

# Open File Envelope

## No. 6900

Airborne Spectrometer Survey No 2 , 1987

Bertoil Holding Corporation A.G. - PEL 36

Lake Torrens - South Australia

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Telephone: (08) 8463 3000  
Facsimile: (08) 8204 1880



**Government of South Australia**  
**Primary Industries and Resources SA**

## **ENVELOPE 6900**

**TENEMENT:** **PEL 36 Lake Torrens**

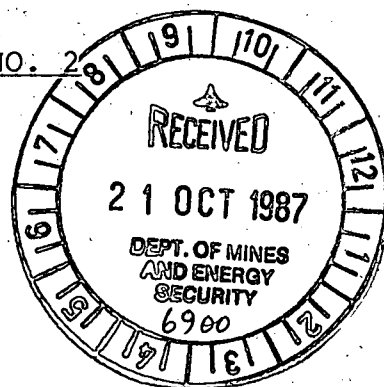
**TENEMENT HOLDER:** Bertoil Holding Corporation A.G.

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**RECON**

EXPLORATION [AUSTRALIA] P/L

BERTOIL HOLDING CORPORATION A.G.PEL 36, LAKE TORRENSAIRBORNE SPECTROMETER SURVEY NO. 226 JUNE - 2 JULY, 1987

RECON EXPLORATION AUST. PTY LTD  
ADELAIDE AIRPORT,  
ADELAIDE S.A. 500  
PHONE: (08) 352 6944

07 JULY 1987

DSBERTOIL1.00

Adelaide Airport, South Australia 5000.  
Telephone: (08) 352 6944 Telex: AA 89619

Mines &amp; Energy SA

R95/01681



00122693

07 July, 1987

Bertoil Holdings A.G.  
15506 Wright Bros Drive,  
DALLAS TEXAS 75234

Attn: Mr Joaquin de Navasques (Director)

Dear Mr de Navasques,

Ref: Airborne Spectrometer Survey, PEL 36, Lake Torrens

We have completed a second five day spectrometer survey in PEL 36, South Australia. The area of 1,900 square kilometres was surveyed over a period of 7 days (26 June to 2 July, 1987).

This letter reports the exciting results of 11 hydrocarbon microseepage anomalies discovered over the second survey period. Further exploration is warranted in these very encouraging target areas.

The Reservoir Gas Mapper (Spectrometer)

Since 1976, the airborne spectrometer, or Reservoir Gas Mapper, has been used to regionally define areas of hydrocarbon gas microseepage emanating from subsurface hydrocarbon accumulations. (Over the past 10 years hundreds of producing oil and gas fields have been examined with the Reservoir Gas Mapper around the world. All of these fields have displayed a clear signature of hydrocarbon microseepage on the airborne spectrometer.) Depending on the terrain between 80 and 160 square kilometres per day can be covered using the helicopter mounted sensor.

The Reservoir Gas Mapper is an electronic installation with a rotating beacon and incorporated antenna. Pulses of specific frequency energy are emitted by the beacon in a horizontal fan shaped beam. Any hydrocarbon gas molecules hit by the energy beam are excited to a higher state of energy. Between pulses the gas molecules re-radiate their characteristic energy as they de-energise to their original ground state. The characteristic energy re-radiated from the molecules is detected, amplified and displayed on a cathode ray screen in the helicopter. Large scale maps are used for navigation and plotting of the microseepage anomalies by the spectrometer operator. Sensitivity is so great that even a few parts per million hydrocarbon gases can readily

be detected and recorded. Background seepage over the sedimentary basin is screened out.

The attached map shows Minor anomalies coloured light yellow and Moderate anomalies coloured orange. These anomalies approximate to an increase over background seepage in the region, of one, and two times, background respectively. Significant anomalies approximate to three times, or greater, background hydrocarbon microseepage.

#### PEL 36, Lake Torrens Survey

The airborne reconnaissance survey was conducted with the spectrometer mounted to a Lloyd Bell Jet Ranger III 206B helicopter. Survey operations commenced from Wilpena Chalet on Friday 26 June. The helicopter and pilot were mobilised from Adelaide, S.A. for the survey period.

Weather conditions were fine and cool with moderate humidity. Barometric pressures throughout the survey period were steady between 1011 - 1014 hPa. No rain fell during the period.

Survey patterns were flown generally in an east-west direction, until an anomaly was detected by the spectrometer. Infill flying then defined the shape and strength of the microseepage. Heights were flown less than 10 metres so that the sensor could detect the higher gas concentrations near ground level before dispersion to the atmosphere. In most areas there were few tall trees or dense scrub which made for good flying conditions.

In all areas safety and consideration of stock, dwellings and people were of paramount importance. Any dwellings or stock were passed at safe height and distance to cause minimum disturbance.

Once anomalous hydrocarbon gas microseepages were identified, a more detailed evaluation was conducted by flying closer grid patterns and hovering the helicopter at various locations. By altering the detection characteristics of the spectrometer, the experienced operator was able to map increasing concentrations of gas microseepage on a semiquantitative basis. These areas of microseepage were plotted on large scale maps in their concentration zones. Minor and Moderate anomalous zones approximate to increases over background of one, and two times hydrocarbon background respectively. Significant anomalies approximate to three times, or greater, background hydrocarbon microseepage.

### Results (See Map)

Eleven (11) anomalous microseepage areas were discovered by the Reservoir Gas Mapper (spectrometer). Four (4) anomalies are of Moderate intensity, approximately two times background hydrocarbons. These Moderate anomalies compare most favourably with other low gas oil fields we have surveyed around Australia e.g. Rough Range, Mt. Horner and Kenmore.

One anomaly was of significant intensity (an increase of three times background hydrocarbon microseepage.)

All anomalies found were discrete and appeared associated with the dominant faulting and lineaments.

To quantify the relative importance of these discovery anomalies needs accurate ground geochemistry.

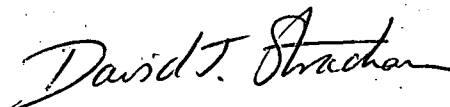
### Interstitial Gas Sampling Survey

It is recommended that ground geochemistry be used to validate and quantify these discovery anomalies. Recon Exploration can also collect ground geochemistry samples across seismically defined structures to assess any hydrocarbon microseepage.

A base of operations and portable laboratory can be established at Leigh Creek township. Interstitial soil gas samples will be collected at 200 metre intervals in grids and profiles across any areas you wish to evaluate. The samples will be analysed using our hydrogen-flame ionisation gas chromatograph and field support computer, integrator and plotter. Results of these analyses will be presented on profile graphs of methane, ethane and propane, along with other analytical data tables for each sample. These data will be interpreted by comparison to the known oil field microseepage, and our world-wide geochemical data base.

We look forward to further assisting Bertoil Holding Corporation A.G.; we hope these findings will aid your evaluation of the survey area.

Yours faithfully,



DAVID J. STRACHAN  
Manager



ED HODGES  
Operator

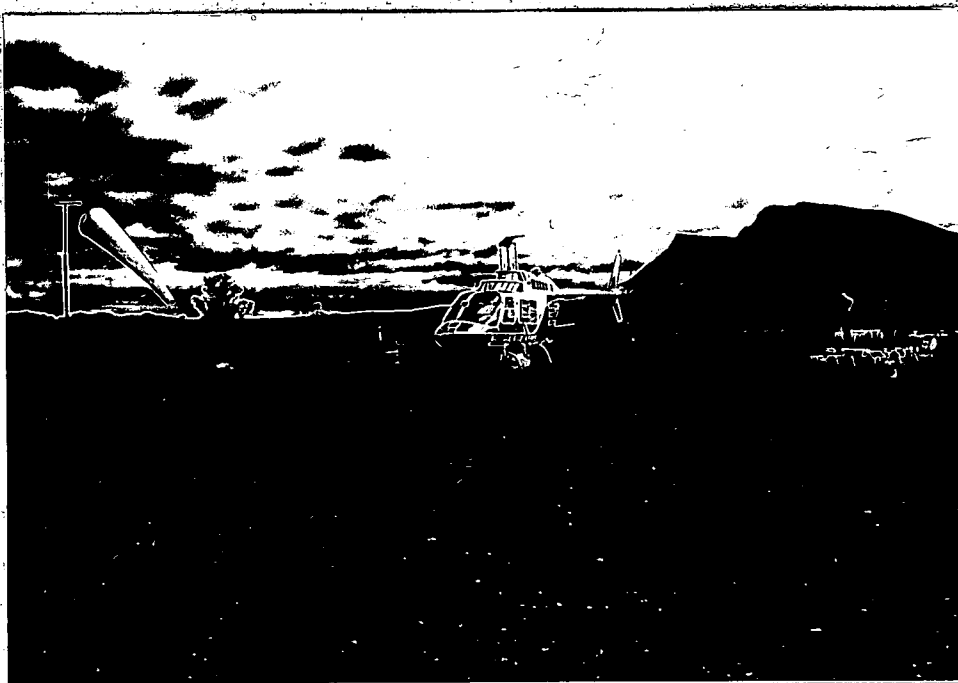
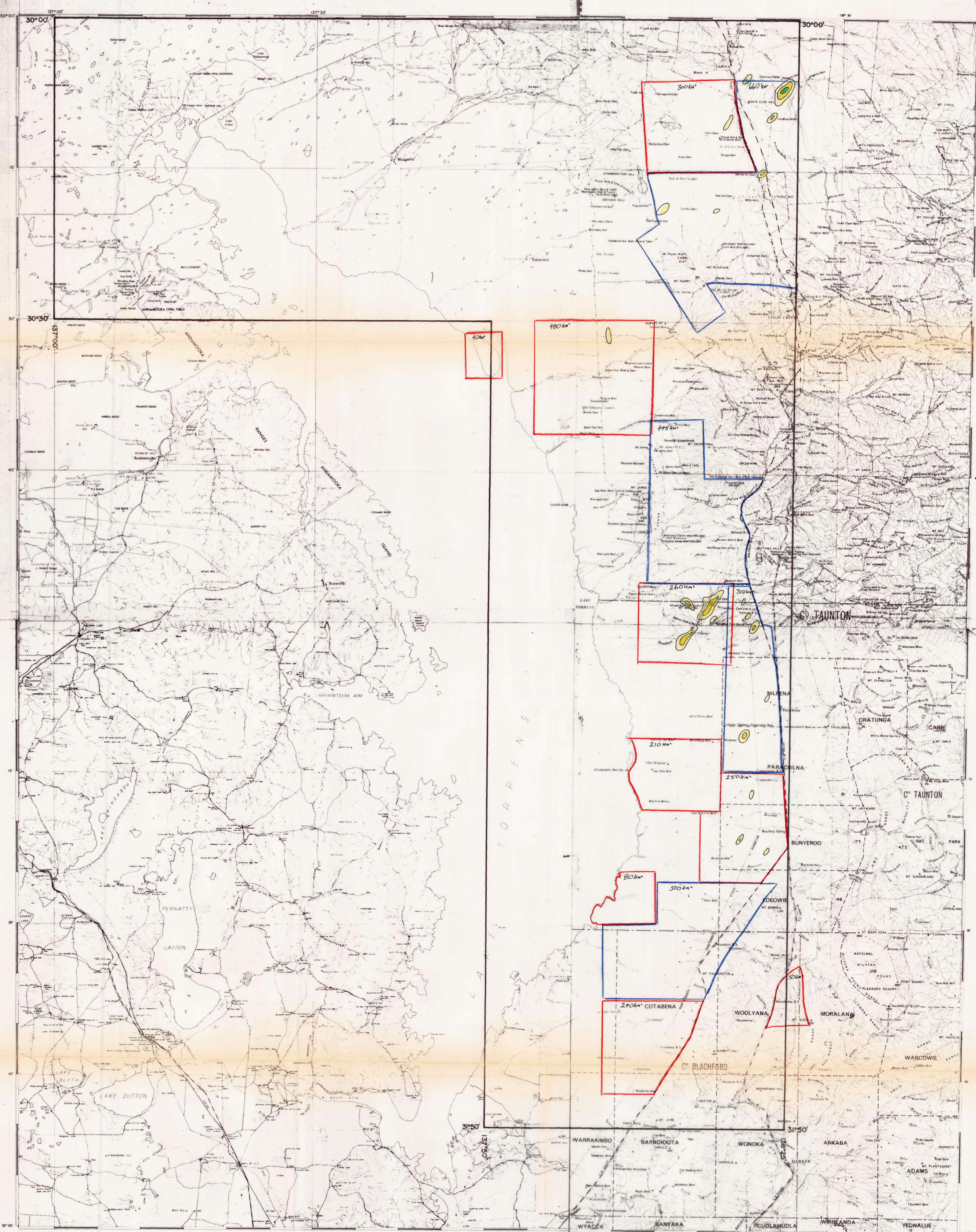


PLATE 1: Refuelling at Wilpena Pound Chalet - Base of Operations



PLATE 2: In the survey area near Parachilna township, looking East.





ANALOGUE SPECTROMETER SURVEYS

**SURVEY #1**  
10-14 Nov 1986  
Approx Area 1910 km<sup>2</sup>

**SURVEY #2**  
25 JUNE - 2 JULY 1987  
Approx Area 1910 km<sup>2</sup>

○ Minor Anomaly  
○ Moderate Anomaly  
○ Significant Anomaly

INDEX TO ADJOINING SHEETS


WARRAKIMBO  
BARNDIOOTA  
WONOKA  
ARKABA  
ADAMS  
WIRREANDA  
YEDNALLUE

WARRAKIMBO  
BARNDIOOTA  
WONOKA  
ARKABA  
ADAMS  
WIRREANDA  
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ARKABA  
ADAMS  
WIRREANDA  
YEDNALLUE

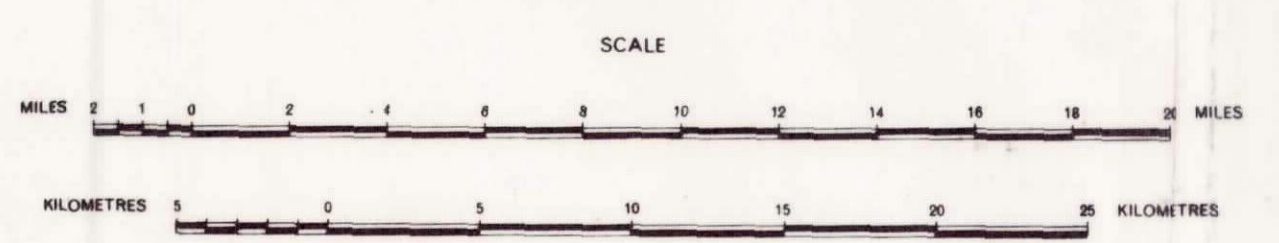
INDIGO OIL PTY LTD

SPECTROMETER SURVEYS

**RECON**  
EXPLORATION  
INDUSTRIAL PTY LTD  
ADELAIDE AIRPORT  
ADELAIDE, S.A. AUSTRALIA 5000

P.E.L. 36, S. Australia

1:250,000  
SYNOPSIS 6/7/87  
6100-1





HYDROCARBON MICROSEEPAGE

GEOCHEMICAL SURVEY

PEL 36

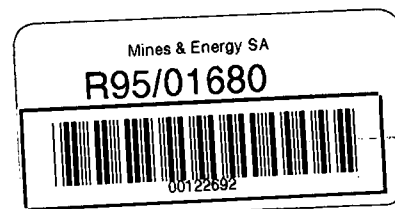
South Australia

to

Bertoil Holding Corporation A.G.  
15506 Wright Bros. Drive  
Dallas, Texas 75234



16 September 1987







# RECON

EXPLORATION [AUSTRALIA] P/L

September 16, 1987

BERTOIL HOLDING CORPORATION A.G.  
15506 Wright Bros. Drive  
Dallas, Texas 75234

ATT: MR. JOAQUIN de NAVASQUES (Director)

Dear Mr. de Navasques:

REF: HYDROCARBON GEOCHEMICAL SURVEY, PEL 36, SOUTH AUSTRALIA

This letter reports the result of our recently completed ground geochemical sampling survey in PEL 36, South Australia. The purpose of this survey was to identify and quantify the hydrocarbon gas microseepage occurring over several airborne geochemical anomalies RECON EXPLORATION had previously discovered in the area (Two reports, July, 1987). Interstitial gas samples were collected along parts of several anomalies. Because there were no producing oil wells in the survey area, it was not possible to compare the measured microseepage to a "Benchmark" for the area. However, when compared to RECON's world-wide experience and data-base, several of these anomalies exhibit favourable hydrocarbon gas microseepage, worthy of further detailed exploration.

## GROUND HYDROCARBON SAMPLING SURVEY

### Field Conditions

RECON EXPLORATION (AUST) PTY LTD mobilised four staff from Adelaide: Mr. David Strachan (Manager), Mr. Ray Burson (Chief Chemist) Mr. Dixon Bunt (Chief Sampler), and Mr. Philip Davies (Field Sampler). The laboratory and base of operations was Leigh Creek from 12-19 August, 1987.

The sampling areas were around the immediate area north of Lyndhurst Township and around Nilpena Homestead. Both areas exhibit airborne spectrometer anomalies of hydrocarbon microseepage. These anomalies were the best targets of the total area analysed by Landsat Analysis (Saunders, 1986).

The sampling area consists of undulating plain of claypans and gibber with some hills. Native shrubland and open woodland is dominated by acacia and eucalypt, with shrubs and grasses. It has a hot, dry desert climate with cool winters. The mean annual rainfall is an unreliable 200 mm. Coal mining, meat and wool are the main sources of income. Tourism is important in the nearby Flinders Ranges.

Temperate clear days with clear skies made work comfortable. No rain fell during the survey. Barometric pressures were moderately stable around 1020 hPa.

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Sampling conditions were ideal, and averaged 60 samples per day. Soils sampled were moderate to highly compact sands or clayey sands with occasional rock or gravel.

### Sampling and Analysis

A total of 386 interstitial gas samples were collected by our field crew along profiles in these structural areas and analysed in our Field Geochemical Laboratory located in Leigh Creek near the sampling sites. The samples were collected at each site using RECON EXPLORATION'S patented unique gas sampling probes. This stainless steel probe was hammered into the soil and the interstitial gas sample taken by syringe through a rubber septum seal at the top of the probe. The samples were spaced at 200-metre intervals along lines through the anomalies and then transported to our field laboratory for same-day analysis.

In the laboratory we used a hydrogen-flame ionization gas chromatograph for analysis, and associated integrator and computer for collating the analytical data. By having this instrumentation near the sample sites, it was possible to perform preliminary evaluations of the data and provide more efficient quality control of all operations.

### Results and Interpretation

#### Results

The results of these analyses are presented on the attached quantitative profile graphs and contrast-to-background graphs of methane, ethane and propane for the profile lines. Chromatographic analysis data for each sample are also included along with several summations and ratios that are helpful in interpreting the results.

#### Interpretation

These summations and ratios have the following applications to interpretations of the geochemical analytical data:

Sum C1-C4: This is the sum of all the hydrocarbons measured from methane through normal-butane.

Sum C2-C4: This is the sum of the petroliferous hydrocarbons (excluding methane). This summation is very useful for evaluating the petroleum potential of an area based on these components concentrations in the soil gases. It excludes methane, which may have a biogenic origin.

Ethane/Ethene and Propane/Propene Ratios: These are the alkane/alkene ratios sometimes useful in identifying fracture related (or fault) microseepage. The normal values are usually in the range of 1-2. An unusual sample with ratios in the range of 3-5 usually indicates seepage up fractures or joints above the reservoir.



Ethane Ratio The ratio of methane to ethane (methane/ethane). Values near 10 indicate a more liquid petroleum source, whereas values in the 20-30 range are related to a dry gas source.

Propane Ratio The propane to methane ratio (propane x 1000/methane). Values in the range >10 are more liquid prone, whereas values in the range <10 are more gas prone.

% Methane The percent methane in the total hydrocarbon gas. A value >95% indicates a dry gas source.

% Wetness The percent of the sum of C2-C4 (ethane through butanes) in the sample. This and the % Methane total 100%. A value >10% indicates a liquid character to the gas source.

The interpretation of the attached profiles is relatively straightforward, that is, the most concentrated amounts of hydrocarbon gases were collected and measured over the areas where the petroleum source potential is the greatest. Statistical evaluation of the hydrocarbon gas sample data to determine the contrast-to-background of these primary hydrocarbon gases supports our interpretations. Each sample line that was ranked from Minor to Moderate and Significant has microseepage exceeding background levels.

The areas were graded as Significant, Moderate, and Minor "reservoir-type" microseepage. These represent an increase over background hydrocarbon gas microseepage of approximately four-, two-, and one-times, respectively. This type of microseepage appears as anomalous over several adjacent samples. "Fault-type" microseepage was clearly evident in several of the areas evaluated. These appear as narrow spikes on the profile graph.

We believe these anomalous hydrocarbon microseepage patterns define the areas of primary interest for further petroleum exploration. With the aid of these quantitative hydrocarbon microseepage analyses, a thorough evaluation of each prospect identified is suggested.

Profiles from the areas that were sampled (see map) during this survey are interpreted as follows:

#### DEADMAN'S CREEK

##### 1. Line-A

The first half of this profile exhibits background to minor hydrocarbon gas microseepage. Moderate microseepage is exhibited at points 20-21 and significant microseepage between points 29-37. Microseepage is again background to minor until points 72-74, where moderate microseepage is again exhibited. From points 82-85, significant microseepage is exhibited.



2. Line-B

This profile exhibits moderate to significant hydrocarbon gas microseepage from points 5-10 and 25-29.

3. Line-C

Moderate microseepage is exhibited between points 2-16 with a large amount of methane present at point 4, which appears to be leakage up a fault or fracture.

4. Line-D

This profile exhibits moderate microseepage between points 9-13.

5. Line-E

This profile exhibits a moderate gassey (high methane) microseepage.

6. Line-F

The microseepage along this profile is minor to moderate with the highest values measured near the centre.

DEADMAN'S CREEK SOUTH

Moderate to significant gaseous (high methane) hydrocarbon gas microseepage is exhibited between points 16-18.

NILPENA RAIL SIDING ANOMALY

Minor microseepage is exhibited across this anomaly.

MT. MICHAELS ANOMALY

Minor microseepage is exhibited along this short line.

PADLOCK DAM ANOMALY

1. Line-A

Significant hydrocarbon gas microseepage is exhibited between points 3-6, falling to background microseepage for the remainder of this profile.

2. Line-B

Moderate microseepage is exhibited along this profile at points 6 and 11-13. The gases present from 11-13 are possible fault-related.

3. Line-C

Minor to background microseepage is exhibited along this profile.

4. Line-D

Minor microseepage was measured across this anomaly, possible fault-related at points 4, 8 and 12.

WHITE CLIFF ANOMALY

Minor hydrocarbon gas microseepage is exhibited across this anomaly.



## LYNDHURST NORTH ANOMALY

Minor hydrocarbon gas microseepage is exhibited that is possibly fault-related at point 2.

### SUMMARY

Interstitial hydrocarbon gas samples were collected and analysed along profiles from many of the previously discovered microseepage anomalies mapped in PEL 36 in South Australia. Parts of these airborne anomalies are interpreted as exhibiting hydrocarbon gas microseepage. Our interpretation is derived by evaluating the amounts of hydrocarbon gas microseepage measured in past surveys of known oil and gas fields through Australia. In particular, RECON EXPLORATION has made comparisons with past surveys over water-drive oil reservoirs, i.e. low gas drive. These oil fields include Mt. Horner (W. Aust.), Rough Range (W. Aust.), Merrimelia (S. Aust.), and Kenmore (Qld.). In our opinion, the moderate to significant hydrocarbon gas microseepage prospects warrant further detailed evaluation.

It has been a pleasure conducting this survey on your behalf, especially with such encouraging results. We hope these findings will aid your evaluation of Petroleum Exploration Licence No 36. If you should have any questions with regard to this report, or the survey method, please do not hesitate to call.

We appreciate the opportunity to perform this exciting work for BERTOIL HOLDING CORPORATION A.G. and look forward to the next opportunity to serve your group.

Yours faithfully,

RECON EXPLORATION (AUSTRALIA) PTY. LTD.



David Strachan  
Manager



Ray Burson  
Vice President,  
Geochemical Operations  
RECON EXPLORATION INC.

Enclosures



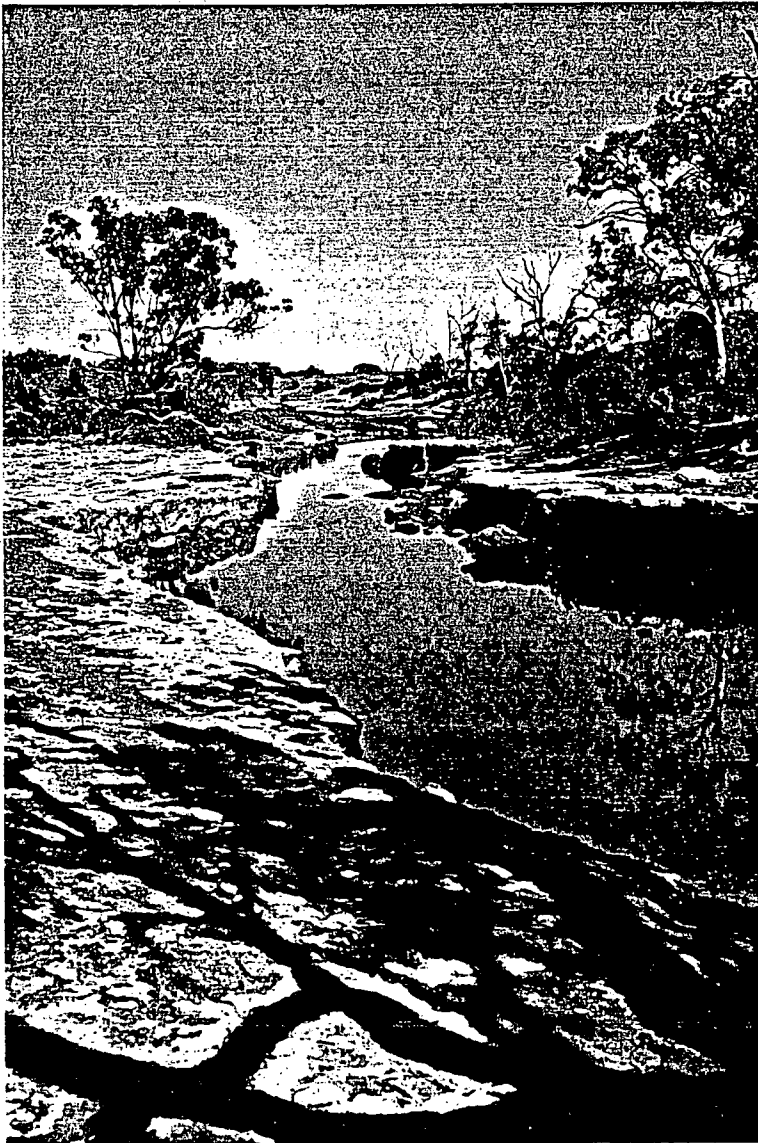


PLATE 1:

DEADMAN'S CREEK NEAR A GOOD  
MICROSEEPAGE ANOMALY.

