

**ASSESSMENT REPORT DESCRIBING THE 2019 FIELD SEASON INCLUDING:**

**DIAMOND DRILLING, REVERSE CIRCULATION DRILLING, AND GROUND GEOPHYSICS**

**ON THE MACMILLAN PASS PROJECT**

Work Completed between June 14 - October 1, 2019

**Claims List:**

Mayo Mining District		Mayo Mining District		Mayo Mining District		Mayo Mining District		Watson Lake Mining District:	
Claim Names	Grant Numbers	Claim Names	Grant Numbers	Claim Names	Grant Numbers	Claim Names	Grant Numbers	Claim Names	Grant Numbers
NS 1-38	YE43331-YE43368	NS 245	YE39194	Ace 1-Ace 17	YA07470-YA07486	Nidd 140	YA07343	Jason 33-Jason 34	Y 83274-Y 83275
NS 39-40	YE39161-YE39162	NS 247-NS 264	YE43577-YE43594	Ace 22-Ace 24	YA07487-YA07489	Nidd 142	YA07344	Jason 41-Jason 44	Y 83276-Y 83279
NS 41-NS 54	YE43371-YE43384	NS 265-NS 266	YE39196-YE39197	Ace 31-Ace 32	YA07490-YA07491	Nidd 144-Nidd 158	YA07345-YA07359	Jason 85-Jason 92	Y 84507-Y 84514
NS 55-NS 56	YE39163-YE39164	NS 267-NS 340	YE39207-YE39280	Ace 36-Ace 38	YA07492-YA07494	Nidd 161	YA07361	Jason 115-Jason 116	Y 84515-Y 84516
NS 57-NS 70	YE43387-YE43400	BR 1-BR 191	YE43601-YE43948	Jason 189-Jason 191	YA15148-YA15150	Nidd 163	YA07362	Jason 123-Jason 124	Y 84517-Y 84518
NS 71-NS 72	YE39165-YE39166	BR 193	YE43793	Jason 198-Jason 222	YA38265-YA38289	Nidd 165	YA07363	Jason 131-Jason 134	Y 84519-Y 84522
NS 73-NS 86	YE43403-YE43416	BR 195	YE43795	Jason 223-Jason 240	YA41288-YA41305	Nidd 167	YA07364	Jason 137	Y 84525
NS 87-NS 88	YE39167-YE39168	BR 197	YE43797	Mac 818-Mac 820	YD120084-YD120086	Nidd 169	YA07365	Jason 84	Y 84530
NS 89-NS102	YE43419-YE43432	BR 199	YE43799	Mac 1-Mac 2	YD120158-YD120159	Nidd 171	YA07366	Jason 161-Jason 176	Y 93952-Y 93967
NS 103-NS 104	YE39169-YE39170	BR 201	YE43801	Mac 803-Mac 812	YD120262-YD120271	Nidd 173-Nidd 175	YA07367-YA07369	Jason 135	Y 94471
NS 107-NS 118	YE43437-YE43448	BR 203-BR 312	YE43803-YE43912	Mac 760-Mac 759	YD128081-YD128082	Nidd 183	YA07375	Jason 19-Jason 20	Y 96210-Y 96211
NS 119-NS 120	YE39171-YE39172	BR 317-BR 318	YE43917-YE43918	Mac 762a-Mac 761a	YD128101-YD128102	Nidd 248-Nidd 253	YA07436-YA07441	Jason 31-Jason 32	Y 96222-Y 96223
NS 123-134	YE43453-YE43464	BR 323-BR 334	YE43923-YE43934	Mac 503-Mac 758	YD128103-YD128358	Nidd 257-Nidd 260	YA07445-YA07448	Jason 39-Jason 40	Y 96228-Y 96229
NS 135-NS 136	YE39173-YE39174	BR 339-BR 340	YE43939-YE43940	Mac 758-Mac 776	YD128358-YD128376	Nidd 275-Nidd 278	YA07449-YA07452	Mike 1-Mike 2	YA00024-YA00025
NS 139-NS 150	YE43469-YE43480	BR 345-BR 348	YE43945-YE43948	Mac 779-Mac 802	YD128379-YD128402	Nidd 283-Nidd 284	YA07453-YA07454	Mike 3	YA08005
NS 151-NS 152	YE39175-YE39176	MC 1-MC 309	YE29071-YE29459	Mac 3-Mac 502	YD151503-YD152002	Nidd 317-Nidd 346	YA15428-YA15457	Ace 18-Ace 21	YA11526-YA11529
NS 153-NS 166	YE43483-YE43496	MC 311	YE29461	Mac 813-Mac 817	YD74032-YD74036	Nidd 401-Nidd 402	YA43328-YA43329	Ace 25-Ace 30	YA11530-YA11535
NS 167-NS 168	YE39177-YE39178	MC 313	YE29463	Kobuk 1-Kobuk 8	YA06587-YA06594	Nidd 404-Nidd 405	YA43331-YA43332	Ace 33-Ace 35	YA11536-YA11538
NS 169-NS 178	YE43499-YE43508	MC 315	YE29465	Nidd 14	YA07254	Nidd 407	YA43334	Ace 39-Ace 40	YA11539-YA11540
NS 179-NS 180	YE39179-YE39180	MC 317	YE29467	Nidd 16	YA07256	Nidd 409	YA43336	Mike 4-Mike 10	YA11541-YA11547
NS 181-NS 190	YE43511-YE43520	MC 319-MC 335	YE29469-YE29485	Nidd 18	YA07258	Nidd 411	YA43338	Jason 177-Jason 188	YA20135-YA20146
NS 191-NS 192	YE39181-YE39182	MC 337	YE29487	Nidd 20-Nidd 40	YA07260-YA07280	Nidd 413	YA43340	Jason 192-Jason 197	YA35586-YA35591
NS 193-NS 202	YE43523-YE43532	MC 338	YE29488	Nidd 47-Nidd 51	YA07281-YA07285	Nidd 415	YA43342	Jerry 1-Jerry 142	YE36371-YE36512
NS 203-NS 204	YE39183-YE39184	MC 339	YE29489	Nidd 55-Nidd 58	YA07286-YA07289	Nidd 416	YA43343	Jerry 144-Jerry 184	YE36514-YE36554
NS 205-NS 212	YE43535-YE43542	MP 1-MP 74	YE29341-YE29414	Nidd 63-Nidd 66	YA07290-YA07293	Nidd 427-Nidd 428	YA43354-YA43355	Jerry 187-Jerry 209	YE36557-YE36579
NS 213-NS 214	YE39185-YE39186	Jason 1-Jason 4	Y 96192-Y 96195	Nidd 70-Nidd 73	YA07294-YA07297	Nidd 476-Nidd 496	YA62598-YA62618	Jerry 214-Jerry 221	YE36584-YE36591
NS 215-NS 217	YE43545-YE43547	Jason 7-Jason 18	Y 96198-Y 96209	Nidd 76-Nidd 79	YA07298-YA07301	Nidd 498	YA62619	Jerry 223-Jerry 225	YE36593-YE36595
NS 218	YE43547	Jason 21-Jason 30	Y 96212-Y 96221	Nidd 81-Nidd 85	YA07302-YA07306	Nidd 500-Nidd 502	YA62620-YA62621		
NS 219-NS 226	YE43549-YE43556	Jason 35-Jason 38	Y 96224-Y 96227	Nidd 88-Nidd 93	YA07307-YA07312	Nidd 504-Nidd 558	YA62622-YA63271		
NS 227- NS 228	YE39189-YE39190	Jason 45-Jason 48	Y 97986-Y 97989	Nidd 95-Nidd 101	YA07313-YA07319	Nidd 575-Nidd 634	YA63288-YA63347		
NS 229	YE39188	Jason 49-Jason 82	Y 98244-Y 98277	Nidd 104-Nidd 110	YA07320-YA07326	Nidd 699-Nidd 730	YA63614-YA63645		
NS 230	YE39193	Jason 93-Jason 114	Y 98278-Y 98299	Nidd 115-Nidd 122	YA07327-YA07334	Nidd 789-Nidd 795	YA63704-YA63710		
NS 231-NS 242	YE43561-YE43572	Jason 117-Jason 122	Y 98300-Y 98305	Nidd 130-Nidd 136	YA07335-YA07341	Nidd 803-Nidd 813	YA64170-YA64180		
NS 243	YE39191	Jason 125-Jason 130	Y 98306-Y 98311	Nidd 138	YA07342	Nidd 815-Nidd 818	YA64182-YA64185		
NS 244	YE39192	Jason 141-Jason 160	Y 98312-Y 98331						

NTS Sheets: 1050 - Niddery Lake (105001)

Latitude: 63.1651° Longitude: -130.1608°

UTM (NAD 83, Zone 9): Easting: 441534nE Northing: 7004513mN

Watson Lake and Mayo Mining District, Yukon Territory

**Fireweed Zinc Ltd.**

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June 17, 2019

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## 1 Summary

The Macmillan Pass Project consists of 2,902 quartz mining claims covering 544 km<sup>2</sup> and is located approximately 230 km north of the town of Ross River in both the Watson Lake and Mayo Mining Districts, Yukon Territory.

The project covers two significant sediment-hosted, lead-zinc-silver deposits called the Tom and Jason deposits as well as numerous advanced prospects and exploration targets. The deposits are hosted within the prolific black shales of the Paleozoic Selwyn Basin.

During the 2019 field season Fireweed Zinc carried out a large field program consisting of ground geophysics (ground gravity and passive seismics), diamond drilling and reverse circulation (RC) drilling, and flew an airborne LiDAR survey.

The total expenditures for the 2019 program were approximately \$3,272,000, including approximately \$460,000 for fixed wing and rotary wing, \$127,000 for fuel, \$730,000 for diamond drilling, \$133,000 for RC drilling, \$182,000 for assays, \$199,000 for the LiDAR acquisition, \$135,000 for the geophysical program, with approximately \$668,000 for camp, food, equipment, supplies, and rental etc.

The 2019 program was successful in expanding known mineralization at the Tom deposit (i.e. Tom North), confirming existing mineralization at the Boundary Zone, and defining new exploration targets to be tested in subsequent programs.

## 2 Introduction

The Macmillan Pass Project is located approximately 230 km north of the town of Ross River in both the Watson Lake and Mayo Mining Districts and is accessible via the North Canol Highway from Ross River.

The property covers two significant sediment-hosted, lead-zinc-silver (Pb-Zn-Ag) deposits called the Tom and Jason deposits with a combined resource of:

- 11.21 Mt Indicated @ 9.61% ZnEq (6.59% Zn, 2.48% Pb, 21.33 g/t Ag), and
- 39.47 Mt Inferred @ 10.00% ZnEq (5.84% Zn, 3.14% Pb, 38.15 g/t Ag)

(\*See Fireweed news release dated January 10, 2018 for background information and QP statement.)

The property also covers a number of advanced prospects such as the Boundary Zone and the End Zone as well as several significant exploration targets.

During the 2019 field season Fireweed Zinc carried out a large exploration program at the Tom deposit, the Boundary Zone and carried out regional exploration consisting of: ground geophysics, diamond drilling (16 holes for 2,357m), reverse circulation (RC) drilling (17 holes for 268.5m), and LiDAR data acquisition.

## 3 Property Description and Location

The Macmillan Pass Property is located in the easternmost part of Canada's Yukon Territory, approximately 230 km north of Ross River along the North Canol Highway (Latitude 63°10'N, Longitude

130°09'W, NTS Sheet 105O-01) (Figure 3.1.). The project consists of 2,902 quartz mining claims covering 544 km<sup>2</sup> (including 144 mining leases). (Figure 3.2., Appendix I.)

The property consists of nine contiguous groups of claims: Tom, Jason, Mac, Jerry, MC, MP, NS, BR, and Nidd. These groups have been acquired by Fireweed Zinc through five separate agreements and are discussed below.

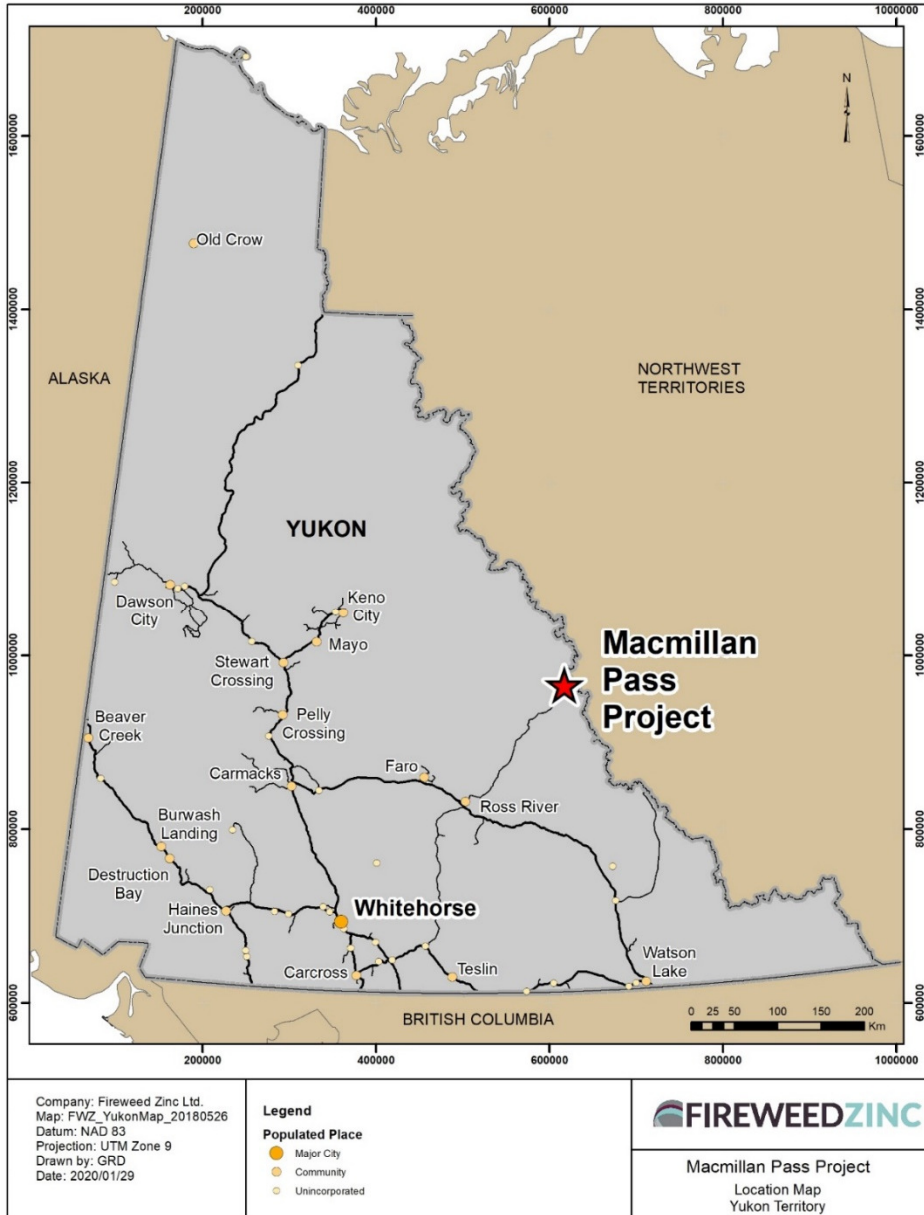


Figure 3.1. A map of the Yukon showing the location of the Macmillan Pass Project.

