

Communication from Public

Name: Warren E&P, Inc. et al.
Date Submitted: 06/08/2026 02:05 PM
Council File No: 17-0447-S2
Comments for Public Posting: Please see attached letter submitted on behalf of the Warren entities.

June 8, 2026

**VIA ONLINE PUBLIC COMMENT SUBMISSION
[LACOUNCILCOMMENT.COM]**

Planning Land Use Management Committee
Los Angeles City Council
John Ferraro Council Chamber
200 North Spring Street, Room 340, City Hall
Los Angeles, CA 90012

Re: *Agenda Item 11 of June 9, 2026 City Council Meeting – Comments on Proposed Oil and Gas Drilling Ordinance; CPC-2025-2884-CA; ENV-2025-2885-MND; CF 17-0447-S2*

Dear Honorable Councilmembers:

This firm represents Warren E&P, Inc.; Warren Resources of California, Inc.; Warren Resources, Inc.; Warren Management Corp.; and Warren Operating LLC (collectively “Warren”).¹ On behalf of Warren, we are providing these comments in opposition to those recommended actions as described in Planning Commission Report dated May 20, 2026 (“Report”), and scheduled for consideration pursuant to City Council Agenda Item No. 11, Council File No. 17-0447-S2, of the Planning and Land Use Management Committee’s June 9, 2026 meeting agenda. Warren incorporates by reference its prior submissions and evidence to the City, including Warren’s submissions of December 1, 2025; December 9, 2025; and as further described in Warren’s December 29, 2025 letter commenting on the City’s Proposed Mitigated Negative Declaration (ENV-2025-2885-MND (“MND”)) regarding the proposed Oil and Gas Drilling Ordinance (“Ordinance”) to prohibit new oil and gas extraction and to make existing extraction activities a nonconforming use (CPC-2025-2884-CA).

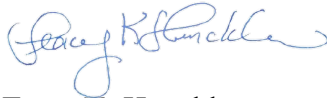
¹ Warren operates drilling and production sites within the City and would be detrimentally affected by the Project. It has a beneficial interest that would be adversely affected by the environmental impacts associated with the Project, and the Project will otherwise have a direct, substantial effect on Warren and its operations. Further, Warren makes these comments on behalf of the public interest, which interest would suffer if the City were not compelled to perform its duties under CEQA.

The Report is woefully insufficient as it fails to analyze or otherwise consider any of the points raised in Warren’s December 29 comment letter on the proposed MND. The Report’s summary conclusions are inadequate to properly respond to the detailed written comments from Warren on the deficiencies with the proposed MND and the Report provides no evidence in response to those comments. For the reasons thoroughly set out in Warren’s December 29 comment letter, the MND is insufficient and the City should be required to perform an Environmental Impact Report analyzing the impacts of the proposed Ordinance.

As explained by Warren and others on numerous prior occasions in connection with a previous and nearly identical ordinance and MND (Ordinance No. 187,709), and as detailed in all prior communications incorporated herein, Warren opposes the adoption of the Ordinance and related MND and urges the PLUM Committee to reject the recommendation of City Planning.²

Sincerely,

DAY CARTER & MURPHY LLP



Tracy K. Hunckler

TKH:cb

² Warren incorporates by reference all prior submissions in connection with the City’s attempts to adopt the former ordinance (Ordinance No. 187,709) as well, including but not limited to the following: Warren’s letter to the Planning Commission dated September 19, 2022; its letter dated October 5, 2022 to the Energy, Climate Change, Environmental Justice, and River Committee; its letter dated October 17, 2022 to the Department of City Planning as to the 2022 MND; its letters to City Council dated November 21 and December 1, 2022. Warren additionally incorporates by reference all submissions in opposition to the issuance of Zoning Administrator Interpretation ZA-2025-2976-ZAI (the “2025 ZAI”), and Zoning Administrator Interpretation ZA-2022-8997-ZAI (the “2023 ZAI”). Warren further incorporates by reference all arguments, submissions and evidence submitted to the City, including the City Planning Commission and City Council, by Warren, E&B Natural Resources Management Corporation and its related entities, and other industry participants and opponents of the former ordinance (Ordinance No. 187,709) (and its associated mitigated negative declaration), the present Ordinance, the MND, the 2025 ZAI and the 2023 ZAI.

Communication from Public

Name: STAND-LA Coalition

Date Submitted: 06/08/2026 03:32 PM

Council File No: 17-0447-S2

Comments for Public Posting: Dear PLUM Committee Members, The STAND-LA Coalition (Stand Together Against Neighborhood Drilling - Los Angeles) is writing to urge the Committee to readopt the oil phaseout ordinance which will be heard at the June 9th PLUM Committee meeting. This ordinance is an incredibly important step in the process towards a full phaseout of oil drilling citywide. Our organizations represent frontline communities in South Los Angeles and Wilmington that have been fighting for over a decade to halt the toxic extraction of oil in our neighborhoods. In December 2022, the Los Angeles City Council voted unanimously to approve a groundbreaking city-wide phase out of oil drilling. However, immediately after it passed, five oil companies sued the City of LA over the ordinance. Unfortunately, in September 2024, a judge ruled in favor of the oil companies and overturned the oil phaseout ordinance on the basis of state law preemption of local ordinances. Just weeks after the Judge's decision, Governor Newsom signed AB 3233 into law. The law, which went into effect in January of 2025, reaffirms the authority of local jurisdictions to regulate and prohibit oil drilling. Now, we need the City to quickly readopt the ordinance and move towards a full phaseout of this noxious land use. An overwhelming body of scientific evidence from the past several decades confirms that oil drilling harms people's health. The chemicals emitted from oil extraction can cause nosebleeds, headaches, nausea, asthma, preterm birth defects and other reproductive harms, lung and other cancers, and many other health harms. For instance, a study focused on resident's respiratory health near oil drilling in South LA found that living near drilling was associated with decreased lung function. In other examples, a statewide study of birth outcomes linked living near active oil and gas wells with low birth weight and a different study in the San Joaquin Valley identified a higher likelihood of spontaneous preterm birth among pregnant people living near oil and gas wells. Additionally, a study published in Science Advances quantified the increased mortality risks due to the oil and gas lifecycle; in California over 10,000 early deaths were due to the fine particles from oil and gas emissions and over 3,000 alone were in LA County. Communities that live close to oil drilling have consistently raised the negative impacts of this extractive practice. The STAND-LA coalition and

our demand for a full phaseout of oil drilling is backed by over 7,000 grassroots supporters, over 43 Neighborhood Councils, and over 70 organizations that range from community-based, public health, environmental, unions, faith, and political groups. Over the past year, over 1,300 individuals have joined our petition calling for the City to readopt the ordinance. For over ten years, impacted communities and supporters have been calling for an end to this extractive practice that has no place in our neighborhoods. Passing this ordinance is just the first step to protect residents. We also need the City to take more immediate action now to protect communities who are forced to live every day with the toxic pollution of this industry in their backyards. The City should use its existing authority to (1) require the re-activation or plugging of idle wells after one year of non-production and (2) revoke conditional use permits for the Warren E&P Banning Drill Site and the E&B Natural Resources Murphy Drill Site through the Nuisance Abatement Revocation process. We urge the PLUM Committee to pass this ordinance and move towards dismantling LA's oil wells as a promise to Angelenos that our health, our safety and our future matters more than the profits of oil companies and CEOs. Sincerely, Emma Silber, Co-Coordinator, STAND-LA Coalition Maro Kakoussian, Director of Climate and Health Programs Physicians for Social Responsibility - Los Angeles, Co-Chair of STAND-LA Tianna Shaw-Wakeman, Environmental Justice Program Director Black Women for Wellness Wendy Miranda, Policy Associate Esperanza Community Housing Richard Parks, President Redeemer Community Partnership Reverend Louis Chase, Minister of Community Outreach Holman United Methodist Church Ashley Hernandez, Wilmington Youth Organizer Communities for a Better Environment, Co-Chair of STAND-LA Tanya Borja, Environmental Justice Policy Associate Strategic Concepts in Organizing and Policy Education (SCOPE)



BLACK WOMEN
FOR WELLNESS



Esperanza
COMMUNITY HOUSING

COMMUNITIES *for a*
BETTER
ENVIRONMENT
est. 1978



PSR-LA
Physicians for Social Responsibility Los Angeles



S.T.A.N.D.
L.A.

STAND TOGETHER AGAINST
NEIGHBORHOOD DRILLING

SCOPE STRATEGIC
COMMUNITY
AGENDA



REDEEMER
COMMUNITY PARTNERSHIP



HOLMAN
united methodist church

June 8, 2026

LA City Planning and Land Use Management Committee
200 N Spring Street
Los Angeles, CA 90012

Dear PLUM Committee Members,

The STAND-LA Coalition (Stand Together Against Neighborhood Drilling - Los Angeles) is writing to urge the Committee to readopt the oil phaseout ordinance which will be heard at the June 9th PLUM Committee meeting. This ordinance is an incredibly important step in the process towards a full phaseout of oil drilling citywide. Our organizations represent frontline communities in South Los Angeles and Wilmington that have been fighting for over a decade to halt the toxic extraction of oil in our neighborhoods.

In December 2022, the Los Angeles City Council voted unanimously to approve a groundbreaking city-wide phase out of oil drilling. However, immediately after it passed, five oil companies sued the City of LA over the ordinance. Unfortunately, in September 2024, a judge ruled in favor of the oil companies and overturned the oil phaseout ordinance on the basis of state law preemption of local ordinances¹. Just weeks after the Judge's decision, Governor Newsom signed [AB 3233](#) into law. The law, which went into effect in January of 2025, reaffirms the authority of local jurisdictions to regulate and prohibit oil drilling². Now, we need the City to quickly readopt the ordinance and move towards a full phaseout of this noxious land use.

An overwhelming body of scientific evidence from the past several decades confirms that oil drilling harms people's health³. The chemicals emitted from oil extraction can cause nosebleeds, headaches, nausea, asthma, preterm birth defects and other reproductive harms, lung and

¹ [Judge strikes down city of L.A.'s ban on new oil drilling - Los Angeles Times](#)

² [AB 3233 Bill Language](#)

³ [Department of Conservation Geologic Energy Management Division Public Health Rulemaking](#)

other cancers, and many other health harms⁴. For instance, a study focused on resident's respiratory health near oil drilling in South LA found that living near drilling was associated with decreased lung function⁵. In other examples, a statewide study of birth outcomes linked living near active oil and gas wells with low birth weight⁶ and a different study in the San Joaquin Valley identified a higher likelihood of spontaneous preterm birth among pregnant people living near oil and gas wells⁷. Additionally, a study published in Science Advances quantified the increased mortality risks due to the oil and gas lifecycle; in California over 10,000 early deaths were due to the fine particles from oil and gas emissions and over 3,000 alone were in LA County⁸.

Communities that live close to oil drilling have consistently raised the negative impacts of this extractive practice. The STAND-LA coalition and our demand for a full phaseout of oil drilling is backed by over 7,000 grassroots supporters, over 43 Neighborhood Councils, and over 70 organizations that range from community-based, public health, environmental, unions, faith, and political groups. Over the past year, over 1,300 individuals have joined our petition calling for the City to readopt the ordinance⁹. For over ten years, impacted communities and supporters have been calling for an end to this extractive practice that has no place in our neighborhoods.

Passing this ordinance is just the first step to protect residents. We also need the City to take more immediate action now to protect communities who are forced to live every day with the toxic pollution of this industry in their backyards. The City should use its existing authority to (1) require the re-activation or plugging of idle wells after one year of non-production and (2) revoke conditional use permits for the Warren E&P Banning Drill Site and the E&B Natural Resources Murphy Drill Site through the Nuisance Abatement Revocation process.

We urge the PLUM Committee to pass this ordinance and move towards dismantling LA's oil wells as a promise to Angelenos that our health, our safety and our future matters more than the profits of oil companies and CEOs.

Sincerely,

Emma Silber, Co-Coordinator, STAND-LA Coalition

Maro Kakoussian, Director of Climate and Health Programs
Physicians for Social Responsibility - Los Angeles, Co-Chair of STAND-LA

⁴ [The Power of Persistence, Liberty Hill](#)

⁵ [Respiratory health, pulmonary function and local engagement in urban communities near oil development - ScienceDirect](#)

⁶ [Living near oil and gas wells tied to low birth weights in infants - Berkeley News](#)

⁷ [Living near oil and gas wells may increase preterm birth risk | Stanford Report](#)

⁸ [The health burden and racial-ethnic disparities of air pollution from the major oil and gas lifecycle stages in the United States | Science Advances; Deaths, illness from air pollution related to gas and oil hit people of color hardest, study finds](#)

⁹ [Tell the LA City Council: Protect LA's Health & Safety over Big Oil's Profits - Action Network](#)

Tianna Shaw-Wakeman, Environmental Justice Program Director
Black Women for Wellness

Wendy Miranda, Policy Associate
Esperanza Community Housing

Richard Parks, President
Redeemer Community Partnership

Reverend Louis Chase, Minister of Community Outreach
Holman United Methodist Church

Ashley Hernandez, Wilmington Youth Organizer
Communities for a Better Environment, Co-Chair of STAND-LA

Tanya Borja, Environmental Justice Policy Associate
Strategic Concepts in Organizing and Policy Education (SCOPE)

Communication from Public

Name: NARO-CA by Edward S Hazard, President
Date Submitted: 06/08/2026 04:32 PM
Council File No: 17-0447-S2
Comments for Public Posting: June 8, 2026 Via US Mail and LACouncilComment.com Los Angeles City Council c/o Office of the City Clerk City Hall, Room 395 Los Angeles, California 90012 Attention: PLUM Committee Re: PROPOSED OIL AND GAS DRILLING ORDINANCE; CPC-2025-2884-CA; ENV-2025-2885-MND; CF 17-0447-S2 Dear Honorable Members: The California Chapter of the National Association of Royalty Owners (NARO-CA) advocates for and defends the rights of the estimated 500,000 private citizen oil and gas royalty owners in California, and even more mineral owners. We strongly oppose any efforts by the City of Los Angeles to phase out oil and gas operations or to prohibit new drilling or to further constrain existing oil production. The grounds for our opposition are as set forth in our earlier public comment letter dated December 8, 2025 addressed to the L.A. Planning Commission. A copy of that letter, with attachments, is attached hereto and, by reference, made a part hereof. In short, given the current crude oil shortage, the sky-high gasoline prices, and the threat to our national security, enactment of this ordinance would be very unwise. Regards, Edward S. Hazard, President National Association of Royalty Owners-California, Inc. (NARO-CA) Cc: Edward S. Renwick, Esq.



June 8, 2026

Via US Mail and LACouncilComment.com

Los Angeles City Council
c/o Office of the City Clerk
City Hall, Room 395
Los Angeles, California 90012
Attention: PLUM Committee

Re: PROPOSED OIL AND GAS DRILLING ORDINANCE; CPC-2025-2884-CA; ENV-2025-2885-MND;
CF 17-0447-S2

Dear Honorable Members:

The California Chapter of the National Association of Royalty Owners (NARO-CA). advocates for and defends the rights of the estimated 500,000 private citizen oil and gas royalty owners in California, and even more mineral owners. We strongly oppose any efforts by the City of Los Angeles to phase out oil and gas operations or to prohibit new drilling or to further constrain existing oil production.

The grounds for our opposition are as set forth in our earlier public comment letter dated December 8, 2025 addressed to the L.A. City Planning Commission. A copy of that letter, with attachments, is attached hereto and, by reference, made a part hereof. In short, given the current crude oil shortage, the sky-high gasoline prices, and the threat to our national security, enactment of this ordinance would be very unwise.

Regards,

Edward S. Hazard, President

Cc: Edward S. Renwick, Esq.

Founded in 1980, the National Association of Royalty Owners is the only national organization representing solely, and without compromise, oil and gas royalty owners' interests.



December 8, 2025

SENT VIA EMAIL TO: cpc@lacity.org

Re: PUBLIC COMMENT, Opposition to proposed Los Angeles City Oil and Gas Drilling Ordinance, CPC-2025-2884-CA

Dear President Lawshe and Members of the Los Angeles City Planning Commission,

The California Chapter of the National Association of Royalty Owners (NARO-CA) advocates for and defends the rights of the estimated 500,000 private citizen oil and gas royalty owners in California, and even more mineral owners. We strongly oppose any efforts by the City of Los Angeles to phase out oil and gas operations or to prohibit new drilling or to further constrain existing oil production as is proposed in Agenda Item 10 on page 6 of the Los Angeles City Planning Commission (CPC) meeting agenda for December 11, 2025.

At our request, this agenda item has been reviewed by our General Counsel, Ed Renwick of Hanna & Morton, LLP. Attached hereto is his brief response together with the Declaration of Wayman T. Gore, Jr., Petroleum Engineer.

Your proposed Oil and Gas Drilling Ordinance that would ultimately shut down all oil and gas operations within the City of Los Angeles relies upon the authority purported to be given to you to do so under the terms of AB 3233. As noted in Mr. Renwick's letter, we believe that AB 3233 is in violation of the California Constitution and should not be relied upon by any California county or municipality to justify any further actions regulating oil production.

Further, we believe that oil and gas mineral and royalty rights cannot be amortized as they are depleting assets that cannot be relocated. The concept that amortization is fair and therefore constitutional is based on the idea that a nonconforming business is given a reasonable period of time so that its owner will be able to move that nonconforming business to a new location with minimal loss. This logic does not apply to oil and gas mineral rights. Oil and gas can only be produced, and the value only be realized if they are produced in the location where they were deposited by nature millions of years ago. The mineral and royalty owners' assets will have no value if they are no longer able to

Founded in 1980, the National Association of Royalty Owners is the only national organization representing solely, and without compromise, oil and gas royalty owners' interests.

PO Box 2777 • Bakersfield, CA 93303 • 661-210-3025 • info@naro-ca.org • www.naro-us.org

produce oil or gas from them. Their assets will have been taken from them by the City of Los Angeles. They will be forced to take action to protect their assets.

If forced to act, NARO-CA will stand with the royalty owners, just as we have successfully done in Monterey County, Ventura County and previously in our lawsuit against the City of Los Angeles.

When Monterey County passed the oil shutdown Measure Z, NARO-CA filed suit together with over 80 royalty owner co-plaintiffs. In addition, five oil companies filed suits. Millions were spent on legal fees and costs. We won, the County lost.

With regards to the potential for millions or billions of dollars in takings claims that might result from your contemplated actions, we draw your attention to the Judge's Intended Decision in the Measure Z case. In it he stated that **"Consequently, should it take effect, Measure Z would effect a facial regulatory taking of CRC's and some members of NARO's property."** He went on to state that **"...the remaining Petitioners would have the option of proceeding with as-applied takings claims."** However, since the court overturned Measure Z this issue was rendered moot. Remember, this judge's final decision was ultimately upheld by unanimous decisions by both the Appellate Court and the California State Supreme Court. It is now solid case law.

We believe that at this time it would be in the best interests of the taxpayers and citizens of the city of Los Angeles that you refrain from proceeding with any efforts to pursue an oil and gas phaseout and/or any further restrictions on oil production. Continuing with such actions could result in substantial expenses and liabilities for the City of Los Angeles.

Sincerely,



Edward S. Hazard
President

Cc: Edward S. Renwick, Esq.

HANNA AND MORTON LLP

A LIMITED LIABILITY PARTNERSHIP INCLUDING A PROFESSIONAL CORPORATION
LAWYERS

444 SOUTH FLOWER STREET, SUITE 2530
LOS ANGELES, CALIFORNIA 90071-2918
TELEPHONE: (213) 628-7131
WEBSITE: www.hanmor.com

EDWARD S. RENWICK
DIRECT DIAL: (213) 430-2516
EMAIL: erenwick@hanmor.com

December 8, 2025

VIA EMAIL

Edward S. Hazard
President
National Association of Royalty Owners-Ca, Inc.
2119 Verde Street
Bakersfield, CA 93304

Re: Los Angeles Planning Commission New Oil Ordinance

Dear Ed,

You have asked me to comment on the validity under the California Constitution of the current draft of the oil ordinance that the Los Angeles Planning Commission will be considering on December 11, 2025. That ordinance constitutes a reoption of essentially the same ordinance as the Los Angeles Superior Court recently struck down. Indeed, you will recall that the city chose not to appeal the decision of the Superior Court, but instead chose to readopt the ordinance in reliance on the passage of AB-3233.

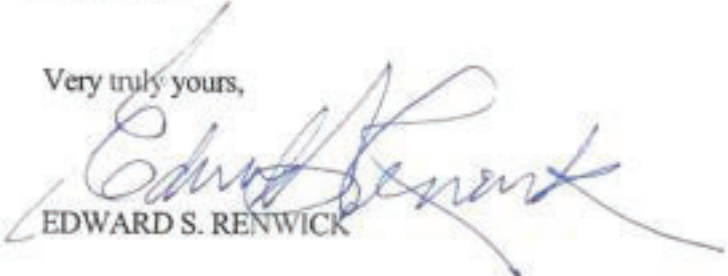
Our complaint in *NARO-CA et al v. City of Los Angeles* (in which Judge Kin still has continuing jurisdiction) alleges preemption and also a violation of Article 11 Sections 5 and 7 of the California Constitution. We prevailed on both counts. The City of Los Angeles is relying on AB-3233 in its effort to adopt an ordinance virtually identical to an ordinance that was just struck down by the Superior Court.¹ Moreover, that judgment was not appealed, but was allowed to become final. It continues to be a binding judgment defeating the to-be-readopted judgment if AB-3233 is not constitutional. We assert that AB-3233 is not constitutional because the Legislature has no power to authorize the City of Los Angeles to violate the California Constitution.

¹ Attached hereto is the opinion of Wayman T Gore, a qualified petroleum engineer with California experience who has qualified as an expert on petroleum production methods in the courts of California. His declaration was prepared for introduction in the first phase of *NARO-CA et al v City of Los Angeles* but was not prepared in time to be part of the public record. The trial court ruled that it could not be admitted unless first admitted into the public record. It states his opinion that the initial ordinance (and therefore the readopted ordinance) prohibits oil and gas producers in the City of Los Angeles from using methods and practices known to maximize ultimate recovery of oil and gas.

National Association of Royalty Owners-Ca, Inc
Attention: Edward Hazard
Re: Los Angeles Planning Commission New Oil Ordinance
December 8, 2025
Page 2

The proposed oil ordinance should not be approved.

Very truly yours,



EDWARD S. RENWICK

ESR:ia
Enclosure

1 Edward S. Renwick (SBN 29325)
HANNA AND MORTON LLP
2 444 South Flower Street, Suite 2530
Los Angeles, California 90071
3 Tel: (213) 628-7131
Email: erenwick@hanmor.com
4

5 Attorneys for Petitioner and Plaintiff,
6 NATIONAL ASSOCIATION OF
ROYALTY OWNERS-CALIFORNIA, INC.,
7 MEKUSUKEY OIL COMPANY, LLC,
NJB WOLF FAMILY LLC, AND
8 THE TERMO COMPANY

9 SUPERIOR COURT OF THE STATE OF CALIFORNIA
10 FOR THE COUNTY OF LOS ANGELES – CENTRAL DISTRICT

11
12 NATIONAL ASSOCIATION OF ROYALTY)
OWNERS-CALIFORNIA, INC., MEKUSUKEY)
13 OIL COMPANY, LLC, NJB WOLF FAMILY)
LLC, THE TERMO COMPANY,)

14)
15 Plaintiffs and Petitioners,)

16 v.)

17 CITY OF LOS ANGELES, CITY COUNCIL OF)
THE CITY OF LOS ANGELES, KAREN BASS)
18 in her official capacity as Mayor of the City of)
Los Angeles, and DOES 1 through 100,)

19)
20 Respondents and Defendants.)
21)

Case No.: 23STCP00106

Related to 23STCP00060; 23STCP00070;
23STCP00085; 23STCP01217

[Assigned to Hon. Curtis A. Kin, Dept. 82]

DECLARATION OF WAYMAN T. GORE,
JR., P.E. IN SUPPORT OF PETITIONERS'
PETITION FOR WRIT OF MANDATE
PHASE ONE

Action Filed: January 12, 2023
Phase 1 Trial Date: August 1, 2024

22
23 **DECLARATION OF WAYMAN T. GORE, JR., P.E. IN SUPPORT OF PETITIONERS' AND**
24 **PLAINTIFFS' PETITION FOR WRIT OF MANDATE AND COMPLAINT**

25 I, Wayman T. Gore, Jr. Declare as follows:

26 //
27
28

1 1. My name is Wayman Travis Gore, Jr. I am a consulting petroleum engineer and President of
2 PGH Petroleum & Environmental Engineers, LLC., a GAI Company ("PGH"). I received a Bachelor of
3 Science in Petroleum Engineering in May 1980 from the University of Texas at Austin. I have worked
4 as a petroleum engineer since that time. I am also a registered professional engineer in the State of
5 Texas. My engineering license number is 56682. A copy of my CV is included as **Attachment 1**.

6 2. PGH is an engineering consulting firm specializing in petroleum engineering. I formed PGH
7 in January 1995. PGH's work consists of advising oil and gas companies, working interest owners,
8 royalty owners, financial institutions and state and federal agencies on petroleum engineering matters.
9 PGH is a registered professional engineering firm in the State of Texas. PGH's firm registration number
10 is F-9137. A copy of the PGH firm brochure is included as **Attachment 2**.

11 3. I have worked as a petroleum engineer on various California oil fields since 1981. This work
12 has involved fields in virtually every producing region of California including Los Angeles County and
13 includes oil fields, gas fields, waterfloods and steamfloods. I have also testified as an expert in petroleum
14 engineering in various state courts in California since 1993. I have also consulted with the California
15 Department of Justice.

16 4. I have been retained by the National Association of Royalty Owners – California, Inc. in this
17 matter and have been asked to give my petroleum engineering opinion of whether prohibiting the drilling,
18 redrilling and/or sidetracking of oil and gas wells¹ or changing the function of any well²; prohibiting
19 maintenance of oil and gas wells; and/or imposing a maximum remaining life of 20 years on all existing
20 oil and gas wells within the City of Los Angeles, will prohibit oil and gas operators from using methods
21 and practices known by the oil and gas industry to maximize ultimate recovery of oil and gas?
22 _____

23 ¹ The distinctions between drilling a new well, redrilling a well and sidetracking a well are as follows:
24 Redrilling a well generally means drilling a new well located essentially in the same place as an earlier well. A
25 redrilled well is sometimes referred to as a replacement well. Sidetracking a well means using a shallow portion
26 of an existing wellbore, cutting a window (i.e. hole) in the steel casing and directionally drilling a new lower
27 portion (deeper) of the existing wellbore to a different bottomhole subsurface location. Redrilling or
28 sidetracking a well are common in the oil and gas industry and both require appropriate permitting from
CalGEM.

² An example of changing the function of a well would be to convert a producing well to an injection well.
Changing the function of a well is a common occurrences in a waterflood or steamflood.

1 5. I have been asked to assume that the City of Los Angeles has adopted an oil and gas ordinance
2 providing in part as follow:

3 **4. Oil Wells.**

4 a) All oil wells (as defined pursuant to LAMC Section 13.01 B),
5 including those operating pursuant to any discretionary permit in all
6 zones, whether by ordinance or approval of a Zoning Administrator,
7 and all oil wells in an M3 zone, are nonconforming uses as of the effective
8 date of the ordinance. No new well for the production of oil, gas, or
9 other hydrocarbon substances may be drilled in any zone. No existing
10 well for the production of oil, gas, or other hydrocarbon substances,
11 which is a nonconforming use, shall be maintained, drilled, re-drilled,
12 or deepened, except to prevent or respond to a threat to public health,
13 safety, or the environment, as determined by the Zone Administrator.

14 b) The operation of all such wells, shall cease within 20 years from
15 effective date of the ordinance deeming such uses nonconforming.

16 c) After the time period set forth in LAMC Section 12.23.C.4(b), all
17 Nonconforming oil wells shall be abandoned in a manner consistent with
18 and in strict accordance with all applicable local, state and federal laws,
19 regulations, rules, and standards.

20 d) If an oil well is abandoned, or its operation is discontinued or
21 idled for a continuous period of one year, such use shall be deemed
22 terminated.

23 e) A well operator as defined by the Public Resources Code Section
24 3237 shall comply with the mitigation measures and mitigation monitoring
25 program adopted with this ordinance in the plugging and abandoning of all
26 wells.

27 I have also been asked to assume that "well Maintenance", which is not permitted, is any scope of work
28 that meets either of the two following criteria:

- 1 1. A scope of work that requires a Notice of Intention "Rework Permit"
2 to carry out a rework project on a well from the California Geologic Energy
3 Management Division (CALGEM).
- 4 2. A scope of work that requires notification per the South Coast Air
5 Quality Management District's (SCAQMD) Rule 1148.2 – "Notification
6 And Reporting Requirements for Oil and Gas Well and Chemical Suppliers"
7 For "Well Rework" and/or "Injection" including one or more of the
8 following activities: acidizing, hydraulic fracturing, gravel packing,
9 maintenance acidizing, matrix acidizing and acid fracturing.

10 Finally I have been asked to assume that (a) a Notice of Intention to CALGEM (and therefore permission
11 from CALGEM) is necessary for any operation subsequent to drilling that involves deepening, redrilling,
12 plugging, or permanently altering in any manner the casing of a well or its function, and (b) SCAQMD
13 1148.2 includes any operation subsequent to drilling that involves deepening, redrilling, or well
14 production stimulation or treatment activity of an existing well, and that WELL REWORK FLUID
15 means a carrier fluid mixed with chemical and/or physical additives used in any operation subsequent to
16 drilling that involves a well production stimulation or treatment activity of an existing well. Maintenance
17 acidizing³ is considered "maintenance" and is therefore prohibited.

18 6. My opinions as a petroleum engineer are as follows:

19 **Opinion 1:** Prohibiting the drilling, redrilling and/or sidetracking of oil and gas wells and
20 prohibiting changing the function of any well will prohibit oil and gas operators in the
21 City of Los Angeles from using methods and practices known by the oil and gas industry
22 to maximize ultimate recovery of oil and gas.

23
24
25
26 ³ Maintenance acidizing is generally considered a recurring treatment of a well with some type of diluted acid.
27 This is often required due to scale buildup in the wellbore or within the perforations of the well. Scale buildup
28 will impede the flow of oil, gas and water into the wellbore over time. A maintenance acid treatment will
dissolve the scale and return the well to its normal production level.

1 **Opinion 2:** Prohibiting maintenance of oil and gas wells; will prohibit oil and gas
2 operators in the City of Los Angeles from using methods and practices known by the oil
3 and gas industry to maximize ultimate recovery of oil and gas.

4 **Opinion 3:** Imposing maximum life time period of 20 years as the maximum remaining
5 life of any oil and gas well will prohibit oil and gas operators in the city of Los Angeles
6 from using methods and practice known by the oil and gas industry to maximize ultimate
7 recovery of oil and gas.

8 A discussion of each opinion follows below.

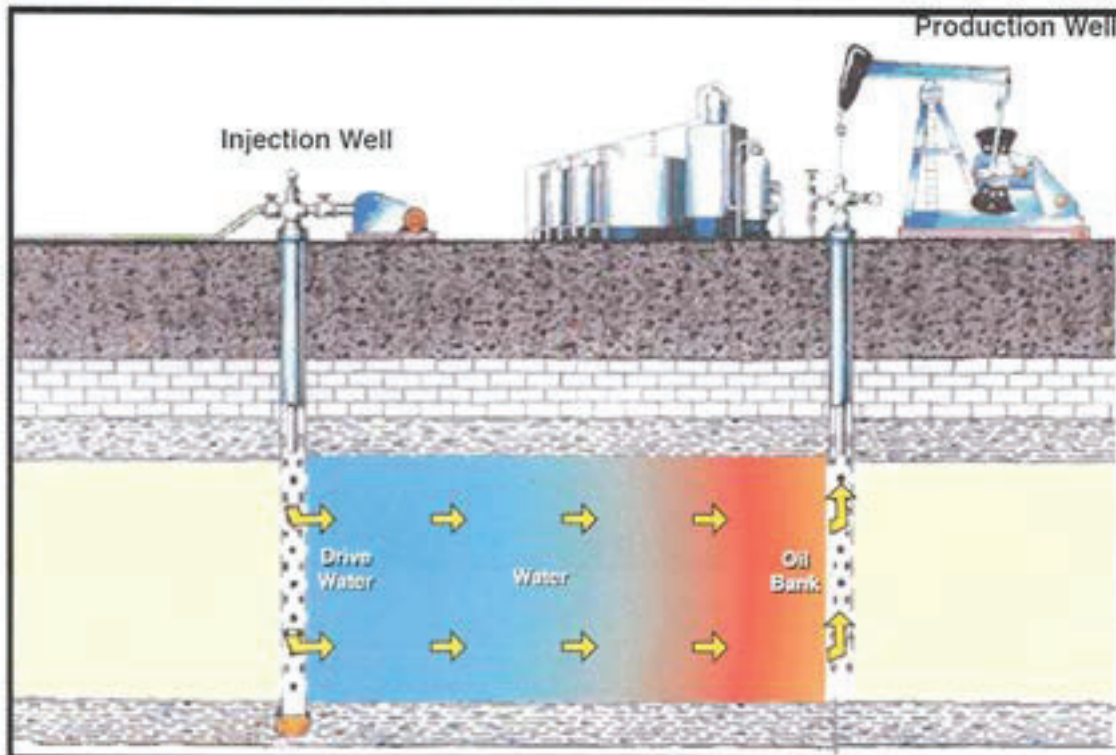
9 **Opinion 1:**

10 7. Drilling, re-drilling and/or sidetracking of oil and gas wells are part of the normal operating
11 process in any oil field. Because oil and gas wells are mechanical in nature, they sometimes fail
12 necessitating remedial operations such as drilling a new replacement well, re-drilling the existing well
13 and/or sidetracking the existing well. Also, recovery methods utilized in an oil field such as
14 waterflooding or steamflooding often require the additional drilling, re-drilling, or sidetracking of
15 producing and/or injection wells. Without the ability to perform such operations remaining recoverable
16 oil reserves will be left in the ground. Ultimate oil and gas recovery will not be maximized, and waste⁴
17 will occur.

18 8. Waterflooding and steamflooding are types of production methods often used in oil fields
19 around the world, including California. Both waterflooding and steamflooding are typically referred to
20 as secondary recovery mechanisms and are used specifically to maximize oil recovery. Without
21 employing such secondary recovery mechanisms, otherwise recoverable oil will be left in the ground
22 and waste will occur. Both waterflooding and steamflooding are highly technical oil recovery processes
23

24 _____
25 ⁴ Waste is a petroleum engineering term routinely used to describe a situation where recoverable oil and gas is
26 rendered unrecoverable by some action or event. When waste occurs oil and gas that would have been produced
27 and sold is not produced and therefore remains in the ground. It is not able to be produced or recovered in the
28 future due to the act or event rendering it unrecoverable. Waste can occur due to various reasons, among them a
producing well failure and not being able to replace the failed well by drilling a replacement well or sidetracking
the failed well, not being able to perform routine equipment maintenance allowing the well to fall into disrepair,
a waterfront or steamfront bypassing oil in the reservoir and not sweeping it to producing wells.

1 which depend on among other things, precise placement of producing and injection wells. Waterflooding
2 and steamflooding are similar processes, one involves water injection and the other involves steam and
3 hot water injection. Example diagrams for both waterflooding and steamflooding are shown below.

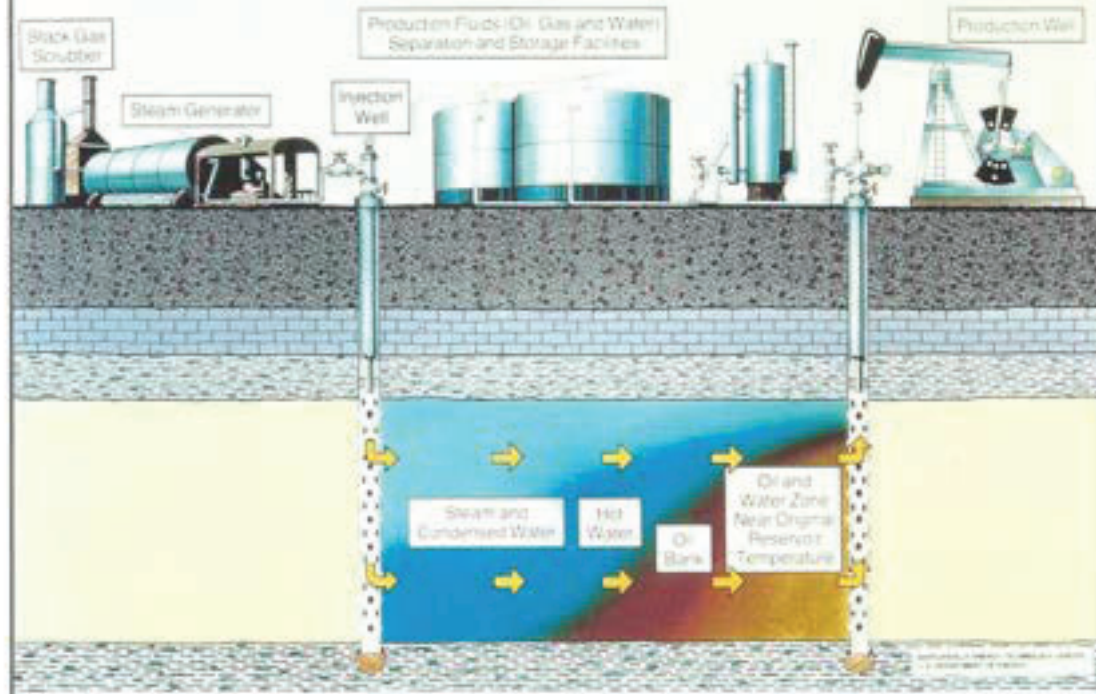


<https://www.nap.edu/read/13355/chapter/6> references DOE: NETL (2010)

STEAM FLOODING

Heat, from steam injected into a heavy-oil reservoir, thins the oil making it easier for the steam to push the oil through the formation toward production wells.

Heat reduces viscosity of oil and increases its mobility

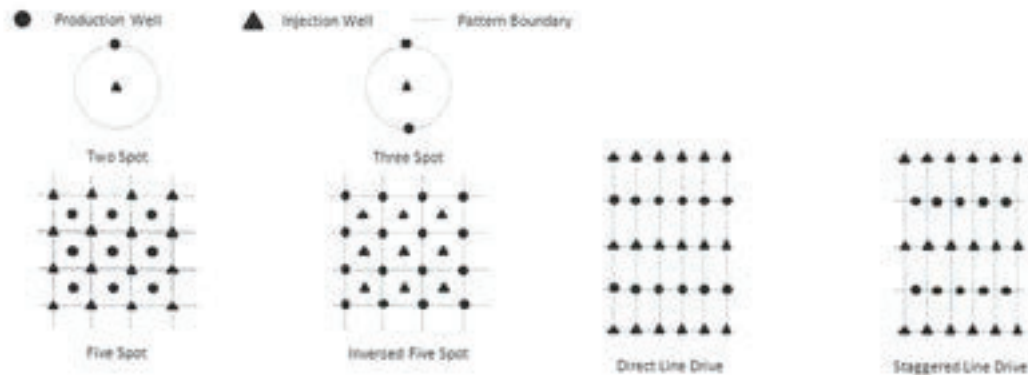


<https://www.netl.doe.gov/file%20library/research/oil-gas/enhanced%20oil%20recovery/other/coldf.pdf>

9. In waterflooding, the objective is to inject water into the oil reservoir and push oil to producing wells. The process in steamflooding is similar but steamflooding adds a component of heat to the process. Steamflooding is typically used in oil reservoirs that contain very viscous or low API gravity crude oil. Because it is very thick, low API gravity oil is difficult to produce. By adding heat in the form of steam and hot water, the reservoir rock is heated which in turn heats the oil making it thinner and less viscous, allowing it to flow more easily. The injection of steam and hot water then pushes the oil to producing wells allowing it to be recovered.

10. While both processes sound simple, they are highly technical production methods. Both waterfloods and steamfloods require injection and production patterns be established in the reservoir to be flooded. These patterns are rigid patterns, that is to say they must be consistent across the entire flood area in order to be successful, maximize recovery and minimize bypassed oil. There are many different patterns that can be utilized based on the petrophysical and reservoir engineering aspects of the reservoir.

Water Flood Pattern Types



<http://permco.com/resources/fundamentals-of-fluid-flow-in-porous-media/chapter-4-immiscible-displacement/water-injection-oil-recovery-calculations/mobility-ratio-effect/>

The establishment of these patterns are the responsibility of the petroleum engineer. Examples of just a few waterflood pattern are shown above.

Steamflood patterns would be similar in nature to these types of waterflood patterns.

11. As time goes by in a waterflood or a steamflood, it may be necessary to convert production wells to injectors and have new producing wells drilled. This is required in order that the injected water or steam keep up with the oil bank as it is being pushed across the reservoir. Again, the petroleum engineer must make a technical determination of if or when this conversion or new drilling needs to occur. Prohibiting oil and gas operators from utilizing or continuing to utilize these secondary recovery methods will minimize oil recovery. It would have the effect of prohibiting the drilling of new wells or the redrilling of old wells as required in the normal operation of a steamflood or waterflood. This will lead to the premature abandonment of not only the waterflood but ultimately the entire field. Oil that was otherwise recoverable will be left in the ground. Ultimate recovery will not be maximized, and waste will occur.

12. My analysis indicates there are at least fifteen oil fields that will be effected by LAMC Section 12.23.C.4. A list of these fifteen fields will be discussed in Opinion 3, Paragraph 17 below. According

1 to the CalGEM website, ten of fifteen fields are producing under a waterflood or steamflood mechanism⁵.
2 The only fields not producing under these secondary recovery methods are El Segundo, Los Angeles
3 City, Playa Del Rey, Salt Lake, and Salt Lake South. If the ten fields with an ongoing waterflood and/or
4 steamflood are prohibited from drilling, redrilling, sidetracking and changing the function of wells, they
5 will become uneconomic in a very few years. Remaining recoverable oil will be left in the ground.
6 Ultimate recovery will not be maximized, and waste will occur.

7 **Opinion 2:**

8 13. Routine oil field maintenance is a requirement in the prudent operation of any oil field. Such
9 maintenance is necessary as the equipment used for the extraction of oil and gas is mechanical in nature.
10 As with any machinery, if routine maintenance is not performed the equipment will fall into disrepair.
11 Examples of the types of surface equipment used in the production of oil in the City would be pumping
12 units, chemical pumps, water pumps, oil pumps, LACT (lease automatic custody transfer) units,
13 compressors, storage tanks, heater treaters, and separators to name just a few. Types of downhole
14 equipment used in the production of oil would be rod pumps, electric submersible pumps, gas lift valves,
15 packers, tubing, and rods, to name just a few. All of this equipment, both surface and downhole, must
16 be carefully maintained to prevent mechanical failure and/or corrosion and to maximize the recovery of
17 oil. Without the ability to perform such maintenance the useful life of a well will be shortened leading
18 to premature abandonment. The premature abandonment of any oil or gas well, without the ability to
19 drill new wells or redrill and/or sidetrack existing wells, will result in recoverable oil being left in the
20 ground. Ultimate recovery will not be maximized, and waste will occur.

21 14. The production of oil is a complicated process. It is not simply drilling a hole in the
22 ground, producing the oil that flows out of the hole and selling it. It involves complicated mechanical
23 and technical processes. Most oil that is produced anywhere in the world requires some type of treatment
24 that serves as an aid in production. Many times, oil, gas and associated water have a chemical makeup

25 _____
26 ⁵ CalGEM records indicate one idle well in the Wilmington field as a steamflood well. CalGEM shows well
27 number 2AT53B (API No. 0403723662) to be located in Los Angeles. All other wells producing under
28 secondary recovery methods are shown as waterflood wells.

1 that causes corrosion of the downhole and surface equipment. As a result, corrosion inhibitors are
2 required to be injected into the wellbore to prevent or minimize such corrosion. Under the assumptions
3 above for SCAQMD 1148.2, corrosion inhibitors could be construed as a WELL REWORK FLUID that
4 involves a "well production treatment activity". Without such treatment for corrosion, downhole pumps,
5 rods, tubing, surface flowlines, tanks, etc. can become corroded and fail resulting in downhole wellbore
6 failures and/or leaks and spills at the surface. Under the assumption that LAMC Section 12.23.C.4
7 prevents drilling or re-drilling, the existing well would have to be prematurely and permanently
8 abandoned resulting in recoverable oil being left in the ground. Ultimate oil and gas recovery will not
9 be maximized, and waste will occur.

10 15. Operators of oil and gas wells are often required pursuant to its contractual obligations with
11 mineral owners and working interest partners to perform its duties in a good and workmanlike manner
12 as a reasonable and prudent operator would do. These duties include well maintenance. Under the
13 assumptions listed above for LAMC Section 12.23.C.4, and SCAQMD 1148.2, operators may very well
14 be prevented from discharging its contractual obligations to perform in a good and workmanlike manner
15 or as a reasonable prudent operator.

16 **Opinion 3:**

17 16. Under the assumption stated above that the City of Los Angeles has adopted an ordinance
18 (LAMC Section 12.23.C.4) paragraph (b) of this ordinance states "*The operation of all such wells, shall*
19 *cease within 20 years from effective date of the ordinance deeming such uses nonconforming.*" In effect,
20 the City has amortized all wells over a twenty year basis, whether depleted or not, and any well still
21 producing will have to be abandoned after 20 years. No analysis or study conducted by the City on the
22 reasonableness of such a 20-year time period has been provided; thus I can only presume no such analysis
23 has been undertaken. Every oil and gas well is different. Wells can produce from different reservoirs
24 and fields under different production mechanisms and from different depths. Wells in the City generally
25
26
27
28

1 produce from depletion drive (i.e. solution gas drive)⁶ reservoirs. They can produce at different oil, gas
2 and water rates. Some wells can be flowing wells while others produce under different artificial lift
3 mechanisms such as a rod pump, an electric submersible pump, gas lift or plunger lift. While this is not
4 an exhaustive list of differences, all of these factors must be considered when estimating the economic
5 life of a well.

6 17. The most common way to estimate the economic life and remaining reserves of a well is
7 known as Decline Curve Analysis (“DCA”) DCA is the interpretation of graphs or plots of producing
8 rate vs. cumulative production. These plots, known as rate-time plots, are typically plotted on semi-log
9 paper. That is to say, the horizontal scale is a coordinate (i.e. linear) scale, and the vertical scale is a
10 logarithmic scale. When the logarithm of producing rate is plotted versus linear time a straight line often
11 times results. This is referred to as “exponential decline.” Exponential decline is sometimes referred to
12 as constant percentage decline. When the data does not plot as a straight line but rather “curves upward”
13 over time, the data is said to be exhibiting “hyperbolic decline.” For wells that experience hyperbolic
14 decline, the decline rate continually decreases over time. For wells exhibiting either exponential or
15 hyperbolic decline, the observed data trend is extrapolated out into the future to a specific production
16 rate known as the economic limit. Once a well reaches its economic limit, the costs incurred to produce
17 the well begins to exceed the value of the production. At the economic limit, the remaining reserves as
18 well as the remaining life of the well can be determined. If a well is required to cease production prior
19 to reaching its economic limit, that is to say its economic life is arbitrarily shortened, the ultimate oil and
20 gas recovery will not be maximized, and waste will occur.

21 18. Under the assumption that the City of Los Angeles has adopted ordinance LAMC Section
22 12.23.C.4, at least fifteen oil fields will be impacted. These fields are as follows:

23 Aliso Canyon	Playa Del Rey
24 Beverly Hills	Rosecrans
25 Cascade	Salt Lake

26 ⁶ Depletion drive oil reservoirs are those reservoirs where the flow of oil within the reservoir is aided by gas that
27 is in solution in the oil. As oil and the solution gas is produced, reservoir pressure declines and more and more
28 gas comes out of solution assisting the oil to flow towards wells to be produced.

1 Cheviot Hills Salt Lake South
2 El Segundo San Vicente
3 Las Cienegas Torrance
4 Los Angeles City Wilmington
5 Los Angeles Downtown

6 I have reviewed wells in four of these fifteen oil fields. Using conventional decline curve analysis⁷, I
7 determined there are many examples of oil wells having a significantly longer remaining life than 20
8 years. The four fields reviewed are Beverly Hills, Las Cienegas, Cascade and Torrance. The remaining
9 life of many wells approached 30 years or longer based on a conservative economic cutoff of 2 barrels
10 of oil per day. The City's use of a 20-year life appears to be arbitrary and not based on any technical
11 petroleum engineering analysis. I have provided example decline curves for wells that I have identified
12 as having a substantially longer life than 20 years in Attachment 3. Under the assumption that LAMC
13 Section 12.23.C.4 has been adopted, the result will be to leave otherwise recoverable oil in the ground.
14 It is my professional opinion that imposing a maximum twenty year life on oil and gas wells will prevent
15 oil and gas well operators from using methods and practices known in the industry to maximize oil and
16 gas production because wells will have to be prematurely abandoned. Ultimate recovery of oil from these
17 "longer life" wells will not be maximized, and waste will occur.

18 I declare under penalty of perjury under the laws of the State of California that the foregoing is
19 true and correct.

20 Executed on February 7, 2024, in Austin, Texas

21 By:


Wayman T. Gore, Jr., P.E.

22
23
24
25
26
27 ⁷ Decline curve analysis is the accepted method used by petroleum engineers to estimate remaining recoverable
28 reserves and economic life of oil and gas wells.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Wayman T. Gore, Jr., P.E.

PROFESSIONAL EXPERIENCE

PRINCIPAL AND CONSULTING PETROLEUM ENGINEER 1995 - PRESENT
PGH Petroleum & Environmental Engineers, LLC Austin, Texas

- ◆ Petroleum and environmental engineering consulting services for oil and gas producers and interest owners, natural gas pipeline companies, lending institutions, state and federal agencies.
- ◆ Services include oil and gas reserve evaluations and economics, fair market value analyses, lease and contract compliance audits, reservoir and geologic field studies, secondary recovery and unitization, administrative and regulatory filings, and expert witness testimony.

SHAREHOLDER AND CONSULTING ENGINEER 1984 - 1995
Platt, Sparks & Associates, Inc. Austin, Texas

- ◆ Provide petroleum engineering consulting services to oil and gas industry clients.
- ◆ Consulting services included reservoir engineering, regulatory compliance and administration, contract compliance audits and expert witness testimony.

PRODUCTION/RESERVOIR ENGINEER 1981 - 1984
Sanchez-O'Brien Oil & Gas Corporation Houston, Texas

- ◆ Supervised company engineering operations in nine-state area and Gulf of Mexico (State Waters).
- ◆ Responsible for all well activity from well completion, facility construction and hookup through production, depletion and abandonment.
- ◆ Worked closely with state and federal regulatory agencies to ensure regulatory compliance. Worked closely with marketing, contracting and sale of natural gas and crude oil.
- ◆ Monitored purchase contracts to ensure contract compliance.
- ◆ Worked closely with natural gas pipeline companies to meet contract obligations.
- ◆ Reserve evaluation, economics and annual budget.
- ◆ Assisted with company reserve report preparation, loan monitoring and lending institutions.

PRODUCTION ENGINEER 1980 - 1981
Tenneco Oil Exploration & Production Houston, Texas

- ◆ Drilling completion and re-completion operations in South Texas, Upper Texas Gulf Coast, East Texas and Louisiana.

- ◆ Supervised production operations for Upper Texas Gulf Coast.
- ◆ Duties included monitoring well production and operating costs, design and supervision of well completions, re-completions, workovers and production facility installations.
- ◆ Other duties included reserve evaluations, economics, and preparation of annual budget.

EDUCATION

BACHELOR OF SCIENCE (PETROLEUM ENGINEERING)
The University of Texas at Austin

1980

Austin, Texas

LICENSES AND AFFILIATIONS

Licensed Professional Engineer in the State of Texas - #56682

Member – Society of Petroleum Engineers (SPE)

Member – Society of Petroleum Evaluation Engineers (SPEE)

Member – Society of Petrophysicists and Well Log Analysts (SPWLA)

Assoc. Member – American Association of Petroleum Geologists (AAPG)

Member – Society of Independent Professional Earth Scientists (SIPES)

Assoc. Member – American Association of Professional Landmen (AAPL)

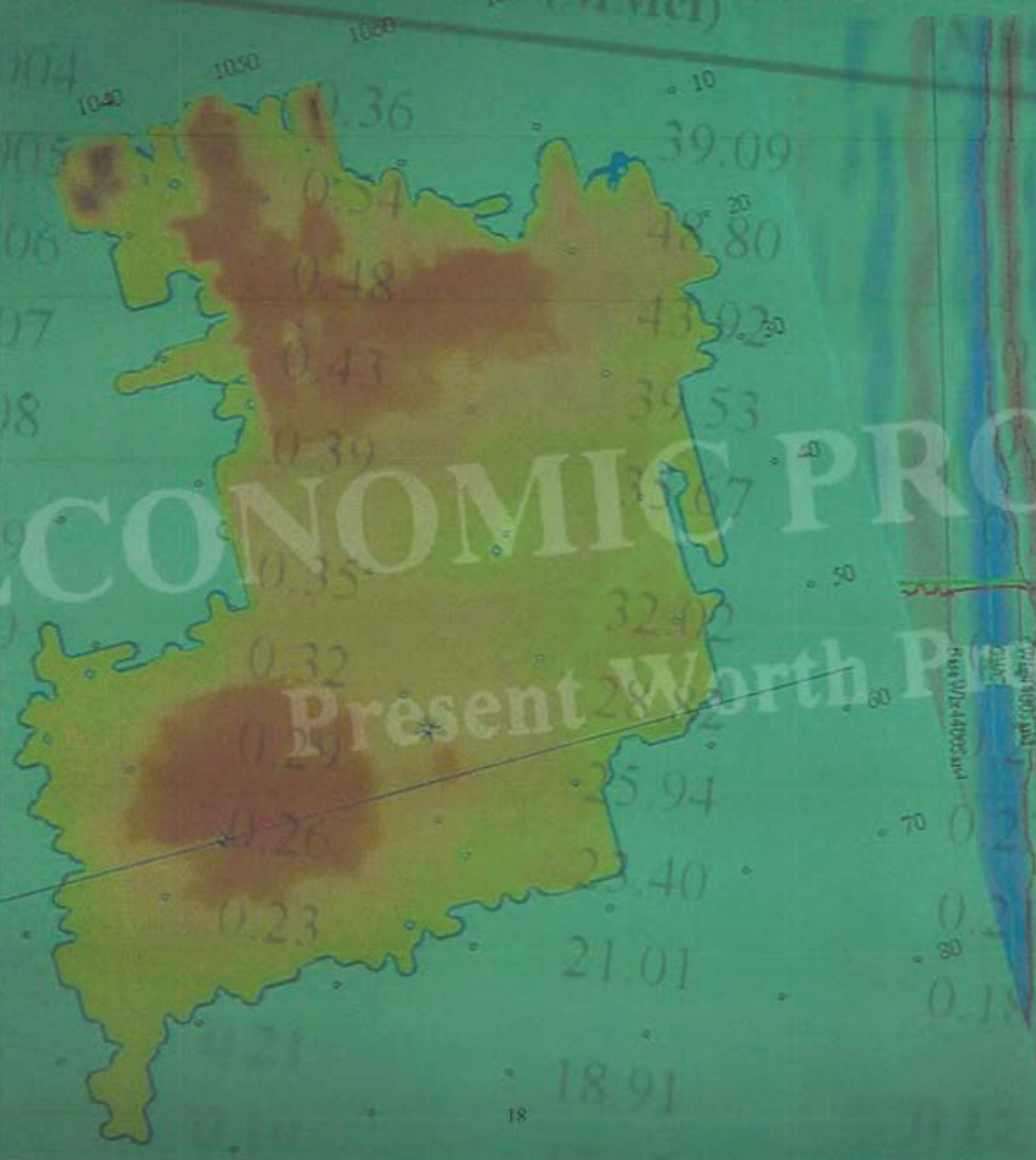
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

PGI
ENGINEERS · CONSULTANTS

a GAI Company

Oil
Gross
(Mbbbl)

Gas
Gross
(MMcf)



**I N T E G R A T E D
P E T R O L E U M A N D
E N V I R O N M E N T A L
S E R V I C E S F O R
T O D A Y ' S O I L A N D
G A S I N D U S T R Y**

PGH is one of the very few firms in the United States offering a full complement of petroleum, economic, environmental and regulatory consulting services to the energy industry. Our customers include major as well as independent oil and gas companies, financial institutions, oil and gas service companies, pipeline and utility companies, regulatory agencies, state governments, and legal and accounting organizations. PGH appraisals and audits are widely accepted—certifying large energy loan commitments. We are committed to satisfying clients' individual needs with timely, practical, results-oriented analysis and recommendations. Utilizing the latest in economic analysis, simulation, risk assessment, mapping and log evaluation technology and techniques ensure we provide superior value by delivering quality services at reasonable cost. The PGH philosophy is really very simple—quality work and practical solutions produce real value!

PGH provides a full range of petroleum, environmental and regulatory consulting services—drilling and reservoir engineering, field development studies, oil and gas reserve evaluation, borrowing base analyses, gas marketing studies, and secondary recover and unification projects. In addition, our integrated approach to petroleum and environmental engineering better meets the stricter environmental regulatory and compliance needs of today's oil and gas companies.

GENERAL PETROLEUM ENGINEERING

PGH interacts with geological, geophysical, and petrophysical personnel to accurately describe reservoir characteristics. We utilize reservoir description, core and log analysis, computer mapping, volumetrics, material balance, and reservoir simulation techniques to accurately model hydrocarbon reservoirs. PGH regularly advises clients on prudent drilling and development guidelines to efficiently and effectively produce recoverable reserves.

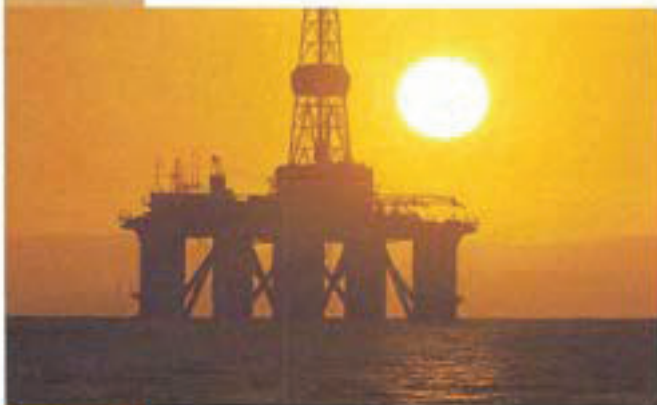
ENHANCED RECOVERY/SIMULATION

The PGH team employs sophisticated reservoir modeling tools to determine the feasibility of enhanced recovery techniques. From project design and economics to regulatory approval and implementation, we work to ensure projects meet our client's specific needs and goals.

ECONOMICS

PGH is frequently called upon to appraise oil and gas properties using the latest in decline curve, material balance, and economic technology. Our appraisals are used for a variety of reasons, among them acquisitions, divestitures, borrowing base analysis, internal business planning and estates. Our clients include royalty and working interest owners, family enterprises, independent producers, and major integrated oil and gas companies.

Our appraisal services include audits of in-house or third party reserve estimates. PGH certified appraisals are accepted by major oil and gas lending institutions, mezzanine firms and equity groups and are relied upon to certify energy loan commitments.



FINANCING FOR OFFSHORE
OIL AND GAS FIELD
DEVELOPMENT, GATHERING
SYSTEMS, PROCESSING
FACILITIES AND PIPELINES
HAVE BEEN SECURED BY
APPRAISALS FROM PGH.

ADVISORY SERVICES

PGH's broad experience is the foundation of a variety of petroleum advisory services, including oil and gas lease and contract analysis, oil and gas payment audits, pricing policy development and administration, and investment counseling. Our advisory service support our client's general business development strategies, litigation, arbitration, and mediation.

LITIGATION SUPPORT

PGH provides expert petroleum engineering studies and testimony in complex litigation and arbitration matters. Our studies and opinions stand up under the closest scrutiny from attorneys, judges, and juries. We have been accepted as expert petroleum engineers before state and federal regulatory agencies, numerous state and federal courts, and arbitration panels. We have also offered expert testimony in many areas of petroleum engineering including drainage, proper development, fair market value, lost production, oil and gas lease/contract requirements, and prudent operators standards.

REGULATORY ENGINEERING

PGH is one of the preeminent engineering firms with a specialty in Texas Oil and Gas Regulations. We offer cradle-to-grave regulatory service—from drilling permit applications and exceptions to new field designation, field consolidations, allowable issues and solutions, injection/disposal applications, tight area designations, severance tax reductions and credits, and proper plugging and abandonment. Our engineers and technicians work closely, every day, with state regulators to ensure that we are abreast of the latest rules, and that our clients are in complete compliance, receiving fair and equitable treatment in the application of all guidelines and regulations.



PGH ROUTINELY ADVISES
CLIENTS ON POLLUTION
AND CLEAN-UP ISSUES.
WE WORK HARD TO
ENSURE OUR CLIENTS
MEET ALL STATE AND
FEDERAL RULES.

PETROLEUM ENGINEERING SERVICES

- Oil and gas reserve evaluation and economic analysis
- Borrowing base analyses of oil and gas properties for borrowing and/or lending purposes
- Acquisition screening and divestiture planning
- Fair market value studies
- Engineering and geologic field studies including field development and reservoir management plans
- Representation before state and federal regulatory agencies
- Unitization and secondary recovery studies
- Review, analysis and negotiation of agreements and contracts
- Reservoir analysis
- Oil and gas marketing studies
- Production accounting and payment audits
- State and federal regulatory compliance audits
- Litigation and arbitration support
- Estate planning and evaluations
- State and Federal regulatory filings
- Appraisal of producing, non-producing and undeveloped mineral interests



neability

Code: 123456789

Cat: Producing

Location:

Whole Field Production

Initial Rate: 4,940 mcf/d

Oil Rate SC DOE_HM18e1

Abandonment Water Rate SC Historical

000,000

Initial Rate

Abandonment

Abandonment Day: 3/5/2021

Indicators

Return on Investment (disc):

Return on Investment (undisc):

Years to Payout:

Internal Rate of Return (%):

Initial



PGIH
ENGINEERS • CONSULTANTS

a GAI Company

PGH Petroleum & Environmental Engineers, L.L.C.

Mailing Address:
P.O. Box 91629
Austin, TX 78709-1629
512.480.8800

Physical Address:
5100 W Hwy 290
Bldg. 2, Suite 300
Austin, TX 78735

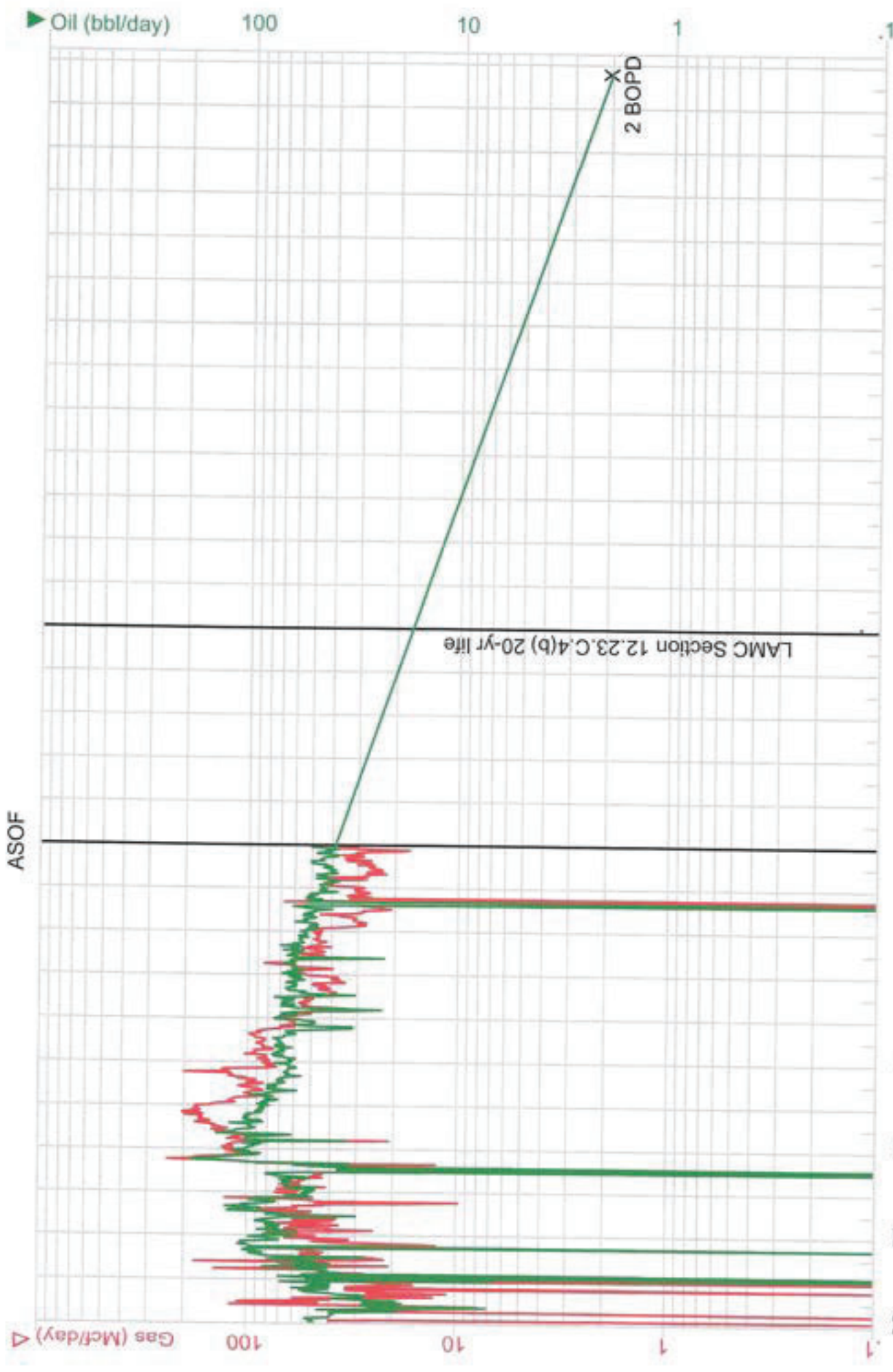
pghengineers.com

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

20 S-54

Oper: E & B NAT RES MGMT CORP
Major Phase: Oil

Field: BEVERLY HILLS
LOS ANGELES, CA
04-037-21190-0000



Proj Oil Cum: 1,041.08 Mbb1
 Oil Rem: 192.55 Mbb1
 Oil EUR: 1,233.64 Mbb1

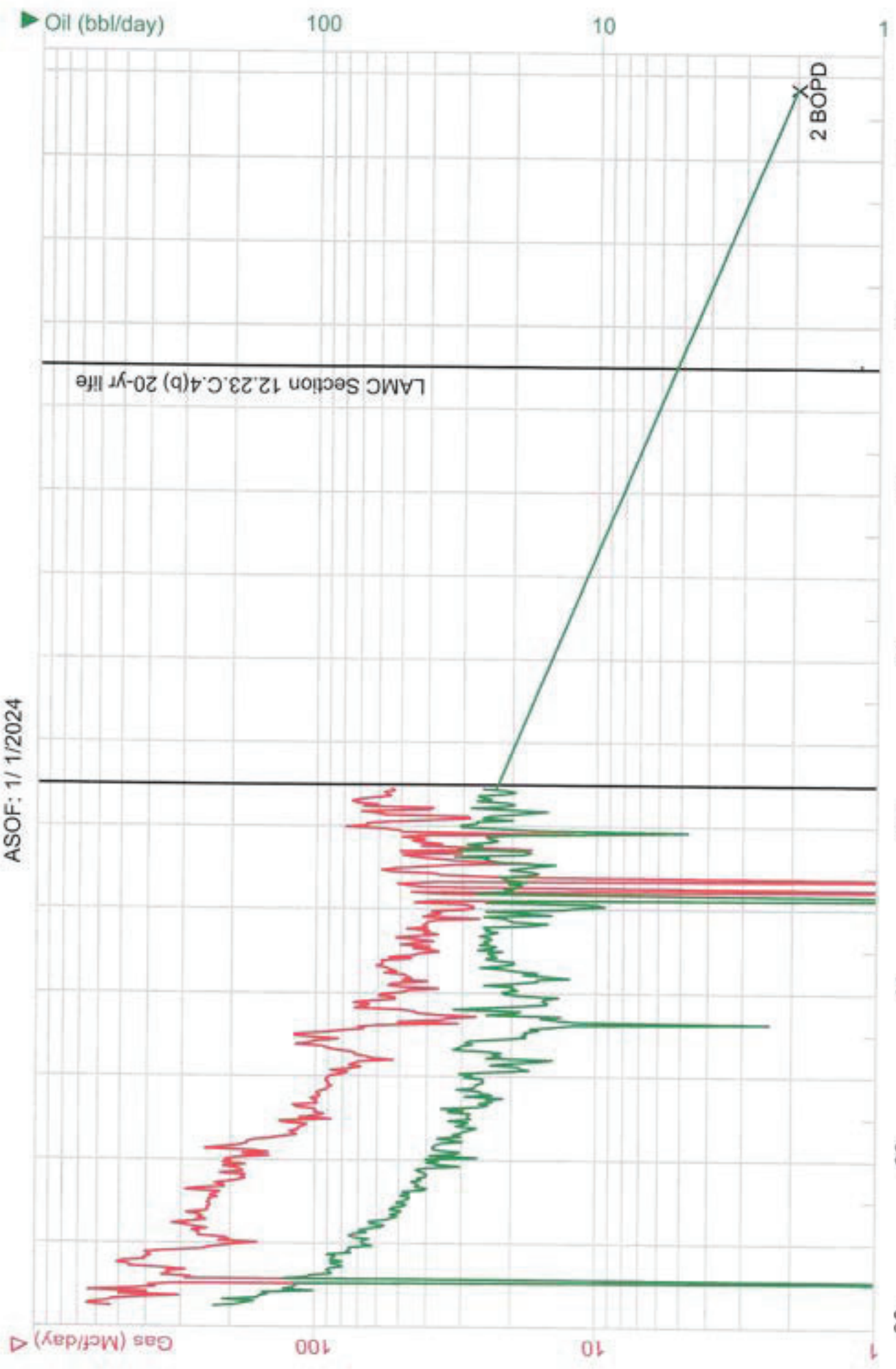
Proj Gas Cum: 1,018.66 MMcf
 Gas Rem: 0.00 MMcf
 Gas EUR: 1,018.66 MMcf

P-59B

Oper: E & B NAT RES MGMT CORP
Major Phase: Oil

Field: BEVERLY HILLS
LOS ANGELES, CA
04-037-20946-0000

ASOF: 1/1/2024



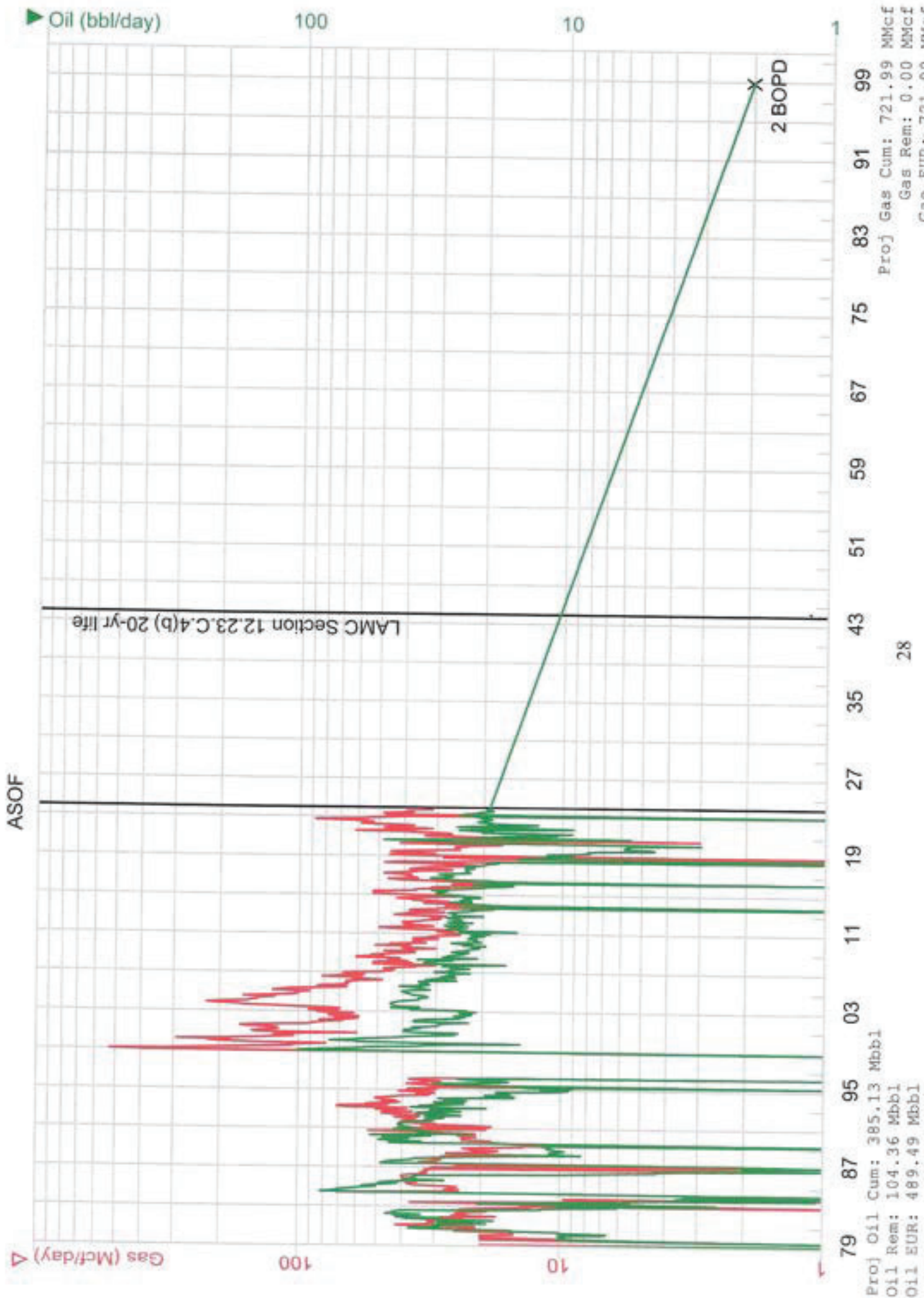
98 Proj Oil Cum: 320.08 Mbbbl
Oil Rem: 86.90 Mbbbl
Oil EUR: 406.98 Mbbbl

54 Proj Gas Cum: 1,126.93 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 1,126.93 MMcf

29 P-28

Oper: E & B NAT RES MGMT CORP
Major Phase: Oil

Field: BEVERLY HILLS
LOS ANGELES, CA
04-037-20643-0000

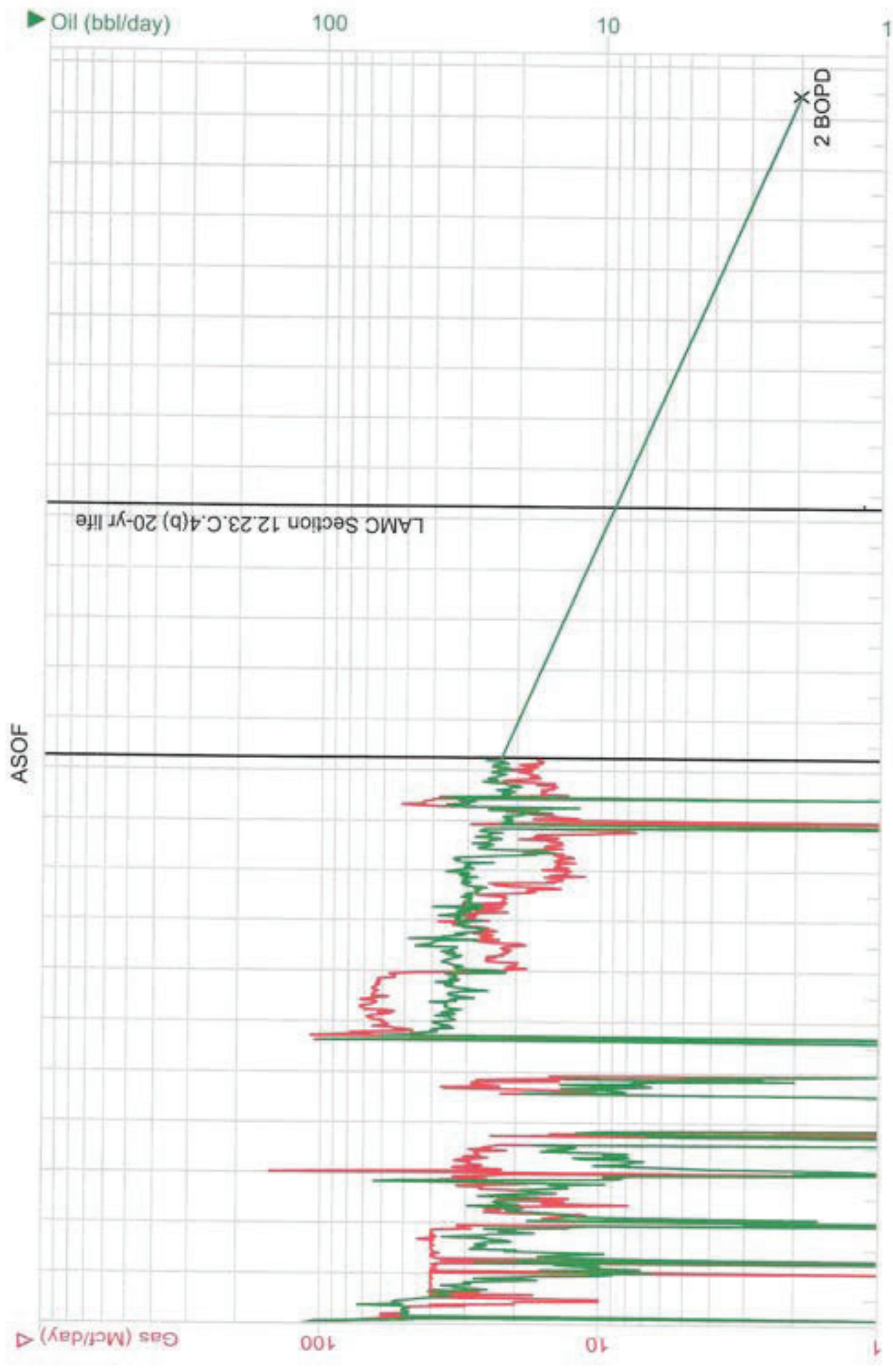


Proj Oil Cum: 385.13 Mbb1
Oil Rem: 104.36 Mbb1
Oil EUR: 489.49 Mbb1

Proj Gas Cum: 721.99 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 721.99 MMcf

20 S-74
Oper: E & B NAT RES MGMT CORP
Major Phase: Oil

Field: BEVERLY HILLS
LOS ANGELES, CA
04-037-21386-0000

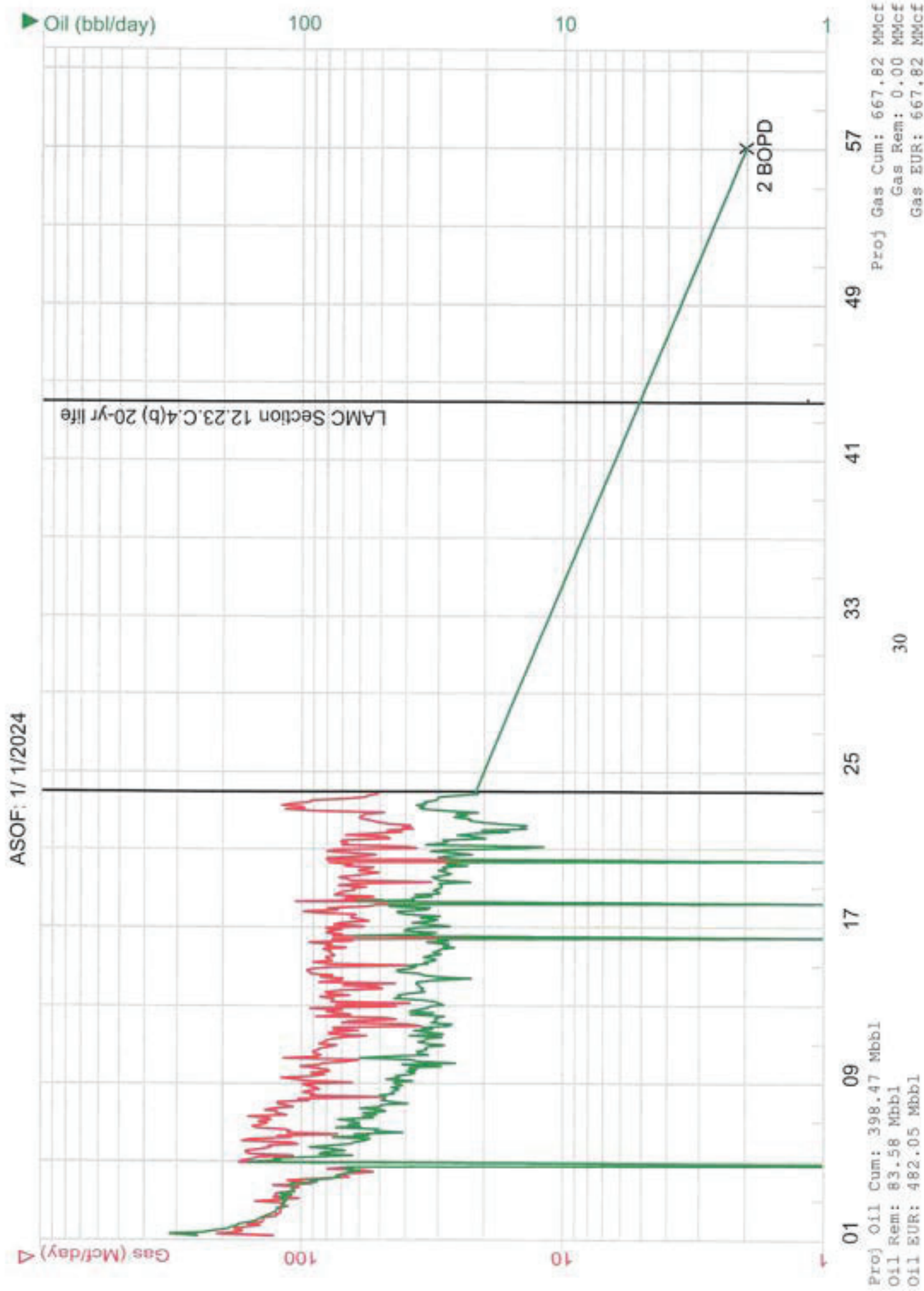


Proj Oil Cum: 419.70 Mbbl
Oil Rem: 108.65 Mbbl
Oil EUR: 528.36 Mbbl

Proj Gas Cum: 458.83 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 458.83 MMcf

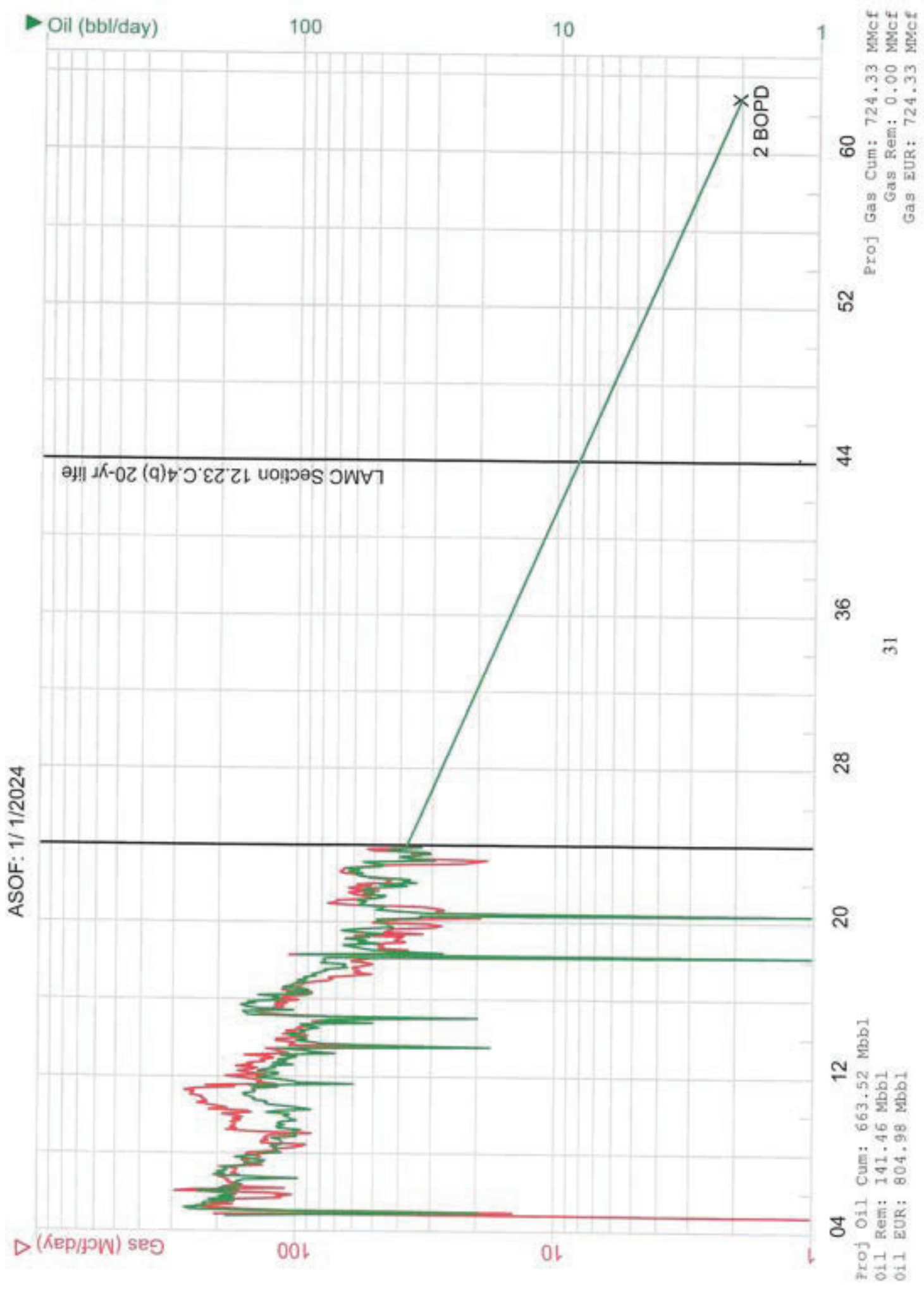
Field: CASCADE
LOS ANGELES, CA
04-037-24221-0000

CASCADE UNIT 1
Oper: CASCADE RESOURCES LLC
Major Phase: Oil



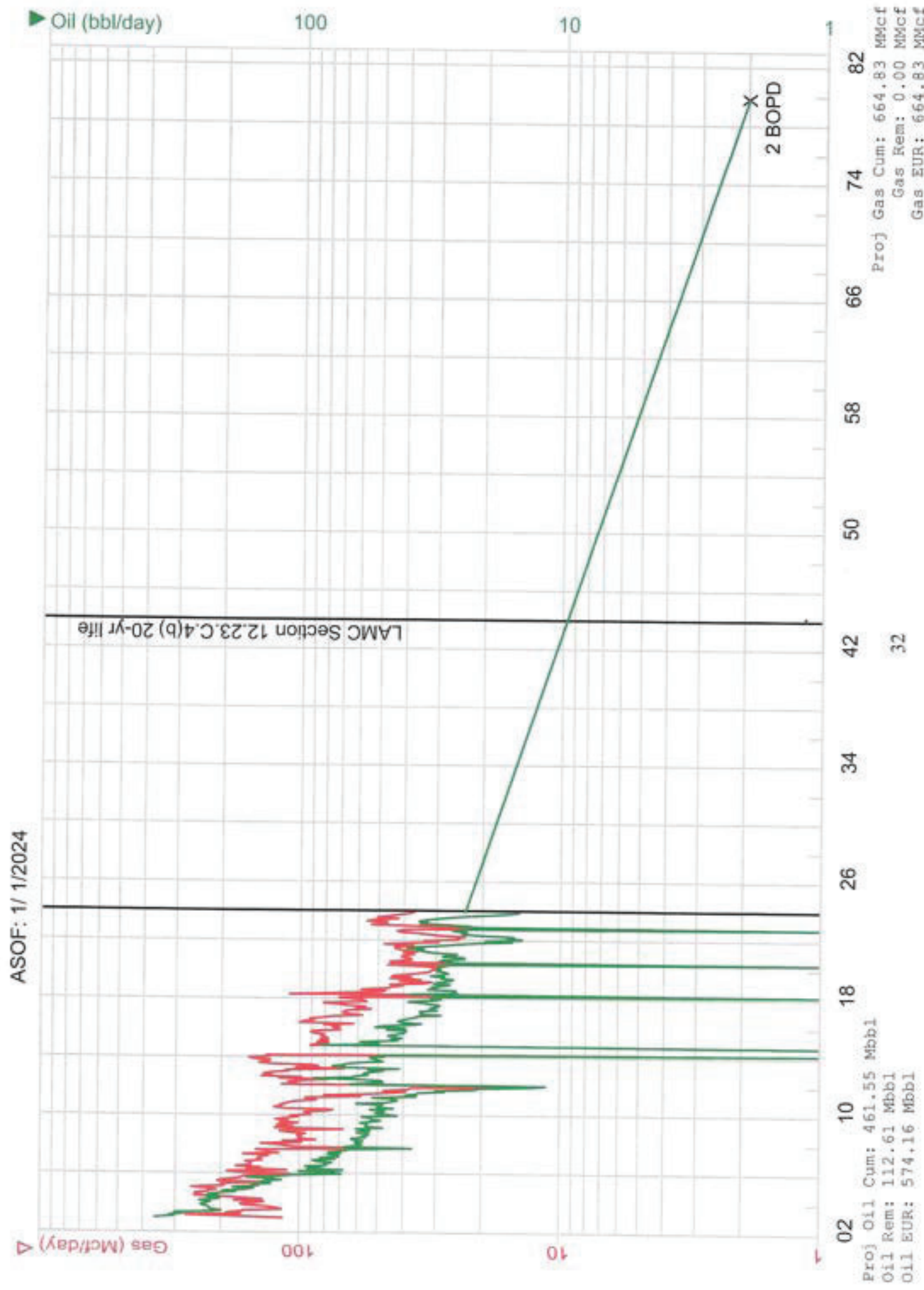
CASCADE UNIT 5
Oper: CASCADE RESOURCES LLC
Major Phase: Oil

Field: CASCADE
LOS ANGELES, CA
04-037-24270-0000



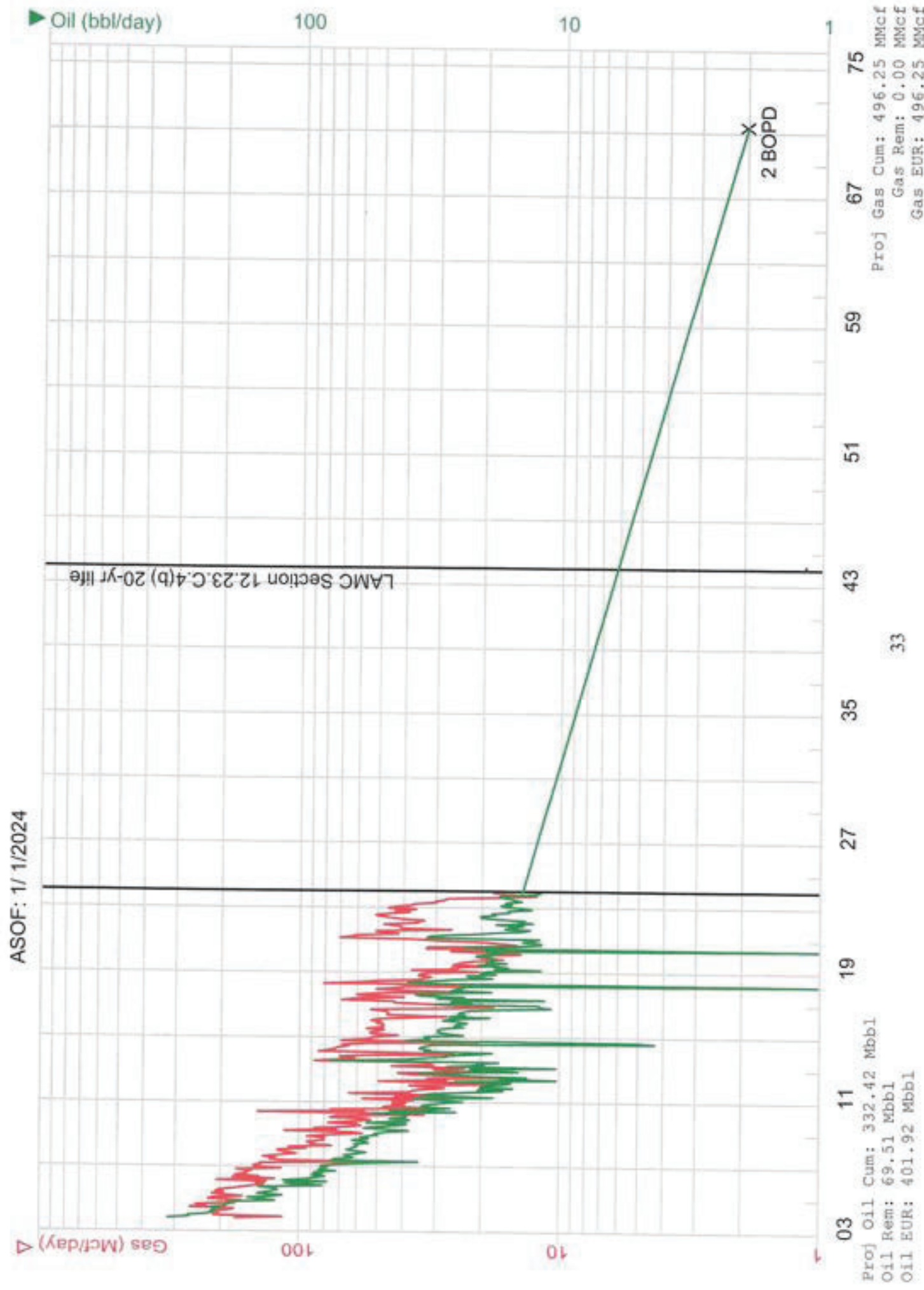
O'MELVENY PARK 4
Oper: CASCADE RESOURCES LLC
Major Phase: Oil

Field: CASCADE
LOS ANGELES, CA
04-037-24249-0000



CASCADE UNIT 4
Oper: CASCADE RESOURCES LLC
Major Phase: Oil

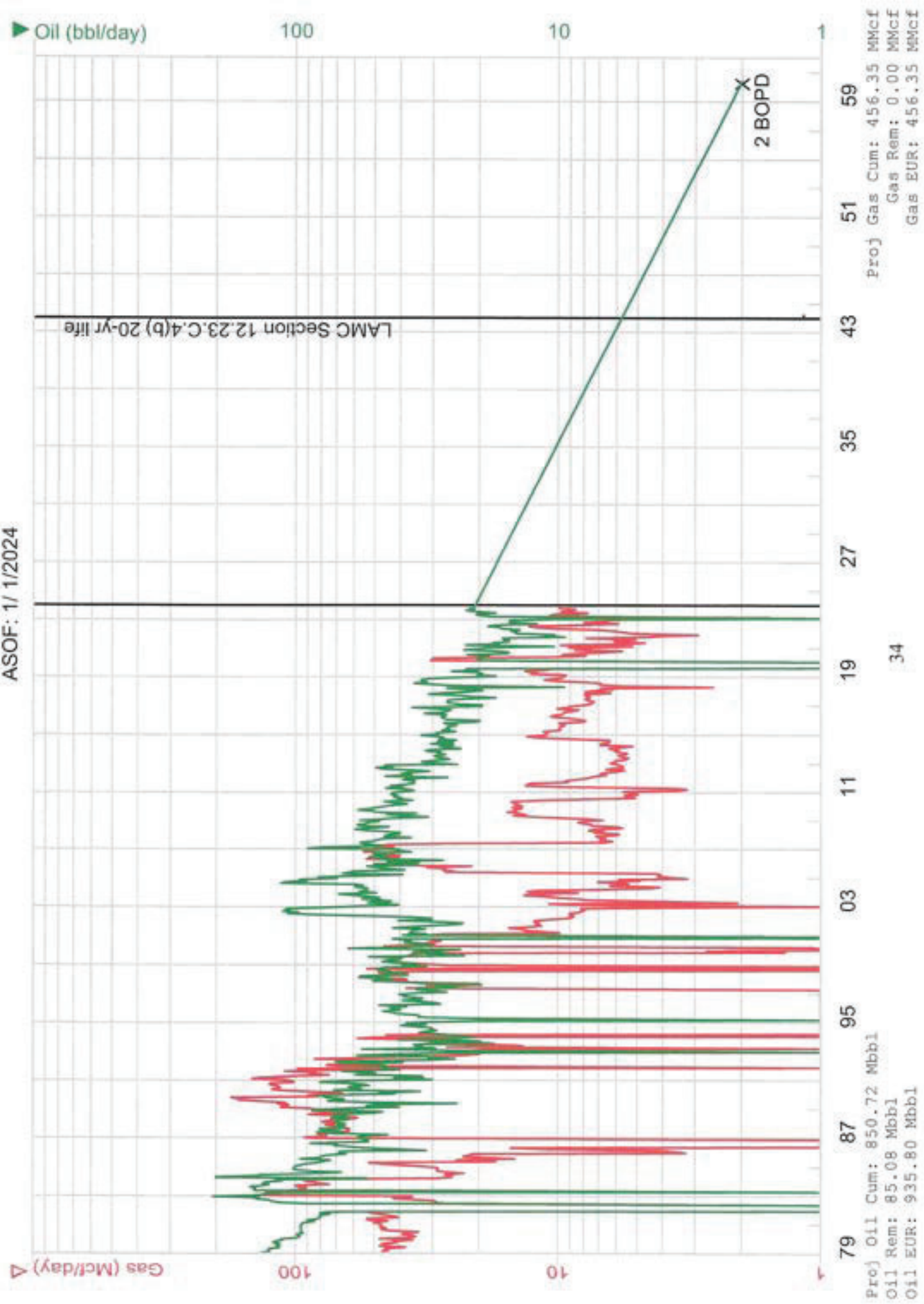
Field: CASCADE
LOS ANGELES, CA
04-037-24264-0000



Field: LAS CIENEGAS
LOS ANGELES, CA
04-037-00384-0000

MURPHY 17
Oper: E & B NAT RES MGMT CORP
Major Phase: Oil

ASOF: 1/ 1/2024

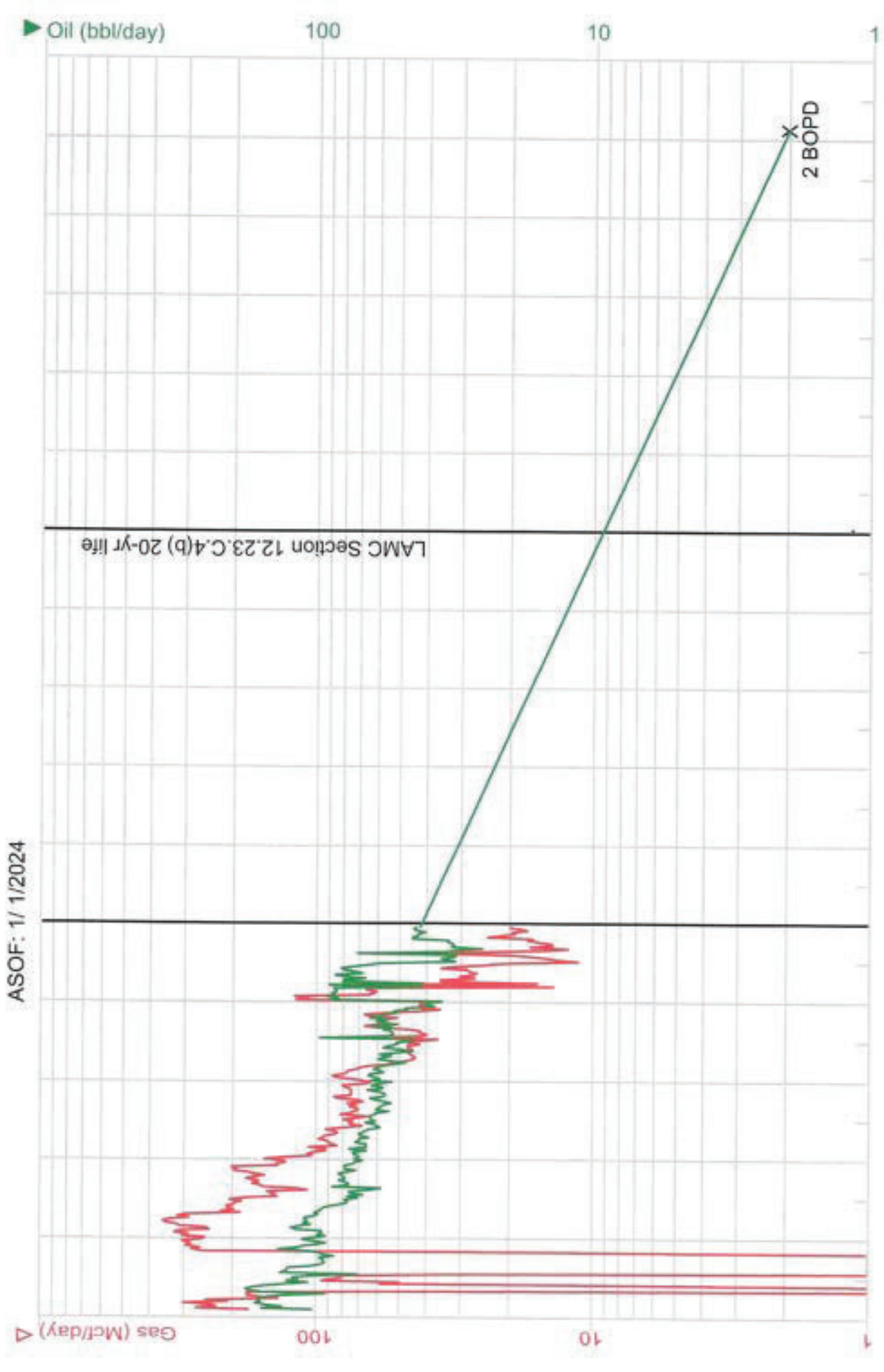


Proj Oil Cum: 850.72 Mbbbl
Oil Rem: 85.08 Mbbbl
Oil EUR: 935.80 Mbbbl

Proj Gas Cum: 456.35 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 456.35 MMcf

Field: LAS CIENEGAS
LOS ANGELES, CA
04-037-00374-0000

MURPHY 6
Oper: E & B NAT RES MGMT CORP
Major Phase: Oil



04 12 20 28 36 44 52 60

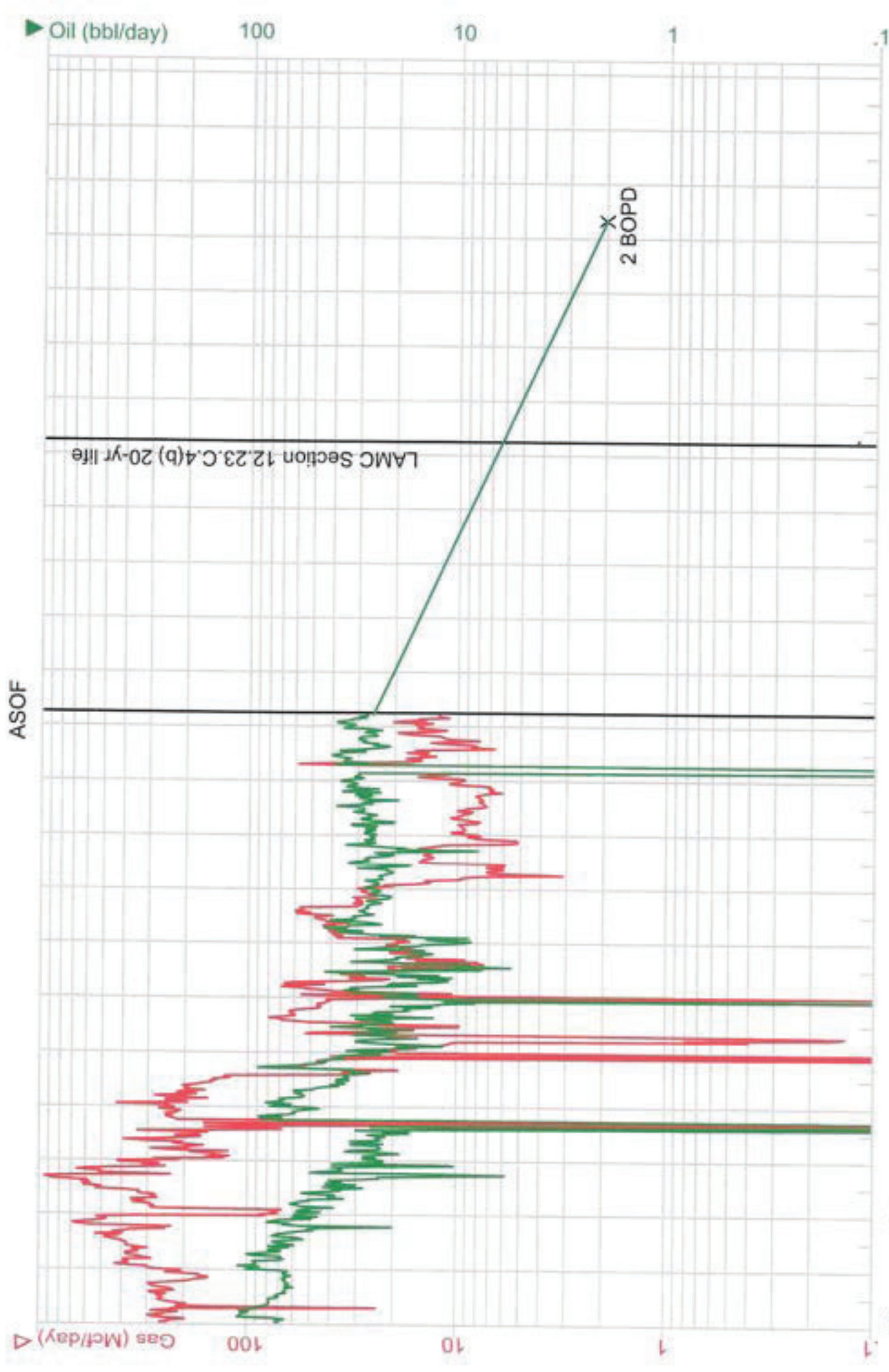
Proj Oil Cum: 536.40 Mbbbl
Oil Rem: 157.43 Mbbbl
Oil EUR: 693.83 Mbbbl

Proj Gas Cum: 701.05 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 701.05 MMcf

35

Field: LAS CIENEGAS
 LOS ANGELES, CA
 04-037-20967-0000

MURPHY 23
 Oper: E & B NAT RES MGMT CORP
 Major Phase: Oil



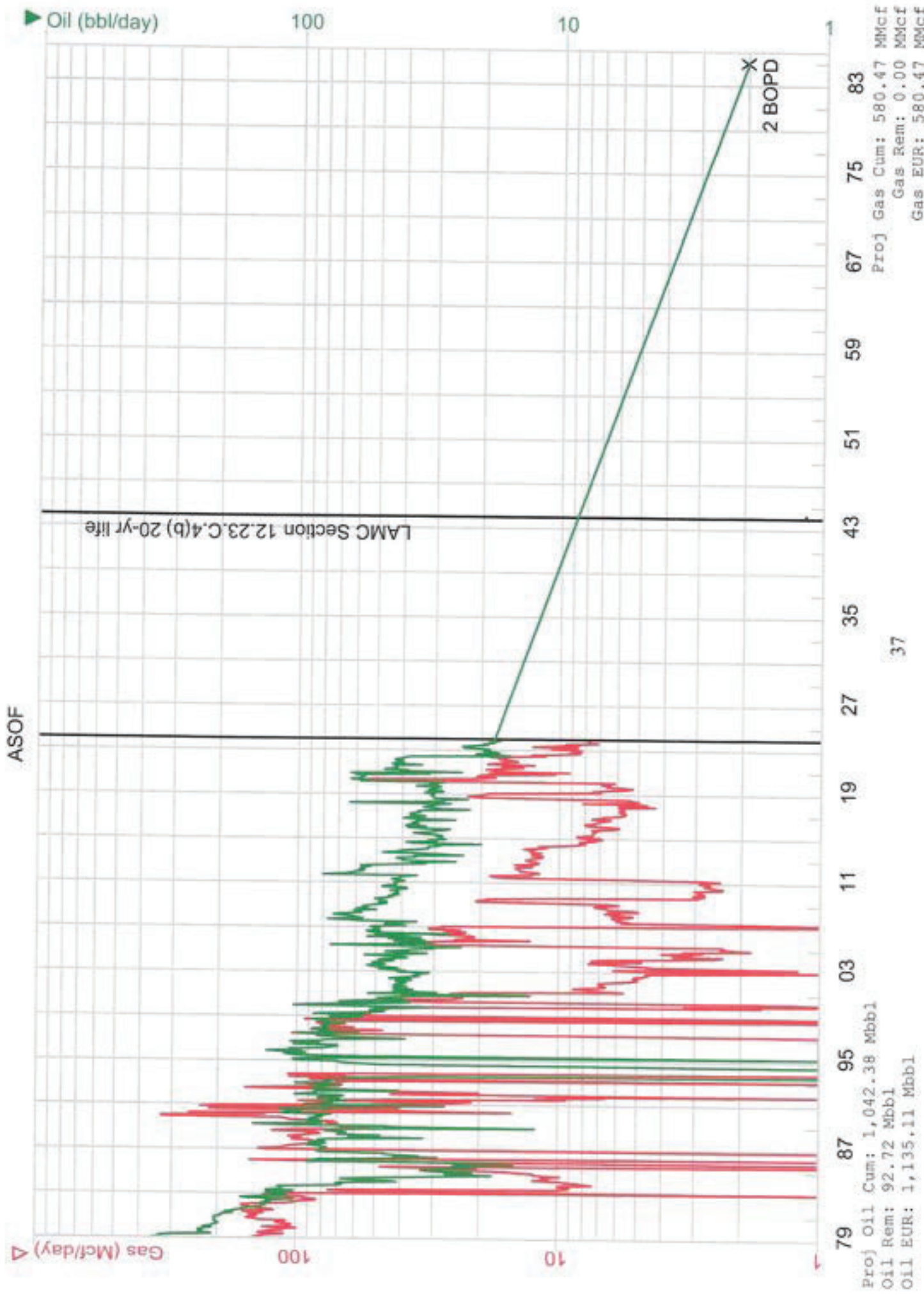
79 87 95 03 11 19 27 35 43 51 59 67

Proj Oil Cum: 653.59 Mbbbl
 Oil Rem: 99.27 Mbbbl
 Oil EUR: 752.86 Mbbbl

Proj Gas Cum: 2,269.54 MMcf
 Gas Rem: 0.00 MMcf
 Gas EUR: 2,269.54 MMcf

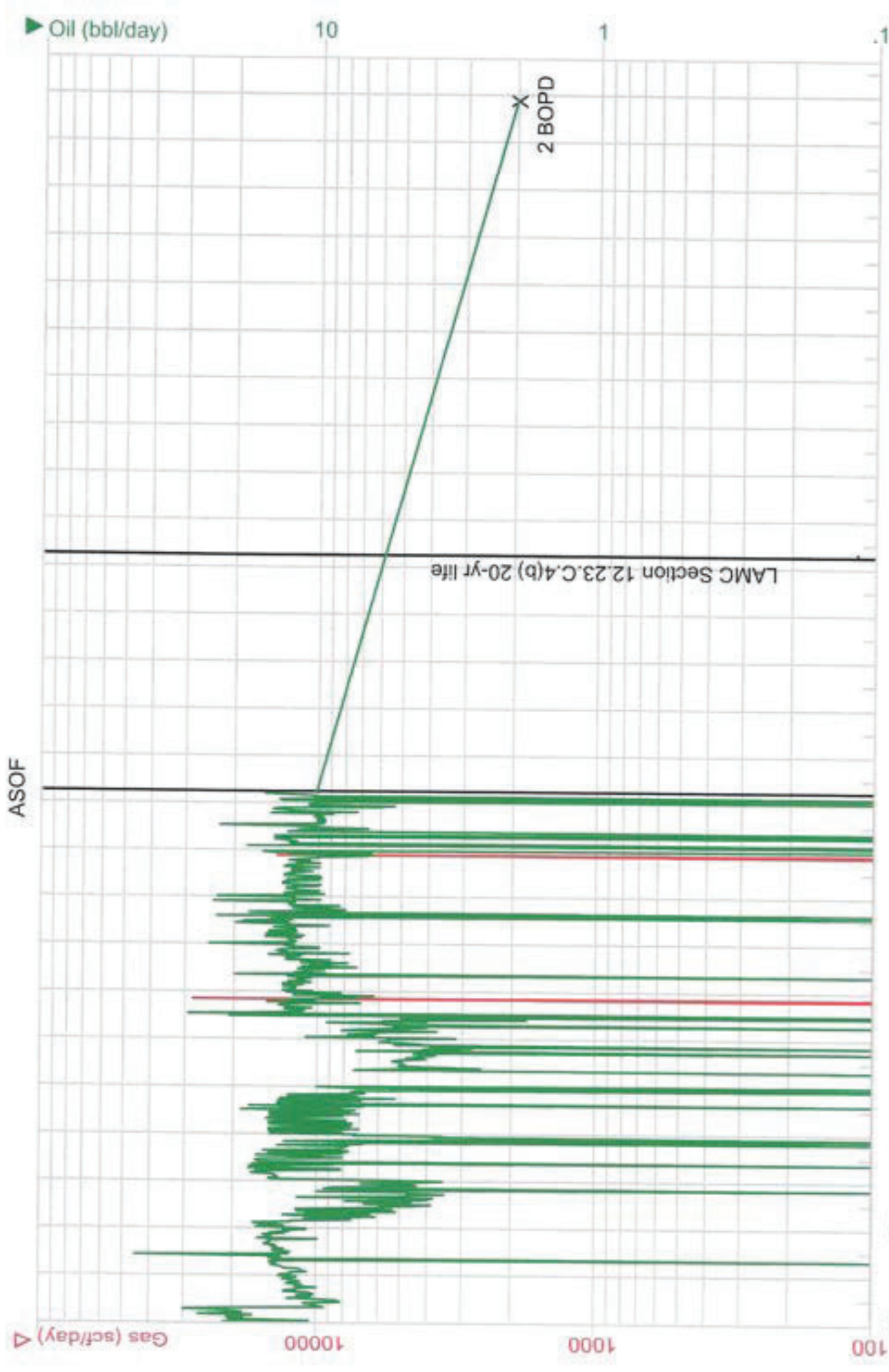
MURPHY 13
 Oper: E & B NAT RES MGMT CORP
 Major Phase: Oil

Field: LAS CIENEGAS
 LOS ANGELES, CA
 04-037-00380-0000



Field: TORRANCE
 LOS ANGELES, CA
 04-037-17533-0000

CAPITAL 71
 Oper: O'DONNELL OIL, LLC
 Major Phase: Oil



79 87 95 03 11 19 27 35 43 51 59 67 75 83

Oil (bbl/day) 10 1

Gas (scf/day) 10000 1000 100

Proj Oil Cum: 181.10 Mbb1
 Oil Rem: 56.95 Mbb1
 Oil EUR: 238.05 Mbb1

Proj Gas Cum: 1.31 MMcf
 Gas Rem: 0.00 MMcf
 Gas EUR: 1.31 MMcf

LAMC Section 12.23.C.4(b) 20-yr life

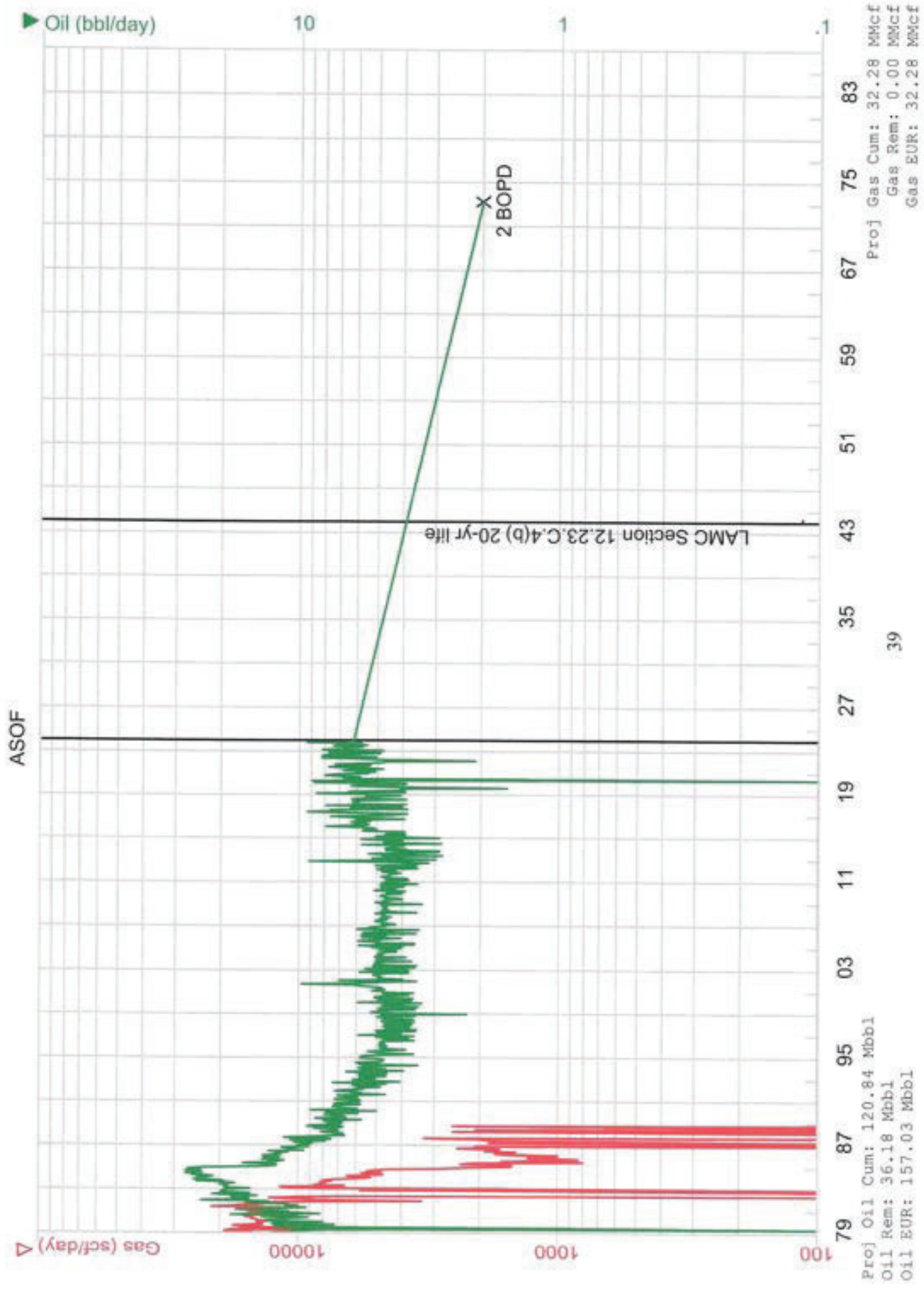
ASOF

38

2 BOPD

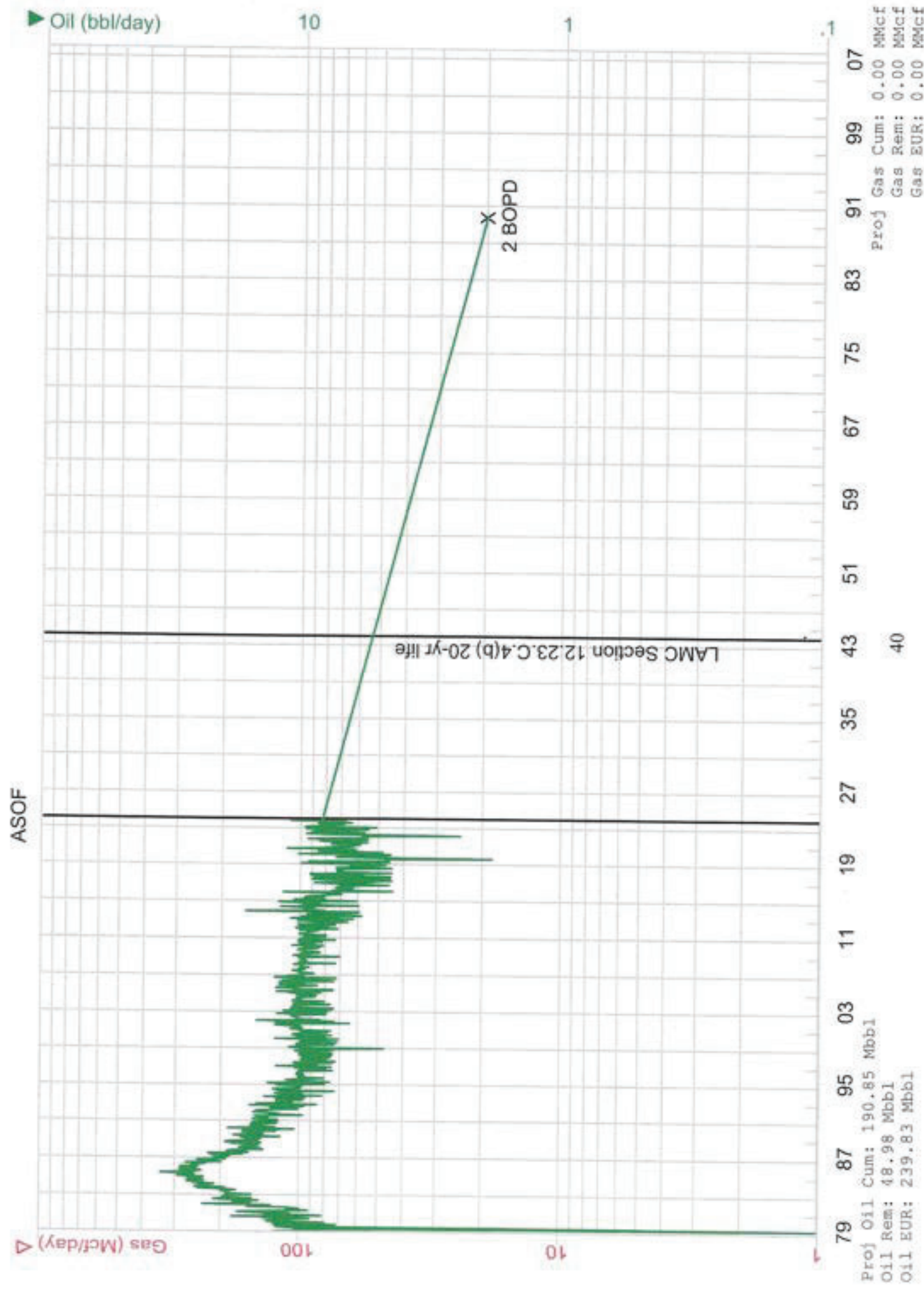
BROWN BEVIS LEASE WELL 31
Oper: COOPER & BRAIN, INC.
Major Phase: Oil

Field: TORRANCE
LOS ANGELES, CA
04-037-17305-0000



BROWN BEVIS LEASE WELL 26
 Oper: COOPER & BRAIN, INC.
 Major Phase: Oil

Field: TORRANCE
 LOS ANGELES, CA
 04-037-17300-0000

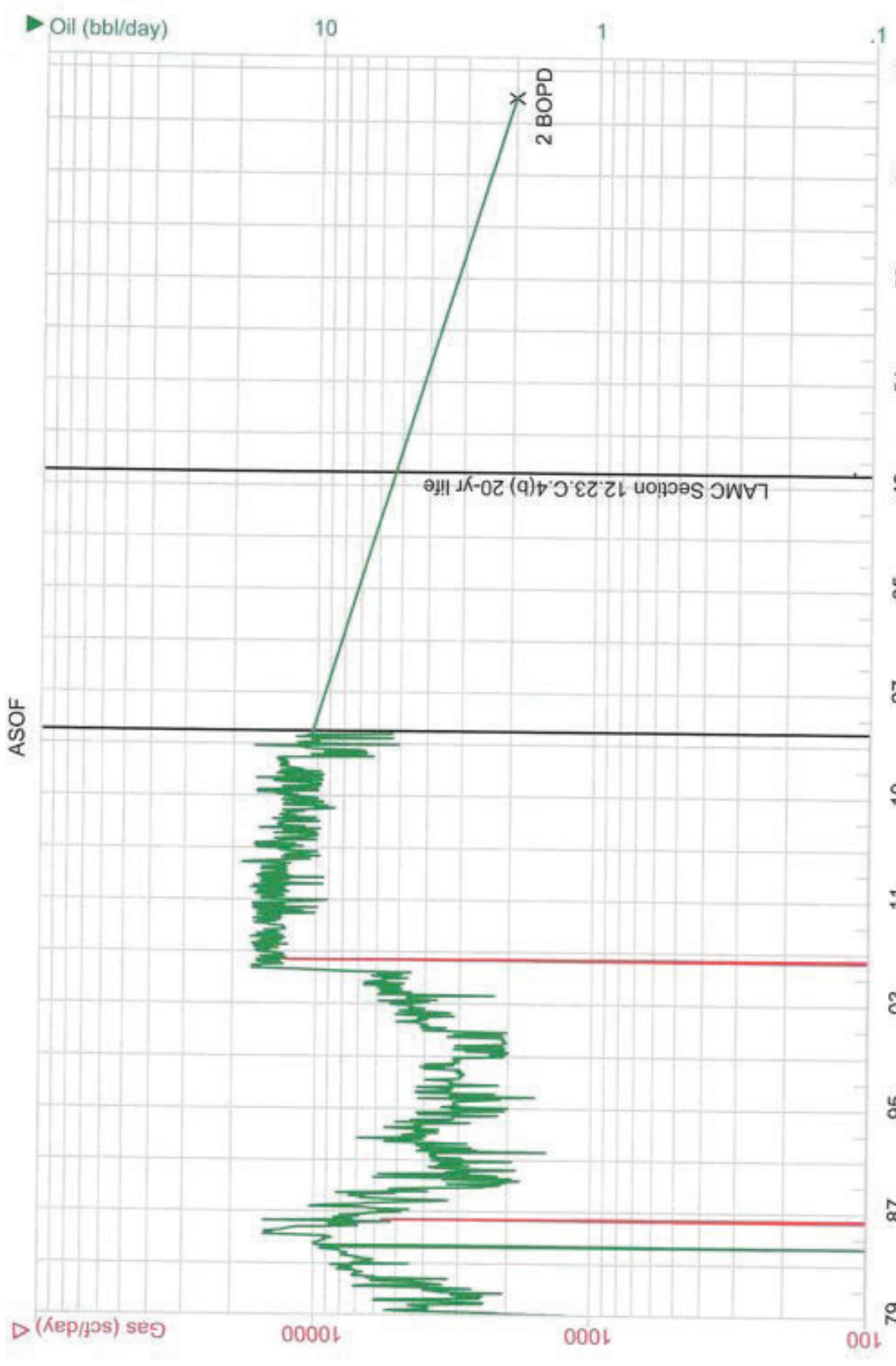


Proj Gas Cum: 0.00 MMcf
 Gas Rem: 0.00 MMcf
 Gas EUR: 0.00 MMcf

Proj Oil Cum: 190.85 Mbbbl
 Oil Rem: 48.98 Mbbbl
 Oil EUR: 239.83 Mbbbl

SPRING 81
Oper: O'DONNELL OIL, LLC
Major Phase: Oil

Field: TORRANCE
LOS ANGELES, CA
04-037-17539-0000



Proj Oil Cum: 134.50 Mbb1
Oil Rem: 55.19 Mbb1
Oil EUR: 189.69 Mbb1

Proj Gas Cum: 0.64 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 0.64 MMcf

Communication from Public

Name: NARO-CA by Edward S Hazard, President
Date Submitted: 06/08/2026 04:33 PM
Council File No: 17-0447-S2
Comments for Public Posting: June 8, 2026 Via US Mail and LACouncilComment.com Los Angeles City Council c/o Office of the City Clerk City Hall, Room 395 Los Angeles, California 90012 Attention: PLUM Committee Re: PROPOSED OIL AND GAS DRILLING ORDINANCE; CPC-2025-2884-CA; ENV-2025-2885-MND; CF 17-0447-S2 Dear Honorable Members: The California Chapter of the National Association of Royalty Owners (NARO-CA) advocates for and defends the rights of the estimated 500,000 private citizen oil and gas royalty owners in California, and even more mineral owners. We strongly oppose any efforts by the City of Los Angeles to phase out oil and gas operations or to prohibit new drilling or to further constrain existing oil production. The grounds for our opposition are as set forth in our earlier public comment letter dated December 8, 2025 addressed to the L.A. Planning Commission. A copy of that letter, with attachments, is attached hereto and, by reference, made a part hereof. In short, given the current crude oil shortage, the sky-high gasoline prices, and the threat to our national security, enactment of this ordinance would be very unwise. Regards, Edward S. Hazard, President National Association of Royalty Owners-California, Inc. (NARO-CA) Cc: Edward S. Renwick, Esq.



June 8, 2026

Via US Mail and LACouncilComment.com

Los Angeles City Council
c/o Office of the City Clerk
City Hall, Room 395
Los Angeles, California 90012
Attention: PLUM Committee

Re: PROPOSED OIL AND GAS DRILLING ORDINANCE; CPC-2025-2884-CA; ENV-2025-2885-MND;
CF 17-0447-S2

Dear Honorable Members:

The California Chapter of the National Association of Royalty Owners (NARO-CA) advocates for and defends the rights of the estimated 500,000 private citizen oil and gas royalty owners in California, and even more mineral owners. We strongly oppose any efforts by the City of Los Angeles to phase out oil and gas operations or to prohibit new drilling or to further constrain existing oil production.

The grounds for our opposition are as set forth in our earlier public comment letter dated December 8, 2025 addressed to the L.A. City Planning Commission. A copy of that letter, with attachments, is attached hereto and, by reference, made a part hereof. In short, given the current crude oil shortage, the sky-high gasoline prices, and the threat to our national security, enactment of this ordinance would be very unwise.

Regards,

Edward S. Hazard, President

Cc: Edward S. Renwick, Esq.

Founded in 1980, the National Association of Royalty Owners is the only national organization representing solely, and without compromise, oil and gas royalty owners' interests.



December 8, 2025

SENT VIA EMAIL TO: cpc@lacity.org

Re: PUBLIC COMMENT, Opposition to proposed Los Angeles City Oil and Gas Drilling Ordinance, CPC-2025-2884-CA

Dear President Lawshe and Members of the Los Angeles City Planning Commission,

The California Chapter of the National Association of Royalty Owners (NARO-CA) advocates for and defends the rights of the estimated 500,000 private citizen oil and gas royalty owners in California, and even more mineral owners. We strongly oppose any efforts by the City of Los Angeles to phase out oil and gas operations or to prohibit new drilling or to further constrain existing oil production as is proposed in Agenda Item 10 on page 6 of the Los Angeles City Planning Commission (CPC) meeting agenda for December 11, 2025.

At our request, this agenda item has been reviewed by our General Counsel, Ed Renwick of Hanna & Morton, LLP. Attached hereto is his brief response together with the Declaration of Wayman T. Gore, Jr., Petroleum Engineer.

Your proposed Oil and Gas Drilling Ordinance that would ultimately shut down all oil and gas operations within the City of Los Angeles relies upon the authority purported to be given to you to do so under the terms of AB 3233. As noted in Mr. Renwick's letter, we believe that AB 3233 is in violation of the California Constitution and should not be relied upon by any California county or municipality to justify any further actions regulating oil production.

Further, we believe that oil and gas mineral and royalty rights cannot be amortized as they are depleting assets that cannot be relocated. The concept that amortization is fair and therefore constitutional is based on the idea that a nonconforming business is given a reasonable period of time so that its owner will be able to move that nonconforming business to a new location with minimal loss. This logic does not apply to oil and gas mineral rights. Oil and gas can only be produced, and the value only be realized if they are produced in the location where they were deposited by nature millions of years ago. The mineral and royalty owners' assets will have no value if they are no longer able to

Founded in 1980, the National Association of Royalty Owners is the only national organization representing solely, and without compromise, oil and gas royalty owners' interests.

PO Box 2777 • Bakersfield, CA 93303 • 661-210-3025 • info@naro-ca.org • www.naro-us.org

produce oil or gas from them. Their assets will have been taken from them by the City of Los Angeles. They will be forced to take action to protect their assets.

If forced to act, NARO-CA will stand with the royalty owners, just as we have successfully done in Monterey County, Ventura County and previously in our lawsuit against the City of Los Angeles.

When Monterey County passed the oil shutdown Measure Z, NARO-CA filed suit together with over 80 royalty owner co-plaintiffs. In addition, five oil companies filed suits. Millions were spent on legal fees and costs. We won, the County lost.

With regards to the potential for millions or billions of dollars in takings claims that might result from your contemplated actions, we draw your attention to the Judge's Intended Decision in the Measure Z case. In it he stated that **"Consequently, should it take effect, Measure Z would effect a facial regulatory taking of CRC's and some members of NARO's property."** He went on to state that **"...the remaining Petitioners would have the option of proceeding with as-applied takings claims."** However, since the court overturned Measure Z this issue was rendered moot. Remember, this judge's final decision was ultimately upheld by unanimous decisions by both the Appellate Court and the California State Supreme Court. It is now solid case law.

We believe that at this time it would be in the best interests of the taxpayers and citizens of the city of Los Angeles that you refrain from proceeding with any efforts to pursue an oil and gas phaseout and/or any further restrictions on oil production. Continuing with such actions could result in substantial expenses and liabilities for the City of Los Angeles.

Sincerely,



Edward S. Hazard
President

Cc: Edward S. Renwick, Esq.

HANNA AND MORTON LLP

A LIMITED LIABILITY PARTNERSHIP INCLUDING A PROFESSIONAL CORPORATION
LAWYERS

444 SOUTH FLOWER STREET, SUITE 2530
LOS ANGELES, CALIFORNIA 90071-2918
TELEPHONE: (213) 628-7131
WEBSITE: www.hanmor.com

EDWARD S. RENWICK
DIRECT DIAL: (213) 430-2516
EMAIL: erenwick@hanmor.com

December 8, 2025

VIA EMAIL

Edward S. Hazard
President
National Association of Royalty Owners-Ca, Inc.
2119 Verde Street
Bakersfield, CA 93304

Re: Los Angeles Planning Commission New Oil Ordinance

Dear Ed,

You have asked me to comment on the validity under the California Constitution of the current draft of the oil ordinance that the Los Angeles Planning Commission will be considering on December 11, 2025. That ordinance constitutes a reoption of essentially the same ordinance as the Los Angeles Superior Court recently struck down. Indeed, you will recall that the city chose not to appeal the decision of the Superior Court, but instead chose to readopt the ordinance in reliance on the passage of AB-3233.

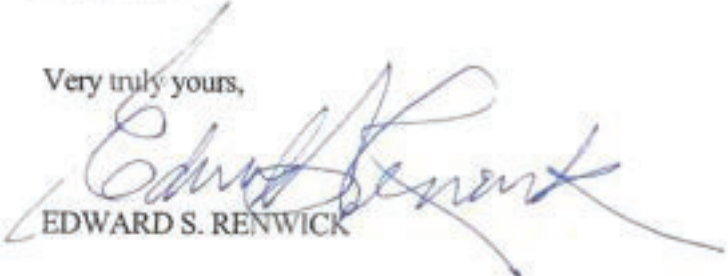
Our complaint in NARO-CA et al v. City of Los Angeles (in which Judge Kin still has continuing jurisdiction) alleges preemption and also a violation of Article 11 Sections 5 and 7 of the California Constitution. We prevailed on both counts. The City of Los Angeles is relying on AB-3233 in its effort to adopt an ordinance virtually identical to an ordinance that was just struck down by the Superior Court.¹ Moreover, that judgment was not appealed, but was allowed to become final. It continues to be a binding judgment defeating the to-be-readopted judgment if AB-3233 is not constitutional. We assert that AB-3233 is not constitutional because the Legislature has no power to authorize the City of Los Angeles to violate the California Constitution.

¹ Attached hereto is the opinion of Wayman T Gore, a qualified petroleum engineer with California experience who has qualified as an expert on petroleum production methods in the courts of California. His declaration was prepared for introduction in the first phase of NARO-CA et al v City of Los Angeles but was not prepared in time to be part of the public record. The trial court ruled that it could not be admitted unless first admitted into the public record. It states his opinion that the initial ordinance (and therefore the readopted ordinance) prohibits oil and gas producers in the City of Los Angeles from using methods and practices known to maximize ultimate recovery of oil and gas.

National Association of Royalty Owners-Ca, Inc
Attention: Edward Hazard
Re: Los Angeles Planning Commission New Oil Ordinance
December 8, 2025
Page 2

The proposed oil ordinance should not be approved.

Very truly yours,



EDWARD S. RENWICK

ESR:ia
Enclosure

1 Edward S. Renwick (SBN 29325)
HANNA AND MORTON LLP
2 444 South Flower Street, Suite 2530
Los Angeles, California 90071
3 Tel: (213) 628-7131
Email: erenwick@hanmor.com
4

5 Attorneys for Petitioner and Plaintiff,
6 **NATIONAL ASSOCIATION OF**
7 **ROYALTY OWNERS-CALIFORNIA, INC.,**
8 **MEKUSUKEY OIL COMPANY, LLC,**
9 **NJB WOLF FAMILY LLC, AND**
10 **THE TERMO COMPANY**

11
12 **SUPERIOR COURT OF THE STATE OF CALIFORNIA**
13 **FOR THE COUNTY OF LOS ANGELES – CENTRAL DISTRICT**
14

15 NATIONAL ASSOCIATION OF ROYALTY)
OWNERS-CALIFORNIA, INC., MEKUSUKEY)
16 OIL COMPANY, LLC, NJB WOLF FAMILY)
LLC, THE TERMO COMPANY,)
17)

18 Plaintiffs and Petitioners,)

19 v.)

20 CITY OF LOS ANGELES, CITY COUNCIL OF)
THE CITY OF LOS ANGELES, KAREN BASS)
21 in her official capacity as Mayor of the City of)
Los Angeles, and DOES 1 through 100,)
22)

23 Respondents and Defendants.)
24)
25)
26)
27)
28)

Case No.: 23STCP00106

Related to 23STCP00060; 23STCP00070;
23STCP00085; 23STCP01217

[Assigned to Hon. Curtis A. Kin, Dept. 82]

DECLARATION OF WAYMAN T. GORE,
JR., P.E. IN SUPPORT OF PETITIONERS'
PETITION FOR WRIT OF MANDATE
PHASE ONE

Action Filed: January 12, 2023
Phase 1 Trial Date: August 1, 2024

29
30 **DECLARATION OF WAYMAN T. GORE, JR., P.E. IN SUPPORT OF PETITIONERS' AND**
31 **PLAINTIFFS' PETITION FOR WRIT OF MANDATE AND COMPLAINT**
32

33 I, Wayman T. Gore, Jr. Declare as follows:
34

35 //
36
37
38

1 1. My name is Wayman Travis Gore, Jr. I am a consulting petroleum engineer and President of
2 PGH Petroleum & Environmental Engineers, LLC., a GAI Company ("PGH"). I received a Bachelor of
3 Science in Petroleum Engineering in May 1980 from the University of Texas at Austin. I have worked
4 as a petroleum engineer since that time. I am also a registered professional engineer in the State of
5 Texas. My engineering license number is 56682. A copy of my CV is included as Attachment 1.

6 2. PGH is an engineering consulting firm specializing in petroleum engineering. I formed PGH
7 in January 1995. PGH's work consists of advising oil and gas companies, working interest owners,
8 royalty owners, financial institutions and state and federal agencies on petroleum engineering matters.
9 PGH is a registered professional engineering firm in the State of Texas. PGH's firm registration number
10 is F-9137. A copy of the PGH firm brochure is included as Attachment 2.

11 3. I have worked as a petroleum engineer on various California oil fields since 1981. This work
12 has involved fields in virtually every producing region of California including Los Angeles County and
13 includes oil fields, gas fields, waterfloods and steamfloods. I have also testified as an expert in petroleum
14 engineering in various state courts in California since 1993. I have also consulted with the California
15 Department of Justice.

16 4. I have been retained by the National Association of Royalty Owners – California, Inc. in this
17 matter and have been asked to give my petroleum engineering opinion of whether prohibiting the drilling,
18 redrilling and/or sidetracking of oil and gas wells¹ or changing the function of any well²; prohibiting
19 maintenance of oil and gas wells; and/or imposing a maximum remaining life of 20 years on all existing
20 oil and gas wells within the City of Los Angeles, will prohibit oil and gas operators from using methods
21 and practices known by the oil and gas industry to maximize ultimate recovery of oil and gas?
22 _____

23 ¹ The distinctions between drilling a new well, redrilling a well and sidetracking a well are as follows:
24 Redrilling a well generally means drilling a new well located essentially in the same place as an earlier well. A
25 redrilled well is sometimes referred to as a replacement well. Sidetracking a well means using a shallow portion
26 of an existing wellbore, cutting a window (i.e. hole) in the steel casing and directionally drilling a new lower
27 portion (deeper) of the existing wellbore to a different bottomhole subsurface location. Redrilling or
28 sidetracking a well are common in the oil and gas industry and both require appropriate permitting from
CalGEM.

² An example of changing the function of a well would be to convert a producing well to an injection well.
Changing the function of a well is a common occurrences in a waterflood or steamflood.

1 5. I have been asked to assume that the City of Los Angeles has adopted an oil and gas ordinance
2 providing in part as follow:

3 **4. Oil Wells.**

4 a) All oil wells (as defined pursuant to LAMC Section 13.01 B),
5 including those operating pursuant to any discretionary permit in all
6 zones, whether by ordinance or approval of a Zoning Administrator,
7 and all oil wells in an M3 zone, are nonconforming uses as of the effective
8 date of the ordinance. No new well for the production of oil, gas, or
9 other hydrocarbon substances may be drilled in any zone. No existing
10 well for the production of oil, gas, or other hydrocarbon substances,
11 which is a nonconforming use, shall be maintained, drilled, re-drilled,
12 or deepened, except to prevent or respond to a threat to public health,
13 safety, or the environment, as determined by the Zone Administrator.

14 b) The operation of all such wells, shall cease within 20 years from
15 effective date of the ordinance deeming such uses nonconforming.

16 c) After the time period set forth in LAMC Section 12.23.C.4(b), all
17 Nonconforming oil wells shall be abandoned in a manner consistent with
18 and in strict accordance with all applicable local, state and federal laws,
19 regulations, rules, and standards.

20 d) If an oil well is abandoned, or its operation is discontinued or
21 idled for a continuous period of one year, such use shall be deemed
22 terminated.

23 e) A well operator as defined by the Public Resources Code Section
24 3237 shall comply with the mitigation measures and mitigation monitoring
25 program adopted with this ordinance in the plugging and abandoning of all
26 wells.

27 I have also been asked to assume that "well Maintenance", which is not permitted, is any scope of work
28 that meets either of the two following criteria:

- 1 1. A scope of work that requires a Notice of Intention "Rework Permit"
2 to carry out a rework project on a well from the California Geologic Energy
3 Management Division (CALGEM).
- 4 2. A scope of work that requires notification per the South Coast Air
5 Quality Management District's (SCAQMD) Rule 1148.2 – "Notification
6 And Reporting Requirements for Oil and Gas Well and Chemical Suppliers"
7 For "Well Rework" and/or "Injection" including one or more of the
8 following activities: acidizing, hydraulic fracturing, gravel packing,
9 maintenance acidizing, matrix acidizing and acid fracturing.

10 Finally I have been asked to assume that (a) a Notice of Intention to CALGEM (and therefore permission
11 from CALGEM) is necessary for any operation subsequent to drilling that involves deepening, redrilling,
12 plugging, or permanently altering in any manner the casing of a well or its function, and (b) SCAQMD
13 1148.2 includes any operation subsequent to drilling that involves deepening, redrilling, or well
14 production stimulation or treatment activity of an existing well, and that WELL REWORK FLUID
15 means a carrier fluid mixed with chemical and/or physical additives used in any operation subsequent to
16 drilling that involves a well production stimulation or treatment activity of an existing well. Maintenance
17 acidizing³ is considered "maintenance" and is therefore prohibited.

18 6. My opinions as a petroleum engineer are as follows:

19 **Opinion 1:** Prohibiting the drilling, redrilling and/or sidetracking of oil and gas wells and
20 prohibiting changing the function of any well will prohibit oil and gas operators in the
21 City of Los Angeles from using methods and practices known by the oil and gas industry
22 to maximize ultimate recovery of oil and gas.

23
24
25
26 ³ Maintenance acidizing is generally considered a recurring treatment of a well with some type of diluted acid.
27 This is often required due to scale buildup in the wellbore or within the perforations of the well. Scale buildup
28 will impede the flow of oil, gas and water into the wellbore over time. A maintenance acid treatment will
dissolve the scale and return the well to its normal production level.

1 **Opinion 2:** Prohibiting maintenance of oil and gas wells; will prohibit oil and gas
2 operators in the City of Los Angeles from using methods and practices known by the oil
3 and gas industry to maximize ultimate recovery of oil and gas.

4 **Opinion 3:** Imposing maximum life time period of 20 years as the maximum remaining
5 life of any oil and gas well will prohibit oil and gas operators in the city of Los Angeles
6 from using methods and practice known by the oil and gas industry to maximize ultimate
7 recovery of oil and gas.

8 A discussion of each opinion follows below.

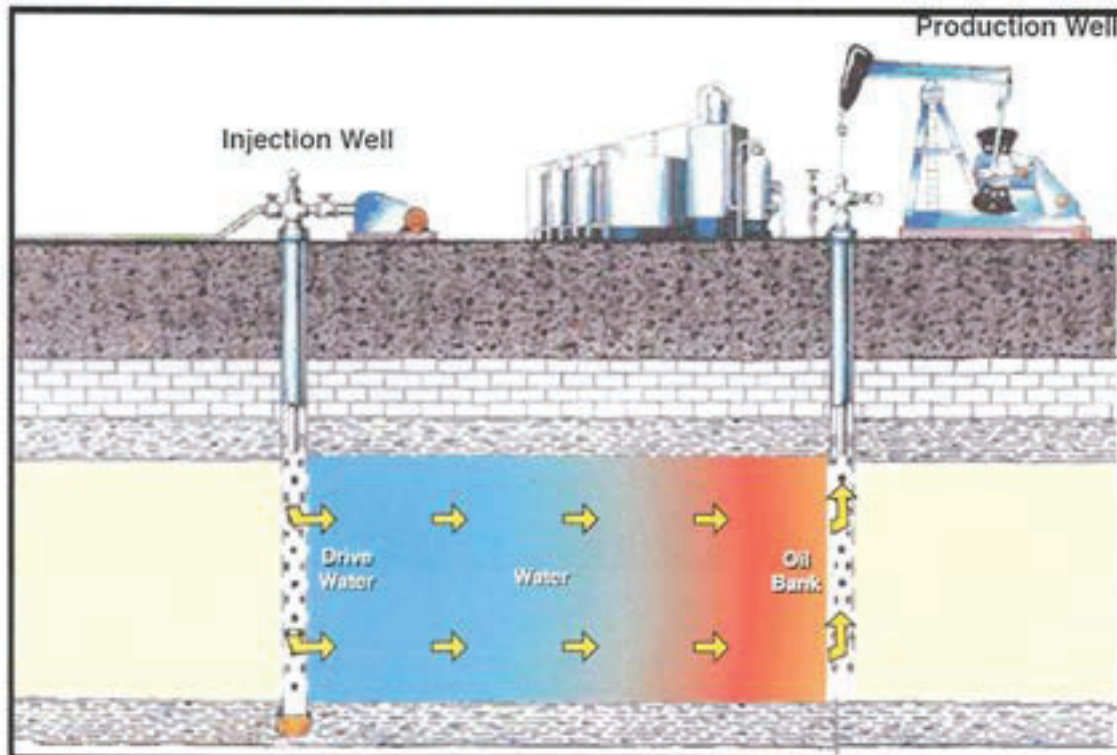
9 **Opinion 1:**

10 7. Drilling, re-drilling and/or sidetracking of oil and gas wells are part of the normal operating
11 process in any oil field. Because oil and gas wells are mechanical in nature, they sometimes fail
12 necessitating remedial operations such as drilling a new replacement well, re-drilling the existing well
13 and/or sidetracking the existing well. Also, recovery methods utilized in an oil field such as
14 waterflooding or steamflooding often require the additional drilling, re-drilling, or sidetracking of
15 producing and/or injection wells. Without the ability to perform such operations remaining recoverable
16 oil reserves will be left in the ground. Ultimate oil and gas recovery will not be maximized, and waste⁴
17 will occur.

18 8. Waterflooding and steamflooding are types of production methods often used in oil fields
19 around the world, including California. Both waterflooding and steamflooding are typically referred to
20 as secondary recovery mechanisms and are used specifically to maximize oil recovery. Without
21 employing such secondary recovery mechanisms, otherwise recoverable oil will be left in the ground
22 and waste will occur. Both waterflooding and steamflooding are highly technical oil recovery processes
23

24 _____
25 ⁴ Waste is a petroleum engineering term routinely used to describe a situation where recoverable oil and gas is
26 rendered unrecoverable by some action or event. When waste occurs oil and gas that would have been produced
27 and sold is not produced and therefore remains in the ground. It is not able to be produced or recovered in the
28 future due to the act or event rendering it unrecoverable. Waste can occur due to various reasons, among them a
producing well failure and not being able to replace the failed well by drilling a replacement well or sidetracking
the failed well, not being able to perform routine equipment maintenance allowing the well to fall into disrepair,
a waterfront or steamfront bypassing oil in the reservoir and not sweeping it to producing wells.

1 which depend on among other things, precise placement of producing and injection wells. Waterflooding
2 and steamflooding are similar processes, one involves water injection and the other involves steam and
3 hot water injection. Example diagrams for both waterflooding and steamflooding are shown below.

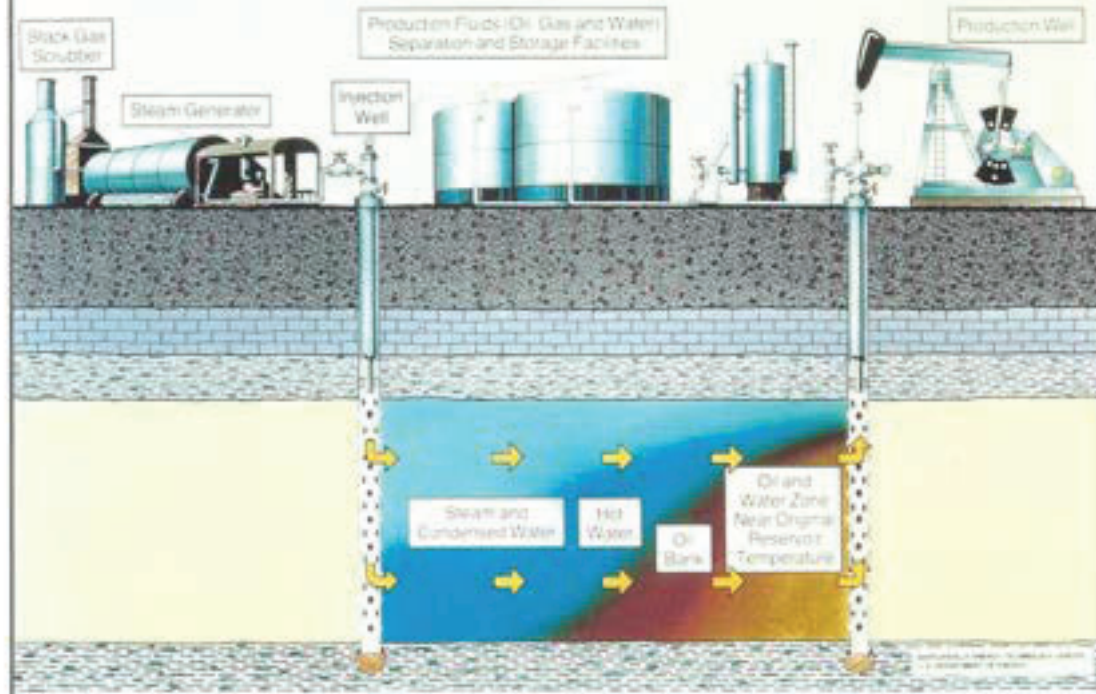


<https://www.nap.edu/read/13355/chapter/6> references DOE: NETL (2010)

STEAM FLOODING

Heat, from steam injected into a heavy-oil reservoir, thins the oil making it easier for the steam to push the oil through the formation toward production wells.

Heat reduces viscosity of oil and increases its mobility

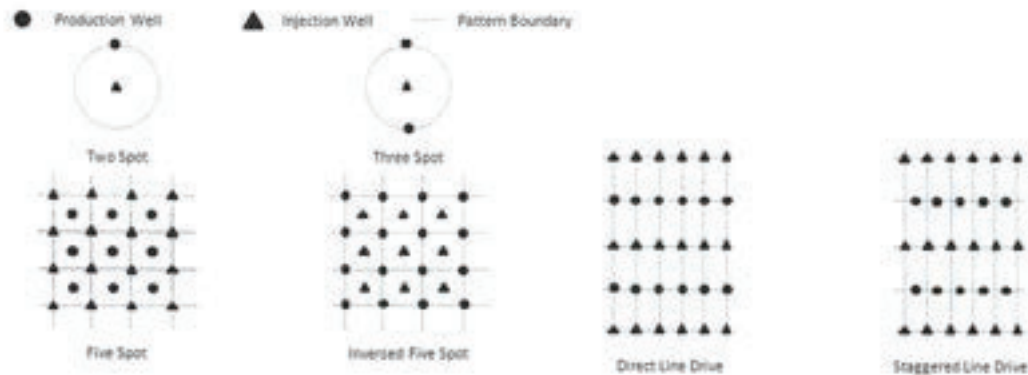


<https://www.netl.doe.gov/file%20library/research/oil-gas/enhanced%20oil%20recovery/other/coldf.pdf>

9. In waterflooding, the objective is to inject water into the oil reservoir and push oil to producing wells. The process in steamflooding is similar but steamflooding adds a component of heat to the process. Steamflooding is typically used in oil reservoirs that contain very viscous or low API gravity crude oil. Because it is very thick, low API gravity oil is difficult to produce. By adding heat in the form of steam and hot water, the reservoir rock is heated which in turn heats the oil making it thinner and less viscous, allowing it to flow more easily. The injection of steam and hot water then pushes the oil to producing wells allowing it to be recovered.

10. While both processes sound simple, they are highly technical production methods. Both waterfloods and steamfloods require injection and production patterns be established in the reservoir to be flooded. These patterns are rigid patterns, that is to say they must be consistent across the entire flood area in order to be successful, maximize recovery and minimize bypassed oil. There are many different patterns that can be utilized based on the petrophysical and reservoir engineering aspects of the reservoir.

Water Flood Pattern Types



<http://permco.com/resources/fundamentals-of-fluid-flow-in-porous-media/chapter-4-immiscible-displacement/water-injection-oil-recovery-calculations/mobility-ratio-effect/>

The establishment of these patterns are the responsibility of the petroleum engineer. Examples of just a few waterflood pattern are shown above.

Steamflood patterns would be similar in nature to these types of waterflood patterns.

11. As time goes by in a waterflood or a steamflood, it may be necessary to convert production wells to injectors and have new producing wells drilled. This is required in order that the injected water or steam keep up with the oil bank as it is being pushed across the reservoir. Again, the petroleum engineer must make a technical determination of if or when this conversion or new drilling needs to occur. Prohibiting oil and gas operators from utilizing or continuing to utilize these secondary recovery methods will minimize oil recovery. It would have the effect of prohibiting the drilling of new wells or the redrilling of old wells as required in the normal operation of a steamflood or waterflood. This will lead to the premature abandonment of not only the waterflood but ultimately the entire field. Oil that was otherwise recoverable will be left in the ground. Ultimate recovery will not be maximized, and waste will occur.

12. My analysis indicates there are at least fifteen oil fields that will be effected by LAMC Section 12.23.C.4. A list of these fifteen fields will be discussed in Opinion 3, Paragraph 17 below. According

1 to the CalGEM website, ten of fifteen fields are producing under a waterflood or steamflood mechanism⁵.
2 The only fields not producing under these secondary recovery methods are El Segundo, Los Angeles
3 City, Playa Del Rey, Salt Lake, and Salt Lake South. If the ten fields with an ongoing waterflood and/or
4 steamflood are prohibited from drilling, redrilling, sidetracking and changing the function of wells, they
5 will become uneconomic in a very few years. Remaining recoverable oil will be left in the ground.
6 Ultimate recovery will not be maximized, and waste will occur.

7 **Opinion 2:**

8 13. Routine oil field maintenance is a requirement in the prudent operation of any oil field. Such
9 maintenance is necessary as the equipment used for the extraction of oil and gas is mechanical in nature.
10 As with any machinery, if routine maintenance is not performed the equipment will fall into disrepair.
11 Examples of the types of surface equipment used in the production of oil in the City would be pumping
12 units, chemical pumps, water pumps, oil pumps, LACT (lease automatic custody transfer) units,
13 compressors, storage tanks, heater treaters, and separators to name just a few. Types of downhole
14 equipment used in the production of oil would be rod pumps, electric submersible pumps, gas lift valves,
15 packers, tubing, and rods, to name just a few. All of this equipment, both surface and downhole, must
16 be carefully maintained to prevent mechanical failure and/or corrosion and to maximize the recovery of
17 oil. Without the ability to perform such maintenance the useful life of a well will be shortened leading
18 to premature abandonment. The premature abandonment of any oil or gas well, without the ability to
19 drill new wells or redrill and/or sidetrack existing wells, will result in recoverable oil being left in the
20 ground. Ultimate recovery will not be maximized, and waste will occur.

21 14. The production of oil is a complicated process. It is not simply drilling a hole in the
22 ground, producing the oil that flows out of the hole and selling it. It involves complicated mechanical
23 and technical processes. Most oil that is produced anywhere in the world requires some type of treatment
24 that serves as an aid in production. Many times, oil, gas and associated water have a chemical makeup

25 _____
26 ⁵ CalGEM records indicate one idle well in the Wilmington field as a steamflood well. CalGEM shows well
27 number 2AT53B (API No. 0403723662) to be located in Los Angeles. All other wells producing under
28 secondary recovery methods are shown as waterflood wells.

1 that causes corrosion of the downhole and surface equipment. As a result, corrosion inhibitors are
2 required to be injected into the wellbore to prevent or minimize such corrosion. Under the assumptions
3 above for SCAQMD 1148.2, corrosion inhibitors could be construed as a WELL REWORK FLUID that
4 involves a "well production treatment activity". Without such treatment for corrosion, downhole pumps,
5 rods, tubing, surface flowlines, tanks, etc. can become corroded and fail resulting in downhole wellbore
6 failures and/or leaks and spills at the surface. Under the assumption that LAMC Section 12.23.C.4
7 prevents drilling or re-drilling, the existing well would have to be prematurely and permanently
8 abandoned resulting in recoverable oil being left in the ground. Ultimate oil and gas recovery will not
9 be maximized, and waste will occur.

10 15. Operators of oil and gas wells are often required pursuant to its contractual obligations with
11 mineral owners and working interest partners to perform its duties in a good and workmanlike manner
12 as a reasonable and prudent operator would do. These duties include well maintenance. Under the
13 assumptions listed above for LAMC Section 12.23.C.4, and SCAQMD 1148.2, operators may very well
14 be prevented from discharging its contractual obligations to perform in a good and workmanlike manner
15 or as a reasonable prudent operator.

16 **Opinion 3:**

17 16. Under the assumption stated above that the City of Los Angeles has adopted an ordinance
18 (LAMC Section 12.23.C.4) paragraph (b) of this ordinance states "*The operation of all such wells, shall*
19 *cease within 20 years from effective date of the ordinance deeming such uses nonconforming.*" In effect,
20 the City has amortized all wells over a twenty year basis, whether depleted or not, and any well still
21 producing will have to be abandoned after 20 years. No analysis or study conducted by the City on the
22 reasonableness of such a 20-year time period has been provided; thus I can only presume no such analysis
23 has been undertaken. Every oil and gas well is different. Wells can produce from different reservoirs
24 and fields under different production mechanisms and from different depths. Wells in the City generally
25
26
27
28

1 produce from depletion drive (i.e. solution gas drive)⁶ reservoirs. They can produce at different oil, gas
2 and water rates. Some wells can be flowing wells while others produce under different artificial lift
3 mechanisms such as a rod pump, an electric submersible pump, gas lift or plunger lift. While this is not
4 an exhaustive list of differences, all of these factors must be considered when estimating the economic
5 life of a well.

6 17. The most common way to estimate the economic life and remaining reserves of a well is
7 known as Decline Curve Analysis (“DCA”) DCA is the interpretation of graphs or plots of producing
8 rate vs. cumulative production. These plots, known as rate-time plots, are typically plotted on semi-log
9 paper. That is to say, the horizontal scale is a coordinate (i.e. linear) scale, and the vertical scale is a
10 logarithmic scale. When the logarithm of producing rate is plotted versus linear time a straight line often
11 times results. This is referred to as “exponential decline.” Exponential decline is sometimes referred to
12 as constant percentage decline. When the data does not plot as a straight line but rather “curves upward”
13 over time, the data is said to be exhibiting “hyperbolic decline.” For wells that experience hyperbolic
14 decline, the decline rate continually decreases over time. For wells exhibiting either exponential or
15 hyperbolic decline, the observed data trend is extrapolated out into the future to a specific production
16 rate known as the economic limit. Once a well reaches its economic limit, the costs incurred to produce
17 the well begins to exceed the value of the production. At the economic limit, the remaining reserves as
18 well as the remaining life of the well can be determined. If a well is required to cease production prior
19 to reaching its economic limit, that is to say its economic life is arbitrarily shortened, the ultimate oil and
20 gas recovery will not be maximized, and waste will occur.

21 18. Under the assumption that the City of Los Angeles has adopted ordinance LAMC Section
22 12.23.C.4, at least fifteen oil fields will be impacted. These fields are as follows:

23 Aliso Canyon	Playa Del Rey
24 Beverly Hills	Rosecrans
25 Cascade	Salt Lake

26 ⁶ Depletion drive oil reservoirs are those reservoirs where the flow of oil within the reservoir is aided by gas that
27 is in solution in the oil. As oil and the solution gas is produced, reservoir pressure declines and more and more
28 gas comes out of solution assisting the oil to flow towards wells to be produced.

1 Cheviot Hills Salt Lake South
2 El Segundo San Vicente
3 Las Cienegas Torrance
4 Los Angeles City Wilmington
5 Los Angeles Downtown

6 I have reviewed wells in four of these fifteen oil fields. Using conventional decline curve analysis⁷, I
7 determined there are many examples of oil wells having a significantly longer remaining life than 20
8 years. The four fields reviewed are Beverly Hills, Las Cienegas, Cascade and Torrance. The remaining
9 life of many wells approached 30 years or longer based on a conservative economic cutoff of 2 barrels
10 of oil per day. The City's use of a 20-year life appears to be arbitrary and not based on any technical
11 petroleum engineering analysis. I have provided example decline curves for wells that I have identified
12 as having a substantially longer life than 20 years in Attachment 3. Under the assumption that LAMC
13 Section 12.23.C.4 has been adopted, the result will be to leave otherwise recoverable oil in the ground.
14 It is my professional opinion that imposing a maximum twenty year life on oil and gas wells will prevent
15 oil and gas well operators from using methods and practices known in the industry to maximize oil and
16 gas production because wells will have to be prematurely abandoned. Ultimate recovery of oil from these
17 "longer life" wells will not be maximized, and waste will occur.

18 I declare under penalty of perjury under the laws of the State of California that the foregoing is
19 true and correct.

20 Executed on February 7, 2024, in Austin, Texas

21 By:


Wayman T. Gore, Jr., P.E.

22
23
24
25
26
27 ⁷ Decline curve analysis is the accepted method used by petroleum engineers to estimate remaining recoverable
28 reserves and economic life of oil and gas wells.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Wayman T. Gore, Jr., P.E.

PROFESSIONAL EXPERIENCE

PRINCIPAL AND CONSULTING PETROLEUM ENGINEER 1995 - PRESENT
PGH Petroleum & Environmental Engineers, LLC Austin, Texas

- ◆ Petroleum and environmental engineering consulting services for oil and gas producers and interest owners, natural gas pipeline companies, lending institutions, state and federal agencies.
- ◆ Services include oil and gas reserve evaluations and economics, fair market value analyses, lease and contract compliance audits, reservoir and geologic field studies, secondary recovery and unitization, administrative and regulatory filings, and expert witness testimony.

SHAREHOLDER AND CONSULTING ENGINEER 1984 - 1995
Platt, Sparks & Associates, Inc. Austin, Texas

- ◆ Provide petroleum engineering consulting services to oil and gas industry clients.
- ◆ Consulting services included reservoir engineering, regulatory compliance and administration, contract compliance audits and expert witness testimony.

PRODUCTION/RESERVOIR ENGINEER 1981 - 1984
Sanchez-O'Brien Oil & Gas Corporation Houston, Texas

- ◆ Supervised company engineering operations in nine-state area and Gulf of Mexico (State Waters).
- ◆ Responsible for all well activity from well completion, facility construction and hookup through production, depletion and abandonment.
- ◆ Worked closely with state and federal regulatory agencies to ensure regulatory compliance. Worked closely with marketing, contracting and sale of natural gas and crude oil.
- ◆ Monitored purchase contracts to ensure contract compliance.
- ◆ Worked closely with natural gas pipeline companies to meet contract obligations.
- ◆ Reserve evaluation, economics and annual budget.
- ◆ Assisted with company reserve report preparation, loan monitoring and lending institutions.

PRODUCTION ENGINEER 1980 - 1981
Tenneco Oil Exploration & Production Houston, Texas

- ◆ Drilling completion and re-completion operations in South Texas, Upper Texas Gulf Coast, East Texas and Louisiana.

- ◆ Supervised production operations for Upper Texas Gulf Coast.
- ◆ Duties included monitoring well production and operating costs, design and supervision of well completions, re-completions, workovers and production facility installations.
- ◆ Other duties included reserve evaluations, economics, and preparation of annual budget.

EDUCATION

BACHELOR OF SCIENCE (PETROLEUM ENGINEERING)
The University of Texas at Austin

1980

Austin, Texas

LICENSES AND AFFILIATIONS

Licensed Professional Engineer in the State of Texas - #56682

Member – Society of Petroleum Engineers (SPE)

Member – Society of Petroleum Evaluation Engineers (SPEE)

Member – Society of Petrophysicists and Well Log Analysts (SPWLA)

Assoc. Member – American Association of Petroleum Geologists (AAPG)

Member – Society of Independent Professional Earth Scientists (SIPES)

Assoc. Member – American Association of Professional Landmen (AAPL)

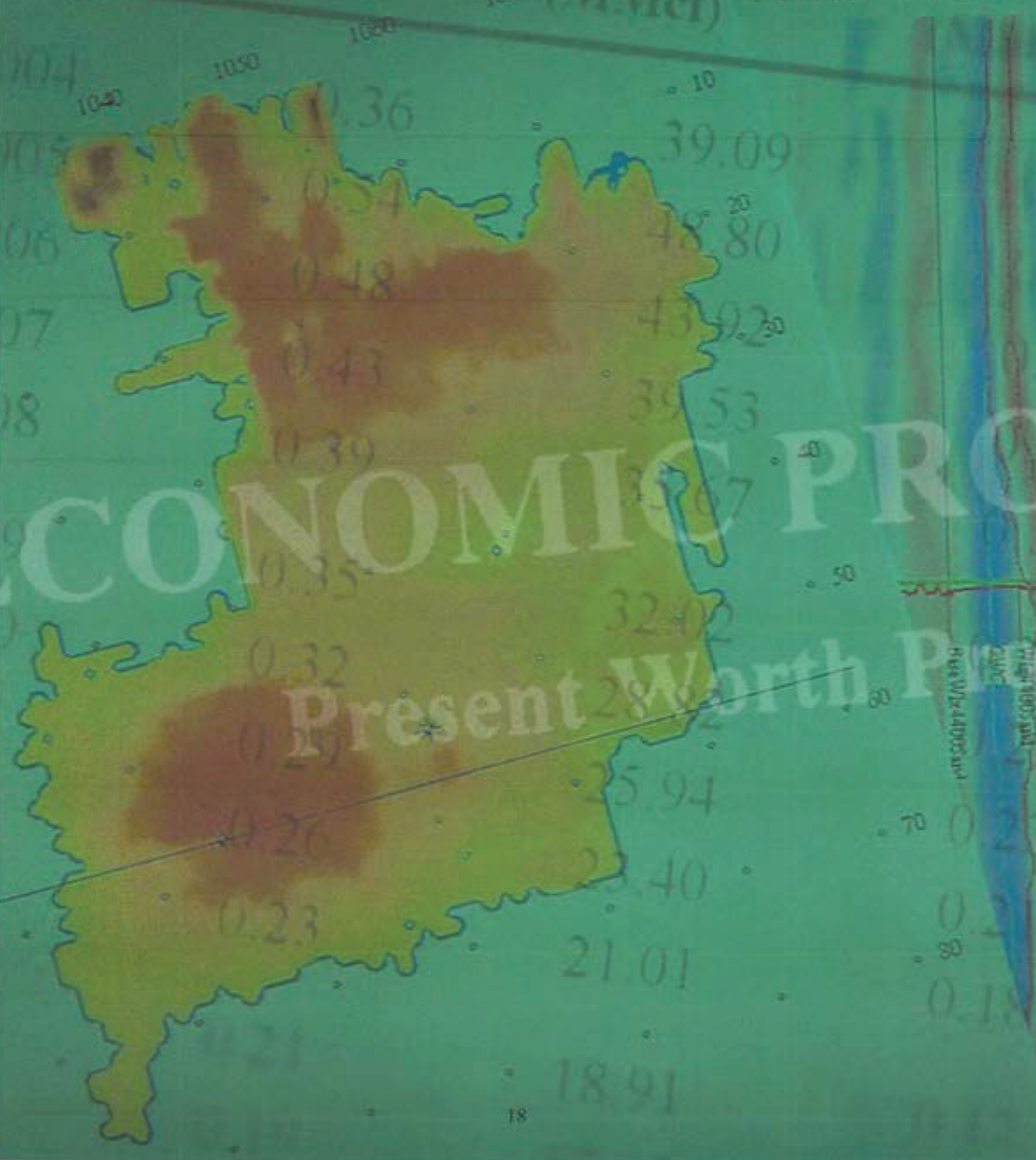
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

PGI
ENGINEERS · CONSULTANTS

a GAI Company

Oil
Gross
(Mbbbl)

Gas
Gross
(MMcf)



**I N T E G R A T E D
P E T R O L E U M A N D
E N V I R O N M E N T A L
S E R V I C E S F O R
T O D A Y ' S O I L A N D
G A S I N D U S T R Y**

PGH is one of the very few firms in the United States offering a full complement of petroleum, economic, environmental and regulatory consulting services to the energy industry. Our customers include major as well as independent oil and gas companies, financial institutions, oil and gas service companies, pipeline and utility companies, regulatory agencies, state governments, and legal and accounting organizations. PGH appraisals and audits are widely accepted—certifying large energy loan commitments. We are committed to satisfying clients' individual needs with timely, practical, results-oriented analysis and recommendations. Utilizing the latest in economic analysis, simulation, risk assessment, mapping and log evaluation technology and techniques ensure we provide superior value by delivering quality services at reasonable cost. The PGH philosophy is really very simple—quality work and practical solutions produce real value!

PGH provides a full range of petroleum, environmental and regulatory consulting services—drilling and reservoir engineering, field development studies, oil and gas reserve evaluation, borrowing base analyses, gas marketing studies, and secondary recover and unification projects. In addition, our integrated approach to petroleum and environmental engineering better meets the stricter environmental regulatory and compliance needs of today's oil and gas companies.

GENERAL PETROLEUM ENGINEERING

PGH interacts with geological, geophysical, and petrophysical personnel to accurately describe reservoir characteristics. We utilize reservoir description, core and log analysis, computer mapping, volumetrics, material balance, and reservoir simulation techniques to accurately model hydrocarbon reservoirs. PGH regularly advises clients on prudent drilling and development guidelines to efficiently and effectively produce recoverable reserves.

ENHANCED RECOVERY/SIMULATION

The PGH team employs sophisticated reservoir modeling tools to determine the feasibility of enhanced recovery techniques. From project design and economics to regulatory approval and implementation, we work to ensure projects meet our client's specific needs and goals.

ECONOMICS

PGH is frequently called upon to appraise oil and gas properties using the latest in decline curve, material balance, and economic technology. Our appraisals are used for a variety of reasons, among them acquisitions, divestitures, borrowing base analysis, internal business planning and estates. Our clients include royalty and working interest owners, family enterprises, independent producers, and major integrated oil and gas companies.

Our appraisal services include audits of in-house or third party reserve estimates. PGH certified appraisals are accepted by major oil and gas lending institutions, mezzanine firms and equity groups and are relied upon to certify energy loan commitments.



FINANCING FOR OFFSHORE
OIL AND GAS FIELD
DEVELOPMENT, GATHERING
SYSTEMS, PROCESSING
FACILITIES AND PIPELINES
HAVE BEEN SECURED BY
APPRAISALS FROM PGH.

ADVISORY SERVICES

PGH's broad experience is the foundation of a variety of petroleum advisory services, including oil and gas lease and contract analysis, oil and gas payment audits, pricing policy development and administration, and investment counseling. Our advisory service support our client's general business development strategies, litigation, arbitration, and mediation.

LITIGATION SUPPORT

PGH provides expert petroleum engineering studies and testimony in complex litigation and arbitration matters. Our studies and opinions stand up under the closest scrutiny from attorneys, judges, and juries. We have been accepted as expert petroleum engineers before state and federal regulatory agencies, numerous state and federal courts, and arbitration panels. We have also offered expert testimony in many areas of petroleum engineering including drainage, proper development, fair market value, lost production, oil and gas lease/contract requirements, and prudent operators standards.

REGULATORY ENGINEERING

PGH is one of the preeminent engineering firms with a specialty in Texas Oil and Gas Regulations. We offer cradle-to-grave regulatory service—from drilling permit applications and exceptions to new field designation, field consolidations, allowable issues and solutions, injection/disposal applications, tight area designations, severance tax reductions and credits, and proper plugging and abandonment. Our engineers and technicians work closely, every day, with state regulators to ensure that we are abreast of the latest rules, and that our clients are in complete compliance, receiving fair and equitable treatment in the application of all guidelines and regulations.



PGH ROUTINELY ADVISES CLIENTS ON POLLUTION AND CLEAN-UP ISSUES. WE WORK HARD TO ENSURE OUR CLIENTS MEET ALL STATE AND FEDERAL RULES.

PETROLEUM ENGINEERING SERVICES

- Oil and gas reserve evaluation and economic analysis
- Borrowing base analyses of oil and gas properties for borrowing and/or lending purposes
- Acquisition screening and divestiture planning
- Fair market value studies
- Engineering and geologic field studies including field development and reservoir management plans
- Representation before state and federal regulatory agencies
- Unitization and secondary recovery studies
- Review, analysis and negotiation of agreements and contracts
- Reservoir analysis
- Oil and gas marketing studies
- Production accounting and payment audits
- State and federal regulatory compliance audits
- Litigation and arbitration support
- Estate planning and evaluations
- State and Federal regulatory filings
- Appraisal of producing, non-producing and undeveloped mineral interests



neability

Code: 123456789

Cat: Producing

Location:

Whole Field Production

Initial Rate: 4,940 mcf/d

Oil Rate SC DOE_HM18e1

Water Rate SC Historical

000,000

Initial Rate

Abandon

Abandon Day: 3/5/2021

Indicators

Return on Investment (disc):

Return on Investment (undisc):

Years to Payout:

Internal Rate of Return (%):

Initial



PGIH
ENGINEERS • CONSULTANTS

a GAI Company

PGH Petroleum & Environmental Engineers, L.L.C.

Mailing Address:
P.O. Box 91629
Austin, TX 78709-1629
512.480.8800

Physical Address:
5100 W Hwy 290
Bldg. 2, Suite 300
Austin, TX 78735

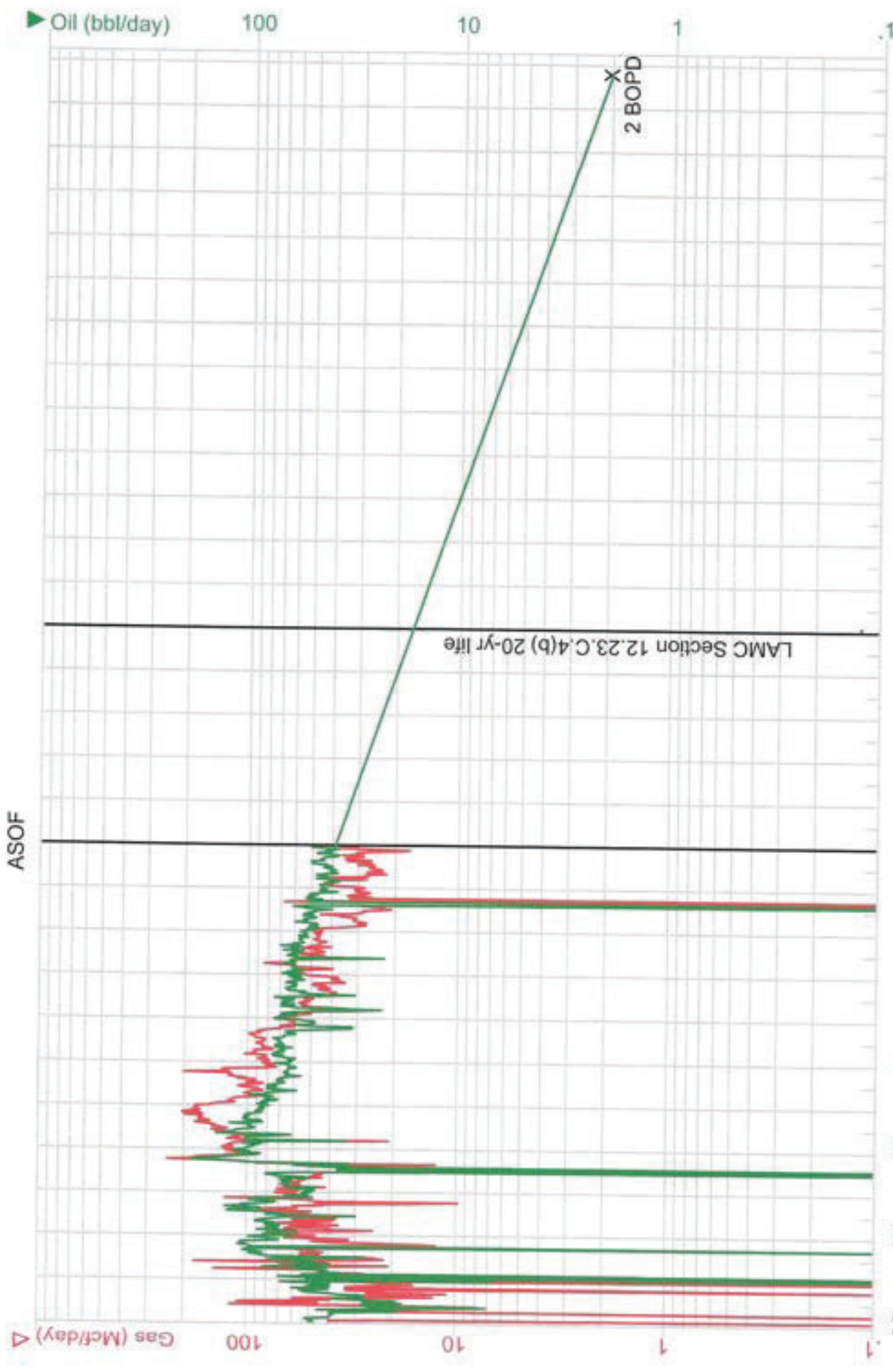
pghengineers.com

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

20 S-54

Oper: E & B NAT RES MGMT CORP
Major Phase: Oil

Field: BEVERLY HILLS
LOS ANGELES, CA
04-037-21190-0000



Proj Oil Cum: 1,041.08 Mbb1
Oil Rem: 192.55 Mbb1
Oil EUR: 1,233.64 Mbb1

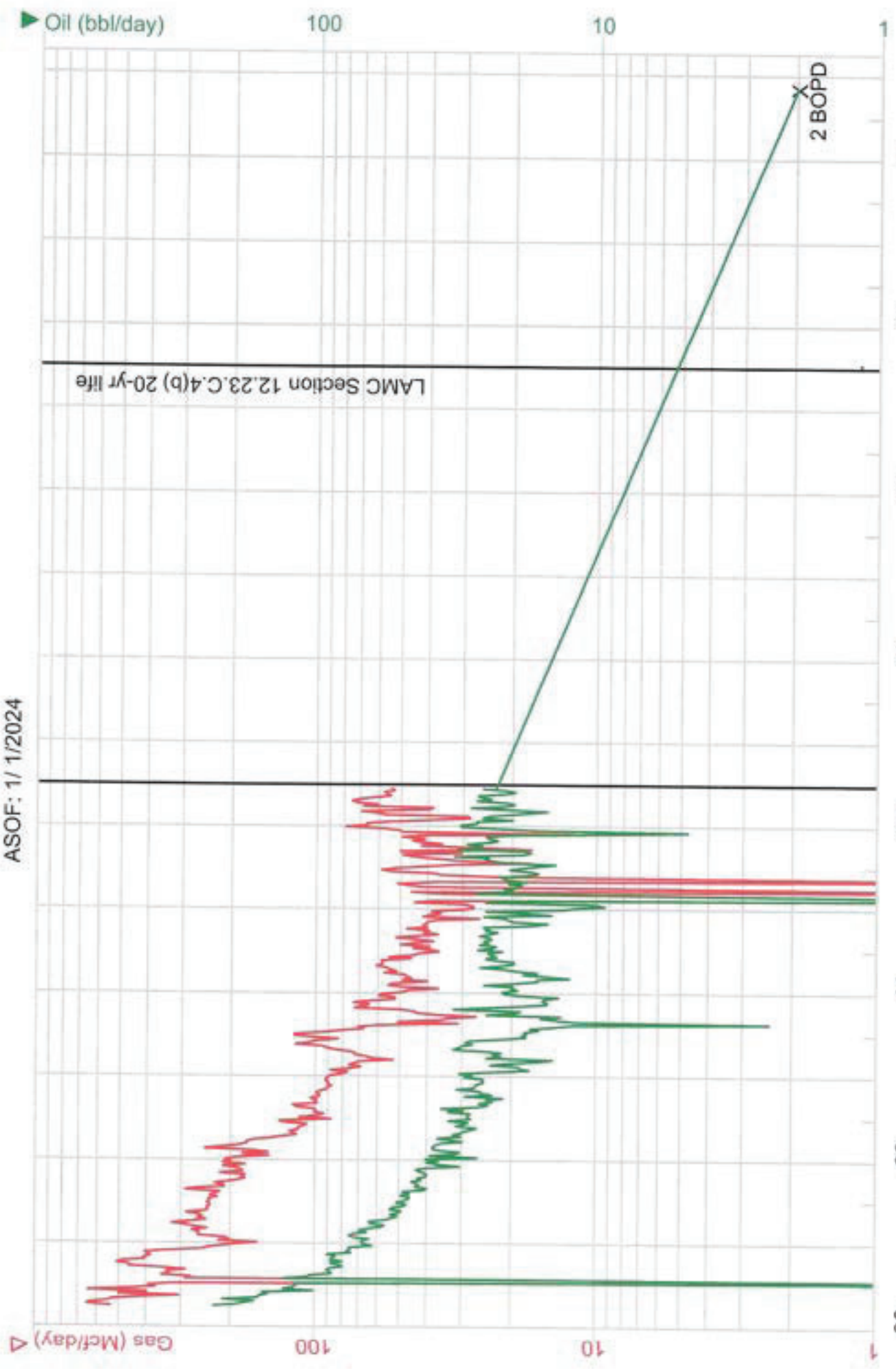
Proj Gas Cum: 1,018.66 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 1,018.66 MMcf

P-59B

Oper: E & B NAT RES MGMT CORP
Major Phase: Oil

Field: BEVERLY HILLS
LOS ANGELES, CA
04-037-20946-0000

ASOF: 1/1/2024



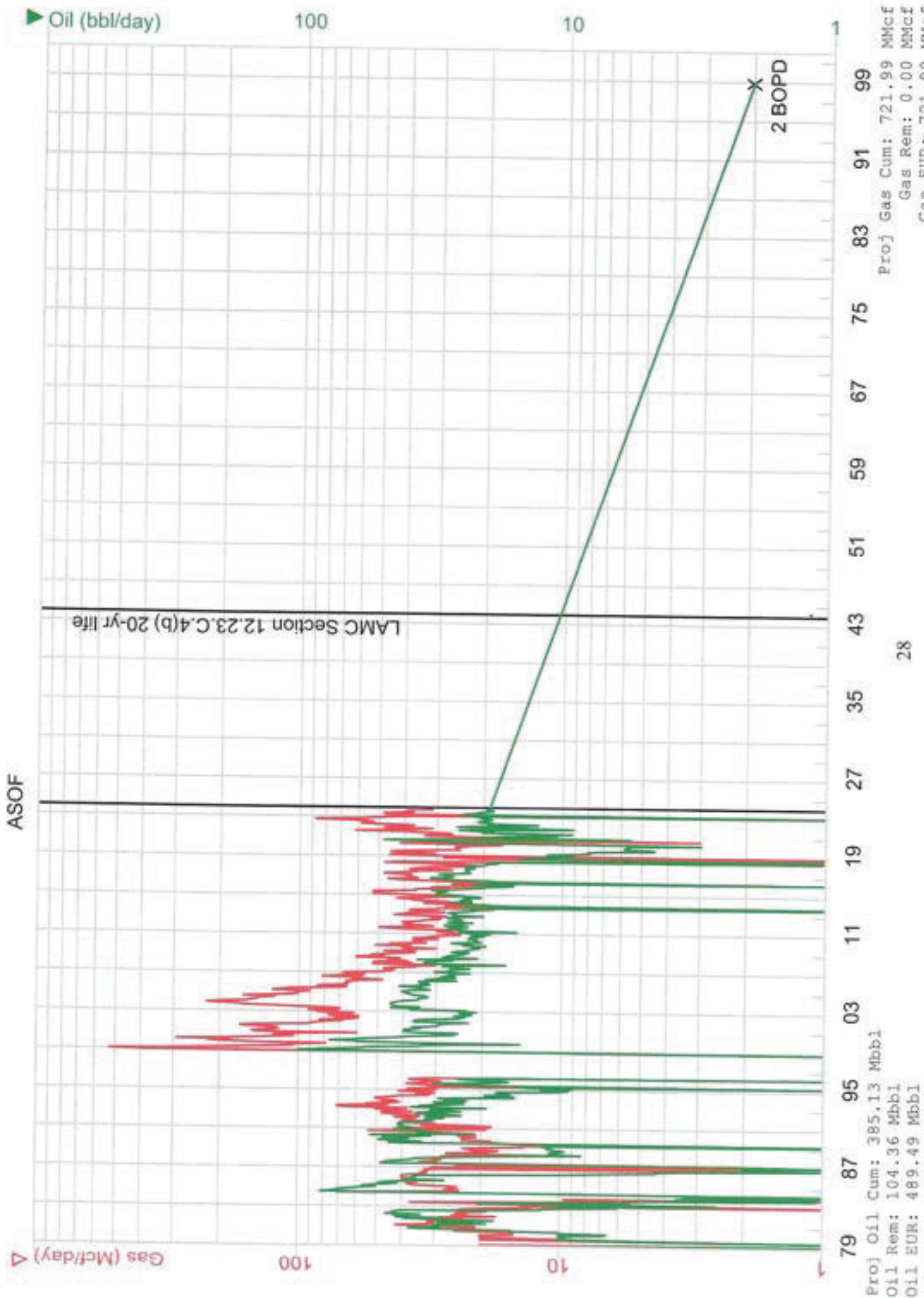
98 Proj Oil Cum: 320.08 Mbbbl
 Oil Rem: 86.90 Mbbbl
 Oil EUR: 406.98 Mbbbl

54 Proj Gas Cum: 1,126.93 MMcf
 Gas Rem: 0.00 MMcf
 Gas EUR: 1,126.93 MMcf

29 P-28

Oper: E & B NAT RES MGMT CORP
Major Phase: Oil

Field: BEVERLY HILLS
LOS ANGELES, CA
04-037-20643-0000

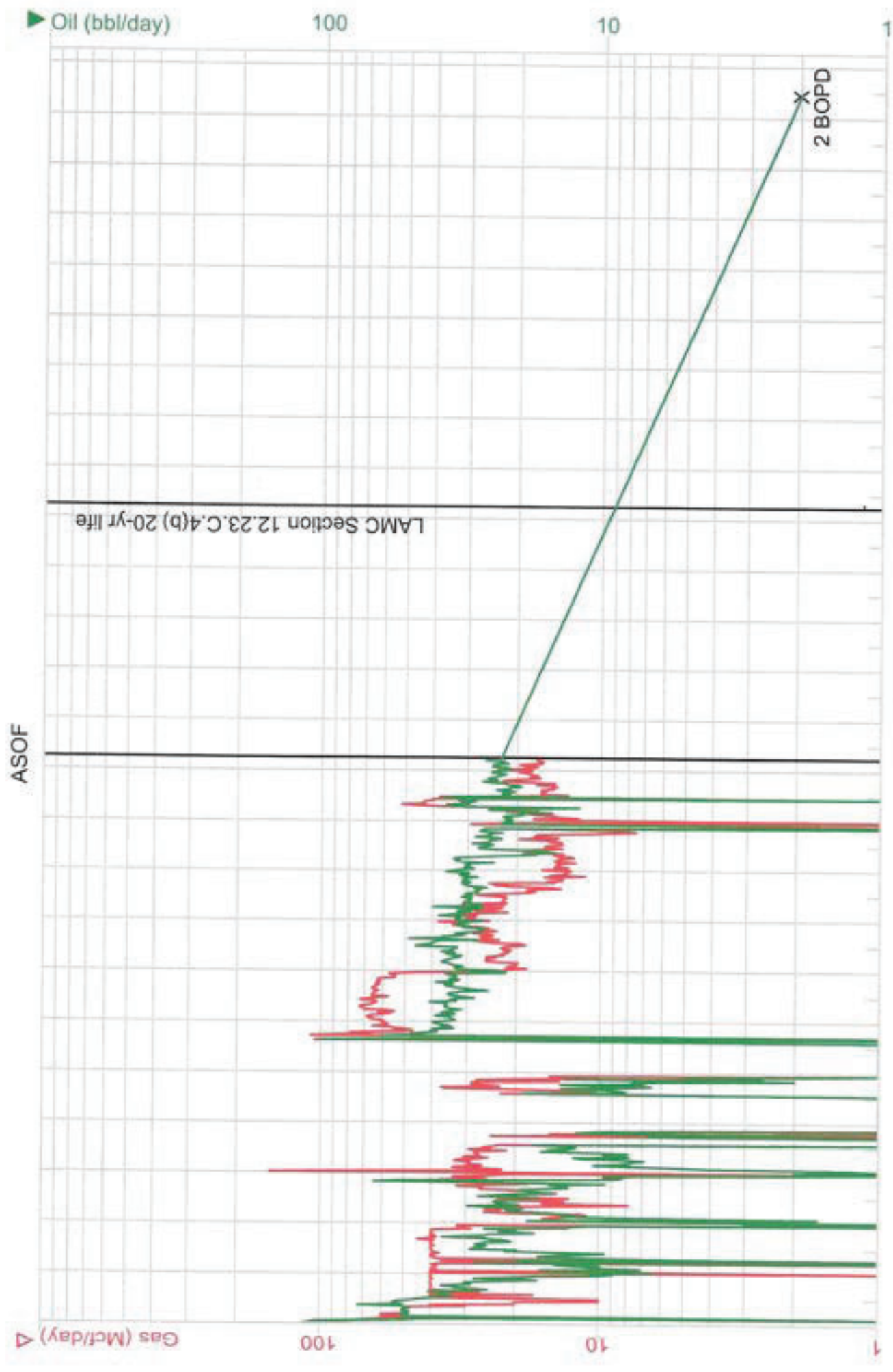


Proj Oil Cum: 385.13 Mbb1
Oil Rem: 104.36 Mbb1
Oil EUR: 489.49 Mbb1

Proj Gas Cum: 721.99 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 721.99 MMcf

20 S-74
Oper: E & B NAT RES MGMT CORP
Major Phase: Oil

Field: BEVERLY HILLS
LOS ANGELES, CA
04-037-21386-0000



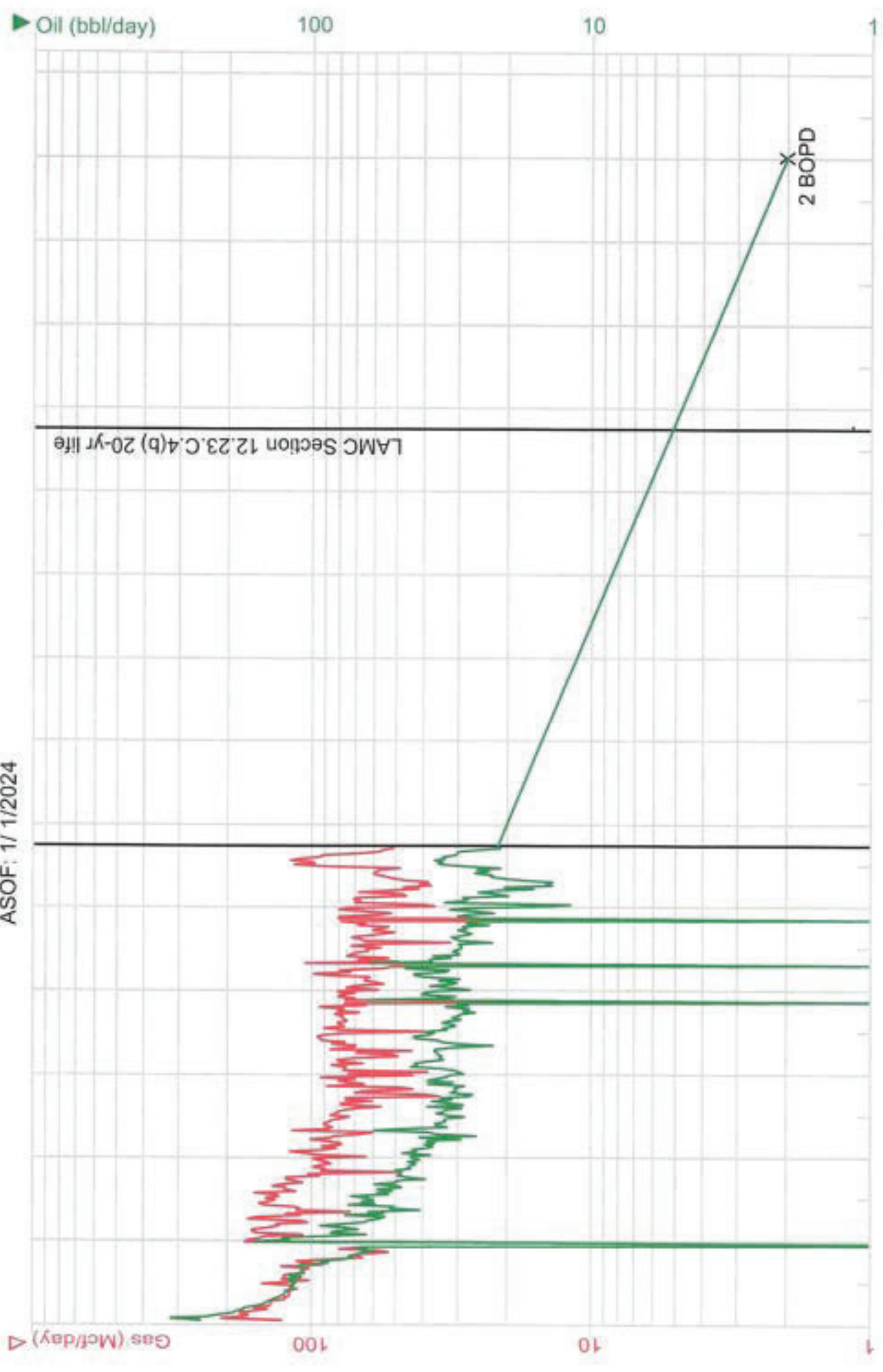
Proj Oil Cum: 419.70 Mbbbl
Oil Rem: 108.65 Mbbbl
Oil EUR: 528.36 Mbbbl

Proj Gas Cum: 458.83 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 458.83 MMcf

Field: CASCADE
LOS ANGELES, CA
04-037-24221-0000

CASCADE UNIT 1
Oper: CASCADE RESOURCES LLC
Major Phase: Oil

ASOF: 1/ 1/2024



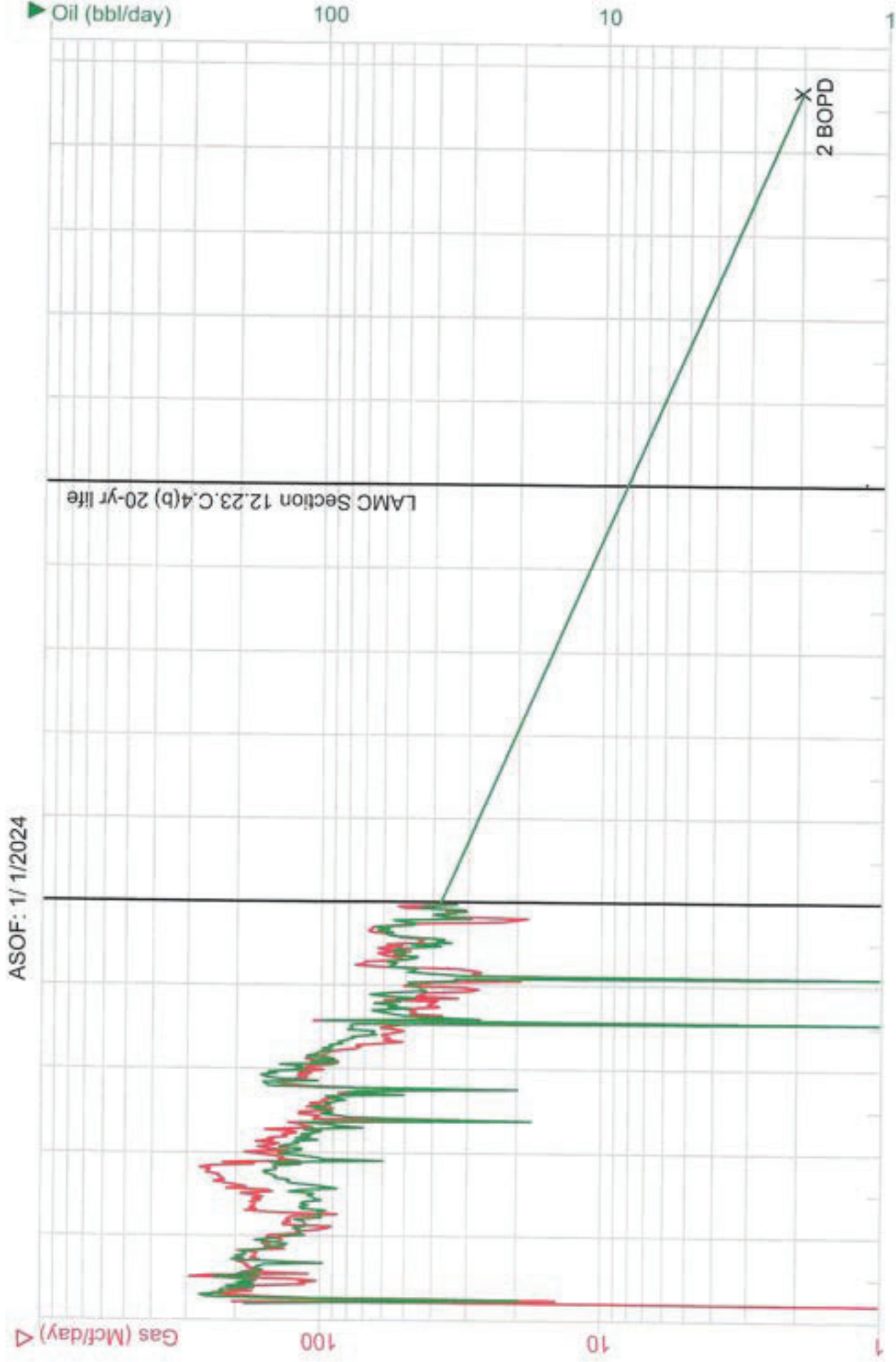
01 09 17 25 30 33 41 49 57

Proj Oil Cum: 398.47 Mbbl
Oil Rem: 83.58 Mbbl
Oil EUR: 482.05 Mbbl

Proj Gas Cum: 667.82 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 667.82 MMcf

CASCADE UNIT 5
Oper: CASCADE RESOURCES LLC
Major Phase: Oil

Field: CASCADE
LOS ANGELES, CA
04-037-24270-0000



ASOF: 1/ 1/2024

LAMC Section 12.23.C.4(b) 20-yr life

2 BOPD

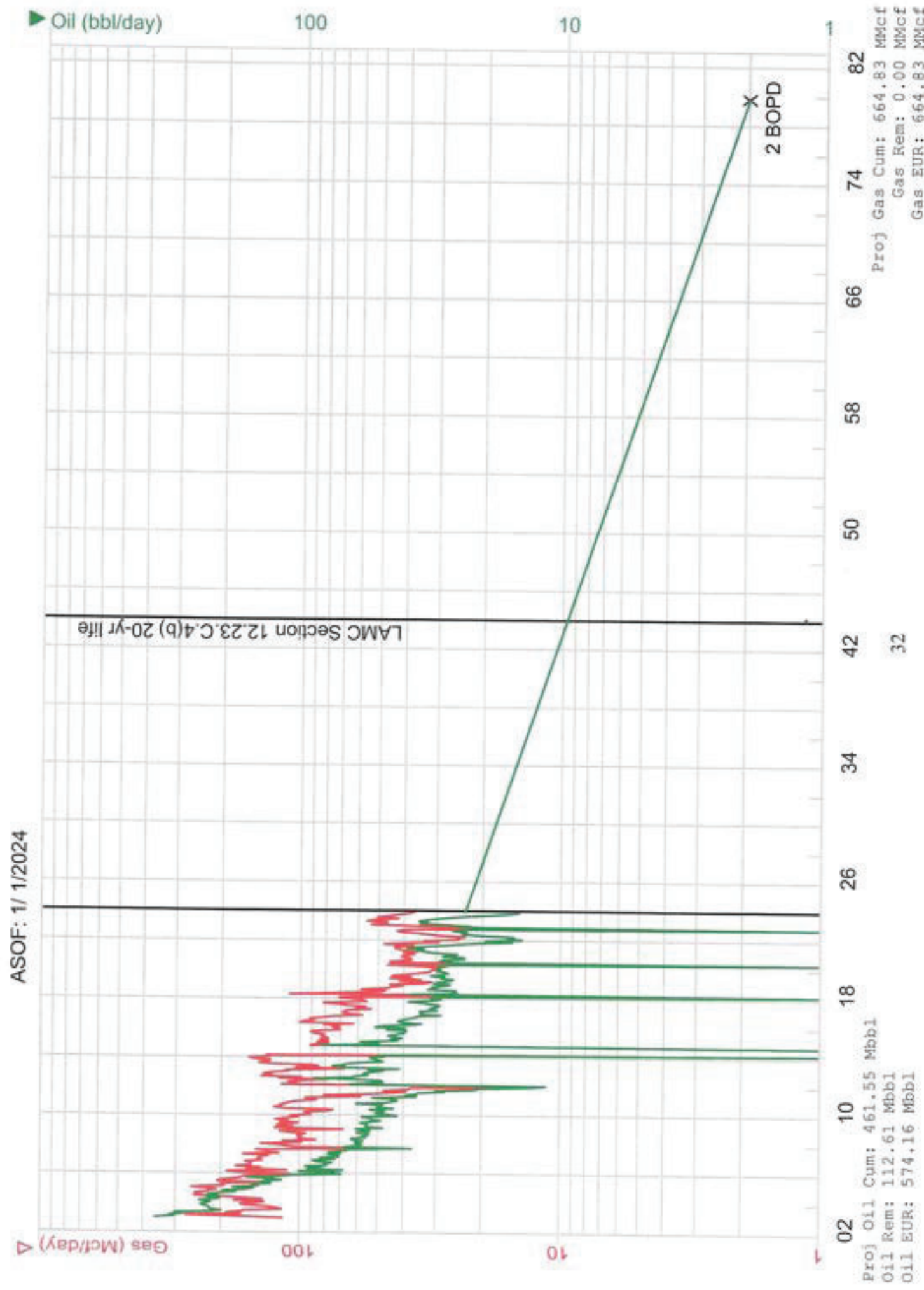
04 Proj Oil Cum: 663.52 Mbbbl
Oil Rem: 141.46 Mbbbl
Oil EUR: 804.98 Mbbbl

60 Proj Gas Cum: 724.33 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 724.33 MMcf

31

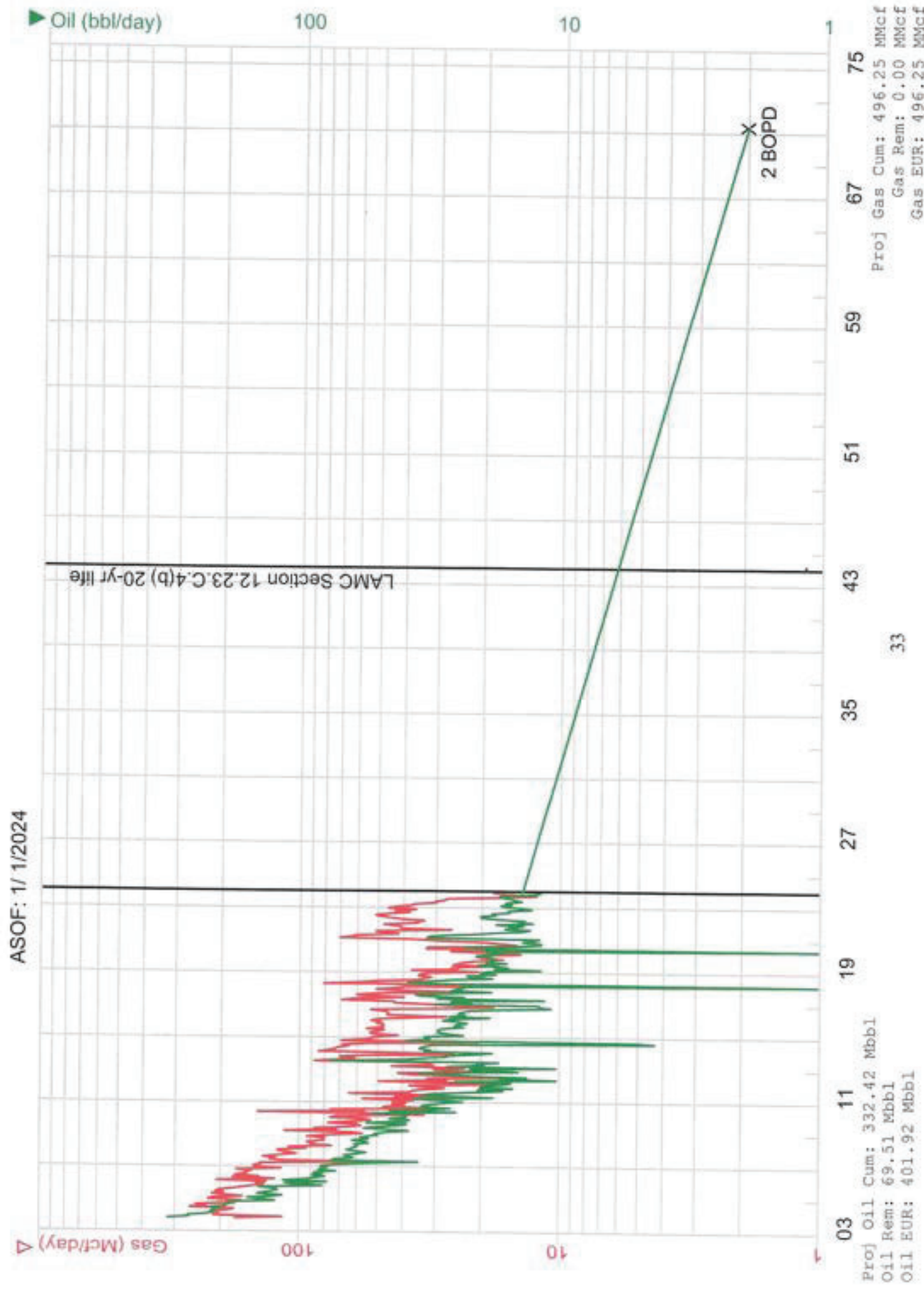
O'MELVENY PARK 4
Oper: CASCADE RESOURCES LLC
Major Phase: Oil

Field: CASCADE
LOS ANGELES, CA
04-037-24249-0000



CASCADE UNIT 4
Oper: CASCADE RESOURCES LLC
Major Phase: Oil

Field: CASCADE
LOS ANGELES, CA
04-037-24264-0000



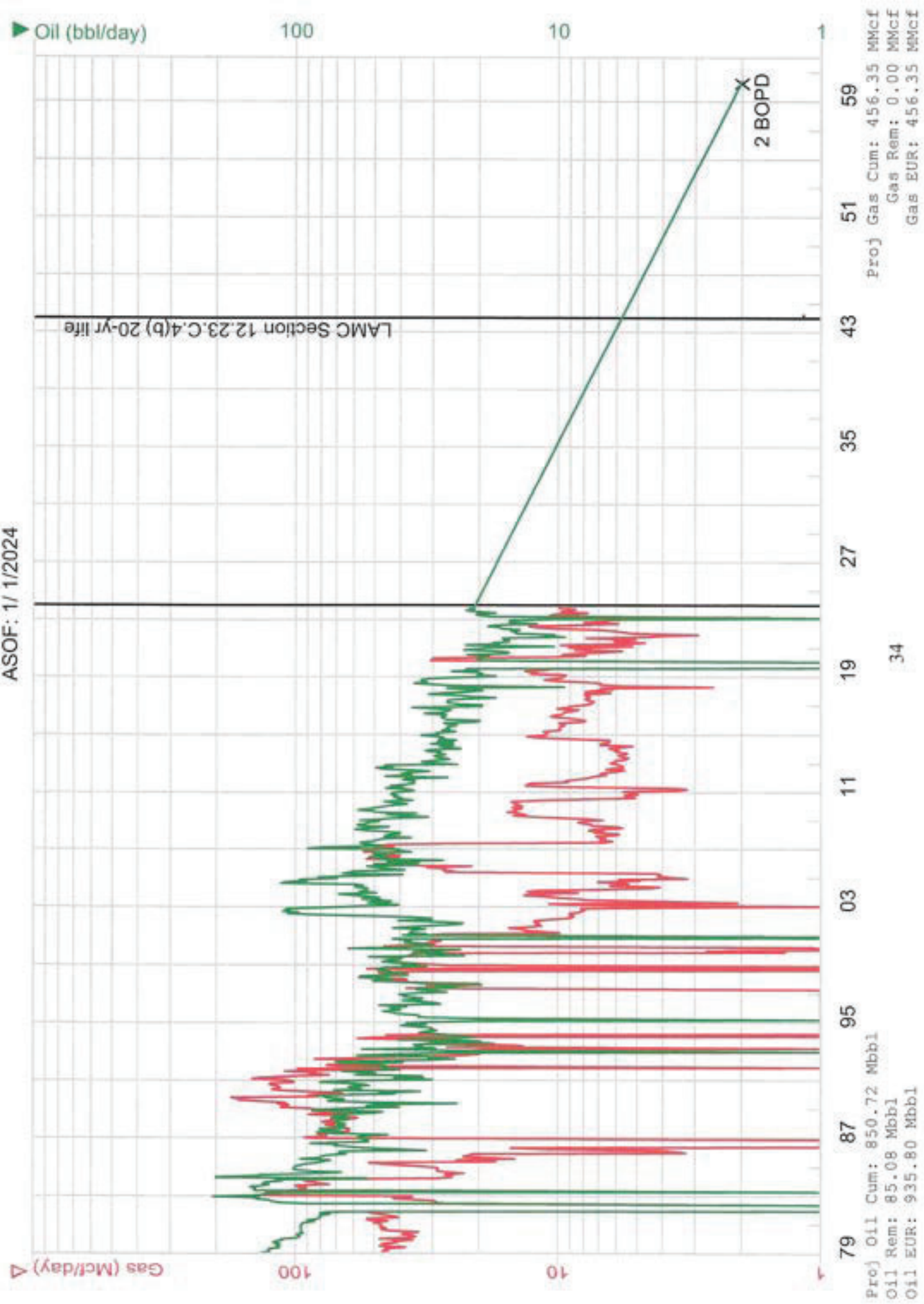
Proj Oil Cum: 332.42 Mbbl
Oil Rem: 69.51 Mbbl
Oil EUR: 401.92 Mbbl

Proj Gas Cum: 496.25 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 496.25 MMcf

Field: LAS CIENEGAS
LOS ANGELES, CA
04-037-00384-0000

MURPHY 17
Oper: E & B NAT RES MGMT CORP
Major Phase: Oil

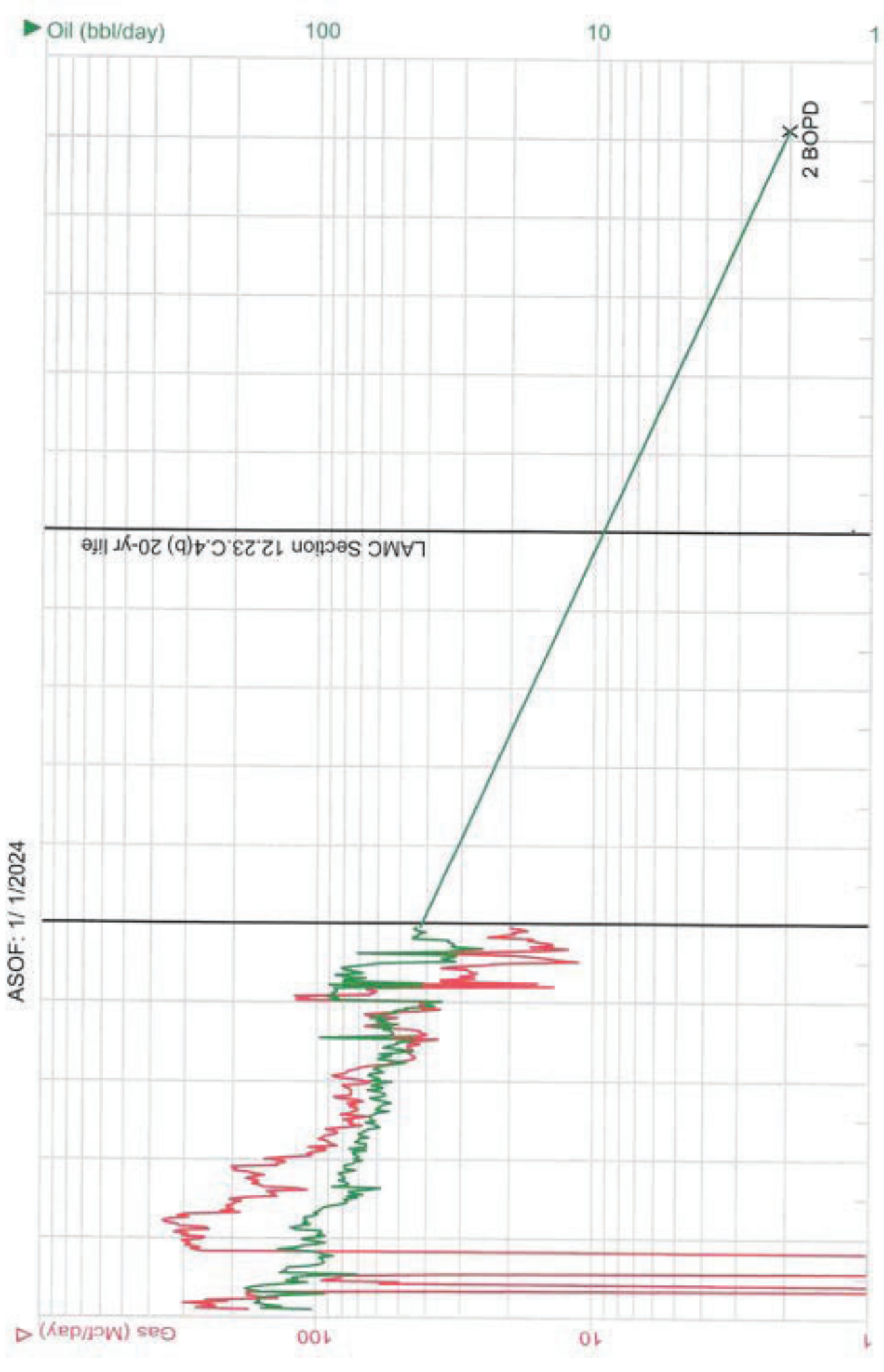
ASOF: 1/ 1/2024



Proj Oil Cum: 850.72 Mbb1
Oil Rem: 85.08 Mbb1
Oil EUR: 935.80 Mbb1
Proj Gas Cum: 456.35 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 456.35 MMcf

Field: LAS CIENEGAS
LOS ANGELES, CA
04-037-00374-0000

MURPHY 6
Oper: E & B NAT RES MGMT CORP
Major Phase: Oil



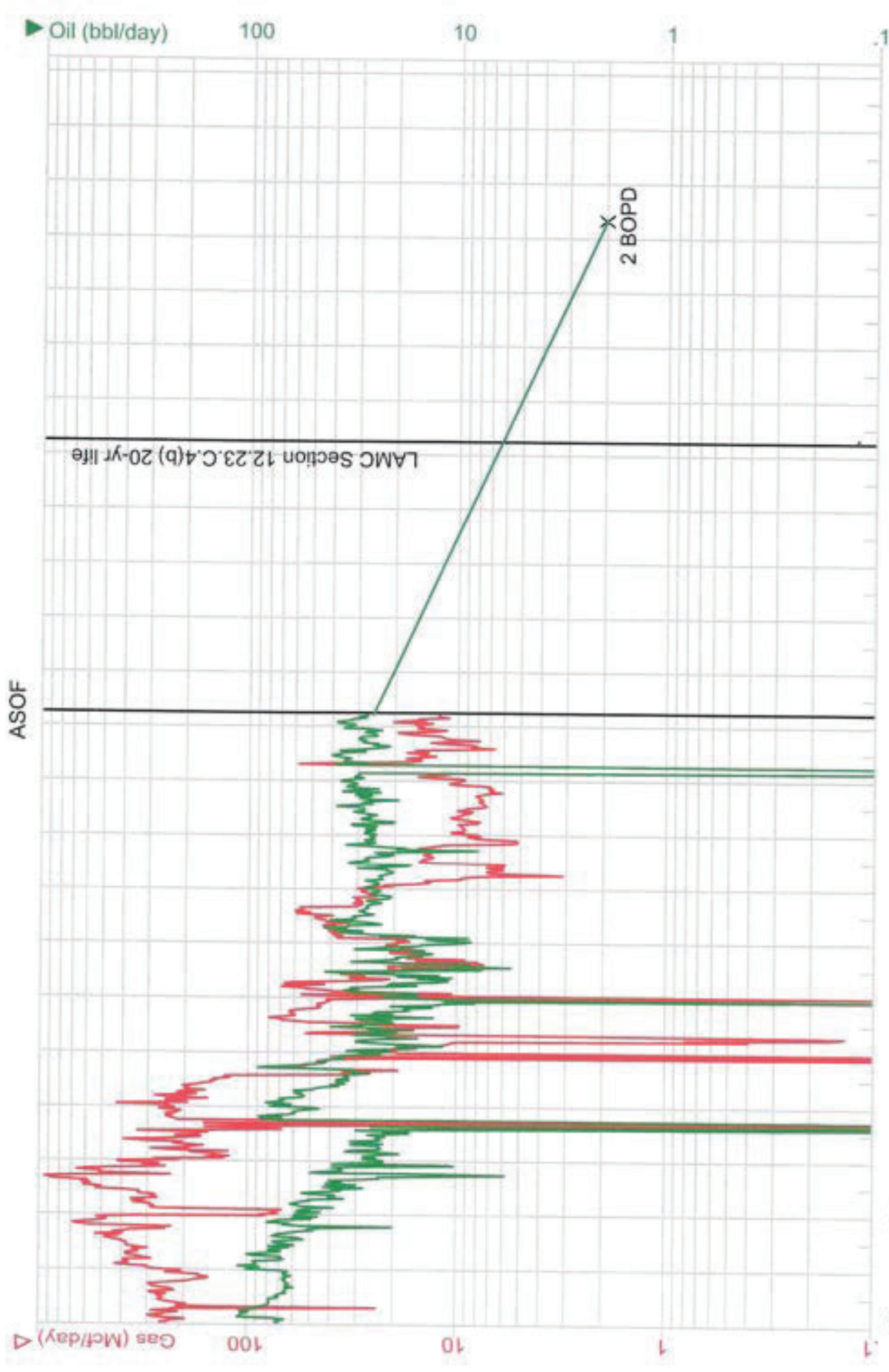
Proj Oil Cum: 536.40 Mbbbl
Oil Rem: 157.43 Mbbbl
Oil EUR: 693.83 Mbbbl

Proj Gas Cum: 701.05 MMcf
Gas Rem: 0.00 MMcf
Gas EUR: 701.05 MMcf

35

Field: LAS CIENEGAS
 LOS ANGELES, CA
 04-037-20967-0000

MURPHY 23
 Oper: E & B NAT RES MGMT CORP
 Major Phase: Oil



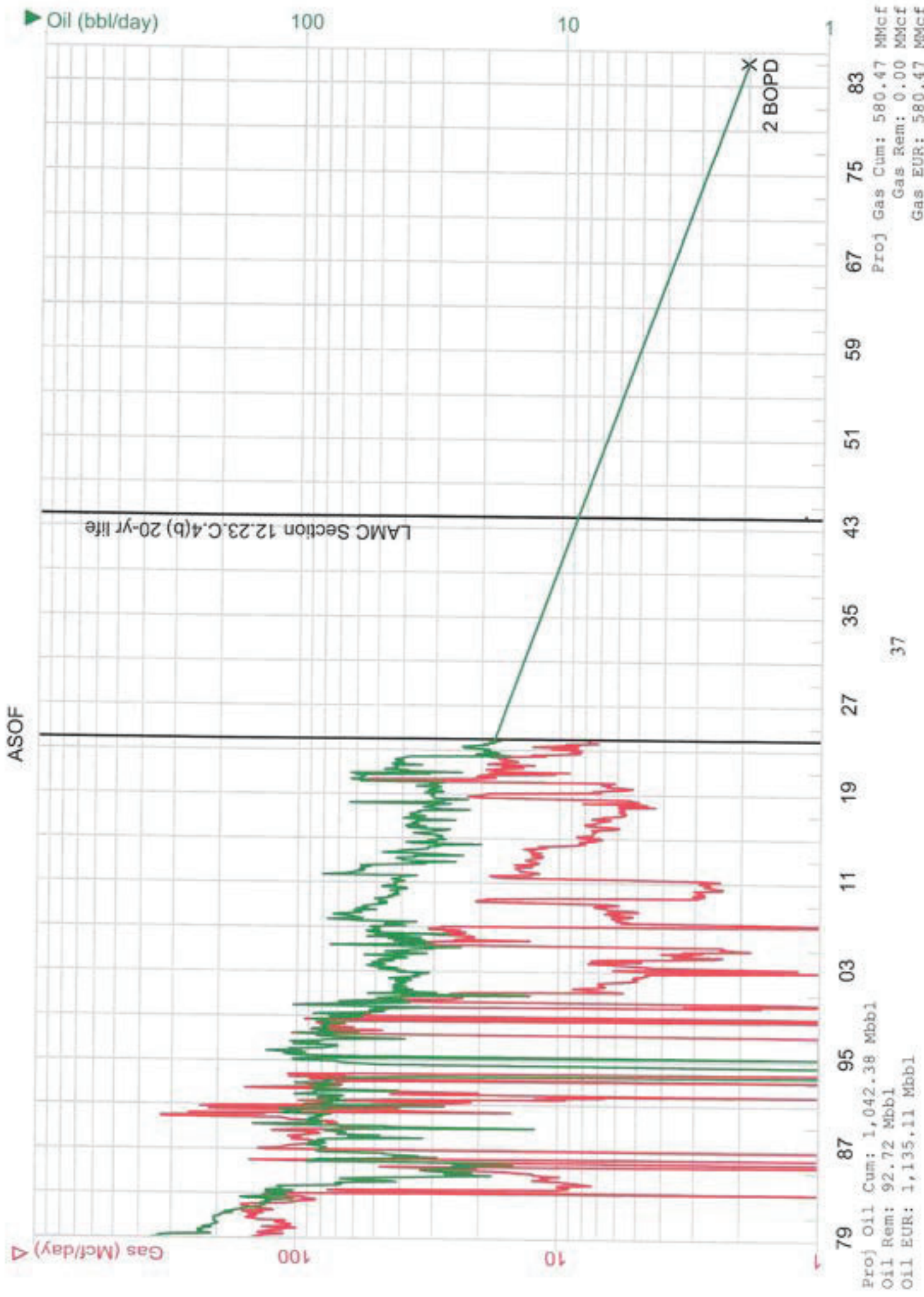
79 87 95 03 11 19 27 35 43 51 59 67

Proj Oil Cum: 653.59 Mbbbl
 Oil Rem: 99.27 Mbbbl
 Oil EUR: 752.86 Mbbbl

Proj Gas Cum: 2,269.54 MMcf
 Gas Rem: 0.00 MMcf
 Gas EUR: 2,269.54 MMcf

MURPHY 13
 Oper: E & B NAT RES MGMT CORP
 Major Phase: Oil

Field: LAS CIENEGAS
 LOS ANGELES, CA
 04-037-00380-0000

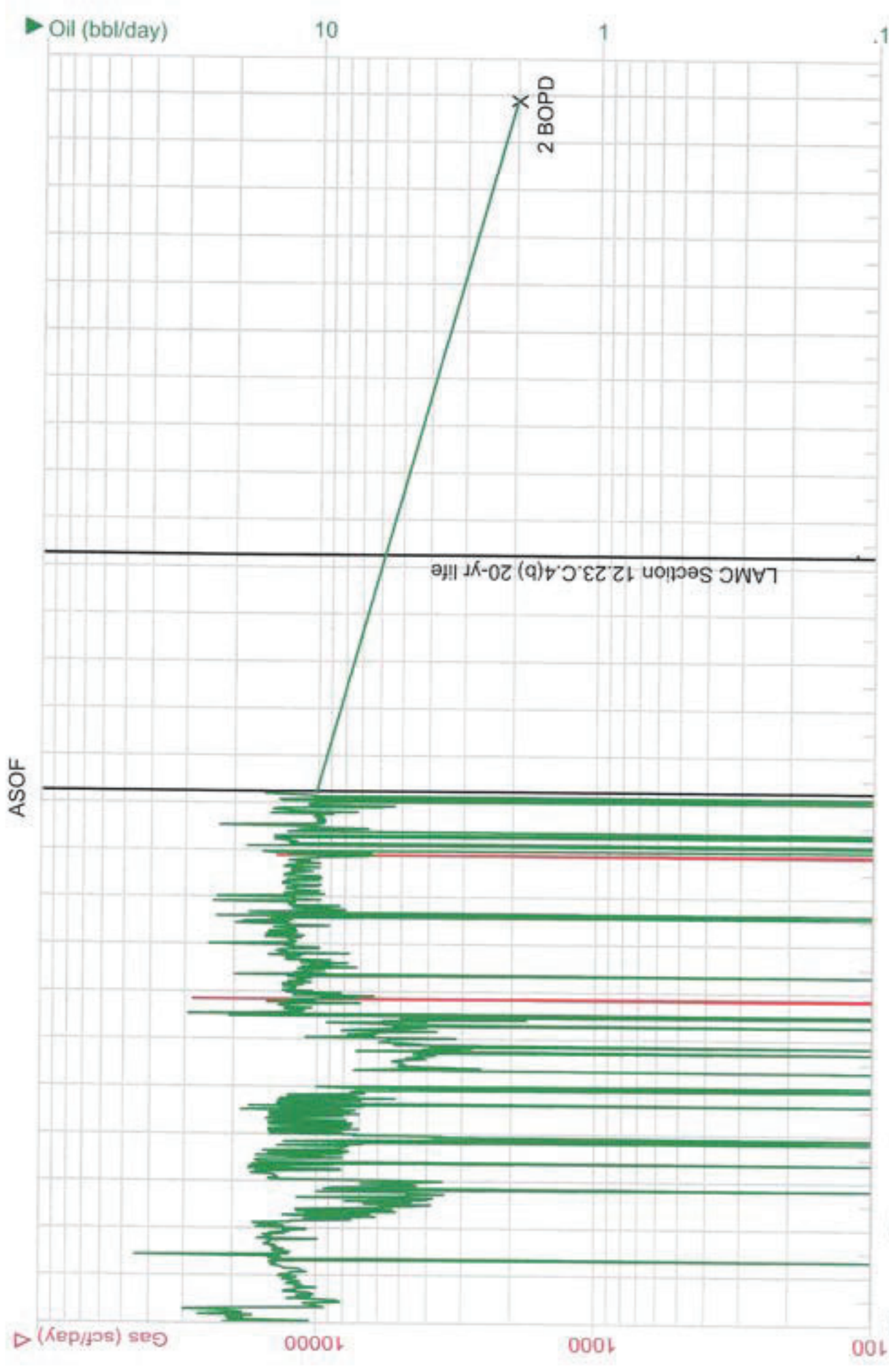


Proj Oil Cum: 1,042.38 Mbb1
 Oil Rem: 92.72 Mbb1
 Oil EUR: 1,135.11 Mbb1

Proj Gas Cum: 580.47 MMcf
 Gas Rem: 0.00 MMcf
 Gas EUR: 580.47 MMcf

Field: TORRANCE
 LOS ANGELES, CA
 04-037-17533-0000

CAPITAL 71
 Oper: O'DONNELL OIL, LLC
 Major Phase: Oil



Oil (bbl/day) 10 1

Gas (scf/day) 10000 1000 100

79 87 95 03 11 19 27 35 43 51 59 67 75 83

Proj Oil Cum: 181.10 Mbb1
 Oil Rem: 56.95 Mbb1
 Oil EUR: 238.05 Mbb1

Proj Gas Cum: 1.31 MMcf
 Gas Rem: 0.00 MMcf
 Gas EUR: 1.31 MMcf

LAMC Section 12.23.C.4(b) 20-yr life

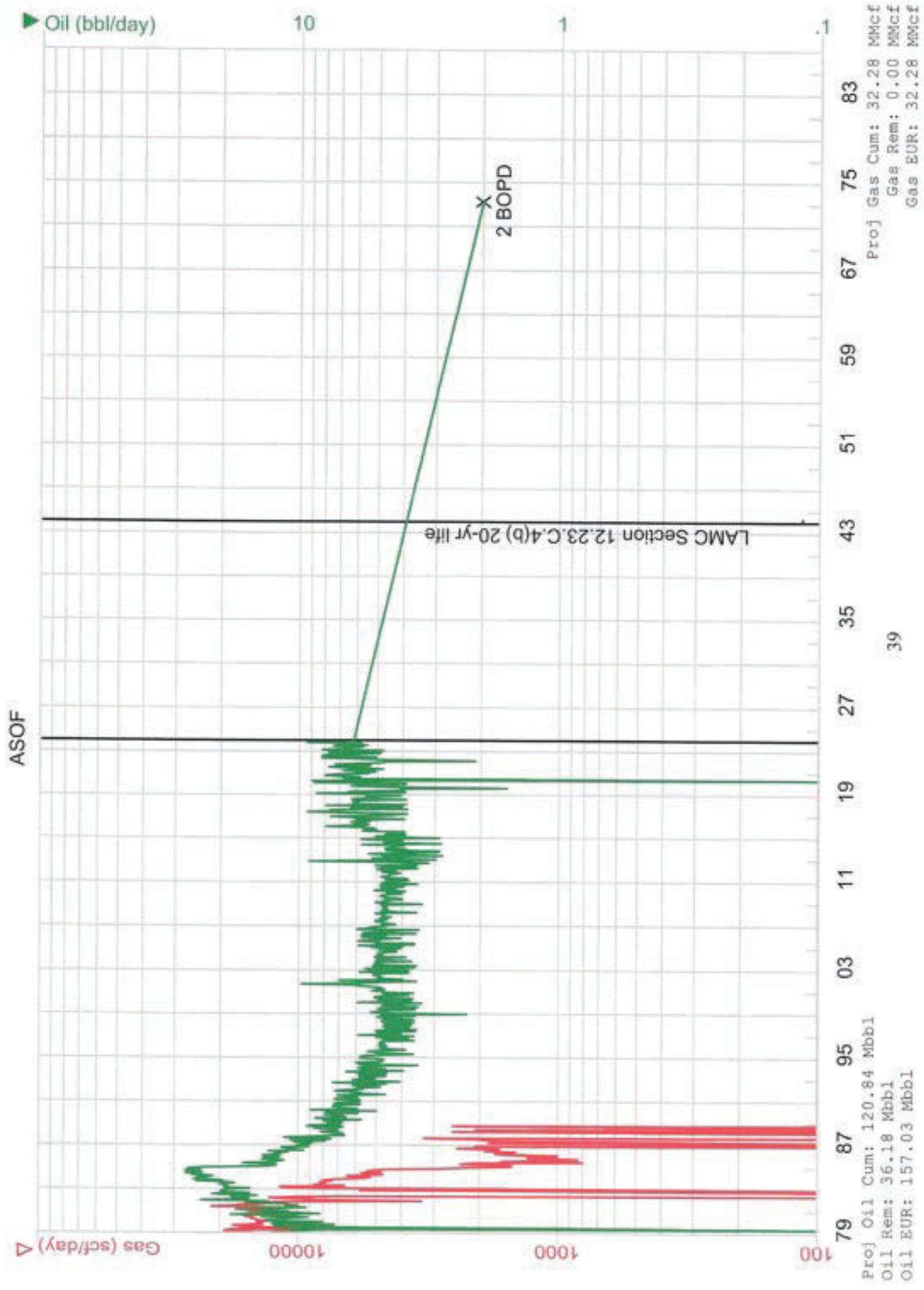
ASOF

2 BOPD

38

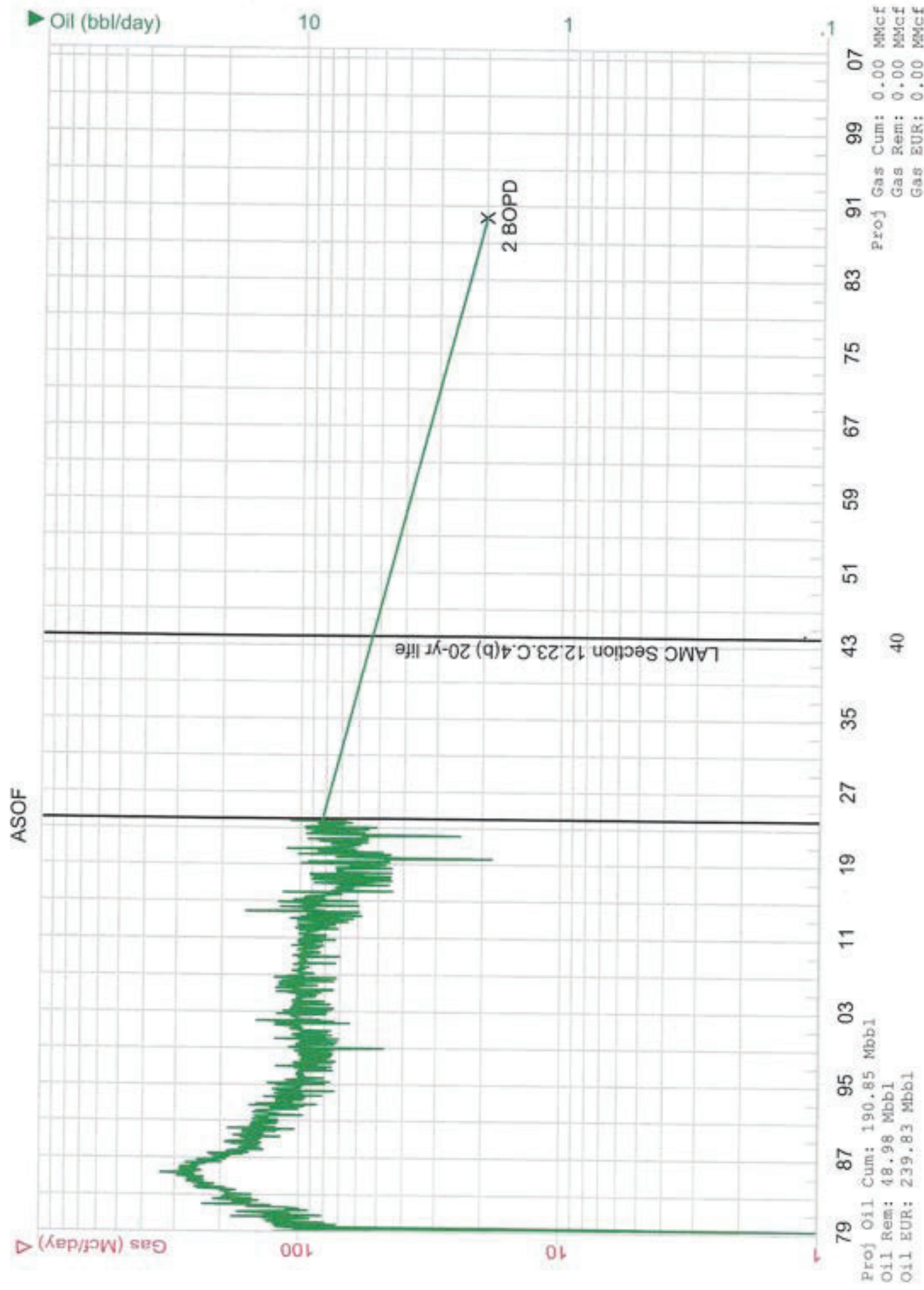
BROWN BEVIS LEASE WELL 31
Oper: COOPER & BRAIN, INC.
Major Phase: Oil

Field: TORRANCE
LOS ANGELES, CA
04-037-17305-0000



BROWN BEVIS LEASE WELL 26
 Oper: COOPER & BRAIN, INC.
 Major Phase: Oil

Field: TORRANCE
 LOS ANGELES, CA
 04-037-17300-0000

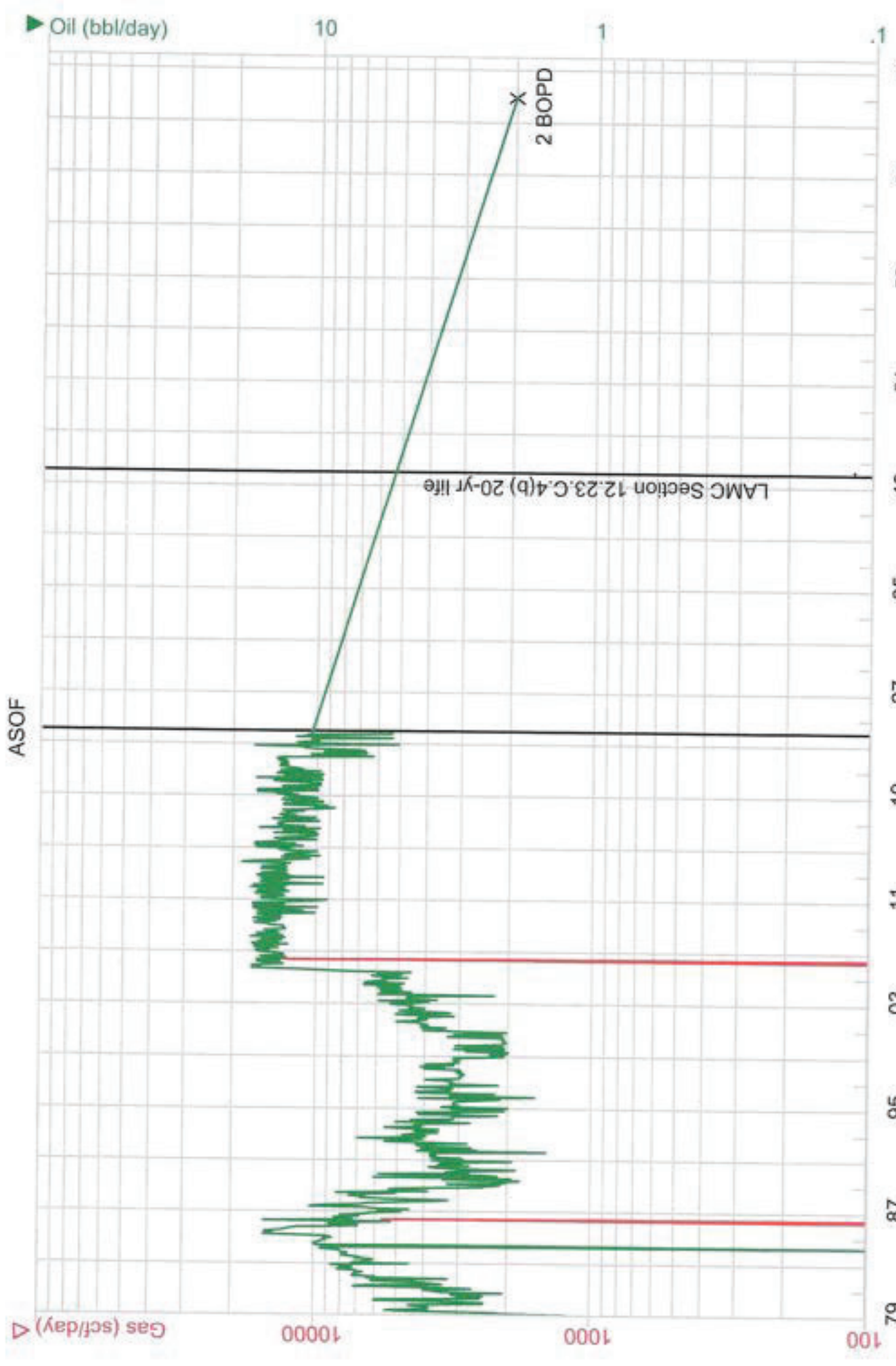


Proj Gas Cum: 0.00 MMcf
 Gas Rem: 0.00 MMcf
 Gas EUR: 0.00 MMcf

Proj Oil Cum: 190.85 Mbbbl
 Oil Rem: 48.98 Mbbbl
 Oil EUR: 239.83 Mbbbl

SPRING 81
 Oper: O'DONNELL OIL, LLC
 Major Phase: Oil

Field: TORRANCE
 LOS ANGELES, CA
 04-037-17539-0000



Proj Oil Cum: 134.50 Mbb1
 Oil Rem: 55.19 Mbb1
 Oil EUR: 189.69 Mbb1

Proj Gas Cum: 0.64 MMcf
 Gas Rem: 0.00 MMcf
 Gas EUR: 0.64 MMcf

Communication from Public

Name: Matt Wickersham for E&B Natural Resources
Date Submitted: 06/08/2026 05:51 PM
Council File No: 17-0447-S2
Comments for Public Posting: See attached letter opposing the proposed Oil & Gas Ordinance for the June 9, 2026 PLUM Committee

ALSTON & BIRD

350 South Grand Avenue, 51st Floor
Los Angeles, CA 90071
213-576-1000 | Fax: 213-576-1100

Matthew Wickersham

Direct: 213-576-1185

matt.wickersham@alston.com

Via LACouncilComment.com

June 8, 2026

Planning and Land Use Management Committee
Los Angeles City Council
200 North Spring Street, Room 340
Los Angeles, CA 90012

Re: June 9, 2026, Hrg, Agenda Item No. 11, Proposed Oil and Gas Drilling Ordinance, Council File No. 17-0447-S2; Mitigated Negative Declaration, Environmental Case Nos. ENV-2025-2885-MND

Dear Councilmembers,

On behalf of E&B Natural Resources Management Corporation, Hillcrest Beverly Oil Corporation, E&B ENR I, LLC, and Elysium Natural Resources, LLC (collectively, “E&B”), this letter provides comments regarding the PLUM Committee’s consideration of Council File No. 17-0447-S2 proposing an Ordinance, which would amend the Los Angeles Municipal Code to prohibit new oil and gas extraction and make existing extraction uses nonconforming (“Oil and Gas Ordinance”). E&B objects to the proposed Oil & Gas Ordinance and strongly urges the Committee to refrain from approving the proposed amendment. The Oil and Gas Ordinance is not appropriate given California’s energy demands and the potential constitutional violations. In addition, City Planning has not properly complied with the California Environmental Quality Act (“CEQA”) in considering the significant environmental impacts caused by this action.

E&B incorporates by reference its prior letters, including its submission on December 8, 2025, in connection with the City Planning Commission’s prior consideration of the Oil & Gas Ordinance, as well as its December 29, 2025, submission of comments to the draft Mitigated Negative Declaration proposed to be adopted in connection with the Oil & Gas Ordinance. E&B briefly reiterates the objections to the ordinance below and refers the Committee to its December 8 and 29 letters for more detailed discussions.

The Oil & Gas Ordinance largely replicates a prior 2022 ordinance that was invalidated by a Los Angeles Superior Court and therefore remains legally defective. The ordinance is preempted by state and federal law because the regulation of oil and gas operations is already fully occupied by state agencies (e.g., CalGEM and SCAQMD) and federal programs governing injection wells. The statutory changes previously cited by the

Alston & Bird LLP

www.alston.com

Atlanta | Brussels | Century City | Charlotte | Chicago | Dallas | London | Los Angeles | New York | Raleigh | San Francisco | Silicon Valley | Washington, D.C.

LEGAL/51402743v1

June 8, 2026

Page 2

City (sections 3106.1 and 3280 et seq. of the Public Resources Code) do not override the constitutional preemption principles established by the California Supreme Court. As a result, the Oil & Gas Ordinance intrudes into areas reserved to higher levels of government and conflicts with controlling legal authority.

Beyond preemption, the Oil & Gas Ordinance is an arbitrary and unsupported exercise of the City's police power and would have significant economic and environmental consequences. The ordinance would effectively terminate oil operations by restricting maintenance, impose an illusory amortization scheme that accelerates shutdown of wells, and result in an unconstitutional taking of vested mineral and contract rights without compensation.

Finally, the City's CEQA review for the proposed Oil Ordinance is procedurally flawed and substantively inadequate. The City's proposed IS/MND improperly ignores foreseeable environmental consequences such as site abandonment and increased reliance on imported oil, and it fails to analyze cumulative and indirect environmental effects. The City must prepare a full Environmental Impact Report. The County of Los Angeles has already conceded this point, moving forward with preparation of an Environmental Impact Report for a proposed ordinance that does not go nearly as far as the City's proposed ordinance.

For all of these reasons, we urge the PLUM Committee not to move forward with respect to the proposed Oil & Gas Ordinance.

Sincerely,

A handwritten signature in blue ink that reads "Matt Wickersham". The signature is written in a cursive, flowing style.

Matt Wickersham