TABLE 4. SELECTED RESERVOIR DATA ON OIL AND NATURAL GAS FIELDS OF PENNSYLVANIA AND WOLFCAMPIAN AGES IN SOUTHEAST NEW MEXICO

FIELD NAME	AGE	COUNTY	DISCOVERY YEAR	DISCOVERY METHOD[1]	PROVINCE	LITHOLOGY	TRAP TYPE	PRODUCING STATUS	DRIVE TYPE	DEPTH TO TOP (feet)	NET THICKNESS (feet)	POROSITY (per cent)	PERMEABILITY (md)	GRAVITY OF LIQUID (°API)	TEMPERATURE (°F)	INITIAL PRESSURE (psi)	GAS OIL RATIO	BRINE SALINITY (ppm)[2]	PRODUCTION ESTIMATED ULTIMATE AS OF 1962 CRUDE OIL (thousand barrels)	PRODUCTION CUMULATIVE AS OF 1963 CRUDE OIL (thousand barrels)	PRODUCTION CUMULATIVE AS OF 1962 CONDENSATE (thousand barrels)	PRODUCTION CUMULATIVE AS OF 1962 NATURAL GAS (million cu ft)
GAS FIELDS																						
Anderson	Morrowan	Eddy	1954	SUS	transition	sandstone	stratigraphic	producing	gas expansion	11039	18	—	1	48	—	5000	24390	0			160	6893
Anderson Ranch West Penn	Morrowan	Lea	1955	SEI	shelf	sandstone	stratigraphic	abandoned	gas expansion	12512	26	—	1	56	—	2990	—	—			9	101
Atoka Penn	Morrowan	Eddy	1957	SUS	transition	sandstone	stratigraphic	producing	gas expansion	9079	31	10	51	56	158	3700	90840	54635			62	5666
Bagley Lower Penn	Desmoinesian	Lea	1951	—	shelf	limestone	structural	producing	gas cap	9805	20	6	1	56	163	3254	0	—			383	8349
Bagley Upper Penn	Desmoinesian	Lea	1955	RAN	shelf	limestone	structural	producing	gas cap	8600	15	6	—	63	150	2930	28390	0			79	5068
Bandana Point Penn	Morrowan	Eddy	1959	SEI	basin	sandstone	combination	producing	gas expansion	9782	14	8	—	—	125	3200	0	—			0	24
Bell Lake Penn	Morrowan	Lea	1958	SUS	basin	sandstone	structural	producing	gas expansion	14417	28	5	—	—	187	6603	0	—			0	434
Black River Penn	Morrowan	Eddy	1958	SUB	basin	sandstone	stratigraphic	producing	gas expansion	11566	32	—	—	—	—	—	—	—			0	134
Bluitt Wolfcamp	Wolfcampian	Roosevelt	1959	SEI	shelf	limestone	structural	producing	solution gas	8022	50	8	5	72	135	3020	27000	—			1	24
Buffalo Penn	Morrowan	Lea	1958	SUS	transition	sandstone	stratigraphic	producing	gas expansion	13270	35	7	—	54	170	6330	12500	—			74	1463
Burton Penn North	Morrowan	Eddy	1960	SEI	transition	sandstone	stratigraphic	producing	gas expansion	10886	19	7	—	52	165	5625	14000	—			0	62
Cedar Lake Morrow	Morrowan	Eddy	1961	—	transition	—	—	producing	gas expansion	11357	26	—	—	59	—	2100	22324	—			2	84
Crawford Penn	Morrowan	Eddy	1957	SUS	basin	sandstone	stratigraphic	producing	gas expansion	11060	39	—	—	42	194	4850	108000	—			0	736
Duffield Penn	Morrowan	Eddy	1952	SEI	transition	sandstone	stratigraphic	producing	gas expansion	8616	56	9	—	54	—	3065	—	—			16	4003
Empire Penn	Morrowan	Eddy	1953	SEI	transition	sandstone	stratigraphic	producing	gas expansion	10102	25	12	—	60	156	3014	44607	—			144	8920
Fren Penn	Morrowan	Eddy	1954	SEI	transition	sandstone	stratigraphic	producing	solution gas	11962	15	9	125	51	160	4970	1180	—			132	4836
Grayburg Atoka Gas	Morrowan	Eddy	1957	—	transition	sandstone	—	producing	gas expansion	10680	80	—	—	56	—	3252	28300	—			95	2765
Harkey Penn	Missourian	Eddy	1958	SUS	basin	limestone	combination	producing	gas expansion	10917	93	—	—	—	160	4000	—	—			0	79
Lea Penn	Morrowan	Lea	1961	SEI	transition	sandstone	structural	producing	gas expansion	13034	23	11	—	55	177	6691	10682	—			4	70
Los Medaños Atoka	Derryan	Eddy	1958	SUS	basin	sandstone	stratigraphic	producing	gas expansion	12920	9	6	—	56	196	8371	86012	—			8	734
Mescalero Penn North	Derryan	Lea	1956	SEI	shelf	sandstone	stratigraphic	producing	gas expansion	10180	11	—	—	50	165	2258	—	0			4	238
Moore Wolfcamp	Wolfcampian	Lea	1952	SEI	shelf	limestone	structural	producing	gas cap	8198	45	8	—	60	—	2850	17050	—			63	1827
Red Lake Penn	Morrowan	Eddy	1956	SEI	transition	sandstone	stratigraphic	producing	gas expansion	9443	22	8	2	53	153	1450	209000	—			16	4505
Salt Lake Atoka South	Morrowan	Lea	1958	SUS	transition	sandstone	stratigraphic	producing	gas expansion	12909	7	7	—	48	—	1681	37175	0			29	1048
Salt Lake Morrow South	Morrowan	Lea	1960	SEI	transition	sandstone	stratigraphic	producing	gas expansion	13242	39	10	50	53	195	500	30930	0			19	561
Shugart Penn	Morrowan	Eddy	1958	OWO	transition	sandstone	stratigraphic	producing	gas expansion	10912	49	9	3	60	143	4855	22300	—			142	3774
Tonto Penn West	Morrowan	Lea	1960	SEI	transition	sandstone	structural	producing	gas expansion	13325	53	10	—	—	—	640	60000	—			2	113
TV	Morrowan	Chaves	1960	OWO	shelf	sandstone	stratigraphic	producing	gas expansion	12860	33	9	15	51	190	4800	15000	—			24	437
Welch Penn	Morrowan	Eddy	1956	SEI	basin	limestone	stratigraphic	producing	solution gas	12502	6	8	—	58	180	3551	—	—			0	769
White City Penn	Missourian	Eddy	1960	SEI	basin	limestone	combination	producing	gas expansion	9806	10	7	—	58	148	4384	—	—			0	151
Continental Bell Lake Unit 2	Derryan	Lea	1954	SEI	basin	—	combination	shut-in	gas expansion	12690	—	6	—	50	178	6092	—	—			15	164
El Paso Mescalero Unit 1	Morrowan	Lea	1961	SEI	transition	—	—	abandoned	gas expansion	13160	37	—	—	—	—	4052	7224	—			1	56
Humble Elliott Federal 1	Morrowan	Lea	1952	SEI	shelf	sandstone	structural	abandoned	gas expansion	12880	30	—	—	51	—	400	17686	—			0	83
Lawton State 2	Derryan	Lea	1952	SEI	shelf	sandstone	structural	abandoned	gas expansion	11342	40	—	—	53	150	1600	11700	—			3	38
Pan American State AD 1	Morrowan	Eddy	1954	SEI	transition	sandstone	structural	abandoned	gas expansion	11060	24	—	—	48	—	4380	—	—			1	140
Western Natural Gas Grambling State 1	Morrowan	Lea	1954	SEI	shelf	sandstone	combination	producing	gas expansion	12310	40	—	—	58	160	6792	20000	—			16	758
																					1504	65107
OIL FIELDS																						
Allison Penn	Wolfcampian	Lea	1954	SEI	shelf	limestone	combination	producing	solution gas	9673	17	9	200	48	155	3363	1346	119447	27349	16031		9923
Anderson Ranch Penn	Virgilian	Lea	1954	OWO	shelf	dolomite	structural	abandoned	water	12362	10	—	—	38	—	—	0	—	0	0		0
Anderson Ranch Wolfcamp	Virgilian	Lea	1953	SEI	shelf	limestone	structural	producing	solution gas	9664	50	10	114	42	140	3731	313	—	8881	4405		4541
