



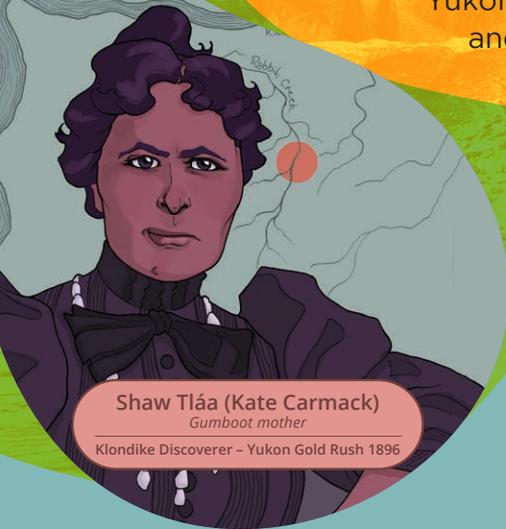
YUKON MINING & GEOLOGY WEEK

SCAVENGER HUNT GUIDE



KLONDIKE GOLD RUSH DISCOVERY

Yukon Mining & Geology Week celebrates the diverse, progressive, and modern exploration and mining industry in our Territory in the first week of May each year. We are excited to honour our history in the Klondike Gold Rush and recognize how far we have come with many discoveries, projects, mines and partnerships over the past 125+ years. Yukon has built a mining history that has contributed to the territory's diverse and inclusive culture, thriving economy, and a globally leading quality of life. Go explore and discover Yukon Rocks in your community!



Shaw Tláa (Kate Carmack)
Gumboot mother

Klondike Discoverer – Yukon Gold Rush 1896



CANADIAN MINING
HALL OF FAME

INDUCTÉE 2019

#KateDidIt

100+ YEARS OF YUKON WOMEN IN MINING

Kate Carmack's induction, and the acknowledgement of her role alongside the Klondike Discoverers in the Mining Hall of Fame, recognizes the untold contributions of all women in the mining industry.

SHARE ON SOCIAL:

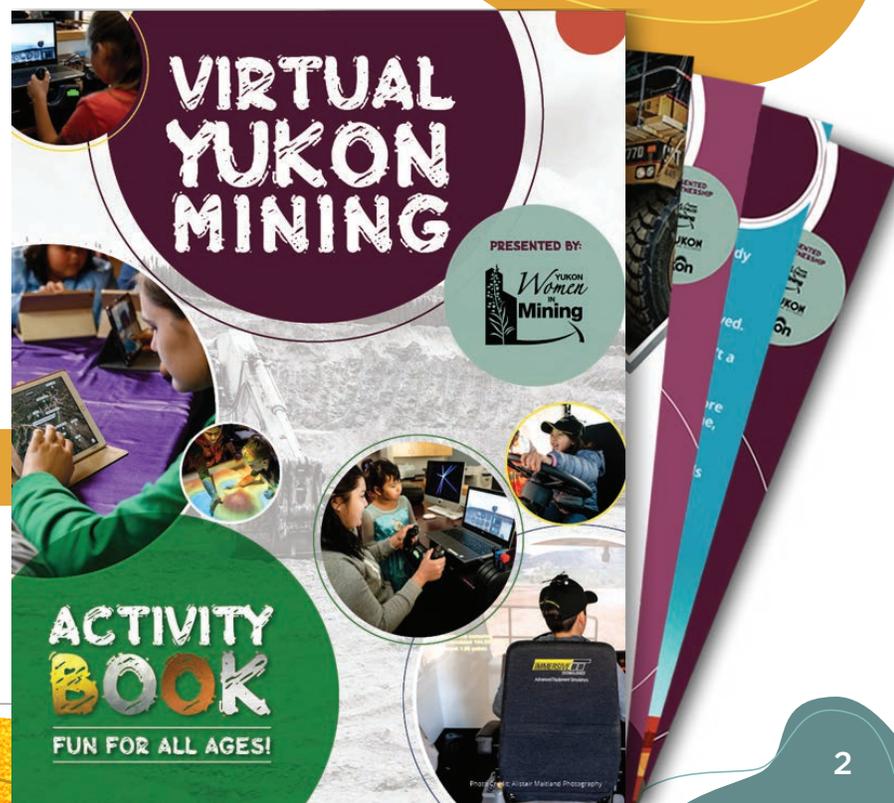
Enter ONE or ALL completed activities on Facebook @YukonMining



VIRTUAL YUKON MINING ACTIVITY BOOK

Download this fun-for-all-ages activity book at:

Yukonwim.ca/vym/vym-activities



YUKON MINING & GEOLOGY WEEK



OPEN TO ALL YUKONERS!
**YUKON ROCKS & WALKS
 SCAVENGER HUNT**

TAG US!
 Tag @YukonMining

HOW IT WORKS:

- 1 Use the Scavenger Hunt Site Guide with the checklist and clues
- 2 Safely explore in your backyard, community and across the territory (Remember the Safe 6 + 1)
- 3 Photo op with your discovery and post:
 - a. Post on your Facebook and Tag @YukonMining
 - b. Visit Facebook Page @YukonMining and post to wall



DID YOU KNOW?

Only 1 in 1,000 mineral occurrences becomes a mine. Your chances of winning this contest are better than that!

**YUKON MINING
 & GEOLOGY WEEK**

MAKE A DISCOVERY!

Let us know what other geological occurrences, iconic places and historical sites you find & enter them



FIND THE OLD BEACHES KNOWN AS “STRANGLINES” ON THE LANDSCAPE ABOVE THE CURRENT BEACH OF ŁÙ’ÀN MǎN

Anyone who lives in Destruction Bay or Burwash Landing knows how strong the wind can be on Łù’àn Mǎn. Some days you can see a cloud of silt and sand blowing out of Ä’äy Chù Valley and over the lake. Geologists call this windblown material “loess” and it can be found on top of many cliffs along the banks of Łù’àn Mǎn. We are currently going through a time of high loess deposition because a change in drainage of the Kaskawulsh Glacier has left Ä’äy Chù valley dry and without vegetation to stabilize the soil. This change in drainage has had a big impact on Łù’àn Mǎn. Beaches formed before 2016 are now 1.5-2m above the lake level. See if you can find one of these “strandlines”. The last time Łù’àn Mǎn levels changed significantly was about 250 years ago during the Little Ice Age. During that time, the Kaskawulsh Glacier got much bigger, and the lake was 12-14m higher than today! See if you can find a beach from this high-stand of the lake.



