

DATA ON DEPTHS TO THE UPPER MYA ZONE OF THE  
SAN JOAQUIN FORMATION IN THE KETTLEMAN CITY AREA,  
SAN JOAQUIN VALLEY, CALIFORNIA

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CONVERSION FACTORS

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For readers who may prefer to use metric units rather than inch-pound units, the conversion factors for the terms used in this report are listed below:

<u>Inch-Pound</u>	<u>Multiply by</u>	<u>Metric (SI)</u>
acres	0.004047	square kilometers
feet	0.3048	meters
miles	1.609	kilometers
square miles	2.590	square kilometers

National Geodetic Vertical Datum of 1929 (NGVD of 1929): A geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called mean sea level.

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The study area occupies about 1,040 square miles in the San Joaquin Valley near Kettleman City (fig. 1, maps 1, 2, and 3). Data on depths to the upper Mya zone are recorded in table 1. Most of the data were found in the reports listed under Selected References. Some depths were correlated from electrical logs where depths were known, to logs where depths were unknown. Virtually all the wells shown in this report (maps 1, 2, and 3) are oil or gas test wells, or abandoned gas wells.

Upper Mya zone refers to the uppermost stratum in which the burrowing pelecypod, or clam, Mya, occurs in the San Joaquin Formation of Pliocene age. In the Kettleman Hills, the base of the Tulare Formation of Pliocene and Pleistocene age lies just above this stratum (Woodring and others, 1940, p. 13). In T. 23 S., Rs. 21 and 22 E., Hill (1964, p. 14) also mapped the base of the Tulare Formation just above the upper Mya zone. Further, in the Kettleman City area, a study in progress (1981) mapped the base of the Tulare Formation and other continental deposits of Pliocene to Holocene age just above the upper Mya zone.

EXPLANATION OF TABLE 1

Well No.: Wells are identified according to their location in the rectangular system for the subdivision of public lands. For example, in the number 20S/20E-32R, the part of the number preceding the slash indicates the township number (T. 20 S.); the number after the slash, the range (R. 20 E.); the number after the hyphen, the section (sec. 32); and the letter after the section number, the 40-acre subdivision of the section, as indicated on the diagram below. Where two wells are located in the same 40-acre subdivision, one is designated with the appropriate letter, and the other is designated with a Z and that letter; thus, 27S/23E-14E and 14ZE. The location of well 26S/24E-5Z was not given to the nearest 40-acre subdivision but was described to the nearest section. Locations of all wells were taken from maps and reports listed under Selected References or from descriptions on electrical logs. Wells were not field located by the Geological Survey. The entire study area is south and east of the Mount Diablo base line and meridian.

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Altitude: The altitude, in feet above National Geodetic Vertical Datum of 1929, is not necessarily that of land surface but may be that of the derrick floor, kelly bushing, or rotary table of a drilling rig (California Department of Conservation, 1963, p. 5). The difference between land surface and a datum point on a drilling rig is generally about 12 feet, as indicated on electrical logs of wells in the area.

Depth to upper Mya zone: The depth to the upper Mya zone, in feet, is that below the altitude shown in the table. Examination of logs and reports concerning the study area indicate that the depth is that to the top of the zone. Footnotes indicate where depth to the upper Mya zone was correlated from electrical logs rather than noted on a log or in a report.

