



Energy & Environmental Research Center

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April 27, 2023

Mr. Reice Haase
Deputy Executive Director
North Dakota Industrial Commission
600 East Boulevard Avenue, Department 405
State Capitol, 14th Floor
Bismarck, ND 58505-0840

Dear Mr. Haase:

Subject: Quarterly Progress Report Entitled "iPIPE – intelligent Pipeline Integrity Program"
Contract No. G-046-88; UND Project – Fund 43500-UND0022445
EERC Funds 23121 and 23211

Attached is the quarterly progress report on the subject project for the period of January 1, 2023 – March 31, 2023.

If you have any questions, please contact me by phone at (701) 777-5402 or by email at amcrae@undeerc.org.

Sincerely,

DocuSigned by:
A blue ink signature of T. Austin McRae, written in a cursive style.

2CF0ADB8F88C44D7...
T. Austin McRae
Research Engineer
Integrated Petroleum Systems

TAM/bjr

Attachment

c: Brent Brannan, North Dakota Industrial Commission
Karen Tyler, North Dakota Industrial Commission



IPIPE – INTELLIGENT PIPELINE INTEGRITY PROGRAM

Quarterly Progress Report

(for the period of January 1, 2023 – March 31, 2023)

Prepared for:

Reice Haase

North Dakota Industrial Commission
600 East Boulevard Avenue, Department 405
State Capitol, 14th Floor
Bismarck, ND 58505-0840

Contract No. G-046-88

Prepared by:

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April 2023

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iPIPE – INTELLIGENT PIPELINE INTEGRITY PROGRAM

Quarterly Progress Report January 1, 2023 – March 31, 2023

EXECUTIVE SUMMARY

This document is a quarterly report for activity conducted by the intelligent Pipeline Integrity Program (iPIPE), led by the Energy & Environmental Research Center, for the North Dakota Industrial Commission Oil and Gas Research Program. The goal of iPIPE is to develop and demonstrate cutting-edge technology that can prevent and/or detect pipeline leaks.

Activity in Quarter 1 2023 focused on one remaining effort:

- Dedicated Space-Based Hyperspectral Imaging – Orbital Sidekick (OSK) is a company that is providing unmatched resolution for hyperspectral imaging from space to identify hydrocarbons such as methane. iPIPE supported OSK in the first launch of OSK's Aurora satellite via SpaceX rideshare in 2021. The learnings from the Aurora program are being applied to OSK's GHOSat satellite constellation, with launch planned for April 2023. The program is a vertical integration of satellite technology to align with industry metrics.

iPIPE – INTELLIGENT PIPELINE INTEGRITY PROGRAM
Quarterly Progress Report
January 1, 2023 – March 31, 2023

BACKGROUND

During a May 2017 meeting with North Dakota pipeline operators, Governor Doug Burgum challenged industry to apply advanced technologies to eliminate pipeline leaks in North Dakota. In response to the Governor's challenge, industry chose a proactive path and engaged in a 3½-year program, led by the Energy & Environmental Research Center (EERC), to advance development and application of emerging technologies to prevent and detect pipeline leaks. The intelligent Pipeline Integrity Program (iPIPE) intends to assist in the development of multiple emerging technologies to prevent and detect pipeline leaks by engaging with technology providers to refine not-yet-commercial products specifically for buried gathering pipelines in North Dakota and then demonstrate technology application on working gathering pipelines.

The goal of this project is to develop and demonstrate cutting-edge technology that can prevent and/or detect gathering pipeline leaks. This goal is supported by accomplishment of the following objectives:

- Select the most promising emerging (near-commercial) technologies for demonstration.
- Assist technology providers in refinement of their products.
- Demonstrate multiple technologies on working gathering pipelines.
- Document results of technology demonstrations.
- Facilitate adoption of technologies into North Dakota pipeline operations.

