



Event Program

May 24th & 25th, 2017

La Ronge, Saskatchewan



Core Days - May 24 and 25 - La Ronge

Day 1 - Northlands College River Campus

9:00 - Registration

10:00 - Tour of Mine School and Tech Center, demonstrations by students

11:30 - Burgers and Hot Dogs

1:30 - Ribbon Cutting Ceremony, Mine School

Day 2 - Precambrian Core Library, Adjacent Lot, Legion

8:00 - Registration (Legion)

8:30 - Technical Workshop #1 - Saskatchewan Exploration Highlights - Gary Delaney, Chief Geologist, Saskatchewan Geological Survey, Minerals, Lands and Resource Policy, Ministry of the Economy (Legion)

9:00 - Technical Workshop #2 - Mining in Transformational Times - Pam Schwann, President, Saskatchewan Mining Association (Legion)

9:30 - Technical Workshop #3 - Silver Standard's Santoy Gap Discovery Hole - increased the Seabee operation's reserves by 78%. (Legion)

10:30 - Coffee (Legion)

10:45 - Technical Workshop #4 - NexGen Energy Ltd's Arrow Deposit - the largest undeveloped uranium deposit in the Athabasca Basin. (Legion)

11:45 - Long Term Service Awards and Northern Fish Fry!

1:15 - Core Displays Open (Precambrian Laboratory and Event Tent)

1:15 - High School Tours (Precambrian Laboratory and Event Tent)

5:00 - Wrap Up

Technical Workshops

Saskatchewan Exploration Highlights

Saskatchewan's Mineral Sector Going into 2017: Status and Outlook

Gary Delaney and the Saskatchewan Geological Survey Staff

In 2016 Saskatchewan was the world's largest potash producer, and the second largest producer of primary uranium. There was also production of coal, gold, base metals, sodium and potassium sulphate and clay products. In 2016 the value of mineral sales, mostly from potash and uranium, was approximately \$6.4 billion (B), down from \$8.2B in 2015 and from \$7.3B in 2014.

Saskatchewan's potash miners produced 17.9 million (M) tonnes potassium chloride (KCl) in 2016 with sales valued at about \$4.2B. Demand for potash, particularly over-seas, drove sales throughout 2016 and is anticipated to remain strong throughout 2017. On the development front, K+S Potash Canada GP recently held a grand opening for the Bethune solution mine (formerly known as Legacy potash project), which is Saskatchewan's newest potash mine in over 45 years. A number of other potash projects, ranging from early exploration to advanced development, continued to make progress over the past year, including BHP's Jansen project, which may see initial production by 2023.

Saskatchewan produced 36.4M pounds (lb) of triuranium octoxide (U₃O₈) in 2016, with a sales value of \$1.9B. Production for 2017, which will come from the McArthur River/Key Lake and Cigar Lake/McClean Lake operations, is forecasted to be about 36Mlb U₃O₈.

Silver Standard Resource Inc. reported that production at the Seabee Operation, Saskatchewan's only active gold mine, achieved a record 77,660 ounces (oz) gold (Au) in 2016, the third consecutive year the operation has sent new records for production. In total, the Seabee mining operation has produced over 1.2Moz Au since commencement of mining in 1991.

A survey conducted by the Ministry of the Economy estimated that \$177M will be spent on mineral exploration in Saskatchewan in 2017. This compares to actual expenditures of \$199M in 2016, \$211M in 2015, \$216M in 2014, and \$236M in 2013. An estimate by Natural Resources Canada indicates that Saskatchewan accounted for 14.9 per cent of Canadian exploration expenditures in 2016, and will likely account for around ten per cent in 2017. The bulk of the spending is anticipated to be for uranium and potash, although there is also renewed interest in diamond and base metal exploration. Uranium exploration spending is forecasted to remain robust in 2017, with projected expenditures of about \$132M, mainly on projects in the Key Lake to McArthur River corridor in the east part of the Athabasca Basin region, and near Patterson Lake in and adjacent to the southwest part of the basin.

There is active diamond exploration in two areas in Saskatchewan. In the Fort à la Corne forest, in central Saskatchewan, Shore Gold Inc. continues to advance the FALC-JV Star-Orion South diamond project. About 100 kilometres west of Flin Flon, at the Pikoo project, operator North Arrow Minerals Inc. has identified ten discrete kimberlite occurrences, five of which have been tested and proven to be diamondiferous.

