NI 43-101 TECHNICAL REPORT,

GEOLOGICAL INTRODUCTION TO HIGHWOOD ASSET MANAGEMENT LTD.'S IRONSTONE IRON-VANADIUM PROJECT IN NORTHWEST ALBERTA, CANADA

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1 Summary

1.1 Issuer and Purpose

This technical report has been prepared for the issuer, Highwood Asset Management Ltd. (Highwood or the Company). Highwood has acquired 100% mineral rights as part of a large Alberta and northeast British Columbia, Canada land position with interest in two distinctly separate commodity projects: 1) the Lithium-Brine Project, and 2) the Ironstone Iron-Vanadium (Fe-V) Project.

This primary objective of this technical report is to introduce Highwood's Ironstone Fe-V Project. The project occurs those known areas of the northwestern Alberta portion of the Western Canada Sedimentary Basin where the Late Cretaceous (Coniacian) Bad Heart Formation crops out or is present in the near sub-surface. The Bad Heart Formation comprises unique ooidal ironstone horizon(s) and Highwood intends on assessing the ironstone for its iron-vanadium potential and other potential elements of interest.

The purpose of this technical report is to: 1) provide a geological introduction to Highwood's Ironstone Fe-V Project, 2) summarize historical ooidal ironstone studies, and 3) make work recommendations for future ironstone studies.

The technical report has been prepared in accordance with the Canadian Securities Administration's National Instrument 43-101 and the Canadian Institute of Mining and Metallurgy definition standards and guidelines and has an Effective Date of 21 September 2021.

Highwood's Lithium-Brine Project is still material to the Company, and therefore, a synopsis of a previous report effectively dated 14 July 2021 is incorporated within this current report to capture the pertinent aspects of Highwood's Lithium-Brine Project.

1.2 Author and Qualified Person Site Inspection

This technical report has been prepared by Mr. D. Roy Eccles, M.Sc. P. Geol., of APEX Geoscience Ltd. in Edmonton, AB, a Qualified Person who takes overall responsibility for the preparation and publication of this technical report. Mr. Eccles is a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta (APEGA) and has worked as a geologist for more than 35 years. His work experience includes research and documentation of a variety of mineral deposit types, including ooidal ironstone, in the Western Canada Sedimentary Basin.

Mr. Eccles performed an Ironstone Fe-V Project site inspection on July 13, 2021, that enabled the author to step on several sub-properties, collect outcrop samples of the Bad Heart Formation, and independently verify the iron and vanadium mineralization.

1.3 Property Location, Description and Access

Highwood's Ironstone Fe-V Project is part of a larger Highwood land package defined 236 mineral permits and mineral titles (1,522,099 hectares) that are located throughout Alberta (n=222 mineral permits) and in northeastern British Columbia (n=14 mineral titles). The Cretaceous Bad Heart Formation is limited to northwest Alberta, and therefore, this technical report focuses on a 77 mineral permit portion, or a 546,398.72 hectares portion, of Highwood's overall land package.

The Ironstone Fe-V Project is located north of the City of Grande Prairie, AB and approximately 456 km northwest of the provincial Capital City of Edmonton, AB. The 77 mineral permits can be grouped into 7 sub-properties that include 4 contiguous groups (Dunvegan, Girouxville, Grande Prairie, and Pouce sub-properties) and 3 non-contiguous groupings of mineral permits (Clear Prairie, Notikewan, and Worsley properties).

The region is the province's largest producer of natural gas and conventional crude oil, and hence, has over 70-years of infrastructure development, can be explored year-round depending on the exploration activity, and the region has a local workforce that is experienced in service industry.

1.4 Tenure Maintenance, Permitting, Surface Rights, and Royalties

Alberta mineral permits were acquired directly via on-line staking from the Government of Alberta. Hence, there are no known back-in rights, payments, or other agreements and encumbrances to which the Property is subject. The Alberta mineral permits grant Highwood the exclusive right to explore for metallic and industrial minerals for 7 consecutive 2-year terms (total of 14 years), subject to traditional biannual assessment work.

Prospecting for Crown minerals using hand tools is permitted throughout Alberta without a licence, permit, or regulatory approval, if there is no surface disturbance. The company must obtain the appropriate approvals and permits if 1) mechanized exploration equipment will be used (drilling, trenching, bulk sampling, grid cutting), and/or 2) the land surface will be disturbed. These approvals and permits are required under the Metallic and Industrial Minerals Exploration Regulation.

Government royalty rates associated with any metallic mineral production in Alberta, as administrated by the Department of Energy, would be subject to 1% gross mine-mouth revenue before payout, and after payout, the greater of 1% gross mine-mouth revenue and 12% net revenue.

1.5 Environmental and Property-Related Uncertainties

None of Highwood's sub-properties occur in areas where surface access is restricted, or where the minerals are reserved, or withdrawn, by the Crown. Specific restrictions (i.e., temporal or buffer zone limitations) occur throughout northwest Alberta in waterways, key wildlife and biodiversity zones, archeological areas, and Caribou zones – but the restrictions would not affect the Company's ability to access and explore the Property.

Environmental licences, factors, and issues – as they pertain to minerals exploration – are administered by Alberta Environment and Parks. Before companies proceed with exploration and development, they will be made aware of any environmental concerns in their area of interest. All applications for metallic mineral exploration are referred to relevant departments for review. The departments will assess potential or existing environmental concerns on the land outlined in the application.

Highwood's Ironstone Fe-V Project is an early-stage exploration project. To the best of the author's knowledge, there are no other significant factors that may affect access, title or right, or ability to perform minerals exploration work at this stage of the project.

1.6 Geological Setting and Mineralization

The Upper Cretaceous (Coniacian) Bad Heart Formation forms a rusty weathering, high-iron content clastic unit that is comprised largely of sandstone and siltstone, and locally, is characterized by ooidal ironstone. The iron-rich, ooidal facies within the Bad Heart forms a series of elongated northwest-trending bodies, the exact limits, and thicknesses of which remain to be determined. The ooidal ironstone 'lenses' range in thickness from 3 to 6 m and can be up to 9 m thick. These scattered exposures occur along the slopes of localized uplands and represent the thickest known iron-rich deposits in western Canada. The ironstone occurrences are historically referred to as the Clear Hills ironstone deposits.

In gross lithology, the iron-rich ooidal facies is the most common constituent by volume in the historically documented iron deposits. The average content of textural elements for a composite of ooidal ironstone facies is 46.0% ooids, 22.3% matrix, 13.5% ferruginous cement, 9.9% rock fragments, 5.6% carbonate (mainly siderite) and 2.7% quartz grains.

The ooids form within a single massive horizon, are 0.4 to 1.0 mm in diameter, have tangential layers (commonly concentric), and consist of nontronite, chamosite and silica that alternate in circular layers of variable width. Quartz commonly occurs in the cores of the ooids with the average ooid composed of about 45 vol. % nontronite, 45 vol. % goethite, 5 vol. % silica and 5 vol. % amorphous phosphate. Mineralogical work conducted in the 1970s shows the nontronite averages 39 wt. % Fe, 20 wt. % SiO_2, 5.4 wt. % Al_2O_3, 0.2 wt. % CaO and 0.9 wt. % P_2O_5, whereas the goethite minerals average 49.9 wt. % Fe, 6.0 wt. % SiO_2, 4.6 wt.% Al_2O_3, 0.4 wt.% CaO and 1.6 wt.% P_2O_5.

1.7 Historical Exploration and Government Studies

The Bad Heart Formation was initially described by McLearn in 1919 and has since been studied by numerous researchers and exploration companies. The most prevalently studied sections of the Bad Heart Formation, and mineral resource evaluations of the Clear Hills iron deposits have occurred in areas that are not included within Highwood's current Ironstone Fe-V Project. And this information has been summarized in this History section. In this case it is important to note that the QP (and the Issuer) has been unable to verify the information and that the information is not necessarily indicative to the mineralization on the Property that is the subject of the technical report.

With respect to historical information that occurs within the boundaries of Highwood's Ironstone Fe-V mineral permits, a recent 2020 Government of Alberta compilation shows there is:

- A total of 71 documented occurrences of Bad Heart Formation. The bedrock occurrences crop out mostly in the Worsley (n=27), Dunvegan (n=21), and Pouce (n=13) sub-properties.

- 58 historical iron and vanadium analyses with analytical results that range from 18.5% to 54.0% Fe_2O_3 with an average of 35.76% Fe_2O_3, and 65 ppm to 2,654 ppm V, with an average of 892 ppm V.

1.8 Highwood's 2021 Exploration Work

In May 2021, Highwood conducted a reconnaissance, road-based bedrock sampling trip at their Dunvegan, Pouce, and Worsley sub-properties. The Company collected a total of 8 bedrock samples. Bad Heart Formation bedrock samples from the historically documented Spirit River Pit 1 (n=2 samples), yielded 34 to 38 wt. % Fe_2O_3 and 418 to 468 ppm V. These analytical results verified the historical iron and vanadium content from the Bad Heart Formation ooidal ironstone at this site. It is the Qualified Person's opinion that Highwood's ironstone exploration work is preliminary, and the Company has yet to conduct a vigorous exploration program on their ironstone-focused mineral permits.

With respect to Li-brine, Highwood collected 54 brine samples from within 5 of their 28 Li-brine sub-properties with analytical results ranging from 10.7 mg/L to 52.6 mg/L Li. The brine samples were collected and analyzed by independent and accredited laboratories with experience in petroleum fluid products such as hypersaline brine. It is the Qualified Person's opinion that the Li-brine exploration work conducted by Highwood is reasonable and within standard practices of Li-brine evaluation.

1.9 Qualified Person Site Inspection

A QP site inspection was completed at Highwood's Ironstone Fe-V Project on July 13, 2021. The author and QP collected 5 samples of the Bad Heart Formation ooidal ironstone at the Spirt River location that included: 1) 3 in-place channel samples in which a representative section of the ironstone measuring 0.7 m to 1.0 m in height was collected for each sample, and 2) 2 grab samples from an active excavation pile. The samples were analyzed at Activation Laboratories in Ancaster, ON. The Sprit River Section Pit sectionally-representative channel samples (0.7-1.0 m vertical sample interval) returned iron values of between 35.4% and 36.6% Fe. The 2 grab samples yielded 29.8% and 34.7% Fe. The channel and grab samples yielded between 1,160 ppm and 1,530 ppm V.

The analytical results verify the historical, and Highwood sampled, iron and vanadium content from the Bad Heart Formation ooidal ironstone at the Spirt River location within the Dunvegan sub-property.

1.10 Conclusions and Recommendations

Highwood's northwest Alberta-based Ironstone Fe-V Project and their Alberta- and British Columbia-based Li-Brine Project represent early-stage exploration projects.

With respect to Highwood's Ironstone Fe-V Project, the compilation work completed as part of this technical report can help to guide the Company to potential target areas within the boundaries of their property. Highwood did complete a preliminary, road-based, reconnaissance field trip in which the Company verified the Bad Heart Formation ooidal ironstone at the Spirit River Section Pit 1 in their Dunvegan sub-property. This exposed location could provide an ideal setting for Highwood to collect ooidal ironstone material for metallurgical test work. Hence the Company is positioned to 1) assess potential target areas outlined in the history section of this technical report, and 2) collect a bulk sample of ooidal ironstone for metallurgical work.

A two-phased ironstone program is recommended with Phase 1 work that evaluates the metallurgical properties of the Bad Heart Formation to beneficiate iron and extract other minerals of interest such as vanadium. The mineral processing test work will be complemented with ongoing data compilation and geological studies. A Phase 2 program is dependent on the positive results of the Phase 1 work. Phase 2 work recommendations propose to explore Highwood's permits with airborne aeromagnetic/electromagnetic surveys and diamond drill programs to delineate high ooidal ironstone stratigraphic units within one or more of the Highwood sub-properties. This work will be complemented with additional metallurgical programs. The Phase 2 work is intended to advance the confidence level of the ironstone toward mineral resource estimation(s). The total estimated cost of Phase 1 and Phase 2 of the recommended exploration work, with a 10% contingency, is CDN$126,500 and CDN$4,642,000, respectively. The total estimated cost of the recommended exploration work, with a 10% contingency, is CDN$4,768,500 (Table 1.1).

With respect to Highwood's Lithium-Brine Project, the Company completed a preliminary June 2021 sampling program, in which Highwood collected brine from 5 of the 7 sub-properties that included a variety of Devonian- to Granite Wash-aged aquifers situated at depths of between 1,222 m and 3,208 m beneath the earth's surface. In addition, Highwood collected brine for preliminary mineral processing test work from the Company's Drumheller sub-property. It is the QP's opinion that the exploration work conducted by Highwood to date at their Lithium-Brine Project is reasonable and within the standard practices of Li-brine evaluation with deep-seated confined aquifers.

A two-phased Li-brine program is recommended that 1) continues to assess some of the 28 sub-properties for their Li-brine and Li-from-brine recovery potential, and 2) dependent on the positive results of the Phase 1 work, defines advanced work for one or more of the sub-properties intended to increase the confidence level of the data toward mineral resource estimation(s). The total estimated cost of Phase 1 and Phase 2 of the recommended exploration work, with a 10% contingency, is CDN$225,500 and CDN$236,500. The total estimated cost of the recommended exploration work, with a 10% contingency, is CDN$462,000 (Table 1.1).

Table 1.1 Future work recommendations for Highwood's Ironstone Fe-V and Lithium-Brine Projects.

A) Ironstone Fe-V Project

Phase	Item	Activity	Cost estimate (CDN$)	Sub-total (CDN$)
Phase 1	1	Collect a bulk sample of the Bad Heart Formation ooidal ironstone for metallurgical test work	$10,000	
	2	Preliminary benchtop metallurgical test work to beneficiate the ironstone to higher levels of iron and a preliminary evaluation of potential co-products such as vanadian, rare earth metals, etc. and their extrability potential.	$60,000	
	3	Ongoing compilation work and geological mapping studies to assess historical Bad Heart Formation occurrences and to determine Phase 2 target locations	$45,000	**$115,000**
Phase 2	1	Complete a heli-borne, detailed (100- to 200-m line spacing), high-resolution, aeromagnetic (HRAM) survey to delineate target areas for drilling. Complement the HRAM survey with a high-frequency electromagnetic survey(s) such as DIGHEM	$1,625,000	
	2	Conduct a diamond drilling program with the intent to drill 75 to 100 holes of approximately 60 m depth totalling 6,000 m.	$2,100,000	
	3	Ongoing metallurgical test work to test and/or refine the Phase 1 metallurgical results.	$450,000	
	4	Technical reporting and potential resource modelling and estimations on selected deposits	$45,000	**$4,220,000**
			Sub-total	**$4,335,000**
			Contingency (10%)	**$433,500**
			Total	**$4,768,500**

B) Lithium-Brine Project

Phase	Item	Activity	Cost estimate (CDN$)	Sub-total (CDN$)
Phase 1	1	Brine geochemical assay sampling programs to assess the individual sub-properties	$85,000	
	2	Brine mineral processing bulk brine sampling program(s) and initial benchtop Li extraction work to produce a lithium concentrate.	$70,000	
	3	Hydrogeological studies on selected sub-properties (x2)	$50,000	**$205,000**
Phase 2	1	Ongoing mineral processing test work that includes adjustments and confirmaton benchtop Li extraction test work along with experimental tests to take the Li concentrate to ltihium hydroxide.	$125,000	
	2	Technical reporting and resource modelling and estimations on selected sub-properties (x2)	$90,000	**$215,000**
			Sub-total	**$420,000**
			Contingency (10%)	**$42,000**
			Total	**$462,000**

2 Introduction

2.1 Issuer and Purpose

This technical report has been prepared for the issuer, Highwood Asset Management Ltd. (Highwood or the Company). Highwood is a Canadian-owned, public asset management entity headquartered in Calgary, Alberta and oversees metallic minerals, oil, and oil midstream activities. During 2021, Highwood acquired 100% mineral ownership of 236 mineral permits and mineral titles (1,522,099 hectares) that are located throughout Alberta (n=222 mineral permits) and in northeastern British Columbia (n=14 mineral titles; Figure 2.1). Highwood is exploring the mineral permits/titles as part of their Lithium-Brine and Ironstone Iron-Vanadium (Fe-V) projects.

This primary objective of this technical report is to introduce Highwood's ironstone Fe-V Project, which comprise a portion of the Companies overall land package that consists of 77 (of the 236) mineral permits encompassing 546,398.72 ha. Known as the Ironstone Fe-V Project (or Property), the 77 mineral permits are situated in northwest Alberta and can be grouped into 7 sub-properties that include 4 contiguous groups and 3 non-contiguous groupings of mineral permits (Figure 2.1).

Highwood is investigating the Upper Cretaceous (Coniacian) Bad Heart Formation for its iron and vanadium potential along with other possible co-product elements. The Bad Heart unit, which is also defined as a series of discontinuous deposits of Clear Hills ironstone, forms a rusty weathering, iron-rich clastic unit that is comprised largely of sandstone and siltstone, and is locally characterized by ooidal ironstone.

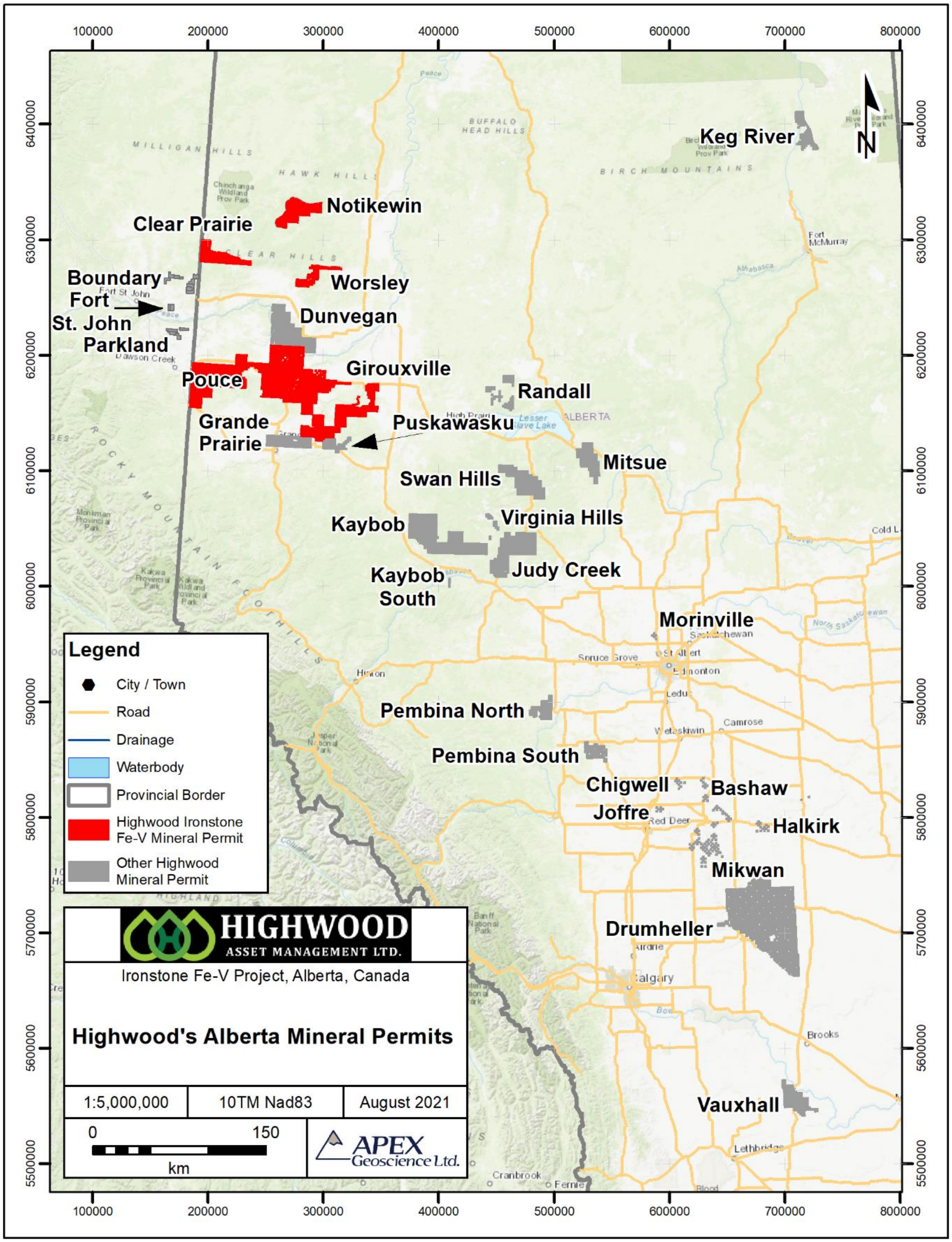
The ironstone deposits were first described by Mclearn (1919) and have been studied ever since by numerous researchers and exploration companies (see Section 2.3). Throughout this time, the most critical component to developing the Clear Hills iron deposits remains a technological challenge because the relatively low iron grade and complex ore mineralogy have prevented economic development to date (Hamilton, 1980).

The purpose of this technical report, therefore, is to 1) provide a geological introduction to Highwood's Ironstone Fe-V Project, 2) summarize historical geological, mineralogical, and geochemical studies on the ironstone, and 4) make recommendations for future exploration and metallurgical test work.

This technical report replaces and supersedes Highwood's previous reports and becomes the Company's current Technical Report. The technical report has been prepared in accordance with the Canadian Securities Administration's (CSA's) National Instrument 43-101 (NI 43-101) and has an Effective Date of 21 September 2021.

Highwood's Lithium-Brine Project is still material to the Company, and therefore, a synopsis of a previous report effectively dated 14 July 2021 is incorporated within this current report to capture the pertinent aspects of Highwood's Lithium-Brine Project.

Figure 2.1 Mineral permit locations for Highwood's Ironstone Fe-V Project (red polygons) and their Lithium-Brine Project (grey polygons).



2.2 Authors and Site Inspection

This technical report has been prepared by Mr. D. Roy Eccles, M.Sc. P. Geol., of APEX Geoscience Ltd. (APEX). Mr. Eccles, as Qualified Person (QP) for Highwood takes overall responsibility for the preparation and publication of this technical report.

The author is a QP as defined by the CSA's NI 43-101. Mr. Eccles is a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta (APEGA) and has worked as a geologist for more than 35 years since his graduation from university. Mr. Eccles has been involved in all aspects of mineral exploration and mineral resource estimations for metallic and industrial mineral projects and deposits in North America. Mr. Eccles technical experience with respect to the Bad Heart Formation includes Government of Alberta geological studies (e.g., Olson et al., 1999; Eccles, 2000; Eccles, 2000; Eccles et al. 2000; Collom et al., 2001; Dufresne and Eccles, 2001).

Mr. Eccles visited Highwood's Ironstone Fe-V Project on July 13, 2021, as part of a NI 43-101 site inspection. The inspection provided independent validation of the Bad Heart Formation ironstone geology and mineralization within Highwood's Property boundaries. Four Bad Heart Formation ironstone samples collected by the QP yielded between 35.4% and 34.7% Fe and 1,200 ppm and 1,530 ppm V, which is consistent with historical geochemical studies of the ironstone deposits.

2.3 Sources of Information

The sources of information and data used in this technical report include publicly available geological and geochemical data as they pertain to Highland's Ironstone Fe-V Project and the surrounding area. The information sources include:

- Industry mineral assessment reports, news releases, and NI 43-101 mineral resources (e.g., Lockwood, 1962; Liddle, 1999; Reader and Murphy, 2012; Stapleton, 1997; Besserer and Balzer, 2000; Bladek, 2002; Arseneau and Johnson, (2012); Prism Diversified Ltd., 2021a,b).

- Government publications and compilations (e.g., Kidd, 1959; Cant, 1988; Hamilton, 1980; Olson et al., 1999; Eccles et al., 2000; Dufresne and Eccles, 2001; Chen and Olson, 2007; Boyce and Sweet, 2006, 2007; Kafle, 2008; Sweet, 2009).

- Academic manuscripts and theses (e.g., McLearn, 1919; Colborne, 1958; Petruk, 1977; Petruk et al., 1997a,b; Plint and Walker, 1987; Plint et al., 1990; Collom (1997a,b); Donaldson, 1997; Donaldson et al., 1999; Collom, 2001; Collom et al., 2001; Mei, 2006; Olson et al., 2006; Kafle, 2011).

The author and QP of this Technical Report has reviewed all government and miscellaneous reports and deemed their information, to the best of his knowledge, are valid contributions to this technical report. The author therefore takes ownership of the ideas and values as they pertain to this geological introduction technical report.

2.4 Units of Measure

With respect to units of measure, unless otherwise stated, this Technical Report uses:

- Abbreviated shorthand consistent with the International System of Units (International Bureau of Weights and Measures, 2006).
- 'Bulk' weight is presented in metric tonnes (tonnes; 1,000 kg or 2,204.6 lbs.).
- Geographic coordinates are projected in the Universal Transverse Mercator (UTM) system relative to Zones 11 of the North American Datum (NAD) 1983. Because Highwood's Alberta mineral properties cover most of the province and given that Alberta is divided into 2 UTM zones, the GIS has been created in NAD 1983 10TM AEP Forest projection.
- Currency in Canadian dollars (CDN$), unless otherwise specified (e.g., U.S. dollars, US$; Euro dollars, €).

3 Reliance of Other Experts

The author of this technical report is not qualified to provide an opinion or comment on issues related to legal agreements, royalties, permitting and environmental matters, and therefore, disclaim certain portions associated with Section 4, Property Description and Location.

The author has not attempted to verify the legal status of the Property; however, the author has reviewed the Alberta Energy Mineral Titles Branch mineral rights management system, which show that 76 Highwood mineral permits are in good standing (a single permit is still in-application with the Alberta government), as of 21 September 2021. In addition, the author has been reliant on Highwood's management team to provide staking updates and/or to cutoff Alberta land position increases coincident with the Effective Date of this technical Report. The mineral permit ownership is described in Section 4.1.

4 Property Description and Location

4.1 Description and Location

Highwood's Ironstone Fe-V Project is part of a larger land package that includes Highwood's Lithium-Brine Project and is collectively defined as 236 mineral permits/titles (1,522,099 hectares) located throughout Alberta and in northeastern British Columbia (ha; Figure 4.1). The Lithium-Brine Project is still material to Highwood, and therefore, a complete summary of all 236 permits/titles is presented in Table 4.1.

Within this expansive land position, Highwood's Ironstone Fe-V Project land position is in northwest Alberta and defined by 77 Alberta Metallic and Industrial Mineral Permits that total 545,520 ha (Table 4.2; Figure 4.2). The permits are located approximately 456 km northwest of the Alberta Capital City of Edmonton, and between 25 km and 200 km north of the City of Grande Prairie in northwest Alberta. Other communities (towns and hamlets) in the vicinity of the permit areas include Bad Heart, Bay Tree, Clear Prairie, Demmitt, Fairview, Gordondale, Girouxville Rycroft, Silverwood, Spirit River, Notikewan, and Worsley. The permits occur within National Topographic System (NTS) map-areas 83M, 83N, 84D, and 84E. Approximately 80 townships are enclosed in the property, ranging from Townships 72 to 94 and from Ranges 23W5 to 13W6.

The 77 mineral permits can be grouped into 7 sub-properties that include 4 contiguous groups (Dunvegan, Girouxville, Grande Prairie, and Pouce sub-properties) and 3 non-contiguous groupings of mineral permits (Worsley, Clear Prairie, and Notikewin). The individual sub-properties are comprised of between 4 and 27 mineral permits.

The sub-properties and mineral permit descriptions, including mineral tenure permit ID, centroid sub-property location (in 10TM, NAD83), designated representative, mineral right percentage, status, term date, expiry date, and area (in hectares) is presented in Table 4.1, Figure 4.2, and is summarized as follows:

- Clear Prairie Sub-Property is comprised of 6 mineral permits totalling 41,136.90 Ha and is in 1:250 000 NTS Map Sheet 84D (centroid is 208050 m Easting, 6284700 m Northing, 10TM, NAD83).

- Dunvegan Sub-Property is comprised of 27 mineral permits totalling 211,917.19 Ha and is in 1:250 000 NTS Map Sheet 84M (centroid is 271900 m Easting, 6182800 m Northing, 10TM, NAD83).

- Girouxville Sub-Property is comprised of 4 mineral permits totalling 35,042.63 Ha and is in 1:250 000 NTS Map Sheet 84N (centroid is 335350 m Easting, 6154200 m Northing, 10TM, NAD83).

- Grande Prairie Sub-Property is comprised of 10 mineral permits totalling 50,567.79 Ha and is in 1:250 000 NTS Map Sheet 84M (centroid is 301800 m Easting, 6134375 m Northing, 10TM, NAD83).

- Notikewin Sub-Property is comprised of 7 mineral permits totalling 48,865.20 Ha and is in 1:250 000 NTS Map Sheet 84E (centroid is 279175 m Easting, 6325900 m Northing, 10TM, NAD83).

- Pouce Sub-Property is comprised of 18 mineral permits totalling 135,785.65 Ha and is in 1:250 000 NTS Map Sheet 84M (centroid is 206850 m Easting, 6187650 m Northing, 10TM, NAD83).

- Worsley Sub-Property is comprised of 4 mineral permits totalling 22,205.01 Ha and is in 1:250 000 NTS Map Sheet 84D (centroid is 293325 m Easting, 6270550 m Northing, 10TM, NAD83).

Figure 4.1 A summary of Highwood's complete Alberta and British Columbia mineral permit package. Highwood's Lithium-Brine Project is highlighted in grey (see Table 4.1). Mineral permits associated with Highwood's Ironstone Fe-V Project are highlighted in red (see Table 4.2).

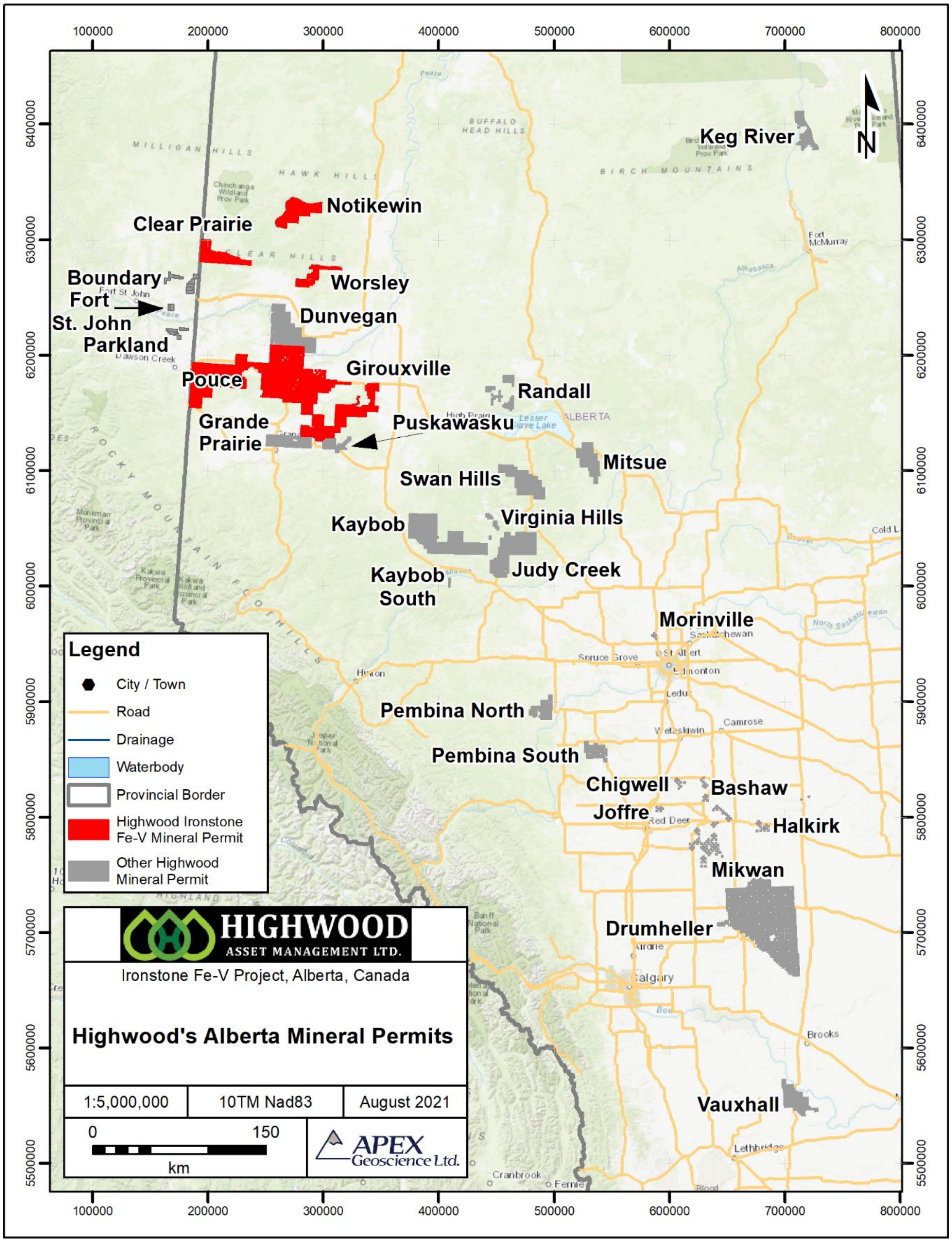


Table 4.1 Description of Highwood's complete mineral land package in Alberta and northeast British Columbia, which includes the Company's Ironstone Fe-V and Lithium-Brine Projects.

A) Alberta Mineral Permits

					Centroid of SubProperty					Approved Permits			
No.	Agreement type	Mineral Permit number	Permit area	SubProperty name	Easting (m) [10TM, NAD83]	Northing (m) [10TM, NAD83]	Status	Designated representative (% ownership)	In-application permits (received date)	Term date	Expiry date	Area (Ha)	SubProperty area (Ha)
1	93	9321060183	South	Vauxhall			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	8,794.41	
2	93	9321060184	South	Vauxhall			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	9,185.01	
3	93	9321060185	South	Vauxhall	851800	5565150	Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	9,301.63	
4	93	9321060186	South	Vauxhall			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	8,748.67	
5	93	9321060187	South	Vauxhall			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	4,537.74	**40,567.46**
6	93	9321060124	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	3,106.28	
7	93	9321060182	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	4,194.34	
8	93	9321070098	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	6,008.25	
9	93	9321070099	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	2,905.98	
10	93	9321080123	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	8,803.83	
11	93	9321080124	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	8,811.24	
12	93	9321080125	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	8,803.27	
13	93	9321080126	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	8,758.64	
14	93	9321080127	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	8,834.67	
15	93	9321080128	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	8,829.23	
16	93	9321080129	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	8,828.06	
17	93	9321080130	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	8,835.29	
18	93	9321080131	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	8,187.62	
19	93	9321080132	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	8,765.63	
20	93	9321080133	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	8,007.20	
21	93	9321080134	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	9,281.20	
22	93	9321080135	South	Drumheller			Active	Highwood Asset Management Ltd. (100%)		2021-08-09	2035-08-09	840.79	
23	A93	210095901	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-12			5,420.68	
24	A93	210096001	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-12			64.57	
25	A93	210096001	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-12			6,936.96	
26	A93	210096101	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-12			7,055.10	
27	A93	210096201	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-12			8,089.58	
28	A93	210096301	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-12			8,825.66	
29	A93	210096401	South	Drumheller	797650	5713700	In Application	Highwood Asset Management Ltd. (100%)	2021-07-12			193.32	
30	A93	210096401	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-12			8,384.47	
31	A93	210096501	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-12			1,606.94	
32	A93	210097301	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-13			8,883.98	
33	A93	210097401	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-13			8,884.61	
34	A93	210097501	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-13			7,492.28	
35	A93	210097601	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-13			2,061.11	
36	A93	210097701	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-13			8,876.08	
37	A93	210097901	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-14			59.96	
38	A93	210097901	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-14			7,448.62	
39	A93	210098001	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-14			46.57	
40	A93	210098001	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-14			6,529.85	
41	A93	210098101	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-14			7,955.96	
42	A93	210098201	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-14			1,616.26	
43	A93	210098301	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-14			8,859.55	
44	A93	210098401	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-14			8,857.26	
45	A93	210098701	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-15			8,851.05	
46	A93	210098801	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-15			8,777.33	
47	A93	210098901	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-15			8,782.12	
48	A93	210099001	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-15			8,780.68	
49	A93	210099101	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-15			8,682.35	
50	A93	210099201	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-15			8,809.13	
51	A93	210100601	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-19			8,821.86	
52	A93	210100701	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-19			8,864.45	
53	A93	210100801	South	Drumheller			In Application	Highwood Asset Management Ltd. (100%)	2021-07-19			1,134.81	**317,454.68**
54	93	9321070180	Central	Halkirk	817500	5799600	Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	4,130.57	**4,130.57**
55	93	9321070174	Central	Mikwan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	1,550.73	
56	93	9321070181	Central	Mikwan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	1,548.69	
57	93	9321070182-01	Central	Mikwan	768900	5784100	Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	1,295.62	
58	93	9321070182-02	Central	Mikwan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	5,886.42	
59	93	9321060178	Central	Mikwan			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	6,688.40	
60	93	9321060179	Central	Mikwan			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	2,314.23	**19,284.09**
61	93	9321070175	Central	Bashaw			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	4,154.40	
62	93	9321070176	Central	Bashaw	767650	5824400	Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	2,081.69	
63	93	9321070197	Central	Bashaw			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	1,806.89	**8,042.98**
64	93	9321060117	Central	Joffre	727000	5816600	Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	1,811.12	**1,811.12**
65	93	9321070177	Central	Chigwell	743400	5836150	Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	1,287.98	
66	93	9321070198	Central	Chigwell			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	1,302.32	**2,590.30**
67	93	9321060116	Central	Pembina South			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	4,253.89	
68	93	9321070109	Central	Pembina South	670650	5862200	Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	6,448.58	
69	93	9321070110	Central	Pembina South			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	7,486.18	
70	93	9321070111	Central	Pembina South			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	2,907.25	**21,095.90**
71	93	9321070200	Central	Pembina North			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	7,778.28	
72	93	9321070112	Central	Pembina North	624500	5897100	Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	9,315.37	
73	93	9321070113	Central	Pembina North			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	6,334.25	**23,427.90**
74	93	9321070199	Central	Morinville	718900	5963900	Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	1,471.04	**1,471.04**
75	93	9321060115	West-central	Kaybob South	540000	6003450	Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	1,282.22	**1,282.22**
76	93	9321060113	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	6,425.76	
77	93	9321060114	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	5,134.53	
78	93	9321060159	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	8,980.61	
79	93	9321060168	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	6,174.90	
80	93	9321060167	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	9,258.86	
81	93	9321060166	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	4,629.77	
82	93	9321060180	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	8,598.19	
83	93	9321070157	West-Central	Kaybob	533190	6035400	Active	Highwood Asset Management Ltd. (100%)		2021-07-09	2035-07-09	4,358.75	
84	93	9321070158	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-07-09	2035-07-09	6,904.15	
85	93	9321070159	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-07-09	2035-07-09	9,190.26	
86	93	9321070160	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-07-09	2035-07-09	7,682.22	
87	93	9321070161	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-07-09	2035-07-09	9,231.86	
88	93	9321070162	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-07-09	2035-07-09	7,682.31	
89	93	9321070163	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-07-09	2035-07-09	6,165.14	
90	93	9321070212	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	9,264.32	
91	93	9321070213	West-Central	Kaybob			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	9,139.90	**118,821.53**
92	93	9321060121	West-Central	Virginia Hills			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	2,044.42	
93	93	9321060122	West-Central	Virginia Hills	578100	6056000	Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	2,301.97	
94	93	9321060123	West-Central	Virginia Hills			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	512.83	**4,859.22**
95	93	9321060188	West-Central	Swan Hills			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	9,221.48	
96	93	9321060189	West-Central	Swan Hills			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	9,231.08	
97	93	9321060170	West-Central	Swan Hills			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	9,214.29	
98	93	9321060171	West-Central	Swan Hills	603800	6095700	Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	9,208.39	
99	93	9321060172	West-Central	Swan Hills			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	9,189.52	
100	93	9321060173	West-Central	Swan Hills			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	7,670.46	
101	93	9321060174	West-Central	Swan Hills			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	3,070.22	**56,805.44**
102	93	9321060175	West-Central	Mitsue			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	9,080.61	
103	93	9321060176	West-Central	Mitsue			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	9,253.35	
104	93	9321060177	West-Central	Mitsue	658100	6115500	Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	8,717.65	
105	93	9321070214	West-Central	Mitsue			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	7,676.35	
106	93	9321070215	West-Central	Mitsue			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	3,597.28	**38,325.24**
107	93	9321060118	West-Central	Randall			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	4,859.68	
108	93	9321060119	West-Central	Randall			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	4,118.87	
109	93	9321060120	West-Central	Randall	579200	6167600	Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	6,210.28	
110	93	9321060165	West-Central	Randall			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	3,328.49	
111	93	9321060181	West-Central	Randall			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	1,789.36	**20,306.68**
112	93	9321070216	West-Central	Judy Creek			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	8,728.56	
113	93	9321070217	West-Central	Judy Creek			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	9,260.60	
114	93	9321070218	West-Central	Judy Creek			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	9,264.05	
115	93	9321070219	West-Central	Judy Creek			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	9,236.67	
116	93	9321070220	West-Central	Judy Creek			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	9,239.96	
117	93	9321070221	West-Central	Judy Creek	595250	6036300	Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	7,782.66	
118	93	9321070092	West-Central	Judy Creek			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	7,711.80	
119	93	9321070093	West-Central	Judy Creek			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,111.11	
120	93	9321070094	West-Central	Judy Creek			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	4,114.61	
121	93	9321070095	West-Central	Judy Creek			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	4,771.14	
122	93	9321070096	West-Central	Judy Creek			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	3,577.52	**81,798.67**
123	93	9321060160	Northwest	Puskawasku	443000	6121100	Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	5,946.56	
124	93	9321070097	Northwest	Puskawasku			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	1,293.30	**7,239.86**
125	93	9321070135	Northwest	Girouxville			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	7,996.83	
126	93	9321070186	Northwest	Girouxville			Active	Highwood Asset Management Ltd. (100%)		2021-07-12	2035-07-12	9,321.89	
127	93	9321070187	Northwest	Girouxville	468400	6158000	Active	Highwood Asset Management Ltd. (100%)		2021-07-12	2035-07-12	9,220.89	
128	93	9321070188	Northwest	Girouxville			Active	Highwood Asset Management Ltd. (100%)		2021-07-12	2035-07-12	7,555.75	
129	93	9321070211	Northwest	Girouxville			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	9,119.16	
130	93	9321070233	Northwest	Girouxville			Active	Highwood Asset Management Ltd. (100%)		2021-07-19	2035-07-19	5,320.95	**48,535.49**

Table 4.1, continued.