Multiple demonstrations of emerging technologies on working pipelines will simultaneously assist technology providers in refining designs, pave a path toward full commercialization in the North Dakota market and beyond, prepare pipeline operators for adoption of the new tools, and improve the performance and economics of gathering pipeline operations in North Dakota and beyond. With demonstrated success, additional consortium members (pipeline operators) will join the effort, thus enabling field testing of more technologies and further proliferating new technology among all pipeline operators.

Members of the industry-led consortium during Quarter (Q) 1 2023 included DCP Midstream, Enbridge, Energy Transfer Partners, Equinor, Goodnight Midstream, Hess Corporation, Marathon Petroleum Logistics (MPLx), ONEOK, and TC Energy.

The following summarizes program activities from January 1, 2023, through March 31, 2023.

ACCOMPLISHMENTS DURING REPORTING PERIOD

- Program-level activities
 - Program management
 - ◆ On February 22, 2023, iPIPE attended an investor meeting hosted by Orbital Sidekick (OSK) in San Jose, California. The event included a tour of the satellite-manufacturing facility and opportunity to view the GHOS 1 and 2 satellites prior to transport to the launch facility.
 - Program meetings
 - ◆ The iPIPE 2.0 Member Forum was held on January 13, 2023, at the EERC. Content included strategic program direction and partnerships, discussion of common challenges, and 2023 project groundwork.
 - The program included guests and presentations from the North Dakota Pipeline Authority (NDPA), North Dakota Industrial Commission (NDIC), and the American Petroleum Institute (API).
 - Membership made final decisions and provided direction to kick off iPIPE 2.0 project work including field demonstration hosts.
 - ◆ On February 17 and March 17, 2023, iPIPE held monthly member meetings to update all members on program status. The goal of these meetings is to keep members apprised of a variety of program topics, including recruitment, finances, strategic direction, and technology development project status, and discuss and make decisions regarding the course of the iPIPE Program. No monthly member meeting was held in January as it was effectively rolled into the Member Forum.
 - Member recruitment
 - ◆ Discussions continued with a number of companies regarding membership in the consortium. Some of these companies have approached the program regarding membership requirements and benefits, while others have been previously approached by the program and/or existing consortium members.
 - Program media mentions
 - ◆ Since inception, iPIPE has now been highlighted in more than 95 public multimedia and print articles. A partial listing of known media mentions is provided in Appendix A.
- Technology selection
 - The EERC continues to engage with companies from around the globe, offering emerging (not yet commercial) technologies as they discover or are directed to iPIPE. Additional technology providers will be sought through iPIPE 2.0.
- Demonstration execution – Satelitics Phase IV
 - Satelitics has completed its analysis of land movement detection using a current stereo pair of images and stereo pairs-generated historical data.
 - The independent EERC evaluation report for this task has been drafted and is under internal review.
- Demonstration execution – OSK

- OSK was able to briefly capture and downlink imagery from its satellite to validate the capabilities of its sensor. However, OSK was unable to task the sensor because of a mechanical failure and eventually lost the limited capabilities because of a second failure at a critical electrical conduit. As a result of the satellite failure, OSK provided a proposal to update the subcontract at the EERC’s request. The EERC has successfully negotiated with OSK, and a contract modification was executed in July 2022. Update meetings on the status of the next generation of satellites and their path to launch have generally occurred on a biweekly basis.
- The launch of the first two GHOSat satellites is expected in April 2023.
- Demonstration execution – Pipeline-Risk
 - Pipeline-Risk has delivered its final report, completed its construction of a risk-learning system for gathering lines, and demonstrated its abilities using member-provided data.
 - The independent EERC evaluation report is being drafted.
- Demonstration execution – TOKU
 - TOKU has completed its demonstration of pipeline-monitoring equipment, analysis of leak simulation data, and refinement of algorithms and has submitted its final report.
 - The independent EERC evaluation report for this task has been drafted and is under internal review.

MEMBERSHIP AND FINANCIAL INFORMATION

The original budget proposed to the NDIC Oil and Gas Research Program (OGRP) totaled \$3,714,000, as shown in Table 1. To demonstrate additional resources provided by new members, additional financial commitment from NDIC, and significantly increased in-kind cost share provided by technology providers and program members, an updated budget is presented in Table 2. Table 2 demonstrates the rapid growth of this program. Table 3 presents greater detail on the expected budget and actual expenses incurred by the program to date.