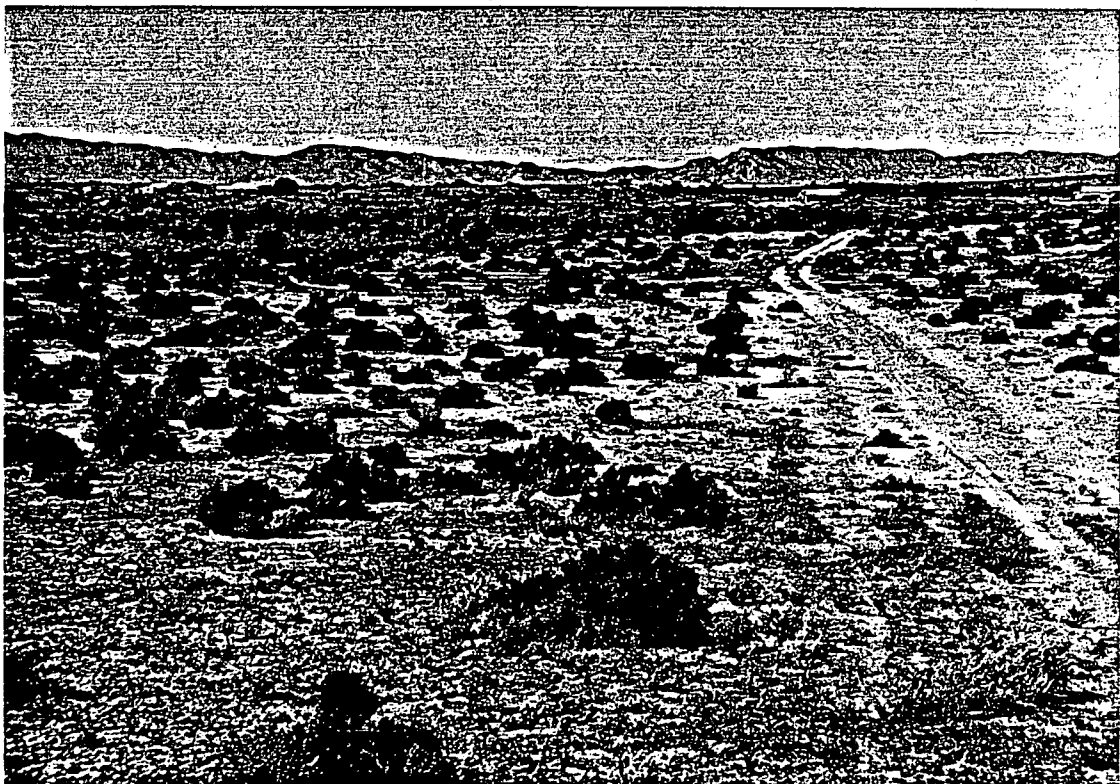
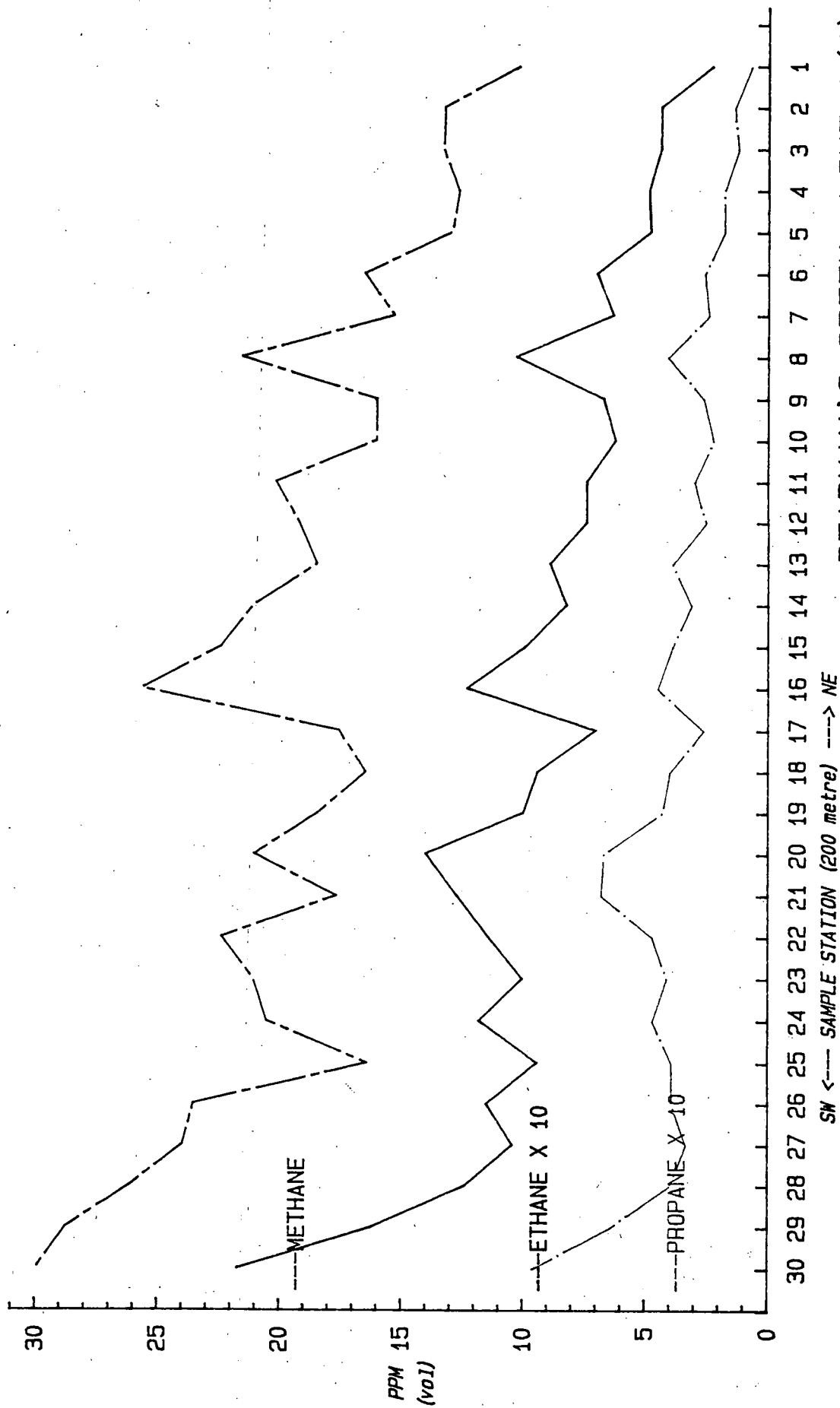


PLATE 2: NILPENA HOMESTEAD - LOOKING  
TOWARD THE EAST ACROSS PEL 36.





DEADMAN'S CREEK, LINE-A (1)

PEL 36 - SOUTH AUSTRALIA

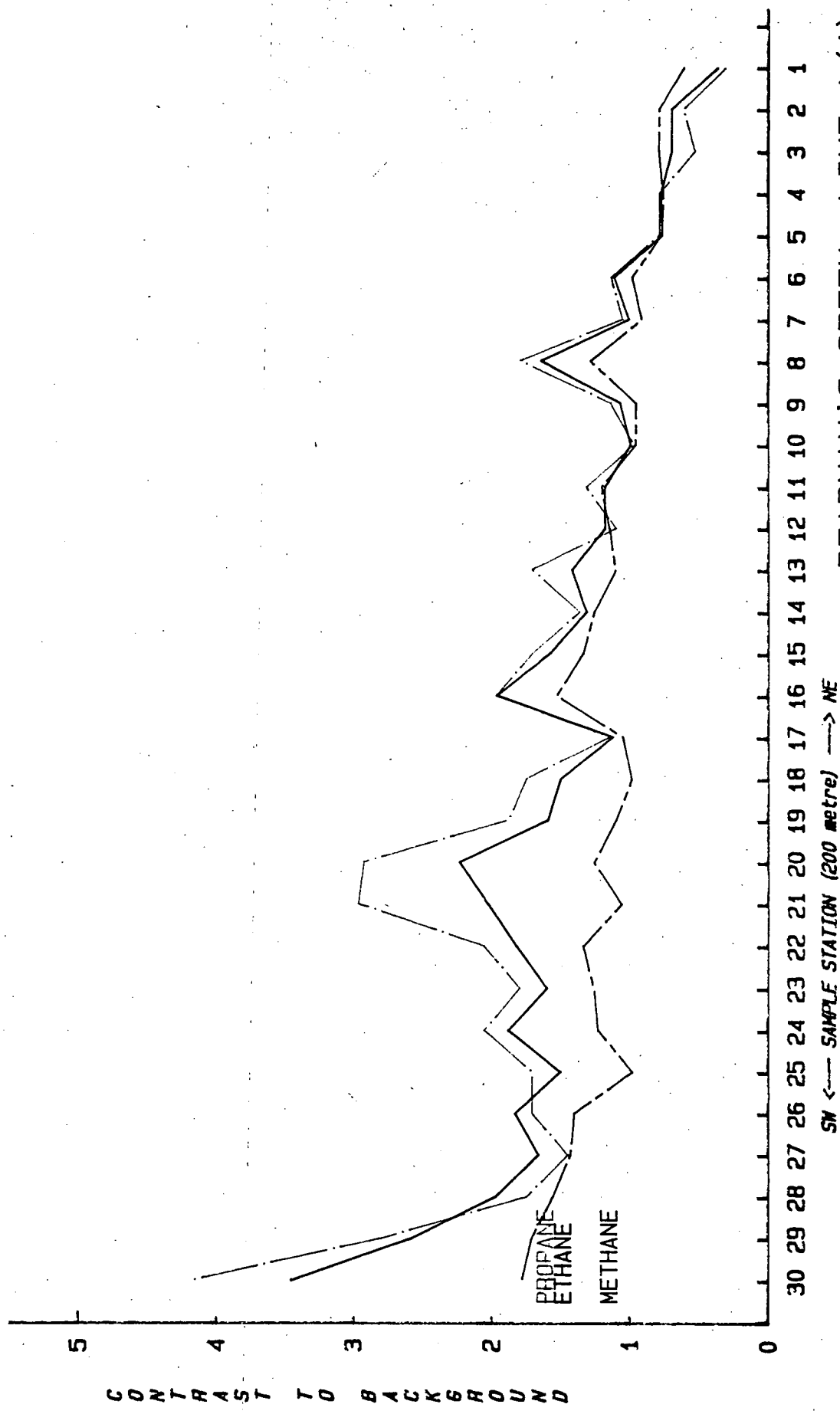
GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

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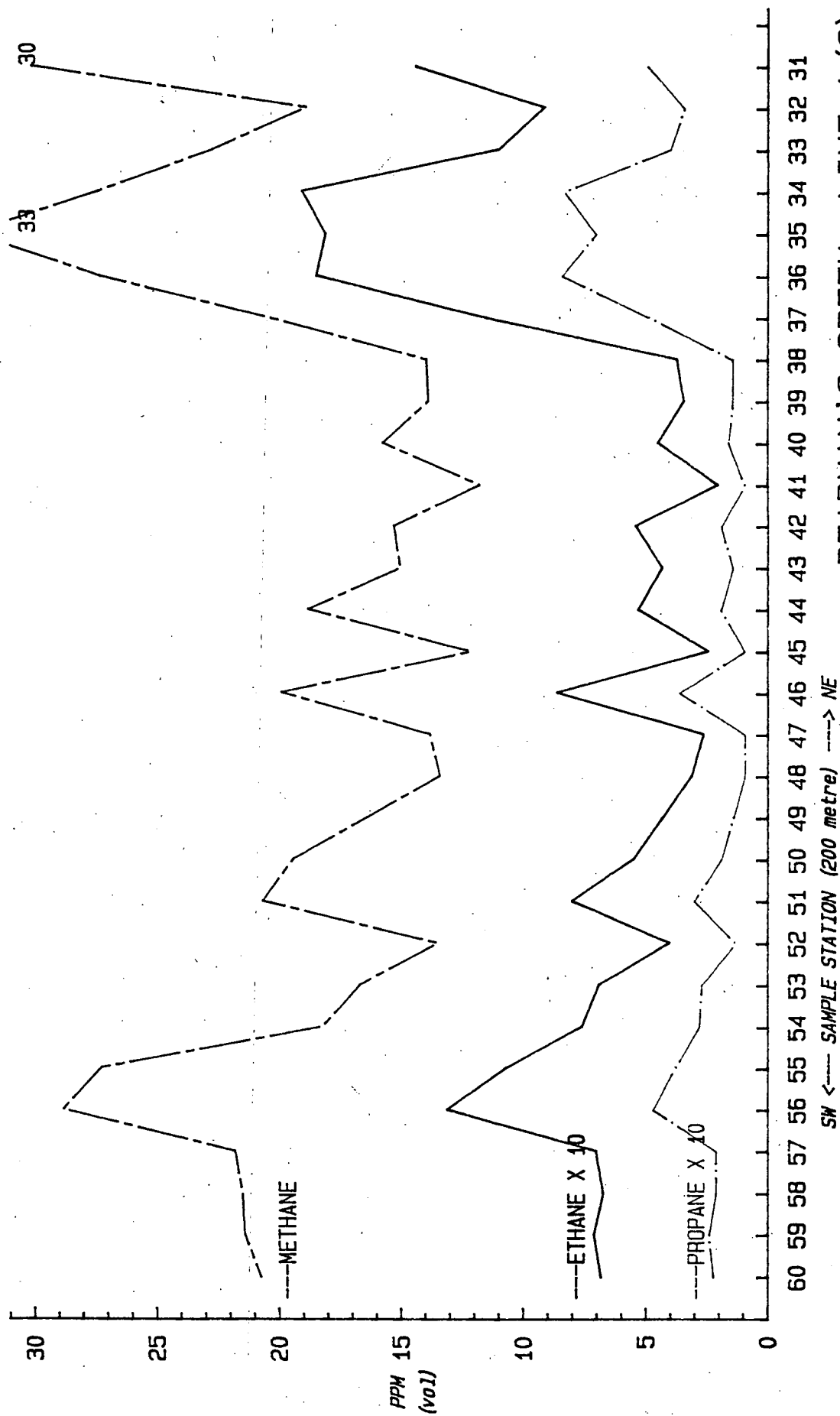




DEADMAN'S CREEK, LINE-A (1)  
 PEL 36 - SOUTH AUSTRALIA  
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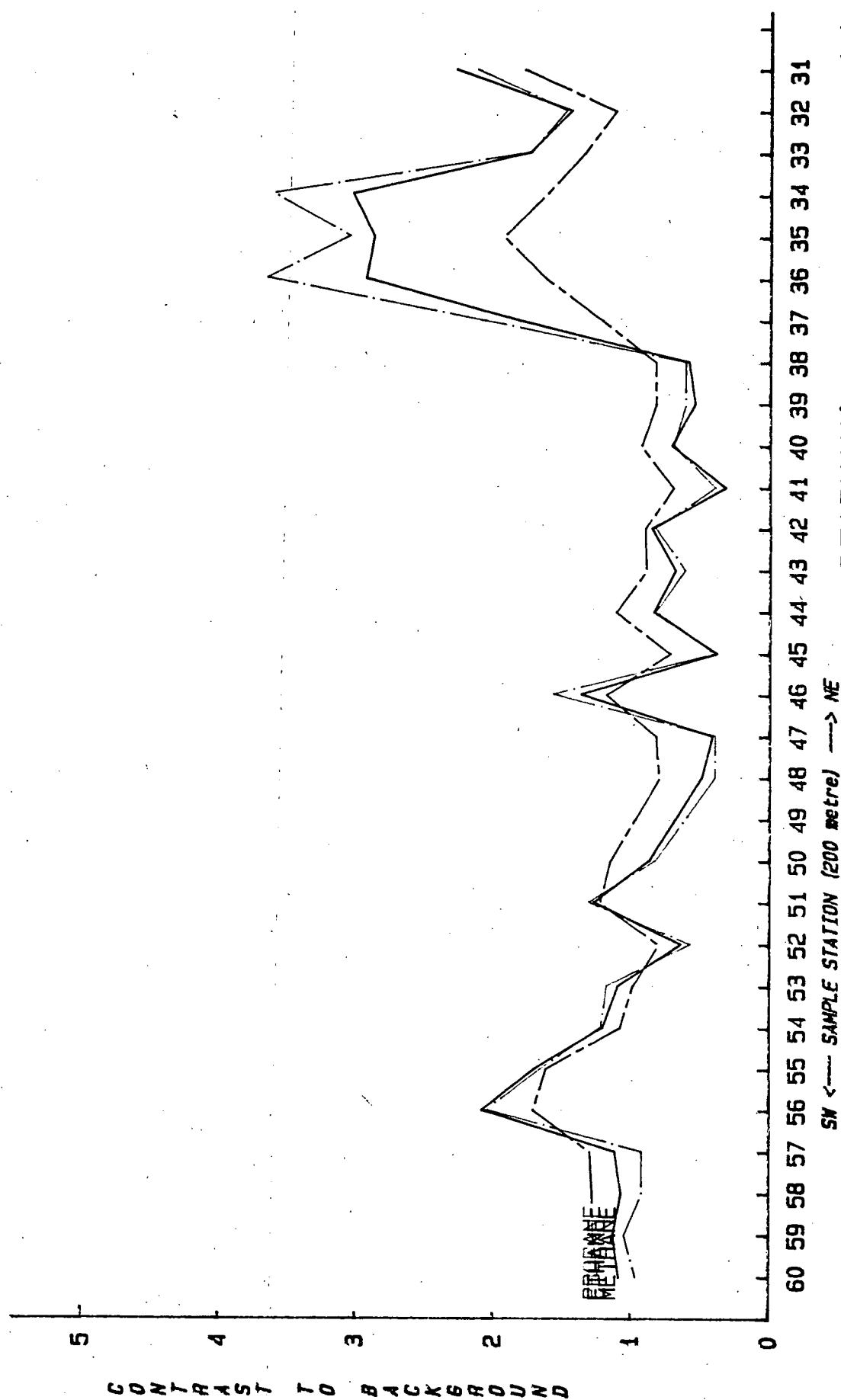




DEADMAN'S CREEK, LINE-A (2)  
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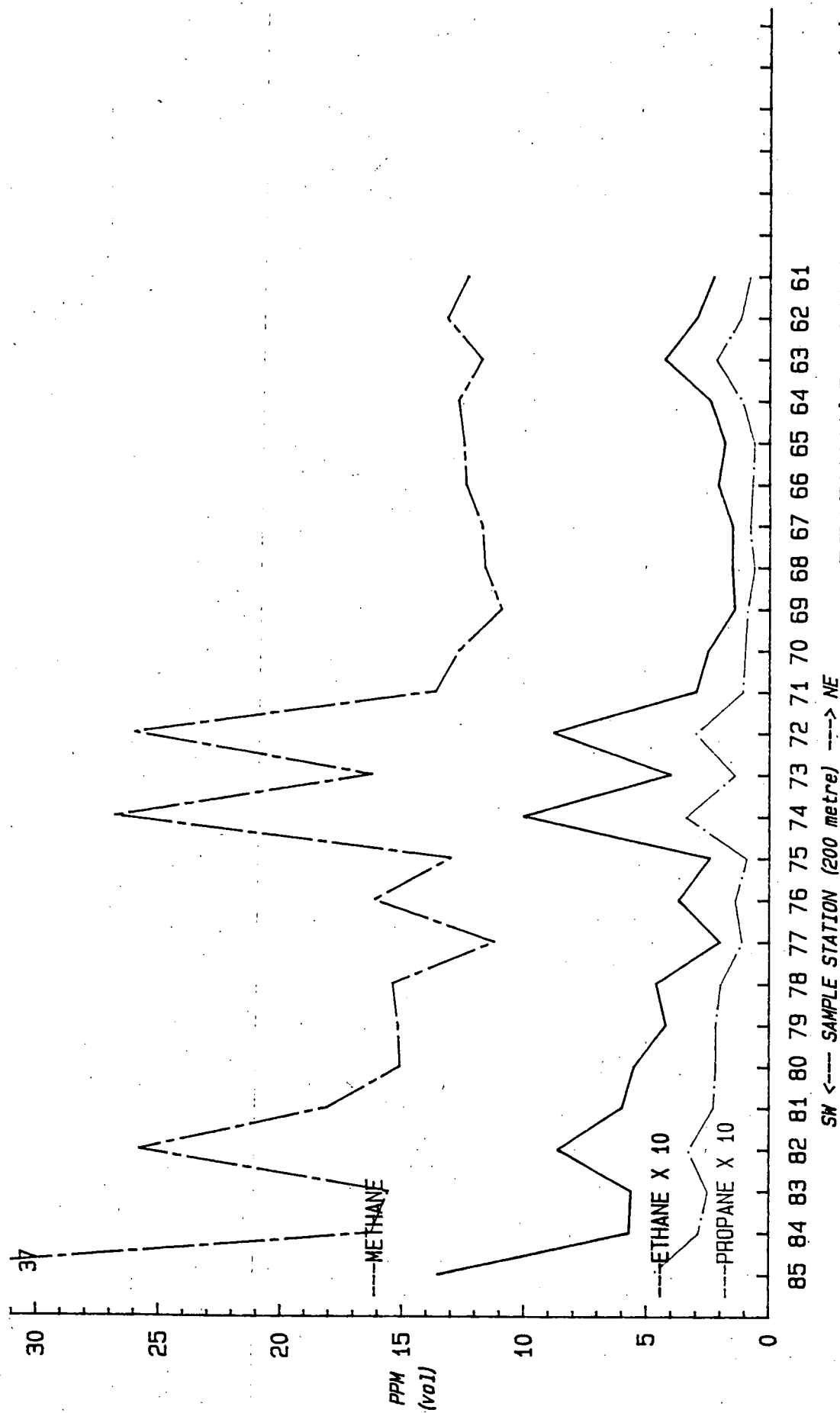
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DEADMAN'S CREEK, LINE-A (2)  
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DEADMAN'S CREEK, LINE-A (3)

PEL 36 - SOUTH AUSTRALIA

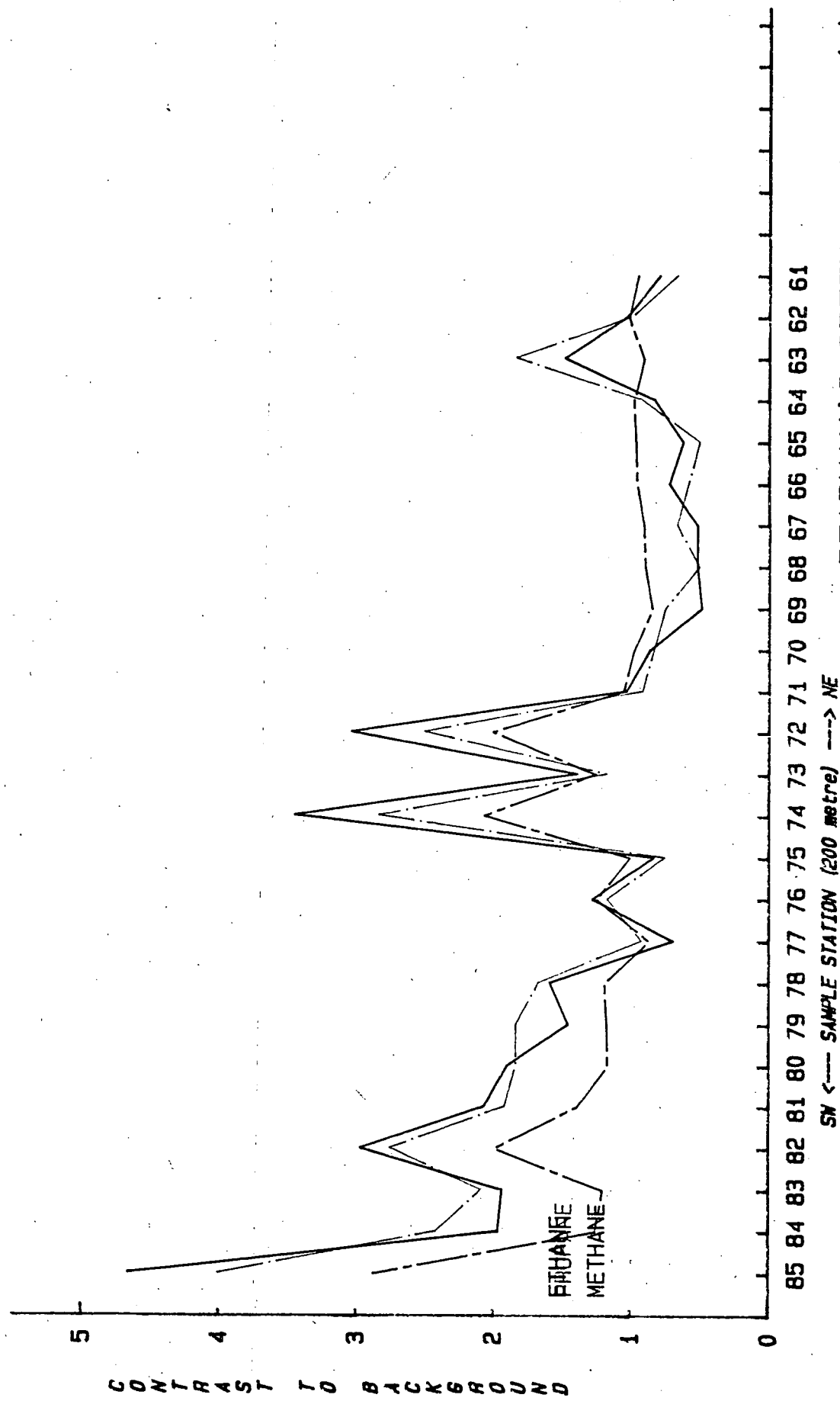
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ADELAIDE, S. AUSTRALIA





DEADMAN'S CREEK, LINE-A (3)

PEL 36 - SOUTH AUSTRALIA

GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

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RECON EXPLORATION (AUSTRALIA) PTY LTD

ADELAIDE, S. AUSTRALIA

**BERTOIL HOLDING CORPORATION A.G.  
DEADMAN'S CREEK LINE-A**

**DATA SUMMARY TABLE**

Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	10.23	.23	.08	.07	.02	0.00	0.00
2	13.28	.44	.13	.14	.07	0.00	.04
3	13.33	.44	.12	.12	.07	0.00	.02
4	12.67	.49	.12	.18	.09	0.00	.06
5	12.97	.48	.15	.18	.09	0.00	.03
6	16.54	.70	.18	.26	.13	0.00	.06
7	15.31	.63	.16	.24	.11	0.00	.07
8	21.55	1.03	.42	.41	.27	.03	.14
9	16.00	.67	.22	.26	.15	0.00	.07
10	16.04	.62	.22	.22	.14	0.00	.02
11	20.17	.74	.29	.30	.19	0.00	.06
12	19.19	.74	.24	.25	.18	0.00	.06
13	18.45	.89	.27	.39	.10	0.00	.10
14	21.07	.82	.26	.31	.15	.02	.08
15	22.42	.99	.25	.39	.18	0.00	.06
16	25.62	1.23	.54	.45	.32	.05	.17
17	17.54	.70	.23	.26	.16	0.00	.05
18	16.44	.94	.51	.40	.34	0.00	.05
19	18.44	1.00	.40	.43	.28	0.00	.08
20	21.03	1.40	.46	.67	.35	0.00	.13
21	17.55	1.27	.42	.68	.35	.07	.20
22	22.37	1.14	.43	.47	.33	.18	0.00
23	21.06	1.00	.40	.41	.28	.05	.18
24	20.50	1.18	.49	.47	.35	0.00	.10
25	16.38	.94	.43	.39	.27	0.00	.06
26	23.52	1.15	.57	.39	.38	0.00	.06
27	23.98	1.04	.56	.33	.33	0.00	.05
28	26.15	1.24	.68	.40	.42	0.00	.08
29	28.75	1.62	.69	.64	.46	.04	.20
30	29.98	2.17	.91	.96	.71	.02	.23
31	30.14	1.44	.77	.49	.48	.05	.18
32	18.91	.91	.47	.34	.32	0.00	.08
33	22.74	1.10	.55	.40	.38	0.00	.08
34	27.42	1.91	1.52	.83	.83	.07	.21
35	32.58	1.81	.81	.70	.55	.09	.23
36	27.36	1.85	.76	.84	.59	.10	.28
37	20.44	1.15	.49	.48	.37	.08	.16
38	13.93	.37	.19	.14	.12	0.00	.02
39	13.85	.34	.16	.14	.12	0.00	.01
40	15.75	.45	.23	.16	.15	0.00	.02
41	11.75	.20	.10	.09	.10	0.00	.01
42	15.29	.54	.29	.19	.22	0.00	.02
43	15.00	.43	.25	.14	.14	0.00	.02
44	18.80	.53	.28	.19	.20	0.00	.02
45	12.09	.24	.12	.09	.09	0.00	0.00
46	19.90	.86	.45	.36	.32	0.00	.06
47	13.78	.26	.14	.09	.11	0.00	.02
48	13.36	.31	.18	.09	.05	0.00	0.00
49	16.40	.43	.28	.14	.09	0.00	.02
50	19.43	.55	.37	.19	.21	0.00	.05



