Enclosure 4: Core analysis data, Point Lay Alaskan outcrops, in Sherwood, K.W., and Amoco Oil Co., 1977 geologic field investigations, Point Lay area, North Slope, Alaska

Sherwood, K.W., and Amoco Oil Co.

GMC DATA REPORT 445B

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2019
State of Alaska
Department of Natural Resources
Division of Geological & Geophysical Surveys
GEOLOGIC MATERIALS CENTER

1977 Field Samples.

CF 800101

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AMOCO PRODUCTION COMPANY
Research Department

CORE ANALYSIS SUMMARY

Subject Point Lay Alaskan Outcrops — Lab No. F-281
Field — Date Cored
Location North Slope, Alaska — Date Analyzed
Formation Analyzed Fortress Mtn., Kukpowruk, Corwin — Elev.
Transmittal Letter by R. C. Brooke — Date 5-5-78 File No.

CORING DATA

Type of Analysis Core Plug Analysis Type A
Number of Samples 144

Remarks:

By D. M. Buchanan Date 8-2-78

cc: R. C. Brooke
J. L. Severson
W. W. Owens
W. E. Jenkins

Small Core

Lab No. F-281
Date 8-1-78

Core Analysis Data Record

Subject Point Lay Alaskan Outcrop Field _____ State Alaska

Sample Number	Formation	Depth ft (Section / Footage)	Description	Permeability-md Horiz.	Permeability-md Vert.	Porosity %	Saturation - % PV Oil	Saturation - % PV Water	Grain Density gm/cc
1	Kfm	W-12, 80'	TC 12	1.00		4.5			2.67
4	Kfm	W-11, 137'	TM 3	.0095		10.5			2.66
5	Kfm	W-11, 242'	TM 5	.0029		5.8			2.66
6	Kfm	W-11, 251'	TM 6	.179		6.3			2.65
7	Kfm	W-11, 265'	TM 7	.0076		6.0			2.67
8	Kfm	W-11, 298'	TM 8	.036		11.2			2.66
9	Kfm	W-11, 314'	TM 9	.099		10.6			2.65
10	Kfm	W-11, 324'	TM 11	.88		10.2			2.66
11	Kfm	W-11, >500'	TM 28	.00140		3.8			2.69
12	Kfm	W-11, >500'?	TM 1	.0049		5.9			2.67
13	Knk	W-13, 74'	KKS 20	.0038		3.1			2.67
14	"	W-13, 110'	KKS 17	.0039		3.8			2.69
15	"	W-13, 129'	KKS 22	.0097		4.9			2.68
16	"	W-13, 135'	KKS 23	.0105		6.7			2.68
17	"	W-13, 162'	KKS 24	.0029		4.7			2.73
18	"	W-13, 166'	KKS 25	.0161		5.0			2.69
19	"	W-14, 39'	TS 34	.00086		2.4			2.73
20	"	W-14, 109'	TS 35	.0085		3.7			2.73
21	"	W-14, 164'	TS 37	.097		10.5			2.70
22	"	W-14, 250'	TS 38	.042		9.4			2.74
23	"	W-14, 435'	TS 40	.0086		6.5			2.72
24	"	W-15, 75'	KA 41	.0099		5.7			2.70
25	"	W-15, 272'	KA 44	.0143		6.8			2.68
26	"	W-15, 295'	KA 45	.107		7.9			2.67
27	"	W-15, 476'	KA 47	.090		9.5			2.67
28	"	W-15, 628'	KA 50	1.24		11.2	17.6		2.66