Table 1. iPIPE Original Budget

Sponsors	2018	2019	2020	2021	Total
NDIC – Cash	\$403,320	\$405,226	\$393,454	\$398,000	\$1,600,000
Industry – Cash	\$264,000	\$450,000	\$450,000	\$450,000	\$1,614,000
Industry and Technology Provider – In-Kind	\$125,000	\$125,000	\$125,000	\$125,000	\$500,000
Total	\$792,320	\$980,226	\$968,454	\$973,000	\$3,714,000

Table 2. iPIPE Updated Budget

Sponsors	2018	2019	2020	2021	Total
NDIC – Cash	\$565,909*	\$735,730*	\$438,772*	\$859,589	\$2,600,000
Industry – Cash	\$352,000*	\$700,000*	\$850,000*	\$675,000	\$2,577,000
Industry and Technology Provider – In-Kind	\$525,878*	\$1,074,077*	\$949,051*	\$500,000	\$3,049,006
Total	\$1,443,787	\$2,509,807	\$2,237,823	\$2,034,589	\$8,226,006

* Reflects actuals for these years.

Table 3. iPIPE Expected Budget and Expenses to Date

Sponsors	Expected Budget	Actual Expenses as of 3/31/23	Balance Remaining of Expected Budget
NDIC Share – Cash	\$2,600,000	\$2,241,258	\$358,742
Industry Share – Cash	\$2,577,000	\$2,431,712	\$145,288
Industry – In-Kind	\$375,000	<i>DCP</i> \$60,500 <i>Enbridge</i> \$126,436 <i>Energy Transfer</i> \$0 <i>Equinor</i> \$153,230 <i>Goodnight</i> \$37,135 <i>Hess</i> \$228,093 <i>MPLx</i> \$17,936 <i>Oasis</i> \$40,069 <i>ONEOK</i> \$5,000 <i>TC Energy</i> \$0 <u><i>Whiting</i></u> <u>\$9,042</u> TOTAL \$677,441	\$0
Technology Providers – In-Kind	\$3,076,597*	<i>Satellytics</i> \$1,713,450 <i>Direct-C</i> \$185,867 <i>Ingu</i> \$88,266 <i>Orbital Sidekick</i> \$1,321,061 <i>Toku</i> \$190,990 <u><i>Pipeline Risk</i></u> <u>\$50,000</u> TOTAL \$3,549,634	\$0
Total	\$8,628,597*	\$8,900,046	\$504,030**

* Includes budget estimates from proposals for 2020 technology development projects and an estimate of anticipated 2021 in-kind from technology providers.

** This amount does not include industry in-kind contributions provided in excess of the expected budget.

The program continues to solicit additional members to contribute to this program. As additional members join the program, Tables 2 and 3 will be updated to show the additional financial resources brought to the program.

Project progress, as represented by the project schedule presented in the original NDIC OGRP proposal, is shown in Figure 1.