DEBRIS FLOWS ON THE HIGHWAYS

The streams coming out of the Kluane Ranges above Destruction Bay are full of energy! They are flowing very steeply, and because they have all this energy, they can move a lot of material. Destruction Bay is built on an “alluvial fan” – basically a big fan-shaped apron of gravel. These streams have a big impact on the highway, and highway crews work hard to keep the highway safe for travellers. Take a picture of something the highway crew has done to make you safer near one of these streams – some examples are culverts, berms, and barriers.



TAKE A PICTURE OF THE WORLD’S LARGEST GOLD PAN

World’s Largest Gold Pan, measuring nearly 6.5 metres in diameter.



MAKE A DISCOVERY!

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MONTANA MOUNTAIN

The Montana plateau is a great area to explore, and Montana Mountain is the highest peak on the Montana massif. This area was of great significance during the Klondike Gold Rush as stampeders travelled from Skagway to Dawson City. Stampeders stopped to prospect at Montana Mountain and discovered gold and silver deposits in 1899. This resulted in several turn of century mines and the historic roads and trails are now being reclaimed by youth from the Carcross Tagish First Nation as part Single Track to Success program creating world-class biking and hiking that attracts global visitors. This mountain and the nearby ranges are also an important caribou and wildlife corridor and is home to the world's smallest desert - making it a fantastic place to explore!



WHITE PASS TRAIN STATION

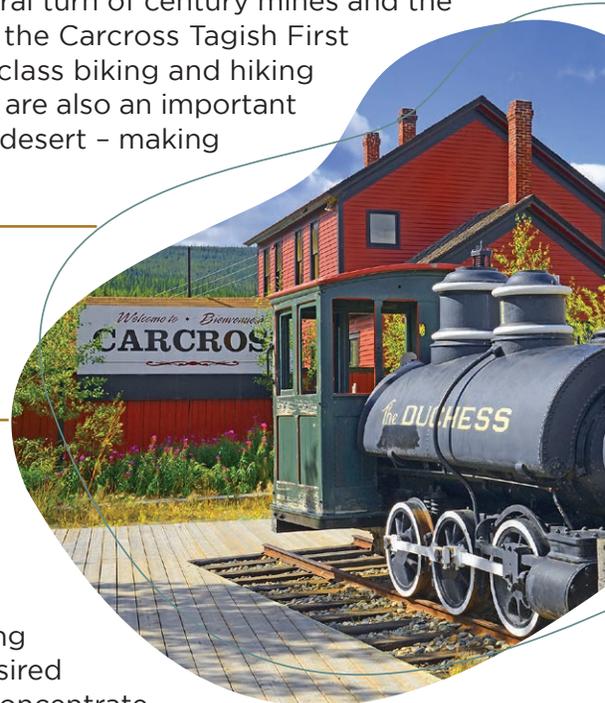


CAPTURE "CON" (CONCENTRATE) TRANSPORT TRUCKS TRAVELLING ON ROUTE TO SKAGWAY, ALASKA

Ore concentrate - or concentrate - is created from the mine milling process of separating rocks and unwanted materials from the desired metals and minerals, such as gold, copper, silver, lead and zinc. Concentrate is transported in trucks for refining and development into everyday materials, tools and technologies, such as the gold in your cell phone and copper in electric cars.

In Yukon, Minto Mine, located in the traditional territory of Selkirk First Nation, ships a copper-gold concentrate. In the traditional territory of the Na-Cho Nyak Dun First Nation, Alexco Resource Corp produces a Silver-Lead and Silver-Zinc concentrate. These transport trucks look different! Can you capture them both?

SAFETY TIP: Observe all safety practices near the highway. Ensure you are in a safe place to capture your picture.



MAKE A DISCOVERY!

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TANTALUS MINE/COAL CARTS

In 1894, George Carmack was tunnelling into the hill across the highway from Carmacks for a supply of coal that he sold to prospectors for their blacksmithing chores. The Five Finger Mine, downriver near Five Finger Rapids, was developed during the Klondike Gold Rush, but attention turned again to the Tantalus Mine when Captain Charles E. Miller started mining coal to power his small fleet of sternwheelers. In 1903, a Dawson City businessman, George De Lion, started mining the site and managed to ship 24 tons of coal to Dawson City where the Dawson Electric Light and Power company became a customer. The Yukon population was declining and there was so little freight by 1918 that the steamers were running without barges unless they were hauling coal, and the demand for coal in Dawson was weakening. The British Yukon Navigation Company sternwheelers started hauling coal to Whitehorse for company use but production dropped in 1918 below 1,000 tons and continued to fall until the Tantalus Mine closed in the 1920s.



CARMACKS AGATE/BASALTS

Agates are semi-precious stones with unique intricate designs. Many agates are found in basalt - an extrusive igneous rock that forms from the cooled lava of a volcano. When the lava rises to the surface, trapped gases escape quickly, leaving behind small cavities or voids in the rock. Slowly, over time, water containing dissolved silica percolates through the rock. Eventually minerals begin to crystallize out, the most common of these being the mineral quartz.

Basalts in Carmacks are ~70 million years old. The agates at Carmacks were found by Indigenous people 10,000 years ago and were used as tools for hunting, cutting, fishing, and skinning.



THE COAL MINE CAMPGROUND



VISIT THE TAGÉ CHO HUDÄN INTERPRETIVE CENTRE

The Tagé Cho Interpretive Centre showcases the past and present culture of the Northern Tutchone including the Little Salmon Carmacks First Nation. Visit the centre to see some fascinating exhibits including a rare collection of stone and bone tools.



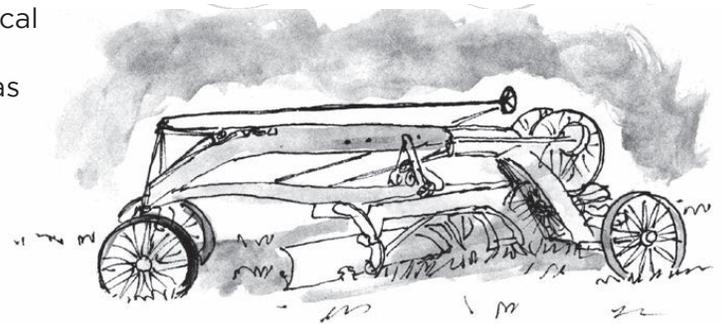
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GRADER

This grader is part of a private collection of mechanical equipment and parts used for mining and road building. The grader was built in the 1940s and was pulled by a tracked vehicle. Equipment such as this was used in the construction of the North Klondike Highway in the early 1950s. The North Klondike Highway was built to provide year-round access for trucks bringing silver ore from the mines near Keno City to the railhead at Whitehorse. Carmacks had a major road construction camp located where the highway maintenance buildings are today.



