Helios Energy Ltd
16th January 2025

ASX Code: HE8

Directors

Philipp Kin
Managing Director

Mark Lochtenberg
Non-Executive Director

John Kenny
Non-Executive Director

Henko Vos
Non-Executive Director &
Company Secretary

Contact Details

Australian Office

Suite 6, 295 Rokeby Road
Subiaco WA 6008, Australia

PO Box 1485
West Perth WA 6872, Australia

Tel +61 1300 291 195

USA Office

3 Riverway, 17th Floor
Suite 1750, Houston
Texas USA 77056

Tel +1 713 333 3613
Fax +1 713 583 0965

www.heliosenergyltd.com

Contingent Resource Report Confirms Substantial Resource at Presidio Project in Texas

- **Independent Contingent Resource Report validates the scale and quality of the Presidio Project in West Texas**
- **Significant Hydrocarbon Potential has been discovered by Helios through drilling, logging, sampling, and testing of four wells**
- **Helios Contingent Resources (Entitlements Enforced): Net (75% NRI) Contingent Resources: Oil: 5 – 8 million barrels, NGL: 2 – 4 million barrels, Gas: 36 – 57 billion cubic feet, ~13.3 - 21.7 MMBOE[1]**

Helios Energy (ASX: HE8) ("Helios" or the "Company") is pleased to announce that an Independent Contingent Resource Report as of 30 September 2024 validates the scale and quality of the Presidio Project in West Texas.

Significant Hydrocarbon Potential has been discovered by Helios through drilling, logging, sampling, and testing of four wells. Large quantities of potentially recoverable condensate/wet gas of material value, reservoired just in the Ojinaga (**OJ**) Formation that overlies the Eagle Ford Formation (**EGFD**) have been established in the underexplored Presidio Project area.

Report validates HE8 thesis that the Ojinaga formation is analogous to the Austin Chalk formation in the Giddings Field area in East Texas which has produced ~600 million barrels (**MMbbl**) of oil to date and is the primary target in the Presidio project.

Managing Director Philipp Kin commented: "*The Presidio project report prepared by Foundation Energy LLC represents the first significant independent report conducted over the asset and confirms that Presidio is a new substantial play. In many ways it feels analogous to the, now established, early-stage shale plays which required work and dedication to unlock, but proved to be highly commercial.*

Luckily for Helios, we have a head start, as there is a wealth of knowledge now on unconventionals, and with the recently engaged world class technical experts W.D Von Gonten, we will have the best chance at advancing this to a new oil and gas play. As we progress with the technical work and as our understanding of the asset increases we anticipate increased per acre drilling density, greater recoveries through unlocking more production sections and reduced drilling and opex costs.

With the prospect of a more industry-supportive regulatory environment in the U.S and the discovery of this significant asset, this is an exciting time for Helios. I look forward to giving shareholders a more in-depth update in the coming weeks of the next exciting steps".

Independent Contingent Resource Report Highlights:

- Helios Contingent Resources (Entitlements Enforced):
  - Gross (100%) Contingent Resources:
    - Oil: 9 – 15 million barrels
    - NGL: 5 – 8 million barrels
    - Gas: 74 – 118 billion cubic feet
  - Net (75% NRI) Contingent Resources:
    - Oil: 5 – 8 million barrels
    - NGL: 2 – 4 million barrels
    - Gas: 36 – 57 billion cubic feet

Gas Initially in Place (**GIIP**) from the Top of the Upper OJ to the base of the Lower Eagle Ford averages 57.4 billion cubic feet (**Bcf**) per 640-acre section or about 89.7 million cubic feet per acre (**MMcf/acre**) based upon an arithmetic average of Total Net Pay in existing Helios well control.

Extrapolating existing Helios well control over its current leasehold, GIIP in the Lower Ojinaga formation alone averages 35.2 Bcf per 640-acre section or about 55.0 MMcf/acre.

Average Oil and Condensate yields are expected to range from 36 – 188 barrels per MMcf from 8000 to 3400 feet, respectively, while average Natural Gas Liquids range from 62 – 74 barrels per MMcf.