Anderson Ranch Penn East	Virgilian	Lea	1957	SUS	shelf	limestone	structural	abandoned	solution gas	10960	24	4	1	40	152	60	1732	—	10	20		17
Apache Springs Wolfcamp	Wolfcampian	Chaves	1955	SUS	shelf	limestone	stratigraphic	abandoned	water	7929	7	8	1	42	134	1900	1094	—	5	5		0
Bagley Penn	Virgilian	Lea	1949	SEI	shelf	limestone	combination	producing	solution gas	9001	45	7	1	47	148	3290	2700	67098	3334	3238		9598
Bagley Lower Penn North	Desmoinesian	Lea	1957	SUS	shelf	limestone	stratigraphic	producing	solution gas	10058	20	6	—	53	145	3775	3091	—	175	120		313
Bagley East Wolfcamp	Wolfcampian	Lea	1955	SEI	shelf	limestone	combination	abandoned	solution gas	9994	17	8	1	43	129	3680	1200	—	19	19		11
Baum Wolfcamp	Virgilian	Lea	1955	SUB	shelf	limestone	combination	producing	solution gas	9940	20	8	—	43	150	150	1141	—	181	116		128
Bough Permo Penn	Wolfcampian	Lea	1949	SEI	shelf	limestone	combination	shut-in	solution gas	9615	20	13	30	44	160	3588	1604	109594	4500	4505		6340
Bronco Wolfcamp	Virgilian	Lea	1953	SEI	shelf	limestone	combination	producing	solution gas	9600	25	13	45	41	138	3640	1037	—	1795	742		421
Buffalo Wolfcamp	Wolfcampian	Lea	1954	SEI	transition	limestone	structural	producing	solution gas	10597	28	8	—	38	155	3700	1052	—	103	48		37
Canyon Wolfcamp	Wolfcampian	Eddy	1959	SEI	transition	dolomite	stratigraphic	producing	water	5741	12	9	—	45	—	300	—	—	42	23		0
Caprock Wolfcamp East	Wolfcampian	Lea	1953	SUB	shelf	limestone	combination	producing	solution gas	8400	13	10	—	44	127	2895	1190	—	630	263		396
Caprock East Penn	Derryan	Lea	1952	SUB	shelf	limestone	combination	abandoned	water	10000	9	8	—	48	154	1099	5060	—	23	23		0
Cass Penn	Desmoinesian	Lea	1944	SUS	platform	limestone	structural	producing	solution gas	7700	35	11	—	40	145	3146	196	39374	3855	1931		1657
Caudill Penn	Missourian	Lea	1951	SEI	shelf	limestone	structural	abandoned	water	11440	25	8	—	45	—	40	930	—	2	0		0
Caudill Wolfcamp	Wolfcampian	Lea	1956	OWO	shelf	limestone	structural	producing	solution gas	10292	22	8	1	42	155	3020	930	—	1627	1309		854
Cedar Lake Atoka	Missourian	Eddy	1961	—	transition	dolomite	—	producing	solution gas	10919	8	7	—	42	—	—	1894	—	41	12		18
Chambers Wolfcamp	Wolfcampian	Lea	1955	SEI	shelf	limestone	structural	producing	solution gas	10581	34	6	36	44	178	3827	1195	—	327	157		235
Crossroads Penn	Virgilian	Lea	1949	SEI	shelf	limestone	combination	producing	solution gas	9750	12	7	—	49	164	—	1663	119909	2298	2006		2489
Dean Permo Penn	Desmoinesian	Lea	1955	OWO	shelf	limestone	combination	producing	solution gas	11560	38	5	3	44	169	4134	1655	—	6366	4654		8512
Denton Wolfcamp	Wolfcampian	Lea	1950	SUS	shelf	limestone	structural	producing	solution gas	9395	53	10	13	45	154	3820	164	103705	38461	22815		8768
Denton Wolfcamp South	Wolfcampian	Lea	1960	SUB	shelf	limestone	—	producing	solution gas	10000	8	9	—	44	147	80	655	—	58	92		12
Dickinson Penn	Derryan	Lea	1957	SUS	shelf	limestone	combination	abandoned	solution gas	11504	40	7	—	43	161	75	2509	—	88	27		69
Echol Wolfcamp	Wolfcampian	Lea	1960	OWO	shelf	limestone	structural	producing	solution gas	9446	10	9	—	42	145	2560	584	—	33	11		4
Eidson Penn	Wolfcampian	Lea	1953	SEI	shelf	limestone	stratigraphic	producing	solution gas	10705	35	9	20	41	158	4064	1892	90559	2592	2219		3777
Empire Wolfcamp	Wolfcampian	Eddy	1954	SEI	transition	limestone	stratigraphic	abandoned	solution gas	7390	17	8	—	41	118	2435	432	—	46	46		53
Field Ranch Wolfcamp	Wolfcampian	Lea	1956	SEI	shelf	limestone	combination	producing	solution gas	9466	14	7	—	42	—	3200	310	—	82	65		15
Four Lakes Penn	Virgilian	Lea	1956	SUS	shelf	limestone	structural	producing	solution gas	10277	16	10	60	43	163	3803	2386	—	1051	1372		1048
Gladiola Wolfcamp	Wolfcampian	Lea	1951	SEI	shelf	limestone	combination	producing	solution gas	9555	35	8	—	42	—	3672	1600	—	4354	3094		2935
Gladiola Wolfcamp South	Wolfcampian	Lea	1955	SEI	shelf	dolomite	combination	producing	solution gas	9688	26	8	—	38	155	2982	800	—	163	122		50
Gladiola Penn South West	Derryan	Lea	1961	OWO	shelf	sandstone	structural	producing	solution gas	11119	5	7	—	54	163	525	1975	—	123	147		148
Hightower Permo Penn	Wolfcampian	Lea	1950	SEI	shelf	limestone	structural	producing	solution gas	8660	30	10	—	70	144	3130	875	—	960	468		4036
Hightower Penn East	Virgilian	Lea	1959	SUS	shelf	dolomite	stratigraphic	producing	solution gas	10218	26	7	—	41	—	3140	477	—	136	69		53
Jenkins Wolfcamp	Wolfcampian	Lea	1960	SEI	shelf	limestone	structural	producing	solution gas	9604	15	7	20	48	180	525	1214	—	184	194		149
Kemnitz Wolfcamp	Virgilian	Lea	1956	SUS	shelf	limestone	stratigraphic	producing	solution gas	10742	32	9	9	39	158	3788	1623	81382	15076	10012		13103
Kemnitz Cisco	Missourian	Lea	1957	SUB	shelf	dolomite	stratigraphic	producing	solution gas	11446	30	8	16	43	163	6911	1140	—	502	325		572
Kemnitz Penn	Missourian	Lea	1956	SEI	shelf	dolomite	—	producing	solution gas	11219	50	8	—	44	—	1100	932	—	305	135		376
King Wolfcamp	Virgilian	Lea	1951	SEI	shelf	limestone	combination	producing	solution gas	10125	7	8	—	36	158	3948	734	108410	625	488		563
King Penn	Missourian	Lea	1960	SUB	shelf	limestone	combination	producing	solution gas	10708	25	4	38	37	152	3713	870	118521	28	12		18
Knowles Wolfcamp South	Wolfcampian	Lea	1961	SEI	basin	—	—	abandoned	—	10001	99	—	—	39	—	4055	848	—	2	2		2
Lane Penn	Virgilian	Lea	1956	SEI	shelf	limestone	structural	producing	solution gas	9802	18	3	9	50	162	3537	1980	—	612	451		597
Lane Wolfcamp	Virgilian	Lea	1955	SEI	shelf	limestone	structural	producing	solution gas	9648	13	11	100	50	162	3516	2000	—	1450	1028		1541
Lazy J Penn	Virgilian	Lea	1952	SEI	shelf	limestone	structural	producing	solution gas	9580	20	6	8	43	146	3546	1200	105741	4155	3326		4702
Leamex Wolfcamp	Wolfcampian	Lea	1958	SEI	transition	limestone	combination	producing	solution gas	10622	54	7	—	37	133	4048	1003	—	261	93		27
Leamex Penn	Missourian	Lea	1956	SEI	transition	limestone	combination	producing	solution gas	11316	36	7	—	37	136	150	1061	—	525	76		486
Little Lucky Lake Penn	Morrowan	Chaves	1959	—	shelf	—	—	abandoned	—	10252	30	—	—	48	—	4820	3200	—	1	1		0
