

**This document relates to wellbore:**  
**24/9-10 A**  
**24/9-10 S**

# Appendix 1

Table 1

Marathon

## Sample descriptions: SAMPLES

Well name	Depth UOM	Upper depth	Lower depth	Sample type	Description	%Lithology	Formation	Sample number
NCS 24/9-10S CATERPILLAR	m	2223,5	2223,5	ccp	bulk fraction		Hermod	550/0001-0
NCS 24/9-10S CATERPILLAR	m	2223,5	2223,5	ccp	sandstone/sand	100	Hermod	550/0001-1
NCS 24/9-10S CATERPILLAR	m	2226,6	2226,6	ccp	bulk fraction		Hermod	550/0002-0
NCS 24/9-10S CATERPILLAR	m	2226,6	2226,6	ccp	sandstone/sand	100	Hermod	550/0002-1
NCS 24/9-10S CATERPILLAR	m	2229,78	2229,78	ccp	bulk fraction		Hermod	550/0003-0
NCS 24/9-10S CATERPILLAR	m	2229,78	2229,78	ccp	sandstone/sand	100	Hermod	550/0003-1
NCS 24/9-10S CATERPILLAR	m	2232,7	2232,7	ccp	bulk fraction		Hermod	550/0004-0
NCS 24/9-10S CATERPILLAR	m	2232,7	2232,7	ccp	sandstone/sand	100	Hermod	550/0004-1
NCS 24/9-10S CATERPILLAR	m	2236,55	2236,55	ccp	bulk fraction		Hermod	550/0005-0
NCS 24/9-10S CATERPILLAR	m	2236,55	2236,55	ccp	sandstone/sand	100	Hermod	550/0005-1
NCS 24/9-10S CATERPILLAR	m	2238,76	2238,76	ccp	bulk fraction		Hermod	550/0006-0
NCS 24/9-10S CATERPILLAR	m	2238,76	2238,76	ccp	sandstone/sand	100	Hermod	550/0006-1
NCS 24/9-10S CATERPILLAR	m	2246,7	2246,7	ccp	bulk fraction		Hermod	550/0007-0
NCS 24/9-10S CATERPILLAR	m	2246,7	2246,7	ccp	sandstone/sand	100	Hermod	550/0007-1
NCS 24/9-10S CATERPILLAR	m	2252,55	2252,55	ccp	bulk fraction		Hermod	550/0008-0
NCS 24/9-10S CATERPILLAR	m	2252,55	2252,55	ccp	sandstone/sand	100	Hermod	550/0008-1
NCS 24/9-10S CATERPILLAR	m	2257,4	2257,4	ccp	bulk fraction		Hermod	550/0009-0
NCS 24/9-10S CATERPILLAR	m	2257,4	2257,4	ccp	sandstone/sand	100	Hermod	550/0009-1
NCS 24/9-10S CATERPILLAR	m	2260,83	2260,83	ccp	bulk fraction		Hermod	550/0010-0
NCS 24/9-10S CATERPILLAR	m	2260,83	2260,83	ccp	sandstone/sand	100	Hermod	550/0010-1



## Pyrolysis GC data: PYRGCREL

Well name	Depth UOM	Upper depth	Lower depth	Sample type	Description	C1	C2-C5	C6-C14	C15+	GORP	Sample number
NCS 24/9-10S CATERPILLAR	m	2223,5	2223,5	ccp	sandstone/sand	0,62	7,28	13,32	78,78	0,09	550/0001-1
NCS 24/9-10S CATERPILLAR	m	2226,6	2226,6	ccp	sandstone/sand	0,78	7,09	13,7	78,43	0,09	550/0002-1
NCS 24/9-10S CATERPILLAR	m	2229,78	2229,78	ccp	sandstone/sand	0,6	6,71	11,6	81,09	0,08	550/0003-1
NCS 24/9-10S CATERPILLAR	m	2232,7	2232,7	ccp	sandstone/sand	0,56	5,79	11,52	82,13	0,07	550/0004-1
NCS 24/9-10S CATERPILLAR	m	2236,55	2236,55	ccp	sandstone/sand	0,58	6,99	12,49	79,94	0,08	550/0005-1
NCS 24/9-10S CATERPILLAR	m	2238,76	2238,76	ccp	sandstone/sand	1,09	10,82	21,53	66,55	0,14	550/0006-1
NCS 24/9-10S CATERPILLAR	m	2246,7	2246,7	ccp	sandstone/sand	3,23	25,24	44,91	26,62	0,4	550/0007-1
NCS 24/9-10S CATERPILLAR	m	2252,55	2252,55	ccp	sandstone/sand	2,7	54,88	30,71	11,71	1,36	550/0008-1
NCS 24/9-10S CATERPILLAR	m	2257,4	2257,4	ccp	sandstone/sand	0,87	8,17	18,17	72,78	0,1	550/0009-1
NCS 24/9-10S CATERPILLAR	m	2260,83	2260,83	ccp	sandstone/sand	1,32	10,5	25,73	62,44	0,13	550/0010-1