51	20.68	.80	.47	.30	.28	0.00	.12
52	13.46	.40	.20	.13	.17	0.00	.03
53	16.68	.69	.32	.27	.21	0.00	.06
54	18.22	.76	.36	.28	.20	.02	.12
55	27.26	1.07	.46	.38	.29	0.00	.12
56	28.82	1.31	.62	.47	.40	.02	.12
57	21.77	.70	.36	.21	.39	.02	.06
58	21.47	.67	.38	.21	.26	0.00	.03
59	21.36	.71	.40	.24	.29	0.00	.05
60	20.71	.68	.37	.22	.25	0.00	.04

**BERTOIL HOLDING CORPORATION A.G.  
DEADMAN'S CREEK LINE-A**

**DATA SUMMARY TABLE**

Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
61	12.33	.23	.10	.08	.05	0.00	0.00
62	13.19	.30	.23	.12	.12	0.00	0.00
63	11.73	.43	.23	.22	.18	0.00	.05
64	12.72	.24	.30	.11	.29	0.00	.02
65	12.47	.18	.11	.06	.10	0.00	0.00
66	12.38	.21	.14	.07	.08	0.00	.02
67	11.71	.15	.13	.08	.11	0.00	0.00
68	11.59	.15	.09	.06	.06	0.00	0.00
69	10.91	.14	.09	.09	.07	0.00	0.00
70	12.68	.25	.14	.10	.09	0.00	0.00
71	13.66	.30	.18	.11	.13	0.00	0.00
72	25.95	.88	.62	.30	.37	0.00	.05
73	16.22	.40	.24	.14	.15	0.00	.02
74	26.77	1.00	.62	.34	.38	0.00	.07
75	12.99	.24	.13	.09	.13	0.00	0.00
76	16.14	.37	.20	.14	.11	0.00	.02
77	11.20	.20	.10	.11	.08	0.00	0.00
78	15.38	.46	.29	.20	.20	0.00	.05
79	15.15	.42	.29	.22	.19	0.00	.05
80	15.07	.55	.30	.22	.21	0.00	.05
81	18.04	.60	.33	.23	.22	0.00	.03
82	25.78	.86	.46	.33	.30	0.00	.05
83	15.56	.56	.21	.25	.17	0.00	.05
84	16.28	.57	.26	.29	.20	0.00	.05
85	37.24	1.35	.75	.48	.45	0.00	.08



# DEADMAN'S CREEK LINE-A

## SUMS AND RATIOS

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	10.63	.40	2.88	3.50	96.24	44.48	6.84	3.76
2	14.10	.82	3.38	2.00	94.18	30.18	10.54	5.82
3	14.10	.77	3.67	1.71	94.54	30.30	9.00	5.46
4	13.61	.94	4.08	2.00	93.09	25.86	14.21	6.91
5	13.90	.93	3.20	2.00	93.31	27.02	13.88	6.69
6	17.87	1.33	3.89	2.00	92.56	23.63	15.72	7.44
7	16.52	1.21	3.94	2.10	92.68	24.30	15.68	7.32
8	23.85	2.30	2.45	1.52	90.36	20.92	19.03	9.64
9	17.37	1.37	3.05	1.73	92.11	23.88	16.25	7.89
10	17.26	1.22	2.82	1.57	92.93	25.87	13.72	7.07
11	21.75	1.58	2.55	1.58	92.74	27.26	14.87	7.26
12	20.66	1.47	3.08	1.39	92.88	25.93	13.03	7.12
13	20.20	1.75	3.30	3.90	91.34	20.73	21.14	8.66
14	22.71	1.64	3.15	2.07	92.76	25.70	14.71	7.22
15	24.29	1.87	3.96	2.17	92.30	22.65	17.40	7.70
16	28.38	2.76	2.28	1.41	90.27	20.83	17.56	9.73
17	18.94	1.40	3.04	1.63	92.61	25.06	14.82	7.39
18	18.68	2.24	1.84	1.18	88.01	17.49	24.33	11.99
19	20.63	2.19	2.50	1.54	89.38	18.44	23.32	10.62
20	24.04	3.01	3.04	1.91	87.48	15.02	31.86	12.52
21	20.64	2.99	3.02	1.94	85.51	13.90	38.53	14.49
22	24.92	2.55	2.65	1.42	89.77	19.62	21.01	10.23
23	23.38	2.32	2.50	1.46	90.08	21.06	19.47	9.92
24	23.09	2.59	2.41	1.34	88.78	17.37	22.93	11.22
25	18.47	2.09	2.19	1.44	88.68	17.43	23.81	11.32
26	26.07	2.55	2.02	1.03	90.22	20.45	16.58	9.78
27	26.29	2.31	1.86	1.00	91.21	23.06	13.76	8.79
28	28.97	2.82	1.82	.95	90.27	21.09	15.30	9.73
29	32.40	3.65	2.35	1.39	88.73	17.75	22.26	11.27
30	34.98	5.00	2.38	1.35	85.71	13.82	32.02	14.29
31	33.55	3.41	1.87	1.02	89.84	20.93	16.26	10.16
32	21.03	2.12	1.94	1.06	89.92	20.78	17.98	10.08
33	25.25	2.51	2.00	1.05	90.06	20.67	17.59	9.94
34	32.79	5.37	1.26	1.00	83.62	14.36	30.27	16.38
35	36.77	4.19	2.23	1.27	88.60	18.00	21.49	11.40
36	31.78	4.42	2.43	1.42	86.09	14.79	30.70	13.91
37	23.17	2.73	2.35	1.30	88.22	17.77	23.48	11.78
38	14.77	.84	1.95	1.17	94.31	37.65	10.05	5.69
39	14.62	.77	2.13	1.17	94.73	40.74	10.11	5.27
40	16.76	1.01	1.96	1.07	93.97	35.00	10.16	6.03
41	12.25	.50	2.00	.90	95.92	58.75	7.66	4.08
42	16.55	1.26	1.86	.86	92.39	28.31	12.43	7.61
43	15.98	.98	1.72	1.00	93.87	34.88	9.33	6.13
44	20.02	1.22	1.89	.95	93.91	35.47	10.11	6.09
45	12.63	.54	2.00	1.00	95.72	50.38	7.44	4.28
46	21.95	2.05	1.91	1.13	90.66	23.14	18.09	9.34
47	14.40	.62	1.86	.82	95.69	53.00	6.53	4.31
48	13.99	.63	1.72	1.80	95.50	43.10	6.74	4.50
49	17.35	.95	1.56	1.50	94.52	38.13	8.23	5.48
50	20.80	1.37	1.49	.90	93.41	35.33	9.78	6.59

51	22.65	1.97	1.70	1.07	91.30	25.85	14.51	8.70
52	14.39	.93	2.00	.76	93.54	33.65	9.66	6.46
53	18.23	1.55	2.18	1.29	91.50	24.17	16.19	8.50
54	19.96	1.74	2.11	1.40	91.28	23.97	15.37	8.72
55	29.58	2.32	2.33	1.31	92.16	25.48	13.94	7.84
56	31.76	2.94	2.11	1.18	90.74	22.00	16.31	9.26
57	23.51	1.74	1.94	.54	92.60	31.10	9.65	7.40
58	23.02	1.55	1.76	.81	93.27	32.04	9.78	6.73
59	23.05	1.89	1.78	.83	92.67	30.08	11.24	7.33
60	22.27	1.56	1.84	.88	93.00	30.46	10.62	7.00

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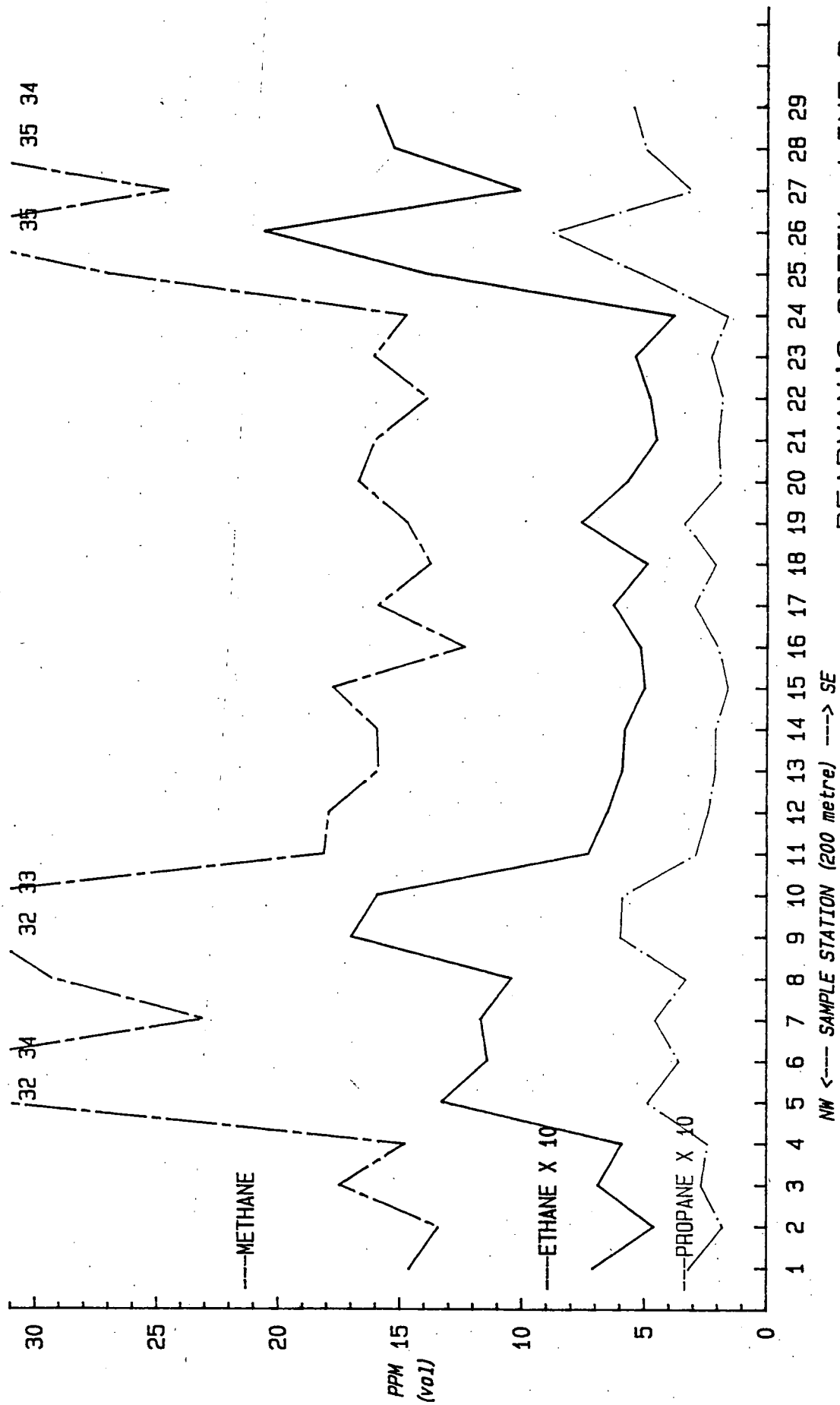


# DEADMAN'S CREEK LINE-A

## SUMS AND RATIOS

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
61	12.79	.46	2.30	1.60	96.40	53.61	6.49	3.60
62	13.96	.77	1.30	1.00	94.48	43.97	9.10	5.52
63	12.84	1.11	1.87	1.22	91.36	27.28	18.76	8.64
64	13.68	.96	.80	.38	92.98	53.00	8.65	7.02
65	12.92	.45	1.64	.60	96.52	69.28	4.81	3.48
66	12.90	.52	1.50	.88	95.97	58.95	5.65	4.03
67	12.18	.47	1.15	.73	96.14	78.07	6.83	3.86
68	11.95	.36	1.67	1.00	96.99	77.27	5.18	3.01
69	11.30	.39	1.56	1.38	96.59	77.93	8.25	3.41
70	13.26	.58	1.79	1.11	95.63	50.72	7.89	4.37
71	14.38	.72	1.67	.85	94.99	45.53	0.05	5.01
72	28.17	2.22	1.42	.81	92.12	29.49	11.56	7.88
73	17.17	.95	1.67	.93	94.47	40.55	8.63	5.53
74	29.18	2.41	1.61	.89	91.74	26.77	12.70	8.26
75	13.58	.59	1.85	.69	95.66	54.13	6.93	4.34
76	16.98	.84	1.85	1.27	95.05	43.62	8.67	4.95
77	11.69	.49	2.00	1.38	95.81	56.00	9.82	4.19
78	16.58	1.20	1.59	1.00	92.76	33.43	13.00	7.24
79	16.32	1.17	1.45	1.16	92.83	36.07	14.52	7.17
80	16.40	1.33	1.83	1.05	91.89	27.40	14.60	8.11
81	19.45	1.41	1.82	1.05	92.75	30.07	12.75	7.25
82	27.78	2.00	1.87	1.10	92.80	29.98	12.80	7.20
83	16.80	1.24	2.67	1.47	92.62	27.79	16.07	7.38
84	17.65	1.37	2.19	1.45	92.24	28.56	17.81	7.76
85	40.35	3.11	1.80	1.07	92.29	27.59	12.89	7.71

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 August, 1987



# DEADMAN'S CREEK, LINE-B

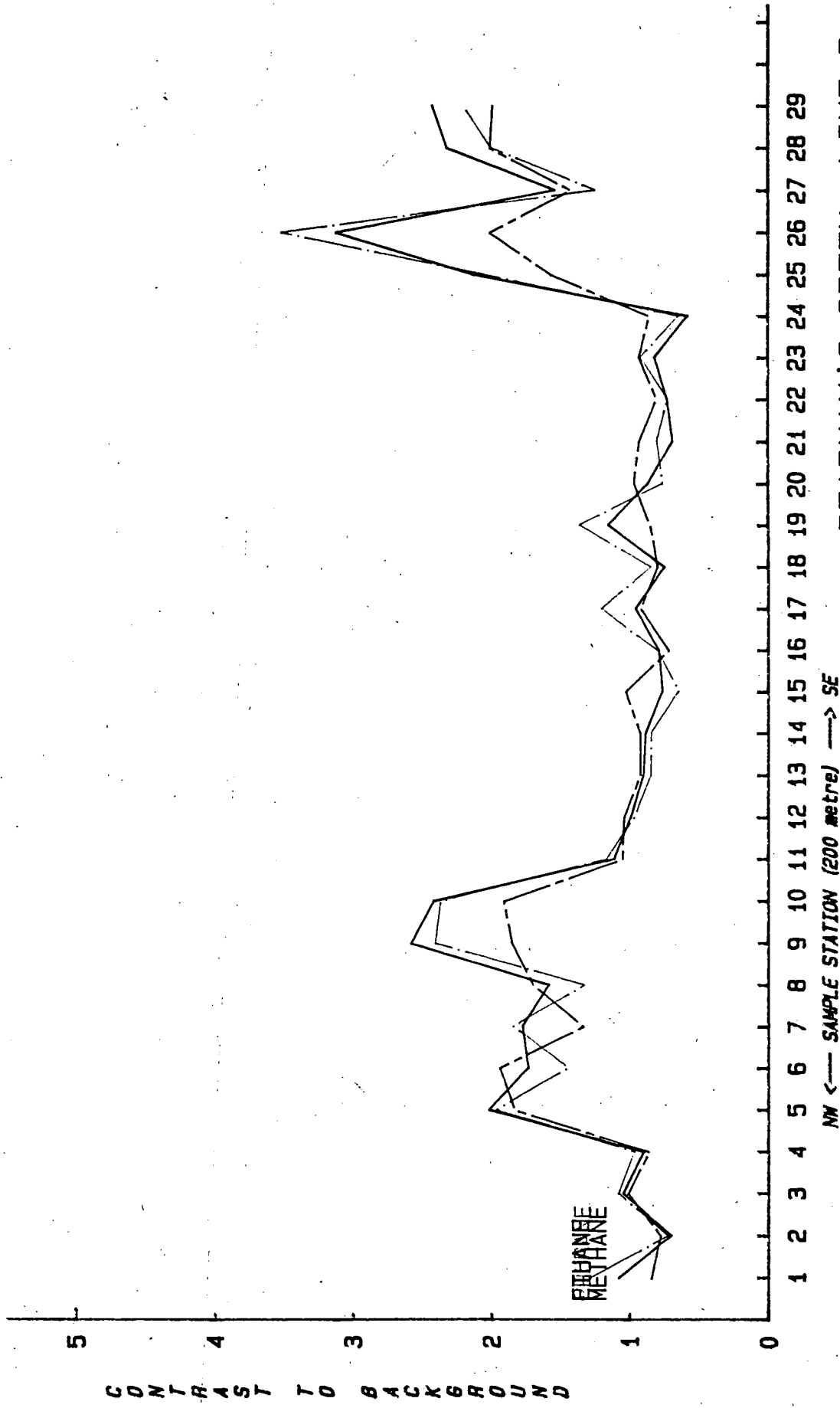
PEL 36 - SOUTH AUSTRALIA

GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

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DEADMAN'S CREEK, LINE-B  
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BERTOIL HOLDING CORPORATION A.G.  
DEADMAN'S CREEK LINE-B

DATA SUMMARY TABLE

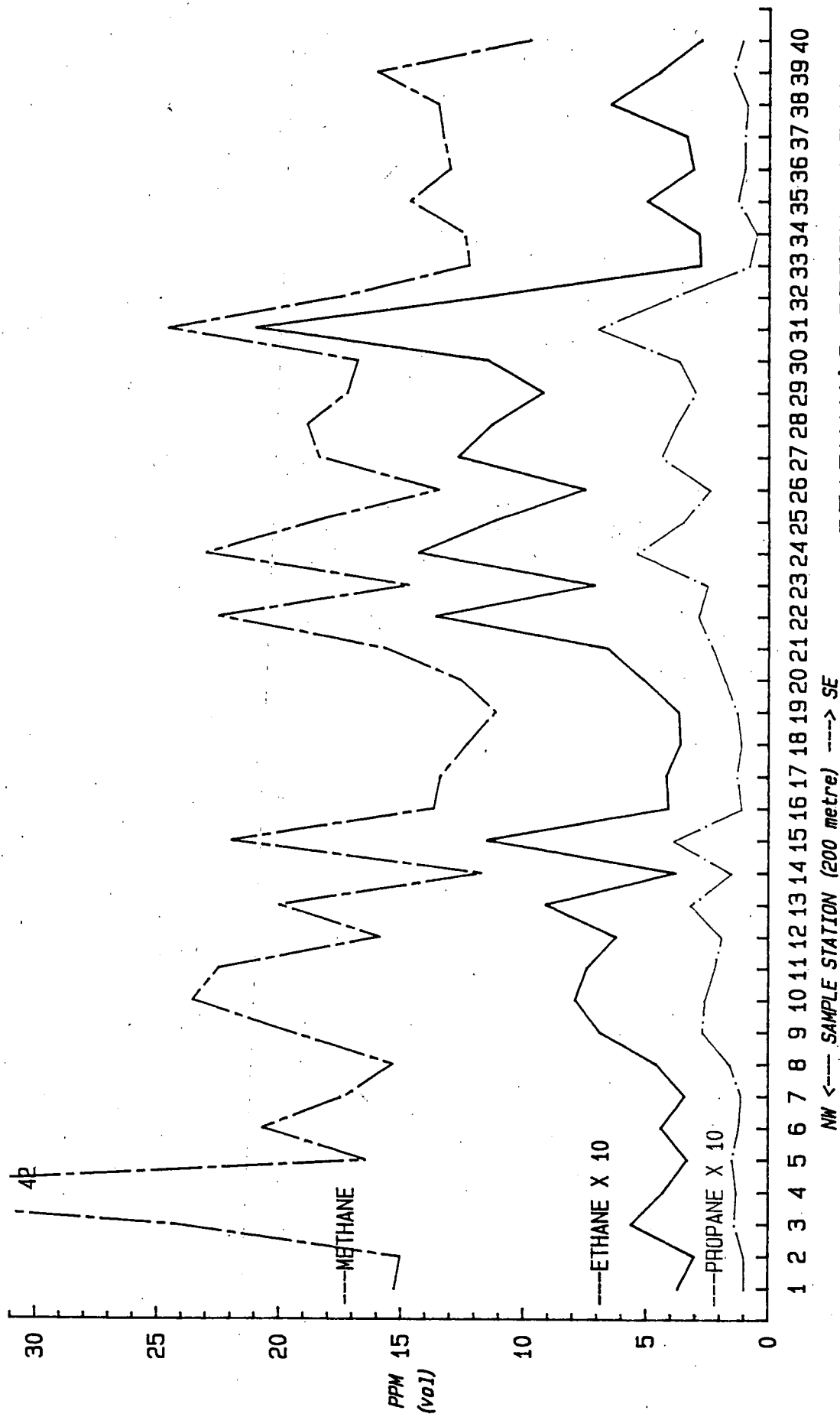
Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	14.64	.71	.29	.32	.22	0.00	.06
2	13.41	.46	.20	.18	.12	0.00	0.00
3	17.49	.69	.25	.27	.17	0.00	.05
4	14.80	.59	.27	.24	.21	0.00	.06
5	31.72	1.33	.81	.49	.58	0.00	.11
6	33.57	1.14	.61	.36	.47	0.00	.09
7	23.05	1.17	.55	.46	.38	0.00	.11
8	29.35	1.04	.59	.33	.39	0.00	.07
9	32.02	1.70	.99	.60	.73	.02	.16
10	33.06	1.59	.82	.59	.52	0.00	.14
11	18.13	.73	.36	.29	.30	0.00	.07
12	17.91	.65	.30	.24	.22	0.00	.03
13	15.90	.59	.28	.21	.23	0.00	.03
14	15.98	.58	.29	.21	.21	0.00	.03
15	17.77	.50	.23	.16	.16	0.00	.03
16	12.35	.52	.25	.20	.17	0.00	.04
17	15.91	.63	.34	.30	.22	0.00	.08
18	13.76	.49	.24	.21	.19	0.00	.05
19	14.76	.76	.36	.34	.29	0.00	.05
20	16.73	.57	.30	.19	.17	0.00	.05
21	16.03	.45	.25	.20	.18	0.00	.03
22	13.89	.48	.23	.18	.16	0.00	.03
23	16.11	.54	.25	.23	.21	0.00	.03
24	14.78	.38	.20	.16	.18	0.00	0.00
25	27.05	1.40	.82	.51	.56	0.00	.10
26	34.79	2.06	1.23	.88	.91	.02	.12
27	24.57	1.01	.64	.31	.34	0.00	.05
28	34.77	1.53	.99	.50	.66	0.00	.10
29	34.35	1.60	1.04	.55	.78	.03	.15

# DEADMAN'S CREEK LINE-B

## SUMS AND RATIOS

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	16.24	1.60	2.45	1.45	90.15	20.62	21.86	9.86
2	14.37	.96	2.30	1.50	93.32	29.15	13.42	6.68
3	18.92	1.43	2.76	1.59	92.44	25.35	15.44	7.56
4	16.17	1.37	2.19	1.14	91.53	25.08	16.22	8.47
5	35.04	3.32	1.64	.84	90.53	23.85	15.45	9.47
6	36.24	2.67	1.87	.77	92.63	29.45	10.72	7.37
7	25.72	2.67	2.13	1.21	89.62	19.70	19.96	10.38
8	31.77	2.42	1.76	.85	92.38	28.22	11.24	7.52
9	36.22	4.20	1.72	.82	88.40	18.84	18.74	11.60
10	36.72	3.66	1.94	1.13	90.03	20.79	17.85	9.97
11	19.88	1.75	2.03	.97	91.20	24.84	16.00	8.80
12	19.35	1.44	2.17	1.09	92.56	27.55	13.40	7.44
13	17.24	1.34	2.11	.91	92.23	26.95	13.21	7.77
14	17.30	1.32	2.00	1.00	92.37	27.55	13.14	7.63
15	18.85	1.08	2.17	1.00	94.27	35.54	9.00	5.73
16	13.53	1.18	2.08	1.18	91.28	23.75	16.19	8.72
17	17.48	1.57	1.85	1.36	91.02	25.25	18.06	8.98
18	14.94	1.18	2.04	1.11	92.10	28.08	15.26	7.90
19	16.56	1.80	2.11	1.17	89.13	19.42	23.04	10.87
20	18.01	1.28	1.90	1.12	92.89	29.35	11.36	7.11
21	17.14	1.11	1.80	1.11	93.52	35.62	12.48	6.48
22	14.97	1.08	2.09	1.13	92.79	28.94	12.96	7.21
23	17.37	1.26	2.16	1.10	92.75	29.83	14.28	7.25
24	15.70	.92	1.90	.89	94.14	38.89	10.83	5.86
25	30.44	3.39	1.71	.91	89.86	19.32	18.85	11.14
26	40.01	5.22	1.67	.97	86.95	16.99	25.29	13.05
27	26.92	2.35	1.58	.91	91.27	24.33	12.62	8.73
28	38.55	3.78	1.55	.76	90.19	22.73	14.38	9.81
29	38.50	4.15	1.54	.71	89.22	21.47	16.01	10.78

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 August, 1987



DEADMAN'S CREEK, LINE-C

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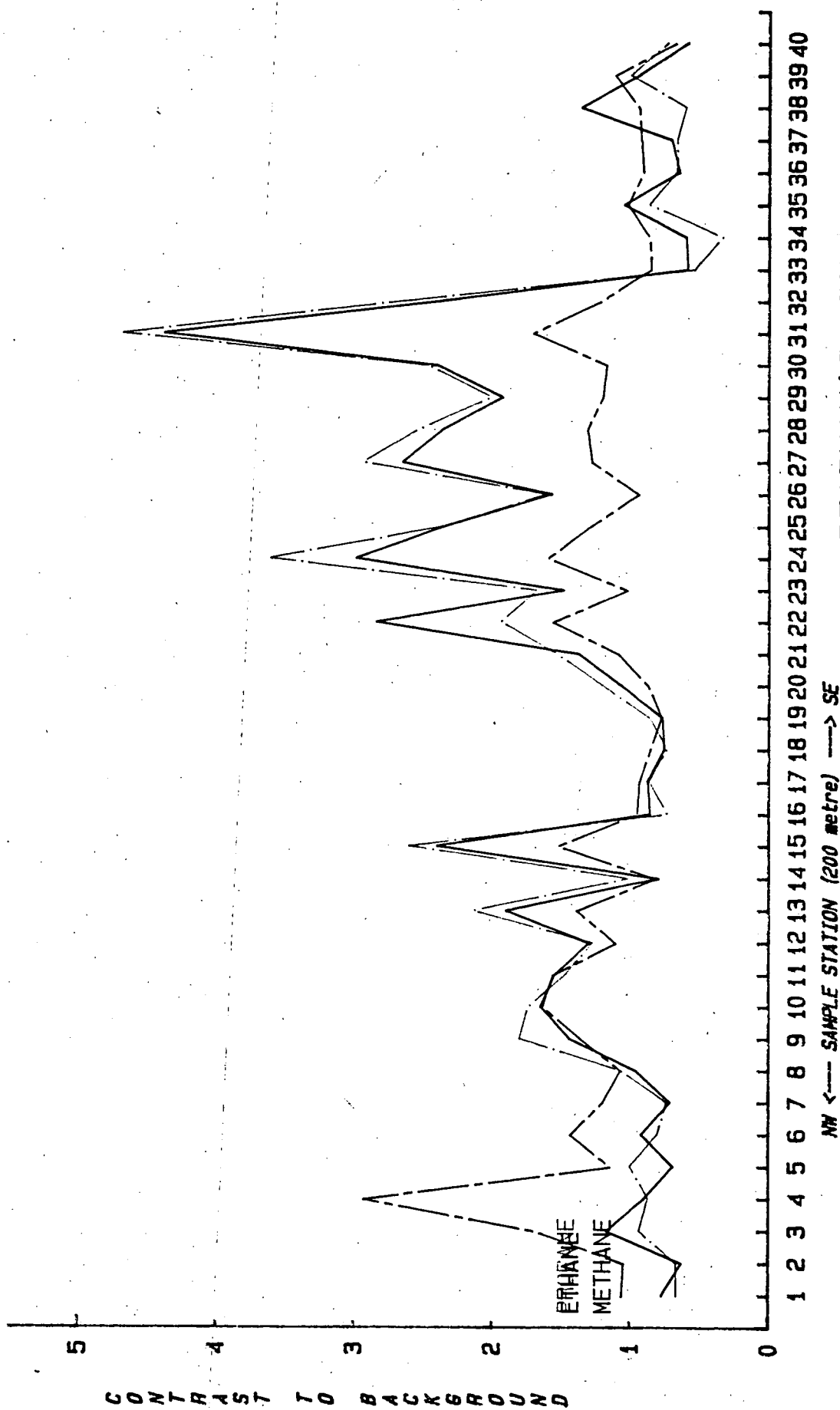
GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

BERTOIL HOLDING CORPORATION A.G.