Small Core

Lab No. F-281
Date 8-1-78

Core Analysis Data Record

Subject Point Lay Alaskan Outcrops Field _____ State Alaska

Sample Number	Formation	Section Depth ft Footage	Description	Permeability-md Horiz.	Permeability-md Vert.	Porosity %	Saturation - % PV Oil	Saturation - % PV Water	Grain Density gm/cc
29	Kuk	W-15, 643'	KA 51	.89		12.1			2.70
30	"	W-15, 652'	KA 52	3.49		11.9			2.67
31	"	W-15, 735'	KA 55	.0037		5.6			2.69
32	"	W-15, 1040'	KA 56	.023		9.0			2.66
33	"	W-15, 1969'	KA 59	.093		6.9			2.64
34	"	W-15, 1988'	KA 61	.020		6.9			2.67
35	"	W-15, 1992'	KA 62	.041		9.1			2.67
36	"	W-15, 1999'	KA 63	.196		7.3			2.66
37	"	W-15, 2013'	KA 64	1.16		11.2			2.68
38	"	W-15, 2047'	KA 65	.142		9.3			2.67
39	"	W-15, 2110'	KA 66	.0197		2.8			2.75
40	"	W-15, 2168'	KA 69	.0095		4.4			2.67
41	"	W-15, 2281'	KA 71	.040		7.6			2.67
42	"	W-15, 2303'	KA 72	2.69		3.9			2.70
43	"	W-15, 2309'	KA 73	.088		4.2			2.70
44	"	W-15, 2420'	KA76	.87		2.6			2.75
45	"	W-15, 2433'	KA 77	.0069		3.2			2.69
46	Knc	W-15, 2547'	KA 79	.049		8.2			2.68
48	"	W-15, 2597'	KA 81	.109		10.7			2.67
49	"	W-15, 2611'	KA 82	.047		7.6			2.69
50	Knc	W-16, 715'	SA 87	.41		9.7			2.67
51	Kuk	W-16, 848'	SA 89	.43		11.4			2.66
52	"	W-16, 877'	SA 90	1.44		12.2			2.66
53	"	W-16, 1031'	SA 92	1.51		11.4			2.66
54	"	W-16, 1053'	SA 94	.28		10.4			2.69

Small Core

Lab No. F-281
Date 8-1-78

Core Analysis Data Record

Subject Point Lay Alaskan Outcrop Field _____ State Alaska

Sample Number	Formation	Depth ft (Section / Footage)	Description	Permeability-md Horiz.	Permeability-md Vert.	Porosity %	Saturation - % PV Oil	Saturation - % PV Water	Grain Density gm/cc
55	Knk	W-16, 1340'	SA 97	.0184		5.9			2.72
56	"	W-16, 1646'	SA 99	.29		7.0			2.67
57	"	W-16, 1682'	SA 100	.84		12.2			2.68
58	"	W-16, 2144'	SA 103	.43		10.5			2.69
59	"	W-16, 2175'	SA 104	.143		15.7			2.70
60	"	W-16, 2341'	SA 105	.30		9.9			2.69
61	"	W-16, 2368'	SA 106	1.34		6.6			2.69
62	"	W-16, 3196'	SA 113	.86		10.2			2.71
63	Knc	W-16, 3915'	SA 235	.080		6.9			2.69
64	"	W-16, 4496'	SA 240	.0181		7.3			2.69
65	"	W-16, 4573'	SA 241	.43		1.5			2.74
66	"	W-16, 4730'	SA 242	.00127		1.2			2.75
67	"	W-16, 5279'	SA 244	.0059		1.5			2.75
68	Knc	W-16, 5581'	SA 245	.0101		1.6			2.75
69	Knk	W-17A, 5'	TSE 114	.55		3.8			2.66
70	"	W-17B, 30'	TSE 116	.030		5.6			2.71
71	"	W-17B, 96'	TSE 117	Unsuitable		2.8			2.73
72	"	W-17C, TOROK	TSE 119	.061		5.2			2.74
73	"	W-17C, 201'	TSE 122	.0106		3.9			2.67
74	"	W-17C, 1285'	TSE 124	.0125		6.8			2.72
75	"	W-17C, 1817'	TSE 125	.031		4.5			2.70
76	Knc	W-17C, 2672'	TSE 127	.123		7.6			2.67
77	"	W-17C, 2707'	TSE 128	.0134		6.0			2.71
78	"	W-17C, 2675'	TSE 247	.089		7.0			2.69
79	"	W-17C, 2675'	TSE 248	.0045		2.9			2.70