As of April 30, 2017, there were a total of 8.74M hectares (ha) under disposition including 5.82Mha for minerals, 2.83Mha for potash, and 0.09Mha for coal. Over the past few years uranium discoveries in the Patterson Lake South area, north of La Loche, and diamond-bearing kimberlite discoveries, north of Deschambault Lake, have resulted in industry acquiring significant land positions in those two areas. The increased staking activity has been facilitated by the Mineral Administration Registry Saskatchewan System (MARS), Saskatchewan's new on-line mineral disposition acquisition system.

Saskatchewan Ministry of the Economy, Saskatchewan Geological Survey, 1000-2103 11th Avenue, Regina, SK S4P 3Z8

Saskatchewan Mining Association

Mining in Transformational Times

Saskatchewan's geological architecture hosts world-class mining deposits, with the result that SK has long been a world-leading mining jurisdiction. The province has also strived to offer an environment that attracted investment by providing certainty and timeliness in its policies and regulatory framework. Both of these factors contributed to SK being named by the Fraser Institute in 2016 as the #1 jurisdiction in the world for attracting mineral investment, an improvement on its #2 rankings in 2015 and 2014.

When commodity prices were cresting in 2009, Saskatchewan was Canada's top mineral producing jurisdiction (by value of production), overtaking ON, AB and BC for a period. However, the sustained low commodity prices for both potash and uranium over the past few years has seen SK's position slide.

In spite of our high-ranking position, right now is a time of significant uncertainty for the SK and Canadian mining sectors, as having a bountiful geological framework is no longer a guarantee of being a world-class mining jurisdiction. Along with operators being faced with sustained low commodity prices there are increasing regulatory requirements from primarily the federal government related to climate change, environmental assessments, relations with indigenous communities, SARA, the role of social media and the question of "public trust". These factors are combining to drive transformational change in the Saskatchewan mining industry to help ensure SK mine operations remain globally competitive in the future, offering individuals and communities a path to sustainable prosperity.

Silver Standard's Seabee Gold Operation

The Santoy Gap

The Santoy Gap deposit was officially discovered in August, 2011 with the intersection of multiple visible-gold bearing quartz veins in drillhole JOY-11-549. This intercept returned grades of 6.73 g/t over 6.24 m (drilled width) and was quickly followed-up by additional holes such as JOY-11-556, which intersected a zone grading 19.10 g/t over 20.48 m from a downhole depth of 323 m showing the size potential and significance of the discovery.

The Gap intercept in JOY-11-549 contains the C-Vein (hangingwall) and A-Vein (footwall) although the grade in the hole comes mainly from the former showing the strong nugget effect. The B-Vein is only locally well-developed within the core of the deposit. Calc-silicate alteration zones developed along vein margins and internal to the mafic volcanic host-rock are made up of diopside-albite-potassium feldspar-titanite assemblages associated with the highest grade portions of the deposit. Gold mineralization is mainly in the form of millimetre-scale visible gold flecks hosted within quartz veins and calc-silicate bands. Gold mineralization can be interstitial or adjacent to pyrite, pyrrhotite and chalcopyrite but is generally found in weak association to sulphide.

NexGen Energy Ltd.

Arrow: The Basin's Largest Undeveloped Deposit

The Arrow Deposit is a basement-hosted uranium discovery made by NexGen Energy Ltd. in February 2014 at its Rook I property in the southwest Athabasca Basin, northern Saskatchewan.

On March 3, 2016 NexGen announced the results of its maiden independent Mineral Resource estimate for the Arrow Deposit. Based on holes drilled and assayed to the end of October 2015 (AR-14-01 to AR-15-62), the estimate is an Inferred Mineral Resource of 201.9 M lbs of U₃O₈ contained in 3.48 M tonnes of mineralization grading 2.63% U₃O₈. The Arrow Deposit mineralization is associated with numerous sub-vertical graphitic shears across a strike length of 645 m, width of 235 m, and vertical extent of 920 m. Drilling from early-January to mid-November 2016 has greatly expanded mineralization to a strike length of 895 m, and a width of 300 m, which remains open in all directions.

