DRILLHOLE NAME	TOWNSHIP	RANGE	SECTION	FNSL	FEWL	XCORD	YCORD	
NF-32-F	21 S	31 E	9	1983n	330w	667600	544125	
NF-31-F	21 S	31 E	9	2000n	2000e	670500	544125	
NF-44-F	21 S	31 E	10	2640s	2640w	675200	543550	
NF-42-F	21 S	31 E	10	330n	320w	672850	545825	
K-94	21 S	31 E	10	2240n	0w	672525	543975	
NF-38-F	21 S	31 E	10	228s	2644e	675125	541150	
FC-59	21 S	31 E	11	300n	300w	678100	545850	
K-139	21 S	31 E	12	800n	600w	683725	545450	
NMP-153 (K-153)	21 S	31 E	13	70s	70e	688300	535800	
FC-72	21 S	31 E	14	2640s	2640w	680575	538275	
FC-71	21 S	31 E	14	141n	141w	677925	540700	
FC-67	21 S	31 E	14	141s	141w	677950	535700	
FC-73	21 S	31 E	14	141s	141e	682950	535775	
NF-36-F	21 S	31 E	15	2590n	2642e	675050	538150	
NF-33-A	21 S	31 E	15	70n	528w	673175	540825	
NF-46-F	21 S	31 E	16	2640n	2640e	669800	538175	Map shows dh 350' NW of location
FC-75	21 S	31 E	16	250s	250w	667450	535700	
KP-96	21 S	31 E	16	1300n	1000e	671525	539500	
KP-97	21 S	31 E	16	1400s	500e	672075	537000	Map shows dh 300' NE of location
NF-45-F	21 S	31 E	17	318n	84e	667200	540550	
FC-77	21 S	31 E	17	2600s	2600e	664700	538150	
NMP-161	21 S	31 E	18	2500s	2500e	659900	538000	
NMP-160 (K-160)	21 S	31 E	18	1700n	1300w	658100	539000	
FC-79	21 S	31 E	19	2400s	2400e	659650	532625	Map shows dh 400' ESE of location
NMP-165	21 S	31 E	20	20s	2640e	664725	530300	
FC-78	21 S	31 E	20	2450s	2450e	664825	532700	
NMP-166	21 S	31 E	20	50s	50w	662100	530300	
K-98	21 S	31 E	21	160n	2282e	670300	535350	
FC-76	21 S	31 E	21	2640n	2626w	669950	532875	
NMP-164	21 S	31 E	21	50s	50w	667400	530350	
NFU-40-F	21 S	31 E	22	200n	668w	673275	535300	
NF-43-F	21 S	31 E	22	2640n	2640w	675325	532775	
NMP-156 (K-156)	21 S	31 E	23	250s	250e	682900	530650	
NMP-155 (K-155)	21 S	31 E	24	1700s	70e	688325	531700	
KP-93	21 S	31 E	24	2740n	200w	683350	532975	map shows dh 400' SE of loc.
NMP-154 (K-154)	21 S	31 E	24	1800n	2500e	685850	533900	
NMP-157 (K-157)	21 S	31 E	26	500s	2000w	679875	525550	
NMP-167	21 S	31 E	27	2630n	2650e	675250	527650	map shows dh 300' NE of loc.
FC-66	21 S	31 E	27	300n	200w	672700	530000	

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DRILLHOLE NAME	TOWNSHIP	RANGE	SECTION	FNSL	FEWL	XCORD	YCORD	
NMP-168	21 S	31 E	28	2640n	2640e	669975	527575	
USP-135	21 S	31 E	28	300s	600w	668025	525425	
NMP-170	21 S	31 E	29	2640n	20e	667325	527650	
NMP-169	21 S	31 E	29	2640s	2640e	664700	527650	
Wills-8 (W-8)	21 S	31 E	30	2667s NMP	206w NMP	657000	527650	
Wills-7	21 S	31 E	31	264n	471w	657300	524700	
FC-63	21 S	31 E	32	300n	2540w	664650	524700	
FC-68	21 S	31 E	32	141s	141e	667300	519900	
FC-65	21 S	31 E	34	100s	100w	672750	519800	
NF-52-F	21 S	31 E	34	250n	2208e	675675	524800	Map shows dh 250'SE of bc (FC-69) CMM
FC-69	21 S	31 E	34	141n	150w	672775	524825	
D-96	22 S	30 E	3	693n	977e	645200	519150	
U-168	22 S	30 E	3	1320s	300e	645900	515900	
Gypsy #3 (GO-03)	22 S	30 E	4	150n	400e	640400	519625	
U-167	22 S	30 E	4	1320s	200e	640675	515825	
NM Potash #1 / Lomasson 1 (I-A)	22 S	30 E	6	1998.1s	2193.3w	628800	516600	
NM Potash #3A / Lommasson Test	22 S	30 E	6	3413s	4645w	629275	518000	
NM Potash #2/Lommasson #2 (I-B)	22 S	30 E	6	3311.4s	2561.7w	627200	~~5170~~ CMM	Y:517900
Gypsy Oil #4 (GO-04)	22 S	30 E	8	756s	756w	630850	510050	
U-163-S	22 S	30 E	9	1320n	2640W CMM	638050	513325	
U-97-A	22 S	30 E	9	315s	219w	635775	509650	
I-322	22 S	30 E	9	2406n	578w	635900	512150	
I-326	22 S	30 E	9	215n	783w	636225	514400	
D-82	22 S	30 E	10	1883n	2574e	643625	512650	
D-121	22 S	30 E	11	1247s	1302w	647500	510525	
D-120	22 S	30 E	13	1562n	1565w	653125	507725	
D-48	22 S	30 E	14	134s	2039e	649500	504175	
I-147	22 S	30 E	20	1320s	1320e	~~631500~~ CMM	~~499950~~ CMM	X:634100 Y:499990
NM Potash & Chemical #1 (I-D)	22 S	30 E	20	754.5n	1568.9w	631650	503200	
IMCC #145 (I-145)	22 S	30 E	20	1320n	1320e	634150	502700	
IMCC # 143 (I-143)	22 S	30 E	20	1320n	1320w	631425	502700	
I-114	22 S	30 E	20	1320s	1320w	631500	499950	
D-33	22 S	30 E	21	109s	81e	640800	498850	
I-111	22 S	30 E	21	1320n	2640e	638175	502650	
I-112	22 S	30 E	21	1320s	1320w	636900	500050	
D-263	22 S	30 E	22	2563n	272e	645950	501475	
D-264	22 S	30 E	22	2585n	2551e	643700	502000	
D-259	22 S	30 E	23	1873s	1144e	650400	500700	
D-261	22 S	30 E	23	407n	1513w	647750	503625	

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DRILLHOLE NAME	TOWNSHIP	RANGE	SECTION	FNSL	FEWL	XCORD	YCORD	
D-262	22 S	30 E	23	213n	70w	646300	503875	
D-202	22 S	30 E	23	1289.12s	1202.48w	647375	499950	
D-260	22 S	30 E	23	1093n	789e	650775	~~504675~~	Y:503000
D-255	22 S	30 E	23	104s	1303e	650250	~~48~~ CMM	Y:498800
D-258	22 S	30 E	23	1508n	2677e	648900	502500	
D-104	22 S	30 E	24	2585n	1394e	655500	501500	
D-235	22 S	30 E	25	2878s	789w	652375	496450	
D-203	22 S	30 E	26	2650s	1276.3e	650350	496050	
D-254	22 S	30 E	26	300n	2100w	648400	498400	
D-233	22 S	30 E	26	4810s	13w	646300	498400	
D-234	22 S	30 E	26	188s	4712w	651000	493650	
D-200	22 S	30 E	27	540s	20w	641000	494100	
D-181	22 S	30 E	27	2664s	2625e	643750	496200	
D-231	22 S	30 E	27	2370s	224e	646100	495900	
D-232	22 S	30 E	27	1326s	1366w	642350	494800	
D-224	22 S	30 E	28	1377n	1390e	639500	497375	
D-219	22 S	30 E	28	1221s	1237e	639750	494650	
D-216	22 S	30 E	28	1199.5s	1421.1w	637000	494600	
D-185	22 S	30 E	28	2593n	16e	641000	~~4960~~ CMM	Y:496100
D-167	22 S	30 E	28	2447s	2652e	638350	495850	
D-225	22 S	30 E	28	1822n	1351w	637000	496800	
D-278	22 S	30 E	28	1200s	100w	635700	494600	
D-199	22 S	30 E	33	2477n	2539e	638400	491000	
D-218	22 S	30 E	33	1246n	1441e	639500	492150	
D-196	22 S	30 E	33	3077n	2540e	638500	490400	
D-221	22 S	30 E	33	1351s	1331e	639800	489500	
D-195	22 S	30 E	33	2777.16n	2539.67e	638600	490750	
D-194	22 S	30 E	33	270.6n	1464.9e	639600	493300	
D-217	22 S	30 E	33	1294n Dup	1321w Dup	637000	492100	
D-170	22 S	30 E	33	2698.76n	2543.21e	638500	490800	
D-38	22 S	30 E	33	97n	2551w	638250	493300	
D-168	22 S	30 E	33	178.5n	243.5e	640800	493250	
D-169	22 S	30 E	33	21.8n	69.7w	635700	493300	
D-228	22 S	30 E	33	1777s Dup	2504w Dup	638200	489975	
D-226	22 S	30 E	33	2591s	1302w	637100	490750	
D-180	22 S	30 E	34	2944n	2681e	643700	490500	
D-188	22 S	30 E	34	2621n	67w	641150	490900	
D-230	22 S	30 E	34	1505n	2672w	642250	494700	
D-36	22 S	30 E	34	280n	325e	646000	493150	

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DRILLHOLE NAME	TOWNSHIP	RANGE	SECTION	FNSL	FEWL	XCORD	YCORD
USGS 3 (GS 3)	22 S	30 E	34	252s	247w	641350	488450
D-229	22 S	30 E	34	618n	1334w	642400	492875
D-249	22 S	30 E	35	2627n	306w	646675	490775
D-160-S	22 S	30 E	36	2464s	1117w	652750	490650

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Checkprint 1 of transcription of StateX + StateY for new potash holes + some orig drillholes w/o X,Y from Dave Hughes WIPP database

ID Number	Drillhole name	StateX (NAD27)	StateY (NAD27)	Township	Range	Section
1070	Amoco Prod., Federal Gas Com No. 1-G	610700	566400	20	30	21
1071	Texas International Petrol. Corp., Lowe Federal #1			20	30	31
1072	Pan American Petroleum Corp., Big Eddy Unit #11	632900	576850	20	31	7
230	U-30	650525	571950	20	31	14
1073	Pennzoil United, Big Eddy Unit No. 12			20	31	21
1074	Shell Oil Company, Perry Federal #1			20	32	10
1075	Flag-Redfern Oil Company, Hanson State #1			20	32	13
1076	Phillips Petroleum Company, Plata Deep Unit #1			20	32	15
215	NF-23-F	678525	560375	20	32	27
398	K-113	685500	554250	20	32	35
400	K-112	682800	554300	20	32	35
1077	Pan American Petroleum Corp., Little Eddy Unit #1			20	33	5
1078	Carl Engwall, Sinclair Federal #1			20	33	14
1079	Randall F. Montgomery, Bass State #1			20	33	18
1080	Randall F. Montgomery, Bass State #2			20	33	18
1081	Amoco Prod. Co., API #30-025-26241, Fed.Y Com #1			20	33	27
1090	Pan American Petroleum Corp., Big Eddy Unit #18			21	29	3
1091	Union Oil Co. of California, Cowden Federal #1			21	29	4
1092	Meadco Properties, Ltd., Harris-Bell #1			21	29	5
1093	Meadco Properties Ltd., Harris Bell #2			21	29	5
1094	Meadco Properties Ltd., Harris 6 #1			21	29	6
1095	Perry R. Bass, Big Eddy Unit #61	610776	537608	21	29	15
1096	Pan American Petroleum Corp., Big Eddy Unit #16	596276	537559	21	29	18
1097	Perry R. Bass, Big Eddy Unit No. 40	612098	533654	21	29	22
1098	Bass Enterprises Prod. Co., Big Eddy Unit No. 38	610799	524446	21	29	34
452	Wills-10-A (W-10A)	655875	547400	21	30	1
453	Wills 10	655885	547400	21	30	1
454	D-131	652775	551050	21	30	1
455	U-126	648625	546500	21	30	2
456	U-144	648650	553125	21	30	2
457	US Potash (U-0)	646400	549000	21	30	2
458	D-157	642425	547000	21	30	3
459	U-91	642000	549750	21	30	3
460	Wills #13 (W-13)	643750	547300	21	30	3
461	Wills-9 (W-09)	645125	550125	21	30	3
462	Wills 14 (W-14)	644750	552800	21	30	3
500	D-158	642800	542800	21	30	10
501	Wills 12 (W-12)	644675	544100	21	30	10
502	US Potash #1 Aray McNutt J (U-S)	641025	543350	21	30	10
503	FC-62	645450	541725	21	30	10
504	D-112	641675	545150	21	30	10
216	D-159	646200	545050	21	30	11
505	Wills 11	649500	543600	21	30	11
507	D-152	647575	542300	21	30	11
508	D-156	647425	545075	21	30	11
510	U-63	651850	538000	21	30	13
523	K-159	630125	536775	21	30	13
217	U-75	641735	536100	21	30	15
232	U-75-A	641725	536100	21	30	15
5301	WC Blanks Big Eddy Unit No. 67	641866	537582	21	30	15

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5059	Bass Big Eddy Unit No. 44	640217	538905	21	30	16
5060	Bass Big Eddy No. 45-Y	640127	538904	21	30	16
1099	WIPP 27	637103	535612	21	30	21
218	MPE-186	✓651250	✓535350	21	30	23
550	FC-80	✓656400	✓535225	21	30	24
551	Crosby #1 (RC-01)	✓652500	✓526250	21	30	25
219	MPE-185	✓649025	✓525500	21	30	26
552	Crosby #2 (RC-02)	✓647650	✓529450	21	30	26
5061	Phillips James "D" No. 1	648187	525723	21	30	26
220	MPE-179	✓643800	✓529750	21	30	27
221	MPE-179-A	✓643806	✓529750	21	30	27
5062	Yates Kaleidoscope "AIO" Federal No. 1	640263	523060	21	30	33
583	I-123	✓643650	✓523800	21	30	34
5063	Yates Julia "AJL" Federal No. 4	644237	523079	21	30	34
5302	Yates Cabin Lake 34 Federal No. 1	645242	520102	21	30	34
5064	Phillips Peak View No. 1	651176	520437	21	30	35
5065	Phillips James "C" No. 1	646880	521743	21	30	35
5066	C. Grace Livingston Ridge No. 1-Y	652480	521752	21	30	36
5303	C Grace Salomeh No. 1	651831	520109	21	30	36
584	K-109	✓687800	✓553725	21	31	1
585	K-138	✓688275	✓548850	21	31	1
586	K-137	✓688300	✓550500	21	31	1
588	K-133	✓684350	✓552850	21	31	1
589	NF-51-F	✓680450	✓548850	21	31	2
590	FC-58	✓678475	✓550550	21	31	2
591	K-107	✓679875	✓553450	21	31	2
593	K-111	✓682850	✓550200	21	31	2
594	K-102	✓676475	✓550275	21	31	3
595	NF-50-F	✓675150	✓548675	21	31	3
596	K-100	✓675300	✓546150	21	31	3
597	K-101	✓677750	✓548800	21	31	3
598	FC-57	✓675150	✓551550	21	31	3
599	FC-55	✓672525	✓550150	21	31	3
600	K-99	✓673525	✓548200	21	31	3
601	K-103	✓677500	✓552600	21	31	3
602	FC-64	✓669950	✓553470	21	31	4
603	FC-54	✓669900	✓546200	21	31	4
604	FC-83	✓671800	✓547675	21	31	4
605	FC-85	✓668500	✓547475	21	31	4
606	NF-49-F	✓669825	✓548700	21	31	4
607	FC-64-A	✓669950	✓553450	21	31	4
608	NF-53-F	✓669750	✓551525	21	31	4
609	FC-74	✓669950	✓547200	21	31	4
610	NF-22-F	✓662300	✓547025	21	31	5
611	FC-87	✓666450	✓548150	21	31	5
612	NF-21-F	✓666850	✓550050	21	31	5
613	NF-41-F	✓667000	✓554000	21	31	5
614	NF-19-F	✓662050	✓546200	21	31	5
615	FC-60	✓664525	✓551475	21	31	5
616	FC-56	✓664550	✓548100	21	31	5
617	NF-8-F	✓667150	✓546275	21	31	5
618	NF-03-F	✓664425	✓554000	21	31	5
619	FC-90	✓665600	✓547250	21	31	5
620	NF-24-F	✓662900	✓550125	21	31	5
623	NF-48-F	✓660400	✓550125	21	31	6
624	NF-37-F	✓661850	✓543400	21	31	7

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625	NF-39-F		659300	543400	21	31	7
626	K-117		660675	542125	21	31	7
627	K-115		660675	544700	21	31	7
307	K-118	663300 542350	666675	576500	21	31	8 *
311	K-119		665925	542200	21	31	8
628	FC-88		665800	544775	21	31	8
629	NF-30-F		664650	543425	21	31	8
630	FC-89		664600	545875	21	31	8
631	K-116		663300	544650	21	31	8
632	NF-35-F		662250	541075	21	31	8
633	FC-61		669900	541000	21	31	9
634	FC-86		668925	545150	21	31	9
635	K-95		671525	542150	21	31	9
636	FC-84		671250	545625	21	31	9
637	NF-32-F		667600	544125	21	31	9
638	NF-31-F		670500	544125	21	31	9
640	NF-44-F		675200	543550	21	31	10
641	NF-42-F		672850	545825	21	31	10
642	K-94		672525	543975	21	31	10
643	NF-38-F		675125	541150	21	31	10
645	FC-59		678100	545850	21	31	11
646	K-139		683725	545450	21	31	12
649	NMP-153 (K-153)		688300	535800	21	31	13
650	FC-72		680575	538275	21	31	14
651	FC-71	677925	~~679925~~	540700	21	31	14
652	FC-67		677950	535700	21	31	14
653	FC-73		682950	535775	21	31	14
656	NF-36-F		675050	538150	21	31	15
657	NF-33-A		673175	540825	21	31	15
660	NF-46-F		669800	538175	21	31	16
661	FC-75		667450	535700	21	31	16
662	KP-96		671525	539500	21	31	16
663	KP-97		672075	537000	21	31	16
664	NF-45-F		667200	540550	21	31	17
665	FC-77		664700	538150	21	31	17
666	NMP-161		659900	538000	21	31	18
667	NMP-160 (K-160)		658100	539000	21	31	18
668	FC-79		659650	532625	21	31	19
669	NMP-165		664725	530300	21	31	20
670	FC-78		664825	532700	21	31	20
671	NMP-166		662100	530300	21	31	20
592	NMP-163		680425	546175	21	31	21
673	K-98		670300	535350	21	31	21
674	FC-76		669950	532875	21	31	21
676	NMP-164		667400	530350	21	31	21
677	NFU-40-F		673275	535300	21	31	22
678	NF-43-F		675325	532775	21	31	22
682	NMP-156 (K-156)		682900	530650	21	31	23
683	NMP-155 (K-155)		688325	531700	21	31	24
684	KP-93		683350	532975	21	31	24
685	NMP-154 (K-154)		685850	533900	21	31	24
5079	Yates "AJA" Federal No. 7		688026	531008	21	31	24
5080	Yates Bonneville "AKK" Federal No. 2		688186	530998	21	31	24
5081	Yates Wolf "AJA" Federal No. 5		688045	528376	21	31	25
5082	Yates Wolf "AJA" Federal No. 4		688059	527034	21	31	25
5304	Maralo MR "25" Federal No. 1		687611	525719	21	31	25

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686	NMP-157 (K-157)	679875	525550	21	31	26
5305	Pogo Federal No. 1	679839	528315	21	31	26
688	NMP-167	675250	527650	21	31	27
689	FC-66	672700	530000	21	31	27
690	NMP-168	669975	527575	21	31	28
691	USP-135	668025	525425	21	31	28
692	NMP-170	667325	527650	21	31	29
693	NMP-169	664700	527650	21	31	29
694	Wills-8 (W-8)	657000	527650	21	31	30
695	Wills-7	657300	524700	21	31	31
696	FC-63	664650	524700	21	31	32
697	FC-68	667300	519900	21	31	32
1103	WIPP 30	667536	524337	21	31	33
698	FC-65	672750	519800	21	31	34
699	NF-52-F	675675	524800	21	31	34
700	FC-69	672775	524825	21	31	34
222	MPE-183	678100	519975	21	31	35
1104	ERDA 6	682279	521970	21	31	35
1104	ERDA 6	682279	521970	21	31	35
5306	Union Federal FI No. 1	678521	524326	21	31	35
5068	Yates Mary "AIV" State No. 5	688075	524406	21	31	36
5069	Yates Mary "AIV" State No. 3	686429	524399	21	31	36
5070	Yates Mary "AIV" State No. 1	686437	523087	21	31	36
5071	Yates Lost Tank "AIS" State No. 8	687770	520448	21	31	36
5072	Yates Lost Tank "AIS" State No. 6	686445	521756	21	31	36
5073	Yates Lost Tank "AIS" State No. 5	683807	520428	21	31	36
5075	Yates Lost Tank "AIS" State No. 3	685127	520435	21	31	36
5076	Yates Lost Tank "AIS" State No. 2	686453	520440	21	31	36
5307	Yates Lost Tank "AIS" State No. 1	687762	521764	21	31	36
5308	Yates Lost Tank "AIS" State No. 4	685122	521752	21	31	36
1105	Phillips Petroleum Company, ETZ Federal #1	718125	551150	21	32	1
1106	Kimball Production Company, Federal #1	716850	547150	21	32	1
1107	Phillips Petroleum Company, Hat Mesa A #1	712900	547100	21	32	2
1108	Amini Oil Company, Pubco Federal #1	710175	551000	21	32	2
1109	Amini Oil Company, New Mexico Federal #1	700625	552500	21	32	4
223	K-140	691100	550650	21	32	6
1110	Holly Energy, Inc., Salt Lake Deep No. 1	693200	552000	21	32	6
1111	The Superior Oil Company, Government H Com. #1	707700	544500	21	32	10
1112	Gackle Drilling Company, Federal #1	714300	541900	21	32	11
1113	Phillips Petroleum Company, Hat Mesa 2-#2	711600	541900	21	32	11
1114	Phillips Petroleum Company, Hat Mesa #1	712900	544500	21	32	11
5264	Belco Federal HM No. 1	715700	543100	21	32	12
5309	Belco Federal "HM" No. 13-1	716900	540250	21	32	13
5310	Collins & Ware N.L. Federal No. 2	691747	536332	21	32	18
5311	Getty North Bilbrey 18 Federal No. 1	691724	538989	21	32	18
5312	Skelly Salt Lake South Unit No. 1	699664	535095	21	32	21
5313	Santa Fe Bilbrey "21" Federal Com. No. 1	702335	531157	21	32	21
5314	Santa Fe Bilbrey "22" Federal Com. No. 1	707257	531208	21	32	22
1116	Gulf Oil Corporation, San Simon #1	714250	528750	21	32	26
5315	Collins & Ware Lincoln Federal No. 1	710253	527301	21	32	26
5279	Santa Fe Bilbrey Federal No. 1-A	706307	528583	21	32	27
5316	Santa Fe Bilbrey 27 Federal Com. No. 1	705323	527224	21	32	27
5278	Santa Fe Bilbrey Federal No. 1	703668	528559	21	32	28
5280	Santa Fe Bilbrey Federal No. 1-A	701038	527167	21	32	28
5277	Getty Bilbrey Federal Com No. 1	695745	527104	21	32	29
1117	Gulf Oil Corporation, H.T. Mattern (NCT) #10			21	32	31

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5272	Phillips Luke Federal No. 2	689062	524415	21	32	31
5273	Pogo Federal No. 1	693156	522136	21	32	31
5274	Collins & Ware BW Federal No. 1	688762	520119	21	32	31
5275	Phillips Luke Federal No. 1	689070	523103	21	32	31
5276	AEC No. 7	691829	523133	21	32	31
5265	Getty State Com No. 1	697111	523186	21	32	32
5317	Texaco Bilbrey 32 State Com. No. 1	695776	523170	21	32	32
5266	Texaco Bilbrey Federal Com No. 1	701049	524549	21	32	33
5267	Texaco Bilbrey Federal No. 2	701403	521883	21	32	33
5268	Phillips Bilbrey Federal No. 1	706351	520629	21	32	34
5269	Maralo Bilbrey Federal No. 1	706324	524620	21	32	34
5270	Gulf Chaney Federal No. 1	711605	523380	21	32	35
5271	Manzano Anderson No. 1	709968	522005	21	32	35
1120	Charles Read, Sinclair State #1			21	33	2
1628	Getty Oil Company Stock Unit #1	√739300	√538050	21	33	15
1629	Amoco Production Company State LT #1	√727500	√522200	21	33	32
5318	Bass Big Eddy Unit No. 90	605975	516526	22	29	4
5319	Hudson Federal No. 1	597850	515250	22	29	6
224	IMCC Water Test #3	√621693	√512772	22	29	12
225	IMCC Water Test #2	√621750	√513150	22	29	12
226	IMCC Water Test #1	√622044	√513466	22	29	12
5320	Bass Big Eddy Unit 96	604394	505900	22	29	16
5321	Bass Big Eddy Unit No. 88	593929	506028	22	29	18
1137	WIPP 32	608848	489850	22	29	33
1138	WIPP 29	612378	488559	22	29	34
5084	Yates Jasmine "AJI" Federal No. 1	654502	515157	22	30	1
5085	Phillips Livingston Ridge No. 2	652656	516740	22	30	1
5086	Troporo Cabana No. 1	652168	515145	22	30	1
5087	Phillips Livingston Ridge No. 4	652292	519352	22	30	1
5089	Phillips Livingston Ridge No. 3	652115	518300	22	30	1
5090	Phillips Livingston Ridge No. 6	653438	516467	22	30	1
5092	Phillips James "A" No. 12W	650327	515728	22	30	2
5093	Phillips James A No. 10	648433	515137	22	30	2
5094	Phillips James A No. 9	650945	519123	22	30	2
5095	Phillips James A No. 8	650793	518134	22	30	2
5096	Phillips James "A" No. 4	649478	517807	22	30	2
5097	Phillips James "A" No. 3	648081	516451	22	30	2
5098	Phillips James "A" No. 2	649489	516124	22	30	2
5099	Phillips James "A" No. 6	650807	516458	22	30	2
5100	Phillips James A No. 7	650818	514982	22	30	2
5101	Phillips James "A" No. 5	649679	515140	22	30	2
5102	Phillips James A No. 1	649472	515142	22	30	2
702	D-96	✓645200	✓519150	22	30	3
703	U-168	✓645900	✓515900	22	30	3
5091	Yates Donell 3 Federal No. 1	644112	517803	22	30	3
227	I-323	√639250	✓515850	22	30	4
704	Gypsy #3 (GO-03)	✓640400	✓519625	22	30	4
707	U-167	✓640675	✓515825	22	30	4
737	NM Potash #1 / Lomasson 1 (I-A)	✓628800	✓516600	22	30	6
741	NM Potash #3A / Lommasson Test #3 (I-C)	✓629275	✓518000	22	30	6
742	NM Potash #2/Lommasson #2 (I-B)	✓627200	✓517900	22	30	6
755	Gypsy Oil #4 (GO-04)	✓630850	✓510050	22	30	8
228	U-97 635789 493447	~~643630~~	~~493461~~	22	30	9
764	U-163-S	✓638050	✓513325	22	30	9
766	U-97-A	✓635775	✓509650	22	30	9
767	I-322	✓635900	✓512150	22	30	9

