

# GREAT AUSTRALIAN BIGHT RESEARCH PROGRAM

## RESEARCH REPORT SERIES

### Asphaltite and tarball surveys

#### APPENDIX 6

#### Sample Analysis Reports

Andrew Ross, Alex Corrick, Christine Trefry, Se Gong, David McKirdy, Tony Hall, Chris Dyt, Zack Angelini, Richard Kempton, April Pickard, Cameron White, Stacey Maslin, David Griffin, John Middleton, John Luick, Stephan Armand, Tania Vergara and Richard Schinteie

GABRP Research Report Series Number 25d

October 2017



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Ross, A., Corrick, A., Trefry, C., Gong, S., McKirdy, D., Hall, T., Dyt, C., Angelini, Z., Kempton, R., Pickard, A., White, C., Maslin, S., Griffin, D., Middleton, J., Luick, J., Armand, S., Vergara, T. and Schinteie, R. (2017). Asphaltite and tarball surveys. Appendix 6: Sample Analysis Reports. Great Australian Bight Research Program, Great Australian Bight Research Report Series Number 25d, 3922pp.

## CONTACT

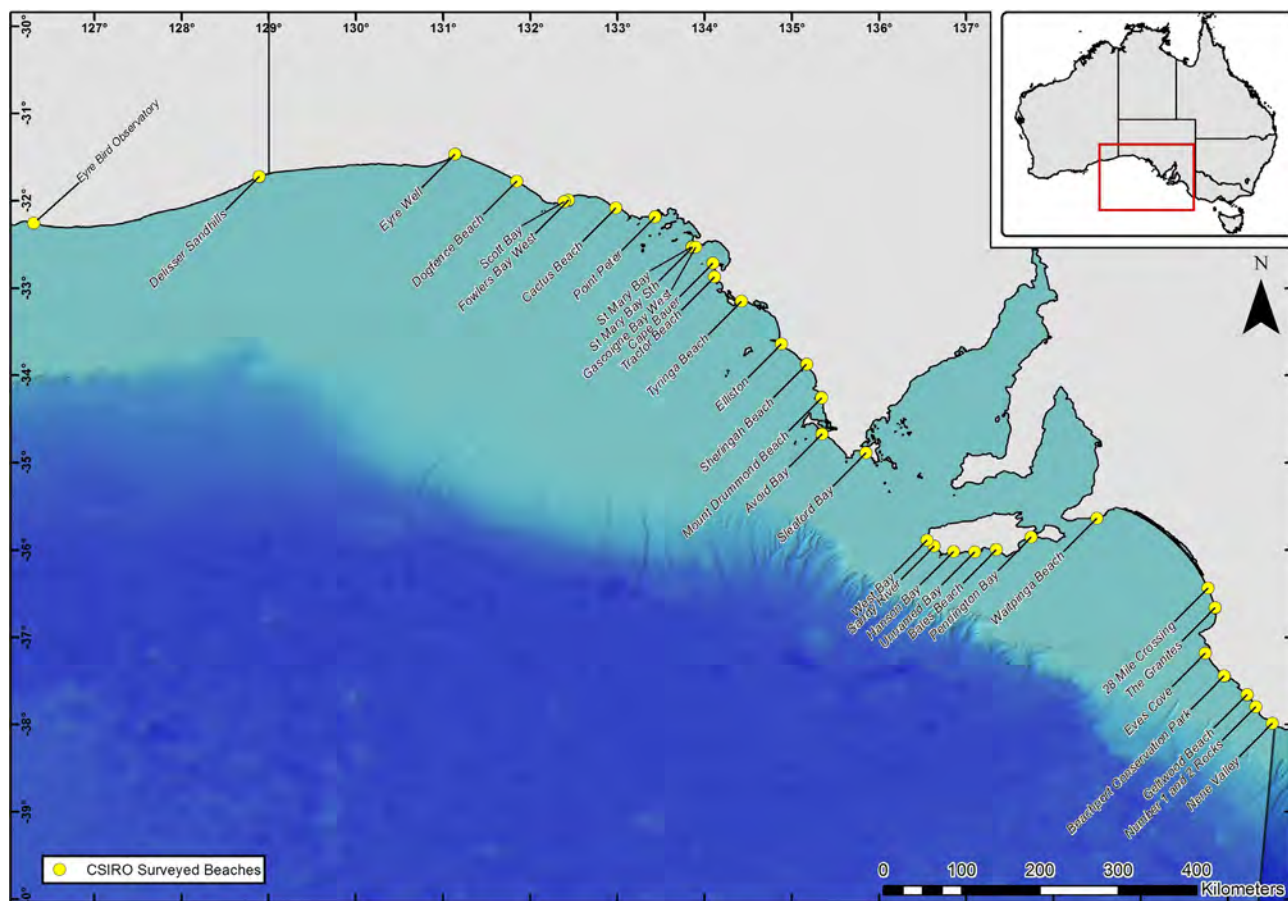
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## FOR FURTHER INFORMATION

[www.misa.net.au/GAB](http://www.misa.net.au/GAB)

## GREAT AUSTRALIAN BIGHT RESEARCH PROGRAM

The Great Australian Bight Research Program is a collaboration between BP, CSIRO, the South Australian Research and Development Institute (SARDI), the University of Adelaide, and Flinders University. The Program aims to provide a whole-of-system understanding of the environmental, economic and social values of the region; providing an information source for all to use.





Sample ID : **W13/007986**

Beach E3c: 28 Mile Crossing Visit: 3

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 20/10/2016 9:59:31 AM

**Type:** Waxy Bitumen

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

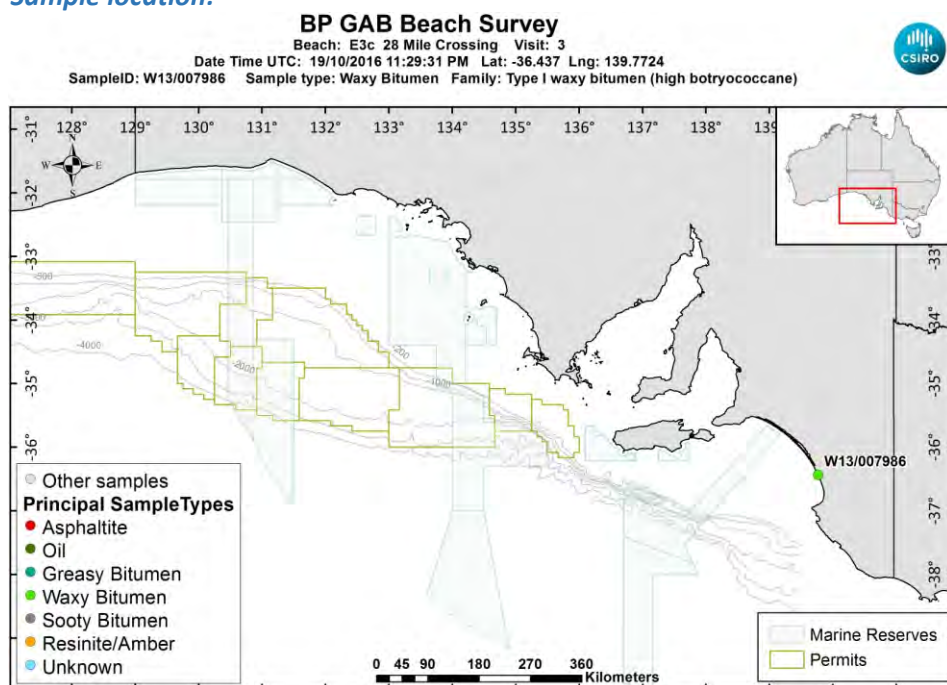
**Size (cm):** 1.8

**Latitude (Y):** -36.437005

**Weight (gm):** 0.93468

**Longitude (X):** 139.772400

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007986\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007986\\_146A6893.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007986\\_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:** W13/007986\_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:**

<b>Sample Volume:</b>	<b>Volume Units:</b>	<b>Extract Volume:</b>	<b>Dilution Factor:</b>
<b>Comment:</b>			

**Data Sheet:**

(default units ppb)

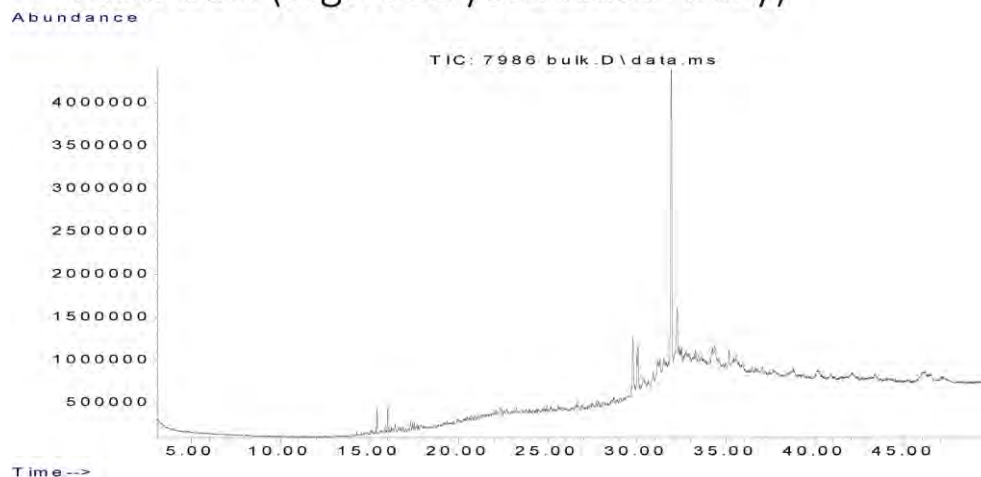
Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			72.3	percent	Y
Inorg	Hydrogen			8.98835705765407	percent	Y
Inorg	Nitrogen			0.33	percent	Y
Inorg	Sulphur			2.02634919973133	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007986 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\\_007986\\_bulk\\_WholeOil.jpg](#)**Preparation:** Dissolved in solvent**Method ID/s:**

<b>Sample Volume:</b>	<b>Volume Units:</b>	<b>Extract Volume:</b>	<b>Dilution Factor:</b>
<b>Comment:</b> Bulk			

## Results for: GCMS with Full Scan

7986 bulk (high botryococcane waxy)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	29248157			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				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910	492411			Z
Aliph	nC31	34.3470	1972372			Z
Aliph	nC32	35.5720	1383865			Z
Aliph	nC33	37.0130	785519			Z
Aliph	nC34	38.7280	667928			Z
Aliph	nC35	40.8080	888505			Z
Aliph	nC36	43.3510	1009325			Z
Aliph	nC37	46.4710	888856			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 : **W13/007987**

Beach E3c: 28 Mile Crossing Visit: 3

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 20/10/2016 10:03:59 AM

**Type:** Waxy Bitumen

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

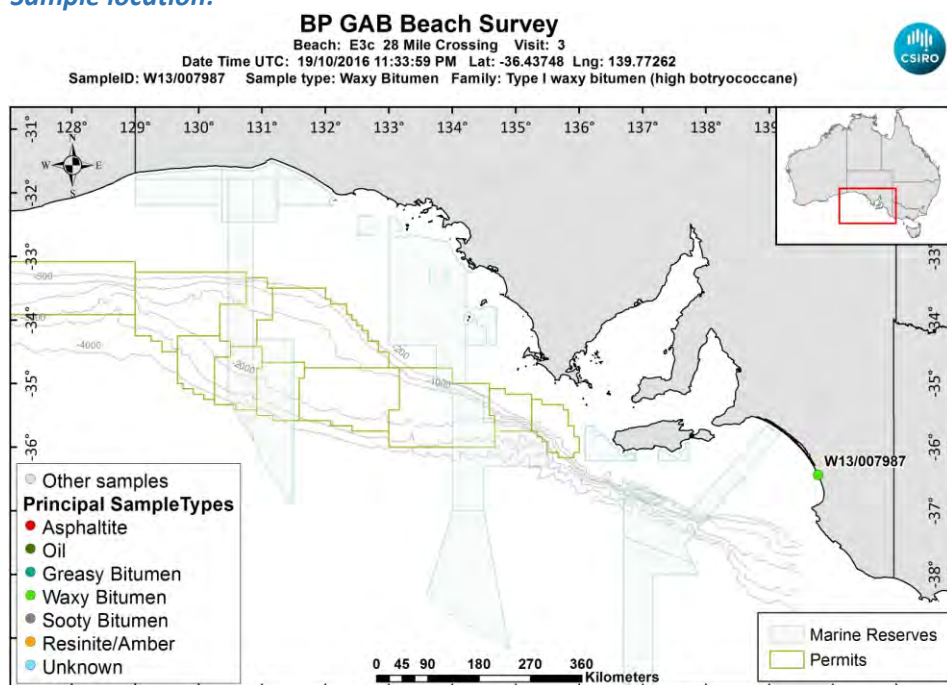
**Size (cm):** 2.3

**Latitude (Y):** -36.437483

**Weight (gm):** 1.4871

**Longitude (X):** 139.772623

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007987\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007987\\_146A6895.JPG](#)

**Sample - laboratory image:**

[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007987\\_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:** W13/007987\_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:**

<b>Sample Volume:</b>	<b>Volume Units:</b>	<b>Extract Volume:</b>	<b>Dilution Factor:</b>
<b>Comment:</b>			

**Data Sheet:**

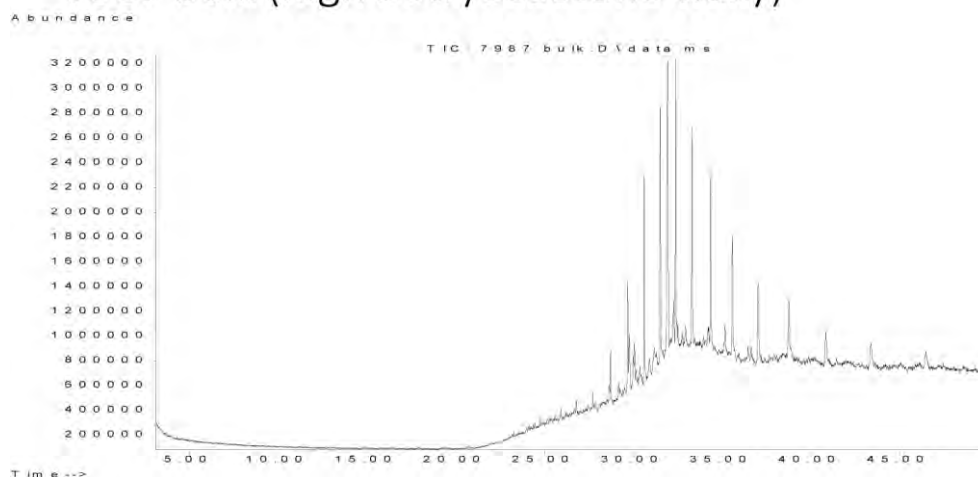
Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			86.38	percent	Y
Inorg	Hydrogen			10.6400864811133	percent	Y
Inorg	Nitrogen			0.16	percent	Y
Inorg	Sulphur			2.53568777283627	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007987 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\\_007987\\_bulk\\_WholeOil.jpg](#)**Preparation:** Dissolved in solvent**Method ID/s:**

<b>Sample Volume:</b>	<b>Volume Units:</b>	<b>Extract Volume:</b>	<b>Dilution Factor:</b>
<b>Comment:</b> Bulk			

## Results for: GCMS with Full Scan

7987 bulk (high botryococcane waxy)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	19328776			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	599134			Z
Aliph	nC25	28.7100	1780239			Z
Aliph	nC26	29.6680	4020778			Z
Aliph	nC27	30.6080	8933312			Z
Aliph	nC28	31.5080	11457196			Z
Aliph	nC29	32.3700	11128216			Z
Aliph	nC30	33.2910	10734252			Z
Aliph	nC31	34.3470	9724715			Z
Aliph	nC32	35.5720	8116596			Z
Aliph	nC33	37.0130	6170991			Z
Aliph	nC34	38.7280	5195848			Z
Aliph	nC35	40.8080	3638786			Z
Aliph	nC36	43.3510	2275030			Z
Aliph	nC37	46.4710	2505685			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 : **W13/007988**

Beach E3c: 28 Mile Crossing Visit: 3

**Comments:**

**Location:** Upper Intertidal

**Local Date Time:** 20/10/2016 11:15:31 AM

**Type:** Waxy Bitumen

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

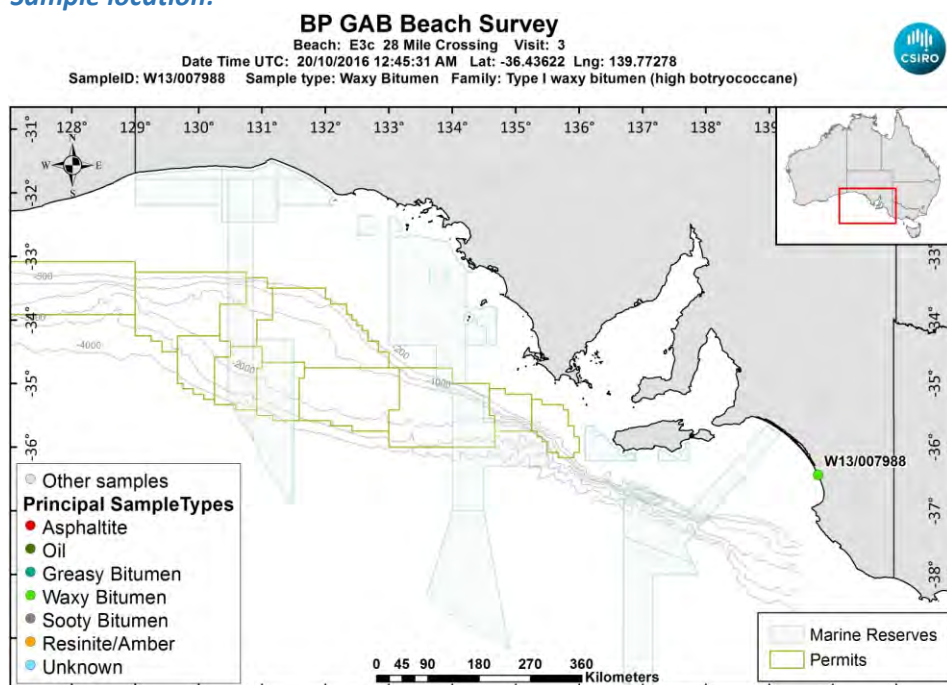
**Size (cm):** 1.5

**Latitude (Y):** -36.436222

**Weight (gm):** 0.50037

**Longitude (X):** 139.772778

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007988\\_Location.jpg](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007988\\_Photo02.JPG](#)

**Sample ID : W13/007988****Beach E3c: 28 Mile Crossing 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:** W13/007988\_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			87.42	percent	Y
<a href="#">Inorg</a>	Hydrogen			7.45303399602386	percent	Y
<a href="#">Inorg</a>	Nitrogen			0.21	percent	Y
<a href="#">Inorg</a>	Sulphur			1.92449284048147	percent	Y

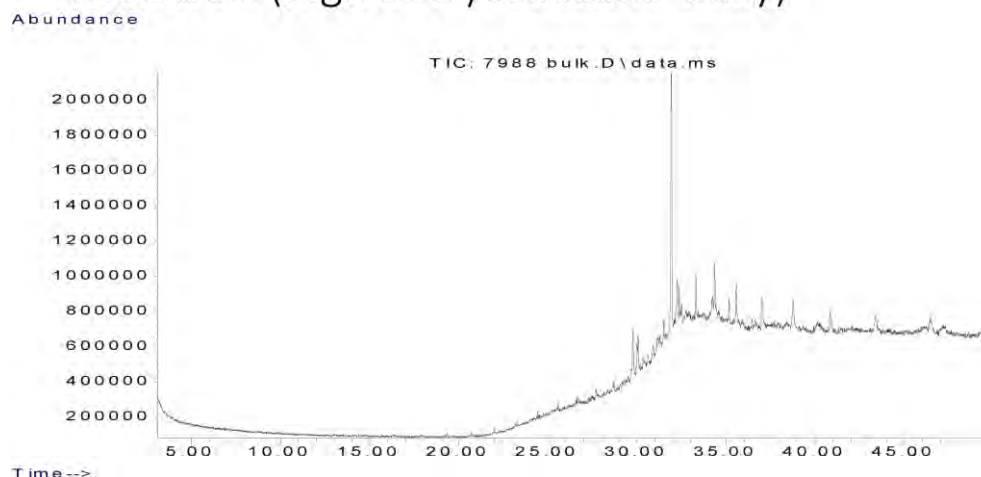
**Results for: GCMS with Full Scan****Unique ID:** W13/007988\_DISS\_GCMS-Scan/03**Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Analysis Date:** 30/10/2017**Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007988\\_bulk\\_WholeOil.jpg](#)**Preparation:** Dissolved in solvent**Method ID/s:**

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



## Results for: GCMS with Full Scan

7988 bulk (high botryococcane waxy)



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	12363802			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	209932			Z
Aliph	nC27	30.6080	321343			Z
Aliph	nC28	31.5080	662403			Z
Aliph	nC29	32.3700	786094			Z
Aliph	nC30	33.2910	1322413			Z
Aliph	nC31	34.3470	1936409			Z
Aliph	nC32	35.5720	1755790			Z
Aliph	nC33	37.0130	1636535			Z
Aliph	nC34	38.7280	1771083			Z
Aliph	nC35	40.8080	1843778			Z
Aliph	nC36	43.3510	1415235			Z
Aliph	nC37	46.4710	1459781			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 : **W13/007673**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:45:13 PM

**Type:** Waxy Bitumen

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

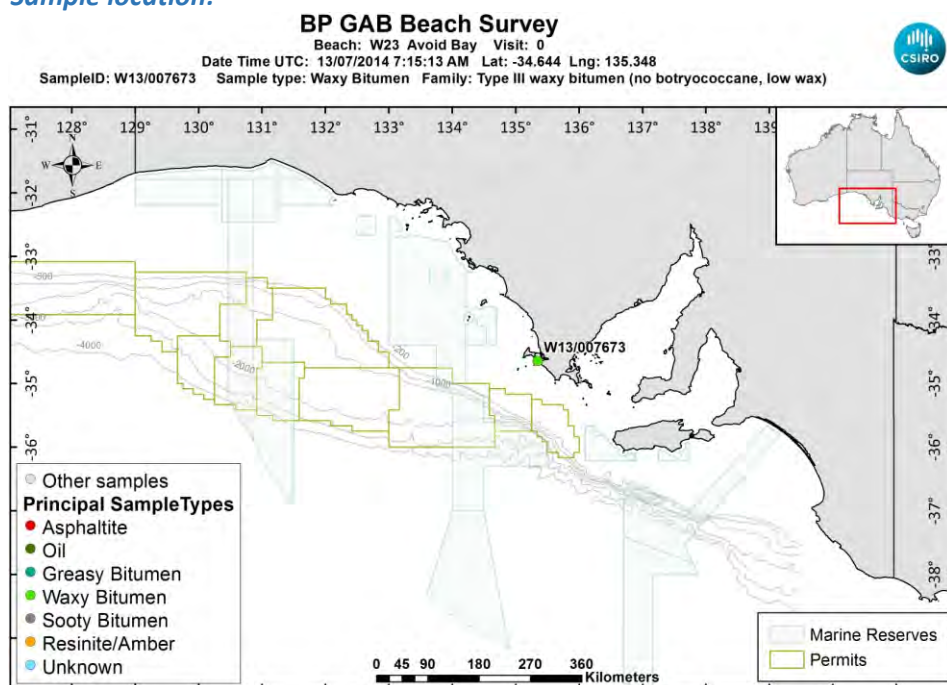
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 8.3

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007673\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007673\\_Photo01.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007673\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007673\_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			86.64	percent	Y
Inorg	Hydrogen			8.69914254473161	percent	Y
Inorg	Nitrogen			0.111292664952871	percent	Y
Inorg	Sulphur			1.66320975483652	percent	Y

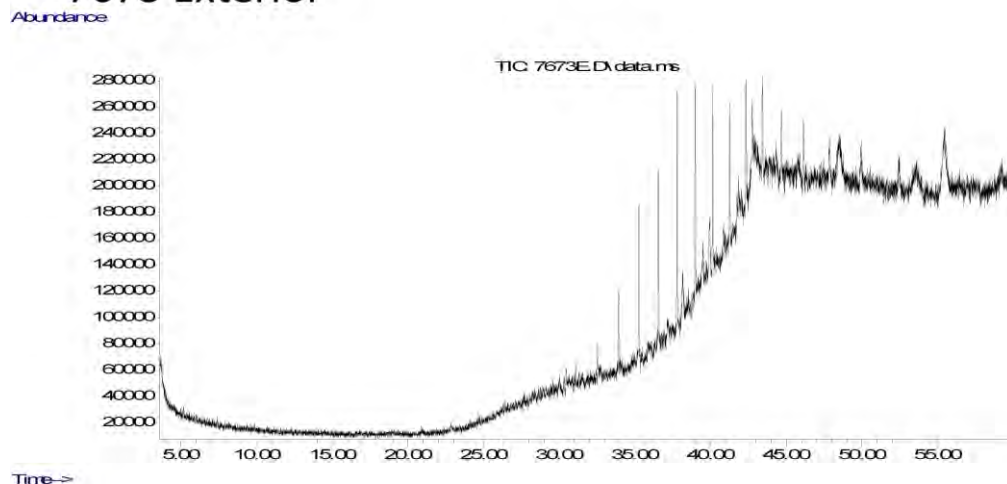
### Results for: GCMS with Full Scan

Unique ID: W13/007673\_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\\_007673\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7673 Exterior



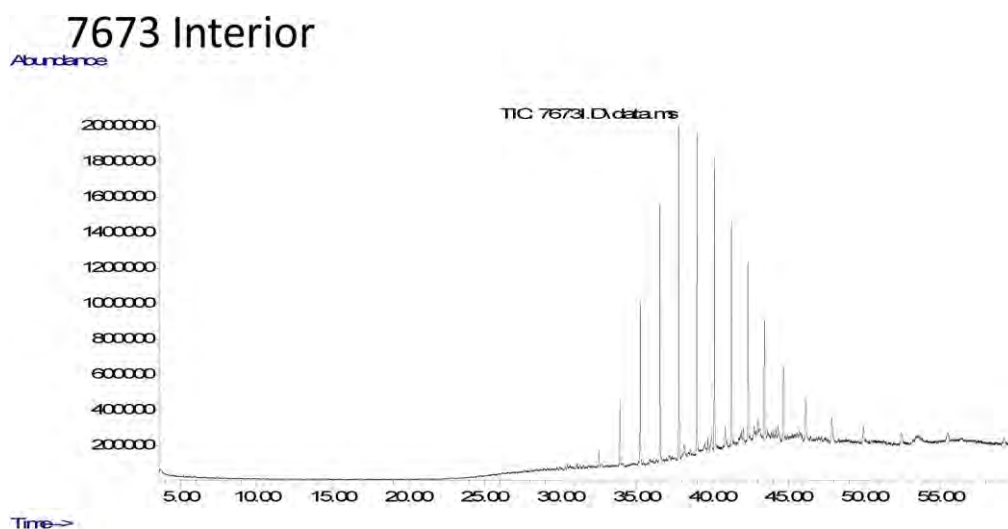
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540	50446		ug/L	Z
Aliph	nC23	32.4960	132228		ug/L	Z
Aliph	nC24	33.8800	293518		ug/L	Z
Aliph	nC25	35.2120	621191		ug/L	Z
Aliph	nC26	36.4960	760261		ug/L	Z
Aliph	nC27	37.7300	844020		ug/L	Z
Aliph	nC28	38.9260	842837		ug/L	Z
Aliph	nC29	40.0740	661877		ug/L	Z
Aliph	nC30	41.1930	516280		ug/L	Z
Aliph	nC31	42.2750	459979		ug/L	Z
Aliph	nC32	43.3560	396989		ug/L	Z
Aliph	nC33	44.5840	315147		ug/L	Z
Aliph	nC34	46.0130	304078		ug/L	Z
Aliph	nC35	47.7140	284621		ug/L	Z
Aliph	nC36	49.7870	332115		ug/L	Z
Aliph	nC37	52.2630	299575		ug/L	Z
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****Results for: GCMS with Full Scan****Unique ID:** W13/007673 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\\_007673\\_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	39.4290			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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540	96702		ug/L	Z
Aliph	nC23	32.4960	488238		ug/L	Z
Aliph	nC24	33.8800	1865404		ug/L	Z
Aliph	nC25	35.2120	4581798		ug/L	Z
Aliph	nC26	36.4960	7353227		ug/L	Z
Aliph	nC27	37.7300	9626593		ug/L	Z
Aliph	nC28	38.9260	9091101		ug/L	Z
Aliph	nC29	40.0740	8458738		ug/L	Z
Aliph	nC30	41.1930	6536621		ug/L	Z
Aliph	nC31	42.2750	5364898		ug/L	Z
Aliph	nC32	43.3560	3773861		ug/L	Z
Aliph	nC33	44.5840	2903134		ug/L	Z
Aliph	nC34	46.0130	1956623		ug/L	Z
Aliph	nC35	47.7140	1388269		ug/L	Z
Aliph	nC36	49.7870	1033265		ug/L	Z
Aliph	nC37	52.2630	999491		ug/L	Z
Aliph	nC38	55.2360	844730		ug/L	Z
Aliph	nC39	58.9110	790176		ug/L	Z
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 : **W13/007674**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

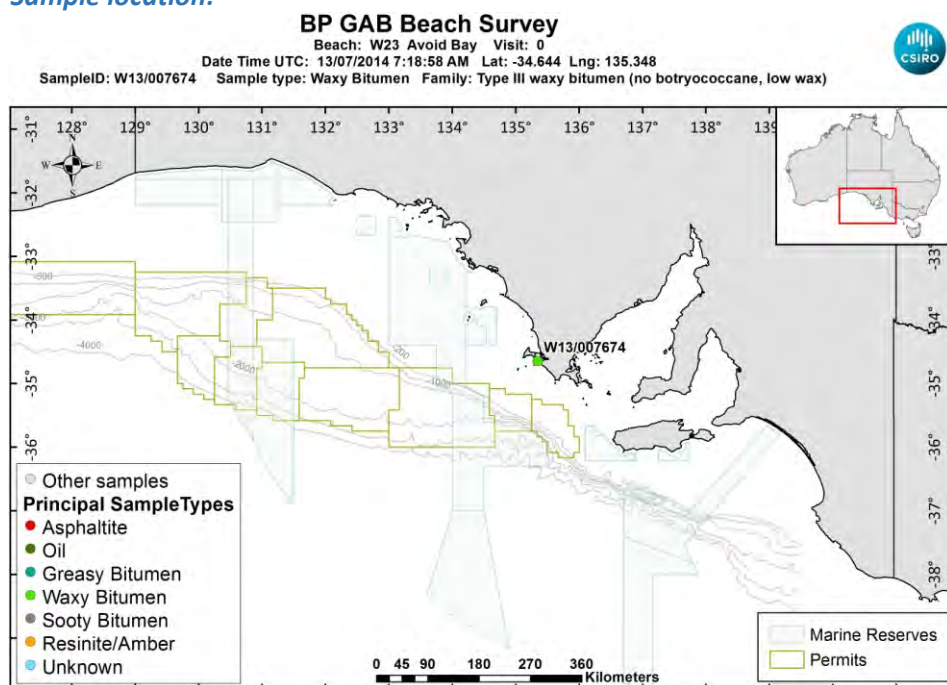
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 10.2

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007674\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007674\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007674\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007674\_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			86.48	percent	Y
Inorg	Hydrogen			9.08867614314115	percent	Y
Inorg	Nitrogen			0.14170087403599	percent	Y
Inorg	Sulphur			1.71844071762738	percent	Y

### Results for: GCMS with Full Scan

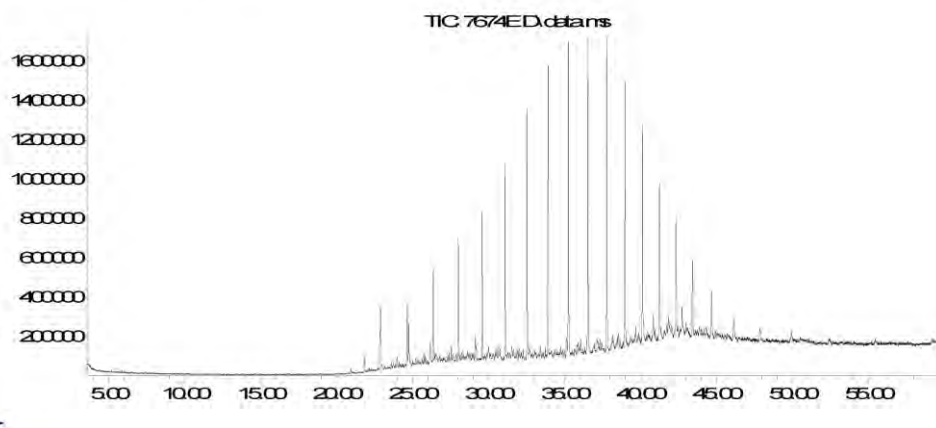
Unique ID: W13/007674\_DISS\_GCMS-Scan/01

**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\\_007674\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7674 Exterior

Abundance



Time--&gt;

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	nC17/nC29			0.140279253058851	ug/L	Y
Ratio	nC17/nC35			1.15399654361759	ug/L	Y
Ratio	nC17/Pristane			0.342573437666948	ug/L	Y
Ratio	nC18/Phytane			1.21567315567943	ug/L	Y
Ratio	Pristane/Phytane			1.6544733913478	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	170257		ug/L	Z
Aliph	nC17	22.8190	824669		ug/L	Z
Aliph	nC18	24.6230	1768818		ug/L	Z
Aliph	nC19	26.3410	2463484		ug/L	Z
Aliph	nC20	27.9810	3181224		ug/L	Z
Aliph	nC21	29.5510	3887708		ug/L	Z
Aliph	nC22	31.0540	5140695		ug/L	Z
Aliph	nC23	32.4960	6451200		ug/L	Z
Aliph	nC24	33.8800	7836171		ug/L	Z
Aliph	nC25	35.2120	8334678		ug/L	Z
Aliph	nC26	36.4960	8325694		ug/L	Z
Aliph	nC27	37.7300	8460896		ug/L	Z
Aliph	nC28	38.9260	6821228		ug/L	Z
Aliph	nC29	40.0740	5878767		ug/L	Z
Aliph	nC30	41.1930	4148632		ug/L	Z
Aliph	nC31	42.2750	3504178		ug/L	Z
Aliph	nC32	43.3560	2470652		ug/L	Z
Aliph	nC33	44.5840	1661247		ug/L	Z
Aliph	nC34	46.0130	1094690		ug/L	Z
Aliph	nC35	47.7140	714620		ug/L	Z
Aliph	nC36	49.7870	582160		ug/L	Z
Aliph	nC37	52.2630	367246		ug/L	Z

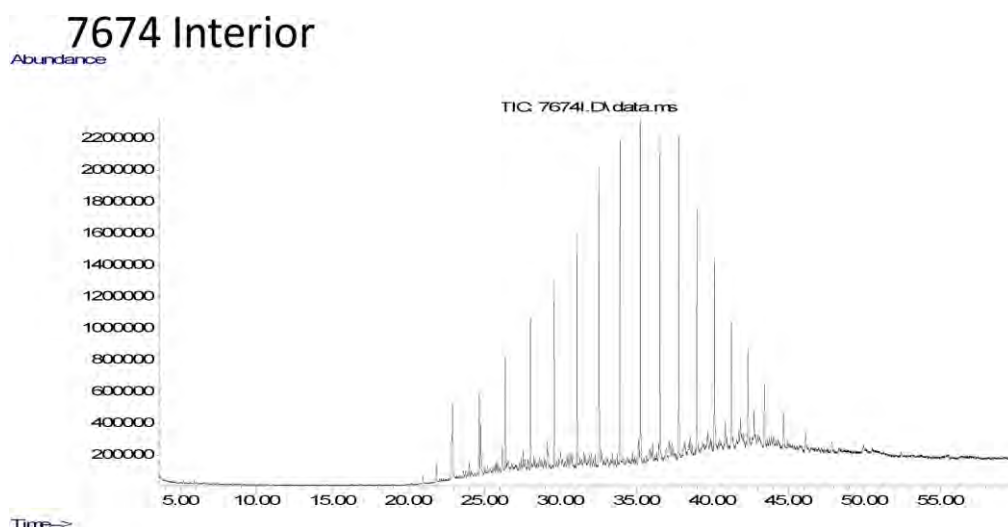


**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360	411548	ug/L	Z
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	699767	ug/L	Z
Aliph	Phytane	24.7190	1455011	ug/L	Z
Aliph	Pristane	22.8660	2407277	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007674 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\\_007674\\_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	nC17/nC29			0.240154421088544	ug/L	Y
Ratio	nC17/nC35			2.28784422546825	ug/L	Y
Ratio	nC17/Pristane			0.405281875896053	ug/L	Y
Ratio	nC18/Phytane			1.28967189667151	ug/L	Y
Ratio	Pristane/Phytane			1.6863178004284	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	267396		ug/L	Z
Aliph	nC17	22.8190	1493139		ug/L	Z
Aliph	nC18	24.6230	2817623		ug/L	Z
Aliph	nC19	26.3410	3781338		ug/L	Z
Aliph	nC20	27.9810	4978581		ug/L	Z
Aliph	nC21	29.5510	5989668		ug/L	Z
Aliph	nC22	31.0540	7375329		ug/L	Z
Aliph	nC23	32.4960	9770293		ug/L	Z
Aliph	nC24	33.8800	10653549		ug/L	Z
Aliph	nC25	35.2120	11235393		ug/L	Z
Aliph	nC26	36.4960	10456192		ug/L	Z
Aliph	nC27	37.7300	10309469		ug/L	Z
Aliph	nC28	38.9260	7783747		ug/L	Z
Aliph	nC29	40.0740	6217412		ug/L	Z
Aliph	nC30	41.1930	4279384		ug/L	Z
Aliph	nC31	42.2750	3508081		ug/L	Z
Aliph	nC32	43.3560	2249588		ug/L	Z
Aliph	nC33	44.5840	1545342		ug/L	Z
Aliph	nC34	46.0130	1113040		ug/L	Z
Aliph	nC35	47.7140	652640		ug/L	Z
Aliph	nC36	49.7870	555333		ug/L	Z
Aliph	nC37	52.2630	320865		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360	322940	ug/L	Z
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	959276	ug/L	Z
Aliph	Phytane	24.7190	2184760	ug/L	Z
Aliph	Pristane	22.8660	3684199	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 : **W13/007675**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

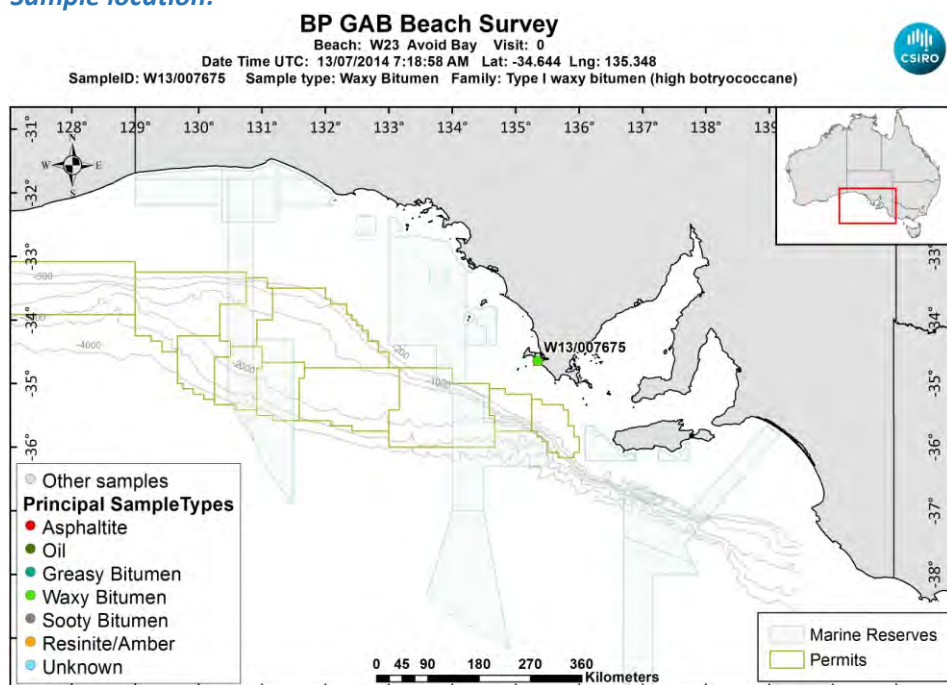
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 9.5

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007675\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007675\\_Photo01.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007675\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007675\_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:

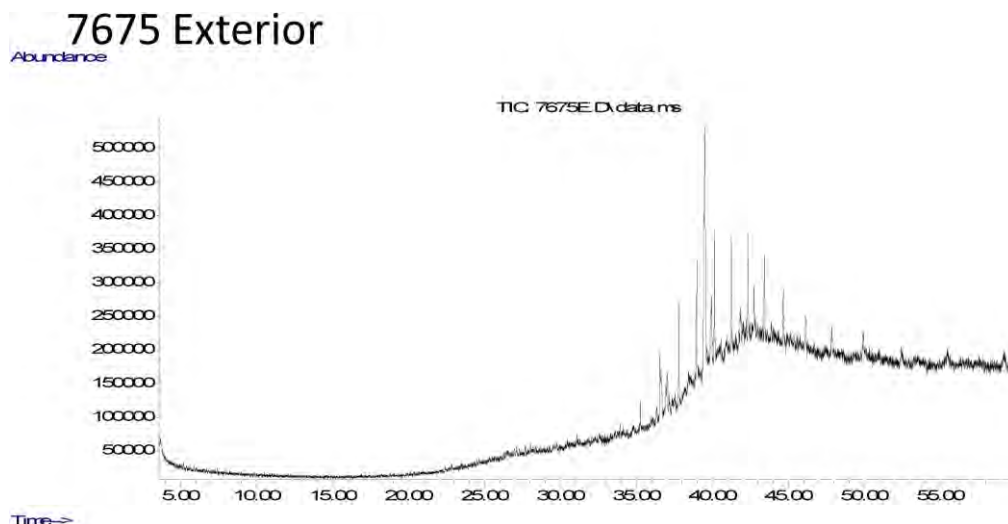
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			87.69	percent	Y
Inorg	Hydrogen			9.45899821073559	percent	Y
Inorg	Nitrogen			0.242988174807198	percent	Y
Inorg	Sulphur			1.84457059954874	percent	Y

### Results for: GCMS with Full Scan

**Unique ID:** W13/007675\_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\\_007675\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

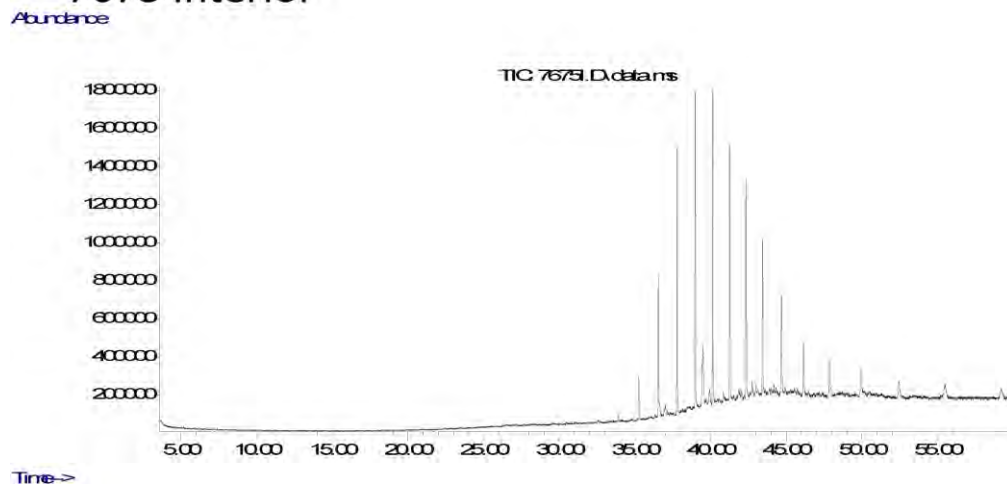
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	3584190		ug/L	Z
Aliph	nC10	0.0000			ug/L	U
Aliph	nC11	0.0000			ug/L	U
Aliph	nC12	12.2580			ug/L	U
Aliph	nC13	14.5950			ug/L	U
Aliph	nC14	16.8180			ug/L	U
Aliph	nC15	18.9260			ug/L	U
Aliph	nC16	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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800	85920		ug/L	Z
Aliph	nC25	35.2120	208027		ug/L	Z
Aliph	nC26	36.4960	512951		ug/L	Z
Aliph	nC27	37.7300	762958		ug/L	Z
Aliph	nC28	38.9260	870828		ug/L	Z
Aliph	nC29	40.0740	1017384		ug/L	Z
Aliph	nC30	41.1930	893942		ug/L	Z
Aliph	nC31	42.2750	872433		ug/L	Z
Aliph	nC32	43.3560	742591		ug/L	Z
Aliph	nC33	44.5840	605144		ug/L	Z
Aliph	nC34	46.0130	522643		ug/L	Z
Aliph	nC35	47.7140	398061		ug/L	Z
Aliph	nC36	49.7870	397897		ug/L	Z
Aliph	nC37	52.2630	341123		ug/L	Z
Aliph	nC38	55.2360	414337		ug/L	Z
Aliph	nC39	58.9110	495130		ug/L	Z
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****Results for: GCMS with Full Scan****Unique ID:** W13/007675 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\\_007675\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior



## Results for: GCMS with Full Scan

7675 Interior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	3070090		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800	196158		ug/L	Z
Aliph	nC25	35.2120	1141417		ug/L	Z
Aliph	nC26	36.4960	3535121		ug/L	Z
Aliph	nC27	37.7300	7267429		ug/L	Z
Aliph	nC28	38.9260	8540014		ug/L	Z
Aliph	nC29	40.0740	8914893		ug/L	Z
Aliph	nC30	41.1930	7524344		ug/L	Z
Aliph	nC31	42.2750	6511148		ug/L	Z
Aliph	nC32	43.3560	4594119		ug/L	Z
Aliph	nC33	44.5840	3639153		ug/L	Z
Aliph	nC34	46.0130	2645373		ug/L	Z
Aliph	nC35	47.7140	1932981		ug/L	Z
Aliph	nC36	49.7870	1459193		ug/L	Z
Aliph	nC37	52.2630	1174901		ug/L	Z
Aliph	nC38	55.2360	1061831		ug/L	Z
Aliph	nC39	58.9110	970925		ug/L	Z
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 : **W13/007676**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

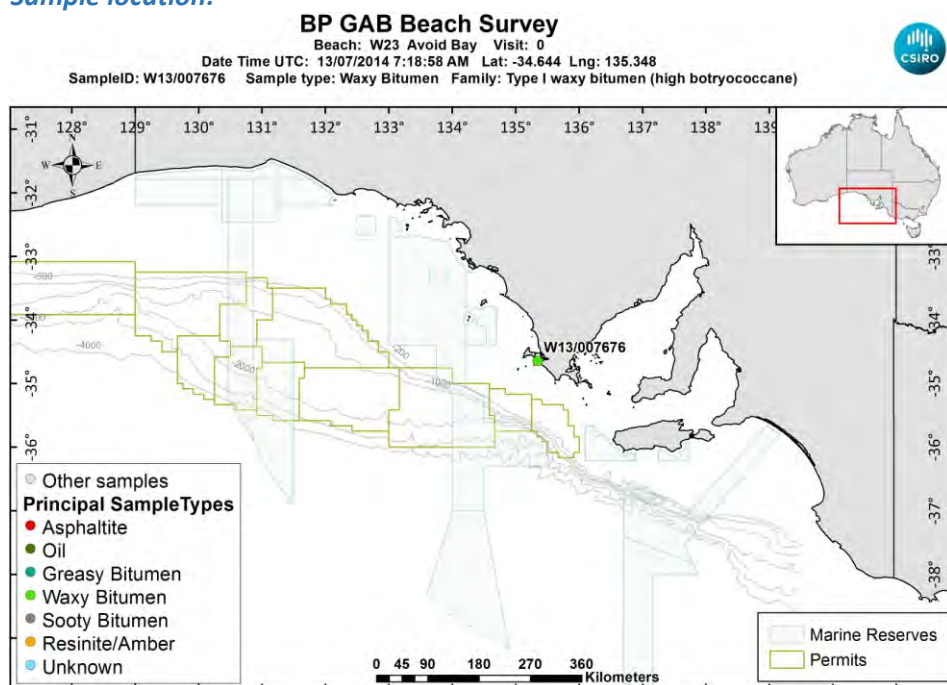
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 34.2