Ultimate Recovery Factors for the Petroleum Initially in Place (**PIIP**) in the Lower OJ are estimated at 15-30%.

Based upon these factors and average depth to the Lower OJ formation, for every 640-acre section, the expected recovery comes to roughly 3.7 Bcf of gas, 0.69 MMbbl of oil and 0.27 MMbbl of condensate for an updip 640-acre section (1C) to 10.0 Bcf of gas and 0.36 MMbbl of oil and 0.62 MMbbl of NGL for a downdip 640-acre section (3C).

Only hydrocarbons in the Lower Ojinaga formation in the Presidio Project are currently classified as Contingent Resources – Development On Hold in accordance with Australian Securities Exchange (ASX) Listing Rules best practices. The estimates of contingent resources are not adjusted for development risk; and where contingent resources are aggregated, they are done so by arithmetic summation.

Other identified hydrocarbon bearing zones, being the Upper OJ, Middle OJ, Upper EGFD, and Lower EGFD, are excluded from this contingent resource estimate in this Report but may be included as further work is conducted and results justify inclusion.

- Substantial Basin Potential Exists (Entitlements Suspended):
    - Gross (100%) Maximum Recoverable Resources:
        - Oil: 46 – 76 million barrels
        - NGL: 28 – 45 million barrels
        - Gas: 417 – 660 billion cubic feet
    - Net (75% NRI) Maximum Recoverable Resources:
        - Oil: 35 – 57 million barrels
        - NGL: 21 – 34 million barrels
        - Gas: 313 – 495 billion cubic feet

Released with the authority of the Board.

For further information please contact:

Managing Director
Philipp Kin
philipp.kin@heliosenergyltd.com
+61 420 717 041

NED & Company Secretary
Henko Vos
henko.vos@nexiaperth.com.au
+61 8 9463 2427

1. Gross (100%) Low – high estimate contingent resources. NGLs are converted to oil equivalent volumes on a constant ratio basis of 1:1. Gas is converted to oil equivalent volumes on a constant ratio basis of 6.0 BCF per 1 MMBOE.

Forward Looking Statements

This document may include forward looking statements. Forward looking statements include, are not necessarily limited to, statements concerning Helios Energy Limited's planned operation program and other statements that are not historic facts. When used in this document, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward looking statements. Although Helios Energy Limited believes its expectations reflected in these statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements. Helios Energy Limited confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning this announcement continue to apply and have not materially changed.

Competent Persons Statement

NOTE: In accordance with ASX Listing Rules, any hydrocarbon resources and/or drilling update information in this report has been reviewed and signed off by Dwayne Stewart, the technical person responsible for compiling this Report who meets the requirements regarding qualifications, independence, objectivity, and confidentiality set forth in the Society of Petroleum Engineer standards. Dwayne Stewart, a Licensed Professional (Petroleum) Engineer in the State of Texas, has over 29 years of total upstream oil and gas experience. Over the course of his 29 years, Dwayne has had the pleasure of working and leading a variety of multi-functional teams for an international E&P company, a large U.S. independent, a start-up exploration company, and others. In each of these organizations, he progressed through increasing levels of management and leadership opportunities.

Upon joining Netherland, Sewell & Associates, Inc. (NSAI) in 2004, Dwayne began practicing consulting petroleum engineering. During his tenure at NSAI, he contributed to and authored reserve, resource, and competent person reports compliant with not only United States Securities & Exchange Commission Regulation S-X but also Canadian Securities Administration NI 51-101 and London Stock Exchange AIM regulations.

In 2019, Dwayne formed his own consulting practice that specializes in bespoke solutions for business planning, asset optimization, economic evaluations, and financial modelling in the energy, energy transition, and associated sectors. Projects currently in progress include ongoing reserve & resource reports, Assets & Divestiture (A&D) modelling, and Asset Development & Depletion Planning (ADDP) of new and legacy fields.

Dwayne has worked on and managed teams in operating environments ranging from (i) 500' TVD to 15,000' TVD; (ii) dead, heavy oil to rich, natural gas; (iii) shallow, low-pressure, cold reservoirs to deep, high-pressure, hot reservoirs; (iv) conventional and unconventional formations; (v) onshore and offshore locales; and (vi) primary to secondary to tertiary recovery techniques.