Small Core

Lab No. F-281
Date 8-1-78

Core Analysis Data Record

Subject Point Lay Alaskan Outcrop Field State Alaska

Sample Number FM	Depth ft SECTION FOOTAGE	Description	Permeability-md Horiz.	Permeability-md Vert.	Porosity %	Saturation - % PV Oil	Saturation - % PV Water	Grain Density gm/cc
80 Knk	W-18, 322'	FS 130	.0020		3.5			2.73
81 "	W-18, 458'	FS 132	.0042		2.9			2.69
82 "	W-18, 942'	FS 133	.021		5.4			2.70
83 "	W-18, 983'	FS 134	.079		7.2			2.67
84 "	W-18, 1404'	FS 135	.089		7.2			2.67
85 "	W-18, 1478'	FS 136	.107		7.5			2.66
86 "	W-19, 193'	DS 138	.021		8.8			2.69
87 "	W-19, 652'	DS 139	.0075		2.5			2.67
88 "	W-19, 860'+	DS 140	1.75		3.6			2.66
89 "	W-20, 679'	PS 141	.029		7.4			2.66
90 "	W-20, 1052'	PS 142	.72		10.4			2.65
91 "	W-20, 2570'	PS 143	.23		7.6			2.63
92 Knc	W-20, 6862'	PS 144	.0072		4.9			2.71
93 Knk	W-21, 851'	MM 146	1.10		8.5			2.71
94 "	W-21, 1200'	MM 147	.054		7.0			2.69
95 "	W-21, 1748'	MM 148	.0184		5.4			2.70
96 "	W-21, 2259'	MM 149	.035		6.7			2.72
97 "	W-21, 2276'	MM150	Unsuitable		8.6			2.72
98 "	W-22, 6'	FP 152	.0120		6.7			2.70
99 "	W-22, 96'	FP 153	1.50		8.1			2.71
100 "	W-22, 212'	FP 157	.021		6.8			2.68
101 "	W-22, 250'	FP 158	.060		8.8			2.68
102 "	W-22, 560'	FP 160	1.11		9.7			2.68
103 "	W-22, 1084'	FP 161	Unsuitable		7.5			2.69
104 "	W-22, 1373'	FP 164	.0025		1.1			2.73

Small Core

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Core Analysis Data Record

Subject Point Lay Alaskan Outcrop Field _____ State Alaska

Sample Number	Formation	Section Depth ft Footage	Description	Permeability-md Horiz.	Permeability-md Vert.	Porosity %	Saturation - % PV Oil	Saturation - % PV Water	Grain Density gm/cc
105	Knk	W-22, 1379'	FP 165	.0017		2.5			2.72
106	"	W-22, 1398'	FP 166	.00051		1.7			2.74
107	"	W-23, 10'	FOG 168	.00068		1.2			2.74
108	"	W-23, 32'	FOG 169	.37		12.4			2.71
109	"	W-23, 36'	FOG 170	.039		2.4			2.73
110	"	W-23, 467'	FOG 171	.023		7.8			2.68
111	"	W-24, 321'	SAE 173	.86		11.7			2.68
112	"	W-24, 1219'	SAE 174	.32		9.8			2.66
113	"	W-24, 1721'	SAE 175	.023		7.3			2.70
114	"	W-24, 1729'	SAE 176	.161		4.6			2.75
115	Knc	W-24, 1989'	SAE 177	1.59		3.5			2.75
116	"	W-24, 2482'	SAE 180	.35		12.2			2.69
117	"	W-24, 2510'+	SAE 181	.021		6.1			2.77
118	Knk	W-25, 283'	SAE 184	.0043		10.9			2.68
119	"	W-26, 28'	CB 223	.57		15.9			2.68
120	"	W-26, 2450'	CB 224	1.46		6.3			2.64
121	"	W-26, 4509'	CB 225	.32		5.8			2.65
122	"	W-26, 4670'	CB 194	.020		4.5			2.65
123	"	W-26, 4808'	CB 195	.00121		1.3			2.72
124	"	W-26, 4950'	CB 200	.083		1.7			2.66
125	"	W-26, 5098'	CB 201	.064		7.1			2.66
126	"	W-26, 5647'	CB 187	.058		1.5			2.72
127	"	W-26, 6266'	CB 189	.45		7.0			2.65
128	"	W-26, 6725'	CB 190	.22		5.9			2.66
129	"	W-26, 6733'	CB 191	.25		6.3			2.63
						951.4			

