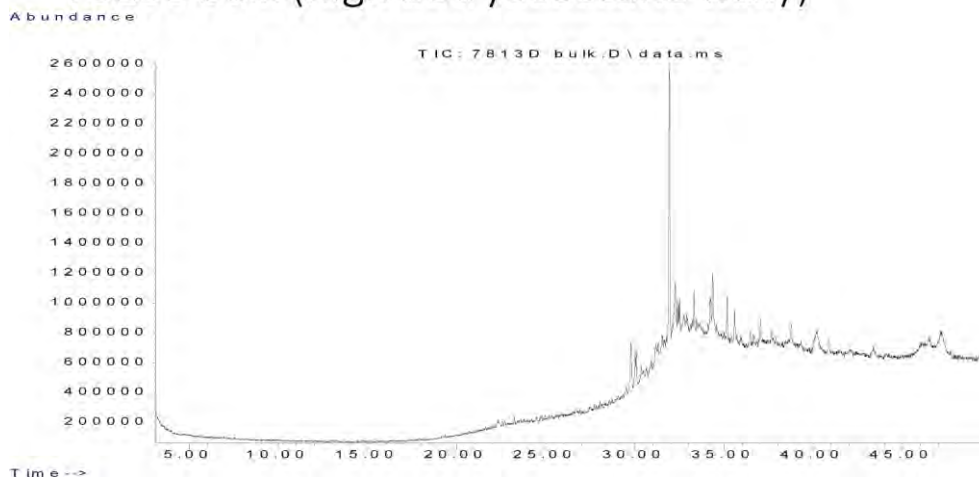


Results for: GCMS with Full Scan

7813E bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	15936626			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	998009			Z
Aliph	nC25	28.7100	5381282			Z
Aliph	nC26	29.6680	13033334			Z
Aliph	nC27	30.6080	21701233			Z
Aliph	nC28	31.5080	22876487			Z
Aliph	nC29	32.3700	22515818			Z
Aliph	nC30	33.2910	18373921			Z
Aliph	nC31	34.3470	15360096			Z
Aliph	nC32	35.5720	11585610			Z
Aliph	nC33	37.0130	8906395			Z
Aliph	nC34	38.7280	6396293			Z
Aliph	nC35	40.8080	4481235			Z
Aliph	nC36	43.3510	3458730			Z
Aliph	nC37	46.4710	2367905			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:**

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 : **W13/007813F**

Beach W5: Dogfence Beach Visit: 3

Comments:

Part F subsample

Location: Shore Upper

Local Date Time: 6/10/2016 4:18:18 PM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

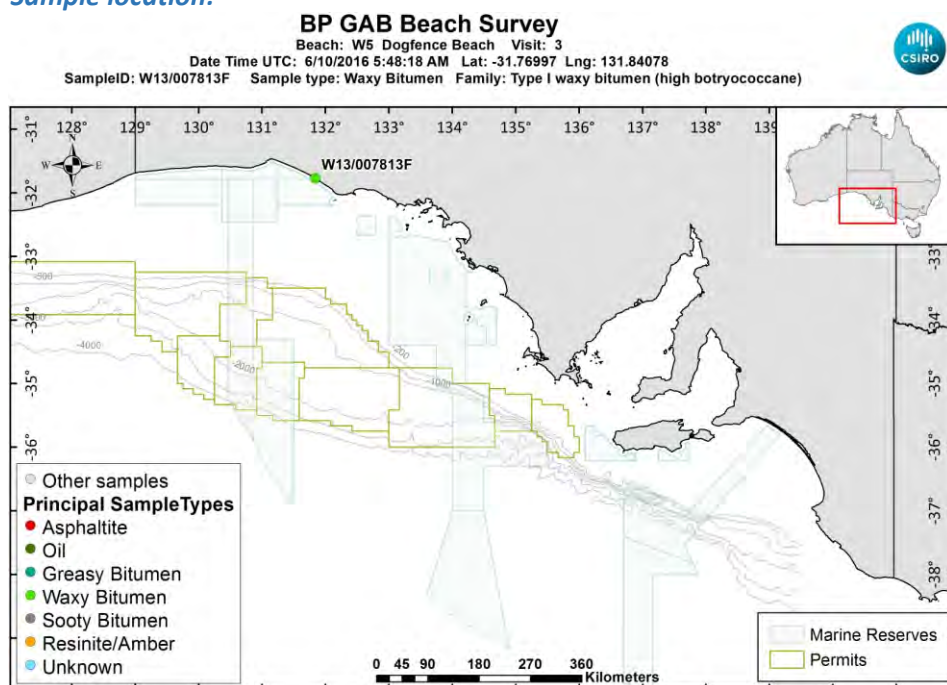
Size (cm): 1.6

Latitude (Y): -31.769970

Weight (gm): 1.00047

Longitude (X): 131.840775

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007813F_Location.jpg](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007813_ABCDEF_Photo02.jpg](#)

Sample ID : W13/007813F**Beach W5: Dogfence Beach Visit: 3****Analyses Requested**

Split: Analysis: Sent:
1 Bitumen Determination NO

Analyses Completed:

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

Sample Analyses Completed:**Results for: Elemental Analyser****Unique ID: W13/007813F_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)*

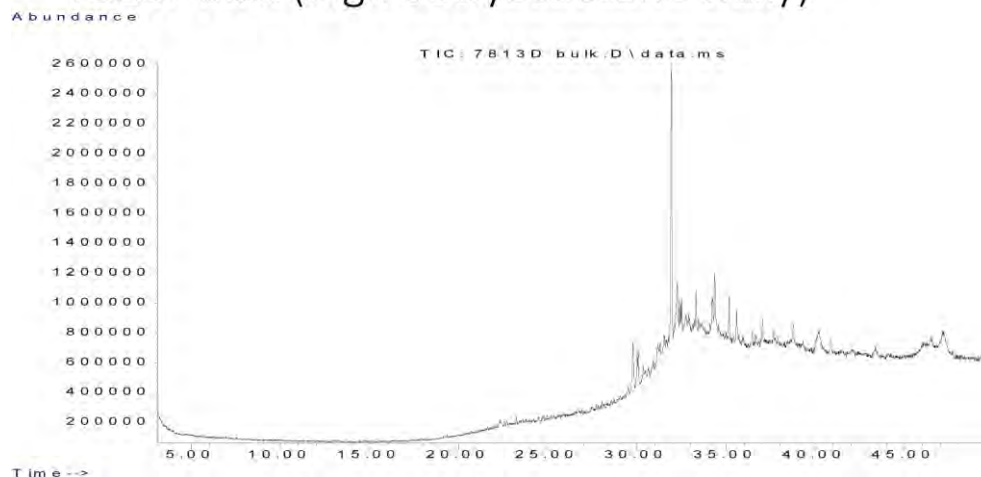
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			87.1	percent	Y
Inorg	Hydrogen			11.9111829025845	percent	Y
Inorg	Nitrogen			0.35	percent	Y
Inorg	Sulphur			2.18793432476117	percent	Y

Results for: GCMS with Full Scan**Unique ID: W13/007813F_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_007813F_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

7813F bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	13185471			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				U
Aliph	nC31	34.3470	1382547			Z
Aliph	nC32	35.5720	451184			Z
Aliph	nC33	37.0130	679528			Z
Aliph	nC34	38.7280	672630			Z
Aliph	nC35	40.8080	313576			Z
Aliph	nC36	43.3510	258482			Z
Aliph	nC37	46.4710	168863			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:**

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 : **W13/007814**

Beach W5: Dogfence Beach Visit: 3

Comments:

No photo

Location: Shore Upper

Local Date Time: 6/10/2016 4:19:57 PM

Type: Resinite/Amber

Family: Resin/Amber

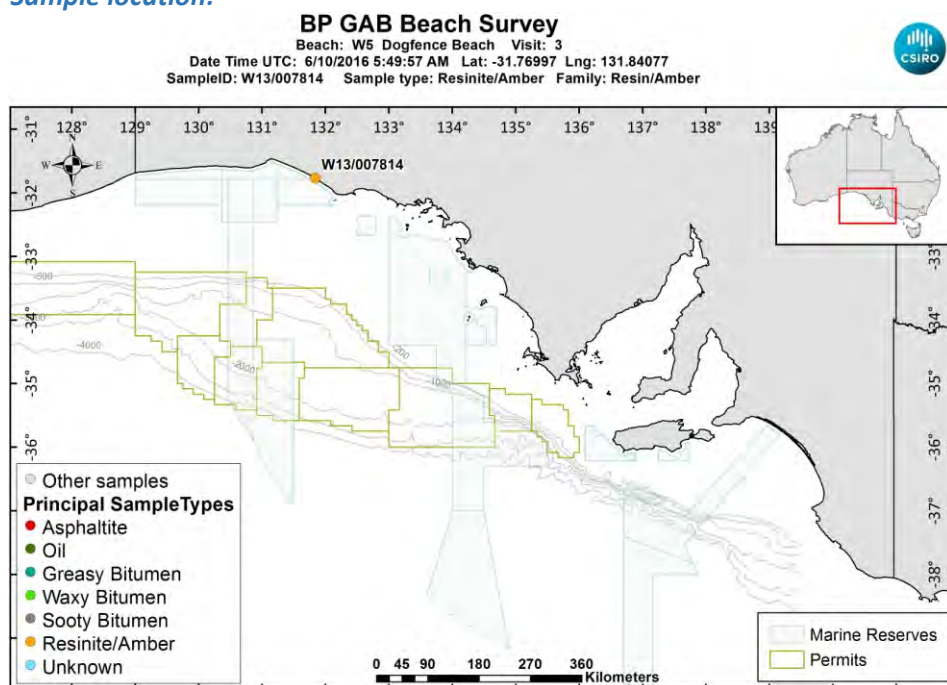
Size (cm): 3.9

Latitude (Y): -31.769972

Weight (gm): 9.31493

Longitude (X): 131.840770

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007814_Location.jpg](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007814_Photo03.JPG](#)

Sample ID : W13/007814

Beach W5: Dogfence Beach Visit: 3

Analyses Requested

Split: Analysis: Sent:
1 Bitumen Determination YES

Analyses Completed:

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

Sample Analyses Completed:

Results for: GCMS with Full Scan

Unique ID: W13/007814_DISS_GCMS-Scan/01

Instrument / Type: GCMS with Full Scan Run: 1

for Analysis: Whole Oils

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Dissolved in solvent

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

Results for: GCMS with Full Scan

Data Sheet:

(default units ppb)

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

Qualifier codes:

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 : **W13/007488**

Beach W20: Elliston Visit: 1

Comments:

Location: Upper Intertidal

Local Date Time: 13/11/2014 9:28:31 AM

Type: Asphaltite

Family: Asphaltite

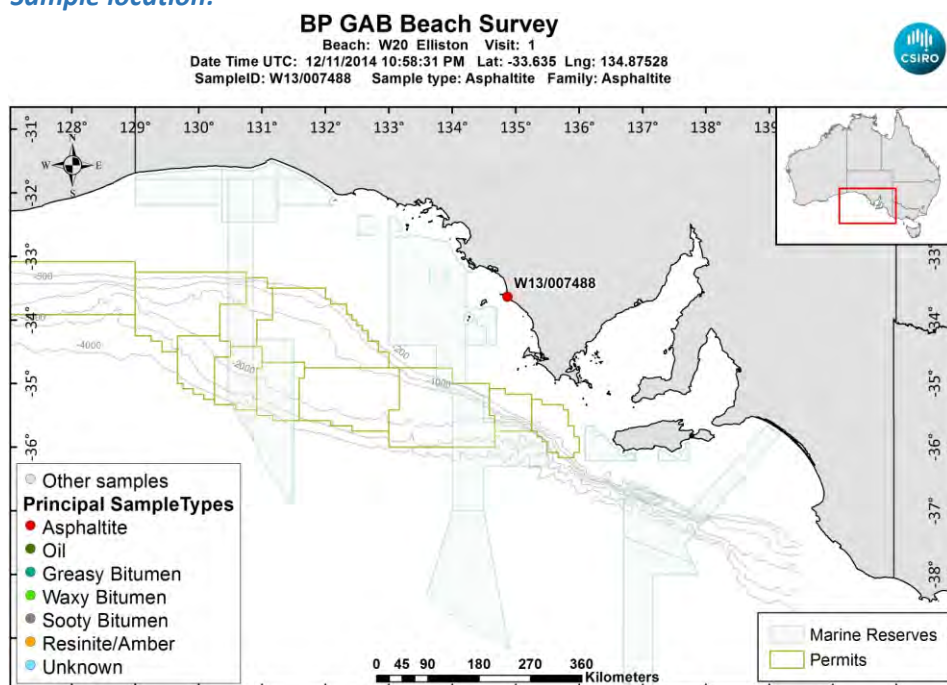
Size (cm): 6

Latitude (Y): -33.635000

Weight (gm): 77.982

Longitude (X): 134.875278

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007488_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\W13_007488_146A0361.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB BCH1\Samples\W13_007488_Photo01.JPG](#)

Analyses Requested

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

Analyses Completed:

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

Sample Analyses Completed:

Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007488 DISS GC-MS/01

Instrument / Type: Gas Chromatography Mass Spectrometry Run: 1

for Analysis: Biomarkers

Analysis Date: 18/07/2017

Linked Image: [None available](#)

Preparation: Dissolved in solvent

Method ID/s:

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: External Ratios only

Results for: Gas Chromatography Mass Spectrometry

Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			36.8817664739502	ratio	Y
BiomRatio	% C27 abb 20(R+S)			37.9321309853798	ratio	Y
BiomRatio	% C28 aaa 20R			24.6913393264058	ratio	Y
BiomRatio	% C28 abb 20(R+S)			26.119388420082	ratio	Y
BiomRatio	% C29 aaa 20R			38.4268941996439	ratio	Y
BiomRatio	% C29 abb 20(R+S)			35.9484805945382	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.104947681075872	ratio	Y
BiomRatio	25-Nor/C30H			2.79279744446414E-02	ratio	Y
BiomRatio	C19t/C23t			0.286440220723483	ratio	Y
BiomRatio	C22t/C21t			0.369717728623308	ratio	Y
BiomRatio	C22t/C24t			0.313838824374267	ratio	Y
BiomRatio	C23t/C30H			7.36139189613207E-02	ratio	Y
BiomRatio	C24t/C23t			0.560078479460454	ratio	Y
BiomRatio	C24Tet/C23t			0.876649908031882	ratio	Y
BiomRatio	C24Tet/C26t			1.65521680342292	ratio	Y
BiomRatio	C24Tet/C30H			6.45336352873082E-02	ratio	Y
BiomRatio	C26t/C25t			0.887838248957811	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.446015337301566	ratio	Y
BiomRatio	C27 Dia/Ster			0.440028133556929	ratio	Y
BiomRatio	C28BNH/C30H			0.050629766851043	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.947705274148553	ratio	Y
BiomRatio	C29H/C30H			0.63464243043101	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.199014109795922	ratio	Y
BiomRatio	C30DiaH/C30H			8.68165820971671E-02	ratio	Y
BiomRatio	C30Ts/C30H			2.13546260954527E-02	ratio	Y
BiomRatio	C35 Homohopane Index			8.78030320236747E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.930978185449529	ratio	Y
BiomRatio	Gam/C30H			6.06112907052024E-02	ratio	Y
BiomRatio	Gam/C31HR			0.185027115206561	ratio	Y
BiomRatio	Ole/C30H			7.67173481874276E-03	ratio	Y
BiomRatio	Sterane/hopane			0.302266805243818	ratio	Y
BiomRatio	Steranes/Terpanes			0.274588653410313	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.100798599977641	ratio	Y

Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007488 DISS GC-MS/02

Instrument / Type: Gas Chromatography Mass Spectrometry Run: 2

for Analysis: Biomarkers

Preparation: Dissolved in solvent

Analysis Date: 18/07/2017

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: Internal Ratios only

Results for: Gas Chromatography Mass Spectrometry

Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			42.8194463079744	ratio	Y
BiomRatio	% C27 abb 20(R+S)			37.8056792466603	ratio	Y
BiomRatio	% C28 aaa 20R			19.8175231450423	ratio	Y
BiomRatio	% C28 abb 20(R+S)			25.4678892900661	ratio	Y
BiomRatio	% C29 aaa 20R			37.3630305469833	ratio	Y
BiomRatio	% C29 abb 20(R+S)			36.7264314632736	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.09757263057294	ratio	Y
BiomRatio	25-Nor/C30H			2.95438788158918E-02	ratio	Y
BiomRatio	C19t/C23t			0.290029260925652	ratio	Y
BiomRatio	C22t/C21t			0.331089268883802	ratio	Y
BiomRatio	C22t/C24t			0.280659704388518	ratio	Y
BiomRatio	C23t/C30H			6.67752169254365E-02	ratio	Y
BiomRatio	C24t/C23t			0.551332473334802	ratio	Y
BiomRatio	C24Tet/C23t			0.990340748198723	ratio	Y
BiomRatio	C24Tet/C26t			2.07954545454545	ratio	Y
BiomRatio	C24Tet/C30H			6.61302182910688E-02	ratio	Y
BiomRatio	C26t/C25t			0.79109392149689	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.425383119547571	ratio	Y
BiomRatio	C27 Dia/Ster			0.429299324831208	ratio	Y
BiomRatio	C28BNH/C30H			4.20215559804189E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.971452760408157	ratio	Y
BiomRatio	C29H/C30H			0.63594554278631	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.16977017831135	ratio	Y
BiomRatio	C30DiaH/C30H			7.71519213395802E-02	ratio	Y
BiomRatio	C30Ts/C30H			3.60568943420804E-02	ratio	Y
BiomRatio	C35 Homohopane Index			8.59550052514323E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.922051746765827	ratio	Y
BiomRatio	Gam/C30H			6.75525768430783E-02	ratio	Y
BiomRatio	Gam/C31HR			0.202550065830504	ratio	Y
BiomRatio	Ole/C30H			4.20194550076686E-03	ratio	Y
BiomRatio	Sterane/hopane			0.300415974862978	ratio	Y
BiomRatio	Steranes/Terpanes			0.276829861142529	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			8.52007569671326E-02	ratio	Y

Results for: Elemental Analyser

Unique ID: W13/007488_UNK_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

Results for: Elemental Analyser

Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			85.02	percent	Y
Inorg	delta13 Carbon			-29.7145556300586	per mille	Y
Inorg	delta34 Sulphur			-5.29890002207504	per mille	Y
Inorg	Hydrogen			7.65	percent	Y
Inorg	Nitrogen			0.66	percent	Y
Inorg	Sulphur			4.36	percent	Y

Results for: GCMS with Full Scan

Unique ID: W13/007488_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_007488_ext_WholeOil.jpg](#)

Sample Volume:

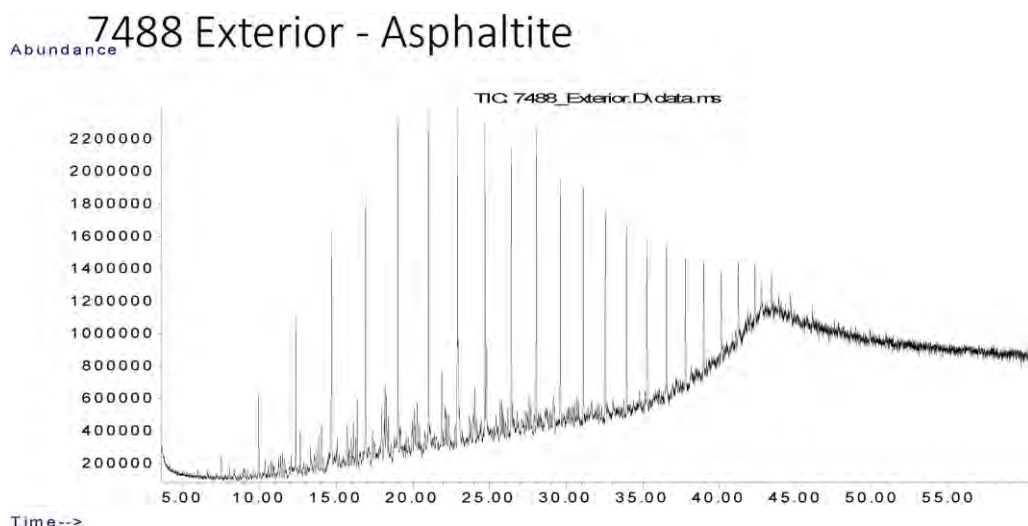
Volume Units:

Extract Volume:

Dilution Factor:

Comment: Exterior

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

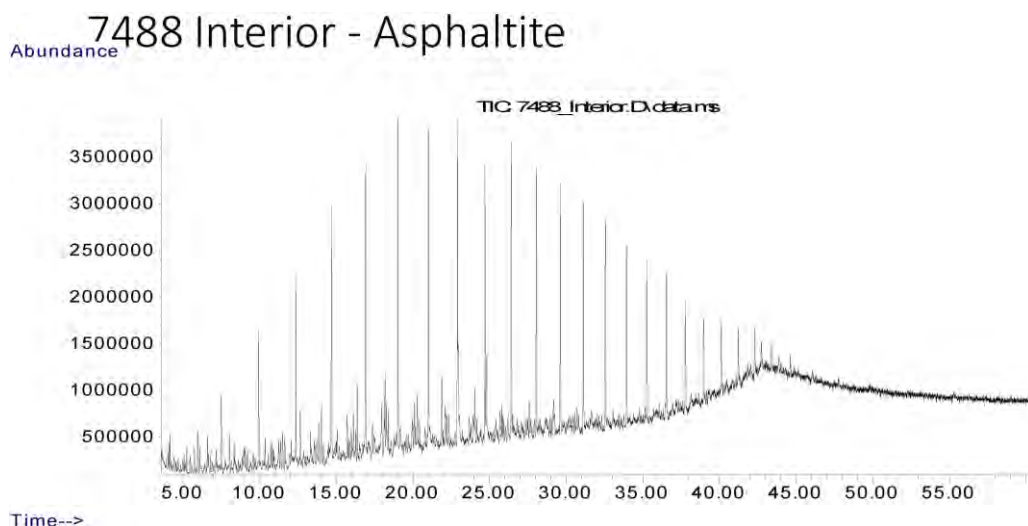
Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29		4.38020620623468		ug/L	Y
Ratio	nC17/nC35		28.190581635344		ug/L	Y
Ratio	nC17/Pristane		3.39089513224376		ug/L	Y
Ratio	nC18/Phytane		2.89745931569516		ug/L	Y
Ratio	Pristane/Phytane		0.963184204472831		ug/L	Y
Aliph	Botryococcane	39.4780			ug/L	U
Aliph	nC10	7.5100	1053423		ug/L	Z
Aliph	nC11	9.9450	3729930		ug/L	Z
Aliph	nC12	12.3690	7120752		ug/L	Z
Aliph	nC13	14.7030	9729252		ug/L	Z
Aliph	nC14	16.9230	12115235		ug/L	Z
Aliph	nC15	19.0270	12999105		ug/L	Z
Aliph	nC16	21.0200	12512748		ug/L	Z
Aliph	nC17	22.9150	12934600		ug/L	Z
Aliph	nC18	24.7150	11474840		ug/L	Z
Aliph	nC19	26.4300	10067728		ug/L	Z
Aliph	nC20	28.0680	9498210		ug/L	Z
Aliph	nC21	29.6330	8657511		ug/L	Z
Aliph	nC22	31.1340	7659878		ug/L	Z
Aliph	nC23	32.5720	7141468		ug/L	Z
Aliph	nC24	33.9520	6380279		ug/L	Z
Aliph	nC25	35.2810	5432740		ug/L	Z
Aliph	nC26	36.5600	5235284		ug/L	Z
Aliph	nC27	37.7930	4168687		ug/L	Z
Aliph	nC28	38.9870	3140420		ug/L	Z
Aliph	nC29	40.1370	2952966		ug/L	Z
Aliph	nC30	41.2480	2633111		ug/L	Z
Aliph	nC31	42.3270	1872336		ug/L	Z
Aliph	nC32	43.4130	1353847		ug/L	Z
Aliph	nC33	44.6430	1184189		ug/L	Z
Aliph	nC34	46.0860	895807		ug/L	Z
Aliph	nC35	47.8060	458827		ug/L	Z
Aliph	nC36	49.8090	387764		ug/L	Z
Aliph	nC37	52.2960			ug/L	U

Results for: GCMS with Full Scan

Aliph	nC38	55.2370		ug/L	U
Aliph	nC39	58.8850		ug/L	U
Aliph	Norpristane	21.9070	4917217	ug/L	Z
Aliph	Phytane	24.8210	3960311	ug/L	Z
Aliph	Pristane	22.9640	3814509	ug/L	Z

Results for: GCMS with Full Scan**Unique ID:** W13/007488 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_007488_int_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29		5.64835143508058		ug/L	Y
Ratio	nC17/nC35		37.1664521248157		ug/L	Y
Ratio	nC17/Pristane		5.58022548650422		ug/L	Y
Ratio	nC18/Phytane		2.9196435979856		ug/L	Y
Ratio	Pristane/Phytane		0.621772383771482		ug/L	Y
Aliph	Botryococcane	39.4780			ug/L	U
Aliph	nC10	7.5100	5455061		ug/L	Z
Aliph	nC11	9.9450	10482348		ug/L	Z
Aliph	nC12	12.3690	15366364		ug/L	Z
Aliph	nC13	14.7030	19184219		ug/L	Z
Aliph	nC14	16.9230	22149534		ug/L	Z
Aliph	nC15	19.0270	22763868		ug/L	Z
Aliph	nC16	21.0200	21571299		ug/L	Z
Aliph	nC17	22.9150	21827783		ug/L	Z
Aliph	nC18	24.7150	18367764		ug/L	Z
Aliph	nC19	26.4300	17141178		ug/L	Z
Aliph	nC20	28.0680	16142021		ug/L	Z
Aliph	nC21	29.6330	14745344		ug/L	Z
Aliph	nC22	31.1340	13208517		ug/L	Z
Aliph	nC23	32.5720	12058947		ug/L	Z
Aliph	nC24	33.9520	10482848		ug/L	Z
Aliph	nC25	35.2810	9175233		ug/L	Z
Aliph	nC26	36.5600	8749967		ug/L	Z
Aliph	nC27	37.7930	6711039		ug/L	Z
Aliph	nC28	38.9870	4920000		ug/L	Z
Aliph	nC29	40.1370	3864452		ug/L	Z
Aliph	nC30	41.2480	3268454		ug/L	Z
Aliph	nC31	42.3270	2360532		ug/L	Z
Aliph	nC32	43.4130	1699911		ug/L	Z
Aliph	nC33	44.6430	1298835		ug/L	Z
Aliph	nC34	46.0860	863645		ug/L	Z
Aliph	nC35	47.8060	587298		ug/L	Z
Aliph	nC36	49.8090	477664		ug/L	Z
Aliph	nC37	52.2960			ug/L	U

Results for: GCMS with Full Scan

Aliph	nC38	55.2370		ug/L	U
Aliph	nC39	58.8850		ug/L	U
Aliph	Norpristane	21.9070	8216303	ug/L	Z
Aliph	Phytane	24.8210	6291098	ug/L	Z
Aliph	Pristane	22.9640	3911631	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 : **W13/007656**

Beach W20: Elliston Visit: 2

Comments:

Location: Upper Intertidal

Local Date Time: 20/09/2015 3:04:10 PM

Type: Unknown

Family: Not bitumen (false sample)

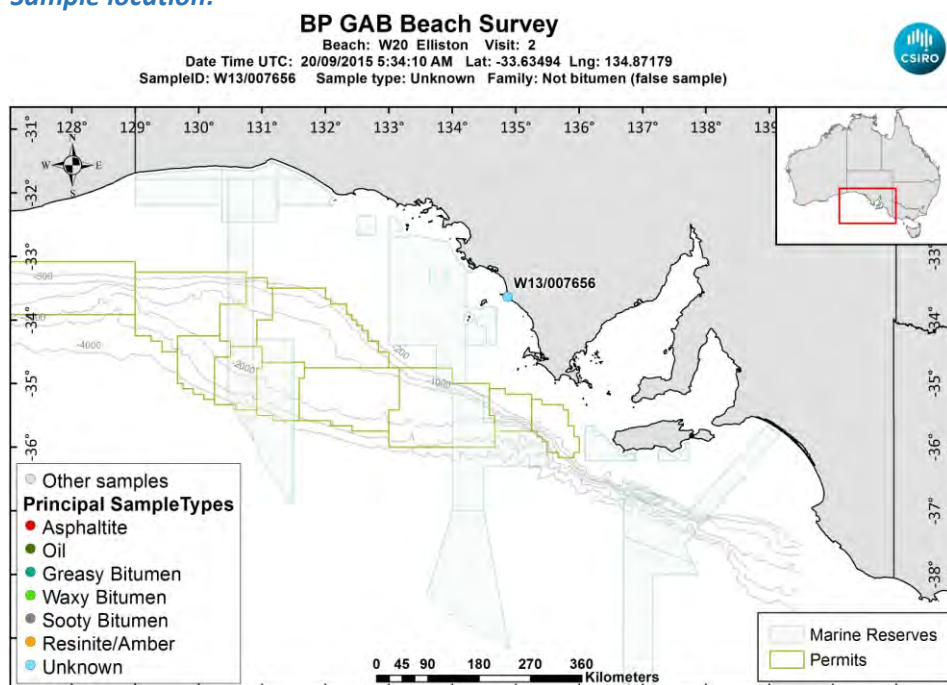
Size (cm): 3

Latitude (Y): -33.634945

Weight (gm): 2.9

Longitude (X): 134.871792

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007656_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\W13_007656_146A1751.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007656_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: W13/007656_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			44.24	percent	Y
Inorg	Hydrogen			4.94513021868787	percent	Y
Inorg	Nitrogen			0.288716709511568	percent	Y
Inorg	Sulphur			10.5514750125975	percent	Y

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 : **W13/007657**

Beach W20: Elliston Visit: 2

Comments:

Collected by AC when walking the beach - no photo taken at the time

Location: Upper Intertidal

Local Date Time: 20/09/2015 5:00:47 PM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

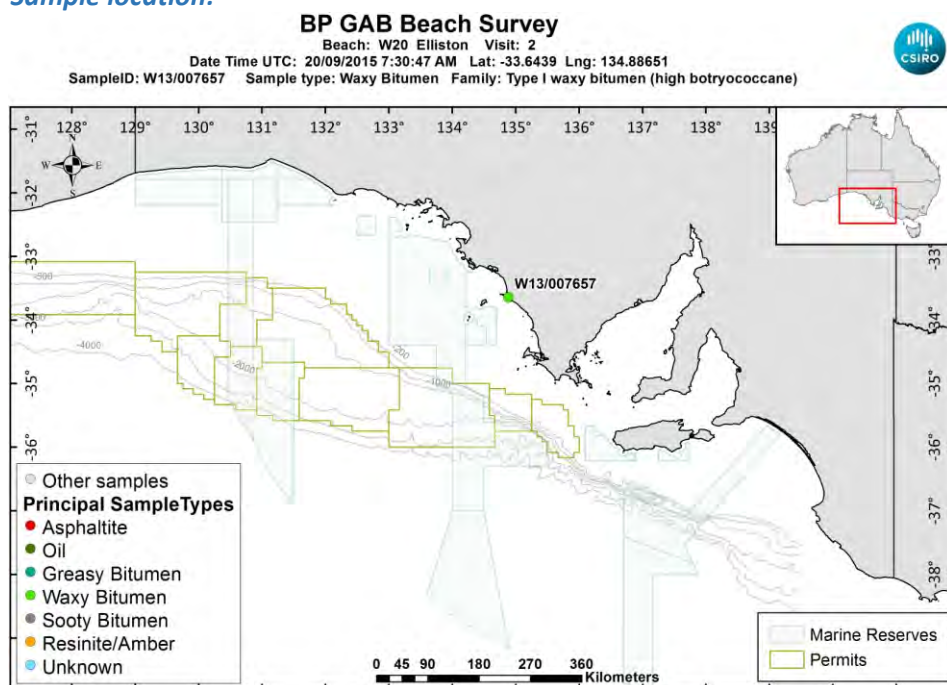
Size (cm): 0

Latitude (Y): -33.643900

Weight (gm): 11.2

Longitude (X): 134.886510

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007657_Location.jpg](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007657_Photo03.JPG](#)

Sample ID : W13/007657**Beach W20: Elliston Visit: 2****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: W13/007657_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)*

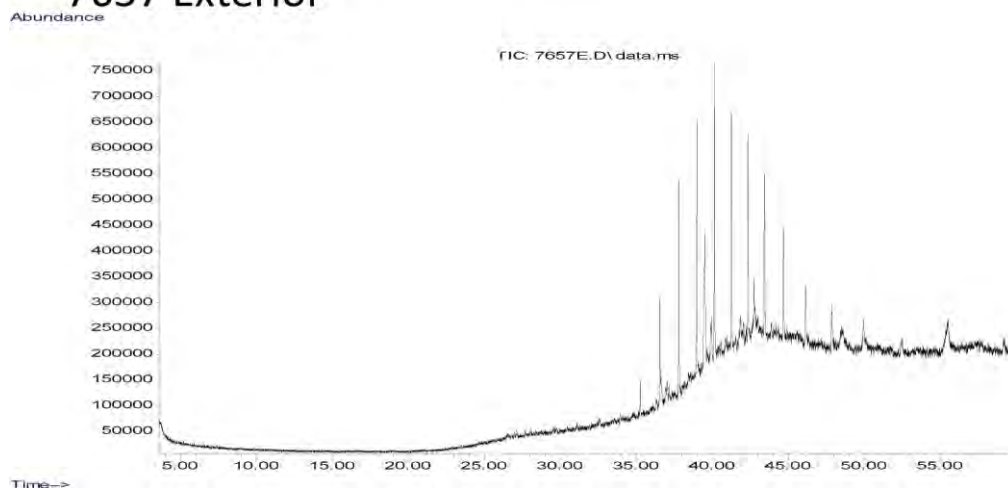
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			87.24	percent	Y
Inorg	Hydrogen			9.21033558648111	percent	Y
Inorg	Nitrogen			0.289333333333333	percent	Y
Inorg	Sulphur			2.1122427550941	percent	Y

Results for: GCMS with Full Scan**Unique ID: W13/007657_DISS_GCMS-Scan/01****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Analysis Date:** 18/11/2016**Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\W13_007657_ext_WholeOil.jpg](#)**Preparation:** Dissolved in solvent**Method ID/s:**

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

Results for: GCMS with Full Scan

7657 Exterior



Data Sheet:

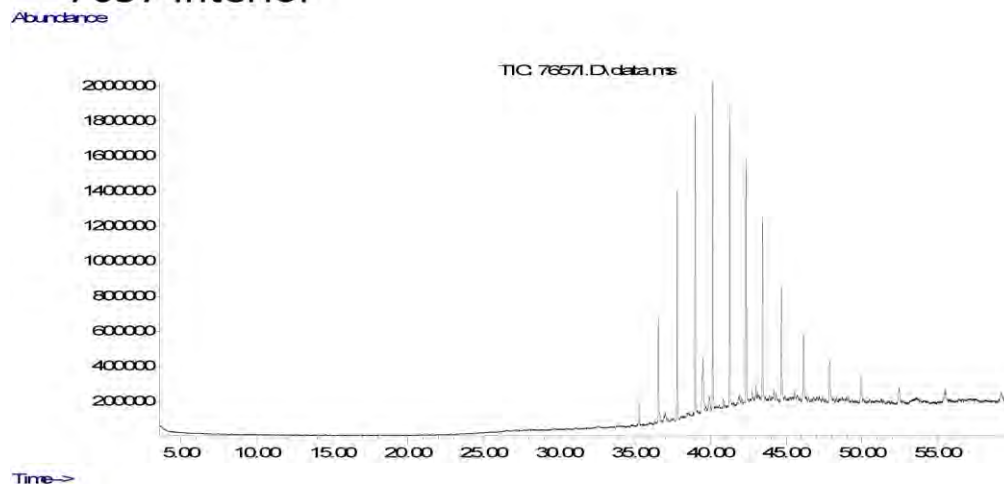
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	2393630		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	295564		ug/L	Z
Aliph	nC26	36.4960	1080900		ug/L	Z
Aliph	nC27	37.7300	2058686		ug/L	Z
Aliph	nC28	38.9260	2545538		ug/L	Z
Aliph	nC29	40.0740	2809257		ug/L	Z
Aliph	nC30	41.1930	2438302		ug/L	Z
Aliph	nC31	42.2750	2158902		ug/L	Z
Aliph	nC32	43.3560	1795425		ug/L	Z
Aliph	nC33	44.5840	1440753		ug/L	Z
Aliph	nC34	46.0130	988042		ug/L	Z
Aliph	nC35	47.7140	698539		ug/L	Z
Aliph	nC36	49.7870	626089		ug/L	Z
Aliph	nC37	52.2630	426811		ug/L	Z
Aliph	nC38	55.2360			ug/L	U
Aliph	nC39	58.9110	338086		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:** W13/007657 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_007657_int_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan

7657 Interior



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4290	3012833		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	65742		ug/L	Z
Aliph	nC25	35.2120	629189		ug/L	Z
Aliph	nC26	36.4960	2937394		ug/L	Z
Aliph	nC27	37.7300	6593354		ug/L	Z
Aliph	nC28	38.9260	8493068		ug/L	Z
Aliph	nC29	40.0740	9751433		ug/L	Z
Aliph	nC30	41.1930	8761075		ug/L	Z
Aliph	nC31	42.2750	7746051		ug/L	Z
Aliph	nC32	43.3560	6269171		ug/L	Z
Aliph	nC33	44.5840	4551158		ug/L	Z
Aliph	nC34	46.0130	3382763		ug/L	Z
Aliph	nC35	47.7140	2285110		ug/L	Z
Aliph	nC36	49.7870	1545829		ug/L	Z
Aliph	nC37	52.2630	1223204		ug/L	Z
Aliph	nC38	55.2360	1147535		ug/L	Z
Aliph	nC39	58.9110	961052		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:**

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 : **W13/007835**

Beach W20: Elliston Visit: 3

Comments:

Location: Mid Intertidal

Local Date Time: 10/10/2016 12:44:57 PM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

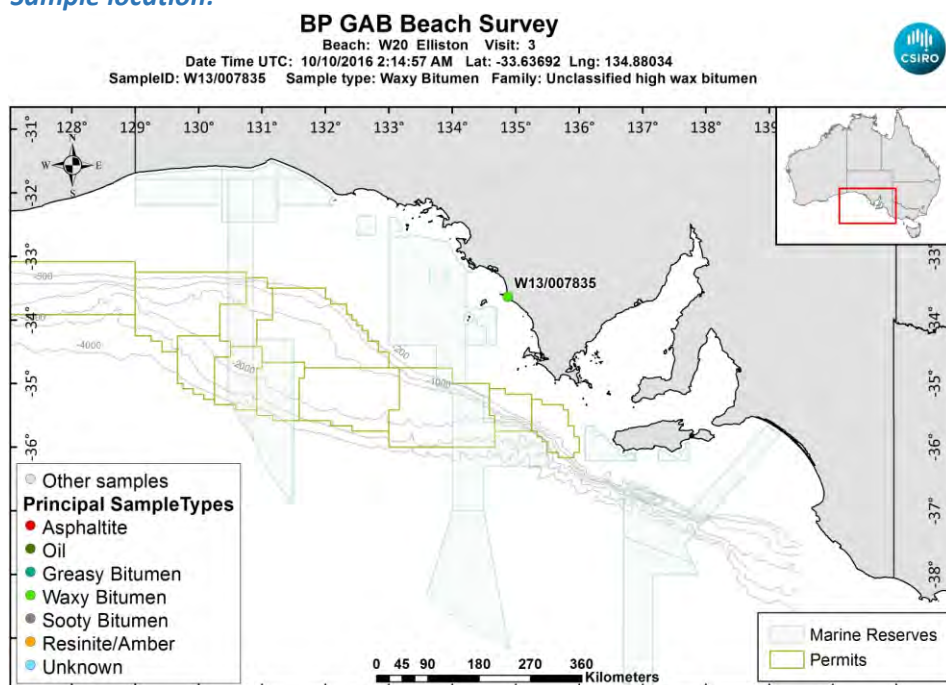
Size (cm): 1.7

Latitude (Y): -33.636915

Weight (gm): 1.15962

Longitude (X): 134.880340

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007835_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\W13_007835_146A6598.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007835_Photo02.JPG](#)

Analyses Requested

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

Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 2
Biomarkers	Gas Chromatography Mass Spectrometry Run: 1
Elemental CHNS	Elemental Analyser Run: 1
Whole Oils	GCMS with Full Scan Run: 3

Sample Analyses Completed:

Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007835_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:	Retention Time:	Target Response:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			81.1671824573389	ratio	Y
BiomRatio	% C27 abb 20(R+S)			17.8388560427958	ratio	Y
BiomRatio	% C28 aaa 20R			9.17206674858136	ratio	Y
BiomRatio	% C28 abb 20(R+S)			16.2527698145545	ratio	Y
BiomRatio	% C29 aaa 20R			9.66075079407971	ratio	Y
BiomRatio	% C29 abb 20(R+S)			65.9083741426498	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.03824572520112	ratio	Y
BiomRatio	25-Nor/C30H			1.51643470284841	ratio	Y
BiomRatio	C19t/C23t			0.569768340339623	ratio	Y
BiomRatio	C22t/C21t			1.9580953734379	ratio	Y
BiomRatio	C22t/C24t			0.399290745459847	ratio	Y
BiomRatio	C23t/C30H			0.132272436470357	ratio	Y
BiomRatio	C24t/C23t			0.907714261758483	ratio	Y
BiomRatio	C24Tet/C23t			0.190927279811529	ratio	Y
BiomRatio	C24Tet/C26t			0.124415466710662	ratio	Y
BiomRatio	C24Tet/C30H			2.52544164893286E-02	ratio	Y
BiomRatio	C26t/C25t			0.922948611973533	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.14061698420888	ratio	Y
BiomRatio	C27 Dia/Ster			0.103751457105866	ratio	Y
BiomRatio	C28BNH/C30H			0.445671059779122	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			3.69465250375553	ratio	Y
BiomRatio	C29H/C30H			0.490100166095401	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.335743268514624	ratio	Y
BiomRatio	C30DiaH/C30H			8.69650121059583E-02	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			4.21386042319869E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.553865172157671	ratio	Y
BiomRatio	Gam/C30H			3.86786130098931E-02	ratio	Y
BiomRatio	Gam/C31HR			0.174024581390389	ratio	Y
BiomRatio	Ole/C30H			3.6418234656834	ratio	Y
BiomRatio	Sterane/hopane			0.278959704593672	ratio	Y
BiomRatio	Steranes/Terpanes			0.232425165515304	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.200212997483288	ratio	Y

Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007835 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: Bulk 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			75.9609685767015	ratio	Y
BiomRatio	% C27 abb 20(R+S)			15.8238707722459	ratio	Y
BiomRatio	% C28 aaa 20R			10.4850980846419	ratio	Y
BiomRatio	% C28 abb 20(R+S)			22.532002403196	ratio	Y
BiomRatio	% C29 aaa 20R			13.5539333386566	ratio	Y
BiomRatio	% C29 abb 20(R+S)			61.6441268245582	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			4.01101334791828E-02	ratio	Y
BiomRatio	25-Nor/C30H			1.25842311983494	ratio	Y
BiomRatio	C19t/C23t			0.575477554653168	ratio	Y
BiomRatio	C22t/C21t			2.16994173759735	ratio	Y
BiomRatio	C22t/C24t			0.473137797510699	ratio	Y
BiomRatio	C23t/C30H			0.119359013481188	ratio	Y
BiomRatio	C24t/C23t			0.874007898982033	ratio	Y
BiomRatio	C24Tet/C23t			0.199951048562052	ratio	Y
BiomRatio	C24Tet/C26t			0.138417935506727	ratio	Y
BiomRatio	C24Tet/C30H			2.38659599008956E-02	ratio	Y
BiomRatio	C26t/C25t			0.932193533379856	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.138315614488344	ratio	Y
BiomRatio	C27 Dia/Ster			0.108185820727238	ratio	Y
BiomRatio	C28BNH/C30H			0.359207621342244	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			3.89564144650866	ratio	Y
BiomRatio	C29H/C30H			0.424599124483676	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.337814855957567	ratio	Y
BiomRatio	C30DiaH/C30H			8.17165389086349E-02	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			3.96350457104168E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.552727208735515	ratio	Y
BiomRatio	Gam/C30H			3.13734207521749E-02	ratio	Y
BiomRatio	Gam/C31HR			0.164485244769461	ratio	Y
BiomRatio	Ole/C30H			3.06274046754579	ratio	Y
BiomRatio	Sterane/hopane			0.268519260305938	ratio	Y
BiomRatio	Steranes/Terpanes			0.222825926343968	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.205062914857739	ratio	Y

