November 22, 2019

U.S. Customs and Border Protection
Office of Trade, Regulations and Rulings
Attn. Cargo Security, Carriers and Restricted Merchandise Branch
90 K Street, NE, 10th Floor
Washington, D.C. 20229-1177

Re: "Proposed Modification and Revocation of Ruling Letters Relating to CBP's Application of the Jones Act to the Transportation of Certain Merchandise and Equipment Between Coastwise Points," 53 *Customs Bulletin* 38 at 12 (Oct. 23, 2019) (the 2019 Notice).

Ladies and Gentlemen:

The American Petroleum Institute (API), the Association of Diving Contractors International (ADCI), the International Association of Drilling Contractors (IADC), the Independent Petroleum Association of America (IPAA), the International Association of Geophysical Contractors (IAGC), the Louisiana Mid-Continent Oil and Gas Association (LMOGA), the Offshore Operators Committee (OOC), the Petroleum Equipment & Services Association (PESA), The Texas Oil and Gas Association (TXOGA) and the U.S. Oil and Gas Association respectfully submit the following comments on the proposed modification and revocation of ruling letters

relating to U.S. Customs and Border Protection's (CBP) application of the Jones Act to the transportation of certain merchandise and equipment between points in the United States as set forth in the 2019 Notice.

The above-referenced trade associations (Trades) represent companies involved in all aspects of the oil and natural gas industry including all aspects of the exploration, development and production of offshore oil and natural gas resources as well as emergency response. Our member companies are active as owners and operators of offshore leases, as companies involved in the development and maintenance of offshore infrastructure and as service and supply companies that perform a wide variety of work in offshore areas. On behalf of its members, the Trades have a direct and substantial interest in any and every CBP ruling that affects U.S. offshore oil and natural gas operations.

The Trades appreciate the opportunity to provide comments to the 2019 Notice. These comments are submitted without prejudice to any of our member companies' right to have or express different, opposing, or supplemental views. We have encouraged all of our members to submit comments on the proposal.

Procedural Background

As you know, the 2019 Notice is not the first attempt by CBP to modify and revoke certain rulings applying the U.S. cabotage law at 46 U.S.C. § 55102 (popularly known as the "Jones Act") to certain offshore oil and natural gas-related CBP rulings. CBP initially proposed such modification and revocation on July 17, 2009[1] and then most recently on January 18, 2017.[2]

The Trades individually submitted extensive comments to the 2009 Notice and as a group to the 2017 Notice. The most recent Trades comments were submitted on April 18, 2017 (the 2017 Comments).

Lifting Operations

The Trades appreciate that CBP has, for the first time in one of the Notices, addressed the serious lifting issues that have affected the offshore industry ever since the issuance of three rulings in 2012 and 2013 referenced in the 2019 Notice.[3] The Trades support the changes proposed by CBP in the 2019 Notice with respect to lifting operations.

In those rulings, CBP determined that even short incidental movements of items attached to the crane of a foreign vessel violated the Jones Act if the item was initially laden in a U.S. port and

[1] "Proposed Modification and Revocation of Ruling Letters Relating to the Customs Position on the Application of the Jones Act to the Transportation of Certain Merchandise and Equipment Between Coastwise Points," 43 *Customs Bulletin* 28 at 54 (July 17, 2009) (the 2009 Notice).
[2] "Proposed Modification and Revocation of Ruling Letters Relating to the Customs Position on the Application of the Jones Act to the Transportation of Certain Merchandise and Equipment Between Coastwise Points," 51 *Customs Bulletin* 3 at 1 (Jan. 18, 2017) (the 2017 Notice).
[3] See HQ H225102 (Sept. 24, 2012); HQ H235242 (Nov. 15, 2012); and HQ H242466 (July 3, 2013). These are commonly known as the "Koff rulings."

finally unladen by the foreign vessel at an offshore "point in the United States." In those interpretations, CBP was not swayed by the facts presented -- namely, that the item would be entirely transported from a U.S. port by a Jones Act-qualified U.S.-flag vessel to the area where it would be installed by a foreign vessel and that the foreign vessel participation was a direct consequence of the lifting portion of the overall operation and not a part of the transportation of the merchandise.

The use of foreign vessels for certain lifting operations is necessitated by reasons not within the control of the oil and gas industry. Safety considerations dictate that offshore lifts be reduced in number if possible by increasing the size of topsides or other items assembled onshore so that such items can be installed in one lift or in as few lifts as possible. For example, relatively recent advances in lift crane technology made it technically possible to combine what had heretofore been separate lifts into a single operation.

Other required safety considerations set forth in the Outer Continental Shelf Lands Act, as amended, and as otherwise required by the U.S. Bureau of Safety and Environmental Enforcement mandate safe offshore operations. As was amply demonstrated in the 2017 Comments, these safety considerations can only be satisfied with the use of foreign lift vessels taking aboard items to be installed outside the safety zone and moving the short distance within the safety zone to the installation point.

The Trades agree with the 2019 Notice (p. 21) interpretation of the words "any part of the transportation" in the Jones Act not to include "certain lateral movements" of a vessel and to emphasize, correctly, that "any lateral movement of the vessel or the item in the vicinity of the structure or facility where the item is being positioned or removed is merely subordinate to and a direct consequence of the lifting operations."

It is well within CBP's authority, as the agency charged with interpreting the Jones Act as it applies to offshore operations, to define "any part of the transportation" under the Jones Act as it proposes to do in the 2019 Notice. The movement of lifting vessels is, as CBP has correctly proposed, "subordinate to and a direct consequence of the lifting operations" and does not form "any part of the transportation" of "merchandise" between two "points in the United States."

The three rulings slated for revocation have improperly inhibited offshore lift operations which in turn has unnecessarily increased the cost of projects, has delayed such projects and has imposed unworkable technical challenges with certain projects – all without advancing a mandatory statutory or regulatory purpose. The new lifting operations definition will remove regulatory uncertainty which will promote offshore development and exploration and production of oil and natural gas resources. The Trades wholeheartedly support the changes proposed in the 2019 Notice regarding lifting operations.

Vessel Equipment

The Trades also appreciate that the 2019 Notice proposes substantial changes to the definition of "vessel equipment" and accept those changes if they are implemented in combination with the proposed lifting definition changes.

First, the 2019 Notice is narrower in scope than the 2017 Notice. The 2019 Notice modifies or revokes 13 rulings related to "vessel equipment," whereas the 2017 Notice modified or revoked 25 such rulings, which is a substantial improvement from the prior notice in terms of magnitude of change and impact. By limiting the new notice to a smaller set of rulings and explicitly focusing on the "vessel equipment" definition, in conjunction with the lifting operations change as described above, CBP has avoided the broad impact that was a significant defect in the 2009 and 2017 Notices.

Second, the 2019 Notice shows modifications in track changes to rulings proposed for modification which is also helpful for the affected industry to understand what is being proposed for revision and what is being proposed for retention in the modified rulings. As compared to the 2009 and 2017 Notices, this approach provides greater transparency and significantly narrows the potential for unintended consequences.

Third, CBP has not advanced in the 2019 Notice the rationale for the proposed changes which it proposed in the 2017 Notice which the Trades and other commenters indicated was inapplicable. That rationale was that changes should be made for the reason that the law had changed in 1988 to add "valueless material" to be covered by the Jones Act. As discussed in length in the 2017 Comments, that rationale was justified by neither the text of the law nor the developments that motivated Congress's decision to amend the Jones Act.

Fourth, the 2019 Notice makes it clear that the "paid out, not unladen" interpretation for not applying the Jones Act to cable and pipe lay operations is unaffected by the proposed changes in the 2019 Notice and applies equally to the paying out and installation of risers, jumper pipes and similar items. In each instance, the Jones Act does not apply and the installation of such cable, umbilicals, flowlines, pipe, risers, and similar items can be accomplished lawfully by a foreign-flag vessel in U.S. waters and between two points in the United States.

Fifth, the 2019 Notice states that those rulings that were proposed for revocation or modification in the 2017 Notice, but not included in the 2019 Notice, remain in effect. These include two rulings pertaining to cement, chemicals, and other consumable materials. In addition, none of the rulings proposed in the 2019 Notice address drilling or well-related operations. Accordingly, it is clear that drilling or well-related operations are unaffected by the proposed changes in the 2019 Notice.

Finally, although the new interpretation of "vessel equipment" should result in more equipment being transported offshore on Jones Act-qualified vessels, the vessel equipment proposal must go hand-in-hand with the lifting proposal to avoid a gap in interpretation and uncertainty that could result. Because the prior definition of vessel equipment allowed both *conveyance* and *installation* to occur with a non-Jones Act vessel for certain categories of items for offshore installation, changing that definition of vessel equipment without clarifying that those vessels can still perform installation work of certain items would have serious negative operational consequences that would impede offshore oil and gas exploration, development and production. Not tying the vessel equipment proposal with the lifting proposal would also be inconsistent with the intent of the Jones Act and the long-standing and consistent interpretations distinguishing transportation from

installation and permitting installation to be conducted by foreign-flag vessels on the U.S. Outer Continental Shelf.

Economic Impact

As with the 2017 Comments, API has commissioned a third-party firm to study the potential economic impacts from the 2019 Notice. The resulting study, attached to this letter, projects that the 2019 Notice would have minimal economic impacts. Calash, which prepared the analysis, predicts the following impacts from the 2019 Notice:

- An average increase in employment due to offshore oil and gas of around 11,000 thousand jobs from 2020 to 2040.
- Between 2020 and 2040, increased Gulf of Mexico offshore oil and natural gas spending in the range of $350 million on average per year.
- No material impact on oil and natural gas production from 2020 to 2040.
- An average increase of around $780 million of GDP from 2020 to 2040.
- No material impact on government revenue per year from 2020 to 2040.

The attached analysis also underscores the significant differences between the 2019 Notice and the 2017 Notice. The economic analysis submitted with the 2017 Comments, also prepared by Calash, predicted that the 2017 Notice could, among other things, result in as many as 125,000 jobs lost by 2030 and cumulative lost GDP of $91.5 billion from 2017-2030. In addition, if the Koff rulings were not revoked, and were expansively enforced by CBP, there would be substantial and widespread adverse effects on industry.

