

APPENDIX F

Fischer-Tropsch IV Product Hydrocarbon Analysis

F-T IV Light HC Product Analysis				
Sample ID (SSFI)	22.11-12	22.11-18	22.11-19	Drum
Date	4/7/1998 1:00	4/14/1998 11:00	4/15/1998 13:30	4/4/1998 8:30
Condition	16.3	16.6	16.7	16.1
Carbon No.	%w	%w	%w	%w
1	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000
3	0.307	0.316	0.330	0.330
4	2.635	2.710	2.828	2.831
5	5.717	5.880	6.136	6.142
6	7.645	7.862	8.205	8.212
7	8.082	8.312	8.675	8.683
8	8.231	8.465	8.835	8.843
9	7.868	8.092	8.445	8.453
10	7.347	7.556	7.885	7.892
11	6.688	7.154	6.895	7.134
12	6.675	6.077	6.760	7.125
13	5.529	5.426	5.470	5.846
14	4.865	4.693	4.665	5.030
15	4.260	4.073	3.956	4.301
16	3.699	3.595	3.417	3.686
17	3.237	3.135	2.914	3.129
18	2.809	2.727	2.498	2.614
19	2.408	2.570	2.320	2.179
20	2.082	1.960	1.715	1.876
21	1.901	1.667	1.409	1.386
22	1.521	1.410	1.202	1.087
23	1.287	1.162	1.025	0.816
24	1.100	0.935	0.858	0.642
25	0.921	0.727	0.701	0.465
26	0.774	0.623	0.589	0.378
27	0.732	1.114	0.795	0.375
28	0.519	0.789	0.619	0.228
29	0.433	0.264	0.265	0.115
30	0.290	0.190	0.188	0.074
31	0.196	0.140	0.131	0.044
32	0.120	0.101	0.091	0.031
33	0.064	0.073	0.061	0.022
34	0.029	0.059	0.037	0.015
35	0.015	0.039	0.025	0.005
36	0.008	0.027	0.018	0.005
37	0.004	0.017	0.010	0.004
38	0.001	0.019	0.007	0.001
39	0.000	0.011	0.005	0.000
40	0.000	0.008	0.003	0.000

F-T IV Light HC Product Analysis						
Sample ID (SSFI)	Drum Sample					
Date	4/4/1998 8:30					
Condition	16.1					
(Olefins and alcohols content per carbon number by capillary GC)						
Assumption: all unidentified GC peaks are assumed iso-paraffins						
Type	n-paraffins	iso-paraffins	1-alcohol	1 -olefin	2-olefin	total
Carbon No.	%w	%w	%w	%w	%w	%w
3	65.8	0.0	13.2	21.1	0.0	100.0
4	54.7	0.0	8.3	26.0	11.0	100.0
5	50.2	3.9	7.0	30.5	8.5	100.0
6	46.9	5.9	6.9	32.6	7.6	100.0
7	49.8	4.5	6.5	32.0	7.3	100.0
8	53.5	4.9	5.9	28.1	7.6	100.0
9	56.5	6.3	5.8	23.4	8.1	100.0
10	59.8	7.3	6.3	18.5	8.2	100.0
11	64.5	7.0	5.6	15.4	7.6	100.0
12	67.2	6.9	5.1	13.4	7.4	100.0
13	70.0	7.8	4.5	10.3	7.3	100.0
14	71.9	8.9	4.3	8.1	6.7	100.0
15	72.6	11.1	4.0	6.5	5.8	100.0
16	72.6	12.7	3.3	6.3	5.1	100.0
17	71.0	15.5	0.8	8.8	3.9	100.0
18	75.9	13.0	0.0	7.0	4.0	100.0
19	78.5	12.0	0.0	5.6	4.0	100.0
20	78.3	16.1	0.0	3.7	1.8	100.0