As an independent petroleum engineer, Dwayne neither owns an interest in the Presidio Project (or surrounding properties) nor was he employed on a contingent basis by Helios Energy Limited.

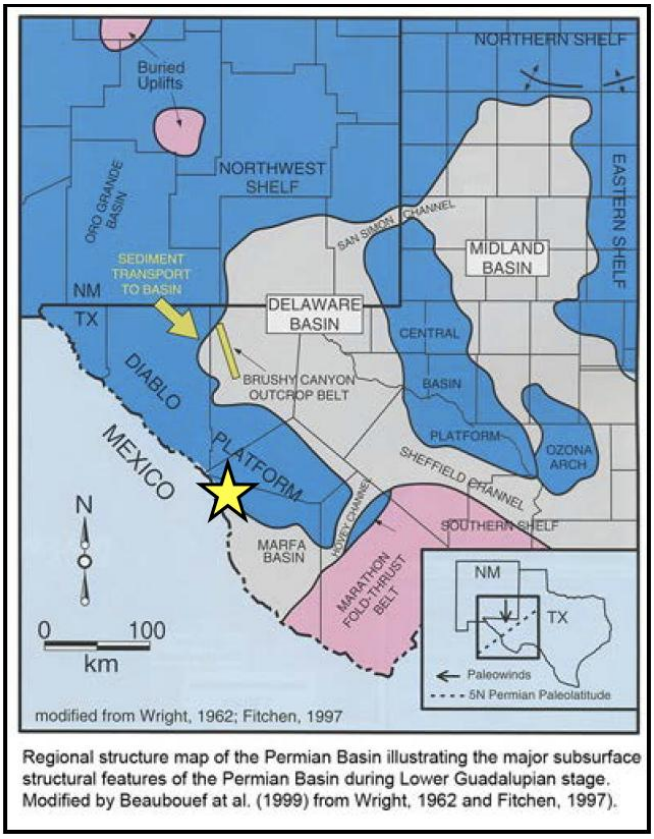
Dwayne consents to the inclusion in this report of information relating to the Contingent Resources, Total PIIP, and Maximum Recoverable Resources in the form and context in which they appear.

About the Presidio Project

The Presidio Project is Helios Energy's flagship asset, strategically located in the Marfa Sub-Basin in West Texas. Targeting the Cretaceous Lower Ojinaga Formation, the project represents a significant geological discovery with strong analogy to the highly productive Cretaceous Austin Chalk Formation in the Giddings Field in East Texas.

Presidio County, Texas, USA

Helios Presidio Project's location in the Marfa Sub-Basin, West Texas



Regional structure map of the Permian Basin illustrating the major subsurface structural features of the Permian Basin during Lower Guadalupian stage. Modified by Beaubouef at al. (1999) from Wright, 1962 and Fitchen, 1997).

Data Reviewed for Contingent Resource Estimates

Type of information	Data Source	Report Date*	Well(s)
Source Rock Analyses	GeoMark	2019-07-15 2022-08-03	1412 5201
Vitrinite Reflectance	GeoMark	2019-07-15	1412
Geochemistry	GeoMark	2018-07-03 2018-07-03 2019-09-16 2022-08-30	1411 1131 1412 5201 ST
Gas Analyses	GeoMark Helios Helios	2019-10-14 2023-06-05 2024-03-13	1412 5201 5201 ST
Temperature & Pressure Data	Helios	2017-06-10 2017-06-29 2022-05-28	1411 1131 5201 ST
Stimulation & Post-Frac Analysis	C&J Energy BJ Services Alamo Pumping	2018-06-26 2019-08-11 2023-01-12	1411 1412 5201 ST
Well Summaries & Production by Well	Helios	2024-08-25	1411 1412 5201 ST
Petrophysical Logs & Calculations	NuTech	2018-03-26 2019-08-01 2022-06-22	1411 1412 5201 ST
Subsurface Depth & Existing Leasehold Maps	Helios	2024-11-07	n/a
Resource Assessment	NuTech	2024-07-31	n/a

Report Date is formatted using ISO 8601 as YYYY-MM-DD. n/a = not available

Contingent Resource Overview

The Contingent Resource Report for the Presidio Project provides an independent validation of the project's significant resource scale. Prepared by Foundation Energy LLC, the report adheres to rigorous technical standards, leveraging comprehensive data collected from Helios Energy's exploratory drilling and field evaluations.