Loco Hills Wolfcamp	Wolfcampian	Eddy	1960	SUS	transition	—	—	abandoned	water	9685	—	—	—	42	—	300	—	—	1	1		0
Lone Wolfcamp	Virgilian	Chaves	1953	SEI	shelf	limestone	stratigraphic	producing	solution gas	7774	19	11	—	42	129	3068	1220	—	168	115		180
Lovington Wolfcamp	Wolfcampian	Lea	1952	SUB	transition	limestone	combination	abandoned	solution gas	10148	5	9	—	40	150	3727	719	131544	81	81		159
Lovington Penn East	Desmoinesian	Lea	1951	SEI	transition	limestone	combination	producing	solution gas	11080	30	7	2	43	168	3327	1092	—	2484	1543		1780
Lusk Strawn	Desmoinesian	Lea	1960	SEI	transition	—	—	producing	water	11168	38	7	17	48	161	5810	3084	—	262	1763		0
Maljamar Wolfcamp	Wolfcampian	Lea	1961	SUS	transition	limestone	stratigraphic	producing	solution gas	10390	10	9	—	42	152	2638	927	—	83	94		20
Maljamar Strawn	Virgilian	Lea	1960	RAN	transition	limestone	combination	abandoned	solution gas	11616	10	7	—	51	226	6210	1022	—	51	36		32
Mescalero Permo Penn	Virgilian	Lea	1952	SUS	shelf	limestone	structural	producing	solution gas	8390	16	8	18	46	163	325	432	—	1134	682		877
Mescalero Wolfcamp North	Wolfcampian	Lea	1960	SUS	shelf	limestone	combination	producing	water	8350	15	9	13	43	142	3011	1074	—	97	54		0
Milnesand Penn	Wolfcampian	Roosevelt	1956	SEI	shelf	limestone	combination	producing	solution gas	9202	14	4	10	47	134	3320	1570	—	936	844		1076
Moore Penn	Desmoinesian	Lea	1952	SUB	shelf	limestone	structural	producing	solution gas	9654	8	7	—	48	164	3411	2454	—	66	29		363
New Hope Penn	Missourian	Roosevelt	1951	SEI	shelf	limestone	stratigraphic	abandoned	solution gas	8131	11	5	—	48	150	2590	1615	—	7	7		14
Pearl Penn	Morrowan	Lea	1959	SEI	transition	sandstone	stratigraphic	producing	solution gas	12640	24	7	—	43	164	325	4700	—	71	42		98
Penasco Wolfcamp	Wolfcampian	Eddy	1960	SEI	transition	limestone	stratigraphic	producing	solution gas	5740	10	6	—	45	105	700	1345	—	25	13		24
Prarie Penn South	Wolfcampian	Roosevelt	1960	—	shelf	limestone	—	producing	solution gas	9653	7	4	194	42	—	—	1600	—	729	1558		751
Querecho Plains Penn	Desmoinesian	Lea	1957	SEI	transition	limestone	combination	producing	solution gas	11595	50	7	25	42	171	50	1621	—	339	304		441
Ranger Lake Penn	Virgilian	Lea	1956	SEI	shelf	limestone	combination	producing	solution gas	10312	33	10	28	41	162	3620	796	—	5854	3093		2334
Reeves Penn	Desmoinesian	Lea	1956	SEI	transition	sandstone	structural	producing	solution gas	10945	10	10	—	45	171	4650	1432	—	882	753		766
Remuda Wolfcamp	Wolfcampian	Eddy	1960	SEI	basin	limestone	structural	producing	solution gas	11111	43	9	—	47	140	100	—	—	26	8		18
Sanmal Penn	Missourian	Lea	1957	—	transition	limestone	—	shut-in	solution gas	11708	14	7	—	42	—	500	1036	—	10	10		35
Saunders Permo Penn	Virgilian	Lea	1950	SEI	shelf	limestone	structural	producing	solution gas	9908	30	10	—	43	146	3523	1400	75728	30286	22536		32955
Saunders Permo Penn South	Virgilian	Lea	1951	SUS	shelf	limestone	combination	producing	solution gas	10587	22	8	1	36	150	2600	820	—	377	134		95
Scharb Penn	Morrowan	Lea	1960	SEI	transition	sandstone	stratigraphic	abandoned	solution gas	13033	23	—	—	54	244	6640	—	—	4	4		49
Shoe Bar Penn	Wolfcampian	Lea	1954	SEI	transition	limestone	stratigraphic	producing	solution gas	10440	55	10	—	44	—	1000	879	—	423	205		47
Shoe Bar Penn North	Desmoinesian	Lea	1958	OWO	transition	limestone	stratigraphic	producing	solution gas	10954	26	7	—	43	—	1100	1227	30484	69	30		54
Shugart Wolfcamp	Wolfcampian	Eddy	1961	SEI	transition	limestone	structural	producing	water	9615	10	9	—	42	142	3690	1894	—	60	12		18
Spencer Penn	Wolfcampian	Lea	1961	SUB	transition	limestone	combination	abandoned	solution gas	9698	60	—	—	44	166	3825	700	—	1	1		0
Squyres Penn	Virgilian	Roosevelt	1961	SUB	shelf	limestone	combination	producing	solution gas	8380	10	7	—	45	—	3388	163	—	20	6		4
SRR Penn	Missourian	Lea	1955	SEI	shelf	limestone	structural	abandoned	solution gas	9208	10	—	—	49	162	3185	3160	—	37	37		164
Tatum Wolfcamp	Wolfcampian	Lea	1957	SUS	shelf	limestone	structural	producing	solution gas	10285	19	10	12	43	—	3930	2100	—	1235	372		367
Tento Deep Wolfcamp	Wolfcampian	Lea	1960	SEI	transition	limestone	stratigraphic	abandoned	solution gas	11394	29	—	—	40	—	20	41	—	2	2		1
Townsand Wolfcamp	Wolfcampian	Lea	1952	SEI	shelf	limestone	stratigraphic	producing	solution gas	10410	36	8	38	40	156	3950	2003	—	23493	14927		45597
Tulk Wolfcamp	Virgilian	Lea	1951	SEI	shelf	limestone	combination	producing	solution gas	9700	25	8	—	42	161	3470	1178	—	1825	1276		1955
Tulk North Wolfcamp	Virgilian	Lea	1952	SUS	shelf	limestone	structural	abandoned	water	9564	10	—	—	41	144	3025	1500	—	5	5		0
Vacuum South Wolfcamp	Wolfcampian	Lea	1960	OWO	transition	limestone	combination	producing	solution gas	10011	16	9	—	38	—	—	—	—	69	63		23
Williams Penn	Derryan	Lea	1955	SEI	shelf	sandstone	stratigraphic	abandoned	water	11097	17	—	—	48	161	4187	3089	—	82	55		0
Williams Penn North	Derryan	Lea	1961	SEI	shelf	limestone	structural	producing	—	11050	10	—	—	48	—	4186	5640	—	51	4		8
Amerada Mathers B 1	Wolfcampian	Lea	1957	SEI	shelf	limestone	structural	producing	solution gas	8641	16	9	—	46	—	675	2819	—	84	50		264
El Paso Mescalero Ridge Unit 1	Morrowan	Lea	1961	SEI	transition	—	—	abandoned	—	13328	12	—	—	—	—	6545	—	—	11	11		5
Forest State A 1	Missourian	Lea	1958	—	shelf	—	—	abandoned	water	11450	73	—	—	42	—	750	1349	—	3	3		0
Humble S Saunders Unit 1	Desmoinesian	Lea	1956	SUB	shelf	limestone	structural	abandoned	water	—	34	—	—	39	—	—	—	—	0	0		0
Lawton State L 1	Desmoinesian	Lea	1953	SEI	transition	limestone	stratigraphic	abandoned	water	11438	34	—	—	42	155	1100	1243	—	4	4		0
Shell Henshaw 1	Wolfcampian	Eddy	1960	SEI	transition	limestone	combination	producing	solution gas	8500	10	6	17	43	126	3410	1377	—	51	143		97
Shell Henshaw 2	Virgilian	Eddy	1961	SEI	transition	limestone	combination	producing	solution gas	9124	18	7	20	42	126	3390	595	—	54	130		27
Shell Henshaw 3	Virgilian	Eddy	1961	SEI	transition	limestone	combination	producing	solution gas	8711	30	7	2	41	126	3390	1501	—	53	34		16
																			205041	137391		179308

