

附件：「永安至通霄第二條海底輸氣管線興建計畫-曾文溪出海口補充調查工作」之全取樣鑽探及海床圓錐貫入試驗作業說明

1 作業範圍 Scope of Work

「永安至通霄第二條海底輸氣管線興建計畫」興建管線（以下簡稱本計畫）規劃路徑如圖 1 內黃線，本次工作將進行全取樣鑽探及海床圓錐貫入試驗（以下簡稱本工作），本工作範圍如圖 1 內粉紅色框，點位坐標如表 1；本鑽探及試驗點位如圖 1 內綠色圓點，點位坐標如表 2。

The Survey region is shown as the pink rectangle in the Figure 1, and the locations of the drillings and CPT works are shown as the green circles in the Figure 1. The coordinates of the survey region and the drillings and CPT are listed in the Table 1 and Table 2.

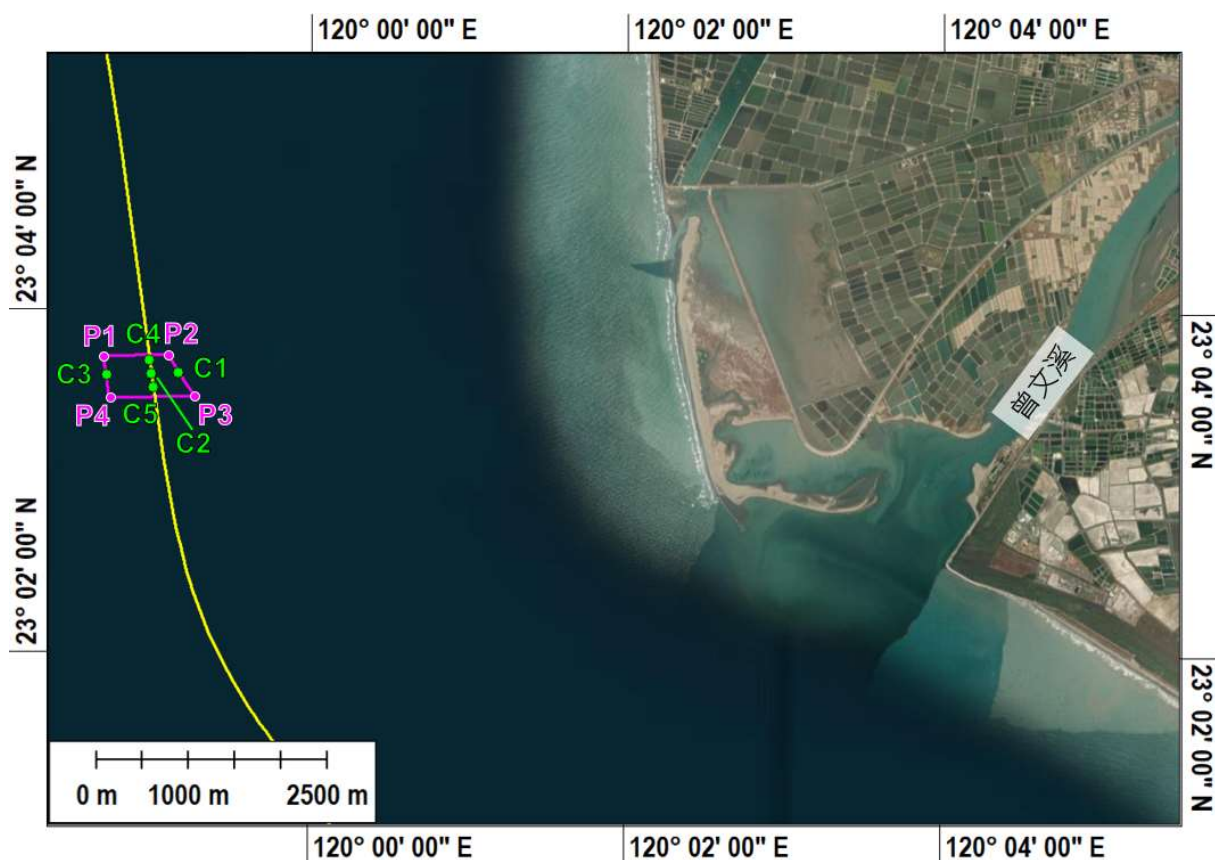


圖 1 本計畫範圍及本工作施工點位分布圖

Figure 1 Boundary of Survey region and locations of the drillings and CPT works.

