Occurrence Details

Occurrence Number: 105M 082
Occurrence Name: Bellekeno
Occurrence Type: Hard-rock
Status: Deposit
Date printed: 12/16/2025 3:19:48 PM

General Information

Primary Commodities: gold, lead, silver, zinc
Secondary Commodities: cadmium, tin
Deposit Type(s): Vein Polymetallic Ag-Pb-Zn+/-Au
Location(s): 63°54'35" N - -135°15'27" W
NTS Mapsheet(s): 105M14
Location Comments: location coordinates provided by Alexco
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

The current underground workings of the Bellekeno Mine (occurrence) cover 4 quartz mining leases; the Tundra (12838) staked in Oct/19, the Whipsaw (14081) staked in Jul/21, the Extension (16087) staked in Nov/25 and the Sam (55327) staked in Nov/25. These quartz mining leases are surrounded by an additional 709 quartz mining leases, 794 quartz mineral claims and 2 crown grants. These claims have been held by various companies until 1946 when they were consolidated into the holdings of United Keno Hill Mines Ltd. Following the bankruptcy of United Keno Hill Mines in 2000 the claims remained tied up in bankruptcy court proceedings due to the pre-existing environmental clean-up costs associated with the property.

In 2004 PricewaterhouseCoopers Inc the court-appointed receiver and receiver-manager of the Keno Hill properties advised the Federal and Territorial governments that United Keno Hill Mines former properties could likely be sold if the pre-existing environmental clean-up costs could be separated from the property. The governments held an open season for bids and in June 2005 Alexco Resources Corporation was selected as the preferred purchaser of the mining assets.

Alexco Resource entered negotiations with the Federal and Territorial governments and in Feb/2006 finalized a purchase agreement. As part of the agreement Alexco assigned its interests in the purchase agreement to its wholly owned subsidiary, Elsa Reclamation and Development Company Ltd. In addition to purchasing all of the assets of United Keno Hill Mines Ltd and UKH Minerals Limited, the subsidiary entered into Sub-Agreement with Alexco, the Federal and Yukon governments in respect of the pre-existing environmental condition and the environmental care and maintenance and reclamation of the United Keno Hill Mines site. As part of the Sub-Agreement, the Federal Government indemnified Elsa Reclamation and Development Company Ltd and Alexco for all liabilities arising directly or indirectly as a result of the pre-existing condition of United Keno Hill Mines various properties. In a separate agreement the Yukon Government hired Elsa Reclamation and Development as a paid contractor to assume responsibility for the environmental care and maintenance of the properties. On February 15, 2006 the Supreme Court of the Yukon Territory granted a vesting order approving the sale of assets to Alexco and its subsidiary Elsa Reclamation and Development Company Ltd.

Following acquisition of United Keno Hill Mines' properties, Alexco Resources began a program of scanning and digitizing all historic documents related to the various historic mines and exploration properties. The company used the resulting database to build 3-D models reflecting the geology, mineralization, structure, grade and configuration of known mineralization. At the Bellekeno deposit (this occurrence) the company built of 3-D model of all known drill holes and mine workings which they used to plan their future exploration programs.

In 2006 Alexco drilled 9 diamond drill holes (3 727m) on the Bellekeno deposit. These holes which were part of a larger 42 diamond drill hole (11 180m) program, targeted the along-strike and down-dip mineralization potential of the known reserves. The company also carried out baseline environmental work and work associated with ongoing regulatory requirements.

In Mar/2007 Alexco signed a Memoranda or Understanding with the Na-Cho Nyak Dun First Nation on whose traditional lands the property resides. The Memoranda provides for cooperation and support of any future development in the Keno Hill Silver District and in the long term, the reclamation and closure of the former mining district.

Alexco drilled 85 diamond drill holes (21 754m) on their Keno Hill properties in 2007. Thirty-one holes (9 217m) targeted the Bellekeno Mine site. The company used the results of this drilling to compile a mineral resource estimate. In Sep/2007 the company signed a Negotiation Agreement with the Na-Cho Nyak Dun First Nation which provided for 1), an Impact Benefit Agreement concerning the care and maintenance and exploration activities undertaken by the company and 2), a Mining Impact Benefit Agreement which covered opportunities in terms of employment, preferential contract positioning, training and other benefits.

In Nov/ 2007 Alexco released a NI 43-101 compliant mineral resource calculation for the historic Bellekeno Mine. Also in the same month the company announced the issuance by the Yukon Water Board of a Water licence for the care and maintenance of the Keno Hill Property. The Licence, effective for 5 years is not related to exploration or any future mine production. In Dec/2007 Alexco finalized the purchase of all of United Keno Hill Mines' former assets.