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769	I-326	✓636225	✓514400	22	30	9
770	D-82	✓643625	512650	22	30	10
771	D-121	647500	✓510525	22	30	11
5111	Phillips James "E" No. 8	649916	511440	22	30	11
5112	Phillips James "E" No. 6	649501	511172	22	30	11
5113	Phillips James "E" Federal No. 5	651144	512689	22	30	11
5114	Phillips James "E" Federal No. 4	651151	513733	22	30	11
5115	Phillips James "E" No. 2	648211	513943	22	30	11
5122	Phillips James "E" No. 1	649498	512506	22	30	11
5322	Phillips James E Federal No. 9	651450	510150	22	30	11
5104	Phillips James E No. 15	652468	511180	22	30	12
5105	Phillips James "E" No. 14	653458	512523	22	30	12
5106	Phillips James "E" No. 13	652138	512516	22	30	12
5107	Phillips James "E" No. 12	653460	513839	22	30	12
5109	Phillips James "E" No. 11	652140	513832	22	30	12
5110	Bass James Ranch Unit No. 48	651813	510184	22	30	12
5323	Bass James Ranch Unit No. 70	654900	510000	22	30	12
773	D-120	✓653125	✓507725	22	30	13
1142	WIPP 33	653981	505790	22	30	13
5103	Mitchell Energy Apache "13" Federal No. 1	656517	507932	22	30	13
774	D-48	✓649500	✓504175	22	30	14
1143	WIPP 25	643343	505868	22	30	15
783	I-147	✓634100	✓499990	22	30	20
784	NM Potash & Chemical #1 (I-D) 631650	~~634350~~	✓503200	22	30	20
785	IMCC #145 (I-145)	✓634150	✓502700	22	30	20
786	IMCC # 143 (I-143)	✓631425	✓502700	22	30	20
787	I-114	✓631500	✓499950	22	30	20
788	D-33	✓640800	✓498850	22	30	21
789	I-111	✓638175	✓502650	22	30	21
790	I-112	✓636900	✓500050	22	30	21
791	D-263	✓645950	✓501475	22	30	22
792	D-264	✓643700	✓502000	22	30	22
794	D-259	✓650400	✓500700	22	30	23
795	D-261	✓647750	✓503625	22	30	23
796	D-262	✓646300	✓503875	22	30	23
797	D-202	✓647375	✓499950	22	30	23
798	D-260	✓650775	✓503000	22	30	23
799	D-255	✓650250	✓498800	22	30	23
800	D-258	✓648900	✓502500	22	30	23
802	D-104	✓655500	✓501500	22	30	24
1144	P-14	652159	499082	22	30	24
1145	P-12	656692	503896	22	30	24
5126	Mitchell Apache "24" Federal No. 1	656552	499922	22	30	24
806	D-235	✓652375	✓496450	22	30	25
5124	Mitchell Apache "25" Federal No. 1	656234	497001	22	30	25
5125	Mitchell Apache "25" Federal Com. No. 2	655598	494097	22	30	25
807	D-203	✓650350	✓496050	22	30	26
808	D-254	✓648400	✓498400	22	30	26
809	D-233	✓646300	✓498400	22	30	26
810	D-234	✓651000	✓493650	22	30	26
811	D-200	✓641000	✓494100	22	30	27
812	D-198	✓643625	✓493475	22	30	27
813	D-181	✓643750	✓496200	22	30	27
814	D-231	✓646100	✓495900	22	30	27
815	D-232	✓642350	✓494800	22	30	27
5324	Richardson & Bass Federal Legg No. 1	644179	498036	22	30	27

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816	D-224	639500	497375	22	30	28
817	D-219	639750	494650	22	30	28
818	D-216	637000	494600	22	30	28
819	D-185	641000	496100	22	30	28
820	D-167	638350	495850	22	30	28
821	D-225	637000	496800	22	30	28
822	D-278	635700	494600	22	30	28
1147	WIPP 26	635509	496516	22	30	29
850	D-199	638400	491000	22	30	33
851	D-218	639500	492150	22	30	33
852	D-196	638500	490400	22	30	33
853	D-221	639800	489500	22	30	33
854	D-195	638600	490750	22	30	33
855	D-194	639600	493300	22	30	33
856	D-217	637000	492100	22	30	33
857	D-170	638500	490800	22	30	33
858	D-38	638250	493300	22	30	33
859	D-168	640800	493250	22	30	33
860	D-169	635700	493300	22	30	33
861	D-228	638200	489975	22	30	33
862	D-226	637100	490750	22	30	33
863	D-180	643700	490500	22	30	34
864	D-188	641150	490900	22	30	34
865	D-230	642250	494700	22	30	34
866	D-36	646000	493150	22	30	34
867	USGS 3 (GS 3)	641350	488450	22	30	34
868	D-229	642400	492875	22	30	34
229	D-250	649300	490875	22	30	35
870	D-250-A	649247	490985	22	30	35
871	D-249	646675	490775	22	30	35
873	D-160-S	652750	490650	22	30	36
5116	Shell James Ranch No. 1	654924	488781	22	30	36
5117	Enron James Ranch Unit No. 71	656248	493126	22	30	36
5118	Enron James Rand Unit No. 37	656263	490090	22	30	36
5119	Enron James Ranch Unit No. 19	654945	490094	22	30	36
5120	Belco James Ranch No. 11	652484	491463	22	30	36
5121	Enron James Ranch Unit No. 18	655815	491378	22	30	36
5123	Bass James Ranch Unit No. 29	653880	490100	22	30	36
5325	Bass James Ranch Unit No. 41	653887	488787	22	30	36
5000	Hanagan No. 2 Unocal-HPC	687453	517817	22	31	1
5002	Phillips Molly State No. 2	685143	517807	22	31	1
5004	Phillips Molly State No. 4	683697	517798	22	31	1
5005	Pogo Federa 1 No. 1	685149	516803	22	31	1
5006	Pogo Federal 1 No. 3	687459	516799	22	31	1
5007	Pogo 1 Federal No. 4	683829	516803	22	31	1
5008	Pogo Federal 1 No. 5	684173	515489	22	31	1
5009	Pogo Federal 1 No. 6	685062	515399	22	31	1
5010	Pogo Federal 1 No. 6	686144	515490	22	31	1
5011	Yates Unocal "AHU" Federal No. 2	687775	519132	22	31	1
5012	Pogo Federal 1 No. 2	686469	516801	22	31	1
5088	Hanagan No. 1 Unocal-HPC	686461	518138	22	31	1
5326	Phillips Molly State No. 1	685129	519123	22	31	1
5327	Phillips Molly State No. 3	683812	519115	22	31	1
5328	Yates Unocal "AHU" Federal No. 1	686455	519124	22	31	1
5014	Pogo State "2" No. 3	682845	516790	22	31	2
5329	Yates Flora "AKF" State No. 1	680237	515105	22	31	2

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5330	Yates Graham "AKB" State No. 2	682839	517800	22	31	2
5331	Yates Graham "AKB" State No. 1	682828	519113	22	31	2
5332	Yates Flora "AKF" State No. 2	680200	516400	22	31	2
5333	Pogo State 2 No. 2	680850	515250	22	31	2
5334	Pogo State 2 No. 1	682863	514819	22	31	2
5335	Bryon McKnight & Troporo Campana No. 1	657463	517615	22	31	6
5336	Yates Llama "ALL" Federal No. 1	657789	509389	22	31	7
1149	DOE 2	667317	509876	22	31	8
1149	Fenix & Scissons Inc., WIPP No. DOE-2	667317	509876	22	31	8
1150	WIPP 11	667700	513751	22	31	9
1150	WIPP 11	667700	513751	22	31	9
1151	WIPP 34	669449	509375	22	31	9
1152	WIPP 14	665336	509260	22	31	9
1153	AEC 8	679951	513567	22	31	11
1153	AEC 8	679951	513567	22	31	11
5015	Yates Martha "AIK" Federal No. 1	682796	509554	22	31	11
5016	Yates Martha "AIK" Federal No. 2	682885	511198	22	31	11
5019	Yates Martha "AIK" Federal No. 5	682877	512529	22	31	11
5020	Yates Martha "AIK" Federal No. 6	682869	513845	22	31	11
5337	Yates Martha "AIK" Federal No. 3	681576	509860	22	31	11
5338	Yates Martha "AIK" Federal No. 4	681568	511172	22	31	11
5021	Pogo Federal 12 No. 2	683872	511208	22	31	12
5022	Pogo Federal 12 No. 4	683537	512529	22	31	12
5023	Pogo Federal 12 No. 5	683529	513841	22	31	12
5024	Pogo Federal 12 No. 6	684860	511537	22	31	12
5025	Pogo Federal 12 No. 7	684852	512857	22	31	12
5027	Pogo SCL Federal No. 2	686504	512529	22	31	12
5028	Pogo Federal 12 No. 3	685202	509565	22	31	12
5339	Pogo Federal 12 No. 8	684844	514173	22	31	12
5029	Texaco Federal Neff "13" No. 2	687857	507261	22	31	13
5030	Texaco Neff 13 No. 3	686552	504607	22	31	13
5032	Texaco Federal Neff 13 No. 6	683563	508250	22	31	13
5033	Texaco Federal Neff 13 No. 7	683570	506937	22	31	13
5034	Texaco Federal Neff 13 No. 8	683579	505578	22	31	13
5340	Texaco Federal Neff 13 No. 5	685216	507264	22	31	13
5341	Pogo Neff 13 No. 1	686544	505923	22	31	13
1154	P-20	683197	504767	22	31	14
5035	Yates Dolores "AIL" Federal No. 3	682803	507264	22	31	14
5036	Yates Dolores "AIL" Federal No. 2	682812	505893	22	31	14
5037	Yates Dolores "AIL" Federal No. 1	682796	508580	22	31	14
1155	Fenix & Scisson, WIPP HYDRO H-5c	677878	508198	22	31	15
1156	P-21	677862	508351	22	31	15
5342	Clayton W. Williams Badger Unit Federal No. 1	674707	505867	22	31	15
1158	Fenix & Scisson, WIPP #13	663885	506464	22	31	17
1159	WIPP 12	667371	504068	22	31	17
1160	P-5	667286	504120	22	31	17
1161	P-13	656973	509039	22	31	18
1162	Fenix and Scisson, Inc., WIPP H-6c	657232	508884	22	31	18
1163	P-3	664351	498747	22	31	20
1164	Fenix & Scisson, Inc., WIPP #18	667446	502935	22	31	20
1165	Fenix & Scisson, Inc., WIPP #22	667453	501165	22	31	20
1166	Fenix & Scisson, Inc., WIPP #21	667459	500071	22	31	20
1167	Fenix & Scisson, Inc., WIPP #19	667453	501632	22	31	20
1168	ERDA 9	667301	498887	22	31	20
1641	H-16	666231	499726	22	31	20
1643	H-18	662621	502926	22	31	20

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1169	P-11	678217	503781	22	31	23
1170	P-19	680377	500362	22	31	23
5038	Pogo Federal 23 No. 1	682604	499315	22	31	23
5039	Pogo Federal "23" No. 2	682601	500402	22	31	23
5040	Pogo Federal "23" No.3	682599	501631	22	31	23
5041	Pogo Federal 23 No. 5	682744	503275	22	31	23
5343	Texas Crude Wright Federal 23 No. 1	682933	498982	22	31	23
5042	Texaco Getty Federal 24 No. 4	685241	500628	22	31	24
5043	Texaco Getty Federal 24 No. 5 SWD	684906	502953	22	31	24
5044	Texaco Getty Federal 24 No. 2	683925	499308	22	31	24
5045	Getty Federal #24-1	686559	501978	22	31	24
5048	Texaco Getty Federal 24 No. 3	686227	503289	22	31	24
5046	Pogo Neff Federal No. 2	683605	497005	22	31	25
5047	Pogo Federal Neff No. 1	685247	497996	22	31	25
5344	Pogo Neff Federal No. 3	684027	498226	22	31	25
1172	P-18	682589	493556	22	31	26
1173	P-10	678410	496383	22	31	26
5049	Pogo Federal 26 No. 1	682760	498050	22	31	26
5050	Pogo Federal 26 No. 2	681299	496693	22	31	26
5051	Pogo Federal "26" No. 3	680158	498061	22	31	26
5052	Pogo Federal 26 No. 4	678359	498083	22	31	26
5053	Pogo Federal 26 No. 5	681039	498331	22	31	26
5054	Pogo Federal 26 No. 6	678367	496708	22	31	26
5055	Pogo Federal 26 No. 7	680015	496696	22	31	26
1174	P-4	671327	493521	22	31	28
1175	DOE-1	672206	493563	22	31	28
1176	P-2	672609	498536	22	31	28
1630	Department of Energy WIPP No. H-15	672606	498572	22	31	28
1177	H-1	666400	497991	22	31	29
1178	Department of Energy, H-14	662815	493697	22	31	29
1179	ERDA, Hydrological H-2c	663907	498002	22	31	29
1180	Sandia National Laboratories, Hydrological No. 3	667377	495440	22	31	29
1181	P-1	662804	493651	22	31	29
1182	P-6	657144	496090	22	31	30
1183	P-15	657148	488426	22	31	31
1184	H-11	672647	489617	22	31	33
1185	P-9	672678	489599	22	31	33
5056	Yates David Ross "AIT" Federal No. 1	682660	491396	22	31	35
5057	Union of CA Medano State Com. Well No. 1	685311	490031	22	31	36
5345	Siete Ottowa State No. 1	706377	516673	22	32	3
5346	Santa Fe Trumpeter 4 State No. 1	702432	515309	22	32	4
5347	Getty Bilbrey Federal Com. No. 1	701090	519263	22	32	4
5348	Getty Bilbrey Federal No. 1	697134	519223	22	32	5
5349	Yates Rosemary "AJB" Federal No. 1	689111	516479	22	32	6
5350	Pogo Federal 6 No. 1	688768	519007	22	32	6
5351	Amoco Federal "CK" Com. No. 1	693182	517875	22	32	6
5352	Strata Flamenco Federal No. 1	689152	510880	22	32	7
5353	Santa Fe White Swam "9" Federal No. 1	704165	509787	22	32	9
5354	Santa Fe White Swam "9" Federal No. 4	703788	512676	22	32	9
5355	Maralo Wild Turkey "9" state No. 1	703458	511356	22	32	9
5356	Maralo Wild Turkey "10" state No. 1	704823	511448	22	32	10
5357	WTI Barr None Federal No. 1	705090	512723	22	32	10
5358	Phillips Emerald Federal No. 1	705153	510128	22	32	10
5359	Maralo Prohibition Federal No. 2	711819	511456	22	32	11
5158	Maralo Prohibition Federal Unit No. 1	715576	512845	22	32	12
5159	Pogo WBR Federal No. 1	719299	507585	22	32	13

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5160	Ray Smith B&H Federal No. 1	719651	504941	22	32	13
5161	Maralo Prohibition Federal Unit No. 4	713055	507207	22	32	14
5162	Meridian Red Tank Federal No. 4	711890	505887	22	32	14
5163	Meridian Red Tank Federal No. 1	711774	504537	22	32	14
5164	Meridian Red Tank Federal No. 3	710784	504523	22	32	14
5165	Carper Red Tank Unit No. 2 (SWD?)	711772	504864	22	32	14
5166	Meridian Red Tank Federal No. 5 (SWD?)	712743	504551	22	32	14
5360	Maralo Prohibition Federal Unit No. 6	714045	507207	22	32	14
5361	Meridian Redchecker 14 No. 2	714051	505880	22	32	14
5362	Meridian Redchecker 14 No. 1	714060	504564	22	32	14
5363	Meridian Prohibition Federal No. 5	711910	507207	22	32	14
5364	Meridian Red Tank Federal No. 6	711735	505887	22	32	14
5167	Superior No. 1 Connally Federal	707811	506124	22	32	15
5168	Strata Paisano Federal No. 3	705128	508426	22	32	15
5169	Strata Paisano Federal No. 2	706130	507124	22	32	15
5170	Strata Paisano Federal No. 1	704937	507436	22	32	15
5171	Strata Lechuza Federal No. 5	704824	505759	22	32	15
5173	Strata Lechuza Federal No. 3	707493	504806	22	32	15
5174	Strata Lechuza Federal No. 2	706145	505775	22	32	15
5175	Strata Lechuza Federal No. 1	704962	504975	22	32	15
5365	Strata Lechuza Federal No. 4	706154	504786	22	32	15
5176	Yates Kiwi "AKX" State No. 3	704158	507100	22	32	16
5177	Yates Kiwi "AKX" State No. 2	704170	505751	22	32	16
5179	Yates Kiwi "AKX" State No. 4	702868	504415	22	32	16
5180	Yates Kiwi "AKX" State No. 5	702851	506059	22	32	16
5181	Yates Kiwi "AKX" State No. 6	701542	504730	22	32	16
5182	Yates Kiwi "AKX" State No. 7	702509	507416	22	32	16
5183	Yates Kiwi "AKX" State No. 8	701519	507402	22	32	16
5184	Yates Kiwi "AKX" State No. 9	704139	509067	22	32	16
5366	Yates Kiwi "AKX" State No. 1	704185	504435	22	32	16
5185	Yates Cleary "AKC" Feceral No. 1	697249	506004	22	32	17
5186	Yates Cleary "AKC" Federal No. 2	694250	508981	22	32	17
5188	Pogo Livingston Ridge Federal No. 1	692941	508635	22	32	18
5189	Pogo Livingston Ridge Federal No. 3 "ZAP"	688841	508765	22	32	18
5190	Pogo East Livingston Ridge Federal No. 3	691960	507160	22	32	18
5367	John H. Trigg Federal Jennings No. 1	693293	504667	22	32	18
5368	Ralph Lowe Bass Federal No. 1	693314	499351	22	32	19
5191	Zonne Federal No. 1	697274	502059	22	32	20
5192	Union of CA Federal Gilmore No. 1 (Cerc Fed 1 SWD)	703873	500772	22	32	21
5193	Strat Cercion Federal No. 3	702536	503708	22	32	21
5194	Strat Cercion Federal No. 1	703864	502131	22	32	21
5369	Strata Cercion Federal No. 5	704183	503788	22	32	21
5195	Trigg Federal Red Tank No. 1-22	705188	502158	22	32	22
5196	Strata Cercion Federal No. 4	706503	502505	22	32	22
5197	Strata Cercion Federal No. 2	705507	503807	22	32	22
5370	Pogo Prize Federal No. 13	709485	500842	22	32	22
5371	Pogo Prize Federal No. 10	709491	499529	22	32	22
5198	Meridian Checkerboard 23 Federal No. 6	710224	499756	22	32	23
5199	Pogo Red Tank 23 Federal No. 2	714066	501040	22	32	23
5200	Meridian Checkerboard 23 No. 16	714102	501921	22	32	23
5201	Meridian Checkerboard 23 Federal No. 13	714068	502597	22	32	23
5202	Meridian Checkerboard 23 Federal No. 12	714475	503927	22	32	23
5203	Meridian Checkerboard 23 Federal No. 8	713073	502259	22	32	23
5204	Meridian Checkerboard 23 Federal No. 4	711784	503533	22	32	23
5206	Meridian Checkerboard 23 Federal No. 5	710807	501189	22	32	23
5372	Meridian Checkerboard 23 Federal No. 11	713074	503575	22	32	23

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5373	Meridian Checkerboard 23 Federal No. 3	712107	501921	22	32	23
5374	Meridian Checkerboard 23 Federal No. 2	713409	499262	22	32	23
5375	Meridian Checkerboard 23 Federal No. 1	713126	500954	22	32	23
5376	Meridian Checkerboard 23 Federal No. 9	712130	499893	22	32	23
5377	Meridian Checkerboard 23 Federal No. 7	711795	500552	22	32	23
5378	Meridian Checkerboard 23 Federal No. 10	710800	502232	22	32	23
5208	Pogo Covington "A" Federal No. 2	715786	498671	22	32	25
5380	Pogo Covington "A" Federal No. 8	715772	493995	22	32	25
5381	Pogo Covington "A" Federal No. 9	717086	494153	22	32	25
5382	Pogo Covington "A" Federal No. 1	717041	498309	22	32	25
5209	Pogo Covington "A" Federal No. 18	713148	498645	22	32	26
5210	Pogo Red Tank "26" Federal No. 1	711731	495498	22	32	26
5211	Pogo Red Tank "26" Federal No. 2	710485	498569	22	32	26
5383	Pogo Red Tank "26" Federal No. 3	710172	496920	22	32	26
5384	Pogo Red Tank "26" Federal No. 4	710179	495917	22	32	26
5212	Pogo Federal 27 No. 1	706900	493891	22	32	27
5214	Pogo Exxon Federal 27 No. 3	709193	495630	22	32	27
5385	Pogo Prize Federal No. 4	709089	497007	22	32	27
5386	Pogo Prize Federal No. 5	709176	498222	22	32	27
5387	Pogo Exxon Federal 27-2	709212	494256	22	32	27
5216	Pogo Red Tank 28 Federal No. 3	702247	498452	22	32	28
5389	Pogo Red Tank "28" Federal No. 1	704225	498483	22	32	28
5217	Bass Perry Federal No. 1	692059	492737	22	32	31
5218	Pogo Proximity 31 No. 4	691954	492737	22	32	31
5219	Enron Silverton 31 Federal No. 1	689284	488859	22	32	31
5220	Yates Lotus "ALT" State No. 2	697351	491465	22	32	32
5221	Pogo Red Tank 34 Federal No. 3	709225	492852	22	32	34
5223	Pogo Red Tank 34 Federal No. 2	709223	491671	22	32	34
5390	Pogo Red Tank "34" Federal No. 14	706913	492866	22	32	34
5391	Pogo Red Tank "34" Federal No. 4	707918	491618	22	32	34
5392	Pogo Red Tank "34" Federal No. 1	708236	492940	22	32	34
5224	Pogo Red Tank 35 Federal No. 1	710208	492972	22	32	35
5393	Pogo Red Tank "35" Federal No. 3 SWD	710868	490662	22	32	35
5394	Shell Bootleg Ridge Unit No. 1	717094	493357	22	32	36
5395	Meridian Mule Deer 36 State No. 1	718414	493357	22	32	36
5396	Meridian Mule Deer 36 State No. 2	718084	491707	22	32	36
5397	Meridian Mule Deer 36 State No. 4	719534	493027	22	32	36
5242	Texas Pacific Reed Federal No. 1	731495	517159	22	33	4
1631	Dual Production Co. Richardson-Bass State No. 1	✓730500	✓515575	22	33	5
5243	~~Dual Richardson & Bass State No. 1~~	~~730365~~	~~515509~~	~~22~~	~~33~~	~~5~~
5244	Meridian Dagger Lake State No. 1	728715	515179	22	33	5
5241	Superior San Simone State Com No. 1	723435	518149	22	33	6
5239	Superior SST State 7 No. 1	723435	511549	22	33	7
5240	Cabot State "K" No. 1	720922	510222	22	33	7
5238	Meridian Dagger Lake "8" Federal No. 1	727370	514213	22	33	8
5398	Meridian Dagger Lake 8 Fed No. 2	728360	514543	22	33	8
5236	Dual Hudson Federal No. 1	731330	514213	22	33	9
1632	Getty Oil Company Getty Federal 15 No. 1	739420	506414	22	33	15
5399	Getty Federal 15 No. 1	739333	506351	22	33	15
5400	Getty Federal 15 Com "B" No. 1	738013	508991	22	33	15
5237	Pogo EBR Federal No. 1	726123	506282	22	33	17
5234	Pogo State NBR No. 2	722146	507594	22	33	18
5235	Pogo State NBR No. 1	723492	506273	22	33	18
5233	Santa Fe Bootleg Ridge 19 State No. 1	721313	503306	22	33	19
5401	Collins & Ware White Lightning Federal No. 1	724872	500986	22	33	19
1633	Davis and Collins Conoco Federal #1	726246	502380	22	33	20

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5232	Davis & Collins Conoco Federal No. 1	726170	502337	22	33	20
5231	Yates Pronghorn "ACZ" Federal No. 1	726246	495713	22	33	29
5229	Yates pronghorn Unit No. 2	724919	497052	22	33	30
5230	Mitchell Bighorn "30" State No. 2	722064	496705	22	33	30
1639	Helbing & Podpechan Shell State #1-B	726355	489162	22	33	32
5226	Helbing & Podpechan Shell State No. 1-B	726303	489144	22	33	32
5402	R.B. Farris Phillps State No. 1	735512	493164	22	33	33
5227	CP Miller Humble State No. 1	739511	489206	22	33	34
5228	Amoco Federal "BG" No. 1	743432	491880	22	33	35
1226	Mesa Petroleum Company, Nash Unit #3	621510	479547	23	29	12
1227	Mesa Petroleum, Nash Unit #5	624533	474546	23	29	13
1228	Mesa Petroleum Company, Nash Unit #4	624517	476547	23	29	13
1229	Mesa Petroleum Company, Nash Unit #1	624195	475560	23	29	13
5127	Belco (Bass?) Belco-James Ranch No. 10	656055	486279	23	30	1
5128	Belco Hudson Federal No. 1	653563	486310	23	30	1
5129	Belco James Ranch Unit No. 3	655287	484839	23	30	1
907	D-227	✓642275	✓486850	23	30	3
1230	Fenix & Scisson, Inc., WIPP H-7c	648766	475035	23	30	14
1231	Skelly Oil Company, Forty-Niner Rdige Unit #1	638975	474206	23	30	16
5130	Texaco Forty-Niner Ridge Unit No. 3	637575	475238	23	30	16
1232	Mesa Petroleum Company, Nash Unit #6	625185	475553	23	30	18
1234	Skelly Oil Company, Forty Niner Ridge Unit 2	639004	470246	23	30	21
5131	Phillips Sandy Unit No. 1	652320	470288	23	30	24
1236	ERDA 10	644058	461520	23	30	34
1237	Atomic Energy Commission, U.S.G.S. Test Hole #1	644000	458900	23	30	34
5154	Union of CA Barclay Federal No. 1	685369	483466	23	31	1
5155	Owens Union Federal No. 1	684036	484770	23	31	1
5153	Continental State AA-2 No. 1	682702	487402	23	31	2
1642	H-17	673837	484304	23	31	3
1239	P-17	667955	484185	23	31	4
1240	P-8	667664	48471	23	31	4
1241	Fenix & Scisson, WIPP No. H-4C	662991	487607	23	31	5
1242	P-7	662669	487090	23	31	5
1243	MP Grace Cabin Baby Federal No. 1	665559	486111	23	31	5
1244	P-16	663914	483737	23	31	5
5147	Belco James Ranch Unit 14	658934	482782	23	31	6
5149	Enron James Ranch Unit No. 17	658924	485883	23	31	6
5150	Bass James Ranch No. 13	657800	486514	23	31	6
5151	Continental James Ranch Unit No. 7	660269	485996	23	31	6
5152	Bass James Ranch Unit No. 30	659943	484664	23	31	6
5141	Santa Fe North Pure Gold "8" Federal No. 9	666705	478105	23	31	8
5142	Santa Fe North Pure Gold "8" Federal No. 6	665259	479417	23	31	8
5143	Santa Fe North Pure Gold "8" Federal No. 5	665254	478108	23	31	8
5144	Santa Fe North Pure Gold "8" Federal No. 3	666887	480967	23	31	8
5145	Santa Fe North Pure Gold "8" Federal No. 2	666707	479421	23	31	8
5146	Santa Fe North Pure Gold "8" Federal No. 1	666896	479418	23	31	8
5148	Belco James Ranch Unit No. 15	662386	478118	23	31	8
5134	Santa Fed North Pure Gold "9" No. 9	670866	477804	23	31	9
5135	Santa Fe North Pure Gold "9" Federal No. 7	669534	480782	23	31	9
5136	Santa Fe North Pure Gold "9" Federal No. 4	668207	480778	23	31	9
5137	Santa Fe North Pure Gold "9" Federal No. 5	668532	481620	23	31	9
5138	Santa Fe North Pure Gold "9" Federal No. 2	668221	478099	23	31	9
5139	Santa Fe North Pure Gold "9" Federal No. 1	669545	477786	23	31	9
5140	Santa Fe Pure Gold "4" Federal No. 1	669525	481862	23	31	9
5133	Max M. Wilson Bauerdorf-Federal No. 1	683072	478191	23	31	11
5132	Devon Todd 13 'O' Federal No. 15	686664	473054	23	31	13

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1246	Texas American Oil Corp., Todd Federal 14 No. 1	680178	474279	23	31	14
1247	H-12	678079	477535	23	31	15
1248	El Paso Natural Gas Company, Arco State #1-16	669610	474216	23	31	16
1249	Patoil Corporation, Muse Federal #1	672277	467625	23	31	21
1250	Texas American Oil Corporation, Todd Federal 23 #3	681682	468971	23	31	23
1251	Texas American Oil Corp., Todd 23 Federal No. 1	681843	467651	23	31	23
1252	Skelly Oil Company, Todd 25 Federal #1-Z	685481	465032	23	31	25
1253	Texas American Oil Corp., Todd Federal #2	681861	465011	23	31	26
1254	Texas American Oil Corp., Todd Federal 26 No. 1	681531	465011	23	31	26
1255	Texas American Oil Corporation, Todd Federal #4	681522	466331	23	31	26
1256	Patoil Corporation, Wright-Federal #1	673622	463667	23	31	27
1257	El Paso Natural Gas Company, Mobil-Federal #1	665712	463629	23	31	29
1258	J.A. Leonard, Continental State No. 1	663060	460967	23	31	32
1259	Patoil Corporation, Wright-Federal #2	668367	459687	23	31	33
1260	Charles P. Miller, Pauley Harrison State #1	684234	457144	23	31	36
5245	Yates Saffron Unit No. 1	713552	486079	23	32	2
5246	OB Kiel, Jr. Federal No. 1	709293	486352	23	32	3
5247	Strata Aracanga Federal No. 1	702426	483394	23	32	4
5248	Santa Fe Platinum 6 Federal No. 1	690620	483483	23	32	6
5249	JH Trigg Federal "WL" No. 5	693473	482355	23	32	7
5250	McBee Continental Federal No. 1	702718	478364	23	32	9
5251	Strata Aracanga Federal No. 2	703103	479385	23	32	9
1263	Hill & Meeker & Ambass. Oil Corp., Matthews 11 #1	713295	481143	23	32	11
5252	Exxon Central SW Oil Corp Federal No. 1	710648	481391	23	32	11
5253	Superior Triste Draw Gulf Federal No. 1	711983	478484	23	32	11
5254	Strata Urraca Federal No. 2	710666	478366	23	32	11
5255	Yates Amanda "AMN" Federal No. 1	711612	480841	23	32	11
5256	Superior Triste Draw Federal No. 1	713292	474527	23	32	14
1264	John H. Trigg, Federal Continental 1-15	708068	475817	23	32	15
1265	Skelly Oil Company, Federal Sand 18-1	693552	475663	23	32	18
1266	Kirklin Drilling Company, Federal Estill AF-1	697549	467782	23	32	20
1267	Fenix & Scisson, Inc., WIPP No. H-10c	697550	467513	23	32	20
1268	Curtis Hankamer, Gulf-Federal A-A #1	√702825	√471850	23	32	21
1269	H.L. Johnston, Sr., Conoco-Fields-Federal #1	720347	469019	23	32	24
1270	Continental Oil Company, Fields Federal No. 1	720027	468023	23	32	24
1271	Continental Oil Company, Fields No. 2	715716	462987	23	32	25
1272	H.L. Johnston, Sr., Wehrli-Federal #1	717674	466331	23	32	25
1273	John H. Trigg, Federal WL #3-26	√715100	√462200	23	32	26
1274	P.M. Drilling Company, Federal James No. 4	715050	463967	23	32	26
1275	P.M. Drilling Company, Federal Field #1	712097	462613	23	32	26
1276	John H. Trigg Company, No. 4-26 Federal WL	713741	462302	23	32	26
1277	Max Wilson, Continental Federal No. 1	701519	466491	23	32	28
1278	Curtis Hankamer, Hankamer No.1 Continental Federal	√689600	√457200	23	32	31
1279	Curtis Hankamer, Holder Federal #1	704201	459915	23	32	33
1280	The Pure Oil Company, Federal K No. 1	709812	458639	23	32	34
1281	PM Drilling Company, Federal James No. 3	713439	458673	23	32	35
1282	John H. Trigg, Federal WL 1-35	713096	460314	23	32	35
1283	P.M. Drilling Company, Federal-James No. 1	714738	461323	23	32	35
1284	P-M Drilling Company, Payne No. 2	712436	460967	23	32	35
1285	John H. Trigg, Federal WL No. 2-35	√714425	√460450	23	32	35
1286	P.M. Drilling Company, Payne Federal No. 4	710793	459958	23	32	35
1287	P-M Drilling Company, Federal-Payne No. 1	712445	459647	23	32	35
1288	P.M. Drilling Co., Federal James No. 2	713418	461308	23	32	35
1289	P.M. Drilling Company, Federal Payne No. 3	710472	458643	23	32	35
1290	Penroc Oil Corporation, Triste State #1	715726	461667	23	32	36
1291	The Pure Oil Company, Brinninstool Deep Unit #1	718764	458769	23	32	36