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007676\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007676\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007676\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007676\_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			90.22	percent	Y
Inorg	Hydrogen			12.6765805168986	percent	Y
Inorg	Nitrogen			0.283586015424165	percent	Y
Inorg	Sulphur			2.8404943595228	percent	Y

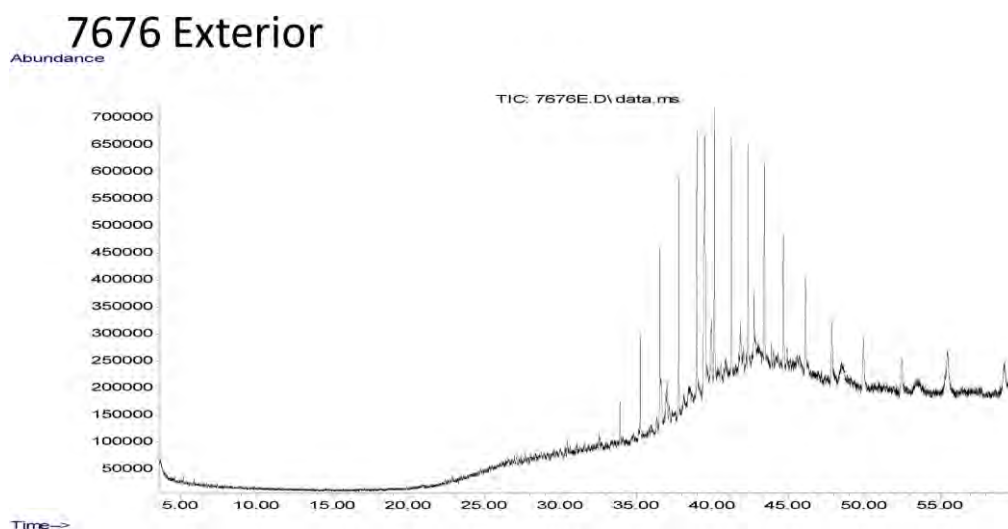
### Results for: GCMS with Full Scan

Unique ID: W13/007676\_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\\_007676\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior



## Results for: GCMS with Full Scan



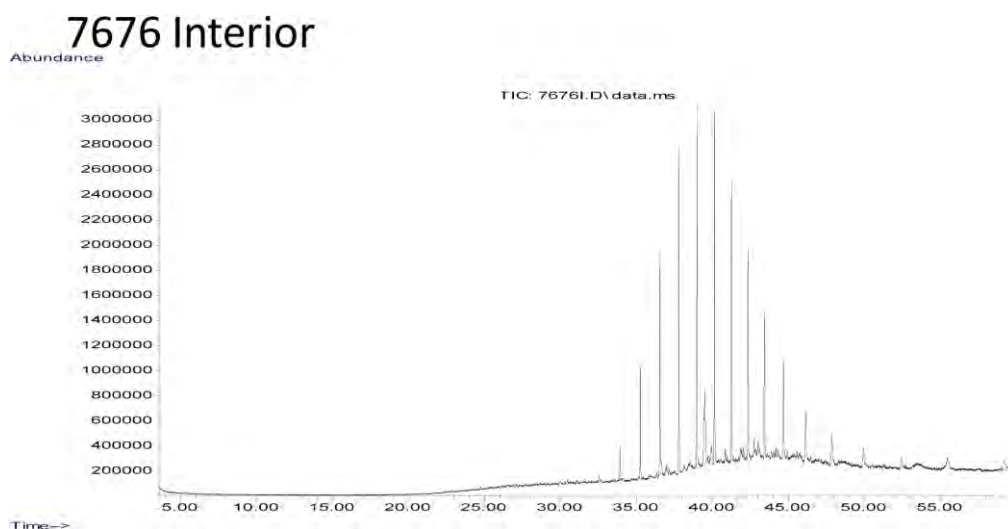
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	4330359		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960	137807		ug/L	Z
Aliph	nC24	33.8800	398119		ug/L	Z
Aliph	nC25	35.2120	938584		ug/L	Z
Aliph	nC26	36.4960	1489572		ug/L	Z
Aliph	nC27	37.7300	2266442		ug/L	Z
Aliph	nC28	38.9260	2530460		ug/L	Z
Aliph	nC29	40.0740	2677535		ug/L	Z
Aliph	nC30	41.1930	2348656		ug/L	Z
Aliph	nC31	42.2750	2143470		ug/L	Z
Aliph	nC32	43.3560	2013908		ug/L	Z
Aliph	nC33	44.5840	1654718		ug/L	Z
Aliph	nC34	46.0130	1358350		ug/L	Z
Aliph	nC35	47.7140	1149009		ug/L	Z
Aliph	nC36	49.7870	948762		ug/L	Z
Aliph	nC37	52.2630	836647		ug/L	Z
Aliph	nC38	55.2360	1778586		ug/L	Z
Aliph	nC39	58.9110	1000452		ug/L	Z
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****Results for: GCMS with Full Scan****Unique ID:** W13/007676 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\\_007676\\_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:
Ratio	Pristane/Phytane			1.10443990155952	ug/L	Y
Aliph	Botryococcane	39.4290	5801613		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			ug/L	U
Aliph	nC22	31.0540	87289		ug/L	Z
Aliph	nC23	32.4960	280153		ug/L	Z
Aliph	nC24	33.8800	1408559		ug/L	Z
Aliph	nC25	35.2120	4444949		ug/L	Z
Aliph	nC26	36.4960	9172482		ug/L	Z
Aliph	nC27	37.7300	13759746		ug/L	Z
Aliph	nC28	38.9260	14430137		ug/L	Z
Aliph	nC29	40.0740	14214629		ug/L	Z
Aliph	nC30	41.1930	11520385		ug/L	Z
Aliph	nC31	42.2750	9438548		ug/L	Z
Aliph	nC32	43.3560	6860720		ug/L	Z
Aliph	nC33	44.5840	5293975		ug/L	Z
Aliph	nC34	46.0130	3553743		ug/L	Z
Aliph	nC35	47.7140	2529896		ug/L	Z
Aliph	nC36	49.7870	1765460		ug/L	Z
Aliph	nC37	52.2630	1340484		ug/L	Z
Aliph	nC38	55.2360	1456849		ug/L	Z
Aliph	nC39	58.9110	1291324		ug/L	Z
Aliph	Norpristane	21.8010			ug/L	U
Aliph	Phytane	24.7190	125794		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	138932	ug/L	Z
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## 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 : **W13/007677**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

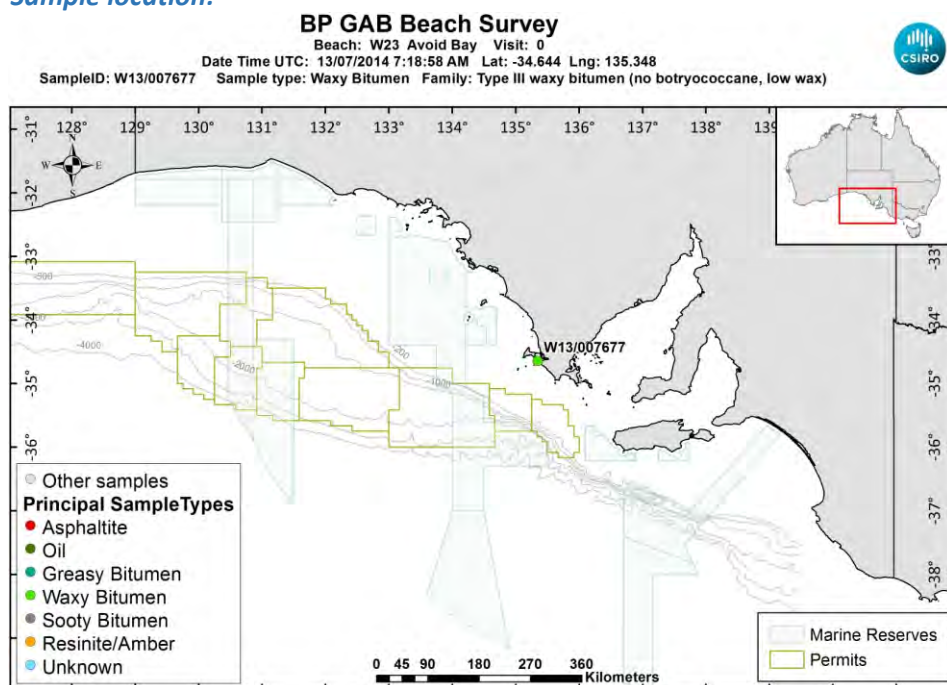
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 26

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007677\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007677\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007677\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007677\_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			85.32	percent	Y
Inorg	Hydrogen			12.4440928429423	percent	Y
Inorg	Nitrogen			0.131674738646101	percent	Y
Inorg	Sulphur			2.71837760220742	percent	Y

### Results for: GCMS with Full Scan

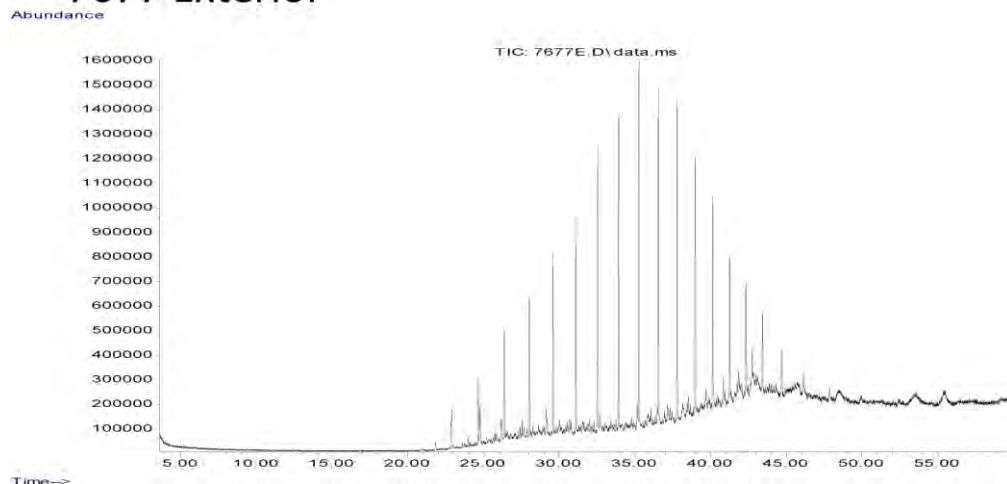
**Unique ID:** W13/007677\_DISS\_GCMS-Scan/01



**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\\_007677\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7677 Exterior



## Data Sheet:

(default units ppb)

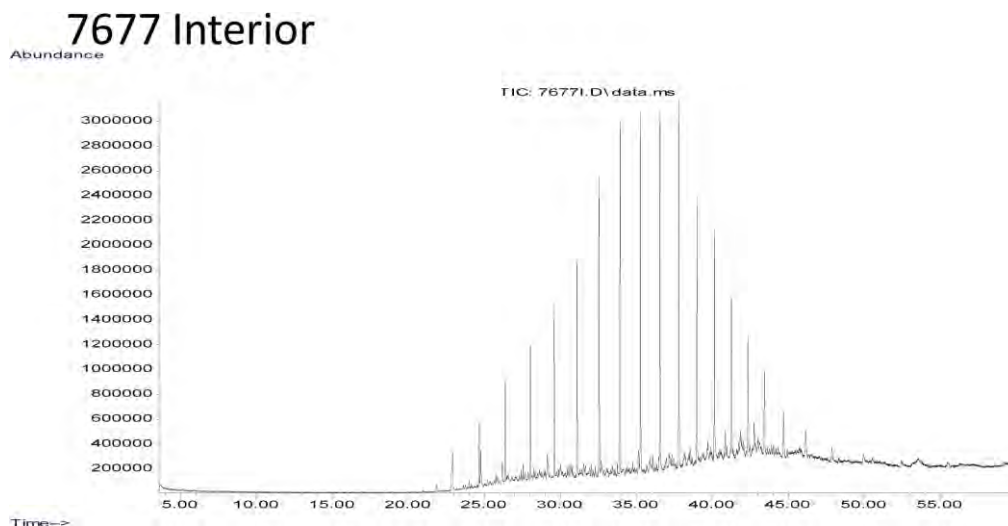
Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29		0.117356833753445		ug/L	Y
Ratio	nC17/nC35		1.04613826859601		ug/L	Y
Ratio	nC17/Pristane		0.435983155416766		ug/L	Y
Ratio	nC18/Phytane		1.32766918298605		ug/L	Y
Ratio	Pristane/Phytane		1.13238568742499		ug/L	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	88580		ug/L	Z
Aliph	nC17	22.8190	516022		ug/L	Z
Aliph	nC18	24.6230	1387695		ug/L	Z
Aliph	nC19	26.3410	2260132		ug/L	Z
Aliph	nC20	27.9810	2945402		ug/L	Z
Aliph	nC21	29.5510	3789477		ug/L	Z
Aliph	nC22	31.0540	4792810		ug/L	Z
Aliph	nC23	32.4960	6059161		ug/L	Z
Aliph	nC24	33.8800	6549442		ug/L	Z
Aliph	nC25	35.2120	7387937		ug/L	Z
Aliph	nC26	36.4960	6938630		ug/L	Z
Aliph	nC27	37.7300	6723409		ug/L	Z
Aliph	nC28	38.9260	5387982		ug/L	Z
Aliph	nC29	40.0740	4397036		ug/L	Z
Aliph	nC30	41.1930	3206785		ug/L	Z
Aliph	nC31	42.2750	2553783		ug/L	Z
Aliph	nC32	43.3560	1817460		ug/L	Z
Aliph	nC33	44.5840	1231059		ug/L	Z
Aliph	nC34	46.0130	839444		ug/L	Z
Aliph	nC35	47.7140	493264		ug/L	Z
Aliph	nC36	49.7870	470555		ug/L	Z
Aliph	nC37	52.2630	304455		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360		ug/L	U
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	231528	ug/L	Z
Aliph	Phytane	24.7190	1045212	ug/L	Z
Aliph	Pristane	22.8660	1183583	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007677 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\\_007677\\_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:
Ratio	nC17/nC29		0.089389166464393		ug/L	Y
Ratio	nC17/nC35		0.814830105442732		ug/L	Y
Ratio	nC17/Pristane		0.384134073771545		ug/L	Y
Ratio	nC18/Phytane		1.35172094560215		ug/L	Y
Ratio	Pristane/Phytane		1.118596464195		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	111095		ug/L	Z
Aliph	nC17	22.8190	856323		ug/L	Z
Aliph	nC18	24.6230	2693819		ug/L	Z
Aliph	nC19	26.3410	4296774		ug/L	Z
Aliph	nC20	27.9810	5696553		ug/L	Z
Aliph	nC21	29.5510	7315578		ug/L	Z
Aliph	nC22	31.0540	9251371		ug/L	Z
Aliph	nC23	32.4960	12076893		ug/L	Z
Aliph	nC24	33.8800	13823490		ug/L	Z
Aliph	nC25	35.2120	15003626		ug/L	Z
Aliph	nC26	36.4960	14833374		ug/L	Z
Aliph	nC27	37.7300	14722244		ug/L	Z
Aliph	nC28	38.9260	11358519		ug/L	Z
Aliph	nC29	40.0740	9579718		ug/L	Z
Aliph	nC30	41.1930	6766772		ug/L	Z
Aliph	nC31	42.2750	5373998		ug/L	Z
Aliph	nC32	43.3560	3894474		ug/L	Z
Aliph	nC33	44.5840	2684464		ug/L	Z
Aliph	nC34	46.0130	1656409		ug/L	Z
Aliph	nC35	47.7140	1050922		ug/L	Z
Aliph	nC36	49.7870	794831		ug/L	Z
Aliph	nC37	52.2630	592951		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	nC38	55.2360	479003	ug/L	Z
Aliph	nC39	58.9110	636421	ug/L	Z
Aliph	Norpristane	21.8010	486939	ug/L	Z
Aliph	Phytane	24.7190	1992881	ug/L	Z
Aliph	Pristane	22.8660	2229229	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 : **W13/007678**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

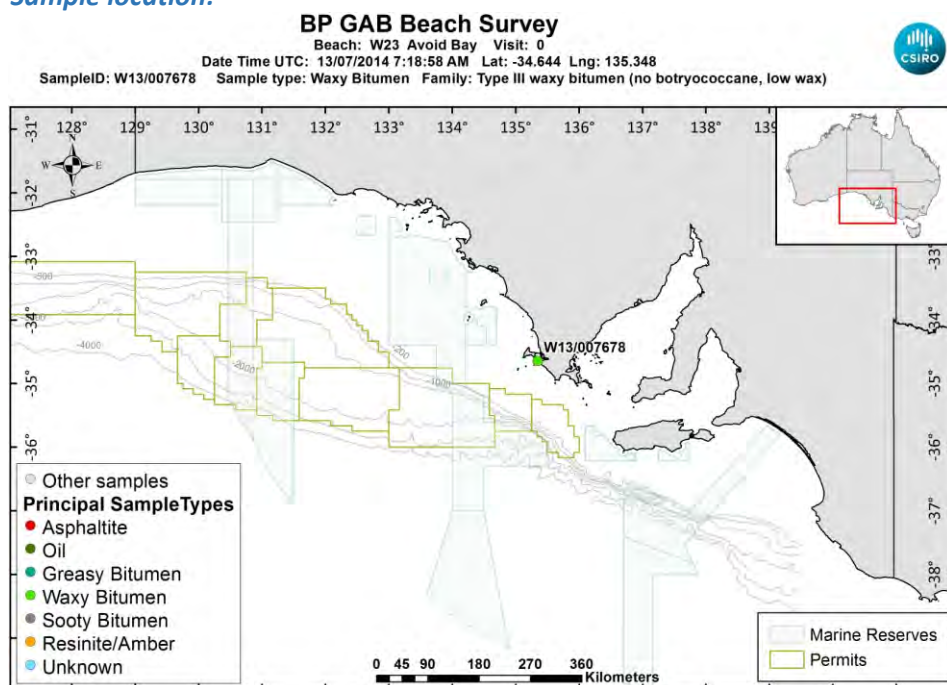
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 12

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007678\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007678\\_Photo01.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007678\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007678\_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			86.58	percent	Y
Inorg	Hydrogen			12.9199681908549	percent	Y
Inorg	Nitrogen			0.131677412167952	percent	Y
Inorg	Sulphur			2.75727093731685	percent	Y

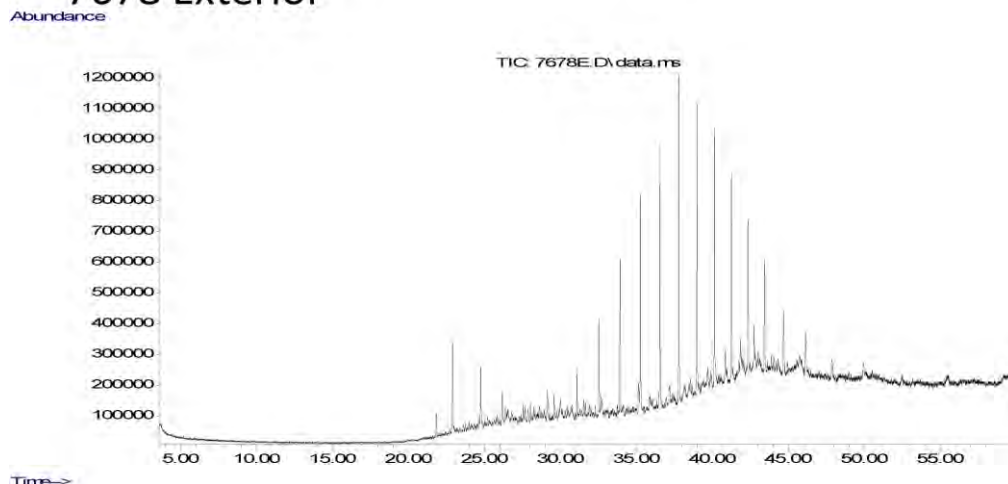
### Results for: GCMS with Full Scan

**Unique ID:** W13/007678\_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\\_007678\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7678 Exterior



## Data Sheet:

(default units ppb)

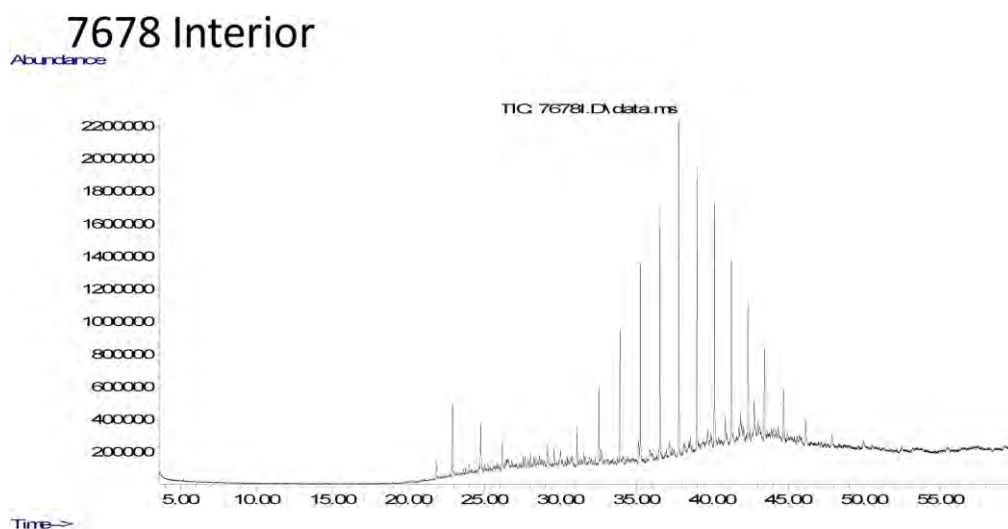
Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC18/Phytane			0.120820866136032	ug/L	Y
Ratio	Pristane/Phytane			1.51965812900138	ug/L	Y
Aliph	Botryococcane	39.4290			ug/L	U
Aliph	nC10	0.0000			ug/L	U
Aliph	nC11	0.0000			ug/L	U
Aliph	nC12	12.2580			ug/L	U
Aliph	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	181923		ug/L	Z
Aliph	nC19	26.3410	201081		ug/L	Z
Aliph	nC20	27.9810	255477		ug/L	Z
Aliph	nC21	29.5510	398434		ug/L	Z
Aliph	nC22	31.0540	826894		ug/L	Z
Aliph	nC23	32.4960	1656268		ug/L	Z
Aliph	nC24	33.8800	2679288		ug/L	Z
Aliph	nC25	35.2120	3559291		ug/L	Z
Aliph	nC26	36.4960	4508733		ug/L	Z
Aliph	nC27	37.7300	5495652		ug/L	Z
Aliph	nC28	38.9260	4947286		ug/L	Z
Aliph	nC29	40.0740	4395127		ug/L	Z
Aliph	nC30	41.1930	3355216		ug/L	Z
Aliph	nC31	42.2750	2807443		ug/L	Z
Aliph	nC32	43.3560	2130484		ug/L	Z
Aliph	nC33	44.5840	1755976		ug/L	Z
Aliph	nC34	46.0130	1123609		ug/L	Z
Aliph	nC35	47.7140	672914		ug/L	Z
Aliph	nC36	49.7870	590789		ug/L	Z
Aliph	nC37	52.2630	442329		ug/L	Z
Aliph	nC38	55.2360	548076		ug/L	Z
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010	656196		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	Phytane	24.7190	1505725	ug/L	Z
Aliph	Pristane	22.8660	2288187	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007678 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\\_007678\\_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			0.115011024467537	ug/L	Y
Ratio	Pristane/Phytane			1.57920051897467	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	242358		ug/L	Z
Aliph	nC19	26.3410	250495		ug/L	Z
Aliph	nC20	27.9810	391959		ug/L	Z
Aliph	nC21	29.5510	569973		ug/L	Z
Aliph	nC22	31.0540	1248032		ug/L	Z
Aliph	nC23	32.4960	2448723		ug/L	Z
Aliph	nC24	33.8800	4058573		ug/L	Z
Aliph	nC25	35.2120	6209396		ug/L	Z
Aliph	nC26	36.4960	8311420		ug/L	Z
Aliph	nC27	37.7300	10006737		ug/L	Z
Aliph	nC28	38.9260	8876301		ug/L	Z
Aliph	nC29	40.0740	7968675		ug/L	Z
Aliph	nC30	41.1930	5961502		ug/L	Z
Aliph	nC31	42.2750	4603866		ug/L	Z
Aliph	nC32	43.3560	3238748		ug/L	Z
Aliph	nC33	44.5840	2266638		ug/L	Z
Aliph	nC34	46.0130	1387836		ug/L	Z
Aliph	nC35	47.7140	834472		ug/L	Z
Aliph	nC36	49.7870	653308		ug/L	Z
Aliph	nC37	52.2630	421141		ug/L	Z
Aliph	nC38	55.2360	425602		ug/L	Z
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010	883023		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Phytane	24.7190	2107263	ug/L	Z
Aliph	Pristane	22.8660	3327790	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 : **W13/007679**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

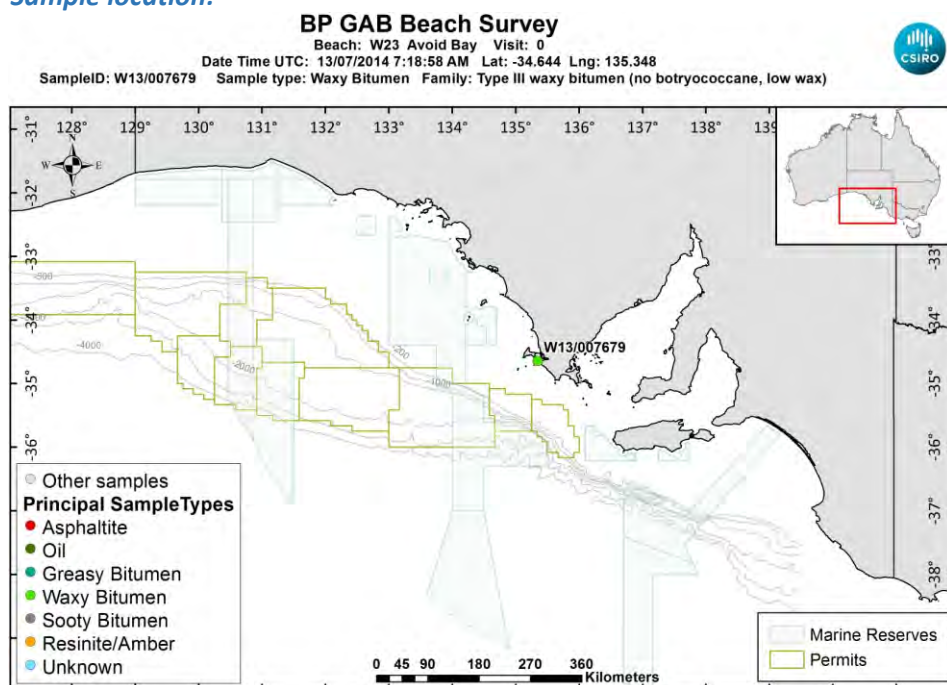
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 24.2

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007679\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007679\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007679\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007679\_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			85.52	percent	Y
Inorg	Hydrogen			12.6765894632207	percent	Y
Inorg	Nitrogen			0.141803084832905	percent	Y
Inorg	Sulphur			2.76222373545901	percent	Y

### Results for: GCMS with Full Scan

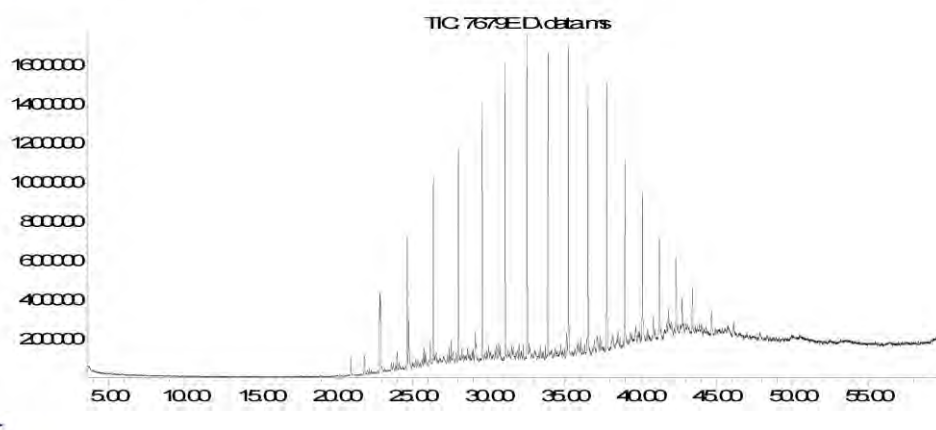
Unique ID: W13/007679\_DISS\_GCMS-Scan/01

**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\\_007679\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7679 Exterior

Abundance



Time--&gt;

## Data Sheet:

(default units ppb)

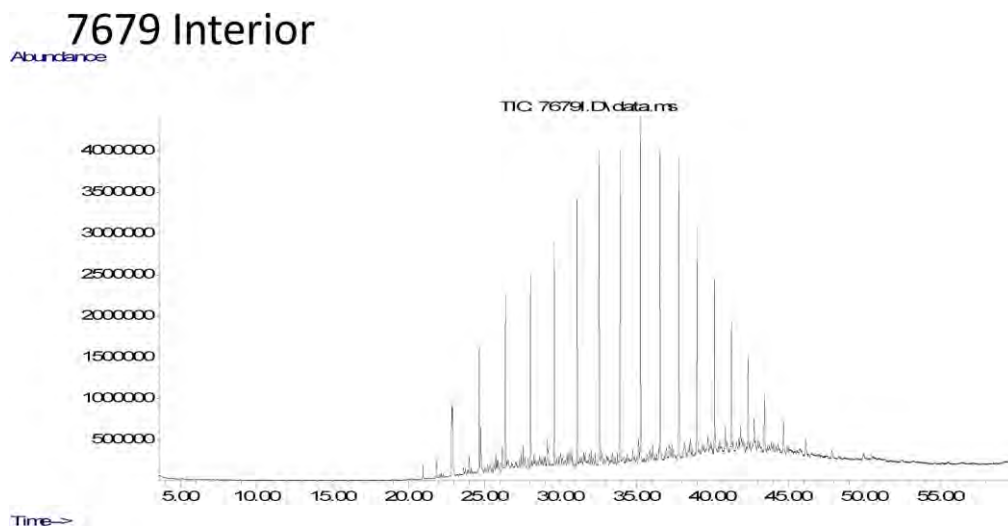
Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29			0.593740480111365	ug/L	Y
Ratio	nC17/nC35			6.51353768684799	ug/L	Y
Ratio	nC17/Pristane			0.858696391335815	ug/L	Y
Ratio	nC18/Phytane			2.37283021217803	ug/L	Y
Ratio	Pristane/Phytane			1.61592109236708	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	47170		ug/L	Z
Aliph	nC16	20.9240	492060		ug/L	Z
Aliph	nC17	22.8190	2199306		ug/L	Z
Aliph	nC18	24.6230	3760906		ug/L	Z
Aliph	nC19	26.3410	4852904		ug/L	Z
Aliph	nC20	27.9810	5614312		ug/L	Z
Aliph	nC21	29.5510	6767275		ug/L	Z
Aliph	nC22	31.0540	7450017		ug/L	Z
Aliph	nC23	32.4960	8509311		ug/L	Z
Aliph	nC24	33.8800	8221906		ug/L	Z
Aliph	nC25	35.2120	8326769		ug/L	Z
Aliph	nC26	36.4960	6874137		ug/L	Z
Aliph	nC27	37.7300	6881958		ug/L	Z
Aliph	nC28	38.9260	4843533		ug/L	Z
Aliph	nC29	40.0740	3704153		ug/L	Z
Aliph	nC30	41.1930	2605358		ug/L	Z
Aliph	nC31	42.2750	1989708		ug/L	Z
Aliph	nC32	43.3560	1395299		ug/L	Z
Aliph	nC33	44.5840	779147		ug/L	Z
Aliph	nC34	46.0130	551375		ug/L	Z
Aliph	nC35	47.7140	337651		ug/L	Z
Aliph	nC36	49.7870	339406		ug/L	Z
Aliph	nC37	52.2630	300497		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360		ug/L	U
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	877389	ug/L	Z
Aliph	Phytane	24.7190	1584987	ug/L	Z
Aliph	Pristane	22.8660	2561214	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007679 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\\_007679\\_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:
Ratio	nC17/nC29		0.437337979130447		ug/L	Y
Ratio	nC17/nC35		4.4752362805856		ug/L	Y
Ratio	nC17/Pristane		0.783744672273164		ug/L	Y
Ratio	nC18/Phytane		2.02909542978698		ug/L	Y
Ratio	Pristane/Phytane		1.45470412877907		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	73394		ug/L	Z
Aliph	nC16	20.9240	1072179		ug/L	Z
Aliph	nC17	22.8190	4548411		ug/L	Z
Aliph	nC18	24.6230	8094926		ug/L	Z
Aliph	nC19	26.3410	10532284		ug/L	Z
Aliph	nC20	27.9810	11706974		ug/L	Z
Aliph	nC21	29.5510	14234281		ug/L	Z
Aliph	nC22	31.0540	16125286		ug/L	Z
Aliph	nC23	32.4960	18926195		ug/L	Z
Aliph	nC24	33.8800	19236290		ug/L	Z
Aliph	nC25	35.2120	20326888		ug/L	Z
Aliph	nC26	36.4960	19052029		ug/L	Z
Aliph	nC27	37.7300	18633905		ug/L	Z
Aliph	nC28	38.9260	13959173		ug/L	Z
Aliph	nC29	40.0740	10400219		ug/L	Z
Aliph	nC30	41.1930	7608144		ug/L	Z
Aliph	nC31	42.2750	5895532		ug/L	Z
Aliph	nC32	43.3560	3982987		ug/L	Z
Aliph	nC33	44.5840	2652002		ug/L	Z
Aliph	nC34	46.0130	1716217		ug/L	Z
Aliph	nC35	47.7140	1016351		ug/L	Z
Aliph	nC36	49.7870	717770		ug/L	Z
Aliph	nC37	52.2630	473035		ug/L	Z



## Results for: GCMS with Full Scan

Aliph	nC38	55.2360	454915	ug/L	Z
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	1959840	ug/L	Z
Aliph	Phytane	24.7190	3989426	ug/L	Z
Aliph	Pristane	22.8660	5803434	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 : **W13/007680**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

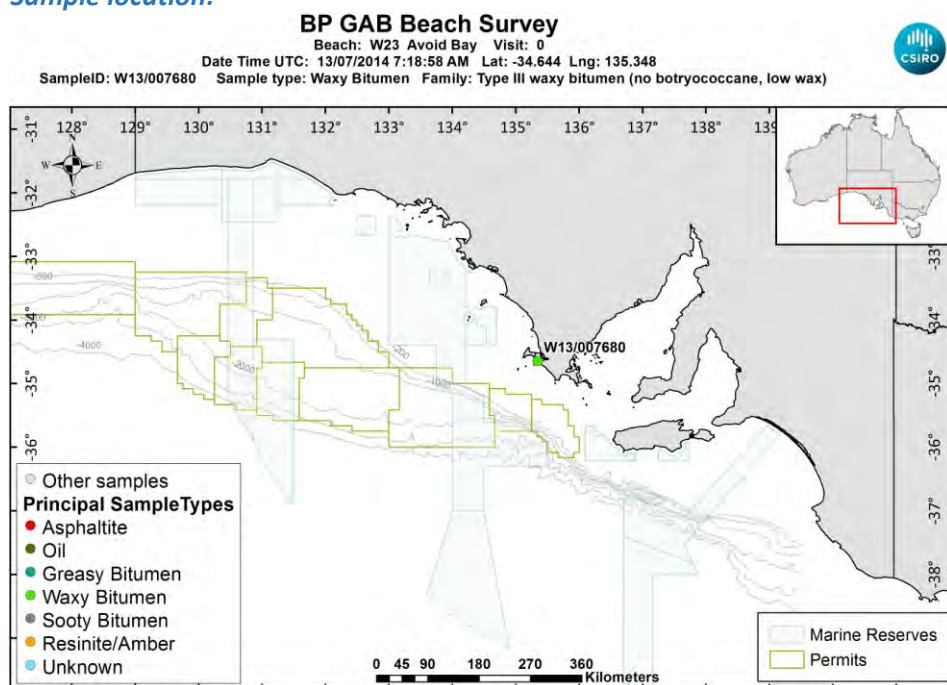
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 17

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007680\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007680\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007680\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007680\_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:

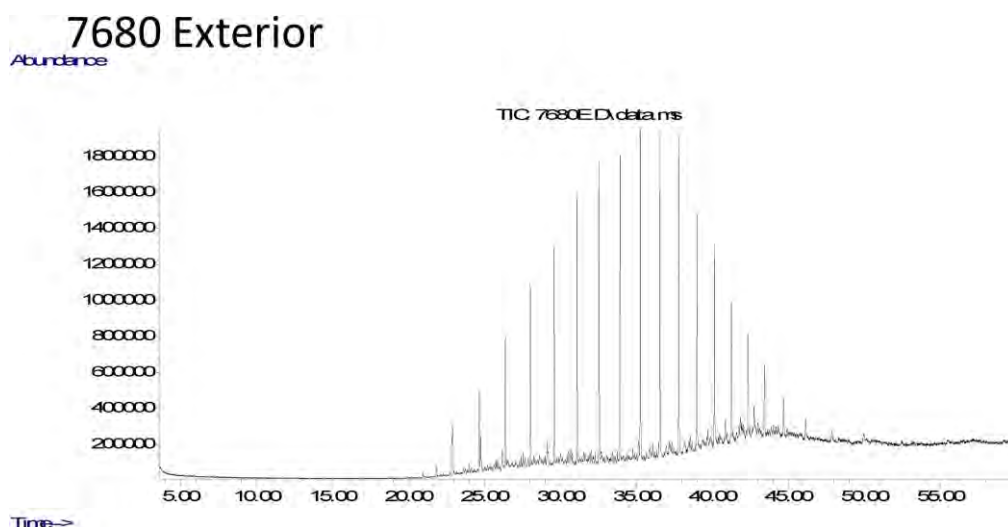
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			86.33	percent	Y
Inorg	Hydrogen			9.34430218687873	percent	Y
Inorg	Nitrogen			0.121538508997429	percent	Y
Inorg	Sulphur			1.80030064225837	percent	Y

### Results for: GCMS with Full Scan

**Unique ID:** W13/007680\_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\\_007680\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

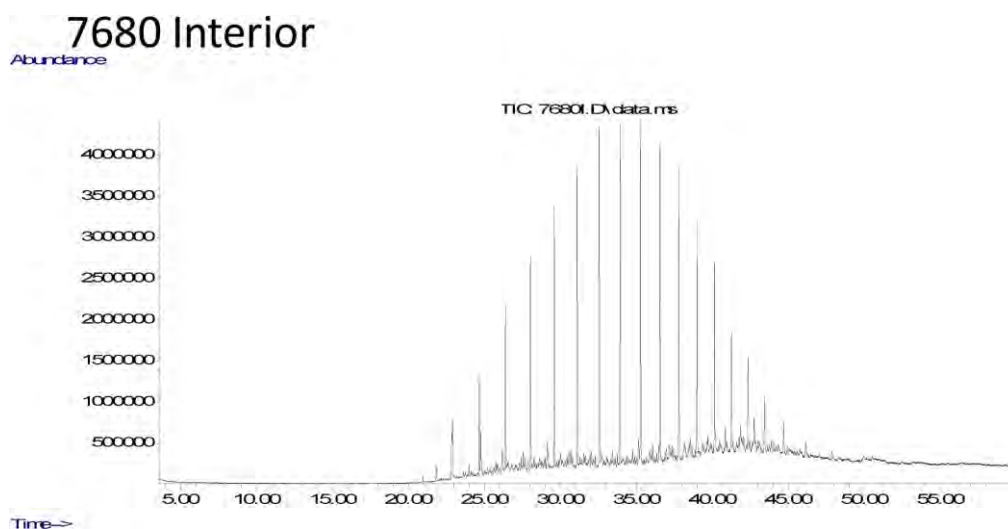
Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29			0.179132658313504	ug/L	Y
Ratio	nC17/nC35			1.66241570412397	ug/L	Y
Ratio	nC17/Pristane			0.521941663169259	ug/L	Y
Ratio	nC18/Phytane			1.87047823952947	ug/L	Y
Ratio	Pristane/Phytane			1.51728701152275	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	159710		ug/L	Z
Aliph	nC17	22.8190	1025468		ug/L	Z
Aliph	nC18	24.6230	2422061		ug/L	Z
Aliph	nC19	26.3410	3714714		ug/L	Z
Aliph	nC20	27.9810	5155974		ug/L	Z
Aliph	nC21	29.5510	6530692		ug/L	Z
Aliph	nC22	31.0540	7554547		ug/L	Z
Aliph	nC23	32.4960	8585780		ug/L	Z
Aliph	nC24	33.8800	8708051		ug/L	Z
Aliph	nC25	35.2120	9279925		ug/L	Z
Aliph	nC26	36.4960	9118836		ug/L	Z
Aliph	nC27	37.7300	8784280		ug/L	Z
Aliph	nC28	38.9260	6644221		ug/L	Z
Aliph	nC29	40.0740	5724628		ug/L	Z
Aliph	nC30	41.1930	4022027		ug/L	Z
Aliph	nC31	42.2750	3238536		ug/L	Z
Aliph	nC32	43.3560	2265202		ug/L	Z
Aliph	nC33	44.5840	1536058		ug/L	Z
Aliph	nC34	46.0130	950925		ug/L	Z
Aliph	nC35	47.7140	616854		ug/L	Z
Aliph	nC36	49.7870	623277		ug/L	Z
Aliph	nC37	52.2630	419417		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360	463064	ug/L	Z
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	581429	ug/L	Z
Aliph	Phytane	24.7190	1294888	ug/L	Z
Aliph	Pristane	22.8660	1964717	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007680 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\\_007680\\_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:
Ratio	nC17/nC29		0.264216454970341		ug/L	Y
Ratio	nC17/nC35		3.01693268878874		ug/L	Y
Ratio	nC17/Pristane		0.488706888122852		ug/L	Y
Ratio	nC18/Phytane		1.69861507108		ug/L	Y
Ratio	Pristane/Phytane		1.54677768613794		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	435329		ug/L	Z
Aliph	nC17	22.8190	2821382		ug/L	Z
Aliph	nC18	24.6230	6339872		ug/L	Z
Aliph	nC19	26.3410	10129633		ug/L	Z
Aliph	nC20	27.9810	13224166		ug/L	Z
Aliph	nC21	29.5510	16276288		ug/L	Z
Aliph	nC22	31.0540	18729330		ug/L	Z
Aliph	nC23	32.4960	21288238		ug/L	Z
Aliph	nC24	33.8800	20808688		ug/L	Z
Aliph	nC25	35.2120	21654370		ug/L	Z
Aliph	nC26	36.4960	19486648		ug/L	Z
Aliph	nC27	37.7300	18281216		ug/L	Z
Aliph	nC28	38.9260	13519970		ug/L	Z
Aliph	nC29	40.0740	10678297		ug/L	Z
Aliph	nC30	41.1930	7419745		ug/L	Z
Aliph	nC31	42.2750	5949848		ug/L	Z
Aliph	nC32	43.3560	3977657		ug/L	Z
Aliph	nC33	44.5840	2531013		ug/L	Z
Aliph	nC34	46.0130	1493336		ug/L	Z
Aliph	nC35	47.7140	935182		ug/L	Z
Aliph	nC36	49.7870	772857		ug/L	Z
Aliph	nC37	52.2630	512349		ug/L	Z



**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360	392655	ug/L	Z
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	1486487	ug/L	Z
Aliph	Phytane	24.7190	3732377	ug/L	Z
Aliph	Pristane	22.8660	5773158	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 : **W13/007681**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

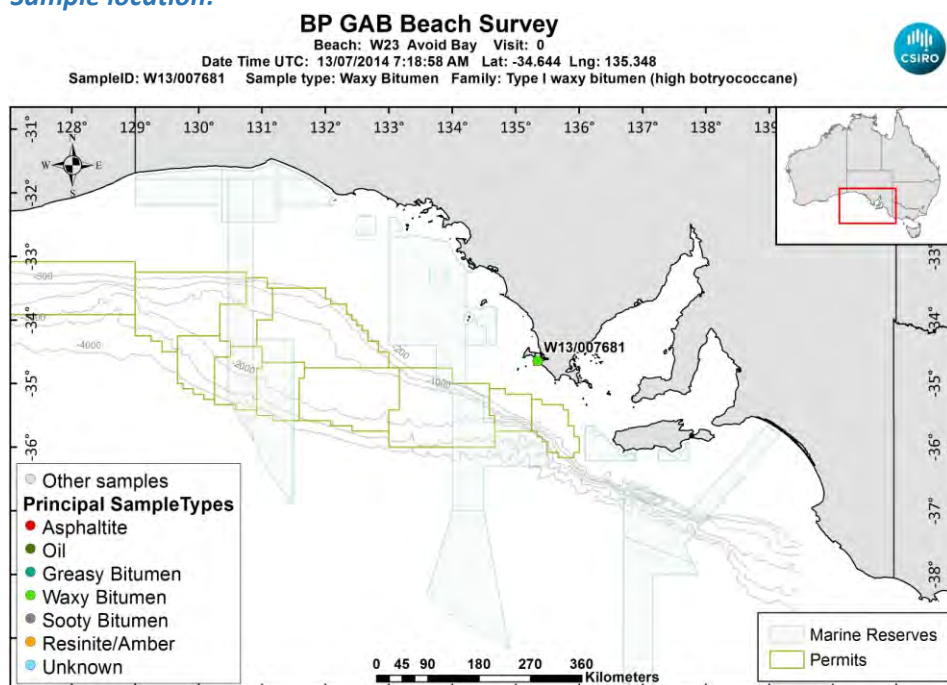
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 9.2

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007681\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007681\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007681\\_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: 2

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007681\_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			87.36	percent	Y
Inorg	Hydrogen			10.0597598409543	percent	Y
Inorg	Nitrogen			0.278410025706941	percent	Y
Inorg	Sulphur			2.4163363590275	percent	Y

