



Open Data, Design, & Development at the Office of Natural Resources Revenue

Getting stakeholder buy-in

May 19, 2021

Framing the problem

For the [Natural Resources Revenue Data \(NRRD\) website](#), we often start a project with a [design studio](#). We start here to solve a problem we've identified through user research.

We took a different approach to redesign the Office of Natural Resources Revenue's (ONRR) primary website, [ONRR.gov](#). ONRR.gov's primary goal is to communicate about the agency and reporting requirements. To reach this goal, we needed to partner with internal stakeholders from all areas of ONRR. This enabled us to learn about the domain before we could begin to better explain things to users. Our approach was to iteratively review [wireframes](#) with each team at ONRR.

Learning how all the pieces fit together was not an easy task because nobody had documented it. For example, when I first started at ONRR, I missed the first half day of new employee training because of flight delays. When I walked in, each team presented about what they do, but I felt like I was missing something. When we got to a break, I asked if I missed a slide

showing how all the groups fit together. The response was that there wasn't one.

Shortly after that, I created [journey maps](#) to understand how the whole process works. I created the map after interviewing ONRR employees as potential users of a future lease level dataset for the NRRD website. This helped me to understand how the process fits together to some extent, but not at the level needed for ONRR.gov.

When [we started working on ONRR.gov](#), we interviewed industry and internal users about how they use the site. This gave us an understanding of the tasks users complete with the site and some of the pain points with the process. It also allowed us to solidify our [product statement](#), [vision](#), and [user types](#).

ONRR.gov problem statement

Companies pay to produce natural resources on federal lands, Indian lands, and the Outer Continental Shelf. They need to access timely and accurate information to meet complex regulatory requirements. These requirements include reporting production and paying the required royalties and other revenues. The Office of Natural Resources Revenue collects, verifies, and disburses those revenues.

Native Americans and the public need to understand their revenues and ensure we meet our trust responsibilities. ONRR should provide access to resources and clear communication to help this understanding.

Vision

We communicate the role of the Office of Natural Resources Revenue. We deliver trusted and easy to use information and customer service. This enables companies who lease federal and Indian lands to accurately report production and pay revenue due.

User types

New production and revenue reporters use the site to request access to reporting systems. They also learn about production and royalty reporting and payment requirements.

Existing reporters and payors use the site monthly to access ONRR's reporting portal. They have to submit reports for their oil, gas, geothermal, or solid minerals production and revenue. These users look on ONRR.gov for handbooks, pricing information, and lease numbers or codes to put on their reports. They also use information about submitting payment of the amount they owe ONRR. Some may look for information about compliance if they get a letter about enforcement.

ONRR customer service reps are internal users who use the site to provide information to reporters and payors.

Inquisitors are people like job seekers or journalists who use the site to learn about ONRR.

Resource owners are tribal representatives or Individual Indian Mineral Owners (IIMOs) who own mineral rights. They use the site to get information about ONRR's trust responsibilities and their leases.

Organizing the site

To understand the universe of content, I revisited the content inventory [one of last year's interns started](#). I updated it to the current state of the site and tracked all the locations where each piece of content lived. We then created cards that were representative of the content and conducted [card sorting](#) and [tree testing](#) with users. We also showed early wireframes to the users who participated in these studies.

Initial homepage wireframe:



Reporting	Training & Resources	Pricing	Paying	Indian	Enforcement & Appeals	About ONRR	Search <input type="text"/>
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The Office of Natural Resources Revenue (ONRR) collects and disburses natural resource revenue from leased federal lands and waters and Native American lands.

Announcements

Reporting

- Reporting Home
- Production
- Royalty
- Solid Minerals
- Geothermal

- eCommerce
- Data Warehouse Portal
- Cross-Referenced Lease & Agreement Number Lists

Training & Resources

- Training & Resources Home
- New Reporter Setup
- Handbooks
- Training Videos
- Policy
- References

- External MRMS Application Request Form (EMARF)
- Addressee of Record Designation for Service of Official Correspondence (ONRR-4444)

Pricing

- Pricing Home
- NYMEX Oil Prices
- Unbundling
- Federal Gas Index Option
- Valuation Regulations

Paying

- Paying Home
- Late Payment Interest

- Pay.gov

2016 Valuation Rule Implementation

Please see the [Dear Reporter Letter \(pdf\)](#) on Extending the Deadline for 2016 Valuation Rule Compliance to July 1, 2020.