Highlights from 2016 drilling include discoveries of significant high grade mineralization within the A1 and A5 shears, and the zone 180 m southwest of the Arrow Deposit. The Patterson corridor has uranium mineralization confirmed by drilling along an approximate 14 km strike length, of which 9 km of that strike length is covered by NexGen's Rook I property. In May 2016, Geotech flew a ZTEM survey along the Patterson corridor, which has revealed one of the most valuable geophysical datasets in the southwest Athabasca.

Regional exploration 4.7 km along trend and northeast of the Arrow Deposit has yielded another discovery, known as the Harpoon zone. This high grade discovery was unlocked with drill hole HP-16-08, which intersected 17.0 m of continuous mineralization (220.0 to 237.0 m) including 4.5 m of off-scale radioactivity (>10,000 to >61,000 cps) with dense accumulations of massive to semi-massive pitchblend.

Display Drill Holes - Precambrian Geological Laboratory

Uranium

McArthur River Deposit (Uranium)

DDH: MAC-210

Company: Cameco Corp.

NTS: 74H 14

UTMs: 496720E, 6402117N; NAD83/Zone13

Date Drilled: June 16, 1989 – June 25, 1989

Elevation: 538.58 m

Core Size: NQ Inclination: -90

Total Length: 715.7 m

Assessment File: 74H-0042

Presented Interval: 541 m – 545 m; 603.5 m – 661 m

Summary: Selected interval shows the P2 reverse fault evidenced by the repeating Athabasca Supergroup stratigraphy. The Athabasca/basement basal unconformity is located at 501.7 m and 569.4 m. The crystalline basement rocks are silicified with a relict foliation and argillised feldspar but also contain massive bull quartz and druzy quartz. Pitchblende mineralization was encountered at the base of the hanging wall wedge (in the sandstone) and in the footwall crystalline basement rocks. See labels on core boxes for specific uranium mineralization grades.

Cigar Lake Deposit (Uranium)

DDH: WDG1-198

Company: Cigar Lake Mining Corporation

NTS: 74I 02

UTMs: 527238E, 6436699N; NAD83/Zone13

Date Drilled: March 16, 1986 – March 21, 1986

Elevation: 485 m

Core Size: NQ Inclination: -90

Total Length: 467 m

Assessment File: 74I02-0039

Presented Interval: 407.0 m - 439.8 m

Summary: Drilled to confirm geological and geotechnical models and provide thick clay intersections for in-situ geotechnical testing. Selected interval includes the Athabasca Supergroup and the crystalline basement rocks with the basal unconformity at 428.25 m. Above the unconformity are discrete beds of sandstone, conglomeratic sandstone and conglomerates many of which have been indurated with clay. Metallic mineralization of pitchblende (plus Ni and Co) and indurated clay are found from 425.5 m to 427.5 m. Metapelites with augen textures located below the unconformity.

Cluff Lake - South Dominique-Peter (Uranium)

DDH: PRC3731

Company: Amok. Ltd.

NTS: 74K 05

UTMs: 235240E, 6479044N; NAD83/Zone13

Date Drilled: June 6, 1989

Elevation: 328.7 m

Core Size: BQ Inclination: -90

Total Length: 154.53 m

Assessment File: Special File (74K05-SF – Amok Cluff Lake(ML 5186))

Presented Interval: 100.2 m - 145 m

Summary: Drilled into the Carswell uplift and therefore contains no Athabasca Supergroup. Crystalline basement rocks consist of a mixture of garnet-cordierite-biotite gneisses and granitic bands. Pitchblende veins from 106.9 m – 119.5 m and 121.5 m – 136.5 m.

Carbonatite from the Patterson Lake area (near Spitfire Uranium Deposit)

DDH: HK-15-029

Company: Purepoint Uranium Group Inc.

