



Vitrinite reflectance data for the Permian Basin, west Texas and southeast New Mexico

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This report presents a compilation of vitrinite reflectance (R_o) data based on analyses of samples of drill cuttings collected from 74 boreholes spread throughout the Permian Basin of west Texas and southeast New Mexico (fig. 1). The resulting data consist of 3 to 24 individual R_o analyses representing progressively deeper stratigraphic units in each of the boreholes (table 1). The samples, Cambrian-Ordovician to Cretaceous in age, were collected at depths ranging from 200 ft to more than 22,100 ft.

The R_o data were plotted on maps that depict three different maturation levels for organic matter in the sedimentary rocks of the Permian Basin (figs. 2-4). These maps show depths at the various borehole locations where the R_o values were calculated to be 0.6 (fig. 2), 1.3 (fig. 3), and 2.0 (fig. 4) percent, which correspond, generally, to the onset of oil generation, the onset of oil cracking, and the limit of oil preservation, respectively.

The four major geologic structural features within the Permian Basin—Midland Basin, Delaware Basin, Central Basin Platform, and Northwest Shelf (fig. 1) differ in overall depth, thermal history and tectonic style. In the western Delaware Basin, for example, higher maturation is observed at relatively shallow depths, resulting from uplift and eastward basin tilting that began in the Mississippian and ultimately exposed older, thermally mature rocks. Maturity was further enhanced in this basin by the emplacement of early and mid-Tertiary intrusives. Volcanic activity also appears to have been a controlling factor for maturation of organic matter in the southern part of the otherwise tectonically stable Northwest Shelf (Barker and Pawlewicz, 1987). Depths to the three different R_o values are greatest in the eastern Delaware Basin and southern Midland Basin. This appears to be a function of tectonic activity related to the Marathon-Ouachita orogeny, during the Late-Middle Pennsylvanian, whose effects were widespread across

the Permian Basin. The Central Basin Platform has been a positive feature since the mid-to-late Paleozoic, during which time sedimentation occurred along its flanks. This non-subsidence, along with the lack of supplemental heating (volcanism), implies lower maturation levels.

Reference

Barker, C.E., and Pawlewicz, M.J., 1987, The effects of igneous intrusions and higher heat flow on the thermal maturity of Leonardian and younger rocks, western Delaware basin, Texas, *in* Cromwell, D.W. ed., Glass Mountains Guidebook, Permian Basin Section, Society of Economic Paleontologists and Mineralogists, p. 69-83.

Table 1: List of boreholes in the Permian Basin, west Texas and southeast New Mexico, from which drill cuttings were collected for vitrinite reflectance analysis. Eighty-four boreholes are listed, and locations are plotted in figure 1. However, depths to the 0.6-, 1.3-, and 2.0-percent vitrinite reflectance levels were calculated for only 74 boreholes because for the other 10, shown as green dots in figure 1 and identified here with the notation “Location not listed in figures 2-4,” the stratigraphic intervals sampled were too limited for constructing meaningful regression curves to accurately determine depths.

[Map ID, borehole number (fig. 1); Lease Name, oil and gas lease name and number; Operator, borehole name; Depth (1st column), sample depth in feet; %R_o (1st column), mean vitrinite reflectance value; Longitude and Latitude, indicates center point within a quarter-mile grid cell in which borehole is located (proprietary agreement with database provider prevents the listing of precise longitude and latitude); Elev., surface elevation at borehole location; %R_o (2nd column), the three vitrinite reflectance values for which depths were calculated and plotted in figures 2-4; Depth (2nd column), calculated depths corresponding to the three vitrinite reflectance values; Depth (3rd column), below sea-level elevations of the three vitrinite reflectance levels.]

Figure 1: Map of the Permian Basin, west Texas and southeast New Mexico, showing boundaries of major structural features and locations of boreholes from which samples were collected for vitrinite reflectance analysis. Numbers refer to listing of boreholes in table 1. Yellow dots indicate boreholes for which depths to the 0.6-, 1.3-, and 2.0-percent vitrinite reflectance levels were not calculated.

Figure 2: Map showing calculated depths to the 0.6-percent vitrinite reflectance value in the Permian Basin, west Texas and southeast New Mexico.

Figure 3: Map showing calculated depths to the 1.3-percent vitrinite reflectance value in the Permian Basin, west Texas and southeast New Mexico.

Figure 4: Map showing calculated depths to the 2.0-percent vitrinite reflectance value in the Permian Basin, west Texas and southeast New Mexico.

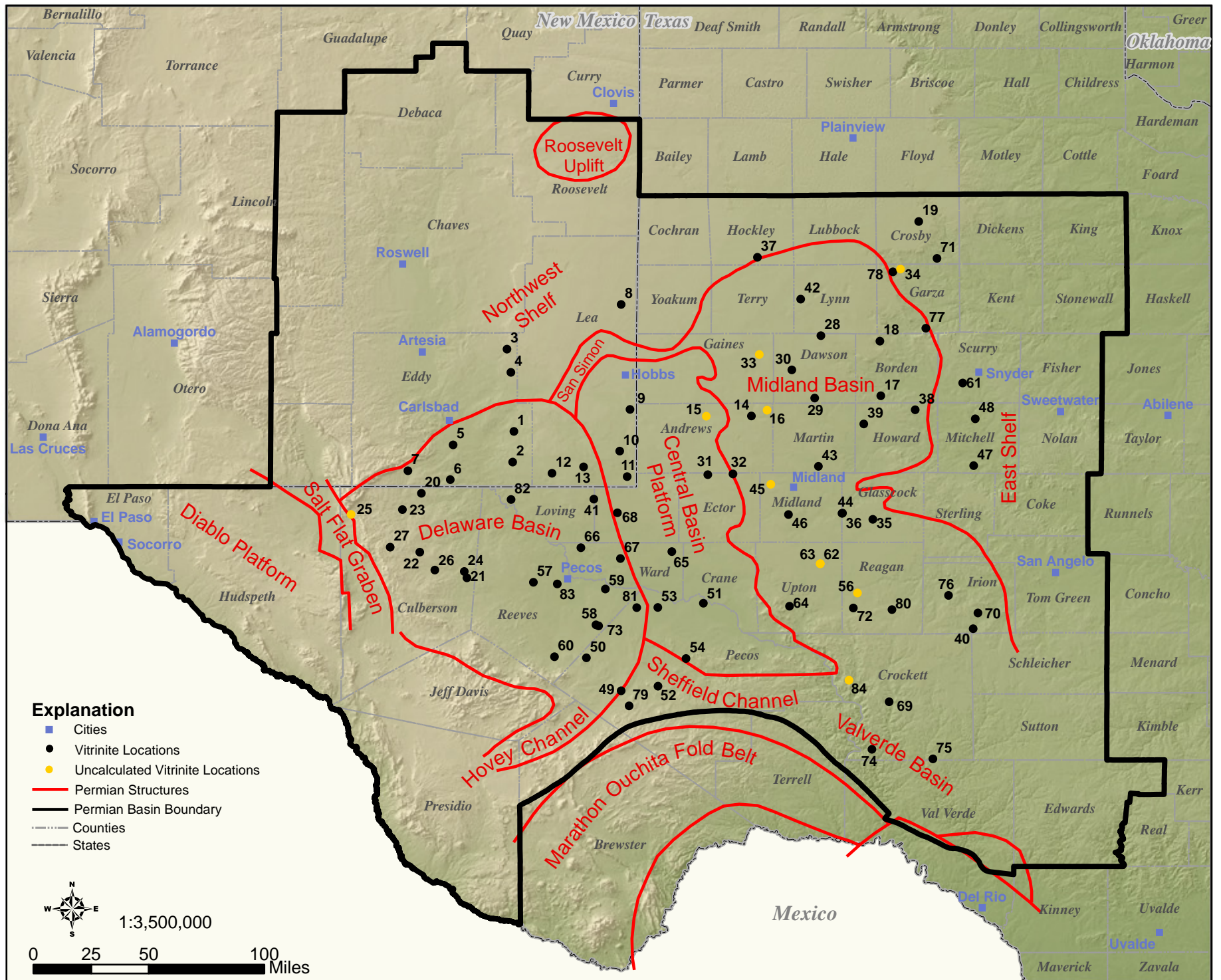


Figure 1:

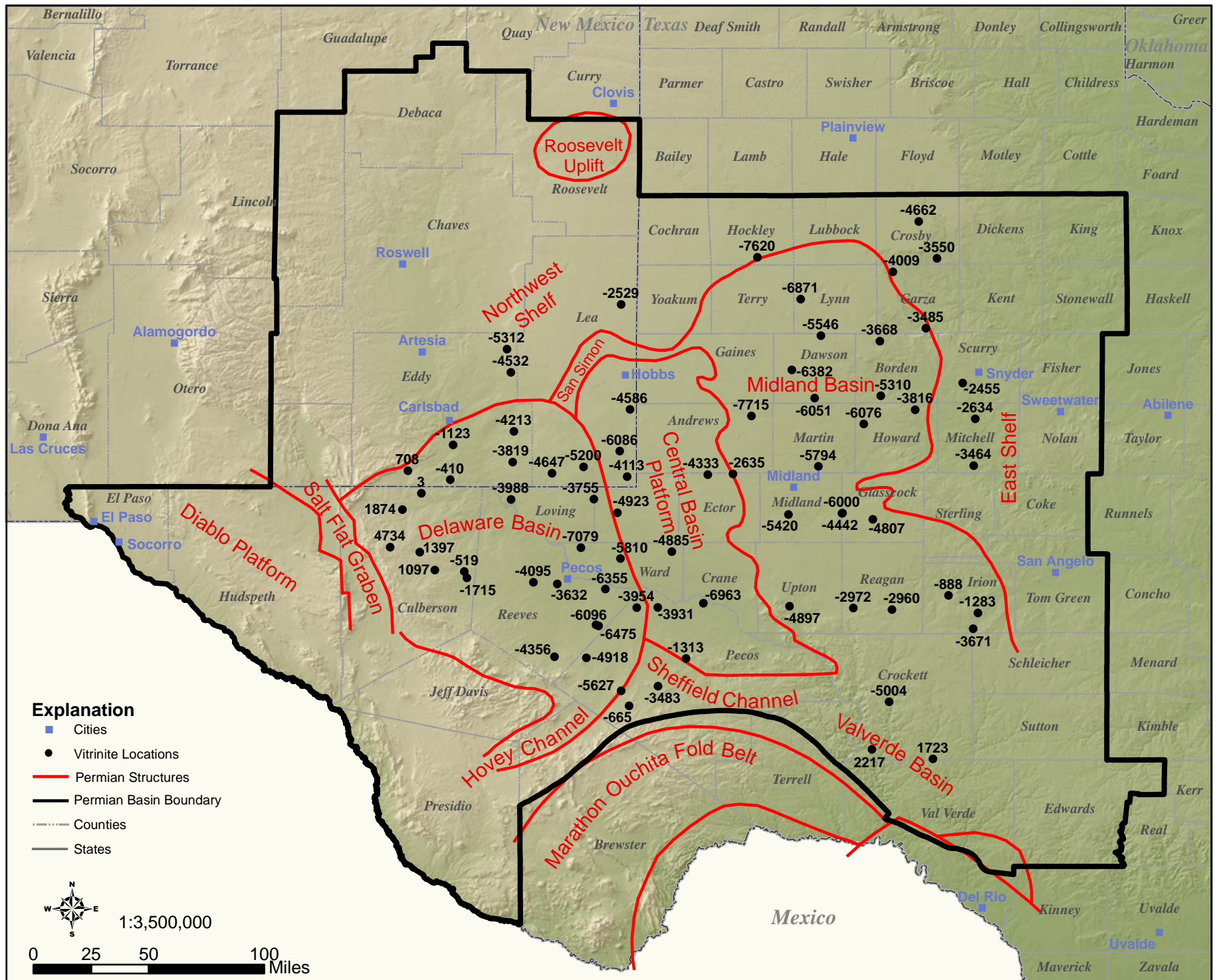


Figure 2

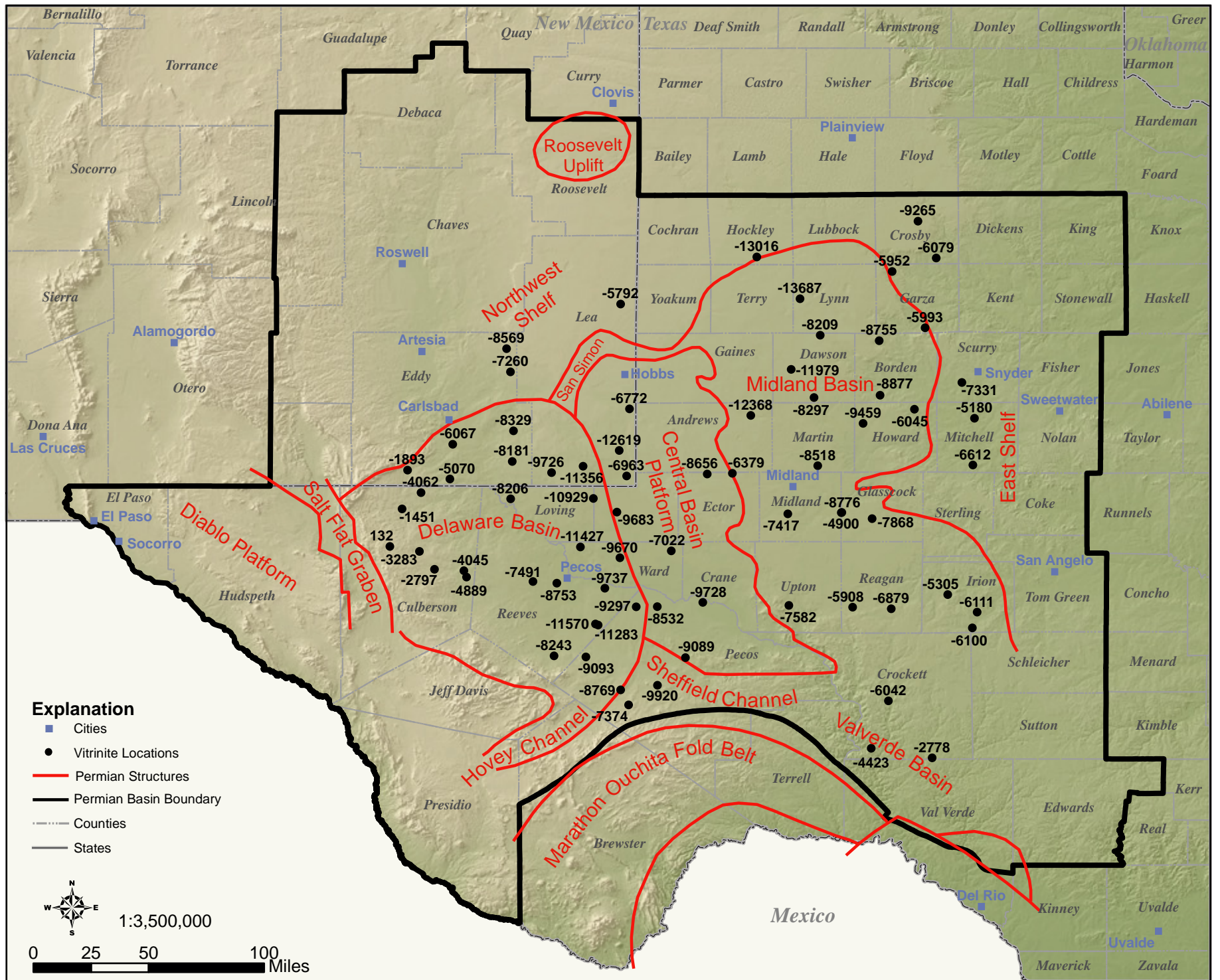


Figure 3

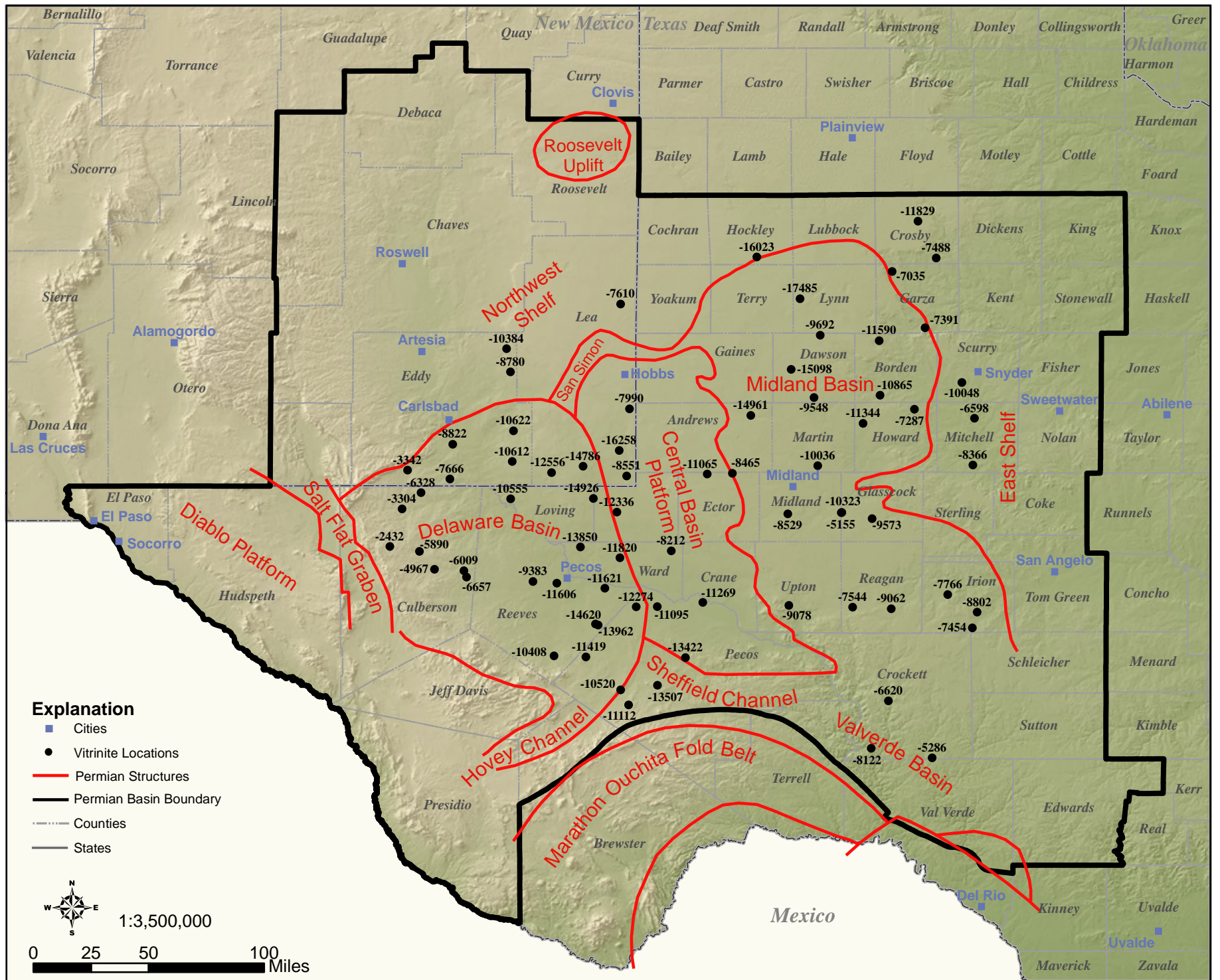


Figure 4

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
1	JAMES RANCH UNIT 1	SHELL OIL CO	7990	0.67	-103.83210	32.34022	3309	0.6	7522	-4,213
1	JAMES RANCH UNIT 1	SHELL OIL CO	9000	0.75	-103.83210	32.34022		1.3	11638	-8,239
1	JAMES RANCH UNIT 1	SHELL OIL CO	10000	0.87	-103.83210	32.34022		2	13931	-10,622
1	JAMES RANCH UNIT 1	SHELL OIL CO	11000	1.25	-103.83210	32.34022				
1	JAMES RANCH UNIT 1	SHELL OIL CO	12130	1.57	-103.83210	32.34022				
1	JAMES RANCH UNIT 1	SHELL OIL CO	13040	1.82	-103.83210	32.34022				
1	JAMES RANCH UNIT 1	SHELL OIL CO	14050	2.08	-103.83210	32.34022				
1	JAMES RANCH UNIT 1	SHELL OIL CO	14990	2.25	-103.83210	32.34022				
1	JAMES RANCH UNIT 1	SHELL OIL CO	16990	3.35	-103.83210	32.34022				
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	6990	0.61	-103.83938	32.15142	3378	0.6	7197	-3,819
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	8110	0.69	-103.83938	32.15142		1.3	11559	-8,181
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	8990	0.81	-103.83938	32.15142		2	13990	-10,612
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	9490	0.87	-103.83938	32.15142				
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	10530	1.02	-103.83938	32.15142				
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	11590	1.28	-103.83938	32.15142				
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	12485	1.78	-103.83938	32.15142				
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	13490	2.00	-103.83938	32.15142				
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	14490	2.29	-103.83938	32.15142				
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	15490	2.45	-103.83938	32.15142				
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	16590	2.57	-103.83938	32.15142				
2	JF HARRISON FEDERAL 1	RICHARDSON & BASS	15590	2.57	-103.83938	32.15142				
3	WEST B 27	SINCLAIR OIL & GAS	8490	0.47	-103.87474	32.85839	3908	0.6	9220	-5,312
3	WEST B 27	SINCLAIR OIL & GAS	7640	0.47	-103.87474	32.85839		1.3	12477	-8,569
3	WEST B 27	SINCLAIR OIL & GAS	9460	0.75	-103.87474	32.85839		2	14292	-10,384
3	WEST B 27	SINCLAIR OIL & GAS	12105	0.86	-103.87474	32.85839				
3	WEST B 27	SINCLAIR OIL & GAS	11500	0.87	-103.87474	32.85839				
3	WEST B 27	SINCLAIR OIL & GAS	10500	1.02	-103.87474	32.85839				
3	WEST B 27	SINCLAIR OIL & GAS	12850	1.48	-103.87474	32.85839				
4	GREENWOOD UNIT 1	PAN AMER CORP ET AL	7990	0.54	-103.85184791	32.71526277	3657	0.6	8189	-4,532
4	GREENWOOD UNIT 1	PAN AMER CORP ET AL	8975	0.81	-103.85184791	32.71526277		1.3	10917	-7,260
4	GREENWOOD UNIT 1	PAN AMER CORP ET AL	9985	0.98	-103.85184791	32.71526277		2	12437	-8,780
4	GREENWOOD UNIT 1	PAN AMER CORP ET AL	10980	1.41	-103.85184791	32.71526277				
4	GREENWOOD UNIT 1	PAN AMER CORP ET AL	11975	1.63	-103.85184791	32.71526277				
5	STATE LSE K-2538 1	PHILLIPS PET ET AL	7050	0.83	-104.21207076	32.26250052	3245	0.6	4368	-1,123
5	STATE LSE K-2538 1	PHILLIPS PET ET AL	7920	1.04	-104.21207076	32.26250052		1.3	9312	-6,067
5	STATE LSE K-2538 1	PHILLIPS PET ET AL	9050	1.21	-104.21207076	32.26250052		2	12067	-8,822
5	STATE LSE K-2538 1	PHILLIPS PET ET AL	10050	1.22	-104.21207076	32.26250052				
5	STATE LSE K-2538 1	PHILLIPS PET ET AL	6240	1.40	-104.21207076	32.26250052				
5	STATE LSE K-2538 1	PHILLIPS PET ET AL	11000	1.65	-104.21207076	32.26250052				
5	STATE LSE K-2538 1	PHILLIPS PET ET AL	12050	1.81	-104.21207076	32.26250052				
5	STATE LSE K-2538 1	PHILLIPS PET ET AL	13250	2.13	-104.21207076	32.26250052				