At the end of Jan/2008 Alexco released an updated mineral resource calculation for the Bellekeno Mine. This calculation included 2007 drilling results from the newly-outlined East zone and additional drilling in the Southwest zone. Tonnage increased 51% while the consolidated silver equivalent increased 19%. In Jul/2008 the company released a positive Preliminary Economic Assessment for the Bellekeno deposit. The assessment outlined a 250 tonne-per day operation with an initial mine life of 5 years. Estimated costs to bring the mine into production were estimated at 61.2 million dollars with a possible payback period of between 1.3 and 1.6 years (dependent on the price of silver used).

In Oct/2008 Alexco entered into a silver purchase agreement with Silver Wheaton Corp whereby Silver Wheaton would advance Alexco $50 million dollars in return for 25% of life-of-mine silver production. Alexco plans to use the money to bring the mine into commercial production. On October 9, 2008 Alexco secured the final water licence required to dewater the historic underground working and begin rehabilitation and development of new workings and drive a new 650m decline (Bellekeno East) into the area of the 99 zone.

In 2009 Alexco collared 9 diamond drill holes (1 666m) from surface and 132 holes (7 333m) from various underground locations. The company completed the Bellekeno East decline and continued with underground rehabilitation and development work. On July 14, 2009 the Yukon Government issued a positive Decision Document agreeing with the recommendation of the Yukon Environmental and Socioeconomic Assessment Board that the Bellekeno Mine project should precede. The issuance of this Decision Document completed the environmental and socioeconomic assessment of the Bellekeno Mine project.

On November 11, 2009 Alexco completed a positive Development Plan for the Bellekeno Mine. As part of their earlier financing deal, Silver Wheaton provided Alexco with written conformation of their acceptance of the plan. Alexco immediately began preparing for the initiation of construction activity to bring the mine into production. In association with the Development Plan, Alexco released an updated mineral resource estimate for the Bellekeno Mine. One week later on November 18, 2009 the Yukon Government issued a Quartz Mining Licence for the Bellekeno Mine which authorized the company to immediately commence mine development and mill construction at the site.

Alexco continued mine and mill construction through mid-2010. At the same time the company continued underground and surface drilling and underground development to prepare for commercial production. In Aug/2010 the company received a Type A Water Licence from Yukon Water Board which cleared the way for the company to commence commercial mine operations. At the end of Sep/2010 Alexco announced that they had completed construction at the Bellekeno Mine and had begun component testing and commissioning the mill complex.

On Dec 2, 2010 Alexco initiated concentrate shipments from the Bellekeno Mine to the port of Skagway, Alaska for eventual shipment to Trail, British Columbia. The company also announced an Off-Take Agreement with Glencore Ltd, Stamford a branch of a wholly owned subsidiary of Swiss-based international resources group Glencore International AG. Over the initial two year term of the agreement, roughly 42 800 tonnes of concentrate (27 300 tonnes lead and 15 500 tonnes of zinc concentrate) are to be shipped from the Bellekeno Mine for smelter treatment and refining.

On January 1, 2011 Alexco Resource Corp announced that the Bellekeno Mine had reached commercial production with both the mine and mill operating at initial design throughput of 250 tonnes per day of ore for 30 days. Planned yearly production for the mine is 12 000 tonnes lead-silver concentrate (average of 6 200 g/t silver and 70% lead) and 8 400 tonnes zinc-silver concentrate (average of 480 g/t silver and 55% zinc).

2011- 2014 not summarized yet.

An updated Preliminary Economic Assessment was prepared by SRK Consulting for Alexco Resource Corp in a report dated November 15 2013. The resource statement for the Bellekeno deposit was dated Sept 30 2012.

Operations were temporarily suspended at the end of August 2013. A January 1, 2015 production re-start is planned.

SRK notes that since the date of the Bellekeno deposit mineral resource statement (Sept 30 2012), Alexco reports actual tonnes processed from the Bellekeno mine of 124,000 t at average grades of 701 gpt silver, 8.3% lead, and 4.3% zinc (from June 1, 2012 to the temporary shutdown on September 1, 2013).