**Extraction data: EXTRACT**

<b>Well name</b>	<b>Depth UOM</b>	<b>Upper depth</b>	<b>Lower depth</b>	<b>Sample type</b>	<b>Description</b>	<b>Rock extracted (g)</b>	<b>EOM (mg)</b>	<b>SAT</b>	<b>ARO</b>	<b>NSO</b>	<b>ASP</b>	<b>TOC(e)</b>	<b>HC</b>	<b>Non-HC</b>	<b>Sample number</b>
NCS 24/9-10S	m	2224	2223,5	ccp	sandstone/sand	9,9	350,1	245,2	64,9	35,0	5,0	2,0	310,1	40,0	550/0001-1
NCS 24/9-10S	m	2233	2232,7	ccp	sandstone/sand	10,5	431,2	339,6	49,8	36,9	4,8	1,7	389,4	41,8	550/0004-1
NCS 24/9-10S	m	2247	2246,7	ccp	sandstone/sand	9,7	159,4	129,8	16,9	9,9	2,8	0,8	146,7	12,7	550/0007-1
NCS 24/9-10S	m	2261	2260,83	ccp	sandstone/sand	11,6	222,4	155,0	38,0	24,0	5,3	1,0	193,1	29,4	550/0010-1

Table 3b

Marathon

**Extraction ratios: EXTRRAT**

<b>Well name</b>	<b>Depth UOM</b>	<b>Upper depth</b>	<b>Lower depth</b>	<b>Sample type</b>	<b>Description</b>	<b>Sat/ EOM</b>	<b>Aro/ EOM</b>	<b>Asph/ EOM</b>	<b>NSO/ EOM</b>	<b>HC/ EOM</b>	<b>Non-HC /EOM</b>	<b>Sat/ Aro</b>	<b>HC/ Non-HC</b>	<b>Sample number</b>
NCS 24/9-10S	m	2223,5	2223,5	ccp	sandstone/sand	70,04	18,53	1,43	10,01	88,57	11,43	3,78	7,75	550/0001-1
NCS 24/9-10S	m	2232,7	2232,7	ccp	sandstone/sand	78,76	11,56	1,12	8,56	90,32	9,68	6,81	9,33	550/0004-1
NCS 24/9-10S	m	2246,7	2246,7	ccp	sandstone/sand	81,44	10,62	1,74	6,2	92,06	7,94	7,67	11,59	550/0007-1
NCS 24/9-10S	m	2260,83	2260,83	ccp	sandstone/sand	69,71	17,09	2,4	10,79	86,8	13,2	4,08	6,58	550/0010-1

Triterpanes, peak heights, SIR: TRITPHS

Well name	Depth UOM	Upper depth	Lower depth	Sample type	Description	26/3R																27Ts				27Tm		28ab		25nor		29ab		29Ts		30d		29ba		30ab		30ba		31abS		31abR		32abS		32abR		33abS		33abR		34abS		34abR		35abS		35abR		Sample number
						19/3	20/3	21/3 (N)	22/3 (O)	23/3 (P)	24/3 (Q)	25/3 (R)	24/4 (S)	(T)	26/3S	28/3R	28/3S	29/3R	29/3S	(A)	(B)	(Z)	30ab (Z1)	(C)	(C1)	(X)	(D)	(E)	(F)	30G	(G)	(H)	31ba (I)	(J1)	(J2)	(K1)	(K2)	(L1)	(L2)	(M1)	(M2)																							
NCS 24/9-10S	m	2224	2223,5	ccp	sandstone/sand	11506	12817	17840	7407	28285	19499	8373	11738	6386	7001	7772	7543	9496	7971	41443	20358	27233	16279	61592	29149	15389	16966	136992	11454	4902	49697	35046	3936	32217	22799	28866	17523	15361	8911	10087	5830	550/0001-1																						
NCS 24/9-10S	m	2233	2232,7	ccp	sandstone/sand	7499	9515	12814	5070	18629	11008	4358	6368	3270	3528	3254	3447	4261	3910	20483	10684	13049	8022	33704	14568	6673	8398	68845	6642	3510	23435	17391	1961	15067	10902	13104	7695	6444	3887	3912	2305	550/0004-1																						
NCS 24/9-10S	m	2247	2246,7	ccp	sandstone/sand	7311	10110	13115	4988	18104	9518	3606	5481	2623	2976	2749	2537	3271	2850	16394	9291	9091	5494	27694	10462	5193	6439	56505	5624	2954	18746	12390	1002	11165	7306	9094	5759	4596	2738	2916	1751	550/0007-1																						
NCS 24/9-10S	m	2261	2260,83	ccp	sandstone/sand	16506	18455	25384	9480	32078	20912	8885	14496	6161	6448	6812	6415	7661	6774	44003	28767	36513	6872	97673	33913	13089	20226	206487	16881	5602	73216	47841	5392	42205	29529	36484	22274	17101	10342	11270	6505	550/0010-1																						