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
6	OWL DRAW UNIT 1	HAMON JAKE L	5950	0.75	-104.23254624	32.0436334	3316	0.6	3726	-410
6	OWL DRAW UNIT 1	HAMON JAKE L	7050	0.98	-104.23254624	32.0436334		1.3	8386	-5,070
6	OWL DRAW UNIT 1	HAMON JAKE L	7950	1.37	-104.23254624	32.0436334		2	10982	-7,666
6	OWL DRAW UNIT 1	HAMON JAKE L	4350	1.37	-104.23254624	32.0436334				
6	OWL DRAW UNIT 1	HAMON JAKE L	8950	1.39	-104.23254624	32.0436334				
6	OWL DRAW UNIT 1	HAMON JAKE L	10040	1.79	-104.23254624	32.0436334				
6	OWL DRAW UNIT 1	HAMON JAKE L	11000	1.98	-104.23254624	32.0436334				
6	OWL DRAW UNIT 1	HAMON JAKE L	11990	2.11	-104.23254624	32.0436334				
6	OWL DRAW UNIT 1	HAMON JAKE L	13030	2.52	-104.23254624	32.0436334				
7	GOVERNMENT M 1	CITIES SERV OIL CO	2530	0.52	-104.49594203	32.09651222	3779	0.6	3071	708
7	GOVERNMENT M 1	CITIES SERV OIL CO	3130	0.70	-104.49594203	32.09651222		1.3	5672	-1,893
7	GOVERNMENT M 1	CITIES SERV OIL CO	5030	0.94	-104.49594203	32.09651222		2	7121	-3,342
7	GOVERNMENT M 1	CITIES SERV OIL CO	6030	0.99	-104.49594203	32.09651222				
7	GOVERNMENT M 1	CITIES SERV OIL CO	4020	1.27	-104.49594203	32.09651222				
7	GOVERNMENT M 1	CITIES SERV OIL CO	7100	1.78	-104.49594203	32.09651222				
8	JL REED 1	ATLANTIC REFG CO	5030	0.50	-103.16263804	33.13677927	3837	0.6	6366	-2,529
8	JL REED 1	ATLANTIC REFG CO	6030	0.52	-103.16263804	33.13677927		1.3	9629	-5,792
8	JL REED 1	ATLANTIC REFG CO	7030	0.70	-103.16263804	33.13677927		2	11447	-7,610
8	JL REED 1	ATLANTIC REFG CO	8030	0.80	-103.16263804	33.13677927				
8	JL REED 1	ATLANTIC REFG CO	9035	1.12	-103.16263804	33.13677927				
8	JL REED 1	ATLANTIC REFG CO	10685	1.57	-103.16263804	33.13677927				
8	JL REED 1	ATLANTIC REFG CO	10230	1.67	-103.16263804	33.13677927				
9	NB BUNIN 1	ROWAN DRILLING	5050	0.40	-103.10366534	32.48244355	3491	0.6	8077	-4,586
9	NB BUNIN 1	ROWAN DRILLING	7050	0.43	-103.10366534	32.48244355		1.3	10263	-6,772
9	NB BUNIN 1	ROWAN DRILLING	8050	0.54	-103.10366534	32.48244355		2	11481	-7,990
9	NB BUNIN 1	ROWAN DRILLING	9760	0.64	-103.10366534	32.48244355				
9	NB BUNIN 1	ROWAN DRILLING	8950	1.08	-103.10366534	32.48244355				
10	MEXICO 2	SKELLY OIL COMPANY	4070	0.34	-103.16614384	32.21798028	3257	0.6	9343	-6,086
10	MEXICO 2	SKELLY OIL COMPANY	6145	0.40	-103.16614384	32.21798028		1.3	15876	-12,619
10	MEXICO 2	SKELLY OIL COMPANY	7055	0.48	-103.16614384	32.21798028		2	19515	-16,258
10	MEXICO 2	SKELLY OIL COMPANY	10220	0.51	-103.16614384	32.21798028				
10	MEXICO 2	SKELLY OIL COMPANY	8065	0.53	-103.16614384	32.21798028				
10	MEXICO 2	SKELLY OIL COMPANY	9025	0.66	-103.16614384	32.21798028				
11	FEDERAL-LEONARD B 1	HUMBLE OIL & REFG	7910	0.53	-103.12634417	32.06124297	3015	0.6	7128	-4,113
11	FEDERAL-LEONARD B 1	HUMBLE OIL & REFG	6000	0.56	-103.12634417	32.06124297		1.3	9978	-6,963
11	FEDERAL-LEONARD B 1	HUMBLE OIL & REFG	8680	1.19	-103.12634417	32.06124297		2	11566	-8,551
11	FEDERAL-LEONARD B 1	HUMBLE OIL & REFG	10140	1.34	-103.12634417	32.06124297				
11	FEDERAL-LEONARD B 1	HUMBLE OIL & REFG	9090	1.39	-103.12634417	32.06124297				
11	FEDERAL-LEONARD B 1	HUMBLE OIL & REFG	11015	1.41	-103.12634417	32.06124297				
11	FEDERAL-LEONARD B 1	HUMBLE OIL & REFG	12110	1.79	-103.12634417	32.06124297				

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
12	RED HILLS UNIT 1	UNION OIL CO CAL	7150	0.53	-103.59195796	32.08146931	3382	0.6	8029	-4,647
12	RED HILLS UNIT 1	UNION OIL CO CAL	8070	0.57	-103.59195796	32.08146931		1.3	13108	-9,726
12	RED HILLS UNIT 1	UNION OIL CO CAL	9050	0.68	-103.59195796	32.08146931		2	15938	-12,556
12	RED HILLS UNIT 1	UNION OIL CO CAL	10050	0.82	-103.59195796	32.08146931				
12	RED HILLS UNIT 1	UNION OIL CO CAL	11055	0.97	-103.59195796	32.08146931				
12	RED HILLS UNIT 1	UNION OIL CO CAL	12150	1.09	-103.59195796	32.08146931				
12	RED HILLS UNIT 1	UNION OIL CO CAL	13050	1.61	-103.59195796	32.08146931				
12	RED HILLS UNIT 1	UNION OIL CO CAL	14050	1.74	-103.59195796	32.08146931				
12	RED HILLS UNIT 1	UNION OIL CO CAL	16040	1.81	-103.59195796	32.08146931				
12	RED HILLS UNIT 1	UNION OIL CO CAL	15150	1.83	-103.59195796	32.08146931				
12	RED HILLS UNIT 1	UNION OIL CO CAL	18150	2.17	-103.59195796	32.08146931				
12	RED HILLS UNIT 1	UNION OIL CO CAL	16975	2.29	-103.59195796	32.08146931				
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	8010	0.56	-103.39826132	32.12333846	3341	0.6	8541	-5,200
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	8935	0.60	-103.39826132	32.12333846		1.3	14697	-11,356
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	9990	0.76	-103.39826132	32.12333846		2	18127	-14,786
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	10990	0.81	-103.39826132	32.12333846				
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	11990	0.84	-103.39826132	32.12333846				
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	13990	1.18	-103.39826132	32.12333846				
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	12970	1.24	-103.39826132	32.12333846				
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	14905	1.44	-103.39826132	32.12333846				
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	17990	1.81	-103.39826132	32.12333846				
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	16040	1.81	-103.39826132	32.12333846				
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	18490	1.85	-103.39826132	32.12333846				
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	17990	1.85	-103.39826132	32.12333846				
13	GULF-FEDERAL 1	SOUTHLAND ROYALTY	18990	2.05	-103.39826	32.123334				
14	UNIV M 1	GREAT WESTERN DRL	8030	0.34	-102.34109	32.44096	2984	0.6	10699	-7,715
14	UNIV M 1	GREAT WESTERN DRL	7040	0.41	-102.34109	32.44096		1.3	15352	-12,368
14	UNIV M 1	GREAT WESTERN DRL	10040	0.48	-102.34109	32.44096		2	17945	-14,961
14	UNIV M 1	GREAT WESTERN DRL	9040	0.48	-102.34109	32.44096				
14	UNIV M 1	GREAT WESTERN DRL	10640	0.57	-102.34109	32.44096				
15	SAVAGE-FISHER 1	TENNECO OIL CO	9940	0.36	-102.62420	32.44308				
15	SAVAGE-FISHER 1	TENNECO OIL CO	8530	0.5	-102.62420	32.44308				Location not used in Figures 2-4
15	SAVAGE-FISHER 1	TENNECO OIL CO	8040	0.59	-102.62420	32.44308				
15	SAVAGE-FISHER 1	TENNECO OIL CO	10425	0.82	-102.62420	32.44308				
16	UNIVERSITY /EX/ WD-1	AMOCO PROD CO	9450	1.09	-102.24297	32.48066				
16	UNIVERSITY /EX/ WD-1	AMOCO PROD CO	8550	1.12	-102.24297	32.48066				
16	UNIVERSITY /EX/ WD-1	AMOCO PROD CO	12250	1.17	-102.24297	32.48066				Location not used in Figures 2-4
16	UNIVERSITY /EX/ WD-1	AMOCO PROD CO	11950	1.23	-102.24297	32.48066				
16	UNIVERSITY /EX/ WD-1	AMOCO PROD CO	11650	1.31	-102.24297	32.48066				
16	UNIVERSITY /EX/ WD-1	AMOCO PROD CO	10050	1.31	-102.24297	32.48066				
16	UNIVERSITY /EX/ WD-1	AMOCO PROD CO	11050	1.39	-102.24297	32.48066				
16	UNIVERSITY /EX/ WD-1	AMOCO PROD CO	10450	1.47	-102.24297	32.48066				