Sources of data: New Mexico Oil & Gas Engineering Committee, Annual Reports; Stipp et al., 1956; Sweeney et al., 1960; American Association of Petroleum Geologists Bulletin, annual exploration issues; International Oil Scouts, annual production reviews; various oil companies.

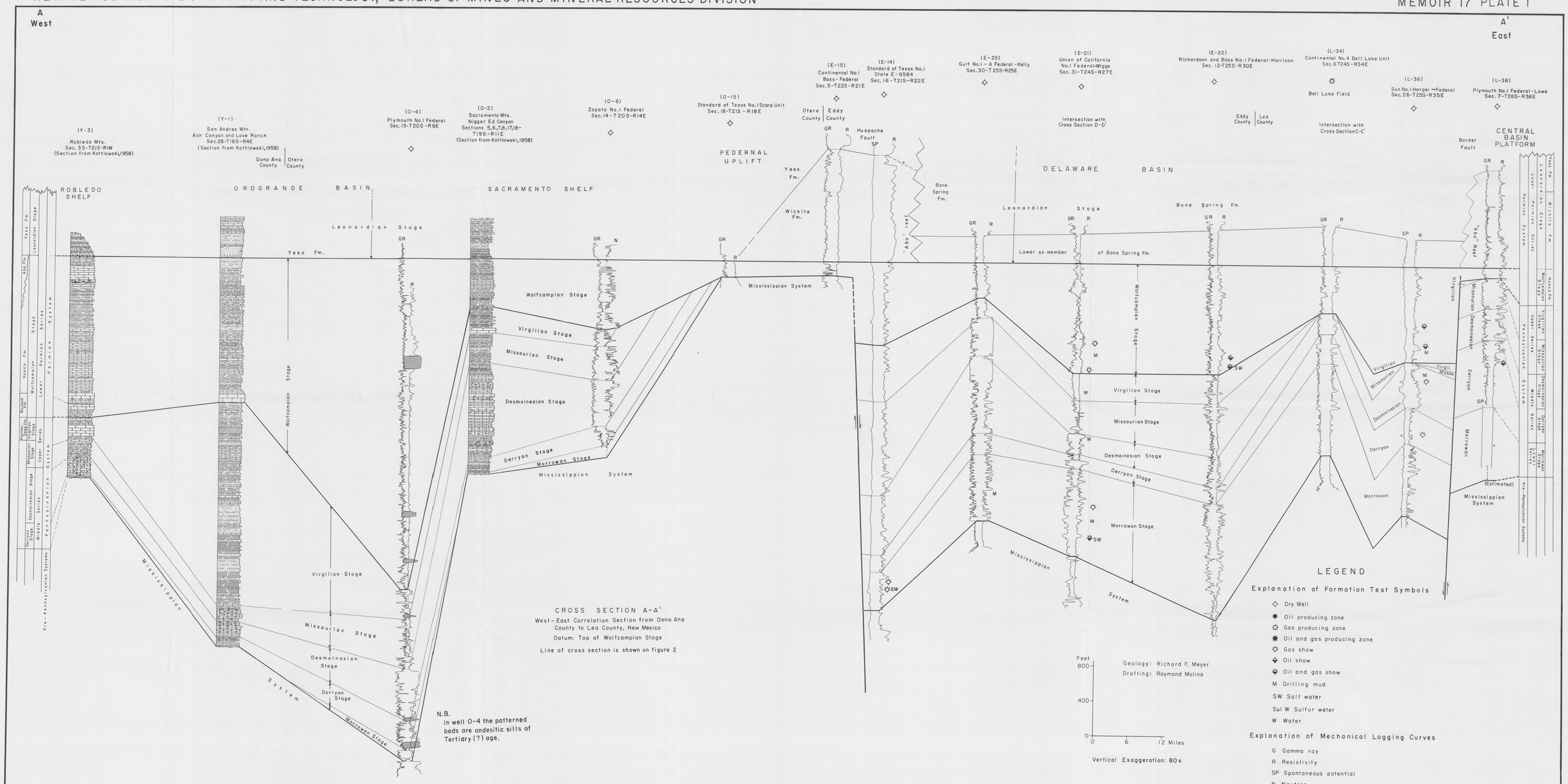
1 SEI, seismic; SUB, subsurface geology; SUS, seismic plus subsurface geology; RAN, random drilling; OWO, oil well worked over.

