

# ***Mining in Saskatchewan: Supporting Local & Global Communities***



***Pam Schwann, P. Geo, President  
May 29, 2019***



**SMA**

*Saskatchewan Mining  
Association*

# SASKATCHEWAN MINING ASSOCIATION

- Voice of the Saskatchewan mining industry.
- **Mission:** Advance a safe, sustainable and globally competitive mining industry in Saskatchewan that benefits all residents of the province
- Over 45 Member companies including producers and exploration companies:
  - Nutrien, Mosaic, Cameco, Orano, Westmoreland Coal, SSR Mining, HudBay Minerals, BHP Billiton, K+S Potash Canada Inc., Denison, Rio Tinto, Star Diamonds, NSC Minerals, NexGen Energy, Fission, and dozens of exploration and mining contractor companies.
- **Roles:** Advocacy & Outreach  
Government; Public (Education); Member



# SASKATCHEWAN - CANADIAN & GLOBAL LEADER IN MINING - 2018



**#1**  
Canadian  
Mineral  
Investment  
Attraction  
**#3 Global**



**#1**  
Potash  
Producer  
Global  
**(30%)**



**#2**  
Uranium  
Producer  
Global  
**(22%)**



**#4**  
Value of  
Mineral  
Product  
\$6.7B  
(ON, QB,  
BC)



**#1**  
Industrial  
Employer  
of  
Indigenous  
people



**#4**  
Canadian  
Expln \$247  
(ON, QB,  
BC)



**Leading  
Client of Rail  
and Vessel  
Transport  
(Value &  
Volume)**



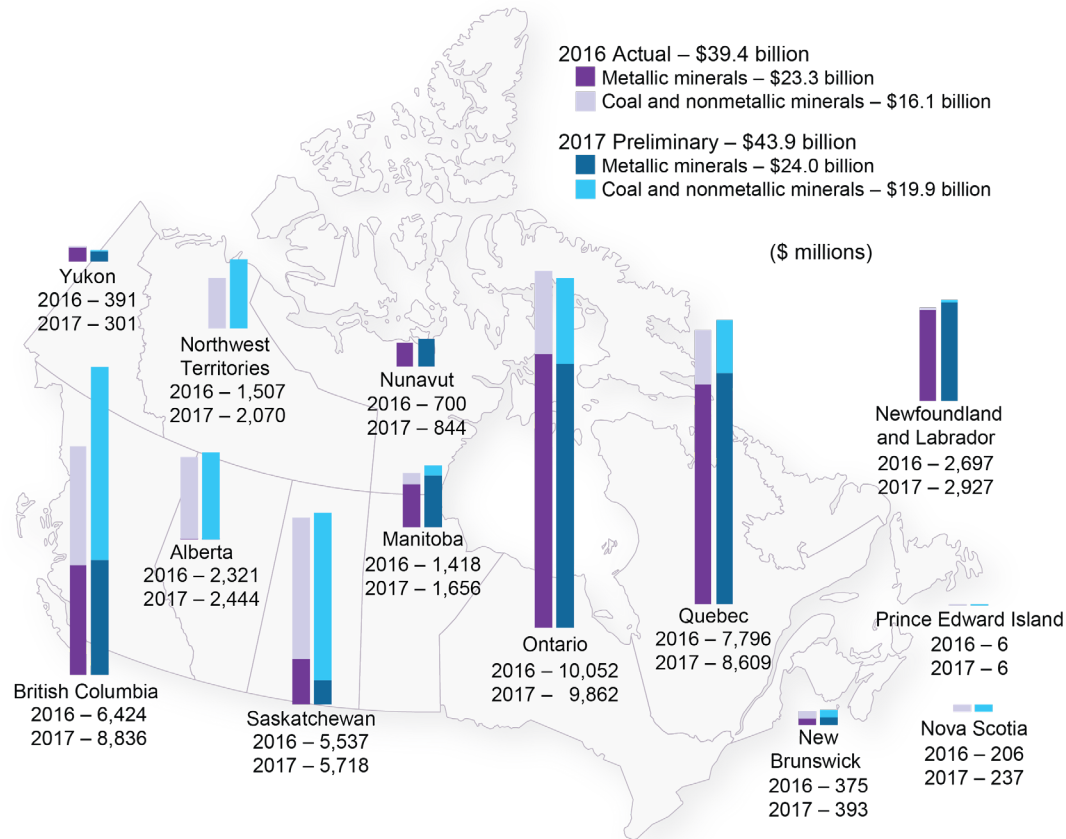
**SMA**  
Saskatchewan  
Mining Association