No.	Agreement type	Mineral Permit number	Permit area	SubProperty name	Centroid of SubProperty: Easting (m) [10TM, NAD83]	Centroid of SubProperty: Northing (m) [10TM, NAD83]	Status	Designated representative (% ownership)	In-application permits (received date)	Approved Permits: Term date	Approved Permits: Expiry date	Area (Ha)	SubProperty area (Ha)
131	93	9321060161	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	1,808.44	
132	93	9321060162	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	2,711.70	
133	93	9321060163	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	2,129.35	
134	93	9321060164	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-06-25	2035-06-25	5,153.26	
135	93	9321070100	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	9,312.99	
136	93	9321070101	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	9,302.91	
137	93	9321070102	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,182.68	
138	93	9321070103	Northwest	Grande Prairie	413250	6130600	Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	9,271.82	
139	93	9321070104	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	9,323.55	
140	93	9321070105	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	6,460.80	
141	93	9321070106	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,011.40	
142	93	9321070107	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,010.21	
143	93	9321070108	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	4,124.01	
144	93	9321070201	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	986.69	
145	93	9321070189	Northwest	Grande Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-07-12	2035-07-12	6,837.66	**91,627.47**
146	93	9321070234	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-19	2035-07-19	9,251.43	
147	93	9321070235	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-19	2035-07-19	8,361.76	
148	93	9321070236	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-19	2035-07-19	9,237.25	
149	93	9321070237	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-19	2035-07-19	8,367.01	
150	93	9321070238	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-19	2035-07-19	9,225.53	
151	93	9321070239	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-19	2035-07-19	6,674.86	
152	93	9321070240	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-19	2035-07-19	4,613.98	
153	93	9321070241	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-19	2035-07-19	9,208.04	
154	93	9321080117	Northwest	Pouce	333100	6186600	Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	8,383.09	
155	93	9321080118	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	9,215.53	
156	93	9321080119	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	4,532.16	
157	93	9321080120	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	1,552.22	
158	93	9321070203	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	9,242.68	
159	93	9321070204	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	8,232.49	
160	93	9321070129	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	7,793.87	
161	93	9321070130	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	3,908.51	
162	93	9321070131	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,730.80	
163	93	9321070132	Northwest	Pouce			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	9,254.45	**135,785.65**
164	93	9321070155	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-09	2035-07-09	4,415.45	
165	93	9321070156	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-09	2035-07-09	4,654.26	
166	93	9321070114	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	7,791.45	
167	93	9321070115	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	7,964.08	
168	93	9321070116	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,711.99	
169	93	9321070117	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	7,723.13	
170	93	9321070118	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	4,660.94	
171	93	9321070119	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,787.46	
172	93	9321070120	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	4,655.69	
173	93	9321070121	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,865.24	
174	93	9321070122	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	9,020.26	
175	93	9321070138	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	6,994.38	
176	93	9321070139	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	7,901.16	
177	93	9321070202	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	8,943.11	
178	93	9321070140	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	9,291.83	
179	93	9321070141	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	9,339.88	
180	93	9321070142	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,609.06	
181	93	9321070143	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	7,355.54	
182	93	9321070144	Northwest	Dunvegan	393800	6205600	Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	9,377.68	
183	93	9321070145	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,758.03	
184	93	9321070126	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,862.61	
185	93	9321070127	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	8,565.25	
186	93	9321070128	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	4,654.06	
187	93	9321070133	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	3,417.61	
188	93	9321070190	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-12	2035-07-12	8,780.41	
189	93	9321070191	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-12	2035-07-12	9,289.01	
190	93	9321070192	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-12	2035-07-12	8,676.92	
191	93	9321070193	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-12	2035-07-12	9,195.44	
192	93	9321070194	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-12	2035-07-12	9,094.87	
193	93	9321070195	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-12	2035-07-12	6,107.01	
194	93	9321070205	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	7,276.45	
195	93	9321070206	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	9,320.68	
196	93	9321070207	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	8,218.19	
197	93	9321070208	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	9,155.76	
198	93	9321070209	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	3,103.71	
199	93	9321070210	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-07-14	2035-07-14	2,781.65	
200	93	9321080115	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	8,893.12	
201	93	9321080116	Northwest	Dunvegan			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	6,610.99	**285,824.37**
202	93	9321070154	Northwest	Worsley			Active	Highwood Asset Management Ltd. (100%)		2021-07-09	2035-07-09	9,005.13	
203	93	9321070136	Northwest	Worsley	412850	6262400	Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	6,898.49	
204	93	9321080087	Northwest	Worsley			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	2,667.35	
205	93	9321080088	Northwest	Worsley			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	5,009.59	**23,580.56**
206	93	9321070137	Northwest	Notikewin			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	9,244.04	
207	93	9321070134	Northwest	Notikewin			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	7,706.60	
208	93	9321070232	Northwest	Notikewin			Active	Highwood Asset Management Ltd. (100%)		2021-07-19	2035-07-19	4,037.27	
209	93	9321080084	Northwest	Notikewin	397400	6320700	Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	7,745.96	
210	93	9321080085	Northwest	Notikewin			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	8,090.50	
211	93	9321080086	Northwest	Notikewin			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	8,323.52	
212	A93	210061501	Northwest	Notikewin			In Application	Highwood Asset Management Ltd. (100%)	2021-05-03			6,380.93	**51,528.82**
213	93	9321080089	Northwest	Clear Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	3,718.86	
214	93	9321080090	Northwest	Clear Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	6,383.38	
215	93	9321080091	Northwest	Clear Prairie	208050	6284700	Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	8,849.00	
216	93	9321080092	Northwest	Clear Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	9,205.79	
217	93	9321080093	Northwest	Clear Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	8,063.47	
218	93	9321080114	Northwest	Clear Prairie			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	4,916.41	**41,136.90**
219	93	9321070178	Northeast	Keg River			Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	4,686.89	
220	93	9321070179	Northeast	Keg River	833150	6414800	Active	Highwood Asset Management Ltd. (100%)		2021-07-02	2035-07-02	7,468.38	
221	93	9321080121	Northeast	Keg River			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	6,592.19	
222	93	9321080122	Northeast	Keg River			Active	Highwood Asset Management Ltd. (100%)		2021-08-05	2035-08-05	8,256.82	**27,004.28**
												Total AB mineral permit area (Ha)	**1,474,338.45**

B) British Columbia mineral titles.

No.	Mineral title number	Claim Name	Permit area	SubProperty name	Centroid of SubProperty: Easting (m) [10TM, NAD83]	Centroid of SubProperty: Northing (m) [10TM, NAD83]	Status	Designated representative (% ownership)	Issue Date	Good To Date	Area (ha)	SubProperty area (Ha)
1	1081623	Parkland 1	BC	Parkland			Good	Highwood Asset Management Ltd. (100%)	2021/Mar/11	2022/Mar/11	1,517.06	
2	1081624	Parkland 2	BC	Parkland	294900	6214900	Good	Highwood Asset Management Ltd. (100%)	2021/Mar/11	2022/Mar/11	1,806.86	
3	1081625	Parkland 3	BC	Parkland			Good	Highwood Asset Management Ltd. (100%)	2021/Mar/11	2022/Mar/11	1,807.75	
4	1081626	Parkland 4	BC	Parkland			Good	Highwood Asset Management Ltd. (100%)	2021/Mar/11	2022/Mar/11	1,808.88	**6,940.55**
5	1081694	FSJ 1	BC	Fort St. John	291400	6236500	Good	Highwood Asset Management Ltd. (100%)	2021/Mar/17	2022/Mar/17	1,726.49	
6	1081695	FSJ 2	BC	Fort St. John			Good	Highwood Asset Management Ltd. (100%)	2021/Mar/17	2022/Mar/17	1,079.06	**2,805.55**
7	1081696	Boundary Lake 1	BC	Boundary			Good	Highwood Asset Management Ltd. (100%)	2021/Mar/17	2022/Mar/17	1,738.62	
8	1081697	Boundary Lake 2	BC	Boundary			Good	Highwood Asset Management Ltd. (100%)	2021/Mar/17	2022/Mar/17	1,791.30	
9	1081698	Boundary Lake 3	BC	Boundary			Good	Highwood Asset Management Ltd. (100%)	2021/Mar/17	2022/Mar/17	1,790.12	
10	1081699	Boundary Lake 4	BC	Boundary	307600	6258500	Good	Highwood Asset Management Ltd. (100%)	2021/Mar/17	2022/Mar/17	1,788.80	
11	1081701	Boundary Lake 5	BC	Boundary			Good	Highwood Asset Management Ltd. (100%)	2021/Mar/17	2022/Mar/17	1,733.24	
12	1081702	Siphon 1	BC	Boundary			Good	Highwood Asset Management Ltd. (100%)	2021/Mar/17	2022/Mar/17	1,717.44	
13	1081704	Siphon 2	BC	Boundary			Good	Highwood Asset Management Ltd. (100%)	2021/Mar/17	2022/Mar/17	1,787.18	
14	1081705	Siphon 3	BC	Boundary			Good	Highwood Asset Management Ltd. (100%)	2021/Mar/17	2022/Mar/17	1,787.47	**14,134.17**
											Total BC mineral permit area (Ha)	**23,880.26**

Table 4.2 Description of Highwood's Ironstone Fe-V Project Alberta Metallic and Industrial Mineral Permits.

1) Clear Prairie Sub-Property

Agreement No.	Sub-property	Centroid of SubProperty Easting (m) [10TM, NAD83]	Centroid of SubProperty Northing (m) [10TM, NAD83]	Designated representative	Mineral rights (%)	Status	Term date	Expiry date	Area (Ha)
9321080089	Clear Prairie			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	3,718.86
9321080090	Clear Prairie			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	6,383.38
9321080091	Clear Prairie	208050	6284700	Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	8,849.00
9321080092	Clear Prairie			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	9,205.79
9321080093	Clear Prairie			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	8,063.47
9321080114	Clear Prairie			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	4,916.41
							Total (n=6 permits)		**41,136.90**

2) Dunvegan Sub-Property

Agreement No.	Sub-property	Centroid of SubProperty Easting (m) [10TM, NAD83]	Centroid of SubProperty Northing (m) [10TM, NAD83]	Designated representative	Mineral rights (%)	Status	Term date	Expiry date	Area (Ha)
9321070118	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	4,660.94
9321070126	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	8,862.61
9321070127	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	8,565.25
9321070133	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	3,417.61
9321070138	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	6,994.38
9321070139	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	7,901.16
9321070140	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	9,291.83
9321070141	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	9,339.88
9321070142	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	8,609.06
9321070143	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	7,355.54
9321070144	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	9,377.68
9321070145	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	8,758.03
9321070190	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-12	2035-07-12	8,780.41
9321070191	Dunvegan	271900	6182800	Highwood Asset Management Ltd.	100	Active	2021-07-12	2035-07-12	9,289.01
9321070192	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-12	2035-07-12	8,676.92
9321070193	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-12	2035-07-12	9,195.44
9321070194	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-12	2035-07-12	9,094.87
9321070195	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-12	2035-07-12	6,107.01
9321070202	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-14	2035-07-14	8,943.11
9321070205	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-14	2035-07-14	7,276.45
9321070206	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-14	2035-07-14	9,320.68
9321070207	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-14	2035-07-14	8,218.19
9321070208	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-14	2035-07-14	9,155.76
9321070209	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-14	2035-07-14	3,103.71
9321070210	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-07-14	2035-07-14	2,781.65
9321080115	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	8,893.12
9321080116	Dunvegan			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	6,610.99
							Total (n=27 permits)		**208,581.30**

3) Girouxville Sub-Property

Agreement No.	Sub-property	Centroid of SubProperty Easting (m) [10TM, NAD83]	Centroid of SubProperty Northing (m) [10TM, NAD83]	Designated representative	Mineral rights (%)	Status	Term date	Expiry date	Area (Ha)
9321070135	Girouxville			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	7,996.83
9321070186	Girouxville			Highwood Asset Management Ltd.	100	Active	2021-07-12	2035-07-12	9,321.89
9321070187	Girouxville	335350	6154200	Highwood Asset Management Ltd.	100	Active	2021-07-12	2035-07-12	9,220.89
9321070188	Girouxville			Highwood Asset Management Ltd.	100	Active	2021-07-12	2035-07-12	7,555.75
9321070211	Girouxville			Highwood Asset Management Ltd.	100	Active	2021-07-14	2035-07-14	9,119.16
							Total (n=5 permits)		**35,217.70**

4) Grande Prairie Sub-Property

Agreement No.	Sub-property	Centroid of SubProperty Easting (m) [10TM, NAD83]	Centroid of SubProperty Northing (m) [10TM, NAD83]	Designated representative	Mineral rights (%)	Status	Term date	Expiry date	Area (Ha)
9321060161	Grande Prairie			Highwood Asset Management Ltd.	100	Active	2021-06-25	2035-06-25	1,808.44
9321060162	Grande Prairie			Highwood Asset Management Ltd.	100	Active	2021-06-25	2035-06-25	2,711.70
9321060163	Grande Prairie			Highwood Asset Management Ltd.	100	Active	2021-06-25	2035-06-25	2,129.35
9321060164	Grande Prairie			Highwood Asset Management Ltd.	100	Active	2021-06-25	2035-06-25	5,153.26
9321070105	Grande Prairie	301800	6134375	Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	6,460.80
9321070106	Grande Prairie			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	8,011.40
9321070107	Grande Prairie			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	8,010.21
9321070108	Grande Prairie			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	4,124.01
9321070189	Grande Prairie			Highwood Asset Management Ltd.	100	Active	2021-07-12	2035-07-12	6,837.66
9321070233	Grande Prairie			Highwood Asset Management Ltd.	100	Active	2021-07-19	2035-07-19	5,320.95
							Total (n=10 permits)		**50,567.79**

5) Notikewin Sub-Property

Agreement No.	Sub-property	Centroid of SubProperty Easting (m) [10TM, NAD83]	Centroid of SubProperty Northing (m) [10TM, NAD83]	Designated representative	Mineral rights (%)	Status	Application received date	Term date	Expiry date	Area (Ha)
9321070134	Notikewin			Highwood Asset Management Ltd.	100	Active		2021-07-02	2035-07-02	7,706.60
9321070137	Notikewin			Highwood Asset Management Ltd.	100	Active		2021-07-02	2035-07-02	9,244.04
9321070232	Notikewin			Highwood Asset Management Ltd.	100	Active		2021-07-19	2035-07-19	4,037.27
9321080084	Notikewin	279175	6325900	Highwood Asset Management Ltd.	100	Active		2021-08-05	2035-08-05	7,745.96
9321080085	Notikewin			Highwood Asset Management Ltd.	100	Active		2021-08-05	2035-08-05	8,090.50
9321080086	Notikewin			Highwood Asset Management Ltd.	100	Active		2021-08-05	2035-08-05	8,323.52
A93-210061501	Notikewin			Highwood Asset Management Ltd.	100	Active	2021-05-03	/	/	6,380.93
								Total (n=7 permits)		**51,528.82**

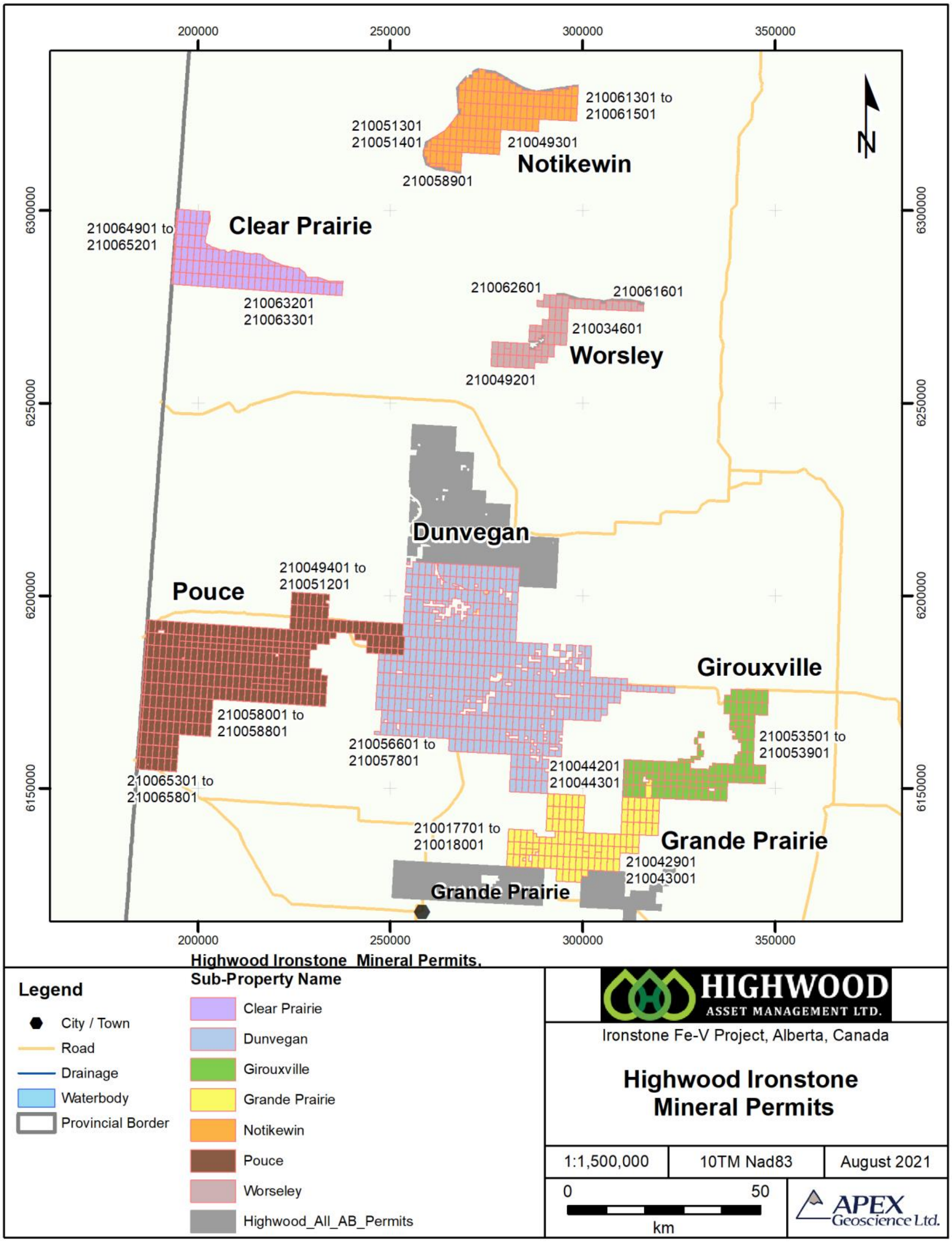
6) Pouce Sub-Property

Agreement No.	Sub-property	Centroid of SubProperty Easting (m) [10TM, NAD83]	Centroid of SubProperty Northing (m) [10TM, NAD83]	Designated representative	Mineral rights (%)	Status	Term date	Expiry date	Area (Ha)
9321070129	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	7,793.87
9321070130	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	3,908.51
9321070131	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	8,730.80
9321070132	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	9,254.45
9321070203	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-14	2035-07-14	9,242.68
9321070204	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-14	2035-07-14	8,232.49
9321070234	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-19	2035-07-19	9,251.43
9321070235	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-19	2035-07-19	8,361.76
9321070236	Pouce	206850	6187650	Highwood Asset Management Ltd.	100	Active	2021-07-19	2035-07-19	9,237.25
9321070237	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-19	2035-07-19	8,367.01
9321070238	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-19	2035-07-19	9,225.53
9321070239	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-19	2035-07-19	6,674.86
9321070240	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-19	2035-07-19	4,613.98
9321070241	Pouce			Highwood Asset Management Ltd.	100	Active	2021-07-19	2035-07-19	9,208.04
9321080117	Pouce			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	8,383.09
9321080118	Pouce			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	9,215.53
9321080119	Pouce			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	4,532.16
9321080120	Pouce			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	1,552.22
							Total (n=18 permits)		**135,785.65**

7) Worsley Sub-Property

Agreement No.	Sub-property	Centroid of SubProperty Easting (m) [10TM, NAD83]	Centroid of SubProperty Northing (m) [10TM, NAD83]	Designated representative	Mineral rights (%)	Status	Term date	Expiry date	Area (Ha)
9321070136	Worsley			Highwood Asset Management Ltd.	100	Active	2021-07-02	2035-07-02	6,898.49
9321070154	Worsley	293325	6270550	Highwood Asset Management Ltd.	100	Active	2021-07-09	2035-07-09	9,005.13
9321080087	Worsley			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	2,667.35
9321080088	Worsley			Highwood Asset Management Ltd.	100	Active	2021-08-05	2035-08-05	5,009.59
							Total (n=4 permits)		**23,580.56**
							Total of all sub-properties (n=77 permits)		**546,398.72**

Figure 4.2 A summary of Highwood's Ironstone Fe-V Project's Alberta mineral permits. The mineral permits are grouped into 7 sub-property areas. The mineral permit numbers associated with each sub-property is included.



4.2 Property Rights and Maintenance

At the Effective Date of this technical report, the designated 100% owner of all 77 permits is Highwood Asset Management Ltd. The status of all permits is listed as "Active", or in good standing.

The Alberta mineral permits grant Highwood the exclusive right to explore for metallic and industrial minerals for seven consecutive two-year terms (total of fourteen years), subject to traditional biannual assessment work. Work requirements for maintenance of permits in good standing are $5.00/ha for the first term, $10.00/ha for each of the second and third terms, and $15.00/ha for each the fourth, fifth, sixth and seventh terms.

The kinds of work that may be submitted to the Department as assessment work include prospecting, stripping/trenching, drilling, geological survey, geochemical survey, geophysical survey, transporting drill core to core storage facility, reclamation of disturbed sites, assay, and analytical work.

The statutes also provide for conversion of Alberta Permits to Metallic Minerals Leases once a mineral deposit has been identified. Leases are granted for a renewable term of 15 years and require annual payments of $3.50/ha for rent to maintain them in good standing. There are no work requirements for the maintenance of leases, and they confer rights to minerals. Complete terms and conditions for Alberta mineral exploration permitting and work can be found in the Alberta *Mines and Minerals Act* and Regulations (Metallic and Industrial Minerals Tenure Regulation 145/2005, Metallic and Industrial Minerals Exploration Regulation 213/98). These and other acts and regulations, with respect to mineral exploration and mining, can be found in the Laws Online section of the Government of Alberta Queen's Printer website (www.qp.alberta.ca/Laws_Online.cfm).

4.3 Royalties and Agreements

Government royalty rates associated with any metallic mineral production in Alberta, as administrated by the Department of Energy, would be subject to 1% gross mine-mouth revenue before payout, and after payout, the greater of 1% gross mine-mouth revenue and 12% net revenue.

The Clear Hills Ironstone mineral permits were acquired directly via on-line staking from the Government of Alberta. Consequently, there are no known back-in rights, payments, or other agreements and encumbrances to which the Property is subject.

4.4 Surface Rights

Prospecting for Crown minerals using hand tools is permitted throughout Alberta without a licence, permit, or regulatory approval, if there is no surface disturbance. Prospecting on privately owned land or land under lease is permitted without any departmental approval. However, the prospector must obtain consent from the landowner or leaseholder before starting to prospect.

When prospecting, the prospector can use a vehicle on existing roads, trails, and cutlines. If the work is on public land, the prospector can live on the land in a tent, trailer, or other shelter for up to 14 days. For periods longer than 14 days, approval should be obtained from the Land Administration Division. If the land is privately owned or under lease, the prospector must formulate arrangements with the landowner or leaseholder.

4.5 Environmental Liabilities, Permitting and Significant Factors

None of Highwood's sub-properties occur in areas where surface access is restricted, or where the minerals are reserved, or withdrawn, by the Crown. Specific restrictions (i.e., temporal or buffer zone limitations) occur throughout northwest Alberta in waterways, key wildlife and biodiversity zones, archeological areas, and Caribou zones – but the restrictions would not affect the Company's ability to access and explore the Ironstone Fe-V Project.

Environmental licences, factors, and issues – as they pertain to minerals exploration – are administered by Alberta Environment and Parks (AEP). Before companies proceed with exploration and development, they will be made aware of any environmental concerns in their area of interest. All applications for metallic mineral exploration are referred to relevant departments for review. The departments will assess potential or existing environmental concerns on the land outlined in the application.

With respect to exploration permits, in Alberta, exploration approval is not needed for aerial surveys or ground geophysical and geochemical surveys, providing they do not disturb the land or vegetation cover.

The prospector or company must obtain the appropriate approvals and permits if 1) mechanized exploration equipment will be used (drilling, trenching, bulk sampling, grid cutting), and/or 2) the land surface will be disturbed. These approvals and permits are required under the Metallic and Industrial Minerals Exploration Regulation. Most projects require an exploration licence, permit, and approval. Samples up to 20 kg in size may be taken for assay and testing purposes, but larger samples must be authorized the Department of Energy.

Exploration project approval is through AEP. If an application has been completed and the appropriate field staff have copies of the program, approval can usually be obtained in about 10 working days.

Each application for exploration approval must be accompanied by a fee of $100 and contain the following information 1) types of minerals being explored, 2) techniques and equipment to be used, 3) expected start-up and completion dates of program, 4) names and addresses of contractors who will conduct the fieldwork, 5) maps showing locations of both the existing and proposed drill, sample or excavation sites, 6) location of campsites and landing strips, 7) location of new and existing routes proposed to gain access to drill, sample and campsites

After receiving exploration approval, the prospector or exploration company may conduct the approved activity. However, if they modify their program, the designated field officer must be contacted to review and approve the changes.

A final report must be submitted to Land Management (AEP) within 60 days following completion of the exploration program.

Highwood's Ironstone Fe-V Project is an early-stage exploration project. To the best of the author's knowledge, there are no other significant factors and risks that may affect access, title or right, or ability to perform minerals exploration work at this stage of the project.

4.6 Property-Related Risks and Uncertainties and Mitigation Strategies

As with any early-stage exploration project, and a metallurgy technology development project, there exists potential risks and uncertainties. Highwood will attempt to reduce risk/uncertainty through effective project management, engaging technical experts, and developing contingency plans.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

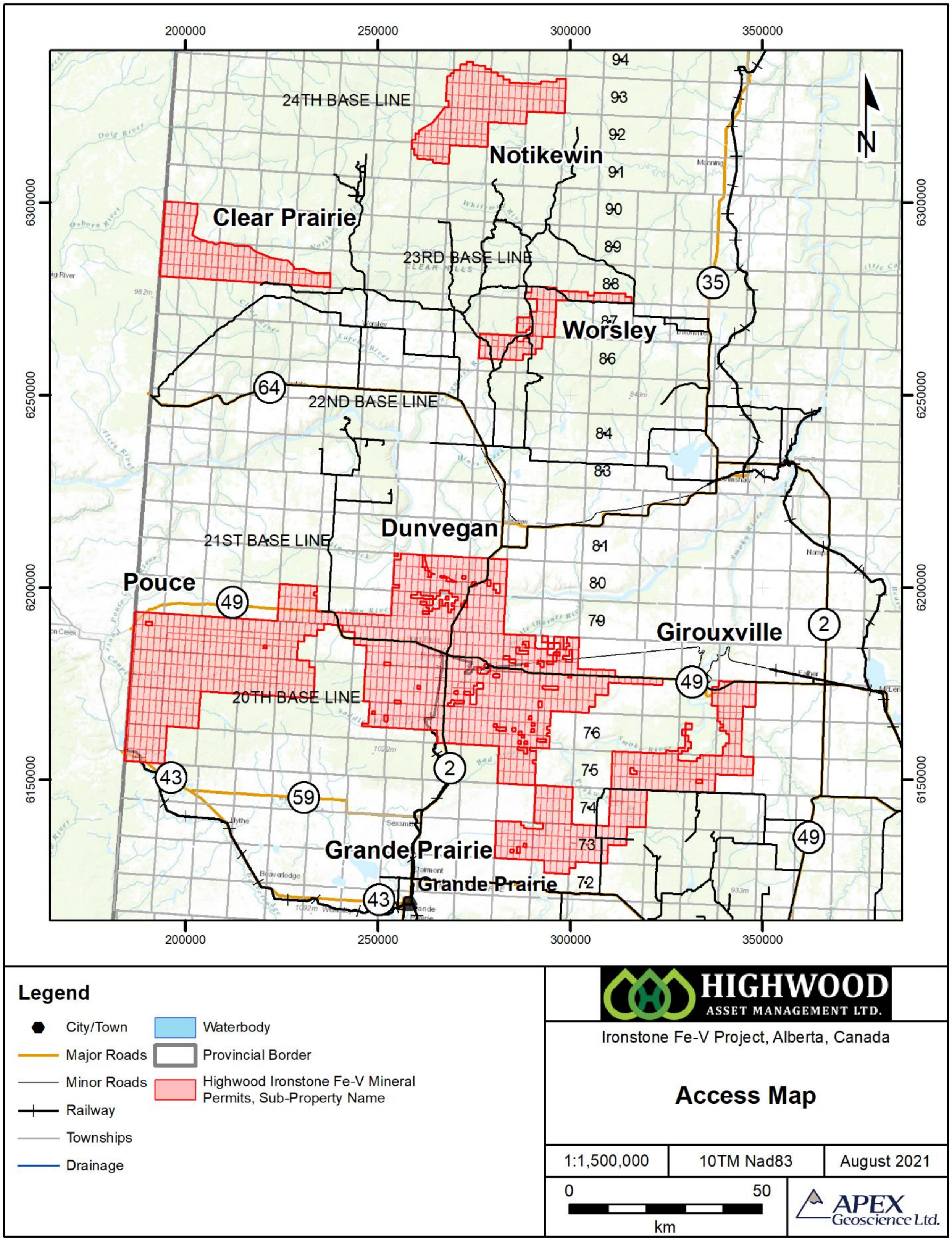
5.1 Accessibility, Infrastructure, and Local Resources

The closest City to the Ironstone Fe-V Project is Grande Prairie at the intersection of Highway 43 and Highway 40, approximately 456 km northwest of Edmonton. The Grande Prairie Airport (IATA: YQU, ICAO: CYQU) is located 5.6 km west-northwest of Grande Prairie. It is the largest airport in the Peace River Country of northwestern Alberta and northeastern British Columbia and ranks among the busiest regional airports in Canada. From Grande Prairie, other nearby communities can be easily accessed by road such as Clear Prairie, Spirit River, Rycroft, Bad Heart, Gordondale, Girouxville, and Fairview.

Highway 49 crosses the northern edge of the Girouxville and Pouce sub-properties and the centre of the Dunvegan sub-property (Figure 5.1). Highways that access the other sub-properties include Highway 43 (Pouce) and Highway 2 (Dunvegan). There are no major highways that intersect the Grande Prairie, Clear Prairie, Notikewin, and Worsley sub-properties; rather the closest highways to these sub-properties include Highway 64 (about 12 km to Worsley and 25 km to Clear Prairie) to the south and Highway 35 to the east (about 20 km to Worsley). There are, however, secondary access routes that connect all sub-properties and the major highways in the region.

Canadian National Railway lines access the Pouce and Dunvegan sub-properties, and the Girouxville sub-property is within 5 km of the rail line. A north-south railway between the towns of Peace River and Meander River is proximal to the highway system.

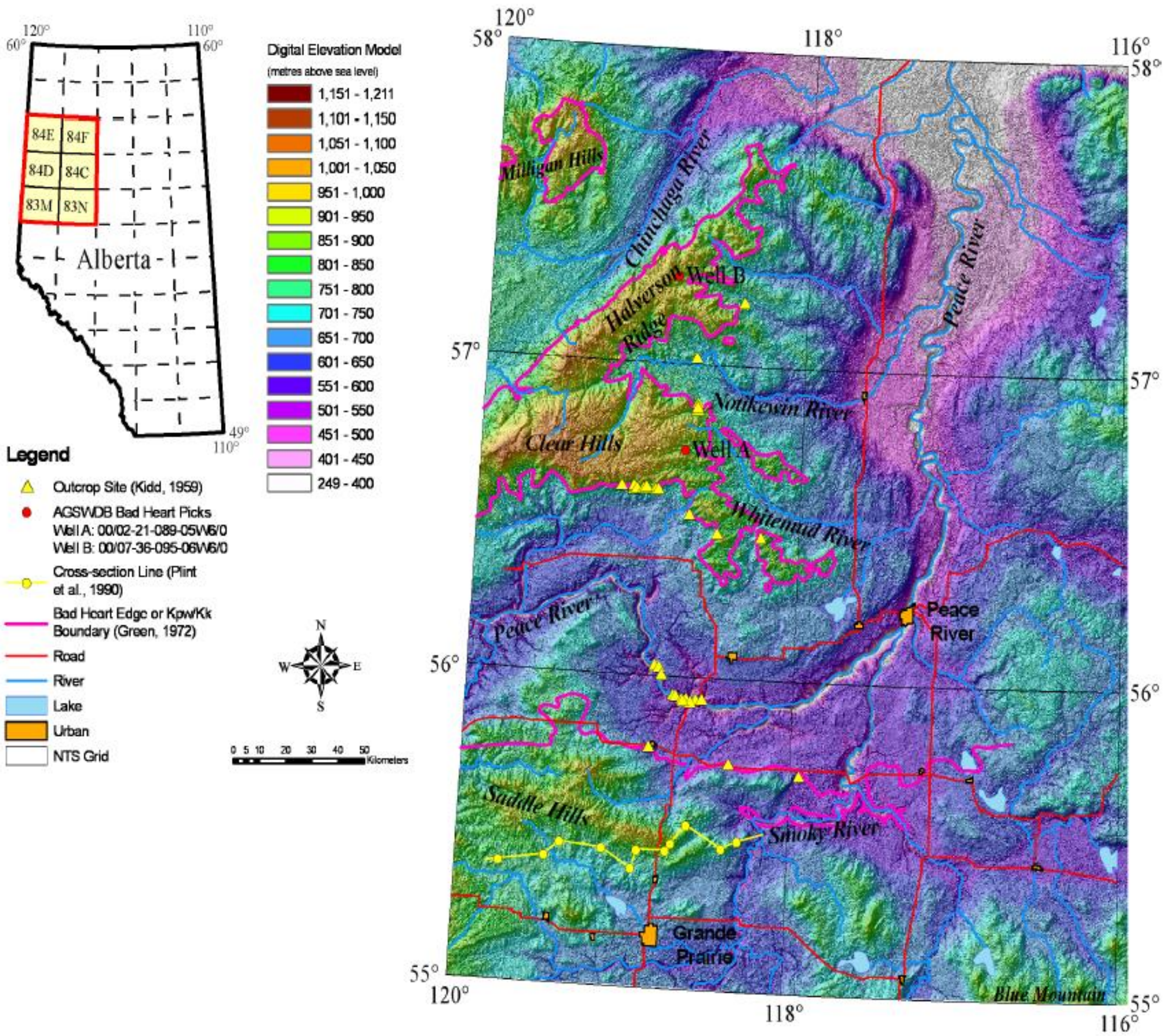
Figure 5.1 Access routes to the Ironstone Fe-V Project.



5.2 Site Topography, Elevation and Vegetation

The Ironstone Fe-V Project is within Plain's region of the WCSB, more specifically, within the Boreal Forest Natural Region with minor Foothills and Parkland Region in northwest Alberta. The digital elevation model (DEM) for the Clear Hills-Smoky River region is shown in Figure 5.2. Relief in the region of the sub-properties ranges from approximately 250 m to 1,210 m above sea level (asl), with the highest elevations at Milligan Hills, Halverson Ridge, Clear Hills, and Saddle Hills. Major rivers define the lowland regions between these highlands, including the Peace River, Smoky River, Whitemud River, Notikewin River, and Chinchaga River.

Figure 5.2 Digital Elevation Model (DEM) for the Clear Hills-Smoky River region. Source: Chen and Olson (2007).



APEX Geoscience Ltd.

The Boreal Forest Natural Region is the largest sub-region (approximately 48%) in Alberta, consisting of vast lowland plains and hill systems. This region is covered mainly by aspen and balsam poplar. Inside the Boreal Forest are extensive areas of aspen parkland in the Grande Prairie and Peace River in the property area. Crops are grown only in those areas that have a sufficiently long growing season or in regions with soil profiles defined by flood plains such as the Peace River region.

The Foothills Natural region is a transitional zone situated between the Rocky Mountain Natural Region and the Boreal Forest Natural Region. The Foothills Region is a series of ridges and rolling hills clothed with lodgepole pine, aspen, and spruce, where small streams wind their way through valley-bottom meadows of dwarf birch, willow, and grasses.

5.3 Climate

The property has a northern continental climate typical of northwestern Alberta, with short warm summers and long cold winters. The average annual minimum temperature of the property is about -3.8 °C, and the average annual maximum temperature is around 7.5 °C. The lowest temperature of the year can be lower than -40 °C, which typically occurs in January and February. The highest temperature of the year can be higher than +30 °C, which usually occurs in July and August. The annual precipitation of the property area is around 460 mm, and about 60-70% of the annual precipitation is received between April and August. The average humidity of the property area is around 72%.

Mapping and bedrock sampling exploration work in this climate zone is typically restricted to between spring and fall (April to October). Apart from spring and late fall when ground conditions are too wet, geophysical surveys and drill programs can be conducted throughout the year. The oil and gas industry are prevalent through the entire region with year-round, 24-7 operations.

5.4 Local Resources

The Peace Region, which is defined as an area of 111,000 km^2. According to Statistics Canada's latest estimates, the region's population totaled 131,200 in 2010 (Government of Alberta, 2012). The region's largest industries on an employment basis are oil and gas, forestry, retail trade, construction, and the agricultural industry. In 2006, according to Statistics Canada's census data, the services-producing sector in the Peace Country accounted for about 63% of the total number employed. The region is the province's largest producer of natural gas and conventional crude oil followed by its in-situ oil sands. Hence, the mining and oil and gas industry had the largest number of individuals employed and accounted for 13% of the region's employment.

Consequently, the Peace Region has a young, educated population that is entering the workforce and is experienced in service industry including mining and oil and gas production.