2 0, no water in reservoir.

TABLE 13. CERTAIN CHARACTERISTICS OF DISTILLATE FRACTIONS OF CRUDE OILS FROM SEVEN RESERVOIRS IN VIRGILIAN AND WOLFCAMPIAN STRATA

FRACTION NUMBER AND FIELD (Distillation temp.; 1-10 at 740 mm Hg, 11-15 at 40 mm Hg)	VOLUME PER CENT		SPECIFIC GRAVITY (60/60°F)		REFRACTIVE INDEX (n_d at 20°C)	SPECIFIC DISPERSION	MOLECULAR WEIGHT	CORRELATION INDEX		AROMATICS		NAPHTHENES (weight per cent)	PARAFFINS (weight per cent)	CLOUD TEST (°F)	VISCOSITY S.U. SECS (100°F)
	FRACTION	SUM	FRACTION	AROMATIC FREE				FRACTION	AROMATIC FREE	VOLUME PER CENT	WEIGHT PER CENT				
1 (50°C, 122°F)															
Bagley	3.3	3.3	0.642												
Caprock, East	1.5	1.5	.643												
Denton	4.1	4.1	.641		1.37247	129.9									
Gladiola	3.5	3.5	.645		.36836	134.1									
Kemnitz															
Saunders	2.8	2.8	.639		.36484	112.1									
Townsend															
2 (75°C, 167°F)															
Bagley	5.3	8.6	.673	0.667	.37855	126.9	79	9	6	2.8	2	5	93		
Caprock, East	2.6	4.1	.676	.665	.37430	130.0	83	10	5	4.7	4	5	91		
Denton	4.1	8.2	.673	.667	.37876	122.0	83	8	6	3.3	3	6	91		
Gladiola	4.1	7.6	.683	.667	.38343	127.3	83	14	6	3.0	2	15	83		
Kemnitz	2.7	2.7	.698	.655	.41407	152.5	82	—		19.1	15	0	85		
Saunders	4.1	6.9	.684	.673	.38386	129.9	83	14	9	4.7	4	13	83		
Townsend	4.0	4.0	.735	.704	.41041	147.7	79	—	24	16.9	13	43	44		
3 (100°C, 212°F)															
Bagley	8.2	16.8	.716	.705	.40041	130.8	84	19	14	5.7	5	23	72		
Caprock, East	7.3	11.4	.721	.710	.40140	130.8	93	22	17	5.7	5	7	88		
Denton	8.7	16.9	.720	.713	.40113	127.7	93	21	18	3.6	3	50	47		
Gladiola	9.8	17.4	.729	.721	.40527	129.1	92	26	22	4.6	4	36	60		
Kemnitz	10.7	13.4	.761	.727	.42432	154.7	89	41	25	23.3	19	43	38		
Saunders	10.2	17.1	.735	.718	.40927	136.3	90	28	20	9.7	8	33	59		
Townsend	15.9	19.9	.778	.742	.43264	157.2	85	49	32	25.7	21	54	25		
4 (125°C, 257°F)															
Bagley	11.0	27.8	.742	.725	.41483	137.8	105	23	15	11.0	9	23	68		
Caprock, East	10.7	22.1	.746	.730	.41527	137.1	105	25	17	10.5	9	27	64		
Denton	9.3	26.2	.749	.737	.41673	134.4	105	26	20	8.6	7	35	58		
Gladiola	11.0	28.4	.754	.742	.41940	135.1	104	28	23	9.2	8	41	51		
Kemnitz	13.7	27.1	.785	.753	.43737	158.4	100	43	28	27.1	23	49	28		
Saunders	11.0	28.1	.763	.743	.42381	142.4	103	33	23	14.6	12	39	49		
Townsend	11.8	31.7	.795	.756	.44274	166.2	99	48	29	33.4	28	51	21		
5 (150°C, 302°F)															
Bagley	8.8	36.6	.763	.741	.42636	143.2	118	25	15	16.4	14	23	63		
Caprock, East	9.5	31.6	.765	.741	.42636	142.0	118	26	16	15.5	14	26	60		
Denton	7.3	33.5	.769	.745	.42916	144.9	117	28	17	17.9	16	27	57		
Gladiola	6.6	35.0	.775	.755	.43092	141.8	117	31	21	15.5	14	36	50		
Kemnitz	7.4	34.5	.797	.758	.44478	163.4	113	41	23	33.8	34	38	28		
Saunders	7.7	35.8	.779	.754	.43436	148.9	115	33	21	21.3	19	36	45		
Townsend	7.4	39.1	.803	.763	.44834	165.3	113	44	25	35.6	31	42	27		
6 (175°C, 347°F)															
Bagley	6.9	43.5	.779	.753	.43551	146.2	130	26	14	19.8	17	23	60		
Caprock, East	7.5	39.1	.782	.759	.43560	143.8	129	27	16	17.9	16	28	56		
Denton	7.3	40.8	.785	.762	.43884	145.3	128	29	18	19.2	17	31	52		
Gladiola	6.1	41.1	.792	.771	.44083	144.9	128	32	22	19.0	17	39	44		
Kemnitz	6.1	40.6	.802	.766	.44809	158.1	126	37	20	30.6	31	34	35		
Saunders	6.1	41.9	.792	.764	.44147	150.5	128	32	19	23.8	21	33	46		
Townsend	4.9	44.0	.805	.768	.44936	159.8	125	38	21	32.1	28	37	35		
7 (200°C, 392°F)															
Bagley	5.2	48.7	.792	.767	.44234	144.2	146	26	14	18.2	16	24	60		
Caprock, East	6.9	46.0	.794	.773	.44248	143.2	146	27	17	17.4	15	32	53		
Denton	4.8	45.6	.800	.774	.44553	147.3	145	30	17	20.9	19	31	50		
Gladiola	5.5	46.6	.806	.780	.44870	147.3	144	32	20	21.9	19	36	45		
Kemnitz	4.2	44.8	.808	.776	.45057	154.0	144	33	18	26.8	27	32	41		
Saunders	5.0	46.9	.802	.777	.44716	147.7	144	31	19	21.3	19	34	47		
Townsend	4.6	48.6	.813	.780	.45266	155.9	142	36	20	28.6	25	36	39		
8 (225°C, 437°F)															
Bagley	6.0	54.7	.804	.775	.44938	146.5	165	26	12	20.0	17	23	60		
