

EXPLORATION PERMITS - MINERALS

NT-1-MEP

and

NT-2-MEP

Minerals (Submerged Lands) Act, 1981

Report on Activities for Period

Completing 19 January 1993

Bonaparte Gulf Area
of the Kimberley Region
Western Australia

Prepared by
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CR 93 / 188A

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Victoria River
Palaeo Channel Survey
by Associated Surveys International Pty Ltd
30 April 1992

Appendix II

Form 5
Report on Operations on Mining Tenement

1 Introduction

Cambridge Gulf Exploration NL (Cambridge Gulf) applied on 7 August 1990 for exploration permits NT-1-MEP and NT-2-MEP in accordance with the Minerals (Submerged Lands) Act, 1981.

These exploration permits were granted on 19 January 1992.

Currently Cambridge Gulf holds a further two exploration leases in the Joseph Bonaparte Gulf under the Minerals (Submerged Lands) Act, 1981.

These leases are WA-1 MEP and WA-4-MEP under the control of the Western Australian Department of Mines and Energy.

A significant amount of work and expenditure has been carried out on all these leases with a specific focus on one lease, WA-1-MEP. The intent is to prove conclusively the scientific and geological evidence gathered on each of these leases and to develop a method of bulk sampling that realistically indicates the quality, quantity and reserve of these unique mineral deposits. To do this it is intended to carry out the first bulk sample on WA-1-MEP then apply the techniques developed to exploration permits NT-1-MEP and NT-2-MEP.

This report is prepared to comply with the requirements of Schedule 2 - "Conditions" of the exploration permit.

2 Progress to Date

Cambridge Gulf has carried out two major on site investigation programmes and has undertaken a number of desk top studies to model fluvial and marine occurrences and reviewed papers on the formation of the Joseph Bonaparte Gulf and the influence of contributing rivers.

Information on the occurrence of diamond in the tributaries to the Joseph Bonaparte Gulf has brought new factors into the scientific model.

In 1989, Cambridge Gulf undertook an investigation programme in the Joseph Bonaparte Gulf that identified submerged palaeo rivers were evident in near proximity to current day river sequences.

These palaeo rivers contain deposition of gravels and sands in layered formation from the seabed down to basement rock.

Further evidence from the high resolution shallow seismic surveys and attempts to take samples from seabed suggests that the palaeo rivers are the only areas that contain these terrestrial sediments.

Resulting from the 1989 survey a programme for further exploration of palaeo rivers in the Joseph Bonaparte Gulf was set down.

The programme included a detailed seismic survey in exploration lease area WA-1-MEP over the palaeo Ord River to produce a geotechnical model and to target sites for bulk sampling.

This seismic survey work was undertaken in August 1991 and the geotechnical model completed during 1992.

The programme also required that a reconnaissance survey be undertaken in lease areas NT-1-MEP and NT-2-MEP.

In conjunction with the work on WA-1-MEP approximately 190 line kilometres of high resolution shallow seismic profiling data was gathered over NT-1-MEP and NT-2-MEP and a report prepared (see appendix 1).

The reconnaissance seismic profiling indicates that palaeo channels exist in both of the Northern Territory lease areas.

Concurrently with the site field work a special purpose bulk sampling vessel has been evaluated and identified as being suitable for our operation. Negotiations are nearing completion for securing its services with delivery to Australia in the first quarter of 1993.

3 Proposed Work Programme for Year 2

The work proposed within the exploration permit NT-1-MEP is in four distinct parts.

Work proposed for year two for exploration permit NT-2-MEP is identical to that for NT-1-MEP as with the costs.

3.1 Seismic Survey

A closely spaced high resolution shallow seismic survey will be undertaken over submerged palaeo river channels now defined in the lease area.

This survey will be controlled to high accuracy using a Syledis or DGPS positioning equipment.

Approximately 500 line kilometres of seismic survey will be run in this lease area. The cost of this work is estimated at \$150,000.00.

3.2 Geotechnical Model

The charts from the seismic survey will be interpreted in respect sea bed, interbedding gravels and sands and bedrock and modelled on our computer together with the positioning data to produce a geotechnical model of the stratigraphy of the palaeo channel sediments.

From this model and its data base, bulk sampling sites will be targeted.

The aim of the bulk sampling survey will be to assess the nature and concentration of valuable minerals, in particular diamonds, which may be present within gravel units. Finer grained heavy mineral-type accumulations may also be present.

The criteria for selection of the bulk sample sites would be as follows:

- Sampling sites to be located over seismic traverses to provide direct comparison with the geotechnical model data base.
- Sampling to investigate different geological unit combinations identified in the survey area.
- Sampling to be representative and extend to bedrock.
- Sampling to take the optimum situation of thin overburden, thick gravel concentration, presence of more than one gravel type and presence of favourable channel structures.

The cost of this work is estimated at \$35,000.00.

3.3 Bulk Sampling

A special bulk sampling vessel with an on board heavy media separation plant will be employed to remove gravels and sands down to bedrock by reverse circulation.

The gravels and sands are processed by screening to size without crushing and concentrated heavy minerals of SG greater than 2.9 separated using ferro silicon as the concentrating media.

The concentrate is retained for further processing onshore through a diamond recovery Sortex machine.

The ferro silicon is recovered in the process and all material with SG less than 2.9 returned to the seabed at the sampling site.

During the bulk sampling operation material samples will be taken continuously from the HMS plant circuit to evaluate if other valuable minerals are present.

The duration of sampling will be 20 days.

The cost of the bulk sampling operation will be \$750,000.00.

3.4 Evaluation of Bulk Sample

The data collected during the bulk sampling operation will be reviewed against the geotechnical model.

From this information it will be decided if further sampling is required to define the size of the reserve or if there are anomalies that require further investigation that may increase the value of the reserve.

The positive actions that may take place after this stage are:

- Carry out further bulk sampling
- Preparation of a bankable document to fund the capital expansion required for full scale mining.

Anticipated expenditure \$60,000.00.

4 Expenditure for Year 2

Summary of expenditure for the next 12 months.

	NT-1-MEP	NT-2-MEP
Seismic Survey	\$150,000.00	\$150,000.00
Geotechnical Model	\$35,000.00	\$35,000.00
Bulk Sampling	\$750,000.00	\$750,000.00
Evaluation of Bulk Sample	\$60,000.00	\$60,000.00

5 Expenditure to 19 January 1993

A total of \$362,000.00 was expended on exploration permit NT-1-MEP and the same amount for NT-2-MEP up to 19 January 1993.

This falls short of the expenditure required of \$530,000.00 for each of the permits for the first twelve months term.

The shortfall has been caused by the delay in the commencement of bulk sampling due mainly to the sourcing of correct equipment to undertake this operation. The equipment is currently undergoing sea trials and will initially be used on the Western Australian lease area for reasons as described earlier.

When the equipment arrives during the first quarter of 1993 for WA-1-MEP the seismic vessel will be mobilised to NT-1-MEP and commence the work needed to develop the geotechnical model. On completion it will proceed immediately to NT-2-MEP.

The bulk sampling programme will commence on NT-1-MEP during the last quarter of 1993 and continue onto NT-2-MEP. The work will complete at the end of 1993.

6 Request for Variation for Exploration Permits NT-1-MEP and NT-2-MEP

It is requested that under section 67 of the Act that condition number 1 of both exploration permits be varied so that the minimum expenditure to be expended by January 1993 be \$362,000.00.

The expenditure requirement for the first two years of \$950,000.00 for each of the permits will be complied with.