Capsule Geology

The occurrence is located on the lower northern slope of Sourdough Hill approximately 1 km east of the former town of Keno Hill in central Yukon. More than 65 mineral deposits and prospects have been identified within the Keno Hill district. Mineralization at the Bellekeno Mine is confined to the Mississippian Central Quartzite also known as the Keno Hill Quartzite. This quartzite is about 700 m thick and is structurally overlain by phyllite and sericite schist of the Late Proterozoic-Early Cambrian Hyland Group, and underlain by graphitic schist, phyllite and sericite schist of the Devonian-Mississippian Earn Group. The sequence is cut by greenstone sills which consist predominantly of meta-diorite and have yielded a U-Pb age of 232.2 ± 1.5 Ma (Triassic).

The metasedimentary rocks strike east-west and dip 20 to 30 degrees south and form the south flank of the McQuesten anticline. Mineralization at Bellekeno consists of numerous veins with variable strike dip and thickness. The veins are classified as polymetallic silver-lead-zinc vein type. The main mineralized structure, the 48 vein-fault occurs in three distinct mineralized zones; Southwest, 99 and East, with the bulk of historical mining occurring in the 99 Zone. The average strike is approximately 030 degrees azimuth with an average dip of 60 to 80 degrees to the east or west. Reported thickness ranges from just a few centimetres to several metres. Faults, originally exposed underground, show intense iron carbonate alteration and local brecciation.

Mineralized zones are largely composed of siderite and limonite. Ore minerals include freibergite, galena and sphalerite. Accessory minerals are anglesite, cerussite, smithsonite, malachite, arsenopyrite, pyrite, chalcopyrite and azurite. Similar to other mineralized vein systems in the Keno Hill Camp, individual veins have a silver-lead-rich top, becoming increasingly zinc-rich and silver/lead-poorer with increasing depth. Veins occur as stacked systems with different, metals occurring at various depths within a vein system (but zoned in individual veins) (from 2009 Bellekeno Project Update).

Historical records indicate that the Bellekeno Mine produced approximately 36 743 tonnes (40 502 tons) of ore averaging 1 461 g/t silver and approximately 11% lead and 7% zinc. All mining at United Keno Hill Mines ceased in Jan/89; however the company managed to keep operating in various forms until 2000 when environment liabilities drove the company into bankruptcy. At the time of bankruptcy the Bellekeno Mine hosted a historical measured and indicated mineral resource of 229 900 tonnes grading 1 251 g/t silver, 0.34 g/t gold, 12.4% lead and 7.1% zinc and a historical inferred resource of 34 400 tonnes grading 789 g/t silver, 0.34 g/t gold, 6.0% lead and 4.0% zinc. These figures were calculated by United Keno Hill Mines staff in Mar/97 and do not meet current National Instrument 43-101 standards.

Exploration in 2006 was aimed at verifying historical resources. Alexco scanned and digitized nearly 70 years of paper maps and other documents and assembled them into a coherent database. Diamond drilling targeted the along-strike and down-dip potential of known mineralization in order to upgrade the historical resource to National Instrument 43-101 standards. Notable results include hole K06-027 which tested mineralization located 50m below the lowest workings. The hole returned a 7.5 m intersection grading 670.2 g/t silver, 1.99 g/t gold, 8.83% lead and 8.81% zinc, including a 3-m section that returned 1 522 g/t silver, 1.26 g/t gold, 20.2% lead and 7.22% zinc as well as a separate 1.5 m section that assayed 206 g/t silver, 6.02 g/t gold, 1.39% lead 20.31% zinc.

Diamond drilling conducted in 2007 initially targeted the East Zone located approximately 800 m north along strike of the historic Southwest Zone. Significant results include diamond drill hole K07-066 which returned 1.51 m grading 3 100 g/t silver, 0.574 g/t gold, 19.63% lead and 15.89% zinc. Drilling later in the year focused on the 99 and Southwest Zones in order to prepare a new resource estimate. Historically, the focus of exploration and development at Bellekeno has been on the high grade 99 and Southwest Zones which comprise the majority of the historical resource.

On November 13, 2007 Alexco Resources released an initial National Instrument 43-101 compliant mineral resource for the Bellekeno Mine. The estimate prepared by SRK Consulting detailed a total inferred mineral resource of 356 000 tonnes grading 1 630 g/t silver, 20.3% lead, 5.9% zinc and 0.3 g/t gold. The inferred mineral resource was broken into three zones;

Category	Zone	Tonnage (tonnes)	Silver (g/t)	Lead (%)	Zinc (%)	Gold (g/t)
Inferred	*99	55 700	1 593	11.1	5.5	0.0
	*East	22 300	1 056	5.3	7.1	0.2
	**Southwest	278 000	1 683	23.4	5.9	0.4
Total Inferred		356 000	1 630	20.3	5.9	0.3

* At the 99 and East Zones, SRK employed a cut off grade of 514.3 grams of silver per tonnes and a cap of 3 428.5 grams of silver per tonne.
** At the Southwest Zone, SRK employed a cut-off grade of 500 grams per tonne silver and silver grades were not capped.