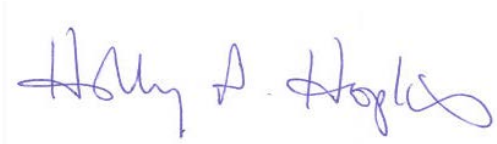
Conclusion

The Trades commend CBP for taking another look at the 2017 Notice, taking into account many stakeholder comments to that Notice in the 2019 Notice, and proposing the 2019 Notice based on extensive discussions that CBP has held with stakeholders since the 2017 Notice was withdrawn. The Trades will continue to work with CBP to provide clarity as to how the Jones Act applies so that the United States can continue to actively explore, develop and produce oil and natural gas on the U.S. Outer Continental Shelf. In that regard, the Trades will continue to support strongly finalization of the 2019 Notice, including publication of CBP's decision in the *Customs Bulletin* and the decision becoming effective 60 days later. The Trades also support a subsequent rulemaking on this issue after CBP finalizes the 2019 Notice to provide greater clarity and certainty for the regulated community.

Although the Trades support the changes proposed in 2019 Notice, for the sake of good order, the Trades reserve the right to raise comments contained in the 2017 Comments in the event that such proposed ruling changes are finalized in a different form than as proposed. Of particular note, any deviations from the 2019 Notice with respect to lifting operations could render the vessel equipment changes unworkable such that the notice could result in significant negative operational and economic impacts.

We appreciate the opportunity to provide these comments. If you have any questions or need clarification, please do not hesitate to contact the undersigned at the contact information listed above.

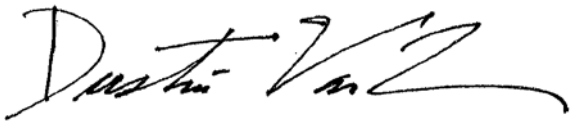
Sincerely,



Holly Hopkins, API

Jason McFarland, IADC

Daniel Naatz, IPAA



Dustin Van Liew, IAGC

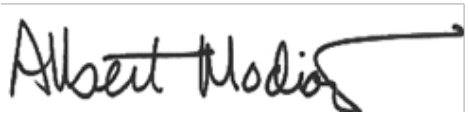
Phil Newsum, ADCI

Tyler Gray, LMOGA

Evan Zimmerman, OOC

Leslie Beyer, PESA

Todd Staples, TXOGA



Alby Modiano, US Oil and Gas Association

Attachment

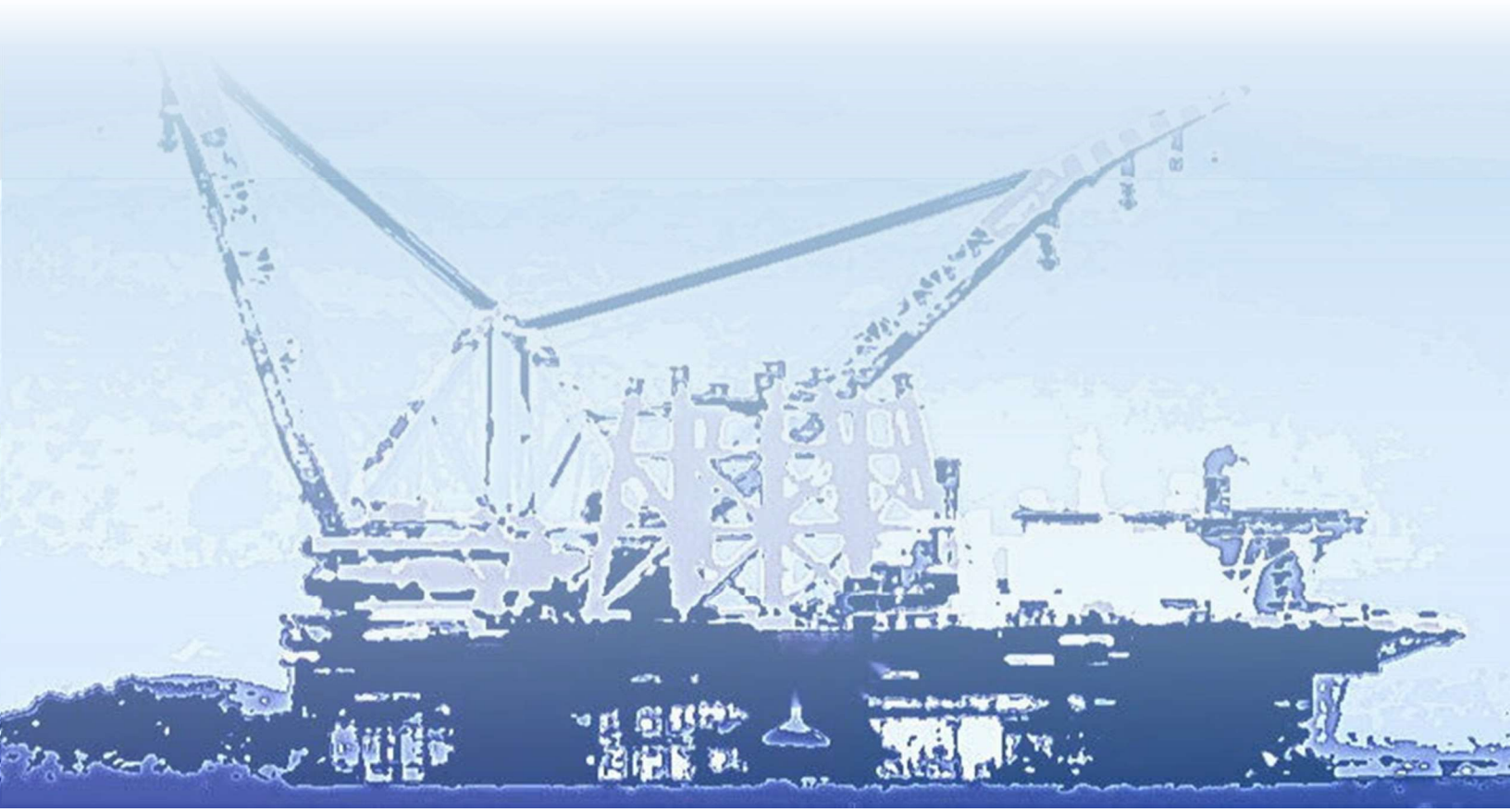
Economic Impacts of the Proposed Modification and Revocation of Ruling Letters Relating to CBP's Application of the Jones Act on the Offshore Oil and Natural Gas Industry

Prepared For:

The American Petroleum Institute (API)

Prepared By:

CALASH



Executive Summary

Introduction

U.S. Customs and Border Protection (CBP) has proposed modifying and revoking certain ruling letters related to CBP's application of the Jones Act to the transportation of certain merchandise and equipment between coastwise points. The proposed modifications and revocations were published on October 23, 2019 in the 2019 Customs Bulletin and Decisions Vol. 53, No. 38. CBP had previously proposed revoking or modifying several ruling letters, most recently in 2017, but withdrew the prior proposed revocations and modifications.

The currently proposed modifications and revocations change long-standing rulings related to vessels transporting and using specialized equipment to support offshore oil and natural gas industry operations. The proposed modifications and revocations would clarify the use of non-coastwise vessels in the development of offshore oil and natural gas projects on the U.S. Outer Continental Shelf (OCS).

Calash was commissioned by the American Petroleum Institute (API) to provide an update of previous independent evaluations of the potential impacts on offshore oil and natural gas project development and spending associated with changes to the Jones Act.[1] In addition, potential impacts on Gulf of Mexico oil and natural gas production, supported employment, gross domestic product, and government revenue were also projected. The conclusions set forth in this study are based solely upon government and other publicly available data and Calash's own expertise and analysis.

Given the time constraints and conservative assumptions associated with this study, it is likely that the costs and economic impacts presented represent a conservative projection of the impact of the proposed language. The impacts presented could be imprecise by as much as 10% or more for a variety of reasons, especially interpretations and enforcement decisions given the lack of a historical precedent for the described applications and determinations.

Impact of the Proposed Language on Gulf of Mexico Oil and Natural Gas Development

If the proposed revocations and modifications are adopted as currently written, the study projects a negligible impact on the total amount of Gulf of Mexico oil and natural gas development activity, as well as increased domestic content for offshore oil and natural gas related installation

[1] The Economic Impacts of Proposed Modification and Revocation of Jones Act Ruling Letters Related to Offshore Oil and Natural Gas Activities, Calash, April 2017. Economic Impacts of the Proposed U.S. House of Representatives Amendment to the Jones Act Related to Offshore Oil and Natural Gas Installation Vessels, Calash, August, 2019.

and transportation activities. Although oil and gas operators would face higher development and operational costs due to the proposed revocations and modifications of ruling letters, these costs would likely have a minimal influence on projects that are currently under development. The primary impact of the proposed modifications and revocations in addition to increased costs would likely be increased regulatory certainty related to Jones Act enforcement which would decrease project risk profiles. The proposed modifications and revocations will significantly reduce existing uncertainty regarding the application of the Jones Act as it relates to offshore oil and gas heavy lift operations. Although difficult to quantify, this certainty will promote increased activity levels, spending, employment, GDP, oil and gas production and government revenues.

The proposed modifications and revocations would change the definition of "vessel equipment" that CBP has used in its coastwise trade rulings, removing consideration of whether an item "possessed a nexus to the 'mission of the vessel.'"[2] CBP has proposed to modify a number rulings (HQ 101925, HQ 108442, HQ 113841, HQ 114435, HQ 115185, HQ 115487, HQ 115771, and HQ 116078) to limit the interpretation of what constitutes vessel equipment. CBP's proposal amends HQ 101925 to interpret "vessel equipment" to "include all articles or physical resources serving to equip the vessel, including the implements used in the vessel's operation or activity." In addition to the proposed modifications, CBP has proposed to revoke a number of other previous ruling letters which are contrary to the guidance provided in the Customs Bulletin and Decisions Vol. 53, No. 38. notice (HQ 115218, HQ 11531, HQ 115522, HQ 115938 and HQ H004242).

In addition to the above proposed modifications and revocations, CBP has proposed the modification of HQ 101925 to clarify the Jones Act's impact on a number of other operation types. The proposed modifications and revocations would clarify interpretations of the Jones Act related to repairing offshore pipelines by clarifying that no violation would occur if materials used were "paid out, not unladen" or if the materials qualified as vessel equipment based on the currently proposed modifications and revocations described above. The proposed modifications and revocations also remove the consideration of if the installation of an item was "foreseeable" in determining whether the transportation of the item was in violation of the Jones Act, and that non Jones Act qualified vessels could carry items onboard a vessel as supplies to conduct un-foreseen repairs to offshore or subsea structures. Additionally, consideration of whether transportation is "incidental" to the activity in which the vessel would ultimately engage would be removed under the proposed modifications and revocations. The proposed modifications and revocations would also amend HQ 101925 to clarify previous rulings which allowed a non-Jones-Act-qualified vessel to transport and subsequently unlade items of "de minimis" value (valueless) normally carried aboard vessels as supplies at coastwise points. The proposed modifications and revocations would remove any consideration of whether an item was of de minimis value in

[2] 2019 Customs Bulletin and Decisions Vol. 53, No. 38. October 23, 2019

determining whether the item is considered merchandise under the Jones Act. The proposed modifications and revocations would also remove references that allowed the transport of damaged or replaced pipe that was previously considered incidental to pipeline repair operations.