Caprock, East	6.2	52.2	.807	.778	.44960	147.9	164	27	14	21.1	19	24	57		
Denton	5.4	51.0	.813	.787	.45253	146.9	164	30	18	20.4	18	32	50		
Gladiola	5.7	52.3	.820	.789	.45695	150.7	162	33	19	23.8	21	34	45		
Kemnitz	4.9	49.7	.820	.788	.45682	152.3	162	33	18	25.2	25	33	42		
Saunders	5.2	52.1	.816	.787	.45452	150.1	162	32	18	23.2	20	33	47		
Townsend	4.2	52.8	.828	.788	.46115	159.0	160	37	18	31.1	27	34	39		
9 (250°C, 482°F)															
Bagley	5.7	60.4	.819	.787	.45757	149.7	180	28	13	20.8	18	23	59		
Caprock, East	6.0	58.2	.821	.779	.45730	154.9	180	29	9	25.5	22	16	62		
Denton	5.7	56.7	.828	.788	.46128	154.6	180	32	13	25.5	22	24	54		
Gladiola	5.8	58.1	.835	.791	.46654	159.3	178	35	14	29.4	26	26	48		
Kemnitz	5.9	55.6	.841	.792	.46902	162.8	178	38	14	32.5	28	30	42		
Saunders	5.6	57.7	.834	.792	.46469	157.0	178	35	15	27.6	24	30	46		
Townsend	5.8	58.6	.850	.796	.47428	169.4	175	42	17	38.2	33	32	35		
10 (275°C, 527°F)															
Bagley	6.1	66.5	.834	.798	.46551	157.2	200	30	13	23.5	21	25	54		
Caprock, East	6.8	65.0	.834	.795	.46548	160.0	199	30	12	25.4	22	22	56		
Denton	6.2	62.9	.842	.804	.47007	161.3	199	34	16	26.5	23	31	46		
Gladiola	6.3	64.4	.849	.818	.47533	168.6	198	37	23	31.8	28	41	31		
Kemnitz	6.0	61.6	.858	.807	.48029	174.6	194	41	17	36.3	32	32	36		
Saunders	6.3	64.0	.850	.808	.47440	166.5	198	38	18	30.4	27	34	39		
Townsend	5.5	64.1	.867	.820	.48429	174.7	192	46	23	36.7	32	42	26		
11 (200°C, 392°F)															
Bagley	2.9	69.4	.849	.811	.47279	160.5	221	33	15	26.9	24	30	46	—	—
Caprock, East	4.3	69.3	.849	.814	.47307	159.8	220	33	17	26.4	24	33	43	15	39
Denton	2.4	65.3	.858	.823	.47652	161.5	216	37	21	27.8	25	39	36	—	—
Gladiola	3.0	67.4	.860	.836	—	—	216	38	—	—	—	—	—	15	39
Kemnitz	5.8	67.4	.884	—	.49091	181.6	210	50	27	43.4	39	47	14	20	41
Saunders	2.8	66.8	.862	—	—	—	215	39	—	—	—	—	—	10	40
Townsend	2.1	66.2	.874	—	.49117	—	222	45	—	—	—	—	—	14	41
12 (225°C, 437°F)															
Bagley	5.3	74.7	.855	—	.47582	160.8	244	32	—	—	—	—	—	—	—
Caprock, East	6.5	75.8	.857	—	.47701	169.0	242	33	—	—	—	—	—	44	40
Denton	5.4	70.7	.864	—	.47910	160.1	238	37	—	—	—	—	—	—	—
Gladiola	5.4	72.8	.865	—	—	—	240	37	—	—	—	—	—	30	42
Kemnitz	5.3	72.7	.894	—	.49766	189.2	234	51	—	—	—	—	—	40	51
Saunders	4.8	71.6	.868	—	—	—	240	38	—	—	—	—	—	35	44
Townsend	4.6	70.8	.883	—	.49360	—	236	46	—	—	—	—	—	30	46
13 (250°C, 482°F)															
Bagley	4.5	79.2	.864		.48159	164.9	268	33	—	—	—	—	—	—	52
Caprock, East	4.2	80.0	.866		.48248	157.0	268	34	—	—	—	—	—	55	55
Denton	5.1	75.8	.875		.48469	168.3	265	38	—	—	—	—	—	—	56
Gladiola	4.9	77.7	.874		—	—	265	38	—	—	—	—	—	45	54
Kemnitz	4.3	77.0	.901		.50377	189.1	260	51	—	—	—	—	—	60	70
Saunders	4.8	76.4	.878		—	—	265	40	—	—	—	—	—	50	55
Townsend	4.3	75.1	.896		.49951	—	236	48	—	—	—	—	—	50	59
14 (275°C, 527°F)															
Bagley	3.7	82.9	.877		—	—	295	36	—	—	—	—	—	—	—
Caprock, East	3.5	83.5	.874		—	—	295	35	—	—	—	—	—	70	72
Denton	4.4	80.2	.885		—	—	292	40	—	—	—	—	—	—	77
Gladiola	4.2	81.9	.885		—	—	291	40	—	—	—	—	—	65	73
Kemnitz	4.6	81.6	.912		—	—	285	53	—	—	—	—	—	80	125
Saunders	3.5	79.9	.888		—	—	290	41	—	—	—	—	—	65	74
Townsend	3.8	78.9	.905		—	—	286	49	—	—	—	—	—	64	87
15 (300°C, 572°F)															
Bagley	4.0	86.9	.883				330	36	—	—	—	—	—		103
Caprock, East	4.4	87.9	.885		—	—	335	37	—	—	—	—	—	85	110
Denton	4.6	84.8	.895		—	—	345	42	—	—	—	—	—	—	135
Gladiola	4.5	86.4	.895		—	—	335	42	—	—	—	—	—	85	120
Kemnitz	4.3	85.9	.922				355	55	—	—	—	—	—	90	265
Saunders	4.8	84.7	.897		—	—	330	43	—	—	—	—	—	80	125
Townsend	4.6	83.5	.912		—	—	340	50	—	—	—	—	—	80	170
Residuum															
Bagley	9.6	96.5	.925												
Caprock, East	11.7	99.6	.926												
Denton	14.1	98.9	.935												
Gladiola	12.4	98.8	.946												
Kemnitz	13.1	99.0	.959												
Saunders	13.6	98.3	.943												
Townsend	11.9	95.4	.949												

Source of data: U.S. Bureau of Mines Bartlesville Laboratory, Okla., McKinney and Garton, 1957.


