime	2310	water	3425
brown shale	2370	gray lime	3435
white lime, gas show	2375	brown sand	3440
brown and blue shale	3285	gray lime & sand	3470
hard sand	2590	fine white sand & blue lime	
brown and blue sand	2400		3485
hard brown sand	2420	coarse gray lime	3495
brown shale	2430	hard gray lime	3505
white lime	2450	coarse gray lime	3518
sand	2700	white lime & sand, hard	3540
white lime	2725	white lime	3555
fine brown sand	3010	gray lime	3565
hard blue lime	3015	white & gray lime	3610
fine brown sand	3020	T.D.	3645
hard blue lime	3035		
black lime	3050	Casing Record:	
blue lime	3060	10" 342'	
gray lime & sand	3070	8" 1954'	
blue lime	3080	6" 2903'	
fine brown sand	3085		
gray lime	3095		
blue lime	3100		
gray lime	3120		
gray shale	3135		

Description of samples by R. T. Short; submitted by D. D. Christ-  
ner.

Very light gray caliche (?). The washed material is almost entirely made up of angular quartz sand. Most of the grains are polished and a few well rounded. A few chert grains were also noted.

Depth in Ft.

0-124

Red sand, calcareous slightly micaceous clay. In the washed material much quartz sand noted. Most of this was angular and some of it was well polished and a few grains were rounded. ...

124-200

	Depth in Feet
Red, slightly calcareous, slightly micaceous clay, spotted with greenish gray clay. ...	350-375
Dark purplish red and red slightly micaceous, slightly calcareous clays and a little selenite....	375-465
Red and brownish red, slightly calcareous clays, and a little selenite. ...	465-540
Red, slightly micaceous, slightly calcareous, shale and a little light greenish gray clay. ...	540-625
Reddish brown slightly calcareous, slightly micaceous shale, red calcareous, slightly micaceous clay and dolomite concretions. ...	625-660
White calcareous sandy clay, brownish red calcareous micaceous clay and a little red calcareous sandstone...	650-670
Largely red, micaceous, dolomitic shale, with a little light green dolomitic shale. ... 860-866, 866-917, 917-940,	940-970
Largely red sand, red shale, a little gypsum and a little green shale. ... 970-985, 985-997,	997-1047
Red dolomitic shale, a few calcareous concretions and a little light greenish gray shale ..	1047-1071, 1071-1090
Red shale, some calcareous concretions and some sand and much more sand than found in the samples above this level. ....	1090-1102
Almost entirely of red shale with a few fragments of green shale, gypsum and considerable sand...	1102-1135
Red shale, and white anhydrite. ... 1135-1173, 1173-1216, 1266-1335, 1335-1355,	1335-1469
Red shale and much salmon colored anhydrite... 1338-1359, 1359-1340, 1340-1341, 1341-1342, 1343-1344, 1344-1345, 1345-1347, 1347-1348,	1349-1350
White and salmon colored anhydrite and red shale in about equal amounts. ...	1350-1351
Red shale, white anhydrite and a few grains of salmon colored anhydrite. ...	1351-1353
White and salmon colored anhydrite and red shale in about equal amounts. ...	1353-1354-1354-1355
Red shale and white and salmon colored anhydrite. ...	1355-1355

	Depth in Feet
Red shale and white and salmon colored anhydrite. ...	1856-1857
Brown shale, white anhydrite and a little light gray clay which slacks in water. ...	1857-1859, 1859-1860
Red shale and white and salmon colored anhydrite. ...	1860-1861, 1861-1862, 1862-1865,
Almost entirely of white anhydrite. ...	2010
Largely red shale. A little white anhydrite...	2250-2260
White and some pink anhydrite and a small amount of quartz sand, some of the quartz grains being perfect crystals.	2016-2035
White anhydrite and a few fragments of red shale. ...	2510-2420
Largely fine sand with some white anhydrite and red shale. ...	2530-2550
Quartz sand, red shale, white anhydrite. ....	2620
Several large pieces of anhydrite. ...	2650
White and gray anhydrite of very fine texture and a little red shale. ...	2700
Essentially fine brownish sand. ...	2700
Salt. Washed material was almost entirely made up of quartz sand. ...	2800-2855
Largely white anhydrite with a little red silt...	2870
Fine brown sand, some white anhydrite and red shale.	2900
Fine sand. ...	2910
White anhydrite, some brown sand and a little red shale. ...	2912
Gray dolomite with dark streaks, white anhydrite and a little red shale. ...	2930
Fine red sand with a little fine sandstone. ...	2940
Red sand with a little red shale and anhydrite ..	2960.
Red shale, fine red sandstone, white anhydrite, gypsum, quartz sand and small quartz crystals.	2986

	Depth in Feet
Gray very hard, fine sandstone; some sand and a little brown shale. ...	3045
Largely of gray sand with a few fragments of fine gray dolomitic sandstone. ...	3055-3060
White anhydrite with some sand. ...	3065
Dark gray and white anhydrite and a few fragments of dark brown shale. ...	3070
Red sand. The washed material was largely made up of quartz sand and fragments of fine sandstone...	3085
Fine sand and a little white anhydrite. ...	3135
Gray, white and light brown anhydrite and a little dolomite. ...	3140
Gray and white anhydrite. ...	3160
White and gray anhydrite, a little dark brown shale and some gray dolomite. ...	3205
Gray dolomite. In the washed material some anhydrite was noted. ...	3250
Gray dolomite of fine texture and white anhydrite. ...	3310
Brown, calcareous, sandy silt and sand. ...	3335
Light gray dolomite. ...	3355
White anhydrite and dolomite. ...	3380
Light gray dolomite with some anhydrite. ...	3390
Gray dolomite. Some oolitic spherules which have broken out were noted. In the washed material some anhydrite and a little fine quartz sand was present. Faint bituminous odor noted when heated in a closed tube.	3633
White dolomite with some anhydrite which has partly replaced the dolomite. In the washed material a little gypsum and quartz sand were present.	3640

NOTE: In the upper part may be some beds belonging to the Triassic, otherwise all these samples are believed to be from the Permian, (Double Mountain). Small perfect quartz crystals and a less perfect agglomerates of crystalline range from 1176 to 3250 feet.

