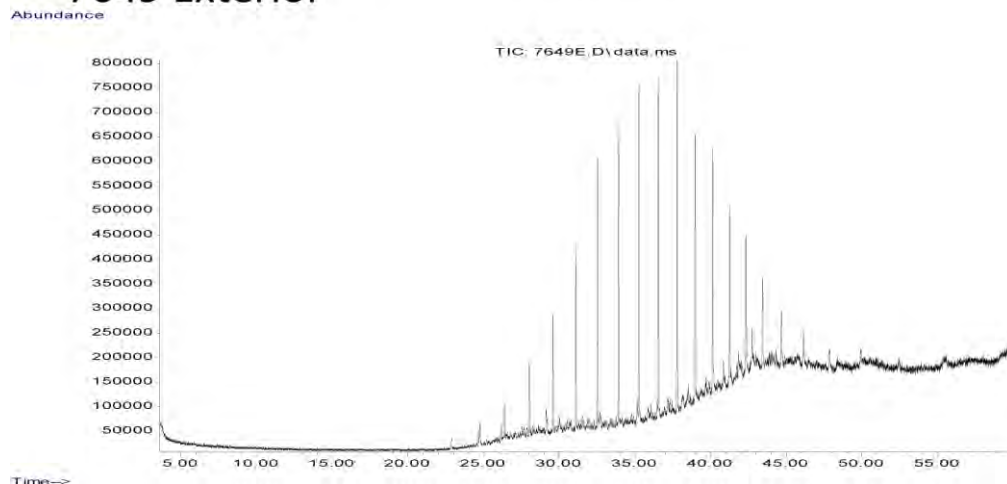


**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007649\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7649 Exterior



## Data Sheet:

(default units ppb)

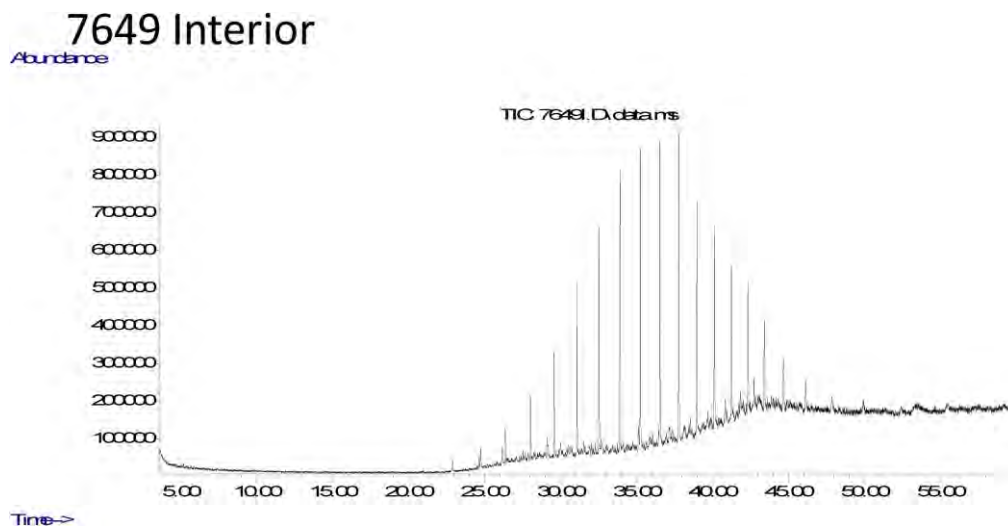
Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
Ratio	nC18/Phytane		0.483446909075292		ug/L	Y
Ratio	Pristane/Phytane		0.645056127824339		ug/L	Y
Aliph	Botryococcane	39.4290			ug/L	U
Aliph	nC10	0.0000			ug/L	U
Aliph	nC11	0.0000			ug/L	U
Aliph	nC12	12.2580			ug/L	U
Aliph	nC13	14.5950			ug/L	U
Aliph	nC14	16.8180			ug/L	U
Aliph	nC15	18.9260			ug/L	U
Aliph	nC16	20.9240			ug/L	U
Aliph	nC17	22.8190			ug/L	U
Aliph	nC18	24.6230	136430		ug/L	Z
Aliph	nC19	26.3410	382373		ug/L	Z
Aliph	nC20	27.9810	710175		ug/L	Z
Aliph	nC21	29.5510	1170748		ug/L	Z
Aliph	nC22	31.0540	1882232		ug/L	Z
Aliph	nC23	32.4960	2679179		ug/L	Z
Aliph	nC24	33.8800	3084922		ug/L	Z
Aliph	nC25	35.2120	3525771		ug/L	Z
Aliph	nC26	36.4960	3302825		ug/L	Z
Aliph	nC27	37.7300	3585493		ug/L	Z
Aliph	nC28	38.9260	2811635		ug/L	Z
Aliph	nC29	40.0740	2453590		ug/L	Z
Aliph	nC30	41.1930	1817556		ug/L	Z
Aliph	nC31	42.2750	1485926		ug/L	Z
Aliph	nC32	43.3560	1086777		ug/L	Z
Aliph	nC33	44.5840	695058		ug/L	Z
Aliph	nC34	46.0130	441213		ug/L	Z
Aliph	nC35	47.7140	333460		ug/L	Z
Aliph	nC36	49.7870	214667		ug/L	Z
Aliph	nC37	52.2630	231821		ug/L	Z
Aliph	nC38	55.2360			ug/L	U
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010			ug/L	U

**Results for: GCMS with Full Scan**

Aliph	Phytane	24.7190	282202	ug/L	Z
Aliph	Pristane	22.8660	182036	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007649 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007649\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC18/Phytane		0.501659833933882		ug/L	Y
Ratio	Pristane/Phytane		0.630962856403403		ug/L	Y
Aliph	Botryococcane	39.4290			ug/L	U
Aliph	nC10	0.0000			ug/L	U
Aliph	nC11	0.0000			ug/L	U
Aliph	nC12	12.2580			ug/L	U
Aliph	nC13	14.5950			ug/L	U
Aliph	nC14	16.8180			ug/L	U
Aliph	nC15	18.9260			ug/L	U
Aliph	nC16	20.9240			ug/L	U
Aliph	nC17	22.8190			ug/L	U
Aliph	nC18	24.6230	165554		ug/L	Z
Aliph	nC19	26.3410	451173		ug/L	Z
Aliph	nC20	27.9810	833228		ug/L	Z
Aliph	nC21	29.5510	1418593		ug/L	Z
Aliph	nC22	31.0540	2190583		ug/L	Z
Aliph	nC23	32.4960	3050016		ug/L	Z
Aliph	nC24	33.8800	3586412		ug/L	Z
Aliph	nC25	35.2120	3886880		ug/L	Z
Aliph	nC26	36.4960	3940711		ug/L	Z
Aliph	nC27	37.7300	4125323		ug/L	Z
Aliph	nC28	38.9260	3226926		ug/L	Z
Aliph	nC29	40.0740	2776692		ug/L	Z
Aliph	nC30	41.1930	2024243		ug/L	Z
Aliph	nC31	42.2750	1649939		ug/L	Z
Aliph	nC32	43.3560	1209957		ug/L	Z
Aliph	nC33	44.5840	828598		ug/L	Z
Aliph	nC34	46.0130	598529		ug/L	Z
Aliph	nC35	47.7140	450438		ug/L	Z
Aliph	nC36	49.7870	353064		ug/L	Z
Aliph	nC37	52.2630	170025		ug/L	Z
Aliph	nC38	55.2360			ug/L	U
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010			ug/L	U



**Results for: GCMS with Full Scan**

Aliph	Phytane	24.7190	330012	ug/L	Z
Aliph	Pristane	22.8660	208225	ug/L	Z

**Qualifier codes:**

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns > 25%
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)

Sample ID : **W13/007852A**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

2 samples. Part A

**Location:** Upper Intertidal

**Local Date Time:** 11/10/2016 1:00:17 PM

**Type:** Waxy Bitumen

**Family:** Type III waxy bitumen (no botryococcane, low

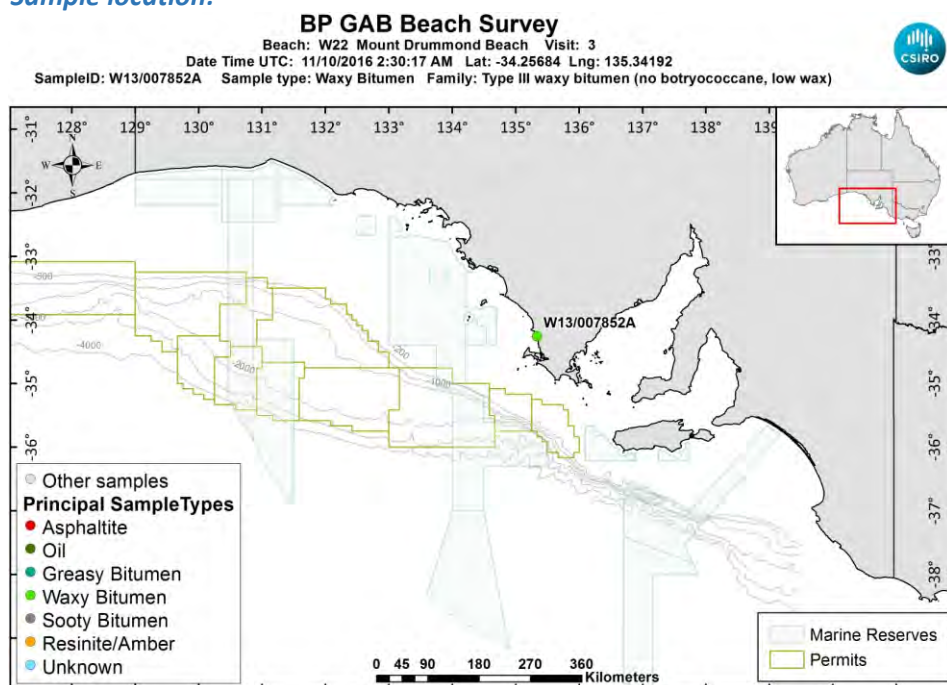
**Size (cm):** 3

**Latitude (Y):** -34.256838

**Weight (gm):** 4.38857

**Longitude (X):** 135.341918

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007852A\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007852\\_146A6649.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007852\\_AB\\_Photo02.jpg](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007852A\_SPE\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			84.8355645881961	percent	Y
Inorg	Hydrogen			8.83003896620278	percent	Y
Inorg	Nitrogen			0.13	percent	Y
Inorg	Sulphur			2.01986239581051	percent	Y

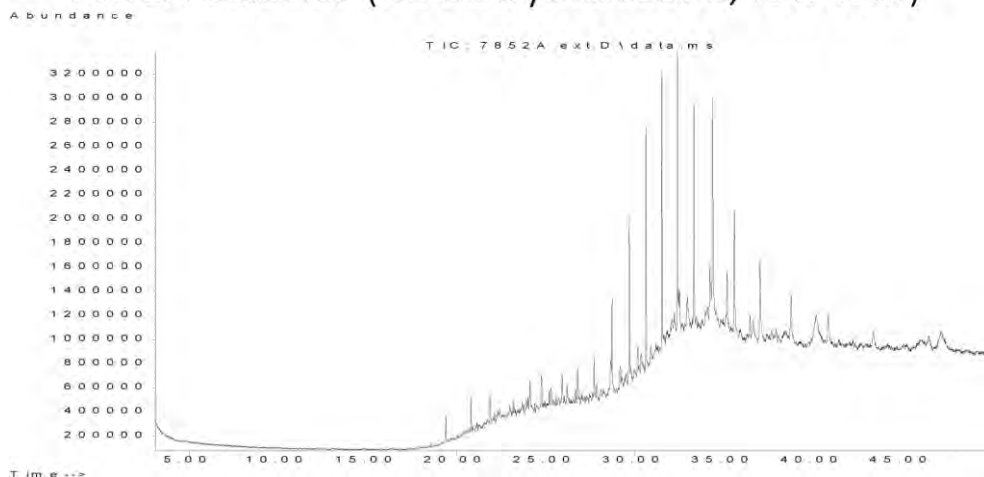
### Results for: GCMS with Full Scan

Unique ID: W13/007852A\_DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007852A\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7852A exterior (no botryococcane, low wax)



## Data Sheet:

(default units ppb)

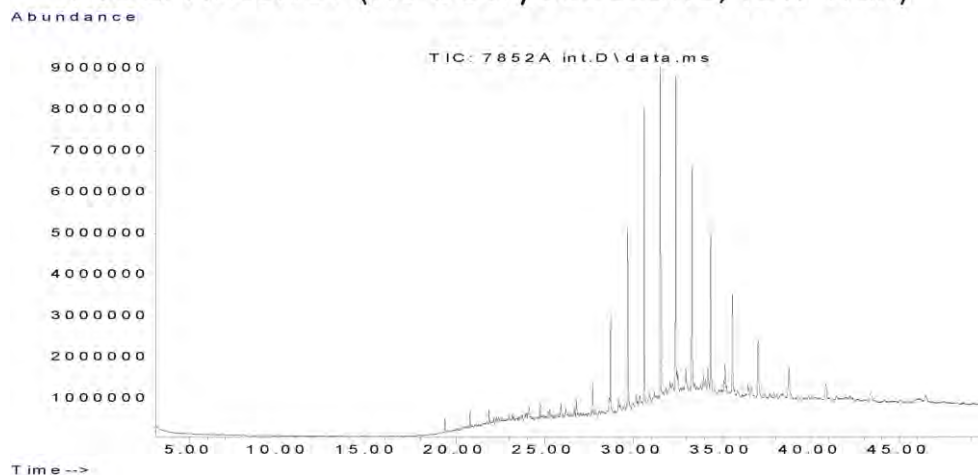
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620	475884			Z
Aliph	nC24	27.7060	1607618			Z
Aliph	nC25	28.7100	3874090			Z
Aliph	nC26	29.6680	7512549			Z
Aliph	nC27	30.6080	10746591			Z
Aliph	nC28	31.5080	10880435			Z
Aliph	nC29	32.3700	13574904			Z
Aliph	nC30	33.2910	10447254			Z
Aliph	nC31	34.3470	13640373			Z
Aliph	nC32	35.5720	7615912			Z
Aliph	nC33	37.0130	5940821			Z
Aliph	nC34	38.7280	3896740			Z
Aliph	nC35	40.8080	2790132			Z
Aliph	nC36	43.3510	2213672			Z
Aliph	nC37	46.4710	1639989			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830	173559			Z
Aliph	Phytane	20.7870	1778169			Z
Aliph	Pristane	19.3870	1453019			Z

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007852A DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007852A\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior



## Results for: GCMS with Full Scan

7852A interior (no botryococcane, low wax)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620	903662			Z
Aliph	nC24	27.7060	3833006			Z
Aliph	nC25	28.7100	11374446			Z
Aliph	nC26	29.6680	24072507			Z
Aliph	nC27	30.6080	37050172			Z
Aliph	nC28	31.5080	37818157			Z
Aliph	nC29	32.3700	40771856			Z
Aliph	nC30	33.2910	30207093			Z
Aliph	nC31	34.3470	25977564			Z
Aliph	nC32	35.5720	18479583			Z
Aliph	nC33	37.0130	12297795			Z
Aliph	nC34	38.7280	7631784			Z
Aliph	nC35	40.8080	4944177			Z
Aliph	nC36	43.3510	3387842			Z
Aliph	nC37	46.4710	2216355			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870	2654720			Z
Aliph	Pristane	19.3870	2258456			Z

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007852B**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

Part B subsample

**Location:** Upper Intertidal

**Local Date Time:** 11/10/2016 1:00:17 PM

**Type:** Waxy Bitumen

**Family:** Type III waxy bitumen (no botryococcane, low

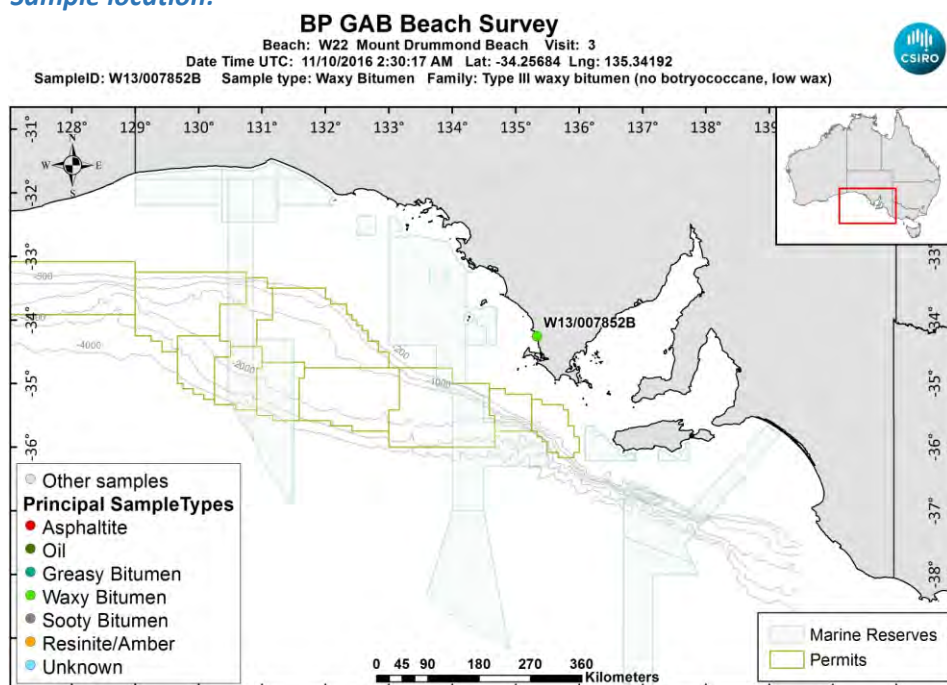
**Size (cm):** 0.8

**Latitude (Y):** -34.256838

**Weight (gm):** 0.55566

**Longitude (X):** 135.341918

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007852B\\_Location.jpg](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007852\\_AB\\_Photo02.jpg](#)

**Sample ID : W13/007852B**

**Beach W22: Mount Drummond Beach Visit: 3**

**Analyses Requested**

Split: Analysis: Sent:  
1 Bitumen Determination NO

**Analyses Completed:**

Analysis: Instrument/Type:  
Whole Oils GCMS with Full Scan Run: 3

**Sample Analyses Completed:**

**Results for: GCMS with Full Scan**

**Unique ID: W13/007852B\_DISS\_GCMS-Scan/03**

**Instrument / Type:** GCMS with Full Scan Run: 3

**for Analysis:** Whole Oils

**Preparation:** Dissolved in solvent

**Analysis Date:** 30/10/2017

**Method ID/s:**

**Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007852B\\_bulk\\_WholeOil.jpg](#)

**Sample Volume:**

**Volume Units:**

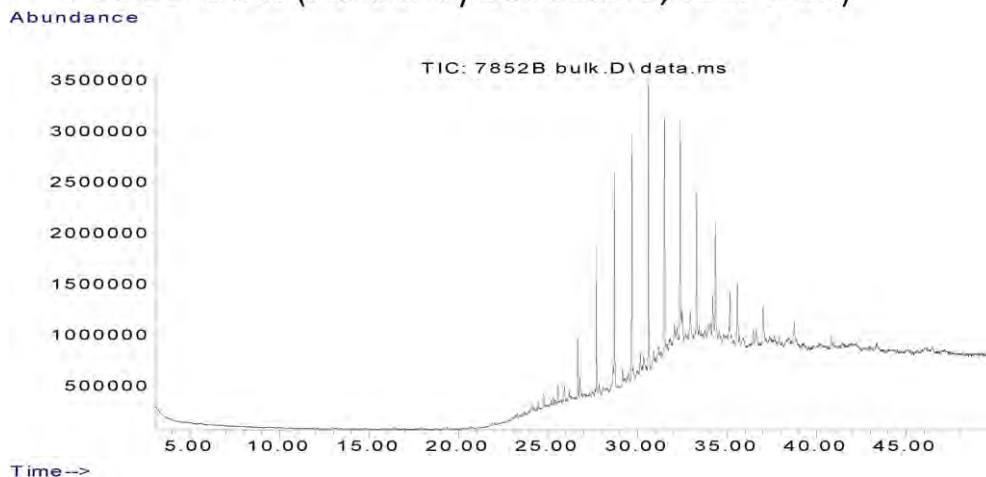
**Extract Volume:**

**Dilution Factor:**

**Comment:** Bulk

## Results for: GCMS with Full Scan

7852B bulk (no botryococcane, low wax)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410	374938			Z
Aliph	nC22	25.5760	1025675			Z
Aliph	nC23	26.6620	2864458			Z
Aliph	nC24	27.7060	6871983			Z
Aliph	nC25	28.7100	10050855			Z
Aliph	nC26	29.6680	11458357			Z
Aliph	nC27	30.6080	14089894			Z
Aliph	nC28	31.5080	11995461			Z
Aliph	nC29	32.3700	11793196			Z
Aliph	nC30	33.2910	7982491			Z
Aliph	nC31	34.3470	7629284			Z
Aliph	nC32	35.5720	5013474			Z
Aliph	nC33	37.0130	3287413			Z
Aliph	nC34	38.7280	2212703			Z
Aliph	nC35	40.8080	1140047			Z
Aliph	nC36	43.3510	945161			Z
Aliph	nC37	46.4710	767927			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007853A**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

2 samples close together. Part A

**Location:** Upper Intertidal

**Local Date Time:** 11/10/2016 1:03:17 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

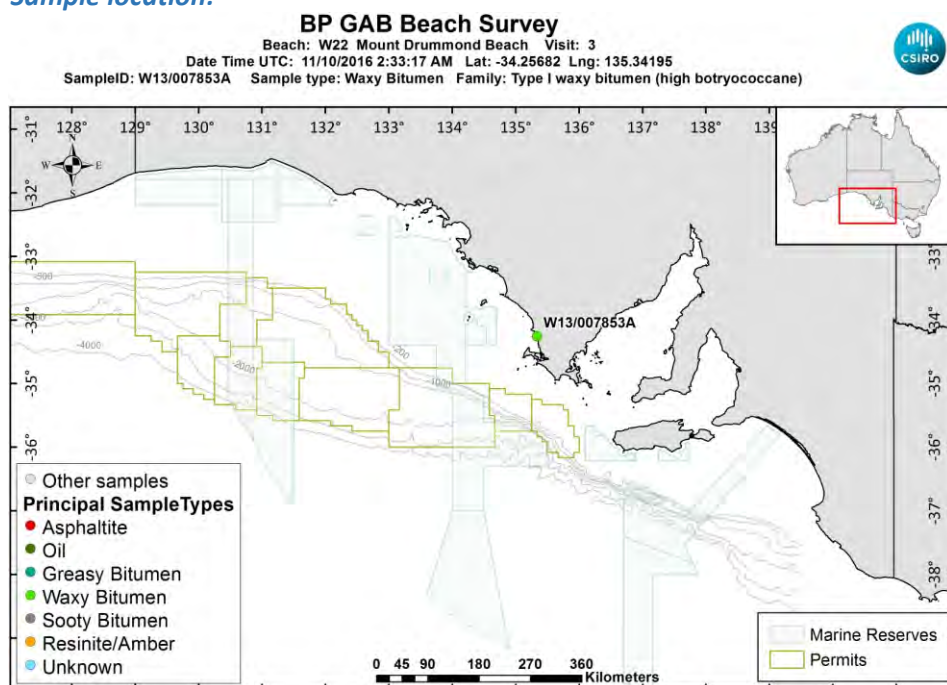
**Size (cm):** 3

**Latitude (Y):** -34.256825

**Weight (gm):** 2.72788

**Longitude (X):** 135.341953

**Sample location:**



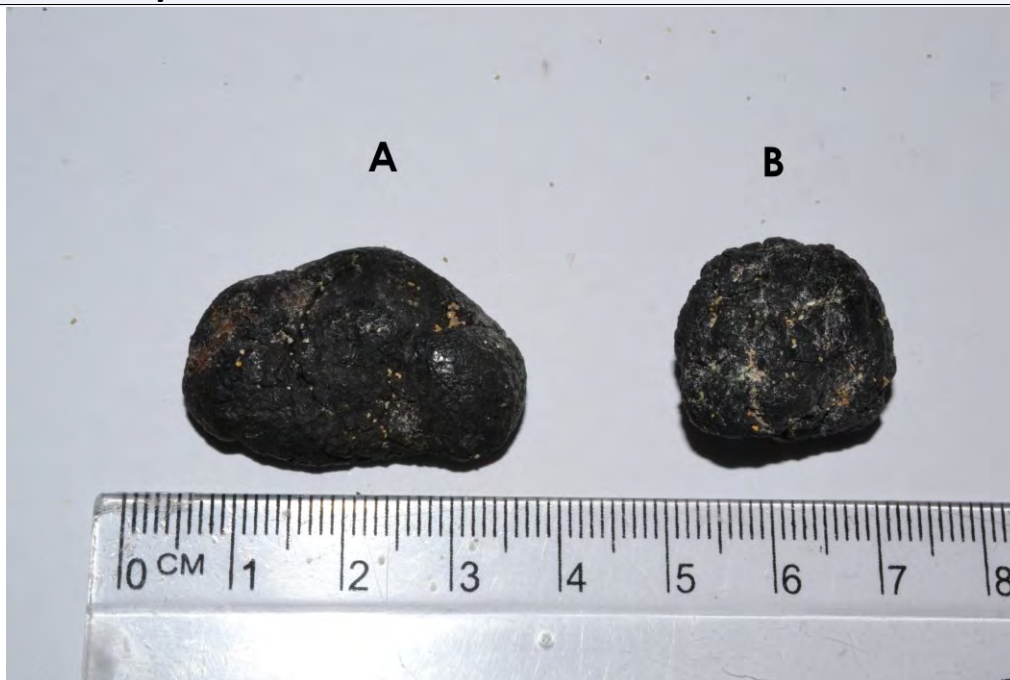
[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007853A\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007853\\_146A6650.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007853\\_AB\\_Photo02.jpg](#)

### Analyses Requested

Split: Analysis: Sent:  
1 Bitumen Determination YES

### Analyses Completed:

Analysis: Instrument/Type:  
Elemental CHNS Elemental Analyser Run: 1  
Whole Oils GCMS with Full Scan Run: 3

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007853A\_SPE\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

Sample Volume: Volume Units: Extract Volume: Dilution Factor:  
Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			87.1931693897966	percent	Y
Inorg	Hydrogen			8.39980914512923	percent	Y
Inorg	Nitrogen			0.22	percent	Y
Inorg	Sulphur			1.86699433173214	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007853A DISS GCMS-Scan/03

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Dissolved in solvent

Method ID/s:

Sample Volume: Volume Units: Extract Volume: Dilution Factor:  
Comment:

## Results for: GCMS with Full Scan

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	23457065			Z
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060	564235			Z
Aliph	nC25	28.7100	4218997			Z
Aliph	nC26	29.6680	16374651			Z
Aliph	nC27	30.6080	35040956			Z
Aliph	nC28	31.5080	41567843			Z
Aliph	nC29	32.3700	42771733			Z
Aliph	nC30	33.2910	34931492			Z
Aliph	nC31	34.3470	30028407			Z
Aliph	nC32	35.5720	22141682			Z
Aliph	nC33	37.0130	16006368			Z
Aliph	nC34	38.7280	10635422			Z
Aliph	nC35	40.8080	6904324			Z
Aliph	nC36	43.3510	5072073			Z
Aliph	nC37	46.4710	4470004			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

**Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007853B**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

Part B subsample

**Location:** Upper Intertidal

**Local Date Time:** 11/10/2016 1:03:17 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

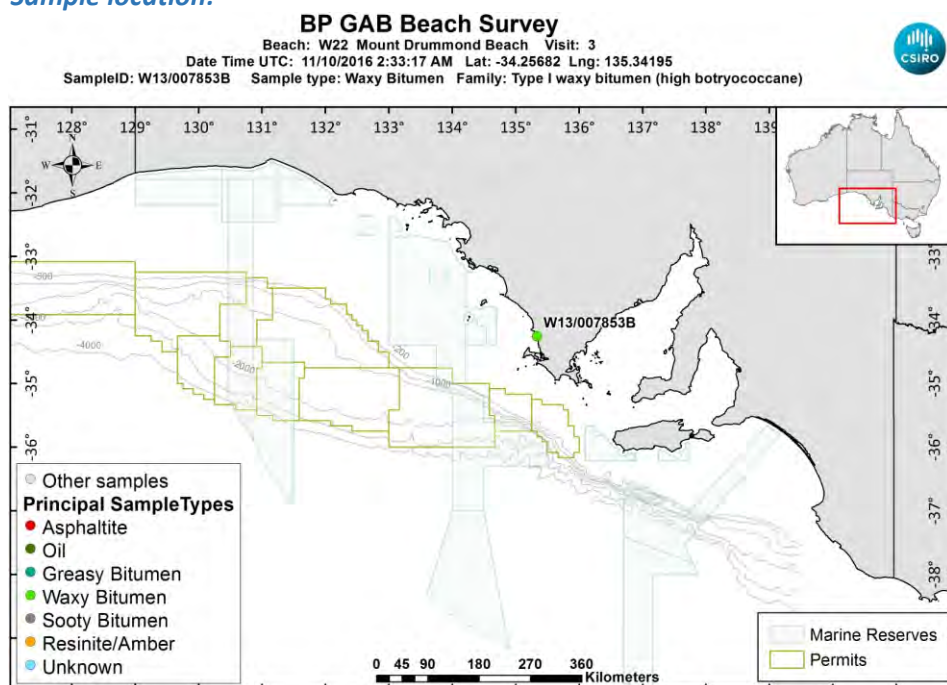
**Size (cm):** 2.2

**Latitude (Y):** -34.256825

**Weight (gm):** 2.98834

**Longitude (X):** 135.341953

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007853B\\_Location.jpg](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007853\\_AB\\_Photo02.jpg](#)

**Sample ID : W13/007853B****Beach W22: Mount Drummond Beach Visit: 3****Analyses Requested**

Split: Analysis: Sent:  
1 Bitumen Determination NO

**Analyses Completed:**

Analysis: Instrument/Type:  
Elemental CHNS Elemental Analyser Run: 1  
Whole Oils GCMS with Full Scan Run: 3

**Sample Analyses Completed:****Results for: Elemental Analyser****Unique ID: W13/007853B\_SPE\_ELEM-AN/01****Instrument / Type:** Elemental Analyser Run: 1**for Analysis:** Elemental CHNS**Analysis Date:** 30/10/2017**Linked Image:** [None available](#)**Preparation:** Solid Phase Extract**Method ID/s:**

**Sample Volume:** **Volume Units:** **Extract Volume:** **Dilution Factor:**  
**Comment:**

**Data Sheet:***(default units ppb)*

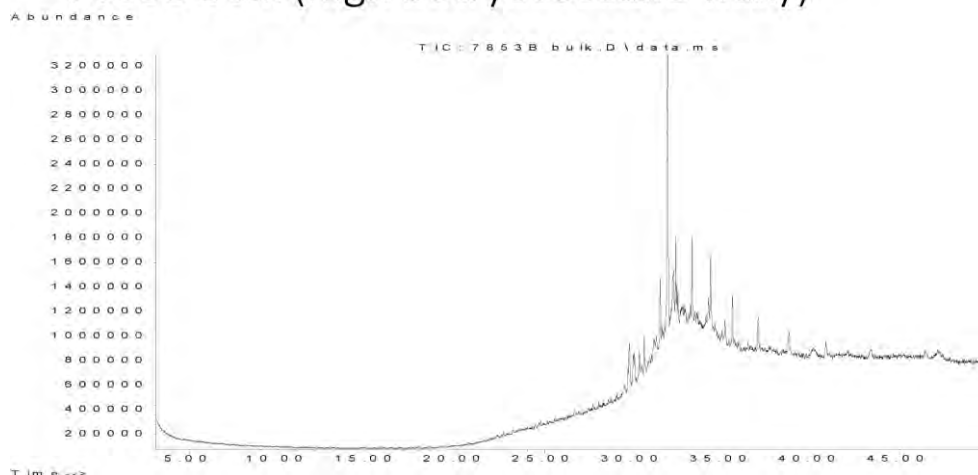
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
<a href="#">Inorg</a>	Carbon			92.6630568856285	percent	Y
<a href="#">Inorg</a>	Hydrogen			9.54908946322068	percent	Y
<a href="#">Inorg</a>	Nitrogen			0.24	percent	Y
<a href="#">Inorg</a>	Sulphur			2.27994366682268	percent	Y

**Results for: GCMS with Full Scan****Unique ID: W13/007853B\_DISS\_GCMS-Scan/03****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Analysis Date:** 30/10/2017**Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007853B\\_bulk\\_WholeOil.jpg](#)**Preparation:** Dissolved in solvent**Method ID/s:**

**Sample Volume:** **Volume Units:** **Extract Volume:** **Dilution Factor:**  
**Comment:** Bulk

## Results for: GCMS with Full Scan

7853B bulk (high botryococcane waxy)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	18439840			Z
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080	1351084			Z
Aliph	nC28	31.5080	2584379			Z
Aliph	nC29	32.3700	2689789			Z
Aliph	nC30	33.2910	3499576			Z
Aliph	nC31	34.3470	3635325			Z
Aliph	nC32	35.5720	2931630			Z
Aliph	nC33	37.0130	2299160			Z
Aliph	nC34	38.7280	2119803			Z
Aliph	nC35	40.8080	1512650			Z
Aliph	nC36	43.3510	1144395			Z
Aliph	nC37	46.4710	1308018			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007854**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 11/10/2016 1:08:52 PM

**Type:** Resinite/Amber

**Family:** Resin/Amber

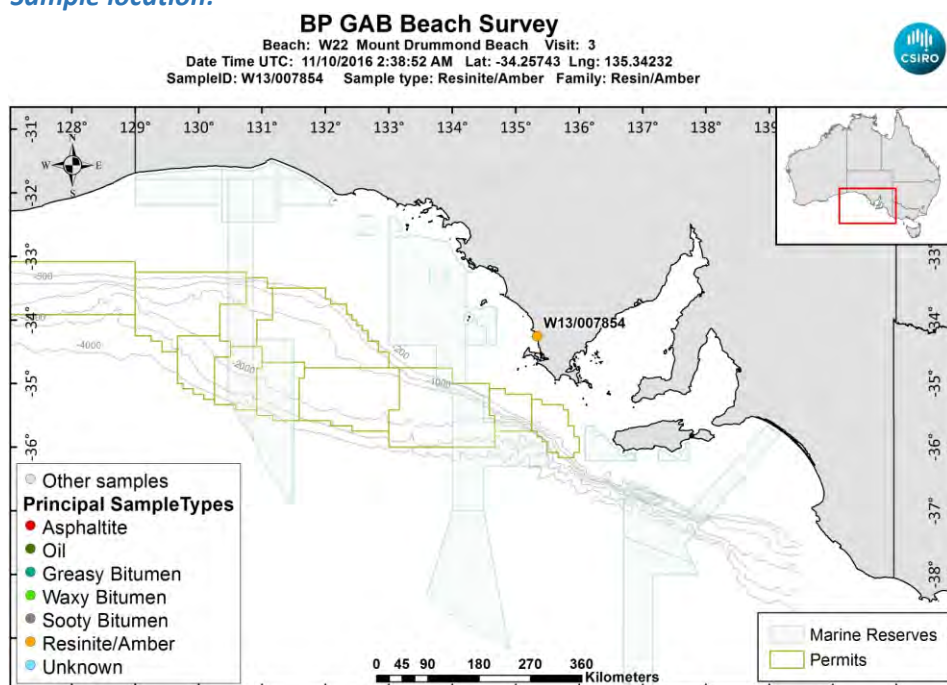
**Size (cm):** 4

**Latitude (Y):** -34.257433

**Weight (gm):** 7.57428

**Longitude (X):** 135.342322

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007854\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007854\\_146A6652.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB BCH1\Samples\W13 007854 Photo02.JPG](#)

**Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

**Analyses Completed:**

Analysis:	Instrument/Type:
Whole Oils	GCMS with Full Scan Run: 1

**Sample Analyses Completed:****Results for: GCMS with Full Scan**

**Unique ID:** W13/007854 DISS GCMS-Scan/01

**Instrument / Type:** GCMS with Full Scan Run: 1

**for Analysis:** Whole Oils

**Analysis Date:** 30/10/2017

**Linked Image:** [None available](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**Sample Volume:**

**Volume Units:**

**Extract Volume:**

**Dilution Factor:**

**Comment:**

## Results for: GCMS with Full Scan

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280				U
Aliph	nC35	40.8080				U
Aliph	nC36	43.3510				U
Aliph	nC37	46.4710				U
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

**Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007855**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 11/10/2016 1:11:03 PM

**Type:** Asphaltite

**Family:** Unknown

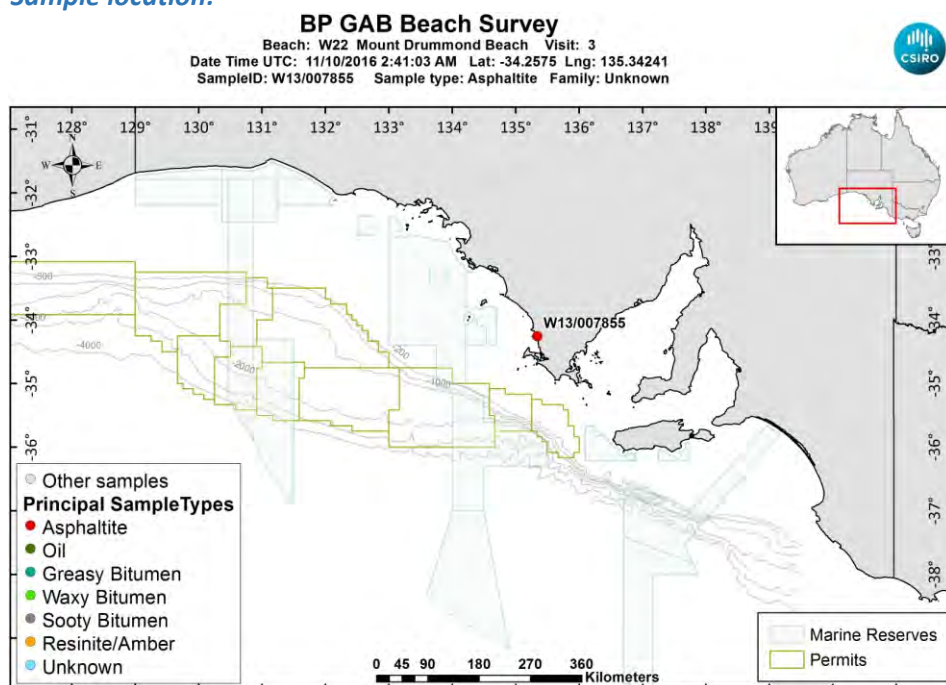
**Size (cm):** 3.5

**Latitude (Y):** -34.257495

**Weight (gm):** 9.35629

**Longitude (X):** 135.342405

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007855\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007855\\_146A6655.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007855\\_Photo02.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
4	Biomarkers	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 2
Biomarkers	Gas Chromatography Mass Spectrometry Run: 1
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Gas Chromatography Mass Spectrometry

**Unique ID:** W13/007855 DISS GC-MS/01

**Instrument / Type:** Gas Chromatography Mass Spectrometry Run: 1

**for Analysis:** Biomarkers

**Analysis Date:** 18/07/2017

**Linked Image:** [None available](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**Sample Volume:**

**Volume Units:**

**Extract Volume:**

**Dilution Factor:**

**Comment:** External Ratios only

## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			32.0393481478746	ratio	Y
BiomRatio	% C27 abb 20(R+S)			24.4518754455289	ratio	Y
BiomRatio	% C28 aaa 20R			26.2397234264365	ratio	Y
BiomRatio	% C28 abb 20(R+S)			24.8179222605631	ratio	Y
BiomRatio	% C29 aaa 20R			41.7209284256889	ratio	Y
BiomRatio	% C29 abb 20(R+S)			50.7302022939079	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.008574603164321	ratio	Y
BiomRatio	25-Nor/C30H			8.60015935247259E-03	ratio	Y
BiomRatio	C19t/C23t			0.153559365335884	ratio	Y
BiomRatio	C22t/C21t			9.00083110167144E-02	ratio	Y
BiomRatio	C22t/C24t			7.70462063813894E-02	ratio	Y
BiomRatio	C23t/C30H			1.28383203222687E-02	ratio	Y
BiomRatio	C24t/C23t			0.751642064173442	ratio	Y
BiomRatio	C24Tet/C23t			0.808133230744551	ratio	Y
BiomRatio	C24Tet/C26t			0.860196999162042	ratio	Y
BiomRatio	C24Tet/C30H			1.03750732793684E-02	ratio	Y
BiomRatio	C26t/C25t			1.33262399393199	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			6.14332822866449E-02	ratio	Y
BiomRatio	C27 Dia/Ster			5.62430411966804E-02	ratio	Y
BiomRatio	C28BNH/C30H			6.81262140843375E-03	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			2.07469575930561	ratio	Y
BiomRatio	C29H/C30H			0.537422030008318	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			7.97927355570738E-02	ratio	Y
BiomRatio	C30DiaH/C30H			2.52797659545361E-02	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			7.86882395197093E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.657844585396936	ratio	Y
BiomRatio	Gam/C30H			0.270703397649332	ratio	Y
BiomRatio	Gam/C31HR			1.21225638710737	ratio	Y
BiomRatio	Ole/C30H			3.86059225404801E-02	ratio	Y
BiomRatio	Sterane/hopane			0.357325574633753	ratio	Y
BiomRatio	Steranes/Terpanes			0.347043405913347	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			2.96279040177852E-02	ratio	Y

## Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007855 DISS GC-MS/02

Instrument / Type: Gas Chromatography Mass Spectrometry Run: 2

for Analysis: Biomarkers

Preparation: Dissolved in solvent

Analysis Date: 18/07/2017

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: Internal Ratios only

## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			31.6282163520329	ratio	Y
BiomRatio	% C27 abb 20(R+S)			24.6651769447895	ratio	Y
BiomRatio	% C28 aaa 20R			25.9054288799501	ratio	Y
BiomRatio	% C28 abb 20(R+S)			24.6232646001921	ratio	Y
BiomRatio	% C29 aaa 20R			42.4663547680171	ratio	Y
BiomRatio	% C29 abb 20(R+S)			50.7115584550185	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			6.89966128055174E-03	ratio	Y
BiomRatio	25-Nor/C30H			8.84656965780054E-03	ratio	Y
BiomRatio	C19t/C23t			0.314009832390401	ratio	Y
BiomRatio	C22t/C21t			9.61322715318265E-02	ratio	Y
BiomRatio	C22t/C24t			0.088838655947788	ratio	Y
BiomRatio	C23t/C30H			6.59534319255615E-03	ratio	Y
BiomRatio	C24t/C23t			1.03861463914068	ratio	Y
BiomRatio	C24Tet/C23t			1.75106576404028	ratio	Y
BiomRatio	C24Tet/C26t			0.946807292163787	ratio	Y
BiomRatio	C24Tet/C30H			1.15488796665812E-02	ratio	Y
BiomRatio	C26t/C25t			1.64314168313416	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			5.18089129901522E-02	ratio	Y
BiomRatio	C27 Dia/Ster			4.65390891744276E-02	ratio	Y
BiomRatio	C28BNH/C30H			4.18723582011983E-03	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			2.05599816164024	ratio	Y
BiomRatio	C29H/C30H			0.5074534439172	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.134379978575369	ratio	Y
BiomRatio	C30DiaH/C30H			2.07157308647788E-02	ratio	Y
BiomRatio	C30Ts/C30H			0.649644593435707	ratio	Y
BiomRatio	C35 Homohopane Index			7.67670378261689E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.696869902662889	ratio	Y
BiomRatio	Gam/C30H			0.250807572848042	ratio	Y
BiomRatio	Gam/C31HR			1.22951686067881	ratio	Y
BiomRatio	Ole/C30H			0.038312762433525	ratio	Y
BiomRatio	Sterane/hopane			0.375928687367905	ratio	Y
BiomRatio	Steranes/Terpanes			0.36743904977201	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			2.31048866503499E-02	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007855\_SPE\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:



**Results for: Elemental Analyser****Data Sheet:**

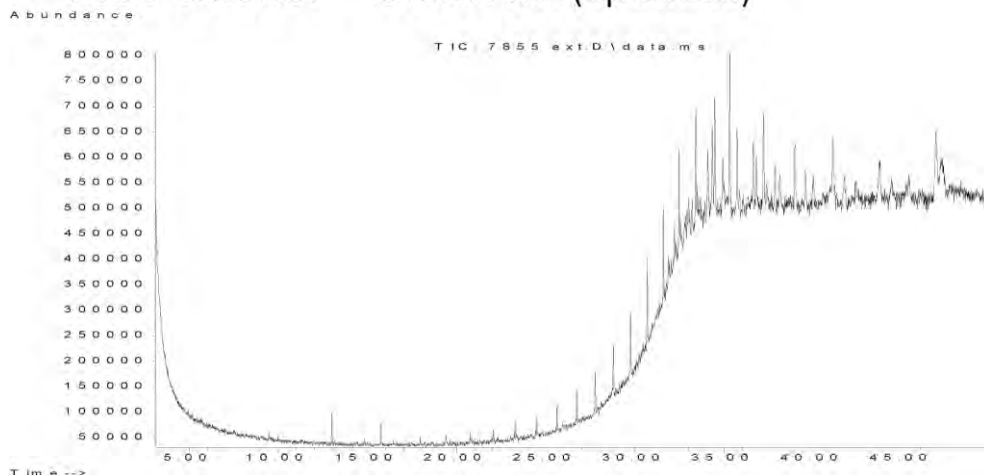
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			74.3930214404802	percent	Y
Inorg	Hydrogen			8.00120874751491	percent	Y
Inorg	Nitrogen			0.58	percent	Y
Inorg	Sulphur			2.70005411776832	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007855\_DISS\_GCMS-Scan/01**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007855\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior (splitless)

## Results for: GCMS with Full Scan

## 7855 exterior – Unknown (splitless)



## Data Sheet:

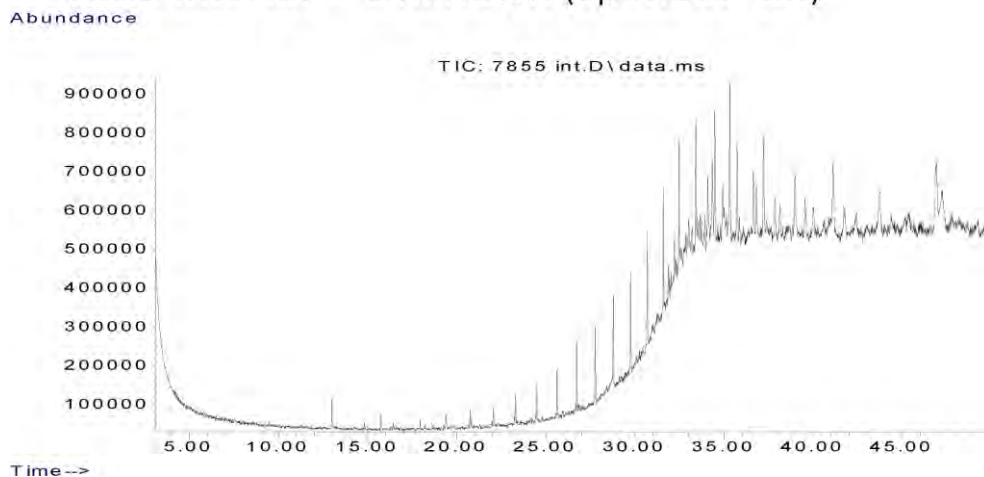
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane					U
Aliph	nC10					U
Aliph	nC11					U
Aliph	nC12					U
Aliph	nC13					U
Aliph	nC14					U
Aliph	nC15					U
Aliph	nC16	17.9470				U
Aliph	nC17	19.3870				U
Aliph	nC18	20.7560				U
Aliph	nC19	22.0580				U
Aliph	nC20	23.3040				U
Aliph	nC21	24.4890				U
Aliph	nC22	25.6290				U
Aliph	nC23	26.7230				U
Aliph	nC24	27.7690				U
Aliph	nC25	28.7780				U
Aliph	nC26	29.7510				U
Aliph	nC27	30.6850				U
Aliph	nC28	31.5900	897691			Z
Aliph	nC29	32.4650	969074			Z
Aliph	nC30	33.4020	1066734			Z
Aliph	nC31	34.4700	1230289			Z
Aliph	nC32	35.7230	1087301			Z
Aliph	nC33	37.1970	1250476			Z
Aliph	nC34	38.9660	1217180			Z
Aliph	nC35	41.0780	1525074			Z
Aliph	nC36	43.6950	1300912			Z
Aliph	nC37	46.8640	2626045			Z
Aliph	nC8					U
Aliph	nC9					U
Aliph	Norpristane	18.6080				U
Aliph	Phytane	20.7570				U
Aliph	Pristane	19.4110				U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007855 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007855\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior (splitless)