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1292	David Fasken, Gulf State #1	716068	460023	23	32	36
5257	Yates Jackal "ANJ" Federal No. 7	731282	486206	23	33	4
5258	Cabeen Continental Federal No. 1-P	735569	483904	23	33	4
5259	WA & ER Hudson Shell Federal No. 1	725384	483523	23	33	6
5260	Yates Pronghorn Unit No. 1	723696	486489	23	33	6
5261	Hudson Federal No. 1	721203	478534	23	33	7
5262	Yates Pronghorn AAP Federal No. 1	726068	478256	23	33	8
5263	Amoco State "IK" No. 1	738219	482615	23	33	10
1296	P-M Oil Company, Texaco State No. 1	726502	473317	23	33	17
1297	Helbing & Podpechan, #1 A Shell State	721296	473304	23	33	18
1298	Tenneco Oil Company, Skelly State #1	723819	477273	23	33	18
1299	Continental Oil Company, Marshall #3	722500	468000	23	33	19
1300	Continental Oil Company, I.J. Marshall 19-1	721347	468037	23	33	19
1301	Continental Oil Company, Marshall #4	721298	469357	23	33	19
1302	Continental Oil Company, Marshall #19-2	722584	469360	23	33	19
1303	American Quasar, Brinninstool #1	729177	470692	23	33	20
1304	Continental Oil Company, Levick Federal #1	730514	468064	23	33	20
1305	Kirklin Drilling Company, Lea State #1	725282	461456	23	33	31
1306	El Cinco Production Co., Ltd., Humble State 1-32	729247	461465	23	33	32
1307	George L. Buckles Company, State 1-35	742455	457603	23	33	35
1323	Chase Petroleum Company, Valley #1	599137	452623	24	29	5
1324	El Capitan Oil Company, Federal Reid No. 1	596182	451311	24	29	6
1325	Southern California Petrol. Corp., Federal Reid #1	596210	447966	24	29	7
1326	Southern California Petrol. Corp., Federal Reid #2	596203	448671	24	29	7
1327	Tennessee Production Comp., Valley Land Company #	593560	446643	24	29	7
1328	Tennessee Production Company, Valley Land #3	594880	447305	24	29	7
1329	Skelly Oil Company, Cedar Canyon #1	608299	446429	24	29	9
1330	Skelly Oil Company, Cedar Canyon 9D #1	607090	446318	24	29	9
1331	Skelly Oil Company, Cedar Canyon #10-1	611032	448814	24	29	10
1634	Exxon Company, USA Exxon Pouche Federal No. 1	618984	449047	24	29	11
1332	Penzoil United Incorporated, Mobil-Federal 27 #1	609826	430402	24	29	27
1333	Perry R. Bass, Poker Lake Unit #54	639064	451785	24	30	4
1334	Perry R. Bass, Poker Lake Unit #45	629692	445286	24	30	18
1335	Fenix & Scisson, Inc., WIPP H No. 8-C	650409	438581	24	30	23
1336	Hill & Meeker, Bass Federal #1-25	652561	430749	24	30	25
1337	Ford Chapman & Associates, Federal-Nettles No. 1	635146	430603	24	30	29
1338	Skelly Oil Company, Todd 2 State #1	680275	454467	24	31	2
1339	Max Wilson, Jennings Federal No. 1	677646	451788	24	31	3
1340	Jack L. McClellan, Jennings Federal No. 1	673684	455760	24	31	3
1341	Texaco, Incorporated, M.M. Stewart Federal #1	672364	455753	24	31	4
1342	Fenix & Scisson, Inc., WIPP No. H-9C	667929	453890	24	31	4
1343	Sundance Oil Company, Betty Federal #1	670056	454734	24	31	4
1344	El Paso Natural Gas Company, Sundance Federal #1	669729	454407	24	31	4
1345	American Quasar, Dunes Unit Federal #1	659117	454367	24	31	6
1346	Ambassador Oil Corporation, Federal Y #1	661902	446427	24	31	7
1347	Gulf Oil Corporation, Federal Littlefield CT #1	681595	450486	24	31	11
1348	Coquina Oil Corporation, El Paso Federal No. 1	685570	447853	24	31	12
1349	W.J. Weaver, Continental Federal #1	667174	445136	24	31	17
1350	Charles B. Read, Ritchie Federal #1	661926	441141	24	31	18
1351	Pauley Petroleum Incorporated, Jennings Federal #1	667202	439856	24	31	20
1352	David Fasken, Poker Lake #40	664587	435859	24	31	20
1353	Hill & Meeker, Carper Federal #1-21	672465	439896	24	31	21
1354	The Texas Company, T. Heflin-Federal #1	686963	435990	24	31	24
1355	Pan American Petroleum Corp., Poker Lake Unit #36	672515	430631	24	31	28
1356	Texaco, Incorporated, Cotton Draw Unit No. 67	679117	426784	24	31	35
1357	Union Oil Co. of California, Union Federal 1 #1	718807	452144	24	32	1

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1358	Cabeen Exploration Corp., Continental Federal #1-L	716134	453435	24	32	1
1359	Calco, Marathon State #1	√712200	√454600	24	32	2
1360	P.M. Drilling Company, Ohio State No. 1	714798	454727	24	32	2
1361	Curtis Hankamer, Bondurant Federal No. 1	692340	455854	24	32	6
1362	Gulf Oil Corporation, Federal Hanagan D #1	708240	448103	24	32	10
1363	Continental Oil Company, Wimberly #2	714841	450783	24	32	11
1364	Curtis Hankamer, Hanagan Federal No. 2	713540	446806	24	32	11
1365	Gulf Oil Corporation, Federal Hanagan D #3	714854	448130	24	32	11
1366	Gulf Oil Corporation, Federal Hanagan D #2	713534	448126	24	32	11
1367	Curtis Hankamer, Gulf Hanagan #1	714860	446810	24	32	11
1368	Continental Oil Company, Wimberly #1	713527	449453	24	32	11
1369	Continental Oil Company, Wimberly 12 #1	720134	450839	24	32	12
1370	Continental Oil Company, Wimberly 12 #2	720140	449519	24	32	12
1371	Curtis Hankamer, Hanagan Federal No. 3	716167	449475	24	32	12
1372	Westates Petroleum Corp. of Texas, Woolley #1	720177	441624	24	32	13
1373	Continental Oil Company, Wimberly A #1	718837	445548	24	32	13
1374	Tenneco Oil Company, #1 USA Jennings	712210	445483	24	32	14
1375	Tenneco Oil Co., USA Jennings N.M. 033503 No. 2	711145	441759	24	32	14
1376	Tenneco Oil Company, Jennings Federal No. 4	711903	442868	24	32	14
1377	Tenneco Oil Co., USA Jennings N.M. 033503 Well #3	713549	445486	24	32	14
1378	Gulf Oil Corporation, Federal Hanagan B #2	709545	441517	24	32	15
1379	Gulf Oil Corporation, Federal Hanagan B #3	709593	442837	24	32	15
1380	Tenneco Oil Company, Hicks-Federal #1	706955	441486	24	32	15
1381	Gulf Oil Corporation, Federal Hanagan B #1	708285	441502	24	32	15
1382	Charles B. Read, Bradley #1	708319	437538	24	32	22
1383	Charles B. Read, Bradley #2	709298	438873	24	32	22
1384	Tenneco Oil Company, U.S. Smelting U.S.A. #2	705653	438831	24	32	22
1385	Tenneco Oil Company, U.S. Smelting U.S.A. Well #3	709639	437553	24	32	22
1386	Tenneco Oil Company, U.S Smelting USA #4	708641	438536	24	32	22
1387	Tennessee Gas Transmission Co., US Smelting USA #	708297	440182	24	32	22
1388	Tenneco Oil Company, U.S. Smelting, USA No. 5	709978	436567	24	32	22
1389	Curtis Hankamer, Ernest Federal #1	710948	438878	24	32	23
1390	Charles B. Read, Bradley #3	√714900	√440200	24	32	23
1391	Ralph E. Williamson, Wright Federal No. 1	708338	434898	24	32	27
1392	Union Oil of California, Paduca Federal #1	692468	433403	24	32	30
1393	Texaco Incorporated, Cotton Draw Unit Well #72	704296	425611	24	32	33
1394	Texaco, Incorporated, Cotton Draw Unit #69	706962	426960	24	32	34
1395	Sid W. Richardson, Inc., Federal Delbasin #1	710915	425681	24	32	35
1396	Continental Oil Company, Bell Lake Unit #7	751703	456332	24	33	1
1635	Getty Oil Company HNG State 4-F #1	732920	454890	24	33	4
1397	Hondo Drilling Company, Gulf N.W. #2	721439	453491	24	33	6
1398	Hondo Drilling Company, Gulf State NW #1	721447	452171	24	33	6
1399	Tom L. Ingram, State O #2	721460	449531	24	33	7
1400	Tom L. Ingram, State O #1	721454	450851	24	33	7
1401	Tom L. Ingram, State P #1	722542	451190	24	33	7
1402	George W. Riley Incorporated, State #1-7	725371	446943	24	33	7
1403	David Fasken, Gulf State #7-2	√723000	√449250	24	33	7
1404	Sunray Mid-Continent Oil Co., N.M. State A.G. 1	726681	450892	24	33	8
1405	Byard Bennett, Holland #1	751783	444434	24	33	13
1406	Tenneco Oil Company, State Lowe #1	726735	441659	24	33	17
1407	Robert B. Holt, Holly-State #1	729340	445646	24	33	17
1408	Continental Oil Company, State BB 20 No. 1	728092	436379	24	33	20
1409	F.R. Jackson, State #1	737312	439079	24	33	22
1410	Tenneco Oil Company, Sunray State #1	738682	432477	24	33	27
1636	Getty Oil Company Getty 28 State No. 1	735022	432456	24	33	28
1411	Tidewater Oil Company, State AP #1	729458	431107	24	33	29

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1412	Kirklin Drilling Co., Inc., Continental State #1	721192	435351	24	33	30
1413	Albert Gackle Operator, Continental State #1	725503	427126	24	33	31
1414	Gulf Oil Corp. & Kirklin Drilling, #1 Lea St. GX	751903	429917	24	33	36
1425	J. Glen Bennett, Superior Federal #1-3	613857	423808	25	29	3
1426	J. Glen Bennett, Superior #1-8			25	29	8
1427	Neil H. Wills, Superior Federal #1	603281	414470	25	29	8
1428	Mobil Oil Corporation, Corral Draw Unit #1	616520	410501	25	29	14
1429	J. Glen Bennett, Superior Federal 15 No.1	609901	409148	25	29	15
1430	Mobil Oil Corporation, Corral Draw Unit #2	611251	404764	25	29	22
1431	J. Glen Bennett, No. 1-26 Superior Federal	619292	398583	25	29	26
1432	J. Glen Bennett, Superior Federal 1-27	609987	398529	25	29	27
1433	Bell Petroleum Company, Federal #1	600565	402550	25	29	29
1434	Bell Petroleum Company, Cities Service Federal #1	597974	398534	25	29	30
1637	Duncan Drilling Company Slater A #1	598062	394496	25	29	31
1436	Pat Oil Corporation, R & B Federal #1	637835	422714	25	30	4
1437	J.M.C. Ritchie & Chambers & Kennedy, #1 Hopp Fed.	636541	420038	25	30	4
1438	Fred Pool Drilling Company, Superior State #1	635232	417381	25	30	8
1439	Ralph Lowe, Poker Lake State #1			25	30	8
1441	Ralph Lowe, T&P State #1			25	30	8
1442	Ralph Lowe, Superior State #1			25	30	8
1443	Ralph Lowe, Poker Lake State #3			25	30	8
1444	Alamo Corporation, Poker Lake Unit #5X-1A			25	30	10
1445	Bass Enterprises, Poker Lake #44	644427	417425	25	30	10
1446	Ralph Lowe, #1-X R&B Federal A			25	30	17
1447	Alamo Corporation, Poker Lake Unit #11A-7			25	30	17
1448	J. Ray Stewart, Poker Lake #61	631187	411967	25	30	17
1449	Jubilee Energy Corporation, Poker Lake Unit 64	632170	413637	25	30	17
1450	J. Ray Stewart, 66 Poker Lake Unit	630863	410592	25	30	17
1451	Perry R. Bass, Jennings-Federal No. 1	628542	413268	25	30	18
1452	Ralph Lowe, R&B Federal #1			25	30	18
1453	Alamo Corporation, Poker Lake #12A-9	628559	409261	25	30	18
1454	Central States Oil Company, Poker Lake Unit No. 38			25	30	19
1455	J.R. Stewart, Poker-Lake Unit No. 65	629888	407945	25	30	19
1456	Perry R. Bass, Continental-Federal #2	631231	405274	25	30	20
1457	Perry R. Bass, Continental Federal #1	631208	407957	25	30	20
1458	Alamo Corporation, Poker Lake Unit #6-2A			25	30	21
1459	Bass Enterprises Prod. Co., Poker Lake Unit No. 56	652558	398842	25	30	25
1460	Texaco Incorporated, Cotton Draw Unit No. 65	681739	422822	25	31	2
1638	Pauley Petroleum Poker Lake #46	663235	424153	25	31	5
1461	Alamo Corporation, Poker Lake Unit 7-A-3	668517	402935	25	31	28
1462	J.A. Leonard, Continental State No. 1			25	31	32
1463	Gold Metals & Santana Pet. Corp., #1 Del Basin Fed	679211	393756	25	31	35
1464	Texaco, Incorporated, Cotton Draw Unit No. 49	708283	421374	25	32	3
1465	Texaco Incorporated, E.F. Ray NCT-2 No. 1	704684	414738	25	32	9
1466	Texaco Incorporated, Cotton Draw Unit No. 52	704669	416058	25	32	9
1467	Tennessee Gas & Oil Company, Ray U.S.A. #1	705628	419030	25	32	10
1468	Texaco Incorporated, Cotton Draw Unit No. 39	705642	417710	25	32	10
1469	Texaco Incorporated, Cotton Draw Unit No. 40	706948	419047	25	32	10
1470	Texaco Incorporated, Cotton Draw Unit #66	705743	417612	25	32	10
1472	Texaco Incorporated, Cotton Draw Unit No. 60	707982	417575	25	32	10
1473	Texaco Incorporated, E.F. Ray Federal B No. 2	706962	417727	25	32	10
1474	Texaco Incorporated, E.F. Ray-Federal B Well #1	708336	415103	25	32	10
1475	Texaco Incorporated, E.F. Ray Federal No. 1	706990	415090	25	32	10
1476	Texaco Incorporated, E.F. Ray-Federal (NCT-1) No.2	706976	416410	25	32	10
1477	Tenneco Oil Company, Emily Flint Ray U.S.A. #41	705659	416068	25	32	10
1478	Westates Petroleum Corp. of Texas, Cont. Fed. #1	713646	415142	25	32	11

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1479	Patoil Company, Union Federal #1	717652	409904	25	32	13
1480	Joseph O'Neill Jr., Federal O #1	715012	409876	25	32	14
1481	Joseph O'Neill, Federal O #2	715000	411196	25	32	14
1482	Hill & Meeker, Ora Hall-Federal 14 #1	710655	412153	25	32	14
1483	Tennessee Gas Transmission, #1 USA G.E. Jordan	705679	409808	25	32	15
1484	Texaco Inc., G.E. Jordan Federal (NCT-2) Well No.1	705678	412438	25	32	15
1485	Texaco Incorporated, G.E. Jordan Federal (NCT-1)#2	706998	411149	25	32	15
1486	Tennessee Gas & Oil Company, G.E. Jordan #3	706997	413770	25	32	15
1487	Texaco Inc., G.E. Jordan Federal (NCT-1) No. 8	708343	413783	25	32	15
1488	Texaco Inc., G.E. Jordan-Federal (NCT-2) No. 2	705677	413578	25	32	15
1489	Tennessee Gas & Oil Company, G.E. Jordan USA #4	705678	411129	25	32	15
1490	Texaco Inc., G.E Jordan Federal (NCT-1) #6	708344	412463	25	32	15
1491	Tennessee Gas Transmission Co., G.E. Jordan USA #	706998	412450	25	32	15
1492	Texaco Incorporated, Cotton Draw Unit No. 46	708196	411318	25	32	15
1493	Tennessee Gas & Oil Company, State Monsanto #4	701685	409765	25	32	16
1494	Tennessee Gas Trans. Co., State E.L. Bradley #1	704358	412424	25	32	16
1495	Tenneco Oil Company, State Monsanto #6	702010	410759	25	32	16
1496	Tennessee Gas Transmission Co., State Monsanto #1	704358	411112	25	32	16
1497	Tenneco Oil Company, State Monsanto #5	703368	410772	25	32	16
1498	Tenneco Oil Company, Monsanto State #8			25	32	16
1499	Tennessee Gas & Oil Company, State Bradley #2	704357	413744	25	32	16
1500	Tenneco Oil Company, State Monsanto #7	700697	409426	25	32	16
1501	Tenneco Oil Company, State E.L. Bradley #3	702003	412066	25	32	16
1502	Continental Oil Company, State Z 16 #1	703038	412408	25	32	16
1503	Tennessee Gas & Oil Company, State Monsanto #3	703039	409779	25	32	16
1504	Tennessee Gas & Oil Company, Monsanto #2	704348	409814	25	32	16
1505	Shoreline Exploration Comp., Continental State #1	703368	412312	25	32	16
1506	Texaco Incorporated, Cotton Draw Unit #64			25	32	18
1507	The Texas Company, Jack B. Shaw Federal #1	692388	413613	25	32	18
1508	Texaco Inc.(formerly PRBass), Cotton Draw Unit #42	699438	405451	25	32	20
1509	Texaco Incorporated, Cotton Draw Unit #57	704083	404836	25	32	21
1510	Panther City Investment Co., Perry Federal #37	700444	404471	25	32	21
1511	Panther City Investment Co., Perry Federal #35	700423	405791	25	32	21
1512	Panther City Investment, Inc., Perry Federal No.6	701721	407126	25	32	21
1513	Panther City Invest. Inc., Perry Federal No. 7	701700	408445	25	32	21
1514	Panther City Investment Co., Perry Federal #27	704066	406156	25	32	21
1515	Panther City Investment Co., Perry Federal #28	703080	405817	25	32	21
1516	Tennessee Gas & Oil Company, #3 E.H. Perry-U.S.A.	703064	407139	25	32	21
1517	Panther City Investment Co., Perry Federal #38	701764	404484	25	32	21
1518	Perry R. Bass, Perry Federal #43			25	32	21
1519	Texaco Inc.(formerly Panther), Cotton Draw Unit 44	702763	404824	25	32	21
1520	Tenneco Oil Company, E.H. Perry USA Well No. 36	700401	407113	25	32	21
1521	Tennessee Gas & Oil Company, E.H. Perry U.S.A. 2	700380	408433	25	32	21
1522	Panther City Investment Company, Perry Federal #2	704384	407152	25	32	21
1523	Tennessee Gas Transmission Co., E.H. Perry USA #1	703047	408459	25	32	21
1524	Panther City Investment Company, Perry Federal #1	704367	408472	25	32	21
1525	Panther City Investment Company, Perry Federal #5	701743	405804	25	32	21
1526	Texaco Incorporated, G.E. Jordan Federal #3	705704	407168	25	32	22
1527	Texaco Incorporated, G.E. Jordan Federal No. 1	705687	408488	25	32	22
1528	Texaco Incorporated, Cotton Draw Unit No. 48	705386	406169	25	32	22
1529	Texaco Incorporated, G.E. Jordan Federal NCT-1 #5	706855	408657	25	32	22
1530	Texaco, C.D. Unit No. 18	706689	407514	25	32	22
1531	Joseph L. O'Neill, Federal P #1	713707	408557	25	32	23
1532	Texaco Incorporated, G.E. Jordan Federal No. 4			25	32	25
1533	Texaco Incorporated, Cotton Draw Unit No. 61	705420	403530	25	32	27
1534	Texaco Incorporated, Cotton Draw Unit No. 47	701778	403164	25	32	28

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1535	Texaco Incorporated, Cotton Draw Unit No. 56	704104	403187	25	32	28
1536	Tenneco Oil Company, J.D. Sena U.S.A. No. 1	701459	400840	25	32	28
1537	Texaco Incorporated, Cotton Draw Unit No. 51	702784	403174	25	32	28
1538	Texaco Incorporated, Cotton Draw Unit No. 54			25	32	28
1539	Texaco Incorporated, Cotton Draw Unit No. 45	700458	403151	25	32	28
1540	Texaco Incorporated, Cotton Draw Unit No. 59	704118	402197	25	32	28
1541	Texaco Incorporated, Cotton Draw Unit No. 50	701784	401844	25	32	28
1542	Tenneco Oil Company, J.D. Sena Jr. U.S.A. No. 2	700812	400834	25	32	28
1543	Texaco Incorporated, Cotton Draw Unit No. 58	699474	401821	25	32	29
1544	I.W. Lovelady, Conoco Federal #1-29	699485	399504	25	32	29
1545	Ray Smith, Ray Smith #1	689811	396460	25	32	31
1546	R.C. Graham, Conoco State No. 1	696462	396522	25	32	32
1547	Westates Petroleum Corp. of Texas, Jennings #1	704597	395266	25	32	33
1548	Hill & Meeker, Hall-Federal 1-33	700489	393906	25	32	33
1549	Hill & Meeker, Jennings-Federal 1-33	702134	396227	25	32	33
1550	Perry R. Bass, Federal-Muse #1	747971	424626	25	33	1
1551	Hill & Meeker, Bass Federal #1	730822	424518	25	33	5
1552	Santana Petroleum Corp., Annie Bass Federal #1	730872	416608	25	33	8
1553	Curtis Hankamer, Muse Federal #1	742717	419315	25	33	11
1554	Sam H. Jolliffe Jr., #1 Bass Federal	721629	413912	25	33	18
1555	Curtis Hankamer, Federal Bass #1	729628	408670	25	33	20
1556	George L. Buckles Co., Federal Marshall No. 1	736192	408690	25	33	21
1557	American Quasar Petroleum Company, Vaca Draw #1	736222	404740	25	33	21
1558	Hill & Meeker, Muse-Federal 23 #1	742865	404780	25	33	23
1559	R.B. Farris, Perry Federal 1	748141	404811	25	33	24
1560	King Resources, Pan American Federal No. 1	748160	400844	25	33	25
1561	Ashmun & Hilliard, Federal No. 1-25	752135	399551	25	33	25
1562	Robert A. Dean, Harry Dickson #1	741567	399489	25	33	27
1563	Tidewater Oil Company, Annie R. Bass Federal #1	736273	399459	25	33	28
1564	Curtis Hankamer, Conley Federal #1	736234	403420	25	33	28
1565	Tenneco Oil Company, W.H. Jennings Inc USA No. 1	727014	402046	25	33	29
1566	Tenn. Gas Transmission Co, Richardson & Bass USA#	721803	394131	25	33	31
1567	Pure Oil Company, Red Hills Unit #1	729402	393832	25	33	32
1568	Neil H. Wills, Continental State No. 1	731044	395490	25	33	32
1569	Max M. Wilson, Marathon-State #1	748205	394253	25	33	36
1570	Ashmun Hilliard Oil Company, State #1-36	748173	398204	25	33	36

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deleted entries w/green lines 4/7/02 DWP

ID Number	Drillhole name	StateX (NAD27)	StateY (NAD27)	Township	Range	Section
~~1070~~	~~Amoco Prod., Federal Gas Com No. 1-G~~	~~610700~~	~~566400~~	~~20~~	~~30~~	~~21~~
~~1071~~	~~Texas International Petrol. Corp., Lowe Federal #1~~			~~20~~	~~30~~	~~31~~
1072	Pan American Petroleum Corp., Big Eddy Unit #11	632900	576850	20	31	7
230	U-30	650525	571950	20	31	14
~~1073~~	~~Pennzoil United, Big Eddy Unit No. 12~~			~~20~~	~~31~~	~~21~~
1074	Shell Oil Company, Perry Federal #1			20	32	10
1075	Flag-Redfern Oil Company, Hanson State #1			20	32	13
~~1076~~	~~Phillips Petroleum Company, Plata Deep Unit #1~~			~~20~~	~~32~~	~~15~~
215	NF-23-F	678525	560375	20	32	27
398	K-113	685500	554250	20	32	35
400	K-112	682800	554300	20	32	35
1077	Pan American Petroleum Corp., Little Eddy Unit #1			20	33	5
1078	Carl Engwall, Sinclair Federal #1			20	33	14
1079	Randall F. Montgomery, Bass State #1			20	33	18
1080	Randall F. Montgomery, Bass State #2			20	33	18
1081	Amoco Prod. Co., API #30-025-26241, Fed Y Com #1			20	33	27
1090	Pan American Petroleum Corp., Big Eddy Unit #18			21	29	3
1091	Union Oil Co. of California, Cowden Federal #1			21	29	4
1092	Meadco Properties, Ltd., Harris-Bell #1			21	29	5
1093	Meadco Properties Ltd., Harris Bell #2			21	29	5
1094	Meadco Properties Ltd., Harris 6 #1			21	29	6
1095	Perry R. Bass, Big Eddy Unit #61	610776	537608	21	29	15
1096	Pan American Petroleum Corp., Big Eddy Unit #16	596276	537559	21	29	18
1097	Perry R. Bass, Big Eddy Unit No. 40	612098	533654	21	29	22
1098	Bass Enterprises Prod. Co., Big Eddy Unit No. 38	610799	524446	21	29	34
452	Wills-10-A (W-10A)	655875	547400	21	30	1
453	Wills 10	655885	547400	21	30	1
454	D-131	652775	551050	21	30	1
455	U-126	648625	546500	21	30	2
456	U-144	648650	553125	21	30	2
457	US Potash (U-0)	646400	549000	21	30	2
458	D-157	642425	547000	21	30	3
459	U-91	642000	549750	21	30	3
460	Wills #13 (W-13)	643750	547300	21	30	3
461	Wills-9 (W-09)	645125	550125	21	30	3
462	Wills 14 (W-14)	644750	552800	21	30	3
500	D-158	642800	542800	21	30	10
501	Wills 12 (W-12)	644675	544100	21	30	10
502	US Potash #1 Aray McNutt J (U-S)	641025	543350	21	30	10
503	FC-62	645450	541725	21	30	10
504	D-112	641675	545150	21	30	10
216	D-159	646200	545050	21	30	11
505	Wills 11	649500	543600	21	30	11
507	D-152	647575	542300	21	30	11
508	D-156	647425	545075	21	30	11
510	U-63	651850	538000	21	30	13
523	K-159	630125	536775	21	30	13
217	U-75	641735	536100	21	30	15
232	U-75-A	641725	536100	21	30	15
5301	WC Blanks Big Eddy Unit No. 67	641866	537582	21	30	15