6 History

Canada is the 8th largest producer of iron ore in the world, and most of Canada's iron ore comes from the Labrador Trough region bordering Quebec and Newfoundland and Labrador (91.1%, Government of Canada, 2021). A sizable undeveloped iron resource occurs within the Upper Cretaceous Bad Heart Formation and crops out discontinuously in the Clear Hills region of northwest Alberta.

The Bad Heart Formation was initially described by McLearn in 1919 and has since been studied by numerous researchers and exploration companies (e.g., McLearn, 1919; Colborne, 1958; Kidd, 1959; Lockwood, 1962; Mellon, 1962; Petruk, 1977; Petruk et al., 1977a,b; Hamilton, 1980; Plint and Walker, 1987; Plint et al., 1990; Leckie et al., 1994; Collom (1997a,b); Donaldson, 1997; Petruk, 1977; Petruk et al., 1997a,b; Stapleton, 1997; Donaldson et al., 1999; Liddle, 1999; Olson et al., 1999; Besserer and Balzer, 2000; Eccles, 2000; Eccles et al., 2000; Collom, 2001; Collom et al., 2001; Dufresne and Eccles, 2001; Bladek, 2002; Weiss et al., 2005; Mei, 2006; Olson et al., 2006; Boyce and Sweet, 2006, 2007; Chen and Olson, 2007; Eccles et al., 2008; Kafle, 2008; Sweet, 2009; Kafle, 2011; Reader and Murphy, 2012; Arseneau and Johnson, (2012); Prism Diversified Ltd., 2021a,b).

The most prevalently studied sections of the Bad Heart Formation, and mineral resource evaluations of the Clear Hills iron deposits have occurred in areas that are not included within Highwood's current Ironstone Fe-V Project. In this case it is important to note that the QP (and the Issuer) has been unable to verify the information and that the information is not necessarily indicative to the mineralization on the Property that is the subject of the technical report.

Having said this the QP has studied the Clear Hills iron deposits during the 1990s and 2000s as geologist with the Government of Alberta. In this capacity, the QP has studied and can confirm that the best historically documented deposits of Bad Heart Formation ironstone occur off Highwood's Property, but there are also good exposures of Bad Heart ironstone within Highwood's Property.

To avoid confusion, this section has been prepared using headers that clearly state whether the sub-sections are discussing "off-Property" or "within Property" information. The disclaimer presented in the previous paragraph is also included in any sub-section that discussed "off-Property" information.

6.1 Historical Off-Property Exploration

This sub-section pertains to off-Property information. The QP (and the Issuer) has been unable to verify the information and that the information is not necessarily indicative to the mineralization on the Property that is the subject of the technical report.

The Bad Heart Formation ooidal ironstone was extensively explored between 1954 and 1965 when approximately 245 diamond drillholes were cored (McDougall, 1954;

Edgar, 1960, 1961, 1962, 1963, 1964a,b,c,d,e, 1965). This work identified 4 separate ironstone deposits named Rambling River, North Whitemud River, South Whitemud River, and Worsley, all of which occur off Highwood's Property. Premier Steel Mills Ltd. conducted mineralogical test work on an ironstone sample from the Worsley deposit, in conjunction with the Alberta Research Council, CANMET, and Krupp Industries Ltd. of Germany. The test results indicated that the iron ore from Clear Hills was not suitable as a blast furnace feed (Samis and Gregory, 1962) and that physical beneficiation of the iron to grades above blast furnace charge grade would be difficult if not impossible (Bertram and Kay, 1978).

In 1974, a Federal-Provincial joint research program excavated a 135-tonne bulk sample from the Rambling River deposit to reassess the economic potential of the Clear Hills iron deposits using more advanced metallurgy (Hamilton, 1974). Beneficiation methods applied to the test sample included magnetic separation, the 'R-N process', acid leaching, flotation, and some experiments conducted by the Alberta Research Council that involved drying, crushing, magnetizing roasting, oxidative roasting, magnetic separation (wet and dry), high-intensity dry magnetic separation, electrostatic separation, and solution-type recovery processes. Bertram and Mellon (1975) concluded that the best procedure for treating the Peace River ore appears to be either: (1) a mild reductive roast followed by crushing and grinding to yield a magnetic concentrate, or (2) intensive reduction of the ore to an iron-metal product followed by magnetic beneficiation of this product to remove the gangue constituents.

A Grain Enlargement Process that reduces the iron minerals to metallic iron with coal in the presence of a small quantity of chloride salt was shown to be successful at lab-scale testing, but the project did not advance beyond the bench-top pilot testing (Bertram and Kay, 1978; Bertram, 1981).

The study led Hamilton (1980) to conclude that there are significant net recoverable reserves of ironstone grading approximately 34% Fe at Rambling River, North Whitemud River, South Whitemud River, and Worsley deposits. However, the deposits are not economically developable because of the low iron grade and the ironstones general resistance to conventional and economical upgrading methods (Hamilton, 1980).

Little to no evaluation of the ironstone deposits were completed again until the mid 1990's, when the deposit was evaluated by Marum Resources Inc. (Marum) of Calgary, AB for its iron potential, as well as for potential co-product elements such as gold or other metals. During 1995 and 1996, Marum excavated and sampled a trench at the Worsley deposit and drilled 11 holes that penetrated to a maximum depth of 21.34 m with 9 of the 11 holes intersecting ooidal ironstone (Boulay, 1995, 1996). A 50 kg samples was collected and a preliminary metallurgical evaluation at CANMET in Ottawa, ON concluded that "*a preliminary qualitative study indicated that the reduction/smelting of the Clear Hills iron ore to produce metallic iron is technically feasible. [However,] due to the physical and chemical nature of the ore, … high material losses and low metallic yield are expected*" (Mikhail et al., 1996).

Through to 2004, Olson et al. (2006) completed a digital compilation that identified 340 diamond drill and auger holes drilled for mineral exploration purposes within the Clear Hills – Smoky River region. In addition, the compilation identified 230 coal exploratory holes, a minimum of 5,400 water wells, and at least 18,000 oil and gas wells in the area. These are summarized in the text and figures that follow.

Renewed interest occurred during the mid- to late 2000s, when Clear Hills Iron Ltd. drilled 9 holes (totaling 583 m) in 2006 (Sneddon, 2006 and 2007), and Ironstone Resources Ltd. drilled 230 holes (totaling 15,544.14 m; Arseneau and Johnson, 2012; Reader, 2014). Prism Diversified Ltd., or Prism, is formerly Ironstone Resources Ltd., and this Company completed a mineral resource estimate for their Rambling Creek, North Whitemud River, South Whitemud River and Worsley (see Section 23, Adjacent Properties). Prism also excavated a bulk pit sample of 11,000 tonnes of Bad Heart Formation ironstone for metallurgical evaluations and process development. They reportedly conducted extensive iron and vanadium beneficiation and process flowsheet development to upgrade the ooidal ironstone into high-grade iron metallics in conjunction with HATCH Associates (Prism Diversified Ltd., 2021b).

6.2 Historical Off-Property Bad Heart Formation Occurrences

This sub-section pertains to off-Property information. The QP (and the Issuer) has been unable to verify the information and that the information is not necessarily indicative to the mineralization on the Property that is the subject of the technical report.

As summarized in Olson et al. (2006), Chen and Olson (2007), and Kafle (2008):

- There is a total of 27 historically bedrock occurrences of Bad Heart Formation and 6 possible outcrop locations of Bad Heart Formation in the general study area (i.e., off-Property occurrences; Figure 6.1; Olson et al., 2006). The highest concentration of Bad Heart Formation occurrences crops out in the Worley, Rambling River, and Bad Heart areas.

- There is a total of 185 auger or diamond drillholes that have reportedly penetrated Bad Heart Formation in the general study area (Figure 6.2; Olson et al., 2006). The Bad Heart auger/drillhole intersections are documented mostly in the Rambling Creek, Worsley, and Gordondale areas.

- There is a total of 141 documented oil and gas wells that have penetrated Bad Heart Formation in the general study area (Chen and Olson, 2007). 2 wells with pick of the Bad Heart Formation, 30 wells with digital logs showing the Bad Heart Formation, 17 wells with digital logs partially showing the Bad Heart Formation, 31 wells with digital logs that may have information of the Bad Heart Formation, and 61 wells with raster logs of the Bad Heart Formation are shown as red, yellow, green, orange, and purple circles, respectively, in Figure 6.3. The Bad Heart intersections are documented mostly in the following areas: Notikewin River, Milligan Hills, and Hotchkiss River.

Figure 6.1 Historically documented bedrock occurrences of Bad Heart Formation and possible outcrop locations of Bad Heart Formation. Sources: Olson et al. (2006) and Lopez et al. (2020).

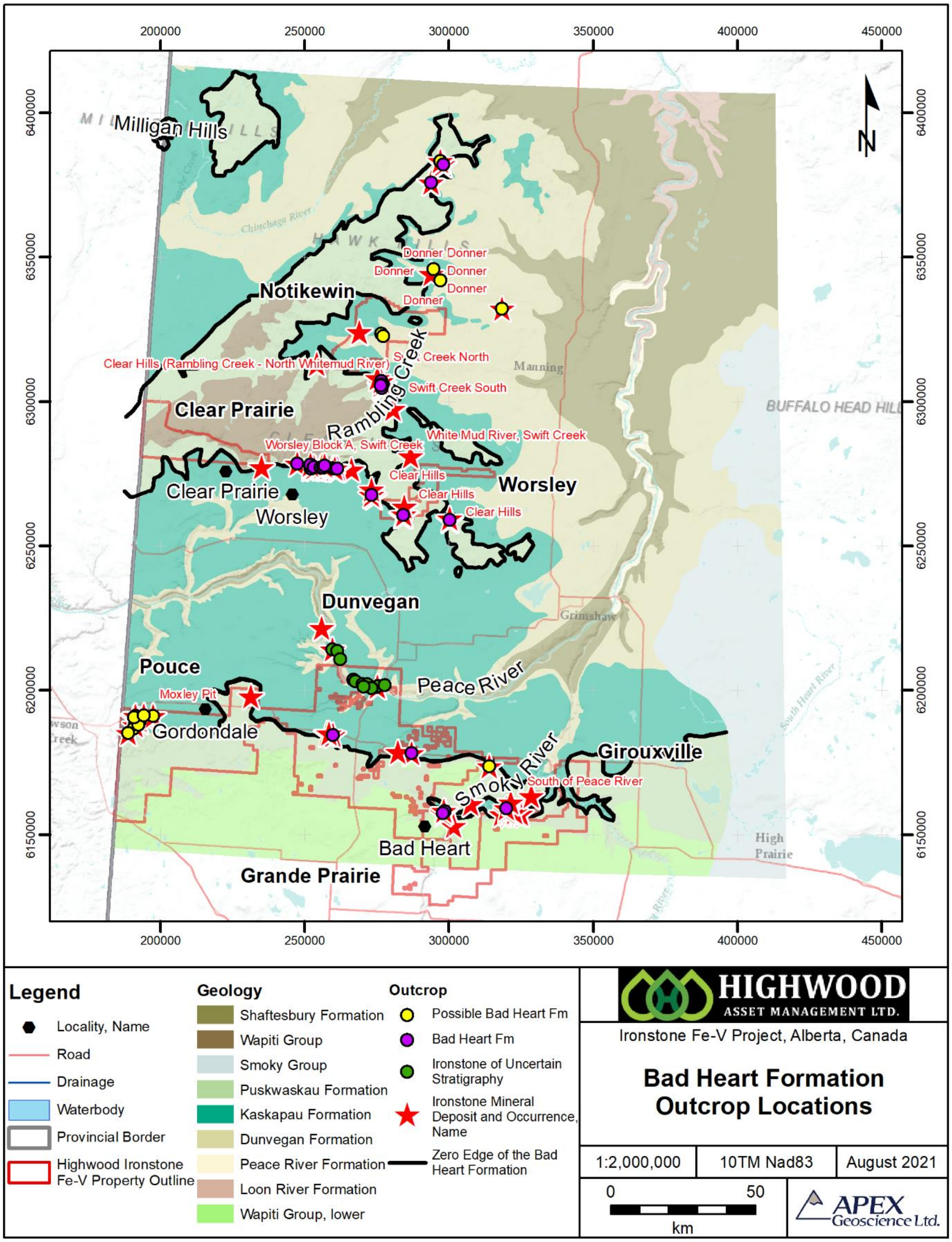


Figure 6.2 Historical location of diamond and auger drillholes that have penetrated the Bad Heart Formation. Sources: Kafle (2008) and Lopez et al. (2020).

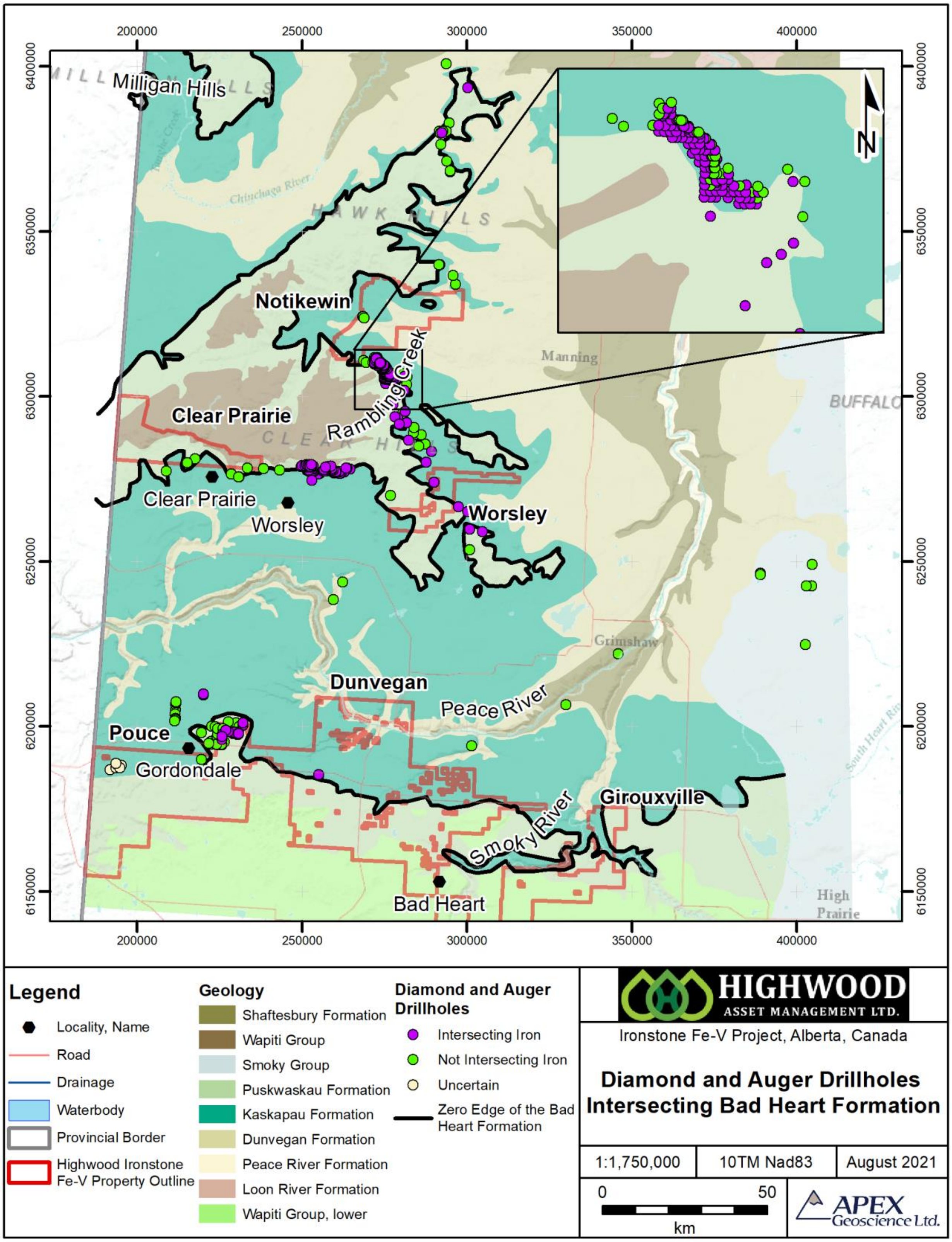
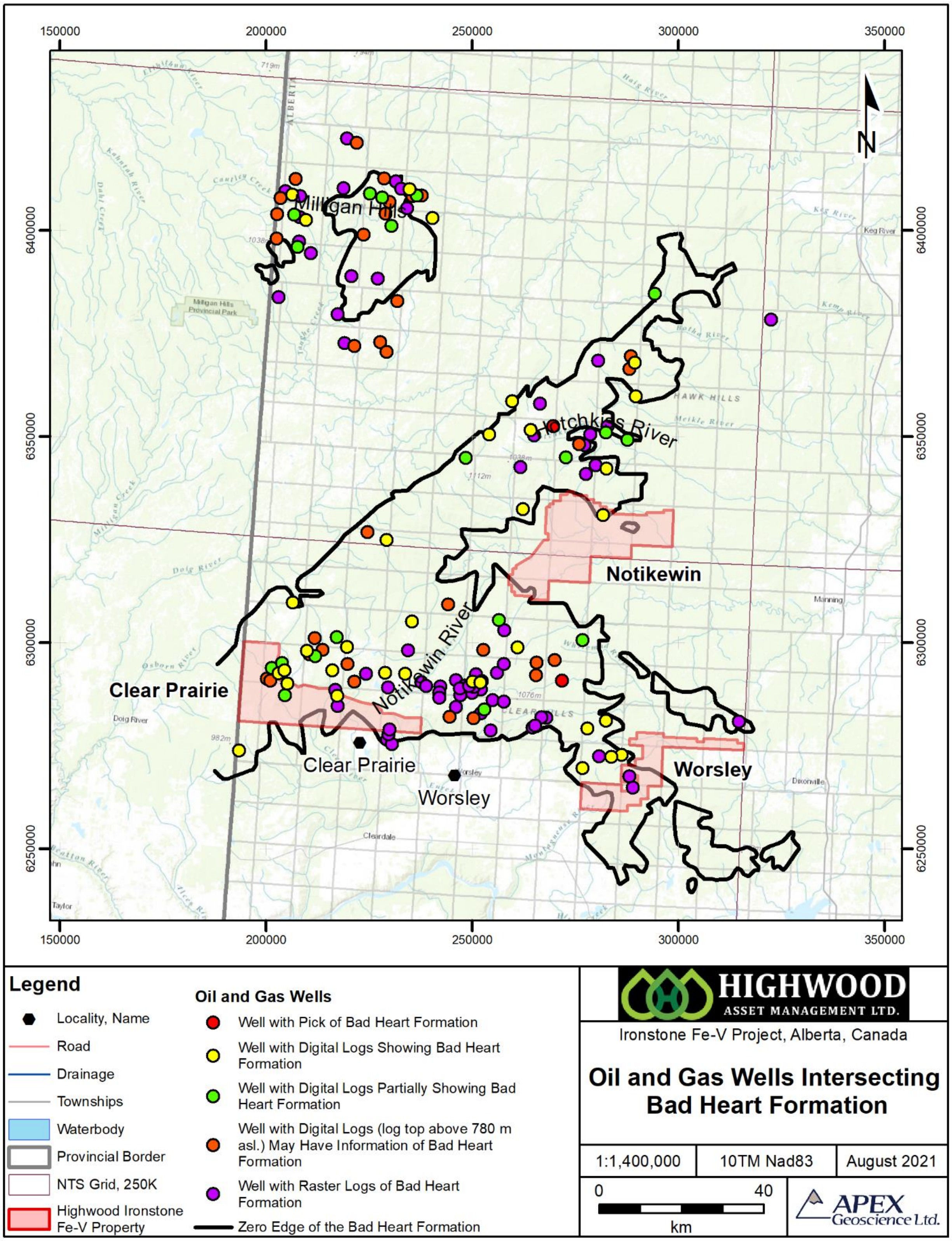


Figure 6.3 Historical location of oil and gas wells that have penetrated the Bad Heart Formation. Sources: Chen and Olson (2007) and Lopez et al. (2020).



In a more recent compilation, Lopez et al. (2020), documented a total of 229 occurrences of Bad Heart Formation in the general study area (i.e., off-Property). These additional occurrences are included in Figure 6.1 and show the Bad Heart Formation crops out mostly in the Smoky River, Southern Clear Hills, and Rambling Creek areas.

6.3 Historical Off-Property Bad Heart Formation Geochemical Observations

This sub-section pertains to off-Property information. The QP (and the Issuer) has been unable to verify the information and that the information is not necessarily indicative to the mineralization on the Property that is the subject of the technical report.

Kafle (2008) documented a total of 108 iron and vanadium analyses within the Bad Heart Formation occurring off-Property. Iron ranges from 15.65% to 46.71% Fe with an average of 32.04% Fe (note: iron is reported in Kafle (2008) as Fe only, not FeO or Fe_2O_3, and was analyzed by the ICP-MS method). Anomalous iron values of >30% Fe are presented in Figure 6.4 and occur in association with the Worsley Block A, Swift Creek, Clear Hills, and South of Peace River Bad Heart Formation deposits.

The thickness of the Bad Heart Formation ironstone occurrences, as documented by Kafle (2008) is presented in Figure 6.5. Of the 108 vanadium analyses from Kafle (2008), the vanadium ranges from 342 ppm to 2,374 ppm V with an average of 1,218 ppm V. Anomalous vanadium values of >1,500 ppm V are presented on Figure 6.6 and occur in association with the South of Peace River Bad Heart Formation deposits and occurrences.

In a more recent Bad Heart geochemical compilation, Lopez et al. (2020) documented a total of 180 recorded Fe_2O_3 analyses that range from 20.29% to 62.04% Fe_2O_3 and have an average of 40.86% Fe_2O_3, and 14 recorded Fe analysis 10% to 57% Fe with an average of 31.44% Fe. With respect to vanadium, there are 179 analyses with a range of 65 ppm to 2,598 ppm V and average of 1,065 ppm V. These data are all from off-Property Bad Heart exposures and the geochemical information is included in Figures 6.4 and 6.6.

6.4 Historical Within Highwood's Property Bad Heart Formation Occurrences

The author has compiled Bad Heart Formation bedrock outcrops, diamond/auger drilling intercepts, and oil and gas well intercepts from Olson et al. (2006), Chen and Olson (2007), and Kafle (2008). There is a total of 3 bedrock occurrences of Bad Heart Formation and 12 possible outcrops of Bad Heart Formation that occur within Highwood's sub-properties (Olson et al., 2006; Figure 6.1; Table 6.1). The Bad Heart crops out mostly in the following sub-properties: Dunvegan (n=2 outcrops), Worsley (n=1 outcrop).

There is a total of 13 auger or diamond drillholes that have penetrated Bad Heart Formation that occur within Highwood's sub-properties (Kafle, 2008; Figure 6.2; Table 6.1). The Bad Heart intersections are documented in the following sub-properties: Pouce (n=12 holes), Dunvegan (n=1 hole).

Figure 6.4 Summary of historically documented iron contents in the Bad Heart Formation. Sources: Kafle (2008) and Lopez et al. (2020).

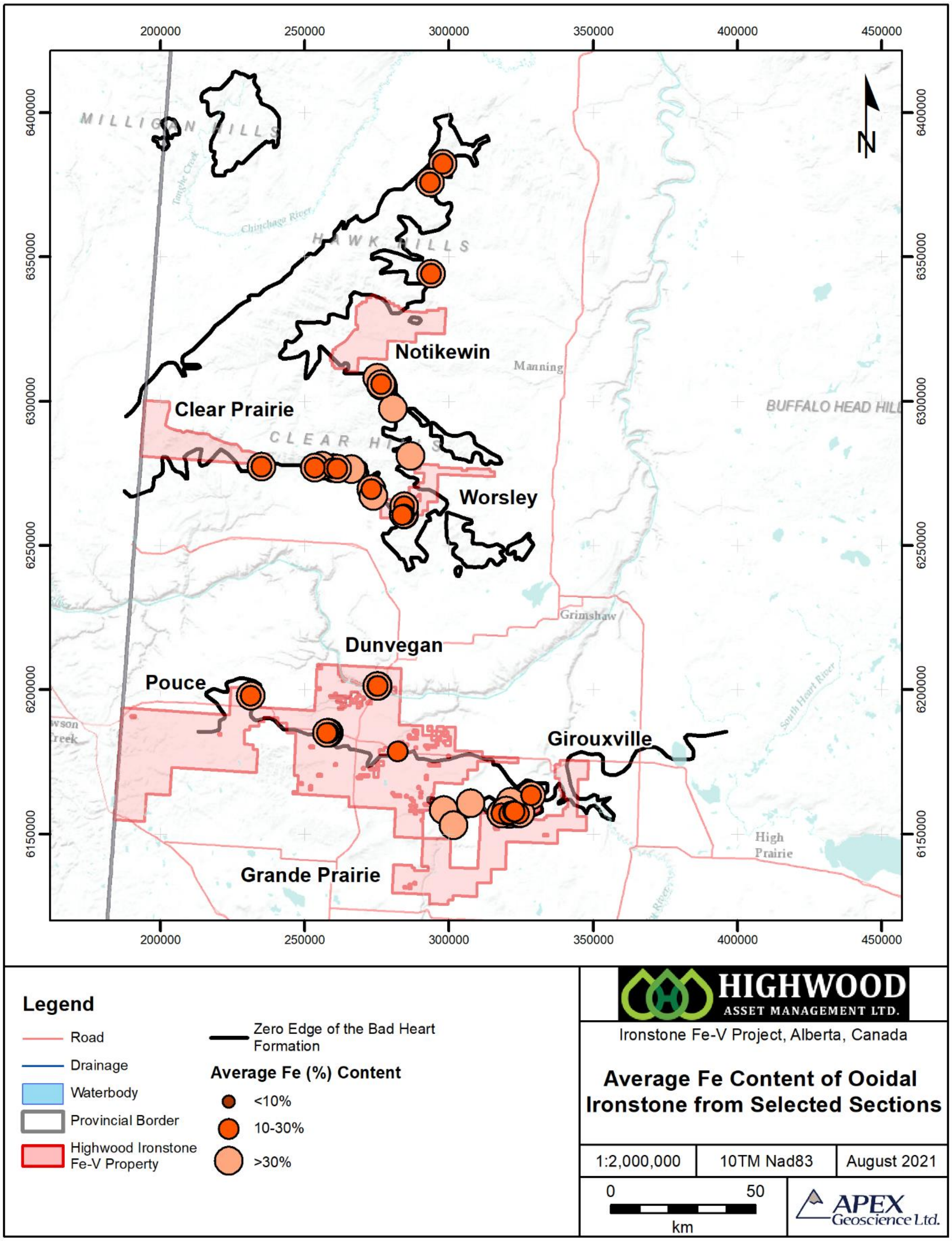


Figure 6.5 Summary of historically documented iron contents with thicknesses of the Bad Heart Formation sections. Source: Kafle (2008).

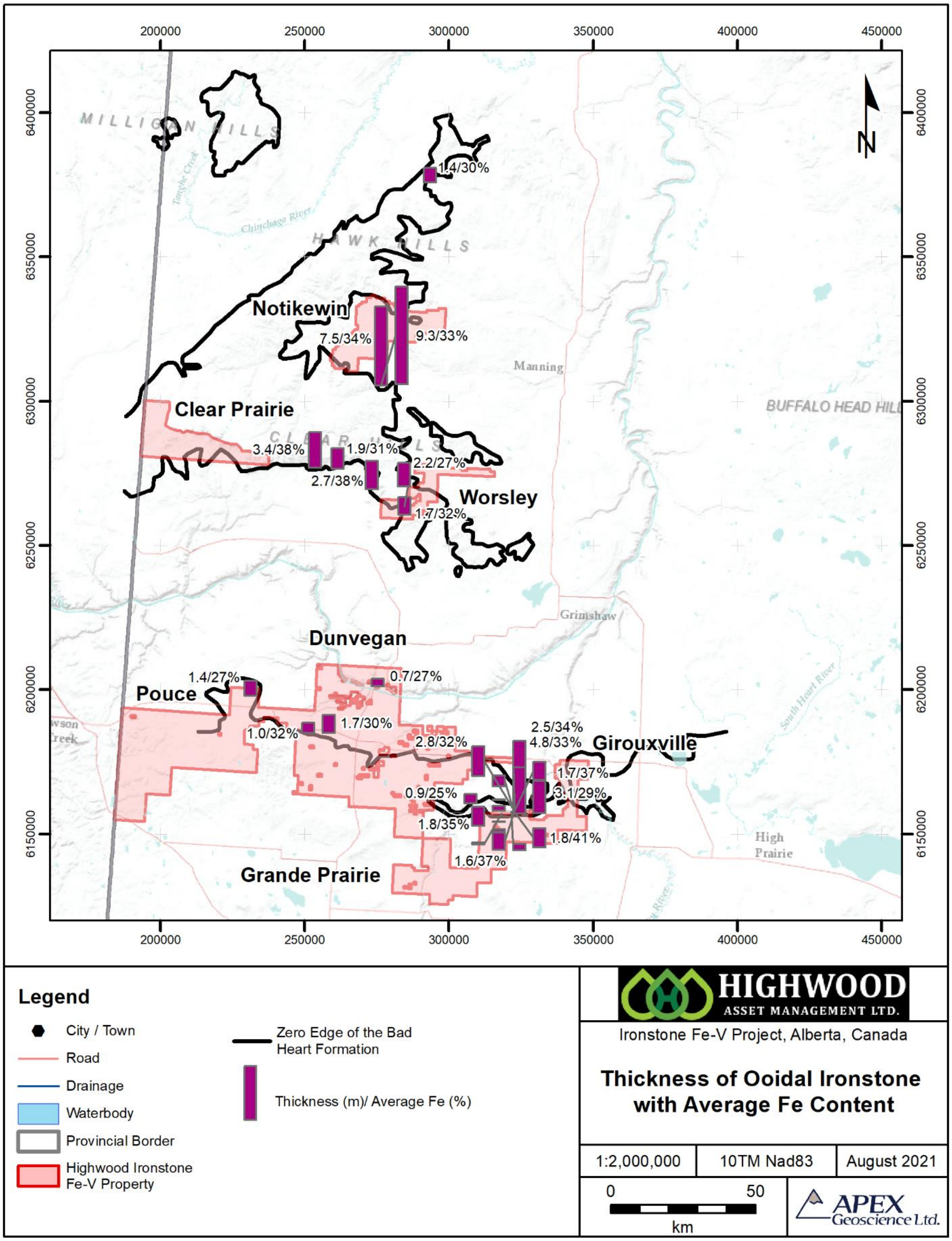


Figure 6.6 Summary of historically documented vanadium contents in the Bad Heart Formation. Sources: Kafle (2008) and Lopez et al. (2020).

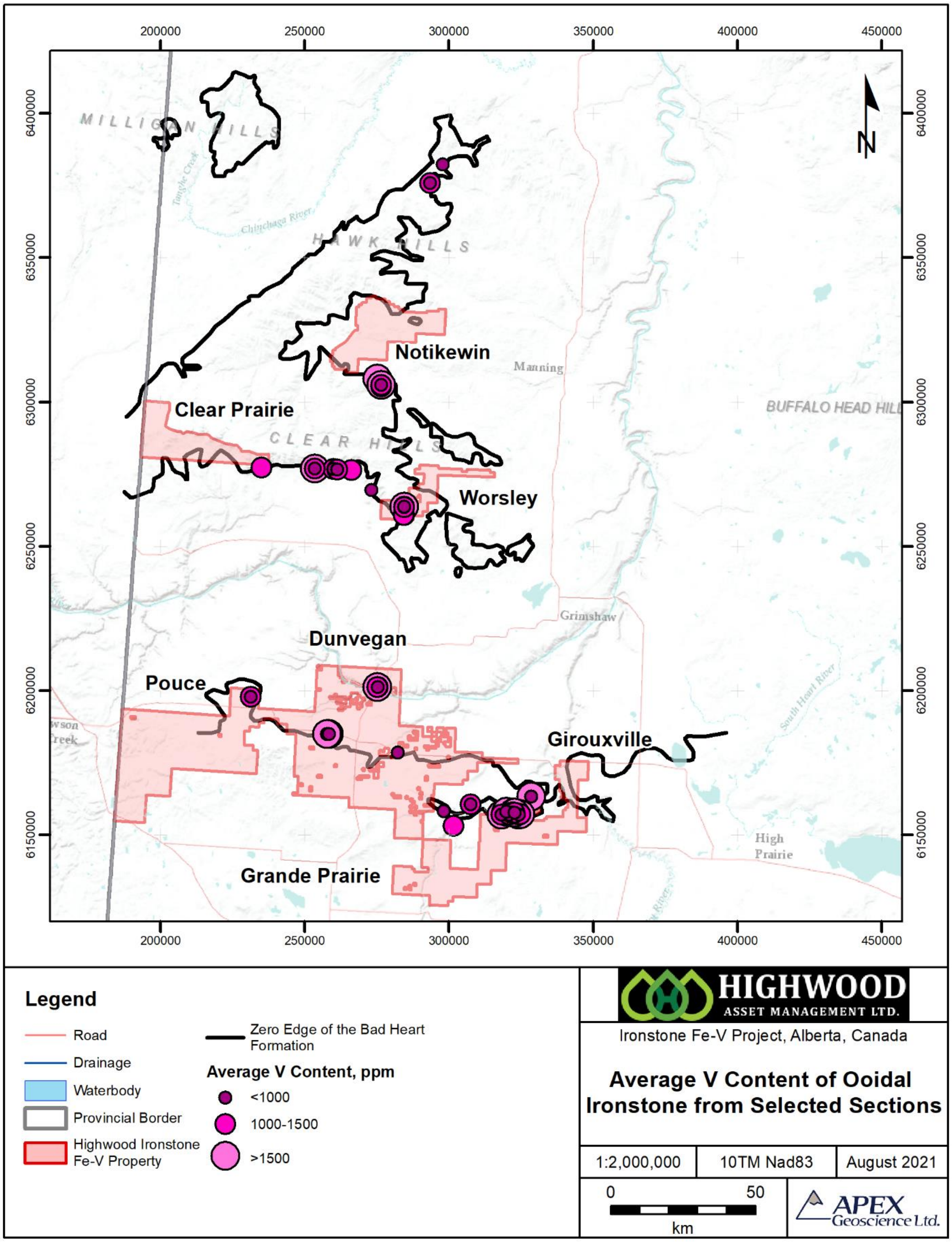


Table 6.1 Documented occurrences of Bad Heart Formation. Sources: Olson et al. (2006) and Kafle (2008).

ID	Occurrence type	Easting (m UTM, Z11, NAD83)	Northing (m UTM, Z11, NAD83)	Description
Kidd-E1	Outcrop	385120.9473	6181836.04	Upper Kt sst, ooidal sst, South of Peace River
Kidd-E2	Outcrop	412574.3	6176331.4	Upper Kt sst, ooidal sst, South of Peace River
Kidd-C17	Outcrop	407271.5607	6258701.52	Upper Kt sst, ooidal sst, Southern Clear Hills
1964003-25	Drillhole	380350.4936	6182297.47	Auger
15-35-79-9W6	Drillhole	356950.9375	6196884.47	Diamond
10-29-79-9W6	Drillhole	351791.8213	6195240.31	Diamond
12-28-79-9W6	Drillhole	352595.0835	6194851.97	Diamond
12-27-79-9W6	Drillhole	354232.1417	6194765.33	Diamond
5-27-79-9W6	Drillhole	354423.0828	6194540.59	Diamond
1964003-4	Drillhole	355756.3477	6194498.73	Auger
1964003-5	Drillhole	355750.1754	6194373.77	Auger
1964003-1	Drillhole	355734.2242	6194262.05	Auger
4-26-79-9W6	Drillhole	355777.1181	6194205.95	Diamond
16-19-79-9W6	Drillhole	350807.8778	6194010.02	Diamond
1964003-22	Drillhole	350756.4983	6193301.42	Auger
16-18-79-9W6	Drillhole	350772.5223	6192436.58	Diamond

There is a total of 11 oil and gas wells that have penetrated Bad Heart Formation that occur within Highwood's sub-properties (Chen and Olson, 2007; Figure 6.3). These include:

- 3 wells with digital logs showing the Bad Heart Formation, 2 wells with digital logs partially showing the Bad Heart Formation.
- 2 wells with digital logs that may have information of the Bad Heart Formation.
- 4 wells with raster logs of the Bad Heart Formation.

The Bad Heart intersections are documented in the following sub-properties: Clear Prairie (n=8 wells), Worsley (n=2 wells), and Notikewin (n=1 well).

In a more recent compilation by Lopez et al. (2020), there is a total of 71 documented occurrences of Bad Heart Formation within the boundary of Highwood's Property. These locations are included in Figure 6.1 and documented in Table 6.2. The bedrock occurrences crop out mostly in the Worsley (n=27), Dunvegan (n=21), and Pouce (n=13) sub-properties.

Table 6.2 Documented occurrences of Bad Heart Formation (n=58). Source: Lopez et al. (2020).