NTS: 74F 11

UTM's: N/A

Date Drilled: N/A

Elevation: N/A

Core Size: NQ Inclination: -70

Total Length: 406.9 m

Assessment File: N/A

Presented Interval: 350.4 m – 363.3 m

Summary: A well-preserved, undeformed calcite carbonatite dyke northeast of Patterson Lake, where it is the dominant rock type in over forty-seven metres of core. The rock has been interpreted as a magmatic carbonatite (as opposed to hydrothermal) on the basis of the following relationships. 1) There are crosscutting relationships along the contacts of the intrusion. Where not silicified, the wall rocks have been extensively fenitized. 2) There are copious rounded to subrounded, partially digested xenoliths of country rock in the calcite matrix, some of which contain a relict foliation. The carbonatite is dominated by calcite and effervesces vigorously when weak hydrochloric acid is applied. Other prominent minerals are partly resorbed phenocrysts of clinopyroxene (likely aegirine-augite based on extinction angles). An unidentified brown mineral (under plane-polarized light) thought to be rutile is also prominent in thin section. Partly resorbed xenoliths also contain aegirine-augite. On the basis of relationships in thin section, sporadic, anhedral quartz and microcline in the carbonatite was likely derived from digestion of the xenoliths that carried it.

Gold

Rod Zones Discovery Hole

DDH. 84-R-1

Mahogany Minerals Resources Inc.

NTS:74-A-01

UTM 13: N6206578 E545045 (NAD83/Zn13)

Date Drilled: July 9 1984

Core Size; NQ; Inclination -50°, Bearing 135°

Total Length: 20.4 m

Special file: 74-A-01-SF

Presented Interval: 0.6 m – 20.4 m: Core length grades 1.45 m of 0.903 oz/ton Au (30.97g/t) or 2.51 m of 0.556 oz/to Au (19.07 g/t) Au

Summary: The Rod Zones occur in structurally controlled northeast trending shear zones within the middle granodiorite-monzonite member of the Star Lake Intrusion. The intrusion is zoned from a granitic core to diorite to locally gabbro on the margin The pluton cuts La Ronge Central Metavolcanic Belt rocks. The Rod Zones occur approx. 0.5 km south of Mallard Lake or 120 km northwest of La Ronge. The discovery led to development of the Jolu Au mine in production from October 1988 to August 1991.

Base Metals

Konuto Lake Deposit (Cu, Zn)

DDH: NER 116

Company: Hudson Bay Exploration and Development Co. Ltd.

NTS: 63L 09

UTMs: 689582E 6060881N NAD83/Zone13

Date Drilled: Aug 18, 1995 – Aug 25, 1995

Elevation: n/a

Core Size: BQ Inclination: -50

Total Length: 500 m

Assessment File: 63-L-09-SF

Presented Interval: 233.2 m – 269.1 m

Summary: Selected interval shows volcanogenic massive sulphide mineralization in a host sequence of basalt. The basalt is massive, locally contains up to 5% ovoid quartz amygdules and is cut in places by diorite dykes. The basalt is locally altered due to interaction with hydrothermal fluids, as evidenced by the presence of siliceous zones and thin veins of carbonate. The mineralized intersections comprise multiple 2-3 metre zones of semi-massive to massive chalcopyrite, pyrrhotite and pyrite with minor sphalerite and magnetite.

Janice Lake Deposit (Cu)

DDH: PL93-11

Company: Noranda Exploration Company Limited

NTS: 74 A 15

UTMs: 500962E 6302955.2N NAD83/Zone13

Date Drilled: March, 1993 – April, 1993

Elevation: n/a

Core Size: BQ Inclinaton: -45

Total Length: 143 m

Assessment File: 74-A-15-32

Presented Interval: 45 m – 83 m

Summary: Selected interval shows the mineralized zone within the clastic sedimentary rocks of the Wollaston Supergroup. The host rocks to the mineralization are interpreted as medium to coarse grained greywacke to arkosic greywacke, with conglomerate at the base of the interval. Copper mineralization consists of sections up to 10 cm wide of disseminated native copper and chalcocite, together with disseminated galena (Pb). A zone of limited core recovery between 65 and 71 metres may represent a fault.

Mcllvenna Bay Deposit (Zn, Cu)

DDH: HA-57

Company: Cameco Corp.

