

Arthur D. Little, Inc.

Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BI53				BI53			
SDG	SDGSOD				SDGEB001			
File	12319711.D				08259707.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.08 mg				5.06 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	12/31/1997				8/26/1997			
Min Reporting Limit	200				200			
Units	ug/g	T	%D	Q	ug/g	T	%D	Q
SHC								
nC9	4800	4.8	0		5000	4.8	4.2	
nC10	4000	4.2	-4.8		4100	4.2	-2.4	
nC11	4200	4.3	-2.3		4000	4.3	-7	
nC12	3900	4	-2.5		4100	4	2.5	
nC13	3700	4	-7.5		3600	4	-10	
1380	1100	1	10		990	1	-1	
nC14	4300	4.2	2.4		3400	4.2	-19	
1470	1500	1.4	7.1		1400	1.4	0	
nC15	3500	3.7	-5.4		3500	3.7	-5.4	
nC16	3300	3.2	3.1		3400	3.2	6.2	
1650	1400	1.5	-6.7		1600	1.5	6.7	
nC17	3000	3.2	-6.3		3000	3.2	-6.3	
pristane	1900	2.2	-14		1900	2.2	-14	
nC18	2700	2.9	-6.9		2800	2.9	-3.4	
phytane	1400	1.6	-13		1500	1.6	-6.3	
nC19	2300	2.6	-12		2500	2.6	-3.8	
nC20	2400	2.7	-11		2300	2.7	-15	
nC21	2200	2.4	-8.3		2000	2.4	-17	
nC22	2000	2.2	-9.1		2000	2.2	-9.1	
nC23	1900	2	-5		1900	2	-5	
nC24	1800	2	-10		1800	2	-10	
nC25	1700	1.7	0		1700	1.7	0	
nC26	1400	1.5	-6.7		1400	1.5	-6.7	
nC27	1000	1.2	-17		1000	1.2	-17	
nC28	820	0.88	-6.8		900	0.88	2.3	
nC29	720	0.81	-11		830	0.81	2.5	
nC30	580	0.65	-11		680	0.65	4.6	
nC31	520	0.58	-10		570	0.58	-1.7	
nC32	420	0.44	-4.6		460	0.44	4.5	
nC33	440	0.4	10		420	0.4	5	
nC34	330	0.35	-5.7		400	0.35	14	
nC35	390	0.35	11		360	0.35	2.8	
nC36	210	0.23	-8.7		220	0.23	-4.4	
nC37	210	0.23	-8.7		240	0.23	4.3	
nC38	190 J	0.22	-14		210	0.22	-4.6	
nC39	160 J	0.18	-11		160 J	0.18	-11	
nC40	150 J	0.19	-21		180 J	0.19	-5.3	
Total Resolved	200000	220	-9.1		210000	220	-4.6	
TPHC	590000	660	-11		620000	660	-6.1	
OTP	NA				NA			
5AA	110				105			
D50T	107				101			

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1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BI53				BI53			
SDG	SDGS006				SDGS006			
File	12299713.D				12249711.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.08 mg				5.08 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	12/29/1997				12/24/1997			
Min Reporting Limit	200				200			
Units	ug/g	T	%D	Q	ug/g	T	%D	Q
SHC								
nC9	4600	4.8	-4.2		4800	4.8	0	
nC10	4000	4.2	-4.8		4000	4.2	-4.8	
nC11	4200	4.3	-2.3		4200	4.3	-2.3	
nC12	3800	4	-5		3800	4	-5	
nC13	3700	4	-7.5		3600	4	-10	
1380	1100	1	10		1100	1	10	
nC14	3700	4.2	-12		3900	4.2	-7.2	
1470	1300	1.4	-7.2		1400	1.4	0	
nC15	3300	3.7	-11		3500	3.7	-5.4	
nC16	3100	3.2	-3.1		3200	3.2	0	
1650	1500	1.5	0		1400	1.5	-6.7	
nC17	2800	3.2	-13		3000	3.2	-6.3	
pristane	2000	2.2	-9.1		2000	2.2	-9.1	
nC18	2700	2.9	-6.9		2700	2.9	-6.9	
phytane	1300	1.6	-19		1400	1.6	-13	
nC19	2300	2.6	-12		2300	2.6	-12	
nC20	2500	2.7	-7.4		2300	2.7	-15	
nC21	2100	2.4	-12		2200	2.4	-8.3	
nC22	2000	2.2	-9.1		2000	2.2	-9.1	
nC23	2000	2	0		1900	2	-5	
nC24	1800	2	-10		1800	2	-10	
nC25	1700	1.7	0		1700	1.7	0	
nC26	1400	1.5	-6.7		1400	1.5	-6.7	
nC27	1000	1.2	-17		1000	1.2	-17	
nC28	820	0.88	-6.8		860	0.88	-2.3	
nC29	750	0.81	-7.4		760	0.81	-6.2	
nC30	570	0.65	-12		590	0.65	-9.2	
nC31	510	0.58	-12		530	0.58	-8.6	
nC32	410	0.44	-6.8		430	0.44	-2.3	
nC33	360	0.4	-10		380	0.4	-5	
nC34	310	0.35	-12		320	0.35	-8.6	
nC35	360	0.35	2.8		390	0.35	11	
nC36	200	0.23	-13		210	0.23	-8.7	
nC37	220	0.23	-4.4		220	0.23	-4.4	
nC38	190	0.22	-14		200	0.22	-9.1	
nC39	160 J	0.18	-11		150 J	0.18	-17	
nC40	160 J	0.19	-16		150 J	0.19	-21	
Total Resolved	200000	220	-9.1		200000	220	-9.1	
TPHC	590000	660	-11		610000	660	-7.6	
OTP	NA				NA			
5AA	111				109			
D50T	108				106			