RECON EXPLORATION (AUSTRALIA) PTY LTD

ADELAIDE, S. AUSTRALIA





DEADMAN'S CREEK, LINE-C  
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 BERTOIL HOLDING CORPORATION A.G.

RECON EXPLORATION (AUSTRALIA) PTY LTD  
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**BERTOIL HOLDING CORPORATION A.G.  
DEADMAN'S CREEK LINE-C**

**DATA SUMMARY TABLE**

Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	15.28	.37	.13	.10	.08	0.00	0.00
2	15.02	.30	.10	.10	.09	0.00	.02
3	24.31	.56	.11	.14	.09	0.00	.03
4	42.29	.43	.11	.13	.09	0.00	.05
5	16.45	.33	.21	.15	.07	0.00	0.00
6	20.67	.44	.09	.12	.08	0.00	0.00
7	17.27	.34	.12	.11	.08	0.00	0.00
8	15.34	.46	.22	.16	.14	0.00	.03
9	19.63	.69	.42	.27	.27	0.00	.02
10	23.55	.79	.29	.26	.19	0.00	.07
11	22.46	.74	.29	.22	.20	0.00	.06
12	15.89	.62	.21	.19	.14	0.00	0.00
13	20.00	.91	.39	.32	.23	0.00	.08
14	11.70	.38	.14	.15	.09	0.00	0.00
15	21.97	1.15	.46	.39	.32	0.00	.09
16	13.67	.41	.14	.11	.11	0.00	0.00
17	13.40	.42	.11	.13	.08	0.00	0.00
18	12.30	.36	.12	.11	.07	0.00	0.00
19	11.14	.37	.14	.13	.10	0.00	0.00
20	12.60	.51	.21	.18	.13	0.00	0.00
21	15.68	.66	.28	.23	.19	0.00	.07
22	22.50	1.36	.63	.29	.44	0.00	.10
23	14.69	.71	.37	.25	.27	0.00	.04
24	23.01	1.43	.53	.54	.45	.10	.15
25	18.50	1.12	.49	.35	.39	.03	.12
26	13.50	.75	.34	.24	.15	0.00	.02
27	18.43	1.27	.64	.44	.30	0.00	.08
28	18.91	1.13	.54	.38	.44	.05	.02
29	17.24	.92	.41	.30	.37	0.00	.06
30	16.82	1.15	.61	.37	.49	0.00	.09
31	24.58	2.10	1.09	.70	.86	0.00	.15
32	17.51	1.15	.55	.40	.50	0.00	.08
33	12.27	.28	.10	.08	.07	0.00	0.00
34	12.47	.29	.16	.05	.03	0.00	0.00
35	14.71	.50	.60	.13	.15	0.00	.02
36	13.06	.31	.14	.10	.09	0.00	0.00
37	13.37	.34	.15	.10	.09	0.00	0.00
38	13.57	.65	.16	.09	.10	0.00	0.00
39	16.07	.45	.20	.15	.13	0.00	.02
40	9.77	.28	.24	.11	.18	0.00	0.00

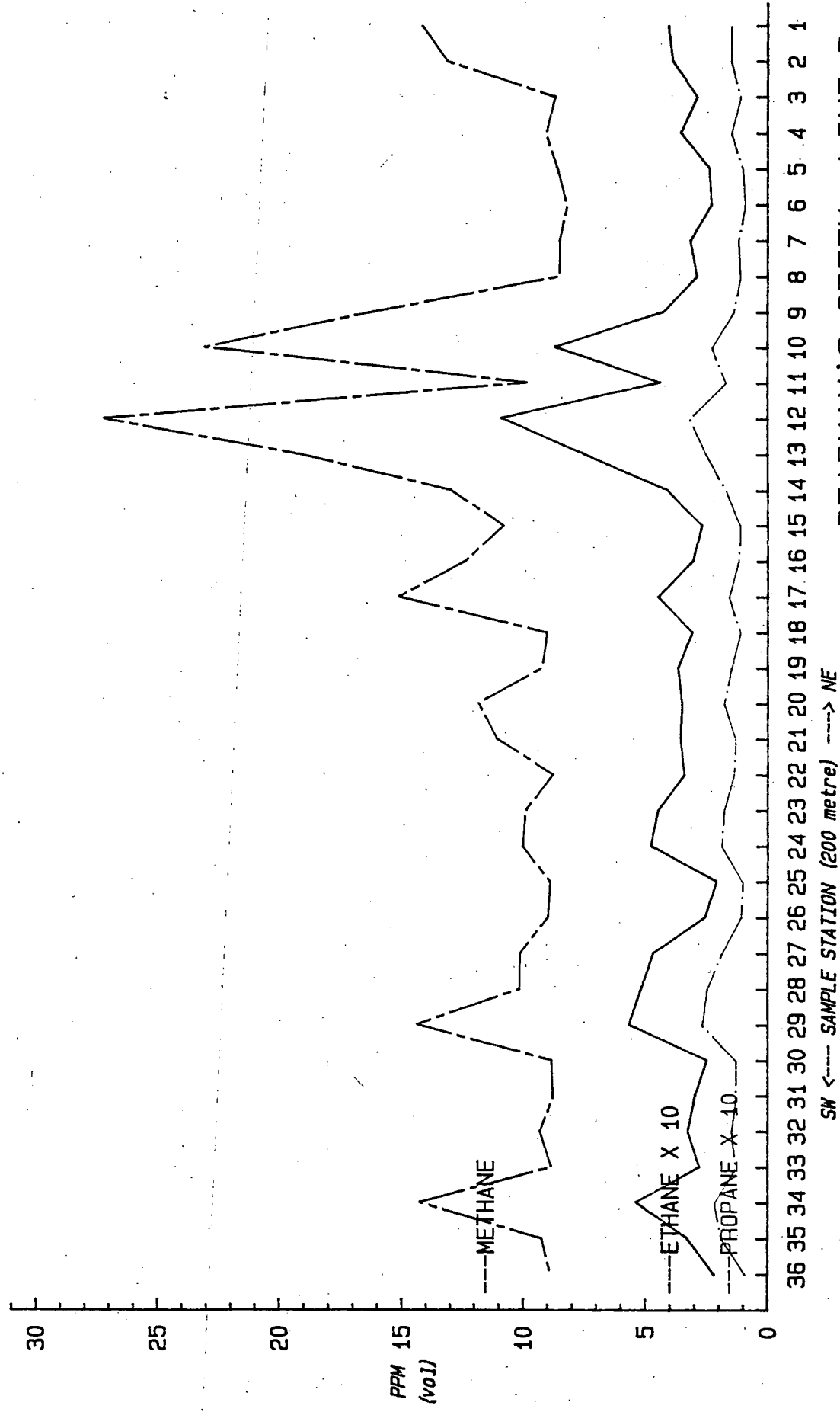
# DEADMAN'S CREEK LINE-C

## SUMS AND RATIOS

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	15.96	.68	2.85	1.25	95.74	41.30	6.54	4.26
2	15.63	.61	3.00	1.11	96.10	50.07	6.66	3.90
3	25.24	.93	5.09	1.56	96.32	43.41	5.76	3.68
4	43.10	.81	3.91	1.44	98.12	98.35	3.07	1.88
5	17.21	.76	1.57	2.14	95.58	49.85	9.12	4.42
6	21.40	.73	4.89	1.50	96.59	46.98	5.81	3.41
7	17.92	.65	2.83	1.38	96.37	50.79	6.37	3.63
8	16.35	1.01	2.09	1.14	93.82	33.35	10.43	6.18
9	21.30	1.67	1.64	1.00	92.15	28.45	13.75	7.85
10	25.15	1.50	2.72	1.37	93.64	29.81	11.04	6.36
11	23.97	1.51	2.55	1.10	93.70	30.35	9.80	6.30
12	17.05	1.16	2.95	1.36	93.20	25.63	11.96	6.80
13	21.93	1.93	2.33	1.41	91.21	21.98	16.00	8.79
14	12.46	.76	2.71	1.67	93.90	30.79	12.82	6.10
15	24.38	2.41	2.50	1.22	90.11	19.10	17.75	9.89
16	14.44	.77	2.93	1.00	94.67	33.34	8.05	5.33
17	14.14	.74	3.82	1.63	94.77	31.90	9.70	5.23
18	12.96	.66	3.00	1.57	94.91	34.17	8.94	5.09
19	11.88	.74	2.64	1.30	93.77	30.11	11.67	6.23
20	13.63	1.03	2.43	1.38	92.44	24.71	14.29	7.56
21	17.11	1.43	2.36	1.21	91.64	23.76	14.67	8.36
22	25.32	2.82	2.16	.66	88.86	16.54	12.89	11.14
23	16.33	1.64	1.92	.93	89.96	20.69	17.02	10.04
24	26.21	3.20	2.70	1.20	87.79	16.09	23.47	12.21
25	21.00	2.50	2.29	.90	88.10	16.52	18.92	11.90
26	15.00	1.50	2.21	1.60	90.00	18.00	17.78	10.00
27	21.16	2.73	1.98	1.47	87.10	14.51	23.87	12.90
28	21.47	2.56	2.09	.86	88.08	16.73	20.10	11.92
29	19.30	2.06	2.24	.81	89.33	18.74	17.40	10.67
30	19.53	2.71	1.89	.76	86.12	14.63	22.00	13.88
31	29.48	4.90	1.93	.81	83.38	11.70	28.48	16.62
32	20.19	2.68	2.09	.80	86.73	15.23	22.84	13.27
33	12.80	.53	2.80	1.14	95.86	43.82	6.52	4.14
34	13.00	.53	1.81	1.67	95.92	43.00	4.01	4.08
35	16.11	1.40	.83	.87	91.31	29.42	8.84	8.69
36	13.70	.64	2.21	1.11	95.33	42.13	7.66	4.67
37	14.05	.68	2.27	1.11	95.16	39.32	7.48	4.84
38	14.57	1.00	4.06	.90	93.14	20.88	6.63	6.86
39	17.02	.95	2.25	1.15	94.42	35.71	9.33	5.58
40	10.58	.81	1.17	.61	92.34	34.89	11.26	7.66

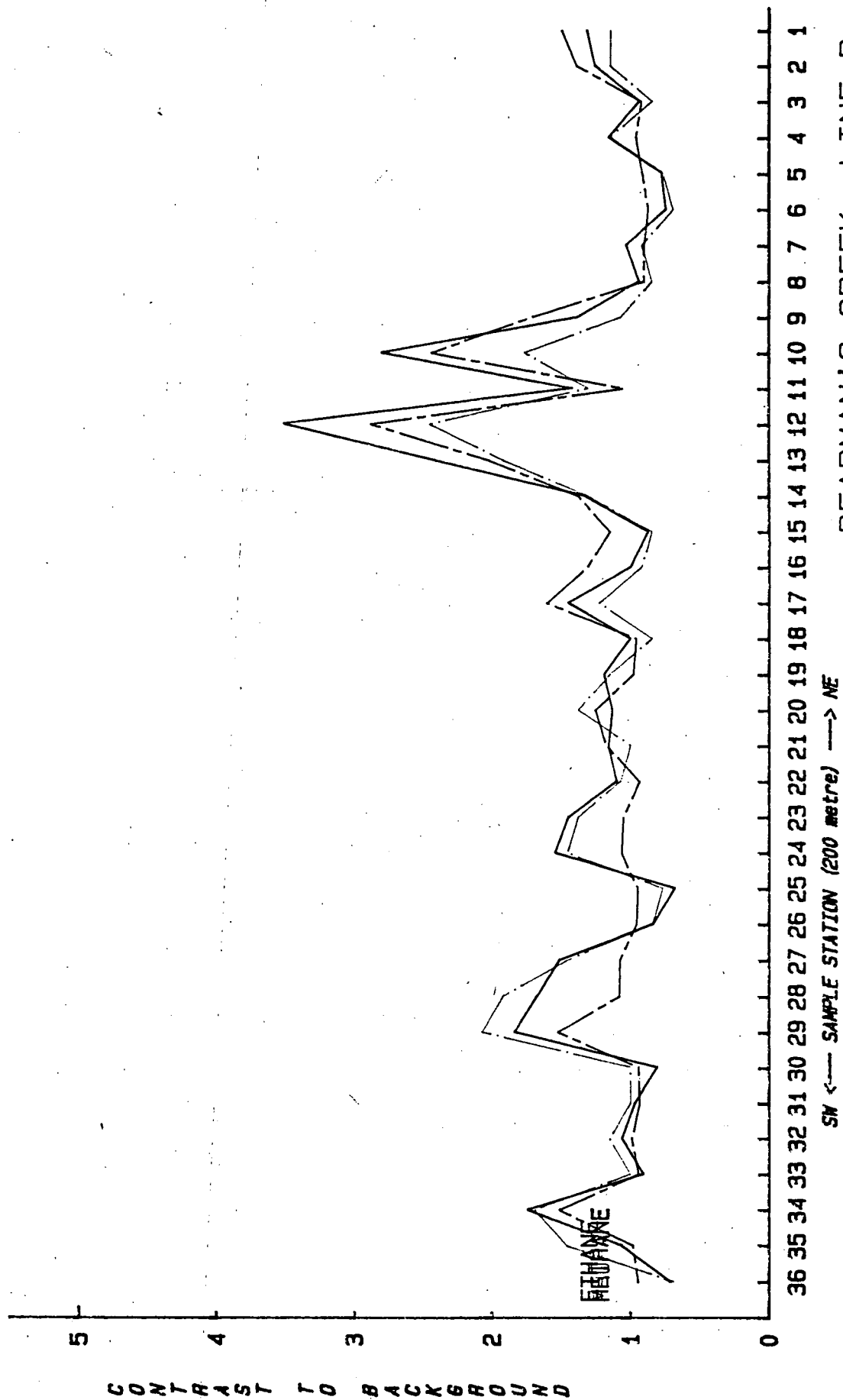
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 South Australia Field Laboratory  
 August, 1987





DEADMAN'S CREEK, LINE-D  
PEL 36 - SOUTH AUSTRALIA  
GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987  
BERTOIL HOLDING CORPORATION A.G.

RECON EXPLORATION (AUSTRALIA) PTY LTD  
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DEADMAN'S CREEK, LINE-D  
 PEL 36 - SOUTH AUSTRALIA  
 GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987  
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RECON EXPLORATION (AUSTRALIA) PTY LTD  
 ADELAIDE, S. AUSTRALIA

BERTOIL HOLDING CORPORATION A.G.  
DEADMAN'S CREEK LINE-D

DATA SUMMARY TABLE

Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	14.17	.41	.21	.15	.13	0.00	.02
2	13.12	.39	.15	.15	.09	0.00	.02
3	8.70	.29	.09	.11	.05	0.00	.02
4	9.09	.36	.10	.15	.09	0.00	.02
5	8.60	.24	.08	.10	.08	0.00	.02
6	8.20	.23	.07	.09	.07	0.00	0.00
7	8.53	.32	.10	.12	.08	0.00	0.00
8	8.53	.29	.09	.11	.09	0.00	0.00
9	16.20	.43	.13	.14	.11	0.00	.02
10	23.07	.87	.16	.23	.22	0.00	.03
11	9.85	.44	.13	.17	.09	0.00	.02
12	27.21	1.09	.27	.32	.20	0.00	.07
13	19.08	.75	.22	.25	.15	0.00	.03
14	12.96	.41	.16	.17	.10	0.00	.02
15	10.81	.27	.08	.11	.07	0.00	0.00
16	12.39	.31	.10	.12	.10	0.00	0.00
17	15.14	.45	.13	.16	.12	0.00	0.00
18	9.02	.31	.12	.11	.10	0.00	0.00
19	9.25	.37	.12	.15	.10	0.00	0.00
20	11.84	.35	.14	.18	.14	0.00	.02
21	11.07	.36	.13	.13	.09	0.00	.02
22	8.78	.34	.12	.14	.10	0.00	.03
23	9.93	.45	.14	.16	.13	0.00	.05
24	10.06	.48	.17	.19	.15	0.00	.05
25	8.89	.21	.09	.10	.07	0.00	0.00
26	9.02	.26	.11	.11	.09	0.00	0.00
27	10.17	.47	.17	.19	.15	0.00	.05
28	10.20	.52	.18	.25	.17	0.00	.05
29	14.39	.57	.26	.27	.19	0.00	.02
30	8.84	.25	.08	.13	.09	0.00	.02
31	8.78	.30	.13	.13	.10	0.00	0.00
32	9.34	.33	.14	.15	.15	.10	0.00
33	8.84	.28	.10	.13	.08	0.00	0.00
34	14.28	.54	.23	.22	.20	.02	.08
35	9.25	.33	.10	.19	.11	0.00	.02
36	8.88	.22	.08	.09	.09	0.00	0.00

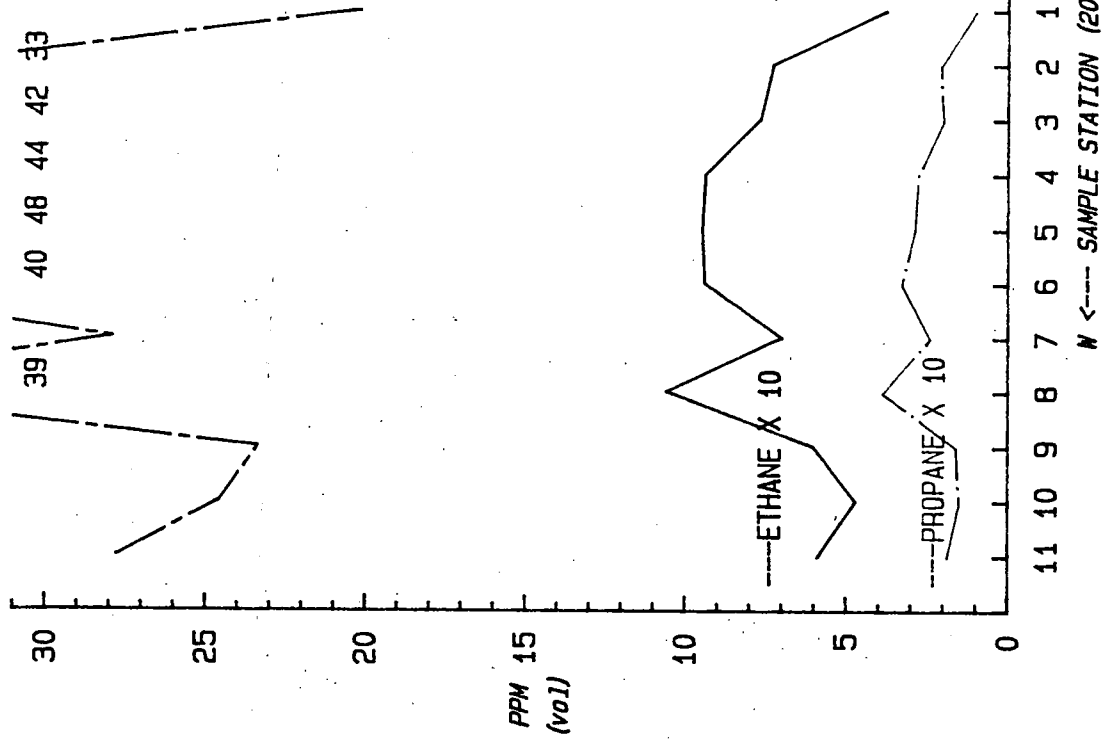


# DEADMAN'S CREEK LINE-D

## SUMS AND RATIOS

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	15.09	.92	1.95	1.15	93.90	34.56	10.59	6.10
2	13.92	.80	2.60	1.67	94.25	33.64	11.43	5.75
3	9.26	.56	3.22	2.20	93.95	30.00	12.64	6.05
4	9.81	.72	3.60	1.67	92.66	25.25	16.50	7.34
5	9.12	.52	3.00	1.25	94.30	35.83	11.63	5.70
6	8.66	.46	3.29	1.29	94.69	35.65	10.98	5.31
7	9.15	.62	3.20	1.50	93.22	26.66	14.07	6.78
8	9.11	.58	3.22	1.22	93.63	29.41	12.90	6.37
9	17.03	.83	3.31	1.27	95.13	37.67	8.64	4.87
10	24.58	1.51	5.44	1.05	93.86	26.52	9.97	6.14
11	10.70	.85	3.38	1.89	92.06	22.39	17.26	7.94
12	29.16	1.95	4.04	1.60	93.31	24.96	11.76	6.69
13	20.48	1.40	3.41	1.67	93.16	25.44	13.10	6.84
14	13.82	.86	2.56	1.70	93.78	31.61	13.12	6.22
15	11.34	.53	3.38	1.57	95.33	40.04	10.18	4.67
16	13.02	.63	3.10	1.20	95.16	39.97	9.69	4.84
17	16.00	.86	3.46	1.33	94.63	33.64	10.57	5.38
18	9.66	.64	2.58	1.10	93.37	29.10	12.20	6.63
19	9.99	.74	3.08	1.50	92.59	25.00	16.22	7.41
20	12.67	.83	2.50	1.29	93.45	33.83	15.20	6.55
21	11.80	.73	2.77	1.44	93.81	30.75	11.74	6.19
22	9.51	.73	2.83	1.40	92.32	25.82	15.95	7.68
23	10.88	.95	3.21	1.38	91.27	22.07	18.13	8.73
24	11.10	1.04	2.82	1.27	90.63	20.96	18.89	9.37
25	9.36	.47	2.33	1.43	94.98	42.33	11.25	5.02
26	9.59	.57	2.36	1.22	94.06	34.69	12.20	5.94
27	11.20	1.03	2.76	1.27	90.80	21.64	18.68	9.20
28	11.37	1.17	2.89	1.47	89.71	19.62	24.51	10.29
29	15.70	1.31	2.19	1.42	91.66	25.25	18.76	8.34
30	9.41	.57	3.13	1.44	93.94	35.36	14.71	6.06
31	9.44	.66	2.31	1.30	93.01	29.27	14.81	6.99
32	10.21	.87	2.36	1.00	91.48	28.30	16.06	8.52
33	9.43	.59	2.80	1.63	93.74	31.57	14.71	6.26
34	15.57	1.29	2.35	1.10	91.71	26.44	15.41	8.29
35	10.00	.75	3.30	1.73	92.50	28.03	20.54	7.50
36	9.36	.48	2.75	1.00	94.87	40.36	10.14	5.13

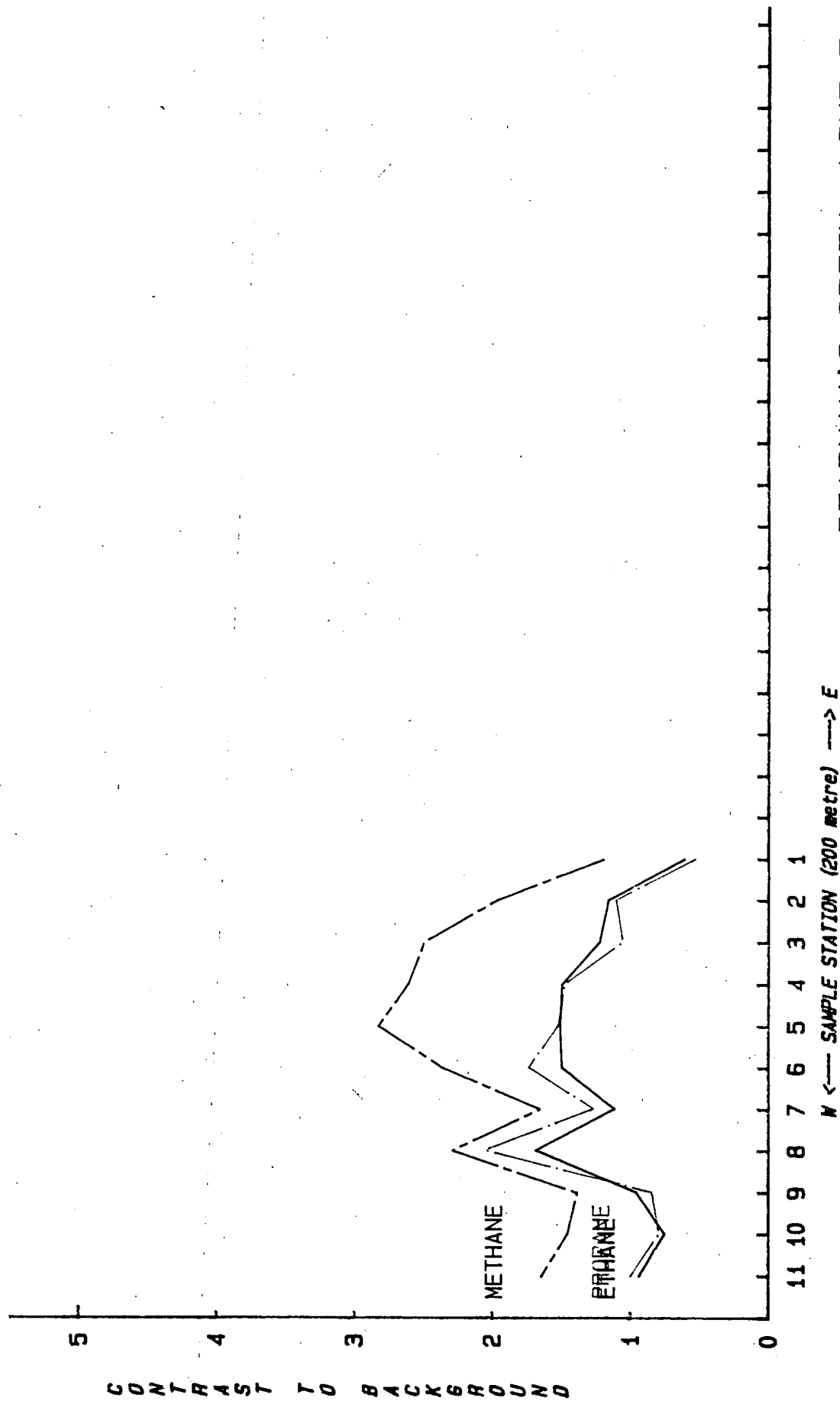
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 South Australia Field Laboratory  
 August, 1987



DEADMAN'S CREEK, LINE-E  
 PEL 36 - SOUTH AUSTRALIA

GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987  
 BERTOIL HOLDING CORPORATION A.G.

