

# Conversation Contents

## URGENT: 2019 Alaska Energy Assessments Write-Up

### Attachments:

/18. URGENT: 2019 Alaska Energy Assessments Write-Up/2.1 FY2018-19 Funding for SO-3352.xlsx

/18. URGENT: 2019 Alaska Energy Assessments Write-Up/6.1 FY2019 Work re SO #3352.docx

**"Maher, Arista" <amaher@usgs.gov>**

---

**From:** "Maher, Arista" <amaher@usgs.gov>  
**Sent:** Fri Feb 09 2018 10:28:33 GMT-0700 (MST)  
**To:** "Houseknecht, David" <dhouse@usgs.gov>  
**CC:** Walter Guidroz <wguidroz@usgs.gov>  
**Subject:** URGENT: 2019 Alaska Energy Assessments Write-Up

Hi David,

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Arista Maher  
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Energy and Mineral Resources, and Environmental Health (EMEH)  
U.S. Geological Survey  
Office of Budget, Planning, and Integration  
Room 7A-224  
(703) 648-6031  
[amaher@usgs.gov](mailto:amaher@usgs.gov)

**"Houseknecht, David" <dhouse@usgs.gov>**

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**From:** "Houseknecht, David" <dhouse@usgs.gov>  
**Sent:** Fri Feb 09 2018 10:36:31 GMT-0700 (MST)

**To:** "Maher, Arista" <amaher@usgs.gov>  
**CC:** Walter Guidroz <wguidroz@usgs.gov>  
**Subject:** Re: URGENT: 2019 Alaska Energy Assessments Write-Up  
**Attachments:** FY2018-19 Funding for SO-3352.xlsx

Hi Arista:

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Dave Houseknecht  
U.S. Geological Survey  
12201 Sunrise Valley Drive  
MS 956  
Reston, VA 20192  
(703) 648-6466

On Fri, Feb 9, 2018 at 12:28 PM, Maher, Arista <amaher@usgs.gov> wrote:

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**"Maher, Arista" <amaher@usgs.gov>**

**From:** "Maher, Arista" <amaher@usgs.gov>  
**Sent:** Fri Feb 09 2018 10:42:16 GMT-0700 (MST)  
**To:** "Houseknecht, David" <dhouse@usgs.gov>  
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**Sent:** Mon Feb 12 2018 06:28:11 GMT-0700 (MST)  
**To:** Arista Maher <[amaher@usgs.gov](mailto:amaher@usgs.gov)>, David Houseknecht <[dhouse@usgs.gov](mailto:dhouse@usgs.gov)>  
**Subject:** RE: URGENT: 2019 Alaska Energy Assessments Write-Up

Dave, thanks for handling this. I was out Friday (teaching day). Arista, please let us know if you need anything else. Thanks...

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U.S. Geological Survey  
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(703) 648-6031  
[amaher@usgs.gov](mailto:amaher@usgs.gov)

## "Maher, Arista" <amaher@usgs.gov>

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**From:** "Maher, Arista" <amaher@usgs.gov>  
**Sent:** Mon Feb 12 2018 07:29:50 GMT-0700 (MST)  
**To:** Walter Guidroz <wguidroz@usgs.gov>  
**CC:** David Houseknecht <dhouse@usgs.gov>  
**Subject:** Re: URGENT: 2019 Alaska Energy Assessments Write-Up

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**Sent:** Mon Feb 12 2018 07:33:50 GMT-0700 (MST)  
**To:** Walter Guidroz <wguidroz@usgs.gov>  
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**Sent:** Mon Feb 12 2018 07:35:00 GMT-0700 (MST)  
**To:** David Houseknecht <[dhouse@usgs.gov](mailto:dhouse@usgs.gov)>  
**Subject:** RE: URGENT: 2019 Alaska Energy Assessments Write-Up

No, I have no idea. I'm replying to Arista right now...