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
17	CLARENCE PORTER 1	LONE STAR PROD COMP	5980	0.43	-101.53128346	32.57014239	2507	0.6	7817	-5,310
17	CLARENCE PORTER 1	LONE STAR PROD COMP	7495	0.49	-101.53128346	32.57014239		1.3	11384	-8,877
17	CLARENCE PORTER 1	LONE STAR PROD COMP	6650	0.49	-101.53128346	32.57014239		2	13372	-10,865
17	CLARENCE PORTER 1	LONE STAR PROD COMP	7735	0.57	-101.53128346	32.57014239				
17	CLARENCE PORTER 1	LONE STAR PROD COMP	7890	0.62	-101.53128346	32.57014239				
17	CLARENCE PORTER 1	LONE STAR PROD COMP	8030	0.65	-101.53128346	32.57014239				
18	AM CLAYTON 1	ANDERSN-PRICHARD OIL	4725	0.50	-101.53766419	32.90935146	2643	0.6	6311	-3,668
18	AM CLAYTON 1	ANDERSN-PRICHARD OIL	5455	0.56	-101.53766419	32.90935146		1.3	11398	-8,755
18	AM CLAYTON 1	ANDERSN-PRICHARD OIL	5830	0.58	-101.53766419	32.90935146		2	14233	-11,590
18	AM CLAYTON 1	ANDERSN-PRICHARD OIL	6210	0.63	-101.53766419	32.90935146				
18	AM CLAYTON 1	ANDERSN-PRICHARD OIL	7360	0.64	-101.53766419	32.90935146				
18	AM CLAYTON 1	ANDERSN-PRICHARD OIL	7645	0.69	-101.53766419	32.90935146				
18	AM CLAYTON 1	ANDERSN-PRICHARD OIL	8075	0.71	-101.53766419	32.90935146				
18	AM CLAYTON 1	ANDERSN-PRICHARD OIL	6915	0.71	-101.53766419	32.90935146				
18	AM CLAYTON 1	ANDERSN-PRICHARD OIL	8325	0.74	-101.53766419	32.90935146				
18	AM CLAYTON 1	ANDERSN-PRICHARD OIL	8255	0.75	-101.53766419	32.90935146				
18	AM CLAYTON 1	ANDERSN-PRICHARD OIL	9035	1.03	-101.53766419	32.90935146				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	4550	0.35	-101.29305631	33.65708846	3061	0.6	7723	-4,662
19	NEINDORFF MARST TR2 1	GULF OIL CORP	6250	0.36	-101.29305631	33.65708846		1.3	12326	-9,265
19	NEINDORFF MARST TR2 1	GULF OIL CORP	5850	0.37	-101.29305631	33.65708846		2	14890	-11,829
19	NEINDORFF MARST TR2 1	GULF OIL CORP	3530	0.37	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	4050	0.38	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	3050	0.40	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	7050	0.41	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	5550	0.44	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	5050	0.44	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	6650	0.48	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	7450	0.53	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	7850	0.54	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	9250	0.61	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	8500	0.70	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	8850	0.71	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	8050	0.72	-101.29305631	33.65708846				
19	NEINDORFF MARST TR2 1	GULF OIL CORP	8250	0.73	-101.29305631	33.65708846				
20	EE POKORNY 1	CONTINENTAL OIL	5030	0.70	-104.41254671	31.95781104	3907	0.6	3904	3
20	EE POKORNY 1	CONTINENTAL OIL	5280	0.78	-104.41254671	31.95781104		1.3	7969	-4,062
20	EE POKORNY 1	CONTINENTAL OIL	8030	1.56	-104.41254671	31.95781104		2	10235	-6,328
20	EE POKORNY 1	CONTINENTAL OIL	11030	2.24	-104.41254671	31.95781104				
20	EE POKORNY 1	CONTINENTAL OIL	10530	2.30	-104.41254671	31.95781104				
20	EE POKORNY 1	CONTINENTAL OIL	11975	2.38	-104.41254671	31.95781104				
21	GRISHAM-HUNTER-STAT 1	EL PASO NAT GAS	5070	0.59	-104.12703311	31.42777335	3416	0.6	5131	-1,715

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
21	GRISHAM-HUNTER-STAT 1	EL PASO NAT GAS	7080	0.91	-104.12703311	31.42777335		1.3	8305	-4,889
21	GRISHAM-HUNTER-STAT 1	EL PASO NAT GAS	7970	1.35	-104.12703311	31.42777335		2	10073	0
21	GRISHAM-HUNTER-STAT 1	EL PASO NAT GAS	9100	1.57	-104.12703311	31.42777335				
21	GRISHAM-HUNTER-STAT 1	EL PASO NAT GAS	10010	2.00	-104.12703311	31.42777335				
21	GRISHAM-HUNTER-STAT 1	EL PASO NAT GAS	10500	2.07	-104.12703311	31.42777335				
22	VELMA C ROUNSAVILLE 1	HUNT W H	2100	0.56	-104.42503867	31.58702224	4157	0.6	2760	1,397
22	VELMA C ROUNSAVILLE 1	HUNT W H	6040	1.02	-104.42503867	31.58702224		1.3	7440	-3,283
22	VELMA C ROUNSAVILLE 1	HUNT W H	5440	1.10	-104.42503867	31.58702224		2	10047	-5,890
22	VELMA C ROUNSAVILLE 1	HUNT W H	8050	1.20	-104.42503867	31.58702224				
22	VELMA C ROUNSAVILLE 1	HUNT W H	7100	1.44	-104.42503867	31.58702224				
22	VELMA C ROUNSAVILLE 1	HUNT W H	9000	1.87	-104.42503867	31.58702224				
22	VELMA C ROUNSAVILLE 1	HUNT W H	10050	2.11	-104.42503867	31.58702224				
22	VELMA C ROUNSAVILLE 1	HUNT W H	10900	2.16	-104.42503867	31.58702224				
23	HOMER COWDEN A 1	MAGNOLIA PET CO	205	0.57	-104.5303189	31.85465742	3917	0.6	2043	1,874
23	HOMER COWDEN A 1	MAGNOLIA PET CO	3505	0.91	-104.5303189	31.85465742		1.3	5368	-1,451
23	HOMER COWDEN A 1	MAGNOLIA PET CO	4500	0.92	-104.5303189	31.85465742		2	7221	-3,304
23	HOMER COWDEN A 1	MAGNOLIA PET CO	5005	1.05	-104.5303189	31.85465742				
23	HOMER COWDEN A 1	MAGNOLIA PET CO	5560	1.10	-104.5303189	31.85465742				
23	HOMER COWDEN A 1	MAGNOLIA PET CO	6500	1.72	-104.5303189	31.85465742				
23	HOMER COWDEN A 1	MAGNOLIA PET CO	7365	1.90	-104.5303189	31.85465742				
23	HOMER COWDEN A 1	MAGNOLIA PET CO	7840	1.93	-104.5303189	31.85465742				
23	HOMER COWDEN A 1	MAGNOLIA PET CO	9740	2.77	-104.5303189	31.85465742				
23	HOMER COWDEN A 1	MAGNOLIA PET CO	8465	3.22	-104.5303189	31.85465742				
23	HOMER COWDEN A 1	MAGNOLIA PET CO	8718	3.49	-104.5303189	31.85465742				
23	HOMER COWDEN A 1	MAGNOLIA PET CO	9055	3.54	-104.5303189	31.85465742				
24	GRISHAM-HUNTER-STAT 1	RICHARDSON & BASS	7950	1.47	-104.14759559	31.46254422	3542	0.6	4061	-519
24	GRISHAM-HUNTER-STAT 1	RICHARDSON & BASS	9020	1.62	-104.14759559	31.46254422		1.3	7587	-4,045
24	GRISHAM-HUNTER-STAT 1	RICHARDSON & BASS	8500	1.65	-104.14759559	31.46254422		2	9551	-6,009
24	GRISHAM-HUNTER-STAT 1	RICHARDSON & BASS	9780	2.13	-104.14759559	31.46254422				
25	WILLIAMS JA 1	UPDIKE	2456	0.7	-104.84926	31.82830				
25	WILLIAMS JA 1	UPDIKE	1145	0.8	-104.84926	31.82830				
25	WILLIAMS JA 1	UPDIKE	787	0.87	-104.84926	31.82830				
25	WILLIAMS JA 1	UPDIKE	945	1	-104.84926	31.82830				
25	WILLIAMS JA 1	UPDIKE	2842	1.06	-104.84926	31.82830				
26	MARVIN R WEATHERBY 1	SUN OIL COMPANY	3030	0.60	-104.32759453	31.47100566	3844	0.6	2747	1,097
26	MARVIN R WEATHERBY 1	SUN OIL COMPANY	2040	0.63	-104.32759453	31.47100566		1.3	6641	-2,797
26	MARVIN R WEATHERBY 1	SUN OIL COMPANY	4040	0.75	-104.32759453	31.47100566		2	8811	-4,927
26	MARVIN R WEATHERBY 1	SUN OIL COMPANY	5040	0.82	-104.32759453	31.47100566				
26	MARVIN R WEATHERBY 1	SUN OIL COMPANY	6040	1.12	-104.32759453	31.47100566				
26	MARVIN R WEATHERBY 1	SUN OIL COMPANY	7040	1.51	-104.32759453	31.47100566				
26	MARVIN R WEATHERBY 1	SUN OIL COMPANY	8110	1.84	-104.32759453	31.47100566				

Location not used in Figures 2-4

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
26	MARVIN R WEATHERBY 1	SUN OIL COMPANY	9300	2.09	-104.32759453	31.47100566				
27	ROUNSAVILLE MVC 1	STANDARD OIL TX	1940	0.76	-104.6076528	31.61662292	4933	0.6	199	4,734
27	ROUNSAVILLE MVC 1	STANDARD OIL TX	3940	1.20	-104.6076528	31.61662292		1.3	4801	132
27	ROUNSAVILLE MVC 1	STANDARD OIL TX	5040	1.48	-104.6076528	31.61662292		2	7365	-2,432
27	ROUNSAVILLE MVC 1	STANDARD OIL TX	6040	1.62	-104.6076528	31.61662292				
27	ROUNSAVILLE MVC 1	STANDARD OIL TX	7045	1.75	-104.6076528	31.61662292				
27	ROUNSAVILLE MVC 1	STANDARD OIL TX	8030	2.17	-104.6076528	31.61662292				
28	MVA SMITH 1	STANDARD OIL TX	6950	0.39	-101.9041429	32.94150929	3083	0.6	8629	-5,546
28	MVA SMITH 1	STANDARD OIL TX	7515	0.52	-101.9041429	32.94150929		1.3	11292	-8,209
28	MVA SMITH 1	STANDARD OIL TX	8065	0.61	-101.9041429	32.94150929		2	12775	-9,692
28	MVA SMITH 1	STANDARD OIL TX	8800	0.66	-101.9041429	32.94150929				
28	MVA SMITH 1	STANDARD OIL TX	10590	0.67	-101.9041429	32.94150929				
28	MVA SMITH 1	STANDARD OIL TX	9145	0.72	-101.9041429	32.94150929				
28	MVA SMITH 1	STANDARD OIL TX	10470	0.73	-101.9041429	32.94150929				
28	MVA SMITH 1	STANDARD OIL TX	9365	0.96	-101.9041429	32.94150929				
28	MVA SMITH 1	STANDARD OIL TX	10970	1.24	-101.9041429	32.94150929				
29	TM LATHAM EST 1	TEXACO INC	7730	0.37	-101.94404013	32.54924972	2878	0.6	8929	-6,051
29	TM LATHAM EST 1	TEXACO INC	8590	0.38	-101.94404013	32.54924972		1.3	11175	-8,297
29	TM LATHAM EST 1	TEXACO INC	8400	0.39	-101.94404013	32.54924972		2	12426	-9,548
29	TM LATHAM EST 1	TEXACO INC	6615	0.40	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	6465	0.40	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	8900	0.42	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	9250	0.44	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	9095	0.46	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	7140	0.46	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	7705	0.48	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	6810	0.48	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	7965	0.50	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	9600	0.51	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	8300	0.54	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	7525	0.54	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	9800	0.57	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	10225	0.60	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	8500	0.60	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	8700	0.83	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	8860	0.87	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	11710	1.09	-101.94404013	32.54924972				
29	TM LATHAM EST 1	TEXACO INC	11325	1.15	-101.94404013	32.54924972				
30	JONES FRANK B 1	PAN AMERICAN	7250	0.40	-102.0873156	32.72956121	3020	0.6	9402	-6,382
30	JONES FRANK B 1	PAN AMERICAN	6750	0.42	-102.0873156	32.72956121		1.3	14999	-11,979
30	JONES FRANK B 1	PAN AMERICAN	8450	0.43	-102.0873156	32.72956121		2	18118	-15,098
30	JONES FRANK B 1	PAN AMERICAN	5250	0.43	-102.0873156	32.72956121				