RECON EXPLORATION (AUSTRALIA) PTY LTD  
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DEADMAN'S CREEK, LINE-E  
 PEL 36 - SOUTH AUSTRALIA  
 GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987  
 BERTOIL HOLDING CORPORATION A.G

RECON EXPLORATION (AUSTRALIA) PTY LTD  
 ADELAIDE, S. AUSTRALIA

**BERTOIL HOLDING CORPORATION A.G.  
DEADMAN'S CREEK LINE-E**

**DATA SUMMARY TABLE**

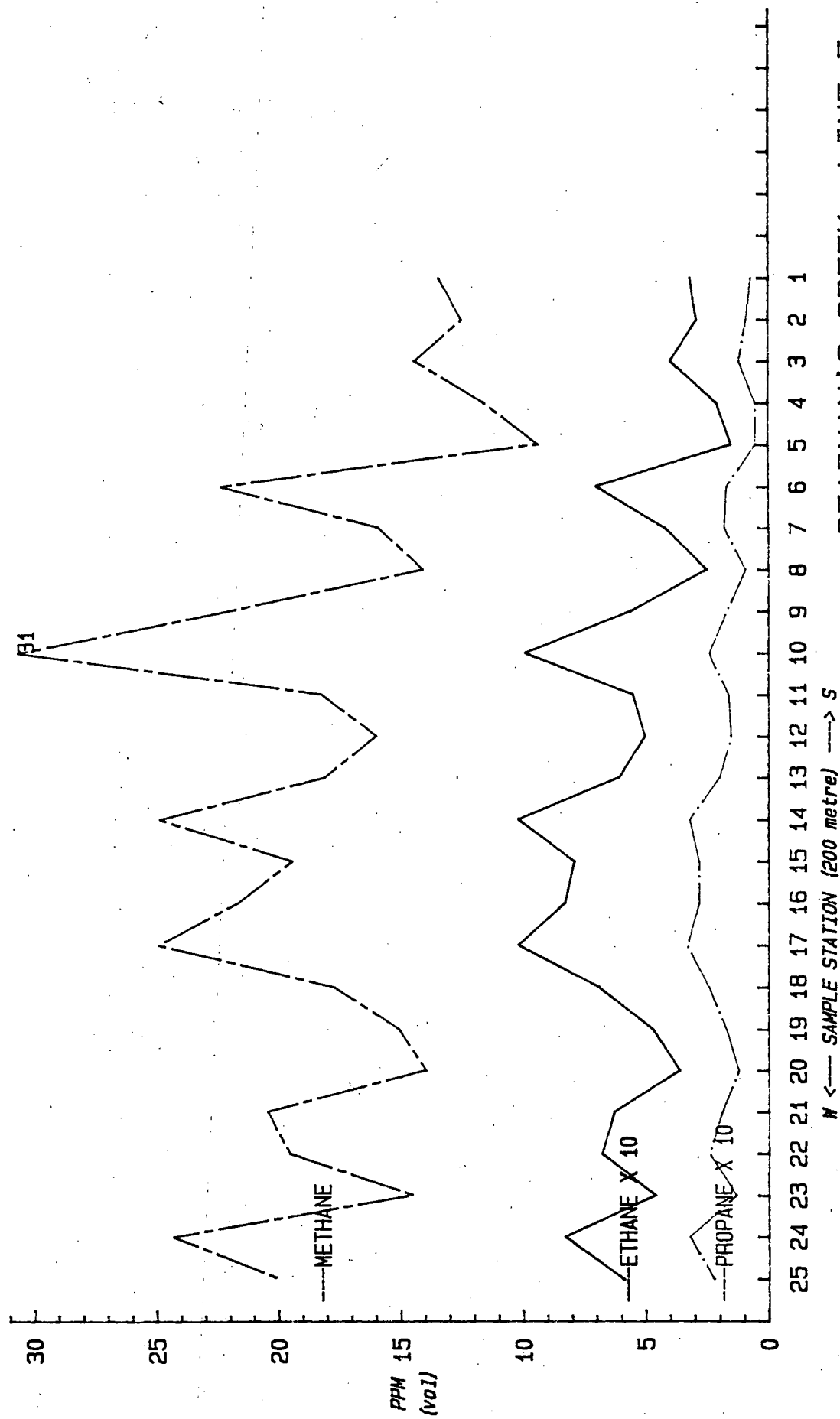
Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	20.18	.38	.08	.10	.08	0.00	0.00
2	33.19	.73	.12	.21	.11	0.00	.02
3	42.13	.77	.17	.20	.13	0.00	.02
4	44.10	.94	.16	.28	.16	0.00	.07
5	47.73	.95	.18	.29	.15	0.00	.03
6	39.84	.94	.21	.33	.18	0.00	.05
7	27.89	.70	.15	.24	.11	0.00	.06
8	38.64	1.06	.17	.39	.16	0.00	.09
9	23.38	.60	.17	.16	.11	0.00	.02
10	24.60	.47	.08	.15	.06	0.00	.02
11	27.78	.59	.10	.19	.09	0.00	.02

**SUMS AND RATIOS**

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	20.82	.64	4.75	1.25	96.93	53.11	4.96	3.07
2	34.38	1.19	6.08	1.91	96.54	45.47	6.33	3.46
3	43.42	1.29	4.53	1.54	97.03	54.71	4.75	2.97
4	45.71	1.61	5.88	1.75	96.48	46.91	6.35	3.52
5	49.33	1.60	5.28	1.93	96.76	50.24	6.08	3.24
6	41.55	1.71	4.48	1.83	95.88	42.38	8.28	4.12
7	29.15	1.26	4.67	2.18	95.68	39.84	8.61	4.32
8	40.51	1.87	6.24	2.44	95.38	36.45	10.09	4.62
9	24.44	1.06	3.53	1.45	95.66	38.97	6.84	4.34
10	25.38	.78	5.88	2.50	96.93	52.34	6.10	3.07
11	28.77	.99	5.90	2.11	96.56	47.08	6.84	3.44

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August, 1987





# DEADMAN'S CREEK, LINE-F

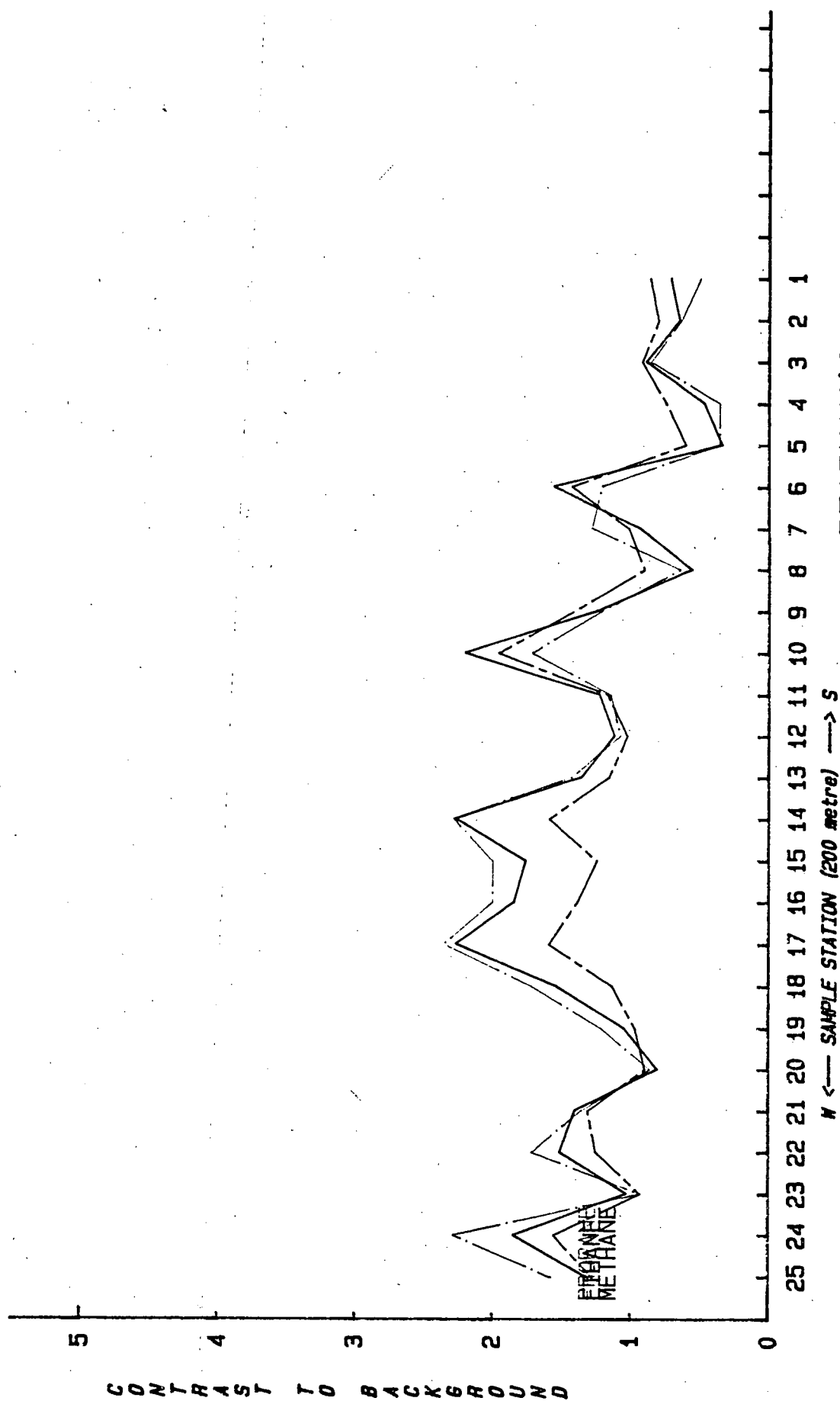
PEL 36 - SOUTH AUSTRALIA

GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

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DEADMAN'S CREEK, LINE-F  
 PEL 36 - SOUTH AUSTRALIA  
 GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987  
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BERTOIL HOLDING CORPORATION A.G.  
DEADMAN'S CREEK LINE-F

DATA SUMMARY TABLE

Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	13.42	.32	.06	.07	.02	0.00	0.00
2	12.47	.29	.04	.09	.02	0.00	0.00
3	14.40	.40	.08	.12	.04	0.00	0.00
4	11.58	.21	.04	.05	.02	0.00	0.00
5	9.33	.15	.04	.05	.02	0.00	0.00
6	22.33	.70	.15	.17	.12	0.00	.02
7	15.86	.42	.09	.18	.07	0.00	.02
8	14.03	.25	.10	.09	.05	0.00	0.00
9	22.04	.56	.16	.17	.13	0.00	.02
10	30.62	.99	.24	.24	.16	0.00	.03
11	18.19	.55	.13	.16	.10	0.00	.02
12	15.95	.50	.20	.15	.11	0.00	0.00
13	18.10	.61	.13	.20	.13	0.00	.03
14	24.86	1.02	.25	.32	.18	0.00	.10
15	19.40	.79	.17	.28	.15	0.00	.06
16	21.69	.93	.21	.28	.12	0.00	.07
17	24.92	1.02	.27	.33	.20	0.00	.07
18	17.69	.69	.17	.24	.13	0.00	.06
19	15.06	.47	.12	.17	.08	0.00	.04
20	13.94	.36	.07	.12	.07	0.00	.03
21	20.44	.63	.12	.19	.09	0.00	.05
22	19.51	.66	.16	.24	.11	0.00	.02
23	14.48	.46	.12	.13	.08	0.00	.03
24	24.32	.83	.18	.32	.16	0.00	.09
25	19.91	.59	.13	.22	.13	0.00	.06

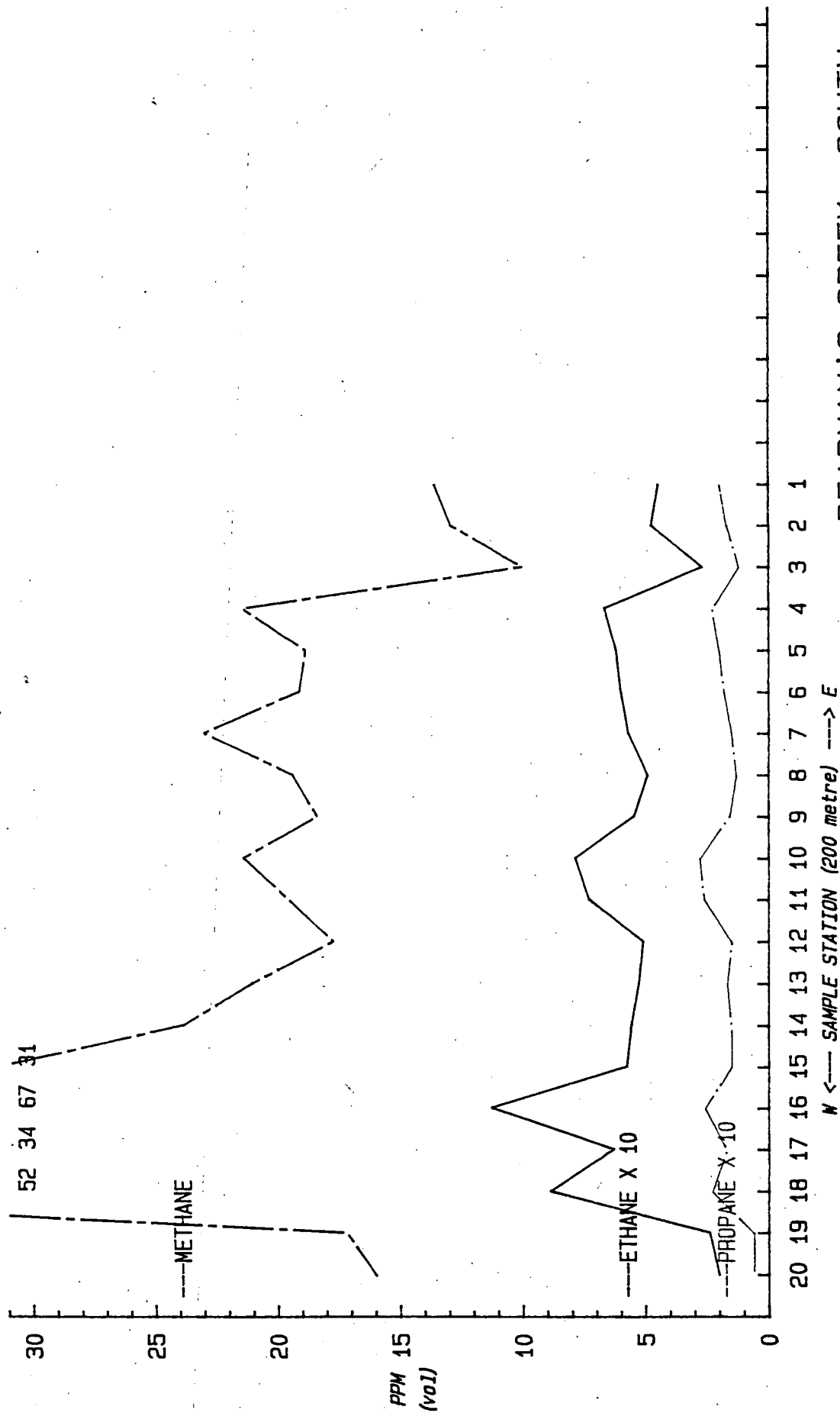
# DEADMAN'S CREEK LINE-F

## SUMS AND RATIOS

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	13.89	.47	5.33	3.50	96.62	41.94	5.22	3.38
2	12.91	.44	7.25	4.50	96.59	43.00	7.22	3.41
3	15.04	.64	5.00	3.00	95.74	36.00	8.33	4.26
4	11.90	.32	5.25	2.50	97.31	55.14	4.32	2.69
5	9.59	.26	3.75	2.50	97.29	62.20	5.36	2.71
6	23.49	1.16	4.67	1.42	95.06	31.90	7.61	4.94
7	16.64	.78	4.67	2.57	95.31	37.76	11.35	4.69
8	14.52	.49	2.50	1.80	96.63	56.12	6.41	3.37
9	23.08	1.04	3.50	1.31	95.49	39.36	7.71	4.51
10	32.28	1.66	4.13	1.50	94.86	30.93	7.84	5.14
11	19.15	.96	4.23	1.60	94.99	33.07	8.80	5.01
12	16.91	.96	2.50	1.36	94.32	31.90	9.40	5.68
13	19.20	1.10	4.69	1.54	94.27	29.67	11.05	5.73
14	26.73	1.87	4.08	1.78	93.00	24.37	12.87	7.00
15	20.85	1.45	4.65	1.87	93.05	24.56	14.43	6.95
16	23.20	1.51	3.95	2.33	93.49	26.13	12.91	6.51
17	26.81	1.89	3.78	1.65	92.95	24.43	13.24	7.05
18	18.98	1.29	4.06	1.85	93.20	25.64	13.57	6.80
19	15.94	.88	3.92	2.13	94.48	32.04	11.29	5.52
20	14.59	.65	5.14	1.71	95.54	38.72	8.51	4.46
21	21.52	1.08	5.25	2.11	94.98	32.44	9.30	5.02
22	20.72	1.21	4.25	2.18	94.16	28.69	12.30	5.84
23	15.30	.82	3.83	1.63	94.64	31.48	8.99	5.36
24	25.90	1.58	4.61	2.00	93.90	29.30	13.16	6.10
25	21.04	1.13	4.54	1.69	94.63	33.75	11.05	5.37

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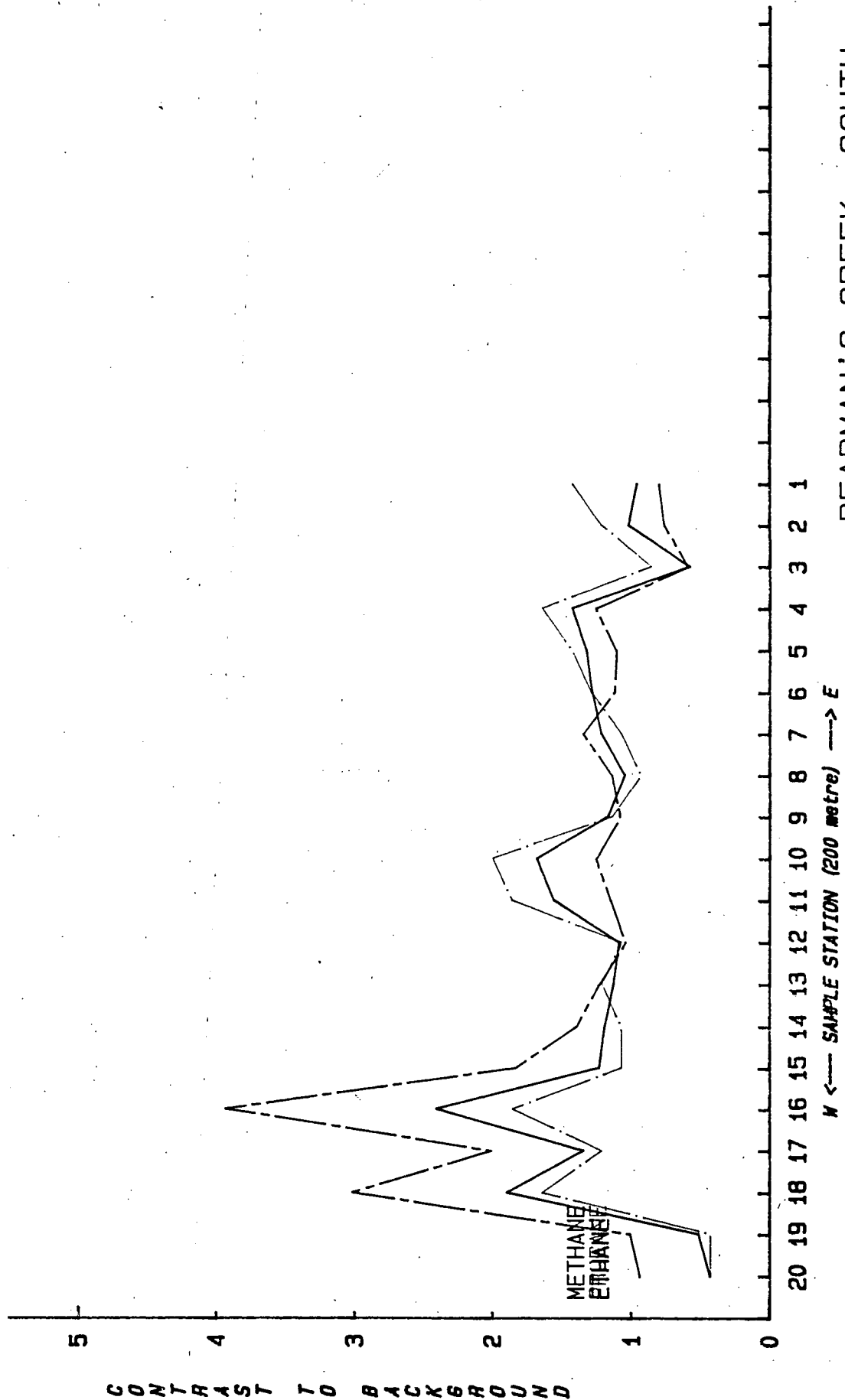


DEADMAN'S CREEK, SOUTH

PEL 36 - SOUTH AUSTRALIA

GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987  
BERTOIL HOLDING CORPORATION A.G.

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DEADMAN'S CREEK, SOUTH  
 PEL 36 - SOUTH AUSTRALIA  
 GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987  
 BERTOIL HOLDING CORPORATION A.G.

RECON EXPLORATION (AUSTRALIA) PTY LTD  
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**BERTOIL HOLDING CORPORATION A.G.  
DEADMAN'S CREEK SOUTH**

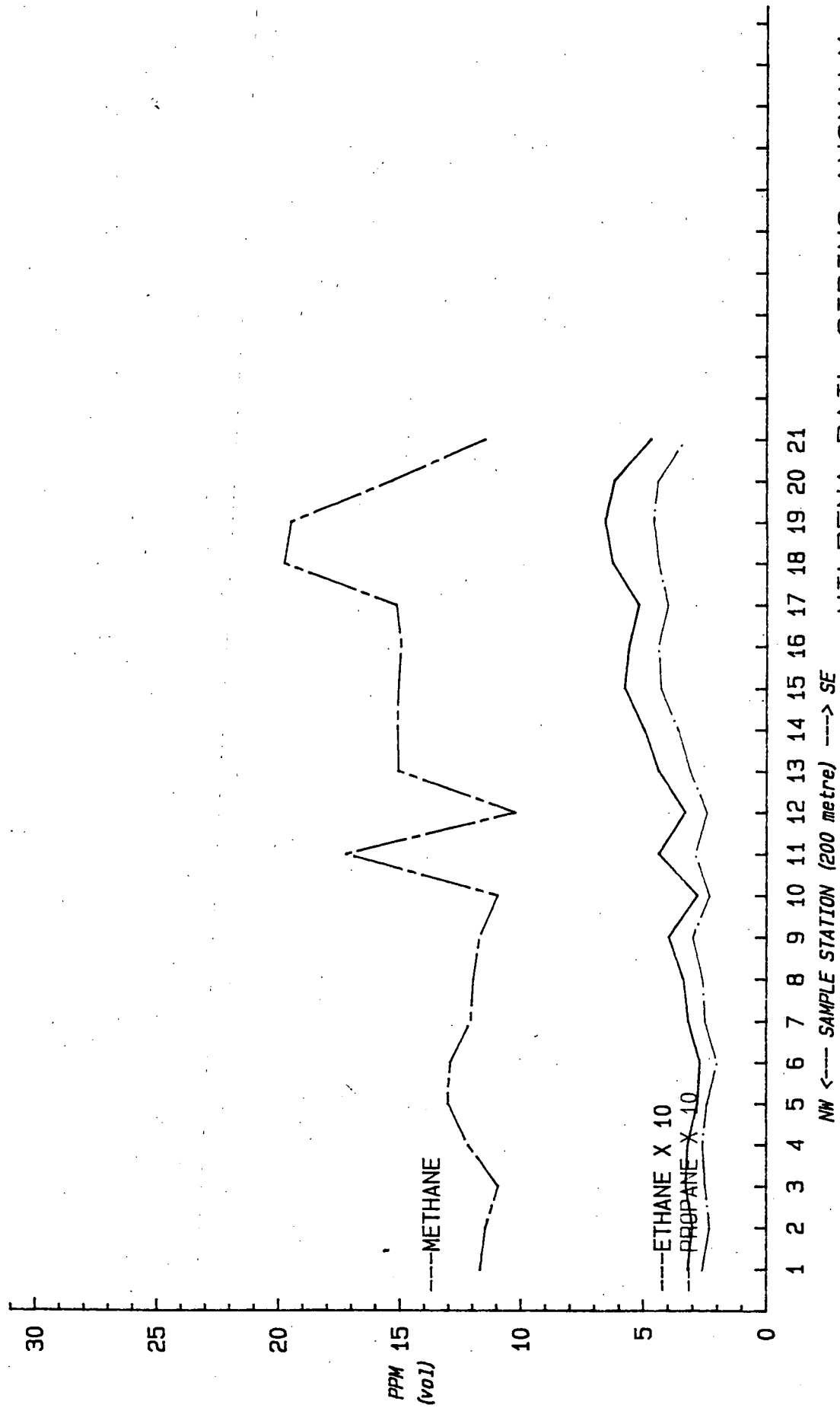
**DATA SUMMARY TABLE**

Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	13.66	.45	.07	.20	.05	.05	.08
2	12.96	.48	.10	.17	.07	0.00	0.00
3	10.03	.27	.05	.12	.04	0.00	.02
4	21.48	.67	.14	.23	.10	0.00	.05
5	18.89	.62	.15	.20	.10	0.00	.02
6	19.16	.60	.12	.18	.09	0.00	.02
7	23.05	.57	.10	.15	.06	0.00	.02
8	19.43	.49	.10	.13	.06	0.00	.01
9	18.40	.55	.11	.16	.07	0.00	.03
10	21.45	.79	.17	.28	.17	0.00	.09
11	19.58	.73	.16	.26	.11	0.00	.07
12	17.76	.51	.08	.15	.07	0.00	0.00
13	21.10	.53	.11	.17	.10	0.00	.02
14	23.80	.56	.12	.15	.09	0.00	.02
15	31.40	.58	.13	.15	.10	0.00	.03
16	67.33	1.13	.22	.26	.13	0.00	.03
17	34.31	.63	.12	.17	.10	0.00	.02
18	51.63	.89	.17	.23	.14	0.00	.04
19	17.19	.24	.05	.06	.03	0.00	0.00
20	15.99	.20	.04	.06	.03	0.00	0.00

**SUMS AND RATIOS**

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	14.56	.90	6.43	4.00	93.82	30.36	14.64	6.18
2	13.78	.82	4.80	2.43	94.05	27.00	13.12	5.95
3	10.53	.50	5.40	3.00	95.25	37.15	11.96	4.75
4	22.67	1.19	4.79	2.30	94.75	32.06	10.71	5.25
5	19.98	1.09	4.13	2.00	94.54	30.47	10.59	5.46
6	20.17	1.01	5.00	2.00	94.99	31.93	9.39	5.01
7	23.95	.90	5.70	2.50	96.24	40.44	6.51	3.76
8	20.22	.79	4.90	2.17	96.09	39.65	6.89	3.91
9	19.32	.92	5.00	2.29	95.24	33.45	8.70	4.76
10	22.95	1.50	4.65	1.65	93.46	27.15	13.05	6.54
11	20.91	1.33	4.56	2.36	93.64	26.82	13.28	6.36
12	18.57	.81	6.39	2.14	95.64	34.82	8.45	4.36
13	22.03	.93	4.82	1.70	95.78	39.81	8.06	4.22
14	24.82	.94	4.67	1.67	96.21	42.64	6.28	3.79
15	32.39	.99	4.46	1.50	96.94	54.14	4.78	3.06
16	69.10	1.77	5.14	2.00	97.44	59.58	3.86	2.56
17	35.35	1.04	5.25	1.70	97.06	54.46	4.95	2.94
18	53.10	1.47	5.24	1.64	97.23	58.01	4.45	2.77
19	17.57	.38	4.80	2.00	97.84	71.63	3.49	2.16
20	16.32	.33	5.00	2.00	97.98	79.95	3.75	2.02

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August, 1987



NILPENA RAIL SIDING ANOMALY

PEL 36 - SOUTH AUSTRALIA

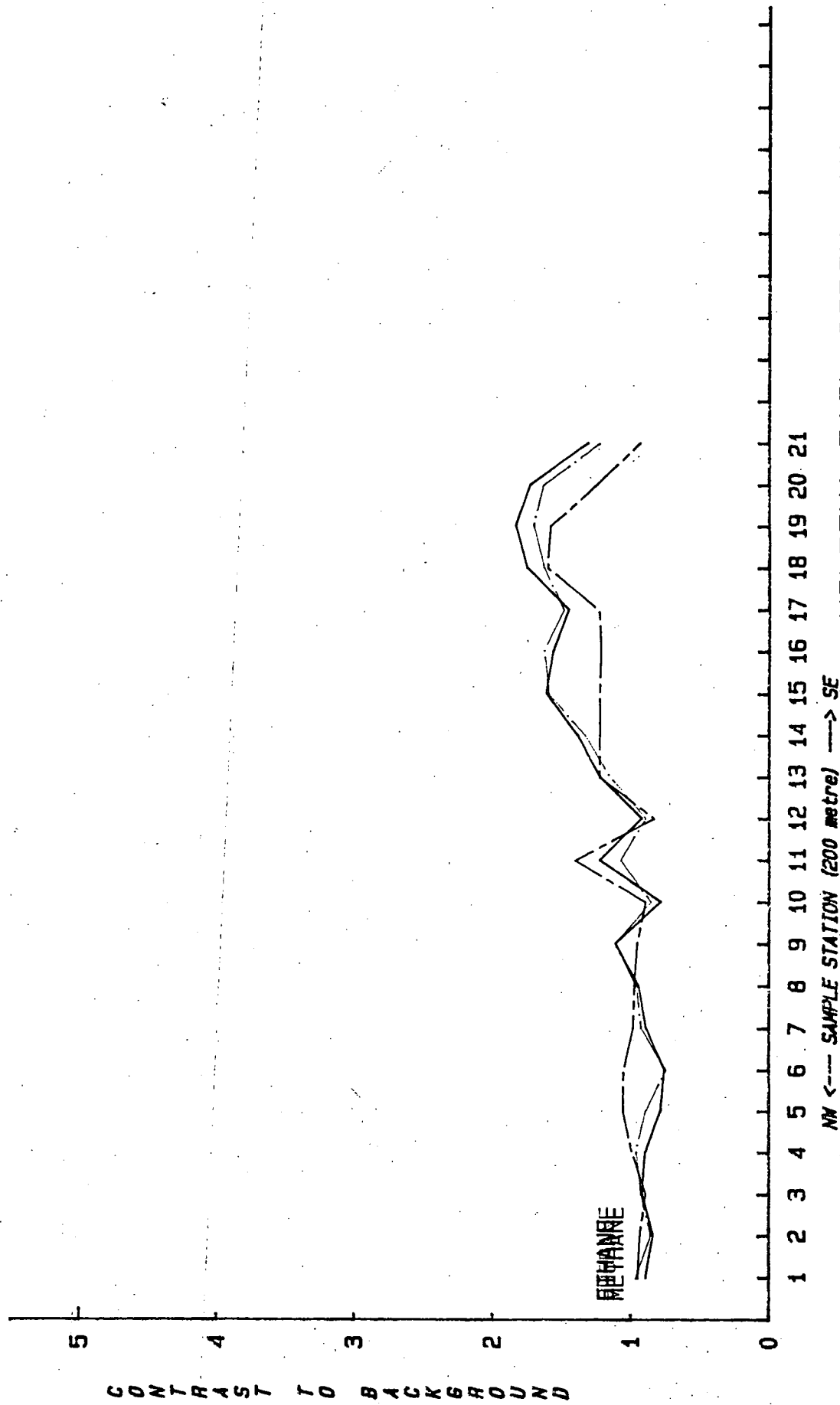
GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

BERTOIL HOLDING CORPORATION A.G.