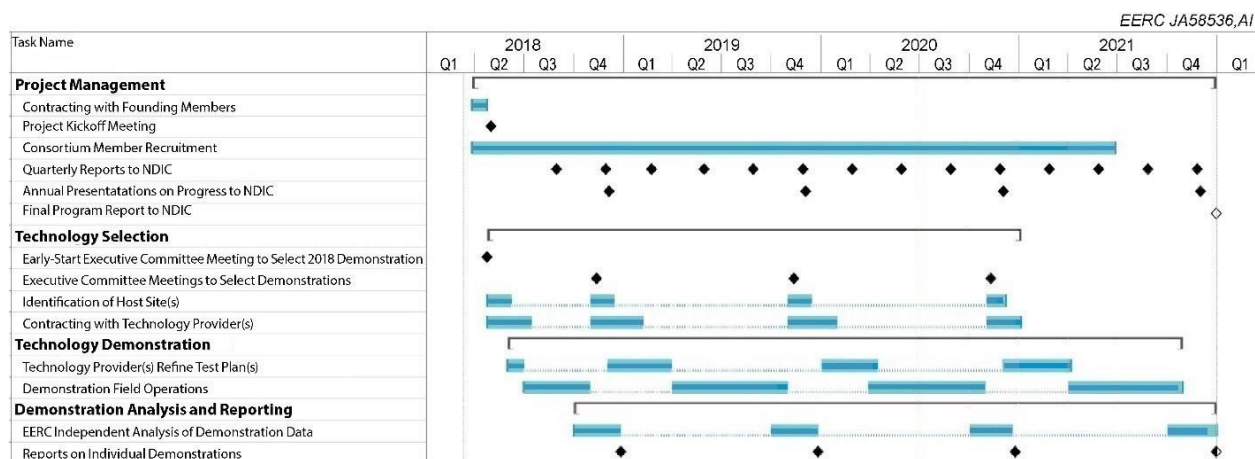


Figure 1. Project progress.

FUTURE ACTIVITIES

The planned activities for the next quarter are detailed below:

- Program-level activities
 - The EERC will work with consortium members and stakeholders to continue iPIPE on its successful path beyond the original 2018–2021 timeline with iPIPE 2.0.
 - iPIPE will continue ongoing and start new discussions with potential program members.
- Technology selection
 - The EERC will remain engaged with and on the lookout for providers of relevant, promising, emerging technology, with iPIPE continuing beyond its original 3½-year timeline into iPIPE 2.0.
- Demonstration execution – Satelitics Phase IV
 - The EERC will complete and distribute its independent review of this project. This will result in full project completion.
- Demonstration execution – OSK
 - The EERC will continue to remain updated prior to the expected April 2023 launch of the first two GHOS_t satellites. Project scope will continue upon successful commissioning.
- Demonstration execution – Pipeline-Risk
 - The EERC will complete and distribute its independent review of this project. This will result in full project completion.
- Demonstration execution – TOKU

- The EERC will complete and distribute its independent review of this project. This will result in full project completion.



APPENDIX A

PARTIAL LISTING OF iPIPE MEDIA MENTIONS

Partial List of Articles Highlighting iPIPE:

Updated April 1, 2023

Title	Date	URL
Industry Responds to Governor's Initiative to Improve Pipeline Technology; Program Funding Approved by North Dakota Industrial Commission		https://www.ndoil.org/industry-responds-to-governors-initiative-to-improve-pipeline-technology-program-funding-approved-by-north-dakota-industrial-commission/
Satelytics Selected to Participate in the intelligent Pipeline Integrity Program (iPIPE)	5/18/2018	https://mailchi.mp/satelytics/satelytics-chosen-to-participate-in-iPIPE-project?e=922473135e
ND Implements Intelligent Pipeline Project	5/22/2018	http://northamericanshalemagazine.com/articles/2380/nd-implements-intelligent-pipeline-project
North Dakota Governor Doug Burgum Provides Remarks This Morning at the Williston Basin Petroleum Conference in Bismarck, Thanks Hess and the Industry for Innovation Through iPIPE Program.	5/23/2018	https://twitter.com/HessCorporation/statuses/999315208261853185
North Dakota Pipeline Leak Detection Initiative Announced	5/25/2018	https://extension.psu.edu/north-dakota-pipeline-leak-detection-initiative-announced
New Consortium Sets Goal of Improving Pipelines	5/26/2018	https://www.mrt.com/business/oil/article/New-consortium-sets-goal-of-improving-pipelines-12941971.php
Industry Responds to Governor's Initiative to Improve Pipeline Technology; Program Funding Approved by North Dakota Industrial Commission	5/26/2018	https://www.oilandgasonline.com/doc/industry-governors-initiative-pipeline-program-north-dakota-industrial-commission-0001
New Consortium Sets Goal of Improving Pipelines	5/27/2018	https://www.timesunion.com/business/oil/article/New-consortium-sets-goal-of-improving-pipelines-12941971.php
Principal Engineer Jay Almlie Discusses the iPIPE Program on Energy Matters Radio	5/31/2018	https://www.youtube.com/watch?v=ZQuwsK0z2aM
North Dakota Selects Ingu Solutions for Demonstration of Cutting-Edge Leak Detection and Prevention Technology for Oil and Gas Pipelines	5/31/2018	https://ingu.co/iPIPE/
Leak Detection Project Kicks Off This Summer	6/1/2018	https://myemail.constantcontact.com/Here-are-the-week-s-top-North-Dakota-energy-stories-.html?soid=1102657032033&aid=NpwT2Ynl17c
How a Canadian Solution to Detecting Pipeline Leaks Is Being Used in North Dakota	6/5/2018	https://www.bnnbloomberg.ca/video/how-a-canadian-solution-to-detecting-pipeline-leaks-is-being-used-in-north-dakota~1410402
iPIPE Program Helps Solve Pipeline Leaks in ND	6/6/2018	http://www.kfyrtv.com/content/news/iPIPE-Program-helps-solve-pipeline-leaks-in-ND--484747291.html
Startup Uses Small Sensors to Check North Dakota Oil Pipes	6/10/2018	https://www.alvareviewcourier.com/story/2018/06/10/interesting-items/startup-uses-small-sensors-to-check-north-dakota-oil-pipes/37406.html
Sensors to Monitor Oil, Brine Gathering Lines Coming to ND	6/12/2018	https://www.westfargopioneer.com/news/science-and-nature/4459638-sensors-monitor-oil-brine-gathering-lines-coming-nd
Pipe Sensors to Monitor Gathering Lines	6/12/2018	https://bismarcktribune.com/business/local/pipe-sensors-to-monitor-gathering-lines/article_cd64586c-1d52-52df-83e6-b661d3b95f0a.html
Startup Uses Small Sensors to Check North Dakota Oil Pipes	6/21/2018	https://www.apnews.com/9d65538034a24711a4a84d4e2bb38efe
Startup Uses Small Sensors to Check North Dakota Oil Pipes	6/21/2018	https://www.usnews.com/news/best-states/north-dakota/articles/2018-06-21/startup-uses-small-sensors-to-check-north-dakota-oil-pipes
Startup Uses Small Sensors to Check North Dakota Oil Pipes	6/21/2018	https://m.washingtontimes.com/news/2018/jun/21/startup-uses-small-sensors-to-check-north-dakota-o/
iPIPE: Taking a Bite Out of Leaks	6/25/2018	http://blogs.und.edu/und-today/2018/06/taking-a-bite-out-of-leaks/
iPIPE: Taking a Bite Out of Leaks	6/29/2018	http://www.northdakotaagconnection.com/story-state.php?id=688&yr=2018
Industry Demonstrates Commitment to Stopping Pipeline Leaks	7/17/2018	http://northamericanshalemagazine.com/articles/2444/industry-demonstrates-commitment-to-stopping-pipeline-leaks
Testing of New Pipeline Inspection Device Begins in Bakken	7/18/2018	https://www.spe.org/en/ogf/ogf-article-detail/?art=4404