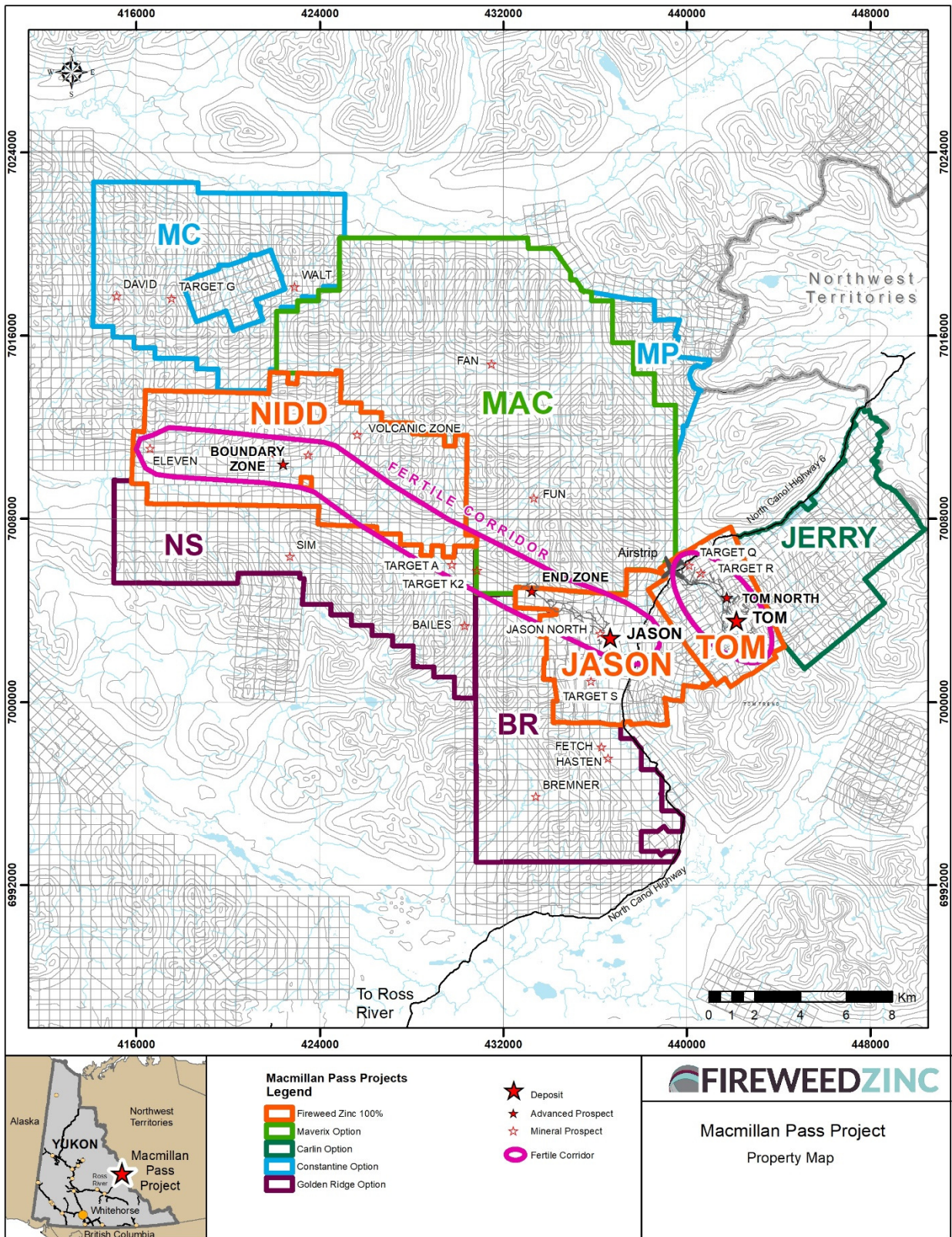


Figure 3.2. A claim map of the Macmillan Pass Project.

### 3.1 Tom Mining Leases

On December 14, 2016, Fireweed signed a Definitive Option Agreement to acquire the Tom mining leases and surface claims and associated permits, licenses, and hard assets from Hudbay Minerals Inc. (“Hudbay”). On February 7, 2018 Fireweed exercised the option and is now the 100% owner of the leases, permits, licenses etc. There are no NSR encumbrances on the Tom leases.

### 3.2 Jason Claims

The Jason claims were acquired by Fireweed in the same agreement described above, however, the Jason claims were purchased by Hudbay on August 2006 from a consortium of companies and are subject to a 3% net smelter royalty (NSR). In acquiring the original agreement, Fireweed has the right to purchase 1.5% of the royalty for C\$1.25 million and the remaining 1.5% of the NSR for C\$4.0 million.

### 3.3 Mac Claims

On July 24, 2017 Fireweed signed an option agreement with Newmont Canada Holdings ULC (“Newmont”) for the MAC claims. On June 29, 2018 Newmont sold the MAC claims option agreement to Maverix Metals Inc. of Vancouver in a larger transaction whereby Maverix purchased a number of royalties and other assets from Newmont. As such the new optionor of the MAC claims is Maverix Metals.

Per the option agreement, the Company can acquire a 100% interest in the MAC claims located on the northwest extension of the Company’s Tom and Jason claims, by paying \$450,000 in staged cash payments over four years (remaining payments \$225,000 through July 24, 2021), maintaining the MAC claims in good standing, and granting Maverix production royalties on the MAC claims as follows: 0.25% NSR on base metals, 1% NSR on silver and 3% NSR on gold.

### 3.4 MC/MP and Jerry Claims

In May 2018, Fireweed announced an option agreement with joint venture partners Constantine Metal Resources Ltd. (“Constantine”) and Carlin Gold Corporation (“Carlin”) to acquire a 100% interest in the MC, MP, and Jerry claims (624 claims total). Constantine transferred its right, title and interest in and to its portion of the claims and assigned its rights and interest in and to the associated option agreement to its wholly-owned subsidiary, Epica Gold Inc. and later transferred 100% interest in Epica to its spinoff company, HighGold Mining Inc. (TSX.V: High). As such the current registered owners and optionors of the claims are Epica and Carlin.

The Company can exercise this option and acquire 100% interest in the claims by making payments totaling \$500,000 and issuing 300,000 Fireweed shares over three years to Constantine/Epica and Carlin (remaining payments \$300,000 and 100,000 shares through May 9, 2021). Half of these payments are to Constantine/Epica and half to Carlin. The Company may prepay any of the option payments and/or prepay the entire purchase price at any time.

Although not part of the consideration payable to exercise the option, the Company will pay an additional \$750,000 or equivalent in shares at the Company’s option, upon receiving a resource calculation of at least 2.0 million tonnes of indicated (or better) resource on any part of the Epica-Carlin claims. Epica-Carlin will retain the right to receive an NSR on any future mine production from the Epica-Carlin claims as follows: 0.5% NSR on base metals and silver and 2% NSR on all other metals including gold. Fireweed maintains a right of first refusal on the sale of any NSR royalty from these claims by Epica and/or Carlin (see the Company’s latest Management Discussion & Analysis posted on [www.sedar.com](http://www.sedar.com) for details).

### 3.5 NS/BR Claims

In May 2018, Fireweed announced an option agreement with Golden Ridge Resources Ltd. (“Golden Ridge”) to acquire a 100% in the 333 NS, and 326 BR quartz claims (659 claims total). The Company can exercise the option and acquire 100% interest in the claims by making payments totaling \$500,000 and issuing 450,000 shares over three years to Golden Ridge (remaining payments \$350,000 and 200,000 shares). The Company may prepay any of the option payments and/or prepay the entire purchase price at any time.

Although not part of the consideration payable to exercise the option, the Company will pay an additional \$750,000 or equivalent in shares at the Company’s option, to Golden Ridge, upon receiving a resource calculation of at least 2.0 million tonnes of indicated (or better) resource on any part of the BR and NS claims.

Golden Ridge will retain the right to receive net smelter return royalties on any future mine production from the BR and NS claims as follows: 0.5% NSR on base metals and silver and 2% NSR on all other metals, including gold. There is also a third party 3% NSR on any future cobalt production from the BR and NS claims. The Company will have the right to purchase one half of these NSR royalties (excluding the cobalt royalty) for \$2.0 million at any time prior to the commencement of commercial production. The Company maintains a right of first refusal on the sale of any NSR royalty from the BR and NS claims by Golden Ridge (see Company’s latest Management Discussion & Analysis posted on [www.sedar.com](http://www.sedar.com) for details).

### 3.6 Nidd Claims

In November 2018, Fireweed announced a purchase agreement with Teck Metals Ltd. (“Teck”), a subsidiary of Teck Resources Limited, to acquire the Nidd property on the western extension of the Macmillan Pass Zinc Project in Yukon, Canada. The Nidd property consists of 372 mineral claims covering 7,393 hectares. Under the terms of the agreement, Fireweed acquired a 100% interest in the property for 1,500,000 Fireweed shares, and Teck retains a 1% NSR on future production from the Nidd property and the right to first offer to purchase from Fireweed, future production concentrates from the Nidd property.

## 4 Physiography, Climate, and Accessibility

### 4.1 Physiography

The Macmillan Pass project is in the Hess Mountain region of the Selwyn Mountains, part of the western North American Cordillera. Elevations in the project area range between approximately 1,125 m in the valley bottoms to approximately 2,100 m at the peaks near the Tom Deposit. The tree line is at approximately 1,350 m and the mountain tops are covered by alpine vegetation. Vegetation below 1,350 m is dominated by mixed deciduous and conifer forest consisting mainly of black spruce (section taken from the NI 43-101 technical report dated January 10, 2018 posted on [www.sedar.com](http://www.sedar.com) ).

### 4.2 Climate

The Macmillan Pass property is within the subarctic region of the Yukon with temperatures averaging -25°C in the winter and +17°C in the summer, although extreme temperatures of -45°C are not uncommon. Precipitation data from Ross River (the nearest community) show that average annual rainfall in the region

is 161.3 mm. Average annual snowfall is 98 cm, with a range between 146 and 67 cm over 15 years of records.

The effective summer field season runs from early June to late October and road access is dependent on when the ferry crossing the Pelly River at Ross River opens and closes for the season.

### 4.3 Accessibility

The property is accessible via exploration roads and trails from the North Canol Highway from Ross River and the Robert Campbell Highway (Whitehorse to Ross River). A government-maintained airstrip (Macmillan Pass) is located on the property at Northing: 7005784mN, Easting: 439392mE or Latitude: 63.1765°, Longitude: -130.2026°.

For the start of the 2019 program, a small crew (5 people) drove to the site via the North Canol Highway on June 11 to open the camp and prepare for the season. At peak season approximately 49 people were based out the Tom Camp (441,564mE 7,004,535mN - NAD83 Zone 9). The camp is serviced via road and airstrip.

## 5 History

The large Macmillan Pass property has seen many phases of exploration under a number of different operators over its history. The claims and leases covering the Tom deposit, the original SEDEX discovery in the district, had been held continuously by Hudbay since being staked in 1951. The Jason claims, originally staked by the Ogilvie Joint Venture in 1971 prior to the discovery of the Jason zone later that year, were held by a number of operators until Hudbay consolidated the two deposits in 2007. Fireweed acquired the Tom and Jason claims in 2018 from Hudbay.

The Mac claims were staked in 2011 by Newmont, who were looking for gold in 2011 and 2012. The Mac claims were optioned to Fireweed Zinc in 2017.

The MC, MP, and Jerry claims were initially staked in 2010 by the Carlin-Constantine Joint Venture, who explored the district for Carlin-style gold mineralization until the property was optioned to Fireweed Zinc in 2018.

The NS and BR claims were initially staked by Golden Ridge, who briefly explored the ground to assess its cobalt and zinc potential before optioning the ground to Fireweed Zinc in 2018.

The Tom and Jason claims have seen the most work of all the claim groups since the discovery of the Tom deposit in 1951 and the Jason deposit in 1972. A total of 243 holes have been drilled on the Tom property since 1951 (including this year's drilling) for a total of 39,862 m, and a total of 179 holes have been drilled on the Jason property (including End Zone and exploration holes) for a total for 50,806m. All together 422 holes have been drilled for a total of 90,669m on the Macmillan Pass property.

The Tom deposit saw a period of extensive underground exploration between 1969 and 1982 when a decline was developed into the Tom West and Tom East zones. A total of 3,423m of underground workings were excavated on the Tom Deposit before being decommissioned and plugged by 2010.

The Nidd property was staked between 1976 and 1981 to cover the western extension of the stratigraphy that hosts the Tom and Jason Deposit (Rhodes, 1992). Cominco carried out numerous exploration programs between 1976 and 1991 including geological mapping, soil and rock geochemistry, geophysics, diamond drilling, road building and trenching. During the late 1980s and early 1990s Cominco drilled a total of 26 holes on the Nidd property with 6 holes in what's now called the Boundary Zone. Fourteen of the 26 holes intersected zinc mineralization and the best result was hole NB83-8 which intersected 224.0 m of 2.5% Zn and 0.3% Pb including 4.5 m of 16.4% Zn demonstrating potential for both bulk tonnage open pit and high-grade underground mineralization.

## 6 Regional Geology

The Macmillan Pass project lies within the Paleozoic Selwyn Basin, a deep-water marine basin off the passive margin of ancestral North America (Rennie 2007; Goodfellow, 2007) (Figure 6.1). The basin consists of a thick package of sedimentary rocks beginning with the late Proterozoic to Cambrian Windermere Supergroup, a thick sequence of continentally derived sediments. These are in turn overlain by the late Cambrian to Ordovician carbonate rocks of the Rabbitkettle Formation and then by the deep-water cherts and shales of the Ordovician to early Devonian Road River Group. The Road River Group is overlain by the chert, black shales, and turbidite sediments of the Devonian to Mississippian Earn Group that hosts the Tom and Jason Deposits as well as other lead-zinc and barite mineralization in the Macmillan Pass area (Figure 6.2).

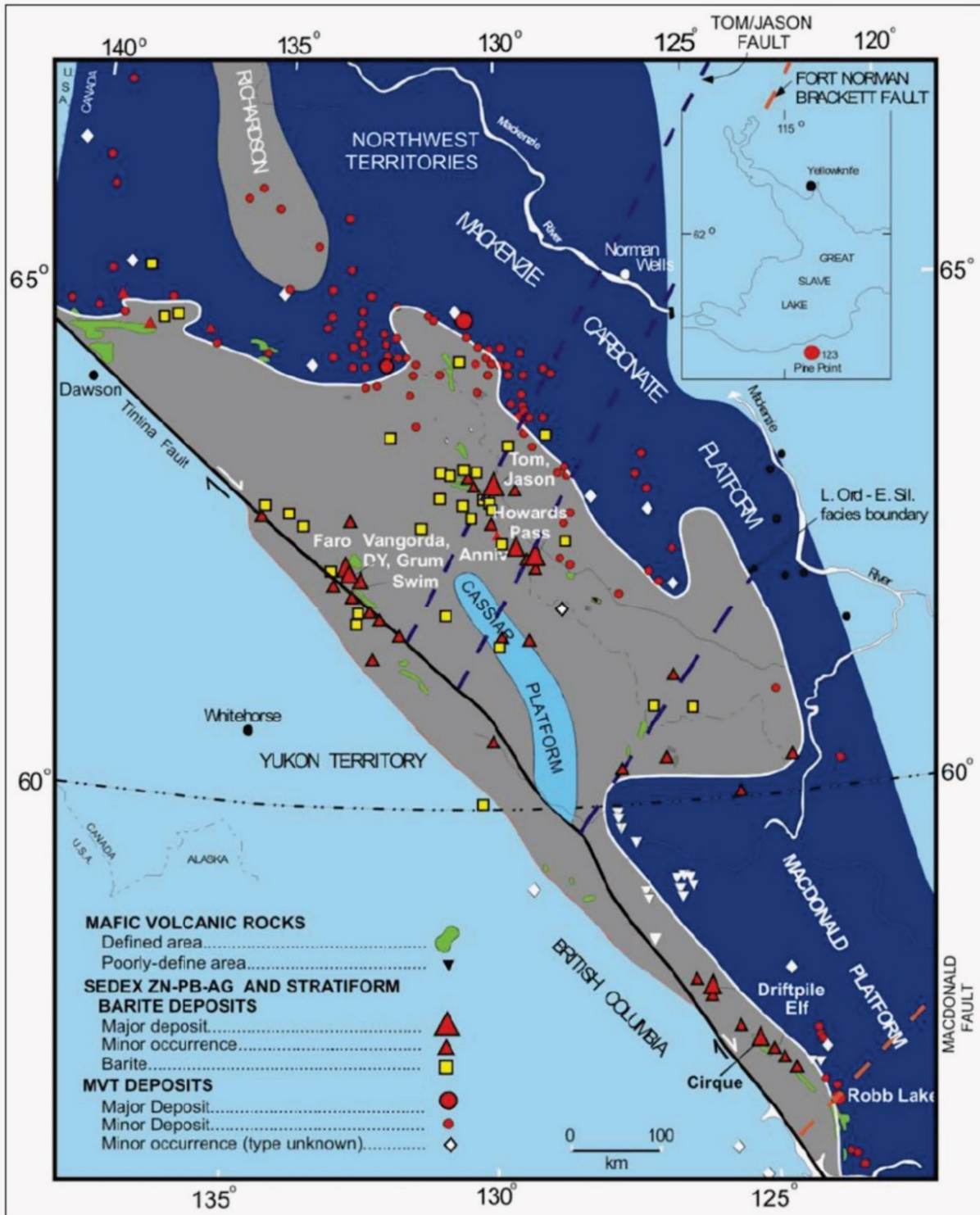


Figure 4.3. Regional Geological Setting of lead-zinc-silver deposits of the Selwyn Basin, including Tom and Jason deposits (Goodfellow, 2007).