RECON EXPLORATION (AUSTRALIA) PTY LTD

ADELAIDE, S. AUSTRALIA





NILPENA RAIL SIDING ANOMALY  
 PEL 36 - SOUTH AUSTRALIA  
 GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987  
 BERTOIL HOLDING CORPORATION A.G.

RECON EXPLORATION (AUSTRALIA) PTY LTD  
 ADELAIDE, S. AUSTRALIA

**BERTOIL HOLDING CORPORATION A.G.  
NILPENA RAIL SIDING**

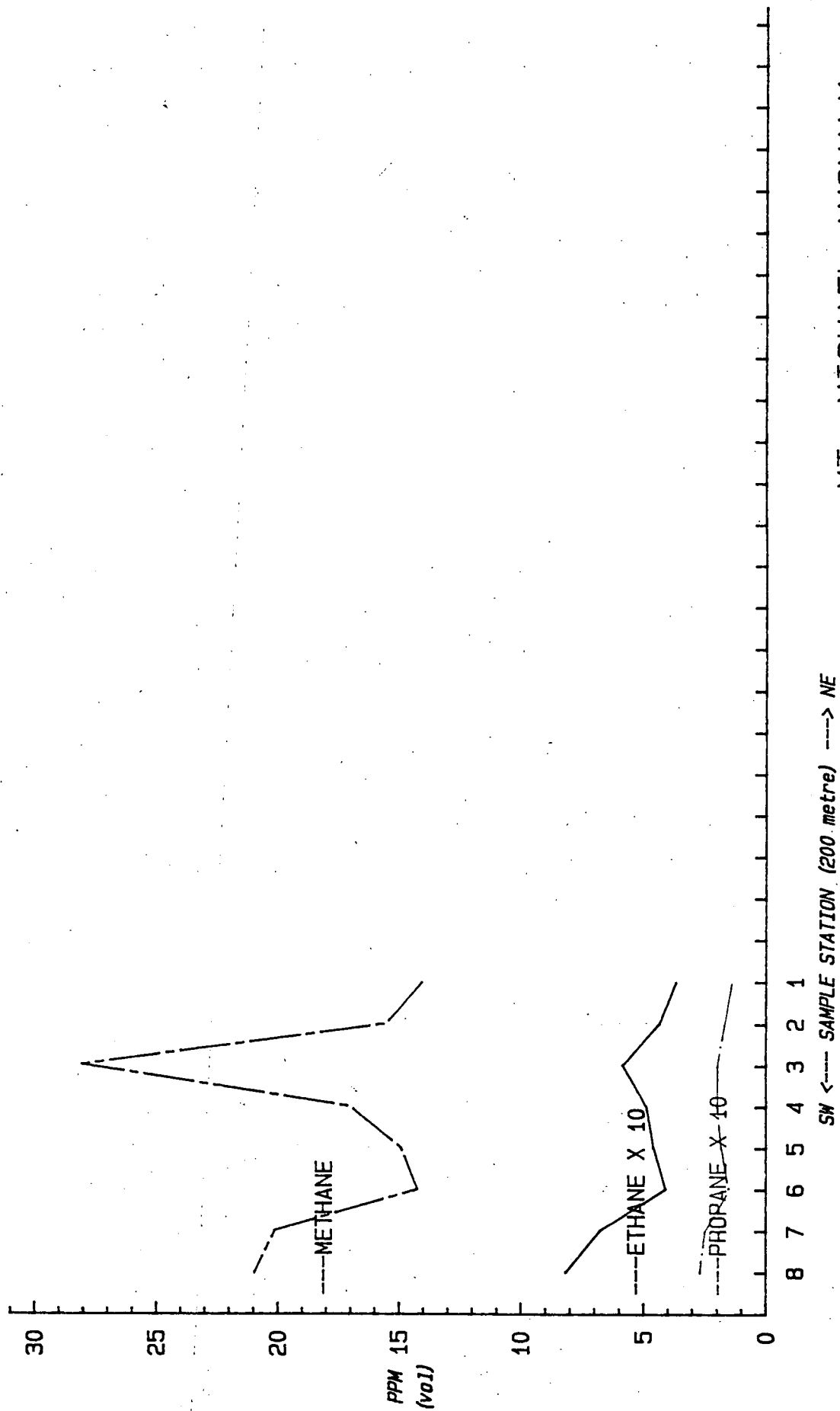
**DATA SUMMARY TABLE**

Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	11.72	.32	.20	.26	.15	0.00	.02
2	11.48	.30	.18	.23	.13	0.00	.02
3	10.94	.33	.19	.25	.10	0.00	.04
4	12.24	.32	.21	.26	.17	0.00	.08
5	13.06	.28	.19	.24	.12	0.00	.02
6	12.93	.27	.18	.20	.11	0.00	.02
7	12.08	.32	.19	.25	.15	0.00	.03
8	11.98	.34	.19	.26	.13	0.00	.05
9	11.72	.40	.16	.30	.14	0.00	.08
10	10.95	.28	.15	.23	.14	0.00	.08
11	17.26	.44	.25	.29	.21	0.00	.08
12	10.23	.33	.14	.24	.12	0.00	.05
13	15.10	.44	.19	.31	.16	0.00	.10
14	15.14	.50	.21	.36	.19	0.00	.11
15	15.07	.58	.23	.43	.20	0.00	.10
16	14.97	.56	.19	.44	.16	0.00	.08
17	15.19	.52	.26	.40	.23	0.00	.13
18	19.78	.63	.22	.44	.40	0.00	.13
19	19.48	.66	.19	.46	.18	0.00	.14
20	15.36	.62	.19	.44	.21	0.00	.13
21	11.49	.47	.14	.33	.14	0.00	.05

**SUMS AND RATIOS**

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	12.67	.95	1.60	1.73	92.50	36.63	22.18	7.50
2	12.34	.86	1.67	1.77	93.03	38.27	20.03	6.97
3	11.85	.91	1.74	2.50	92.32	33.15	22.85	7.68
4	13.28	1.04	1.52	1.53	92.17	38.25	21.24	7.83
5	13.91	.85	1.47	2.00	93.89	46.64	18.38	6.11
6	13.71	.78	1.50	1.82	94.31	47.89	15.47	5.69
7	13.02	.94	1.68	1.67	92.78	37.75	20.70	7.22
8	12.95	.97	1.79	2.00	92.51	35.24	21.70	7.49
9	12.80	1.08	2.50	2.14	91.56	29.30	25.60	8.44
10	11.83	.88	1.87	1.64	92.56	39.11	21.00	7.44
11	18.53	1.27	1.76	1.38	93.15	39.23	16.80	6.85
12	11.11	.88	2.36	2.00	92.08	31.00	23.46	7.92
13	16.30	1.20	2.32	1.94	92.64	34.32	20.53	7.36
14	16.51	1.37	2.38	1.89	91.70	30.28	23.78	8.30
15	16.61	1.54	2.52	2.15	90.73	25.98	28.53	9.27
16	16.40	1.43	2.95	2.75	91.28	26.73	29.39	8.72
17	16.73	1.54	2.00	1.74	90.79	29.21	26.33	9.21
18	21.60	1.82	2.86	1.10	91.57	31.40	22.24	8.43
19	21.11	1.63	3.47	2.56	92.28	29.52	23.61	7.72
20	16.95	1.59	3.26	2.10	90.62	24.77	28.65	9.38
21	12.62	1.13	3.36	2.36	91.05	24.45	28.72	8.95

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South Australia Field Laboratory  
August, 1987



MT. MICHAEL ANOMALY

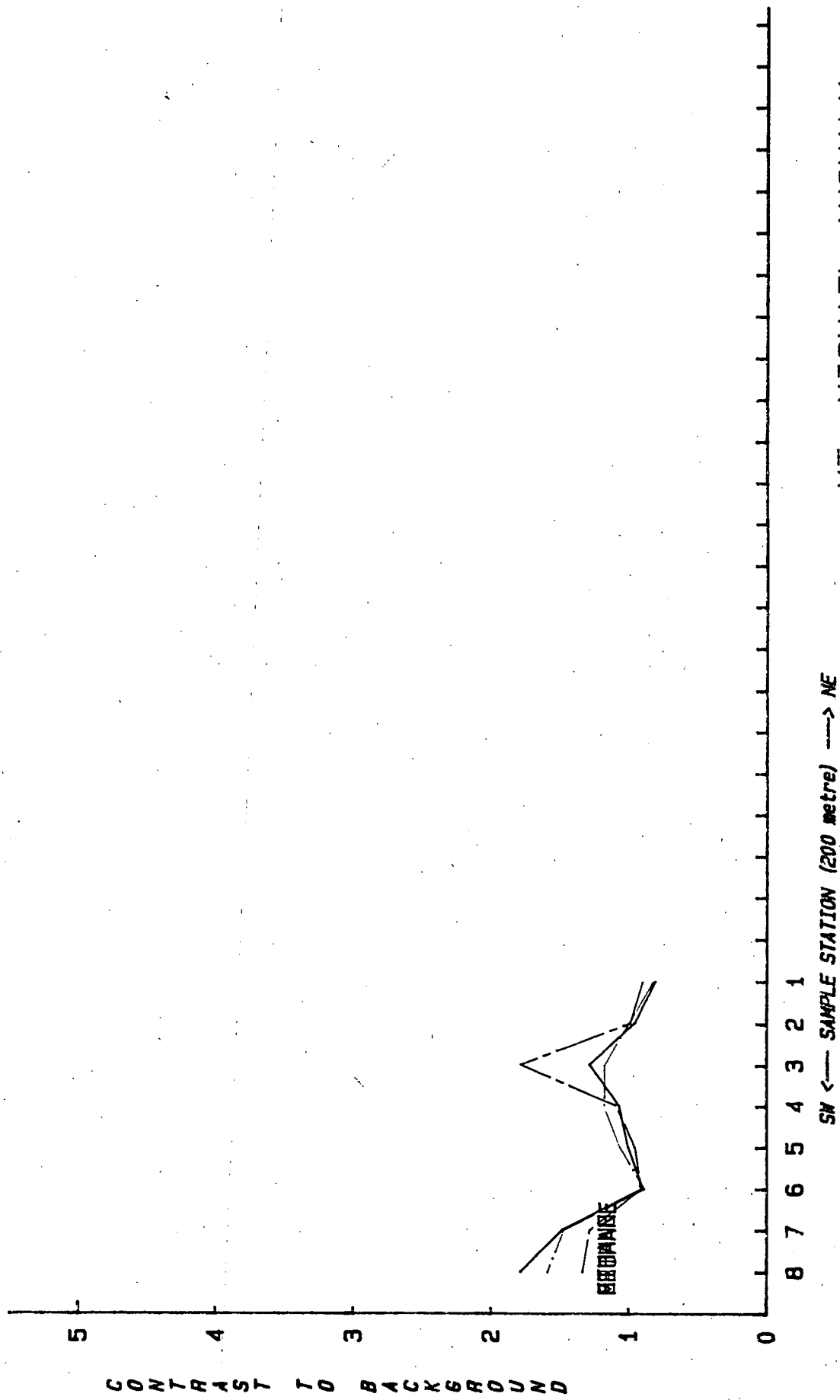
PEL 36 - SOUTH AUSTRALIA

GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

BERTOIL HOLDING CORPORATION A.G.

RECON EXPLORATION (AUSTRALIA) PTY LTD

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MT. MICHAEL ANOMALY  
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 GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987  
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RECON EXPLORATION (AUSTRALIA) PTY LTD  
 ADELAIDE, S. AUSTRALIA

**BERTOIL HOLDING CORPORATION A.G.  
MT. MICHAEL ANOMALY**

**DATA SUMMARY TABLE**

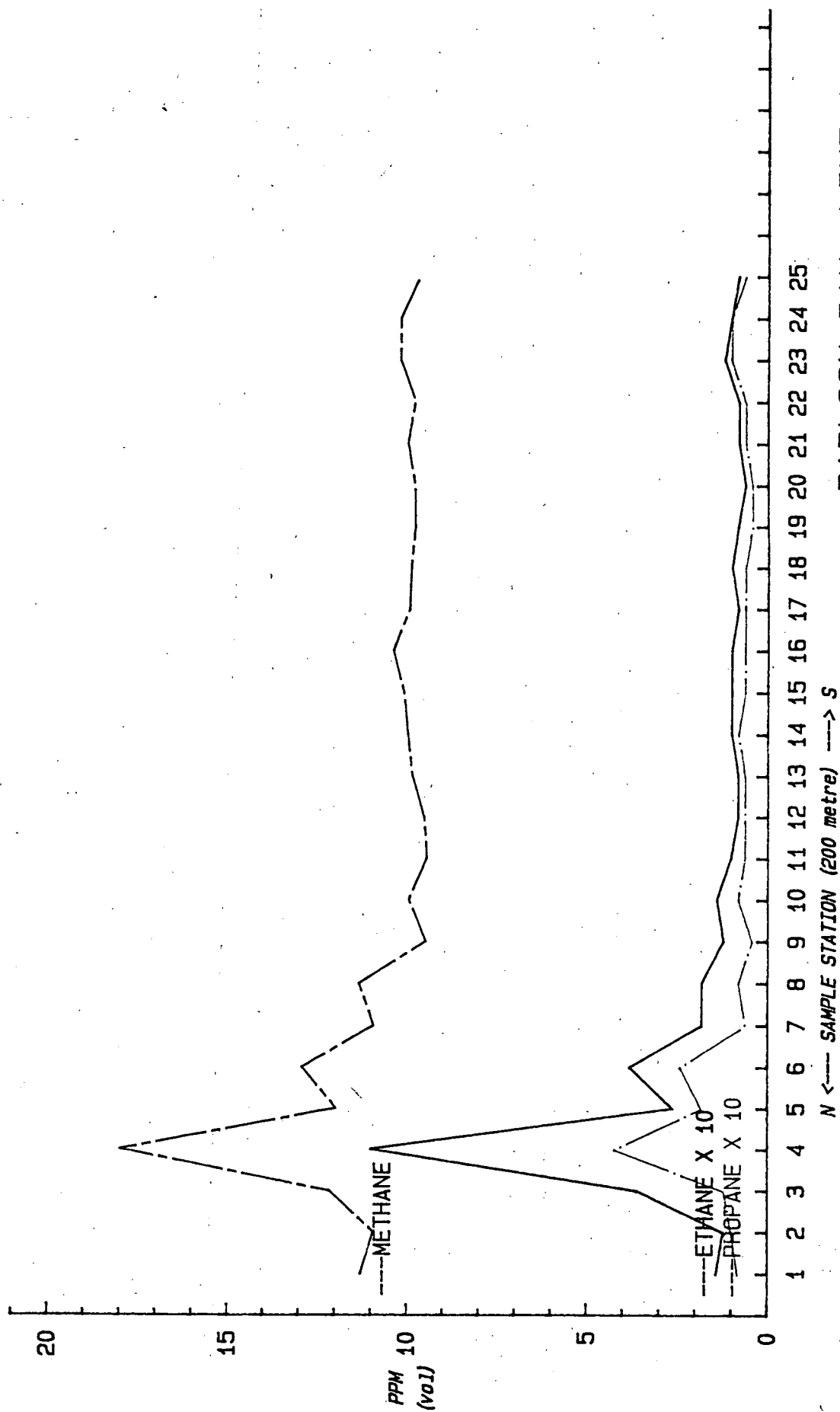
Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	14.10	.37	.09	.14	.06	0.00	.02
2	15.58	.44	.14	.17	.10	0.00	.02
3	28.07	.59	.10	.20	.07	0.00	.02
4	17.05	.49	.11	.20	.08	0.00	.06
5	14.94	.46	.09	.18	.07	0.00	.04
6	14.25	.41	.11	.15	.05	0.00	.04
7	20.16	.68	.21	.25	.15	0.00	.06
8	20.99	.82	.99	.27	.53	0.00	.05

**SUMS AND RATIOS**

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	14.78	.68	4.11	2.33	95.40	38.11	9.93	4.60
2	16.45	.87	3.14	1.70	94.71	35.41	10.91	5.29
3	29.05	.98	5.90	2.86	96.63	47.58	7.13	3.37
4	17.99	.94	4.45	2.50	94.77	34.80	11.73	5.23
5	15.78	.84	5.11	2.57	94.68	32.48	12.05	5.32
6	15.01	.76	3.73	3.00	94.94	34.76	10.53	5.06
7	21.51	1.35	3.24	1.67	93.72	29.65	12.40	6.28
8	23.65	2.66	.83	.51	88.75	25.60	12.86	11.25

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# PADLOCK DAM, LINE-A

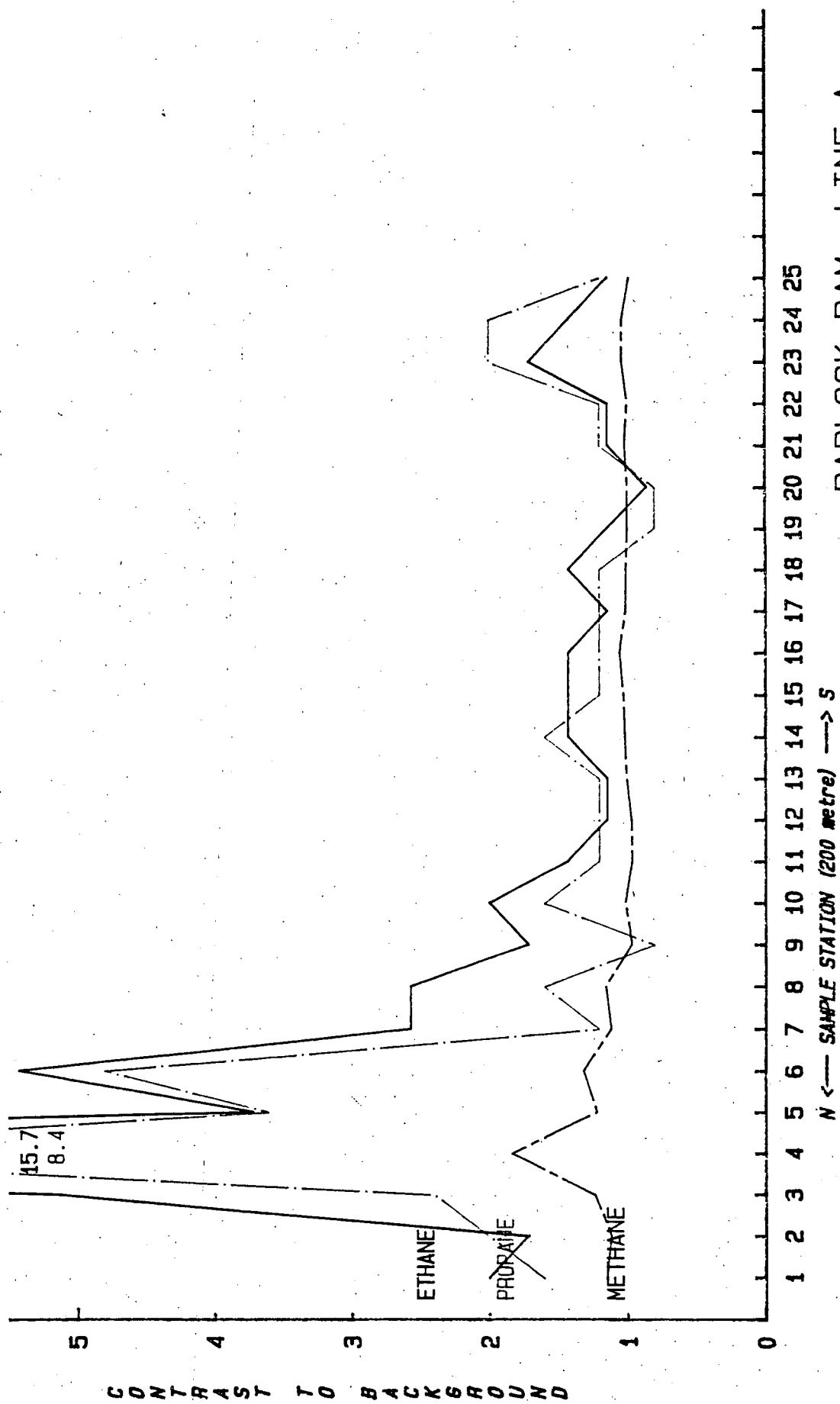
PEL 36 - SOUTH AUSTRALIA

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BERTOIL HOLDING CORPORATION A.G.  
PADLOCK DAM LINE-A

DATA SUMMARY TABLE

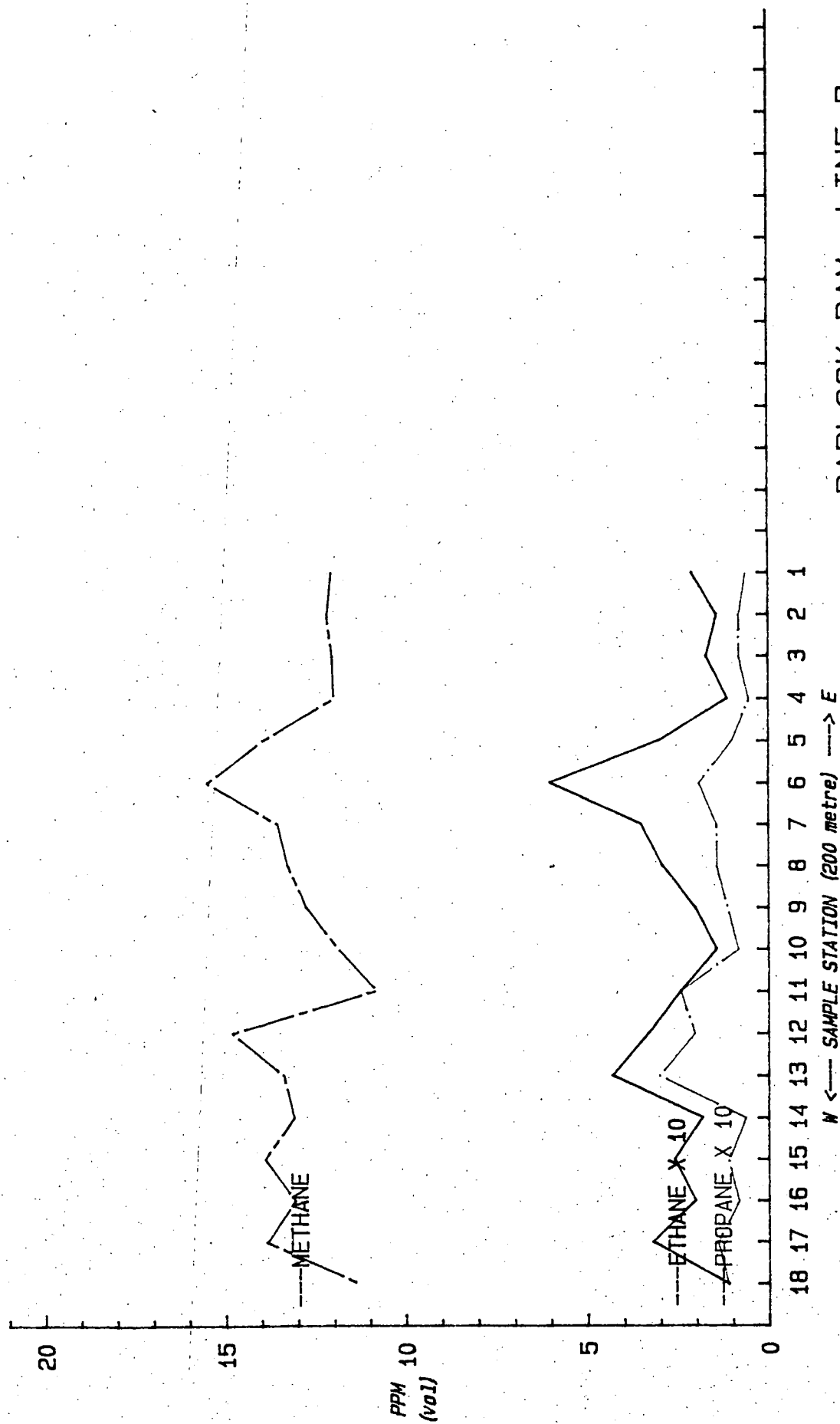
Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	11.27	.14	.10	.08	.06	0.00	0.00
2	10.90	.12	.08	.10	.06	0.00	0.00
3	12.13	.36	.16	.12	.08	0.00	0.00
4	17.95	1.10	.42	.42	.26	0.00	.10
5	11.94	.26	.18	.18	.08	0.00	0.00
6	12.89	.38	.16	.24	.10	0.00	.04
7	10.89	.18	.08	.06	.04	0.00	0.00
8	11.31	.18	.08	.08	.10	0.00	0.00
9	9.44	.12	.10	.04	.06	0.00	0.00
10	9.92	.14	.06	.08	.06	0.00	0.00
11	9.41	.10	.08	.06	.04	0.00	0.00
12	9.50	.08	.06	.06	.04	0.00	0.00
13	9.83	.08	.06	.06	.06	0.00	0.00
14	9.96	.10	.08	.08	.04	0.00	0.00
15	10.06	.10	.08	.06	.06	0.00	0.00
16	10.36	.10	.04	.06	.04	0.00	0.00
17	9.89	.08	.06	.06	.04	0.00	0.00
18	9.85	.10	.06	.06	.04	0.00	0.00
19	9.73	.08	.06	.04	.04	0.00	0.00
20	9.76	.06	.04	.04	.02	0.00	0.00
21	9.96	.08	.04	.06	.06	0.00	0.00
22	9.74	.08	.06	.06	.06	0.00	0.00
23	10.17	.12	.10	.10	.06	0.00	0.00
24	10.16	.10	.06	.10	.08	0.00	0.00
25	9.61	.08	.06	.06	.04	0.00	0.00