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
30	JONES FRANK B 1	PAN AMERICAN	4750	0.43	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	7750	0.44	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	5750	0.44	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	7950	0.45	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	6250	0.46	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	8145	0.48	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	8650	0.49	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	10550	0.53	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	8950	0.55	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	10950	0.60	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	9750	0.62	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	10150	0.65	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	11350	0.68	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	9250	0.71	-102.0873156	32.72956121				
30	JONES FRANK B 1	PAN AMERICAN	9550	0.76	-102.0873156	32.72956121				
31	WF COWDEN B 1	STANOLND OIL CO	4950	0.42	-102.62066937	32.07042244	3110	0.6	7443	-4,333
31	WF COWDEN B 1	STANOLND OIL CO	6030	0.48	-102.62066937	32.07042244		1.3	11766	-8,656
31	WF COWDEN B 1	STANOLND OIL CO	10175	0.76	-102.62066937	32.07042244		2	14175	-11,065
31	WF COWDEN B 1	STANOLND OIL CO	10800	1.25	-102.62066937	32.07042244				
32	FASKEN 29 1	UNION TEXAS PET	5030	0.46	-102.45778224	32.07265131	3068	0.6	5703	-2,635
32	FASKEN 29 1	UNION TEXAS PET	4030	0.56	-102.45778224	32.07265131		1.3	9447	-6,379
32	FASKEN 29 1	UNION TEXAS PET	7030	0.71	-102.45778224	32.07265131		2	11533	-8,465
32	FASKEN 29 1	UNION TEXAS PET	8030	0.88	-102.45778224	32.07265131				
32	FASKEN 29 1	UNION TEXAS PET	8430	0.89	-102.45778224	32.07265131				
32	FASKEN 29 1	UNION TEXAS PET	6030	1.05	-102.45778224	32.07265131				
32	FASKEN 29 1	UNION TEXAS PET	10030	1.12	-102.45778224	32.07265131				
33	LOMAX THORNTON JR B 1	AMOCO PROD CO	12800	0.96	-102.29270	32.82938				
33	LOMAX THORNTON JR B 1	AMOCO PROD CO	9850	1.01	-102.29270	32.82938				
33	LOMAX THORNTON JR B 1	AMOCO PROD CO	8350	1.03	-102.29270	32.82938				
33	LOMAX THORNTON JR B 1	AMOCO PROD CO	11650	1.04	-102.29270	32.82938				
33	LOMAX THORNTON JR B 1	AMOCO PROD CO	12550	1.08	-102.29270	32.82938				
33	LOMAX THORNTON JR B 1	AMOCO PROD CO	8950	1.09	-102.29270	32.82938				
33	LOMAX THORNTON JR B 1	AMOCO PROD CO	9250	1.33	-102.29270	32.82938				
33	LOMAX THORNTON JR B 1	AMOCO PROD CO	7450	1.44	-102.29270	32.82938				
34	CARL E RAINS 1	FAIRWAY OIL	5550	0.35	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	5050	0.37	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	6350	0.38	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	5950	0.41	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	4050	0.41	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	6750	0.43	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	8450	0.53	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	4550	0.53	-101.42903	33.36036				

Location not used in Figures 2-4

Location not used in Figures 2-4

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
34	CARL E RAINS 1	FAIRWAY OIL	8850	0.54	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	7150	0.56	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	3050	0.58	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	8050	0.62	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	7530	0.63	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	2550	0.71	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	3550	0.72	-101.42903	33.36036				
34	CARL E RAINS 1	FAIRWAY OIL	7850	0.74	-101.42903	33.36036				
35	JC BRYANS 1	MAGNOLIA PET CO	6030	0.52	-101.58039281	31.79404412	2718	0.6	7525	-4,087
35	JC BRYANS 1	MAGNOLIA PET CO	8050	0.63	-101.58039281	31.79404412		1.3	10586	-7,868
35	JC BRYANS 1	MAGNOLIA PET CO	9040	0.69	-101.58039281	31.79404412		2	12291	-9,573
35	JC BRYANS 1	MAGNOLIA PET CO	10240	1.29	-101.58039281	31.79404412				
35	JC BRYANS 1	MAGNOLIA PET CO	10800	1.39	-101.58039281	31.79404412				
36	WA HUTCHINSON 1	SUN OIL COMPANY	6883	0.43	-101.77087424	31.82782019	2628	0.6	7070	-4,442
36	WA HUTCHINSON 1	SUN OIL COMPANY	6903	0.46	-101.77087424	31.82782019		1.3	7528	-4,900
36	WA HUTCHINSON 1	SUN OIL COMPANY	6924	0.48	-101.77087424	31.82782019		2	7783	-5,155
36	WA HUTCHINSON 1	SUN OIL COMPANY	6918	0.48	-101.77087424	31.82782019				
36	WA HUTCHINSON 1	SUN OIL COMPANY	6984	0.49	-101.77087424	31.82782019				
37	ARMSTRONG 1	FRENCH L R JR	8300	0.42	-102.30767267	33.43269235	3460	0.6	11080	-7,620
37	ARMSTRONG 1	FRENCH L R JR	9000	0.47	-102.30767267	33.43269235		1.3	16476	-13,016
37	ARMSTRONG 1	FRENCH L R JR	10040	0.48	-102.30767267	33.43269235		2	19483	-16,023
37	ARMSTRONG 1	FRENCH L R JR	10540	0.58	-102.30767267	33.43269235				
37	ARMSTRONG 1	FRENCH L R JR	12040	0.64	-102.30767267	33.43269235				
37	ARMSTRONG 1	FRENCH L R JR	13040	0.80	-102.30767267	33.43269235				
37	ARMSTRONG 1	FRENCH L R JR	13490	0.88	-102.30767267	33.43269235				
38	REED NH 1	FOREST OIL CORP	4030	0.26	-101.31807838	32.47918742	2514	0.6	6330	-3,816
38	REED NH 1	FOREST OIL CORP	4030	0.26	-101.31807838	32.47918742		1.3	8559	-6,045
38	REED NH 1	FOREST OIL CORP	5030	0.49	-101.31807838	32.47918742		2	9801	-7,287
38	REED NH 1	FOREST OIL CORP	6030	0.50	-101.31807838	32.47918742				
38	REED NH 1	FOREST OIL CORP	6970	0.64	-101.31807838	32.47918742				
38	REED NH 1	FOREST OIL CORP	7870	1.05	-101.31807838	32.47918742				
39	PAGE LOLA A 1	ANADARKO PROD	6040	0.39	-101.63943042	32.39135799	2586	0.6	8662	-6,076
39	PAGE LOLA A 1	ANADARKO PROD	8030	0.44	-101.63943042	32.39135799		1.3	12045	-9,459
39	PAGE LOLA A 1	ANADARKO PROD	9030	0.52	-101.63943042	32.39135799		2	13930	-11,344
39	PAGE LOLA A 1	ANADARKO PROD	10030	0.97	-101.63943042	32.39135799				
39	PAGE LOLA A 1	ANADARKO PROD	10455	1.09	-101.63943042	32.39135799				
39	PAGE LOLA A 1	ANADARKO PROD	16010	2.20	-101.63943042	32.39135799				
40	NOELKE MONTE 1B	HANKAMER CURTIS	5525	0.48	-100.95690944	31.10681518	2430	0.6	6101	-3,671
40	NOELKE MONTE 1B	HANKAMER CURTIS	4530	0.49	-100.95690944	31.10681518		1.3	8530	-6,100
40	NOELKE MONTE 1B	HANKAMER CURTIS	6525	0.52	-100.95690944	31.10681518		2	9884	-7,454

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
40	NOELKE MONTE 1B	HANKAMER CURTIS	7825	1.06	-100.95690944	31.10681518				
41	LINEBERRY EVELYN 1	RODEN OIL CO	12040	1.07	-103.3278672	31.91793159	3000	0.6	6755	-3,755
41	LINEBERRY EVELYN 1	RODEN OIL CO	13740	1.11	-103.3278672	31.91793159		1.3	13929	-10,929
41	LINEBERRY EVELYN 1	RODEN OIL CO	13030	1.26	-103.3278672	31.91793159		2	17926	-14,926
41	LINEBERRY EVELYN 1	RODEN OIL CO	15040	1.47	-103.3278672	31.91793159				
41	LINEBERRY EVELYN 1	RODEN OIL CO	16400	1.90	-103.3278672	31.91793159				
41	LINEBERRY EVELYN 1	RODEN OIL CO	18030	2.09	-103.3278672	31.91793159				
41	LINEBERRY EVELYN 1	RODEN OIL CO	19030	2.12	-103.3278672	31.91793159				
41	LINEBERRY EVELYN 1	RODEN OIL CO	17040	2.17	-103.3278672	31.91793159				
41	LINEBERRY EVELYN 1	RODEN OIL CO	22130	2.57	-103.3278672	31.91793159				
42	CODY BRAGG 1	LONE STAR PROD	4740	0.36	-102.03458	33.17302	3202	0.6	10073	-6,871
42	CODY BRAGG 1	LONE STAR PROD	5150	0.38	-102.03458	33.17302		1.3	16889	-13,687
42	CODY BRAGG 1	LONE STAR PROD	6770	0.40	-102.03458	33.17302		2	20687	-17,485
42	CODY BRAGG 1	LONE STAR PROD	7150	0.41	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	8650	0.42	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	8250	0.42	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	7850	0.42	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	6350	0.42	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	5570	0.43	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	5950	0.44	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	9050	0.47	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	7450	0.48	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	10350	0.58	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	10950	0.59	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	9850	0.60	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	10550	0.62	-102.03458	33.17302				
42	CODY BRAGG 1	LONE STAR PROD	9450	0.66	-102.03458	33.17302				
43	JW BLOCKER ETAL 1	HUMBLE OIL & REFG	6445	0.36	-101.92099	32.12386	2720	0.6	8514	-5,794
43	JW BLOCKER ETAL 1	HUMBLE OIL & REFG	7100	0.43	-101.92099	32.12386		1.3	11238	-8,518
43	JW BLOCKER ETAL 1	HUMBLE OIL & REFG	8000	0.47	-101.92099	32.12386		2	12756	-10,036
43	JW BLOCKER ETAL 1	HUMBLE OIL & REFG	9000	0.61	-101.92099	32.12386				
43	JW BLOCKER ETAL 1	HUMBLE OIL & REFG	10060	1.16	-101.92099	32.12386				
43	JW BLOCKER ETAL 1	HUMBLE OIL & REFG	11100	1.22	-101.92099	32.12386				
43	JW BLOCKER ETAL 1	HUMBLE OIL & REFG	11500	1.24	-101.92099	32.12386				
44	MRS WA HUTCHINSON 7	SUN OIL COMPANY	7213	0.40	-101.77939	31.82738	2628	0.6	8628	-6,000
44	MRS WA HUTCHINSON 7	SUN OIL COMPANY	7209	0.41	-101.77939	31.82738		1.3	11404	-8,776
44	MRS WA HUTCHINSON 7	SUN OIL COMPANY	7487	0.43	-101.77939	31.82738		2	12951	-10,323
44	MRS WA HUTCHINSON 7	SUN OIL COMPANY	7435	0.43	-101.77939	31.82738				
44	MRS WA HUTCHINSON 7	SUN OIL COMPANY	7465	0.44	-101.77939	31.82738				
44	MRS WA HUTCHINSON 7	SUN OIL COMPANY	7787	0.46	-101.77939	31.82738				
44	MRS WA HUTCHINSON 7	SUN OIL COMPANY	7758	0.46	-101.77939	31.82738				
44	MRS WA HUTCHINSON 7	SUN OIL COMPANY	7593	0.46	-101.77939	31.82738				