**Triterpanes, m/z 177, peak height, SIR: TR177PHS**

<b>Well name</b>	<b>Depth UOM</b>	<b>Upper depth</b>	<b>Lower depth</b>	<b>Sample type</b>	<b>Description</b>	<b>%Lithology</b>	<b>25nor28 ab</b>	<b>25nor30 ab</b>	<b>Sample number</b>
NCS 24/9-10S	m	2224	2224	ccp	sandstone/sand	100	10209,2	15296,1	550/0001-1
NCS 24/9-10S	m	2233	2233	ccp	sandstone/sand	100	4317,7	7239,7	550/0004-1
NCS 24/9-10S	m	2247	2247	ccp	sandstone/sand	100	3429,4	5209,1	550/0007-1
NCS 24/9-10S	m	2261	2261	ccp	sandstone/sand	100	8436,2	6444,9	550/0010-1

**Triterpanes, peak height ratios, SIR: TRITRATS**

Well name	Depth UOM	Upper depth	Lower depth	Sample type	Description	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Sample number
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	
NCS 24/9-10S	m	2224	2224	ccp	sandstone/sand	0,49	0,33	0,12	0,45	0,31	0,11	0,2	0,44	0,17	0,14	0,92	0,35	0,14	58,56	550/0001-1
NCS 24/9-10S	m	2233	2233	ccp	sandstone/sand	0,52	0,34	0,12	0,49	0,33	0,1	0,19	0,39	0,16	0,16	0,91	0,36	0,15	58,02	550/0004-1
NCS 24/9-10S	m	2247	2247	ccp	sandstone/sand	0,57	0,36	0,13	0,49	0,33	0,09	0,16	0,33	0,14	0,17	0,91	0,35	0,14	60,45	550/0007-1
NCS 24/9-10S	m	2261	2261	ccp	sandstone/sand	0,65	0,4	0,11	0,47	0,32	0,06	0,18	0,37	0,15	0,1	0,92	0,35	0,12	58,84	550/0010-1

Steranes, peak heights, SIR: STERPHS

Well name	Depth UOM	Upper depth	Lower depth	Sample type	Description	21a (u)	22a (v)	27dbS (a)	27dbR (b)	27daR (c)	27daS (d)	28dbS (e)	28dbR (f)	28daR+ 27aaS (g)	29dbS+ 27bbR (h)	27bbS+ 28daS (i)	27aaR (j)	29dbR (k)	29daR (l)	28aaS (m)	28bbR+ 29daS (n)	28bbS (o)	28aaR (p)	29aaS (q)	29bbR (r)	29bbS (s)	29aaR (t)	Sample number
NCS 24/9-10S	m	2224	2224	ccp	sandstone/sand	28866	14829	41163	25267	10558	11934	22829	12764	14086	41715	20941	14633	19365	11068	9595	16363	23677	8172	12297	23556	18885	10394	550/0001-1
NCS 24/9-10S	m	2233	2233	ccp	sandstone/sand	17908	9014	20946	12040	4840	5335	10526	5273	5827	19077	9238	6509	8237	4132	3472	6608	10096	3285	4791	10947	8328	4743	550/0004-1
NCS 24/9-10S	m	2247	2247	ccp	sandstone/sand	17463	8319	16248	9488	3870	4230	8418	4342	5049	15225	7638	5836	6440	3528	3260	5754	8536	2632	3849	8466	6494	3811	550/0007-1
NCS 24/9-10S	m	2261	2261	ccp	sandstone/sand	37639	20954	40974	23343	9331	10443	20556	10770	17435	48683	27551	19406	18246	10293	10783	21976	30437	10469	16439	31642	25518	14479	550/0010-1