TABLE 1.- Data on depths to upper Mya zone

Well No.	Altitude (feet)	Depth to upper Mya zone (feet)	Well No.	Altitude (feet)	Depth to upper Mya zone (feet)
20S/20E-32R	199	2,940	22S/23E-20B	208	2,875
21S/18E- 1Q	260	3,027	23S/20E- 7C	197	3,258
11C	273	3,180	24P	200	3,480
11H	270	3,105	26J	203	3,657
12P	269	3,070	28B	223	3,305
13D	276	3,106	29R	237	3,580
30F	438	2,840	31N	272	4,075
36A	219	3,168			
21S/19E- 7A	247	2,962	23S/21E- 1Q	198	2,860
16M	224	2,993	2F	200	2,840
19J	238	3,015	5L	198	2,920
20A	232	2,963	8F	189	2,940
34D	209	2,960	10H	199	2,830
35Q	205	2,980	11J	192	2,802
21S/20E- 4Q	195	2,960	11Q	197	2,795
22A	186	2,970	12N	199	2,800
23R	193	2,973	12Q	197	2,795
35K	191	2,939	13E	190	2,787
21S/21E-18F	189	3,060	14A	190	2,780
24C	196	<sup>1</sup> 3,203	14C	190	2,810
22S/19E- 3R	190	2,910	14J	190	2,795
13L	192	2,935	24D	190	2,790
15D	201	2,960	25A	193	2,773
22J	194	3,120	25B	193	2,778
29H	215	4,110	25J	201	2,776
22S/20E- 9D	186	3,020	23S/22E- 4E	192	2,945
17K	189	2,816	7E	199	2,823
20M	195	2,892	7N	198	2,822
28D	205	2,845	7R	199	2,842
29H	211	2,870	13R	206	2,990
32F	187	2,990	17L	200	2,810
35D	195	3,082	18G	204	2,786
22S/21E- 7N	193	2,930	19B	200	2,815
15C	194	3,062	19F	200	2,790
33E	194	2,935	28N	205	2,792
22S/22E-12C	203	2,922	29B	197	2,786
30R	194	2,970	29L	202	2,778
			29Q	205	2,760
			29R	199	2,758
			30C	195	2,776
			32C	204	2,783
			32G	204	2,790
			32R	206	2,760

See footnote at end of table.

TABLE 1. - Data on depths to Mya zone--Continued

Well No.	Altitude (feet)	Depth to upper Mya zone (feet)	Well No.	Altitude (feet)	Depth to upper Mya zone (feet)
23S/22E-33D	204	2,770	24S/23E-22D	212	<sup>1</sup> 2,435
34K	206	2,691	23N	209	2,473
34R	203	2,705	26F	220	2,498
36C	208	<sup>1</sup> 2,610	26N	218	2,442
			27A	204	2,466
23S/23E- 5E	203	3,152	27D	205	2,395
20D	204	2,960	27K	216	2,426
25E	205	2,694	28J	214	2,403
27L	227	2,758	28N	206	2,434
32P	220	<sup>1</sup> 2,660	29A	213	2,490
34P	217	2,962	29G	206	2,461
			30A	217	2,535
23S/24E-32A	220	2,675	33A	206	2,406
			33F	206	2,436
24S/20E-12K	201	3,565	34E	206	2,404
			34G	205	2,415
24S/21E- 8B	203	3,435	34K	206	2,426
9B	195	3,351	34L	206	2,416
16A	204	3,275	35E	216	<sup>1</sup> 2,422
17D	205	<sup>1</sup> 3,415	35L	217	<sup>1</sup> 2,425
			35N	208	2,418
24S/22E- 1A	210	<sup>1</sup> 2,520	35Q	205	2,445
2J	207	<sup>1</sup> 2,545	36E	205	2,535
4J	207	<sup>1</sup> 2,730	36N	219	2,505
7E	208	2,890			
11K	214	<sup>1</sup> 2,750	24S/24E- 4A	222	2,455
12A	216	<sup>1</sup> 2,462	5L	206	<sup>1</sup> 2,590
13H	209	<sup>1</sup> 2,490	9R	228	2,540
16H	212	2,755	10R	233	2,460
16K	208	2,810	12R	256	2,272
17B	225	<sup>1</sup> 2,838	20K	232	2,603
25H	219	2,563	21K	228	2,538
35A	223	2,615	28P	230	2,543
			29F	225	2,567
			29M	226	2,608
24S/23E- 7H	220	<sup>1</sup> 2,418			
9A	205	2,660	24S/25E-16N	294	2,030
11A	206	2,640			
11J	205	2,605	25S/22E- 1F	221	2,633
15E	212	2,578	10G	221	2,758
17D	219	<sup>1</sup> 2,421	16G	248	2,947
18F	213	<sup>1</sup> 2,450			
19A	214	<sup>1</sup> 2,500	25S/23E- 1E	212	2,432
19L	210	2,485	1G	216	2,456
20G	218	<sup>1</sup> 2,422	1R	218	2,458
21Q	214	<sup>1</sup> 2,418	2G	208	2,439

See footnote at end of table.