REPORT ON OPERATIONS ON MINING TENEMENT

(To be completed in accordance with the instructions on the reverse hereof)

Tick box
applicable

☒ Annual ☐ Final ☐ Surrender, Report for the

Period from To 19 January 1993

Details of Mining Tenement:

Type Nt-1-MEP Number

Brief
summary of
operations
for each if
applicable

SUMMARY OF OPERATIONS AND EXPENDITURE:

General Prospecting: (Specify: Costeering No.; Metal detecting man days;
Sampling No., etc)

Cost \$

Remote Sensing & Airborne Surveys: (Specify: Photography; Surveys
Line km; etc)

Sub bottom profiling surveys - 10% of 650
kilometre survey and 90 kilometre of survey August 1991 Cost \$114,000.00

Ground Surveys: (Specify: Type; Line km; etc)

Cost \$

Drilling: (Specify: Type; No. of holes; Metres; etc)
Design, research and locating suitable equipment
to undertake bulk sampling operation

Cost \$43,000.00

Mining or Development: (Specify: Development; Tonnes mined; etc)

Cost \$

Overheads: (Specify: Report preparation; Office studies; etc)

Consultants reports

Planning of Geophysical programme

Planning of bulk sample operation

Cost \$97,000.00

Specialist Consultants

Funding Expenses

Other Costs: (Specify: Labour own/hired; Plant hire; Transportation,
Construction, Fuel; etc).

Overseas travel and accommodation to review bulk
sampling techniques and capital raising Cost \$108,000.00

- site visits to Kimberley area

- Computer systems

TOTAL EXPENDITURE \$362,000.00

Note: A copy of this page of the report may be obtained by any person on the payment of the prescribed fee—
Regulation 96 (2)

REPORT ON OPERATIONS ON MINING TENEMENT

(To be completed in accordance with the instructions on the reverse hereof)

Tick box
applicable☒ Annual ☐ Final ☐ Surrender, Report for the

Period from To 19 January 1993

Details of Mining Tenement:

Type NT-2-MEP Number

Brief
summary of
operations
for each if
applicable**SUMMARY OF OPERATIONS AND EXPENDITURE:****General Prospecting:** (Specify: Costeering No.; Metal detecting man days;
Sampling No., etc)

Cost \$

Remote Sensing & Airborne Surveys: (Specify: Photography; Surveys
Line km; etc)Sub bottom profiling surveys - 10% of 650
kilometre survey and 90 kilometre of survey
August 1991 Cost \$ 114,000.00**Ground Surveys:** (Specify: Type; Line km; etc)

Cost \$

Drilling: (Specify: Type; No. of holes; Metres; etc)Design, research and locating suitable equipment
to undertake bulk sampling operation Cost \$ 43,000.00**Mining or Development:** (Specify: Development; Tonnes mined; etc)

Cost \$

Overheads: (Specify: Report preparation; Office studies; etc)Consultants reports
Planning of Geophysical programme
Planning of bulk sample operation Cost \$ 97,000.00
Specialist Consultants**Funding Expenses****Other Costs:** (Specify: Labour own/hired; Plant hire; Transportation,
Construction, Fuel; etc).Overseas travel and accommodation to review bulk
sampling techniques and capital raising Cost \$ 108,000.00

- site visits to Kimberley area

- Computer systems

TOTAL EXPENDITURE \$ 362,000.00Note: A copy of this page of the report may be obtained by any person on the payment of the prescribed fee—
Regulation 96 (2)

55239/7/87—20M—AS/1192

Ref:4660SD

**BRIEF REPORT
VICTORIA RIVER
PALAEO-CHANNEL SURVEY**

CR 93 / 188 B

FOR:

**CAMBRIDGE GULF EXPLORATION NL
18 HIGH STREET
FREMANTLE. W.A.**

BY:

**ASSOCIATED SURVEYS INTERNATIONAL PTY LTD
18 PROWSE STREET
WEST PERTH. W.A.**

PALAEO-CHANNEL SURVEY

Approximately 180 km of reconnaissance echo sounder and high resolution shallow seismic profiling data were acquired during 28th to 30th August, 1991, offshore from the Victoria River in the southern Joseph Bonaparte Gulf of the Northern Territory and Western Australia.

The accompanying Figure 1 shows the layout of the three survey lines relative to shoreline features identified from the Admiralty Chart AUS 316.

Survey and other operations are detailed in the separate report titled "Palaeo-Channel Survey in WA-1-MEP, Joseph Bonaparte Gulf, Western Australia". This report also presents a background synthesis of regional geology and interpretations of past depositional environments in the southern Joseph Bonaparte Gulf.

The accompanying map Plan Number 8428-55, shows the survey fix trackplot at 1:100,000 scale and interpretations of the seismic data.

Note that because of the line spacings of tens of kilometres, the continuity of features is largely conjectural from line to line, however the map does show the possible style of channel features that would be better delineated by a closer survey grid.

The map shows present channels and older, infilled relict channels and estimates of depths below sea level to the deepest parts of each channel.

These depths are determined by converting the seismic record time scale using assumed seismic velocities for sea water and sediments.

Echo sounder data are not used to obtain more accurate bathymetry, because there is no tidal data sufficiently reliable for accurate reductions.

The map shows two presently active branching channel systems up to 4km wide and varying in depth between near 35m inshore to almost 45m offshore, and conjectured as extending northwards from the present day river mouth.

Two minor channels are also shown further west on one survey line.

SCALE 1 : 500000

JOSEPH BONAPARTE
GULF

Dorchester Is.

Pearce
Point

Line 1

Line 2

Line 3

• Pelican Is.

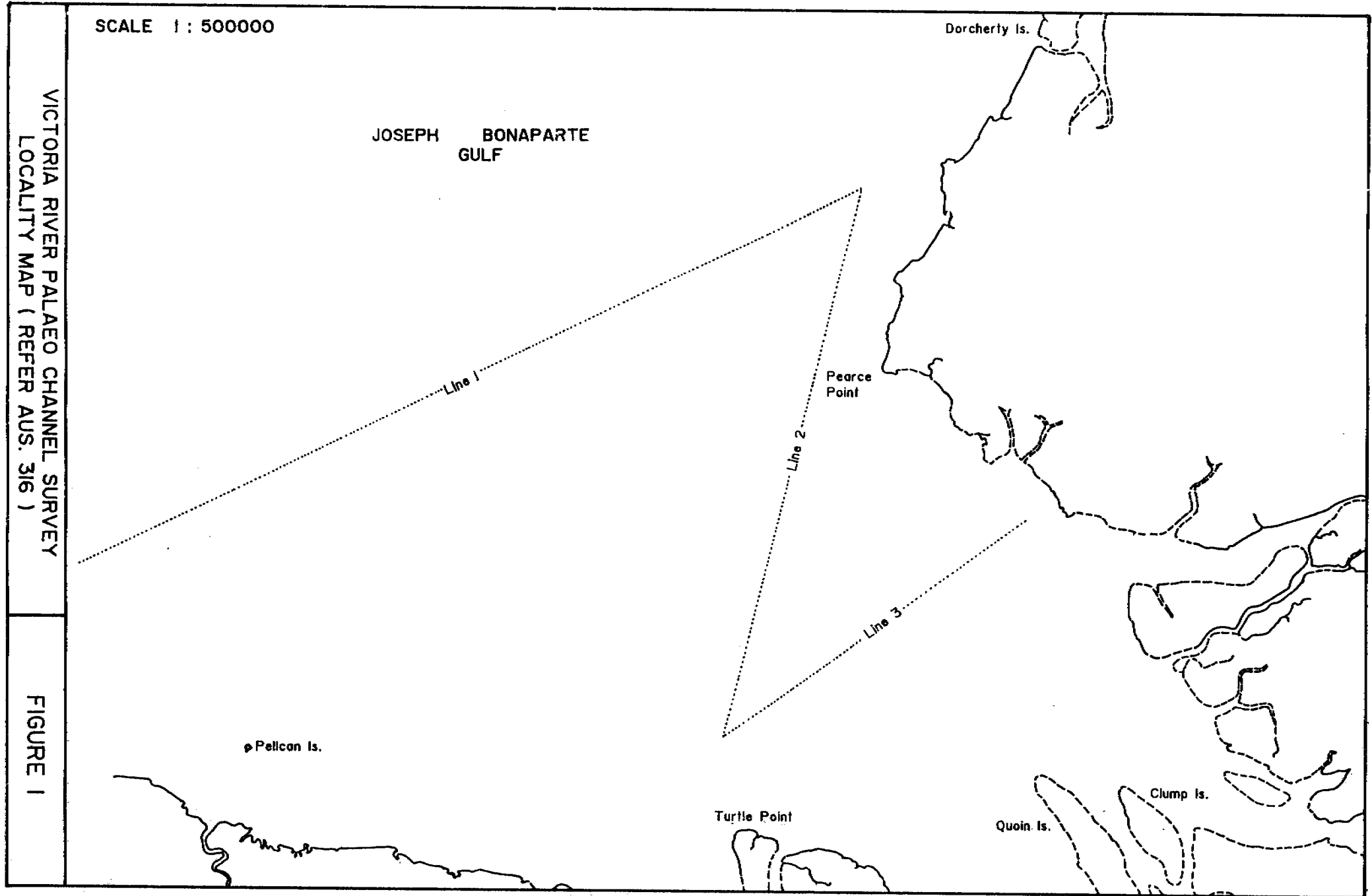
Turtle Point

Quoin Is.

