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## A Tour of the Yukon

## A Monday Morning Musing from Mickey the Mercenary Geologist

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I realized the junior resource business was quickly changing for the better upon receiving an invitation to attend a series of project tours in the Yukon from July 9-15. Despite required changes in my summer travel plans, it did not take long to accept the all-expenses paid trip.

The invitation came from the Yukon Department of Economic Development and the Yukon Mining Alliance. Their proactive and ongoing promotion of mineral potential of the territory is now paying dividends since the 2010-2011 exploration bubble burst and the five-year bear market in mining equities began.

My trip started in Albuquerque with an evening flight to and subsequent day in Vancouver. Along with three other newsletter writers and four media types, we flew to Whitehorse late Saturday afternoon and were met at the airport by hosts Chris Ackerman, Corey Kanzig, and Mark Stephens. After checking in and dropping our bags at the hotel, the group met for beers before dinner.

Participants included Franz Els of Mining.com, Paul Harris of Aspermont/Mining Journal Americas, Matt Keevil of the Northern Miner, Byron King of Agora Financial, Ben Kramer-Miller of Mining Wealth, James Kwantes of Resource Opportunities, Teresa Matich of Investing News Network, and yours truly.

Here is our group at the first evening's festivities; the waitress-turned-photographer obviously wanted to crop the two shiny bald heads occupying the head of the table:



Early the next morning we flew about an hour and a half east via fixed-wing plane and then a short jaunt via helicopter to Golden Predator's Three Aces exploration project. We were met by Chairman Bill Sheriff, CEO Janet Lee-Sheriff, and my longtime friend, Chief Geologist Mike Burke.

We examined this blasted open-cut exposing a pinch-and-swell quartz vein from a recent bulk sampling program. Gaudy visible gold is abundant in the exposure and several tour participants lined up for their turns at high-grading:



I was the only one with a rock hammer and had to instruct a couple of novices in the technique of chipping off pieces of hard rock with glancing blows versus pounding and pounding on a flat surface until their arms gave out.

Despite both us being a bit wider in the gut than when we met 20 years ago, Mike and I traipsed up a steep cat track to the next exposure accompanied by only two others from the tour group of eight:



The high grade of gold in this relatively small target is impressive and the exploration potential is strong with many untested quartz-gold showings and soil anomalies in a huge claim block.

The next field exam took us back west across the province via fixed-wing to Carmacks and then by helicopter to Rockhaven Resources' Kazla gold-silver project. We were met by CEO Matt Turner and project geologist Jared Tarswell, had a corporate presentation by Matt, looked at maps and core, and enjoyed the camp's usual Saturday evening steak dinner.

Here the geologists pose in front of a drill rig turning to the right:



It's been a long while since I've seen one of the below. This was the standard water truck for drill programs during the 1980s, an old army surplus 6 x 6 that can go just about anywhere a dozer can cut a track:



Klaza has good gold-silver grades and significant exploration potential, but with high arsenic content and three concentrates required for precious metals recovery, it is metallurgically-challenged at this juncture.

It had been a very long day by the time we flew back via helicopter to Carmacks, plane to Mayo, and then drove to our next destination, Keno City in central Yukon Territory. Arriving about 10 pm, we checked into the bunkhouse, met at the downstairs bar for last-call beers, and then made sandwiches before retiring for the "night".

Of course, it never really gets dark this far north in the middle of the summer.

The next morning Chris, Corey, and Mark treated us to a big home-cooked breakie, and properly fueled-up, we went eagerly to the next project, Alexco Resources' Keno Silver Hill lead-zinc-silver mine. It last produced from 2011-2013 as a relatively high-cost operation. We drove to the company offices for a project review with CEO Clynton Nauman and VP-Exploration Alan McOnie followed by three stops at an old dump and adit (shown below), an open-pit, and the dormant mill adjacent to the portal of a newly planned decline.



The company is now exploring and developing new high-grade discoveries. It currently generates cash flow from an environmental subsidiary that mostly works on remediation of the district's historic workings and water treatment and has other contracts in the US.

Alexco requires higher metals prices and renegotiation of its streaming agreement with Silver Wheaton to reopen and become a profitable mining operation.

After a drive to the airstrip at Mayo, we took off for our next flight but landed quickly due to a loud banging in one of the plane's engines. It turned out to be caused by pilot error but necessitated an hour wait for another plane and pilot.

We flew northeast to the western end of ATAC Resources' Rackla claim block and then about 180 km east via helicopter to its easternmost prospects and camp. President and CEO Graham Downs, VP-Exploration Julia Lane, and IR Director Vanessa Pickering were our hosts. ATAC is part of the Archer-Cathro Group and was historically a prospect generator with over 25 projects. Discovery of the Tiger zone on the western end of the district in 2006 and the Osiris zone in 2011 resulted in the company focusing solely on its Rackla project. We had corporate and geological presentations, a visit to the core shed, and dinner.