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5059	Bass Big Eddy Unit No. 44	640217	538905	21	30	16
5060	Bass Big Eddy No. 45-Y	640127	538904	21	30	16
1099	WIPP 27	637103	535612	21	30	21
218	MPE-186	651250	535350	21	30	23
550	FC-80	656400	535225	21	30	24
551	Crosby #1 (RC-01)	652500	526250	21	30	25
219	MPE-185	649025	525500	21	30	26
552	Crosby #2 (RC-02)	647650	529450	21	30	26
5061	Phillips James "D" No. 1	648187	525723	21	30	26
220	MPE-179	643800	529750	21	30	27
221	MPE-179-A	643806	529750	21	30	27
5062	Yates Kaleidoscope "AIO" Federal No. 1	640263	523060	21	30	33
583	I-123	643650	523800	21	30	34
5063	Yates Julia "AJL" Federal No. 4	644237	523079	21	30	34
5302	Yates Cabin Lake 34 Federal No. 1	645242	520102	21	30	34
5064	Phillips Peak View No. 1	651176	520437	21	30	35
5065	Phillips James "C" No. 1	646880	521743	21	30	35
5066	C. Grace Livingston Ridge No. 1-Y	652480	521752	21	30	36
5303	C Grace Salomeh No. 1	651831	520109	21	30	36
584	K-109	687800	553725	21	31	1
585	K-138	688275	548850	21	31	1
586	K-137	688300	550500	21	31	1
588	K-133	684350	552850	21	31	1
589	NF-51-F	680450	548850	21	31	2
590	FC-58	678475	550550	21	31	2
591	K-107	679875	553450	21	31	2
593	K-111	682850	550200	21	31	2
594	K-102	676475	550275	21	31	3
595	NF-50-F	675150	548675	21	31	3
596	K-100	675300	546150	21	31	3
597	K-101	677750	548800	21	31	3
598	FC-57	675150	551550	21	31	3
599	FC-55	672525	550150	21	31	3
600	K-99	673525	548200	21	31	3
601	K-103	677500	552600	21	31	3
602	FC-64	✓670000	✓546855	21	31	4
603	FC-54	669900	546200	21	31	4
604	FC-83	671800	547675	21	31	4
605	FC-85	668500	547475	21	31	4
606	NF-49-F	669825	548700	21	31	4
607	FC-64-A	✓670000	✓546875	21	31	4
608	NF-53-F	669750	551525	21	31	4
609	FC-74	669950	547200	21	31	4
610	NF-22-F	662300	547025	21	31	5
611	FC-87	666450	548150	21	31	5
612	NF-21-F	666850	550050	21	31	5
613	NF-41-F	667000	554000	21	31	5
614	NF-19-F	662050	546200	21	31	5
615	FC-60	664525	551475	21	31	5
616	FC-56	664550	548100	21	31	5
617	NF-8-F	667150	546275	21	31	5
618	NF-03-F	664425	554000	21	31	5
619	FC-90	665600	547250	21	31	5
620	NF-24-F	662900	550125	21	31	5
623	NF-48-F	660400	550125	21	31	6
624	NF-37-F	661850	543400	21	31	7

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625	NF-39-F	659300	543400	21	31	7
626	K-117	660675	542125	21	31	7
627	K-115	660675	544700	21	31	7
307	K-118	663300	542350	21	31	8
311	K-119	665925	542200	21	31	8
628	FC-88	665800	544775	21	31	8
629	NF-30-F	664650	543425	21	31	8
630	FC-89	664600	545875	21	31	8
631	K-116	663300	544650	21	31	8
632	NF-35-F	662250	541075	21	31	8
633	FC-61	669900	541000	21	31	9
634	FC-86	668925	545150	21	31	9
635	K-95	671525	542150	21	31	9
636	FC-84	671250	545625	21	31	9
637	NF-32-F	667600	544125	21	31	9
638	NF-31-F	670500	544125	21	31	9
640	NF-44-F	675200	543550	21	31	10
641	NF-42-F	672850	545825	21	31	10
642	K-94	672525	543975	21	31	10
643	NF-38-F	675125	541150	21	31	10
645	FC-59	678100	545850	21	31	11
646	K-139	683725	545450	21	31	12
649	NMP-153 (K-153)	688300	535800	21	31	13
650	FC-72	680575	538275	21	31	14
651	FC-71	677925	540700	21	31	14
652	FC-67	677950	535700	21	31	14
653	FC-73	682950	535775	21	31	14
656	NF-36-F	675050	538150	21	31	15
657	NF-33-A	673175	540825	21	31	15
660	NF-46-F	669800	538175	21	31	16
661	FC-75	667450	535700	21	31	16
662	KP-96	671525	539600	21	31	16
663	KP-97	672075	537000	21	31	16
664	NF-45-F	667200	540550	21	31	17
665	FC-77	664700	538150	21	31	17
666	NMP-161	659900	538000	21	31	18
667	NMP-160 (K-160)	658100	539000	21	31	18
668	FC-79	659650	532625	21	31	19
669	NMP-165	664725	530300	21	31	20
670	FC-78	664825	532700	21	31	20
671	NMP-166	662100	530300	21	31	20
592	NMP-163	669925	530325	21	31	21
673	K-98	670300	535350	21	31	21
674	FC-76	669950	532875	21	31	21
676	NMP-164	667400	530350	21	31	21
677	NFU-40-F	673275	535300	21	31	22
678	NF-43-F	675325	532775	21	31	22
682	NMP-156 (K-156)	682900	530650	21	31	23
683	NMP-155 (K-155)	688325	531700	21	31	24
684	KP-93	683350	532975	21	31	24
685	NMP-154 (K-154)	685850	533900	21	31	24
5079	Yates "AJA" Federal No. 7	688026	531008	21	31	24
5080	Yates Bonneville "AKK" Federal No. 2	688186	530998	21	31	24
5081	Yates Wolf "AJA" Federal No. 5	688045	528376	21	31	25
5082	Yates Wolf "AJA" Federal No. 4	688059	527034	21	31	25
5304	Maralo MR "25" Federal No. 1	687611	525719	21	31	25

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686	NMP-157 (K-157)	679875	525550	21	31	26
5305	Pogo Federal No. 1	679839	528315	21	31	26
688	NMP-167	675250	527650	21	31	27
689	FC-66	672700	530000	21	31	27
690	NMP-168	669975	527575	21	31	28
691	USP-135	668025	525425	21	31	28
692	NMP-170	667325	527650	21	31	29
693	NMP-169	664700	527650	21	31	29
694	Wills-8 (W-8)	657000	527650	21	31	30
695	Wills-7	657300	524700	21	31	31
696	FC-63	664650	524700	21	31	32
697	FC-68	667300	519900	21	31	32
1103	WIPP 30	667536	524337	21	31	33
698	FC-65	672750	519800	21	31	34
699	NF-52-F	675675	524800	21	31	34
700	FC-69	672775	524825	21	31	34
222	MPE-183	678100	519975	21	31	35
1104	ERDA 6	682279	521970	21	31	35
1104	ERDA 6	682279	521970	21	31	35
5306	Union Federal FI No. 1	678521	524326	21	31	35
5068	Yates Mary "AIV" State No. 5	688075	524406	21	31	36
5069	Yates Mary "AIV" State No. 3	686429	524399	21	31	36
5070	Yates Mary "AIV" State No. 1	686437	523087	21	31	36
5071	Yates Lost Tank "AIS" State No. 8	687770	520448	21	31	36
5072	Yates Lost Tank "AIS" State No. 6	686445	521756	21	31	36
5073	Yates Lost Tank "AIS" State No. 5	683807	520428	21	31	36
5075	Yates Lost Tank "AIS" State No. 3	685127	520435	21	31	36
5076	Yates Lost Tank "AIS" State No. 2	686453	520440	21	31	36
5307	Yates Lost Tank "AIS" State No. 1	687762	521764	21	31	36
5308	Yates Lost Tank "AIS" State No. 4	685122	521752	21	31	36
1105	Phillips Petroleum Company, ETZ Federal #1	718125	551150	21	32	1
1106	Kimball Production Company, Federal #1	716850	547150	21	32	1
1107	Phillips Petroleum Company, Hat Mesa A #1	712900	547100	21	32	2
1108	Amini Oil Company, Pubco Federal #1	710175	551000	21	32	2
1109	Amini Oil Company, New Mexico Federal #1	700625	552500	21	32	4
223	K-140	691100	550650	21	32	6
1110	Holly Energy, Inc., Salt Lake Deep No. 1	693200	552000	21	32	6
1111	The Superior Oil Company, Government H Com. #1	707700	544500	21	32	10
1112	Gackle Drilling Company, Federal #1	714300	541900	21	32	11
1113	Phillips Petroleum Company, Hat Mesa 2-#2	711600	541900	21	32	11
1114	Phillips Petroleum Company, Hat Mesa #1	712900	544500	21	32	11
5264	Belco Federal HM No. 1	715700	543100	21	32	12
5309	Belco Federal "HM" No. 13-1	716900	540250	21	32	13
5310	Collins & Ware N.L. Federal No. 2	691747	536332	21	32	18
5311	Getty North Bilbrey 18 Federal No. 1	691724	538989	21	32	18
5312	Skelly Salt Lake South Unit No. 1	699664	535095	21	32	21
5313	Santa Fe Bilbrey "21" Federal Com. No. 1	702335	531157	21	32	21
5314	Santa Fe Bilbrey "22" Federal Com. No. 1	707257	531208	21	32	22
1116	Gulf Oil Corporation, San Simon #1	714250	528750	21	32	26
5315	Collins & Ware Lincoln Federal No. 1	710253	527301	21	32	26
5279	Santa Fe Bilbrey Federal No. 1-A	706307	528583	21	32	27
5316	Santa Fe Bilbrey 27 Federal Com. No. 1	705323	527224	21	32	27
5278	Santa Fe Bilbrey Federal No. 1	703668	528559	21	32	28
5280	Santa Fe Bilbrey Federal No. 1-A	701038	527167	21	32	28
5277	Getty Bilbrey Federal Com No. 1	695745	527104	21	32	29
~~1117~~	~~Gulf Oil Corporation, H.T. Mattern (NCT) #10~~			~~21~~	~~32~~	~~31~~

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5272	Phillips Luke Federal No. 2	689062	524415	21	32	31
5273	Pogo Federal No. 1	693156	522136	21	32	31
5274	Collins & Ware BW Federal No. 1	688762	520119	21	32	31
5275	Phillips Luke Federal No. 1	689070	523103	21	32	31
5276	AEC No. 7	691829	523133	21	32	31
5265	Getty State Com No. 1	697111	523186	21	32	32
5317	Texaco Bilbrey 32 State Com. No. 1	695776	523170	21	32	32
5266	Texaco Bilbrey Federal Com No. 1	701049	524549	21	32	33
5267	Texaco Bilbrey Federal No. 2	701403	521883	21	32	33
5268	Phillips Bilbrey Federal No. 1	706351	520629	21	32	34
5269	Maralo Bilbrey Federal No. 1	706324	524620	21	32	34
5270	Gulf Chaney Federal No. 1	711605	523380	21	32	35
5271	Manzano Anderson No. 1	709968	522005	21	32	35
1120	~~Charles Read, Sinclair State #1~~			21	33	2
1628	Getty Oil Company Stock Unit #1	739300	538050	21	33	15
1629	Amoco Production Company State LT #1	727500	522200	21	33	32
5318	Bass Big Eddy Unit No. 90	605975	516526	22	29	4
5319	Hudson Federal No. 1	597850	515250	22	29	6
224	IMCC Water Test #3	621693	512772	22	29	12
225	IMCC Water Test #2	621750	513150	22	29	12
226	IMCC Water Test #1	622044	513466	22	29	12
5320	Bass Big Eddy Unit 96	604394	505900	22	29	16
5321	Bass Big Eddy Unit No. 88	593929	506028	22	29	18
1137	WIPP 32	608848	489850	22	29	33
1138	WIPP 29	612378	488559	22	29	34
5084	Yates Jasmine "AJI" Federal No. 1	654502	515157	22	30	1
5085	Phillips Livingston Ridge No. 2	652656	516740	22	30	1
5086	Troporo Cabana No. 1	652168	515145	22	30	1
5087	Phillips Livingston Ridge No. 4	652292	519352	22	30	1
5089	Phillips Livingston Ridge No. 3	652115	518300	22	30	1
5090	Phillips Livingston Ridge No. 6	653438	516467	22	30	1
5092	Phillips James "A" No. 12W	650327	515728	22	30	2
5093	Phillips James A No. 10	648433	515137	22	30	2
5094	Phillips James A No. 9	650945	519123	22	30	2
5095	Phillips James A No. 8	650793	518134	22	30	2
5096	Phillips James "A" No. 4	649478	517807	22	30	2
5097	Phillips James "A" No. 3	648081	516451	22	30	2
5098	Phillips James "A" No. 2	649489	516124	22	30	2
5099	Phillips James "A" No. 6	650807	516458	22	30	2
5100	Phillips James A No. 7	650818	514982	22	30	2
5101	Phillips James "A" No. 5	649679	515140	22	30	2
5102	Phillips James A No. 1	649472	515142	22	30	2
702	D-96	645200	519150	22	30	3
703	U-168	645900	515900	22	30	3
5091	Yates Donell 3 Federal No. 1	644112	517803	22	30	3
227	I-323	639250	515850	22	30	4
704	Gypsy #3 (GO-03)	640400	519625	22	30	4
707	U-167	640675	515825	22	30	4
737	NM Potash #1 / Lomasson 1 (I-A)	628800	516600	22	30	6
741	NM Potash #3A / Lommasson Test #3 (I-C)	629275	518000	22	30	6
742	NM Potash #2/Lommasson #2 (I-B)	627200	517900	22	30	6
755	Gypsy Oil #4 (GO-04)	630850	510050	22	30	8
228	U-97	635789	493447	22	30	9
764	U-163-S	638050	513325	22	30	9
766	U-97-A	635775	509650	22	30	9
767	I-322	635900	512150	22	30	9

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769	I-326	636225	514400	22	30	9
770	D-82	643625	512650	22	30	10
771	D-121	647500	510525	22	30	11
5111	Phillips James "E" No. 8	649916	511440	22	30	11
5112	Phillips James "E" No. 6	649501	511172	22	30	11
5113	Phillips James "E" Federal No. 5	651144	512689	22	30	11
5114	Phillips James "E" Federal No. 4	651151	513733	22	30	11
5115	Phillips James "E" No. 2	648211	513943	22	30	11
5122	Phillips James "E" No. 1	649498	512506	22	30	11
5322	Phillips James E Federal No. 9	651450	510150	22	30	11
5104	Phillips James E No. 15	652468	511180	22	30	12
5105	Phillips James "E" No. 14	653458	512523	22	30	12
5106	Phillips James "E" No. 13	652138	512516	22	30	12
5107	Phillips James "E" No. 12	653460	513839	22	30	12
5109	Phillips James "E" No. 11	652140	513832	22	30	12
5110	Bass James Ranch Unit No. 48	651813	510184	22	30	12
5323	Bass James Ranch Unit No. 70	654900	510000	22	30	12
773	D-120	653125	507725	22	30	13
1142	WIPP 33	653981	505790	22	30	13
5103	Mitchell Energy Apache "13" Federal No. 1	656517	507932	22	30	13
774	D-48	649500	504175	22	30	14
1143	WIPP 25	643343	505868	22	30	15
783	I-147	634100	499990	22	30	20
784	NM Potash & Chemical #1 (I-D)	631650	503200	22	30	20
785	IMCC #145 (I-145)	634150	502700	22	30	20
786	IMCC # 143 (I-143)	631425	502700	22	30	20
787	I-114	631500	499950	22	30	20
788	D-33	640800	498850	22	30	21
789	I-111	638175	502650	22	30	21
790	I-112	636900	500050	22	30	21
791	D-263	645950	501475	22	30	22
792	D-264	643700	502000	22	30	22
794	D-259	650400	500700	22	30	23
795	D-261	647750	503625	22	30	23
796	D-262	646300	503875	22	30	23
797	D-202	647375	499950	22	30	23
798	D-260	650775	503000	22	30	23
799	D-255	650250	498800	22	30	23
800	D-258	648900	502500	22	30	23
802	D-104	655500	501500	22	30	24
1144	P-14	652159	499082	22	30	24
1145	P-12	656692	503896	22	30	24
5126	Mitchell Apache "24" Federal No. 1	656552	499922	22	30	24
806	D-235	652375	496450	22	30	25
5124	Mitchell Apache "25" Federal No. 1	656234	497001	22	30	25
5125	Mitchell Apache "25" Federal Com. No. 2	655598	494097	22	30	25
807	D-203	650350	496050	22	30	26
808	D-254	648400	498400	22	30	26
809	D-233	646300	498400	22	30	26
810	D-234	651000	493650	22	30	26
811	D-200	641000	494100	22	30	27
812	D-198	643625	493475	22	30	27
813	D-181	643750	496200	22	30	27
814	D-231	646100	495900	22	30	27
815	D-232	642350	494800	22	30	27
5324	Richardson & Bass Federal Legg No. 1	644179	498036	22	30	27

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816	D-224	639500	497375	22	30	28
817	D-219	639750	494650	22	30	28
818	D-216	637000	494600	22	30	28
819	D-185	641000	496100	22	30	28
820	D-167	638350	495850	22	30	28
821	D-225	637000	496800	22	30	28
822	D-278	635700	494600	22	30	28
1147	WIPP 26	635509	496516	22	30	29
850	D-199	638400	491000	22	30	33
851	D-218	639500	492150	22	30	33
852	D-196	638500	490400	22	30	33
853	D-221	639800	489500	22	30	33
854	D-195	638600	490750	22	30	33
855	D-194	639600	493300	22	30	33
856	D-217	637000	492100	22	30	33
857	D-170	638500	490800	22	30	33
858	D-38	638250	493300	22	30	33
859	D-168	640800	493250	22	30	33
860	D-169	635700	493300	22	30	33
861	D-228	638200	489975	22	30	33
862	D-226	637100	490750	22	30	33
863	D-180	643700	490500	22	30	34
864	D-188	641150	490900	22	30	34
865	D-230	642250	494700	22	30	34
866	D-36	646000	493150	22	30	34
867	USGS 3 (GS 3)	641350	488450	22	30	34
868	D-229	642400	492875	22	30	34
229	D-250	649300	490875	22	30	35
870	D-250-A	649247	490985	22	30	35
871	D-249	646675	490775	22	30	35
873	D-160-S	652750	490650	22	30	36
5116	Shell James Ranch No. 1	654924	488781	22	30	36
5117	Enron James Ranch Unit No. 71	656248	493126	22	30	36
5118	Enron James Rand Unit No. 37	656263	490090	22	30	36
5119	Enron James Ranch Unit No. 19	654945	490094	22	30	36
5120	Belco James Ranch No. 11	652484	491463	22	30	36
5121	Enron James Ranch Unit No. 18	655815	491378	22	30	36
5123	Bass James Ranch Unit No. 29	653880	490100	22	30	36
5325	Bass James Ranch Unit No. 41	653887	488787	22	30	36
5000	Hanagan No. 2 Unocal-HPC	687453	517817	22	31	1
5002	Phillips Molly State No. 2	685143	517807	22	31	1
5004	Phillips Molly State No. 4	683697	517798	22	31	1
5005	Pogo Federa 1 No. 1	685149	516803	22	31	1
5006	Pogo Federal 1 No. 3	687459	516799	22	31	1
5007	Pogo 1 Federal No. 4	683829	516803	22	31	1
5008	Pogo Federal 1 No. 5	684173	515489	22	31	1
5009	Pogo Federal 1 No. 6	685062	515399	22	31	1
5010	Pogo Federal 1 No. 6	686144	515490	22	31	1
5011	Yates Unocal "AHU" Federal No. 2	687775	519132	22	31	1
5012	Pogo Federal 1 No. 2	686469	516801	22	31	1
5088	Hanagan No. 1 Unocal-HPC	686461	518138	22	31	1
5326	Phillips Molly State No. 1	685129	519123	22	31	1
5327	Phillips Molly State No. 3	683812	519115	22	31	1
5328	Yates Unocal "AHU" Federal No. 1	686455	519124	22	31	1
5014	Pogo State "2" No. 3	682845	516790	22	31	2
5329	Yates Flora "AKF" State No. 1	680237	515105	22	31	2

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5330	Yates Graham "AKB" State No. 2	682839	517800	22	31	2
5331	Yates Graham "AKB" State No. 1	682828	519113	22	31	2
5332	Yates Flora "AKF" State No. 2	680200	516400	22	31	2
5333	Pogo State 2 No. 2	680850	515250	22	31	2
5334	Pogo State 2 No. 1	682863	514819	22	31	2
5335	Bryon McKnight & Troporo Campana No. 1	657463	517615	22	31	6
5336	Yates Llama "ALL" Federal No. 1	657789	509389	22	31	7
1149	DOE 2	667317	509876	22	31	8
1149	Fenix & Scissons Inc., WIPP No. DOE-2	667317	509876	22	31	8
1150	WIPP 11	667700	513751	22	31	9
1150	WIPP 11	667700	513751	22	31	9
1151	WIPP 34	669449	509375	22	31	9
1152	WIPP 14	665336	509260	22	31	9
1153	AEC 8	679951	513567	22	31	11
1153	AEC 8	679951	513567	22	31	11
5015	Yates Martha "AIK" Federal No. 1	682796	509554	22	31	11
5016	Yates Martha "AIK" Federal No. 2	682885	511198	22	31	11
5019	Yates Martha "AIK" Federal No. 5	682877	512529	22	31	11
5020	Yates Martha "AIK" Federal No. 6	682869	513845	22	31	11
5337	Yates Martha "AIK" Federal No. 3	681576	509860	22	31	11
5338	Yates Martha "AIK" Federal No. 4	681568	511172	22	31	11
5021	Pogo Federal 12 No. 2	683872	511208	22	31	12
5022	Pogo Federal 12 No. 4	683537	512529	22	31	12
5023	Pogo Federal 12 No. 5	683529	513841	22	31	12
5024	Pogo Federal 12 No. 6	684860	511537	22	31	12
5025	Pogo Federal 12 No. 7	684852	512857	22	31	12
5027	Pogo SCL Federal No. 2	686504	512529	22	31	12
5028	Pogo Federal 12 No. 3	685202	509565	22	31	12
5339	Pogo Federal 12 No. 8	684844	514173	22	31	12
5029	Texaco Federal Neff "13" No. 2	687857	507261	22	31	13
5030	Texaco Neff 13 No. 3	686552	504607	22	31	13
5032	Texaco Federal Neff 13 No. 6	683563	508250	22	31	13
5033	Texaco Federal Neff 13 No. 7	683570	506937	22	31	13
5034	Texaco Federal Neff 13 No. 8	683579	505578	22	31	13
5340	Texaco Federal Neff 13 No. 5	685216	507264	22	31	13
5341	Pogo Neff 13 No. 1	686544	505923	22	31	13
1154	P-20	683197	504767	22	31	14
5035	Yates Dolores "AIL" Federal No. 3	682803	507264	22	31	14
5036	Yates Dolores "AIL" Federal No. 2	682812	505893	22	31	14
5037	Yates Dolores "AIL" Federal No. 1	682796	508580	22	31	14
1155	Fenix & Scisson, WIPP HYDRO H-5c	677878	508198	22	31	15
1156	P-21	677862	508351	22	31	15
5342	Clayton W. Williams Badger Unit Federal No. 1	674707	505867	22	31	15
1158	Fenix & Scisson, WIPP #13	663885	506464	22	31	17
1159	WIPP 12	667371	504068	22	31	17
1160	P-5	667286	504120	22	31	17
1161	P-13	656973	509039	22	31	18
1162	Fenix and Scisson, Inc., WIPP H-6c	657232	508884	22	31	18
1163	P-3	664351	498747	22	31	20
1164	Fenix & Scisson, Inc., WIPP #18	667446	502935	22	31	20
1165	Fenix & Scisson, Inc., WIPP #22	667453	501165	22	31	20
1166	Fenix & Scisson, Inc., WIPP #21	667459	500071	22	31	20
1167	Fenix & Scisson, Inc., WIPP #19	667453	501632	22	31	20
1168	ERDA 9	667301	498887	22	31	20
1641	H-16	666231	499726	22	31	20
1643	H-18	662621	502926	22	31	20

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1169	P-11	678217	503781	22	31	23
1170	P-19	680377	500362	22	31	23
5038	Pogo Federal 23 No. 1	682604	499315	22	31	23
5039	Pogo Federal "23" No. 2	682601	500402	22	31	23
5040	Pogo Federal "23" No.3	682599	501631	22	31	23
5041	Pogo Federal 23 No. 5	682744	503275	22	31	23
5343	Texas Crude Wright Federal 23 No. 1	682933	498982	22	31	23
5042	Texaco Getty Federal 24 No. 4	685241	500628	22	31	24
5043	Texaco Getty Federal 24 No. 5 SWD	684906	502953	22	31	24
5044	Texaco Getty Federal 24 No. 2	683925	499308	22	31	24
5045	Getty Federal #24-1	686559	501978	22	31	24
5048	Texaco Getty Federal 24 No. 3	686227	503289	22	31	24
5046	Pogo Neff Federal No. 2	683605	497005	22	31	25
5047	Pogo Federal Neff No. 1	685247	497996	22	31	25
5344	Pogo Neff Federal No. 3	684027	498226	22	31	25
1172	P-18	682589	493556	22	31	26
1173	P-10	678410	496383	22	31	26
5049	Pogo Federal 26 No. 1	682760	498050	22	31	26
5050	Pogo Federal 26 No. 2	681299	496693	22	31	26
5051	Pogo Federal "26" No. 3	680158	498061	22	31	26
5052	Pogo Federal 26 No. 4	678359	498083	22	31	26
5053	Pogo Federal 26 No. 5	681039	498331	22	31	26
5054	Pogo Federal 26 No. 6	678367	496708	22	31	26
5055	Pogo Federal 26 No. 7	680015	496696	22	31	26
1174	P-4	671327	493521	22	31	28
1175	DOE-1	672206	493563	22	31	28
1176	P-2	672609	498536	22	31	28
1630	Department of Energy WIPP No. H-15	672606	498572	22	31	28
1177	H-1	666400	497991	22	31	29
1178	Department of Energy, H-14	662815	493697	22	31	29
1179	ERDA, Hydrological H-2c	663907	498002	22	31	29
1180	Sandia National Laboratories, Hydrological No. 3	667377	495440	22	31	29
1181	P-1	662804	493651	22	31	29
1182	P-6	657144	496090	22	31	30
1183	P-15	657148	488426	22	31	31
1184	H-11	672647	489617	22	31	33
1185	P-9	672678	489599	22	31	33
5056	Yates David Ross "AIT" Federal No. 1	682660	491396	22	31	35
5057	Union of CA Medano State Com. Well No. 1	685311	490031	22	31	36
5345	Siete Ottowa State No. 1	706377	516673	22	32	3
5346	Santa Fe Trumpeter 4 State No. 1	702432	515309	22	32	4
5347	Getty Bilbrey Federal Com. No. 1	701090	519263	22	32	4
5348	Getty Bilbrey Federal No. 1	697134	519223	22	32	5
5349	Yates Rosemary "AJB" Federal No. 1	689111	516479	22	32	6
5350	Pogo Federal 6 No. 1	688768	519007	22	32	6
5351	Amoco Federal "CK" Com. No. 1	693182	517875	22	32	6
5352	Strata Flamenco Federal No. 1	689152	510880	22	32	7
5353	Santa Fe White Swam "9" Federal No. 1	704165	509787	22	32	9
5354	Santa Fe White Swam "9" Federal No. 4	703788	512676	22	32	9
5355	Maralo Wild Turkey "9" state No. 1	703458	511356	22	32	9
5356	Maralo Wild Turkey "10" state No. 1	704823	511448	22	32	10
5357	WTI Barr None Federal No. 1	705090	512723	22	32	10
5358	Phillips Emerald Federal No. 1	705153	510128	22	32	10
5359	Maralo Prohibition Federal No. 2	711819	511456	22	32	11
5158	Maralo Prohibition Federal Unit No. 1	715576	512845	22	32	12
5159	Pogo WBR Federal No. 1	719299	507585	22	32	13