Credit: yukon.ca/sites/yukon.ca/files/tc/tc-walking-tour-carmacks.pdf



ORLOFF KING PROSPECTOR CABIN

Orloff King was a prospector who traversed the remote regions around Carmacks; he built this cabin in the 1920s as his “town house”. One year, Orloff King went prospecting never to return. His body was eventually found and was buried near his cabin on Mount Nansen, about 95 km west of Carmacks. Placer gold was first discovered on Mount Nansen in 1899, and the first hard rock source of gold was discovered in 1943. The remote areas west of Carmacks contain many mineral riches, and to this day, remains a popular area for prospectors.



Credit: yukon.ca/sites/yukon.ca/files/tc/tc-walking-tour-carmacks.pdf

TOURISM TIP: Interested in historic buildings? Checkout the Carmacks Historical Building Walking Tour at <https://yukon.ca/sites/yukon.ca/files/tc/tc-walking-tour-carmacks.pdf>



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#4 DREDGE

During the early years of the Klondike Gold Rush, more than 30,000 miners hand mined for gold on the rich placer creeks. Much of the gold was simply too difficult and expensive to extract using hand-mining techniques. Dredge No. 4, built in 1912 for the Canadian Klondike Mining Company, was the largest wooden-hulled, bucket-lined dredge in North America. It worked in the Klondike Valley on the “Boyle Concession” until 1940 and then was relocated to Bonanza Creek and worked this valley until 1959. At the peak of corporate mining, a dozen dredges churned through the creeks of the Klondyke. Dredging continued until 1966, when the last of the Yukon Consolidated Gold Company’s dredges shut down. Dredge No. 4 represents the many decades of corporate mining in the Canadian mid-north through the 20th century.



DISCOVERY CLAIM

Discovery Claim National Historic Site is the place where gold was discovered in 1896, by Kate Carmack and the Klondike Discoverers, triggering the Klondike Gold Rush. The discovery was made on Rabbit Creek, famously known today as Bonanza Creek, and is a tributary of the Klondike River near Dawson City, Yukon. Within days of the strike, Bonanza and Eldorado creeks were staked from end to end. When news reached the outside world the Klondike Gold Rush was on the valley became the scene of hundreds of excited people exploring for gold.



DIAMOND TOOTH GERTIES GAMBLING HALL

Diamond Tooth Gerties is Canada’s first and oldest Casino and is a non-profit operated by the Klondike Visitors Association, which invests in the community through grants, fundraising, sponsorship, contracts and wages. According to legend Diamond Tooth Gertie was a dance hall girl who married Dawson’s most prominent lawyer and did have a diamond between her teeth! The building was originally built in 1901 and hosts lively shows, with dancing, charm and powerhouse vocals, attracting tourists, visitors and Yukoners who want to experience the charm of the Klondike Gold Rush.



S.S. KENO NATIONAL HISTORIC SITE

The S.S. Keno was part of the fleet that played a major part in the history of the Yukon Territory. Without the riverboats, the gold of the Klondike and the silver, lead, and zinc of the Mayo district would have remained in the hills for at least another half century, and the development of the Canadian West and North would have suffered in consequence. The S.S. Keno is an example of the riverboats used on the lakes and rivers of the Yukon and displays the design and application of steam powered sternwheeler technology. Source: https://www.pc.gc.ca/en/lhn-nhs/yt/klondike/culture/lhn-nhs_sskeno



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TINTINA TRENCH

The Tintina Trench is a linear valley, extending into Alaska and south across the Yukon. It was first recorded as a geological feature in the early 1900s by R.G. McConnel, a geologist with the Geological Survey of Canada (GSC). The GSC named it the “Tintina (meaning Chief) Trench”.

Beneath the Tintina Trench is a fault line along which the bedrock has shifted a minimum of 450 km laterally. Some 65 million years ago, the rocks presently beneath Dawson City were adjacent to those of Ross River!



BIG RED ORE TRUCK WITH THE FARO SIGN

Ore trucks are used to transport ore or waste materials (rocks) in a mine. The weight and amount of material is monitored by engineers, whereas the grade (mineral content) is monitored by geologists.



RECLAMATION AT THE HISTORIC FARO

Faro Mine was once the world’s largest open-pit lead zinc mine from 1969 to 1998, and the road to Skagway was built to move concentrate to market when transport by train was no longer feasible. This mine operated before Yukon (and much of North American) had regulatory processes to manage the extraction of minerals. Currently the Faro Mine is part of a significant reclamation project.

Yukon exploration mining is highly regulated today, and reclamation is a critical part of the process. Progressive reclamation and security bonds ensure that when activities are completed the land is restored for plants, animals and people.



CAMPBELL REGION INTERPRETIVE CENTRE



MAKE A DISCOVERY!

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VISITOR CENTRE - SEISMOGRAPH

Yukon is in a “seismically active” area. This means that earthquakes can and do happen here. They usually occur far away from communities and do not affect people or buildings. We may occasionally feel a light shaking from an earthquake that happens several hundred kilometres away. These distant earthquakes usually cause no damage or injury. But if the centre of a major earthquake is in or very close to a community, damage and injury could occur. Scientists measure the strength of earthquakes using the “Richter scale”. The higher the Richter scale number, the stronger the earthquake and the likelihood of damage and injury. A magnitude 3 earthquake is considered “minor”, a magnitude 6 earthquake is “strong”, and a magnitude 8 is “great”. A magnitude 8 earthquake that occurs in a town or city could cause major damage and injury.



WILDLIFE MOUNTAIN

Yukon mineral exploration and mining industry is explored, developed and mined, through modern and responsible - globally-leading - practices that are highly regulated in partnership between Government of Yukon, Yukon First Nations and Government of Canada. Wildlife studies and management is a critical part of the permitting process. Ongoing collaborative wildlife management through construction, production, reclamation and closure is key to ensuring responsible development and as safe, sustainable environment for generations to come.



KLUANE MOUNTAINS VIEW FROM THE WINDOWS OF FN BUILDING FOR TECTONICS

Kluane features the highest and most massive mountains in Canada, including Mount Logan, Canada’s highest peak. Kluane mountains are young compared to others in the Yukon and due to tectonic plate activity, they are still growing. Kluane also contains the most extensive ice fields (outside the North and South Poles) in the world – covering more than 80% of the park. This is a dynamic landscape! Erosion caused by glaciers and glacial streams is evident everywhere. Long valley glaciers are the “escape valve” of the park’s vast central icefields, carving deep U-shaped valleys as they grind their way downhill. Steep slopes and cliffs, as well as outwash plains and moraines are dominant landforms. With some of these glaciers, the flow can suddenly increase, called a glacial surge.