## Results for: GCMS with Full Scan

## 7855 interior – Unknown (splitless run)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
Aliph	Botryococcane		1312375			Z
Aliph	nC10					U
Aliph	nC11					U
Aliph	nC12					U
Aliph	nC13					U
Aliph	nC14					U
Aliph	nC15					U
Aliph	nC16	17.9470	124393			Z
Aliph	nC17	19.3870	179040			Z
Aliph	nC18	20.7560	208269			Z
Aliph	nC19	22.0580	94993			Z
Aliph	nC20	23.3040	250154			Z
Aliph	nC21	24.4890	307516			Z
Aliph	nC22	25.6290	421130			Z
Aliph	nC23	26.7230	544781			Z
Aliph	nC24	27.7690	686676			Z
Aliph	nC25	28.7780	927847			Z
Aliph	nC26	29.7510	1108263			Z
Aliph	nC27	30.6850	1108074			Z
Aliph	nC28	31.5900	1328030			Z
Aliph	nC29	32.4650	1438610			Z
Aliph	nC30	33.4020	1323242			Z
Aliph	nC31	34.4700	1646449			Z
Aliph	nC32	35.7230	1427273			Z
Aliph	nC33	37.1970	1439390			Z
Aliph	nC34	38.9660	1608633			Z
Aliph	nC35	41.0780	1436383			Z
Aliph	nC36	43.6950	1443288			Z
Aliph	nC37	46.8640	2849501			Z
Aliph	nC8					U
Aliph	nC9					U
Aliph	Norpristane	18.6080	108308			Z
Aliph	Phytane	20.7570	208269			Z
Aliph	Pristane	19.4110	91099			Z



**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007856**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 11/10/2016 1:12:52 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

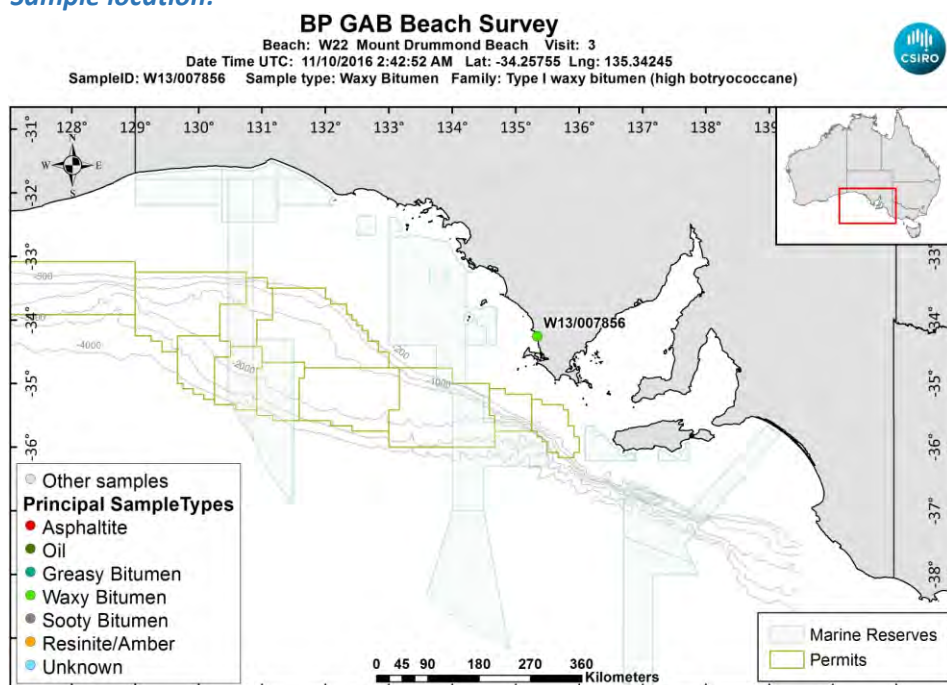
**Size (cm):** 2.9

**Latitude (Y):** -34.257552

**Weight (gm):** 5.53745

**Longitude (X):** 135.342450

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007856\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007856\\_146A6657.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007856\\_Photo02.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: **W13/007856\_SPE\_ELEM-AN/01**

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.6655935311771	percent	Y
Inorg	Hydrogen			8.26773121272366	percent	Y
Inorg	Nitrogen			0.23	percent	Y
Inorg	Sulphur			1.80362670259041	percent	Y

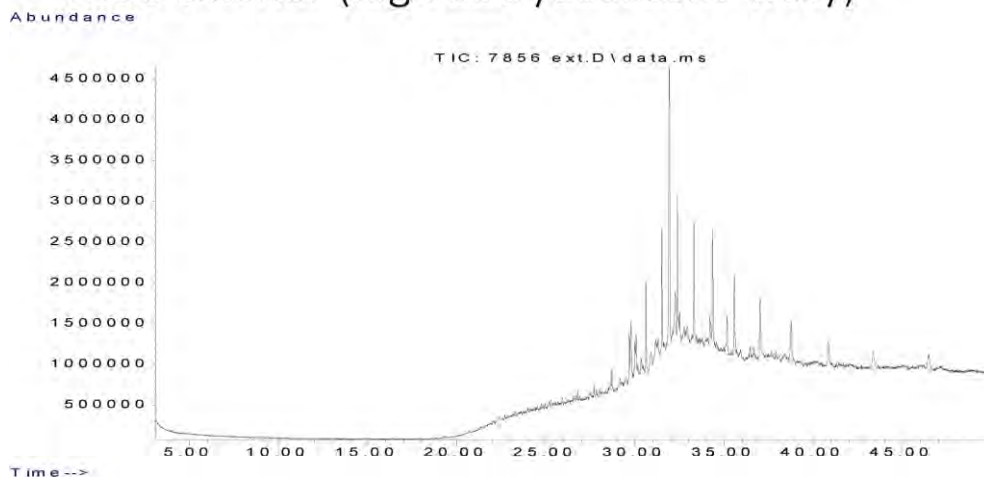
### Results for: GCMS with Full Scan

Unique ID: **W13/007856\_DISS\_GCMS-Scan/01**

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007856\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7856 exterior (high botryococcane waxy)



## Data Sheet:

(default units ppb)

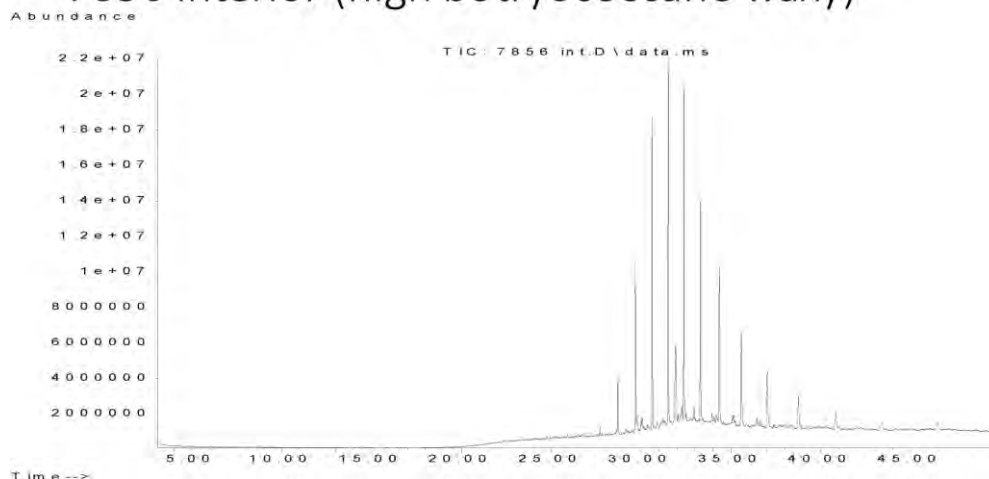
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	28710391			Z
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060	626842			Z
Aliph	nC25	28.7100	1370165			Z
Aliph	nC26	29.6680	2309699			Z
Aliph	nC27	30.6080	5769269			Z
Aliph	nC28	31.5080	7817581			Z
Aliph	nC29	32.3700	8826567			Z
Aliph	nC30	33.2910	8412668			Z
Aliph	nC31	34.3470	9638962			Z
Aliph	nC32	35.5720	7688537			Z
Aliph	nC33	37.0130	7022304			Z
Aliph	nC34	38.7280	5112476			Z
Aliph	nC35	40.8080	3930392			Z
Aliph	nC36	43.3510	3036273			Z
Aliph	nC37	46.4710	2635659			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007856 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007856\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior



## Results for: GCMS with Full Scan

7856 interior (high botryococcane waxy)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	36154805			Z
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060	2456324			Z
Aliph	nC25	28.7100	14603379			Z
Aliph	nC26	29.6680	43832087			Z
Aliph	nC27	30.6080	83996328			Z
Aliph	nC28	31.5080	90948464			Z
Aliph	nC29	32.3700	89058843			Z
Aliph	nC30	33.2910	69143690			Z
Aliph	nC31	34.3470	57859218			Z
Aliph	nC32	35.5720	41007099			Z
Aliph	nC33	37.0130	29348807			Z
Aliph	nC34	38.7280	18428872			Z
Aliph	nC35	40.8080	12087350			Z
Aliph	nC36	43.3510	8109263			Z
Aliph	nC37	46.4710	6476140			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007857A**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

2 pieces. Part A

**Location:** Upper Intertidal

**Local Date Time:** 11/10/2016 1:14:59 PM

**Type:** Waxy Bitumen

**Family:** Type IV waxy bitumen (no botryococcane, hig

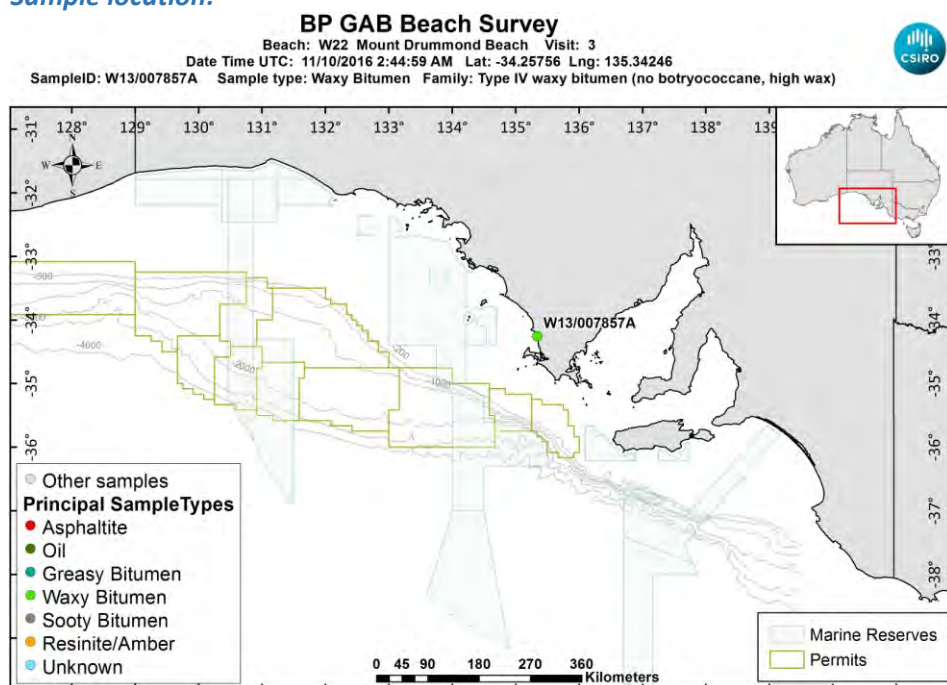
**Size (cm):** 4.7

**Latitude (Y):** -34.257565

**Weight (gm):** 7.89657

**Longitude (X):** 135.342457

**Sample location:**



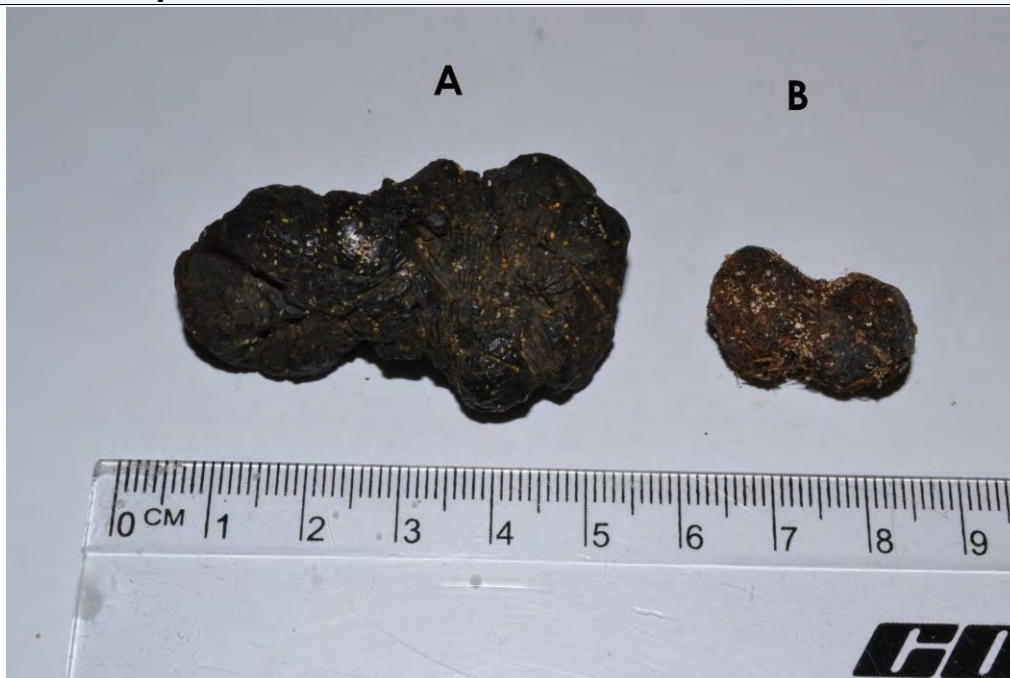
[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007857A\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007857\\_146A6659.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007857\\_AB\\_Photo02.jpg](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007857A\_SPE\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.7531160386796	percent	Y
Inorg	Hydrogen			7.91000079522863	percent	Y
Inorg	Nitrogen			0.07	percent	Y
Inorg	Sulphur			1.67300874353881	percent	Y

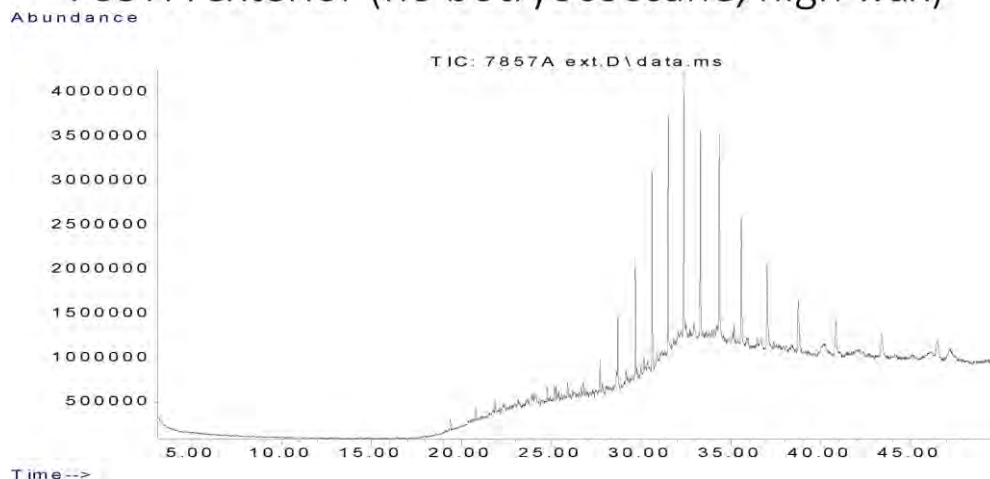
### Results for: GCMS with Full Scan

Unique ID: W13/007857A DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007857A\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7857A exterior (no botryococcane, high wax)



## Data Sheet:

(default units ppb)

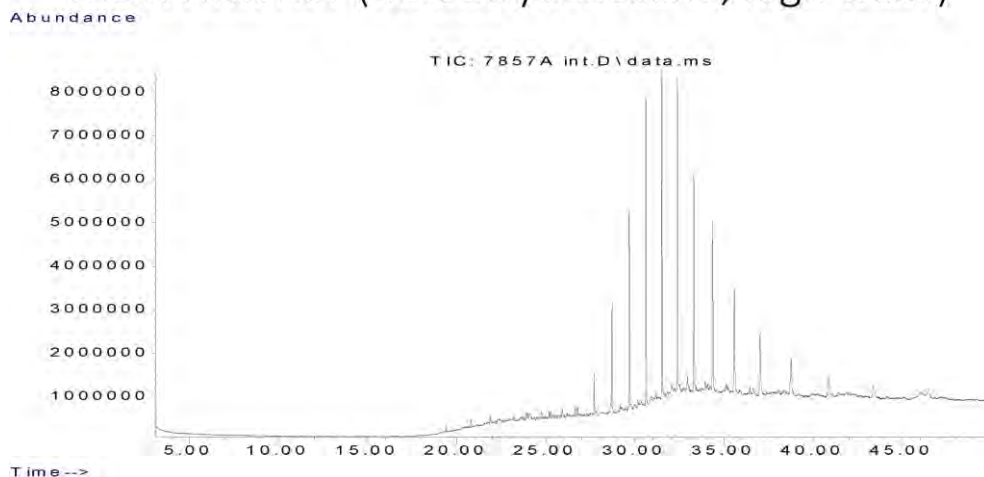
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620	658842			Z
Aliph	nC24	27.7060	1781237			Z
Aliph	nC25	28.7100	4001768			Z
Aliph	nC26	29.6680	6977386			Z
Aliph	nC27	30.6080	10801853			Z
Aliph	nC28	31.5080	13337467			Z
Aliph	nC29	32.3700	15689625			Z
Aliph	nC30	33.2910	13627434			Z
Aliph	nC31	34.3470	15735860			Z
Aliph	nC32	35.5720	11165555			Z
Aliph	nC33	37.0130	9199314			Z
Aliph	nC34	38.7280	7026185			Z
Aliph	nC35	40.8080	5123611			Z
Aliph	nC36	43.3510	3556591			Z
Aliph	nC37	46.4710	2805504			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870	879900			Z
Aliph	Pristane	19.3870	869573			Z



**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007857A DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007857A\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan

7857A interior (no botryococcane, high wax?)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620	1122734			Z
Aliph	nC24	27.7060	4578252			Z
Aliph	nC25	28.7100	12272262			Z
Aliph	nC26	29.6680	23814561			Z
Aliph	nC27	30.6080	35830456			Z
Aliph	nC28	31.5080	36409701			Z
Aliph	nC29	32.3700	37764399			Z
Aliph	nC30	33.2910	29249153			Z
Aliph	nC31	34.3470	25480840			Z
Aliph	nC32	35.5720	18146723			Z
Aliph	nC33	37.0130	13687408			Z
Aliph	nC34	38.7280	8947524			Z
Aliph	nC35	40.8080	5829348			Z
Aliph	nC36	43.3510	4421569			Z
Aliph	nC37	46.4710	2975330			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870	1153327			Z
Aliph	Pristane	19.3870	1105001			Z

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns > 25%
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007857B**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

Part B subsample

**Location:** Upper Intertidal

**Local Date Time:** 11/10/2016 1:14:59 PM

**Type:** Unknown

**Family:** Not bitumen (false sample)

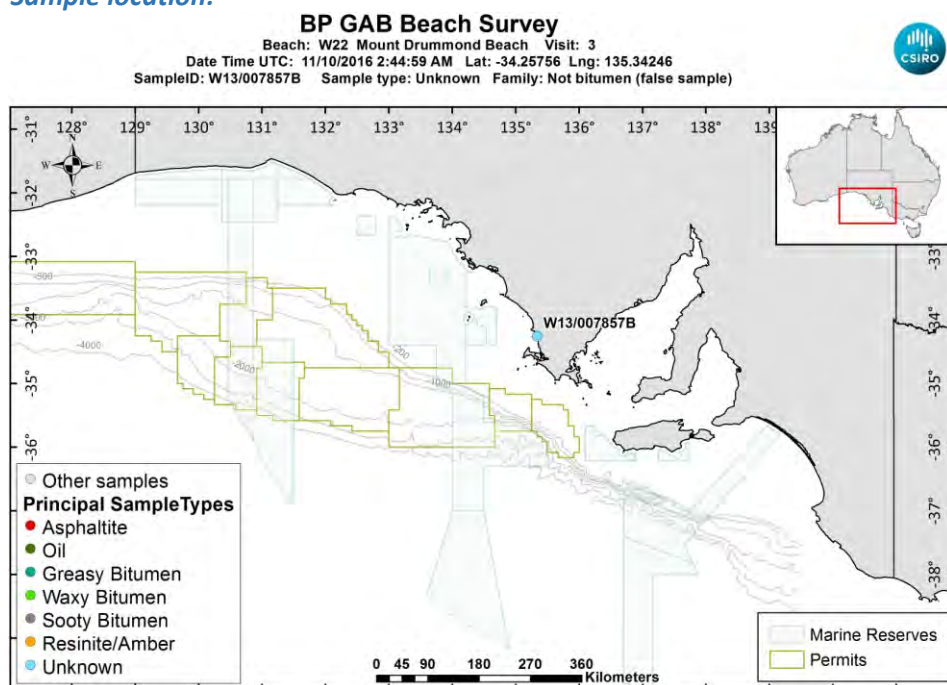
**Size (cm):**

**Latitude (Y):** -34.257565

**Weight (gm):**

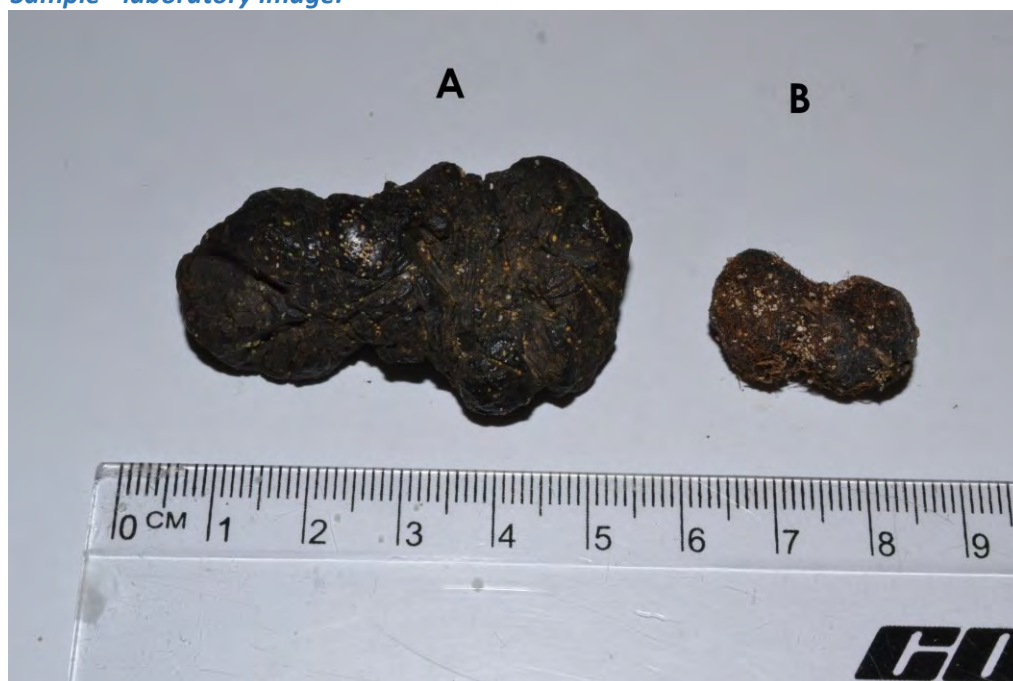
**Longitude (X):** 135.342457

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007857B\\_Location.jpg](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007857\\_AB\\_Photo02.jpg](#)

**Sample ID : W13/007857B**

**Beach W22: Mount Drummond Beach Visit: 3**

**Analyses Requested**

Split: Analysis: Sent:  
1 Bitumen Determination NO

**Analyses Completed:**

Analysis: Instrument/Type:  
Whole Oils GCMS with Full Scan Run: 1

**Sample Analyses Completed:**

**Results for: GCMS with Full Scan**

**Unique ID: W13/007857B\_DISS\_GCMS-Scan/01**

**Instrument / Type:** GCMS with Full Scan Run: 1

**for Analysis:** Whole Oils

**Analysis Date:** 30/10/2017

**Linked Image:** [None available](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**Sample Volume:**

**Volume Units:**

**Extract Volume:**

**Dilution Factor:**

**Comment:**

## Results for: GCMS with Full Scan

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280				U
Aliph	nC35	40.8080				U
Aliph	nC36	43.3510				U
Aliph	nC37	46.4710				U
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U



**Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007858**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 11/10/2016 1:18:52 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

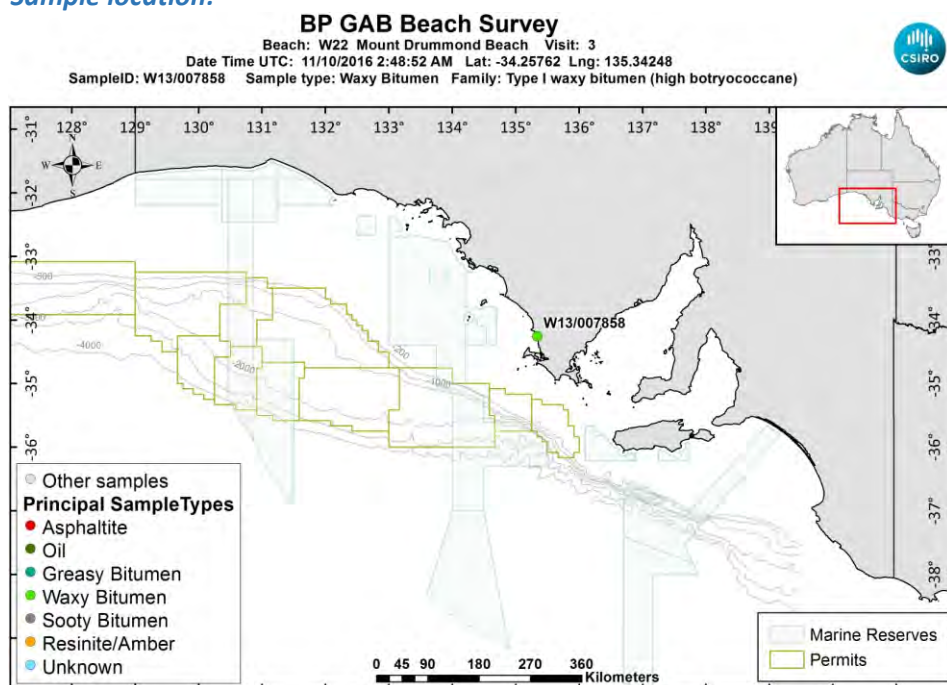
**Size (cm):** 2.3

**Latitude (Y):** -34.257618

**Weight (gm):** 2.59161

**Longitude (X):** 135.342483

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007858\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007858\\_146A6661.JPG](#)

**Sample - laboratory image:**

[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007858\\_Photo02.JPG](#)**Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

**Analyses Completed:**

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

**Sample Analyses Completed:****Results for: Elemental Analyser****Unique ID:** W13/007858\_SPE\_ELEM-AN/01**Instrument / Type:** Elemental Analyser Run: 1**for Analysis:** Elemental CHNS**Analysis Date:** 30/10/2017**Linked Image:** [None available](#)**Preparation:** Solid Phase Extract**Method ID/s:****Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:****Data Sheet:**

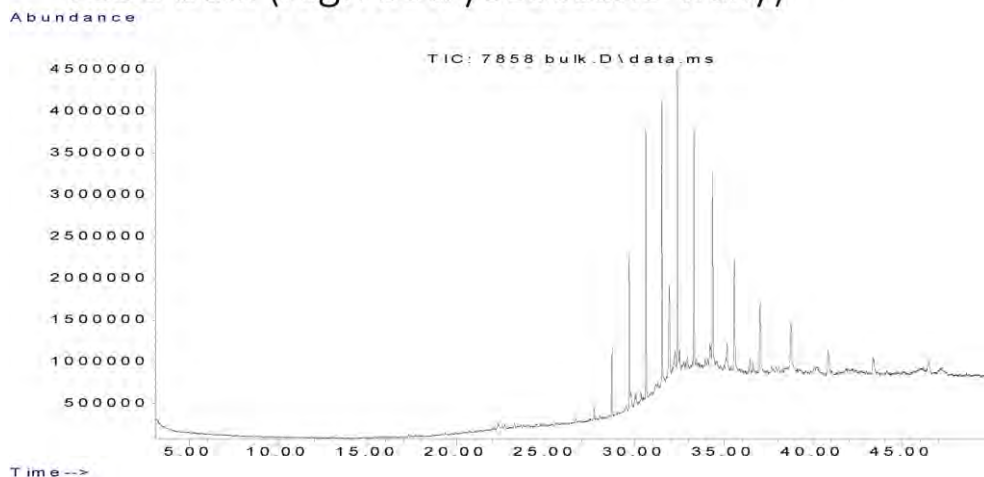
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			84.2729149049683	percent	Y
Inorg	Hydrogen			9.64892246520875	percent	Y
Inorg	Nitrogen			0.19	percent	Y
Inorg	Sulphur			2.19388852603587	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007858 DISS GCMS-Scan/03**Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Analysis Date:** 30/10/2017**Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007858\\_bulk\\_WholeOil.jpg](#)**Preparation:** Dissolved in solvent**Method ID/s:****Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan

7858 bulk (high botryococcane waxy)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	9033659			Z
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620	319790			Z
Aliph	nC24	27.7060	715248			Z
Aliph	nC25	28.7100	3690220			Z
Aliph	nC26	29.6680	8515081			Z
Aliph	nC27	30.6080	16201037			Z
Aliph	nC28	31.5080	18033764			Z
Aliph	nC29	32.3700	18972122			Z
Aliph	nC30	33.2910	16029657			Z
Aliph	nC31	34.3470	14790669			Z
Aliph	nC32	35.5720	10572751			Z
Aliph	nC33	37.0130	7532529			Z
Aliph	nC34	38.7280	5855666			Z
Aliph	nC35	40.8080	4074582			Z
Aliph	nC36	43.3510	2742258			Z
Aliph	nC37	46.4710	2306648			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007859**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

In rocks at back shore

**Location:** Shore Upper

**Local Date Time:** 11/10/2016 1:22:43 PM

**Type:** Waxy Bitumen

**Family:** Type III waxy bitumen (no botryococcane, low

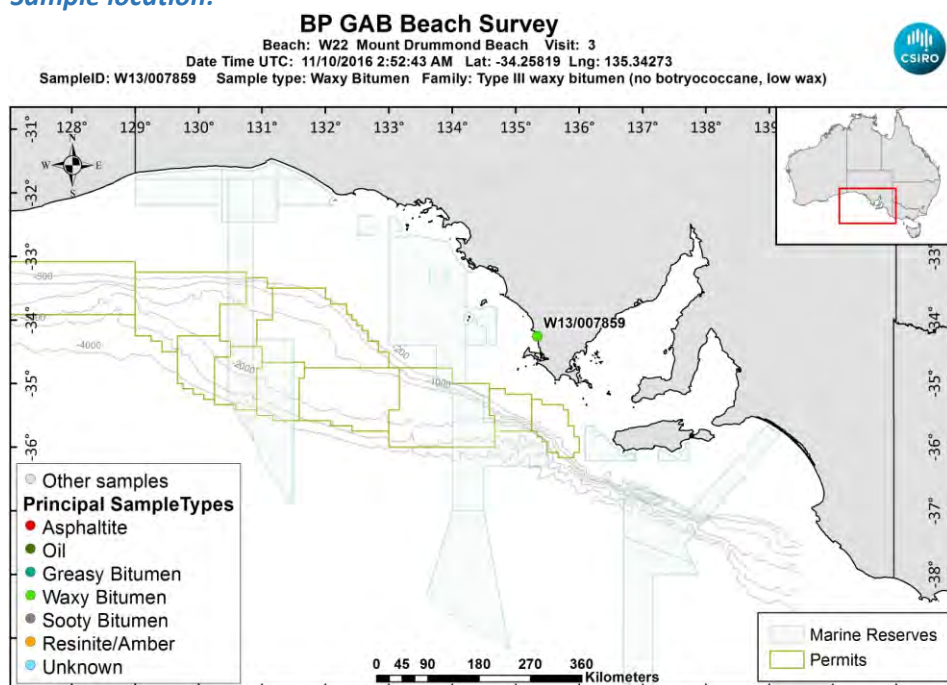
**Size (cm):** 3.3

**Latitude (Y):** -34.258190

**Weight (gm):** 4.52645

**Longitude (X):** 135.342732

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007859\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007859\\_146A6662.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007859\\_Photo02.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007859\_SPE\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

Sample Volume:      Volume Units:      Extract Volume:      Dilution Factor:

Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			81.897470756919	percent	Y
Inorg	Hydrogen			7.85138767395626	percent	Y
Inorg	Nitrogen			0.1	percent	Y
Inorg	Sulphur			1.54800513439388	percent	Y

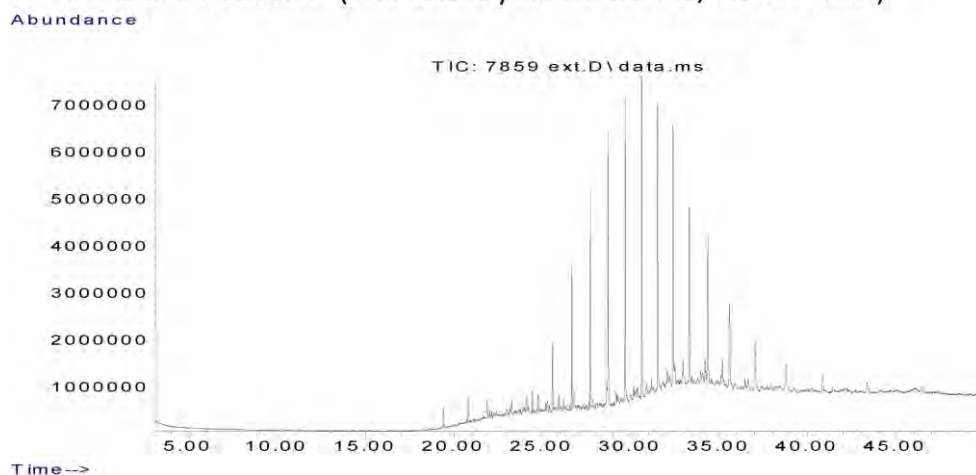
### Results for: GCMS with Full Scan

Unique ID: W13/007859\_DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007859\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7859 exterior (no botryococcane, low wax)



## Data Sheet:

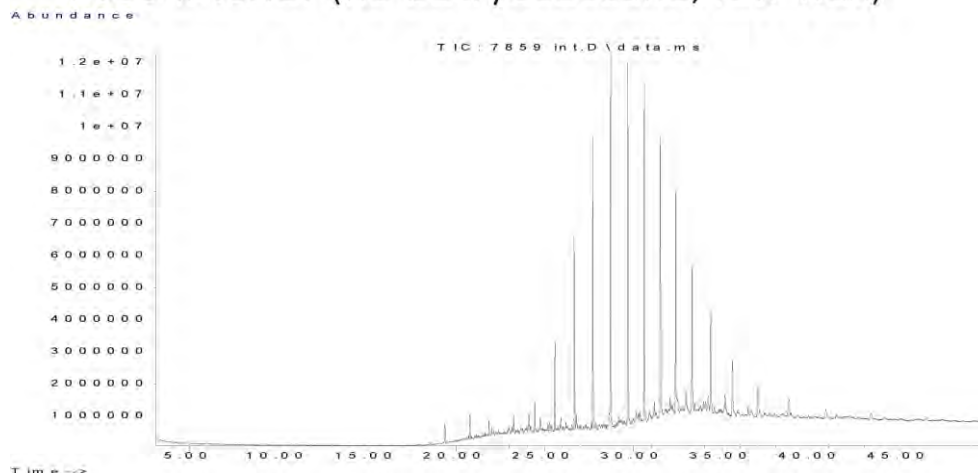
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170	375204			Z
Aliph	nC19	22.0170	649671			Z
Aliph	nC20	23.2570	1487949			Z
Aliph	nC21	24.4410	2354238			Z
Aliph	nC22	25.5760	6956733			Z
Aliph	nC23	26.6620	13405931			Z
Aliph	nC24	27.7060	21314775			Z
Aliph	nC25	28.7100	27700864			Z
Aliph	nC26	29.6680	31575191			Z
Aliph	nC27	30.6080	35308378			Z
Aliph	nC28	31.5080	31200363			Z
Aliph	nC29	32.3700	27911984			Z
Aliph	nC30	33.2910	22325808			Z
Aliph	nC31	34.3470	20762768			Z
Aliph	nC32	35.5720	14643532			Z
Aliph	nC33	37.0130	10099718			Z
Aliph	nC34	38.7280	6506743			Z
Aliph	nC35	40.8080	3856199			Z
Aliph	nC36	43.3510	3033247			Z
Aliph	nC37	46.4710	2396647			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830	402969			Z
Aliph	Phytane	20.7870	2984209			Z
Aliph	Pristane	19.3870	2564630			Z

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007859 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007859\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan

7859 interior (no botryococcane, low wax)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170	538484			Z
Aliph	nC19	22.0170	1225836			Z
Aliph	nC20	23.2570	2484085			Z
Aliph	nC21	24.4410	4377298			Z
Aliph	nC22	25.5760	13257532			Z
Aliph	nC23	26.6620	26648075			Z
Aliph	nC24	27.7060	41760216			Z
Aliph	nC25	28.7100	50938673			Z
Aliph	nC26	29.6680	52360263			Z
Aliph	nC27	30.6080	52765756			Z
Aliph	nC28	31.5080	42138092			Z
Aliph	nC29	32.3700	35706904			Z
Aliph	nC30	33.2910	25164256			Z
Aliph	nC31	34.3470	20626917			Z
Aliph	nC32	35.5720	13527699			Z
Aliph	nC33	37.0130	9784115			Z
Aliph	nC34	38.7280	6151135			Z
Aliph	nC35	40.8080	3933219			Z
Aliph	nC36	43.3510	2904121			Z
Aliph	nC37	46.4710	2117220			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830	539809			Z
Aliph	Phytane	20.7870	4225124			Z
Aliph	Pristane	19.3870	3776838			Z

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007860**

Beach W22: Mount Drummond Beach Visit: 3

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 11/10/2016 1:29:16 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

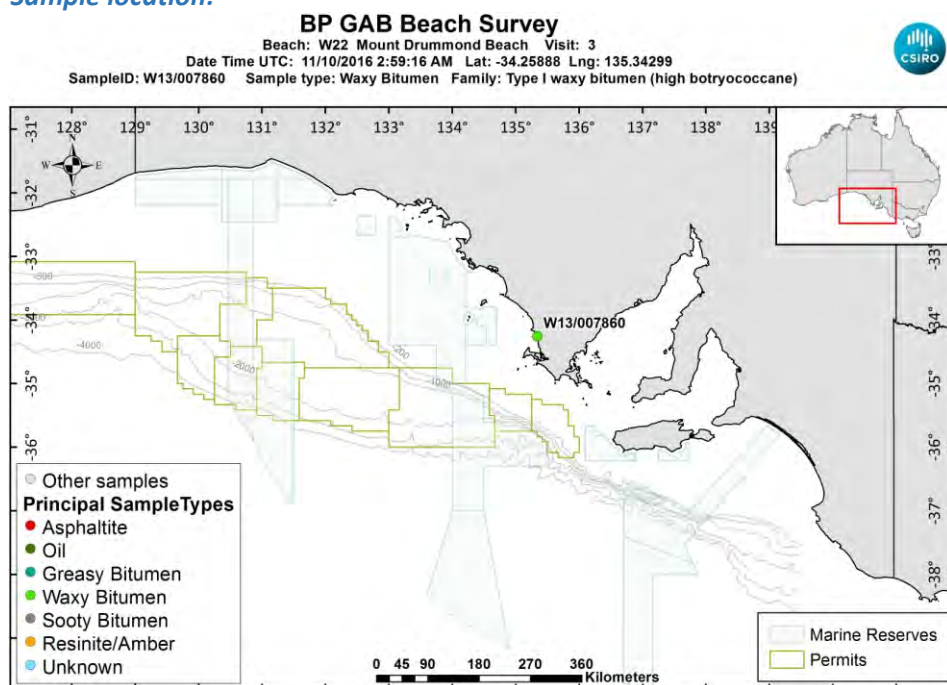
**Size (cm):** 2

**Latitude (Y):** -34.258877

**Weight (gm):** 2.25568

**Longitude (X):** 135.342992

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007860\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007860\\_146A6664.JPG](#)

**Sample - laboratory image:**

[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007860\\_Photo02.JPG](#)**Analyses Requested**

Split: Analysis: Sent:  
1 Bitumen Determination YES

**Analyses Completed:**

Analysis: Instrument/Type:  
Elemental CHNS Elemental Analyser Run: 1  
Whole Oils GCMS with Full Scan Run: 3

**Sample Analyses Completed:****Results for: Elemental Analyser****Unique ID:** W13/007860\_SPE\_ELEM-AN/01**Instrument / Type:** Elemental Analyser Run: 1**for Analysis:** Elemental CHNS**Analysis Date:** 30/10/2017**Linked Image:** [None available](#)**Preparation:** Solid Phase Extract**Method ID/s:**

**Sample Volume:** **Volume Units:** **Extract Volume:** **Dilution Factor:**  
**Comment:**

**Data Sheet:**

(default units ppb)

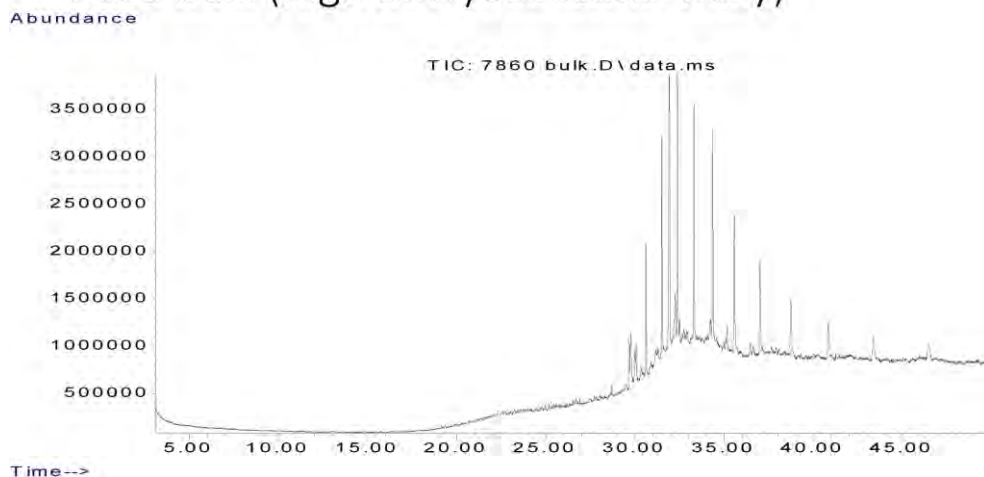
Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			86.3505777592531	percent	Y
Inorg	Hydrogen			8.76607554671968	percent	Y
Inorg	Nitrogen			0.21	percent	Y
Inorg	Sulphur			1.97307522861509	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007860 DISS GCMS-Scan/03**Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Analysis Date:** 30/10/2017**Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007860\\_bulk\\_WholeOil.jpg](#)**Preparation:** Dissolved in solvent**Method ID/s:**

**Sample Volume:** **Volume Units:** **Extract Volume:** **Dilution Factor:**  
**Comment:** Bulk

## Results for: GCMS with Full Scan

7860 bulk (high botryococcane waxy)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	24601687			Z
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060	230341			Z
Aliph	nC25	28.7100	580241			Z
Aliph	nC26	29.6680	2253336			Z
Aliph	nC27	30.6080	7423326			Z
Aliph	nC28	31.5080	11873490			Z
Aliph	nC29	32.3700	14677915			Z
Aliph	nC30	33.2910	14943933			Z
Aliph	nC31	34.3470	14369790			Z
Aliph	nC32	35.5720	11415271			Z
Aliph	nC33	37.0130	8482640			Z
Aliph	nC34	38.7280	6248030			Z
Aliph	nC35	40.8080	4460844			Z
Aliph	nC36	43.3510	3549454			Z
Aliph	nC37	46.4710	3323156			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007643**

Beach E13: Nene Valley Visit: 2

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 11/09/2015 11:18:35 AM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

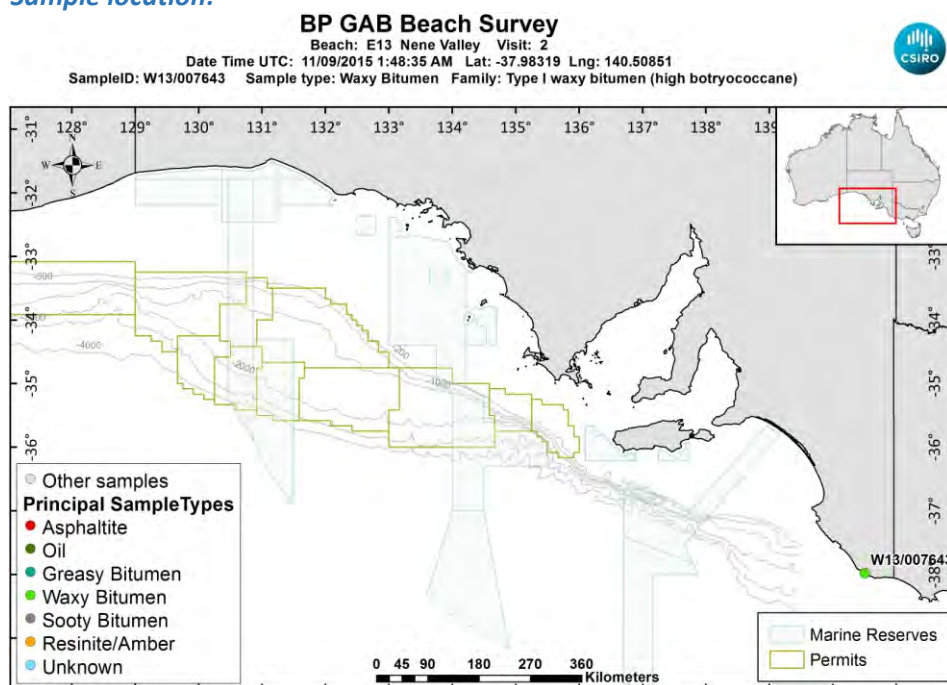
**Size (cm):** 1

**Latitude (Y):** -37.983188

**Weight (gm):** 0.5

**Longitude (X):** 140.508508

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007643\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007643\\_146A1699.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007643\\_Photo02.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007643\_SPE\_ELEM-AN/01

**Instrument / Type:** Elemental Analyser Run: 1

**for Analysis:** Elemental CHNS

**Analysis Date:** 30/10/2017

**Linked Image:** [None available](#)

**Preparation:** Solid Phase Extract

**Method ID/s:**

**Sample Volume:** **Volume Units:** **Extract Volume:** **Dilution Factor:**

**Comment:**

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			86.61	percent	Y
Inorg	Hydrogen			11.0036102147117	percent	Y
Inorg	Nitrogen			0.314215681233933	percent	Y
Inorg	Sulphur			1.66033333565699	percent	Y

### Results for: GCMS with Full Scan

**Unique ID:** W13/007643 DISS GCMS-Scan/03

**Instrument / Type:** GCMS with Full Scan Run: 3

**for Analysis:** Whole Oils

**Analysis Date:** 18/11/2016

**Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007643\\_bulk\\_WholeOil.jpg](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**Sample Volume:** **Volume Units:** **Extract Volume:** **Dilution Factor:**