Perhaps most impactfully, the proposed modifications and revocations would clarify longstanding issues and contradictory rulings related to the movement by lifting of a topside by non-coastwise qualified vessels subsequent to receiving a topside from a coastwise-qualified transport vessel. The proposed modifications would clarify that certain lateral movements performed as part of an offshore lift do not constitute transportation under the Jones Act. The proposed modifications would clarify that, "Offshore lifting operations are distinct from transportation subject to the Jones Act in that any lateral movement of the vessel or the item in the vicinity of the structure or facility where the item is being positioned or removed is merely subordinate to and a direct consequence of the lifting operations."[3] This clarification would reduce uncertainty due to previously contradictory rulings and increase safety, as it is impossible to predict the need for movement for safety or operational purposes while lifting, which under previous ruling letter interpretations could lead to an offshore lifting operation falling afoul of CBP's interpretations due to movement necessary for the safe conduct of lifting operations. As part of this clarification, CBP has proposed the revocation of rulings HQ H225102, HQ H235242, and H242466.

Total cumulative spending on offshore oil and natural gas exploration and development in the Gulf of Mexico OCS is projected to be just under $635 billion between 2020 and 2040, or an average of around $30 billion per year. If the proposed modifications and revocations are adopted, the study projects cumulative spending from 2020 to 2040 to just over $641 billion, an average increase of around of $350 million (around 1 percent) per year primarily due to increased costs related to the increased use of coastwise vessels for the transportation of equipment.

Economic Impact of Proposed Language

The study projects total employment supported by the Gulf of Mexico offshore oil and natural gas industry to average around 360 thousand jobs under the base development scenario from 2020 to 2040. The adoption of the proposed modifications and revocations is projected to lead to an increase in industry supported employment between 2020 and 2040 of nearly 11 thousand jobs on average due to increased costs (and spending) and increased US domestic content for installation and ongoing operations activity.[4]

[3] 2019 Customs Bulletin and Decisions Vol. 53, No. 38. October 23, 2019

[4] Although increased spending in Gulf of Mexico oil and gas development increases projected employment within the scope of this study, it is indeterminate that it would increase employment in the US economy as a whole. Resources would likely diverted from some other part of the economy to cover the increased costs.

The Gulf of Mexico offshore oil and natural gas industry is expected to contribute an estimated average of nearly $30 billion annually to U.S. GDP from 2020 to 2040. The proposed modifications and revocations, if adopted as currently proposed, are projected to lead to a potential increase of GDP supported by Gulf of Mexico oil and natural gas activities of around $780 million annually from 2020 to 2040, both due to increased industry costs as well as due to increased US domestic content.

Annual government revenues from Gulf of Mexico lease sales, rents, and royalties are expected to average over $5.3 billion in the base development scenario. As currently proposed, CBP's proposed modifications and revocations are not expected to have a material impact on oil and natural gas development activity or production, as such revenues from lease sales, rents, and royalties are unlikely to be materially impacted.

The adoption of the proposed amendment to the Jones Act related to the use of non-coastwise vessels for offshore oil and natural gas activities in the U.S. OCS is projected to reduce uncertainty related to the development of offshore oil and natural gas projects, slightly increase project development costs albeit with a minimal impact on development activity and increase U.S. economic content. This is projected to lead to a slight increase in overall and domestic spending, employment and GDP, without a material impact on oil and natural production or government revenues.

Study Limitations

This paper has been limited in scope to the assessment of the effects of the proposed modifications and revocations as published in the 2019 Customs Bulletin and Decisions Vol. 53, No. 38 on October 23, 2019. Any further changes could have limiting effects on oil and natural gas activities in the U.S. OCS. If the currently proposed modifications and revocations are interpreted in such a way that further decreases or prevents the ability of non-coastwise vessels to operate in support of oil and natural gas activities in the OCS, then the effects of these proposed modifications and revocations could be significantly different than what is described in this report and likely would be negative. The study has also excluded the impacts on activity in the Alaskan, Pacific, Eastern Gulf and Atlantic OCS regions, which may be material if these areas were opened for additional leasing.

This study does not examine the potential impact of expansive enforcement of the Koff[5] rulings; instead, the baseline development scenario assumes that despite certain previous

[5] In the Koff Rulings (HQ 225102, dated September 14, 2012; HQ H235242, dated November 15, 2012; and HQ H242466, dated July 3, 2013), CBP took the position that movement of a vessel, even a short distance, while a topside is suspended from its crane, off its central axis in order to avoid hitting a SPAR before unlading the topside onto the SPAR, is a violation of the Jones Act as this movement of the vessel was interpreted by CBP as providing part of the transportation of the topside between a U.S. point and the SPAR .

applications of the Koff rulings that prevented the use of a foreign flagged vessel to install topsides, that offshore lifts from foreign flagged vessels could continue. If the Koff rulings remain unchanged and were expansively enforced, the negative impacts on the industry and economies of the Gulf Coast states would likely be substantial and widespread. These impacts potentially would include project cancellations, project delays, and a significant reduction in US domestic content due to topside construction being moved to foreign fabrication yards. Under that alternative baseline scenario, the positive impacts of CBP's proposed modifications and revocations would likely be much greater. In any event, the proposed modifications and revocations will significantly reduce existing uncertainty regarding the application of the Jones Act as it relates to offshore oil and gas heavy lift operations. Although difficult to quantify, this certainty will promote increased activity levels, spending, employment, GDP, oil and gas production and government revenues.

Overall, given the constraints and assumptions discussed above, it is likely that the costs and economic impacts presented in this study could be imprecise by as much as 10% or more for a variety of reasons, especially government agency enforcement decisions.

Impact Summary

This study projects that the following impacts may result if the proposed language is adopted as written:

- An average increase in employment of around 11 thousand jobs each year from 2020 to 2040.
- Between 2020 and 2040, increased Gulf of Mexico offshore oil and natural gas spending in the range of $350 million on average per year.
- No material impact on oil and natural gas production from 2020 to 2040.
- An average annual increase of around $780 million of GDP from 2020 to 2040.
- No material impact on federal or state government revenue from leases, rents and royalties or funding for the LWCF.

Table of Contents

List of Tables

List of Figures

Section 1 – Introduction

1.1 Purpose of the Report

U.S. Customs and Border Protection (CBP) has proposed modifying and revoking certain ruling letters related to CBP's application of the Jones Act to the transportation of certain merchandise and equipment between coastwise points. The proposed modifications and revocations were published on October 23, 2019 in the 2019 Customs Bulletin and Decisions Vol. 53, No. 38. CBP had previously proposed revoking or modifying several ruling letters, most recently in 2017, but withdrew the prior proposed revocations and modification.

The currently proposed modifications and revocations change long-standing rulings related to vessels transporting and using specialized equipment to support offshore oil and natural gas industry operations. The proposed modifications and revocations would clarify the use of non-coastwise vessels in the development of offshore oil and natural gas projects on the U.S. Outer Continental Shelf (OCS).

Calash was commissioned by the American Petroleum Institute (API), to provide an independent evaluation of the potential impacts on project development and spending associated with the proposed modifications and revocations. In addition, Calash also projected potential impacts on Gulf of Mexico oil and natural gas production, supported employment, GDP, and government revenue. The conclusions set forth in this study are based solely upon government and other publicly available data and Calash's own expertise and analysis.

1.2 Report Structure

In this report, Calash will first outline the study methodology including the development of data, the review of the proposed modifications and revisions and their potential impacts on offshore oil and natural gas activity, the limitations of this study and how the two scenarios used in the report were developed. The next section will discuss the potential impact on offshore oil and natural gas development, including the impact on projects, production, and spending. The third section examines the potential economic impacts of the proposed language, including employment impacts, GDP impacts, and government revenue impacts. The final section concludes.

1.3 Excluded from This Study

This paper has been limited in scope to the assessment of the effects of the currently proposed modifications and revocations of headquarters rulings related to the Jones Act affecting offshore oil and natural gas development activity. Additionally, if the currently proposed language is interpreted or enforced in such a way that further decreases the ability of non-coastwise vessels

to operate in support of oil and natural gas activities in the OCS then the effects of this language would likely be larger than what is outlined in this report.

This study does not examine the potential impact of expansive enforcement of the Koff rulings; instead, the baseline development scenario assumes that despite certain previous applications of the Koff rulings that prevented the use of a foreign flagged vessel to install topsides, that offshore lifts from foreign flagged vessels could continue. If the Koff rulings remain unchanged and were expansively enforced, the negative impacts on the industry and economies of the Gulf Coast states would likely be substantial and widespread. These impacts potentially would include project cancellations, project delays, and a significant reduction in US domestic content due to topside construction being moved to foreign fabrication yards. Under that alternative baseline scenario, the positive impacts of CBP's proposed modifications and revocations would likely be much greater. In any event, the proposed modifications and revocations will significantly reduce existing uncertainty regarding the application of the Jones Act as it relates to offshore oil and gas heavy lift operations. Although difficult to quantify, this certainty will promote increased activity levels, spending, employment, GDP, oil and gas production and government revenues.

The study has also excluded the impacts of activity in the Alaskan, Pacific, Eastern Gulf and Atlantic OCS regions.[6] These impacts could be greater if areas which are not currently available for lease in the 2017-2022 OCS Oil and Gas Leasing Program are made. Under Executive Order 13795 (April 28, 2017) and Secretary's Order 3350 (May 1, 2017), BOEM is initiating a process to develop a new national OCS program for 2019-2024 to, upon completion, replace the current 2017-2022 program.

The study also does not attempt to calculate the effects of the proposed language on midstream or downstream oil and natural gas entities or the broader economy. While this study projects increased oil and natural gas spending, employment and GDP, the overall impact on the US economy may be negative. In addition, the calculated government revenue potential does not include personal income taxes, corporate income taxes or local property taxes.

Given the unpredictable nature of advancements in technology and innovation in the oil and natural gas industry, the scope of this paper was limited to the effects that new requirements would have on future activity with the assumption that the methods and equipment mentioned in the proposed modifications and revocations would still be in use at the end of the study period.