**From:** Houseknecht, David [mailto:[dhouse@usgs.gov](mailto:dhouse@usgs.gov)]  
**Sent:** Monday, February 12, 2018 9:34 AM  
**To:** Walter Guidroz <[wguidroz@usgs.gov](mailto:wguidroz@usgs.gov)>  
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**Sent:** Mon Feb 12 2018 07:36:08 GMT-0700 (MST)  
**To:** Arista Maher <[amaher@usgs.gov](mailto:amaher@usgs.gov)>  
**CC:** David Houseknecht <[dhouse@usgs.gov](mailto:dhouse@usgs.gov)>  
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Arista, as I mentioned when we talked, I have no idea where that number came from, as with many others recently. We should go with Dave's estimate as it's the one grounded in reality.

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**From:** Maher, Arista [mailto:[amaher@usgs.gov](mailto:amaher@usgs.gov)]  
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**To:** Walter Guidroz <wguidroz@usgs.gov>  
**CC:** David Houseknecht <dhouse@usgs.gov>  
**Subject:** Re: URGENT: 2019 Alaska Energy Assessments Write-Up

And.... just as I thought we were done.... (sorry): would you please take a look at the following language for the appropriators, below, and please make sure it looks good to you. Note the use of "obligate" - can we get these funds obligated in the years mentioned?

Looking to get this verified ASAP.

Thanks,

Arista

-----  
All -

Please see below for our most current information on 2018 and 2019 for AK Energy. I hope this will help to answer your questions. I am happy to set up a discussion with our program coordinator for Energy to get you all of the information that you need.

Please note that our 2018 estimate has been revised from the earlier funding levels of about \$5.2 million as we refined the work that needs to be done in 2018. Please note that without additional funds, USGS would need to move around funding from within the Energy program to complete the work.

In 2018, the USGS Energy Resources Program (ERP) would plan to obligate **\$4.72 million** for assessment work associated with Secretarial Order #3352. This number has come down somewhat from the original number provided to the Senate and that is in their mark. The total funding need to complete the assessments is \$21.8 million over 4-5 years. The assessments would include work on the Nanushuk-Torok formations in the National Petroleum Reserve – Alaska (NPR-A); reprocessing of vintage 2D seismic data on the Arctic National Wildlife Refuge Coastal Plain (Section 1002 Area); and work to begin coordinating the 3D seismic data acquisition in the Section 1002 Area.

In FY 2019 we would plan to obligate **\$6.225 million**, which is \$1.5M above the 2018 funding level. This work will include:

- Completion and publication of remaining assessment reports for the Nanushuk-Torok formation in the NPR-A;
- Interpretation of reprocessed vintage 2D seismic data for the ANWR Section 1002 area, as well as completion and publication of the assessment;
- Laboratory analyses and interpretation of available data from the 3D seismic survey of the ANWR Section 1002 area;
- Leasing preparation workshops, in coordination with the Bureau of Land Management;
- Licensing commercially available 2D and 3D seismic data, field work, and analysis of samples collected from outcrops and wells in the Central North Slope assessment area, as well as USGS and contract scientists to analyze results from all tasks and to prepare for conducting the assessment during the first quarter of FY 2020.

As background for you, past USGS Alaska North Slope Assessments include: conventional oil and gas in NPR-A (2010), conventional oil and gas in the Central North Slope (2005), conventional oil and gas in the ANWR Section 1002 area (1998), North Slope-wide assessments of “unconventional” oil and gas in shale (self-sourced) reservoirs (2012), gas in coal beds (2006), and gas in hydrates (2008).

Secretarial Order 3352 (Section 4b) directs the Assistant Secretary – Land and Minerals Management and the Assistant Secretary – Water and Science to submit to the Counselor to the Secretary for Energy Policy a joint plan for updating current assessments of undiscovered, technically recoverable oil and natural gas resources of the Alaska North Slope, focusing on Federal lands including NPR-A and the Section 1002 Area of ANWR.