Clump Is.

VICTORIA RIVER PALAEO CHANNEL SURVEY
LOCALITY MAP (REFER AUS. 316)

FIGURE 1



This channel system supersedes an infilled channel system with possibly three branching channels up to 5 or more kilometres wide, trending west of north and varying in depth between approximately 40 and almost 60 metres, with one channel more than 70 m deep.

Several minor infilled channels in this range of depths are shown on one survey line to the west.

Between this channel system and the overlying present channels is a zone of seismic masking attributed to gas being generated in peat beds. This is interpreted as an ancient mangrove swamp, and is taken as firm evidence for lower sea levels in the past, and supports the claims made in the WA-1-MEP report for the presence of fluvial and deltaic deposition in the southern Joseph Bonaparte Gulf, pre-dating the present estuarine and marine environment.

A third older channel system is also indicated on the map, also trending west of north from the present river mouth. This appears to comprise a major central channel more than 10 km wide and approximately 70 m or more deep, and a lesser eastern channel, 5 km wide and 80 m deep.

The offshore extent of the major channel is obscured on the seismic records by the shallow water seabed multiple.

This multiple also obscures deeper seismic features which may be indicative of even older broad channel features.

A closer survey grid may assist in determining the presence of such possible older features, however useful delineation may only be possible by seismic techniques such as multi channel acquisition which will reduce the multiple problem.

In conclusion, this survey has shown the presence of significant palaeo-channel systems offshore from the Victoria River mouth, which are very likely to have developed at periods of lower sea level within fluvial and deltaic depositional regimes.

Further appraisal of this area will require a confident assessment that these palaeo-channels have drained from areas with diamondiferous potential, and if this criteria is satisfied, then a closer spaced seismic survey will be required for more confident delineation of the palaeo-channel geometry and identification of coarse fluvial deposits.



DAILY OPERATIONS REPORT (HYDRO)

FROM	TO	SUMMARY OF OPERATIONS
0000	2400	ALONGSIDE WHARF IN WYNDHAM.
		JOINED BY T. GANS, J GRANDORNG C.C.E.
	1100	A TERRILL ARRIVES FROM KUNUNURRA
	1400	A LANE DEPARTS FOR KUNUNURRA/PERTH
	1600	ELICS EQUIPMENT ARRIVES VIA CHARTER AIRCRAFT
	1700	ELICS EQUIPMENT TEMPORARILY INSTALLED AND TESTED OK.
	1900	ALL EQUIPMENT INSTALLED READY FOR DEPARTURE
	2000	WORK COMPLETE FOR DAY
	2100	PHONE REPORT TO TED GRAMM.

AUTHORISED CONTRACT CHANGES/COMMENTS

Alban Gerratt

J.M. Grandorge *Jug*

Document No. AS-HY-001



ASSOCIATED SURVEYS

DAILY OPERATIONS REPORT (HYDRO)

CLIENT	C.G.E.	JOB NO.	8428	DATE	25/8/91
LOCATION	CAMBRIDGE GULF	VESSEL	HELMUND ACHIEVER		

FROM	TO	SUMMARY OF OPERATIONS
0000	0600	ALONGSIDE WYNDHAM WHARF
	0600	BAR CHECK - AT VS 1534 TO 2.22.
		CAST OFF, DEPLOY S.S.S.
0620	1005	E/S + SSS. SURVEY DOWN WYNDHAM CHANNEL
1005	1345	PULL SSS FISH + E/S TRANSDUCER. PROCEED AT SPEED FOR LOC'N.
	1345	TS PROBE AND DEPLOY BOOMER, START TUNING VS 1530
1446	1446 1615	SOL 395000 10.11 km (10.11 km)
1620	1719	UNCONTROLLED LINE ON TOP OF BANK. NO SATELLITES
1719	2125	UNINSUFFICIENT SV'S
2125	2249	LINE 377000 8.40 km (18.51)
2302	2350	LINE 376000 5.45 (23.96)
	2350	LINE 376000 ABORTED BEFORE AND DUE TO EPHEMERIS CHANGES

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
PC NAV SYSTEM	1	EG + G HYDRO	2	LAURIE SKINNER	SURVEYOR
DGPS SYSTEM	1	EG+G 23/232A	2	ALLAN TERRILL	GEO PHYSICIS
PC MAP SYSTEM	1	DELPH-1	1	LAURIE ETHERIDGE	TECH
RESO 20 SOUNDER	2	OYO PLOTTER	1	ADRIAN SAROLEA	DATA PROC
ASHTECH RECEIVER	2				
PACRATT MODEM	2				
SSB HF RADIO	2				
T.S. PROBE	1				
EG+G UNICORN	1				
CONSUMABLES	1x SYQUEST DSK, 1x E/S ROLL				
VEHICLE					
ACCOMMODATION					

AUTHORISED CONTRACT CHANGES/COMMENTS

PARTY CHIEF'S SIGNATURE	CLIENT REPRESENTATIVES SIGNATURE	DOR 2681
<i>Allan Terrill</i>	<i>July</i>	



ASSOCIATED SURVEYS

DAILY OPERATIONS REPORT (HYDRO)

CLIENT	C.G.E	JOB NO.	8428	DATE	26/8/91
LOCATION	CAMBRIDGE GULF	VESSEL	MERMAID RESCUEVER		

FROM	TO	SUMMARY OF OPERATIONS
0000	0025	TURNING TO 502 5.25 km (29.21 km)
0025	0111	LINE 375000
0128	0201	LINE 376500 4.11 (33.32 km)
0201	1130	WINDOW CLOSED, GO TO ANCHOR NORTH END OF SURVEY.
1130	1200	WAP ANCHOR, PREPARING FOR SURVEY
1200	1740	PROBLEMS WITH DIFFERENTIAL LINK, NO CORRECTIONS
1740	2114	WINDOW CLOSED WAITING ON SV'S
2114	2305	LINE 405000 17.56 km (50.88 km)
2305	2359	HEAD TO LINE 400000

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
ASHTECH RCVR'S	2	OTO PLOTTER	1	ALLAN TERRILL	GEO/PC
SSB RADIOS	2	ANALOGUE BEARER	1	LAURIE SKINNER	SURV.
DGPS SYSTEM	2	(SPARE SYSTEM)		LAURIE EMMERSON	TECH
PCNAV SYSTEM	2			ADRIAN SAROLEA	PROC.
PLOTTER 'A0'	1				
DESO 20 E/S	2				
UNI BROOM	1				
231/232A	2				
DELPH 1	1				
CONSUMABLES	1x SYQUEST DISK, 1x OTO ROLL, 1x E/S ROLL				
VEHICLE					
ACCOMMODATION					

AUTHORISED CONTRACT CHANGES/COMMENTS

PARTY CHIEF'S SIGNATURE	CLIENT REPRESENTATIVES SIGNATURE	DOR 2682



ASSOCIATED SURVEYS

DAILY OPERATIONS REPORT (HYDRO)

