

Mining, Energy & Manufacturing

- FALL 2021 EDITION -

Spectator Spectator



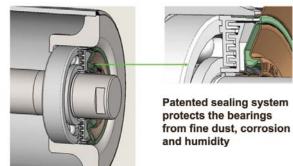


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Readying K3's south shaft headframe for production

The future of Mosaic Esterhazy is taking shape. Potash ore continues to be Potash ore continues to be hoisted up K3's completed north shaft at an average rate of more than 30,000 tons per day, and final work is underway to begin production at K3's south shaft later this month.

"Thanks to the dedication of our team and contract partners—the south shaft headframe will be safely completed ap-proximately three months ahead of schedule," ex-plains Bernie Boutin, Director of Capital Projects-

K3.
"It was always a goal to accelerate completion of the south shaft headframe, mine ore storage bins and related conveyor systems, however the early closure of K1 and K2 made it that

of K1 and K2 made if that much more important." Commissioning of the south shaft and mine ore handling system took place throughout October. First ore was safely and successfully conveyed through the massive 6,000-ton-capacity south coarse ore bin, and then conveyed through the south surge bin system up the south shaft headframe using the newly completed Koepe hoist and 60-ton

ore from mining machines cutting in the south portion of K3 is conveyed to the south coarse ore bin.

Esterhazy's K3 has twin shafts that sink more than 3,000 feet—each covered by headframes that rise more than 300 feet above



From here, it can be directed to either the south surge bin and hoisting system, or to the north surge

bin and hoisting system. The focus now is on final preparations to begin production at the south shaft headframe this monthstarting at 10,000 tons per

day the first week then ramping up every week thereafter to achieve an additional 40,000 tons of hoisting capacity per day by December.

By that time, a ninth four-rotor mining machine is also expected to be in production at K3-with

machines expected to be in production at K3 by June 2022. additional mining

2022.

Mining machines that are cutting in a production panel make three passes—the first pass to set the direction and forge a new path through rock, then second and third passes to mina cre

More than 21,000 feet (or 247,000 tons) have been

cut by these machines utilizing first-pass automa-tion since testing began in April, and the entire fleet is expected to be operating autonomously for all three passes in fully developed production areas in early 2022. Running these ma-chines with minimal hu-man intervention reduces risk for our employees and eliminates downtime, as they can safely operator

Esterhazy's K3 has twin shafts that sink more than 3,000 feet—each covered by headframes that rise more than 300 feet above ground. The north shaft (on right) is used to move ore to the surface and transport people and equipment. The south shaft (on left) will be used solely to move ore to the



Saskatchewan's energy and mining sectors are critical to Canada's economy, accounting for almost 15% of the national gross domestic product.



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Oil and gas extraction sector contributes \$53B to federal finances

Alberta's total gross fiscal contributions to the federal government totalled almost \$561 billion between 2007

Nearly 62 per cent of Alberta voters endorsed removing equalization from the Constitution in a recent referendum.

Constitutional scholar Ted Morton, a former Alberta fi-nance minister, argues that the province has leverage to force the issue. Others argue that equalization has a weak constitutional status, which makes reform easier than of-

Part of what drives unhappiness with equalization for some Albertans is the notion that a significant portion of federal tax revenues originate in traditional 'have' provinces such as Alberta.

Alberta's resource extraction is significant, and much of its revenues (as well as other economic activity and taxes)

end up in provinces such as Quebec via federal transfers. But in Quebec, resource extraction is discouraged and will soon be banned. The fact that some Quebec politi-cians have called Alberta oil "dirty" also factors into the dissatisfaction.

One of us has previously written a number of reports on equalization and transfer payments over the years, including suggested reforms.

But here, we'll look at what Alberta's oil and natural

gas extraction sector has paid into federal coffers.
According to Statistics Canada, Alberta's total gross fiscal contributions to the federal government totalled almost \$561 billion between 2007 and 2019. Subtract federal



Mark Milke & Lennie Kaplan



transfers to the Alberta government and to Albertans, as well as federal spending in Alberta, and the net transfer to the federal government from Alberta has been \$272 bil-

Alberta's oil and gas sector contributed \$53 billion of that \$272 billion, or about 19 per cent of the net fiscal contribution to the federal government.

This \$53 billion doesn't include all oil and gas activity, only the extraction sector in Alberta. It includes only federal corporate tax revenues from Alberta's oil and gas firms (\$35.5 billion) and the federal personal income taxes of Albertans directly employed in the sector (\$17.4 bil-

It excludes direct and indirect revenues from pipelines and other oil and gas economic activity. It also doesn't in-clude federal taxes on production and products, such as GST, excise taxes, duties, import taxes, air transportation tax, gasoline and motive fuel taxes, and the like that the Alberta extraction sector paid over the period.

of available data from Statistics Canada on other federal taxes on oil and gas production.)

The contribution of the Alberta oil and gas extraction

sector to federal finances has ranged from an annual high of \$3.7 billion to a low of \$2.5 billion.

Looking at national oil and gas extraction, 88 per cent of all personal income tax paid to the federal government between 2007 and 2019 came from Alberta. And 89 per cent of all corporate income tax paid from oil and gas extraction came from Alberta.

If Alberta's oil and gas extraction sector is 'phased out,' not only does a major contributing sector to federal government finances diminish significantly, so does nearly 90 per cent of federal tax revenues from the oil and gas extraction sector in Canada.

In a previous research paper, we detailed gross revenue contributions to all Canadian governments from the oil and gas sector, looking at data between 2000 and 2019. We found that Canada's wider oil and gas sector paid almost \$505 billion between 2000 and 2019 to federal, pro-

vincial and municipal governments. That was almost as much as what two other major industries, real estate and construction, paid into government coffers over the same

period.

Mark Milke and Lennie Kaplan are with the Canadian Energy Centre, an Alberta government corporation funded in part by taxes paid by industry on carbon emissions. They are au-thors of \$53 billion to Ottawa: The Alberta oil and gas sector's contribution to federal government finances, 2007 to 2019.

Two projects will reduce venting and flaring methane gas

On November 2, the government of Saskatchewan announced that two new oil and gas processing projects, undertaken by Steel Reef, have been approved under the provincial Oil and Gas Processing Investment Incentive (OGPII). Introduced in 2019 as part of the Government's Methane Action Plan, OGPII is available for companies making investments in infrastructure and value-added processing projects, including ones that reduce venting

and flaring of methane gas.

"These methane capture and commercialization projects will create local jobs and help grow our economy," Energy and Resources Minister Bronwyn Eyre said. "They build on our energy strengths and are another positive win-win for the economy and the environSteel Reef's two North Portal projects represent an anticipated capital investment of \$40 million into Saskatchewan. The company expanded its North Portal Gas Plant processing capacity, which became operation-al in April 2021, and reactivated gathering infrastruc-ture to tie in previously flared gas through its existing

integrated pipeline infrastructure.
Steel Reef is also investing in a new fractionator adjacent to the North Portal Gas Plant, which will allow it to process natural gas liquids from its North Portal Gas Plant and other gas plants in the area into separated propane, butane, and condensate for direct access to local and export markets.

"This partnership with the Government of Saskatchewan is a key part of ensuring more associated gas is be-

ing captured, processed and brought to markets," Steel Reef's Chief Operating Officer Austin Voss said. "We are proud to deliver on our core purpose of enhancing the energy community by investing in infrastructure that prevents flaring and creates value for the province." Methane Action Plan is a made-in-Saskatchewan plan

to reduce methane-based GHG emissions by 40 to 45 per cent by 2025 – the equivalent of taking up to 800,000

per cent by 2025 – the equivalent of taking up to 800,000 cars off the road for one year.

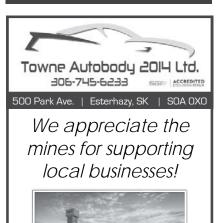
The OGPII program offers transferable oil and gas royalty/freehold tax credits for approved projects at a rate of 15 per cent of eligible program costs. Government investment follows up front private investment and so far, has successfully attracted over \$200 million in private investment in Saskatchewan.

