



Quarterly Activities Report

Quarter Ending 30 June 2019

Helios Energy Ltd (ASX Codes: HE8, HE8OA) (**Helios** or **Company**) is pleased to report its activities for the quarter ended 30 June 2019.

Frack of Presidio 141#2 Well

1,400 Feet Horizontal Portion of Presidio 141#2 Well

During the quarter the 1,400 feet horizontal portion of the Presidio 141#2 well was successfully drilled to the west towards the Quinn Creek 141 discovery well entirely within the zone of the best oil shows and highest natural fracturing that occurs within the 359 feet lower bench of the Ojinaga Formation present in the Presidio 141#2 well. The entire Presidio 141#2 well has been cased and the 5½ inch casing has been cemented into place and the 1,400 feet horizontal portion now awaits fracking in early August 2019.

The 1,400 feet horizontal was drilled into rock which has uniform geological characteristics. The entire 1,400 feet is predominantly black shale with micro laminations of siltstone and fine carbonates and is highly naturally fractured. Continuous, good to excellent oil shows were observed throughout the entire 1,400 feet of horizontal drilling. Oil was present in fractures and micro-fractures and oil shows with fast fluorescence cut and bright bluish white residual ring were recorded throughout the entire 1,400 feet of horizontal drilling.

Multi-Stage Fracking of the 1,400 Feet Horizontal Portion of the Presidio 141#2 well

During the quarter Helios undertook the design of a multi-stage hydraulic fracture stimulation plan for the 1,400 feet horizontal portion of the Presidio 141#2 well. Preparation of the well site for the arrival of hydraulic fracture stimulation equipment is now complete and the fracking of the Presidio 141#2 well will commence in early August 2019.

Vertical Portion of the Presidio 141#2 Well

The Presidio 141#2 well is located 2,300 feet to the east of the existing Quinn Creek 141 discovery well. The total measured depth of the well is 5,846 feet and this includes the 1,400 feet horizontal portion drilled into the primary target zone within the lower bench of the Ojinaga Formation. The well is located structurally updip of the existing Quinn Creek 141

ASX Code: HE8

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discovery well.

Ojinaga Formation

Wireline logs and drilling cuttings indicate that the Ojinaga Formation is approximately 1,941 feet thick. Wireline logs and drilling cuttings indicate that the lower bench of the Ojinaga Formation is 359 feet thick and is highly naturally fractured. Good to excellent, continuous oil shows were observed throughout the entire drilling of this 359 feet thick vertical interval. Excellent and continuous oil shows along with a high density of natural fractures were observed whilst drilling throughout a 220 feet subset of this 359 feet thick lower bench of the Ojinaga Formation. It is within this 220 feet subset that the 1,400 feet horizontal portion of the well was drilled.

Oil Discovery in the Ojinaga Shale Formation

Helios successfully completed a one stage frack in the vertical Quinn Creek 141 well to test oil shows and log indications between 4,744 and 4,880 feet in the lower Ojinaga Formation. The Company has previously reported to ASX that the Quinn Creek 141 well flowed 260 barrels of oil and 1,345 barrels of completion fluid in 168 hours (7 days).

The oil produced is good quality, mature, 39 degrees API gravity light oil similar in composition to Eagle Ford oils.

Gas was also produced at 456 mcf per day on a 34/64ths of one-inch choke. As the well cleaned up and the percentage of completion fluid recovery rose, a steadily increasing oil cut was observed. Total load recovery (until the lower interval was shut in) was approximately 35% (3,509 barrels of completion fluid out of 10,187 barrels of completion fluid injected).

Easily Mapped with 2D & 3D Seismic

The lower bench of the Ojinaga Formation shows well on both 2D & 3D seismic and is easily mapped.

Porosity and Permeability in Lower Bench of the Ojinaga Shale Formation

The lower bench of the Ojinaga Shale Formation has porosity predominately ranging between 4% to 12.5% and permeability up to 0.75 μ d (micro darcys). Analysis of the Quinn Creek 141 well and the Presidio 141#2 well as well as surrounding historical wells clearly shows that these porosity and permeability characteristics in Presidio County in the Ojinaga Shale Formation exceed the characteristics present in the Eagle Ford Shale in the Karnes Trough which is the premier sweet spot of the Eagle Ford Shale play.

Presidio Oil Project – Infrastructure

Access to the 3 wells that constitute the Presidio Oil Project (Presidio 141#2, Quinn Creek 141 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 3 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

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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 is approximately 4,000,000 bopd.

Underneath is a photo of the frack team and its equipment prior to the commencement of the frack in the Quinn Creek 141 well. The Quinn Mesa 113 well can be seen in the background.



