

EMSU #246
Eunice Monument Grayburg / San Andres Field
Lea County, New Mexico
June 7, 1996

Workover Procedure - Acidize Stimulate

Charge to: PU765700 Line 19 WS

1. MIRU PU. POH w/ rods & pump. Install BOP. GIH, tag for fill & POH w/ prod. tbg.
2. If significant fill is indicated on TD check (i.e., above 3936 +/-), RU Rev Unit. GIH w/ bit, DC's, etc. on tbg. C/O to +/- 3976'. (Catch samples and analyze for composition) RD Rev Unit. POH w/ tbg, DC's & bit.
3. GIH w/ seating nipple, trtg pkr & tubing unloader on tbg. Set pkr @ 3700' +/- . Drop standing valve and seat in SN. RU BJ Services. Pick up on tubing to set tbg unloader in circ. position. Pickle tubing with 300 gals 15% NEA acid*. Flush to bottom of tbg w/ water. Pump pickle acid at approximately 1/2 BPM. Load backside and circulate pickle acid out of tbg (at 1/2 BPM when catch pressure on backside). Repickle tubing if iron counts are above +/- 2000 ppm on "last in" acid. Slack off on tbg to set tbg unloader in closed position. Fish standing valve. Acidize OH (3752' - 3976') w/ 7500 gal Resisol II+ [viscosified aromatic solvent (20% by vol.) and acid (80% by vol.)] in 6 stages at rate of 3-4 BPM and max. trtg press of 1250 psig STP, while monitoring backside, as follows:
 - A. Pump 1250 gal Resisol II+**.
 - B. Drop 500# Trimix salt in 10 bbls. gelled Brine water***
 - C. Repeat step A & B four times. Vary block size depending on response encountered in previous salt block.
 - D. Pump 1250 gal Resisol II+**.
 - E. Flush to top perf / open hole with water.***
4. RD Trtg Co. Shut well in a minimum of minimum of 3 hours after treatment.
5. Flow/swab back acid residue until well cleans up. POH w/ pkr & tbg.
6. GIH w/ prod tbg. ND BOP. GIH w/ pump & rods. Hang well on. RD PU.
7. Test well & report results to Midland office.

* Pickle acid to contain: 1 gal / 1000 gallons CI-23 Corrosion Inhibitor & 300 gallons 15% HCL

** BJ's Resisol II+ -- Iron control system to follow tapered concentration as follows:

LEAD 2000 = 3 gal/1000 FE270 & 1 gal/1000 FE271

MID 2000 = 1.5 gal / 1000 FE270 & 1 gal/1000 FE271

TAIL 3500 = 0.5 gal/1000 FE270 & 1 gal/1000 FE271

***Also, All flush water and diverter GBW stages to contain appropriate de-emulsifiers (NE agents)

Prepared by: Jimmy Dolan Petroleum Engineer

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DATE	OIL VOLUME PRODUCED bbls	FORECASTED OIL VOLUME bbls	GAS VOLUME PRODUCED Mscf	FORECASTED GAS VOLUME Mscf
9501	3878.0	0.00	724	0.00
9502	3597.0	0.00	682	0.00
9503	4076.0	0.00	810	0.00
9504	3802.0	0.00	705	0.00
9505	3940.0	0.00	640	0.00
9506	3752.0	0.00	642	0.00
9507	3719.0	0.00	711	0.00
9508	3675.0	0.00	712	0.00
9509	3531.0	0.00	634	0.00
9510	3516.0	0.00	530	0.00
9511	3167.0	0.00	527	0.00
9512	3111.0	0.00	590	0.00
9601	3163.0	0.00	349	0.00
9602	2968.0	0.00	140	0.00
9603	3213.0	0.00	248	0.00
9604	3052.0	2969.28	291	435.48
9605	2924.0	3054.40	439	444.21
9606	2780.0	2942.52	422	424.35
9607	2889.0	3026.90	420	432.86
9608	3031.0	3013.26	715	427.29
9609	3185.0	2902.85	688	408.19
9610	3234.0	2986.12	754	416.38
9611	3082.0	2876.74	813	397.76
9612	3046.0	2959.20	900	405.73
9701	2934.0	2945.81	779	400.52
9702	2729.0	2648.74	470	357.11
9703	2975.0	2919.31	646	390.29
9704	3021.0	2812.44	653	372.84
9705	2923.0	2893.01	678	380.31
9706	3141.0	2787.04	0	363.31
9707	0.0	2866.97	0	370.60
9708	0.0	2854.01	0	365.83
9709	0.0	2749.49	0	349.48
9710	0.0	2828.34	0	356.49
9711	0.0	2724.70	0	340.55
9712	0.0	2802.82	0	347.38
9801	0.0	2790.22	0	342.91
9802	0.0	2508.77	0	305.74
9803	0.0	2765.07	0	334.15
9804	0.0	2663.79	0	319.21
9805	0.0	2740.14	0	325.61
9806	0.0	2639.80	0	311.06
9807	0.0	2715.46	0	317.29
9808	0.0	2703.23	0	313.21
9809	0.0	2604.24	0	299.21
9810	0.0	2678.86	0	305.21
9811	0.0	2580.76	0	291.57
9812	0.0	2654.71	0	297.41
9901	0.0	2642.79	0	293.59
9902	0.0	2376.22	0	261.77