MAKE A DISCOVERY!

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MINING RECORDER

The Mining Recorder is responsible for coordinating the mining land use application process by providing information, advice and assistance for the acquisition and security of mineral title to the mining community. The Mining Recorder is responsible for evaluating, processing and making recommendations for the acceptance or rejection of applications.



VICTORIA GOLD SIGN

Victoria Gold is the owner and operator of the Eagle Gold open-pit gold mine, located north of Mayo in the Traditional Territory of the First Nation of Nacho Nyak Dun.



FIND A ROCK WITH THE MINERAL GALENA IN IT

Galena is a lead sulfide mineral with a chemical composition of PbS, and is the world's primary ore of lead. At Keno, the deposits not only contained lead in galena, but they were also rich in silver and zinc. In fact, the Keno Hill Camp was actually Canada's second largest silver producer and is one of the richest silver-lead-zinc vein deposits ever mined in the world!

Look for freshly broken pieces of rock containing the distinctive silver-coloured galena with a bright, metallic lustre.



ORE BUCKETS/CARTS

Find an ore cart or bucket that was used to transport ore material.



KENO MINING MUSEUM

Visit the Keno Mining Museum to learn about the rich history of the Keno Hill Silver District. Alexco Resource Corp. now owns the majority and most prospective part of the Keno Hill Silver District, which is located within the Traditional Territory of the First Nation of Na-Cho Nyak Dun. Keno Hill is one of the highest-grade silver districts in the world, having produced historically more than 214 million ounces of silver at an average grade of approximately 1,373 grams per tonne or 44 ounces per ton from the early 1900s through the late 1980s.



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ICE AGE MAMMAL FOSSILS AT THE JOHN TIZYA CENTRE

Old Crow is situated in that part of the Yukon that escaped the scouring of large glaciers during the last ice age. This area, known as Beringia, included a land bridge across the Bering Strait that connected Asia and North America. The land bridge was created during the last ice age as sea levels dropped and most of the world's water became locked in glacial ice. Many plants and animals (including humans) made their way to Yukon across this landbridge.

Old Crow is famous around the world for its ice age mammal fossils. The bluffs and banks along the Old Crow river are the richest sources of ice age fossils in Canada. Visit the John Tizya Centre to learn more about the fascinating story of Beringia and the creatures that roamed there.



STONES CARRIED BY RIVERS OR PEOPLE?

Take a trip to the quartzite (metamorphosed sandstone rock) quarry on Crow Mountain (via ATV), and see where this rock is used around town. This rock looks a lot different than the sedimentary rocks that have been carried (and weathered) by the Porcupine River. How can you tell river rocks from quarried rocks? Take a photo of each. Hint: rivers and water can be highly erosive, smoothing out any edges of objects as they tumble along the river bed over long periods of time.



MAKE A DISCOVERY!

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**WHITE RIVER ASH**

The White River Ash is a sedimentary deposit formed by the accumulation of volcanic ash from two eruptions that took place roughly 1200 and 2000 years ago. The ash originated from a volcano at Mt. Churchill, located 25km west of the Yukon-Alaska border within the Wrangell-St. Elias National Park. The eruption has been estimated to be the 4th largest global eruption in the last 2000 years, and spread a layer of ash across south and central Yukon, reaching distances well into the Northwest Territories. A recent study in 2014 by researchers from the University of Alberta has since discovered traces of the White River Ash as far east as Newfoundland and even western Germany!

Look for a distinctive white layer below the soil that you will find in road cuts, riverbanks and gravel pits.

**OBSERVE MINTO ORE TRUCKS**

Minto is a copper-gold underground mine located in the Traditional Territory of the Selkirk First Nation. The copper concentrate is trucked to Skagway, Alaska, and from there, shipped to smelters in Japan.

**MINTO BARGE/MINTO LANDING**

The Minto barge is a seasonal mode of transportation located on the Traditional Territory of the Selkirk First Nation. The barge operates in summer and early fall and provides access to the Minto mine.

**BIG JONATHAN HOUSE**

The Big Jonathan House is home to the Selkirk First Nation Cultural Centre at Pelly Crossing. The centre is named after Big Jonathan Campbell - the son of Hanan who was the Selkirk Chief at the time that Robert Campbell was running the Hudson's Bay trading post at Fort Selkirk. Robert Campbell was an explorer and trader and before he arrived, the Chilkat Tlingit had an exclusive trading right-of-entry. The Chilkat resented Campbell and the construction of Fort Selkirk as it interfered with their monopoly on trade. In August 1852, the Chilkat raided Fort Selkirk and forced Campbell into a boat and set it adrift. It was Chief Hanan who saved Campbell's life, and for that, Campbell gave Hanan his name. Hanan's descendants retained the name, including Big Jonathan Campbell who went on to become a greatly respected chief of the Selkirk people.



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SPOT COAL-BEARING ROCKS NEAR WHISKERS LAKE ON THE ACCESS ROAD TO ROSS RIVER NEAR THE ROBERT CAMPBELL HIGHWAY

The Ross River coal deposits formed in the basin of the Tintina Trench. In the basin, water accumulated and sediments were deposited from the weathering and erosion of rock and soil from the surrounding uplands. But coal deposits form from thick accumulations of vegetation in swampy environments, so where did the coal come from? About 100 million years ago, the climate was warm and lush with jungles and swamps. When the vegetation died, it was washed into the basin of the Tintina Trench where it formed peat bogs. The process of turning peat into coal is a long one and involves the decay of the vegetation through biochemical processes from bacteria feeding on the dead material. This process uses up the oxygen in the vegetation, leaving behind mostly carbon. Eventually the deposition of organic material ceases and the decaying vegetation becomes covered by silt or sand. As the organic matter becomes covered, pressure becomes the main driver for the coalification process. In Ross River, a two-metre thick coal seam can be found, which was estimated to take approximately 20,000 years to form!



DINOSAUR TRACKS IN ROCK IN THE LOBBY OF THE ROSS RIVER SCHOOL

These tracks were discovered in 1999 by a team from the University of Alaska. The tracks are approximately 100 million years old. The tracks include Carnosaur, Hadrosaur, Ornithomimus and Euoplocephalus.



BARGE ACCESS FOR THE NORTH CANOL ROAD



MAKE A DISCOVERY!