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Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID		North Slope Crude		
Lab ID		BI53		
SDG		SDGS006		
File		12249712.D		
Sample Type		NSC		
Matrix		Oil		
Sample Size		5.08 mg		
Weight Basis		OIL		
Associated Blank		NA		
Field Date		NA		
Extract Date		NA		
Analysis Date		12/24/1997		
Min Reporting Limit		200		
Units		ug/g	T %D Q	
SHC				
nC9	4900	4.8	2.1	
nC10	4000	4.2	-4.8	
nC11	4100	4.3	-4.7	
nC12	3900	4	-2.5	
nC13	3500	4	-12	
1380	1000	1	0	
nC14	4200	4.2	0	
1470	1400	1.4	0	
nC15	3600	3.7	-2.7	
nC16	3200	3.2	0	
1650	1500	1.5	0	
nC17	2900	3.2	-9.4	
pristane	2300	2.2	4.5	
nC18	2500	2.9	-14	
phytane	1500	1.6	-6.3	
nC19	2400	2.6	-7.7	
nC20	2500	2.7	-7.4	
nC21	2200	2.4	-8.3	
nC22	2200	2.2	0	
nC23	1900	2	-5	
nC24	1700	2	-15	
nC25	1600	1.7	-5.9	
nC26	1500	1.5	0	
nC27	1000	1.2	-17	
nC28	840	0.88	-4.6	
nC29	670	0.81	-17	
nC30	610	0.65	-6.2	
nC31	640	0.58	10	
nC32	490	0.44	11	
nC33	400	0.4	0	
nC34	380	0.35	8.6	
nC35	350	0.35	0	
nC36	230	0.23	0	
nC37	210	0.23	-8.7	
nC38	190	0.22	-14	
nC39	140 J	0.18	-22	
nC40	180 J	0.19	-5.3	
Total Resolved	200000	220	-9.1	
TPHC	580000	660	-12	
OTP		NA		
5AA	111			
D50T	104			