NTS: 63L 10

UTMs: 640493E 6056570.5N NAD83/Zone13

Date Drilled: Feb 3, 1990

Elevation: 319.5

Core Size: BQ Inclinaton: -78

Total Length: 722.6 m

Assessment File: 63-L-10-119

Presented Interval: 638.7 -664.4 m

Summary: Selected interval shows volcanogenic massive sulphide mineralization in a host sequence of felsic volcanoclastic and minor exhalative rocks of the Hanson Lake Assemblage. The mineralization consists of chalcopyrite stringers throughout the interval, as well as a 6m zone of semi-massive to massive sulphides with up to 10% chalcopyrite. The host rock to the mineralization is dacitic tuff with minor chert interbeds.

Graphite

Deep Bay Graphite Deposit

DDH. 74-9

Mineral Evaluation Program

NTS: 64-D-06

UTM Of Prospect: 6250322.33N 15771.74E NAD83/Zn13.

Date Drilled: Nov. 1974

Core Size: BQ Inclination: N/A

Total Length: 90.53 m

Reference File: 64-D-06 NE-SF Pollon lake

Presented Interval 40.23 m – 78.33 m: 38.10 m averaging 8.60% Graphite and 10.62%C.

Summary: The Deep Bay area is underlain by a sequence of highly folded biotite – hornblende, quartzitic and calcareous meta-sedimentary gneisses containing minor graphite as a common constituent. The graphite is present as a major constituent in some bands of gneiss within the synclinal structure on the west side of Deep Bay; some bands are estimated to contain 25% graphite. The property is now listed as a developed prospect with open pit reserves.

Kimberlite

Kimberlite

DDH. RS-1

Saskatchewan Diamond Syndicate

NTS: 73-H-10

UTM: 5936813N 515259E

Date Drilled: 1996

Core Size: NQ: Inclination 90°

Total Length: 248 m

Reference File: 73-H-10-SF1; 73H10-SW-0003 Jacqueline Lake:

Presented Interval: 128.3 m -137.3 m Kimberlite; 159 m – 163.5 m Kimberlite with fine brecciated inclusions; 219 m -223.6 m Sediment.

Summary: Swannell Minerals Corporation Nov. 1, 1996 News Release. 0-128.5 m Overburden; 128.5 -188.0 m Pure Kimberlite; 220 – 233.5 m Kimberlite with various fragments of coal, shale, and limestone 233.5 m -234.5 m Layered sediment with some lenses or fragments of kimberlite; 234.5 m -248.0 m Sediment + possible kimberlite fragments. No diamonds.

Lifetime Achievement Awards

Knudsen family

Knudsen Concrete Ltd., and formally Knudsen Northland Construction Ltd., have been supplying northern Saskatchewan.

1. Knudsen's built the original road into the Decade Mine site, which is now the Jolu Mine, after Peter Knudsen was flown into the site and walked out while planning the best place to build their permanent road.
2. All weather road into Star Lake Mine.
3. All weather road into Contact Lake Mine.
4. Winter road to Fox Point (94km) and hauled fuel to what is now McArthur River Mine Site.
5. Made winter exploration road and snowplowed road into Cree Lake.
6. Crushed and screened gravel and poured concrete for mine shaft collar at Midwest Lake Joint Venture.
7. Made Drill roads for Hogg Construction south of La Ronge for coal exploration.
8. Used a specially equipped skidder with a backhoe attachment for soil sampling for Golden Band.
9. Drill roads for Occidental Petroleum near McClean Lake.
10. Drill road into Waddy Lake.
11. Winter work on Cluff Lake Mine road.
12. Joint Venture with Patrick Pipeline (Patrick/Knudsen) at Key Lake mine for site work and concrete.
13. Joint Venture with Graham Brothers Construction for roads and site work at McLean Lake Mine

Peter, Scott, and Chris Knudsen all do mineral exploration in northern Saskatchewan, and B.C.

Peter has his own geophysical instruments and also a Diamond Drill which has drilled many holes on his many northern claims. Peter plans on doing mineral exploration until he is 120 or his legs give out - whichever comes first.

Scott and Chris also have their own Diamond Drill which they use for custom drilling and drilling on their own claims.

Pat Knudsen (Momma Knudsen) runs the business end of things and puts up with Peter and her boys expensive hobby.