The visit to the core shed and discussions with Julia were instructive for me. This is a Carlin-type gold camp with the eastern Nadaleen trend host rocks, mineralization, and structural control, very reminiscent of the Getchell trend of north-central Nevada.

ATAC has made major discoveries in the millions of ounces of high-grade gold-arsenic mineralization in the area. However the remoteness, lack of infrastructure, and extreme alpine terrain precludes current development of the eastern deposits. This is well-illustrated by a view from the core shed toward the Osiris discovery, exposed in the orange rocks in a cirque below the high peak:



ATAC has submitted plans to build a 65-km road from Keno City to access the western end of the claim block and near the much smaller, lower grade, and currently subeconomic Tiger oxide gold deposit. The company is currently focused on drilling new prospects in the eastern zone and building an air strip for fixed-wing access to its eastern camp.

The potential for giant gold deposits is outstanding at Rackla. That said, it is currently a huge, expensive exploration-stage project. In my opinion, ATAC must attract a major mining company joint-venture partner to fund exploration and future development.

Another late evening helicopter flight was in the offing and took us to the camp of Victoria Gold's Eagle deposit south of Mayo. Two choppers were always required on this tour and I was lucky to get assigned to the first one leaving Rackla. The second had electrical problems and was forced to reroute to Mayo with Cory driving the rest of our crew to Victoria around midnight.

It was not a good day for air travel.

The next morning we had a presentation by Victoria Gold's President and CEO John McConnell on the low-grade Eagle porphyry gold deposit. It is located above Dublin Gulch with historic and current placer production. The project is fully-permitted for production.

Following the presentation and a Q and A session, we drove up the mountain to the top of the proposed open pit mine in company of Executive VP Mark Ayranto and Chief Geologist Paul Gray.

Here's a good view from near the top down to the camp, placer workings, and old silver-lead-zinc mines peripheral to intrusion-related gold deposits:



Then we four-wheeled north to Victoria's current drill program at its Olive-Shamrock prospect. Paul Gray and I are shown in a trench of discrete quartz veins hosted by the usual granodiorite host rock:



The company is exploring satellite deposits in the area with a goal to develop higher-grade resources that could serve as sweeteners to the larger low-grade operation.

Victoria Gold's Eagle deposit would be a low strip, open pit, heap leach operation. It has current road access but is 35 km from electrical power. Here's my bottom line: Considering its location in the extremely cold climate of far northern Canada, it is grade-challenged with projected recovery around 0.6 g/t Au.

Following the tour and lunch at camp, we flew to Dawson City. Before landing, our pilot treated us to a flyover of the extensive dredge tailings piles that fill Bonanza Creek and other gulches for many kilometers within and above the town. An estimated twenty million ounces of placer gold has been pulled out of the Klondike gulches with the hard rock source(s) never determined.

We checked into a hotel and immediately convened at the bar. After spending two days in dry camps, this crew was obviously ready to cut loose in a legendary party town.

With time out for a good dinner and good wine enjoyed with good company, we bar-hopped our way thru Dawson until the wee hours.

The next morning came way too early but as usual, duty called. Despite the fact that conference conveners failed to inform us they had scheduled a series of one-on-one meetings with company reps, I only missed my first one at the Yukon Mining Conference. Besides seven meetings, I managed to do three interviews in the afternoon, one with Ellis Martin and two with the Northern Miner.

This was the scene of an "At the Bar" episode with host Matt Keevil, analyst Joe Mazumdar, and newsletter writer Gwen Preston:



The evening began with champagne and oysters on the patio of the historic territory commissioner's residence and was followed by an outdoor dinner reception. I got initiated as an honorary Yukoner with the infamous "sourtoe cocktail", a shot of Yukon Jack containing a mummified human toe. By the way, it's a \$2500 fine if you swallow the toe.



At that juncture, the night was just beginning. We chased the above episodes with beers at Diamond Tooth Gertie's and ended later than the previous night at "The Pit".

Again the next morning came early amid some snafus. The hotel restaurant did not open until 7:30 am and our departure was scheduled at that time. I wandered around a bit and found a place to eat breakfast a couple of blocks away. In the end, I could have slept another hour as the shuttle van broke down, and we waited until alternative transport could be arranged to the airport. Just before boarding the plane, we realized Franz Els of Mining.com was missing. He was still eating breakfast in the hotel when we departed.

