

Arthur D. Little, Inc.

Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - BIOMARKER

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BH62				BH62			
SDG	SDGEB001				SDGS001			
File	DZ2239.D				DZ0234.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.12 mg				5.12 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	9/5/1997				8/21/1997			
Min Reporting Limit	4.9				4.9			
Units	ug/g	T	%D	Q	ug/g	T	%D	Q
BIOMARKER								
T4-C23Diterpane	28	46	-26		28	46	-26	
S4-Diacholestane	32	50	-22		39	50	-6	
S5-Diacholestane	24	29	0		24	29	-3.4	
T9-C29Tricyclitriterpane	12	16	-6.2		13	16	0	
T10-C29Tricyclitriterpane	13	18	-11		13	18	-11	
T11-Trisnorhopane(TS)	17	26	-19		20	26	-7.7	
T12-Trisnorhopane(TM)	21	32	-19		24	32	-12	
S24-Methylcholestane	24				29			
S25-Ethylcholestane	40	53	-7.6		42	53	-5.7	
S28-Ethylcholestane	32	40	-2.5		34	40	0	
T15-Norhopane	70	96	-10		76	96	-5.2	
T18-Oleanane	ND				ND			
T19-Hopane	98	128	-6.2		100	128	-6.2	
T21-Homohopane	43	53	-1.9		45	53	1.9	
T22-Homohopane	29	38	-7.9		33	38	2.6	
Total S/T	480				520			
5B(H)-Cholane	122				119			
D66-Dotriacontane	124				110			

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1997 Final Data (Surrogate Corrected) - NSC - BIOMARKER

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BH62				BH62			
SDG	SDGS010				SDGS002			
File	DZ2445.D				DZ2080.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.12 mg				5.12 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	9/18/1997				8/25/1997			
Min Reporting Limit	4.9				4.9			
Units	ug/g	T	%D	Q	ug/g	T	%D	Q
BIOMARKER								
T4-C23Diterpane	29	46	-26		28	46	-26	
S4-Diacholestane	36	50	-16		33	50	-20	
S5-Diacholestane	21	29	-14		23	29	-3.4	
T9-C29Tricyclitriterpane	14	16	0		13	16	0	
T10-C29Tricyclitriterpane	14	18	-5.6		13	18	-11	
T11-Trisnorhopane(TS)	16	26	-27		18	26	-15	
T12-Trisnorhopane(TM)	20	32	-25		21	32	-19	
S24-Methylcholestane	26				22			
S25-Ethylcholestane	43	53	-5.7		41	53	-5.7	
S28-Ethylcholestane	30	40	-12		32	40	-2.5	
T15-Norhopane	74	96	-10		74	96	-7.3	
T18-Oleanane	ND				ND			
T19-Hopane	94	128	-14		99	128	-6.2	
T21-Homohopane	40	53	-11		39	53	-11	
T22-Homohopane	27	38	-16		29	38	-7.9	
Total S/T	480				490			
5B(H)-Cholane	117				121			
D66-Dotriacontane	114				125			

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1997 Final Data (Surrogate Corrected) - NSC - BIOMARKER

Field ID		North Slope Crude		
Lab ID		BH62		
SDG		SDGS003		
File		DZ2080.D		
Sample Type		NSC		
Matrix		Oil		
Sample Size		5.12 mg		
Weight Basis		OIL		
Associated Blank		NA		
Field Date		NA		
Extract Date		NA		
Analysis Date		8/25/1997		
Min Reporting Limit		4.9		
Units		ug/g	T %D	Q
BIOMARKER				
T4-C23Diterpane	28	46	-26	
S4-Diacholestane	33	50	-20	
S5-Diacholestane	23	29	-3.4	
T9-C29Tricyclitriterpane	13	16	0	
T10-C29Tricyclitriterpane	13	18	-11	
T11-Trisnorhopane(TS)	18	26	-15	
T12-Trisnorhopane(TM)	21	32	-19	
S24-Methylcholestane	22			
S25-Ethylcholestane	41	53	-5.7	
S28-Ethylcholestane	32	40	-2.5	
T15-Norhopane	74	96	-7.3	
T18-Oleanane		ND		
T19-Hopane	99	128	-6.2	
T21-Homohopane	39	53	-11	
T22-Homohopane	29	38	-7.9	
Total S/T	490			
5B(H)-Cholane	121			
D66-Dotriacontane	125			

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1997 Final Data (Surrogate Corrected) - NSC - BIOMARKER