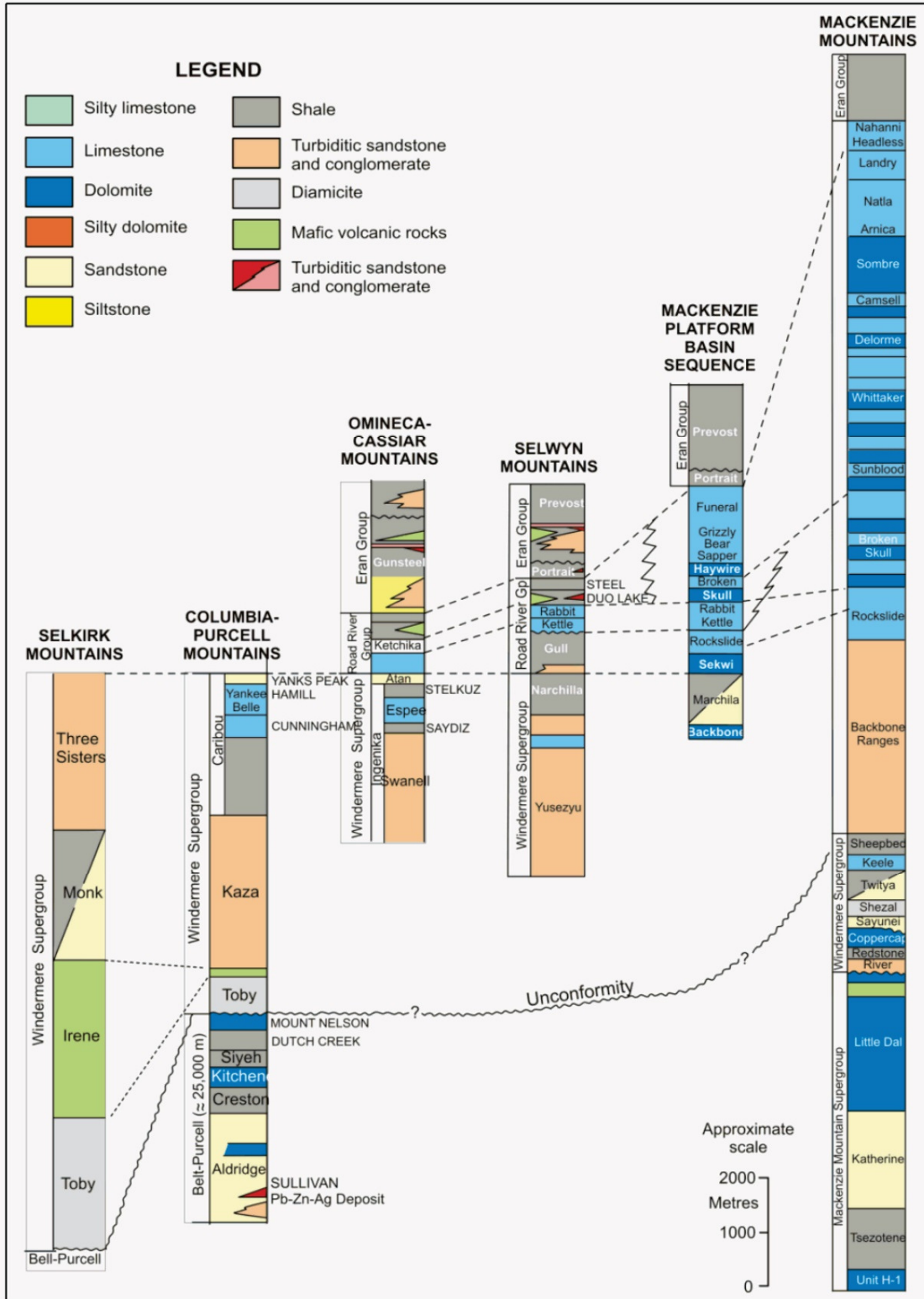


Figure 6.2. Stratigraphy of the Selwyn Basin and Belt Purcell Group (from Goodfellow, 2007).

## 7 Property Geology

The following is a brief description of the geology of the Macmillan Pass deposits. For a detailed description of the deposit geology the reader is referred to Turner (1991), Goodfellow (1991), and Rennie (2007). The Macmillan Pass Project covers at least three distinct occurrences of shale-hosted, stratiform lead-zinc-silver (Pb-Zn-Ag) mineralization called Tom, Jason, and End Zones, and one zone of brecciated and vein-hosted zinc mineralization called the Boundary Zone. The Tom and Jason deposits make up the current resources on the Macmillan Pass Project, and the End Zone and Boundary Zone have significant mineralization drilled but not yet classified as mineral resources (Figure 7.1.).

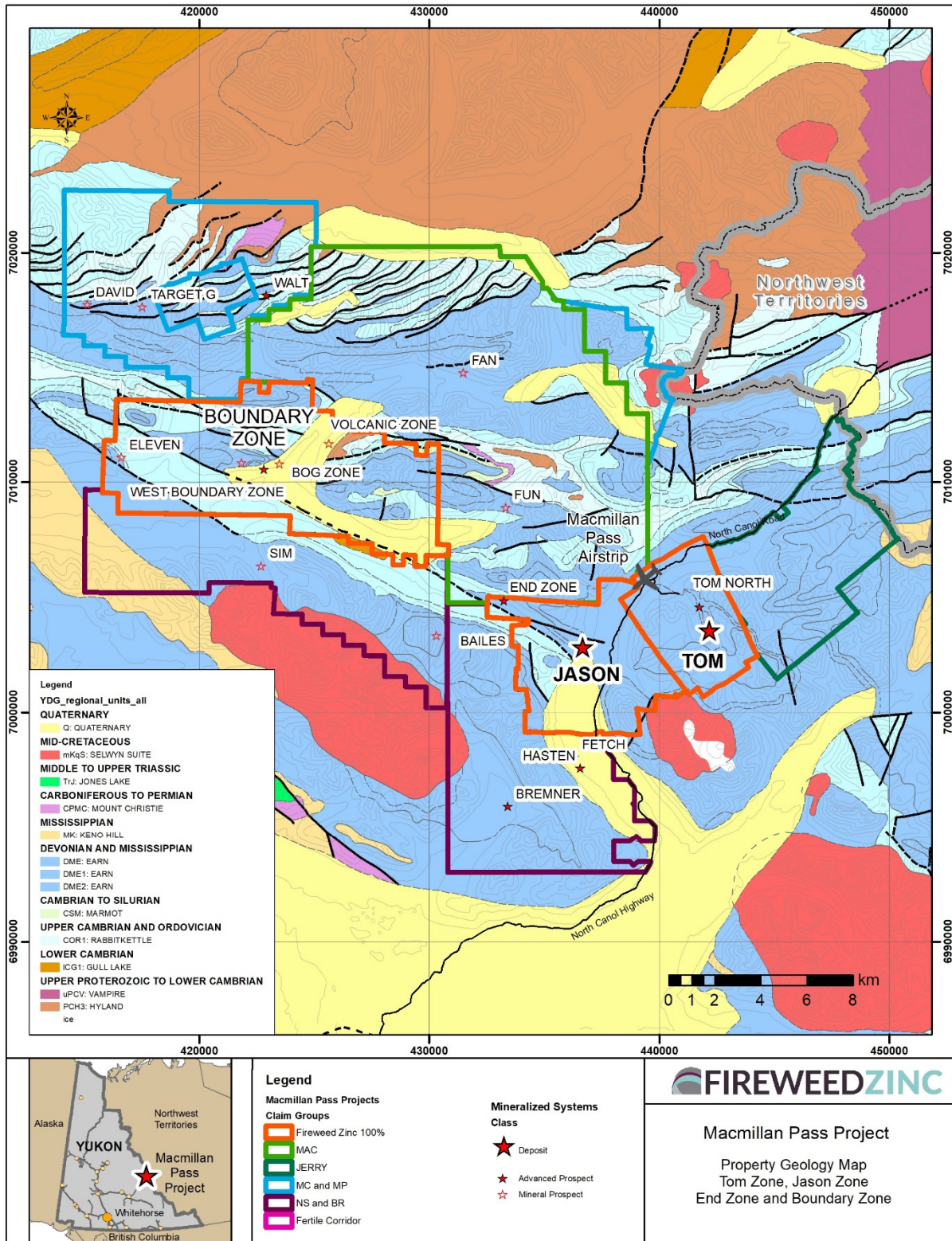


Figure 7.1. A geology map of the Macmillan Pass Project (Geology from YGS).

The shale-hosted Pb-Zn-Ag deposits occur within the Portrait Lake Formation at or near the contact between the Fuller Lake Member and the MacMillan Pass Member, while the Boundary Zone mineralization occurs at or near the base of the MacMillan Pass Member. The Fuller Lake Member consists of massive to thinly laminated, carbonaceous to siliceous, pyrite-rich mudstone, while the MacMillan Pass Member generally consists of interbedded black mudstone with grey siltstone and sandstone (“pinstripe mudstone”) with coarse sandstone and conglomerate sections (Figure 7.2) and mafic volcanic and volcanoclastic rocks at or near the base.

Code	Group	Formation	Member	Submember		
ITS	Earn	Itsi Formation				
FLU		Portrait Lake Formation	Fuller Lake Member (Tom member informal)	Undifferentiated		
FLE				Eggshell submember		
FLX				Cherty submember		
FLG				Gritty submember		
FLC				Carbonaceous submember		
MMP				Tom Deposit	Jason Deposit	Undifferentiated
MMPu			MacMillan Pass Member	Boundary Zone	Upper "pinstriped" shale submember	
MMC					Middle coarse submember - Conglomerate facies	
MMC					Middle coarse submember - Sandstone facies	
MMPI					Lower "pinstriped" Shale submember	
NL			Niddery Lake Member			
MVV			none	MacMillan Pass volcanics		mafic flows, volcanoclastics
MVI						gabbro sills and dykes
SAF	Road River		Sapper Formation			
STF		Steel Formation				
DLF		Duo Lake Formation				

Figure 7.2. Detailed stratigraphy around the Tom and Jason Deposits.

## 7.1 The Tom Deposit

The Tom deposit, including the Tom West, Tom East, and Tom Southeast zones, consists of several varieties of mineralization ranging from well laminated, stratiform, barite-sphalerite(-galena-pyrite) mineralization to massive sulphide consisting of pyrite, galena, sphalerite and locally pyrrhotite. These two end members have been interpreted to represent distal vs. feeder-proximal environments for mineralization and grade into one another with lead and silver concentrations increasing towards the feeder and barite concentrations increasing toward the distal mineralization.

Mineralization at the Tom West Zone ranges from several meters to over 40 m thick at its thickest part. The zone strikes northwest, and dips approximately 60° to the southwest. It extends for approximately 1 km along strike and at least 400 m down dip where it remains open. The highest-grade portion of the Tom West Zone is along the southeastern margin where zinc+lead grades exceed 10% combined with elevated silver concentrations. This zone is interpreted to represent the feeder-proximal mineralization.

The Tom East Zone occurs near the hinge of a northwest trending anticline. This zone is structurally more complex than the Tom Main Zone and shows multiple generations of folding. It consists of high-grade sphalerite, galena, pyrite, pyrrhotite, and barite.

The Tom Southeast Zone is a thinner zone southeast of Tom West Zone with a limited number of historic drill holes.

The Tom North Zone is a large, lower grade zone north of the Tom West deposit. It consists of laminated sphalerite and barite hosted within laminated to massive carbonaceous mudstone. This zone has a similar

orientation as Tom West Zone but is separated from Tom West Zone by faulting and is probably the northern extension of Tom West across the fault. This zone is generally 10 to 20 m thick and has been traced for approximately 500 m along strike and 150 m down dip through drilling where it remains open.

## 7.2 The Jason Deposit

The Jason deposit, consisting of the Jason Main Zone and the Jason South Zone, consists of several varieties of mineralization ranging from distal, well laminated barite-sphalerite(-galena) mineralization to massive lead zinc sulfide to massive pyrite mineralization. The Jason deposit is interpreted to be hosted within the Jason synform with the two zones (Jason Main and Jason South) located on separate limbs of the fold. The synform fold nose has not been drill-tested at depth.

The Jason Main Zone is a concordant zone up to 40 m thick, extending approximately 1,200 m along strike. The zone strikes approximately 115° azimuth and dips sub-vertically (Rennie, 2007). The Jason South Zone consists of at least three horizons, termed Upper, Middle, and Lower. It is intensively disrupted by the Jason Fault, as well as by later crossing structures, which have cut the zone into several distinct blocks. The orientation for the South Zone is variable, although the general strike is more or less parallel to the Main Zone.

## 7.3 The End Zone

The End Zone is a small, fault-bound block of MacMillan Pass Member (and Fuller Lake Member) in fault contact with older Road River Group mudstones. This fault block contains high-grade, massive sulphide mineralization (dominantly galena, pyrite, pyrrotite and sphalerite), interpreted to be feeder-proximal mineralization similar to the feeder proximal mineralization at the Tom deposit.

## 7.4 The Boundary Zone

The Boundary Zone mineralization consists of sphalerite-siderite-pyrite and minor galena in veins, stockworks, interstitial disseminations, and as replacement of matrix and clasts within diamictites and chert pebble conglomerates. Boundary Zone is located adjacent to a major syn-sedimentary structure and contains large volumes of boulder diamictites indicating that the area underwent active tectonic extension during the formation of the basin, a similar setting to the Tom and Jason areas. The Boundary Zone area is part of a distinct sub-basin that contains significant volumes of strongly siderite altered basaltic pyroclastics and lava flows within the Earn Group. The presence of syn-sedimentary faulting, a distinct sub-basin, volcanic rocks, abundant zinc mineralization, and strong alteration indicate the area is host to a robust zinc mineralizing system.

Known mineralization at the Boundary Zone is spread over an area two kilometres long and 200-800 m wide with drilled mineralization in a central area 300 m long, 190 m deep (and open) and a true thickness of up to 285 m of over 2% Zn.

# 8 2019 Work Program and Results

The 2019 program had several objectives and included geophysical surveys, diamond drilling, reverse circulation (RC) drilling, and LiDAR, and each program is described in detail below.

## 8.1 Ground Gravity and Passive Seismics

The ground gravity data was collected by a six-person crew from Aurora Geosciences Ltd. of Whitehorse between June 25, and July 9, 2019. The 2019 survey grid was a western continuation of the grid collected during the 2018 season and consisted of 687 gravity stations on 21 lines-oriented NNE (N021°) and spaced 200 m apart (Figure 8.1.1.). At the end of the program a small grid consisting of 44 stations on two north south lines was completed over the Boundary Zone mineralization as a test line to characterize the gravity response of the zone. Future gravity work is recommended for the fertile corridor extending up to and beyond the Boundary Zone.