Results for: Elemental Analyser

Unique ID: W13/007835_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:**

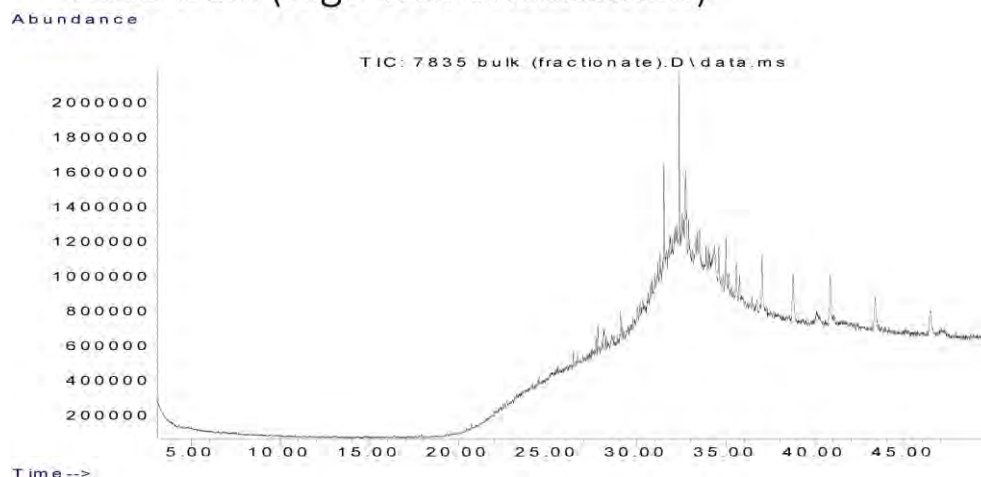
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			89.131653051017	percent	Y
Inorg	Hydrogen			10.2163992047714	percent	Y
Inorg	Nitrogen			0.27	percent	Y
Inorg	Sulphur			2.3087965041197	percent	Y

Results for: GCMS with Full Scan**Unique ID:** W13/007835_DISS_GCMS-Scan/03**Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\W13_007835_bulk_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

Results for: GCMS with Full Scan

7835 bulk (high wax unclassified)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470	886743			Z
Aliph	nC32	35.5720	1783149			Z
Aliph	nC33	37.0130	2829047			Z
Aliph	nC34	38.7280	3115198			Z
Aliph	nC35	40.8080	3616996			Z
Aliph	nC36	43.3510	2587441			Z
Aliph	nC37	46.4710	2460623			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:**

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 : **W13/007836**

Beach W20: Elliston Visit: 3

Comments:

Location: Mid Intertidal

Local Date Time: 10/10/2016 1:06:24 PM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

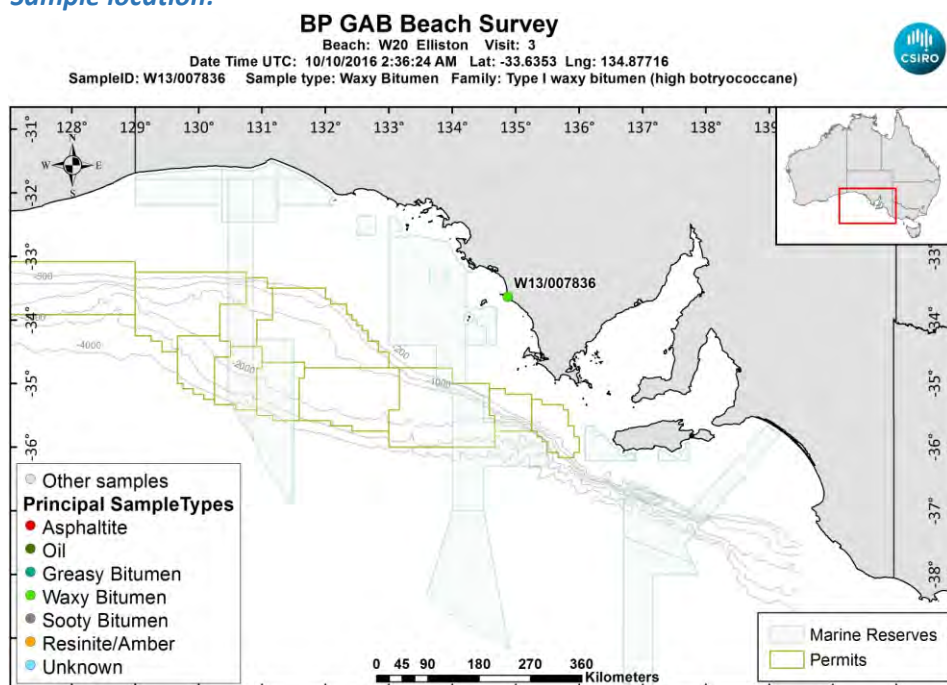
Size (cm): 3.6

Latitude (Y): -33.635302

Weight (gm): 7.21646

Longitude (X): 134.877165

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007836_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\W13_007836_146A6600.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007836_Photo02.JPG](#)

Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: W13/007836_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			85.0772524174725	percent	Y
Inorg	Hydrogen			8.51463339960239	percent	Y
Inorg	Nitrogen			0.33	percent	Y
Inorg	Sulphur			1.73816773895006	percent	Y

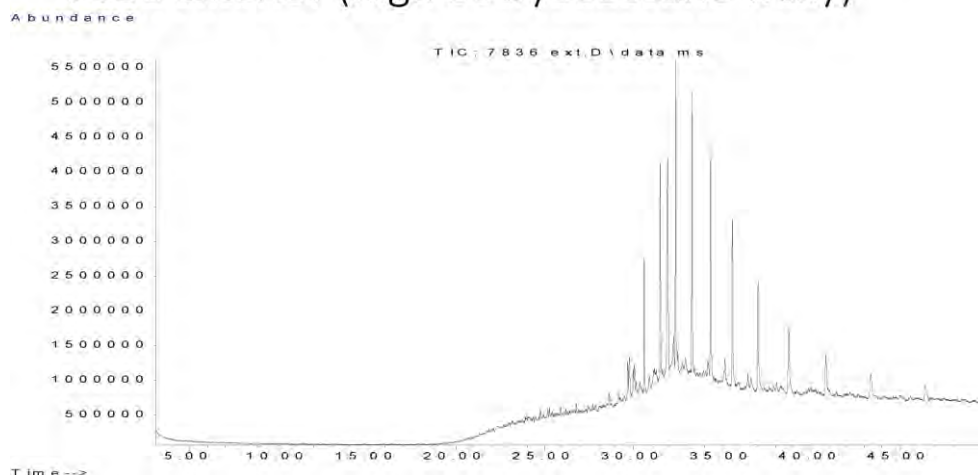
Results for: GCMS with Full Scan

Unique ID: W13/007836_DISS_GCMS-Scan/01

Results for: GCMS with Full Scan**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\W13_007836_ext_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

7836 exterior (high botryococcane waxy)



Data Sheet:

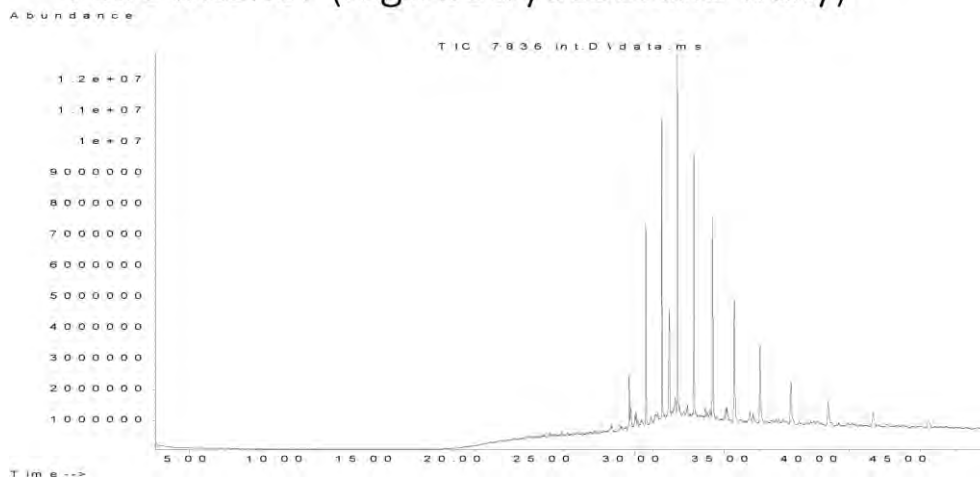
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	25426344			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	1515486			Z
Aliph	nC26	29.6680	2814091			Z
Aliph	nC27	30.6080	9944413			Z
Aliph	nC28	31.5080	17636921			Z
Aliph	nC29	32.3700	23173428			Z
Aliph	nC30	33.2910	23341802			Z
Aliph	nC31	34.3470	23112791			Z
Aliph	nC32	35.5720	19265756			Z
Aliph	nC33	37.0130	15048239			Z
Aliph	nC34	38.7280	10589596			Z
Aliph	nC35	40.8080	7406220			Z
Aliph	nC36	43.3510	5178571			Z
Aliph	nC37	46.4710	3532993			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** W13/007836 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\W13_007836_int_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan

7836 interior (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	26463104			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	1312418			Z
Aliph	nC26	29.6680	7365409			Z
Aliph	nC27	30.6080	30875580			Z
Aliph	nC28	31.5080	48984543			Z
Aliph	nC29	32.3700	54315721			Z
Aliph	nC30	33.2910	48856573			Z
Aliph	nC31	34.3470	41279668			Z
Aliph	nC32	35.5720	31445714			Z
Aliph	nC33	37.0130	21841898			Z
Aliph	nC34	38.7280	14793446			Z
Aliph	nC35	40.8080	9716852			Z
Aliph	nC36	43.3510	6646474			Z
Aliph	nC37	46.4710	4683072			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:**

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 : **W13/007837**

Beach W20: Elliston Visit: 3

Comments:

Found on Seg 2 - not initial photo - get from Alex.

Location: Mid Intertidal

Local Date Time: 10/10/2016 4:25:00 PM

Type: Waxy Bitumen

Family: Type IV waxy bitumen (no botryococcane, hig

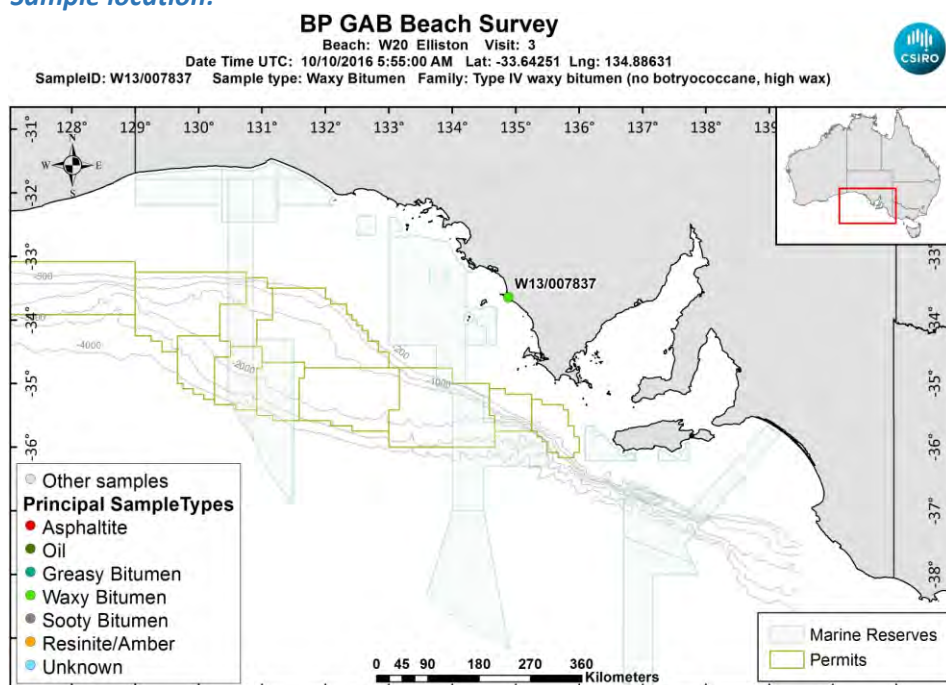
Size (cm): 4

Latitude (Y): -33.642510

Weight (gm): 4.64886

Longitude (X): 134.886310

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007837_Location.jpg](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007837_Photo02.JPG](#)

Sample ID : W13/007837**Beach W20: Elliston Visit: 3****Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	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: W13/007837_DISS_GC-MS/01****Instrument / Type:** Gas Chromatography Mass Spectrometry Run: 1**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:** Bulk 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			33.4949494383805	ratio	Y
BiomRatio	% C27 abb 20(R+S)			21.8751737816746	ratio	Y
BiomRatio	% C28 aaa 20R			22.9534538150361	ratio	Y
BiomRatio	% C28 abb 20(R+S)			27.5402246649489	ratio	Y
BiomRatio	% C29 aaa 20R			43.5515967465833	ratio	Y
BiomRatio	% C29 abb 20(R+S)			50.5846015533765	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.165981935562076	ratio	Y
BiomRatio	25-Nor/C30H			1.61008798927815E-02	ratio	Y
BiomRatio	C19t/C23t			0.107273005855509	ratio	Y
BiomRatio	C22t/C21t			0.786338510698757	ratio	Y
BiomRatio	C22t/C24t			0.455433415622525	ratio	Y
BiomRatio	C23t/C30H			0.169734802111546	ratio	Y
BiomRatio	C24t/C23t			0.333394414490521	ratio	Y
BiomRatio	C24Tet/C23t			1.23488707232837	ratio	Y
BiomRatio	C24Tet/C26t			5.06261141198241	ratio	Y
BiomRatio	C24Tet/C30H			0.209603312851763	ratio	Y
BiomRatio	C26t/C25t			0.877131523938403	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.180702799431892	ratio	Y
BiomRatio	C27 Dia/Ster			0.129115470429677	ratio	Y
BiomRatio	C28BNH/C30H			1.09965071737629E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			2.31242055757987	ratio	Y
BiomRatio	C29H/C30H			1.47090359943678	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			6.65965681656164E-02	ratio	Y
BiomRatio	C30DiaH/C30H			1.76725374801851E-02	ratio	Y
BiomRatio	C30Ts/C30H			0.195457076650113	ratio	Y
BiomRatio	C35 Homohopane Index			7.11785191727268E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.951513870944785	ratio	Y
BiomRatio	Gam/C30H			0.127766413445404	ratio	Y
BiomRatio	Gam/C31HR			0.294659868887231	ratio	Y
BiomRatio	Ole/C30H			3.51558223640338E-03	ratio	Y
BiomRatio	Sterane/hopane			0.169412699541335	ratio	Y
BiomRatio	Steranes/Terpanes			0.15157385898376	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.117690746129822	ratio	Y

Results for: Elemental Analyser

Unique ID: W13/007837_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:**

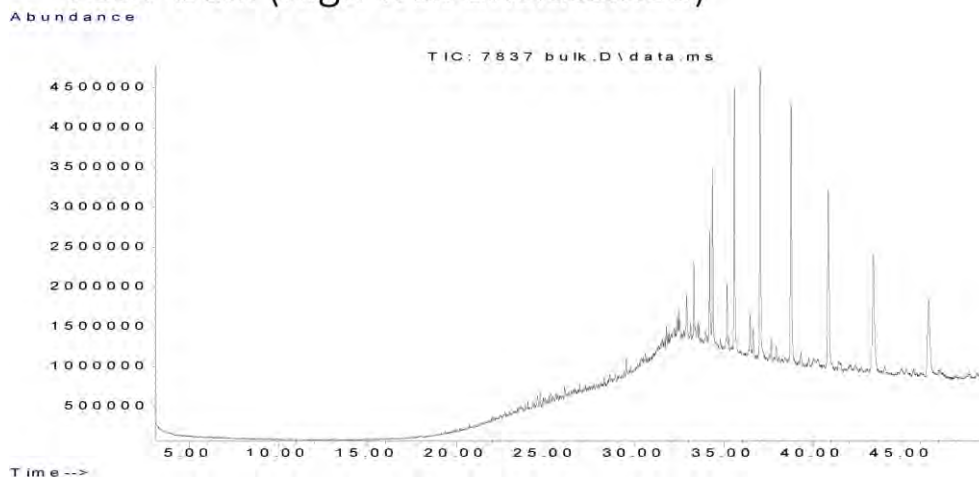
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			82.9588054351451	percent	Y
Inorg	Hydrogen			9.04477932405568	percent	Y
Inorg	Nitrogen			0.37	percent	Y
Inorg	Sulphur			4.69908075075769	percent	Y

Results for: GCMS with Full Scan**Unique ID:** W13/007837_DISS_GCMS-Scan/03**Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\W13_007837_bulk_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

Results for: GCMS with Full Scan

7837 bulk (high wax unclassified)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700	1215536			Z
Aliph	nC30	33.2910	5329516			Z
Aliph	nC31	34.3470	13915863			Z
Aliph	nC32	35.5720	25319376			Z
Aliph	nC33	37.0130	31487502			Z
Aliph	nC34	38.7280	34425690			Z
Aliph	nC35	40.8080	28242117			Z
Aliph	nC36	43.3510	21920221			Z
Aliph	nC37	46.4710	17378202			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:

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 : **W13/007838**

Beach W20: Elliston Visit: 3

Comments:

Found on Seg 2 - not initial photo - get from Alex.

Location: Shore Upper

Local Date Time: 10/10/2016 3:20:00 PM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

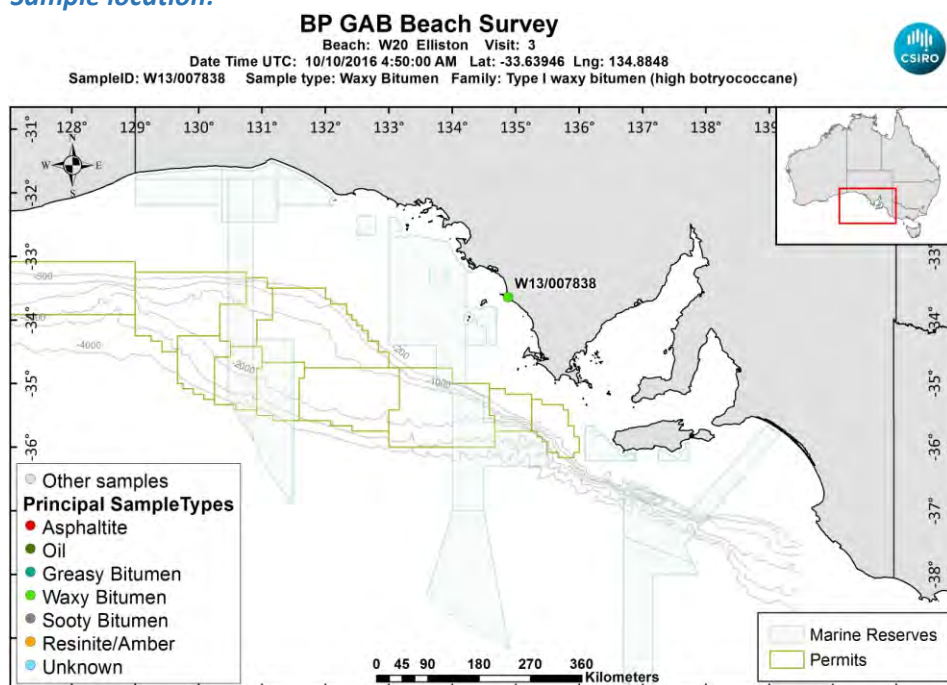
Size (cm): 3.1

Latitude (Y): -33.639460

Weight (gm): 10.18783

Longitude (X): 134.884800

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007838_Location.jpg](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007838_Photo02.JPG](#)

Sample ID : W13/007838**Beach W20: Elliston Visit: 3****Analyses Requested**

Split:	Analysis:	Sent:
1	Bitumen Determination	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: W13/007838 DISS GC-MS/01****Instrument / Type:** Gas Chromatography Mass Spectrometry Run: 1**for Analysis:** Biomarkers**Preparation:** Dissolved in solvent**Analysis Date:** 18/07/2017**Method ID/s:****Linked Image:** [None available](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Internal Ratios only

Results for: Gas Chromatography Mass Spectrometry

Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			47.6091509482448	ratio	Y
BiomRatio	% C27 abb 20(R+S)			53.2544356866288	ratio	Y
BiomRatio	% C28 aaa 20R			9.09409210052937	ratio	Y
BiomRatio	% C28 abb 20(R+S)			21.0898965120655	ratio	Y
BiomRatio	% C29 aaa 20R			43.2967569512258	ratio	Y
BiomRatio	% C29 abb 20(R+S)			25.6556678013057	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			6.28061112364304E-02	ratio	Y
BiomRatio	25-Nor/C30H			8.65286130272681E-02	ratio	Y
BiomRatio	C19t/C23t			0.188936650847777	ratio	Y
BiomRatio	C22t/C21t			0.451024167478346	ratio	Y
BiomRatio	C22t/C24t			0.252634805615498	ratio	Y
BiomRatio	C23t/C30H			0.128812669936751	ratio	Y
BiomRatio	C24t/C23t			0.851190084829576	ratio	Y
BiomRatio	C24Tet/C23t			0.339107908729826	ratio	Y
BiomRatio	C24Tet/C26t			0.347722659853807	ratio	Y
BiomRatio	C24Tet/C30H			4.36813951201569E-02	ratio	Y
BiomRatio	C26t/C25t			1.93772492309469	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.765869803595441	ratio	Y
BiomRatio	C27 Dia/Ster			1.36525121155982	ratio	Y
BiomRatio	C28BNH/C30H			5.07276384208634E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.481756448463266	ratio	Y
BiomRatio	C29H/C30H			0.599865686503241	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.318721012915683	ratio	Y
BiomRatio	C30DiaH/C30H			0.211269620927658	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			4.48322742715362E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.416913373976018	ratio	Y
BiomRatio	Gam/C30H			2.65103782717742E-02	ratio	Y
BiomRatio	Gam/C31HR			0.160600735148774	ratio	Y
BiomRatio	Ole/C30H			9.75297317715073E-02	ratio	Y
BiomRatio	Sterane/hopane			8.72386021015702E-02	ratio	Y
BiomRatio	Steranes/Terpanes			7.07672727924659E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.232753484190476	ratio	Y

Results for: Elemental Analyser

Unique ID: W13/007838_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:**

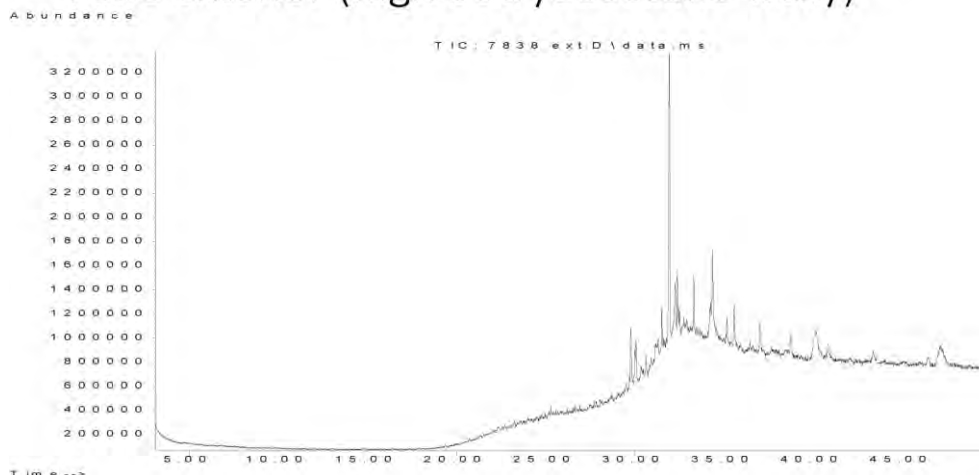
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			84.27	percent	Y
Inorg	Hydrogen			7.8409254473161	percent	Y
Inorg	Nitrogen			0.448876092544987	percent	Y
Inorg	Sulphur			1.78902845171467	percent	Y

Results for: GCMS with Full Scan**Unique ID:** W13/007838_DISS_GCMS-Scan/01**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\W13_007838_ext_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

7838 exterior (high botryococcane waxy)



Data Sheet:

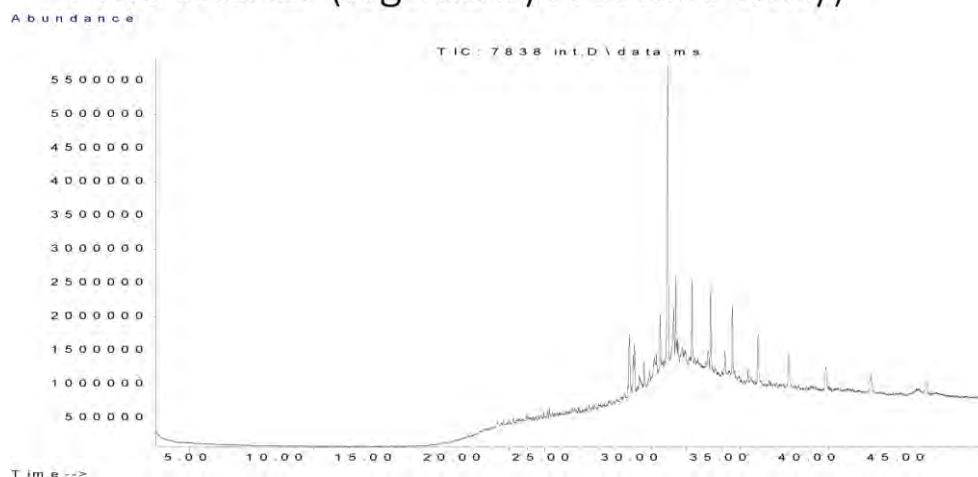
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	19516363			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	826523			Z
Aliph	nC28	31.5080	1777664			Z
Aliph	nC29	32.3700	2257089			Z
Aliph	nC30	33.2910	2624586			Z
Aliph	nC31	34.3470	5213842			Z
Aliph	nC32	35.5720	2681218			Z
Aliph	nC33	37.0130	2407025			Z
Aliph	nC34	38.7280	2222682			Z
Aliph	nC35	40.8080	1923997			Z
Aliph	nC36	43.3510	1138267			Z
Aliph	nC37	46.4710	1290964			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** W13/007838 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\W13_007838_int_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan

7838 interior (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	35861590			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	1662254			Z
Aliph	nC28	31.5080	4381065			Z
Aliph	nC29	32.3700	5619542			Z
Aliph	nC30	33.2910	7092573			Z
Aliph	nC31	34.3470	8060556			Z
Aliph	nC32	35.5720	7974003			Z
Aliph	nC33	37.0130	6953605			Z
Aliph	nC34	38.7280	5836287			Z
Aliph	nC35	40.8080	4703858			Z
Aliph	nC36	43.3510	3834560			Z
Aliph	nC37	46.4710	3366641			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:**

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 : **W13/007839**

Beach W20: Elliston Visit: 3

Comments:

Found 3m up on the back cliff. Found on Seg 2 - not initial photo - get from Alex.

Location: Shore Upper

Local Date Time: 10/10/2016 4:38:00 PM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

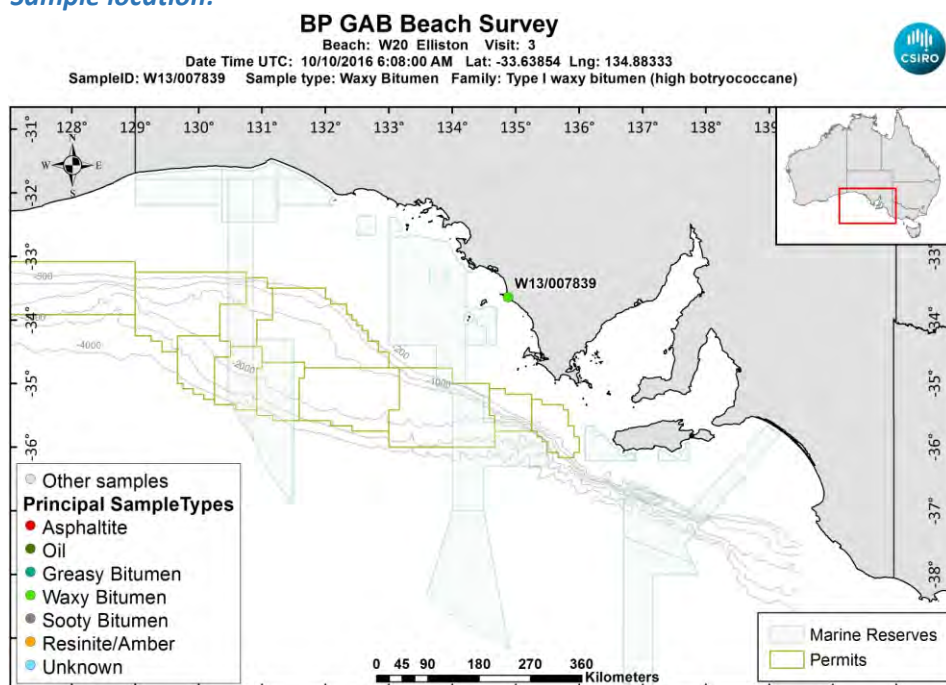
Size (cm): 3

Latitude (Y): -33.638540

Weight (gm): 7.28275

Longitude (X): 134.883330

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007839_Location.jpg](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007839_Photo02.JPG](#)

Sample ID : W13/007839**Beach W20: Elliston Visit: 3****Analyses Requested**

Split: Analysis: Sent:
1 Bitumen Determination YES

Analyses Completed:

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

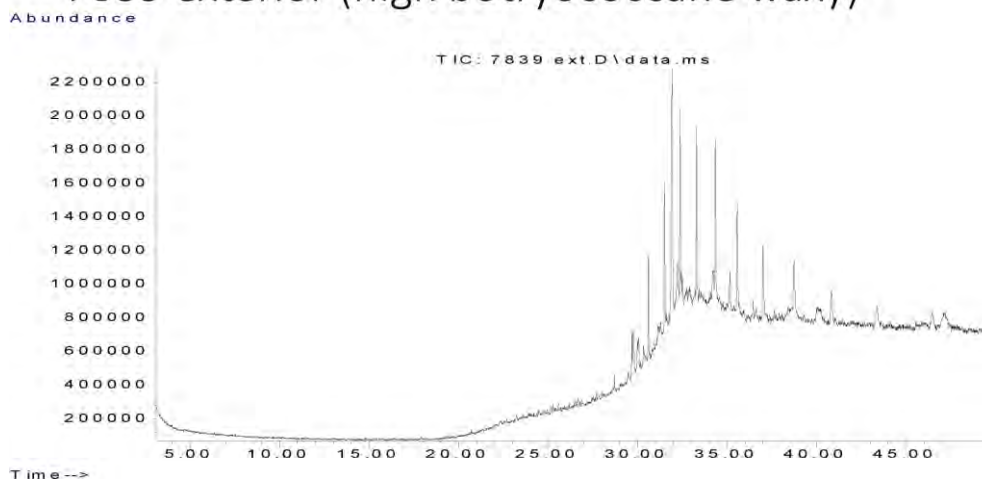
Sample Analyses Completed:**Results for: Elemental Analyser****Unique ID: W13/007839_SPE_ELEM-AN/01****Instrument / Type:** Elemental Analyser Run: 1**for Analysis:** Elemental CHNS**Analysis Date:** 30/10/2017**Linked Image:** [None available](#)**Preparation:** Solid Phase Extract**Method ID/s:****Sample 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			85.31	percent	Y
Inorg	Hydrogen			5.7631013916501	percent	Y
Inorg	Nitrogen			0.365024678663239	percent	Y
Inorg	Sulphur			0.981022211553414	percent	Y

Results for: GCMS with Full Scan**Unique ID: W13/007839 DISS GCMS-Scan/01****Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Analysis Date:** 30/10/2017**Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\W13_007839_ext_WholeOil.jpg](#)**Preparation:** Dissolved in solvent**Method ID/s:****Sample Volume:** **Volume Units:** **Extract Volume:** **Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

7839 exterior (high botryococcane waxy)



Data Sheet:

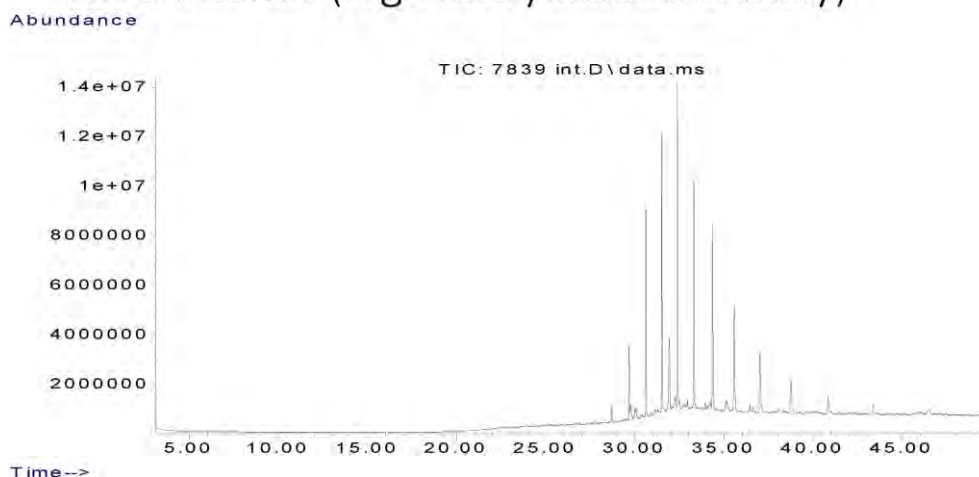
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	11717201			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	233271			Z
Aliph	nC25	28.7100	622254			Z
Aliph	nC26	29.6680	1108297			Z
Aliph	nC27	30.6080	3279245			Z
Aliph	nC28	31.5080	4702304			Z
Aliph	nC29	32.3700	5679705			Z
Aliph	nC30	33.2910	5677491			Z
Aliph	nC31	34.3470	6114559			Z
Aliph	nC32	35.5720	5166115			Z
Aliph	nC33	37.0130	4443284			Z
Aliph	nC34	38.7280	3388394			Z
Aliph	nC35	40.8080	2548637			Z
Aliph	nC36	43.3510	1929215			Z
Aliph	nC37	46.4710	1626759			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** W13/007839 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\W13_007839_int_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan

7839 interior (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	24420817			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	497207			Z
Aliph	nC25	28.7100	3254977			Z
Aliph	nC26	29.6680	15491001			Z
Aliph	nC27	30.6080	41018601			Z
Aliph	nC28	31.5080	57615558			Z
Aliph	nC29	32.3700	65000835			Z
Aliph	nC30	33.2910	54463148			Z
Aliph	nC31	34.3470	46165258			Z
Aliph	nC32	35.5720	33319843			Z
Aliph	nC33	37.0130	22971106			Z
Aliph	nC34	38.7280	14997487			Z
Aliph	nC35	40.8080	9223819			Z
Aliph	nC36	43.3510	5672882			Z
Aliph	nC37	46.4710	4006953			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:**

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 : **W13/007517**

Beach E6: Eves Cove Visit: 1

Comments:

Location: Mid Intertidal

Local Date Time: 24/11/2014 9:41:12 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

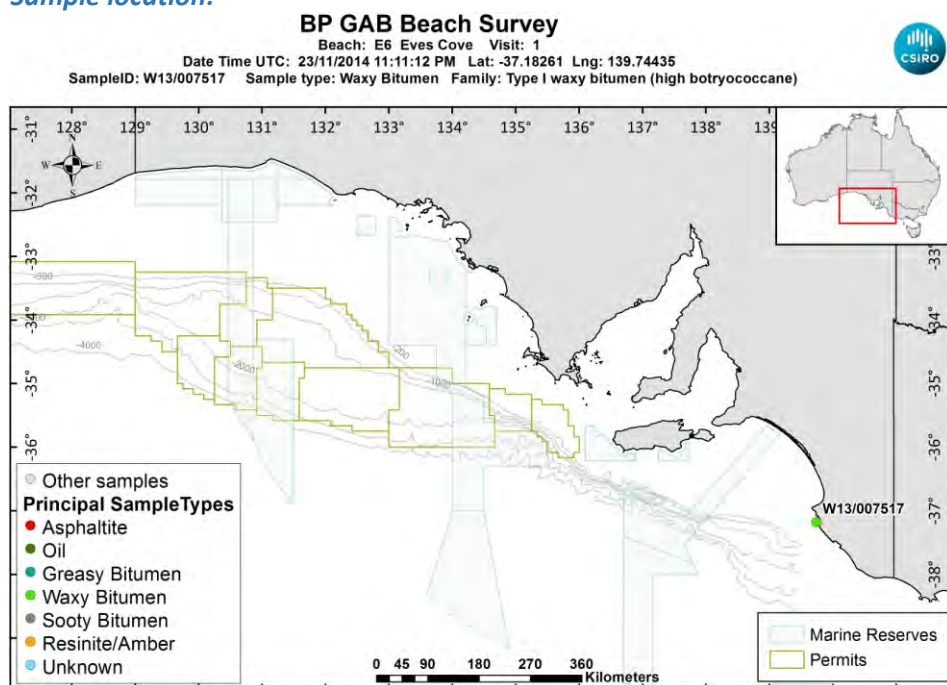
Size (cm): 2

Latitude (Y): -37.182609

Weight (gm): 3.41136

Longitude (X): 139.744345

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007517_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\W13_007517_146A0608.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007517_Photo01.JPG](#)

Analyses Requested

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

Analyses Completed:

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

Sample Analyses Completed:

Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007517 DISS GC-MS/01

Instrument / Type: Gas Chromatography Mass Spectrometry Run: 1

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: External Ratios only

Results for: Gas Chromatography Mass Spectrometry

Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			31.8650436175209	ratio	Y
BiomRatio	% C27 abb 20(R+S)			34.7198708813379	ratio	Y
BiomRatio	% C28 aaa 20R			8.62572086326504	ratio	Y
BiomRatio	% C28 abb 20(R+S)			25.1489500523686	ratio	Y
BiomRatio	% C29 aaa 20R			59.509235519214	ratio	Y
BiomRatio	% C29 abb 20(R+S)			40.1311790662935	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			0.096759310622891	ratio	Y
BiomRatio	25-Nor/C30H			6.02844365482538E-02	ratio	Y
BiomRatio	C19t/C23t			0.204758681221381	ratio	Y
BiomRatio	C22t/C21t			0.494978792291424	ratio	Y
BiomRatio	C22t/C24t			0.310241578091349	ratio	Y
BiomRatio	C23t/C30H			6.13442327711666E-02	ratio	Y
BiomRatio	C24t/C23t			1.03499257421283	ratio	Y
BiomRatio	C24Tet/C23t			0.701596608590233	ratio	Y
BiomRatio	C24Tet/C26t			0.700602988726733	ratio	Y
BiomRatio	C24Tet/C30H			4.30389056688203E-02	ratio	Y
BiomRatio	C26t/C25t			1.43094316861107	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.70038864160715	ratio	Y
BiomRatio	C27 Dia/Ster			0.730607286331571	ratio	Y
BiomRatio	C28BNH/C30H			1.65942109420802E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			1.15585623009515	ratio	Y
BiomRatio	C29H/C30H			0.57400360286505	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.366661428527625	ratio	Y
BiomRatio	C30DiaH/C30H			0.223964373667853	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			2.40105853714615E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.320961913636943	ratio	Y
BiomRatio	Gam/C30H			4.24299017904272E-02	ratio	Y
BiomRatio	Gam/C31HR			0.256756898787212	ratio	Y
BiomRatio	Ole/C30H			0.114313201678811	ratio	Y
BiomRatio	Sterane/hopane			4.49777086594095E-02	ratio	Y
BiomRatio	Steranes/Terpanes			4.04489323855279E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.111962813522907	ratio	Y

Results for: Gas Chromatography Mass Spectrometry

Unique ID: W13/007517 DISS GC-MS/02

Instrument / Type: Gas Chromatography Mass Spectrometry Run: 2

for Analysis: Biomarkers

Preparation: Dissolved in solvent

Analysis Date: 18/07/2017

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment: Internal Ratios only

Results for: Gas Chromatography Mass Spectrometry

Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
BiomRatio	% C27 aaa 20R			37.559882737088	ratio	Y
BiomRatio	% C27 abb 20(R+S)			46.6565018514485	ratio	Y
BiomRatio	% C28 aaa 20R			18.0178516099816	ratio	Y
BiomRatio	% C28 abb 20(R+S)			22.7642977758895	ratio	Y
BiomRatio	% C29 aaa 20R			44.4222656529304	ratio	Y
BiomRatio	% C29 abb 20(R+S)			30.579200372662	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			7.43754263802959E-02	ratio	Y
BiomRatio	25-Nor/C30H			6.48214552537524E-02	ratio	Y
BiomRatio	C19t/C23t			0.194452216042854	ratio	Y
BiomRatio	C22t/C21t			0.437551364918594	ratio	Y
BiomRatio	C22t/C24t			0.294703299498081	ratio	Y
BiomRatio	C23t/C30H			7.83431214343776E-02	ratio	Y
BiomRatio	C24t/C23t			0.912259033061517	ratio	Y
BiomRatio	C24Tet/C23t			0.366030912006551	ratio	Y
BiomRatio	C24Tet/C26t			0.379937810328585	ratio	Y
BiomRatio	C24Tet/C30H			2.86760041880652E-02	ratio	Y
BiomRatio	C26t/C25t			1.65512107339433	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.719642275999427	ratio	Y
BiomRatio	C27 Dia/Ster			1.19458723121776	ratio	Y
BiomRatio	C28BNH/C30H			2.21773929481301E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.655411339453273	ratio	Y
BiomRatio	C29H/C30H			0.516032286700167	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.327592626455248	ratio	Y
BiomRatio	C30DiaH/C30H			0.202816439091424	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			4.63183888675688E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.452352895243098	ratio	Y
BiomRatio	Gam/C30H			2.47429437329646E-02	ratio	Y
BiomRatio	Gam/C31HR			0.140814345824675	ratio	Y
BiomRatio	Ole/C30H			8.88956129830021E-02	ratio	Y
BiomRatio	Sterane/hopane			8.25749700285388E-02	ratio	Y
BiomRatio	Steranes/Terpanes			7.16913035848705E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.151812924294003	ratio	Y

Results for: Elemental Analyser

Unique ID: W13/007517_UNK_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

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

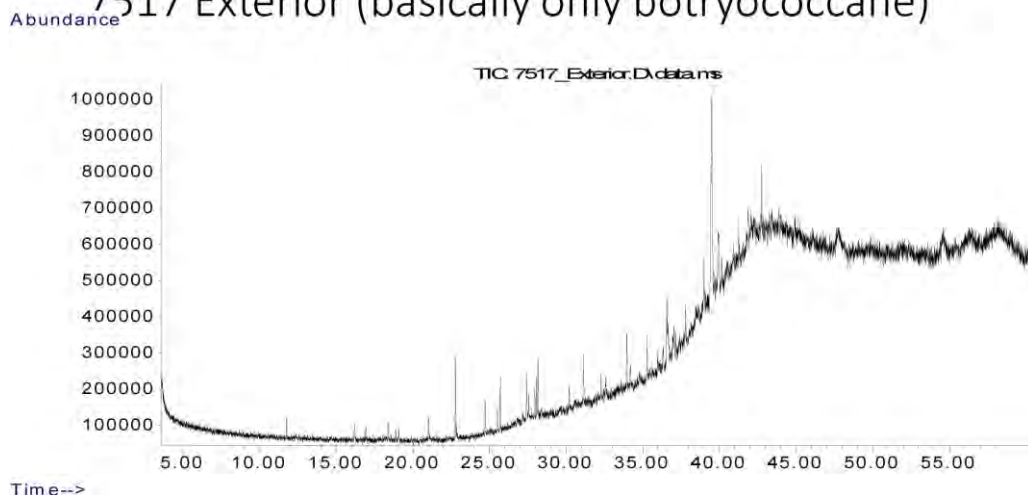
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.47	percent	Y
Inorg	delta13 Carbon				per mille	U
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			6.33	percent	Y
Inorg	Nitrogen			0.245	percent	Y
Inorg	Sulphur			0.95	percent	Y