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5160	Ray Smith B&H Federal No. 1	719651	504941	22	32	13
5161	Maralo Prohibition Federal Unit No. 4	713055	507207	22	32	14
5162	Meridian Red Tank Federal No. 4	711890	505887	22	32	14
5163	Meridian Red Tank Federal No. 1	711774	504537	22	32	14
5164	Meridian Red Tank Federal No. 3	710784	504523	22	32	14
5165	Carper Red Tank Unit No. 2 (SWD?)	711772	504864	22	32	14
5166	Meridian Red Tank Federal No. 5 (SWD?)	712743	504551	22	32	14
5360	Maralo Prohibition Federal Unit No. 6	714045	507207	22	32	14
5361	Meridian Redchecker 14 No. 2	714051	505880	22	32	14
5362	Meridian Redchecker 14 No. 1	714060	504564	22	32	14
5363	Meridian Prohibition Federal No. 5	711910	507207	22	32	14
5364	Meridian Red Tank Federal No. 6	711735	505887	22	32	14
5167	Superior No. 1 Connally Federal	707811	506124	22	32	15
5168	Strata Paisano Federal No. 3	705128	508426	22	32	15
5169	Strata Paisano Federal No. 2	706130	507124	22	32	15
5170	Strata Paisano Federal No. 1	704937	507436	22	32	15
5171	Strata Lechuza Federal No. 5	704824	505759	22	32	15
5173	Strata Lechuza Federal No. 3	707493	504806	22	32	15
5174	Strata Lechuza Federal No. 2	706145	505775	22	32	15
5175	Strata Lechuza Federal No. 1	704962	504975	22	32	15
5365	Strata Lechuza Federal No. 4	706154	504786	22	32	15
5176	Yates Kiwi "AKX" State No. 3	704158	507100	22	32	16
5177	Yates Kiwi "AKX" State No. 2	704170	505751	22	32	16
5179	Yates Kiwi "AKX" State No. 4	702868	504415	22	32	16
5180	Yates Kiwi "AKX" State No. 5	702851	506059	22	32	16
5181	Yates Kiwi "AKX" State No. 6	701542	504730	22	32	16
5182	Yates Kiwi "AKX" State No. 7	702509	507416	22	32	16
5183	Yates Kiwi "AKX" State No. 8	701519	507402	22	32	16
5184	Yates Kiwi "AKX" State No. 9	704139	509067	22	32	16
5366	Yates Kiwi "AKX" State No. 1	704185	504435	22	32	16
5185	Yates Cleary "AKC" Feceral No. 1	697249	506004	22	32	17
5186	Yates Cleary "AKC" Federal No. 2	694250	508981	22	32	17
5188	Pogo Livingston Ridge Federal No. 1	692941	508635	22	32	18
5189	Pogo Livingston Ridge Federal No. 3 "ZAP"	688841	508765	22	32	18
5190	Pogo East Livingston Ridge Federal No. 3	691960	507160	22	32	18
5367	John H. Trigg Federal Jennings No. 1	693293	504667	22	32	18
5368	Ralph Lowe Bass Federal No. 1	693314	499351	22	32	19
5191	Zonne Federal No. 1	697274	502059	22	32	20
5192	Union of CA Federal Gilmore No. 1 (Cerc Fed 1 SWD)	703873	500772	22	32	21
5193	Strat Cercion Federal No. 3	702536	503708	22	32	21
5194	Strat Cercion Federal No. 1	703864	502131	22	32	21
5369	Strata Cercion Federal No. 5	704183	503788	22	32	21
5195	Trigg Federal Red Tank No. 1-22	705188	502158	22	32	22
5196	Strata Cercion Federal No. 4	706503	502505	22	32	22
5197	Strata Cercion Federal No. 2	705507	503807	22	32	22
5370	Pogo Prize Federal No. 13	709485	500842	22	32	22
5371	Pogo Prize Federal No. 10	709491	499529	22	32	22
5198	Meridian Checkerboard 23 Federal No. 6	710224	499756	22	32	23
5199	Pogo Red Tank 23 Federal No. 2	714066	501040	22	32	23
5200	Meridian Checkerboard 23 No. 16	714102	501921	22	32	23
5201	Meridian Checkerboard 23 Federal No. 13	714068	502597	22	32	23
5202	Meridian Checkerboard 23 Federal No. 12	714475	503927	22	32	23
5203	Meridian Checkerboard 23 Federal No. 8	713073	502259	22	32	23
5204	Meridian Checkerboard 23 Federal No. 4	711784	503533	22	32	23
5206	Meridian Checkerboard 23 Federal No. 5	710807	501189	22	32	23
5372	Meridian Checkerboard 23 Federal No. 11	713074	503575	22	32	23

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5373	Meridian Checkerboard 23 Federal No. 3	712107	501921	22	32	23
5374	Meridian Checkerboard 23 Federal No. 2	713409	499262	22	32	23
5375	Meridian Checkerboard 23 Federal No. 1	713126	500954	22	32	23
5376	Meridian Checkerboard 23 Federal No. 9	712130	499893	22	32	23
5377	Meridian Checkerboard 23 Federal No. 7	711795	500552	22	32	23
5378	Meridian Checkerboard 23 Federal No. 10	710800	502232	22	32	23
5208	Pogo Covington "A" Federal No. 2	715786	498671	22	32	25
5380	Pogo Covington "A" Federal No. 8	715772	493995	22	32	25
5381	Pogo Covington "A" Federal No. 9	717086	494153	22	32	25
5382	Pogo Covington "A" Federal No. 1	717041	498309	22	32	25
5209	Pogo Covington "A" Federal No. 18	713148	498645	22	32	26
5210	Pogo Red Tank "26" Federal No. 1	711731	495498	22	32	26
5211	Pogo Red Tank "26" Federal No. 2	710485	498569	22	32	26
5383	Pogo Red Tank "26" Federal No. 3	710172	496920	22	32	26
5384	Pogo Red Tank "26" Federal No. 4	710179	495917	22	32	26
5212	Pogo Federal 27 No. 1	706900	493891	22	32	27
5214	Pogo Exxon Federal 27 No. 3	709193	495630	22	32	27
5385	Pogo Prize Federal No. 4	709089	497007	22	32	27
5386	Pogo Prize Federal No. 5	709176	498222	22	32	27
5387	Pogo Exxon Federal 27-2	709212	494256	22	32	27
5216	Pogo Red Tank 28 Federal No. 3	702247	498452	22	32	28
5389	Pogo Red Tank "28" Federal No. 1	704225	498483	22	32	28
5217	Bass Perry Federal No. 1	692059	492737	22	32	31
5218	Pogo Proximity 31 No. 4	691954	492737	22	32	31
5219	Enron Silverton 31 Federal No. 1	689284	488859	22	32	31
5220	Yates Lotus "ALT" State No. 2	697351	491465	22	32	32
5221	Pogo Red Tank 34 Federal No. 3	709225	492852	22	32	34
5223	Pogo Red Tank 34 Federal No. 2	709223	491671	22	32	34
5390	Pogo Red Tank "34" Federal No. 14	706913	492866	22	32	34
5391	Pogo Red Tank "34" Federal No. 4	707918	491618	22	32	34
5392	Pogo Red Tank "34" Federal No. 1	708236	492940	22	32	34
5224	Pogo Red Tank 35 Federal No. 1	710208	492972	22	32	35
5393	Pogo Red Tank "35" Federal No. 3 SWD	710868	490662	22	32	35
5394	Shell Bootleg Ridge Unit No. 1	717094	493357	22	32	36
5395	Meridian Mule Deer 36 State No. 1	718414	493357	22	32	36
5396	Meridian Mule Deer 36 State No. 2	718084	491707	22	32	36
5397	Meridian Mule Deer 36 State No. 4	719534	493027	22	32	36
5242	Texas Pacific Reed Federal No. 1	731495	517159	22	33	4
1631	Dual Production Co. Richardson-Bass State No. 1	730500	515575	22	33	5
5244	Meridian Dagger Lake State No. 1	728715	515179	22	33	5
5241	Superior San Simone State Com No. 1	723435	518149	22	33	6
5239	Superior SST State 7 No. 1	723435	511549	22	33	7
5240	Cabot State "K" No. 1	720922	510222	22	33	7
5238	Meridian Dagger Lake "8" Federal No. 1	727370	514213	22	33	8
5398	Meridian Dagger Lake 8 Fed No. 2	728360	514543	22	33	8
5236	Dual Hudson Federal No. 1	731330	514213	22	33	9
1632	Getty Oil Company Getty Federal 15 No. 1	739420	506414	22	33	15
5399	Getty Federal 15 No. 1	739333	506351	22	33	15
5400	Getty Federal 15 Com "B" No. 1	738013	508991	22	33	15
5237	Pogo EBR Federal No. 1	726123	506282	22	33	17
5234	Pogo State NBR No. 2	722146	507594	22	33	18
5235	Pogo State NBR No. 1	723492	506273	22	33	18
5233	Santa Fe Bootleg Ridge 19 State No. 1	721313	503306	22	33	19
5401	Collins & Ware White Lightning Federal No. 1	724872	500986	22	33	19
1633	Davis and Collins Conoco Federal #1	726246	502380	22	33	20
5232	Davis & Collins Conoco Federal No. 1	726170	502337	22	33	20

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5231	Yates Pronghorn "ACZ" Federal No. 1	726246	495713	22	33	29
5229	Yates pronghorn Unit No. 2	724919	497052	22	33	30
5230	Mitchell Bighorn "30" State No. 2	722064	496705	22	33	30
1639	Helbing & Podpechan Shell State #1-B	726355	489162	22	33	32
5226	Helbing & Podpechan Shell State No. 1-B	726303	489144	22	33	32
5402	R.B. Farris Phillps State No. 1	735512	493164	22	33	33
5227	CP Miller Humble State No. 1	739511	489206	22	33	34
5228	Amoco Federal "BG" No. 1	743432	491880	22	33	35
1226	Mesa Petroleum Company, Nash Unit #3	621510	479547	23	29	12
1227	Mesa Petroleum, Nash Unit #5	624533	474546	23	29	13
1228	Mesa Petroleum Company, Nash Unit #4	624517	476547	23	29	13
1229	Mesa Petroleum Company, Nash Unit #1	624195	475560	23	29	13
5127	Belco (Bass?) Belco-James Ranch No. 10	656055	486279	23	30	1
5128	Belco Hudson Federal No. 1	653563	486310	23	30	1
5129	Belco James Ranch Unit No. 3	655287	484839	23	30	1
907	D-227	642275	486850	23	30	3
1230	Fenix & Scisson, Inc., WIPP H-7c	648766	475035	23	30	14
1231	Skelly Oil Company, Forty-Niner Rdige Unit #1	638975	474206	23	30	16
5130	Texaco Forty-Niner Ridge Unit No. 3	637575	475238	23	30	16
1232	Mesa Petroleum Company, Nash Unit #6	625185	475553	23	30	18
1234	Skelly Oil Company, Forty Niner Ridge Unit 2	639004	470246	23	30	21
5131	Phillips Sandy Unit No. 1	652320	470288	23	30	24
1236	ERDA 10	644058	461520	23	30	34
1237	Atomic Energy Commission, U.S.G.S. Test Hole #1	644000	458900	23	30	34
5154	Union of CA Barclay Federal No. 1	685369	483466	23	31	1
5155	Owens Union Federal No. 1	684036	484770	23	31	1
5153	Continental State AA-2 No. 1	682702	487402	23	31	2
1642	H-17	673837	484304	23	31	3
1239	P-17	667955	484185	23	31	4
1240	P-8	667664	48471	23	31	4
1241	Fenix & Scisson, WIPP No. H-4C	662991	487607	23	31	5
1242	P-7	662669	487090	23	31	5
1243	MP Grace Cabin Baby Federal No. 1	665559	486111	23	31	5
1244	P-16	663914	483737	23	31	5
5147	Belco James Ranch Unit 14	658934	482782	23	31	6
5149	Enron James Ranch Unit No. 17	658924	485883	23	31	6
5150	Bass James Ranch No. 13	657800	486514	23	31	6
5151	Continental James Ranch Unit No. 7	660269	485996	23	31	6
5152	Bass James Ranch Unit No. 30	659943	484664	23	31	6
5141	Santa Fe North Pure Gold "8" Federal No. 9	666705	478105	23	31	8
5142	Santa Fe North Pure Gold "8" Federal No. 6	665259	479417	23	31	8
5143	Santa Fe North Pure Gold "8" Federal No. 5	665254	478108	23	31	8
5144	Santa Fe North Pure Gold "8" Federal No. 3	666887	480967	23	31	8
5145	Santa Fe North Pure Gold "8" Federal No. 2	666707	479421	23	31	8
5146	Santa Fe North Pure Gold "8" Federal No. 1	666896	479418	23	31	8
5148	Belco James Ranch Unit No. 15	662386	478118	23	31	8
5134	Santa Fed North Pure Gold "9" No. 9	670866	477804	23	31	9
5135	Santa Fe North Pure Gold "9" Federal No. 7	669534	480782	23	31	9
5136	Santa Fe North Pure Gold "9" Federal No. 4	668207	480778	23	31	9
5137	Santa Fe North Pure Gold "9" Federal No. 5	668532	481620	23	31	9
5138	Santa Fe North Pure Gold "9" Federal No. 2	668221	478099	23	31	9
5139	Santa Fe North Pure Gold "9" Federal No. 1	669545	477786	23	31	9
5140	Santa Fe Pure Gold "4" Federal No. 1	669525	481862	23	31	9
5133	Max M. Wilson Bauerdorf-Federal No. 1	683072	478191	23	31	11
5132	Devon Todd 13 'O' Federal No. 15	686664	473054	23	31	13
1246	Texas American Oil Corp., Todd Federal 14 No. 1	680178	474279	23	31	14

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1247	H-12	678079	477535	23	31	15
1248	El Paso Natural Gas Company, Arco State #1-16	669610	474216	23	31	16
1249	Patoil Corporation, Muse Federal #1	672277	467625	23	31	21
1250	Texas American Oil Corporation, Todd Federal 23 #3	681682	468971	23	31	23
1251	Texas American Oil Corp., Todd 23 Federal No. 1	681843	467651	23	31	23
1252	Skelly Oil Company, Todd 25 Federal #1-Z	685481	465032	23	31	25
1253	Texas American Oil Corp., Todd Federal #2	681861	465011	23	31	26
1254	Texas American Oil Corp., Todd Federal 26 No. 1	681531	465011	23	31	26
1255	Texas American Oil Corporation, Todd Federal #4	681522	466331	23	31	26
1256	Patoil Corporation, Wright-Federal #1	673622	463667	23	31	27
1257	El Paso Natural Gas Company, Mobil-Federal #1	665712	463629	23	31	29
1258	J.A. Leonard, Continental State No. 1	663060	460967	23	31	32
1259	Patoil Corporation, Wright-Federal #2	668367	459687	23	31	33
1260	Charles P. Miller, Pauley Harrison State #1	684234	457144	23	31	36
5245	Yates Saffron Unit No. 1	713552	486079	23	32	2
5246	OB Kiel, Jr. Federal No. 1	709293	486352	23	32	3
5247	Strata Aracanga Federal No. 1	702426	483394	23	32	4
5248	Santa Fe Platinum 6 Federal No. 1	690620	483483	23	32	6
5249	JH Trigg Federal "WL" No. 5	693473	482355	23	32	7
5250	McBee Continental Federal No. 1	702718	478364	23	32	9
5251	Strata Aracanga Federal No. 2	703103	479385	23	32	9
1263	Hill & Meeker & Ambass. Oil Corp., Matthews 11 #1	713295	481143	23	32	11
5252	Exxon Central SW Oil Corp Federal No. 1	710648	481391	23	32	11
5253	Superior Triste Draw Gulf Federal No. 1	711983	478484	23	32	11
5254	Strata Urraca Federal No. 2	710666	478366	23	32	11
5255	Yates Amanda "AMN" Federal No. 1	711612	480841	23	32	11
5256	Superior Triste Draw Federal No. 1	713292	474527	23	32	14
1264	John H. Trigg, Federal Continental 1-15	708068	475817	23	32	15
1265	Skelly Oil Company, Federal Sand 18-1	693552	475663	23	32	18
1266	Kirklin Drilling Company, Federal Estill AF-1	697549	467782	23	32	20
1267	Fenix & Scisson, Inc., WIPP No. H-10c	697550	467513	23	32	20
1268	Curtis Hankamer, Gulf-Federal A-A #1	702825	471850	23	32	21
1269	H.L. Johnston, Sr., Conoco-Fields-Federal #1	720347	469019	23	32	24
1270	Continental Oil Company, Fields Federal No. 1	720027	468023	23	32	24
1271	Continental Oil Company, Fields No. 2	715716	462987	23	32	25
1272	H.L. Johnston, Sr., Wehrli-Federal #1	717674	466331	23	32	25
1273	John H. Trigg, Federal WL #3-26	715100	462200	23	32	26
1274	P.M. Drilling Company, Federal James No. 4	715050	463967	23	32	26
1275	P.M. Drilling Company, Federal Field #1	712097	462613	23	32	26
1276	John H. Trigg Company, No. 4-26 Federal WL	713741	462302	23	32	26
1277	Max Wilson, Continental Federal No. 1	701519	466491	23	32	28
1278	Curtis Hankamer, Hankamer No.1 Continental Federal	689600	457200	23	32	31
1279	Curtis Hankamer, Holder Federal #1	704201	459915	23	32	33
1280	The Pure Oil Company, Federal K No. 1	709812	458639	23	32	34
1281	PM Drilling Company, Federal James No. 3	713439	458673	23	32	35
1282	John H. Trigg, Federal WL 1-35	713096	460314	23	32	35
1283	P.M. Drilling Company, Federal-James No. 1	714738	461323	23	32	35
1284	P-M Drilling Company, Payne No. 2	712436	460967	23	32	35
1285	John H. Trigg, Federal WL No. 2-35	714425	460450	23	32	35
1286	P.M. Drilling Company, Payne Federal No. 4	710793	459958	23	32	35
1287	P-M Drilling Company, Federal-Payne No. 1	712445	459647	23	32	35
1288	P.M. Drilling Co., Federal James No. 2	713418	461308	23	32	35
1289	P.M. Drilling Company, Federal Payne No. 3	710472	458643	23	32	35
1290	Penroc Oil Corporation, Triste State #1	715726	461667	23	32	36
1291	The Pure Oil Company, Brinninstool Deep Unit #1	718764	458769	23	32	36
1292	David Fasken, Gulf State #1	716068	460023	23	32	36

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5257	Yates Jackal "ANJ" Federal No. 7	731282	486206	23	33	4
5258	Cabeen Continental Federal No. 1-P	735569	483904	23	33	4
5259	WA & ER Hudson Shell Federal No. 1	725384	483523	23	33	6
5260	Yates Pronghorn Unit No. 1	723696	486489	23	33	6
5261	Hudson Federal No. 1	721203	478534	23	33	7
5262	Yates Pronghorn AAP Federal No. 1	726068	478256	23	33	8
5263	Amoco State "IK" No. 1	738219	482615	23	33	10
1296	P-M Oil Company, Texaco State No. 1	726502	473317	23	33	17
1297	Helbing & Podpechan, #1 A Shell State	721296	473304	23	33	18
1298	Tenneco Oil Company, Skelly State #1	723819	477273	23	33	18
1299	Continental Oil Company, Marshall #3	722500	468000	23	33	19
1300	Continental Oil Company, I.J. Marshall 19-1	721347	468037	23	33	19
1301	Continental Oil Company, Marshall #4	721298	469357	23	33	19
1302	Continental Oil Company, Marshall #19-2	722584	469360	23	33	19
1303	American Quasar, Brinninstool #1	729177	470692	23	33	20
1304	Continental Oil Company, Levick Federal #1	730514	468064	23	33	20
1305	Kirklin Drilling Company, Lea State #1	725282	461456	23	33	31
1306	El Cinco Production Co., Ltd., Humble State 1-32	729247	461465	23	33	32
1307	George L. Buckles Company, State 1-35	742455	457603	23	33	35
1323	Chase Petroleum Company, Valley #1	599137	452623	24	29	5
1324	El Capitan Oil Company, Federal Reid No. 1	596182	451311	24	29	6
1325	Southern California Petrol. Corp., Federal Reid #1	596210	447966	24	29	7
1326	Southern California Petrol. Corp., Federal Reid #2	596203	448671	24	29	7
1327	Tennessee Production Comp., Valley Land Company #	593560	446643	24	29	7
1328	Tennessee Production Company, Valley Land #3	594880	447305	24	29	7
1329	Skelly Oil Company, Cedar Canyon #1	608299	446429	24	29	9
1330	Skelly Oil Company, Cedar Canyon 9D #1	607090	446318	24	29	9
1331	Skelly Oil Company, Cedar Canyon #10-1	611032	448814	24	29	10
1634	Exxon Company, USA Exxon Pouche Federal No. 1	618984	449047	24	29	11
1332	Penzoil United Incorporated, Mobil-Federal 27 #1	609826	430402	24	29	27
1333	Perry R. Bass, Poker Lake Unit #54	639064	451785	24	30	4
1334	Perry R. Bass, Poker Lake Unit #45	629692	445286	24	30	18
1335	Fenix & Scisson, Inc., WIPP H No. 8-C	650409	438581	24	30	23
1336	Hill & Meeker, Bass Federal #1-25	652561	430749	24	30	25
1337	Ford Chapman & Associates, Federal-Nettles No. 1	635146	430603	24	30	29
1338	Skelly Oil Company, Todd 2 State #1	680275	454467	24	31	2
1339	Max Wilson, Jennings Federal No. 1	677646	451788	24	31	3
1340	Jack L. McClellan, Jennings Federal No. 1	673684	455760	24	31	3
1341	Texaco, Incorporated, M.M. Stewart Federal #1	672364	455753	24	31	4
1342	Fenix & Scisson, Inc., WIPP No. H-9C	667929	453890	24	31	4
1343	Sundance Oil Company, Betty Federal #1	670056	454734	24	31	4
1344	El Paso Natural Gas Company, Sundance Federal #1	669729	454407	24	31	4
1345	American Quasar, Dunes Unit Federal #1	659117	454367	24	31	6
1346	Ambassador Oil Corporation, Federal Y #1	661902	446427	24	31	7
1347	Gulf Oil Corporation, Federal Littlefield CT #1	681595	450486	24	31	11
1348	Coquina Oil Corporation, El Paso Federal No. 1	685570	447853	24	31	12
1349	W.J. Weaver, Continental Federal #1	667174	445136	24	31	17
1350	Charles B. Read, Ritchie Federal #1	661926	441141	24	31	18
1351	Pauley Petroleum Incorporated, Jennings Federal #1	667202	439856	24	31	20
1352	David Fasken, Poker Lake #40	664587	435859	24	31	20
1353	Hill & Meeker, Carper Federal #1-21	672465	439896	24	31	21
1354	The Texas Company, T. Heflin-Federal #1	686963	435990	24	31	24
1355	Pan American Petroleum Corp., Poker Lake Unit #36	672515	430631	24	31	28
1356	Texaco, Incorporated, Cotton Draw Unit No. 67	679117	426784	24	31	35
1357	Union Oil Co. of California, Union Federal 1 #1	718807	452144	24	32	1
1358	Cabeen Exploration Corp., Continental Federal #1-L	716134	453435	24	32	1

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1359	Calco, Marathon State #1	712200	454600	24	32	2
1360	P.M. Drilling Company, Ohio State No. 1	714798	454727	24	32	2
1361	Curtis Hankamer, Bondurant Federal No. 1	692340	455854	24	32	6
1362	Gulf Oil Corporation, Federal Hanagan D #1	708240	448103	24	32	10
1363	Continental Oil Company, Wimberly #2	714841	450783	24	32	11
1364	Curtis Hankamer, Hanagan Federal No. 2	713540	446806	24	32	11
1365	Gulf Oil Corporation, Federal Hanagan D #3	714854	448130	24	32	11
1366	Gulf Oil Corporation, Federal Hanagan D #2	713534	448126	24	32	11
1367	Curtis Hankamer, Gulf Hanagan #1	714860	446810	24	32	11
1368	Continental Oil Company, Wimberly #1	713527	449453	24	32	11
1369	Continental Oil Company, Wimberly 12 #1	720134	450839	24	32	12
1370	Continental Oil Company, Wimberly 12 #2	720140	449519	24	32	12
1371	Curtis Hankamer, Hanagan Federal No. 3	716167	449475	24	32	12
1372	Westates Petroleum Corp. of Texas, Woolley #1	720177	441624	24	32	13
1373	Continental Oil Company, Wimberly A #1	718837	445548	24	32	13
1374	Tenneco Oil Company, #1 USA Jennings	712210	445483	24	32	14
1375	Tenneco Oil Co., USA Jennings N.M. 033503 No. 2	711145	441759	24	32	14
1376	Tenneco Oil Company, Jennings Federal No. 4	711903	442868	24	32	14
1377	Tenneco Oil Co., USA Jennings N.M. 033503 Well #3	713549	445486	24	32	14
1378	Gulf Oil Corporation, Federal Hanagan B #2	709545	441517	24	32	15
1379	Gulf Oil Corporation, Federal Hanagan B #3	709593	442837	24	32	15
1380	Tenneco Oil Company, Hicks-Federal #1	706955	441486	24	32	15
1381	Gulf Oil Corporation, Federal Hanagan B #1	708285	441502	24	32	15
1382	Charles B. Read, Bradley #1	708319	437538	24	32	22
1383	Charles B. Read, Bradley #2	709298	438873	24	32	22
1384	Tenneco Oil Company, U.S. Smelting U.S.A. #2	705653	438831	24	32	22
1385	Tenneco Oil Company, U.S. Smelting U.S.A. Well #3	709639	437553	24	32	22
1386	Tenneco Oil Company, U.S Smelting USA #4	708641	438536	24	32	22
1387	Tennessee Gas Transmission Co., US Smelting USA #	708297	440182	24	32	22
1388	Tenneco Oil Company, U.S. Smelting, USA No. 5	709978	436567	24	32	22
1389	Curtis Hankamer, Ernest Federal #1	710948	438878	24	32	23
1390	Charles B. Read, Bradley #3	714900	440200	24	32	23
1391	Ralph E. Williamson, Wright Federal No. 1	708338	434898	24	32	27
1392	Union Oil of California, Paduca Federal #1	692468	433403	24	32	30
1393	Texaco Incorporated, Cotton Draw Unit Well #72	704296	425611	24	32	33
1394	Texaco, Incorporated, Cotton Draw Unit #69	706962	426960	24	32	34
1395	Sid W. Richardson, Inc., Federal Delbasin #1	710915	425681	24	32	35
1396	Continental Oil Company, Bell Lake Unit #7	751703	456332	24	33	1
1635	Getty Oil Company HNG State 4-F #1	732920	454890	24	33	4
1397	Hondo Drilling Company, Gulf N.W. #2	721439	453491	24	33	6
1398	Hondo Drilling Company, Gulf State NW #1	721447	452171	24	33	6
1399	Tom L. Ingram, State O #2	721460	449531	24	33	7
1400	Tom L. Ingram, State O #1	721454	450851	24	33	7
1401	Tom L. Ingram, State P #1	722542	451190	24	33	7
1402	George W. Riley Incorporated, State #1-7	725371	446943	24	33	7
1403	David Fasken, Gulf State #7-2	723000	449250	24	33	7
1404	Sunray Mid-Continent Oil Co., N.M. State A.G. 1	726681	450892	24	33	8
1405	Byard Bennett, Holland #1	751783	444434	24	33	13
1406	Tenneco Oil Company, State Lowe #1	726735	441659	24	33	17
1407	Robert B. Holt, Holly-State #1	729340	445646	24	33	17
1408	Continental Oil Company, State BB 20 No. 1	728092	436379	24	33	20
1409	F.R. Jackson, State #1	737312	439079	24	33	22
1410	Tenneco Oil Company, Sunray State #1	738682	432477	24	33	27
1636	Getty Oil Company Getty 28 State No. 1	735022	432456	24	33	28
1411	Tidewater Oil Company, State AP #1	729458	431107	24	33	29
1412	Kirklin Drilling Co., Inc., Continental State #1	721192	435351	24	33	30

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1413	Albert Gackle Operator, Continental State #1	725503	427126	24	33	31
1414	Gulf Oil Corp. & Kirklin Drilling, #1 Lea St. GX	751903	429917	24	33	36
1425	J. Glen Bennett, Superior Federal #1-3	613857	423808	25	29	3
1426	J. Glen Bennett, Superior #1-8			25	29	8
1427	Neil H. Wills, Superior Federal #1	603281	414470	25	29	8
1428	Mobil Oil Corporation, Corral Draw Unit #1	616520	410501	25	29	14
1429	J. Glen Bennett, Superior Federal 15 No.1	609901	409148	25	29	15
1430	Mobil Oil Corporation, Corral Draw Unit #2	611251	404764	25	29	22
1431	J. Glen Bennett, No. 1-26 Superior Federal	619292	398583	25	29	26
1432	J. Glen Bennett, Superior Federal 1-27	609987	398529	25	29	27
1433	Bell Petroleum Company, Federal #1	600565	402550	25	29	29
1434	Bell Petroleum Company, Cities Service Federal #1	597974	398534	25	29	30
1637	Duncan Drilling Company Slater A #1	598062	394496	25	29	31
1436	Pat Oil Corporation, R & B Federal #1	637835	422714	25	30	4
1437	J.M.C. Ritchie & Chambers & Kennedy, #1 Hopp Fed.	636541	420038	25	30	4
1438	Fred Pool Drilling Company, Superior State #1	635232	417381	25	30	8
~~1439~~	~~Ralph Lowe, Poker Lake State #1~~			~~25~~	~~30~~	~~8~~
1441	Ralph Lowe, T&P State #1			25	30	8
1442	Ralph Lowe, Superior State #1			25	30	8
1443	Ralph Lowe, Poker Lake State #3			25	30	8
~~1444~~	~~Alamo Corporation, Poker Lake Unit #5X-1A~~			~~25~~	~~30~~	~~10~~
1445	Bass Enterprises, Poker Lake #44	644427	417425	25	30	10
~~1446~~	~~Ralph Lowe, #1-X R&B Federal A~~			~~25~~	~~30~~	~~17~~
~~1447~~	~~Alamo Corporation, Poker Lake Unit #11A-7~~			~~25~~	~~30~~	~~17~~
1448	J. Ray Stewart, Poker Lake #61	631187	411967	25	30	17
1449	Jubilee Energy Corporation, Poker Lake Unit 64	632170	413637	25	30	17
1450	J. Ray Stewart, 66 Poker Lake Unit	630863	410592	25	30	17
1451	Perry R. Bass, Jennings-Federal No. 1	628542	413268	25	30	18
1452	Ralph Lowe, R&B Federal #1			25	30	18
1453	Alamo Corporation, Poker Lake #12A-9	628559	409261	25	30	18
~~1454~~	~~Central States Oil Company, Poker Lake Unit No. 38~~			25	30	19
1455	J.R. Stewart, Poker-Lake Unit No. 65	629888	407945	25	30	19
1456	Perry R. Bass, Continental-Federal #2	631231	405274	25	30	20
1457	Perry R. Bass, Continental Federal #1	631208	407957	25	30	20
~~1458~~	~~Alamo Corporation, Poker Lake Unit #6-2A~~			25	30	21
1459	Bass Enterprises Prod. Co., Poker Lake Unit No. 56	652558	398842	25	30	25
1460	Texaco Incorporated, Cotton Draw Unit No. 65	681739	422822	25	31	2
1638	Pauley Petroleum Poker Lake #46	663235	424153	25	31	5
1461	Alamo Corporation, Poker Lake Unit 7-A-3	668517	402935	25	31	28
~~1462~~	~~J.A. Leonard, Continental State No. 1~~			25	31	32
1463	Gold Metals & Santana Pet. Corp., #1 Del Basin Fed	679211	393756	25	31	35
1464	Texaco, Incorporated, Cotton Draw Unit No. 49	708283	421374	25	32	3
1465	Texaco Incorporated, E.F. Ray NCT-2 No. 1	704684	414738	25	32	9
1466	Texaco Incorporated, Cotton Draw Unit No. 52	704669	416058	25	32	9
1467	Tennessee Gas & Oil Company, Ray U.S.A. #1	705628	419030	25	32	10
1468	Texaco Incorporated, Cotton Draw Unit No. 39	705642	417710	25	32	10
1469	Texaco Incorporated, Cotton Draw Unit No. 40	706948	419047	25	32	10
1470	Texaco Incorporated, Cotton Draw Unit #66	705743	417612	25	32	10
1472	Texaco Incorporated, Cotton Draw Unit No. 60	707982	417575	25	32	10
1473	Texaco Incorporated, E.F. Ray Federal B No. 2	706962	417727	25	32	10
1474	Texaco Incorporated, E.F. Ray-Federal B Well #1	708336	415103	25	32	10
1475	Texaco Incorporated, E.F. Ray Federal No. 1	706990	415090	25	32	10
1476	Texaco Incorporated, E.F. Ray-Federal (NCT-1) No.2	706976	416410	25	32	10
1477	Tenneco Oil Company, Emily Flint Ray U.S.A. #41	705659	416068	25	32	10
1478	Westates Petroleum Corp. of Texas, Cont. Fed. #1	713646	415142	25	32	11
1479	Patoil Company, Union Federal #1	717652	409904	25	32	13