Title	Date	URL
Testing of New Pipeline Inspection Device Begins in Bakken (link not active)	7/18/2018	https://www.spe.org/en/print-article/?art=4404
6 Companies Collaborating on Pipeline Leak Detection	8/15/2018	https://www.willistonherald.com/news/companies-collaborating-on-pipeline-leak-detection/article_bbce3194-a098-11e8-8bac-1b765123019e.html
More Skin in the Game: New Technology to Find, Fix Leaks	8/20/2018	https://pgjonline.com/magazine/2018/august-2018-vol-245-no-8/features/more-skin-in-the-game-new-technology-to-find-fix-leaks
Burgum Highlights Oil Industry's Progress, Challenges at ND Petroleum Council's Annual Meeting in Fargo	9/25/2018	https://www.governor.nd.gov/news/burgum-highlights-oil-industry%E2%80%99s-progress-challenges-nd-petroleum-council%E2%80%99s-annual-meeting
Burgum Highlights Oil Industry's Progress, Challenges at ND Petroleum Council's Annual Meeting in Fargo	9/25/2018	https://votesmart.org/public-statement/1287849/burgum-highlights-oil-industrys-progress-challenges-at-nd-petroleum-councils-annual-meeting-in-fargo#.XDz9tVxKjmE
The Digital Oilfield: How Digital Technologies Are Changing the Oil Industry in ND and Nationwide	9/30/2018	http://www.prairiebusinessmagazine.com/business/energy-and-mining/4506605-digital-oilfield-how-digital-technologies-are-changing-oil
Progress for Partners Key to Energy & Environmental Research Center (link not active)		https://www.ndliving.com/content/progress-partners-key-energy-environmental-research-center
API Banquet Salutes Stars of Bakken Oil and Gas	11/19/2018	https://www.willistonherald.com/news/api-banquet-salutes-stars-of-bakken-oil-and-gas/article_a006f78e-eb98-11e8-a353-abe9fc1170fc.html
Energy Matters: iPIPE Receives Industry Innovation Award	12/3/2018	https://www.youtube.com/watch?v=L2lEr2Xu4aw
Energy Matters with iPIPE	12/12/2018	https://www.satelytics.com/blog/oil-gas-solutions/2018-energy-matters-with-iPIPE/
Developing Technology to Prevent Pipeline Leaks	1/3/2019	https://mydigitalpublication.com/publication/?i=547462&p=&pn=#{%22issue_id%22:547462,%22page%22:34}
Innovative Pipeline Consortium Marks New Highlights	1/8/2019	http://undeerc.blogspot.com/2018/12/innovative-pipeline-consortium-marks.html
2018 State of the State Address	1/23/2019	https://www.governor.nd.gov/events/2018-state-state-address
North Dakota Eyes Expanded Use of Drones for Oil and Natural Gas Operations	2/8/2019	https://www.naturalgasintel.com/articles/117347-north-dakota-eyes-expanded-use-of-drones-for-oil-and-natural-gas-operations
The Crude Life Interview: Joe Dancy, Energy Expert & Educator	5/18/2019	http://www.thecrudelife.com/podcast/the-crude-life-interview-joe-dancy-energy-expert-educator/
The Big Data Revolution: Detecting Pipeline Leaks, Encroachments and More Using Satellites	6/15/2019	https://www.pipeline-journal.net/journal/pipeline-technology-journal-32019
Energy Matters Radio: iPIPE	9/6/19	https://youtu.be/4tTA_WEsMl8
iPIPE Program Assisting in Detection of Pipeline Leaks in the Pipeline & Gas Journal September Edition (Page 50–52)	9/10/2019	https://www.nxtbook.com/nxtbooks/gulfpub/pgj_201909/
iPIPE Receives IOGCC Chairman's Stewardship Award for Environmental Partnership	9/10/2019	https://www.am1100theflag.com/news/10755-iPIPE-receives-iogcc-chairman%E2%80%99s-stewardship-award-environmental-partnership
iPIPE Receives Chairman's Stewardship Award	9/10/2019	http://undeerc.blogspot.com/2019/09/iPIPE-receives-chairmans-stewardship.html
iPIPE Receives Chairman's Stewardship Award	9/13/2019	https://www.willistonherald.com/news/business/iPIPE-receives-stewardship-award/article_e7c45bf0-d636-11e9-b069-739139b5d75b.html
API Award Winner Shares What Recognition Has Meant	10/14/2019	https://www.willistonherald.com/news/oil_and_energy/api-award-winner-shares-what-recognition-has-meant/article_ec10b56a-eecc-11e9-a94a-0f17a0778d95.html
AI Raising Drone Game in Oil, Gas but FAA Challenges Remain	10/15/19	https://www.naturalgasintel.com/articles/119892-ai-raising-drone-game-in-oil-gas-but-faa-challenges-remain
Almlie and Helms: Where Innovation Leads, Regulation Follows	10/18/19	https://trib.com/opinion/columns/almlie-and-helms-where-innovation-leads-regulation-follows/article_ee198ef8-05aa-599f-9df9-67bfd8492bc0.html
Shared on Drilling Info's Social Media Site: Almlie, Helms: Innovation Leads, Regs Follow	10/20/19	https://www.grandforksherald.com/opinion/columns/4728897-Almlie-Helms-Innovation-leads-regs-follow
Almlie, Helms: Innovation Leads, Regs Follow	10/20/19	https://www.grandforksherald.com/opinion/columns/4728897-Almlie-Helms-Innovation-leads-regs-follow
Where Innovation Leads, Regulation Follows	10/21/19	https://bismarcktribune.com/opinion/letters/where-innovation-leads-regulation-follows/article_6018311c-49fd-5744-b815-2a485b881e59.html
Bakken Backers Email: Almlie, Helms: Innovation Leads, Regs Follow	10/25/19	https://www.grandforksherald.com/opinion/columns/4728897-Almlie-Helms-Innovation-leads-regs-follow