[6] The Economic Impacts of Allowing Access to the Eastern Gulf of Mexico for Oil and Natural Gas Exploration and Development, Calash, Nov. 2018. The Economic Impacts of Allowing Access to the Pacific OCS for Oil and Natural Gas Exploration and Development, Calash, Nov. 2018. The Economic Impacts of Allowing Access to the Atlantic OCS for Oil and Natural Gas Exploration and Development, Calash, Nov. 2018.

Overall, given the constraints and assumptions discussed above, it is likely that the impacts presented could be imprecise by as much as 10% or more for a variety of reasons, including government agency interpretations and enforcement decisions.

1.4 About Calash

Calash is an award-winning energy advisory firm providing strategy, business advisory, economic analysis, and mergers and acquisitions support services across the upstream, midstream, refining and petrochemical industries. As a function of Calash's core business, the company is engaged daily in the collection and analysis of data as it relates to the oil and natural gas industry. Calash serves the global community of operating oil and natural gas companies, their suppliers, financial firms, and many others by providing detailed analysis on projects, investments, capital investment and operational spending undertaken by the onshore and offshore oil and natural gas industries. Calash analyzes market data from a variety of sources at the project level for projects throughout the world.

Section 2 – Study Methodology

2.1 Data Development

The authors of this report have undertaken a detailed review and analysis of the proposed language modifications and revisions of headquarters rulings related to the use of Jones Act (coastwise) and non-coastwise vessels in oil and natural gas activities. As the effects of the proposed language are open to a wide interpretation and enforcement, the authors have made a good-faith effort to provide a reasonable interpretation of how the modifications and revocations would likely be interpreted and enforced. This study is in no way exhaustive, especially considering the relatively short period available to develop this analysis and the high degree of uncertainty around the potential implementation of the proposed modifications and revisions.

This analysis focuses on the likely operational effects of the modifications and revisions on project development activity and considers the potential operational changes oil and natural gas operators and contractors could implement to minimize the effects of the revisions. As such, this analysis is essentially forward looking and potentially subject to significant changes based on the interpretation and enforcement of the modifications and revisions by CBP.

Due to the limited time available to prepare this report, as well as uncertainties about the way the modifications and revisions would be implemented and interpreted if adopted, all of the projected costs, engineering requirements and operational burdens that could arise from the language are not included in this report. Additionally, the internal costs to CBP, or other agencies of implementing and administrating the proposed modifications and revisions are not calculated in this report.

2.2 Requirements Review and Vessel Fleet

The Merchant Marine Act of 1920, also known as the Jones Act, is a United States federal statute that regulates maritime commerce in U.S. waters and between U.S. points. Amongst other things, the Jones Act defines cabotage requirements for U.S. waters requiring that all goods transported by water between U.S. points be carried on U.S. flagged ships, which were constructed in the United States, are owned by U.S. citizens, and are crewed by U.S. citizens and/or U.S. permanent residents. Historically, rulings by CBP held that the Jones Act did not apply to certain types of drilling, pipelay, heavy lift and other construction vessels that operate in the Gulf of Mexico and other OCS areas. Despite these rulings, the vast majority of vessels operating in support of offshore oil and natural gas activities have been coastwise vessels; CBP requires that vessels transporting persons and supplies to offshore drilling rigs and platforms, such as platform supply vessels and crew boats, be coastwise vessels.

CBP has proposed modifying and revoking certain ruling letters related to CBP's application of the Jones Act to the offshore oil and natural gas industry as well as other industries engaged in offshore construction. The proposed modifications and revocations were published on October 23, 2019 in the 2019 Customs Bulletin and Decisions Vol. 53, No. 38. CBP had previously proposed revoking or modifying several ruling letters, most recently in 2017, but withdrew the prior proposed revocations and modification.

The proposed modifications and revocations would change the definition of "vessel equipment" that CBP has used in its coastwise trade rulings, removing consideration of whether an item "possessed a nexus to the 'mission of the vessel.'" CBP has proposed to modify a number of rulings (HQ 101925, HQ 108442, HQ 113841, HQ 114435, HQ 115185, HQ 115487, HQ 115771, and HQ 116078) to limit the interpretation of what constitutes "vessel equipment." CBP's proposal amends HQ 101925 to interpret "vessel equipment" to "include all articles or physical resources serving to equip the vessel, including the implements used in the vessel's operation or activity." In addition to the proposed modification CBP has proposed to revoke a number of other previous ruling letters which are contrary to the guidance provided in the Customs Bulletin and Decisions Vol. 53, No. 38. notice (HQ 115218, HQ 11531, HQ 115522, HQ 115938 and HQ H004242).

In addition to the above proposed modifications and revocations, CBP has proposed the modification of HQ 101925 to clarify the Jones Act's impact on a number of other operation types. The proposed modifications and revocations would clarify interpretations of the Jones Act related to repairing offshore pipelines by clarifying that no violation would occur if materials used were "paid out, not unladen" or if the materials qualified as vessel equipment based on the currently proposed modifications and revocations described above. The proposed modifications and revocations also remove the consideration of if the installation of an item was "foreseeable" in determining whether the transportation of the item was in violation of the Jones Act, and that non Jones Act qualified vessels could carry items onboard a vessel as supplies to conduct un-foreseen repairs to offshore or subsea structures. Additionally, consideration of whether transportation is "incidental" to the activity in which the vessel would ultimately engage would be removed under the proposed modifications and revocations. The proposed modifications and revocations would also amend HQ 101925 to clarify previous rulings which allowed a non-Jones-Act-qualified vessel to transport and subsequently unlade items of de minimis value (valueless) normally carried aboard vessels as supplies at coastwise points. The proposed modifications and revocations would remove any consideration of whether an item was of de minimis value in determining whether the item is considered merchandise under the Jones Act. The proposed

modifications and revocations would also remove references that allowed the transport of damaged or replaced pipe that was previously considered incidental to pipeline repair operations.

Perhaps most impactfully, the proposed modifications and revocations would clarify longstanding issues and contradictory rulings related the movement by lifting of a topside by non-coastwise qualified vessels subsequent to receiving a topside from a coastwise-qualified transport vessel. The proposed modifications would clarify that certain lateral movements performed as part of an offshore lift do not constitute transportation under the Jones Act. The proposed modifications would clarify that, "Offshore lifting operations are distinct from transportation subject to the Jones Act in that any lateral movement of the vessel or the item in the vicinity of the structure or facility where the item is being positioned or removed is merely subordinate to and a direct consequence of the lifting operations." This clarification would reduce uncertainty due to previously contradictory rulings and increase safety, as it is impossible to predict the need for movement for safety or operational purposes while lifting, which under previous ruling letter interpretations could lead to an offshore lifting operation falling afoul of CBP's interpretations due to movement necessary for the safe conduct of lifting operations. As part of this clarification, CBP has proposed the revocation of rulings HQ H225102, HQ H235242, and H242466.

This study does not examine the potential impact of expansive enforcement of the Koff rulings; instead, the baseline development scenario assumes that despite certain previous applications of the Koff rulings that prevented the use of a foreign flagged vessel to install topsides, that offshore lifts from foreign flagged vessels could continue. If the Koff rulings remain unchanged and were expansively enforced, the negative impacts on the industry and economies of the Gulf Coast states would likely be substantial and widespread. These impacts potentially would include project cancellations, project delays, and a significant reduction in US domestic content due to topside construction being moved to foreign fabrication yards. Under that alternative baseline scenario, the positive impacts of CBP's proposed modifications and revocations would likely be much greater. In any event, the proposed modifications and revocations will significantly reduce existing uncertainty regarding the application of the Jones Act as it relates to offshore oil and gas heavy lift operations. Although difficult to quantify, this certainty will promote increased activity levels, spending, employment, GDP, oil and gas production and government revenues.

If the currently proposed modifications and revocations are interpreted in such a way that further decreases or prevents the ability of non-coastwise vessels to operate in support of oil and natural gas activities in the OCS, then the effects of these proposed modifications and revocations could be significantly different than what is described in this report and likely would be negative.

Crane Barges

Crane Barges are non-self-propelled barges equipped with various cranes for lifting jackets, topsides, modules or other equipment. They are used in installation, decommissioning, and other non-oil and natural gas related construction activities. These barges must be moved to location using tugboats and are moored when in operation by anchoring to the seabed, which prevents them from operating in deep water. The effect of the proposed modifications and revocations on activities utilizing crane barges should be minimal as crane barges are less likely to undertake lateral movements in the process of lifting operations as they are moored to the seabed. There are currently 13 coastwise crane barges suitable for shallow water offshore oil and gas work, compared to a global fleet of 154. The largest of these crane vessels have lifting capacities of 800 to 1,000 tons which covers most shallow water lifts but would be incapable of lifting the largest, fixed platform jackets and topsides in the Gulf of Mexico.

Multipurpose Support / Remotely Operated Vehicle Support Vessels (MPSV/ROV)

This category includes a wide variety of vessels which perform light construction work across water depths using remotely operated vehicles (ROV), and smaller cranes. While some vessels in this category can perform only one of these roles, many are equipped, or can be equipped, to perform a variety of work. ROV vessels typically have work class ROVs, and the cranes on these vessels typically can lift between 100 and 250 tons. Some of these cranes are equipped with special heave compensators to install equipment on the seafloor in deep waters. These vessels perform installation of subsea equipment, hookup, and other miscellaneous work for offshore oil and natural gas projects. Currently, across this category there are 16 coastwise vessels in service or under construction out of a global fleet of around 156. There are no coastwise vessel with lifting capacity of greater than 250 tons which coupled with the required crane radius (lifting capacities are decreased for larger radiuses) makes coastwise vessels unsuitable for most subsea lifts greater than 100 tons. Additionally, there is a lack of coastwise “DP3” vessels whose station keeping ability is more resilient in case of faults. The proposed modifications and revocations would clarify that incidental movements during the course of a lifting operation of for example subsea equipment by a MSV or ROV vessel is not transportation under the Jones Act, removing concerns about the ability to install certain subsea equipment which would require lifting capacities greater than those available the coastwise fleet. This change would reduce uncertainty for oil and gas operators. Some additional costs related to the operation of these vessels would be likely due to the proposed modifications and revocations change to the definition of vessel equipment which for example would likely require a vessel to offload certain equipment which was removed from the sea floor during a repair operation onto a coastwise vessel for transportation back to a coastwise point. Additionally, the proposed modifications and revocations would confirm

that an ROV constitutes vessel equipment. Although this change will increase operations costs, it is unlikely to have a significant impact on operations.