CLIENT	C G E	JOB NO.	8428	DATE	27/8/91
LOCATION	BONAPARTE GULF	VESSEL	MERMAID REHEVER		
FROM	TO	SUMMARY OF OPERATIONS			
0004	0249	LINE 400,000	23.69 km	(74.57 km)	
0249	1115	WINDOW CLOSED, REST PERIOD			
	1115	TS PROBE, UP ANCHOR PROCEED TO SOC	Vs 1530		
1218	1329	LINE 398,000	9.76	(84.33 km)	
1410	1508	LINE 403,000	8.48	(92.81 km)	
1520	1632	LINE 404,000	8.18	(100.99 km)	
1632	2030	DGPS WINDOW OFF HEADING TO NEW LINE			
2030		LINE 380,000, PDP 2 + 5 SVs AT SOC, 2DRMs 2-3m			
2031	2216	NODGPS LINK FROM 2030-35, STAND ALONE FROM 2045			
2251	2342	DGPS LINK RE-ESTABLISHED HEADING FOR NEW LINE			
2342	2359	LINE TIE LINE 1 -			
		STOP TO RESET SOFTWARE			
		3.13 km	(114.10)	9.98	(110.47)

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
ASITECH RCVR	2	040 PLOTTER	1	ALLAN TERRILL	GEO/P'C
SSB RADIOS	2	ANALOGUE BOOMER		LAURIE SKINNER	SURV.
DGPS SYSTEM	2	SYSTEM (SPARE)	1	LAURIE ETHERIDGE	TECH.
PC NW	2			ADRIAN SAROLEA	PROC.
AD PLOTTER	1				
DESO 20 E/S	2				
UNIBOOM	1				
231/232A	2				
DEZ PH 1	1				
CONSUMABLES	1 x STORQUEST DISK, 2 x E/S ROLL				
VEHICLE					
ACCOMMODATION					

AUTHORISED CONTRACT CHANGES/COMMENTS

PARTY CHIEF'S SIGNATURE	CLIENT REPRESENTATIVES SIGNATURE	DOR 2683
<i>Allan Terrill</i>	<i>Ing</i>	



DAILY OPERATIONS REPORT (HYDRO)

FROM	TO	SUMMARY OF OPERATIONS
0007	0313	LINE TIE LINE 1A. 21.25 km (135.35 km)
0313	1115	NO GPS WINDOW REST PERIOD HIS START-UP SYSTEM
1203		LEAVE MOVE TO VICTORIA RIVER LOCATION.
	1115	START-UP SYSTEM
1203	1615	LINE VIC #1 37.12 km (2172.75)
1615	2025	ON ANCHOR, ON LINE AWAITING SATELITES
2025	2356	LINE VIC #1A STOP LINE TO RESET SOFTWARE
		AT 2400.
		22.06 km (194.81)

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
ASHTECH RCVRs	2	OYO PLOTTER	1	ALLAN TERRILL	GEO / PC
SSB RADIOS	2	ANALOGUE SYSTEM	1	LAILIE SKINNER	SURV.
DGPS SYSTEM	2			LAILIE EMMERSON	TECH
PC NAV	2			ADRIAN SAROLEA	PROC.
AD PLOTTER	1				
DESO 20 E/S	2				
UNIBOAT	1				
231 / 232 A	2				
PER PH 1	1				
CONSUMABLES	3 x SYQUEST DISKS, 2 x E/S ROLL				
VEHICLE	1 x LG OYO ROLL				
ACCOMMODATION					

AUTHORISED CONTRACT CHANGES/COMMENTS

PARTY CHIEF'S SIGNATURE

Allen Yerrall

CLIENT REPRESENTATIVES SIGNATURE

True

DOR
2684



ASSOCIATED SURVEYS

DAILY OPERATIONS REPORT (HYDRO)

CLIENT	C. G. E.	JOB NO.	X 8428	DATE	29/8/91
LOCATION	BONAPARTE GULF	VESSEL	MERMAID RECOVER		
FROM	TO	SUMMARY OF OPERATIONS			
0000	0019	TURNING ON TO LINE			
0019	0311	LINE VIC #1 B. 24.74 km (219.55)			
0311	1145	WINDOW CLOSED REST PERIOD			
1145	1215	UP ANCHOR HEAD TO LINE			
1215	1615	LINE VIC #1 C WITH NAV GOOD NAV.			
1615		CONTINUE LINE VIC #			
	1406	LINE VIC #1 C 14.34 (233.89)			
1421	1615	LINE VIC #2 WITH GOOD NAVIGATION 37.9 (271.79)			
1615	1808	CONTINUE LINE WITH POOR NAV FOR GEOLOGICAL TIE			
1810	2040	CONTINUE LINE AS VIC #2A ^{2B} AFTER NAV RESET, POOR NAV.			
2040		TURNING TO NEW LINE, SETTING UP GOOD NAV DGPS			
	2300	LINK PROBLEMS. 11.79 (283.58) 7.92 (291.5)			
2300		HEADING NORTH TO INVESTIGATE FLARES SIGHTED AT 2200 AND REPORTED TO DARWIN RADIO, DGPS LINE BACK AT 2330.			

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
ASUTECH RCVRS	2	DYD PLOTTER	1	ALAN ZARDICK	GEO/PIC
SSB RADIOS	2	ANALOGUE SYSTEM	1	LAURIE SKINNER	SURV.
DGPS SYSTEM	2			LAURIE SKINNER	TECH.
PC NAV	2			ADRIAN SARACCA	PROC.
AP PLOTTER	1				
DESO 20 E/S	2				
WIN BOOM	1				
231/232 A	2				
DELPH 1	1				
CONSUMABLES	2 ASYST DISKS, 1 E/S ROLL				
VEHICLE					
ACCOMMODATION					

AUTHORISED CONTRACT CHANGES/COMMENTS

PARTY CHIEF'S SIGNATURE

CLIENT REPRESENTATIVES SIGNATURE

DOR
2685



ASSOCIATED SURVEYS

DAILY OPERATIONS REPORT (HYDRO)

CLIENT	C.G.E.	JOB NO.	8428	DATE	30/8/91
LOCATION	VICTORIA RIVER	VESSEL	M. ACHIEVER		

FROM	TO	SUMMARY OF OPERATIONS
0000	0005	FLARE CONFIRMED BY DARWIN DUE TO AIRCRAFT RETURN TO LINE.
0015	0206	RETURN TO SOL.
0206	0309	LINE VIC # 3 8.62 (292.2)(299.77)
0709	1137	GPS WINDOW CLOSED, REST PERIOD, 1000 CMC A.S.I
1137	1312	LINE VIC # 3A 11.05 299.63 (310.92)
1312	1354	CHANGE DGPS LINE TO 4 MEG, RETURN TO LINE
1354	1627	LINE VIC # 3B. PULL CABLE
1627		STEAM TO ORD RIVER MOUTH 20.65 (331.47)

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
ASHTECH RCN	2	BYO PLOTTER	1	A TERRILL	GEO/PIC
SSB'S	2	ANALOGUE SYSTEM	1	L SKINNER	SURV.
DGPS SYSTEM	2			L ETHERIDGE	TECH
PC NAV	2			A SAROLEA	PROC.
AO PLOTTER	1				
DESD 20 E/S	2				
UNI BOOM	1				
231/232A	2				
DELPHI	1				
CONSUMABLES	1x SYQUEST DISK, 1x E/S ROLL, 1x SM.				
VEHICLE	BYO ROLL.				
ACCOMMODATION					

AUTHORISED CONTRACT CHANGES/COMMENTS

Allan Terrill

PARTY CHIEF'S SIGNATURE

CLIENT REPRESENTATIVES SIGNATURE

Julie

DOR
2686



ASSOCIATED SURVEYS

DAILY OPERATIONS REPORT (HYDRO)

CLIENT	CGE	JOB NO.	8428	DATE	31/8/91
LOCATION	BONAPARTE GULF	VESSEL	MERMAID BELIEVER		
FROM	TO	SUMMARY OF OPERATIONS			
0000	0220	STEAMING TO CAMBRIDGE GULF/OLD RIVER MOUTH 0220 ON 3,			
0220	1000	ON 3. 0900 COM'S WITH TRUSCOTT + NAV CHECK 1000 UP 1			
1029	1118	LINE 377500 7.06 km (338.53)			
1126	1235	LINE 378000 6.87 km (345.40)			
1258	1349	LINE 378500 (TOUCH BOTTOM AT EOC) 5.99 km (351.3)			
1408	1503	LINE 379000 6.53 (357.92)			
1510	1616	LINE 379500 7.83 (365.75)			
1616	1930	DGPS WINDOW CLOSED			
1930	2036	LINE 380000 (RERUN OVER 380000)			
2048	2144	LINE 380500A 7.23 (372.98)			
2203	2302	LINE 381000 8.28 (381.26)			
2314	2354	LINE 381500 (END TO RESET SOFTWARE AT 2400)			
		3.23 km (384.49)			