Original ID	AGS METID	Highwood Sub-Property	Easting (m, UTM, Z11, NAD83)	Northing (m, UTM, Z11, NAD83)	Site Type	General location	Fe_2O_3 (%)	V (ppm)	Reference
Kidd-E2	METID_0486	Dunvegan	447070	6156094	Bedrock	South of Peace River	/	/	Olson et al. 2006 (GEO 2005-05)
CHROR4058	METID_0487	Dunvegan	447070	6156094	Roadcut	Wanham	26.85	500	WanHam Rdcut, Kafle 2011, 2009 (OFR 2009-01)
Kidd-E1	METID_0493	Dunvegan	447070	6156094	Bedrock	South of Peace River	/	/	Olson et al. 2006 (GEO 2005-05)
6ROSR41	METID_0494	Dunvegan	444342	6156131	Pit	Spirit River	31.16	634	SPRV Pit, Kafle 2011, 2009 (OFR 2009-01)
CHROR4050	METID_0495	Dunvegan	444342	6156131	Pit	Spirit River	22.91	1,768	SPRV Pit, Kafle 2011, 2009 (OFR 2009-01)
CHROR4052	METID_0496	Dunvegan	444342	6156131	Pit	Spirit River	28.37	1,944	SPRV Pit, Kafle 2011, 2009 (OFR 2009-01)
CHROR4053	METID_0497	Dunvegan	444342	6156131	Pit	Spirit River	37.27	1,561	SPRV Pit, Kafle 2011, 2009 (OFR 2009-01)
CHROR4054	METID_0498	Dunvegan	444342	6156131	Pit	Spirit River	53.95	364	SPRV Pit, Kafle 2011, 2009 (OFR 2009-01)
CHROR4055	METID_0499	Dunvegan	412574.3	6176331	Pit	Spirit River	52.5	2,654	SPRV Pit, Kafle 2011, 2009 (OFR 2009-01)
CHROR4061	METID_0500	Dunvegan	407910	6176530	Pit	Spirit River	54	557	SPRV Pit, Kafle 2011
6ROSRR03	METID_0501	Dunvegan	314295.8	6180446	Roadcut	Spirit River	35.63	912	SPRV Rdcut, Kafle 2011, 2009 (OFR 2009-01)
6ROSRR04	METID_0502	Dunvegan	316444.3	6183189	Roadcut	Spirit River	35.27	960	SPRV Rdcut, Kafle 2011, 2009 (OFR 2009-01)
6ROSRR05	METID_0503	Dunvegan	385121	6181836	Roadcut	Spirit River	33.7	673	SPRV Rdcut, Kafle 2011, 2009 (OFR 2009-01)
6ROSRR06	METID_0504	Dunvegan	383055	6182285	Roadcut	Spirit River	42.14	194	SPRV Rdcut, Kafle 2011, 2009 (OFR 2009-01)
6ROSRR07	METID_0504	Dunvegan	383055	6182285	Roadcut	Spirit River	27.17	352	SPRV Rdcut, Kafle 2011, 2009 (OFR 2009-01)
6ROSRR08	METID_0505	Dunvegan	383055	6182285	Roadcut	Spirit River	49.07	443	SPRV Rdcut, Kafle 2011, 2009 (OFR 2009-01)
6ROSRR09	METID_0506	Dunvegan	383055	6182285	Roadcut	Spirit River	53.56	317	SPRV Rdcut, Kafle 2011, 2009 (OFR 2009-01)
6ROSRR11	METID_0507	Dunvegan	383055	6182285	Roadcut	Spirit River	43.4	295	SPRV Rdcut, Kafle 2011, 2009 (OFR 2009-01)
6ROSRR10	METID_0508	Dunvegan	383055	6182285	Roadcut	Spirit River	31.92	275	SPRV Rdcut, Kafle 2011, 2009 (OFR 2009-01)
CHROR4056	METID_0509	Dunvegan	383055	6182285	Roadcut	Spirit River	32.94	2,476	SPRV Rdcut, Kafle 2011, 2009 (OFR 2009-01)
CHROR4057	METID_0510	Dunvegan	383697	6182279	Roadcut	Spirit River	40.45	758	SPRV Rdcut, Kafle 2011, 2009 (OFR 2009-01)
SROR4077	METID_0384	Girouxville	383697	6182279	Outcrop	Smoky River	37.03	512	ASR7, Kafle 2011
SROR4078	METID_0385	Girouxville	383697	6182279	Outcrop	Smoky River	25.9	1,173	ASR7, Kafle 2011
SROR4080	METID_0386	Girouxville	383697	6182279	Outcrop	Smoky River	29.27	612	ASR7, Kafle 2011
7ROSR04	METID_0387	Girouxville	383697	6182279	Outcrop	Smoky River	29.75	1,987	ASR5, Kafle 2011, 2009 (OFR 2009-01)
7ROSRR01	METID_0388	Girouxville	383697	6182279	Outcrop	Smoky River	38.68	391	ASR5, Kafle 2011, 2009 (OFR 2009-01)
7ROSRR02	METID_0389	Girouxville	383697	6182279	Outcrop	Smoky River	27.37	1,285	ASR5, Kafle 2011, 2009 (OFR 2009-01)
7ROSRR03	METID_0390	Girouxville	383697	6182279	Outcrop	Smoky River	31.12	987	ASR5, Kafle 2011, 2009 (OFR 2009-01)
7ROSRR05	METID_0391	Girouxville	383697	6182279	Outcrop	Smoky River	27.64	529	ASR5, Kafle 2011, 2009 (OFR 2009-01)
MH 1-A	METID_0738	Notikewin	383697	6182279	/	/	/	/	Bladek 2002 (MAR 20020006)
MH 1-B	METID_0739	Notikewin	383697	6182279	/	/	/	/	Bladek 2002 (MAR 20020006)
Liddle-Site-6	METID_0489	Pouce	318132.2	6184739	Outcrop	5 km south of Baytree	/	/	Olson et al. 2006 (GEO 2005-05)
Liddle-O/C-1	METID_0491	Pouce	317742.2	6185157	Excavated	5 km south of Baytree	/	/	Olson et al. 2006 (GEO 2005-05)
Liddle-O/C-2	METID_0512	Pouce	316578.6	6186424	Outcrop	5 km south of Baytree	/	/	Olson et al. 2006 (GEO 2005-05)
Liddle-Site-3	METID_0513	Pouce	319433.8	6186713	Outcrop	5 km south of Baytree	/	/	Olson et al. 2006 (GEO 2005-05)
Liddle-O/C-3	METID_0515	Pouce	322678.5	6186581	Bedrock	5 km south of Baytree	/	/	Olson et al. 2006 (GEO 2005-05)
Liddle-Site-8	METID_0516	Pouce	356273	6194344	Pit	5 km south of Baytree	/	/	Olson et al. 2006 (GEO 2005-05)
Liddle-Site-1	METID_0517	Pouce	356273	6194344	Pit	5 km south of Baytree	/	/	Olson et al. 2006 (GEO 2005-05)
7ROSRR15	METID_0526	Pouce	356273	6194344	Outcrop	Blueberry Mountain	43.91	398	BM, Kafle 2011, 2009 (OFR 2009-01)
7ROSRR16	METID_0527	Pouce	356273	6194344	Outcrop	Blueberry Mountain	30.46	461	BM, Kafle 2011
7ROSRR18	METID_0528	Pouce	356273	6194344	Outcrop	Blueberry Mountain	28.52	1,327	BM, Kafle 2011
7ROSRR19	METID_0529	Pouce	356273	6194344	Outcrop	Blueberry Mountain	32.62	1,244	BM, Kafle 2011
7ROSRR20	METID_0530	Pouce	407041.4	6258590	Outcrop	Blueberry Mountain	28.96	1,281	BM, Kafle 2011
7ROSRR21	METID_0531	Pouce	407271.6	6258701	Outcrop	Blueberry Mountain	30.86	645	BM, Kafle 2011
84D-M-08	METID_0576	Worsley	407650	6258819	Outcrop	38.5 km ESE of Worsley	/	/	Olson et al. 1994 (OFR 1994-08)
Kidd-C17	METID_0577	Worsley	407650	6258819	Bedrock	Southern Clear Hills	/	/	Olson et al. 2006 (GEO 2005-05)
6ROCHR44	METID_0578	Worsley	407650	6258819	Pit	Southern Clear Hills	28.4	1,164	KC17 Pit6, Kafle 2011, 2009 (OFR 2009-01)
6ROCHR45	METID_0579	Worsley	407650	6258819	Pit	Southern Clear Hills	39.33	1,351	KC17 Pit6, Kafle 2011, 2009 (OFR 2009-01)
6ROCHR46	METID_0580	Worsley	407650	6258819	Pit	Southern Clear Hills	44.84	1,305	KC17 Pit6, Kafle 2011, 2009 (OFR 2009-01)
6ROCHR47	METID_0581	Worsley	407650	6258819	Pit	Southern Clear Hills	50.22	1,334	KC17 Pit6, Kafle 2011, 2009 (OFR 2009-01)
6ROCHR48	METID_0582	Worsley	407650	6258819	Pit	Southern Clear Hills	48.92	1,259	KC17 Pit6, Kafle 2011, 2009 (OFR 2009-01)
6ROCHR49	METID_0583	Worsley	407396	6258880	Pit	Southern Clear Hills	37.36	1,311	KC17 Pit6, Kafle 2011, 2009 (OFR 2009-01)
6ROCHR50	METID_0584	Worsley	407515	6261675	Pit	Southern Clear Hills	21.51	1,208	KC17 Pit6, Kafle 2011, 2009 (OFR 2009-01)
CHROR4042	METID_0585	Worsley	407515	6261675	Outcrop	Southern Clear Hills	34.14	1,128	C17, Kafle 2011
6ROCHR01	METID_0598	Worsley	407515	6261675	Pit	Southern Clear Hills	35.22	1,038	LVH Main Pit, Kafle 2011, 2009 (OFR 2009-01)
6ROCHR02	METID_0599	Worsley	407515	6261675	Pit	Southern Clear Hills	37.24	945	LVH Main Pit, Kafle 2011, 2009 (OFR 2009-01)
6ROCHR03	METID_0600	Worsley	407515	6261675	Pit	Southern Clear Hills	44.45	713	LVH Main Pit, Kafle 2011, 2009 (OFR 2009-01)
6ROCHR04	METID_0601	Worsley	407515	6261675	Pit	Southern Clear Hills	41.22	770	LVH Main Pit, Kafle 2011, 2009 (OFR 2009-01)
6ROCHR05	METID_0602	Worsley	407515	6261685	Pit	Southern Clear Hills	36.13	867	LVH Main Pit, Kafle 2011, 2009 (OFR 2009-01)
6ROCHR06	METID_0603	Worsley	407515	6261685	Pit	Southern Clear Hills	27.05	556	LVH Main Pit, Kafle 2011, 2009 (OFR 2009-01)
CHROR4027	METID_0604	Worsley	407515	6261693	Pit	Southern Clear Hills	44.12	1,549	LVH Pit6, Kafle 2011, 2009 (OFR 2009-01)
CHROR4028	METID_0605	Worsley	407515	6261693	Pit	Southern Clear Hills	25.29	1,295	LVH Pit6, Kafle 2011, 2009 (OFR 2009-01)
CHROR4030	METID_0606	Worsley	407515	6261693	Pit	Southern Clear Hills	31.86	188	LVH Pit3, Kafle 2011, 2009 (OFR 2009-01)
CHROR4032	METID_0607	Worsley	407515	6261693	Pit	Southern Clear Hills	25.58	208	LVH Pit3, Kafle 2011, 2009 (OFR 2009-01)
CHROR4034	METID_0608	Worsley	407515	6261695	Pit	Southern Clear Hills	25.85	295	LVH Pit3, Kafle 2011, 2009 (OFR 2009-01)
CHROR4035	METID_0609	Worsley	407515	6261695	Pit	Southern Clear Hills	22.58	503	LVH Pit3, Kafle 2011, 2009 (OFR 2009-01)
CHROR4037	METID_0610	Worsley	407515	6261695	Pit	Southern Clear Hills	38.18	1,498	LVH Pit2, Kafle 2011, 2009 (OFR 2009-01)
CHROR4038	METID_0611	Worsley	407515	6261701	Pit	Southern Clear Hills	39.39	442	LVH Pit2, Kafle 2011, 2009 (OFR 2009-01)
CHROR4039	METID_0612	Worsley	407515	6261701	Pit	Southern Clear Hills	38.7	65	LVH Pit2, Kafle 2011, 2009 (OFR 2009-01)
CHROR4040	METID_0613	Worsley	390193	6321616	Pit	Southern Clear Hills	44.43	117	LVH Pit1, Kafle 2011, 2009 (OFR 2009-01)
CHROR4041	METID_0614	Worsley	390193	6321616	Pit	Southern Clear Hills	37.7	159	LVH Pit1, Kafle 2011, 2009 (OFR 2009-01)

6.5 Historical Within Highwood's Property Bad Heart Formation Geochemical Observations

Based on a compilation by Kafle (2008), there is a total of 34 iron and vanadium measurements of Bad Heart Formation ironstone within Highwood's sub-properties. These data are presented on Figures 6.4 and 6.6 and summarized in Table 6.3.

The iron ranges from 16.71% to 40.4% Fe with an average of 28.93% Fe. Anomalous iron values of >30% occur in association with the South of Peace River E-1 deposits and occurrences. The within Highwood's sub-properties vanadium ranges from 357 ppm to 2323 ppm V with an average of 1,349 ppm V. Anomalous vanadium values of >1,500 ppm V are associated with the South of Peace River E-1 and Clear Hills Bad Heart Formation occurrences.

Table 6.3 A summary of the iron and vanadium geochemical results that occur within the Highwood Clear Hills Property (n=34). Source: Kafle (2008).

Sample_No	Site_No	Area	Easting (m UTM, Z11, NAD83)	Northing (m UTM, Z11, NAD83)	Year	Fe (%)	V (ppm)
6ROCHR01	LVH Main Pit	Southern Clear Hills	407515	6261675	2006	26.43	1,045
6ROCHR02	LVH Main Pit	Southern Clear Hills	407515	6261675	2006	27.61	1,482
6ROCHR03	LVH Main Pit	Southern Clear Hills	407515	6261675	2006	32.86	1,470
6ROCHR04	LVH Main Pit	Southern Clear Hills	407515	6261675	2006	30.36	1,462
6ROCHR06	LVH Main Pit	Southern Clear Hills	407515	6261675	2006	20.55	1,132
6ROCHR44	KC17 Pit6	Southern Clear Hills	407650	6258819	2006	21.82	2,166
6ROCHR46	KC17 Pit6	Southern Clear Hills	407650	6258819	2006	35.49	1,755
6ROCHR47	KC17 Pit6	Southern Clear Hills	407650	6258819	2006	36.54	1,283
6ROCHR48	KC17 Pit6	Southern Clear Hills	407650	6258819	2006	35	1,541
6ROCHR49	KC17 Pit6	Southern Clear Hills	407650	6258819	2006	27.52	1,393
6ROSR41	SPRV Pit	Spirit River	383055	6182285	2006	22.99	2,323
6ROSRR04	SPRV Rdcut	Spirit River	383697	6182279	2006	26.24	1,709
6ROSRR06	SPRV Rdcut	Spirit River	383697	6182279	2006	31.06	2,069
6ROSRR08	SPRV Rdcut	Spirit River	383697	6182279	2006	35.6	1,270
6ROSRR09	SPRV Rdcut	Spirit River	383697	6182279	2006	37.92	1,530
6ROSRR10	SPRV Rdcut	Spirit River	383697	6182279	2006	23.82	1,721
7ROSRR15	BM	Blueberry Mountain	356273	6194344	2007	35.13	357
7ROSRR19	BM	Blueberry Mountain	356273	6194344	2007	26.82	905
7ROSRR20	BM	Blueberry Mountain	356273	6194344	2007	22.68	938
7ROSRR21	BM	Blueberry Mountain	356273	6194344	2007	22.74	635
CHROR4035	LVH Pit3	Southern Clear Hills	407515	6261693	2004	16.71	1,326
CHROR4036	LVH Pit3	Southern Clear Hills	407515	6261693	2004	25.45	594
CHROR4037	LVH Pit2	Southern Clear Hills	407515	6261695	2004	27.76	1,242
CHROR4038	LVH Pit2	Southern Clear Hills	407515	6261695	2004	28.37	1,230
CHROR4039	LVH Pit2	Southern Clear Hills	407515	6261695	2004	28.64	603
CHROR4040	LVH Pit1	Southern Clear Hills	407515	6261701	2004	32.45	1,054
CHROR4041	LVH Pit1	Southern Clear Hills	407515	6261701	2004	26.82	870
CHROR4053	SPRV Pit	Spirit River	383055	6182285	2004	27.29	1,838
CHROR4054	SPRV Pit	Spirit River	383055	6182285	2004	39.03	1,350
CHROR4055	SPRV Pit	Spirit River	383055	6182285	2004	39.09	1,204
CHROR4056	SPRV Rdcut	Spirit River	383697	6182279	2004	24.85	1,703
CHROR4057	SPRV Rdcut	Spirit River	383697	6182279	2004	30.27	1,410
CHROR4061	SPRV Pit	Spirit River	383055	6182285	2004	40.4	1,366
7ROSR04	ASR5	Smoky River	444342	6156131	2007	23.49	1,896

In a more recent compilation, Lopez et al. (2020) documented a total of 58 Fe_2O_3 analyses within the boundaries of Highwood's Clear Hills Property. These analytical results range from 18.5% to 54.0% Fe_2O_3 with an average of 35.76% Fe_2O_3. With respect to vanadium, the Lopez et al. (2020) compilation ranges from 65 ppm to 2,654 ppm V, with an average of 892 ppm V. The Lopez et al. (2020) data are included in Figures 6.4 and 6.6 and Table 6.3.

6.6 Oil and Gas Well Data Summary Within Highwood' Lithium-Brine Sub-Properties

The author has reviewed the oil and gas well data within the boundaries of the individual Highwood sub-properties. The results of the review are presented in Table 6.4.

The Swan Hills and Judy Creek sub-properties in West-Central Alberta have the highest number of active wells (301 and 357 wells, respectively) followed by: Kaybob (n=129), Vauxhall (n=105), Mitsue (n=67), Mikwan (n=29), Randall (n=27), Virginia Hills (n=24) Drumheller (n=18), Puskawasku (n=14), Halkirk and Pembina North (n=9), Parkland (n=9), Morinville (n=6), Bashaw (n=5), Dunvegan (n=4), Pembina South (n=3), and Chigwell (n=1 well).

Presently, there are no active wells at the Joffre, Kaybob South, Girouxville, Grande Prairie, Pouce, Worsely, Notikewan, and Pouce sub-properties. This does not mean Highwood cannot access brine as there is the possibility of opening a suspended well and/or Highwood drilling their own well.

The active wells are producing from the following Devonian-Precambrian-aged fields and pools:

- Arcs/Nisku pools: Vauxhall sub-properties.
- Nisku pool: Drumheller and Pembina North sub-properties.
- Nisku/Leduc pools: Mikwan sub-properties.
- Leduc pools: Morinville sub-properties.
- Beaverhill Lake pools: Virginia Hills, Swan Hills, Judy Creek, and Puskaskau sub-properties.
- Duvernay and Beaverhill Lake pools: Pembina South, and Kaybob sub-properties.
- Gilwood pools: Mitsue and Randall sub-properties.

Table 6.4 Summary of the number of total wells and Devonian to Precambrian wells within the Highwood sub-properties. The table includes the status of the wells and the dominate active well oil and gas production fields and pools.

				Devonian to Precambrian generalized well statistics (generated 1 May 2021)								
Permit area	SubProperty name	Total number of wells (all ages)	Devonian to Precambrian wells	Active wells	Suspended wells	Abandoned wells	Drilled & cased wells	Water: Injection	Water: Dispersal	Water: Source	Dominate field (active wells)	Dominate pool (active wells)
South AB	Vauxhall	994	264	105	52	63	9	34	/	1	Enchant	Arcs/Nisku
South AB	Drumheller	581	76	18	3	51	2	/	2	/	Wayne-Rosdale	Nisku
Central AB	Halkirk	106	104	9	21	70	2	2	/	/	Halkirk	Upper Mannville
Central AB	Mikwan	573	152	29	20	93	6	1	3	/	Mikwan/Elnora	Leduc D-2/Nisku
Central AB	Bashaw	188	53	5	8	38	2	/	/	/	Erskine	Blairmore
Central AB	Joffre	26	9	/	1	8	/	/	/	/	/	/
Central AB	Chigwell	50	10	1	/	9	/	/	/	/	Chigwell North	Mannville
Central AB	Pembina South	268	16	3	2	9	2	/	/	/	Pembina	Duvernay and Beaverhill Lake
Central AB	Pembina North	1154	95	9	30	47	8	1	/	/	Pembina	Nisku
Central AB	Morinville	34	30	6	3	20	1	/	/	/	Morinville	Leduc D-3
West-central AB	Kaybob South	6	/	/	/	/	/	/	/	/	/	/
West-central AB	Kaybob	934	346	129	51	147	16	/	3	/	Kaybob	Duvernay and Beaverhill Lake
West-central AB	Virginia Hills	65	62	24	17	17	/	3	1	/	Virginia Hills	Beaverhill Lake
West-central AB	Swan Hills	777	747	301	121	215	5	95	2	8	Swan Hills	Beaverhill Lake
West-central AB	Mitsue	469	420	67	97	196	2	51	7	/	Mitsue	Gilwood
West-central AB	Randall	182	180	27	37	106	8	1	1	/	Randell/Gift/Little Horse	Gilwood
West-central AB	Judy Creek	1090	873	357	239	224	10	41	2	/	Judy Creek	Beaverhill Lake
Northwest AB	Puskawasku	60	60	14	29	6	6	3	1	1	Puskwaskau	Beaverhill Lake
Northwest AB	Girouxville	19	19	/	1	17	1	/	/	/	/	/
Northwest AB	Grande Prairie	69	68	/	4	62	2	/	/	/	/	/
Northwest AB	Pouce	2	2	/	1	1	/	/	/	/	/	/
Northwest AB	Dunvegan	75	73	4	5	60	4	/	/	/	Dunvegan	Debolt
Northwest AB	Worsley	7	7	/	/	5	2	/	/	/	/	/
Northwest AB	Notikewin	4	4	/	/	4	/	/	/	/	/	/
Northwest AB	Keg River	3	/	/	/	/	/	/	/	/	/	/
Northeast BC	Parkland	456	28	9	6	11	2	/	/	/	Parkland	Wabamun
Northeast BC	Fort St. John	30	14	/	/	13	1	/	/	/	Two Rivers	Wabamun
Northeast BC	Boundary	158	10	1	/	9	/	/	/	/	Boundary Lake/Siphon	Baldonnel

6.7 Historical Lithium-Brine Geochemical Summary

The fluid geochemical data presented in this sub-section are from publicly available well data that were 1) submitted to the AER and are made available via various third-party oil and gas database companies, and 2) created and/or compiled in various government reports (e.g., Hitchon et al., 1995; Eccles and Jean, 2010; Eccles and Berhane, 2011; Huff et al., 2011, 2012, 2019; Huff 2016, 2019; Lopez, 2020).

All the historical Li-brine data results presented in this sub-section occur outside of Highwood's sub-properties. In these instances, the QP has been unable to verify the information, and accordingly, this information is not necessarily indicative to the lithium mineralization that occurs within the Devonian to Precambrian aquifers situated beneath Highwood's mineral permits that are the subject of the Technical Report.

The first comprehensive overview of Alberta's mineral potential from subsurface formation water was compiled by the Government of Alberta (Hitchon et al., 1995). These authors compiled nearly 130,000 analyses of brine across Alberta (e.g., Hitchon et al., 1971; 1989; Connolly et al., 1990a,b and unpublished detailed analyses collected by the Government of Alberta). Hitchon et al. (1995) showed the highest concentrations of Li in formation water occurred within the Beaverhill Lake (Swan Hills) and/or Woodbend (Leduc) aquifers: 130 mg/L and 140 mg/L, respectively (Note: one mg/L is equal to one ppm).

In 2010, an expanded Li-brine dataset (n=1,511 analyses) was used to show Li-brine anomalies throughout Alberta (Eccles and Jean, 2010). Of the 1,511 analyses, 19 analyses/wells contained >100 mg/L Li (up to 140 mg/L), all of which were sampled from within the Middle to Late Devonian carbonate complexes. The distribution of lithium occurrences in Alberta from Eccles and Jean (2010) is presented with an overlay of Highwood's sub-properties in Figure 6.8.

The author not aware of detailed Devonian aquifer Li-brine studies in northeastern British Columbia; however, Hitchon et al. (1993) did report lithium values of between 26 and 54 mg/L Li from wells located within 2° longitude west of the British Columbia–Alberta border leading Simandl et al. (2018) suggested that the possibility to discover Li-rich brines in the British Columbia portion of the WCSB should not be discounted.

A recent government compilation by Lopez et al. (2020) has been evaluated by the senior author. The dataset includes lithium values from the surface to the Cambrian. All Devonian to Precambrian Li-brine data were culled from the dataset and are presented with respect to Highwood's regional permit areas in Figures 6.9 to 6.13.

As stated earlier, none of the historically anomalous Li-brine assays (>50 mg/L Li) occur within the High sub-properties. Rather, Highwood has strategized to stake mineral permits in areas where either high Li-brine is present, or there is current Devonian to Precambrian oil and gas production. The QP has been unable to verify the information, and accordingly, this information is not necessarily indicative to the lithium mineralization that occurs within the Devonian to Precambrian aquifers situated beneath Highwood's mineral permits that are the subject of the Technical Report.

Some observations from these figures are presented as follows:

- In the South Alberta Permit Area, 2 anomalous Li-brine assays occur directly west of the Drumheller sub-property.
- In the Central Alberta Permit Area, several anomalous Li-brine assays occur in near the Bashaw, Chigwell, Pembina South and Morinville sub-properties.
- In the West-Central Alberta Permit Area, several anomalous Li-brine assays occur in near the Kaybob South, Kaybob, and Virginia Hills sub-properties.
- In the Northwest Alberta Permit Area, several anomalous Li-brine assays occur in near the Grande Prairie, Girouxville, Dunvegan, and Worsley sub-properties.
- There are no Li-brine assay anomalies in the Northeast Alberta Permit Area.

Highwood is currently conducting brine sample programs in the Company's Alberta sub-properties to determine whether deep-seated aquifer brine contains elevated concentrations of lithium within their sub-properties. A summary of brine assay work completed to date is presented in Section 9, Exploration.

With respect to the lithium potential associated with mineral titles in British Columbia, the author is not aware of any Devonian or older Li-brine compilation work in the public realm. Consequently, the QP has investigated the calculated TDS of brine samples – as a 'proxy' for hypersaline brine that 'could' host Li-enriched brine – in the vicinity of the mineral titles (Figure 6.14). it is interesting to note the presence of high TDS samples in the Parkland sub-property (up to 269,000 mg/L TDS).

While high TDS is by no means a direct indication of elevated lithium in brine, the author has documented high TDS in Alberta brine can be indirectly related to lithium content. And this indirect relationship is better correlated with lithium by using other elements such as potassium (K), bromine (Br), boron (B), iodide (I), etc. (Eccles, 2012).

Unfortunately, there is no corresponding brine geochemical data such as K, Br, B, I, etc. within the BC brine geochemical dataset. Accordingly, the only way to properly evaluate brine within Highwood's BC mineral title sub-properties is for Company to conduct their own brine sampling program.

Figure 6.8 Distribution of lithium in Alberta formation waters. Source: Eccles and Jean (2010) and Eccles and Berhane (2011).

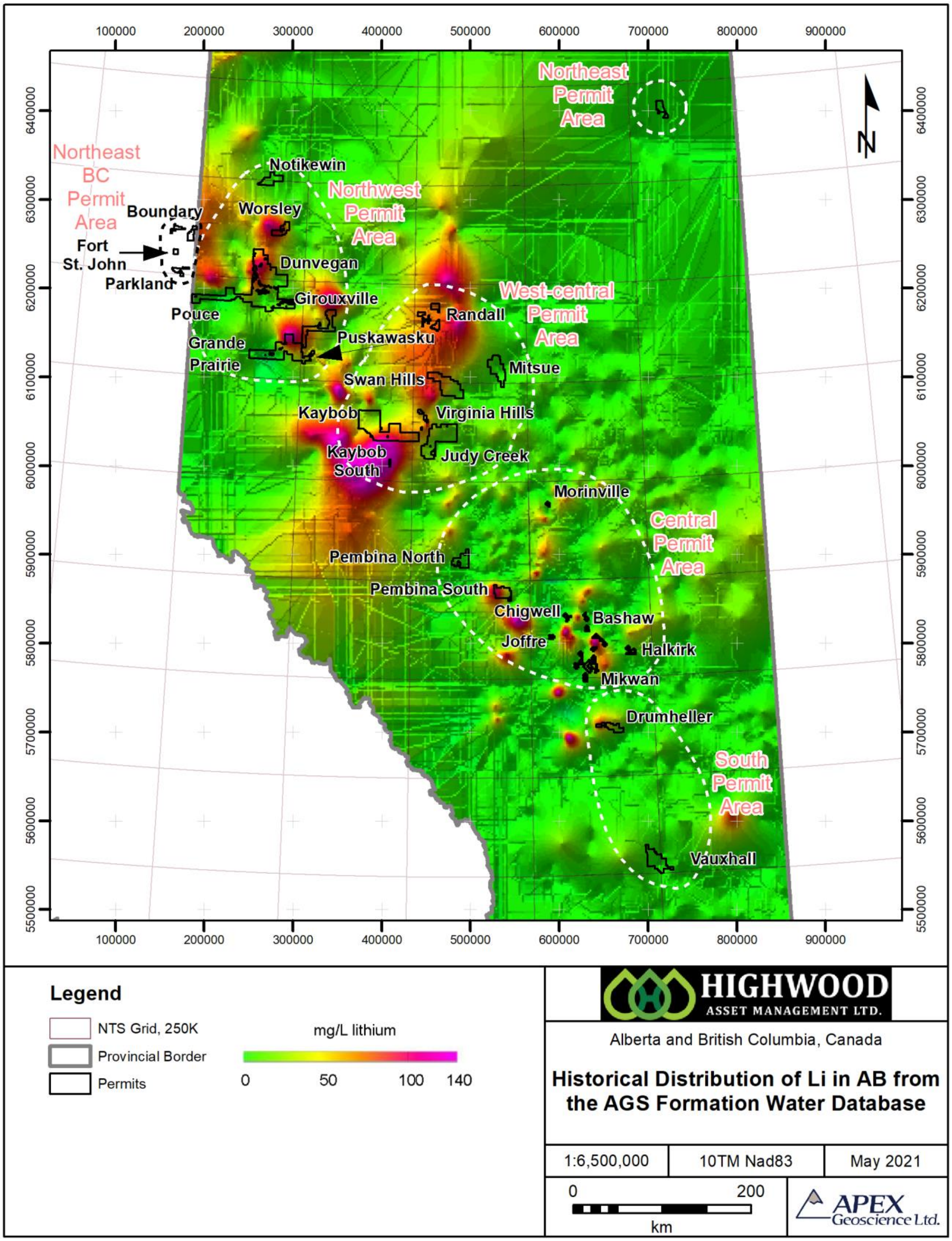


Figure 6.9 Distribution of historical Devonian to Precambrian Li-brine assays in Highwood's South Alberta permit area.

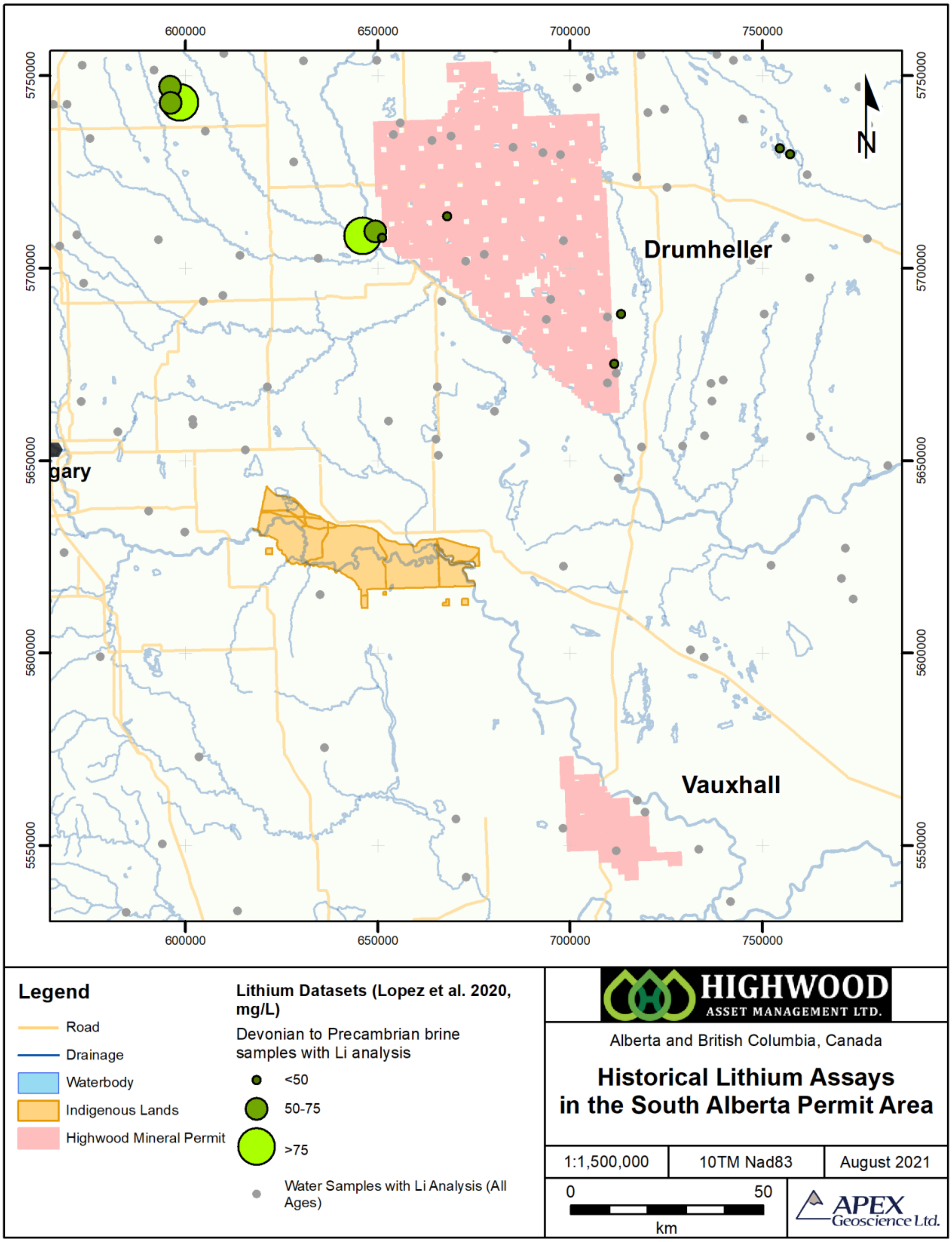


Figure 6.10 Distribution of historical Devonian to Precambrian Li-brine assays in Highwood's Central Alberta permit area.

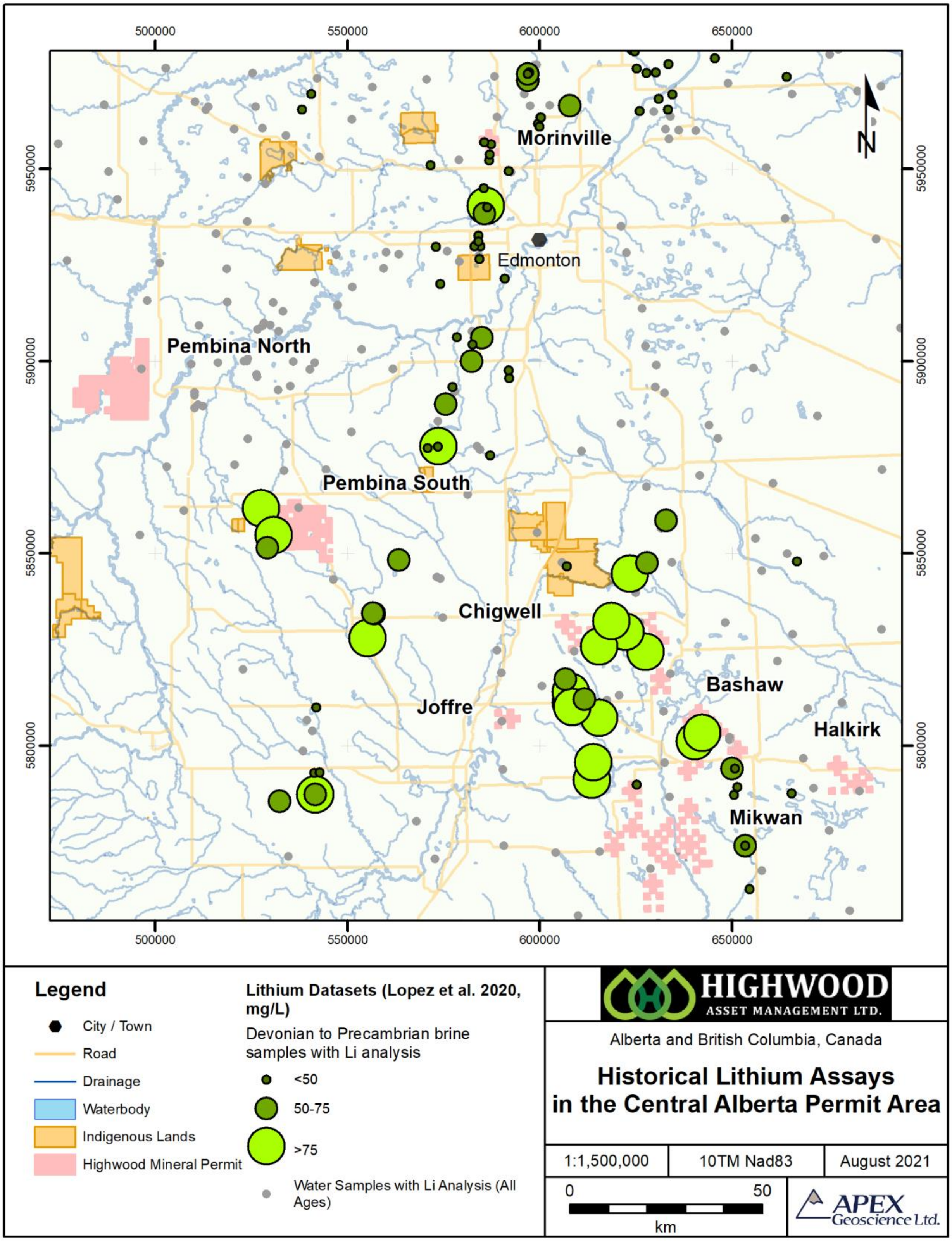


Figure 6.11 Distribution of historical Devonian to Precambrian Li-brine assays in Highwood's West-Central Alberta permit area.

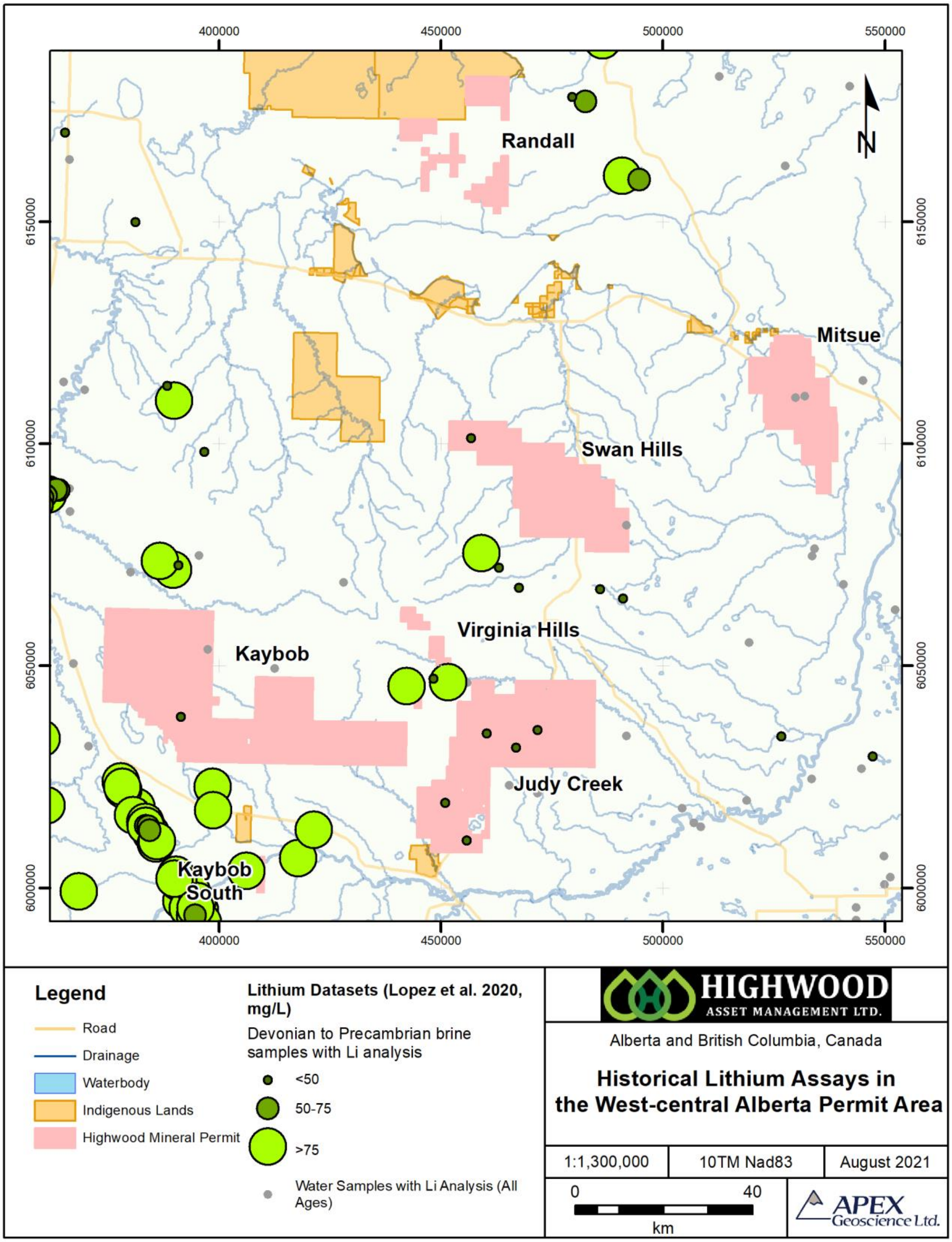


Figure 6.12 Distribution of historical Devonian to Precambrian Li-brine assays in Highwood's Northwest Alberta permit area.