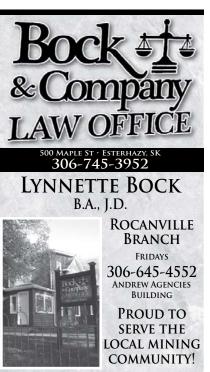


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Oil and gas provides nothing but opportunity for Indigenous peoples

Government policies harmful to the oil and gas industry will mean significant setbacks and losses for Indigenous

people.

I learned from my dad about sharing opportunities and lending a helping hand. That principle of generosity now sets the tone for my business and its interactions with customers. The oil and natural gas industry has provided opportunities for me and my family, which I'm proud to

opportunities for me and my family, which I'm proud to pay forward to my employees, community and beyond. My dad is an electrician and had an entrepreneurial spirit from the start. He did wiring and other jobs for farmers and Indigenous families in the Carvel area where we live, about 35 kilometres west of Edmonton. Dad taught his kids that strong relationships are important to a business. You build your network based on trust. You also create your own opportunities, look for chances and grab them.

In 2014, my brother and I took over dad's business and started growing, working for pipelines, oil and gas companies, even expanding to the oil sands. Today we have 17 employees; 80 per cent of them are Indigenous. And we've received awards and recognition from the Canadian Council for Aboriginal Business, the Métis Nations of



Jordan Jolicoeur

Alberta and Alberta Business Awards of Distinction.

This business is as much about building relationships as installing wires. In my experience, successful people like to share and help others to be successful. Seeing others grow and thrive is a reward. Plus, business is about bringing value not only to your customers and employees but also to your family and community. I go back to what

I learned from my parents: give someone an opportunity. It's a step up for them and they can pay it forward. That's what I appreciate about working with customers in the oil and natural gas sector. The industry has given Indigenous people opportunities. For instance, Indig-

enous youth is the fastest-growing population segment in Canada. When the industry provides jobs for Indigenous people, that's not only an economic opportunity, it's also a social opportunity as young people see those role models. The oil and natural gas industry is in our corner; they are doing things right. The voices of Indigenous people are now being heard, we are part of important discussions such as major resource developments.

I see nothing but opportunity from involvement with the energy sector. The industry seems to be vilified for emissions and water use, and I'm concerned that policies harmful to the industry will mean significant setbacks and losses for Indigenous people. I think there's a strong environmental ethic across the industry, as well as a commitment to work with Indigenous businesses and communities. I think that's a message Canadians need to understand. understand.

The success of the oil and natural gas industry is the success of Indigenous people

Jordan Jolicoeur is president and CEO of Carvel Electric, a thriving, award-winning Indigenous-owned business in Al-

Oil infrastructure program expanded to support carbon capture

On November 4, the government of Saskatchewan announced that pipelines transporting carbon dioxide (CO2), whether for carbon capture utilization and storage (CCUS) or enhanced oil recovery (EOR), are now eligible for the provincial Oil Infrastructure Investment Program (OIIP).

The OIIP was introduced by the Ministry of Energy and Recoverse in 2020 and offers transferable oil and

The OIIP was introduced by the Ministry of Energy and Resources in 2020 and offers transferable oil and gas royalty/freehold production tax credits, at a rate of 20 per cent of eligible costs, for qualified infrastructure projects that significantly increase provincial pipeline capacity. Government investment follows up front private investment and so far, has successfully attracted over \$76 million in private investment in Saskatchewan. "Today's announcement delivers on a key commitment made in our provincial CCUS priorities, announced in September, which will strengthen Saskatchewan's position as a global CCUS leader," Energy and

Resources Minister Bronwyn Evre said, "This will lead

Resources Minister Bronwyn Eyre said. "This will lead to significant investments in new energy projects that contribute to a strong, sustainable Saskatchewan, as the energy sector achieves its emissions goals."

Saskatchewan is already a world leader in CCUS, particularly with EOR. Saskatchewan has experienced significant success in applying CO2 for EOR, which produces approximately 82 per cent fewer net emissions than traditional oil and gas extraction methods. Over the last 25 years, provincial EOR projects have sequestered more than 40 million tonnes of CO2 and resulted in over 100 million barrels of incremental oil production.

100 million barrels of incremental oil production.
The government of Saskatchewan anticipates that CCUS projects will attract provincial investment of more than \$2 billion and sequester over two million tonnes of CO2 annually.

OIIP, when fully applied, will assist in generating a total investment impact of at least \$500 million in new and

expanded pipeline capacity in Saskatchewan, while allowing for further industry adoption of CCUS for reduction of greenhouse gas emissions and CO2 deployment in EOR.

Applications under OIIP will be accepted until March 31, 2025, and credits earned will expire on March 31,

For additional information on OIIP, please visit https://www.saskatchewan.ca/business/agriculturenatural-resources-and-industry/oil-and-gas/oil-and-gas-incentives-crown-royalties-and-taxes/oil-infrastructure-investment-program.

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October oil and gas public offering raises \$1.9 million in revenue

More than double the revenue than same time last year

Saskatchewan's October public offering of Crown petroleum and natural gas rights held on Tuesday, October 5, 2021, generated \$1,876,806.59 in revenue for the prov-

ince.

The Estevan area brought in \$1,357,527.30 for 50 par-

Cels totalling 11,591.068 hectares.

An exploration licence posted in the Estevan area received \$171,885.71, the highest bid for a parcel in this offering. This licence is located west of Radville and is prospective for oil in the Bakken Formation.

The highest bonus bid received on a lease is \$161,373.56 for a 257.448 hectare lease in the Estevan area. This lease is located southwest of Roche Percee and is prospective for oil in the Bakken Formation.

for oil in the Bakken Formation.

The highest dollars per hectare received on a lease in this offering is \$2,489.10 per hectare. This 44.99 hectare lease was awarded to Ferret Energy Limited and is located southwest of Stoughton. It is prospective for oil in the Frobisher Beds of the Madison Group.

Of the total 81 parcels posted, 59 parcels received acceptable bids. These bids covered 14,320.688 hectares and the average heavy bid was \$131.06 each bestern.

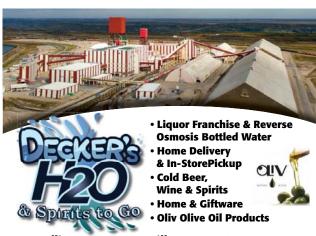
and the average bonus bid was \$131.06 per hectare. This public offering was the fourth of six sales for the current fiscal year. The next oil and gas public offering in Saskatchewan is scheduled for December 7, 2021.



Oil production is increasing in Saskatchewan. With shutdowns due to Covid and decreases in demand, oil production hit a low in May of 2020, and is now on an upward trend.

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Lithium emerging as newest commodity to diversify Saskatchewan's mining sector

Prairie Lithium drills first targeted lithium well in province's history

Saskatchewan's resource sector continues to gain momentum with the emergence of lithium, used primarily in portable electronic devices and electric vehicles. Prairie Lithium Corporation, a Reginabased lithium technology development company, has shown strong results in extracting lithium from Sas whom strong results in extracting lithium from Sas was the way an oilfield brines.

katchewan oilfield brines.

"Global demand for lithium is expected to grow five-fold by 2030, and Saskatchewan is well-positioned to make the most of its potential," Energy and Resources Minister Bronwyn Eyre said. "Our energy and mining sectors are attracting investment, creating high-quality jobs and building on our traditional strengths. It's exciting that lithium from Saskatchewan oilfield brine will power electric vehicles of the future."

will power electric vehicles of the future."
Since 2020, Prairie Lithium has been using proprietary technology to extract lithium from subsurface brine water. While drilling, the project supported over 100 jobs from 40 different companies. In Emerald Park, the company established a pilot project processing facility, which has successfully extracted 99.7 per cent of lithium from the brine in a matter of minutes. This fall, Prairie Lithium concluded drilling its first-ever dedicated lithium brine well in southeast Saskatchewan—the first well of its kind drilled in Saskatchewan.

Saskatchewan's Growth Plan supports the development of the lithium sector and lithium extraction technologies. The Ministry of Energy and Resources' Saskatchewan Geological Survey subsurface brine sampling program, which began in 2011, has also been instrumental in increasing sector interest in pursuing lithium projects in Saskatchewan. To date this year, sub-surface mineral public offerings, which target minerals including lithium, have raised over \$4.2 million in revenue for the province.