For the Southwest zone SRK constructed the new resource estimate using geostatistical block modeling approach constrained by wireframe. For the 99 and East Zones SRK re-classified an historical polygonal resource estimate after auditing the methodology used by United Keno Hill Mines Ltd in 1997. The new resource estimate represents a 35% increase in tonnage and a 37% increase in silver grade compared to the 1997 resource estimate.

The Nov/2007 Water Licence covered the care and maintenance of the its entire Keno Hill property. This licence covered ongoing water treatment issues but is not related to exploration or mine development. The issuance of the Water Licence was a condition of the purchase of the property by Alexco.

On January 30, 2008 Alexco released an update National Instrument 43-101 compliant mineral resource estimate for the Bellekeno Mine. This estimate incorporated all of the diamond drilling results from the East Zone, none of which were included in the Nov/2007 resource estimate and several holes from the Southwest Zone which were not included in the earlier estimate. The mineral resource was broken into three zones:

Category	Zone	Tonnage (tonnes)	Silver (g/t)	Lead (%)	Zinc (%)	Gold (g/t)	Silver-Equivalent (g/t)
Inferred	*99	55 700	1 593	11.1	5.5	0.0	2 375
	**Southwest	302 100	1 357	20.4	5.5	0.4	2 494

Sub-Total Inferred	99+ Southwest	357 800	1 394	19.0	5.5	0.4	2 476
Inferred	**East	179 600	263	2.0	21.3	0.6	1 698
Total Inferred		537 400	1 016	13.5	10.7	0.4	2 216

*At the 99 Zone SRK employed a cut-off of 514.3 g/t silver and silver grades were capped at 3 428.5 g/t silver.

** At the Southwest and East Zones SRK employed a cut-off of 1 000 g/t silver equivalent and grades were not capped. Total tonnage increased by 51% and consolidated silver equivalent (grams) increased 19% over the Nov/2007 figures.

The Jul/2008 Preliminary Economic Assessment (PEA) on the Bellekeno deposit (Mine). produced by SRK Consulting (Canada) Inc and Wardrop Engineering, envisioned an initial 5 year mine life supported by an initial production rate of 250 tonnes of ore per day increasing to 400 tonnes of ore in year three. Initial capital costs were estimated at 61 million dollars (Canadian) (minus $10 million already spent) with a payback period of approximately 1.6 years and a pre-tax internal rate of return of 55.5%.

The silver purchase agreement with Silver Wheaton Corp allowed Silver Wheaton to purchase 25% of the life of mine silver produced by Alexco from the Keno Hill camp in return for an upfront payment of $50 000 000 plus a further payment of the lesser of US $3.90 per ounce (one once = 34.2848 grams) (increasing by 1% per annum after the third year of full production) and the prevailing market price for each ounce of silver delivered. Alexco used the money to continue to bring the Bellekeno mine into production.

The Oct/2008 Type B Water Licence allowed Alexco to dewater and rehabilitate the underground workings at the Bellekeno Mine and commence an underground diamond drilling program. The aim of these programs was to increase the mineral resource of the deposit and to collect mining-related geotechnical data prior to a construction decision. The release of the positive Decision Document in Jul/2009 by the Yukon Government signalled the completion of the environmental and socioeconomic assessment of the Bellekeno Mine and provided the company with a framework for mitigations that would be included in both the Quartz Mining Licence and the Type A Water Use Licence.

The successful Mine Development Plan released in Nov/2009 outlined the proposed mining methods and proposed mineral processing methods, as well as expected metallurgical recoveries, engineering design of mill and mine facilities; permitting requirements, environmental impacts and other factors relevant to the construction and operation of the Bellekeno Mine. As part of the plan an updated National Instrument 43-101 compliant mineral resource estimate was released. The mineral resource estimate resulted in most of the inferred resources being upgraded to Indicated resources. The resource estimate was broken down into the following categories:

*Resource Category	Zone	Tonnage (tonnes)	Silver (g/t)	Lead (%)	Zinc (%)	Contained Silver (ounces)
Indicated	Southwest	215 800	997	12.6	7.2	6 917 000
	99	91 700	995	7.5	4.2	2 933 000
	East	93 500	672	3.9	6.9	2 020 000
Total Indicated	**All**	401 000	921	9.4	6.5	11 870 000
Inferred	East	111 100	320	3.1	17.9	1 143 000

*These figures were based on a Net Smelter Return of US$185 per tonne, calculated on an in-situ (undiluted) basis. Metallurgical recoveries were applied.