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BH62				BH62			
SDG	SDGS004				SDGS004			
File	DZ2292.D				DZ2239.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.12 mg				5.12 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	9/9/1997				9/5/1997			
Min Reporting Limit	4.9				4.9			
Units	ug/g	T	%D	Q	ug/g	T	%D	Q
BIOMARKER								
T4-C23Diterpane	29	46	-26		28	46	-26	
S4-Diacholestane	36	50	-16		32	50	-22	
S5-Diacholestane	25	29	0		24	29	0	
T9-C29Tricyclitriterpane	12	16	-12		12	16	-6.2	
T10-C29Tricyclitriterpane	14	18	-5.6		13	18	-11	
T11-Trisnorhopane(TS)	16	26	-27		17	26	-19	
T12-Trisnorhopane(TM)	21	32	-22		21	32	-19	
S24-Methylcholestane	28				24			
S25-Ethylcholestane	43	53	-5.7		40	53	-7.6	
S28-Ethylcholestane	32	40	-5		32	40	-2.5	
T15-Norhopane	73	96	-12		70	96	-10	
T18-Oleanane	ND				ND			
T19-Hopane	100	128	-6.2		98	128	-6.2	
T21-Homohopane	44	53	-3.8		43	53	-1.9	
T22-Homohopane	29	38	-11		29	38	-7.9	
Total S/T	500				480			
5B(H)-Cholane	117				122			
D66-Dotriacontane	104				124			

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1997 Final Data (Surrogate Corrected) - NSC - BIOMARKER

Field ID		North Slope Crude		
Lab ID		BH62		
SDG		SDGS005		
File		DZ2292.D		
Sample Type		NSC		
Matrix		Oil		
Sample Size		5.12 mg		
Weight Basis		OIL		
Associated Blank		NA		
Field Date		NA		
Extract Date		NA		
Analysis Date		9/9/1997		
Min Reporting Limit		4.9		
Units		ug/g	T %D	Q
BIOMARKER				
T4-C23Diterpane	29	46	-26	
S4-Diacholestane	36	50	-16	
S5-Diacholestane	25	29	0	
T9-C29Tricyclitriterpane	12	16	-12	
T10-C29Tricyclitriterpane	14	18	-5.6	
T11-Trisnorhopane(TS)	16	26	-27	
T12-Trisnorhopane(TM)	21	32	-22	
S24-Methylcholestane	28			
S25-Ethylcholestane	43	53	-5.7	
S28-Ethylcholestane	32	40	-5	
T15-Norhopane	73	96	-12	
T18-Oleanane		ND		
T19-Hopane	100	128	-6.2	
T21-Homohopane	44	53	-3.8	
T22-Homohopane	29	38	-11	
Total S/T	500			
5B(H)-Cholane	117			
D66-Dotriacontane	104			

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Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - BIOMARKER

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BH62				BH62			
SDG	SDGS006				SDGS007			
File	DX6512.D				DZ2336.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.12 mg				5.12 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	1/9/1998				9/12/1997			
Min Reporting Limit	4.9				4.9			
Units	ug/g	T	%D	Q	ug/g	T	%D	Q
BIOMARKER								
T4-C23Diterpane	49	46	15		31	46	-24	
S4-Diacholestane	38	50	-16		39	50	-12	
S5-Diacholestane	21	29	-21		26	29	0	
T9-C29Tricyclitriterpane	14	16	-6.2		13	16	-6.2	
T10-C29Tricyclitriterpane	15	18	-11		16	18	0	
T11-Trisnorhopane(TS)	21	26	-12		18	26	-23	
T12-Trisnorhopane(TM)	25	32	-16		23	32	-19	
S24-Methylcholestane	27				29			
S25-Ethylcholestane	38	53	-21		47	53	0	
S28-Ethylcholestane	33	40	-10		35	40	-2.5	
T15-Norhopane	81	96	-8.3		77	96	-10	
T18-Oleanane	ND				ND			
T19-Hopane	110	128	-6.2		110	128	-6.2	
T21-Homohopane	45	53	-7.6		44	53	-7.6	
T22-Homohopane	31	38	-11		30	38	-11	
Total S/T	550				540			
5B(H)-Cholane	109				112			
D66-Dotriacontane	107				106			

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Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - BIOMARKER

Field ID	North Slope Crude			
Lab ID	BH62			
SDG	SDGS008			
File	DZ2336.D			
Sample Type	NSC			
Matrix	Oil			
Sample Size	5.12 mg			
Weight Basis	OIL			
Associated Blank	NA			
Field Date	NA			
Extract Date	NA			
Analysis Date	9/12/1997			
Min Reporting Limit	4.9			
Units	ug/g	T	%D	Q