表 1 本工作範圍邊界坐標

Table 1 Coordinates of Survey region

點位 No.	經度 Lon(WGS84)	緯度 Lat(WGS84)
P1	119° 58' 41.410" E	23° 03' 43.730" N
P2	119° 59' 05.900" E	23° 03' 44.180" N
P3	119° 59' 16.450" E	23° 03' 29.780" N
P4	119° 58' 43.840" E	23° 03' 29.150" N

表 2 本工作施工點位點位坐標

Table 2 Coordinates of the CPT and vibro-core work locations

施工點位編號 No.	經度 Lon	緯度 Lat
C1	119°59'10.360"E	23°03'37.630"N
C2	119°59'00.000"E	23°03'37.150"N
C3	119°58'43.120"E	23°03'36.650"N
C4	119°58'59.260"E	23°03'42.000"N
C5	119°59'00.740"E	23°03'32.310"N

2 預計作業期程 Working Time Period

本計畫船舶預計作業期程為 113 年 11 月 16 日起至 113 年 12 月 31 日，惟此期程將依照現場施工或海象條件而有所變動。

The estimated vessel operation duration of this work is from 16th Nov. 2024 to 31th Dec. 2024. The schedule is subject to change based on on-site situation and weather condition.

3 本計畫施工船舶規格 Vessel Information

本計畫將使用奧黛麗絲及寶拉麗絲 3 號進行作業，其規格及照片如下。
MV Australis and MV Polaris 3 will be performed the survey, and their specifications and pictures are shown below.

表 3 船舶規格
Table 3 Vessel specifications

船舶名稱 Vessel name	奧黛麗絲 MV Australis	總長 Total length	58.30 m
國際海事組織編號 IMO	9459307	呼號 Call Sign	BICJ
船舶國籍 Flag	台灣 R.O.C. Taiwan	主要設備 Main Equipment	16 Cyls(s) DIESEL 2set(s)
總噸位 GT	1,314 Tons	淨噸位 NT	394 Tons
船籍港 Registry port	高雄港 Kaohsiung Port	-	-

船舶名稱 Vessel name	寶拉麗絲 3 號 MV PolarisIII	總長 Total length	45.79 m
國際海事組織編號 IMO	9533971	呼號 Call Sign	BR4332
船舶國籍 Flag	台灣 R.O.C. Taiwan	主要設備 Main Equipment	6 Cyls(s) DIESEL 2set(s)
總噸位 GT	1,050 Tons	淨噸位 NT	315 Tons
船籍港 Registry port	高雄港 Kaohsiung Port	-	-



DP2 Geotechnical Drilling Vessel M/V Australis

INTRODUCTION

Australis is a Taiwanese flagged fit-for-purpose geotechnical drilling vessel. Originally built in 2008, Australis was refurbished in Taiwan and delivered in 2018, becoming classed by both BV and CR, equipped with DP2 technology allowing for precise positioning in rough seas.

Featuring an on-board laboratory and a full suite of geotechnical tools, Australis is capable of conducting thorough geotechnical site investigations in water depths up to 200 meters, including drilling, seabed sampling, in situ testing and borehole logging.

龍登集團 Dragon Geosciences Group

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General

Vessel name	Australis
Builder / year	2008
Owner	Dragon Drilling Co. Ltd.
Flag	Taiwan (R.O.C.)
Speed	Transit 10 - 12 knots
Call sign	BICJ
Classification	DYNAPOS AM/AT R +AMS
Port of registry	Kaohsiung
Endurance	Max 30 days
Operational water dept	20-200m

圖 2 奧黛麗絲船舶資訊
Figure 2 MV Australis information

中華民國船舶國籍證書

THE REPUBLIC OF CHINA CERTIFICATE OF VESSEL'S NATIONALITY

換發

輪字第 033618 號 Certificate No. 033618

查 銘大企業有限公司 所有 奧黛麗絲 船業於 高雄 港為所有權之登記取得中華民國國籍，茲依照船舶法第十六條規定核發本證書為證。

It is certified that AUSTRALIS has been registered at Maritime and Port Bureau M.O.T.C., Taiwan, The Republic of China, as Chinese Vessel and this Certificate of Nationality is issued in accordance with the provisions of Article 16 of the "Law of Ships".