Key highlights from the report include:

Maximum Recoverable Resources - Entitlements Enforced

Product	Gross (100%) Contingent Resource Estimate (1C-3C)	Net (75% NRI) Contingent Resource Estimate (1C-3C)
Oil (MMbbl)	*9 – 15*	*5 – 8*
NGLs (MMbbl)	*5 – 8*	*2 – 4*
Gas (BCF)	*74 – 118*	*36 – 57*

This substantial resource base underscores the immense potential of the Presidio Project, positioning it as a transformational opportunity for Helios Energy and its shareholders.

Maximum Recoverable Resources - Entitlements Suspended

Product	Gross (100%) Maximum Recoverable Resources (Low-High)	Net (75% NRI) Maximum Recoverable Resources (Low-High)
Oil (MMbbl)	*46 – 76*	*35 – 57*
NGL (MMbbl)	*28 – 45*	*21 – 34*
Gas (BCF)	*417 – 660*	*313 – 495*

Resource Classification and Methodology

The contingent resources are classified using the 2018 Society of Petroleum Engineers Petroleum Resources Management System (2018 SPE-PRMS) guidelines, which categorize resources into 1C (low estimate), 2C (best estimate), and 3C (high estimate) based on confidence levels. These estimates are derived using deterministic methods, incorporating reservoir performance data, seismic analysis, and analogy comparisons.

- **1C (Low Estimate):** the approximate probability quantities recovered will equal or exceed the estimated amount is generally inferred to have a 90% confidence level.
- **2C (Best Estimate):** the approximate probability quantities recovered will equal or exceed the estimated amount is generally inferred to have a 50% confidence level.
- **3C (High Estimate):** the approximate probability quantities recovered will equal or exceed the estimated amount is generally inferred to have a 10% confidence level.

Economic Assumptions and Development Contingencies

The typecurve (half-cycle) economics outlined in the report include:

Parameter	Value
Oil Price	$68.29/bbl (starting January 2025) and slowly decreasing to $63.43/bbl (January 2034). The last monthly value of $63.43/bbl is held flat thereafter.
NGL Price	$34.84/bbl (starting January 2025) and slowly decreasing to $32.36/bbl (January 2034). The last monthly value of $32.36/bbl is held flat thereafter.
Gas Price	$0.50/MCF
Lateral Length	5,000–9,000 feet

These estimates consider the need for:

1. **Project Financing:** Securing capital to scale exploration and production activities.
2. **Additional Evaluation:** Further appraisal drilling and reservoir modelling to refine resource estimates.
3. **Gas Commercialisation:** Developing infrastructure for gas processing and transportation to market.

The estimates of contingent resources are not contingent on any technology that is currently under development and the Company also confirms that the contingent resources do not relate to an unconventional resource.

Strategic Development Pathway

The Contingent Resource classification highlights critical steps required to progress the Presidio Project toward commercialisation. These include:

1. **Enhanced Technical Evaluation**: Advanced reservoir modelling and recovery optimization to refine resource estimates.
2. **Infrastructure and Market Access**: Exploring partnerships and infrastructure development to commercialize the substantial gas resource.
3. **Regulatory Engagement**: Continued proactive collaboration with local and federal authorities to secure permits and approvals.

These milestones will be the focus of Helios Energy's near-term efforts to de-risk the project and advance it towards full-scale development.