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
ASHTECH RCVR	2	OYO PLOTTER	1	A TERRILL	CEO/P.C.
SSB's	2	ANALOG SYSTEM (SPARE)	1	L SKINNER	SWAV.
DGPS SYSTEM	2			L ETHERIDGE	TECH
P C NAV	2			A SAROLEA	PROC.
AO PLOTTER	1				
DESO 20 E/S	2				
UNIBOON	1				
231/232 A	2				
DEPTH 1	1				
CONSUMABLES	2x SYQUEST DISKS, 2x E/S ROLLS				
VEHICLE					
ACCOMMODATION					

AUTHORISED CONTRACT CHANGES/COMMENTS

PARTY CHIEF'S SIGNATURE

Allan Terrill

CLIENT REPRESENTATIVES SIGNATURE

Jug

DOR
2687



ASSOCIATED SURVEYS

DAILY OPERATIONS REPORT (HYDRO)

CLIENT	CGE	JOB NO.	8428	DATE	1/9/91
LOCATION		VESSEL	M. ACHEVER		

FROM	TO	SUMMARY OF OPERATIONS
0005	0039	LINE 381500A 3.63 km (385.12)
0046	0146	LINE 382000 7.76 km (395.88)
0146 0200	0900	WINDOW CLOSED REST PERIOD
0900	1054	PREPARING FOR WORK, TUNING RADIO ETC.
1054	1215	LINE 382500 8.34 km (404.22)
1219	1318	LINE 383000 8.22 km (412.44)
1325	1432	LINE 383500 8.27 km (420.71)
1440	1544	LINE 384000 7.54 km (428.25)
1554	1605	LINE 384500 ABORTED, WINDOW CLOSED
1605	1840	WINDOW CLOSED, WINDOW OPENS WITH SV #24, PREVIOUS W/S, NOW GOOD.
1840	2000	LINE 384500A 10.33 km (438.53)
2020	2150	LINE 385000 9.69 km (448.27) 5.12 (457.46)
2158	2313	LINE 385500 9.19 (457.40) 239 - 2400 LINE 386000

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
AS TECH REVR	2	OYO PLOTTER	1	ATERRILL	GEO/P'C
S.S.B.'s	2	ANMOG SPARE	1	L SKINNER	SURV.
DGPS SYSTEM	2			L ETHERIDGE	TECH
PC NAB	2			A SAROLEA	PROC.
AO PLOTTER	1				
DESO 20 E/S	2				
UNIBOAT	1				
231/231A	2				
DELP41	1				
CONSUMABLES	2x500EST DGS, 2x E/S ROLLS				
VEHICLE					
ACCOMMODATION					

AUTHORISED CONTRACT CHANGES/COMMENTS

PARTY CHIEF'S SIGNATURE

CLIENT REPRESENTATIVES SIGNATURE

DOR

2688



ASSOCIATED SURVEYS

DAILY OPERATIONS REPORT (HYDRO)

CLIENT	C G E	JOB NO.	8428	DATE	2/9/91
LOCATION		VESSEL	M. ACHIEVER		

FROM	TO	SUMMARY OF OPERATIONS			
0001	0031	LINE 386000A	3.84	(466.42)	
0039	0205	" 386500	9.31 km	(475.73)	
0205	1037	ON TRUCK, WINDOW CLOSED + REST PERIOD			
1037	1148	LINE 387000	9.87 km	(485.60)	
1155	1316	LINE 387500	10.03 km	(495.63)	
1325	1420	LINE 388000	7.36 km	(402.99)	
1425	1437	LINE 388000A	CONTINUATION LINE. 1.81 (404.80)		
1445	1615	LINE 388500	10.25 km	(415.05)	
1700	1833	LINE 389000	15.26 km	(430.31)	424.7
1846	2017	LINE 389500	12.12 km	(436.91)	
2028	1054	LINE 390000	15.26 km	(452.17)	
2300	2359	LINE 390500	RESET NAV. SOFTWARE		
			7.81 km	(459.98)	

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
ASHTTECH REC'D	2	D70 PLOTTER	1		
SSB	2	ANALOG SPARE			
DGPS	2	SYSTEM.	1		
PC NAV	2				
AD PLOTTER	1				
DESO 20 E/S	2				
UNI BOOM	1				
231/232A	2				
DELPIT 1	1				
CONSUMABLES	3x 5-QUART DSKS, 1x LARGE D70 ROLL				
VEHICLE	2x E/S ROADS				
ACCOMMODATION					

AUTHORISED CONTRACT CHANGES/COMMENTS

PARTY CHIEF'S SIGNATURE

CLIENT REPRESENTATIVES SIGNATURE

DOR
2689





ASSOCIATED SURVEYS

DAILY OPERATIONS REPORT (HYDRO)

CLIENT	CGE	JOB NO.	8428	DATE	3/9/91
LOCATION	BONAPARTE GULF	VESSEL	M. ACHIEVER		

FROM	TO	SUMMARY OF OPERATIONS
0002	0034	LINE 390500A 84.01 km (463.99)
0034	1138	ON ANCHOR, WINDOW CLOSED, APPROX 1000 CALL PERMTH.
1138	1406	LINE TIE LINE 2 18.33 km (482.32)
1432		LINE 376000A 3.77 km (486.09)
1515	1600	LINE 376500A 6.09 (492.18)
1609	1621	LINE 376500B 1.58 (493.76)
1621	1826	GPS WINDOW CLOSED.
1826	2140	TIE LINE 3 20.78 km (514.54)
2152	2306	LINE 394500 ^{8.72} 20.78 km (523.26)
2325	2359	LINE TIE LINE 4. STOPPED NAV TO RESET
		AT 2400 HRS 4.78 km (528.04)

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
ASHTECH RCVR'S	2	DYO PLOTTER	1	A TERRILL	GEO/P'C
SSB'S	2	ANALOG BEAMER		L SKINNER	SURV.
DGPS SYSTEM	2	(SPARE)	1	L ETHERIDGE	TECH
PC NAV	2			A SAROLEA	PROC.
AI PLOTTER	1				
DESO 20 E/S	2				
UNI BEAM	1				
231/232A	2				
DELPHI 1	1				
CONSUMABLES	264 Syquest Disks, 264 E/S ROLLS				
VEHICLE	167 small DYO ROLL				
ACCOMMODATION					

AUTHORISED CONTRACT CHANGES/COMMENTS

PARTY CHIEF'S SIGNATURE

CLIENT REPRESENTATIVES SIGNATURE

DOR
2690



ASSOCIATED SURVEYS

DAILY OPERATIONS REPORT (HYDRO)

CLIENT C.G.E	JOB NO. 8428	DATE 4/9/91
LOCATION BONAPARTE GULF	VESSEL MERMAID ACHIEVER	

FROM	TO	SUMMARY OF OPERATIONS
0001	0020	TIE LINE 4A 2.75 km (530.79)
0020	1144	REST PERIOD, WINDOW CLOSED. PROCESSING DATA. PHONE ASL PERTH 10000.
1144	1300	LINE 383000 B 9.77 km (540.56)
1327	1452	LINE 391500 11.13 km (551.69)
1505	1643	LINE 392500 11.79 km (563.48)
1653	1819	LINE 393500 11.96 km (575.44)
1836	2016	LINE 396000 12.71 km.
2026	2100	Line 394500A 4.38 km
2108	2323	Tie line 5 11.87 km
2336	2359	Line 404000A 4.25 km
		STOP LOGGING TO RESET NAV.
		AT 21.00