Results for: GCMS with Full Scan**Unique ID:** W13/007517_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_007517_ext_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

7517 Exterior (basically only botryococcane)



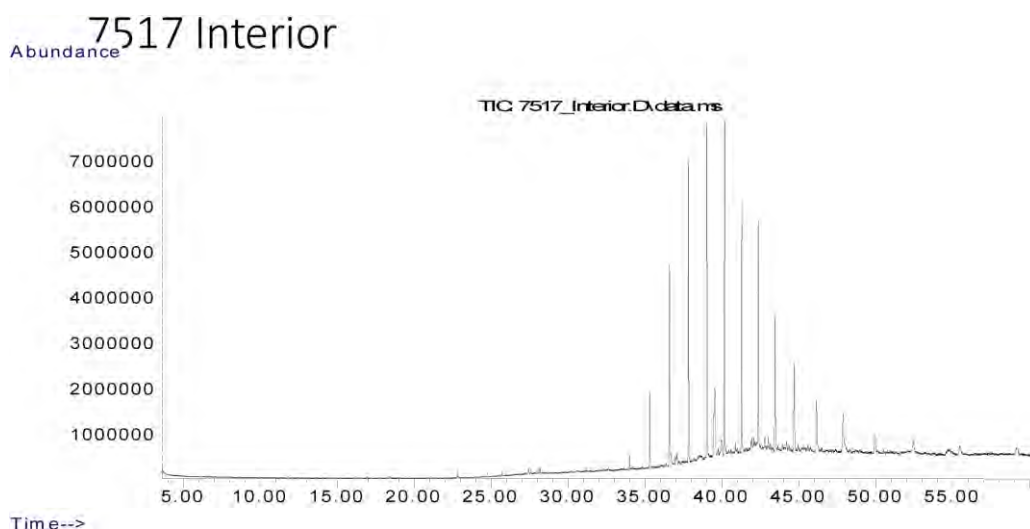
Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	3796221		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	614693		ug/L	Z
Aliph	nC23	32.5720	211502		ug/L	Z
Aliph	nC24	33.9520	724122		ug/L	Z
Aliph	nC25	35.2810	591027		ug/L	Z
Aliph	nC26	36.5600	882439		ug/L	Z
Aliph	nC27	37.7930	556789		ug/L	Z
Aliph	nC28	38.9870	859815		ug/L	Z
Aliph	nC29	40.1370	396616		ug/L	Z
Aliph	nC30	41.2480	449554		ug/L	Z
Aliph	nC31	42.3270	228775		ug/L	Z
Aliph	nC32	43.4130	410749		ug/L	Z
Aliph	nC33	44.6430	76212		ug/L	Z
Aliph	nC34	46.0860	104439		ug/L	Z
Aliph	nC35	47.8060	161995		ug/L	Z
Aliph	nC36	49.8090	72620		ug/L	Z
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370	39201		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** W13/007517 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_007517_int_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	15109701		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340			ug/L	U
Aliph	nC23	32.5720			ug/L	U
Aliph	nC24	33.9520	1478231		ug/L	Z
Aliph	nC25	35.2810	8192944		ug/L	Z
Aliph	nC26	36.5600	21012100		ug/L	Z
Aliph	nC27	37.7930	35670553		ug/L	Z
Aliph	nC28	38.9870	37182895		ug/L	Z
Aliph	nC29	40.1370	37987307		ug/L	Z
Aliph	nC30	41.2480	29670712		ug/L	Z
Aliph	nC31	42.3270	25857313		ug/L	Z
Aliph	nC32	43.4130	18730682		ug/L	Z
Aliph	nC33	44.6430	14107410		ug/L	Z
Aliph	nC34	46.0860	9873771		ug/L	Z
Aliph	nC35	47.8060	6873881		ug/L	Z
Aliph	nC36	49.8090	5664933		ug/L	Z
Aliph	nC37	52.2960	1830057		ug/L	Z
Aliph	nC38	55.2370	4038816		ug/L	Z
Aliph	nC39	58.8850	4299346		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

Results for: GCMS with Full Scan

Qualifier codes:

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

Sample ID : **W13/007518**

Beach E6: Eves Cove Visit: 1

Comments:

Location: Shore Upper

Local Date Time: 24/11/2014 9:58:25 AM

Type: Sooty Bitumen

Family: Sooty Bitumen

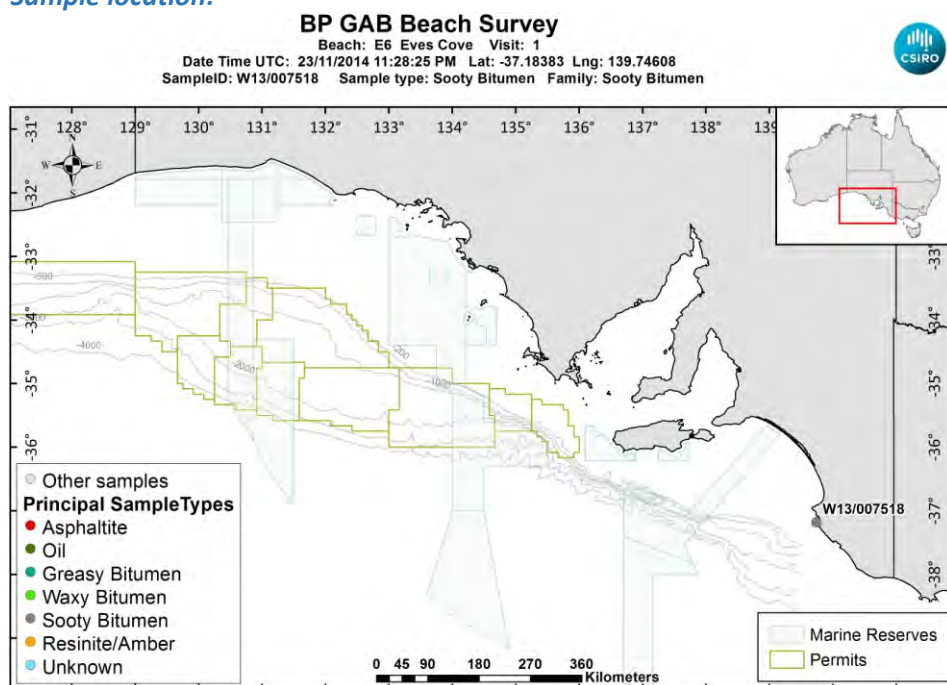
Size (cm): 6

Latitude (Y): -37.183829

Weight (gm): 53.00449

Longitude (X): 139.746083

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007518_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\W13_007518_146A0617.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007518_Photo01.JPG](#)

Analyses Requested

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

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: W13/007518_UNK_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.15	percent	Y
Inorg	delta13 Carbon			-26.1113185627126	per mille	Y
Inorg	delta34 Sulphur			5.8747172097358	per mille	Y
Inorg	Hydrogen			9.68	percent	Y
Inorg	Nitrogen			0.21	percent	Y
Inorg	Sulphur			1.73	percent	Y

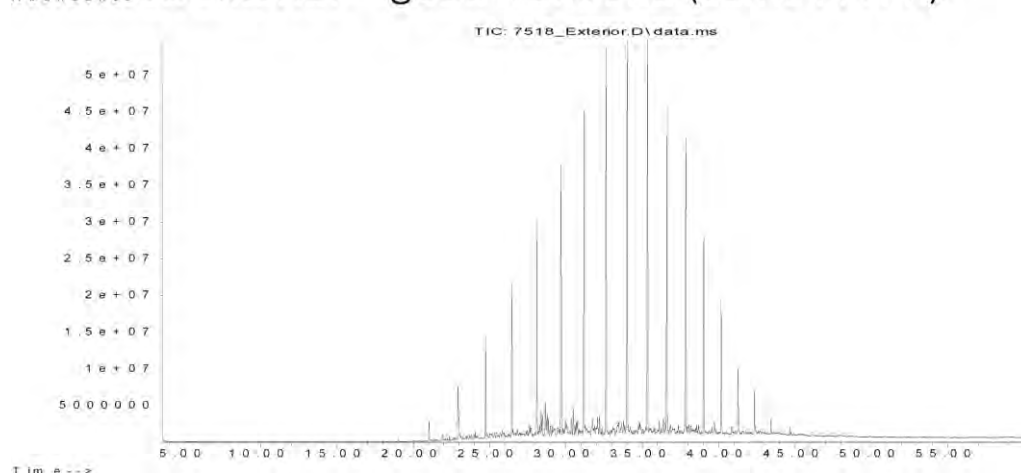
Results for: GCMS with Full Scan

Unique ID: W13/007518_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_007518_ext_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

7518 Exterior – good front end (some Pr+Ph)



Data Sheet:

(default units ppb)

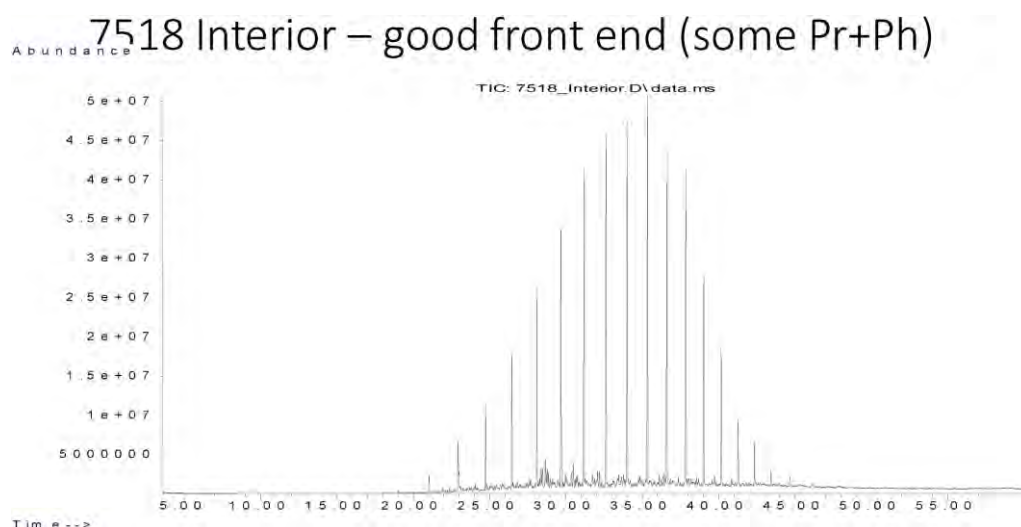
Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29			0.485138109952222	ug/L	Y
Ratio	nC17/Pristane			3.09492031157267	ug/L	Y
Ratio	nC18/Phytane			15.6765626352623	ug/L	Y
Ratio	Pristane/Phytane			3.06990590409975	ug/L	Y
Aliph	Botryococcane	39.4780			ug/L	U
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200	14703895		ug/L	Z
Aliph	nC17	22.9150	44779359		ug/L	Z
Aliph	nC18	24.7150	73884643		ug/L	Z
Aliph	nC19	26.4300	111788008		ug/L	Z
Aliph	nC20	28.0680	158932861		ug/L	Z
Aliph	nC21	29.6330	212214091		ug/L	Z
Aliph	nC22	31.1340	249621770		ug/L	Z
Aliph	nC23	32.5720	279086270		ug/L	Z
Aliph	nC24	33.9520	284091011		ug/L	Z
Aliph	nC25	35.2810	289982003		ug/L	Z
Aliph	nC26	36.5600	250927528		ug/L	Z
Aliph	nC27	37.7930	223941413		ug/L	Z
Aliph	nC28	38.9870	141054943		ug/L	Z
Aliph	nC29	40.1370	92302291		ug/L	Z
Aliph	nC30	41.2480	44134982		ug/L	Z
Aliph	nC31	42.3270	30117757		ug/L	Z
Aliph	nC32	43.4130	12709139		ug/L	Z
Aliph	nC33	44.6430	8143269		ug/L	Z
Aliph	nC34	46.0860	3507644		ug/L	Z
Aliph	nC35	47.8060			ug/L	U
Aliph	nC36	49.8090			ug/L	U
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U

Results for: GCMS with Full Scan

Aliph	nC39	58.8850		ug/L	U
Aliph	Norpristane	21.9070	6615572	ug/L	Z
Aliph	Phytane	24.8210	4713064	ug/L	Z
Aliph	Pristane	22.9640	14468663	ug/L	Z

Results for: GCMS with Full Scan**Unique ID:** W13/007518 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_007518_int_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Rspnse:	Value:	units:	Qualifier:
Ratio	nC17/nC29			0.399619416281627	ug/L	Y
Ratio	nC17/Pristane			2.60655350825392	ug/L	Y
Ratio	nC18/Phytane			16.691917772099	ug/L	Y
Ratio	Pristane/Phytane			3.89562011567467	ug/L	Y
Aliph	Botryococcane	39.4780			ug/L	U
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270	2075502		ug/L	Z
Aliph	nC16	21.0200	12143963		ug/L	Z
Aliph	nC17	22.9150	36083628		ug/L	Z
Aliph	nC18	24.7150	59316182		ug/L	Z
Aliph	nC19	26.4300	94474882		ug/L	Z
Aliph	nC20	28.0680	139686931		ug/L	Z
Aliph	nC21	29.6330	181162054		ug/L	Z
Aliph	nC22	31.1340	224917366		ug/L	Z
Aliph	nC23	32.5720	253660748		ug/L	Z
Aliph	nC24	33.9520	261232807		ug/L	Z
Aliph	nC25	35.2810	267638591		ug/L	Z
Aliph	nC26	36.5600	232846197		ug/L	Z
Aliph	nC27	37.7930	214709365		ug/L	Z
Aliph	nC28	38.9870	129774578		ug/L	Z
Aliph	nC29	40.1370	90294982		ug/L	Z
Aliph	nC30	41.2480	43503347		ug/L	Z
Aliph	nC31	42.3270	29808649		ug/L	Z
Aliph	nC32	43.4130	12621290		ug/L	Z
Aliph	nC33	44.6430	7902697		ug/L	Z
Aliph	nC34	46.0860	3892824		ug/L	Z
Aliph	nC35	47.8060			ug/L	U
Aliph	nC36	49.8090			ug/L	U
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U

Results for: GCMS with Full Scan

Aliph	nC39	58.8850		ug/L	U
Aliph	Norpristane	21.9070	5594121	ug/L	Z
Aliph	Phytane	24.8210	3553587	ug/L	Z
Aliph	Pristane	22.9640	13843425	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 : **W13/007519**

Beach E6: Eves Cove Visit: 1

Comments:

Location: Shore Upper

Local Date Time: 24/11/2014 10:02:07 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

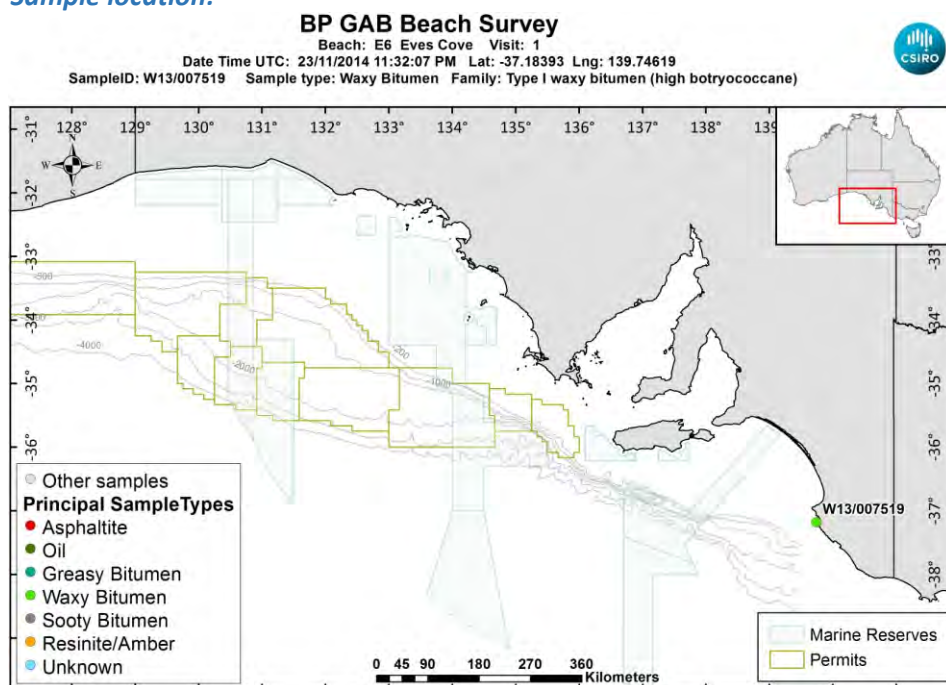
Size (cm): 3

Latitude (Y): -37.183927

Weight (gm): 16.58187

Longitude (X): 139.746193

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007519_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\W13_007519_146A0619.JPG](#)

Sample - laboratory image:



LinkedFiles\GAB_BCH1\Samples\W13_007519_Photo01.JPG

Analyses Requested

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

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: W13/007519_UNK_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

Data Sheet:

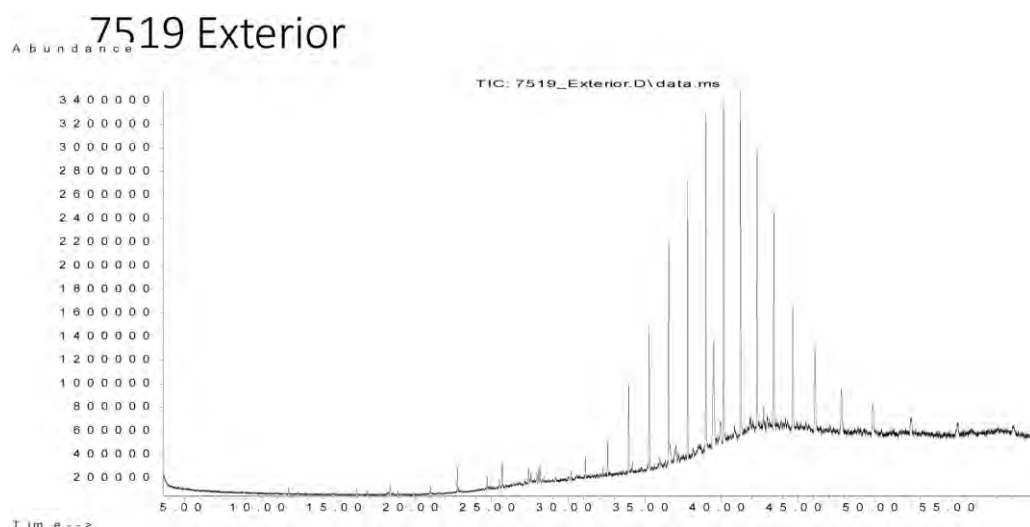
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			86.23	percent	Y
Inorg	delta13 Carbon			-26.1228788558483	per mille	Y
Inorg	delta34 Sulphur				per mille	U
Inorg	Hydrogen			12.93	percent	Y
Inorg	Nitrogen			0.26	percent	Y
Inorg	Sulphur			1.57	percent	Y

Results for: GCMS with Full Scan

Unique ID: W13/007519_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_007519_ext_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan



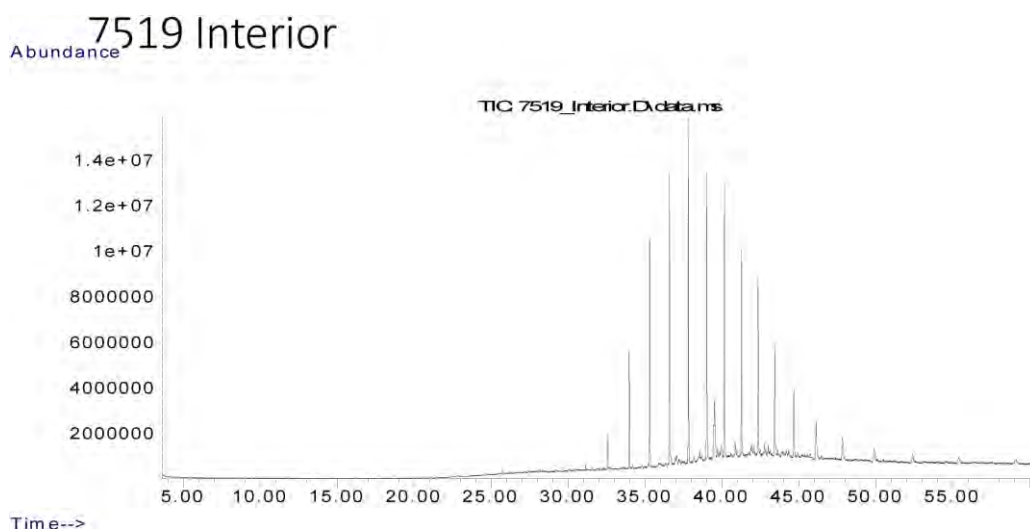
Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	8716502		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	827107		ug/L	Z
Aliph	nC23	32.5720	1430995		ug/L	Z
Aliph	nC24	33.9520	4070765		ug/L	Z
Aliph	nC25	35.2810	6220425		ug/L	Z
Aliph	nC26	36.5600	10689237		ug/L	Z
Aliph	nC27	37.7930	12321136		ug/L	Z
Aliph	nC28	38.9870	14627798		ug/L	Z
Aliph	nC29	40.1370	15304935		ug/L	Z
Aliph	nC30	41.2480	14311842		ug/L	Z
Aliph	nC31	42.3270	12865352		ug/L	Z
Aliph	nC32	43.4130	10554759		ug/L	Z
Aliph	nC33	44.6430	8055785		ug/L	Z
Aliph	nC34	46.0860	6047089		ug/L	Z
Aliph	nC35	47.8060	1932266		ug/L	Z
Aliph	nC36	49.8090	3193941		ug/L	Z
Aliph	nC37	52.2960	1909619		ug/L	Z
Aliph	nC38	55.2370	175784		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** W13/007519 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_007519_int_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	17897297		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	1365878		ug/L	Z
Aliph	nC23	32.5720	7803739		ug/L	Z
Aliph	nC24	33.9520	25591597		ug/L	Z
Aliph	nC25	35.2810	50356014		ug/L	Z
Aliph	nC26	36.5600	64242583		ug/L	Z
Aliph	nC27	37.7930	73354349		ug/L	Z
Aliph	nC28	38.9870	65658884		ug/L	Z
Aliph	nC29	40.1370	60514507		ug/L	Z
Aliph	nC30	41.2480	47365714		ug/L	Z
Aliph	nC31	42.3270	39321389		ug/L	Z
Aliph	nC32	43.4130	28657790		ug/L	Z
Aliph	nC33	44.6430	20995064		ug/L	Z
Aliph	nC34	46.0860	14065444		ug/L	Z
Aliph	nC35	47.8060	9563589		ug/L	Z
Aliph	nC36	49.8090	7985888		ug/L	Z
Aliph	nC37	52.2960	4946481		ug/L	Z
Aliph	nC38	55.2370	4599395		ug/L	Z
Aliph	nC39	58.8850	4424553		ug/L	Z
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

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

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

Sample ID : **W13/007520**

Beach E6: Eves Cove Visit: 1

Comments:

Location: Shore Upper

Local Date Time: 24/11/2014 10:10:41 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

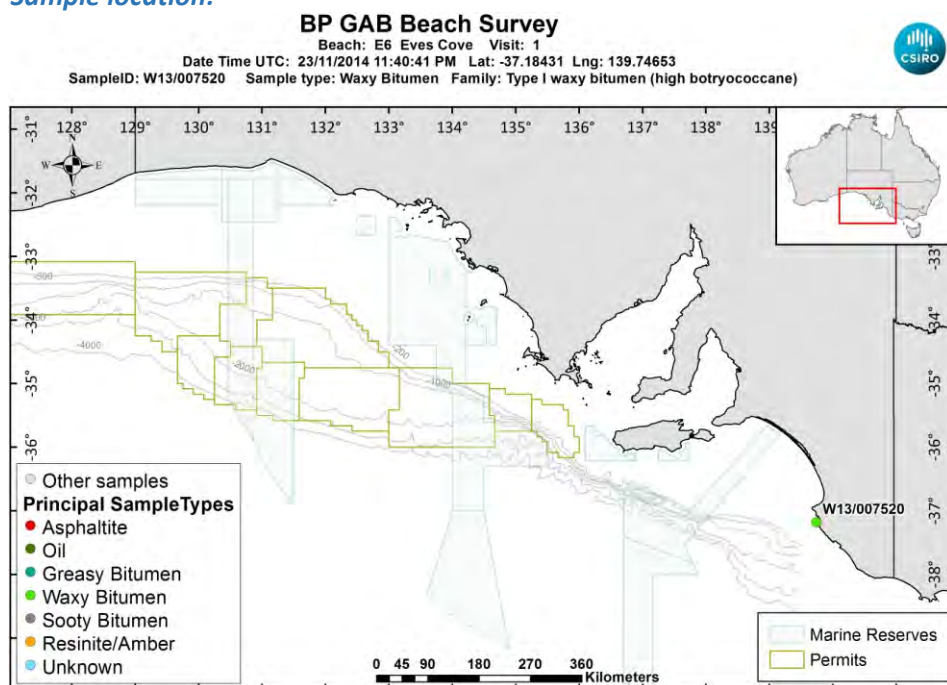
Size (cm): 3

Latitude (Y): -37.184311

Weight (gm): 4.00564

Longitude (X): 139.746528

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\W13_007520_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\W13_007520_146A0623.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\W13_007520_Photo01.JPG](#)

Analyses Requested

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

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: W13/007520_UNK_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Preparation: Unknown

Analysis Date:

Method ID/s:

Linked Image: [None available](#)

Sample Volume:

Volume Units:

Extract Volume:

Dilution Factor:

Comment:

Data Sheet:

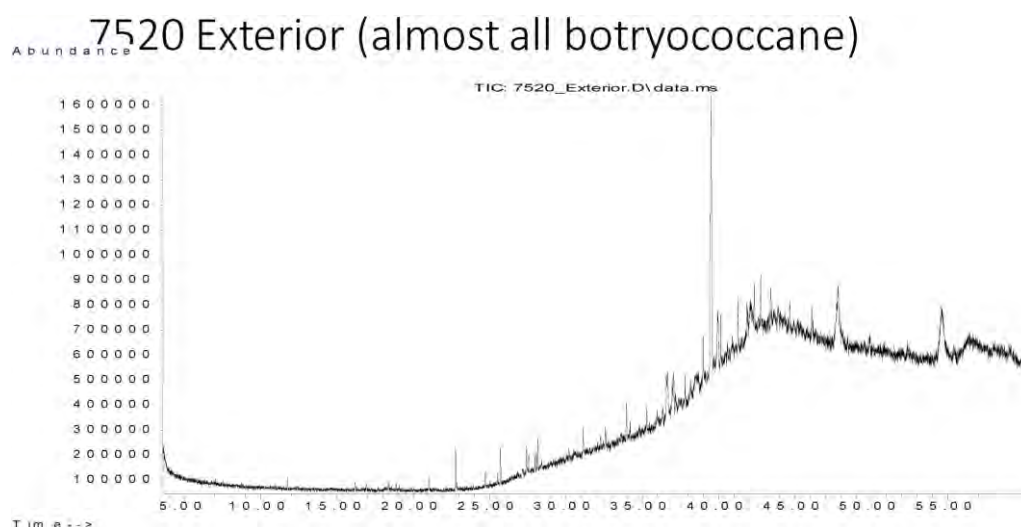
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.51	percent	Y
Inorg	delta13 Carbon			-26.017697999684	per mille	Y
Inorg	delta34 Sulphur			0.330320911803958	per mille	Y
Inorg	Hydrogen			10.78	percent	Y
Inorg	Nitrogen			0.31	percent	Y
Inorg	Sulphur			1.38	percent	Y

Results for: GCMS with Full Scan

Unique ID: W13/007520_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_007520_ext_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan



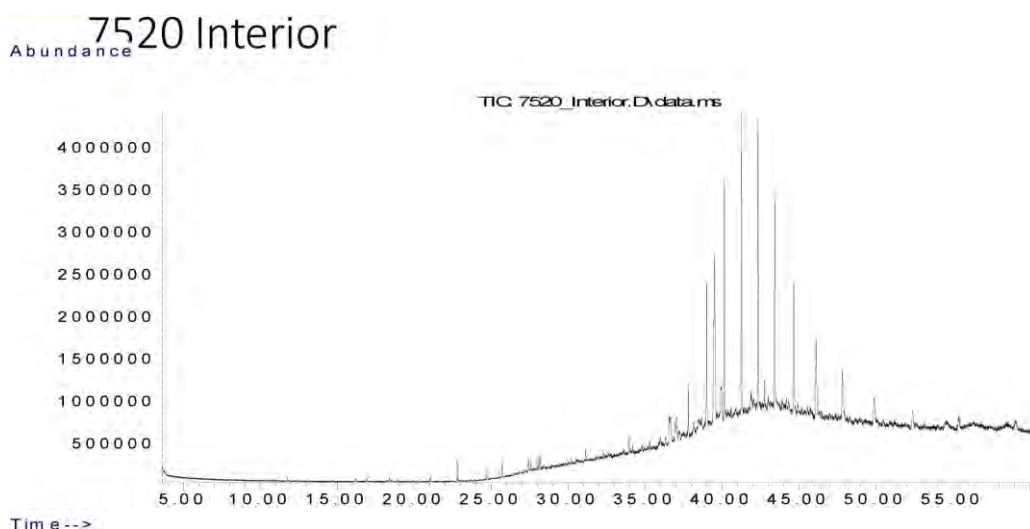
Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	10400658		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	550093		ug/L	Z
Aliph	nC23	32.5720	285419		ug/L	Z
Aliph	nC24	33.9520	774616		ug/L	Z
Aliph	nC25	35.2810	507654		ug/L	Z
Aliph	nC26	36.5600	1176315		ug/L	Z
Aliph	nC27	37.7930	649325		ug/L	Z
Aliph	nC28	38.9870	1137191		ug/L	Z
Aliph	nC29	40.1370	810875		ug/L	Z
Aliph	nC30	41.2480	1068402		ug/L	Z
Aliph	nC31	42.3270	916804		ug/L	Z
Aliph	nC32	43.4130	783174		ug/L	Z
Aliph	nC33	44.6430	589835		ug/L	Z
Aliph	nC34	46.0860	446933		ug/L	Z
Aliph	nC35	47.8060			ug/L	U
Aliph	nC36	49.8090			ug/L	U
Aliph	nC37	52.2960			ug/L	U
Aliph	nC38	55.2370			ug/L	U
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** W13/007520 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_007520_int_WholeOil.jpg](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	39.4780	19203261		ug/L	Z
Aliph	nC10	7.5100			ug/L	U
Aliph	nC11	9.9450			ug/L	U
Aliph	nC12	12.3690			ug/L	U
Aliph	nC13	14.7030			ug/L	U
Aliph	nC14	16.9230			ug/L	U
Aliph	nC15	19.0270			ug/L	U
Aliph	nC16	21.0200			ug/L	U
Aliph	nC17	22.9150			ug/L	U
Aliph	nC18	24.7150			ug/L	U
Aliph	nC19	26.4300			ug/L	U
Aliph	nC20	28.0680			ug/L	U
Aliph	nC21	29.6330			ug/L	U
Aliph	nC22	31.1340	768923		ug/L	Z
Aliph	nC23	32.5720	272857		ug/L	Z
Aliph	nC24	33.9520	993437		ug/L	Z
Aliph	nC25	35.2810	504449		ug/L	Z
Aliph	nC26	36.5600	1770157		ug/L	Z
Aliph	nC27	37.7930	3214224		ug/L	Z
Aliph	nC28	38.9870	9031270		ug/L	Z
Aliph	nC29	40.1370	14704005		ug/L	Z
Aliph	nC30	41.2480	17952770		ug/L	Z
Aliph	nC31	42.3270	17290365		ug/L	Z
Aliph	nC32	43.4130	15163810		ug/L	Z
Aliph	nC33	44.6430	11551704		ug/L	Z
Aliph	nC34	46.0860	8415649		ug/L	Z
Aliph	nC35	47.8060	5788887		ug/L	Z
Aliph	nC36	49.8090	4863090		ug/L	Z
Aliph	nC37	52.2960	2851828		ug/L	Z
Aliph	nC38	55.2370	2330240		ug/L	Z
Aliph	nC39	58.8850			ug/L	U
Aliph	Norpristane	21.9070			ug/L	U
Aliph	Phytane	24.8210			ug/L	U
Aliph	Pristane	22.9640			ug/L	U

Results for: GCMS with Full Scan

Qualifier codes:

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

Sample ID : /001001

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 10:49:56 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

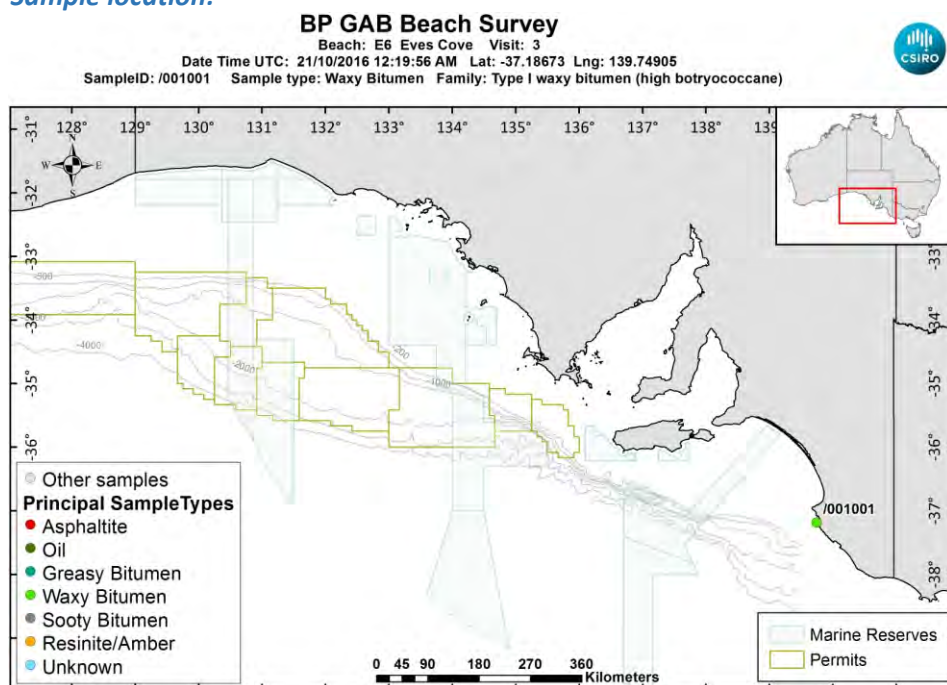
Size (cm): 2.4

Latitude (Y): -37.186728

Weight (gm): 4.20283

Longitude (X): 139.749050

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\ 001001_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\001001_146A7020.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\001001_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: /001001_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			83.54	percent	Y
Inorg	Hydrogen			9.030775944334	percent	Y
Inorg	Nitrogen			0.23	percent	Y
Inorg	Sulphur			2.03420670665586	percent	Y

Results for: GCMS with Full Scan

Unique ID: /001001_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\ 001001_bulk_WholeOil.JPG](#)

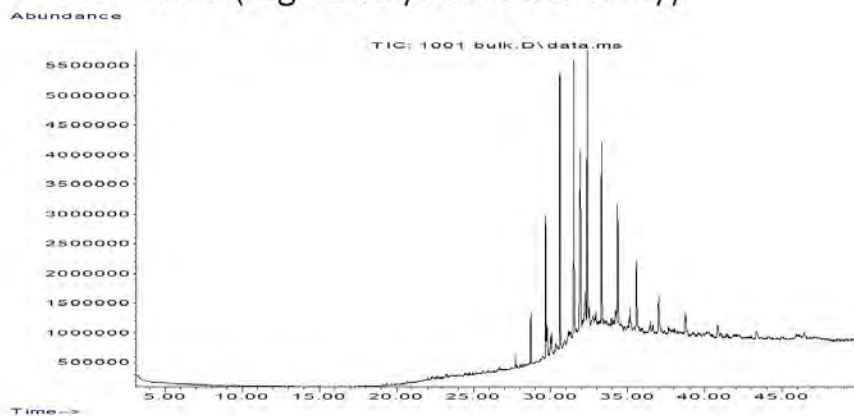
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

1001 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	24919093			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	894000			Z
Aliph	nC25	28.7100	4220697			Z
Aliph	nC26	29.6680	11223850			Z
Aliph	nC27	30.6080	21770818			Z
Aliph	nC28	31.5080	23928602			Z
Aliph	nC29	32.3700	22175603			Z
Aliph	nC30	33.2910	17098003			Z
Aliph	nC31	34.3470	13714857			Z
Aliph	nC32	35.5720	8829095			Z
Aliph	nC33	37.0130	6645629			Z
Aliph	nC34	38.7280	4120885			Z
Aliph	nC35	40.8080	2844817			Z
Aliph	nC36	43.3510	2259690			Z
Aliph	nC37	46.4710	2172970			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:

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 : /001002

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 10:52:58 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

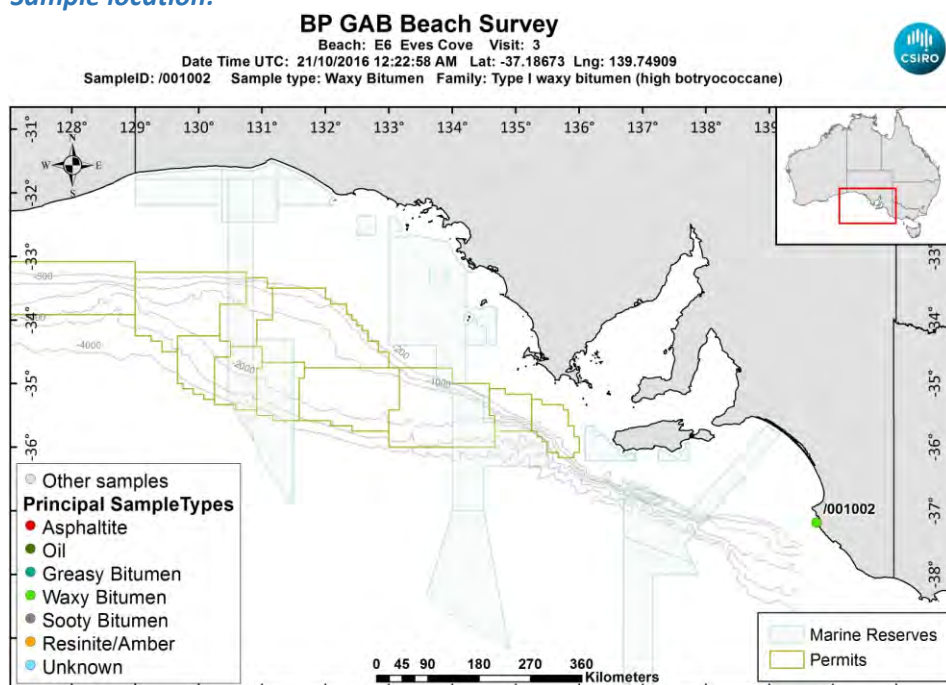
Size (cm): 3.7

Latitude (Y): -37.186733

Weight (gm): 10.4208

Longitude (X): 139.749092

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\ 001002 Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\001002_146A7022.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\001002_Photo02.JPG](#)

Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: /001002_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			85.57	percent	Y
Inorg	Hydrogen			6.16266580516899	percent	Y
Inorg	Nitrogen			0.23	percent	Y
Inorg	Sulphur			1.06870594593732	percent	Y

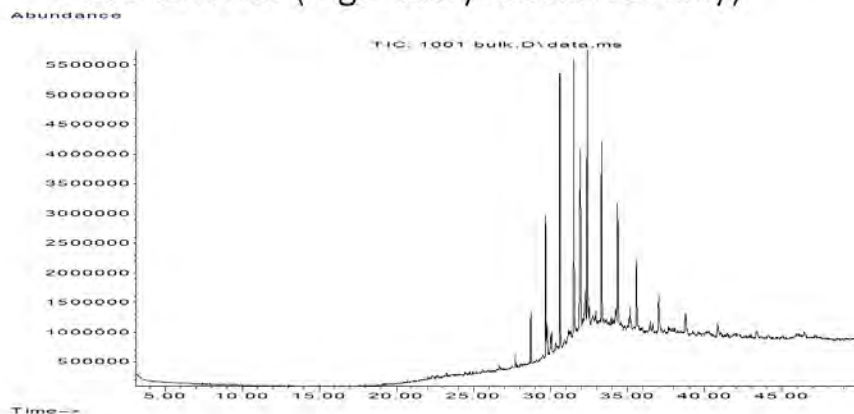
Results for: GCMS with Full Scan

Unique ID: /001002_DISS_GCMS-Scan/01

Results for: GCMS with Full Scan**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\ 001002_ext WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

1002 exterior (high botryococcane waxy)



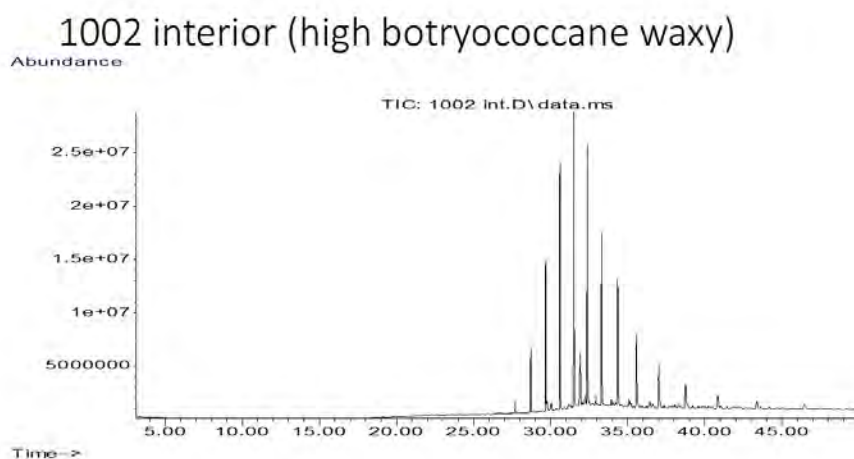
Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	13599809			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	356594			Z
Aliph	nC25	28.7100	924718			Z
Aliph	nC26	29.6680	1369226			Z
Aliph	nC27	30.6080	2942866			Z
Aliph	nC28	31.5080	3942147			Z
Aliph	nC29	32.3700	4298433			Z
Aliph	nC30	33.2910	4092281			Z
Aliph	nC31	34.3470	4157039			Z
Aliph	nC32	35.5720	3308590			Z
Aliph	nC33	37.0130	2913870			Z
Aliph	nC34	38.7280	2763778			Z
Aliph	nC35	40.8080	2167508			Z
Aliph	nC36	43.3510	1922905			Z
Aliph	nC37	46.4710	1910612			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** /001002 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS_001002_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	31.9240	38268091			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	533774			Z
Aliph	nC24	27.7060	4988652			Z
Aliph	nC25	28.7100	27562626			Z
Aliph	nC26	29.6680	66487026			Z
Aliph	nC27	30.6080	112941901			Z
Aliph	nC28	31.5080	119133620			Z
Aliph	nC29	32.3700	114931857			Z
Aliph	nC30	33.2910	90169862			Z
Aliph	nC31	34.3470	72890094			Z
Aliph	nC32	35.5720	51971684			Z
Aliph	nC33	37.0130	36563884			Z
Aliph	nC34	38.7280	22553544			Z
Aliph	nC35	40.8080	14635780			Z
Aliph	nC36	43.3510	12004995			Z
Aliph	nC37	46.4710	8863389			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:

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 : /001003

Beach E6: Eves Cove Visit: 3

Comments:

Location: Shore Upper

Local Date Time: 21/10/2016 10:54:12 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

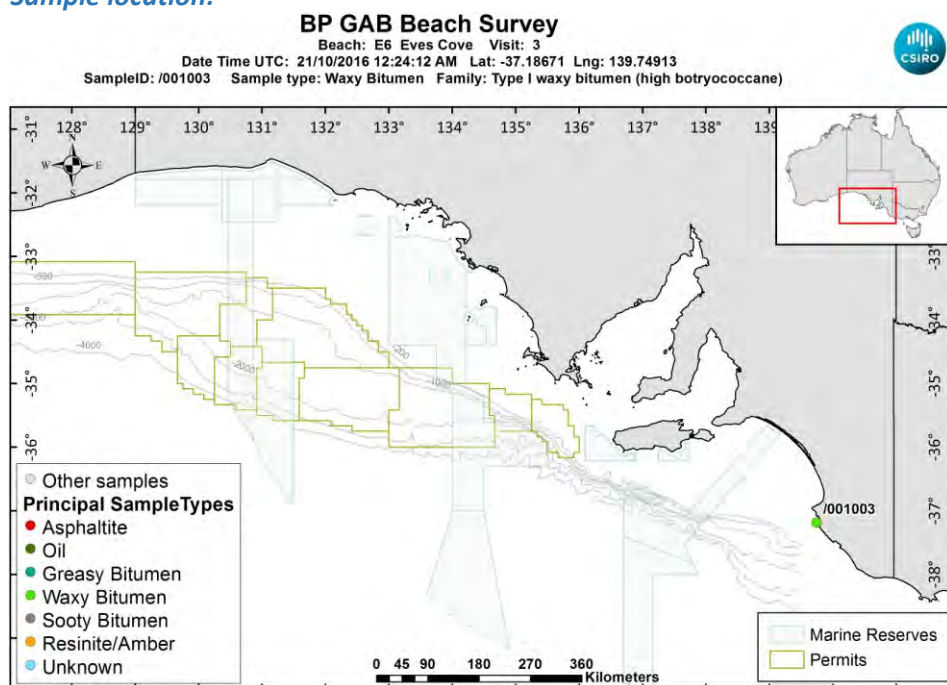
Size (cm): 2.5

Latitude (Y): -37.186713

Weight (gm): 4.28415

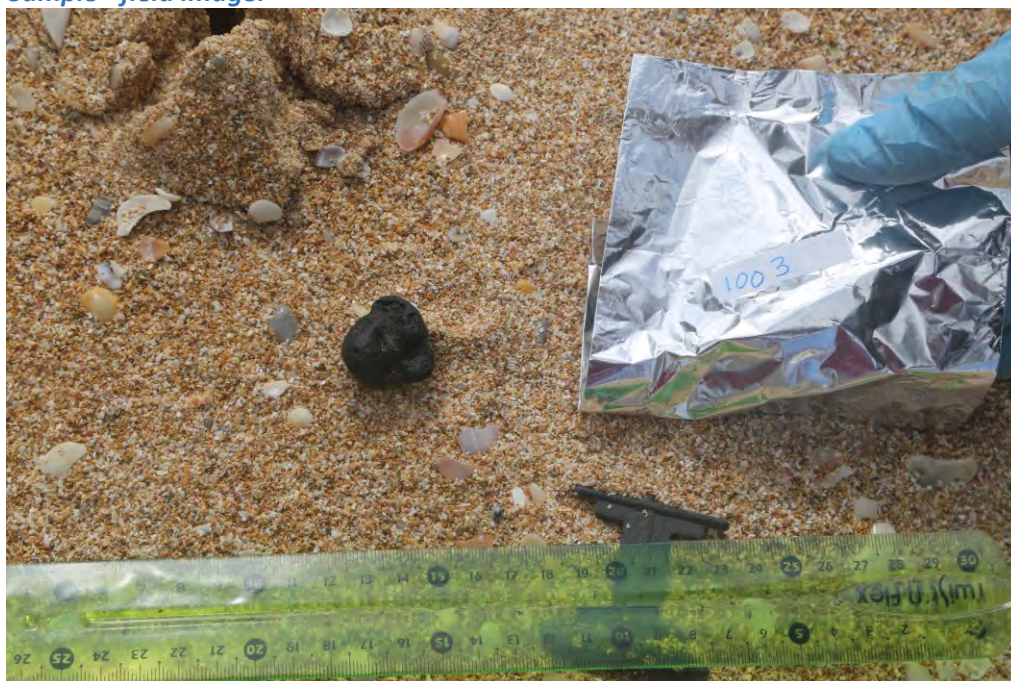
Longitude (X): 139.749127

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\ 001003 Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\001003_146A7024.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\001003_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: /001003_SPE_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

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

Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			86.4	percent	Y
Inorg	Hydrogen			5.91024095427435	percent	Y
Inorg	Nitrogen			0.22	percent	Y
Inorg	Sulphur			0.880330503057377	percent	Y

Results for: GCMS with Full Scan

Unique ID: /001003_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\ 001003_bulk_WholeOil.JPG](#)

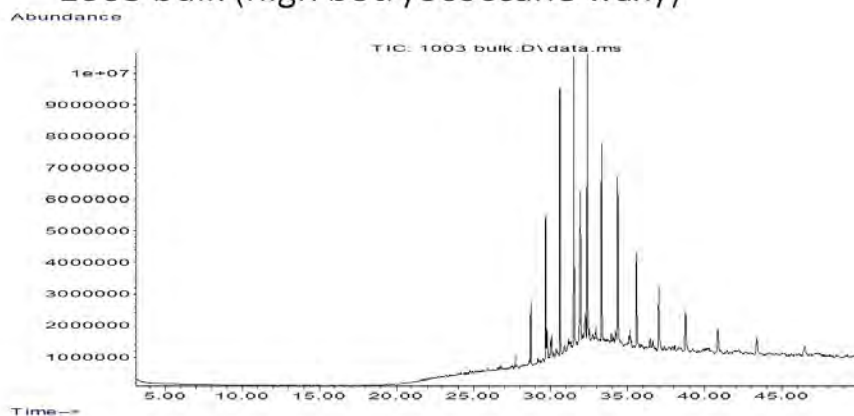
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

1003 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	38900885			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	1885569			Z
Aliph	nC25	28.7100	9260013			Z
Aliph	nC26	29.6680	21793121			Z
Aliph	nC27	30.6080	39700821			Z
Aliph	nC28	31.5080	44788965			Z
Aliph	nC29	32.3700	44902624			Z
Aliph	nC30	33.2910	36531778			Z
Aliph	nC31	34.3470	33226581			Z
Aliph	nC32	35.5720	23205254			Z
Aliph	nC33	37.0130	17208998			Z
Aliph	nC34	38.7280	12447701			Z
Aliph	nC35	40.8080	9699421			Z
Aliph	nC36	43.3510	7803676			Z
Aliph	nC37	46.4710	5962543			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:

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 : /001004

Beach E6: Eves Cove Visit: 3

Comments:

Location: Shore Upper

Local Date Time: 21/10/2016 10:54:49 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

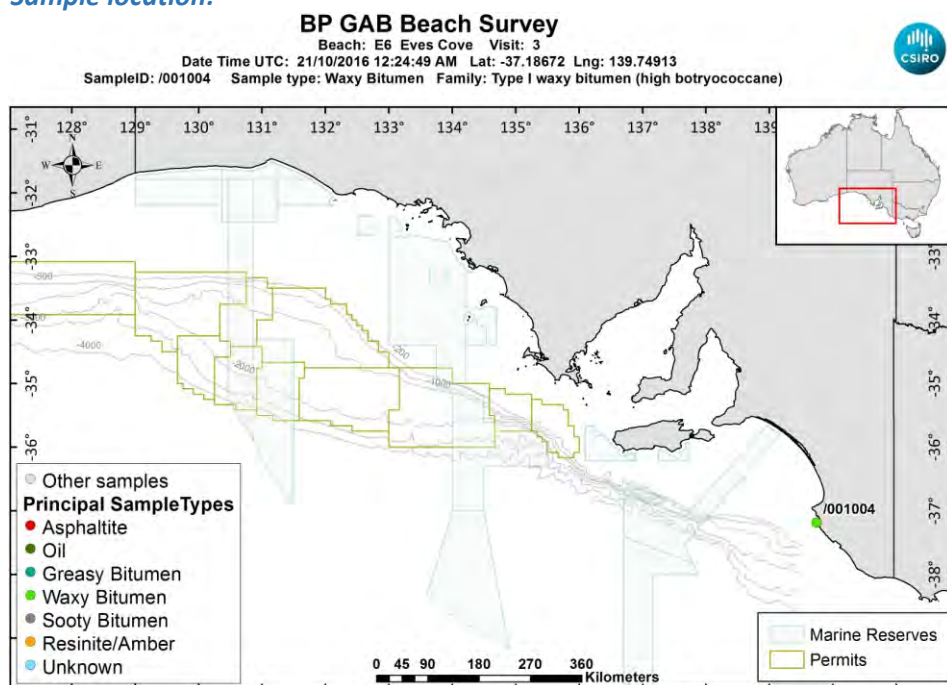
Size (cm): 2.6

Latitude (Y): -37.186717

Weight (gm): 2.34526

Longitude (X): 139.749133

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\ 001004 Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\001004_146A7025.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\001004_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: /001004_SPE_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

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

Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			86.6	percent	Y
Inorg	Hydrogen			5.79294512922465	percent	Y
Inorg	Nitrogen			0.28	percent	Y
Inorg	Sulphur			0.858031000596326	percent	Y

Results for: GCMS with Full Scan

Unique ID: /001004_DISS_GCMS-Scan/03

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

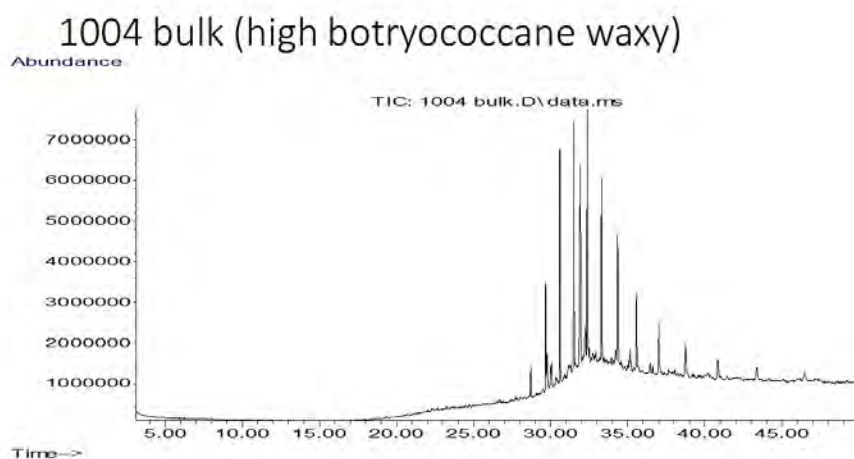
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\ 001004_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	39650316			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	496747			Z
Aliph	nC25	28.7100	3542690			Z
Aliph	nC26	29.6680	12370370			Z
Aliph	nC27	30.6080	26709832			Z
Aliph	nC28	31.5080	30898748			Z
Aliph	nC29	32.3700	28895514			Z
Aliph	nC30	33.2910	23396572			Z
Aliph	nC31	34.3470	20982905			Z
Aliph	nC32	35.5720	14832508			Z
Aliph	nC33	37.0130	10648701			Z
Aliph	nC34	38.7280	7862331			Z
Aliph	nC35	40.8080	6237535			Z
Aliph	nC36	43.3510	4755514			Z
Aliph	nC37	46.4710	4049685			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:

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 : /001005

Beach E6: Eves Cove Visit: 3

Comments:

Location: Shore Upper

Local Date Time: 21/10/2016 10:56:19 AM

Type: Waxy Bitumen

Family: Type III waxy bitumen (no botryococcane, low

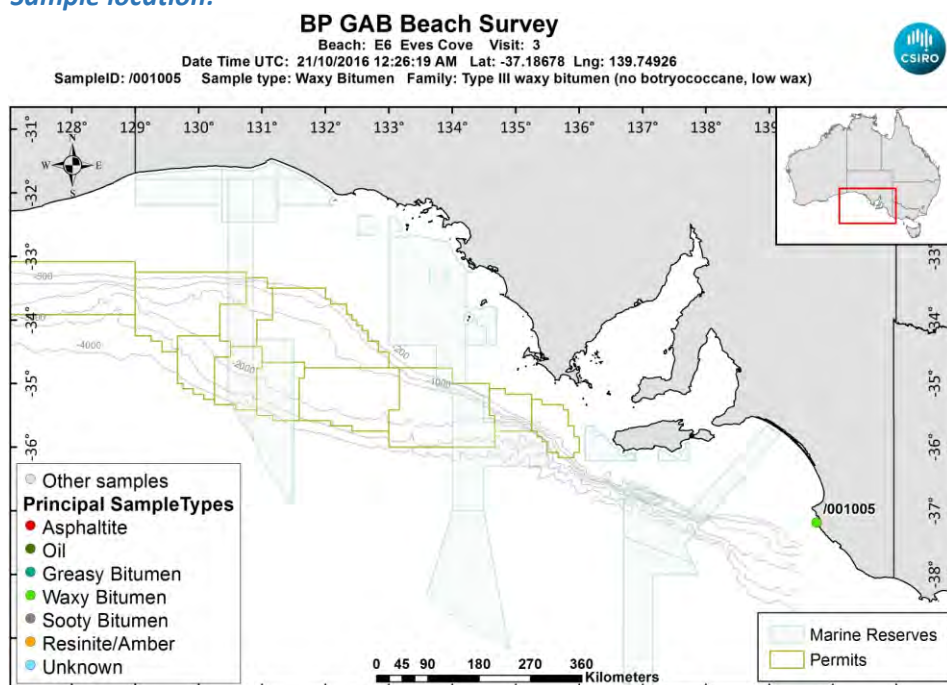
Size (cm): 1.2

Latitude (Y): -37.186778

Weight (gm): 0.58594

Longitude (X): 139.749257

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\ 001005 Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\001005_146A7028.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\001005_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: /001005_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	percent	Y
Inorg	Hydrogen			7.55314512922466	percent	Y
Inorg	Nitrogen			0.25	percent	Y
Inorg	Sulphur			2.2613694163445	percent	Y

Results for: GCMS with Full Scan

Unique ID: /001005_DISS_GCMS-Scan/03

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

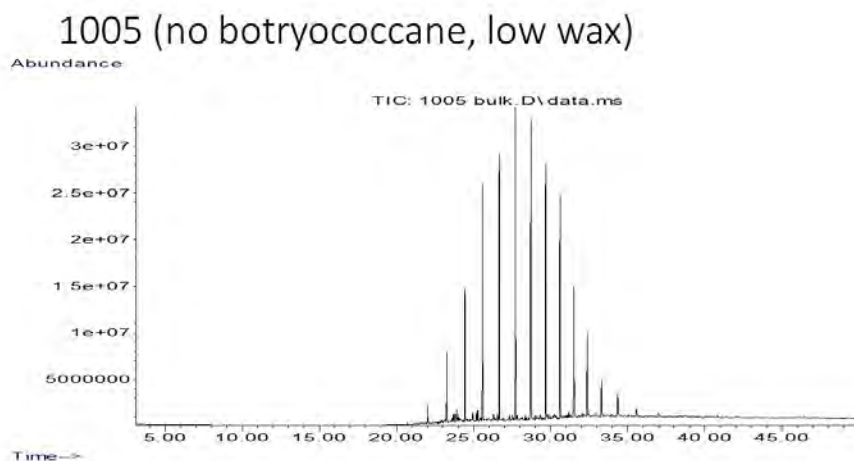
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\ 001005_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160	167083			Z
Aliph	nC17	19.3500	113854			Z
Aliph	nC18	20.7170	1518032			Z
Aliph	nC19	22.0170	9456152			Z
Aliph	nC20	23.2570	33636388			Z
Aliph	nC21	24.4410	68362001			Z
Aliph	nC22	25.5760	102900440			Z
Aliph	nC23	26.6620	128210213			Z
Aliph	nC24	27.7060	140125883			Z
Aliph	nC25	28.7100	145169640			Z
Aliph	nC26	29.6680	118526621			Z
Aliph	nC27	30.6080	106595420			Z
Aliph	nC28	31.5080	64846712			Z
Aliph	nC29	32.3700	43759186			Z
Aliph	nC30	33.2910	20626255			Z
Aliph	nC31	34.3470	15732370			Z
Aliph	nC32	35.5720	6668025			Z
Aliph	nC33	37.0130	3941890			Z
Aliph	nC34	38.7280	2053373			Z
Aliph	nC35	40.8080	1594977			Z
Aliph	nC36	43.3510	993671			Z
Aliph	nC37	46.4710	756268			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870	450509			Z
Aliph	Pristane	19.3870	274525			Z

Results for: GCMS with Full Scan

Qualifier codes:

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

Sample ID : /001006

Beach E6: Eves Cove Visit: 3

Comments:

Location: Shore Upper

Local Date Time: 21/10/2016 10:57:01 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

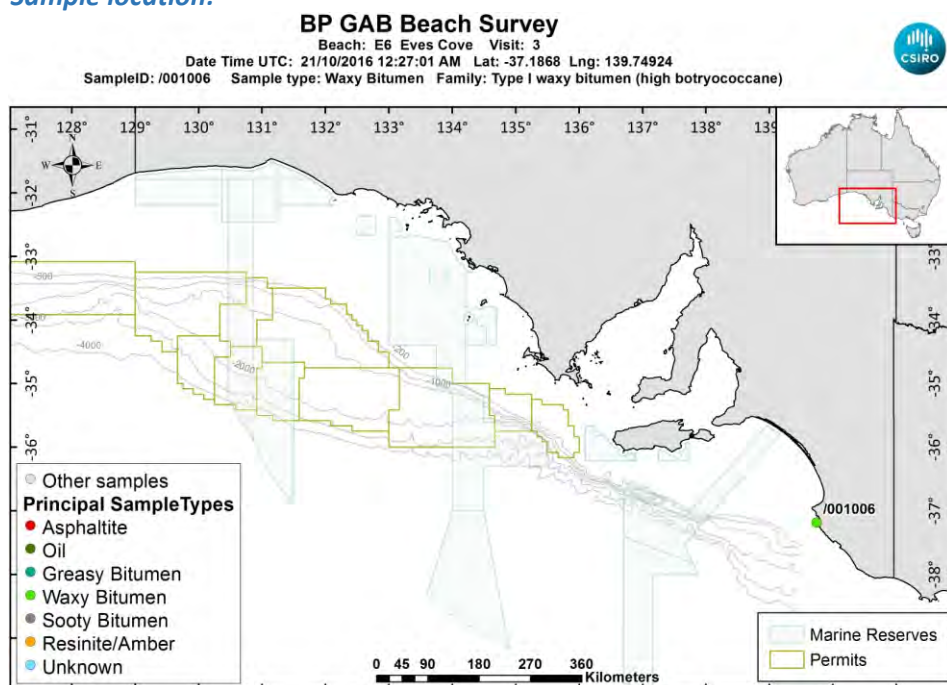
Size (cm): 3.3

Latitude (Y): -37.186803

Weight (gm): 8.42256

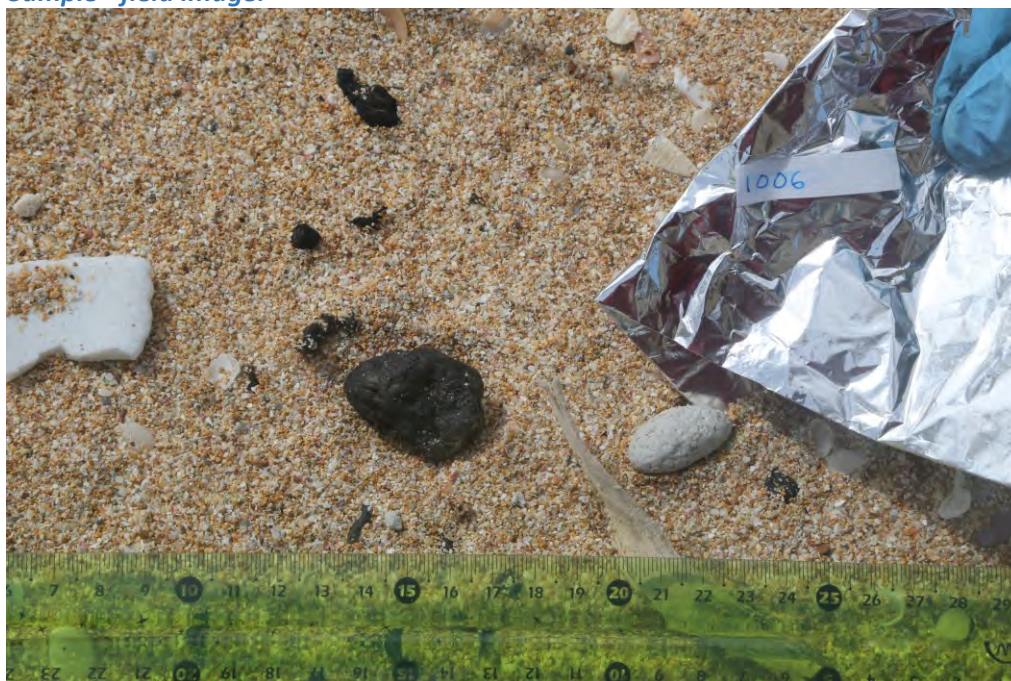
Longitude (X): 139.749235

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\ 001006 Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\001006_146A7030.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\001006_Photo02.JPG](#)

Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: /001006_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			86.45	percent	Y
Inorg	Hydrogen			8.91891650099404	percent	Y
Inorg	Nitrogen			0.28	percent	Y
Inorg	Sulphur			1.87901984825268	percent	Y

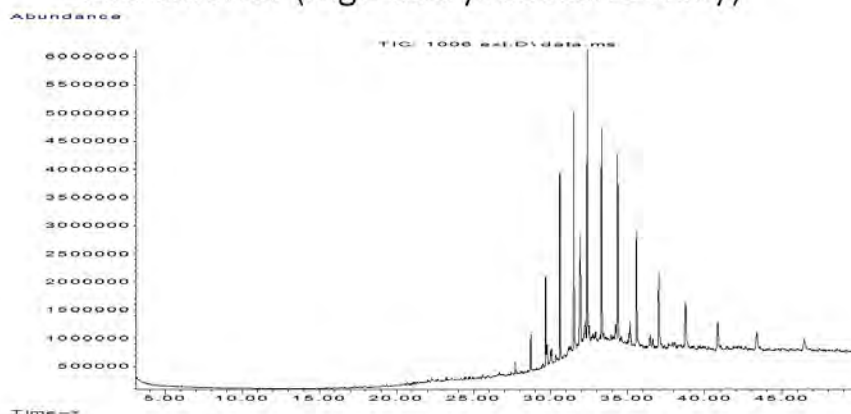
Results for: GCMS with Full Scan

Unique ID: /001006_DISS_GCMS-Scan/01

Results for: GCMS with Full Scan**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\ 001006_ext WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

1006 exterior (high botryococcane waxy)



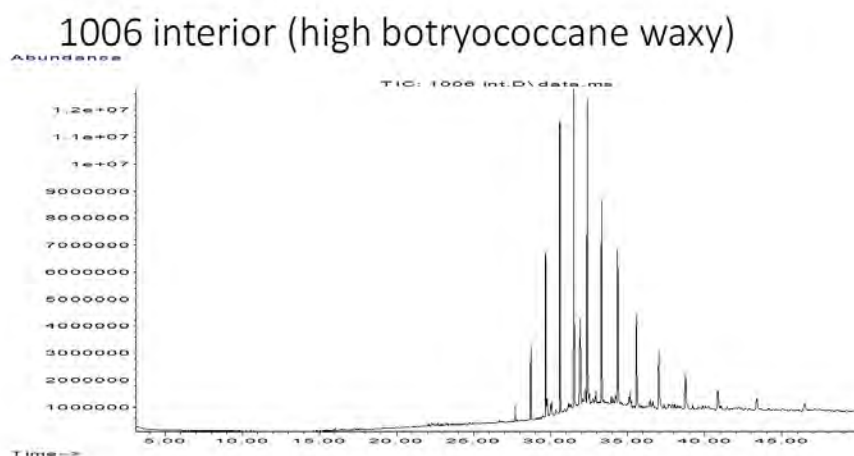
Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	15794638			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	284584			Z
Aliph	nC24	27.7060	860044			Z
Aliph	nC25	28.7100	3080116			Z
Aliph	nC26	29.6680	7888693			Z
Aliph	nC27	30.6080	16565269			Z
Aliph	nC28	31.5080	21852782			Z
Aliph	nC29	32.3700	24747692			Z
Aliph	nC30	33.2910	22500160			Z
Aliph	nC31	34.3470	20799372			Z
Aliph	nC32	35.5720	15982553			Z
Aliph	nC33	37.0130	11988129			Z
Aliph	nC34	38.7280	8839343			Z
Aliph	nC35	40.8080	5920456			Z
Aliph	nC36	43.3510	4651850			Z
Aliph	nC37	46.4710	3626694			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** /001006 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS_001006_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	31.9240	25245170			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	326569			Z
Aliph	nC24	27.7060	2648734			Z
Aliph	nC25	28.7100	12417812			Z
Aliph	nC26	29.6680	29858815			Z
Aliph	nC27	30.6080	52682994			Z
Aliph	nC28	31.5080	57452160			Z
Aliph	nC29	32.3700	55296947			Z
Aliph	nC30	33.2910	43836697			Z
Aliph	nC31	34.3470	37051498			Z
Aliph	nC32	35.5720	27024895			Z
Aliph	nC33	37.0130	19689628			Z
Aliph	nC34	38.7280	12965571			Z
Aliph	nC35	40.8080	8997542			Z
Aliph	nC36	43.3510	7184229			Z
Aliph	nC37	46.4710	5435529			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:**

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 : /001007

Beach E6: Eves Cove Visit: 3

Comments:

Location: Shore Upper

Local Date Time: 21/10/2016 10:58:12 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

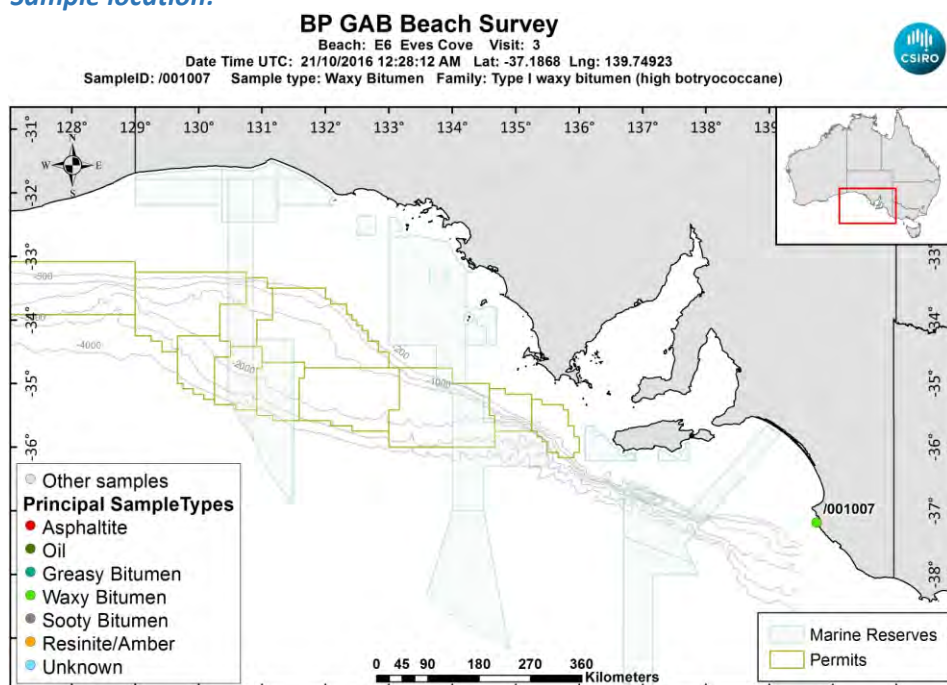
Size (cm): 2.9

Latitude (Y): -37.186800

Weight (gm): 2.23343

Longitude (X): 139.749230

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\ 001007 Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\001007_146A7032.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\001007_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: /001007_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			85.17	percent	Y
Inorg	Hydrogen			5.7136874751491	percent	Y
Inorg	Nitrogen			0.27	percent	Y
Inorg	Sulphur			0.787679219700734	percent	Y

Results for: GCMS with Full Scan

Unique ID: /001007_DISS_GCMS-Scan/03

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

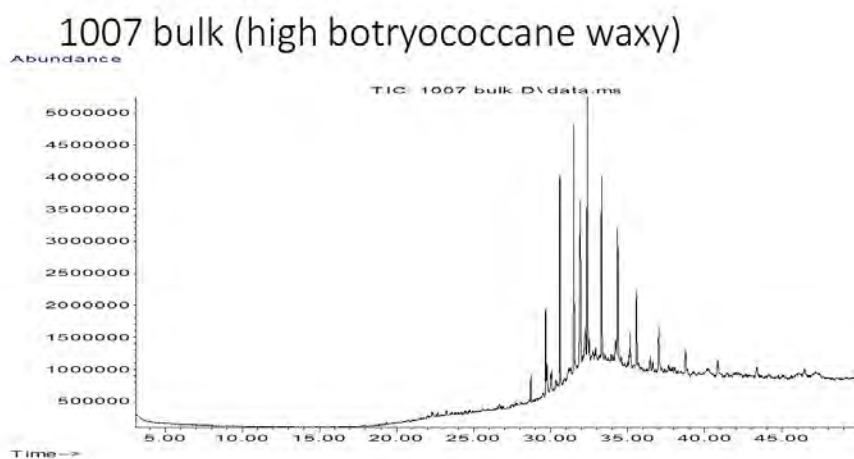
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\ 001007_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	21271171			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	455522			Z
Aliph	nC25	28.7100	1965936			Z
Aliph	nC26	29.6680	6397329			Z
Aliph	nC27	30.6080	15392052			Z
Aliph	nC28	31.5080	20690846			Z
Aliph	nC29	32.3700	19762265			Z
Aliph	nC30	33.2910	16333285			Z
Aliph	nC31	34.3470	13827226			Z
Aliph	nC32	35.5720	9265618			Z
Aliph	nC33	37.0130	6370751			Z
Aliph	nC34	38.7280	4310828			Z
Aliph	nC35	40.8080	3322284			Z
Aliph	nC36	43.3510	2608121			Z
Aliph	nC37	46.4710	2142880			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:

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 : /001008

Beach E6: Eves Cove Visit: 3

Comments:

Location: Shore Upper

Local Date Time: 21/10/2016 10:58:52 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

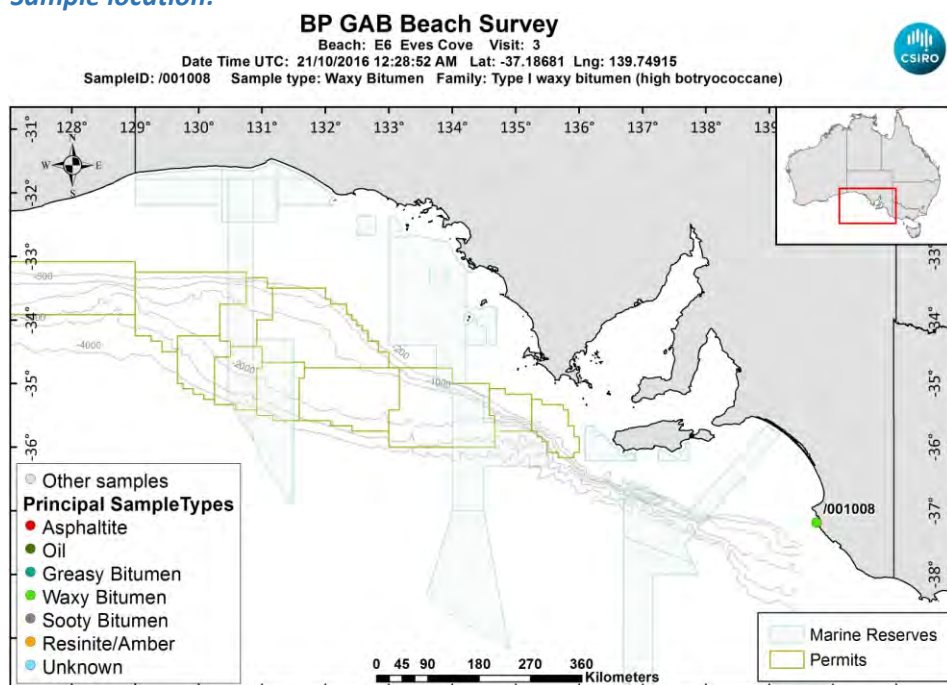
Size (cm): 3.1

Latitude (Y): -37.186810

Weight (gm): 7.03313

Longitude (X): 139.749147

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\ 001008 Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\001008_146A7034.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\001008_Photo02.JPG](#)

Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: /001008_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			89.69	percent	Y
Inorg	Hydrogen			5.83086282306163	percent	Y
Inorg	Nitrogen			0.3	percent	Y
Inorg	Sulphur			0.90657811639103	percent	Y

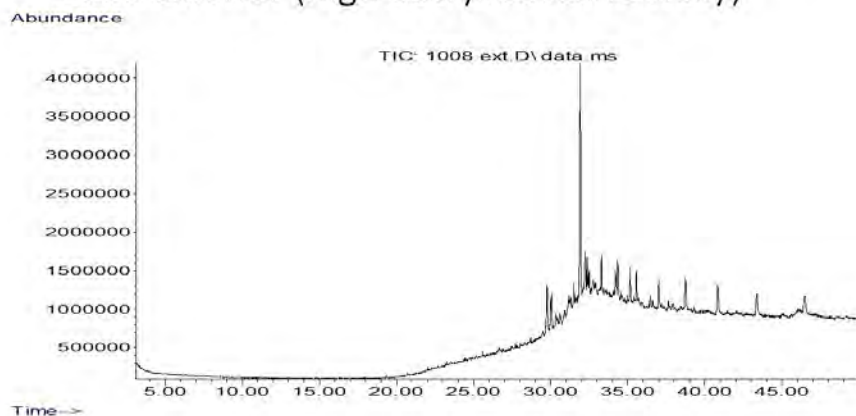
Results for: GCMS with Full Scan

Unique ID: /001008_DISS_GCMS-Scan/01

Results for: GCMS with Full Scan**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\ 001008_ext_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

1008 exterior (high botryococcane waxy)



Data Sheet:

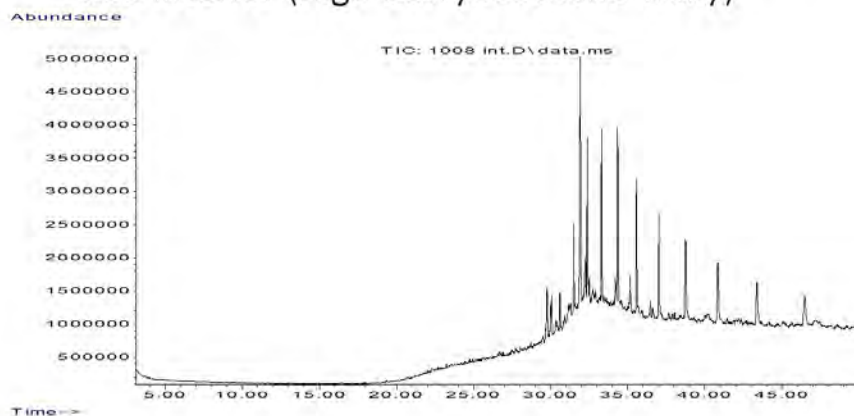
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	25212205			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	381812			Z
Aliph	nC27	30.6080	704156			Z
Aliph	nC28	31.5080	1495473			Z
Aliph	nC29	32.3700	1803520			Z
Aliph	nC30	33.2910	2580568			Z
Aliph	nC31	34.3470	3169844			Z
Aliph	nC32	35.5720	3265718			Z
Aliph	nC33	37.0130	3450837			Z
Aliph	nC34	38.7280	4345525			Z
Aliph	nC35	40.8080	4570395			Z
Aliph	nC36	43.3510	4836089			Z
Aliph	nC37	46.4710	3726337			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** /001008 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS_001008_int_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan

1008 interior (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	30011563			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	563914			Z
Aliph	nC27	30.6080	2427887			Z
Aliph	nC28	31.5080	7786722			Z
Aliph	nC29	32.3700	12095419			Z
Aliph	nC30	33.2910	14884492			Z
Aliph	nC31	34.3470	17859054			Z
Aliph	nC32	35.5720	15842687			Z
Aliph	nC33	37.0130	13765376			Z
Aliph	nC34	38.7280	12826704			Z
Aliph	nC35	40.8080	10591460			Z
Aliph	nC36	43.3510	9538960			Z
Aliph	nC37	46.4710	7874907			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:

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 : /001009

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 10:59:45 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

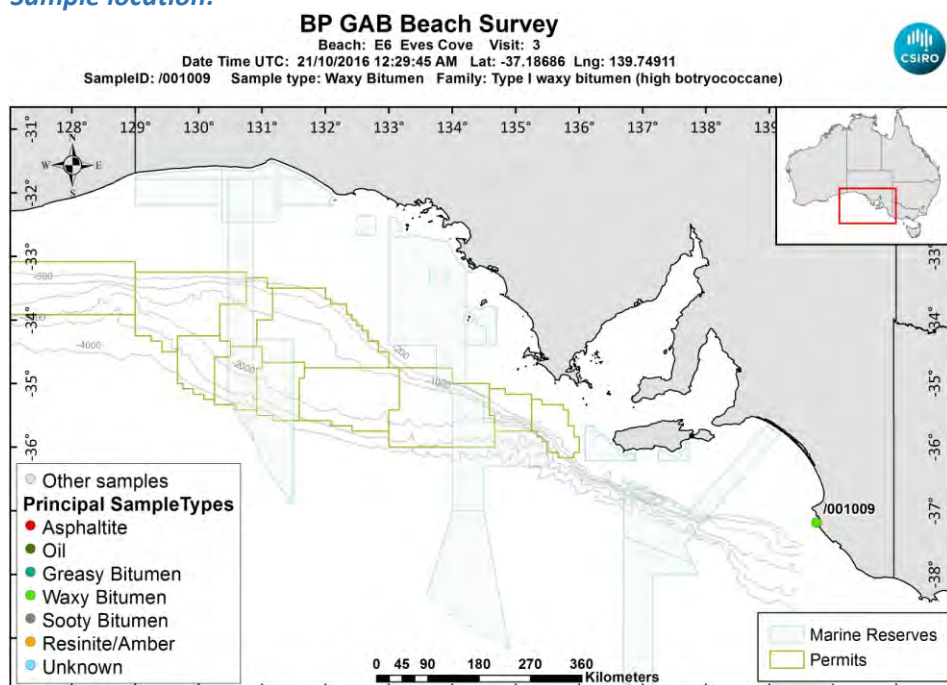
Size (cm): 2.7

Latitude (Y): -37.186863

Weight (gm): 3.07372

Longitude (X): 139.749115

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\ /001009 Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\001009_146A7036.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\001009_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: /001009_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			83.85	percent	Y
Inorg	Hydrogen			8.09325248508947	percent	Y
Inorg	Nitrogen			0.382423907455013	percent	Y
Inorg	Sulphur			3.01660179177201	percent	Y

Results for: GCMS with Full Scan

Unique ID: /001009_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\ 001009_bulk_WholeOil.JPG](#)

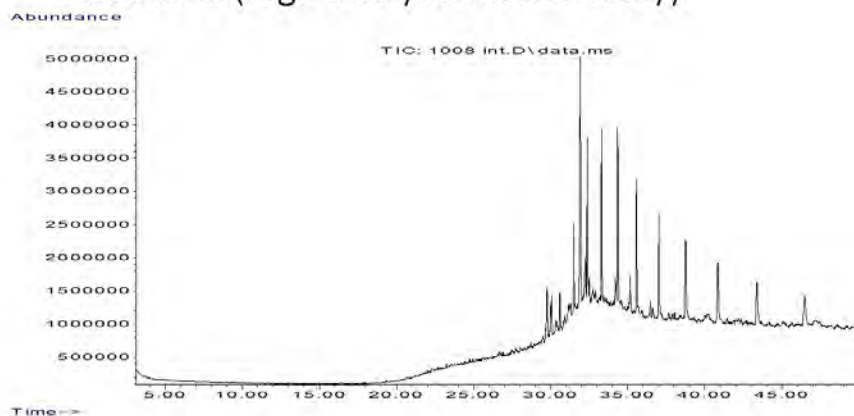
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

1009 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	19183720			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	401364			Z
Aliph	nC25	28.7100	1329141			Z
Aliph	nC26	29.6680	5052895			Z
Aliph	nC27	30.6080	13872268			Z
Aliph	nC28	31.5080	20701370			Z
Aliph	nC29	32.3700	23292253			Z
Aliph	nC30	33.2910	19534143			Z
Aliph	nC31	34.3470	20236476			Z
Aliph	nC32	35.5720	13633427			Z
Aliph	nC33	37.0130	10292305			Z
Aliph	nC34	38.7280	7147010			Z
Aliph	nC35	40.8080	5325998			Z
Aliph	nC36	43.3510	4513149			Z
Aliph	nC37	46.4710	3399184			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:**

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 : /001010

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 11:00:13 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

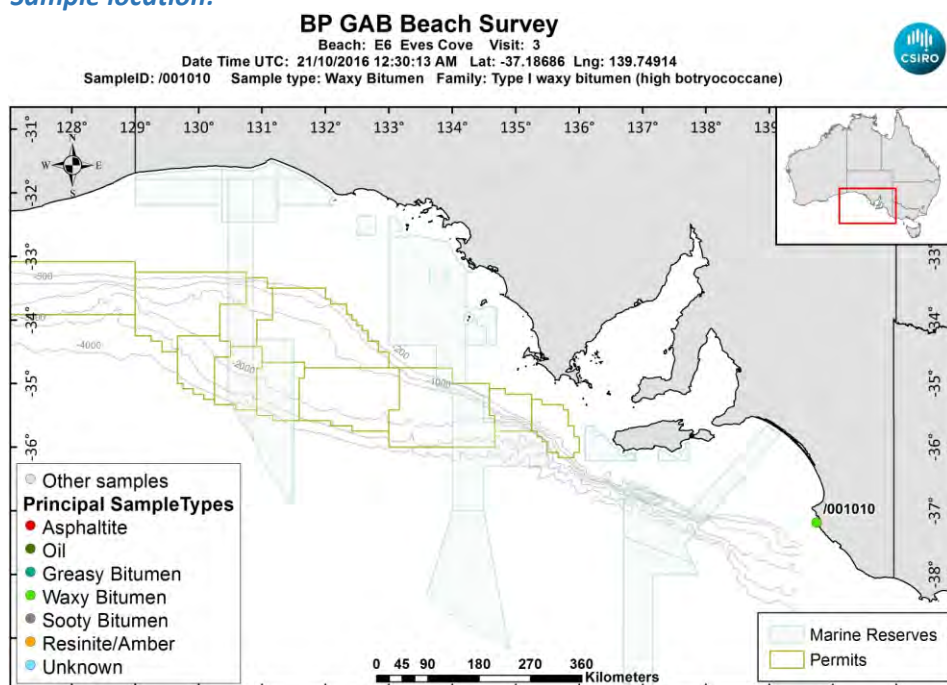
Size (cm): 2.2

Latitude (Y): -37.186857

Weight (gm): 2.5711

Longitude (X): 139.749138

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\ 001010 Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\001010_146A7038.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\001010_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: /001010_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			84.95	percent	Y
Inorg	Hydrogen			5.74455268389662	percent	Y
Inorg	Nitrogen			0.242317909168809	percent	Y
Inorg	Sulphur			0.805011249967565	percent	Y

Results for: GCMS with Full Scan

Unique ID: /001010_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\ 001010_bulk_WholeOil.JPG](#)