The issuance of a Quartz Mining Licence in Nov/2009 from the Yukon Government allowed Alexco to immediately commence mine development and mill construction at the mine site. The company spent the first half of 2010 completing underground development and constructing the mill and other surface infrastructure. The issuance of a Type A Water Licence by the Yukon Water Board allowed the company to commence commercial production at the Bellekeno mine. During September and Oct/2010 the company completed construction and testing of the mill and other related infrastructure. The company also started underground mining activities.

The first concentrate was shipped from the mine on Dec 2, 2010. Commercial production was achieved on January 1, 2011. This day marked the point whereby the mine and mill had operated at initial design throughput of 250 tonnes per day of ore for 30 days. During the commissioning and ramp-up period of October through December 2010 the mine produced approximately 15 700 tonnes of ore and the mill processed over 9 000 tonnes of ore. Average production grade of ore extracted during this period, including low grade material specifically mined for mill commissioning purposes was 1 068 g/t silver, 12.6% lead and 6.6% zinc.

For the first two months of 2011 the company processed approximately 12 000 tonnes of ore and produced approximately 1 600 tonnes of lead concentrate and 620 tonnes of zinc concentrate. Average mill heads during this period were blended by design to an average of 10% lead, 6% zinc, and 900 g/t silver. The company continued to fine-tune the metallurgical balance and recovery in the mill with mill throughput steadily increasing from an initial 200 tonnes per day in January to approximately 260 tonnes per day in late February. Operating plans for 2011 call for mine output and mill throughput to incrementally increase beyond 250 tonnes per day and for annual silver production to reach approximately 96 000 000 grams (2 800 000 ounces).

2011- 2014 not summarized yet.

An updated Preliminary Economic Assessment was prepared by SRK Consulting for Alexco Resource Corp in a report dated November 15 2013. The updated resource statement for the Bellekeno deposit (dated Sept 2012) stood at 365,000 tonnes of INIDICATED resource grading 658g/t Ag, 5.3% Pb and 5.3% Zn, and 243,000 tonnes of INFERRED resource grading 428g/t Ag, 4.1% Pb and 5.1% Zn. Bellekeno potentially mineable tonnes, 11% of LoM plant feed, are estimated at 86 kt with average metal grades of 660 gpt silver, 6.74% lead, and 4.15% zinc, and NSR value of $404/t. The mine reached commercial production at the start of 2011. Operations were temporarily suspended at the end of August 2013. A January 1, 2015 production re-start is planned.

SRK notes that since the date of the Bellekeno deposit mineral resource statement, Alexco reports actual tonnes processed from the Bellekeno mine of 124,000 t at average grades of 701 gpt silver, 8.3% lead, and 4.3% zinc (from June 1, 2012 to the temporary shutdown on September 1, 2013).

Work History

Date	Work Type	Comment
12/31/2011	Other	

12/31/2011	Other	Mill achieves commercial production.
12/31/2010	Development, Surface	Company completed mine and mill construction.
12/31/2010	Other	
12/31/2010	Other	
12/31/2010	Other	December initiated concentrate shipments.
12/31/2009	Studies	Updated resource calculation completed.
12/31/2009	Drilling	Number of holes drilled: 141 Amount of work done: 8999 METRES Nine holes (1 666m) collared from surface and 132 holes (7 333m) collared underground.
12/31/2009	Studies	Postive Development Plan completed.
12/31/2009	Development, Surface	Mine and mill construction begins in November 2009.
12/31/2008	Studies	Preliminary Economic Assement Report.
12/31/2008	Other	Updated calculation based on 2007 diamond drilling.
12/31/2007	Studies	SRK Nov 2007 and updated Jan 2008
12/31/2007	Drilling	Number of holes drilled: 31 Amount of work done: 9217 METRES
12/31/2006	Drilling	Number of holes drilled: 9 Amount of work done: 3727 METRES
12/31/2006	Studies	Baseline studies.
12/13/2007	Geology	
12/13/2007	Geochemistry	
12/13/2007	Geochemistry	
12/13/2006	Airphotography	
12/13/2006	Airphotography	
12/13/2006	Airborne Geophysics	
12/13/2006	Airborne Geophysics	
12/13/2006	Pre-existing Data	
12/13/2006	Remote Sensing	
12/13/1954	Pre-existing Data	
12/13/1954	Development, Underground	
12/13/1954	Development, Underground	
12/13/1954	Development, Underground	
11/15/2013	Studies	SRK nov 2013

