

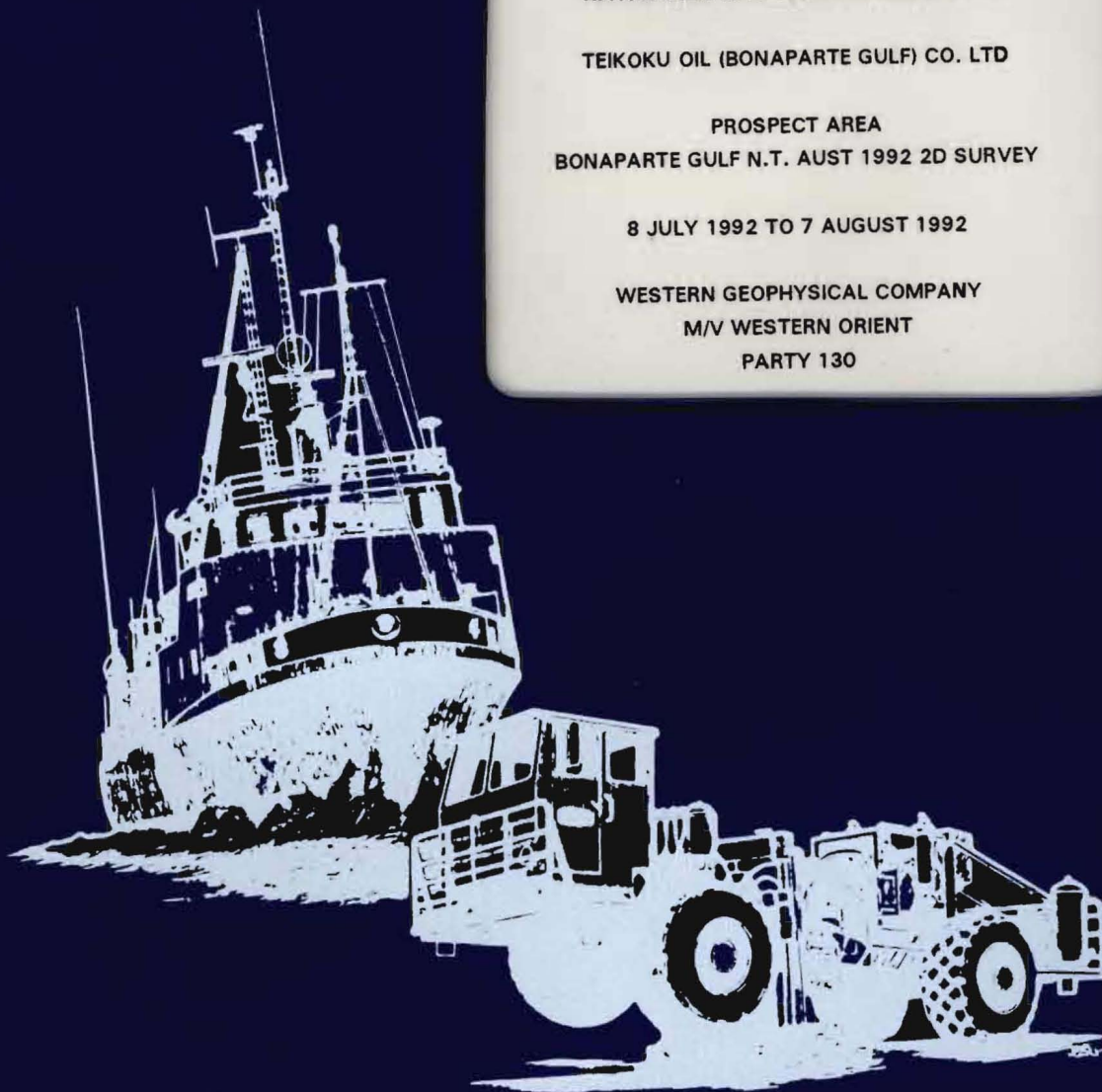
NAVIGATION DATA PROCESSING REPORT

TEIKOKU OIL (BONAPARTE GULF) CO. LTD

PROSPECT AREA
BONAPARTE GULF N.T. AUST 1992 2D SURVEY

8 JULY 1992 TO 7 AUGUST 1992

WESTERN GEOPHYSICAL COMPANY
M/V WESTERN ORIENT
PARTY 130



OFFSHORE

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NAVIGATION DATA PROCESSING/MAPPING

A. PROCESSING OF DATA

The processing of the Skyfix, DGPS data was done by WESTERN's Singapore Navigation Processing Department.