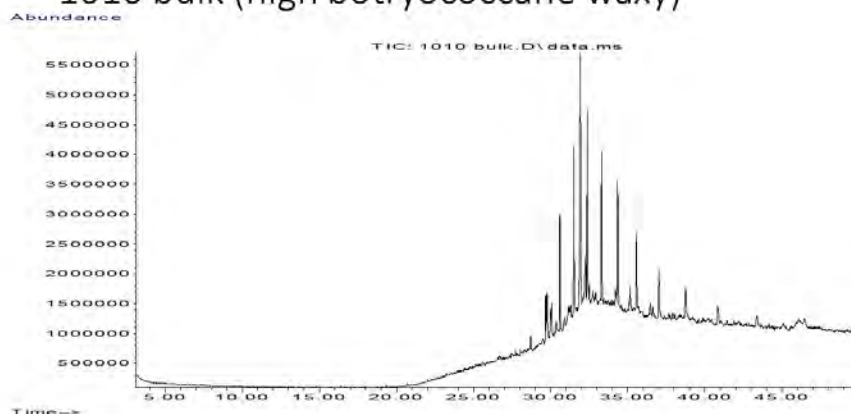
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

1010 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	34346359			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	380792			Z
Aliph	nC25	28.7100	1033945			Z
Aliph	nC26	29.6680	3909202			Z
Aliph	nC27	30.6080	9605912			Z
Aliph	nC28	31.5080	14382273			Z
Aliph	nC29	32.3700	15849525			Z
Aliph	nC30	33.2910	14354831			Z
Aliph	nC31	34.3470	12750918			Z
Aliph	nC32	35.5720	9782406			Z
Aliph	nC33	37.0130	7650413			Z
Aliph	nC34	38.7280	5754037			Z
Aliph	nC35	40.8080	3852536			Z
Aliph	nC36	43.3510	3115534			Z
Aliph	nC37	46.4710	1872977			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:

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 : /001011

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 11:01:23 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

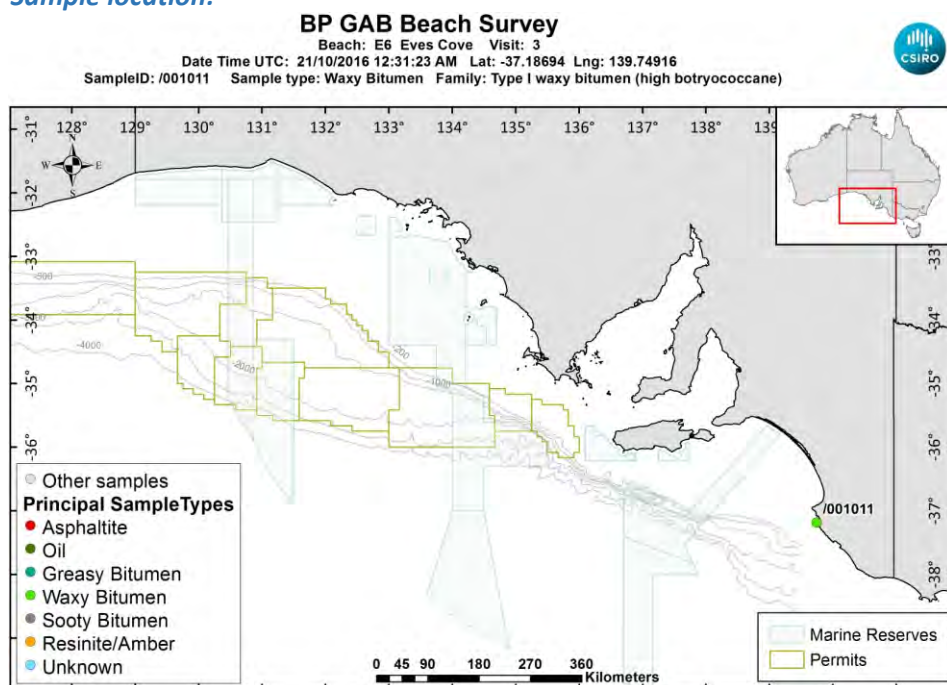
Size (cm): 4

Latitude (Y): -37.186935

Weight (gm): 11.76639

Longitude (X): 139.749155

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\ 001011 Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\001011_146A7040.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\001011_Photo02.JPG](#)

Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: /001011_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			85.43	percent	Y
Inorg	Hydrogen			6.08178210735586	percent	Y
Inorg	Nitrogen			0.211220736932305	percent	Y
Inorg	Sulphur			0.834821928713359	percent	Y

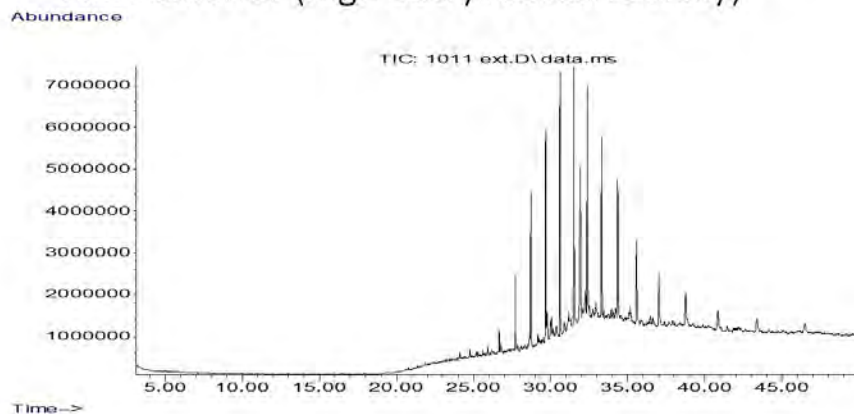
Results for: GCMS with Full Scan

Unique ID: /001011_DISS_GCMS-Scan/01

Results for: GCMS with Full Scan**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB BCH1\GCMS\ 001011_ext WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

1011 exterior (high botryococcane waxy)



Data Sheet:

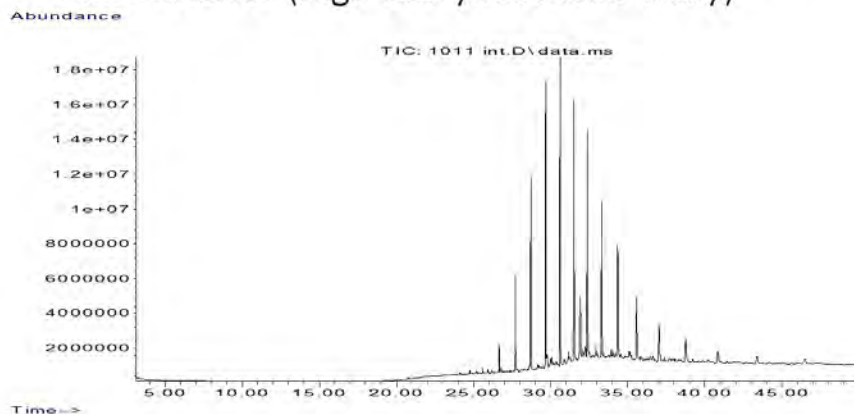
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	27980019			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	2398938			Z
Aliph	nC24	27.7060	8270748			Z
Aliph	nC25	28.7100	16887484			Z
Aliph	nC26	29.6680	21648726			Z
Aliph	nC27	30.6080	30217940			Z
Aliph	nC28	31.5080	29352269			Z
Aliph	nC29	32.3700	28924287			Z
Aliph	nC30	33.2910	23466407			Z
Aliph	nC31	34.3470	20691644			Z
Aliph	nC32	35.5720	15188022			Z
Aliph	nC33	37.0130	10451833			Z
Aliph	nC34	38.7280	8461706			Z
Aliph	nC35	40.8080	5403890			Z
Aliph	nC36	43.3510	4855727			Z
Aliph	nC37	46.4710	3414516			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** /001011 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS_001011_int_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan

1011 interior (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	27663022			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	1254946			Z
Aliph	nC23	26.6620	6719816			Z
Aliph	nC24	27.7060	24059465			Z
Aliph	nC25	28.7100	49398163			Z
Aliph	nC26	29.6680	62478374			Z
Aliph	nC27	30.6080	76404222			Z
Aliph	nC28	31.5080	67580990			Z
Aliph	nC29	32.3700	60797229			Z
Aliph	nC30	33.2910	45453026			Z
Aliph	nC31	34.3470	39056615			Z
Aliph	nC32	35.5720	27050554			Z
Aliph	nC33	37.0130	19152729			Z
Aliph	nC34	38.7280	11971512			Z
Aliph	nC35	40.8080	8430890			Z
Aliph	nC36	43.3510	6234659			Z
Aliph	nC37	46.4710	6030213			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:

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 : COA/000957

Beach E6: Eves Cove Visit: 3

Comments:

Has hole in it

Location: Upper Intertidal

Local Date Time: 21/10/2016 8:32:46 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

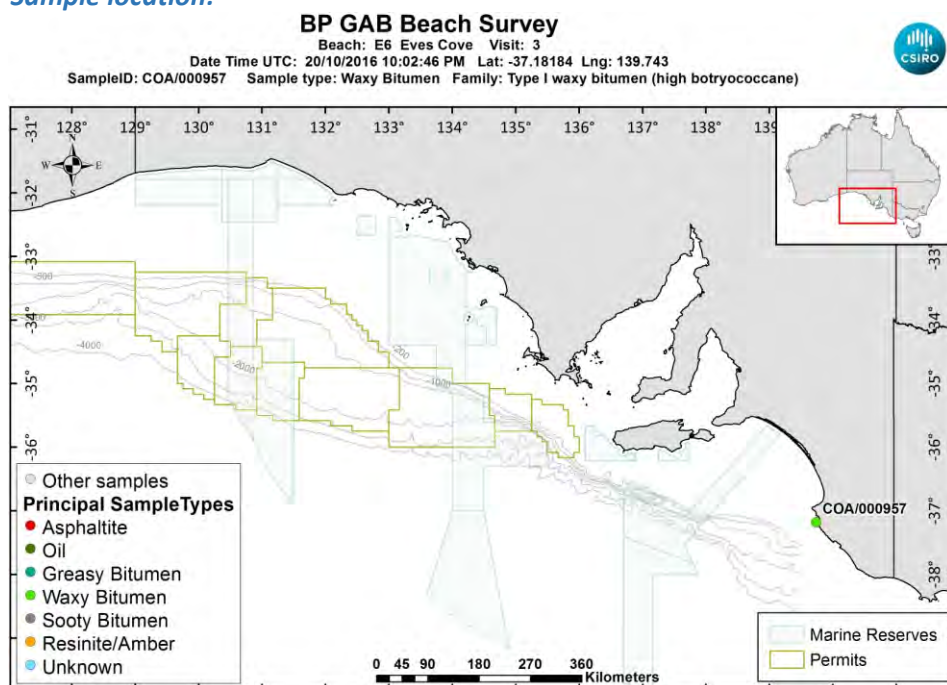
Size (cm): 2.9

Latitude (Y): -37.181837

Weight (gm): 6.08221

Longitude (X): 139.742995

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000957_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000957_146A6933.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000957_Photo02.JPG](#)

Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: COA/000957_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			85.0743898966322	percent	Y
Inorg	Hydrogen			9.87450218687873	percent	Y
Inorg	Nitrogen			0.211695115681234	percent	Y
Inorg	Sulphur			2.28694822049567	percent	Y

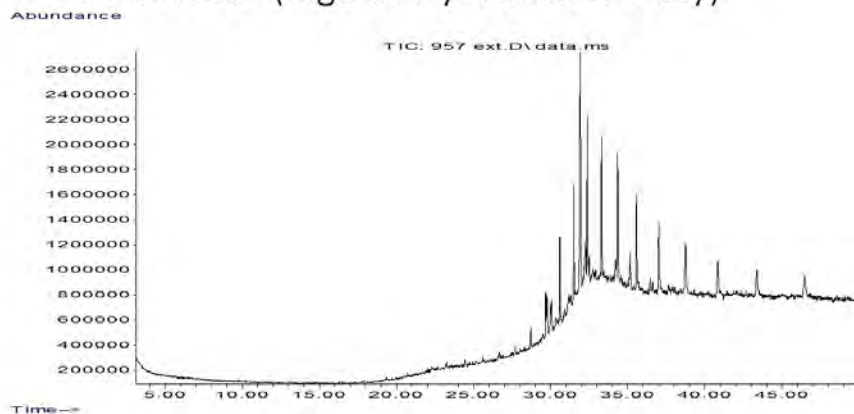
Results for: GCMS with Full Scan

Unique ID: COA/000957_DISS_GCMS-Scan/01

Results for: GCMS with Full Scan**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\COA_000957_ext_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

957 exterior (high botryococcane waxy)



Data Sheet:

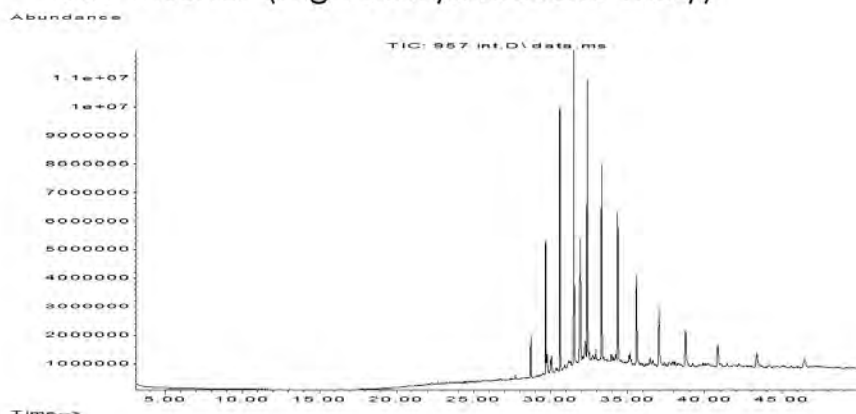
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	15934864			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	351855			Z
Aliph	nC25	28.7100	821020			Z
Aliph	nC26	29.6680	1550078			Z
Aliph	nC27	30.6080	3632688			Z
Aliph	nC28	31.5080	5057854			Z
Aliph	nC29	32.3700	6469656			Z
Aliph	nC30	33.2910	6614432			Z
Aliph	nC31	34.3470	7301100			Z
Aliph	nC32	35.5720	6425911			Z
Aliph	nC33	37.0130	5129104			Z
Aliph	nC34	38.7280	4625169			Z
Aliph	nC35	40.8080	3447579			Z
Aliph	nC36	43.3510	3463764			Z
Aliph	nC37	46.4710	3677328			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** COA/000957 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\COA_000957_int_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan

957 interior (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	34108555			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	741539			Z
Aliph	nC25	28.7100	6497653			Z
Aliph	nC26	29.6680	22586102			Z
Aliph	nC27	30.6080	46159437			Z
Aliph	nC28	31.5080	52462900			Z
Aliph	nC29	32.3700	51073033			Z
Aliph	nC30	33.2910	41261542			Z
Aliph	nC31	34.3470	35048616			Z
Aliph	nC32	35.5720	25922101			Z
Aliph	nC33	37.0130	18798887			Z
Aliph	nC34	38.7280	12676896			Z
Aliph	nC35	40.8080	10605849			Z
Aliph	nC36	43.3510	8040257			Z
Aliph	nC37	46.4710	6357510			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:**

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 : COA/000958

Beach E6: Eves Cove Visit: 3

Comments:

Very brittle

Location: Upper Intertidal

Local Date Time: 21/10/2016 8:35:28 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

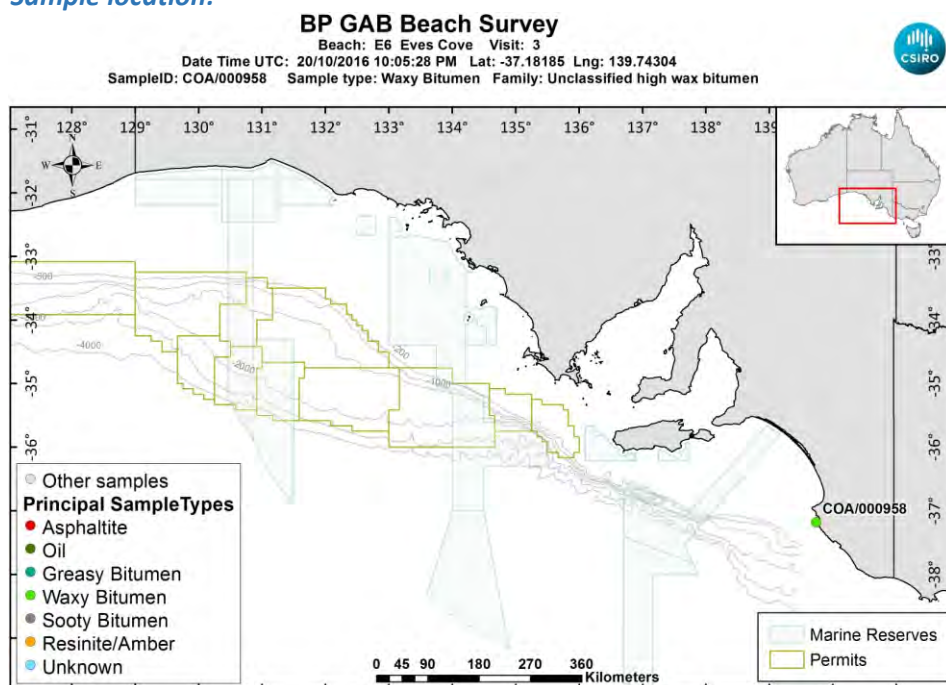
Size (cm): 1.7

Latitude (Y): -37.181853

Weight (gm): 0.67512

Longitude (X): 139.743035

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000958_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000958_146A6935.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000958_Photo02.JPG](#)

Analyses Requested

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

Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 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: COA/000958 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			65.7633531958405	ratio	Y
BiomRatio	% C27 abb 20(R+S)			9.48094428565973	ratio	Y
BiomRatio	% C28 aaa 20R			6.32866229500129	ratio	Y
BiomRatio	% C28 abb 20(R+S)			19.323738814107	ratio	Y
BiomRatio	% C29 aaa 20R			27.9079845091582	ratio	Y
BiomRatio	% C29 abb 20(R+S)			71.1953169002333	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			7.20542271151983E-02	ratio	Y
BiomRatio	25-Nor/C30H			2.62194950820165E-02	ratio	Y
BiomRatio	C19t/C23t			0.357639550924732	ratio	Y
BiomRatio	C22t/C21t			0.045757197034994	ratio	Y
BiomRatio	C22t/C24t			1.90158502731262E-02	ratio	Y
BiomRatio	C23t/C30H			7.04886597620283E-02	ratio	Y
BiomRatio	C24t/C23t			1.25245342694676	ratio	Y
BiomRatio	C24Tet/C23t			4.23783380626058	ratio	Y
BiomRatio	C24Tet/C26t			16.0564963348561	ratio	Y
BiomRatio	C24Tet/C30H			0.298719225297524	ratio	Y
BiomRatio	C26t/C25t			0.402805474012136	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			8.76023296239619E-03	ratio	Y
BiomRatio	C27 Dia/Ster			4.93937149246508E-03	ratio	Y
BiomRatio	C28BNH/C30H			5.03321017457132E-03	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			7.5093065368941	ratio	Y
BiomRatio	C29H/C30H			0.904089537619026	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.356258957410854	ratio	Y
BiomRatio	C30DiaH/C30H			5.47257349107458E-02	ratio	Y
BiomRatio	C30Ts/C30H			6.92150397838246E-02	ratio	Y
BiomRatio	C35 Homohopane Index			8.69068634028088E-03	ratio	Y
BiomRatio	C35HS/C34HS			1.12477127567754	ratio	Y
BiomRatio	Gam/C30H			8.49479226989359E-02	ratio	Y
BiomRatio	Gam/C31HR			0.233086401006529	ratio	Y
BiomRatio	Ole/C30H			1.35746069743936E-02	ratio	Y
BiomRatio	Sterane/hopane			0.344420809574721	ratio	Y
BiomRatio	Steranes/Terpanes			0.305998976646984	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.125561965431219	ratio	Y

Results for: Elemental Analyser

Unique ID: COA/000958_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:**

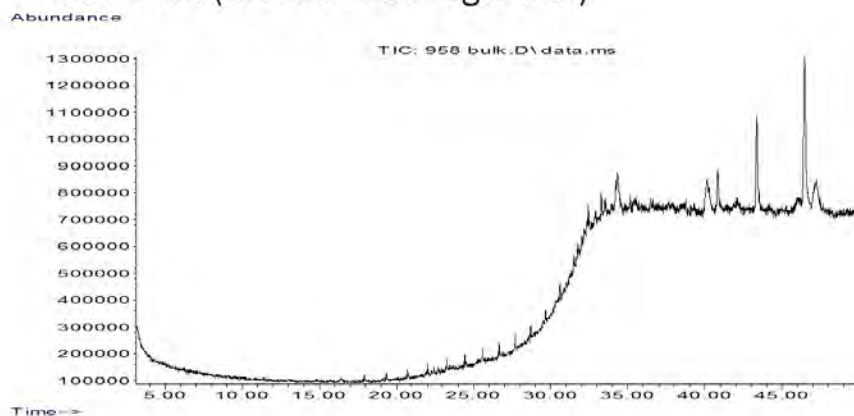
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			80.2901047015672	percent	Y
Inorg	Hydrogen			6.65937375745527	percent	Y
Inorg	Nitrogen			0.111294173093402	percent	Y
Inorg	Sulphur			2.34125446190493	percent	Y

Results for: GCMS with Full Scan**Unique ID:** COA/000958_DISS_GCMS-Scan/03**Instrument / Type:** GCMS with Full Scan Run: 3**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\COA_000958_bulk_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Bulk

Results for: GCMS with Full Scan

958 bulk (unclassified high wax)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280				U
Aliph	nC35	40.8080	1796562			Z
Aliph	nC36	43.3510	5947723			Z
Aliph	nC37	46.4710	10740301			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:**

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 : COA/000959

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 8:41:54 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

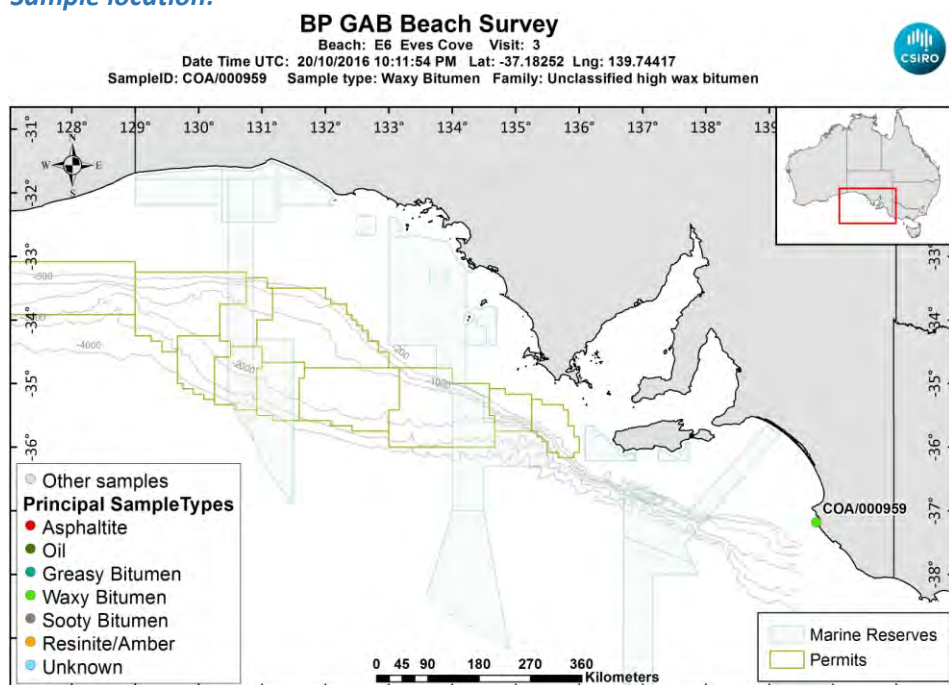
Size (cm): 2.1

Latitude (Y): -37.182523

Weight (gm): 0.95612

Longitude (X): 139.744170

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000959_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000959_146A6937.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000959_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: COA/000959_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			80.2041652217406	percent	Y
Inorg	Hydrogen			8.32519662027833	percent	Y
Inorg	Nitrogen			0.182615938303342	percent	Y
Inorg	Sulphur			2.96013031401563	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000959 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\COA_000959_bulk_WholeOil.JPG](#)

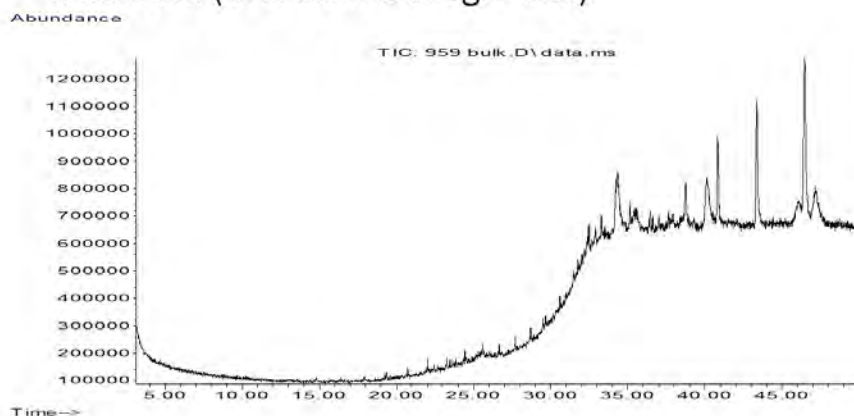
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

959 bulk (unclassified high wax)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280	1495189			Z
Aliph	nC35	40.8080	3405921			Z
Aliph	nC36	43.3510	6144967			Z
Aliph	nC37	46.4710	10078616			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:**

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 : **COA/000960**

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 8:46:39 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

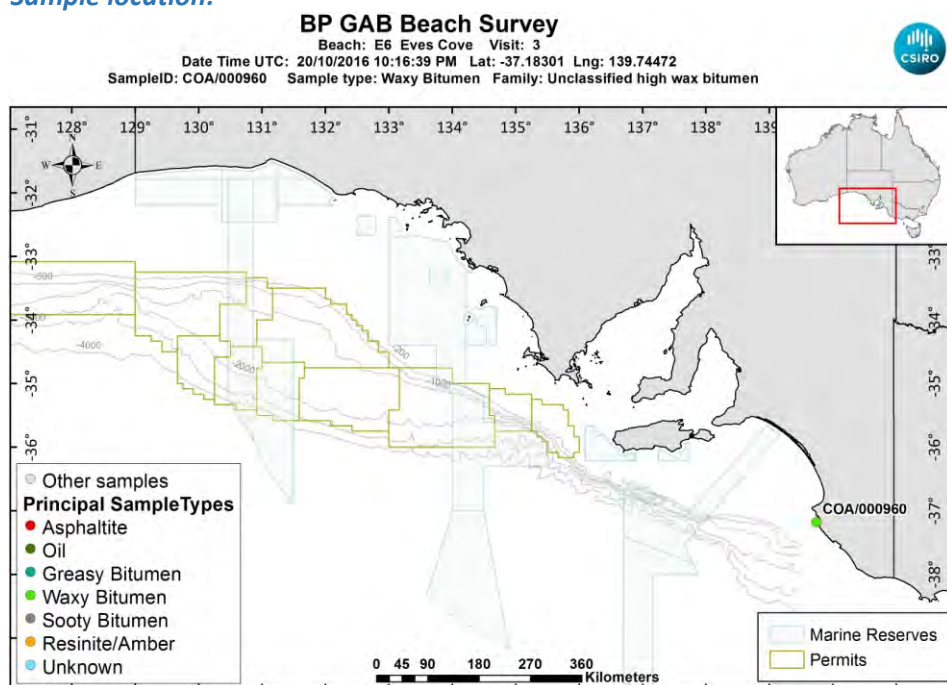
Size (cm): 1.9

Latitude (Y): -37.183013

Weight (gm): 0.66151

Longitude (X): 139.744723

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000960_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000960_146A6938.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000960_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: COA/000960_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			82.7081545515172	percent	Y
Inorg	Hydrogen			10.6755371769384	percent	Y
Inorg	Nitrogen			0.203458440445587	percent	Y
Inorg	Sulphur			3.86744853925657	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000960 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\COA_000960_bulk_WholeOil.JPG](#)

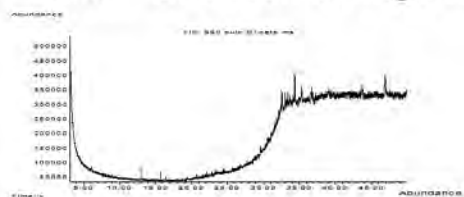
Preparation: Dissolved in solvent

Method ID/s:

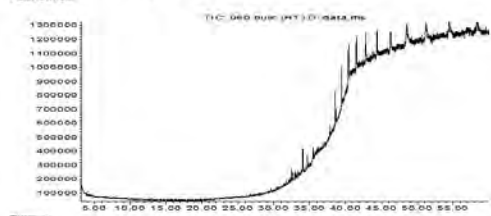
Sample Volume: Volume Units: Extract Volume: Dilution Factor:
Comment: Bulk (splitless)

Results for: GCMS with Full Scan

960 – Unclassified high wax (Splitless)



High temp GC-MS run



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane					U
Aliph	nC10					U
Aliph	nC11					U
Aliph	nC12					U
Aliph	nC13					U
Aliph	nC14					U
Aliph	nC15					U
Aliph	nC16	17.9470				U
Aliph	nC17	19.3870				U
Aliph	nC18	20.7560				U
Aliph	nC19	22.0580				U
Aliph	nC20	23.3040				U
Aliph	nC21	24.4890				U
Aliph	nC22	25.6290				U
Aliph	nC23	26.7230				U
Aliph	nC24	27.7690				U
Aliph	nC25	28.7780				U
Aliph	nC26	29.7510				U
Aliph	nC27	30.6850				U
Aliph	nC28	31.5900				U
Aliph	nC29	32.4650				U
Aliph	nC30	33.4020				U
Aliph	nC31	34.4700				U
Aliph	nC32	35.7230				U
Aliph	nC33	37.1970				U
Aliph	nC34	38.9660				U
Aliph	nC35	41.0780				U
Aliph	nC36	43.6950	620238			Z
Aliph	nC37	46.8640	1344390			Z
Aliph	nC8					U
Aliph	nC9					U
Aliph	Norpristane	18.6080				U
Aliph	Phytane	20.7570				U
Aliph	Pristane	19.4110				U

Results for: GCMS with Full Scan**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 : COA/000961

Beach E6: Eves Cove Visit: 3

Comments:

Location: Shore Upper

Local Date Time: 21/10/2016 8:52:43 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

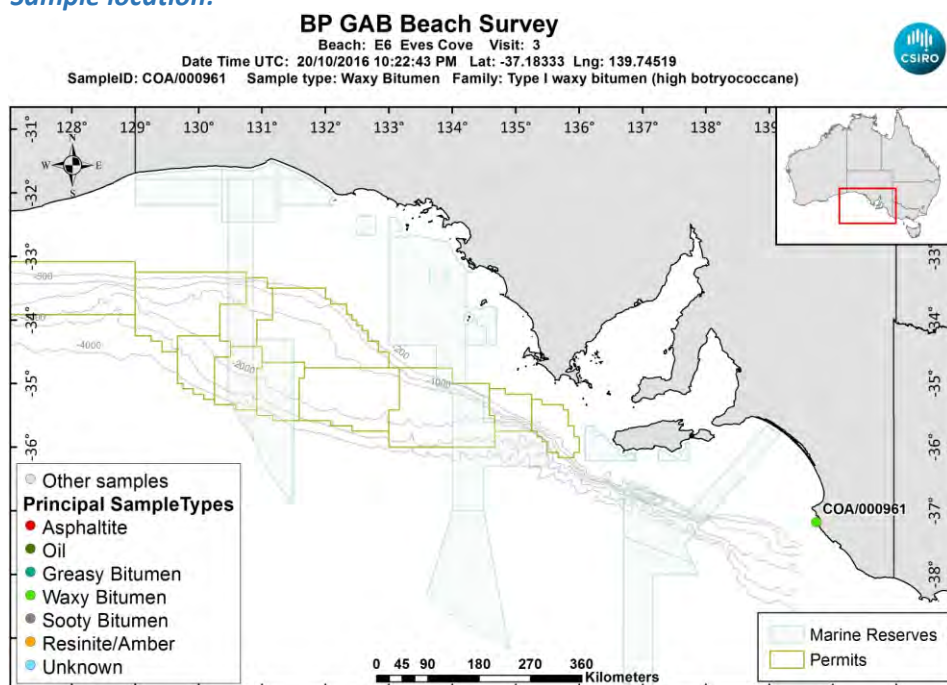
Size (cm): 2.3

Latitude (Y): -37.183330

Weight (gm): 3.25621

Longitude (X): 139.745192

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000961_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000961_146A6940.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000961_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: COA/000961_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			85.9664858952984	percent	Y
Inorg	Hydrogen			9.32731888667992	percent	Y
Inorg	Nitrogen			0.213629562982005	percent	Y
Inorg	Sulphur			1.99457183765158	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000961 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\COA_000961_bulk_WholeOil.JPG](#)

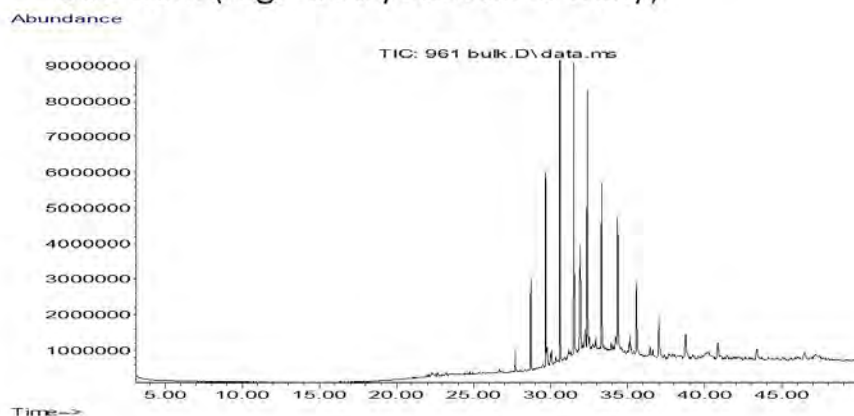
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

961 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	24542298			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	409823			Z
Aliph	nC24	27.7060	2759697			Z
Aliph	nC25	28.7100	12351532			Z
Aliph	nC26	29.6680	26862784			Z
Aliph	nC27	30.6080	42673076			Z
Aliph	nC28	31.5080	42145571			Z
Aliph	nC29	32.3700	37899746			Z
Aliph	nC30	33.2910	27931079			Z
Aliph	nC31	34.3470	24745093			Z
Aliph	nC32	35.5720	16249650			Z
Aliph	nC33	37.0130	11258529			Z
Aliph	nC34	38.7280	7081911			Z
Aliph	nC35	40.8080	5582328			Z
Aliph	nC36	43.3510	4577050			Z
Aliph	nC37	46.4710	3493036			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:**

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 : COA/000962

Beach E6: Eves Cove Visit: 3

Comments:

On rocks at segment end

Location: Upper Intertidal

Local Date Time: 21/10/2016 8:55:59 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

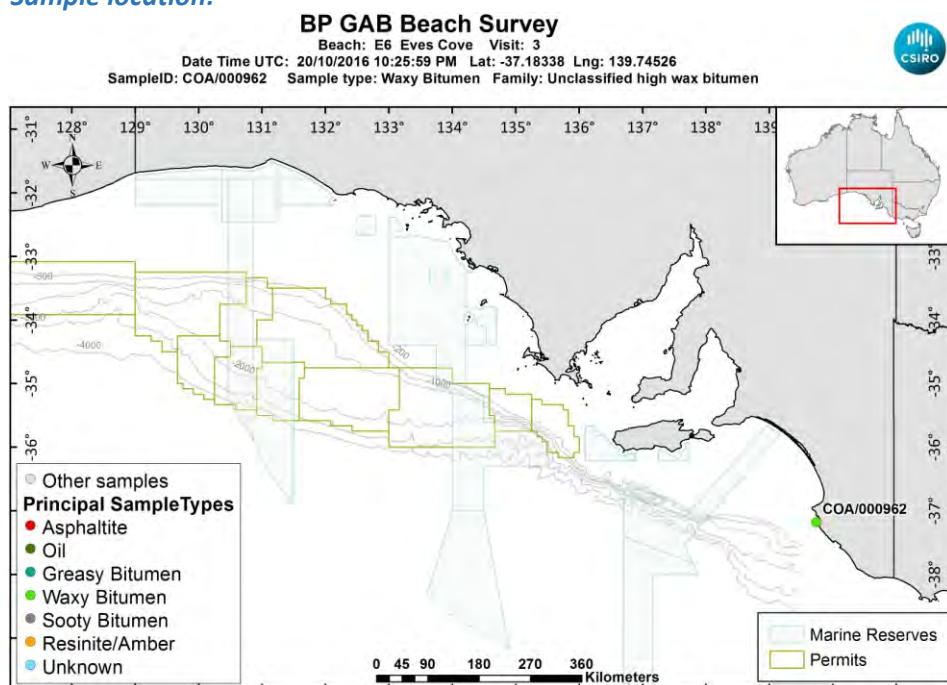
Size (cm): 2.2

Latitude (Y): -37.183385

Weight (gm): 0.8377

Longitude (X): 139.745262

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000962_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000962_146A6942.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000962_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: **COA/000962_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			78.4077724241414	percent	Y
Inorg	Hydrogen			9.99928429423459	percent	Y
Inorg	Nitrogen			0.121961953727506	percent	Y
Inorg	Sulphur			3.02721661211901	percent	Y

Results for: GCMS with Full Scan

Unique ID: **COA/000962_DISS GCMS-Scan/03**

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

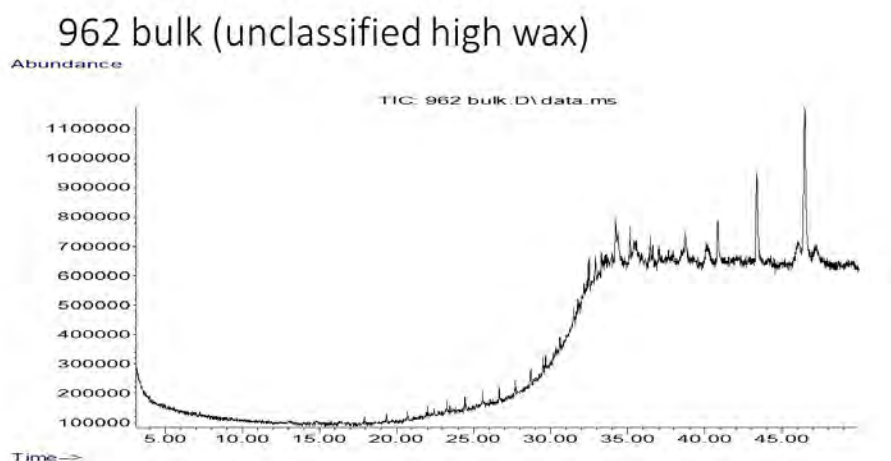
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\COA_000962_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280	917518			Z
Aliph	nC35	40.8080	1564508			Z
Aliph	nC36	43.3510	4347002			Z
Aliph	nC37	46.4710	8265999			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:

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 : **COA/000963**

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:03:14 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

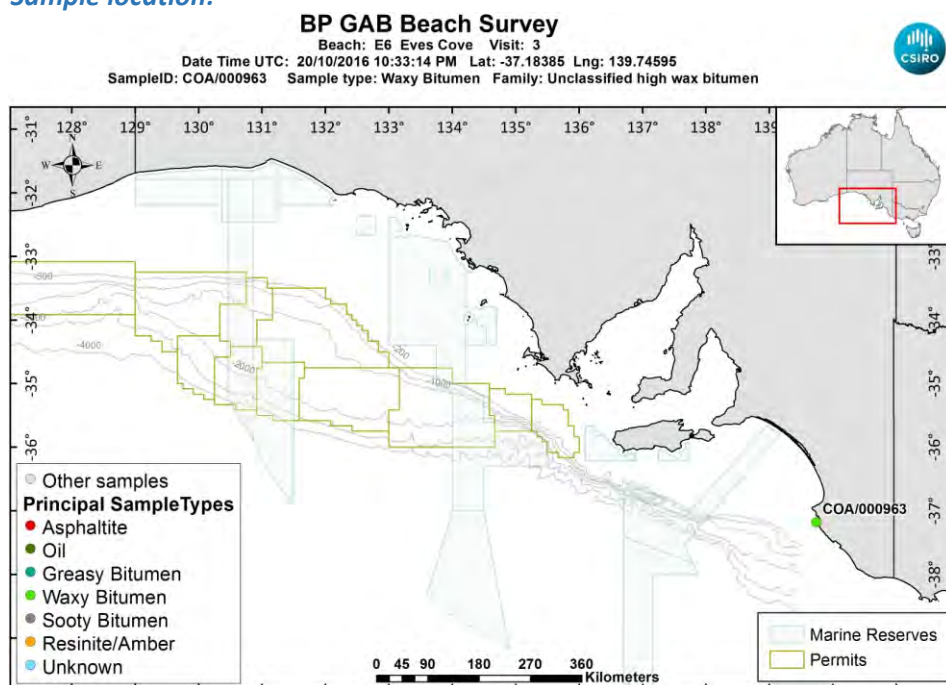
Size (cm): 2.1

Latitude (Y): -37.183848

Weight (gm): 1.2005

Longitude (X): 139.745952

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000963_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000963_146A6948.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000963_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: COA/000963_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			82.9907622540847	percent	Y
Inorg	Hydrogen			11.2297407554672	percent	Y
Inorg	Nitrogen			0.101449014567267	percent	Y
Inorg	Sulphur			3.14210093251563	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000963 DISS GCMS-Scan/03

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

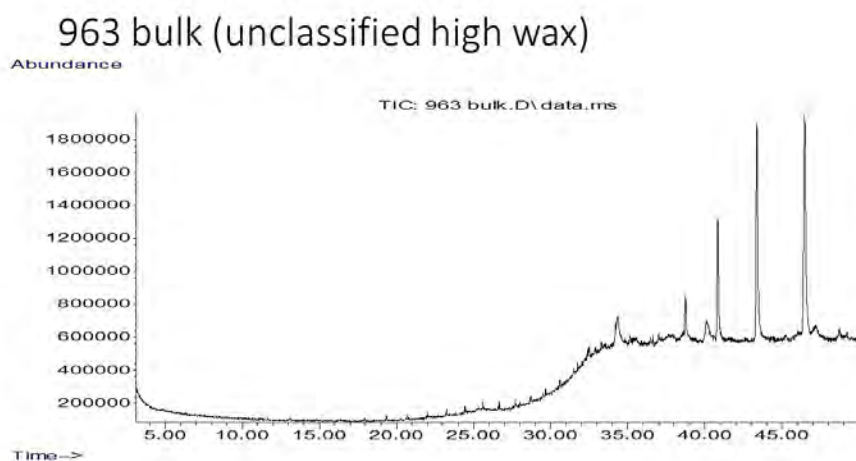
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\COA_000963_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280	2654182			Z
Aliph	nC35	40.8080	9161291			Z
Aliph	nC36	43.3510	17878427			Z
Aliph	nC37	46.4710	21319998			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:**

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 : COA/000964

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:04:32 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