### Results for: GCMS with Full Scan

**Unique ID:** W13/007681 DISS GCMS-Scan/02

**Instrument / Type:** GCMS with Full Scan Run: 2

**for Analysis:** Whole Oils

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

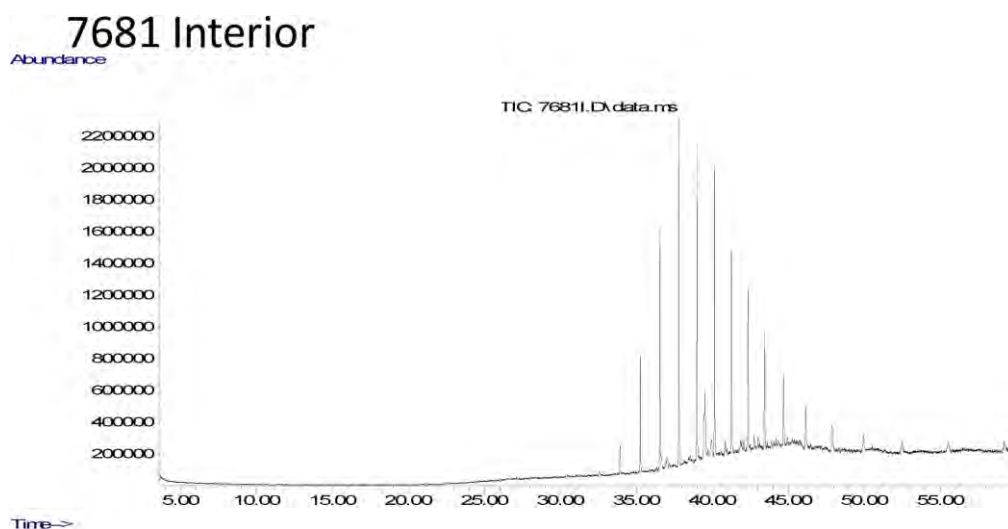
**Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007681\\_int\\_WholeOil.jpg](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**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	39.4290	3954089		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960	157341		ug/L	Z
Aliph	nC24	33.8800	979566		ug/L	Z
Aliph	nC25	35.2120	3749914		ug/L	Z
Aliph	nC26	36.4960	7395003		ug/L	Z
Aliph	nC27	37.7300	10773316		ug/L	Z
Aliph	nC28	38.9260	9883619		ug/L	Z
Aliph	nC29	40.0740	9404754		ug/L	Z
Aliph	nC30	41.1930	6951934		ug/L	Z
Aliph	nC31	42.2750	5513512		ug/L	Z
Aliph	nC32	43.3560	3929547		ug/L	Z
Aliph	nC33	44.5840	3163637		ug/L	Z
Aliph	nC34	46.0130	2072259		ug/L	Z
Aliph	nC35	47.7140	1552729		ug/L	Z
Aliph	nC36	49.7870	1166328		ug/L	Z
Aliph	nC37	52.2630	1011244		ug/L	Z
Aliph	nC38	55.2360	1047799		ug/L	Z
Aliph	nC39	58.9110	1124685		ug/L	Z
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 : **W13/007682**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

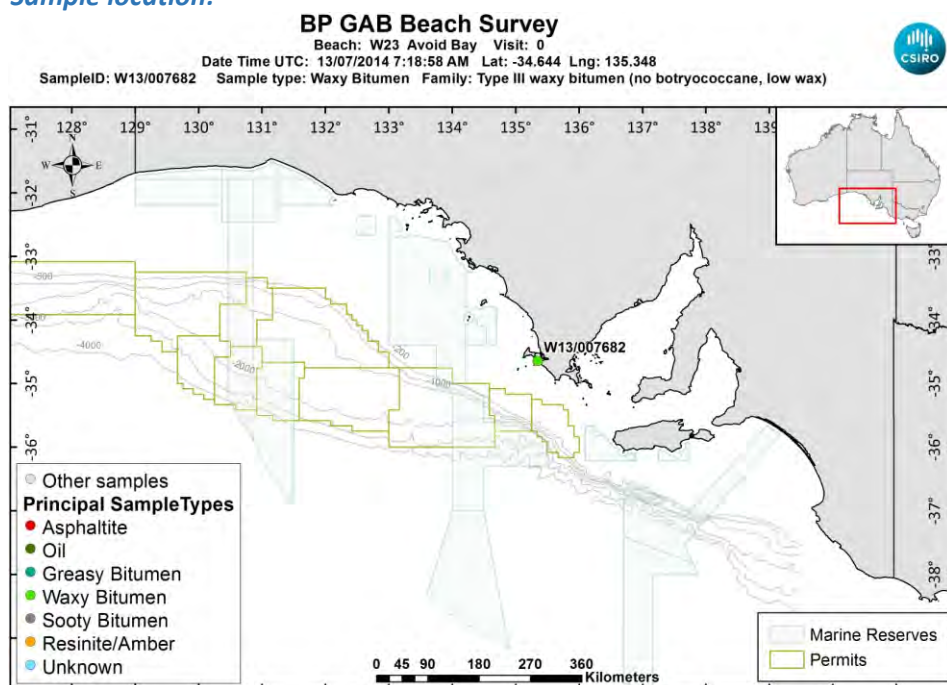
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 11.9

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007682\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007682\\_Photo01.JPG](#)

**Sample - laboratory image:**



LinkedFiles\GAB\_BCH1\Samples\W13\_007682\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007682\_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			85.09	percent	Y
Inorg	Hydrogen			11.3604357852883	percent	Y
Inorg	Nitrogen			0.14426118251928	percent	Y
Inorg	Sulphur			2.51275430347845	percent	Y

### Results for: GCMS with Full Scan

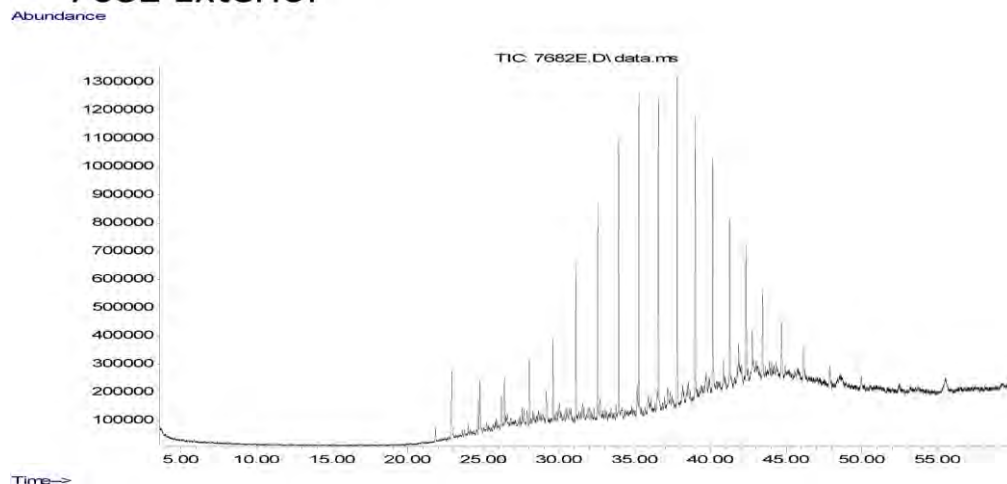
Unique ID: W13/007682\_DISS\_GCMS-Scan/01



**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\\_007682\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7682 Exterior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC18/Phytane			0.471298180601177	ug/L	Y
Ratio	Pristane/Phytane			1.28046022342406	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	625292		ug/L	Z
Aliph	nC19	26.3410	865486		ug/L	Z
Aliph	nC20	27.9810	1141308		ug/L	Z
Aliph	nC21	29.5510	1436286		ug/L	Z
Aliph	nC22	31.0540	2727721		ug/L	Z
Aliph	nC23	32.4960	3868896		ug/L	Z
Aliph	nC24	33.8800	4917244		ug/L	Z
Aliph	nC25	35.2120	5437585		ug/L	Z
Aliph	nC26	36.4960	5528516		ug/L	Z
Aliph	nC27	37.7300	6055809		ug/L	Z
Aliph	nC28	38.9260	4918446		ug/L	Z
Aliph	nC29	40.0740	3988578		ug/L	Z
Aliph	nC30	41.1930	2981897		ug/L	Z
Aliph	nC31	42.2750	2513594		ug/L	Z
Aliph	nC32	43.3560	1825562		ug/L	Z
Aliph	nC33	44.5840	1331709		ug/L	Z
Aliph	nC34	46.0130	940439		ug/L	Z
Aliph	nC35	47.7140	562513		ug/L	Z
Aliph	nC36	49.7870	518901		ug/L	Z
Aliph	nC37	52.2630	383295		ug/L	Z
Aliph	nC38	55.2360	1232465		ug/L	Z
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010	378832		ug/L	Z

**Results for: GCMS with Full Scan**

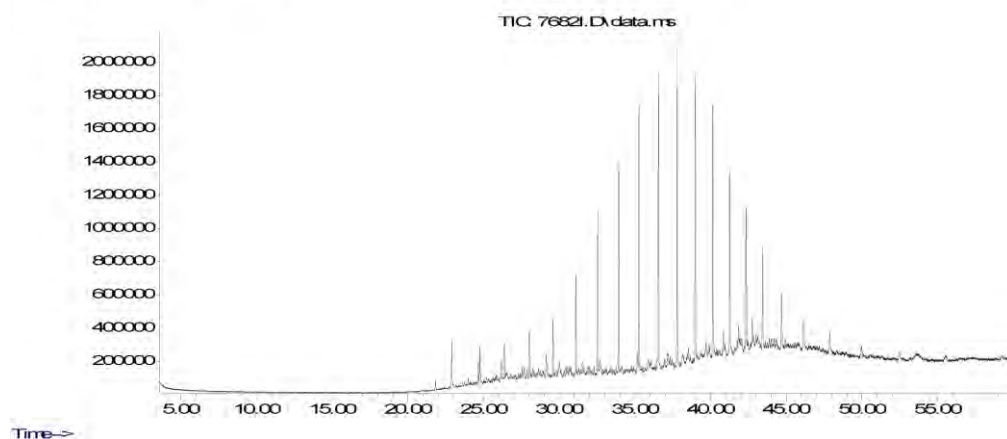
Aliph	Phytane	24.7190	1326744	ug/L	Z
Aliph	Pristane	22.8660	1698843	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007682 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\\_007682\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan

7682 Interior

Abundance



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC18/Phytane			0.447183026504672	ug/L	Y
Ratio	Pristane/Phytane			1.38541535267284	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	704434		ug/L	Z
Aliph	nC19	26.3410	1021202		ug/L	Z
Aliph	nC20	27.9810	1380770		ug/L	Z
Aliph	nC21	29.5510	1743888		ug/L	Z
Aliph	nC22	31.0540	3155199		ug/L	Z
Aliph	nC23	32.4960	4902465		ug/L	Z
Aliph	nC24	33.8800	6465719		ug/L	Z
Aliph	nC25	35.2120	7923939		ug/L	Z
Aliph	nC26	36.4960	9196595		ug/L	Z
Aliph	nC27	37.7300	10043235		ug/L	Z
Aliph	nC28	38.9260	8748758		ug/L	Z
Aliph	nC29	40.0740	7392260		ug/L	Z
Aliph	nC30	41.1930	5769178		ug/L	Z
Aliph	nC31	42.2750	4740491		ug/L	Z
Aliph	nC32	43.3560	3483083		ug/L	Z
Aliph	nC33	44.5840	2497169		ug/L	Z
Aliph	nC34	46.0130	1642591		ug/L	Z
Aliph	nC35	47.7140	1139851		ug/L	Z
Aliph	nC36	49.7870	744333		ug/L	Z
Aliph	nC37	52.2630	617889		ug/L	Z
Aliph	nC38	55.2360	637409		ug/L	Z
Aliph	nC39	58.9110	502348		ug/L	Z
Aliph	Norpristane	21.8010	462400		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Phytane	24.7190	1575271	ug/L	Z
Aliph	Pristane	22.8660	2182404	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 : **W13/007683**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

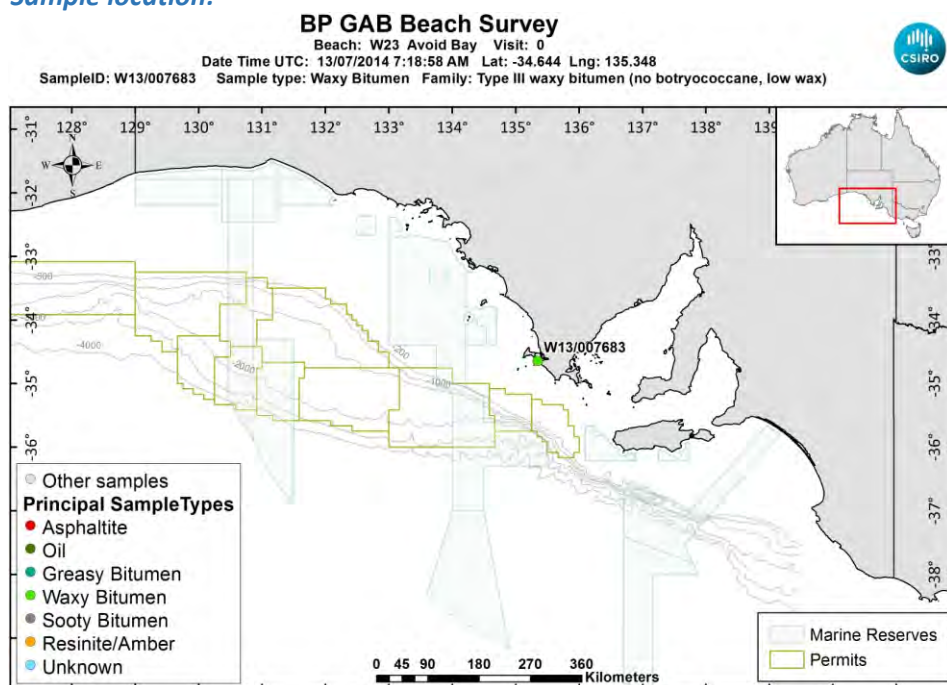
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 9.7

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007683\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007683\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007683\\_Photo02.JPG](#)

### Analyses Requested

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

### Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry 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: Gas Chromatography Mass Spectrometry

**Unique ID:** W13/007683\_DISS\_GC-MS/02

**Instrument / Type:** Gas Chromatography Mass Spectrometry Run: 2

**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:** 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			36.2307925403125	ratio	Y
BiomRatio	% C27 abb 20(R+S)			40.6901644830982	ratio	Y
BiomRatio	% C28 aaa 20R			20.1408032197042	ratio	Y
BiomRatio	% C28 abb 20(R+S)			20.7476195788728	ratio	Y
BiomRatio	% C29 aaa 20R			43.6284042399833	ratio	Y
BiomRatio	% C29 abb 20(R+S)			38.562215938029	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.107327988468397	ratio	Y
BiomRatio	25-Nor/C30H			6.07987827385725E-02	ratio	Y
BiomRatio	C19t/C23t			0.131006165858219	ratio	Y
BiomRatio	C22t/C21t			0.288270189553737	ratio	Y
BiomRatio	C22t/C24t			0.205395619039203	ratio	Y
BiomRatio	C23t/C30H			0.119770676980683	ratio	Y
BiomRatio	C24t/C23t			0.851686648431202	ratio	Y
BiomRatio	C24Tet/C23t			0.338506210423529	ratio	Y
BiomRatio	C24Tet/C26t			0.374585341102491	ratio	Y
BiomRatio	C24Tet/C30H			4.05431179845916E-02	ratio	Y
BiomRatio	C26t/C25t			1.64641702391778	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.585602222265694	ratio	Y
BiomRatio	C27 Dia/Ster			0.741452787166388	ratio	Y
BiomRatio	C28BNH/C30H			3.99704509503806E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.947703614077229	ratio	Y
BiomRatio	C29H/C30H			0.715292914206223	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.226753058846851	ratio	Y
BiomRatio	C30DiaH/C30H			8.97504936702975E-02	ratio	Y
BiomRatio	C30Ts/C30H			3.23210522270437E-03	ratio	Y
BiomRatio	C35 Homohopane Index			3.16515522639313E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.415132955663063	ratio	Y
BiomRatio	Gam/C30H			0.064910052844784	ratio	Y
BiomRatio	Gam/C31HR			0.43403626546025	ratio	Y
BiomRatio	Ole/C30H			4.69989068559678E-02	ratio	Y
BiomRatio	Sterane/hopane			6.38277707134803E-02	ratio	Y
BiomRatio	Steranes/Terpanes			5.17748731790109E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.232794342012131	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007683\_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:

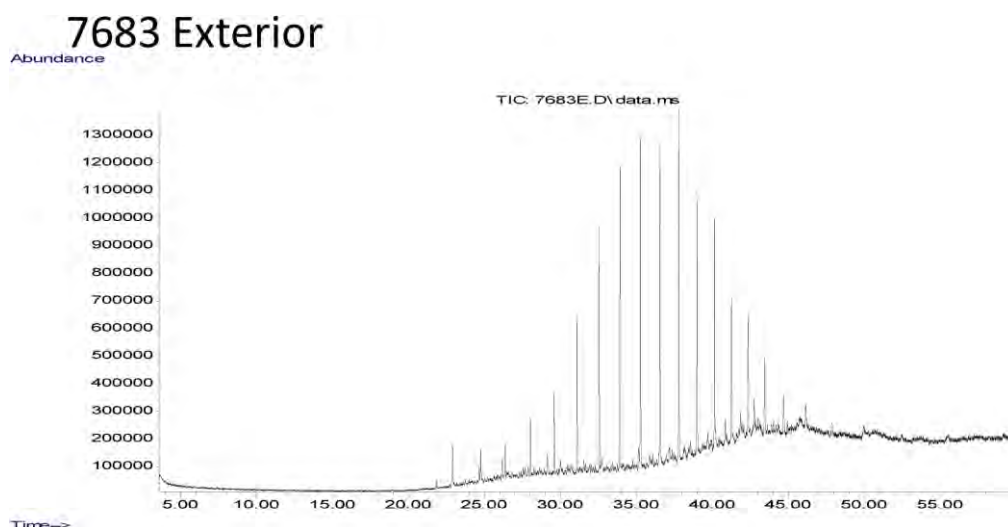
**Results for: Elemental Analyser****Data Sheet:**

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			85.49	percent	Y
Inorg	Hydrogen			9.02505288270378	percent	Y
Inorg	Nitrogen			0.133862125107112	percent	Y
Inorg	Sulphur			1.7925475909624	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007683\_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\\_007683\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

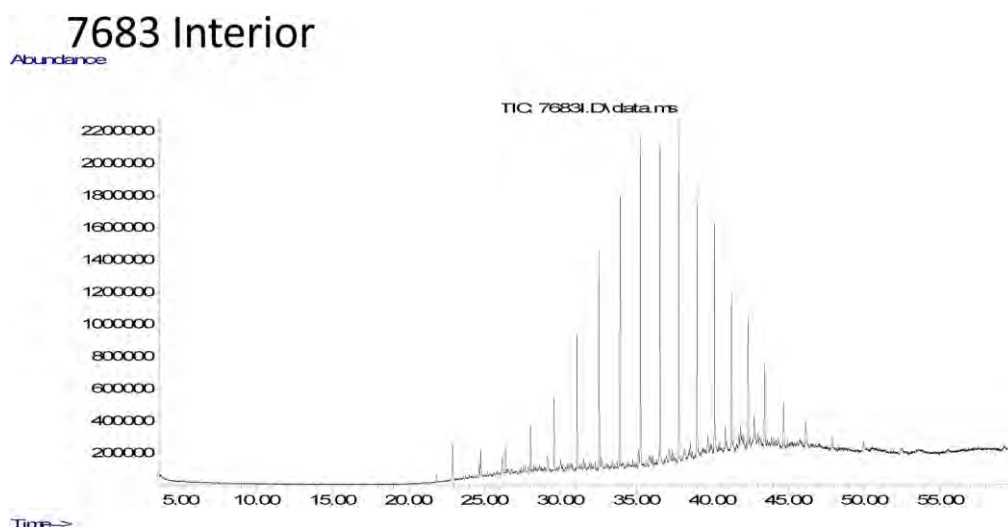
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	nC18/Phytane		0.423930729964519		ug/L	Y
Ratio	Pristane/Phytane		1.41051973683132		ug/L	Y
Aliph	Botryococcane	39.4290			ug/L	U
Aliph	nC10	0.0000			ug/L	U
Aliph	nC11	0.0000			ug/L	U
Aliph	nC12	12.2580			ug/L	U
Aliph	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	331025		ug/L	Z
Aliph	nC19	26.3410	618023		ug/L	Z
Aliph	nC20	27.9810	1039982		ug/L	Z
Aliph	nC21	29.5510	1459715		ug/L	Z
Aliph	nC22	31.0540	2848755		ug/L	Z
Aliph	nC23	32.4960	4423832		ug/L	Z
Aliph	nC24	33.8800	5603706		ug/L	Z
Aliph	nC25	35.2120	6354418		ug/L	Z
Aliph	nC26	36.4960	6159788		ug/L	Z
Aliph	nC27	37.7300	6435852		ug/L	Z
Aliph	nC28	38.9260	4822706		ug/L	Z
Aliph	nC29	40.0740	4127251		ug/L	Z
Aliph	nC30	41.1930	2848749		ug/L	Z
Aliph	nC31	42.2750	2246586		ug/L	Z
Aliph	nC32	43.3560	1579255		ug/L	Z
Aliph	nC33	44.5840	1081367		ug/L	Z
Aliph	nC34	46.0130	760708		ug/L	Z
Aliph	nC35	47.7140	467157		ug/L	Z
Aliph	nC36	49.7870	388171		ug/L	Z
Aliph	nC37	52.2630	385717		ug/L	Z
Aliph	nC38	55.2360	458673		ug/L	Z
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010	234614		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	Phytane	24.7190	780847	ug/L	Z
Aliph	Pristane	22.8660	1101400	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007683 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\\_007683\\_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:
Ratio	nC17/nC29		0.246521018230915		ug/L	Y
Ratio	nC17/nC35		2.0712755471292		ug/L	Y
Ratio	nC17/Pristane		1.032649095876		ug/L	Y
Ratio	nC18/Phytane		0.383931315220526		ug/L	Y
Ratio	Pristane/Phytane		1.4377278883102		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	1781527		ug/L	Z
Aliph	nC18	24.6230	460698		ug/L	Z
Aliph	nC19	26.3410	883815		ug/L	Z
Aliph	nC20	27.9810	1466918		ug/L	Z
Aliph	nC21	29.5510	2266602		ug/L	Z
Aliph	nC22	31.0540	4290045		ug/L	Z
Aliph	nC23	32.4960	6738077		ug/L	Z
Aliph	nC24	33.8800	8493801		ug/L	Z
Aliph	nC25	35.2120	9923473		ug/L	Z
Aliph	nC26	36.4960	10059136		ug/L	Z
Aliph	nC27	37.7300	10618218		ug/L	Z
Aliph	nC28	38.9260	8416099		ug/L	Z
Aliph	nC29	40.0740	7226672		ug/L	Z
Aliph	nC30	41.1930	5057459		ug/L	Z
Aliph	nC31	42.2750	4367020		ug/L	Z
Aliph	nC32	43.3560	2814756		ug/L	Z
Aliph	nC33	44.5840	2051663		ug/L	Z
Aliph	nC34	46.0130	1317108		ug/L	Z
Aliph	nC35	47.7140	860111		ug/L	Z
Aliph	nC36	49.7870	618909		ug/L	Z
Aliph	nC37	52.2630	395778		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360	491896	ug/L	Z
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	358103	ug/L	Z
Aliph	Phytane	24.7190	1199949	ug/L	Z
Aliph	Pristane	22.8660	1725200	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 : **W13/007684**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

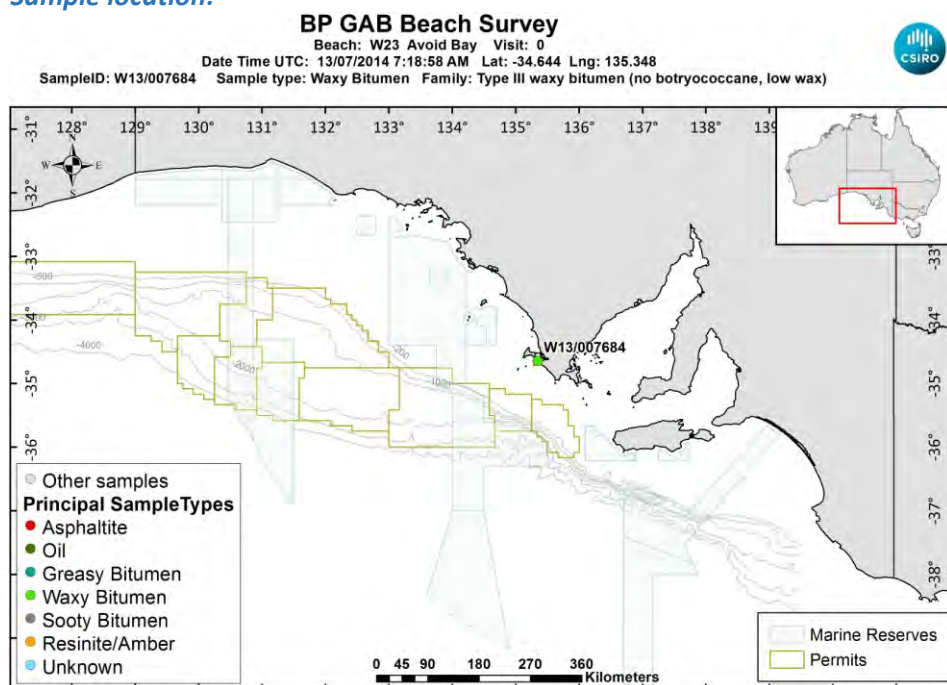
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 4.7

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007684\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007684\\_Photo01.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007684\\_Photo02.JPG](#)

### Analyses Requested

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

### Analyses Completed:

Analysis:	Instrument/Type:
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:** W13/007684\_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:** 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			35.4538138721327	ratio	Y
BiomRatio	% C27 abb 20(R+S)			40.5935294768184	ratio	Y
BiomRatio	% C28 aaa 20R			20.2324658539451	ratio	Y
BiomRatio	% C28 abb 20(R+S)			21.9485015714948	ratio	Y
BiomRatio	% C29 aaa 20R			44.3137202739222	ratio	Y
BiomRatio	% C29 abb 20(R+S)			37.4579689516868	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.130342473465637	ratio	Y
BiomRatio	25-Nor/C30H			4.28087849860466E-02	ratio	Y
BiomRatio	C19t/C23t			0.115509717564346	ratio	Y
BiomRatio	C22t/C21t			0.288173472773813	ratio	Y
BiomRatio	C22t/C24t			0.216779996948065	ratio	Y
BiomRatio	C23t/C30H			8.85750073075613E-02	ratio	Y
BiomRatio	C24t/C23t			0.880926812893761	ratio	Y
BiomRatio	C24Tet/C23t			0.326470067166661	ratio	Y
BiomRatio	C24Tet/C26t			0.299412079102084	ratio	Y
BiomRatio	C24Tet/C30H			0.028917088584987	ratio	Y
BiomRatio	C26t/C25t			1.8751528384863	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.566410891199257	ratio	Y
BiomRatio	C27 Dia/Ster			0.651045369653335	ratio	Y
BiomRatio	C28BNH/C30H			2.15497866371047E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.922757134805874	ratio	Y
BiomRatio	C29H/C30H			0.773399389420303	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.176108211222368	ratio	Y
BiomRatio	C30DiaH/C30H			6.14417414095806E-02	ratio	Y
BiomRatio	C30Ts/C30H			1.65831915009156E-02	ratio	Y
BiomRatio	C35 Homohopane Index			3.10645779730407E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.451571747218393	ratio	Y
BiomRatio	Gam/C30H			5.51328400049802E-02	ratio	Y
BiomRatio	Gam/C31HR			0.440164031711772	ratio	Y
BiomRatio	Ole/C30H			7.50233095203535E-02	ratio	Y
BiomRatio	Sterane/hopane			0.049833929650155	ratio	Y
BiomRatio	Steranes/Terpanes			4.17453887254799E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.193758907788972	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007684\_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:**

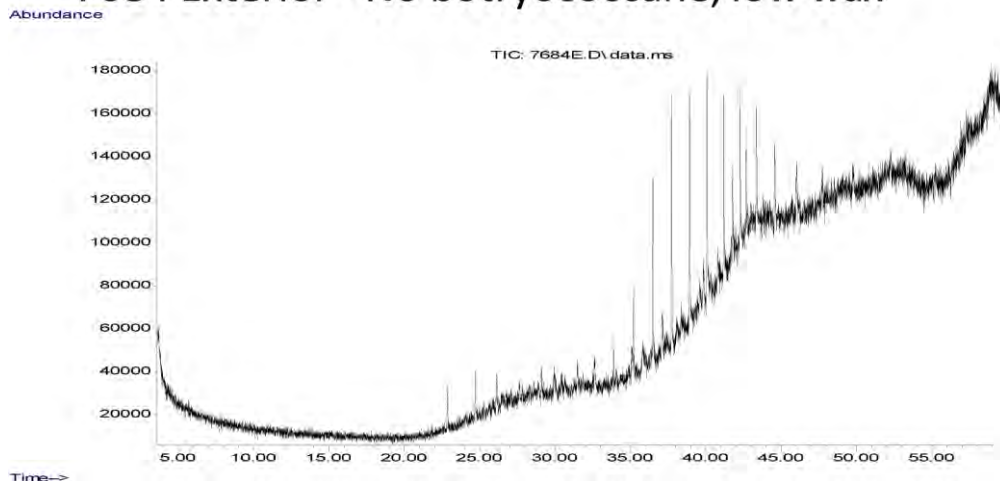
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			86.28	percent	Y
Inorg	Hydrogen			9.84686242544732	percent	Y
Inorg	Nitrogen			0.12347557840617	percent	Y
Inorg	Sulphur			2.10684402121706	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007684\_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\\_007684\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7684 Exterior - No botryococcane, low wax



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane		0.876381357181671		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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800	94218		ug/L	Z
Aliph	nC25	35.2120	227534		ug/L	Z
Aliph	nC26	36.4960	496609		ug/L	Z
Aliph	nC27	37.7300	681540		ug/L	Z
Aliph	nC28	38.9260	627991		ug/L	Z
Aliph	nC29	40.0740	582679		ug/L	Z
Aliph	nC30	41.1930	471773		ug/L	Z
Aliph	nC31	42.2750	395961		ug/L	Z
Aliph	nC32	43.3560	311606		ug/L	Z
Aliph	nC33	44.5840	297923		ug/L	Z
Aliph	nC34	46.0130	156626		ug/L	Z
Aliph	nC35	47.7140	210576		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	35438		ug/L	Z
Aliph	Phytane	24.7190	138500		ug/L	Z

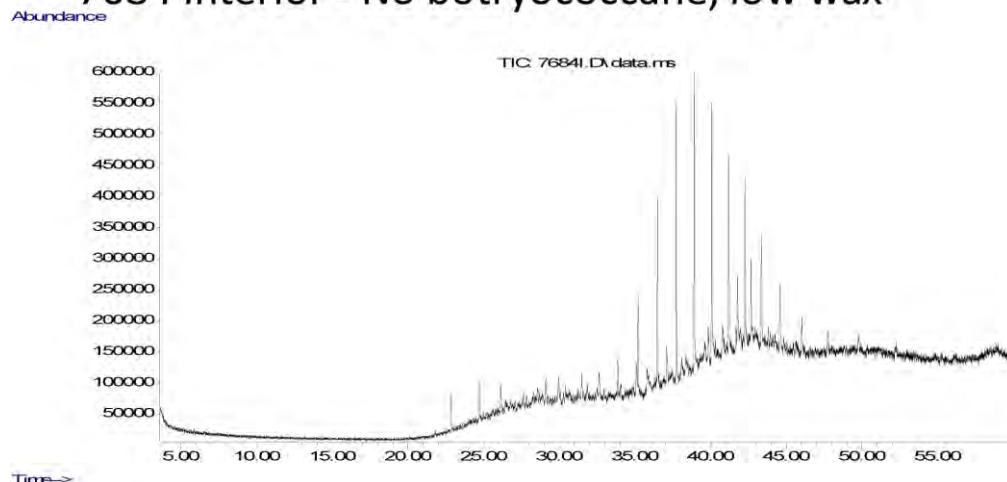
**Results for: GCMS with Full Scan**

Aliph	Pristane	22.8660	121379	ug/L	Z
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**Results for: GCMS with Full Scan****Unique ID:** W13/007684 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\\_007684\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan

## 7684 Interior - No botryococcane, low wax



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane			0.885827417852183	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960	316738		ug/L	Z
Aliph	nC24	33.8800	364253		ug/L	Z
Aliph	nC25	35.2120	822940		ug/L	Z
Aliph	nC26	36.4960	1663471		ug/L	Z
Aliph	nC27	37.7300	2287775		ug/L	Z
Aliph	nC28	38.9260	2446324		ug/L	Z
Aliph	nC29	40.0740	2393569		ug/L	Z
Aliph	nC30	41.1930	1836037		ug/L	Z
Aliph	nC31	42.2750	1429094		ug/L	Z
Aliph	nC32	43.3560	1001566		ug/L	Z
Aliph	nC33	44.5840	847959		ug/L	Z
Aliph	nC34	46.0130	500560		ug/L	Z
Aliph	nC35	47.7140	462679		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	49104		ug/L	Z
Aliph	Phytane	24.7190	494168		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	437748	ug/L	Z
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## 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 : **W13/007685**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

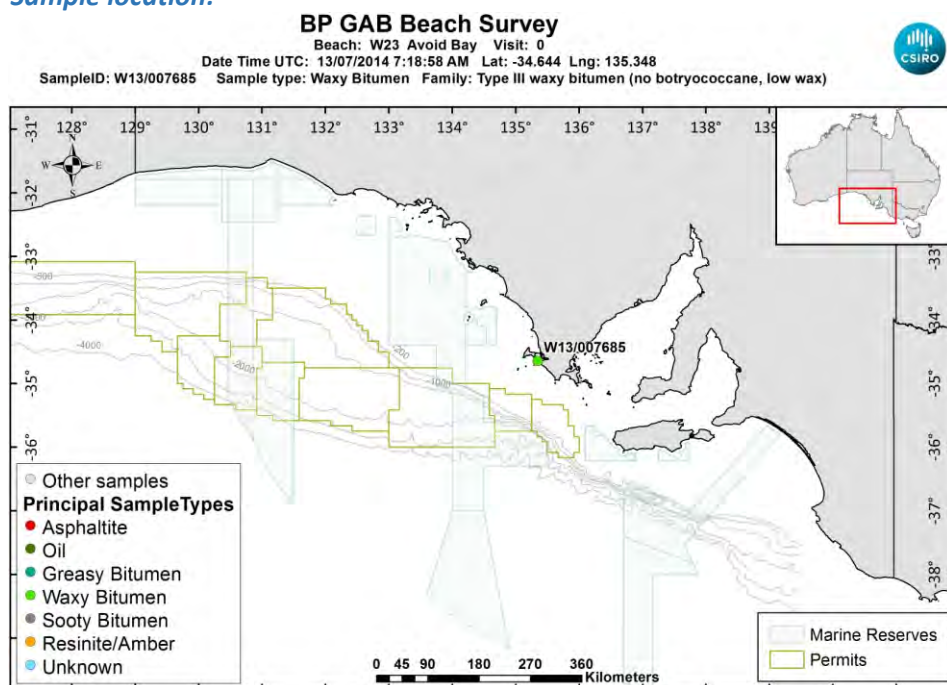
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 4.1

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007685\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007685\\_Photo01.JPG](#)

**Sample - laboratory image:**



LinkedFiles\GAB BCH1\Samples\W13\_007685\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007685\_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			86.39	percent	Y
Inorg	Hydrogen			6.9048111332008	percent	Y
Inorg	Nitrogen			0.11310205655527	percent	Y
Inorg	Sulphur			1.16776310175888	percent	Y

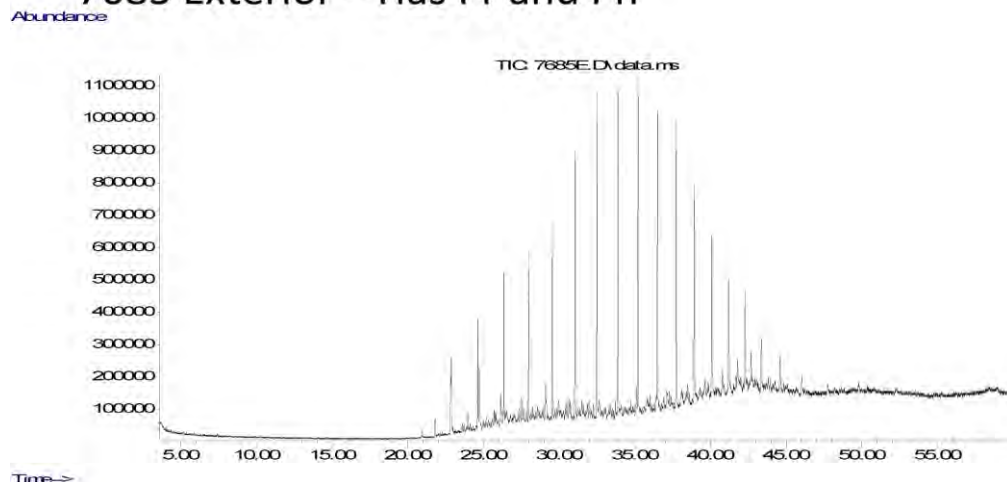
### Results for: GCMS with Full Scan

Unique ID: W13/007685\_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\\_007685\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7685 Exterior – Has Pr and Ph



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29			0.371117146747243	ug/L	Y
Ratio	nC17/nC35			3.31392329138834	ug/L	Y
Ratio	nC17/Pristane			0.53609226081757	ug/L	Y
Ratio	nC18/Phytane			1.41953040583935	ug/L	Y
Ratio	Pristane/Phytane			1.46429214525735	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	110495		ug/L	Z
Aliph	nC17	22.8190	1026217		ug/L	Z
Aliph	nC18	24.6230	1855737		ug/L	Z
Aliph	nC19	26.3410	2419238		ug/L	Z
Aliph	nC20	27.9810	2573096		ug/L	Z
Aliph	nC21	29.5510	2990750		ug/L	Z
Aliph	nC22	31.0540	4142786		ug/L	Z
Aliph	nC23	32.4960	5049931		ug/L	Z
Aliph	nC24	33.8800	5133495		ug/L	Z
Aliph	nC25	35.2120	5266416		ug/L	Z
Aliph	nC26	36.4960	4786539		ug/L	Z
Aliph	nC27	37.7300	4573853		ug/L	Z
Aliph	nC28	38.9260	3391096		ug/L	Z
Aliph	nC29	40.0740	2765210		ug/L	Z
Aliph	nC30	41.1930	2043916		ug/L	Z
Aliph	nC31	42.2750	1617293		ug/L	Z
Aliph	nC32	43.3560	1104412		ug/L	Z
Aliph	nC33	44.5840	697941		ug/L	Z
Aliph	nC34	46.0130	478247		ug/L	Z
Aliph	nC35	47.7140	309668		ug/L	Z
Aliph	nC36	49.7870	289621		ug/L	Z
Aliph	nC37	52.2630	382740		ug/L	Z

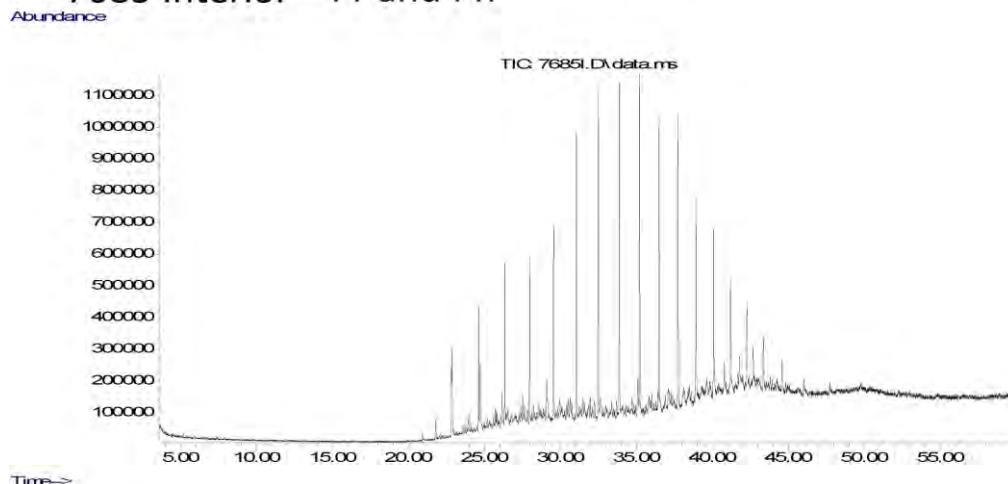
**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360		ug/L	U
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	460576	ug/L	Z
Aliph	Phytane	24.7190	1307290	ug/L	Z
Aliph	Pristane	22.8660	1914254	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007685 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\\_007685\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan

## 7685 Interior – Pr and Ph



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29		0.344777253824923		ug/L	Y
Ratio	nC17/nC35		3.40869408731712		ug/L	Y
Ratio	nC17/Pristane		0.464827043295592		ug/L	Y
Ratio	nC18/Phytane		1.3435653453618		ug/L	Y
Ratio	Pristane/Phytane		1.4357725865522		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	138955		ug/L	Z
Aliph	nC17	22.8190	1035535		ug/L	Z
Aliph	nC18	24.6230	2084714		ug/L	Z
Aliph	nC19	26.3410	2609205		ug/L	Z
Aliph	nC20	27.9810	2766208		ug/L	Z
Aliph	nC21	29.5510	3208309		ug/L	Z
Aliph	nC22	31.0540	4404907		ug/L	Z
Aliph	nC23	32.4960	5211707		ug/L	Z
Aliph	nC24	33.8800	5360665		ug/L	Z
Aliph	nC25	35.2120	5286910		ug/L	Z
Aliph	nC26	36.4960	5009001		ug/L	Z
Aliph	nC27	37.7300	4664904		ug/L	Z
Aliph	nC28	38.9260	3488004		ug/L	Z
Aliph	nC29	40.0740	3003489		ug/L	Z
Aliph	nC30	41.1930	1876507		ug/L	Z
Aliph	nC31	42.2750	1550790		ug/L	Z
Aliph	nC32	43.3560	977160		ug/L	Z
Aliph	nC33	44.5840	656854		ug/L	Z
Aliph	nC34	46.0130	441258		ug/L	Z
Aliph	nC35	47.7140	303792		ug/L	Z
Aliph	nC36	49.7870	344820		ug/L	Z
Aliph	nC37	52.2630			ug/L	U

## Results for: GCMS with Full Scan

Aliph	nC38	55.2360		ug/L	U
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	538226	ug/L	Z
Aliph	Phytane	24.7190	1551628	ug/L	Z
Aliph	Pristane	22.8660	2227785	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 : **W13/007686**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

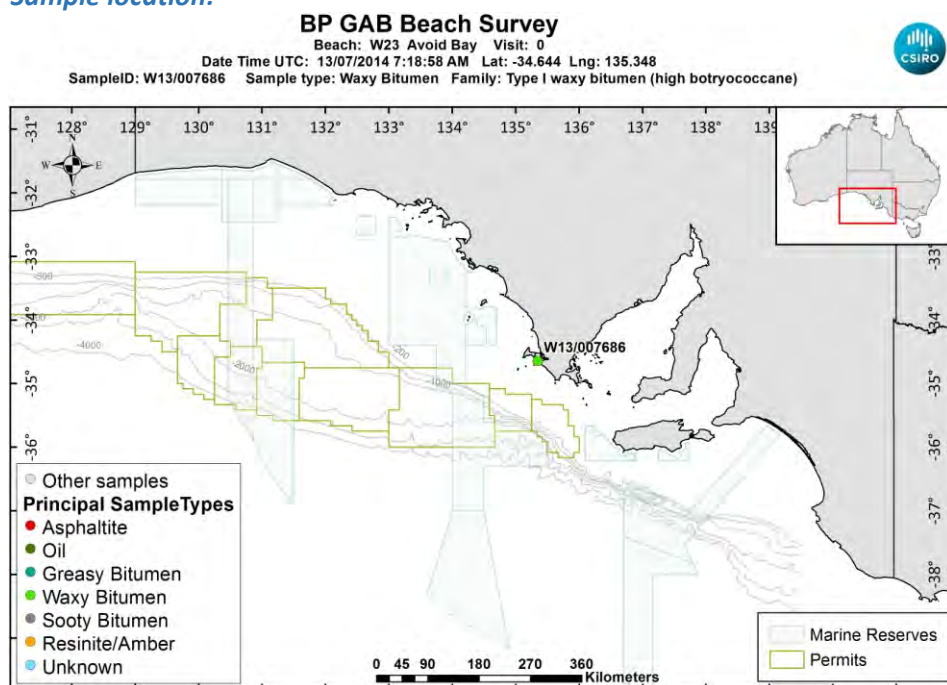
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 6.7

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007686\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007686\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007686\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007686\_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			86.33	percent	Y
Inorg	Hydrogen			9.49443260437376	percent	Y
Inorg	Nitrogen			0.277188431876607	percent	Y
Inorg	Sulphur			2.25975614383452	percent	Y

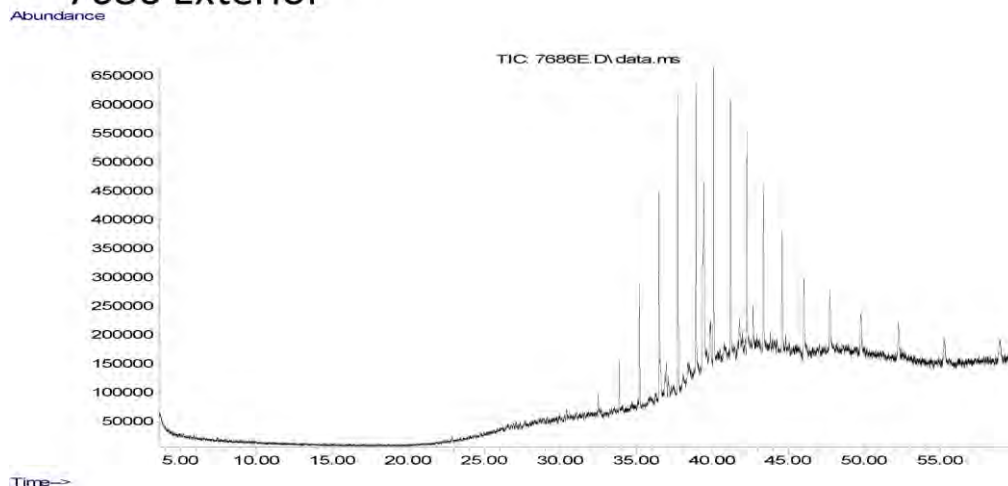
### Results for: GCMS with Full Scan

Unique ID: W13/007686\_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\\_007686\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7686 Exterior



## Data Sheet:

(default units ppb)