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TESLIN FAULT

If you were to look at Teslin Lake and the Teslin River valley to the north from an aerial perspective, you would notice that they make a pretty straight line running northwest-southeast for over 200km. This is because of a very large fault, or crack in the earth's crust, known as the Teslin fault, which underlies the long, narrow lake and river valley. Faults will have some kind of related displacement, whereby the rocks on either side of the fault will move apart, converge, or slide past one another. In the case of the Teslin fault, rocks on the northeast side of the fault were displaced ~130km to the southeast with respect to the rocks on the other side of the fault! This movement grinds up the rock creating a weak zone that is susceptible to weathering and erosion. The Teslin River and Teslin Lake now occupy that zone along the Teslin fault. Take a look at some topographic maps of Yukon and you will see many examples of long, linear features that are now occupied by streams, rivers and valleys - often these are surface expressions of the geology underneath.



TESLIN TLINGIT HERITAGE CENTRE



GEORGE JOHNSTON MUSEUM



WATSON LAKE

CHECKLIST & SITE CLUES

TAG US!

Tag @YukonMining

MAKE A DISCOVERY!

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FIND THE SERPENTINITE BOULDER NEAR THE WATSON LAKE SCHOOL

Serpentinite is a metamorphic rock with an olive green colour. The name is derived from the Latin word *serpentinus*, meaning “serpent rock” due to its texture, which is smooth or scaly, and resembles the skin of a snake. Serpentinite rock is composed of one or more serpentine group minerals, some of which are asbestiform minerals (chrysotile asbestos). Chrysotile asbestos was once widely used in many construction materials (e.g., floor tiles, insulation boards, water and sewage pipes, etc.) due to its thermal properties and its resistance to extreme heat. However, chrysotile asbestos is made up of tiny curly fibres, and if a product containing chrysotile is disturbed, these fibres are released into the air. If the fibres are inhaled consistently and over a long period of time, they may get lodged into the lungs and remain there for years. Eventually this may form scarring in the lungs, inflammation, or more serious health problems. Asbestos was eventually classified as a known carcinogen (i.e., causing cancer) to humans and has since been banned in many countries around the world.



FIND A LICENSE PLATE WITH A GOLD MINER ON IT IN THE SIGN POST FOREST



SPOT A TRUCK WITH COEUR MINING STICKER ON IT



MAKE A DISCOVERY!

Let us know what other geological occurrences, iconic places and historical sites you find & enter them



#1. COPPER NUGGET

Corner of Front & Steele Street at McBride Museum

This huge native copper nugget was found on the Upper White River in southwest Yukon. This prized nugget, weighing 2590 lbs, was hoisted from the river in 1958 by six men using a Canadian Army caterpillar. It then took 5 days to reach the highway by using dog teams to haul the nugget through the rugged wilderness!



#2. KATE CARMACK

Mural on the Yukon Chamber of Mines building; corner of 3rd Ave. and Alexander St.

Kate Carmack, born as Shaaw Tláa, was a Tagish First Nation woman who was recently inducted into the Canadian Mining Hall of Fame for her role in the discovery of gold in the Klondike. Shaaw Tláa, along with her husband George Carmack, her brother Keish (a.k.a. Skookum Jim) and nephew Káa Goox (a.k.a. Tagish (Dawson) Charlie) made the discovery in 1896 which set off one of the world's largest gold rushes!



#3. SAM MCGEE'S CABIN

Corner of Front & Steele Street at McBride Museum.

Did you know that Sam McGee wasn't actually from Tennessee, but born in Lindsay, Ontario in 1867. He made his way to the Klondike where, at the time, poet Robert Service was working at the Canadian Bank of Commerce. Service stole the name for his famous poem after McGee made a deposit at the bank. McGee later settled in Whitehorse and was a prospector known more for his building, road construction and freighting. He also mined the War Eagle pit (part of the Whitehorse Copper Belt deposits), which is now the site of the Whitehorse landfill.



#4. KOPPER KING DISCOVERY CLAIM

See resources section for map location

Access is by Raven's Ridge Subdivision. You will find a dirt trail/road on your right about 200m along War Eagle Way Rd. Follow the trail to the end where you will find an open area and the creek on your right. You will see old timbers sticking out of tank from the buried mine adit, among other subtle features.

Copper was first discovered in the Whitehorse area in 1897 by prospectors that were actually making their way to the Klondike. Hearing that most of the claims in the Klondike were already staked, prospectors started poking around Whitehorse. The first claim was staked in 1898 and was named the "Copper King" claim. Take a photo of some of the old equipment that still remains among the willow bushes.

BONUS QUESTION: The creek adjacent to the discovery claim was named after the prospector who discovered it. What was his name?



MAKE A DISCOVERY!

Let us know what other geological occurrences, iconic places and historical sites you find & enter them



#5. S.S KLONDIKE NATIONAL HISTORIC SITE

The S.S. Klondike was the first sternwheeler to haul cargo in excess of 300 tons without having to push a barge. It was integral in hauling silver-lead ore that was mined in the Keno Silver District back to Whitehorse. Smaller sternwheelers brought the concentrate from Keno, down the Stewart River to Mayo where it was loaded onto the S.S. Klondike. The Silver Mining District included over 35 mines that operated from 1913 to 1989 and was the second-largest primary silver producer in Canada.



#6. FIND THE MINERAL SERPENTINE

On the rock wall outside of Wykes' Your Independent Grocer.

Serpentine is not the name of a single mineral, but rather a group of minerals with the same general chemical formula. Look for a dark green mineral with a slippery feel.



#7. CLAY CLIFFS

At the Black Street stairs in downtown Whitehorse; at the end of Black St.

These fine sediments of silt and sand were once at the bottom of a huge glacial lake known as "Glacial Lake Laberge" that once inundated the Yukon River valley from the damming of glacial ice during the most recent glaciation (known as the McConnell glaciation). Did you know that the thickness of glacier ice above Whitehorse during the last glaciation reached 1350m - that is equivalent to climbing the Black Street stairs 34 times or about 8000 steps!

Speaking of the Black Street stairs, if you climb to the top of these, someone has built a spectacular maze out of - you guessed it - rocks!! Take a picture of this beautiful maze for extra points!



#8. PROSPECTOR STATUE

On Main Street in downtown Whitehorse; corner of Main Street and 3rd Ave.

This beautiful sculpture was built as a commemoration to the Klondike Gold Rush and depicts a prospector and his dog. This year we are celebrating the 125th anniversary of the Klondike Gold Rush!