Royalty Valuation will also offer Processed Gas Reporting training addressing the changes resulting from the reinstatement of the 2016 Valuation Rule via WebEx on Wednesday, June 10, 2020. This session will run from 8:00 am to 10:30 am Mountain Daylight Time. [Click here to register.](#)

Indian

- Indian Home
- Indian Services
- Indian Pricing

Enforcement & Appeals

- Enforcement & Appeals Home
- Appeals & Sureties
- Bankruptcies

About ONRR

- About ONRR Home
- Press Releases
- Contact Us

Mineral Owners

ONRR would like to let the mineral owners know that we are still operating, processing 2014s and payments, as well as processing distributions. Our Indian Outreach group is also answering phones. If you have any questions or concerns, please call us at the [numbers available on our Allottee Assistance page.](#)

Reporter Letters

- Extending the Deadline for 2016 Valuation Rule Compliance to 07/01/2020 (11/20/2019)
- Enjoining of Federal and Indian Coal Provisions of the 2016 Consolidated Valuation (10/17/2019)
- Assessment of Late Payment Charges on Solid Mineral Leases (06/24/2019)
- View All

Press Releases

- Interior Disburses \$353 Million in GOMESA FY 2019 Revenues; Funds Support Coastal Conservation and Hurricane Protection Projects (03/30/2020)
- Interior Disburses \$50 Million to Alabama from 2019 Energy Revenues (03/30/2020)
- Interior Disburses \$155.7 Million to Louisiana in FY 2019 Energy Revenues (03/30/2020)
- View All

Deliveries

Until further notice, all ONRR office deliveries (except for the United States Postal Service) must be shipped to the ONRR Denver Office at:

*Office of Natural Resources Revenue
P.O. Box 25165, Entrance N1
Building 85, Eighth Street
Denver Federal Center, CO 80225*

This applies to deliveries designated for ONRR offices in Houston TX; Dallas TX; Oklahoma City OK; Tulsa OK; and Farmington NM.

Revenue Statistics

- Fiscal year 2019 revenue: \$12,006,908,794
- Fiscal year 2019 disbursements: \$11,693,266,132
- Fiscal year 2020 GOMESA disbursements: \$352,963,140
- Explore Revenue Statistics

Follow Us

Share

We created a taxonomy based on the card sort and tree test findings. Then I went through our content inventory and made sure we had a home in the new organization for every piece of content. I also tweaked the categories, as needed.

We also started going through the 3,000 documents on ONRR.gov to make them accessible. We'll write more about how we did that later. While the teams who owned the documents were doing this, we had them think about what content was necessary to keep on the site. Thinking about what was necessary while updating content for accessibility helped to pare down the content.

Redesigning pages

Then it came time to start redesigning pages. I had an assumption that I would have to negotiate many changes because of regulatory requirements. As a result, I started with screenshots of the current site placed into the structure that came out of card sorting and tree testing.

Wireframe using a screenshot of the current site:



Getting Started Reporting Guidance & References Paying Enforcement & Appeals Indian Resources About ONRR Search

Home | Guidance & References | Valuation & Pricing

- Guidance & References
Home
Valuation & Pricing
Reference Lists & Codes
Reporter Training
Handbooks
Forms
Reporter Letters
Rules & Regulations

Valuation & Pricing

How Valuation Works Pricing Unbundling Valuation Examples Valuation Regulations Contacts

Valuation Examples

Royalty Valuation produced the following examples to assist ONRR stakeholders in correct valuation reporting. More examples are in production and will be made available as completed.

These examples serve as guidance for determining value for royalties and are not an appealable decision or order under 30 CFR Part 1290, Subpart B. If ONRR issues you an order to pay additional royalties or assesses civil penalties under 30 CFR Part 1241 at a later date based on this guidance, your appeal rights will be provided at that time. While this example is not appealable, ONRR may use this guidance in conducting audits and as a basis for demanding additional royalties.

Table with 2 columns: Valuation Examples, Example. Rows include 2016 Valuation Rule Federal Processed Gas Reporting and Percent-of-Proceeds (POP) Contract Reporting Pre-2016.