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
44	MRS WA HUTCHINSON 7	SUN OIL COMPANY	7522	0.46	-101.77939	31.82738				
44	MRS WA HUTCHINSON 7	SUN OIL COMPANY	7863	0.48	-101.77939	31.82738				
45	DAVID FASKEN AY 1	PAN AMERICAN	7530	0.37	-102.21999	32.01735				
45	DAVID FASKEN AY 1	PAN AMERICAN	6040	0.47	-102.21999	32.01735				
45	DAVID FASKEN AY 1	PAN AMERICAN	7040	0.49	-102.21999	32.01735				
45	DAVID FASKEN AY 1	PAN AMERICAN	6530	0.49	-102.21999	32.01735				
46	BRAUN ETAL 1	BROWN TOM INC	7040	0.43	-102.11271931	31.82418558	2870	0.6	8290	-5,420
46	BRAUN ETAL 1	BROWN TOM INC	8040	0.46	-102.11271931	31.82418558		1.3	10287	-7,417
46	BRAUN ETAL 1	BROWN TOM INC	10040	0.98	-102.11271931	31.82418558		2	11399	-8,529
46	BRAUN ETAL 1	BROWN TOM INC	9040	1.11	-102.11271931	31.82418558				
46	BRAUN ETAL 1	BROWN TOM INC	11130	1.42	-102.11271931	31.82418558				
47	ELLWOOD EST 1	HUMBLE OIL & REFG	5540	0.44	-100.95144353	32.12725898	2235	0.6	5699	-3,464
47	ELLWOOD EST 1	HUMBLE OIL & REFG	4520	0.45	-100.95144353	32.12725898		1.3	8847	-6,612
47	ELLWOOD EST 1	HUMBLE OIL & REFG	3650	0.49	-100.95144353	32.12725898		2	10601	-8,366
47	ELLWOOD EST 1	HUMBLE OIL & REFG	6540	0.85	-100.95144353	32.12725898				
47	ELLWOOD EST 1	HUMBLE OIL & REFG	7994	0.91	-100.95144353	32.12725898				
47	ELLWOOD EST 1	HUMBLE OIL & REFG	7500	0.91	-100.95144353	32.12725898				
48	PRUITT KEEL 1	HUMBLE OIL & REFG	4530	0.45	-100.94404138	32.42388554	2156	0.6	4790	-2,634
48	PRUITT KEEL 1	HUMBLE OIL & REFG	3465	0.49	-100.94404138	32.42388554		1.3	7336	-5,180
48	PRUITT KEEL 1	HUMBLE OIL & REFG	5550	0.83	-100.94404138	32.42388554		2	8754	-6,598
48	PRUITT KEEL 1	HUMBLE OIL & REFG	7005	1.08	-100.94404138	32.42388554				
49	CB HARRISON ETAL 1	ADKISSON A W	5380	0.35	-103.16077988	30.71791872	2481	0.6	8108	-5,627
49	CB HARRISON ETAL 1	ADKISSON A W	7080	0.38	-103.16077988	30.71791872		1.3	11250	-8,769
49	CB HARRISON ETAL 1	ADKISSON A W	8200	0.72	-103.16077988	30.71791872		2	13001	-10,520
49	CB HARRISON ETAL 1	ADKISSON A W	9750	0.86	-103.16077988	30.71791872				
49	CB HARRISON ETAL 1	ADKISSON A W	11580	1.35	-103.16077988	30.71791872				
50	KELLY STATE GAS UNI 1	ATLANTIC RICHLFD	7020	0.46	-103.38185801	30.92111339	3216	0.6	8134	-4,918
50	KELLY STATE GAS UNI 1	ATLANTIC RICHLFD	8030	0.52	-103.38185801	30.92111339		1.3	12309	-9,093
50	KELLY STATE GAS UNI 1	ATLANTIC RICHLFD	6035	0.60	-103.38185801	30.92111339		2	14635	-11,419
50	KELLY STATE GAS UNI 1	ATLANTIC RICHLFD	9020	0.69	-103.38185801	30.92111339				
50	KELLY STATE GAS UNI 1	ATLANTIC RICHLFD	10020	0.85	-103.38185801	30.92111339				
50	KELLY STATE GAS UNI 1	ATLANTIC RICHLFD	11030	1.21	-103.38185801	30.92111339				
50	KELLY STATE GAS UNI 1	ATLANTIC RICHLFD	12020	1.26	-103.38185801	30.92111339				
50	KELLY STATE GAS UNI 1	ATLANTIC RICHLFD	13020	1.53	-103.38185801	30.92111339				
50	KELLY STATE GAS UNI 1	ATLANTIC RICHLFD	14030	1.79	-103.38185801	30.92111339				
50	KELLY STATE GAS UNI 1	ATLANTIC RICHLFD	14970	1.96	-103.38185801	30.92111339				
51	WA WRIGHT 1	STANOLND OIL CO	11510	0.56	-102.64819034	31.26486416	2391	0.6	9354	-6,963
51	WA WRIGHT 1	STANOLND OIL CO	7030	0.56	-102.64819034	31.26486416		1.3	12119	-9,728
51	WA WRIGHT 1	STANOLND OIL CO	9130	0.57	-102.64819034	31.26486416		2	13660	-11,269

Location not used in Figures 2-4

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
51	WA WRIGHT 1	STANOLND OIL CO	8620	0.61	-102.64819034	31.26486416				
51	WA WRIGHT 1	STANOLND OIL CO	10035	0.66	-102.64819034	31.26486416				
51	WA WRIGHT 1	STANOLND OIL CO	11030	0.75	-102.64819034	31.26486416				
51	WA WRIGHT 1	STANOLND OIL CO	9630	0.79	-102.64819034	31.26486416				
52	ALAMO 1	PHILLIPS PET ET AL	8520	0.80	-102.93526663	30.74683586	3562	0.6	7045	-3,483
52	ALAMO 1	PHILLIPS PET ET AL	11725	0.95	-102.93526663	30.74683586		1.3	13482	-9,920
52	ALAMO 1	PHILLIPS PET ET AL	13325	1.22	-102.93526663	30.74683586		2	17069	-13,507
52	ALAMO 1	PHILLIPS PET ET AL	15030	1.55	-102.93526663	30.74683586				
52	ALAMO 1	PHILLIPS PET ET AL	16720	2.01	-102.93526663	30.74683586				
53	CROCKETT 1	PENNZOIL CO INC	8040	0.76	-102.92657202	31.24062469	2533	0.6	6464	-3,931
53	CROCKETT 1	PENNZOIL CO INC	7040	0.85	-102.92657202	31.24062469		1.3	11065	-8,532
53	CROCKETT 1	PENNZOIL CO INC	10915	0.93	-102.92657202	31.24062469		2	13628	-11,095
53	CROCKETT 1	PENNZOIL CO INC	9715	1.13	-102.92657202	31.24062469				
54	STROMAN WA B 1	HUMBLE OIL & REFG	11030	1.09	-102.75518325	30.91760853	2948	0.6	4261	-1,313
54	STROMAN WA B 1	HUMBLE OIL & REFG	10130	1.10	-102.75518325	30.91760853		1.3	12037	-9,089
54	STROMAN WA B 1	HUMBLE OIL & REFG	12040	1.23	-102.75518325	30.91760853		2	16370	-13,422
54	STROMAN WA B 1	HUMBLE OIL & REFG	13040	1.68	-102.75518325	30.91760853				
54	STROMAN WA B 1	HUMBLE OIL & REFG	14060	1.71	-102.75518325	30.91760853				
54	STROMAN WA B 1	HUMBLE OIL & REFG	15040	1.83	-102.75518325	30.91760853				
54	STROMAN WA B 1	HUMBLE OIL & REFG	17040	2.05	-102.75518325	30.91760853				
54	STROMAN WA B 1	HUMBLE OIL & REFG	19040	2.34	-102.75518325	30.91760853				
55	JALONICK L J 3	SUN OIL COMPANY	6793	0.41	-101.76026231	31.56056592	2692	0.6	11214	-8,522
55	JALONICK L J 3	SUN OIL COMPANY	7720	0.42	-101.76026231	31.56056592		1.3	20191	-17,499
55	JALONICK L J 3	SUN OIL COMPANY	6964	0.42	-101.76026231	31.56056592		2	25193	-22,501
55	JALONICK L J 3	SUN OIL COMPANY	6920	0.42	-101.76026231	31.56056592				
55	JALONICK L J 3	SUN OIL COMPANY	6884	0.42	-101.76026231	31.56056592				
55	JALONICK L J 3	SUN OIL COMPANY	6876	0.42	-101.76026231	31.56056592				
56	TURNER PRICE ETAL 1	TIDEWATER OIL CO	5950	0.38	-101.67764	31.33611				
56	TURNER PRICE ETAL 1	TIDEWATER OIL CO	7040	0.51	-101.67764	31.33611				
56	TURNER PRICE ETAL 1	TIDEWATER OIL CO	8040	0.69	-101.67764	31.33611				
56	TURNER PRICE ETAL 1	TIDEWATER OIL CO	9040	1.15	-101.67764	31.33611				
56	TURNER PRICE ETAL 1	TIDEWATER OIL CO	10040	1.16	-101.67764	31.33611				
56	TURNER PRICE ETAL 1	TIDEWATER OIL CO	9540	1.24	-101.67764	31.33611				
57	MRS VL SHURTLEFF 1	GULF OIL & PHILLIPS	5000	0.42	-103.70668495	31.3996191	2823	0.6	6918	-4,095
57	MRS VL SHURTLEFF 1	GULF OIL & PHILLIPS	7050	0.54	-103.70668495	31.3996191		1.3	10314	-7,491
57	MRS VL SHURTLEFF 1	GULF OIL & PHILLIPS	6030	0.55	-103.70668495	31.3996191		2	12206	-9,383
57	MRS VL SHURTLEFF 1	GULF OIL & PHILLIPS	8120	0.76	-103.70668495	31.3996191				
57	MRS VL SHURTLEFF 1	GULF OIL & PHILLIPS	9100	1.01	-103.70668495	31.3996191				
57	MRS VL SHURTLEFF 1	GULF OIL & PHILLIPS	10050	1.05	-103.70668495	31.3996191				
57	MRS VL SHURTLEFF 1	GULF OIL & PHILLIPS	10840	1.63	-103.70668495	31.3996191				