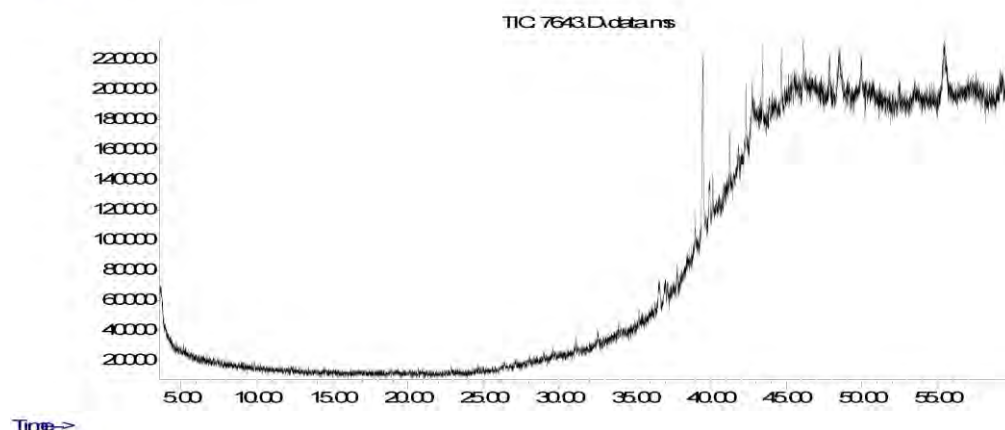
**Comment:** Bulk



## Results for: GCMS with Full Scan

7643 Bulk

Abundance



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	1064487		ug/L	Z
Aliph	nC10	0.0000			ug/L	U
Aliph	nC11	0.0000			ug/L	U
Aliph	nC12	12.2580			ug/L	U
Aliph	nC13	14.5950			ug/L	U
Aliph	nC14	16.8180			ug/L	U
Aliph	nC15	18.9260			ug/L	U
Aliph	nC16	20.9240			ug/L	U
Aliph	nC17	22.8190			ug/L	U
Aliph	nC18	24.6230			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510	36741		ug/L	Z
Aliph	nC22	31.0540	35555		ug/L	Z
Aliph	nC23	32.4960	35183		ug/L	Z
Aliph	nC24	33.8800	35089		ug/L	Z
Aliph	nC25	35.2120	50685		ug/L	Z
Aliph	nC26	36.4960	93443		ug/L	Z
Aliph	nC27	37.7300	76570		ug/L	Z
Aliph	nC28	38.9260	140543		ug/L	Z
Aliph	nC29	40.0740	142619		ug/L	Z
Aliph	nC30	41.1930	198643		ug/L	Z
Aliph	nC31	42.2750	221170		ug/L	Z
Aliph	nC32	43.3560	232236		ug/L	Z
Aliph	nC33	44.5840	238823		ug/L	Z
Aliph	nC34	46.0130	226957		ug/L	Z
Aliph	nC35	47.7140	258518		ug/L	Z
Aliph	nC36	49.7870			ug/L	U
Aliph	nC37	52.2630			ug/L	U
Aliph	nC38	55.2360			ug/L	U
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010			ug/L	U
Aliph	Phytane	24.7190			ug/L	U
Aliph	Pristane	22.8660			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : /001085

Beach E13: Nene Valley Visit: 3

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 22/10/2016 4:22:29 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

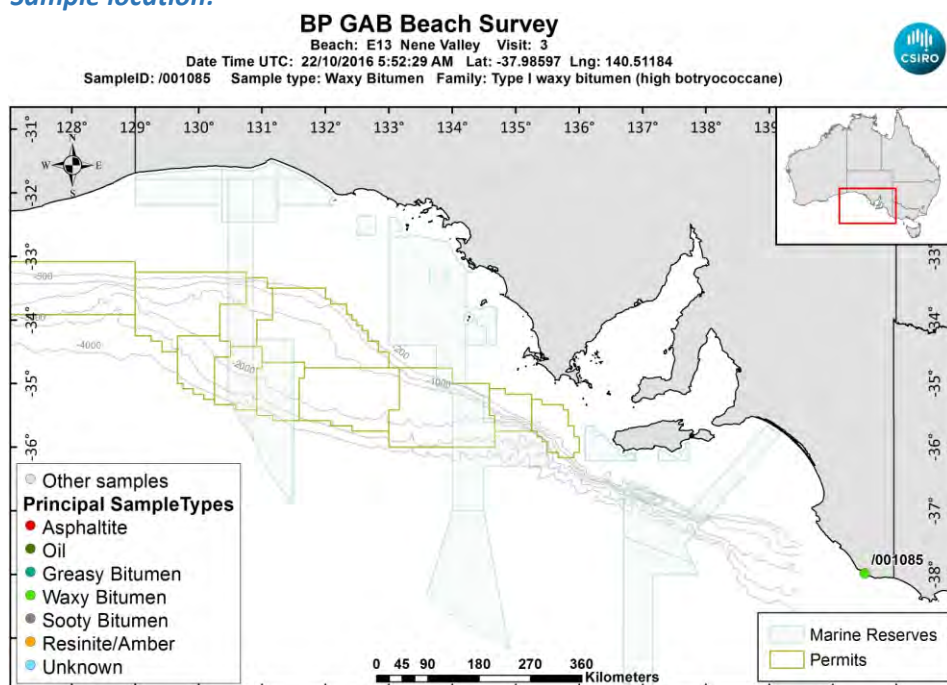
**Size (cm):** 3.3

**Latitude (Y):** -37.985970

**Weight (gm):** 6.71227

**Longitude (X):** 140.511838

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\ 001085 Location.jpg](LinkedFiles\GAB_BCH1\SampleLocations\ 001085 Location.jpg)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\001085\\_146A7212.JPG](LinkedFiles\GAB_BCH1\Samples\001085_146A7212.JPG)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\001085\\_Photo02.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** /001085\_SPE\_ELEM-AN/01

**Instrument / Type:** Elemental Analyser Run: 1

**for Analysis:** Elemental CHNS

**Analysis Date:** 30/10/2017

**Linked Image:** [None available](#)

**Preparation:** Solid Phase Extract

**Method ID/s:**

**Sample Volume:** **Volume Units:** **Extract Volume:** **Dilution Factor:**

**Comment:**

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			84.8	percent	Y
Inorg	Hydrogen			7.17660914512923	percent	Y
Inorg	Nitrogen			0.184675064267352	percent	Y
Inorg	Sulphur			1.28639319636384	percent	Y

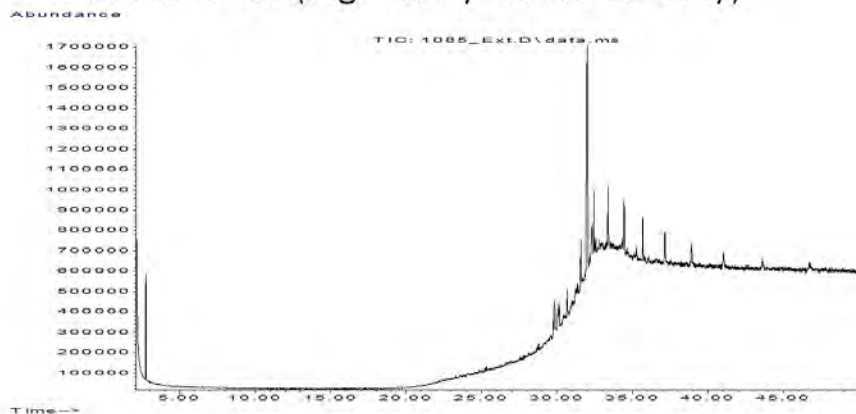
### Results for: GCMS with Full Scan

**Unique ID:** /001085\_DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\ 001085\\_ext WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

1085 exterior (high botryococcane waxy)



## Data Sheet:

(default units ppb)

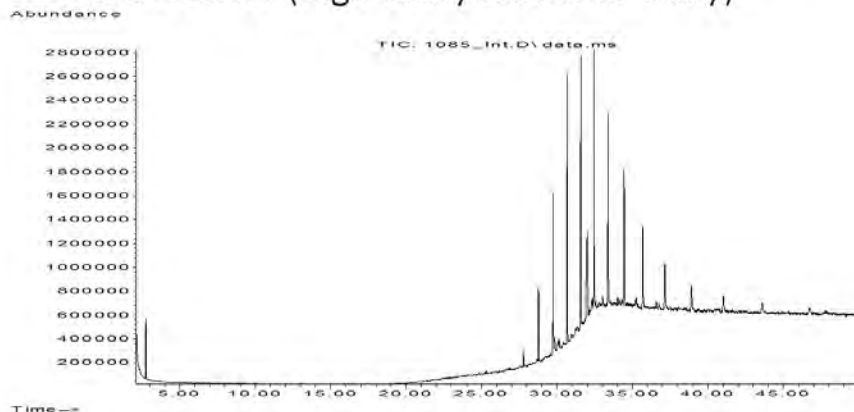
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	6204600			Z
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060	43623			Z
Aliph	nC25	28.7100	124094			Z
Aliph	nC26	29.6680	180328			Z
Aliph	nC27	30.6080	434121			Z
Aliph	nC28	31.5080	774746			Z
Aliph	nC29	32.3700	699061			Z
Aliph	nC30	33.2910	1104961			Z
Aliph	nC31	34.3470	1121829			Z
Aliph	nC32	35.5720	1070935			Z
Aliph	nC33	37.0130	911672			Z
Aliph	nC34	38.7280	728687			Z
Aliph	nC35	40.8080	534606			Z
Aliph	nC36	43.3510	429577			Z
Aliph	nC37	46.4710	448328			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U



**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** /001085 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\\\_001085\\_int\\_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan

1085 interior (high botryococcane waxy)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	4188843			Z
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060	449412			Z
Aliph	nC25	28.7100	2089146			Z
Aliph	nC26	29.6680	4457445			Z
Aliph	nC27	30.6080	7312388			Z
Aliph	nC28	31.5080	7623917			Z
Aliph	nC29	32.3700	7455584			Z
Aliph	nC30	33.2910	5939542			Z
Aliph	nC31	34.3470	4597810			Z
Aliph	nC32	35.5720	3568232			Z
Aliph	nC33	37.0130	2532767			Z
Aliph	nC34	38.7280	1634140			Z
Aliph	nC35	40.8080	1089900			Z
Aliph	nC36	43.3510	818325			Z
Aliph	nC37	46.4710	605161			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns > 25%
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : /001086

Beach E13: Nene Valley Visit: 3

**Comments:**

**Location:** Mid Intertidal

**Local Date Time:** 22/10/2016 4:53:32 PM

**Type:** Unknown

**Family:** Not bitumen (false sample)

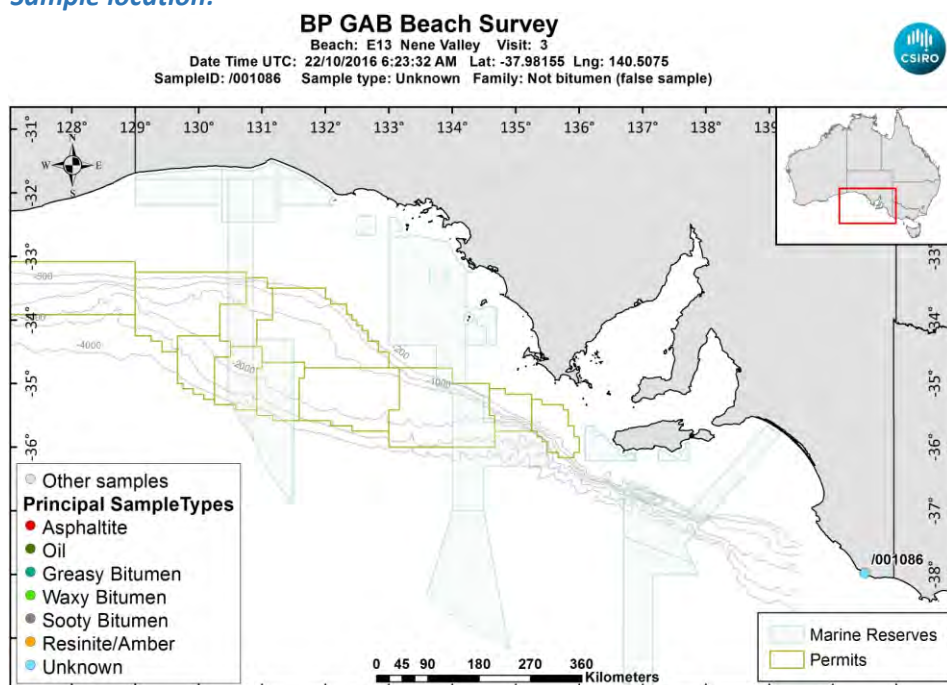
**Size (cm):** 2.5

**Latitude (Y):** -37.981550

**Weight (gm):** 3.75719

**Longitude (X):** 140.507500

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\ 001086 Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\001086\\_146A7214.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\001086\\_Photo02.JPG](#)

### Analyses Requested

Split: Analysis: Sent:  
1 Bitumen Determination YES

### Analyses Completed:

Analysis: Instrument/Type:  
Elemental CHNS Elemental Analyser Run: 1  
Whole Oils GCMS with Full Scan Run: 3

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: /001086\_SPE\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

Sample Volume: Volume Units: Extract Volume: Dilution Factor:  
Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			96.51	percent	Y
Inorg	Hydrogen			9.13175049701789	percent	Y
Inorg	Nitrogen			0.914473093401885	percent	Y
Inorg	Sulphur			2.00411005340522	percent	Y

### Results for: GCMS with Full Scan

Unique ID: /001086\_DISS\_GCMS-Scan/03

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

Linked Image: [LinkedFiles\GAB\\_BCH1\GCMS\ 001086\\_bulk\\_WholeOil.JPG](#)

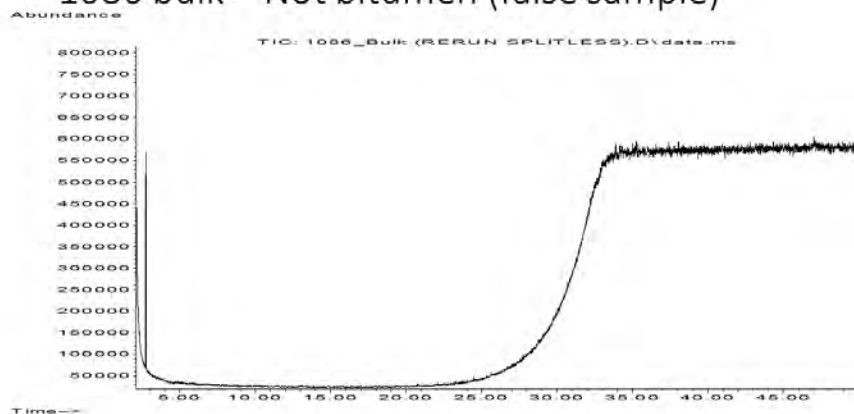
Preparation: Dissolved in solvent

Method ID/s:

Sample Volume: Volume Units: Extract Volume: Dilution Factor:  
Comment: Bulk

## Results for: GCMS with Full Scan

1086 bulk – Not bitumen (false sample)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280				U
Aliph	nC35	40.8080				U
Aliph	nC36	43.3510				U
Aliph	nC37	46.4710				U
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U



**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007529**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 3:55:13 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

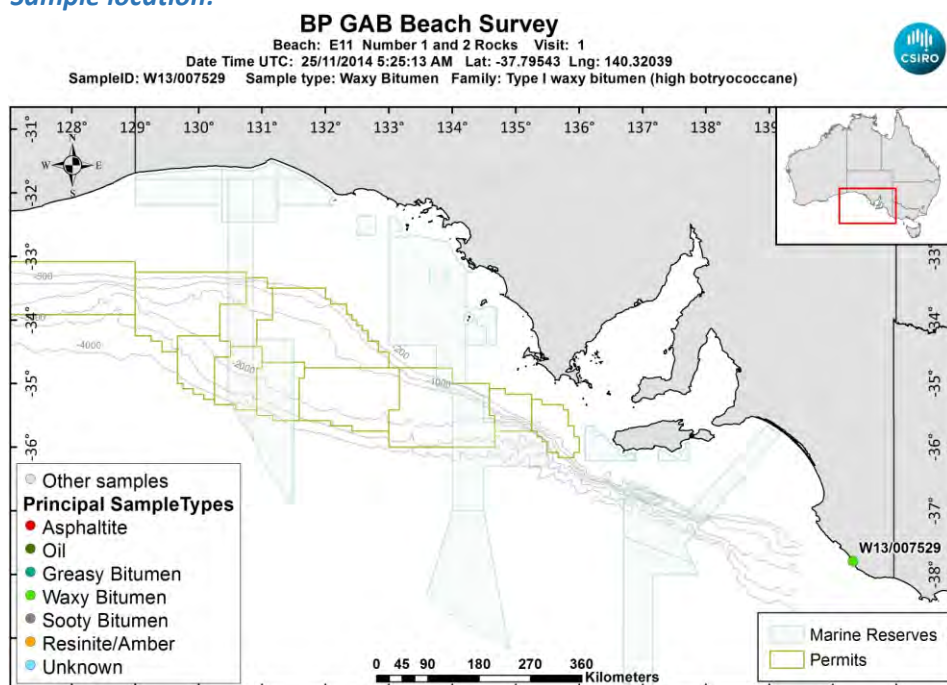
**Size (cm):** 3

**Latitude (Y):** -37.795432

**Weight (gm):** 3.5293

**Longitude (X):** 140.320393

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007529\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007529\\_146A0717.JPG](#)

**Sample - laboratory image:**



LinkedFiles\GAB\_BCH1\Samples\W13\_007529\_Photo01.JPG

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007529\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date:

Linked Image: [None available](#)

Preparation: Unknown

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

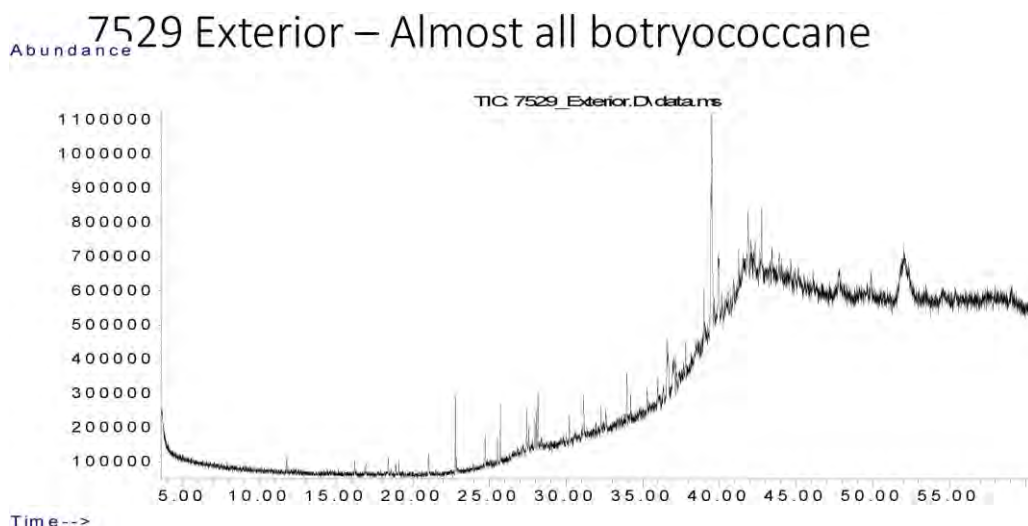
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			86.12	percent	Y
Inorg	delta13 Carbon			-25.8690725858	per mille	Y
Inorg	delta34 Sulphur			1.39786420673143	per mille	Y
Inorg	Hydrogen			6.25	percent	Y
Inorg	Nitrogen			0.24	percent	Y
Inorg	Sulphur			0.19	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007529\_DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007529\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



## Data Sheet:

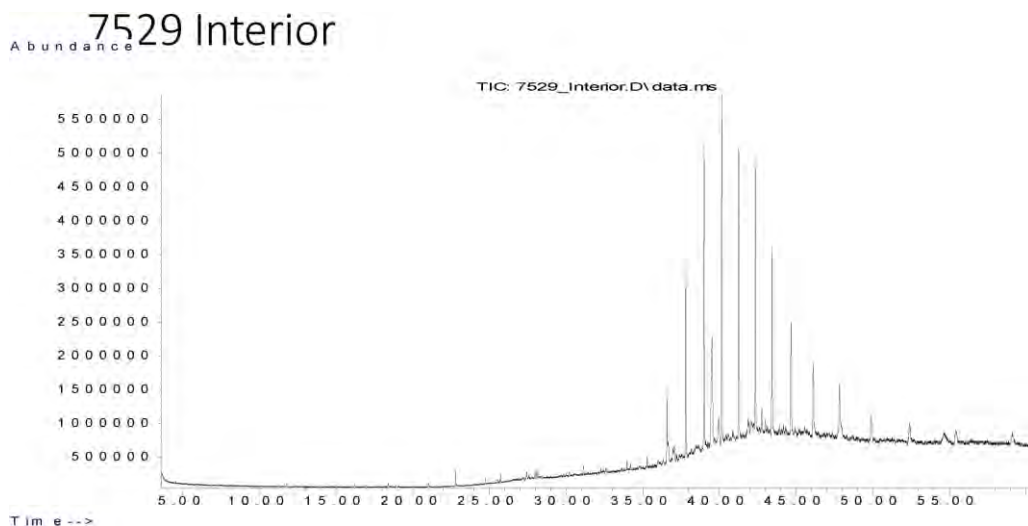
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	4560361		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	660531		ug/L	Z
Aliph	nC23	32.5720	222503		ug/L	Z
Aliph	nC24	33.9520	698771		ug/L	Z
Aliph	nC25	35.2810	409875		ug/L	Z
Aliph	nC26	36.5600	1090528		ug/L	Z
Aliph	nC27	37.7930	475936		ug/L	Z
Aliph	nC28	38.9870	805498		ug/L	Z
Aliph	nC29	40.1370	388686		ug/L	Z
Aliph	nC30	41.2480	568095		ug/L	Z
Aliph	nC31	42.3270	479905		ug/L	Z
Aliph	nC32	43.4130	462422		ug/L	Z
Aliph	nC33	44.6430	103257		ug/L	Z
Aliph	nC34	46.0860	194329		ug/L	Z
Aliph	nC35	47.8060	138624		ug/L	Z
Aliph	nC36	49.8090			ug/L	U
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007529 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007529\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior



## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	12044913		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	583774		ug/L	Z
Aliph	nC23	32.5720	95660		ug/L	Z
Aliph	nC24	33.9520	713030		ug/L	Z
Aliph	nC25	35.2810	837847		ug/L	Z
Aliph	nC26	36.5600	5953859		ug/L	Z
Aliph	nC27	37.7930	15151215		ug/L	Z
Aliph	nC28	38.9870	23298412		ug/L	Z
Aliph	nC29	40.1370	27126987		ug/L	Z
Aliph	nC30	41.2480	23621685		ug/L	Z
Aliph	nC31	42.3270	22057731		ug/L	Z
Aliph	nC32	43.4130	16514797		ug/L	Z
Aliph	nC33	44.6430	12284496		ug/L	Z
Aliph	nC34	46.0860	9071036		ug/L	Z
Aliph	nC35	47.8060	8126623		ug/L	Z
Aliph	nC36	49.8090	4880540		ug/L	Z
Aliph	nC37	52.2960	2823667		ug/L	Z
Aliph	nC38	55.2370	4154900		ug/L	Z
Aliph	nC39	58.8850	549295		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007530**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 3:58:11 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

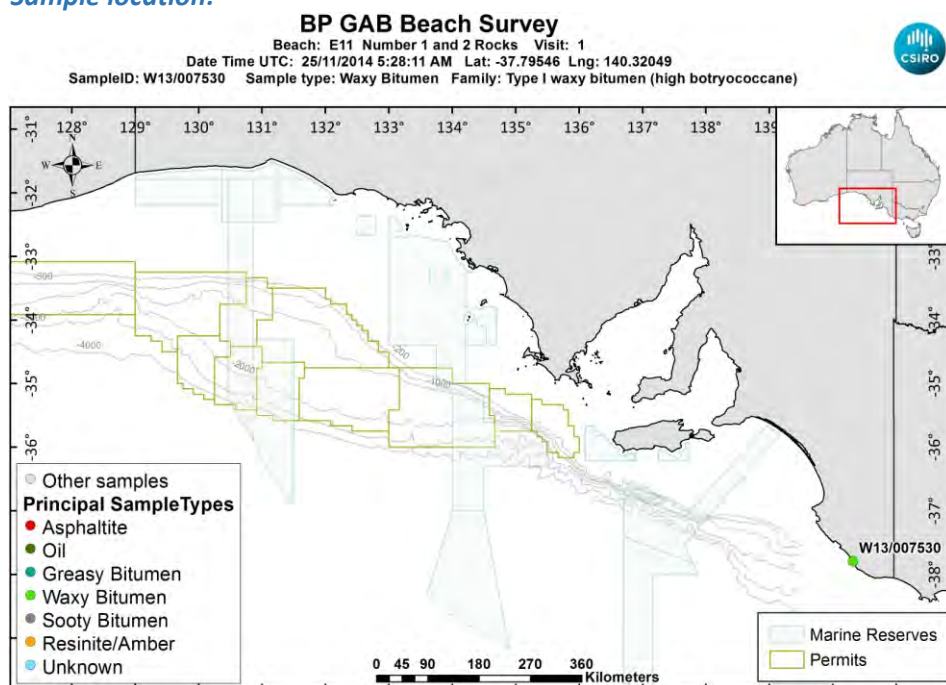
**Size (cm):** 3

**Latitude (Y):** -37.795464

**Weight (gm):** 4.1553

**Longitude (X):** 140.320495

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007530\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007530\\_146A0724.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007530\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES
4	Biomarkers	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 2
Biomarkers	Gas Chromatography Mass Spectrometry Run: 1
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2

## Sample Analyses Completed:

### Results for: Gas Chromatography Mass Spectrometry

**Unique ID:** W13/007530\_DISS\_GC-MS/01

**Instrument / Type:** Gas Chromatography Mass Spectrometry Run: 1

**for Analysis:** Biomarkers

**Analysis Date:** 18/07/2017

**Linked Image:** [None available](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**Sample Volume:**

**Volume Units:**

**Extract Volume:**

**Dilution Factor:**

**Comment:** External Ratios only

## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			34.22094655465	ratio	Y
BiomRatio	% C27 abb 20(R+S)			50.7354694175657	ratio	Y
BiomRatio	% C28 aaa 20R			16.4023381031196	ratio	Y
BiomRatio	% C28 abb 20(R+S)			19.6822741842098	ratio	Y
BiomRatio	% C29 aaa 20R			49.3767153422304	ratio	Y
BiomRatio	% C29 abb 20(R+S)			29.5822563982244	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.074049674317067	ratio	Y
BiomRatio	25-Nor/C30H			7.45020842177051E-02	ratio	Y
BiomRatio	C19t/C23t			0.247920830157062	ratio	Y
BiomRatio	C22t/C21t			0.379040087553618	ratio	Y
BiomRatio	C22t/C24t			0.286413594408579	ratio	Y
BiomRatio	C23t/C30H			6.33315993848252E-02	ratio	Y
BiomRatio	C24t/C23t			1.02975736723187	ratio	Y
BiomRatio	C24Tet/C23t			0.55383865229962	ratio	Y
BiomRatio	C24Tet/C26t			0.451772469581195	ratio	Y
BiomRatio	C24Tet/C30H			3.50754876512711E-02	ratio	Y
BiomRatio	C26t/C25t			1.8459788419975	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.753268006072675	ratio	Y
BiomRatio	C27 Dia/Ster			1.33376622696543	ratio	Y
BiomRatio	C28BNH/C30H			0.033017366161212	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.583068546281793	ratio	Y
BiomRatio	C29H/C30H			0.580313711299313	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.328732264267322	ratio	Y
BiomRatio	C30DiaH/C30H			0.195116180349202	ratio	Y
BiomRatio	C30Ts/C30H			2.38158407504576E-02	ratio	Y
BiomRatio	C35 Homohopane Index			4.44315850989469E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.486853226275059	ratio	Y
BiomRatio	Gam/C30H			0.041087185714584	ratio	Y
BiomRatio	Gam/C31HR			0.248543081379593	ratio	Y
BiomRatio	Ole/C30H			0.108002230356509	ratio	Y
BiomRatio	Sterane/hopane			6.23198276160293E-02	ratio	Y
BiomRatio	Steranes/Terpanes			5.45193631290849E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.143076955401611	ratio	Y

## Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007530 DISS GC-MS/02

Instrument / Type: Gas Chromatography Mass Spectrometry Run: 2

for Analysis: Biomarkers

Preparation: Dissolved in solvent

Analysis Date: 18/07/2017

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: Internal Ratios only



## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			29.223580900214	ratio	Y
BiomRatio	% C27 abb 20(R+S)			50.7031923696703	ratio	Y
BiomRatio	% C28 aaa 20R			17.8604606354209	ratio	Y
BiomRatio	% C28 abb 20(R+S)			21.4823396193546	ratio	Y
BiomRatio	% C29 aaa 20R			52.9159584643651	ratio	Y
BiomRatio	% C29 abb 20(R+S)			27.8144680109751	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			7.39320311479919E-02	ratio	Y
BiomRatio	25-Nor/C30H			0.052962218610212	ratio	Y
BiomRatio	C19t/C23t			0.226029927951229	ratio	Y
BiomRatio	C22t/C21t			0.365412354003282	ratio	Y
BiomRatio	C22t/C24t			0.30772293567923	ratio	Y
BiomRatio	C23t/C30H			8.61735082472171E-02	ratio	Y
BiomRatio	C24t/C23t			0.914705338998707	ratio	Y
BiomRatio	C24Tet/C23t			0.506553007310443	ratio	Y
BiomRatio	C24Tet/C26t			0.453158496161074	ratio	Y
BiomRatio	C24Tet/C30H			4.36514497531191E-02	ratio	Y
BiomRatio	C26t/C25t			1.87252591790269	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.782313078788053	ratio	Y
BiomRatio	C27 Dia/Ster			1.41377199523645	ratio	Y
BiomRatio	C28BNH/C30H			3.50402393963784E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.548574295049974	ratio	Y
BiomRatio	C29H/C30H			0.634509566507977	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.348045357739236	ratio	Y
BiomRatio	C30DiaH/C30H			0.206828245879803	ratio	Y
BiomRatio	C30Ts/C30H			3.10316509284956E-02	ratio	Y
BiomRatio	C35 Homohopane Index			4.18999401773528E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.443640560966523	ratio	Y
BiomRatio	Gam/C30H			3.83197041477042E-02	ratio	Y
BiomRatio	Gam/C31HR			0.210691505391269	ratio	Y
BiomRatio	Ole/C30H			0.143953947399842	ratio	Y
BiomRatio	Sterane/hopane			7.09896609360929E-02	ratio	Y
BiomRatio	Steranes/Terpanes			6.11023548586172E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.161815466856451	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007530\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:



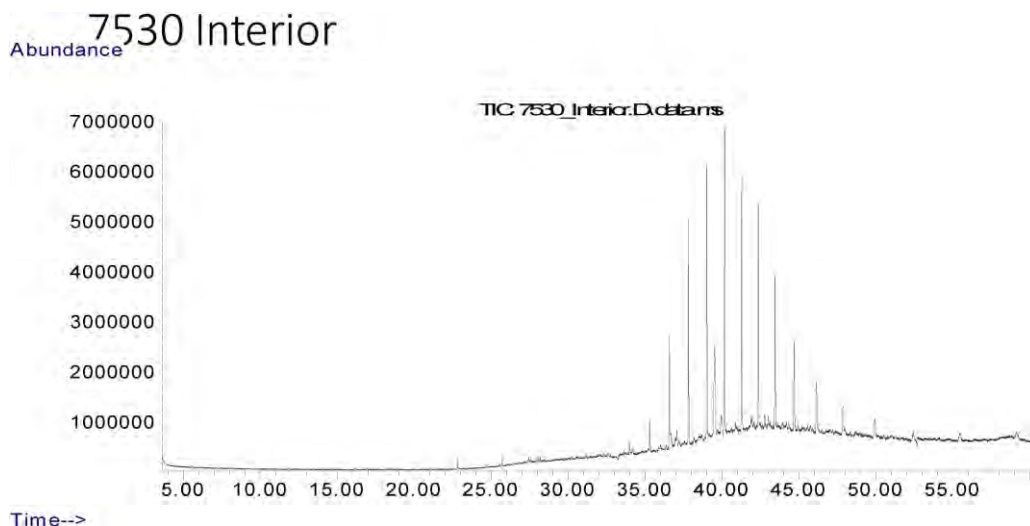
**Results for: Elemental Analyser****Data Sheet:**

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			83.73	percent	Y
Inorg	delta13 Carbon		-26.1013718574159		per mille	Y
Inorg	delta34 Sulphur		-3.07089655332182		per mille	Y
Inorg	Hydrogen			10.01	percent	Y
Inorg	Nitrogen			0.25	percent	Y
Inorg	Sulphur			1.22	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007530\_DISS\_GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007530\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	17605437		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	1145502		ug/L	Z
Aliph	nC25	35.2810	3397355		ug/L	Z
Aliph	nC26	36.5600	11998970		ug/L	Z
Aliph	nC27	37.7930	22431142		ug/L	Z
Aliph	nC28	38.9870	28724926		ug/L	Z
Aliph	nC29	40.1370	31698552		ug/L	Z
Aliph	nC30	41.2480	27517338		ug/L	Z
Aliph	nC31	42.3270	23487231		ug/L	Z
Aliph	nC32	43.4130	17967444		ug/L	Z
Aliph	nC33	44.6430	13067265		ug/L	Z
Aliph	nC34	46.0860	9658892		ug/L	Z
Aliph	nC35	47.8060	6217796		ug/L	Z
Aliph	nC36	49.8090	4719545		ug/L	Z
Aliph	nC37	52.2960	2345164		ug/L	Z
Aliph	nC38	55.2370	3453995		ug/L	Z
Aliph	nC39	58.8850	4557184		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

## Results for: GCMS with Full Scan

## Qualifier codes:

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference   Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)

Sample ID : **W13/007531A**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

4 PIECES located near each other. Part A.

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:01:01 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

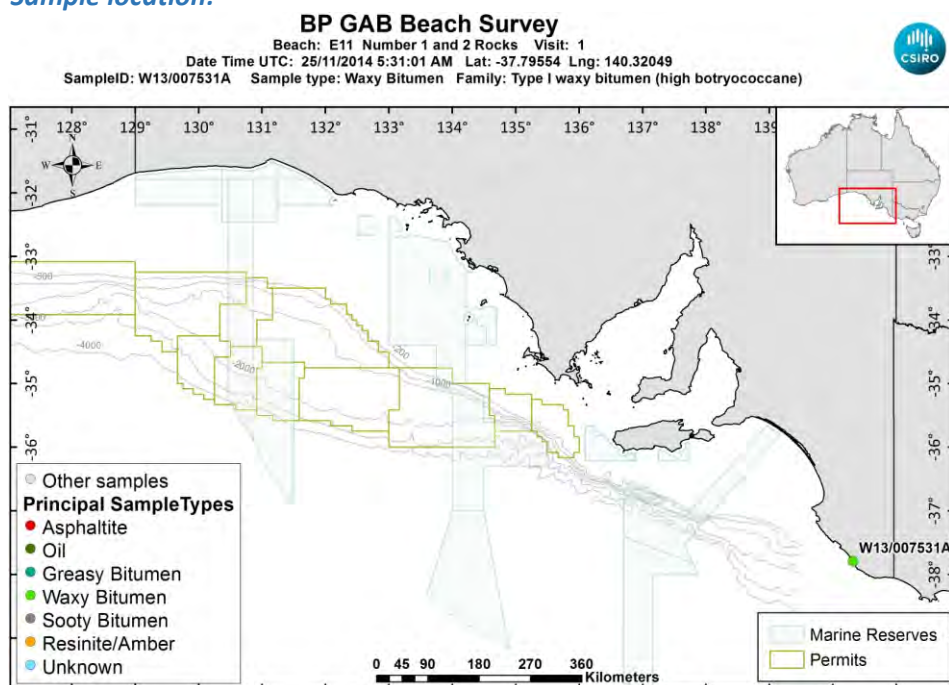
**Size (cm):** 2

**Latitude (Y):** -37.795540

**Weight (gm):** 1.84039

**Longitude (X):** 140.320489

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007531A\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007531\\_146A0726.JPG](#)

**Sample - laboratory image:**



LinkedFiles\GAB\_BCH1\Samples\W13\_007531\_Photo01.JPG

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007531A\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			82.01	percent	Y
Inorg	delta13 Carbon			-26.2104573606337	per mille	Y
Inorg	delta34 Sulphur			-1.81622899445678	per mille	Y
Inorg	Hydrogen			7.63	percent	Y
Inorg	Nitrogen			0.29	percent	Y
Inorg	Sulphur			1.68	percent	Y

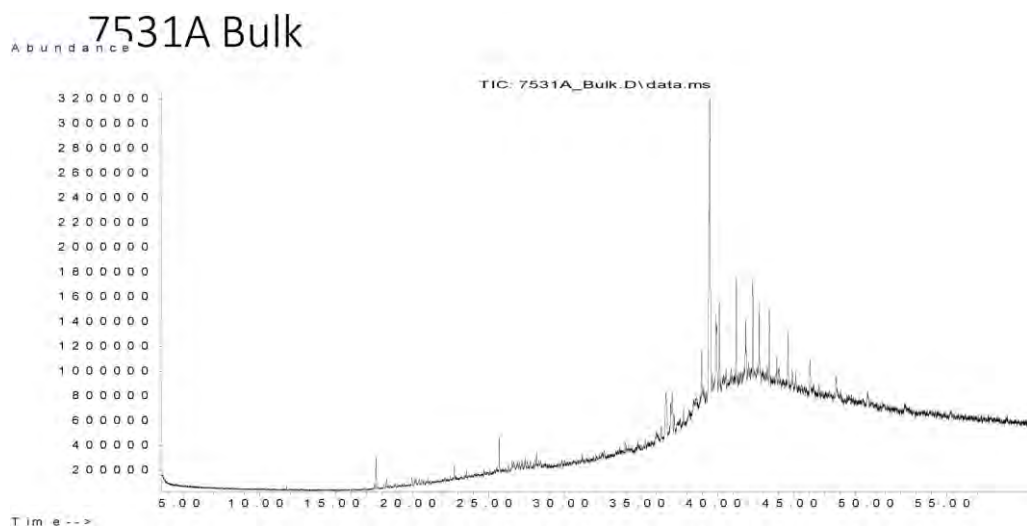
### Results for: GCMS with Full Scan

Unique ID: W13/007531A\_DISS\_GCMS-Scan/03

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007531A\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk



## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	2982758		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810			ug/L	U
Aliph	nC26	36.5600			ug/L	U
Aliph	nC27	37.7930			ug/L	U
Aliph	nC28	38.9870	1782328		ug/L	Z
Aliph	nC29	40.1370	3222161		ug/L	Z
Aliph	nC30	41.2480	3674892		ug/L	Z
Aliph	nC31	42.3270	3966562		ug/L	Z
Aliph	nC32	43.4130	3410557		ug/L	Z
Aliph	nC33	44.6430	2741255		ug/L	Z
Aliph	nC34	46.0860	2248667		ug/L	Z
Aliph	nC35	47.8060	1581795		ug/L	Z
Aliph	nC36	49.8090	287534		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007531B**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

Part B subsample

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:01:01 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

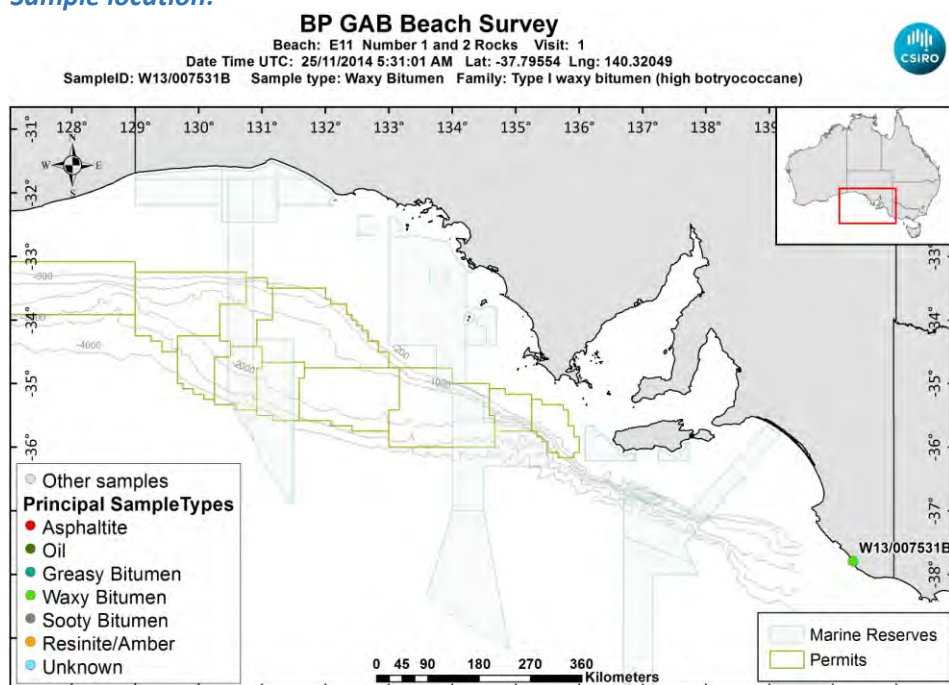
**Size (cm):**

**Latitude (Y):** -37.795540

**Weight (gm):**

**Longitude (X):** 140.320489

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007531B\\_Location.jpg](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007531\\_Photo01.JPG](#)

**Sample ID : W13/007531B****Beach E11: Number 1 and 2 Rocks Visit: 1****Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

**Analyses Completed:**

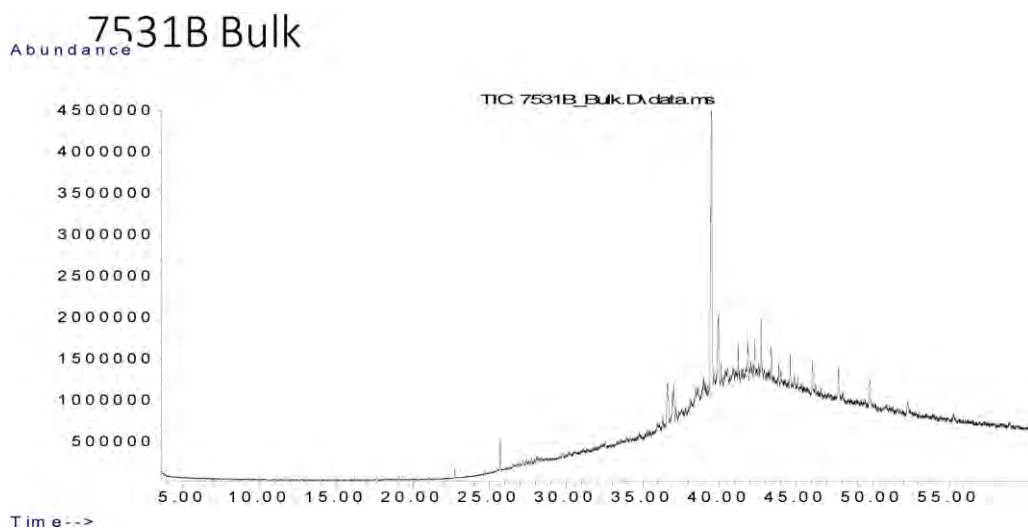
Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

**Sample Analyses Completed:****Results for: Elemental Analyser****Unique ID: W13/007531B UNK ELEM-AN/01****Instrument / Type:** Elemental Analyser Run: 1**for Analysis:** Elemental CHNS**Preparation:** Unknown**Analysis Date:****Method ID/s:****Linked Image:** [None available](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:****Data Sheet:***(default units ppb)*

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.52	percent	Y
Inorg	delta13 Carbon				per mille	U
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			11.64	percent	Y
Inorg	Nitrogen			0.27	percent	Y
Inorg	Sulphur			1.9	percent	Y

**Results for: GCMS with Full Scan****Unique ID: W13/007531B DISS GCMS-Scan/03****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007531B\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	4336098		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810			ug/L	U
Aliph	nC26	36.5600			ug/L	U
Aliph	nC27	37.7930			ug/L	U
Aliph	nC28	38.9870	1387172		ug/L	Z
Aliph	nC29	40.1370	1155501		ug/L	Z
Aliph	nC30	41.2480	1656149		ug/L	Z
Aliph	nC31	42.3270	1880722		ug/L	Z
Aliph	nC32	43.4130	2029965		ug/L	Z
Aliph	nC33	44.6430	2157077		ug/L	Z
Aliph	nC34	46.0860	2679839		ug/L	Z
Aliph	nC35	47.8060	3546707		ug/L	Z
Aliph	nC36	49.8090	437579		ug/L	Z
Aliph	nC37	52.2960	1826499		ug/L	Z
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007531C**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

Part C subsample

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:01:01 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

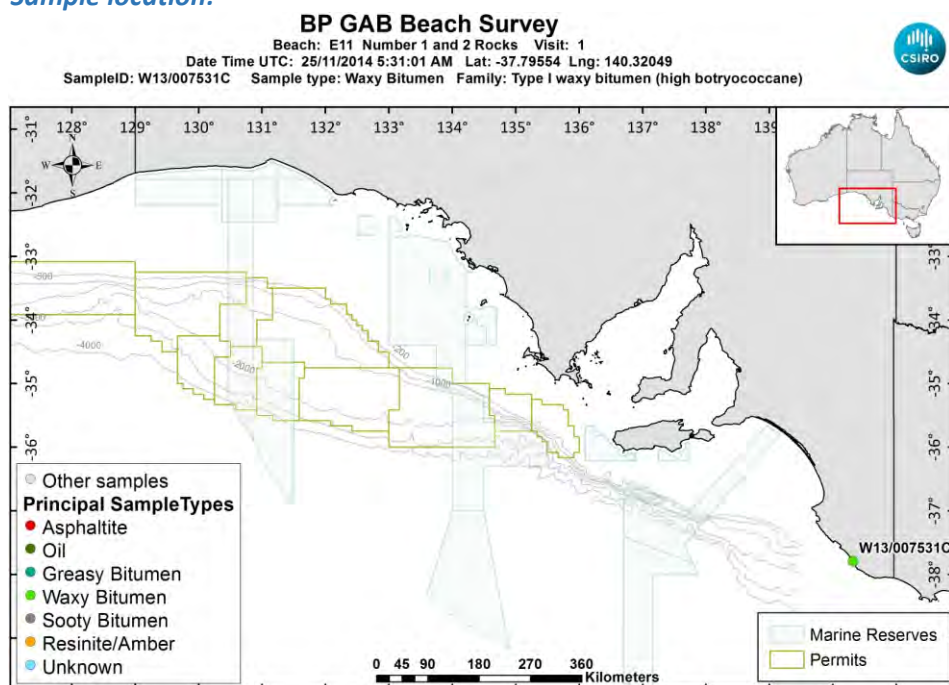
**Size (cm):**

**Latitude (Y):** -37.795540

**Weight (gm):**

**Longitude (X):** 140.320489

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007531C\\_Location.jpg](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007531\\_Photo01.JPG](#)

**Sample ID : W13/007531C****Beach E11: Number 1 and 2 Rocks Visit: 1****Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

**Analyses Completed:**

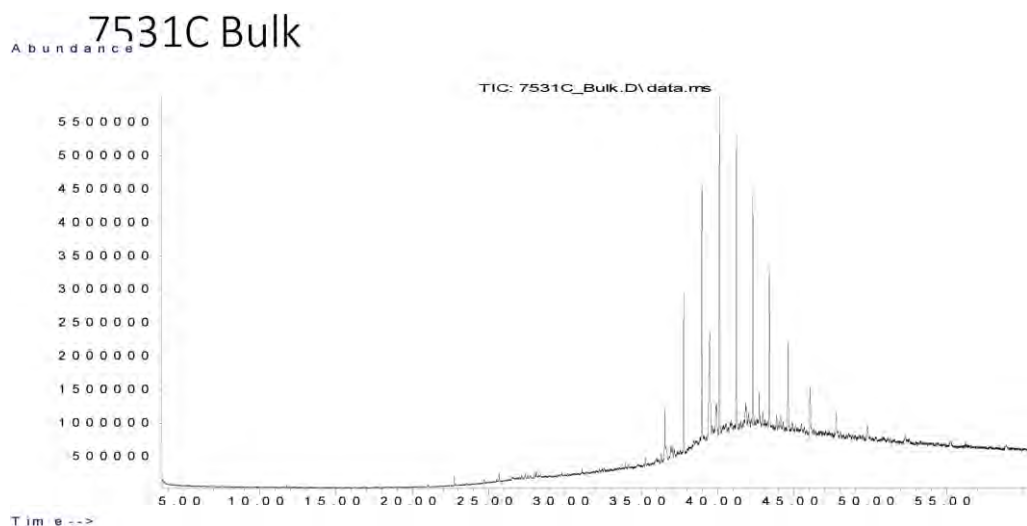
Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

**Sample Analyses Completed:****Results for: Elemental Analyser****Unique ID: W13/007531C\_UNK\_ELEM-AN/01****Instrument / Type:** Elemental Analyser Run: 1**for Analysis:** Elemental CHNS**Preparation:** Unknown**Analysis Date:****Method ID/s:****Linked Image:** [None available](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:****Data Sheet:***(default units ppb)*

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
<a href="#">Inorg</a>	Carbon			81.26	percent	Y
<a href="#">Inorg</a>	delta13 Carbon				per mille	U
<a href="#">Inorg</a>	delta34 Sulphur				per mille	U
<a href="#">Inorg</a>	Hydrogen			10.06	percent	Y
<a href="#">Inorg</a>	Nitrogen			0.24	percent	Y
<a href="#">Inorg</a>	Sulphur			1.82	percent	Y

**Results for: GCMS with Full Scan****Unique ID: W13/007531C DISS GCMS-Scan/03****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007531C\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	9454951		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810	528881		ug/L	Z
Aliph	nC26	36.5600	3789665		ug/L	Z
Aliph	nC27	37.7930	11401386		ug/L	Z
Aliph	nC28	38.9870	18935072		ug/L	Z
Aliph	nC29	40.1370	23544304		ug/L	Z
Aliph	nC30	41.2480	20680341		ug/L	Z
Aliph	nC31	42.3270	16919279		ug/L	Z
Aliph	nC32	43.4130	12022128		ug/L	Z
Aliph	nC33	44.6430	8045311		ug/L	Z
Aliph	nC34	46.0860	5087921		ug/L	Z
Aliph	nC35	47.8060	3005456		ug/L	Z
Aliph	nC36	49.8090	726873		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007531D**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

Part D subsample

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:01:01 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

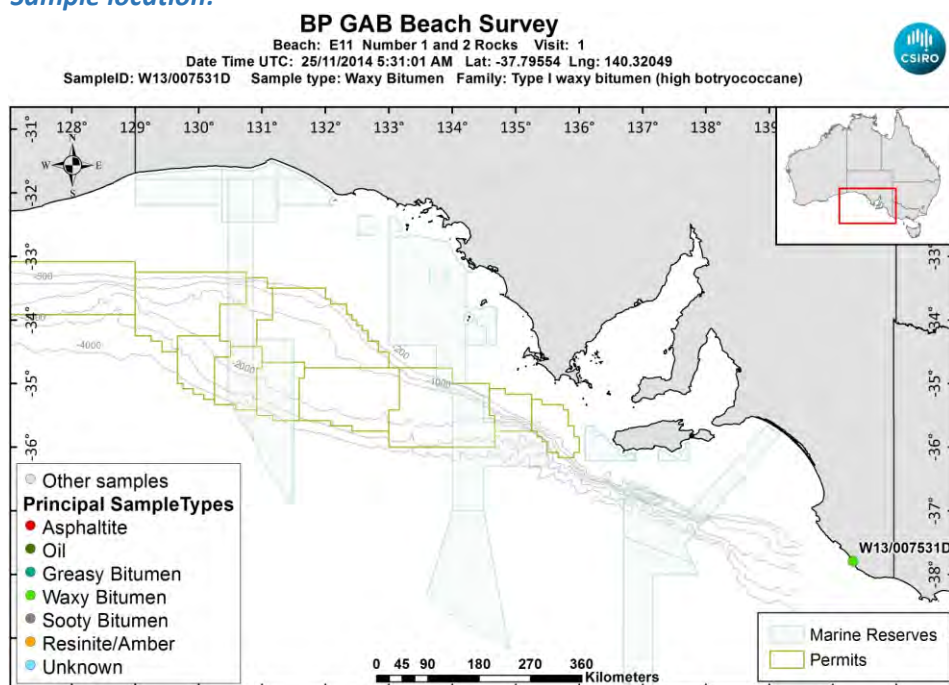
**Size (cm):**

**Latitude (Y):** -37.795540

**Weight (gm):**

**Longitude (X):** 140.320489

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007531D\\_Location.jpg](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007531\\_Photo01.JPG](#)

**Sample ID : W13/007531D****Beach E11: Number 1 and 2 Rocks Visit: 1****Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

**Analyses Completed:**

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

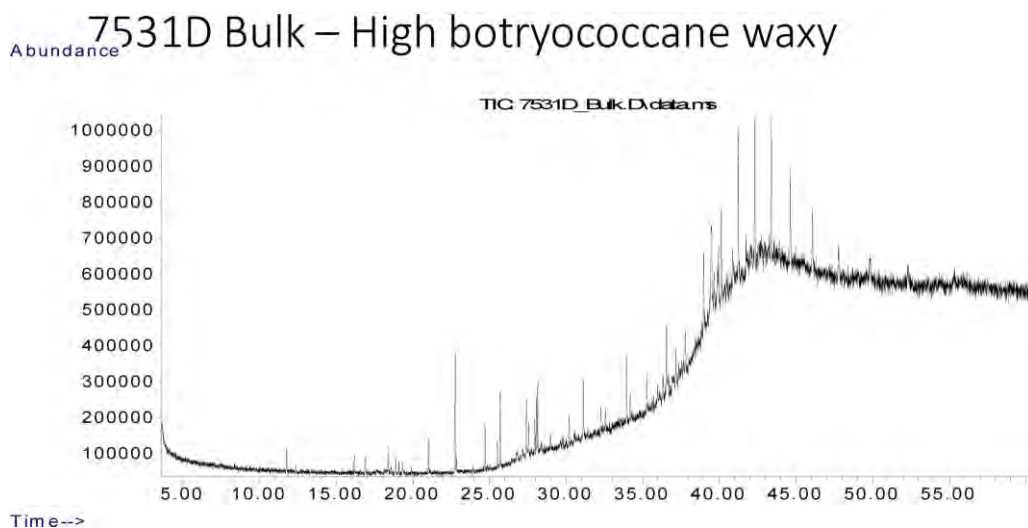
**Sample Analyses Completed:****Results for: Elemental Analyser****Unique ID: W13/007531D\_UNK\_ELEM-AN/01****Instrument / Type:** Elemental Analyser Run: 1**for Analysis:** Elemental CHNS**Preparation:** Unknown**Analysis Date:****Method ID/s:****Linked Image:** [None available](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:****Data Sheet:***(default units ppb)*

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			86.32	percent	Y
Inorg	delta13 Carbon				per mille	U
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			12.62	percent	Y
Inorg	Nitrogen			0.27	percent	Y
Inorg	Sulphur			1.6	percent	Y

**Results for: GCMS with Full Scan****Unique ID: W13/007531D DISS GCMS-Scan/03****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007531D\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk



## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	1250855		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	807276		ug/L	Z
Aliph	nC23	32.5720	207069		ug/L	Z
Aliph	nC24	33.9520	987590		ug/L	Z
Aliph	nC25	35.2810	469228		ug/L	Z
Aliph	nC26	36.5600	1055725		ug/L	Z
Aliph	nC27	37.7930	485288		ug/L	Z
Aliph	nC28	38.9870	1186856		ug/L	Z
Aliph	nC29	40.1370	1223748		ug/L	Z
Aliph	nC30	41.2480	2034760		ug/L	Z
Aliph	nC31	42.3270	1885076		ug/L	Z
Aliph	nC32	43.4130	2086288		ug/L	Z
Aliph	nC33	44.6430	1633962		ug/L	Z
Aliph	nC34	46.0860	1159380		ug/L	Z
Aliph	nC35	47.8060	812646		ug/L	Z
Aliph	nC36	49.8090	724925		ug/L	Z
Aliph	nC37	52.2960	535841		ug/L	Z
Aliph	nC38	55.2370	323881		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

## Results for: GCMS with Full Scan

## Qualifier codes:

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)

Sample ID : **W13/007532A**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

2 pieces. Part A.

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:02:54 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

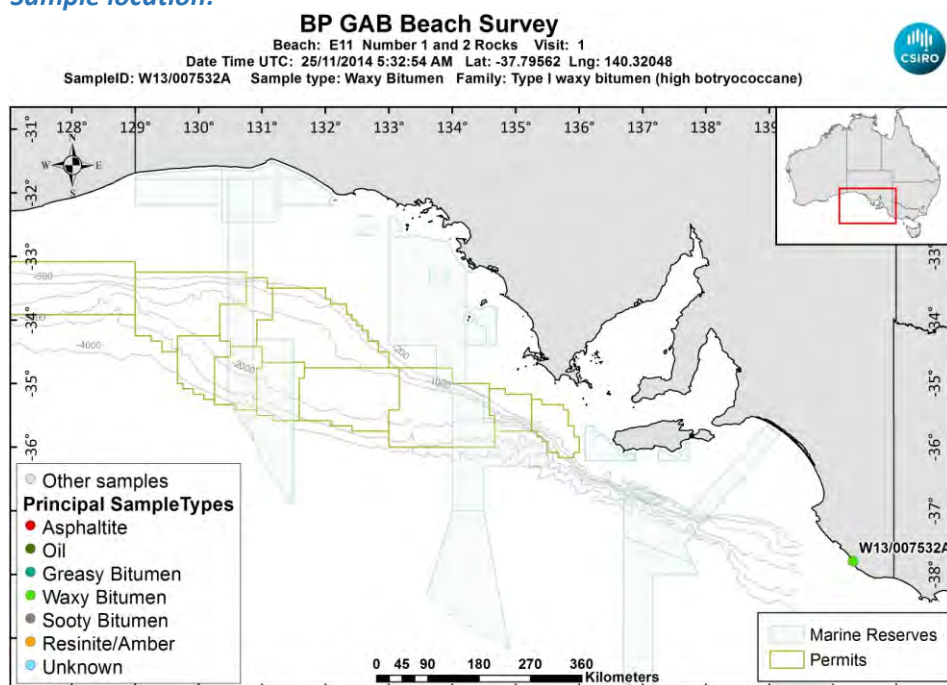
**Size (cm):** 3

**Latitude (Y):** -37.795622

**Weight (gm):** 2.37376

**Longitude (X):** 140.320480

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007532A\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007532\\_146A0728.JPG](#)

**Sample - laboratory image:**



LinkedFiles\GAB\_BCH1\Samples\W13\_007532\_Photo01.JPG

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007532A\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.67	percent	Y
Inorg	delta13 Carbon				per mille	U
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			12.33	percent	Y
Inorg	Nitrogen			0.22	percent	Y
Inorg	Sulphur			1.81	percent	Y

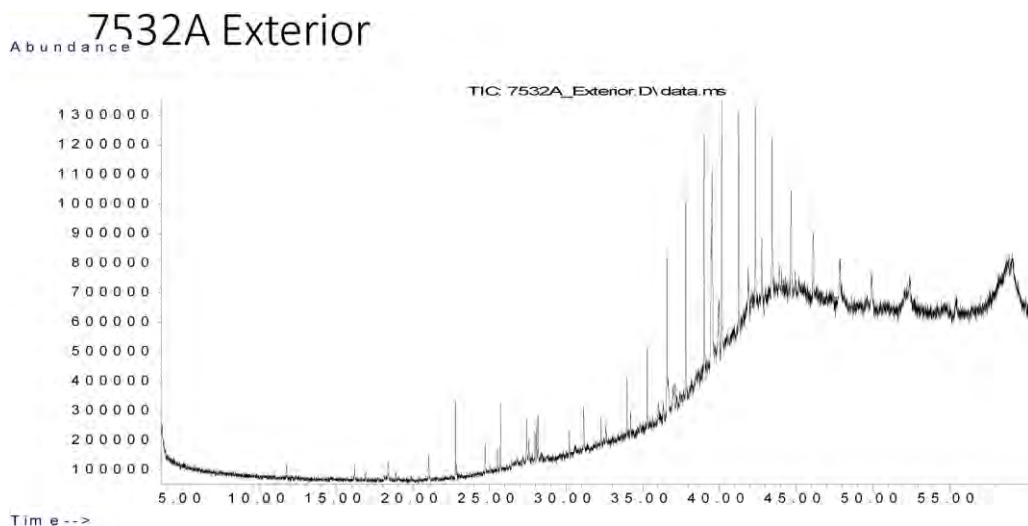
### Results for: GCMS with Full Scan

Unique ID: W13/007532A DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007532A\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior



## Results for: GCMS with Full Scan



## Data Sheet:

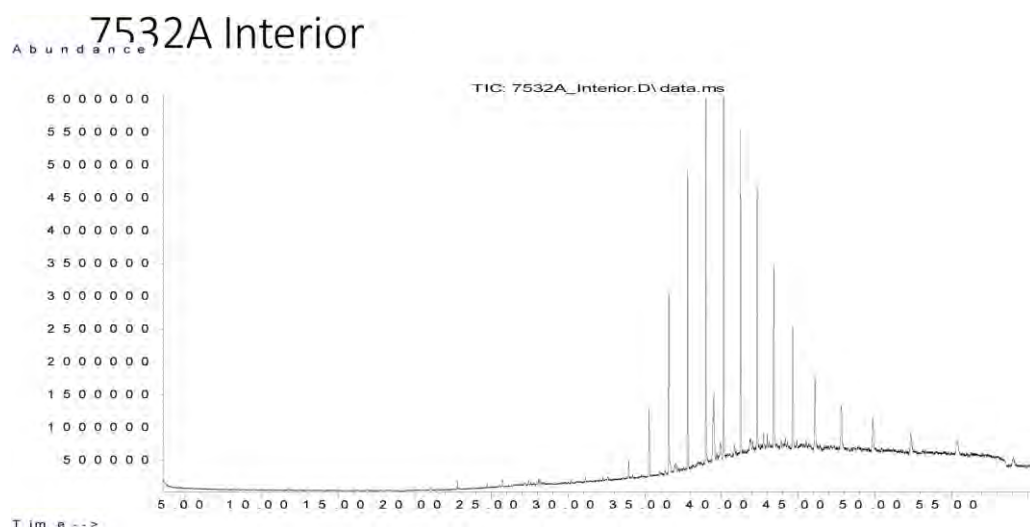
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	6400545		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	1071929		ug/L	Z
Aliph	nC25	35.2810	1423607		ug/L	Z
Aliph	nC26	36.5600	2922019		ug/L	Z
Aliph	nC27	37.7930	3935731		ug/L	Z
Aliph	nC28	38.9870	4897633		ug/L	Z
Aliph	nC29	40.1370	4415831		ug/L	Z
Aliph	nC30	41.2480	4129782		ug/L	Z
Aliph	nC31	42.3270	3513620		ug/L	Z
Aliph	nC32	43.4130	3258488		ug/L	Z
Aliph	nC33	44.6430	2775712		ug/L	Z
Aliph	nC34	46.0860	1945467		ug/L	Z
Aliph	nC35	47.8060	1606316		ug/L	Z
Aliph	nC36	49.8090	1338125		ug/L	Z
Aliph	nC37	52.2960	698459		ug/L	Z
Aliph	nC38	55.2370	500874		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U



**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007532A DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007532A\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	7267951		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	1396796		ug/L	Z
Aliph	nC25	35.2810	5272573		ug/L	Z
Aliph	nC26	36.5600	13526605		ug/L	Z
Aliph	nC27	37.7930	23953929		ug/L	Z
Aliph	nC28	38.9870	27170174		ug/L	Z
Aliph	nC29	40.1370	27458167		ug/L	Z
Aliph	nC30	41.2480	24437729		ug/L	Z
Aliph	nC31	42.3270	20807755		ug/L	Z
Aliph	nC32	43.4130	16302106		ug/L	Z
Aliph	nC33	44.6430	12062269		ug/L	Z
Aliph	nC34	46.0860	9235519		ug/L	Z
Aliph	nC35	47.8060	6415242		ug/L	Z
Aliph	nC36	49.8090	5753184		ug/L	Z
Aliph	nC37	52.2960	3999205		ug/L	Z
Aliph	nC38	55.2370	4094524		ug/L	Z
Aliph	nC39	58.8850	136471		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007532B**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

Part B subsample

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:02:54 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

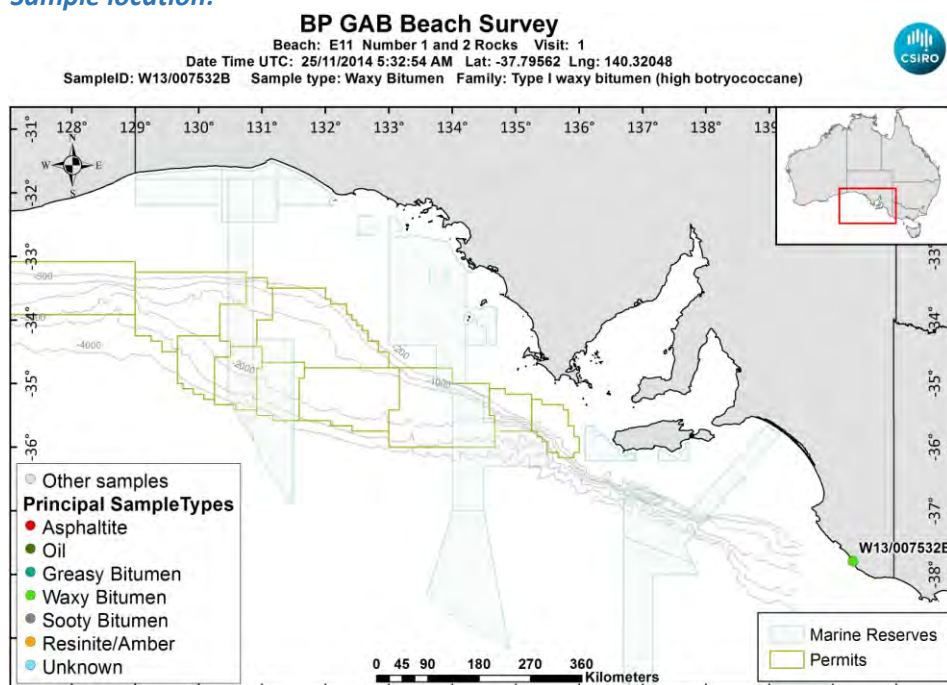
**Size (cm):**

**Latitude (Y):** -37.795622

**Weight (gm):**

**Longitude (X):** 140.320480

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007532B\\_Location.jpg](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007532\\_Photo01.JPG](#)

**Sample ID : W13/007532B****Beach E11: Number 1 and 2 Rocks Visit: 1****Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

**Analyses Completed:**

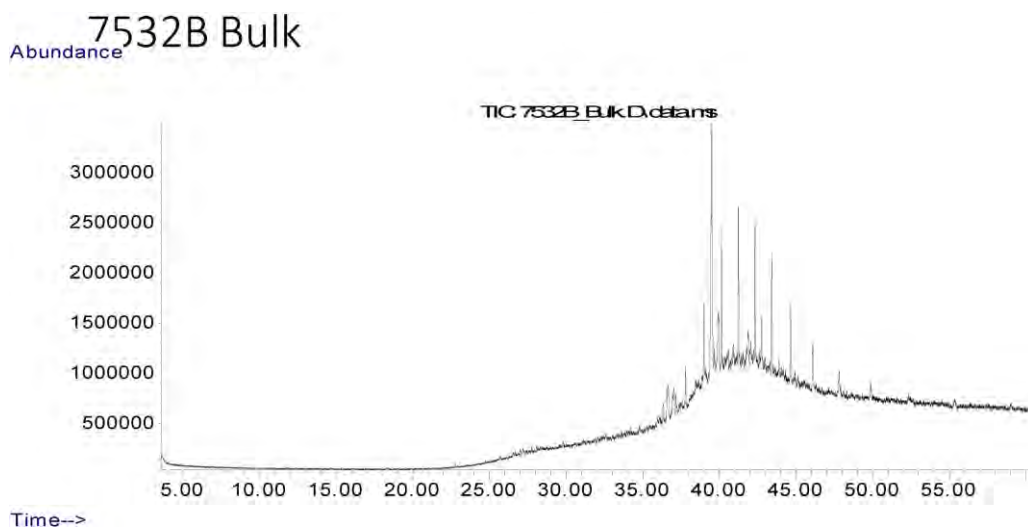
Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

**Sample Analyses Completed:****Results for: Elemental Analyser****Unique ID: W13/007532B\_UNK\_ELEM-AN/01****Instrument / Type:** Elemental Analyser Run: 1**for Analysis:** Elemental CHNS**Preparation:** Unknown**Analysis Date:****Method ID/s:****Linked Image:** [None available](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:****Data Sheet:***(default units ppb)*

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.74	percent	Y
Inorg	delta13 Carbon				per mille	U
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			5.75	percent	Y
Inorg	Nitrogen			0.25	percent	Y
Inorg	Sulphur			0.69	percent	Y

**Results for: GCMS with Full Scan****Unique ID: W13/007532B DISS GCMS-Scan/03****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007532B\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	15524656		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810			ug/L	U
Aliph	nC26	36.5600	4237033		ug/L	Z
Aliph	nC27	37.7930	1926869		ug/L	Z
Aliph	nC28	38.9870	4477023		ug/L	Z
Aliph	nC29	40.1370	6582006		ug/L	Z
Aliph	nC30	41.2480	7810383		ug/L	Z
Aliph	nC31	42.3270	7876618		ug/L	Z
Aliph	nC32	43.4130	6518023		ug/L	Z
Aliph	nC33	44.6430	5316364		ug/L	Z
Aliph	nC34	46.0860	3676510		ug/L	Z
Aliph	nC35	47.8060	1328838		ug/L	Z
Aliph	nC36	49.8090	2034653		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U



**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007533**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:05:10 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

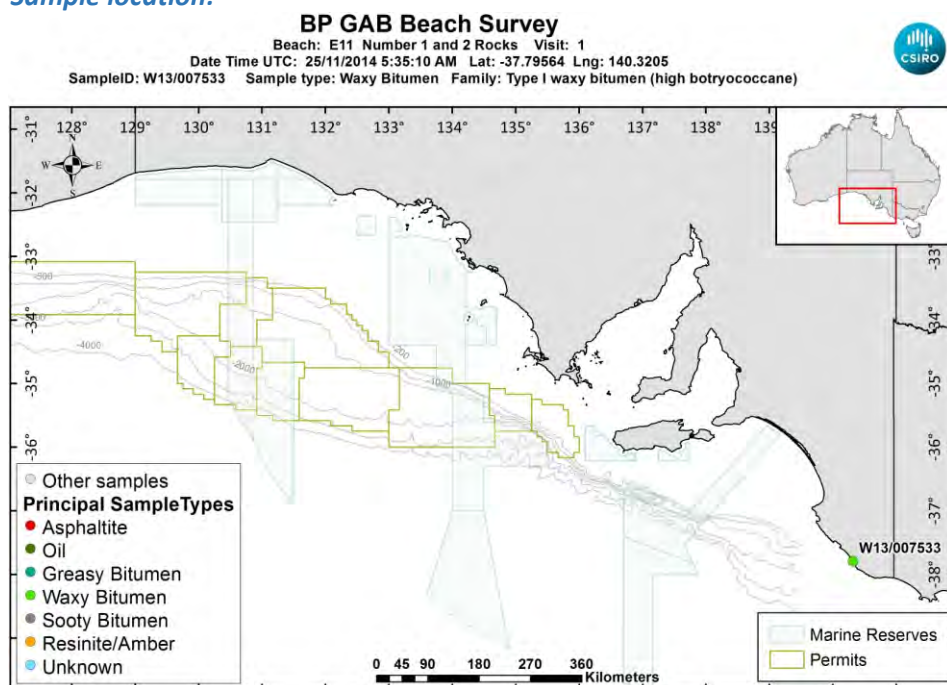
**Size (cm):**

**Latitude (Y):** -37.795645

**Weight (gm):** 1.94203

**Longitude (X):** 140.320502

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007533\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007533\\_146A0730.JPG](#)

**Sample - laboratory image:**



LinkedFiles\GAB BCH1\Samples\W13\_007533\_Photo01.JPG

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007533 UNK ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			85.09	percent	Y
Inorg	delta13 Carbon			-26.0831797316465	per mille	Y
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			12.49	percent	Y
Inorg	Nitrogen			0.28	percent	Y
Inorg	Sulphur			1.56	percent	Y

**Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007534**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:07:50 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

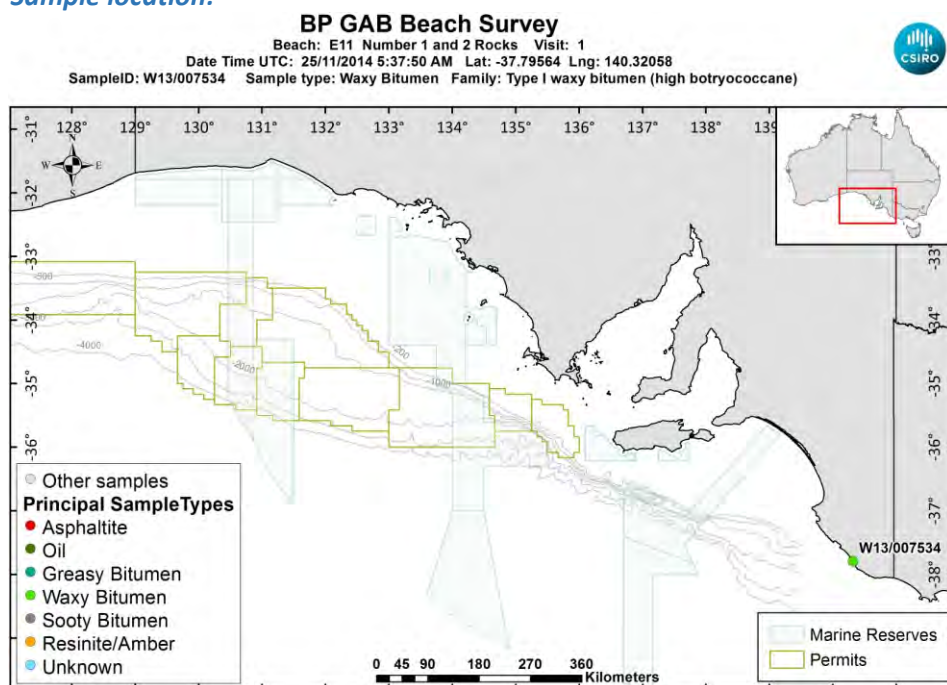
**Size (cm):** 4

**Latitude (Y):** -37.795644

**Weight (gm):** 5.6395

**Longitude (X):** 140.320584

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007534\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007534\\_146A0732.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007534\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007534\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date:

Linked Image: [None available](#)

Preparation: Unknown

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			86.23	percent	Y
Inorg	delta13 Carbon			-25.9240313048651	per mille	Y
Inorg	delta34 Sulphur			-3.70873348028929	per mille	Y
Inorg	Hydrogen			13.04	percent	Y
Inorg	Nitrogen			0.22	percent	Y
Inorg	Sulphur			1.64	percent	Y

### Results for: GCMS with Full Scan

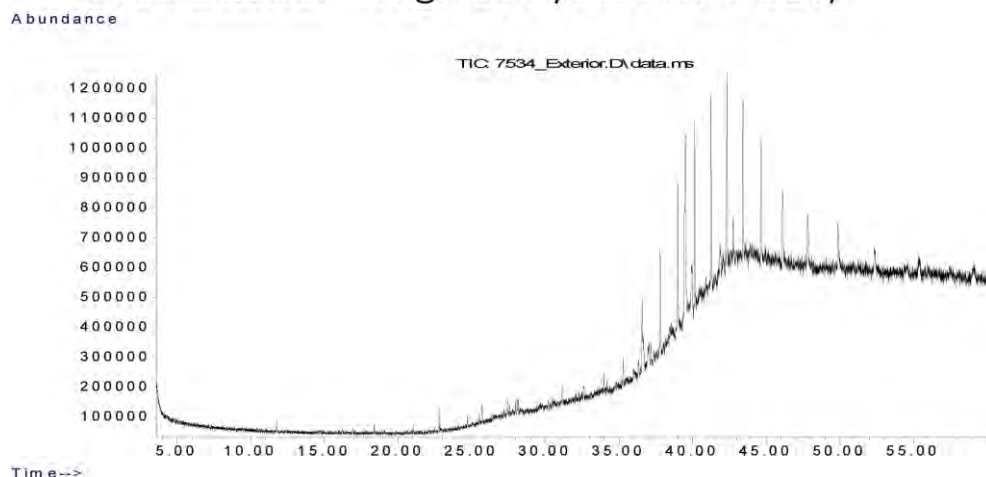
Unique ID: W13/007534\_DISS\_GCMS-Scan/01



**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007534\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7534 Exterior – High botryococcane waxy



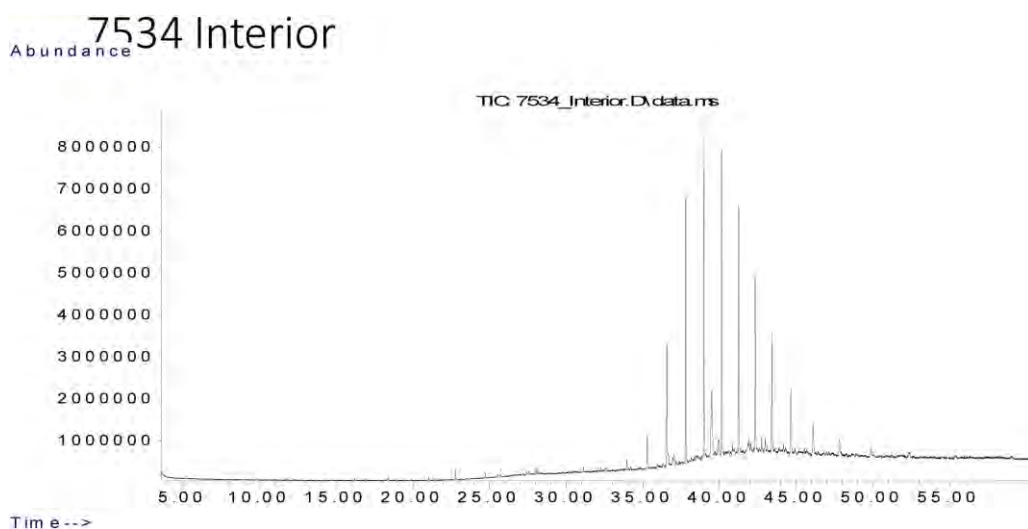
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	5254164		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	291259		ug/L	Z
Aliph	nC23	32.5720	214125		ug/L	Z
Aliph	nC24	33.9520	346275		ug/L	Z
Aliph	nC25	35.2810	468263		ug/L	Z
Aliph	nC26	36.5600	1357810		ug/L	Z
Aliph	nC27	37.7930	1948692		ug/L	Z
Aliph	nC28	38.9870	2840455		ug/L	Z
Aliph	nC29	40.1370	3179024		ug/L	Z
Aliph	nC30	41.2480	3251945		ug/L	Z
Aliph	nC31	42.3270	3241993		ug/L	Z
Aliph	nC32	43.4130	3032599		ug/L	Z
Aliph	nC33	44.6430	2816479		ug/L	Z
Aliph	nC34	46.0860	2098455		ug/L	Z
Aliph	nC35	47.8060	1740048		ug/L	Z
Aliph	nC36	49.8090	1659784		ug/L	Z
Aliph	nC37	52.2960	241700		ug/L	Z
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007534 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007534\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	14716871		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	614028		ug/L	Z
Aliph	nC23	32.5720	331106		ug/L	Z
Aliph	nC24	33.9520	1310729		ug/L	Z
Aliph	nC25	35.2810	4242169		ug/L	Z
Aliph	nC26	36.5600	15000045		ug/L	Z
Aliph	nC27	37.7930	31702170		ug/L	Z
Aliph	nC28	38.9870	39561811		ug/L	Z
Aliph	nC29	40.1370	40069636		ug/L	Z
Aliph	nC30	41.2480	30645463		ug/L	Z
Aliph	nC31	42.3270	24575091		ug/L	Z
Aliph	nC32	43.4130	16536598		ug/L	Z
Aliph	nC33	44.6430	10922499		ug/L	Z
Aliph	nC34	46.0860	7142056		ug/L	Z
Aliph	nC35	47.8060	4270801		ug/L	Z
Aliph	nC36	49.8090	3254333		ug/L	Z
Aliph	nC37	52.2960	230649		ug/L	Z
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

## Results for: GCMS with Full Scan

## Qualifier codes:

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)

Sample ID : **W13/007535**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:10:16 PM

**Type:** Waxy Bitumen

**Family:** Type III waxy bitumen (no botryococcane, low

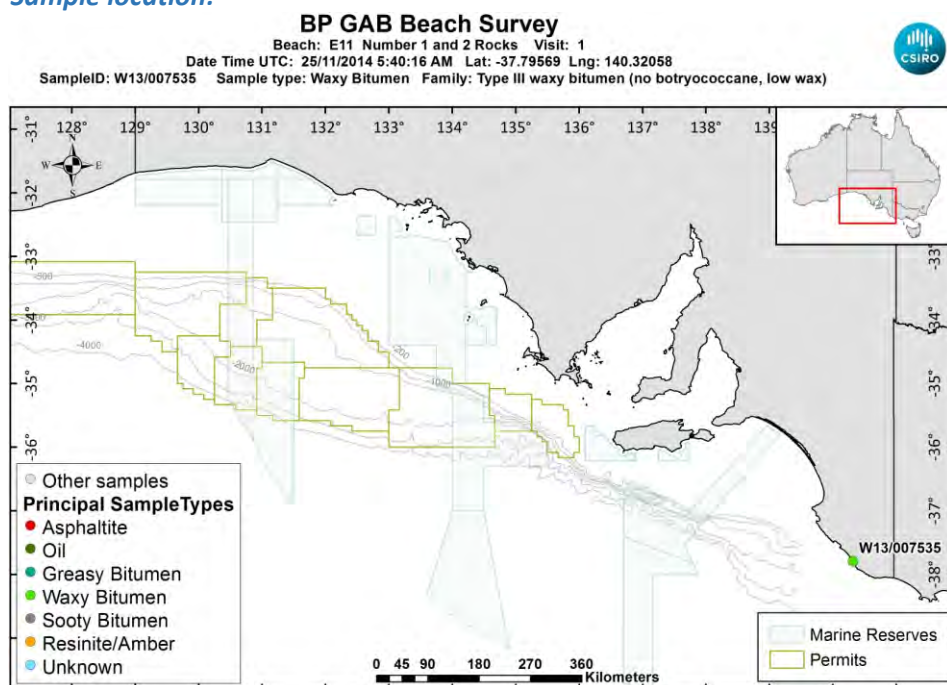
**Size (cm):** 7

**Latitude (Y):** -37.795685

**Weight (gm):** 17.55289

**Longitude (X):** 140.320579

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007535\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007535\\_146A0735.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007535\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007535\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

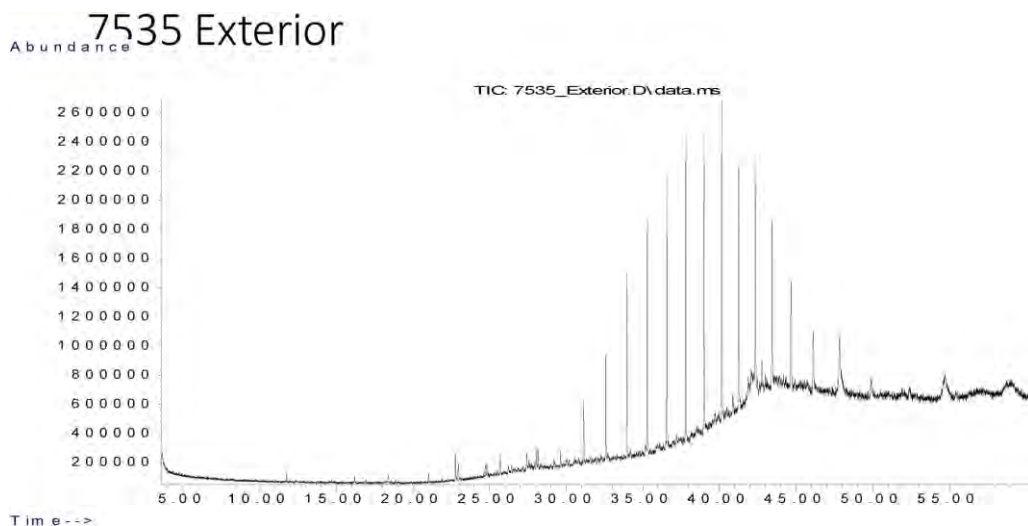
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			79.93	percent	Y
Inorg	delta13 Carbon			-27.4792842902875	per mille	Y
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			11.76	percent	Y
Inorg	Nitrogen			0.2	percent	Y
Inorg	Sulphur			1.51	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007535\_DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13 007535\\_ext WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



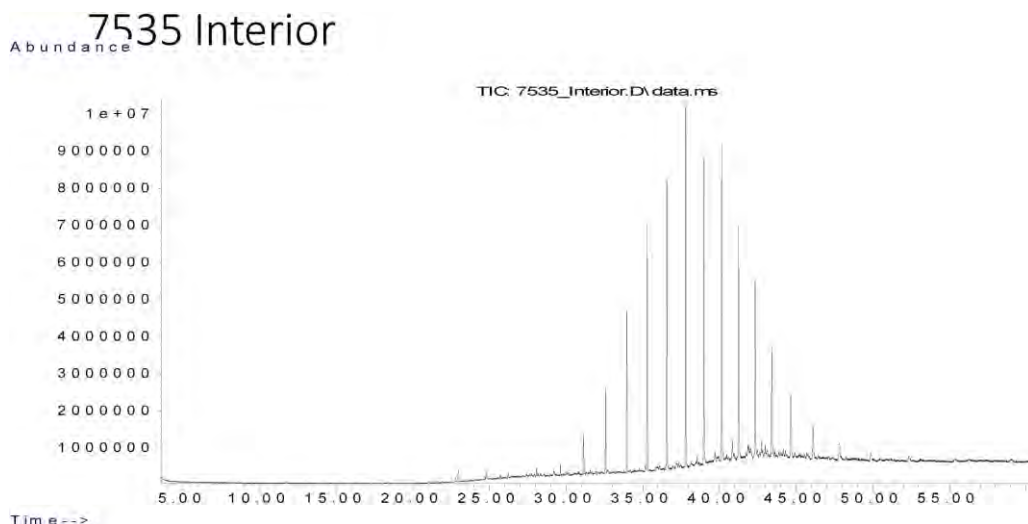
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780			ug/L	U
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330	585993		ug/L	Z
Aliph	nC22	31.1340	2128396		ug/L	Z
Aliph	nC23	32.5720	3768824		ug/L	Z
Aliph	nC24	33.9520	6496471		ug/L	Z
Aliph	nC25	35.2810	7742273		ug/L	Z
Aliph	nC26	36.5600	9403839		ug/L	Z
Aliph	nC27	37.7930	11074511		ug/L	Z
Aliph	nC28	38.9870	10840084		ug/L	Z
Aliph	nC29	40.1370	10730320		ug/L	Z
Aliph	nC30	41.2480	8903197		ug/L	Z
Aliph	nC31	42.3270	8621207		ug/L	Z
Aliph	nC32	43.4130	6609849		ug/L	Z
Aliph	nC33	44.6430	5021228		ug/L	Z
Aliph	nC34	46.0860	3748791		ug/L	Z
Aliph	nC35	47.8060	1304192		ug/L	Z
Aliph	nC36	49.8090	1960527		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007535 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007535\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780			ug/L	U
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680	1175446		ug/L	Z
Aliph	nC21	29.6330	1436095		ug/L	Z
Aliph	nC22	31.1340	5396133		ug/L	Z
Aliph	nC23	32.5720	12118729		ug/L	Z
Aliph	nC24	33.9520	22233879		ug/L	Z
Aliph	nC25	35.2810	32833966		ug/L	Z
Aliph	nC26	36.5600	41525288		ug/L	Z
Aliph	nC27	37.7930	48801825		ug/L	Z
Aliph	nC28	38.9870	42599377		ug/L	Z
Aliph	nC29	40.1370	41330270		ug/L	Z
Aliph	nC30	41.2480	29631144		ug/L	Z
Aliph	nC31	42.3270	25091768		ug/L	Z
Aliph	nC32	43.4130	18249283		ug/L	Z
Aliph	nC33	44.6430	13116772		ug/L	Z
Aliph	nC34	46.0860	7902186		ug/L	Z
Aliph	nC35	47.8060	4814956		ug/L	Z
Aliph	nC36	49.8090	3398400		ug/L	Z
Aliph	nC37	52.2960	1436900		ug/L	Z
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007536**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:13:17 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

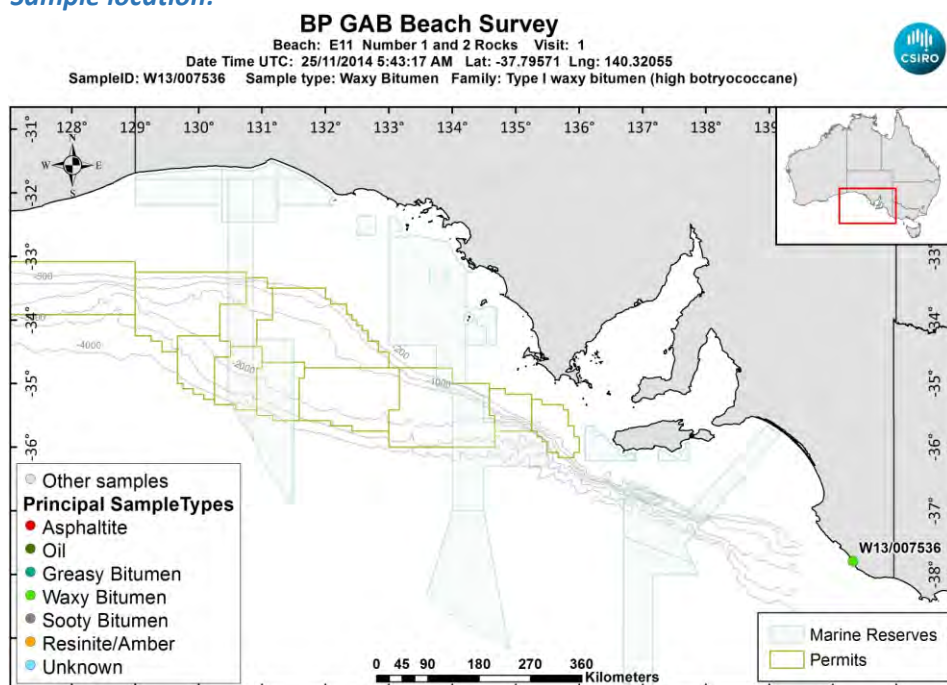
**Size (cm):** 3

**Latitude (Y):** -37.795708

**Weight (gm):** 3.9108

**Longitude (X):** 140.320549

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007536\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007536\\_146A0737.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007536\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007536\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date:

Linked Image: [None available](#)

Preparation: Unknown

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

**Comment:** Sulphur isotope response peak was small. This value may be inaccurate. Sulphur isotope response peak was small. This value may be inaccurate.

### Data Sheet:

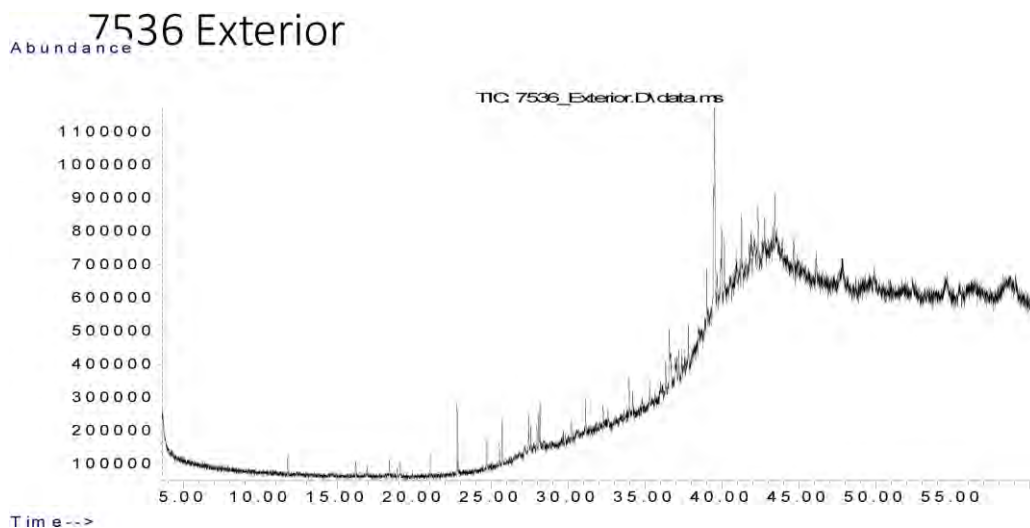
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			86.3	percent	Y
Inorg	delta13 Carbon			-25.7588410472545	per mille	Y
Inorg	delta34 Sulphur			5.89167198200953	per mille	Y
Inorg	Hydrogen			9.99	percent	Y
Inorg	Nitrogen			0.24	percent	Y
Inorg	Sulphur			1.24	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007536\_DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007536\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



## Data Sheet:

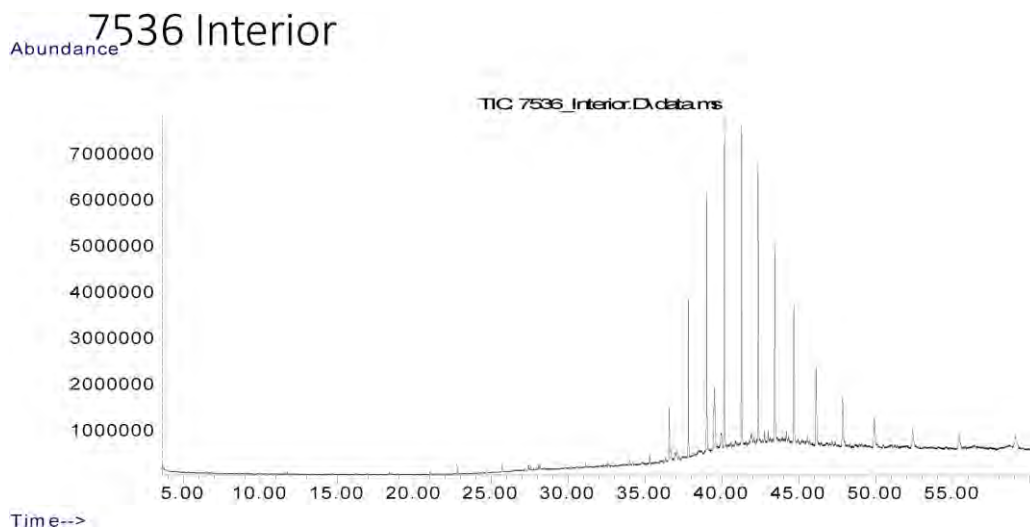
(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	3853129		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	516366		ug/L	Z
Aliph	nC23	32.5720	155664		ug/L	Z
Aliph	nC24	33.9520	585529		ug/L	Z
Aliph	nC25	35.2810	392242		ug/L	Z
Aliph	nC26	36.5600	680262		ug/L	Z
Aliph	nC27	37.7930	572704		ug/L	Z
Aliph	nC28	38.9870	954261		ug/L	Z
Aliph	nC29	40.1370	857442		ug/L	Z
Aliph	nC30	41.2480	950222		ug/L	Z
Aliph	nC31	42.3270	822801		ug/L	Z
Aliph	nC32	43.4130	911608		ug/L	Z
Aliph	nC33	44.6430	736377		ug/L	Z
Aliph	nC34	46.0860	228823		ug/L	Z
Aliph	nC35	47.8060	360471		ug/L	Z
Aliph	nC36	49.8090			ug/L	U
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007536 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007536\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior



## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	9688431		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	790448		ug/L	Z
Aliph	nC25	35.2810	1142951		ug/L	Z
Aliph	nC26	36.5600	7355432		ug/L	Z
Aliph	nC27	37.7930	17801803		ug/L	Z
Aliph	nC28	38.9870	29105749		ug/L	Z
Aliph	nC29	40.1370	37643231		ug/L	Z
Aliph	nC30	41.2480	36134069		ug/L	Z
Aliph	nC31	42.3270	32411654		ug/L	Z
Aliph	nC32	43.4130	26092880		ug/L	Z
Aliph	nC33	44.6430	19928776		ug/L	Z
Aliph	nC34	46.0860	14408174		ug/L	Z
Aliph	nC35	47.8060	9798461		ug/L	Z
Aliph	nC36	49.8090	7947785		ug/L	Z
Aliph	nC37	52.2960	4937834		ug/L	Z
Aliph	nC38	55.2370	5957699		ug/L	Z
Aliph	nC39	58.8850	2721580		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U



**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007537**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:14:49 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

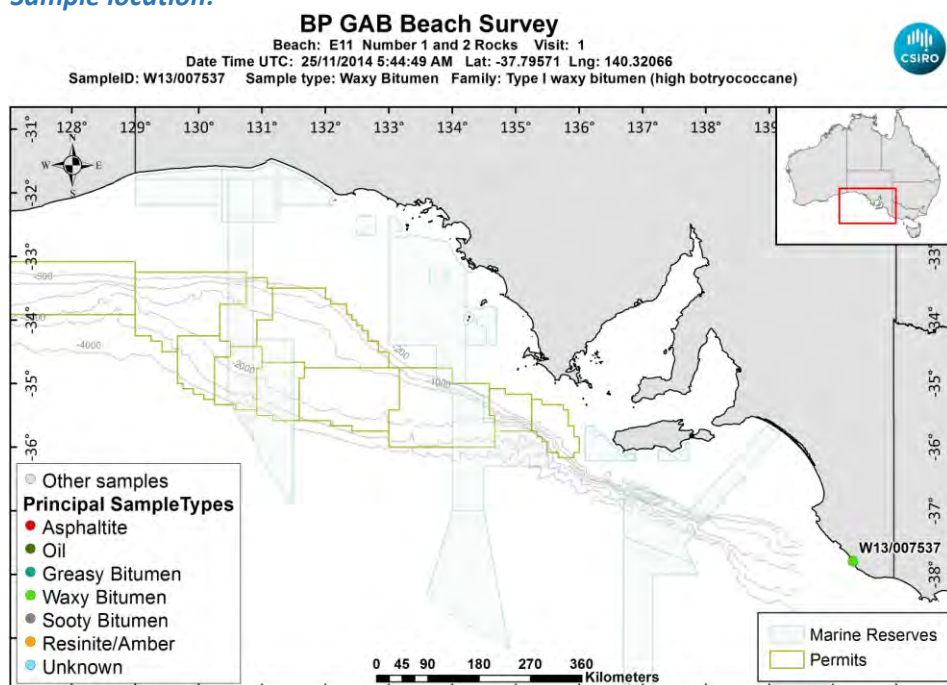
**Size (cm):** 6

**Latitude (Y):** -37.795714

**Weight (gm):** 10.25213

**Longitude (X):** 140.320662

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007537\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007537\\_146A0740.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007537\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007537\_UNK\_ELEM-AN/01

**Instrument / Type:** Elemental Analyser Run: 1

**for Analysis:** Elemental CHNS

**Preparation:** Unknown

**Analysis Date:**

**Method ID/s:**

**Linked Image:** [None available](#)

**Sample Volume:**

**Volume Units:**

**Extract Volume:**

**Dilution Factor:**

**Comment:** Sulphur isotope peak was small. This value may not be accurate. Sulphur isotope peak was small. This value may not be accurate.

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			85.08	percent	Y
Inorg	delta13 Carbon			-25.9914007054178	per mille	Y
Inorg	delta34 Sulphur			-8.47072586984374	per mille	Y
Inorg	Hydrogen			7.96	percent	Y
Inorg	Nitrogen			0.25	percent	Y
Inorg	Sulphur			1.37	percent	Y

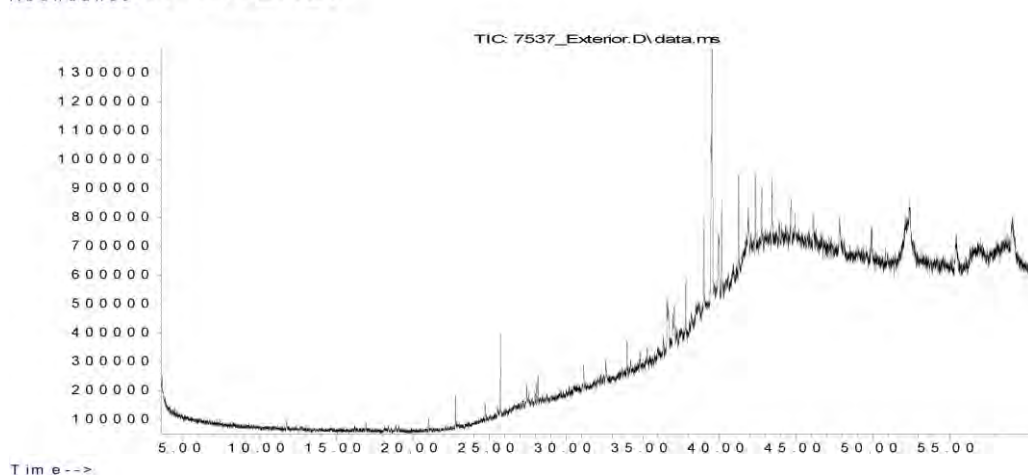
### Results for: GCMS with Full Scan

**Unique ID:** W13/007537\_DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007537\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7537 Exterior



## Data Sheet:

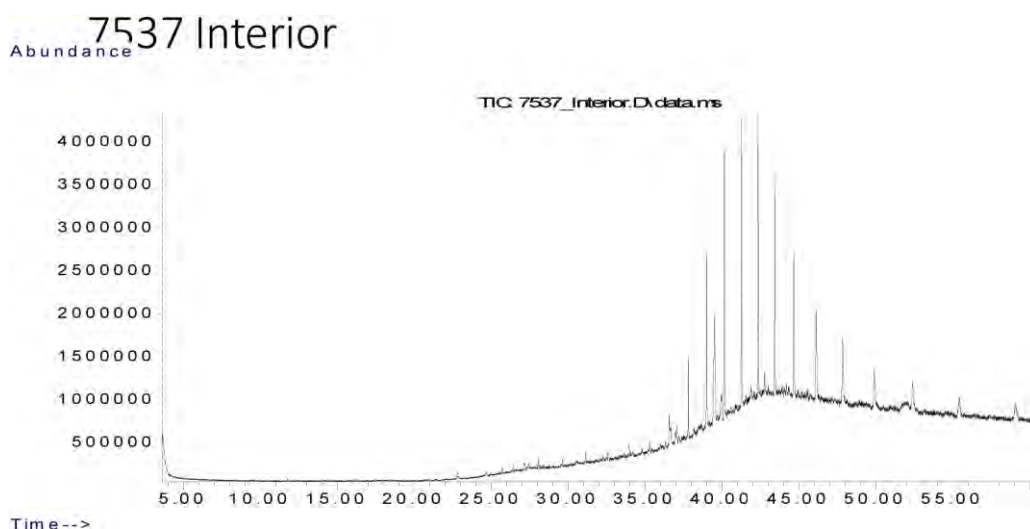
(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	8374700		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810			ug/L	U
Aliph	nC26	36.5600	912515		ug/L	Z
Aliph	nC27	37.7930	1032755		ug/L	Z
Aliph	nC28	38.9870	1858743		ug/L	Z
Aliph	nC29	40.1370	1736262		ug/L	Z
Aliph	nC30	41.2480	1848627		ug/L	Z
Aliph	nC31	42.3270	1505417		ug/L	Z
Aliph	nC32	43.4130	1371174		ug/L	Z
Aliph	nC33	44.6430	1057843		ug/L	Z
Aliph	nC34	46.0860	1084382		ug/L	Z
Aliph	nC35	47.8060	886339		ug/L	Z
Aliph	nC36	49.8090	1296506		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007537 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007537\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior



## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	8904445		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300	404538		ug/L	Z
Aliph	nC20	28.0680	645250		ug/L	Z
Aliph	nC21	29.6330	418528		ug/L	Z
Aliph	nC22	31.1340	661556		ug/L	Z
Aliph	nC23	32.5720	580258		ug/L	Z
Aliph	nC24	33.9520	630054		ug/L	Z
Aliph	nC25	35.2810	565472		ug/L	Z
Aliph	nC26	36.5600	1644077		ug/L	Z
Aliph	nC27	37.7930	4967702		ug/L	Z
Aliph	nC28	38.9870	10396156		ug/L	Z
Aliph	nC29	40.1370	15038325		ug/L	Z
Aliph	nC30	41.2480	16186224		ug/L	Z
Aliph	nC31	42.3270	16751418		ug/L	Z
Aliph	nC32	43.4130	14660559		ug/L	Z
Aliph	nC33	44.6430	12018712		ug/L	Z
Aliph	nC34	46.0860	9240445		ug/L	Z
Aliph	nC35	47.8060	7130759		ug/L	Z
Aliph	nC36	49.8090	5812665		ug/L	Z
Aliph	nC37	52.2960	3920904		ug/L	Z
Aliph	nC38	55.2370	4542187		ug/L	Z
Aliph	nC39	58.8850	4308199		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007538A**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

2 pieces smaller is 1.5cm. Part A.

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:17:35 PM

**Type:** Waxy Bitumen

**Family:** Type II waxy bitumen (low botryococcane)

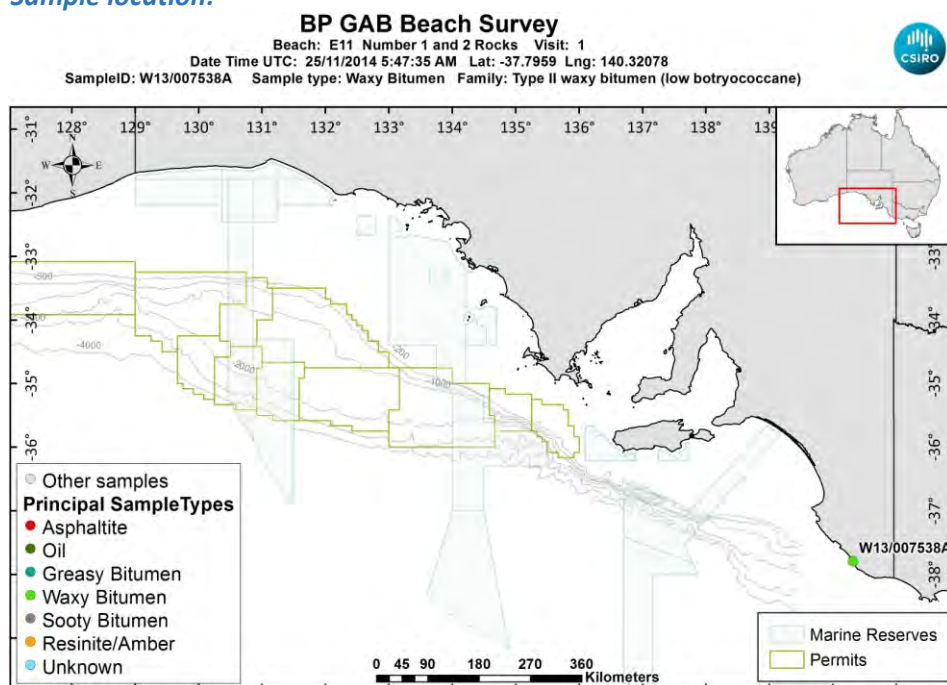
**Size (cm):** 4

**Latitude (Y):** -37.795902

**Weight (gm):** 7.8708

**Longitude (X):** 140.320780

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007538A\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007538\\_146A0743.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007538\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES
4	Biomarkers	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 2
Biomarkers	Gas Chromatography Mass Spectrometry Run: 1
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Gas Chromatography Mass Spectrometry

**Unique ID:** W13/007538A DISS GC-MS/01

**Instrument / Type:** Gas Chromatography Mass Spectrometry Run: 1

**for Analysis:** Biomarkers

**Analysis Date:** 18/07/2017

**Linked Image:** [None available](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**Sample Volume:**

**Volume Units:**

**Extract Volume:**

**Dilution Factor:**

**Comment:** External Ratios only

## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			26.9356605319362	ratio	Y
BiomRatio	% C27 abb 20(R+S)			18.3294161033845	ratio	Y
BiomRatio	% C28 aaa 20R			24.4414245598017	ratio	Y
BiomRatio	% C28 abb 20(R+S)			30.6932509727762	ratio	Y
BiomRatio	% C29 aaa 20R			48.6229149082622	ratio	Y
BiomRatio	% C29 abb 20(R+S)			50.9773329238393	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.152513564690904	ratio	Y
BiomRatio	25-Nor/C30H			4.44596304826094E-02	ratio	Y
BiomRatio	C19t/C23t			0.183300746607268	ratio	Y
BiomRatio	C22t/C21t			0.536537479875918	ratio	Y
BiomRatio	C22t/C24t			0.355446620574838	ratio	Y
BiomRatio	C23t/C30H			0.139358853848588	ratio	Y
BiomRatio	C24t/C23t			0.570846842387493	ratio	Y
BiomRatio	C24Tet/C23t			0.97011920966877	ratio	Y
BiomRatio	C24Tet/C26t			1.71256597266722	ratio	Y
BiomRatio	C24Tet/C30H			0.135194701155938	ratio	Y
BiomRatio	C26t/C25t			1.06897571698566	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.339241756901715	ratio	Y
BiomRatio	C27 Dia/Ster			0.239809677595624	ratio	Y
BiomRatio	C28BNH/C30H			1.92974331712127E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			2.78117604163214	ratio	Y
BiomRatio	C29H/C30H			1.1316297633676	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.160568982967762	ratio	Y
BiomRatio	C30DiaH/C30H			7.33408231364095E-02	ratio	Y
BiomRatio	C30Ts/C30H			0.140640290787082	ratio	Y
BiomRatio	C35 Homohopane Index			6.44389447082963E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.911943545756243	ratio	Y
BiomRatio	Gam/C30H			8.73819045376618E-02	ratio	Y
BiomRatio	Gam/C31HR			0.25541802012153	ratio	Y
BiomRatio	Ole/C30H			6.88032533276432E-02	ratio	Y
BiomRatio	Sterane/hopane			0.178110590602038	ratio	Y
BiomRatio	Steranes/Terpanes			0.15638103056677	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.138952659133358	ratio	Y

## Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007538A DISS GC-MS/02

Instrument / Type: Gas Chromatography Mass Spectrometry Run: 2

for Analysis: Biomarkers

Preparation: Dissolved in solvent

Analysis Date: 18/07/2017

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: Internal Ratios only



## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			44.030601663735	ratio	Y
BiomRatio	% C27 abb 20(R+S)			31.8505571334936	ratio	Y
BiomRatio	% C28 aaa 20R			15.6706787823856	ratio	Y
BiomRatio	% C28 abb 20(R+S)			25.0148488011717	ratio	Y
BiomRatio	% C29 aaa 20R			40.2987195538794	ratio	Y
BiomRatio	% C29 abb 20(R+S)			43.1345940653347	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.128005004468275	ratio	Y
BiomRatio	25-Nor/C30H			4.14966956316937E-02	ratio	Y
BiomRatio	C19t/C23t			0.187954863417323	ratio	Y
BiomRatio	C22t/C21t			0.549187331574351	ratio	Y
BiomRatio	C22t/C24t			0.428468869728292	ratio	Y
BiomRatio	C23t/C30H			0.137737730333765	ratio	Y
BiomRatio	C24t/C23t			0.482268275793847	ratio	Y
BiomRatio	C24Tet/C23t			0.894061868490595	ratio	Y
BiomRatio	C24Tet/C26t			1.73023567458174	ratio	Y
BiomRatio	C24Tet/C30H			0.12314605254386	ratio	Y
BiomRatio	C26t/C25t			1.11796404439417	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.342480987128671	ratio	Y
BiomRatio	C27 Dia/Ster			0.285420677078056	ratio	Y
BiomRatio	C28BNH/C30H			0.021954183124437	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			1.3542806766157	ratio	Y
BiomRatio	C29H/C30H			1.15451431552301	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.140076172360626	ratio	Y
BiomRatio	C30DiaH/C30H			4.71682091593849E-02	ratio	Y
BiomRatio	C30Ts/C30H			0.14181460209138	ratio	Y
BiomRatio	C35 Homohopane Index			8.81249433598552E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.964379525109942	ratio	Y
BiomRatio	Gam/C30H			8.50727029153672E-02	ratio	Y
BiomRatio	Gam/C31HR			0.228433559251608	ratio	Y
BiomRatio	Ole/C30H			0.054612952656609	ratio	Y
BiomRatio	Sterane/hopane			0.160428860249298	ratio	Y
BiomRatio	Steranes/Terpanes			0.142288903242538	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.127486800399602	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007538A UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:



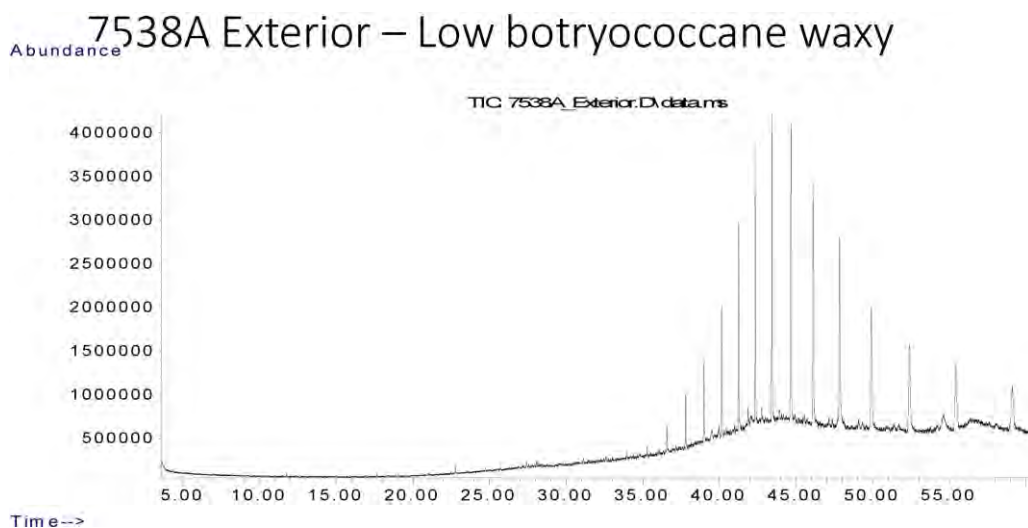
**Results for: Elemental Analyser****Data Sheet:**

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			78.92	percent	Y
Inorg	delta13 Carbon			-26.9619350579705	per mille	Y
Inorg	delta34 Sulphur			-4.44560337465012	per mille	Y
Inorg	Hydrogen			8.14	percent	Y
Inorg	Nitrogen			0.19	percent	Y
Inorg	Sulphur			2.34	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007538A\_DISS\_GCMS-Scan/01**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007538A\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



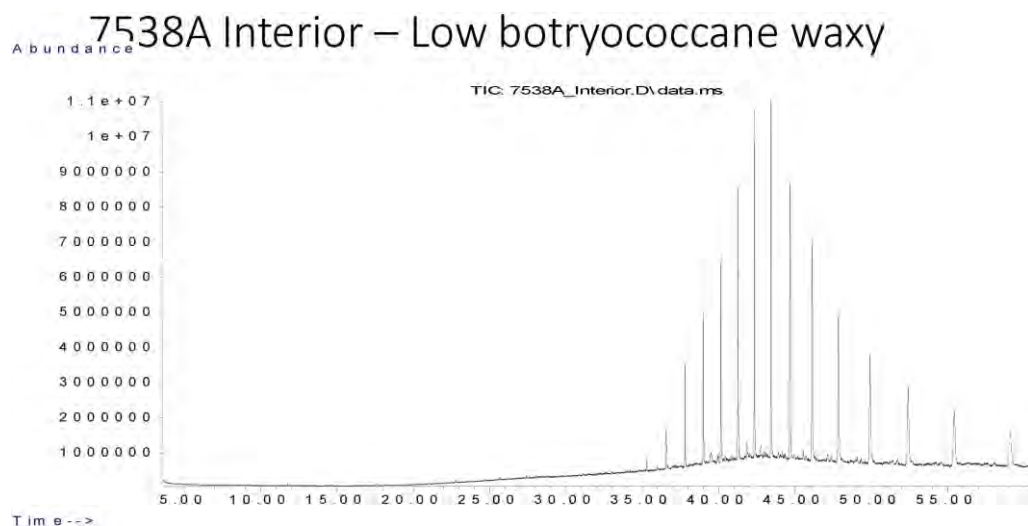
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	858164		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	476956		ug/L	Z
Aliph	nC25	35.2810	602385		ug/L	Z
Aliph	nC26	36.5600	1470503		ug/L	Z
Aliph	nC27	37.7930	2883152		ug/L	Z
Aliph	nC28	38.9870	5012040		ug/L	Z
Aliph	nC29	40.1370	7929921		ug/L	Z
Aliph	nC30	41.2480	13076454		ug/L	Z
Aliph	nC31	42.3270	17754915		ug/L	Z
Aliph	nC32	43.4130	21063228		ug/L	Z
Aliph	nC33	44.6430	22777471		ug/L	Z
Aliph	nC34	46.0860	22332135		ug/L	Z
Aliph	nC35	47.8060	21502637		ug/L	Z
Aliph	nC36	49.8090	17393413		ug/L	Z
Aliph	nC37	52.2960	15083778		ug/L	Z
Aliph	nC38	55.2370	13129821		ug/L	Z
Aliph	nC39	58.8850	12832019		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007538A DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007538A\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	2650011		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	584460		ug/L	Z
Aliph	nC25	35.2810	1622005		ug/L	Z
Aliph	nC26	36.5600	5672358		ug/L	Z
Aliph	nC27	37.7930	13993604		ug/L	Z
Aliph	nC28	38.9870	22352202		ug/L	Z
Aliph	nC29	40.1370	31993541		ug/L	Z
Aliph	nC30	41.2480	40689193		ug/L	Z
Aliph	nC31	42.3270	49673013		ug/L	Z
Aliph	nC32	43.4130	56858127		ug/L	Z
Aliph	nC33	44.6430	53449710		ug/L	Z
Aliph	nC34	46.0860	48974270		ug/L	Z
Aliph	nC35	47.8060	41929673		ug/L	Z
Aliph	nC36	49.8090	36783729		ug/L	Z
Aliph	nC37	52.2960	33289163		ug/L	Z
Aliph	nC38	55.2370	28197962		ug/L	Z
Aliph	nC39	58.8850	7934601		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007538B**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

Part B subsample

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:17:35 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

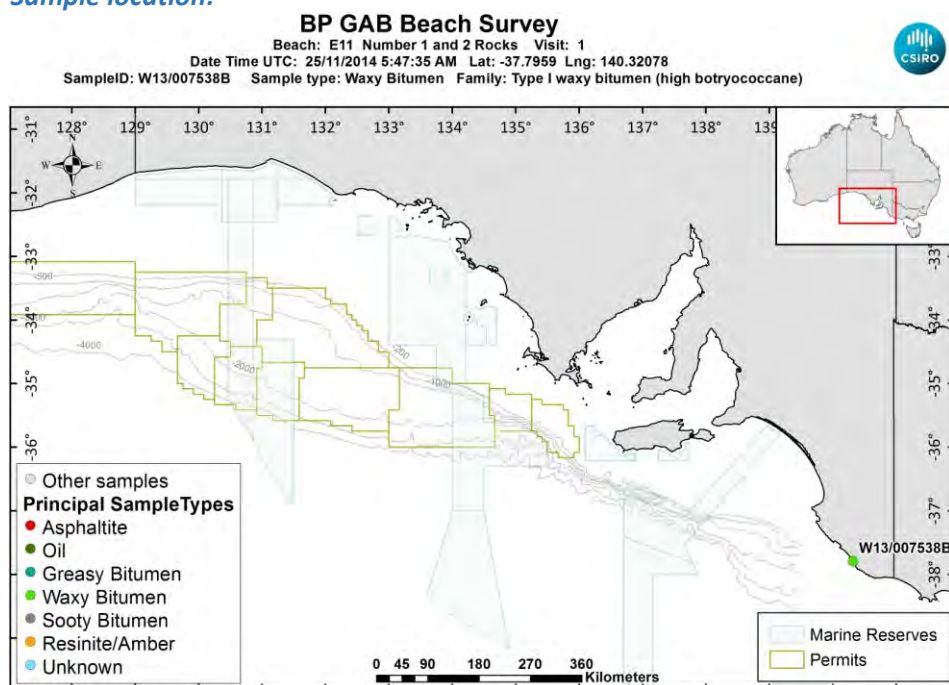
**Size (cm):**

**Latitude (Y):** -37.795902

**Weight (gm):**

**Longitude (X):** 140.320780

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007538B\\_Location.jpg](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007538\\_Photo01.JPG](#)



**Sample ID : W13/007538B****Beach E11: Number 1 and 2 Rocks Visit: 1****Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

**Analyses Completed:**

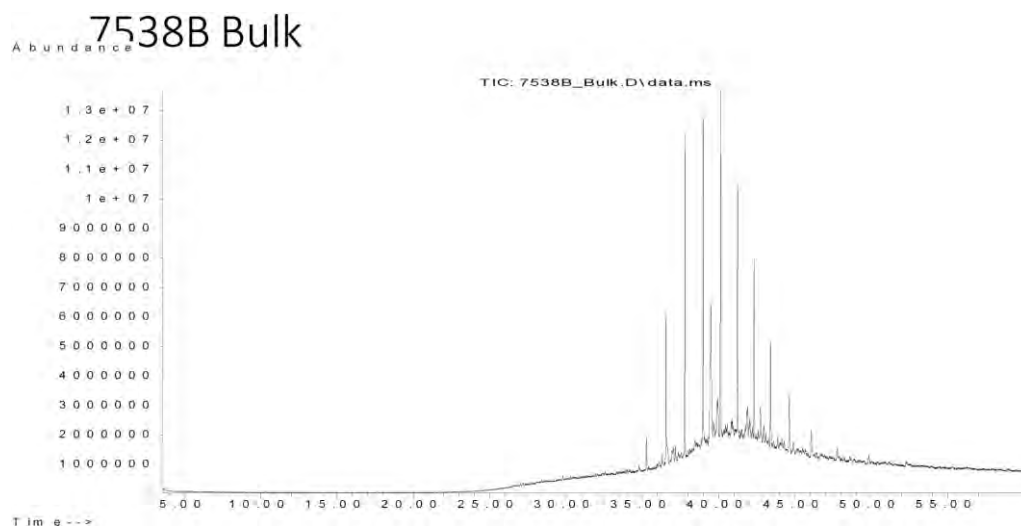
Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

**Sample Analyses Completed:****Results for: Elemental Analyser****Unique ID: W13/007538B UNK ELEM-AN/01****Instrument / Type:** Elemental Analyser Run: 1**for Analysis:** Elemental CHNS**Preparation:** Unknown**Analysis Date:****Method ID/s:****Linked Image:** [None available](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:****Data Sheet:***(default units ppb)*

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
<a href="#">Inorg</a>	Carbon			86.08	percent	Y
<a href="#">Inorg</a>	delta13 Carbon				per mille	U
<a href="#">Inorg</a>	delta34 Sulphur				per mille	U
<a href="#">Inorg</a>	Hydrogen			7.83	percent	Y
<a href="#">Inorg</a>	Nitrogen				percent	U
<a href="#">Inorg</a>	Sulphur			1.19	percent	Y

**Results for: GCMS with Full Scan****Unique ID: W13/007538B DISS GCMS-Scan/03****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007538B\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	29849279		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810	5656362		ug/L	Z
Aliph	nC26	36.5600	26109743		ug/L	Z
Aliph	nC27	37.7930	51589704		ug/L	Z
Aliph	nC28	38.9870	58119402		ug/L	Z
Aliph	nC29	40.1370	53880558		ug/L	Z
Aliph	nC30	41.2480	38872373		ug/L	Z
Aliph	nC31	42.3270	28741386		ug/L	Z
Aliph	nC32	43.4130	18306272		ug/L	Z
Aliph	nC33	44.6430	12561331		ug/L	Z
Aliph	nC34	46.0860	7246185		ug/L	Z
Aliph	nC35	47.8060	4947006		ug/L	Z
Aliph	nC36	49.8090	3274100		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns > 25%
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007539A**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

2 pieces smaller is 1cm. Part A.

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:20:32 PM

**Type:** Waxy Bitumen

**Family:** Type III waxy bitumen (no botryococcane, low

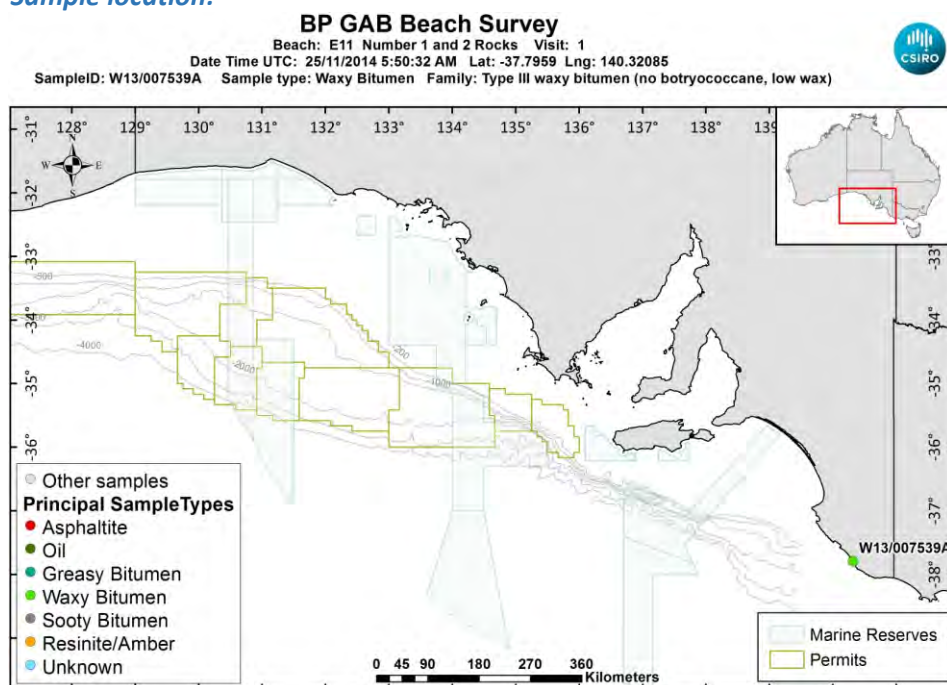
**Size (cm):** 2

**Latitude (Y):** -37.795899

**Weight (gm):** 2.69829

**Longitude (X):** 140.320855

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007539A\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007539\\_146A0745.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB BCH1\Samples\W13\\_007539\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 2
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007539A\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date:

Linked Image: [None available](#)

Preparation: Unknown

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

**Comment:** Sulphur isotope peak was VERY small. Value may be inaccurate. Sulphur isotope peak was VERY small. Value may be inaccurate.

### Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			84.43	percent	Y
Inorg	delta13 Carbon			-26.4418750159212	per mille	Y
Inorg	delta34 Sulphur			-5.5795646846629	per mille	Y
Inorg	Hydrogen			9.69	percent	Y
Inorg	Nitrogen				percent	U
Inorg	Sulphur			1.49	percent	Y

### Results for: Elemental Analyser

Unique ID: W13/007539A\_UNK\_ELEM-AN/02



**Results for: Elemental Analyser****Instrument / Type:** Elemental Analyser Run: 2**for Analysis:** Elemental CHNS**Preparation:** Unknown**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [None available](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:****Data Sheet:**

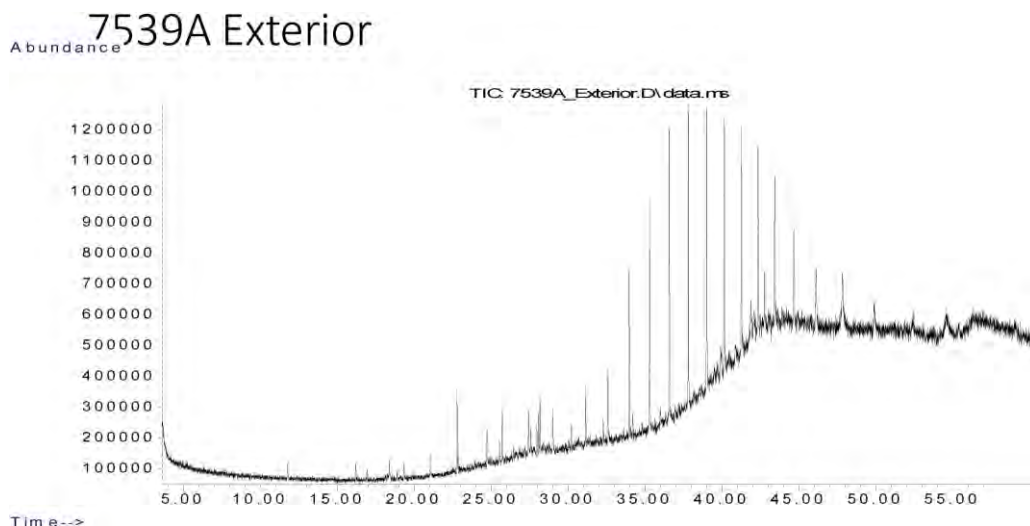
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
<a href="#">Inorg</a>	Carbon			84.88	percent	Y
<a href="#">Inorg</a>	Hydrogen			6.3931041749503	percent	Y
<a href="#">Inorg</a>	Nitrogen			7.18420736932305E-02	percent	Y
<a href="#">Inorg</a>	Sulphur			1.40607161407137	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007539A DISS GCMS-Scan/01**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007539A\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior



## Results for: GCMS with Full Scan



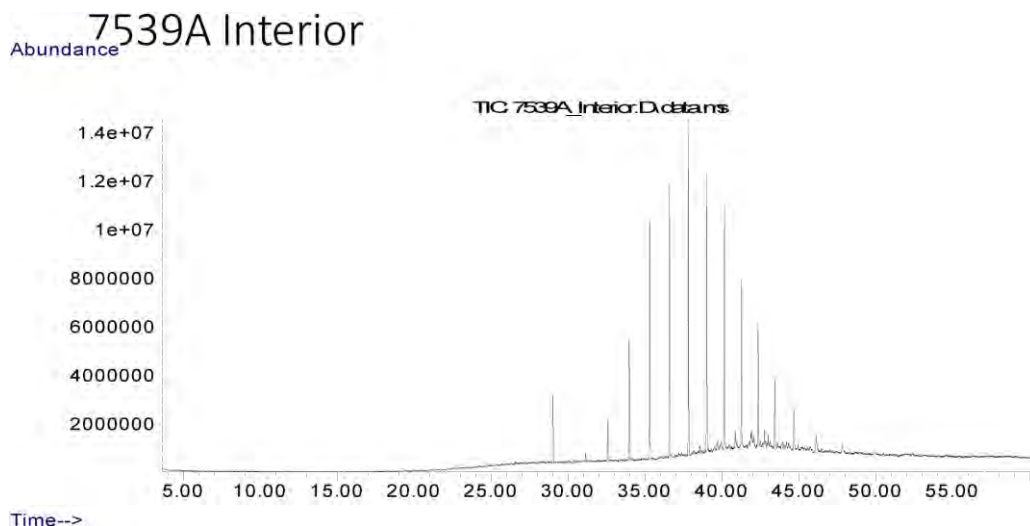
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780			ug/L	U
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	778961		ug/L	Z
Aliph	nC23	32.5720	1061243		ug/L	Z
Aliph	nC24	33.9520	2808367		ug/L	Z
Aliph	nC25	35.2810	3806761		ug/L	Z
Aliph	nC26	36.5600	4952748		ug/L	Z
Aliph	nC27	37.7930	4987660		ug/L	Z
Aliph	nC28	38.9870	4942258		ug/L	Z
Aliph	nC29	40.1370	4504717		ug/L	Z
Aliph	nC30	41.2480	3887167		ug/L	Z
Aliph	nC31	42.3270	3455725		ug/L	Z
Aliph	nC32	43.4130	2846807		ug/L	Z
Aliph	nC33	44.6430	2136769		ug/L	Z
Aliph	nC34	46.0860	1799414		ug/L	Z
Aliph	nC35	47.8060	1807184		ug/L	Z
Aliph	nC36	49.8090	1245294		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007539A DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007539A\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780			ug/L	U
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	1958134		ug/L	Z
Aliph	nC23	32.5720	8907434		ug/L	Z
Aliph	nC24	33.9520	24972004		ug/L	Z
Aliph	nC25	35.2810	46394513		ug/L	Z
Aliph	nC26	36.5600	58519395		ug/L	Z
Aliph	nC27	37.7930	69546752		ug/L	Z
Aliph	nC28	38.9870	58265053		ug/L	Z
Aliph	nC29	40.1370	51644285		ug/L	Z
Aliph	nC30	41.2480	35744812		ug/L	Z
Aliph	nC31	42.3270	26910048		ug/L	Z
Aliph	nC32	43.4130	17222671		ug/L	Z
Aliph	nC33	44.6430	11944527		ug/L	Z
Aliph	nC34	46.0860	7334546		ug/L	Z
Aliph	nC35	47.8060	4226269		ug/L	Z
Aliph	nC36	49.8090	2561651		ug/L	Z
Aliph	nC37	52.2960	166615		ug/L	Z
Aliph	nC38	55.2370	60531		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007539B**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

Part B subsample

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:20:32 PM

**Type:** Waxy Bitumen

**Family:** Type III waxy bitumen (no botryococcane, low

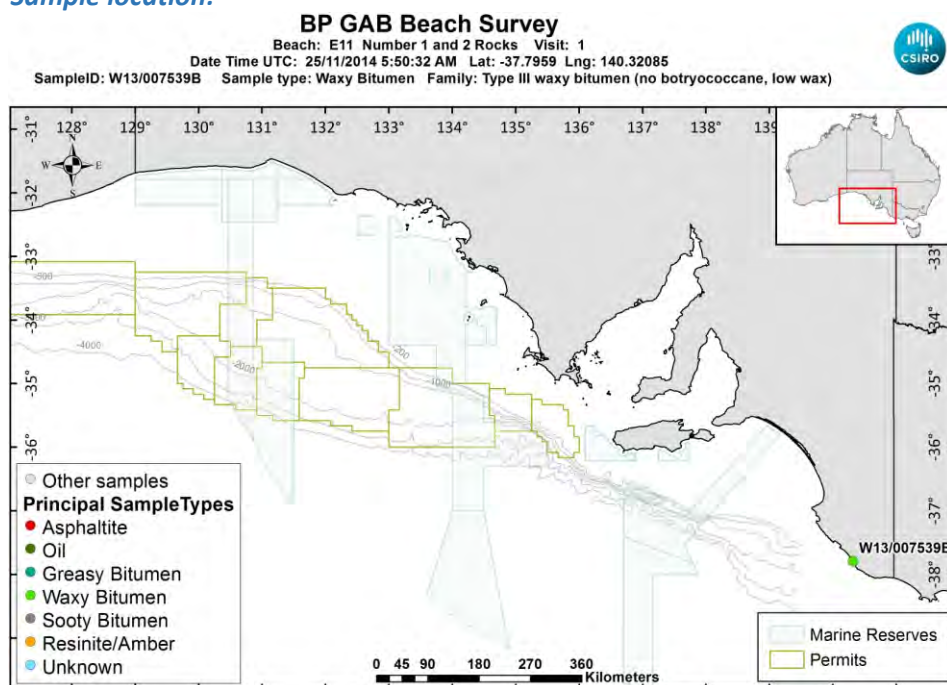
**Size (cm):**

**Latitude (Y):** -37.795899

**Weight (gm):**

**Longitude (X):** 140.320855

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007539B\\_Location.jpg](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007539\\_Photo01.JPG](#)

**Sample ID : W13/007539B****Beach E11: Number 1 and 2 Rocks Visit: 1****Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

**Analyses Completed:**

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 2
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

**Sample Analyses Completed:****Results for: Elemental Analyser****Unique ID: W13/007539B\_UNK\_ELEM-AN/01****Instrument / Type:** Elemental Analyser Run: 1**for Analysis:** Elemental CHNS**Preparation:** Unknown**Analysis Date:****Method ID/s:****Linked Image:** [None available](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:****Data Sheet:***(default units ppb)*

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
<a href="#">Inorg</a>	Carbon			83.7	percent	Y
<a href="#">Inorg</a>	delta13 Carbon				per mille	U
<a href="#">Inorg</a>	delta34 Sulphur				per mille	U
<a href="#">Inorg</a>	Hydrogen			9.43	percent	Y
<a href="#">Inorg</a>	Nitrogen				percent	U
<a href="#">Inorg</a>	Sulphur			1.67	percent	Y

**Results for: Elemental Analyser****Unique ID: W13/007539B\_UNK\_ELEM-AN/02****Instrument / Type:** Elemental Analyser Run: 2**for Analysis:** Elemental CHNS**Preparation:** Unknown**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [None available](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:****Data Sheet:***(default units ppb)*

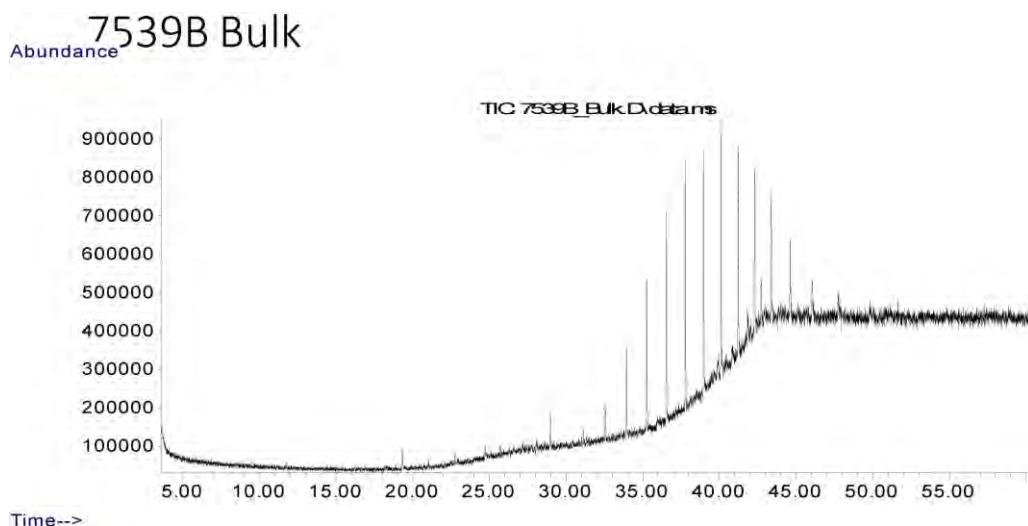
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
<a href="#">Inorg</a>	Carbon			83.23	percent	Y
<a href="#">Inorg</a>	Hydrogen			6.23749940357853	percent	Y
<a href="#">Inorg</a>	Nitrogen			7.16801199657241E-02	percent	Y
<a href="#">Inorg</a>	Sulphur			1.36181325000074	percent	Y

**Results for: GCMS with Full Scan****Unique ID: W13/007539B\_DISS\_GCMS-Scan/03**



**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007539B\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780			ug/L	U
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	164520		ug/L	Z
Aliph	nC23	32.5720	441118		ug/L	Z
Aliph	nC24	33.9520	1189158		ug/L	Z
Aliph	nC25	35.2810	1824147		ug/L	Z
Aliph	nC26	36.5600	2491519		ug/L	Z
Aliph	nC27	37.7930	3203931		ug/L	Z
Aliph	nC28	38.9870	3087692		ug/L	Z
Aliph	nC29	40.1370	3173470		ug/L	Z
Aliph	nC30	41.2480	2793521		ug/L	Z
Aliph	nC31	42.3270	2281222		ug/L	Z
Aliph	nC32	43.4130	1803784		ug/L	Z
Aliph	nC33	44.6430	1358219		ug/L	Z
Aliph	nC34	46.0860	765443		ug/L	Z
Aliph	nC35	47.8060	367984		ug/L	Z
Aliph	nC36	49.8090	419110		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

## Results for: GCMS with Full Scan

## Qualifier codes:

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)

Sample ID : **W13/007540**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:23:37 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

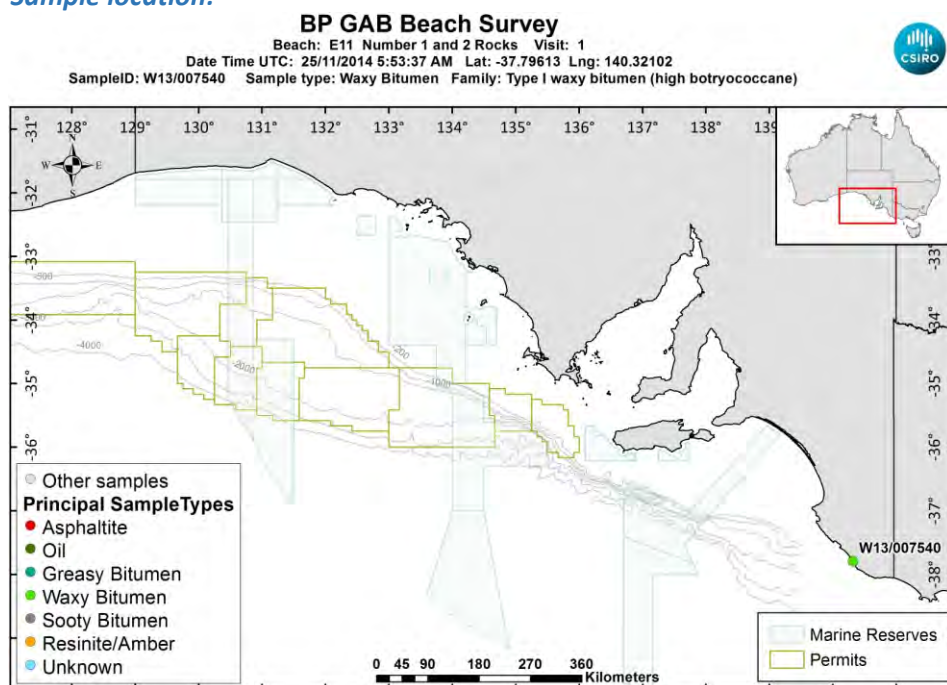
**Size (cm):** 5

**Latitude (Y):** -37.796134

**Weight (gm):** 7.52009

**Longitude (X):** 140.321019

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007540\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007540\\_146A0747.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007540\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 2
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 4
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007540\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date:

Linked Image: [None available](#)

Preparation: Unknown

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.27	percent	Y
Inorg	delta13 Carbon			-26.1354388608487	per mille	Y
Inorg	delta34 Sulphur			-2.24777525357021	per mille	Y
Inorg	Hydrogen			8.04	percent	Y
Inorg	Nitrogen				percent	U
Inorg	Sulphur			1.52	percent	Y

### Results for: Elemental Analyser

Unique ID: W13/007540\_UNK\_ELEM-AN/02

**Results for: Elemental Analyser****Instrument / Type:** Elemental Analyser Run: 2**for Analysis:** Elemental CHNS**Preparation:** Unknown**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [None available](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:****Data Sheet:**

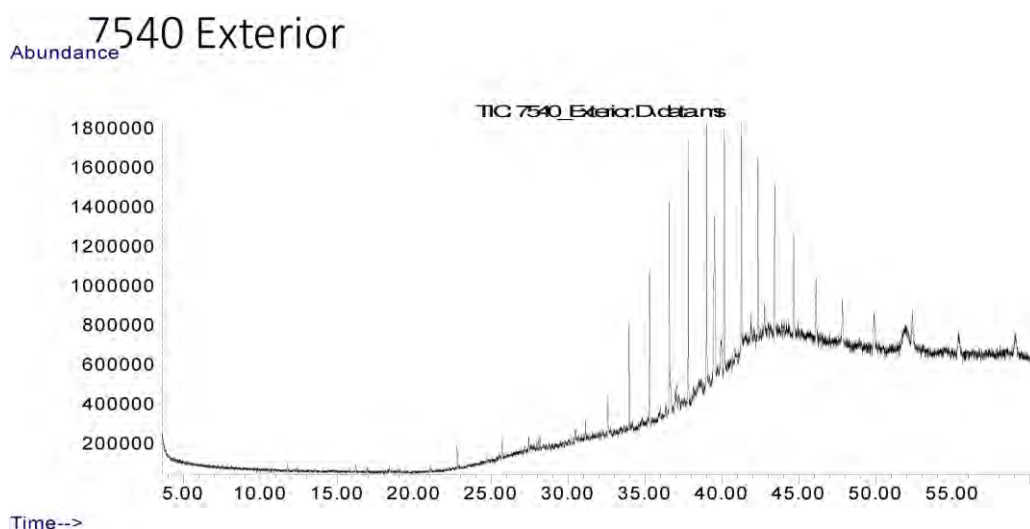
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
<a href="#">Inorg</a>	Carbon			86.26	percent	Y
<a href="#">Inorg</a>	Hydrogen			5.47778290258449	percent	Y
<a href="#">Inorg</a>	Nitrogen			0.214352956298201	percent	Y
<a href="#">Inorg</a>	Sulphur			1.28014521091232	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007540 DISS GCMS-Scan/01**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007540\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior



## Results for: GCMS with Full Scan



## Data Sheet:

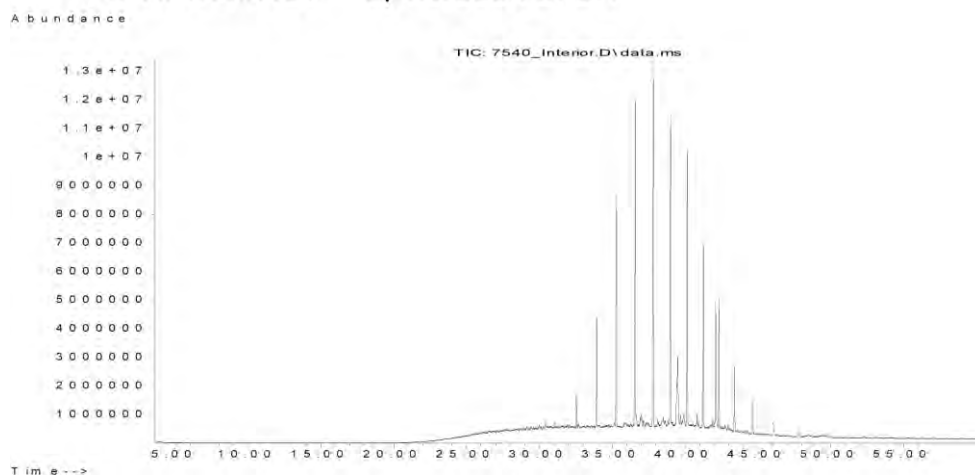
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	6320126		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	404602		ug/L	Z
Aliph	nC23	32.5720	1054843		ug/L	Z
Aliph	nC24	33.9520	2590574		ug/L	Z
Aliph	nC25	35.2810	4164772		ug/L	Z
Aliph	nC26	36.5600	5256829		ug/L	Z
Aliph	nC27	37.7930	6790753		ug/L	Z
Aliph	nC28	38.9870	6867704		ug/L	Z
Aliph	nC29	40.1370	6891122		ug/L	Z
Aliph	nC30	41.2480	5799576		ug/L	Z
Aliph	nC31	42.3270	5036460		ug/L	Z
Aliph	nC32	43.4130	4222045		ug/L	Z
Aliph	nC33	44.6430	2826022		ug/L	Z
Aliph	nC34	46.0860	2749913		ug/L	Z
Aliph	nC35	47.8060	2591790		ug/L	Z
Aliph	nC36	49.8090	2620561		ug/L	Z
Aliph	nC37	52.2960	2458303		ug/L	Z
Aliph	nC38	55.2370	2801165		ug/L	Z
Aliph	nC39	58.8850	2724196		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007540 DISS GCMS-Scan/04**Instrument / Type:** GCMS with Full Scan Run: 4**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007540\\_intSplitless\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior - Splitless rerun