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9903	0.0	2618.95	0	286.09
9904	0.0	2523.03	0	273.30
9905	0.0	2595.37	0	278.78
9906	0.0	2500.31	0	266.31
9907	0.0	2572.00	0	271.66
9908	0.0	2560.39	0	268.16
9909	0.0	2466.62	0	256.18
9910	0.0	2537.34	0	261.31
9911	0.0	2444.41	0	249.63
9912	0.0	2514.44	0	254.63
10001	0.0	2503.14	0	251.36
10002	0.0	2331.04	0	232.12
10003	0.0	2480.61	0	244.94
10004	0.0	2389.71	0	233.99
10005	0.0	2458.23	0	238.68
10006	0.0	2368.21	0	228.01
10007	0.0	2436.07	0	232.58
10008	0.0	2425.09	0	229.59
10009	0.0	2336.28	0	219.33
10010	0.0	2403.29	0	223.73
10011	0.0	2315.24	0	213.72
10012	0.0	2381.59	0	218.01
10101	0.0	2370.87	0	215.21
10102	0.0	2131.75	0	191.88
10103	0.0	2349.49	0	209.71
10104	0.0	2263.48	0	200.33
10105	0.0	2328.37	0	204.35
10106	0.0	2243.04	0	195.22
10107	0.0	2307.40	0	199.13
10108	0.0	2296.94	0	196.57
10109	0.0	2212.83	0	187.78
10110	0.0	2276.29	0	191.55
10111	0.0	2192.90	0	182.98
10112	0.0	2255.75	0	186.65
10201	0.0	2245.60	0	184.25
10202	0.0	2019.13	0	164.28
10203	0.0	2225.37	0	179.55
10204	0.0	2143.82	0	171.52
10205	0.0	2205.35	0	174.96
10206	0.0	2124.54	0	167.14
10207	0.0	2185.43	0	170.49
10208	0.0	2175.60	0	168.29
10209	0.0	2095.91	0	160.77
10210	0.0	2155.99	0	163.99
10211	0.0	2077.03	0	156.67
10212	0.0	2136.60	0	159.81
10301	0.0	2126.92	0	157.75
10302	0.0	1912.45	0	140.65
10303	0.0	2107.79	0	153.72
10304	0.0	2030.59	0	146.85

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10305	0.0	2088.76	0	149.79
10306	0.0	2012.32	0	143.10
10307	0.0	2069.94	0	145.97
10308	0.0	2060.68	0	144.09
10309	0.0	1985.15	0	137.65
10310	0.0	2042.07	0	140.41
10311	0.0	1967.29	0	134.13
10312	0.0	2023.67	0	136.82
10401	0.0	2014.57	0	135.06
10402	0.0	1876.09	0	124.72
10403	0.0	1996.38	0	131.61
10404	0.0	1923.30	0	125.73
10405	0.0	1978.42	0	128.25
10406	0.0	1905.97	0	122.51
10407	0.0	1960.59	0	124.97
10408	0.0	1951.75	0	123.36
10409	0.0	1880.29	0	117.85
10410	0.0	1934.16	0	120.21
10411	0.0	1863.34	0	114.84
10412	0.0	1916.75	0	117.14
10501	0.0	1908.10	0	115.63
10502	0.0	1715.68	0	103.10
10503	0.0	1890.92	0	112.68
10504	0.0	1821.65	0	107.64
10505	0.0	1873.91	0	109.80
10506	0.0	1805.26	0	104.89
10507	0.0	1856.99	0	107.00
10508	0.0	1848.63	0	105.62
10509	0.0	1780.93	0	100.90
10510	0.0	1831.98	0	102.92
10511	0.0	1764.89	0	98.32
10512	0.0	1815.48	0	100.29
10601	0.0	1807.27	0	99.00
10602	0.0	1625.03	0	88.27
10603	0.0	1791.01	0	96.47
10604	0.0	1725.40	0	92.16
10605	0.0	1774.89	0	94.01
10606	0.0	1709.86	0	89.81
10607	0.0	1758.89	0	91.61
10608	0.0	1750.97	0	90.43
10609	0.0	1686.82	0	86.39
10610	0.0	1735.18	0	88.12
10611	0.0	1671.61	0	84.18
10612	0.0	1719.57	0	85.87
10701	0.0	1711.78	0	84.76
10702	0.0	1539.16	0	75.58
10703	0.0	1696.36	0	82.60
10704	0.0	1634.25	0	78.90
10705	0.0	1681.09	0	80.49
10706	0.0	1619.53	0	76.89