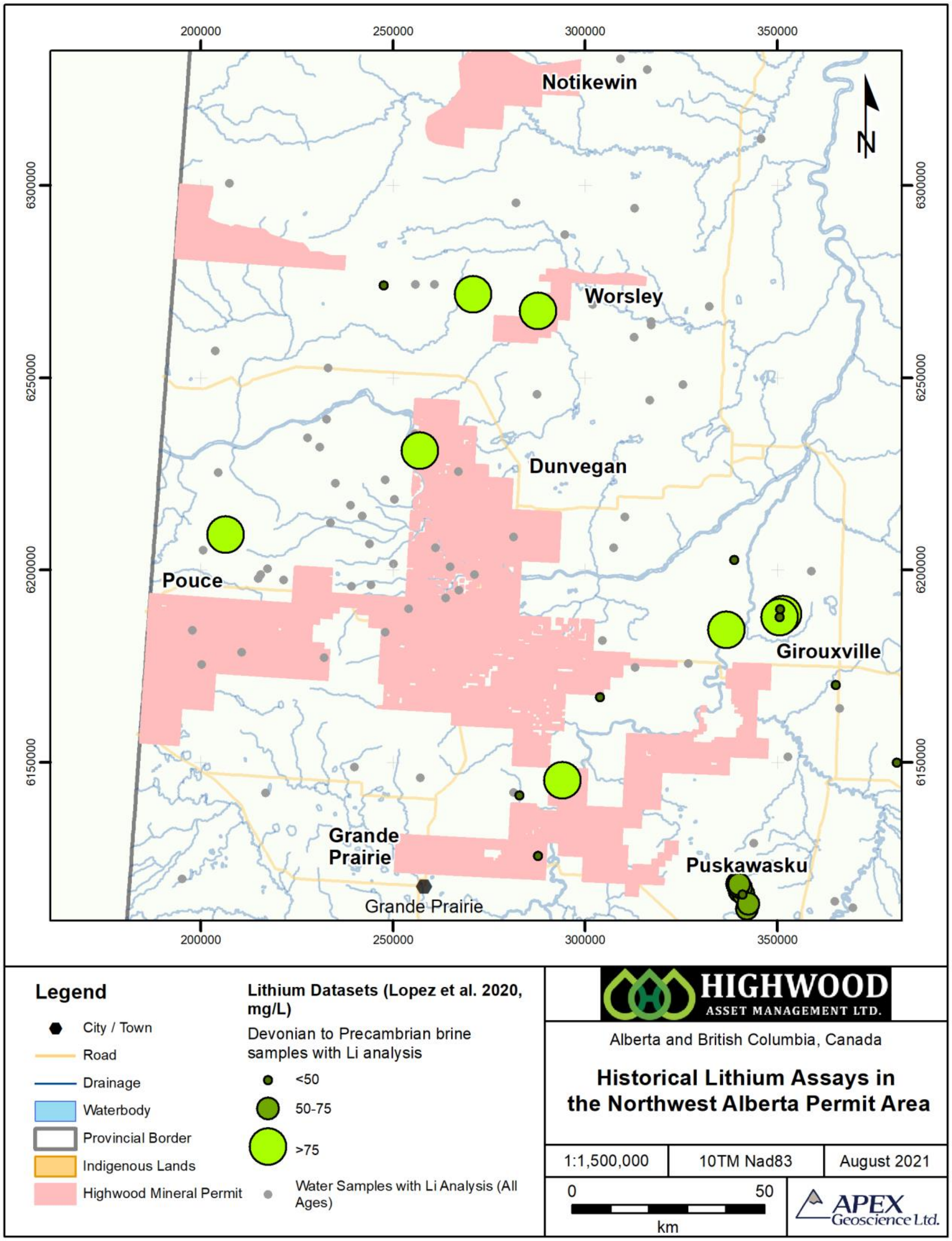


Figure 6.13 Distribution of historical Devonian to Precambrian Li-brine assays in Highwood's Northeast Alberta permit area.

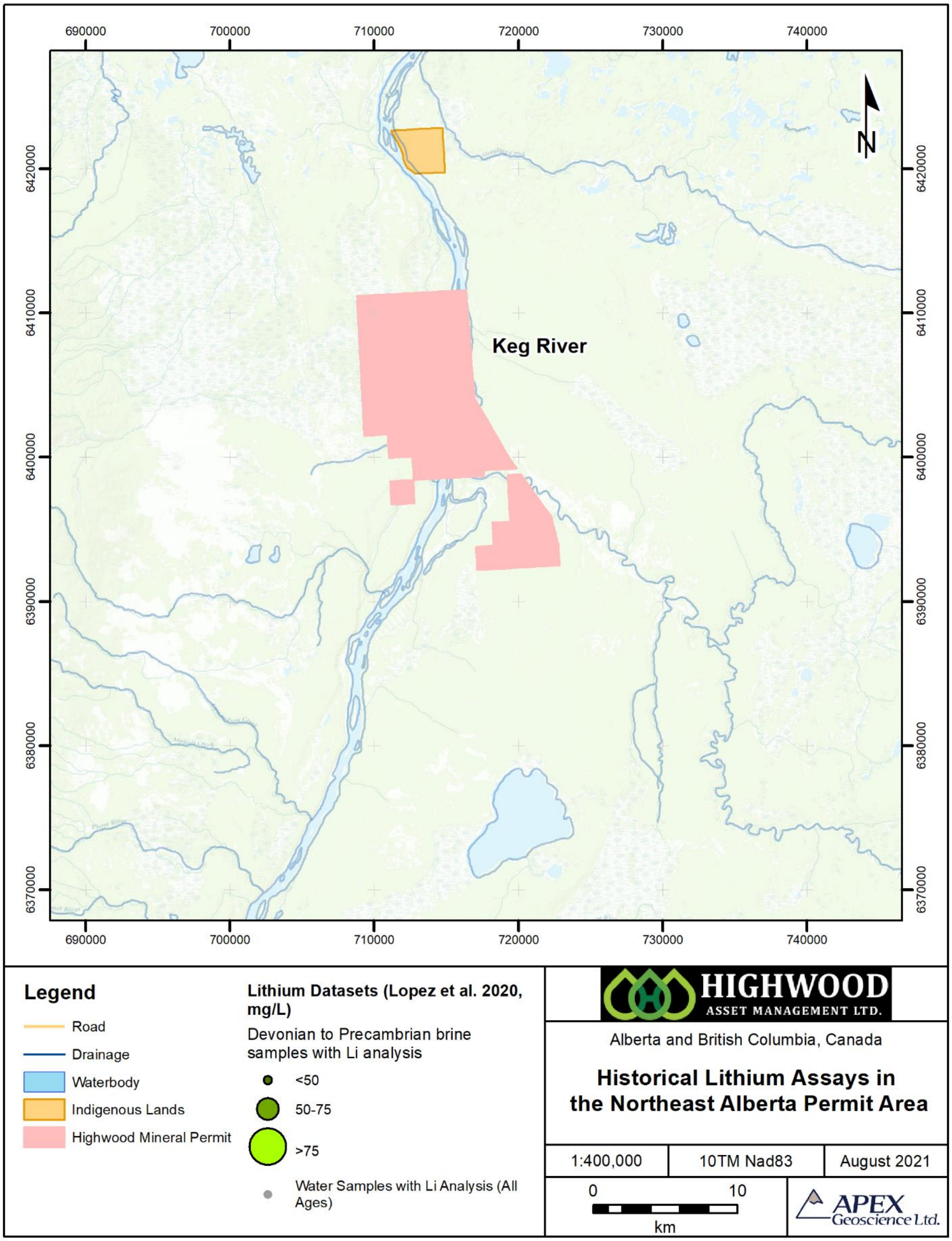
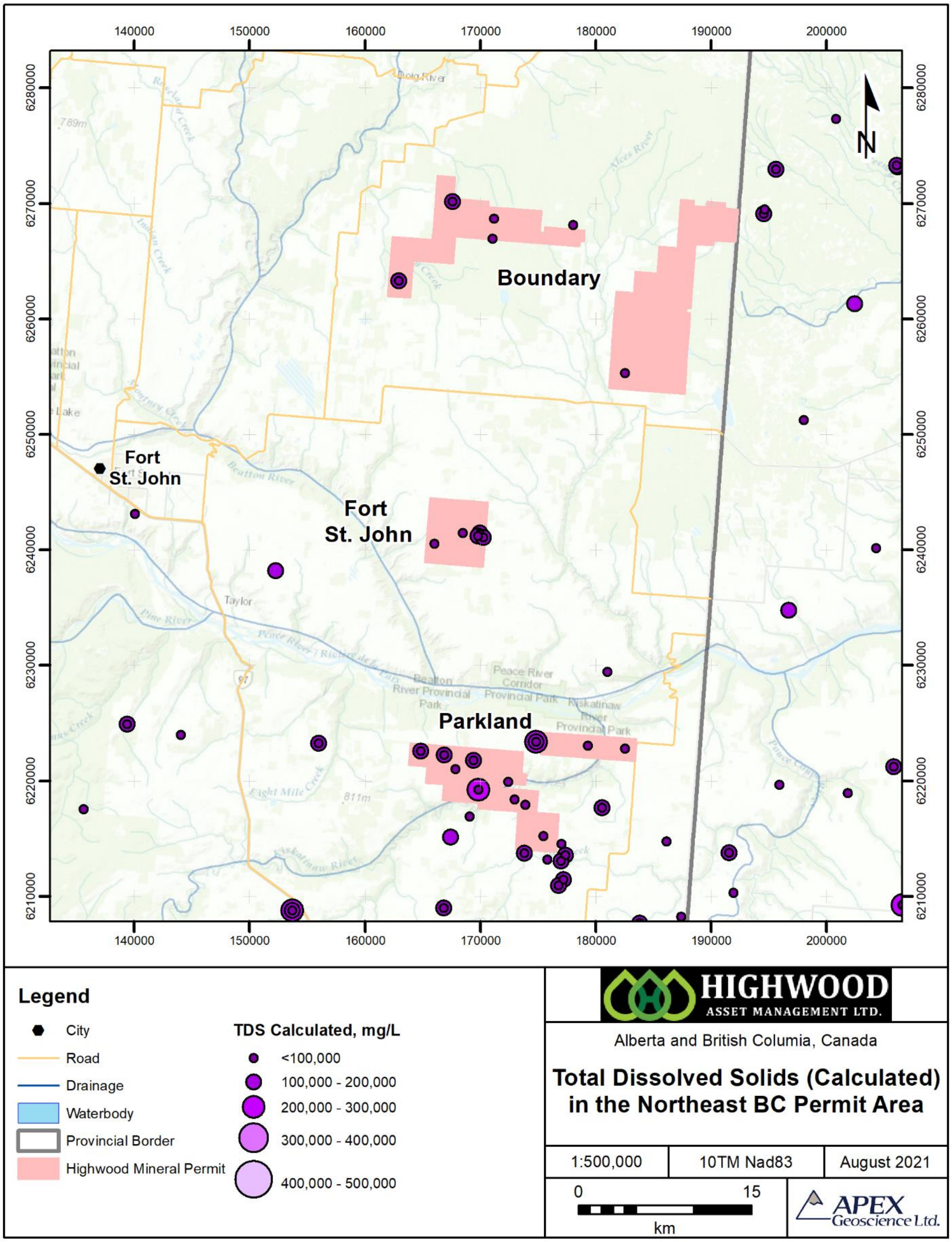


Figure 6.14 Distribution of historical total dissolved solids (calculated) in Highwood's Northeast British Columbia permit area.



7 Geological Setting and Mineralization

7.1 Regional Geology

Geological units of Alberta range in age from Archean to Recent and are exposed as broad northwesterly trending belts, which decrease in age toward the southwest (Hamilton et al., 1999). Precambrian rocks are exposed in the northeast and form the basement for a thickening wedge of Phanerozoic strata of the Western Canada Sedimentary Basin (WCSB) that reaches a maximum thickness of about 6,000 m in front of the Cordilleran fold-and-thrust belt to the southwest. Phanerozoic strata have been deposited in the WCSB in two fundamentally different tectono-sedimentary environments: 1) Late Proterozoic to Middle Jurassic passive continental margin; and 2) Middle Jurassic to Oligocene foreland basin. The WCSB contains one of the world's largest reserves of petroleum and natural gas, bitumen (oil sands) and coal.

The Paleozoic to Jurassic platformal succession, which is dominated by carbonate rocks, can be summarized as two periods of continental margin sedimentation separated by cratonic inundations from the west, southeast and northwest (Kent, 1994). During this period, marine inundation, sedimentation, and erosion were strongly influenced by epeirogenic movements on intracratonic arches (e.g., Peace River Arch in northwestern Alberta) that episodically differentiated the region into a complex array of sub-basins and uplifts (Mossop and Shetsen, 1994). As a result, much of the Paleozoic succession consists of unconformity-bounded, thin to thick sequences of carbonate rocks interlayered with predominantly fine- to medium-grained clastic marine sedimentary rocks.

The overlying mid-Jurassic to Paleocene foreland basin succession is dominated by clastic rocks. The sedimentary rocks contain mineralogically mature, pre-orogenic strata from cratonic sediment sources in the east, and a thick sequence of younger, less mature, foreland trough strata that were derived largely from orogenic uplifts to the west. Continental sedimentary continued through uppermost Cretaceous uplift and erosion during Laramide orogenic activity. The last major stage of uplift erosion occurred during the Late Cretaceous-Tertiary, possibly related to regional tectonic uplift and isostatic rebound. Hence, sedimentation and erosion were strongly influenced by epeirogenic movements on various intracratonic arches, which episodically differentiated the region into a complex array of sub-basins and uplifts.

Post-Mannville strata of Late Albian to Early Campanian age are dominated by the Cretaceous the roughly age equivalent Colorado Group (northeast Alberta) – Alberta Group (southern Alberta) – Smoky Group (northwest Alberta) marine shale that is encased by generally thin but extensive sandstone units. The sandstone units include the Viking, Dunvegan, and Cardium formations that are of enormous economic hydrocarbon importance, and the Bad Heart Formation ooidal ironstone, which represents the largest known resource of iron in western Canada. The Late Cretaceous (Late Coniacian, ~86.0-85.5 Ma) Bad Heart Formation, which is also referred to as the Clear Hills iron deposits, is the focus of this technical report. The stratigraphic and spatial position of the Bad Heart is illustrated in Figures 7.1, 7.2, and 7.3.

Figure 7.1 Bedrock geology of Alberta. Source: Prior et al. (2013). The stratigraphic position of the Bad Heart Formation is denoted with a red arrow.

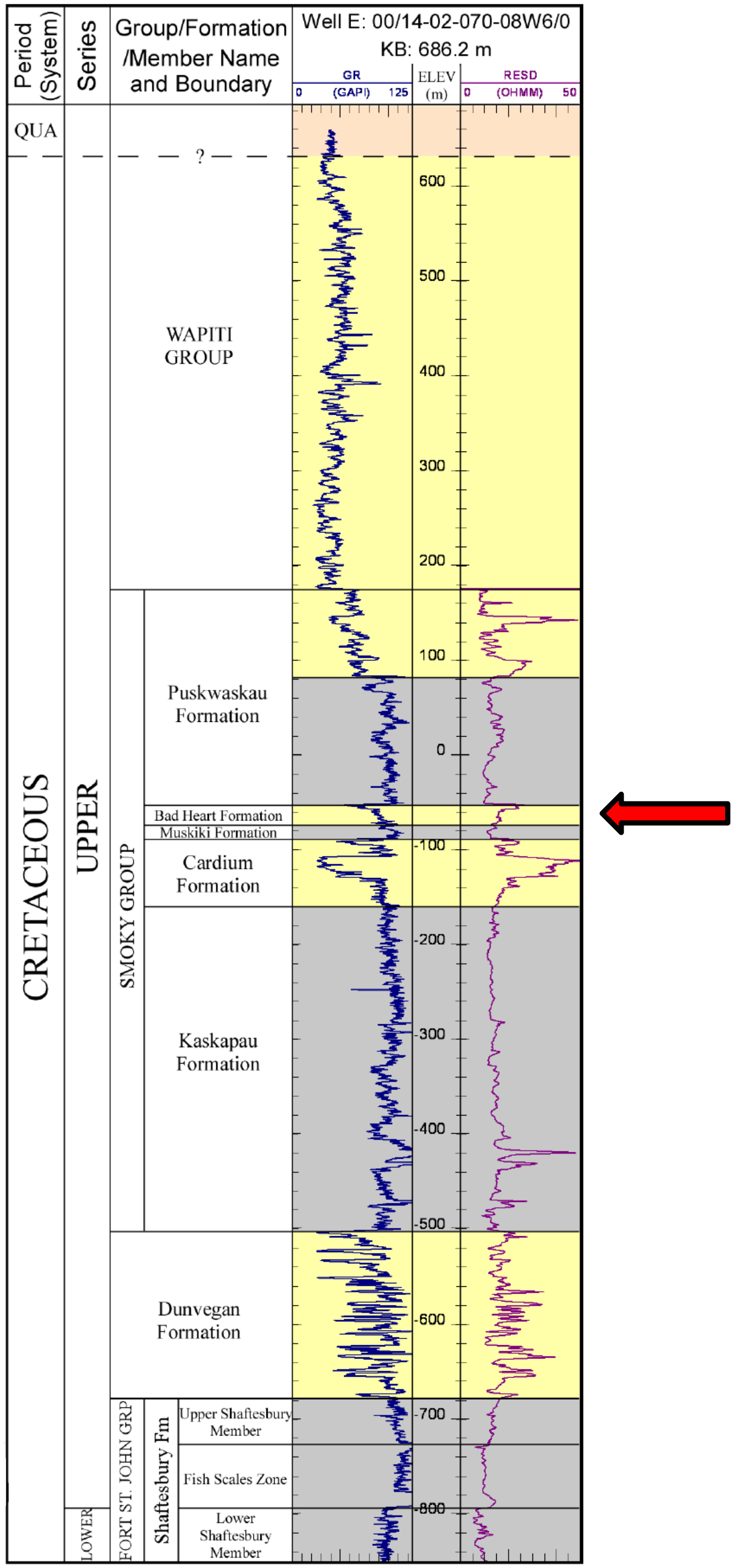


Figure 7.2 Regional bedrock geology highlighting the zero edge of the Bad Heart Formation. The line of cross-section is presented in Figure 7.3.

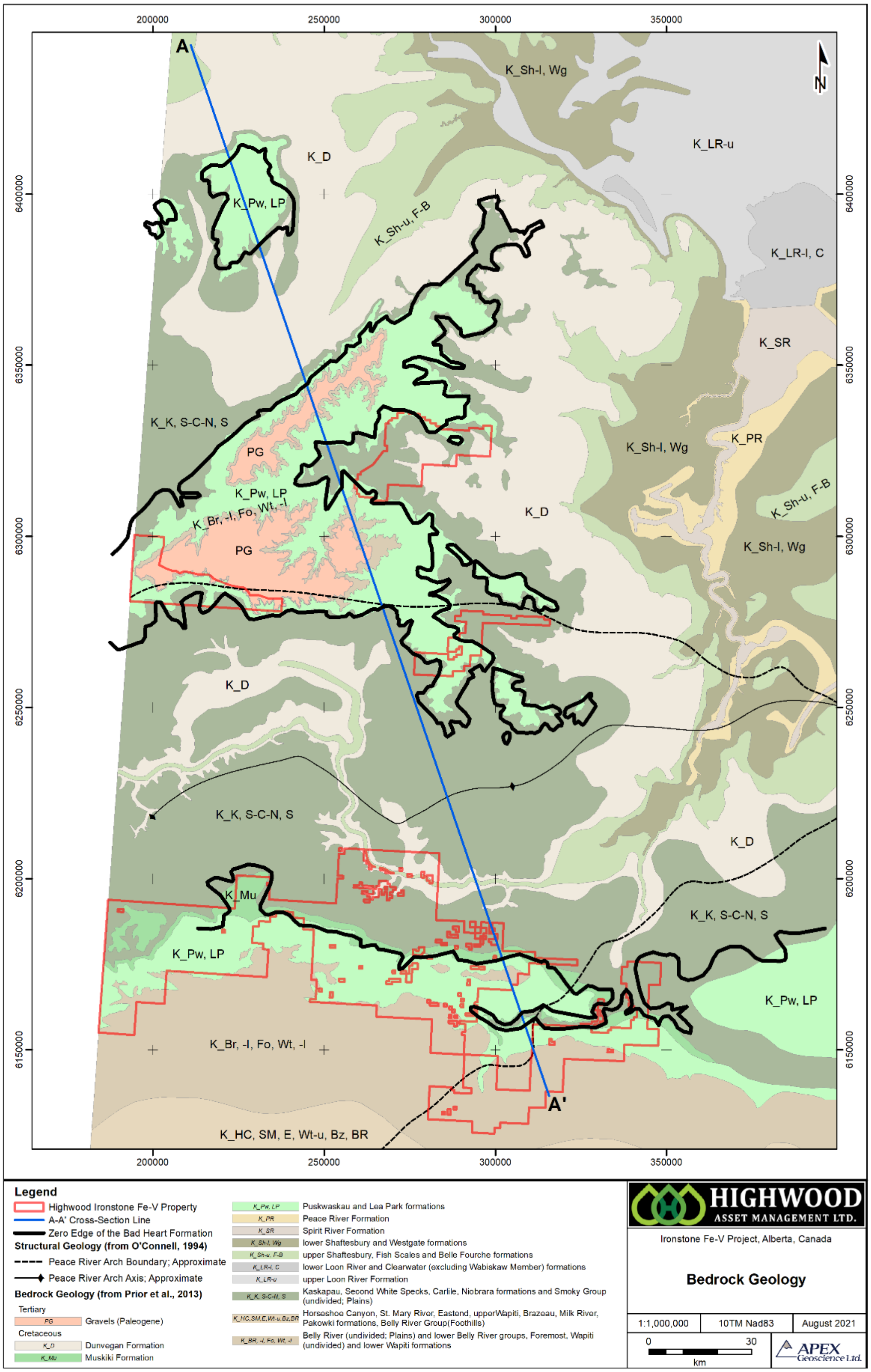


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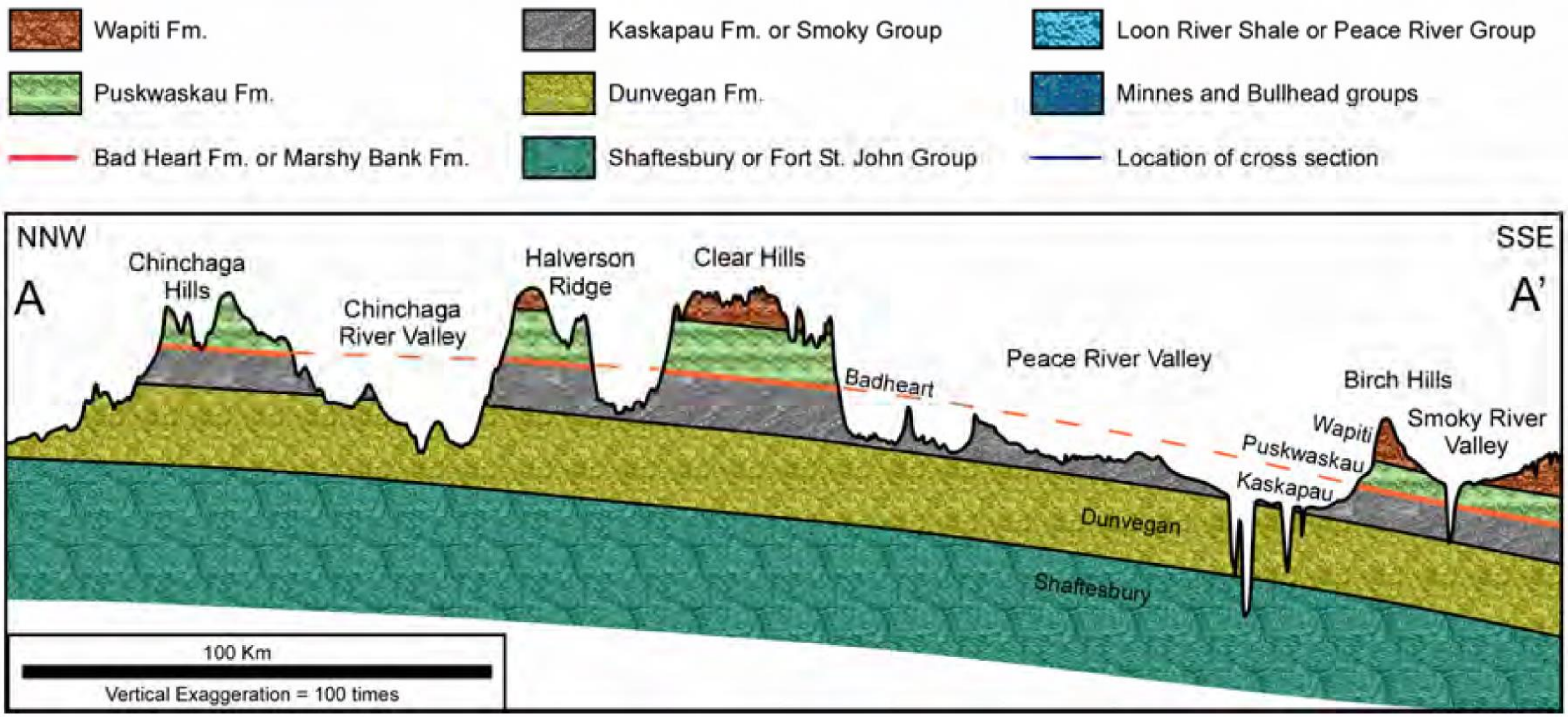
Figure 7.3 Northwest-trending cross-section through northwestern Alberta to illustrate the stratigraphic position of the Bad Heart Formation.



The Bad Heart Formation is a unique unit within the WCSB due to 1) the potentially economic ooidal ironstone, 2) associated ubiquitous shallow marine macro- and ichnofossil assemblages, and 3) the ooidal ironstone deposits within the Bad Heart Formation overlap the Peace River Arch (PRA) region, which is a long-lived zone of structural disturbance in the Western Canada Sedimentary Basin (WCSB). Consequently, the unit is extensively studied (e.g., McLearn, 1919; Mellon, 1962; Petruk, 1977; Petruk et al., 1977a,b; Hamilton, 1980; Plint and Walker, 1987; Plint et al., 1990; Leckie et al., 1994; Donaldson, 1997; Donaldson et al., 1999; Eccles, 2000; Eccles et al., 2000; Collom, 2001; Collom et al., 2001; Dufresne et al., 2001; Weiss et al., 2005; Mei, 2006; Olson et al., 2006; Chen and Olson, 2007; Eccles et al., 2008; Kafle, 2008, 2011). The Bad Formation is described in detail in the following Property Geology section.

Quaternary deposits form the local landforms over virtually all northern Alberta (Figure 7.4). The surficial deposits are primarily Late Wisconsin in age and were deposited by the Laurentide Continental and Cordilleran ice sheets between 23,000 and 11,000 years ago (Dyke et al., 2002). Late Wisconsin ice-flow directions were dominantly southwestward, and most of the sediment is till (glacial diamicton) with glaciolacustrine and glaciofluvial sediment (Andriashek and Fenton, 1989).

The most predominant structural feature in northern Alberta is the Peace River Arch (PRA), a roughly east-northeast striking zone of long-lasting structural disturbance. The PRA is entirely a subsurface feature and consists of 3 distinct phases of distinct phases of Phanerozoic evolution: 1) Pre-Late Devonian development of the topographically high PRA on the WCSB passive margin, 2) Early Carboniferous collapse and reversal of the topographic expression to the Peace River Embayment, and 3) Enhanced Mesozoic subsidence coeval with the initiation and evolution of thrust loading during the Columbian and Laramide orogenies (Cant, 1988; O'Connell et al., 1990). The underlying tectonic causes for the PRA have remained an enigma.

Numerous lineaments and (or) faults have been interpreted as resulting from the long-lived tectonic activity in the PRA–PRE area (Figure 7.5). The continued tectonic inversion during the Late Carboniferous resulted in localized subsidence along the former axis of the Devonian PRA, forming a system of grabens referred to as the Dawson Creek Graben Complex (DCGC; Barclay et al. 1990; Richards et al. 1994; Mei, 2006). The DCGC consists of the Fort St. John Graben, with its principal seaward opening in the west, and the Hines Creek, Whitelaw, and Cindy satellite grabens in the east, and Clear River Graben in the northwest DCGC complex.

In terms of present-day structural features, none are readily observed, but adjustment along pre-existing fault planes is undoubtedly occurring. Over the last 50-years, several earthquakes of small to moderate magnitude have been recorded in the PRA area, suggesting continuous tectonic readjustments of the basement in a region of long-lasting tectonic instability.

The theory of basement-controlled faulting proposed was used by Donaldson et al. (1998) and Mei (2006) to explain the influence of tectonic reactivation on the Bad Heart

Formation in the Late Cretaceous. Donaldson et al. (1998) interpreted 4 faults based on the distribution of the Bad Heart Formation on the southern flank of the PRA: 1) the southwestern limit of the Bad Heart sandstone, 2) the abrupt thinning of the Bad Heart Formation, and 3) two erosional edges of the Bad Heart sandstone. These reactivated faults formed 5–20 m of topography that controlled the preservation and facies of the Bad Heart sandstone (Donaldson et al. 1998).

7.2 Property Geology

The Upper Cretaceous (Coniacian) Bad Heart Formation forms a rusty weathering, high-iron content clastic unit that is comprised largely of sandstone and siltstone, and locally, is characterized by ooidal ironstone (Figure 7.6). The iron-rich, ooidal facies within the Bad Heart forms a series of elongated northwest-trending bodies, the exact limits, and thicknesses of which remain to be determined. The ooidal ironstone 'lenses' range in thickness from 3 to 6 m in the area north of Worsley, but some outcrops along the Rambling River are up to 9 m thick (Hamilton, 1980). These scattered exposures represent the thickest known iron-rich deposits in western Canada and have often been referred to as the Clear Hills ironstone deposits (Green and Mellon, 1962).

Paleontological and geochronological data indicate that the Bad Heart Formation was deposited during the Late Cretaceous (Late Coniacian *Scaphites depressus* zone), ~86.0-85.5 Ma before present (Stott, 1967; Collom, 2001). The Bad Heart Formation (ca. 88.5-86 Ma) is penecontemporaneous with the emplacement of kimberlite and related rock bodies in northwestern to north-central Alberta. Geochronology of the Buffalo Head Hills kimberlite field shows that these bodies, which are located ~210 km east-northeast of the Clear Hills, were emplaced in three separate episodes with predominant eruptions at ~88-81 Ma and less intensive episodes at ~64 Ma and ~60 Ma (Eccles et al., 2008).

The Bad Heart Formation is shoreline-detached shelf sandstone within the Late Cretaceous Smoky Group (Stott, 1967). It is underlain and overlain by dark grey to black marine mudstone units of the Kaskapau and Puskwaskau formations, respectively.

The Bad Heart Formation ooidal ironstone is best exposed 1) in outcrop along the Rambling River and the North and South Whitemud rivers on the eastern slopes of the Clear Hills; 2) in creeks along the south flank of the Clear Hills directly north of the community of Worsley; and 3) along the Smoky River approximately 85 km south-southwest of town of Peace River. A summary of which occurrences are documented outside of, and within, Highwood's Clear Hills Property is presented in Sections 6.5 and 6.6, respectively.

In constructing a cross section of closely spaced sections along approximately 30 km of the Smoky River, Donaldson (1997) illustrated the lens-like morphology of one of these deposits, the lateral extent of which can also be observed in outcrop. At this section, Donaldson (1997) recognized nine distinct facies within the Coniacian-Santonian boundary interval. Of these, only the massive ooidal ironstone occurs in laterally restricted lenses or pods.

Figure 7.4 Regional surficial geology.

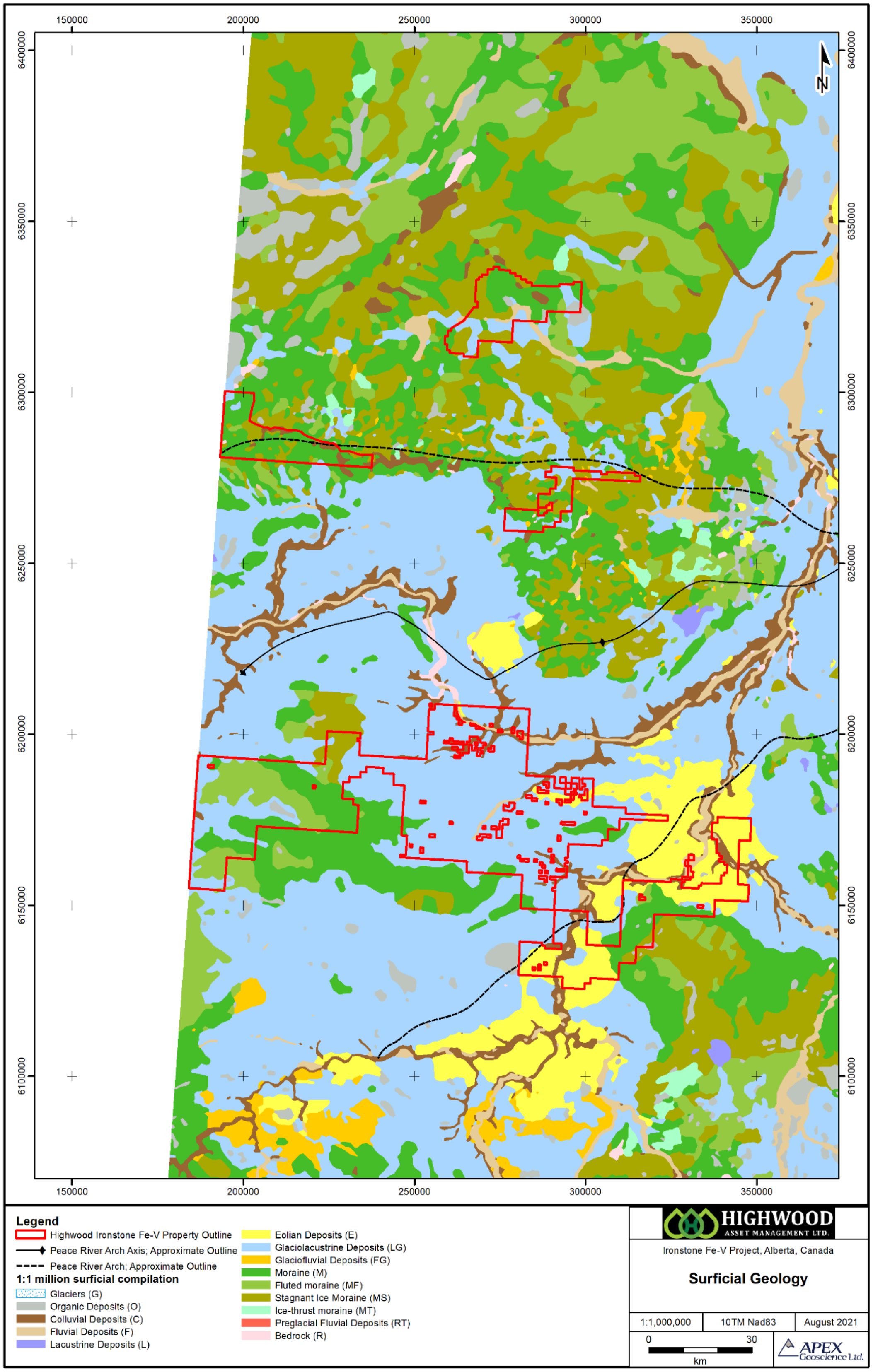


Figure 7.5 Regional structural geology.

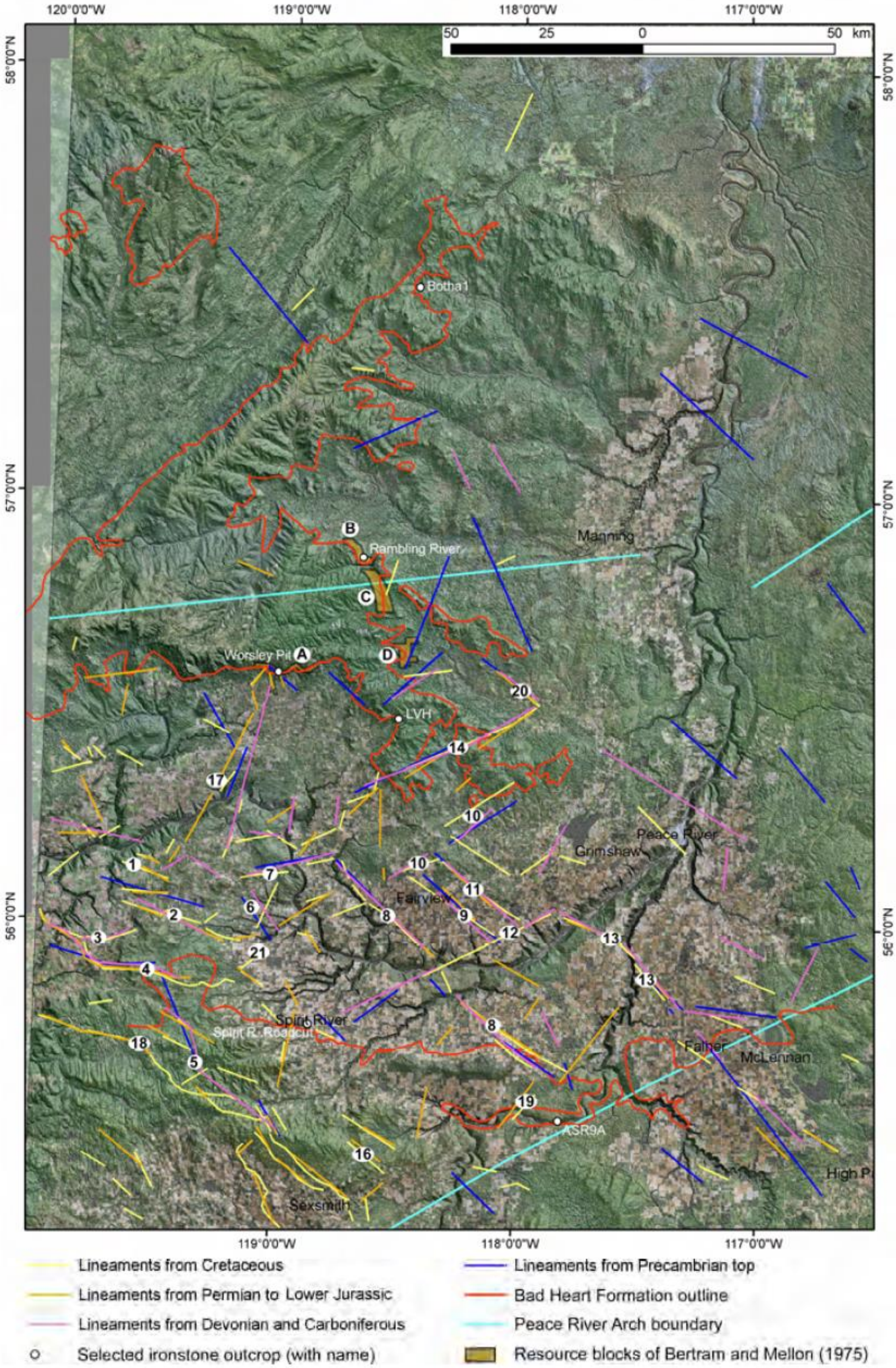


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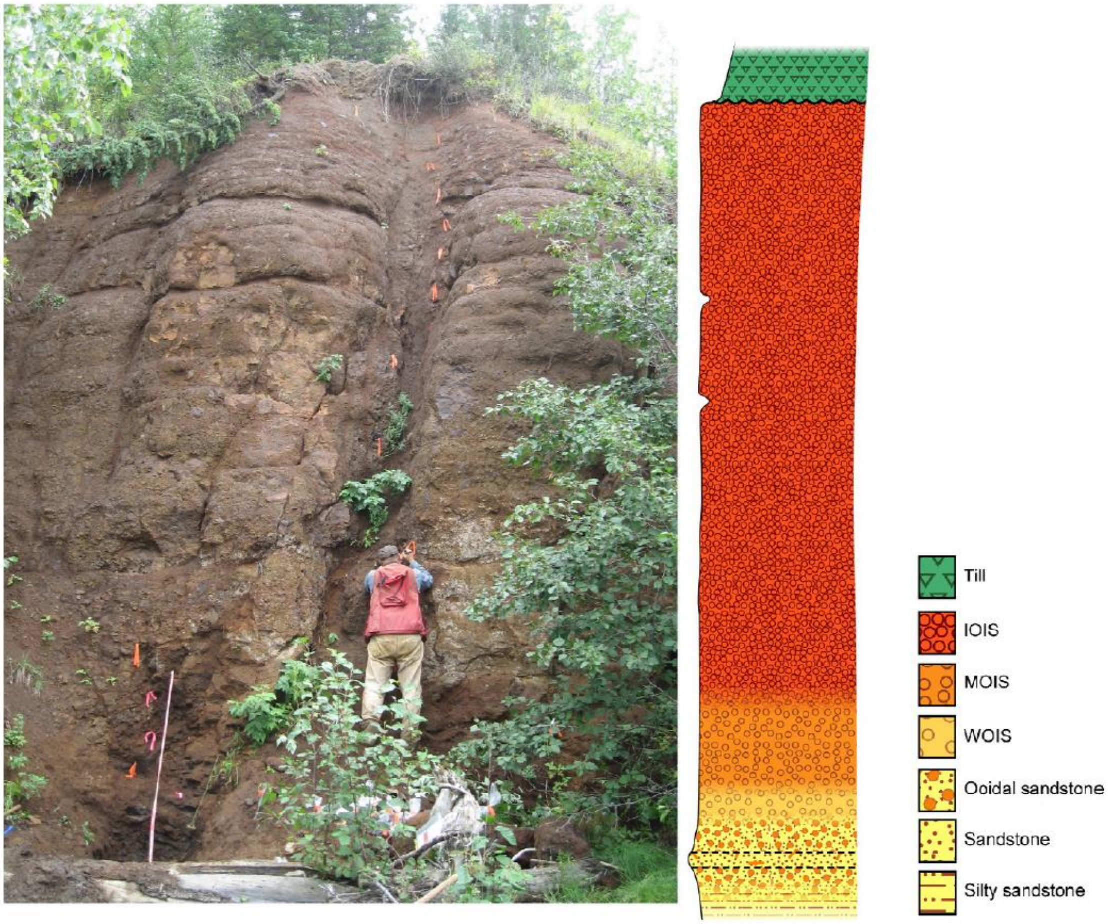
Figure 7.6 Example field photo and stratigraphic interval of the Bad Heart Formation ooidal ironstone along Rambling Creek. Source: Kafle (2009; Section ARR3). Legend acronyms IOIS, MOIS, and WOIS stand for intensely, moderately, and weakly ooidal ironstone.