**Steranes, m/z 218, peak height, SIR: ST218PHS**

<b>Well name</b>	<b>Depth UOM</b>	<b>Upper depth</b>	<b>Lower depth</b>	<b>Sample type</b>	<b>Description</b>	<b>27bbR (h)</b>	<b>27bbS (i)</b>	<b>28bbR (n)</b>	<b>28bbS (o)</b>	<b>29bbR (r)</b>	<b>29bbS (s)</b>	<b>30bbR (x)</b>	<b>30bbS (y)</b>	<b>Sample number</b>
NCS 24/9-10S	m	2224	2224	ccp	sandstone/sand	37397	27870	22737	27667	32161	28340	10467	9381	550/0001-1
NCS 24/9-10S	m	2233	2233	ccp	sandstone/sand	17789	12846	10030	12909	16147	13474	4747	4422	550/0004-1
NCS 24/9-10S	m	2247	2247	ccp	sandstone/sand	14494	10424	8066	10267	11767	10278	3673	3397	550/0007-1
NCS 24/9-10S	m	2261	2261	ccp	sandstone/sand	52097	40687	31263	38341	44631	39804	14254	12866	550/0010-1

**Steranes, peak height ratios, SIR: STERRATS**

<b>Well name</b>	<b>Depth UOM</b>	<b>Upper depth</b>	<b>Lower depth</b>	<b>Sample type</b>	<b>Description</b>	<b>Ratio 1</b>	<b>Ratio 2</b>	<b>Ratio 3</b>	<b>Ratio 4</b>	<b>Ratio 5</b>	<b>Ratio 6</b>	<b>Ratio 7</b>	<b>Ratio 8</b>	<b>Ratio 9</b>	<b>Ratio 10</b>	<b>Sample number</b>
NCS 24/9-10S	m	2224	2224	ccp	sandstone/sand	0,74	54,2	78,9	1	0,78	0,4	0,28	0,65	1,18	4,08	550/0001-1
NCS 24/9-10S	m	2233	2233	ccp	sandstone/sand	0,76	50,3	80,2	1,13	0,8	0,48	0,36	0,67	1,01	4,06	550/0004-1
NCS 24/9-10S	m	2247	2247	ccp	sandstone/sand	0,74	50,3	79,6	1,09	0,8	0,53	0,4	0,66	1,01	3,93	550/0007-1
NCS 24/9-10S	m	2261	2261	ccp	sandstone/sand	0,68	53,2	78,7	0,85	0,78	0,4	0,28	0,65	1,14	3,95	550/0010-1

Aromatic GCMS, peak heights, SIR: AROMSPHS

Well name	Depth UOM	Upper depth	Lower depth	Sample type	Description	2.6+2.7		1.3+1.7		2.3+1.4		1.3.5+ 1.4.6		1.6.7+		P										Sample number							
						2MN	1MN	2EN	1EN	DMN	DMN	1.6DMN	DMN	1.5DMN	1.2DMN	1.3.7TMN	1.3.6TMN	TMN	2.3.6TMN	1.2.7TMN	1.2.6TMN	1.2.4TMN	1.2.5TMN	3MP	2MP		9MP	1MP	DBT	4MDBT	2+3MDBT	1MDBT	
NCS 24/9-10S	m	2224	2224	ccp	sandstone/sand	1315569	1566399	245757	123207	1252528	2712979	2245368	903647	636223	457314	1241653	1491049	1445384	807507	804972	440894	148453	516523	1003643	449435	484276	1000405	690362	273449	462365	112247	147327	550/0001-1
NCS 24/9-10S	m	2233	2233	ccp	sandstone/sand	1893052	1659124	351910	160435	1755102	3644006	2764983	1221237	899714	544168	1196582	1530192	1656951	865625	741300	455231	134987	495871	937788	364247	358658	716485	598528	223121	345464	82197	99620	550/0004-1
NCS 24/9-10S	m	2247	2247	ccp	sandstone/sand	3691050	3532196	515957	206444	2679005	5537663	4750916	1827390	1504539	706695	1407937	2658690	2607637	1306889	1199462	621693	222429	646896	1308163	442229	409043	821714	637141	249726	508553	103738	138090	550/0007-1
NCS 24/9-10S	m	2261	2261	ccp	sandstone/sand	1488487	1689919	244114	127831	1177196	2566064	2066719	880592	592948	447082	911590	1128950	1149886	588735	611409	349772	126096	449739	695759	285021	318320	637910	431384	169493	288678	76673	116258	550/0010-1