## Results for: GCMS with Full Scan

## 7540 Interior – splitless rerun



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	18260424		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	822534		ug/L	Z
Aliph	nC23	32.5720	4893977		ug/L	Z
Aliph	nC24	33.9520	17997948		ug/L	Z
Aliph	nC25	35.2810	41203372		ug/L	Z
Aliph	nC26	36.5600	59328593		ug/L	Z
Aliph	nC27	37.7930	68657084		ug/L	Z
Aliph	nC28	38.9870	57043280		ug/L	Z
Aliph	nC29	40.1370	44958821		ug/L	Z
Aliph	nC30	41.2480	29503370		ug/L	Z
Aliph	nC31	42.3270	19829704		ug/L	Z
Aliph	nC32	43.4130	11208395		ug/L	Z
Aliph	nC33	44.6430	6550605		ug/L	Z
Aliph	nC34	46.0860	3110173		ug/L	Z
Aliph	nC35	47.8060	1562275		ug/L	Z
Aliph	nC36	49.8090	893068		ug/L	Z
Aliph	nC37	52.2960	562684		ug/L	Z
Aliph	nC38	55.2370	380623		ug/L	Z
Aliph	nC39	58.8850	261466		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns > 25%
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007541**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:25:43 PM

**Type:** Waxy Bitumen

**Family:** Type III waxy bitumen (no botryococcane, low

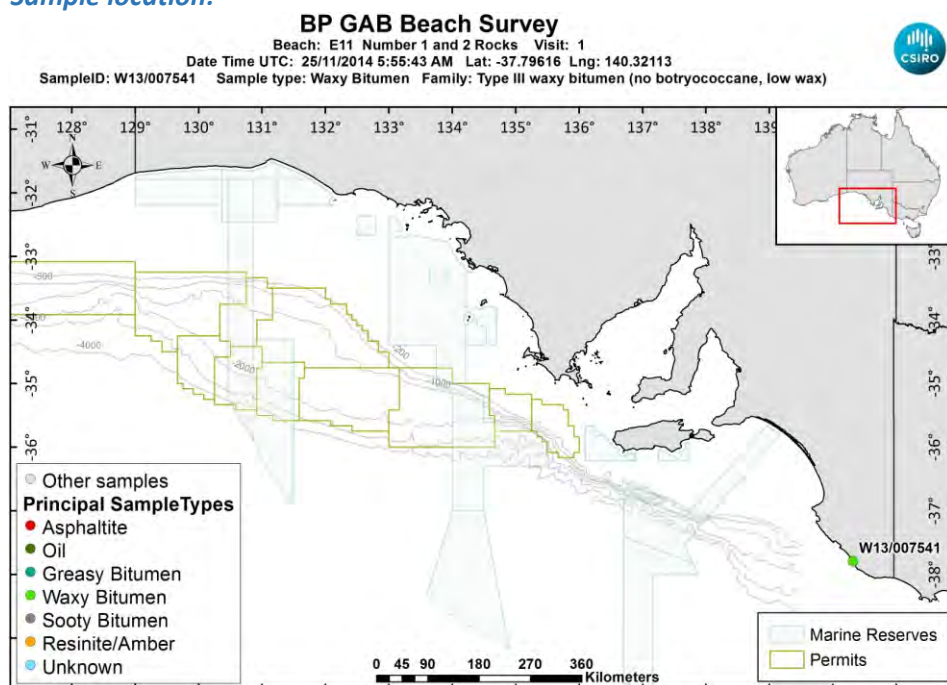
**Size (cm):** 4

**Latitude (Y):** -37.796156

**Weight (gm):** 4.6315

**Longitude (X):** 140.321129

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007541\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007541\\_146A0749.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007541\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES
4	Biomarkers	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 2
Biomarkers	Gas Chromatography Mass Spectrometry Run: 1
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Gas Chromatography Mass Spectrometry

**Unique ID:** W13/007541 DISS GC-MS/01

**Instrument / Type:** Gas Chromatography Mass Spectrometry Run: 1

**for Analysis:** Biomarkers

**Analysis Date:** 18/07/2017

**Linked Image:** [None available](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**Sample Volume:**

**Volume Units:**

**Extract Volume:**

**Dilution Factor:**

**Comment:** External Ratios only



## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			31.9528560499809	ratio	Y
BiomRatio	% C27 abb 20(R+S)			35.6709543872855	ratio	Y
BiomRatio	% C28 aaa 20R			14.4693782141187	ratio	Y
BiomRatio	% C28 abb 20(R+S)			20.696411731748	ratio	Y
BiomRatio	% C29 aaa 20R			53.5777657359004	ratio	Y
BiomRatio	% C29 abb 20(R+S)			43.6326338809666	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			9.37350799748015E-02	ratio	Y
BiomRatio	25-Nor/C30H			6.04514084936165E-02	ratio	Y
BiomRatio	C19t/C23t			0.10333500173935	ratio	Y
BiomRatio	C22t/C21t			0.31331220854835	ratio	Y
BiomRatio	C22t/C24t			0.212967392698424	ratio	Y
BiomRatio	C23t/C30H			0.10092708846993	ratio	Y
BiomRatio	C24t/C23t			0.961332611172841	ratio	Y
BiomRatio	C24Tet/C23t			0.312785518822898	ratio	Y
BiomRatio	C24Tet/C26t			0.268603651089029	ratio	Y
BiomRatio	C24Tet/C30H			3.15685317303515E-02	ratio	Y
BiomRatio	C26t/C25t			1.72304334291361	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.665680532041733	ratio	Y
BiomRatio	C27 Dia/Ster			0.821725144400516	ratio	Y
BiomRatio	C28BNH/C30H			2.47483991596236E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			1.22319782664741	ratio	Y
BiomRatio	C29H/C30H			0.900213649489411	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.217891533018674	ratio	Y
BiomRatio	C30DiaH/C30H			9.49880020301294E-02	ratio	Y
BiomRatio	C30Ts/C30H			0.026151939916229	ratio	Y
BiomRatio	C35 Homohopane Index			3.54863638589831E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.397586834916092	ratio	Y
BiomRatio	Gam/C30H			0.087837711717479	ratio	Y
BiomRatio	Gam/C31HR			0.66275241239501	ratio	Y
BiomRatio	Ole/C30H			0.113545375653439	ratio	Y
BiomRatio	Sterane/hopane			3.99528834515998E-02	ratio	Y
BiomRatio	Steranes/Terpanes			3.32341005589292E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.202165329576384	ratio	Y

## Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007541 DISS GC-MS/02

Instrument / Type: Gas Chromatography Mass Spectrometry Run: 2

for Analysis: Biomarkers

Preparation: Dissolved in solvent

Analysis Date: 18/07/2017

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: Internal Ratios only

## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			32.0883803444559	ratio	Y
BiomRatio	% C27 abb 20(R+S)			38.3331330897695	ratio	Y
BiomRatio	% C28 aaa 20R			17.1993084852034	ratio	Y
BiomRatio	% C28 abb 20(R+S)			22.1021512927555	ratio	Y
BiomRatio	% C29 aaa 20R			50.7123111703407	ratio	Y
BiomRatio	% C29 abb 20(R+S)			39.564715617475	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.107409217570974	ratio	Y
BiomRatio	25-Nor/C30H			4.59399231998827E-02	ratio	Y
BiomRatio	C19t/C23t			0.124907571050092	ratio	Y
BiomRatio	C22t/C21t			0.309710365888819	ratio	Y
BiomRatio	C22t/C24t			0.247063142099855	ratio	Y
BiomRatio	C23t/C30H			8.28339316083028E-02	ratio	Y
BiomRatio	C24t/C23t			0.901046312292139	ratio	Y
BiomRatio	C24Tet/C23t			0.2853517937019	ratio	Y
BiomRatio	C24Tet/C26t			0.222357514559896	ratio	Y
BiomRatio	C24Tet/C30H			2.36368109638097E-02	ratio	Y
BiomRatio	C26t/C25t			2.00204331306401	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.635343198729203	ratio	Y
BiomRatio	C27 Dia/Ster			0.74184427570577	ratio	Y
BiomRatio	C28BNH/C30H			2.47349168204727E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			1.0321284076838	ratio	Y
BiomRatio	C29H/C30H			0.6646407922842	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.205177800702563	ratio	Y
BiomRatio	C30DiaH/C30H			7.57139593548395E-02	ratio	Y
BiomRatio	C30Ts/C30H			8.61634061441879E-03	ratio	Y
BiomRatio	C35 Homohopane Index			3.59623986157248E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.452084187357124	ratio	Y
BiomRatio	Gam/C30H			5.48380002031139E-02	ratio	Y
BiomRatio	Gam/C31HR			0.415615424327205	ratio	Y
BiomRatio	Ole/C30H			6.38854943114038E-02	ratio	Y
BiomRatio	Sterane/hopane			4.50746521685448E-02	ratio	Y
BiomRatio	Steranes/Terpanes			3.76839478468846E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.196123409141998	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007541\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

## Results for: Elemental Analyser

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			83.97	percent	Y
Inorg	delta13 Carbon			-26.2635753625002	per mille	Y
Inorg	delta34 Sulphur			-0.790758232115525	per mille	Y
Inorg	Hydrogen			8.01	percent	Y
Inorg	Nitrogen			0.28	percent	Y
Inorg	Sulphur			1.27	percent	Y

## Results for: GCMS with Full Scan

Unique ID: W13/007541\_DISS\_GCMS-Scan/01

Instrument / Type: GCMS with Full Scan Run: 1

for Analysis: Whole Oils

Preparation: Dissolved in solvent

Analysis Date: 18/11/2016

Method ID/s:

Linked Image: [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007541\\_ext\\_WholeOil.jpg](#)

Sample Volume:

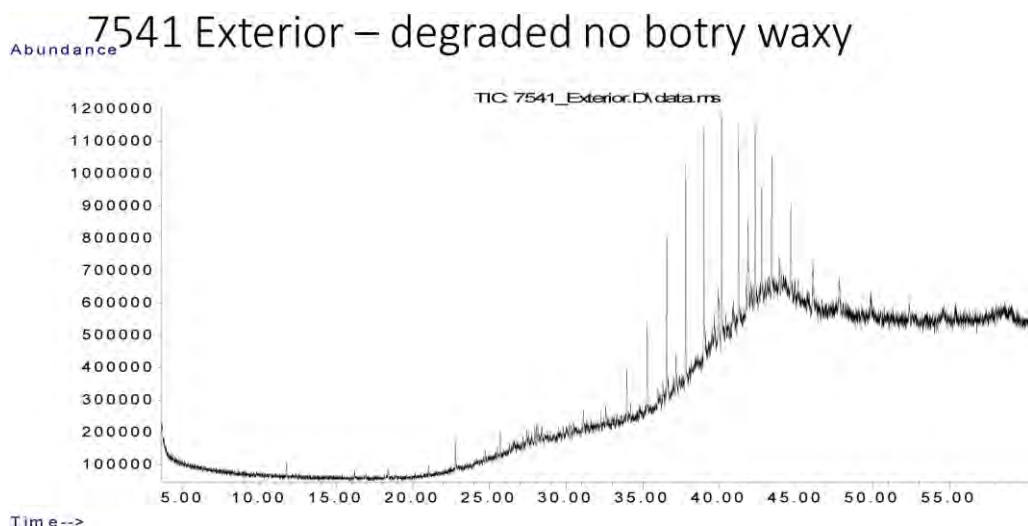
Volume Units:

Extract Volume:

Dilution Factor:

Comment: Exterior

## Results for: GCMS with Full Scan



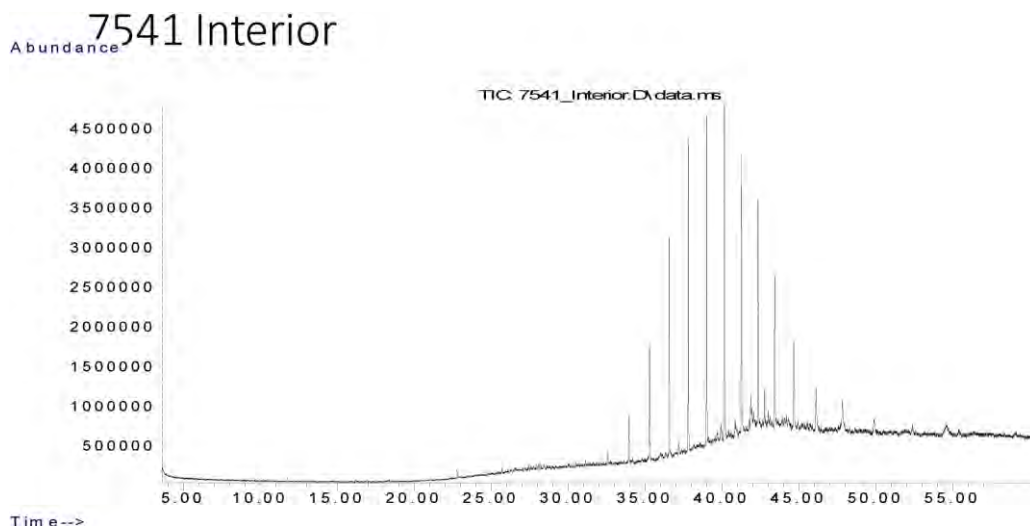
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780			ug/L	U
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	256522		ug/L	Z
Aliph	nC23	32.5720	258105		ug/L	Z
Aliph	nC24	33.9520	866896		ug/L	Z
Aliph	nC25	35.2810	1466808		ug/L	Z
Aliph	nC26	36.5600	2585761		ug/L	Z
Aliph	nC27	37.7930	3347759		ug/L	Z
Aliph	nC28	38.9870	3774175		ug/L	Z
Aliph	nC29	40.1370	3669556		ug/L	Z
Aliph	nC30	41.2480	3237639		ug/L	Z
Aliph	nC31	42.3270	2903578		ug/L	Z
Aliph	nC32	43.4130	2058235		ug/L	Z
Aliph	nC33	44.6430	2187609		ug/L	Z
Aliph	nC34	46.0860	1402607		ug/L	Z
Aliph	nC35	47.8060	1089306		ug/L	Z
Aliph	nC36	49.8090	988796		ug/L	Z
Aliph	nC37	52.2960	1001764		ug/L	Z
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007541 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007541\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780			ug/L	U
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720	788339		ug/L	Z
Aliph	nC24	33.9520	3002790		ug/L	Z
Aliph	nC25	35.2810	7712902		ug/L	Z
Aliph	nC26	36.5600	13838233		ug/L	Z
Aliph	nC27	37.7930	20784102		ug/L	Z
Aliph	nC28	38.9870	21061138		ug/L	Z
Aliph	nC29	40.1370	22098922		ug/L	Z
Aliph	nC30	41.2480	17926592		ug/L	Z
Aliph	nC31	42.3270	15320449		ug/L	Z
Aliph	nC32	43.4130	11378713		ug/L	Z
Aliph	nC33	44.6430	8164428		ug/L	Z
Aliph	nC34	46.0860	5147193		ug/L	Z
Aliph	nC35	47.8060	4622270		ug/L	Z
Aliph	nC36	49.8090	2683273		ug/L	Z
Aliph	nC37	52.2960	1206092		ug/L	Z
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U



**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007542**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:27:40 PM

**Type:** Waxy Bitumen

**Family:** Type II waxy bitumen (low botryococcane)

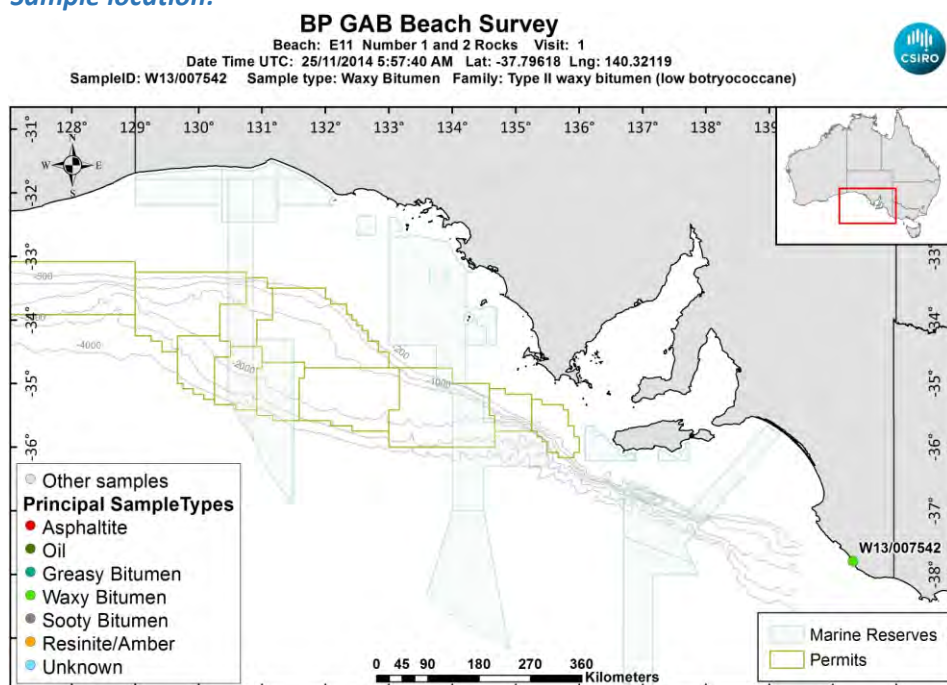
**Size (cm):** 3

**Latitude (Y):** -37.796181

**Weight (gm):** 7.85249

**Longitude (X):** 140.321187

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007542\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007542\\_146A0751.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007542\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES
4	Biomarkers	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 2
Biomarkers	Gas Chromatography Mass Spectrometry Run: 1
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Gas Chromatography Mass Spectrometry

**Unique ID:** W13/007542\_DISS\_GC-MS/01

**Instrument / Type:** Gas Chromatography Mass Spectrometry Run: 1

**for Analysis:** Biomarkers

**Analysis Date:** 18/07/2017

**Linked Image:** [None available](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**Sample Volume:**

**Volume Units:**

**Extract Volume:**

**Dilution Factor:**

**Comment:** External Ratios only

## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			32.1945050191141	ratio	Y
BiomRatio	% C27 abb 20(R+S)			13.3008035827722	ratio	Y
BiomRatio	% C28 aaa 20R			21.8610672128687	ratio	Y
BiomRatio	% C28 abb 20(R+S)			29.9050166895739	ratio	Y
BiomRatio	% C29 aaa 20R			45.9444277680172	ratio	Y
BiomRatio	% C29 abb 20(R+S)			56.7941797276539	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.111564663389184	ratio	Y
BiomRatio	25-Nor/C30H			4.15963248622454E-02	ratio	Y
BiomRatio	C19t/C23t			0.212414288567043	ratio	Y
BiomRatio	C22t/C21t			0.61157548834208	ratio	Y
BiomRatio	C22t/C24t			0.357679026026862	ratio	Y
BiomRatio	C23t/C30H			0.105745301588131	ratio	Y
BiomRatio	C24t/C23t			0.541665534285164	ratio	Y
BiomRatio	C24Tet/C23t			1.00417464749456	ratio	Y
BiomRatio	C24Tet/C26t			1.63544340824503	ratio	Y
BiomRatio	C24Tet/C30H			0.106186750946467	ratio	Y
BiomRatio	C26t/C25t			1.1987883709449	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.288255444901637	ratio	Y
BiomRatio	C27 Dia/Ster			0.212721034522146	ratio	Y
BiomRatio	C28BNH/C30H			1.69948631688167E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			4.26998108604628	ratio	Y
BiomRatio	C29H/C30H			1.17708854089679	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.143586903003447	ratio	Y
BiomRatio	C30DiaH/C30H			6.83538037303408E-02	ratio	Y
BiomRatio	C30Ts/C30H			0.129466613471165	ratio	Y
BiomRatio	C35 Homohopane Index			6.91394203349655E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.971315614809685	ratio	Y
BiomRatio	Gam/C30H			8.34569195781229E-02	ratio	Y
BiomRatio	Gam/C31HR			0.245187083720001	ratio	Y
BiomRatio	Ole/C30H			0.071667610249572	ratio	Y
BiomRatio	Sterane/hopane			0.17150776816328	ratio	Y
BiomRatio	Steranes/Terpanes			0.154479792188653	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.110227853969615	ratio	Y

## Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007542 DISS GC-MS/02

Instrument / Type: Gas Chromatography Mass Spectrometry Run: 2

for Analysis: Biomarkers

Preparation: Dissolved in solvent

Analysis Date: 18/07/2017

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: Internal Ratios only



## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			29.2347939829954	ratio	Y
BiomRatio	% C27 abb 20(R+S)			22.2815142972211	ratio	Y
BiomRatio	% C28 aaa 20R			14.3884892086331	ratio	Y
BiomRatio	% C28 abb 20(R+S)			26.4297221103504	ratio	Y
BiomRatio	% C29 aaa 20R			56.3767168083715	ratio	Y
BiomRatio	% C29 abb 20(R+S)			51.2887635924285	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			7.59724908661079E-02	ratio	Y
BiomRatio	25-Nor/C30H			9.19994355862847E-02	ratio	Y
BiomRatio	C19t/C23t			0.226396917148362	ratio	Y
BiomRatio	C22t/C21t			0.589322381930185	ratio	Y
BiomRatio	C22t/C24t			0.304994686503719	ratio	Y
BiomRatio	C23t/C30H			3.66163397770566E-02	ratio	Y
BiomRatio	C24t/C23t			0.906551059730251	ratio	Y
BiomRatio	C24Tet/C23t			1.38439306358382	ratio	Y
BiomRatio	C24Tet/C26t			0	ratio	U
BiomRatio	C24Tet/C30H			5.06914068011853E-02	ratio	Y
BiomRatio	C26t/C25t			0	ratio	U
BiomRatio	C27 Dia/(Dia+Reg)			0.352865421764327	ratio	Y
BiomRatio	C27 Dia/Ster			0.259592610137376	ratio	Y
BiomRatio	C28BNH/C30H			0	ratio	U
BiomRatio	C29/C27 abb Sterane Ratio			2.30185268865793	ratio	Y
BiomRatio	C29H/C30H			0.902497530689996	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.157977883096367	ratio	Y
BiomRatio	C30DiaH/C30H			4.81515450825455E-02	ratio	Y
BiomRatio	C30Ts/C30H			4.75165796528856E-02	ratio	Y
BiomRatio	C35 Homohopane Index			0.115208970745603	ratio	Y
BiomRatio	C35HS/C34HS			1.03877290157648	ratio	Y
BiomRatio	Gam/C30H			0	ratio	U
BiomRatio	Gam/C31HR			0	ratio	U
BiomRatio	Ole/C30H			0	ratio	U
BiomRatio	Sterane/hopane			7.69029119850869E-02	ratio	Y
BiomRatio	Steranes/Terpanes			7.41252851377435E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			3.74720561571118E-02	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007542\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

**Results for: Elemental Analyser****Data Sheet:**

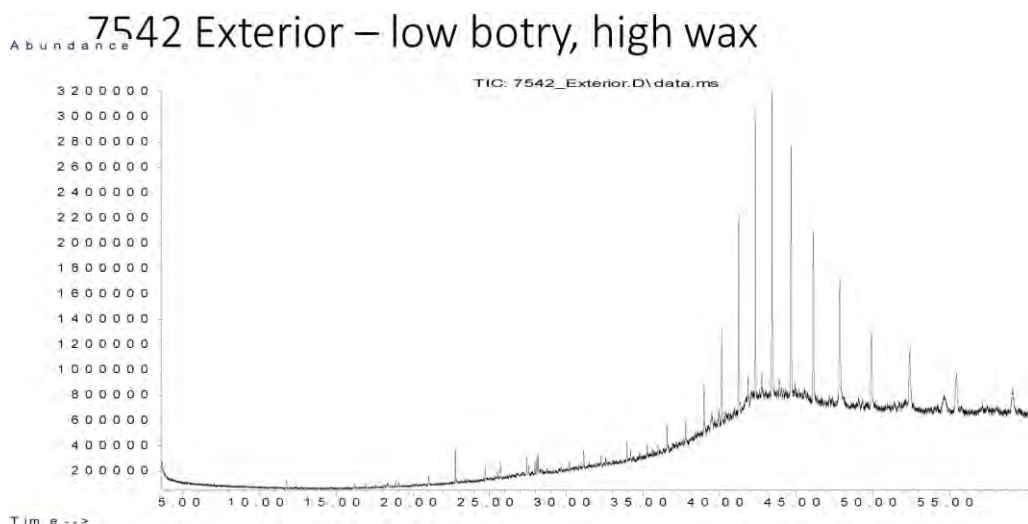
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			84.99	percent	Y
Inorg	delta13 Carbon			-26.7856436436184	per mille	Y
Inorg	delta34 Sulphur			-4.31816162233298	per mille	Y
Inorg	Hydrogen			6.72	percent	Y
Inorg	Nitrogen			0.4	percent	Y
Inorg	Sulphur			2.63	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007542\_DISS\_GCMS-Scan/01**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007542\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior



## Results for: GCMS with Full Scan



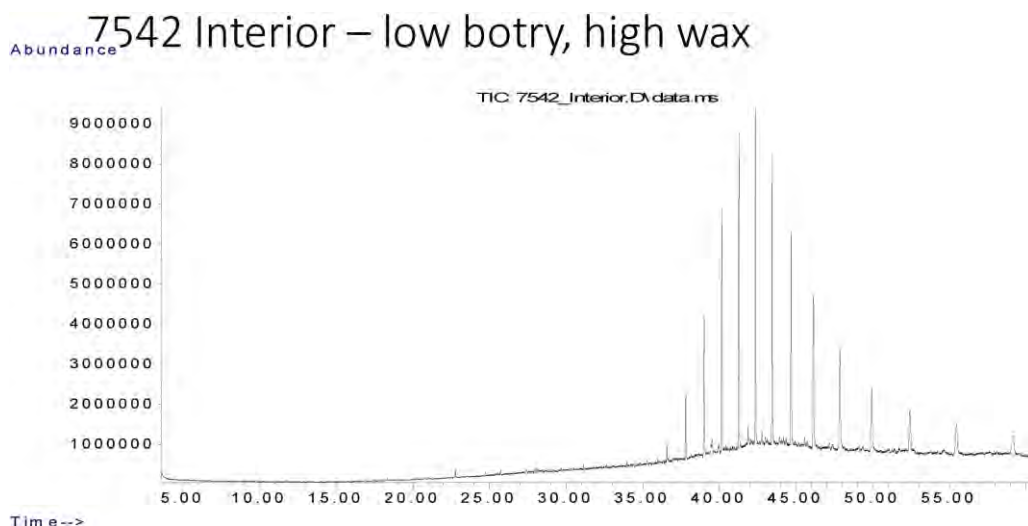
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	854532		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	690510		ug/L	Z
Aliph	nC23	32.5720	191990		ug/L	Z
Aliph	nC24	33.9520	881823		ug/L	Z
Aliph	nC25	35.2810	491981		ug/L	Z
Aliph	nC26	36.5600	939819		ug/L	Z
Aliph	nC27	37.7930	1038602		ug/L	Z
Aliph	nC28	38.9870	2450450		ug/L	Z
Aliph	nC29	40.1370	4097295		ug/L	Z
Aliph	nC30	41.2480	7746320		ug/L	Z
Aliph	nC31	42.3270	12399608		ug/L	Z
Aliph	nC32	43.4130	15415899		ug/L	Z
Aliph	nC33	44.6430	14057981		ug/L	Z
Aliph	nC34	46.0860	11712572		ug/L	Z
Aliph	nC35	47.8060	10369633		ug/L	Z
Aliph	nC36	49.8090	8287536		ug/L	Z
Aliph	nC37	52.2960	8496679		ug/L	Z
Aliph	nC38	55.2370	6393986		ug/L	Z
Aliph	nC39	58.8850	5416370		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007542 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007542\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	2102748		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810			ug/L	U
Aliph	nC26	36.5600	2323732		ug/L	Z
Aliph	nC27	37.7930	8832532		ug/L	Z
Aliph	nC28	38.9870	19520752		ug/L	Z
Aliph	nC29	40.1370	30630257		ug/L	Z
Aliph	nC30	41.2480	39139522		ug/L	Z
Aliph	nC31	42.3270	44599627		ug/L	Z
Aliph	nC32	43.4130	42959592		ug/L	Z
Aliph	nC33	44.6430	36990795		ug/L	Z
Aliph	nC34	46.0860	30171538		ug/L	Z
Aliph	nC35	47.8060	24223508		ug/L	Z
Aliph	nC36	49.8090	20201092		ug/L	Z
Aliph	nC37	52.2960	11142985		ug/L	Z
Aliph	nC38	55.2370	14131276		ug/L	Z
Aliph	nC39	58.8850	11979179		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007543**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:30:51 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

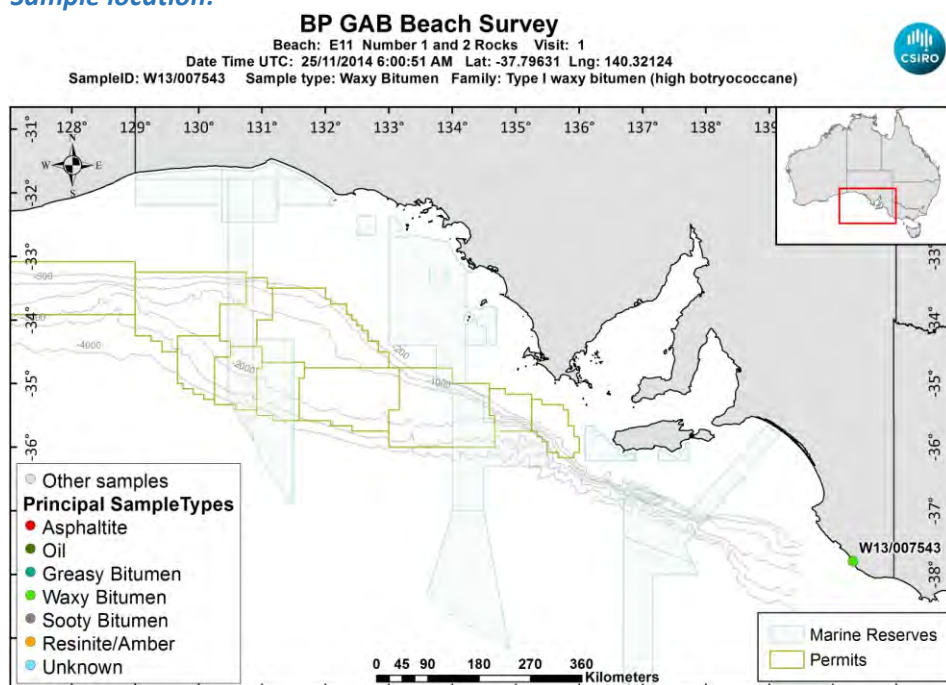
**Size (cm):** 2

**Latitude (Y):** -37.796312

**Weight (gm):** 1.1909

**Longitude (X):** 140.321238

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007543\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007543\\_146A0753.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007543\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007543\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			86.31	percent	Y
Inorg	delta13 Carbon				per mille	U
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			10.05	percent	Y
Inorg	Nitrogen			0.53	percent	Y
Inorg	Sulphur			1.4	percent	Y

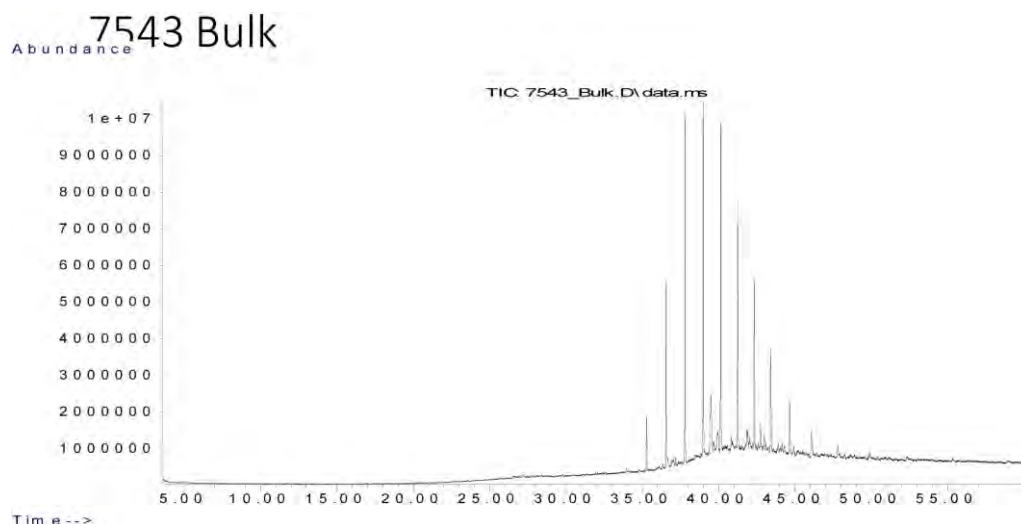
### Results for: GCMS with Full Scan

Unique ID: W13/007543\_DISS\_GCMS-Scan/03



**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007543\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	14662995		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	838686		ug/L	Z
Aliph	nC25	35.2810	7345836		ug/L	Z
Aliph	nC26	36.5600	24451823		ug/L	Z
Aliph	nC27	37.7930	45270696		ug/L	Z
Aliph	nC28	38.9870	47655634		ug/L	Z
Aliph	nC29	40.1370	45616830		ug/L	Z
Aliph	nC30	41.2480	32609570		ug/L	Z
Aliph	nC31	42.3270	24173696		ug/L	Z
Aliph	nC32	43.4130	15925909		ug/L	Z
Aliph	nC33	44.6430	10675605		ug/L	Z
Aliph	nC34	46.0860	6727613		ug/L	Z
Aliph	nC35	47.8060	3621499		ug/L	Z
Aliph	nC36	49.8090	2862266		ug/L	Z
Aliph	nC37	52.2960	1839441		ug/L	Z
Aliph	nC38	55.2370	1582512		ug/L	Z
Aliph	nC39	58.8850	2676026		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns > 25%
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007544**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:32:44 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

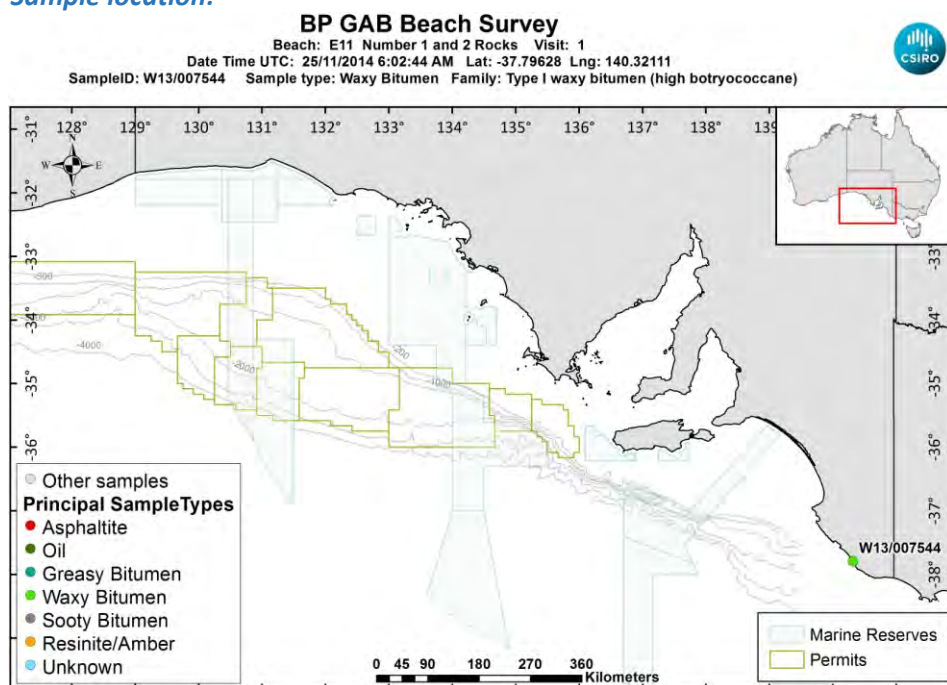
**Size (cm):** 3

**Latitude (Y):** -37.796280

**Weight (gm):** 3.81962

**Longitude (X):** 140.321115

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007544\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007544\\_146A0755.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB BCH1\Samples\W13\\_007544\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007544 UNK ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			83.45	percent	Y
Inorg	delta13 Carbon			-25.5820986862101	per mille	Y
Inorg	delta34 Sulphur			-1.92841703310883	per mille	Y
Inorg	Hydrogen			8.7	percent	Y
Inorg	Nitrogen			0.59	percent	Y
Inorg	Sulphur			1.16	percent	Y

**Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007545**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:34:58 PM

**Type:** Waxy Bitumen

**Family:** Type II waxy bitumen (low botryococcane)

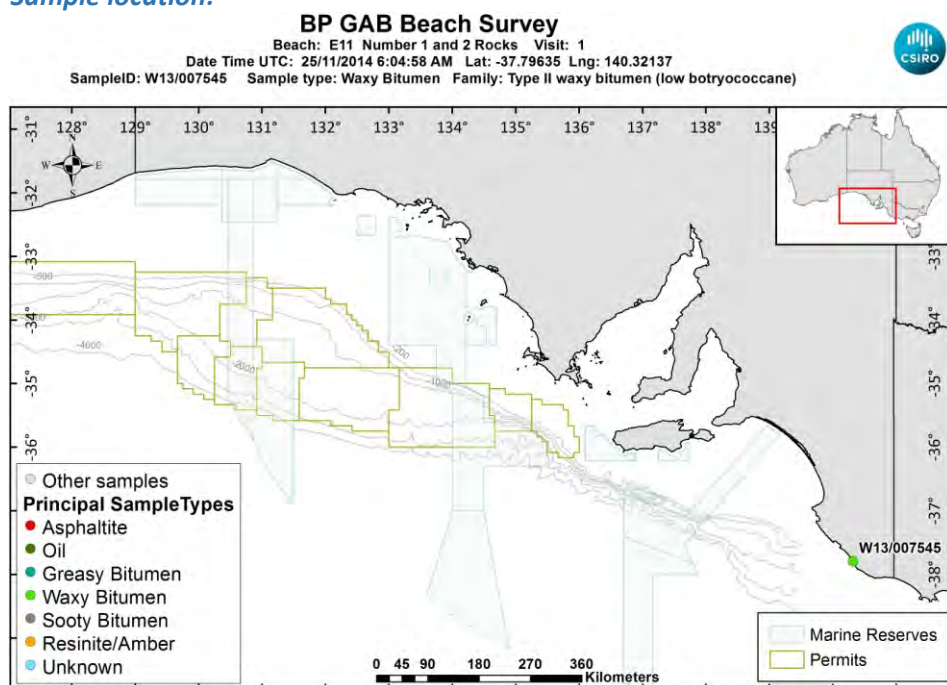
**Size (cm):** 4

**Latitude (Y):** -37.796349

**Weight (gm):** 10.5114

**Longitude (X):** 140.321371

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007545\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007545\\_146A0757.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB BCH1\Samples\W13\\_007545\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES
4	Biomarkers	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 2
Biomarkers	Gas Chromatography Mass Spectrometry Run: 1
Elemental CHNS	Elemental Analyser Run: 2
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2

## Sample Analyses Completed:

### Results for: Gas Chromatography Mass Spectrometry

**Unique ID:** W13/007545 DISS GC-MS/01

**Instrument / Type:** Gas Chromatography Mass Spectrometry Run: 1

**for Analysis:** Biomarkers

**Analysis Date:** 18/07/2017

**Linked Image:** [None available](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**Sample Volume:**

**Volume Units:**

**Extract Volume:**

**Dilution Factor:**

**Comment:** External Ratios only

## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			36.6891322662174	ratio	Y
BiomRatio	% C27 abb 20(R+S)			30.67214339059	ratio	Y
BiomRatio	% C28 aaa 20R			11.4574557708509	ratio	Y
BiomRatio	% C28 abb 20(R+S)			25.8252427184466	ratio	Y
BiomRatio	% C29 aaa 20R			51.8534119629318	ratio	Y
BiomRatio	% C29 abb 20(R+S)			43.5026138909634	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			7.19160859257131E-02	ratio	Y
BiomRatio	25-Nor/C30H			6.12943607378248E-02	ratio	Y
BiomRatio	C19t/C23t			0.110689252336449	ratio	Y
BiomRatio	C22t/C21t			0.458223857067788	ratio	Y
BiomRatio	C22t/C24t			0.276913305811369	ratio	Y
BiomRatio	C23t/C30H			5.16417055035217E-02	ratio	Y
BiomRatio	C24t/C23t			0.919684579439252	ratio	Y
BiomRatio	C24Tet/C23t			1.04906542056075	ratio	Y
BiomRatio	C24Tet/C26t			0.971598593454152	ratio	Y
BiomRatio	C24Tet/C30H			5.41755275025263E-02	ratio	Y
BiomRatio	C26t/C25t			1.64238116392714	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.623822222222222	ratio	Y
BiomRatio	C27 Dia/Ster			0.813737767264969	ratio	Y
BiomRatio	C28BNH/C30H			2.45086949308478E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			1.41831020209399	ratio	Y
BiomRatio	C29H/C30H			0.693528196310876	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.298986203216709	ratio	Y
BiomRatio	C30DiaH/C30H			0.152873927273276	ratio	Y
BiomRatio	C30Ts/C30H			3.45836538316517E-02	ratio	Y
BiomRatio	C35 Homohopane Index			5.90244938138161E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.681600850008854	ratio	Y
BiomRatio	Gam/C30H			0.028294345655551	ratio	Y
BiomRatio	Gam/C31HR			0.137587092042538	ratio	Y
BiomRatio	Ole/C30H			0.090750041476253	ratio	Y
BiomRatio	Sterane/hopane			7.28562151816535E-02	ratio	Y
BiomRatio	Steranes/Terpanes			6.62423905308527E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			9.98427834170683E-02	ratio	Y

## Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007545 DISS GC-MS/02

Instrument / Type: Gas Chromatography Mass Spectrometry Run: 2

for Analysis: Biomarkers

Preparation: Dissolved in solvent

Analysis Date: 18/07/2017

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: Internal Ratios only

## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			36.6208999590459	ratio	Y
BiomRatio	% C27 abb 20(R+S)			28.4180414682092	ratio	Y
BiomRatio	% C28 aaa 20R			24.3312416317623	ratio	Y
BiomRatio	% C28 abb 20(R+S)			26.6769556652776	ratio	Y
BiomRatio	% C29 aaa 20R			39.0478584091918	ratio	Y
BiomRatio	% C29 abb 20(R+S)			44.9050028665132	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.129331547733831	ratio	Y
BiomRatio	25-Nor/C30H			3.15113760147817E-02	ratio	Y
BiomRatio	C19t/C23t			0.207649458294709	ratio	Y
BiomRatio	C22t/C21t			0.527889933199621	ratio	Y
BiomRatio	C22t/C24t			0.418557289756031	ratio	Y
BiomRatio	C23t/C30H			0.156450213041358	ratio	Y
BiomRatio	C24t/C23t			0.448106276934861	ratio	Y
BiomRatio	C24Tet/C23t			0.787544421867506	ratio	Y
BiomRatio	C24Tet/C26t			1.38349828891763	ratio	Y
BiomRatio	C24Tet/C30H			0.123211492580704	ratio	Y
BiomRatio	C26t/C25t			1.44850330000625	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.349364849757892	ratio	Y
BiomRatio	C27 Dia/Ster			0.30781517152622	ratio	Y
BiomRatio	C28BNH/C30H			2.35543233920219E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			1.58015825674502	ratio	Y
BiomRatio	C29H/C30H			1.15555843667241	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.109349069572451	ratio	Y
BiomRatio	C30DiaH/C30H			4.88826547176322E-02	ratio	Y
BiomRatio	C30Ts/C30H			0.113059267534369	ratio	Y
BiomRatio	C35 Homohopane Index			8.08623523537704E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.932958799686572	ratio	Y
BiomRatio	Gam/C30H			8.62545405760899E-02	ratio	Y
BiomRatio	Gam/C31HR			0.270315071919222	ratio	Y
BiomRatio	Ole/C30H			5.28672128150664E-02	ratio	Y
BiomRatio	Sterane/hopane			0.166251539445045	ratio	Y
BiomRatio	Steranes/Terpanes			0.143706691662596	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.156880988084958	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007545\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:



## Results for: Elemental Analyser

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon				percent	U
Inorg	delta13 Carbon		-27.1133166210071		per mille	Y
Inorg	delta34 Sulphur		-4.59617870523054		per mille	Y
Inorg	Hydrogen		4.97		percent	Y
Inorg	Nitrogen		0.4		percent	Y
Inorg	Sulphur		1.65		percent	Y

## Results for: Elemental Analyser

Unique ID: W13/007545\_UNK\_ELEM-AN/02

Instrument / Type: Elemental Analyser Run: 2

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date: 30/10/2017

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.72	percent	Y
Inorg	Hydrogen		5.77672365805169		percent	Y
Inorg	Nitrogen		0.25412382176521		percent	Y
Inorg	Sulphur		3.02078598784132		percent	Y

## Results for: GCMS with Full Scan

Unique ID: W13/007545 DISS GCMS-Scan/02

Instrument / Type: GCMS with Full Scan Run: 2

for Analysis: Whole Oils

Preparation: Dissolved in solvent

Analysis Date: 18/11/2016

Method ID/s:

Linked Image: [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007545\\_int\\_WholeOil.jpg](#)

Sample Volume:

Volume Units:

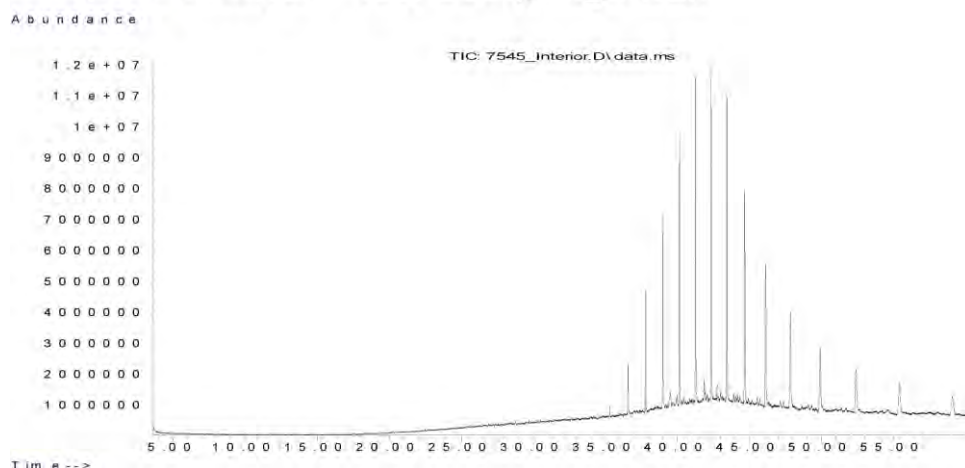
Extract Volume:

Dilution Factor:

Comment: Interior

## Results for: GCMS with Full Scan

7545 Interior – low botry, high wax



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	4015762		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810	1822093		ug/L	Z
Aliph	nC26	36.5600	7665359		ug/L	Z
Aliph	nC27	37.7930	20685496		ug/L	Z
Aliph	nC28	38.9870	32475847		ug/L	Z
Aliph	nC29	40.1370	43472817		ug/L	Z
Aliph	nC30	41.2480	52422748		ug/L	Z
Aliph	nC31	42.3270	57655455		ug/L	Z
Aliph	nC32	43.4130	55377415		ug/L	Z
Aliph	nC33	44.6430	45831616		ug/L	Z
Aliph	nC34	46.0860	37749462		ug/L	Z
Aliph	nC35	47.8060	29777012		ug/L	Z
Aliph	nC36	49.8090	25202556		ug/L	Z
Aliph	nC37	52.2960	16139733		ug/L	Z
Aliph	nC38	55.2370	17476159		ug/L	Z
Aliph	nC39	58.8850	14793083		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U