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
ASHTERH FCUR	2	OXY PLOTTER	1	A TERRILL	GEO/PIC
SSB's	2	ANALOG SYSTEM	1	L SKINNER	SURV
DGPS	2			L ETHERIDGE	TECH
PC NAV	2			A SAROCHA	PROC
A1 PLOTTER	1				
DESO 20 E/S	2				
UNIBOAM	1				
231/2324	2				
DELPHI	1				
CONSUMABLES	1 x SYQUEST DISK, 1 x E/S ROLL				
VEHICLE					
ACCOMMODATION					

AUTHORISED CONTRACT CHANGES/COMMENTS

PARTY CHIEF'S SIGNATURE

Alan Carroll

CLIENT REPRESENTATIVES SIGNATURE

Ing

DOR
2691



ASSOCIATED SURVEYS

DAILY OPERATIONS REPORT (HYDRO)

CLIENT		C G E		JOB NO.		8428		DATE		5/9/91	
LOCATION		BARAPANTE GULF		VESSEL		MERMAID ACFTUEUR					
FROM		TO		SUMMARY OF OPERATIONS							
0004		0110		LINE 404000 B.							
0110		0200		ATTEMPT VELOCITY PROBE, BAR CHECK TD 2-07 Vs 1530 (ASSUMED)							
0200				DEPART SITE FOR DARWIN.							
0900				COMMENCE BOOMER & NAV PROCESSING							
1000				PHONE ASI OFFICE							
				BEGIN DEMOBILISING EQUIPMENT							
1400				PHONE ASI OFFICE							
		2400		EN ROUTE DARWIN. FINALISING TRACK PLOT AND BATHY PROCESSING							
EQUIPMENT		NUMBER		EQUIPMENT		NUMBER		PERSONNEL		TITLE	
ASHTECH REC'R		2		OYO PLOTTER		1		A TERRILL		GEO/PIC	
SSB's		2		ANALOG BOOMER				L SKINNER		SURV	
DGPS SYSTEM		2		(SHARE)		1		L ETHERIDGE		TECH	
PC NAV		2						A SAROLEA		PROC	
A1 PLOTTER		1									
DESO 20 B/S		2									
UNIBOAM		1									
231/232 A		2									
DELPID 1		1									
CONSUMABLES				1 SMALL ROLL 8x10 PAPER,							
VEHICLE				48 P/C DISKS USED TO DATE							
ACCOMMODATION											

AUTHORISED CONTRACT CHANGES/COMMENTS

PARTY CHIEF'S SIGNATURE

Alan Ferrell

CLIENT REPRESENTATIVES SIGNATURE

Ing.

DOR
2692



CLIENT	CGE (DEMOS)	JOB NO.	5428	DATE	6/9/91
LOCATION	DARWIN	VESSEL	MERMAID BECKEYER		

EQUIPMENT	NUMBER	EQUIPMENT	NUMBER	PERSONNEL	TITLE
DEMOB.				A TERRILL	
				L SKINNER	
				A BETHERIDGE	
				A FAROLEA	
CONSUMABLES					
VEHICLE		1 BUDGET HIRE S/WAGON.			
ACCOMMODATION		4 ROOMS "FRONTIER TOP END"			

PARTY CHIEF'S SIGNATURE 	CLIENT REPRESENTATIVES SIGNATURE	DOR 4500
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ASSOCIATED SURVEYS

GRL 2358

GEOPHYSICAL RUN LOG

CLIENT: C.G.E.

JOB NO: 8428

LOCATION: CAMBRIDGE GULF

VESSEL: HERMAN DEERVELD

SEA STATE

0000-0600

1200-1800

LOW SWELL, NEAR CALM

0600-1200

1800-2400

CALM

DATE	RUN NO.	START TIME	END TIME	START FIX	END FIX	DIRECTION	RECORD QUALITY — INDICATE VARIATIONS / CABLE OUT / FILTER SETTINGS ETC.				OPERATOR
							SYSTEM NO. 1	ROLL	SYSTEM NO. 2	ROLL	
25/4/91	345000	1446	1615	1	268	270	DELPH I / UNIBOON 100 J				CGE9101
	377000	2125	2249	352	602 352	270	" " 200 J				
	376000	2302	2350	603	745	090°	ABORT — EPHEMERIS CHANGE OVER				
26/4/91	375000	0025	0111	745	881	270°					
2	376500	0128	0201	882	981	090°					
	405000	2113	2305	982	1203	270°	30 SECOND FIXES				CGE9102
22/4/91	400000	0004	0249	1204	1534	090°					
	398000	1211	1329	1535	1693	270°	RECORD STARTED 1544, DIGITIZING 1550				CGE9103
	403000	1410	1508	1694	1810	090°					
	404000	1520	1632	1811	1955	270°					
	380000	2030	2216	1956	2193	090°	Fit 2136 CHANGE TO DISK CGE9104 - Fit 2144 (2143 mTARE)				CGE9104
	TIE LINE 1	2242	2144	2184	2219	343°	END LINE READY FOR 0000 SOFTWARE CHANGE				

2359



ASSOCIATED SURVEYS

GRL 2359

GEOPHYSICAL RUN LOG

CLIENT:

CGE

JOB NO:

8428

LOCATION:

BODAPARTE GULF

VESSEL:

HERMANO ARRIEUER

SEA STATE

0000-0600

CALM

1200-1800

0600-1200

1800-2400

DATE	RUN NO.	START TIME	END TIME	START FIX	END FIX	DIRECTION	RECORD QUALITY — INDICATE VARIATIONS / CABLE OUT / FILTER SETTINGS ETC.				OPERATOR
							SYSTEM NO. 1	ROLL	SYSTEM NO. 2	ROLL	
28/8	TIE LINE 1A	0007	0313	2220	2591	343	LINE ENDED EARLY DUE SV'S CONT. AIR LATER FROM NORTHING 8398000		DSC CGE9104	CNTD.	
	VIC #1	1203	1615	2592	2841	064°	60 SEC FIXING FIX NO ON DELPHI EOL IS 2842 (PROBLEM AT SOC?)		CGE9105		
	VIC #1A	2025	2356	2842	3053	4	60 SEC FIXING		CGE9106		
29/8	VIC #1B	0019	0311	3054	3228	4	ARCHIVED AS VIBRA-ARC		CGE9107		
	VIC #1C	1215	1406	3229	3341	4	" " VIBRA-ARC		"		
	VIC #2	1421	1808	3342	3570	194°			CGE9108		
VIC #2B	VIC #2A	1910	2040	3571	3708	"	(STILL NO. VIC #2 ON DELPHI 1)		3627/3629 CHANGE DISK	CGE9109	
30/8/91	VIC #3	0206	0309	3709	3773	053°				"	
	VIC #3A	1137	1312	3774	3868	053°	(FIX 3774 IS LATE)		CHANGE DGPS	"	
	VIC #3B	1354	1627	3869	4022	53°				"	



ASSOCIATED SURVEYS

GRL 2360

GEOPHYSICAL RUN LOG

CLIENT: CGE

JOB NO: 8428

LOCATION: BANAPATE GULF

VESSEL: M. ACHIEVER

SEA STATE

0000-0600

1200-1800

0600-1200

1800-2400

RECORD QUALITY — INDICATE VARIATIONS / CABLE OUT / FILTER SETTINGS ETC.