## Triaromatic steranes, peak heights: TASTPH

Well name	Depth UOM	Upper depth	Lower depth	Sample type	Description	a1	b1	c1	d1	e1	f1	g1	Sample number
NCS 24/9-10S	m	2224	2224	ccp	sandstone/sand	51629	50604	25098	73394	38249	37321	31073	550/0001-1
NCS 24/9-10S	m	2233	2233	ccp	sandstone/sand	42617	50383	31103	77110	44226	40671	38700	550/0004-1
NCS 24/9-10S	m	2247	2247	ccp	sandstone/sand	33229	38964	17488	45280	24867	22935	20059	550/0007-1
NCS 24/9-10S	m	2261	2261	ccp	sandstone/sand	52064	62684	32968	95308	55333	52181	47550	550/0010-1

## Triaromatic steranes, peak height ratios: TASTRAT

Well name	Depth UOM	Upper depth	Lower depth	Sample type	Description	a1/ (a1+g1)	b1/ (b1+g1)	(a1+b1)/ (a1+b1+c1+d 1+e1+f1+g1)	a1/ (a1+e1+f1+g1)	a1/ (a1+d1)	Sample number
NCS 24/9-10S	m	2224	2224	ccp	sandstone/sand	0,62	0,62	0,33	0,33	0,41	550/0001-1
NCS 24/9-10S	m	2233	2233	ccp	sandstone/sand	0,52	0,57	0,29	0,26	0,36	550/0004-1
NCS 24/9-10S	m	2247	2247	ccp	sandstone/sand	0,62	0,66	0,36	0,33	0,42	550/0007-1
NCS 24/9-10S	m	2261	2261	ccp	sandstone/sand	0,52	0,57	0,29	0,25	0,35	550/0010-1



**Monoaromatic steranes, peak heights: MASTPH**

<b>Well name</b>	<b>Depth UOM</b>	<b>Upper depth</b>	<b>Lower depth</b>	<b>Sample type</b>	<b>Description</b>	<b>A1</b>	<b>B1</b>	<b>C1</b>	<b>D1</b>	<b>E1</b>	<b>F1</b>	<b>G1</b>	<b>H1</b>	<b>I1</b>	<b>Sample number</b>
NCS 24/9-10S	m	2224	2224	ccp	sandstone/sand	27074	17083	14483	12527	19530	4767	17013	11569	3477	550/0001-1
NCS 24/9-10S	m	2233	2233	ccp	sandstone/sand	17783	12707	12620	10585	13404	3961	13137	9637	3442	550/0004-1
NCS 24/9-10S	m	2247	2247	ccp	sandstone/sand	21429	14136	9874	8182	12217	2970	10854	7755	2575	550/0007-1
NCS 24/9-10S	m	2261	2261	ccp	sandstone/sand	27451	18020	16644	13806	20062	4598	18283	13242	4391	550/0010-1

**Monoaromatic steranes, peak height ratios: MASTRAT**

<b>Well name</b>	<b>Depth UOM</b>	<b>Upper depth</b>	<b>Lower depth</b>	<b>Sample type</b>	<b>Description</b>	<b>A1/ (A1+E1)</b>	<b>B1/ (B1+E1)</b>	<b>A1/ (A1+E1+G1)</b>	<b>(A1+B1)/ (A1+B1+C1+D1+E1 +F1+G1+H1+I1)</b>	<b>Sample number</b>
NCS 24/9-10S	m	2224	2224	ccp	sandstone/sand	0,58	0,47	0,43	0,35	550/0001-1
NCS 24/9-10S	m	2233	2233	ccp	sandstone/sand	0,57	0,49	0,4	0,31	550/0004-1
NCS 24/9-10S	m	2247	2247	ccp	sandstone/sand	0,64	0,54	0,48	0,4	550/0007-1
NCS 24/9-10S	m	2261	2261	ccp	sandstone/sand	0,58	0,47	0,42	0,33	550/0010-1