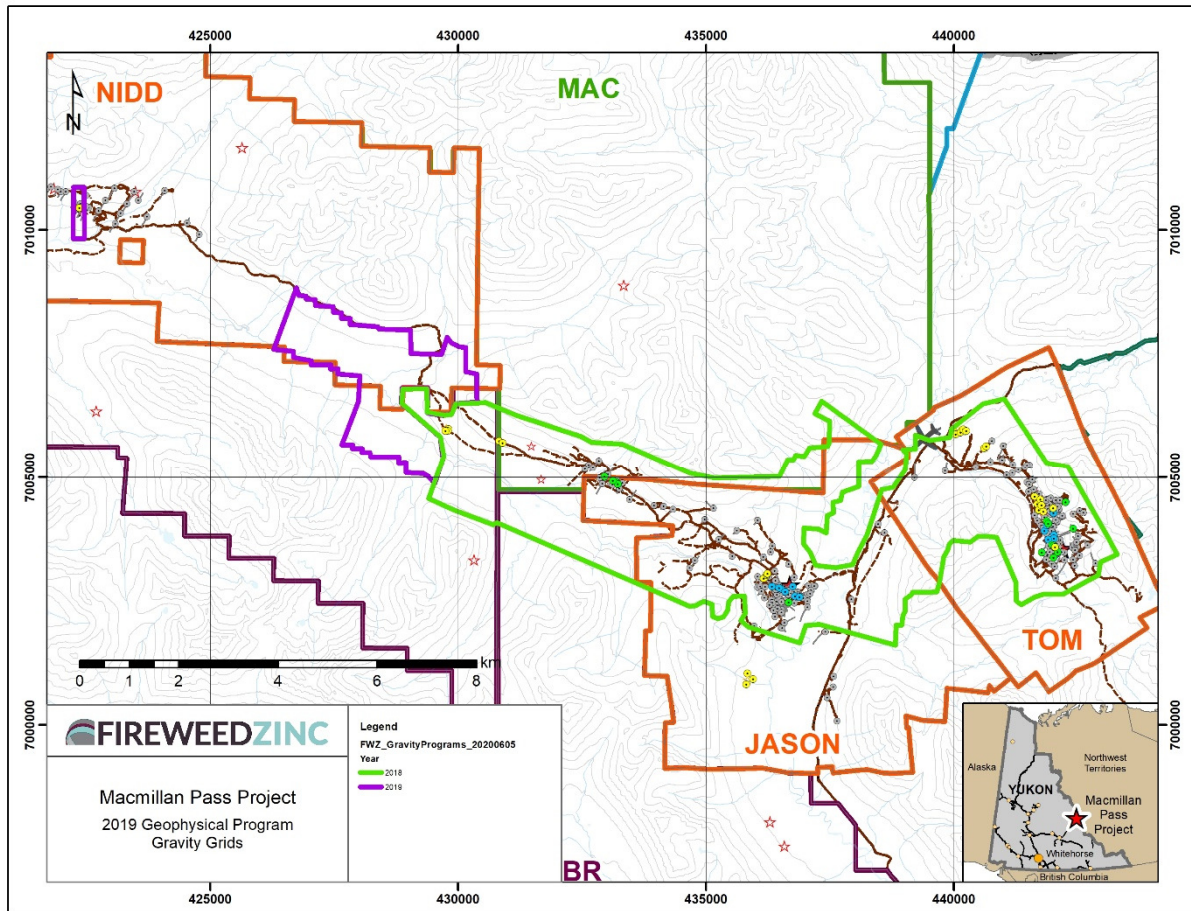


Figure 8.1.1. A map showing the location of the 2019 gravity grid extending NW from the 2018 grid.

The Bouguer Gravity data collected in 2018-2019 shows variation along the fertile corridor with anomalously high response targets associated with known mineralization (e.g. Tom and Jason) but also with locally dense mudstones (Figure 8.1.2.). The gravity surveys are sensitive enough to distinguish between variations in the mudstone (e.g. Vampire Formation vs MacMillan Pass Member). First (FOTR) and second (SOTR) order regional trends were removed from the data (Figure 8.1.3 and 8.1.4) to level the regional trends and highlight the localized trends within the data sets.

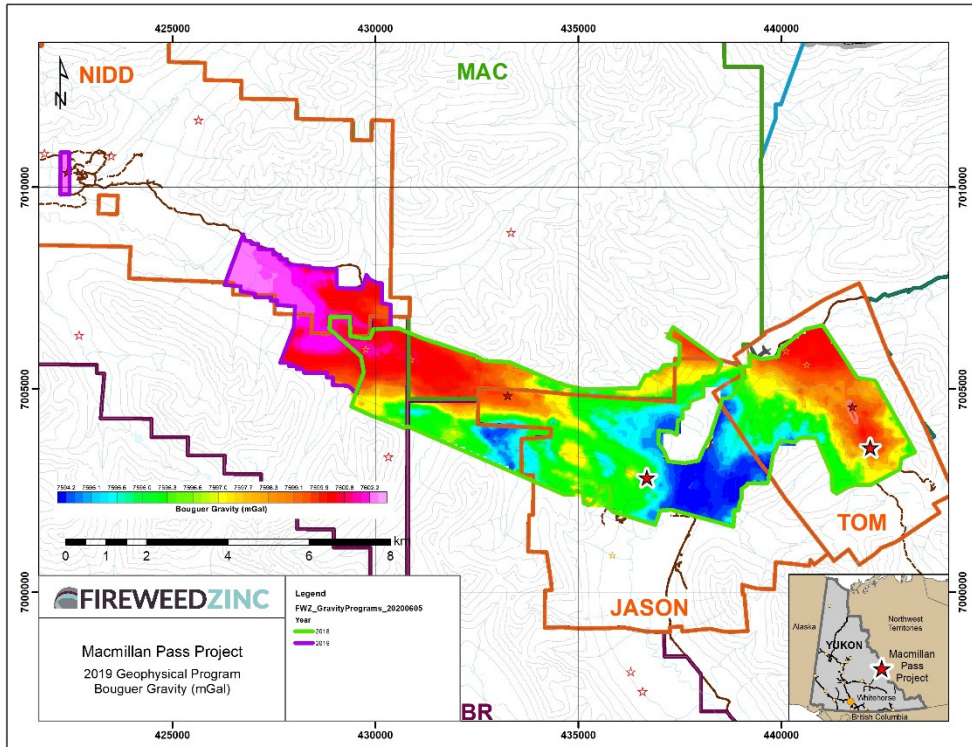


Figure 8.1.2. A map of the compiled Bouguer Gravity data for the 2018 and 2019 gravity programs.

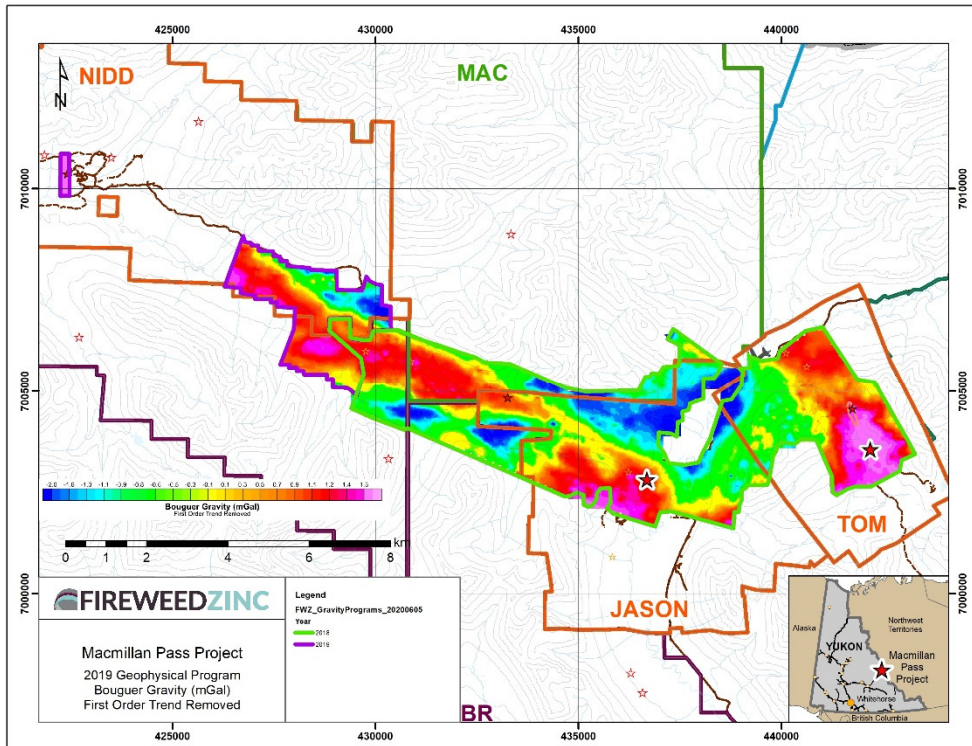


Figure 8.1.3. A map of the compiled Bouguer Gravity data with the first order trend removed (FOTR).

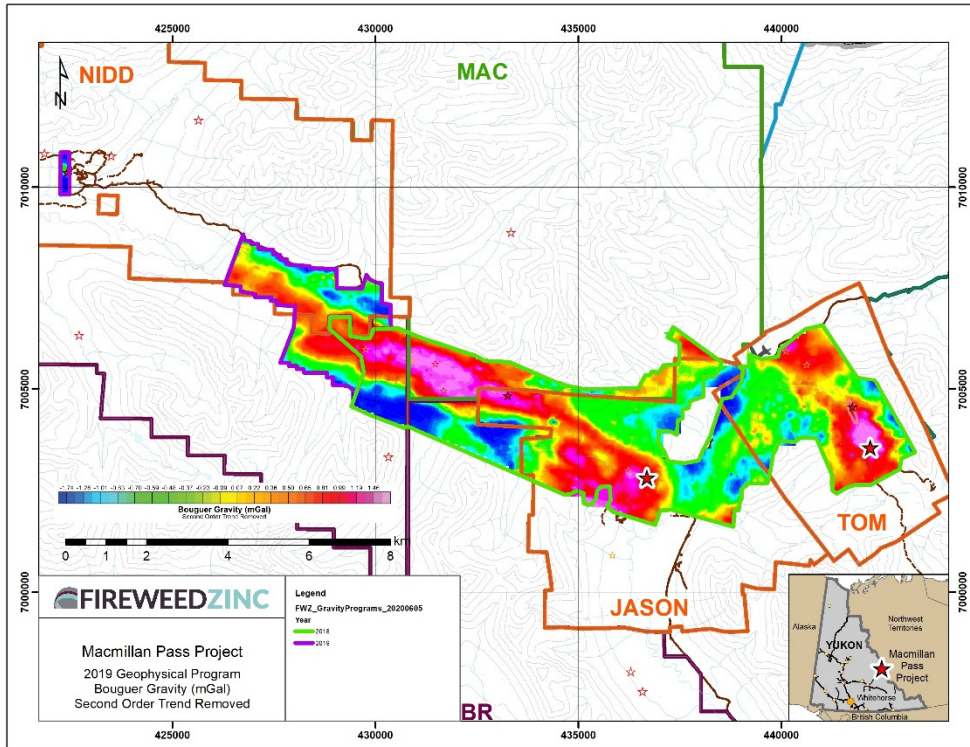


Figure 8.1.4. A map of the compiled Bouguer Gravity data with the second order trend removed (SOTR).

With the first and second order trends removed from the datasets, patterns begin to emerge that represent variations in the geology underlying the survey grid which may be associated with higher density, lead-zinc-silver mineralization. These gravity highs may also be associated with higher density mudstones or higher density mafic volcanic rocks of MacMillan Pass Volcanics. Further work is required to test the gravity anomalies and evaluate their potential to detect economic concentrations of lead-zinc mineralization.

## 8.2 Reverse Circulation (RC) Drilling

The RC drilling was carried out by Vision Quest based out of Whitehorse, Yukon between June 25 and July 3, 2019. A total of 17 reverse circulation (RC) drill holes were drilled on the Macmillan Pass property (**Table 8.2.1.**). These holes were drilled through the overburden and into bedrock to confirm the overburden depth and to confirm the bedrock composition. This data was used to verify the passive seismic overburden depth data collected in 2018-2019. The overburden depth data is used to correct the gravity data collected to remove overburden effects in the data. The 2019 RC program was successful in testing the overburden depth, which correlated well with the overburden estimates made by the passive seismic data.

Hole ID	Property/Prospect	UTM East	UTM North	Elevation CGVD28 (m)	Dip (°)	Azimuth (°) (True North)	Length (m)	Hole Type	Drill Started	Drill Completed
JSRC19-001	JASON	436229	7003018	1316	-50	5	24.4	RC	2019-06-25	2019-06-27
JSRC19-002	JASON	436235	7003038	1318	-50	5	16.8	RC	2019-06-27	2019-06-27
JSRC19-003	JASON	436242	7003051	1319	-60	5	20.7	RC	2019-06-27	2019-06-29
MPRC19-001	Target R	439994	7005942	1187	-90	0	10.7	RC	2019-06-22	2019-06-22
MPRC19-002	Target R	440040	7005879	1204	-90	0	6.1	RC	2019-06-22	2019-06-22

MPRC19-003	Target R	440136	7005914	1209	-90	0	7.6	RC	2019-06-23	2019-06-23
MPRC19-004	Target R	440226	7005936	1210	-90	0	9.1	RC	2019-06-23	2019-06-23
MPRC19-005	Target R	440191	7005972	1209	-90	0	5.5	RC	2019-06-24	2019-06-24
MPRC19-006	Target Q	440619	7005591	1315	-90	0	16.8	RC	2019-06-24	2019-06-24
MPRC19-007	Target Q	440658	7005632	1312	-90	0	15.2	RC	2019-06-24	2019-06-25
MPRC19-008	Target A	429799	7005947	1225	-90	0	21.3	RC	2019-06-28	2019-06-29
MPRC19-009	Target A	429751	7005947	1200	-90	0	13.7	RC	2019-06-29	2019-06-30
MPRC19-010	Target K2	430832	7005736	1325	-90	0	21.3	RC	2019-06-30	2019-06-30
MPRC19-011	Target K2	430903	7005703	1325	-90	0	21.3	RC	2019-06-30	2019-07-01
MPRC19-012	Target S	435844	7001033	1182	-90	0	16.8	RC	2019-07-01	2019-07-02
MPRC19-013	Target S	435816	7000818	1174	-90	0	22.9	RC	2019-07-02	2019-07-03
MPRC19-014	Target S	435951	7000922	1105	-90	0	18.3	RC	2019-07-03	2019-07-03

**Table 8.2.1.** A list of reverse circulation (RC) drill holes from the 2019 program on the Macmillan Pass Project (UTM NAD83 Zone 9).

The RC chips were classified as either soil or bedrock and were shipped to Bureau Veritas labs in Whitehorse. The soil (overburden) samples were assayed by Aqua Regia digestion with Ultratrace ICP-MS analysis (method - AQ250) for Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Au, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, W, Sc, Tl, S, Hg, Se, Te, and Ga, and the bedrock samples were assayed by Aqua Regia digestion with ICP-ES/ICP-MS analysis for Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Th, Sr, Cd, Sb, Bi, V, Ca, P, , La, Cr, Mg, Ba, Ti, Al, Na, K, W, Hg, Sc, Tl, S, Ga, and Se and by lithium/borate fusion, analysis by XRF (method Li2B4O7/LiBO2) for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, Fe<sub>2</sub>O<sub>3</sub>, CaO, MgO, MnO, TiO<sub>2</sub>, P<sub>2</sub>O<sub>5</sub>, Cr<sub>2</sub>O<sub>3</sub>, Ba, Cu, Pb, Zn, LOI, SUM\_T, and V<sub>2</sub>O<sub>5</sub>. The results were investigated, and it was concluded that no significant lead, zinc, or silver mineralization was encountered during the RC drilling program.

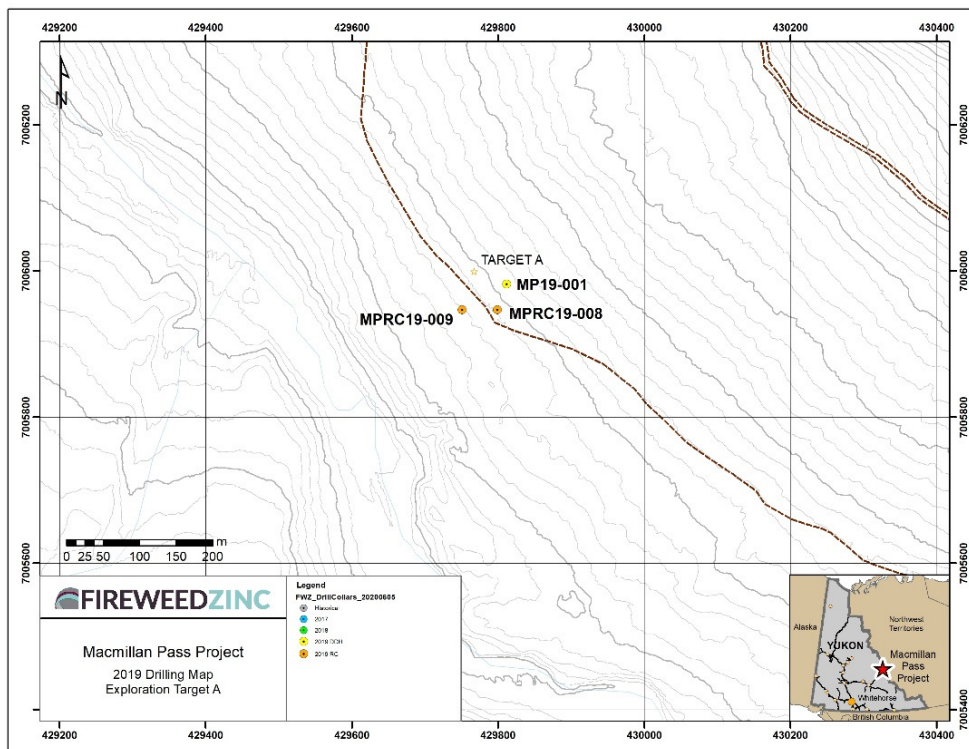


Figure 8.2.1. A map of the RC drilling at Target A.