Heavy Lift Construction Vessels

Heavy lift offshore construction vessels are large, often semi-submersible, vessels that can lift as much as fifteen thousand tons. These vessels are used to install topsides and modules, install moorings in deepwater, pull in risers, install subsea equipment, and perform decommissioning work. These vessels, which are typically dynamically positioned and self-propelled, are some of the costliest and most complex vessels involved in offshore oil and natural gas construction. There are over 25 of these vessels in the global fleet capable of lifting over 1,000 tons, none of which are coastwise vessels. One coastwise vessel, the VB10,000 which uses an unusual dual barge-mounted truss system is capable of lifting fixed topsides and jackets up to 7,500 tons but is limited by its crane hook height when lifting topsides and modules and does therefore not typically undertake traditional heavy lift work. Worldwide, the number of vessels capable of performing the largest lifts in deep water which requires the highest level of DP systems is at most 16. Use of these vessels is required for the largest deepwater projects, for many complex tasks in addition to classical topsides lifts, such as the installation of moorings and pulling in risers from extreme water depths. The proposed modifications and revision would clarify that movement that is incidental to performing heavy lifts is not transportation under the Jones Act. Due to the immense complexity of large offshore lifts as well as uncontrollable factors such as sea states and general weather conditions, it impossible to predict the need for movement for safety or operational purposes while lifting. This clarification of previous contradictory rulings and enforcement would reduce uncertainty for oil and gas operators planning oil and natural gas projects.

2.3 Limitations of the Report

The report's authors make no representation as to the effects of the proposed modifications and revisions not addressed specifically in this report and do not discount the possibility that the proposed modifications and revisions could impose significantly greater engineering, operational, cost or other burdens on industry or regulators. The report's authors' estimates herein of the effects that the proposed language will have on current and future engineering, operations, and costs are an independent good faith, qualitative view arising from a reasonable review of the proposed modifications and revisions. As these modifications and revisions are subject to interpretation by CBP, and potentially other regulators, the effects of these changes will be highly dependent on those regulators' interpretation and enforcement of the modifications and revisions. Calash provides this independent view expressly disclaiming any warranty, liability, or responsibility for completeness, accuracy, use, or fitness to any person for any reason.

2.4 Scenario Development

The report's scenario development focused on constructing a tiered "bottom-up" model that separates the complete life cycle of offshore operations and subsequent effects into three main categories and five subcategories. The three main categories are as follows: 1) an "Activity" model that assesses potential reserve information in the context of estimating the possible number of projects within the Gulf of Mexico OCS and the currently forecasted projects and trends in exploration and project development in the region; 2) a "Spending" model based on the requirements to develop projects within the "Activity Forecast"; and 3) an "Economic" model focused on the economic impact on employment and government revenue from the "Spending" model. These categories include leasing activity, drilling, infrastructure & project development, and production & operation.

After the creation of the baseline model utilizing the oil and natural gas price strip and production profile from the Energy Information Administration's "Annual Energy Outlook 2019,"[7] the potential effects of the proposed language were considered on the basis of both potentially affected vessel types as well as potentially affected offshore oil and natural gas activities. Potential effects that were unclear or considered unlikely given a reasonable reading of the proposed modifications and revisions were excluded from the study. The following potential effects were deemed most likely to impact U.S. OCS oil and natural gas activities based on direct impacts from affected vessel types. (Table 1)

[7] Annual Energy Outlook 2019, Energy Information Administration

Table 1: Projected Direct Vessel Impacts from Proposed Language

Vessel Type	Potential Impact of Proposed Language	Potential Effect
Shallow Water Crane Barges	Removal of uncertainties related to incidental movement in lifting operations. Items which were previously considered vessel equipment now constitute merchandise and must be transported by a Jones Act-qualified vessel.	Minimimal due to lack of movement with moored vessels. Increased costs due to use of additional Jones Act vessels to transport items previously not subject to the Jones Act.
Lift Boats	Items which were previously considered vessel equipment now constitute merchandise and must be transported by a Jones Act-qualified vessel.	Increased costs due to use of additional Jones Act vessels to transport items previously not subject to the Jones Act.
Pipe and Umbilical Lay Vessels	Items which were previously considered vessel equipment now constitute merchandise and must be transported by a Jones Act-qualified vessel.	Increased costs due to use of additional Jones Act vessels to transport items previously not subject to the Jones Act.
MPSV/ROV	Removal of uncertainties related to incidental movement in lifting operations. Items which were previously considered vessel equipment now constitute merchandise and must be transported by a Jones Act-qualified vessel. Clarification that ROVs constitute vessel equipment.	Removal of uncertainties related to lifting operations. Increased costs due to use of additional Jones Act vessels to transport items previously not subject to the Jones Act.
Heavy Lift Construction Vessels	Removal of uncertainties related to incidental movement in lifting operations.	Reduces operational, planning, engineering and safety issues which could have delayed larger projects delayed, postponed and cancelled and led to fabrication of platform topsides, modules, and other subsea equipment being moved outside of the US.

Source: Calash

In addition to the potential direct impacts above, further impacts due to the proposed language are likely due to the reduced uncertainty in planning, engineering and procurement. However, project development and operations will likely face higher costs due to increased use of coastwise vessels. (Table 2)

Table 2: Other Projected Impacts from the Proposed Language

Cause of Impact	Potential Impact of Proposed Language	Potential Effect
Engineering, Operational and Safety Impact	The proposed modifications and revisions would likely lead to reduced uncertainty in engineering and operations which could impact safety.	Operators may be more willing to develop project due to reduced risks associated with previous contradictory enforcement.
Engineering, Procurement and Planning Issues	Currently underway and future projects would see reduced uncertainty in planning, engineering, and contracting.	Operators may be more willing to develops project due to reduced risks associated with previous contradictory enforcement.
Increased costs due to changes to the definition of vessels equipment	Increased use of coastwise vessels due to changes in the definition of vessels equipment.	More expensive coastwise vessels used for transportation of equipment that was previously considered vessel equipment and not subject to the Jones Act increases operator costs.
Increased US domestic content	Due to changes in the definition of vessel equipment, an increased share of installation and operational spending will be domestic spending	Increased domestic U.S. content, spending and employment.

Source: Calash

After the potential impacts of the proposed modifications and revisions as discussed in the above tables were considered, the effects on near-term projects were considered. For projects not yet installed, depending on the size and complexity of the project, if increases costs would cause delays or impact project economics was considered. Although the proposed modifications and revisions are projected to increase project development and operations, it was determined that for most projects no material impact on overall project economics would be experienced. As such, it was considered unlikely that the proposed modifications and revisions would have a material impact on project development activity. The potential increased costs and domestic content were applied to the base scenario forecast resulting in the creation of the "Proposed Modifications and Revisions Case" which attempts to provide a reasonable projection of oil and natural gas exploration and development activity in the Gulf of Mexico OCS if the proposed language were adopted as currently proposed. After the development of this scenario, the scenario's potential implications for oil and natural gas production, employment, GDP, and government revenues were then calculated.

Section 3 – Impact on Development

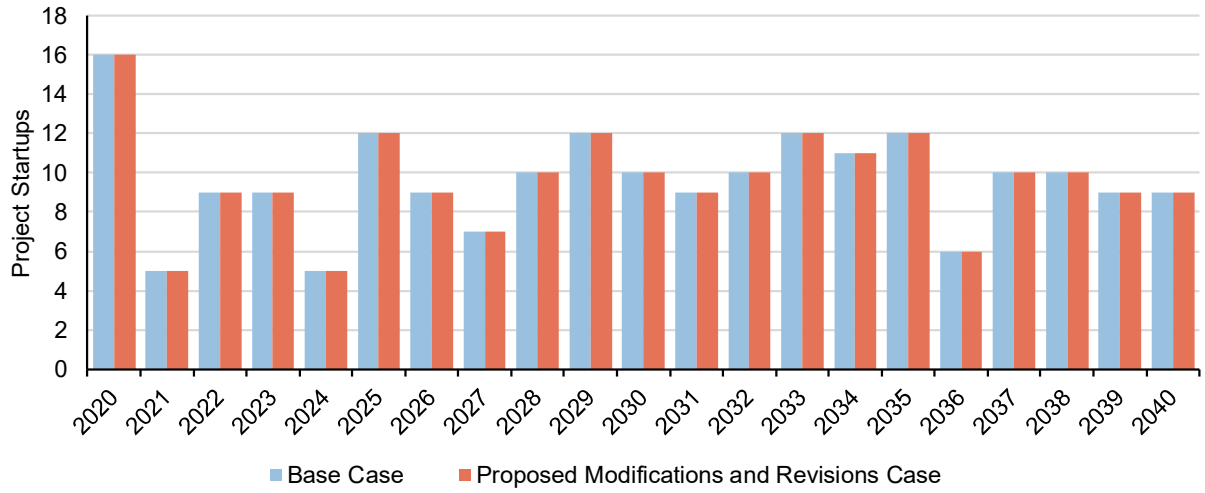
Natural gas and crude oil exploration and production activities in the U.S. OCS provide large contributions to employment, gross domestic product and state and federal government revenues. To quantify the effects of the proposed modifications and revisions, the study forecasted activity levels for Gulf of Mexico OCS oil and natural gas activity with and without the proposed modifications and revisions. The forecasted activity levels include the number of wells drilled, projects executed, total production, and spending. These activity forecasts drive the spending projections from which GDP, employment and government revenue effects are estimated.

3.1 Projects Executed

The development of an offshore oil and natural gas project is a complex process that requires a significant amount of time, planning and high levels of capital investment. Changes to project planning, engineering, contracting strategies and costs could lead to project delays as well as project cancellations due to changes in project economics and risk profiles. Project executions and their respective timelines are the best indicator of overall market health, as they can be viewed as representative of total trends in production, employment and revenue for the market.

Over the forecasted period of this study (2020-2040), the proposed modifications and revisions are projected to lead to a non-material impact in the number of projects coming online despite slight cost increases in project development. (Figure 1)

Figure 1: Projected Gulf of Mexico OCS Project Startups 2020-2040 Base Case and Proposed Modifications and Revisions Case



Source: Calash

It should be noted that overall project numbers in both scenarios in the latter part of the forecast are lower than in the earlier part of the forecast due to a projected shift towards larger deepwater projects in the Gulf of Mexico. Larger deepwater projects are typically more complex and require more wells and a longer development period, in addition to requiring increased material resources and larger equipment such as platforms, production trees and pipelines. Smaller projects, on the other hand, often rely on larger projects for certain types of infrastructure such as pipelines or processing facilities. This leads to the spending, production and other effects on a per project basis to be highly variable. The forecast also predicts a relative reduction in new project installations from 2021 to 2024 due to reduced exploration in recent years.