Geodetic Information

Spheroid	:	Australian National
Semi-Major Axis	:	6378160.00 metres
Inverse Flattening	:	298.25
Local Datum	:	AGD 1984
Projection	:	Universal Tranverse Mercator
Zone Number	:	52 South
Latitude of origin	:	0 degrees North
Longitude of origin	:	129 degrees East
False Northing	:	10,000,000 metres at 0 degrees latitude
False Easting	:	500,000 metres at the central meridian
Scale Factor at origin	:	0.9996 on the central meridian

B. MAPPING

Plotting Parameters

NRP stands for "Navigation Reference Point" which is the origin point for the vessel relative offsets. On this survey, the NRP was located at the ship's mainmast which is on the centerline of the vessel and 18.8 meters forward of the stern. The positions recorded in the "C" records of the UKOOA P1/84 are the "Common Depth Point" positions which are calculated from the source and the center of near group.

Antenna Offsets : Skyfix ,DGPS antenna was located at 0.18 metres aft of the NRP.

Stepback : 98.36 metres from the NRP to near CDP position.

Specific map border requirements were not supplied and all final map borders were determined using our best judgement during navigation post-processing.

<u>Scale</u>	<u>Plot Intervals</u>	<u>Label Intervals</u>
100K	Small circle at every 50th SP Large circle at every 400th SP	Every 400th SP

Line numbers were labelled at the end of line only.
Tick grid interval at every 10000 metres using a height of 0.5 inch.
Tick geographical interval at every 10 minutes using a height of 0.2 inch.

Map corners were supplied by WESTERN GEOPHYSICAL as follows:

Map 1 of 1 (contains current acquisition only)
Latitudes 14 degrees 20 minutes to 15 degrees 08 minutes South
Longitudes 128 degrees 25 minutes to 129 degrees 45 minutes East

Map 1 of 2 (contains current acquisition and vintage lines)
Latitudes 14 degrees 20 minutes to 15 degrees 08 minutes South
Longitudes 128 degrees 25 minutes to 129 degrees 45 minutes East

Map 2 of 2 (contains vintage lines only)
Latitudes 13 degrees 50 minutes to 14 degrees 20 minutes South
Longitudes 128 degrees 25 minutes to 129 degrees 50 minutes East

The following wells were included in the abovementioned maps.

Well name -----	Latitude			Longitude		
	Deg	Min	secs	Deg	Min	Secs
-----	-----	-----	-----	-----	-----	-----
Barnett-1	-14	31	50.000	129	03	41.000
Barnett-2	-14	31	56.000	129	03	08.000
Barnett-3	-14	32	04.000	129	03	01.000
Bonaparte-1	-15	00	50.000	128	44	35.000
Bonaparte-2	-15	05	07.000	128	43	16.000
Kinmore-1	-14	02	01.000	129	15	45.000
Kulshill-1	-14	21	47.000	129	32	33.000
Kulshill-2	-14	24	18.000	129	32	40.000
Lacrosse-1	-14	17	51.000	128	34	58.000
Matilda-1	-14	27	17.000	128	44	59.000
Moyle-1	-14	19	10.000	129	46	31.000
Pelican Island-1	-14	46	19.000	128	46	27.000
Turtle-1	-14	28	36.000	128	56	41.000
Turtle-2	-14	30	21.000	128	56	45.000

C. POSTPLOT SUMMARY

The following datum shift parameters were used in the field :

WGS 84 DATUM TO AGD 84 DATUM

Dx = 116.000 m Dy = 50.470 m Dz = -141.690 m

Calibrated water velocity of 1542 m/sec and vessel draft of 2.5 metres were compensated for in the WISDOM field system.
Gyro hull alignment correction value of -0.10 degrees was applied.
Magnetic declination value of 3.4 degrees was applied.
Times recorded in the UKOOA P1/84 data are GMT Time.
Tidal correction was applied to the current data.

The majority of lines were postplotted using the WISDOM primary positions using the following standard despiking and smoothing parameters. If other despiking and filtering parameters were used then these have been mentioned in the report for the affected line(s).

