VII. APPENDIX

TABULATION OF DETAILED DATA

	15A	15B	15C	15D	15E	15F	15G	15H	15I
OIL LAYER									
Neut. No	21.8	25.2	27.6	29.4	30.9	32.5	37.0	40.3	43.5
Sap. No	24.8	27.9	29.8	33.2	33.3	36.5	40.4	43.1	46.4
Hydroxyl No	34.5	44.5	46.0	46.5	48.0	50.5	49.0	45.0	47.5
Weight %									
HAC	2.33	2.70	2.95	3.15	3.31	3.48	3.96	4.31	4.66
Et Ac	0.47	0.42	0.35	0.60	0.38	0.63	0.53	0.44	0.46
Alcohols	3.82	4.93	5.11	5.16	5.32	5.61	5.43	5.00	5.27
Total	6.62	8.05	8.41	8.91	9.01	9.72	9.92	9.75	10.39
#/hr oil layer	31.00	37.68	29.03	34.76	26.91	20.51	27.88	25.03	20.04
HAC	0.722	1.017	0.856	1.095	0.891	0.714	1.104	1.079	0.934
Et. Ac	0.146	0.158	0.101	0.208	0.102	0.129	0.148	0.110	0.092
Alcohols	1.184	1.858	1.484	1.794	1.432	1.151	1.514	1.251	1.056
Totals	2.052	3.033	2.441	3.097	2.425	1.994	2.766	2.440	2.082
MCFH H_2+CO	6.142	6.556	5.629	5.788	5.539	5.933	5.969	6.217	6.016
#/MCF									
HAC	0.117	0.156	0.152	0.189	0.161	0.120	0.185	0.174	0.155
Et. Ac	0.024	0.024	0.018	0.036	0.018	0.022	0.025	0.018	0.015
Alcohols	0.192	0.283	0.264	0.310	0.259	0.194	0.254	0.201	0.176
Total	0.334	0.463	0.434	0.535	0.438	0.336	0.464	0.393	0.346

TABULATION OF DETAILED DATA

	15A	15B	15C	15D	15E	15F	15G	15H	15I
WATER LAYER									
Neut. No	27.0	31.6	33.9	36.7	40.2	45.6	47.1	50.0	56.3
Sap. No	27.3	32.2	34.2	37.3	40.7	46.2	47.8	51.8	57.2
Azeo at 95°C	5.9	9.9	10.9	10.3	10.3	10.3	10.9	10.2	9.9
Weight %									
HAC	2.89	3.38	3.63	3.93	4.30	4.88	5.04	5.35	6.03
Et Ac	.05	.09	.05	.09	.08	.09	..11	.28	.17
Alcohols	5.31	8.91	9.81	9.27	9.27	9.27	9.81	9.18	8.91
Total	8.25	12.38	13.49	13.29	13.65	14.24	14.96	14.81	15.11
#/hr water layer	78.39	82.82	73.54	64.92	59.96	54.83	45.72	29.15	37.01
HAC	2.265	2.799	2.670	2.552	2.578	2.676	2.304	1.560	2.232
Et Ac	0.039	0.075	0.037	0.058	0.048	0.049	0.050	0.082	0.063
Alcohols	4.163	7.379	7.214	6.018	5.558	5.412	4.485	2.676	3.298
Total	6.467	10.253	9.921	8.628	8.184	8.137	6.839	4.318	5.593
#/MCF HAC	0.369	0.427	0.474	0.441	0.465	0.451	0.386	0.251	0.371
Et Ac	0.006	0.011	0.007	0.010	0.009	0.008	0.008	0.013	0.010
Alcohols	0.678	1.126	1.282	10.40	1.003	0.912	0.751	0.430	0.548
Total	1.053	1.564	1.763	1.491	1.477	1.371	1.145	0.694	0.929
Combined Product - #/MCF H_2+CO fed to Reactor									
HAC	0.486	0.583	0.626	0.630	0.626	0.571	0.571	0.425	0.526
Et Ac	0.030	0.035	0.025	0.046	0.027	0.030	0.033	0.031	0.025
Alcohols	0.871	1.409	1.546	1.350	1.262	1.106	1.005	0.631	0.724
Total	1.387	2.027	2.197	2.026	1.915	1.707	1.609	1.083	1.275
Wt.% of total in water layer	75.9	77.2	80.2	73.6	77.1	80.3	71.2	63.8	72.9
Alc/Ac.	1.79	2.417	2.470	2.143	2.016	1.927	1.760	1.485	1.376
Contraction, %	70.1	75.5	71.4	66.8	62.8	58.5	54.6	49.1	47.2

TABULATION OF DETAILED DATA

	15A		15B		15C		15D	
Lbs/hr								
HAC	0.486		0.583		0.626		0.630	
CH_3OH	0.669		1.1565		1.089		0.978	
C_2H_5OH	2.478		4.281		4.032		3.621	
C_3H_7OH	0.776		1.340		1.262		1.134	
C_4H_9OH	0.355		0.613		0.577		0.518	
Mols/hr	CF.	Effl.	CF.	Effl.	CF.	Effl.	CF.	Effl.	CF.
HAC		.00810		.00972		.01043		.01050	
CH_3OH		.0209		.0361		.0340		.0306	
C_2H_5OH		.0539		.0930		.0876		.0787	
C_3H_7OH		.0129		.0223		.0210		.0189	
C_4H_9OH		.0048		.00828		.0078		.0070	
C_2H_4	.745	.872	2.074	2.393	1.846	2.127	2.129	2.540	1.503
C_3H_6	.665	.779	.912	1.652	.770	.887	.836	.998	.473
C_4H_8	.482	.564	.605	.699	.549	.633	.347	.414	.435
H_2O		3.766		4.432		3.155		2.989	
CO_2	9.286	10.357	8.857	9.674	9.242	10.225	7.590	8.644	8.302
CO	8.281	3.027	6.341	0.395	6.228	0.786	6.414	1.162	6.765
Total	50.435	41.654	48.971	39.511	45.911	37.949	44.617	36.898	48.016