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1480	Joseph O'Neill Jr., Federal O #1	715012	409876	25	32	14
1481	Joseph O'Neill, Federal O #2	715000	411196	25	32	14
1482	Hill & Meeker, Ora Hall-Federal 14 #1	710655	412153	25	32	14
1483	Tennessee Gas Transmission, #1 USA G.E. Jordan	705679	409808	25	32	15
1484	Texaco Inc., G.E. Jordan Federal (NCT-2) Well No.1	705678	412438	25	32	15
1485	Texaco Incorporated, G.E. Jordan Federal (NCT-1)#2	706998	411149	25	32	15
1486	Tennessee Gas & Oil Company, G.E. Jordan #3	706997	413770	25	32	15
1487	Texaco Inc., G.E. Jordan Federal (NCT-1) No. 8	708343	413783	25	32	15
1488	Texaco Inc., G.E. Jordan-Federal (NCT-2) No. 2	705677	413578	25	32	15
1489	Tennessee Gas & Oil Company, G.E. Jordan USA #4	705678	411129	25	32	15
1490	Texaco Inc., G.E Jordan Federal (NCT-1) #6	708344	412463	25	32	15
1491	Tennessee Gas Transmission Co., G.E. Jordan USA #	706998	412450	25	32	15
1492	Texaco Incorporated, Cotton Draw Unit No. 46	708196	411318	25	32	15
1493	Tennessee Gas & Oil Company, State Monsanto #4	701685	409765	25	32	16
1494	Tennessee Gas Trans. Co., State E.L. Bradley #1	704358	412424	25	32	16
1495	Tenneco Oil Company, State Monsanto #6	702010	410759	25	32	16
1496	Tennessee Gas Transmission Co., State Monsanto #1	704358	411112	25	32	16
1497	Tenneco Oil Company, State Monsanto #5	703368	410772	25	32	16
~~1498~~	~~Tenneco~~ Oil Company, Monsanto State #8			25	32	16
1499	Tennessee Gas & Oil Company, State Bradley #2	704357	413744	25	32	16
1500	Tenneco Oil Company, State Monsanto #7	700697	409426	25	32	16
1501	Tenneco Oil Company, State E.L. Bradley #3	702003	412066	25	32	16
1502	Continental Oil Company, State Z 16 #1	703038	412408	25	32	16
1503	Tennessee Gas & Oil Company, State Monsanto #3	703039	409779	25	32	16
1504	Tennessee Gas & Oil Company, Monsanto #2	704348	409814	25	32	16
1505	Shoreline Exploration Comp., Continental State #1	703368	412312	25	32	16
~~1506~~	~~Texaco~~ Incorporated, Cotton Draw Unit #64			25	32	18
1507	The Texas Company, Jack B. Shaw Federal #1	692388	413613	25	32	18
1508	Texaco Inc.(formerly PRBass), Cotton Draw Unit #42	699438	405451	25	32	20
1509	Texaco Incorporated, Cotton Draw Unit #57	704083	404836	25	32	21
1510	Panther City Investment Co., Perry Federal #37	700444	404471	25	32	21
1511	Panther City Investment Co., Perry Federal #35	700423	405791	25	32	21
1512	Panther City Investment, Inc., Perry Federal No.6	701721	407126	25	32	21
1513	Panther City Invest. Inc., Perry Federal No. 7	701700	408445	25	32	21
1514	Panther City Investment Co., Perry Federal #27	704066	406156	25	32	21
1515	Panther City Investment Co., Perry Federal #28	703080	405817	25	32	21
1516	Tennessee Gas & Oil Company, #3 E.H. Perry-U.S.A.	703064	407139	25	32	21
1517	Panther City Investment Co., Perry Federal #38	701764	404484	25	32	21
~~1518~~	~~Perry~~ R. Bass, Perry Federal #43			25	32	21
1519	Texaco Inc.(formerly Panther), Cotton Draw Unit 44	702763	404824	25	32	21
1520	Tenneco Oil Company, E.H. Perry USA Well No. 36	700401	407113	25	32	21
1521	Tennessee Gas & Oil Company, E.H. Perry U.S.A. 2	700380	408433	25	32	21
1522	Panther City Investment Company, Perry Federal #2	704384	407152	25	32	21
1523	Tennessee Gas Transmission Co., E.H. Perry USA #1	703047	408459	25	32	21
1524	Panther City Investment Company, Perry Federal #1	704367	408472	25	32	21
1525	Panther City Investment Company, Perry Federal #5	701743	405804	25	32	21
1526	Texaco Incorporated, G.E. Jordan Federal #3	705704	407168	25	32	22
1527	Texaco Incorporated, G.E. Jordan Federal No. 1	705687	408488	25	32	22
1528	Texaco Incorporated, Cotton Draw Unit No. 48	705386	406169	25	32	22
1529	Texaco Incorporated, G.E. Jordan Federal NCT-1 #5	706855	408657	25	32	22
1530	Texaco, C.D. Unit No. 18	706689	407514	25	32	22
1531	Joseph L. O'Neill, Federal P #1	713707	408557	25	32	23
~~1532~~	~~Texaco~~ Incorporated, G.E. Jordan Federal No. 4			25	32	25
1533	Texaco Incorporated, Cotton Draw Unit No. 61	705420	403530	25	32	27
1534	Texaco Incorporated, Cotton Draw Unit No. 47	701778	403164	25	32	28
1535	Texaco Incorporated, Cotton Draw Unit No. 56	704104	403187	25	32	28

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1536	Tenneco Oil Company, J.D. Sena U.S.A. No. 1	701459	400840	25	32	28
1537	Texaco Incorporated, Cotton Draw Unit No. 51	702784	403174	25	32	28
~~1538~~	Texaco Incorporated, Cotton Draw Unit No. 54			25	32	28
1539	Texaco Incorporated, Cotton Draw Unit No. 45	700458	403151	25	32	28
1540	Texaco Incorporated, Cotton Draw Unit No. 59	704118	402197	25	32	28
1541	Texaco Incorporated, Cotton Draw Unit No. 50	701784	401844	25	32	28
1542	Tenneco Oil Company, J.D. Sena Jr. U.S.A. No. 2	700812	400834	25	32	28
1543	Texaco Incorporated, Cotton Draw Unit No. 58	699474	401821	25	32	29
1544	I.W. Lovelady, Conoco Federal #1-29	699485	399504	25	32	29
1545	Ray Smith, Ray Smith #1	689811	396460	25	32	31
1546	R.C. Graham, Conoco State No. 1	696462	396522	25	32	32
1547	Westates Petroleum Corp. of Texas, Jennings #1	704597	395266	25	32	33
1548	Hill & Meeker, Hall-Federal 1-33	700489	393906	25	32	33
1549	Hill & Meeker, Jennings-Federal 1-33	702134	396227	25	32	33
1550	Perry R. Bass, Federal-Muse #1	747971	424626	25	33	1
1551	Hill & Meeker, Bass Federal #1	730822	424518	25	33	5
1552	Santana Petroleum Corp., Annie Bass Federal #1	730872	416608	25	33	8
1553	Curtis Hankamer, Muse Federal #1	742717	419315	25	33	11
1554	Sam H. Jolliffe Jr., #1 Bass Federal	721629	413912	25	33	18
1555	Curtis Hankamer, Federal Bass #1	729628	408670	25	33	20
1556	George L. Buckles Co., Federal Marshall No. 1	736192	408690	25	33	21
1557	American Quasar Petroleum Company, Vaca Draw #1	736222	404740	25	33	21
1558	Hill & Meeker, Muse-Federal 23 #1	742865	404780	25	33	23
1559	R.B. Farris, Perry Federal 1	748141	404811	25	33	24
1560	King Resources, Pan American Federal No. 1	748160	400844	25	33	25
1561	Ashmun & Hilliard, Federal No. 1-25	752135	399551	25	33	25
1562	Robert A. Dean, Harry Dickson #1	741567	399489	25	33	27
1563	Tidewater Oil Company, Annie R. Bass Federal #1	736273	399459	25	33	28
1564	Curtis Hankamer, Conley Federal #1	736234	403420	25	33	28
1565	Tenneco Oil Company, W.H. Jennings Inc USA No. 1	727014	402046	25	33	29
1566	Tenn. Gas Transmission Co, Richardson & Bass USA#	721803	394131	25	33	31
1567	Pure Oil Company, Red Hills Unit #1	729402	393832	25	33	32
1568	Neil H. Wills, Continental State No. 1	731044	395490	25	33	32
1569	Max M. Wilson, Marathon-State #1	748205	394253	25	33	36
1570	Ashmun Hilliard Oil Company, State #1-36	748173	398204	25	33	36

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Record Tables.

FFG#	twp	rge	sec	fnsl	fewl	Drillhole name	UTM X	UTM Y
~~105~~	~~21~~	~~30~~	~~25~~	~~1098s~~	~~969w~~	~~Wills Grosby #1~~		
~~685~~	~~22~~	~~29~~	~~6~~	~~660s~~	~~660e~~	~~#1 Eddy Federal~~		
122	22	30	9	1485s	650w	IMC #343	604,170	3585,500
? 144	23	29	1	2763s	2964e	Duval #29	599825 ?	3577,780 ? (Located in Laguna Tres Elev. ~ 905 ft)
146	23	29	1	1320n	1320e	IMC I-263	600,350	3578,170
145	23	29	1	528s	528w	IMC I-184	599,300	3577,130
147	23	29	4	1255n	1374e	Arco #9	595 500	3 578 180
148	23	29	12	2600n	700e	Shell Oil Company #17 (Dogtown #)	600 550	3 576 200
149	23	29	13	2100n	300e	Shell Oil Company #21 (Dogtown #15)	600 700	3 574 700
151	23	29	15	1160n	3276e	Duval #14	596 540	3 575 000
155	23	29	27	660s	1980w	Laguna Grande #2	596 600	3 570 670
156	23	29	28	1380s	990e	#1 Laguna Grande Unit	595 680	3 570 850
157	23	29	35	1900s	100e	A-29	599 200	3 569 430
158	23	29	36	1800s	1200e	A-31	600 500	3 569 420
161	23	30	2	101s	1169w	Duval #1	607 670	3 577 075
162	23	30	2	143n	112w	Duval D-31	607 330	3 578 600
163	23	30	2	2655n	2655e	Duval D-179	608 075	3 577 840
164	23	30	17	2505n	317w	Shell Oil Company #6 (Dogtown #1)	602 450	3 574 600
165	23	30	19	2244n	2096e	Duval #10	601 815	3 573 060
~~167~~	~~23~~	~~30~~	~~26~~			~~USGS #22~~		
168	23	30	28	175s	232w	Duval #4	604 185	3 570 620
169	23	30	29	261n	261e	Shell Oil Company #7 (Dogtown #2)	604 025	3 572 085
170	23	30	30	215n	2300w	Shell Oil Company #20 (Dogtown #14)	601 540	3 572 075
171	23	30	31	2640n	1750e	Arco #24	600 995	3 569 715
172	23	30	32	1411n	2510e	Shell Oil Company #23 (Dogtown #17)	603 370	~~3 569~~ 3 570 110
173	23	30	36	2150n	3090w	Leonard ~~??????~~ #1-S	609 960	3 570 020
177	24	29	19	480n	330w	Bun #1	591 330	3 563 820
179	24	29	29	1980s	660w	Ellis Federal 1-X	593 075	3 561 330
180	24	30	2	200s	200w	Shell Oil Company #16 (Dogtown #11)	607 500	3 567 420
181	24	30	5	1147n	406e	Shell Oil Company #11 (Dogtown #6)	604 075	3 568 580
182	24	30	6	1990n	2185w	Arco #8	601 540	3 568 290
183	24	30	9	2001n	2001e	Shell Oil Company #8 (Dogtown #3)	605 220	3 566 ~~700~~ 730
184	24	30	11	316s	390w	Shell Oil Company #12 (Dogtown #)	607 615	3 565 780
185	24	30	15	200n	200w	Shell Oil Company #13 (Dogtown #)	605 ~~775~~ 880	3 565 660
186	24	30	16	150n	2590e	Shell Oil Company #24 (Dogtown #18)	605 040	3 565 ~~660~~ 680
188	24	30	20	100n	1320w	Southern Production Company core test #6	602 925	3 564 040
189	24	30	23	1606n	2294e	Shell Oil Company #9 (Dogtown #4)	608 415	3 563 670

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6?

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FFG#	twp	rge	sec	fnsl	fewl	Drillhole name	UTM X	UTM Y
190	24	30	23	660s	660w	Shugart Federal 23 #1	607 700	3 562 740
192	24	30	27	336n	270e	Shell Oil Company #10 (Dogtown #)	607 425	3 562 425
198	24	31	5	330n	330e	USGS potash core test #13	613 800	3 568 860
199	24	31	6	1098n	2193e	Shell Oil Company #15	611 580	3 568 630
202	24	31	11	2531n	178e	Shell Oil Company #4 (Federal G-NM #4)	618 710	3 566 685
204	24	31	13	1980s	1980e	1-13 Federal	619 780	3 564 825
210	24	31	21	660s	660w	Poker Lake Unit #43	614 200	3 562 750
213	24	31	33	2310n	2313e	~~Ramley (?) #1~~ Ramsey #1 cmm	614 900	3 560 250
479	24	32	11	1980n	1980w	Federal Hanagan D-4	627 500	3 566 040
487	24	32	23	1650n	330w	Exxon A Federal No. 2	627 020	3 563 825
488	24	32	24	330n	330w	Bon Durant Federal No. 1	628 650	3 564 150
489	24	32	25	1980n	1980w	Federal "BM" #1	629 160	3 562 160
490	24	32	29	1980n	660w	#1 Payne	622 280	~~3 561 990~~ cmm Y: 3 562 010
494	24	32	34	660s	1980w	Cotton Draw Unit #74	625 990	3 559 680
215	25	30	1	660n	660e	Poker Lake Unit #2	610 575	3 559 160
577	25	30	8	1980s	660w	Poker Lake State #3	602 860	3 556 530
584	25	30	10	2030n	2180e	Poker Lake #44	606 880	3 557 000
585	25	30	12	1980n	1980w	Shugart Federal No. 1	609 770	3 557 125
589	25	30	17	660s	660w	Poker Lake Unit #11A-7	602 860	3 554 200
600	25	30	35	1980n	660e	Marshall Federal #1	609 010	3 550 590
601	25	30	35	660s	660w	Richardson & Bass Federal No. 1	607 860	3 549 750
217	25	31	2	100n	1500w	Dog Town #2	617 700	3 559 350
219	25	31	10	1980n	1980e	Pauley & Harrison #2	616 635	3 557 160
220	25	31	12	660n	660w	Pauley & Harrison #1	619 075	3 557 590
221	25	31	15	780n	1230w	Pauley & Harrison PH-1	616 000	3 555 915
606	25	31	35	660n	1980e	Big Sinks Federal Unit #1	618 325	3 551 160
705	25	32	28	2310s	990w	J.D. Sena Jr.	624 070	3 552 135
706	25	32	28	2310s	1650w	J.D. Sena U.S.A. No. 1	624 270	3 552 135
707	25	32	29	1980n	330e	Cotton Draw Unit No. 58	623 670	3 552 425
708	25	32	29	330n	330e	Cotton Draw Unit No. 55	623 670	3 552 925
714	25	32	34	660n	660w	Federal Sunshine Royalty #1	625 610	3 551 260
715	25	32	34	660n	660e	Sunshine Royalties #1	626 850	3 551 250

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CheckPrint for 2-6TBL_FFG

IDNum	twp	rge	sec	fnsl	fewl	Drillhole name	UTM X	UTM Y
6122	22	30	9	1485s	650w	IMC #343	604170	3585500
6144	23	29	1	2763s	2964e	Duval #29	599825	3577780
6146	23	29	1	1320n	1320e	IMC I-263	600350	3578170
6145	23	29	1	528s	528w	IMC I-184	599300	3577130
6147	23	29	4	1255n	1374e	Arco #9	595500	3578180
6148	23	29	12	2600n	700e	Shell Oil Company #17 (Dogtown #	600550	3756200
6149	23	29	13	2100n	300e	Shell Oil Company #21 (Dogtown #	600700	3574700
6151	23	29	15	1160n	3276e	Duval #14	596540	3575000
6155	23	29	27	660s	1980w	Laguna Grande #2	596600	3570670
6156	23	29	28	1380s	990e	#1 Laguna Grande Unit	595680	3570850
6157	23	29	35	1900s	100e	A-29	599200	3569430
6158	23	29	36	1800s	1200e	A-31	600500	3569420
6161	23	30	2	101s	1169w	Duval #1	~~607330~~	~~3578600~~
6162	23	30	2	143n	112w	Duval D-31	~~608075~~	~~3577840~~
6163	23	30	2	2655n	2655e	Duval D-179	~~607670~~	~~3577075~~
6164	23	30	17	2505n	317w	Shell Oil Company #6 (Dogtown #1	602450	3574600
6165	23	30	19	2244n	2096e	Duval #10	601815	3573060
6168	23	30	28	175s	232w	Duval #4	604185	3570620
6169	23	30	29	261n	261e	Shell Oil Company #7 (Dogtown #2	604025	3572085
6170	23	30	30	215n	2300w	Shell Oil Company #20 (Dogtown #	601540	3572075
6171	23	30	31	2640n	1750e	Arco #24	600995	3569715
6172	23	30	32	1411n	2510e	Shell Oil Company #23 (Dogtown #	603370	3570110
6173	23	30	36	2150n	3090w	Leonard ??????? #1-S	609960	3570020
6177	24	29	19	480n	330w	Bun #1	591330	3563820
6179	24	29	29	1980s	660w	Ellis Federal 1-X	593075	3561330
6180	24	30	2	200s	200w	Shell Oil Company #16 (Dogtown #	607500	3567420
6181	24	30	5	1147n	406e	Shell Oil Company #11 (Dogtown #	604075	3568580
6182	24	30	6	1990n	2185w	Arco #8	601540	3568290
6183	24	30	9	2001n	2001e	Shell Oil Company #8 (Dogtown #3	605220	3566730
6184	24	30	11	316s	390w	Shell Oil Company #12 (Dogtown #	607615	3565780
6185	24	30	15	200n	200w	Shell Oil Company #13 (Dogtown #	605880	3565660
6186	24	30	16	150n	2590e	Shell Oil Company #24 (Dogtown #	605040	3565680
6188	24	30	20	100n	1320w	Southern Production Company cor	602925	3564040
6189	24	30	23	1606n	2294e	Shell Oil Company #9 (Dogtown #4	608415	3563670
6190	24	30	23	660s	660w	Shugart Federal 23 #1	607700	3562740

x:607 670 y:3577075
x:607 330 y:3578600
x:608 675 y:3577840
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IDNum	twp	rge	sec	fnsl	fewl	Drillhole name	UTM X	UTM Y
6192	24	30	27	336n	270e	Shell Oil Company #10 (Dogtown #	607425	3562425
6198	24	31	5	330n	330e	USGS potash core test #13	613800	3568860
6199	24	31	6	1098n	2193e	Shell Oil Company #15	611580	3568630
6202	24	31	11	2531n	178e	Shell Oil Company #4 (Federal G-N	618710	3566685
6204	24	31	13	1980s	1980e	1-13 Federal	619780	3564825
6210	24	31	21	660s	660w	Poker Lake Unit #43	614200	3562750
6213	24	31	33	2310n	2313e	~~Ramley (?) #1~~ Ramsey #1 (	614900	3560250
6479	24	32	11	1980n	1980w	Federal Hanagan D-4	627500	3566040
6487	24	32	23	1650n	330w	Exxon A Federal No. 2	627020	3563825
6488	24	32	24	330n	330w	Bon Durant Federal No. 1	628650	3564150
6489	24	32	25	1980n	1980w	Federal "BM" #1	629160	3562160
6490	24	32	29	1980n	660w	#1 Payne	622280	3562010
6494	24	32	34	660s	1980w	Cotton Draw Unit #74	625990	3559680
6215	25	30	1	660n	660e	Poker Lake Unit #2	610575	3559160
6577	25	30	8	1980s	660w	Poker Lake State #3	602860	3556530
6584	25	30	10	2030n	2180e	Poker Lake #44	606880	3557000
6585	25	30	12	1980n	1980w	Shugart Federal No. 1	609770	3557125
6589	25	30	17	660s	660w	Poker Lake Unit #11A-7	602860	3554200
6600	25	30	35	1980n	660e	Marshall Federal #1	609010	3550590
6601	25	30	35	660s	660w	Richardson & Bass Federal No. 1	607860	3549750
6217	25	31	2	100n	1500w	Dog Town #2	617700	3559350
6219	25	31	10	1980n	1980e	Pauley & Harrison #2	616635	3557160
6220	25	31	12	660n	660w	Pauley & Harrison #1	619075	3557590
6221	25	31	15	780n	1230w	Pauley & Harrison PH-1	616000	3555915
6606	25	31	35	660n	1980e	Big Sinks Federal Unit #1	618325	3551160
6705	25	32	28	2310s	990w	J.D. Sena Jr.	624070	3552135
6706	25	32	28	2310s	1650w	J.D. Sena U.S.A. No. 1	624270	3552135
6707	25	32	29	1980n	330e	Cotton Draw Unit No. 58	623670	3552425
6708	25	32	29	330n	330e	Cotton Draw Unit No. 55	623670	3552925
6714	25	32	34	660n	660w	Federal Sunshine Royalty #1	626850	~~3551250~~
6715	25	32	34	660n	660e	Sunshine Royalties #1	~~625610~~	~~3551250~~

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x: 625610
Y: 3551250
x: 626850
Y: 3551250

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Check Print #2 for 2-6TBL_FFG

FFG.	twp	rge	sec	fnsl	fewl	Drillhole name	UTM X	UTM Y
6122	22	30	9	1485s	650w	IMC #343	604170	3585500
6144	23	29	1	2763s	2964e	Duval #29	599825	3577780
6146	23	29	1	1320n	1320e	IMC I-263	600350	3578170
6145	23	29	1	528s	528w	IMC I-184	599300	3577130
6147	23	29	4	1255n	1374e	Arco #9	595500	3578180
6148	23	29	12	2600n	700e	Shell Oil Company #17 (	600550	~~3756200~~ 3576200
6149	23	29	13	2100n	300e	Shell Oil Company #21 (	600700	3574700
6151	23	29	15	1160n	3276e	Duval #14	596540	3575000
6155	23	29	27	660s	1980w	Laguna Grande #2	596600	3570670
6156	23	29	28	1380s	990e	#1 Laguna Grande Unit	595680	3570850
6157	23	29	35	1900s	100e	A-29	599200	3569430
6158	23	29	36	1800s	1200e	A-31	600500	3569420
6161	23	30	2	101s	1169w	Duval #1	607670	3577075
6162	23	30	2	143n	112w	Duval D-31	607330	3578600
6163	23	30	2	2655n	2655e	Duval D-179	608675	3577840
6164	23	30	17	2505n	317w	Shell Oil Company #6 ([	602450	3574600
6165	23	30	19	2244n	2096e	Duval #10	601815	3573060
6168	23	30	28	175s	232w	Duval #4	604185	3570620
6169	23	30	29	261n	261e	Shell Oil Company #7 ([	604025	3572085
6170	23	30	30	215n	2300w	Shell Oil Company #20 (	601540	3572075
6171	23	30	31	2640n	1750e	Arco #24	600995	3569715
6172	23	30	32	1411n	2510e	Shell Oil Company #23 (	603370	3570110
6173	23	30	36	2150n	3090w	Leonard #1-S	609960	3570020
6177	24	29	19	480n	330w	Bun #1	591330	3563820
6179	24	29	29	1980s	660w	Ellis Federal 1-X	593075	3561330
6180	24	30	2	200s	200w	Shell Oil Company #16 (	607500	3567420
6181	24	30	5	1147n	406e	Shell Oil Company #11	604075	3568580
6182	24	30	6	1990n	2185w	Arco #8	601540	3568290
6183	24	30	9	2001n	2001e	Shell Oil Company #8 ([	605220	3566730
6184	24	30	11	316s	390w	Shell Oil Company #12 (	607615	3565780
6185	24	30	15	200n	200w	Shell Oil Company #13 (	605880	3565660
6186	24	30	16	150n	2590e	Shell Oil Company #24 (	605040	3565680
6188	24	30	20	100n	1320w	Southern Production Co	602925	3564040
6190	24	30	23	1606n	2294e	Shell Oil Company #9 ([	608415	3563670
6189	24	30	23	660s	660w	Shugart Federal 23 #1	607700	3562740

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FFG.	twp	rge	sec	fnsl	fewl	Drillhole name	UTM X	UTM Y
6192	24	30	27	336n	270e	Shell Oil Company #10	607425	3562425
6198	24	31	5	330n	330e	USGS potash core test #	613800	3568860
6199	24	31	6	1098n	2193e	Shell Oil Company #15	611580	3568630
6202	24	31	11	2531n	178e	Shell Oil Company #4 (F	618710	3566685
6204	24	31	13	1980s	1980e	1-13 Federal	619780	3564825
6210	24	31	21	660s	660w	Poker Lake Unit #43	614200	3562750
6213	24	31	33	2310n	2313e	Ramsey #1	614900	3560250
6479	24	32	11	1980n	1980w	Federal Hanagan D-4	627500	3566040
6487	24	32	23	1650n	330w	Exxon A Federal No. 2	627020	3563825
6488	24	32	24	330n	330w	Bon Durant Federal No.	628650	3564150
6489	24	32	25	1980n	1980w	Federal "BM" #1	629160	3562160
6490	24	32	29	1980n	660w	#1 Payne	622280	3562010
6494	24	32	34	660s	1980w	Cotton Draw Unit #74	625990	3559680
6215	25	30	1	660n	660e	Poker Lake Unit #2	610575	3559160
6577	25	30	8	1980s	660w	Poker Lake State #3	602860	3556530
6584	25	30	10	2030n	2180e	Poker Lake #44	606880	3557000
6585	25	30	12	1980n	1980w	Shugart Federal No. 1	609770	3557125
6589	25	30	17	660s	660w	Poker Lake Unit #11A-7	602860	3554200
6600	25	30	35	1980n	660e	Marshall Federal #1	609010	3550590
6601	25	30	35	660s	660w	Richardson & Bass Fede	607860	3549750
6217	25	31	2	100n	1500w	Dog Town #2	617700	3559350
6219	25	31	10	1980n	1980e	Pauley & Harrison #2	616635	3557160
6220	25	31	12	660n	660w	Pauley & Harrison #1	619075	3557590
6221	25	31	15	780n	1230w	Pauley & Harrison PH-1	616000	3555915
6606	25	31	35	660n	1980e	Big Sinks Federal Unit #	618325	3551160
6705	25	32	28	2310s	990w	J.D. Sena Jr.	624070	3552135
6706	25	32	28	2310s	1650w	J.D. Sena U.S.A. No. 1	624270	3552135
6707	25	32	29	1980n	330e	Cotton Draw Unit No. 58	623670	3552425
6708	25	32	29	330n	330e	Cotton Draw Unit No. 55	623670	3552925
6715	25	32	34	660n	660w	Federal Sunshine Royalt	625610	3551250
6714	25	32	34	660n	660e	Sunshine Royalties #1	626850	3551250

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Check Print #3 for 2-6TBL_FFG