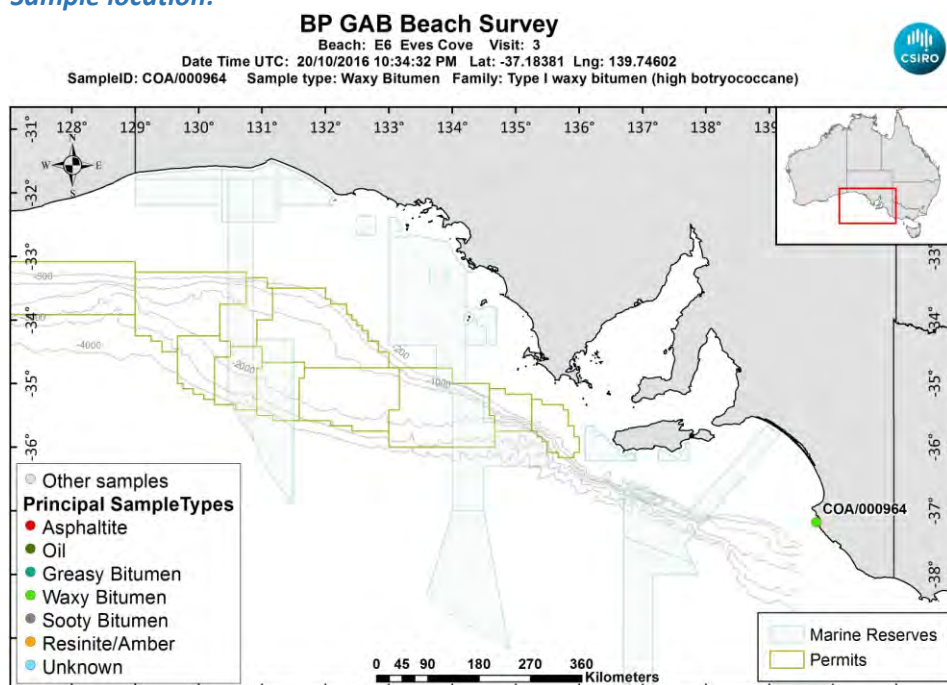
Size (cm): 2.5

Latitude (Y): -37.183813

Weight (gm): 1.90525

Longitude (X): 139.746017

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000964_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000964_146A6950.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000964_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: COA/000964_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			87.4439030343448	percent	Y
Inorg	Hydrogen			8.32962703777336	percent	Y
Inorg	Nitrogen			0.263043359040274	percent	Y
Inorg	Sulphur			1.73106360378612	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000964 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\COA_000964_bulk_WholeOil.JPG](#)

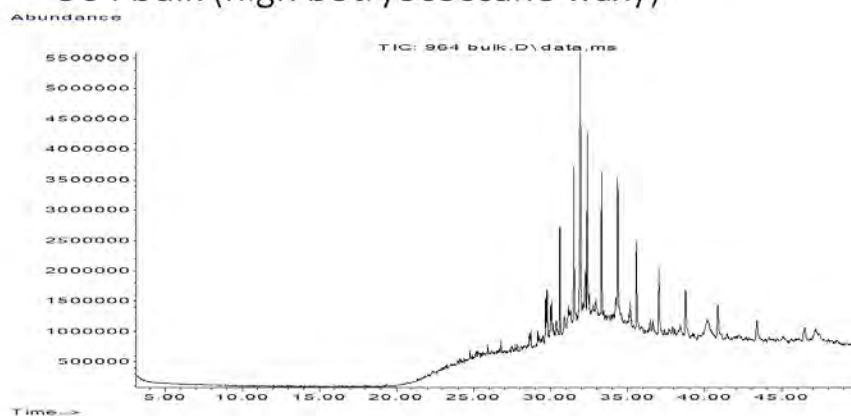
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

964 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	36058629			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	387526			Z
Aliph	nC25	28.7100	1401271			Z
Aliph	nC26	29.6680	3115255			Z
Aliph	nC27	30.6080	8822152			Z
Aliph	nC28	31.5080	13757602			Z
Aliph	nC29	32.3700	16692763			Z
Aliph	nC30	33.2910	13728474			Z
Aliph	nC31	34.3470	16360570			Z
Aliph	nC32	35.5720	11798073			Z
Aliph	nC33	37.0130	10179382			Z
Aliph	nC34	38.7280	9089578			Z
Aliph	nC35	40.8080	6850860			Z
Aliph	nC36	43.3510	5814098			Z
Aliph	nC37	46.4710	4224165			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:**

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 : COA/000965

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:06:21 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

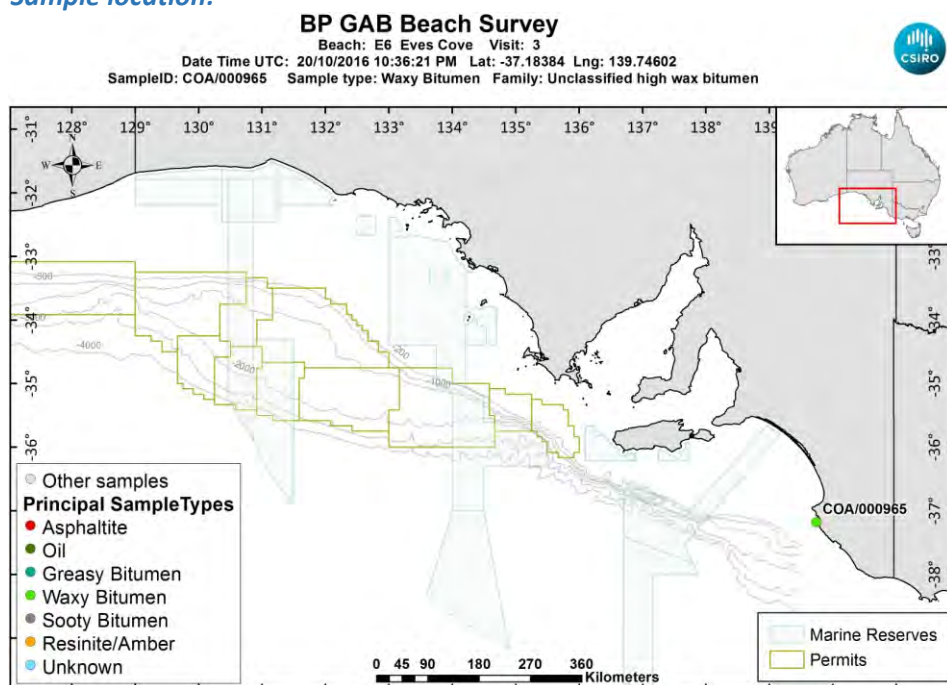
Size (cm): 2.1

Latitude (Y): -37.183842

Weight (gm): 0.9573

Longitude (X): 139.746018

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000965_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000965_146A6952.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000965_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: **COA/000965_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			77.655448216072	percent	Y
Inorg	Hydrogen			9.84558369781312	percent	Y
Inorg	Nitrogen			0.17	percent	Y
Inorg	Sulphur			3.32578490435085	percent	Y

Results for: GCMS with Full Scan

Unique ID: **COA/000965 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\COA_000965_bulk_WholeOil.JPG](#)

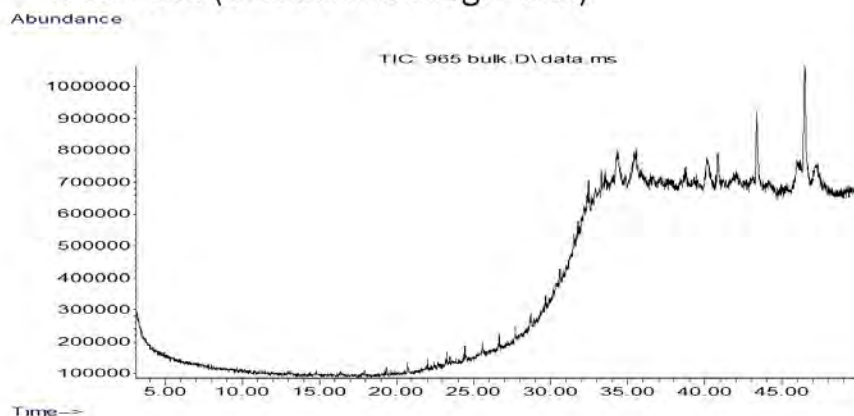
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

965 bulk (unclassified high wax)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280				U
Aliph	nC35	40.8080	1239819			Z
Aliph	nC36	43.3510	3419628			Z
Aliph	nC37	46.4710	5685072			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:

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 : COA/000966

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:24:42 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

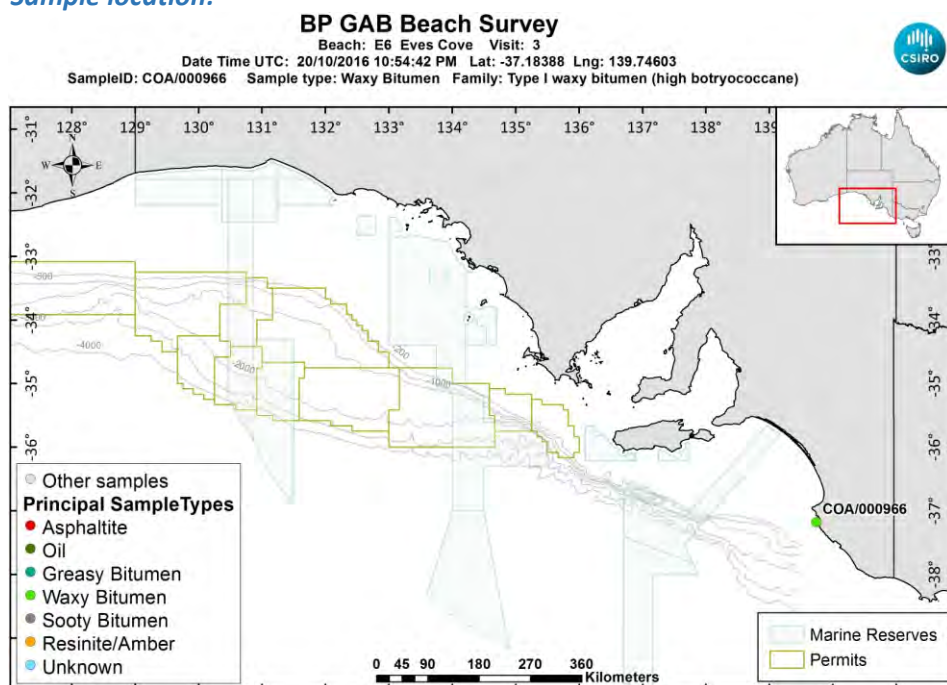
Size (cm): 2.7

Latitude (Y): -37.183877

Weight (gm): 2.04213

Longitude (X): 139.746033

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000966_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000966_146A6954.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000966_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: COA/000966_SPE_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

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

Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			86.2349956652217	percent	Y
Inorg	Hydrogen			6.43721669980119	percent	Y
Inorg	Nitrogen			0.16	percent	Y
Inorg	Sulphur			1.07466643488427	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000966 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\COA_000966_bulk_WholeOil.JPG](#)

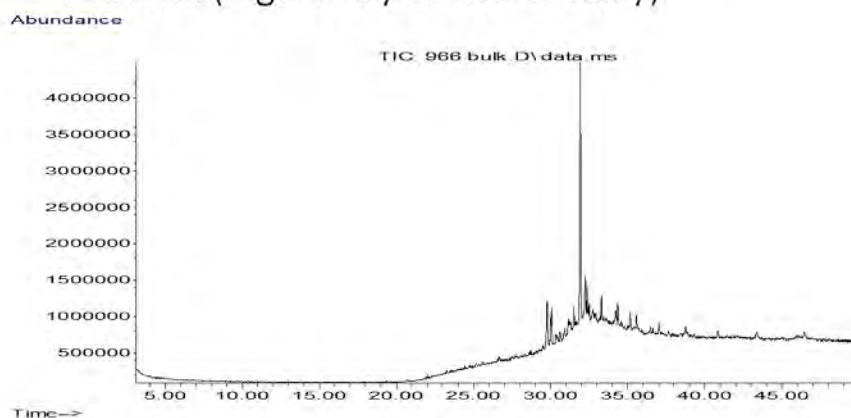
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

966 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	29430802			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	781923			Z
Aliph	nC28	31.5080	1551696			Z
Aliph	nC29	32.3700	1684235			Z
Aliph	nC30	33.2910	2009931			Z
Aliph	nC31	34.3470	1912247			Z
Aliph	nC32	35.5720	1813781			Z
Aliph	nC33	37.0130	1479821			Z
Aliph	nC34	38.7280	1545480			Z
Aliph	nC35	40.8080	1336353			Z
Aliph	nC36	43.3510	1711366			Z
Aliph	nC37	46.4710	1415306			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:**

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 : COA/000967

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:25:06 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

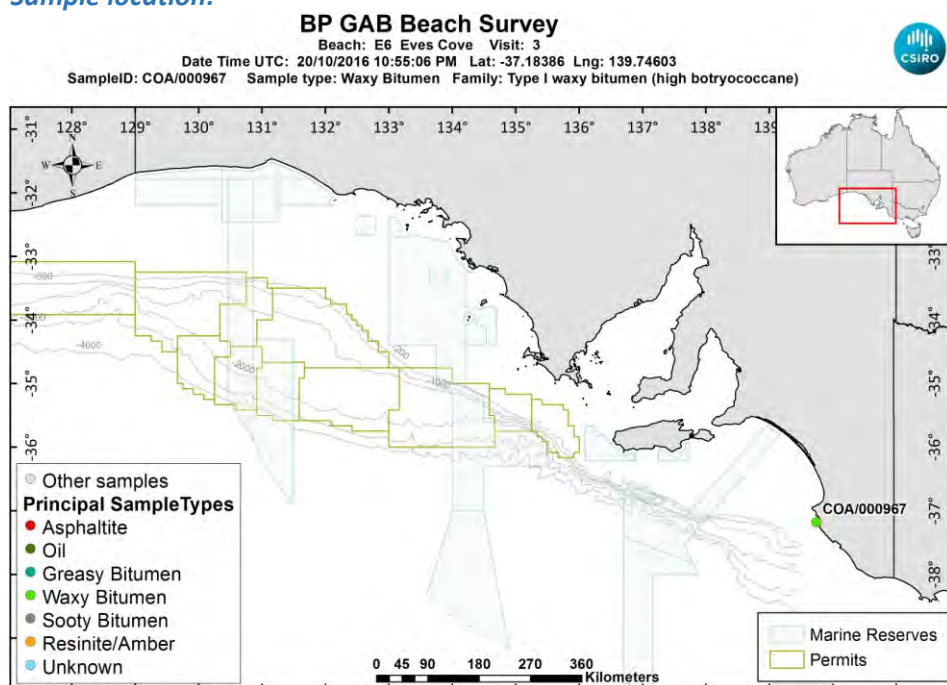
Size (cm): 2.4

Latitude (Y): -37.183863

Weight (gm): 2.05178

Longitude (X): 139.746028

Sample location:



LinkedFiles\GAB_BCH1\SampleLocations\COA_000967_Location.jpg

Sample - field image:



LinkedFiles\GAB_BCH1\Samples\COA_000967_146A6955.JPG

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000967_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: COA/000967_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			84.5991930643548	percent	Y
Inorg	Hydrogen			7.62297574552684	percent	Y
Inorg	Nitrogen			0.21	percent	Y
Inorg	Sulphur			1.46083929646965	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000967 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\COA_000967_bulk_WholeOil.JPG](#)

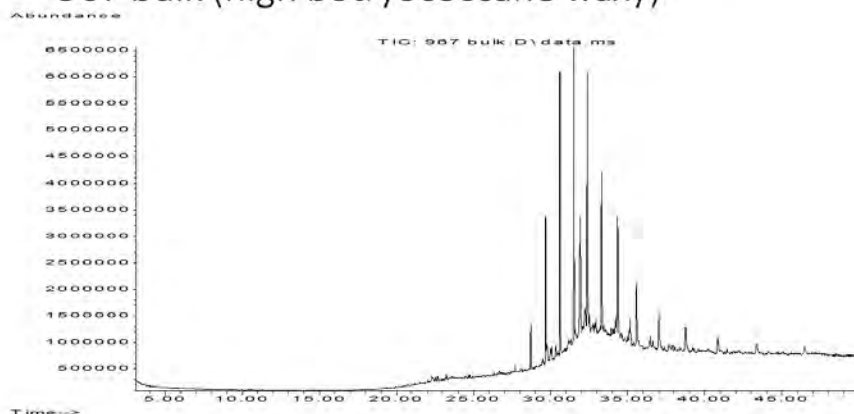
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

967 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retention Time:	Target Response:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	18641925			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	544042			Z
Aliph	nC25	28.7100	4140391			Z
Aliph	nC26	29.6680	13407633			Z
Aliph	nC27	30.6080	25986624			Z
Aliph	nC28	31.5080	28158895			Z
Aliph	nC29	32.3700	25171768			Z
Aliph	nC30	33.2910	18480061			Z
Aliph	nC31	34.3470	15312343			Z
Aliph	nC32	35.5720	10316306			Z
Aliph	nC33	37.0130	7396477			Z
Aliph	nC34	38.7280	5158000			Z
Aliph	nC35	40.8080	4284793			Z
Aliph	nC36	43.3510	3765381			Z
Aliph	nC37	46.4710	2247977			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:**

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 : **COA/000968**

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:25:43 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

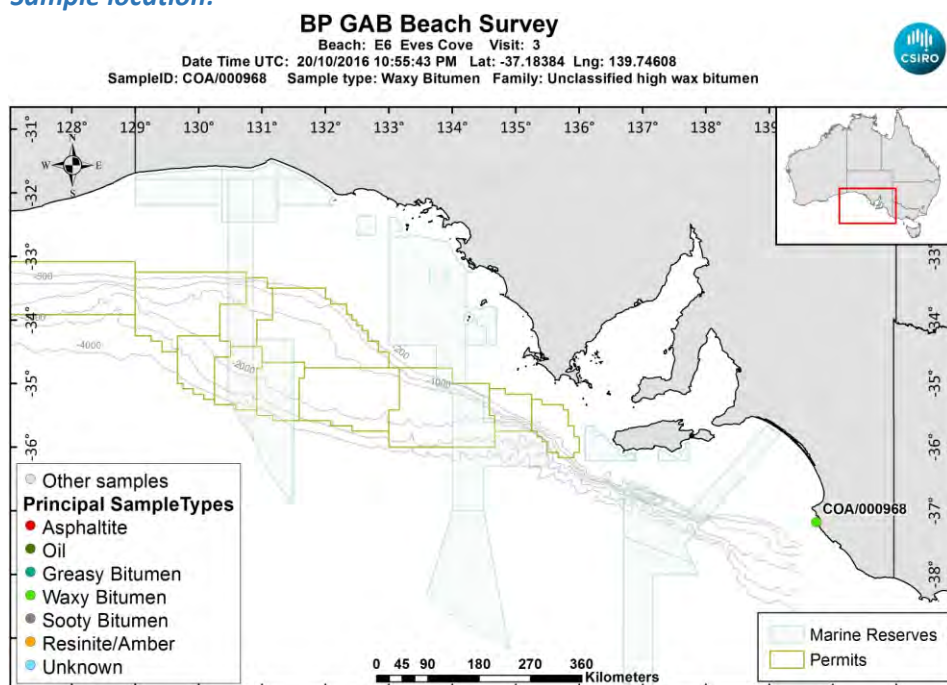
Size (cm): 1.6

Latitude (Y): -37.183843

Weight (gm): 0.9931

Longitude (X): 139.746080

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000968_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000968_146A6956.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000968_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: **COA/000968_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			84.4126895631877	percent	Y
Inorg	Hydrogen			8.25824254473161	percent	Y
Inorg	Nitrogen			0.14	percent	Y
Inorg	Sulphur			2.85422364412287	percent	Y

Results for: GCMS with Full Scan

Unique ID: **COA/000968_DISS GCMS-Scan/03**

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

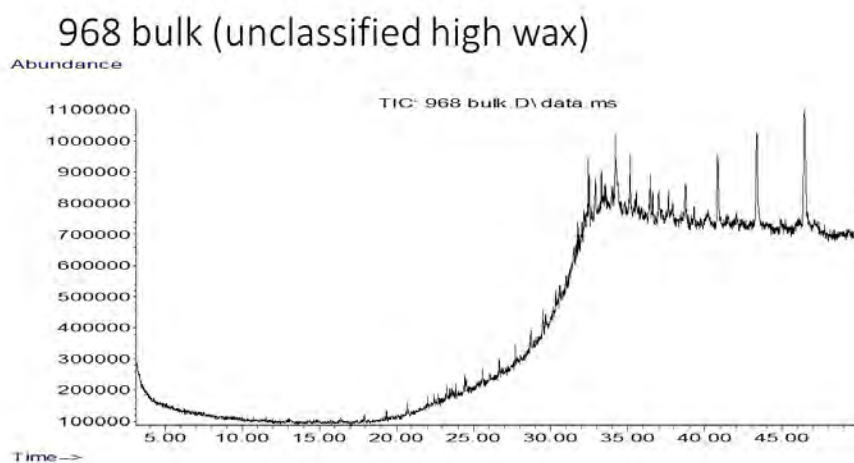
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\COA_000968_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720	515157			Z
Aliph	nC33	37.0130	697956			Z
Aliph	nC34	38.7280	1491996			Z
Aliph	nC35	40.8080	2511098			Z
Aliph	nC36	43.3510	3766432			Z
Aliph	nC37	46.4710	6115865			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:**

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 : COA/000969

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:27:10 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

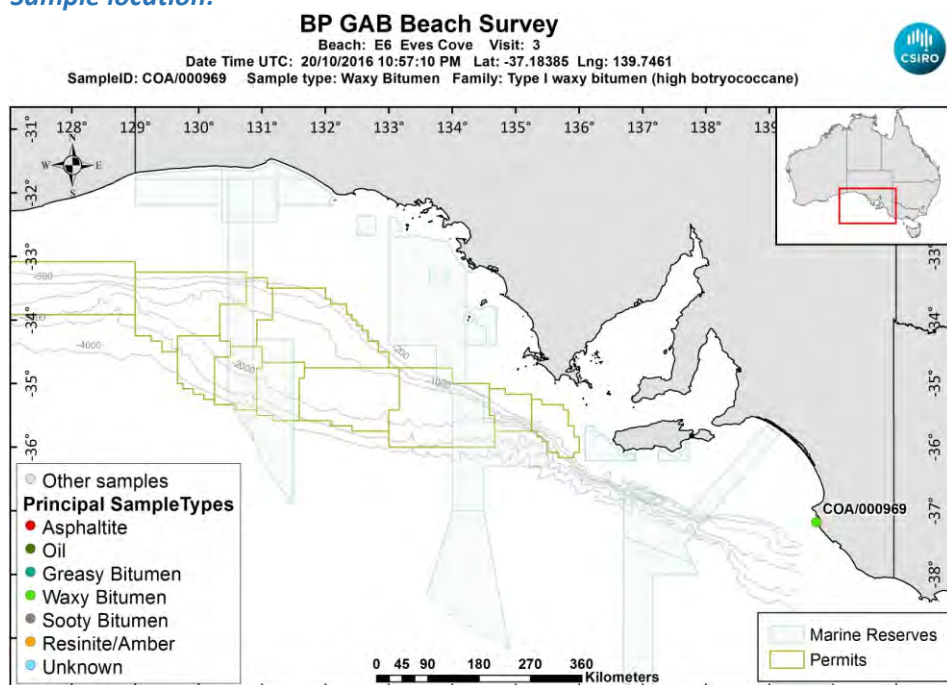
Size (cm): 2

Latitude (Y): -37.183848

Weight (gm): 1.75863

Longitude (X): 139.746100

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000969_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000969_146A6958.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000969_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: COA/000969_SPE_ELEM-AN/01

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

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

Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			86.3167090363454	percent	Y
Inorg	Hydrogen			8.1141	percent	Y
Inorg	Nitrogen			0.22	percent	Y
Inorg	Sulphur			1.45484918200542	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000969 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\COA_000969_bulk_WholeOil.JPG](#)

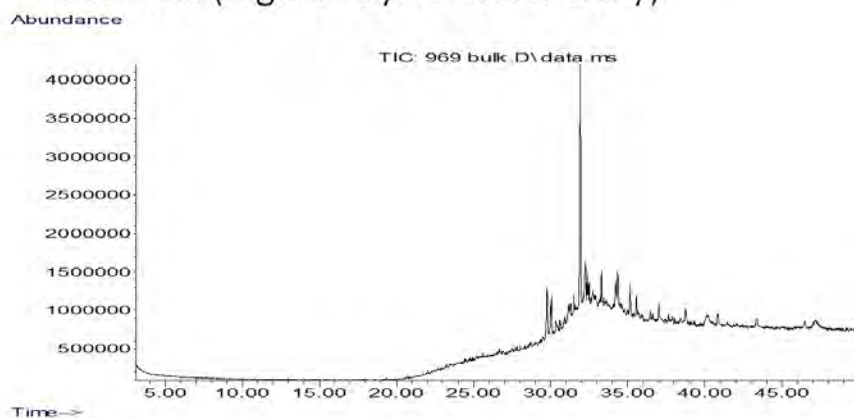
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

969 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	26442906			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	475390			Z
Aliph	nC28	31.5080	1542202			Z
Aliph	nC29	32.3700	1535172			Z
Aliph	nC30	33.2910	2176679			Z
Aliph	nC31	34.3470	3865480			Z
Aliph	nC32	35.5720	2334167			Z
Aliph	nC33	37.0130	2111612			Z
Aliph	nC34	38.7280	1930507			Z
Aliph	nC35	40.8080	1742868			Z
Aliph	nC36	43.3510	1470789			Z
Aliph	nC37	46.4710	1172952			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:**

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 : COA/000970

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:28:50 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

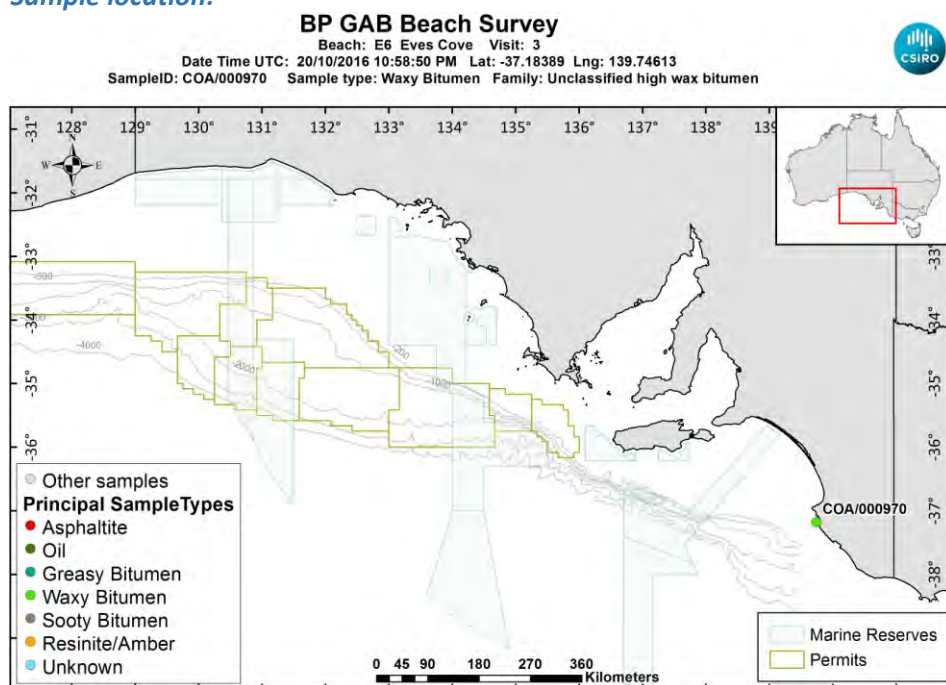
Size (cm): 2

Latitude (Y): -37.183890

Weight (gm): 2.31503

Longitude (X): 139.746133

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000970_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000970_146A6959.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000970_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: COA/000970_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			78.3167722574191	percent	Y
Inorg	Hydrogen			6.79649602385686	percent	Y
Inorg	Nitrogen			0.14	percent	Y
Inorg	Sulphur			2.64174494284962	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000970_DISS GCMS-Scan/03

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

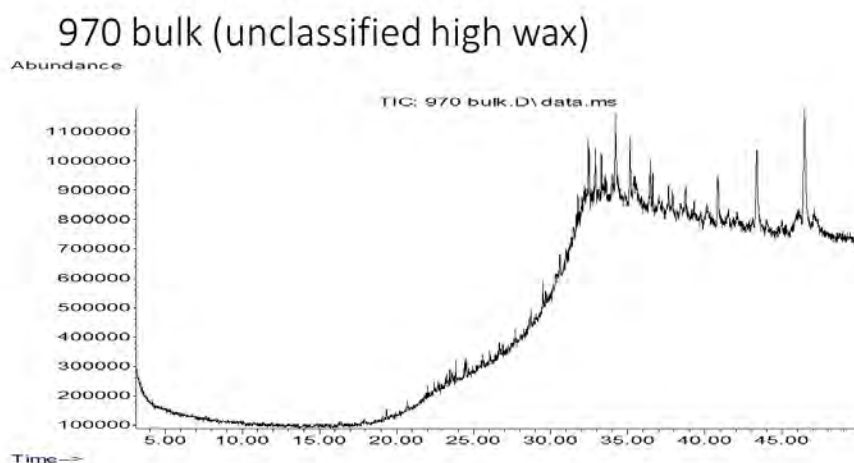
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\COA_000970_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130	503632			Z
Aliph	nC34	38.7280	947548			Z
Aliph	nC35	40.8080	1736349			Z
Aliph	nC36	43.3510	3856776			Z
Aliph	nC37	46.4710	6005651			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:**

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 : COA/000971

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:30:36 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

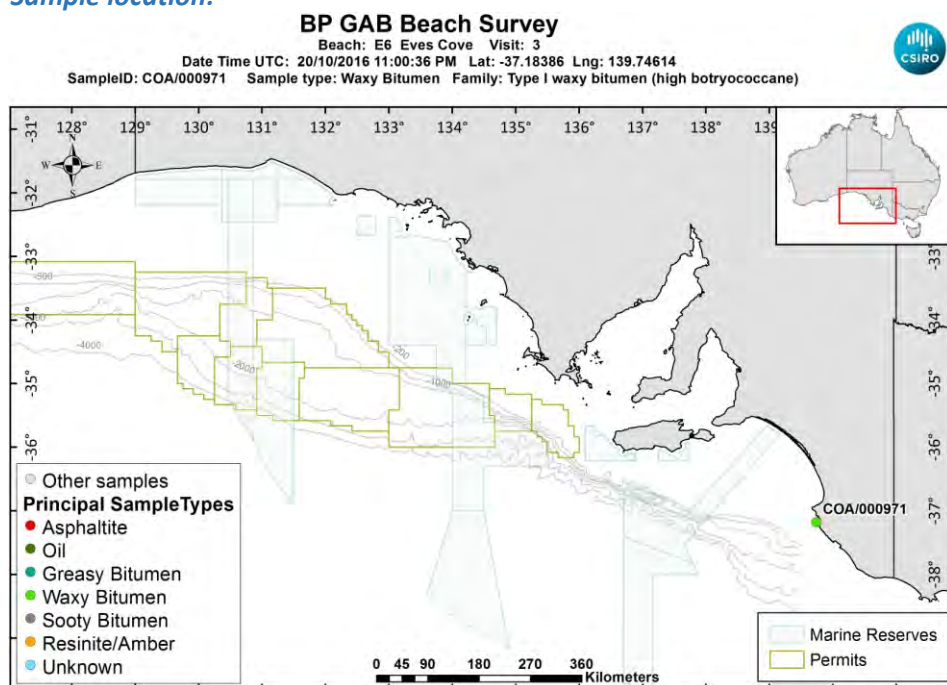
Size (cm): 2.4

Latitude (Y): -37.183855

Weight (gm): 2.08109

Longitude (X): 139.746140

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000971_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000971_146A6961.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000971_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: **COA/000971_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			83.1534018006002	percent	Y
Inorg	Hydrogen			7.6331944333996	percent	Y
Inorg	Nitrogen			0.32	percent	Y
Inorg	Sulphur			1.80442411115683	percent	Y

Results for: GCMS with Full Scan

Unique ID: **COA/000971 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\COA_000971_bulk_WholeOil.JPG](#)

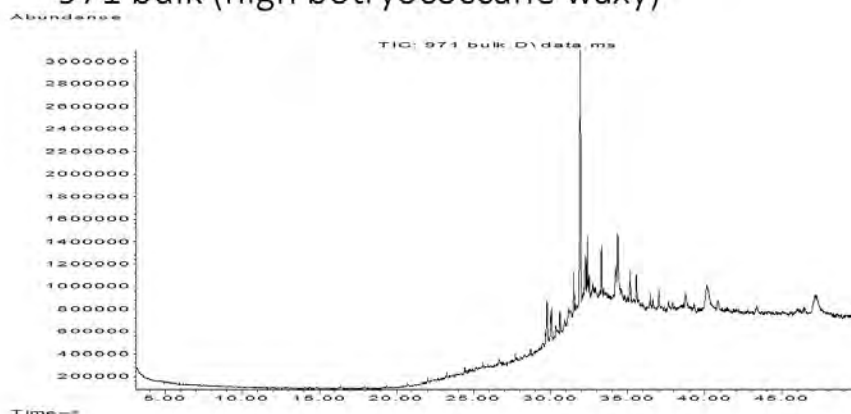
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

971 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	18740062			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	322656			Z
Aliph	nC26	29.6680	244785			Z
Aliph	nC27	30.6080	985998			Z
Aliph	nC28	31.5080	1969581			Z
Aliph	nC29	32.3700	2674153			Z
Aliph	nC30	33.2910	2532881			Z
Aliph	nC31	34.3470	4437232			Z
Aliph	nC32	35.5720	2162842			Z
Aliph	nC33	37.0130	1387972			Z
Aliph	nC34	38.7280	1781463			Z
Aliph	nC35	40.8080	1216750			Z
Aliph	nC36	43.3510	721697			Z
Aliph	nC37	46.4710	1027379			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:**

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 : COA/000972

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:31:50 AM

Type: Waxy Bitumen

Family: Type III waxy bitumen (no botryococcane, low

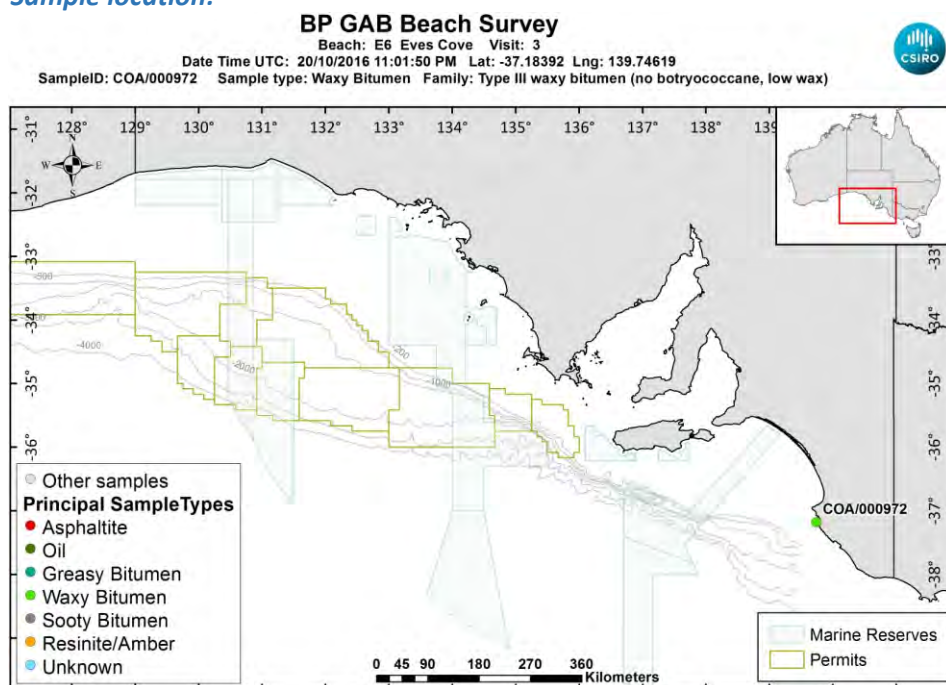
Size (cm): 2.4

Latitude (Y): -37.183917

Weight (gm): 2.46148

Longitude (X): 139.746192

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000972_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000972_146A6963.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000972_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: **COA/000972_SPE_ELEM-AN/01**

Instrument / Type: Elemental Analyser Run: 1

for Analysis: Elemental CHNS

Analysis Date: 30/10/2017

Linked Image: [None available](#)

Preparation: Solid Phase Extract

Method ID/s:

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

Data Sheet:

Type:	Compound / Variable:	Retentn Time:	Target Respnse:	Value:	units:	Qualifier:
Inorg	Carbon			86.3811437145715	percent	Y
Inorg	Hydrogen			5.6947634194831	percent	Y
Inorg	Nitrogen			0.14	percent	Y
Inorg	Sulphur			1.08234633235787	percent	Y

Results for: GCMS with Full Scan

Unique ID: **COA/000972_DISS GCMS-Scan/03**

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

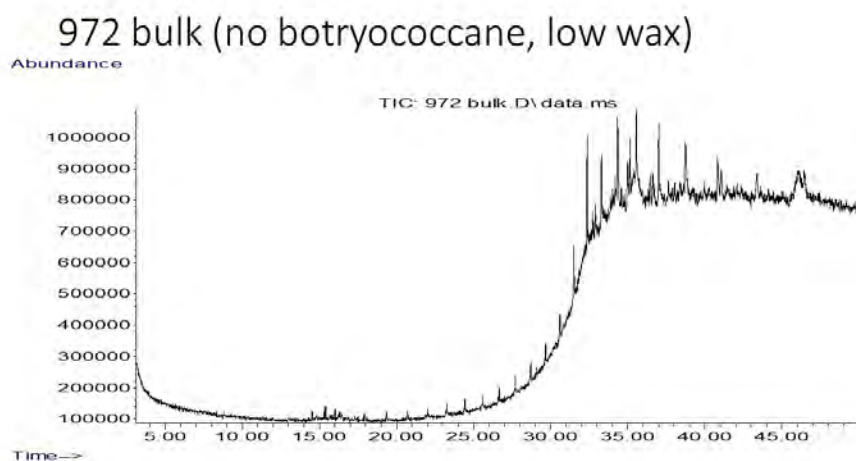
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\COA_000972_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680	347286			Z
Aliph	nC27	30.6080	564993			Z
Aliph	nC28	31.5080	831261			Z
Aliph	nC29	32.3700	988891			Z
Aliph	nC30	33.2910	1288454			Z
Aliph	nC31	34.3470	1802241			Z
Aliph	nC32	35.5720	1913294			Z
Aliph	nC33	37.0130	2495976			Z
Aliph	nC34	38.7280	1956858			Z
Aliph	nC35	40.8080	1642914			Z
Aliph	nC36	43.3510	1354060			Z
Aliph	nC37	46.4710	1206702			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:**

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 : **COA/000973**

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:33:48 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

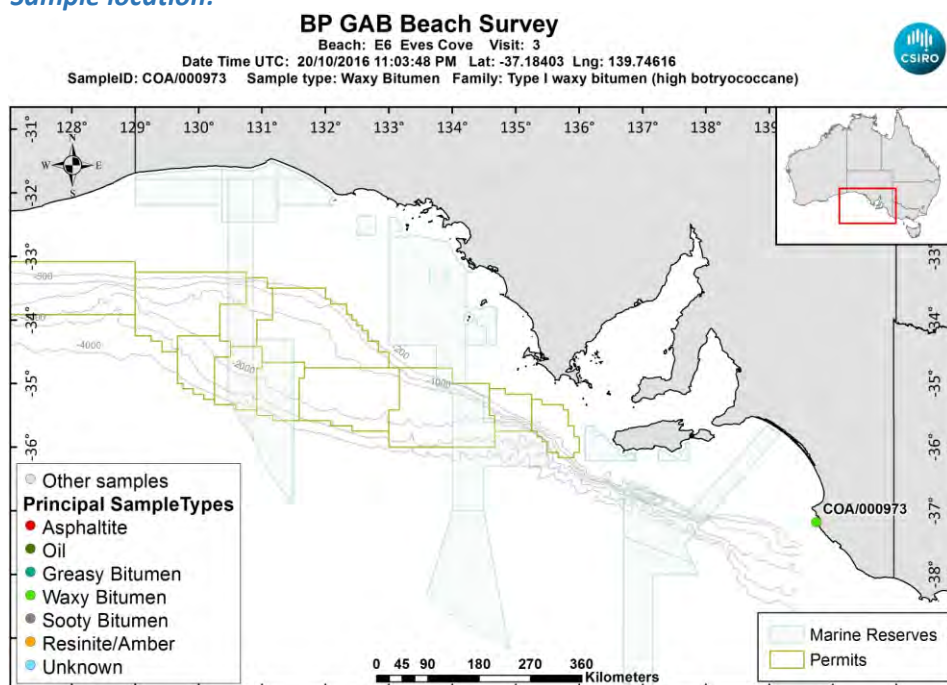
Size (cm): 1

Latitude (Y): -37.184028

Weight (gm): 0.46604

Longitude (X): 139.746162

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000973_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000973_146A6965.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000973_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: **COA/000973_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			86.3377483161054	percent	Y
Inorg	Hydrogen			8.57510457256461	percent	Y
Inorg	Nitrogen			0.2	percent	Y
Inorg	Sulphur			1.89136602326854	percent	Y

Results for: GCMS with Full Scan

Unique ID: **COA/000973 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\COA_000973_bulk_WholeOil.JPG](#)

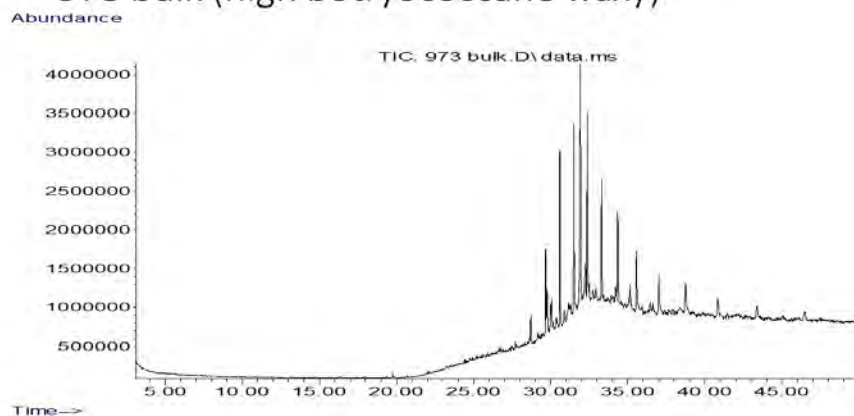
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

973 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	24837706			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	369710			Z
Aliph	nC25	28.7100	1536931			Z
Aliph	nC26	29.6680	5067056			Z
Aliph	nC27	30.6080	11165386			Z
Aliph	nC28	31.5080	13094372			Z
Aliph	nC29	32.3700	12682543			Z
Aliph	nC30	33.2910	9838344			Z
Aliph	nC31	34.3470	7959582			Z
Aliph	nC32	35.5720	6425810			Z
Aliph	nC33	37.0130	4820637			Z
Aliph	nC34	38.7280	4271435			Z
Aliph	nC35	40.8080	3027683			Z
Aliph	nC36	43.3510	2687031			Z
Aliph	nC37	46.4710	1863761			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:**

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 : COA/000974

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:35:34 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

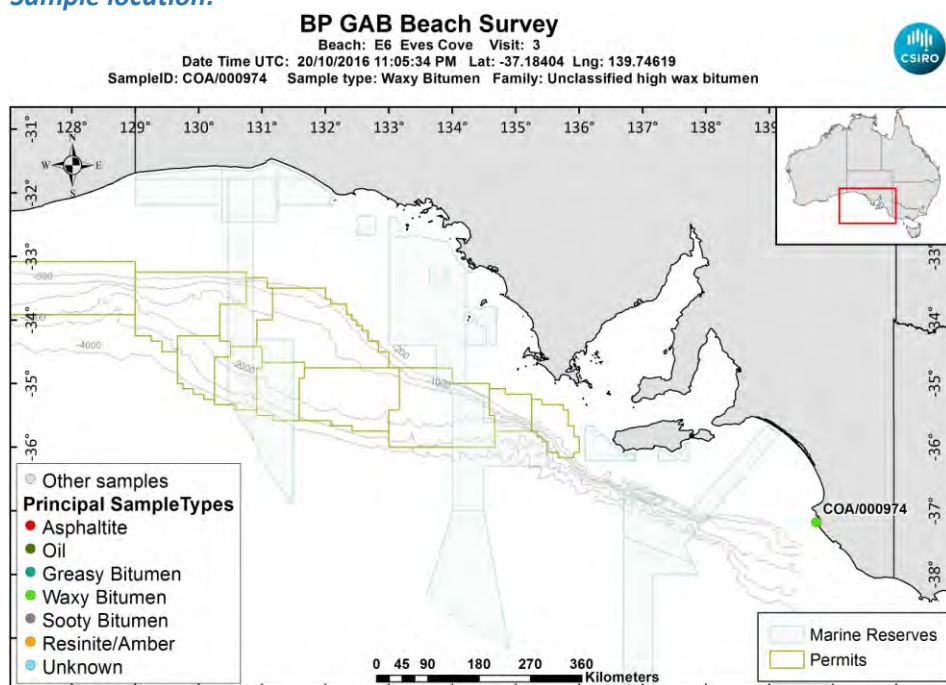
Size (cm): 2.1

Latitude (Y): -37.184037

Weight (gm): 0.99936

Longitude (X): 139.746193

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000974_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000974_146A6967.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000974_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: **COA/000974_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			78.2109463154385	percent	Y
Inorg	Hydrogen			8.23597117296223	percent	Y
Inorg	Nitrogen			0.18	percent	Y
Inorg	Sulphur			2.83982815024689	percent	Y