TABLE 1. - Data on depths to upper Mya zone--Continued

Well No.	Altitude (feet)	Depth to upper Mya zone (feet)	Well No.	Altitude (feet)	Depth to upper Mya zone (feet)
25S/23E- 2K	209	2,409	26S/23E- 6J	232	3,020
3A	206	2,435	8P	236	3,045
3C	207	2,444	27B	242	2,940
3L	212	2,481			
4G	218	2,485	26S/24E- 2A	270	2,597
12E	222	2,491	3B	261	2,648
15F	226	2,545	5Z	257	2,677
21B	225	2,628	7F	254	<sup>1</sup> 2,750
24F	233	2,605			
31R	259	3,020	26S/25E-17J	325	2,180
25S/24E- 3F	244	2,537	27S/22E- 1C	260	2,446
4A	241	2,576	1D	260	2,445
4Q	242	2,582	1G	264	2,418
6J	233	2,522	1J	262	2,362
6P	232	2,490	12A	267	2,377
7C	228	2,487	22F	247	3,132
9E	237	2,572	36N	293	<sup>1</sup> 2,730
15N	250	2,655	36P	282	2,732
17B	241	2,806			
19L	236	2,590	27S/23E- 5J	258	2,508
20C	241	2,595	5N	266	2,378
20K	251	2,612	6Q	257	2,357
21F	253	2,626	7A	263	2,351
23L	272	2,664	7K	269	2,400
27L	255	2,644	8E	266	2,316
28D	253	2,620	8J	264	2,374
29B	247	2,595	8L	267	2,310
32G	259	2,655	9C	267	2,428
			9J	262	2,434
25S/25E- 7D	255	2,490	9R	275	2,388
26E	315	2,382	10F	267	2,530
31G	298	2,473	14E	276	2,458
35E	313	2,430	14ZE	277	2,350
			14Q	280	2,464
26S/22E- 5D	235	2,820	15D	270	2,370
9K	236	2,880	15G	277	2,405
15N	240	2,797	15H	272	2,345
16M	239	2,799	16C	272	2,327
20A	232	2,938	16H	270	2,345
26L	251	2,680	17A	281	2,316
27G	250	2,690	17R	287	2,443
			22C	284	2,338
26S/23E- 4L	234	2,925	22K	286	2,330
5R	229	2,973	23D	277	2,357

See footnote at end of table.

TABLE 1. - Data on depths to upper Mya zone--Continued

Well No.	Altitude (feet)	Depth to upper Mya zone (feet)	Well No.	Altitude (feet)	Depth to upper Mya zone (feet)
27S/23E-24N	285	2,360	28S/23E- 3L	297	2,690
25C	285	2,390	4N	273	2,850
25P	291	2,381	5L	283	2,723
25R	288	2,398	5N	295	2,635
26A	287	2,347	5P	283	2,715
26C	285	2,385	5Q	282	<sup>1</sup> 2,703
31N	285	2,580	6C	290	2,600
36A	292	2,392	6G	292	2,612
36D	292	2,452	6R	296	2,596
			7A	297	2,595
27S/24E- 8M	278	2,860	7C	292	2,657
17C	289	<sup>1</sup> 2,804	7G	293	2,652
17F	283	2,783	7J	293	2,673
20N	284	2,578	8C	292	2,637
26M	318	2,746	8D	296	2,596
28L	297	2,617	8F	300	2,600
30N	292	2,422	8J	282	2,632
31E	291	2,406	8L	297	2,690
32M	304	<sup>1</sup> 2,608	8M	297	2,665
34E	303	2,618	9N	292	2,612
35B	322	2,615	17A	296	2,671
35E	322	2,650	17C	293	2,748
35J	330	2,758			
36N	326	2,820	28S/24E- 4N	307	<sup>1</sup> 2,469
			5J	306	2,487
28S/22E- 1A	292	2,572	9E	303	2,438
1J	290	2,660	10J	317	2,450

<sup>1</sup>Depth correlated from electrical logs.