- Gyro** : Despiking operator length of 9 samples with threshold value of 1.0 degree; windowed median despiking. Smoothing operator length 15 samples, cosine weighted smoothing.
- Fathometer** : Despiking operator length of 9 samples with threshold value of 0.5 metres; windowed median despiking. Smoothing operator length 3 samples, cosine weighted smoothing.
- Compass** : Despiking operator length of 9 samples with threshold value of 1.0 degree; windowed median despiking. Smoothing operator length 13 samples, cosine weighted smoothing.
- System Position** : Despiking operator length of 1 sample with threshold value of 0.0 metres; windowed median despiking. Smoothing operator length 1 sample, cosine weighted smoothing.

Line Description

TK92-01 SP 540 - SP 2700

A nominal value of 193.8 degrees was used to replace the acquired compass data for the entire line.

TK92-03 SP 610 - SP 3084

A nominal value of 33.5 degrees was used to replace the acquired compass data for shotpoints 610 to 1058.

TK92-05 SP 400 - SP 3196

The water depth data was interpolated from shotpoints 3071 to 3099.

TK92-10 SP 151 - SP 2117

A nominal value of 300.6 degrees was used to replace the acquired compass data for shotpoints 610 to 1058.

TK92-21 SP 280 - SP 3082

Shotpoints 295 and 296 were not recorded on the navigation field tape and were interpolated during navigation post processing.

TK92-118 SP 101 - SP 3074

Time differences of 8.1 and 6.1 seconds exist between SPs 2308-2309 and SPs 2309-2310 respectively.

TK92-D SP 101 - SP 1090

Time differences of 6.8, 7.4, 4.5, 3.5 and 8.2 seconds exist between SPs 361-362, SPs 388-389, SPs 389-390, SPs 392-393 and SPs 403-404 respectively.

Shotpoints 336 to 409 were interpolated.

:

TK92-KR01 SP 101 - SP 1258

Fathometer : Despiking operator length of 13 samples with
 threshold value of 0.5 metres;
 windowed median despiking.
 Smoothing operator length 3 samples,
 cosine weighted smoothing.

TK92-KR02 SP 220 - SP 1815

A nominal value of 341.2 degrees was used to replace the
acquired compass data for the entire line.

TK92-KR03 SP 101 - SP 1055

A nominal value of 107.4 degrees was used to replace the
acquired compass data for the entire line.

TK92-KR03A SP 995 - SP 1659

A nominal value of 104.0 degrees was used to replace the
acquired compass data for the entire line.

TK92-KR04 SP 490 - SP 1783

A nominal value of 334.0 degrees was used to replace the
acquired compass data for the entire line.

TK92-SO2 SP 210 - SP 1742

Time differences of 12.0, 9.9 and 7.4 seconds exist between
SPs 649-650, SPs 653-654 and SPs 654-655 respectively.

TK92-SO3 SP 820 - SP 41

The water depth data was extrapolated from shotpoints 820 to 775.

TK92-S04

SP 190 - SP 1668

A nominal value of 334.9 degrees was used to replace the acquired compass data for the entire line.

TK92-S05

SP 101 - SP 1627

Time differences of 13.8, 19.8, 35.0 and 33.9 seconds exist between SPs 102-103, SPs 103-104, SPs 104-105 and SPs 105-106 respectively.

D. DISTRIBUTION

To : Teikoku Oil (Bonaparte Gulf) Co. Ltd.
6th Floor, Takara Building
34-14 Hatagaya 1-Chome
Shibayu-ku
Tokyo 151
Japan

Attn : Mr Ryohei Tada

2 reels Final UKOOA Pl/84 with tapedump printout and UKOOA Pl/84 format definition (one original and one copy tape).

1 diskette 3.5" 720KB floppy disk containing intersections of current and vintage data (excluding QC and QCA lines). Total of 4108 intersections.

1 copy Intersection listing of current and vintage data (excluding QC and QCA lines). Total of 4108 intersections.

2 originals on mylar 100k final shotpoint map at CDP position with 11 wells plotted and coastline and logo drafted in. (current acquisition and wells) Map 1 of 1.

2 originals on mylar 100k final shotpoint map at CDP position with 14 wells plotted and coastline and logo drafted in. (current acquisition, wells and vintage lines) Map 1 of 2 and map 2 of 2.

3 copies Final navigation post processing report.

9 reels Navigation field tape nos. 4032-1118 to 4032-1126

9 sets Wisdom printouts for the above reels.

1 reel UKOOA Format tape reel no. 92R261 of vintage lines supplied by client.

1 file Tidal correction printouts supplied by client.

52 envs Seismic line information printouts.

14 rolls Analog fathometer.