Results for: GCMS with Full Scan

Unique ID: **COA/000974 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\COA_000974_bulk_WholeOil.JPG](#)

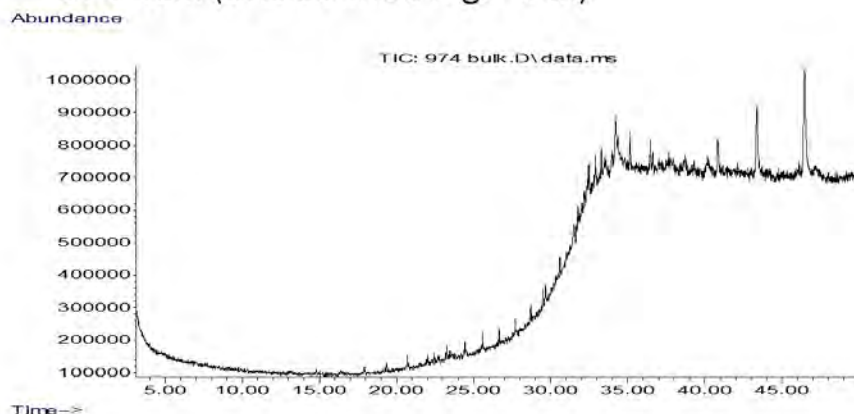
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

974 bulk (unclassified high wax)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280				U
Aliph	nC35	40.8080	1340107			Z
Aliph	nC36	43.3510	3745497			Z
Aliph	nC37	46.4710	6770453			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:

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 : COA/000975

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:37:14 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

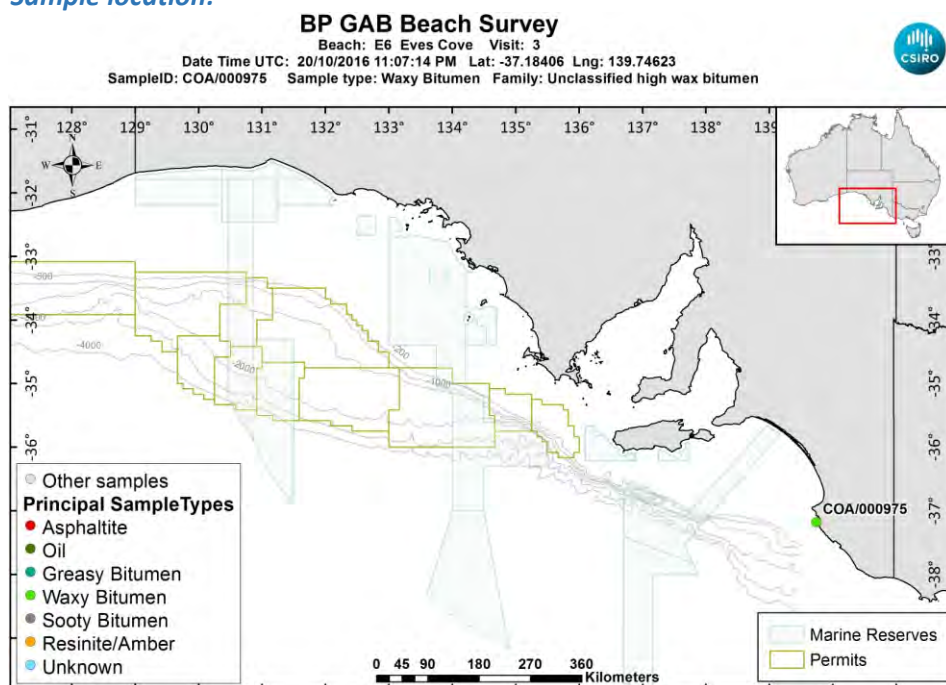
Size (cm): 2.1

Latitude (Y): -37.184055

Weight (gm): 1.31895

Longitude (X): 139.746225

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000975_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000975_146A6969.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000975_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: **COA/000975_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			82.8945548516172	percent	Y
Inorg	Hydrogen			9.70021868787276	percent	Y
Inorg	Nitrogen			0.28	percent	Y
Inorg	Sulphur			3.49327931626884	percent	Y

Results for: GCMS with Full Scan

Unique ID: **COA/000975 DISS GCMS-Scan/03**

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

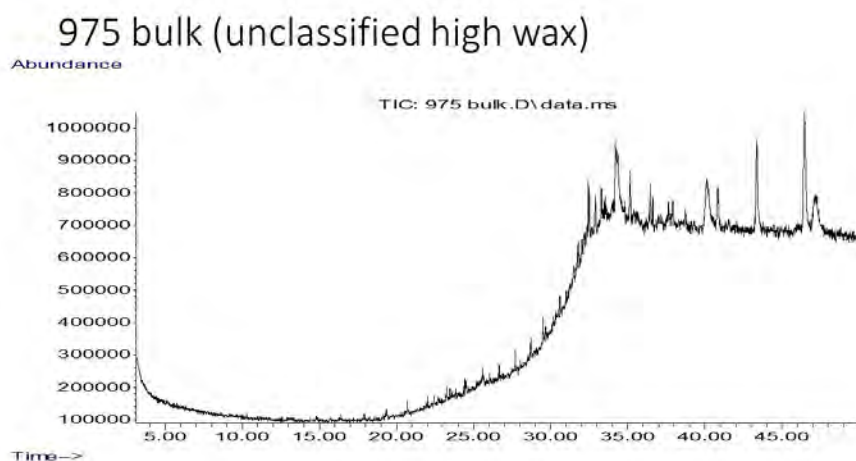
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\COA_000975_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280	455191			Z
Aliph	nC35	40.8080	1758456			Z
Aliph	nC36	43.3510	4507748			Z
Aliph	nC37	46.4710	7378603			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:**

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 : COA/000976

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:38:28 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

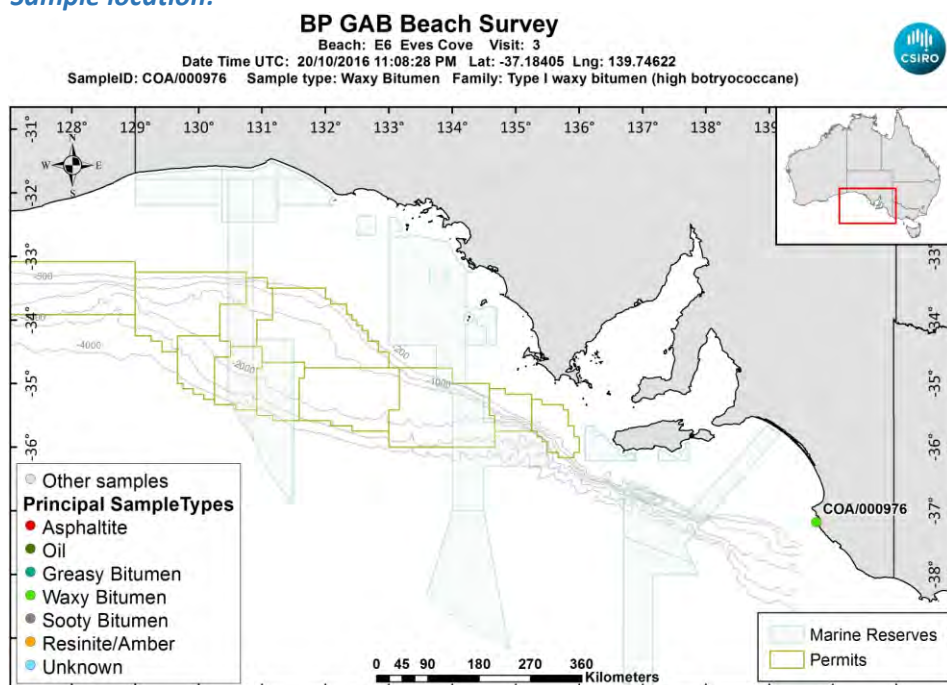
Size (cm): 3.4

Latitude (Y): -37.184053

Weight (gm): 8.37921

Longitude (X): 139.746218

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000976_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000976_146A6971.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000976_Photo02.JPG](#)

Analyses Requested

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

Analyses Completed:

Analysis:	Instrument/Type:
Biomarkers	Gas Chromatography Mass Spectrometry Run: 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: COA/000976_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			45.3449412173282	ratio	Y
BiomRatio	% C27 abb 20(R+S)			50.9448169201285	ratio	Y
BiomRatio	% C28 aaa 20R			6.25436578252582	ratio	Y
BiomRatio	% C28 abb 20(R+S)			22.0435603481739	ratio	Y
BiomRatio	% C29 aaa 20R			48.400693000146	ratio	Y
BiomRatio	% C29 abb 20(R+S)			27.0116227316976	ratio	Y
BiomRatio	(C21+C22)/(C27+C28+C29)			6.67544922890058E-02	ratio	Y
BiomRatio	25-Nor/C30H			6.43058414625232E-02	ratio	Y
BiomRatio	C19t/C23t			0.309488941305165	ratio	Y
BiomRatio	C22t/C21t			0.166681147064733	ratio	Y
BiomRatio	C22t/C24t			0.105848924200025	ratio	Y
BiomRatio	C23t/C30H			0.086223056952668	ratio	Y
BiomRatio	C24t/C23t			0.793063275561481	ratio	Y
BiomRatio	C24Tet/C23t			0.583092332410351	ratio	Y
BiomRatio	C24Tet/C26t			0.645911308559995	ratio	Y
BiomRatio	C24Tet/C30H			5.02760033860817E-02	ratio	Y
BiomRatio	C26t/C25t			1.90537471175464	ratio	Y
BiomRatio	C27 Dia/(Dia+Reg)			0.735293523672485	ratio	Y
BiomRatio	C27 Dia/Ster			1.1817365970345	ratio	Y
BiomRatio	C28BNH/C30H			3.27537380125398E-02	ratio	Y
BiomRatio	C29/C27 abb Sterane Ratio			0.530213363491845	ratio	Y
BiomRatio	C29H/C30H			0.53280396331902	ratio	Y
BiomRatio	C29Ts/(C29Ts+C29H)			0.32276573622858	ratio	Y
BiomRatio	C30DiaH/C30H			0.198082477970426	ratio	Y
BiomRatio	C30Ts/C30H			0	ratio	U
BiomRatio	C35 Homohopane Index			4.02442203560548E-02	ratio	Y
BiomRatio	C35HS/C34HS			0.398187736714578	ratio	Y
BiomRatio	Gam/C30H			4.21693323807031E-02	ratio	Y
BiomRatio	Gam/C31HR			0.223445500366088	ratio	Y
BiomRatio	Ole/C30H			0.118017562351299	ratio	Y
BiomRatio	Sterane/hopane			6.46998080875978E-02	ratio	Y
BiomRatio	Steranes/Terpanes			5.60200163393535E-02	ratio	Y
BiomRatio	Tricyclic/Pentacyclic Terpanes			0.154940899975191	ratio	Y

Results for: Elemental Analyser

Unique ID: COA/000976_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:**

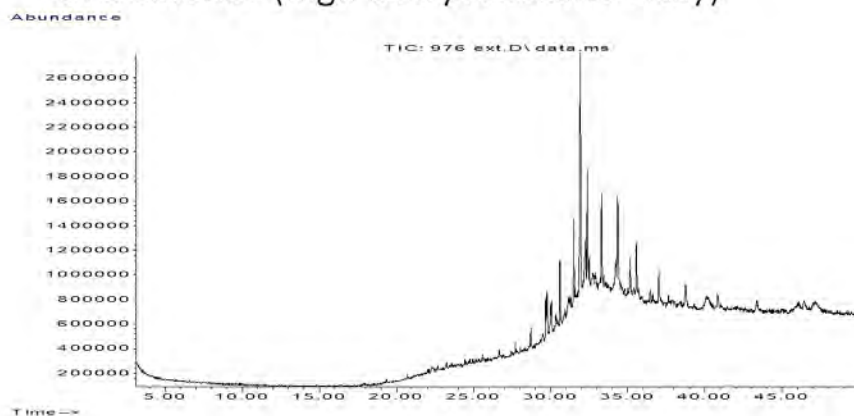
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Inorg	Carbon			87.1157719239747	percent	Y
Inorg	Hydrogen			7.18843538767396	percent	Y
Inorg	Nitrogen			0.25	percent	Y
Inorg	Sulphur			1.3204314283595	percent	Y

Results for: GCMS with Full Scan**Unique ID:** COA/000976_DISS_GCMS-Scan/01**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\COA_000976_ext_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

976 exterior (high botryococcane waxy)



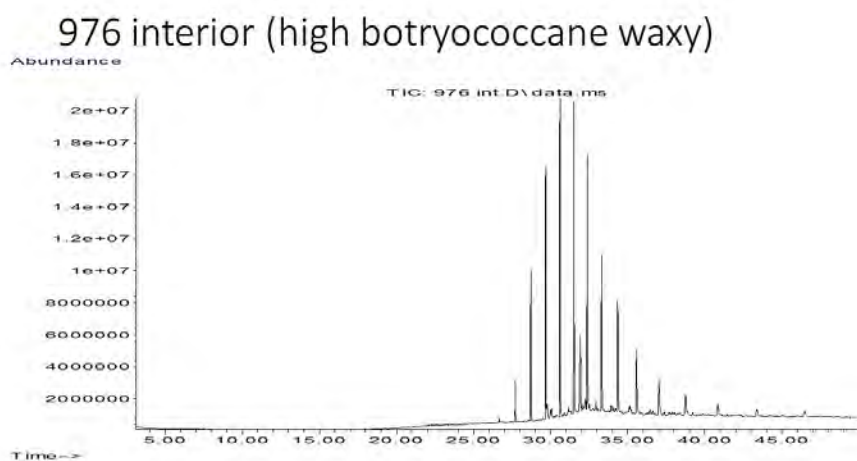
Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	16678279			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	277452			Z
Aliph	nC24	27.7060	366573			Z
Aliph	nC25	28.7100	820032			Z
Aliph	nC26	29.6680	1229276			Z
Aliph	nC27	30.6080	2639711			Z
Aliph	nC28	31.5080	3809542			Z
Aliph	nC29	32.3700	4348898			Z
Aliph	nC30	33.2910	4335716			Z
Aliph	nC31	34.3470	4813499			Z
Aliph	nC32	35.5720	3487704			Z
Aliph	nC33	37.0130	2844876			Z
Aliph	nC34	38.7280	1856917			Z
Aliph	nC35	40.8080	1613018			Z
Aliph	nC36	43.3510	1437736			Z
Aliph	nC37	46.4710	1195685			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** COA/000976 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\COA_000976_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 Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	37409003			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	1325780			Z
Aliph	nC24	27.7060	11821523			Z
Aliph	nC25	28.7100	42488235			Z
Aliph	nC26	29.6680	73107370			Z
Aliph	nC27	30.6080	97239595			Z
Aliph	nC28	31.5080	87930325			Z
Aliph	nC29	32.3700	76779573			Z
Aliph	nC30	33.2910	57461106			Z
Aliph	nC31	34.3470	44799370			Z
Aliph	nC32	35.5720	31757324			Z
Aliph	nC33	37.0130	21453431			Z
Aliph	nC34	38.7280	13479316			Z
Aliph	nC35	40.8080	9407356			Z
Aliph	nC36	43.3510	7169745			Z
Aliph	nC37	46.4710	5883620			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:**

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 : **COA/000977**

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:40:02 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

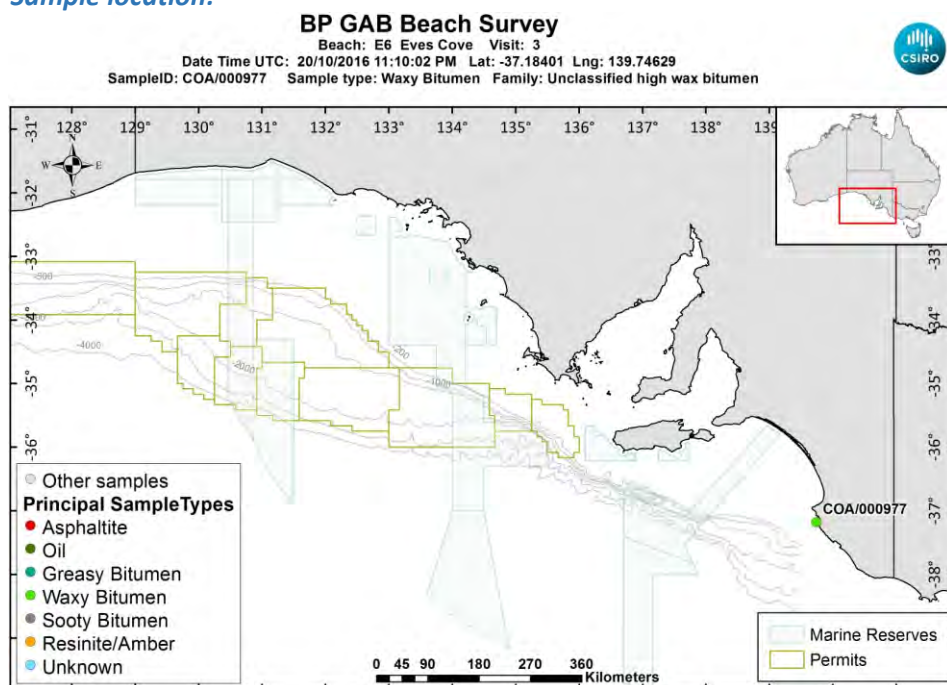
Size (cm): 2

Latitude (Y): -37.184010

Weight (gm): 0.78058

Longitude (X): 139.746293

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000977_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000977_146A6973.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000977_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: COA/000977_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			84.8942930976992	percent	Y
Inorg	Hydrogen			10.6185852882704	percent	Y
Inorg	Nitrogen			0.07	percent	Y
Inorg	Sulphur			2.92528578060651	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000977 DISS GCMS-Scan/03

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

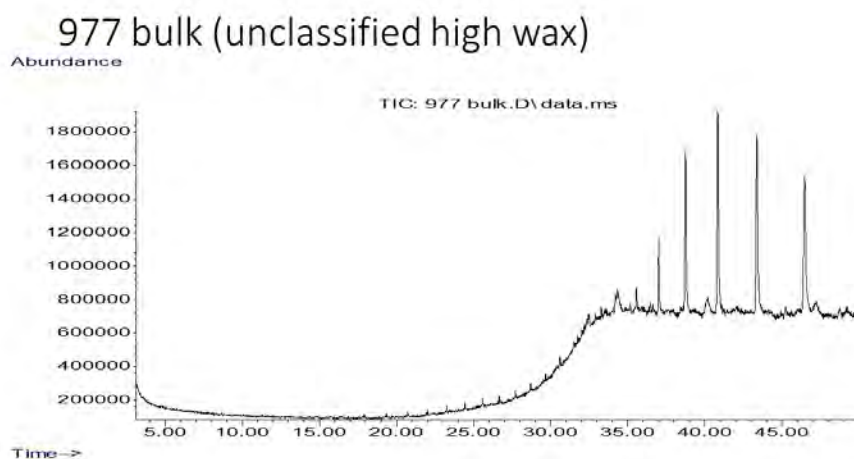
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\COA_000977_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470	2348586			Z
Aliph	nC32	35.5720	1168579			Z
Aliph	nC33	37.0130	4252596			Z
Aliph	nC34	38.7280	9964019			Z
Aliph	nC35	40.8080	16216600			Z
Aliph	nC36	43.3510	17211771			Z
Aliph	nC37	46.4710	15767746			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:**

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 : COA/000978

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:41:31 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

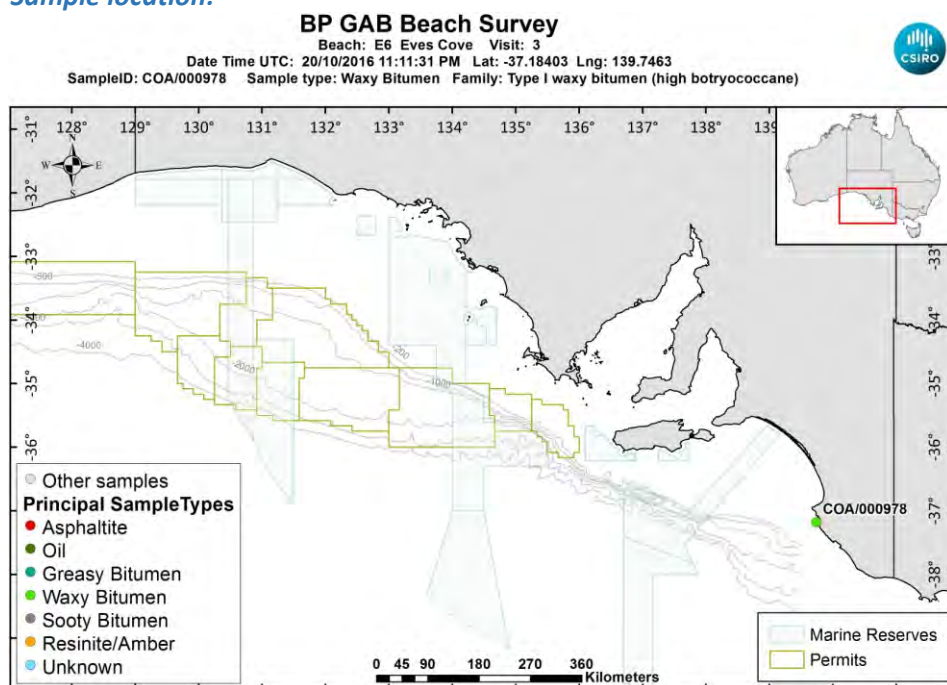
Size (cm): 1.5

Latitude (Y): -37.184032

Weight (gm): 0.61945

Longitude (X): 139.746297

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000978_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000978_146A6975.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000978_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: **COA/000978_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			83.8859053017673	percent	Y
Inorg	Hydrogen			7.97864294234593	percent	Y
Inorg	Nitrogen			0.32	percent	Y
Inorg	Sulphur			1.5752908150923	percent	Y

Results for: GCMS with Full Scan

Unique ID: **COA/000978 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\COA_000978_bulk_WholeOil.JPG](#)

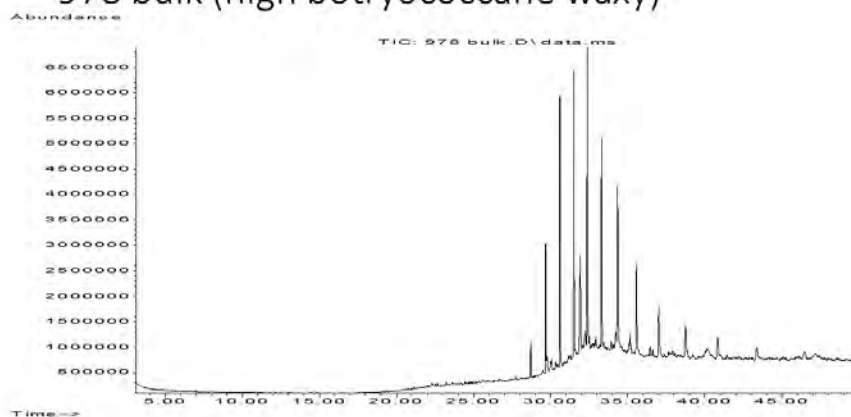
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

978 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	16437026			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	419899			Z
Aliph	nC25	28.7100	3311125			Z
Aliph	nC26	29.6680	13045984			Z
Aliph	nC27	30.6080	26775304			Z
Aliph	nC28	31.5080	30489318			Z
Aliph	nC29	32.3700	30005261			Z
Aliph	nC30	33.2910	22950116			Z
Aliph	nC31	34.3470	22438581			Z
Aliph	nC32	35.5720	14754443			Z
Aliph	nC33	37.0130	10296484			Z
Aliph	nC34	38.7280	7282741			Z
Aliph	nC35	40.8080	4997109			Z
Aliph	nC36	43.3510	4343867			Z
Aliph	nC37	46.4710	2979625			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:

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 : COA/000979

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:42:53 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

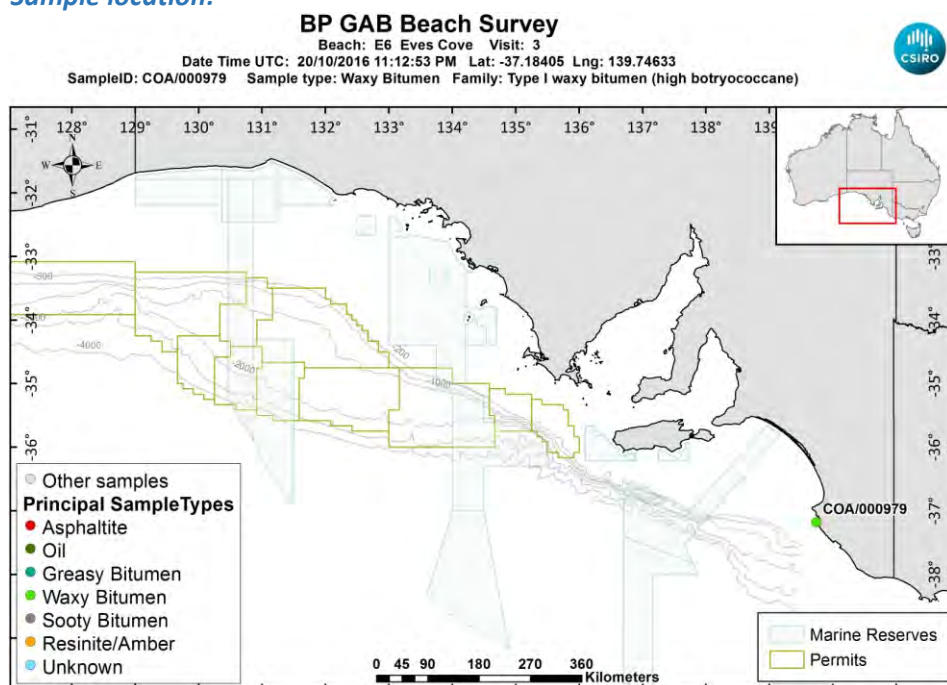
Size (cm): 1.7

Latitude (Y): -37.184053

Weight (gm): 0.84212

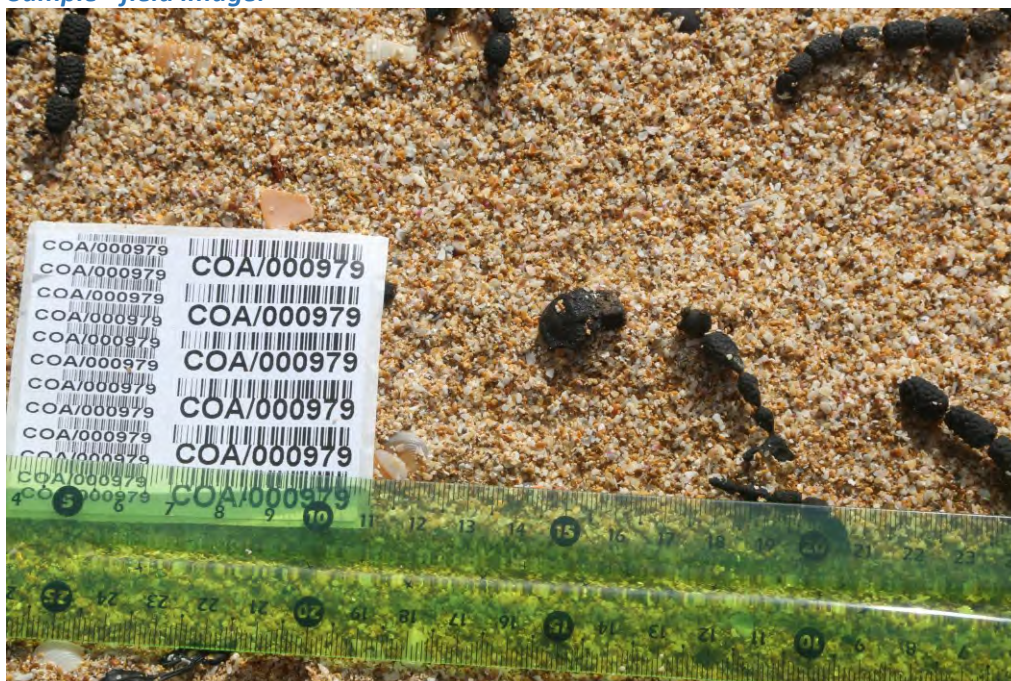
Longitude (X): 139.746325

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000979_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000979_146A6977.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000979_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: COA/000979_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			85.1864288096032	percent	Y
Inorg	Hydrogen			6.1564916500994	percent	Y
Inorg	Nitrogen			0.24	percent	Y
Inorg	Sulphur			0.922329063581094	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000979 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\COA_000979_bulk_WholeOil.JPG](#)

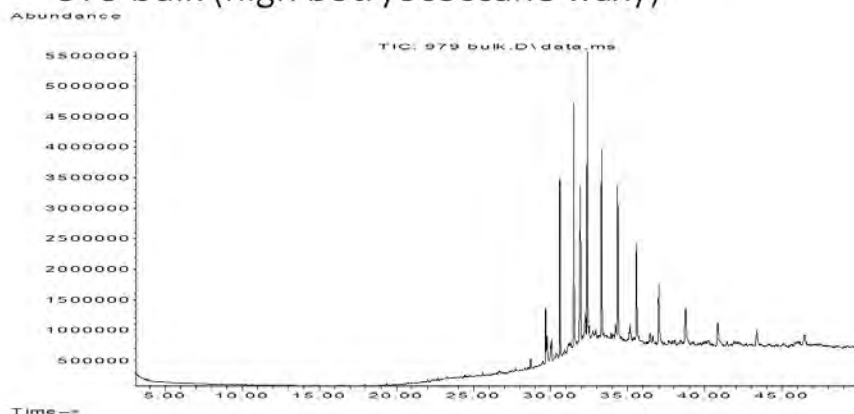
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

979 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	20808809			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	745511			Z
Aliph	nC26	29.6680	4332845			Z
Aliph	nC27	30.6080	14861123			Z
Aliph	nC28	31.5080	21330457			Z
Aliph	nC29	32.3700	23114070			Z
Aliph	nC30	33.2910	19185203			Z
Aliph	nC31	34.3470	17264764			Z
Aliph	nC32	35.5720	12877300			Z
Aliph	nC33	37.0130	9825720			Z
Aliph	nC34	38.7280	7272251			Z
Aliph	nC35	40.8080	5372871			Z
Aliph	nC36	43.3510	4367283			Z
Aliph	nC37	46.4710	3459429			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:**

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 : COA/000980

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:44:34 AM

Type: Waxy Bitumen

Family: Type III waxy bitumen (no botryococcane, low

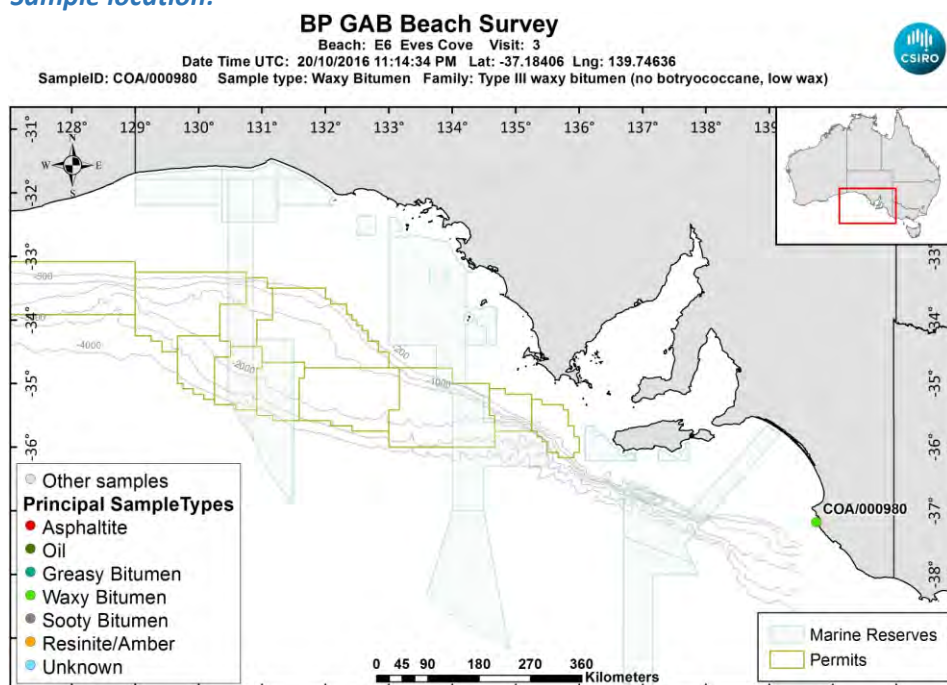
Size (cm): 1.8

Latitude (Y): -37.184058

Weight (gm): 1.09254

Longitude (X): 139.746355

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000980_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000980_146A6979.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000980_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: COA/000980_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			83.58	percent	Y
Inorg	Hydrogen			10.2092226640159	percent	Y
Inorg	Nitrogen			0.09	percent	Y
Inorg	Sulphur			2.48561926531938	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000980_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\COA_000980_bulk_WholeOil.JPG](#)

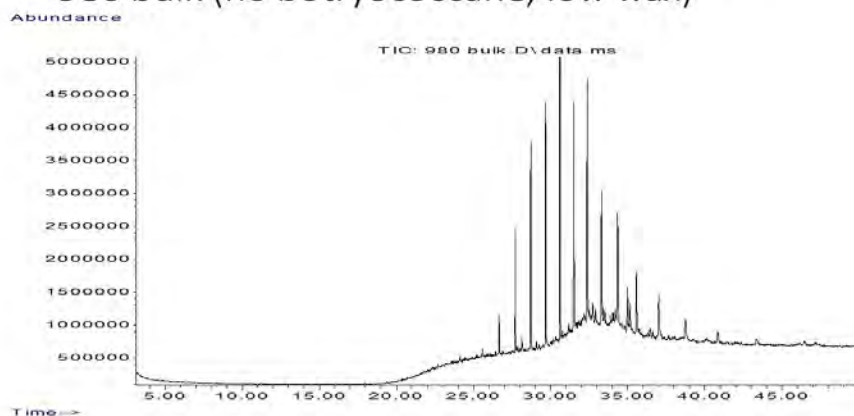
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

980 bulk (no botryococcane, low wax)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760	544993			Z
Aliph	nC23	26.6620	2630894			Z
Aliph	nC24	27.7060	8454361			Z
Aliph	nC25	28.7100	15218154			Z
Aliph	nC26	29.6680	18444523			Z
Aliph	nC27	30.6080	19870471			Z
Aliph	nC28	31.5080	17222291			Z
Aliph	nC29	32.3700	16383309			Z
Aliph	nC30	33.2910	12051991			Z
Aliph	nC31	34.3470	12446498			Z
Aliph	nC32	35.5720	7933335			Z
Aliph	nC33	37.0130	6680974			Z
Aliph	nC34	38.7280	3655369			Z
Aliph	nC35	40.8080	2549855			Z
Aliph	nC36	43.3510	1846561			Z
Aliph	nC37	46.4710	800948			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:**

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 : COA/000981

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:45:24 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

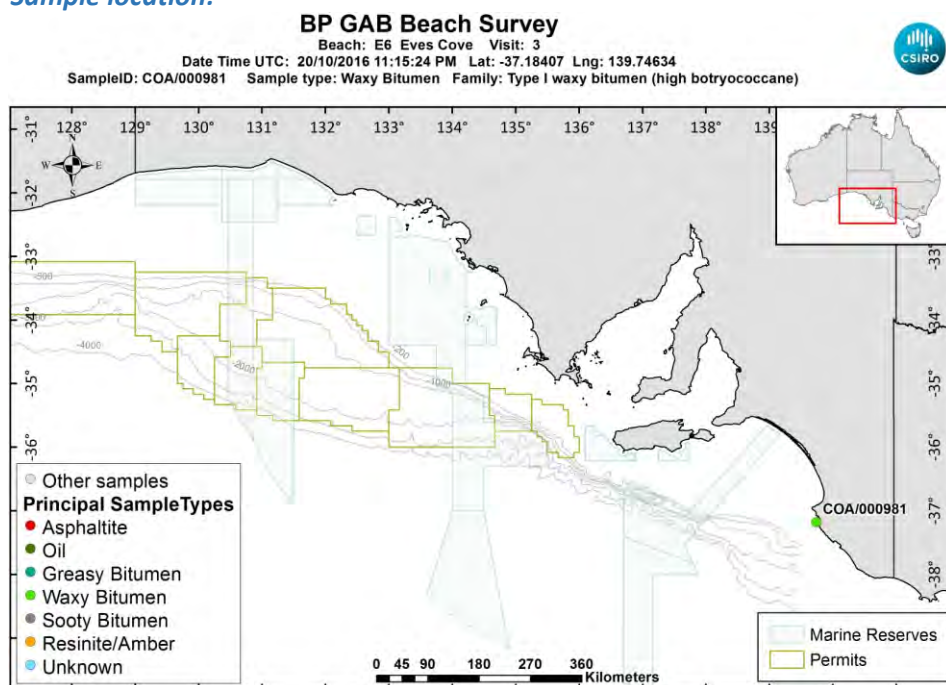
Size (cm): 2.3

Latitude (Y): -37.184073

Weight (gm): 3.73225

Longitude (X): 139.746345

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000981_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000981_146A6981.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000981_Photo02.JPG](#)

Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: COA/000981_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			86.24	percent	Y
Inorg	Hydrogen			10.4418669980119	percent	Y
Inorg	Nitrogen			0.2	percent	Y
Inorg	Sulphur			2.45010383771849	percent	Y

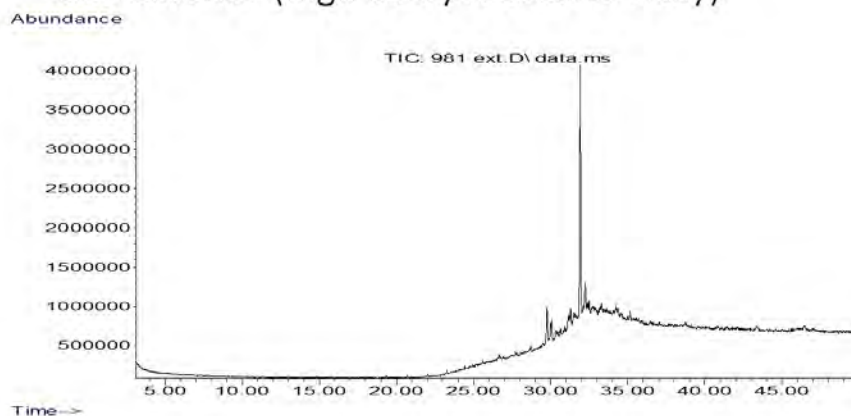
Results for: GCMS with Full Scan

Unique ID: COA/000981_DISS_GCMS-Scan/01

Results for: GCMS with Full Scan**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\COA_000981_ext_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan

981 exterior (high botryococcane waxy)



Data Sheet:

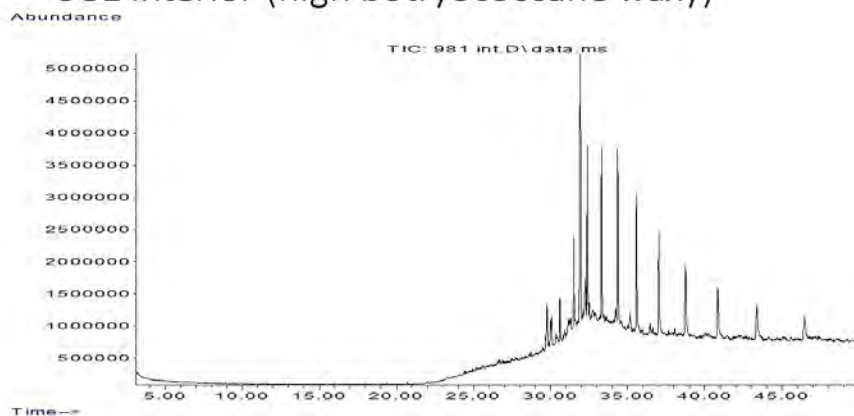
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	25833469			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				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130	419106			Z
Aliph	nC34	38.7280	481179			Z
Aliph	nC35	40.8080	675671			Z
Aliph	nC36	43.3510	798284			Z
Aliph	nC37	46.4710	866063			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** COA/000981 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\COA_000981_int_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan

981 interior (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	35862138			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	365821			Z
Aliph	nC26	29.6680	755254			Z
Aliph	nC27	30.6080	3365422			Z
Aliph	nC28	31.5080	7732468			Z
Aliph	nC29	32.3700	13111586			Z
Aliph	nC30	33.2910	16164700			Z
Aliph	nC31	34.3470	19009930			Z
Aliph	nC32	35.5720	16950210			Z
Aliph	nC33	37.0130	14623097			Z
Aliph	nC34	38.7280	12131663			Z
Aliph	nC35	40.8080	10226971			Z
Aliph	nC36	43.3510	7838540			Z
Aliph	nC37	46.4710	6209822			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:**

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 : COA/000982

Beach E6: Eves Cove Visit: 3

Comments:

Location: Shore Upper

Local Date Time: 21/10/2016 9:47:21 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

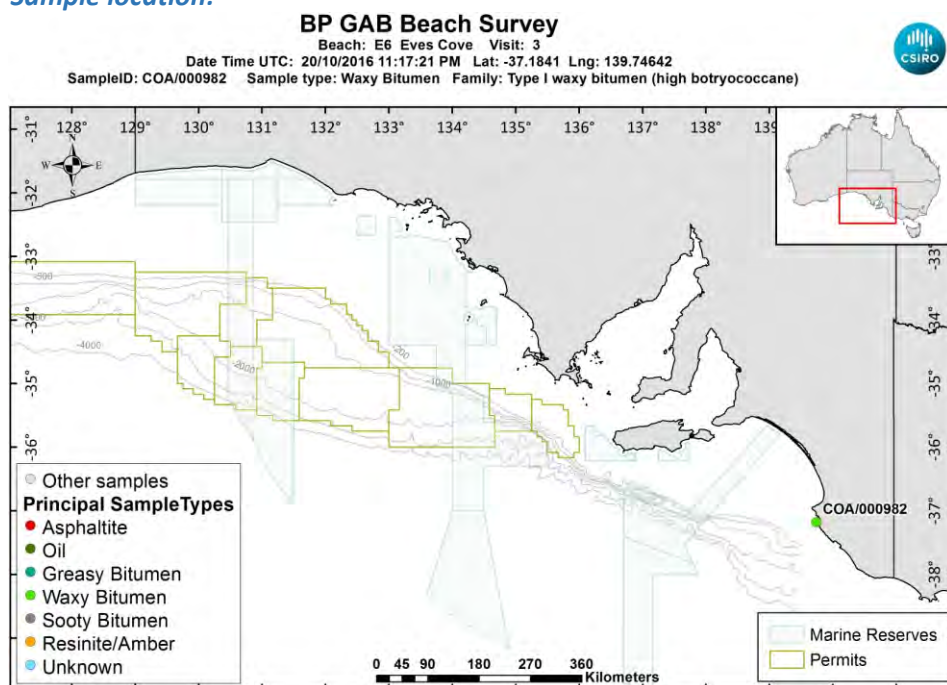
Size (cm): 2.3

Latitude (Y): -37.184095

Weight (gm): 2.56998

Longitude (X): 139.746418

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000982_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000982_146A6982.JPG](#)