DATE	RUN NO.	START TIME	END TIME	START FIX	END FIX	DIRECTION	RECORD QUALITY — INDICATE VARIATIONS / CABLE OUT / FILTER SETTINGS ETC.			OPERATOR
							SYSTEM NO. 1	ROLL	SYSTEM NO. 2	
31/8/91	377500	1029	1118	4023	4072	270°	FIRST FIX ON DELPHI IS 4023, FIXING-HALTED TO 4029 TO CATCH UP			CGE 9110
	378000	1126	1235	4073	4207	090°	FIRST FIX 4073 (NOT 4075) - FIXING OFF TO 4076 TO CATCH UP			
	378500	1243		4208		270°	ABORT			
	378500	1258	1349	4220	4324	290°				
	379000			4322		090°	ABORT			
	37900	1408	1503	4325	4435	090°				
	379500	1510	1616	4326	4567	270°	DISK FULL AT 4565			
	380500	1930	2036	4568	4679	270°	(SHOT ON 380000 NORTHING)			CGE 9111
	380500A	2048	2144	4700	4812	090°				
	381000	2203	2302	4813	4931	270°				
	381500	2314	2354	4932	5012	090°				
	385500A	0005	0039	5014	5082	090°				
	382000	0046	0146	5083	5201	270°				CGE 912



ASSOCIATED SURVEYS

GRL 2361

GEOPHYSICAL RUN LOG

CLIENT:

CGE

JOB NO:

8428

LOCATION:

BONAPARTE GULF

VESSEL:

M. ACHEVER

SEA STATE

0000-0600

1200-1800

0600-1200

1800-2400

DATE	RUN NO.	START TIME	END TIME	START FIX	END FIX	DIRECTION	RECORD QUALITY — INDICATE VARIATIONS / CABLE OUT / FILTER SETTINGS ETC.				OPERATOR
							SYSTEM NO. 1	ROLL	SYSTEM NO. 2	ROLL	
1/9/71	382500	1054	1215	5202	5362	090	FIX COUNT PROBLEMS TO 5237 ON DELPHI		DISK CGE9112		
	383000	1219	1318	5363	5482	210°					
	383500	1325	1432	5483	5619	090°					
	384000	1440	1544	5620	5748	270°			DISK CGE9113		
	384500	1554	1605	5748	5771	090°	ABORT — WINDOW CLOSED				
	384500A	1840	2000	5772	5932	090°	START ELCS AT 5777				
	385000	2020	2150	5933	6114	270°					
	385500	2158	2313	6115	6264	090°	FIX 6214/6217 CHANGE DISK. CONTINUE ON ELCS AS 385500A DISK CGE9114				
	386000	2319	2359	6265	6349	270°	HALT CINE TO RESET NAV. CONTINUES AS 386000 ON				
2/9/71	386000A	0001	0031	6346	6401	"	DELPHI. FIX COUNT CORRECT AT 6349.				
	386500	0039	0205	6402	6573	090°					
	387000	1037	1148	6574	6713	270°	START ELCS 6577 AFTER COUNT PROBLEMS				
	387500	1155	1316	6714	6878	090°	6801-6804 CHANGE DISK. 6877/6878 TOGETHER				
	388000	1325	1420	6879	6989	270°	FIXING PROBLEMS ON NAV, FIXES RECONCILED AT 6999.				
	388000A	1425	1437	7017	7017	"	CONTINUE AS 388000 ON DELPHI.				
	388500	1445	1615	7018	7196	090°	MISSED 7018 ON DELPHI, 7018 IS 7019, 7019 IS NF 7020 OK.				
	389000	1700	1833	7197	7382	270°	DELPHI FIXING CORRECT AT 7201, MISSED 7197, 7198				



ASSOCIATED SURVEYS

GRL 2362

GEOPHYSICAL RUN LOG

CLIENT:

CGE

JOB NO:

8428

LOCATION:

BONAPARTE GULF

VESSEL:

M. ACHUEVER

SEA STATE

0000-0600

1200-1800

0600-1200

1800-2400

DATE	RUN NO.	START TIME	END TIME	START FIX	END FIX	DIRECTION	RECORD QUALITY -- INDICATE VARIATIONS / CABLE OUT / FILTER SETTINGS ETC.				OPERATOR
							SYSTEM NO. 1	ROLL	SYSTEM NO. 2	ROLL	
2/9/91	389500	1544	2017	7383	7568	90°	DIGITISING AT 6000 HZ	1	SAMPLE DISK CGE 9116		
	390000	2028	1054	7569	7859	270°	7858/7859 TOGETHER				
	390800	2300	2359	7860	7979	090°	RESET NAV AT 2400		CONTINUE AS 390500 ON DELPH.		FE/S
3/9/91	390500A	0002	0034	7981	8045	"	FIRST CORRECT FIX NO 7982 TO FIT NAV.		6.6 MB ON DISK		
	TIE LINE 2	1138		8046		180°	ON DELPH 1 FIX 8050 IS 8046, OFF TO 8051 TO CATCHUP.		8000 HZ		CGE 9117
	(TIE LINE 2)		1406		8343	"	8320 DELPH FIX COUNT OUT DUE PAPER CHANGE. (9 FIXES OUT) SE 8352 at EOC.				
	376000A	1432	1504	8344	8405	090°	DELPH DISK FULL AT 8404.				CGE 9101
	376500A	1515	1600	8407	8501	270°					CGE 9104
	376600B	1609	1621	8502	8526	"					"
	TIE LINE 3	1826	2140	8527	8915	000°	FIX 8527 SLIGHTLY LATE ON DELPH 1				CGE 9118
	394500	2152	2306	8916	9065	270°			6000 HZ		"
	TIE LINE 4	2325	2359	9066	9135	148°	MISSED FIXES 9066-9068 ON DELPH, 9066 IS 9068, 9067/68 ARE NF				CGE 9116
4/9/91	TIE LINE 4A	0001	0020	9136	9175	"	RESET NAV FOR 2400 CONTINUE		AS TIE LINE 4 ON DELPH 1.		"
	388000B	1144	1300	9176	9330	070°					CGE 9106
	388500	1323	1452	9331	9500	270°					CGE 9117



GRL 2363

GEOPHYSICAL RUN LOG

CLIENT: CFE

JOB NO: 8428

LOCATION: Bonaire Gulf

VESSEL: M. ACHIEVER

SEA STATE

0000-0600

1200-1800

0600-1200

1800-2400

DOCUMENT NO AS-HY-006(1)



ASSOCIATED SURVEYS INTERNATIONAL Pty. Ltd.

SURVEY LOG RUN

0645

CLIENT: CGE

JOB NO: 8428

LOCATION: CAMBRIDGE GULF

DATE	RUN NO.	START TIME	END TIME	START FIX	END FIX	RPM/SPEED	RAW DISC. NO.	ECHO ROLL NO.	DIRECTION	FILE HEAVE ON/OFF	COMMENTS	SURVEYOR
25/8/91	395000	1446	1615	1	268	4.0	#1	#1	270	GGE01	ES/Boomer.	
	BANK	1620	1719	269	351	5.0	"	"	161	"	ES ONLY TO CHECK LEVEL OF BANK AT HIGH WATER.	
	377000	2125	2249	352	602	3.6	"	#2	270	GGE02	LEAVE STAY AT (E425000E)	
	376000	2302	2350	603	745	4.0	"	"	90	"	1/2 LINE APPROX - LOGGING PROBLEM. - PUT - (POSSIBLE)	
	376000A											
26/8/91	375000	0025	0111	746	881	4.5	#2	"	270	GGE03	ES/Boomer.	
	376500	0128	0201	882	981	4.1	"	"	90	GGE04	"	LOW
26/8/91	405000	2113	2305	982	1203	5.0	#2	#3	270	GGE05	(Mol 02) (420,000E - 405000E) (30 SEC RXRAB)	
27/8/91	4000000004	0219	1204	1534	4.2	#3	"	"	90	GGE06	(408,000E - 430000E)	
	398000	0211	1329	1535	1693	4.2	#4	"	270	GGE07	(418000E - 409500E)	
	403000	1440	1508	1694	1810	4.9	"	#4	90	"	(408000E - 416000E)	
	404000	1520	1632	1811	1955	5.0	"	"	270	"	(408000E - 416000E)	
	380000	2023	2216	1956	2183	3.0	#5	"	90	GGE08	(416000E - 425000E) (TOP OF BANK)	
	TIE LINE #1	2312	2358	2184	2219	6.0	#6	"	343	GGE09	TIE LINE	
28/8/91	TIE LINE #1	0007	0313	2220	2591	VARIES	#6	#5	343	GGE10	Fix 2498 CHANGE ROLL (END NTH 8398000)	
	VIC #1	1203	1615	2592	2841	VARIES	#7	#5	64	GGE11	FILE GGE11.RAW HAS CORRUPT FILE HEADER (CANNOT SCAN)	
	VIC #1A	2025	2356	2842	3053	4.0	#8	#6	64	GGE12	SCAN (OK) START AT 04 36500 (ABT 500M O/LAP)	
29/8/91	VIC #1B	0019	0311	3054	3228	4.5	#9	#6	64	GGE13	SCAN (OK) START AT 04 57800 (ABT 400M O/LAP)	



ASSOCIATED SURVEYS INTERNATIONAL Pty. Ltd.