Below is some additional information about current and planned work:

#### **National Petroleum Reserve-Alaska (NPR-A)**

In response to Secretarial Order 3352, the USGS released an updated assessment of oil and gas resources in NPR-A in December 2017. Work on the assessment bridged Fiscal Years 2017 and 2018, especially with respect to publication and proportional computing costs that took place in FY 2018 along with proportionate salary and benefits costs. Our efforts on NPR-A are essentially complete and no further work is anticipated to occur.

#### **Arctic National Wildlife Refuge (ANWR), Section 1002 Area (2D seismic)**

The USGS has contracted with an external seismic vendor to reprocess existing vintage 2-Dimensional (2D) seismic data acquired in the ANWR coastal plain (otherwise known as the Section 1002 area) in the mid-1980s. This work is a computer-based exercise that involves using new algorithms to improve the quality of the seismic image derived from the original data. The 2D seismic data, once reprocessed, will form the basis for an updated USGS geologic interpretation of this area along with selected field work, oil geochemistry and analytical services. The updated geologic interpretation will itself form the basis for an updated resource assessment of the Section 1002 area, which should be released by December 2018. Proportionate salary and benefits costs will also be required in order to complete this work.

#### **Arctic National Wildlife Refuge, Section 1002 Area (3D seismic)**

The USGS envisages that an industry consortium will manage and procure a 3-Dimensional (3D) seismic survey over the ANWR Section 1002 area. The most likely acquisition scenario is that acquisition of this survey will take place over two winter seasons, first beginning in the winter of 2018-2019 and continuing during the winter of 2019-2020. During FY 2018, a

relatively small amount of funding will be required to coordinate activity with the Bureau of Land Management with respect to the 3D survey acquisition. The 3D seismic data, once acquired, will form the basis for a follow-up revision by the USGS of its geologic interpretation of the Section 1002 area. The updated geologic interpretation will itself then form the basis for an updated resource assessment of the Section 1002 area, which should be released by 2020. Proportionate salary and benefits costs will also be required in order to complete this work.

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**Sent:** Friday, February 9, 2018 12:42 PM  
**To:** Houseknecht, David <[dhouse@usgs.gov](mailto:dhouse@usgs.gov)>  
**Cc:** Walter Guidroz <[wguidroz@usgs.gov](mailto:wguidroz@usgs.gov)>  
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## "Maher, Arista" <amaher@usgs.gov>

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**To:** Walter Guidroz <wguidroz@usgs.gov>  
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**Subject:** Re: URGENT: 2019 Alaska Energy Assessments Write-Up

Ok, thanks Walter. I wanted to double check with Dave as well to make sure he wasn't aware of anything we weren't with the earlier number.

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Arista, as I mentioned when we talked, I have no idea where that number came from, as with many others recently. We should go with Dave's estimate as it's the one grounded in reality.

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**To:** "Maher, Arista" <amaher@usgs.gov>  
**CC:** Walter Guidroz <wguidroz@usgs.gov>  
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A few suggestions:

2nd paragraph: "move around funding within the Energy Program" - why not tell the truth and say "cease conducting work in other oil and gas basins and redirect funding to the North Slope assessment work."

3rd paragraph: "work to begin coordinating the 3D seismic data acquisition in the Section 1002 Area" - this cannot be said as the USGS has NOTHING to do with coordinating 3D seismic data acquisition - that is done entirely by industry. Instead, I suggest saying "work to collect ancillary data and acquiring software for interpreting 3D seismic data once it is collected by industry and submitted to DOI."

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U.S. Geological Survey  
Office of Budget, Planning, and Integration  
Room 7A-224  
(703) 648-6031  
[amaher@usgs.gov](mailto:amaher@usgs.gov)

On Mon, Feb 12, 2018 at 8:28 AM, Walter Guidroz <[wguidroz@usgs.gov](mailto:wguidroz@usgs.gov)>  
wrote:

Dave, thanks for handling this. I was out Friday (teaching day). Arista, please let us know if you need anything else. Thanks...