The support that we have received from the Saskatchewan Advantage Innovation Fund and Saskatchewan Petroleum Innovation Incentive have been critical to the development of our Direct Lithi-

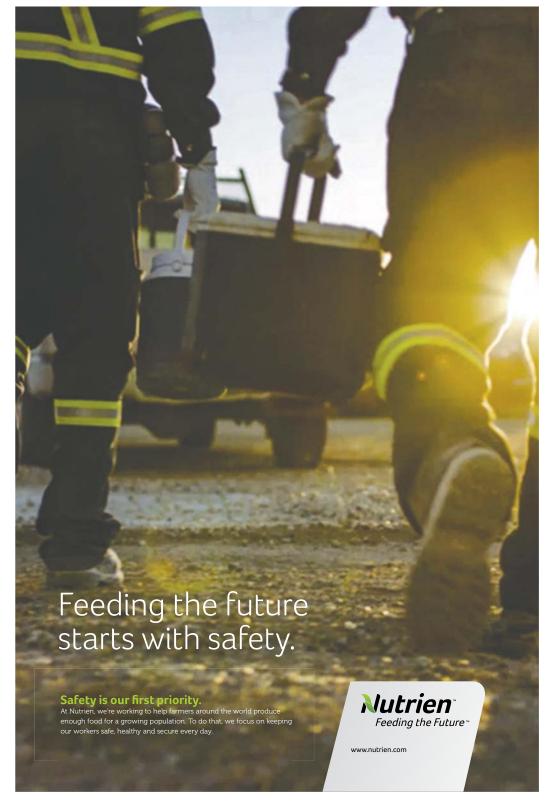
Got a story idea?

Give us a call at 306-435-2445 or email world_spectator @sasktel.net um Extraction technology," Prairie Lithium President and CEO Zach Maurer

Prairie Lithium qualified for both the Saskatchewan Advantage Innovation Fund and Saskatchewan Petroleum Investment Incentive, a research and development incentive that targets oil and gas innovations, pilot projects and commercial scaling projects, based around transferable oil and gas royalty/

freehold production tax credits. Prairie Lithium also recently signed an agreement with Saskatoonbased DEEP Earth Energy Production, which forms an Area of Mutual Interest for lithium exploration. Lithium is identified as a critical mineral in the Canada-US Joint Action Plan on Critical Minerals Collaboration. Of the 31 minerals identified and considered essential for modern economies and which also

have applications in clean and digital technologies, Saskatchewan currently produces three (uranium, potash and helium), and 22 of the 31 critical minerals listed are found in the province.







Above: Once the cap is in place, backfilling of the excavation begins.

Left: Inspector Sandy Armstrong shows a section of pipe following installation of a steel cap. After the pipe segment is cut, a cap is fabricated onto the ends of the pipe and coated with epoxy. This permanently seals the pipeline at that location and backfill can then be completed.

Manitoba pipeline decommissioning:

First segment of legacy Line 3 taken safely out of service

For more than 50 years, Enbridge's Line 3 pipeline ensured the safe and reliable delivery of energy from the oilfields of Alberta to the Midwestern U.S. and refineries

across North America.

Its legacy continues with a new pipeline along essentially the same corridor, stretching 1,765 kilometres (1,097 miles) from Edmonton, Alberta to Superior, Wisconsin. Line 93, as the replacement pipeline is now named, came into service October 1 following more than eight years of extensive community engagement, and thorough environmental, regulatory and legal review.

"This was a landmark undertaking that has redefined how Enbridge builds major projects," says Guy Krepps, Line 3 Project Director in Canada. "The new pipeline was designed and executed with state-of-the-art construction materials and a strong safety and environmental performance. The level of public engagement, which included Indigenous communities and groups, was unprecedented and led to a better outcome, both for Enbridge and communities near the right of way."

In Canada, Line 93 has been operating since December 2019, leading to a focus on

reclaiming the pipeline construction right of way and safely removing the legacy Line 3 pipeline from service, a process known as decommissionine.

Jecommissioning.

Decommissioning of the first of four segments began in August and was completed ahead of schedule in Manitoba by mid-October, thanks in part to a very dry summer and fall, with zero safety or environmental incidents.

A joint venture of Métis N4 Construction and Steel River Solutions served as general contractor for an area covering 260 km from Cromer to Gretna, with a peak workforce of 55 persons. Indigenous men and women comprised approximately 75 per cent of the workforce.

"Decommissioning is a logistically challenging job that N4-Steel River handled very successfully," says Enbridge Construction Manager Allen Sawatzky. "It's different than building a pipeline—you don't just work from kilometre zero to kilometre 100 in a straight line. You go backand-forth, from site-to-site, and this particular job involved 31 different locations for segmentation, valve isolation and railway fill."



Above: With backfill completed and the topsoil replaced, the land is ready to be returned to its pre-construction state.

Below: Inclusion was an important component of the Manitoba project, with the selection of an Indigenous-owned general contractor and approximately 75 per cent of the decommissioning workforce made up of Indigenous men and women. From left are Travis Favel (Enbridge), Ellis Cochrane (Peguis First Nation), Dennis Esperance (Enbridge), and Jade Dewar (Manitoba Metis Federation).



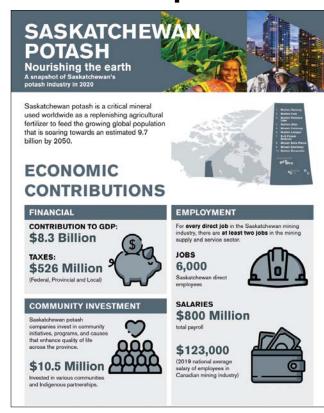


Above: A worker looks on during removal of a valve south of Morden.

Below: Vehicles and equipment were washed and disinfected under a strict biosecurity protocol to prevent the spread of noxious weeds.



Potash: A snapshot of Saskatchewan's potash industry





This infographic from the Saskatchewan Mining Association provides a snapshot of Saskatchewan's potash industry in 2020. Statistics have been compiled from information provided by Saskatchewan's three potash mining companies, Government of Saskatchewan Dashboard, Saskatchewan Workers Compensation Board, Mining Association of Canada (Facts and Figures 2020) and Statistics Canada. All numbers are from 2020.

Saskatchewan manufacturing sales remain strong

Saskatchewan continues to show strong signs of economic recovery with manufacturing sales increasing by nearly 30 per cent year-over-year, the second highest percentage growth increase in Canada. Nationally, manufacturing grew by 14.8 per cent. "Significant growth in leading economic indicators like manufacturing sales, wholesale trade and job growth show that our economy remains resilient

"Significant growth in leading economic indicators like manufacturing sales, wholesale trade and job growth show that our economy remains resilient and we are showing strong signs of recovery." Trade and Export Development Minister Jeremy Harrison said. "Saskatchewan has one of the most competitive business environments in all of Canada and the recent large private sector investments worth billions of dollars will create more jobs and opportunities for Saskatchewan people."

On a month-over-month

On a month-over-month basis, seasonally adjusted manufacturing sales grew by 10.6 per cent, above the national average of 3.5 per cent. This was also the second highest percentage increase among the provinces. The value of manufacturing sales in March 2021 was \$1.49 billion.

Wholesale trade also recorded a seasonally adjusted increase of 13.2 per

2021 was \$1.49 billion. Wholesale trade also recorded a seasonally adjusted increase of 13.2 per cent over last year, above the national average of 12.8 per cent. The value of wholesale trade in March 2021 was \$2.58 billion.



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K3 will be at full production in early 2022

The World-Spectator spoke with Bernie Boutin, Mosaic's Director of Capital Projects, about the K3 project at Esterhazy. The interview follows:

Could you explain where the whole plan for K3 started and how you got to where you are

The K3 project originates as far back as 2009 and was part of the Esterhazy mine expansion plans. It was always intended to be pre-pared in the event that the K1/K2 shafts would have to be closed due to the inflow situation. We had the north shaft headframe in service

back in 2019 and we started developing the mine full stream then.