Resources and Guidance

- Historical Code of Federal Regulations
Reporter Letters
Public Laws About Mineral Royalties
Historical Oil Rule Public Comments
Historical Geothermal Rule Information
Indian Valuation Information

As I started to review pages with stakeholders, it became clear that most of the content on the site wasn't designed intentionally. The people I talked with generally didn't know why the site was the way it was before the redesign. That gave me leeway to design based on best practices and what we learned from the early user interviews.

I laid out pages with better chunking and started simplifying the reading level. Some skeptical stakeholders didn't think we could simplify the content without sacrificing meaning. But seeing the rewritten content convinced them. It retained the meaning while being easier for users to comprehend.

Wireframe with rewritten content:

An official website of the U.S. government

U.S. Department of the Interior
Office of Natural Resources Revenue (ONRR)

Contact Us Events Revenue Data

Getting Started Reporting Guidance & References Paying Enforcement & Appeals Indian Resources About ONRR Search

Home | [Indian Resources](#) | Assistance

Indian Resources Home
Assistance
Tribal Consultation
Indian Pricing
Indian References
Indian Payments

Assistance

Choosing assistance Indian Outreach Federal Indian Minerals Office Tribal Assistance Indian Energy Service Center Contacts

Choosing assistance

Individual Indian Mineral Owners (IIMOs)
[Indian Outreach](#) conducts outreach with individual Indian mineral owners to resolve royalty-related problems. Our primary method is through on-site meetings in Indian Country.

The [Federal Indian Minerals Office \(FIMO\)](#) provides services that are responsive, consistent, and effective for individual Navajo mineral owners regarding oil and gas in the Four Corners Region.

Tribes
[Tribal Assistance](#) advocates for the interest of tribal Indian mineral owners by fulfilling ONRR's responsibility to serve as a trustee of royalty assets.

Other agencies and tribes
The [Indian Energy Service Center \(IESC\)](#) is a multi-agency collaboration between the Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), Office of Natural Resources Revenue (ONRR), and Bureau of Trust Fund Administration (BTFA) whose mission is to expedite Indian oil and gas activities, standardize processes, and provide for multi-disciplinary engagement in support of gaining efficiencies in the management of all types of Indian Energy, Renewable Energy, and Mineral development and activities to better serve Indian beneficiaries and Tribes.

Not sure which option is right for you?
The Tribal Liaison Officer (TLO) is facilitator and advisor to program offices and associated parties. [Contact the ONRR Indian and Tribal Liaison.](#)

I created process diagrams for many sections to explain concepts to new reporters. These often started with “we have a slide to explain that” conversations. I took what was in the slide and simplified it. Then reviewed it with the team and iterated.

Process wireframe:



U.S. Department of the Interior

Office of Natural Resources Revenue (ONRR)

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Events

Revenue Data

Getting Started

Reporting

References

Paying

Compliance & Enforcement

Indian Resources

About ONRR

Search

Compliance

Compliance & Enforcement Home

Compliance

Enforcement & Litigation Support

Appeals

Cooperative Agreements (STRAC)

Home | Compliance & Enforcement | Compliance

Overview

Compliance Authorities

Contacts

Overview

Our primary tools to verify and ensure compliance from companies are data mining reviews, compliance reviews, and audits. In all these activities, we review all components of the royalty reports in whole or in part. These include volume, value, allowances, and royalty rate.

1

Up-Front System Edits

oil, gas, geothermal

when reporting

Up-front system OGOR and ONRR-2014 edits are in place that may reject your report when you submit.

[OGOR edits](#) [2014 edits](#)

2

Data Mining Reviews

oil, gas

6-9 months after reporting

Data mining analysts perform reviews of reported royalty information, capturing possible anomalies. Most data mining reviews consist of volume measurement reviews. They look for under-reported or 100 percent missing royalties based on reported production data. Data mining also reviews companies that recoup more than they reported (net negatives) and new communitization agreements.