Walter

**From:** Maher, Arista [mailto:[amaher@usgs.gov](mailto:amaher@usgs.gov)]  
**Sent:** Friday, February 9, 2018 12:42 PM  
**To:** Houseknecht, David <[dhouse@usgs.gov](mailto:dhouse@usgs.gov)>  
**Cc:** Walter Guidroz <[wguidroz@usgs.gov](mailto:wguidroz@usgs.gov)>  
**Subject:** Re: URGENT: 2019 Alaska Energy Assessments Write-Up

Thanks, Dave. The spreadsheet is helpful, and I apologize if I missed the 2019 tab the first time around.

It would be great if you could please draft a sentence or two of layperson language for what kind of work would be conducted for each assessment in FY 2019 (i.e., please explain what would happen in FY 2019 regarding the 2D ANWR reprocessing vs. in FY 2018, or more specifically, building upon the work that was conducted in FY 2018). Does that make sense? If not, please feel free to give me a call and I can explain.

Thanks,

Arista

Arista Maher  
Budget Coordinator for  
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On Fri, Feb 9, 2018 at 12:36 PM, Houseknecht, David <[dhouse@usgs.gov](mailto:dhouse@usgs.gov)> wrote:

Hi Arista:

I sent this spreadsheet to Walter this morning, but he is on travel and I did not hear back from him. Note there are two tabs, one for FY2018 and one for FY2019. Email or call if you need more info - I'm working at home today, and can be reached by my cell: (b)(6)

Dave Houseknecht  
U.S. Geological Survey  
[12201 Sunrise Valley Drive](#)  
MS 956  
Reston, VA 20192  
(703) 648-6466

On Fri, Feb 9, 2018 at 12:28 PM, Maher, Arista <[amaher@usgs.gov](mailto:amaher@usgs.gov)> wrote:

Hi David,

Walter and I spoke yesterday regarding Congressional interest in understanding what is needed in FY 2019 for the Alaska Energy Resource Assessment work. I think he spoke with you yesterday about putting together a brief description of what the funding need is in FY 2019 and what that funding would be used for. He gave me a breakdown of FY 2018 work for the same purpose, which we have passed along to the Hill. We are also using it for our budget roll-out prep.

Would you please provide me with the same for FY 2019? I need it today, as soon as you can, please.

Thanks!

Arista

Arista Maher  
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## FY2018 Funding for SO #3352 - Alaska North Slope

### Assessment 1 - Nanushuk-Torok-NPRA (National Petroleum Reserve in Alaska)

S&B	\$270,000	Salary and benefits
Spent	\$150,000	Completion and release of assessment (travel, oil geochemistry, analytical services, computing)
Planned	<u>\$100,000</u>	Publication costs and proportional computing costs (esp. software license maintenance)
<i>Subtotal</i>	\$520,000	

### Assessment 2 - Arctic National Wildlife Refuge Coastal Plain (1002 Area) - Reprocessed Vintage 2D Seismic Data

S&B	\$850,000	Salary and benefits
Contract	\$900,000	Seismic reprocessing contract and associated travel
Spent	\$150,000	Analytical services, proportional computing costs
Planned	<u>\$1,600,000</u>	Field work, oil geochemistry, analytical services, contract personnel, travel
<i>Subtotal</i>	\$3,500,000	

### Assessment 3 - Arctic National Wildlife Refuge Coastal Plain (1002 Area) - 3D Seismic Data

S&B	\$150,000	Salary and benefits
Planned	<u>\$50,000</u>	Coordination with Bureau of Land Management (seismic surveys, leasing, etc.)
<i>Subtotal</i>	\$200,000	

**TOTAL**            **\$4,220,000**

### Added later after conversation with WG

Planned	\$500,000	Sampling and source-rock analysis of perimeter wells
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**TOTAL**            **\$4,720,000**

**FY2019 Funding for SO #3352 - Alaska North Slope**

**Assessment 1 - Nanushuk-Torok-NPRA (National Petroleum Reserve in Alaska - completed and released)**

S&B	\$0	Salary and benefits
Spent	\$0	Completion and release of assessment (travel, oil geochemistry, analytical services, computing)
Planned	<u>\$25,000</u>	Publication costs
<i>Subtotal</i>	<i>\$25,000</i>	