SURVEY LOG RUN

0646

CLIENT: CGE

JOB NO: 8428

LOCATION: BONA PONTA GULF - MORMONIA AEMIAL

DATE	RUN NO.	START TIME	END TIME	START FIX	END FIX	KNOTS RPM/SPEED	DISC. NO.	ECHO ROLL NO.	DIRECTION	RAW FILE HEAVE ON/OFF	COMMENTS	SURVEY
29/8/91	VIC#1C	1215	1406	3229	3341	3.8	#10	#7	64	CGE14	(START AT CH. 81565.8m)	
	✓ VIC#2	1421	1808	3342	3570	5.0	#11	#7	194	CGE15	GRAPHICS SIEZED. SYSTEM FAILURE. END OF LINE BAD. (RUN THROUGH GATEWAY WINDOW LOSS)	
	✓ VIC#2A	1813	1928	3571	3648	4.0	#12	#8	194	CGE16	SYSTEM FAILURE. (u u u u)	
	✓ VIC#2B	1935	2040	3642	3708	4.0	#12	#8	194	CGE17	GRAPHICS SIEZED. (ALL DATA TAKEN IN STAND ALONE MODE)	
	***** NOTE (CGE11.RAW / CGE15.RAW / CGE16.RAW / CGE17.RAW ALL CORRECT) *****											
30/8/91	VIC#3	0206	0309	3709	3773	4.4	#13	#8	53	CGE18	(END CH 8600m)	
30/8/91	VIC#3A	1136	1312	3774	3869	4.4	#14	#8	53	CGE19		
	* VIC#3B	1354	1627	3869	4022	4.5	"	"	53	CGE19		
31/8/91	377500	1029	1118	4023	4072	4.2	#15	#9	270	CGE20	FIXING 60S	
	378000	1126	1233	4073	4207	4.0	"	"	90	"	FIXING 30S	
	378500	1247	1408	4209	4249	"	"	"	270	CGE21	FIXING 30S. ABORTED OFF LINE	
	* 378500	1258	1341	4220	4321	4.0	"	"	270	"	FIXING 30S.	
	379000	1400	1401	4322	4324	"	"	"	90	"	ABORTED OFF LINE.	
	* 379000	1408	1503	4325	4435	4.4	"	"	90	"		END BARS 425000
	* 379500	1510	1616	4436	4567	3.3	#16	"	270	CGE22		START BARS 425000
	380500	1930	2036	4568	4699	11.0	#16	"	270	CGE23	*****	
	380500	2148	2144	4700	4812	4.0	#16	"	90	"		
											ACTUAL NORTHING IS [8380000]	



ASSOCIATED SURVEYS INTERNATIONAL Pty. Ltd.

0647

CLIENT:

CAMBRIDGE GULF
Exploration.

JOB NO:

WY 8428

SURVEY LOG RUN

LOCATION:

CAMBRIDGE GULF - MARMARA REVENUE

DATE	RUN NO.	START TIME	END TIME	START FIX	END FIX	KNOTS RPM/SPEED	DISC. NO.	ECHO ROLL NO.	DIRECTION	RAW FILE NAME ON/OFF	COMMENTS	SURVEY
31/8/91	381000	2203	2302	4813	4931	4.8 #16	#10	270	CGE24			
	381500	2344	2354	4932	5012	3.9 #17	#10	90	CGE25			
1/9/91	381500A	0002		5013		Logging Problem			CGE26		SPUR FILE 240000s LOGGING PROB!!	
	381500A	0005	0039	5014	5082	3.1 #17	#10	90	"			
	382000	0046	0114	5083	5201	3.9 #17	#10	270	"			
1/9/91	382500	1054	1213	5202	5362	4.0 #18	#10	90°	CGE27		(BUD ERSE 417500 START EAST 425500)	
	383000	1219	1518 5363	5363	5482	4.0 "	#10	270	"		(START BUD 417300 425500)	
	383500	1325	1432	5483	5649	3.5 "	#11	90°	"			
	384000	1440	1544	5620	5747	4.0 #17	#11	270	CGE28			
	384500	1554	1606	5748	5771	4.0 #17	#11	90°	4		ABORTED GPS WINDOW - ABSENTA RECEIVER PROB X35	
	384500A	1840	2000	5772	5932	4.2 #19	#11	90°	CGE29		3SV'S. = PROB = 2.0 (GPS SWITCHELUTION MIDLINE) PROB = 2.0	
	385000	2020	2151	5933	6114	4.0 #19	#11	270	"		GPS OK - SEED NAME MODE.	
	385500	2158	2313	6115	6264	4.0 #19	#12	90	CGE30			
	386000	2319	2359	6265	6345	4.5 #20	#12	270	CGE31			
2/9/91	386000A	0001	0029	6346	6401	4.2 #20	#12	270	CGE32		SPUR FILE OVER 240000s.	
	386500	0039	0205	6402	6573	3.9 #20	#12	90°	"			
	387000	1037	1147	6574	6710	4.0 #21	#12	270°	CGE33			
	387500	1154	1316	6711	6878	4.0 #21	#12	90°	"			
	*388000	1325	1420	6879	6989	4.0 #21	#13	270	"		*** PCAN SYSTEM HANGUP - 1420 HRS	CGE34



ASSOCIATED SURVEYS INTERNATIONAL Pty. Ltd.

SURVEY LOG RUN

0648

CLIENT: AMBROSIO GULF
Bashamnow

JOB NO: 448428

LOCATION: BOWARATE GULF - WORMADACRE

DATE	RUN NO.	START TIME	END TIME	START FIX	END FIX	RPM/SPEED	DISC. NO.	ECHO ROLL NO.	DIRECTION	HEAVE ON/OFF	COMMENTS	SURVEY
2/9/91	388000A	1425	1437	6574	7017	4-0	#21	#13	290	G6833	DOWN. (FIX N'S ALL OUT AT BEGINNING - BEST)	90 MATE
	388500	1445	1615	7018	7196	4-0	#20	#13	290	G6834	LAST 10 MINS OF LINE IN BATHYGRAPH	BOOMER
	389000	1700	1833	7197	7382	3-2	#22	#13	270	G6835		
	389500	1814	1821	7383	7568	4-0	"	#13	90	"		
	390000	2028	1055	7569	7859	4-0	#23	#14	270	G6836	} TWO LINES RUN OUT TO 428000 EAST	
	390500	2300	2359	7860	7979	4-3	#23	#14	90	G6837		
3/9/91	390500A	0002	0033	7981	8048	4-0	#23	#14	90	G6838	} SPLIT FILE OVER MIDNIGHT.	
	TIE LINE 2	1138	1406	8046	8343	4-1	#24	#14	180	G6839		
	376000A	1432	1504	8344	8406	3-7	#24	#15	90	"	COMPLETE LINE TO 8425500	
	376500A	1513	1600	8407	8501	4-5	#24	#15	270	G6840		
	376500B	1609	1621	8502	8526	3-8	#24	#15	270	G6840		
	TIE LINE 3	1826	2140	8527	8915	4-0	#25	#15	360	G6841		
	394500	2152	2306	8916	9065	4-0	#26	#15	270	G6842		
	TIE LINE 4	2325	2359	9066	9134	4-4	#26	#15	148	G6842	} SPLIT FILE AT MIDNIGHT.	
4/9/91	TIE LINE 4	0001	0020	9136	9175	4-6	#26	#15	148	G6843		
	388000B	1144	1300	9176	9330	4-0	#26	#16	90	G6844	DOWN DUE TO NW. HAWK 2/9/91	
	391500	1327	1452	9331	9500	4-0	#27	#16	270	G6845		
	392500	1505	1643	9501	9697	4-0	#27	#16	90	G6845		



CLIENT: Exploration

JOB NO: 64 8428

SURVEY LOG RUN

LOCATION: MORRIS ACHUBER - BONAPARTE GOLF.

0649

[illegible]