Alternatively, Kafle (2011) divided the ooidal ironstone into 3 subtypes based on the visually estimated percentage content of ooids: (1) intensely ooidal ironstone (IOIS) in which iron ooids are >70 volume per cent (vol.%), (2) moderately ooidal ironstone (MOIS) in which the ooid content ranges from <70 to ≥30 vol.%, and (3) weakly ooidal ironstone (WOIS) in which the ooid content is from <30 to ≥10 vol.% (e.g., Figure 7.6). In addition to these ironstone subtypes, Bad Heart Formation clastic rocks with <10 to ≥1 vol.% ooids are defined as ooidal sandstone (OS).

7.3 Mineralization

In gross lithology, the iron-rich ooidal facies consists of dark reddish brown and green to dark red ooidal ironstone with interbeds of indurated sideritic ironstone and greenish grey mudstone (glauconite and nontronite). The ooids are the most common constituent by volume in the Clear Hills iron deposits. The average content of textural elements for a composite of ooidal ironstone facies is 46.0% ooids, 22.3% matrix, 13.5% ferruginous

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cement, 9.9% rock fragments, 5.6% carbonate (mainly siderite) and 2.7% quartz grains (Rambling River section; Mellon, 1962).

Ooids become increasingly more abundant upward, ranging from about 24 vol. % near the stratigraphic base to almost 60 vol. % at the top of the unit. The variation in ooid content corresponds to iron content. Samples near the base of the ooidal ironstone unit have about 25 wt. % Fe, whereas those near the top have almost 40 wt. %. The ooids are closely packed but include a fine-grained clastic material matrix of illite and nontronite embedded in ferruginous opal cement (Petruk, 1977; Petruk et al., 1977a, b).

The ooids, which generally form a single massive bed, are 0.4 to 1.0 mm in diameter, have tangential layers (commonly concentric), and consist of nontronite, chamosite and silica that alternate in concentric layers of variable width (Kidd, 1959). An average ooid consists of about 45 vol. % nontronite, 45 vol. % goethite, 5 vol. % silica and 5 vol. % amorphous phosphate (Petruk, 1976; Petruk et al., 1977b). The base of the ooidal ironstone unit is characterized by nontronite ooids; these are overlain by interlayered nontronite and goethite ooids (Petruk et al., 1977a). The nontronite end member is approximately 60 wt. % amorphous nontronite and 40 wt. % submicroscopic goethite (the Fe-rich end member of nontronite is the same as Fe-poor goethite). The nontronite average 39 wt. % Fe, 20 wt. % SiO_2, 5.4 wt. % Al_2O_3, 0.2 wt. % CaO and 0.9 wt. % P_2O_5, whereas the goethite minerals average 49.9 wt. % Fe, 6.0 wt. % SiO2, 4.6 wt.% Al_2O_3, 0.4 wt.% CaO and 1.6 wt.% P2O5 (Petruk et al., 1977a, b).

Quartz commonly occurs in the cores of the ooids, but is also found as discrete, rounded to angular, uncoated grains scattered throughout the matrix. Phosphate is confined to ooids, as rare discrete grains in the cores and as a diffuse impurity in the goethite and nontronite layers. The phosphate is largely amorphous, but one such grain gave a weak x-ray diffraction pattern of apatite (Petruk, 1977). Pyrite is rare to very rare in the Bad Heart Formation ooidal ironstone and typically occurs as a placer mineral that is potentially derived from the overlying Puskawaskau Formation.

The Bad Heart Formation ooidal ironstone has elevated to very high concentrations of some major oxides and several trace elements relative to non-ooidal, sandstone- and siltstone-dominated portions of the Bad Heart and other sedimentary rock units in the Smoky Group. The ooidal ironstone has higher Fe_2O_3, CaO, and less significant SiO_2. Within the boundaries of Highwood's Clear Hills Property, there is a total of 58 Bad Heart Formation Fe_2O_3 analyses that range from 21.5% to 54.0% Fe_2O_3 with an average of 35.76% Fe_2O_3, and 1 recorded Fe analysis, 18.49% Fe (see Section 6.6).

With respect to trace elements, manganese (Mn), vanadium (V), and zinc (Zn) are elevated in the ooidal ironstone relative to non-ooidal, sandstone-dominated portions of the Bad Heart. As documented by Kafle (2011),

- The average Mn concentration in the ooidal ironstone in the Clear Hills and Smoky River regions is about 1,073 ppm (up to 2,684 ppm), whereas the non-ooidal, sandstone- and siltstone-dominated parts of the Bad Heart typically contain 621 ppm Mn (Kafle, 2011).

- The average V in ooidal ironstone is 1,266 ppm (up to 2,476 ppm), versus 508 ppm in the non-ooidal, sandstone- and siltstone-dominated parts of the Bad Heart. In comparison, the average V concentration in the Middle to Late Cretaceous shale in northern Alberta is 118 ppm (Dufresne et al., 2001).

- The average Zn concentration in the ooidal ironstone is 581 ppm (up to 1,040 ppm), whereas the non-ooidal, sandstone- and siltstone-dominated parts of the Bad Heart contain 255 ppm. In comparison, the average Zn content for Late Cretaceous shale in northern Alberta is 102 ppm (Dufresne et al., 2001).

With respect to vanadium and within the boundaries of Highwood's Clear Hills Property, there are 58 analyses that range from 65 ppm to 2,654 ppm V, with an average of 892 ppm V (see Section 6.6).

8 Deposit Types

Phanerozoic ooidal ironstones have been generally referred to as either 'Minette'- or 'Clinton'-type ironstones using a classification by comparison to type deposits (Early Jurassic Lorraine deposits, France and Silurian Clinton deposits, USA, respectively). As such, the Clear Hills ironstone has been classified as the only Minette-type ooidal ironstone in Canada (Gross, 1965; Petruk, 1977; Hamilton, 1980) based on mineralogical, textural, and geochemical evidence.

Many scientists agree, however, that the terms Minette- and Clinton-type ironstone are unsatisfactory, and it is premature to divide ironstone into facies types (see Young, 1989). For example, Kimberley (1989) lamented "*in reality, it is difficult to find any two papers about any type of [ironstone] deposit which completely agree on genetic processes*", and that "*unfortunately there are no 'ideal' iron formations*", and lastly, "*all deposits exhibit both unique features and features which occur in other ironstone deposits*".

These observations are relevant for the Clear Hills iron deposits because there are some clear distinctions between the Clear Hills and other ironstone deposits. For example, the Clear Hills ironstone contains nontronite as the main ferroan silicate mineral versus siderite-chamosite-iron in Minette-type deposits and hematite-chamosite-iron in Clinton-type deposits. In addition, the Clear Hills ironstone contains higher silica (~19-29 wt. % SiO_2) in the form of quartz and opaline cement than those reported for the type deposits of Minette (5.2-20.7 wt. % SiO_2) and Clinton (9-16 wt. % SiO_2) ironstone.

Regardless, the origins of sedimentary iron-formation and associated metalliferous deposits are complex. Their diversity in nature has led modellers to various hypotheses over the last century, and yet the genesis of ironstone deposits remains controversial. The uncertainty of a solute supply source for chemical sedimentary ores has divided modellers into two distinct camps: supply by surficial weathering versus exhalation of deep fluids.

Despite considerable development interest since the Clear Hills ironstone was discovered in 1953, the origin of the vast quantities of iron has remained speculative. Theories for the genesis of the Clear Hills iron deposits generally fall into 2 distinct camps:

1. Several authors have advocated that the iron in the Clear Hills deposits was derived from a weathered landmass by normal erosional processes, along with appreciable clay and detrital constituents, and that these were subsequently altered during diagenesis (Colborne, 1958; Kidd, 1959; Donaldson, 1997).

2. Alternatively, a hydrothermal origin for the phyllosilicate nontronite in the ooidal ironstone is supported by mineralogical evidence (Petruk, 1977; Petruk et al., 1977a,b; Olson et al. 1994), and documentation of chemosymbiotic animal communities associated with the Bad Heart Formation (Collom 1997a, b).

Geological concepts being applied in the investigation and/or exploration of the Clear Hills ironstone deposits include geological mapping and sampling, geophysical surveys (magnetic, seismic), trenching, and diamond drilling. The most critical component to developing the Clear Hills iron deposits remains a technological challenge because the relatively low iron grade and complex ore mineralogy have prevented economic development to date (Hamilton, 1980).

9 Exploration

9.1 Highwood's Ironstone Fe-V Project

In May 2021, Highwood conducted a reconnaissance, road-based bedrock sampling trip at their Dunvegan, Pouce, and Worsley sub-properties. The Company collected a total of 8 bedrock samples (Table 9.1; Figure 9.1). Bedrock samples, RE21-IS-SR01, were sampled at a historically documented ironstone site located directly southwest of the Town of Spirt River, AB (Spirit River Section SPRV Pit 1; Kafle, 2009). The sample site is located within an active surface quarry, in which the ironstone is being mechanically bulldozed and trucked to local farmers for road fill and infrastructure base material (e.g., elevators). The overall depth of the pit is approximately 2 m deep. At this locale, the Bad Heart Formation comprises intensely ooidal ironstone in the upper 0.8 m of the section where it changes to a fine- to medium-grained ferruginous sandstone (Figure 9.2).

Select analytical results of the Highwood samples are presented in Table 9.2 (SRC results) and Table 9.3 (ALS results). The SRC iron and vanadium analytical results are summarized graphically in Figures 9.3 and 9.4, respectively. Samples from the Spirit River Pit 1, RE21-IS-SR01 (a+b), yielded 38 wt. % Fe_2O_3 and 450-468 ppm V at the SRC. At ALS, sample RE21-IS-SR01-02 from the Spirit River Pit 1 yielded 34 wt. % Fe_2O_3 and 418 ppm V. These samples verify the historical iron and vanadium content from the Bad Heart Formation ooidal ironstone at this site.

Table 9.1 Location and description of 8 bedrock samples collected by Highwood in a reconnaissance sampling program.

Sample ID	Latitude	Longitude	Elevation (m)	Sample notes
RE21-IS-BR01	55.532746°	-118.402372°	591	Muddy grey to dark grey weathered shale, bioturbated with scattered pebble clasts
RE21-IS-SL01	56.488206°	-118.509207°	775	Soil sample, grey green, in part ruddy, silty clay, slippery, sandy in part
RE21-IS-SL02	56.4748°	-118.51846°	751	Laminated grey green shale, red partings, fissile
RE21-IS-SL03	56.49149°	-118.496852°	784	Shaly, grey to mottled brown
RE21-IS-SHBP01	55.79163°	-119.88676°	834	6 m of rust-red sandstone, ubiquitous iron staining, pebble conglomerate and shale clast horizons
RE21-IS-SHBP02	55.796768°	-119.885628°	788	Rusty stained creek bed sediment, metallic smell
RE21-IS-KR01	55.835319°	-119.172096°	665	Possibly Muskiki Fm shale underlying the Bad Heart Fm. Light to dark grey shale
RE21-IS-SR01 (a+b)	55.771546°	-118.853666	688	Two separate layers of iron-stained, bedded ooidal sandstone, sampled independently

Table 9.2 Select results of the 8 samples collected by Highwood and analyzed at the Saskatchewan Research Council.

Sample ID	Lab	Al_2O_3 (wt.%)	Fe_2O_3 (wt.%)	MnO (wt.%)	MgO (wt.%)	CaO (wt.%)	Na_2O (wt.%)	K_2O (wt.%)	TiO_2 (wt.%)	P_2O_5 (wt.%)	Co (ppm)	Cu (ppm)	Ni (ppm)	Zn (ppm)	Ba (ppm)	V (ppm)	Cr (ppm)	Pb (ppm)	Rb (ppm)	Sr (ppm)
RE21-IS-BR01	SRC	11.40	3.93	0.037	1.61	2.49	0.73	1.96	0.553	0.149	7.87	20.4	22.9	69.0	721.0	21.0	102.0	12.2	85.2	151.0
RE21-IS-SL01	SRC	15.20	5.37	0.009	1.15	0.23	0.45	2.87	0.865	0.166	5.68	22.1	13.9	82.4	994.0	51.6	114.0	17.8	146	176.0
RE21-IS-SL02	SRC	14.00	4.83	0.064	1.36	1.20	0.93	2.30	0.709	0.187	13.00	23.4	57.8	111.0	942.0	27.6	97.0	14.0	97.1	151.0
RE21-IS-SL03	SRC	11.40	8.40	0.040	1.18	0.99	0.47	1.93	0.575	0.330	12.40	22.3	25.8	118.0	851.0	56.7	124.0	16.1	87.2	122.0
RE21-IS-SHBP01	SRC	2.80	19.70	0.068	0.33	0.15	0.15	0.61	0.153	0.270	10.20	4.3	30.8	66.5	895.0	84.8	113.0	5.4	23.5	65.0
RE21-IS-SHBP02	SRC	3.64	22.00	0.086	0.34	0.76	0.15	0.72	0.236	0.866	29.60	6.2	60.5	270.0	788.0	195.0	100.0	14.6	26.6	91.0
RE21-IS-KR01	SRC	11.40	4.15	0.047	1.36	1.41	0.72	2.07	0.612	0.178	9.68	21.3	26.0	81.7	835.0	23.9	99.0	13.1	90.1	138.0
RE21-IS-SR01a	SRC	4.82	38.40	0.116	1.05	3.21	0.07	0.68	0.192	1.020	35.60	5.2	47.1	262.0	771.0	468.0	100.0	32.3	35.4	126.0
RE21-IS-SR01b	SRC	4.82	38.30	0.12	1.05	3.21	0.06	0.67	0.19	1.00	34.6	5.2	46.4	259.0	764.0	450.0	99.0	35.7	35.6	126.0
		ICP - TD	ICP - TD	ICP - TD	ICP - TD	ICP - TD	ICP - TD	ICP - TD	ICP - TD	ICP - TD	ICP-MS PD	ICP-MS PD	ICP-MS PD	ICP-MS PD	ICP - TD	ICP-MS PD	ICP - TD	ICP-MS PD	ICP - TD	ICP - TD

Table 9.3 Select results of the 8 samples collected by Highwood and analyzed at ALS Canada Ltd.

Sample ID	Lab	Al_2O_3 (wt.%)	Fe_2O_3 (wt.%)	MnO (wt.%)	MgO (wt.%)	CaO (wt.%)	Na_2O (wt.%)	K_2O (wt.%)	TiO_2 (wt.%)	P_2O_5 (wt.%)	Co (ppm)	Cu (ppm)	Ni (ppm)	Zn (ppm)	Ba (ppm)	V (ppm)	Cr (ppm)	Pb (ppm)	Rb (ppm)	Sr (ppm)
RE21-IS-BR01-01	ALS	11.56	4.25	0.04	1.70	2.82	0.70	1.98	0.56	0.17	10.8	24.9	37.4	96.0	730.0	130.0	80.0	14.7	82.2	151.5
RE21-IS-SL01-02	ALS	15.91	5.32	0.01	1.28	0.26	0.45	2.85	0.84	0.17	8.3	29.4	26.6	112.0	1,010.0	280.0	105.0	20.2	136.5	156.0
RE21-IS-SL02-01	ALS	13.80	8.73	0.10	1.50	2.20	0.88	2.25	0.68	0.98	18.3	32.3	85.7	157.0	1,020.0	155.0	76.0	16.5	91.0	191.5
RE21-IS-SL03-02	ALS	12.36	10.62	0.05	1.30	1.16	0.43	1.94	0.56	0.43	17.9	32.3	40.2	171.0	870.0	230.0	78.0	20.4	87.2	126.5
RE21-IS-SHBP01-03	ALS	3.09	29.07	0.12	0.88	1.10	0.16	0.70	0.15	0.34	10.1	6.4	37.3	86.0	960.0	150.0	37.0	6.7	26.2	64.9
RE21-IS-SHBP01-04	ALS	4.81	8.80	0.03	0.43	0.74	0.25	0.99	0.22	0.22	9.7	7.6	28.6	103.0	720.0	123.0	49.0	10.9	36.6	73.7
RE21-IS-KR01-02	ALS	11.84	4.44	0.05	1.45	1.52	0.71	2.04	0.61	0.19	13.1	28.1	36.5	113.0	870.0	149.0	73.0	17.0	89.4	137.0
RE21-IS-SR01-02	ALS	3.45	34.38	0.12	1.60	5.00	0.02	0.54	0.14	0.84	37.1	6.2	45.4	242.0	640.0	418.0	51.0	24.5	24.8	125.5
		ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-MS61r	ME-MS61r	ME-MS61r	ME-MS61r	ME-MS61r	ME-MS61r	ME-MS61r	ME-MS61r	ME-MS61r	ME-MS61r

Figure 9.1 Location of 8 bedrock samples collected by Highwood.

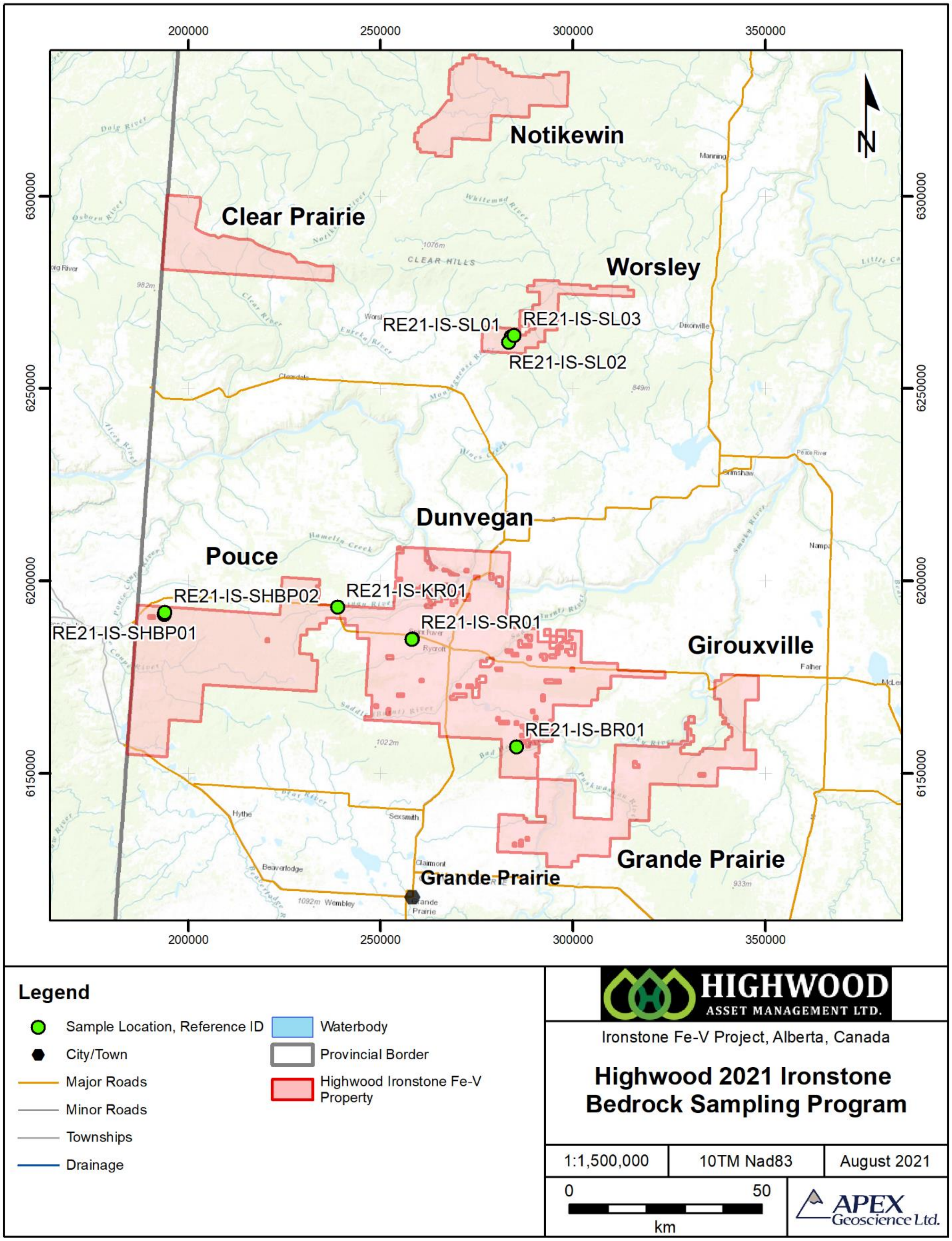

Figure 9.2 Geological sketch of the Spirit River Bad Heart Formation ironstone deposit. Source: Kafle (2009).

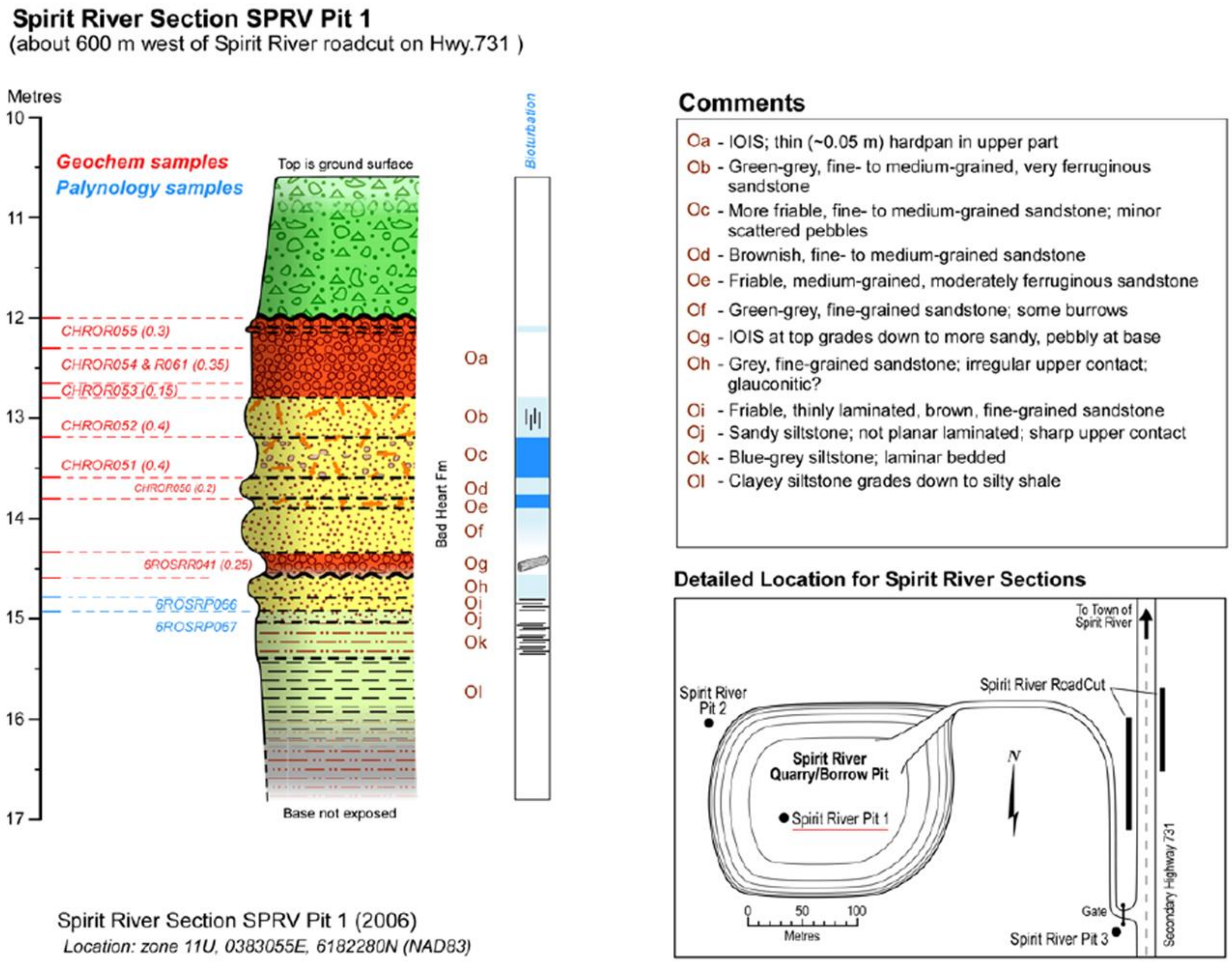

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Figure 9.3 Iron analytical results of the 8 bedrock samples collected by Highwood.

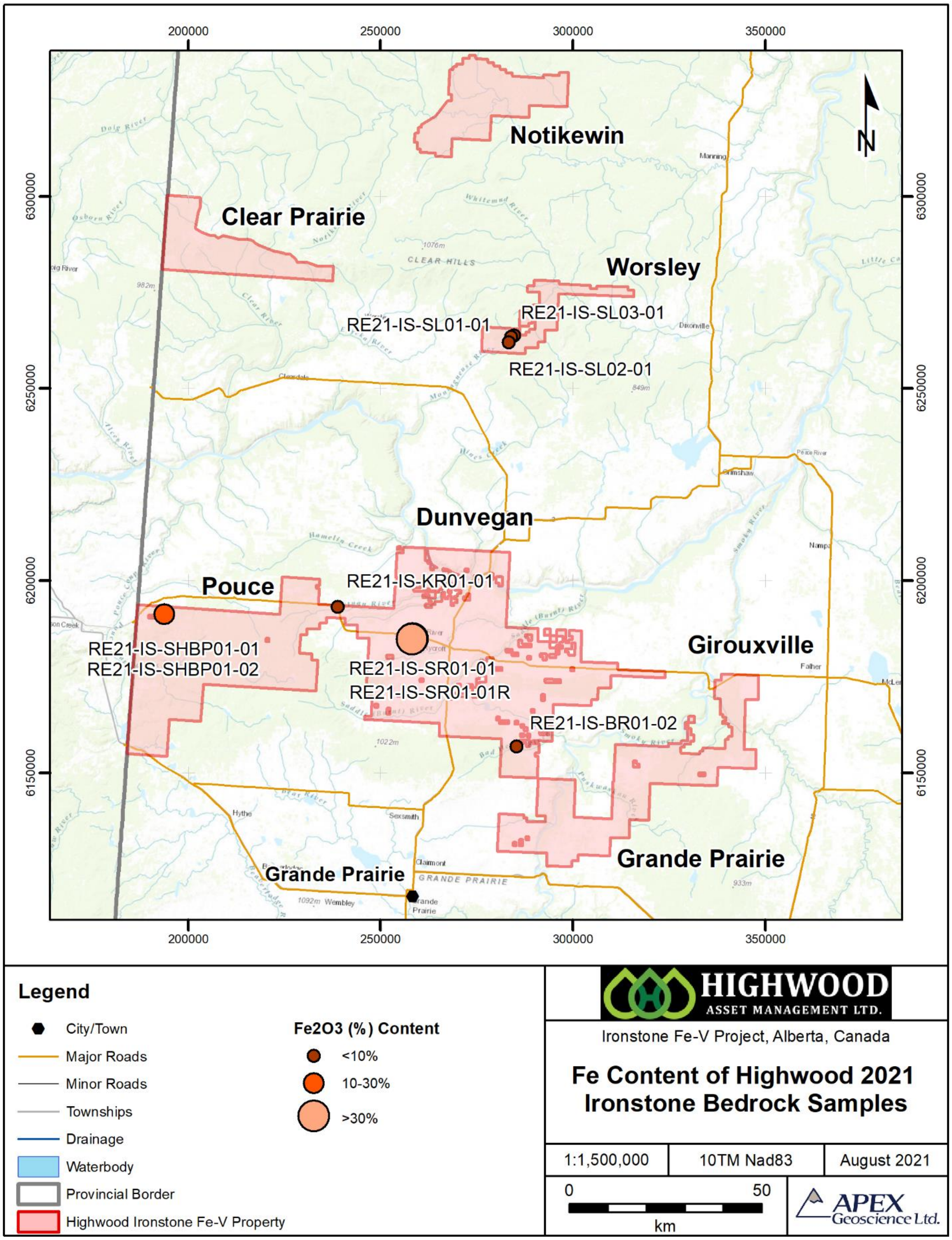
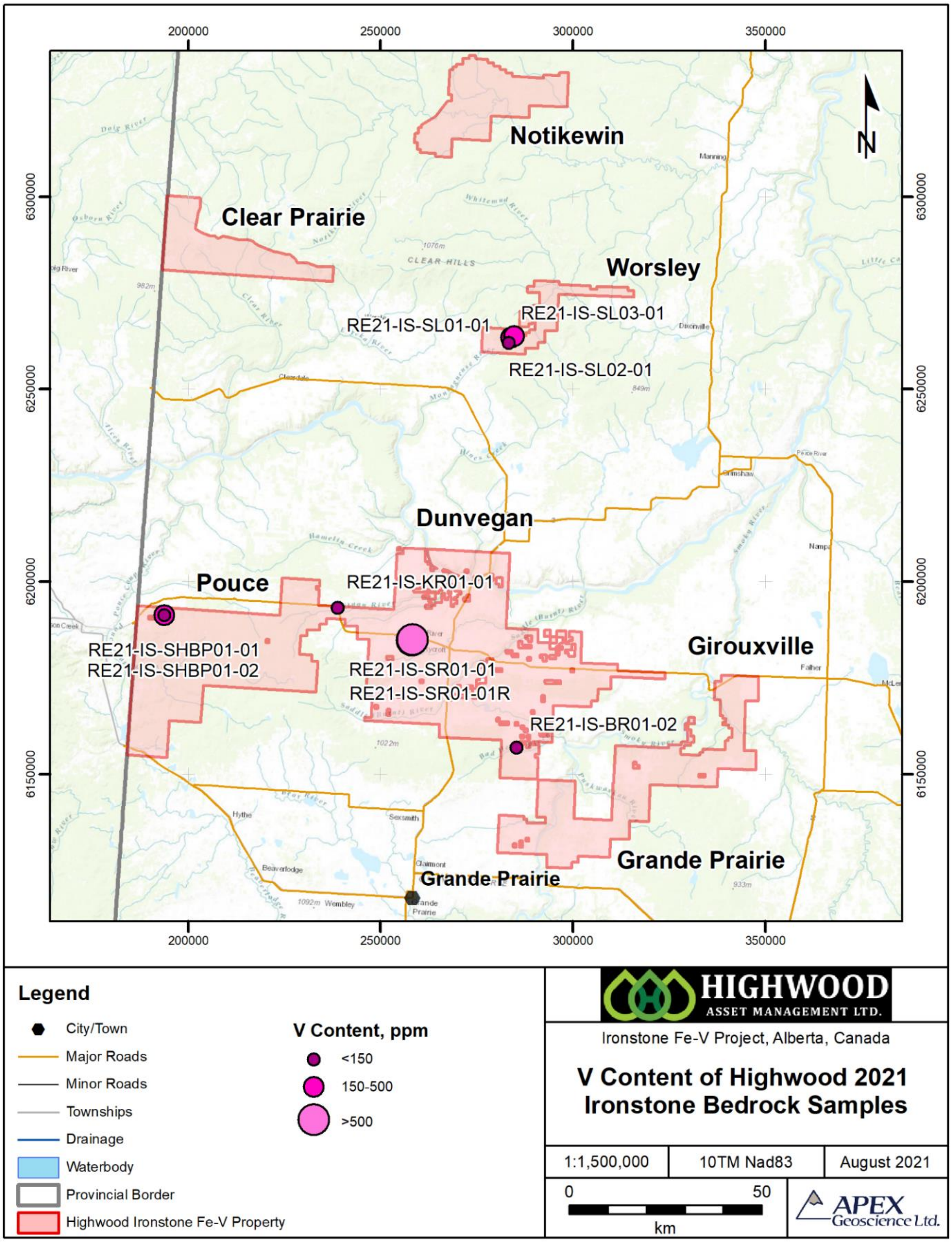


Figure 9.4 Vanadium analytical results of the 8 bedrock samples collected by Highwood.



The next highest iron samples occur in samples RE21-IS-SHBP01 and RE21-IS-SHBP02, which were collected from a rusty-weathering sandstone bedrock unit located approximately 7.75 km southwest of the unincorporated community of Bay Tree, AB and east on secondary highway 784 for approximately 3.2 km. Iron and vanadium contents of these samples are 19.7-22.0 Fe_2O_3 and 84.8 to 195.0 ppm V. Based on the bedrock geological map of Alberta (see Figure 7.2), it is possible that the sandstone belongs to the Kaskapau Formation (not Bad Heart Formation). The Bad Heart has been historically documented in the vicinity of this site but is stratigraphically higher than the Kaskapau Formation, and hence, the occurrences would be located at higher elevations.

The remaining samples have elevated aluminum (11.4 to 15.2 wt. % Al_2O_3), sodium (0.47 to 0.93 wt. % Na_2O), and potassium (1.9 to 2.9 wt. % K_2O) in comparison to the Bad Heart Formation ironstone samples collected (e.g., 4.8 wt. % Al_2O_3). These samples are therefore considered to have lithologies characterized by siltstone and clay.

9.2 Highwood's Lithium-Brine Project

9.2.1 Preliminary March-April 2021 Brine Assay Sampling Program

During March-April 2021, Highwood commissioned two Calgary, AB based laboratories to conduct brine sampling from select petro-operations in Alberta, maintain chain-of-custody of the samples, and analyze the brine for lithium using industry standard techniques. The labs included Highwood's primary lab: AGAT Laboratories (AGAT) and a check lab: Core Laboratories (Core Lab). AGAT.

A total of 20 brine samples were collected from a variety of Devonian- to Granite Wash-aged aquifers situated at depths of between 1,222 m and 3,208 m beneath the earth's surface. Brine from 5 of the 28 sub-properties were sampled and include Vauxhall, Drumheller, Kaybob, Judy Creek, and Randall sub-properties (Table 9.4, Figure 9.5). Because of the 1) large spatial distribution between sample points, and 2) knowledge that the samples are from different reservoirs (fields) and geological formations (pools), the resulting lithium analytical data have a wide range of values from 10.7 mg/L to 52.60 mg/L Li.

A summary of the sampling program analytical results to date include:

- Leduc and Nisku formations brine in the Drumheller sub-property yielded 47.9-52.6 mg/L Li (n=3 samples) and 29.7-32.3 mg/L Li (n=4 samples), respectively (Figure 9.6).

- Gilwood Formation brine in the Randell sub-property yielded 13.5-28.2 mg/L Li (n=4 samples; Figure 9.7).

- Beaverhill Lake Group brine in the Judy Creek and Kaybob sub-properties yielded 24.3-29.9 mg/L Li (n=3 samples) and 10.7-13.6 mg/L Li (4 samples), respectively (Figure 9.7).

Table 9.4 Lithium geochemical results of Highwood's March-April preliminary 2021 brine sampling program.

Sample ID	Highwood sub-property mame	Highwood Permit area	Operator	Well ID	Well name	Lat	Long	Total depth (m)	True vertical depth (m)	Field	Pool	Lithium (mg/L) AGAT	Lithium (mg/L) Core Lab
02/05-01-030-21W4	Drumheller	South	Bearspaw	102 / 05-01-030-21 W4 / 0	Bearspaw Et Al 102 Drumw 5-1-30-21	51.537933	-112.838289	1,720.00	n/a	Ghost Pine	D-3 A		52.6
13-35-029-21W4	Drumheller	South	Bearspaw	100 / 13-35-029-21 W4 / 0	Bearspaw Et Al Drumw 13-35-29-21	51.530392	-112.861559	1,699.60	n/a	Ghost Pine	D-2 A		49.7
09-34-029-21W4	Drumheller	South	Bearspaw	100 / 09-34-029-21 W4 / 0	Bearspaw Et Al Drumw 9-34-29-21	51.527122	-112.866605	1,688.60	1,688.54	Ghost Pine	D-2 A		47.9
15-07-029-19W4	Drumheller	South	Bearspaw	100 / 15-07-029-19 W4 / 0	Bearspaw Et Al Drum 15-7-29-19	51.473409	-112.664564	1,655.00	n/a	Wayne-Rosedale	Nisku H		29.7
02/02-36-029-20W4	Drumheller	South	Bearspaw	102 / 02-36-029-20 W4 / 0	Bearspaw 102 Drum 2-36-29-20	51.518725	-112.687117	1,700.00	1,699.84	Wayne-Rosedale	Nisku G		32.3
06-19-029-19W4	Drumheller	South	Bearspaw	100 / 06-19-029-19 W4 / 0	Bearspaw Et Al Drum 6-19-29-19	51.494513	-112.667538	1,676.70	n/a	Wayne-Rosedale	Nisku G		30.2
08-21-013-16W4	Vauxhall	South	CNRL	100 / 08-21-013-16 W4 / 0	Norcen Et Al Enchant 8-21-13-16	50.095771	-112.122962	1,425.00	n/a	Enchant	Commingled Pool 006		33.8
13-02-013-14W4	Vauxhall	South	CNRL	100 / 13-02-013-14 W4 / 0	Anadarko Hays 13-2-13-14	50.059694	-111.820327	1,612.00	n/a	Grand Forks	ARCS T		14.2
05-35-078-11W5	Randell	West-central	Summerland	100 / 05-35-078-11 W5 / 0	Summerland Gift 5-35-78-11	55.800460	-115.601487	1,875.00	n/a	Gift	Gilwood H		13.5
09-19-078-11W5	Randell	West-central	Summerland	100 / 09-19-078-11 W5 / 0	Summerland Gift 9-19-78-11	55.776043	-115.683716	2,031.70	1,944.97	Gift	Gilwood K	18.3	
11-02-076-11W5	Randell	West-central	Kinmerc	100 / 11-02-076-11 W5 / 0	Kin Merc Randell 11-2-76-11	55.558096	-115.597815	2,025.00	n/a	Randell	Gilwood D		28.2
08-10-076-11W5	Randell	West-central	Kinmerc	100 / 08-10-076-11 W5 / 0	Kin Merc Randell 8-10-76-11	55.567088	-115.608608	2,028.60	n/a	Randell	Gilwood I		28.2
16-11-076-11W5	Randell	West-central	Kinmerc	16-11-076-11 W5	Randell 16-11-76-11 Multiwell Facility	55.575791	-115.582876	n/a	n/a	Randell	n/a		25.3
16-18-064-011W5	Judy Creek	West-central	Crescent Point	100 / 16-18-064-11 W5 / 0	CPEC Hz Judyck 16-18-64-11	54.543171	-115.641310	4,510.00	2,656.17	Judy Creek	Beaverhill Lake T		24.8
08-17-064-10W5	Judy Creek	West-central	Crescent Point	100 / 08-17-064-10 W5 / 0	CPEC Hz Judyck 8-17-64-10	54.535558	-115.466902	5,298.00	2,580.64	Judy Creek	n/a		24.3
12-02-65-10W5	Judy Creek	West-central	Crescent Point	102 / 12-02-065-10 W5 / 0	CPEC Hz Swanhs 12-2-65-10	54.598651	-115.381534	4,302.00	2,461.78	Judy Creek	n/a		29.9
Kaybob 8-9 Gas Plant	Kaybob	West-central	Paramount	08-09-064-19 W5	Trilogy Kaybob BHL Unit1 Facility 8-9-64-19	54.521604	-116.802140	n/a	n/a	Kaybob	Beaverhill Lake	11.6	
2-9-64-19W5	Kaybob	West-central	Paramount	100 / 02-09-064-19 W5 / 0	Trilogy Kaybob 2-9-64-19	54.517989	-116.808376	3,031.80	n/a	Kaybob	Beaverhill Lake A	13.6	
4-21-64-19W5	Kaybob	West-central	Paramount	100 / 04-21-064-19 W5 / 0	Trilogy Kaybob 4-21-64-19	54.547081	-116.820840	3,029.70	n/a	Kaybob	Beaverhill Lake A	13.2	
10-22-64-19W5	Kaybob	West-central	Paramount	100 / 10-22-064-19 W5 / 2	Trilogy NT Kaybob 10-22-64-19	54.554303	-116.783189	2,984.00	n/a	Kaybob	Commingled Pool 010	10.7	
											Minimum	**10.7**	**13.5**
											Maximum	**18.3**	**52.6**

Figure 9.5 Location and lithium analytical results of brine samples collected by Highwood during their 2021 brine sampling programs.