We have various mainline conveyors in service, we have both veyors in service, we have both the north and south mine storage bins and ore handling conveyors in service and we plan to have the ninth miner coming out by end of November. We still plan to assem-ble two to three more miners in the upcoming years following 2021.

Once the inflow became un-manageable at K1 and K2, did the development go into hyper drive at K3 to get it ready? How did that transition go?

To be honest, we have always, since back in 2018 when it was decided to accelerate the project, been in hyper drive. There's just a little bit more emphasis on ensur-

ing that we're focusing on the right things to safely get the right mining infrastructure in service. We focused on getting the miners out, we accelerated some miner assembly by one month, and then we really focused on getting the south shaft headframe complete to complement the underground miners, the conveyors, and the storage systems. This will help K3 supplement the re-quired ore for feeding both K1 and K2 mills.

Where is the point in which you'll be at full production from K3, or do you know right now?

Our plan is for the south shaft headframe to be fully in service by end of this year and then we should be at full production by end of Q1/Q2 2022. The south shaft headframe will be in full service by end of this year during the ramp up beigting compressioning. ing the ramp up hoisting commissioning.

Will full production match what it was at K1 and K2? Pretty much, it's full production to fully supply K1

Is there anything done to remediate the K1 and K2

sites?
We've commenced some mine decommissioning activities. We finished installing a temporary plug at the bottom of each shaft and we're now in the process of constructing the permanent concrete plugs at mid-shaft at each site. We are also proceeding ahead with the approved decommissioning and reclamation plans such as that involving brine/grout wells, and we'll also tackle some surface building decommissioning in the future.

Will the mining operation from K3 be mining totally new areas compared to K1 and K2? It's mining the same member, the Esterhazy member,

but we're not connected with either K1 or K2 old mine

workings.

There's some mining going a short distance eastwards, however the majority would be west, south and

When you develop a whole new shaft like this, how many years of production are there that you can access from that shaft?

I think it's safe to say for many years and generations

With the transition from K1 and K2 to K3, has there been any impact on employment? Do you have about the same number of people working? This transition has been going on for quite a few years





The K3 potash mine at Esterhazy. The south shaft headframe, at left, was completed this year. At the bottom of the photo the overland conveyors, which transport ore to the K1 and K2 mills, can be seen

and most of the reductions have been planned through

So we are at reduced manpower levels than with the combined mine, but that was part of our normal transi-tion process. These plans have been achieved through strong teamwork and regular collaboration with the local Unifor union.

The safety of our workforce is a priority when such a big transition is taking place.

How is it working having those above ground conveyors taking the ore to the pre-existing mills? Is that plan working well?

The overland conveyors have been operating very well and we're starting to optimize even the north hoisting plant, and everything will be ready for when the south shaft headframe comes online, with ramp up production in November.

What were the biggest challenges of developing K3? Is brine inflow always something in the back of your

There was considerable planning and mitigation efforts put in place with the selection of the K3 mine site.

Early efforts such as drilling exploration wells and performing seismic surveys for K3 to better understand the geology, and ongoing efforts such as having mine engineering involved on a daily basis working with our output. production crews, help protect against inflow risk. The large buffer zone situated between the K3 mine area and K1/2 mine areas also offers sound protection, as the new mining area is not connected to the old areas.

Overall, how would you say the transition from K1 and K2 to K3 has gone?

In light of the rush closure back in June, the transition as gone very well. The big change at K3 is we're now transitioning to fewer contractors and we made the safe transition to the regular production and maintenance crews for Mosaic.

In the long term would the plan be to continue with the current mills or would there be any benefit in the long term for Mosaic to develop a new mill right at the

As part of our normal capital planning process, the capital and operations' groups are always considering potential mill upgrades or equipment upgrades.





PROUD to have supplied the concrete for the Mosaic Esterhazy K3 south headframe during its continuous pour this

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Eyre sees bright future for Sask mining

BY SIERRA D'SOUZA BUTTS LOCAL JOURNALISM INITIA-

TIVE REPORTER
We spoke with Saskatchewan Minister of Energy
and Resources Bromyn
Eyre, about the future of
the mining industry in Saskatchewan. The full interview follows:

How important is the potash industry specifically to Saskatchewan and how do you see that level of importance changing over the next decade?

"I think it's very impor-tant and there are signifi-cant opportunities ahead for growth in potash and there are some other projects out there, particularly on the solution side and some new technologies that will be used for certain

that will be used for certain mines moving forward."
"Potash has played a leading role for 60 years in our economy, so it's obviously a key economic sector. The latest numbers the sector had sales valued at \$5.5 billion in 2020, it directly employed about 6,000 workers, it was 10 at directly employed about 6,000 workers, it was 10 per cent of Saskatchewan's GDP. We have a 10 year growth plan, we target achieving about \$\fo\$9 billion in annual potash sales by 2030 and we think that's achieving billion that the solicity of the sales of the sales with the sales of t achievable. It's something that can be buttressed by that can be buttressed by the commitment from Mo-saic, from Nutrien, from K+S who are our existing potash producers, and of course the recent decision by BHP for the \$12 billion Jansen project."

In recent years, there has been some major in-vestments in potash and BHP announced that massive investment at Jansen this year. How do you see the expansion of the pot-

the expansion of the pot-ash industry playing out in Saskatchewan?
"BHP was a great start in terms of signals of future growth. BHP invested \$5 billion, and plans to invest an additional \$7.5 billion in that mine. It is the largest that mine. It is the largest private investment ever in Saskatchewan history, and the biggest project ever by BHP. There are amazing job numbers, 3,500 annually during construction, over

600 permanently once it's up and running."
"I mentioned the growth plan, certainly that will contribute to achieving our goal of \$9 billion of potash sales by 2030. Jansen is go-ing to generate tens of bil-lions of dollars in royalties and taxes to the people of this province over the life of the mine. I think it is a very strong sign of the at-tractiveness of the invest-

ment climate that we have put in place in the province . We had \$20 billion dollars invested into projects over the last six years that's now \$30 billion with this BHP announcement.'

"We hope this sends a very strong signal to other companies and there are other projects that are on the horizon, perhaps not on the Jansen scale but still on the horizon. We hope that they take notice of this globally significant project in the province."

How do you expect potash production to grow in the province in the com-

ing years?
"We have a growth plan that is estimating \$9 billion of potash sales by 2030 and the long term prospects going forward are very posi-tive. Population growth, the growing levels of in-come around the world, the increased consumption of bio-fuels, all of these things point to an increasing need for more potash globally for decades to come. That really is the fertil-izer side of the food, fuel, and fortilizer that we are

and fertilizer that we export around the world. Going forward, I think the Going forward, I finite the numbers that we are esti-mating can be fulfilled in the growth plan are really borne out by the invest-ments that we have seen most recently by BHP."

Aside from the other projects in the in the works and on the drawing board, do you see poten-tial for even more invest-ments in potash mining in the province?

"Yes we do, perhaps not on the scale of BHP Jansen, but certainly there are other potential projects that are under development and could come to fruition, per-haps on the solution side. Certainly there is room for investment and that's why we have the growth plan target that we have, because we have created an investment climate for the province that will bring some of those projects over

What has the government done to ensure that Saskatchewan remains a competitive jurisdiction as potash mining compa-nies look to future invest-

ments?

"We have implemented a number of incentives in the potash taxation system since 2003 and that of course is the government of Saskatchewan before even we came into govern-ment. This has improved the environment for pot-



Saskatchewan Energy and Resources Minister Bronwyn Eyre

ash investment and these measures have played a really important role in attracting the \$30 billon of investment that I referenced. That's while making sure people in the province get a fair return for the potash resource."

"We remain very com-

mitted to looking at growth, looking at com-petitiveness as we go for-ward and as other projects perhaps move forward. Last year we announced amendments to the Potash Production Tax to improve accessibility of credit for market development and R&D. These changes are all about expanding the pot-ash sector and making sure the province remains the preferred jurisdiction for private companies to pilot innovative technologies.

What do you see as the main challenges and the biggest opportunities for Saskatchewan's potash industry?