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#9. FIND A DREDGE BUCKET

In a neighbourhood! (Note: no specific site location given on maps)

The use of dredges changed the process of placer mining in the Klondike drastically. Dredge No. 4 in Dawson City was the largest wooden-hulled, bucket-lined dredge in North America, but there were about a dozen dredges operating around that time that were much smaller. Today, people make use of the buckets as flower planters in their yards and you will surely find some in the neighbourhoods around Whitehorse.



#10. VISIT THE ROCK AND MINERAL COLLECTION

At Yukon Visitor Information Centre, 100 Hanson Street.

The Yukon has a complex geologic history and is rich in mineral deposits. Visit the Yukon Visitor Information Centre to learn more!



#11. FIND THE MINERALS MALACHITE AND AZURITE

In the rock wall near the Chocolate Claim coffee shop; on Strickland Street between 3rd and 4th Ave.

As early prospectors made their way to the Klondike, some stopped to prospect in the Whitehorse area. This led to the discovery of the Whitehorse Copper Belt in 1897 (refer to Site #4). There are over 30 occurrences and deposits rich in copper minerals found in a linear belt west of the Alaska Hwy.; they extend from Crestview subdivision in the north, to Cowley Creek in the south. For azurite, look for the bright blue mineral. For malachite, look for the bright green one.



#12. WHITE RIVER ASH

See resources section for map location

Drive approximately 350m up the Grey Mountain Rd. Look for a pull-off on your left, park there. Walk the steep, sandy embankment until you reach the ridge-top trail that skirts along the forest edge. You will find exposures of White River ash where there are little banks exposing the soil profile. This is only one location of many - go ahead and find your own exposure of White River Ash!

This volcanic ash forms a distinctive white layer in the soil that can be seen in roadcuts, gravel pits and riverbanks in southern and central Yukon. White River Ash formed from a huge volcanic eruption at Mt. Churchill in the Wrangell-St. Elias Park. It occurred around 1200 years ago and was 10 times the size of the eruption at Mount St. Helens in 1980, and is estimated to be the fourth-largest global eruption in the last 2000 years!



MAKE A DISCOVERY!

Let us know what other geological occurrences, iconic places and historical sites you find & enter them



#13. GEOHAZARD: MUDSLIDE

See resources section for map location

On north side of Mountain View Drive opposite old fish hatchery. Park safely on the side of the road and walk up the bluff until you hit the trail. Turn left on the trail and walk to the end.

Geohazards are something to pay attention to as they can affect infrastructure such as our homes or other buildings, but catastrophic geohazards (e.g., large earthquakes) can even take people's lives. Thankfully the mudslide you see here didn't take any people or buildings with it! This one formed slowly as McIntyre Creek undercut the bank slowly, leaving the hillside above it unstable and susceptible to failure.



#14. KETTLE LAKES

See resources section for map location

You can access this area via the single track trail network behind Riverdale, or drive approx. 1.8 km along the Chadburn Lake Road and you will see an access road on your left that will take you to Hidden Lakes.

In the Chadburn area we see many kettle lakes that formed during the last ice age. They form when large blocks of ice are detached from the main glacier as it retreats. The blocks of ice become buried under sediment and when the ice melts, a depression is left behind in the ground called a 'kettle'. If it's filled with water, it's called a 'kettle lake'. There are many kettles and kettle lakes around the Chadburn area - Hidden Lakes is just one example of these.



#15. YUKON TRANSPORTATION MUSEUM

See resources section for map location

Transportation is key to Yukon's mining industry. For example, the White Pass & Yukon Route Railway (WP&WR) was originally built to service the Klondike Gold Rush. In 1907/08, they built a spur line to service the Whitehorse Copper Belt mines. Visit the Yukon Transportation Museum to learn more about this valuable sector of the mining industry!



#16. MILES CANYON

See resources section for map location

Access Miles Canyon Road from either the Alaska Hwy. or South Access Road

The rock that you see here formed roughly 8.5 million years ago and is the youngest bedrock type you will find in the Whitehorse area. It originated from lava that oozed slowly from a vent near Copper Cliff Lake near Mt. Sima ski area. Several different eruptions produced lava flows that were up to 20 m thick!

BONUS: Name the volcanic rock that is formed, and the diagnostic feature you see in the walls of the Canyon.



MAKE A DISCOVERY!

Let us know what other geological occurrences, iconic places and historical sites you find & enter them



#17. GREY MOUNTAIN CAVE

See resources section for map location

Visit <https://www.alltrails.com/explore/recording/recording-oct-20-12-46-pm--3> for a detailed description for location.

Grey Mountain is made up of limestone rock that originated as a coral reef in a shallow warm sea about 220 million years ago. Limestone is a soluble rock that can dissolve under the action of rainwater and groundwater that makes its way through cracks and fissures in the rock. Over time, these cracks can enlarge to eventually become caves.

BONUS: There are coral fossils to be found in the polished rock on your hike up. See if you can spot one and take a picture!



#18. COPPER SKI TRAIL - MT. MAC RECREATION AREA

See map for location or the Whitehorse Cross Country Ski Club website for a map of the ski trails.

So many of the roads and trails we enjoy today as part of our recreation began as access trails to mining claims and deposits from prospecting and mining development of times passed. The Copper ski trail was one of many trails that was originally built to access local mineral deposits of the Whitehorse Copper Belt.



#19. FIND YOUR FAVOURITE ROCK!

Rocks are everywhere, each with their own history and story. For example, Grey Mountain limestone was once a coral reef that would have been teeming with marine creatures and full of life about 220 million years ago. Over millions of years, as continents drifted, the reef would have been buried by kilometres of sediment, eventually creating the limestone rock. As the continents drifted further, and tectonic plates collided, rocks buried in the earth's crust folded and buckled creating mountains and eventually exposing these rocks at the surface.

Find a rock that intrigues you and tell us a story about your rock. Be creative - there are prizes! You may chose to write a poem, a little story or even create some artwork, whatever inspires you!



MAKE A DISCOVERY!

Let us know what other geological occurrences, iconic places and historical sites you find & enter them



LLEWELLYN GLACIER

The Llewellyn Glacier is a glacier located in British Columbia. It is the second-largest glacier in the Juneau Icefield. The glacier has rapidly retreated as of recent, and on June 6, 2018, a large kilometre-sized chunk of the narrow tongue of the glacier broke off and plunged into Atlin Lake.