BIOMARKER				
T4-C23Diterpane	31	46	-24	
S4-Diacholestane	39	50	-12	
S5-Diacholestane	26	29	0	
T9-C29Tricyclitriterpane	13	16	-6.2	
T10-C29Tricyclitriterpane	16	18	0	
T11-Trisnorhopane(TS)	18	26	-23	
T12-Trisnorhopane(TM)	23	32	-19	
S24-Methylcholestane	29			
S25-Ethylcholestane	47	53	0	
S28-Ethylcholestane	35	40	-2.5	
T15-Norhopane	77	96	-10	
T18-Oleanane	ND			
T19-Hopane	110	128	-6.2	
T21-Homohopane	44	53	-7.6	
T22-Homohopane	30	38	-11	

Total S/T	540
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5B(H)-Cholane	112
D66-Dotriacontane	106

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Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - BIOMARKER

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BH62				BH62			
SDG	SDGS009				SDGSOD			
File	DZ2394.D				DX6550.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.12 mg				5.12 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	9/15/1997				1/10/1998			
Min Reporting Limit	4.9				4.9			
Units	ug/g	T	%D	Q	ug/g	T	%D	Q
BIOMARKER								
T4-C23Diterpane	33	46	-17		54	46	30	
S4-Diacholestane	40	50	-8		41	50	-8	
S5-Diacholestane	28	29	10		24	29	-6.9	
T9-C29Tricyclitriterpane	15	16	6.2		16	16	12	
T10-C29Tricyclitriterpane	17	18	5.6		18	18	11	
T11-Trisnorhopane(TS)	22	26	-3.8		25	26	7.7	
T12-Trisnorhopane(TM)	26	32	-6.2		28	32	-3.1	
S24-Methylcholestane	33				28			
S25-Ethylcholestane	52	53	11		43	53	-9.4	
S28-Ethylcholestane	38	40	10		34	40	-5	
T15-Norhopane	82	96	-2.1		89	96	4.2	
T18-Oleanane	ND				ND			
T19-Hopane	120	128	9.4		130	128	9.4	
T21-Homohopane	48	53	3.8		48	53	1.9	
T22-Homohopane	33	38	0		31	38	-7.9	
Total S/T	590				610			
5B(H)-Cholane	114				112			
D66-Dotriacontane	99				103			

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Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - BIOMARKER

Field ID	North Slope Crude			
Lab ID	BH62			
SDG	SDGSOD			
File	DY7261.D			
Sample Type	NSC			
Matrix	Oil			
Sample Size	5.12 mg			
Weight Basis	OIL			
Associated Blank	NA			
Field Date	NA			
Extract Date	NA			
Analysis Date	1/14/1998			
Min Reporting Limit	4.9			
Units	ug/g	T	%D	Q

BIOMARKER				
T4-C23Diterpane	45	46	4.3	
S4-Diacholestane	39	50	-18	
S5-Diacholestane	24	29	-14	
T9-C29Tricyclitriterpane	13	16	-12	
T10-C29Tricyclitriterpane	14	18	-17	
T11-Trisnorhopane(TS)	23	26	-7.7	
T12-Trisnorhopane(TM)	26	32	-12	
S24-Methylcholestane	28			
S25-Ethylcholestane	56	53	11	
S28-Ethylcholestane	40	40	7.5	
T15-Norhopane	90	96	-1	
T18-Oleanane	ND			
T19-Hopane	110	128	-6.2	
T21-Homohopane	52	53	3.8	
T22-Homohopane	38	38	5.3	

Total S/T 600

5B(H)-Cholane	106
D66-Dotriacontane	102

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Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - BIOMARKER

Field ID		North Slope Crude			
Lab ID		BH62			
SDG		SDGW001			
File		DX5187.D			
Sample Type		NSC			
Matrix		Oil			
Sample Size		5.12 mg			
Weight Basis		OIL			
Associated Blank		NA			
Field Date		NA			
Extract Date		NA			
Analysis Date		9/24/1997			
Min Reporting Limit		4.9			
Units		ug/g	T	%D	Q
BIOMARKER					
T4-C23Diterpane		43	46	2.2	
S4-Diacholestane		43	50	-6	
S5-Diacholestane		28	29	3.4	
T9-C29Tricyclitriterpane		18	16	25	
T10-C29Tricyclitriterpane		17	18	5.6	
T11-Trisnorhopane(TS)		29	26	23	
T12-Trisnorhopane(TM)		31	32	6.2	
S24-Methylcholestane		29			
S25-Ethylcholestane		43	53	-11	
S28-Ethylcholestane		36	40	-2.5	
T15-Norhopane		100	96	14	
T18-Oleanane		ND			
T19-Hopane		140	128	17	
T21-Homohopane		56	53	15	
T22-Homohopane		39	38	13	
Total S/T		650			
5B(H)-Cholane		109			
D66-Dotriacontane		98			