F-T IV Product Wax Analysis (Carbon distribution of wax samples by high temp. GC)							
Sample ID (SSFI)	22.62-14	22.62-20	22.62-22	22.62-25	22.62-27	drum sample	start-up wax
Date	4/4/1998 23:15	4/8/1998 11:20	4/9/1998 20:30	4/11/1998 15:00	4/14/1998 2:15	4/4/1998 0:00	Callista
Condition	16.1	16.3	16.4	16.5	16.6	16.1	
Carbon No.	%w	%w	%w	%w	%w	%w	%w
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.195	0.093	0.218	0.027	0.220	0.023	0.000
13	0.348	0.215	0.208	0.242	0.199	0.339	0.000
14	0.613	0.264	0.368	0.424	0.388	0.511	0.009
15	0.652	0.329	0.481	0.594	0.402	0.749	0.018
16	1.030	0.412	0.542	0.705	0.585	0.931	0.017
17	1.229	0.505	0.676	0.880	0.740	1.183	0.015
18	1.535	0.620	0.845	1.084	0.912	1.486	0.019
19	1.896	0.765	1.051	1.326	1.121	1.842	0.025
20	2.305	0.921	1.290	1.606	1.370	2.245	0.034
21	2.753	1.117	1.559	1.928	1.666	2.666	0.057
22	3.213	1.347	1.847	2.284	2.015	3.244	0.112
23	3.667	1.616	2.143	2.656	2.408	3.564	0.220
24	4.070	1.923	2.446	3.020	2.831	3.932	0.422
25	4.404	2.283	2.744	3.357	3.292	4.290	0.764
26	4.668	2.835	3.076	3.660	4.248	4.693	1.320
27	4.894	3.744	3.451	3.934	6.982	4.920	2.130
28	4.876	3.876	3.718	4.084	6.189	4.866	3.384
29	4.703	3.966	3.957	4.175	4.402	4.489	4.453
30	4.531	4.328	4.219	4.231	4.353	4.350	5.743
31	4.331	4.609	4.396	4.511	4.294	4.122	6.795
32	4.165	5.136	4.411	4.174	4.238	3.915	7.564
33	3.824	4.821	4.389	4.033	4.695	3.713	7.996
34	3.522	4.790	4.630	3.863	4.828	3.440	8.095
35	3.209	4.502	4.094	3.602	3.843	3.130	7.775
36	2.935	4.232	3.867	3.351	3.241	2.830	7.255
37	2.708	3.920	3.736	3.078	2.941	2.618	6.445
38	2.445	3.640	3.281	2.833	2.680	2.384	5.633
39	2.203	3.404	3.002	2.592	2.461	2.175	4.739
40	2.033	2.939	2.761	2.413	2.288	2.001	3.892
41	1.840	2.809	2.478	2.124	2.007	1.831	3.126
42	1.685	2.546	2.227	1.925	1.801	1.666	2.501
43	1.512	2.234	2.055	1.764	1.634	1.523	1.948
44	1.382	2.071	1.835	1.614	1.451	1.402	1.528
45	1.244	1.856	1.651	1.448	1.324	1.275	1.175
46	1.111	1.636	1.470	1.320	1.214	1.166	0.914
47	1.005	1.498	1.305	1.210	1.064	1.054	0.701
48	0.900	1.339	1.149	1.109	0.977	0.960	0.550
49	0.795	1.183	1.045	0.988	0.877	0.882	0.435
50	0.715	1.061	0.915	0.913	0.790	0.792	0.342
51	0.629	0.943	0.819	0.814	0.706	0.723	0.284
52	0.551	0.846	0.733	0.742	0.642	0.660	0.226
53	0.485	0.741	0.644	0.679	0.565	0.593	0.187
54	0.426	0.659	0.580	0.612	0.519	0.529	0.155
55	0.369	0.595	0.506	0.558	0.459	0.477	0.126