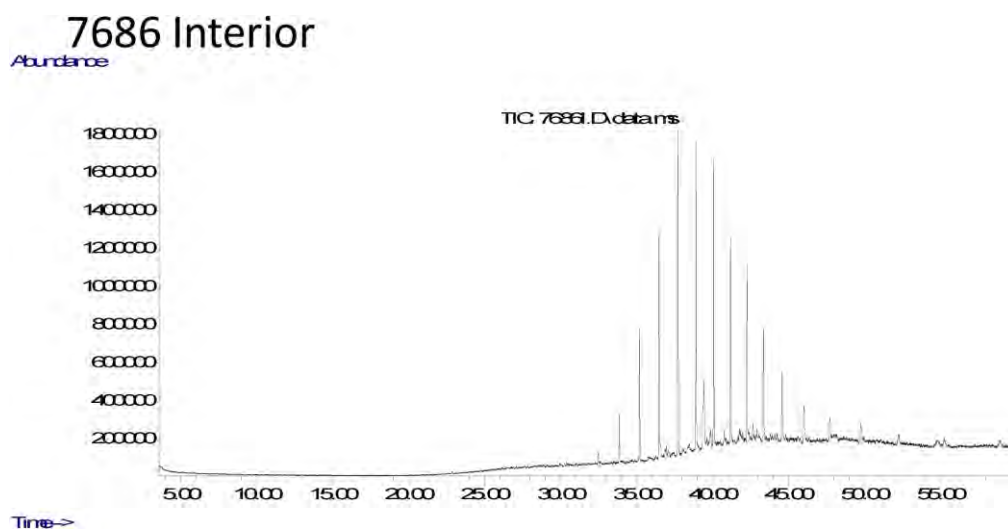
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane			1.00057817453852	ug/L	Y
Aliph	Botryococcane	39.4290	3166877		ug/L	Z
Aliph	nC10	0.0000			ug/L	U
Aliph	nC11	0.0000			ug/L	U
Aliph	nC12	12.2580			ug/L	U
Aliph	nC13	14.5950			ug/L	U
Aliph	nC14	16.8180			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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960	171559		ug/L	Z
Aliph	nC24	33.8800	450175		ug/L	Z
Aliph	nC25	35.2120	993243		ug/L	Z
Aliph	nC26	36.4960	1597169		ug/L	Z
Aliph	nC27	37.7300	2598824		ug/L	Z
Aliph	nC28	38.9260	2762801		ug/L	Z
Aliph	nC29	40.0740	2732255		ug/L	Z
Aliph	nC30	41.1930	2325016		ug/L	Z
Aliph	nC31	42.2750	2105229		ug/L	Z
Aliph	nC32	43.3560	1788288		ug/L	Z
Aliph	nC33	44.5840	1445982		ug/L	Z
Aliph	nC34	46.0130	1197068		ug/L	Z
Aliph	nC35	47.7140	1047968		ug/L	Z
Aliph	nC36	49.7870	924132		ug/L	Z
Aliph	nC37	52.2630	770173		ug/L	Z
Aliph	nC38	55.2360	812342		ug/L	Z
Aliph	nC39	58.9110	876115		ug/L	Z
Aliph	Norpristane	21.8010			ug/L	U
Aliph	Phytane	24.7190	58979		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	Pristane	22.8660	59013	ug/L	Z
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**Results for: GCMS with Full Scan****Unique ID:** W13/007686 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\\_007686\\_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:
Ratio	Pristane/Phytane			0.92299901958557	ug/L	Y
Aliph	Botryococcane	39.4290	3374091		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960	362955		ug/L	Z
Aliph	nC24	33.8800	1374788		ug/L	Z
Aliph	nC25	35.2120	3570872		ug/L	Z
Aliph	nC26	36.4960	6173889		ug/L	Z
Aliph	nC27	37.7300	8750174		ug/L	Z
Aliph	nC28	38.9260	8337617		ug/L	Z
Aliph	nC29	40.0740	7583095		ug/L	Z
Aliph	nC30	41.1930	6028675		ug/L	Z
Aliph	nC31	42.2750	4869670		ug/L	Z
Aliph	nC32	43.3560	3393088		ug/L	Z
Aliph	nC33	44.5840	2583978		ug/L	Z
Aliph	nC34	46.0130	1710280		ug/L	Z
Aliph	nC35	47.7140	1136514		ug/L	Z
Aliph	nC36	49.7870	1137223		ug/L	Z
Aliph	nC37	52.2630	769196		ug/L	Z
Aliph	nC38	55.2360	520651		ug/L	Z
Aliph	nC39	58.9110	802991		ug/L	Z
Aliph	Norpristane	21.8010			ug/L	U
Aliph	Phytane	24.7190	102997		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	95066	ug/L	Z
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## 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 : **W13/007687**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

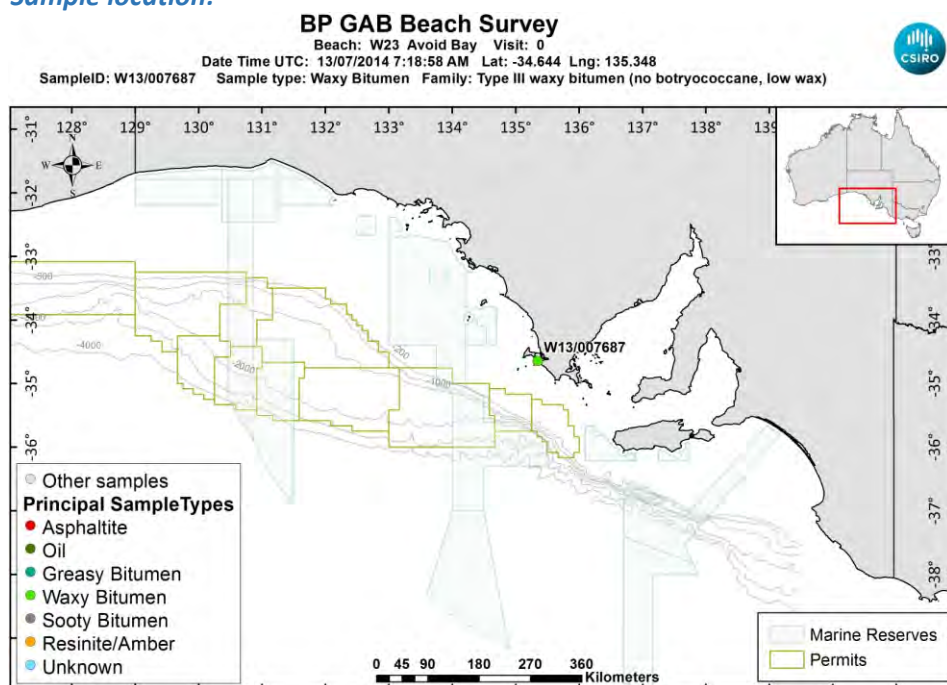
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 4.8

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007687\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007687\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007687\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007687\_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			85.03	percent	Y
Inorg	Hydrogen			10.1604349900596	percent	Y
Inorg	Nitrogen			0.143613367609255	percent	Y
Inorg	Sulphur			2.25306470920566	percent	Y

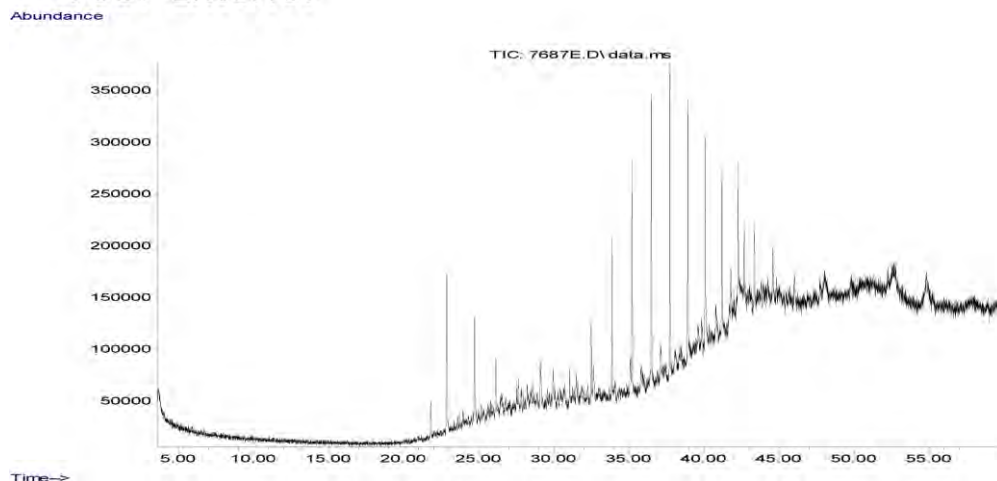
### Results for: GCMS with Full Scan

Unique ID: W13/007687\_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 007687\\_ext WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7687 Exterior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane			1.53324826214368	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540	189965		ug/L	Z
Aliph	nC23	32.4960	410688		ug/L	Z
Aliph	nC24	33.8800	746861		ug/L	Z
Aliph	nC25	35.2120	1110166		ug/L	Z
Aliph	nC26	36.4960	1348368		ug/L	Z
Aliph	nC27	37.7300	1573715		ug/L	Z
Aliph	nC28	38.9260	1239622		ug/L	Z
Aliph	nC29	40.0740	1056389		ug/L	Z
Aliph	nC30	41.1930	776094		ug/L	Z
Aliph	nC31	42.2750	704434		ug/L	Z
Aliph	nC32	43.3560	518902		ug/L	Z
Aliph	nC33	44.5840	348116		ug/L	Z
Aliph	nC34	46.0130	274148		ug/L	Z
Aliph	nC35	47.7140	268309		ug/L	Z
Aliph	nC36	49.7870	216220		ug/L	Z
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	301143		ug/L	Z
Aliph	Phytane	24.7190	737962		ug/L	Z

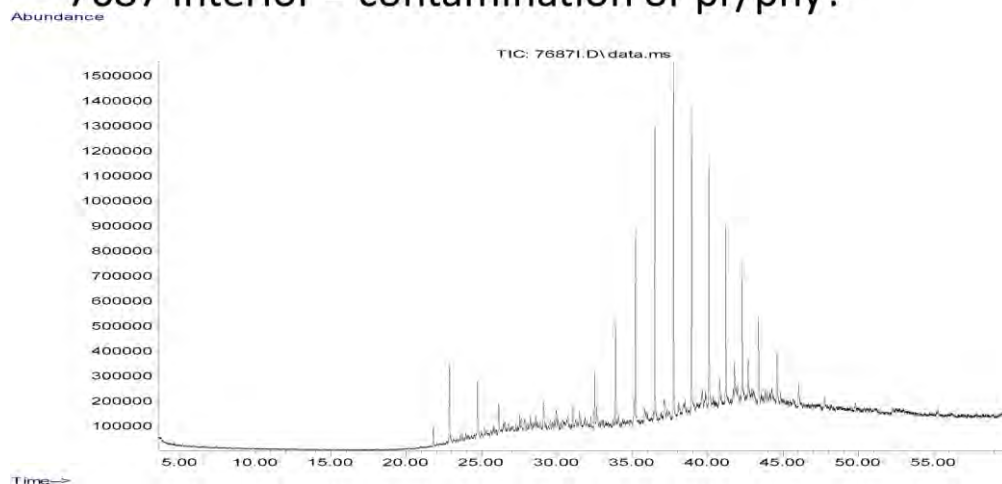
**Results for: GCMS with Full Scan**

Aliph	Pristane	22.8660	1131479	ug/L	Z
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**Results for: GCMS with Full Scan****Unique ID:** W13/007687 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\\_007687\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan

## 7687 Interior – contamination or pr/phy?



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane			1.720613558767	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510	240203		ug/L	Z
Aliph	nC22	31.0540	433614		ug/L	Z
Aliph	nC23	32.4960	1167724		ug/L	Z
Aliph	nC24	33.8800	2328439		ug/L	Z
Aliph	nC25	35.2120	4236474		ug/L	Z
Aliph	nC26	36.4960	5889038		ug/L	Z
Aliph	nC27	37.7300	7284842		ug/L	Z
Aliph	nC28	38.9260	6357196		ug/L	Z
Aliph	nC29	40.0740	5098067		ug/L	Z
Aliph	nC30	41.1930	3786216		ug/L	Z
Aliph	nC31	42.2750	2949716		ug/L	Z
Aliph	nC32	43.3560	2011778		ug/L	Z
Aliph	nC33	44.5840	1370302		ug/L	Z
Aliph	nC34	46.0130	917505		ug/L	Z
Aliph	nC35	47.7140	544955		ug/L	Z
Aliph	nC36	49.7870	452386		ug/L	Z
Aliph	nC37	52.2630	564132		ug/L	Z
Aliph	nC38	55.2360	234999		ug/L	Z
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010	698525		ug/L	Z
Aliph	Phytane	24.7190	1493935		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	2570484	ug/L	Z
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## 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 : **W13/007688**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

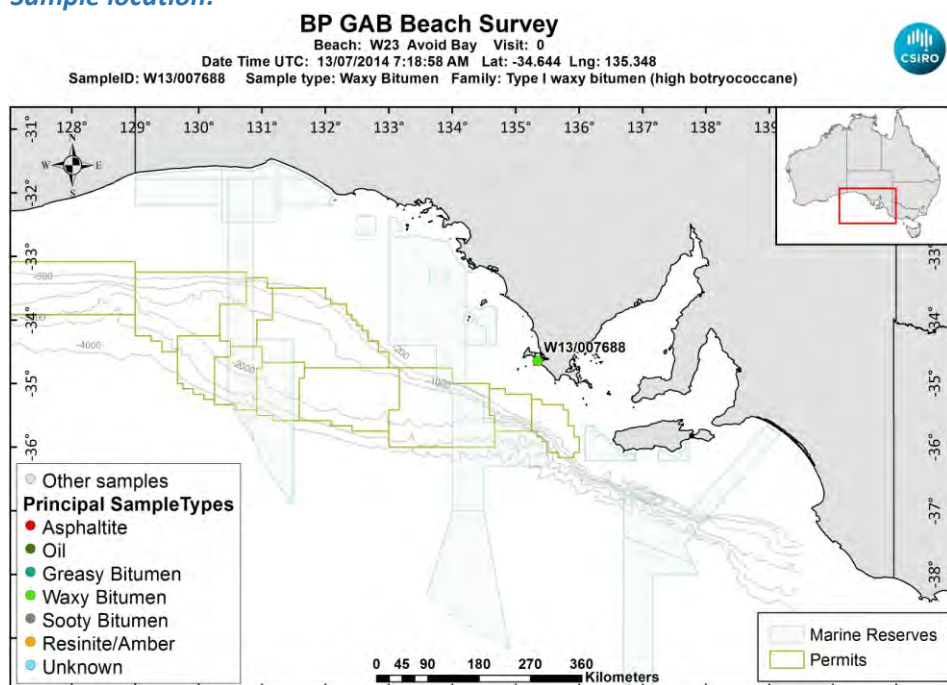
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 3.9

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007688\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007688\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007688\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007688\_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			86.37	percent	Y
Inorg	Hydrogen			9.00795228628231	percent	Y
Inorg	Nitrogen			0.266494430162811	percent	Y
Inorg	Sulphur			2.00263287970281	percent	Y

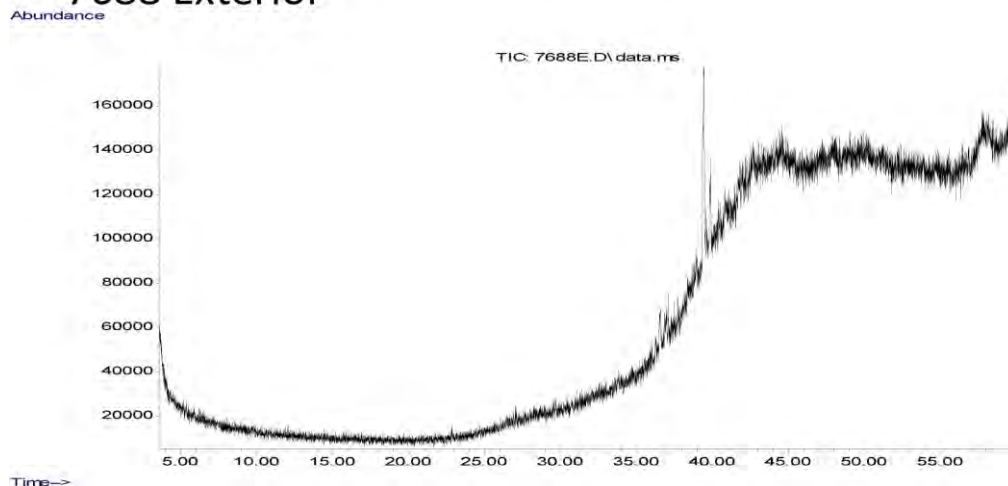
### Results for: GCMS with Full Scan

Unique ID: W13/007688\_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\\_007688\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7688 Exterior



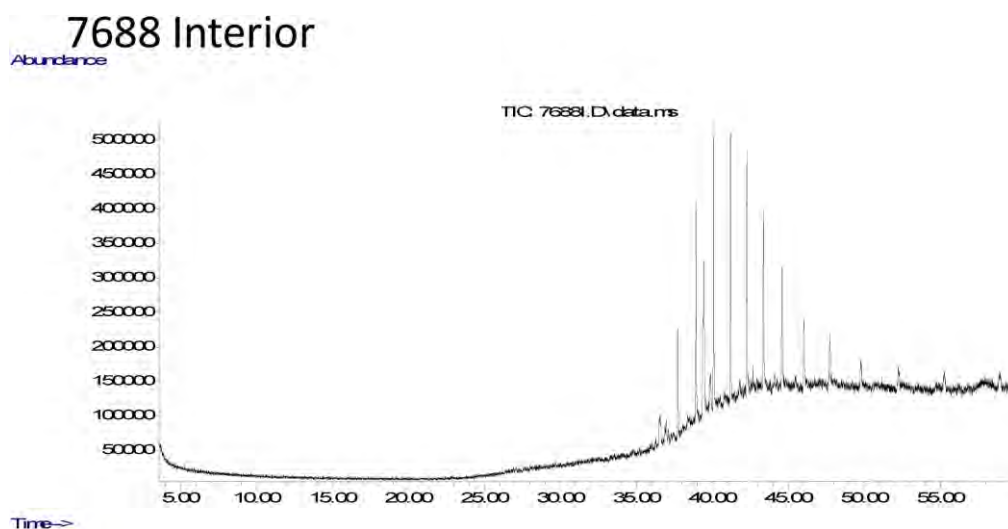
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	964160		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120			ug/L	U
Aliph	nC26	36.4960			ug/L	U
Aliph	nC27	37.7300			ug/L	U
Aliph	nC28	38.9260			ug/L	U
Aliph	nC29	40.0740			ug/L	U
Aliph	nC30	41.1930			ug/L	U
Aliph	nC31	42.2750			ug/L	U
Aliph	nC32	43.3560			ug/L	U
Aliph	nC33	44.5840			ug/L	U
Aliph	nC34	46.0130			ug/L	U
Aliph	nC35	47.7140			ug/L	U
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****Results for: GCMS with Full Scan****Unique ID:** W13/007688 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\\_007688\\_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	39.4290	1978604		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120			ug/L	U
Aliph	nC26	36.4960			ug/L	U
Aliph	nC27	37.7300	816820		ug/L	Z
Aliph	nC28	38.9260	1620045		ug/L	Z
Aliph	nC29	40.0740	2154995		ug/L	Z
Aliph	nC30	41.1930	2138682		ug/L	Z
Aliph	nC31	42.2750	1942861		ug/L	Z
Aliph	nC32	43.3560	1548467		ug/L	Z
Aliph	nC33	44.5840	1174938		ug/L	Z
Aliph	nC34	46.0130	865862		ug/L	Z
Aliph	nC35	47.7140	720465		ug/L	Z
Aliph	nC36	49.7870	570653		ug/L	Z
Aliph	nC37	52.2630	446542		ug/L	Z
Aliph	nC38	55.2360	439670		ug/L	Z
Aliph	nC39	58.9110	462005		ug/L	Z
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 : **W13/007689**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

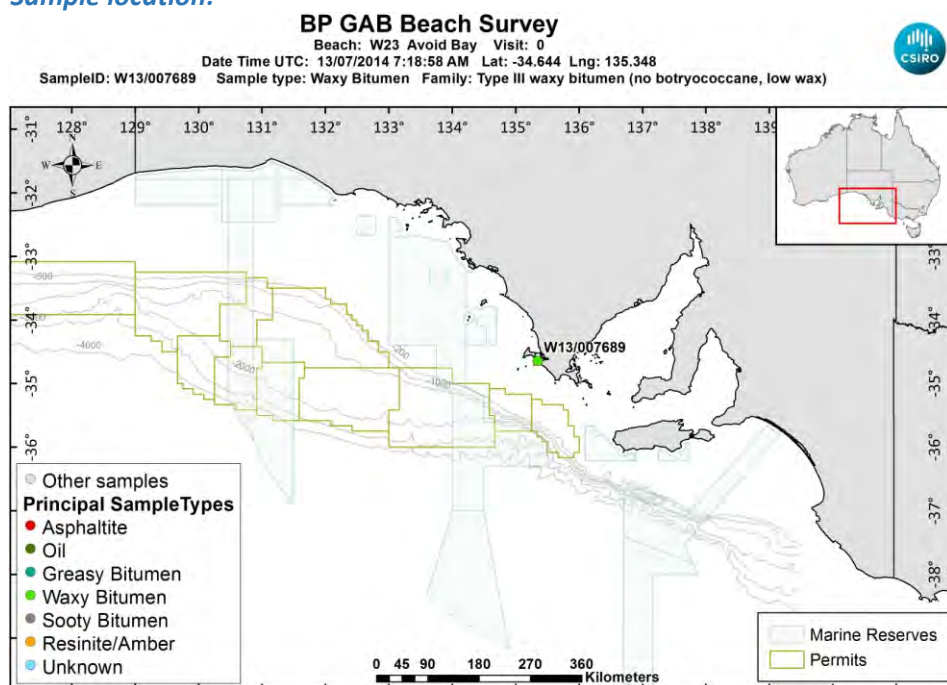
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 3.6

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007689\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007689\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007689\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007689\_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			85.64	percent	Y
Inorg	Hydrogen			8.7469550695825	percent	Y
Inorg	Nitrogen			9.21717223650386E-02	percent	Y
Inorg	Sulphur			1.81990020533163	percent	Y

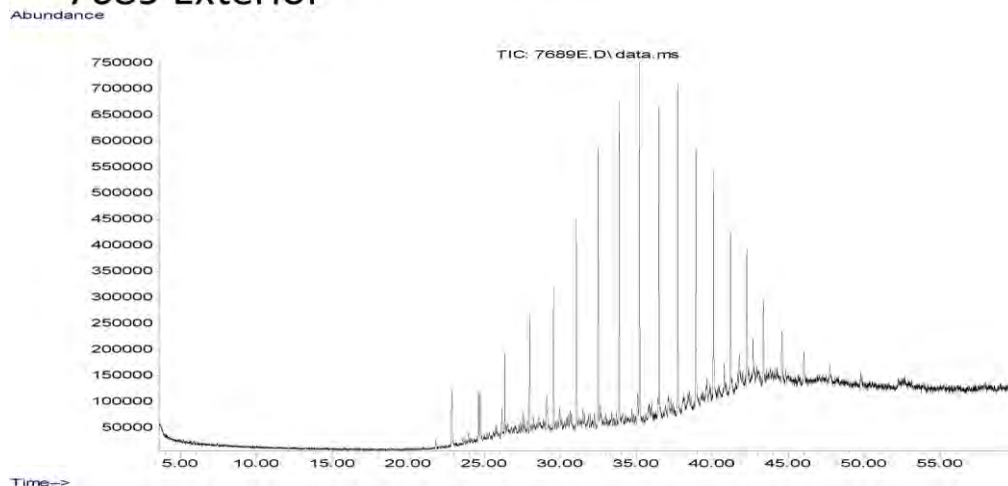
### Results for: GCMS with Full Scan

**Unique ID:** W13/007689\_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\\_007689\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7689 Exterior



## Data Sheet:

(default units ppb)

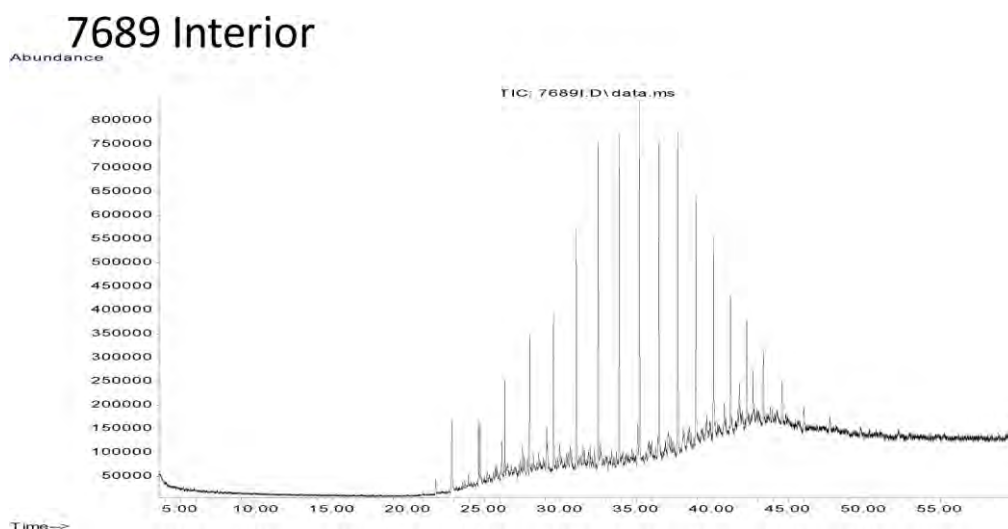
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	nC17/nC29		0.105700670380781		ug/L	Y
Ratio	nC17/nC35		0.546318427658912		ug/L	Y
Ratio	nC17/Pristane		0.296793961810512		ug/L	Y
Ratio	nC18/Phytane		0.773991588709164		ug/L	Y
Ratio	Pristane/Phytane		1.29830728383238		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	241890		ug/L	Z
Aliph	nC18	24.6230	485873		ug/L	Z
Aliph	nC19	26.3410	803527		ug/L	Z
Aliph	nC20	27.9810	1059950		ug/L	Z
Aliph	nC21	29.5510	1304822		ug/L	Z
Aliph	nC22	31.0540	1951657		ug/L	Z
Aliph	nC23	32.4960	2650305		ug/L	Z
Aliph	nC24	33.8800	3077423		ug/L	Z
Aliph	nC25	35.2120	3293406		ug/L	Z
Aliph	nC26	36.4960	3180442		ug/L	Z
Aliph	nC27	37.7300	3215765		ug/L	Z
Aliph	nC28	38.9260	2730958		ug/L	Z
Aliph	nC29	40.0740	2288447		ug/L	Z
Aliph	nC30	41.1930	1553200		ug/L	Z
Aliph	nC31	42.2750	1295142		ug/L	Z
Aliph	nC32	43.3560	990205		ug/L	Z
Aliph	nC33	44.5840	671500		ug/L	Z
Aliph	nC34	46.0130	464275		ug/L	Z
Aliph	nC35	47.7140	442764		ug/L	Z
Aliph	nC36	49.7870	329423		ug/L	Z
Aliph	nC37	52.2630			ug/L	U

**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360		ug/L	U
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	163306	ug/L	Z
Aliph	Phytane	24.7190	627749	ug/L	Z
Aliph	Pristane	22.8660	815011	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007689 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\\_007689\\_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:
Ratio	nC17/nC29		0.134899452038861		ug/L	Y
Ratio	nC17/nC35		1.11617950660065		ug/L	Y
Ratio	nC17/Pristane		0.253304496791923		ug/L	Y
Ratio	nC18/Phytane		0.867703381486977		ug/L	Y
Ratio	Pristane/Phytane		1.36305260039008		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	295983		ug/L	Z
Aliph	nC18	24.6230	743844		ug/L	Z
Aliph	nC19	26.3410	1143378		ug/L	Z
Aliph	nC20	27.9810	1416057		ug/L	Z
Aliph	nC21	29.5510	1787977		ug/L	Z
Aliph	nC22	31.0540	2484438		ug/L	Z
Aliph	nC23	32.4960	3307196		ug/L	Z
Aliph	nC24	33.8800	3568912		ug/L	Z
Aliph	nC25	35.2120	3827550		ug/L	Z
Aliph	nC26	36.4960	3641995		ug/L	Z
Aliph	nC27	37.7300	3529952		ug/L	Z
Aliph	nC28	38.9260	2763047		ug/L	Z
Aliph	nC29	40.0740	2194097		ug/L	Z
Aliph	nC30	41.1930	1521762		ug/L	Z
Aliph	nC31	42.2750	1267915		ug/L	Z
Aliph	nC32	43.3560	760666		ug/L	Z
Aliph	nC33	44.5840	596389		ug/L	Z
Aliph	nC34	46.0130	317657		ug/L	Z
Aliph	nC35	47.7140	265175		ug/L	Z
Aliph	nC36	49.7870	196144		ug/L	Z
Aliph	nC37	52.2630	187055		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	nC38	55.2360		ug/L	U
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	250298	ug/L	Z
Aliph	Phytane	24.7190	857256	ug/L	Z
Aliph	Pristane	22.8660	1168485	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 : **W13/007690**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

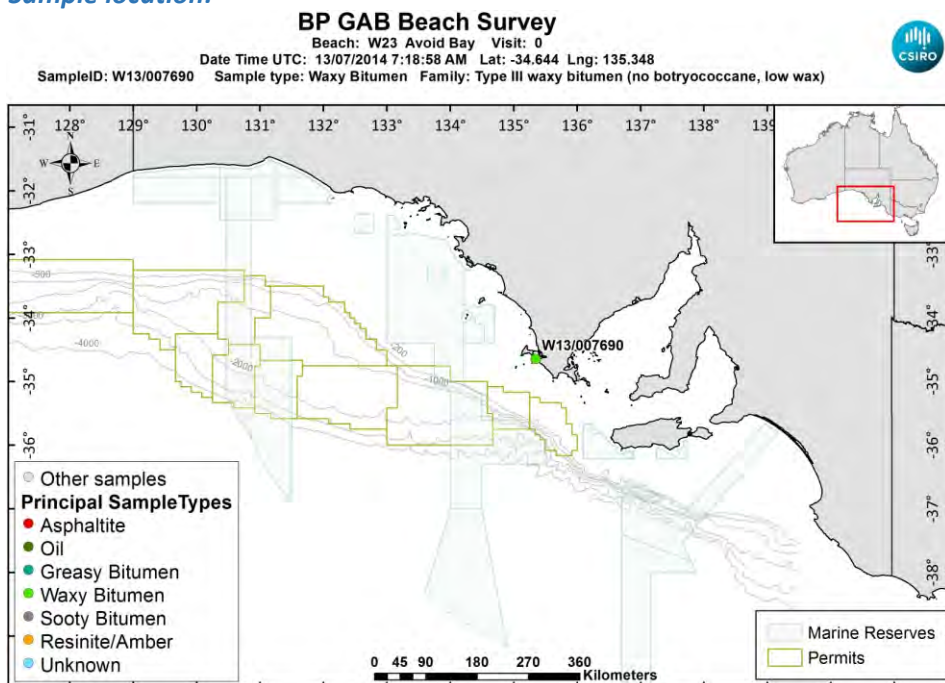
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 5.8

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007690\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007690\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007690\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007690\_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:

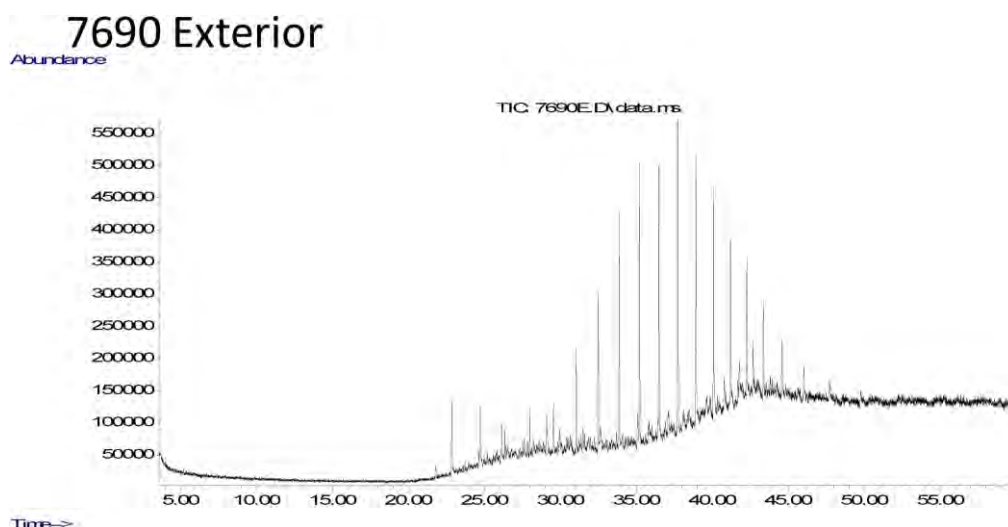
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.58	percent	Y
Inorg	Hydrogen			10.7440644135189	percent	Y
Inorg	Nitrogen			8.18611825192802E-02	percent	Y
Inorg	Sulphur			2.44462193672327	percent	Y

### Results for: GCMS with Full Scan

Unique ID: W13/007690\_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\\_007690\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

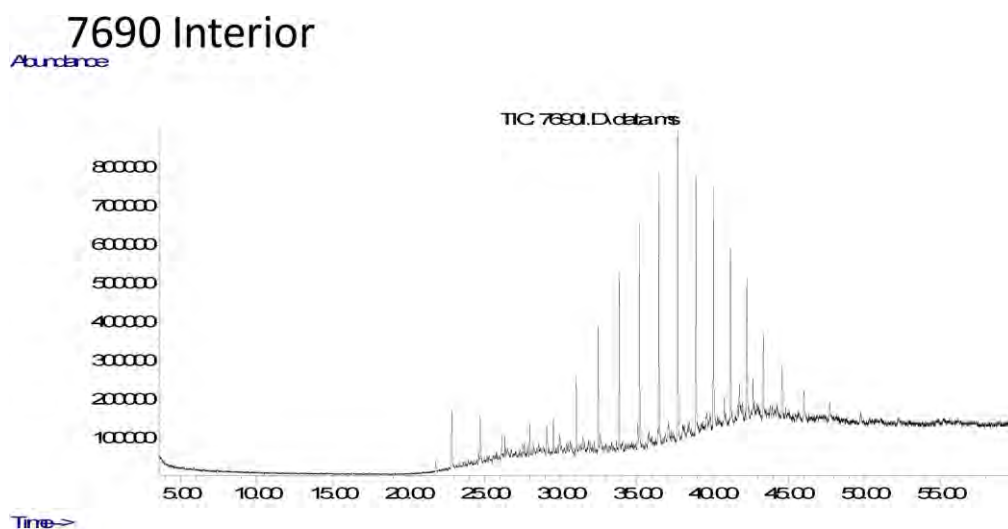
Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane			1.26030190042773	ug/L	Y
Aliph	Botryococcane	39.4290			ug/L	U
Aliph	nC10	0.0000			ug/L	U
Aliph	nC11	0.0000			ug/L	U
Aliph	nC12	12.2580			ug/L	U
Aliph	nC13	14.5950			ug/L	U
Aliph	nC14	16.8180			ug/L	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			ug/L	U
Aliph	nC19	26.3410	198150		ug/L	Z
Aliph	nC20	27.9810	315038		ug/L	Z
Aliph	nC21	29.5510	375445		ug/L	Z
Aliph	nC22	31.0540	787787		ug/L	Z
Aliph	nC23	32.4960	1215555		ug/L	Z
Aliph	nC24	33.8800	1786126		ug/L	Z
Aliph	nC25	35.2120	2037494		ug/L	Z
Aliph	nC26	36.4960	2287441		ug/L	Z
Aliph	nC27	37.7300	2671163		ug/L	Z
Aliph	nC28	38.9260	2052651		ug/L	Z
Aliph	nC29	40.0740	1789962		ug/L	Z
Aliph	nC30	41.1930	1396985		ug/L	Z
Aliph	nC31	42.2750	1126961		ug/L	Z
Aliph	nC32	43.3560	768066		ug/L	Z
Aliph	nC33	44.5840	642899		ug/L	Z
Aliph	nC34	46.0130	438670		ug/L	Z
Aliph	nC35	47.7140	269553		ug/L	Z
Aliph	nC36	49.7870	226374		ug/L	Z
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	181315		ug/L	Z
Aliph	Phytane	24.7190	698189		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	Pristane	22.8660	879929	ug/L	Z
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**Results for: GCMS with Full Scan****Unique ID:** W13/007690 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\\_007690\\_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			0.234600845154523	ug/L	Y
Ratio	Pristane/Phytane			1.4745724962874	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	188423		ug/L	Z
Aliph	nC19	26.3410	279175		ug/L	Z
Aliph	nC20	27.9810	361270		ug/L	Z
Aliph	nC21	29.5510	472043		ug/L	Z
Aliph	nC22	31.0540	975532		ug/L	Z
Aliph	nC23	32.4960	1555749		ug/L	Z
Aliph	nC24	33.8800	2337205		ug/L	Z
Aliph	nC25	35.2120	2798710		ug/L	Z
Aliph	nC26	36.4960	3403148		ug/L	Z
Aliph	nC27	37.7300	3897205		ug/L	Z
Aliph	nC28	38.9260	3372366		ug/L	Z
Aliph	nC29	40.0740	3121968		ug/L	Z
Aliph	nC30	41.1930	2305066		ug/L	Z
Aliph	nC31	42.2750	1897910		ug/L	Z
Aliph	nC32	43.3560	1273603		ug/L	Z
Aliph	nC33	44.5840	945819		ug/L	Z
Aliph	nC34	46.0130	607603		ug/L	Z
Aliph	nC35	47.7140	489801		ug/L	Z
Aliph	nC36	49.7870	373812		ug/L	Z
Aliph	nC37	52.2630	335785		ug/L	Z
Aliph	nC38	55.2360			ug/L	U
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010	208007		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Phytane	24.7190	803164	ug/L	Z
Aliph	Pristane	22.8660	1184324	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 : **W13/007691**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

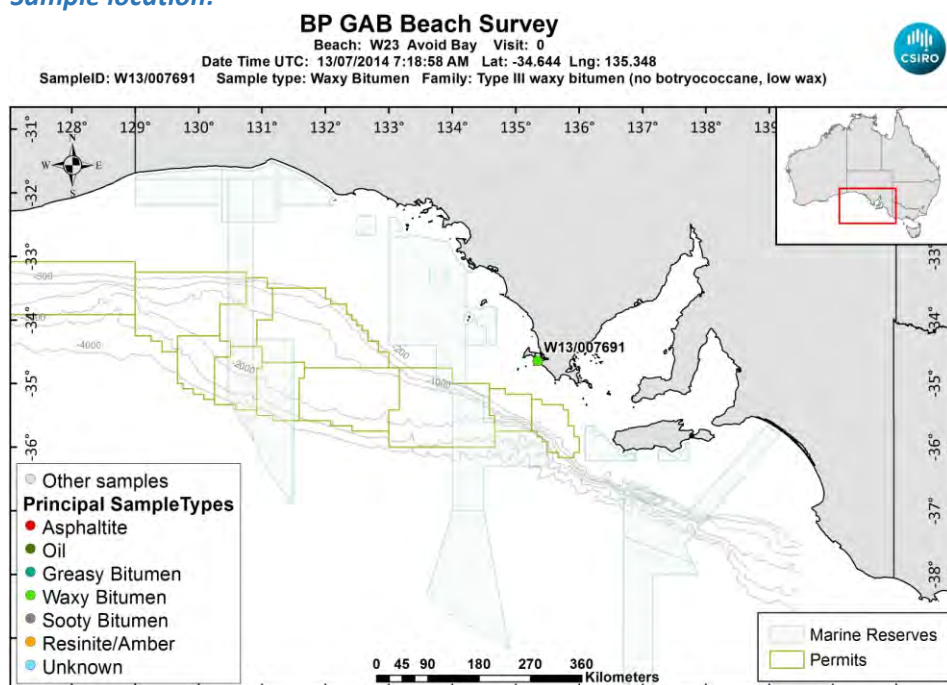
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 5

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007691\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007691\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007691\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007691\_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:

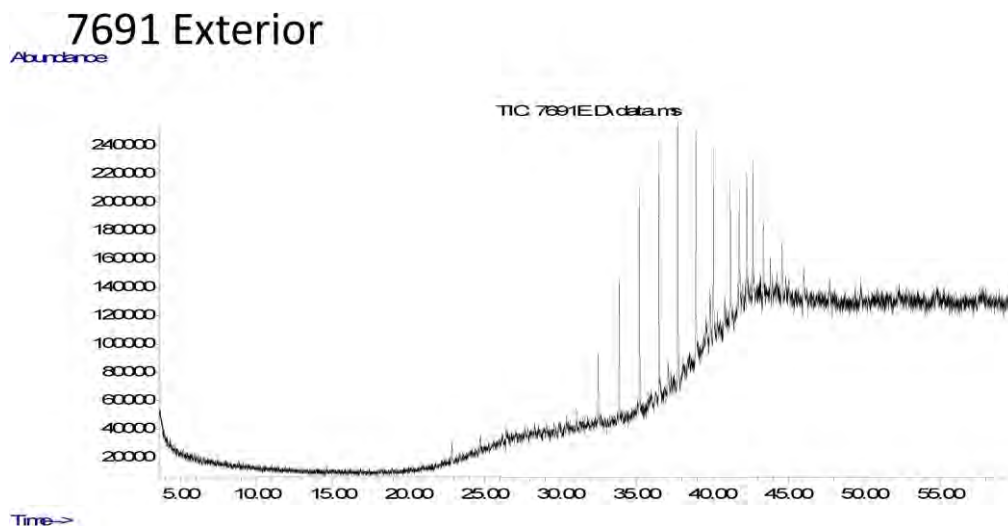
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.29	percent	Y
Inorg	Hydrogen			9.29698926441352	percent	Y
Inorg	Nitrogen			0.162947729220223	percent	Y
Inorg	Sulphur			2.0988227366091	percent	Y

### Results for: GCMS with Full Scan

**Unique ID:** W13/007691\_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\\_007691\\_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:
Ratio	Pristane/Phytane			1.1537898934759	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540	74850		ug/L	Z
Aliph	nC23	32.4960	225291		ug/L	Z
Aliph	nC24	33.8800	467865		ug/L	Z
Aliph	nC25	35.2120	804627		ug/L	Z
Aliph	nC26	36.4960	904981		ug/L	Z
Aliph	nC27	37.7300	955879		ug/L	Z
Aliph	nC28	38.9260	818744		ug/L	Z
Aliph	nC29	40.0740	694931		ug/L	Z
Aliph	nC30	41.1930	522792		ug/L	Z
Aliph	nC31	42.2750	473523		ug/L	Z
Aliph	nC32	43.3560	335328		ug/L	Z
Aliph	nC33	44.5840	271560		ug/L	Z
Aliph	nC34	46.0130	159687		ug/L	Z
Aliph	nC35	47.7140	171293		ug/L	Z
Aliph	nC36	49.7870	312044		ug/L	Z
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	70674		ug/L	Z

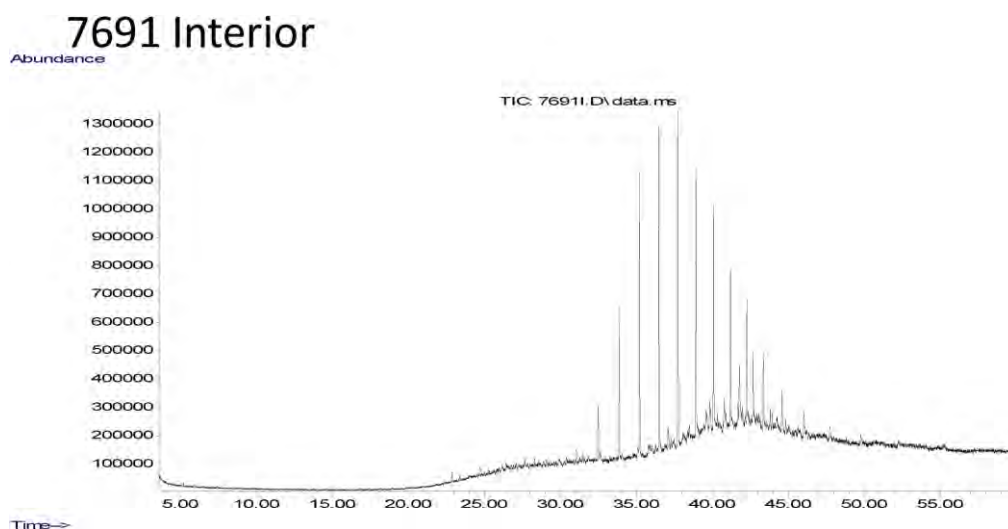
## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	81543	ug/L	Z
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## Results for: GCMS with Full Scan

**Unique ID:** W13/007691 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\\_007691\\_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:
Ratio	Pristane/Phytane			1.269189756152	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540	241760		ug/L	Z
Aliph	nC23	32.4960	1007061		ug/L	Z
Aliph	nC24	33.8800	2650486		ug/L	Z
Aliph	nC25	35.2120	4509711		ug/L	Z
Aliph	nC26	36.4960	5599949		ug/L	Z
Aliph	nC27	37.7300	6034297		ug/L	Z
Aliph	nC28	38.9260	4867999		ug/L	Z
Aliph	nC29	40.0740	4110328		ug/L	Z
Aliph	nC30	41.1930	2863297		ug/L	Z
Aliph	nC31	42.2750	2345247		ug/L	Z
Aliph	nC32	43.3560	1571841		ug/L	Z
Aliph	nC33	44.5840	1105057		ug/L	Z
Aliph	nC34	46.0130	661116		ug/L	Z
Aliph	nC35	47.7140	425584		ug/L	Z
Aliph	nC36	49.7870	367908		ug/L	Z
Aliph	nC37	52.2630	387625		ug/L	Z
Aliph	nC38	55.2360	213097		ug/L	Z
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010			ug/L	U
Aliph	Phytane	24.7190	207345		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	263160	ug/L	Z
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## 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 : **W13/007692**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

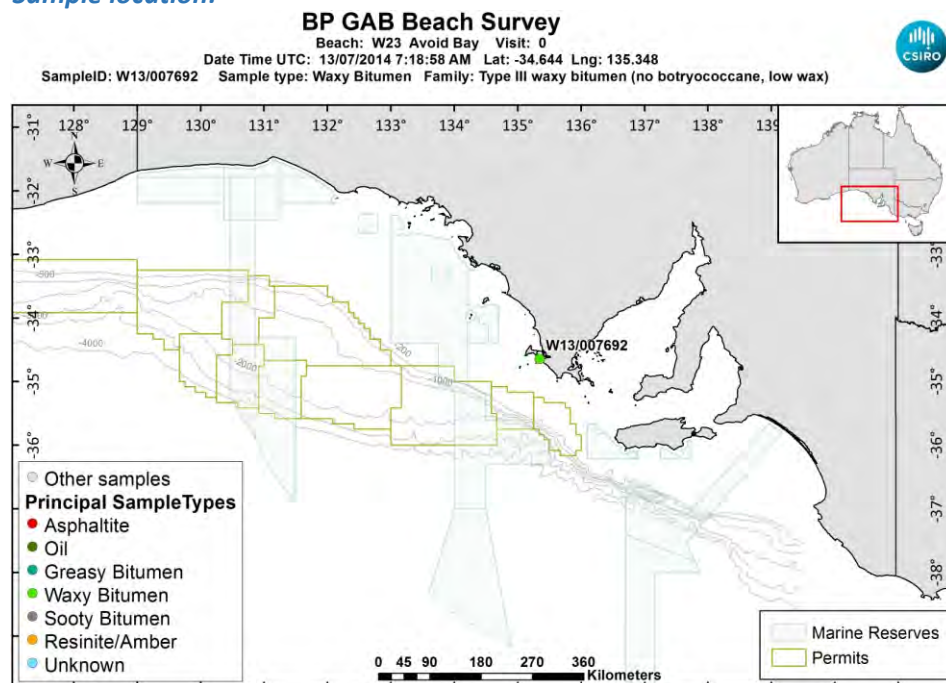
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 6.1

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007692\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007692\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007692\\_Photo02.JPG](#)

### Analyses Requested

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

### Analyses Completed:

Analysis:	Instrument/Type:
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:** W13/007692\_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:** 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			36.8034358135332	ratio	Y
BiomRatio	% C27 abb 20(R+S)			40.4183489358723	ratio	Y
BiomRatio	% C28 aaa 20R			19.4323703938854	ratio	Y
BiomRatio	% C28 abb 20(R+S)			20.8806859031988	ratio	Y
BiomRatio	% C29 aaa 20R			43.7641937925814	ratio	Y
BiomRatio	% C29 abb 20(R+S)			38.7009651609289	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.109611882337001	ratio	Y
BiomRatio	25-Nor/C30H			6.32521568612605E-02	ratio	Y
BiomRatio	C19t/C23t			5.38881409720572E-02	ratio	Y
BiomRatio	C22t/C21t			0.255927261992995	ratio	Y
BiomRatio	C22t/C24t			0.186400084149884	ratio	Y
BiomRatio	C23t/C30H			0.121002968878356	ratio	Y
BiomRatio	C24t/C23t			0.845803991040641	ratio	Y
BiomRatio	C24Tet/C23t			0.336445253954427	ratio	Y
BiomRatio	C24Tet/C26t			0.379595618650518	ratio	Y
BiomRatio	C24Tet/C30H			4.07108745935182E-02	ratio	Y
BiomRatio	C26t/C25t			1.58935555863331	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.591857808243255	ratio	Y
BiomRatio	C27 Dia/Ster			0.75474643969267	ratio	Y
BiomRatio	C28BNH/C30H			4.07541727078972E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.957509798886933	ratio	Y
BiomRatio	C29H/C30H			0.732467457799718	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.223963830564061	ratio	Y
BiomRatio	C30DiaH/C30H			9.06645952974935E-02	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			3.01059282924294E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.371849244757296	ratio	Y
BiomRatio	Gam/C30H			6.26037498533069E-02	ratio	Y
BiomRatio	Gam/C31HR			0.424052656504295	ratio	Y
BiomRatio	Ole/C30H			5.60117893904004E-02	ratio	Y
BiomRatio	Sterane/hopane			5.99797389956737E-02	ratio	Y
BiomRatio	Steranes/Terpanes			4.87349076817967E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.230734638655674	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007692\_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)