Future Plans and Opportunities

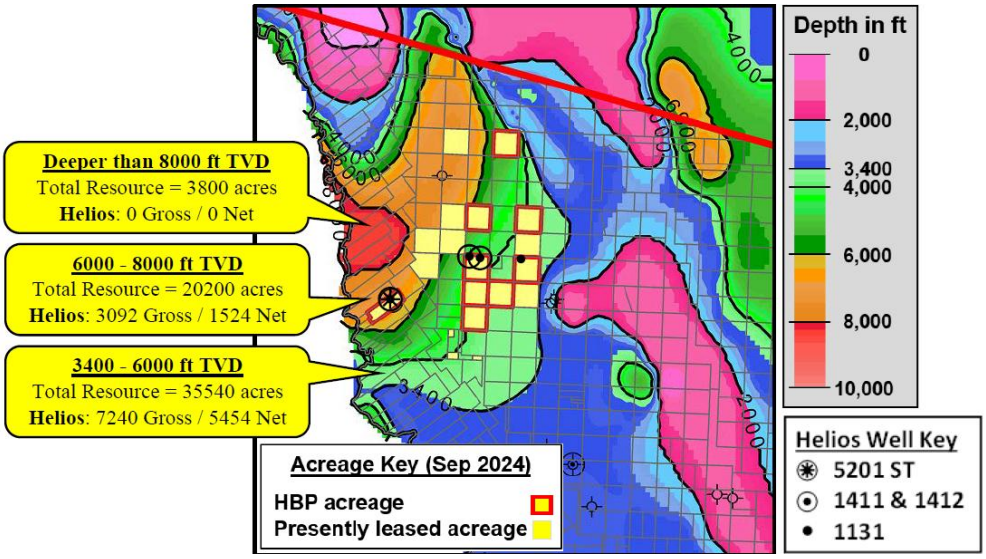
The validation of the Presidio Project's significant resource potential provides a *strong foundation for Helios Energy's growth strategy. The Company is committed to* unlocking its full value through:

- **Joint Venture Opportunities**: Engaging with potential partners to accelerate project development while mitigating risks.
- **Resource Monetisation**: Evaluating pathways to commercialise the project's oil, NGLs, and gas resources through infrastructure and market integration.
- **Ongoing Appraisal and Optimisation**: Leveraging advanced technologies to enhance recovery and operational efficiency.

Helios Energy remains dedicated to advancing the Presidio Project and delivering long-term value for its shareholders.

Helios Acreage Position

A distinguishing feature between conventional and unconventional plays is the direction (or depth) that gas, oil, and water are found relative to each other in the reservoir. Specifically, in conventional reservoirs with high porosity and permeability, buoyancy forces directly contribute to gravity segregation of fluids. Thus, gas (lowest density) is found on top of oil (medium density) which is found on top of water (highest density). Conversely, in unconventional plays, micro- and nano-scale pores and pore throats inhibit bulk migration of fluids and therefore invert that relationship.



Presidio Project Depth vs. Contingent Resource Categorization

Depth TVD	Resource Determination	Contingent Resources
> 8000'	GOR ≥50,000 scf/stb	None. Low condensate yield + low gas price = noncommercial resource.
6000' – 8000'	Downdip (higher GOR; lower WOR)	1C = Low Estimate = 20% RF 2C = Best Estimate = 25% RF 3C = High Estimate = 30% RF
3400' – 6000'	Updip (lower GOR; higher WOR)	1C = Low Estimate = 15% RF 2C = Best Estimate = 20% RF 3C = High Estimate = 25% RF
< 3400'	WOR ≥9 bw/bo	None. High WOR = high lifting costs = noncommercial resource.

Given GOR primarily falls between 5,000 - 50,000 scf/stb, Helios' acreage is in the Condensate Wet Gas window. Coupled with high bottomhole temperatures and Giddings Field Austin Chalk analogy, Presidio hydrocarbons in situ are expected to be single-phase gas. Thus, when produced to surface facilities, heavier components condense and form a liquid phase. For this reason, the author believes Gas Initially In Place (GIIP) and Recovery Factors (RF) associated with unconventional gas reservoirs is a more accurate way to assess contingent resources for the Presidio Project.