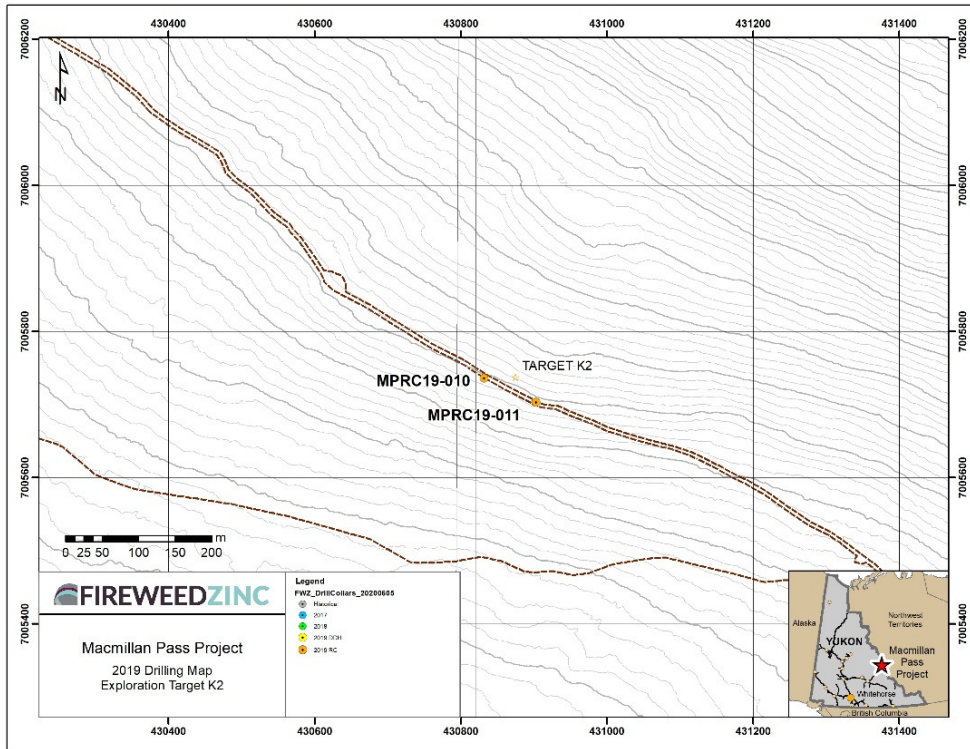


Figure 8.2.2. A map of the RC drilling at Target K2.

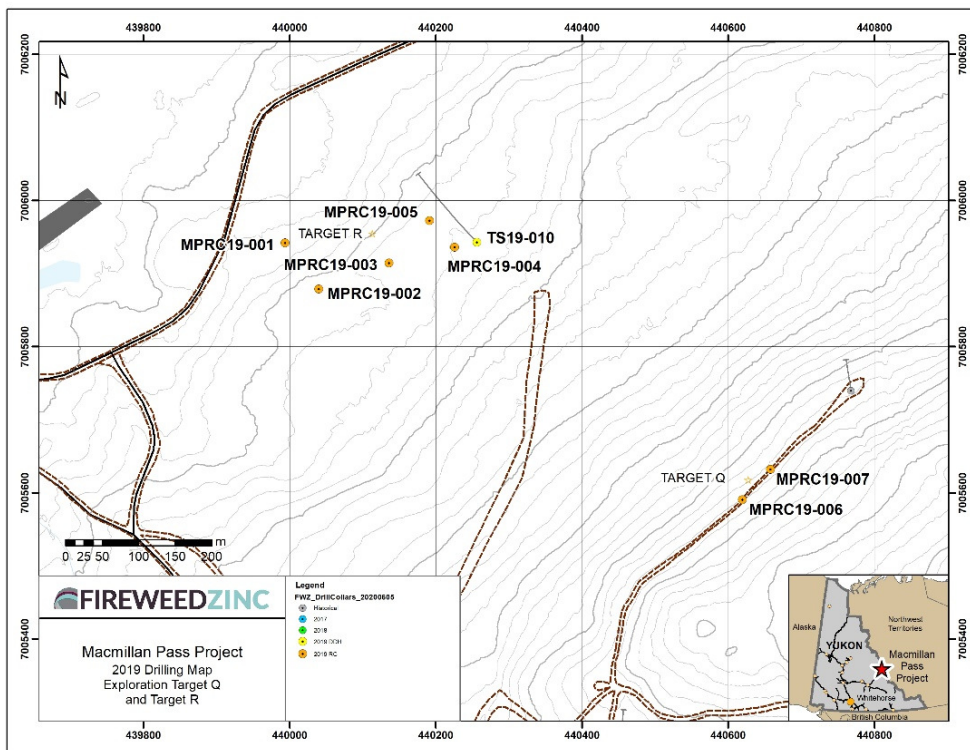


Figure 8.2.3. A map of the RC drilling at Target Q and R.

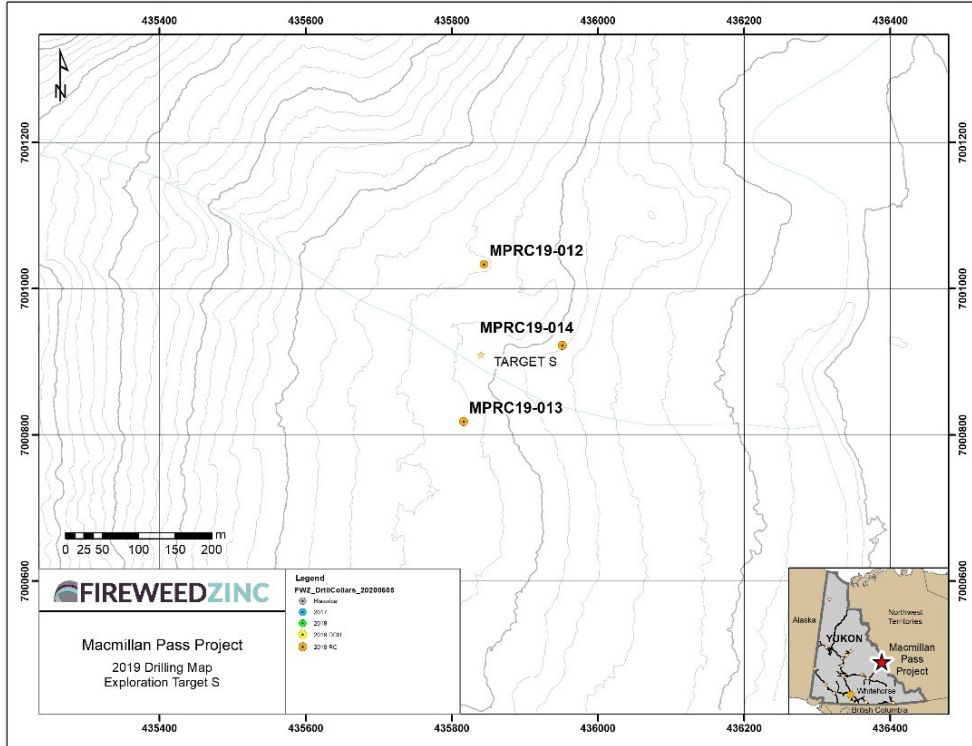


Figure 8.2.4. A map of the RC drilling at Target S.

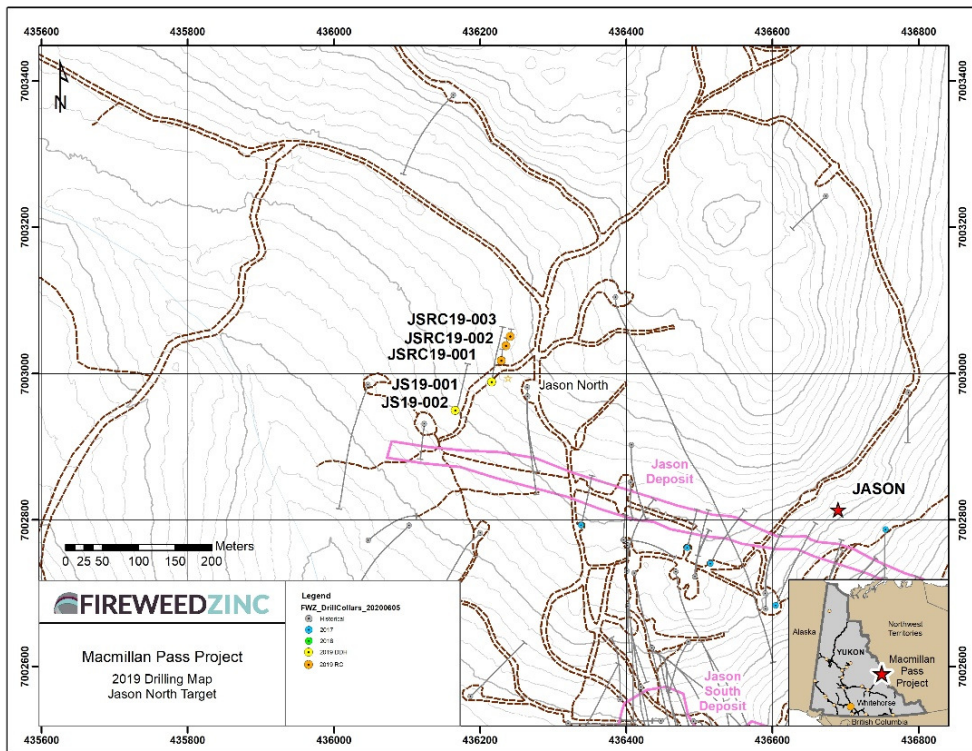


Figure 8.2.5. A map of the RC drilling at the Jason North Target.

### 8.3 Diamond Drilling

A total of 16 diamond drill holes were drilled on the Macmillan Pass property in 2019. These holes were drilled on the Tom deposits (7 on Tom North, 1 on Tom East, 1 on Tom West), Jason North exploration target (2 holes), Boundary Zone (2 holes) and regional exploration targets (1 on Target G, 1 on Target A, and 1 on Target R (Figure 3.2.) (Table 8.3.1.).

Hole ID	Property/ Prospect	UTM East	UTM North	Elevation CGVD28 (m)	Dip (°)	Azimuth (°) (True North)	Length (m)	Core Size	Drill Started	Drill Completed
JS19-001	Jason N.	436216	7002989	1311	-50	10	108.0	HQ3	2019-07-14	2019-07-17
JS19-002	Jason N.	436166	7002950	1300	-50	10	100.2	HQ3	2019-07-18	2019-07-19
MP19-001	Target A	429812	7005982	1222	-50	206	89.0	HQ3	2019-07-22	2019-07-23
MP19-002	Target G	417543	7017670	1750	-49	210	63.2	HQ3	2019-07-25	2019-07-27
NB19-001	Boundary	422370	7010439	1173	-50	215	308.8	HQ3	2019-08-01	2019-08-08
NB19-002	Boundary	422371	7010440	1173	-65	215	357.0	HQ3	2019-08-08	2019-08-14
TS19-001	Tom North	441686	7004448	1442	-51	76	110.0	HQ3	2019-06-15	2019-06-19
TS19-002	Tom North	441716	7004332	1466	-51	74	119.0	HQ3	2019-06-20	2019-06-21
TS19-003	Tom North	441628	7004602	1417	-52	58	125.0	HQ3	2019-06-22	2019-06-24
TS19-004	Tom West	442043	7003582	1583	-77	91	234.0	HQ3	2019-06-25	2019-06-30
TS19-005	Tom North	441804	7004295	1519	-50	76	45.0	HQ3	2019-06-30	2019-07-01
TS19-006	Tom North	441803	7004295	1519	-60	76	54.0	HQ3	2019-07-01	2019-07-02
TS19-007	Tom East	442002	7004363	1638	-64	72	330.0	HQ3	2019-07-03	2019-07-09
TS19-008	Tom North	441747	7004541	1474	-50	64	84.0	HQ3	2019-07-09	2019-07-10
TS19-009	Tom North	441770	7004426	1487	-50	64	45.0	HQ3	2019-07-10	2019-07-10
TS19-010	Target R	440256	7005943	1211	-50	317	184.8	HQ3	2019-07-11	2019-07-13

Table 8.3.1. A list of diamond drill holes from the 2019 program at the Macmillan Pass (UTM NAD83 Zone 9).

The core from the first hole drilled at the Boundary Zone (NB19-001) was transported to Whitehorse for further testing and is stored in Fireweed's seacan at Small's Expediting & General Services Ltd., 25 Pilgrim Place, Whitehorse, YT. All other core from the 2019 season is stored on the Tom Property at the core storage area.

The core logging and sampling program is carried out under a rigorous quality assurance / quality control program using industry best practices. All holes drilled in 2019 are HQ3 (split tube) size core (61.1mm / 2.4-inch diameter) with recoveries typically above 85%. After drilling, core is logged for geology, structure, and geotechnical characteristics, marked for sampling, and photographed on site. The cores for analyses are marked for sampling based on geological intervals with individual samples 1.5 metres or less in length. Drill core is cut lengthwise in half with a core saw; one half core is sent for assay; the other half is stored on site for reference. A total of 5% assay standards and 5% blanks are inserted into every sample shipment as a quality control measure and reviewed, after analyses are received. Standards and blanks in shipments to date have been approved as acceptable. Samples are sent to the Bureau Veritas (formerly Acme Labs) preparation laboratory in Whitehorse, Yukon, where the samples are crushed and a 500 g split is pulverized to 85% passing 200 mesh size pulps. Clean crush material is passed through the crusher and clean silica is pulverized between each sample. The pulps are then sent to the Bureau Veritas laboratory in Vancouver, B.C. and analyzed by 1:1:1 Aqua Regia digestion followed by Inductively Coupled Plasma Mass Spectrometry (ICP-ES/ICP-MS) multi-element analyses (BV Code AQ270). All samples are also analyzed for multiple elements by lithium borate fusion and X-ray fluorescence analysis (XRF) finish (BV Code LF725). Over-limit Pb (>25.0%) and Zn (>24.0%) were analyzed by lithium borate fusion with XRF finish (BV Code LF726). Silver is reported in this news release by method AQ270, and zinc and lead are reported by LF725 or LF726 (or GC816 in the case of five very high-grade zinc samples). Bureau Veritas (Vancouver) is an independent, international ISO/IEC 17025:2005 accredited laboratory.

### 8.3.1. Tom North

The Tom North Zone is north of, and along strike with Tom West. It was initially drilled in 1952 with several shallow drill holes that yielded relatively poor core recovery. The first drill holes of the 2019 season have confirmed the presence of mineralization at Tom North and that mineralization extends to depth. The results define a near-surface zone of zinc-lead mineralization that is potentially amenable to open-pit mining.

The Tom North zone has mineralization demonstrated over a strike length of at least 500 m, a true thickness between 6 and 23 m (average of 12 m). The down-dip extent has been tested to 190 m and is open to depth (Figures 8.3.1, 8.3.2, and 8.3.3.). The mineralization is stratiform and comprises laminated fine-grained sphalerite-galena-pyrite-barite. Tom North is a distinct zone separated from the Tom West zone by faulting (Figure 8.3.2).

No mineral resource has been estimated for Tom North and the zone is not included in the current mineral resource estimate for the property (described in Fireweed news release dated January 10, 2018). Tom North represents potential for a significant expansion to the Tom mineral resources, to extend open pit and underground mine life, and to improve project economics described in the current Preliminary Economic Assessment (PEA) (see Fireweed news release dated May 23, 2018). The current PEA includes a three-year open pit mine life at Tom West over the course of an overall 18-year mine life.

All holes drilled in the Tom North exploration target intersected significant lead and zinc mineralization (Table 8.3.2). The best results were holes TS19-002, which intersected 6.36% Zn and 0.65% Pb over 9.00 m and TS19-001 intersected 6.19% Zn and 0.51% Pb over 7.30 m (true widths). Drill hole TS19-005 had low recovery (>60%) through the ore zone and a second hole, TS19-006, was drilled at the same pad to confirm results.