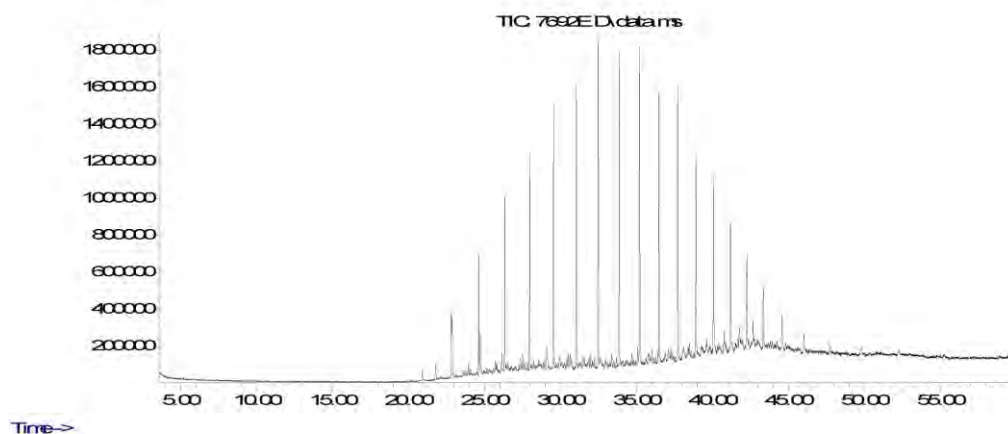
Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			88.19	percent	Y
Inorg	Hydrogen			12.6600397614314	percent	Y
Inorg	Nitrogen			0.132896315338475	percent	Y
Inorg	Sulphur			3.04787212616017	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007692\_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\\_007692\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7692 Exterior

Abundance



## Data Sheet:

(default units ppb)

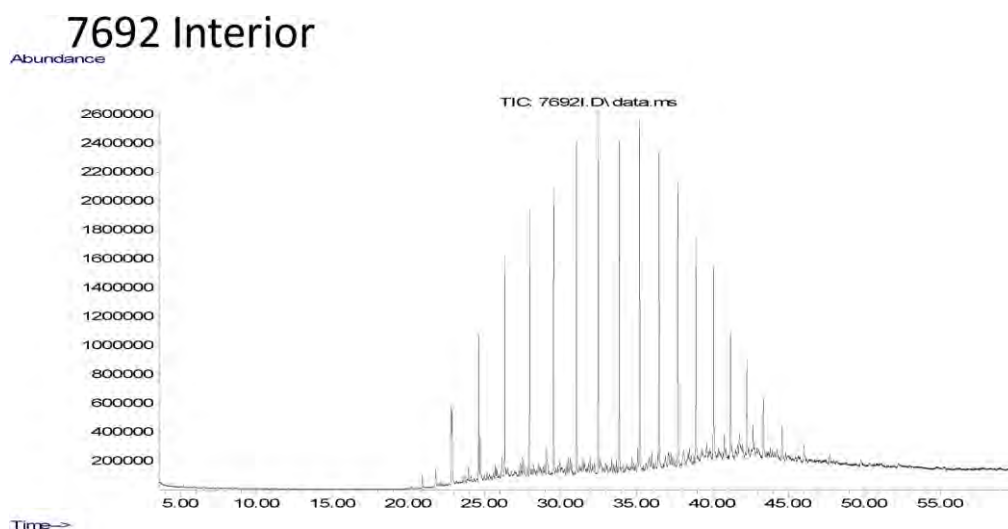
Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29			0.472759766077895	ug/L	Y
Ratio	nC17/nC35			4.03740245230486	ug/L	Y
Ratio	nC17/Pristane			0.963843317962074	ug/L	Y
Ratio	nC18/Phytane			2.58911792908567	ug/L	Y
Ratio	Pristane/Phytane			1.69181569252197	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	390332		ug/L	Z
Aliph	nC17	22.8190	2264915		ug/L	Z
Aliph	nC18	24.6230	3596204		ug/L	Z
Aliph	nC19	26.3410	4980370		ug/L	Z
Aliph	nC20	27.9810	6159136		ug/L	Z
Aliph	nC21	29.5510	7151479		ug/L	Z
Aliph	nC22	31.0540	7785250		ug/L	Z
Aliph	nC23	32.4960	8713227		ug/L	Z
Aliph	nC24	33.8800	8648385		ug/L	Z
Aliph	nC25	35.2120	8643426		ug/L	Z
Aliph	nC26	36.4960	7766082		ug/L	Z
Aliph	nC27	37.7300	7331112		ug/L	Z
Aliph	nC28	38.9260	5679039		ug/L	Z
Aliph	nC29	40.0740	4790838		ug/L	Z
Aliph	nC30	41.1930	3534256		ug/L	Z
Aliph	nC31	42.2750	2819557		ug/L	Z
Aliph	nC32	43.3560	1954639		ug/L	Z
Aliph	nC33	44.5840	1341368		ug/L	Z
Aliph	nC34	46.0130	785390		ug/L	Z
Aliph	nC35	47.7140	560983		ug/L	Z
Aliph	nC36	49.7870	442131		ug/L	Z
Aliph	nC37	52.2630	415998		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360	262058	ug/L	Z
Aliph	nC39	58.9110	160901	ug/L	Z
Aliph	Norpristane	21.8010	731574	ug/L	Z
Aliph	Phytane	24.7190	1388969	ug/L	Z
Aliph	Pristane	22.8660	2349879	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007692 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\\_007692\\_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	nC17/nC29			0.441051641399434	ug/L	Y
Ratio	nC17/nC35			4.54749598306963	ug/L	Y
Ratio	nC17/Pristane			0.771181453474293	ug/L	Y
Ratio	nC18/Phytane			2.30238641809057	ug/L	Y
Ratio	Pristane/Phytane			1.58366281085116	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	584584		ug/L	Z
Aliph	nC17	22.8190	2829046		ug/L	Z
Aliph	nC18	24.6230	5333335		ug/L	Z
Aliph	nC19	26.3410	7557798		ug/L	Z
Aliph	nC20	27.9810	9057763		ug/L	Z
Aliph	nC21	29.5510	10303133		ug/L	Z
Aliph	nC22	31.0540	11209706		ug/L	Z
Aliph	nC23	32.4960	12131724		ug/L	Z
Aliph	nC24	33.8800	11688860		ug/L	Z
Aliph	nC25	35.2120	11852440		ug/L	Z
Aliph	nC26	36.4960	10896124		ug/L	Z
Aliph	nC27	37.7300	10165627		ug/L	Z
Aliph	nC28	38.9260	7734997		ug/L	Z
Aliph	nC29	40.0740	6414318		ug/L	Z
Aliph	nC30	41.1930	4295660		ug/L	Z
Aliph	nC31	42.2750	3446457		ug/L	Z
Aliph	nC32	43.3560	2391616		ug/L	Z
Aliph	nC33	44.5840	1621614		ug/L	Z
Aliph	nC34	46.0130	1018324		ug/L	Z
Aliph	nC35	47.7140	622111		ug/L	Z
Aliph	nC36	49.7870	559730		ug/L	Z
Aliph	nC37	52.2630	432127		ug/L	Z



## Results for: GCMS with Full Scan

Aliph	nC38	55.2360		ug/L	U
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	1112362	ug/L	Z
Aliph	Phytane	24.7190	2316438	ug/L	Z
Aliph	Pristane	22.8660	3668456	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 : **W13/007693**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

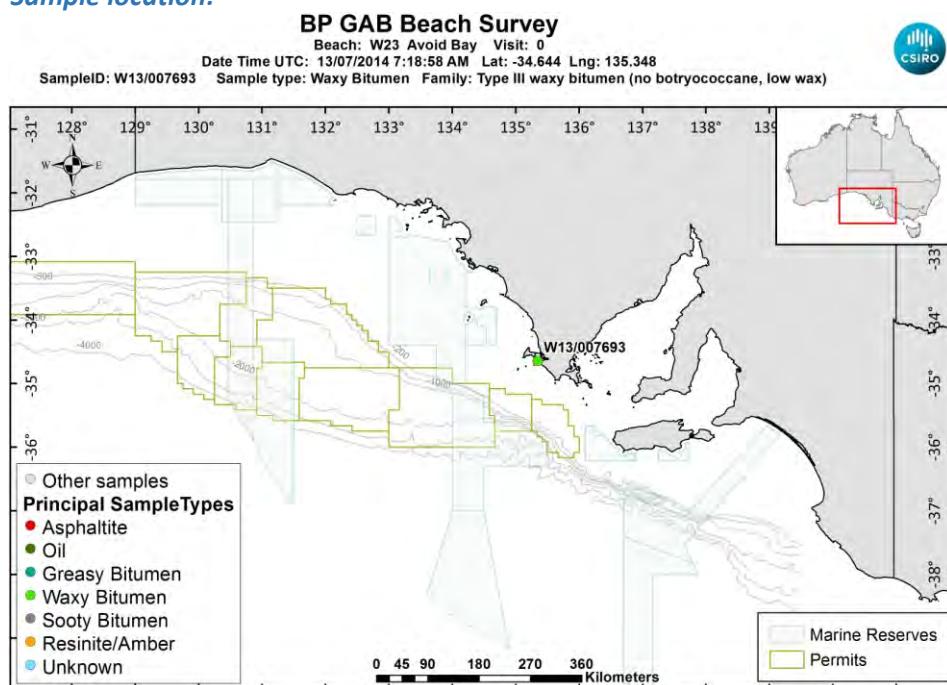
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 4.8

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007693\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007693\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007693\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007693\_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			84.66	percent	Y
Inorg	Hydrogen			9.67716739562624	percent	Y
Inorg	Nitrogen			0.15392030848329	percent	Y
Inorg	Sulphur			2.01042797993706	percent	Y

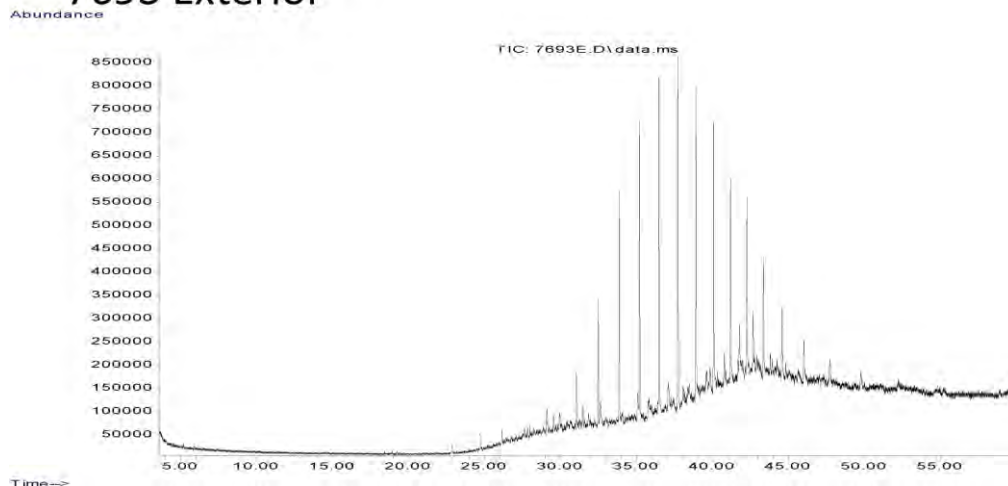
### Results for: GCMS with Full Scan

Unique ID: W13/007693\_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\\_007693\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7693 Exterior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane			0.475251368259774	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510	217457		ug/L	Z
Aliph	nC22	31.0540	609592		ug/L	Z
Aliph	nC23	32.4960	1401822		ug/L	Z
Aliph	nC24	33.8800	2500072		ug/L	Z
Aliph	nC25	35.2120	3292520		ug/L	Z
Aliph	nC26	36.4960	3548390		ug/L	Z
Aliph	nC27	37.7300	3849717		ug/L	Z
Aliph	nC28	38.9260	3380845		ug/L	Z
Aliph	nC29	40.0740	3042425		ug/L	Z
Aliph	nC30	41.1930	2261534		ug/L	Z
Aliph	nC31	42.2750	2051011		ug/L	Z
Aliph	nC32	43.3560	1311463		ug/L	Z
Aliph	nC33	44.5840	1086106		ug/L	Z
Aliph	nC34	46.0130	710732		ug/L	Z
Aliph	nC35	47.7140	587908		ug/L	Z
Aliph	nC36	49.7870	379412		ug/L	Z
Aliph	nC37	52.2630	502441		ug/L	Z
Aliph	nC38	55.2360	162193		ug/L	Z
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010			ug/L	U
Aliph	Phytane	24.7190	248175		ug/L	Z

**Results for: GCMS with Full Scan**

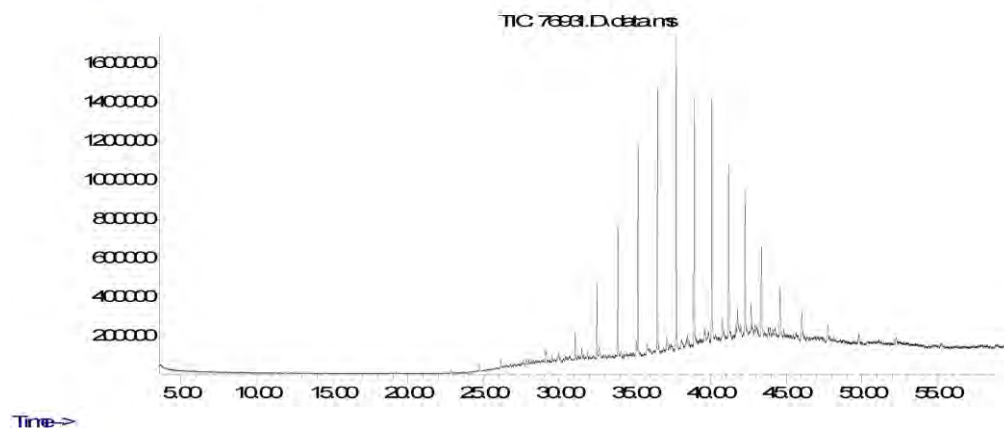
Aliph	Pristane	22.8660	117945	ug/L	Z
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**Results for: GCMS with Full Scan****Unique ID:** W13/007693 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 18/11/2016**Method ID/s:****Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007693\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan

7693 Interior

Abundance



Time--&gt;

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane			0.538783811710395	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810	96733		ug/L	Z
Aliph	nC21	29.5510	220387		ug/L	Z
Aliph	nC22	31.0540	784905		ug/L	Z
Aliph	nC23	32.4960	1947062		ug/L	Z
Aliph	nC24	33.8800	3883092		ug/L	Z
Aliph	nC25	35.2120	5650379		ug/L	Z
Aliph	nC26	36.4960	6927192		ug/L	Z
Aliph	nC27	37.7300	8494452		ug/L	Z
Aliph	nC28	38.9260	7194669		ug/L	Z
Aliph	nC29	40.0740	6294363		ug/L	Z
Aliph	nC30	41.1930	4741331		ug/L	Z
Aliph	nC31	42.2750	3715740		ug/L	Z
Aliph	nC32	43.3560	2517561		ug/L	Z
Aliph	nC33	44.5840	1785443		ug/L	Z
Aliph	nC34	46.0130	1114297		ug/L	Z
Aliph	nC35	47.7140	760110		ug/L	Z
Aliph	nC36	49.7870	502292		ug/L	Z
Aliph	nC37	52.2630	522345		ug/L	Z
Aliph	nC38	55.2360	562321		ug/L	Z
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010			ug/L	U
Aliph	Phytane	24.7190	292659		ug/L	Z



## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	157680	ug/L	Z
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## 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 : **W13/007694**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

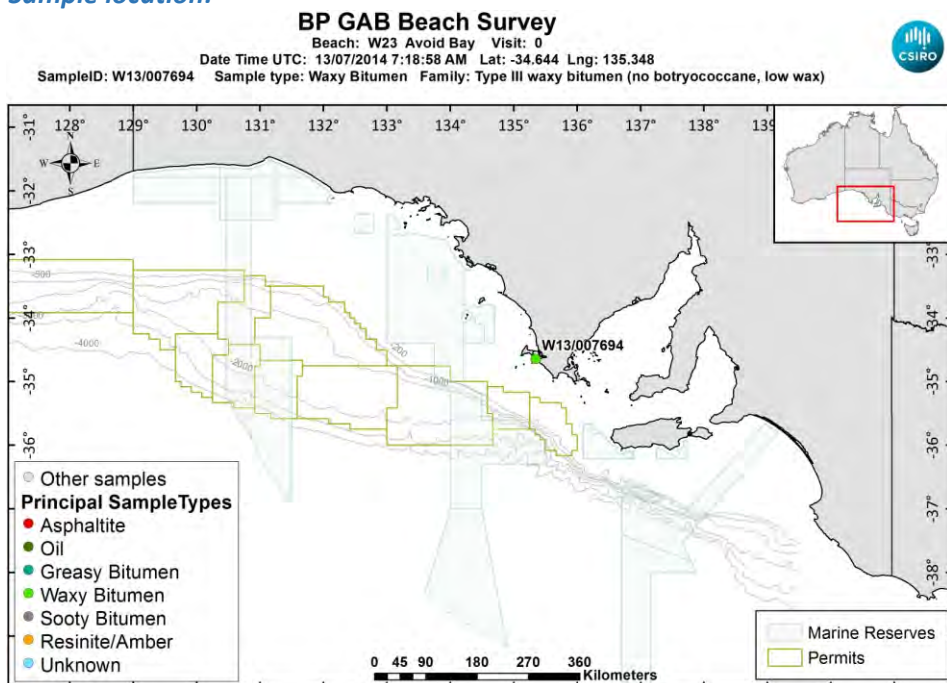
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 8

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007694\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007694\\_Photo01.JPG](#)

**Sample - laboratory image:**



LinkedFiles\GAB\_BCH1\Samples\W13\_007694\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007694\_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			82.52	percent	Y
Inorg	Hydrogen			9.7076930417495	percent	Y
Inorg	Nitrogen			0.154498714652956	percent	Y
Inorg	Sulphur			2.00763310372769	percent	Y

### Results for: GCMS with Full Scan

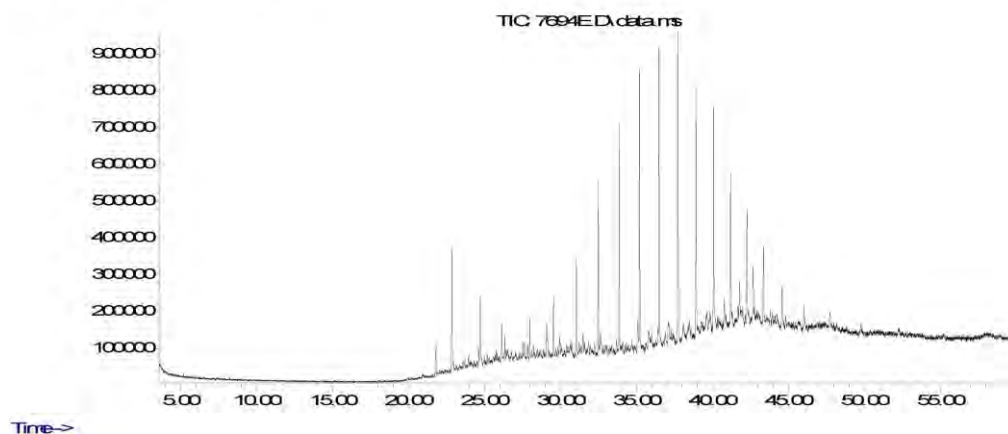
Unique ID: W13/007694\_DISS\_GCMS-Scan/01

**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\\_007694\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7694 Exterior

Abundance



## Data Sheet:

(default units ppb)

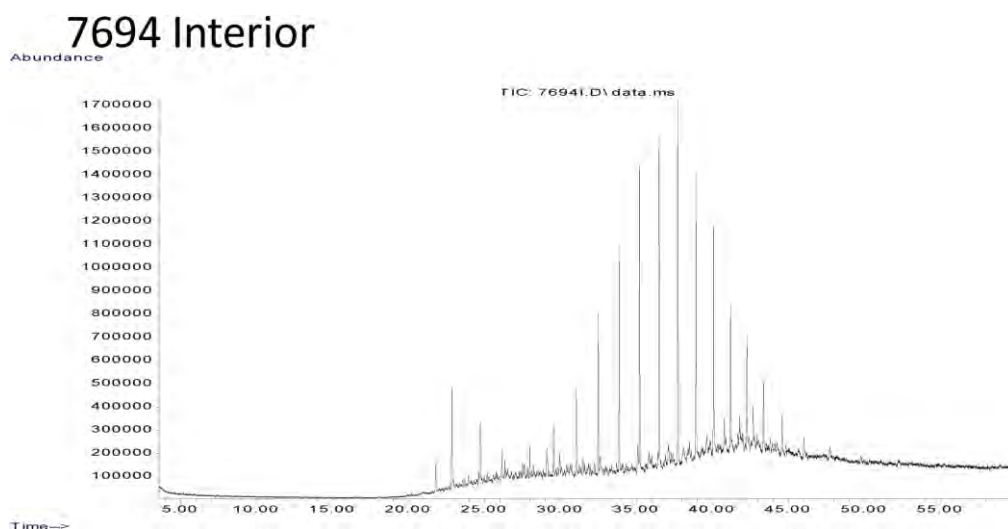
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	nC18/Phytane		0.165225796953732		ug/L	Y
Ratio	Pristane/Phytane		1.75271114817066		ug/L	Y
Aliph	Botryococcane	39.4290			ug/L	U
Aliph	nC10	0.0000			ug/L	U
Aliph	nC11	0.0000			ug/L	U
Aliph	nC12	12.2580			ug/L	U
Aliph	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	239572		ug/L	Z
Aliph	nC19	26.3410	314589		ug/L	Z
Aliph	nC20	27.9810	474932		ug/L	Z
Aliph	nC21	29.5510	800843		ug/L	Z
Aliph	nC22	31.0540	1376199		ug/L	Z
Aliph	nC23	32.4960	2340301		ug/L	Z
Aliph	nC24	33.8800	3137439		ug/L	Z
Aliph	nC25	35.2120	3910118		ug/L	Z
Aliph	nC26	36.4960	4066158		ug/L	Z
Aliph	nC27	37.7300	4507364		ug/L	Z
Aliph	nC28	38.9260	3442013		ug/L	Z
Aliph	nC29	40.0740	3094683		ug/L	Z
Aliph	nC30	41.1930	2244769		ug/L	Z
Aliph	nC31	42.2750	1752420		ug/L	Z
Aliph	nC32	43.3560	1227715		ug/L	Z
Aliph	nC33	44.5840	852221		ug/L	Z
Aliph	nC34	46.0130	638480		ug/L	Z
Aliph	nC35	47.7140	451803		ug/L	Z
Aliph	nC36	49.7870	325720		ug/L	Z
Aliph	nC37	52.2630	219678		ug/L	Z
Aliph	nC38	55.2360	182027		ug/L	Z
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010	702995		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	Phytane	24.7190	1449967	ug/L	Z
Aliph	Pristane	22.8660	2541373	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007694 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\\_007694\\_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			0.181224824433189	ug/L	Y
Ratio	Pristane/Phytane			1.80922676580686	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	345446		ug/L	Z
Aliph	nC19	26.3410	461032		ug/L	Z
Aliph	nC20	27.9810	651613		ug/L	Z
Aliph	nC21	29.5510	1061233		ug/L	Z
Aliph	nC22	31.0540	1927278		ug/L	Z
Aliph	nC23	32.4960	3375234		ug/L	Z
Aliph	nC24	33.8800	5106715		ug/L	Z
Aliph	nC25	35.2120	6906529		ug/L	Z
Aliph	nC26	36.4960	7447421		ug/L	Z
Aliph	nC27	37.7300	7809232		ug/L	Z
Aliph	nC28	38.9260	6111277		ug/L	Z
Aliph	nC29	40.0740	4759446		ug/L	Z
Aliph	nC30	41.1930	3378552		ug/L	Z
Aliph	nC31	42.2750	2637301		ug/L	Z
Aliph	nC32	43.3560	1788241		ug/L	Z
Aliph	nC33	44.5840	1143681		ug/L	Z
Aliph	nC34	46.0130	638982		ug/L	Z
Aliph	nC35	47.7140	434490		ug/L	Z
Aliph	nC36	49.7870	398749		ug/L	Z
Aliph	nC37	52.2630	284048		ug/L	Z
Aliph	nC38	55.2360			ug/L	U
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010	995049		ug/L	Z



## Results for: GCMS with Full Scan

Aliph	Phytane	24.7190	1906176	ug/L	Z
Aliph	Pristane	22.8660	3448705	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 : **W13/007695**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

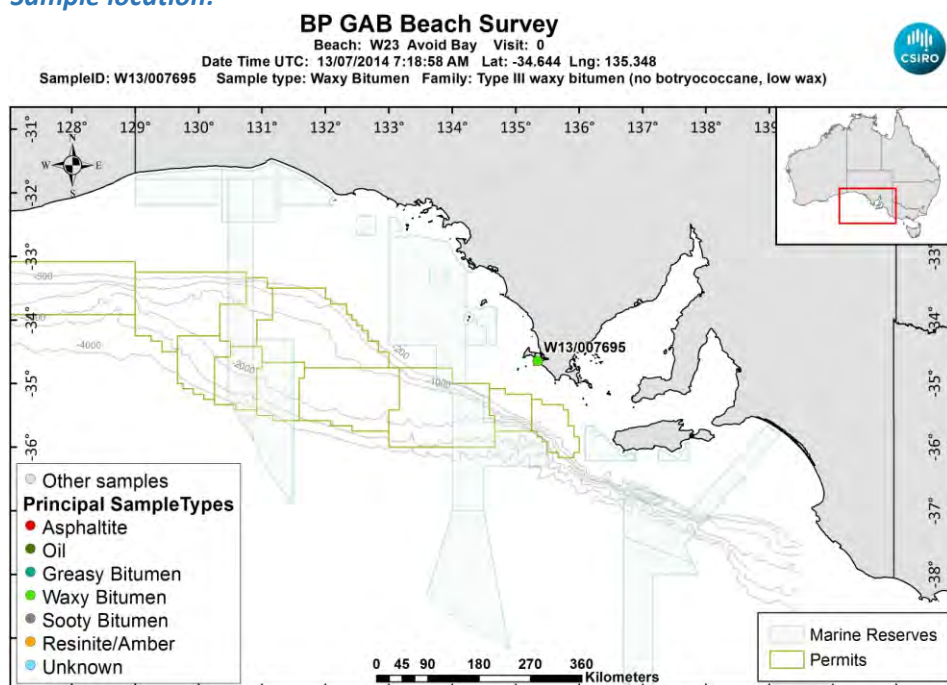
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 4

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007695\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007695\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007695\\_Photo02.JPG](#)

### Analyses Requested

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

### Analyses Completed:

Analysis:	Instrument/Type:
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: W13/007695\_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: 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			34.0388656513299	ratio	Y
BiomRatio	% C27 abb 20(R+S)			38.9249891699157	ratio	Y
BiomRatio	% C28 aaa 20R			25.3035003102047	ratio	Y
BiomRatio	% C28 abb 20(R+S)			24.028902440379	ratio	Y
BiomRatio	% C29 aaa 20R			40.6576340384654	ratio	Y
BiomRatio	% C29 abb 20(R+S)			37.0461083897053	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.129715124113187	ratio	Y
BiomRatio	25-Nor/C30H			0.198567881955423	ratio	Y
BiomRatio	C19t/C23t			8.65833325301902E-02	ratio	Y
BiomRatio	C22t/C21t			5.71473025458988E-02	ratio	Y
BiomRatio	C22t/C24t			0.044840813867328	ratio	Y
BiomRatio	C23t/C30H			0.475443579021262	ratio	Y
BiomRatio	C24t/C23t			0.852591582416947	ratio	Y
BiomRatio	C24Tet/C23t			7.63119343864147E-02	ratio	Y
BiomRatio	C24Tet/C26t			7.66603299820065E-02	ratio	Y
BiomRatio	C24Tet/C30H			3.62820192067127E-02	ratio	Y
BiomRatio	C26t/C25t			1.65279092374715	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.479788395384557	ratio	Y
BiomRatio	C27 Dia/Ster			0.461144245556436	ratio	Y
BiomRatio	C28BNH/C30H			0.15648251756583	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.951730730816426	ratio	Y
BiomRatio	C29H/C30H			0.772963651309911	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.231949717778305	ratio	Y
BiomRatio	C30DiaH/C30H			0.10955125684923	ratio	Y
BiomRatio	C30Ts/C30H			8.5966489519154E-03	ratio	Y
BiomRatio	C35 Homohopane Index			7.11551405961134E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.557428601336381	ratio	Y
BiomRatio	Gam/C30H			7.26295637479025E-02	ratio	Y
BiomRatio	Gam/C31HR			0.475140440175783	ratio	Y
BiomRatio	Ole/C30H			0.119656592261046	ratio	Y
BiomRatio	Sterane/hopane			7.58324267918474E-02	ratio	Y
BiomRatio	Steranes/Terpanes			4.30819202741971E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.760191428543762	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007695\_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:**

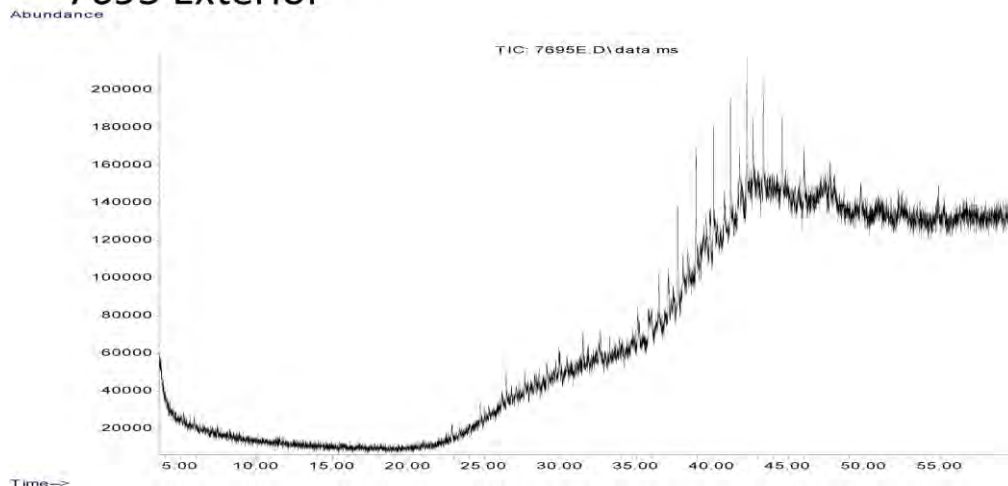
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			82.34	percent	Y
Inorg	Hydrogen			11.9602862823062	percent	Y
Inorg	Nitrogen			8.27077977720651E-02	percent	Y
Inorg	Sulphur			2.83379906899185	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007695\_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\\_007695\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7695 Exterior



## Data Sheet:

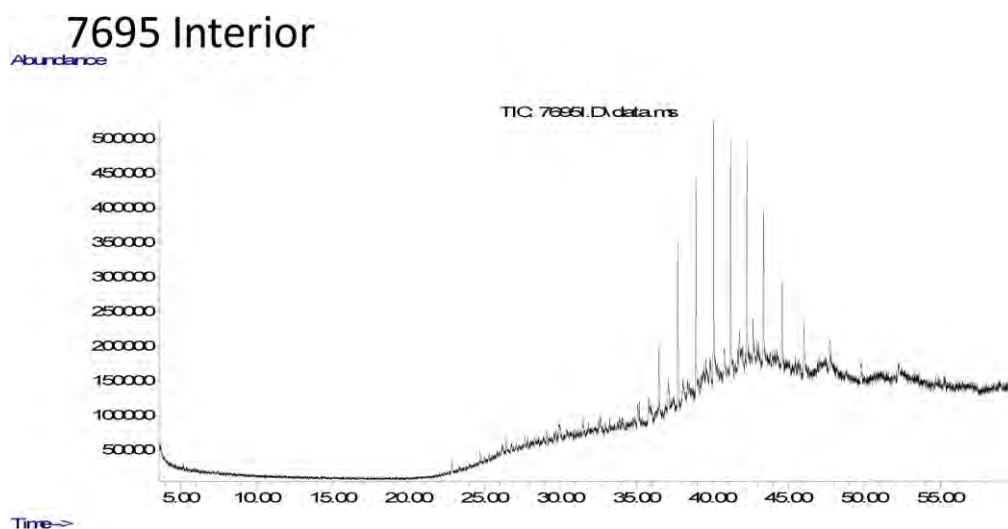
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120	149055		ug/L	Z
Aliph	nC26	36.4960	167910		ug/L	Z
Aliph	nC27	37.7300	291674		ug/L	Z
Aliph	nC28	38.9260	343459		ug/L	Z
Aliph	nC29	40.0740	404721		ug/L	Z
Aliph	nC30	41.1930	331099		ug/L	Z
Aliph	nC31	42.2750	420542		ug/L	Z
Aliph	nC32	43.3560	314926		ug/L	Z
Aliph	nC33	44.5840	300812		ug/L	Z
Aliph	nC34	46.0130	227120		ug/L	Z
Aliph	nC35	47.7140	176334		ug/L	Z
Aliph	nC36	49.7870	262035		ug/L	Z
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****Results for: GCMS with Full Scan****Unique ID:** W13/007695 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\\_007695\\_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:
Ratio	Pristane/Phytane		0.67275305163897		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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120			ug/L	U
Aliph	nC26	36.4960	465322		ug/L	Z
Aliph	nC27	37.7300	1229898		ug/L	Z
Aliph	nC28	38.9260	1642458		ug/L	Z
Aliph	nC29	40.0740	1918874		ug/L	Z
Aliph	nC30	41.1930	1845327		ug/L	Z
Aliph	nC31	42.2750	1683157		ug/L	Z
Aliph	nC32	43.3560	1273322		ug/L	Z
Aliph	nC33	44.5840	908661		ug/L	Z
Aliph	nC34	46.0130	719635		ug/L	Z
Aliph	nC35	47.7140	518033		ug/L	Z
Aliph	nC36	49.7870	325911		ug/L	Z
Aliph	nC37	52.2630	254108		ug/L	Z
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	111190		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	74804	ug/L	Z
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## 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 : **W13/007696**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

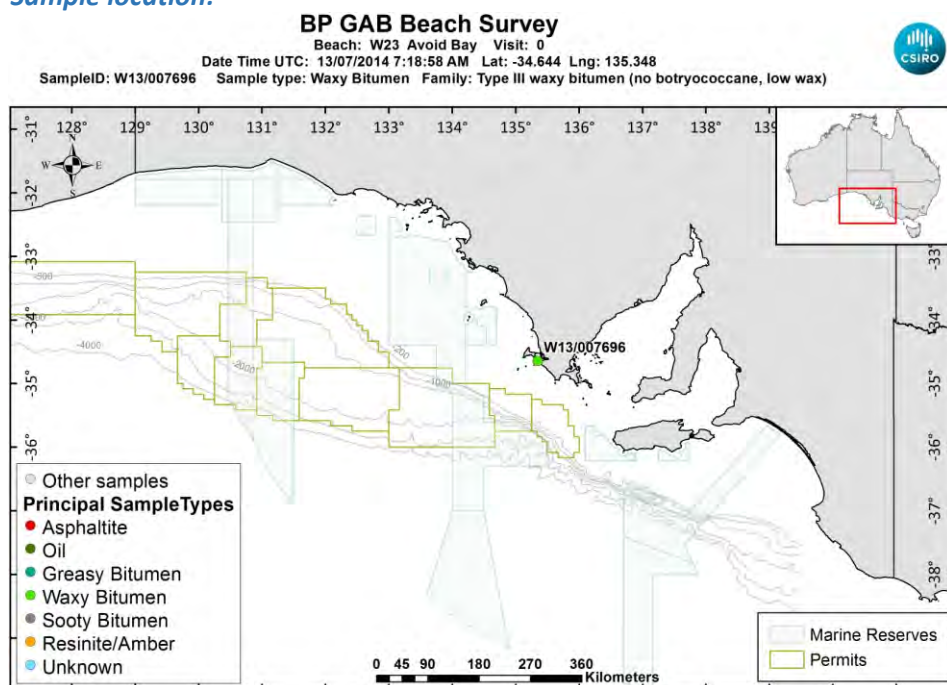
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 3.6

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007696\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007696\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007696\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007696\_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			85.44	percent	Y
Inorg	Hydrogen			12.9200994035785	percent	Y
Inorg	Nitrogen			0.686132819194516	percent	Y
Inorg	Sulphur			2.39510633073415	percent	Y

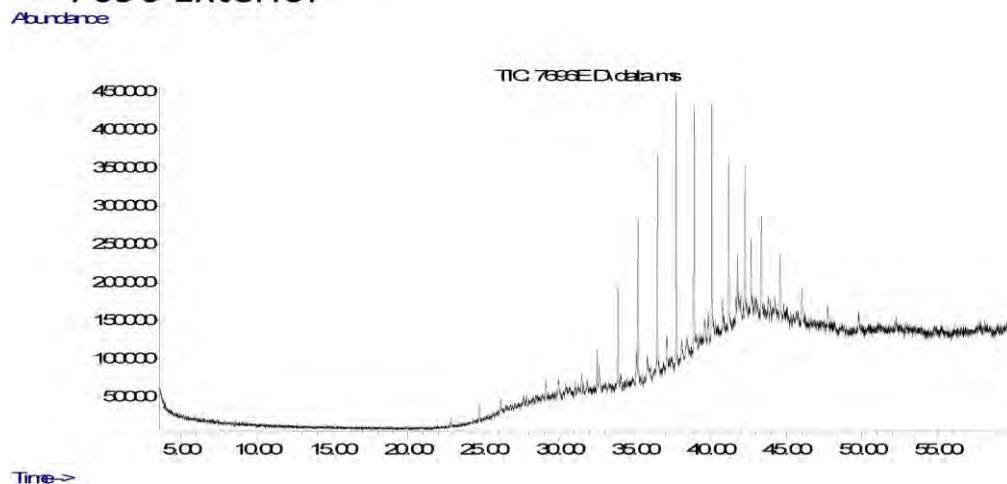
### Results for: GCMS with Full Scan

Unique ID: W13/007696\_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\\_007696\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7696 Exterior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane			0.647349684849037	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960	292147		ug/L	Z
Aliph	nC24	33.8800	686656		ug/L	Z
Aliph	nC25	35.2120	1059191		ug/L	Z
Aliph	nC26	36.4960	1533899		ug/L	Z
Aliph	nC27	37.7300	1919557		ug/L	Z
Aliph	nC28	38.9260	1730529		ug/L	Z
Aliph	nC29	40.0740	1467695		ug/L	Z
Aliph	nC30	41.1930	1182236		ug/L	Z
Aliph	nC31	42.2750	1071606		ug/L	Z
Aliph	nC32	43.3560	662791		ug/L	Z
Aliph	nC33	44.5840	583162		ug/L	Z
Aliph	nC34	46.0130	425291		ug/L	Z
Aliph	nC35	47.7140	309186		ug/L	Z
Aliph	nC36	49.7870	200806		ug/L	Z
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	127336		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	82431	ug/L	Z
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## Results for: GCMS with Full Scan

Unique ID: W13/007696 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\\_007696\\_int\\_WholeOil.jpg](#)

Sample Volume:

Volume Units:

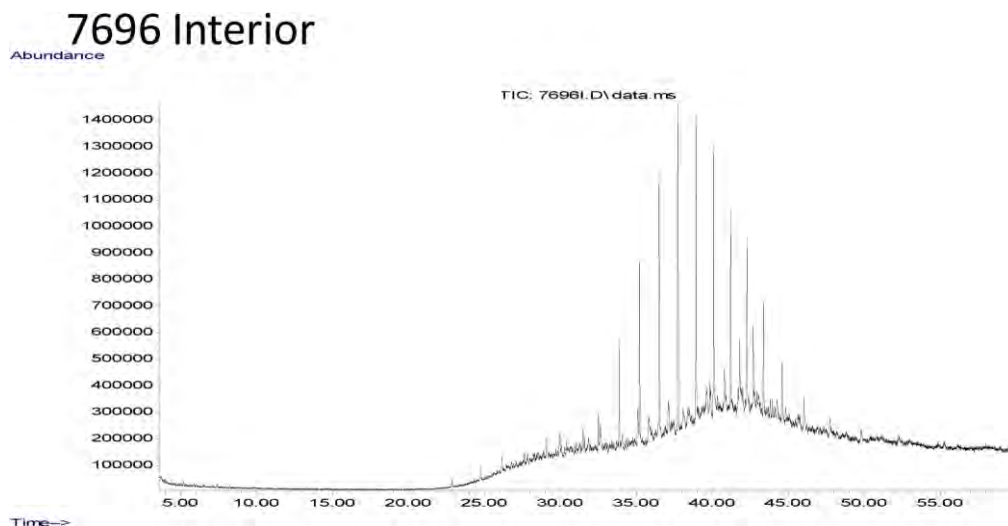
Extract Volume:

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:
Ratio	Pristane/Phytane			0.593628217345557	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540	218547		ug/L	Z
Aliph	nC23	32.4960	755994		ug/L	Z
Aliph	nC24	33.8800	2048749		ug/L	Z
Aliph	nC25	35.2120	3472910		ug/L	Z
Aliph	nC26	36.4960	4984330		ug/L	Z
Aliph	nC27	37.7300	6489129		ug/L	Z
Aliph	nC28	38.9260	5789138		ug/L	Z
Aliph	nC29	40.0740	4980274		ug/L	Z
Aliph	nC30	41.1930	3971506		ug/L	Z
Aliph	nC31	42.2750	3346639		ug/L	Z
Aliph	nC32	43.3560	2399920		ug/L	Z
Aliph	nC33	44.5840	1627577		ug/L	Z
Aliph	nC34	46.0130	1110606		ug/L	Z
Aliph	nC35	47.7140	680229		ug/L	Z
Aliph	nC36	49.7870	533882		ug/L	Z
Aliph	nC37	52.2630	392579		ug/L	Z
Aliph	nC38	55.2360	335692		ug/L	Z
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010			ug/L	U
Aliph	Phytane	24.7190	425666		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	252687	ug/L	Z
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## 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 : **W13/007697**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

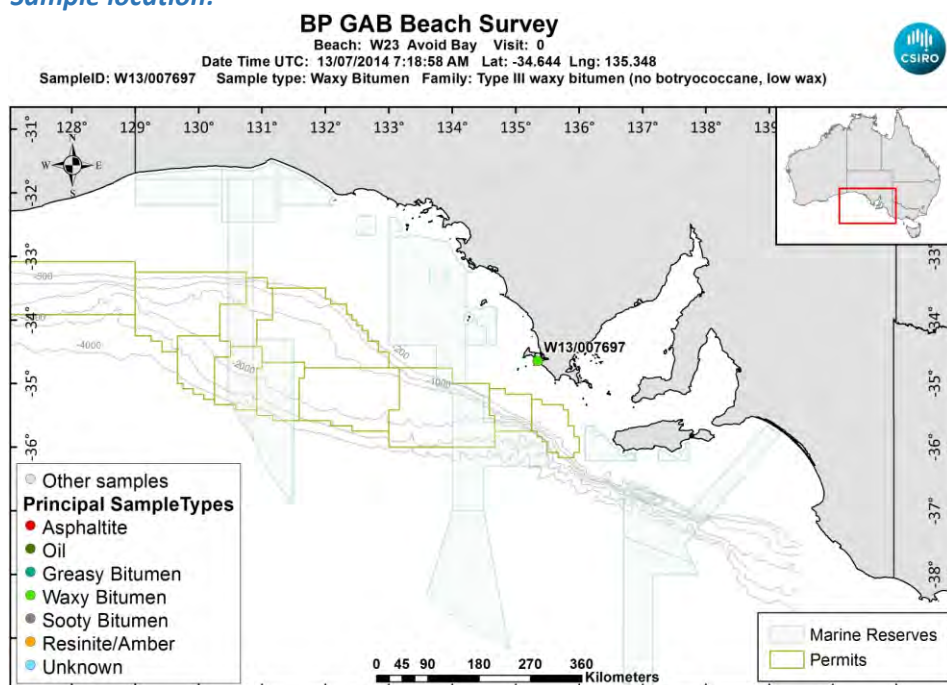
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 34.6

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007697\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007697\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007697\\_Photo02.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	YES
4	Biomarkers	YES
5	CSIA	YES

### Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 1
CSIA	Compound Specific Isotope Analysis d13C Run: 3
CSIA	Compound Specific Isotope Analysis d2H 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: Gas Chromatography Mass Spectrometry

**Unique ID:** W13/007697\_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:** 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			39.3038530305328	ratio	Y
BiomRatio	% C27 abb 20(R+S)			41.9178370940127	ratio	Y
BiomRatio	% C28 aaa 20R			21.0627433136154	ratio	Y
BiomRatio	% C28 abb 20(R+S)			21.5431545162952	ratio	Y
BiomRatio	% C29 aaa 20R			39.6334036558517	ratio	Y
BiomRatio	% C29 abb 20(R+S)			36.5390083896922	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			9.41985226791929E-02	ratio	Y
BiomRatio	25-Nor/C30H			0.113976347904331	ratio	Y
BiomRatio	C19t/C23t			3.79096401576149E-02	ratio	Y
BiomRatio	C22t/C21t			5.83905085850143E-02	ratio	Y
BiomRatio	C22t/C24t			4.35540447691028E-02	ratio	Y
BiomRatio	C23t/C30H			0.263484566686216	ratio	Y
BiomRatio	C24t/C23t			0.878309661247465	ratio	Y
BiomRatio	C24Tet/C23t			8.88943519222572E-02	ratio	Y
BiomRatio	C24Tet/C26t			9.00341506850725E-02	ratio	Y
BiomRatio	C24Tet/C30H			2.34222897970879E-02	ratio	Y
BiomRatio	C26t/C25t			1.80690402397599	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.472634481353762	ratio	Y
BiomRatio	C27 Dia/Ster			0.504838925256594	ratio	Y
BiomRatio	C28BNH/C30H			9.33982614424243E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.871681625837302	ratio	Y
BiomRatio	C29H/C30H			0.667399099656413	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.210314701864414	ratio	Y
BiomRatio	C30DiaH/C30H			9.30928020717008E-02	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			0.046943385191834	ratio	Y
BiomRatio	C35HS/C34HS			0.377869407348145	ratio	Y
BiomRatio	Gam/C30H			6.34603977365544E-02	ratio	Y
BiomRatio	Gam/C31HR			0.454482360161487	ratio	Y
BiomRatio	Ole/C30H			5.82659146842772E-02	ratio	Y
BiomRatio	Sterane/hopane			4.85539914189298E-02	ratio	Y
BiomRatio	Steranes/Terpanes			3.29951561453483E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.471549072386341	ratio	Y