Petrophysical Parameters by Well

Well	Interval	Depths (ft MD)	Gross (ft)	NetPay (ft)	Clay (%)	Sw (%)	Porosity (%)	Perm (μD)	TOC (%)	OIIP * (MMB/ sec)	OIIP * (MBO/ acre)	Comments
1412	Upper OJ	2860-3611	751	4	31	59	8.4	0.119	0.4	0.5	0.8	
	Middle OJ	3611-3968	357	63	34	46	7.4	0.179	0.9	9.6	15	
	Lower OJ	3968-4640	672	176	33	48	7.5	0.175	0.9	25.4	39.7	
	Upper EGFD	4640-5050	410	31	47	46	6.6	0.138	2.1	4.3	6.7	
	Lower EGFD	X	X	X	X	X	X		X	X	X	was not penetrated
1411	Upper OJ	2975-4317	1,342	109	26	53	10	0.238	1.8	17.7	27.7	almost complete repeat section
	Middle OJ	4317-4712	395	59	26	50	7.4	0.148	1.8	8.3	13	
	Lower OJ	4712-5437	725	220	30	46	7.2	0.173	2.2	31.4	49.1	
	Upper EGFD	5437-5713	276	X	X	X	X	X	X	X	X	Upper EGFD has zero net pay
	Lower EGFD	5713-5910	197	58	19	35	4.6	0.086	1.6	6.5	10.2	
5201 ST	Upper OJ	5449-6307	858	23	30	55	10.2	0.235	1.5	4.1	6.4	
	Middle OJ	6307-6629	322	37	27	46	8.8	0.308	1.5	6.8	10.6	
	Lower OJ	6629-7423	794	163	33	44	7.9	0.254	1.9	28.2	44.1	
	Upper EGFD	7423-7796	373	15	44	34	6.6	0.223	1.9	2.5	3.9	
	Lower EGFD	7796-8029	233	13	42	37	4.5	0.08	0.4	1.4	2.2	
Average	Upper OJ		805	14	31	57	9.3	0.177	1.0	2.3	3.6	excludes 1411 partial repeat
	Middle OJ		358	53	29	48	7.9	0.212	1.4	8.2	12.9	
	Lower OJ		730	186	32	46	7.5	0.201	1.7	28.3	44.3	
	Upper EGFD		353	23	46	40	6.6	0.181	2.0	3.4	5.3	
	Lower EGFD		215	36	30	36	4.6	0.083	1.0	4.0	6.2	
Total or NetPay Wtd Avg =			2,461	311	32	45	7.3	0.187	1.6	46.2	72.2	Clay, Sw, Por, Perm, & TOC are NetPay Wtd Averages

** Cut-off parameters: Vclay = 60%, Sw = 60%, Minimum Permeability = 0.050 μD (microDarcy) = 50 nD (nanoDarcy).MMBO = millions of barrels of oil. MBO = thousands of barrels of oil. 1 section (sec) = 640 acres = 1 square mile ≈ 2.59 square kilometers (km) ≈ 259 hectares (ha).*

Comprehensive Resource Breakdown

Helios Net Contingent Resources - Presidio Project – Entitlements Enforced

Category	Oil (MMbbl)	Gas (BCF)	NGL (MMbbl)	Total (MMBOE)
Low Estimate (1C)	4.88	35.6	2.49	13.3
Best Estimate (2C)	6.47	46.5	3.26	17.5
High Estimate (3C)	8.06	57.4	4.03	21.7

Gas volumes throughout this Report may sometimes be expressed in billions of cubic feet (BCF), millions of cubic feet (MMCF), or thousands of cubic feet (MCF) at standard temperature and pressure bases. Oil volumes throughout this Report may sometimes be expressed in millions of barrels (MMbbl), thousands of barrels (Mbbl), or barrels (bbl). Oil resources shown in the table above – and reported throughout this Report – include crude oil and condensate. Natural Gas Liquid (NGL) volumes throughout this Report may sometimes be expressed in millions of barrels (MMbbl), thousands of barrels (Mbbl), or barrels (bbl). Oil equivalent volumes throughout this Report may sometimes be expressed in millions of barrels of oil equivalent (MMBOE), thousands of barrels of oil equivalent (MBOE), or barrels of oil equivalent (BOE) determined using the ratio of 6 MCF of gas at standard temperature and pressure bases to 1 barrel of oil and 1 barrel of NGL to 1 barrel of oil. One barrel is equivalent to 42 United States gallons.