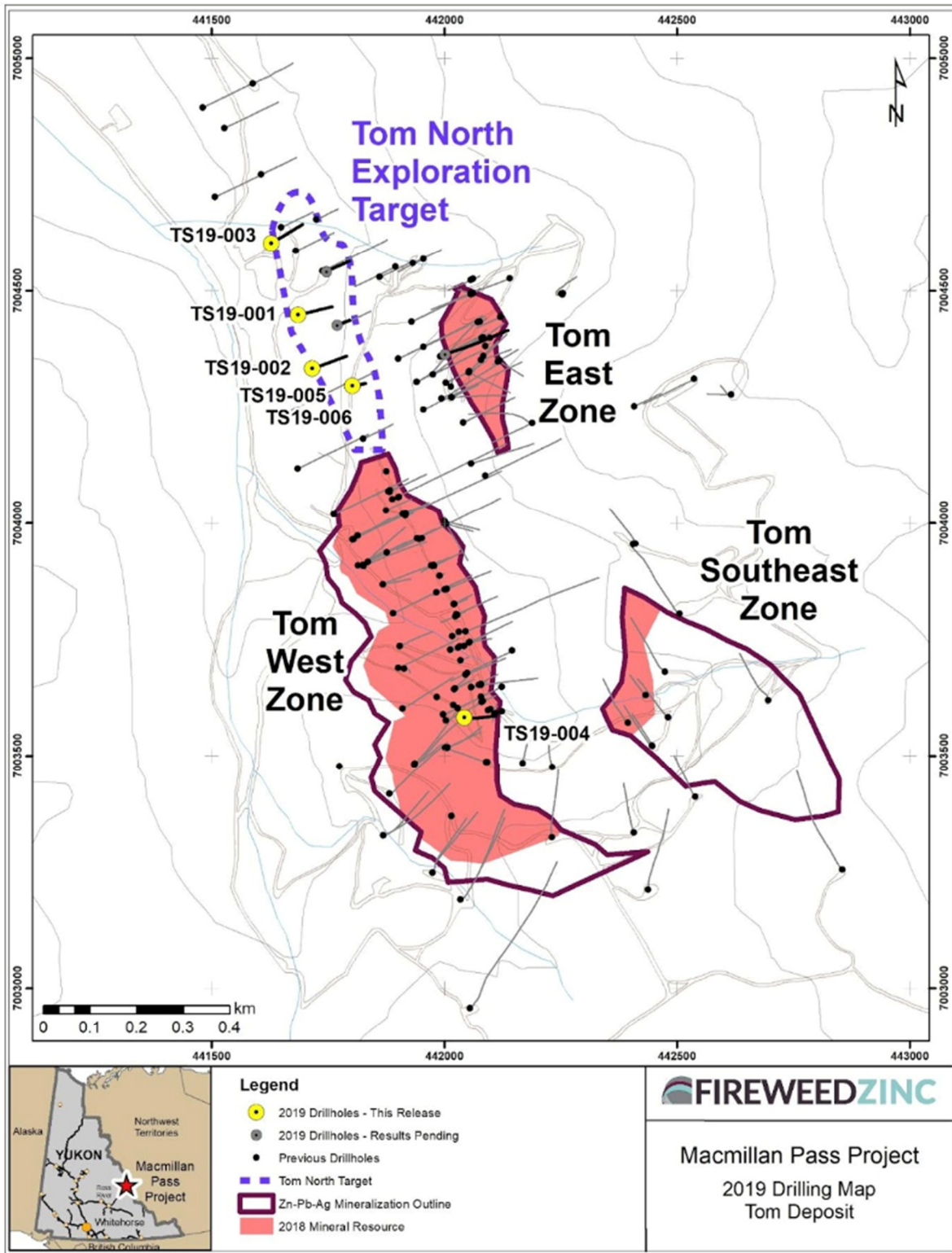


Figure 8.3.1. A map of the Tom Deposit showing the Tom North Exploration Target and 2019 drilling.

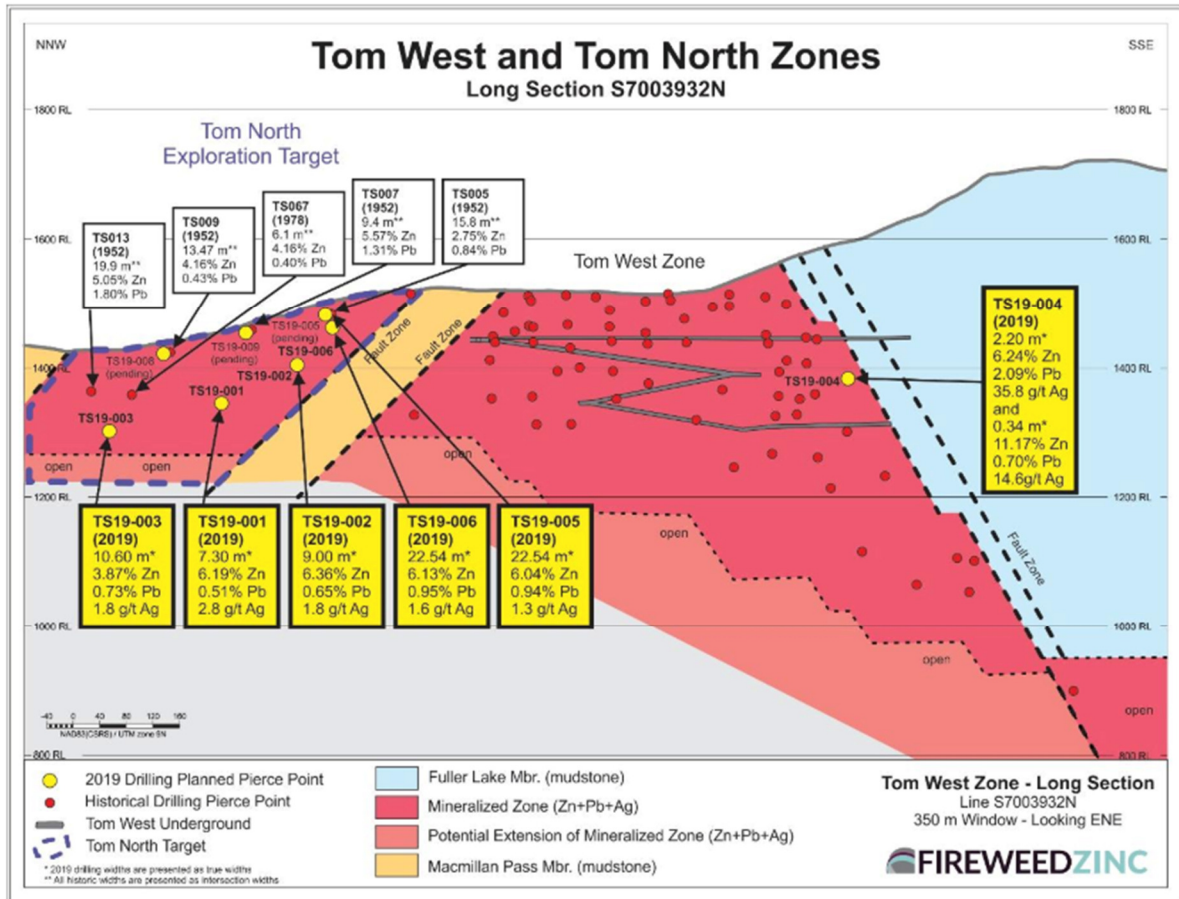


Figure 8.3.2. A long section of the Tom West Zone and the Tom North Exploration Target showing the pierce points and results for the 2019 and historic drilling.

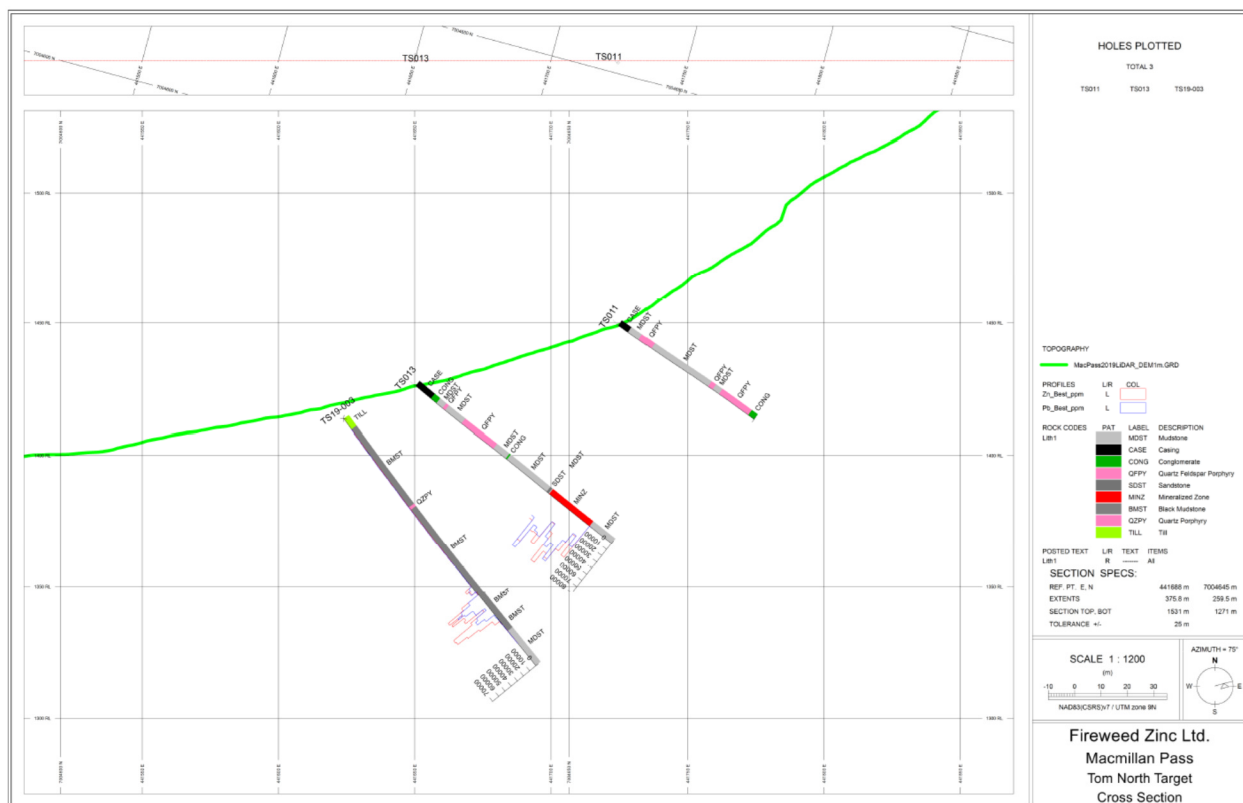


Figure 8.3.3. A cross section of the Tom North Exploration Target showing the mineralized intersections in TS19-003.

Drill Hole	Zone	From (meters)	To (meters)	Interval (meters)	Estimated True Width (meters) <sup>2</sup>	Zinc (%)	Lead (%)	Silver (g/t)	Zn Eq*
<b>TS19-001</b>	Tom North	67.2	74.75	7.55	7.3	6.19	0.51	2.8	6.68
<i>Including</i>		69.75	72.2	2.45	2.4	10.75	1.21	4.9	11.88
<b>TS19-002</b>	Tom North	80	89.53	9.53	9	6.36	0.65	1.8	6.95
<b>TS19-003</b>	Tom North	89.84	101.29	11.45	10.6	3.87	0.73	1.8	4.53
<b>TS19-005</b>	Tom North	8.21	33.14	24.93	22.5	6.04	0.94	1.3	6.86
<b>TS19-006</b>	Tom North	8.32	39.99	31.67	22.5	6.13	0.95	1.6	6.97
<i>Including</i>		34	39	5	3.7	8.41	1.68	3	9.89
<b>TS19-008</b>	Tom North	34.4	46.14	11.74	10.9	5.38	0.64	1.81	5.96
<b>TS19-009</b>	Tom North	11.17	24	12.83	11.9	4.57	0.97	1.41	5.42
<i>Including</i>		11.17	23.2	5.2	4.5	6.22	1.09	1.6	7.18

Table 8.3.2. Drill Results from the 2019 Tom North Drill Program.

### 8.3.2. Tom West

One hole was drilled in the Tom West zone near the western margin of the zone (TS19-004). This hole intersected 2.2 m (true width) of 6.24% Zn, 2.09 % Pb, and 35.8 g/t Ag, and 0.34 m (true width) of 11.17% Zn, 0.7% Pb, and 14.6 g/t Ag. The mineralization was cut off by a fault zone. This hole was drilled to fill in

a portion of the resource near the western fault zone and it intersected the mineralized horizon at the fault zone.

### 8.3.3. Tom East

One hole was drilled in the Tom East zone (TS19-007). This hole was drilled to test the down dip extension of the mineralization intersected in 2018 drilling (TS18-004 - 16.4 m grading 21.14% Zn, 13.55% Pb and 243 g/t Ag). TS19-007 deviated from its planned course and ran down dip intersecting long high-grade intervals within the known zone and did not hit the intended target. These high-grade infill results provide geological information that will inform geological modelling for resource expansion and exploration in the structurally complex Tom East Zone. The potential extension of the high-grade mineralization discovered in 2018 remains untested and Tom East is open at depth.

### 8.3.4. Boundary Zone

In 2019, Fireweed drilled two holes in the Boundary Zone (NB19-001 and NB19-002). The first hole (NB19-001) intersected 3.44% Zn over a true width of 250 m with high-grade subintervals including 16.35% Zn over a drill intersection of 23.31 m, a lead- and silver-rich section grading 9.18% Zn 4.45% Pb and 71.6 g/t Ag over an intersection of 11.85 m and local very high-grade sections including 47.70% Zn over an intersection of 1.01 m.

Drill Hole	Zone	From (meters)	To (meters)	Interval (meters)	Estimated True Width (meters) <sup>2</sup>	Zinc (%)	Lead (%)	Silver (g/t)	Zn Eq*
<b>NB19-001</b>	<b>Boundary</b>	<b>6</b>	<b>278.45</b>	<b>272.45</b>	<b>230</b>	<b>3.44</b>	<b>0.1</b>	<b>5.6</b>	<b>3.64</b>
<i>including</i>		6	117	111	97.3	5.63	0.04	9.5	5.86
<i>including</i>		93.69	117	23.31	20.4	16.35	0.09	27.9	17.02
<i>including</i>		93.69	98.54	4.85	4.3	31.96	0.14	39.8	32.92
<i>including</i>		94.84	95.85	1.01	0.9	47.7	0.21	50.2	48.94
<i>including</i>		111.4	117	5.6	4.9	29.19	0.2	62.8	30.69
<i>including</i>		113.54	117	3.46	3	36.36	0.29	81.2	38.32
<i>including</i>		226.2	238.05	11.85	undetermined	9.18	4.45	71.6	14.46
<i>including</i>		230.3	236	5.7	undetermined	12.16	7.09	109.3	20.47
<i>including</i>		230.3	233.22	2.92	undetermined	18.96	3.02	75.1	23.10
<i>including</i>		233.88	236	2.12	undetermined	5.74	14.26	180.9	21.63
<b>NB19-002</b>	<b>Boundary</b>	<b>8</b>	<b>330</b>	<b>322</b>	<b>230</b>	<b>4.14</b>	<b>0.3</b>	<b>9.7</b>	<b>4.60</b>
<i>including</i>		8	150.3	142.3	100	7.94	0.1	11.1	8.26
<i>including</i>		27.8	40.1	12.3	8.7	9.2	0.04	11.5	9.48
<i>including</i>		115.81	127	11.19	7.9	17.47	0.08	36	18.30
<i>including</i>		120.64	127	6.36	4.5	28.72	0.13	59.9	30.10
<i>including</i>		139.35	148.42	9.07	6.4	42.88	0.75	42.1	44.40
<i>including</i>		145.65	146.53	0.88	0.6	61.67	0.2	61.2	63.13
<i>including</i>		289.81	307.7	17.89	undetermined	3.03	1.79	28.86	5.15
<i>including</i>		289.81	291.98	2.17	undetermined	6.3	5	73.17	12.08

**Table 8.3.3.** Drill Results from the 2019 Boundary Zone Drill Program.

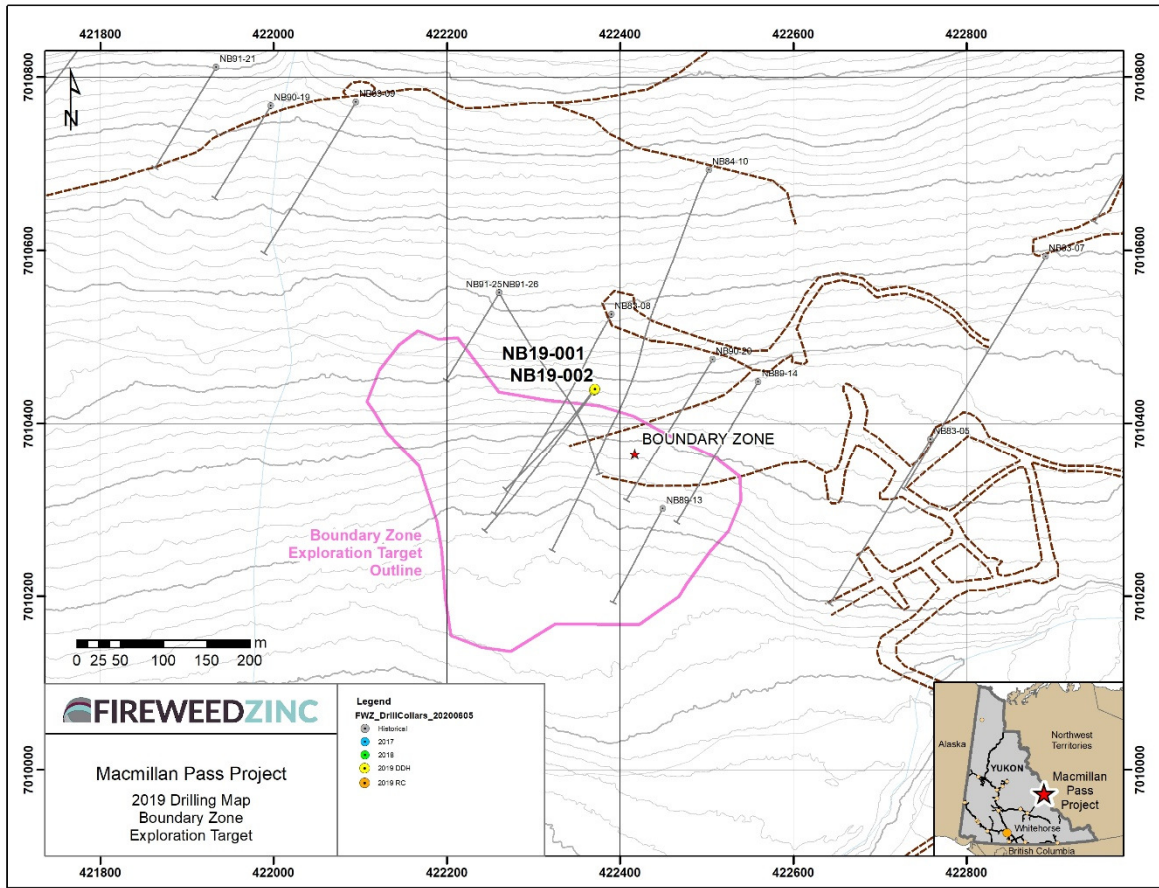


Figure 8.3.4. A map showing the 2019 drilling at the Boundary Zone.