Klaus Lehnert-Thiel

Klaus was born in 1938 and raised in a small town just south of Vienna, Austria. After primary education he enrolled at the University of Mining and Metallurgy in 1958 and graduated Master of Mining Engineering in 1962. Klaus then took a position as associate professor in the Mineral Exploration Institute of the same university because this included the opportunity to take a PhD course besides his regular employment duties. For five years he stayed in this position, worked on his PhD thesis and several other ventures during the summer months. Two summers were spent collecting material on Turkish mercury deposits for his thesis, two summers in East Greenland with a Danish prospecting base metals program and one full four month 1966 summer in Northern Saskatchewan mineral prospecting. Graduated 1967 PhD in Economic Geology and was looking for a more permanent job.

The same year, 1967, the Rabbit lake uranium deposit was found and Saskatchewan uranium exploration went into overdrive. Klaus accepted a telephone job offer made by Mr. Donald Fisher who operated a Saskatchewan mineral exploration service company. Two weeks later, May 1968, Klaus ran 10 man exploration crew in Northern Saskatchewan. After settling down with his young family in La Ronge, Klaus continued this work for the next few years. The same year included experience in West Greenland, California and Nevada.

A then completely unknown German company, named Uranerz Exploration and Mining Limited was looking for help in 1973 because they had an interesting uranium project north of Highrock Lake, now known as the Key Lake area. Klaus ran large exploration crews all over the Athabasca Basin for the next few years participating in the discovery of the Gaertner (1975, Deilman (1976) and Maurice Bay (1977) orebodies.

Once promoted to Exploration Manager in 1978 and later to Vice President for all of Uranerz's exploration Klaus relocated to Saskatoon. Uranerz operated about three dozen uranium exploration projects from coast to coast. Klaus supervised up to 80 geoscientists located in Saskatoon and the Calgary, La Ronge and Montreal regional offices to accomplish this immense task

After the Key Lake mine went into production in 1983 the uranium spot price on the world market plunged and uranium exploration activities were drastically reduced. Uranerz closed all its regional offices including La Ronge.

Uranerz ventured into other commodities i.e. gold to compensate for the reduced activities

The discovery of the Fort a la Corne Kimberlite pipes was most exciting. DeBeers was drilling a kimberlite occurrence near Sturgeon Lake west of Prince Albert in 1989. A great surprise to the exploration community. Uranerz geologists quickly located and staked several bullseye magnetic anomalies east of Prince Albert visible on a governmental map. Water well rig follow up drilling confirmed kimberlites below about 100 m of glacial till. Altogether about 80 pipes were found. Most pipes were barren of diamonds except for a few with marginal diamond contents.

After a successful, 20 year and often hectic career with Uranerz, Klaus left in 1992 to form Nordland Exploration Ltd.. Nordland offered their services in uranium and gold exploration for 20 years. Golden Band Resources Inc., where Klaus held the Vice President of Exploration position, was the main gold client. During the next 15 years Klaus's crews took some 15,000 till samples in the La Ronge Gold Belt which were processed for gold grains right in the Waddy Lake base camp. Ten new gold showings were discovered and drilled by following up the gold in till dispersion trains. The Bingo deposit went into production after the Jolu gold mill was purchased from Golden Rule. Unfortunately, operations ceased a few years ago because the grade was lower and production costs higher than anticipated.

Klaus, now fully retired, lives in Saskatoon. His northern Saskatchewan connection is now restricted to visiting old friends, fishing and mushroom picking.

Andrew Gracie

Born 14th May 1938 in Johore Bharu Malaysia. First memories are of New Zealand. Returned home to the United Kingdom by way of the Panama Canal, New York and the North Atlantic before the end of the war.

Grew up in Scotland, graduated from Edinburgh University BSc Hons Geology 1960. Then discovered and mapped a small complicated area in unmetamorphosed Precambrian sedimentary rocks in Northwest Scotland. Eventually I realized the PreCambrian shorelines I had mapped closely resembled the modern shorelines I looked at every day. Graduated Ph.D Geology Reading University 1964.

The rocks were formed by processes that are acting today like the prof said!

Joined the Saskatchewan Department of Mineral Resources in May 1964 as a Precambrian mapping party chief after an interview in the Saskatchewan consulate in London, England. Mapping the 15" Hickson Lake was a big and mostly very positive experience. Someone in Regina told me don't show up until you have completed your 90 days. During the long winter in Regina I learned that a La Ronge Laboratory was to be built in 1965 and I would be stationed there. My supervisor answered "nothing" when I asked him what he thought I knew about it. Completed the fieldwork for my second 15" sheet Maribelli Lake in 1965. Winter 1965/66 meant working one week out of every month in the new Saskatchewan PreCambrian Geological Laboratory La Ronge. The program agreed with my own idea that the province should "get the ball up the park".