# CANADIAN MINERAL PRODUCTION

- Total value of mineral production in Canada in 2018 increased to \$47B
- Gold #1 MVP commodity by value of production (\$9.6B); potash #3 @ \$5.7B
- SK continues to be Canadian jurisdiction to be world leading producer in 2 commodities – potash and uranium

Canada's Top Minerals	Value (\$B) 2018 (\$47B)	Value (\$B) 2017 (\$45B)
Gold	9.6	8.8
Coal	6.4	6.2
Potash	5.7	4.8
Iron Ore	4.8	3.8
Copper	4.5	4.7
Nickel	3.0	2.8
Diamonds	2.7	2.7
Uranium	.66	1.4

# CANADIAN MINERAL PRODUCTION (2017)



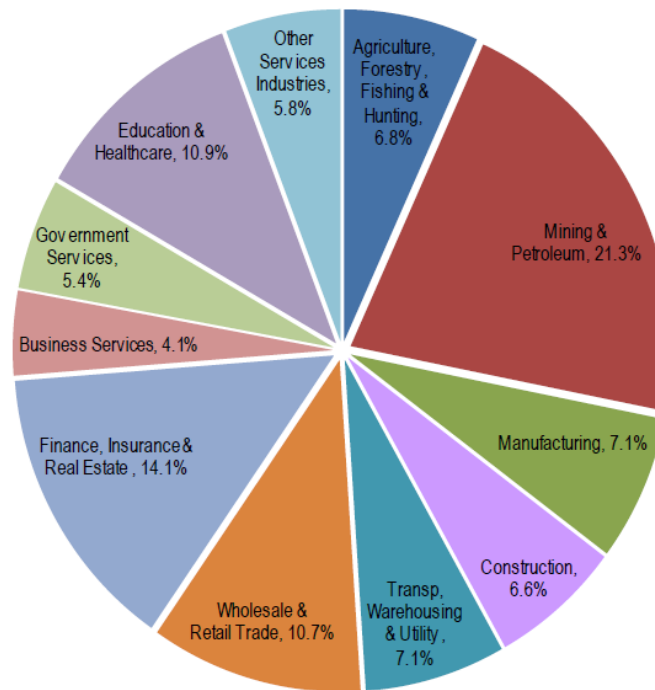
**Ontario, (\$9.86B), BC (\$8.84B) QB (\$8.6 B) and SK (\$5.7 B) top 4 mineral producing jurisdictions (75% value of Canadian mineral production)**