F-T IV Product Wax Analysis (Carbon distribution of wax samples by high temp. GC)							
Sample ID (SSFI)	22.62-14	22.62-20	22.62-22	22.62-25	22.62-27	drum sample	start-up wax
Date	4/4/1998 23:15	4/8/1998 11:20	4/9/1998 20:30	4/11/1998 15:00	4/14/1998 2:15	4/4/1998 0:00	Callista
Condition	16.1	16.3	16.4	16.5	16.6	16.1	
Carbon No.	%w	%w	%w	%w	%w	%w	%w
56	0.328	0.516	0.476	0.528	0.413	.422	0.109
57	0.284	0.476	0.417	0.470	0.367	.383	0.097
58	0.246	0.396	0.387	0.438	0.330	0.334	0.079
59	0.215	0.373	0.356	0.422	0.293	0.304	0.079
60	0.186	0.330	0.329	0.398	0.260	0.266	0.058
61	0.163	0.297	0.298	0.366	0.246	0.240	0.051
62	0.140	0.257	0.293	0.370	0.212	0.215	0.046
63	0.123	0.239	0.280	0.347	0.194	0.189	0.040
64	0.106	0.210	0.269	0.333	0.175	0.168	0.034
65	0.090	0.187	0.263	0.319	0.159	0.150	0.036
66	0.077	0.173	0.257	0.324	0.147	0.134	0.030
67	0.068	0.151	0.267	0.301	0.128	0.118	0.025
68	0.056	0.135	0.260	0.291	0.118	0.105	0.024
69	0.046	0.122	0.251	0.268	0.106	0.094	0.024
70	0.036	0.111	0.257	0.260	0.093	0.084	0.020
71	0.030	0.098	0.259	0.214	0.088	0.073	0.017
72	0.023	0.091	0.237	0.208	0.078	0.068	0.017
73	0.016	0.078	0.239	0.192	0.073	0.061	0.014
74	0.015	0.073	0.225	0.174	0.062	0.050	0.013
75	0.014	0.063	0.170	0.155	0.058	0.047	0.011
76	0.013	0.059	0.226	0.140	0.052	0.042	0.011
77	0.011	0.051	0.143	0.129	0.046	0.037	0.009
78	0.010	0.045	0.140	0.110	0.047	0.031	0.008
79	0.009	0.041	0.125	0.094	0.036	0.029	0.007
80	0.010	0.035	0.125	0.088	0.041	0.026	0.006
81	0.009	0.036	0.101	0.082	0.036	0.024	0.005
82	0.008	0.029	0.084	0.070	0.029	0.020	0.004
83	0.007	0.026	0.074	0.068	0.026	0.019	0.003
84	0.006	0.019	0.058	0.052	0.024	0.015	0.003
85	0.005	0.021	0.056	0.049	0.023	0.014	0.001
86	0.004	0.020	0.050	0.048	0.023	0.011	0.002
87	0.004	0.014	0.041	0.037	0.020	0.009	0.001
88	0.004	0.014	0.034	0.034	0.017	0.008	0.001
89	0.004	0.011	0.029	0.031	0.017	0.005	0.001
90	0.003	0.009	0.023	0.024	0.017	0.005	0.000
91	0.003	0.009	0.022	0.019	0.016	0.004	0.000
92	0.002	0.005	0.016	0.017	0.014	0.004	0.000
93	0.001	0.003	0.010	0.012	0.015	0.002	0.000
94	0.010	0.002	0.006	0.010	0.011	0.002	0.000
95	0.007	0.001	0.004	0.008	0.011	0.002	0.000
96	0.000	0.001	0.001	0.005	0.008	0.001	0.000
97	0.000	0.000	0.000	0.005	0.005	0.001	0.000
98	0.000	0.000	0.001	0.002	0.004	0.001	0.000
99	0.000	0.000	.000	0.001	0.002	0.001	0.000
100	0.000	0.000	0.003	0.001	0.000	0.001	0.000

F-T IV Total Carbon Distributions I (Combined purge gas, light hydrocarbon-and wax in production ratio)				
Condition	16.C	16.3D	16.4A	16.5C
Light HC	drum	22.11-12	22.11-12	22.11-18
Wax	22. 2-14	2.62-20	22.62-22	22.62-25
Carbon No.	%w	%w	%w	%w
1	14.024	17.571	20.763	16.923
2	2.430	3.104	3.338	3.309
3	4.483	5.614	5.965	6.207
4	4.659	5.662	5.634	6.197
5	5.222	5.735	5.381	5.995
6	5.742	5.761	5.371	5.763
7	5.555	5.470	5.019	5.126
8	5.606	5.421	4.969	5.169
9	5.295	5.096	4.668	4.685
10	4.944	4.759	4.359	4.375
11	4.469	4.332	3.968	4.142
12	4.486	4.325	3.968	3.520
13	3.703	3.586	3.288	3.158
14	3.222	3.156	2.899	2.746
15	2.770	2.766	2.545	2.399
16	2.429	2.404	2.214	2.130
17	2.102	2.107	1.945	1.876
18	1.815	1.832	1.697	1.653
19	1.585	1.575	1.466	1.579
20	1.442	1.367	1.281	1.245
21	1.187	1.254	1.184	1.097
22	1.053	1.012	0.969	0.972
23	0.936	0.866	0.841	0.855
24	0.874	0.752	0.741	0.748
25	0.802	0.643	0.645	0.650
26	0.777	0.558	0.569	0.611
27	0.802	0.550	0.558	0.914
28	0.708	0.414	0.441	0.736
29	0.617	0.360	0.399	0.438
30	0.571	0.275	0.323	0.399
31	0.530	0.220	0.074	0.389
32	0.502	0.181	0.229	0.344
33	0.457	0.139	0.195	0.318
34	0.417	0.115	0.183	0.298
35	0.375	0.101	0.155	0.269
36	0.343	0.091	0.143	0.245
37	0.316	0.082	0.136	0.220
38	0.284	0.074	0.118	0.205
39	0.255	0.069	0.107	0.183
40	0.235	0.059	0.099	0.169