"We've been really successful in exporting 'made in Saskatchewan' products to markets all around the world, but there are challenges when it comes to competing globally. For one, around Environmental Social Governance (ESG). We have a very strong sustainability brand here in Saskatchewan. Our potash production produces 50 per cent fewer emissions in production than competing jurisdictions around the world. It's very clean, it's very green, it's very innovative. Yet when you're competing interna-tionally with companies in other parts of the world— Belarus or Russia just to name two-vou have very different labor laws, you different labor laws, you have very different environmental regulations—they aren't as stringent and at the high standard that they are here in the province of Scalatchewan That ince of Saskatchewan. That can be of some frustration to companies where they are facing global competi-

The other answer to that is we continue to tell the Saskatchewan story and we continue to tell the sustainability story, and how made in Canada, made in made in Canada, made in Saskatchewan potash is produced at the highest level of ESG components. We try to get the word out as much as possible and we think we are well placed to do that with some of the investment; we've vestment we've attracted. We have very transparent regulations and royalty stems, taxation systems, systems, taxation systems, that make it a very attrac-tive jurisdiction compared to competing jurisdictions around the world and he have to keep getting the word out about how sus-tainably we produce here in the province of Sas-katchewan.

Lithium and Helium are two elements that have some potential for development in Saskatch-ewan—how much poten-tial do you see for these elements and what other elements do you see be-coming a factor in Sas-katchewan over the next decade?

It's very exciting in terms of both of them, Helium and Lithium, and 'watch this space' on both of them. I think the worst kept se-cret is that we will be releasing our Helium action plan as soon as possible. In terms of Helium—made in Saskatchewan Helium of course we are now the home to the largest purification facility in the prov-ince and we have a lot to tell about Helium in Saskatchewan. For example, it's not extracted as a byproduct generally of hydrocarbon generally of hydrocarbon production so we can have dedicated Helium wells, and we have very good reserves of it. We've done extensive geological sur-veying and we fully expect that we can make up 10 per cent of global Helium sup-ply here in Saskatchewan by 2030. It's very exciting and a lot more is to come in that area.

It terms of Lithium, we have a company here called Prairie Lithium and their technology is extracting Lithium from oil well brine. I always like to say what a beautiful irony it is that oil well brine is going to lead to the powering of electric vehicles, so that is something we are certainly interested in promoting and looking further into, that is something compa-nies are looking further into. So that I would say is something to watch for

In terms of employ-ment and in terms of conribution to the province's GDP, where do you see Saskatchewan's mining industry a decade from now compared to the cur-

now compared to the current figures?
"Well in 2020 this past year, just keep in mind that the mining sector was responsible for 12 per cent of provincial GDP, directly problemed about 14,000 of provincial GDP, directly employed about 14,000 people and indirectly supports thousands more. Again, we have highlighted very ambitious targets in the growth plan to increase the size and the sustainability of the sector."

tainability of the sector."
"In addition to BHP for example, Mosaic has accelerated work on the Ester-

hazy K3 project—that's a multi-billion dollar project. Saskatchewan Mining and Minerals is planning to begin construction late this vear on a \$200 million sul-

year on a \$200 million surfact of potash upgrade in Chaplin, at its facility there. We have a very promising future in terms of advance stage Uranium projects—NextGen Energy. Denison Mines, Fission

We have so much going on in terms of critical minon in terms of critical min-erals that are being devel-oped in commodities that may be slightly less tra-ditional to Saskatchewan, in addition to potash and Uranium. We've got Foran Mining and its McIlvenna Resupposites that would be Bay project that would be the world's first carbon neutral copper development.
We've had a bit of a gold

rush over the last year in the mining space and we've got advanced spaced exploration and evaluation of the Fort à la Corne Dia-mond project as well, they work as you know with Rio Tinto. There's a lot in the base and precious met-al state, a lot going forward in the areas such as copper and diamonds and gold. Uranium is looking very bright, obviously the prices are doing well there at the moment. So there's a lot of activity, and around our target and mineral explora-tion incentive, that focused on base and precious met-als in the Creighton and Denare Beach area which is very rich for those. That's also been very successful, that targeted explo-ration incentive for juniors in particular, who we were concerned might bypass the province and perhaps explore in other provinces.

It's proven very successful in reattracting those juniors and keeping them drilling here. I think we've had quite a successful year in that area.

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Wind energy project open house held in Kipling

An open house was held at the Friendship Centre in Kipling on Wednesday for the Bekevar Wind Energy Project. Bekevar Win L.P.—a partnership between Renewable Energy Systems Canada Inc and Cowessess First Nation—is proposing to develop, construct and operate a 200 MW wind power project of approximately 30 to 40 turbines several miles south of Kipling in the RMs of Hazelwood and Kingsley, as well as on 500 acres of Cowessess First nation.

At the open house on Wednesday, members of the project team, as well as subject matter experts, were present to answer questions. Mapping and information panels were also on display.

Bekevar Wind L.P. has entered into a 25-year PPA with SaskPower for this project, which would power approximately 90,000 homes in Saskatchewan.

Above right are members of the project team and Cowesses First Nation speaking with members of the public at the open house on Wednesday.







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Kitchen says gov't doesn't understand energy industry

Souris-Moose Mountain MP Dr. Robert Kitchen says the appointment of a former Greenpeace activist as environment minister and comments by Prime Minister Justin Trudeau at the COP 26 climate conference regarding the energy industry show that the prime minister does not understand the energy industry in Canada, and does not care about the industry.

Following are his comments during an interview with the World-Spectator on November 5.

At COP26, Prime Minister Trudeau was talking about imposing emissions caps specifically on the energy industry and not other major emitters. From your viewpoint, how do you interpret his messaging to the energy

industry?

This Prime Minister's all about theatre so he's doing it

to try and make himself look good.

It's an insult. Is it a message? I don't think he knows how to give a message, he's basically just going to do it his way and cram it down people's throats without any

his way and cram it down people's throats without any accountability and without any understanding.

He flew to Brussels and then he flew to the G20, then he flew over to Glasgow for COP26. He's flying all over the place with all these people and doesn't get the hypocrisy of the carbon emissions that he's putting out there, the 200-plus government civil servants that went over there for this that are over there now with all these carbon emissions that they're creating itself is being those and thou resident that they're creating itself is being those and thou produced the contraction of the plant thou and thou produced the contraction of the plant though the contraction of the plant though the produced the contraction of the plant though the produced the plant they are they a

sions that they're creating just in being there and then going to have to come home.

Then he turns around and says "hmm, we're going to shut down our oil and gas industry but it's okay for

to shut down our oil and gas industry but it's okay for countries like Saudi Arabia and Venezuela to increase the amount that they're producing because we're just going to import it from there" where they don't have the human rights standards and the environmental standards.

We have an industry that puts billions of dollars into protection of the environment and trying to capture carbon and they're continually looking at this but there's no recognition for that or any credit for that. We're just going to shut it down and what's going to happen? Here we are —a country that amounts to two per cent of the world's emissions. Even if they shut it all down, the rest of the world would pick it up in a heart beat and he doesn't care about that part and he's going to put everyone here out of work. He turns around and goes after not just our oil and gas sector but our agriculture industry and he's going after our ranchers and our farmers and our producers that are doing great sequestration of carbon.

are doing great sequestration of carbon.

I heard a thing from him yesterday where he actually used the word photosynthesis. That's a word we all learn in Grade 9 and understand how plants capture carbon in the air and they create proteins and put it into the ground. It's a simple little thing, but all of a sudden he talks like "oh this is going on." We've known about that and our farmers have known about that for years and decades. Yet all of a sudden, hmm we should be doing that? We've been doing that with zero till, we've been doing that with carbon capture.

I saw a study the other day talking about feeding live-stock canola and it's reducing the amount of methane that they're producing. Okay, so that's great. We've got these scientists that are doing this, but to shut down the industry, to put people out of work, makes no sense. None

On the current trajectory, what do you see as the fu-

ture of the energy industry in Canada?
Well, the industry is under attack by the party in power right now and we're going to fight it every which way we





Souris-Moose Mountain MP Dr. Robert Kitchen

can about our oil and gas industry. That industry is our number one producer for the economy in this country. Not only that, it provides us a base power. We need that base power. It's all fine and dandy to go electric, but that electricity that powers those batteries has to come from somewhere and it's not always going to come from wind and solar. Yes, that's a great thing but it's going to take years to get something and yes we need to work on that.