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10707	0.0	1665.96	0	78.43
10708	0.0	1658.43	0	77.42
10709	0.0	1597.70	0	73.96
10710	0.0	1643.50	0	75.44
10711	0.0	1583.30	0	72.07
10712	0.0	1628.71	0	73.52
10801	0.0	1621.33	0	72.57
10802	0.0	1509.88	0	67.02
10803	0.0	1606.75	0	70.72
10804	0.0	1547.88	0	67.56
10805	0.0	1592.29	0	68.91
10806	0.0	1533.95	0	65.83
10807	0.0	1577.91	0	67.15
10808	0.0	1570.80	0	66.29
10809	0.0	1513.28	0	63.32
10810	0.0	1556.66	0	64.59
10811	0.0	1499.64	0	61.70
10812	0.0	1542.65	0	62.94
10901	0.0	1535.67	0	62.13
10902	0.0	1380.80	0	55.40
10903	0.0	1521.84	0	60.55
10904	0.0	1466.10	0	57.84
10905	0.0	1508.14	0	59.00
10906	0.0	1452.89	0	56.36
10907	0.0	1494.55	0	57.49
10908	0.0	1487.81	0	56.75
10909	0.0	1433.31	0	54.21
10910	0.0	1474.42	0	55.30
10911	0.0	1420.38	0	52.83
10912	0.0	1461.14	0	53.89
11001	0.0	1454.53	0	53.20
11002	0.0	1307.84	0	47.43
11003	0.0	1441.43	0	51.84
11004	0.0	1388.64	0	49.52
11005	0.0	1428.44	0	50.51
11006	0.0	1376.14	0	48.25
11007	0.0	1415.58	0	49.22
11008	0.0	1409.20	0	48.59
11009	0.0	1357.57	0	46.42
11010	0.0	1396.50	0	47.35
11011	0.0	1345.35	0	45.23
11012	0.0	1383.92	0	46.14
11101	0.0	1377.70	0	45.54
11102	0.0	1238.73	0	40.61
11103	0.0	1365.26	0	44.38
11104	0.0	1315.27	0	42.40
11105	0.0	1352.97	0	43.25
11106	0.0	1303.41	0	41.31
11107	0.0	1340.79	0	42.14
11108	0.0	1334.73	0	41.60

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11109	0.0	1285.85	0	39.74
11110	0.0	1322.73	0	40.54
11111	0.0	1274.27	0	38.73
11112	0.0	1310.78	0	39.50
11201	0.0	1304.90	0	38.99
11202	0.0	1215.19	0	36.01
11203	0.0	1293.14	0	38.00
11204	0.0	1245.75	0	36.30
11205	0.0	1281.48	0	37.03
11206	0.0	1234.55	0	35.37
11207	0.0	1269.95	0	36.08
11208	0.0	1264.22	0	35.62
11209	0.0	1217.90	0	34.02
11210	0.0	1252.83	0	34.71
11211	0.0	1206.92	0	33.16
11212	0.0	1241.53	0	33.82
11301	0.0	1235.94	0	33.38
11302	0.0	1111.30	0	29.77
11303	0.0	1224.80	0	32.53
11304	0.0	1179.93	0	31.08
11305	0.0	1213.77	0	31.70
11306	0.0	1169.33	0	30.28
11307	0.0	1202.82	0	30.89
11308	0.0	1197.41	0	30.49
11309	0.0	1153.57	0	29.13
11310	0.0	1186.61	0	29.71
11311	0.0	1143.17	0	28.39
11312	0.0	1175.95	0	28.96
11401	0.0	1170.61	0	28.58
11402	0.0	1052.58	0	25.48
11403	0.0	1160.08	0	27.85
11404	0.0	1117.60	0	26.61
11405	0.0	1149.65	0	27.14
11406	0.0	1107.53	0	25.93
11407	0.0	1139.27	0	26.45
11408	0.0	1134.15	0	26.11
11409	0.0	1092.60	0	24.94
11410	0.0	1123.93	0	25.44
11411	0.0	1082.76	0	24.30
11412	0.0	1113.81	0	24.79
11501	0.0	1108.76	0	24.47
11502	0.0	996.95	0	21.82
11503	0.0	1098.80	0	23.85
11504	0.0	1058.55	0	22.78
11505	0.0	1088.87	0	23.24
11506	0.0	1049.02	0	22.20
11507	0.0	1079.09	0	22.64
11508	0.0	1074.21	0	22.35
11509	0.0	1034.87	0	21.35
11510	0.0	1064.53	0	21.78

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11511	0.0	1025.56	0	20.81
11512	0.0	1054.94	0	21.22
11601	0.0	0.00	0	0.00
11602	0.0	0.00	0	0.00
11603	0.0	0.00	0	0.00
11604	0.0	0.00	0	0.00
11605	0.0	0.00	0	0.00
11606	0.0	0.00	0	0.00
11607	0.0	0.00	0	0.00
11608	0.0	0.00	0	0.00
11609	0.0	0.00	0	0.00
11610	0.0	0.00	0	0.00
11611	0.0	0.00	0	0.00
11612	0.0	0.00	0	0.00
11701	0.0	0.00	0	0.00