



## Quarterly Activities Report

### Quarter Ending 31 March 2022

Helios Energy Ltd (ASX Code: HE8) (**Helios** or **Company**) is pleased to report its activities for the quarter ended 31 March 2022.

### Commencement of Drilling of Presidio 52#1 Well

Late in the quarter, drilling of the Presidio 52#1 well commenced. The Presidio 52#1 well is targeting the lower bench of the Ojinaga Formation (primary target) but also the Eagle Ford Formation (secondary target) as well as older (deeper) Cretaceous units being the Buda, Georgetown and Edwards limestone Formations (all secondary targets).

At the Presidio 52#1 well location, the lower bench of the Ojinaga Formation is at a depth of approximately 6,950 feet and the bench is approximately 650 feet thick. The lower bench of the Ojinaga Formation shows well on 2D seismic and is easily mapped.

The Presidio 52#1 well will be drilled to a total depth (**TD**) of 9,800 feet. The Presidio 52#1 well location permits a very cost-effective penetration into Buda, Georgetown and Edwards interpreted traps as well as representing a prime location and depth for the lower bench of the Ojinaga Shale Formation.

### Eagle Ford Shale Formation

Helios has successfully tested and produced oil from all the wells it has drilled which have penetrated the Ojinaga Formation. The oil analysis shows that the oil in the Ojinaga Formation is sourced from the Eagle Ford shale. The Eagle Ford shale has an average thickness across the Presidio Oil Project of 460 feet. When the Presidio 52#1 well is drilled, the well will pass through the Eagle Ford Shale on the way to the Buda, Georgetown and Edwards Formations. The interpreted thickness of the Eagle Ford Shale at the Presidio 52#1 location is 870 feet.

ASX Code: HE8

#### Directors

Hui Ye  
Non-Executive Chairman  
Richard He  
Managing Director  
Robert Bearden  
Non-Executive Director  
Nicholas Ong  
Non-Executive Director  
John Palermo  
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Stratigraphy of the Presidio Oil Project located in Presidio County, Texas, USA

| Gulf Coast          |                     | Presidio Oil Project Subsurface                            |
|---------------------|---------------------|--|
| Series              | Division or Group   |  |
| Gulf Cretaceous     | Austin              | San Carlos (Olmos)   |
|                     |                     | Austin Chalk age equivalent formation (called the Ojinaga) |
|                     | Eagle Ford          | Upper Eagle Ford Shale                                     |
|                     |                     | Boquillas  |
| Comanche Cretaceous | Washita             | Buda   |
|                     |                     | Eagle Mt SS  |
|                     |                     | George Town  |
|                     | Fredericksburg      | Kiamichi   |
|                     |                     | Edwards  |
|                     | Trinity             | Glen Rose  |
|                     | Hosston/Travis Peak |  |

Presidio 52#1 Well – Buda, Georgetown and Edwards Formations

The Buda, Georgetown and Edwards are conventional oil plays where the Eagle Ford Shale sources the porous and naturally fractured limestone reservoirs. These older (deeper) Cretaceous units being the Buda, Georgetown and Edwards limestone formations will be found between approximately 8,470 feet (top of the Buda interval) to 8,600 feet (top of the Georgetown interval) to 9,240 feet (top of the Edwards interval) in the Presidio 52#1 well. Interpretation of the 11 miles of recently acquired 2D seismic has resulted in Helios forming the view that a 1,700 acre enclosure or trap at the Buda Formation level may be present at the Presidio 52#1 location. The interpreted trap is a 3-way fault closure at the Buda interval over 1,700 acres. In addition, there is an interpreted trap of approximately 1,300 acres at the Georgetown interval along with a further interpreted 150 acre trap at the Edwards interval.

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### **Presidio 141#2 Well**

Pressure build up testing of the Presidio 141#2 well will cease shortly. As the well is shallow with normal formation pressure, the well will require artificial lift for commercial oil production. The Presidio 141#2 well is a shallow well with a total measured depth of 5,846 feet including the fracked 1,400 feet horizontal portion which was drilled into the primary target zone within the lower bench of the Ojinaga Formation.