Initially maximum laboratory staff were a secretary, geologist, mining recorder and laboratory technician who doubled as chief expediter to the field mapping parties in the summer. 1-3 summer assistants helped the technician. Working in La Ronge was a learning experience which required new priorities. The laboratory's purpose was to assist mineral exploration and report to Regina. Sharing information with mineral exploration personnel was important in making useful Regina reports.

The laboratory enabled a client to stake and check claims; study assessment work, government geology and geophysical reports; examine provincial collections of mineralized rocks and core. At one time basic analytical equipment was available. Clients included mineral exploration personnel, prospectors and the general public. The office could also provide information on local services i.e. contract stakers, geophysical operators, drillers, expeditors, grocery stores and air companies. The department offered mining recorders at Creighton, Uranium City as well as La Ronge, plus Resident Geologists at Uranium City in the sixties. My favorite jobs included flying out to the bush to examine showings, report on drill jobs or pick up core. With the discovery of the Rabbit Lake (1968) and Key Lake (1975) the situation changed. Visits to mines or properties that would become mines became more common. 8 gold mines were added. My duties included writing the annual Saskatchewan Exploration and Development Highlights handout distributed at the Saskatchewan Geological Survey's Open House in Saskatoon.

Although after 39 year service I retired from the government service in 2003, I have been able to work part time offering my services as a consulting geoscientist in Geology and Mineral Exploration. Duties have included writing technical, 43-101 compliant technical reports, assessment work research, drill program geologist, small company formation and management. Recently I assembled Northlands College Mineralized Rock and Core Collections to support a number of Northlands College courses.

Robertson Trading Limited

In 1967, after 22 years as a fur buyer with the Hudson's Bay Company and a couple of particularly tough seasons behind him, Alex Robertson decided to leave the "Honourable Company" and become a "free trader". He chose La Ronge at the edge of some of the best fur country in all of Canada. It sat at the edge of the Pre-Cambrian Shield with untold riches just waiting to be discovered, and the lakes and rivers teemed with pickerel, pike and trout. The harvesting of fur and fish and mineral was, in the simplest of terms, real wealth creation. Surely, he believed, this was a country with a future.

So, in July of 1967, having sold virtually everything he owned, Alex Robertson packed his remaining worldly possessions, including a wife and four children, into a station wagon and moved to La Ronge to become the new owner of La Ronge Grocery. It soon became clear that in addition to grubstaking local trappers, there was money to be made outfitting the prospectors, line cutters and drillers operating in the area. Exploration people are a colourful bunch: prospectors, speculators, dreamers and con-men....all of them chasing the next big find...and requiring boots and axes and groceries in the process. It was not long before Robertson's hitched its wagon to a horse named "exploration."

Mineral exploration was fantastic for the local economy; every business on Main Street benefited and they all paid wages and taxes. La Ronge, Stanley Mission and Brabant Lake developed significant numbers of well-trained and experienced prospectors, stakers and like-cutters. These mostly aboriginal men were hired by companies all across Canada to work on projects in every province, from Ontario to British Columbia and they brought their wages home.

Local exploration companies, lead by men such as Rod Spooner, Bill Patterson, Eric Partridge, George Flatland, Mike O'Brien, Vern and Randy Studer, Dale Hoffman, Seamus and Tim Young, Mike Lederhouse and others generated millions of dollars in local wages and more millions in local spinoff.

The Robertsons became heavily involved in the local exploration trade and they always felt obliged to support those companies that supported them. They would often buy and hold shares in these junior exploration companies, simply to show support for their efforts in northern Saskatchewan. Gone are the days when we would sell 50 oxhead axes, 50 pair of rope snowshoes and dozens of compasses and winter sleeping bags in a single afternoon as a result of a pending staking rush. This new generation has no idea what an oxhead axe is, or a Silva Ranger compass, a rock hammer, a grub hoe, or what a hand lens is, or for that matter, what the hell a claim tag is for! These young folks think that flagging tape is something used to mark off a crime scene...and they would never find out if it were not for Google.