J.A.U. and R.F.S.

General Oil Company No. 1 Well

Located on Section 35, Block 32, 4 miles NE of Big Spring, on T. & P. Ry. Co. lands. Elevation 3474 feet.

Drillers log

	Depth in Ft. to:		Depth in Ft. to:
wanting	1050	lime rock, rigged up	
hard flinty rock	1050	ready for standard	
hard rock	1051	tools. Set 8 $\frac{1}{2}$ "	1656
hard limestone rock	1050	white lime	1660
blue lime	1100	red bed	1685
blue lime	1122	red bed	1720
blue lime	1156	red bed	1735
lime rock	1176	red bed	1790
limestone rock	1207	red bed	1840
hard shale and sand rock	1231	red bed	1900
hard shale and " "	1275	red bed	1945
red sand rock	1288	red bed	1985
red sand rock	1325	red bed	2030
white lime rock	1326	red bed	2080
white lime	1334	red bed	2145
white lime rock	1346	red bed	2175
white lime rock	1365	red bed	2180
red clay	1365	red bed	2215
red gumbo	1368	red bed	2250
white lime rock	1381	red bed	2290
limestone rock	1394	lime	2295
lime rock	1408	red bed	2340
red gumbo and bldrs.	1418	lime plug and cement	2355
rock	1421	red bed	2365
packed sand	1437	red sand.. Got gas from	
gumbo and bldrs.	1442	2365 to	2370
gumbo	1443	red bed	2387
lime	1444	grey lime plug and cement	2405
lime rock	1462	lime and shale	2455
white lime	1472	red sandy shale	2470
red gumbo	1482	salt rock	2545
white lime	1500	blue shale with streaks of	
white lime	1508	salt	2580
lime	1517	white lime with red shale	2615
white lime	1522	grey lime	2735
white lime	1528	crystallized lime	2760
white lime	1546	crystallized lime	2795
white lime rock	1578	grey lime	2810
blue lime	1581	grey lime	2840
blue lime and shale	1595	red shale	2860
hard shale	1603	red shale	2890
lime rock	1605	shale and lime	2895
lime rock	1609	lime	2920
white lime	1615	pink lime	2925
white lime	1642	water sand	2928
white lime	1644	pink lime	2940
hard shale	1654	blue lime	2950
		grey lime	2955

	Depth in ft. to:		Depth in ft. to:
white sand	2985	grey lime set 6 & 5/8"	
brown lime	2985	casing at 3155 ft.	3170
grey lime	3010	sand	3245
white sand	3020	grey lime	3315
white lime	3080	water sand	3385
grey lime	3095	grey lime	3455
broken lime	3105		
white lime	3115	T. D.	3510
water sand	3150		

Description of samples by J. A. Udden and Dorot y Shool.

Fragments of white anhydrite with some reddish brown shale, and some salt. 2340-2355

Mixture of small fragments of sandy red shale having a salty taste, whitish gray sandy shale and white anhydrite. ... 2355-2365

Brick red silt. ... 2370

Gray mottled rock,  $\frac{2}{3}$  of which consists of anhydrite, the remainder being dolomite. ... 2387-2395

Fragments of reddish brown indurated silt containing minute mica scales, and fragments of greenish gray somewhat indurated silt containing anhydrite. ... 2405-2415

A mixture of fragments of reddish brown fine grained sandstone containing shaly material, a few fragments of gray shale and anhydrite. ... 2415-2430

Fragments of gray anhydrite, and some red sand and silt. ... 2430-2435

Fragments of brown reddish clayey silt, and some anhydrite. 2435-2450

A mixture of fragments of brown silt containing salt, and a few anhydrite fragments. ... 2450-2470

Very fine, slightly salty sand. ... 2470-2485

A brown indurated silt, with much salt and anhydrite fragments. ... 2485-2495

Largely salt, with a few fragments of red silt and some anhydrite. ... 2495-2515

Fragments of white anhydrite and some reddish brown silt. 2515-2545

Fragments of reddish brown sandy silt, with a few fragments of white fine grained sandstone. A lump of salt measured 1" x  $\frac{1}{2}$ " x  $\frac{1}{4}$ " in size. Anhydrite, quartz



crystals and rounded sand grains were noted in the washed material. Depth in Feet  
2575-2587

In an analysis made by the Division of Industrial Chemistry this sample was found to contain 0.35% potash ( $K_2O$ ) to the soluble portion. 39% of sample was soluble 3415-2430

In an analysis made by the Division of Industrial Chemistry this sample was found to contain 0.72% of potash ( $K_2O$ ) to the soluble portion. 13.4% of sample was soluble. 2750-2770