# PADLOCK DAM LINE-A

## SUMS AND RATIOS

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	11.65	.38	1.40	1.33	96.74	80.50	7.10	3.26
2	11.26	.36	1.50	1.67	96.80	90.83	9.17	3.20
3	12.85	.72	2.25	1.50	94.40	33.69	9.89	5.60
4	20.25	2.30	2.62	1.62	88.64	16.32	23.40	11.36
5	12.64	.70	1.44	2.25	94.46	45.92	15.08	5.54
6	13.81	.92	2.38	2.40	93.34	33.92	18.62	6.66
7	11.25	.36	2.25	1.50	96.80	60.50	5.51	3.20
8	11.75	.44	2.25	.80	96.26	62.83	7.07	3.74
9	9.76	.32	1.20	.67	96.72	78.67	4.24	3.28
10	10.26	.34	2.33	1.33	96.69	70.86	8.06	3.31
11	9.69	.28	1.25	1.50	97.11	94.10	6.38	2.89
12	9.74	.24	1.33	1.50	97.54	118.75	6.32	2.46
13	10.09	.26	1.33	1.00	97.42	122.88	6.10	2.58
14	10.26	.30	1.25	2.00	97.08	99.60	8.03	2.92
15	10.36	.30	1.25	1.00	97.10	100.60	5.96	2.90
16	10.60	.24	2.50	1.50	97.74	103.60	5.79	2.26
17	10.13	.24	1.33	1.50	97.63	123.63	6.07	2.37
18	10.11	.26	1.67	1.50	97.43	98.50	6.09	2.57
19	9.95	.22	1.33	1.00	97.79	121.63	4.11	2.21
20	9.92	.16	1.50	2.00	98.39	162.67	4.10	1.61
21	10.20	.24	2.00	1.00	97.65	124.50	6.02	2.35
22	10.00	.26	1.33	1.00	97.40	121.75	6.16	2.60
23	10.55	.38	1.20	1.67	96.40	84.75	9.83	3.60
24	10.50	.34	1.67	1.25	96.76	101.60	9.84	3.24
25	9.85	.24	1.33	1.50	97.56	120.13	6.24	2.44

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 August, 1987



PADLOCK DAM, LINE-B

PEL 36 - SOUTH AUSTRALIA

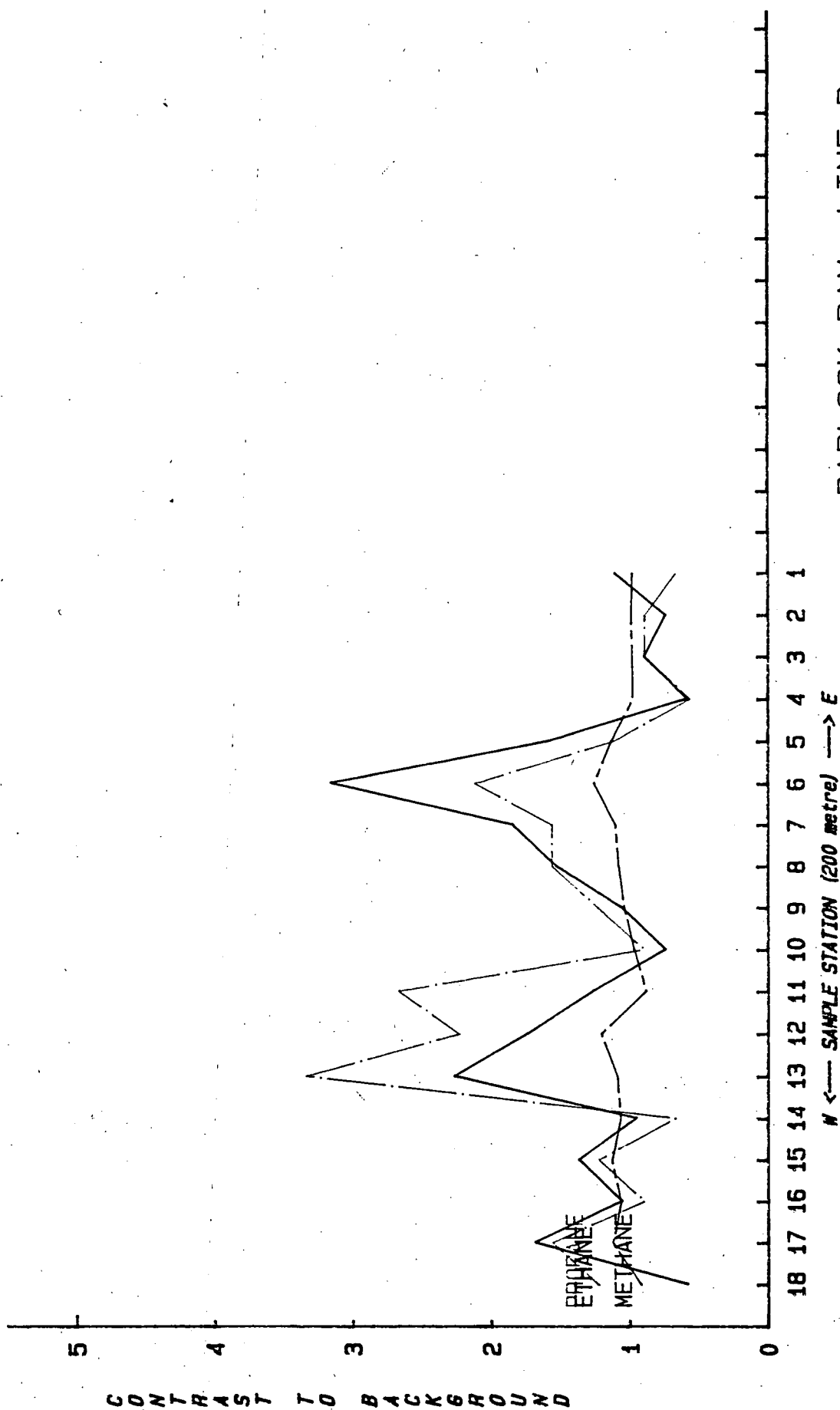
GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

BERTOIL HOLDING CORPORATION A.G.

RECON EXPLORATION (AUSTRALIA) PTY LTD

ADELAIDE, S. AUSTRALIA





PADLOCK DAM, LINE-B  
 PEL 36 - SOUTH AUSTRALIA  
 GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987  
 BERTOIL HOLDING CORPORATION A.G

RECON EXPLORATION (AUSTRALIA) PTY LTD  
 ADELAIDE, S. AUSTRALIA

**BERTOIL HOLDING CORPORATION A.G.  
PADLOCK DAM LINE-B**

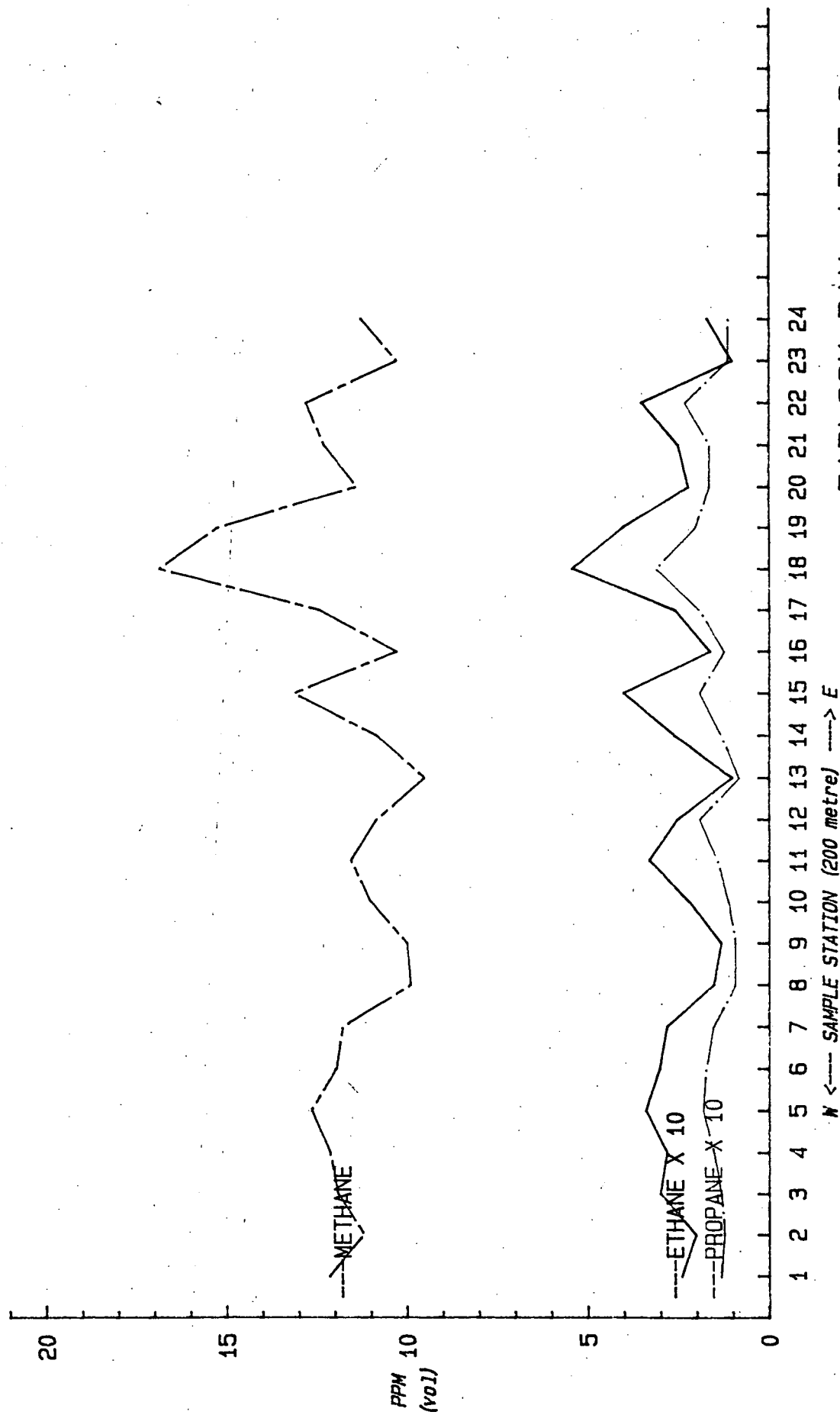
**DATA SUMMARY TABLE**

Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	12.03	.21	.10	.05	.05	0.00	.02
2	12.15	.14	.05	.08	.12	0.00	.02
3	11.99	.17	.07	.08	.09	0.00	.02
4	11.95	.11	.04	.05	.06	0.00	.02
5	13.94	.30	.15	.10	.13	0.00	.03
6	15.47	.60	.30	.19	.22	0.00	.05
7	13.51	.35	.15	.14	.17	0.00	.04
8	13.23	.29	.15	.14	.17	0.00	.05
9	12.71	.20	.12	.11	.11	0.00	.03
10	11.84	.14	.04	.08	.07	0.00	0.00
11	10.77	.24	.11	.24	.13	0.00	.02
12	14.78	.33	.15	.20	.14	0.00	.02
13	13.34	.43	.47	.30	.23	0.00	.05
14	13.07	.19	.10	.06	.09	0.00	.02
15	13.89	.26	.15	.11	.13	0.00	.02
16	13.04	.20	.12	.08	.14	0.00	0.00
17	13.83	.32	.21	.14	.19	0.00	.05
18	11.27	.11	.06	.11	.09	0.00	0.00

**SUMS AND RATIOS**

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	12.47	.44	2.10	1.20	96.47	57.29	4.99	3.53
2	12.56	.41	2.80	.67	96.73	86.75	6.59	3.27
3	12.42	.43	2.43	.89	96.54	70.50	6.68	3.46
4	12.23	.28	2.75	.83	97.71	108.59	4.19	2.29
5	14.65	.71	2.00	.77	95.15	46.47	7.17	4.85
6	16.83	1.36	2.00	.86	91.92	25.78	12.28	8.08
7	14.36	.85	2.33	.82	94.08	38.60	10.36	5.92
8	14.03	.80	1.93	.82	94.30	45.62	10.58	5.70
9	13.28	.57	1.67	1.00	95.71	63.55	8.65	4.29
10	12.17	.33	3.50	1.14	97.29	84.54	6.76	2.71
11	11.51	.74	2.18	1.85	93.57	44.88	22.28	6.43
12	15.62	.84	2.20	1.43	94.62	44.79	13.53	5.38
13	14.82	1.48	.91	1.30	90.01	31.02	22.49	9.99
14	13.52	.45	1.80	.67	96.67	72.58	4.59	3.33
15	14.56	.67	1.73	.85	95.40	53.42	7.92	4.60
16	13.58	.54	1.67	.57	96.02	65.18	6.14	3.98
17	14.74	.91	1.52	.74	93.83	43.22	10.12	6.17
18	11.64	.37	1.83	1.22	96.82	102.41	9.76	3.18

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August, 1987

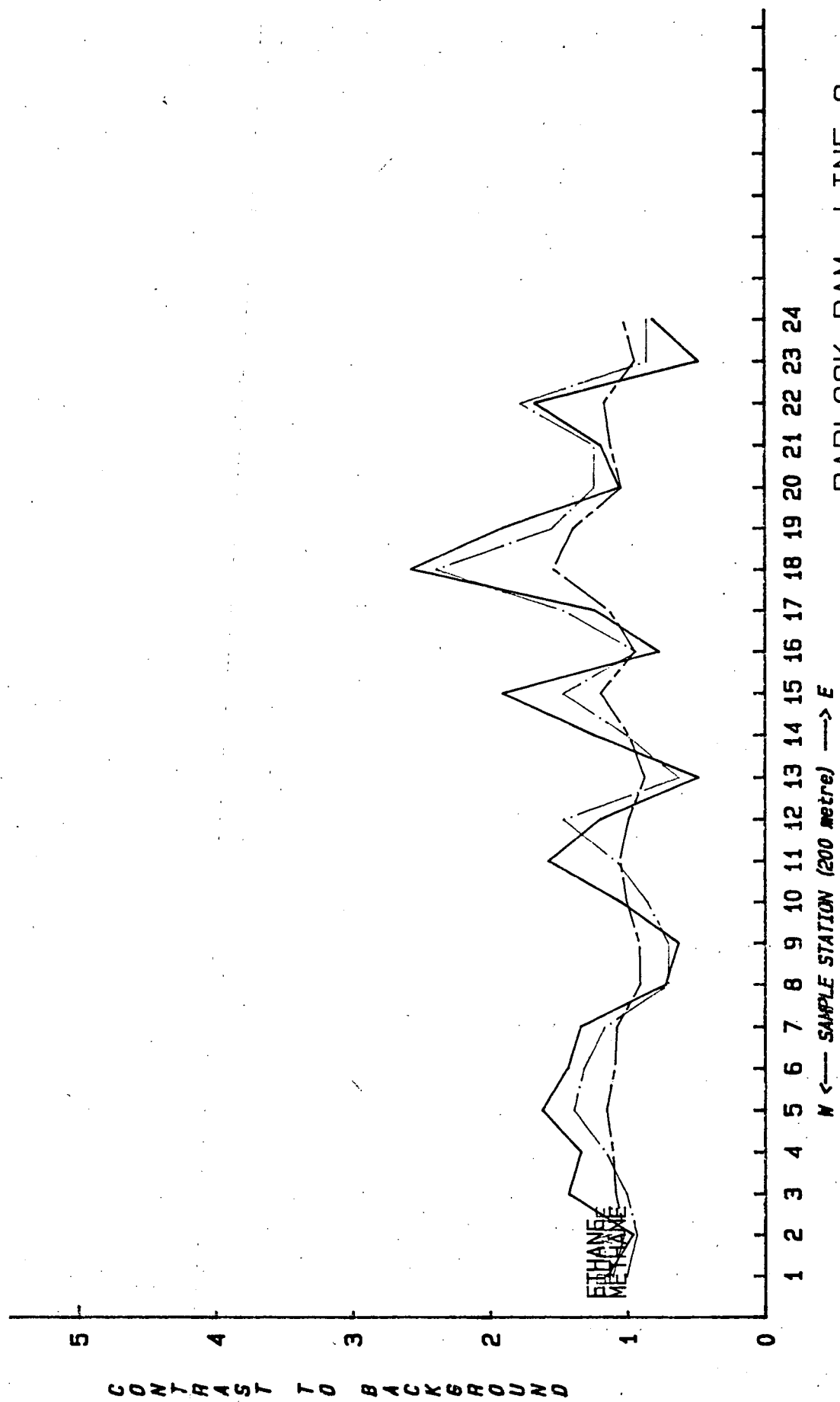


PADLOCK DAM, LINE-C

PEL 36 - SOUTH AUSTRALIA

GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987  
BERTOIL HOLDING CORPORATION A.G.

RECON EXPLORATION (AUSTRALIA) PTY LTD  
ADELAIDE, S. AUSTRALIA



PADLOCK DAM, LINE-C

PEL 36 - SOUTH AUSTRALIA

GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

BERTOIL HOLDING CORPORATION A.G

RECON EXPLORATION (AUSTRALIA) PTY LTD  
ADELAIDE, S. AUSTRALIA

BERTOIL HOLDING CORPORATION A.G.  
PADLOCK DAM LINE-C

DATA SUMMARY TABLE

Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	12.14	.24	.11	.13	.08	0.00	0.00
2	11.18	.20	.09	.12	.06	0.00	0.00
3	11.91	.30	.15	.13	.08	0.00	0.00
4	12.12	.28	.14	.15	.07	0.00	.05
5	12.63	.34	.16	.18	.13	0.00	.04
6	11.93	.30	.16	.17	.11	0.00	.03
7	11.75	.28	.15	.15	.11	0.00	.02
8	9.87	.15	.09	.09	.08	0.00	0.00
9	9.99	.13	.08	.09	.08	0.00	0.00
10	11.00	.22	.13	.11	.10	0.00	0.00
11	11.54	.33	.17	.14	.10	0.00	.03
12	10.80	.25	.16	.19	.15	0.00	.02
13	9.48	.10	.08	.08	.05	0.00	0.00
14	10.82	.26	.18	.13	.11	0.00	0.00
15	13.09	.40	.25	.19	.15	0.00	.05
16	10.25	.16	.09	.12	.07	0.00	0.00
17	12.40	.26	.18	.19	.15	0.00	.06
18	16.82	.54	.26	.31	.22	0.00	.08
19	15.20	.40	.20	.20	.15	0.00	.07
20	11.36	.22	.12	.16	.10	0.00	0.00
21	12.26	.25	.14	.16	.12	0.00	.02
22	12.77	.35	.17	.23	.16	.01	.06
23	10.26	.10	.06	.11	.09	0.00	0.00
24	11.25	.17	.10	.11	.15	0.00	0.00

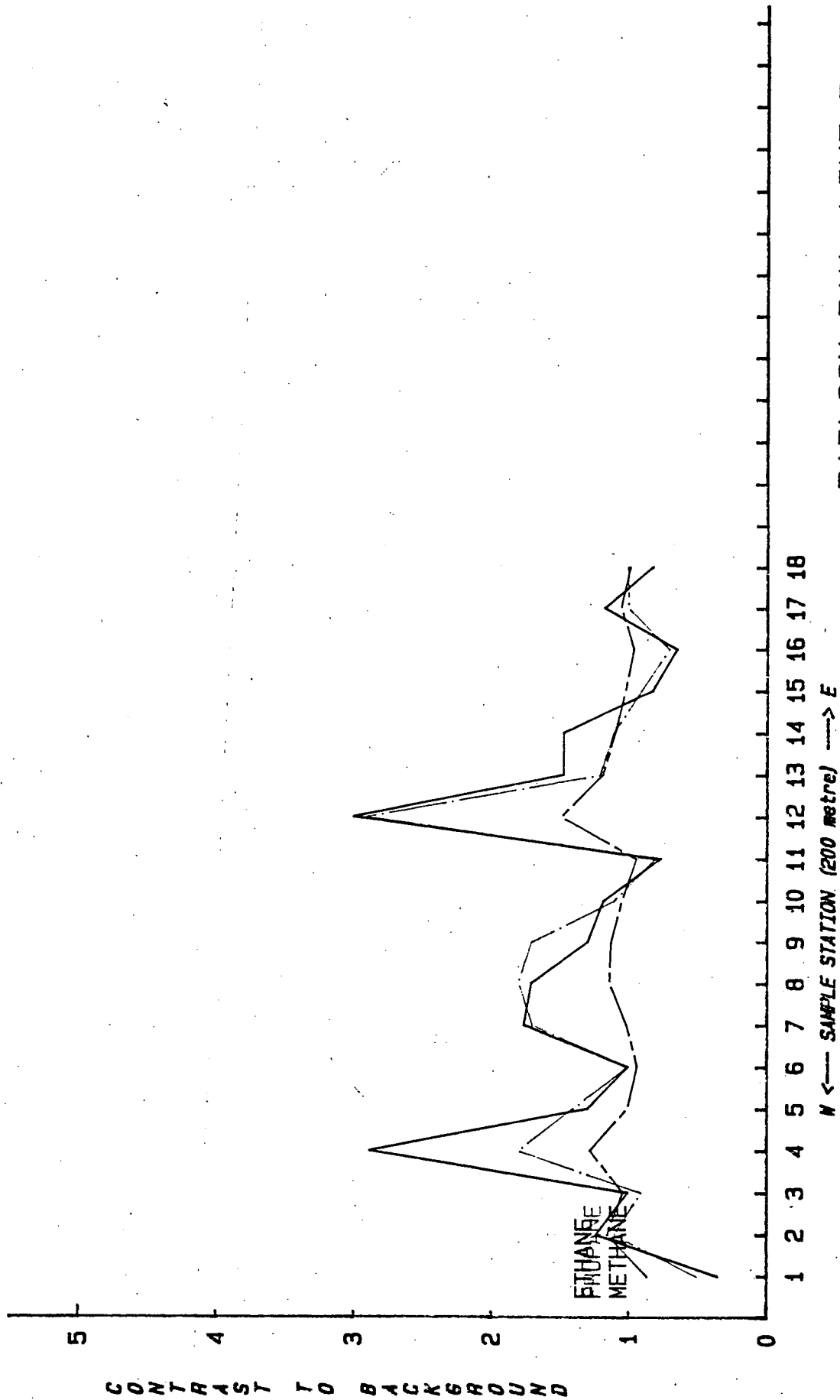
# PADLOCK DAM LINE-C

## SUMS AND RATIOS

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	12.70	.56	2.18	1.63	95.59	50.58	10.71	4.41
2	11.65	.47	2.22	2.00	95.97	55.90	10.73	4.03
3	12.57	.66	2.00	1.63	94.75	39.70	10.92	5.25
4	12.81	.69	2.00	2.14	94.61	43.29	12.38	5.39
5	13.48	.85	2.13	1.38	93.69	37.15	14.25	6.31
6	12.70	.77	1.88	1.55	93.94	39.77	14.25	6.06
7	12.46	.71	1.87	1.36	94.30	41.96	12.77	5.70
8	10.28	.41	1.67	1.13	96.01	65.80	9.12	3.99
9	10.37	.38	1.63	1.13	96.34	76.85	9.01	3.66
10	11.56	.56	1.69	1.10	95.16	50.00	10.00	4.84
11	12.31	.77	1.94	1.40	93.74	34.97	12.13	6.26
12	11.57	.77	1.56	1.27	93.34	43.20	17.59	6.66
13	9.79	.31	1.25	1.60	96.83	94.80	8.44	3.17
14	11.50	.68	1.44	1.18	94.09	41.62	12.01	5.91
15	14.13	1.04	1.60	1.27	92.64	32.73	14.51	7.36
16	10.69	.44	1.78	1.71	95.88	64.06	11.71	4.12
17	13.24	.84	1.44	1.27	93.66	47.69	15.32	6.34
18	18.23	1.41	2.08	1.41	92.27	31.15	18.43	7.73
19	16.22	1.02	2.00	1.33	93.71	38.00	13.16	6.29
20	11.96	.60	1.83	1.60	94.98	51.64	14.08	5.02
21	12.95	.69	1.79	1.33	94.67	49.04	13.05	5.33
22	13.75	.98	2.06	1.44	92.87	36.49	18.01	7.13
23	10.62	.36	1.67	1.22	96.61	102.60	10.72	3.39
24	11.78	.53	1.70	.73	95.50	66.18	9.78	4.50

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PADLOCK DAM, LINE-D

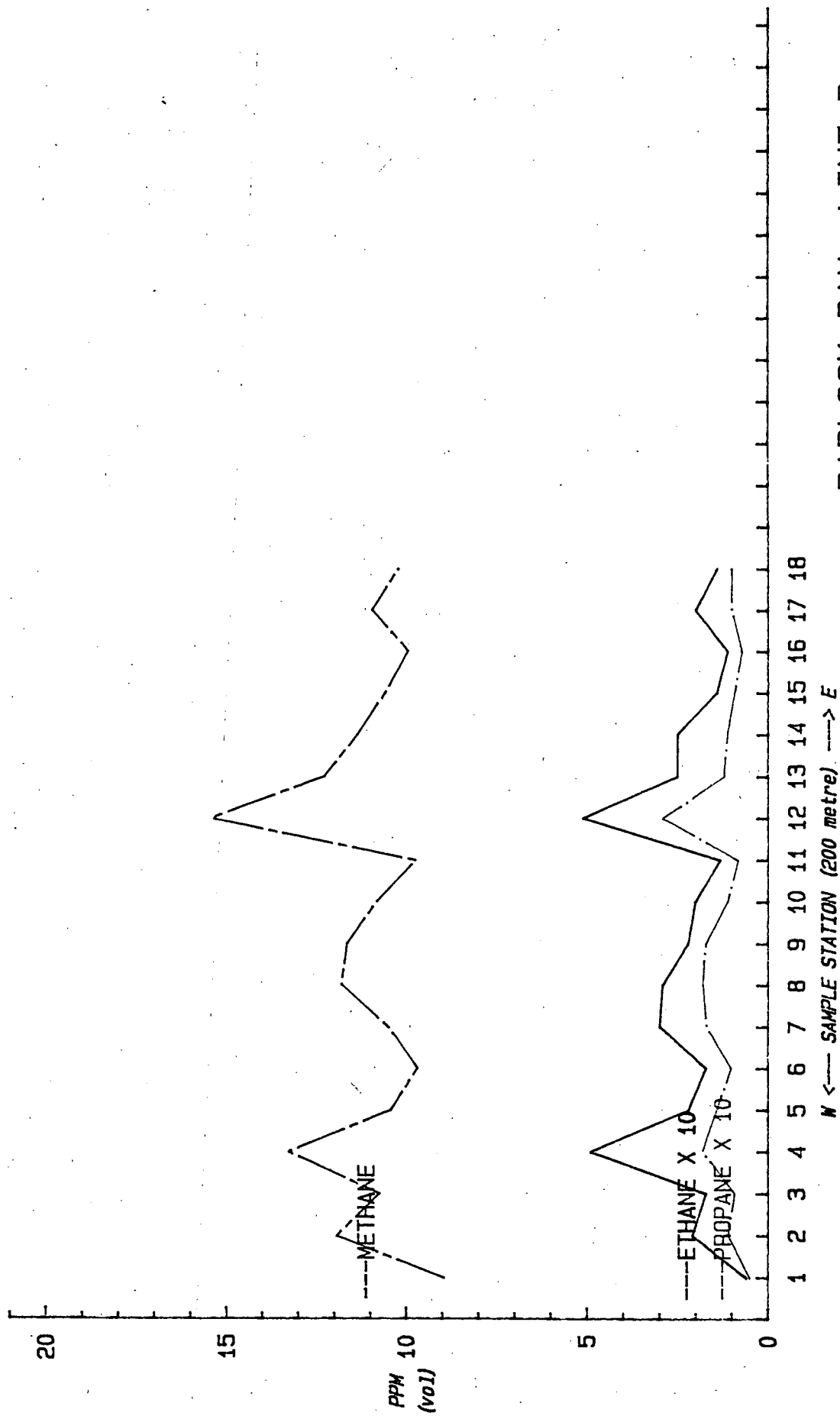
PEL 36 - SOUTH AUSTRALIA

GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

BERTOIL HOLDING CORPORATION A.G

RECON EXPLORATION (AUSTRALIA) PTY LTD

ADLAIDE, S. AUSTRALIA



PADLOCK DAM, LINE-D

PEL 36 - SOUTH AUSTRALIA

GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

BERTOIL HOLDING CORPORATION A.G.