The sad fact is that there is no going back. The world is changing and so is mineral exploration. Nonetheless, Robertson Trading continues to support mining exploration and the benefits that this entails, and are damn proud to have been a part of this for the last 50 years.

Charlie Cook

Born March 26, 1945.

Charlie Cook is best known for his years of work in the bush as a prospector, line cutter, and in more recent years working in the field of Geophysics. Over the years Charlie has mentored and worked with many seasonal workers in the Boreal Forests throughout Canada's North and has even spent time working in Canada's Arctic Region. Charlie is well known for not only his hard work ethics and skills but for his willingness to share all his knowledge with anyone that works with him.

Charlie's love of the bush is evident as he decided to build himself a new cabin at the family trapline in 2015. The trapline was where Charlie and his wife Miriam raised their family of five children, which was the home base from where they would both take on seasonal employment. With retirement, Charlie has taken the time to really make the trapline more accessible for his children, grandchildren and great grandchildren. Charlie's focus is now on passing his skills and knowledge of fishing, trapping, preparing furs and even tanning hides, to his ever extending family.

People have often remarked that Charlie should write a book on all his amazing experiences and life lessons, which range from killing a bear with an axe to locating gold mines. Many of his stories about his encounters are actually true and in some cases he has pictures to prove it!

Vern Studer

The Studer Family immigrated from Switzerland to Kansas USA in 1906, then in 1914 heard of homestead land available in Canada and moved north to Loon Lake Saskatchewan. In 1920 Adolph, the youngest brother, married Laura Olivier and had four children, Iona, Vernon, Alma and Louise.

It was in 1923 that Adolph applied to recover placer gold from claims established on the Waterhen River, about 30 miles north of Loon Lake. Very little gold was found and he was forced to abandon the claims, but the desire to prospect was in his veins and continued with the search for minerals. The next few years were spent in the Mudjatic River area, prospecting the 'harder rock', which they reported were barren.

In the meantime, he was raising his family, and in order to provide for them, became a successful trapper during the long winter months. He made many friends during the early years, who were impressed no doubt by his sincerity and determination. Among them being, Dr Mawdsley, Professor of Geology at the University of Saskatchewan. In fact it was Mawdsley's report on the Lac La Ronge area and his personal advice to Studer, that sent him prospecting the Lac La Ronge area in 1932.

In 1934 a X-ray type diamond drill was purchased and work conducted on a small claim near the first cabin on Contact Lake. Only narrow veins, with little gold was identified at that location, but by 1935 he had discovered high-grade gold veins on the shore of Dog Lake, which he re-named to Sulphide Lake. They then built a new cabin nearby where they would spend the next 10 years raising their family and working on the gold claims. Work consisted of shallow trenching, diamond drilling and also proved his resourcefulness by building a small crusher and mill. The operation was powered with a water-wheel, hauling ore from high grade gold outcroppings and trenches on the property. He was assisted in this by his family, who must have inherited their father's energy and persistence.

As exploration was conducted, several cousins and others arrived to learn the trade. Jobs were available with the drilling companies. Many local natives were employed, which led to long standing relations with them. As the only son, Vernon learned all his skills from his father, uncle and cousins. They were all very talented in design and used books to research aerodynamics, electronics and geology to identify favorable rocks with little tools except shovels, picks and hammers to extract the ore rich rocks.

In 1952, Vernon married Ida Parent and in 1958 would move his family to La Ronge so they could be near the trap-line, cabin and the life he had grown into. Vernon learned how to handle explosives and he would use that skill several times during his career. When Berry Richards was working on the Rottenstone Mine development, Vernon scouted in the road, with the assistance of Garry Thompson, who would be instrumental in getting Vernon to start flying. To diversify in slow times, Vernon had wild rice leases, tourist camps and commercial fishing operations, but diamond drilling, trenching, staking, line-cutting and prospecting were always what were talked about most. He spent his entire life in the north, be it flying around to visit with many of his northern friends, or checking his trap-line, or prospecting for valuable minerals. Vernon was a self made bush man, who learned from his co-workers, father and family the ways of the North.

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