Coothermal here in my fiding is another way to create

Geothermal, here in my riding, is another way to create a base power energy source which is what we need, but we had two or three blackouts in Estevan in the last two months for no reason at all and that scares the heck out of me and my constituents because where's that base power going to come from if we don't have that? Now you're going to put that in electric vehicles or electric housing, where does that come from? You need it to come from a

Do you believe your party can stop this agenda?

Well the first thing we need to do is get back to the house. Here's a Prime Minister who called this election and on the day he called it said this is the most important election we've had for the country since 1945 after World War II and we need to do this to get this country going, and yet he makes that decree right at the time of the election and it'll be two months before we actually get back into Ottawa to even get into the house to even debate any of these issues and to point out some of these things.

We have a Prime Minister who loves making up words and using buzzwords. I made up a word too and it's called "thispocketnesi," and basically it's a disease that this Liberal government is afflicted with, and it's basically taking

eral government is afflicted with, and it's basically taking from this pocket and putting it into another pocket. What he's doing is he's taking from the Westerner's pockets and putting it into the Easterner's pockets and forgetting where he actually got that money from. That's a word that I've said in the House of Commons and I spelled it out for them and it's something we need to continue to point out, that that's what this government is.

With the current makeup of the house, does your par-

with the current makeup of the nouse, does your party have any prospect of slowing down this agenda?

There are concerns obviously. Trudeau called an election because he thought he was going to get a majority government, we have the exact same government we've had in the past. He's talking to the NDP on certain things, I don't know where that will go. That means they're going to protect him and his government over the next months. I think we can't get rid of this prime minister fast enough, but if he's protected by the NDP, time will tell where we

What do you think Canada's approach should be to the oil and gas industry? Number one, we need to recognize the great value it provides for all Canadians.

Number two, we need to recognize we need energy security here in Canada and what's best is to do it with our own energy and create our own security, and that's something we need to be dependent upon Canada

for, not other countries.

Those are things that need to be emphasized and things that I will continue to emphasize that we need to do and to push for understanding where that base energy comes from, whether it is from oil and gas, whether it is from energy, whether it's nuclear, whether it's coal, whether it's gas, solar, wind, geothermal.

Those are things we need to make certain are here in Canada and utilizing Canadian energy sources.

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Eyre worries about too swift a green transition

BY SIERRA D'SOUZA BUTTS
LOCAL JOURNALISM INITIATIVE REPORTER
The World-Spectator spoke with Saskatchewan Minister
of Energy and Resources Bronwyn Eyre about the future
of the energy industry in Saskatchewan. The full interview

We've seen an increase in oilfield activity in our area We've seen an increase in oilfield activity in our area as prices have recovered. How do you see the oil and gas industry changing in the province in the next 10 years? The energy sector is a lot stronger than it was a year ago. The oil price alone speaks to that, but the overall picture isn't without complexity.

We have companies who have gone bankrupt during the past 19 or so months who have taken on a lot of debt.

A lot of capital allocations for projects has stalled and production is not where it was, certainly, at the beginning of

It will take a little more time to get rolling again, but obviously there is quite a lot more optimism than there was. Again, in terms of the growth plan, we're very bullish about the projections for the energy sector and in the growth plan we had released, it was the November before Covid hit, but it was to grow provincial production to 600,000 barrels a day by 2030.

of Covid in, but it was beginn provincial production to 600,000 barrels a day by 2030.

Prior to Covid, we were producing about 500,000. That is down but we certainly think we can get back to that level and move beyond it closer to the 600,000 going forward through the decades because of some of the programs we have in place around enhanced oil recovery and so on. Some of the infrastructure incentives that we put in place for building pipelines or looking at the CO2 pipeline space—we think there are a lot of areas where production can grow if we go with the all of the above approach. So looking at, obviously, new and diversified areas, but even in terms of conventional drilling where we have secondary recovery techniques, water flooding, enhanced oil recovery. We have some very effective investment incentive programs. We think that it is completely consistent and realistic that we can hit those growth plan targets.

There have been some headwinds in energy development at the federal level, and now we have a new Federal Environment Minister who has expressed some pretty strong opposition to the entire industry in the past and has even been arrested in the past for his activism, and we had the Prime Minister reiterate the need for a hard

we had the Frime Minister reiterate the need for a hard cap on emissions from the energy industry at COP 26. Do you worry about what signal those things send on the federal government's approach to the industry? We've already seen a great deal of anti-energy policies and regulations coming from the federal government over the last few years. I think of Bill C69 of course, I think of shutting down Northern Gateway, shutting down Energy

A lot of the narrative emerging from Ottawa has not been particularly friendly to the energy sector. So are we con-cerned, am I concerned at this latest appointment? There have been a number of Environment Ministers in Ottawa now who have not been particularly energy friendly. Min-ister Guilbeault did say the federal government doesn't regulate production, only pollution. Of course that leave it up to interpretation. When you have a cap on emissions



Saskatchewan Energy and Resources Minister Bronwyn Eyre

the same effect as a cap on production, and could freeze new production. Of course that is very, very concerning. What we have to hope for is a realization that hobbling the energy sector could actually hurt the federal bottom

ine. John Ivison wrote in the National Post this weekend, 'The Bank of Canada's decision to end its bond buying program which has previously soaked up seven per cent of the government's bond issues over the course of the pandemic, means Canada cannot afford to hobble its big-gest export earning sector," and that of course would be

We have to continue to tell our own story and really to stand up for the sector and do everything we possibly can. I spoke to Minister Wilkinson, he's the former Environment Minister now Energy Minister, a few hours ago and

I raised some of our concerns about that capping of emissions levels, what that would mean. I raised to him that we stand very strongly behind the enhanced oil recovery side of carbon capture, utilization and storage. We know that enhanced oil recovery is very good for oil production but also very good for the environment because CO2 en-hanced oil recovery wells produce 82 per cent fewer emis-sions than traditional wells, I told him that. I'm trying to

get the story out as much as possible.

The federal government doesn't like enhanced oil recovery I guess because they don't like oil and have excluded enhanced oil recovery from a federal tax credit for carbon capture, utilization and storage. I was saying to Minister Wilkinson today. I would hope that could be reconsidered in light of net zero goals because enhanced oil recovery really has a very, very strong profile in that regard. There are leading environmentalists that say you can't get to Paris Accord targets without enhanced oil recovery. So we just have to keep saying what we do and getting this story out and always remaining a little bit on our guard about some of the rhetoric coming out of the federal government. We've gotten used to it, and I hate to say that, but it isn't perhaps going to get a heck of a lot easier now with Minister Guilbeault.

With the continued limits on export capacity because of the pipelines, do you see a limit on growth potential

for the industry or do you see potential to overcome those constraints?

The biggest project, Keystone XL, was cancelled on President Biden's first day. Northern Gateway was cancelled. Energy East was cancelled by the current federal government. There were problems with Enbridge Line 5. The Enbridge main line carries 70 per cent of Saskatchewan's oil. The Enbridge main line does ultimately connect to Line 5 and up into Ontario and ultimately to Quebec on Line 9. It is a major transporter for us in Saskatchewan. We're obviously very pleased that the Line 3 replacement project is now operational, and so that's a huge relief because a massive amount of oil does go on that pipeline for cause a massive amount of oil does go on that pipeline for Saskatchewan producers. But there are still a lot of challenges in terms of getting our oil to tide water because all those other projects have been cancelled.

those other projects have been cancelled.

We remain cautiously hopeful about Trans Mountain and in the meantime do everything we can provincially and we are trying to do everything we can to incentivise any kind of infrastructure, pipeline infrastructure, that will move product and increase production for us. We have seen some successes in that regard, under some of our infrastructure programs where we have had projects that have increased recreased excreased excreases. that have increased production and increased egress be approved under those infrastructure programs, which are based around transferrable royalty credits and so on. We just have to do what we can here. We're land-locked and unfortunately vulnerable to a lot of other people's decisions, but we have to just keep doing everything we can for our producers.