A
West
A'
East
(Y-3)
Robledo Mts.
Sec. 35-T21S-R1W
(Section from Kottlowski,1958)
(Y-1)
San Andres Mtr.
Ash Canyon and Love Ranch
Sec.28-T19S-R4E
(Section from Kottlowski,1958)
Dona Ana County
Otero County
(O-4)
Plymouth No.1 Federal
Sec.15-T20S-R9E
(O-2)
Sacramento Mts.
Nigger Ed Canyon
Sections 5,6,7,8,17,18-
T19S-R11E
(Section from Kottlowski,1958)
(O-6)
Zapata No.1 Federal
Sec.14-T20S-R14E
(O-15)
Standard of Texas No.1 Scarp Unit
Sec. 18-T21S-R18E
(E-15)
Continental No.1
Bass-Federal
Sec.5-T22S-R21E
(E-14)
Standard of Texas No.1
State E-6584
Sec. 16-T21S-R22E
(E-25)
Gulf No.1-A Federal-Kelly
Sec.30-T25S-R25E
(E-21)
Union of California
No.1 Federal-Wiggs
Sec. 31-T24S-R27E
(E-22)
Richardson and Bass No.1 Federal-Harrison
Sec. 12-T25S-R30E
(L-34)
Continental No.4 Bell Lake Unit
Sec.6 T24S-R34E
(L-36)
Sun No.1 Harper-Federal
Sec.26-T25S-R35E
(L-38)
Plymouth No.1 Federal-Lowe
Sec.7-T26S-R38E
Bell Lake Field
Otero County
Eddy County
Intersection with Cross Section D-D'
Eddy County
Lea County
Intersection with Cross Section C-C'
ROBLEDO SHELF
OROGRANDE BASIN
SACRAMENTO SHELF
PEDERNAL UPLIFT
DELAWARE BASIN
CENTRAL BASIN PLATFORM
Yeso Fm.
Abo Fm.
Hueco Fm.
Bursum Fm.
Leonardian Stage
Wolfcampian Stage
Lower Permian Series
Permian System
Upper Series
Pennsylvanian System
Virgilian Stage
Missourian Stage
Desmoinesian Stage
Middle Series
Derryan Stage
Morrowan Stage
Pre-Pennsylvanian Systems
Mississippian System
Huapache Fault
Wichita Fm.
Bone Spring Fm.
Lower ss member of Bone Spring Fm.
"Abo" reef
Border Fault
Leonardian Stage
Lower Permian Series
Permian System
Wolfcamp Fm.
Wolfcampian Stage
Virgilian Stage
Missourian Stage
Desmoinesian Stage
Derryan Stage
Morrowan Stage
Pennsylvanian System
Mississippian System
Pre-Pennsylvanian Systems
(Estimated)
SW
M
CROSS SECTION A-A'
West-East Correlation Section from Dona Ana County to Lea County, New Mexico
Datum: Top of Wolfcampian Stage
Line of cross section is shown on figure 2
N.B.
In well O-4 the patterned beds are andesitic sills of Tertiary (?) age.
Feet
800
400
0
0 6 12 Miles
Vertical Exaggeration: 80x
Geology: Richard F. Meyer
Drafting: Raymond Molina
LEGEND
Explanation of Formation Test Symbols
Dry Well
Oil producing zone
Gas producing zone
Oil and gas producing zone
Gas show
Oil show
Oil and gas show
M Drilling mud
SW Salt water
Sul W Sulfur water
W Water
Explanation of Mechanical Logging Curves
G Gamma ray
R Resistivity
SP Spontaneous potential
N Neutron


B
West
B'
East
(S-15)
Joyita hills
Sec. 23-T1N-R1E
(Section from U.S.G.S.P.M. 61)
(S-16)
Los Pinos Mts.
Turret Mesa
Sec. 28-T1N-R3E
(Section from U.S.G.S. P.M. 61)
(S-14)
Skelly No. 1 Goddard
Sec. 22-T2S-R4E
(S-5)
Oscura Mts.
Sec. 23, 14, 26, 35-T2S-R1E
2, 3-T3S-R1E
(Section from U.S.G.S.O.M. 121)
(S-4)
Sun No. 1 Bingham-State
Sec. 23-T5S-R5E
(X-1)
Standard of Texas No. 1 Federal-Heard
Sec. 33-T6S-R9E
Socorro County
Lincoln County
(X-3)
Texas No. 1 Boyle
Sec. 11-T9S-R20E
Lincoln County
Chaves County
(C-9)
Dekalb No. 1 Lewis
Sec. 13-T10S-R 25E
(C-10)
Honolulu No. 1 Levick-State
Sec. 16-T10S-R 27E
Intersection with cross section D-D'
(C-11)
Dekalb and Los Nietos No. 1-X White
Sec. 28-T10S-R29E
(C-12)
Stanolind No. 1
Polecat Canyon Unit
Sec. 34-T10S-R31E
Chaves County
Lea County
(L-5)
Sinclair No. 1 State 262
Sec. 22-T11S-R33E
(L43)
Sunray Mid Continent No. 1 E. Bagley Unit
Sec. 9-T12S-R34E
East Bagley Field
(L-6)
Sunray Mid Continent No. 1
State L
Sec. 25 T11S-R35E
Intersection with cross section C-C'
(L-7)
Markham No. 1 Webb Heirs
Sec. 23-T11S-R37E
(L-44)
Continental No. 1 E. Gladiola Unit
Sec. 34-T11S-R38E
JOYITA UPLIFT
ESTANCIA BASIN
OSCURA UPLIFT
OROGRANDE BASIN
PEDERNAL UPLIFT
NORTHWEST SHELF
Yeso Fm.
Abo Fm.
Bursum Fm.
Upper Arkosic Mbr.
Madera Fm.
Lower Gray Ls. Mbr.
Sandia Fm.
Upper Clastic Mbr.
Leonardian Stage
Wolfcampian Stage
Virgilian Stage
Missourian Stage
Desmoinesian Stage
Derryan Stage
Lower Permian Series
Upper Series
Middle Series
Permian System
Pennsylvanian System
Pre-Pennsylvanian Systems
Leonardian Stage
Wolfcampian Stage
Virgilian Stage
Missourian Stage
Desmoinesian Stage
Derryan Stage
Precambrian Systems
Capitan Mt.
Tertiary Intrusive
TERTIARY INTRUSIVE
TERTIARY INTRUSIVE
Precambrian Systems
Wichita Fm.
Morrowan Stage
Mississippian System
Yeso Fm.
Leonardian Stage
Wichita Fm.
Lower Permian Series
Permian System
Hueco Fm.
Wolfcampian Stage
Virgilian
Missourian
Upper Series
Desmoinesian
Derryan
Middle Series
Morrowan
Lower Series
Pennsylvanian System
Pre-Pennsylvanian Systems
GR
R
SP
N
M
SW
LEGEND
Explanation of Formation Test Symbols
Dry Well
Oil producing zone
Gas producing zone
Oil and gas producing zone
Gas show
Oil show
Oil and gas show
M Drilling mud
SW Salt water
Sul W Sulfur water
W Water
Explanation of Mechanical Logging Curves
G Gamma ray
R Resistivity
SP Spontaneous potential
N Neutron
Feet
800
400
0
0 6 12 Miles
Vertical Exaggeration: 80x
Geology: Richard F. Meyer
Drafting: Raymond Molina
CROSS SECTION B-B'
West-East Correlation Section from
Socorro County to Lea County, New Mexico
Datum: Top of Wolfcampian Stage
Line of cross section is shown on figure 2

C
North

C'
South

(R-2) Signal - Makin No.1 Bell Federal Sec. 32-T3S-R33E

(R-4) Austral No.1 Sadler Sec. 29-T4S-R32E

(R-5) Goldston No.1 Lambirth-State Sec.36-T5S-R32E

(R-12) Magnolia No.1 Brown Sec.6-T7S-R34E

(R-10) Magnolia No.1 Jacobs-Federal Sec.18-T8S-R35E

Milnesand Field

Roosevelt County | Lea County

(L-39) Magnolia No.2 Betenbough 'B' Sec14-T9S-R35E

Bough Field

(L-4) Magnolia No.1 Four Lakes Unit Sec.15-T10S-R34E

(L-45) Sinclair No.1 Anderson Sec.17-T12S R36E

(L-6) Sunray Mid Cont. No.1 State 'L' Sec.25-T11S-R35E

Intersection with cross section B-B'

(L-46) Pan American No.1 E.Saunders Unit Sec.12-T14S-R34E

(L-9) Sharples No.1 Alston Sec.17-T13S-R35E

(L-15) Humble No.1 S.Saunders Unit Sec.1-T16S-R33E

(L-47) Felmont No.1 Etcheverry Unit Sec. 15-T15S-R34E

(L-24) Pan American No.1 Buffalo Unit Sec.3-T19S R33E

Buffalo Field

(L-31) Phillips No.1 Etz Sec.1-T21S-R32E

(L-19) Phillips No.6 Leamex Sec. 23-T17S-R33E

Leamex Field

(L-27) Texaco No.1 Muse Federal Sec.7-T20S-R33E

(L-34) Continental No. 4 Bell Lake Unit Sec.6-T24S-R34E

Bell Lake Field

(J-1) Richardson & Bass No.1 Kyle Sec. 28-Blk54-TI-TPRR

Lea County N.M. | Loving County Texas

Intersection with cross section A-A'

NORTHWEST SHELF

ROOSEVELT UPLIFT

DELAWARE BASIN

Yeso Fm.

Wichita Fm.

Hueco Fm.

Bone Spring Fm.

"Abo" Reef

Leonardian Stage

Wolfcampian Stage

Virgilian Stage

Missourian Stage

Desmoinesian Stage

Derryan Stage

Morrowan Stage

Lower ss Mbr. of Bone Spring Fm.

Lower Permian Series

Upper Series

Middle Series

Lower Series

Permian System

Pennsylvanian System

Pre-Pennsylvanian Systems

Mississippian System

Siluro-Devonian Systems

Virgilian St.

Missourian St.

(Estimated)

LEGEND

Explanation of Formation Test Symbols

- Dry Well
- Oil producing zone
- Gas producing zone
- Oil and gas producing zone
- Gas show
- Oil show
- Oil and gas show
- M Drilling mud
- SW Salt water
- Sul W Sulfur water
- W Water

Explanation of Mechanical Logging Curves

- G Gamma ray
- R Resistivity
- SP Spontaneous potential
- N Neutron

Feet
800
400
0
0 6 12 Miles

Geology: Richard F. Meyer
Drafting: Raymond Molina

Vertical Exaggeration: 80 x

CROSS SECTION C-C'

North – South Correlation Section from Roosevelt County, New Mexico to Loving County, Texas

Datum: Top of Wolfcampian Stage

Line of cross section is shown on figure 2

D North

D' South

(D-3) Katz No.1 Field Sec.13-T.1N.-R22E

(D-4) Nearburg & Ingram No.1 Milton Sec.28-T.1S-R25E

(D-5) Nearburg & Ingram No.1 Murray Sec.23-T3S-R24E

(C-1) Olson No.1 Noble Trust Sec.18-T4S-R27E

(C-31) Samedan No.1 Chatten Ranch Sec.11-T6S-R27E

(C-32) Sinclair No.1 State-Chaves 129 Sec. 2-T8S-R27E

(C-35) Republic & Seaboard No.1 White Sec.9-T11S-R28E

(C-10) Honolulu No.1 Levick-State Sec.16-T10S-R27E

Intersection With Cross Section B-B'

(C-16) Malco No.1 Waller Sec. 35-T12S-R28E

(C-19) Vincent & Welch No.1 Cassidy-Federal Sec.27-T14S-R27E

(E-2) Continental No.1 Duffield-Federal Sec.21-T16S-R27E

Duffield Field

(E-4) Standard of Texas No.1 Everest Sec.14-T18S-R26E

Atoka Field

(E-12) Kelly No.1 Lake McMillan Unit Sec.36-T20S-R26E

(E-29) Gulf No.1 Hackberry Hills Unit Sec.1-T22S-R25E

(E-21) Union of California No.1 Federal-Wiggs Sec.31-T24S-R27E

Intersection With Cross Section A-A'

(E-23) El Paso No.1-X Welch Unit Sec.21-T26S-R27E

Welch Field

De Baca County | Chaves County

Chaves County | Eddy County

TUCUMCARI BASIN

NORTHWEST SHELF

PEDERNAL UPLIFT

NORTHWEST SHELF

DELAWARE BASIN

Yeso Fm.

Wichita Fm.

Leonardian Stage

Bone Spring Fm.

"Abo" Reef

Lower ss member of Bone Spring Fm

Wolfcampian Stage

Virgilian Stage

Missourian Stage

Desmoinesian Stage

Derryan Stage

Morrowan Stage

Sul W

SW

M

Precambrian Systems

Mississippian System

Pennsylvanian System

Pre-Pennsylvanian Systems

Geology: Richard F. Meyer

Drafting: Raymond Molina

Feet 800 400 0 0 6 12 Miles

Vertical Exaggeration: 80 x

LEGEND

Explanation of Formation Test Symbols

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- W Water

Explanation of Mechanical Logging Curves

- G Gamma ray
- R Resistivity
- SP Spontaneous potential
- N Neutron

CROSS SECTION D-D'

North-South Correlation Section from De Baca County to Eddy County, New Mexico

Datum: Top of Wolfcampian Stage

Line of cross section is shown on figure 2