## Results for: Compound Specific Isotope Analysis d13C

Unique ID: W13/007697\_PTE\_CSIA-C13/03

Instrument / Type: Compound Specific Isotope Analysis d13C Run: 3

for Analysis: CSIA

Preparation: Pentane Extraction

Analysis Date: 17/07/2017

Method ID/s: Final d13C

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: Internal Final d13C

## Results for: Compound Specific Isotope Analysis d13C

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Aliph	nC13			-28.057	value	Y
Aliph	nC14			-26.442	value	Y
Aliph	nC15			-27.206	value	Y
Aliph	nC16			-27.292	value	Y
Aliph	nC17			-27.945	value	Y
Aliph	nC18			-28.515	value	Y
Aliph	nC19			-28.708	value	Y
Aliph	nC20			-28.87	value	Y
Aliph	nC21			-29.011	value	Y
Aliph	nC22			-28.87	value	Y
Aliph	nC23			-29.131	value	Y
Aliph	nC24			-28.698	value	Y
Aliph	nC25			-28.766	value	Y
Aliph	nC26			-28.714	value	Y
Aliph	nC27			-28.881	value	Y
Aliph	nC28			-28.822	value	Y
Aliph	nC29			-29.109	value	Y
Aliph	nC30			-28.971	value	Y
Aliph	nC31			-28.29	value	Y
Aliph	nC32			-28.307	value	Y
Aliph	nC33			-28.126	value	Y
Aliph	nC34			-28.295	value	Y
Aliph	nC35			-28.102	value	Y
Aliph	nC36			-27.647	value	Y
Aliph	nC37			-27.742	value	Y
Aliph	nC38			-25.381	value	Y
Aliph	nC39				value	U

## Results for: Compound Specific Isotope Analysis d2H

Unique ID: W13/007697\_PTE\_CSIA/02

Instrument / Type: Compound Specific Isotope Analysis d2H Run: 2

for Analysis: CSIA

Preparation: Pentane Extraction

Analysis Date: 17/07/2017

Method ID/s: Final d 2H/1H

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: Internal 2H analysis

## Results for: Compound Specific Isotope Analysis d2H

## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	nC13			-88.895	value	Y
Aliph	nC14			-139.671	value	Y
Aliph	nC15			-137.547	value	Y
Aliph	nC16			-138.726	value	Y
Aliph	nC17			-136.169	value	Y
Aliph	nC18			-128.44	value	Y
Aliph	nC19			-122.579	value	Y
Aliph	nC20			-117.673	value	Y
Aliph	nC21			-116.7805	value	Y
Aliph	nC22			-117.29	value	Y
Aliph	nC23				value	U
Aliph	nC24				value	U
Aliph	nC25				value	U
Aliph	nC26				value	U
Aliph	nC27				value	U
Aliph	nC28			-111.657	value	Y
Aliph	nC29			-110.301	value	Y
Aliph	nC30			-110.7035	value	Y
Aliph	nC31			-111.0015	value	Y
Aliph	nC32			-110.891	value	Y
Aliph	nC33			-102.734	value	Y
Aliph	nC34			-94.1985	value	Y
Aliph	nC35				value	U
Aliph	nC36				value	U
Aliph	nC37				value	U
Aliph	nC38				value	U
Aliph	nC39				value	U

## Results for: Elemental Analyser

Unique ID: W13/007697\_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:
Inorg	Carbon			87.4	percent	Y
Inorg	Hydrogen			10.4342743538767	percent	Y
Inorg	Nitrogen			0.503015252784919	percent	Y
Inorg	Sulphur			1.6755331226191	percent	Y

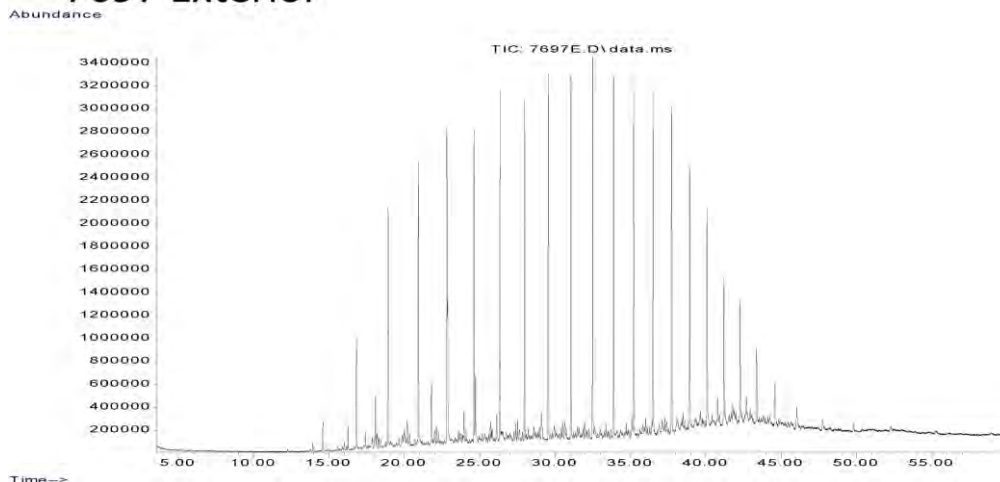
## Results for: GCMS with Full Scan



**Results for: GCMS with Full Scan****Unique ID:** W13/007697 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 007697 ext WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7697 Exterior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29			1.72814335336604	ug/L	Y
Ratio	nC17/nC35			16.0665642634489	ug/L	Y
Ratio	nC17/Pristane			2.30403570714092	ug/L	Y
Ratio	nC18/Phytane			3.43373595004299	ug/L	Y
Ratio	Pristane/Phytane			1.66909126237951	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	154646		ug/L	Z
Aliph	nC13	14.5950	1592352		ug/L	Z
Aliph	nC14	16.8180	6316673		ug/L	Z
Aliph	nC15	18.9260	11951074		ug/L	Z
Aliph	nC16	20.9240	13807123		ug/L	Z
Aliph	nC17	22.8190	16422525		ug/L	Z
Aliph	nC18	24.6230	14663497		ug/L	Z
Aliph	nC19	26.3410	15228725		ug/L	Z
Aliph	nC20	27.9810	14885132		ug/L	Z
Aliph	nC21	29.5510	16189910		ug/L	Z
Aliph	nC22	31.0540	16254731		ug/L	Z
Aliph	nC23	32.4960	17470685		ug/L	Z
Aliph	nC24	33.8800	16683527		ug/L	Z
Aliph	nC25	35.2120	16460457		ug/L	Z
Aliph	nC26	36.4960	15570799		ug/L	Z
Aliph	nC27	37.7300	15092154		ug/L	Z
Aliph	nC28	38.9260	11926946		ug/L	Z
Aliph	nC29	40.0740	9502988		ug/L	Z
Aliph	nC30	41.1930	7068904		ug/L	Z
Aliph	nC31	42.2750	5896377		ug/L	Z
Aliph	nC32	43.3560	3905506		ug/L	Z
Aliph	nC33	44.5840	2475944		ug/L	Z
Aliph	nC34	46.0130	1664749		ug/L	Z
Aliph	nC35	47.7140	1022155		ug/L	Z
Aliph	nC36	49.7870	681286		ug/L	Z
Aliph	nC37	52.2630	771601		ug/L	Z

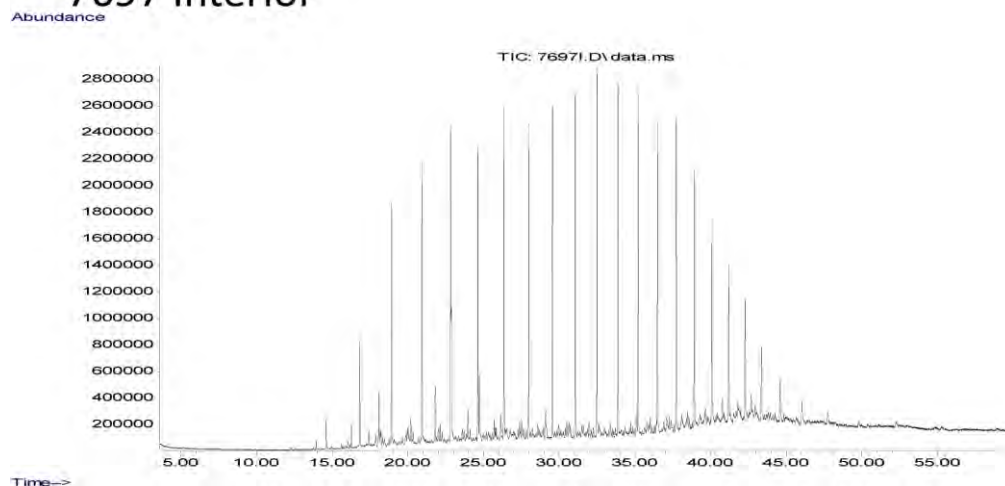
**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360	408737	ug/L	Z
Aliph	nC39	58.9110	422963	ug/L	Z
Aliph	Norpristane	21.8010	4633189	ug/L	Z
Aliph	Phytane	24.7190	4270421	ug/L	Z
Aliph	Pristane	22.8660	7127722	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007697 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\\_007697\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan

7697 Interior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29		1.65308863051001		ug/L	Y
Ratio	nC17/nC35		10.2157078261679		ug/L	Y
Ratio	nC17/Pristane		2.02384521054436		ug/L	Y
Ratio	nC18/Phytane		3.454255241503		ug/L	Y
Ratio	Pristane/Phytane		1.81527787216472		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	104601		ug/L	Z
Aliph	nC13	14.5950	1430994		ug/L	Z
Aliph	nC14	16.8180	5330596		ug/L	Z
Aliph	nC15	18.9260	10166583		ug/L	Z
Aliph	nC16	20.9240	11709886		ug/L	Z
Aliph	nC17	22.8190	13121441		ug/L	Z
Aliph	nC18	24.6230	12337170		ug/L	Z
Aliph	nC19	26.3410	12985052		ug/L	Z
Aliph	nC20	27.9810	12666141		ug/L	Z
Aliph	nC21	29.5510	13393762		ug/L	Z
Aliph	nC22	31.0540	13170559		ug/L	Z
Aliph	nC23	32.4960	13835656		ug/L	Z
Aliph	nC24	33.8800	12975114		ug/L	Z
Aliph	nC25	35.2120	13332954		ug/L	Z
Aliph	nC26	36.4960	12801342		ug/L	Z
Aliph	nC27	37.7300	12223340		ug/L	Z
Aliph	nC28	38.9260	9583988		ug/L	Z
Aliph	nC29	40.0740	7937531		ug/L	Z
Aliph	nC30	41.1930	5735105		ug/L	Z
Aliph	nC31	42.2750	4706577		ug/L	Z
Aliph	nC32	43.3560	3048255		ug/L	Z
Aliph	nC33	44.5840	2481873		ug/L	Z
Aliph	nC34	46.0130	1385564		ug/L	Z
Aliph	nC35	47.7140	1284438		ug/L	Z
Aliph	nC36	49.7870	989514		ug/L	Z
Aliph	nC37	52.2630	1072466		ug/L	Z

**Results for: GCMS with Full Scan**

<i>Aliph</i>	<b>nC38</b>	55.2360	702530	ug/L	Z
<i>Aliph</i>	<b>nC39</b>	58.9110	468266	ug/L	Z
<i>Aliph</i>	<b>Norpristane</b>	21.8010	3771079	ug/L	Z
<i>Aliph</i>	<b>Phytane</b>	24.7190	3571586	ug/L	Z
<i>Aliph</i>	<b>Pristane</b>	22.8660	6483421	ug/L	Z

**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 : **W13/007698**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

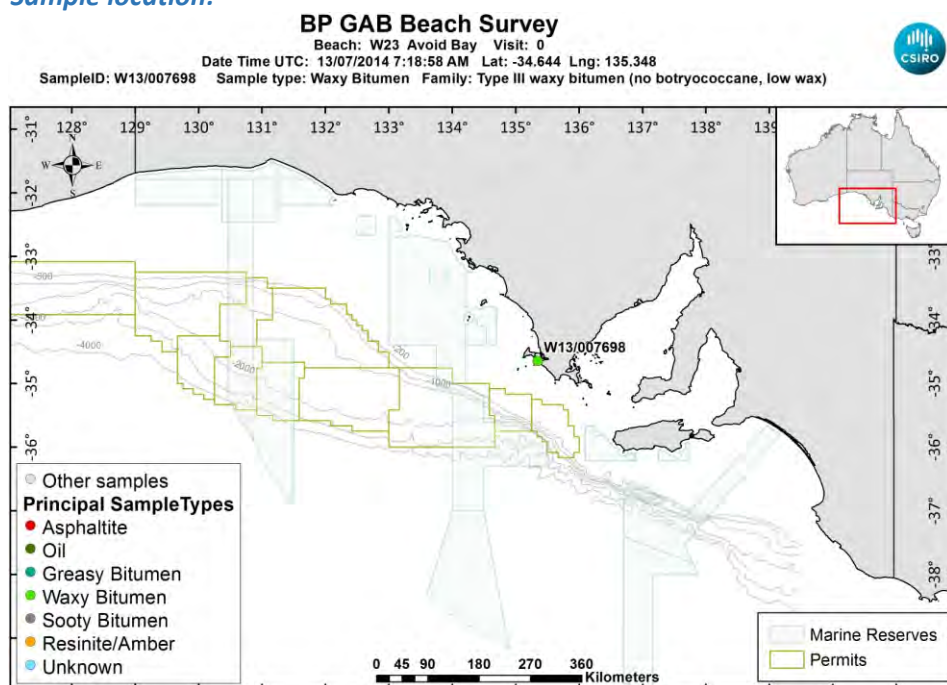
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 6.7

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007698\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007698\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007698\\_Photo02.JPG](#)

### Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES
2	Whole Oils	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:** W13/007698 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:** Internal 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			35.3314229341852	ratio	Y
BiomRatio	% C27 abb 20(R+S)			39.4436189933972	ratio	Y
BiomRatio	% C28 aaa 20R			20.6438415251306	ratio	Y
BiomRatio	% C28 abb 20(R+S)			20.0520381312097	ratio	Y
BiomRatio	% C29 aaa 20R			44.0247355406842	ratio	Y
BiomRatio	% C29 abb 20(R+S)			40.5043428753931	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.114409635346403	ratio	Y
BiomRatio	25-Nor/C30H			5.56625668044499E-02	ratio	Y
BiomRatio	C19t/C23t			0.118990588863623	ratio	Y
BiomRatio	C22t/C21t			5.09771583508947E-02	ratio	Y
BiomRatio	C22t/C24t			4.76379238719212E-02	ratio	Y
BiomRatio	C23t/C30H			0.111335043911651	ratio	Y
BiomRatio	C24t/C23t			0.850581688609801	ratio	Y
BiomRatio	C24Tet/C23t			0.224367533332794	ratio	Y
BiomRatio	C24Tet/C26t			0.219694598624202	ratio	Y
BiomRatio	C24Tet/C30H			2.49799691759553E-02	ratio	Y
BiomRatio	C26t/C25t			1.89201823974015	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.598058104750799	ratio	Y
BiomRatio	C27 Dia/Ster			0.750000529863458	ratio	Y
BiomRatio	C28BNH/C30H			2.91121149547069E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			1.02689215414472	ratio	Y
BiomRatio	C29H/C30H			0.730495172781624	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.197051396316102	ratio	Y
BiomRatio	C30DiaH/C30H			8.62218862729694E-02	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			3.10186148086522E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.407312617373641	ratio	Y
BiomRatio	Gam/C30H			0.056810209894206	ratio	Y
BiomRatio	Gam/C31HR			0.379853576943389	ratio	Y
BiomRatio	Ole/C30H			5.03962919851478E-02	ratio	Y
BiomRatio	Sterane/hopane			5.41033143628752E-02	ratio	Y
BiomRatio	Steranes/Terpanes			4.45022990766109E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.215742006266601	ratio	Y

## Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007698 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 duplicate 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			33.2559052840838	ratio	Y
BiomRatio	% C27 abb 20(R+S)			39.2772484342432	ratio	Y
BiomRatio	% C28 aaa 20R			20.8693454945095	ratio	Y
BiomRatio	% C28 abb 20(R+S)			21.0384251956647	ratio	Y
BiomRatio	% C29 aaa 20R			45.8747492214067	ratio	Y
BiomRatio	% C29 abb 20(R+S)			39.6843263700921	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.101240601442537	ratio	Y
BiomRatio	25-Nor/C30H			6.21320060584838E-02	ratio	Y
BiomRatio	C19t/C23t			0.115685049211061	ratio	Y
BiomRatio	C22t/C21t			0.052641451391442	ratio	Y
BiomRatio	C22t/C24t			3.91032339868188E-02	ratio	Y
BiomRatio	C23t/C30H			0.100420644785739	ratio	Y
BiomRatio	C24t/C23t			0.836727936633035	ratio	Y
BiomRatio	C24Tet/C23t			0.251034703066452	ratio	Y
BiomRatio	C24Tet/C26t			0.244897518166485	ratio	Y
BiomRatio	C24Tet/C30H			2.52090667455295E-02	ratio	Y
BiomRatio	C26t/C25t			1.88674131552519	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.583590581960326	ratio	Y
BiomRatio	C27 Dia/Ster			0.680778321549057	ratio	Y
BiomRatio	C28BNH/C30H			3.24970897665503E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			1.0103642172524	ratio	Y
BiomRatio	C29H/C30H			0.705183839063593	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.164882373942371	ratio	Y
BiomRatio	C30DiaH/C30H			8.96308584143767E-02	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			0.031367853235126	ratio	Y
BiomRatio	C35HS/C34HS			0.393250127006357	ratio	Y
BiomRatio	Gam/C30H			6.17170863221545E-02	ratio	Y
BiomRatio	Gam/C31HR			0.397067962027977	ratio	Y
BiomRatio	Ole/C30H			5.75176630652711E-02	ratio	Y
BiomRatio	Sterane/hopane			5.91877345721987E-02	ratio	Y
BiomRatio	Steranes/Terpanes			4.95882598176547E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.193583618175816	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007698\_SPE\_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Solid Phase Extract

Analysis Date: 30/10/2017

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

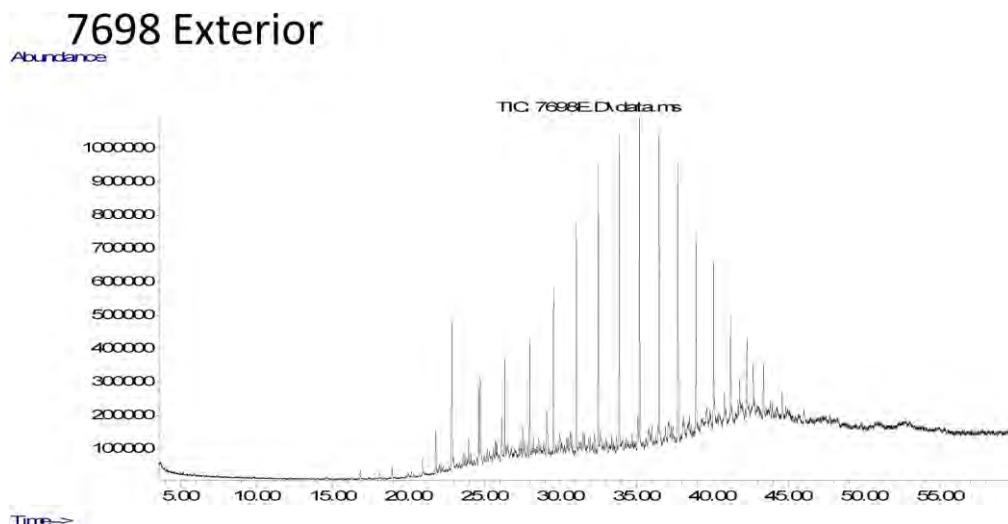
**Results for: Elemental Analyser****Data Sheet:**

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			87.96	percent	Y
Inorg	Hydrogen			10.5562425447316	percent	Y
Inorg	Nitrogen			0.562600856898029	percent	Y
Inorg	Sulphur			1.89868582670866	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007698\_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\\_007698\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan



## Data Sheet:

(default units ppb)

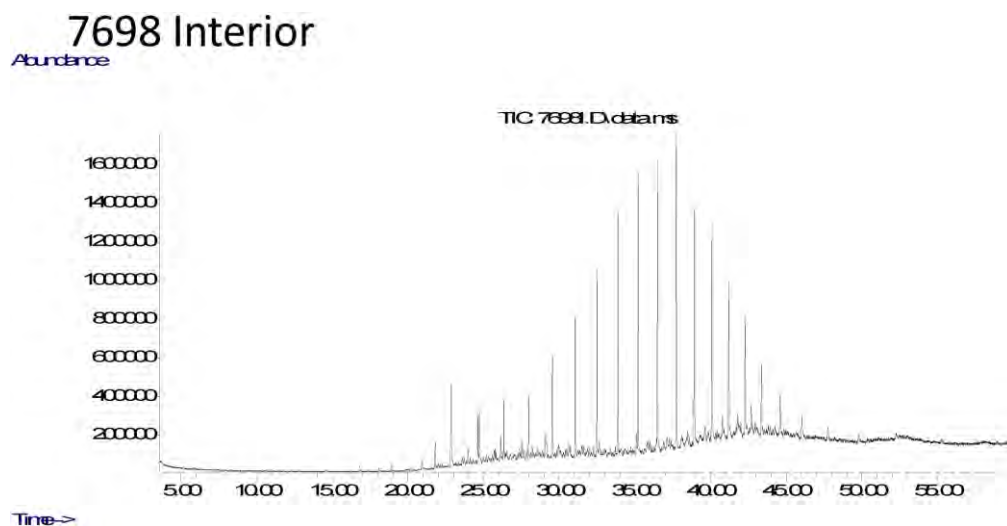
Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29		0.346284861654304		ug/L	Y
Ratio	nC17/nC35		1.45207780549364		ug/L	Y
Ratio	nC17/Pristane		0.260413333652601		ug/L	Y
Ratio	nC18/Phytane		0.788933170576934		ug/L	Y
Ratio	Pristane/Phytane		2.04190007072302		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	179091		ug/L	Z
Aliph	nC15	18.9260	205146		ug/L	Z
Aliph	nC16	20.9240	309987		ug/L	Z
Aliph	nC17	22.8190	866120		ug/L	Z
Aliph	nC18	24.6230	1285052		ug/L	Z
Aliph	nC19	26.3410	1543696		ug/L	Z
Aliph	nC20	27.9810	1815399		ug/L	Z
Aliph	nC21	29.5510	2608671		ug/L	Z
Aliph	nC22	31.0540	3419261		ug/L	Z
Aliph	nC23	32.4960	4394967		ug/L	Z
Aliph	nC24	33.8800	4831619		ug/L	Z
Aliph	nC25	35.2120	5104086		ug/L	Z
Aliph	nC26	36.4960	4641326		ug/L	Z
Aliph	nC27	37.7300	4352691		ug/L	Z
Aliph	nC28	38.9260	3056789		ug/L	Z
Aliph	nC29	40.0740	2501178		ug/L	Z
Aliph	nC30	41.1930	1673606		ug/L	Z
Aliph	nC31	42.2750	1300663		ug/L	Z
Aliph	nC32	43.3560	904452		ug/L	Z
Aliph	nC33	44.5840	659084		ug/L	Z
Aliph	nC34	46.0130	476563		ug/L	Z
Aliph	nC35	47.7140	596469		ug/L	Z
Aliph	nC36	49.7870			ug/L	U
Aliph	nC37	52.2630			ug/L	U

**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360		ug/L	U
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	1107416	ug/L	Z
Aliph	Phytane	24.7190	1628847	ug/L	Z
Aliph	Pristane	22.8660	3325944	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007698 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\\_007698\\_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	nC17/nC29			0.107571756577346	ug/L	Y
Ratio	nC17/nC35			0.98285411021285	ug/L	Y
Ratio	nC17/Pristane			0.189948932901427	ug/L	Y
Ratio	nC18/Phytane			0.705368712880839	ug/L	Y
Ratio	Pristane/Phytane			1.74318419947086	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	58312		ug/L	Z
Aliph	nC14	16.8180	168867		ug/L	Z
Aliph	nC15	18.9260	218521		ug/L	Z
Aliph	nC16	20.9240	322992		ug/L	Z
Aliph	nC17	22.8190	606292		ug/L	Z
Aliph	nC18	24.6230	1291569		ug/L	Z
Aliph	nC19	26.3410	1517784		ug/L	Z
Aliph	nC20	27.9810	1793726		ug/L	Z
Aliph	nC21	29.5510	2700804		ug/L	Z
Aliph	nC22	31.0540	3672916		ug/L	Z
Aliph	nC23	32.4960	5010314		ug/L	Z
Aliph	nC24	33.8800	6294643		ug/L	Z
Aliph	nC25	35.2120	7329934		ug/L	Z
Aliph	nC26	36.4960	8008893		ug/L	Z
Aliph	nC27	37.7300	8296927		ug/L	Z
Aliph	nC28	38.9260	6374223		ug/L	Z
Aliph	nC29	40.0740	5636161		ug/L	Z
Aliph	nC30	41.1930	4047227		ug/L	Z
Aliph	nC31	42.2750	3201749		ug/L	Z
Aliph	nC32	43.3560	2225507		ug/L	Z
Aliph	nC33	44.5840	1447971		ug/L	Z
Aliph	nC34	46.0130	992097		ug/L	Z
Aliph	nC35	47.7140	616869		ug/L	Z
Aliph	nC36	49.7870	538947		ug/L	Z
Aliph	nC37	52.2630	358823		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360	279559	ug/L	Z
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	1135643	ug/L	Z
Aliph	Phytane	24.7190	1831056	ug/L	Z
Aliph	Pristane	22.8660	3191867	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 : **W13/007699**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

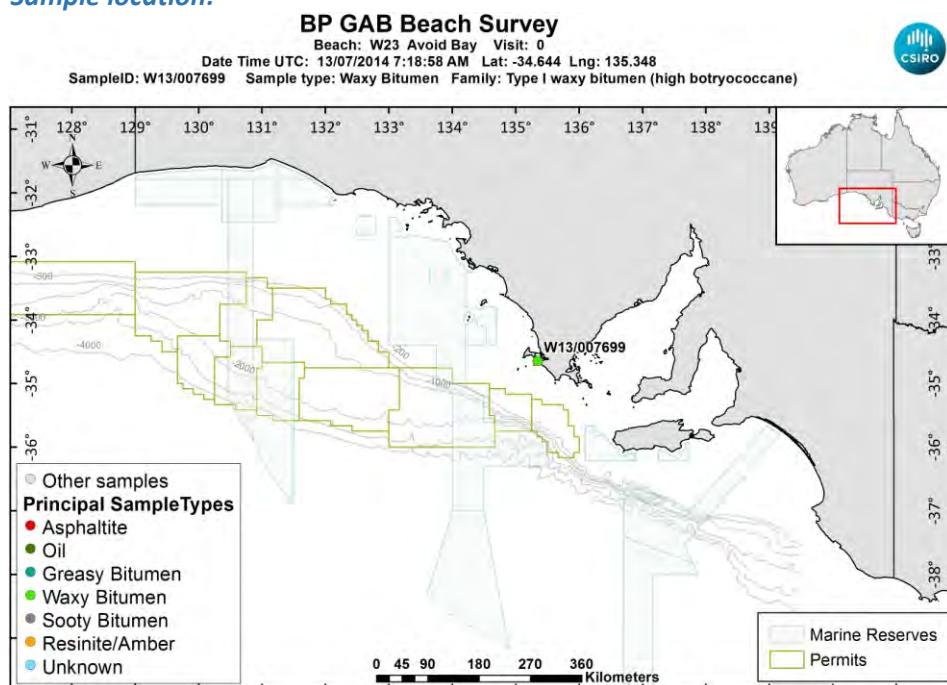
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 9

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007699\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007699\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007699\\_Photo02.JPG](#)

### Analyses Requested

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

### Analyses Completed:

Analysis:	Instrument/Type:
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:** W13/007699\_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:** 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			22.365906225855	ratio	Y
BiomRatio	% C27 abb 20(R+S)			43.0625676163	ratio	Y
BiomRatio	% C28 aaa 20R			18.0370867390509	ratio	Y
BiomRatio	% C28 abb 20(R+S)			23.0341687702849	ratio	Y
BiomRatio	% C29 aaa 20R			59.5970070350941	ratio	Y
BiomRatio	% C29 abb 20(R+S)			33.9032636134151	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			5.67212874244176E-02	ratio	Y
BiomRatio	25-Nor/C30H			8.12574223961357E-02	ratio	Y
BiomRatio	C19t/C23t			0.234496453393204	ratio	Y
BiomRatio	C22t/C21t			0.353105012139063	ratio	Y
BiomRatio	C22t/C24t			0.235077902578703	ratio	Y
BiomRatio	C23t/C30H			6.88275061303067E-02	ratio	Y
BiomRatio	C24t/C23t			1.09021708990402	ratio	Y
BiomRatio	C24Tet/C23t			0.38470620857447	ratio	Y
BiomRatio	C24Tet/C26t			0.296068618474946	ratio	Y
BiomRatio	C24Tet/C30H			2.64783689290263E-02	ratio	Y
BiomRatio	C26t/C25t			2.03594904065815	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.722422974515025	ratio	Y
BiomRatio	C27 Dia/Ster			1.0031691535719	ratio	Y
BiomRatio	C28BNH/C30H			3.41985843809083E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.787302418088559	ratio	Y
BiomRatio	C29H/C30H			0.544925928411316	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.390578805099951	ratio	Y
BiomRatio	C30DiaH/C30H			0.197317379042262	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			4.49858295507336E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.434579935923716	ratio	Y
BiomRatio	Gam/C30H			2.86214367111636E-02	ratio	Y
BiomRatio	Gam/C31HR			0.178487787273579	ratio	Y
BiomRatio	Ole/C30H			9.99423138606187E-02	ratio	Y
BiomRatio	Sterane/hopane			6.78960496085139E-02	ratio	Y
BiomRatio	Steranes/Terpanes			5.88515695646557E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.153682902780046	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007699\_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:**

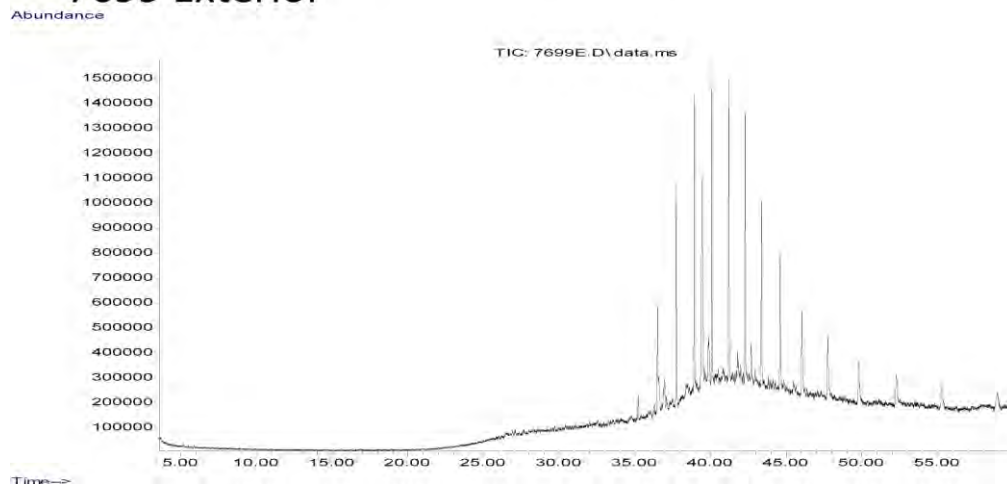
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			86.59	percent	Y
Inorg	Hydrogen			12.4017495029821	percent	Y
Inorg	Nitrogen			0.716010282776349	percent	Y
Inorg	Sulphur			2.4748641675694	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007699\_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\\_007699\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7699 Exterior



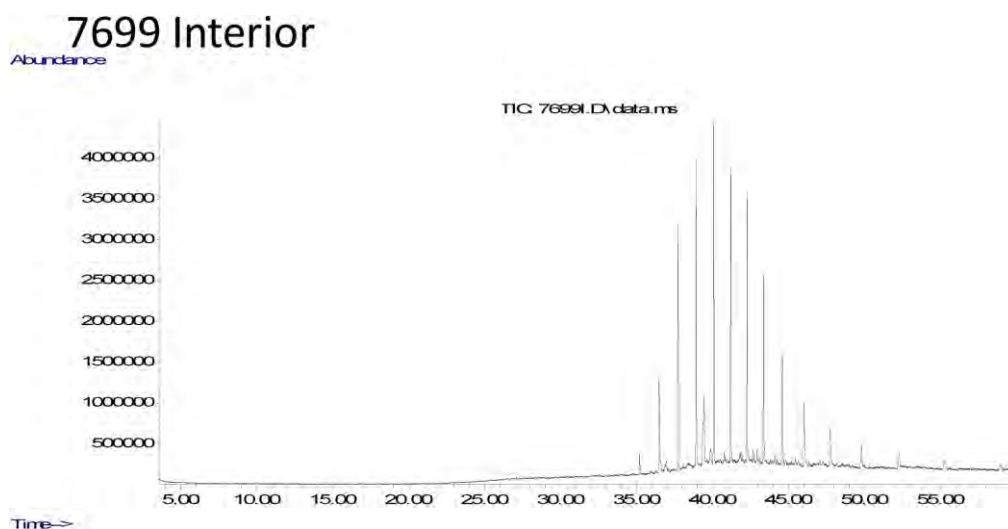
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	8069838		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120	500651		ug/L	Z
Aliph	nC26	36.4960	2256747		ug/L	Z
Aliph	nC27	37.7300	4582140		ug/L	Z
Aliph	nC28	38.9260	5989103		ug/L	Z
Aliph	nC29	40.0740	6782607		ug/L	Z
Aliph	nC30	41.1930	6431464		ug/L	Z
Aliph	nC31	42.2750	5606519		ug/L	Z
Aliph	nC32	43.3560	4512675		ug/L	Z
Aliph	nC33	44.5840	3990594		ug/L	Z
Aliph	nC34	46.0130	3195835		ug/L	Z
Aliph	nC35	47.7140	2844887		ug/L	Z
Aliph	nC36	49.7870	2348876		ug/L	Z
Aliph	nC37	52.2630	2230180		ug/L	Z
Aliph	nC38	55.2360	1691091		ug/L	Z
Aliph	nC39	58.9110	1583311		ug/L	Z
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****Results for: GCMS with Full Scan****Unique ID:** W13/007699 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\\_007699\\_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	39.4290	8432288		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120	1231039		ug/L	Z
Aliph	nC26	36.4960	6608391		ug/L	Z
Aliph	nC27	37.7300	15047769		ug/L	Z
Aliph	nC28	38.9260	19290380		ug/L	Z
Aliph	nC29	40.0740	21854269		ug/L	Z
Aliph	nC30	41.1930	19336580		ug/L	Z
Aliph	nC31	42.2750	16505851		ug/L	Z
Aliph	nC32	43.3560	12902195		ug/L	Z
Aliph	nC33	44.5840	9568996		ug/L	Z
Aliph	nC34	46.0130	6565766		ug/L	Z
Aliph	nC35	47.7140	4701882		ug/L	Z
Aliph	nC36	49.7870	3153676		ug/L	Z
Aliph	nC37	52.2630	2981864		ug/L	Z
Aliph	nC38	55.2360	2521325		ug/L	Z
Aliph	nC39	58.9110	1531440		ug/L	Z
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 : **W13/007700**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

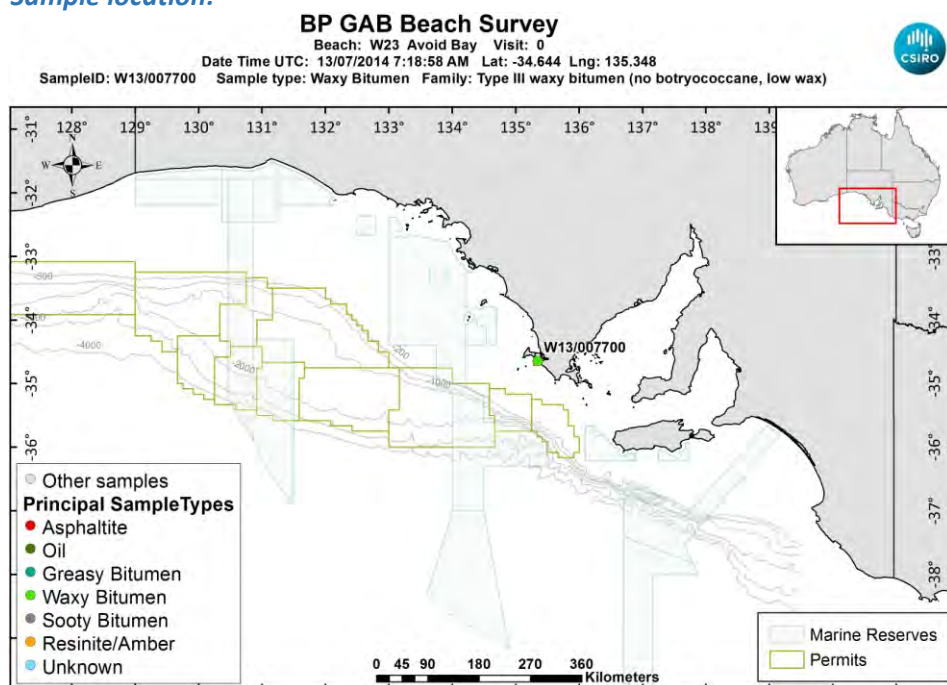
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 5.4

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007700\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007700\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007700\\_Photo02.JPG](#)

### Analyses Requested

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

### Analyses Completed:

Analysis:	Instrument/Type:
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:** W13/007700\_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:** 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			39.9111221102581	ratio	Y
BiomRatio	% C27 abb 20(R+S)			43.8559124793653	ratio	Y
BiomRatio	% C28 aaa 20R			21.7535629166151	ratio	Y
BiomRatio	% C28 abb 20(R+S)			21.1689853973329	ratio	Y
BiomRatio	% C29 aaa 20R			38.3353149731268	ratio	Y
BiomRatio	% C29 abb 20(R+S)			34.9751021233018	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.166161804455215	ratio	Y
BiomRatio	25-Nor/C30H			0.113097293128145	ratio	Y
BiomRatio	C19t/C23t			8.08668928984767E-02	ratio	Y
BiomRatio	C22t/C21t			4.73107639850506E-02	ratio	Y
BiomRatio	C22t/C24t			3.48921904360987E-02	ratio	Y
BiomRatio	C23t/C30H			0.337623396709965	ratio	Y
BiomRatio	C24t/C23t			0.872879681140063	ratio	Y
BiomRatio	C24Tet/C23t			0.117203992397161	ratio	Y
BiomRatio	C24Tet/C26t			0.129692752878833	ratio	Y
BiomRatio	C24Tet/C30H			3.95708100210983E-02	ratio	Y
BiomRatio	C26t/C25t			1.70357859383171	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.480833123481962	ratio	Y
BiomRatio	C27 Dia/Ster			0.475302986382174	ratio	Y
BiomRatio	C28BNH/C30H			0.105359467522027	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.79750027182214	ratio	Y
BiomRatio	C29H/C30H			0.713226046040899	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.219232532124879	ratio	Y
BiomRatio	C30DiaH/C30H			8.73667070677391E-02	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			4.35167576493118E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.362409229071224	ratio	Y
BiomRatio	Gam/C30H			6.73516484861841E-02	ratio	Y
BiomRatio	Gam/C31HR			0.504761948453514	ratio	Y
BiomRatio	Ole/C30H			6.20191150124672E-02	ratio	Y
BiomRatio	Sterane/hopane			5.62123630854646E-02	ratio	Y
BiomRatio	Steranes/Terpanes			3.57663282253244E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.571655964552253	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007700\_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)

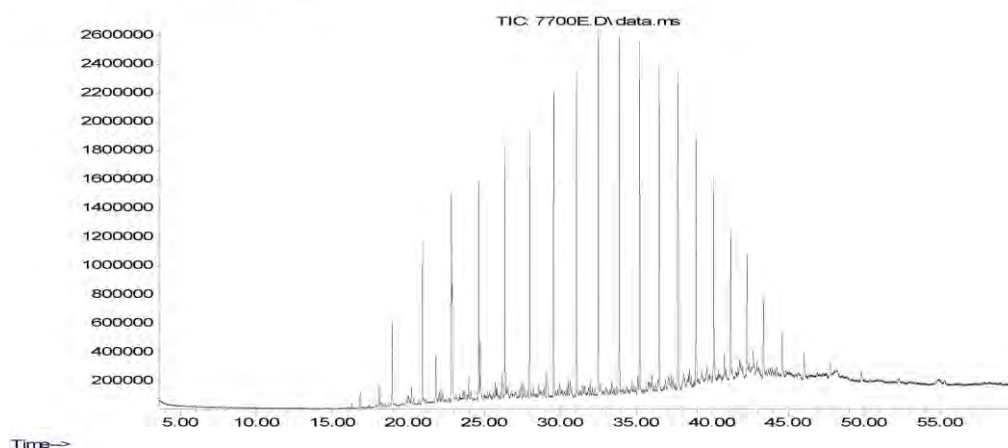
Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			85.44	percent	Y
Inorg	Hydrogen			10.0766401590457	percent	Y
Inorg	Nitrogen			0.521546700942588	percent	Y
Inorg	Sulphur			1.81215879845335	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007700\_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\\_007700\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7700 Exterior

Abundance



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29		1.20951346510024		ug/L	Y
Ratio	nC17/nC35		6.68330359901315		ug/L	Y
Ratio	nC17/Pristane		1.92281154577131		ug/L	Y
Ratio	nC18/Phytane		2.55283519446607		ug/L	Y
Ratio	Pristane/Phytane		1.51850160826678		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	799388		ug/L	Z
Aliph	nC15	18.9260	3471209		ug/L	Z
Aliph	nC16	20.9240	6096581		ug/L	Z
Aliph	nC17	22.8190	9117237		ug/L	Z
Aliph	nC18	24.6230	7971390		ug/L	Z
Aliph	nC19	26.3410	9149543		ug/L	Z
Aliph	nC20	27.9810	9343580		ug/L	Z
Aliph	nC21	29.5510	10841760		ug/L	Z
Aliph	nC22	31.0540	11277384		ug/L	Z
Aliph	nC23	32.4960	12570239		ug/L	Z
Aliph	nC24	33.8800	12410555		ug/L	Z
Aliph	nC25	35.2120	12698317		ug/L	Z
Aliph	nC26	36.4960	11660326		ug/L	Z
Aliph	nC27	37.7300	11076722		ug/L	Z
Aliph	nC28	38.9260	8891913		ug/L	Z
Aliph	nC29	40.0740	7537938		ug/L	Z
Aliph	nC30	41.1930	5799335		ug/L	Z
Aliph	nC31	42.2750	4386471		ug/L	Z
Aliph	nC32	43.3560	3046298		ug/L	Z
Aliph	nC33	44.5840	2250008		ug/L	Z
Aliph	nC34	46.0130	1561745		ug/L	Z
Aliph	nC35	47.7140	1364181		ug/L	Z
Aliph	nC36	49.7870	1056695		ug/L	Z
Aliph	nC37	52.2630	717196		ug/L	Z

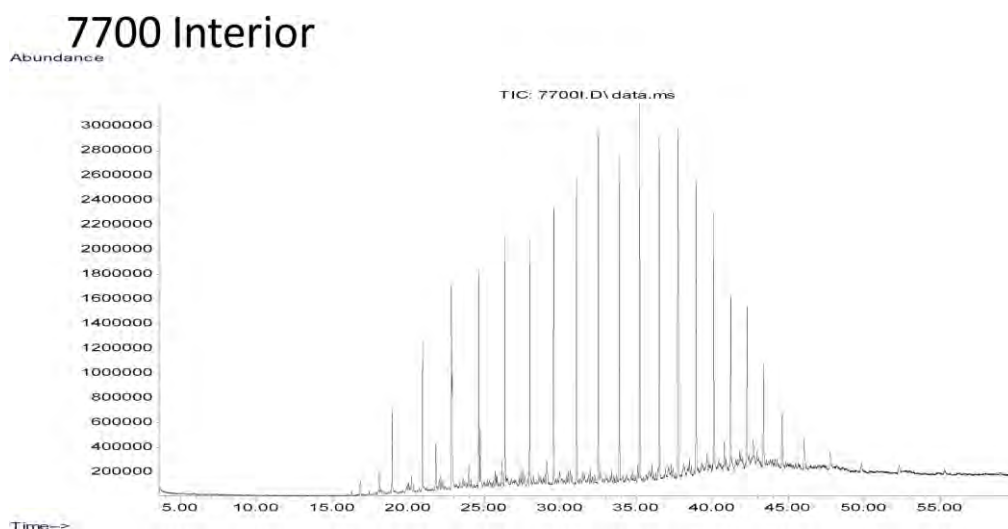
**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360	557570	ug/L	Z
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	2829190	ug/L	Z
Aliph	Phytane	24.7190	3122563	ug/L	Z
Aliph	Pristane	22.8660	4741618	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007700 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\\_007700\\_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	nC17/nC29			0.860942219572804	ug/L	Y
Ratio	nC17/nC35			5.74967359173808	ug/L	Y
Ratio	nC17/Pristane			1.59526607703469	ug/L	Y
Ratio	nC18/Phytane			2.80208897675944	ug/L	Y
Ratio	Pristane/Phytane			1.72465993371885	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	827558		ug/L	Z
Aliph	nC15	18.9260	3989249		ug/L	Z
Aliph	nC16	20.9240	6656626		ug/L	Z
Aliph	nC17	22.8190	9100249		ug/L	Z
Aliph	nC18	24.6230	9268268		ug/L	Z
Aliph	nC19	26.3410	10376967		ug/L	Z
Aliph	nC20	27.9810	10430358		ug/L	Z
Aliph	nC21	29.5510	11764950		ug/L	Z
Aliph	nC22	31.0540	12634727		ug/L	Z
Aliph	nC23	32.4960	14729967		ug/L	Z
Aliph	nC24	33.8800	13972614		ug/L	Z
Aliph	nC25	35.2120	14613210		ug/L	Z
Aliph	nC26	36.4960	14278059		ug/L	Z
Aliph	nC27	37.7300	13959179		ug/L	Z
Aliph	nC28	38.9260	11623096		ug/L	Z
Aliph	nC29	40.0740	10570104		ug/L	Z
Aliph	nC30	41.1930	7818531		ug/L	Z
Aliph	nC31	42.2750	6852522		ug/L	Z
Aliph	nC32	43.3560	4677461		ug/L	Z
Aliph	nC33	44.5840	3179615		ug/L	Z
Aliph	nC34	46.0130	2399738		ug/L	Z
Aliph	nC35	47.7140	1582742		ug/L	Z
Aliph	nC36	49.7870	1140759		ug/L	Z
Aliph	nC37	52.2630	1056603		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360	659922	ug/L	Z
Aliph	nC39	58.9110	692105	ug/L	Z
Aliph	Norpristane	21.8010	3373079	ug/L	Z
Aliph	Phytane	24.7190	3307628	ug/L	Z
Aliph	Pristane	22.8660	5704533	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 : **W13/007701**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