船名 Name of ship	奧黛麗絲 AUSTRALIS	船籍港 Port of Registry	高雄港 Kaohsiung
國際海事組織編號 IMO No.	9459307	信號符字 Signal Letters	BICJ
船舶號數 Official No.	015941		
船舶所有人 Owner of ship	銘大企業有限公司 DRAGON DRILLING CO., LTD.	所有人住所 Owner's Address	800305 高雄市新興區民權一路251號11樓之4 11F-4, No. 251, Minquan 1st Rd., Xinxing Dist., Kaohsiung City 800305, Taiwan (R.O.C.)
船舶用途 Intended Use of ship	工作船 WORKING VESSEL	建造完成日期 Date of Build	097年11月 2008/11
船身質料 Material of Hull	鋼 STEEL	船長(公尺) Length (M)	53.38 (LOA : 58.30 M)
主機種類及數目 Type & Number of Engines	16缸 柴油機 2 部 16 Cyl(s) DIESEL 2 Set(s)	船寬(公尺) Breadth (M)	13.80
推進器種類及數目 Type & Number of Propellers	1 具 1 Set(s)	艏部模深(公尺) Molded Depth amidships (M)	5.50
造船地點及廠名 Hull Builder & Location	馬來西亞 / Sarawak Slipways Sdn. Bhd. MALAYSIA / Sarawak Slipways Sdn. Bhd.	總噸位 Gross Tonnage	1314
造機地點及廠名 Engine Maker & Location	美國 / CUMMINS U.S.A. / CUMMINS	淨噸位 Net Tonnage	394

發證地點

高雄

日期

111 年 12 月 08 日

Issued at

Kaohsiung

on

Dec 8, 2022



交通部航港局

Maritime and Port Bureau M.O.T.C.

航政機關 (Seal of Issuing Authority)

局長 葉協隆

Director-General Hsieh Lung-jah

簽署 (Signature)

圖 3 奧黛麗絲船舶國籍證書
Figure 3 MV Australis certificate



DP1 Multi Purpose Survey Vessel **Polaris III**

INTRODUCTION

A Taiwanese Polaris III is a Taiwanese flagged fit-for-purpose geophysical/geotechnical survey vessel, built in 2008 and fully retrofit to be a dedicated geophysical/geotechnical survey vessel in Taiwan in 2023; retrofitted with DP1 functionality by Q2 2023, classed by BV and CR, fitted with hull mounted transducers of full range geophysical survey sensors, on-board data processing capacity, modern mechanized on-board handling facilities including marine foldable crane, winches and purpose designed multi-functional and very powerful A-frame. Safe and precise positioning and station keeping by DP, Polaris III is equipped with shallow seabed sampling and in-situ geotechnical testing by means of vibro-core and seabed CPT, along with work class ROV capacity in supporting a wide range of inspection and pre- / post-engineering activities. Permanently installed with full depth range of MBES and SBE, multi-frequency SSS and multiple configurations of multi-sensors gradiometer, high to ultra-high resolution SBP and multi-channel seismic capabilities, Polaris III is capable in performing full range of shallow geotechnical investigations, geophysical survey for EIA, UCH, pre-engineering investigation study, cable route evaluation and selection survey, post installation analysis and time-laps inspection survey, search and salvage operation.