ATLIN VOLCANIC FIELDS/CINDER CONES

'Fresh' volcanic rocks can be found east of Atlin Lake in the Atlin Volcanic Field (also called the Llangorse Volcanic Field and the Surprise Lake Volcanic Field). These rocks formed from a group of cinder cones or steep-sided, simple volcanoes that were actively erupting between 125 thousand and 11 thousand years ago. Geologically speaking, this is very recent, especially when you compare the age of these rocks to the age of the Earth, which is 4.6 billion years old!



FIND A PIECE OF LISTWAENITE

Listwaenite is a rock type that forms from the partial alteration (chemical change of peridotites, which are rocks that are common on part of the oceanic lithosphere (old ocean seafloor)). This is a big clue that the rocks around Atlin were formed under the ocean! The dark green to black rocks you see around Atlin are peridotites which are sometimes altered to listwaenite. Also these rocks can interact with rain and groundwater containing CO₂ to form white carbonate minerals in the white dry ponds you see near town. This process is removing CO₂ from the atmosphere and may someday help in reducing global warming. Hydromagnesite Deposits of Atlin, BC (ubc.ca)



ATLIN MUSEUM

Visit the Atlin Museum to learn about the history of placer mining in the area.



GET YOUR PHOTO TAKEN WITH SOMEONE WITH A GOLD NUGGET!