Where do you see room for growth in the province's energy industry? Enhanced oil recovery is key. There is also a lot of room

for growth in value added processing and we have seen some major investments there. Gibson's increase of the Moose Jaw refinery capacity is one, Reef Resources' con-struction of a new fractionator plant, that's another one, and we have brought in these targeted investment incentive programs around research and development and in-frastructure to increase investment in some of these areas. What I always say about our incentives is that government money follows private investment, it doesn't lead.

What do you see as the biggest challenges facing the

energy industry in Saskatchewan?
Pipeline egress and federal government regulatory intervention. The carbon tax is one area of concern, Bill C69 was another, and around federal environmental impact assessments and encroachment on provincial jurisdiction,

that is a huge concern and it continues to be a concern.

On the horizon is the clean fuel standard. I brought that up with Minister Wilkinson and have written him on that as well. It is a second carbon tax, it comes at a time when globally gas prices are very, very high and we have a lot of uncertainty around that and so much else coming out of Covid, this is not the time to put in place something that will further hit households, people paying for gas at the pumps, businesses, agricultural producers, rail transporters, and so on. That's a big concern and it has always been a little bit under the radar, the clean fuel standards, but it's another one in a long line of regulatory positions on the energy sector, but also on ordinary consumers.

Out of all the issues that you deal with, which of them

keeps you up at night if any?

I think the biggest issue is all the talk of a just transition or a green transition. We have to be so cautious with that transition, which you can call energy evolution or transformation, careful to never be too rapid or too glib because on the line are literally hundreds of thousands of energy workers? workers' jobs.

In Saskatchewan, and I personally believe that we yes build on our strengths, yes in all of the above approach, yes we look at exciting opportunities in helium, hydrogen, of course CO2, but we always keep in mind that we cannot turn our backs on our traditional sector and that they are at serious risk if policy makers who are too into just transition, as they call it, at the expense of everything else, even though they may claim they aren't, in fact override sectors that are proud sectors and are incredibly important sectors for Saskatchewan and for everything that fills our lives. So I think that's one thing I'm very, very concerned about, this trend to just move away from without really analyzing how that's to be done and how that's to be paid for.







Noble HSSE:

New business to provide Covid testing in Moosomin

BY KEVIN WEEDMARK

With some employers in the area requiring negative Covid-19 tests from employees who do not have proof of vaccination, a company is setting up in Moosomin to provide Covid testing.

Noble HSSE (Health, Safety, Security, and Emergency management) has been around for more than two decades, and is moving into Moosomin to fill a need for mine workers and others who need to provide negative tests.

"We started about 25 years ago as an oc-cupational health and safety company,"

cupational health and safety company," says Ryan Galloway of Nobel.
"We've done safety programs, industrial, and occupational health. We provide fitness testing, hearing testing, pulmonary, we've got a ton of drug testing and that helped us pivot when everything changed with Covid.

"A year ago now we started doing rapid antigen testing for some workplaces, for people travelling for international travel and now with this, a lot more of individu-

al workplace testing.
"We started in Oxbow, Saskatchewan, "We started in Oxbow, Saskatchewan, working in the oilfield area around Estevan and that's where we built our business, really. A year and a bit ago we moved into Regina and then about a year ago we got set up in Saskatoon and now we have a presence in Coronach, Kindersley, Moose Jaw, Regina, Saskatoon, Estevan, Oxbow, Yorkton, Melville and now Moosomin."

How much has the business changed

How much has the business changed

"From the start of Covid to about a year ago we shrunk big time," says Galloway.
"For all of our industrial clients there wasn't nearly as much work, oil kind of tanked, it was hard. We also do a lot of safety training and that shut down for a while and fit testing shut down because nobody wants to share a mask, so that slowed down.

"The Covid testing has really helped us pivot and get back to pre-Covid business levels, just under a little bit different busi-



What attracted Nobel to Moosomin? "When we're looking at what areas there are and what work there is, Moosomin stands out. Rocanville's not far, Esterhazy's not far and there's quite a large workforce there and we're just looking to support that area of the province. There space available at Broadway Com-

mons so we will set up there."

Galloway was hoping to be set up by Saturday, and said he is finalizing hours.

atturday, and said he is finalizing hours. "I'd like to do an alternating schedule just because we want to help accommodate shift workers because some people start work at 6 pm, some people are just getting off work at 6 pm. So likely, something around 2 pm to 10 pm to catch both sides of shift work, and we'll try to catch people through the work, and we'll try to catch people through the week, weekends, we'll try to accommodate other people's sched-

ules as best as we can."

Covid testing has become a huge part of the business

"Overall, Covid testing is about 90 per cent of what we do right now," said Gallo-way. "We're still doing some drug testing, we still do hearing and fit testing but not nearly as much as the rapid antigen PCR testing that we do."

The long term plan is to switch back to

!colatos!!d

the traditional testing once the Covid pan-

demic is over.

"We switched into Covid testing mode because a lot of the other testing slowed down. Now some of that's starting slowly to pick back up and we're just hoping to turn right back into more of what we were doing pre-Covid— safety manuals, drug testing, you name it, anything and every-thing for industrial health, industrial hy-

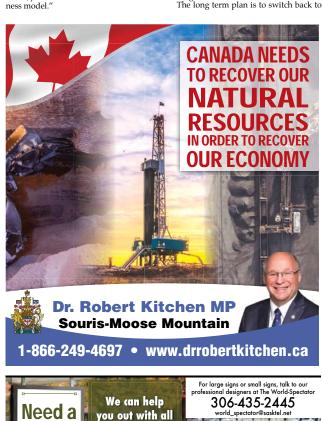
giene, occupational health and safety.
"If the business warrants staying in
Moosomin post-Covid, absolutely we will
stay in Moosomin. If business for post-Covid picks up in the same way we're doing drug testing out of there, if we're doing more work out of that office then absolutely we'll stay."

You can find out more about Noble at https://www.nobelhsse.com



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engineering and manufacturing will be invaluable." SIMSA currently represents over 270 Saskatche-

wan suppliers to Saskatch-

SIMSA continues its rapid growth through increased member services

The Saskatchewan Industrial and Mining Suppliers Association's (SIM-SA's) membership has grown 25 per cent through Covid. SIMSA attributes this continued growth to items such as its numerous supplier/buyer events, as well as the development of its member database. This database is now a supplier short-listing tool, filled with only Saskatchewan suppliers, and is a key gateway to becoming a "local" supplier to BHP's Jansen potash project (as well as over 50 other projects). SIMSA's newest member service is a continuation of its leadership in the digital involving the service is a continuation of its leadership in the digital involving and carbon reduction spheres—SIMSA

SIMSA's newest member service is a continuation of its leadership in the digital innovation and carbon reduction spheres—SIMSA proudly announced the selection of James Bulmer as its "Industrial Concierge," As the Concierge, he provides a free personalized advice to SIMSA members, on their energy efficiency.

As the Concierge, he provides a free personalized advice to SIMSA members, on their energy efficiency/carbon reduction needs, as well as assisting them fulfill the major mining companies' digital innovation needs.

This role will function in concert with the International Minerals Innovation Institute (IMII). The IMII is a unique innovation-supporting-network of mining companies, government departments and agencies, as well as post-secondary and research institutions; and is jointly funded by industry and government. It exists to deliver innovations that matter to mining in Saskatchewan. The IMII's mineral company members include BHP, Cameco, Mosaic, and Nutrien.

Leveraging his background in R&D and manu-facturing, James will also help facilitate partner development between the IMII's minerals-industry members and SIMSA members, and will help connect resource-producer needs with supply chain solution providers. In his previous role as a Production E.I.T. for International Road Dynamics, James worked with teams to create new products and set up new supply chains.

products and set up new supply chains. More specifically, the Concierge service will be a connector (more so than a doer) between SIMSA members and;

- resource producers relaying industries' needs as well as SIMSA members' abilities to fulfill them (especially in the area of digital innovation)
- solutions providers sourcing leads to 3rd party solutions for SIMSA mem-

bers to address industries' current and future needs (especially in the area of carbon reduction)

• funding agencies sourcing leads to funding agencies to assist in these efforts.