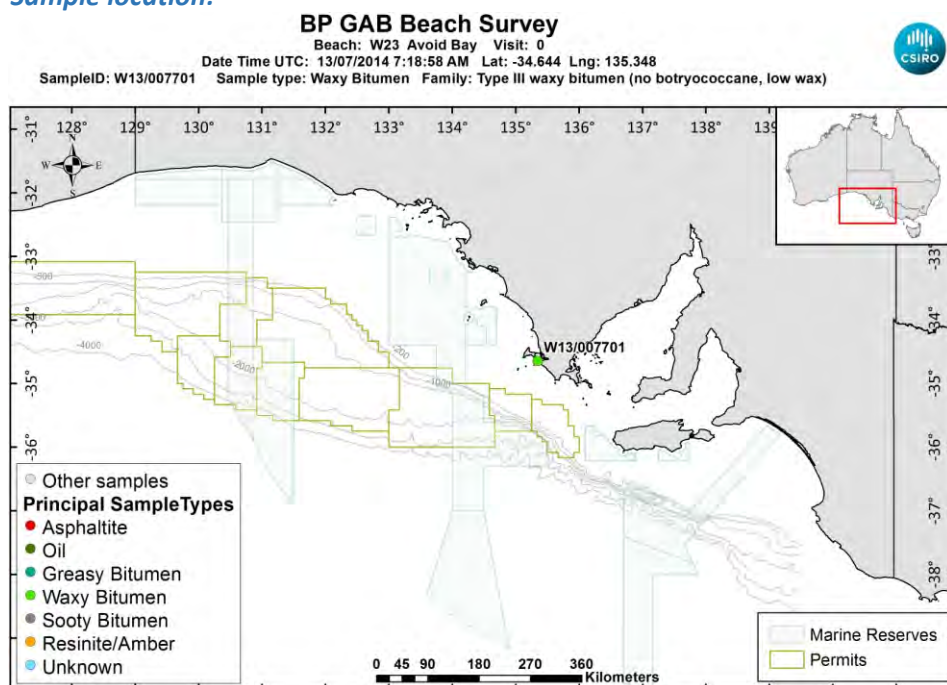
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 3.8

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007701\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007701\\_Photo01.JPG](#)

**Sample - laboratory image:**



LinkedFiles\GAB\_BCH1\Samples\W13\_007701\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007701\_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			89.46	percent	Y
Inorg	Hydrogen			12.2113574552684	percent	Y
Inorg	Nitrogen			0.48127677806341	percent	Y
Inorg	Sulphur			1.78093518985173	percent	Y

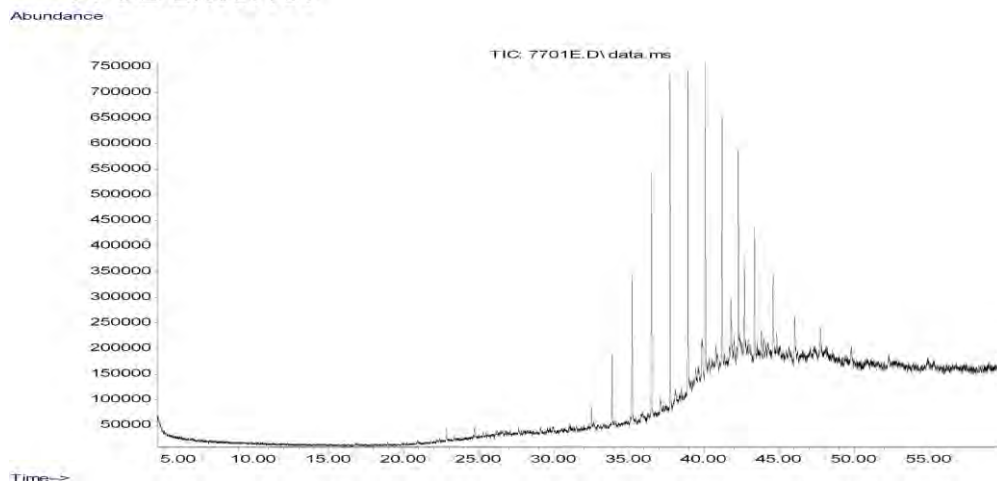
### Results for: GCMS with Full Scan

Unique ID: W13/007701\_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\\_007701\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7701 Exterior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane			1.41894442587275	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960	212235		ug/L	Z
Aliph	nC24	33.8800	687353		ug/L	Z
Aliph	nC25	35.2120	1544265		ug/L	Z
Aliph	nC26	36.4960	2375962		ug/L	Z
Aliph	nC27	37.7300	3195901		ug/L	Z
Aliph	nC28	38.9260	3250541		ug/L	Z
Aliph	nC29	40.0740	3028808		ug/L	Z
Aliph	nC30	41.1930	2371849		ug/L	Z
Aliph	nC31	42.2750	2100584		ug/L	Z
Aliph	nC32	43.3560	1629468		ug/L	Z
Aliph	nC33	44.5840	1157791		ug/L	Z
Aliph	nC34	46.0130	901588		ug/L	Z
Aliph	nC35	47.7140	671748		ug/L	Z
Aliph	nC36	49.7870	643023		ug/L	Z
Aliph	nC37	52.2630	456046		ug/L	Z
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	156899		ug/L	Z

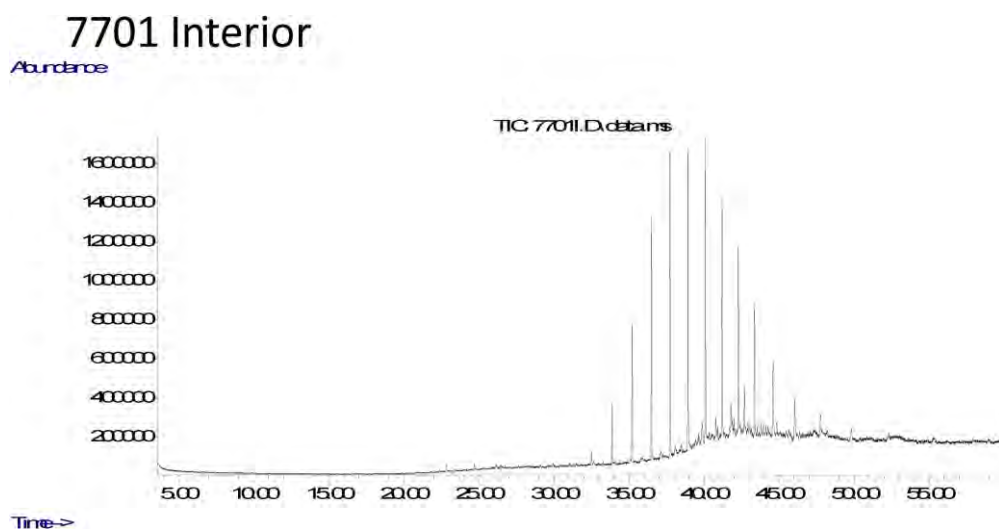
**Results for: GCMS with Full Scan**

Aliph	Pristane	22.8660	222632	ug/L	Z
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**Results for: GCMS with Full Scan****Unique ID:** W13/007701 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\\_007701\\_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:
Ratio	Pristane/Phytane			1.36116082980414	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960	420348		ug/L	Z
Aliph	nC24	33.8800	1452350		ug/L	Z
Aliph	nC25	35.2120	3915139		ug/L	Z
Aliph	nC26	36.4960	6488248		ug/L	Z
Aliph	nC27	37.7300	8200899		ug/L	Z
Aliph	nC28	38.9260	8009561		ug/L	Z
Aliph	nC29	40.0740	7847195		ug/L	Z
Aliph	nC30	41.1930	6248450		ug/L	Z
Aliph	nC31	42.2750	5118877		ug/L	Z
Aliph	nC32	43.3560	3919925		ug/L	Z
Aliph	nC33	44.5840	3172604		ug/L	Z
Aliph	nC34	46.0130	1944174		ug/L	Z
Aliph	nC35	47.7140	1463021		ug/L	Z
Aliph	nC36	49.7870	987370		ug/L	Z
Aliph	nC37	52.2630	784779		ug/L	Z
Aliph	nC38	55.2360	915373		ug/L	Z
Aliph	nC39	58.9110	993327		ug/L	Z
Aliph	Norpristane	21.8010			ug/L	U
Aliph	Phytane	24.7190	247951		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	337501	ug/L	Z
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## 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 : **W13/007702**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

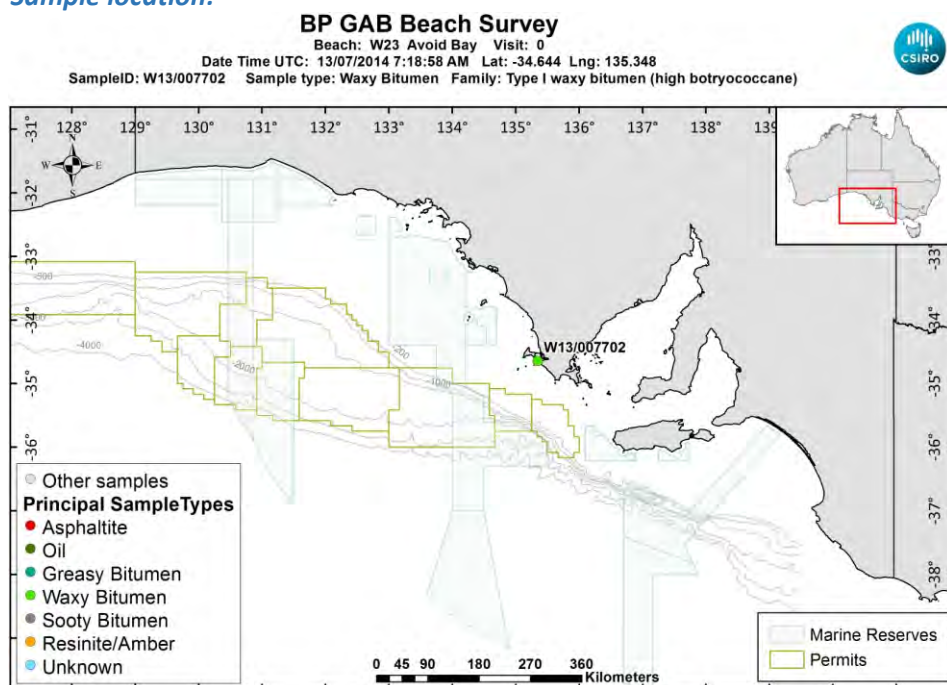
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 4

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007702\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007702\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007702\\_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:** W13/007702\_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			89.7	percent	Y
Inorg	Hydrogen			8.47976222664016	percent	Y
Inorg	Nitrogen			0.397352185089974	percent	Y
Inorg	Sulphur			0.978370813654268	percent	Y

### Results for: GCMS with Full Scan

**Unique ID:** W13/007702 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\\_007702\\_bulk\\_WholeOil.jpg](#)

**Preparation:** Dissolved in solvent

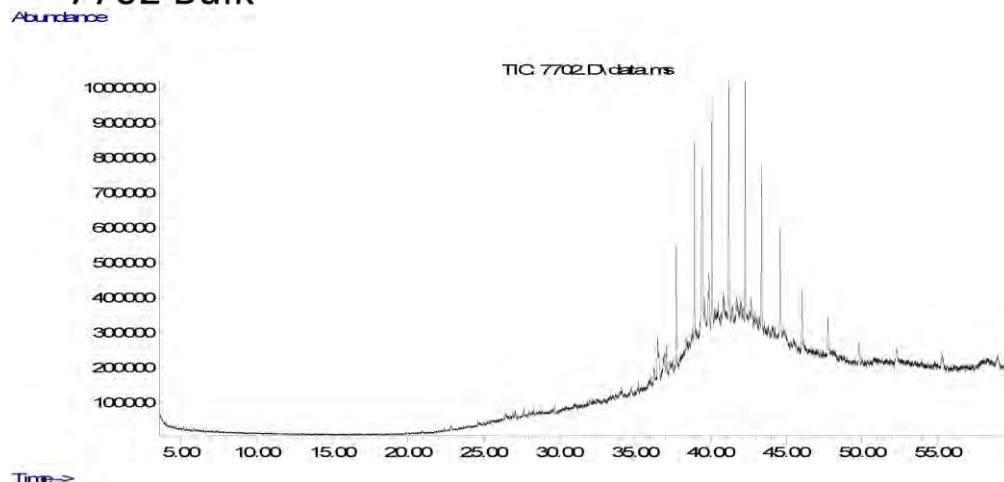
**Method ID/s:**

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

**Comment:** Bulk

## Results for: GCMS with Full Scan

7702 Bulk



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane			2.68647327528505	ug/L	Y
Aliph	Botryococcane	39.4290	4698943		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120	121586		ug/L	Z
Aliph	nC26	36.4960	766226		ug/L	Z
Aliph	nC27	37.7300	1919896		ug/L	Z
Aliph	nC28	38.9260	3033669		ug/L	Z
Aliph	nC29	40.0740	3751203		ug/L	Z
Aliph	nC30	41.1930	3764301		ug/L	Z
Aliph	nC31	42.2750	3489446		ug/L	Z
Aliph	nC32	43.3560	2767498		ug/L	Z
Aliph	nC33	44.5840	2121532		ug/L	Z
Aliph	nC34	46.0130	1369894		ug/L	Z
Aliph	nC35	47.7140	1020641		ug/L	Z
Aliph	nC36	49.7870	887060		ug/L	Z
Aliph	nC37	52.2630	651324		ug/L	Z
Aliph	nC38	55.2360	604584		ug/L	Z
Aliph	nC39	58.9110	1255776		ug/L	Z
Aliph	Norpristane	21.8010	31753		ug/L	Z
Aliph	Phytane	24.7190	61344		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	164800	ug/L	Z
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## 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 : **W13/007703**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

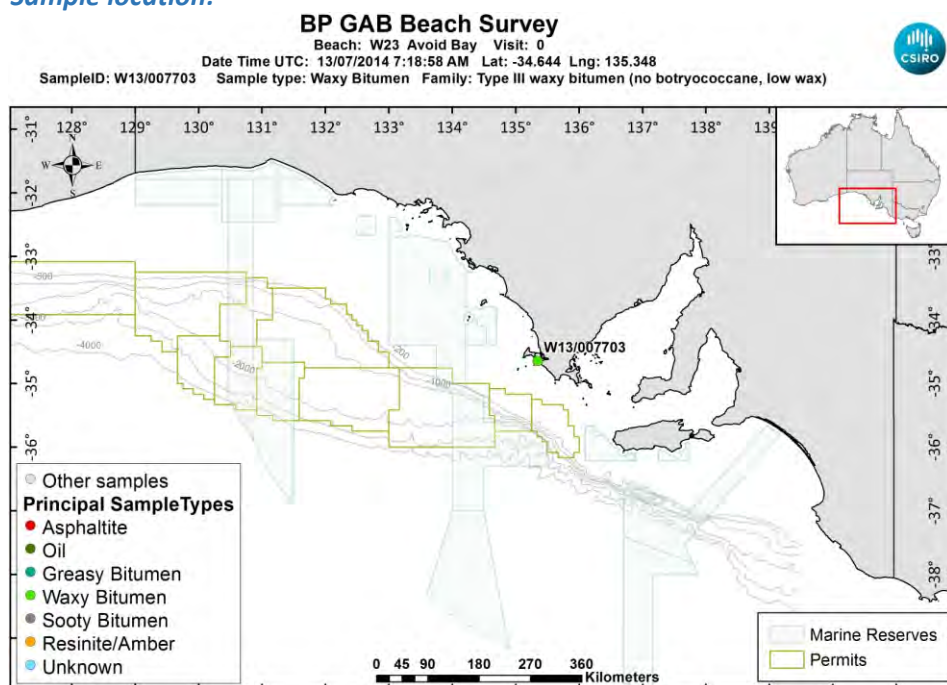
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 3.6

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007703\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007703\\_Photo01.JPG](#)

**Sample - laboratory image:**





LinkedFiles\GAB\_BCH1\Samples\W13\_007703\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007703\_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			86.51	percent	Y
Inorg	Hydrogen			10.3450636182903	percent	Y
Inorg	Nitrogen			0.273701799485861	percent	Y
Inorg	Sulphur			1.69171220882151	percent	Y

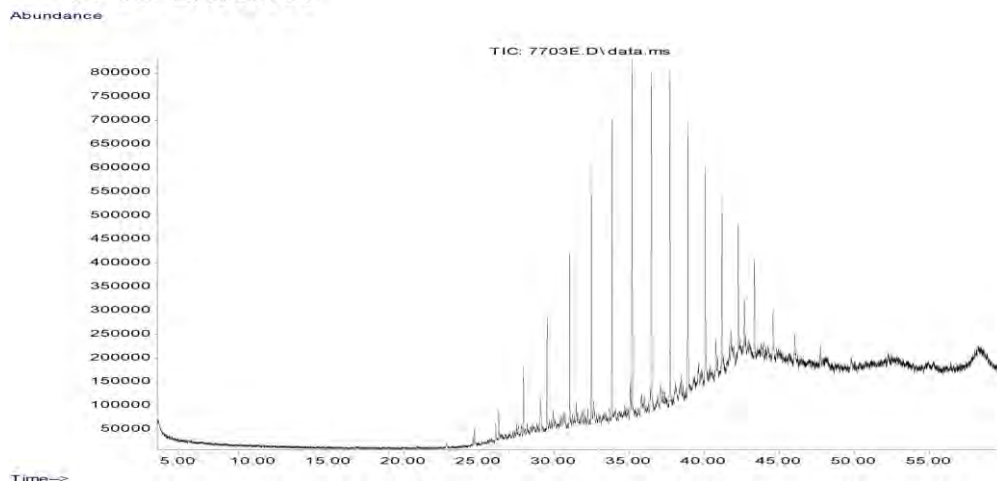
### Results for: GCMS with Full Scan

Unique ID: W13/007703\_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\\_007703\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7703 Exterior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	nC18/Phytane		0.427974448504404		ug/L	Y
Ratio	Pristane/Phytane		0.504009499317517		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	103215		ug/L	Z
Aliph	nC19	26.3410	332393		ug/L	Z
Aliph	nC20	27.9810	770998		ug/L	Z
Aliph	nC21	29.5510	1175869		ug/L	Z
Aliph	nC22	31.0540	1811416		ug/L	Z
Aliph	nC23	32.4960	2767063		ug/L	Z
Aliph	nC24	33.8800	3188790		ug/L	Z
Aliph	nC25	35.2120	3650090		ug/L	Z
Aliph	nC26	36.4960	3688085		ug/L	Z
Aliph	nC27	37.7300	3569274		ug/L	Z
Aliph	nC28	38.9260	2938392		ug/L	Z
Aliph	nC29	40.0740	2545934		ug/L	Z
Aliph	nC30	41.1930	1871853		ug/L	Z
Aliph	nC31	42.2750	1496804		ug/L	Z
Aliph	nC32	43.3560	1059869		ug/L	Z
Aliph	nC33	44.5840	849340		ug/L	Z
Aliph	nC34	46.0130	558326		ug/L	Z
Aliph	nC35	47.7140	422563		ug/L	Z
Aliph	nC36	49.7870	427193		ug/L	Z
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

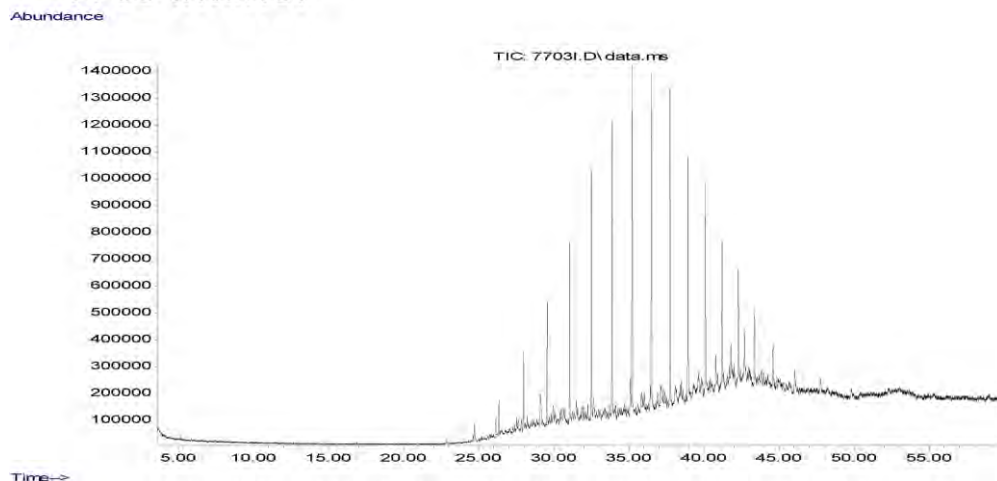
**Results for: GCMS with Full Scan**

Aliph	Phytane	24.7190	241171	ug/L	Z
Aliph	Pristane	22.8660	121552	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007703 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\\_007703\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan

7703 Interior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC18/Phytane			0.367149009404165	ug/L	Y
Ratio	Pristane/Phytane			0.34533443457448	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	171530		ug/L	Z
Aliph	nC19	26.3410	608886		ug/L	Z
Aliph	nC20	27.9810	1453484		ug/L	Z
Aliph	nC21	29.5510	2253377		ug/L	Z
Aliph	nC22	31.0540	3334655		ug/L	Z
Aliph	nC23	32.4960	4796865		ug/L	Z
Aliph	nC24	33.8800	5817660		ug/L	Z
Aliph	nC25	35.2120	6294823		ug/L	Z
Aliph	nC26	36.4960	6035793		ug/L	Z
Aliph	nC27	37.7300	6155101		ug/L	Z
Aliph	nC28	38.9260	4772779		ug/L	Z
Aliph	nC29	40.0740	4137233		ug/L	Z
Aliph	nC30	41.1930	2846140		ug/L	Z
Aliph	nC31	42.2750	2428223		ug/L	Z
Aliph	nC32	43.3560	1657199		ug/L	Z
Aliph	nC33	44.5840	1112716		ug/L	Z
Aliph	nC34	46.0130	929446		ug/L	Z
Aliph	nC35	47.7140	733428		ug/L	Z
Aliph	nC36	49.7870	520917		ug/L	Z
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

## Results for: GCMS with Full Scan

Aliph	Phytane	24.7190	467194	ug/L	Z
Aliph	Pristane	22.8660	161338	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 : **W13/007704**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

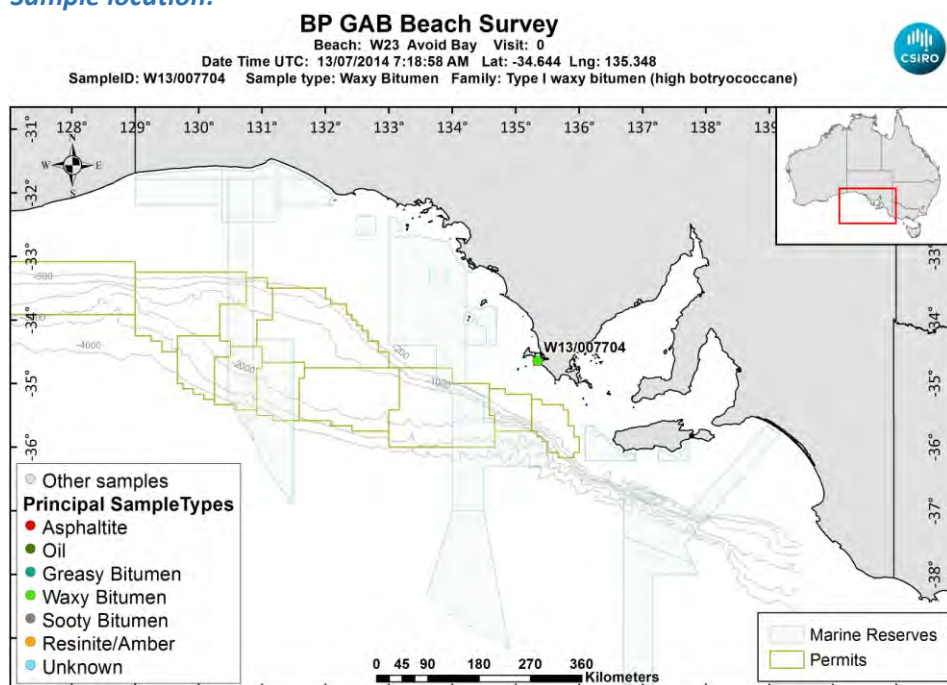
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 4.9

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007704\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007704\\_Photo01.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007704\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007704\_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			89.35	percent	Y
Inorg	Hydrogen			12.3341669980119	percent	Y
Inorg	Nitrogen			0.191628106255356	percent	Y
Inorg	Sulphur			2.25908665671435	percent	Y

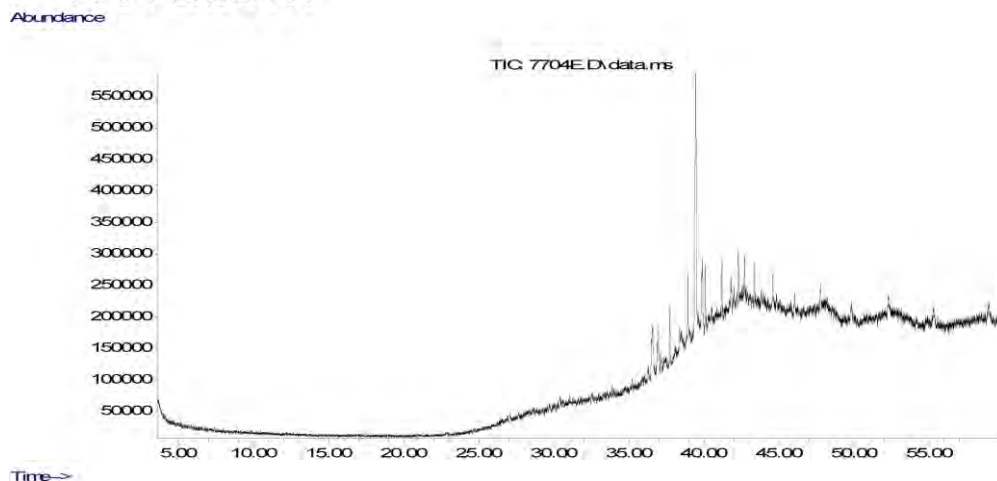
### Results for: GCMS with Full Scan

Unique ID: W13/007704\_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 007704 ext WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7704 Exterior



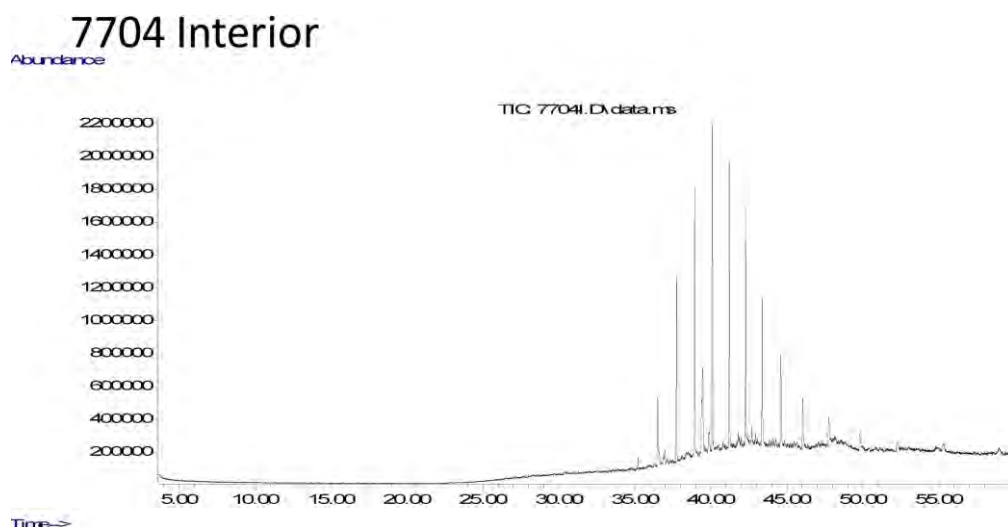
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	4118649		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800	25451		ug/L	Z
Aliph	nC25	35.2120	102504		ug/L	Z
Aliph	nC26	36.4960	383913		ug/L	Z
Aliph	nC27	37.7300	446311		ug/L	Z
Aliph	nC28	38.9260	568053		ug/L	Z
Aliph	nC29	40.0740	590005		ug/L	Z
Aliph	nC30	41.1930	512984		ug/L	Z
Aliph	nC31	42.2750	375200		ug/L	Z
Aliph	nC32	43.3560	354109		ug/L	Z
Aliph	nC33	44.5840	420100		ug/L	Z
Aliph	nC34	46.0130	395188		ug/L	Z
Aliph	nC35	47.7140	427353		ug/L	Z
Aliph	nC36	49.7870	497688		ug/L	Z
Aliph	nC37	52.2630	635045		ug/L	Z
Aliph	nC38	55.2360	721725		ug/L	Z
Aliph	nC39	58.9110	982393		ug/L	Z
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****Results for: GCMS with Full Scan****Unique ID:** W13/007704 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\\_007704\\_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	39.4290	5112773		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120	354639		ug/L	Z
Aliph	nC26	36.4960	2218462		ug/L	Z
Aliph	nC27	37.7300	5545401		ug/L	Z
Aliph	nC28	38.9260	8282249		ug/L	Z
Aliph	nC29	40.0740	9838594		ug/L	Z
Aliph	nC30	41.1930	8628806		ug/L	Z
Aliph	nC31	42.2750	7248384		ug/L	Z
Aliph	nC32	43.3560	5396992		ug/L	Z
Aliph	nC33	44.5840	4158656		ug/L	Z
Aliph	nC34	46.0130	2536066		ug/L	Z
Aliph	nC35	47.7140	1671156		ug/L	Z
Aliph	nC36	49.7870	1253989		ug/L	Z
Aliph	nC37	52.2630	875562		ug/L	Z
Aliph	nC38	55.2360	700848		ug/L	Z
Aliph	nC39	58.9110	767928		ug/L	Z
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 : **W13/007705**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

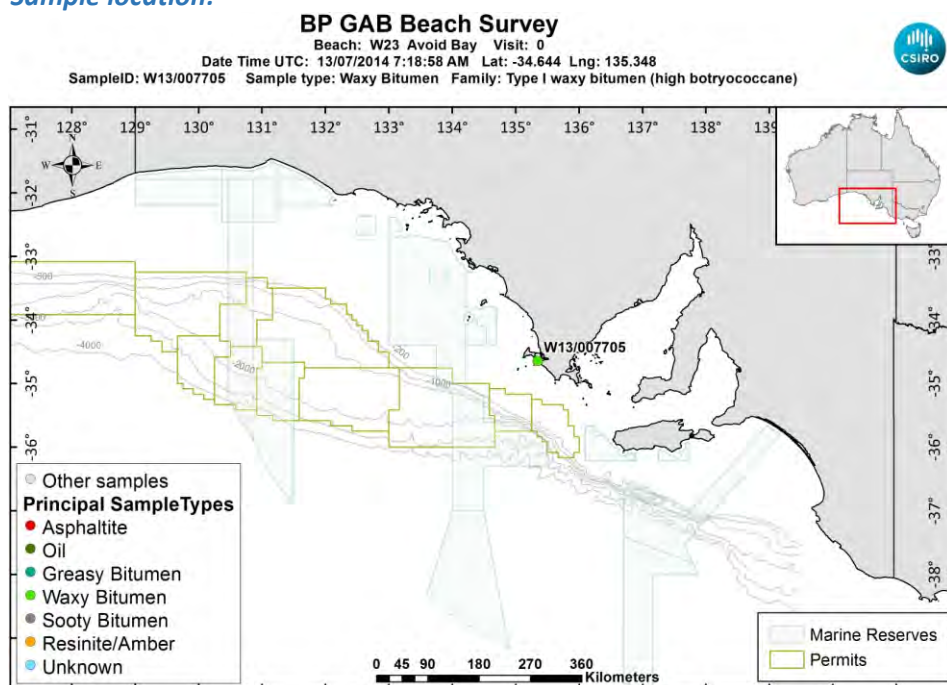
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 4.8

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007705\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007705\\_Photo01.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007705\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007705\_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			88.34	percent	Y
Inorg	Hydrogen			9.55061630218688	percent	Y
Inorg	Nitrogen			0.331131105398458	percent	Y
Inorg	Sulphur			1.44501831027619	percent	Y

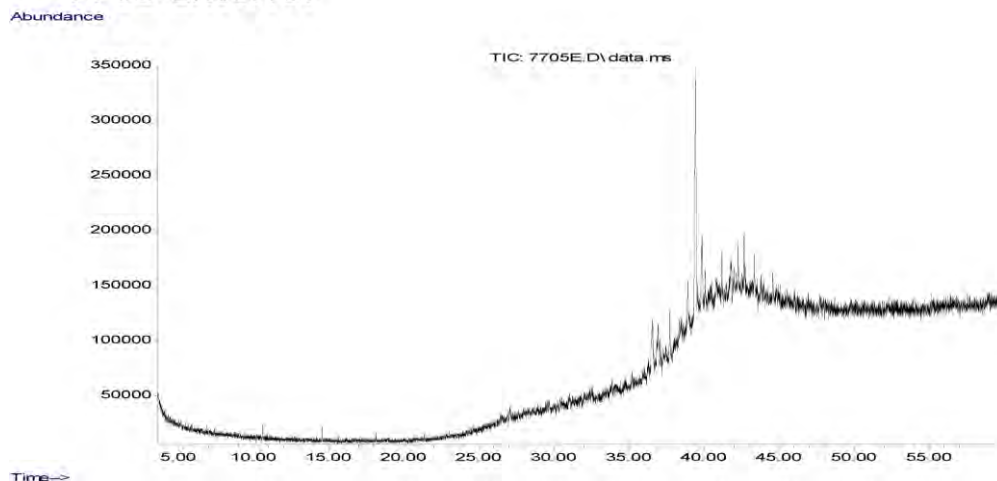
### Results for: GCMS with Full Scan

Unique ID: W13/007705\_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\\_007705\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7705 Exterior



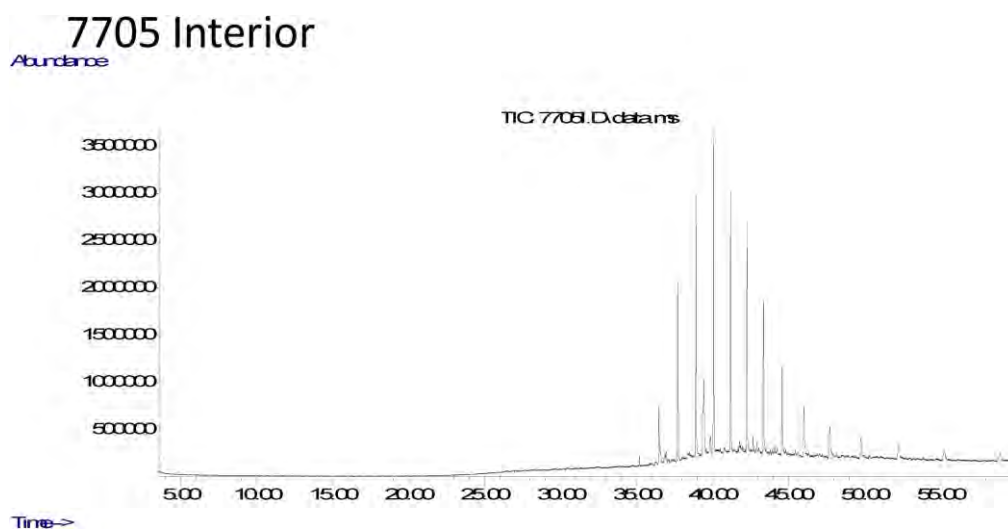
## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	2232767		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120			ug/L	U
Aliph	nC26	36.4960			ug/L	U
Aliph	nC27	37.7300	122760		ug/L	Z
Aliph	nC28	38.9260	150228		ug/L	Z
Aliph	nC29	40.0740	204097		ug/L	Z
Aliph	nC30	41.1930	191237		ug/L	Z
Aliph	nC31	42.2750	209401		ug/L	Z
Aliph	nC32	43.3560	164685		ug/L	Z
Aliph	nC33	44.5840	140163		ug/L	Z
Aliph	nC34	46.0130			ug/L	U
Aliph	nC35	47.7140			ug/L	U
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****Results for: GCMS with Full Scan****Unique ID:** W13/007705 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\\_007705\\_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	39.4290	7570797		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120	554135		ug/L	Z
Aliph	nC26	36.4960	3238360		ug/L	Z
Aliph	nC27	37.7300	10137896		ug/L	Z
Aliph	nC28	38.9260	15329206		ug/L	Z
Aliph	nC29	40.0740	17961672		ug/L	Z
Aliph	nC30	41.1930	15503185		ug/L	Z
Aliph	nC31	42.2750	13356757		ug/L	Z
Aliph	nC32	43.3560	9695474		ug/L	Z
Aliph	nC33	44.5840	7029787		ug/L	Z
Aliph	nC34	46.0130	5032081		ug/L	Z
Aliph	nC35	47.7140	2962200		ug/L	Z
Aliph	nC36	49.7870	2582127		ug/L	Z
Aliph	nC37	52.2630	1819583		ug/L	Z
Aliph	nC38	55.2360	1849779		ug/L	Z
Aliph	nC39	58.9110	1743700		ug/L	Z
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 : **W13/007706**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

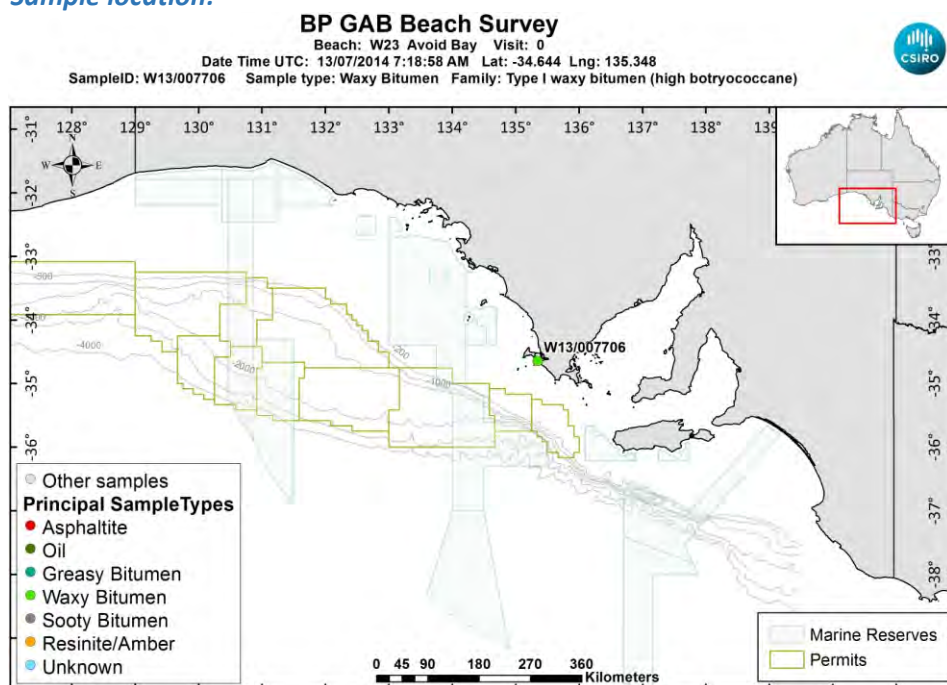
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 3

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007706\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007706\\_Photo01.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007706\\_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: 2

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007706\_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			89.25	percent	Y
Inorg	Hydrogen			11.4934795228628	percent	Y
Inorg	Nitrogen			0.44	percent	Y
Inorg	Sulphur			2.5059931662854	percent	Y

### Results for: GCMS with Full Scan

**Unique ID:** W13/007706 DISS GCMS-Scan/02

**Instrument / Type:** GCMS with Full Scan Run: 2

**for Analysis:** Whole Oils

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

**Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007706\\_int\\_WholeOil.jpg](#)

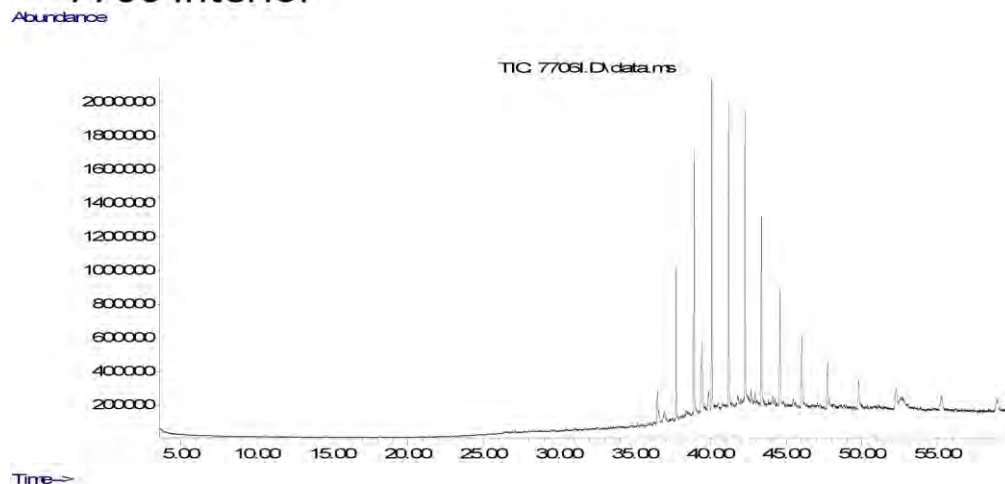
**Preparation:** Dissolved in solvent

**Method ID/s:**

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

## Results for: GCMS with Full Scan

7706 Interior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	4349864		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120	118529		ug/L	Z
Aliph	nC26	36.4960	1154468		ug/L	Z
Aliph	nC27	37.7300	4621924		ug/L	Z
Aliph	nC28	38.9260	8313701		ug/L	Z
Aliph	nC29	40.0740	10598631		ug/L	Z
Aliph	nC30	41.1930	9910347		ug/L	Z
Aliph	nC31	42.2750	9721384		ug/L	Z
Aliph	nC32	43.3560	7020161		ug/L	Z
Aliph	nC33	44.5840	5377647		ug/L	Z
Aliph	nC34	46.0130	3791632		ug/L	Z
Aliph	nC35	47.7140	2618528		ug/L	Z
Aliph	nC36	49.7870	2061977		ug/L	Z
Aliph	nC37	52.2630	1835922		ug/L	Z
Aliph	nC38	55.2360	1530400		ug/L	Z
Aliph	nC39	58.9110	1519903		ug/L	Z
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 : **W13/007707**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

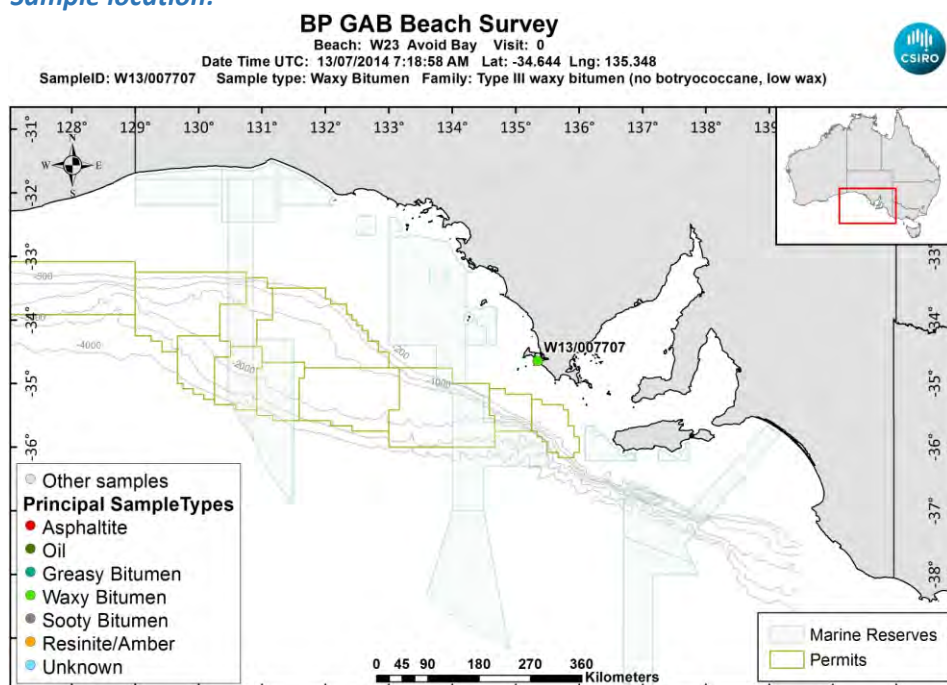
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 3.1

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007707\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007707\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007707\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007707\_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			87.38	percent	Y
Inorg	Hydrogen			8.10779642147117	percent	Y
Inorg	Nitrogen			0.22	percent	Y
Inorg	Sulphur			1.41933052928822	percent	Y

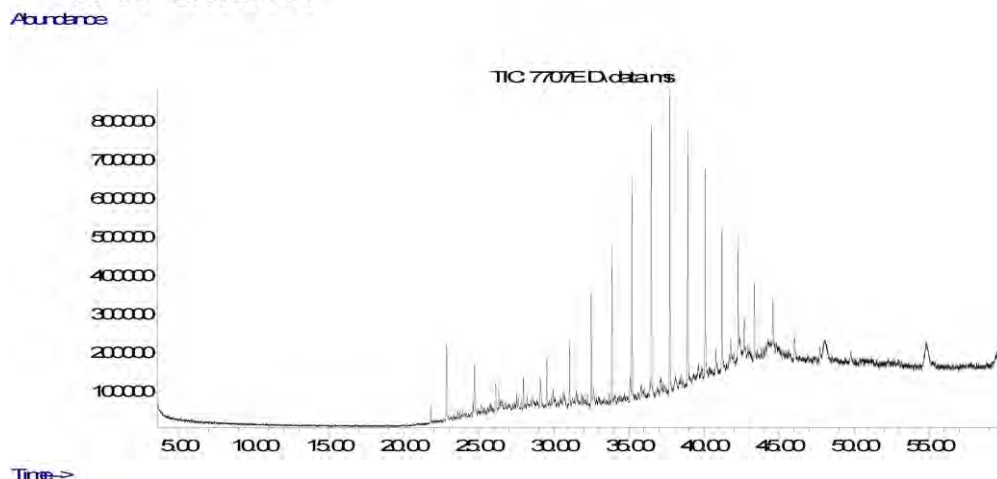
### Results for: GCMS with Full Scan

Unique ID: W13/007707\_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 007707\\_ext WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7707 Exterior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	nC18/Phytane			0.203348995908562	ug/L	Y
Ratio	Pristane/Phytane			1.63129381610544	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	194465		ug/L	Z
Aliph	nC19	26.3410	242326		ug/L	Z
Aliph	nC20	27.9810	355748		ug/L	Z
Aliph	nC21	29.5510	606794		ug/L	Z
Aliph	nC22	31.0540	955887		ug/L	Z
Aliph	nC23	32.4960	1513520		ug/L	Z
Aliph	nC24	33.8800	2204669		ug/L	Z
Aliph	nC25	35.2120	2922964		ug/L	Z
Aliph	nC26	36.4960	3536513		ug/L	Z
Aliph	nC27	37.7300	4165524		ug/L	Z
Aliph	nC28	38.9260	3575107		ug/L	Z
Aliph	nC29	40.0740	3008119		ug/L	Z
Aliph	nC30	41.1930	2088559		ug/L	Z
Aliph	nC31	42.2750	1682012		ug/L	Z
Aliph	nC32	43.3560	1290657		ug/L	Z
Aliph	nC33	44.5840	764629		ug/L	Z
Aliph	nC34	46.0130	556953		ug/L	Z
Aliph	nC35	47.7140	462904		ug/L	Z
Aliph	nC36	49.7870	390487		ug/L	Z
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	403122		ug/L	Z



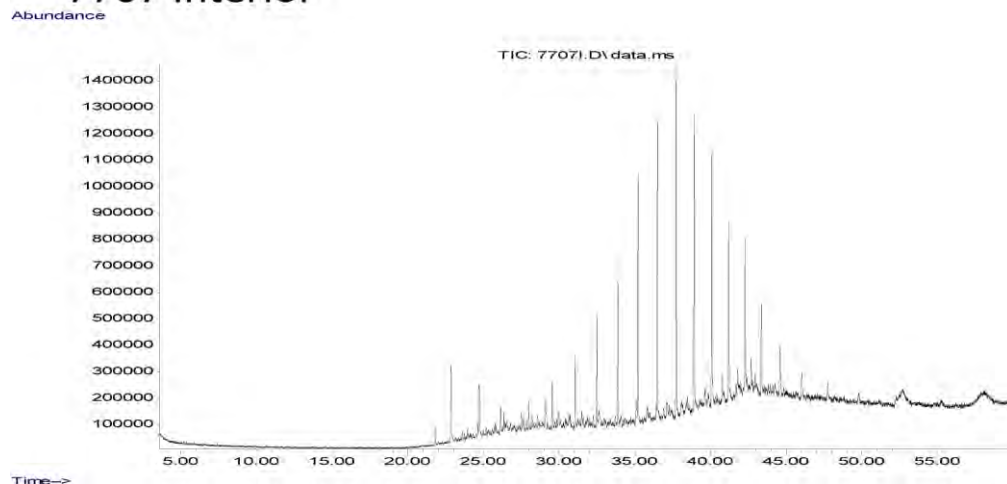
**Results for: GCMS with Full Scan**

Aliph	Phytane	24.7190	956309	ug/L	Z
Aliph	Pristane	22.8660	1560021	ug/L	Z

**Results for: GCMS with Full Scan****Unique ID:** W13/007707 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\\_007707\\_int\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