**SMA**  
 Saskatchewan  
 Mining Association

# SK MINING BY THE NUMBERS

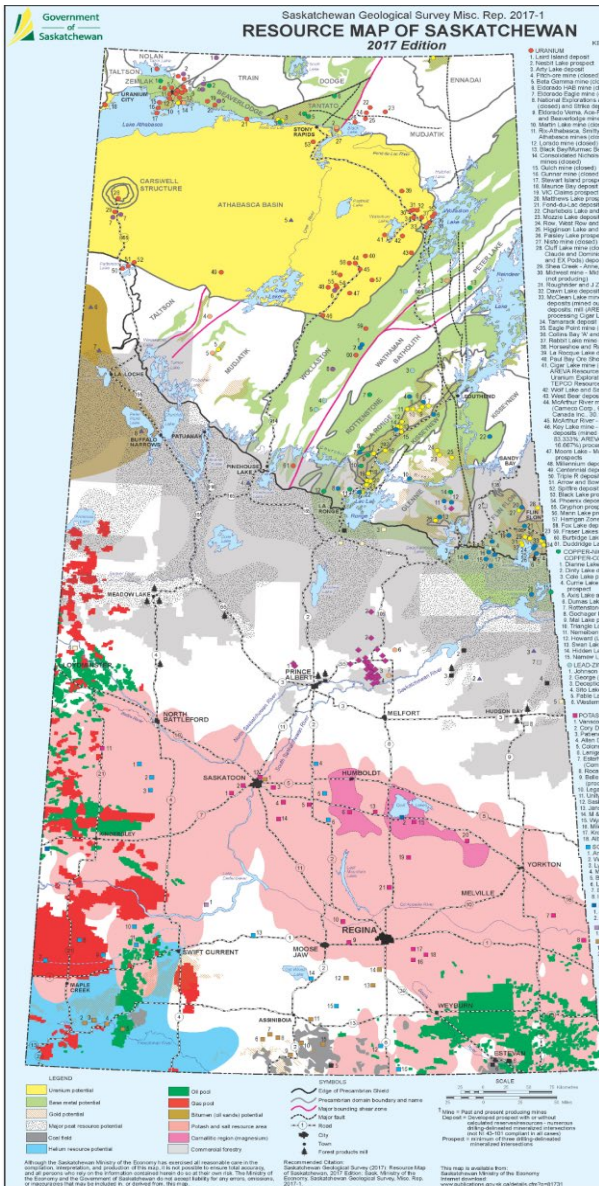
**Mining: 2017 SK GDP - \$7 B (8.5%)**



**2017 percentage of Real GDP by sector**  
**(CANSIM Table 379-0030, Statistics Canada, 2017)**



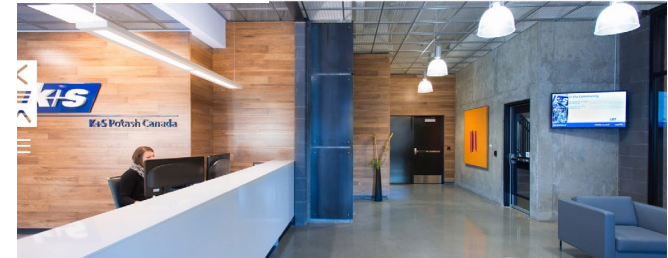
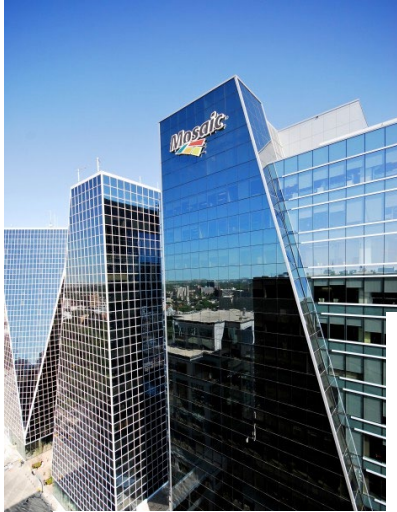
# SK NATURAL ADVANTAGE



- >23 SK mine facilities
- Geology is SK Advantage – world class deposits
  - ✓ Potash
  - ✓ Uranium
  - ✓ Diamonds
- Skilled & Trained Labour Force
- Strong supply chain
- Government Policy (?)

# SK MINING BY THE NUMBERS

## Corporate Offices (sample)





# SK MINING BY THE NUMBERS

## Geography of SK Mining Suppliers (2014) - \$1.1 B sales

Region	Company Count	Employees
Saskatoon Region	137	8,755
Regina Region	41	4,115
Northern Region	16	605
Estevan Region	8	66
Western Region	7	84
Yorkton/Esterhazy Region	15	673
Provincial Total	224*	14,298

# SK MINING BY THE NUMBERS

## Direct Employment & Payroll



**12,400**

SK mining operations directly employ more than **12,400** individuals.



SK mining operations paid a total of **\$1.4 billion** to employees in 2017.