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General

Vessel name	Polaris III (寶拉麗絲3號)
Builder / year	2008
Re-construction	March 2023
Owner	Dragon Drilling Co. Ltd.
Flag	Taiwan (R.O.C.)
Speed	Transit 10 – 12 knots
Call sign	BR4432
Classification	BV + CR
Port of registry	Kaohsiung
Endurance	Max 21 days
Operational water dept	15 - 6,000 m

圖 4 寶拉麗絲 3 號船舶資訊
Figure 4 MV PolarisIII information

中華民國船舶國籍證書

THE REPUBLIC OF CHINA
CERTIFICATE OF VESSEL'S NATIONALITY

換發

輪字第 033993 號 Certificate No. 033993

查 銓日儀企業有限公司 所有 寶拉麗絲 3 號 船業於 高雄

港為所有權之登記取得中華民國國籍，茲依照船舶法第十六條規定核發本證書為證。

It is certified that POLARIS III has been registered at Maritime and Port Bureau M.O.T.C, Taiwan, The Republic of China, as Chinese Vessel and this Certificate of Nationality is issued in accordance with the provisions of Article 16 of the "Law of Ships".

船 名 Name of ship	寶拉麗絲3號 POLARIS III	船 籍 港 Port of Registry	高雄港 Kaohsiung
國際海事組織編號 IMO No.	9533971	信 號 符 字 Signal Letters	BR4332
船 舶 號 數 Official No.	016353		
船 舶 所 有 人 Owner of ship	銓日儀企業有限公司 DRAGON SURVEY CO., LTD.	所 有 人 住 所 Owner's Address	800401 高雄市新興區民權一路 251 號 12 樓之 3 12F.-3, No. 251, Minquan 1st Rd., Xinxing Dist., Kaohsiung City 800401, Taiwan (R.O.C.)
船 舶 用 途 Intended Use of ship	工作船 WORKING VESSEL	建造完成日期 Date of Build	098年01月 2009/01
船 身 質 料 Material of Hull	鋼 STEEL	船 長 (公尺) Length (M)	45.79 (LOA : 49.00 M)
主機種類及數目 Type & Number of Engines	6缸 柴油機 2 部 6 Cyl(s) DIESEL 2 Set(s)	船 寬 (公尺) Breadth (M)	13.20
推進器種類及數目 Type & Number of Propellers	變距螺旋槳 / 2 具 CONTROLLABLE-PITCH / 2 Set(s)	艀部模深 (公尺) Molded Depth amidships (M)	5.30
造船地點及廠名 Hull Builder & Location	馬來西亞 / MALAYSIA / SAVOR SHIPBUILDING INDUSTRIES SDN BHD	總 噸 位 Gross Tonnage	1050
造機地點及廠名 Engine Maker & Location	日本 / 野馬牌 JAPAN / YANMAR	淨 噸 位 Net Tonnage	315

發證地點 高雄 日期 112 年 03 月 20 日
Issued at Kaohsiung on Mar 20, 2023



交通部航港局
Maritime and Port Bureau M.O.T.C
航政機關 (Seal of Issuing Authority)

局長 葉協隆
Director-General Hsieh Lung Yeh

簽署 (Signature)

圖 5 寶拉麗絲 3 號船舶國籍證書
Figure 5 MV PolarisIII certificate

4 緊急聯絡資訊 Emergency contact information

表 4 緊急聯絡資訊
Table 4 Emergency contact information

 Dragon Geosciences		
專案經理 Project Manager	Mr. Chow 周○毅	chiai.chou@dragon-geosciences.com Mob 電話: +886 976 276 075
營運長/岸上指定代表 Operation Director / DPA	Mr. Chow 周○賢	kelvin.chow@dragon-geosciences.com Mob 電話: +886 933 539 315
環安衛經理 HSE Manager	Christopher Matulac	christopher.matulac@dragon-geosciences.com Mob 電話: +639 565 768 718
船舶部經理 Vessel Manager	Mr. Wu 吳○宇	yaoyu.wu@dragon-geosciences.com Mob 電話: +886 912 723 322
船舶部副理 Assistant Vessel Manager	Ms. Juang 莊○如	renee.juang@dragon-geosciences.com Mob 電話: +886 934 275 256

5 預計航行路線 Route Planning

預計從高雄港或台中港航至前述海域範圍內進行作業，實際航行路線將視海象情況進行調整。

MV PolarisIII and MV Australis will be departure from Kaohsiung port or Taichung port to aforementioned offshore survey area The route planning will be adjusted according to weather conditions.