IDNum	DH_Name	StateX	StateY	Township	Range	Section	FNSL	FEWL	UTMX	UTMY
6122	IMC #343			22	30	9	1485s	650w	604170	3585500
6144	Duval #29			23	29	1	2763s	2964e	599825	3577780
6146	IMC I-263			23	29	1	1320n	1320e	600350	3578170
6145	IMC I-184			23	29	1	528s	528w	599300	3577130
6147	Arco #9			23	29	4	1255n	1374e	595500	3578180
6148	Shell Oil Company #17 (Dogtown #)			23	29	12	2600n	700e	600550	3576200
6149	Shell Oil Company #21 (Dogtown #1			23	29	13	2100n	300e	600700	3574700
6151	Duval #14			23	29	15	1160n	3276e	596540	3575000
6155	Laguna Grande #2			23	29	27	660s	1980w	596600	3570670
6156	#1 Laguna Grande Unit			23	29	28	1380s	990e	595680	3570850
6157	A-29			23	29	35	1900s	100e	599200	3569430
6158	A-31			23	29	36	1800s	1200e	600500	3569420
6161	Duval #1			23	30	2	101s	1169w	607670	3577075
6162	Duval D-31			23	30	2	143n	112w	607330	3578600
6163	Duval D-179			23	30	2	2655n	2655e	608675	3577840
6164	Shell Oil Company #6 (Dogtown #1)			23	30	17	2505n	317w	602450	3574600
6165	Duval #10			23	30	19	2244n	2096e	601815	3573060
6168	Duval #4			23	30	28	175s	232w	604185	3570620
6169	Shell Oil Company #7 (Dogtown #2)			23	30	29	261n	261e	604025	3572085
6170	Shell Oil Company #20 (Dogtown #1			23	30	30	215n	2300w	601540	3572075
6171	Arco #24			23	30	31	2640n	1750e	600995	3569715
6172	Shell Oil Company #23 (Dogtown #1			23	30	32	1411n	2510e	603370	3570110
6173	Leonard #1-S			23	30	36	2150n	3090w	609960	3570020
6177	Bun #1			24	29	19	480n	330w	591330	3563820
6179	Ellis Federal 1-X			24	29	29	1980s	660w	593075	3561330
6180	Shell Oil Company #16 (Dogtown #1			24	30	2	200s	200w	607500	3567420
6181	Shell Oil Company #11 (Dogtown #6			24	30	5	1147n	406e	604075	3568580
6182	Arco #8			24	30	6	1990n	2185w	601540	3568290
6183	Shell Oil Company #8 (Dogtown #3)			24	30	9	2001n	2001e	605220	3566730
6184	Shell Oil Company #12 (Dogtown #)			24	30	11	316s	390w	607615	3565780
6185	Shell Oil Company #13 (Dogtown #)			24	30	15	200n	200w	605880	3565660
6186	Shell Oil Company #24 (Dogtown #1			24	30	16	150n	2590e	605040	3565680
6188	Southern Production Company core			24	30	20	100n	1320w	602925	3564040
6190	Shell Oil Company #9 (Dogtown #4)			24	30	23	1606n	2294e	608415	3563670
6189	Shugart Federal 23 #1			24	30	23	660s	660w	607700	3562740

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IDNum	DH_Name	StateX	StateY	Township	Range	Section	FNSL	FEWL	UTMX	UTMY
6192	Shell Oil Company #10 (Dogtown #)			24	30	27	336n	270e	607425	3562425
6198	USGS potash core test #13			24	31	5	330n	330e	613800	3568860
6199	Shell Oil Company #15			24	31	6	1098n	2193e	611580	3568630
6202	Shell Oil Company #4 (Federal G-NM			24	31	11	2531n	178e	618710	3566685
6204	1-13 Federal			24	31	13	1980s	1980e	619780	3564825
6210	Poker Lake Unit #43			24	31	21	660s	660w	614200	3562750
6213	Ramsey #1			24	31	33	2310n	2313e	614900	3560250
6479	Federal Hanagan D-4			24	32	11	1980n	1980w	627500	3566040
6487	Exxon A Federal No. 2			24	32	23	1650n	330w	627020	3563825
6488	Bon Durant Federal No. 1			24	32	24	330n	330w	628650	3564150
6489	Federal "BM" #1			24	32	25	1980n	1980w	629160	3562160
6490	#1 Payne			24	32	29	1980n	660w	622280	3562010
6494	Cotton Draw Unit #74			24	32	34	660s	1980w	625990	3559680
6215	Poker Lake Unit #2			25	30	1	660n	660e	610575	3559160
6577	Poker Lake State #3			25	30	8	1980s	660w	602860	3556530
6584	Poker Lake #44			25	30	10	2030n	2180e	606880	3557000
6585	Shugart Federal No. 1			25	30	12	1980n	1980w	609770	3557125
6589	Poker Lake Unit #11A-7			25	30	17	660s	660w	602860	3554200
6600	Marshall Federal #1			25	30	35	1980n	660e	609010	3550590
6601	Richardson & Bass Federal No. 1			25	30	35	660s	660w	607860	3549750
6217	Dog Town #2			25	31	2	100n	1500w	617700	3559350
6219	Pauley & Harrison #2			25	31	10	1980n	1980e	616635	3557160
6220	Pauley & Harrison #1			25	31	12	660n	660w	619075	3557590
6221	Pauley & Harrison PH-1			25	31	15	780n	1230w	616000	3555915
6606	Big Sinks Federal Unit #1			25	31	35	660n	1980e	618325	3551160
~~6705~~	~~J.D. Sena Jr.~~			~~25~~	~~32~~	~~28~~	~~2310s~~	~~990w~~	~~624070~~	~~3552135~~ dups DWP 4/12/02
~~6706~~	~~J.D. Sena U.S.A. No. 1~~			~~25~~	~~32~~	~~28~~	~~2310s~~	~~1650w~~	~~624270~~	~~3552135~~ dups DWP 4/12/02
6707	Cotton Draw Unit No. 58			25	32	29	1980n	330e	623670	3552425
6708	Cotton Draw Unit No. 55			25	32	29	330n	330e	623670	3552925
6715	Federal Sunshine Royalty #1			25	32	34	660n	660w	625610	3551250
6714	Sunshine Royalties #1			25	32	34	660n	660e	626850	3551250

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UTM Coordinates from Corpscon for Selected Drillholes Compared to UTM Coordinates in Gonzales (1989)

Input File: Source Data from Gonzales (1989), Table 3-6

Drillhole name	State X	StateY
H-01	666500	497991
H-5c	677878	508198
H-7c	648766	475035
H-12	678079	477535

Output file from Corpscon

SOFTWARE: Corpscon for Windows 5.11.08
Horizontal Datum: UTM, NAD27
Horizontal Zone: 13
Horizontal Units: Meters

Drillhole name	UTM X	UTM Y
H-01	613455.71451	3581670.49190
H-5c	616903.65952	3584802.58362
H-7c	608095.03789	3574641.28770
H-12	617023.10812	3575458.69646

UTM Data from Gonzales (1989), Table 3-7

Drillhole name	UTM X	UTM Y
H-01	613423	3581684
H-5c	616903	3584802
H-7c	608095	3574640
H-12	617023	3575452

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Appendix D
List of Electronic Files Submitted

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The following electronic files have been submitted for Task 1:

Main report file: Task 1 Analysis Report for AP-088 revised.doc (Word 97)

Data source table: Task1 Source Data.xls (Excel 97)
(Separate worksheets for Source Table A and Source Table B)

Data source table: RustlerHalite.xls (Excel 97)
(includes data on position of halite relative to Culebra Dolomite Member)

Large format map files: Drillhole ID Numbers.pdf (Acrobat 3.0)
Culebra Structure.pdf (Acrobat 3.0)
Salado Dissolution and CulVT Thickness.pdf (Acrobat 3.0)
Rustler Halite Margins.pdf (Acrobat 3.0)

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Appendix E
User's Instructions for Corpscon for Windows 5.11.08

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Corpscon
Operating Instructions

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Corpscon

Version 5.x
Technical Documentation and Operating Instructions

September 1997

U.S. Army Corps of Engineers
Topographic Engineering Center
Alexandria, Virginia 22315-3864

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Internal Software Documentation
and Report

September 1997

Corpscon

Version 5.x

Technical Documentation
and
Operating Instructions

Geodetic Applications Division
Topographic Applications Laboratory
U.S. Army Topographic Engineering Center
7701 Telegraph Road
Alexandria, Virginia 22315-3864

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{ TC 1.0 General }{ TC }1.0 GENERAL

{ TC }1.1 Background

• The National Geodetic Survey has developed three programs called Nadcon (North American Datum Conversion), Vertcon (Vertical Conversion) and Geoid96. Nadcon provides consistent results when converting to and from the North American Datum of 1983 (NAD83) and the North American Vertical Datum of 1988 (NAVD88). Nadcon converts coordinates between NAD83 and the following datums; NAD27, Old Hawaiian Datum, Puerto Rico Datum, St. George Island (Alaska) Datum, St. Paul Island (Alaska) Datum and St. Lawrence Island (Alaska) Datum. For organizational purposes, the latter six datums are referred to as NAD27 within the program. Vertcon converts orthometric heights between National Geodetic Vertical Datum of 1929 (NGVD29) and NAVD88. Geoid96 calculates the separation between the Geoid and the Geodetic Reference System of 1980 (GRS80) ellipsoid. Nadcon, Vertcon, and Geoid96 work exclusively in geographical coordinates (Latitude/Longitude). For information on the accuracies of Vertcon refer to Appendix A. For more information on the accuracies of Geoid96 refer to Appendix B.

• The U.S. Army Topographic Engineering Center (TEC) created a more comprehensive program called Corpscon (Corps Convert), which is based on Nadcon, Vertcon and Geoid96. In addition to transformations between NAD83 and NAD27 geographical coordinates, Corpscon also converts between State Plane Coordinates Systems (SPCS), Universal Transverse Mercator (UTM) and geographical coordinates; thus eliminating several steps in the total process of converting between SPCS27, SPCS83, UTM27, and UTM83. Inputs can be in either geographic or SPCS/UTM coordinates (SPCS27 X and Y or SPCS83 Northing and Easting). This program can also be used to convert between state plane, geographic, and UTM coordinates on the same datum. Corpscon will convert orthometric and ellipsoidal heights in Geographic, State Plane and UTM coordinate systems.

• Corpscon allows conversions based on U.S. Survey and International Feet. As of 1997, 19 states have specified, by statute, units of measure for grid coordinates as follows:

U.S. Survey Foot - California, Colorado, Connecticut, Idaho, Indiana, Kentucky, Maryland, Massachusetts, Mississippi, New Mexico, New York, North Carolina, Oklahoma, Pennsylvania, Tennessee, Texas, Washington and Wisconsin.

International Survey Foot - Arizona, Michigan, Montana, North Dakota, Oregon, South Carolina and Utah.

• Corpscon 5.0 includes conversions based on High Accuracy Regional Networks (HARN's).

• The Federal Geodetic Control Subcommittee (FGCS) has adopted NAD83 as the official

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horizontal datum for U.S. surveying and mapping activities performed or financed by the Federal Government (Federal Register / Vol. 54, No. 113, June 14, 1989). The FGCS also stated that Nadcon will be the standard conversion method for all mathematical transformations between NAD83 and NAD27. For further information reference Engineer Technical Letter No. 1110-1-147, Engineering and Design Conversion to North American Datum of 1983 dated March 5, 1990.

• FGCS has affirmed that NAVD88 shall be the official vertical reference datum for the United States (Federal Register / Vol. 58, No. 120, June 24, 1993). For further information reference Engineer Technical Letter No. 1110-1-152, Conversion to the North American Vertical Datum of 1988, dated July 31, 1994.

{ TC }1.2 Coverage

The current version performs NAD27/NAD83 and NAVD88/GRS80 conversions for the continental U.S. (CONUS), including the 200 mile commercial zone, Alaska, Hawaii, Puerto Rico, and the U.S. Virgin Islands. Current areas of coverage for HARNs are Alabama, Arizona, California, Colorado, Florida, Idaho-Montana, Kentucky, Louisiana, Maine, Maryland-Delaware, Mississippi, Nebraska, New England (Connecticut, Massachusetts, New Hampshire, Vermont), New Mexico, Oklahoma, Puerto Rico-Virgin Islands, Tennessee, Texas, Virginia, Washington-Oregon, Wisconsin and Wyoming. The current version performs NGVD29/NAVD88 conversions for the continental U.S. only.

1.3 Accuracy

Nadcon and Vertcon transformations between datums are based on a model of over 250,000 common stations. Therefore, conversions are approximate and accuracy can vary depending on location and proximity to common stations.

Nadcon 2.1
The accuracy of the transformations should be viewed with some caution. At the 67 percent confidence level, this method introduces approximately 0.15 meter uncertainty within the conterminous United States, 0.50 meter uncertainty within Alaska, 0.20 meter uncertainty within Hawaii and 0.05 meter uncertainty within Puerto Rico and the U.S. Virgin Islands. In areas of sparse geodetic data coverage, Nadcon may yield less accurate results, but seldom in excess of 1.0 meter. Transformations between NAD83 and states/regions with High Accuracy Reference Networks (HARNs) introduce approximately 0.05 meter uncertainty. Transformations between old datums (NAD27, Old Hawaiian, Puerto Rico, etc.) and HARN could combine uncertainties (i.e. NAD27 to HARN equals 0.15m + 0.05m = 0.20m). In near offshore regions, results will be less accurate, but seldom in excess of 5.0 meters. Farther offshore NAD27 undefined. Therefore, the Nadcon computed transformations are extrapolations and no accuracy can be stated.

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Vertcon 2.0

The Vertcon 2.0 model was computed on May 5, 1994 using 381,833 datum difference values. A key part of the computation procedure was the development of the predictable, physical components of the differences between the NAVD 88 and NGVD 29 datums. This included models of refraction effects on geodetic leveling, and gravity and elevation influences on the new NAVD 88 datum. Tests of the predictive capability of the physical model show a 2.0 cm RMS agreement at our 381,833 data points. For this reason, the Vertcon 2.0 model can be considered accurate at the 2 cm (one sigma) level. Since 381,833 data values were used to develop the corrections to the physical model, Vertcon 2.0 will display even better overall accuracy than that displayed by the uncorrected physical model. This higher accuracy will be particularly noticeable in the eastern United States.

2.0 SOURCE OF PROGRAM AND ASSISTANCE

To obtain copies of the program, contact:

U.S. Army Topographic Engineering Center
ATTN: CETEC-
7701 Telegraph Road
Alexandria, Virginia 22315-3864
(703) 428-6766

3.0 HARDWARE AND SOFTWARE REQUIREMENTS

A 80486 (or higher) PC with MS-Windows 3.1, MS-Windows95 or MS-WindowsNT and 20MB of hard disk space is required. The CONFIG.SYS file must have FILES set to 25.

4.0 INSTALLATION PROCEDURES

To install the Corpscon program from diskette, perform the following steps:

1. Insert Distribution Disk #1 in the a: drive of the computer.
2. For Windows95, select *Run* from the *Start* menu. For Windows 3.1, go to the Program Manager group box and select *File* and then *Run*. A Run window should appear.
3. Enter '*a:setup*' in the Command Line item of the Run window. This should activate the Corpscon installation window.
4. Follow the directions on screen to install the program.

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To install the Corpscon program from CD, perform the following steps:

1. Insert the CD in the computer.
2. For Windows95, select *Run* from the *Start* menu. For Windows 3.1, go to the Program Manager group box and select *File* and then *Run*. A Run window should appear.
3. Enter '*d:\corpscon\setup*' in the Command Line item of the Run window. This should activate the Corpscon installation window. If the CD-ROM is on a drive other than the 'd:' drive, replace the 'd:' with the appropriate drive letter.
4. Follow the directions on screen to install the program.

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5.0 PROGRAM AND DATA FILES

Upon installation, the following files should be located in the destination directory (c:\Corpscon if the default installation was used):

corpswin.exe	alhpgn.las	nehpgn.las
corpswin.cfg	alhpgn.los	nehpgn.los
utms.hlp		
geoareas.lst	azhpgn.las	nmhpgn.las
corpswin.wri	azhpgn.los	nmhpgn.los
geoid96.txt	cahpgn.las	okhpgn.las
vertcon.txt	cahpgn.los	okhpgn.los
conus.las	cohpgn.las	pvhpgn.las
conus.los	cohpgn.los	pvhpgn.los
hawaii.las	emhpgn.las	tnhpgn.las
hawaii.los	emhpgn.los	tnhpgn.los
prvi.las	ethpgn.las	vahpgn.las
prvi.los	ethpgn.los	vahpgn.los
vertcone.94	flhpgn.las	wihpgn.las
vertconc.94	flhpgn.los	wihpgn.los
vertconw.94	kyhpgn.las	wmhpgn.las
geoid96ne.geo	kyhpgn.los	wmhpgn.los
geoid96nc.geo	lahpgn.las	wohpgn.las
geoid96nw.geo	lahpgn.los	wohpgn.los
geoid96se.geo	mehpgn.las	
geoid96sc.geo	mehpgn.los	
geoid96sw.geo	mdhpgn.las	
haw96.geo	mdhpgn.los	
prvi96.geo	mshpgn.las	
	mshpgn.los	

If the Alaska Data Files were installed, the following files should be copied to the destination directory (c:\corpscon if the default installation was used):

alaska.las		
alaska.los	stgeorge.las	geo96an.geo
stlrnc.las	stgeorge.los	geo96as.geo
stlrnc.los	stpaul.las	
	stpaul.los	

5.1 .LAS/.LOS, .94, and .GEO Files

Files with .las and .los extensions are Nadcon data files. These files are used for

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NAD27/NAD83/HPGN conversions. Files with .94 extensions are Vertcon data files. These files are used for NGVD29/NAVD88 conversions. File with .geo extensions are Geoid96 files. These files are used for GRS80/NAVD88 conversions.

5.2 Corpscon.CFG File

When Corpscon is run, the corpscon.cfg file will be updated. This file will hold all of the configuration information for the most recent conversion. Information maintained includes input and output datums, zones, units, and output file names.

5.3 Corpscon.INI File

The Corpscon.ini file will be created in the Windows directory by the installation program. The Corpscon.ini file contains several variables required for program execution. Each variable holds a directory name as specified below.

programfiles - directory for all program files (corpswin.exe & utms.hlp)
nadconfiles - directory for all Nadcon (.las & .los) files
vertconfiles - directory for all Vertcon (.94) files
geoid9396files - directory for all Geoid96 (.geo) files
tempfiles - directory where temporary files are created
configfiles - directory where the configuration file (corpswin.cfg) is stored

The Corpscon.ini file also contains descriptions and base filenames of HARN areas. This file may be modified to include new or updated HARN files. The format of entries in this file is:

description=basefilename

For example, the files used to cover Maryland and Delaware are mdhpgn.las and mdhpgn.los. The corresponding entry in the Corpscon.ini file is:

Maryland-Delaware=mdhpgn

The .las and .los file extensions should NOT be included in the filename. The Corpscon.ini file may be modified by hand using any text editor, or entries may be added by using the Utilities/Add New HPGN File option described in Section 6.5.5.

5.4 Geoareas.lst File

The geoareas.lst file contains a list of all Geoid96 data files. This file must be present or Corpscon will default to using Geoid93 data files.

6.0 OPERATING INSTRUCTIONS

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Execute the Corpscon program throught the Start Menu for Windows95 or through the Corpscon icon for Windows 3.1. This should open the Corpscon Main Window. The Corpscon Window consists of four items: the Main Menu Bar, the Input Format information box, the Output Format information box, and the Send Data information box. All user interaction is performed through the use of the main menu bar. The information boxes are included for reference purposes only.

The basic procedure for performing a conversion is:

1. Specify input data information using the Input Data Format menu item.
2. Specify output data information using the Output Data Format menu item.
3. Specify the devices/files to which the data should be sent using the Send Data menu item.
4. Perform the conversion using the Convert menu item.

The main menu bar consists of six menu items: Convert, Input Format, Output Format, Send Data, Utilities, and Help. Each menu item will be explained below.

6.1 Convert

The convert menu item has three sub-items: Single Point (Manual Input), Corpscon Batch File, and User Defined Input File.

6.1.1 Convert/Single Point

The single point sub-item is used to convert a single data point. When this item is selected, a window will appear prompting the user to input relevant information. For grid coordinate conversions, the user must enter the Northing and Easting or X and Y values. For geographic conversions, the user will need to enter the latitude and longitude. If vertical conversions are being performed, the user must also enter an elevation value. An optional point name may be entered. The user should enter in the appropriate information and press the OK button to perform the conversion. If data is to be sent to an output and/or printer file, other windows will appear which will allow the specification of the names of these output files. If data is to be sent to an Output Window, the results of the conversion will appear in a separate window.

6.1.2 Convert/Corpscon Batch File

The Corpscon Batch File sub-item is used to convert files, which are in the standard Corpscon Batch File Format. Files in this format may be created by using the Utilities/Build New Corpscon Batch File (section 6.5.1) menu item. The details of this file format are included below.

When this sub-item is selected, a window will appear prompting the user to select the name of the input Corpscon Batch File. The user should select an input filename and press the OK button to perform the conversion. If data is to be sent to an output and/or printer file, other windows will appear which will allow the specification of the names of these output files. If data is to be sent to an Output Window, the results of the conversion will appear in a separate window.

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6.1.3 Corpscon Batch File Format

A Corpscon Batch File is an ASCII text file containing three or four comma-delimited fields. For geographic coordinates the fields are:

1. Point Name
2. Latitude
3. Longitude
4. Elevation (optional)

Latitude and longitude values may be in decimal degrees, degrees-decimal minutes, or degrees-minutes-decimal seconds. Longitude values have a positive west sign convention. Degree, minute, and second values must be separated by a space within the latitude or longitude field. The point name is not required, but a ',' must appear before the latitude value in order to be accepted as a valid line. The fourth field is required only if vertical conversions are to be performed. Below are some examples of valid lines for geographic coordinates:

Point 1, 38.014135524, 77.253656438, 20.2
Second, 35 25.334554, 78 10.2, 100.33452
, 33 20, 77 40 20.000, 0
Four, 39 1 14.93945, 76 23 15.85347, 15.6778

For grid coordinates, the fields are:

1. Point Name
2. Easting or X value
3. Northing or Y value
4. Elevation (optional)

Again, the fourth field is required only if vertical conversions are to be performed. Below are some examples of valid lines for grid coordinates:

Point A, 500000.0, 2600000.0, 1238.4566
, 500010, 2600400.264, 10.66
PTC, 512353.23523,2600234.23453, 100.6

Lines beginning with a ';' or '#' characters in Corpscon Batch Files are interpreted as comment lines. No conversion of data will be performed for comment lines.

6.1.4 Convert/User Defined Input File

The User Defined Input File sub-item is used to convert files in a format which is specified by

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the user. These files may contain up to six fields and may be comma or space delimited. When this option is selected, a window will appear prompting the user to specify the format of the input file. At a minimum, the type of data each field will contain and the delimiter of fields (comma or space) in the data file must be specified. If the input file contains geographic coordinates, the format of these coordinates must also be specified. Geographic coordinates may be in decimal degrees, degrees-decimal minutes or degrees-minutes-decimal seconds. The user should specify the format of the input file and press the OK button to continue. The User Defined File window and examples of its use are included below.

After specification of the input file format, a window will appear which will allow entry the input data file name. The user should enter the name and press the OK button to continue.

If data is to be sent to an output file, another User Defined File window will appear which allows specification of the format of the output file. The output file may have a different format than that of the input file. The user should specify the format of the output file and press the OK button to continue.

After specification of the output file format, a window will appear which will allow entry of the output data file name. The user should enter the name and press the OK button to perform the conversion. If data is to be sent to a printer file, another window will appear which will allow specification of the name of the printer file. If data is to be sent to an Output Window, the results of the conversion will appear in a separate window.

6.1.5 User Defined File Dialog Box

The User Defined File dialog box consists of two blocks of information: the field specifications and other file information.

The six fields that a user defined file may have are Point Name, Northing/Y/Latitude, Easting/X/Longitude, Elevation, Carry Field 1, and Carry Field 2. The Carry Fields act as place-holders of extra information which may be included in the file but is not necessary for the conversion. These carry fields can be included in an output file.

The field delimiter of the file must also be specified. This should be done by selecting commas or spaces in the Delimiter drop-down box.

If the input file contains geographic coordinate information, the coordinate format must also be specified in the Degree Format drop down box. Valid formats are decimal degrees, degrees-decimal minutes or degrees-minutes-decimal seconds. Geographic coordinates that are in degrees-decimal minutes or degrees-minutes-decimal seconds must have a space between the degree-minute and minute-second values in the input file.

If the user-defined file is to be an output file, header information may be included in the output.

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Header information will contain data on the output datums, data/time, and company/project names. These lines will have a ';' as their leading character which indicates a comment.

6.2 Input/Output Format Menu Items

Input/Output Format menu items allow the user to select Geographic, UTM, or State Plane coordinates on NAD27, NAD83, or HPGN. If Geographic coordinates are selected, a window will appear which allows the user to specify the vertical datum (NGVD29, NAVD88 or GRS80) and units.

If UTM coordinates are selected a window will appear which prompts the user to input the UTM zone, horizontal units, vertical datum (if any) and vertical units.

If State Plane coordinates are selected, a window will appear which prompts the user to input the State Plane zone, horizontal units, vertical datum (if any) and vertical units.

If a HPGN conversion is selected a second dialog box will appear prompting the user to selected the desired area for the HPGN conversion.

A check will appear next to the currently selected format.

6.3 Send Data

The send data menu items allow the user to specify where the output data should be sent. Data may be sent to an Output Window, Output File, Printer File or to the Printer. Data may be sent to more than one device or file. A check will appear next to the sub-item that device or item is to receive output data.

6.4 Utilities

The Utilities menu item has the following sub-items: Build Corpscon Batch File, Append Existing Corpscon Batch File, View Nadcon/Vertcon/Geoid96 File Status, Degree Conversion and Preferences.

6.4.1 Build Corpscon Batch File

This sub-item allows the user to create input files in the Corpscon Batch File Format explained in section 6.2.3 above. The user may build geographic or grid files which may or may not contain elevation values.

6.4.2 Append Existing Batch File

This sub-item allows the user to add points to an existing Corpscon Batch File.

6.4.3 View Nadcon/Vertcon/Geoid93/96 File Status

Corpscon requires that several data files be located and opened successfully in order to perform NAD27/NAD83 and NGVD29/NAVD88/GRS80 conversions. This sub-item allows

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the user to determine which data files have been opened successfully.

6.4.4 Degree Conversion

This tool allows the user to input a degree value in decimal degrees, degrees decimal minutes, or degrees minutes decimal seconds. The value is then displayed in an output window in decimal degrees, degrees-decimal minutes, and degrees-minutes-decimal seconds.

6.4.5 Add New HPGN File

This tool allows the user to add new or updated HPGN files to the program. The user should enter the area description and the base filename. The base filename should NOT include .las or .los extensions.

6.4.6 Preferences

The Preferences dialog box allows specification of a Company and Project name. It also allows specification of the Nadcon, Vertcon, and Geoid96 files directories. Grid coordinate entry and display may also be set here. A Northing-Easting or X-Y display may be selected.

6.5 Help

The Help menu item has the following sub-items: UTM Zones, and About The UTM Zones sub-item will display information about UTM zones. A diagram displaying approximate UTM zones for the continental U.S. is included. The About sub-item will display information about the program including version number.

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Appendix A

Vertcon Information

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The following is an excerpt from the Vertcon, Version 2.0, README file.

The Vertcon 2.0 Model

The Vertcon 2.0 model was computed on May 5, 1994 using 381,833 datum difference values. A key part of the computation procedure was the development of the predictable, physical components of the differences between the NAVD 88 and NGVD 29 datums. This included models of refraction effects on geodetic leveling, and gravity and elevation influences on the new NAVD 88 datum. Tests of the predictive capability of the physical model show a 2.0 cm RMS agreement at our 381,833 data points. For this reason, the Vertcon 2.0 model can be considered accurate at the 2 cm (one sigma) level. Since 381,833 data values were used to develop the corrections to the physical model, Vertcon 2.0 will display even better overall accuracy than that displayed by the uncorrected physical model. This higher accuracy will be particularly noticeable in the eastern United States.

Using Vertcon 2.0

It should be emphasized that Vertcon 2.0 is a datum transformation model, and can not maintain the full vertical control accuracy of geodetic leveling. Ideally, one should process level data using the latest reduction software and adjust it to established NAVD 88 control. However, Vertcon 2.0 accuracy is suitable for a variety of mapping and charting purposes.

The Vertcon 2.0 model expresses datum differences between NAVD 88 and NGVD 29 due to removal of distortions in the level data, as well as due to the physical differences in the height systems. In some rare cases, these local NGVD 29 distortions could be 20 cm or more. If both ends of your old vertical survey were tied to one of these "problem" lines, then the datum difference of the problem line is appropriate to use to transform the survey data. If both ends of a vertical survey are tied to "undistorted lines", then it is appropriate to use a slightly distant point to compute the transformation, no matter how close your survey data may approach a given problem line. The possible presence of a problem NGVD 29 line in the vicinity of your survey will become evident if dramatically different datum transformation values are computed within a small area.

It must also be emphasized that Vertcon 2.0 is not to be considered reliable beyond the boundaries of the lower 48 United States. The Vertcon program will interpolate values in Canada, Mexico, or in the ocean, due to the grid structure of the model. Those values do not contain important model components present in the conterminous U.S. model. Future versions of Vertcon may be extended into neighboring countries.