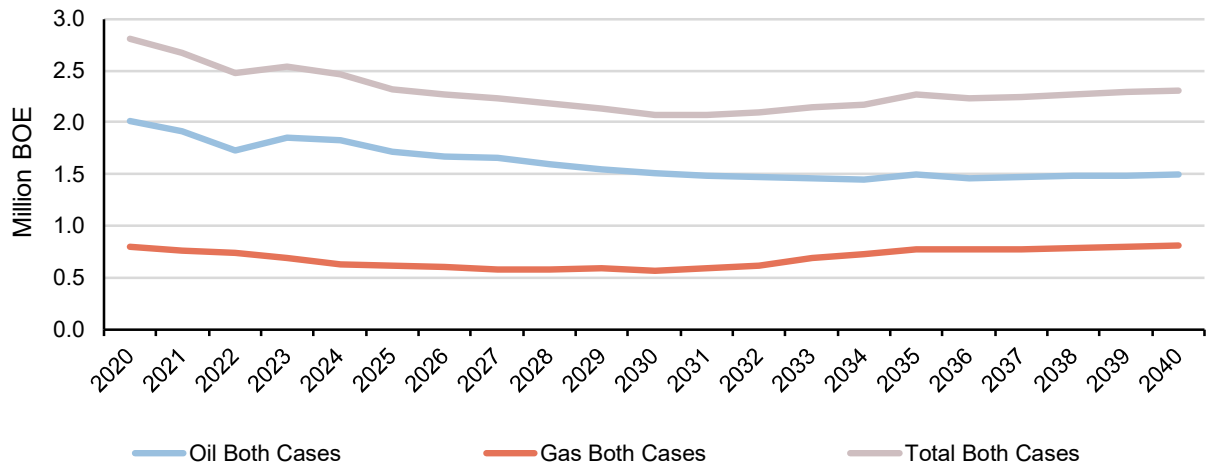
3.2 Production

The number of projects developed, coupled with reservoir size, productivity and decline rates determines oil and natural gas production levels. Most oil and natural gas reservoirs contain a combination of oil, natural gas, water, and other substances. In order to forecast aggregate production, each project or potential project was modeled based on production curves for similar developments and reservoirs. The base case production curve for this report was modeled to be relatively in line with the projected offshore production forecast from the Energy Information Administration's "Annual Energy Outlook 2019."[8]

This study projects production in the Gulf of Mexico in the range of 2.8 million barrels of oil equivalent (BOE) per day in 2020 with production, for the most part, slowly declining throughout the forecast period. Approximately 71 percent of production in 2020 is projected to be oil (2.0 million BOE per day), and approximately 29 percent of the production is projected to be natural gas (.8 million BOE per day). Under the Proposed Modifications and Revisions Case, reductions in Gulf of Mexico production are projected to non-material over the forecast period. (Figure 2)

[8] Annual Energy Outlook 2019, Energy Information Administration

Figure 2: Projected Gulf of Mexico Oil and Natural Gas Production Base and Proposed Modifications and Revisions Case 2020-2040



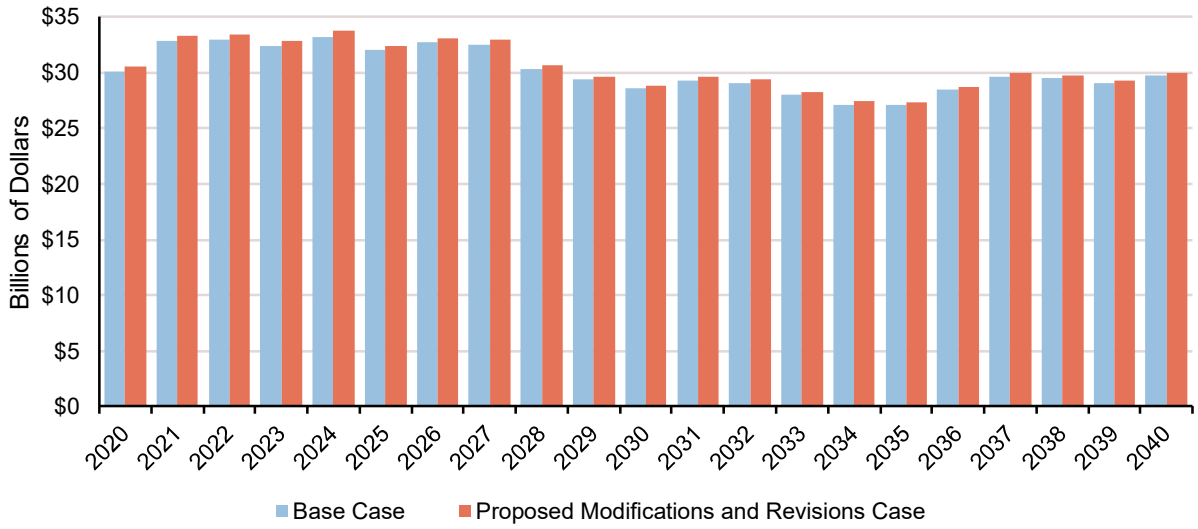
Source: EIA, Calash

3.3 Spending

Offshore oil and natural gas exploration and development is a capital-intensive process. Offshore projects require exploratory seismic surveys, drilling, production equipment, engineering, and operational expenditures to maintain production. In the base case, cumulative spending from offshore oil and natural gas development from 2020 to 2040 is projected to be in the range of $634 billion, compared to projected spending in the range of $641 billion in the Proposed Modifications and Revisions Case. This represents an increase of around one percent across the period, or projected spending in the range of $30.5 billion per year compared to projected spending in the range of $30.2 billion a year in the base case.

For the purposes of this report, spending is divided into seven main categories: Drilling, Engineering, G&G, Installation, OPEX, Platforms, and Subsea Umbilicals, Risers and Flowlines (SURF). Each category encompasses a major type of exploration and production activity and has a significant influence on overall spending. Both development scenarios estimate total spending amounts that rise slightly through the end of the decade, decline briefly, then recover due to normal project development cycles. In both cases, spending on offshore oil and natural gas is projected to begin to recover in 2020 and recover relatively strongly through 2027 before declining (with fluctuations due to normal investment cycles). (Figure 3)

Figure 3: Projected Total Offshore Oil and Natural Gas Spending Base and Proposed Modifications and Revisions Case 2020-2040



Source: Calash

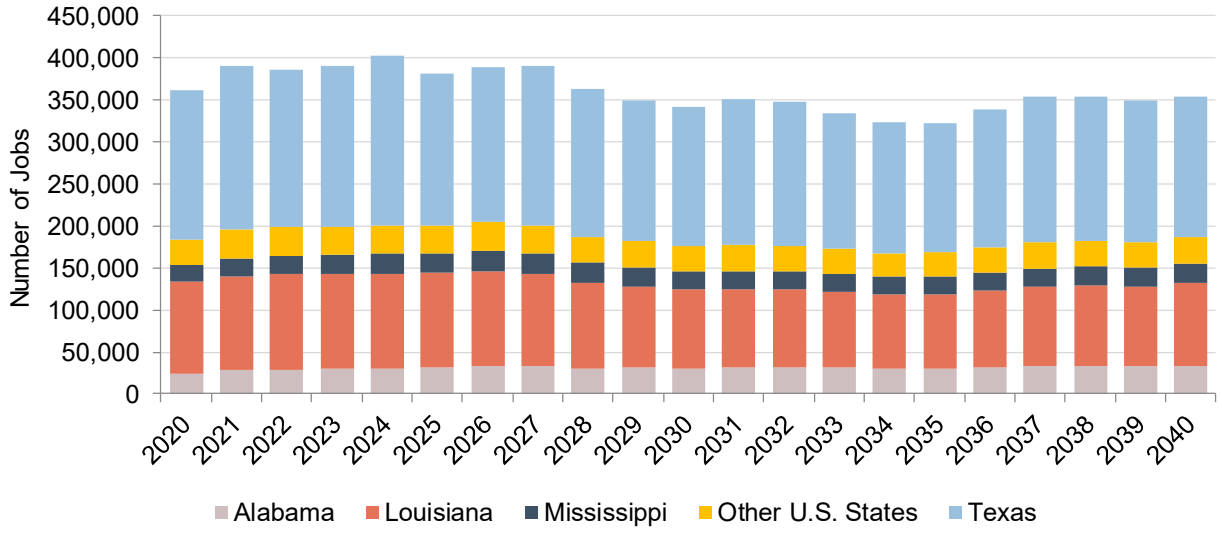
In contrast, in the Proposed Modifications and Revisions Case spending is projected to be consistently slightly higher across the forecast period due to increases costs related to increased use of coastwise vessels for the transportation of equipment which was previously not considered subject to the Jones Act.

Section 4 – Macro-Economic Impact Conclusions

4.1 Employment

The offshore oil and natural gas industry has a long history of providing significant employment in the United States, particularly in the Gulf Coast states. Continued investment in offshore oil and gas infrastructure has led to a large U.S. based supply chain that has provided high wages to large numbers of workers. Despite the ongoing downturn in the global oil and natural gas industry, Calash estimates that the Gulf of Mexico offshore oil and natural gas industry is likely to support over 360 thousand U.S. jobs in 2020 in the base case (including indirect and induced employment).[9] (Figure 4)

Figure 4: Projected Employment by State - Base Scenario 2020-2040

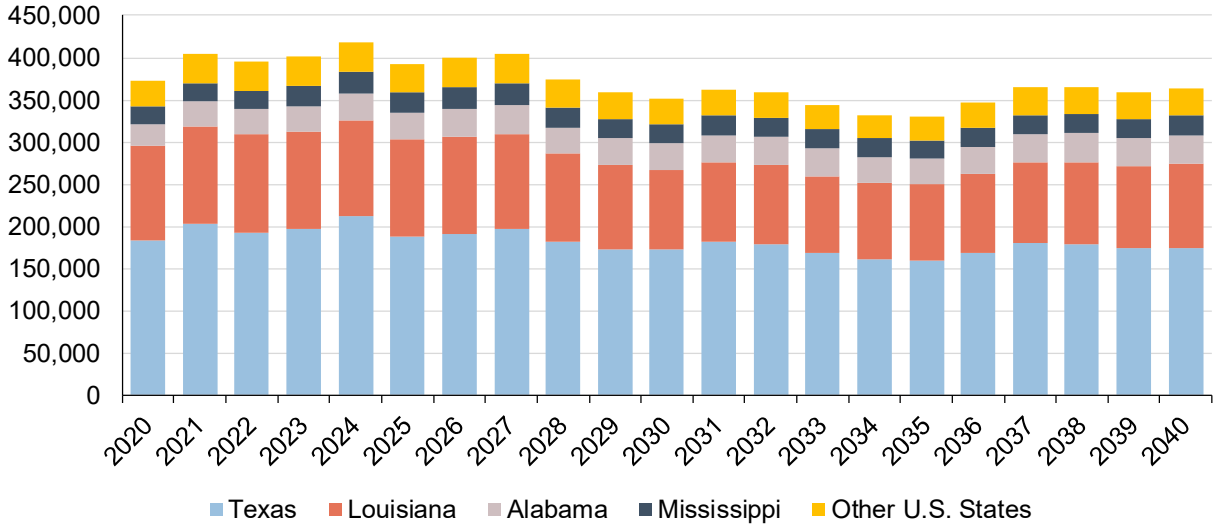


Source: Calash

From 2020 to 2040 in the Proposed Modifications and Revisions Scenario average annual employment is projected at over 371 thousand jobs a year, due to increased overall spending due to increased costs related to increased use of coastwise vessels as well as due to increased domestic content. (Figure 5)

[9] Indirect jobs are those related to the oil and natural gas supply chain. Induced jobs are created from more income that is spent throughout the economy.