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
096732	2014	Assessment Report Describing Metallurgical Test Pits, Metallurgical Auger Drilling, Geotechnical Auger Drilling, Geotechnical Study, Environmental Baseline Studies, Heritage Evaluation, and Water Quality and Climate Monitoring Surveys	Auger - Drilling, Water - Geochemistry, Metallurgical Tests - Lab Work/Physical Studies, Environmental Assessment/Impact - Studies, Geotechnical - Studies, Heritage/Archeological - Studies	9	96.77
095932	2011	Assessment Report on the 2011 Keno-Lighting Geophysical, Trench Mapping, Soil Geochemistry and Diamond Drilling Program	Electromagnetic - Airborne Geophysics, Reclamation - Development, Surface, Diamond - Drilling, Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Environmental Assessment/Impact - Studies	25	1819.30
094943	2006	2006 Geological, Aerial Photography and Orthophoto Assessment Report on the Keno Hill Property	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics, Interpretation - Airphotography, Orthophoto - Airphotography, Digitizing Data - Pre-existing Data, Photogrammetry - Remote Sensing		
092043	1980	Geological, Geochemical and Geophysical Report on the Mount Keno Leases	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Detailed Bedrock Mapping - Geology, EM - Ground Geophysics, Line Cutting - Other, Prospecting - Other, Research/Summarize - Pre-existing Data, Mechanical - Trenching		
090564	1979	Geological, Geochemical, and Geophysical Report	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Seismic - Ground Geophysics, Research/Summarize - Pre-existing Data		

Related References

Number	Title	Page(s)	Reference Type	Document Type
YEG2006_OV	Yukon Mining, Development and Exploration Overview 2006	18-19, 42, 46.	Yukon Geological Survey	Annual Report
YEG2007_OV	Yukon Exploration and Geology Overview 2007	16-17.	Yukon Geological Survey	Annual Report
YEG2008_OV	Yukon Exploration and Geology Overview 2008	13-14, 31.	Yukon Geological Survey	Annual Report
YEG2009_OV	Yukon Exploration and Geology Overview 2009	20, 55.	Yukon Geological Survey	Annual Report
YEG2010_OV	Yukon Exploration and Geology Overview 2010	22, 62.	Yukon Geological Survey	Annual Report
GM1997-1	Bedrock geology of Mayo map area, central Yukon (NTS 105M)		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Geoscience Map (Geological - Bedrock)
7	Geology of the Mayo Map Area, Yukon Territory (NTS 105M)		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Bulletin
GM1996-5	Geological map of Keno Hill area, Yukon (105M/14)		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Geoscience Map (Geological - Bedrock)
1989-3	Yukon Gold-Silver File Description of Occurrences		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Bedrock)
6	Geology of the McQuesten River Region, Northern McQuesten and Mayo Map Areas, Yukon Territory (115P/14, 15, 16; 105M/13, 14)		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Bulletin

Resource/Reserve

Year	Zone	Type	Commodity	Grade	Tonnage	Amount	Reported Amount	43-101 Compliant	Cut-off
2019	Bellekeno (Underground)	Probable	lead	11.8 %	40,109	4732862	Yes	Yes	Unknown
2019	Bellekeno (Underground)	Probable	zinc	6.3 %	40,109	2526867	Yes	Yes	Unknown
2019	Bellekeno (Underground)	Indicated	silver	585 g/t	262,000	153270000	Yes	Yes	Unknown
2019	Bellekeno (Underground)	Indicated	lead	3.5 %	262,000	9170000	Yes	Yes	Unknown
2019	Bellekeno (Underground)	Indicated	zinc	5.3 %	262,000	13886000	Yes	Yes	Unknown
2019	Bellekeno (Underground)	Inferred	silver	428 g/t	243,000	104004000	Yes	Yes	Unknown
2019	Bellekeno (Underground)	Inferred	lead	4.1 %	243,000	9963000	Yes	Yes	Unknown
2019	Bellekeno (Underground)	Inferred	zinc	5.1 %	262,000	12393000	Yes	Yes	Unknown