Location not used in Figures 2-4

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
58	WAPLES-PLATTER 1	HAMON JAKE L	7520	0.45	-103.3158729	31.12864431	2814	0.6	9289	-6,475
58	WAPLES-PLATTER 1	HAMON JAKE L	9020	0.46	-103.3158729	31.12864431		1.3	14097	-11,283
58	WAPLES-PLATTER 1	HAMON JAKE L	10515	0.61	-103.3158729	31.12864431		2	16776	-13,962
58	WAPLES-PLATTER 1	HAMON JAKE L	13570	1.14	-103.3158729	31.12864431				
58	WAPLES-PLATTER 1	HAMON JAKE L	6110	1.26	-103.3158729	31.12864431				
58	WAPLES-PLATTER 1	HAMON JAKE L	15015	1.52	-103.3158729	31.12864431				
58	WAPLES-PLATTER 1	HAMON JAKE L	16515	1.81	-103.3158729	31.12864431				
58	WAPLES-PLATTER 1	HAMON JAKE L	21420	1.99	-103.3158729	31.12864431				
59	HORRY L ETAL 3	GULF OIL CORP	7020	0.38	-103.25995211	31.35712398	2598	0.6	8953	-6,355
59	HORRY L ETAL 3	GULF OIL CORP	11320	1.17	-103.25995211	31.35712398		1.3	12335	-9,737
59	HORRY L ETAL 3	GULF OIL CORP	13020	1.36	-103.25995211	31.35712398		2	14219	-11,621
59	HORRY L ETAL 3	GULF OIL CORP	13020	1.36	-103.25995211	31.35712398				
60	TENNEY GERALD E 1	PAN AMERICAN	6040	0.44	-103.57740649	30.92966809	3066	0.6	7422	-4,356
60	TENNEY GERALD E 1	PAN AMERICAN	7005	0.57	-103.57740649	30.92966809		1.3	11309	-8,243
60	TENNEY GERALD E 1	PAN AMERICAN	8040	0.70	-103.57740649	30.92966809		2	13474	-10,408
60	TENNEY GERALD E 1	PAN AMERICAN	9040	0.84	-103.57740649	30.92966809				
60	TENNEY GERALD E 1	PAN AMERICAN	11040	1.08	-103.57740649	30.92966809				
60	TENNEY GERALD E 1	PAN AMERICAN	10240	1.15	-103.57740649	30.92966809				
61	JS GOLDEN-SUN 1	LOWE RALPH L	4030	0.50	-101.01822971	32.64456582	2340	0.6	4795	-2,455
61	JS GOLDEN-SUN 1	LOWE RALPH L	3530	0.51	-101.01822971	32.64456582		1.3	9671	-7,331
61	JS GOLDEN-SUN 1	LOWE RALPH L	4970	0.64	-101.01822971	32.64456582		2	12388	-10,048
61	JS GOLDEN-SUN 1	LOWE RALPH L	6030	0.77	-101.01822971	32.64456582				
61	JS GOLDEN-SUN 1	LOWE RALPH L	7570	0.87	-101.01822971	32.64456582				
61	JS GOLDEN-SUN 1	LOWE RALPH L	6930	0.91	-101.01822971	32.64456582				
62	FG KEEL 1	SOHIO PETROLEUM	9130	0.42	-101.91000	31.52000				
62	FG KEEL 1	SOHIO PETROLEUM	6050	0.45	-101.91078	31.51920				
62	FG KEEL 1	SOHIO PETROLEUM	11455	0.46	-101.91078	31.51920				
62	FG KEEL 1	SOHIO PETROLEUM	9970	0.53	-101.91078	31.51920				
62	FG KEEL 1	SOHIO PETROLEUM	8150	0.54	-101.91078	31.51920				
62	FG KEEL 1	SOHIO PETROLEUM	7040	0.58	-101.91078	31.51920				
63	KEEL FG 1	HUMBLE OIL & REFG CO	4530	0.45	-101.91000	31.51000				
63	KEEL FG 1	HUMBLE OIL & REFG CO	3465	0.49	-101.91000	31.51000				
63	KEEL FG 1	HUMBLE OIL & REFG CO	5550	0.83	-101.91000	31.51000				
63	KEEL FG 1	HUMBLE OIL & REFG CO	7005	1.08	-101.91000	31.51000				
64	CAMPBELL FLORENCE 1	LEVIN M - PATTON R	6325	0.52	-102.10297	31.24538607	2735	0.6	7632	-4,897
64	CAMPBELL FLORENCE 1	LEVIN M - PATTON R	8430	0.57	-102.10296903	31.24538607		1.3	10317	-7,582
64	CAMPBELL FLORENCE 1	LEVIN M - PATTON R	9430	0.94	-102.10296903	31.24538607		2	11813	-9,078
64	CAMPBELL FLORENCE 1	LEVIN M - PATTON R	7325	1.03	-102.10296903	31.24538607				
64	CAMPBELL FLORENCE 1	LEVIN M - PATTON R	10425	1.10	-102.10296903	31.24538607				

Location not used in Figures 2-4

Location not used in Figures 2-4

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
65	JOHN EDWARDS ETAL E 1	GULF OIL CORP	7305	0.60	-102.84596732	31.59347608	2662	0.6	7547	-4,885
65	JOHN EDWARDS ETAL E 1	GULF OIL CORP	9070	0.79	-102.84596732	31.59347608		1.3	9684	-7,022
65	JOHN EDWARDS ETAL E 1	GULF OIL CORP	8230	1.03	-102.84596732	31.59347608		2	10874	-8,212
65	JOHN EDWARDS ETAL E 1	GULF OIL CORP	10015	1.32	-102.84596732	31.59347608				
66	GREER-MCGINLEAS UNT 1	GULF OIL CORP	8530	0.37	-103.41132883	31.61537986	2693	0.6	9772	-7,079
66	GREER-MCGINLEAS UNT 1	GULF OIL CORP	9030	0.58	-103.41132883	31.61537986		1.3	14120	-11,427
66	GREER-MCGINLEAS UNT 1	GULF OIL CORP	10040	0.68	-103.41132883	31.61537986		2	16543	-13,850
66	GREER-MCGINLEAS UNT 1	GULF OIL CORP	14030	1.65	-103.41132883	31.61537986				
66	GREER-MCGINLEAS UNT 1	GULF OIL CORP	15030	1.93	-103.41132883	31.61537986				
66	GREER-MCGINLEAS UNT 1	GULF OIL CORP	16040	2.20	-103.41132883	31.61537986				
66	GREER-MCGINLEAS UNT 1	GULF OIL CORP	17050	2.27	-103.41132883	31.61537986				
66	GREER-MCGINLEAS UNT 1	GULF OIL CORP	19540	2.71	-103.41132883	31.61537986				
66	GREER-MCGINLEAS UNT 1	GULF OIL CORP	20360	2.92	-103.41132883	31.61537986				
67	UNIVERSITY PYOTE UN 1	UNION OIL OF CAL	5520	0.44	-103.16592204	31.54442445	2635	0.6	8445	-5,810
67	UNIVERSITY PYOTE UN 1	UNION OIL OF CAL	7550	0.47	-103.16592204	31.54442445		1.3	12305	-9,670
67	UNIVERSITY PYOTE UN 1	UNION OIL OF CAL	6550	0.49	-103.16592204	31.54442445		2	14455	-11,820
67	UNIVERSITY PYOTE UN 1	UNION OIL OF CAL	11530	0.69	-103.16592204	31.54442445				
67	UNIVERSITY PYOTE UN 1	UNION OIL OF CAL	12520	0.82	-103.16592204	31.54442445				
67	UNIVERSITY PYOTE UN 1	UNION OIL OF CAL	10530	0.86	-103.16592204	31.54442445				
67	UNIVERSITY PYOTE UN 1	UNION OIL OF CAL	8540	0.86	-103.16592204	31.54442445				
67	UNIVERSITY PYOTE UN 1	UNION OIL OF CAL	9530	1.09	-103.16592204	31.54442445				
67	UNIVERSITY PYOTE UN 1	UNION OIL OF CAL	12430	1.15	-103.16592204	31.54442445				
67	UNIVERSITY PYOTE UN 1	UNION OIL OF CAL	14235	2.07	-103.16592204	31.54442445				
68	ROARK IC 1	PAN AMERICAN	5620	0.42	-103.18313378	31.83313079	2840	0.6	7763	-4,923
68	ROARK IC 1	PAN AMERICAN	6530	0.59	-103.18313378	31.83313079		1.3	12523	-9,683
68	ROARK IC 1	PAN AMERICAN	11030	0.66	-103.18313378	31.83313079		2	15176	-12,336
68	ROARK IC 1	PAN AMERICAN	9240	0.85	-103.18313378	31.83313079				
68	ROARK IC 1	PAN AMERICAN	7645	0.86	-103.18313378	31.83313079				
68	ROARK IC 1	PAN AMERICAN	12945	1.04	-103.18313378	31.83313079				
68	ROARK IC 1	PAN AMERICAN	10540	1.15	-103.18313378	31.83313079				
68	ROARK IC 1	PAN AMERICAN	13430	1.29	-103.18313378	31.83313079				
68	ROARK IC 1	PAN AMERICAN	12630	1.35	-103.18313378	31.83313079				
69	Humble 1CV University	Humble	5810	0.76	-101.48509331	30.64708246	2367	0.6	7371	-5,004
69	Humble 1CV University	Humble	6210	0.74	-101.48509331	30.64708246		1.3	8409	-6,042
69	Humble 1CV University	Humble	6510	0.94	-101.48509331	30.64708246		2	8987	-6,620
69	Humble 1CV University	Humble	6810	1.17	-101.48509331	30.64708246				
69	Humble 1CV University	Humble	7310	1.09	-101.48509331	30.64708246				
69	Humble 1CV University	Humble	7710	1.35	-101.48509331	30.64708246				
69	Humble 1CV University	Humble	8210	1.19	-101.48509331	30.64708246				
69	Humble 1CV University	Humble	8610	0.71	-101.48509331	30.64708246				
69	Humble 1CV University	Humble	9110	0.80	-101.48509331	30.64708246				

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
69	Humble 1CV University	Humble	9610	0.93	-101.48509331	30.64708246				
69	Humble 1CV University	Humble	10005	0.99	-101.48509331	30.64708246				
69	Humble 1CV University	Humble	10210	1.16	-101.48509331	30.64708246				
70	#1 Ellis Leah Marie	Tarpon	4010	0.79	-100.92035558	31.20258233	2486	0.6	3769	-1,283
70	#1 Ellis Leah Marie	Tarpon	5810	0.77	-100.92035558	31.20258233		1.3	8597	-6,111
70	#1 Ellis Leah Marie	Tarpon	6310	0.93	-100.92035558	31.20258233		2	11288	-8,802
70	#1 Ellis Leah Marie	Tarpon	6910	0.82	-100.92035558	31.20258233				
71	#1 H.E. Fisher	Plymouth	3040	0.33	-101.18140109	33.42411529	2490	0.6	6040	-3,550
71	#1 H.E. Fisher	Plymouth	3530	0.29	-101.18140109	33.42411529		1.3	8569	-6,079
71	#1 H.E. Fisher	Plymouth	5640	0.57	-101.18140109	33.42411529		2	9978	-7,488
71	#1 H.E. Fisher	Plymouth	6140	1.05	-101.18140109	33.42411529				
71	#1 H.E. Fisher	Plymouth	6775	0.66	-101.18140109	33.42411529				
71	#1 H.E. Fisher	Plymouth	7250	0.55	-101.18140109	33.42411529				
71	#1 H.E. Fisher	Plymouth	7940	0.76	-101.18140109	33.42411529				
71	#1 H.E. Fisher	Plymouth	8260	1.15	-101.18140109	33.42411529				
72	Big Lake	University D 1	4810	0.98	-101.70332801	31.23761533	2683	0.6	5655	-2,972
72	Big Lake	University D 1	5510	0.78	-101.70332801	31.23761533		1.3	8591	-5,908
72	Big Lake	University D 1	5910	0.74	-101.70332801	31.23761533		2	10227	-7,544
72	Big Lake	University D 1	6425	0.93	-101.70332801	31.23761533				
72	Big Lake	University D 1	6807	0.96	-101.70332801	31.23761533				
72	Big Lake	University D 1	7805	1.27	-101.70332801	31.23761533				
72	Big Lake	University D 1	8255	1.02	-101.70332801	31.23761533				
72	Big Lake	University D 1	8803	0.77	-101.70332801	31.23761533				
72	Big Lake	University D 1	9355	0.91	-101.70332801	31.23761533				
72	Big Lake	University D 1	9905	1.04	-101.70332801	31.23761533				
73	WD #1 Wilson	Hamon Jake L	11410	1.18	-103.29834792	31.12254438	2796	0.6	8892	-6,096
73	WD #1 Wilson	Hamon Jake L	12510	1.24	-103.29834792	31.12254438		1.3	14366	-11,570
73	WD #1 Wilson	Hamon Jake L	13310	1.09	-103.29834792	31.12254438		2	17416	-14,620
73	WD #1 Wilson	Hamon Jake L	12150	1.10	-103.29834792	31.12254438				
73	WD #1 Wilson	Hamon Jake L	14110	1.38	-103.29834792	31.12254438				
73	WD #1 Wilson	Hamon Jake L	14810	1.39	-103.29834792	31.12254438				
73	WD #1 Wilson	Hamon Jake L	15525	1.57	-103.29834792	31.12254438				
73	WD #1 Wilson	Hamon Jake L	16615	1.53	-103.29834792	31.12254438				
73	WD #1 Wilson	Hamon Jake L	16815	1.07	-103.29834792	31.12254438				
73	WD #1 Wilson	Hamon Jake L	17465	1.85	-103.29834792	31.12254438				
74	#6 Mitchell	Shell	1710	0.67	-101.59128134	30.35157892	2286	0.6	69	2,217
74	#6 Mitchell	Shell	4410	0.99	-101.59128134	30.35157892		1.3	6709	-4,423
74	#6 Mitchell	Shell	5210	1.09	-101.59128134	30.35157892		2	10408	-8,122
74	#6 Mitchell	Shell	5910	1.33	-101.59128134	30.35157892				
74	#6 Mitchell	Shell	6610	1.45	-101.59128134	30.35157892				
74	#6 Mitchell	Shell	7310	1.38	-101.59128134	30.35157892				