Sample - laboratory image:

[LinkedFiles\GAB_BCH1\Samples\COA_000982_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:** COA/000982_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)

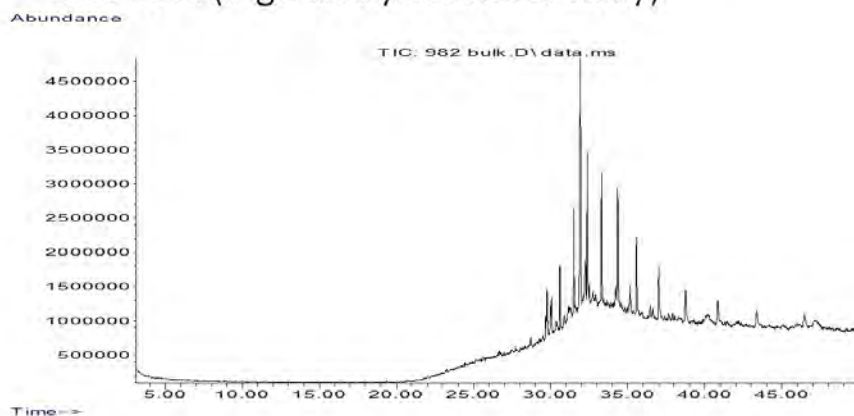
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.36	percent	Y
Inorg	Hydrogen			7.24232147117296	percent	Y
Inorg	Nitrogen			0.24	percent	Y
Inorg	Sulphur			1.37766382169758	percent	Y

Results for: GCMS with Full Scan**Unique ID:** COA/000982 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\COA_000982_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

982 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	31348034			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	522704			Z
Aliph	nC26	29.6680	1275189			Z
Aliph	nC27	30.6080	4732823			Z
Aliph	nC28	31.5080	8638439			Z
Aliph	nC29	32.3700	10840044			Z
Aliph	nC30	33.2910	11004387			Z
Aliph	nC31	34.3470	13117379			Z
Aliph	nC32	35.5720	9253439			Z
Aliph	nC33	37.0130	7184387			Z
Aliph	nC34	38.7280	5638500			Z
Aliph	nC35	40.8080	4664942			Z
Aliph	nC36	43.3510	3909136			Z
Aliph	nC37	46.4710	3107476			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:**

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 : **COA/000983**

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:49:12 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

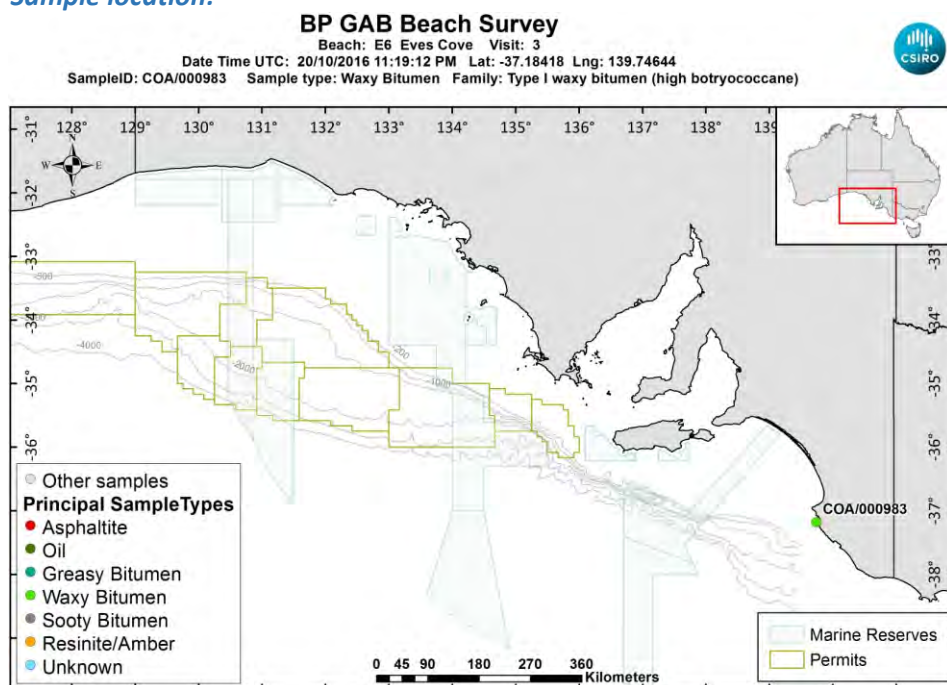
Size (cm): 2.2

Latitude (Y): -37.184178

Weight (gm): 1.40023

Longitude (X): 139.746445

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000983_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000983_146A6984.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000983_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: COA/000983_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			85.23	percent	Y
Inorg	Hydrogen			6.87467355864811	percent	Y
Inorg	Nitrogen			0.26	percent	Y
Inorg	Sulphur			1.27513983572707	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000983_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\COA_000983_bulk_WholeOil.JPG](#)

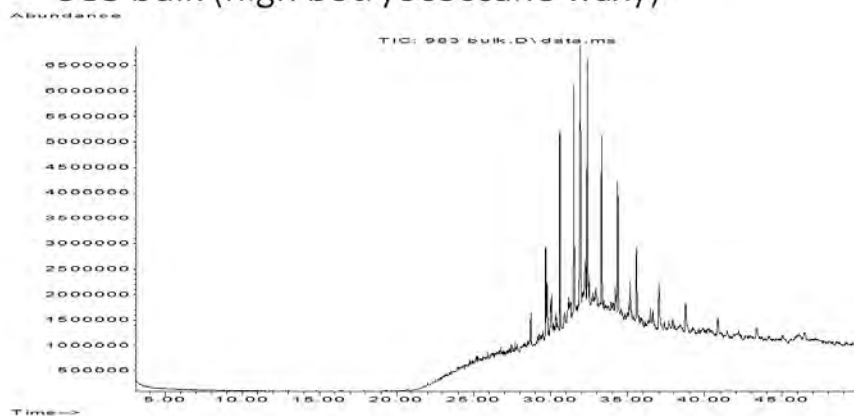
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

983 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	40333979			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	746436			Z
Aliph	nC25	28.7100	2493911			Z
Aliph	nC26	29.6680	7284121			Z
Aliph	nC27	30.6080	18188881			Z
Aliph	nC28	31.5080	23655650			Z
Aliph	nC29	32.3700	25592667			Z
Aliph	nC30	33.2910	19886026			Z
Aliph	nC31	34.3470	16613419			Z
Aliph	nC32	35.5720	12584656			Z
Aliph	nC33	37.0130	8129169			Z
Aliph	nC34	38.7280	5812334			Z
Aliph	nC35	40.8080	4426908			Z
Aliph	nC36	43.3510	3529607			Z
Aliph	nC37	46.4710	3437254			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:**

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 : COA/000984

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:50:32 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

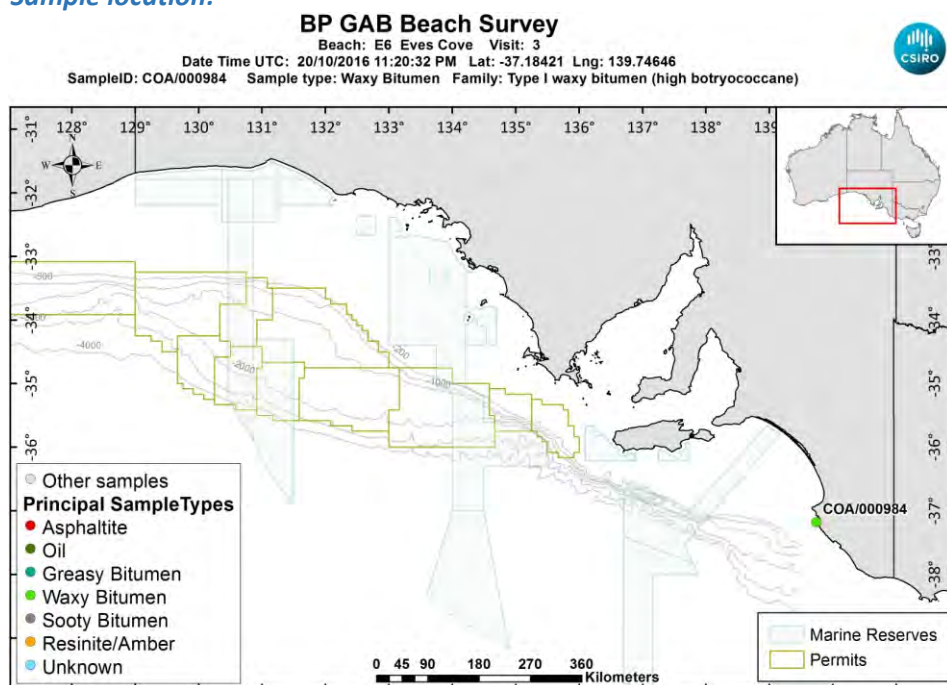
Size (cm): 4.7

Latitude (Y): -37.184207

Weight (gm): 12.73077

Longitude (X): 139.746463

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000984_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000984_146A6986.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000984_Photo02.JPG](#)

Analyses Requested

Split:	Analysis:	Sent:
1	Bitumen Determination	YES

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: COA/000984_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:

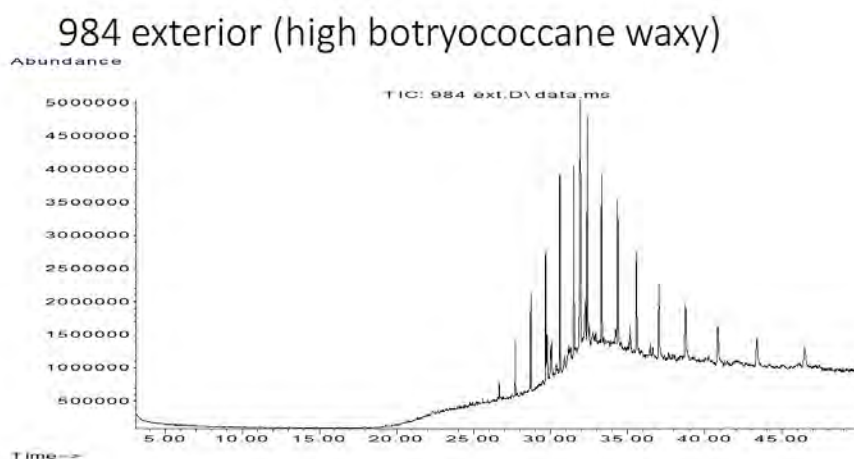
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			85.54	percent	Y
Inorg	Hydrogen			6.46900397614314	percent	Y
Inorg	Nitrogen			0.29	percent	Y
Inorg	Sulphur			1.07725120071806	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000984_DISS_GCMS-Scan/01

Results for: GCMS with Full Scan**Instrument / Type:** GCMS with Full Scan Run: 1**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\COA_000984_ext_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Exterior

Results for: GCMS with Full Scan



Data Sheet:

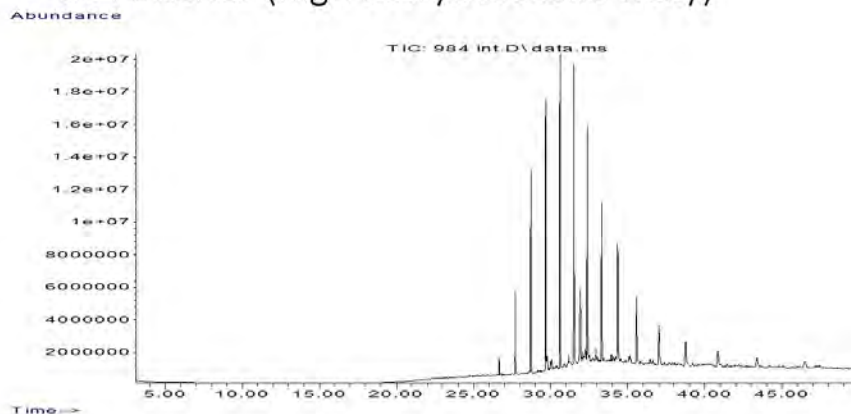
(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	31085445			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	336504			Z
Aliph	nC23	26.6620	1223104			Z
Aliph	nC24	27.7060	3570593			Z
Aliph	nC25	28.7100	7121771			Z
Aliph	nC26	29.6680	8851088			Z
Aliph	nC27	30.6080	13563727			Z
Aliph	nC28	31.5080	14789678			Z
Aliph	nC29	32.3700	15760804			Z
Aliph	nC30	33.2910	14871201			Z
Aliph	nC31	34.3470	14774473			Z
Aliph	nC32	35.5720	12173392			Z
Aliph	nC33	37.0130	11298681			Z
Aliph	nC34	38.7280	8896108			Z
Aliph	nC35	40.8080	6543169			Z
Aliph	nC36	43.3510	6981005			Z
Aliph	nC37	46.4710	4584605			Z
Aliph	nC8	4.0300				U
Aliph	nC9	5.6200				U
Aliph	Norpristane	18.5830				U
Aliph	Phytane	20.7870				U
Aliph	Pristane	19.3870				U

Results for: GCMS with Full Scan**Results for: GCMS with Full Scan****Unique ID:** COA/000984 DISS GCMS-Scan/02**Instrument / Type:** GCMS with Full Scan Run: 2**for Analysis:** Whole Oils**Preparation:** Dissolved in solvent**Analysis Date:** 30/10/2017**Method ID/s:****Linked Image:** [LinkedFiles\GAB_BCH1\GCMS\COA_000984_int_WholeOil.JPG](#)**Sample Volume:****Volume Units:****Extract Volume:****Dilution Factor:****Comment:** Interior

Results for: GCMS with Full Scan

984 interior (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	36060418			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	625014			Z
Aliph	nC23	26.6620	4563583			Z
Aliph	nC24	27.7060	21886889			Z
Aliph	nC25	28.7100	53562114			Z
Aliph	nC26	29.6680	75670455			Z
Aliph	nC27	30.6080	91076552			Z
Aliph	nC28	31.5080	79641173			Z
Aliph	nC29	32.3700	70522747			Z
Aliph	nC30	33.2910	53075720			Z
Aliph	nC31	34.3470	44782133			Z
Aliph	nC32	35.5720	31911854			Z
Aliph	nC33	37.0130	22508886			Z
Aliph	nC34	38.7280	15031921			Z
Aliph	nC35	40.8080	11142474			Z
Aliph	nC36	43.3510	9848512			Z
Aliph	nC37	46.4710	7799336			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:**

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 : COA/000985

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:55:42 AM

Type: Waxy Bitumen

Family: Unknown

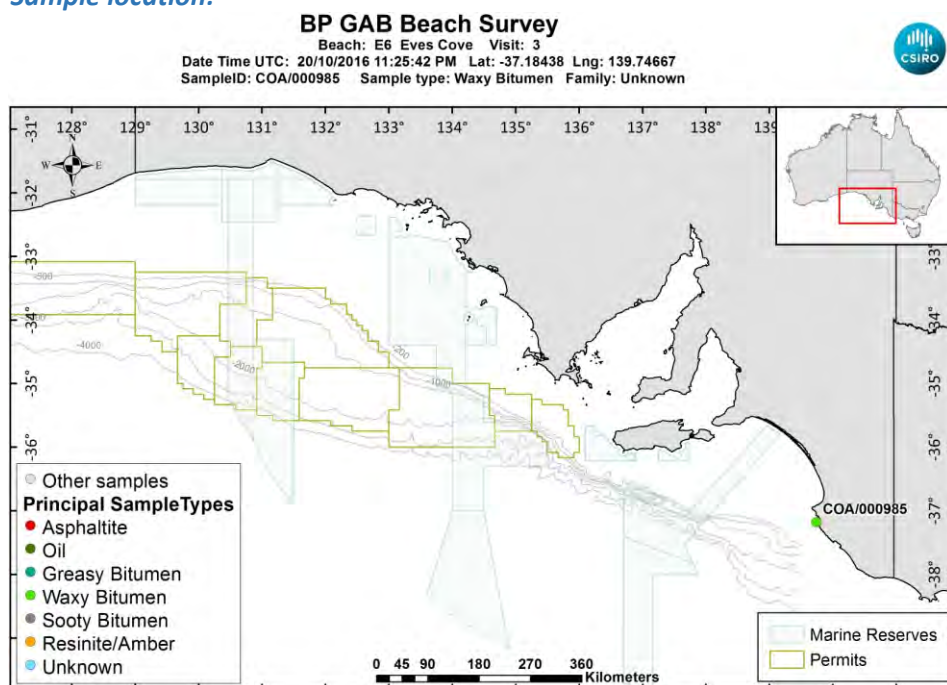
Size (cm): 1.6

Latitude (Y): -37.184382

Weight (gm): 0.72506

Longitude (X): 139.746668

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000985_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000985_146A6988.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000985_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: **COA/000985_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			79.37	percent	Y
Inorg	Hydrogen			5.69397415506958	percent	Y
Inorg	Nitrogen			0.28	percent	Y
Inorg	Sulphur			2.13642399992396	percent	Y

Results for: GCMS with Full Scan

Unique ID: **COA/000985 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\COA_000985_bulk_WholeOil.JPG](#)

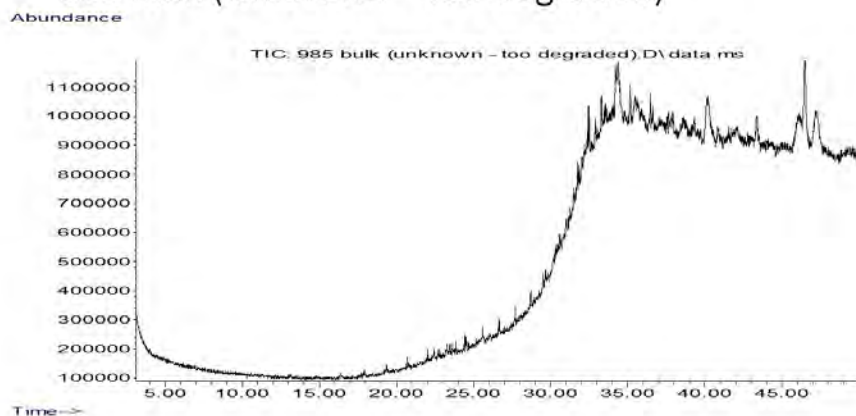
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

985 bulk (Unknown – too degraded)



Data Sheet:

(default units ppb)

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

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

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 : COA/000986

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:57:04 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

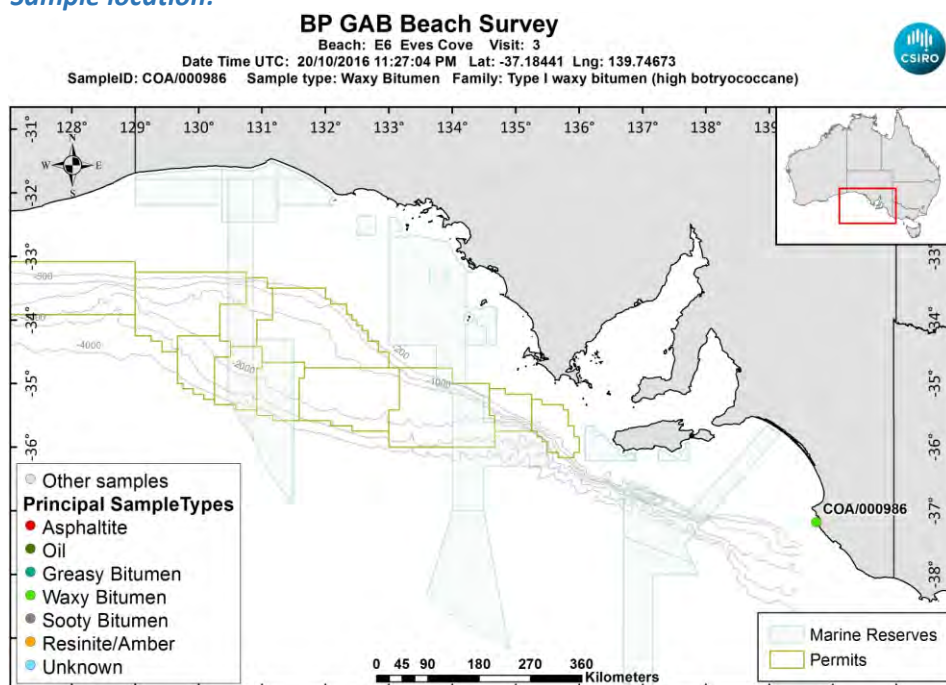
Size (cm): 1.2

Latitude (Y): -37.184407

Weight (gm): 1.74278

Longitude (X): 139.746727

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000986_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000986_146A6990.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000986_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: COA/000986_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			86.12	percent	Y
Inorg	Hydrogen			6.1521351888668	percent	Y
Inorg	Nitrogen			0.24	percent	Y
Inorg	Sulphur			1.09625883718132	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000986_DISS GCMS-Scan/03

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

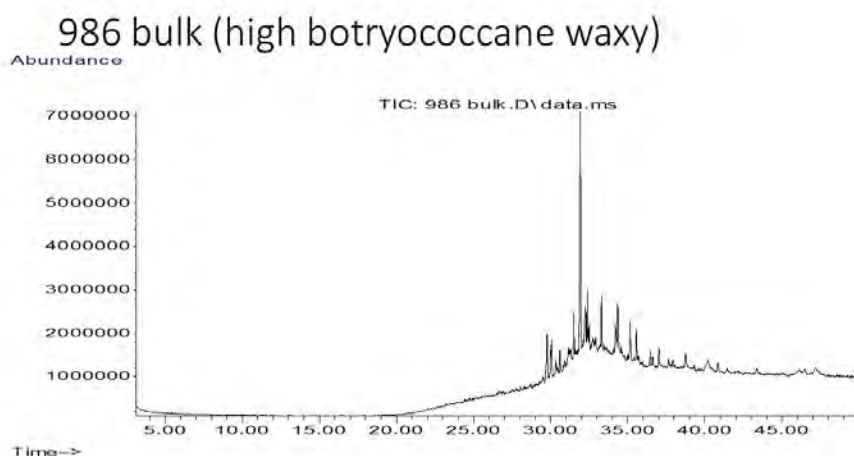
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\COA_000986_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respns:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	44953568			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	2632049			Z
Aliph	nC28	31.5080	5010844			Z
Aliph	nC29	32.3700	6384250			Z
Aliph	nC30	33.2910	6476977			Z
Aliph	nC31	34.3470	7726645			Z
Aliph	nC32	35.5720	5455191			Z
Aliph	nC33	37.0130	4522214			Z
Aliph	nC34	38.7280	3792456			Z
Aliph	nC35	40.8080	2981404			Z
Aliph	nC36	43.3510	2150522			Z
Aliph	nC37	46.4710	1532124			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:**

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 : **COA/000987**

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 9:59:00 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

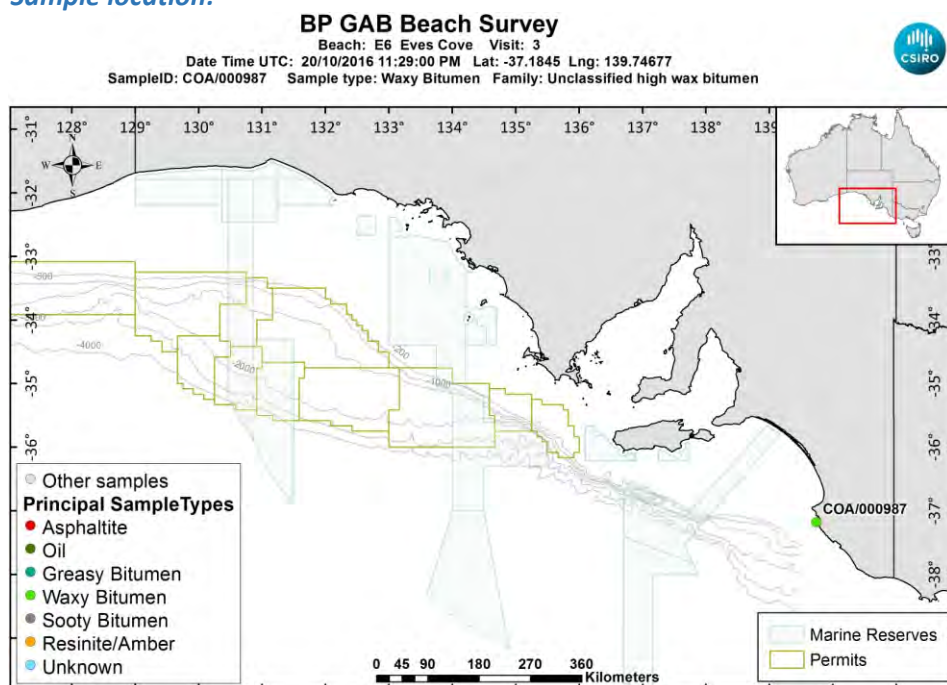
Size (cm): 2.5

Latitude (Y): -37.184495

Weight (gm): 2.19391

Longitude (X): 139.746772

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000987_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000987_146A6992.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000987_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: COA/000987_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			81.39	percent	Y
Inorg	Hydrogen			9.10692047713718	percent	Y
Inorg	Nitrogen			0.21	percent	Y
Inorg	Sulphur			3.25497751261433	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000987 DISS GCMS-Scan/03

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

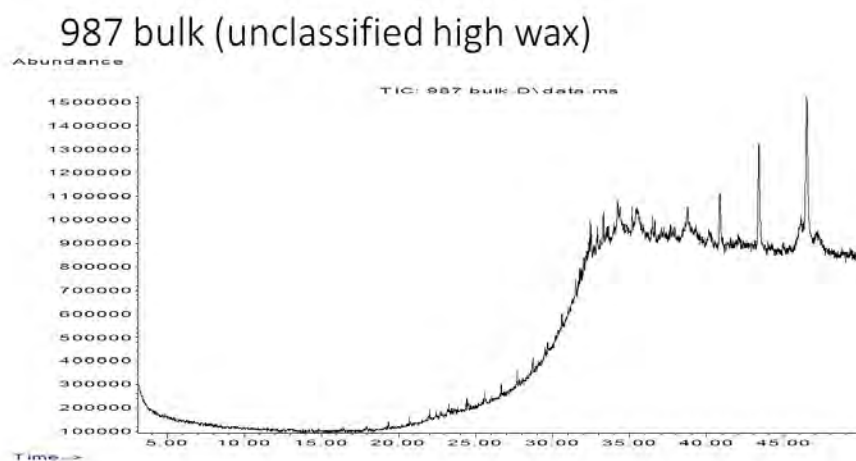
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\COA_000987_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280	1657756			Z
Aliph	nC35	40.8080	2754920			Z
Aliph	nC36	43.3510	7428631			Z
Aliph	nC37	46.4710	9670130			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:**

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 : COA/000988A

Beach E6: Eves Cove Visit: 3

Comments:

2 pieces. Part A

Location: Upper Intertidal

Local Date Time: 21/10/2016 10:00:21 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

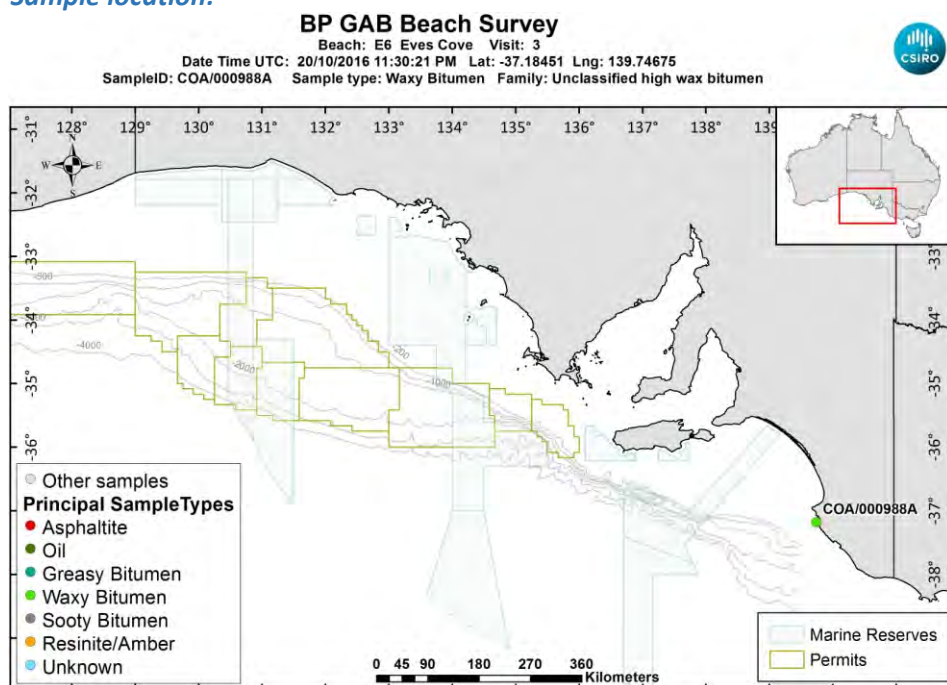
Size (cm): 2.9

Latitude (Y): -37.184508

Weight (gm): 2.52086

Longitude (X): 139.746752

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000988A_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000988_146A6994.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000988_AB_Photo02.jpg](#)

Analyses Requested

Split: Analysis: Sent:
1 Bitumen Determination YES

Analyses Completed:

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

Sample Analyses Completed:

Results for: Elemental Analyser

Unique ID: COA/000988A_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			80.56	percent	Y
Inorg	Hydrogen			8.85605248508947	percent	Y
Inorg	Nitrogen			0.17	percent	Y
Inorg	Sulphur			3.15462083443804	percent	Y

Results for: GCMS with Full Scan

Unique ID: COA/000988A DISS GCMS-Scan/03

Instrument / Type: GCMS with Full Scan Run: 3

for Analysis: Whole Oils

Analysis Date: 30/10/2017

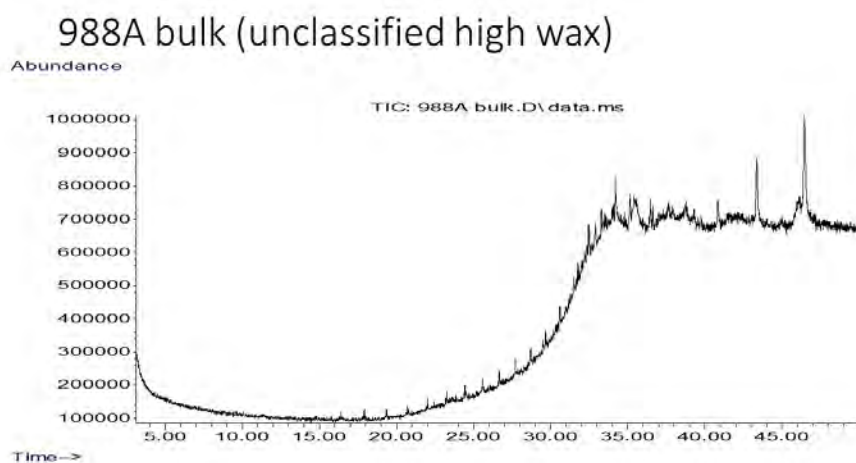
Linked Image: [LinkedFiles\GAB_BCH1\GCMS\COA_000988A_bulk_WholeOil.JPG](#)

Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720				U
Aliph	nC33	37.0130				U
Aliph	nC34	38.7280	655287			Z
Aliph	nC35	40.8080	1154187			Z
Aliph	nC36	43.3510	2704733			Z
Aliph	nC37	46.4710	4511847			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:**

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 : COA/000988B

Beach E6: Eves Cove Visit: 3

Comments:

Part B subsample

Location: Upper Intertidal

Local Date Time: 21/10/2016 10:00:21 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

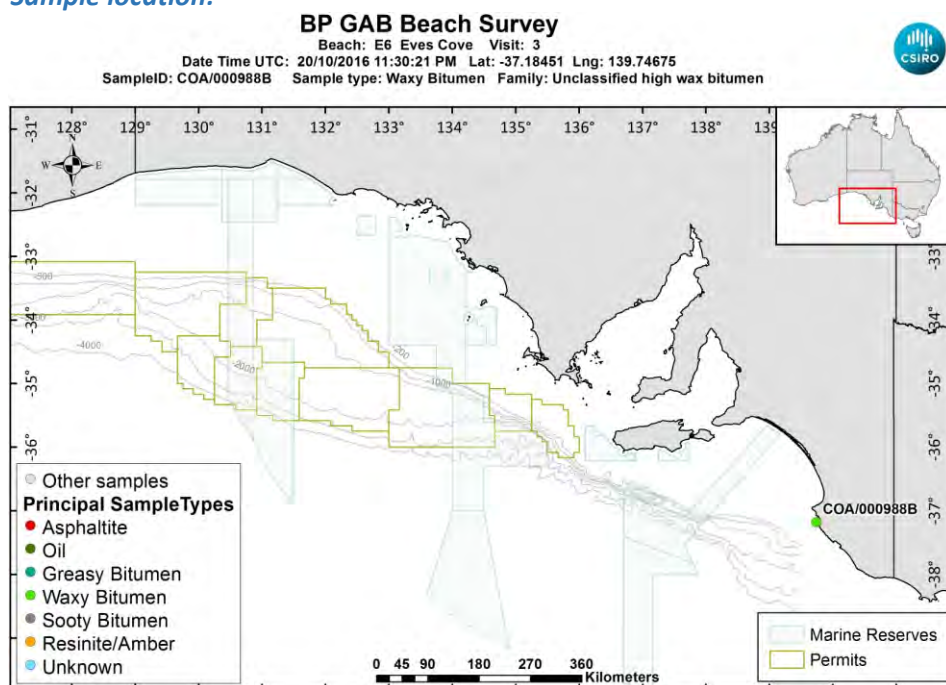
Size (cm): 1

Latitude (Y): -37.184508

Weight (gm): 0.33164

Longitude (X): 139.746752

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000988B_Location.jpg](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000988_AB_Photo02.jpg](#)

Sample ID : COA/000988B**Beach E6: Eves Cove 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:** COA/000988B_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)*

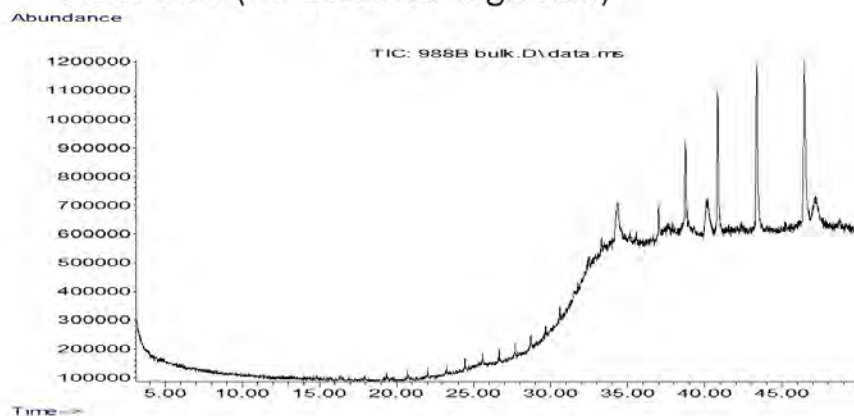
Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Inorg	Carbon			83.49	percent	Y
Inorg	Hydrogen			7.58775009940358	percent	Y
Inorg	Nitrogen			0.31	percent	Y
Inorg	Sulphur			2.02599850308892	percent	Y

Results for: GCMS with Full Scan**Unique ID:** COA/000988B_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\COA_000988B_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

988B bulk (unclassified high wax)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240				U
Aliph	nC10	7.5110				U
Aliph	nC11	9.4450				U
Aliph	nC12	11.3220				U
Aliph	nC13	13.1110				U
Aliph	nC14	14.8030				U
Aliph	nC15	16.4030				U
Aliph	nC16	17.9160				U
Aliph	nC17	19.3500				U
Aliph	nC18	20.7170				U
Aliph	nC19	22.0170				U
Aliph	nC20	23.2570				U
Aliph	nC21	24.4410				U
Aliph	nC22	25.5760				U
Aliph	nC23	26.6620				U
Aliph	nC24	27.7060				U
Aliph	nC25	28.7100				U
Aliph	nC26	29.6680				U
Aliph	nC27	30.6080				U
Aliph	nC28	31.5080				U
Aliph	nC29	32.3700				U
Aliph	nC30	33.2910				U
Aliph	nC31	34.3470				U
Aliph	nC32	35.5720	500448			Z
Aliph	nC33	37.0130	1157334			Z
Aliph	nC34	38.7280	3292490			Z
Aliph	nC35	40.8080	7154721			Z
Aliph	nC36	43.3510	10807769			Z
Aliph	nC37	46.4710	11192545			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:**

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 : **COA/000989**

Beach E6: Eves Cove Visit: 3

Comments:

Location: Mid Intertidal

Local Date Time: 21/10/2016 10:01:59 AM

Type: Waxy Bitumen

Family: Type I waxy bitumen (high botryococcane)

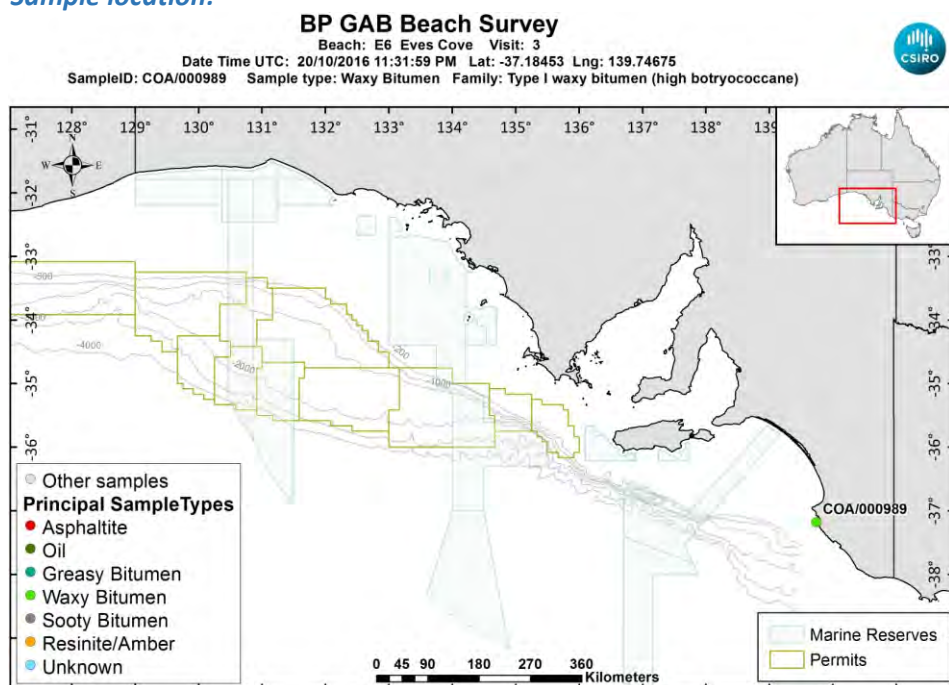
Size (cm): 2.5

Latitude (Y): -37.184530

Weight (gm): 1.55727

Longitude (X): 139.746753

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000989_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000989_146A6996.JPG](#)

Sample - laboratory image:



[LinkedFiles\GAB_BCH1\Samples\COA_000989_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: **COA/000989_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			87.29	percent	Y
Inorg	Hydrogen			7.56356063618291	percent	Y
Inorg	Nitrogen			0.34	percent	Y
Inorg	Sulphur			1.64078054845201	percent	Y

Results for: GCMS with Full Scan

Unique ID: **COA/000989_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\COA_000989_bulk_WholeOil.JPG](#)

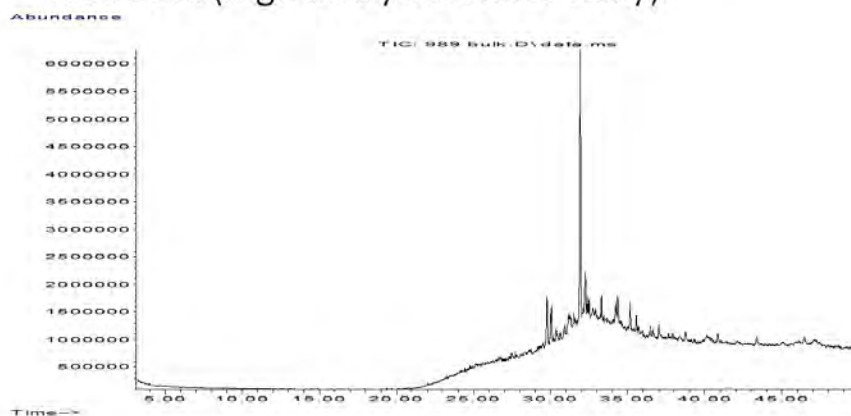
Preparation: Dissolved in solvent

Method ID/s:

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

Results for: GCMS with Full Scan

989 bulk (high botryococcane waxy)



Data Sheet:

(default units ppb)

Type:	Compound / Variable:	Retentn Time:	Target Respse:	Value:	units:	Qualifier:
Aliph	Botryococcane	31.9240	40811171			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	1178303			Z
Aliph	nC29	32.3700	939154			Z
Aliph	nC30	33.2910	2146228			Z
Aliph	nC31	34.3470	3559233			Z
Aliph	nC32	35.5720	2463237			Z
Aliph	nC33	37.0130	2262659			Z
Aliph	nC34	38.7280	2025079			Z
Aliph	nC35	40.8080	2209346			Z
Aliph	nC36	43.3510	2234972			Z
Aliph	nC37	46.4710	2120365			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:

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 : COA/000990

Beach E6: Eves Cove Visit: 3

Comments:

Location: Upper Intertidal

Local Date Time: 21/10/2016 10:05:03 AM

Type: Waxy Bitumen

Family: Unclassified high wax bitumen

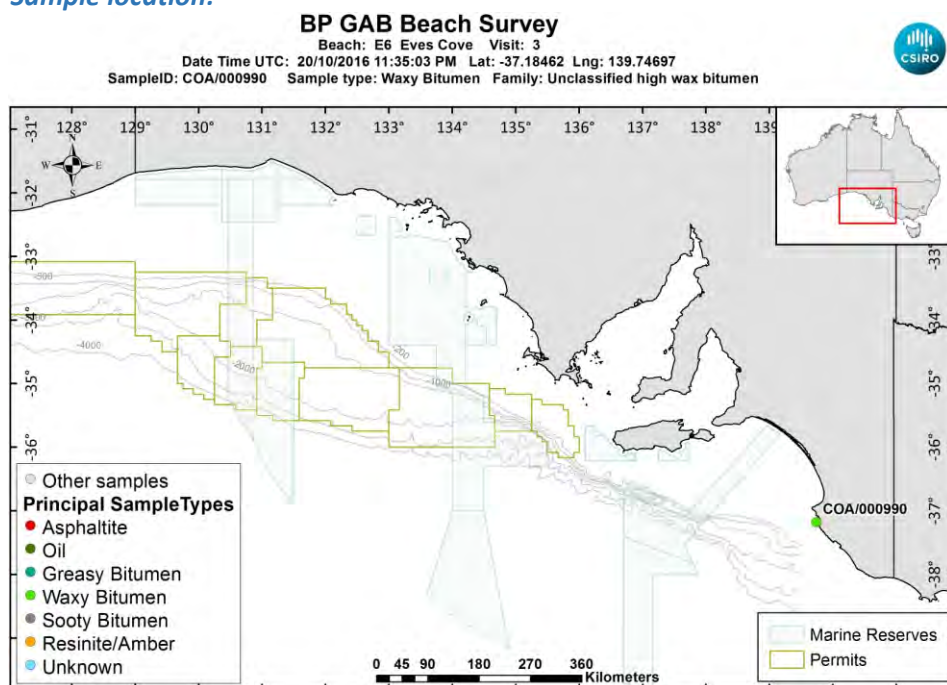
Size (cm): 2.6

Latitude (Y): -37.184625

Weight (gm): 3.10945

Longitude (X): 139.746967

Sample location:



[LinkedFiles\GAB_BCH1\SampleLocations\COA_000990_Location.jpg](#)

Sample - field image:



[LinkedFiles\GAB_BCH1\Samples\COA_000990_146A6998.JPG](#)

Sample - laboratory image: