Preliminary Findings and Determination

Regarding

The Kitchen Lights Unit

Royalty Modification Application

Commissioner

of the Department of Natural Resources

APPROVAL OF MODIFICATION OF ROYALTY

FOR LEASES:

ADLs 389196, 389197, 389198, 389507, 389514, 389515, and 389923

November 22, 2024

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Executive Summary

On September 5, 2024, Furie Operating Alaska, LLC ("Furie"), as operator of the Kitchen Lights Unit ("KLU") and partial working interest owner in the leases corresponding to KLU, submitted an application ("Application") to the Commissioner of the State of Alaska Department of Natural Resources ("DNR") for modification of royalty under AS 38.05.180(j)(1)(B). This Preliminary Findings and Determination Regarding the KLU Royalty Modification Application ("Preliminary Decision") constitutes DNR's analysis and preliminary decision on Furie's Application.

Royalty modification was sought for all 30 leases in KLU. Furie asserted, under AS 38.05.180(j)(1)(B), that royalty modification was warranted to prolong the economic life of a gas field or pool as per barrel equivalent costs were projected to increase sufficiently due to declining production to make future production no longer economically feasible. Furie proposed a flat three percent royalty rate for five years and then a sliding scale royalty reduction based on KLU gas prices and claimed that this would extend the life of KLU.

Furie provided sufficient technical and financial information to substantiate its Application as required under 11 AAC 88.105, 11 AAC 83.185, 11 AAC 05.110(d)(3)(I), and AS 38.05.180(j)(6). Per AS 38.05.180(j)(2), the applicant clearly showed that the per barrel equivalent cost increase was sufficient to make future production no longer economically feasible without royalty modification. Per AS 38.05.180(j)(1)(B), the applicant clearly showed that the modification of royalty would prolong the economic life of KLU.

DNR finds that granting royalty modification for select KLU leases is in the best interest of the State. DNR authorizes a modification mechanism of three percent state royalty until KLU's cumulative gross revenues beginning from September 1, 2024, total \$712MM, with royalty rates subsequently returning to original values. DNR analyses show that the modification of royalty would extend the life of the field ten and a half years. Moreover, the modification of royalty and the extension of operating life for KLU translates into an expected gain of \$37.62MM in direct revenues to the State. Given the extended life and the changed economics, an amendment to the financial assurances agreement is a condition of this modification as well to support the best interest of the State.

In addition to revenue gains, DNR also finds that there would be significant indirect benefits to the State from extending the operating life of KLU. DNR quantified the indirect benefit of continuing Cook Inlet gas production for Southcentral Alaska utilities and their customers. DNR believes that ensuring enough gas in the system this coming winter is paramount. When considering this, in addition to the financial benefit to the State, Furie provides a compelling, clear and convincing case for granting royalty modification to KLU.

I. BACKGROUND

On September 5, 2024, Furie, as operator of KLU and partial working interest owner in the KLU leases, submitted the Application to the Commissioner of DNR for modification of royalty under Alaska Statute (AS) 38.05.180(j)(1)(B).

Prior to receiving an official application, Furie engaged with DNR on the royalty modification process beginning in April 2023 to learn the requirements of an application and expectations from DNR. In May 2023, Furie provided a draft application but was requested to significantly supplement their materials before an official royalty modification application would be ready. In February 2024, Furie provided more updates based on DNR's feedback. DNR provided even more feedback in March 2024. At the end of May 2024, Furie revised their draft materials and continued this refinement throughout the summer in conjunction with meaningful engagements with DNR. Finally, Furie submitted the Application on September 5, 2024.

On October 24, 2024, Furie informed DNR of entirely new production and price impacts to their modeling based on new market information and continued geotechnical analysis. This required DNR to update its analysis again and reconfigure much of the work that was already completed. This Preliminary Decision responds to the Application as required under AS 38.05.180(j)(8).

A. KLU Development History

The KLU, with 83,394 unitized acres, is located offshore in the Cook Inlet. Although previously known as Escopeta Oil Co., LLC, Furie has operated the unit since its formation in 2007. The unit was formed as the Kitchen Unit originally and was comprised of just the Southwest and Central Blocks of what is now the KLU. Forest Oil Corporation, Inc. operated the Corsair Unit to the north, consisting of acreage that is now the Corsair Block within the KLU. By the end of 2008 both the Kitchen Unit and the Corsair Unit were in default. During that same general time, Renaissance Alaska, LLC had applied to form a third unit, the Northern Lights Unit, which included the acreage that is now the North Block in the current KLU. After a series of events associated with all three units, on June 30, 2009, the Kitchen Unit was expanded to include the Corsair Unit acreage and the proposed Northern Lights Unit acreage and renamed as the KLU¹.

The KLU produces natural gas, which is used solely by Southcentral Alaska gas and electric utilities and the one oil refinery located in Nikiski, currently operated by Marathon Petroleum. Initial production began in November 2015 from the KLU 3 well. Currently, Furie operates a single offshore platform, the Julius R ("JRP") within the Unit that produces approximately 10,000 thousand cubic feet per day ("mcfd") (as of August 2024) from both the Beluga and Sterling pools.

Since sustained unit production commenced in November 2015, the KLU has produced over 41.08 billion cubic feet ("Bcf") of natural gas, 0 barrels of oil, and 1.52 million barrels

¹ See Exhibit C for a map showing the former or proposed Kitchen Unit, Corsair Unit, and Northern Lights Units.

of produced water through June 2024. Gas production peaked in November 2018, after the completion of KLU A-1 and KLU 4 wells at an average rate of 28,447 mcfd. The KLU A-1 and KLU 4 wells initially produced from the Sterling gas formations, which have significant associated water. In early 2019, hydrates formed within the gathering line, resulting in an approximate 3-month shut-in and subsequent Chapter 11 bankruptcy filing by the prior owner of Furie.

Furie produces gas at the JRP, transports the gas via a subsea gathering line, and processes the gas onshore at the Central Processing Facility ("CPF"). The JRP, the smallest offshore platform in Cook Inlet, was completed and put into service in November 2015. The JRP is a piled monopod substructure and topside comprised of three primary decks – an enclosed production deck, a main deck, and a heli-deck. The JRP is connected to the CPF by a concrete coated 10" diameter, 15-mile sub-sea gathering line, which handles unprocessed gas. The gathering line has a design capacity of 75,000 mcfd. The JRP has 6 well slots. Only 4 wells have been drilled from the platform (KLU A-1, KLU A-2a, KLU 3 & KLU A4). As of February 28, 2023, the KLU A-1 well has been incapable of flowing gas, and remains so even after a workover in the fall of 2023. In October 2024, Furie began drilling the A-1A well, a sidetrack of the A-1 well, but the results of the drilling and production from this well are still pending at the time of this Preliminary Decision.

Gas is processed at the CPF. The CPF was designed to process up to 45,000 mcfd and included three phase processing equipment for future oil development, but this equipment has never been placed into service. The CPF includes a small man camp, warehouse, compressor building, gas treatment building, and measurement building. Utility grade gas is currently sold by Furie at the 215 meter, the interconnect between Furie and the Kenai Beluga Pipeline. However, depending upon the gas customer, gas sales can occur at the 215 meter or another agreed upon meter. The CPF was also placed into service in 2015.

Furie is a Delaware registered company. Cornucopia Oil & Gas Company LLC ("Cornucopia"), a Delaware registered company, owns 100 percent of Furie. Cornucopia and its sister company, Corsair Oil & Gas Company LLC ("Corsair"), a Delaware registered company, are both 100 percent owned by Hex Cook Inlet LLC ("Hex CI"), an Alaska registered company. Hex CI is 100 percent owned by HEX LLC ("HEX"), an Alaska registered company. HEX is 100 percent owned by John L. Hendrix. John L. Hendrix purchased Cornucopia, Corsair and Furie through a complex Federal Chapter 11 bankruptcy process, closing the acquisition on June 30, 2020.

B. Three Royalty Modification Scenarios Under Statute

Under Alaska statutes, royalty modification is allowed under three potential scenarios:

- 1. New production- AS 38.05.180(j)(1)(A) provides for modification of royalty, "to allow for production from an oil or gas field or pool..." that "... has not previously produced oil or gas for sale."
- 2. Existing production nearing the end of field life- AS 38.05.180(j)(1)(B) provides for modification of royalty, "to prolong the economic life of an oil or gas field or pool as per barrel or barrel equivalent costs increase or as the price of oil or gas decreases, and the

increase or decrease is sufficient to make future production no longer economically feasible."

3. Shut-in production- AS 38.05.180(j)(1)(C) provides for modification of royalty, "to reestablish production of shut-in oil or gas that would not otherwise be economically feasible."

Furie is seeking modification of royalty under AS 38.05.180(j)(1)(B), since KLU is nearing the end of field life.

C. Procedure

The Commissioner will publish this Preliminary Decision and give public notice of a 30day comment period per AS 38.05.180(j)(8), as well as offer to appear before the Legislative Budget and Audit Committee and provide a review of the Preliminary Decision and administrative process per AS 38.05.180(j)(9). The Commissioner will keep the submitted data confidential under AS 38.05.035(a)(8) at the request of the lessee or lessees applying for the royalty reduction. Within 30 days of the close of the public comment period the Commissioner will prepare a summary of the public comments, make a Final Findings and Determination, and with the applicant's consent, amend the applicant's leases or unitization agreement consistent with the Final Findings and Determination per AS 38.05.180(j)(11). The Commissioner's Final Findings and Determination regarding a royalty reduction is final and not appealable to the court pursuant to AS 38.05.180(j)(11)(B).

II. SUMMARY OF FURIE'S APPLICATION FOR ROYALTY MODIFICATION

Furie applied for royalty modification of all 30 leases in KLU. The State of Alaska royalty rate is 12.5 percent, and there is a 12.5 percent overriding royalty interest ("ORRI"), making the total burden 25 percent on each of these 30 leases².

The applicant asserted, under AS 38.05.180(j)(1)(B), that royalty modification was warranted to prolong the economic life of a gas field or pool as per barrel equivalent costs were to increase sufficiently to make future production no longer economically feasible. The applicant claimed that future production from the KLU's offshore Sterling and Beluga sands cannot be economically recovered due to declining production and associated increasing per-barrel equivalent costs, making the field uneconomic to continue operations. Per its Application, Furie contended that, given the expected production profile, cost structure, along with KLU contract gas prices at the time averaging between \$9.61 and \$9.85 per mcf, the field would generate sustained negative cash flows by June 2025.

Furie requested a five-year royalty reduction to 3 percent with a sliding scale royalty based on the price of gas sold from the KLU after five years, with a total of 20 years of royalty relief. Due to the urgent need for natural gas production in Cook Inlet, Furie requested the maximum royalty relief of 3 percent for five years to extend field life by helping enable drilling of sidetracks and new wells to maintain and even increase production. After five years, Furie proposed a sliding scale royalty based on the price of gas

² See Section II C for more details on the history of the ORRIs.

sold from the KLU. For every \$1.00 increase in the average price of gas sold from the KLU above an inflation adjusted base price of \$12.50/mcf, the State's royalty would increase by .25 percent, but not exceed 7.5 percent. The \$12.50/mcf would be adjusted annually for inflation using CPI for Urban Alaska as reported by the State of Alaska Department of Labor and Workforce Development.

Furie claimed that if royalty relief was not granted for KLU, they would not be able to drill or rework any of their wells as the well work would be uneconomic, and therefore, would begin shutting down the KLU in June 2025, depending on existing KLU well performance. With the royalty modification proposed in the Application, Furie claimed that additional wells could be drilled or sidetracked as early as 2024, and each drilling season thereafter, until the JRP would be fully drilled out, with a total of 12 wells by the end of 2028.

A. Lease Summary

The following is a summary of all the KLU leases (Figure 1). The Division of Oil and Gas issued:

- 1. ADLs 389197, 389196, 389198, 389189, 389191, 389190, 389193, and 389192 effective February 1, 2000, on Competitive Oil and Gas Lease Form #DOG 9609 (Revised September 1999), with a primary term of seven years. These leases provided for a 12.5 percent fixed royalty rate.
- 2. ADLs 389514, 389513, 389515, and 389507 effective May 1, 2001, on Competitive Oil and Gas Lease Form #DOG 200004, with a primary term of seven years. These leases provided for a 12.5 percent fixed royalty rate.
- 3. ADLs 389928, 389927, 389930, 389929, 389924, 389923, 389925, 389926, 389918, 389917, 389915, 389914, and 389919 effective January 1, 2002, on Competitive Oil and Gas Lease Form #DOG 200004, with a primary term of seven years. These leases provided for a 12.5 percent fixed royalty rate.
- 4. ADLs 390381 and 390374 effective October 1, 2003, on Competitive Oil and Gas Lease Form #DOG 200204, with a primary term of seven years. These leases provided for a 12.5 percent fixed royalty rate.
- 5. ADLs 390554 and 390548 effective June 1, 2005, on Competitive Oil and Gas Lease Form #DOG 200204 (Revised October 2003), with a primary term of seven years. These leases provided for a 12.5 percent fixed royalty rate.
- 6. ADL 391106 effective January 1, 2007, on Competitive Oil and Gas Lease Form #DOG 200604, with a primary term of seven years. This lease provided for a 12.5 percent fixed royalty rate.

These thirty leases were committed to KLU effective June 30, 2009, extending the primary term in accordance with lease paragraph 4(b) so long as they remain committed to the unit agreement. For all leases, the working interest breakdown is as follows:

Table 1: KLU Working and Net Revenue Interests							
Name	Working Interest	Net Revenue Interest					
Cornucopia Oil & Gas Company, LLC*	78.99900%	59.26571%					
Taylor Minerals LLC	2.62000%	1.83405%					
Danny S. Davis	3.44000%	2.63734%					
A. Lawrence Berry	3.94000%	3.02067%					
Furie Operating Alaska, LLC*	11.00000%	8.24148%					
Corsair Oil & Gas LLC*	0.00100%	0.00075%					
Totals	100.00000%	75.00000%					

Table 1: KLU Working and Net Revenue Interests

*Controlled by HEX LLC, totaling 90 percent working interest in the KLU



Figure 1: KLU Boundary with Tract Designations, Leases, and PA Boundaries³

³ Source: DNR- Division of Oil and Gas

B. Production History

KLU encompasses 83,394 acres. Production at KLU averaged 10,289 mcfd in June 2024 and comes from two Participating Areas ("PAs") (Figure 1), the Julius R Beluga PA ("Beluga PA") and the Julius R Sterling PA ("Sterling PA"). There are currently four wells in the KLU that penetrate the Sterling and Beluga pools (Figure 2):

- KLU A-1 (shut-in)
- KLU A-2a (producing from Sterling Pool)
- KLU 3 (producing from Beluga Pool)
- KLU A-4 (producing from Beluga Pool)



Figure 2: KLU Lifetime Well Production History Up to April 2024⁴

Most of the current ~10,000 mcfd production is coming from the KLU A-2a well, which accounts for approximately 50 percent of KLU's total daily production. The KLU A-3 and KLU A-4 wells produce approximately 40 and 10 percent respectively of KLU's total daily production. Due to declining reservoir pressures, flowing wellhead pressures have nearly equalized with the flowline pressures in all three producing wells, posing a risk that any well could cease to produce, impacting KLU field life. In fact, the KLU A-1 well has been shut-in since November 2022 because of water loading in the well. The KLU A-1 was shut-in for mandatory safety valve testing and was not able to return to natural flow, despite

⁴ Source: Furie's Application

Furie's efforts to restore production. A similar event could occur to any of the other three wells. Absent costly well rework or sidetracks, the KLU has a real risk of its field life being prematurely shortened by wells going offline as early as this year.

C. History of Overriding Royalty Interests at KLU

An ORRI is an interest in oil and gas produced at the surface, free of the expense of production. This interest is nonpossessory. An ORRI is carved from the lessee's interest. The ORRIs at KLU total 12.5 percent. The State's royalty is from its interest as lessor. The State's royalty interest is 12.5 percent.

The KLU ORRIs were created or reserved over an eight-year period from 2002 to 2010 by the various working interest owners that have held the KLU leases. The last ORRI transaction in 2010 was five years before the KLU began sustained production. DNR only approves the initial creation of an ORRI and does not take action to approve or post records of any subsequent assignments of ORRIs.⁵ DNR may have information on such transfers of interest in its records, but there is no obligation for DNR to track or approve subsequent transfers. A full list of the initial ORRIs when they were created and to whom they were granted or reserved is listed in Exhibit B.

Several notable points must be observed when examining the issue of the KLU ORRIs. Foremost among them is that the ORRI burden of the KLU has not changed since 2010, and has remained 12.5 percent, in addition to the State royalty rate of 12.5 percent, through the acquisition of Cornucopia, Corsair, and Furie by HEX in 2020. Claims to the effect that the KLU leases are suddenly overburdened because of the approval ORRIs by DNR is undermined by the foregoing, as no new ORRIs have been created in over a decade.

Second, all current production from KLU comes from the Sterling and Beluga PAs where over half of the ORRI burden was created by Escopeta Oil Co LLC⁶ ("Escopeta Oil"), which reserved a 7 percent ORRI to itself in 2010. Once the Department of Natural Resources approved the creation of these ORRIs, the holder was able to re-assign them without any further review or approval by the Department. Escopeta Oil subsequently did assign its ORRIs to other parties. Although Escopeta Oil changed its name to Furie in 2012, the KLU has had only one operator. It wasn't until July 2020 when HEX acquired Furie through bankruptcy that the operator effectively changed as Furie's management changed.

Third, on the leases outside the boundaries of the PAs, Escopeta Oil created the largest ORRI burden on the KLU leases accounting for 52 percent of the total ORRI burden. When considering the ORRIs reserved by Escopeta Production – Alaska, Inc. in 2002, 68 percent of the KLU ORRIs were created by an Escopeta entity. The other notable entities that created significant ORRI burdens on the KLU leases were Prodigy Alaska, LLC from 2002-2006 and Pacific Energy Alaska Operating, LLC in 2007, responsible for 14 percent and 13 percent of the total KLU ORRI burden respectively.

⁵ 11 AAC 82.605(b).

⁶ Escopeta Oil Co LLC changed its name to Furie Operating Alaska, LLC on March 29, 2012.

Lastly, Escopeta Oil and Taylor Minerals, LLC returned a combined 5 percent ORRI burden on half of the KLU leases to their own respective working interests to lessen the total burden in 2010, as those leases had a 17.5 percent ORRI and a 30 percent total burden. This was done to equalize the total burden across the KLU to 25 percent rather than applying to increase the ORRIs on the other leases to 30 percent. The working interest owners could have reduced more of the ORRI burden, but did not.

Furie argues in its Application that one of the reasons for needing royalty modification is that DNR has allowed the KLU to be excessively burdened. They refer to *AVCG*, *LLC v. Alaska Department of Natural Resources*, 527 P.3d 272 (Alaska 2023), where the State of Alaska Supreme Court affirmed DNR's position to deny a requested ORRI that would have burdened leases with a combined royalty greater than 20 percent. The Court found DNR has the authority to evaluate the particular circumstances of a lease and deny the creation of an ORRI without the need to promulgate regulations defining a bright line on total allowed burdens. The *AVCG* case does not mean that all leases with burdens already higher than 20 percent total royalty burden must be modified, as Furie contends. DNR's granting of royalty modification for this Application is done outside of any argument related to the *AVCG* case.

Prior to submitting its Application, Furie reported to the Department that it made multiple efforts to work with the current ORRI owners to either reduce their burden or sell their interest to Furie to prolong the life of KLU or sell their interest to Furie. These attempts in 2023 and 2024 were unsuccessful.

III. SUMMARY OF ROYALTY MODIFICATION AUTHORITIES AS 38.05.180(j) A. Authority on Royalty Modification Criteria

AS 38.05.180(j)(1)(B) provides the DNR Commissioner the authority to grant modification of royalty to unitized or individual leases for existing production to extend the life of the field as mentioned in Section I.B. AS 38.05.180(j)(2) provides that the Commissioner may not grant a royalty modification unless the lessee or lessees requesting the royalty modification make a clear and convincing showing that:

- 1. Royalty modification is necessary to prolong the economic life of an oil or gas field or pool as per barrel or barrel equivalent costs increase or as the price of oil or gas decreases, and the increase or decrease is sufficient to make future production no longer economically feasible; and
- 2. Royalty modification is in the best interests of the State. When evaluating whether royalty modification is in the best interests of the State, DNR looks to the objectives and criteria listed in statutes such as AS 38.05.180(a) and (j).

B. Additional Statutory Requirements for Royalty Modification

1. Under AS 38.05.180(j)(3) the royalty modification terms must provide for an increase or decrease or other modification of the State's royalty share by a sliding scale royalty or other mechanism that shall be based on a change in the price of oil or gas and may also be

based on other relevant factors such as a change in production rate, projected ultimate recovery, development costs, and operating costs.

- 2. Under AS 38.05.180(j)(4)(B) a modification to royalty may not be granted for the field or pool to extend the life of the field if the royalty modification would result in a royalty rate of less than three percent in amount or value of the production removed or sold from a lease or leases covering the field or pool.
- 3. Under AS 38.05 180(j)(5) a royalty reduction must include an explicit condition that the royalty reduction is not assignable without the prior written approval of the Commissioner, which may not be unreasonably withheld. The Commissioner shall, in the Preliminary and Final Findings and Determinations, set out the conditions under which the royalty reduction may be assigned.

IV. APPLICANT'S CLEAR AND CONVINCING SHOWING FOR ROYALTY MODIFICATION AS REQUIRED UNDER AS 38.05.180(j)

DNR determined that Furie provided sufficient technical and financial information to substantiate its Application as required under AS 38.05.180(j)(6), 11 AAC 83.185, and 11 AAC 88.105.

Per AS 38.05.180(j)(2), the applicant clearly showed that the increase in per barrel equivalent costs is sufficient to make future production no longer economically feasible from KLU without royalty modification. The increase in per barrel equivalent costs is mainly due to declining production. Lease operating expenditures are expected to increase as the number of producing wells decreases. Likewise, there is a small increase in general and administrative costs that change with production, since as production decreases, each produced barrel equivalent bears a larger share of those fixed expenditures.

Similarly, per AS 38.05.180(j)(1)(B), the applicant clearly showed that the modification of royalty would prolong the economic life of KLU. Furie showed that KLU's life would be extended by 23 months if Furie drills the A-1 sidetrack, it comes online as expected, and the existing wells remain on production. However, there is a risk that other KLU wells could cease production due to sanding issues, low reservoir pressure, or watering out. If that occurs, then KLU would likely reach end of field life as early as December 2024. Therefore, full development of the acreage surrounding the JRP by Furie is essential for the KLU. Furie also showed full development of the acreage surrounding the JRP would likely extend field life for more than ten years. Either way, royalty modification would prolong field life at least through this winter while southcentral Alaska's gas needs are high, provide Furie the ability to sustain operations while planning additional well work to restore any lost production from existing wells, and implement full field development of the acreage surrounding the JRP over time.

Additionally, per AS 38.05.180(j)(2), the applicant showed that the reduction of the royalty rate is in the best interests of the State based on extension of field life and the potential indirect benefits of Furie's continued operation of KLU.

However, the mechanism for the reduction of the royalty rate proposed by the applicant was not acceptable to DNR. Under AS 38.05.180(j)(3), royalty modification must be based on a sliding-scale that accounts for changes in the price of oil and/or gas, and which may also consider other factors. DNR cannot expressly grant a flat royalty rate for a fixed period of time regardless of price factors, as Furie had originally proposed. Furthermore, using a sliding scale royalty solely based on price ignores the relevance of KLU's reservoir performance, which affects field life. To respond to these considerations in light of the statutory authority of the Department, the royalty modification approved by DNR is based on the cumulative gross revenues – which are driven by the price and volume of gas sold – which are expected to occur over the extended field life period to conform to the requirements of AS 38.05.180(j)(3).

V. SUMMARY OF STATE'S ROYALTY MODIFICATION DECISION, TERMS AND CONDITIONS A. Royalty Modification Decision

Furie has paid the filing fee and submitted a complete application for royalty modification, including meeting the financial and technical data requirements of AS 38.05.180(j)(6), 11 AAC 83.185, and 11 AAC 88.105. Furie qualifies for royalty modification on ADLs 389196, 389197, 389198, 389507, 389514, 389515, and 389923 under AS 38.05.180(j)(1)(B) as these are the leases that can be developed from the JRP to extend field life. However, Furie's proposed royalty modification mechanism does not comport with the requirements of AS 38.05.180(j)(3). Instead, DNR will grant royalty modification based on a sliding scale incorporating both oil price and production and conditions for the best interest of the State. DNR's granting of royalty modification is effective as of September 1, 2024, until the gross revenue target is reached, as described in Section V.B.1. below.

B. Royalty Modification Terms

- The royalty rate will be three percent per month until the gross revenue generated from the KLU beginning from September 1, 2024, reaches a cumulative amount of \$712,000,000.00 ("Gross Revenue Target"). After this Gross Revenue Target is reached, royalty rate will return to 12.5 percent, and royalty modification will expire.
- 2. The Gross Revenue Target was generated from the total monthly cost and expense estimates for full field development of KLU that Furie provided for the estimated economic life of the JRP, with adjustments that DNR deemed reasonable.
- 3. Monthly gross revenues will be assessed against the Gross Revenue Target in determining monthly royalty rates.
- 4. For the month in which the Gross Revenue Target is reached, the royalty rate will be 12.5 percent for the entire month. The 3 percent royalty rate will not be prorated in that last month.
- 5. The procedure for determining royalty modification, and the resulting calculation, are as follows:

- a. For every production month, DNR will calculate the monthly gross revenue as the product of the monthly production of natural gas and the royalty value of such natural gas at KLU.
- b. If the cumulative gross revenue from September 1, 2024, to the current production month is less than or equal to the Gross Revenue Target, then the royalty rate will be three percent for that month.
- c. Once the monthly gross revenue has reached a cumulative amount greater than or equal to the Gross Revenue Target, then the royalty rate will be 12.5 percent for that month.
- d. Royalty reduction shall not result in a royalty rate less than three percent.
- e. These royalty calculations are subject to routine DNR royalty audits.
- 6. Royalty modification will apply to seven leases in the KLU, ADLs 389196, 389197, 389198, 389507, 389514, 389515, and 389923. These are KLU tracts 6, 7, 8, 9, 11, 12, and 18 respectively.
- 7. DNR shall have the right to obtain invoices and financial and accounting records from Furie every six months after granting royalty modification.
- 8. DNR shall have the right, upon notice to Furie, to terminate the royalty modification in whole or in part if DNR determines that the criteria of AS 38.05.180(j)(1)(B) or AS 38.05.180(j)(2) are no longer met. Furthermore, if DNR finds the KLU operator to be in default per 11 AAC 83.374⁷, and the default is not cured, then this royalty modification will terminate effective at the end of the month of when the cure period⁸ ends.
- 9. The royalty modification shall expire once the Gross Revenue Target is reached, unless terminated previously pursuant to condition 8 above.
- 10. The effectiveness of a final Best Interest Finding is made expressly contingent upon DNR, HEX, and Furie agreeing to amend the Dismantlement Removal, and Restoration Financial Assurances Agreement by and between the parties dated September 14, 2022 ("DR&R FAA") by deleting Section 3.6.2 in its entirety and providing for a reopener on or before November 1, 2028⁹. Failure to amend the FAA per DNR's request will cause this royalty modification to terminate.

⁷ 11 AAC 83.374. Default. (a) Failure to comply with any of the terms of an approved unit agreement, including any plans of exploration, development, or operations which are a part of the unit agreement, is a default under the unit agreement.

⁸ 11 AAC 83.374. Default. (b) The commissioner will give notice to the unit operator and defaulting party (if other than the unit operator) of the default. The notice will state the nature of the default and include a demand to cure the default by a specific date, which in the case of failure to pay rentals or royalties will be a date determined by the commissioner and in the case of any other default will be a date not less than 90 days after the date of the commissioner's notice of default.

⁹ Per the modeling provided by Furie, DR&R is included in the cost estimates in V.B.2. and the Gross Revenue Target on which royalty modification is based. Therefore, modification of the DR&R FAA is appropriate to account for the extended field life and development economics of the KLU.

- 11. The royalty modification may only be assigned by Furie to another lessee, pursuant to AS 38.05.180(j)(5), upon the written approval of the Commissioner. The Commissioner will approve a transfer of the royalty modification unless the Commissioner makes a written finding that the transfer would adversely affect the best interests of the State or does not comply with applicable statutes or regulations.
- 12. The royalty modification shall be applied retroactively to September 1, 2024.

VI. DISCUSSION OF ROYALTY MODIFICATION DECISION

A. Leases Eligible for Consideration

Furie applied for royalty modification for the thirty leases committed to KLU. Pursuant to AS 38.05.180(j)(1), DNR may grant royalty modification to individual leases, and so approves royalty modification to only the seven KLU leases described in Section V.B.66. that can be developed from the JRP to extend field life.

B. Applicant Data Submission Review

Furie was required to provide detailed information allowing DNR to comprehensively evaluate the economics of operating KLU, per AS 38.05.180(j)(6). Furie completed this requirement with its Application, and again throughout DNR's evaluation process as additional questions arose or follow up materials were needed. This was particularly the case when DNR learned that Furie had an updated price and production profile that Furie was relying upon that required updating what was submitted with its initial Application.

Furie also provided other documents that detailed the basis for its cost and production assumptions. DNR checked model inputs against cost and production assumptions reflected in these documents. DNR reviewed the formulas used to capture the costs and benefits of the project and was able to create a dynamic scenario-based cash flow model to analyze the Application.

C. DNR Financial Modeling Review

DNR analyzed several Furie economic models, including during the pre-application stage, once Furie applied for royalty modification, and again as new information was presented to DNR after receiving the Application.

During modeling, DNR carefully revised the Furie model for KLU in several important ways, after evaluating the model assumptions. These modifications made the model dynamic; extended the period under consideration; modeled possible KLU field shutdown scenarios; and created a simulation environment where price, production, and different royalty modification mechanisms could be tested against the status quo of no royalty modification. In all, 20 different simulation scenarios (with both fixed and random stochastic assumptions) were considered before deciding upon the royalty modification mechanism proposed in this Preliminary Decision based on the final Furie submissions.

During pre-application discussions, Furie was focused on royalty modification that would extend field life by enabling Furie to drill one well (sidetracking the A1 well) to meet

current POD commitments. Concerns about existing well reliability jeopardized forecasted cash flows such that per barrel equivalent costs would make further development of the KLU uneconomic unless royalty relief was given. These evaluations established a baseline for DNR to determine how effective royalty modification could be to extend the life of KLU pursuant to AS 38.05.180(j)(1)(B). It was anticipated that field life could be extended by approximately two years. The net present value ("NPV") for the State's royalty share and for Furie were better under royalty modification such that Furie would likely be able to meet its POD commitments. Once Furie's initial economic model was thoroughly evaluated and adjusted, and after much feedback to Furie, Furie applied for royalty modification.

Upon receipt of the Application, DNR began to further scrutinize Furie's economic models to better understand how far into the future the KLU field life could be extended, in addition to the initial A1 sidetrack program. Furie presented a model that included full development of the JRP through 2030. DNR then expanded the period under consideration and added sensitivity to price and production to get a fuller understanding of KLU's expected field life. Under these assumptions, DNR modeled a royalty modification mechanism different than what Furie had requested, yet extended the life of the field by approximately nine years while increasing State revenues more than 600 percent compared to not granting royalty modification. However, the applicant notified DNR on October 24, 2024, that a new price and production profile was being relied upon for business purposes. DNR requested this new information and was promptly provided with the same.

At this point, DNR engaged in one last round of modeling. Furie's confidence in the new prices for KLU gas were high, so DNR re-ran sensitivities around the new price curve, and formulated new price scenarios. Furie also changed the production forecast for the years 2026 through 2030 but left outer years the same. DNR then evaluated the model using Furie's updated production numbers without adding additional risking as Furie had already risked the production numbers appropriately.

In this last stage of modeling, DNR compared the estimated direct impacts to State revenues (royalties, production tax, property tax, and corporate income tax¹⁰) and estimated the extensions to the life of the field from granting royalty modification as opposed to not doing so. This enabled DNR to determine a royalty modification mechanism that both brought meaningful extension to the life of KLU while being statutorily compliant.

DNR estimated direct impacts to State revenues following guidelines given by DOR's Revenue Sources Book for Fall 2023, and references therein. Production tax and related authorities are found under AS 43.55, corporate income tax authorities are found under AS 43.20, while property tax authorities are found under AS 43.56.

¹⁰ DNR estimated that corporate income tax was not a consideration for the period under examination. As a limited liability company, Furie does not pay corporate income tax, but rather acts as a pass-through entity for profits to be reported for tax purposes by its parent HEX CI, another limited liability company.

D. Stochastic Modeling Approach

i. Modeling Framework

The DNR model was dynamic compared to the static model Furie presented. DNR designed a model that used a simulation framework where the user could specify scenarios that they would be interested in running and could compare outcomes from multiple price and production expectation scenarios by toggling between options. This framework was utilized in all stages of scenario evaluation. The modeling time horizon was between 2024 to 2038. The analysis was done initially completed on an annual basis, but once Furie provided its final price and production updates on October 24, 2024, DNR used a month-to-month basis for its final analysis and recommendations. Every stochastic scenario was simulated 5 times, with 10,000 iterations in each simulation run, using Palisade's @Risk software.

ii. Price Scenarios

Stochastic elements were introduced in price modeling. Given that the cash flow models for KLU generated estimates of negative cash flows within the period under consideration due to normal production declines, price scenarios had to sufficiently capture the variation possible within this time frame. Out of many price scenarios possible and considered, DNR settled on four: one fixed price path and three stochastic paths for both stages of Furie's price submissions.

The fixed price path came from the applicant and was updated on October 24, 2024. For reference, the applicant's initial fixed price forecast, along with the updated fixed price forecast, is shown below (Figure 3) to illustrate just how significantly the price forecast changed from Furie's initial Application. There were three different stochastic price paths initially modeled following Furie's Application. After Furie's latest submission, DNR used three new price paths (Figure 3): a Random Furie price path that fitted a Uniform distribution (±\$1) to Furie's latest price expectations; a Uniform price path (\$12.10, \$15.10) using contract price expectations per mcf, and a Normal price path (mean= \$15.75, standard deviation =\$0.25) that captured random price distributions in a high case scenario anchored around \$15.75 per mcf. In all three stochastic models, DNR elected to maintain Furie's prices for 2024 and 2025.

DNR fitted the Furie-provided-prices to known continuous distributions and determined that the Uniform (best fit) and Normal distributions were preferred based on information criteria, namely the Akaike Information Criterion. Other probabilistic distributions were examined; including Triangular, Lognormal, Loglogistic and Pert; and excluded due to fit and reasonableness based on KLU's field life expectations. The stochastic distributions used since KLU field life extension was likely to be significant, and Cook Inlet gas prices may be volatile in the outer years due to supply concerns. Therefore, it was deemed important to try to capture as much meaningful variation as possible in the modeling window. In general, the stochastic price distributions were modeled month-tomonth, where each month's price realization was assumed to be independent and identically distributed. While the fixed price scenarios showed how a stable price regime would provide modification outcomes, the stochastic price scenarios tried to optimize the probability that the chosen scenario is realized. For example, Scenario 3 (Table 2) used a Uniform distribution in the range following Furie's updated prices but tried to generate price realizations within a wider band of up to \$1.00. Likewise, Scenario 4 used a Uniform price path, but prices were allowed to fluctuate around \$12.10 and \$15.10 per mcf. Since Furie was confident in the updated prices, DNR assumed those to be the new "floor." By trying to model sufficient meaningful variation, DNR was trying to see what the "worst case" and "best case" outcomes could be, and the variations between those outcomes.



Figure 3: Modeled Price Paths for Royalty Modification Scenarios

Price	
Scenario	Description
Scenario 1	Furie's Initial price
Scenario 2	Furie's Updated price
Scenario 3	Random Furie Updated price (medium case)
Scenario 4	Uniform price (medium-high case)
Scenario 5	Normal price (high case)

Table 2: Modeled Price Scenario	S
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iii. Production Scenarios

Before the applicant updated their price and production forecasts on October 24, 2024, DNR introduced dynamic elements to the production modeling by considering alternate production profiles. DNR initially evaluated the Furie submitted decline profile of risking production at 50 percent and determined that it was reasonable, based on historical reservoir performance, downtime activities, and expected decline. DNR also modeled risking production at 25 percent to capture scenarios where well performance is less than expected, and 75 percent where well performance is better than expected. However, with the new price and production curves from October 24, 2024, which Furie deemed to be more reliable, DNR elected to model only Furie's provided production curve without further risking beyond the provided 50 percent. Changing the risking of the new production profile would not change the appropriateness of the Gross Revenue Target royalty modification mechanism, but only change the timing under which royalty relief occurs. A 25 percent production risk would mean less production, and it would take longer to reach the Gross Revenue Target. A 75 percent production risk would mean more production, and the Gross Revenue Target would be reached sooner.

iv. KLU Field Shutdown Scenarios

DNR used Furie's forecasted maximum cumulative cash flow to determine when a shutdown was likely to occur. DNR modeled this strategic consideration with the assumption that Furie would shut down the KLU once cumulative cash flows beginning September 1, 2024, reached their peak. This gave DNR the ability to toggle between Furie shut down time horizons to see how royalty modification would help field economics and incentivize field life extension.

This toggling further enabled a review of how the modification mechanism would interact with price variation, and on average, how State revenues would change accordingly.

v. The Royalty Modification Mechanism Considered

DNR settled on modification mechanisms that explicitly addressed the KLU monthly gross cash flows, although other mechanisms were initially considered. DNR wanted to ensure that the proposed mechanism would grant royalty relief now when it is most needed for continued gas production this winter, while enabling a meaningful extension of field life. Moreover, the DNR modification mechanism would result in sliding scale royalty relief if revenues were to increase for any reason, such as when new drilling results in additional production or if prices significantly increase, so that the royalty rate would commensurately rise back to original levels as field economics allow.

The model used the cumulative gross revenue mechanism to determine which months and years would be eligible for royalty relief. If a given month's cumulative gross revenue is less than or equal to the Gross Revenue Target, then there will be a reduction of the royalty rate to three percent. The model estimated whether royalty relief was sufficient or not to delay shutdown of the field and calculated the corresponding State revenues, gas production, and Furie's cash flows in all cases.

E. Results of Scenario Modeling

The results shown (Table 3) are for four price scenarios (Scenarios 2-5 from Table 2) and include the baseline case of not granting royalty modification. The Scenario results assume that DNR would grant royalty modification commencing September 1, 2024.

To understand the effects of royalty modification, a baseline end of field life must be established. According to Furie's model, end of field life would likely occur in June 2025 when costs to continue operating the KLU become more than the revenue generated. This is because continued development of the field is uneconomic under the current royalty rate. In this baseline, Furie could be expected to produce just under 2.5 Bcf of gas between September 1, 2024, to June 2025. The State would get approximately \$1.67MM (NPV12.5) in royalties at the 12.5 percent royalty rate and a total of \$3.50MM when including estimated production and property taxes.

With royalty modification, DNR expects the life of the field to be extended at least 10.5 years (126 months) based on the scenarios modeled, assuming Furie's full JRP development per the Application. The highest extension in field life seen was 11.5 years (138 months) for Scenario 5, and 10.5 years for the more likely scenarios (Scenarios 2-4). With this extension of field life, the amount of gas produced for the benefit of Alaskans increases significantly, an increase of 63.2 Bcf to 65.9 Bcf in total, with a 63.2 Bcf increase in the more likely scenarios. The modeling suggests that Furie would benefit from royalty modification for 104 months (8.7 years) for the most likely scenario (Scenario 2), averaging 98 months (8.2 years) across all Scenarios, and lasting 82 months (6.8 years) for the high price Scenario 5 because the Gross Revenue Target is reached much earlier than in the other Scenarios.

In addition to the significant benefit of continued Cook Inlet gas production in the near term, DNR found that this extension to the life of the field was accompanied by expected increases in direct revenues to the State in royalties, production tax, and property taxes. Royalty revenue gains occur during the years when the life of KLU is extended beyond June 2025 due to royalty modification. These expected royalty gains would not occur otherwise. Additionally, production and property taxes continue to be collected as the field continues to produce.

In terms of royalty gains to the State, the expected gain from all the Scenarios ranged from \$15.44MM-\$16.98MM (NPV 12.5) over the baseline of not granting royalty modification. Using the high price scenario (Scenario 5), the expected royalty gain could yield as much as \$25.24MM (NPV 12.5) more to the State. This is because with continued operation of the KLU for ten and a half years or more over the baseline, even with a reduced royalty rate, the State receives significantly more in total royalties from all the additional gas produced and sold that otherwise would not have been developed.

Another significant State revenue impact will come from increases in property tax revenues (Table 3). DNR estimated property tax revenues being split evenly between the State and Kenai Peninsula Borough. By extending the life of the field significantly, the amount of additional property tax generated to the State (beyond the baseline amount of \$0.80MM) will be \$16.12MM (NPV12.5) in Scenarios 2-4, which are the earliest postroyalty modification end of field life cases. In Scenario 5, since field life is extended to December 2036, the expected property tax increase will be \$16.92MM beyond the baseline amount.

Production tax revenues are expected to be \$6.06MM (NPV 12.5) over the baseline (shutdown June 2025) for the likely scenarios (Scenarios 2-4). In the event of high prices (Scenario 5), the production tax gains would be \$6.16MM (NPV 12.5).

Total State revenues are expected to increase from \$37.62MM to \$48.31MM, beyond the baseline of \$2.71MM (Table 3).

	Results of Probabilistic Price Scenarios									
Price Path Scenario	SOA Royalty \$MM (NPV12.5)	End of Field Life Extension Over June 2025 (months)	End of Field Life Extension Over June 2025 (Years)	End of Field Life	Cumulative Production From Sept 2024 MMSCF	Production Tax \$MM (NPV12.5)	State Share of Property Tax (50%) \$MM (NPV12.5)	Total State Revenue \$MM (NPV 12.5)		
Scenario 1: No Royalty Modification (baseline)	\$1.67	0	0	June 2025	2,496	\$0.24	\$0.80	\$2.71		
Scenario 2: Furie's Updated Price Estimate	\$17.11	126	10.5	December 2035	65,724	\$6.30	\$16.92	\$40.33		
Scenario 3: Random Furie Updated Price +/- \$1 (medium case)	\$17.24	126	10.5	December 2035	65,724	\$6.30	\$16.92	\$40.46		
Scenario 4: Uniform Price (medium-high case)	\$18.65	126	10.5	December 2035	65,724	\$6.30	\$16.92	\$41.87		
Scenario 5: Normal Price (high case)	\$26.91	138	11.5	December 2036	68,369	\$6.40	\$17.71	\$51.02		

Table 3: DNR Final Modeling Results

VII. THE ROYALTY MODIFICATION IS IN THE BEST INTEREST OF THE STATE

This Preliminary Decision concludes that granting royalty modification on the seven leases described in Section V.B.6 is in the best interest of the State based on the direct benefits presented above (Table 3) in terms of expected field life extension and increases in direct revenues to the State. Additionally, two other indirect benefits to the State that were not quantifiable are discussed below. DNR believes that once all these unquantified indirect benefits are considered alongside the quantified benefits to the State, they have the potential to further support the best interests of the State from the modification of royalty at KLU.

A. Quantified Total Direct Benefits to the State

In terms of direct revenue benefits to the State for the most likely scenario (Scenario 2) over the baseline at NPV 12.5, they include \$15.44MM in incremental royalties, \$6.06MM in incremental production taxes, and \$16.12MM in incremental property taxes for a grand total of \$37.62MM in incremental direct benefits to the State. In terms of extension to the life of the field, per AS 38.05.180(j)(1)(B), the proposed royalty modification would extend field life on average by 10.5 years, based on Scenario 2, the most likely case modeled.

B. Unquantified Indirect Benefits to the State

DNR's decision to grant royalty modification is also based on two different possible sources of indirect benefits to the State.

i. Continued Local Gas Production

Cook Inlet is facing a potential natural gas shortfall to local utilities and could easily experience shortfalls as early as this winter. In 2022, Hilcorp Alaska, LLC ("Hilcorp"), the largest producer of natural gas in the Cook Inlet, announced it would not have enough reserves to sign new gas contracts beyond its current contract commitments. Buyers of Cook Inlet gas are considering potentially costly alternatives, including LNG imports, or other sources of energy. Maintaining a stable Cook Inlet gas can continue to be produced. By granting royalty relief on the seven leases described in Section V.B.6., it will make KLU more economic to maintain production, develop and increase local gas production.

Displacing local gas by imported gas has several impacts, including zero royalty income to the State on gas imports. The number of local, high-paying jobs in the oil and gas industry will decline as demand for their services decreases, assuming imported gas facilities would not create an equivalent number of new jobs. The Cook Inlet region will suffer from reduced exploration activities and diminished interest as a viable energy production basin. The State and Kenai Peninsula Borough might possibly expect fewer property taxes. Ultimately, replacing local Cook Inlet gas with another energy source will likely cost more, which will likely increase energy costs to utility rate payers as well.

ii. Environmental, Social, and Cultural Impacts

The best interests of the State also need to consider the environmental, social, and cultural impacts of Furie's continued operations at KLU that this royalty modification decision would facilitate. DNR develops lease stipulations through the Areawide Lease Sales process to mitigate the potential environmental, social, and cultural impacts from oil and gas activity.

In terms of environmental impacts, the leases that are included in the royalty modification contain many stipulations designed to protect the environment and address any outstanding concerns regarding impacts to the area's fish and wildlife species and to habitat and subsistence activities. They address the protection of primary waterfowl areas, site restoration, construction of pipelines, seasonal restrictions on operations, public access to, or use of the leased lands, and avoidance of seismic hazards. The granting of royalty Commissioner's Preliminary Findings and Determination for Kitchen Lights Unit Royalty Modification

modification will not result in additional restrictions or limitations on access to surface lands or to public and navigable waters.

The Commissioner's approval of the royalty modification is an administrative action, which by itself does not convey any authority to conduct operations on the leases, within the development area, unit or participating area. Furie must still obtain approval of a Unit Plan of Operations and various permits from state agencies before initiating activities. In addition, Furie as the operator, and HEX as the parent, have in place a DR&R FAA with DNR, as well as meeting bonding requirements with the AOGCC for plugging and abandoning KLU wells.

In terms of social and cultural impacts, the leases comprising KLU have provisions requiring the lessee to undertake a program to encourage the employment of Alaskans. Furie employs 19 staff and an additional two full-time contractors, companywide. Furie is located and headquartered in Anchorage, AK. Roughly 84 percent of Furie employees live in Alaska.

VIII. PROPOSED FINDINGS AND DETERMINATION

After detailed consideration where all the materials presented by the applicant were reviewed and incorporated into our analysis, DNR has determined that Furie meets the necessary requirements and that royalty modification for the seven leases described in Section V.B.6 is warranted under the terms established in Section V of this Preliminary Decision.

MR

12/6/2024 Date

John Boyle Commissioner

cc: Derek Nottingham, Director, Division of Oil and Gas Ryan Fitzpatrick, Commercial Section Manager, Division of Oil and Gas Mary Gramling, Department of Law

			-	
Row Number	Royalty Relief Determined Here:			
		Month A		Month B
1	Royalty Value (RV) of Gas:	\$ 9.85	\$	13.65
2	Month's Gross Production (mcf):	257,300		365,700
3	Month's Gross Revenue:	\$ 2,534,405.00	\$	4,991,805.00
4	Cumulative Gross Revenue from 9/1/24:	\$ 27,530,000.00	\$ 7	723,810,000.00
5	Cumulative Gross Revenue Target:	\$ 712,000,000.00	\$ 7	712,000,000.00
6	Has the Gross Revenue Target been met?	NO		YES
7	Royalty Rate Reduced?	YES		NO
8	Calculated Royalty Rate:	3%		12.50%
9	Calculated Royalty Revenue:	\$ 76,032.15	\$	623,975.63

Exhibit A- Calculation of Royalty Relief- Two Examples

The table above shows how the royalty modification mechanism works. Two hypothetical months, Months A and B (Month B occurring after Month A) are shown. A step-by-step general description of the mechanism is provided below referencing the relevant row number in the Figure above. Rows 1-9 are inputs and calculations used for the royalty decision for each month. This is followed by a description of two possible cases corresponding to: the case where royalty relief is applied (Month A) and royalty relief is not applied (Month B).

General Description

- Row 1 shows the "royalty value" of gas per mcf for each month. This is the price per mcf of gas at KLU, which is used in the calculation of revenue and royalty.

- Row 2 is the KLU's gross gas production in mcf for each month.

- Row 3 is the KLU's gross revenue for each month, which is the product of the royalty value and the gross production for each month.

- Row 4 is the cumulative gross revenue from September 1, 2024, to the production month in question.

- Row $\bar{5}$ is the cumulative Gross Revenue Target of \$712MM used in this Preliminary Decision.

- Row 6 states whether the condition of the Gross Revenue Target has been met or not.

- Row 7 states whether royalty rates will be reduced or not, based on whether the Gross Revenue Target in Row 6 has been reached.

- Row 8 displays the royalty rate as a percentage for that particular month (3 percent if Gross Revenue Target has not been reached in Row 6, and 12.5 percent otherwise).

- Row 9 calculates the State's royalty amount for the corresponding month.

Two Cases Considered

Month A: This is an example where the cumulative gross revenue (Row 4) is less than the \$712MM cumulative Gross Revenue Target (Row 5). Thus, there is a reduction to the royalty rate for this month to 3 percent (Row 8). The State receives the statutory minimum 3 percent royalty, which is \$76,032.15 (Row 9).

Month B: This is an example of no royalty relief given for this month. Since the cumulative gross revenue in Row 4 surpassed the Gross Revenue Target in Row 5, royalty relief has

expired. Therefore, the original royalty rate of 12.5 percent would be the final, effective royalty rate for revenue calculations. Furie would not see any royalty relief for this month and State royalties would be \$623,975.63 for that month.

				766	0001	Assigned or
	Lease			Effective	ORRI	Reserved to
Tract	Number	ORRI Assignor	ORRI Assignee	Date	%	Itself
1	389189	Escopeta Production - Alaska, Inc.	Danny S Davis	01/01/2002	1	
		Escopeta Production - Alaska, Inc.	Walter D Wells Jr	01/01/2002	1.4	
		Escopeta Production - Alaska, Inc.	Chase Morsey Jr	01/01/2002	0.1	
		Escopeta Production - Alaska, Inc.	Robert C Warthen	01/01/2002	1	
		Escopeta Oil Co LLC	Taylor Minerals, LLC	06/01/2004	1	
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	09/01/2006	13	Х
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	12/09/2010	-3.75	Х
		Taylor Minerals, LLC	Taylor Minerals, LLC	12/09/2010	-1.25	Х
2	389190	Escopeta Production - Alaska, Inc.	Danny S Davis	01/01/2002	1	
		Escopeta Production - Alaska, Inc.	Walter D Wells Jr	01/01/2002	1.4	
		Escopeta Production - Alaska, Inc.	Chase Morsey Jr	01/01/2002	0.1	
		Escopeta Production - Alaska, Inc.	Robert C Warthen	01/01/2002	1	
		Escopeta Oil Co LLC	Taylor Minerals, LLC	06/01/2004	1	
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	09/01/2006	13	Х
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	12/09/2010	-3.75	Х
		Taylor Minerals, LLC	Taylor Minerals, LLC	12/09/2010	-1.25	Х
3	389191	Escopeta Production - Alaska, Inc.	Danny S Davis	01/01/2002	1	
		Escopeta Production - Alaska, Inc.	Walter D Wells Jr	01/01/2002	1.4	
		Escopeta Production - Alaska, Inc.	Chase Morsey Jr	01/01/2002	0.1	
		Escopeta Production - Alaska, Inc.	Robert C Warthen	01/01/2002	1	
		Escopeta Oil Co LLC	Taylor Minerals, LLC	06/01/2004	1	
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	09/01/2006	13	Х
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	12/09/2010	-3.75	Х
		Taylor Minerals, LLC	Taylor Minerals, LLC	12/09/2010	-1.25	Х

Exhibit B – KLU Leases, Initial Creation of ORRIs

						Assigned or
	Lease			Effective	ORRI	Reserved to
Tract	Number	ORRI Assignor	ORRI Assignee	Date	%	Itself
		Escopeta Production - Alaska, Inc.	Danny S Davis	01/01/2002	1	
		Escopeta Production - Alaska, Inc.	Walter D Wells Jr	01/01/2002	1.4	
		Escopeta Production - Alaska, Inc.	Chase Morsey Jr	01/01/2002	0.1	
4	389192	Escopeta Production - Alaska, Inc.	Robert C Warthen	01/01/2002	1	
4	309192	Escopeta Oil Co LLC	Taylor Minerals, LLC	06/01/2004	1	
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	09/01/2006	13	Х
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	12/09/2009	-3.75	Х
		Taylor Minerals, LLC	Taylor Minerals, LLC	12/09/2009	-1.25	Х
		Escopeta Production - Alaska, Inc.	Danny S Davis	01/01/2002	1	
		Escopeta Production - Alaska, Inc.	Walter D Wells Jr	01/01/2002	1.4	
		Escopeta Production - Alaska, Inc.	Chase Morsey Jr	01/01/2002	0.1	
5	389193	Escopeta Production - Alaska, Inc.	Robert C Warthen	01/01/2002	1	
5	309193	Escopeta Oil Co LLC	Taylor Minerals, LLC	06/01/2004	1	
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	09/01/2006	13	Х
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	12/09/2009	-3.75	Х
		Taylor Minerals, LLC	Taylor Minerals, LLC	12/09/2009	-1.25	Х
		Pacific Energy Alaska Operating, LLC	MLQ, LLC	08/01/2007	2.5	
		Pacific Energy Alaska Operating, LLC	SPCP Group Alaska, LLC	08/01/2007	2.43823	
6	389196	Pacific Energy Alaska Operating, LLC	SPCP Group III Alaska, LLC	08/01/2007	0.06176	
		Escopeta Oil Co LLC	Bruce D Webb	11/01/2009	0.5	
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	10/01/2010	7	Х
		Pacific Energy Alaska Operating, LLC	MLQ, LLC	08/01/2007	2.5	
		Pacific Energy Alaska Operating, LLC	SPCP Group Alaska, LLC	08/01/2007	2.43823	
7	389197	Pacific Energy Alaska Operating, LLC	SPCP Group III Alaska, LLC	08/01/2007	0.06176	
		Escopeta Oil Co LLC	Bruce D Webb	11/01/2009	0.5	
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	10/01/2010	7	Х
		Pacific Energy Alaska Operating, LLC	MLQ, LLC	08/01/2007	2.5	
		Pacific Energy Alaska Operating, LLC	SPCP Group Alaska, LLC	08/01/2007	2.43823	
8	389198	Pacific Energy Alaska Operating, LLC	SPCP Group III Alaska, LLC	08/01/2007	0.06176	
		Escopeta Oil Co LLC	Bruce D Webb	11/01/2009	0.5	
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	10/01/2010	7	Х

Tract	Lease Number	ORRI Assignor	ORRI Assignee	Effective Date	ORRI %	Assigned or Reserved to Itself
9	389507	Pacific Energy Alaska Operating, LLC Pacific Energy Alaska Operating, LLC Pacific Energy Alaska Operating, LLC Escopeta Oil Co LLC Escopeta Oil Co LLC	MLQ, LLC SPCP Group Alaska, LLC SPCP Group III Alaska, LLC Bruce D Webb Escopeta Oil Co LLC	08/01/2007 08/01/2007 08/01/2007 11/01/2009	2.5 2.43823 0.06176 0.5 7	Y
10	389513	Pacific Energy Alaska Operating, LLC Pacific Energy Alaska Operating, LLC Pacific Energy Alaska Operating, LLC Escopeta Oil Co LLC Escopeta Oil Co LLC	MLQ, LLC SPCP Group Alaska, LLC SPCP Group III Alaska, LLC Bruce D Webb Escopeta Oil Co LLC	10/01/2010 08/01/2007 08/01/2007 08/01/2007 11/01/2009 10/01/2010	2.5 2.43823 0.06176 0.5 7	x
11	389514	Pacific Energy Alaska Operating, LLC Pacific Energy Alaska Operating, LLC Pacific Energy Alaska Operating, LLC Escopeta Oil Co LLC Escopeta Oil Co LLC	MLQ, LLC SPCP Group Alaska, LLC SPCP Group III Alaska, LLC Bruce D Webb Escopeta Oil Co LLC	09/01/2007 09/01/2007 09/01/2007 11/01/2009 10/01/2010	2.5 2.43823 0.06176 0.5 7	х
12	389515	Pacific Energy Alaska Operating, LLC Pacific Energy Alaska Operating, LLC Pacific Energy Alaska Operating, LLC Escopeta Oil Co LLC Escopeta Oil Co LLC	MLQ, LLC SPCP Group Alaska, LLC SPCP Group III Alaska, LLC Bruce D Webb Escopeta Oil Co LLC	08/01/2007 08/01/2007 08/01/2007 11/01/2009 10/01/2010	2.5 2.43823 0.06176 0.5 7	Х
13	389914	Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Oil Co LLC Escopeta Oil Co LLC Escopeta Oil Co LLC Taylor Minerals, LLC	Walter D Wells Jr Robert C Warthen Danny S Davis A L Berry Taylor Minerals, LLC Escopeta Oil Co LLC Escopeta Oil Co LLC Taylor Minerals, LLC	02/01/2002 02/01/2002 02/01/2002 02/01/2002 06/01/2004 09/01/2006 12/09/2009 12/09/2009	1.5 1 2 1 11 -3.75 -1.25	X X X

Tract	Lease Number	ORRI Assignor	ORRI Assignee	Effective Date	ORRI %	Assigned or Reserved to Itself
14	389915	Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Oil Co LLC Escopeta Oil Co LLC	Walter D Wells Jr Robert C Warthen Danny S Davis A L Berry Taylor Minerals, LLC Escopeta Oil Co LLC	02/01/2002 02/01/2002 02/01/2002 02/01/2002 06/01/2004 09/01/2006	1.5 1 2 1 11	X
		Escopeta Oil Co LLC Taylor Minerals, LLC	Escopeta Oil Co LLC Taylor Minerals, LLC	12/09/2009 12/09/2009	-3.75 -1.25	X X
15	389917	Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Oil Co LLC Escopeta Oil Co LLC Escopeta Oil Co LLC Taylor Minerals, LLC	Walter D Wells Jr Robert C Warthen Danny S Davis A L Berry Taylor Minerals, LLC Escopeta Oil Co LLC Escopeta Oil Co LLC Taylor Minerals, LLC	02/01/2002 02/01/2002 02/01/2002 02/01/2002 06/01/2004 09/01/2006 12/09/2009 12/09/2009	1.5 1 2 1 11 -3.75 -1.25	X X X
16	389918	Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Oil Co LLC Escopeta Oil Co LLC Escopeta Oil Co LLC Taylor Minerals, LLC	Walter D Wells Jr Robert C Warthen Danny S Davis A L Berry Taylor Minerals, LLC Escopeta Oil Co LLC Escopeta Oil Co LLC Taylor Minerals, LLC	02/01/2002 02/01/2002 02/01/2002 02/01/2002 06/01/2004 09/01/2006 12/09/2009 12/09/2009	1.5 1 2 1 11 -3.75 -1.25	X X X X
17	389919	Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Production - Alaska, Inc. Escopeta Oil Co LLC Escopeta Oil Co LLC Escopeta Oil Co LLC Taylor Minerals, LLC	Walter D Wells Jr Robert C Warthen Danny S Davis A L Berry Taylor Minerals, LLC Escopeta Oil Co LLC Escopeta Oil Co LLC Taylor Minerals, LLC	02/01/2002 02/01/2002 02/01/2002 02/01/2002 06/01/2004 09/01/2006 12/09/2009 12/09/2009	1.5 1 2 1 -3.75 -1.25	X X X

	Lease			Effective	ORRI	Assigned or Reserved to
Tract	Number	ORRI Assignor	ORRI Assignee	Date	%	Itself
		Pacific Energy Alaska Operating, LLC	MLQ, LLC	08/01/2007	2.5	
		Pacific Energy Alaska Operating, LLC	SPCP Group Alaska, LLC	08/01/2007	2.43823	
18	389923	Pacific Energy Alaska Operating, LLC	SPCP Group III Alaska, LLC	08/01/2007	0.06176	Itself 5 3 5 3 5 7
		Escopeta Oil Co LLC	Bruce D Webb	11/01/2009	0.5	
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	10/01/2010	7	Х
		Escopeta Production - Alaska, Inc.	Walter D Wells Jr	02/01/2002	1.5	
		Escopeta Production - Alaska, Inc.	Robert C Warthen	02/01/2002	1	6
		Escopeta Production - Alaska, Inc.	Danny S Davis	02/01/2002	_	
19	389924	Escopeta Production - Alaska, Inc.	A L Berry	02/01/2002	2	
17	507721	Escopeta Oil Co LLC	Taylor Minerals, LLC	06/01/2004	1	
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	09/01/2006	11	1 1 x 5 x 5 x
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	12/09/2009	-3.75	
		Taylor Minerals, LLC	Taylor Minerals, LLC	12/09/2009	-1.25	Х
		Escopeta Production - Alaska, Inc.	Walter D Wells Jr	02/01/2002	1.5	
		Escopeta Production - Alaska, Inc.	Robert C Warthen	02/01/2002	1	
		Escopeta Production - Alaska, Inc.	Danny S Davis	02/01/2002	1	5 x 5 1 2
20	389925	Escopeta Production - Alaska, Inc.	A L Berry	02/01/2002	2	
20	507725	Escopeta Oil Co LLC	Taylor Minerals, LLC	06/01/2004		
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	09/01/2006	11	Х
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	12/09/2009	-3.75	Х
		Taylor Minerals, LLC	Taylor Minerals, LLC	12/09/2009	-1.25	Reserved to Itself x x x x x x x x x x x x
		Escopeta Production - Alaska, Inc.	Walter D Wells Jr	02/01/2002	1.5	
		Escopeta Production - Alaska, Inc.	Robert C Warthen	02/01/2002	1	
		Escopeta Production - Alaska, Inc.	Danny S Davis	02/01/2002	1	
21	389926	Escopeta Production - Alaska, Inc.	A L Berry	02/01/2002	2	
	507720	Escopeta Oil Co LLC	Taylor Minerals, LLC	06/01/2004	1	
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	09/01/2006	11	Х
		Escopeta Oil Co LLC	Escopeta Oil Co LLC	12/09/2009	-3.75	Х
		Taylor Minerals, LLC	Taylor Minerals, LLC	12/09/2009	-1.25	Х

Tract	Lease Number	ORRI Assignor	ORRI Assignee	Effective Date	ORRI %	Assigned or Reserved to Itself
22	389927	Prodigy Alaska, LLC Prodigy Alaska, LLC Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	M&P FOLEY PW & LA LOKKE S.E. BARTHOLOMA E.E. BARATHOLMA A.E. BARATHOLOM MR&CL LANDT DJ&CT DOHERTY L&TLS HIGGINS S. BREGMAN S.E. BARTHOLOMA CGGVeritas Land (U.S.) Inc. AW RUTTER Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	06/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 01/01/2003 08/01/2004 03/01/2006 02/01/2009 02/01/2009	$\begin{array}{c} 0.7875\\ 0.25\\ 1\\ 0.5\\ 0.5\\ 0.42\\ 0.7875\\ 1\\ 0.5\\ 1.25\\ 0.5\\ 1.5\\ 0.43813\\ 3.0669\end{array}$	X X
23	389928	Prodigy Alaska, LLC Prodigy Alaska, LLC Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	M&P FOLEY PW & LA LOKKE S.E. BARTHOLOMA E.E. BARATHOLMA A.E. BARATHOLOM MR&CL LANDT DJ&CT DOHERTY L&TLS HIGGINS S. BREGMAN S.E. BARTHOLOMA CGGVeritas Land (U.S.) Inc. AW RUTTER Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	06/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 01/01/2003 08/01/2004 03/01/2009 02/01/2009	$\begin{array}{c} 0.7875\\ 0.25\\ 1\\ 0.5\\ 0.5\\ 0.42\\ 0.7875\\ 1\\ 0.5\\ 1.25\\ 0.5\\ 1.5\\ 0.43813\\ 3.0669\\ \end{array}$	X X

Tract	Lease Number	ORRI Assignor	ORRI Assignee	Effective Date	ORRI %	Assigned or Reserved to Itself
24	389929	Prodigy Alaska, LLC Prodigy Alaska, LLC Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	M&P FOLEY PW & LA LOKKE S.E. BARTHOLOMA E.E. BARATHOLMA A.E. BARATHOLOM MR&CL LANDT DJ&CT DOHERTY L&TLS HIGGINS S. BREGMAN S.E. BARTHOLOMA CGGVeritas Land (U.S.) Inc. AW RUTTER Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	06/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 01/01/2003 08/01/2004 03/01/2006 02/01/2009 02/01/2009	$\begin{array}{c} 0.7875\\ 0.25\\ 1\\ 0.5\\ 0.5\\ 0.42\\ 0.7875\\ 1\\ 0.5\\ 1.25\\ 0.5\\ 1.5\\ 0.43813\\ 3.0669\end{array}$	X X
25	389930	Prodigy Alaska, LLC Prodigy Alaska, LLC Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	M&P FOLEY PW & LA LOKKE S.E. BARTHOLOMA E.E. BARATHOLOMA A.E. BARATHOLOM MR&CL LANDT DJ&CT DOHERTY L&TLS HIGGINS S. BREGMAN S.E. BARTHOLOMA CGGVeritas Land (U.S.) Inc. AW RUTTER Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	06/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 11/01/2002 01/01/2003 08/01/2004 03/01/2006 02/01/2009 02/01/2009	0.7875 0.25 1 0.5 0.5 0.42 0.7875 1 0.5 1.25 0.5 1.5 0.43813 3.0669	X

Tract	Lease Number	ORRI Assignor	ORRI Assignee	Effective Date	ORRI %	Assigned or Reserved to Itself
26	390374	Prodigy Alaska, LLC Prodigy Alaska, LLC Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	L&TLS HIGGINS S.E. BARTHOLOMA MR&CL LANDT E.E. BARATHOLMA A.E. BARATHOLOM PW & LA LOKKE DJ&CT DOHERTY S. BREGMAN CGGVeritas Land (U.S.) Inc. M&P FOLEY AW RUTTER Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	01/01/2004 05/01/2004 05/01/2004 05/01/2004 05/01/2004 05/01/2004 05/01/2004 05/01/2004 08/01/2004 03/01/2006 03/01/2006 02/01/2009 02/01/2009	$\begin{array}{c} 1\\ 2.25\\ 0.42\\ 0.5\\ 0.5\\ 0.25\\ 0.7875\\ 0.5\\ 0.7875\\ 1.5\\ 0.7875\\ 1.5\\ 0.16813\\ 3.3369\end{array}$	X X
27	390381	Prodigy Alaska, LLC Prodigy Alaska, LLC Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	L&TLS HIGGINS S.E. BARTHOLOMA MR&CL LANDT E.E. BARATHOLMA A.E. BARATHOLOM PW & LA LOKKE DJ&CT DOHERTY S. BREGMAN CGGVeritas Land (U.S.) Inc. M&P FOLEY AW RUTTER Rutter & Wilbanks Corporation Linc Alaska Resources, LLC	01/01/2004 05/01/2004 05/01/2004 05/01/2004 05/01/2004 05/01/2004 05/01/2004 05/01/2004 05/01/2004 03/01/2006 03/01/2006 02/01/2009 02/01/2009	1 2.25 0.42 0.5 0.25 0.7875 0.5 0.7875 1.5 0.43813 3.0669	X X
28	390548	Escopeta Oil Co LLC Escopeta Oil Co LLC Taylor Minerals, LLC	Escopeta Energy Company, Inc. Escopeta Oil Co LLC Taylor Minerals, LLC	09/01/2006 12/09/2009 12/09/2009	17.5 -3.75 -1.25	X X
29	390554	Escopeta Oil Co LLC Escopeta Oil Co LLC Taylor Minerals, LLC	Escopeta Oil Co LLC Escopeta Oil Co LLC Taylor Minerals, LLC	09/01/2006 12/09/2009 12/09/2009	17.5 -3.75 -1.25	X X X X

Tract	Lease Number	ORRI Assignor	ORRI Assignee	Effective Date	ORRI %	Assigned or Reserved to Itself
		Escopeta Oil Co LLC	Bruce D Webb	11/01/2009	0.5	
30	391106	Escopeta Oil Co LLC	Escopeta Oil Co LLC	12/01/2009	4.25	Х
50	391100	Escopeta Oil Co LLC	Escopeta Oil Co LLC	02/01/2010	5.8125	Х
		Taylor Minerals, LLC	Taylor Minerals, LLC	02/01/2010	1.9375	Х



Exhibit C - Former Kitchen, Corsair, and Northern Lights Units Map