Title	Date	URL
Cleanup Continues after Keystone Pipeline Oil Spill near Edinburg, ND	11/4/19	https://www.grandforksherald.com/news/accidents/4754456-Nearly-half-of-the-oil-has-been-recovered-in-Keystone-Pipeline-incident-says-TC-Energy
ND Keystone Spill about Half Recovered, Official Says	11/4/19	https://www.bemidjipioneer.com/business/energy-and-mining/4755069-ND-Keystone-spill-about-half-recovered-official-says
DAPL 2.0 Pipeline – Doug Burgum, North Dakota Governor (Governor mentioning iPIPE on “What’s on Your Mind”)	11/7/2019	https://www.am1100theflag.com/news/12229-11719-dapl-20-pipeline-doug-burgum-north-dakota-governor
Previewing the PSC’s DAPL 2.0 Expansion Hearing	11/11/2019	https://www.am1100theflag.com/news/12320-previewing-psc%E2%80%99s-dapl-20-expansion-hearing
Oasis Petroleum’s Jared Iverson Talks about the Next 20 years in the Bakken	12/4/2019	https://www.willistonherald.com/news/oil_and_energy/oasis-petroleum-s-jared-iverson-talks-about-the-next-years/article_2368a346-16f1-11ea-81ad-d3443353be3e.html
DCP Midstream LinkedIn Mention	~Sept 2019	https://www.linkedin.com/posts/dcp-midstream_dcp-wearcdcp-transformation-activity-6577940399116038144-orkP/
iPIPE Looks to Enhance Pipeline Safety	12/17/2019	https://www.kfyrtv.com/content/news/iPipe-looks-to-enhance-pipeline-safety-566298741.html
Burgum, Sanford Reflect on Significant Progress Made During Administration’s Third Year	12/19/2019	https://www.thedickinsonpress.com/incoming/4830773-Burgum-Sanford-reflect-on-significant-progress-made-during-administration%E2%80%99s-third-year-Site-and-date-announced-for-2020-State-of-the-State-address
Burgum, Sanford Reflect on Significant Progress Made During Administration’s Third Year	12/19/2019	https://www.nd.gov/news/burgum-sanford-reflect-significant-progress-made-during-administrations-third-year
Companies Aim to Prevent, Detect Pipeline Leaks with New Technologies	1/5/2020	https://bismarcktribune.com/bakken/companies-aim-to-prevent-detect-pipeline-leaks-with-new-technologies/article_0cac7e82-c49a-5c86-9267-ad8beb5b9799.html
Podcast: iPIPE with Jay Almlie — Real Technology, Real Pipelines, Real Progress	1/7/2020	https://pipelinerspodcast.com/episode-109-iPIPE-jay-almalie/
iPIPE Welcomes New Consortium Member	1/10/2020	https://mailchi.mp/undeerc/news-release-iPIPE-receives-chairmans-stewardship-award-585605
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