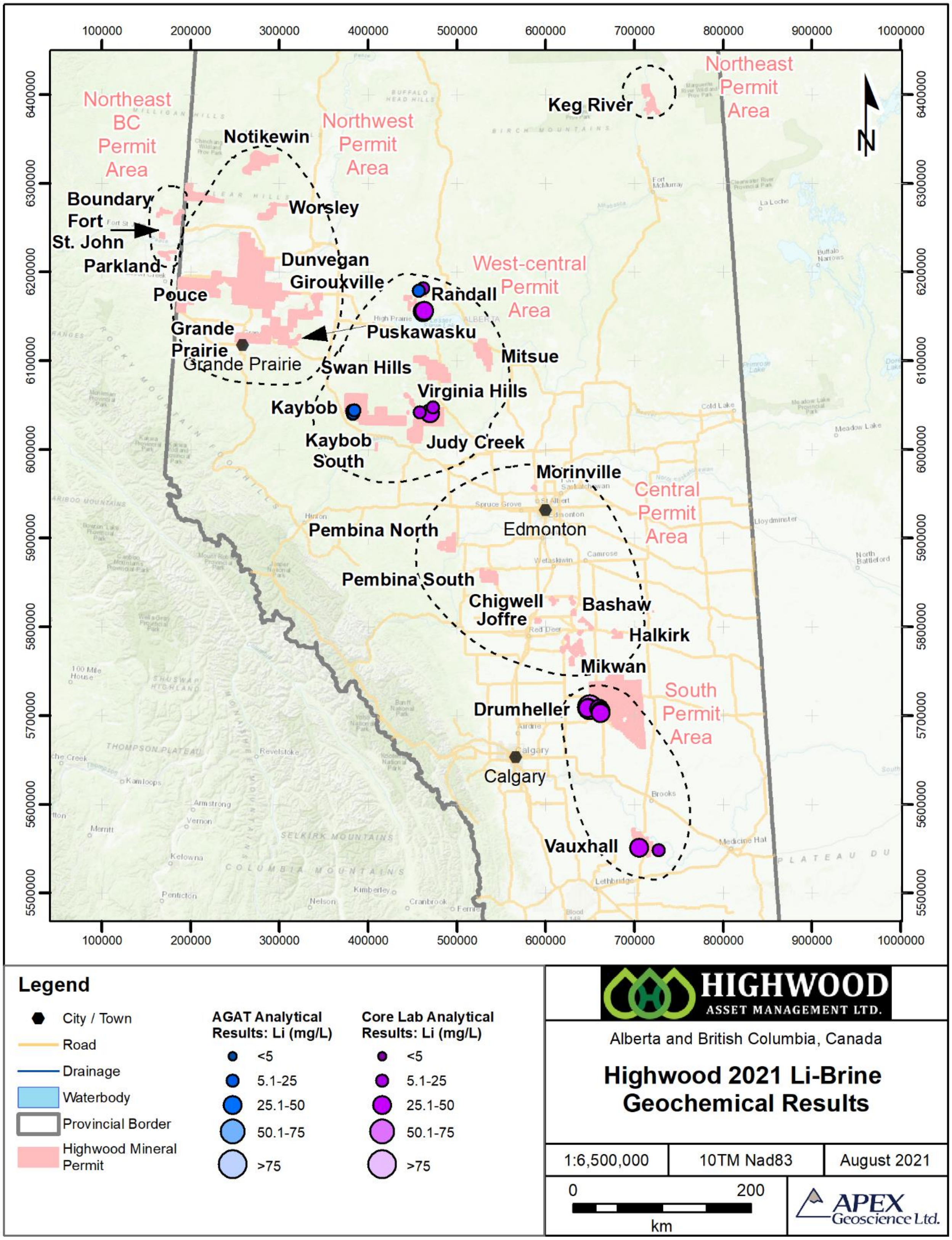


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Figure 9.6 Lithium geochemical results of Highwood's 2021 brine samples collected in the South Permit Area.

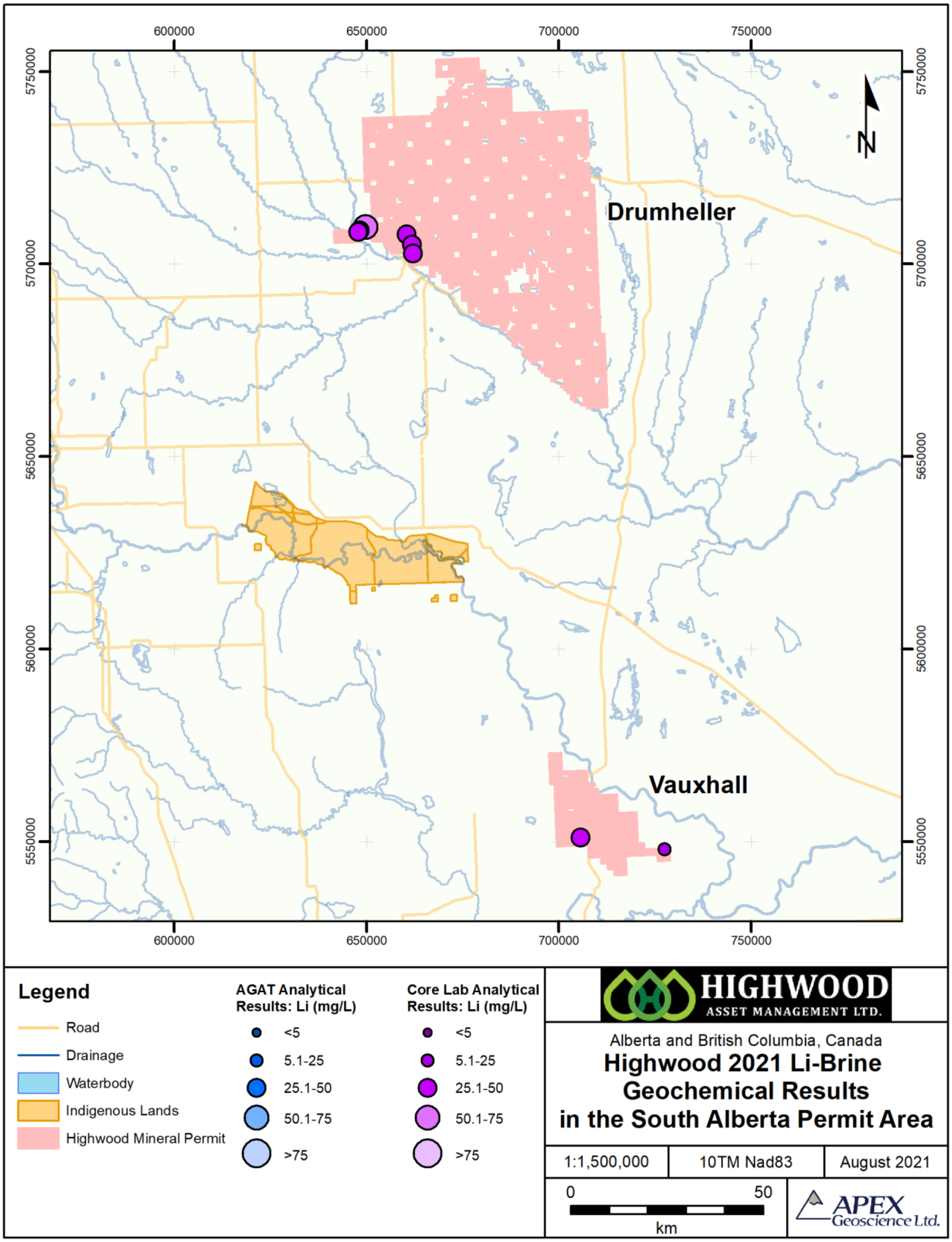
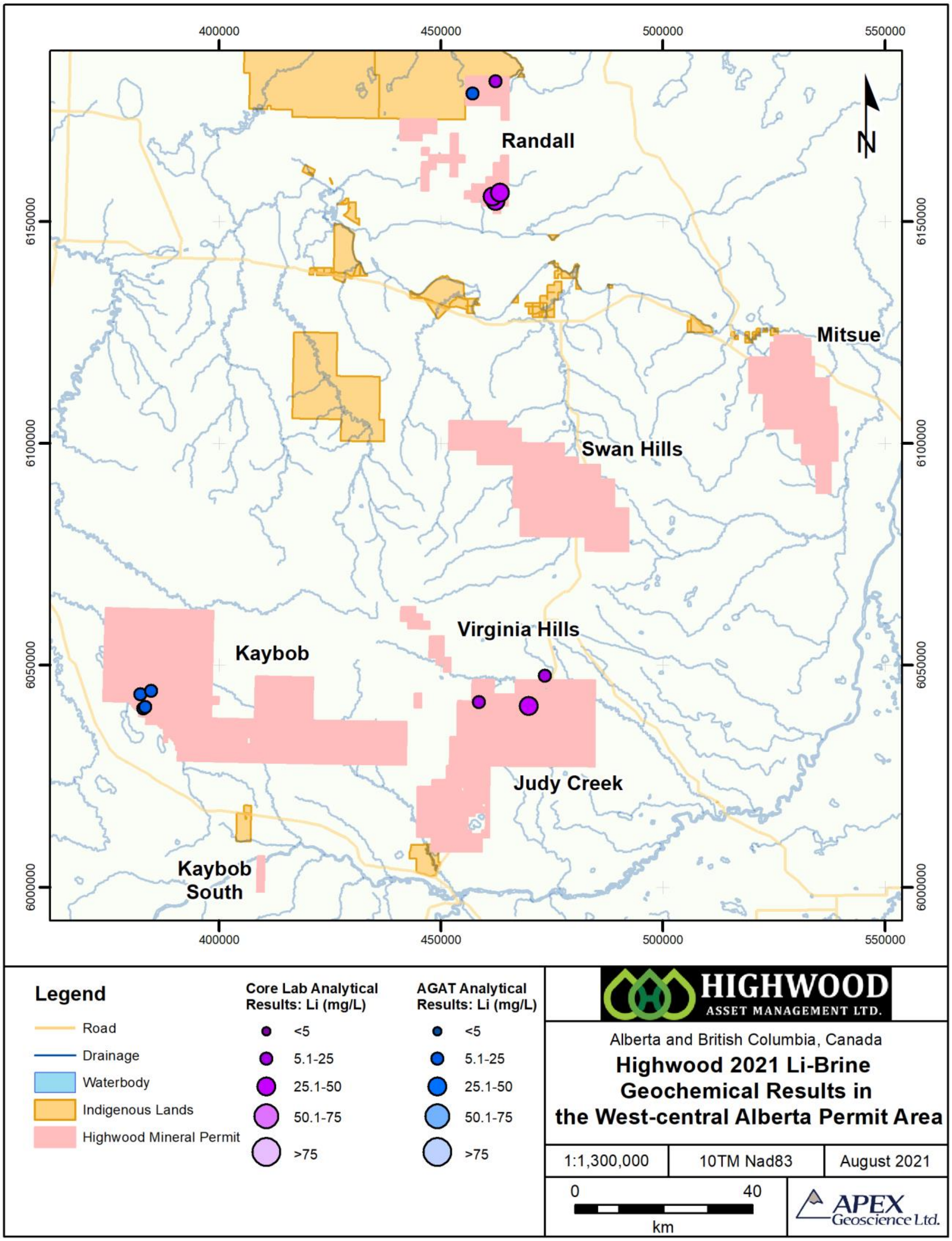


Figure 9.7 Lithium geochemical results of Highwood's 2021 brine samples collected in the West-Central Permit Area.



9.2.2 Follow-Up May 2021 Brine Assay Sampling Program: Drumheller Sub-Property

On May 28, 2021, Highwood completed a follow-up brine sampling program at the Drumheller Sub-Property with the objective to 1) sample additional wells in the Wayne-Rosedale and Ghost Pines oil and gas fields for assay testing, and 2) collect mini-bulk brine samples (40-litres) for mineral processing test work to assess the extractability of lithium from the Nisku- and Leduc-aged brines.

A total of 10 oil and gas wells or Facilities were selected for brine assay testing and include Nisku- and Leduc-aged brines from the Wayne-Rosedale and Ghost Pine oil and gas fields (Table 9.5). In addition to 8 oil and gas wells, the Facilities included 1) the Crude Oil Multi-Well Proration Battery and Gas Plant (Wayne-Rosedale) at 04-30-029-19W4, and 2) the Crude Oil Multi-Well Proration Battery (Ghost Pine) at 03-02-030-21W4. One well, 100/07-15-029-20W4/0, was shut-in at the time of the sampling program and no brine was collected at this site.

A total of 34 brine samples were collected, which included 32 brine assay samples and 2 mini-bulk brine samples. The brine assay samples included original samples from each of the wells/facilities (n=10), duplicate samples (n=8 sites), blank standard samples (n=3), lab-prepared certified standard samples (n=6), and lab-check samples (n=5).

The mini-bulk mineral processing samples included 20-litre samples (n=2). The mineral processing samples were delivered to metallurgical laboratories, the results of which are not available at the Effective Date of this technical report. The sample preparation, security, analyses, and QA-QC procedures are described in detail in Section 11.

All samples were collected from wellheads or brine sample nipple points at the facilities. The brine assay samples were collected in 1-litre, plastic, screw-cap sample bottles, which were labelled and sealed with electrician tape. The initial appearance of the brine collected in most of the well samples was slightly oily; when the sample jug remained undisturbed for about 30 minutes, the fluids separated, and it became evident that there was only between <1% and approximately 5% oil in the samples with the remaining fluid being brine.

Two separate mini-bulk samples were collected from well 100/13-35-029-21W4/0. The mineral processing samples were collected in 20-litre, steel, bung-sealed pails. The brine assay samples were analyzed by ICP-OES at AGAT Laboratories in Calgary, AB and Bureau Veritas Laboratories in Edmonton, Alberta.

The geochemical assay results of the original, duplicate, and lab check samples are presented in Table 9.6 and Figure 9.8. The Nisku Formation brine from the Wayne-Rosedale oilfield yielded between 22 and 29 mg/L Li (average 24.5 mg/L Li). This includes brine from the fields multi-well proration battery, which yielded between 23 and 28 mg/L Li.

Table 9.5 Drumheller Property well descriptions. Two mini-bulk brine samples (40-litres total) were collected from well 13-35 for mineral processing test work (highlighted).

UWI	Licensee and operator	Surface hole Latitude (NAD27)	Surface hole Longitude (NAD27)	True Vertical Depth (m)	Producing Zone	Field Name	Pool Name
04-30-029-19W4	Bearspaw Petroleum Ltd.	51.504727	-112.673389	Crude Oil Multiwell Proration Battery and Gas Plant (Wayne-Rosedale)			
100/11-07-029-19W4/0	Bearspaw Petroleum Ltd.	51.470902	-112.667835	1575.4	Nisku	Wayne-Rosedale	Nisku H
100/07-30-029-19W4/0	Bearspaw Petroleum Ltd.	51.508287	-112.661981	1675.0	Nisku	Wayne-Rosedale	Nisku G
100/11-24-029-20W4/0	Bearspaw Petroleum Ltd.	51.498888	-112.688513	1683.2	Nisku	Wayne-Rosedale	Nisku G
102/02-36-029-20W4/0	Bearspaw Petroleum Ltd.	51.518844	-112.687260	1699.8	Nisku	Wayne-Rosedale	Nisku G
100/09-34-029-21W4/0	Bearspaw Petroleum Ltd.	51.527135	-112.866595	1688.5	Nisku	Ghost Pine	Nisku A
100/13-35-029-21W4/0	Bearspaw Petroleum Ltd.	51.530392	-112.861559	1699.6	Nisku	Ghost Pine	Nisku A
100/14-35-029-21W4/0	Bearspaw Petroleum Ltd.	51.530387	-112.855758	1709.0	Nisku	Ghost Pine	Nisku A
03-02-030-21W4	Bearspaw Petroleum Ltd.	51.534186	-112.855754	Crude Oil Multiwell Proration Battery (Ghost Pine)			
102/05-01-030-21W4/0	Bearspaw Petroleum Ltd.	51.537933	-112.838289	1720.0	Leduc	Ghost Pine	Leduc A

Table 9.6 Selected geochemical results from follow-up brine assay testing at the Drumheller Sub-Property. Sample RE21-HOC-WR-008 was not collected because the well was shut-in. Samples RE21-HOC-GP-007 and RE211-HOC-GP-008 were collected for mineral processing test work.

A) Wayne-Rosedale Oilfield

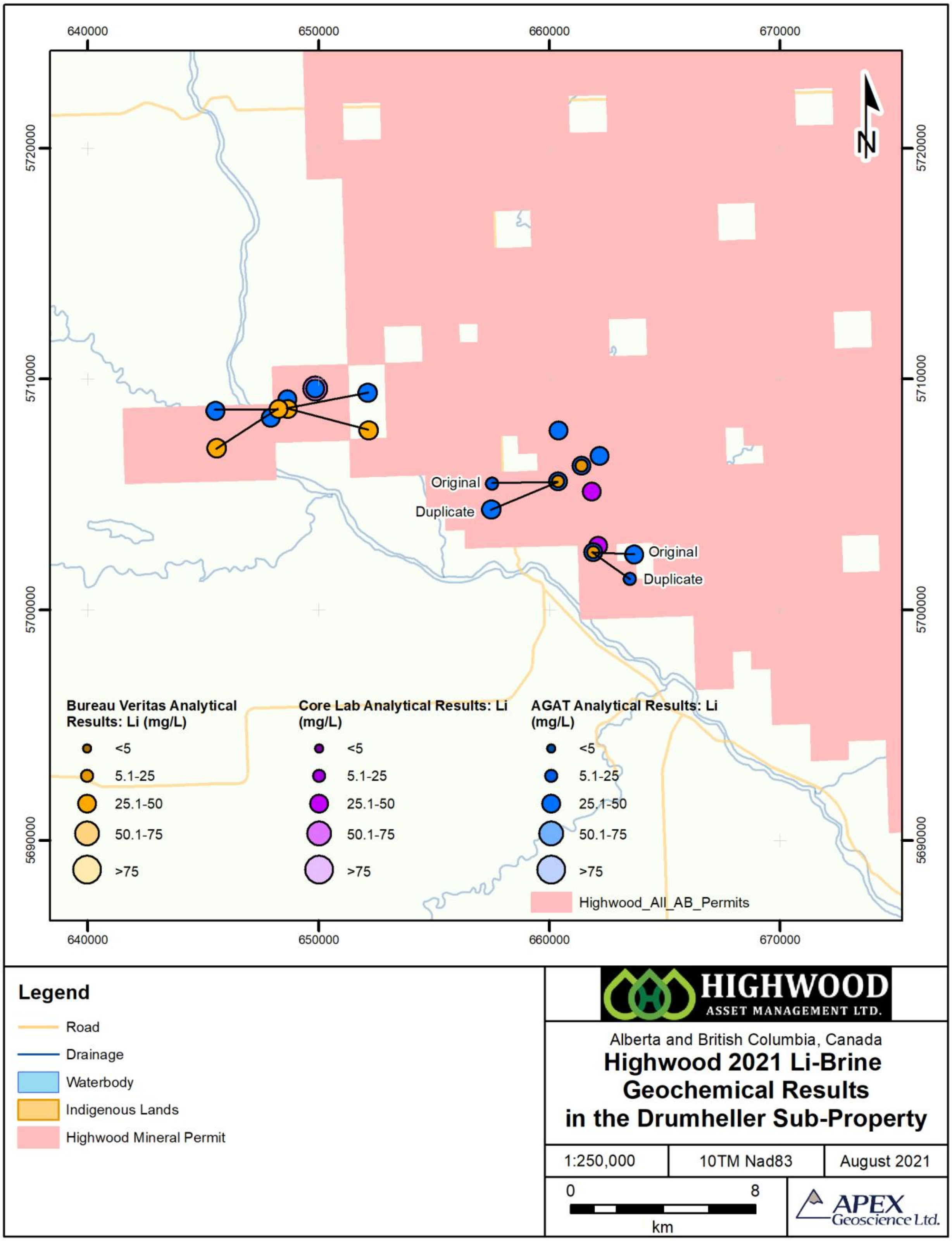
Sample ID	UWI	Sample type	Lab	Total Li (mg/L)	Total B (mg/L)	Total Ca (mg/L)	Total Mg (mg/L)	Total Na (mg/L)	Total K (mg/L)
RE21-HOC-WR-001	100/11-07-029-19W4/0	Original	AGAT	25.7	59.0	3,700	851	15,300	1,450
RE21-HOC-WR-002	100/11-07-029-19W4/0	Duplicate	AGAT	24.3	62.0	3,590	814	14,500	1,410
RE21-HOC-WR-003	100/11-07-029-19W4/0	Original	Bureau Veritas	21.7	55.0	3,310	692	14,200	1,540
RE21-HOC-WR-004	100/11-07-029-19W4/0	Duplicate	Bureau Veritas	22.1	56.1	3,380	682	14,300	1,580
RE21-HOC-WR-005	100/07-30-029-19W4/0	Original	AGAT	28.7	64.0	4,460	1,050	16,800	1,690
~~RE21-HOC-WR-008~~	~~100/07-15-029-20W4/0~~	No sample taken: well down		/	/	/	/	/	/
RE21-HOC-WR-011	100/11-24-029-20W4/0	Original	AGAT	24.3	59.0	3,830	834	14,500	1,410
RE21-HOC-WR-012	100/11-24-029-20W4/0	Duplicate	AGAT	26.9	62.0	4,250	921	16,000	1,570
RE21-HOC-WR-013	100/11-24-029-20W4/0	Original	Bureau Veritas	22.0	55.8	3,670	738	14,100	1,570
RE21-HOC-WR-014	100/11-24-029-20W4/0	Duplicate	Bureau Veritas	22.5	55.4	3,620	764	15,400	1,600
RE21-HOC-WR-016	102/02-36-029-20W4/0	Original	AGAT	25.2	62.0	3,900	893	15,000	1,450

B) Ghost Pine Oilfield

Sample ID	UWI	Sample type	Lab	Total Li (mg/L)	Total B (mg/L)	Total Ca (mg/L)	Total Mg (mg/L)	Total Na (mg/L)	Total K (mg/L)
RE21-HOC-GP-001	100/09-34-029-21W4/0	Original	AGAT	43.7	113.0	10,400	1,940	25,800	2,530
RE21-HOC-GP-003	100/13-35-029-21W4/0	Original	AGAT	46.6	117.0	11,000	2,420	30,500	2,960
RE21-HOC-GP-004	100/13-35-029-21W4/0	Duplicate	AGAT	42.1	125.0	10,100	2,230	27,300	2,770
RE21-HOC-GP-005	100/13-35-029-21W4/0	Original	Bureau Veritas	37.0	111.0	10,500	2,040	24,400	2,750
RE21-HOC-GP-006	100/13-35-029-21W4/0	Duplicate	Bureau Veritas	36.5	108.0	10,600	2,090	24,600	2,690
RE21-HOC-GP-007	100/13-35-029-21W4/0	Mineral processing	SRC	/	/	/	/	/	/
RE21-HOC-GP-008	100/13-35-029-21W4/0	Mineral processing	Recion	/	/	/	/	/	/
RE21-HOC-GP-010	100/14-35-029-21W4/0	Original	AGAT	43.4	110.0	9,410	1,810	26,000	2,480
RE21-HOC-GP-011	100/14-35-029-21W4/0	Duplicate	AGAT	45.8	101.0	9,830	1,900	27,500	2,590
RE21-HOC-GP-012	100/14-35-029-21W4/0	Original	Bureau Veritas	38.9	104.0	10,300	1,910	27,400	2,840
RE21-HOC-GP-013	100/14-35-029-21W4/0	Duplicate	Bureau Veritas	38.4	103.0	10,200	1,890	27,100	2,820
RE21-HOC-GP-016	03-02-030-21W4	Original	AGAT	48.2	105.0	10,300	2,000	30,200	2,870
RE21-HOC-GP-017	102/05-01-030-21W4/0	Original	AGAT	49.0	107.0	9,830	1,930	30,800	2,930
RE201-HOC-BPF-001	04-30-029-19W4	Original	Bureau Veritas	22.8	56.7	4,150	778	15,700	1,590
RE201-HOC-BPF-002	04-30-029-19W4	Original	AGAT	28.3	63.0	4,530	1,030	17,400	1,670

	Total Li (mg/L)	Total B (mg/L)	Total Ca (mg/L)	Total Mg (mg/L)	Total Na (mg/L)	Total K (mg/L)
Wayne-Rosedale Oilfield: Original and duplicate brine samples						
Minimum	21.7	55.0	3,310.0	682.0	14,100.0	1,410.0
Maximum	28.7	125.0	11,000.0	2,420.0	30,800.0	2,960.0
Mean	24.5	83.2	6,907.0	1,400.3	21,078.3	2,120.0
Median	24.3	64.0	4,530.0	1,050.0	17,400.0	1,690.0
Ghost Pine Oilfield: Original and duplicate brine samples						
Minimum	36.5	101.0	9,410.0	1,810.0	24,400.0	2,480.0
Maximum	49.0	125.0	11,000.0	2,420.0	30,800.0	2,960.0
Mean	42.7	109.5	10,224.5	2,014.5	27,418.2	2,748.2
Median	43.4	108.0	10,300.0	1,940.0	27,300.0	2,770.0

Figure 9.8 Summary of Devonian brine assay sampling and analytical results at the Drumheller Sub-Property.



The Nisku-Leduc Formation brine from the Ghost Pine oilfield yielded between 37 and 49 mg/L Li (average 43 mg/L Li). This includes brine from the fields multi-well proration battery, which yielded between 49 mg/L Li. The Nisku and Leduc formations in the Drumheller Sub-Property are generally believed to be in hydrogeological communication. Similarities in the geochemical data between the Nisku and Leduc brine as presented in Table 9.6 suggest the 2 aquifers are connected, but it is worth noting that the Leduc brine samples from well 102/05-01-030-21W4/0 does yield the highest Li-brine value, albeit only slightly, in this dataset (49.0 mg/L Li).

9.2.3 Brine Mineral Processing Sampling Program: Drumheller Sub-Property

As part of the follow-up Drumheller Sub-Property brine sampling program, Highwood collected two 20-litre brine samples from well 100/13-35-029-21W4.

The brine samples were sent to independent laboratories for mineral processing test work, the results of which, are not available at the Effective Date of this technical report.

10 Drilling

Highwoods Ironstone Fe-V and Lithium-Brine Projects are early-stage exploration projects and Highwood has yet to drill any diamond drillholes or auger drillholes at the Property.

11 Sample Preparation, Analyses and Security

11.1 Sample Collection, Preparation and Security

11.1.1 Ironstone Fe-V Project

In May 2021, Highwood conducted a reconnaissance, road-based bedrock sampling trip in their Dunvegan, Pouce, and Worsley sub-properties. The Company collected a total of 8 bedrock samples (Table 9.1 and Figure 9.1).

The bedrock samples were documented in the field by Highwood by taking a GPS location reading, recording the lithology of the sample, and taking a photograph. Hand grab samples were collected and placed into a pre-labelled plastic bag. The bag was tied and transported back to Highwood's Calgary, AB office. The samples were couriered to ALS Canada Ltd. (ALS) in Vancouver, BC and the Saskatchewan Research Council (SRC) in Saskatoon, SK.

11.1.2 Lithium-Brine Project

Highwood's preliminary June 2021 brine sampling programs were conducted by AGAT Laboratories (AGAT) and Core Laboratories (Core Lab) from Calgary, AB – both labs of which, completed sample collection and analytical work. Highwood's follow-up

May 2021 sampling program at the Drumheller Sub-Property was commissioned to Bureau Veritas, who collected the brine samples with AGAT and Bureau Veritas analyzing the samples as the primary and check laboratories.

The brine samples were collected from oil and gas well produced water sample points that include the wellhead, test separator, and the operator's facilities such as multi-well proration batteries, free-water knockouts, etc. The first procedure is to ensure the sample point is associated with flowing brine and that the brine sample point is not representative of stagnant brine. Typically, a one-litre, plastic, screw top sample bottle, or jug, is used to collect the brine. The sample jug is then secured by wrapping electrical tape around the screw top. The sample jug is labelled by using black permanent marker and laboratory prepared one-sided sticky sample labels. The top lid of the jug is also labelled.

The 20-litre brine samples for mineral processing are collected using the sample methodology, except: 1) the sample vessel is a 20-litre, metal, bung-seal pail, and 2) the brine is mitigated of H_2S using a Zinc Acetate Reagent. One hundred grams of Zn Acetate powder was measured and applied to each 20-litre pail.

The brine sample for assay and mineral processing test work is not filtered, and no acid is added to the sample as per typical routine water analysis sample collection procedure. The idea is to collect – and then analytically measure or perform Li extraction technologies – on as representative of a brine sample as possible.

The brine assay samples, which were collected by the respective laboratories, were transported by vehicle directly to the labs. Hence the only chain of custody person was the laboratory technician who collected the brine samples. The mineral processing brine samples were shipped by the laboratory to the respective commercial laboratories for mineral extraction test work. The appropriate Chain of Custody sheets, and sign-off date and times, has been reviewed by the author with no apparent issues.

11.2 Analytical Procedures

11.2.1 Ironstone Fe-V Project

ALS Canada Ltd. (ALS) is an independent laboratory accredited to ISO/IEC 17025:2017 for specific analytical procedures including sample preparation and analytical procedures tailored to meet the needs of exploration geologists, miners, mineral processing engineers, and metallurgists.

ALS prepared the samples by 1) coding the rock samples upon arrival to the laboratory, 2) fine crushing of approximately 70% of the sample to <2 mm (Code CRU-31), and 3) pulverize 250 g of the fine crush to 85% at <75µm. The analytical procedures included:

- Four acid digestion, multi-element + Rare Earth Elements by ICP-MS (Code ME-MS61r).

- Whole rock fusion-XRF (Code ME-XRF26).
- Platinum group metals by Ni Sulphide FA fusion via ICP-MS (PGM-MS25NS).
- Loss of ignition at 1000 °C by XRF (Code OA-GRA05x).
- Trace B via B/Li-Na_2O_2 fusion and ICP-AES (Code ME-ICP82b).
- Trace Hg by ICP-MS (Hg-MS42).

Saskatchewan Research Council (SRC) is an independent laboratory accredited by the Canadian Association for Laboratory Accreditation Inc. the recognized International Standard ISO/IEC 17025:2017 (Accreditation No. A2472).

The SRC conducted ICP-MS sandstone exploration package that consists of 1) ICP-MS analysis on the partial digestion, 2) ICP-OES analysis for major and minor elements on the total digestion, and 3) ICP-MS analysis for trace elements on the total digestion. The analyses were conducted on a Perkin Elmer Sciex Elan DRC II ICP-MS and a Perkin Elmer ICP-OES (models: Optima 5300DV, 8300DV, and Avio 500DV).

Total digestions are performed on an aliquot of sample pulp. The aliquot is digested to dryness in a Teflon tube within a hot block digestion system using a mixture of concentrated HF:HNO_3:$HClO_4$. The residue is dissolved in dilute HNO_3. A 0.125 g pulp is gently heated in a mixture of ultrapure HF/HNO_3/$HClO_4$ until dry and the residue dissolved in dilute ultrapure HNO_3.The lab standard is DCB01.

Partial digestions are performed on an aliquot of sample pulp. The aliquot is digested in a mixture of concentrated nitric: hydrochloric acid (HNO_3:HCl) in a test tube in a hot water bath, then diluted using deionized water. A 0.500 g pulp is digested with 2.25 ml of 8:1 ultrapure HNO3:HCl for 1 hour at 95 °C. The lab standard is DCB01.

11.2.2 Lithium-Brine Project

AGAT, Bureau Veritas, and Core Labs are independent of Highwood and are well-known and reputable laboratories within the energy sector. AGAT is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC). Bureau Veritas is accredited to ASTM: American Society for Testing and Materials ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories. Core Labs is certified in Quality Management System, which complies with the requirements of ISO 9001:2015. Accreditations and certificates for AGAT and Core Labs are for the provision of specific drinking water tests and rock and fluid analyses related to the oil and gas industry.

The 3 laboratories performed the following analytical techniques on the brine samples:

- Routine water analysis for cations and anions, measured and calculated total dissolved solids (TDS), observed pH, relative density, resistivity, salinity, and total alkalinity as $CaCO_3$.

- At AGAT, a total of 27 metallic elements were analyzed as total metals by ICP-OES after an acid digestion procedure. Reported elements include aluminum, antimony, arsenic, barium, beryllium, bismuth, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, manganese, magnesium, molybdenum, potassium, phosphorous, nickel, selenium, silicon, silver, sodium, strontium, thallium, tin, titanium, uranium, vanadium, and zinc. The minimum limit of detection for lithium at AGAT is 1.0 mg/L Li.

- At Core Labs the metallic analytical results included the same elements listed above (for the AGAT metal results) plus cesium, rubidium, tellurium, tungsten, and zirconium. The analysis was conducted as total metals by ICP-mass spectrometry (ICP-MS) after the brine sample was digested with nitric and hydrochloric acids. The Certificate of Analysis indicates the analysis was performed by ALS Environmental.

- At Bureau Veritas the metallic analytical results include a suite of 32 metal elements. The analysis was conducted as total metals by Total Acid Digestion for Metals (ASTM D5708) followed by ICP-OES 32 element scan for total metals (EPA SW-846 6010C).

The analytical procedures followed nitric acid digestion (SM 3030 E), Metals by Plasma Emission Spectroscopy, Inductively Coupled Plasma (ICP) Method (SM 3120 B), Procedure for Spectrochemical Determination of Total Recoverable Metals (EPA 200.2), and ICP-mass spectrometry (EPA 6020A).

11.3 Quality Assurance – Quality Control

11.3.1 Ironstone Fe-V Project

Highwood has yet to formulate a QA-QC protocol for the Ironstone Fe-V Project. The company collected 8 bedrock samples including one duplicate sample as part of a reconnaissance program. The duplicate sample pair yielded percent relative standard deviation, or average RSD% values of between zero and 10.9% (Na_2O) suggestive of good analytical reproducibility. The author also conducted a QP site inspection, the results of which are presented in Section 12.3.

11.3.2 Lithium-Brine Project

Initially, Highwood QA-QC procedures were limited to 7 lab-check samples collected during the June 2021 brine sampling program. These samples were analyzed at AGAT and Core Labs, the results of which are presented in sub-section 11.3.4.

Upon commissioning APEX, the QA-QC brine sampling protocol included the random insertion of duplicate samples, sample blanks, and pre-lab-prepared brine standard samples. The duplicate samples, sample blanks and lab-prepared standard samples were inserted as part of the Drumheller Sub-Property brine sampling program in which a total of 34 brine samples were collected (32 brine assay samples and 2 mini-bulk brine samples). The brine assay sample stream for the Drumheller Sub-Property program included:

- Original samples from each of the wells/facilities (n=10).
- Duplicate samples (n=8 sites).
- Blank standard samples (n=3).
- Lab-prepared certified standard samples (n=6).
- Lab-check samples (n=5).
- Mini-bulk mineral processing samples included 20-litre samples (n=2; Table 11.1).

The Drumheller Sub-Property assay sample set was sent to Highwood's primary lab (AGAT) and their secondary lab (Bureau Veritas). The results of the QA-QC data analyses are presented in the text that follows.

During Highwood's Drumheller Sub-Property brine sampling program, a total of 8 duplicate brine samples were collected with 4 duplicate pairs being analyzed at both AGAT and Bureau Veritas. The analytical results for the duplicate pairs are presented in Figure 11.1 and described in the text that follows.

The quality of the duplicate pair data from AGAT and Bureau Veritas is assessed using average percent relative standard deviation (% coefficient of variation), or average RSD% as an estimate of precision or reproducibility of the analytical results. The RSD% value is calculated using the formula: *RSD% = standard deviation/mean x 100*. It is the author's opinion that average RSD% values below 30% are considered to indicate very good data quality; between 30 and 50%, moderate quality and over 50%, poor quality.

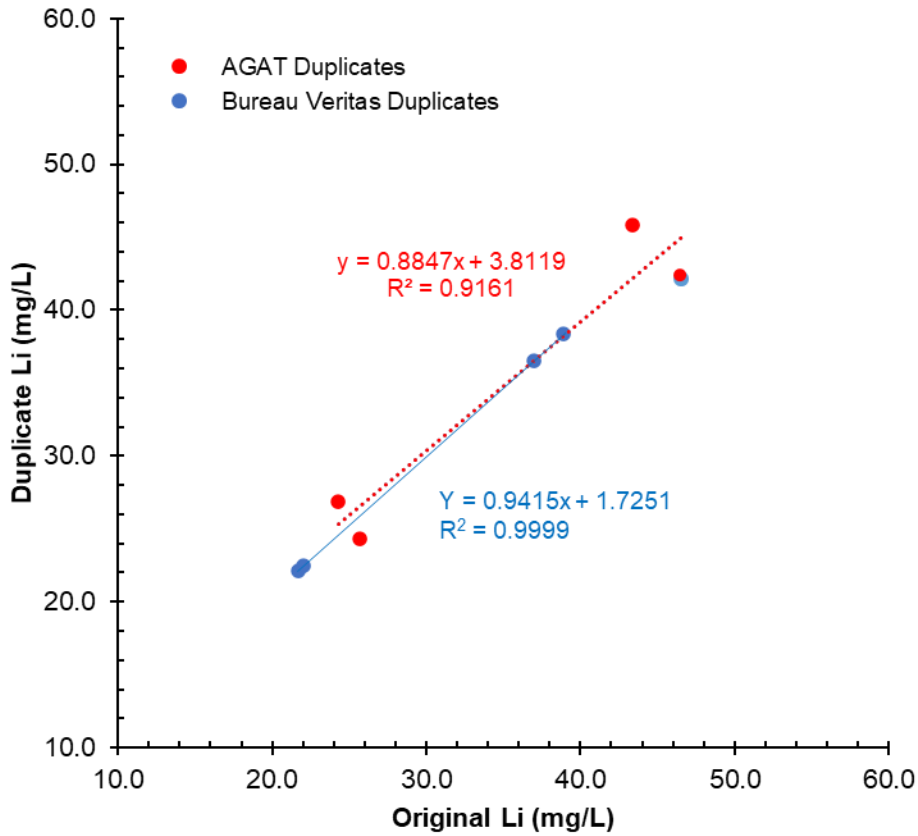
The RSD% values for AGAT and Bureau Veritas range between 3.8% and 7.2%, and 0.9% and 1.3%, respectively. It is concluded that there is very good data quality for Highwood's 2021 Li-brine analytical results at both independent laboratories. This positive analytical relationship between the duplicate samples pairs for both labs is shown graphically on Figure 11.1 with best-fit reliability trends of 0.9161 (AGAT) and 0.9999 (Bureau Veritas).

Sample Blanks composed of distilled water were inserted into the sample stream (n=3 samples). The analytical results for all 3 sample blanks yielded lithium at below the minimum detection. This is an accurate result as the blanks contained no lithium.

Table 11.1 Summary of QA-QC samples entered into the Drumheller Sub-Property sample stream. Colour code: Grey – duplicate samples (n=8); blue – Sample Blanks (n=3); red – lab-prepared Sample Standards (n=6); and yellow – lab check samples (n=5).