Office of Natural Resources Revenue Preliminary Determination				
Case No. 00000000	Volume Exception		Request No. PD-0	
PAD No. 00000000				
PART I	Company Name & ID: ABC Company 1234	Request Submitted To: Phone 999-999-9999 Email jane@abc.com	Date of Request: MM/DD/YYYY 1/15/2019	Date Due: MM/DD/YYYY 1/31/2019
PART II	Property Number(s): 999-999999-9		Review Period: 01/01/2013-12/31/2018	
You are receiving this notification as the result of an Office of Natural Resources Revenue (ONRR) Audit. We determined that ABC Company (ABC) reported inaccurately, paid inaccurately, or both. This Preliminary Compliance Management Review. We determined that Company Name reported inaccurately, paid inaccurately, or both. This Preliminary Determination (PD) follows a review of production reports, royalty				

3

Compliance Reviews

oil, gas, geothermal, solids

1-2 years after reporting

Compliance reviews check that the royalty equation (volume, value, allowances, royalty rate) is reported and paid correctly and there are no variances. There are also compliance reviews for Indian Gas Major Portion and Indian Oil Major Portion pricing and dual accounting.

Office of Natural Resources Revenue Preliminary Determination				
Case No. 99-99999	Compliance Review		Request No. PD-01	
PAD No. 0000000				
PART I	Company Name & ID: ABC Company 1234	Request Submitted To: Jane Doe 999-999-9999 jane@abc.com	Date of Request: 1/15/2019	Date Due: 1/31/2019
PART II	Property Number(s): 999-999999-9		Review Period: 01/01/2013-12/31/2018	
You are receiving this notification as the result of an Office of Natural Resources Revenue (ONRR) Audit. We determined that ABC Company (ABC) reported inaccurately, paid inaccurately, or both. This Preliminary Compliance Management Review. We determined that Company Name reported inaccurately, paid inaccurately, or both. This Preliminary Determination (PD) follows a review of production reports, royalty				

4

Audits

oil, gas, geothermal, solids

We conduct audits to determine if companies are



United States Department of the Interior


2-3 years after reporting
up to 7 years for federal oil & gas
no time limit for Indian leases





complying with lease terms, laws, and regulations . We apply Generally Accepted Government Auditing Standards and use 3rd party documentation to validate royalty reporting and payments. It is a longer, more formal process and requires a higher standard of verification in the form of evidence.



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Office of Natural Resources Revenue (ONRR)

  
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Having an artifact, like a [wireframe](#), helped to start these discussions. I made them sketchy to start the conversations and keep people from getting hung up on look and feel. Wireframes make it easy for people to point to something and ask about it. They also prompt them to tell you about problems they have with the current state. They give a visual aide for the conversation and give people something to react to. I also invited feedback. I showed the stakeholders how to put comments in our prototyping tool. This allowed them to comment more offline after they had a chance to let the changes sink in.

Stakeholder comment:

1

Up-Front System Edits

oil, gas, geothermal

when reporting

Up-front system OGOR and ONRR-2014 edits are in place that may reject your report when you submit.

[OGOR edits](#) [2014 edits](#)

51

49

2

Data Mining Reviews

oil, gas

50

6-9 months after reporting

Data mining analysts perform reviews of reported royalty information, capturing possible anomalies. Most data mining reviews consist of volume measurement reviews. They look for under-reported or 100 percent missing royalties based on reported production data. Data mining also reviews companies that recoup more than they reported (net negatives) and new communitization agreements.

45

A screenshot of a comment interface. At the top right is a close button (X). Below it is the user's profile picture and name 'jennifer.goldblatt'. The comment text reads: 'I believe we have a screenshot similar to the ones for CRs and Audits'. The date 'Feb 18, 2021' is on the right. Below the text is a text input field with the placeholder 'Enter your reply here'. At the bottom left are '@' and smiley face icons. At the bottom right are two buttons: 'Mark unresolved' and 'POST'.

3

Compliance Reviews

Conclusion

I now know more about how the teams within ONRR work than when I started with the agency. All it took was putting wireframes in front of people from each team and having them tell me about their work and how it fits into ONRR.gov.

The teams also now enjoy working with our team and are bought into the user-centered design process. Now that we have most of the site redesigned to stakeholder satisfaction, we will test it again with users. This will be the real test to find out whether we've moved closer to achieving our product vision.

Note : Reference in this blog to any specific commercial product, process, or service, is for the information and convenience of the public, and does not constitute endorsement, recommendation, or favoring by the Department of the Interior.



Shannon McHarg: User Experience Designer at the Office of Natural Resources Revenue.

[< Six lessons from my time as a government product manager](#)

[A user-centered approach: simplicity and complexity in a homepage graphic >](#)

[Home](#)



U.S. Department of the Interior

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From the team that works on Natural Resources Revenue Data and ONRR.gov. Have feedback or a blog post idea? Drop us a line.

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