We flew to the next project on the agenda, Western Copper and Gold's Casino copper-gold-molybdenum project west of Carmacks. The camp is shuttered pending permitting and financing but that did not deter a contingent of five company representatives from attending. President CEO Paul West-Sells gave a presentation; then we drove up to the top of the hill to view the proposed open-pit outline, ate a box lunch, and briefly looked at a couple boxes of core. Casino is a large but low-grade deposit that is subeconomic at current metals prices.

This photo looks south from the top of the gold-enriched (but copper oxide-bearing) leached cap toward the exploration camp below:



Our next leg was a flight to Burwash Landing and a drive to Wellgreen Platinum's nickel-copperplatinum-palladium-cobalt-gold deposit. Chief Operating Officer John Sagman was our guide and he talked over some poster boards in the core shack.

The deposit is hosted by an ultramafic intrusive complex and perhaps resembles Norilsk. It is another large but low-grade deposit and metallurgical recovery is problematic for the PGMs. After looking at core, we drove to an old adit where Hudson Bay Mining and Smelting mined a high-grade contact zone in 1972-1973:



After the tour we drove the Alaska Highway south to a motel near Destruction Bay where we had an outdoor dinner of grilled burgers and cold beers. After the shenanigans in Dawson, an early night was appreciated.

The next morning we drove to Burwash Landing and flew north to the camp of Kaminak Gold and its Coffee project along the Yukon River. From the air strip, we were driven to an old hunting camp, which now serves as an exploration camp.

Goldcorp completed its acquisition a couple of days earlier so after remarks by Kaminak COB John Robbins, the first formal presentation was by Brent Bergeron, its manager of corporate affairs and sustainability. Such is the nature of major mining companies these days, eh? He explained Goldcorp's reasons for acquiring the company and in broad terms, its intentions going forward.

Following that, VP-Exploration Tim Smith talked specifically about the Coffee project geological setting and exploration program. We then departed via helicopter to the deposits southwest and above camp. A flyover of the deposits and an on-the-ground visit to the discovery trench and drill hole followed. Byron King, who is also holds a geology degree, and I posed for this picture with Kaminak geo Tim Smith:



Back at camp, I looked at core and had interesting discussions with project geologists regarding the host rocks, structural controls, alteration, and mineralization of the orogenic gold-arsenic-antimony deposits at Coffee.

In my opinion, Goldcorp acquired Kaminak not only for the current project but also its potential to host additional gold deposits in a district-wide setting. It added about three million ounces of reserves to its mineral inventory for no cash and only 3% dilution to existing shareholders. The market has historically rewarded major gold miners, and especially Goldcorp, for growth of reserves and resources.

On the other hand, Kaminak shareholders were rewarded with an opportunity to sell their shares at a significant premium or become Goldcorp shareholders. I do not expect Coffee will be a priority project for near-term mine development by Goldcorp.

Following lunch at camp, we flew to Whitehorse where most of us convened at the bar before returning to Vancouver that evening.

In retrospect, the Yukon is very well-endowed in mineral deposits and is undoubtedly one of the most pro-mining jurisdictions I have worked in. That said, the territory is remote with little infrastructure and a harsh climate. As with many mining locales worldwide, the mineral deposits of the Yukon generally require higher metals prices to be economically viable and attract capital for development.

The 2016 Yukon Exploration and Mining Tour was a six day trip. Over four days our "media group" visited seven company projects that are among the best mineral deposits in the Yukon; attended a one-day conference in Dawson with these seven and an additional four exploration companies available for one-on-one meetings; and had a social calendar filled with good times and plenitudes of top notch food and drink shared with interesting and enjoyable company.

The organization and logistics of the tour were superb from beginning to end. When a problem cropped up and whether big or small, a solution was soon found and implemented by the organizers.

I sincerely thank the indefatigable Corey Kanzig of the Yukon Department of Economic Development and the ebullient Anne Lewis of the Yukon Mining Alliance for the opportunity to attend an informative tour.

A good time was had by all.

Ciao for now,

Mickey Fulp Mercenary Geologist



The Mercenary Geologist Michael S. "Mickey" Fulp is a Certified Professional Geologist with a B.Sc. Earth Sciences with honor from the University of Tulsa, and M.Sc. Geology from the University of New Mexico. Mickey has 35 years experience as an exploration geologist and analyst searching for economic deposits of base and precious metals, industrial minerals, uranium, coal, oil and gas, and water in North and South America, Europe, and Asia.

Mickey worked for junior explorers, major mining companies, private companies, and investors as a consulting economic geologist for over 20 years, specializing in geological mapping, property evaluation, and business development. In addition to Mickey's professional credentials and experience, he is high-altitude proficient, and is bilingual in English and Spanish. From 2003 to 2006, he made four outcrop ore discoveries in Peru, Nevada, Chile, and British Columbia.

Mickey is well-known and highly respected throughout the mining and exploration community due to his ongoing work as an analyst, writer, and speaker.

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