**Assessment 2 - Arctic National Wildlife Refuge Coastal Plain (1002 Area) - Reprocessed Vintage 2D Seismic Data**

S&B	\$250,000	Salary and benefits
Contracts	\$150,000	Contract personnel - petroleum systems modeling, seismic amplitude analysis
Committed	\$200,000	Analytical services, proportional computing costs
Planned	<u>\$300,000</u>	Oil geochemistry, analytical services, travel, publication costs
<i>Subtotal</i>	<i>\$900,000</i>	

**Assessment 3 - Arctic National Wildlife Refuge Coastal Plain (1002 Area) - 3D Seismic Data (see text box at bottom)**

S&B	\$200,000	Salary and benefits
Contracts	\$50,000	Contract personnel - petroleum systems modeling, seismic amplitude analysis
Planned	<u>\$100,000</u>	Coordination with Bureau of Land Management (seismic surveys, leasing, etc.)
<i>Subtotal</i>	<i>\$350,000</i>	

**Assessment 4 - Central North Slope**

S&B	\$1,000,000	Salary and benefits
Contracts	\$250,000	Contract personnel - petroleum systems modeling, seismic amplitude analysis
Committed	\$700,000	Oil geochemistry, analytical services, proportional computing costs
Planned	<u>\$3,000,000</u>	License seismic data, field work, travel
<i>Subtotal</i>	<i>\$4,950,000</i>	

**TOTAL**                    **\$6,225,000**

All available information indicates that a 3D seismic survey of the ANWR 1002 Area will be conducted during winters 2018-2019 and 2019-2020, so initial 3D data will not be available until late FY 2019 and the entire data set will not be available until late FY2020. Therefore, assessment #4 (Central North Slope) and planned funding are being moved forward in the schedule.

USGS work to be conducted in FY2019 for assessments re. SO #3352

#### Assessment 1 – Nanushuk-Torok-NPRA

This assessment was completed and results were released as a USGS fact sheet in December 2017: <https://pubs.usgs.gov/fs/2017/3088/fs20173088.pdf>

One publication documenting the science on which the assessment is based has been accepted for publication and other reports are in preparation. Funding in FY2019 will support completion and publication of those scientific reports.

#### Assessment 2 - Arctic National Wildlife Refuge Coastal Plain (1002 Area) based on Reprocessed Vintage 2D Seismic Data

FY2019 funds will be devoted to interpretation of reprocessed vintage 2D seismic data to be delivered in July 2018, to the laboratory analysis of rock and oil samples collected from outcrops in ANWR and from nearby wells during FY2018, and to the interpretation of results from all these tasks by USGS and contract scientists. FY2019 funds also will support travel and other costs associated with completion and publication of the assessment no later than January 2019.

#### Assessment 3 - Arctic National Wildlife Refuge Coastal Plain (1002 Area) - 3D Seismic Data

All available information indicates that a 3D seismic survey of the ANWR 1002 Area may be conducted during winters 2018-2019 and 2019-2020, so initial 3D data will not be available until late FY 2019 and the entire data set will not be available until late FY2020. Therefore, FY2019 funding has been reduced for assessment 3 and will be devoted to additional laboratory analyses and interpretation of results by USGS and contract scientists. Funds also are budgeted to participate in leasing preparation workshops at the request of the Bureau of Land Management.

#### Assessment 4 - Central North Slope

Because of the delay in collection of a 3D seismic survey in the ANWR 1002 Area, assessment #4 (Central North Slope) and planned funding are being moved forward in the schedule. FY2019 funding will include licensing commercially available 2D and 3D seismic data, field work, and analysis of samples collected from outcrops and wells located in the assessment area. Funds also will support USGS and contract scientists to analyze results from all tasks and to prepare for conducting the assessment during the first quarter of FY2020.