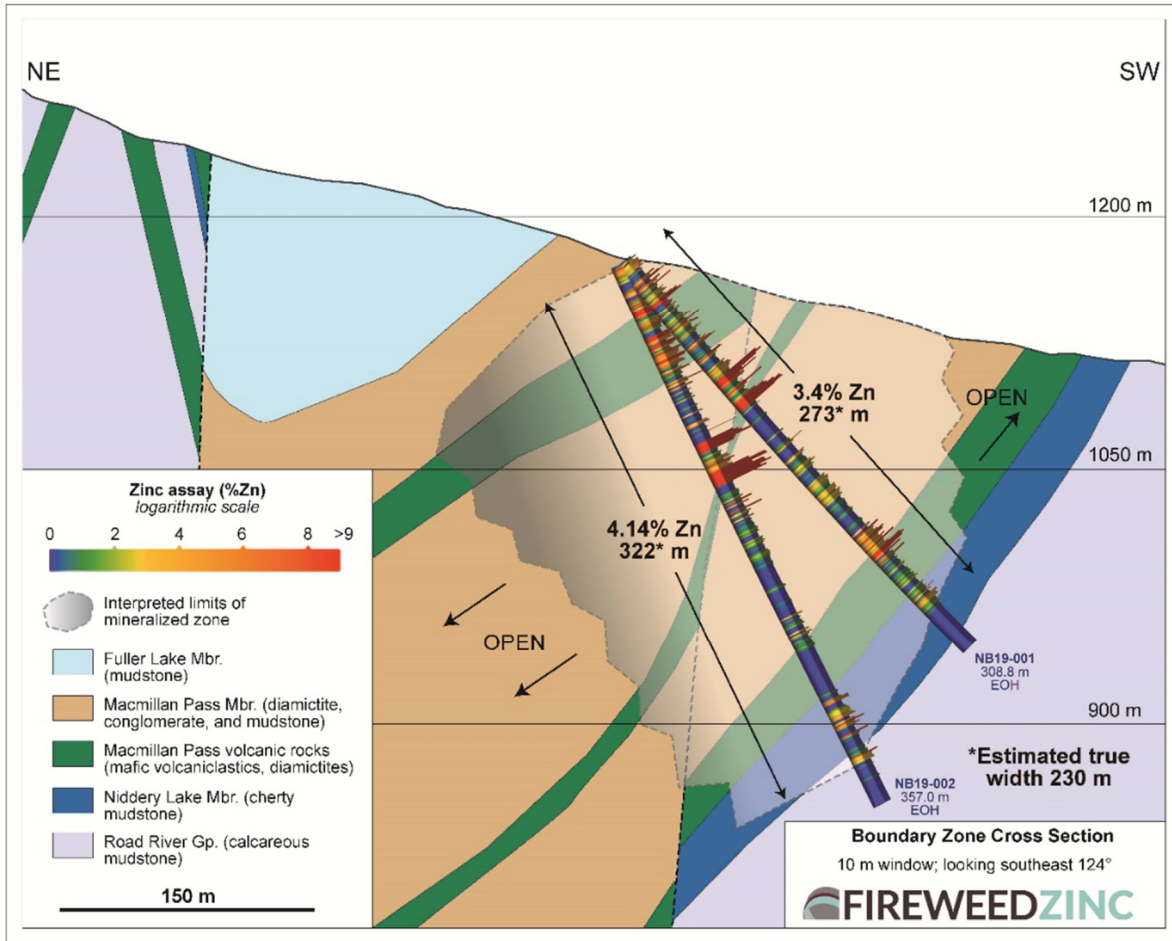


Figure 8.3.5. A cross section showing the 2019 drilling at the Boundary Zone.

### 8.3.5. Jason North Target

Two exploration diamond drill holes were drilled at the Jason North target, JS19-001 and JS19-002. These two holes targeted a lead-in-soil anomaly north of, and up ice from, the Jason Main deposit (Figure 8.3.5). Both holes intersected thick sequences of dark carbonaceous mudstones interpreted to be the MacMillan Pass mudstone with minor diamictite and conglomerate near the bottom of JS19-001. No significant mineralization was intersected in these drill holes and the lead-in-soil anomaly remains unexplained.

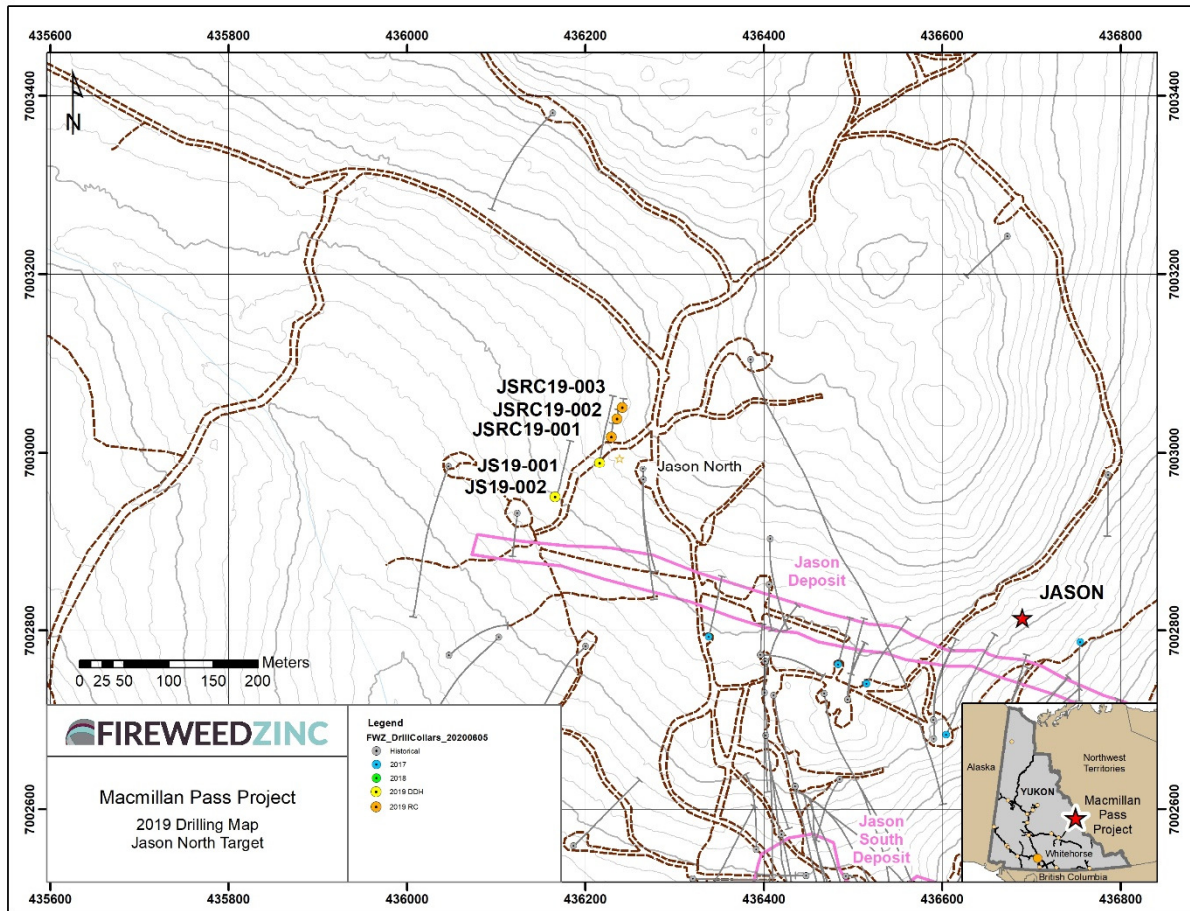


Figure 8.3.6. A map of the Jason North Exploration Target showing 2019 RC and diamond drilling.

### 8.3.6. Regional Exploration Targets (Target A, G, and R)

Three diamond drill holes were drilled in three separate greenfields exploration targets to test for the potential for lead-zinc-silver mineralization.

#### Target A

Drill hole MP19-001 was drilled into coincident ground gravity and magnetic anomalies called Exploration Target A. This hole intersected 89 m of carbonaceous mudstone interpreted to be part of the Vampire Formation. This formation has higher density compared to other mudstones (e.g. Fuller Lake or MacMillan Pass mudstones) and may explain the gravity anomaly associated with this target. No significant mineralization was intersected in the drill hole.

#### Target G

Drill hole MP19-002 was drilled into Zn-Pb-Ba anomaly called Exploration Target G. This hole intersected approximately 40 m of carbonaceous mudstone overlying approximately 20 m of laminated mudstone and barite. A narrow zone of zinc mineralization intersected between the mudstone and baritic mudstone yielded 0.73 m of 1.97% Zn, 0.55% Pb, and 42.4g/t Ag (40.22-40.95 m). This small horizon of zinc barite

mineralization may explain the Zn-Pb-Ba anomaly associated with this target. Further exploration work is required to further evaluate the target.

#### Target R

Drill hole TS19-010 was drilled into a coincident ground gravity and magnetic anomaly called Exploration Target R. This hole intersected approximately 185 m of carbonaceous mudstone interpreted to be part of the Duo Lakes Formation of the Road River Group, with no significant mineralization.

### 8.4 LiDAR

Airborne LiDAR data was collected by McElhanney Ltd. to provide a highly accurate topographic map of the property. The survey was carried out using an Optech Galaxy system and a Phase One iXU-RS1000 RGB on-board camera. The project was flown using a Piper Navajo fixed wing aircraft on July 10, 17, and 18, and September 7, 2019. A total of 513 km<sup>2</sup> were covered during the flights.

Final output data is provided in NAD83CSRS UTM 9 and the elevations are based on CGVD28 HT2 geoid model. The deliverables include:

- LiDAR data: Bare-Earth, Full-Feature and Model Key Points in LAS format.
- 1m pixel, bare-earth DEM
- LiDAR hillshade imagery in ECW format
- 5 m contours in ESRI Shapefile format
- 20 cm orthophoto in TIF (1km tiles) and ECW (overview mosaic) format.
- LiDAR and Airphoto report

All output data is available in the attached appendices.

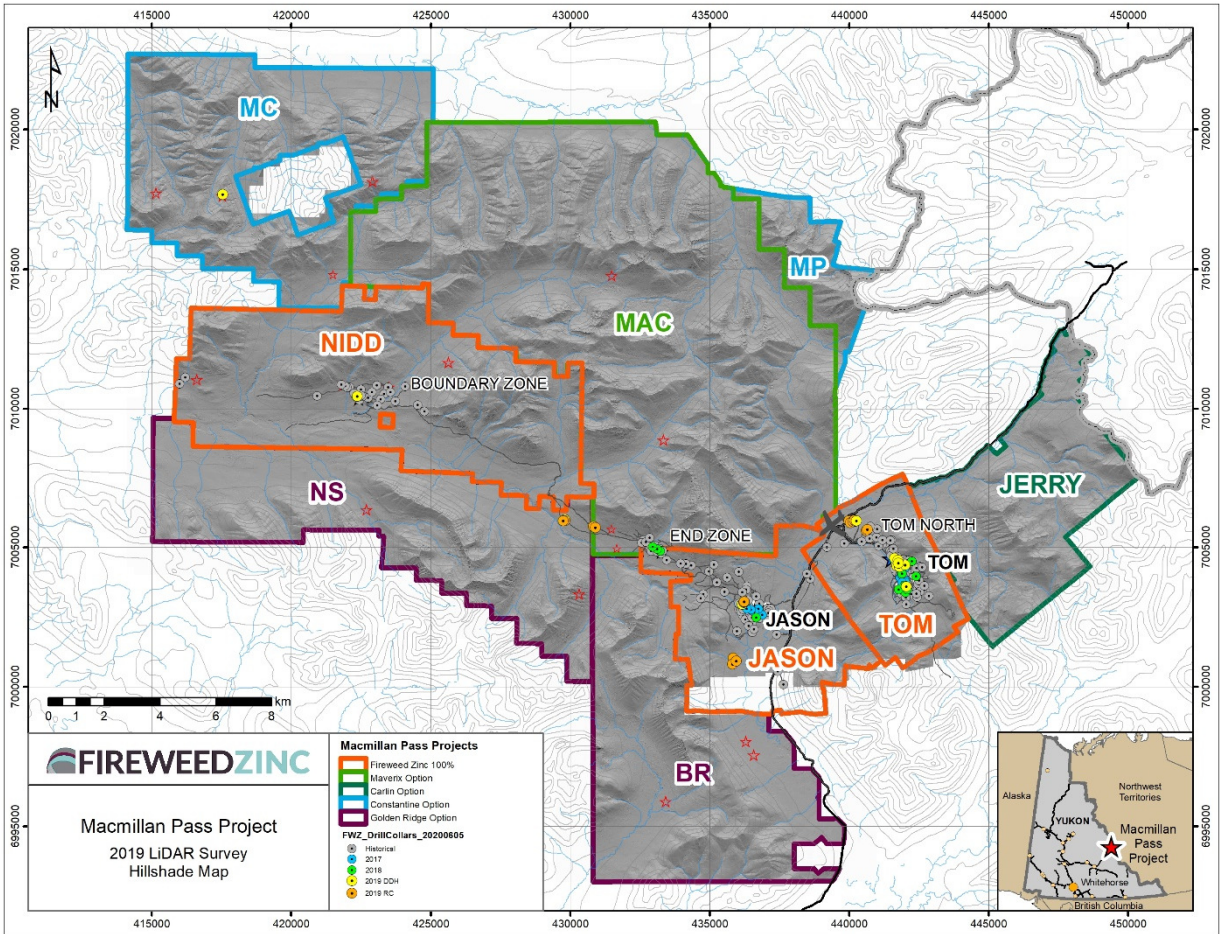


Figure 8.4.1. A map showing the LiDAR coverage as a hillshade.