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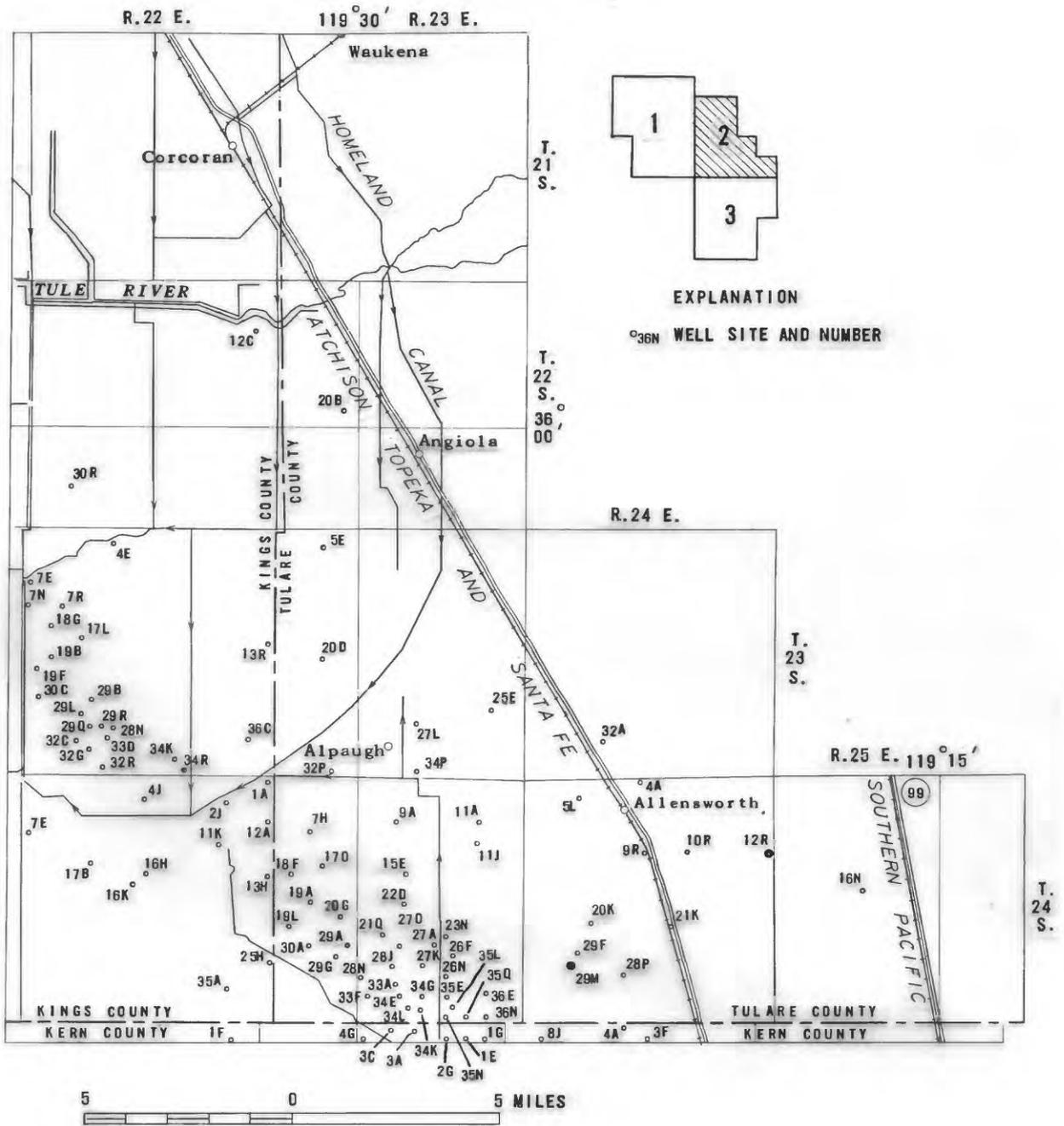
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