---

>2600

# SK MINING BY THE NUMBERS

## Employment



For every **direct job** in the SK industry, there are at least **two jobs** in the mining supply and service sector.

= > 30,000  
employees

# SK MINING BY THE NUMBERS

## Business Support – SK Procurement

= \$5 B  
Total

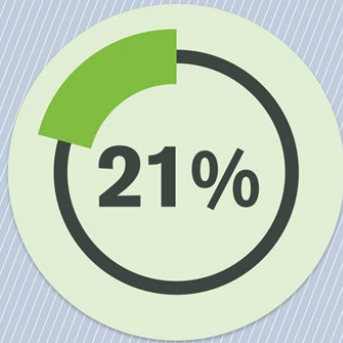
s





# SK MINING BY THE NUMBERS

## Indigenous Engagement



21% of SK mine employees  
are Indigenous. >2600



In 2017 Saskatchewan mining operations  
purchased **\$649 million** of goods and  
services from Indigenous-owned businesses.



**SMA**  
Saskatchewan  
Mining Association

# SK MINING BY THE NUMBERS

## Supporting local Communities



In 2018 SK mining operations made over **\$22 million** in social and community contributions.

Sample:

- ✓ STARS
- ✓ Saskatchewan Children's Hospital & local hospitals
- ✓ Event Complex – Mosaic Place; Wanuskewin
- ✓ Breakfast Clubs & Food Banks
- ✓ Habitat for Humanity
- ✓ Children's Wish Foundation
- ✓ Step Up for Mental Health
- ✓ Souls Harbour Rescue Mission

# SK MINING BY THE NUMBERS

Revenues to Governments (annual)

## \$1.8B

- ✓ Hospitals - SK Children's hospital (~\$200M)
- ✓ Education – \$95 M to replace 9 schools in Regina, Moose Jaw, Stoon, Rosthern, Weyburn
- ✓ Highways - \$208M for highway safety infrastructure
- Public Safety \$100M – crime prevention and wildfire prevention



# STATE OF SK MINING

- Between 2008 – 2015 >**\$25 B capital expansions** invested in brownfield and greenfield mines
- 3 new potash headframes (Mosaic K3, Nutrien Scissors Ck, BHP Jansen)
- 1 new solution potash mine (K+S Potash Bethune);
- 1 new uranium mine (Cigar Lake) and 1 refurbished mill (McClean) BUT
- Long term suspension of operations Rabbit Lake and more recently McArthur River - Key Lake (Jan 2018 – indeterminant suspension)
- >\$200 M/yr Exploration Investment





# POTASH PRODUCERS

- 11 producing mines
  - (8 underground; and 3 solution)
- 3 producing companies:
  - Nutrien (6) Mosaic (4) K+S
  - Potash Canada (1)
- 2018 production – 22.5 M t KCl
- By 2020 brownfield expansion capacity increase of 90% over 2004 values at cost of over \$15 B.
- Greenfield
  - K+S 2017 – production (2.8M)
  - BHP Billiton 2023? (8 – 12 M?)
  - Western Potash



# URANIUM PRODUCERS



- 100% of Canadian production; 22% global production in 2017
- 18.2 M lbs U<sub>3</sub>O<sub>8</sub> in 2018; (~50% decrease from 2017)
- 1 operating mines in 2018
- Cigar Lake/ McClean lake (~18 M lbs)
- McArthur River/Key – world's largest, high grade mine announced indefinite suspension in July 2017)
- Eagle Point/Rabbit – production suspended in 1Q 2016

# COAL

- SK primary source of baseload power supply (44%)
- 2 Lignite coal strip mines in the Estevan & Coronach areas (Estevan and Poplar River – Westmoreland Coal)
- Clean Coal Technology Project Estevan (\$1.4B) (CCS capture 2 M tonnes CO<sub>2</sub> = capture emissions from 500,000 cars)





# GOLD/DIAMONDS



## **GOLD**

### **SSR Mining - Seabee Mine & Santoy 8**

- Surpassed 1 M oz Au production Aug 2012
- 2018 – record gold production of 95,602 oz