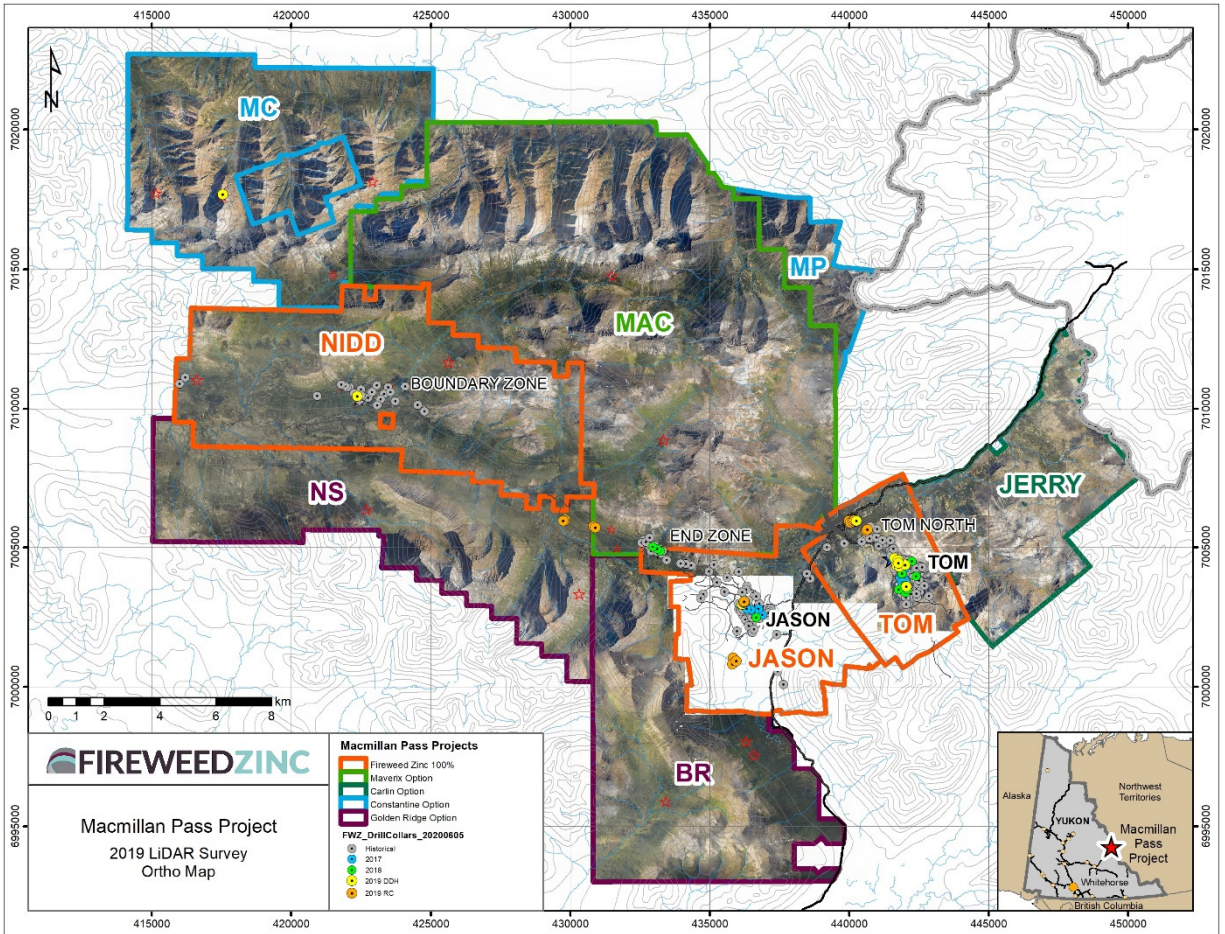


Figure 8.4.2. A map showing the LiDAR coverage as an orthophoto.

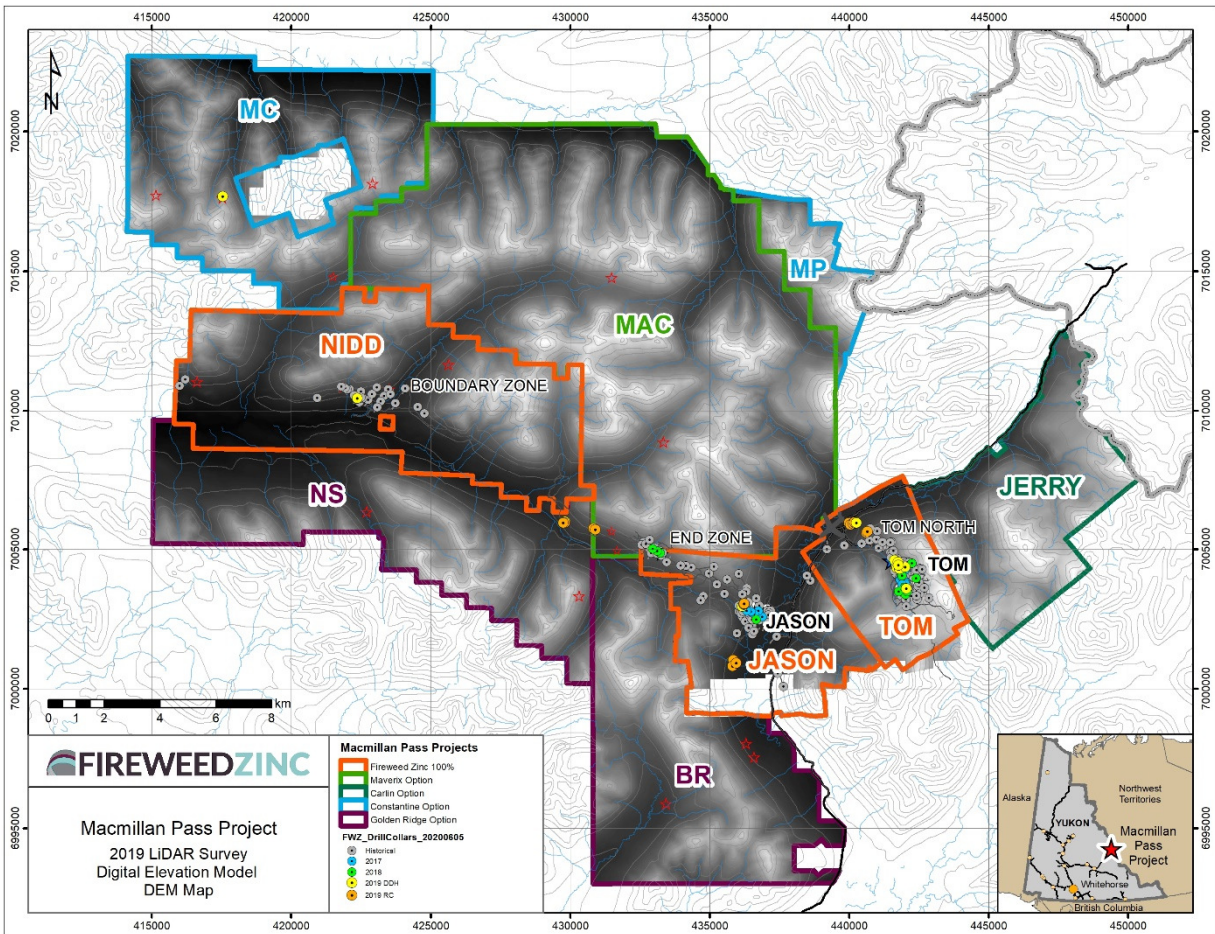


Figure 8.4.3. A map showing the LiDAR coverage as a digital elevation model (DEM).

## 9 Interpretations, Recommendations and Conclusions

The exploration work carried out during the 2019 program included geophysical surveying, LiDAR surveying, diamond drilling, and reverse circulation (RC) drilling, and focused on the Tom North, Tom East, Tom West zones, the Jason North Zone, the Boundary Zone and several greenfields exploration targets in the fertile corridor and beyond.

The geophysical survey consisted of a ground gravity and passive seismic survey. The passive seismics were used to develop a depth-to-overburden correction factor to correct the ground gravity data where it was collected over deep overburden. This process is ongoing and requires further work to correctly interpret the data. The ground gravity program was successful in delineating a gravity anomaly over the known mineralized zones (including at Tom, Jason and End Zone), as well as defining several new gravity anomalies within the fertile corridor. These anomalies will be the focus of future work to test for the existence of shale-hosted, massive sulfide mineralization similar to the Tom and Jason deposits within the fertile corridor.

The gravity survey was also successful in mapping out variations in bedrock density along the fertile corridor and can be used as an exploration tool to look for higher density, lead-zinc-silver mineralized

deposits. The gravity is sensitive enough to detect the variation between various lithological units within the Selwyn basin at the Macmillan Pass project such as the Vampire Formation vs. the MacMillan Pass Member of the Portrait Lake Formation. The gravity survey could be used for geological mapping in areas with extensive cover along with other geophysical tools and ground based geological mapping.

The RC drilling program was successful in confirming the overburden depths estimated by the passive seismic methods carried out in conjunction with the gravity surveys. These overburden depths can be used to correct the gravity data in areas of extensive overburden cover to 'remove' the effect of the overburden on the data and 'see through' to bedrock. The RC program tested the soil and top of bedrock in several exploration targets but did not encounter any significant mineralization. Further RC work could be used to test near surface targets; however, water table and equipment capabilities will likely limit the depth for this exploration, especially in the valley bottoms where the water table is very near surface.

The diamond drilling program at Tom North outlined a significant near surface zone. (i.e. hole number TS19-002, which intersected 6.36% Zinc and 0.65% Lead over 9.00 metres and TS19-001 intersected 6.19% Zinc and 0.51% Lead over 7.30 metres (true widths)). This zone extends from surface to a depth of approximately 190m and could be amenable to open pit extraction. The zone has been defined over a strike length of at least 500 metres and has a true thickness between 6 and 23 metres (average of 12 metres). This zone is open to depth. Further work is required at Tom North to evaluate its potential and support a mineral resource estimation.

The diamond drilling program at the Boundary Zone was successful in confirming significant of zinc and zinc+lead+silver mineralization with both 2019 holes intersecting broad sections of disseminated, replacement, and vein hosted zinc and zinc+lead+silver mineralization. For example hole NB19-001 intersected 3.44% Zinc over a true width of 250 metres with high grade subintervals including 16.35% Zinc over a drill intersection of 23.31 metres, a lead and silver rich section grading 9.18% Zinc 4.45% Lead and 71.6 g/t Silver over an intersection of 11.85 metres and local very high grade sections including 47.70% Zinc over an intersection of 1.01 metres. Further work is required at the Boundary Zone, including ground gravity, geological mapping, and diamond drilling to evaluate the target and support a mineral resource estimation.

Exploration drilling (diamond and RC) in the fertile corridor (Targets A, G, Q, R, and S) were unsuccessful in identifying any significant new, lead-zinc-silver mineralization. Exploration drilling at the Jason North target was also unsuccessful in identifying any significant new, lead-zinc-silver mineralization.

Further work is warranted to continue to test the exploration targets developed by ground gravity, geological mapping, and prospecting. The Macmillan Pass district is a prolific part of the Selwyn basin and is well endowed with lead-zinc-silver mineralization.

## 10 References

- Arne, D., McGarry, L., 2018, NI 43-101 Technical Report on the Macmillan Pass Zinc-Lead-Silver Project, Watson Lake and Mayo Mining Districts Yukon Territory, Canada. Report No. R161.2018, pp. 99.
- Rhodes, D., 1992. 1991 Assessment Report on the NIDD Property, Mayo Mining District, Yukon Territory, Cominco Ltd, Mar/92. Yukon Assessment Report \*#093015.
- Goodfellow, W.D., 2007, Base Metal Metallogeny of the Selwyn Basin, Canada. In Goodfellow, W.D., Mineral Deposits of Canada: A synthesis of Major deposits Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods. Geological Association of Canada. Mineral Deposits Division, Special Publication 5, pp. 553-579.
- Rennie, D.W., 2007, Technical Report on the Tom and Jason Deposits, Yukon territory, Canada: (NI 43-101) report prepared for Hudbay Mineral Inc., by Scott Wilson Roscoe Postle Associates Inc. 202 pp.
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- Turner, D.G., 2018, Surficial Geology and Glacial History of the Macmillan Pass Area. Internal Report for Fireweed Zinc. 37 pp.

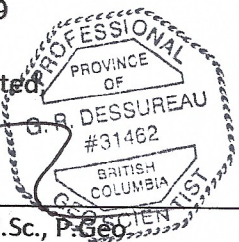
## 11 Statement of Expenditures

Item	Description	Total
Helicopter	Helicopter flight	\$ 358,130.00
	Pilot minimums	\$ 6,795.00
	Fuel supplied by contractor	\$ 4,456.00
Fixed Wing	Flights to and from Whitehorse	\$ 94,021.00
Fuel	Diesel	\$ 63,237.00
	Jet A	\$ 60,557.00
	Gas	\$ 2,844.00
Assays	Core	\$ 153,588.00
	Rock	\$ 12,644.00
	RC overburden	\$ 1,249.00
	RC bedrock	\$ 14,935.00
Geological Staff	Management	\$ 320,256.00
	Geologist	\$ 197,855.00
	Technicians	\$ 29,528.00
Geophysical Program	Core cutters and field technician	\$ 52,947.00
	Ground gravity, and passive seismics	\$ 120,938.00
	Ground gravity processing and interpretation	\$ 13,750.00
LIDAR	Lidar acquisition	\$ 172,700.00
	Surveying for LiDAR ground control	\$ 26,843.00
Transportation	4 Trucks and flat deck trailer	\$ 32,428.00
	Heavy equipment transport, and excavation	\$ 37,647.00
	Crew flights, travel, hotels, food	\$ 29,862.00
Diamond Drilling	Diamond drilling	\$ 733,090.00
RC Drilling	RC drilling	\$ 133,158.00
Pad Building	Pad building	\$ 31,066.00
Camp Costs	Camp staff	\$ 204,492.00
	Camp equipment and rentals and expediting	\$ 278,763.00
	Food	\$ 84,406.00
<b>Total</b>		<b>\$ 3,272,185.00</b>

I, Gilles Dessureau, M.Sc., P.Geo., of 308-3131 Main St., Vancouver, B.C., Canada, V5T 3G8 do hereby certify that the above listed expenditures are believed to be accurate and represent the expenditures of the 2019 field season incurred at Macmillan Pass Property, Yukon Territory between June 15 and October 1, 2019.

Dated June 17, 2019

Respectfully submitted,

Gilles Dessureau, M.Sc., P.Geo.  
Vice President of Exploration  
Fireweed Zinc Ltd.

## 12 Statement of Qualifications

I, Gilles Dessureau, M.Sc., P.Geo., of 308-3131 Main St., Vancouver, B.C., Canada, V5T 3G8 do hereby certify that:

I am currently the V.P. Exploration for Fireweed Zinc Ltd. and I am not independent of Fireweed Zinc, as described in Section 1.5 of NI 43-101.

I graduated from St. Mary's University in Halifax, Nova Scotia with a Bachelor of Science with Honors in Geology in 1998, and I graduated from Laurentian University in Sudbury, Ontario with a Master of Science in Geology in 2003.

I have worked in the mineral exploration industry continuously since 2003, in Ontario, British Columbia, and The Yukon Territory, Canada, and intermittently since 1996 in Ontario and Nova Scotia during my education and training.

I am a registered member of the Association of Profession Engineers and Geoscientists of British Columbia, since August 2007. Membership number 31462 and I am a non-practicing member of the Association of Profession Geoscientists of Ontario, since May 2007. Membership number 1459.

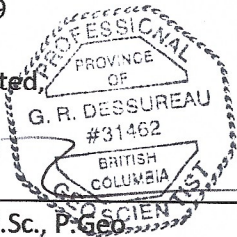
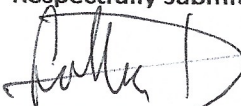
I have prepared this report titled 'Assessment Report Describing the 2019 Field Season Including: Diamond Drilling, Reverse Circulation Drilling, and Ground Geophysics on the Macmillan Pass Project' dated June 17, 2020. The report was prepared to fulfill the assessment requirements for the Macmillan Pass Property as laid out in the Yukon Territory Quartz Mining Act.

I have read the definition of "Qualified Person" set out in National Instrument 43-101("NI 43-101") and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.

I am not aware of any material fact or material change with respect to the contents of this report that is not reflected in this report, the omission to disclose which makes this report misleading.

Dated June 17, 2019

Respectfully submitted,



Gilles Dessureau, M.Sc., P.Geo.

Vice President of Exploration  
Fireweed Zinc Ltd.

## 13 Appendices

### **Appendix I.**

Claims List (on DVD)

### **Appendix II.**

Geophysical Report (on DVD)

### **Appendix III.**

Drill Logs (on DVD)

### **Appendix IV.**

Assay Certificates (on DVD)

### **Appendix V.**

LiDAR Report (on DVD)

### **Appendix VI.**

Large Format Maps (print and on DVD)

-Claim Map

-Cross Sections