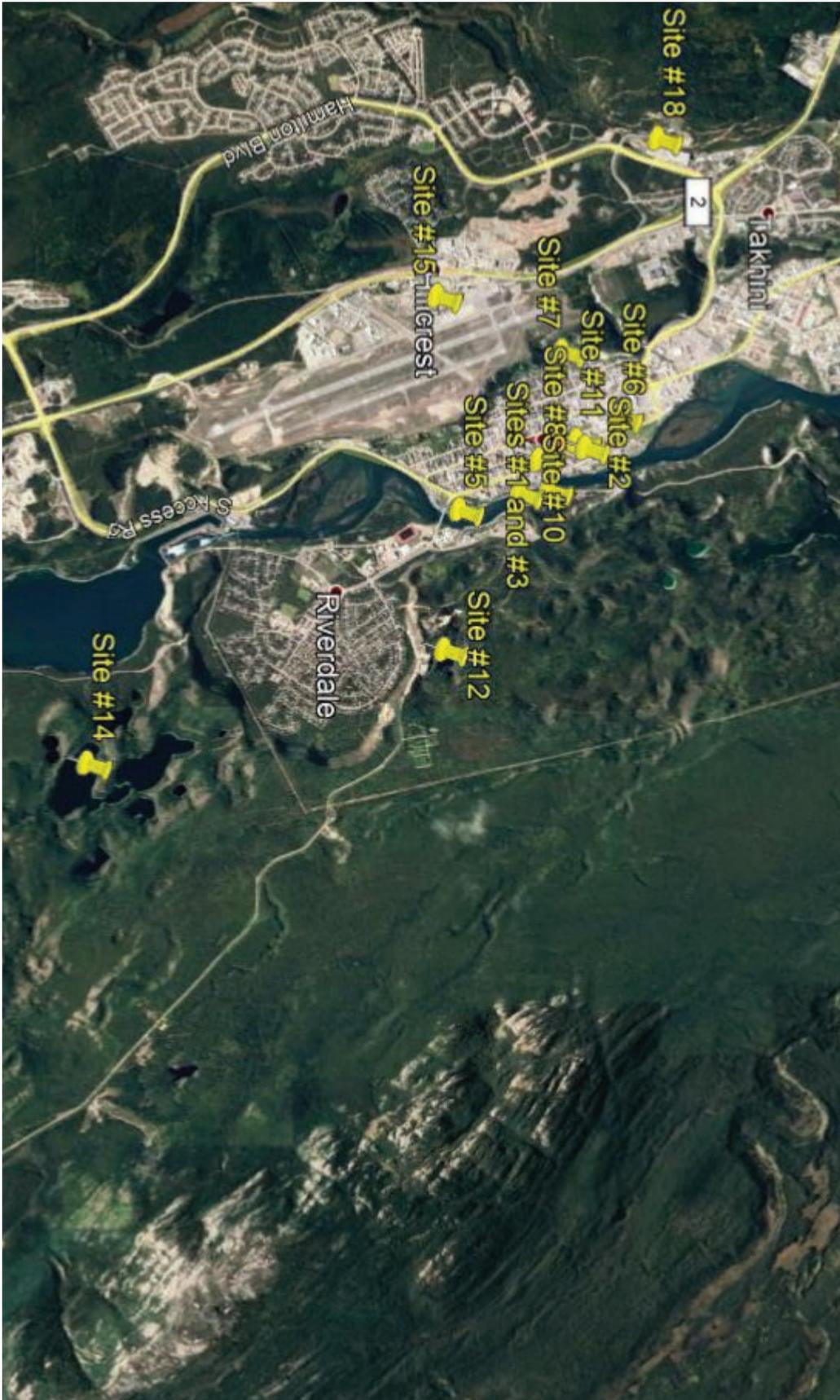




WHITEHORSE

#12. WHITE RIVER ASH

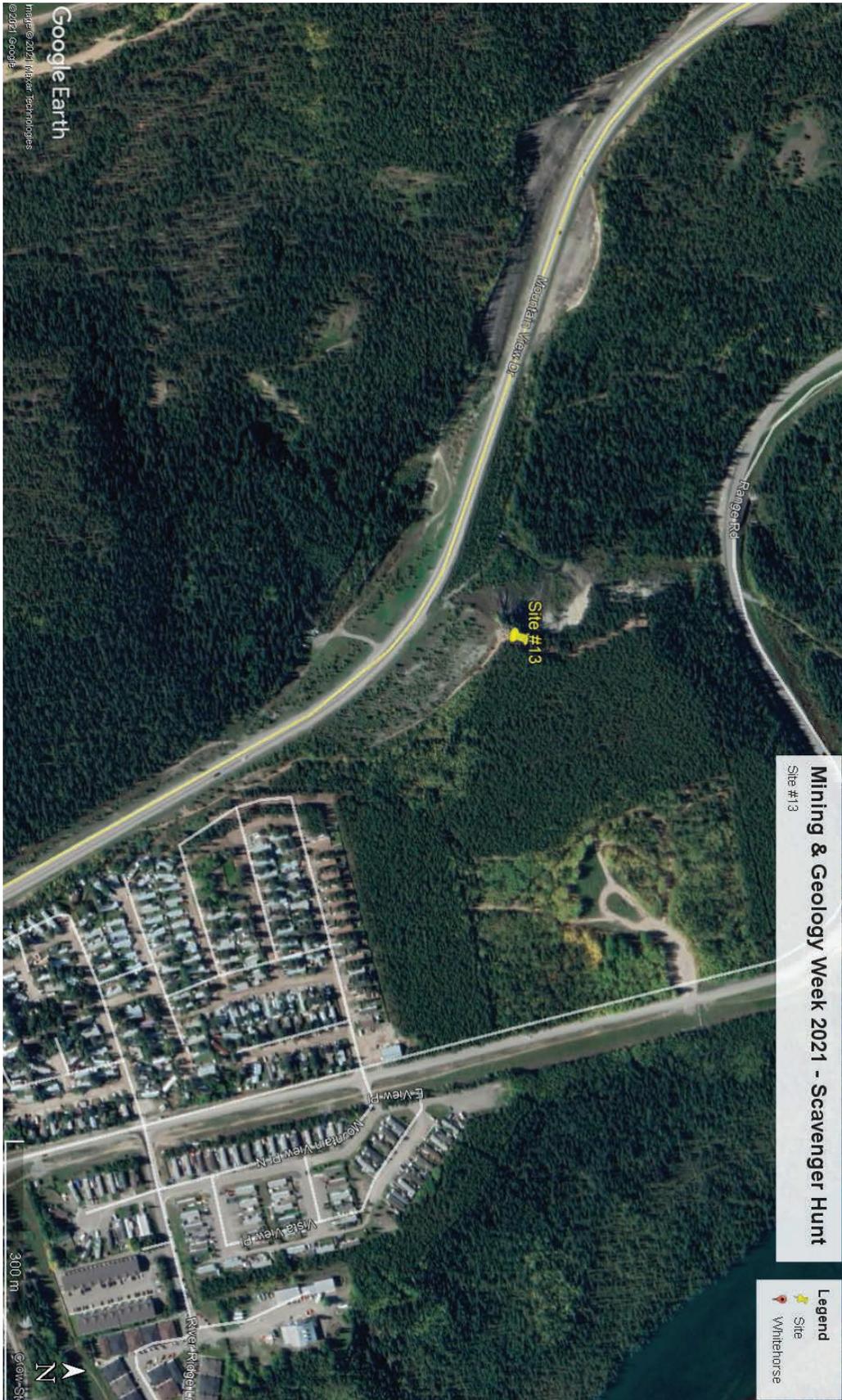
RESOURCES



WHITEHORSE

#13. GEOHAZARD: MUDSLLIDE

RESOURCES



WHITEHORSE

#14. KETTLE LAKES / #16. MILES CANYON

RESOURCES

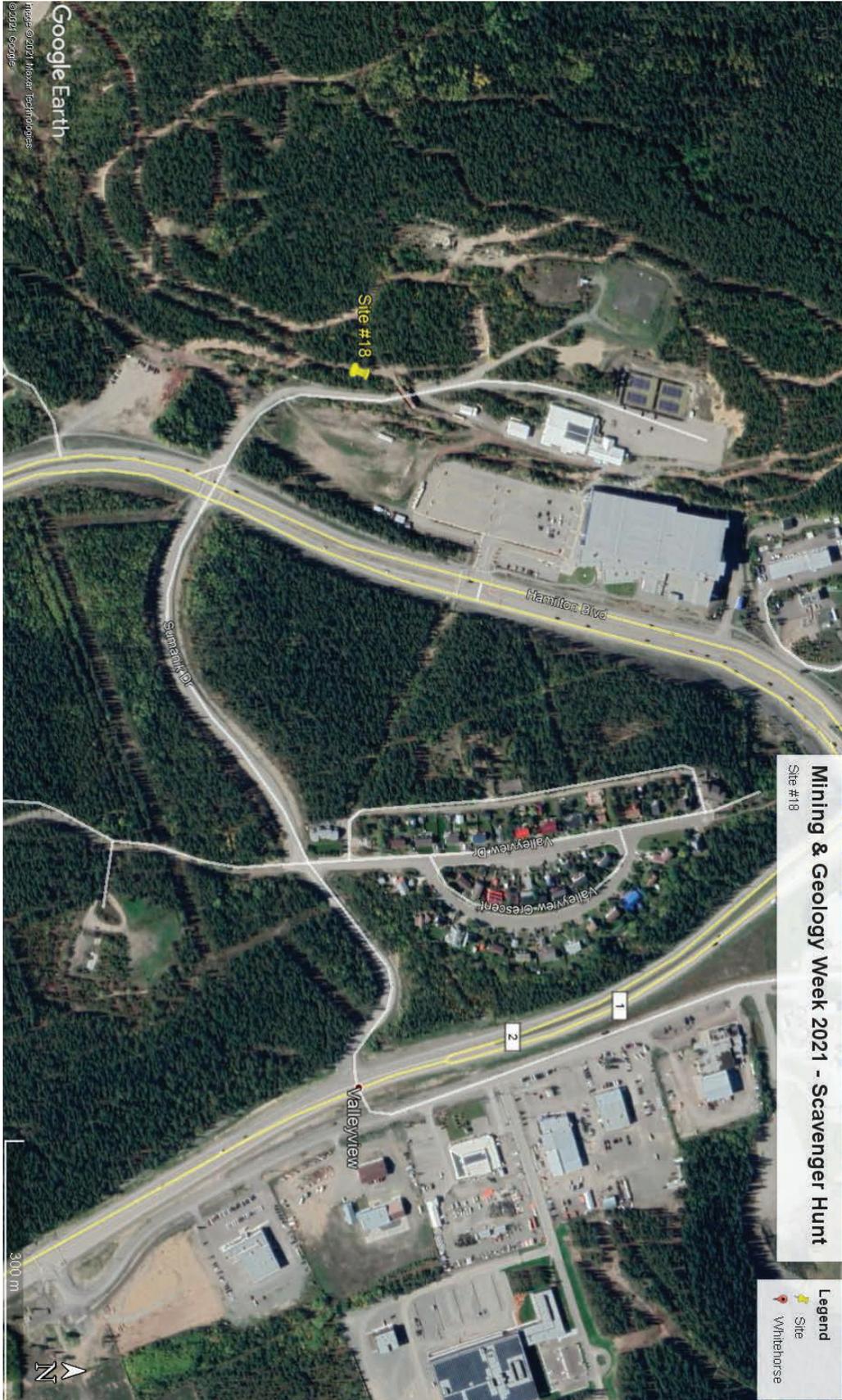


WHITEHORSE

#17. GREY MOUNTAIN CAVE

RESOURCES







YUKON MINING & GEOLOGY WEEK

SCAVENGER HUNT GUIDE



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