(Tabulation continued on next page)

TABULATION OF DETAILED (Continuation)

	15E		15F		15G		15H		15I	
Lbs/hr										
HAC	0.626		0.571		0.571		0.425		0.526	
CH_3OH	0.875		0.822		0.751		0.492		0.545	
C_2H_5OH	3.240		3.042		2.780		1.820		2.018	
C_3H_7OH	1.014		0.948		0.870		0.570		0.630	
C_4H_9OH	0.463		0.435		0.398		0.260		0.289	
Mols/hr	Effl.	CF.	Effl.	CF.	Effl.	CF.	Effl.	CF.	Effl.	
HAC	.01043		.00952		.00952		.00708		.00877	
CH_3OH	.0273		.0257		.0235		.0154		.0170	
C_2H_5OH	.0704		.0661		.0604		.0396		.0439	
C_3H_7OH	.0169		.0158		.0145		.0095		.0105	
C_4H_9OH	.00626		.00588		.00538		.00351		.00390	
C_2H_4	1.783	.660	.988	.359	.443	.545	.696	1.051	1.342	
C_3H_6	.562	.434	.538	.890	1.099	.426	.544	.405	.517	
C_4H_8	.517	.389	.485	.359	.443	.394	.503	.296	.378	
H_2O	2.648		2.451		2.009		1.802		1.673	
CO_2	9.413	8.268	9.647	8.238	9.715	8.134	9.893	7.563	9.208	
CO	1.726	7.532	2.191	7.981	2.696	8.683	3.201	8.866	3.647	
Total	40.811	48.721	41.499	49.367	42.464	49.815	43.140	49.023	42.908	

TABULATION OF DETAILED DATA

	15A	15B	15C	15D	15E	15F	15G	15H	15I	Total
Measured oil	31.00	37.68	29.03	34.76	26.91	20.51	27.88	25.03	20.04	252.84
Less H_2O in oil										
56% HAC	.404	.570	.479	.613	.499	.400	.618	.604	.523	
46% H_2O	.067	.073	.046	.096	.047	.059	.068	.051	.042	
34% Alc.	.403	.632	.505	.610	.487	.391	.515	.425	.359	
	.874	1.275	1.030	1.319	1.033	.850	1.201	1.080	.924	9.586
Net Oil	30.126	36.405	28.000	33.441	25.877	19.660	26.679	23.950	19.116	
Plus Oil in H_2O										
44% HAC	0.997	1.232	1.175	1.123	1.134	1.177	1.014	.686	.982	
54% Et Ac.	.021	.040	.020	.031	.026	.026	.027	.044	.034	
66% Alc.	2.748	4.870	4.761	3.972	3.668	3.572	2.960	1.766	2.177	
	3.766	6.142	5.956	5.126	4.828	4.775	4.001	2.496	3.193	40.283
Total Oil	33.892	42.547	33.956	38.567	30.705	24.435	30.680	26.446	22.309	283.51
Calc.	39.19	48.40	36.44	32.65	31.51	24.29	26.85	19.03	26.03	284.69
Measured H_2O	78.39	82.82	73.54	64.92	59.96	54.83	45.72	29.15	37.01	526.34
Less Oil to Oil	3.766	6.142	5.956	5.126	4.828	4.775	4.001	2.496	3.193	40.283
Plus H_2O from Oil	.874	1.275	1.030	1.319	1.033	.850	1.201	1.080	.924	9.586
Net Loss	2.892	4.867	4.926	3.807	3.795	3.925	2.800	1.416	2.269	30.697
Net H_2O	75.498	77.953	68.614	61.113	50.165	50.905	42.92	27.734	34.741	495.643
Calc. H_2O	56.02	77.08	60.91	58.82	48.98	45.45	46.17	33.48	35.86	462.77
Total Oxy.-HAC	2.937	3.816	3.526	3.647	3.469	3.390	3.408	2.639	3.166	30.048
Et Ac.	.185	.233	.138	.266	.150	.178	.198	.192	.155	1.695
Alc.	5.347	9.237	8.698	7.812	6.990	6.563	5.999	3.927	4.354	58.927
	8.519	13.286	12.362	11.725	10.609	10.131	9.605	6.758	7.675	90.670
Total HC in Oxy.										
HAC	1.315	1.679	1.552	1.605	1.526	1.491	1.500	1.161	1.393	
Et Ac.	.100	.125	.075	.143	.081	.096	.107	.103	.084	
Alc.	3.529	6.096	5.740	5.156	4.613	4.332	3.959	2.592	2.874	
	4.944	7.900	7.367	6.904	6.220	5.919	5.566	3.856	4.351	
Carbon Content #/hr	4.152	6.771	6.322	5.918	5.331	5.073	4.771	3.305	3.729	
m/hr	.415	.564	.527	.493	.444	.423	.398	.275	.311	
%CO Fed	7.29	11.29	9.50	9.06	8.36	7.37	6.87	4.45	5.17	