Photo: Quinn Creek 141 Well Location in Presidio County, Texas, USA (Looking due east).

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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

88 Mile 2D Seismic Programme

Helios has recently completed the acquisition, processing and interpretation of a further 14 miles of new 2D seismic and the re-processing and interpretation of 74 miles of existing 2D seismic (previously acquired by another oil company in the 1980s) and this 88 mile 2D seismic programme has established a thick presence of Austin Chalk age equivalent Ojinaga Formation across Helios' entire acreage position of 69,396 gross acres. The thickness of the Ojinaga Formation ranges from 1,000 feet in the eastern section of Helios' acreage to 2,000 feet in the western section.

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Prior to December 2018, Helios had shot, processed and interpreted a total of 17 miles of 2D seismic and 2 square miles of 3D seismic across the Presidio Oil Project. The Company's 3D seismic programme was acquired over 2 square miles covering the Quinn Creek 141 well and the Quinn Mesa 113 well and the area in between the 2 wells (which includes the Presidio 141#2 well location).

The 17 miles of new 2D seismic was acquired over the northern section of the Presidio Oil Project in very close proximity to the 3 wells that constitute the Presidio Oil Project (Presidio 141#2, Quinn Creek 141 and Quinn Mesa 113). The decision by Helios to focus its resources on its new oil discovery in the lower interval of the Ojinaga Formation resulted in the decision to acquire additional 2D seismic. Commencing in December 2018, a further 14 miles of new 2D seismic was acquired in locations to the south of the 3 wells.

In addition, in late 2018, Helios licensed 74 miles of 2D seismic acquired by a major oil company in the 1980s which covers acreage within the Ojinaga Shale Formation play area (an area of approximately 200,000 acres) but which is currently unleased by Helios.

In summary, this 88 mile 2D seismic programme has established a thick presence of Ojinaga Formation across Helios' entire acreage position of 69,396 gross acres. In addition, this 88 mile 2D seismic programme has established a thick presence of Ojinaga Formation across the entire Ojinaga Shale Formation play area (which is approximately 200,000 acres in size).

Geological Surface Fieldwork

Geological surface fieldwork supports the current seismic interpretation and corroborates that a thick presence of Ojinaga Formation exists across Helios' entire acreage position of 69,396 gross acres.

Gravity and Magnetic Data

During December 2018 and January 2019, Helios acquired gravity and magnetic data over the entire Presidio Oil Project. Interpretation of that data was then compared with the entire seismic programme, along with data from the 3 new wells and the existing old well data. The data sets, when compared, evidence a high degree of 'matching' or 'fit'. The presence therefore of the Ojinaga Formation across the entire Ojinaga Shale Formation play area (which is approximately 200,000 acres in size) can be easily mapped.

Well Location Identification

Helios will continue to integrate the geological and geophysical data with the aim of high grading multiple well locations that target the Ojinaga Formation, the Eagle Ford Formation as well as the older Cretaceous units being the Buda, Georgetown and Edwards limestone formations.

Presidio Oil Project – 70%WI

Helios must drill 3 wells to earn a 70% WI in the initial 6,400 acres (4,480 net acres) which comprise the Presidio Oil Project and a 70% WI in each of these 3 wells. Helios to date has drilled 2 of those 3 wells, being the Quinn Creek 141 vertical well and the Quinn Mesa 113 vertical well. Once the Presidio 141#2 well has been completed, Helios will have earned a 70%WI in the 3 wells and the initial 6,400 acres (4,480 net acres) which comprise the Presidio Oil Project.



Leasing Programme

The Company has been actively leasing in the Presidio Oil Project area. Excluding the initial 6,400 acres (4,480 net acres) of the Presidio Oil Project in which Helios will earn a 70% WI upon completing the drilling of 3 wells, the Company has been actively leasing additional acres in close proximity to these initial 6,400 acres and now has a 70% WI in a further 62,996 acres. During the quarter, Helios exercised all its call options to lease additional land. Upon the completion of Presidio 141#2 Helios will have a 70% WI in a total of 69,396 gross acres (48,577 net acres).

For further information, please contact:

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Managing Director

Competent Person's Statement

The information in this ASX announcement is based on information compiled or reviewed by Eldar Hasanov. Mr Hasanov is a qualified petroleum geologist with over 21 years of experience in the USA, Russia, Azerbaijan, Kazakhstan, the Middle East, Turkey, Indonesia and other international areas involving technical, operational and executive aspects of petroleum exploration and production, in both onshore and offshore environments. He has extensive experience in petroleum exploration, appraisal and reserve and resource estimation, as well as in identifying and evaluating new oil and gas ventures. Mr Hasanov has a Masters degree in Petroleum Geology. He is a member of the American Association of Petroleum Geologists.

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