Small Core

Lab No. F-281
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Core Analysis Data Record

Subject Point Lay Alaskan Outcrop Field _____ State Alaska

Sample Number	FORMATION / SECTION / FOOTAGE Depth ft	Description	Permeability-md Horiz.	Permeability-md Vert.	Porosity %	Saturation - % PV Oil	Saturation - % PV Water	Grain Density gm/cc
130 Knk	W-26, 6742'	CB 202	Unsuitable		6.4			2.65
131 "	W-26, 6746'	CB 192	Unsuitable		3.8			2.73
133 Knc	W-26, 8348'	CB 204	.00124		1.5			2.71
134 "	W-26, 8361'	CB 205	.00124		3.2			2.75
135 "	W-26, 8421'	CB 206	.00064		1.0			2.72
136 "	W-26, 8720'	CB 207	.0064		2.9			2.70
137 "	W-26, 8779'	CB 208	Unsuitable		2.6			2.68
138 "	W-26, 8915'	CB 209	Unsuitable		5.1			2.63
139 "	W-26, 8940'	CB 210	4.50		6.0			2.65
140 "	W-26, 8968'	CB 211	.026		2.4			2.77
141 "	W-26, 8986'	CB 212	8.63		2.8			2.66
142 "	W-26, 9014'	CB 213	.021		3.7			2.63
143 "	W-26, 9028'	CB 214	(Fractured) 243.		4.9			2.63
144 "	W-26, 9550'	CB 215	.59		7.5			2.62
					906.20			
					Avg ϕ = 6.29 %			

1970 FIELD DATA

[illegible] DATA

PAN AMERICAN CORE ANALYSIS DATA SHEET

Sample No.	1977 Section Number	Footage	Perm. MDS Plug	Eff. Pors. Percent
AR-1			0.16	9.3
AR-3			0.05	6.0
SA-2			0.11	8.2
AR-30			0.94	3.7
BS-1	W-16	100'	0.46	10.3
BS-5	W-16	717'	0.96	12.5
BS-7	W-16	890'	0.55	12.5
BS-9	W-16	1045'	0.18	8.3
BS-12	W-16	1334'	0.14	5.9
BS-17	W-16	1705'	0.09	1.9
BS-20	W-16	2169'	0.16	9.4
KS-7			0.09	9.1
KS-11			0.18	1[illegible].1
KS-24	W-15	2438'	0.09	5.4
KS-25	W-15	2421'	0.27	8.3
SA-5			0.36	11.6
SA-8			0.16	4.8
SA-11			0.05	1.3
SA-15			0.54	4.9
			.33	ave 10.9
BS-23	W-16	2512'	0.09	[illegible].8
BS-31	W-16	3729'	0.05	3.3
BS-34	W-16	4196'	0.36	4.3
BS-38	W-16	4828'	0.07	2.6
BS-47			0.07	1.9
BS-51			0.13	1[illegible].9
BS-57			0.36	1[illegible].0
BS-61			1.62	1[illegible].2
SA-18			0.05	3.0
SA-22			0.07	4.4
			.29 ave	ave 9%
DW-1			0.05	[illegible].0
IR-2			0.09	7.7
IR-3			0.11	5.6
IR-5			4.47	6.5
			Ave 1.18	Ave 7.20

[illegible]