Climate Wells

Early Decommissioning of Oil and Gas Wells - Wilmington, Los Angeles

Project Design Document

March, 2025

Climate Wells

TABLE OF CONTENTS

A. PROJECT OVERVIEW

A1. PROJECT TITLE

Early Decommissioning of Oil and Gas Wells – Wilmington, Los Angeles Project (hereinafter referred to as "Project").

A2. PROJECT TYPE

Industrial Process Emissions: Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from the Early Decommissioning of Marginal Oil and Gas Wells in the United States

A3. SUMMARY OF PROJECT

The project activity is the plugging of seven marginal wells in Los Angeles County, CA. Each of the seven wells in the project were documented as marginal wells based on their low ongoing production rates. The wells had maintained low production for years and required emission intensive techniques to produce oil and natural gas. Additionally, these wells pose health and well-being risks to the residents of Wilmington and threaten proximal natural resources. As of December 2023, there were over 23,000 marginal wells in California. Many of these wells were drilled in the 1920s, 30s, and 40s and sit in a state of productive disrepair. On average, the emissions intensity of an oil and gas well doubles every 25 years[1]. There is no regulation requiring these wells to be plugged for decades. ClimateWells, the project developer, has taken responsibility for quantifying the emissions of these wells for the purpose of leveraging carbon finance for incentivizing immediate and proper plugging and remediation. Project Activity includes the quantification of lifecycle emissions of remaining economic oil and gas production and the subsequent mitigation of emissions via permanent plugging of wellbores. Emissions abatement will be confirmed post-plugging.

A4. PROJECT ACTION

All project wells will be plugged in accordance with CA regulation and include approved cementing prognosis and monitored by regulatory field representatives. This ensures that all reservoirs that are potential hydrocarbon bearing zones are isolated. In addition, California

[1] Gallagher, J. Oil production: Impact of age. *Nat Energy* 2, 17148 (2017). https://doi.org/10.1038/nenergy.2017.148

Geologic Energy Management Division (CALGEM) performs quality control of cement plugs and procedural execution on site.

Description of project technologies, practices, products, services and expected level of activity:

- For plugging operations:
    - Plugging and Abandonment service rigs capable of the maximum possible encountered hook loads, operated by state-approved plugging operators.
    - Cement pump units, blow out preventers, lubricators and other well control equipment available as needed.
- For emissions measurement:
    - A qualified professional petroleum engineering firm will use methods in conjunction with OCI+, an open-source, constantly updated, institutionally-owned emissions measurement model.

A5. PROOF OF PROJECT ELIGIBILITY

Project is eligible under Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from the Early Decommissioning of Marginal Oil and Gas Wells in the U.S. v2.7 (April 2024)

- Criteria for project eligibility under methodology:
    - These wells are located in the United States
    - These wells are Marginal and Active as defined in the methodology
        - Average production prior 12 months to project initiation below marginal well production cutoff per the methodology
    - These wells meet the Additionality provisions defined in the methodology:
        - These wells are under no regulatory burden to be plugged within the crediting term.
        - These wells possess economically recoverable reserves.
    - These wells qualify under the Qualitative Permanence Review defined in the methodology
    - Credits available for issuance are net of leakage.
    - The Crediting Period is no longer than 0.5 years, within the 10 year maximum in the methodology
    - The pertinent natural resources regulator has certified the plugging project
        - California Geologic Energy Management (CALGEM) has returned certification letters for all wells
    - The project is independently validated & verified: <<In process>>

A6. PROJECT LOCATION

Unique identification including API numbers, well names, legal property descriptions, and meridians and parallels can be found below. For more information, see Appendix D.

Well Name	API_UWI	Section_Township_Range	State	County	Latitude	Longitude
73-201	4037303060000	35-04S-13W	CA	Los Angeles	33.783955	-118.221306
73-209	4037300950000	35-04S-13W	CA	Los Angeles	33.783836	-118.221237
73-109	4037274490000	35-04S-13W	CA	Los Angeles	33.783836	-118.221214
73-08	4037220220000	35-04S-13W	CA	Los Angeles	33.784447	-118.221497
73-30	4037269830000	35-04S-13W	CA	Los Angeles	33.783848	-118.221481
73-206	4037303430000	35-04S-13W	CA	Los Angeles	33.783882	-118.22126
73-211	4037303930000	35-04S-13W	CA	Los Angeles	33.783802	-118.221214

Received from: CALGEM
Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

A7. REGULATORY COMPLIANCE

ClimateWells performs a rigorous examination of each well's history. This includes reviewing any notices of violations or breaches of regulatory compliance. Under such examination, it was determined and verified by CALGEM that these wells are under no regulatory burden to be decommissioned at this time.

The Operator filed a permit to plug and abandon these wellbores which was accepted by CALGEM. In accordance with standard practice, CALGEM issues a certification of the plugging operation after reviewing the exact plugging procedure of each project. After approval, each well is officially classified as plugged and abandoned in the CALGEM well records database.

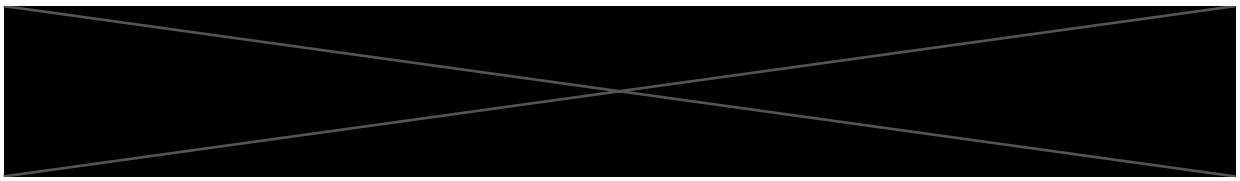
A8. PARTIES

Entity	Name	Role/Title	Contact Info	Responsibility
	Reid Calhoon	Chief Executive Officer	1717 W 6th St. STE 100 Austin, TX 78703 Phone: (405) 406-1173	Project Proponent – Chief Executive
ClimateWells, INC (CW)	Charlie Wohleber	Chief Operating Officer	1717 W 6th St. STE 100 Austin, TX 78703 Phone: (504) 289-9006	Project Proponent – Management of operations and coordination of project implementation
Netherland, Sewell & Associates (NSAI)	Joe Mello	Petroleum Engineer	1301 McKinney St. Ste 3200 Houston, TX 77010 Phone: (713) 654-4950	IndependentReservoir Engineering
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]

The Project Developer, ClimateWells, has over 20 years of combined oil and gas property development and petroleum data management experience. Our team has contributed

significant and continued technical support for the development of The Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from the Early Decommissioning of Marginal Oil and Gas Wells in the U.S..

The Independent Petroleum Engineering Firm, Netherland, Sewell & Associates, (NSAI) was established in 1961 and is a worldwide leader of petroleum property analysis for industry and financial organizations and government agencies. With offices in Dallas and Houston, NSAI is the leading independent petroleum engineering firm, delivering high-quality, fully-integrated engineering, operational, geological, geophysical, petrophysical, and economic solutions for all facets of the upstream energy industry. Joe Mello, who worked on this project, received his B.S. in Chemical Engineering, from Rice University. Joe joined NSAI in 2015 after working over five years as a Reservoir Engineer at ExxonMobil Production Company. Joe has worked extensively in onshore conventional and unconventional development and the offshore deepwater environment, where he leverages significant simulation experience to understand complex behavior. He also employs his simulation expertise to evaluate reservoirs for carbon sequestration projects.



B. METHODOLOGY

B1. APPROVED METHODOLOGY

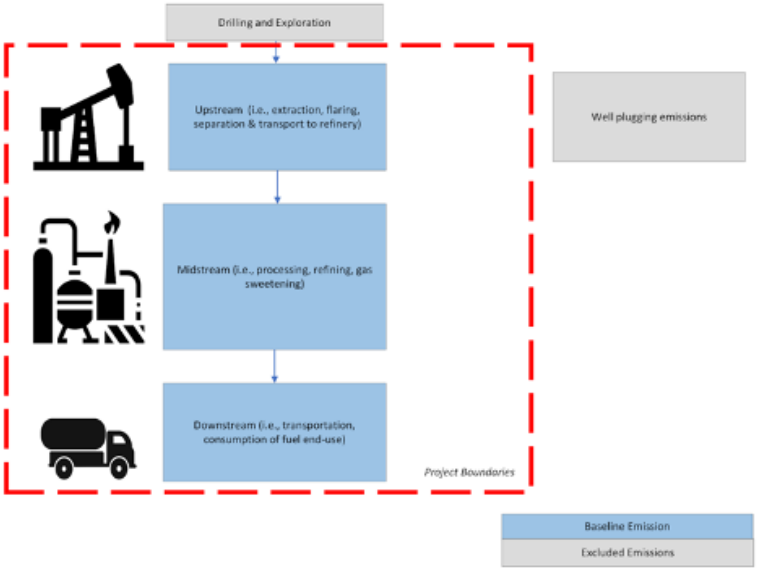
This project is submitted under the methodology entitled - Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from the Early Decommissioning of Marginal Oil and Gas Wells in the U.S, approved April 2024 with Open Carbon Protocol.

B2. METHODOLOGY JUSTIFICATION

There is no requirement in the U.S. that requires marginal wells to be plugged. Marginal oil and gas wells make up less than 5% of oil and gas production but as much as 70% of oilfield emissions. The chosen methodology provides a framework for the quantification, monitoring, reporting and verification of GHG gas emission reductions associated with plugging of marginal oil and gas wells in the U.S.

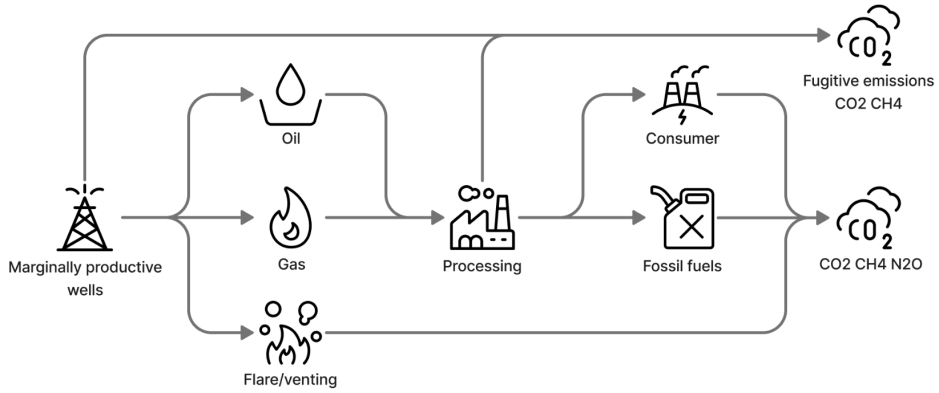
B3. IDENTIFICATION OF GHG SOURCES, SINKS, AND RESERVOIRS

Baseline			
Source	**GHGs**	**Included?**	**Justification/Explanation**
Oil and Gas Ore Exploration	CO_2	No	It is assumed that the emissions derived from this specific activity would occur regardless of whether the Project Activity is undertaken. Therefore, this activity falls outside the project boundaries.
	CH_4		
	N_2O		
Extraction	CO_2	Yes	Included in the project boundaries are emissions calculated using the OPGEE model within the Oil Climate Index Plus (OCI+) tool. However, these emissions are presumed to be significantly smaller compared to other activities throughout the fossil fuel production lifecycle.
	CH_4		
	N_2O		
Flaring and venting	CO_2	Yes	GHG emissions resulting from flaring are considered by the OPGEE model.
	CH_4		
	N_2O		
Processing and Refining	CO_2	Yes	GHG emissions resulting from the processing of hydrocarbons at refineries or similar facilities are identified as significant by the PRELIM model within the OCI+ tool.
	CH_4		
	N_2O		
Transportation	CO_2	Yes	GHG emissions resulting from the combustion of fossil fuels for transportation, extending from the gate to the end-user, are identified as relevant according to the OPEM model within the OCI+ tool.
	CH_4		
	N_2O		
Consumption of fuel for the end-user	CO_2	Yes	Significant emission sources, included in the analysis of the OPEM model.
	CH_4		
	N_2O		
Fugitive emissions	CO_2	Yes	Emissions occurring at any stage of the oil and gas production process are accounted for in all mentioned models.
	CH_4	Yes	
	N_2O	No	Negligible compound, as reflected in all the mentioned models.



B4. BASELINE SCENARIO

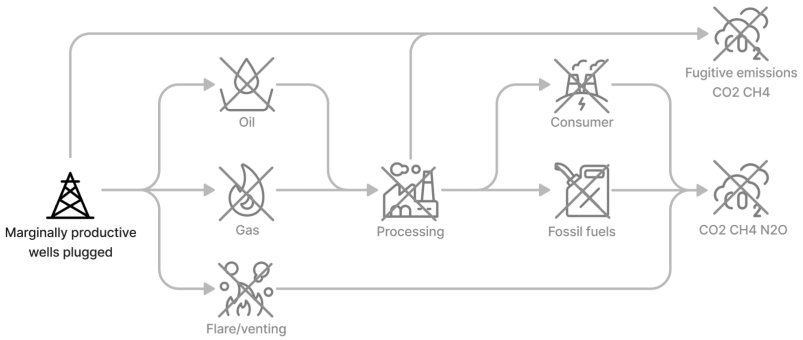
The Baseline scenario includes the continued emissions from the lifecycle of oil and gas production and use. Baseline emissions are determined by measurements conducted under The Oil Climate Index[2]. Relevant equations are found in section 8.1 of the methodology and further described in section F below.



B5. WITH-PROJECT SCENARIO

The seven wells in this project were identified based on ongoing economic production and emissions intensity. They are eligible for the methodology due to their marginal status and applicability conditions described by the methodology.

Business as usual entails continued production from these wells through their economic limit in 7/2024. With the project, these wells were properly plugged and reclaimed ahead of their economic limit, abating production based emissions as described in OCI+.



[2] https://ocipl

B6. GHG EMISSION REDUCTIONS AND REMOVALS

Through this project, emission reductions are achieved by preventing the ongoing operation of these oil and gas wells. The reductions are calculated by baseline emissions minus any deductions for impermanence, leakage and/or uncertainty.

B7. PERMANENCE

Wells are being plugged by cementing the wellbore, completely sealing hydrocarbon bearing zones to permanently eliminate all future production and emissions. Plugging an oil and gas well with cement is a widely accepted method to permanently seal a wellbore and prevent any leaking of oil, gas, or other fluids. Cement is pumped into the wellbore to fill the space between the casing and the formation and inside the casing above all hydrocarbon bearing zones, creating a solid barrier that seals off the well from the surrounding environment. Once the cement sets, it forms an impermeable seal that can withstand high pressure and temperature, ensuring that no fluids can escape from the well. These operations are highly regulated with fail-safe industry standards in place since modern oil and gas regulation was established.

Each well was evaluated on the Qualitative Permanence Review as detailed in the methodology. Continuous, and annual, permanence monitoring and verification will be conducted as part of the project.

C. ADDITIONALITY

C1. INVESTMENT ANALYSIS

By plugging these wells before their economic limit, the operator is leaving profitable oil and gas production in the ground and foregoing sales revenues. By plugging these wells ahead of their economic limit, the project owner and developer are receiving no income outside of carbon credit revenues.

C2. REGULATORY SURPLUS

In order to pass the regulatory surplus test, a project must not be mandated by existing laws, regulations, statutes, legal rulings, or other regulatory frameworks that directly or indirectly affect the project credits. As noted earlier, there are no regulations requiring the project wells to be plugged or decommissioned within the crediting term. All existing plugging regulations apply to inactive wells.

C3. COMMON PRACTICE

The project methodology indicates that common practice is plugging and remediating an oil and gas well when it reaches its economic limit, at the earliest. There are 718 active onshore wells in Wilmington. Of those 131 (18%) of them are producing very marginally and are not plugged. Additionally, there are 274 (38%) that are currently producing less than the avg BOE/day (22.97 as of 2/29/24) of the wells being plugged in our project.
Unfortunately, many wells are never plugged. Today there are over 100,000 documented orphan wells for which the operator went out of business before being plugged.

C4. ALTERNATIVES TO THE PROPOSED PROJECT

The operator has 2 alternatives to the proposed project: 1. Continue to produce these wells until at least their economic limit or 2. take the wells offline through temporary abandonment[3]. While the former does not create an emission reduction, the latter only postpones emissions and is not available for crediting.

D. GHG MONITORING PLAN

D1. PARAMETERS REMAINING CONSTANT

Data / Parameter	TRes
Unit	Barrels of Oil Equivalent, BOE.
Description	Total Economic Reserves throughout the remaining economic life of the well.
Equations	8,9 in the methodology

[3] https://iadclexicon.org/temporarily-abandoned-well/

Source of data	Determined by a qualified professional petroleum engineering firm (PPEF).
Value applied	Different per well.
Justification of choice of data or description of measurement methods and procedures applied	An independent third-party hydrocarbon reserve certification firm subject to the SPE PRMS standard and licensed by the government. The professional engineer(s) must have a minimum of 5 years of experience. The individual or entity by which they are employed will furnish the projected economic reserves forecast with a reasonable level of assurance.
Purpose of Data	Calculation of crediting term discount and adjusted limited economic reserves.
Comments	NA

Data / Parameter	ALRes
Unit	Barrels of Oil Equivalent, BOE.
Description	Adjusted Limited Economic Reserves (Max of 10 years post project commencement, adjusted for impermanence risk)
Equations	3,8,9,12,13 in the methodology
Source of data	Determined by a qualified professional petroleum engineering firm (PPEF).
Value applied	Different per well.
Justification of choice of data or description of measurement methods and procedures applied	An independent third-party hydrocarbon reserve certification firm subject to the SPE PRMS standard and licensed by the government. The professional engineer(s) must have a minimum of 5 years of experience. The individual or entity by which they are employed will furnish the projected economic reserves forecast with a reasonable level of assurance.
Purpose of Data	Calculation of baseline emissions
Comments	NA

Data / Parameter	PE

Unit	tCO_2-e.
Description	Project Emissions of the early plugged activity
Equations	1,11 in the methodology
Source of data	NA
Value applied	0
Justification of choice of data or description of measurement methods and procedures applied	It is assumed that the wells would have been plugged even if the Project activity is not happening. Additionally, it is believed emissions are negligible.
Purpose of Data	NA
Comments	NA

Data / Parameter	OCI_{fc}
Unit	tCO_2-e/BOE.
Description	Oil Climate Index Field Coefficient.
Equations	3,10 in the methodology
Source of data	Most recent data for all global producing oil fields published in the Oil Climate Index tool (OCI+) https://ociplus.rmi.org/
Justification of choice of data or description of measurement methods and procedures applied	The OCI+ tool shall be used to determine the LCA emission factor of the hydrocarbons associated with the project field. The Project Proponent must run the tool to determine a site-specific emission factor.
Purpose of Data	Calculation of the baseline emissions.
Calculation Methods	*Measured & Modeled*
QA/QC	*Procedures for Quality Assurance and Quality Control applied.*
Comments	NA

Data / Parameter	L

Unit	tCO_2-e
Description	Leakage Adjustment
Equations	1,12, 13 in the methodology
Source of data	Most recent analysis by Resources for the Future and the Rocky Mountain Institute. https://www.rff.org/publications/working-papers/estimating-the-emissions-reductions-from-supply-side-fossil-fuel-interventions/
Description of measurement methods and procedures to be applied	Leveraging peer-reviewed empirical economic research, the data and studies referenced here conclude a variable leakage rate of supply-side fossil fuel intervention.
Purpose of Data	Calculation of emission reductions.
Calculation Methods	*Measured and Modeled*
QA/QC	*Procedures for Quality Assurance and Quality Control applied.*
Comments	NA

Data / Parameter	P
Unit	tCO_2-e
Description	Permanence Discount
Equations	5,6,7,9,13 in the methodology
Source of data	Permanence data provided by an independent petroleum reserve certification firm.
Description of measurement methods and procedures to be applied	The Permanence discount applies to the propensity for reserves communication when clear technical zonal isolation is not achieved in the technical permanence review.
Frequency of monitoring	*Procedure 2 from the methodology is performed annually but changes will only affect the buffer pool*
Purpose of Data	Calculation of emission reductions.
Calculation Methods	*Estimated*

QA/QC	*Procedures for Quality Assurance and Quality Control applied.*
Comments	NA

Data / Parameter	U
Unit	tCO_2-e
Description	Uncertainty Discount
Equations	1,14 in the methodology
Source of data	Uncertainty data provided by independent petroleum reserve certification firm.
Description of measurement methods and procedures to be applied	The Uncertainty Discount applies to the quality and completeness of data provided to the independent petroleum firm used for reserves and permanence evaluation.
Purpose of Data	Calculation of emission reductions.
Calculation Methods	*Estimated*
QA/QC	*Procedures for Quality Assurance and Quality Control applied.*
Comments	NA

Additionally, and as noted above, Procedure 2 in Appendix C of the methodology mandates an annual verification to ensure that no actions have jeopardized the integrity of the plugged wells. Should the results of Procedure 2 indicate that new development shall access the well's reserves, credits from the buffer pool will act as recompense upon the completion of the new well. Since it is illegal to drill new wells in this area, this monitoring should not yield any results.

E. GHG QUANTIFICATION GUIDANCE

E1. BASELINE SCENARIO

The baseline scenario contemplates that each applicable well continues to produce through its economic limit. Baseline emissions quantification will utilize reserve calculations completed by Netherland, Sewell and Associates and emissions data from the Oil Climate Index. The process of reserve calculation is detailed in Appendix A of the methodology. The inputs leveraged for emissions quantification can be found in the Oil Climate Index methodology. For this project, the

Wilmington Field data was used (with the exception of drilling & development and exploration emissions). Full carbon accounting can be found in section F1 below.

E2. WITH-PROJECT SCENARIO

After each well is decommissioned, CALGEM oversight issues a certification of the plugging process and changes the well status in their internal records. CALGEM requires that the surface is returned to its “Native State” within a certain amount of time from plugging. This surface reclamation does not affect the emission reduction. All emissions contemplated through the Oil Climate Index are stopped once the well is decommissioned.

E3. PERMANENCE

Below are the results of the Qualitative Permanence Review conducted by Netherland and Sewell & Associates. For the NSAI presentation, see Appendix B.

% of Reserves Recoverable from Offset Wells	Conclusiveness of Available Data: LOW	MEDIUM	HIGH
HIGH	**HL** Project not eligible for crediting	**HM** Project not eligible for crediting	**HH** Project not eligible for crediting
MEDIUM	**ML** 20% Permanence Discount across total economic reserves. Uncertainty discount of 5%	**MM** 20% Permanence Discount across total economic reserves. Uncertainty discount of 1%	**MH** 20% Permanence Discount across total economic reserves. No Uncertainty discount
LOW	**LL** 5% Permanence Discount across total economic reserves. Uncertainty discount of 5%	**LM** 5% Permanence Discount across total economic reserves. Uncertainty discount of 1%	**LH** 5% Permanence Discount across total economic reserves. No Uncertainty discount

Well Name	NSAI Matrix Results
73-201	LH
73-209	LH
73-109	LH
73-8	LH
73-30	LM

Well Name	NSAI Matrix Results
73-201	LH
73-206	LH
73-211	LH

Received from: NSAI
Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

E4. UNCERTAINTY

If a well or wells within a project are deemed to have low or medium data conclusiveness when reviewed through the Qualitative Permanence Review, an uncertainty adjustment must be applied. The results of each Qualitative Permanence Review can be found above in the permanence section and full carbon accounting details below in section F1.

E5. LEAKAGE

RFF and RMI recommend the use of a 57% Leakage Adjustment for supply-side fossil fuel carbon crediting. This adjustment can be increased or decreased depending on the sources of curtailed and substitute supply.

More information on Leakage can be found in section 10 of the methodology and full carbon accounting is below in section F1.

E6. QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC)

Our project begins with cross-checking private and public records to confirm the identification, history, and current status of the wells we include in our projects. Public data and independent reserves analysis ensure that our GHG quantification is accurate, conservative and non-biased. We constantly update OCI+ with any new data added to the system and communicate with the Rocky Mountain Institute to confirm we're using the most updated information. Our emissions measurement is always transparently offered and will be audited by a third-party VVB.

F. CARBON ACCOUNTING & PROJECTIONS

F1. ACCOUNTING TABLE

$$BE = ALRes \times OCI_{fc}$$

$$ALRes = TRes \times (1 - P)$$

Well Name	TRes	P	ALRes	OCI+[4]	Baseline Emissions
73-201	4118	0.05	3912.10	0.597	2335.53
73-209	3193	0.05	3033.35	0.597	1810.92
73-109	5398	0.05	5128.10	0.597	3061.49
73-08	318	0.05	302.10	0.597	180.35
73-30	2370	0.05	2251.50	0.597	1344.15
73-206	3993	0.05	3793.35	0.597	2264.64
73-211	2237	0.05	2125.47	0.597	1268.91

Received from: NSAI
Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

$$ER = BE - PE - L - U$$

Well Name	Baseline Emissions	Project Emissions	Leakage	Uncertainty Adjustment	Emission Reduction	Buffer Pool
73-201	2335.53	0	1155.09	0	1180.45	59.02
73-209	1810.92	0	895.63	0	915.29	45.76
73-109	3061.49	0	1514.12	0	1547.36	77.37
73-08	180.35	0	89.20	0	91.16	4.56
73-30	1344.15	0	664.78	13.44	665.93	33.3
73-206	2264.64	0	1120.02	0	1144.61	57.23
73-211	1268.91	0	627.57	0	641.34	32.07

[4] OCI+ as used here is net of upstream drilling & development and exploration emissions.

Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

F2. EX ANTE EMISSION REDUCTION PROJECTION

Well Name	Baseline Emissions	Emission Reduction	Buffer Pool	Marketable Credits
73-201	2335.53	1180.45	59.02	1121.42
73-209	1810.92	915.29	45.76	869.53
73-109	3061.49	1547.36	77.37	1470.00
73-08	180.35	91.16	4.56	86.60
73-30	1344.15	665.93	33.3	632.63
73-206	2264.64	1144.61	57.23	1087.38
73-211	1268.91	627.57	32.07	609.28
Totals	12265.80	6186.05	309.30	**5876.75**

Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

H. ENVIRONMENTAL AND SOCIAL IMPACT

The project's positive environmental and social impacts are outsized due to the location of these wells in a highly populated urban area and the intensity of emissions in this oilfield. The Wilmington area is known to have higher health risks due to air pollution[5] and the community outcry for decommissioning has been continuous.
Note: More detail on SDG contribution in section 17 of the methodology

APPENDIX A: ECONOMIC RESERVES DATA

Well Name	NSAI Reserves 12/31/22	CALGEM BOE Produced from 1/1/23-06/30/24[6]	TRes

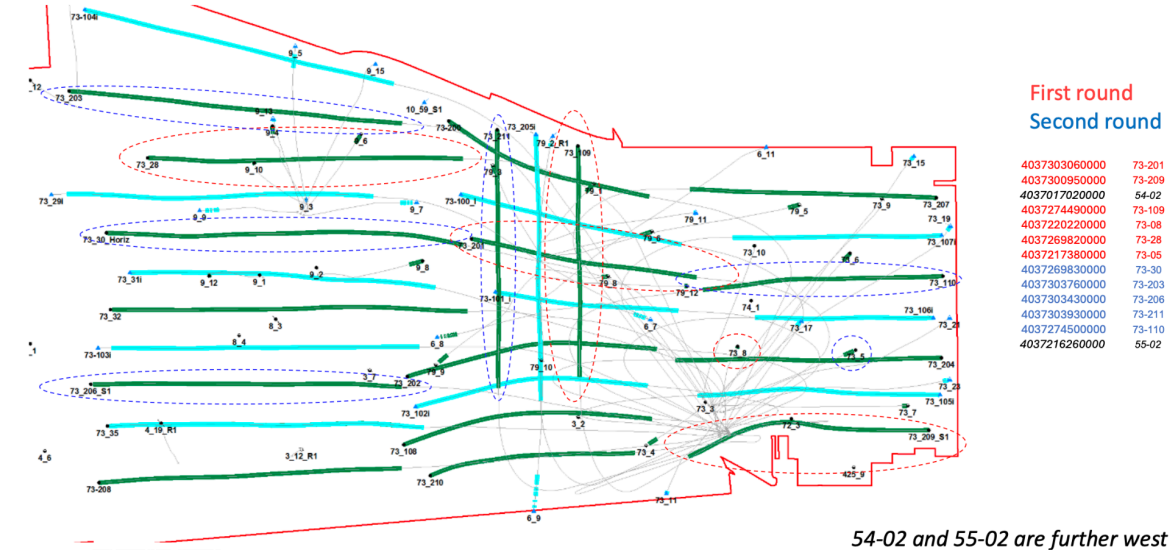
[5] Physicians for Social Responsibility, STAND_LA 2022
[6] CALGEM production data as of 03/26/25

73-201	4800	682	4118
73-209	5200	2007	3193
73-109	6200	802	5398
73-08	3000	2682	318
73-30	5000	2630	2370
73-206	5900	1907	3993
73-211	8400	6163	2237

Received from: NSAI/CALGEM
Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

APPENDIX B: NSAI PROJECT LEVEL ANALYSIS

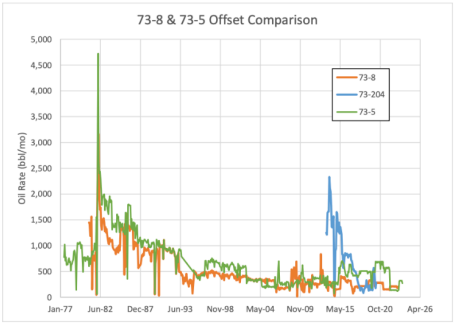
Updated Proposed Well Locations

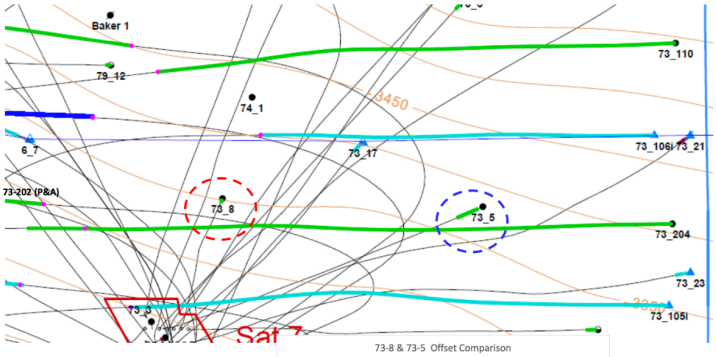


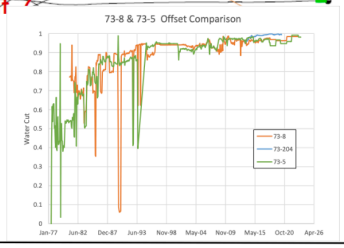
Climate Wells

73-8 and 73-5

- 73-8 and 73-5 are likely in good communication with one another, production and water cuts have tracked closely over their life
- 73-204 is partially updip but downdip portion appears to have watered out very quickly
  - Concern would be about a plugback of the 73-204, but very unlikely to be executed given short remaining field life
- Updip injector limits upward migration of remaining further updip oil due to rel perm effects
- If they are both abandoned in quick succession, do not see material volumes being produced in other wellbores within three years







73-8 and 73-5 Application of Methodology

Low	Medium	High
Early in property life production records	Established production trends	Mature properties at or near terminal decline
Little data beyond public	Some operator data available on wellbores and well histories	Substantial operational data available over long time horizons
Little or no geologic context available	Basic understanding of geologic structure	Detailed understanding of geology, including sealing faults
Long remaining economic lives for offset producers	Moderate remaining economic lives for offset producers	Short remaining economic lives for offset producers or operator guarantee of end of field life
Conflicting or unreliable data	Interpretation supported by only one or two data points	Multiple independent approaches to analysis point to the same conclusion

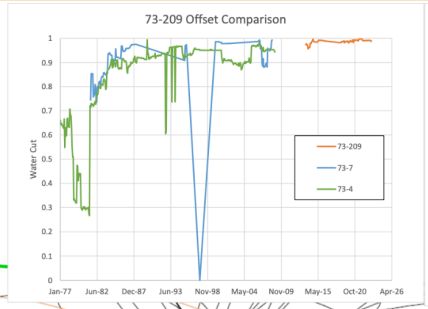
% of Reserves Recoverable from Offset Wells	Conclusiveness of Available Data: LOW	MEDIUM	HIGH
HIGH	HL	HM	HH
MEDIUM	ML	MM	MH
LOW	LL	LM	LH

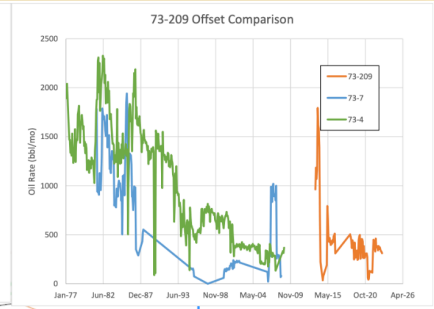
Different WC trends on offset 204, shut-in offset, injection updip preventing migration all suggest little reserves will be recovered by other wells if both of these are plugged

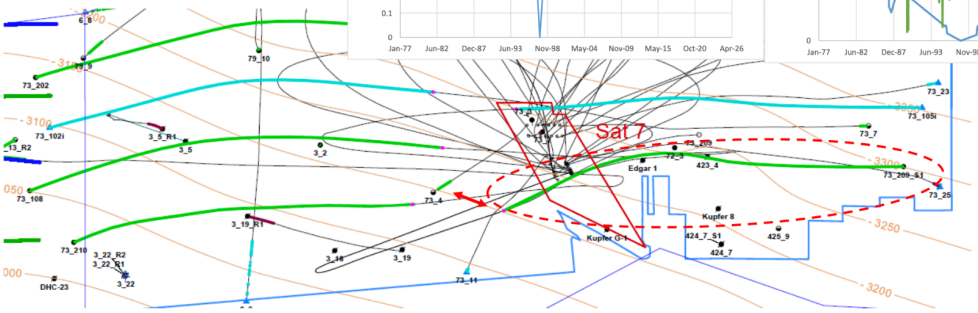
Climate Wells

73-209

- 72-3 – P&A
- 73-7 – idle, >99% WC in last months and likely more swept since SI, unlikely to be reactivated
- 73-2 – P&A
- 73-4 – idle, but SI at 95% WC? Assume would be online if economic, so probably more to the story, but no obvious data to support expectation this could not get some of the 209's remaining reserves
- 73-210 – idle, >99.5% WC in last month, unlikely to be reactivated
- 73-108 – idle, >99.5% WC , unlikely to be reactivated







73-209 Application of Methodology

Low	Medium	High
Early in property life production records	Established production trends	Mature properties at or near terminal decline
Little data beyond public	Some operator data available on wellbores and well histories	Substantial operational data available over long time horizons
Little or no geologic context available	Basic understanding of geologic structure	Detailed understanding of geology, including sealing faults
Long remaining economic lives for offset producers	Moderate remaining economic lives for offset producers	Short remaining economic lives for offset producers or operator guarantee of end of field life
Conflicting or unreliable data	Interpretation supported by only one or two data points	Multiple independent approaches to analysis point to the same conclusion

% of Reserves Recoverable from Offset Wells	Conclusiveness of Available Data: LOW	MEDIUM	HIGH
HIGH	HL	HM	HH
MEDIUM	ML	MM	MH
LOW	LL	LM	LH

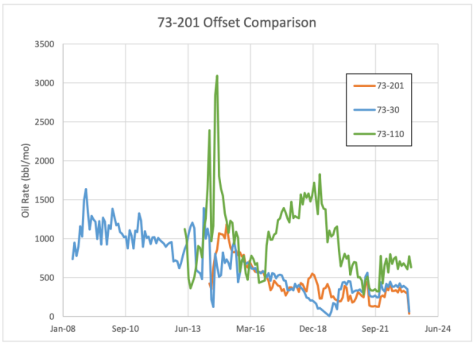
Different WC trends on offsets, shut-in offsets, no directly updip producers all suggest little reserves will be recovered by other wells

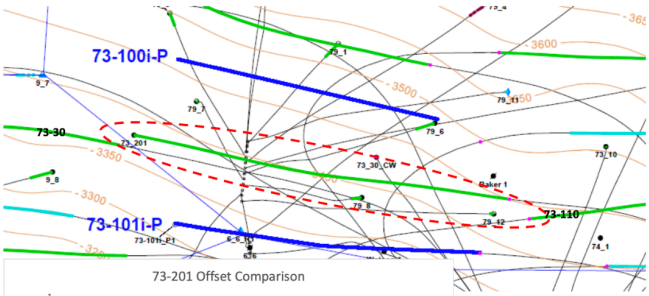
(assuming idle offsets remain idle, particularly 73-4, would want to confirm that status)

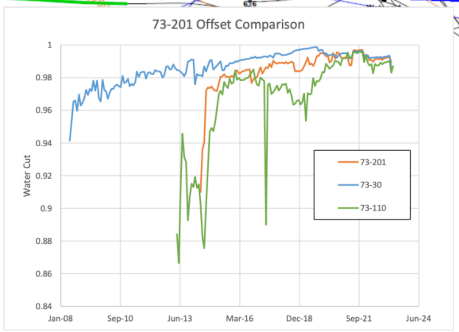
Climate Wells

73-201

- 79-6, 79-8, 79-7, 79-12 – P&A
- 73-30 / 73-110 are offset horizontals, also being plugged. 110 has shown independent behavior with respect to oil and WC, and did not observe an impact on 30's production trends when 201 brought online. So, would not expect to register a noticeable change in either offset's profile based on shutting in 201 over 3 years.
- 73-211 (not shown) in Upper Ranger – not likely to communicate







73-201 Application of Methodology

Low	Medium	High
Early in property life production records	Established production trends	Mature properties at or near terminal decline
Little data beyond public	Some operator data available on wellbores and well histories	Substantial operational data available over long time horizons
Little or no geologic context available	Basic understanding of geologic structure	Detailed understanding of geology, including sealing faults
Long remaining economic lives for offset producers	Moderate remaining economic lives for offset producers	Short remaining economic lives for offset producers or operator guarantee of end of field life
Conflicting or unreliable data	Interpretation supported by only one or two data points	Multiple independent approaches to analysis point to the same conclusion

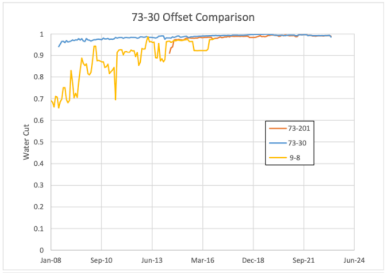
% of Reserves Recoverable from Offset Wells	Conclusiveness of Available Data: LOW	MEDIUM	HIGH
HIGH	HL	HM	HH
MEDIUM	ML	MM	MH
LOW	LL	LM	LH

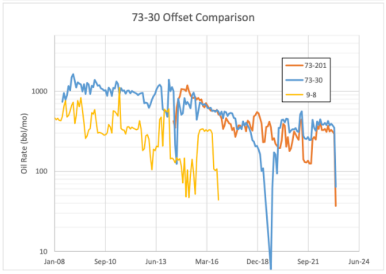
Only remaining offsets are also to be plugged, otherwise bounded by plugged wells and injectors

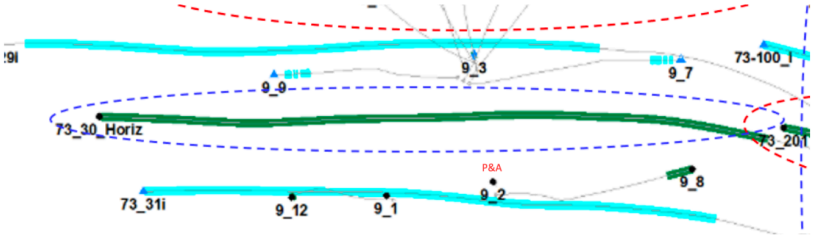
Little uncertainty on this one

73-30

- 73-30 is completely surrounded by injectors except for inactive offset 9-8 and offset 73-201 which is also being plugged
- 9-8 is updip and exhibited a lower water cut when brought online, but eventually tracked (slightly shifted lower)
- However as a deviated completion its rates were much lower with a smaller completed interval and has been offline since 2016
- Due to low rates, any potential incremental recovery would take a very long time frame to manifest even if it were reinstated
- Assigning a low level of offset recovery, but some uncertainty in the 9-8 status, may make a modest amount of oil of which some could be incremental to the do-nothing case.
- Although updip from the producer, 9-1 and 9-2 are adjacent to historical injection and therefore do not believe they have near-term viability as producers







73-30 Application of Methodology

Low	Medium	High
Early in property life production records	Established production trends	Mature properties at or near terminal decline
Little data beyond public	Some operator data available on wellbores and well histories	Substantial operational data available over long time horizons
Little or no geologic context available	Basic understanding of geologic structure	Detailed understanding of geology, including sealing faults
Long remaining economic lives for offset producers	Moderate remaining economic lives for offset producers	Short remaining economic lives for offset producers or operator guarantee of end of field life
Conflicting or unreliable data	Interpretation supported by only one or two data points	Multiple independent approaches to analysis point to the same conclusion

Based on WC history, would expect 9-8 to be able to capture some small amount of these reserves – unclear status

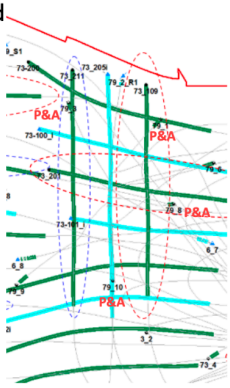
It is currently shut-in, and has lower rate potential, so total incremental would be limited in a short time frame

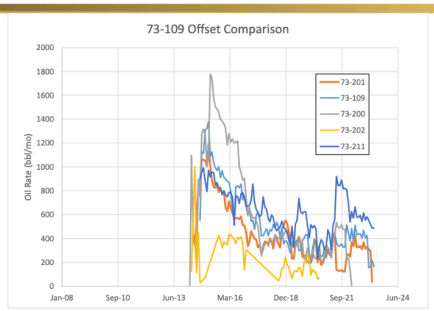
% of Reserves Recoverable from Offset Wells	Conclusiveness of Available Data: LOW	MEDIUM	HIGH
HIGH	HL	HM	HH
MEDIUM	ML	MM	MH
LOW	LL	LM	LH

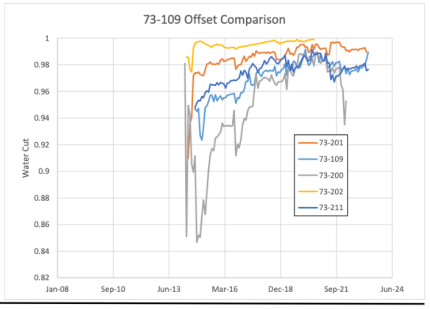
Climate Wells

73-109 and 73-211

- According to [redacted] 73-109 and 73-211 are in the Upper Ranger
- Separation from the main zone by a shale break could limit communication, isolated from offset parallel producer by water injector which should limit production of any remaining reserves in the near term
  - However, detailed geologic review not conducted at this time
- Water cuts track between the Upper Ranger wells
- Aside from 201 also under plans to abandon, 200 and 202 are already idle so few obvious offsets in the main development would be able to recover these volumes, provided these wells remain offline
- 79-8, -9, -3, and -1 are all already plugged
- Concluding minimal potential for offset wells to recover reserves from these wells







NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

Page 18

73-109 and 73-211 Application of Methodology

Low	Medium	High
Early in property life production records	Established production trends	Mature properties at or near terminal decline
Little data beyond public	Some operator data available on wellbores and well histories	Substantial operational data available over long time horizons
Little or no geologic context available	Basic understanding of geologic structure	Detailed understanding of geology, including sealing faults
Long remaining economic lives for offset producers	Moderate remaining economic lives for offset producers	Short remaining economic lives for offset producers or operator guarantee of end of field life
Conflicting or unreliable data	Interpretation supported by only one or two data points	Multiple independent approaches to analysis point to the same conclusion

% of Reserves Recoverable from Offset Wells	Conclusiveness of Available Data: LOW	MEDIUM	HIGH
HIGH	HL	HM	HH
MEDIUM	ML	MM	MH
LOW	LL	LM	LH

Different water cut trends on offsets, potential for geologic separation between "upper" Ranger zone and other wells

Assumes idle wells 200 and 202 remain offline, although with more geologic work that constraint may be relaxed.

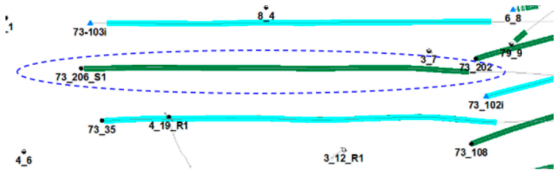
NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

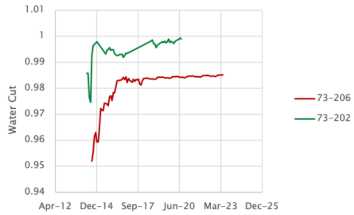
Page 19

Climate Wells

73-206

- 73-202 is end-to-end and downdip with subject well, see low chance of material recovery of these reserves
- While possibly in communication, 202 displayed remarkably different production characteristics and is unlikely to produce additional reserves
- 79-9 is shut in
- See very little chance of any reserves being otherwise produced





NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

Page 20

73-206 Application of Methodology

Low	Medium	High
Early in property life production records	Established production trends	Mature properties at or near terminal decline
Little data beyond public	Some operator data available on wellbores and well histories	Substantial operational data available over long time horizons
Little or no geologic context available	Basic understanding of geologic structure	Detailed understanding of geology, including sealing faults
Long remaining economic lives for offset producers	Moderate remaining economic lives for offset producers	Short remaining economic lives for offset producers or operator guarantee of end of field life
Conflicting or unreliable data	Interpretation supported by only one or two data points	Multiple independent approaches to analysis point to the same conclusion

% of Reserves Recoverable from Offset Wells	Conclusiveness of Available Data: LOW	MEDIUM	HIGH
HIGH	HL	HM	HH
MEDIUM	ML	MM	MH
LOW	LL	LM	LH

Only offset performed far worse, different WC trend.

Only offset had an extremely high absolute WC, highly unlikely to be reactivated at all

Surrounding injectors limit oil migration potential

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

Page 21

Received from: NSAI
Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

Climate Wells

APPENDIX C: NWU RESERVES REPORT

ESTIMATES

of

RESERVES AND FUTURE REVENUE

to the

[redacted]

in

CERTAIN OIL AND GAS PROPERTIES

located in

WILMINGTON FIELD, LOS ANGELES COUNTY
CALIFORNIA

as of

DECEMBER 31, 2022

BASED ON PRICE AND COST PARAMETERS

specified by

[redacted]

NSAI

NETHERLAND, SEWELL & ASSOCIATES, INC.

WORLDWIDE PETROLEUM CONSULTANTS

ENGINEERING • GEOLOGY
GEOPHYSICS • PETROPHYSICS

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.
WORLDWIDE PETROLEUM CONSULTANTS
ENGINEERING • GEOLOGY • GEOPHYSICS • PETROPHYSICS

January 27, 2023

[redacted]
Addison, Texas 75001

Dear [redacted]

In accordance with your request, we have estimated the proved, probable, and possible reserves and future revenue, as of December 31, 2022, to the [redacted] interest in certain oil and gas properties located in Wilmington Field, Los Angeles County, California, as listed in the accompanying tabulations. We completed our evaluation on or about the date of this letter. This report has been prepared using price and cost parameters specified by [redacted], as discussed in subsequent paragraphs of this letter. The estimates in this report have been prepared in accordance with the definitions and guidelines set forth in the 2018 Petroleum Resources Management System (PRMS) approved by the Society of Petroleum Engineers (SPE) except that, as requested, only the near-term abandonment costs have been included in our estimates of future net revenue. Definitions are presented immediately following this letter.

It is our understanding that various local and state governmental entities in the state of California have proposed or recently adopted new policies, such as California Senate Bill 1137 (SB1137), that may affect future production and development of oil and gas reserves within the state. Because final rulings have not been made, the estimates shown in this report have not been adjusted to account for such policies.

We estimate the net reserves and future net revenue to the [redacted] interest in these properties, as of December 31, 2022, to be:

	Net Reserves		Future Net Revenue (M$)	
Category	Oil (MBBL)	Gas (MMCF)	Total	Present Worth at 10%
Proved Developed Producing	4,622.4	473.7	104,137.0	75,176.8
Proved Developed Non-Producing	1,276.7	134.1	46,618.7	22,788.4
Proved Undeveloped	4,256.8	446.4	90,861.8	32,737.5
Total Proved[(1)]	10,155.9	1,054.3	241,617.5	130,702.7
Probable[(1)]	6,896.0	724.2	190,475.5	64,121.5
Possible [(1)]	7,244.8	761.0	181,810.9	42,275.5

Totals may not add because of rounding.

(1) We estimate that approximately 40 percent of the proved reserves and all of the probable and possible reserves may be affected by implementation of SB1137 due to its potential impact on the drilling of undeveloped locations included in this report.

The oil volumes shown include crude oil only. Oil volumes are expressed in thousands of barrels (MBBL); a barrel is equivalent to 42 United States gallons. Gas volumes are expressed in millions of cubic feet (MMCF) at standard

2100 ROSS AVENUE, SUITE 2200 • DALLAS, TEXAS 75201 • PH: 214-969-5401 • FAX: 214-969-5411
1301 MCKINNEY STREET, SUITE 3200 • HOUSTON, TEXAS 77010 • PH: 713-654-4950 • FAX: 713-654-4951
info@nsai-petro.com
netherlandsewell.com

temperature and pressure bases. Oil equivalent volumes shown in this report are expressed in thousands of barrels of oil equivalent (MBOE), determined using the ratio of 6 MCF of gas to 1 barrel of oil.

Reserves categorization conveys the relative degree of certainty; reserves subcategorization is based on development and production status. The estimates of reserves and future revenue included herein have not been adjusted for risk. This report does not include any value that could be attributed to interests in undeveloped acreage beyond those tracts for which undeveloped reserves have been estimated.

As shown in the Table of Contents, this report includes summary projections of reserves and revenue by reserves category for all properties. Included for each unit are reserves and economics data by reserves category; these data include summary projections of reserves and revenue along with one-line summaries of basic data, reserves, and economics by lease.

Gross revenue shown in this report is [redacted] share of the gross (100 percent) revenue from the properties prior to any deductions. Future net revenue is after deductions for [redacted] share of production taxes, ad valorem taxes, capital costs, abandonment costs, and operating expenses but before consideration of any income taxes. The future net revenue has been discounted at an annual rate of 10 percent to determine its present worth, which is shown to indicate the effect of time on the value of money. Future net revenue presented in this report, whether discounted or undiscounted, should not be construed as being the fair market value of the properties.

As requested, this report has been prepared using oil and gas price parameters specified by [redacted]. Oil prices are based on Brent Crude futures prices and are adjusted by unit for quality, transportation fees, and market differentials. Gas prices are based on NYMEX Henry Hub prices and are adjusted by unit for energy content, transportation fees, and market differentials. All prices, before adjustments, are shown in the following table:

Period Ending	Oil Price ($/Barrel)	Gas Price ($/MMBTU)
12-31-2023	83.96	4.316
12-31-2024	78.99	4.271
12-31-2025	75.04	4.393
12-31-2026	72.12	4.464
12-31-2027	69.86	4.504
12-31-2028	68.32	4.574
12-31-2029	67.36	4.706
12-31-2030	67.13	4.933
Thereafter	67.12	5.447

Operating costs used in this report are based on operating expense records of [redacted] the operator of the properties, and include only direct lease- and field-level costs. Operating costs have been divided into unit-level costs, per-well costs, and per-unit-of-production costs. As requested, these costs do not include the per-well overhead expenses allowed under joint operating agreements, nor do they include the headquarters general and administrative overhead expenses of [redacted]. Also as requested, operating costs are not escalated for inflation.

Capital costs used in this report were provided by [redacted] and are based on authorizations for expenditure and actual costs from recent activity. Capital costs are included as required for workovers, new development wells, and production equipment. Based on our understanding of future development plans, a review of the records provided to us, and our knowledge of similar properties, we regard these estimated capital costs to be reasonable. For the North Wilmington Unit properties, abandonment costs used in this report are [redacted] estimates of the costs to abandon the wells and production facilities, net of any salvage value. For the Wilmington Townlot Unit properties,

NETHERLAND, SEWELL & ASSOCIATES, INC.

abandonment costs used in this report are [redacted] estimates of the near-term costs required to abandon the wells and production facilities, net of any salvage value. It is our understanding that the abandonment costs shown in this report are not representative of [redacted] total expected abandonment liability for these properties. As requested, capital costs and abandonment costs are not escalated for inflation.

For the purposes of this report, we did not perform any field inspection of the properties, nor did we examine the mechanical operation or condition of the wells and facilities. We have not investigated possible environmental liability related to the properties; therefore, our estimates do not include any costs due to such possible liability.

We have made no investigation of potential volume and value imbalances resulting from overdelivery or underdelivery to the [redacted] interest. Therefore, our estimates of reserves and future revenue do not include adjustments for the settlement of any such imbalances; our projections are based on [redacted] receiving its net revenue interest share of estimated future gross production. Additionally, we have made no specific investigation of any firm transportation contracts that may be in place for these properties; our estimates of future revenue include the effects of such contracts only to the extent that the associated fees are accounted for in the historical field- and lease-level accounting statements.

The reserves shown in this report are estimates only and should not be construed as exact quantities. Proved reserves are those quantities of oil and gas which, by analysis of engineering and geoscience data, can be estimated with reasonable certainty to be commercially recoverable; probable and possible reserves are those additional reserves which are sequentially less certain to be recovered than proved reserves. Estimates of reserves may increase or decrease as a result of market conditions, future operations, changes in regulations, or actual reservoir performance. In addition to the primary economic assumptions discussed herein, our estimates are based on certain assumptions including, but not limited to, that the properties will be developed consistent with current development plans as provided to us by [redacted] that the properties will be operated in a prudent manner, that no governmental regulations or controls will be put in place that would impact the ability of the interest owner to recover the reserves, and that our projections of future production will prove consistent with actual performance. If the reserves are recovered, the revenues therefrom and the costs related thereto could be more or less than the estimated amounts. Because of governmental policies and uncertainties of supply and demand, the sales rates, prices received for the reserves, and costs incurred in recovering such reserves may vary from assumptions made while preparing this report.

For the purposes of this report, we used technical and economic data including, but not limited to, well logs, geologic maps, well test data, production data, historical price and cost information, and property ownership interests. The reserves in this report have been estimated using deterministic methods; these estimates have been prepared in accordance with generally accepted petroleum engineering and evaluation principles set forth in the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the SPE (SPE Standards). We used standard engineering and geoscience methods, or a combination of methods, including performance analysis, volumetric analysis, and analogy, that we considered to be appropriate and necessary to classify, categorize, and estimate reserves in accordance with the 2018 PRMS definitions and guidelines. A substantial portion of these reserves are for undeveloped locations; such reserves are based on analogy to properties with similar geologic and reservoir characteristics. As in all aspects of oil and gas evaluation, there are uncertainties inherent in the interpretation of engineering and geoscience data; therefore, our conclusions necessarily represent only informed professional judgment.

The data used in our estimates were obtained from [redacted], public data sources, and the nonconfidential files of Netherland, Sewell & Associates, Inc. and were accepted as accurate. Supporting work data are on file in our office. We have not examined the titles to the properties or independently confirmed the actual degree or type of interest owned. The technical persons primarily responsible for preparing the estimates presented herein meet the requirements regarding qualifications, independence, objectivity, and confidentiality set forth in the SPE Standards.

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

We are independent petroleum engineers, geologists, geophysicists, and petrophysicists; we do not own an interest in these properties nor are we employed on a contingent basis.

Sincerely,

NETHERLAND, SEWELL & ASSOCIATES, INC.
Texas Registered Engineering Firm F-2699

By:
C.H. (Scott) Rees III, P.E.
Executive Chairman

By:
C. Ashley Smith, P.E. 100560
Vice President

Date Signed: January 27, 2023

By:
Shane M. Howell, P.G. 11276
Vice President

Date Signed: January 27, 2023

CAS:JDK

NETHERLAND, SEWELL & ASSOCIATES, INC.

PETROLEUM RESERVES AND RESOURCES CLASSIFICATION AND DEFINITIONS

Excerpted from the 2018 Petroleum Resources Management System (PRMS), version 1.03
Approved by the Society of Petroleum Engineers (SPE) Board of Directors

This document contains information excerpted from definitions and guidelines prepared by the Oil and Gas Reserves Committee of the Society of Petroleum Engineers (SPE) and reviewed and jointly sponsored by the SPE, World Petroleum Council, American Association of Petroleum Geologists, Society of Petroleum Evaluation Engineers, Society of Exploration Geophysicists, Society of Petrophysicists and Well Log Analysts, and European Association of Geoscientists & Engineers.

Preamble

Petroleum resources are the quantities of hydrocarbons naturally occurring on or within the Earth's crust. Resources assessments estimate quantities in known and yet-to-be-discovered accumulations. Resources evaluations are focused on those quantities that can potentially be recovered and marketed by commercial projects. A petroleum resources management system provides a consistent approach to estimating petroleum quantities, evaluating projects, and presenting results within a comprehensive classification framework.

This updated PRMS provides fundamental principles for the evaluation and classification of petroleum reserves and resources. If there is any conflict with prior SPE and PRMS guidance, approved training, or the Application Guidelines, the current PRMS shall prevail. It is understood that these definitions and guidelines allow flexibility for entities, governments, and regulatory agencies to tailor application for their particular needs; however, any modifications to the guidance contained herein must be clearly identified. The terms "shall" or "must" indicate that a provision herein is mandatory for PRMS compliance, while "should" indicates a recommended practice and "may" indicates that a course of action is permissible. The definitions and guidelines contained in this document must not be construed as modifying the interpretation or application of any existing regulatory reporting requirements.

1.0 Basic Principles and Definitions

1.0.0.1 A classification system of petroleum resources is a fundamental element that provides a common language for communicating both the confidence of a project's resources maturation status and the range of potential outcomes to the various entities. The PRMS provides transparency by requiring the assessment of various criteria that allow for the classification and categorization of a project's resources. The evaluation elements consider the risk of geologic discovery and the technical uncertainties together with a determination of the chance of achieving the commercial maturation status of a petroleum project.

1.0.0.2 The technical estimation of petroleum resources quantities involves the assessment of quantities and values that have an inherent degree of uncertainty. These quantities are associated with exploration, appraisal, and development projects at various stages of design and implementation. The commercial aspects considered will relate the project's maturity status (e.g., technical, economical, regulatory, and legal) to the chance of project implementation.

1.0.0.3 The use of a consistent classification system enhances comparisons between projects, groups of projects, and total company portfolios. The application of PRMS must consider both technical and commercial factors that impact the project's feasibility, its productive life, and its related cash flows.

1.1 Petroleum Resources Classification Framework

1.1.0.1 Petroleum is defined as a naturally occurring mixture consisting of hydrocarbons in the gaseous, liquid, or solid state. Petroleum may also contain non-hydrocarbons, common examples of which are carbon dioxide, nitrogen, hydrogen sulfide, and sulfur. In rare cases, non-hydrocarbon content can be greater than 50%.

1.1.0.2 The term resources as used herein is intended to encompass all quantities of petroleum naturally occurring within the Earth's crust, both discovered and undiscovered (whether recoverable or unrecoverable), plus those quantities already produced. Further, it includes all types of petroleum whether currently considered as conventional or unconventional resources.

1.1.0.3 Figure 1.1 graphically represents the PRMS resources classification system. The system classifies resources into discovered and undiscovered and defines the recoverable resources classes: Production, Reserves, Contingent Resources, and Prospective Resources, as well as Unrecoverable Resources.

1.1.0.4 The horizontal axis reflects the range of uncertainty of estimated quantities potentially recoverable from an accumulation by a project, while the vertical axis represents the chance of commerciality, P_c, which is the chance that a project will be committed for development and reach commercial producing status.

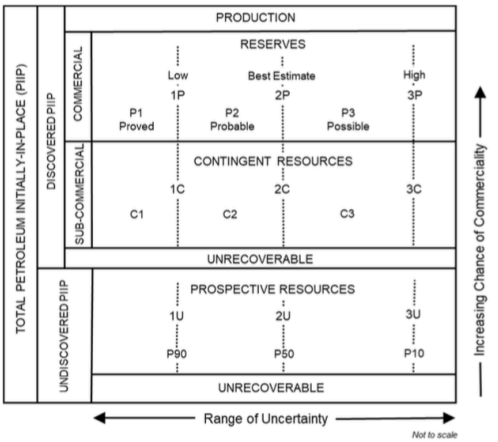


Figure 1.1—Resources classification framework

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

PETROLEUM RESERVES AND RESOURCES CLASSIFICATION AND DEFINITIONS

Excerpted from the 2018 Petroleum Resources Management System (PRMS), version 1.03
Approved by the Society of Petroleum Engineers (SPE) Board of Directors

1.1.0.5 The following definitions apply to the major subdivisions within the resources classification:

A. **Total Petroleum Initially-In-Place** (PIIP) is all quantities of petroleum that are estimated to exist originally in naturally occurring accumulations, discovered and undiscovered, before production.

B. **Discovered PIIP** is the quantity of petroleum that is estimated, as of a given date, to be contained in known accumulations before production.

C. **Production** is the cumulative quantities of petroleum that have been recovered at a given date. While all recoverable resources are estimated, and production is measured in terms of the sales product specifications, raw production (sales plus non-sales) quantities are also measured and required to support engineering analyses based on reservoir voidage (see Section 3.2, Production Measurement).

1.1.0.6 Multiple development projects may be applied to each known or unknown accumulation, and each project will be forecast to recover an estimated portion of the initially-in-place quantities. The projects shall be subdivided into commercial, sub-commercial, and undiscovered, with the estimated recoverable quantities being classified as Reserves, Contingent Resources, or Prospective Resources respectively, as defined below.

A. 1. **Reserves** are those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions. Reserves must satisfy four criteria: discovered, recoverable, commercial, and remaining (as of the evaluation's effective date) based on the development project(s) applied.

2. Reserves are recommended as sales quantities as metered at the reference point. Where the entity also recognizes quantities consumed in operations (CiO) (see Section 3.2.2), as Reserves these quantities must be recorded separately. Non-hydrocarbon quantities are recognized as Reserves only when sold together with hydrocarbons or CiO associated with petroleum production. If the non-hydrocarbon is separated before sales, it is excluded from Reserves.

3. Reserves are further categorized in accordance with the range of uncertainty and should be sub-classified based on project maturity and/or characterized by development and production status.

B. **Contingent Resources** are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations, by the application of development project(s) not currently considered to be commercial owing to one or more contingencies. Contingent Resources have an associated chance of development. Contingent Resources may include, for example, projects for which there are currently no viable markets, or where commercial recovery is dependent on technology under development, or where evaluation of the accumulation is insufficient to clearly assess commerciality. Contingent Resources are further categorized in accordance with the range of uncertainty associated with the estimates and should be sub-classified based on project maturity and/or economic status.

C. **Undiscovered PIIP** is that quantity of petroleum estimated, as of a given date, to be contained within accumulations yet to be discovered.

D. **Prospective Resources** are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective Resources have both an associated chance of geologic discovery and a chance of development. Prospective Resources are further categorized in accordance with the range of uncertainty associated with recoverable estimates, assuming discovery and development, and may be sub-classified based on project maturity.

E. **Unrecoverable Resources** are that portion of either discovered or undiscovered PIIP evaluated, as of a given date, to be unrecoverable by the currently defined project(s). A portion of these quantities may become recoverable in the future as commercial circumstances change, technology is developed, or additional data are acquired. The remaining portion may never be recovered because of physical/chemical constraints represented by subsurface interaction of fluids and reservoir rocks.

1.1.0.7 The sum of Reserves, Contingent Resources, and Prospective Resources may be referred to as "remaining recoverable resources." Importantly, these quantities should not be aggregated without due consideration of the technical and commercial risk involved with their classification. When such terms are used, each classification component of the summation must be provided.

1.1.0.8 Other terms used in resource assessments include the following:

A. **Estimated Ultimate Recovery (EUR)** is not a resources category or class, but a term that can be applied to an accumulation or group of accumulations (discovered or undiscovered) to define those quantities of petroleum estimated, as of a given date, to be potentially recoverable plus those quantities already produced from the accumulation or group of accumulations. For clarity, EUR must reference the associated technical and commercial conditions for the resources; for example, proved EUR is Proved Reserves plus prior production.

B. **Technically Recoverable Resources (TRR)** are those quantities of petroleum producible using currently available technology and industry practices, regardless of commercial considerations. TRR may be used for specific Projects or for groups of Projects, or, can be an undifferentiated estimate within an area (often basin-wide) of recovery potential.

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

PETROLEUM RESERVES AND RESOURCES CLASSIFICATION AND DEFINITIONS

Excerpted from the 2018 Petroleum Resources Management System (PRMS), version 1.03
Approved by the Society of Petroleum Engineers (SPE) Board of Directors

1.2 Project-Based Resources Evaluations

1.2.0.1 The resources evaluation process consists of identifying a recovery project or projects associated with one or more petroleum accumulations, estimating the quantities of PIIP, estimating that portion of those in-place quantities that can be recovered by each project, and classifying the project(s) based on maturity status or chance of commerciality.

1.2.0.2 The concept of a project-based classification system is further clarified by examining the elements contributing to an evaluation of net recoverable resources (see Figure 1.2).

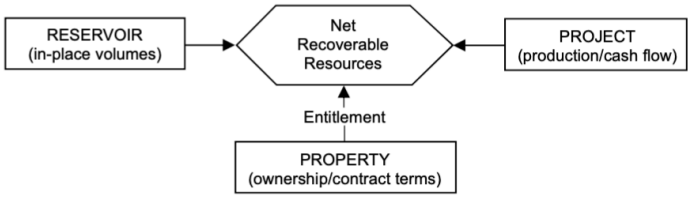


Figure 1.2—Resources evaluation

1.2.0.3 **The reservoir** (contains the petroleum accumulation): Key attributes include the types and quantities of PIIP and the fluid and rock properties that affect petroleum recovery.

1.2.0.4 **The project:** A project may constitute the development of a well, a single reservoir, or a small field; an incremental development in a producing field; or the integrated development of a field or several fields together with the associated processing facilities (e.g., compression). Within a project, a specific reservoir's development generates a unique production and cash-flow schedule at each level of certainty. The integration of these schedules taken to the project's earliest truncation caused by technical, economic, or the contractual limit defines the estimated recoverable resources and associated future net cash flow projections for each project. The ratio of EUR to total PIIP quantities defines the project's recovery efficiency. Each project should have an associated recoverable resources range (low, best, and high estimate).

1.2.0.5 **The property** (lease or license area): Each property may have unique associated contractual rights and obligations, including the fiscal terms. This information allows definition of each participating entity's share of produced quantities (entitlement) and share of investments, expenses, and revenues for each recovery project and the reservoir to which it is applied. One property may encompass many reservoirs, or one reservoir may span several different properties. A property may contain both discovered and undiscovered accumulations that may be spatially unrelated to a potential single field designation.

1.2.0.6 An entity's net recoverable resources are the entitlement share of future production legally accruing under the terms of the development and production contract or license.

1.2.0.7 In the context of this relationship, the project is the primary element considered in the resources classification, and the net recoverable resources are the quantities derived from each project. A project represents a defined activity or set of activities to develop the petroleum accumulation(s) and the decisions taken to mature the resources to reserves. In general, it is recommended that an individual project has assigned to it a specific maturity level sub-class (See Section 2.1.3.5, Project Maturity Sub-Classes) at which a decision is made whether or not to proceed (i.e., spend more money) and there should be an associated range of estimated recoverable quantities for the project (See Section 2.2.1, Range of Uncertainty). For completeness, a developed field is also considered to be a project.

1.2.0.8 An accumulation or potential accumulation of petroleum is often subject to several separate and distinct projects that are at different stages of exploration or development. Thus, an accumulation may have recoverable quantities in several resources classes simultaneously.

1.2.0.10 Not all technically feasible development projects will be commercial. The commercial viability of a development project within a field's development plan is dependent on a forecast of the conditions that will exist during the time period encompassed by the project (see Section 3.1, Assessment of Commerciality). Conditions include technical, economic (e.g., hurdle rates, commodity prices), operating and capital costs, marketing, sales route(s), and legal, environmental, social, and governmental factors forecast to exist and impact the project during the time period being evaluated. While economic factors can be summarized as forecast costs and product prices, the underlying influences include, but are not limited to, market conditions (e.g., inflation, market factors, and contingencies), exchange rates, transportation and processing infrastructure, fiscal terms, and taxes.

1.2.0.11 The resources being estimated are those quantities producible from a project as measured according to delivery specifications at the point of sale or custody transfer (see Section 3.2.1, Reference Point) and may permit forecasts of CiO quantities (see Section 3.2.2., Consumed in Operations). The cumulative production forecast from the effective date forward to cessation of production is the remaining recoverable resources quantity (see Section 3.1.1, Net Cash-Flow Evaluation).

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

PETROLEUM RESERVES AND RESOURCES CLASSIFICATION AND DEFINITIONS

Excerpted from the 2018 Petroleum Resources Management System (PRMS), version 1.03
Approved by the Society of Petroleum Engineers (SPE) Board of Directors

1.2.0.12 The supporting data, analytical processes, and assumptions describing the technical and commercial basis used in an evaluation must be documented in sufficient detail to allow, as needed, a qualified reserves evaluator or qualified reserves auditor to clearly understand each project's basis for the estimation, categorization, and classification of recoverable resources quantities and, if appropriate, associated commercial assessment.

2.0 Classification and Categorization Guidelines

2.1 Resources Classification

2.1.0.1 The PRMS classification establishes criteria for the classification of the total PIIP. A determination of a discovery differentiates between discovered and undiscovered PIIP. The application of a project further differentiates the recoverable from unrecoverable resources. The project is then evaluated to determine its maturity status to allow the classification distinction between commercial and sub-commercial projects. PRMS requires the project's recoverable resources quantities to be classified as either Reserves, Contingent Resources, or Prospective Resources.

2.1.1 Determination of Discovery Status

2.1.1.1 A discovered petroleum accumulation is determined to exist when one or more exploratory wells have established through testing, sampling, and/or logging the existence of a significant quantity of potentially recoverable hydrocarbons and thus have established a known accumulation. In the absence of a flow test or sampling, the discovery determination requires confidence in the presence of hydrocarbons and evidence of producibility, which may be supported by suitable producing analogs (see Section 4.1.1, Analogs). In this context, "significant" implies that there is evidence of a sufficient quantity of petroleum to justify estimating the in-place quantity demonstrated by the well(s) and for evaluating the potential for commercial recovery.

2.1.1.2 Where a discovery has identified potentially recoverable hydrocarbons, but it is not considered viable to apply a project with established technology or with technology under development, such quantities may be classified as Discovered Unrecoverable with no Contingent Resources. In future evaluations, as appropriate for petroleum resources management purposes, a portion of these unrecoverable quantities may become recoverable resources as either commercial circumstances change or technological developments occur.

2.1.2 Determination of Commerciality

2.1.2.1 Discovered recoverable quantities (Contingent Resources) may be considered commercially mature, and thus attain Reserves classification, if the entity claiming commerciality has demonstrated a firm intention to proceed with development. This means the entity has satisfied the internal decision criteria (typically rate of return at or above the weighted average cost-of-capital or the hurdle rate). Commerciality is achieved with the entity's commitment to the project and all of the following criteria:

A. Evidence of a technically mature, feasible development plan.
B. Evidence of financial appropriations either being in place or having a high likelihood of being secured to implement the project.
C. Evidence to support a reasonable time-frame for development.
D. A reasonable assessment that the development projects will have positive economics and meet defined investment and operating criteria. This assessment is performed on the estimated entitlement forecast quantities and associated cash flow on which the investment decision is made (see Section 3.1.1, Net Cash-Flow Evaluation).
E. A reasonable expectation that there will be a market for forecast sales quantities of the production required to justify development. There should also be similar confidence that all produced streams (e.g., oil, gas, water, CO2) can be sold, stored, re-injected, or otherwise appropriately disposed.
F. Evidence that the necessary production and transportation facilities are available or can be made available.
G. Evidence that legal, contractual, environmental, regulatory, and government approvals are in place or will be forthcoming, together with resolving any social and economic concerns.

2.1.2.2 The commerciality test for Reserves determination is applied to the best estimate (P50) forecast quantities, which upon qualifying all commercial and technical maturity criteria and constraints become the 2P Reserves. Stricter cases [e.g., low estimate (P90)] may be used for decision purposes or to investigate the range of commerciality (see Section 3.1.2, Economic Criteria). Typically, the low- and high-case project scenarios may be evaluated for sensitivities when considering project risk and upside opportunity.

2.1.2.3 To be included in the Reserves class, a project must be sufficiently defined to establish both its technical and commercial viability as noted in Section 2.1.2.1. There must be a reasonable expectation that all required internal and external approvals will be forthcoming and evidence of firm intention to proceed with development within a reasonable time-frame. A reasonable time-frame for the initiation of development depends on the specific circumstances and varies according to the scope of the project. While five years is recommended as a benchmark, a longer time-frame could be applied where justifiable; for example, development of economic projects that take longer than five years to be developed or are deferred to meet contractual or strategic objectives. In all cases, the justification for classification as Reserves should be clearly documented.

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

PETROLEUM RESERVES AND RESOURCES CLASSIFICATION AND DEFINITIONS

Excerpted from the 2018 Petroleum Resources Management System (PRMS), version 1.03
Approved by the Society of Petroleum Engineers (SPE) Board of Directors

2.1.2.4 While PRMS guidelines require financial appropriations evidence, they do not require that project financing be confirmed before classifying projects as Reserves. However, this may be another external reporting requirement. In many cases, financing is conditional upon the same criteria as above. In general, if there is not a reasonable expectation that financing or other forms of commitment (e.g., farm-outs) can be arranged so that the development will be initiated within a reasonable time-frame, then the project should be classified as Contingent Resources. If financing is reasonably expected to be in place at the time of the final investment decision (FID), the project's resources may be classified as Reserves.

2.2 Resources Categorization

2.2.0.1 The horizontal axis in the resources classification in Figure 1.1 defines the range of uncertainty in estimates of the quantities of recoverable, or potentially recoverable, petroleum associated with a project or group of projects. These estimates include the uncertainty components as follows:

A. The total petroleum remaining within the accumulation (in-place resources).
B. The technical uncertainty in the portion of the total petroleum that can be recovered by applying a defined development project or projects (i.e., the technology applied).
C. Known variations in the commercial terms that may impact the quantities recovered and sold (e.g., market availability; contractual changes, such as production rate tiers or product quality specifications) are part of project's scope and are included in the horizontal axis, while the chance of satisfying the commercial terms is reflected in the classification (vertical axis).

2.2.0.2 The uncertainty in a project's recoverable quantities is reflected by the 1P, 2P, 3P, Proved (P1), Probable (P2), Possible (P3) reserves; 1C, 2C, 3C, C1, C2, and C3 contingent resources; or 1U, 2U, and 3U prospective resources categories. The chance of commerciality is associated with resources classes or sub-classes and not with the resources categories reflecting the range of recoverable quantities.

2.2.1 Range of Uncertainty

2.2.1.1 Uncertainty is inherent in a project's resources estimation and is communicated in PRMS by reporting a range of category outcomes. The range of uncertainty of the recoverable and/or potentially recoverable quantities may be represented by either deterministic scenarios or by a probability distribution (see Section 4.2, Resources Assessment Methods).

2.2.1.2 When the range of uncertainty is represented by a probability distribution, a low, best, and high estimate shall be provided such that:

A. There should be at least a 90% probability (P90) that the quantities actually recovered will equal or exceed the low estimate.
B. There should be at least a 50% probability (P50) that the quantities actually recovered will equal or exceed the best estimate.
C. There should be at least a 10% probability (P10) that the quantities actually recovered will equal or exceed the high estimate.

2.2.1.3 In some projects, the range of uncertainty may be limited, and the three scenarios may result in resources estimates that are not significantly different. In these situations, a single value estimate may be appropriate to describe the expected result.

2.2.1.4 When using the deterministic scenario method, typically there should also be low, best, and high estimates, where such estimates are based on qualitative assessments of relative uncertainty using consistent interpretation guidelines. Under the deterministic incremental method, quantities for each confidence segment are estimated discretely (see Section 2.2.2, Category Definitions and Guidelines).

2.2.1.5 Project resources are initially estimated using the above uncertainty range forecasts that incorporate the subsurface elements together with technical constraints related to wells and facilities. The technical forecasts then have additional commercial criteria applied (e.g., economics and license cutoffs are the most common) to estimate the entitlement quantities attributed and the resources classification status: Reserves, Contingent Resources, and Prospective Resources.

2.2.2 Category Definitions and Guidelines

2.2.2.1 Evaluators may assess recoverable quantities and categorize results by uncertainty using the deterministic incremental method, the deterministic scenario (cumulative) method, geostatistical methods, or probabilistic methods (see Section 4.2, Resources Assessment Methods). Also, combinations of these methods may be used.

2.2.2.2 Use of consistent terminology (Figures 1.1 and 2.1) promotes clarity in communication of evaluation results. For Reserves, the general cumulative terms low/best/high forecasts are used to estimate the resulting 1P/2P/3P quantities, respectively. The associated incremental quantities are termed Proved (P1), Probable (P2) and Possible (P3). Reserves are a subset of, and must be viewed within the context of, the complete resources classification system. While the categorization criteria are proposed specifically for Reserves, in most cases, the criteria can be equally applied to Contingent and Prospective Resources. Upon satisfying the commercial maturity criteria for discovery and/or development, the project quantities will then move to the appropriate resources sub-class. Table 3 provides criteria for the Reserves categories determination.

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

PETROLEUM RESERVES AND RESOURCES CLASSIFICATION AND DEFINITIONS

Excerpted from the 2018 Petroleum Resources Management System (PRMS), version 1.03
Approved by the Society of Petroleum Engineers (SPE) Board of Directors

2.2.2.3 For Contingent Resources, the general cumulative terms low/best/high estimates are used to estimate the resulting 1C/2C/3C quantities, respectively. The terms C1, C2, and C3 are defined for incremental quantities of Contingent Resources.
2.2.2.4 For Prospective Resources, the general cumulative terms low/best/high estimates also apply and are used to estimate the resulting 1U/2U/3U quantities. No specific terms are defined for incremental quantities within Prospective Resources.

2.2.2.5 Quantities in different classes and sub-classes cannot be aggregated without considering the varying degrees of technical uncertainty and commercial likelihood involved with the classification(s) and without considering the degree of dependency between them (see Section 4.2.1, Aggregating Resources Classes).

2.2.2.6 Without new technical information, there should be no change in the distribution of technically recoverable resources and the categorization boundaries when conditions are satisfied to reclassify a project from Contingent Resources to Reserves.

2.2.2.7 All evaluations require application of a consistent set of forecast conditions, including assumed future costs and prices, for both classification of projects and categorization of estimated quantities recovered by each project (see Section 3.1, Assessment of Commerciality).

Table 1—Recoverable Resources Classes and Sub-Classes

Class/Sub-Class	Definition	Guidelines
Reserves	Reserves are those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions.	Reserves must satisfy four criteria: discovered, recoverable, commercial, and remaining based on the development project(s) applied. Reserves are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by the development and production status. To be included in the Reserves class, a project must be sufficiently defined to establish its commercial viability (see Section 2.1.2, Determination of Commerciality). This includes the requirement that there is evidence of firm intention to proceed with development within a reasonable time-frame. A reasonable time-frame for the initiation of development depends on the specific circumstances and varies according to the scope of the project. While five years is recommended as a benchmark, a longer time-frame could be applied where, for example, development of an economic project is deferred at the option of the producer for, among other things, market-related reasons or to meet contractual or strategic objectives. In all cases, the justification for classification as Reserves should be clearly documented. To be included in the Reserves class, there must be a high confidence in the commercial maturity and economic producibility of the reservoir as supported by actual production or formation tests. In certain cases, Reserves may be assigned on the basis of well logs and/or core analysis that indicate that the subject reservoir is hydrocarbon-bearing and is analogous to reservoirs in the same area that are producing or have demonstrated the ability to produce on formation tests.
On Production	The development project is currently producing or capable of producing and selling petroleum to market.	The key criterion is that the project is receiving income from sales, rather than that the approved development project is necessarily complete. Includes Developed Producing Reserves. The project decision gate is the decision to initiate or continue economic production from the project.
Approved for Development	All necessary approvals have been obtained, capital funds have been committed, and implementation of the development project is ready to begin or is under way.	At this point, it must be certain that the development project is going ahead. The project must not be subject to any contingencies, such as outstanding regulatory approvals or sales contracts. Forecast capital expenditures should be included in the reporting entity's current or following year's approved budget. The project decision gate is the decision to start investing capital in the construction of production facilities and/or drilling development wells.

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

PETROLEUM RESERVES AND RESOURCES CLASSIFICATION AND DEFINITIONS

Excerpted from the 2018 Petroleum Resources Management System (PRMS), version 1.03
Approved by the Society of Petroleum Engineers (SPE) Board of Directors

Class/Sub-Class	Definition	Guidelines
Justified for Development	Implementation of the development project is justified on the basis of reasonable forecast commercial conditions at the time of reporting, and there are reasonable expectations that all necessary approvals/contracts will be obtained.	To move to this level of project maturity, and hence have Reserves associated with it, the development project must be commercially viable at the time of reporting (see Section 2.1.2, Determination of Commerciality) and the specific circumstances of the project. All participating entities have agreed and there is evidence of a committed project (firm intention to proceed with development within a reasonable time-frame). There must be no known contingencies that could preclude the development from proceeding (see Reserves class). The project decision gate is the decision by the reporting entity and its partners, if any, that the project has reached a level of technical and commercial maturity sufficient to justify proceeding with development at that point in time.
Contingent Resources	Those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations by application of development projects, but which are not currently considered to be commercially recoverable owing to one or more contingencies.	Contingent Resources may include, for example, projects for which there are currently no viable markets, where commercial recovery is dependent on technology under development, where evaluation of the accumulation is insufficient to clearly assess commerciality, where the development plan is not yet approved, or where regulatory or social acceptance issues may exist. Contingent Resources are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by the economic status.
Development Pending	A discovered accumulation where project activities are ongoing to justify commercial development in the foreseeable future.	The project is seen to have reasonable potential for eventual commercial development, to the extent that further data acquisition (e.g., drilling, seismic data) and/or evaluations are currently ongoing with a view to confirming that the project is commercially viable and providing the basis for selection of an appropriate development plan. The critical contingencies have been identified and are reasonably expected to be resolved within a reasonable time-frame. Note that disappointing appraisal/evaluation results could lead to a reclassification of the project to On Hold or Not Viable status. The project decision gate is the decision to undertake further data acquisition and/or studies designed to move the project to a level of technical and commercial maturity at which a decision can be made to proceed with development and production.
Development on Hold	A discovered accumulation where project activities are on hold and/or where justification as a commercial development may be subject to significant delay.	The project is seen to have potential for commercial development. Development may be subject to a significant time delay. Note that a change in circumstances, such that there is no longer a probable chance that a critical contingency can be removed in the foreseeable future, could lead to a reclassification of the project to Not Viable status. The project decision gate is the decision to either proceed with additional evaluation designed to clarify the potential for eventual commercial development or to temporarily suspend or delay further activities pending resolution of external contingencies.
Development Unclarified	A discovered accumulation where project activities are under evaluation and where justification as a commercial development is unknown based on available information.	The project is seen to have potential for eventual commercial development, but further appraisal/evaluation activities are ongoing to clarify the potential for eventual commercial development. This sub-class requires active appraisal or evaluation and should not be maintained without a plan for future evaluation. The sub-class should reflect the actions required to move a project toward commercial maturity and economic production.

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

PETROLEUM RESERVES AND RESOURCES CLASSIFICATION AND DEFINITIONS

Excerpted from the 2018 Petroleum Resources Management System (PRMS), version 1.03
Approved by the Society of Petroleum Engineers (SPE) Board of Directors

Class/Sub-Class	Definition	Guidelines
Development Not Viable	A discovered accumulation for which there are no current plans to develop or to acquire additional data at the time because of limited commercial potential.	The project is not seen to have potential for eventual commercial development at the time of reporting, but the theoretically recoverable quantities are recorded so that the potential opportunity will be recognized in the event of a major change in technology or commercial conditions. The project decision gate is the decision not to undertake further data acquisition or studies on the project for the foreseeable future.
Prospective Resources	Those quantities of petroleum that are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations.	Potential accumulations are evaluated according to the chance of geologic discovery and, assuming a discovery, the estimated quantities that would be recoverable under defined development projects. It is recognized that the development programs will be of significantly less detail and depend more heavily on analog developments in the earlier phases of exploration.
Prospect	A project associated with a potential accumulation that is sufficiently well defined to represent a viable drilling target.	Project activities are focused on assessing the chance of geologic discovery and, assuming discovery, the range of potential recoverable quantities under a commercial development program.
Lead	A project associated with a potential accumulation that is currently poorly defined and requires more data acquisition and/or evaluation to be classified as a Prospect.	Project activities are focused on acquiring additional data and/or undertaking further evaluation designed to confirm whether or not the Lead can be matured into a Prospect. Such evaluation includes the assessment of the chance of geologic discovery and, assuming discovery, the range of potential recovery under feasible development scenarios.
Play	A project associated with a prospective trend of potential prospects, but that requires more data acquisition and/or evaluation to define specific Leads or Prospects.	Project activities are focused on acquiring additional data and/or undertaking further evaluation designed to define specific Leads or Prospects for more detailed analysis of their chance of geologic discovery and, assuming discovery, the range of potential recovery under hypothetical development scenarios.

Table 2—Reserves Status Definitions and Guidelines

Status	Definition	Guidelines
Developed Reserves	Expected quantities to be recovered from existing wells and facilities.	Reserves are considered developed only after the necessary equipment has been installed, or when the costs to do so are relatively minor compared to the cost of a well. Where required facilities become unavailable, it may be necessary to reclassify Developed Reserves as Undeveloped. Developed Reserves may be further sub-classified as Producing or Non-producing.
Developed Producing Reserves	Expected quantities to be recovered from completion intervals that are open and producing at the effective date of the estimate.	Improved recovery Reserves are considered producing only after the improved recovery project is in operation.
Developed Non-Producing Reserves	Shut-in and behind-pipe Reserves.	Shut-in Reserves are expected to be recovered from (1) completion intervals that are open at the time of the estimate but which have not yet started producing, (2) wells which were shut-in for market conditions or pipeline connections, or (3) wells not capable of production for mechanical reasons. Behind-pipe Reserves are expected to be recovered from zones in existing wells that will require additional completion work or future re-completion before start of production with minor cost to access these reserves. In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

PETROLEUM RESERVES AND RESOURCES CLASSIFICATION AND DEFINITIONS

Excerpted from the 2018 Petroleum Resources Management System (PRMS), version 1.03
Approved by the Society of Petroleum Engineers (SPE) Board of Directors

Status	Definition	Guidelines
Undeveloped Reserves	Quantities expected to be recovered through future significant investments.	Undeveloped Reserves are to be produced (1) from new wells on undrilled acreage in known accumulations, (2) from deepening existing wells to a different (but known) reservoir, (3) from infill wells that will increase recovery, or (4) where a relatively large expenditure (e.g., when compared to the cost of drilling a new well) is required to (a) recomplete an existing well or (b) install production or transportation facilities for primary or improved recovery projects.

Table 3—Reserves Category Definitions and Guidelines

Category	Definition	Guidelines
Proved Reserves	Those quantities of petroleum that, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable from a given date forward from known reservoirs and under defined economic conditions, operating methods, and government regulations.	If deterministic methods are used, the term "reasonable certainty" is intended to express a high degree of confidence that the quantities will be recovered. If probabilistic methods are used, there should be at least a 90% probability (P90) that the quantities actually recovered will equal or exceed the estimate. The area of the reservoir considered as Proved includes (1) the area delineated by drilling and defined by fluid contacts, if any, and (2) adjacent undrilled portions of the reservoir that can reasonably be judged as continuous with it and commercially productive on the basis of available geoscience and engineering data. In the absence of data on fluid contacts, Proved quantities in a reservoir are limited by the LKH as seen in a well penetration unless otherwise indicated by definitive geoscience, engineering, or performance data. Such definitive information may include pressure gradient analysis and seismic indicators. Seismic data alone may not be sufficient to define fluid contacts for Proved reserves. Reserves in undeveloped locations may be classified as Proved provided that: A. The locations are in undrilled areas of the reservoir that can be judged with reasonable certainty to be commercially mature and economically productive. B. Interpretations of available geoscience and engineering data indicate with reasonable certainty that the objective formation is laterally continuous with drilled Proved locations. For Proved Reserves, the recovery efficiency applied to these reservoirs should be defined based on a range of possibilities supported by analogs and sound engineering judgment considering the characteristics of the Proved area and the applied development program.
Probable Reserves	Those additional Reserves that analysis of geoscience and engineering data indicates are less likely to be recovered than Proved Reserves but more certain to be recovered than Possible Reserves.	It is equally likely that actual remaining quantities recovered will be greater than or less than the sum of the estimated Proved plus Probable Reserves (2P). In this context, when probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the 2P estimate. Probable Reserves may be assigned to areas of a reservoir adjacent to Proved where data control or interpretations of available data are less certain. The interpreted reservoir continuity may not meet the reasonable certainty criteria. Probable estimates also include incremental recoveries associated with project recovery efficiencies beyond that assumed for Proved.

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

PETROLEUM RESERVES AND RESOURCES CLASSIFICATION AND DEFINITIONS

Excerpted from the 2018 Petroleum Resources Management System (PRMS), version 1.03
Approved by the Society of Petroleum Engineers (SPE) Board of Directors

Category	Definition	Guidelines
Possible Reserves	Those additional reserves that analysis of geoscience and engineering data indicates are less likely to be recoverable than Probable Reserves.	The total quantities ultimately recovered from the project have a low probability to exceed the sum of Proved plus Probable plus Possible (3P), which is equivalent to the high-estimate scenario. When probabilistic methods are used, there should be at least a 10% probability (P10) that the actual quantities recovered will equal or exceed the 3P estimate. Possible Reserves may be assigned to areas of a reservoir adjacent to Probable where data control and interpretations of available data are progressively less certain. Frequently, this may be in areas where geoscience and engineering data are unable to clearly define the area and vertical reservoir limits of economic production from the reservoir by a defined, commercially mature project. Possible estimates also include incremental quantities associated with project recovery efficiencies beyond that assumed for Probable.
Probable and Possible Reserves	See above for separate criteria for Probable Reserves and Possible Reserves.	The 2P and 3P estimates may be based on reasonable alternative technical interpretations within the reservoir and/or subject project that are clearly documented, including comparisons to results in successful similar projects. In conventional accumulations, Probable and/or Possible Reserves may be assigned where geoscience and engineering data identify directly adjacent portions of a reservoir within the same accumulation that may be separated from Proved areas by minor faulting or other geological discontinuities and have not been penetrated by a wellbore but are interpreted to be in communication with the known (Proved) reservoir. Probable or Possible Reserves may be assigned to areas that are structurally higher than the Proved area. Possible (and in some cases, Probable) Reserves may be assigned to areas that are structurally lower than the adjacent Proved or 2P area. Caution should be exercised in assigning Reserves to adjacent reservoirs isolated by major, potentially sealing faults until this reservoir is penetrated and evaluated as commercially mature and economically productive. Justification for assigning Reserves in such cases should be clearly documented. Reserves should not be assigned to areas that are clearly separated from a known accumulation by non-productive reservoir (i.e., absence of reservoir, structurally low reservoir, or negative test results); such areas may contain Prospective Resources. In conventional accumulations, where drilling has defined a highest known oil elevation and there exists the potential for an associated gas cap, Proved Reserves of oil should only be assigned in the structurally higher portions of the reservoir if there is reasonable certainty that such portions are initially above bubble point pressure based on documented engineering analyses. Reservoir portions that do not meet this certainty may be assigned as Probable and Possible oil and/or gas based on reservoir fluid properties and pressure gradient interpretations.

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

[redacted]

SUMMARY PROJECTION OF RESERVES AND REVENUE
AS OF DECEMBER 31, 2022

TOTAL PROVED RESERVES

SUMMARY - CERTAIN PROPERTIES
LOCATED IN WILMINGTON FIELD
LOS ANGELES COUNTY, CALIFORNIA

PERIOD	GROSS RESERVES		NET RESERVES				AVERAGE PRICES			GROSS REVENUE			
ENDING	OIL	GAS	OIL	NGL	GAS	EQUIV	OIL	NGL	GAS	OIL	NGL	GAS	TOTAL
M-D-Y	MBBL	MMCF	MBBL	MBBL	MMCF	MBOE	$/BBL	$/BBL	$/MCF	M$	M$	M$	M$
12-31-2023	685.4	117.3	557.3	0.0	52.5	566.1	79.13	0.00	4.960	44,101.6	0.0	260.5	44,362.1
12-31-2024	702.4	127.1	569.8	0.0	56.9	579.3	74.16	0.00	4.910	42,255.8	0.0	279.6	42,535.3
12-31-2025	819.2	154.9	663.2	0.0	69.4	674.8	70.21	0.00	5.043	46,565.8	0.0	349.8	46,915.6
12-31-2026	818.8	154.9	662.9	0.0	69.3	674.5	67.29	0.00	5.121	44,607.0	0.0	355.1	44,962.1
12-31-2027	977.6	185.1	791.5	0.0	82.9	805.3	65.03	0.00	5.164	51,472.1	0.0	428.0	51,900.1
12-31-2028	885.1	167.6	716.6	0.0	75.0	729.1	63.49	0.00	5.241	45,498.7	0.0	393.2	45,891.9
12-31-2029	809.7	153.3	655.6	0.0	68.6	667.0	62.53	0.00	5.385	40,994.0	0.0	369.5	41,363.6
12-31-2030	750.4	142.0	607.6	0.0	63.6	618.2	62.30	0.00	5.632	37,852.1	0.0	358.2	38,210.3
12-31-2031	695.5	131.6	563.1	0.0	58.9	573.0	62.29	0.00	6.192	35,077.3	0.0	365.0	35,442.3
12-31-2032	647.0	122.5	523.8	0.0	54.8	533.0	62.29	0.00	6.192	32,630.3	0.0	339.5	32,969.8
12-31-2033	599.9	113.5	485.7	0.0	50.8	494.2	62.29	0.00	6.192	30,253.6	0.0	314.8	30,568.4
12-31-2034	553.2	104.7	447.9	0.0	46.9	455.7	62.29	0.00	6.192	27,900.2	0.0	290.3	28,190.4
12-31-2035	512.7	97.0	415.1	0.0	43.4	422.3	62.29	0.00	6.192	25,857.0	0.0	269.0	26,126.0
12-31-2036	477.6	90.4	386.7	0.0	40.5	393.4	62.29	0.00	6.192	24,086.6	0.0	250.6	24,337.2
12-31-2037	441.8	83.6	357.7	0.0	37.4	363.9	62.29	0.00	6.192	22,280.5	0.0	231.8	22,512.3
SUBTOTAL	10,376.3	1,945.5	8,404.6	0.0	871.1	8,549.8	65.61	0.00	5.573	551,432.7	0.0	4,854.6	556,287.3
REMAINING	2,163.0	409.1	1,751.3	0.0	183.2	1,781.8	62.29	0.00	6.192	109,086.6	0.0	1,134.3	110,220.9
TOTAL	12,539.2	2,354.6	10,155.9	0.0	1,054.3	10,331.6	65.04	0.00	5.681	660,519.3	0.0	5,988.9	666,508.2
CUM PROD	27,118.3	2,571.0											
ULTIMATE	39,657.5	4,925.7											

PERIOD	NUMBER OF ACTIVE COMPLETIONS		NET DEDUCTIONS/EXPENDITURES					FUTURE NET REVENUE			PRESENT WORTH PROFILE	
			TAXES		CAPITAL	ABDNMNT	OPERATING	UNDISCOUNTED		DISC AT 10.000%		
ENDING			PRODUCTION	AD VALOREM	COST	COST	EXPENSE	PERIOD	CUM	CUM	DISC RATE	CUM PW
M-D-Y	GROSS	NET	M$	M$	M$	M$	M$	M$	M$	M$	%	M$
12-31-2023	124	122.8	495.3	1,097.6	4,177.4	2,976.0	17,732.9	17,882.8	17,882.8	17,021.5	8.000	145,522.6
12-31-2024	127	125.7	506.9	1,041.8	8,956.1	1,426.0	17,086.3	13,518.3	31,401.1	28,479.8	12.000	118,181.7
12-31-2025	122	120.7	590.5	1,139.6	13,434.1	-210.0	16,870.8	15,090.6	46,491.7	40,055.6	15.000	102,788.1
12-31-2026	121	119.7	590.2	1,091.5	13,434.1	158.2	16,984.0	12,704.0	59,195.8	48,850.3	20.000	83,681.6
12-31-2027	131	129.6	704.8	1,259.4	13,434.1	158.2	17,936.0	18,407.6	77,603.4	60,558.5	25.000	70,090.0
12-31-2028	127	125.6	638.1	1,113.2	0.0	158.2	17,575.9	26,406.5	104,009.8	76,215.7	30.000	60,093.9
12-31-2029	125	123.6	583.7	1,003.2	0.0	158.2	17,112.2	22,506.2	126,516.1	88,344.6	35.000	52,528.7
12-31-2030	122	120.7	541.0	926.7	0.0	158.2	16,801.8	19,782.6	146,298.7	98,036.8	40.000	46,660.2
12-31-2031	121	119.7	501.4	859.5	0.0	158.2	16,531.2	17,391.9	163,690.6	105,783.4	45.000	42,009.6
12-31-2032	121	119.7	466.4	799.6	0.0	158.2	16,348.4	15,197.2	178,887.7	111,937.3	50.000	38,255.2
12-31-2033	120	118.7	432.5	741.3	0.0	158.2	16,031.7	13,204.6	192,092.3	116,798.5		
12-31-2034	116	114.7	398.8	683.7	0.0	79.1	15,554.6	11,474.3	203,566.6	120,638.9		
12-31-2035	112	110.8	369.6	633.6	0.0	79.1	15,216.5	9,827.2	213,393.8	123,629.2		
12-31-2036	112	110.8	344.3	590.2	0.0	79.1	15,008.8	8,314.7	221,708.5	125,929.6		
12-31-2037	110	108.8	318.5	546.0	0.0	79.1	14,642.1	6,926.6	228,635.1	127,671.9		
SUBTOTAL			7,482.0	13,527.0	53,435.7	5,774.3	247,433.0	228,635.1	228,635.1	127,671.9		
REMAINING			1,559.3	2,673.1	0.0	5,923.9	87,082.3	12,982.4	241,617.5	130,702.7		
TOTAL OF 21.6 YRS			9,041.3	16,200.1	53,435.7	11,698.2	334,515.3	241,617.5	241,617.5	130,702.7		

Table I

All estimates and exhibits herein are part of this NSAI report and are subject to its parameters and conditions.

[redacted]

NETHERLAND, SEWELL & ASSOCIATES, INC.

SUMMARY PROJECTION OF RESERVES AND REVENUE
AS OF DECEMBER 31, 2022

[redacted] INTEREST

PROVED DEVELOPED PRODUCING RESERVES

SUMMARY - CERTAIN PROPERTIES
LOCATED IN WILMINGTON FIELD
LOS ANGELES COUNTY, CALIFORNIA

PERIOD	GROSS RESERVES		NET RESERVES				AVERAGE PRICES			GROSS REVENUE			
ENDING	OIL	GAS	OIL	NGL	GAS	EQUIV	OIL	NGL	GAS	OIL	NGL	GAS	TOTAL
M-D-Y	MBBL	MMCF	MBBL	MBBL	MMCF	MBOE	$/BBL	$/BBL	$/MCF	M$	M$	M$	M$
12-31-2023	663.6	113.1	539.6	0.0	50.7	548.1	79.13	0.00	4.960	42,700.2	0.0	251.2	42,951.5
12-31-2024	580.1	103.9	470.8	0.0	46.5	478.5	74.16	0.00	4.910	34,913.6	0.0	228.5	35,142.1
12-31-2025	510.5	96.3	413.4	0.0	43.1	420.5	70.21	0.00	5.043	29,021.6	0.0	217.4	29,239.0
12-31-2026	474.3	89.4	384.0	0.0	40.0	390.7	67.29	0.00	5.121	25,841.7	0.0	205.0	26,046.7
12-31-2027	437.2	82.4	354.0	0.0	36.9	360.1	65.03	0.00	5.164	23,018.8	0.0	190.6	23,209.4
12-31-2028	406.9	76.7	329.4	0.0	34.3	335.1	63.49	0.00	5.241	20,915.2	0.0	180.0	21,095.1
12-31-2029	379.4	71.5	307.2	0.0	32.0	312.5	62.53	0.00	5.385	19,206.8	0.0	172.4	19,379.2
12-31-2030	356.2	67.1	288.4	0.0	30.1	293.4	62.30	0.00	5.632	17,967.8	0.0	169.3	18,137.1
12-31-2031	335.3	63.2	271.5	0.0	28.3	276.2	62.29	0.00	6.192	16,912.8	0.0	175.3	17,088.1
12-31-2032	317.4	59.8	257.0	0.0	26.8	261.4	62.29	0.00	6.192	16,006.9	0.0	165.9	16,172.8
12-31-2033	297.7	56.1	241.0	0.0	25.1	245.2	62.29	0.00	6.192	15,011.9	0.0	155.6	15,167.4
12-31-2034	275.7	52.0	223.2	0.0	23.3	227.1	62.29	0.00	6.192	13,903.8	0.0	144.1	14,047.9
12-31-2035	257.5	48.5	208.5	0.0	21.7	212.1	62.29	0.00	6.192	12,987.4	0.0	134.6	13,122.0
12-31-2036	242.7	45.7	196.5	0.0	20.5	199.9	62.29	0.00	6.192	12,239.3	0.0	126.8	12,366.1
12-31-2037	170.3	32.1	137.9	0.0	14.4	140.3	62.29	0.00	6.192	8,588.7	0.0	89.0	8,677.7
SUBTOTAL	5,704.8	1,058.0	4,622.4	0.0	473.7	4,701.3	66.90	0.00	5.500	309,236.7	0.0	2,605.5	311,842.2
REMAINING	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.000	0.0	0.0	0.0	0.0
TOTAL	5,704.8	1,058.0	4,622.4	0.0	473.7	4,701.3	66.90	0.00	5.500	309,236.7	0.0	2,605.5	311,842.2
CUM PROD	26,435.3	2,489.3											
ULTIMATE	32,140.1	3,547.3											

PERIOD	NUMBER OF		NET DEDUCTIONS/EXPENDITURES					FUTURE NET REVENUE			PRESENT WORTH PROFILE	
			TAXES		CAPITAL	ABDNMNT	OPERATING	UNDISCOUNTED		DISC AT 10.000%		
ENDING	ACTIVE COMPLETIONS		PRODUCTION	AD VALOREM	COST	COST	EXPENSE	PERIOD	CUM	CUM	DISC RATE	CUM PW
M-D-Y	GROSS	NET	M$	M$	M$	M$	M$	M$	M$	M$	%	M$
12-31-2023	116	114.9	479.6	1,063.3	0.0	2,976.0	17,432.8	20,999.8	20,999.8	20,052.9	8.000	79,584.9
12-31-2024	115	113.9	418.8	862.1	0.0	1,426.0	15,569.7	16,865.5	37,865.3	34,611.8	12.000	71,254.2
12-31-2025	102	100.9	368.0	710.2	0.0	-210.0	13,795.0	14,575.7	52,441.1	46,087.4	15.000	66,128.1
12-31-2026	101	99.9	341.9	632.3	0.0	158.2	13,583.2	11,331.0	63,772.1	54,216.2	20.000	59,166.1
12-31-2027	99	97.9	315.1	563.2	0.0	158.2	13,136.2	9,036.7	72,808.8	60,109.8	25.000	53,667.7
12-31-2028	95	94.0	293.3	511.7	0.0	158.2	12,836.5	7,295.4	80,104.2	64,435.4	30.000	49,227.0
12-31-2029	93	92.0	273.5	470.0	0.0	158.2	12,553.2	5,924.3	86,028.5	67,629.1	35.000	45,571.3
12-31-2030	90	89.0	256.8	439.9	0.0	158.2	12,379.0	4,903.2	90,931.7	70,032.3	40.000	42,511.9
12-31-2031	89	88.0	241.7	414.4	0.0	158.2	12,236.7	4,037.0	94,968.8	71,831.4	45.000	39,915.1
12-31-2032	89	88.0	228.8	392.2	0.0	158.2	12,169.0	3,224.5	98,193.3	73,138.0	50.000	37,683.7
12-31-2033	88	87.0	214.6	367.8	0.0	158.2	11,955.5	2,471.2	100,664.5	74,048.7		
12-31-2034	84	83.1	198.7	340.7	0.0	79.1	11,571.4	1,858.0	102,522.5	74,671.5		
12-31-2035	80	79.1	185.6	318.2	0.0	79.1	11,317.5	1,221.5	103,744.0	75,044.1		
12-31-2036	80	79.1	174.9	299.9	0.0	79.1	11,186.3	625.9	104,370.0	75,218.2		
12-31-2037	78	77.1	122.8	210.5	0.0	79.1	8,181.8	83.6	104,453.5	75,240.1		
SUBTOTAL			4,114.1	7,596.5	0.0	5,774.3	189,903.7	104,453.5	104,453.5	75,240.1		
REMAINING			0.0	0.0	0.0	316.5	0.0	-316.5	104,137.0	75,176.8		
TOTAL OF 15.8 YRS			4,114.1	7,596.5	0.0	6,090.8	189,903.7	104,137.0	104,137.0	75,176.8		

Table II

All estimates and exhibits herein are part of this NSAI report and are subject to its parameters and conditions.

[redacted]

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

SUMMARY PROJECTION OF RESERVES AND REVENUE
AS OF DECEMBER 31, 2022

[redacted]TEREST

PROVED DEVELOPED NON-PRODUCING RESERVES

SUMMARY - CERTAIN PROPERTIES
LOCATED IN WILMINGTON FIELD
LOS ANGELES COUNTY, CALIFORNIA

PERIOD	GROSS RESERVES		NET RESERVES				AVERAGE PRICES			GROSS REVENUE			
ENDING	OIL	GAS	OIL	NGL	GAS	EQUIV	OIL	NGL	GAS	OIL	NGL	GAS	TOTAL
M-D-Y	MBBL	MMCF	MBBL	MBBL	MMCF	MBOE	$/BBL	$/BBL	$/MCF	M$	M$	M$	M$
12-31-2023	20.9	4.0	16.9	0.0	1.8	17.2	79.13	0.00	4.960	1,338.9	0.0	8.8	1,347.7
12-31-2024	52.7	10.0	42.7	0.0	4.5	43.4	74.16	0.00	4.910	3,165.7	0.0	22.0	3,187.8
12-31-2025	113.0	21.5	91.5	0.0	9.6	93.1	70.21	0.00	5.043	6,423.0	0.0	48.5	6,471.5
12-31-2026	124.6	23.7	100.9	0.0	10.6	102.7	67.29	0.00	5.121	6,789.1	0.0	54.3	6,843.3
12-31-2027	116.4	22.1	94.2	0.0	9.9	95.9	65.03	0.00	5.164	6,126.1	0.0	51.1	6,177.3
12-31-2028	108.9	20.7	88.2	0.0	9.3	89.7	63.49	0.00	5.241	5,597.8	0.0	48.5	5,646.4
12-31-2029	102.1	19.4	82.7	0.0	8.7	84.1	62.53	0.00	5.385	5,168.3	0.0	46.8	5,215.1
12-31-2030	95.8	18.2	77.6	0.0	8.2	78.9	62.30	0.00	5.632	4,832.9	0.0	45.9	4,878.8
12-31-2031	90.0	17.1	72.9	0.0	7.7	74.1	62.29	0.00	6.192	4,539.1	0.0	47.4	4,586.5
12-31-2032	84.6	16.1	68.5	0.0	7.2	69.7	62.29	0.00	6.192	4,266.9	0.0	44.6	4,311.4
12-31-2033	79.6	15.1	64.4	0.0	6.8	65.6	62.29	0.00	6.192	4,013.0	0.0	41.9	4,054.9
12-31-2034	74.9	14.2	60.6	0.0	6.4	61.7	62.29	0.00	6.192	3,775.5	0.0	39.4	3,814.9
12-31-2035	70.4	13.4	57.0	0.0	6.0	58.0	62.29	0.00	6.192	3,553.0	0.0	37.1	3,590.1
12-31-2036	66.3	12.6	53.7	0.0	5.6	54.6	62.29	0.00	6.192	3,344.4	0.0	34.9	3,379.4
12-31-2037	62.4	11.9	50.5	0.0	5.3	51.4	62.29	0.00	6.192	3,148.5	0.0	32.9	3,181.4
SUBTOTAL	1,262.6	239.9	1,022.3	0.0	107.4	1,040.2	64.64	0.00	5.625	66,082.3	0.0	604.2	66,686.5
REMAINING	314.3	59.7	254.4	0.0	26.7	258.9	62.29	0.00	6.192	15,849.5	0.0	165.5	16,015.0
TOTAL	1,576.9	299.6	1,276.7	0.0	134.1	1,299.1	64.17	0.00	5.738	81,931.8	0.0	769.7	82,701.5
CUM PROD	683.0	81.7											
ULTIMATE	2,259.9	381.3											

PERIOD	NUMBER OF		NET DEDUCTIONS/EXPENDITURES					FUTURE NET REVENUE			PRESENT WORTH PROFILE	
			TAXES		CAPITAL	ABDNMNT	OPERATING	UNDISCOUNTED		DISC AT 10.000%		
ENDING	ACTIVE COMPLETIONS		PRODUCTION	AD VALOREM	COST	COST	EXPENSE	PERIOD	CUM	CUM	DISC RATE	CUM PW
M-D-Y	GROSS	NET	M$	M$	M$	M$	M$	M$	M$	M$	%	M$
12-31-2023	8	7.9	15.1	32.8	1,938.4	0.0	296.4	-934.9	-934.9	-888.6	8.000	25,781.0
12-31-2024	8	7.9	38.0	77.5	0.0	0.0	1,051.7	2,020.6	1,085.6	864.1	12.000	20,300.0
12-31-2025	8	7.9	81.5	157.2	0.0	0.0	1,620.0	4,612.9	5,698.5	4,477.4	15.000	17,285.9
12-31-2026	8	7.9	89.8	166.1	0.0	0.0	1,737.9	4,849.4	10,547.9	7,955.1	20.000	13,600.6
12-31-2027	8	7.9	83.9	149.9	0.0	0.0	1,706.8	4,236.7	14,784.6	10,717.0	25.000	11,002.9
12-31-2028	8	7.9	78.5	137.0	0.0	0.0	1,678.7	3,752.2	18,536.8	12,940.8	30.000	9,095.5
12-31-2029	8	7.9	73.6	126.5	0.0	0.0	1,653.1	3,361.9	21,898.7	14,752.1	35.000	7,648.3
12-31-2030	8	7.9	69.1	118.3	0.0	0.0	1,629.4	3,061.9	24,960.7	16,251.9	40.000	6,520.7
12-31-2031	8	7.9	64.9	111.2	0.0	0.0	1,607.5	2,802.9	27,763.6	17,500.0	45.000	5,622.8
12-31-2032	8	7.9	61.0	104.6	0.0	0.0	1,587.2	2,558.7	30,322.2	18,535.7	50.000	4,894.6
12-31-2033	8	7.9	57.4	98.3	0.0	0.0	1,568.2	2,331.0	32,653.2	19,393.6		
12-31-2034	8	7.9	54.0	92.5	0.0	0.0	1,550.5	2,118.0	34,771.2	20,102.2		
12-31-2035	8	7.9	50.8	87.1	0.0	0.0	1,533.9	1,918.4	36,689.6	20,685.7		
12-31-2036	8	7.9	47.8	82.0	0.0	0.0	1,518.3	1,731.3	38,420.9	21,164.4		
12-31-2037	8	7.9	45.0	77.2	0.0	0.0	1,503.6	1,555.6	39,976.5	21,555.5		
SUBTOTAL			910.3	1,618.1	1,938.4	0.0	22,243.2	39,976.5	39,976.5	21,555.5		
REMAINING			226.6	388.4	0.0	0.0	8,757.9	6,642.1	46,618.7	22,788.4		
TOTAL OF 21.6 YRS			1,136.9	2,006.5	1,938.4	0.0	31,001.1	46,618.7	46,618.7	22,788.4		

Table III

All estimates and exhibits herein are part of this NSAI report and are subject to its parameters and conditions.

[redacted]

NETHERLAND, SEWELL & ASSOCIATES, INC.

SUMMARY PROJECTION OF RESERVES AND REVENUE
AS OF DECEMBER 31, 2022

[redacted] INTEREST

PROVED UNDEVELOPED RESERVES

SUMMARY - CERTAIN PROPERTIES
LOCATED IN WILMINGTON FIELD
LOS ANGELES COUNTY, CALIFORNIA

PERIOD	GROSS RESERVES		NET RESERVES				AVERAGE PRICES			GROSS REVENUE			
ENDING	OIL	GAS	OIL	NGL	GAS	EQUIV	OIL	NGL	GAS	OIL	NGL	GAS	TOTAL
M-D-Y	MBBL	MMCF	MBBL	MBBL	MMCF	MBOE	$/BBL	$/BBL	$/MCF	M$	M$	M$	M$
12-31-2023	1.0	0.2	0.8	0.0	0.1	0.8	79.13	0.00	4.960	62.5	0.0	0.4	62.9
12-31-2024	69.6	13.2	56.3	0.0	5.9	57.3	74.16	0.00	4.910	4,176.5	0.0	29.1	4,205.5
12-31-2025	195.6	37.2	158.4	0.0	16.6	161.2	70.21	0.00	5.043	11,121.2	0.0	83.9	11,205.1
12-31-2026	219.8	41.8	178.0	0.0	18.7	181.1	67.29	0.00	5.121	11,976.2	0.0	95.8	12,072.0
12-31-2027	424.1	80.6	343.3	0.0	36.1	349.3	65.03	0.00	5.164	22,327.1	0.0	186.3	22,513.4
12-31-2028	369.3	70.2	299.0	0.0	31.4	304.3	63.49	0.00	5.241	18,985.8	0.0	164.7	19,150.4
12-31-2029	328.3	62.4	265.8	0.0	27.9	270.4	62.53	0.00	5.385	16,618.9	0.0	150.4	16,769.2
12-31-2030	298.4	56.7	241.6	0.0	25.4	245.8	62.30	0.00	5.632	15,051.5	0.0	143.0	15,194.4
12-31-2031	270.2	51.3	218.7	0.0	23.0	222.6	62.29	0.00	6.192	13,625.3	0.0	142.3	13,767.7
12-31-2032	245.0	46.6	198.4	0.0	20.8	201.8	62.29	0.00	6.192	12,356.5	0.0	129.1	12,485.6
12-31-2033	222.6	42.3	180.3	0.0	18.9	183.4	62.29	0.00	6.192	11,228.7	0.0	117.3	11,346.0
12-31-2034	202.7	38.5	164.1	0.0	17.2	167.0	62.29	0.00	6.192	10,220.8	0.0	106.8	10,327.6
12-31-2035	184.7	35.1	149.6	0.0	15.7	152.2	62.29	0.00	6.192	9,316.6	0.0	97.3	9,413.9
12-31-2036	168.6	32.0	136.5	0.0	14.3	138.9	62.29	0.00	6.192	8,502.9	0.0	88.8	8,591.7
12-31-2037	209.1	39.6	169.3	0.0	17.7	172.2	62.29	0.00	6.192	10,543.2	0.0	109.9	10,653.1
SUBTOTAL	3,408.9	647.6	2,760.0	0.0	290.0	2,808.3	63.81	0.00	5.673	176,113.7	0.0	1,644.9	177,758.6
REMAINING	1,848.7	349.4	1,496.8	0.0	156.5	1,522.9	62.29	0.00	6.192	93,237.1	0.0	968.8	94,205.9
TOTAL	5,257.6	997.0	4,256.8	0.0	446.4	4,331.2	63.27	0.00	5.855	269,350.8	0.0	2,613.7	271,964.5
CUM PROD	0.0	0.0											
ULTIMATE	5,257.6	997.0											

PERIOD	NUMBER OF		NET DEDUCTIONS/EXPENDITURES					FUTURE NET REVENUE			PRESENT WORTH PROFILE	
			TAXES		CAPITAL	ABDNMNT	OPERATING	UNDISCOUNTED		DISC AT 10.000%		
ENDING	ACTIVE COMPLETIONS		PRODUCTION	AD VALOREM	COST	COST	EXPENSE	PERIOD	CUM	CUM	DISC RATE	CUM PW
M-D-Y	GROSS	NET	M$	M$	M$	M$	M$	M$	M$	M$	%	M$
12-31-2023	0	0.0	0.7	1.5	2,239.0	0.0	3.7	-2,182.0	-2,182.0	-2,142.7	8.000	40,156.6
12-31-2024	4	4.0	50.1	102.2	8,956.1	0.0	464.9	-5,367.8	-7,549.9	-6,996.1	12.000	26,627.5
12-31-2025	12	11.9	141.0	272.2	13,434.1	0.0	1,455.8	-4,098.0	-11,647.8	-10,509.3	15.000	19,374.1
12-31-2026	12	11.9	158.5	293.1	13,434.1	0.0	1,662.8	-3,476.5	-15,124.3	-13,320.9	20.000	10,914.9
12-31-2027	24	23.7	305.7	546.3	13,434.1	0.0	3,093.0	5,134.3	-9,990.0	-10,268.3	25.000	5,419.3
12-31-2028	24	23.7	266.3	464.5	0.0	0.0	3,060.7	15,358.9	5,368.9	-1,160.5	30.000	1,771.4
12-31-2029	24	23.7	236.7	406.7	0.0	0.0	2,905.9	13,220.0	18,588.8	5,963.3	35.000	-690.9
12-31-2030	24	23.7	215.1	368.5	0.0	0.0	2,793.4	11,817.4	30,406.3	11,752.6	40.000	-2,372.5
12-31-2031	24	23.7	194.8	333.9	0.0	0.0	2,687.0	10,552.0	40,958.2	16,452.1	45.000	-3,528.2
12-31-2032	24	23.7	176.6	302.8	0.0	0.0	2,592.2	9,413.9	50,372.2	20,263.6	50.000	-4,323.0
12-31-2033	24	23.7	160.5	275.2	0.0	0.0	2,508.0	8,402.4	58,774.6	23,356.2		
12-31-2034	24	23.7	146.1	250.5	0.0	0.0	2,432.7	7,498.3	66,272.9	25,865.2		
12-31-2035	24	23.7	133.2	228.3	0.0	0.0	2,365.1	6,687.3	72,960.2	27,899.5		
12-31-2036	24	23.7	121.6	208.4	0.0	0.0	2,304.3	5,957.5	78,917.7	29,547.0		
12-31-2037	24	23.7	150.7	258.4	0.0	0.0	4,956.6	5,287.4	84,205.1	30,876.4		
SUBTOTAL			2,457.7	4,312.4	51,497.3	0.0	35,286.1	84,205.1	84,205.1	30,876.4		
REMAINING			1,332.7	2,284.7	0.0	5,607.4	78,324.4	6,656.7	90,861.8	32,737.5		
TOTAL OF 21.6 YRS			3,790.4	6,597.1	51,497.3	5,607.4	113,610.5	90,861.8	90,861.8	32,737.5		

Table IV

All estimates and exhibits herein are part of this NSAI report and are subject to its parameters and conditions.

[redacted]

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

SUMMARY PROJECTION OF RESERVES AND REVENUE
AS OF DECEMBER 31, 2022

[redacted] INTEREST

PROBABLE RESERVES

SUMMARY - CERTAIN PROPERTIES
LOCATED IN WILMINGTON FIELD
LOS ANGELES COUNTY, CALIFORNIA

PERIOD	GROSS RESERVES		NET RESERVES				AVERAGE PRICES			GROSS REVENUE			
ENDING	OIL	GAS	OIL	NGL	GAS	EQUIV	OIL	NGL	GAS	OIL	NGL	GAS	TOTAL
M-D-Y	MBBL	MMCF	MBBL	MBBL	MMCF	MBOE	$/BBL	$/BBL	$/MCF	M$	M$	M$	M$
12-31-2023	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.000	0.0	0.0	0.0	0.0
12-31-2024	2.5	0.5	2.0	0.0	0.2	2.0	74.16	0.00	4.910	148.8	0.0	1.0	149.8
12-31-2025	109.0	20.7	88.3	0.0	9.3	89.8	70.21	0.00	5.043	6,197.2	0.0	46.8	6,244.0
12-31-2026	290.2	55.1	234.9	0.0	24.7	239.1	67.29	0.00	5.121	15,809.6	0.0	126.4	15,936.0
12-31-2027	419.1	79.6	339.3	0.0	35.7	345.3	65.03	0.00	5.164	22,065.9	0.0	184.1	22,250.1
12-31-2028	657.8	125.0	532.6	0.0	56.0	541.9	63.49	0.00	5.241	33,812.8	0.0	293.3	34,106.1
12-31-2029	692.6	131.6	560.8	0.0	58.9	570.6	62.53	0.00	5.385	35,065.4	0.0	317.3	35,382.7
12-31-2030	665.1	126.4	538.5	0.0	56.6	547.9	62.30	0.00	5.632	33,547.1	0.0	318.6	33,865.7
12-31-2031	594.1	112.9	481.0	0.0	50.5	489.5	62.29	0.00	6.192	29,964.0	0.0	313.0	30,276.9
12-31-2032	528.1	100.3	427.6	0.0	44.9	435.1	62.29	0.00	6.192	26,635.6	0.0	278.2	26,913.8
12-31-2033	472.2	89.7	382.3	0.0	40.2	389.0	62.29	0.00	6.192	23,814.5	0.0	248.7	24,063.2
12-31-2034	423.9	80.5	343.2	0.0	36.1	349.2	62.29	0.00	6.192	21,379.6	0.0	223.3	21,602.9
12-31-2035	382.9	72.8	310.0	0.0	32.6	315.4	62.29	0.00	6.192	19,311.1	0.0	201.7	19,512.8
12-31-2036	347.3	66.0	281.2	0.0	29.5	286.2	62.29	0.00	6.192	17,517.5	0.0	183.0	17,700.5
12-31-2037	316.1	60.1	255.9	0.0	26.9	260.4	62.29	0.00	6.192	15,939.7	0.0	166.5	16,106.1
SUBTOTAL	5,900.9	1,121.2	4,777.7	0.0	502.0	4,861.4	63.04	0.00	5.781	301,208.9	0.0	2,901.9	304,110.8
REMAINING	2,616.3	496.4	2,118.3	0.0	222.3	2,155.4	62.29	0.00	6.192	131,949.7	0.0	1,376.3	133,326.0
TOTAL	8,517.2	1,617.6	6,896.0	0.0	724.2	7,016.7	62.81	0.00	5.907	433,158.6	0.0	4,278.2	437,436.8
CUM PROD	0.0	0.0											
ULTIMATE	8,517.2	1,617.6											

PERIOD	NUMBER OF		NET DEDUCTIONS/EXPENDITURES					FUTURE NET REVENUE			PRESENT WORTH PROFILE	
			TAXES		CAPITAL	ABDNMNT	OPERATING	UNDISCOUNTED		DISC AT 10.000%		
ENDING	ACTIVE COMPLETIONS		PRODUCTION	AD VALOREM	COST	COST	EXPENSE	PERIOD	CUM	CUM	DISC RATE	CUM PW
M-D-Y	GROSS	NET	M$	M$	M$	M$	M$	M$	M$	M$	%	M$
12-31-2023	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.000	78,776.9
12-31-2024	1	1.0	1.8	3.6	4,553.2	0.0	15.1	-4,423.9	-4,423.9	-3,746.6	12.000	52,450.1
12-31-2025	8	7.9	78.6	151.7	7,968.1	0.0	619.4	-2,573.8	-6,997.7	-5,764.4	15.000	39,109.8
12-31-2026	14	13.8	209.2	386.9	17,074.5	0.0	1,846.8	-3,581.3	-10,579.0	-8,224.9	20.000	24,357.8
12-31-2027	29	28.7	302.1	539.9	17,074.5	0.0	2,917.8	1,415.7	-9,163.3	-7,268.1	25.000	15,324.3
12-31-2028	43	42.5	474.2	827.3	29,595.7	0.0	4,918.3	-1,709.5	-10,872.8	-8,405.0	30.000	9,617.3
12-31-2029	46	45.5	499.3	858.1	3,414.9	0.0	5,791.4	24,818.9	13,946.1	4,885.1	35.000	5,919.7
12-31-2030	51	50.4	479.5	821.3	5,691.5	0.0	5,954.2	20,919.3	34,865.4	15,056.9	40.000	3,475.9
12-31-2031	51	50.4	428.3	734.3	0.0	0.0	5,785.4	23,328.9	58,194.3	25,449.9	45.000	1,836.5
12-31-2032	51	50.4	380.8	652.7	0.0	0.0	5,536.7	20,343.6	78,537.9	33,687.4	50.000	725.4
12-31-2033	51	50.4	340.4	583.6	0.0	0.0	5,326.0	17,813.3	96,351.2	40,245.0		
12-31-2034	51	50.4	305.6	523.9	0.0	0.0	5,144.0	15,629.3	111,980.6	45,475.3		
12-31-2035	51	50.4	276.1	473.2	0.0	0.0	4,989.5	13,774.0	125,754.6	49,665.6		
12-31-2036	51	50.4	250.4	429.3	0.0	0.0	4,855.5	12,165.3	137,919.9	53,030.0		
12-31-2037	51	50.4	227.9	390.6	0.0	0.0	4,737.6	10,750.1	148,670.0	55,732.7		
SUBTOTAL			4,254.3	7,376.5	85,372.3	0.0	58,437.7	148,670.0	148,670.0	55,732.7		
REMAINING			1,886.2	3,233.4	0.0	9,345.7	77,055.1	41,805.5	190,475.5	64,121.5		
TOTAL OF 25.1 YRS			6,140.5	10,609.9	85,372.3	9,345.7	135,492.8	190,475.5	190,475.5	64,121.5		

Table V

All estimates and exhibits herein are part of this NSAI report and are subject to its parameters and conditions.

[redacted]

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

SUMMARY PROJECTION OF RESERVES AND REVENUE
AS OF DECEMBER 31, 2022

[redacted] INTEREST

POSSIBLE RESERVES

SUMMARY - CERTAIN PROPERTIES
LOCATED IN WILMINGTON FIELD
LOS ANGELES COUNTY, CALIFORNIA

PERIOD	GROSS RESERVES		NET RESERVES				AVERAGE PRICES			GROSS REVENUE			
ENDING	OIL	GAS	OIL	NGL	GAS	EQUIV	OIL	NGL	GAS	OIL	NGL	GAS	TOTAL
M-D-Y	MBBL	MMCF	MBBL	MBBL	MMCF	MBOE	$/BBL	$/BBL	$/MCF	M$	M$	M$	M$
12-31-2023	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.000	0.0	0.0	0.0	0.0
12-31-2024	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.000	0.0	0.0	0.0	0.0
12-31-2025	1.5	0.3	1.2	0.0	0.1	1.2	70.21	0.00	5.043	84.0	0.0	0.6	84.6
12-31-2026	1.9	0.4	1.6	0.0	0.2	1.6	67.29	0.00	5.121	105.3	0.0	0.8	106.1
12-31-2027	1.8	0.3	1.4	0.0	0.1	1.4	65.03	0.00	5.164	92.3	0.0	0.8	93.1
12-31-2028	1.6	0.3	1.3	0.0	0.1	1.4	63.49	0.00	5.241	84.7	0.0	0.7	85.4
12-31-2029	155.3	29.5	125.7	0.0	13.2	127.9	62.53	0.00	5.385	7,860.1	0.0	71.1	7,931.2
12-31-2030	359.7	68.3	291.3	0.0	30.6	296.4	62.30	0.00	5.632	18,145.2	0.0	172.4	18,317.6
12-31-2031	696.1	132.3	563.6	0.0	59.2	573.5	62.29	0.00	6.192	35,106.4	0.0	366.7	35,473.1
12-31-2032	870.7	165.4	704.9	0.0	74.1	717.3	62.29	0.00	6.192	43,909.9	0.0	458.6	44,368.5
12-31-2033	744.6	141.5	602.9	0.0	63.3	613.4	62.29	0.00	6.192	37,553.7	0.0	392.3	37,945.9
12-31-2034	650.7	123.6	526.9	0.0	55.4	536.1	62.29	0.00	6.192	32,819.2	0.0	342.8	33,162.0
12-31-2035	567.1	107.8	459.2	0.0	48.2	467.2	62.29	0.00	6.192	28,602.5	0.0	298.8	28,901.3
12-31-2036	504.1	95.8	408.2	0.0	42.9	415.3	62.29	0.00	6.192	25,425.6	0.0	265.6	25,691.2
12-31-2037	451.2	85.7	365.3	0.0	38.4	371.7	62.29	0.00	6.192	22,756.3	0.0	237.7	22,993.9
SUBTOTAL	5,006.4	951.2	4,053.4	0.0	425.9	4,124.4	62.30	0.00	6.126	252,545.2	0.0	2,608.9	255,154.0
REMAINING	3,941.6	748.4	3,191.3	0.0	335.1	3,247.2	62.29	0.00	6.192	198,788.2	0.0	2,075.1	200,863.3
TOTAL	8,948.0	1,699.6	7,244.8	0.0	761.0	7,371.6	62.30	0.00	6.155	451,333.4	0.0	4,683.9	456,017.3
CUM PROD	0.0	0.0											
ULTIMATE	8,948.0	1,699.6											

PERIOD	NUMBER OF		NET DEDUCTIONS/EXPENDITURES					FUTURE NET REVENUE			PRESENT WORTH PROFILE	
			TAXES		CAPITAL	ABDNMNT	OPERATING	UNDISCOUNTED		DISC AT 10.000%		
ENDING	ACTIVE COMPLETIONS		PRODUCTION	AD VALOREM	COST	COST	EXPENSE	PERIOD	CUM	CUM	DISC RATE	CUM PW
M-D-Y	GROSS	NET	M$	M$	M$	M$	M$	M$	M$	M$	%	M$
12-31-2023	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.000	56,041.0
12-31-2024	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.000	31,998.9
12-31-2025	0	0.0	1.1	2.1	0.0	0.0	5.6	75.9	75.9	58.9	15.000	21,158.2
12-31-2026	0	0.0	1.4	2.6	0.0	0.0	7.3	94.9	170.8	127.0	20.000	10,623.5
12-31-2027	0	0.0	1.3	2.3	0.0	0.0	6.6	83.0	253.8	181.1	25.000	5,214.7
12-31-2028	0	0.0	1.2	2.1	0.0	0.0	6.2	75.9	329.7	226.1	30.000	2,387.0
12-31-2029	24	23.7	111.9	192.4	27,319.1	0.0	1,419.5	-21,111.7	-20,782.0	-11,253.7	35.000	900.8
12-31-2030	38	37.6	259.3	444.2	18,465.9	0.0	3,349.0	-4,201.0	-24,983.0	-13,286.7	40.000	128.3
12-31-2031	59	58.3	501.9	860.3	31,161.3	0.0	6,007.3	-3,057.6	-28,040.7	-14,814.8	45.000	-258.6
12-31-2032	66	65.3	627.7	1,076.0	13,849.5	0.0	7,714.0	21,101.4	-6,939.3	-6,309.4	50.000	-435.7
12-31-2033	66	65.3	536.8	920.3	0.0	0.0	7,395.6	29,093.2	22,153.9	4,402.5		
12-31-2034	66	65.3	469.2	804.2	0.0	0.0	7,041.9	24,846.8	47,000.7	12,720.6		
12-31-2035	66	65.3	408.9	700.9	0.0	0.0	6,726.8	21,064.7	68,065.4	19,130.2		
12-31-2036	66	65.3	363.5	623.1	0.0	0.0	6,489.5	18,215.2	86,280.5	24,168.4		
12-31-2037	66	65.3	325.3	557.6	0.0	0.0	6,290.1	15,820.9	102,101.5	28,146.7		
SUBTOTAL			3,609.4	6,188.0	90,795.8	0.0	52,459.4	102,101.5	102,101.5	28,146.7		
REMAINING			2,841.7	4,871.3	0.0	6,230.5	107,210.4	79,709.4	181,810.9	42,275.5		
TOTAL OF 27.9 YRS			6,451.1	11,059.3	90,795.8	6,230.5	159,669.7	181,810.9	181,810.9	42,275.5		

Table VI

All estimates and exhibits herein are part of this NSAI report and are subject to its parameters and conditions.

[redacted]

NORTH WILMINGTON UNIT

NETHERLAND, SEWELL & ASSOCIATES, INC.

SUMMARY PROJECTION OF RESERVES AND REVENUE
AS OF DECEMBER 31, 2022

[redacted] INTEREST

PROVED DEVELOPED PRODUCING RESERVES

SUMMARY - NORTH WILMINGTON UNIT
LOCATED IN WILMINGTON FIELD
LOS ANGELES COUNTY, CALIFORNIA

PERIOD	GROSS RESERVES		NET RESERVES				AVERAGE PRICES			GROSS REVENUE			
ENDING	OIL	GAS	OIL	NGL	GAS	EQUIV	OIL	NGL	GAS	OIL	NGL	GAS	TOTAL
M-D-Y	MBBL	MMCF	MBBL	MBBL	MMCF	MBOE	$/BBL	$/BBL	$/MCF	M$	M$	M$	M$
12-31-2023	63.5	0.0	53.8	0.0	0.0	53.8	79.11	0.00	0.000	4,254.7	0.0	0.0	4,254.7
12-31-2024	29.0	0.0	24.6	0.0	0.0	24.6	74.14	0.00	0.000	1,821.1	0.0	0.0	1,821.1
06-30-2025	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.000	0.0	0.0	0.0	0.0
SUBTOTAL	92.5	0.0	78.3	0.0	0.0	78.3	77.55	0.00	0.000	6,075.8	0.0	0.0	6,075.8
REMAINING	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.000	0.0	0.0	0.0	0.0
TOTAL	92.5	0.0	78.3	0.0	0.0	78.3	77.55	0.00	0.000	6,075.8	0.0	0.0	6,075.8
CUM PROD	8,315.6	512.3											
ULTIMATE	8,408.1	512.3											

PERIOD	NUMBER OF		NET DEDUCTIONS/EXPENDITURES					FUTURE NET REVENUE		
			TAXES		CAPITAL	ABDNMNT	OPERATING	UNDISCOUNTED		DISC AT 10.000%
ENDING	ACTIVE COMPLETIONS		PRODUCTION	AD VALOREM	COST	COST	EXPENSE	PERIOD	CUM	CUM
M-D-Y	GROSS	NET	M$	M$	M$	M$	M$	M$	M$	M$
12-31-2023	13	13.0	47.0	122.0	0.0	2,976.0	3,288.8	-2,179.1	-2,179.1	-2,079.5
12-31-2024	13	13.0	21.5	52.2	0.0	1,426.0	1,615.9	-1,294.4	-3,473.5	-3,283.7
06-30-2025	0	0.0	0.0	0.0	0.0	-210.0	0.0	210.0	-3,263.5	-3,144.2
SUBTOTAL			68.5	174.2	0.0	4,192.0	4,904.6	-3,263.5	-3,263.5	-3,144.2
REMAINING			0.0	0.0	0.0	0.0	0.0	0.0	-3,263.5	-3,144.2
TOTAL OF 2.5 YRS			68.5	174.2	0.0	4,192.0	4,904.6	-3,263.5	-3,263.5	-3,144.2

PRESENT WORTH PROFILE	
DISC RATE	CUM PW
%	M$
8.000	-3,168.4
12.000	-3,120.0
15.000	-3,083.9
20.000	-3,024.2
25.000	-2,965.7
30.000	-2,908.7
35.000	-2,853.4
40.000	-2,799.9
45.000	-2,748.2
50.000	-2,698.4

All estimates and exhibits herein are part of this NSAI report and are subject to its parameters and conditions.

[redacted]

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

BASIC DATA
AS OF DECEMBER 31, 2022

PROVED DEVELOPED PRODUCING RESERVES

SUMMARY - NORTH WILMINGTON UNIT
LOCATED IN WILMINGTON FIELD
LOS ANGELES COUNTY, CALIFORNIA

LEASE NUMBER	LEASE NAME	ACTIVE COMPLTNS OIL	ACTIVE COMPLTNS GAS	GROSS ULTIMATE OIL MBBL	GROSS ULTIMATE GAS MMCF	WORKING INTEREST START	WORKING INTEREST END	REVENUE INTEREST START	REVENUE INTEREST END	OIL $/BBL START	OIL $/BBL END	NGL $/BBL START	NGL $/BBL END	GAS $/MCF START	GAS $/MCF END	GROSS OPERATING EXPENSE M$/M START	GROSS OPERATING EXPENSE M$/M END	LIFE YRS
								CALIFORNIA										
	OTHER RESERVOIR																	
005750	FE NWU PDP	0	0	0.0	0.0	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	167.1	167.1	1.5
019640	ABAN NWU PDP G	0	0	0.0	0.0	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	2.5
	TOTAL OTHER	0	0	0.0	0.0													
	RANGER RESERVOIR																	
004680	NWU 09-001 RGR SI	0	0	281.6	4.6	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
005560	NWU 09-002 RGR SI	0	0	194.6	4.4	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004160	NWU 09-004 RGR SI	0	0	136.9	12.9	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004980	NWU 09-006 RGR SI	0	0	247.6	31.0	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
005070	NWU 09-008 RGR SI	0	0	243.4	7.0	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004290	NWU 09-010 RGR SI	0	0	172.0	7.0	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004440	NWU 09-012 RGR SI	0	0	257.9	12.9	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
005280	NWU 12-001 RGR SI	0	0	185.3	12.1	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
005470	NWU 13-001 RGR SI	0	0	203.6	3.7	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004210	NWU 19-008 RGR SI	0	0	284.6	6.8	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004640	NWU 23-015 RGR SI	0	0	225.5	6.0	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
003850	NWU 32-028 RGR SI	0	0	205.2	5.4	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
005330	NWU 34-032 RGR SI	0	0	402.2	10.9	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004100	NWU 34-033 RGR SI	0	0	134.8	7.1	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
005340	NWU 34-034 RGR SI	0	0	103.7	5.6	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004580	NWU 34-035 RGR SI	0	0	177.2	10.1	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004650	NWU 52-001 RGR SI	0	0	192.7	40.0	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004040	NWU 54-002 RGR	1	0	294.4	30.5	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	7.0	7.0	1.5
004540	NWU 55-001 RGR	0	0	198.8	10.8	100.000	100.000	84.707	84.707	79.11	79.11	0.00	0.00	0.000	0.000	6.2	6.2	0.0
004310	NWU 55-002 RGR	1	0	251.7	10.3	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	8.4	8.3	1.5
005450	NWU 55-006 RGR SI	0	0	313.9	59.5	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004060	NWU 72-003 RGR SI	0	0	355.0	24.7	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004860	NWU 73-003 RGR SI	0	0	462.6	9.1	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004890	NWU 73-005 RGR	1	0	363.4	15.9	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	6.9	6.8	1.5
003900	NWU 73-006 RGR	0	0	364.7	14.7	100.000	100.000	84.707	84.707	79.11	79.11	0.00	0.00	0.000	0.000	6.2	6.2	0.0
005130	NWU 73-008 RGR	1	0	266.8	13.8	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	7.2	7.1	1.5
003990	NWU 73-010 RGR SI	0	0	326.6	11.8	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
005400	NWU 73-028 RGR	1	0	185.6	16.9	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	9.6	9.5	1.5
004420	NWU 73-030 RGR	1	0	121.2	9.5	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	8.1	7.9	1.4
005290	NWU 73-032 RGR SI	0	0	47.1	2.9	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
012120	NWU 73-108 RGR SI	0	0	46.9	5.1	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
012190	NWU 73-110 RGR	1	0	125.8	13.3	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	9.4	8.7	1.5
011980	NWU 73-200 RGR	0	0	60.6	7.0	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	6.2	6.2	0.0
012000	NWU 73-201 RGR	1	0	51.9	5.3	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	7.9	7.7	1.5
011990	NWU 73-202 RGR SI	0	0	12.4	1.4	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	6.2	6.2	0.0
011970	NWU 73-203 RGR	1	0	109.9	11.4	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	9.6	9.3	1.5
012160	NWU 73-204 RGR SI	0	0	64.0	7.1	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	6.2	6.2	0.0
012140	NWU 73-206 RGR	1	0	67.7	7.0	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	8.3	8.0	1.5

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

[redacted] INTEREST

RESERVES AND ECONOMICS
AS OF DECEMBER 31, 2022

PROVED DEVELOPED PRODUCING RESERVES

SUMMARY - NORTH WILMINGTON UNIT
LOCATED IN WILMINGTON FIELD
LOS ANGELES COUNTY, CALIFORNIA

LEASE NUMBER	LEASE NAME	GROSS RESERVES OIL MBBL	GROSS RESERVES GAS MMCF	NET RESERVES OIL MBBL	NET RESERVES NGL MBBL	NET RESERVES GAS MMCF	NET RESERVES EQUIV MBOE	GROSS REVENUE OIL M$	GROSS REVENUE NGL M$	GROSS REVENUE GAS M$	TOTAL TAXES M$	NET CAP COST M$	ABDNMNT COST M$	OPERATING EXPENSE M$	NET REVENUE M$	CUM P.W. 10.000% M$
							CALIFORNIA									
	OTHER RESERVOIR															
005750	FE NWU PDP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,008.4	-3,008.4	-2,803.3
019640	ABAN NWU PDP G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,192.0	0.0	-4,192.0	-4,024.2
	TOTAL OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,192.0	3,008.4	-7,200.4	-6,827.5
	RANGER RESERVOIR															
004680	NWU 09-001 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
005560	NWU 09-002 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004160	NWU 09-004 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004980	NWU 09-006 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
005070	NWU 09-008 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004290	NWU 09-010 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004440	NWU 09-012 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
005280	NWU 12-001 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
005470	NWU 13-001 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004210	NWU 19-008 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004640	NWU 23-015 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
003850	NWU 32-028 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
005330	NWU 34-032 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004100	NWU 34-033 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
005340	NWU 34-034 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004580	NWU 34-035 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004650	NWU 52-001 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004040	NWU 54-002 RGR	3.0	0.0	2.5	0.0	0.0	2.5	197.3	0.0	0.0	7.9	0.0	0.0	126.2	63.2	59.2
004540	NWU 55-001 RGR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004310	NWU 55-002 RGR	7.7	0.0	6.5	0.0	0.0	6.5	507.4	0.0	0.0	20.3	0.0	0.0	150.1	337.1	314.9
005450	NWU 55-006 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004060	NWU 72-003 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004860	NWU 73-003 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004890	NWU 73-005 RGR	2.4	0.0	2.1	0.0	0.0	2.1	159.4	0.0	0.0	6.4	0.0	0.0	123.3	29.7	27.9
003900	NWU 73-006 RGR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
005130	NWU 73-008 RGR	3.6	0.0	3.0	0.0	0.0	3.0	233.3	0.0	0.0	9.3	0.0	0.0	129.0	95.0	88.9
003990	NWU 73-010 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
005400	NWU 73-028 RGR	12.0	0.0	10.2	0.0	0.0	10.2	789.7	0.0	0.0	31.5	0.0	0.0	171.8	586.3	547.5
004420	NWU 73-030 RGR	5.9	0.0	5.0	0.0	0.0	5.0	390.1	0.0	0.0	15.6	0.0	0.0	130.2	244.4	229.9
005290	NWU 73-032 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
012120	NWU 73-108 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
012190	NWU 73-110 RGR	10.2	0.0	8.6	0.0	0.0	8.6	667.4	0.0	0.0	26.7	0.0	0.0	162.3	478.4	448.2
011980	NWU 73-200 RGR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
012000	NWU 73-201 RGR	5.7	0.0	4.8	0.0	0.0	4.8	374.6	0.0	0.0	15.0	0.0	0.0	139.9	219.8	205.7
011990	NWU 73-202 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
011970	NWU 73-203 RGR	11.7	0.0	9.9	0.0	0.0	9.9	769.5	0.0	0.0	30.7	0.0	0.0	170.2	568.5	531.3
012160	NWU 73-204 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
012140	NWU 73-206 RGR	6.9	0.0	5.9	0.0	0.0	5.9	453.7	0.0	0.0	18.1	0.0	0.0	145.9	289.6	271.0

All estimates and exhibits herein are part of this NSAI report and are subject to its parameters and conditions.

[redacted]

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.

[redacted] INTEREST

BASIC DATA
AS OF DECEMBER 31, 2022

PROVED DEVELOPED PRODUCING RESERVES

SUMMARY - NORTH WILMINGTON UNIT
LOCATED IN WILMINGTON FIELD
LOS ANGELES COUNTY, CALIFORNIA

LEASE NUMBER	LEASE NAME	ACTIVE COMPLTNS OIL	ACTIVE COMPLTNS GAS	GROSS ULTIMATE OIL MBBL	GROSS ULTIMATE GAS MMCF	WORKING INTEREST START	WORKING INTEREST END	REVENUE INTEREST START	REVENUE INTEREST END	OIL $/BBL START	OIL $/BBL END	NGL $/BBL START	NGL $/BBL END	GAS $/MCF START	GAS $/MCF END	GROSS OPERATING EXPENSE M$/M START	GROSS OPERATING EXPENSE M$/M END	LIFE YRS
CALIFORNIA (CONTINUED)																		
RANGER RESERVOIR (CONTINUED)																		
012110	NWU 73-207 RGR SI	0	0	23.5	2.6	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
012130	NWU 73-208 RGR SI	0	0	25.6	3.0	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	6.2	6.2	0.0
012100	NWU 73-209 RGR	1	0	43.9	4.2	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	8.0	7.9	1.5
012200	NWU 73-210 RGR SI	0	0	17.4	1.8	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
004810	NWU 74-001 RGR SI	0	0	422.3	11.8	100.000	100.000	84.707	84.707	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.0	0.0
	TOTAL RANGER	11	0	8,272.2	498.7													
RANGER UPPER RESERVOIR																		
013070	NWU 73-109 RGR	1	0	62.1	6.3	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	8.4	8.1	1.5
013080	NWU 73-211 RGR	1	0	73.8	7.3	100.000	100.000	84.707	84.707	79.11	74.14	0.00	0.00	0.000	0.000	9.1	8.8	1.5
	TOTAL RANGER UPPER	2	0	135.9	13.6													
	TOTAL CALIFORNIA	13	0	8,408.1	512.3													
	TOTAL ALL LEASES	13	0	8,408.1	512.3													

All estimates and exhibits herein are part of this NSAI report and are subject to its parameters and conditions.

[redacted]

NETHERLAND, SEWELL & ASSOCIATES, INC.

RESERVES AND ECONOMICS
AS OF DECEMBER 31, 2022

[redacted] INTEREST

PROVED DEVELOPED PRODUCING RESERVES

SUMMARY - NORTH WILMINGTON UNIT
LOCATED IN WILMINGTON FIELD
LOS ANGELES COUNTY, CALIFORNIA

LEASE NUMBER	LEASE NAME	GROSS RESERVES OIL MBBL	GROSS RESERVES GAS MMCF	NET RESERVES OIL MBBL	NET RESERVES NGL MBBL	NET RESERVES GAS MMCF	NET RESERVES EQUIV MBOE	GROSS REVENUE OIL M$	GROSS REVENUE NGL M$	GROSS REVENUE GAS M$	TOTAL TAXES M$	NET CAP COST M$	ABDNMNT COST M$	OPERATING EXPENSE M$	NET REVENUE M$	CUM P.W. 10.000% M$
CALIFORNIA (CONTINUED)																
RANGER RESERVOIR (CONTINUED)																
012110	NWU 73-207 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
012130	NWU 73-208 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
012100	NWU 73-209 RGR	6.1	0.0	5.2	0.0	0.0	5.2	400.3	0.0	0.0	16.0	0.0	0.0	138.5	245.8	230.1
012200	NWU 73-210 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
004810	NWU 74-001 RGR SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL RANGER	75.2	0.0	63.7	0.0	0.0	63.7	4,942.8	0.0	0.0	197.4	0.0	0.0	1,587.6	3,157.8	2,954.6
RANGER UPPER RESERVOIR																
013070	NWU 73-109 RGR	7.3	0.0	6.2	0.0	0.0	6.2	479.3	0.0	0.0	19.1	0.0	0.0	147.3	312.9	292.8
013080	NWU 73-211 RGR	10.0	0.0	8.4	0.0	0.0	8.4	653.7	0.0	0.0	26.1	0.0	0.0	161.3	466.3	435.9
	TOTAL RANGER UPPER	17.3	0.0	14.6	0.0	0.0	14.6	1,133.0	0.0	0.0	45.3	0.0	0.0	308.6	779.1	728.7
	TOTAL CALIFORNIA	92.5	0.0	78.3	0.0	0.0	78.3	6,075.8	0.0	0.0	242.7	0.0	4,192.0	4,904.6	-3,263.5	-3,144.2
	TOTAL ALL LEASES	92.5	0.0	78.3	0.0	0.0	78.3	6,075.8	0.0	0.0	242.7	0.0	4,192.0	4,904.6	-3,263.5	-3,144.2

All estimates and exhibits herein are part of this NSAI report and are subject to its parameters and conditions.

[redacted]

Received from: NSAI
Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

APPENDIX D: CALGEM WELL LOCATION DETAIL

NWU 73-201 - API 0403730306

Surface Location

Section
35

Township
04S

Range
13W

Latitude
33.78395462

Longitude
-118.22130585

B&M
SB

County
Los Angeles

District
Southern

Onshore/Offshore
Onshore

Datum
NAD 83

Corner Call
474' N along property line and 130' W at right angles to center line from SE corner of SAT 7 property

Location Description
474 ft North along section property line and 130 ft West at right angles to said line from the Southeast corner of property Satellite #7

Bottom Hole Location - Wellbore 0403730306-00

Section
34

Township
04S

Range
13W

Latitude
33.78793890

Longitude
-118.22770460

B&M
SB

Field
Wilmington [849]

County
Los Angeles [37]

Corner Call
1945' West and 1452' North of surface location

NWU 73-209 - API 0403730095

Surface Location

Section
35

Township
04S

Range
13W

Latitude
33.78383636

Longitude
-118.22123718

B&M
SB

County
Los Angeles

District
Southern

Onshore/Offshore
Onshore

Datum
NAD 83

Corner Call
421' North along property line and 134' west at right angles to said line from SE corner of SAT 7 property

Location Description
Well is 420.5' North along property line and 134' West at right angles to said line from the southeast property Satellite 37.

Bottom Hole Location - Wellbore 0403730095-00

Section
35

Township
04S

Range
13W

Latitude
33.78391190

Longitude
-118.21619470

B&M
SB

Field
Wilmington [849]

County
Los Angeles [37]

Corner Call
28' North and 1530' East of surface location

NWU 73-109 - API 0403727449

Surface Location

Section
35

Township
04S

Range
13W

Latitude
33.78383636

Longitude
-118.22121429

B&M
SB

County
Los Angeles

District
Southern

Onshore/Offshore
Onshore

Datum
NAD 83

Corner Call
417' N along property line and 127' W at right angles to said line from the SE corner of Sat. #7

Location Description
Location of well 417' Norht along section propety line and 127' West ar tight angles to siad line from the Southeast coner of property Satellite.

Bottom Hole Location - Wellbore 0403727449-00

Section
27

Township
04S

Range
13W

Latitude
33.78988660

Longitude
-118.22502390

B&M
SB

Field
Wilmington [849]

County
Los Angeles [37]

Corner Call
1159' West and 2204' North of Surface Location

NWU 73-08 - API 0403722022

Surface Location

Section
35

Township
04S

Range
13W

Latitude
33.78444672

Longitude
-118.22149658

B&M
SB

County
Los Angeles

District
Southern

Onshore/Offshore
Onshore

Datum
NAD 83

Corner Call
617' N and 1826' W of Centerline intersection Santa Fe Avenue & Anaheim St

Location Description
N/A

Bottom Hole Location - Wellbore 0403722022-00

Section
35

Township
04S

Range
13W

Latitude
33.78567360

Longitude
-118.22100410

B&M
SB

Field
Wilmington [849]

County
Los Angeles [37]

Corner Call
144' N and 448' East of surface location

NWU 73-30 - API 0403726983

Surface Location

Section
35

Township
04S

Range
13W

Latitude
33.78384781

Longitude
-118.22148132

B&M
SB

County
Los Angeles

District
Southern

Onshore/Offshore
Onshore

Datum
NAD 83

Corner Call
439 ft. N and 1,844 ft W from centerline of intersection of Santa Fe Ave and Anaheim Street.

Location Description
N/A

Bottom Hole Location - Wellbore 0403726983-00

Section
34

Township
04S

Range
13W

Latitude
33.78807140

Longitude
-118.23689680

B&M
SB

Field
Wilmington [849]

County
Los Angeles [37]

Corner Call
1542 ft. North and 4685 ft. West from surface location.

NWU 73-206 - API 0403730343

Surface Location

Section
35

Township
04S

Range
13W

Latitude
33.78388214

Longitude
-118.22126007

B&M
SB

County
Los Angeles

District
Southern

Onshore/Offshore
Onshore

Datum
NAD 83

Corner Call
424' N from property line and 127' W at right angles to said line from SE corner of Satellite #7 property.

Location Description
N/A

Bottom Hole Location - Wellbore 0403730343-00

Section
N/A

Township
N/A

Range
N/A

Latitude
N/A

Longitude
N/A

B&M
N/A

Field
Wilmington [849]

County
N/A

Corner Call
N/A

NWU 73-211 - API 0403730393

Surface Location

Section 35	**Township** 04S	**Range** 13W
Latitude 33.78380203	**Longitude** -118.22121429	**B&M** SB
County Los Angeles	**District** Southern	**Onshore/Offshore** Onshore
Datum NAD 83	**Corner Call** 407' N and 136' W at right angles from the SE corner of Satellite 7.	

Location Description
407 ft North along the property line and 136 ft West at right angles to said line form the Southeast corner of property Satellite 7

Bottom Hole Location - Wellbore 0403730393-00

Section 27	**Township** 04S	**Range** 13W
Latitude 33.79022790	**Longitude** -118.22705710	**B&M** SB
Field Wilmington [849]	**County** Los Angeles [37]	**Corner Call** 2339' N and 1774' West of surface location.

Received from: CALGEM
Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

APPENDIX E: CALGEM REPORT OF ABANDONMENT

NWU 73-201 - API 0403730306

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
715 P Street, MS 1803
Sacramento, CA. 95814
T: (916) 445-5986

1/9/2024

[redacted]
Wilmington, CA 90744

Dear [redacted]

Your report of abandonment of well NWU 73-201, A.P.I. No. 0403730306, Section 35, T. 04S, R. 13W, SB B.&M., Wilmington field, Los Angeles County, has been examined in conjunction with records filed in this office. This letter confirms that the well has been plugged and abandoned, and that the required records regarding the abandonment process were filed with our office. Please see the notes below for any additional information.

The plugging and abandonment of the well is approved.

1. The plugging and abandonment of the original hole (API12 #0403730306-00) meets regulatory standards.

a. Surface plugging completed on 12/12/2023.
b. Restoration of well site deferred pending removal of common well cellar.

If you have any supplemental questions, please contact your nearest District office or visit us at www.conservation.ca.gov/calgem

Sincerely,

Scott Walker
Senior Oil and Gas Engineer

CC Organizations:
State Lands Commission

NWU 73-209 - API 0403730095

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
715 P Street, MS 1803
Sacramento, CA. 95814
T: (916) 445-5986

4/16/2024

[redacted]
Wilmington, CA 90744

Dear [redacted]

Your report of abandonment of well NWU 73-209, A.P.I. No. 0403730095, Section 35, T. 04S, R. 13W, SB B.&M., Wilmington field, Los Angeles County, has been examined in conjunction with records filed in this office. This letter confirms that the well has been plugged and abandoned, and that the required records regarding the abandonment process were filed with our office. Please see the notes below for any additional information.

The plugging and abandonment of this well is approved.
1. The plugging and abandonment of the original wellbore (API-12 #0403730095-00) meets regulatory standards.

a. Surface plugging completed on 12/01/2023.
b. Restoration of well site deferred pending removal of common well cellar.

If you have any supplemental questions, please contact your nearest District office or visit us at www.conservation.ca.gov/calgem

Sincerely,

Scott Walker
Senior Oil and Gas Engineer

CC Organizations:
State Lands Commission

NWU 73-109 - API 0403727449

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
715 P Street, MS 1803
Sacramento, CA. 95814
T: (916) 445-5986

6/17/2024

[redacted]
Wilmington, CA 90744

Dear [redacted]

Your report of abandonment of well NWU 73-109, A.P.I. No. 0403727449, Section 35, T. 04S, R. 13W, SB B.&M., Wilmington field, Los Angeles County, has been examined in conjunction with records filed in this office. This letter confirms that the well has been plugged and abandoned, and that the required records regarding the abandonment process were filed with our office. Please see the notes below for any additional information.

The plugging and abandonment of this well is approved.

1. The plugging and abandonment of the original hole (0403727449-00) meets regulatory standards.

a. Surface plugging completed on 03/05/2024.
b. Restoration of well site deferred pending removal of common well cellar.

If you have any supplemental questions, please contact your nearest District office or visit us at www.conservation.ca.gov/calgem

Sincerely,

Scott Walker
Senior Oil and Gas Engineer

CC Organizations:
State Lands Commission

NWU 73-08 - API 0403722022

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
715 P Street, MS 1803
Sacramento, CA. 95814
T: (916) 445-5986

8/12/2024

[redacted]
Wilmington, CA 90744

Dear [redacted]

Your report of abandonment of well NWU 73-8, A.P.I. No. 0403722022, Section 35, T. 04S, R. 13W, SB B.&M., Wilmington field, Los Angeles County, has been examined in conjunction with records filed in this office. This letter confirms that the well has been plugged and abandoned, and that the required records regarding the abandonment process were filed with our office. Please see the notes below for any additional information.

The plugging and abandonment of this well is approved.

1. The plugging and abandonment of the original hole (0403722022-00) meets regulatory standards.

a. Surface plugging completed on 05/13/2024.
b. Site inspection made and approved on 06/25/2024.

If you have any supplemental questions, please contact your nearest District office or visit us at www.conservation.ca.gov/calgem

Sincerely,

Scott Walker
Senior Oil and Gas Engineer

CC Organizations:
State Lands Commission

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
715 P Street, MS 1803
Sacramento, CA. 95814
T: (916) 445-5986

6/18/2024

[redacted]
Wilmington, CA 90744

Dear [redacted],

Your report of abandonment of well NWU 73-30, A.P.I. No. 0403726983, Section 35, T. 04S, R. 13W, SB B.&M., Wilmington field, Los Angeles County, has been examined in conjunction with records filed in this office. This letter confirms that the well has been plugged and abandoned, and that the required records regarding the abandonment process were filed with our office. Please see the notes below for any additional information.

The plugging and abandonment of this well is approved.

1. The plugging and abandonment of the original hole (0403726983-00) meets regulatory standards.

a. Surface plugging completed on 03/15/2024.
b. Site inspection made and approved on 04/03/2024.

If you have any supplemental questions, please contact your nearest District office or visit us at www.conservation.ca.gov/calgem

Sincerely,

Scott Walker
Senior Oil and Gas Engineer

CC Organizations:
State Lands Commission

NWU 73-206 - API 0403730343

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
715 P Street, MS 1803
Sacramento, CA. 95814
T: (916) 445-5986

3/14/2024

[redacted]
Wilmington, CA 90744

Dear [redacted],

Your report of abandonment of well NWU 73-206, A.P.I. No. 0403730343, Section 35, T. 04S, R. 13W, SB B.&M., Wilmington field, Los Angeles County, has been examined in conjunction with records filed in this office. This letter confirms that the well has been plugged and abandoned, and that the required records regarding the abandonment process were filed with our office. Please see the notes below for any additional information.

The plugging and abandonment of this well is approved.

1. The plugging and abandonment of the current wellbore (API-12 # 0403730343-01) and original wellbore (API-12 #0403730343-00) meet regulatory standards.

a. Surface plugging completed on 1/4/2024.
b. Restoration of well site deferred pending removal of common well cellar.

If you have any supplemental questions, please contact your nearest District office or visit us at www.conservation.ca.gov/calgem

Sincerely,

Scott Walker
Senior Oil and Gas Engineer

CC Organizations:
State Lands Commission

NWU 73-211 - API 0403730393

California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
715 P Street, MS 1803
Sacramento, CA. 95814
T: (916) 445-5986

7/16/2024

[redacted]
Wilmington, CA 90744

Dear [redacted]

Your report of abandonment of well NWU 73-211, A.P.I. No. 0403730393, Section 35, T. 04S, R. 13W, SB B.&M., Wilmington field, Los Angeles County, has been examined in conjunction with records filed in this office. This letter confirms that the well has been plugged and abandoned, and that the required records regarding the abandonment process were filed with our office. Please see the notes below for any additional information.

1. The plugging and abandonment of the original hole (0403730393-00) meets regulatory standards.

a. Surface plugging completed on 03/28/2024.
b. Restoration of well site deferred pending removal of common well cellar.

If you have any supplemental questions, please contact your nearest District office or visit us at www.conservation.ca.gov/calgem

Sincerely,

Scott Walker
Senior Oil and Gas Engineer

CC Organizations:
State Lands Commission

Received from: CALGEM
Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

APPENDIX F: CALGEM PRODUCTION DATA

NWU 73-211

Reporting Period ↓	Clean Oil or Condensate Prod	Gross Gas Produced (Mcf)	Water Produced (bbls)	Casing Pressure (psi)	Water or Steam Injected (bbls	Gas or Air Injected (Mcf)
May 2024	0	0	0	0		
April 2024	173.06 (Est.)	47.7315 (Est.)	11710.3 (Est.)			
March 2024	170	45	11560	0		
February 2024	287	62	32802	0		
January 2024	299	23	34430	0		
December 2023	363	43	41435	0		
November 2023	419	56	51915	0		
October 2023	360	55	42268	0		
September 2023	405	51	45457	0		
August 2023	459	58	53603	0		
July 2023	455	61	55333	0		
June 2023	431	59	46171	0		
May 2023	158	20	6160	0		
April 2023	489	64	20316	0		
March 2023	487	58	19406	0		
February 2023	518	56	26815	0		
January 2023	552	67	27235	0		
December 2022	582	76	27467	0		
November 2022	554	70	25964	0		
October 2022	614	73	26379	0		

1 2 3 4 5 6 20 items per page Viewing 1 - 20 from 116 results

NWU 73-206

Reporting Period ↓	Clean Oil or Condensate Prod	Gross Gas Produced (Mcf)	Water Produced (bbls)	Casing Pressure (psi)	Water or Steam Injected (bbls	Gas or Air Injected (Mcf)
January 2023	406	49	43309	0		
January 2023	0	0	0	0		
December 2022	428	56	43678	0		
December 2022	684.1 (Est.)	67.2459 (Est.)	43922.1 (Est.)			
November 2022	407	52	41289	0		
November 2022	680.832 (Est.)	66.8781 (Est.)	43311.4 (Est.)			
October 2022	446	53	41321	0		
October 2022	653.703 (Est.)	64.1763 (Est.)	41681.7 (Est.)			
September 2022	396	53	40102	0		
September 2022	668.135 (Est.)	65.5462 (Est.)	42975.2 (Est.)			
August 2022	440	48	41631	0		
August 2022	643.923 (Est.)	63.3358 (Est.)	41262.8 (Est.)			
July 2022	427	40	40691	0		
July 2022	668.525 (Est.)	65.6261 (Est.)	42897.2 (Est.)			
June 2022	427	39	39774	0		
June 2022	662.496 (Est.)	64.1256 (Est.)	42978.9 (Est.)			
May 2022	470	42	43700	0		
May 2022	641.954 (Est.)	63.0413 (Est.)	42140.3 (Est.)			
April 2022	425	51	37874	0		
April 2022	664.755 (Est.)	66.7951 (Est.)	43185.4 (Est.)			

1 2 3 4 5 6 7 8 9 10 20 items per page Viewing 21 - 40 from 184 results

Climate Wells

NWU 73-206.1

Reporting Period ↓	Clean Oil or Condensate Proc	Gross Gas Produced (Mcf)	Water Produced (bbls)	Casing Pressure (psi)	Water or Steam Injected (bbls	Gas or Air Injected (Mcf)
January 2024	0	0	0	0		
December 2023	0	0	0	0		
November 2023	0	0	0	0		
October 2023	0	0	0	0		
September 2023	0	0	0	0		
September 2023	0	0	0	0		
August 2023	0	0	0	0		
August 2023	0	0	0	0		
July 2023	0	0	0	0		
July 2023	0	0	0	0		
June 2023	0	0	0	0		
June 2023	0	0	0	0		
May 2023	348	44	27046	0		
May 2023	0	0	0	0		
April 2023	369	48	30570	0		
April 2023	0	0	0	0		
March 2023	365	43	29117	0		
March 2023	0	0	0	0		
February 2023	381	41	42642	0		
February 2023	0	0	0	0		

1 2 3 4 5 6 7 8 9 10 | 20 items per page | Viewing 1 - 20 from 184 results

NWU 73-30

Reporting Period ↓	Clean Oil or Condensate Proc	Gross Gas Produced (Mcf)	Water Produced (bbls)	Casing Pressure (psi)	Water or Steam Injected (bbls	Gas or Air Injected (Mcf)
April 2024	0	0	0	0		
March 2024	196	52	16449	0		
February 2024	331	72	46674	0		
January 2024	344	27	48990	0		
December 2023	419	49	58958	0		
November 2023	0	0	0	0		
October 2023	414	63	60144	0		
September 2023	0	0	0	0		
August 2023	0	0	0	0		
July 2023	17	2	2540	0		
June 2023	0	0	0	0		
May 2023	61	8	6763	0		
April 2023	0	0	0	0		
March 2023	64	8	4517	0		
February 2023	350	38	53697	0		
January 2023	373	45	54537	0		
December 2022	393	52	55001	0		
November 2022	374	47	51993	0		
October 2022	425	50	52973	0		
September 2022	377	50	51410	0		

1 2 3 4 5 6 7 8 9 10 | 20 items per page | Viewing 1 - 20 from 191 results

Climate Wells

NWU73-8

Reporting Period ↓	Clean Oil or Condensate Proc	Gross Gas Produced (Mcf)	Water Produced (bbls)	Casing Pressure (psi)	Water or Steam Injected (bbls	Gas or Air Injected (Mcf)
June 2024	0	0	0	0		
May 2024	0	0	0	0		
April 2024	0	0	0	0		
March 2024	156	18	11926	0		
February 2024	163	29	11057	0		
January 2024	140	11	9505	0		
December 2023	174	20	11819	0		
November 2023	168	26	11438	0		
October 2023	137	20	12033	0		
September 2023	168	24	11438	0		
August 2023	174	27	11819	0		
July 2023	174	28	11819	0		
June 2023	168	27	11438	0		
May 2023	214	23	13608	0		
April 2023	207	19	13169	0		
March 2023	179	17	11413	0		
February 2023	193	13	12291	0		
January 2023	214	16	13608	0		
December 2022	214	18	13608	0		
November 2022	207	17	13169	0		

1 2 3 4 5 6 7 8 9 10 ... 20 items per page Viewing 1 - 20 from 526 results

NWU 73-109

Reporting Period ↓	Clean Oil or Condensate Proc	Gross Gas Produced (Mcf)	Water Produced (bbls)	Casing Pressure (psi)	Water or Steam Injected (bbls	Gas or Air Injected (Mcf)
April 2024	4.072 (Est.)	1.0607 (Est.)	510.552 (Est.)			
March 2024	4	1	504	0		
February 2024	0	0	0	0		
January 2024	0	0	0	0		
December 2023	0	0	0	0		
November 2023	0	0	0	0		
October 2023	0	0	0	0		
September 2023	0	0	0	0		
August 2023	0	0	0	0		
July 2023	0	0	0	0		
June 2023	0	0	0	0		
May 2023	77	10	6805	0		
April 2023	166	22	15570	0		
March 2023	216	25	13247	0		
February 2023	163	18	7821	0		
January 2023	156	19	7175	0		
December 2022	427	56	18692	0		
November 2022	406	51	17670	0		
October 2022	468	56	17972	0		
September 2022	404	54	16977	0		

1 2 3 4 5 6 7 20 items per page Viewing 1 - 20 from 124 results

NWU 73-209

Reporting Period ↓	Clean Oil or Condensate Pro	Gross Gas Produced (Mcf)	Water Produced (bbls)	Casing Pressure (psi)	Water or Steam Injected (bbl	Gas or Air Injected (Mcf)
February 2024	0	0	0	0		
January 2024	0	0	0	0		
December 2023	0	0	0	0		
November 2023	0	0	0	0		
October 2023	0	0	0	0		
September 2023	121	15	22001	0		
August 2023	0	0	0	0		
July 2023	0	0	0	0		
June 2023	129	17	22347	0		
May 2023	392	50	33511	0		
April 2023	312	41	28523	0		
March 2023	327	39	26806	0		
February 2023	332	36	43419	0		
January 2023	354	43	44099	0		
December 2022	373	49	44474	0		
November 2022	355	45	42042	0		
October 2022	384	46	42762	0		
September 2022	341	45	41500	0		
August 2022	381	41	42476	0		
July 2022	370	34	41340	0		

1 2 3 4 5 6 7 20 items per page Viewing 1 - 20 from 129 results

NWU 73-201

Reporting Period ↓	Clean Oil or Condensate Pro	Gross Gas Produced (Mcf)	Water Produced (bbls)	Casing Pressure (psi)	Water or Steam Injected (bbl	Gas or Air Injected (Mcf)
December 2023	0	0	0	0		
November 2023	0	0	0	0		
October 2023	0	0	0	0		
September 2023	0	0	0	0		
August 2023	0	0	0	0		
July 2023	0	0	0	0		
June 2023	0	0	0	0		
May 2023	27	3	3600	0		
April 2023	0	0	0	0		
March 2023	37	4	3476	0		
February 2023	293	32	40041	0		
January 2023	312	38	40668	0		
December 2022	329	43	41014	0		
November 2022	314	40	38771	0		
October 2022	369	44	39984	0		
September 2022	310	41	36735	0		
August 2022	338	37	39282	0		
July 2022	327	30	38228	0		
June 2022	327	30	37189	0		
May 2022	429	39	41491	0		

1 2 3 4 5 6 20 items per page Viewing 1 - 20 from 115 results

Received from: CALGEM
Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

APPENDIX G: DEVELOPER ELIGIBILITY ATTESTATION

ClimateWells, Inc. Project Developer Eligibility Documentation and Attestation

I, Reid Calhoon, an authorized representative of ClimateWells, hereby attest to the following:

Conflict of Interest Test: Project Developer

In order to ensure only the highest quality baseline emission calculations, the ClimateWells methodology requires the Project Developer for each project to pass the following Conflict of Interest Test in order to be eligible. If the Project Developer is eligible under the following conditions it must provide a letter of attestation confirming compliance with these conditions to the VVB upon project completion.

1. The project developer may not be an oil and gas well operator. Project development must be conducted by an independent third-party unrelated to the ownership of the oil and gas wells being decommissioned.
2. The project developer must not have any conflict of interest prohibiting independence from the owner or operator of the oil and gas wells included in the project. A project developer cannot be deemed to be independent if involved in any of the following:
    a. Investments—Either owned or acquired, or were committed to acquire, directly or indirectly, any material financial interest in an operator or any corporation or other person affiliated therewith.
    b. Joint Business Ventures—Either owned or acquired, or were committed to acquire, directly or indirectly, any material joint business investment with the operator or any officer, director, principal stockholder, or other person affiliated therewith.
    c. Borrowings—Were indebted to an operator or any officer, director, principal stockholder, or other person affiliated therewith, provided, however, that retainers, advances against work-in-progress, and trade accounts payable arising from the purchase of goods and services in the ordinary course of business shall not constitute indebtedness within the meaning of this section.
    d. Guarantees of Borrowings—Were indebted to any individual, corporation, or other person under circumstances in which the payment of such indebtedness was guaranteed by the operator or any officer, director, principal stockholder, or other person affiliated therewith.
    e. Loans to Operators—Extended credit to the operator or any officer, director, principal stockholder, or other person affiliated therewith provided, however, that trade accounts receivable arising in the ordinary course of business shall not constitute the extension of credit within the meaning of this section.
    f. Guarantees for Operators—Guaranteed any indebtedness owed by the operator or any officer, director, principal stockholder, or other person affiliated therewith.
    g. Purchases and Sales of Assets—Purchased any material asset from, or sold any material asset to, the operator or any officer, director, principal stockholder, or other person affiliated therewith.
    h. Certain Relationships With Operators—Were directly or indirectly connected with the operator as a promoter, underwriter, officer, director, or principal stockholder, or in any capacity equivalent thereto, or were otherwise not separate and independent from the operating and investment decision-making process of the operator.
    i. Trusts and Estates—Were trustees, participants, or beneficial owners in any trust, or executors, administrators, or beneficiaries of any estate, if such trust or estate had any direct or indirect interest material to it in the operator.
    j. Contingent Fee—Were engaged by an operator to estimate or audit carbon crediting information pursuant to any agreement, arrangement, or understanding whereby the remuneration or fee paid by the operator was contingent upon, or related to, the results or conclusions reached in estimating or auditing carbon crediting or emission reductions or removals.
3. The principal address of the project developer must be located in the United States and its operations must be subject to the United States legal system.
4. The project developer must have a demonstrated expertise in oil and gas well ownership, title, and divisions of interest.
5. The project developer must have demonstrated a previous business relationship with the Rocky Mountain Institute or its affiliates/subsidiaries and familiarity with OCI+ and its models.

I declare that the information provided in this attestation letter is true and accurate to the best of my knowledge and belief.

Signature 

Name Reid Calhoon

Date 03/26/25

Received from: ClimateWells
Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

APPENDIX H: PPEF ELIGIBILITY ATTESTATION

ClimateWells, Inc. Professional Petroleum Engineering Firm Eligibility Documentation and Attestation

I, Richard B. Talley, Jr., Chairman and Chief Executive Officer of Netherland, Sewell & Associates, Inc., hereby attest to the following:

Conflict of Interest Test: PPEF

In order to ensure only the highest quality baseline emission calculations, the ClimateWells methodology requires the Professional Petroleum Engineering Firm (PPEF) for each project to pass the following Conflict of Interest Test in order to be eligible. If the PPEF is eligible under the following conditions it must provide a letter of attestation confirming compliance with these conditions to the project developer who must supply the letter to the VVB upon project completion.

1. Client Count: The PPEF must have worked for 100 or more clients in 12 months.
2. Percentage of Annual Revenue attributed to Client: The operator of the oil and gas wells and the project developer must not make up more than 5% of the annual revenue of the PPEF in the 3 years prior to the project start date
3. In the 3 years prior to the project start date, the PPEF must not have participated in any of the following with the operator of the oil and gas wells: Warren Resources
    a. Investments—Either owned or acquired, or were committed to acquire, directly or indirectly, any material financial interest in an operator or any corporation or other person affiliated therewith or any property with respect to which Reserves information is to be estimated or audited.
    b. Joint Business Ventures—Either owned or acquired, or were committed to acquire, directly or indirectly, any material joint business investment with the operator or any officer, director, principal stockholder, or other person affiliated therewith.
    c. Borrowings—Were indebted to an operator or any officer, director, principal stockholder, or other person affiliated therewith, provided, however, that retainers, advances against work-in-progress, and trade accounts payable arising from the purchase of goods and services in the ordinary course of business shall not constitute indebtedness within the meaning of this section.
    d. Guarantees of Borrowings—Were indebted to any individual, corporation, or other person under circumstances in which the payment of such indebtedness was guaranteed by the operator or any officer, director, principal stockholder, or other person affiliated therewith.
    e. Loans to Clients—Extended credit to the operator or any officer, director, principal stockholder, or other person affiliated therewith or any person having a material interest in any property with respect to which Reserves information was estimated or audited, provided, however, that trade accounts receivable arising in the ordinary course of business from the performance of petroleum engineering and related services shall not constitute the extension of credit within the meaning of this section.
    f. Guarantees for Clients—Guaranteed any indebtedness owed by the operator or any officer, director, principal stockholder, or other person affiliated therewith or payable to any individual, corporation, entity, or other person having a material interest in the Reserves information pertaining to the operator.
    g. Purchases and Sales of Assets—Purchased any material asset from, or sold any material asset to, the operator or any officer, director, principal stockholder, or other person affiliated therewith.
    h. Certain Relationships With Client—Were directly or indirectly connected with the operator as a promoter, underwriter, officer, director, or principal stockholder, or in any capacity equivalent thereto, or were otherwise not separate and independent from the operating and investment decision-making process of the operator.
    i. Trusts and Estates—Were trustees, participants, or beneficial owners in any trust, or executors, administrators, or beneficiaries of any estate, if such trust or estate had any direct or indirect interest material to it in the operator or in any property with respect to which Reserves information was estimated or audited.
    j. Contingent Fee—Were engaged by an operator to estimate or audit Reserves information pursuant to any agreement, arrangement, or understanding whereby the remuneration or fee paid by the

operator was contingent upon, or related to, the results or conclusions reached in estimating or auditing Reserves information.

The qualified firm shall:

1. Have experience in preparing reserve estimates or evaluating reserves that are relevant to the type of reservoir being evaluated.
2. Have familiarity with the geological and engineering principles and practices used in the industry for evaluating reserves.
3. Have a reasonable understanding of the legal and regulatory framework governing oil and gas operations.
4. Be independent of the company for which the report is being prepared, as described above.
5. Be qualified to make engineering or geologic evaluations of the type of reserves being reported.

Operator: [redacted]
Field: Wilmington, CA
Project Name: Wilmington, Los Angeles Project

I declare that the information provided in this attestation letter is true and accurate to the best of my knowledge and belief.

Signature Richard B. Talley, Jr.

Name Richard B. Talley, Jr., P.E.

Date February 12, 2025

Received from: NSAI
Entered by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25

APPENDIX I: AFTER PHOTOS

APPENDIX J: PROJECT DEVELOPER WELL REVIEW ATTESTATION

I declare that the wells included in this project are in compliance and qualify according to the methodology to the best of my knowledge as of 06/30/2024.

Attested by: Charlie Wohleber Date: 3/26/25
Reviewed by: Reid Calhoon Date: 3/27/25