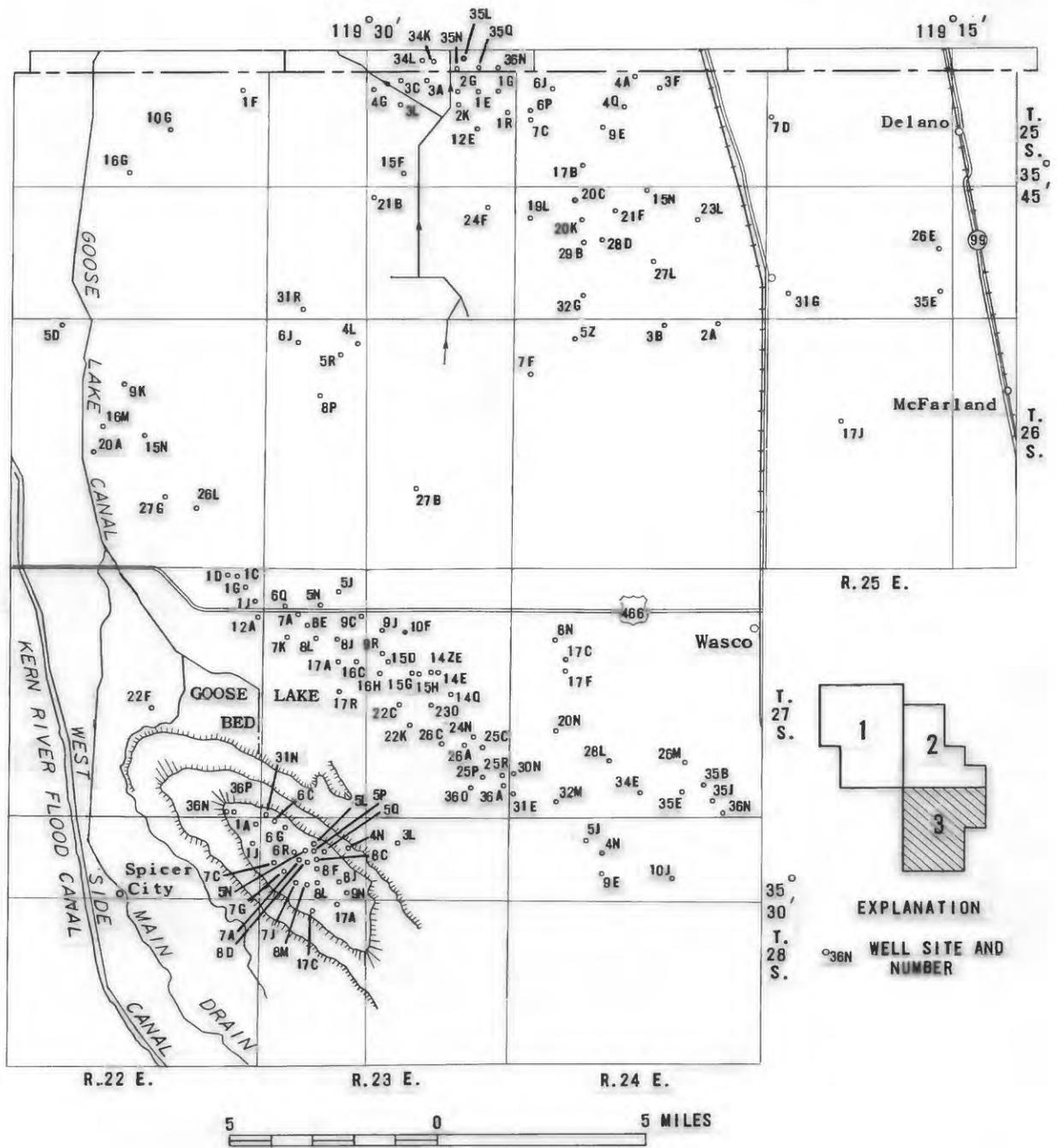


FIGURE 1.—California State index map.





MAP 2.—Locations of wells.



MAP 3.1—Locations of wells.