RECON EXPLORATION (AUSTRALIA) PTY LTD

ADELAIDE, S. AUSTRALIA

**BERTOIL HOLDING CORPORATION A.G.  
PADLOCK DAM LINE-D**

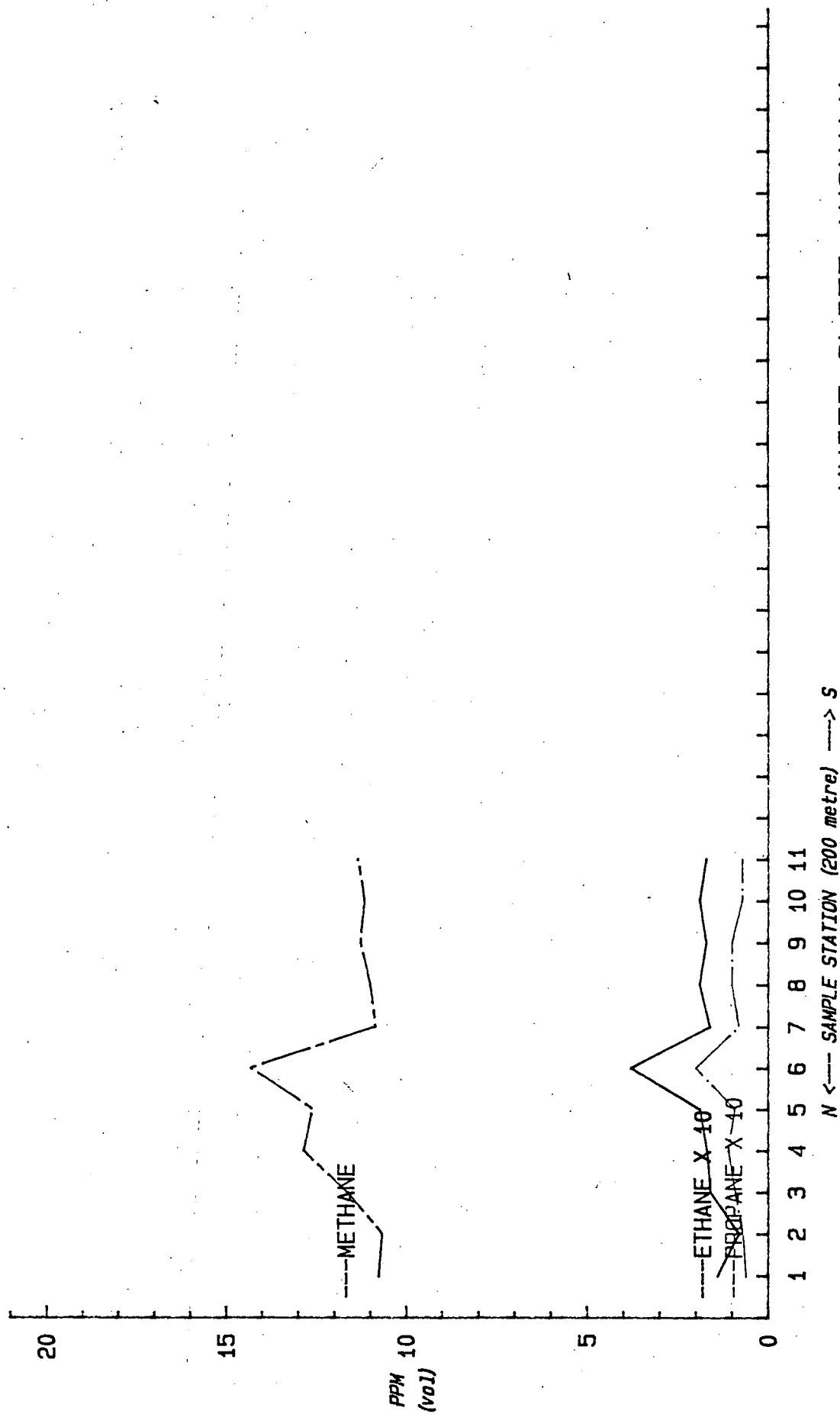
**DATA SUMMARY TABLE**

Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	8.96	.06	.04	.05	.02	0.00	0.00
2	11.93	.21	.08	.11	.06	0.00	0.00
3	10.73	.17	.11	.09	.07	0.00	0.00
4	13.26	.49	.24	.18	.11	.01	.03
5	10.41	.22	.10	.14	.09	0.00	0.00
6	9.67	.17	.10	.10	.08	0.00	0.00
7	10.51	.30	.30	.17	.22	0.00	.05
8	11.79	.29	.16	.18	.13	0.00	.02
9	11.63	.22	.10	.17	.17	0.00	0.00
10	10.82	.20	.10	.11	.12	0.00	0.00
11	9.71	.13	.07	.08	.05	0.00	0.00
12	15.42	.51	.25	.29	.22	.03	.05
13	12.26	.25	.09	.12	.08	0.00	0.00
14	11.33	.25	.11	.11	.11	0.00	0.00
15	10.56	.14	.05	.09	.05	0.00	0.00
16	9.93	.11	.07	.07	.03	0.00	0.00
17	10.94	.20	.11	.10	.08	0.00	0.00
18	10.20	.14	.07	.10	.07	0.00	0.00

**SUMS AND RATIOS**

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	9.13	.17	1.50	2.50	98.14	149.33	5.58	1.86
2	12.39	.46	2.63	1.83	96.29	56.81	9.22	3.71
3	11.17	.44	1.55	1.29	96.06	63.12	8.39	3.94
4	14.32	1.06	2.04	1.64	92.60	27.06	13.57	7.40
5	10.96	.55	2.20	1.56	94.98	47.32	13.45	5.02
6	10.12	.45	1.70	1.25	95.55	56.89	10.34	4.45
7	11.55	1.04	1.00	.77	90.99	35.03	16.18	9.01
8	12.57	.78	1.81	1.38	93.79	40.66	15.27	6.21
9	12.29	.66	2.20	1.00	94.63	52.86	14.62	5.37
10	11.35	.53	2.00	.92	95.33	54.10	10.17	4.67
11	10.04	.33	1.86	1.60	96.71	74.69	8.24	3.29
12	16.77	1.35	2.04	1.32	91.95	30.24	18.81	8.05
13	12.80	.54	2.78	1.50	95.78	49.04	9.79	4.22
14	11.91	.58	2.27	1.00	95.13	45.32	9.71	4.87
15	10.89	.33	2.80	1.80	96.97	75.43	8.52	3.03
16	10.21	.28	1.57	2.33	97.26	90.27	7.05	2.74
17	11.43	.49	1.82	1.25	95.71	54.70	9.14	4.29
18	10.58	.38	2.00	1.43	96.41	72.86	9.80	3.59

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August, 1987



N <--- SAMPLE STATION (200 metre) ----> S

# WHITE CLIFF ANOMALY

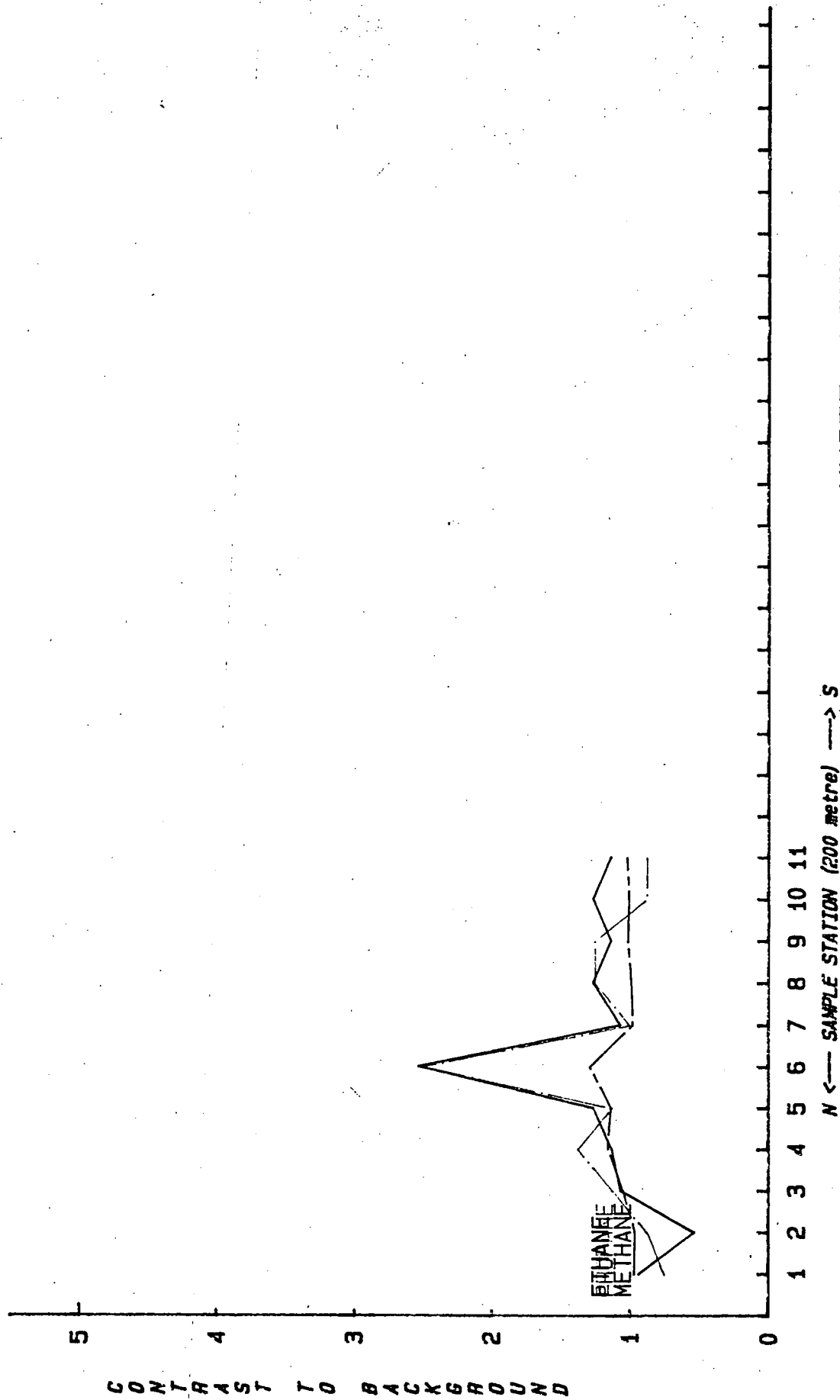
PEL 36 - SOUTH AUSTRALIA

GEOCHEMICAL EXPLORATION PROGRAMME, AUGUST 1987

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# WHITE CLIFF ANOMALY

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**BERTOIL HOLDING CORPORATION A.G.  
WHITE CLIFF ANOMALY**

**DATA SUMMARY TABLE**

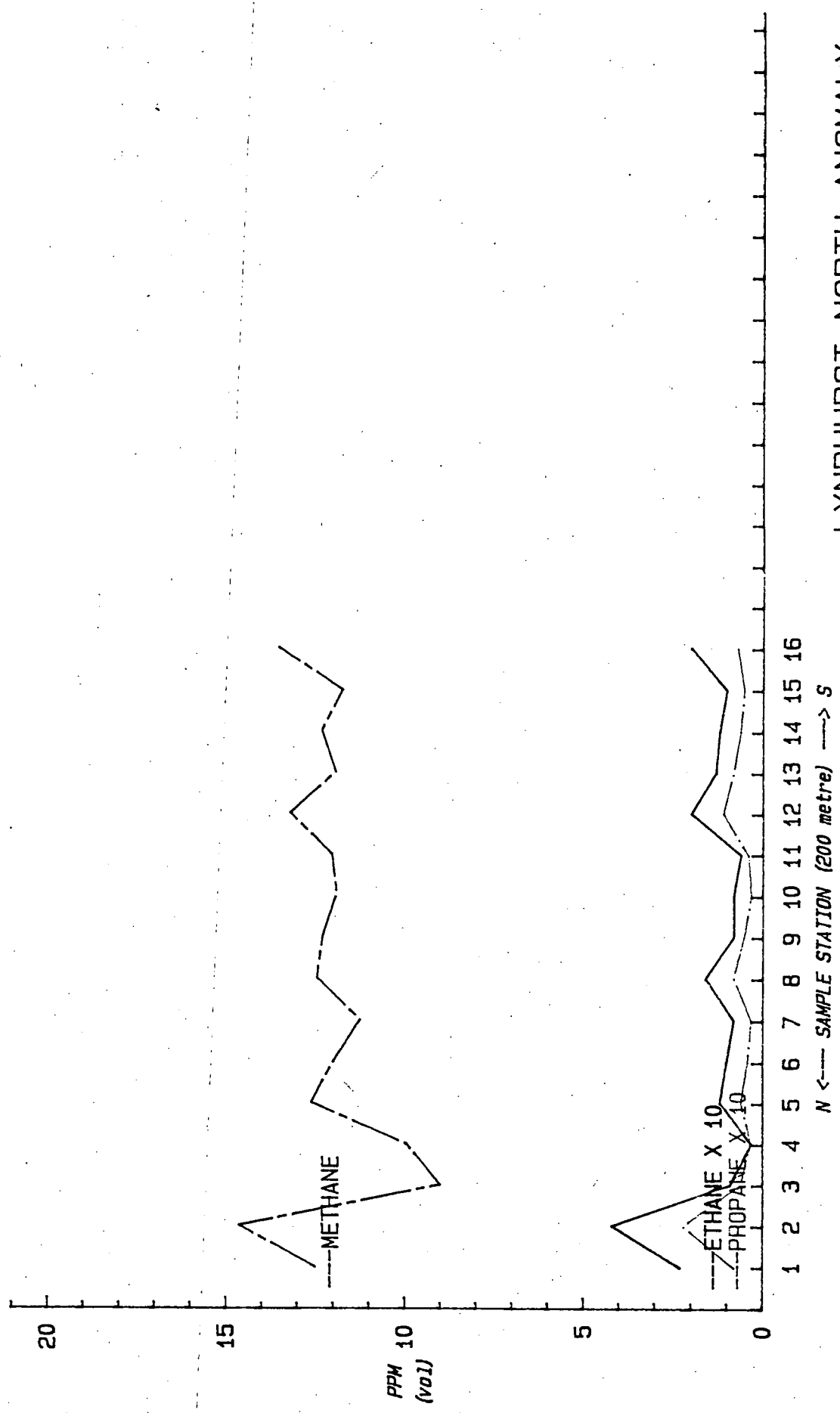
Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	10.77	.14	.09	.06	.10	0.00	0.00
2	10.67	.08	.05	.07	.05	0.00	0.00
3	11.65	.16	.09	.09	.10	0.00	0.00
4	12.96	.17	.11	.11	.10	0.00	0.00
5	12.59	.19	.15	.09	.08	0.00	0.00
6	14.32	.38	.22	.20	.21	0.00	.02
7	10.95	.16	.08	.08	.15	0.00	.05
8	11.01	.19	.09	.10	.06	0.00	0.00
9	11.27	.17	.10	.10	.07	0.00	0.00
10	11.15	.19	.09	.07	.11	0.00	0.00
11	11.35	.17	.07	.07	.11	0.00	0.00

**SUMS AND RATIOS**

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	11.16	.39	1.56	.60	96.51	76.93	5.57	3.49
2	10.92	.25	1.60	1.40	97.71	133.31	6.56	2.29
3	12.09	.44	1.78	.90	96.36	72.91	7.73	3.64
4	13.35	.49	1.55	1.10	96.33	75.62	8.56	3.67
5	13.12	.53	1.27	1.13	95.96	66.26	7.15	4.04
6	15.38	1.06	1.73	.95	93.11	37.67	13.97	6.89
7	11.32	.47	2.00	.53	95.95	67.91	7.37	4.15
8	11.45	.44	2.11	1.67	96.16	57.92	9.09	3.84
9	11.71	.44	1.70	1.43	96.24	66.26	8.98	3.76
10	11.61	.46	2.11	.64	96.04	58.66	6.28	3.96
11	11.77	.42	2.43	.64	96.43	66.74	6.17	3.57

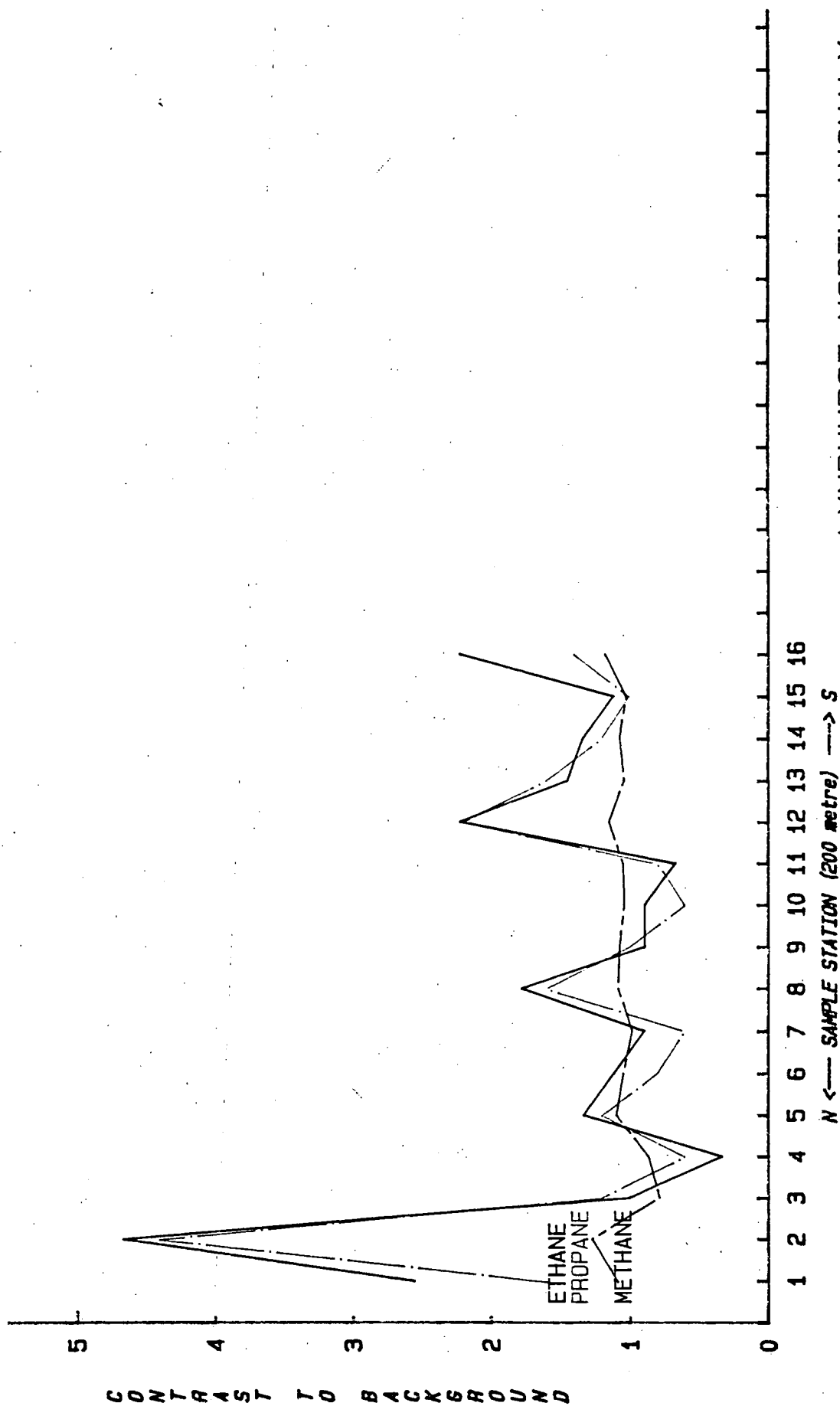
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**LYNDHURST NORTH ANOMALY**

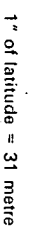
**DATA SUMMARY TABLE**

Sample #	Methane	Ethane	Ethene	Propane	Propene	i-Butane	n-Butane
1	12.50	.23	.08	.08	.04	0.00	0.00
2	14.62	.42	.16	.22	.11	0.00	0.00
3	9.00	.09	.04	.06	.04	0.00	0.00
4	9.96	.03	.01	.03	.01	0.00	0.00
5	12.61	.12	.05	.06	.04	0.00	.01
6	11.99	.10	.04	.04	.04	0.00	0.00
7	11.24	.08	.03	.03	.02	0.00	0.00
8	12.45	.16	.04	.08	.05	0.00	0.00
9	12.29	.08	.04	.05	.03	0.00	0.00
10	11.91	.08	.05	.03	.02	0.00	0.00
11	12.05	.06	.03	.04	.02	0.00	0.00
12	13.21	.20	.07	.11	.05	0.00	0.00
13	11.93	.13	.04	.08	.05	0.00	0.00
14	12.33	.12	.03	.06	.03	0.00	0.00
15	11.73	.10	.03	.05	.03	0.00	0.00
16	13.52	.20	.09	.07	.05	0.00	0.00

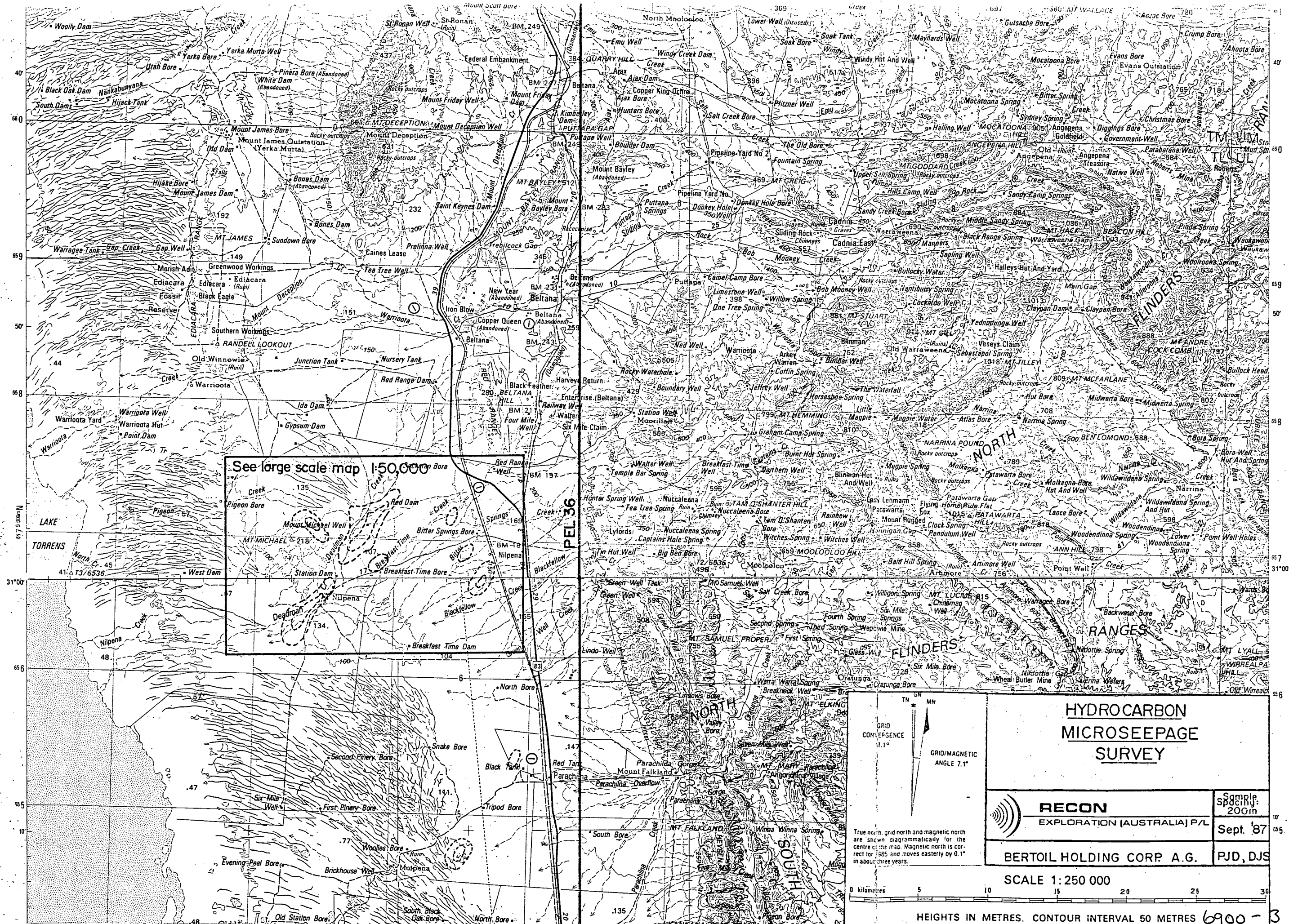
**SUMS AND RATIOS**

Sample #	Sum C1-C4	Sum C2-C4	Ethane/ Ethene	Propane/ Propene	Percent Methane	Ethane Ratio	Propane Ratio	Percent Wetness
1	12.93	.43	2.88	2.00	96.67	54.35	6.40	3.33
2	15.53	.91	2.63	2.00	94.14	34.81	15.05	5.86
3	9.23	.23	2.25	1.50	97.51	100.00	6.67	2.49
4	10.04	.08	3.00	3.00	99.20	332.00	3.01	.80
5	12.89	.28	2.40	1.50	97.83	105.08	4.76	2.17
6	12.21	.22	2.50	1.00	98.20	119.90	3.34	1.80
7	11.40	.16	2.67	1.50	98.60	140.50	2.67	1.40
8	12.78	.33	4.00	1.60	97.42	77.81	6.43	2.58
9	12.49	.20	2.00	1.67	98.40	153.63	4.07	1.60
10	12.09	.18	1.60	1.50	98.51	148.88	2.52	1.49
11	12.20	.15	2.00	2.00	98.77	200.83	3.32	1.23
12	13.64	.43	2.86	2.20	96.85	66.05	8.33	3.15
13	12.23	.30	3.25	1.60	97.55	91.77	6.71	2.45
14	12.57	.24	4.00	2.00	98.09	102.75	4.87	1.91
15	11.94	.21	3.33	1.67	98.24	117.30	4.26	1.76
16	13.93	.41	2.22	1.40	97.06	67.60	5.18	2.94

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South Australia Field Laboratory  
August, 1987







# HYDROCARBON MICROSEEPAGE SURVEY



**RECON**  
EXPLORATION (AUSTRALIA) P/L

BERTOIL HOLDING CORP. A.G.

SCALE 1:250 000

HEIGHTS IN METRES. CONTOUR INTERVAL 50 METRES 6900-3

SPRINT  
200m  
Sept. '87  
PJD, DJS

True north, grid north and magnetic north  
are shown diagrammatically for the  
centre of the map. Magnetic north is  
correct for 1985 and moves easterly by 0.1°  
in about three years.

0 Kilometres 5 10 15 20 25 30