The Defense Mapping Agency

The Defense Mapping Agency (DMA) has been of immense help in this endeavor. DMA has provided a major portion of the NGS land gravity data set. DMA has also been instrumental in the creation of the various 30" elevation grids in existence. Although the work of the DMA generally precludes public recognition, their cooperation in this work is gratefully

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acknowledged.

Other Future Plans:

A continuing development effort is underway to improve Vertcon results. NGVD 29 normal orthometric heights are being analyzed for localized monument and/or crustal motion effects, for inconsistent adjustments, and other effects. Computed height differences that are significantly influenced by such effects will be flagged and rated for reliability in future versions.

For More Information

For Products Available From the National Geodetic Survey:

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N/NGS12, SSMC3-9450
National Geodetic Survey, NOAA
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Silver Spring, MD 20910-3282
Telephone: 301-713-3242

For Information on Vertcon 2.0, and Future Research:

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Appendix B

Geoid96 Information

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The following is an excerpt from the GEOID96, Version 3.00, README file.

The GEOID96 Model

The GEOID96 model was computed on October 1, 1996 using over 1.8 million terrestrial and marine gravity values. The method of computation uses a Fast Fourier Transform (FFT) technique to compute the detailed geoid structure, which is then combined with an underlying EGM96 geopotential model. The result is a gravimetric geoid height grid with a 2' X 2' spacing in latitude and longitude (2' x 4' in Alaska), referred to the Geodetic Reference System 1980 (GRS 80) normal ellipsoid in an International Terrestrial Reference System 1994 (ITRF94) frame. Then, by means of NAD 83 GPS ellipsoidal heights on NAVD 88 benchmark data, plus known relationships between NAD 83 and the ITRF94 reference frames, a conversion is applied to generate the final GEOID96 geoid model. This conversion causes the GEOID96 model to be biased relative to a geocentric ellipsoid; but, this bias is deliberate. The GEOID96 model was developed to support direct conversion between NAD 83 GPS ellipsoidal heights a nd NAVD 88 orthometric heights.

When comparing the GEOID96 model with GPS ellipsoidal heights in the NAD 83 reference frame and leveling in the NAVD 88 datum, it is seen that GEOID96 has roughly a 3-cm accuracy (one sigma) in the regions of GPS benchmark coverage. In those states with sparse (150km+) GPS benchmark coverage, less point accuracy may be evident; but relative accuracy at about a 1 to 2 part-per-million level, or better, should still be obtained. For users with less stringent accuracy requirements, simple height conversions with GEOID96 in the conterminous United States can be sufficient. For users with more stringent accuracy requirements, please see the section entitled "Deriving Orthometric Heights From GPS", later in this document. Users should be aware that GPS ellipsoid height error, by itself, can be significantly greater than error in geoid height differences.

States with Sparse GPS Benchmark Coverage

As of the date of computation of GEOID96, the states with sparse GPS benchmark coverage are: Arkansas, Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, North Dakota, South Dakota, and West Virginia. This does not mean that the GEOID96 model can not be used in these states. It does mean that users may not see the same absolute accuracy when compared to other parts of the United States with denser GPS benchmark coverage. As stated above, relative accuracy may reach 1-2 PPM. Even so, the major components of the datum relationships between NAD 83 and NAVD 88 in all of the lower 48 states have been incorporated into the GEOID96 geoid model. As a rule, one can expect better

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results with GEOID96, relative to GEOID93, in any part of the United States.

Alaska, Hawaii, Puerto Rico and the Virgin Islands

It must be emphasized that the GEOID96 models in Alaska, Hawaii, Puerto Rico, and the Virgin Islands were NOT, repeat, NOT computed by incorporating a conversion surface based on GPS benchmarks. This was due to a shortage of reliable NAD 83 GPS ellipsoidal heights on NAVD 88 benchmarks in these regions. The GEOID96 geoid models provided in these areas are relative to a geocentric, GRS80 ellipsoid, as were earlier GEOID93 and GEOID90 models. For this reason, users should refer to the section entitled "Deriving Orthometric Heights From GPS", later in this document.

Due to poorer data coverage, error estimates for GEOID96 in these regions are larger. Long-wavelength errors may be as large as 4-5 parts-per-million in some areas. Particular care must be used in computing heights in the tectonically active areas in southern Alaska. Crustal motion may exceed 1 meter even after accounting for the shift of the 1964 Prince William Sound Earthquake.

The National Imagery and Mapping Agency

The National Imagery and Mapping Agency (NIMA), which incorporates the former Defense Mapping Agency (DMA), has been of immense help in this endeavor. NIMA has provided a major portion of the NGS land gravity data set. NIMA has also been instrumental in the creation of the various 30" and 3" elevation grids in existence. And, NIMA was a partner in the joint project to compute the new global geopotential model, EGM96. Although the work of the NIMA generally precludes public recognition, their cooperation is gratefully acknowledged.

GSFC/NIMA Geopotential Model, EGM96

The Goddard Space Flight Center (GSFC) and the National Imagery and Mapping Agency (NIMA) have been engaged in a joint project to compute an improved global spherical harmonic model of the Earth's geopotential. This model incorporates the latest satellite tracking data, as well as altimeter data from TOPEX/Poseidon, ERS-1, and the Geosat Geodetic Mission. EGM96 also incorporates new surface and marine gravity data covering the globe, including the former Soviet Union.

EGM96 is a global geopotential model expressed as spherical harmonic

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coefficients complete to degree and order 360. Therefore, the shortest wavelength this model can exhibit is one degree, and its resolution is one-half degree (about 50 km). Although this model does not reproduce geoid structure at very fine resolution, it is global. We thank the many members of the project team for making this model available.

Deriving Orthometric Heights From GPS

One key problem is deciding which orthometric height datum to use. NGVD 29 is not a sea-level datum, and the heights are not true orthometric heights. The datum of NAVD 88 is selected to maintain reasonable conformance with existing height datums, and its Helmert heights are good approximations of true orthometric heights. And, while differential ellipsoidal heights obtained from GPS are precise, they are often expressed in the NAD 83 datum, which is not exactly geocentric. In addition, GEOID96 rests upon an underlying EGM96 global geopotential model, and EGM96 does possess some error of commission.

This leads to a warning:
Do not expect the difference of a GPS ellipsoidal height at a point and the associated GEOID96 height to exactly match the vertical datum you need. The results will be close when converting NAD 83 GPS ellipsoidal heights into NAVD 88 elevations; but, maybe not accurate enough for your requirement.

However, one can combine the precision of differential carrier phase GPS with the precision of GEOID96 height differences, to approach that of leveling.

Include at least one existing benchmark in your GPS survey (preferably many benchmarks). The difference between the published elevation(s) and the height obtained from differencing your adopted GPS ellipsoidal height and the GEOID96 model, could be considered a "local orthometric height datum correction." If you are surveying an extensive area (100+ km), and you occupy a lot of benchmarks, then you might detect a trend in the corrections up to a one part-per-million level. This may be error in the GEOID96 model.

We do not currently consider geoid-corrected GPS orthometric heights as a substitute for geodetic leveling in meeting the Federal Geodetic Control Subcommittee(FGCS) standards for vertical control networks. Studies are underway, and many less stringent requirements can be satisfied by geoid modeling. Widespread success has been achieved with the preceding models, GEOID93 and GEOID90.

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Future Plans

A research effort is underway to improve geoid height estimates in the future, perhaps at the 1-cm accuracy level. One important direction is integrating gravity data with GPS and geodetic leveling measurements, and the study of error in GPS ellipsoid heights and in the NAVD88 vertical datum. It is likely that this research, in conjunction with the completion of the state upgrade GPS surveys, will yield a significant improvement to our geoid model in 1999.

For More Information

For Products Available From the National Geodetic Survey:

Information Services Branch
National Geodetic Survey, NOAA, N/NGS12
1315 East-West Highway, SSMC3, Station 9202
Silver Spring, MD 20910-3282
301-713-3242 fax: 301-713-4172

For Information on GEOID96 and Future Research:

Dr. Dennis G. Milbert
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Silver Spring, MD 20910-3282
301-713-3202
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Dr. Dru A. Smith
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For Information on GEOID96 and Future Research:

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Visit our web site:
http://www.ngs.noaa.gov/GEOID/geoid.html

Best Wishes!

README file 9-oct-96 dgm/das

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The following is an excerpt from the VERTCON, Version 2.00, README file.

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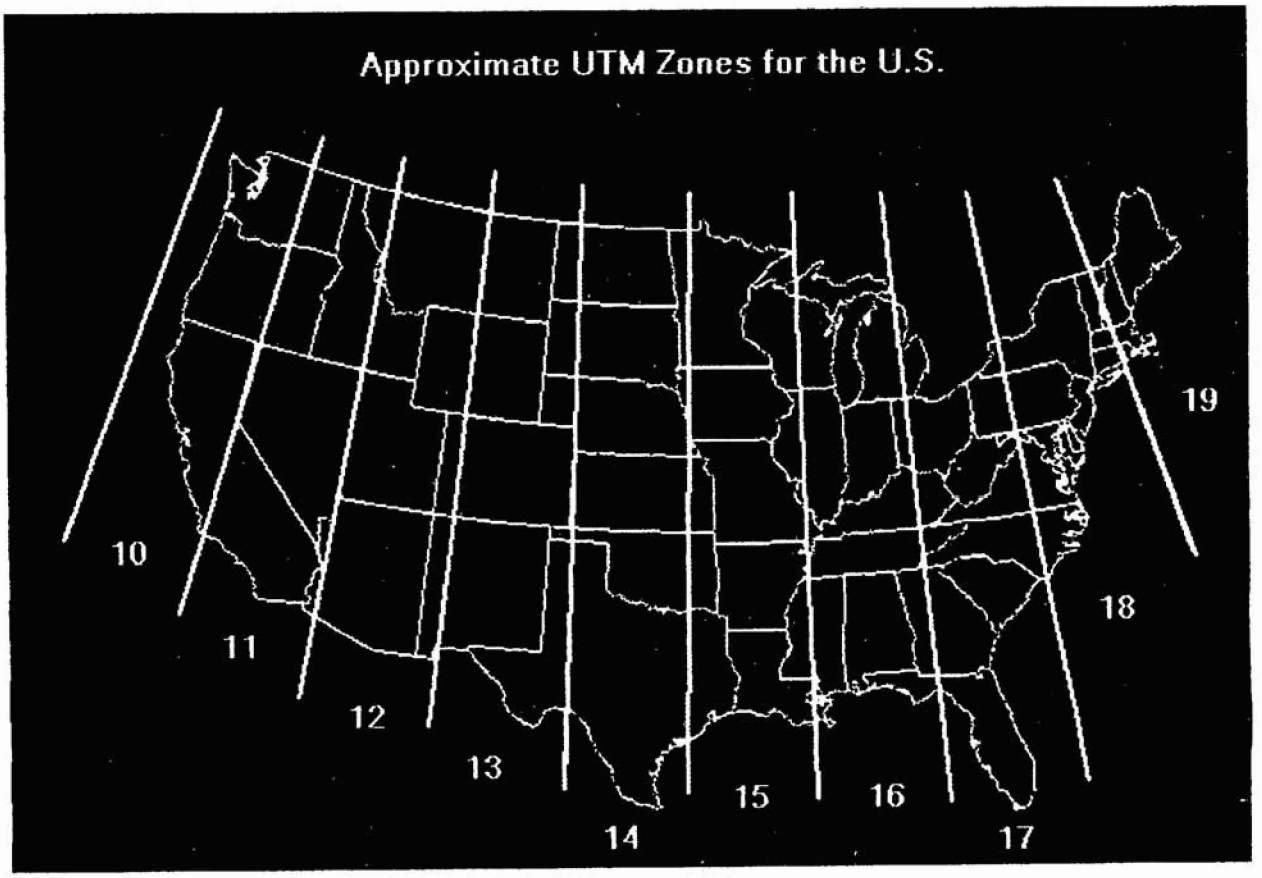
UTM zones occur at every 6° of longitude. Below are the boundaries of UTM zones for the U.S. and a diagram with the approximate boundaries for the continental U.S.

LONGITUDE					ZONE
72	W	to	66	W	19
78	W	to	72	W	18
84	W	to	78	W	17
90	W	to	84	W	16
96	W	to	90	W	15
102	W	to	96	W	14
108	W	to	102	W	13
114	W	to	108	W	12
120	W	to	114	W	11
126	W	to	120	W	10
132	W	to	126	W	9
138	W	to	132	W	8
144	W	to	138	W	7
150	W	to	144	W	6
156	W	to	150	W	5
162	W	to	156	W	4
168	W	to	162	W	3



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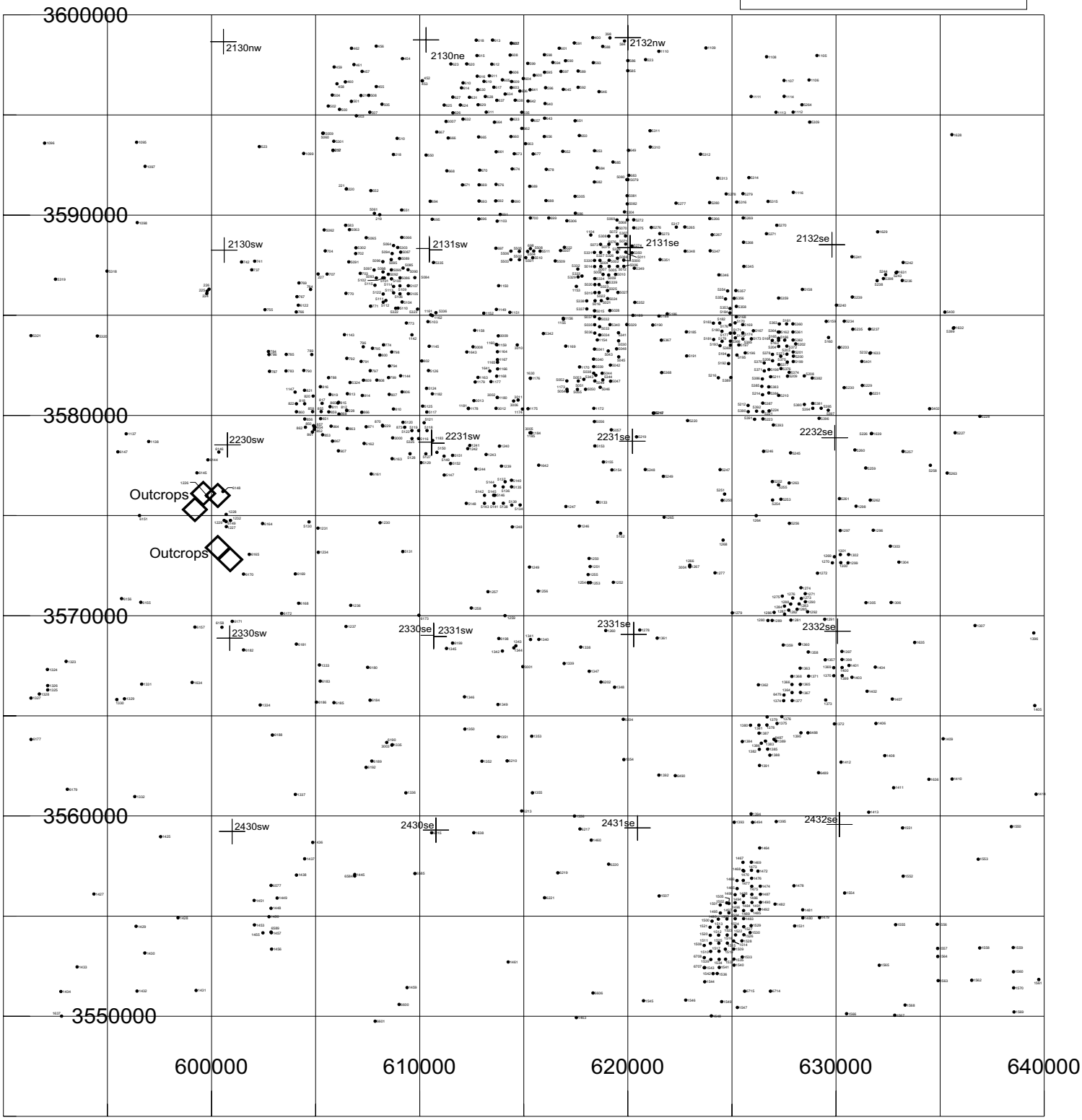
Culebra T Field Data
Drillhole ID Numbers

Prepared by Dennis W. Powers, Ph.D., Consulting Geologist
for Task 1, AP-088
Location and other data for drillholes are available in Source Tables A and B included in the analysis report.
April 2002



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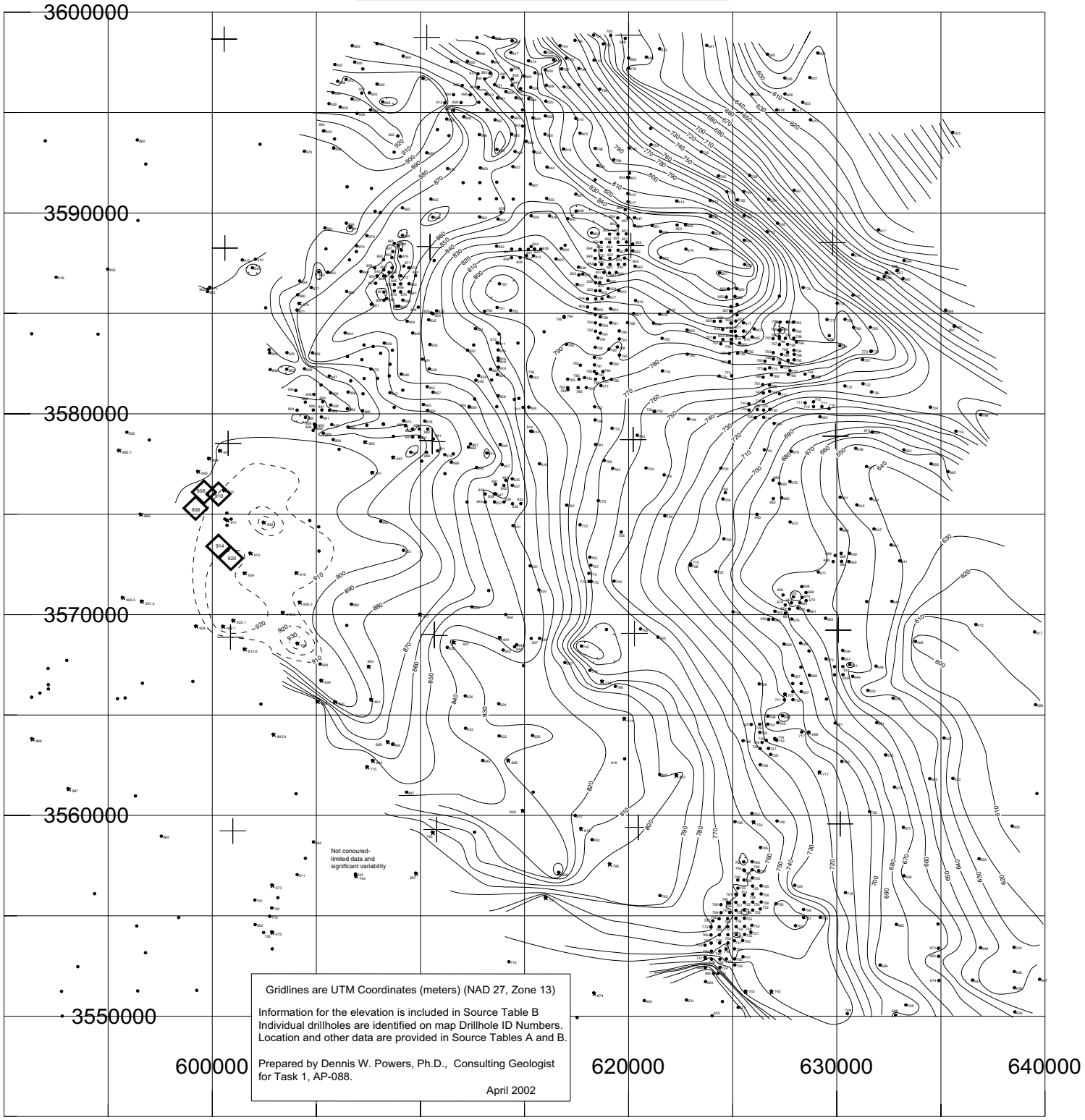
Culebra T Field Data
Elevation of Top of Culebra (m amsl)



Gridlines are UTM Coordinates (meters) (NAD 27, Zone 13)

Information for the elevation is included in Source Table B
Individual drillholes are identified on map Drillhole ID Numbers.
Location and other data are provided in Source Tables A and B.

Prepared by Dennis W. Powers, Ph.D., Consulting Geologist
for Task 1, AP-088.

April 2002

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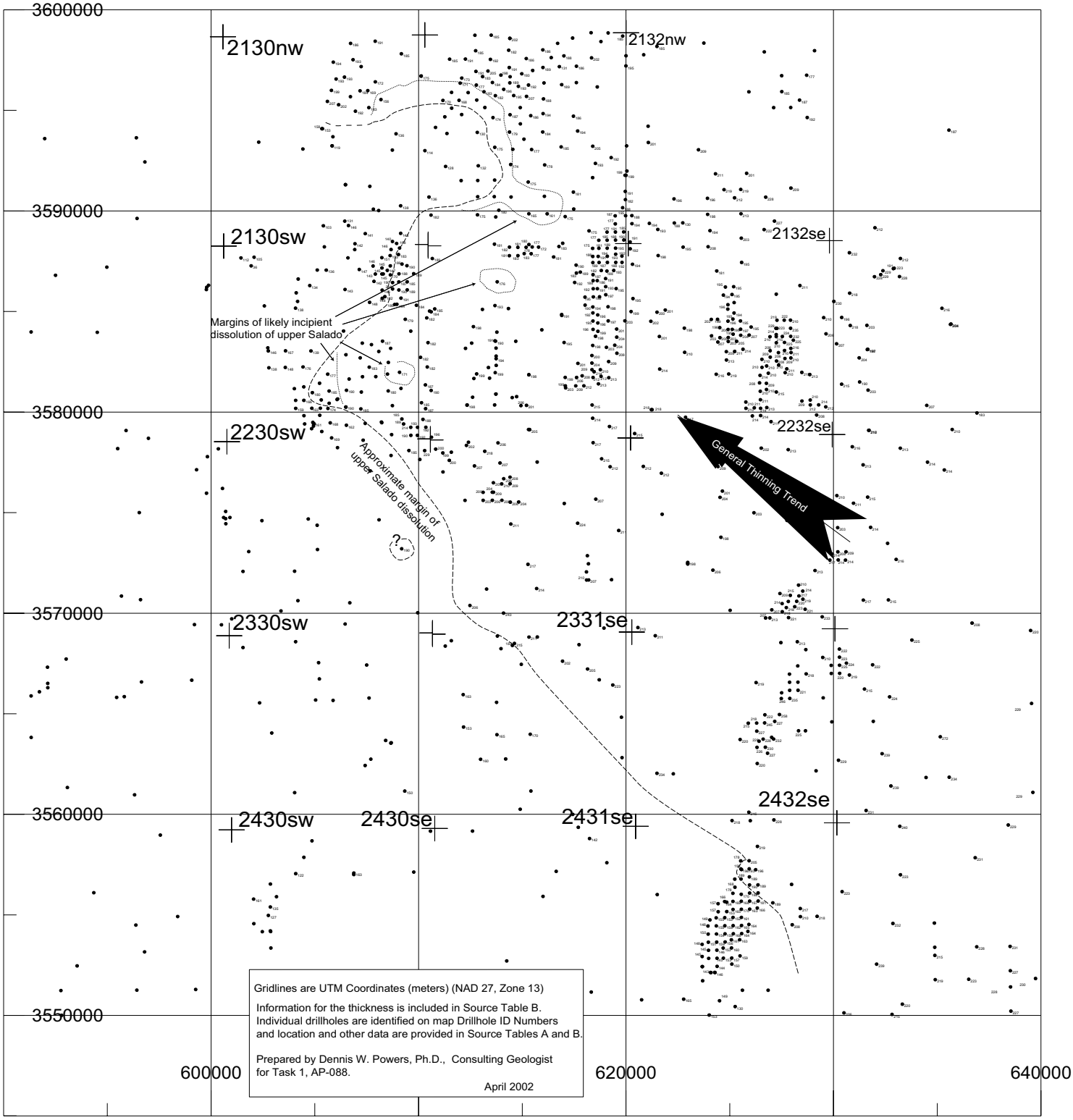
Culebra T Field Data

Thickness from
Top of Culebra to Base of Vaca Triste (m)
Used to assist in estimating boundary of Salado dissolution



Gridlines are UTM Coordinates (meters) (NAD 27, Zone 13)

Information for the thickness is included in Source Table B.
Individual drillholes are identified on map Drillhole ID Numbers and location and other data are provided in Source Tables A and B.

Prepared by Dennis W. Powers, Ph.D., Consulting Geologist for Task 1, AP-088.

April 2002

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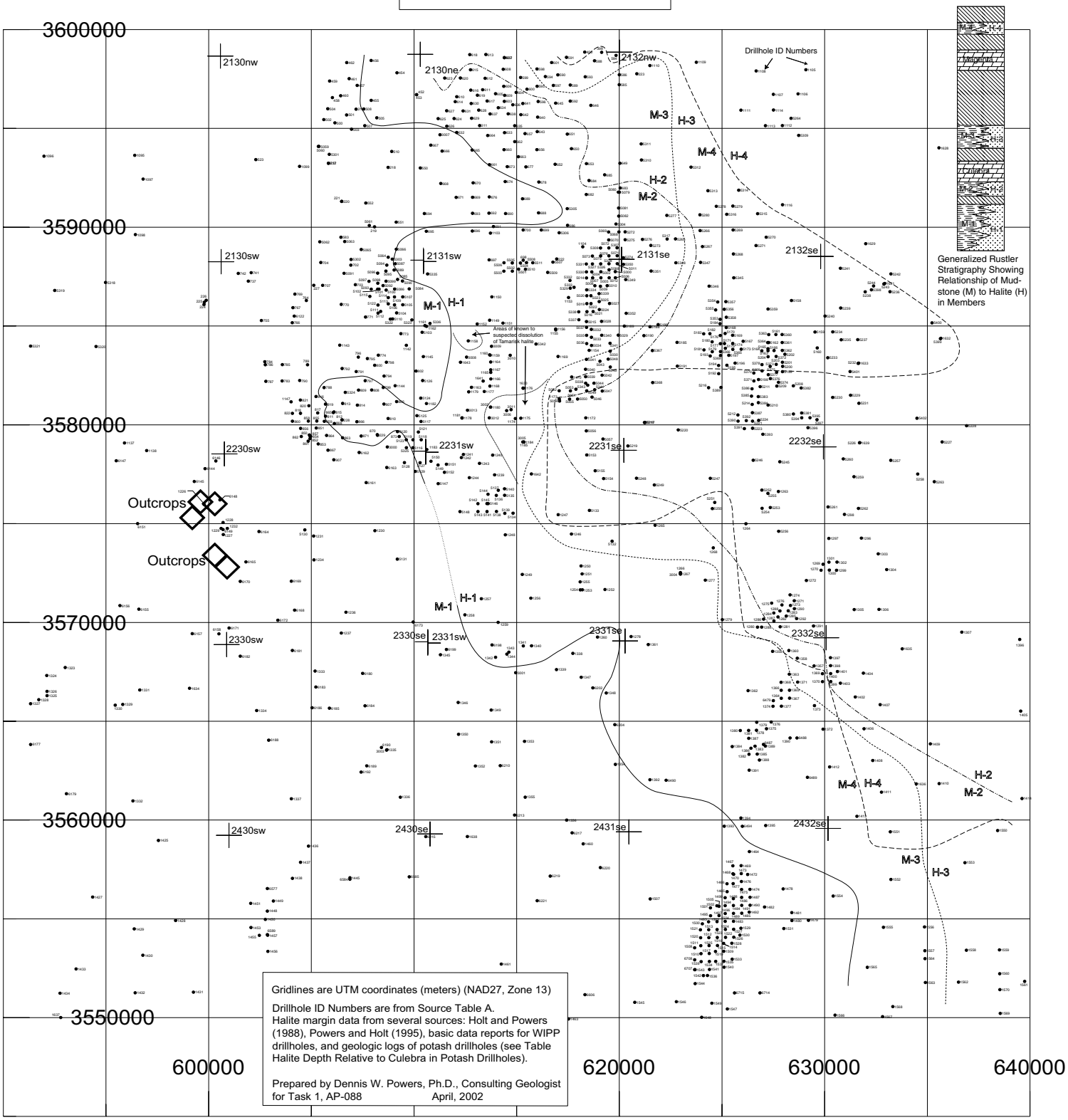
Culebra T Field Data
Rustler Halite Margins



Gridlines are UTM coordinates (meters) (NAD27, Zone 13)

Drillhole ID Numbers are from Source Table A.
Halite margin data from several sources: Holt and Powers (1988), Powers and Holt (1995), basic data reports for WIPP drillholes, and geologic logs of potash drillholes (see Table Halite Depth Relative to Culebra in Potash Drillholes).

Prepared by Dennis W. Powers, Ph.D., Consulting Geologist for Task 1, AP-088 April, 2002

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