## **Diamonds (Advanced Expl)**

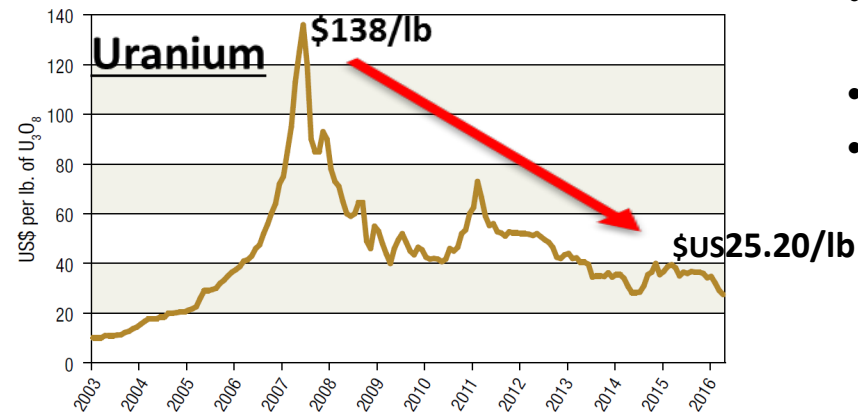
- Fort a la Corne - world's largest diamond –bearing kimberlite field – Rio Tinto option with Star Diamonds to earn 60% in June 2017
- Rio Tinto additional bulk sampling in 2019
- Pelican Narrows region



# GLOBAL POTASH & URANIUM OUTLOOK

## REALITY CHECK – COMMODITY PRICES

Spot prices\*



Potash Price  
226.00 USD/t  
28 Feb '18



- Reduced growth in global markets
- Undisciplined production – high inventories
- Overall declining commodity prices
- 2016 -18
  - cost control measures
  - reductions/suspensions in operations
  - maximize production at lowest cost/Tier 1 assets
  - Cancellation of contracts (TEPCO)
- “Merger of equals” – PotashCorp + Agrium = Nutrien Ltd.
- 
- Commodity Price (Takers) 2018
  - U3O8 - rebound to \$25.20 (May/19);
  - KCl – inventory drawdown; >fert intensive crop; upward price \$US226 rebound to \$US331

# Challenges to Global Competitiveness

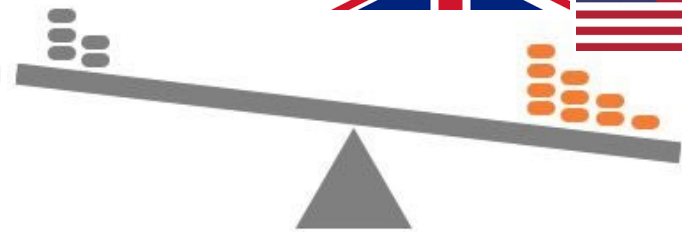
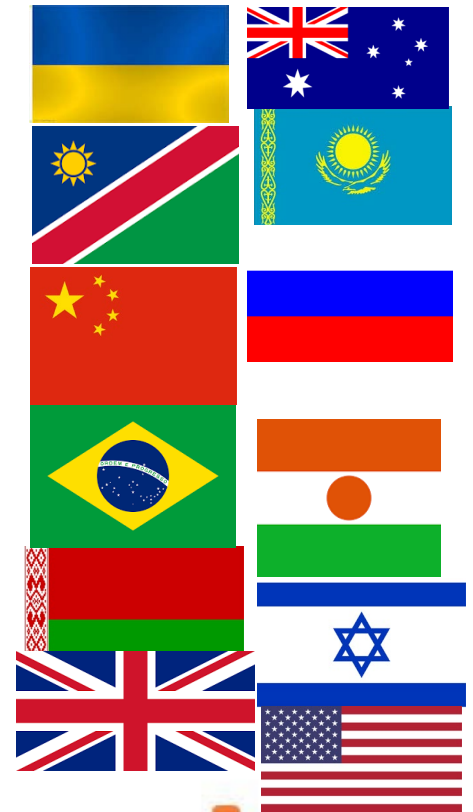
## Recent/New Federal Costs