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Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BI53				BI53			
SDG	SDGS007				SDGS009			
File	09039703.D				09109733.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.08 mg				5.08 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	8/31/1997				9/12/1997			
Min Reporting Limit	200				200			
Units	ug/g	T	%D	Q	ug/g	T	%D	Q
SHC								
nC9	4900	4.8	2.1		4600	4.8	-4.2	
nC10	4200	4.2	0		4100	4.2	-2.4	
nC11	3900	4.3	-9.3		4100	4.3	-4.7	
nC12	3700	4	-7.5		3600	4	-10	
nC13	3600	4	-10		3600	4	-10	
1380	960	1	-4		910	1	-9	
nC14	3300	4.2	-22		4000	4.2	-4.8	
1470	1400	1.4	0		1300	1.4	-7.2	
nC15	3300	3.7	-11		3300	3.7	-11	
nC16	3200	3.2	0		3100	3.2	-3.1	
1650	1400	1.5	-6.7		1400	1.5	-6.7	
nC17	2900	3.2	-9.4		3000	3.2	-6.3	
pristane	1900	2.2	-14		2100	2.2	-4.6	
nC18	2700	2.9	-6.9		2900	2.9	0	
phytane	1500	1.6	-6.3		1400	1.6	-13	
nC19	2600	2.6	0		2600	2.6	0	
nC20	2300	2.7	-15		2600	2.7	-3.7	
nC21	2100	2.4	-12		2500	2.4	4.2	
nC22	2100	2.2	-4.6		2100	2.2	-4.6	
nC23	2000	2	0		1900	2	-5	
nC24	1800	2	-10		1700	2	-15	
nC25	1700	1.7	0		1600	1.7	-5.9	
nC26	1400	1.5	-6.7		1500	1.5	0	
nC27	1000	1.2	-17		1100	1.2	-8.3	
nC28	810	0.88	-8		880	0.88	0	
nC29	780	0.81	-3.7		760	0.81	-6.2	
nC30	670	0.65	3.1		670	0.65	3.1	
nC31	500	0.58	-14		520	0.58	-10	
nC32	450	0.44	2.3		430	0.44	-2.3	
nC33	400	0.4	0		390	0.4	-2.5	
nC34	380	0.35	8.6		360	0.35	2.8	
nC35	360	0.35	2.8		320	0.35	-8.6	
nC36	240	0.23	4.3		220	0.23	-4.4	
nC37	200	0.23	-13		210	0.23	-8.7	
nC38	200	0.22	-9.1		210	0.22	-4.6	
nC39	150 J	0.18	-17		160 J	0.18	-11	
nC40	170 J	0.19	-11		160 J	0.19	-16	
Total Resolved	200000	220	-9.1		190000	220	-14	
TPHC	570000	660	-14		600000	660	-9.1	
OTP	NA				NA			
5AA	108				114			
D50T	108				113			

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Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID North Slope Crude				
Lab ID	BI53			
SDG	SDGS010			
File	09169703.D			
Sample Type	NSC			
Matrix	Oil			
Sample Size	5.08 mg			
Weight Basis	OIL			
Associated Blank	NA			
Field Date	NA			
Extract Date	NA			
Analysis Date	9/16/1997			
Min Reporting Limit	200			
Units	ug/g	T	%D	Q
SHC				
nC9	4600	4.8	-4.2	
nC10	4100	4.2	-2.4	
nC11	4000	4.3	-7	
nC12	3600	4	-10	
nC13	3500	4	-12	
1380	1100	1	10	
nC14	4500	4.2	7.1	
1470	1300	1.4	-7.2	
nC15	3200	3.7	-14	
nC16	3000	3.2	-6.3	
1650	1500	1.5	0	
nC17	2700	3.2	-16	
pristane	2000	2.2	-9.1	
nC18	2800	2.9	-3.4	
phytane	1400	1.6	-13	
nC19	2600	2.6	0	
nC20	2600	2.7	-3.7	
nC21	2300	2.4	-4.2	
nC22	2100	2.2	-4.6	
nC23	1900	2	-5	
nC24	1700	2	-15	
nC25	1600	1.7	-5.9	
nC26	1400	1.5	-6.7	
nC27	1100	1.2	-8.3	
nC28	830	0.88	-5.7	
nC29	730	0.81	-9.9	
nC30	700	0.65	7.7	
nC31	540	0.58	-6.9	
nC32	450	0.44	2.3	
nC33	370	0.4	-7.5	
nC34	320	0.35	-8.6	
nC35	360	0.35	2.8	
nC36	200	0.23	-13	
nC37	210	0.23	-8.7	
nC38	200	0.22	-9.1	
nC39	150 J	0.18	-17	
nC40	150 J	0.19	-21	
Total Resolved	190000	220	-14	
TPHC	580000	660	-12	
OTP	NA			
5AA	115			
D50T	114			

Arthur D. Little, Inc.

Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BI53				BG28			
SDG	SDGW001				SDGS001			
File	09249715.D				07299705.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.08 mg				5.01 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	9/25/1997				7/29/1997			
Min Reporting Limit	200				200			
Units	ug/g	T	%D	Q	ug/g	T	%D	Q
SHC								
nC9	4800	4.8	0		4700	4.8	-2.1	
nC10	4000	4.2	-4.8		4300	4.2	2.4	
nC11	4000	4.3	-7		4400	4.3	2.3	
nC12	3900	4	-2.5		4200	4	5	
nC13	3400	4	-15		4200	4	5	
1380	990	1	-1		1200	1	20	
nC14	3400	4.2	-19		4300	4.2	2.4	
1470	1300	1.4	-7.2		1400	1.4	0	
nC15	3400	3.7	-8.1		3800	3.7	2.7	
nC16	3200	3.2	0		3300	3.2	3.1	
1650	1400	1.5	-6.7		1700	1.5	13	
nC17	2800	3.2	-13		3100	3.2	-3.1	
pristane	1800	2.2	-18		2200	2.2	0	
nC18	2700	2.9	-6.9		2900	2.9	0	
phytane	1500	1.6	-6.3		1600	1.6	0	
nC19	2500	2.6	-3.8		2700	2.6	3.8	
nC20	2300	2.7	-15		2900	2.7	7.4	
nC21	2100	2.4	-12		2400	2.4	0	
nC22	2000	2.2	-9.1		2300	2.2	4.5	
nC23	2000	2	0		2100	2	5	
nC24	1700	2	-15		1800	2	-10	
nC25	1700	1.7	0		1800	1.7	5.9	
nC26	1400	1.5	-6.7		1400	1.5	-6.7	
nC27	1000	1.2	-17		1200	1.2	0	
nC28	840	0.88	-4.6		920	0.88	4.5	
nC29	790	0.81	-2.5		750	0.81	-7.4	
nC30	600	0.65	-7.7		660	0.65	1.5	
nC31	520	0.58	-10		580	0.58	0	
nC32	420	0.44	-4.6		490	0.44	11	
nC33	380	0.4	-5		390	0.4	-2.5	
nC34	300	0.35	-14		370	0.35	5.7	
nC35	330	0.35	-5.7		370	0.35	5.7	
nC36	210	0.23	-8.7		260	0.23	13	
nC37	240	0.23	4.3		220	0.23	-4.4	
nC38	220	0.22	0		240	0.22	9.1	
nC39	160 J	0.18	-11		170 J	0.18	-5.6	
nC40	190 J	0.19	0		170 J	0.19	-11	
Total Resolved	220000	220	0		230000	220	4.5	
TPHC	660000	660	0		680000	660	3	
OTP	NA				NA			
5AA	111				121	100	21	
D50T	109				116	100	16	

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Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID North Slope Crude				
Lab ID	BG28			
SDG	SDGS002			
File	07299736.D			
Sample Type	NSC			
Matrix	Oil			
Sample Size	5.01 mg			
Weight Basis	OIL			
Associated Blank	NA			
Field Date	NA			
Extract Date	NA			
Analysis Date	7/31/1997			
Min Reporting Limit	200			
Units	ug/g	T	%D	Q
SHC				
nC9	4400	4.8	-8.3	
nC10	4300	4.2	2.4	
nC11	4400	4.3	2.3	
nC12	4200	4	5	
nC13	4100	4	2.5	
1380	1100	1	10	
nC14	4300	4.2	2.4	
1470	1500	1.4	7.1	
nC15	3800	3.7	2.7	
nC16	3300	3.2	3.1	
1650	1700	1.5	13	
nC17	3100	3.2	-3.1	
pristane	2000	2.2	-9.1	
nC18	2900	2.9	0	
phytane	1600	1.6	0	
nC19	2700	2.6	3.8	
nC20	2900	2.7	7.4	
nC21	2400	2.4	0	
nC22	2300	2.2	4.5	
nC23	2100	2	5	
nC24	1800	2	-10	
nC25	1700	1.7	0	
nC26	1400	1.5	-6.7	
nC27	1100	1.2	-8.3	
nC28	880	0.88	0	
nC29	740	0.81	-8.6	
nC30	640	0.65	-1.5	
nC31	570	0.58	-1.7	
nC32	470	0.44	6.8	
nC33	360	0.4	-10	
nC34	350	0.35	0	
nC35	330	0.35	-5.7	
nC36	220	0.23	-4.4	
nC37	230	0.23	0	
nC38	220	0.22	0	
nC39	180 J	0.18	0	
nC40	180 J	0.19	-5.3	
Total Resolved	220000	220	0	
TPHC	710000	660	7.6	
OTP	NA			
5AA	NA			
D50T	117	100	17	

Arthur D. Little, Inc.

Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID	North Slope Crude				North Slope Crude			
Lab ID	BG28				BG28			
SDG	SDGS003				SDGS004			
File	08049728.D				08169705.D			
Sample Type	NSC				NSC			
Matrix	Oil				Oil			
Sample Size	5.01 mg				5.01 mg			
Weight Basis	OIL				OIL			
Associated Blank	NA				NA			
Field Date	NA				NA			
Extract Date	NA				NA			
Analysis Date	8/7/1997				8/16/1997			
Min Reporting Limit	200				200			
Units	ug/g	T	%D	Q	ug/g	T	%D	Q
SHC								
nC9	4600	4.8	-4.2		4600	4.8	-4.2	
nC10	4300	4.2	2.4		4300	4.2	2.4	
nC11	4500	4.3	4.6		4300	4.3	0	
nC12	4100	4	2.5		3900	4	-2.5	
nC13	4000	4	0		3800	4	-5	
1380	1100	1	10		1100	1	10	
nC14	4400	4.2	4.8		4400	4.2	4.8	
1470	1500	1.4	7.1		1400	1.4	0	
nC15	3900	3.7	5.4		3800	3.7	2.7	
nC16	3400	3.2	6.2		3200	3.2	0	
1650	1600	1.5	6.7		1600	1.5	6.7	
nC17	3300	3.2	3.1		3400	3.2	6.2	
pristane	2200	2.2	0		2300	2.2	4.5	
nC18	3000	2.9	3.4		3100	2.9	6.9	
phytane	1500	1.6	-6.3		1600	1.6	0	
nC19	2700	2.6	3.8		2700	2.6	3.8	
nC20	2800	2.7	3.7		2800	2.7	3.7	
nC21	2400	2.4	0		2400	2.4	0	
nC22	2300	2.2	4.5		2200	2.2	0	
nC23	2100	2	5		2000	2	0	
nC24	1900	2	-5		1800	2	-10	
nC25	1700	1.7	0		1800	1.7	5.9	
nC26	1500	1.5	0		1600	1.5	6.7	
nC27	1100	1.2	-8.3		1200	1.2	0	
nC28	890	0.88	1.1		930	0.88	5.7	
nC29	810	0.81	0		810	0.81	0	
nC30	670	0.65	3.1		630	0.65	-3.1	
nC31	600	0.58	3.4		590	0.58	1.7	
nC32	480	0.44	9.1		460	0.44	4.5	
nC33	390	0.4	-2.5		380	0.4	-5	
nC34	390	0.35	11		340	0.35	-2.9	
nC35	350	0.35	0		340	0.35	-2.9	
nC36	250	0.23	8.7		220	0.23	-4.4	
nC37	250	0.23	8.7		220	0.23	-4.4	
nC38	230	0.22	4.5		210	0.22	-4.6	
nC39	200	0.18	11		190 J	0.18	5.6	
nC40	200	0.19	5.3		190 J	0.19	0	
Total Resolved	240000	220	9.1		200000	220	-9.1	
TPHC	650000	660	-1.5		610000	660	-7.6	
OTP	NA				NA			
5AA	NA				NA			
D50T	111	100	11		113			

Arthur D. Little, Inc.

Environmental Monitoring and Analysis

Minerals Management Service - Shelikof Strait and Outermost Cook Inlet

1997 Final Data (Surrogate Corrected) - NSC - SHC

Field ID		North Slope Crude		
Lab ID		BI53		
SDG		SDGS005		
File		08199734.D		
Sample Type		NSC		
Matrix		Oil		
Sample Size		5.08 mg		
Weight Basis		OIL		
Associated Blank		NA		
Field Date		NA		
Extract Date		NA		
Analysis Date		8/21/1997		
Min Reporting Limit		200		
Units		ug/g	T %D Q	
SHC				
nC9	4700	4.8	-2.1	
nC10	4100	4.2	-2.4	
nC11	4000	4.3	-7	
nC12	3700	4	-7.5	
nC13	3600	4	-10	
1380	1100	1	10	
nC14	4200	4.2	0	
1470	1400	1.4	0	
nC15	3500	3.7	-5.4	
nC16	3200	3.2	0	
1650	1500	1.5	0	
nC17	3100	3.2	-3.1	
pristane	2000	2.2	-9.1	
nC18	2900	2.9	0	
phytane	1500	1.6	-6.3	
nC19	2700	2.6	3.8	
nC20	2600	2.7	-3.7	
nC21	2400	2.4	0	
nC22	2100	2.2	-4.6	
nC23	1900	2	-5	
nC24	1800	2	-10	
nC25	1700	1.7	0	
nC26	1400	1.5	-6.7	
nC27	1100	1.2	-8.3	
nC28	870	0.88	-1.1	
nC29	760	0.81	-6.2	
nC30	630	0.65	-3.1	
nC31	560	0.58	-3.4	
nC32	450	0.44	2.3	
nC33	400	0.4	0	
nC34	350	0.35	0	
nC35	350	0.35	0	
nC36	220	0.23	-4.4	
nC37	220	0.23	-4.4	
nC38	200	0.22	-9.1	
nC39	170 J	0.18	-5.6	
nC40	180 J	0.19	-5.3	
Total Resolved	190000	220	-14	
TPHC	580000	660	-12	
OTP		NA		
5AA		NA		
D50T	111	100	11	