**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007546**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:45:45 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

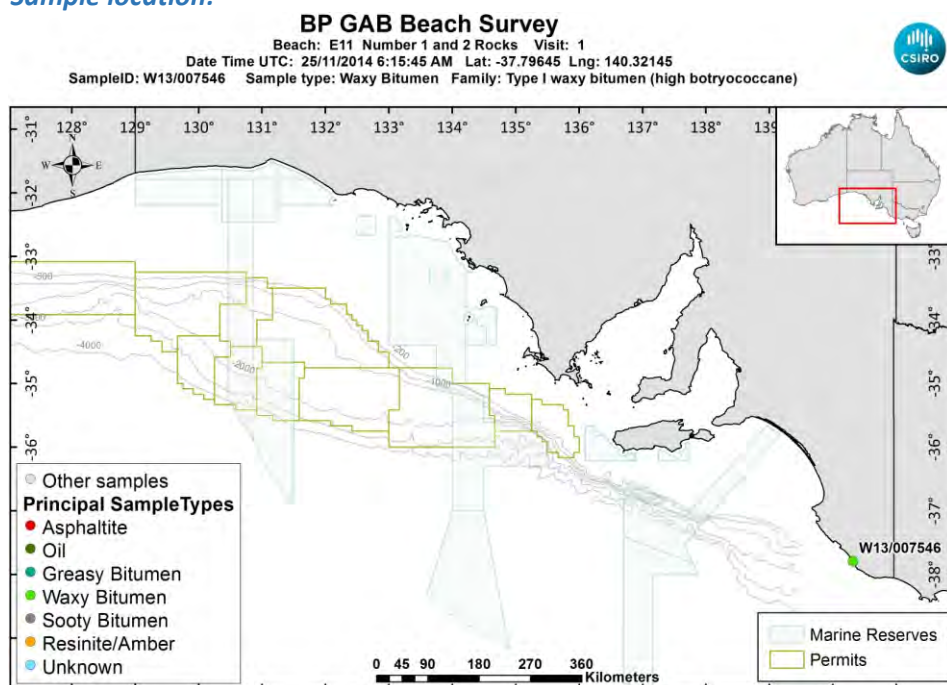
**Size (cm):** 2

**Latitude (Y):** -37.796449

**Weight (gm):** 0.71927

**Longitude (X):** 140.321449

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007546\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007546\\_146A0759.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007546\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007546\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

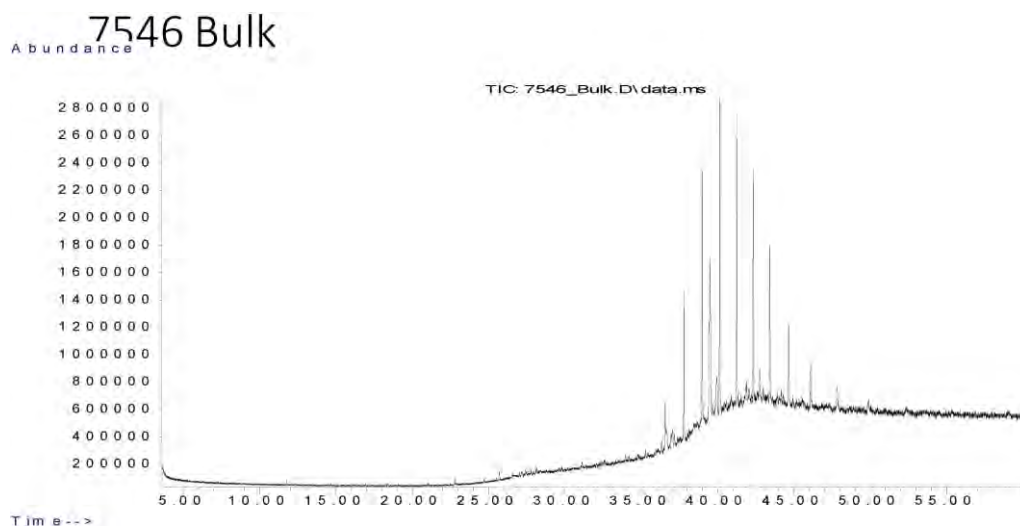
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.02	percent	Y
Inorg	delta13 Carbon				per mille	U
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			12.8	percent	Y
Inorg	Nitrogen			0.27	percent	Y
Inorg	Sulphur			1.64	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007546\_DISS\_GCMS-Scan/03

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007546\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	10305675		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810	347053		ug/L	Z
Aliph	nC26	36.5600	1857911		ug/L	Z
Aliph	nC27	37.7930	5455900		ug/L	Z
Aliph	nC28	38.9870	9490955		ug/L	Z
Aliph	nC29	40.1370	11806835		ug/L	Z
Aliph	nC30	41.2480	10759891		ug/L	Z
Aliph	nC31	42.3270	8613254		ug/L	Z
Aliph	nC32	43.4130	6461634		ug/L	Z
Aliph	nC33	44.6430	4209118		ug/L	Z
Aliph	nC34	46.0860	2848194		ug/L	Z
Aliph	nC35	47.8060	1493488		ug/L	Z
Aliph	nC36	49.8090	1128862		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007547**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:47:50 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

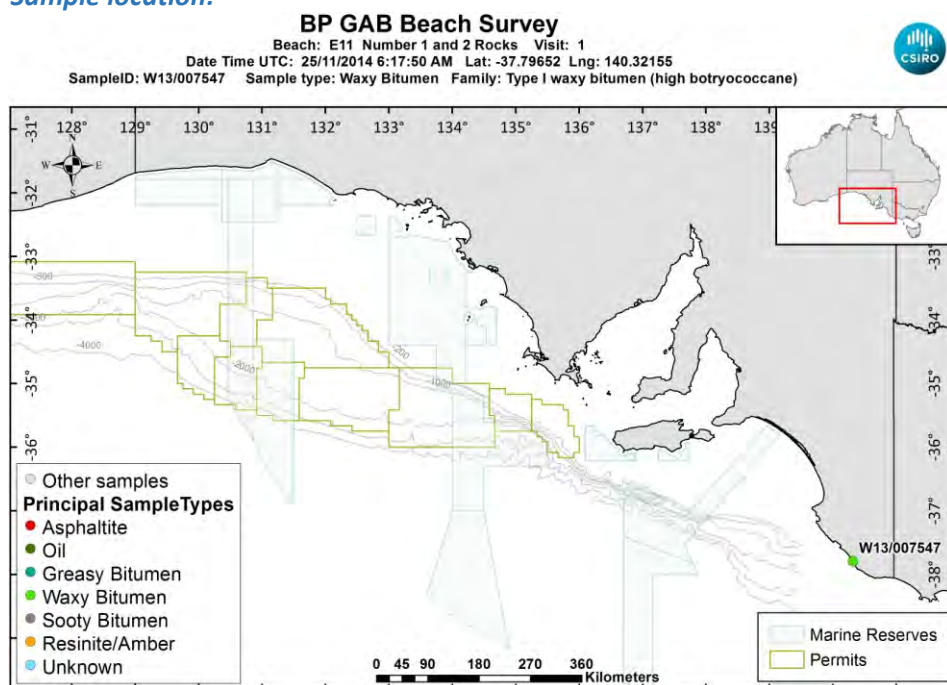
**Size (cm):** 1

**Latitude (Y):** -37.796524

**Weight (gm):** 0.48623

**Longitude (X):** 140.321545

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007547\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007547\\_146A0761.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007547\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007547\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

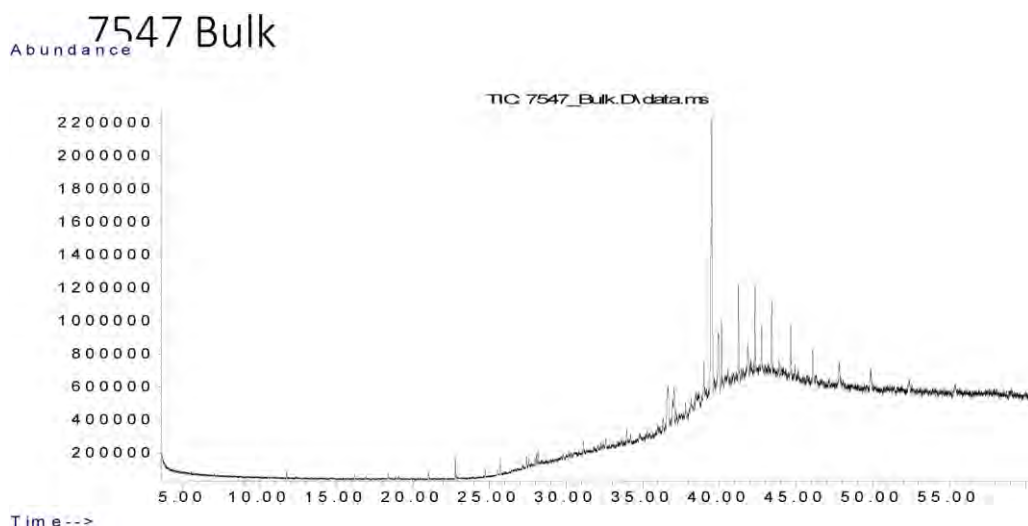
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			84.82	percent	Y
Inorg	delta13 Carbon				per mille	U
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			7.02	percent	Y
Inorg	Nitrogen			0.27	percent	Y
Inorg	Sulphur			0.89	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007547\_DISS\_GCMS-Scan/03

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007547\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	11192813		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	354191		ug/L	Z
Aliph	nC23	32.5720	221734		ug/L	Z
Aliph	nC24	33.9520	514460		ug/L	Z
Aliph	nC25	35.2810	393907		ug/L	Z
Aliph	nC26	36.5600	3169218		ug/L	Z
Aliph	nC27	37.7930	402161		ug/L	Z
Aliph	nC28	38.9870	1379817		ug/L	Z
Aliph	nC29	40.1370	2136990		ug/L	Z
Aliph	nC30	41.2480	2719957		ug/L	Z
Aliph	nC31	42.3270	3094967		ug/L	Z
Aliph	nC32	43.4130	2511290		ug/L	Z
Aliph	nC33	44.6430	1937876		ug/L	Z
Aliph	nC34	46.0860	1624572		ug/L	Z
Aliph	nC35	47.8060	675315		ug/L	Z
Aliph	nC36	49.8090	1608649		ug/L	Z
Aliph	nC37	52.2960	594994		ug/L	Z
Aliph	nC38	55.2370	49405		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

## Results for: GCMS with Full Scan

## Qualifier codes:

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference   Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)



Sample ID : **W13/007548**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:50:47 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

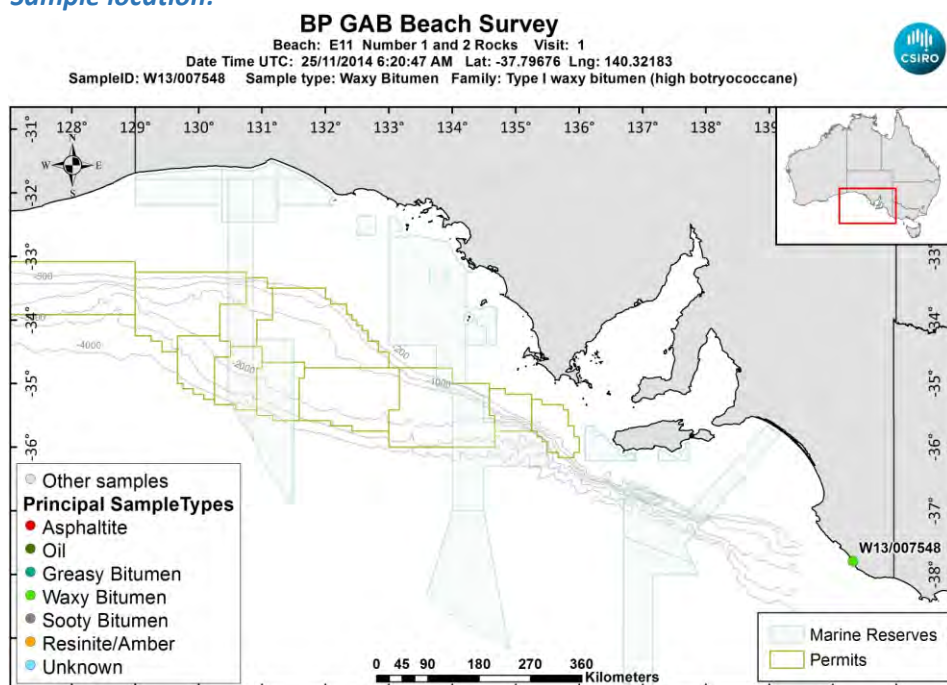
**Size (cm):** 3

**Latitude (Y):** -37.796762

**Weight (gm):** 5.69674

**Longitude (X):** 140.321835

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007548\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007548\\_146A0763.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007548\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007548\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

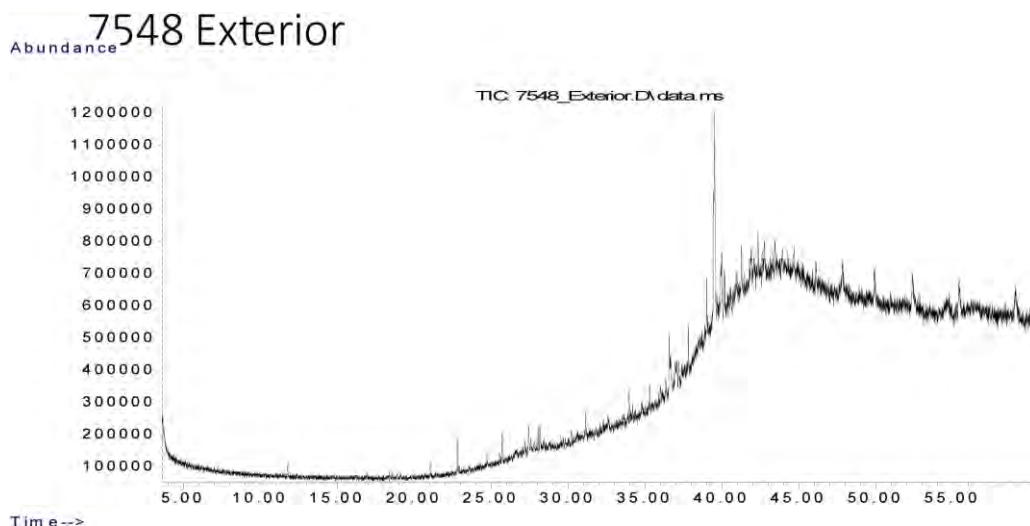
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			84.33	percent	Y
Inorg	delta13 Carbon			-25.9648968926029	per mille	Y
Inorg	delta34 Sulphur			-2.62026365626387	per mille	Y
Inorg	Hydrogen			5.1	percent	Y
Inorg	Nitrogen			0.25	percent	Y
Inorg	Sulphur			1.15	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007548\_DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007548\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



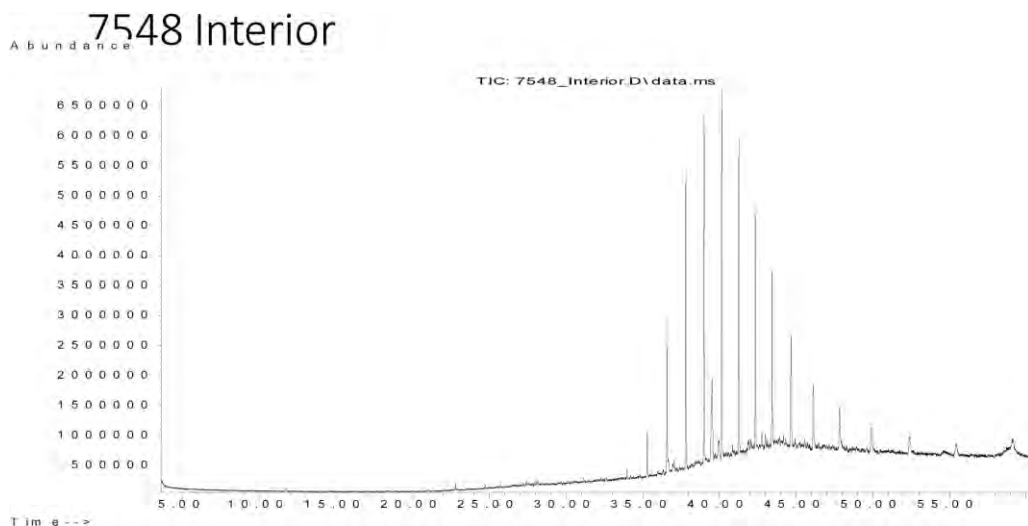
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	5875773		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	323001		ug/L	Z
Aliph	nC23	32.5720	152033		ug/L	Z
Aliph	nC24	33.9520	456693		ug/L	Z
Aliph	nC25	35.2810	410932		ug/L	Z
Aliph	nC26	36.5600	658238		ug/L	Z
Aliph	nC27	37.7930	790751		ug/L	Z
Aliph	nC28	38.9870	1081859		ug/L	Z
Aliph	nC29	40.1370	694800		ug/L	Z
Aliph	nC30	41.2480	719230		ug/L	Z
Aliph	nC31	42.3270	652329		ug/L	Z
Aliph	nC32	43.4130	608415		ug/L	Z
Aliph	nC33	44.6430	507732		ug/L	Z
Aliph	nC34	46.0860	698423		ug/L	Z
Aliph	nC35	47.8060	1067810		ug/L	Z
Aliph	nC36	49.8090	1506870		ug/L	Z
Aliph	nC37	52.2960	1973203		ug/L	Z
Aliph	nC38	55.2370	1751697		ug/L	Z
Aliph	nC39	58.8850	1478309		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007548 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007548\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	13223308		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	740776		ug/L	Z
Aliph	nC25	35.2810	3821735		ug/L	Z
Aliph	nC26	36.5600	12538119		ug/L	Z
Aliph	nC27	37.7930	26115714		ug/L	Z
Aliph	nC28	38.9870	30511877		ug/L	Z
Aliph	nC29	40.1370	32387997		ug/L	Z
Aliph	nC30	41.2480	26616693		ug/L	Z
Aliph	nC31	42.3270	22324843		ug/L	Z
Aliph	nC32	43.4130	17656573		ug/L	Z
Aliph	nC33	44.6430	13319368		ug/L	Z
Aliph	nC34	46.0860	9378455		ug/L	Z
Aliph	nC35	47.8060	7132395		ug/L	Z
Aliph	nC36	49.8090	6666725		ug/L	Z
Aliph	nC37	52.2960	5271481		ug/L	Z
Aliph	nC38	55.2370	4668704		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

## Results for: GCMS with Full Scan

## Qualifier codes:

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)



Sample ID : **W13/007549**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:52:29 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

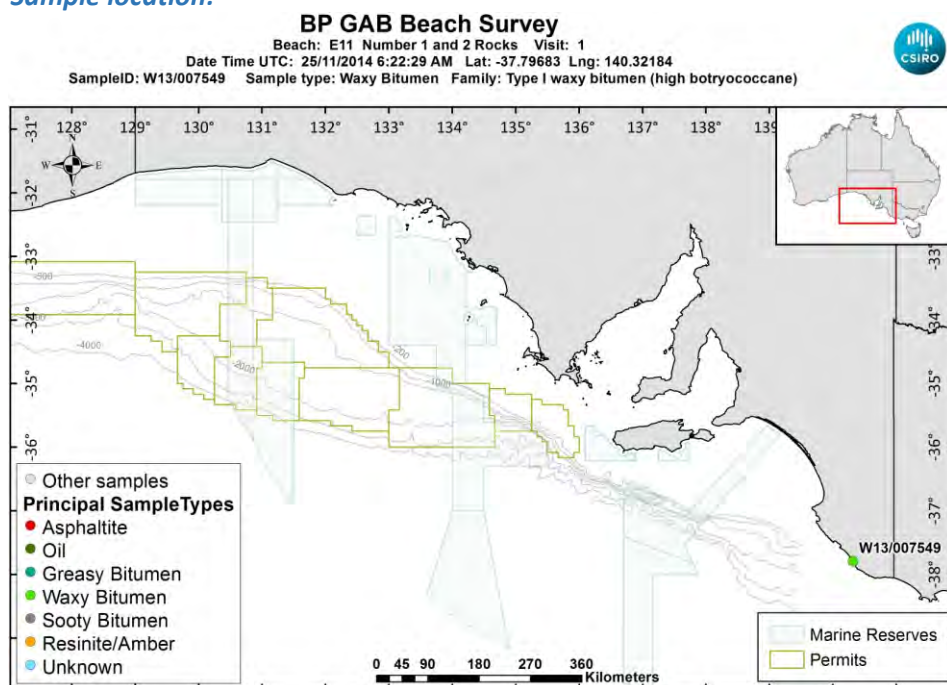
**Size (cm):** 1

**Latitude (Y):** -37.796826

**Weight (gm):** 0.63603

**Longitude (X):** 140.321841

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007549\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007549\\_146A0765.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007549\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007549\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

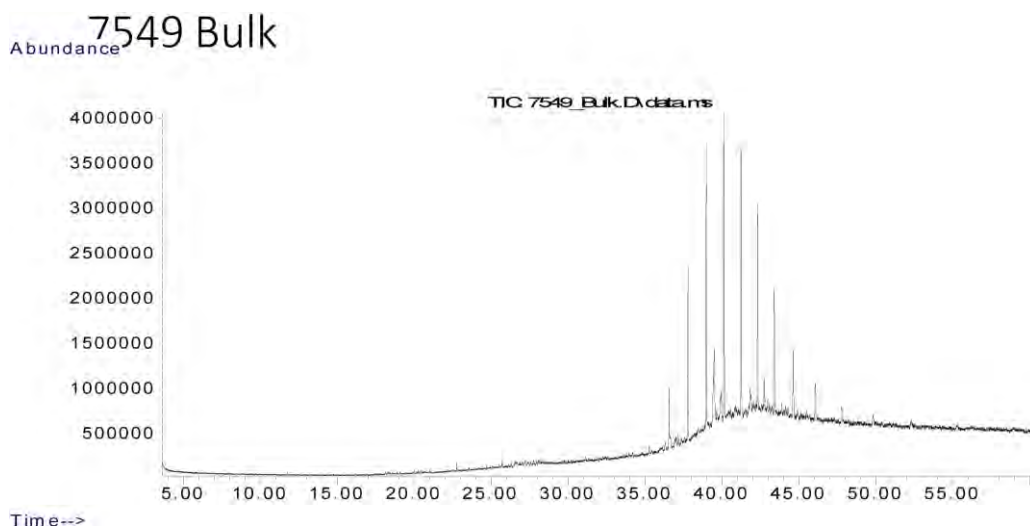
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			86.14	percent	Y
Inorg	delta13 Carbon				per mille	U
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			6.65	percent	Y
Inorg	Nitrogen			0.245	percent	Y
Inorg	Sulphur			0.89	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007549\_DISS\_GCMS-Scan/03

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007549\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	4682166		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810	487082		ug/L	Z
Aliph	nC26	36.5600	3106671		ug/L	Z
Aliph	nC27	37.7930	9718103		ug/L	Z
Aliph	nC28	38.9870	14985426		ug/L	Z
Aliph	nC29	40.1370	16480754		ug/L	Z
Aliph	nC30	41.2480	13734940		ug/L	Z
Aliph	nC31	42.3270	11106669		ug/L	Z
Aliph	nC32	43.4130	7585171		ug/L	Z
Aliph	nC33	44.6430	5094221		ug/L	Z
Aliph	nC34	46.0860	3427790		ug/L	Z
Aliph	nC35	47.8060	2054761		ug/L	Z
Aliph	nC36	49.8090	146389		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

## Results for: GCMS with Full Scan

## Qualifier codes:

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)



Sample ID : **W13/007550**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:54:42 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

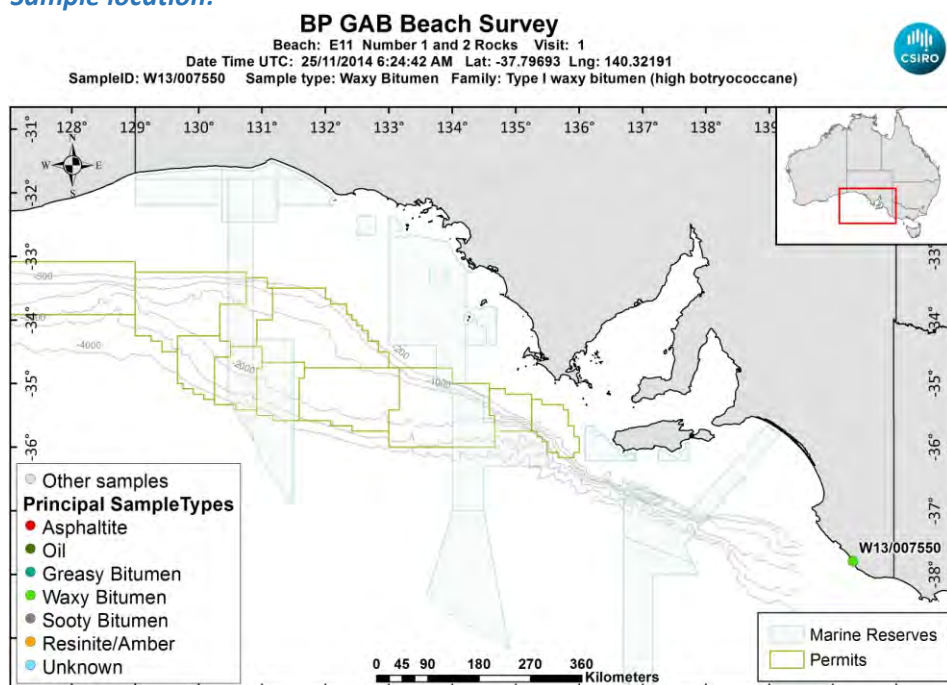
**Size (cm):** 2

**Latitude (Y):** -37.796933

**Weight (gm):** 2.56436

**Longitude (X):** 140.321910

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007550\\_Location.jpg](#)

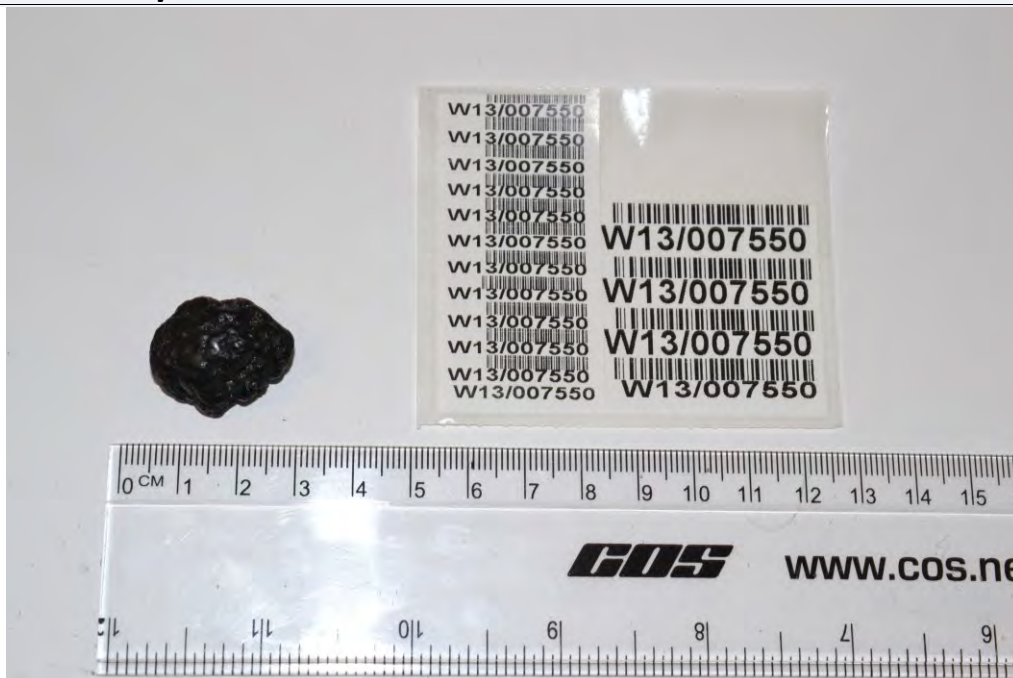
**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007550\\_146A0767.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007550\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007550\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

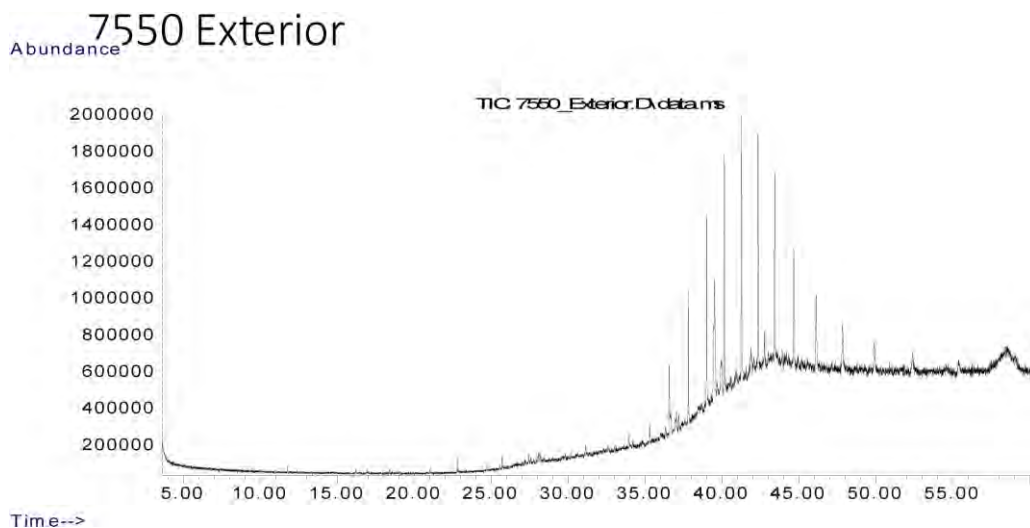
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			86.19	percent	Y
Inorg	delta13 Carbon				per mille	U
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			9.41	percent	Y
Inorg	Nitrogen			0.24	percent	Y
Inorg	Sulphur			1.19	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007550\_DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007550\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



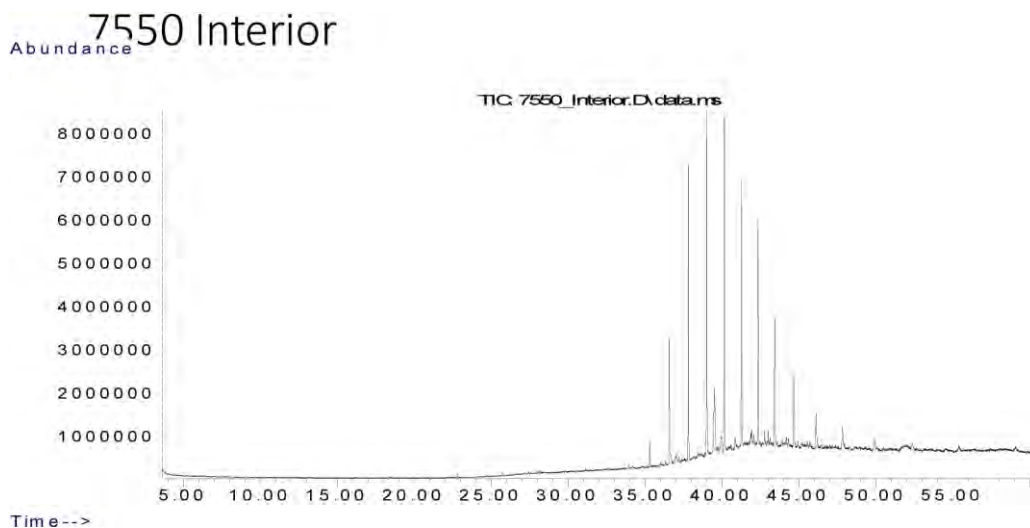
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	6157180		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	272485		ug/L	Z
Aliph	nC23	32.5720	172930		ug/L	Z
Aliph	nC24	33.9520	385797		ug/L	Z
Aliph	nC25	35.2810	598829		ug/L	Z
Aliph	nC26	36.5600	1749963		ug/L	Z
Aliph	nC27	37.7930	3745698		ug/L	Z
Aliph	nC28	38.9870	5363884		ug/L	Z
Aliph	nC29	40.1370	7032149		ug/L	Z
Aliph	nC30	41.2480	7136517		ug/L	Z
Aliph	nC31	42.3270	7126715		ug/L	Z
Aliph	nC32	43.4130	6234712		ug/L	Z
Aliph	nC33	44.6430	4631076		ug/L	Z
Aliph	nC34	46.0860	3604726		ug/L	Z
Aliph	nC35	47.8060	2711922		ug/L	Z
Aliph	nC36	49.8090	2034699		ug/L	Z
Aliph	nC37	52.2960	1424519		ug/L	Z
Aliph	nC38	55.2370	1172104		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007550 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007550\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	10672072		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	600986		ug/L	Z
Aliph	nC25	35.2810	3382542		ug/L	Z
Aliph	nC26	36.5600	14285491		ug/L	Z
Aliph	nC27	37.7930	33722096		ug/L	Z
Aliph	nC28	38.9870	39782127		ug/L	Z
Aliph	nC29	40.1370	41488443		ug/L	Z
Aliph	nC30	41.2480	32137373		ug/L	Z
Aliph	nC31	42.3270	25367949		ug/L	Z
Aliph	nC32	43.4130	17076107		ug/L	Z
Aliph	nC33	44.6430	11783390		ug/L	Z
Aliph	nC34	46.0860	7623271		ug/L	Z
Aliph	nC35	47.8060	4964288		ug/L	Z
Aliph	nC36	49.8090	3600139		ug/L	Z
Aliph	nC37	52.2960	3028243		ug/L	Z
Aliph	nC38	55.2370	2637056		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

## Results for: GCMS with Full Scan

## Qualifier codes:

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)



Sample ID : **W13/007551**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:55:56 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

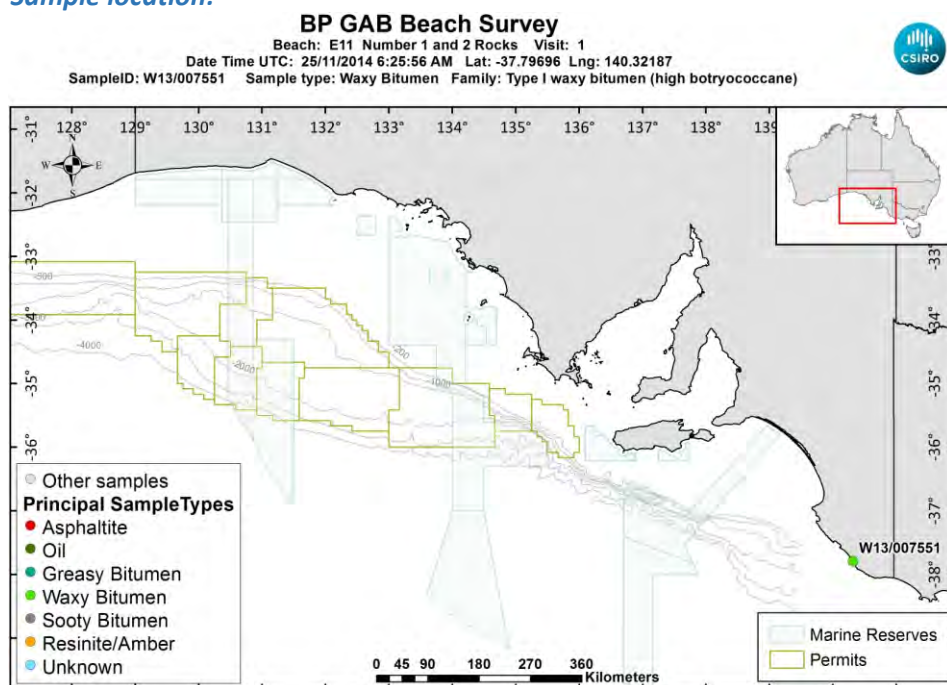
**Size (cm):** 2

**Latitude (Y):** -37.796956

**Weight (gm):** 4.9983

**Longitude (X):** 140.321868

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007551\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007551\\_146A0769.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007551\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007551\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date:

Linked Image: [None available](#)

Preparation: Unknown

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

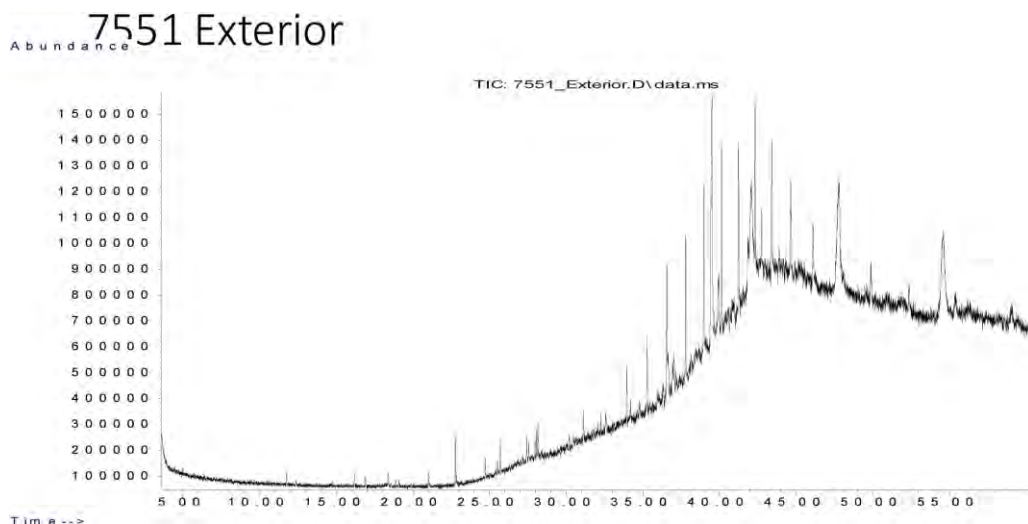
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			84.98	percent	Y
Inorg	delta13 Carbon			-26.4064309575244	per mille	Y
Inorg	delta34 Sulphur			-2.64651594442135	per mille	Y
Inorg	Hydrogen			8.47	percent	Y
Inorg	Nitrogen			0.89	percent	Y
Inorg	Sulphur			1.82	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007551\_DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007551\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



## Data Sheet:

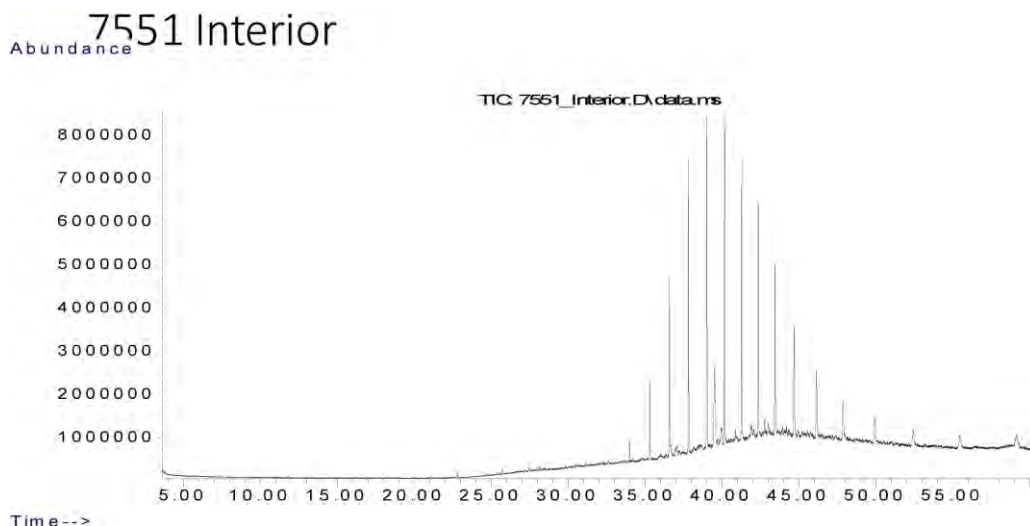
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	9548360		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	562335		ug/L	Z
Aliph	nC23	32.5720	291412		ug/L	Z
Aliph	nC24	33.9520	1050272		ug/L	Z
Aliph	nC25	35.2810	1392867		ug/L	Z
Aliph	nC26	36.5600	2520057		ug/L	Z
Aliph	nC27	37.7930	2874730		ug/L	Z
Aliph	nC28	38.9870	3606305		ug/L	Z
Aliph	nC29	40.1370	3744801		ug/L	Z
Aliph	nC30	41.2480	3606443		ug/L	Z
Aliph	nC31	42.3270	3284876		ug/L	Z
Aliph	nC32	43.4130	2991122		ug/L	Z
Aliph	nC33	44.6430	2461231		ug/L	Z
Aliph	nC34	46.0860	2421953		ug/L	Z
Aliph	nC35	47.8060	1660169		ug/L	Z
Aliph	nC36	49.8090	1879969		ug/L	Z
Aliph	nC37	52.2960	1913179		ug/L	Z
Aliph	nC38	55.2370	2313782		ug/L	Z
Aliph	nC39	58.8850	1905902		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007551 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007551\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior



## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	16245752		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	2539958		ug/L	Z
Aliph	nC25	35.2810	8812608		ug/L	Z
Aliph	nC26	36.5600	19846521		ug/L	Z
Aliph	nC27	37.7930	34496612		ug/L	Z
Aliph	nC28	38.9870	37842465		ug/L	Z
Aliph	nC29	40.1370	39364129		ug/L	Z
Aliph	nC30	41.2480	33879445		ug/L	Z
Aliph	nC31	42.3270	28354418		ug/L	Z
Aliph	nC32	43.4130	23428793		ug/L	Z
Aliph	nC33	44.6430	17561465		ug/L	Z
Aliph	nC34	46.0860	13005219		ug/L	Z
Aliph	nC35	47.8060	9220421		ug/L	Z
Aliph	nC36	49.8090	7742616		ug/L	Z
Aliph	nC37	52.2960	4935284		ug/L	Z
Aliph	nC38	55.2370	5437537		ug/L	Z
Aliph	nC39	58.8850	6049651		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U



## Results for: GCMS with Full Scan

## Qualifier codes:

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference   Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)

Sample ID : **W13/007552A**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

2 pieces smaller is 1cm

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:58:05 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

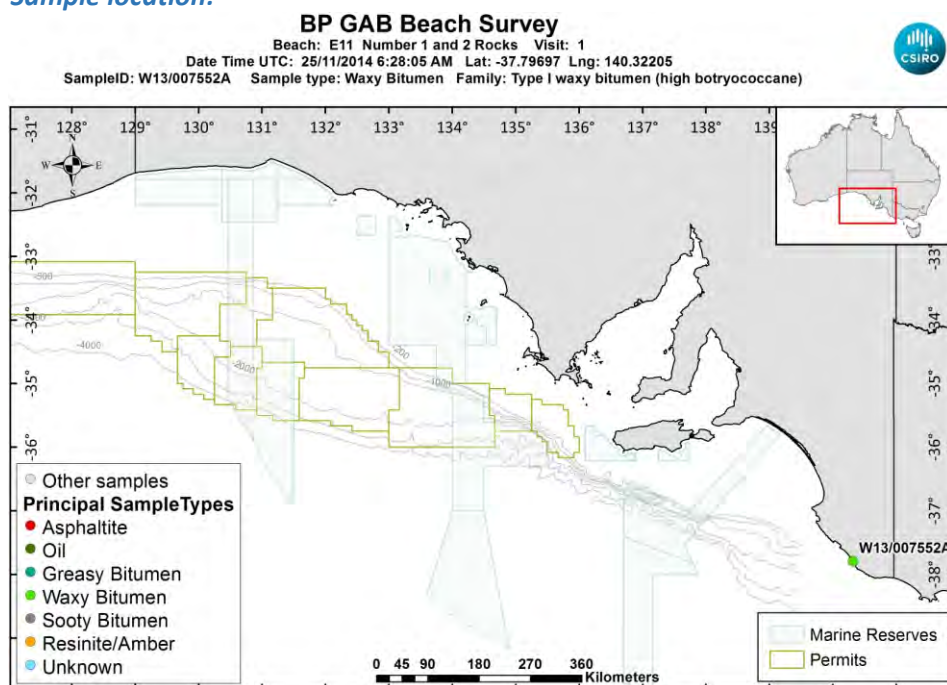
**Size (cm):** 2

**Latitude (Y):** -37.796974

**Weight (gm):** 3.08449

**Longitude (X):** 140.322045

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007552A\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007552\\_146A0771.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007552\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007552A\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

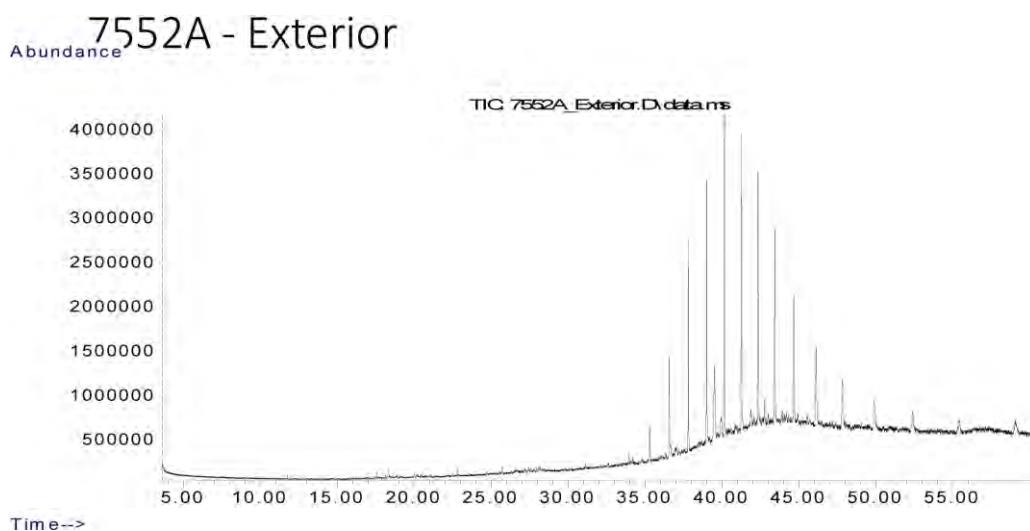
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			81.16	percent	Y
Inorg	delta13 Carbon			-26.3520938002122	per mille	Y
Inorg	delta34 Sulphur			-2.46927389722079	per mille	Y
Inorg	Hydrogen			6.95	percent	Y
Inorg	Nitrogen			0.62	percent	Y
Inorg	Sulphur			1.69	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007552A DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13\\_007552A\\_ext WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



## Data Sheet:

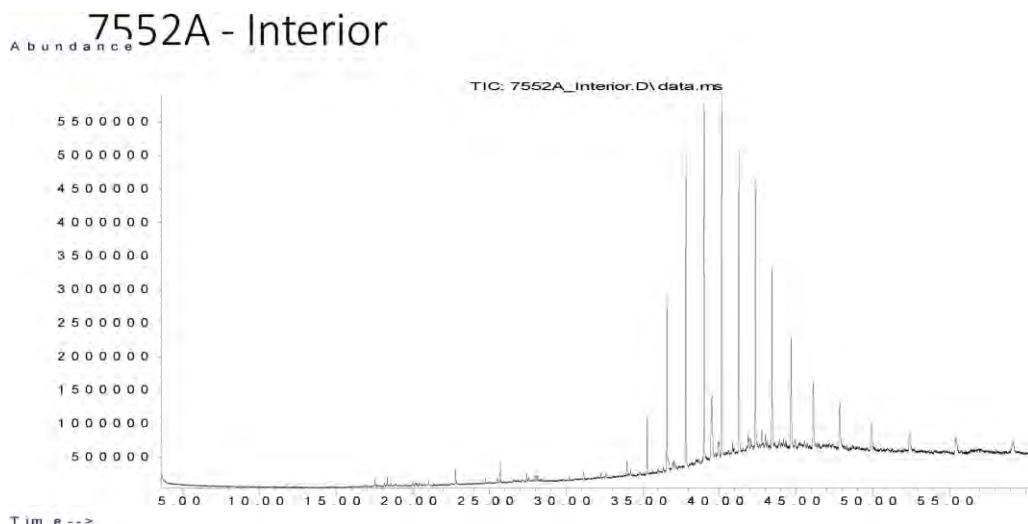
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	7945613		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	607178		ug/L	Z
Aliph	nC25	35.2810	2066186		ug/L	Z
Aliph	nC26	36.5600	5493756		ug/L	Z
Aliph	nC27	37.7930	11927029		ug/L	Z
Aliph	nC28	38.9870	15651035		ug/L	Z
Aliph	nC29	40.1370	18990067		ug/L	Z
Aliph	nC30	41.2480	17508918		ug/L	Z
Aliph	nC31	42.3270	16475051		ug/L	Z
Aliph	nC32	43.4130	13508270		ug/L	Z
Aliph	nC33	44.6430	10246360		ug/L	Z
Aliph	nC34	46.0860	8065624		ug/L	Z
Aliph	nC35	47.8060	5579766		ug/L	Z
Aliph	nC36	49.8090	4982344		ug/L	Z
Aliph	nC37	52.2960	3905902		ug/L	Z
Aliph	nC38	55.2370	3440649		ug/L	Z
Aliph	nC39	58.8850	2886354		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007552A DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007552A\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior



## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	9419704		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	1235882		ug/L	Z
Aliph	nC25	35.2810	4633430		ug/L	Z
Aliph	nC26	36.5600	13325149		ug/L	Z
Aliph	nC27	37.7930	24159808		ug/L	Z
Aliph	nC28	38.9870	27751551		ug/L	Z
Aliph	nC29	40.1370	28086209		ug/L	Z
Aliph	nC30	41.2480	24279388		ug/L	Z
Aliph	nC31	42.3270	20885123		ug/L	Z
Aliph	nC32	43.4130	16182530		ug/L	Z
Aliph	nC33	44.6430	12108086		ug/L	Z
Aliph	nC34	46.0860	8919015		ug/L	Z
Aliph	nC35	47.8060	6446572		ug/L	Z
Aliph	nC36	49.8090	5700456		ug/L	Z
Aliph	nC37	52.2960	2819153		ug/L	Z
Aliph	nC38	55.2370	4525932		ug/L	Z
Aliph	nC39	58.8850	1961901		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

## Results for: GCMS with Full Scan

## Qualifier codes:

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference   Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)

Sample ID : **W13/007552B**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

Part B subsample

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 4:58:05 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

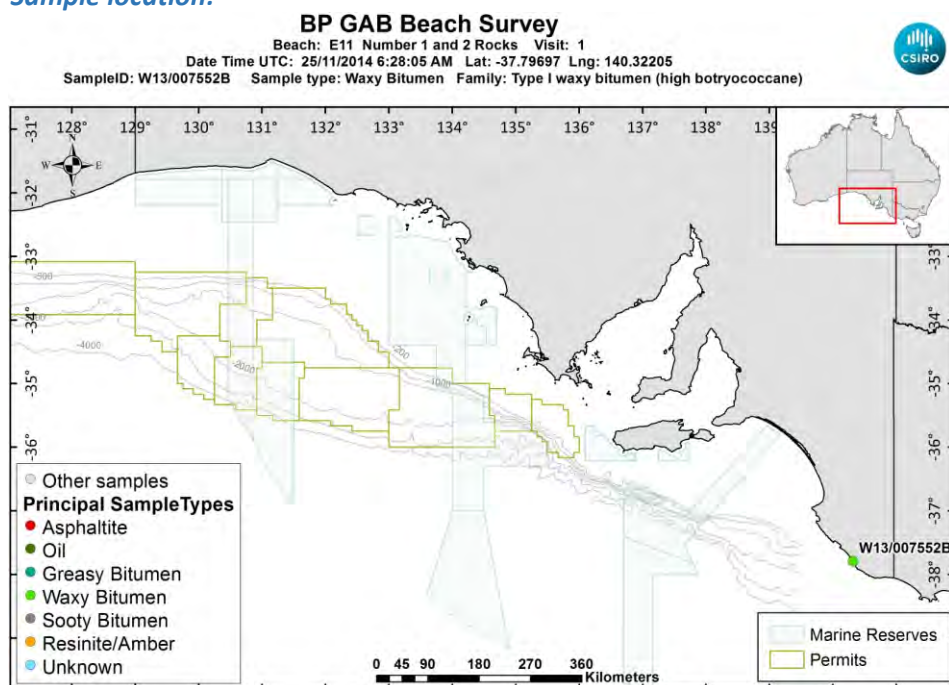
**Size (cm):**

**Latitude (Y):** -37.796974

**Weight (gm):**

**Longitude (X):** 140.322045

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007552B\\_Location.jpg](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007552\\_Photo01.JPG](#)

**Sample ID : W13/007552B****Beach E11: Number 1 and 2 Rocks Visit: 1****Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

**Analyses Completed:**

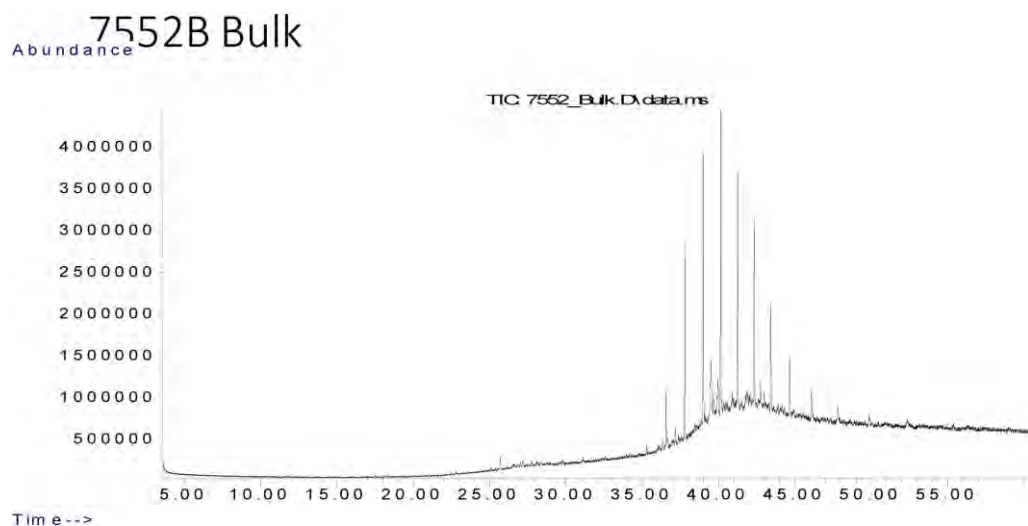
Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

**Sample Analyses Completed:****Results for: Elemental Analyser****Unique ID: W13/007552B\_UNK\_ELEM-AN/01****Instrument / Type:** Elemental Analyser Run: 1**for Analysis:** Elemental CHNS**Preparation:** Unknown**Analysis Date:****Method ID/s:****Linked Image:** [None available](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:****Data Sheet:***(default units ppb)*

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
<a href="#">Inorg</a>	Carbon			85.97	percent	Y
<a href="#">Inorg</a>	delta13 Carbon				per mille	U
<a href="#">Inorg</a>	delta34 Sulphur				per mille	U
<a href="#">Inorg</a>	Hydrogen			8.97	percent	Y
<a href="#">Inorg</a>	Nitrogen			0.92	percent	Y
<a href="#">Inorg</a>	Sulphur			1.29	percent	Y

**Results for: GCMS with Full Scan****Unique ID: W13/007552B DISS GCMS-Scan/03****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007552B\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	5463504		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810	573329		ug/L	Z
Aliph	nC26	36.5600	3427391		ug/L	Z
Aliph	nC27	37.7930	11376165		ug/L	Z
Aliph	nC28	38.9870	16286708		ug/L	Z
Aliph	nC29	40.1370	18235930		ug/L	Z
Aliph	nC30	41.2480	14749847		ug/L	Z
Aliph	nC31	42.3270	11215005		ug/L	Z
Aliph	nC32	43.4130	7508888		ug/L	Z
Aliph	nC33	44.6430	4838991		ug/L	Z
Aliph	nC34	46.0860	3319899		ug/L	Z
Aliph	nC35	47.8060	1033007		ug/L	Z
Aliph	nC36	49.8090	1692484		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007553**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 5:00:02 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

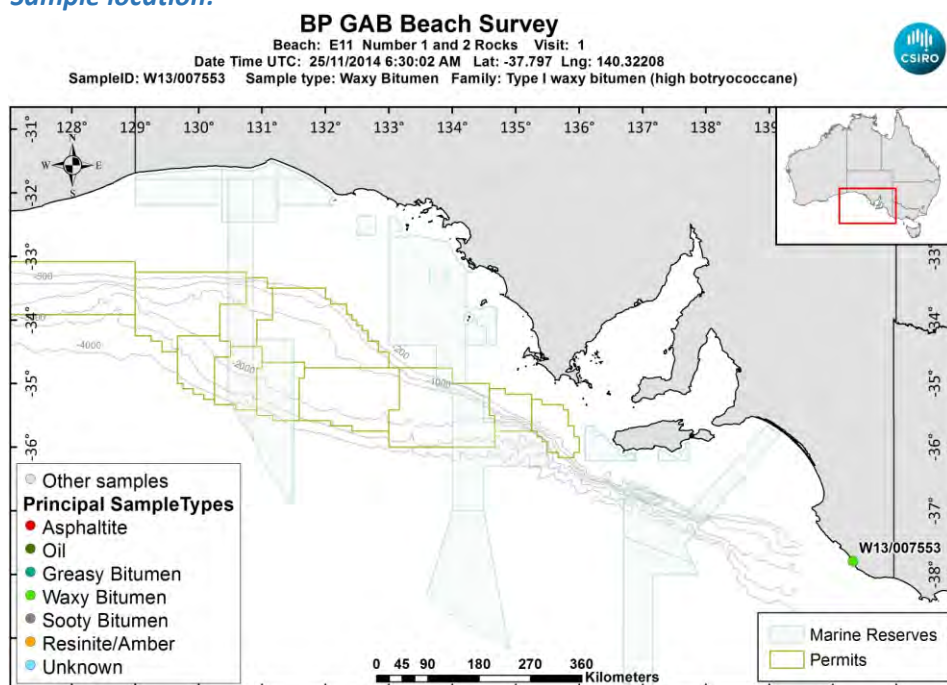
**Size (cm):** 2

**Latitude (Y):** -37.797002

**Weight (gm):** 1.52858

**Longitude (X):** 140.322082

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007553\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007553\\_146A0773.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007553\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES
4	Biomarkers	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 2
Biomarkers	Gas Chromatography Mass Spectrometry Run: 1
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Gas Chromatography Mass Spectrometry

**Unique ID:** W13/007553 DISS GC-MS/01

**Instrument / Type:** Gas Chromatography Mass Spectrometry Run: 1

**for Analysis:** Biomarkers

**Analysis Date:** 18/07/2017

**Linked Image:** [None available](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**Sample Volume:**

**Volume Units:**

**Extract Volume:**

**Dilution Factor:**

**Comment:** External Ratios only

## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			48.6820163854623	ratio	Y
BiomRatio	% C27 abb 20(R+S)			45.8185418401402	ratio	Y
BiomRatio	% C28 aaa 20R			14.1322023014221	ratio	Y
BiomRatio	% C28 abb 20(R+S)			20.3352484365521	ratio	Y
BiomRatio	% C29 aaa 20R			37.1857813131156	ratio	Y
BiomRatio	% C29 abb 20(R+S)			33.8462097233077	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			8.05874909466288E-02	ratio	Y
BiomRatio	25-Nor/C30H			0.068090580253776	ratio	Y
BiomRatio	C19t/C23t			0.347962492007656	ratio	Y
BiomRatio	C22t/C21t			0.32908929442166	ratio	Y
BiomRatio	C22t/C24t			0.304053348190967	ratio	Y
BiomRatio	C23t/C30H			0.074318706104639	ratio	Y
BiomRatio	C24t/C23t			0.944632331626244	ratio	Y
BiomRatio	C24Tet/C23t			0.58226203374568	ratio	Y
BiomRatio	C24Tet/C26t			0.453540063928052	ratio	Y
BiomRatio	C24Tet/C30H			4.32729609618346E-02	ratio	Y
BiomRatio	C26t/C25t			1.99429609828851	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.707745399880314	ratio	Y
BiomRatio	C27 Dia/Ster			1.23896442383578	ratio	Y
BiomRatio	C28BNH/C30H			3.01024045559042E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.738701153812278	ratio	Y
BiomRatio	C29H/C30H			0.617905961136324	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.305486231612268	ratio	Y
BiomRatio	C30DiaH/C30H			0.19937138130181	ratio	Y
BiomRatio	C30Ts/C30H			6.6050648252528E-03	ratio	Y
BiomRatio	C35 Homohopane Index			3.85319425066425E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.428241384935753	ratio	Y
BiomRatio	Gam/C30H			3.50420316750972E-02	ratio	Y
BiomRatio	Gam/C31HR			0.206753306697053	ratio	Y
BiomRatio	Ole/C30H			0.115415902577089	ratio	Y
BiomRatio	Sterane/hopane			6.58881246898246E-02	ratio	Y
BiomRatio	Steranes/Terpanes			5.67399870882731E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.161229109680963	ratio	Y

## Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007553 DISS GC-MS/02

Instrument / Type: Gas Chromatography Mass Spectrometry Run: 2

for Analysis: Biomarkers

Preparation: Dissolved in solvent

Analysis Date: 18/07/2017

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: Internal Ratios only

## Results for: Gas Chromatography Mass Spectrometry

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			43.9302746678228	ratio	Y
BiomRatio	% C27 abb 20(R+S)			46.1691420419955	ratio	Y
BiomRatio	% C28 aaa 20R			13.537017673612	ratio	Y
BiomRatio	% C28 abb 20(R+S)			19.8925796376814	ratio	Y
BiomRatio	% C29 aaa 20R			42.5327076585652	ratio	Y
BiomRatio	% C29 abb 20(R+S)			33.9382783203231	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			5.34065149861473E-02	ratio	Y
BiomRatio	25-Nor/C30H			4.90035626457577E-02	ratio	Y
BiomRatio	C19t/C23t			0.442490759740708	ratio	Y
BiomRatio	C22t/C21t			0.170922145890053	ratio	Y
BiomRatio	C22t/C24t			0.157715587373902	ratio	Y
BiomRatio	C23t/C30H			5.92066472007279E-02	ratio	Y
BiomRatio	C24t/C23t			0.964187327823691	ratio	Y
BiomRatio	C24Tet/C23t			0.579127368110594	ratio	Y
BiomRatio	C24Tet/C26t			0.467018536417507	ratio	Y
BiomRatio	C24Tet/C30H			0.03428818976801	ratio	Y
BiomRatio	C26t/C25t			1.80944227229858	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.664360316494218	ratio	Y
BiomRatio	C27 Dia/Ster			1.04740871071152	ratio	Y
BiomRatio	C28BNH/C30H			2.80779880952867E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.735085748170342	ratio	Y
BiomRatio	C29H/C30H			0.55314821743248	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.319805154755041	ratio	Y
BiomRatio	C30DiaH/C30H			0.204117421296886	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			3.81073078662047E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.463926962494092	ratio	Y
BiomRatio	Gam/C30H			4.43545495718249E-02	ratio	Y
BiomRatio	Gam/C31HR			0.248378741066692	ratio	Y
BiomRatio	Ole/C30H			0.120072196613164	ratio	Y
BiomRatio	Sterane/hopane			6.01053020592175E-02	ratio	Y
BiomRatio	Steranes/Terpanes			5.27330744853238E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.139802726198821	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007553 UNK ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:



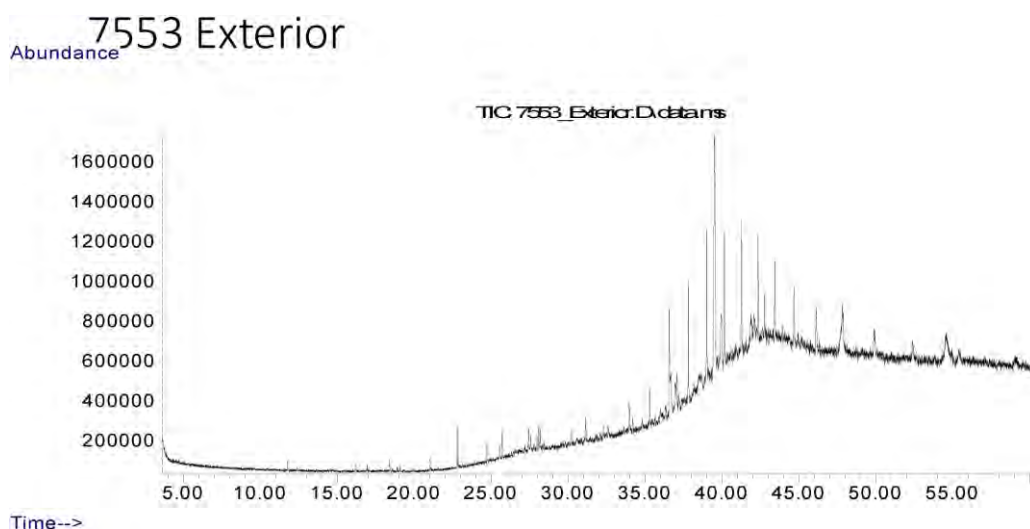
**Results for: Elemental Analyser****Data Sheet:**

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			81.96	percent	Y
Inorg	delta13 Carbon			-26.7797910914698	per mille	Y
Inorg	delta34 Sulphur			-4.44329278821601	per mille	Y
Inorg	Hydrogen			8.36	percent	Y
Inorg	Nitrogen			0.29	percent	Y
Inorg	Sulphur			2.52	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007553\_DISS\_GCMS-Scan/01**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007553\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



## Data Sheet:

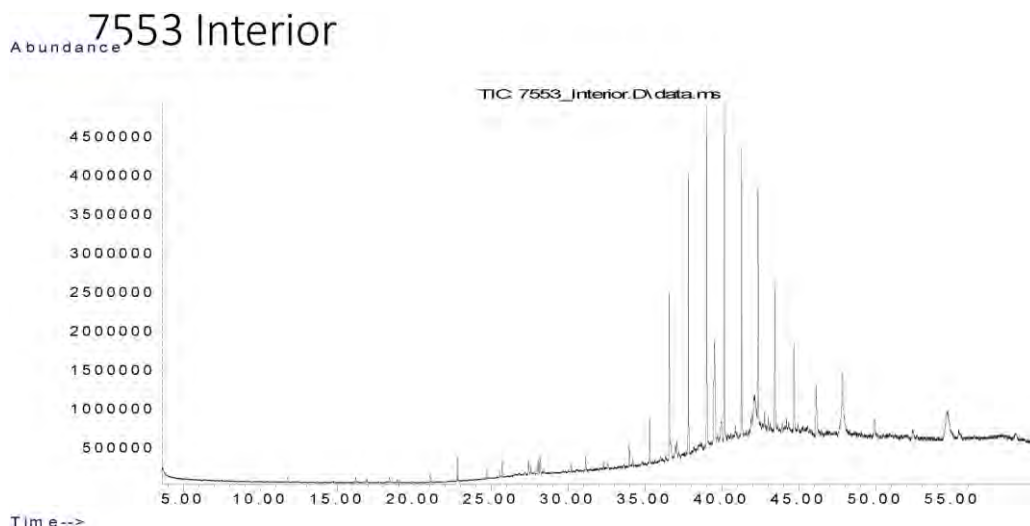
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	11684163		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	653193		ug/L	Z
Aliph	nC23	32.5720	219999		ug/L	Z
Aliph	nC24	33.9520	816536		ug/L	Z
Aliph	nC25	35.2810	1088153		ug/L	Z
Aliph	nC26	36.5600	2991709		ug/L	Z
Aliph	nC27	37.7930	3250108		ug/L	Z
Aliph	nC28	38.9870	4112464		ug/L	Z
Aliph	nC29	40.1370	3467542		ug/L	Z
Aliph	nC30	41.2480	3701438		ug/L	Z
Aliph	nC31	42.3270	2874795		ug/L	Z
Aliph	nC32	43.4130	2582855		ug/L	Z
Aliph	nC33	44.6430	1944674		ug/L	Z
Aliph	nC34	46.0860	1874474		ug/L	Z
Aliph	nC35	47.8060	3052077		ug/L	Z
Aliph	nC36	49.8090	1894625		ug/L	Z
Aliph	nC37	52.2960	182356		ug/L	Z
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U



**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007553 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007553\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	12708943		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	920756		ug/L	Z
Aliph	nC23	32.5720	287560		ug/L	Z
Aliph	nC24	33.9520	1463664		ug/L	Z
Aliph	nC25	35.2810	3137338		ug/L	Z
Aliph	nC26	36.5600	9538615		ug/L	Z
Aliph	nC27	37.7930	18782881		ug/L	Z
Aliph	nC28	38.9870	22171717		ug/L	Z
Aliph	nC29	40.1370	22667499		ug/L	Z
Aliph	nC30	41.2480	19225552		ug/L	Z
Aliph	nC31	42.3270	15640649		ug/L	Z
Aliph	nC32	43.4130	11856860		ug/L	Z
Aliph	nC33	44.6430	8445726		ug/L	Z
Aliph	nC34	46.0860	5672625		ug/L	Z
Aliph	nC35	47.8060	9650888		ug/L	Z
Aliph	nC36	49.8090	3232975		ug/L	Z
Aliph	nC37	52.2960	1771539		ug/L	Z
Aliph	nC38	55.2370	1735515		ug/L	Z
Aliph	nC39	58.8850	2148584		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)

Sample ID : **W13/007554**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 5:01:37 PM

**Type:** Waxy Bitumen

**Family:** Type II waxy bitumen (low botryococcane)

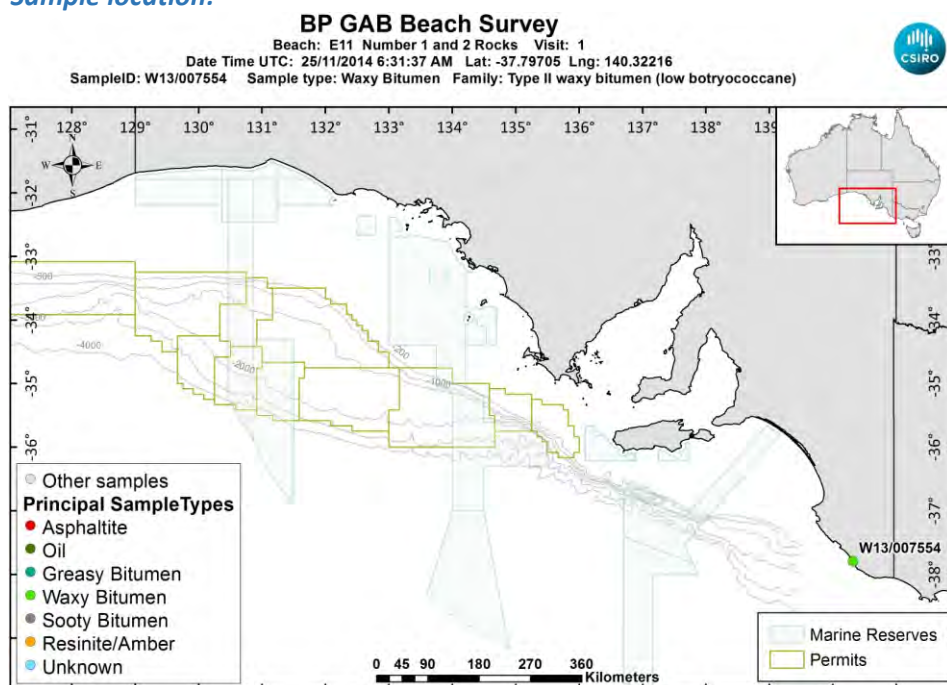
**Size (cm):** 2

**Latitude (Y):** -37.797050

**Weight (gm):** 3.13133

**Longitude (X):** 140.322162

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007554\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007554\\_146A0776.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007554\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007554\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			80.43	percent	Y
Inorg	delta13 Carbon			-26.8401414775768	per mille	Y
Inorg	delta34 Sulphur			-4.6349168549963	per mille	Y
Inorg	Hydrogen			6.82	percent	Y
Inorg	Nitrogen			0.24	percent	Y
Inorg	Sulphur			2.44	percent	Y

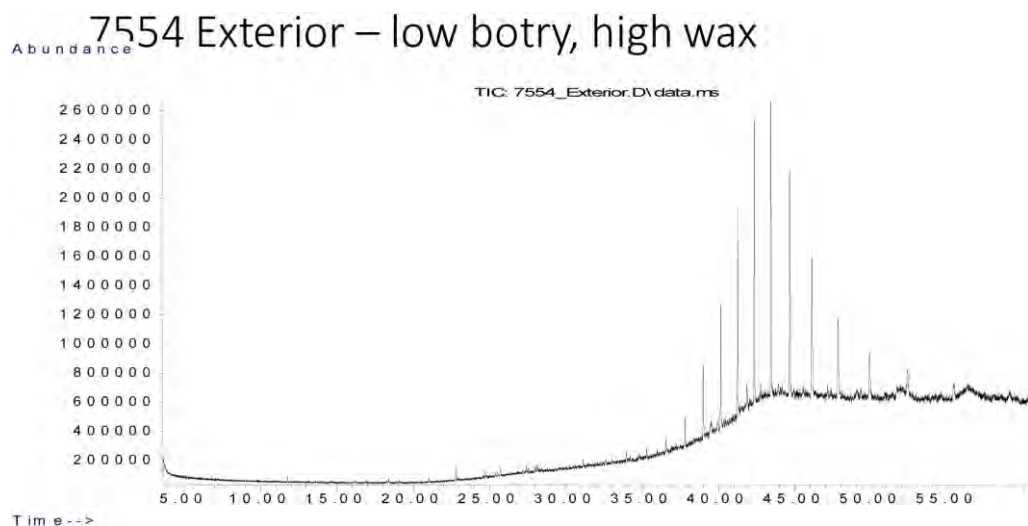
### Results for: GCMS with Full Scan

Unique ID: W13/007554\_DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13 007554 ext WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior



## Results for: GCMS with Full Scan



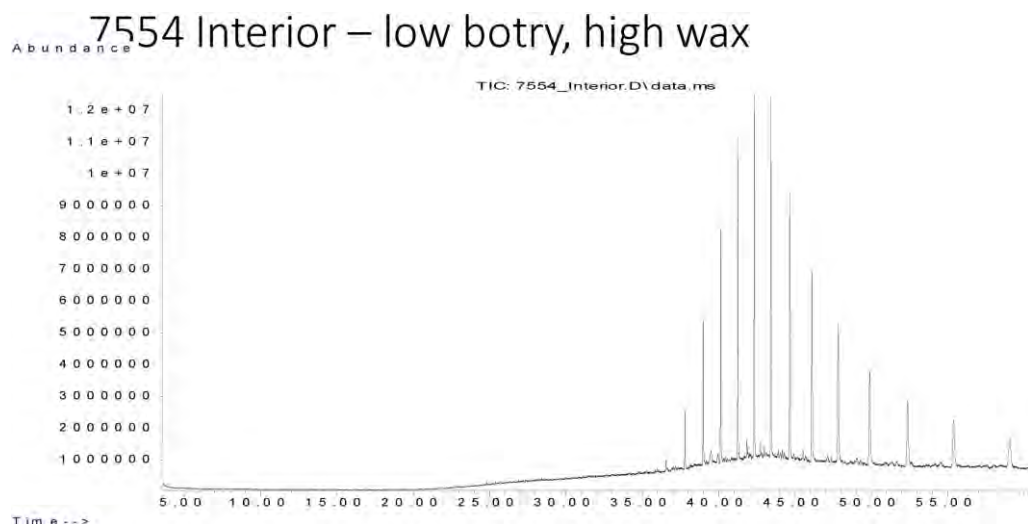
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	689341		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	266615		ug/L	Z
Aliph	nC23	32.5720	159001		ug/L	Z
Aliph	nC24	33.9520	353835		ug/L	Z
Aliph	nC25	35.2810	216184		ug/L	Z
Aliph	nC26	36.5600	591462		ug/L	Z
Aliph	nC27	37.7930	997391		ug/L	Z
Aliph	nC28	38.9870	2688277		ug/L	Z
Aliph	nC29	40.1370	4586853		ug/L	Z
Aliph	nC30	41.2480	7389475		ug/L	Z
Aliph	nC31	42.3270	10429630		ug/L	Z
Aliph	nC32	43.4130	12315823		ug/L	Z
Aliph	nC33	44.6430	10596958		ug/L	Z
Aliph	nC34	46.0860	8225025		ug/L	Z
Aliph	nC35	47.8060	5487772		ug/L	Z
Aliph	nC36	49.8090	4215470		ug/L	Z
Aliph	nC37	52.2960	3270969		ug/L	Z
Aliph	nC38	55.2370	2439878		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007554 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007554\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	2727333		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810			ug/L	U
Aliph	nC26	36.5600	1994635		ug/L	Z
Aliph	nC27	37.7930	9793258		ug/L	Z
Aliph	nC28	38.9870	23651898		ug/L	Z
Aliph	nC29	40.1370	39329735		ug/L	Z
Aliph	nC30	41.2480	51951040		ug/L	Z
Aliph	nC31	42.3270	60578248		ug/L	Z
Aliph	nC32	43.4130	63490591		ug/L	Z
Aliph	nC33	44.6430	56966255		ug/L	Z
Aliph	nC34	46.0860	50325785		ug/L	Z
Aliph	nC35	47.8060	41561141		ug/L	Z
Aliph	nC36	49.8090	35916477		ug/L	Z
Aliph	nC37	52.2960	26734315		ug/L	Z
Aliph	nC38	55.2370	27380803		ug/L	Z
Aliph	nC39	58.8850	23506882		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

## Results for: GCMS with Full Scan

## Qualifier codes:

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
D	Compound quantitated on a diluted sample
E	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
J	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
M	Duplicate injection precision not met
N	Spike sample not within control limits
O	Presumptive evidence of a compound
P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)

Sample ID : **W13/007555**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 5:03:41 PM

**Type:** Resinite/Amber

**Family:** Resin/Amber

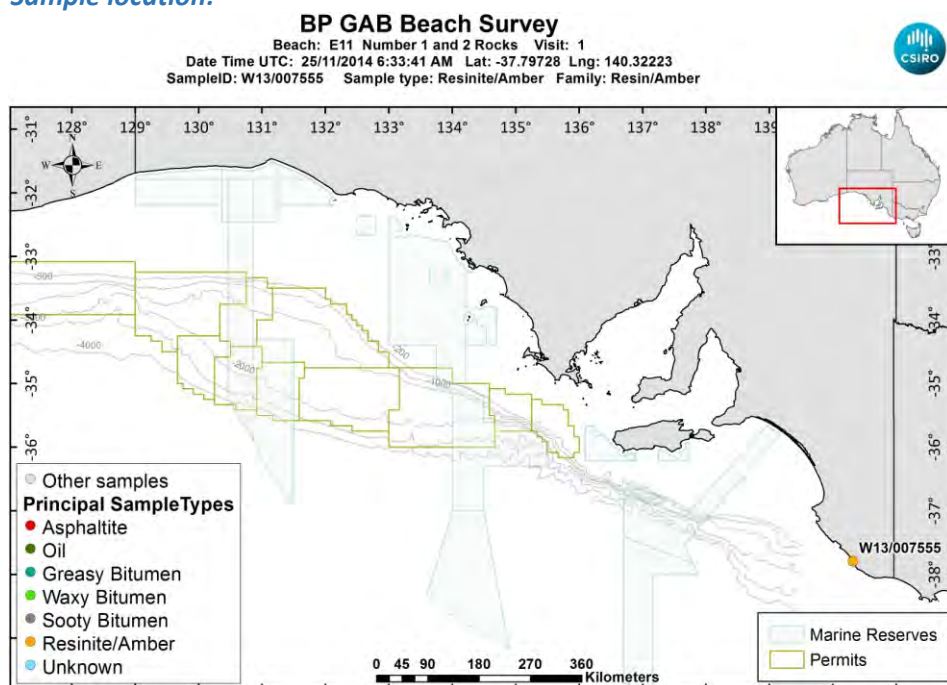
**Size (cm):** 3

**Latitude (Y):** -37.797281

**Weight (gm):** 8.66855

**Longitude (X):** 140.322229

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007555\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007555\\_146A0778.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007555\\_Photo01.JPG](#)

**Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

**Analyses Completed:****Sample Analyses Completed:**

**No results to date**

**Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007556**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 5:05:32 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

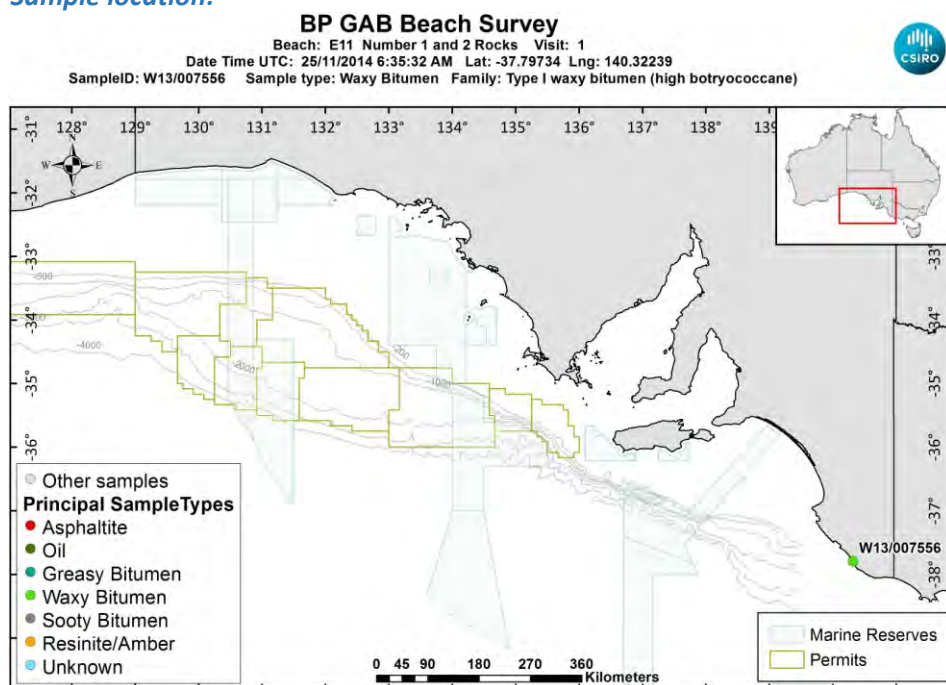
**Size (cm):** 1

**Latitude (Y):** -37.797340

**Weight (gm):** 0.86757

**Longitude (X):** 140.322393

**Sample location:**



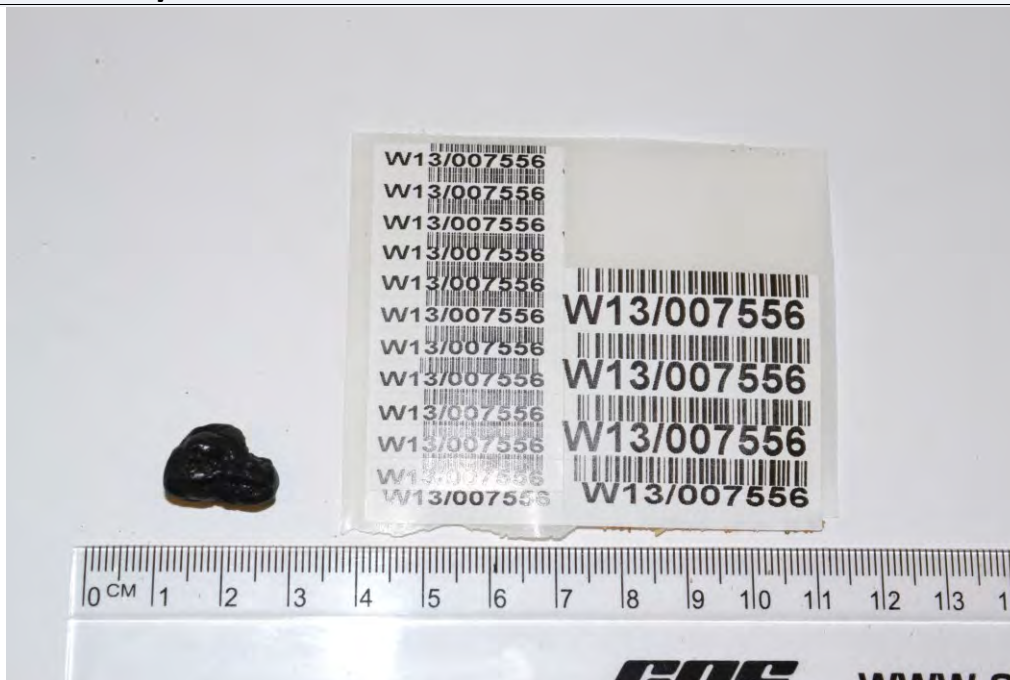
[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007556\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007556\\_146A0780.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007556\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007556\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

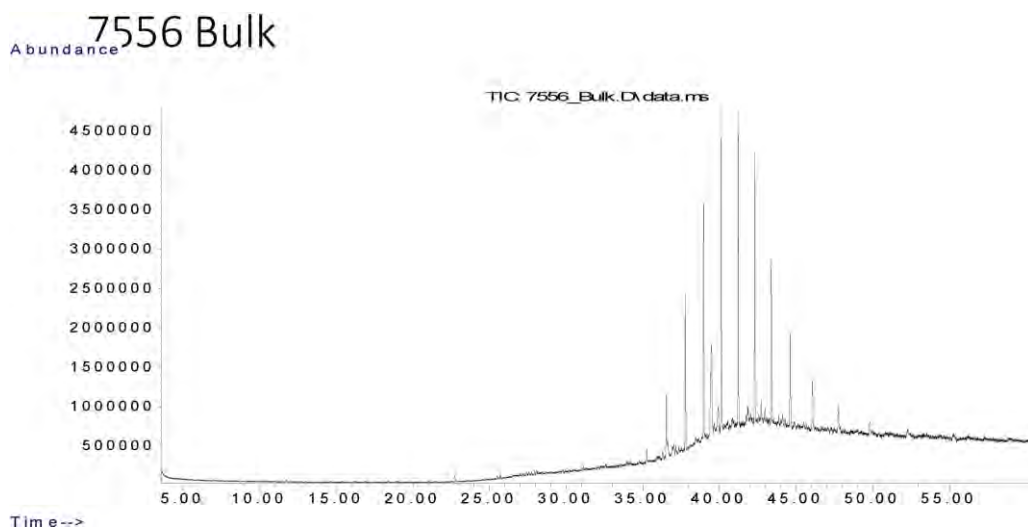
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			84.62	percent	Y
Inorg	delta13 Carbon				per mille	U
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			5.48	percent	Y
Inorg	Nitrogen			0.26	percent	Y
Inorg	Sulphur			0.8	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007556\_DISS\_GCMS-Scan/03

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007556\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	9971979		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810	836634		ug/L	Z
Aliph	nC26	36.5600	5176046		ug/L	Z
Aliph	nC27	37.7930	9781148		ug/L	Z
Aliph	nC28	38.9870	15266031		ug/L	Z
Aliph	nC29	40.1370	19684634		ug/L	Z
Aliph	nC30	41.2480	18299614		ug/L	Z
Aliph	nC31	42.3270	15965710		ug/L	Z
Aliph	nC32	43.4130	11273798		ug/L	Z
Aliph	nC33	44.6430	8054058		ug/L	Z
Aliph	nC34	46.0860	5090539		ug/L	Z
Aliph	nC35	47.8060	3016898		ug/L	Z
Aliph	nC36	49.8090	2278306		ug/L	Z
Aliph	nC37	52.2960	412779		ug/L	Z
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Qualifier codes:**

<b>A</b>	TIC is a possible aldol-condensation product
<b>B</b>	Analyte was also detected in the blank
<b>D</b>	Compound quantitated on a diluted sample
<b>E</b>	Inorganics: Estimated due to interference    Organics: Concentration exceeds the calibration range of the instrument
<b>J</b>	Estimated - Result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ)
<b>M</b>	Duplicate injection precision not met
<b>N</b>	Spike sample not within control limits
<b>O</b>	Presumptive evidence of a compound
<b>P</b>	Concentration difference between primary and confirmation columns $> 25\%$
<b>R</b>	Spike/Surrogate failed recovery limits
<b>S</b>	Method of standard additions (MSA) used for calculation
<b>T</b>	Detected but Quantitated amount exceeded maximum
<b>U</b>	Compound Not Detected
<b>V</b>	overloaded and possibly not a water extract
<b>X</b>	Duplicate analysis not within control limits
<b>Y</b>	Detected
<b>Z</b>	Detected but not Quantified (too small)



Sample ID : **W13/007557A**

Beach E11: Number 1 and 2 Rocks Visit: 1

**Comments:**

3 pieces near each other. Smaller ones are 1cm each. Part A.

**Location:** Upper Intertidal

**Local Date Time:** 25/11/2014 5:07:32 PM

**Type:** Waxy Bitumen

**Family:** Type I waxy bitumen (high botryococcane)

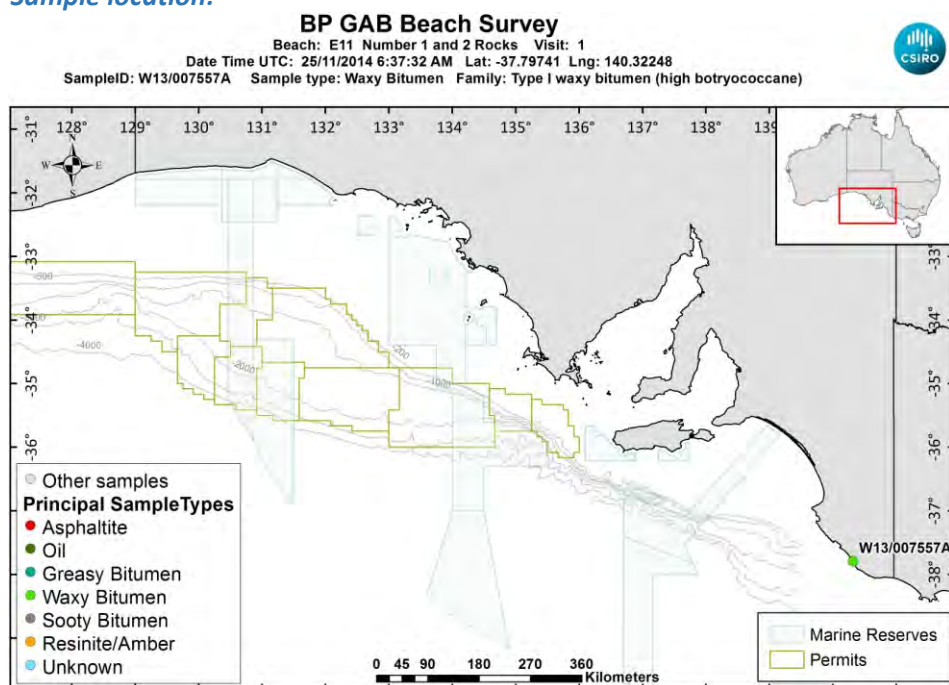
**Size (cm):** 2

**Latitude (Y):** -37.797411

**Weight (gm):** 2.29605

**Longitude (X):** 140.322477

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007557A\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007557\\_146A0783.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007557\\_Photo01.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
3	Elemental CHNS	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007557A\_UNK\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

### Data Sheet:

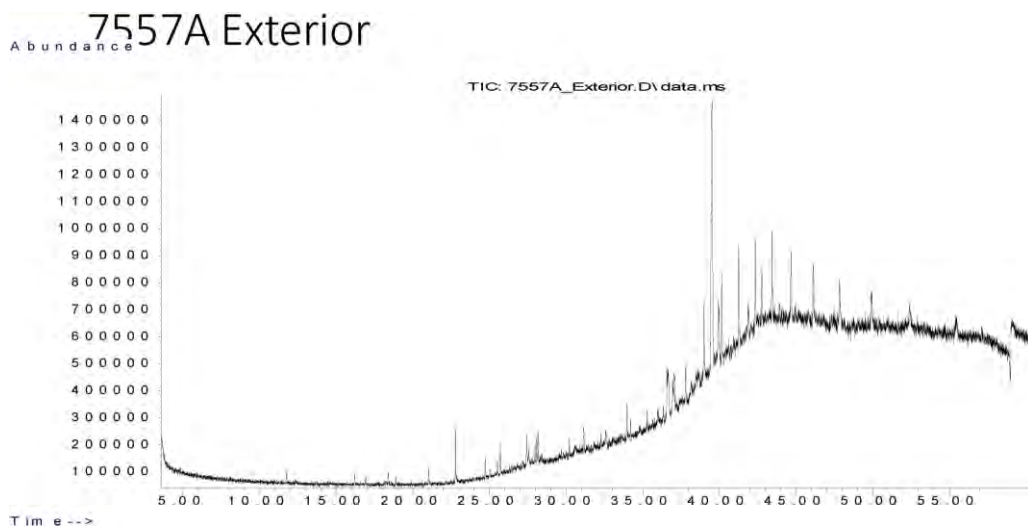
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.5	percent	Y
Inorg	delta13 Carbon			-26.0897061316858	per mille	Y
Inorg	delta34 Sulphur			-1.2998562245055	per mille	Y
Inorg	Hydrogen			8.74	percent	Y
Inorg	Nitrogen			0.23	percent	Y
Inorg	Sulphur			1.39	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007557A DISS\_GCMS-Scan/01

**Results for: GCMS with Full Scan****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007557A\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



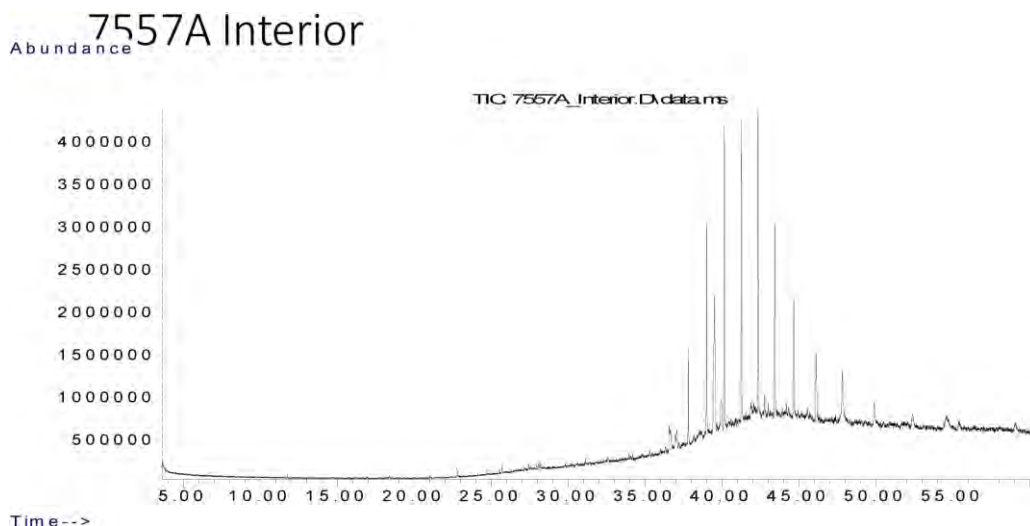
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	10539955		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	492953		ug/L	Z
Aliph	nC23	32.5720	196591		ug/L	Z
Aliph	nC24	33.9520	637564		ug/L	Z
Aliph	nC25	35.2810	365647		ug/L	Z
Aliph	nC26	36.5600	878485		ug/L	Z
Aliph	nC27	37.7930	946492		ug/L	Z
Aliph	nC28	38.9870	1966249		ug/L	Z
Aliph	nC29	40.1370	1770534		ug/L	Z
Aliph	nC30	41.2480	1750810		ug/L	Z
Aliph	nC31	42.3270	1812947		ug/L	Z
Aliph	nC32	43.4130	2096255		ug/L	Z
Aliph	nC33	44.6430	1599991		ug/L	Z
Aliph	nC34	46.0860	1892017		ug/L	Z
Aliph	nC35	47.8060	1613627		ug/L	Z
Aliph	nC36	49.8090	1874695		ug/L	Z
Aliph	nC37	52.2960	2040963		ug/L	Z
Aliph	nC38	55.2370	1791182		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

**Results for: GCMS with Full Scan****Results for: GCMS with Full Scan****Unique ID:** W13/007557A DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007557A\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	15385627		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520			ug/L	U
Aliph	nC25	35.2810			ug/L	U
Aliph	nC26	36.5600	1558054		ug/L	Z
Aliph	nC27	37.7930	5691100		ug/L	Z
Aliph	nC28	38.9870	12849000		ug/L	Z
Aliph	nC29	40.1370	18923330		ug/L	Z
Aliph	nC30	41.2480	19511659		ug/L	Z
Aliph	nC31	42.3270	18188879		ug/L	Z
Aliph	nC32	43.4130	14348885		ug/L	Z
Aliph	nC33	44.6430	10665643		ug/L	Z
Aliph	nC34	46.0860	7478726		ug/L	Z
Aliph	nC35	47.8060	6123280		ug/L	Z
Aliph	nC36	49.8090	4170240		ug/L	Z
Aliph	nC37	52.2960	2846096		ug/L	Z
Aliph	nC38	55.2370	2349320		ug/L	Z
Aliph	nC39	58.8850	2665157		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

## Results for: GCMS with Full Scan

## Qualifier codes:

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P	Concentration difference between primary and confirmation columns $> 25\%$
R	Spike/Surrogate failed recovery limits
S	Method of standard additions (MSA) used for calculation
T	Detected but Quantitated amount exceeded maximum
U	Compound Not Detected
V	overloaded and possibly not a water extract
X	Duplicate analysis not within control limits
Y	Detected
Z	Detected but not Quantified (too small)