- Carbon Tax
- Clean Fuel Standard Tax
- Regulatory Compliance Costs & Cost Recovery



## Recent New Provincial Costs

- Reduction in Saskatchewan Resource Credit from 1.0 to 0.75%
- Changes to Potash Royalty System 2013-14 & 2019-20 Budget (\$117M)
- 6% PST on construction and real property services (\$10 - \$100's M)
- Increased fees in *The Resource Lands Regulations* – increased costs of over \$25 million in new fees (405% increase) in two years to companies operating in NAD – ongoing



**LANDLOCKED** – must get product to market

# FUTURE ECONOMY - China, India, Africa & “Clean Economy”

- **BUT** Positive Long Term Fundamentals
- SK uniquely situated to feed and fuel the world
- **DRIVERS:**
  - ✓ **GROWING GLOBAL POPULATION**
  - ✓ **CLIMATE CHANGE**
  - ✓ **BASELOAD ENERGY SECURITY**
- **MINERS MATH = > FOOD + > CLEAN ENERGY ON < LAND**
- Limited local potash and uranium resources
- Growing industrialized middle class (9.2 B by 2050)
  - China consumed 5% of world's base metals in 1980s v ~30% today
- Trade Agreements
- Federal Nuclear Cooperation Agreements - China and India
- Canada – European Free Trade Agreement



# Sask Resources Key to Global Sustainability

**1. Food Security:** In the next **40 years** the equivalent of all of the food produced in the **last 10,000 years**

- Crop production must increase by 70% by 2050

## **2. Energy Security**

- Globally, 1 billion people still live without electricity. Access to energy is essential to reduce poverty.
- Energy consumption increase by 75% by 2040 with 60% of growth in non-OECD countries
- Strong nuclear growth
  - 55 reactors under construction





# GREEN REVOLUTION – AFRICA



- Simnai and Phillip Tshuma, farmers from Zimbabwe; drought year but harvest 50% >than in 2015 – targeted microdose of fertilizer
- 130% increase in fertilizer usage in Africa since 2008
- effective policies, new farming methods, improved inputs have improved harvest & reduced poverty

# CLEAN ECONOMY – CHINA & NUCLEAR



- Mainland China electricity is predominantly produced from fossil fuels (coal – 73%).
- Rapid growth in demand resulted in power shortages; smog/pollution from fossil fuels has resulted in economic loss of 6% GDP
- Government of China prioritized move away from coal into clean fuels including nuclear capacity of 120 – 150 GWe by 2030 (8 – 10% of electricity from current state of 3.5%)
- Currently ~45 nuclear reactors in operation with 17 under construction and more planned

# MINING AND PUBLIC SUPPORT



## **2016 Survey of 1000 SK residents says:**

- 89% are supportive of mining industry
- 97% believe it is important to the province
- 75% are confident in the regulatory process.
- EA Reviews and licensing hearing are inclusive - Indigenous communities and leaders encouraged and supported in participating

# WHERE WILL RESOURCES COME FROM?

## **We Know**

- ✓ **Future Global Demand for potash and uranium**
- ✓ **Saskatchewan can SUPPLY potash and uranium for decades**
- ✓ **Mining companies in SK have a smaller environmental footprint than global competitors (GHG emissions, water usage)**
- ✓ **Mining Companies in SK provide greater social benefits to local communities (employment, business, community support) than global competitors**

## **TBD**

- ✓ **Can mining operations in SK remain globally competitive with ongoing cost increases**

# *Saskatchewan Mining: Supporting Local and Global Communities*

1500 - 2002 Victoria Avenue  
Regina, SK S4P 0R7

Phone 306-757-9505  
Fax 306-569-1085

[pschwann@saskmining.ca](mailto:pschwann@saskmining.ca)



**SMA**  
Saskatchewan  
Mining Association