The Industrial Concierge is the next step on SIMSA's net-zero journey, following the release of its Carbon Calculator for the industrial supply chain (it can be downloaded for free from SIMSA.ca). SIMSA commissioned the development of its custom Carbon Calculator for the mining, energy and industrial supply chain in Saskatchewam—helping lead the charge on carbon reduction. The calculator was developed with the assistance of BHP, Cameco, Nutrien, and TC Energy, as well as funding from the Government of Canada.

The calculator allows

The calculator allows suppliers to accurately assess their Scopes 1 and 2 carbon emissions levels. From there, suppliers can develop solutions to reduce their carbon output and take effective steps to make those reductions a reality, with the assistance of SIMSA's Industrial Concierge. The calculator allows for up to 10 separate locations to be evaluated at once, combining those calculations into one total output. This could include calculating carbon emissions by different buildings, street addresses, or even by segments within a building.

As the Industrial Con-

As the Industrial Concierge (and as the next step from the Carbon Calculator), James has already begun compiling a library of resource materials on the various relevant topics, which are now available to SIMCA members.

SIMSA members.
Further, he has connected with several research institutions, key SIMSA members, government agencies; as well as BHP, Cameco, Mosaic and Nutrien. He is also currently pulling together the industry's needs, on both carbon reduction and digital innovation.

SIMSA members can submit their assistance requests to James at james. bulmer@simsa.ca or by calling (306) 343-0019

calling (306) 343-0019.

SIMSA's Executive Director – Eric Anderson – stated, "SIMSA is excited to have the opportunity to work with a person of James' abilities. As this position is new to the market and SIMSA, James' previous work as the communicative-handshake between

To advertise in our spring Mining, Energy and Manufacturing feature call 306-435-2445 or email world spectator@sasktel.net Allows suppliers to reduce their carbon output and take effective steps to make emissions reductions a reality.

1
1
1
2
Calculate carbon emissions for up to 10 locations by different buildings, street addresses, and/or by segments within a building.

Calculate carbon emissions, then assess current emission levels in relation to other SIMSA members.

CD2=0

CD2=0

ENERGY

Allows suppliers to reduce their carbon output and take effective steps to reduce carbon emissions by using SIMSATS industrial Concierge.

Take effective steps to reduce carbon emissions industrial Concierge.

SIMSA commissioned the development of its custom Carbon Calculator for the mining, energy and industrial supply chain in Saskatchewan, helping lead the charge on carbon reduction. The calculator was developed with the assistance of BHP, Cameco, Nutrien, and TC Energy, as well as funding from the Government of Canada. The calculator allows suppliers to accurately assess their Scopes 1 and 2 carbon emissions levels. From there, suppliers can develop solutions to reduce their carbon output and take effective steps to make those reductions a reality, with the assistance of SIMSA's Industrial Concierge.

ewan's 'Imining,' energy, and industrial sector; this group of companies represents well over 21,000 employees and \$11-billoin in revenues. SIMSA's mandate is to represent the interests and concerns of only Saskatchewan industrial equipment and service suppliers, through promotion of its members and the creation of partnerships with industry and other associations. SIMSA is the only construction related Association that represents only Saskatchewan-based suppliers and notes that there is nearly four-times as much economic impact from purchasing from a local supplier, as there is from one outside of the province.



Local spending, local impact

Did you know that every dollar spent with local Saskatchewan suppliers generates nearly four times more economic output for the province than the same amount spent with out-of-province suppliers? ¹

In a time of much-needed stimulus spending, maximizing local impact is critical. As the only Association that represents the voice of Saskatchewan Suppliers – and *only* Saskatchewan suppliers – SIMSA members help keep stimulus money and its impact close to home.

Learn more at https://simsa.ca/letter

¹ Source: The economic impact of local resource suppliers in Saskatchewan. PWC (2019)

Manitoba oil industry facts

There are a lot of facts about Manitoba's oil industry Mississippian Production. many people may not be aware of. Did you know . . .

Manitoba has two oil and gas producing sedimentary basins with potential for oil and gas production, southwest Manitoba and the Hudson Bay lowlands.

Producible oil was discovered in southwestern Manitoba in the 1950's. This area has produced oil since 1951

All Manitoba's current oil production is located in southwest Manitoba along the northeastern flank of the Williston Basin, a sedimentary basin that also occupies portions of southern Saskatchewan, North Dakota, South Dakota and

Potential hydrocarbon bearing-formations in southwest Manitoba occur to depths of up to 2 300 metres (7,500

The vast majority of the approximately 11,400 wells drilled in Manitoba have only been drilled into the upper portion of the sedimentary sequence, to Triassic, Mississippian or Bakken formations. Only 137 wells have penetrated the entire sequence, leaving half the sequence, the older formations, largely unexplored.

Manitoba produced 2,201,087.5 cubic metres of oil in

There is over 76 kilometers of core from wells drilled in available for examination

All pre-1980 oil production originated from Mississippian Lodgepole and Mission Canyon formations at depths that range from 600 to 1,050 metres (2,000 to 3,500 feet).

These formations account for approximately 61% of Manitoba's cumulative oil production

Oil was discovered in 1980 above the Mississippian in the Triassic Amaranth Formation.

In 1985, oil was discovered in the Bakken Formation in

In 1993, oil was discovered in the Jurassic Melita Formation in the $St.\ Lazare$ area.

In 2004, oil was discovered in the Devonian Three Forks Formation in the Daly Field, marking Manitoba's first pre

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In July 2008, Manitoba approved a first CO2 Enhanced Oil Recovery project in the Daly-Sinclair Oil Field.

he oldest producing well drilled in Manitoba is Daly Unit #3 Prov. 7-12-10-28 which has produced since July 1951.

Manitoba's most productive well is in 2-21-11-26W1 in North Virden Scallion Unit No. 1 which has produced 2.05 million barrels of oil since June 1955.

Manitoba's oil is of good quality, and in 2020 the average posted selling price for light sour blend crude was \$285.56 per cubic metre (\$45.38 CDN per barrel).

The estimated value of oil sold in 2019 was approximatelv \$1.1 billion.

As of October 2021, there is approximately 5194 wells

Currently there are 13 designated oil fields and 181 producing oil pools in southwest Manitoba

Manitoba's crude oil production is equivalent to approximately 43% of the province's refined petroleum products requirements.

The current cost to drill and complete a well in Manitoba ranges from \$325,000 to \$1.8 Million depending primarily on depth.

83 new wells were drilled in Manitoba during 2020 including 76 horizontal wells

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Only 10 to 15% of the oil discovered in Manitoba is recoverable under natural depletion. Recovery may be increased to over 30% by water flooding.

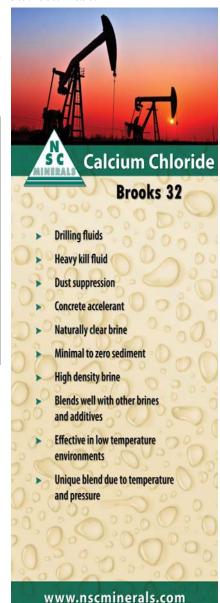
Approximately 80% of the oil and gas rights are owned by private individuals or companies (freehold), the remaining 20% are owned by the Crown in the right of Manitoba.

There are gas shows in most of the Cretaceous shale formations throughout southwestern Manitoba. The Favel and Carlile formations have the highest gas content and are the most prospective unconventional gas targets.

Total oil industry expenditures in Manitoba in 2019 were

approximately \$352.9 million.

During 2018/19, the Tax and Royalties section collected \$22.6 million from the petroleum industry. This revenue comprised \$11.8 million in Crown oil royalties, \$9.3 million in freehold oil taxes and \$1.5 million from administration of Crown Oil and Gas Rights, well licences fees, battery operating permits, geophysical licences and oil and gas lease agent registration and publication sales. In 2018/19, approximately \$5 million in cash, term deposits and letters of credit were administered.





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