## Results for: GCMS with Full Scan

7707 Interior



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	nC18/Phytane			0.195108030374676	ug/L	Y
Ratio	Pristane/Phytane			1.73125249851261	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	269580		ug/L	Z
Aliph	nC19	26.3410	384921		ug/L	Z
Aliph	nC20	27.9810	565443		ug/L	Z
Aliph	nC21	29.5510	870230		ug/L	Z
Aliph	nC22	31.0540	1433163		ug/L	Z
Aliph	nC23	32.4960	2468331		ug/L	Z
Aliph	nC24	33.8800	3399403		ug/L	Z
Aliph	nC25	35.2120	4870220		ug/L	Z
Aliph	nC26	36.4960	5895101		ug/L	Z
Aliph	nC27	37.7300	6949890		ug/L	Z
Aliph	nC28	38.9260	5773038		ug/L	Z
Aliph	nC29	40.0740	5068232		ug/L	Z
Aliph	nC30	41.1930	3516092		ug/L	Z
Aliph	nC31	42.2750	2908600		ug/L	Z
Aliph	nC32	43.3560	2113168		ug/L	Z
Aliph	nC33	44.5840	1414878		ug/L	Z
Aliph	nC34	46.0130	924315		ug/L	Z
Aliph	nC35	47.7140	677003		ug/L	Z
Aliph	nC36	49.7870	425461		ug/L	Z
Aliph	nC37	52.2630	478315		ug/L	Z
Aliph	nC38	55.2360	287033		ug/L	Z
Aliph	nC39	58.9110			ug/L	U
Aliph	Norpristane	21.8010	575783		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Phytane	24.7190	1381697	ug/L	Z
Aliph	Pristane	22.8660	2392066	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 : **W13/007708**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

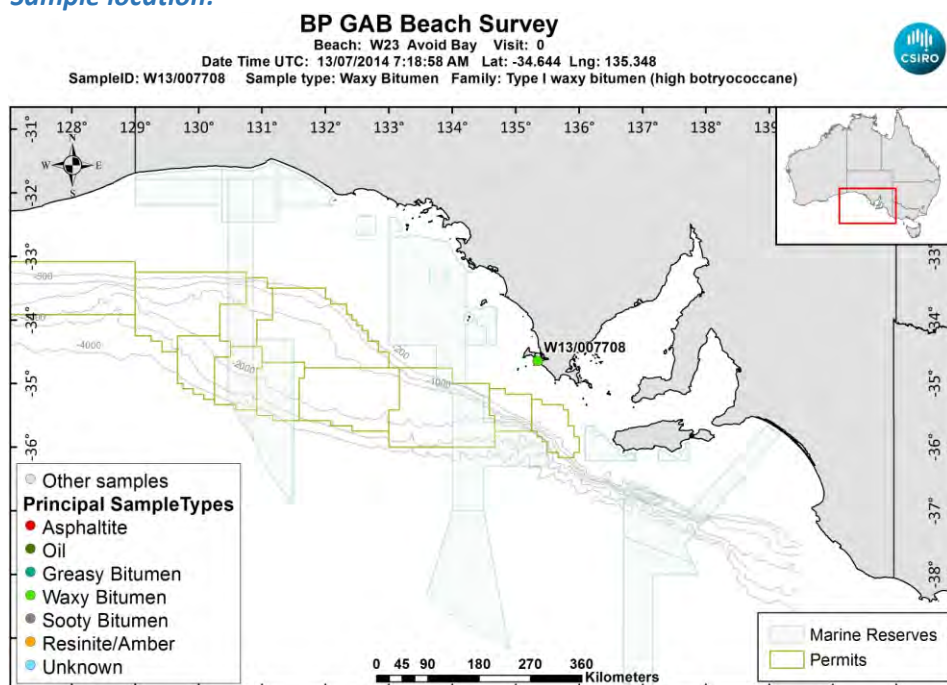
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 3.2

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007708\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007708\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007708\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007708\_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			88.51	percent	Y
Inorg	Hydrogen			10.3227673956262	percent	Y
Inorg	Nitrogen			0.29	percent	Y
Inorg	Sulphur			2.13233568452238	percent	Y

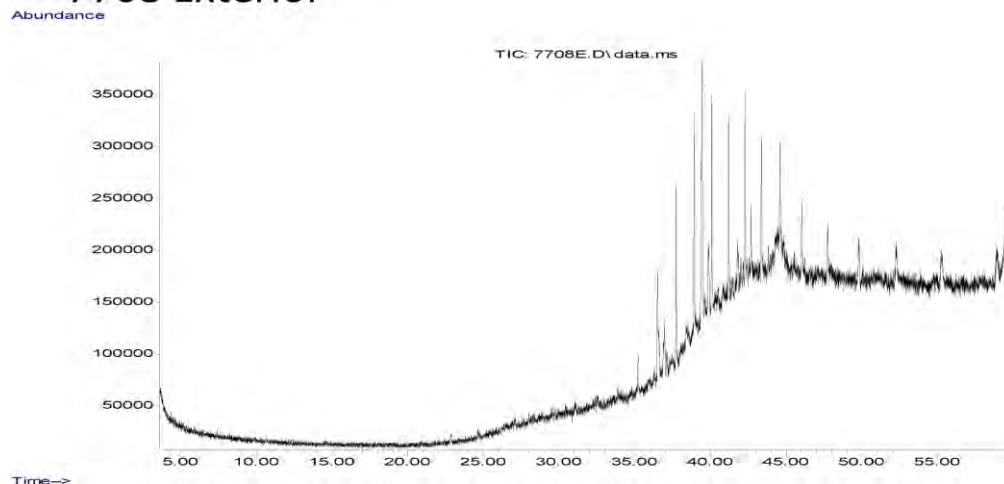
### Results for: GCMS with Full Scan

**Unique ID:** W13/007708\_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\\_007708\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

7708 Exterior



## Data Sheet:

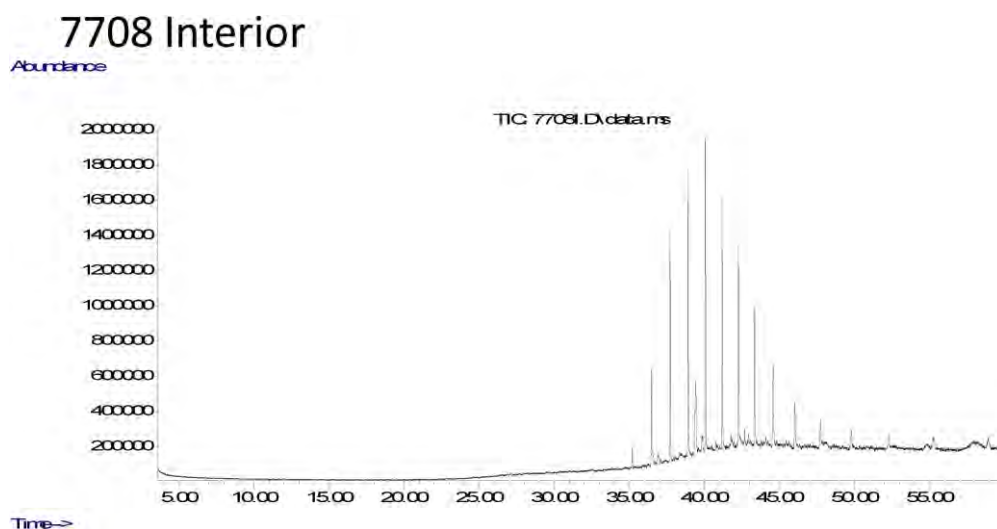
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	2316971		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120	191467		ug/L	Z
Aliph	nC26	36.4960	622346		ug/L	Z
Aliph	nC27	37.7300	901659		ug/L	Z
Aliph	nC28	38.9260	1093023		ug/L	Z
Aliph	nC29	40.0740	1252320		ug/L	Z
Aliph	nC30	41.1930	1026189		ug/L	Z
Aliph	nC31	42.2750	937755		ug/L	Z
Aliph	nC32	43.3560	690971		ug/L	Z
Aliph	nC33	44.5840	703741		ug/L	Z
Aliph	nC34	46.0130	556841		ug/L	Z
Aliph	nC35	47.7140	388484		ug/L	Z
Aliph	nC36	49.7870	443932		ug/L	Z
Aliph	nC37	52.2630	571307		ug/L	Z
Aliph	nC38	55.2360	642681		ug/L	Z
Aliph	nC39	58.9110	666704		ug/L	Z
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****Results for: GCMS with Full Scan****Unique ID:** W13/007708 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\\_007708\\_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	39.4290	3860171		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120	628007		ug/L	Z
Aliph	nC26	36.4960	2565037		ug/L	Z
Aliph	nC27	37.7300	6684216		ug/L	Z
Aliph	nC28	38.9260	8546243		ug/L	Z
Aliph	nC29	40.0740	9543580		ug/L	Z
Aliph	nC30	41.1930	7823144		ug/L	Z
Aliph	nC31	42.2750	6564262		ug/L	Z
Aliph	nC32	43.3560	4638112		ug/L	Z
Aliph	nC33	44.5840	3253560		ug/L	Z
Aliph	nC34	46.0130	2307292		ug/L	Z
Aliph	nC35	47.7140	1481941		ug/L	Z
Aliph	nC36	49.7870	1285488		ug/L	Z
Aliph	nC37	52.2630	914098		ug/L	Z
Aliph	nC38	55.2360	914337		ug/L	Z
Aliph	nC39	58.9110	1026331		ug/L	Z
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 : **W13/007709**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

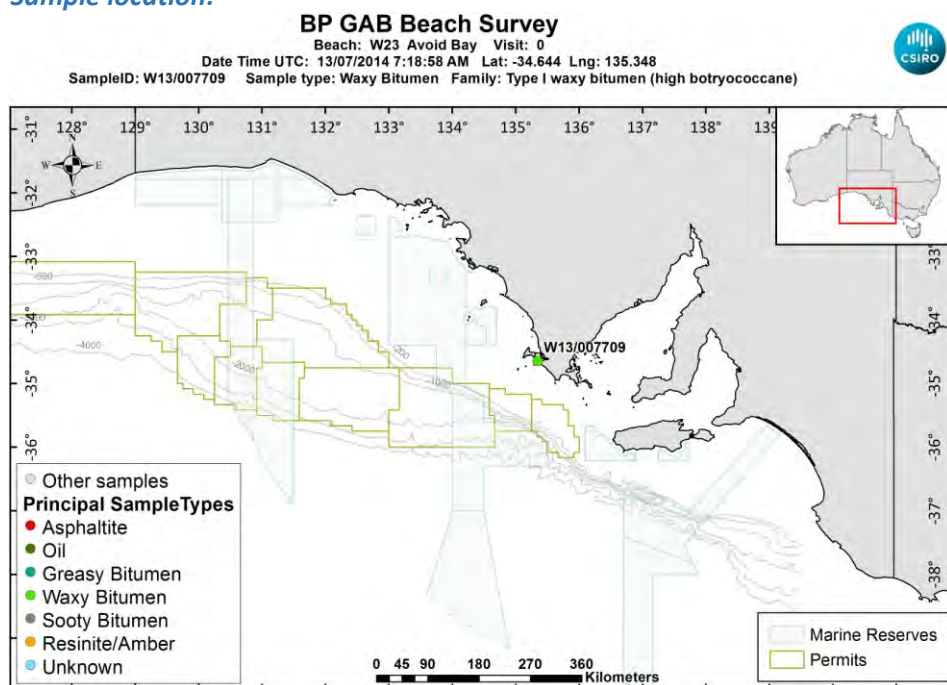
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 1.8

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007709\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007709\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007709\\_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

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007709\_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:
Inorg	Carbon			86.19	percent	Y
Inorg	Hydrogen			10.8542763419483	percent	Y
Inorg	Nitrogen			0.28	percent	Y
Inorg	Sulphur			4.6670681329061	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 : **W13/007710**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

**Family:** Unknown

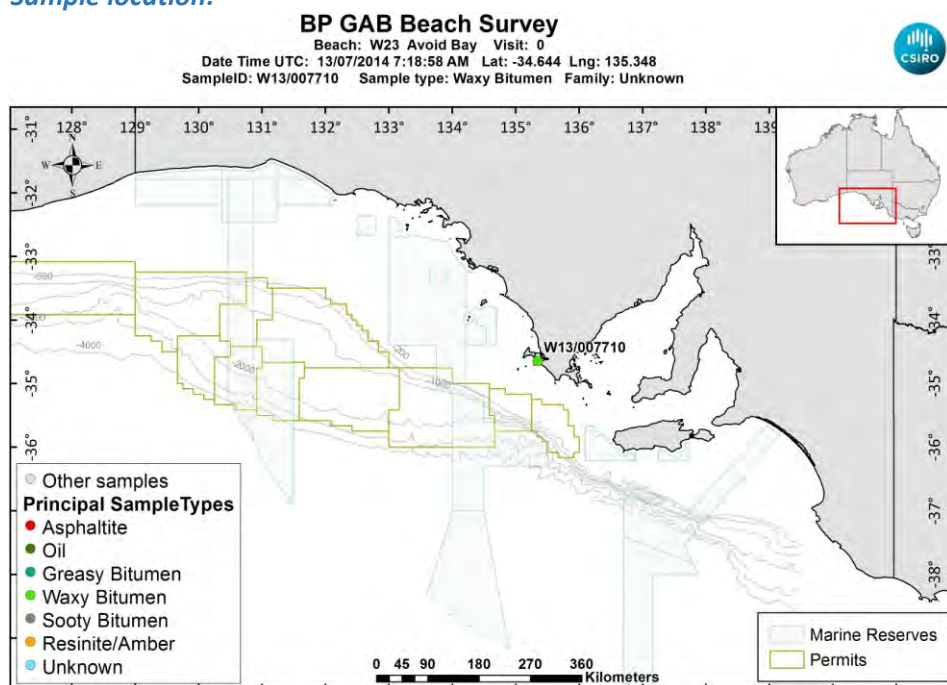
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 3.2

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007710\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007710\\_Photo01.JPG](#)

**Sample - laboratory image:**





[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007710\\_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

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007710\_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:
Inorg	Carbon			89.26	percent	Y
Inorg	Hydrogen			9.43275825049702	percent	Y
Inorg	Nitrogen			0.22	percent	Y
Inorg	Sulphur			1.84994819638448	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 : **W13/007711**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

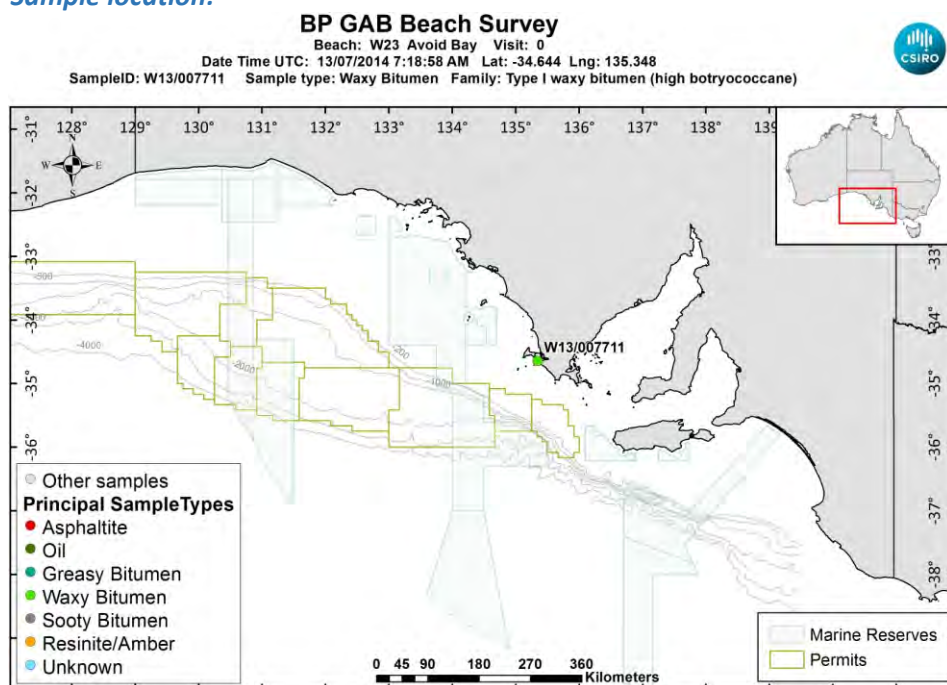
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 1.7

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007711\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007711\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007711\\_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: 2
Whole Oils	GCMS with Full Scan Run: 1

## Sample Analyses Completed:

### Results for: Elemental Analyser

Unique ID: W13/007711\_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			87.97	percent	Y
Inorg	Hydrogen			8.51851491053678	percent	Y
Inorg	Nitrogen			0.19	percent	Y
Inorg	Sulphur			1.79791504345428	percent	Y

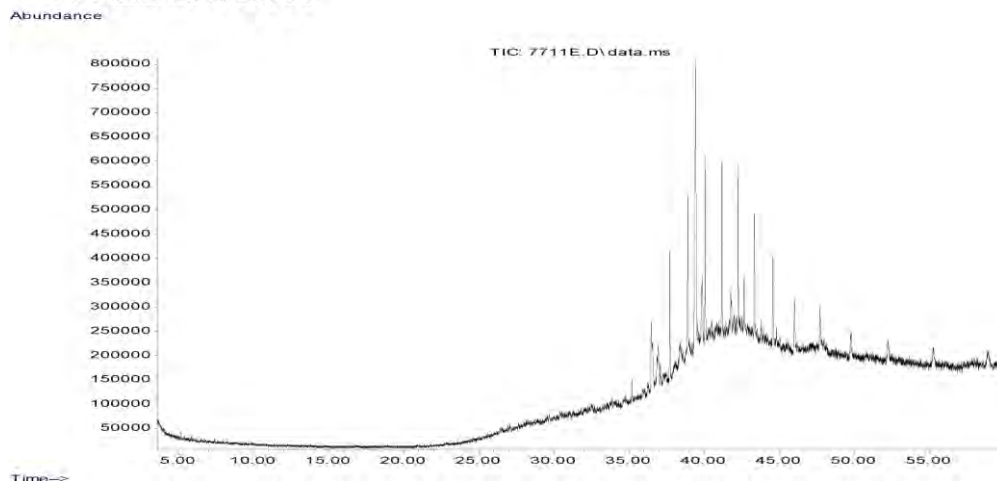
### Results for: GCMS with Full Scan

Unique ID: W13/007711\_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\\_007711\\_ext\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

## Results for: GCMS with Full Scan

## 7711 Exterior



## Data Sheet:

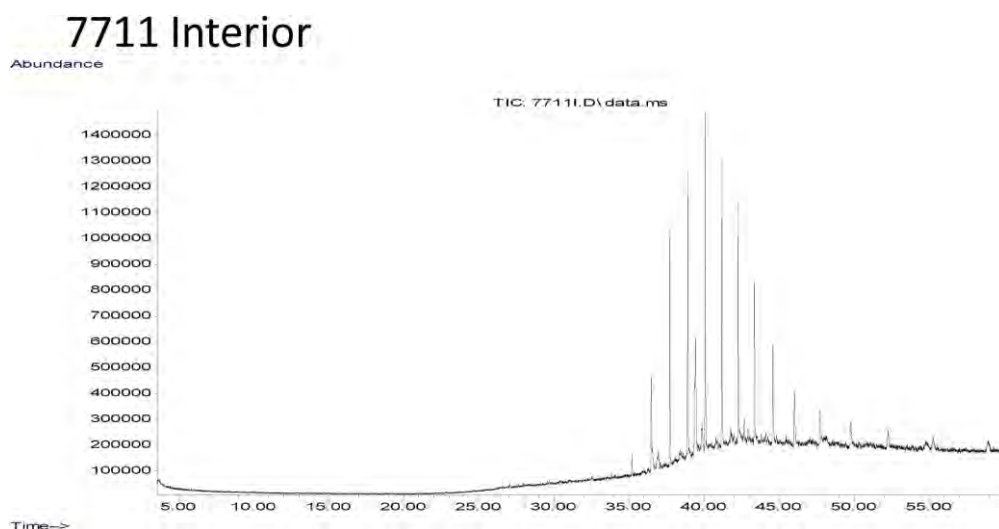
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	5735795		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120	217085		ug/L	Z
Aliph	nC26	36.4960	791275		ug/L	Z
Aliph	nC27	37.7300	1379845		ug/L	Z
Aliph	nC28	38.9260	1790893		ug/L	Z
Aliph	nC29	40.0740	2036694		ug/L	Z
Aliph	nC30	41.1930	1818250		ug/L	Z
Aliph	nC31	42.2750	1882576		ug/L	Z
Aliph	nC32	43.3560	1386916		ug/L	Z
Aliph	nC33	44.5840	1152369		ug/L	Z
Aliph	nC34	46.0130	958427		ug/L	Z
Aliph	nC35	47.7140	785859		ug/L	Z
Aliph	nC36	49.7870	796239		ug/L	Z
Aliph	nC37	52.2630	536272		ug/L	Z
Aliph	nC38	55.2360	451126		ug/L	Z
Aliph	nC39	58.9110	634690		ug/L	Z
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****Results for: GCMS with Full Scan****Unique ID:** W13/007711 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\\_007711\\_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	39.4290	4070649		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			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120	401768		ug/L	Z
Aliph	nC26	36.4960	1677080		ug/L	Z
Aliph	nC27	37.7300	4498551		ug/L	Z
Aliph	nC28	38.9260	6011188		ug/L	Z
Aliph	nC29	40.0740	6906785		ug/L	Z
Aliph	nC30	41.1930	5925953		ug/L	Z
Aliph	nC31	42.2750	5211156		ug/L	Z
Aliph	nC32	43.3560	3702793		ug/L	Z
Aliph	nC33	44.5840	3045675		ug/L	Z
Aliph	nC34	46.0130	1893789		ug/L	Z
Aliph	nC35	47.7140	1268758		ug/L	Z
Aliph	nC36	49.7870	937096		ug/L	Z
Aliph	nC37	52.2630	802808		ug/L	Z
Aliph	nC38	55.2360	594690		ug/L	Z
Aliph	nC39	58.9110	715774		ug/L	Z
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 : **W13/007712**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

**Family:** Unclassified high wax bitumen

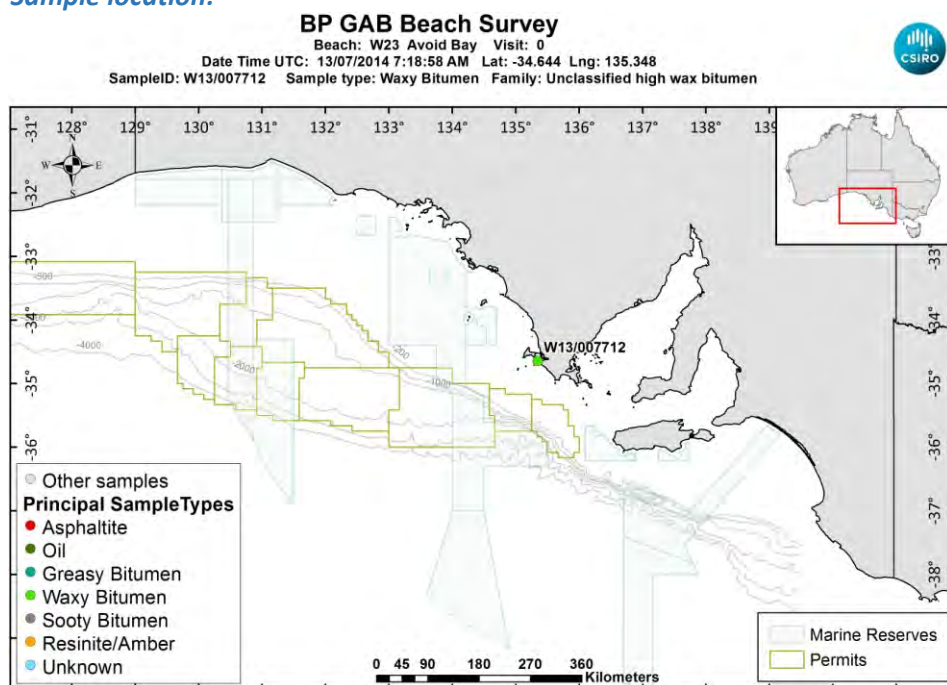
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 0.7

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007712\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007712\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007712\\_Photo02.JPG](#)

### Analyses Requested

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

### Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 1
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

## Sample Analyses Completed:

### Results for: Gas Chromatography Mass Spectrometry

**Unique ID:** W13/007712 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:** Bulk 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			42.6289749492918	ratio	Y
BiomRatio	% C27 abb 20(R+S)			34.7680648008641	ratio	Y
BiomRatio	% C28 aaa 20R			26.2143509223051	ratio	Y
BiomRatio	% C28 abb 20(R+S)			29.9266672327396	ratio	Y
BiomRatio	% C29 aaa 20R			31.1566741284031	ratio	Y
BiomRatio	% C29 abb 20(R+S)			35.3052679663963	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.20861397601846	ratio	Y
BiomRatio	25-Nor/C30H			6.08140442862938E-02	ratio	Y
BiomRatio	C19t/C23t			0.10929462822871	ratio	Y
BiomRatio	C22t/C21t			0.471017435386893	ratio	Y
BiomRatio	C22t/C24t			0.2491408220393	ratio	Y
BiomRatio	C23t/C30H			0.496478652352653	ratio	Y
BiomRatio	C24t/C23t			0.521024330280992	ratio	Y
BiomRatio	C24Tet/C23t			0.984581856952123	ratio	Y
BiomRatio	C24Tet/C26t			2.67342711039226	ratio	Y
BiomRatio	C24Tet/C30H			0.488823873470463	ratio	Y
BiomRatio	C26t/C25t			0.692550519336516	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.392727893309194	ratio	Y
BiomRatio	C27 Dia/Ster			0.383568037857949	ratio	Y
BiomRatio	C28BNH/C30H			6.18099870294439E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			1.01545105166506	ratio	Y
BiomRatio	C29H/C30H			1.10186427098724	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.149038331768792	ratio	Y
BiomRatio	C30DiaH/C30H			3.78359663781201E-02	ratio	Y
BiomRatio	C30Ts/C30H			0.107374218167023	ratio	Y
BiomRatio	C35 Homohopane Index			9.64691278292646E-02	ratio	Y
BiomRatio	C35HS/C34HS			1.06942282188779	ratio	Y
BiomRatio	Gam/C30H			0.097133692318814	ratio	Y
BiomRatio	Gam/C31HR			0.291748726594415	ratio	Y
BiomRatio	Ole/C30H			0.184573223299683	ratio	Y
BiomRatio	Sterane/hopane			0.741626522891505	ratio	Y
BiomRatio	Steranes/Terpanes			0.519041654176426	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.428838161492567	ratio	Y

## Results for: Elemental Analyser

Unique ID: W13/007712\_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:**

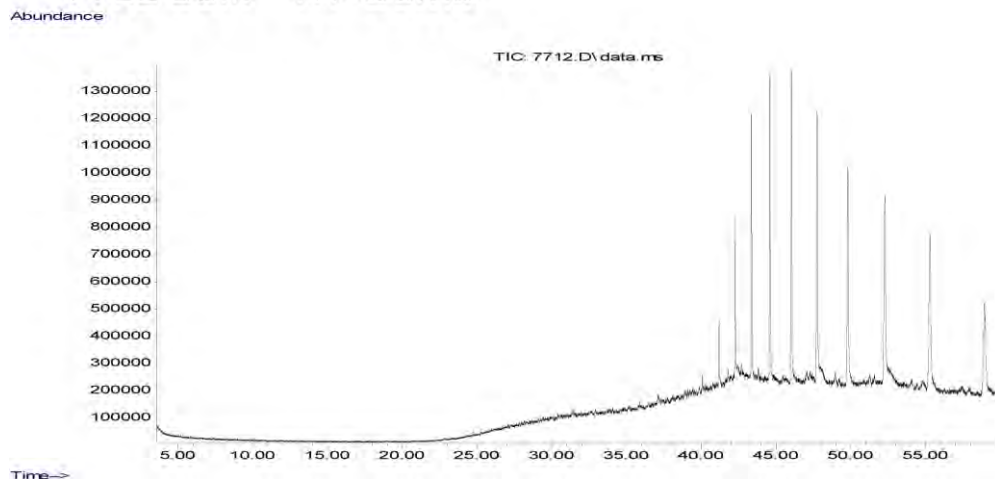
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			84.63	percent	Y
Inorg	Hydrogen			7.61308727634195	percent	Y
Inorg	Nitrogen			0.26	percent	Y
Inorg	Sulphur			2.33931115027709	percent	Y

**Results for: GCMS with Full Scan****Unique ID:** W13/007712\_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\\_007712\\_bulk\\_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

## Results for: GCMS with Full Scan

## 7712 Bulk – HT-GCMS



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510			ug/L	U
Aliph	nC22	31.0540			ug/L	U
Aliph	nC23	32.4960			ug/L	U
Aliph	nC24	33.8800			ug/L	U
Aliph	nC25	35.2120			ug/L	U
Aliph	nC26	36.4960			ug/L	U
Aliph	nC27	37.7300			ug/L	U
Aliph	nC28	38.9260			ug/L	U
Aliph	nC29	40.0740	400717		ug/L	Z
Aliph	nC30	41.1930	1202768		ug/L	Z
Aliph	nC31	42.2750	3069350		ug/L	Z
Aliph	nC32	43.3560	5791812		ug/L	Z
Aliph	nC33	44.5840	8429644		ug/L	Z
Aliph	nC34	46.0130	9919262		ug/L	Z
Aliph	nC35	47.7140	9880565		ug/L	Z
Aliph	nC36	49.7870	9384673		ug/L	Z
Aliph	nC37	52.2630	9471373		ug/L	Z
Aliph	nC38	55.2360	8743593		ug/L	Z
Aliph	nC39	58.9110	6428608		ug/L	Z
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 : **W13/007713**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

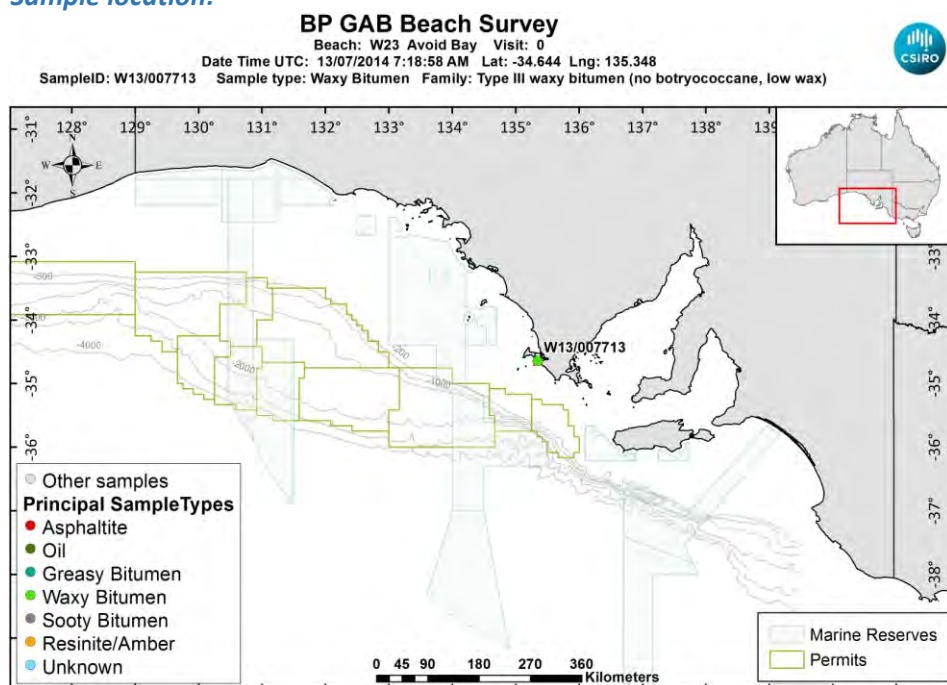
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 3

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007713\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007713\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007713\\_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: 2

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007713\_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			88.05	percent	Y
Inorg	Hydrogen			10.7276308151093	percent	Y
Inorg	Nitrogen			0.23	percent	Y
Inorg	Sulphur			2.14880557376	percent	Y

### Results for: GCMS with Full Scan

**Unique ID:** W13/007713 DISS GCMS-Scan/02

**Instrument / Type:** GCMS with Full Scan Run: 2

**for Analysis:** Whole Oils

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

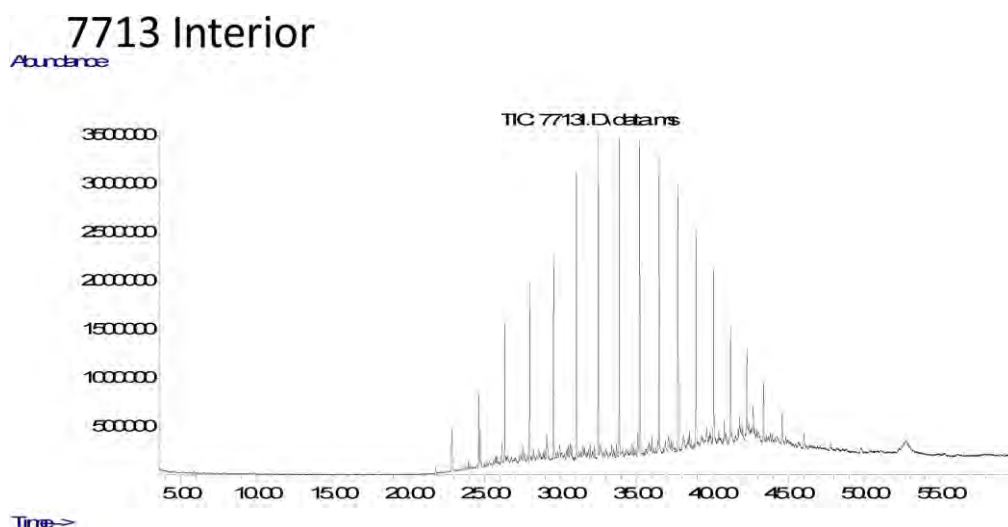
**Linked Image:** [LinkedFiles\GAB\\_BCH1\GCMS\W13\\_007713\\_int\\_WholeOil.jpg](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

**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:
Ratio	nC17/nC29		0.107934333255631		ug/L	Y
Ratio	nC17/nC35		1.23921991337725		ug/L	Y
Ratio	nC17/Pristane		0.285227481880676		ug/L	Y
Ratio	nC18/Phytane		1.6164088687069		ug/L	Y
Ratio	Pristane/Phytane		1.34875252003717		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	985399		ug/L	Z
Aliph	nC18	24.6230	4140375		ug/L	Z
Aliph	nC19	26.3410	7368601		ug/L	Z
Aliph	nC20	27.9810	9685592		ug/L	Z
Aliph	nC21	29.5510	11377233		ug/L	Z
Aliph	nC22	31.0540	14835499		ug/L	Z
Aliph	nC23	32.4960	16807990		ug/L	Z
Aliph	nC24	33.8800	17223294		ug/L	Z
Aliph	nC25	35.2120	16971058		ug/L	Z
Aliph	nC26	36.4960	15220859		ug/L	Z
Aliph	nC27	37.7300	14540845		ug/L	Z
Aliph	nC28	38.9260	11016805		ug/L	Z
Aliph	nC29	40.0740	9129615		ug/L	Z
Aliph	nC30	41.1930	6051385		ug/L	Z
Aliph	nC31	42.2750	5144541		ug/L	Z
Aliph	nC32	43.3560	3376318		ug/L	Z
Aliph	nC33	44.5840	2479093		ug/L	Z
Aliph	nC34	46.0130	1395506		ug/L	Z
Aliph	nC35	47.7140	795177		ug/L	Z
Aliph	nC36	49.7870	553152		ug/L	Z
Aliph	nC37	52.2630	572407		ug/L	Z

**Results for: GCMS with Full Scan**

Aliph	nC38	55.2360	460197	ug/L	Z
Aliph	nC39	58.9110		ug/L	U
Aliph	Norpristane	21.8010	635703	ug/L	Z
Aliph	Phytane	24.7190	2561465	ug/L	Z
Aliph	Pristane	22.8660	3454783	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 : **W13/007714**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

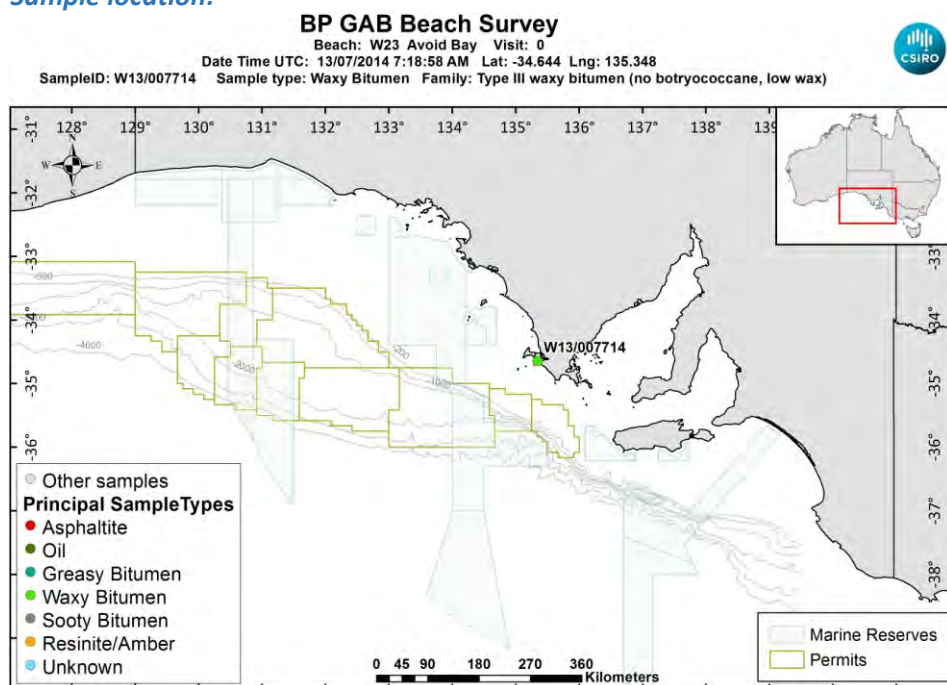
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 1.8

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007714\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007714\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007714\\_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:** W13/007714\_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			87.02	percent	Y
Inorg	Hydrogen			12.3674856858847	percent	Y
Inorg	Nitrogen			0.17	percent	Y
Inorg	Sulphur			2.47112751199382	percent	Y

### Results for: GCMS with Full Scan

**Unique ID:** W13/007714 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\\_007714\\_bulk\\_WholeOil.jpg](#)

**Preparation:** Dissolved in solvent

**Method ID/s:**

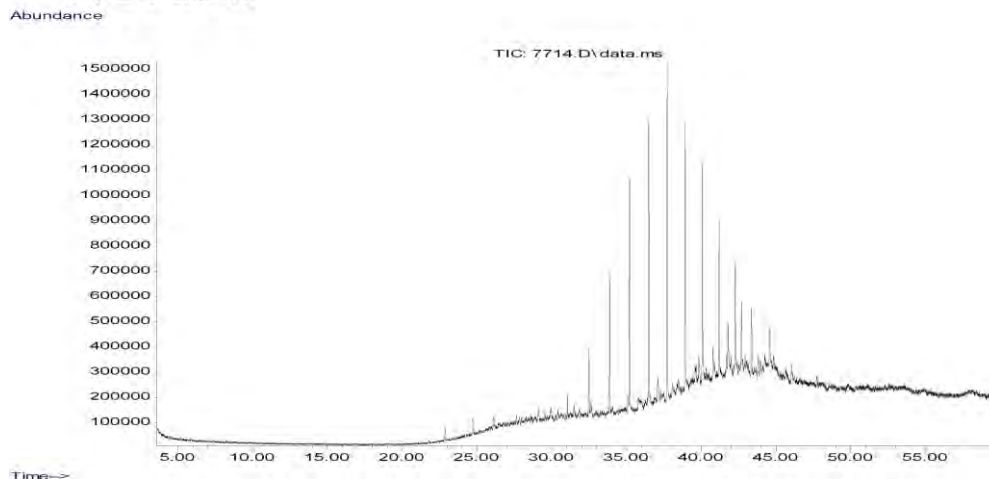
**Sample Volume:** **Volume Units:** **Extract Volume:** **Dilution Factor:**

**Comment:** Bulk



## Results for: GCMS with Full Scan

7714 Bulk



## Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Ratio	Pristane/Phytane			0.978716333107743	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			ug/L	U
Aliph	nC19	26.3410			ug/L	U
Aliph	nC20	27.9810			ug/L	U
Aliph	nC21	29.5510	148554		ug/L	Z
Aliph	nC22	31.0540	523829		ug/L	Z
Aliph	nC23	32.4960	1479913		ug/L	Z
Aliph	nC24	33.8800	2888073		ug/L	Z
Aliph	nC25	35.2120	4651755		ug/L	Z
Aliph	nC26	36.4960	5845274		ug/L	Z
Aliph	nC27	37.7300	6650309		ug/L	Z
Aliph	nC28	38.9260	5301756		ug/L	Z
Aliph	nC29	40.0740	4589614		ug/L	Z
Aliph	nC30	41.1930	3058383		ug/L	Z
Aliph	nC31	42.2750	2428196		ug/L	Z
Aliph	nC32	43.3560	1571404		ug/L	Z
Aliph	nC33	44.5840	1299556		ug/L	Z
Aliph	nC34	46.0130	476380		ug/L	Z
Aliph	nC35	47.7140	359800		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	56779		ug/L	Z
Aliph	Phytane	24.7190	458441		ug/L	Z

## Results for: GCMS with Full Scan

Aliph	Pristane	22.8660	448683	ug/L	Z
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## 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 : **W13/007715**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

**Family:** Unknown

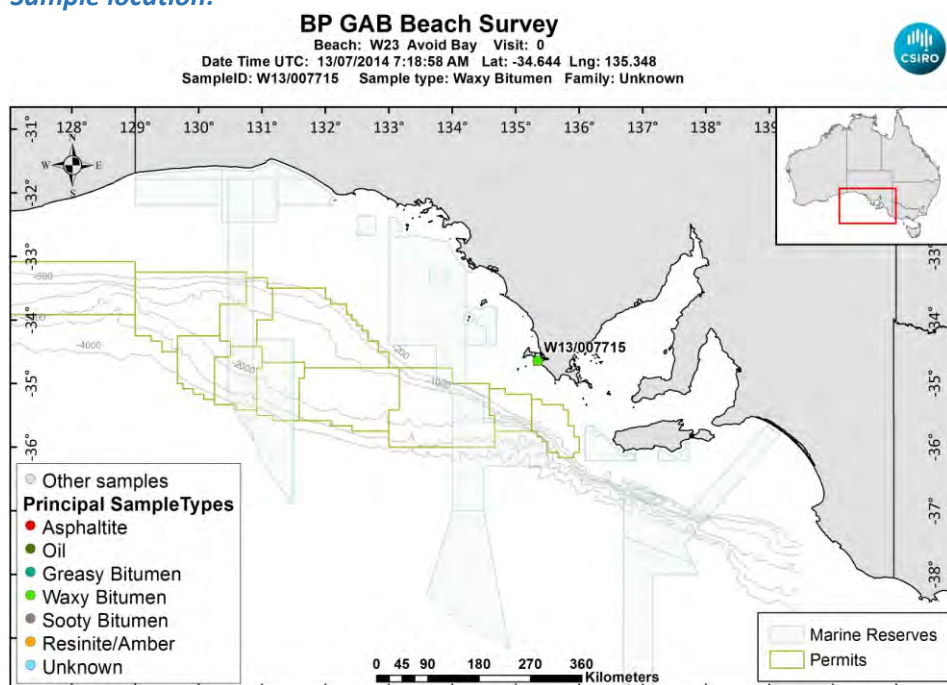
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 1.2

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007715\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007715\\_Photo01.JPG](#)

**Sample - laboratory image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007715\\_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

## Sample Analyses Completed:

### Results for: Elemental Analyser

**Unique ID:** W13/007715\_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			86.78	percent	Y
Inorg	Hydrogen			7.90392206759443	percent	Y
Inorg	Nitrogen			0.23	percent	Y
Inorg	Sulphur			1.25831238881864	percent	Y

(default units ppb)

**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 : **W13/007716**

Beach W23: Avoid Bav Visit: 0

**Comments:**

gifted to CSIRO from Stuart Valladares Coffin Bay.

**Location:** Upper Intertidal

**Local Date Time:** 13/07/2014 4:48:58 PM

**Type:** Waxy Bitumen

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

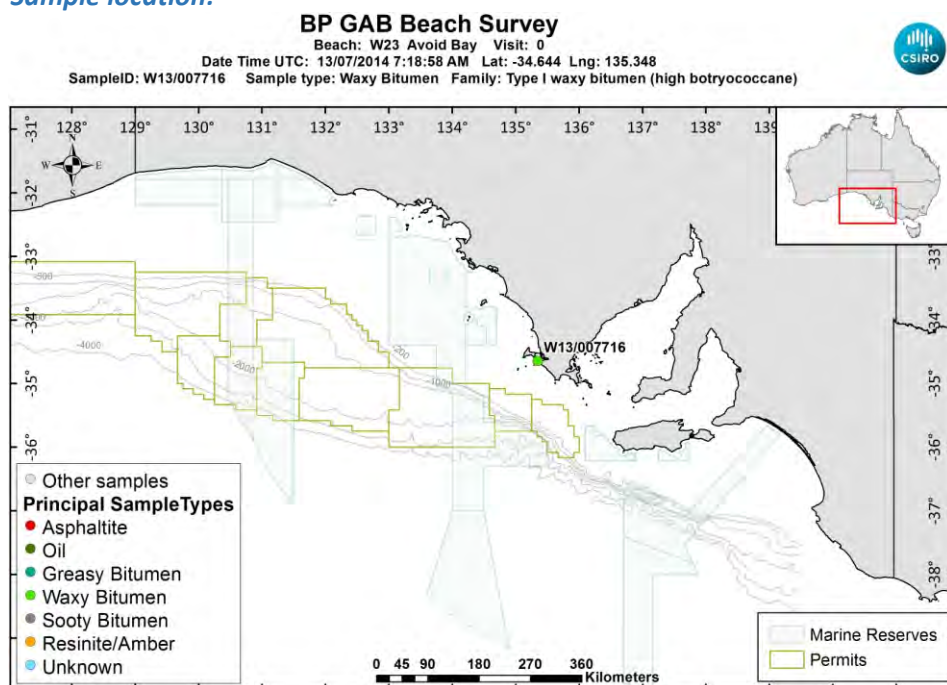
**Size (cm):** 0

**Latitude (Y):** -34.644000

**Weight (gm):** 1

**Longitude (X):** 135.348000

**Sample location:**



[LinkedFiles\GAB\\_BCH1\SampleLocations\W13\\_007716\\_Location.jpg](#)

**Sample - field image:**



[LinkedFiles\GAB\\_BCH1\Samples\W13\\_007716\\_Photo01.JPG](#)

**Sample - laboratory image:**