### **Presidio Oil Project – Infrastructure**

Access to the 4 wells that constitute the Presidio Oil Project (Presidio 52#1, Presidio 141#2, Quinn Creek 141#1 and Quinn Mesa 113) is provided by a 25 mile unsealed, formed road constructed by Helios that branches off the sealed US-90 highway which carries heavy truck and passenger vehicle traffic. The 4 oil wells have access to ample supplies of fresh water provided by local water wells drilled into shallow water aquifers. The El Paso Oil Refinery located in El Paso, Texas has a processing capacity of 135,000 barrels of oil per day and is located 170 miles from the Presidio Oil Project. Crude oil is sold there by truck delivery.

The Presidio Oil Project is located 250 miles (or 5 hours by truck) from Midland, Texas which is the epicenter of the Permian Basin oil industry. All rigs, supplies and services required for the Presidio Oil Project are sourced from Midland, Texas. Oil production in the Permian Basin has rebounded strongly in the past 9 months and is now approximately 5,100,000 bopd.

### **Leases Acquired or Disposed of During the Quarter**

Helios has a 70%WI in a total of 85,685 gross acres (59,980 net acres). No additional oil and gas leases were acquired or disposed of during the quarter. All 85,685 gross acres the subject of the Presidio Oil Project are located in the south-west portion of Presidio County, Texas and are the subject of oil and gas lease agreements entered into with private oil and gas mineral rights owners.

### **Helium Business – China – Second Extraction Plant**

During the quarter, Helios entered into and commenced a second helium extraction joint venture in China. Through its wholly owned subsidiary, Helios Energy China Ltd, Helios has entered into a boil-off gas (**BOG**) helium extraction joint venture with Chinese domestic liquefied natural gas (**LNG**) company, Shanxi Wanshengyuan Natural Gas Co. Ltd (**Wanshengyuan**), located in Shanxi, China.

Under the helium extraction joint venture agreement, Wanshengyuan will provide all land, all BOG feed gas and all associated utilities for the helium extraction joint venture. Helios will construct at a cost of approximately US\$9.5m (CNY60 million), new, leading edge helium gas extraction modules immediately adjacent to Wanshengyuan's LNG plants located in Shanxi province in China. Wanshengyuan will contribute the BOG feed gas at no cash cost and in exchange for its contributions to the joint venture will receive 50% of the profits of the joint venture. Helios is responsible for the upfront capital investment of US\$9.5m (CNY60 million), all technology and equipment deployment and all the sales of the liquid helium. Helios is entitled to 50% of the profits of the joint venture.

Wanshengyuan, founded in July 2010, owns LNG plants, gas stations, city gas gate stations and LNG supply pipe networks throughout both Shanxi and Shaanxi provinces in China.

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Helios Energy Ltd  
29 April 2022



As the operator of the helium gas extraction plants, Helios will produce high purity industrial grade liquid helium and earn 50% of the profits derived from the liquid helium produced and sold. Helios expects the annual helium gas output from this second extraction joint venture to be approximately 500,000 Nm<sup>3</sup> per year, which is 5 times the expected liquid helium production from the first helium extraction joint venture with Ordos Xingxing.

Helios is one of the first companies to commercially extract material quantities of BOG helium in China, liquefy it and then sell it to domestic Chinese customers.

Based on the current helium market price in China, Helios expects liquid helium sales arising from this second joint venture to be approximately US\$39m (CNY250m) per annum.

The first phase of the project is scheduled to start construction in July 2022 and commence first output in March 2023.

Helios' use of unique and leading-edge helium extraction and liquification technology provides a cost effective and reliable way to produce liquid helium. The joint venture with Wanshengyuan aims to cheaply extract, liquify and profitably sell high quality helium to domestic Chinese customers.

#### **Corporate**

Helios has no debt and cash at bank at the end of the quarter was \$26,714,000.

#### **Related Party Payments – Item 6 of Appendix 5B**

Payments to related parties listed in Item 6 of the Appendix 5B are to Executive and Non-Executive Directors for personal exertion salary and directors fees.

For further information, please contact:

**Richard He**  
**Managing Director**

#### **Competent Person's Statement**

*The information in this ASX announcement is based on information compiled or reviewed by Mr Neville Henry. Mr Henry is a qualified petroleum geologist with over 47 years of Australian, USA and other international technical, operational and executive petroleum experience in both onshore and offshore environments. He has extensive experience of petroleum exploration, appraisal, strategy development and reserve/resource estimation, as well as new oil and gas ventures identification and evaluation. Mr Henry has a BA (Honours) in geology from Macquarie University.*

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Drilling Rig at the Presidio 52#1 Well



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