Presidio Project Graben Maximum Recoverable Resources (assuming NRI @ 75%) – Entitlements Suspended

Category	Oil (MMbbl)	Gas (BCF)	NGL (MMbbl)	Total (MMBOE)
Low Estimate	*34.70*	*312.8*	*21.24*	*108.1*
Best Estimate	*45.79*	*403.8*	*27.50*	*140.6*
High Estimate	*56.88*	*494.9*	*33.77*	*173.1*

As requested by Helios for internal planning purposes, the Report also includes an estimate of Total Petroleum Initially In Place (PIIP) and maximum recoverable resources over the entire Presidio Project graben with entitlements suspended. All things being equal, as Helios accretes working interest under existing gross acreage, reacquires expired leasehold, and/or adds new leasehold to its portfolio, its contingent resources would increase up to the maximum recoverable resource estimates with entitlements suspended. Thus, the maximum recoverable resource estimates with entitlements suspended act as a theoretical ceiling (limit) for estimated recoverable resources over the Presidio Project graben.

Well Summaries & Production Discussion

Well histories, production data, and other data summarized

Well	Summary
Presidio 1411	• Completed June 2018 as a vertical well. • Completed one-stage frac in the Lower Ojinaga zone. • Peak rate: 92 BOPD / 474 MCFD / 199 BWPD (12 July 2018). • Cumulative production: 580 bbl oil / 1248 MCF gas / 4342 bbl water as of 31 July 2024. • Produced water / frac fluid ratio = 4342 bbl / 10464 bbl ≈0.41 • Intermittent production due to no nearby water disposal. • Tubing builds up to ~1200 psi and well unloads when opened. • Shares a production facility with the Presidio 1412.
Presidio 1412	• Completed in August 2019 as a short-radius horizontal well. • Completed seven-stage frac in the Lower Ojinaga zone. • Peak rate: 153 BOPD / 1271 MCFD / 539 BWPD (23 August 2019). • Cumulative production: 5990 bbl oil / 50721 MCF gas / 60075 bbl water as of 31 July 2024. • Produced water / frac fluid ratio = 60075 bbl / 64064 bbl ≈0.94 • Intermittent production due to no nearby water disposal. • Tubing builds up to ~1000 psi and well unloads when opened. • Shares a production facility with the Presidio 1411.
State Helios 5201 ST	• Sidetracked and completed in January 2023 as a vertical well. • Completed four-stage frac in the Lower Eagle Ford, Upper Eagle Ford, Lower Ojinaga, and Upper Ojinaga zones. • Peak rate: 81 BOPD / 698 MCFD / 1482 BWPD (4 February 2023). • Cumulative production: 3143 bbl oil / 146049 MCF gas / 73446 bbl water as of 15 November 2024. • Produced water / frac fluid ratio = 73446 bbls / 113937 bbls ≈0.64 • Tracer surveys performed pre-gas lift gas installation (January - February 2023) indicate water production of 25% ± 2% from each of the four zones, i.e., similar contribution of frac water by each zone. • Post-gas lift gas installation, there was a slight decrease of frac water production in the Upper Ojinaga and commensurate increase of frac water production in the Lower Eagle Ford. • Due to a decline in production rate in July 2023, Helios ran in the hole and discovered an obstruction (fill material) covering EGFD stages. • Unfortunately, frac water recovery – and the allocation thereof – does not prove which of the four zones hydrocarbon production originates.

Summary & Conclusions

Helios drilled four exploratory wells in the Marfa Sub-Basin located in Presidio County, Texas near the USA/Mexico international border; three of those wells were deep enough to penetrate the Ojinaga and Eagle Ford formations. Via logging, sampling, and testing, Helios discovered a significant quantity of potentially recoverable hydrocarbons principally in the Cretaceous Ojinaga formation, which is analogous to the Cretaceous Austin Chalk formation in the Giddings Field in East Texas. Furthermore, via a single-stage frac vertical completion, a four-stage frac vertical completion, and a short-radius, seven-stage frac horizontal completion, Helios demonstrated hydrocarbons are producible from the Upper Ojinaga, Lower Ojinaga, Upper Eagle Ford, and Lower Eagle Ford formations.

This announcement has been authorized for release by the Board of Directors of Helios.