F-T IV Total Carbon Distributions I (Combined purge gas, light hydrocarbon-and wax in production ratio)				
Condition	16.C	16.3D	16.4A	16.5C
Light HC	drum	22.11-12	22.11-12	22.11-18
Wax	22. 2-14	2.62-20	22.62-22	22.62-25
Carbon No.	%w	%w	%w	%w
41	0.213	0.057	0.089	0.148
42	0.195	0.051	0.080	0.134
43	0.175	0.045	0.074	0.122
44	0.166	0.042	0.066	0.112
45	0.144	0.037	0.059	0.100
46	0.129	0.033	0.053	0.091
47	0.116	0.030	0.047	0.083
48	0.104	0.027	0.041	0.076
49	0.092	0.024	0.037	0.068
50	0.083	0.021	0.033	0.062
51	0.073	0.019	0.029	0.056
52	0.064	0.017	0.026	0.051
53	0.056	0.015	0.023	0.046
54	0.049	0.013	0.021	0.042
55	0.043	0.012	0.018	0.038
56	0.038	0.010	0.017	0.036
57	0.033	0.010	0.015	0.032
58	0.028	0.008	0.014	0.030
59	0.025	0.008	0.013	0.029
60	0.022	0.007	0.012	0.027
61	0.019	0.006	0.011	0.025
62	0.016	0.005	0.010	0.025
63	0.014	0.005	0.010	0.024
64	0.012	0.004	0.010	0.023
65	0.010	0.004	0.009	0.022
66	0.009	0.003	0.009	0.022
67	0.008	0.003	0.010	0.021
68	0.006	0.003	0.009	0.020
69	0.605	0.002	0.009	0.018
70	0.004	0.002	0.009	0.018
71	0.004	0.002	0.009	0.015
72	0.003	0.002	0.008	0.014
73	0.002	0.002	0.009	0.013
74	0.002	0.001	0.008	0.012
75	0.002	0.001	0.006	0.011
76	0.001	0.001	0.008	0.010
77	0.001	0.001	0.005	0.009
78	0.001	0.001	0.005	0.008
79	0.001	0.001	0.004	0.006
80	0.001	0.001	0.004	0.006

F-T IV Total Carbon Distributions I (Combined purge gas, light hydrocarbon-and wax in production ratio)				
Condition	16.C	16.3D	16.4A	16.5C
Light HC	drum	22.11-12	22.11-12	22.11-18
Wax	22. 2-14	2.62-20	22.62-22	22.62-25
Carbon No.	%w	%w	%w	%w
81	0.001	0.001	0.004	0.006
82	0.001	0.001	0.003	0.005
83	0.001	0.001	0.003	0.005
84	0.001	0.000	0.002	0.004
85	0.001	0.000	0.002	0.003
86	0.000	0.000	0.002	0.003
87	0.000	0.000	0.001	0.003
88	0.001	0.000	0.001	0.002
89	0.000	0.000	0.001	0.002
90	0.000	0.000	0.001	0.002
91	0.000	0.000	0.001	0.001
92	0.000	0.000	0.001	0.001
93	0.000	0.000	0.001	0.001
94	0.001	0.000	0.000	0.001
95	0.001	0.000	0.000	0.001
96	0.000	0.000	0.000	0.000
97	0.000	0.000	0.000	0.000
98	0.000	0.000	0.000	0.000
99	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000