Figure 5: Projected Jobs by State – Proposed Modifications and Revisions Case 2020-2040

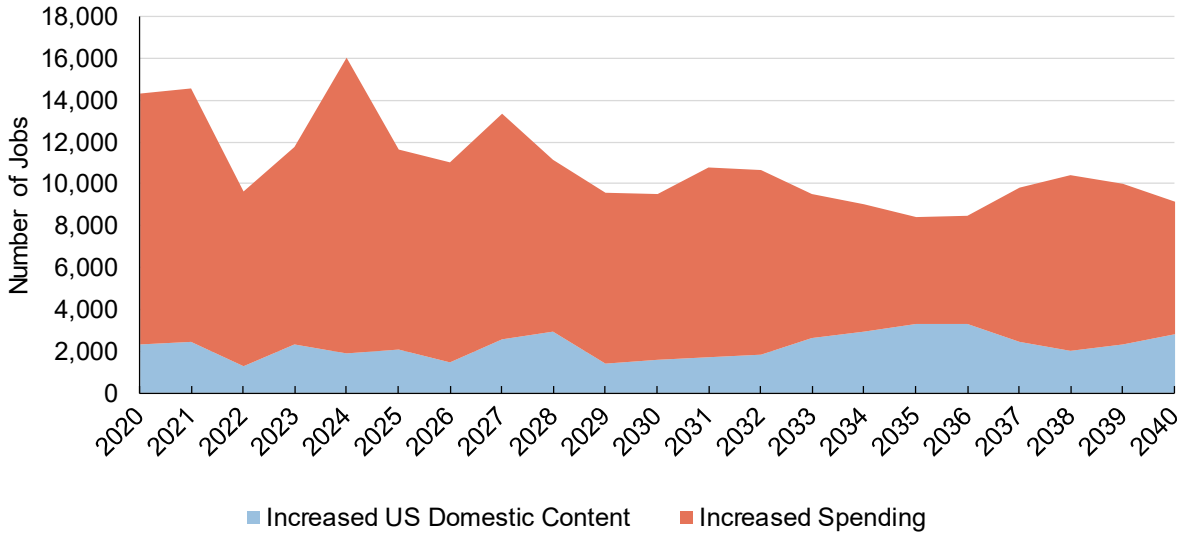


Source: Calash

4.2 Employment Impact Analysis

Increased employment in the Proposed Modifications and Revisions Case is due to both increased overall spending due to increased costs borne by operators and increased U.S. content for certain installation and operational activities, primarily related to the transportation of equipment for use in offshore oil and natural gas activities.[10] This study projects that increased employment would average in the range of nearly 11 thousand jobs annually over the forecast period, of which 80 percent on average is projected to be due to increased spending, while 20 percent on average is projected to be due to increased U.S. content. (Figure 6)

Figure 6: Lost Employment Analysis – Projected Increased Employment by Cause 2020-2040



Source: Calash

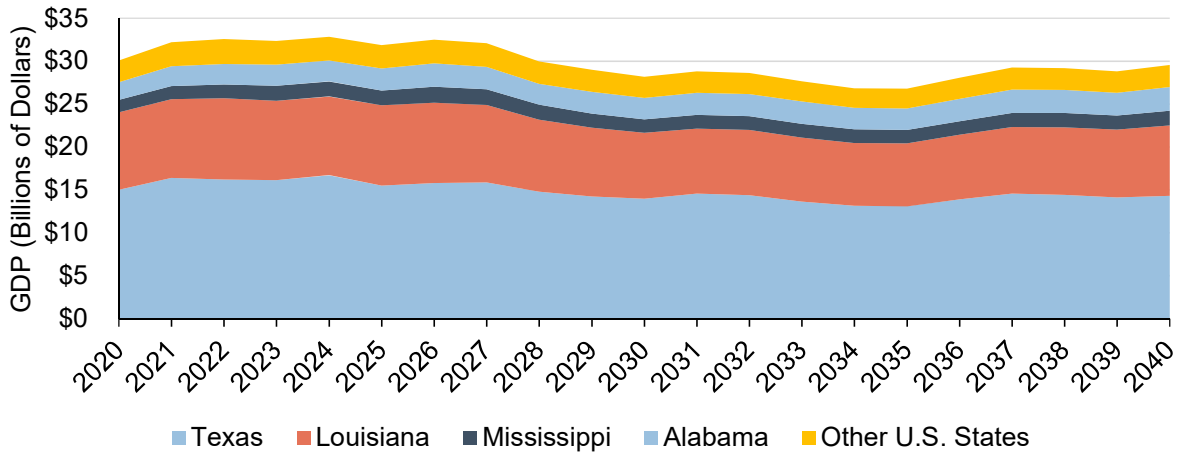
[10] Although increased spending in Gulf of Mexico oil and gas development increases projected employment within the scope of this study, it is indeterminate that it would increase employment in the US economy as a whole. Resources would likely diverted from some other part of the economy to cover the increased costs.

4.3 GDP (Gross Domestic Product)

Potential gross domestic product (GDP) effects were calculated as a multiplier on spending within the U.S., further utilizing the BEA's RIMS II model. The estimated effects of proposed modifications and revisions are therefore likely to be strongly correlated to any shifts within spending with international spending excluded, and mirror shifts in employment.

The GDP impact of the Gulf of Mexico offshore oil and natural gas industry in the U.S. in the base case in 2020 is projected to be around $30 billion and is projected to average around $29.8 billion from 2020 to 2040. (Figure 7)

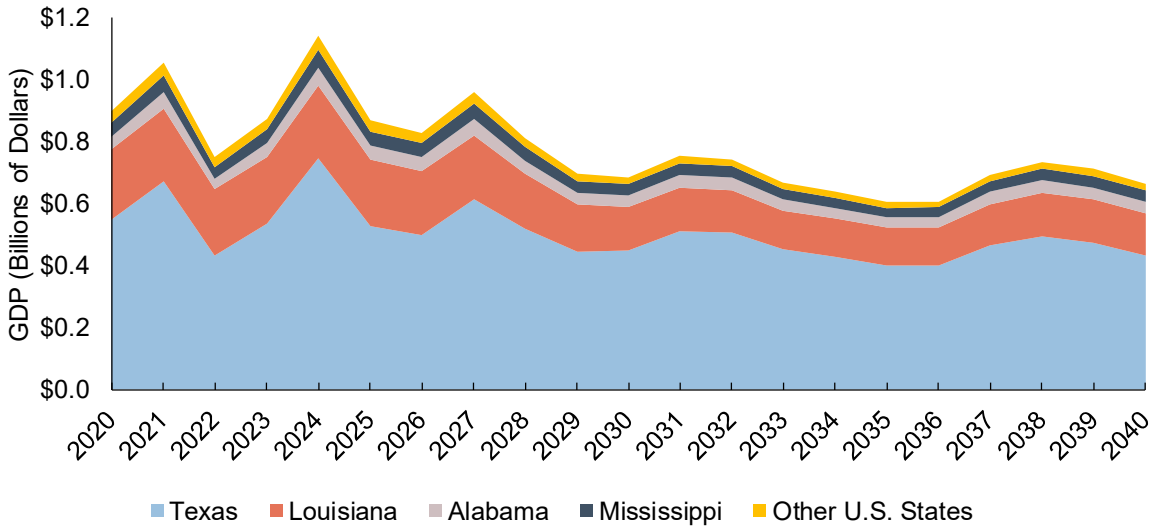
Figure 7: Projected GDP by State - Base Scenario 2020-2040



Source: Calash

The proposed modifications and revocations, if adopted as written, are projected to increase the GDP impact from Gulf of Mexico oil and natural gas activities by an average of around $780 million from 2020 to 2040. (Figure 8)

Figure 8: Projected Increased GDP by State –Proposed Modifications and Revisions Case 2020-2040

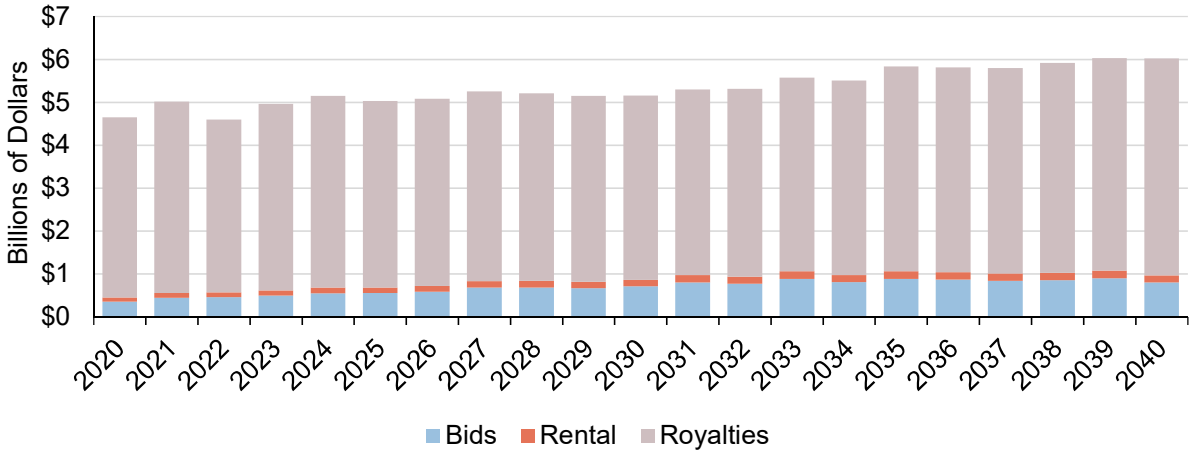


Source: Calash

4.4 Government Revenues

Government revenues due to Gulf of Mexico offshore oil and natural gas operations are currently collected through three main revenue streams: lease sale bonus bids, lease rentals, and production royalties. The distribution of these revenue streams is heavily skewed towards production royalties, which account for around 80 to 90 percent of revenues in a given year from offshore oil and natural gas activities. Total government revenues from Gulf of Mexico offshore oil and natural gas royalties have been between $2.8 and $4.7 billion in recent years, lease sale revenues have been between $230 million and $975 million, lease rental revenues have been approximately $100 to $200 million per year, and production revenues have provided around $2.4 to $4 billion per year. (Figure 9)

Figure 9: Projected Governmental Revenues – Base and Proposed Modifications and Revisions Cases 2020-2040



Source: Calash

In the Proposed Modifications and Revisions Case, no material impact on government revenues is projected due to the lack of expected impact on project development activity.