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
74	#6 Mitchell	Shell	8010	1.53	-101.59128134	30.35157892				
74	#6 Mitchell	Shell	8710	1.64	-101.59128134	30.35157892				
74	#6 Mitchell	Shell	9410	1.80	-101.59128134	30.35157892				
74	#6 Mitchell	Shell	10010	1.84	-101.59128134	30.35157892				
74	#6 Mitchell	Shell	10710	2.10	-101.59128134	30.35157892				
74	#6 Mitchell	Shell	12210	2.15	-101.59128134	30.35157892				
75	1 W. Massie #28	Atlantic	4910	1.43	-101.20957556	30.2905338	2159	0.6	436	1,723
75	1 W. Massie #28	Atlantic	5710	1.63	-101.20957556	30.2905338		1.3	4937	-2,778
75	1 W. Massie #28	Atlantic	6110	1.71	-101.20957556	30.2905338		2	7445	-5,286
75	1 W. Massie #28	Atlantic	6810	1.8	-101.20957556	30.2905338				
75	1W. Massie #28	Atlantic	7410	2.03	-101.20957556	30.2905338				
75	1 W. Massie #28	Atlantic	8010	2.2	-101.20957556	30.2905338				
75	1 W. Massie #28	Atlantic	8610	2.39	-101.20957556	30.2905338				
75	1 W. Massie #28	Atlantic	9110	2.29	-101.20957556	30.2905338				
75	1 W. Massie #28	Atlantic	9710	2.73	-101.20957556	30.2905338				
75	1 W. Massie #28	Atlantic	10510	2.97	-101.20957556	30.2905338				
75	1 W. Massie #28	Atlantic	11440	3.36	-101.20957556	30.2905338				
75	1 W. Massie #28	Atlantic	11560	5.26	-101.20957556	30.2905338				
76	Sugg Ela C. A.	Cactus Drilling	5110	1.19	-101.10571224	31.31732383	2507	0.6	3395	-888
76	Sugg Ela C. A.	Cactus Drilling	5710	0.92	-101.10571224	31.31732383		1.3	7812	-5,305
76	Sugg Ela C. A.	Cactus Drilling	6310	1	-101.10571224	31.31732383		2	10273	-7,766
76	Sugg Ela C. A.	Cactus Drilling	6810	1.05	-101.10571224	31.31732383				
76	Sugg Ela C. A.	Cactus Drilling	7305	1.31	-101.10571224	31.31732383				
76	Sugg Ela C. A.	Cactus Drilling	7805	1.07	-101.10571224	31.31732383				
76	Sugg Ela C. A.	Cactus Drilling	8595	1.4	-101.10571224	31.31732383				
76	Sugg Ela C. A.	Cactus Drilling	9010	1.3	-101.10571224	31.31732383				
77	#1 Miller	Consolidated O & G	4995	0.5	-101.24821493	32.98803225	2384	0.6	5869	-3,485
77	#1 Miller	Consolidated O & G	6150	0.6	-101.24821493	32.98803225		1.3	8377	-5,993
77	#1 Miller	Consolidated O & G	5310	0.49	-101.24821493	32.98803225		2	9775	-7,391
77	#1 Miller	Consolidated O & G	6710	0.96	-101.24821493	32.98803225				
77	#1 Miller	Consolidated O & G	7560	0.93	-101.24821493	32.98803225				
77	#1 Miller	Consolidated O & G	7940	1.03	-101.24821493	32.98803225				
78	#1 Mid Seale	Humble O & R	5410	0.45	-101.45514809	33.34648065	2215	0.6	6224	-4,009
78	#1 Mid Seale	Humble O & R	6010	1.01	-101.45514809	33.34648065		1.3	8167	-5,952
78	#1 Mid Seale	Humble O & R	6910	1.11	-101.45514809	33.34648065		2	9250	-7,035
78	#1 Mid Seale	Humble O & R	7410	0.88	-101.45514809	33.34648065				
78	#1 Mid Seale	Humble O & R	8010	0.99	-101.45514809	33.34648065				
78	#1 Mid Seale	Humble O & R	8420	1.05	-101.45514809	33.34648065				
78	#1 Mid Seale	Humble O & R	8515	1.03	-101.45514809	33.34648065				
79	#47 Elsinore Royalty Co	Hunt Oil Co	6990	0.9	-103.11061392	30.62679122	3742	0.6	4407	-665
79	#47 Elsinore Royalty Co	Hunt Oil Co	8750	0.97	-103.11061392	30.62679122		1.3	11116	-7,374

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
79	#47 Elsinore Royalty Co	Hunt Oil Co	9370	1	-103.11061392	30.62679122		2	14854	-11,112
79	#47 Elsinore Royalty Co	Hunt Oil Co	10020	1.25	-103.11061392	30.62679122				
79	#47 Elsinore Royalty Co	Hunt Oil Co	10580	1.19	-103.11061392	30.62679122				
79	#47 Elsinore Royalty Co	Hunt Oil Co	11510	1.36	-103.11061392	30.62679122				
79	#47 Elsinore Royalty Co	Hunt Oil Co	12070	1.39	-103.11061392	30.62679122				
79	#47 Elsinore Royalty Co	Hunt Oil Co	12810	1.94	-103.11061392	30.62679122				
79	#47 Elsinore Royalty Co	Hunt Oil Co	14400	1.57	-103.11061392	30.62679122				
79	#47 Elsinore Royalty Co	Hunt Oil Co	15275	1.98	-103.11061392	30.62679122				
80	Pembrook 1-10	McFarland Corp	4610	0.55	-101.46498235	31.22785011	2722	0.6	5682	-2,960
80	Pembrook 1-11	McFarland Corp	4910	0.72	-101.46498235	31.22785011		1.3	9601	-6,879
80	Pembrook 1-12	McFarland Corp	5710	0.68	-101.46498235	31.22785011		2	11784	-9,062
80	Pembrook 1-13	McFarland Corp	6410	0.69	-101.46498235	31.22785011				
80	Pembrook 1-14	McFarland Corp	6905	1.02	-101.46498235	31.22785011				
80	Pembrook 1-15	McFarland Corp	7510	0.61	-101.46498235	31.22785011				
80	Pembrook 1-16	McFarland Corp	8110	1.18	-101.46498235	31.22785011				
80	Pembrook 1-17	McFarland Corp	8710	1.17	-101.46498235	31.22785011				
80	Pembrook 1-18	McFarland Corp	9305	1.02	-101.46498235	31.22785011				
80	Pembrook 1-19	McFarland Corp	9805	1.2	-101.46498235	31.22785011				
80	Pembrook 1-20	McFarland Corp	10350	0.93	-101.46498235	31.22785011				
81	Calvert A #1	Sinclair O & G	8610	1.03	-103.06242	31.23932856	2610	0.6	6564	-3,954
81	Calvert A #2	Sinclair O & G	10210	1.02	-103.06242	31.23932856		1.3	11907	-9,297
81	Calvert A #3	Sinclair O & G	11110	1.05	-103.06242	31.23932856		2	14884	-12,274
81	Calvert A #4	Sinclair O & G	11710	1.11	-103.06242	31.23932856				
81	Calvert A #5	Sinclair O & G	12220	1.23	-103.06242	31.23932856				
81	Calvert A #6	Sinclair O & G	12240	1.48	-103.06242	31.23932856				
81	Calvert A #7	Sinclair O & G	12420	1.4	-103.06242	31.23932856				
82	Lago Unit #1	Texaco Inc	7910	0.75	-103.85091809	31.91878197	2849	0.6	6837	-3,988
82	Lago Unit #2	Texaco Inc	8610	0.7	-103.85091809	31.91878197		1.3	11055	-8,206
82	Lago Unit #3	Texaco Inc	9210	0.86	-103.85091809	31.91878197		2	13404	-10,555
82	Lago Unit #4	Texaco Inc	9910	1.41	-103.85091809	31.91878197				
82	Lago Unit #5	Texaco Inc	11210	1.45	-103.85091809	31.91878197				
82	Lago Unit #6	Texaco Inc	11910	1.68	-103.85091809	31.91878197				
82	Lago Unit #7	Texaco Inc	12410	1.78	-103.85091809	31.91878197				
82	Lago Unit #8	Texaco Inc	12810	1.88	-103.85091809	31.91878197				
82	Lago Unit #9	Texaco Inc	13310	2.22	-103.85091809	31.91878197				
82	Lago Unit #10	Texaco Inc	14510	2.07	-103.85091809	31.91878197				
82	Lago Unit #11	Texaco Inc	15210	2.25	-103.85091809	31.91878197				
82	Lago Unit #12	Texaco Inc	16205	3.01	-103.85091809	31.91878197				
83	Johnson W.D. #1	Sun Oil Co	5435	0.7	-103.56779628	31.73535291	2793	0.6	6425	-3,632
83	Johnson W.D. #1	Sun Oil Co	8450	0.55	-103.56779628	31.73535291		1.3	11546	-8,753
83	Johnson W.D. #1	Sun Oil Co	8710	0.73	-103.56779628	31.73535291		2	14399	-11,606
83	Johnson W.D. #1	Sun Oil Co	9075	1.25	-103.56779628	31.73535291				

Map ID	Lease Name	Operator	Depth (ft)	% Ro	Longitude	Latitude	Elev	% Ro	Depth (ft)	Depth (-SL)
83	Johnson W.D. #1	Sun Oil Co	9085	1.53	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	9305	1.19	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	9825	0.93	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	10065	0.89	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	11405	1.32	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	11170	1	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	12010	1.83	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	13410	1.68	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	14410	1.75	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	15420	1.84	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	15865	1.9	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	16210	2.1	-103.56779628	31.73535291				
83	Johnson W.D. #1	Sun Oil Co	17205	2.43	-103.56779628	31.73535291				
84	Owens B #1	Cities Service Oil	3510	0.84	-101.73000	30.79000				
84	Owens B #1	Cities Service Oil	4780	0.92	-101.73000	30.79000				

Location not used in Figures 2-4