Section 5 – Conclusions

The oil and natural gas industry in the Gulf of Mexico has been a long-term provider of contributions to the economies of the Gulf coast states and the broader U.S. economy. The industry supports hundreds of thousands of American jobs providing revenues to many levels of the U.S. government and contributes to domestic energy production. Despite currently depressed activity levels, the region is currently producing near record levels of oil and natural gas. Assuming that oil prices begin to stabilize, activity levels are also projected to increase leading to an upward trend in spending and employment.

This study concludes that the proposed modifications and revocations of ruling letters related to CBP's application of the Jones Act to the offshore oil and natural gas industry as well as other industries engaged in offshore construction would increase costs related to the development of offshore oil and natural gas projects, albeit with a non-material impact on project development activity, increase US domestic content, and reduce uncertainty due to inconsistent applications of the Jones Act related to offshore oil and natural gas installation activity.

After analyzing the operational and economic impacts of the proposed language, this study has projected that the following effects may result from adoption and implementation of the proposed modification and revisions:

- An average increase in employment of around 11 thousand jobs each year from 2020 to 2040.
- Between 2020 and 2040, increased Gulf of Mexico offshore oil and natural gas spending in the range of $350 million on average per year.
- No material impact on oil and natural gas production from 2020 to 2040.
- An average annual increase of around $780 million of GDP from 2020 to 2040.
- No material impact on federal or state government revenue from leases, rents and royalties or funding for the LWCF.

Section 6 – Appendices

6.1 Extended Methodology Appendix

General Methodology

Calash's methodology focused on constructing a tiered "bottom-up" model that separated the complete life cycle of offshore operations and subsequent effects into four main categories – these categories are further developed into cases and presented as the base scenario and Proposed Modifications and Revisions Case within the paper. The four main categories are as follows;

- A "Proposed Modifications and Revisions Case" model that independently assesses the individual or combined effects of the proposed modifications and revisions to the Jones Act affecting offshore oil and natural gas installation activities
- An "Activity Forecast" model assessing Calash's projects and project modeling information under which the number of expected projects is developed
- A "Spending" model based on the requirements of developing projects within the "Activity Forecast"
- An "Economic" model focusing on the economic impact on employment and government revenue from the "Spending" model.

Three (Activity Forecast, Spending, and Economic models) of the four individual subsections were further split into five additional criteria that create an individual "Project" model. These categories include seismic, leasing activity, drilling, infrastructure & project development, and production & operation.

In order to estimate the economic effects and project activity losses through the "Project" model, additional analysis was undertaken to understand which projects likely would be disrupted due to delays and changes to project economics and risk profiles. This was presented through additional analysis of the Base Development scenario and is provided as the Proposed Modifications and Revisions Case.

Project Development Methodology

In order to account for both currently active projects within the Gulf of Mexico and longer-term prospects that will be developed towards the end of the forecast period into the study's project development activity, Calash incorporated two models into the project development forecast. The near-term activity was developed on known projects or prospects currently under consideration for development, while a longer-term forecast was developed on top of the near-

term forecast through the analysis of reserves, oil prices, leasing trends, development trends, historic project sizes and other relevant factors. The longer-term forecast was modelled after the Energy Information Administration's 2019 Long Term Energy Outlook's forecast of Gulf of Mexico oil and natural gas production.

Longer term projects were developed by applying historical and current trends within the region to future developments based on undiscovered oil and natural gas resources in order to apply the proper costs and timelines to the expected activity. Projects were still delineated by individual timelines and the development scenarios that may be expected of future activity within the region but were calculated using assumptions on industry trends in production methods instead of on confirmed aspects of the specific projects.

With regards to the Proposed Modifications and Revisions Case, projects were examined for potential hurdles that would be encountered under the proposed changes through several criteria identified from Calash's research. These were focused on how changes to the ruling letters were likely to affect specific projects and how these changes would affect specific aspects of project development. These identified factors drove the forecasted possibility of delays or lost activity due to contracting and operational issues, project economics due to increased installation costs and potential delays and changing risk profiles.

Project Spending Methodology

This spending analysis accounts for all capital investment and operational spending through the entire "life cycle" of operations. Every offshore oil or natural gas project must go through a series of steps in order to be developed. Initial expenditures necessary to identify targets and estimate the potential recoverable resources in place include seismic surveys (G&G) and the drilling and evaluation of exploration & appraisal (E&A) wells. For projects that are commercially viable, the full range of above-surface and below-water (subsea) equipment must be designed and purchased. Offshore equipment includes production platforms and on-site processing facilities, as well as below-water equipment, generally referred to as SURF (Subsea, Umbilicals, Risers and Flowlines). Finally, the equipment must be installed, and additional development wells must be drilled. Once under production, further operational expenditures (OPEX) are required to perform ongoing maintenance, production operations and other life extension activities as necessary for continued field production and optimization.

Spending for individual projects was subdivided into sixteen categories covering the complete life cycle of a single offshore project, as well as two additional groups for natural gas processing and operation. Timing and cost for individual categories were assigned based on the previously mentioned project types where prices are scaled according to the complexity and size of the project.

Upon compiling the scenario of overall spending estimates, Calash deconstructed the "local content" of oil and natural gas operations within the studied region. Individual tasks were analyzed on a component-by-component basis to provide an estimate of the percentage of regional, national, and international construction required by offshore operations. Additionally, delineations were made at the regional level in order to project spending for individual states. Considerations were based on current oil and natural gas development, the proximity to reserves and production, strategic locations such as shore bases and ports, as well as Bureau of Economic Analysis (BEA) data pertaining to each state's present economic distribution. For the Proposed Modifications and Revisions Case, these distributions were modified to account for likely changes to the offshore oil and natural gas supply chain as a result of the proposed changes including increased domestic content.

Economic Methodology

The study's GDP and job data were calculated using the BEA's RIMs II Model providing an input-output multiplier on spending at the industry and state levels for each defined category. Model outputs considered from spending effects include number of jobs and GDP multiplier effects. Further delineation is presented in the form of direct and indirect and induced job numbers, which encompass the number of jobs relating to the spending in that category versus indirect and induced jobs that are created from pass-through spending. For states considered within the study that contained no RIMs II multipliers for specific sectors, state multipliers from economies that most closely paralleled those in question were replicated.

Rims Categories used:

- Architectural, Engineering, and Related Services
- Construction
- Drilling Oil and Gas Wells
- Fabricated Metal Product Manufacturing
- Mining and Oil and Gas Field Machinery Manufacturing
- Oil and Gas Extraction
- Steel Product Manufacturing from Purchased Steel
- Support Activities for Oil and Gas Operations

Governmental Revenue Development

Governmental revenue data is presented in three categories: bonus bids from lease sales, rents from purchased but not yet developed leases, and royalty payments from producing leases. The projected revenue was calculated under the assumption that the current operating structure of the Gulf of Mexico would remain in place where applicable. Lease sales and rental rates were calculated through the simulation of yearly lease sales within each individual area, while the number of leases acquired was modeled on oil price forecasts, historical rates, and on the estimated amount of reserves in the western and central OCS regions.

The federal / state government revenue split of leases, rents and royalties were modeled under the application of GOMESA (Gulf of Mexico Energy Security Act).

Production pricing were calculated using the EIA estimates for both West Texas Intermediate (WTI) spot and Henry Hub natural gas prices[11] as well as differentials between historically realized royalties and commodity prices. Additional governmental revenues such as income and corporate taxes were considered outside of the scope of this study and are likely to provide additional government revenues throughout the studied period.

[11] Annual Energy Outlook 2019, Energy Information Administration

6.2 Glossary of Terms

Coastwise vessel – A vessel permitted to engage in Jones Act protected domestic trade between two or more coastwise points in the United States. Coastwise vessels are required to be U.S. built, crewed by U.S. Citizen mariners, U.S. owned, and issued a Coastwise Endorsement by the Coast Guard on the vessel's Certificate of Documentation

Gross Domestic Product (GDP) – The total dollar value of all goods and services produced over a specific time period

Gulf of Mexico Energy Security Act (GOMESA) – Act signed into law in 2006 which enhances OCS oil and natural gas leasing activities and revenue sharing in the Gulf of Mexico (GOM)

Lease Sales – Periodic sales of leases by the federal government to offshore areas for the purpose of developing oil, natural gas, and sulfur

Module – A part of a topside structure which can typically be lifted independently before being integrated into a topside

Outer Continental Shelf (OCS) – the submerged lands, subsoil, and seabed, lying between the seaward extent of the States' jurisdiction and the seaward extent of Federal jurisdiction

Rents – Ongoing rental income paid by leaseholders to the federal government to maintain offshore oil and natural gas leases

Riser – A pipeline used to convey fluids between a subsea and a surface facility

Royalties – Ongoing payments to the federal government by leaseholders based on the value of produced oil and natural gas

Subsea Equipment – Seabed placed equipment used in the production of oil and natural gas

Topsides – The upper part of a fixed or floating platform used to process oil, natural gas, water and other fluids, control production, and house workers

Umbilical – A collection of cables, tubes, and hoses used to control, monitor and provide communications, chemicals, hydraulic and electrical power to subsea oil and natural gas wells

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