Sample ID	UWI	Sample type	Lab
RE21-HOC-WR-001	100/11-07-029-19W4/0	Original	AGAT
RE21-HOC-WR-002	100/11-07-029-19W4/0	Duplicate	AGAT
RE21-HOC-WR-003	100/11-07-029-19W4/0	Lab check	Bureau Veritas
RE21-HOC-WR-004	100/11-07-029-19W4/0	Duplicate	Bureau Veritas
RE21-HOC-WR-005	100/07-30-029-19W4/0	Original	AGAT
RE21-HOC-WR-006	Blank	Blank standard	AGAT
RE21-HOC-WR-007	Blank	Blank standard	Bureau Veritas
~~RE21-HOC-WR-008~~	~~100/07-15-029-20W4/0~~	No sample taken: well down	
RE21-HOC-WR-009	Certified Standard	Certified Standard	AGAT
RE21-HOC-WR-010	Certified Standard	Certified Standard	Bureau Veritas
RE21-HOC-WR-011	100/11-24-029-20W4/0	Original	AGAT
RE21-HOC-WR-012	100/11-24-029-20W4/0	Duplicate	AGAT
RE21-HOC-WR-013	100/11-24-029-20W4/0	Lab check	Bureau Veritas
RE21-HOC-WR-014	100/11-24-029-20W4/0	Duplicate	Bureau Veritas
RE21-HOC-WR-015	Certified Standard	Certified Standard	AGAT
RE21-HOC-WR-016	102/02-36-029-20W4/0	Original	AGAT
RE21-HOC-GP-001	100/09-34-029-21W4/0	Original	AGAT
RE21-HOC-GP-002	Blank	Blank standard	AGAT
RE21-HOC-GP-003	100/13-35-029-21W4/0	Original	AGAT
RE21-HOC-GP-004	100/13-35-029-21W4/0	Duplicate	AGAT
RE21-HOC-GP-005	100/13-35-029-21W4/0	Lab check	Bureau Veritas
RE21-HOC-GP-006	100/13-35-029-21W4/0	Duplicate	Bureau Veritas
RE21-HOC-GP-007	100/13-35-029-21W4/0	Mineral processing	SRC
RE21-HOC-GP-008	100/13-35-029-21W4/0	Mineral processing	Recion
RE21-HOC-GP-009	Certified Standard	Certified Standard	AGAT
RE21-HOC-GP-010	100/14-35-029-21W4/0	Original	AGAT
RE21-HOC-GP-011	100/14-35-029-21W4/0	Duplicate	AGAT
RE21-HOC-GP-012	100/14-35-029-21W4/0	Lab check	Bureau Veritas
RE21-HOC-GP-013	100/14-35-029-21W4/0	Duplicate	Bureau Veritas
RE21-HOC-GP-014	Certified Standard	Certified Standard	AGAT
RE21-HOC-GP-015	Certified Standard	Certified Standard	Bureau Veritas
RE21-HOC-GP-016	03-02-030-21W4	Original	AGAT
RE21-HOC-GP-017	102/05-01-030-21W4/0	Original	AGAT
RE201-HOC-BPF-001	04-30-029-19W4	Lab check	Bureau Veritas
RE201-HOC-BPF-002	04-30-029-19W4	Original	AGAT

Figure 11.1 Comparison of duplicate samples.



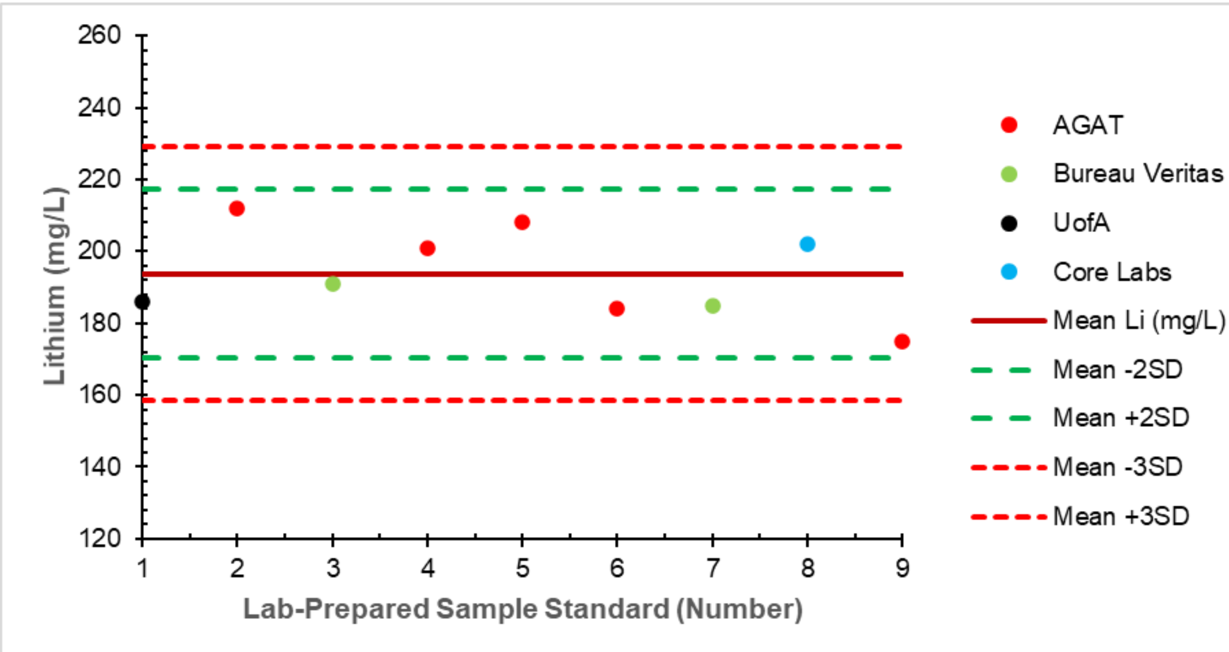
To further evaluate brine analytical accuracy, the QP, on behalf of Highwood, inserted a laboratory prepared Sample Standard prepared by the University of Alberta into the 2021 sampling program. Highwood commissioned the University of Alberta to prepare a laboratory prepared Sample Standard by adding a measured amount of elemental lithium to a saline brine concoction.

Components of the Highwood's Sample Standard include pre-measured powdered quantities of LiCl, $CaCl_2.2H_2O$, $MgCl_2.6H_2O$, NaCl, KCl, Na_2SO_4, $FeCl_3.6H_2O$, $Na_2SiO_3.9H_2O$ together with 9.8 L MilliQ water; and 0.200 L 70% HNO_3. All chemical reagents were weighed and mixed in a bucket. Ultrapure water (9.8-litres) was added to the bucket followed by stirring at room temperature for several minutes. Once thoroughly mixed, 200 ml of 70% HNO_3 was added to the bucket and the solution was re-mixed. Adding acid to water/brine samples is routine in aqueous geochemistry as it prevents adsorption of metal ions and their precipitation.

The Sample Standard has a conceived mean of 186±7 mg/L Li. This value is derived from the University of Alberta using ICP-MS instrumentation.

A total of 8 Sample Standards were submitted to AGAT (n=5 samples), Bureau Veritas (n=2 samples), and Core Labs (n=1 sample). The analytical results ranged between 175 and 212 mg/L Li (average 194 mg/L Li). The RSD% of the 8 Sample Standard analysis is 6.1% indicative of very good data quality. The Sample Standard analytical results from all laboratories plot within 2 standard deviations of the mean (Figure 11.2). It is concluded that the laboratories used by Highwood are within error of the lab-prepared brine standard and therefore, the analytical data presented are suitable for reporting purposes in this technical report and for use in potential future resource estimation reporting.

Figure 11.2 Sample Standard analytical results.



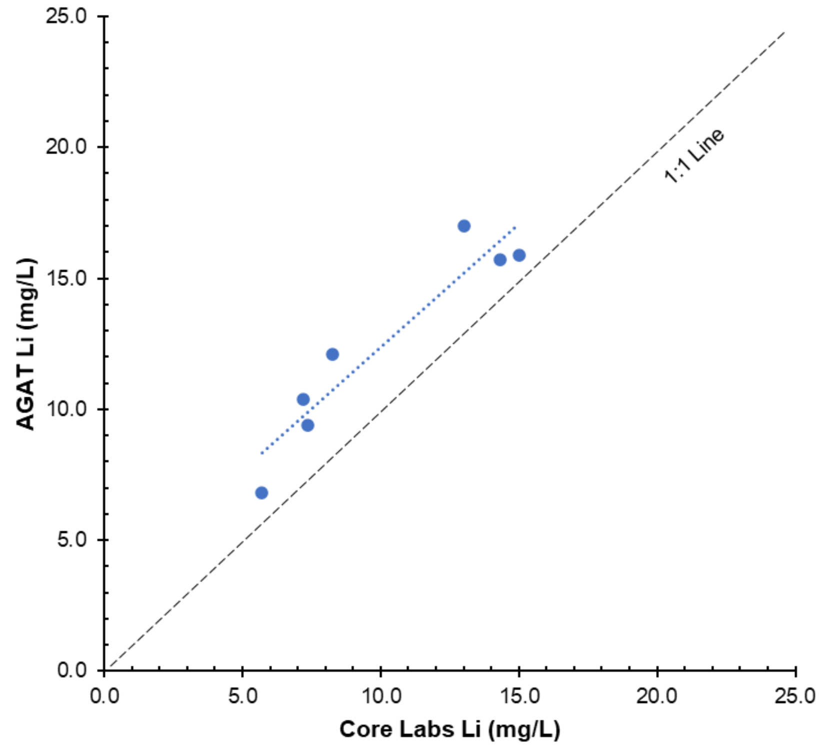
During the June 2021 preliminary sampling program, a total of 7 sample sites were duplicated with samples sent to both AGAT and Core Lab. Comparative results are presented in Figure 11.3a and show that the AGAT brine analysis consistently yielded higher lithium results in comparison to the Core Lab results. The senior author and QP investigated this discrepancy and concluded that the difference between the two labs is a result of analytical technique. AGAT analyzed the brine by ICP-OES while Core Lab used ICP-MS.

Presently, ICP-OES is the technique of choice for liquids including hypersaline brine. The advantages of using ICP-OES over other elemental analysis techniques such as ICP-MS or atomic absorption spectrometry (AAS) include its wide linear dynamic range, high matrix tolerance, and the enhanced speed of analysis that can be achieved.

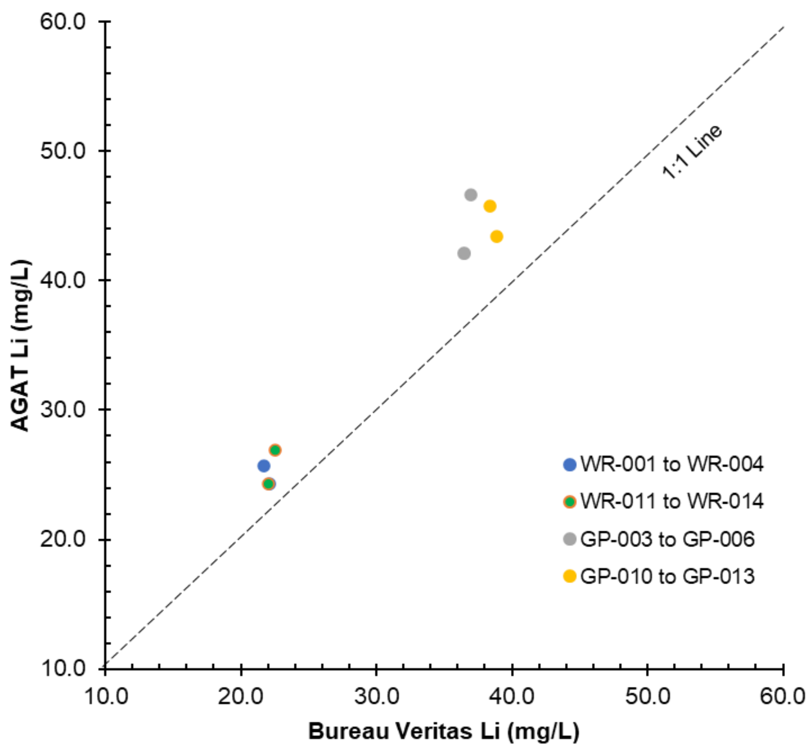
During the May 2021 follow-up sampling program at the Drumheller Sub-Property, a total of 4 (of 10) sample sites were duplicated with samples sent to both AGAT and Bureau Veritas. Comparative results are presented in Figure 11.3b and show a similar trend in that the AGAT lab analyses continue to yield higher lithium results in comparison to both Bureau Veritas and Core Labs.

Figure 11.3 Comparison of lithium from duplicate field brine samples that were analyzed at AGAT, Core Lab and Bureau Veritas.

A) AGAT versus Core Labs



B) AGAT versus Bureau Veritas



11.4 Adequacy of Sample Collection, Preparation, Security and Analytical Procedures

11.4.1 Ironstone Fe-V Project

In the opinion of the QP, Highwood has not conducted meaningful exploration at their Ironstone Fe-V Project, and as such the Company requires the formulation of a QA-QC protocol that should include the random insertion of duplicate samples, sample blanks, and sample standards into any future sampling program related to bedrock and/or drill core sampling.

11.4.2 Lithium-Brine Project

These analytical data were prepared by independent and accredited third-party laboratories using methods that are standard and routine in the field of Li-brine geochemical analytical test work. All work conducted has been done using accepted standard protocols, and generally accepted practices and methods.

The author and QP has reviewed the adequacy of the sample preparation, security, and analytical procedures and found no significant issues or inconsistencies that would cause one to question the validity of the data. The QP is satisfied with the adequacy of the procedures as implemented by Highwood.

It is the QP's opinion that Highwood should continue to use laboratories that implement ICO-OES for total metals. This would include AGAT as Highwood's primary lab with check samples being analyzed at a secondary laboratory such as Bureau Veritas. It is the QP's opinion that the analytical results produced from these laboratories are sufficient for any future resource estimation work conducted by Highwood in accordance with NI 43-101 and CIM Definition Standards and Guidelines (CIM, 2014, 2019).

12 Data Verification

Highwood's Ironstone Fe-V and Li-Brine Projects represent early-stage exploration projects. The primary datasets evaluated by the author in the preparation of this geological introduction technical report include publicly available oil and gas well data, and brine and Bad Heart Formation bedrock geochemical data.

The author and QP completed a site inspection to Highwood's Drumheller Li-brine sub-property on May 28, 2021, and to the Dunvegan and Pouce Ironstone Fe-V sub-properties on July 13, 2021.

12.1 Oil and Gas Well Data Verification Procedure

The well data were acquired from a third-party oil and gas data management company AbaData, developed by Abacus Datagraphics and has managed and supplied WCSB petroleum data and maps to industry for over 25 years. AbaData features more than 100 data layers displaying information on energy, forestry, government, the environment, property, utilities, and many others. The AbaData data update cycles range from yearly, monthly, weekly, daily and in some cases, data is updated multiple times a day.

Under Directive 059: Well Drilling and Completion Data Filing Requirements, oil and gas companies exploring/producing in Alberta must record and submit data to the AER throughout the drilling phase of any well and update the well's status throughout its life cycle. These data are available in general well data reports generated by the AER, which is also used by third-party oil and gas data management companies to build their respective databases.

As a data verification step, the author compared the well status between AbaData and the AER's general well data reports for a select number of wells (approximately 30 wells) within Highwood's sub-properties. There were no issues to indicate that there is a discrepancy between the well status datasets and the AbaData are deemed appropriate and reliable by the QP for the context of the background geological information used in this technical report.

12.2 Geochemical Data Verification Procedure

12.2.1 Ironstone Fe-V Project

The QP reviewed historical Bad Heart Formation geological and geochemical reports that were prepared by Government and/or academic persons holding university certificates or diplomas that are equivalent to, or above, the level of a bachelor's degree. These data were compiled by Government authors that converted the geochemical data from hard copy to electronic datasets and completed their own validation check.

To verify the datasets, the author compared the electronic data with the original hard copy data sources (journal papers, open file reports, etc.). No errors were encountered.

12.2.2 Lithium-Brine Project

The QP reviewed a geochemical dataset provided by Highwood against the original AGAT and Core Labs Certificate of Analysis, which are not produced without the approval of the respective laboratories. Apart from one sample (RE21-HOC-WR-014), no discrepancies were observed.

With respect to the discrepancy mentioned in the text above, upon reviewing the initial analytical results, a single sample (RE21-HOC-WR-014) yielded a lithium value of below the limit of detection ("0") in comparison to its duplicate pair, which had 22.0 mg/L Li. Accordingly, Highwood instructed Bureau Veritas to reanalyze this sample, which returned 22.5 mg/L Li indicative of an original lab error.

The QP participated in a meeting with AGAT laboratory lab managers and asked questions related to accreditation, experience, and laboratory methodologies and techniques. AGAT is accredited to ISO/IEC 17025 by the Canadian Association for

Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC), and ASTM: American Society for Testing and Materials. The lithium content (and trace elements) of the brine samples were analyzed by ICP-OES, which is a standard analytical technique and industry standard for the measurement of lithium-in-brine.

12.3 Qualified Person Site Inspection: Ironstone Fe-V Project

A QP site inspection was completed at Highwood's Ironstone Fe-V Project on July 13, 2021. An ironstone occurrence known as the Spirit River Section Pit 1 was inspected (Kafle, 2009). This is the same location sampled by Highwood during their May 2021 reconnaissance exploration bedrock sampling program (see Section 9).

The Bad Heart Formation ironstone at the Spirt River is situated in an active mining quarry that is about 250 m x 150 m. The operators reported that the ironstone is being used by locale farmers for road and farm storage (silo) crush rock. The quarry mining process occurs in two-vertical stages that are both roughly 1 m in height. Pit sidewalls were available for both bench levels with the upper 1 m being comprised of moderate (40-70%) to pervasively (>70%) ooidal ironstone. The lower bench contains less ooids and is defined as a brownish fine- to medium-grained sandstone with minor ooidal ironstone horizons. The ironstone is overlain by 1.5-2 m of glacial till with minor (<10%) granite and gneiss cobbles and boulders. The lower contact of the Bad Heart changes gradationally from a sandy siltstone at the proposed contact with the Bad Heart Formation to a clay siltstone to a silty mudstone at depth.

The author and QP collected 5 samples of the Bad Heart Formation ooidal ironstone at the Spirt River location that included: 1) three in-place channel samples in which a representative section of the ironstone measuring 0.7 m to 1.0 m in height was collected for each sample, and 2) two grab samples from an active excavation pile (Table 12.1). Photographs of the channel and grab samples is presented in Figure 12.1. The samples were comprised of ferruginous, moderate to pervasive ooidal ironstone with various textural traits that include blocky, friable, or carbonate stained.

The samples were couriered by the QP to Activation Laboratories (Actlabs) in Ancaster, ON for iron ore whole rock XRF analysis (Code 8-Iron Ore) and multi-method trace element INAA/ICP-OES/ICP-MS analysis (Ultratrace 3). Actlabs is accredited to the following standards: ISO/IEC 17025:2017 and ISO 9001:2015. Selected XRF, INAA, and ICP analytical results are presented in Table 12.2. The Sprit River Section Pit sectionally-representative channel samples (0.7-1.0 m vertical interval) returned iron values of between 35.4% and 36.6% Fe. The 2 grab samples yielded 29.8% and 34.7% Fe. Vanadium yielded between 1,160 ppm and 1,530 ppm V (Table 12.2). These values are consistent with historical geochemical studies of the ironstone deposits (see Section 6).

The QP inspected 2 other "iron sandstone" occurrences in the region. It was determined that these were showing of Kaskapau Formation sandstone and a single sample was collected from the Moxley Pit (Table 12.1). This sample yielded 21.9% Fe and 117 ppm V (Table 12.2).

Table 12.1 Summary of the locations visited, and samples collected, during a July 2021 QP site inspection.

Site ID	Highwood sub-property	QP Sample ID	Easting (m, Z11 NAD83)	Northing (m, Z11 NAD83)	Approximate quarry dimensions (m)	Sample media	Sample type	Formation	Description
Spirit River Section (SPRV Pit 1)	Dunvegan	RE21-HOC-CHFe-001	382928	6182161	250 x 150	Bedrock	1 m channel	Bad Heart	Blocky, ferruginous, moderate to pervasive ooidal ironstone
		RE21-HOC-CHFe-002	382932	6182150		Bedrock	0.7 m channel	Bad Heart	Brownish, ferruginous, moderate to pervasive ooidal ironstone; abundant organic material at the top
		RE21-HOC-CHFe-003	382910	6182115		Bedrock	1 m channel	Bad Heart	Brownish, ferruginous, moderate to pervasive ooidal ironstone; carbonate-staining with moderate 10% HCl reaction
		RE21-HOC-CHFe-004	382921	6182130		Float	Grab	Bad Heart	Brownish, ferruginous, moderately ooidal ironstone
		RE21-HOC-CHFe-005	382921	6182130		Float	Grab	Bad Heart	Brownish, ferruginous, moderately ooidal ironstone
Moxley Pit	Dunvegan	RE21-HOC-CHFe-006	318997	6186613	70 x 75	Float	Grab	Cardium	Iron-stained fine-grained sandstone
Bay Tree Sandstone Quarry	Pouce	Not sampled	315566	6186185	250 x 450	/	/	Cardium	Iron-stained fine-grained sandstone

Table 12.2 Selected analytical results of channel and grab ironstone samples collected by the Qualified Person.

Analyte Symbol	SiO_2	Fe_2O_3(T)	Fe	V_2O_5	V	Zn	As	Ba	Rb	Sr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.003	2	0.5	0.5	1	0.2	0.2
Sample ID	FUS-XRF	FUS-XRF	INAA	FUS-XRF	TD-ICP	INAA/TD-ICP/TD-MS	INAA	INAA/TD-ICP-MS	INAA/TD-ICP-MS	TD-MS
RE21-HOC-CHFe-001	13.88	57.03	36.9	0.308	1,430	517	211	989	32	88.3
RE21-HOC-CHFe-002	14.61	55.64	35.4	0.315	1,460	571	189	796	28	96.8
RE21-HOC-CHFe-003	13.02	57.64	36.7	0.338	1,530	558	233	959	24	121
RE21-HOC-CHFe-004	9.61	57.84	34.7	0.275	1,200	456	209	587	27	153
RE21-HOC-CHFe-005	24.49	45.06	29.8	0.246	1,160	440	180	859	25	185
RE21-HOC-CHFe-006	51	32.38	21.9	0.023	117	188	105	1,180	34	64.2

Figure 12.1 Photographs of 2 samples collected from the Spirit River Section Pit 1 during the QP site inspection.

A) Bad Heart Formation ironstone channel sample RE21-HOC-CHFe-002.

B) Bad Heart Formation ironstone grab sample RE21-HOC-CHFe-005.

12.4 Qualified Person Site Inspection: Lithium-Brine Project

The QP conducted a site inspection of the Drumheller Sub-Property on May 28, 2021. The author drove to, stepped on the Sub-Property, observed active oil and gas wells that were producing from the Nisku and Leduc reservoirs/aquifers, and acquired independent brine samples to validate the lithium content of the brine.

A total of 32 1-litre brine samples were collected by the QP in conjunction with Highwood's commissioned brine sample hander, a technician from Bureau Veritas. The samples were transported from the field, and on the same day, to AGAT and Bureau Veritas. Both labs routinely process high TDS brine and perform trace element analysis for lithium. The labs comply with the data quality objectives of the industry, Canadian Regulators, U.S. EPA, and the International Standards Organization (ISO/IEC 17025). The lithium content (and trace elements) of the brine samples were analyzed by ICP-OES, which is a standard analytical technique and industry standard for the measurement of lithium-in-brine.

A summary of the QP brine sample analytical results is presented in Section 9.2. the QA-QC measures applied by the QP on the Drumheller Sub-Property brine samples are discussed in Section 11.3.2. The analytical results of the brine samples collected by the QP confirm that the Nisku- and Leduc-aged brine at the Drumheller Sub-Property is enriched in lithium. The Nisku Formation brine from the Wayne-Rosedale oilfield yielded between 22 and 29 mg/L Li (average 24.5 mg/L Li). The Nisku-Leduc Formation brine from the Ghost Pine oilfield yielded between 37 and 49 mg/L Li (average 43 mg/L Li).

12.5 Validation Limitations

Apart from using a check lab, there were minimal QA-QC protocols established by Highwood, or the laboratories commissioned by Highwood, to collect the Company's June 2021 preliminary brine samples. Hence the number of QA-QC comparative sample data are minimal from this time-period and represent an initial limitation of the Highwood dataset.

As the sampling program developed, the QP made QA-QC recommendations as part of a sub-property site inspection that included unique sample ID's together with the random insertion of sample duplicates, sample blanks, and sample standards into the sample stream. While this work was conducted during the preparation of this technical report, the resulting QA-QC information did help the QP to evaluate and validate the laboratory data.

Future brine sampling programs initiated by Highwood should adhere to the new QA-QC protocol. This would enable a higher-level confidence in the data in the event Highwood wants to advance the sub-properties and/or evaluate Li-brine resources in accordance with NI 43-101 and CIM Definition Standards and Best Practice Guidelines (2014, 2019).

12.6 Adequacy of the Data

The senior author and QP has reviewed the adequacy of the information presented in this technical report, including oil and gas well data and geochemical data, and found no significant issues or inconsistencies that would cause one to question the validity of the data. The QP is satisfied to include the information and data as presented in this geological introduction technical report.

13 Mineral Processing and Metallurgical Testing

Highwoods Ironstone Fe-V and Lithium-Brine Projects are early-stage exploration projects. Highwood has collected Devonian brine samples for the purpose of mineral processing, or lithium-extraction test work but the results are not available at the Effective Date of this report. Highwood has also contacted independent laboratories and contractors with respect to the metallurgical properties of the Bad Heart Formation ironstone but has yet to collect bulk material for this work.

14 Mineral Resource Estimates

Highwoods Ironstone Fe-V and Lithium-Brine Projects are early-stage exploration projects, and the Company has yet to conduct resource estimate modelling or estimation work.

**** NI 43-101 Items 15 to 22 are not included in this technical report because Highwood's Ironstone Fe-V and Lithium-Brine projects do not represent advanced projects ****

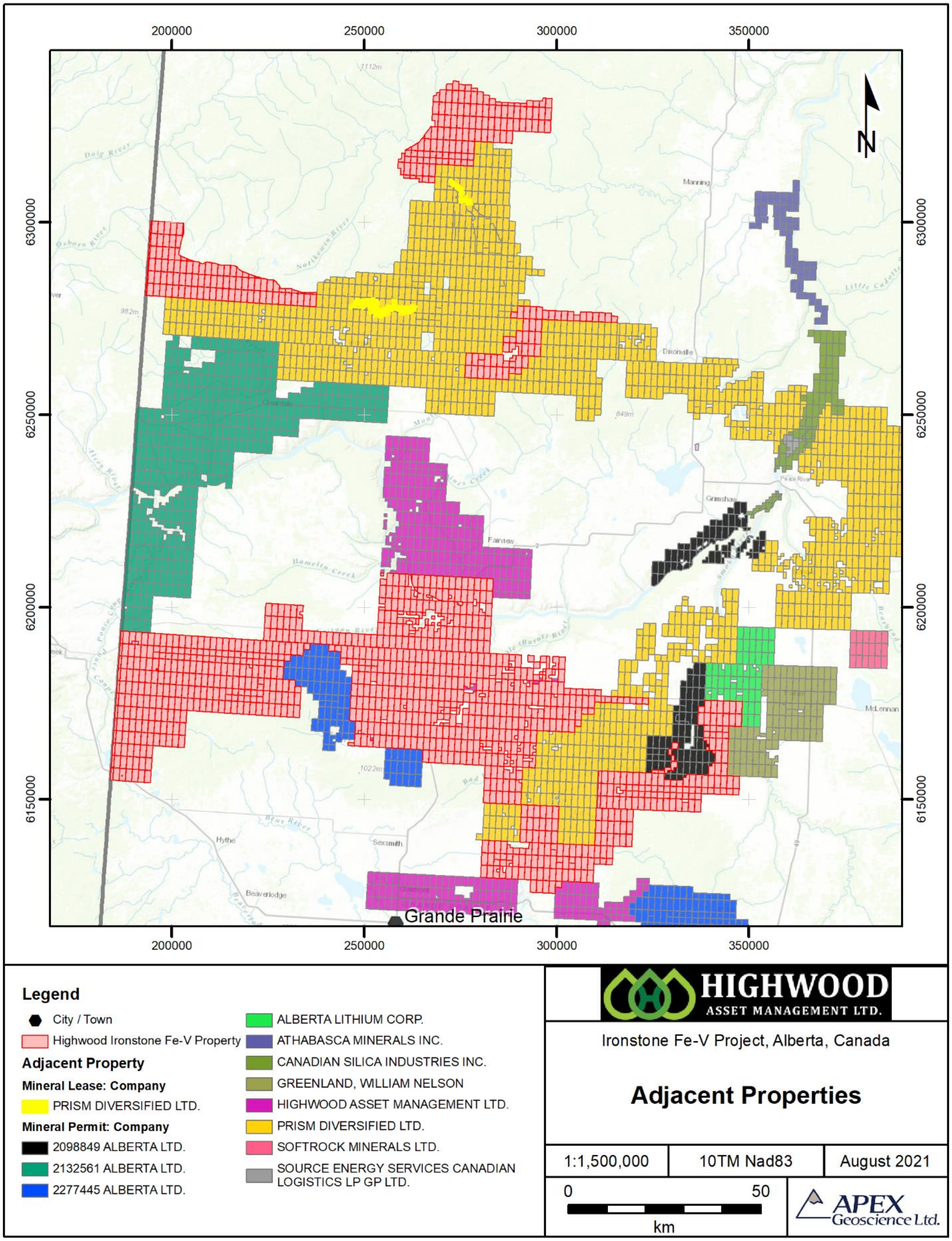
23 Adjacent Properties

This section discusses mineral properties that occur outside of the Highwood sub-properties. The QP has been unable to verify information pertaining to mineralization on the competitor properties, and therefore, the QP and Highwood advocate that the information is not necessarily indicative to the mineralization on the sub-properties that are the subject of the Technical Report.

23.1 Bad Heart Formation Ironstone Focused Adjacent Properties

Prism Diversified Ltd.'s (Prism) has a substantial land position in the Clear Hills ironstone area situated between Highwood's Clear Prairie, Notikewan, and Worsley sub-properties (Figure 26.1). In 2006, Prism formed a mineral lease (2,060 ha) that encompasses their Rambling Creek-North Whitemud River ooidal ironstone deposit for which they completed a NI 43-101 technical resource report entitled, Technical Report on the Rambling Creek-North Whitemud River Oolitic Ironstone Deposit, Clear Hills, Alberta with an Effective Date of July 27, 2012.

Figure 23.1 Adjacent mineral permits in the vicinity of Highwood's sub-properties.



The mineral resource was prepared by SRK Consulting Inc. (Arseneau and Johnson, 2012), and focused on Prism's Bad Heart Formation ironstone deposit that is situated along the eastern flanks of the Clear Hills in northwest Alberta about 80 km northwest of the Town of Peace River, AB.

Prism' Clear Hills Property encompasses four main Bad Heart Formation project areas: Rambling Creek, North Whitemud River, South Whitemud River and Worsley. The mineral resources were derived from the Rambling Creek and North Whitemud River Project areas only and are contained within Mineral Lease 9405040583 and Mineral Permit numbers 9306040750, 9306050832, 9308050888, and 9310080616.

Prism's Rambling Creek and North Whitemud River Ironstone deposit historical estimate was prepared using:

- 230 diamond drill cores on its Clear Hills permits.
- Extracted 11,000 tonnes of oolitic ironstone for process development, pilot plant tests and future use.
- An assay file that included 437 historical Fe and SiO_2 assay records representing 489 m of drilling. The Assay values were composited to a fixed length of 1m.
- Two mineralized zones were modelled: A densely oolitic ("DOIS") and a moderately oolitic ("MOIS") zone.
- Grade interpolation was carried out into blocks 50 m by 50 m by 2 m to reflect drill spacing and the size of the deposit, 21 km by 4 km by 10 m.
- The grade interpolation was carried out in two successive passes using flat search ellipses.

The historical, off-property resource estimate reported 557 million tonnes of indicated resource, with 182 million tonnes of contained iron and 2.45 billion pounds of contained vanadium pentoxide (Table 6.1; Arseneau and Johnson, 2012; Prism Diversified Ltd., 2021). SRK did not include vanadium in the economic parameters while estimating the viability of the Whittle shell but did comment that if vanadium can be shown to be recoverable, the economics of the project will be positively affected.

The historical estimate complies with CIM Definition Standards on Mineral Resources and Mineral Reserves as required by NI 43-101. To the best of the authors knowledge, the reliability of the historical estimate is considered reasonable and is still being treated as a current mineral resource by Prism.

Table 6.1 Summary of the resource estimate prepared in 2012 by SRK Consulting (Canada) Ltd. for Prism Diversified Resources Ltd. at their Rambling Creek and North Whitemud River Ironstone deposit. This resource estimate pertains to off-Property information. The QP (and the Issuer) has been unable to verify the information and that the information is not necessarily indicative to the mineralization on the Property that is the subject of the technical report. The mineral resource is included here only because it is relevant to the Bad Heart Formation ironstone.

Classification	Density	Tonnes (000)	Fe (%)	SiO_2 (%)	V_2O_5 (%)	Al_2O_3 (%)	P_2O_5 (%)	P%
Indicated	2.24	557,738	33.3	24.37	0.2	4.98	1.37	0.6
Inferred	2.23	94,664	34.11	26.19	/	/	/	/

Note 1: Reported at a cut-off grade of 25% Fe within a Whittle pit shell optimized using Fe price of $317/dry metric tonnes Fe, metallurgical recovery of 82%, and overall mining cost of $2.63 per tonne and processing costs of C$51.

Note 2: P% was calculated by dividing P2O5% by 2.2914

23.2 Lithium-Brine Focused Adjacent Properties

This section discusses mineral properties that occur outside of the Highwood sub-properties. The QP has been unable to verify information pertaining to mineralization on the competitor properties, and therefore, the QP and Highwood advocate that the information is not necessarily indicative to the mineralization on the sub-properties that are the subject of the Technical Report.

Alberta has experienced several waves of Li-brine staking since 2010, including a current interest in Devonian to Precambrian aged aquifer brines in which brine access is entirely through oil and gas infrastructure. Figure 23.1 shows there are many competitors with mineral permits near or adjacent to the Highwood sub-properties.

Competitor Li-brine companies in west-central and northwest Alberta include, for example, Prism Diversified Ltd., Empire Metals Corp., and Lithiumbank Resources Corp. The websites of these companies show an interest in Li-brine (Empire Metals Corp., 2021; LithiumBank Resources Corp., 2021; Prism Diversified Ltd., 2021c).

Most of these companies are early-stage exploration projects. In southern Alberta, E3 Metals Corp. was awarded a $1.8 million Alberta innovates grant for development of a Direct Lithium Extraction technology and announced the opening of their Calgary Testing Facility as the Company works toward their objective of a field pilot plant (E3 Metals Corp., 2021a,b,c).

23.3 Other Adjacent Properties Projects

At present, most of the mineral production in Alberta occurs in the form of industrial minerals (e.g., aggregate, limestone, etc.). Aggregate quarries are scattered throughout northern Alberta with their activity level dependent on proximal roadbuilding and/or municipal and energy industry infrastructure projects. In addition, the oil and gas hydraulic fracking industry is driving demand for proximal basinal silica sand. At least 3 companies are active to the east of Highwood's permits along the sloping margins of the Peace River including Athabasca Minerals Inc., Canadian Silica Industries Inc., and Source Energy Services Ltd. These companies are exploring for either aggregate or silica sand associated with the Paddy-Cadotte Members of the Lower Cretaceous Peace River Formation (e.g., Canadian Silica Industries Inc., 2021).

24 Other Relevant Data and Information

None to report.

25 Interpretation and Conclusions

Highwood's northwest Alberta-based Ironstone Fe-V Project and their Alberta- and British Columbia-based Li-Brine Project represent early-stage exploration projects.

With respect to Highwood's Ironstone Fe-V Project, the Company ironstone exploration work is preliminary, and the Company has yet to conduct a vigorous exploration program on their ironstone-focused mineral permits. The compilation work completed as part of this technical report can help to guide the Company to potential target areas within the boundaries of their property. Highwood did complete a preliminary, road-based, reconnaissance field trip in which the Company verified the Bad Heart Formation ooidal ironstone at the Spirit River Section Pit 1 in their Dunvegan sub-property. This exposed location could provide an ideal setting for Highwood to collect ooidal ironstone material for metallurgical test work.

To end, and in the opinion of the QP, Highwood has yet to conduct exploration work at the Property; however, the Company is positioned to 1) assess potential target areas outlined in the history section of this technical report, and 2) collect a bulk sample of ooidal ironstone for metallurgical work. The QP conducted a site inspection at Highwood's Dunvegan sub-property on July 13, 2021 and can verify the iron and vanadium mineralization of the Bad Heart Formation ooidal ironstone at the Spirit River Section Pit 1 as follows:

- Three Sprit River Section Pit sectionally-representative channel samples (0.7-1.0 m vertical sample intervals) returned iron values of between 35.4% and 36.6% Fe.
- Two grab samples yielded 29.8% and 34.7% Fe.
- The channel and grab samples yielded between 1,160 ppm and 1,530 ppm V.

With respect to Highwood's Lithium-Brine Project, the Company completed a preliminary June 2021 sampling program, in which Highwood collected brine from 5 of the 7 sub-properties that included a variety of Devonian- to Granite Wash-aged aquifers situated at depths of between 1,222 m and 3,208 m beneath the earth's surface. Because of the 1) large spatial distribution between sample points, and 2) knowledge that the samples are from different reservoirs (fields) and geological formations (pools), the resulting preliminary lithium analytical data have a wide range of values from 10.7 mg/L to 52.60 mg/L Li.

A summary of the sampling program analytical results to date include:

- Leduc and Nisku formations brine in the Drumheller sub-property yielded 47.9-52.6 mg/L Li (n= samples) and 29.7-32.3 mg/L Li (n=4 samples), respectively.

- Gilwood Formation brine in the Randell sub-property yielded 13.5-28.2 mg/L Li (n=4 samples).

- Beaverhill Lake Group brine in the Judy Creek and Kaybob sub-properties yielded 24.3-29.9 mg/L Li (n=3 samples) and 10.7-13.6 mg/L Li (4 samples), respectively.

Highwood conducted a May 2021 follow-up brine sampling program at their Drumheller Sub-Property, in which the Company collected 32 brine samples for assay and QA-QC testing and two 20-litre brine samples for mineral processing test work. The analytical results of this work showed:

- The Nisku Formation brine from the Wayne-Rosedale oilfield yielded between 22 and 29 mg/L Li (average 24.5 mg/L Li).

- The Nisku-Leduc Formation brine from the Ghost Pine oilfield yielded between 37 and 49 mg/L Li (average 43 mg/L Li).

- The analytical results of individual oil and gas wells correlated with multi-well proration battery Facilities. This is important because the Facilities represent brine collection sites that could yield a continuous and high-volume flow of brine for any future lithium extraction test work.

The QP conducted a site inspection at Highwood's Drumheller sub-property on May 28, 2021. The inspection confirmed or validated 1) actively pumping oil and gas infrastructure at the Ghost Pine and Wayne-Rosedale oil and gas field (Highwood's Drumheller sub-property), 2) Highwood's permission from the petro-operator to collect brine samples, and 3) lithium mineralization within Nisku and Leduc formations brine from the sub-property as established by the independent brine sample collection and analytical work. The analytical results verify the historical Li-brine mineralization in the region.

In addition, the QP observed Highwood's collection of two 20-litre samples of representative Nisku Formation brine from a well within the Drumheller sub-property for mineral processing work at independent laboratories. This work is underway, and results are not available at the Effective Date of this technical report.

To end, it is the QP's opinion that the exploration work conducted by Highwood to date at their Lithium-Brine Project is reasonable and within the standard practices of Li-brine evaluation with deep-seated confined aquifers as presented in this technical report. This contention is based on 1) the QP's site inspection and independent verification of Li-brine mineralization, 2) a review of Highwood's primary and check laboratories that included discussion on the labs brine sample collection and brine preparation methods, and 3) a review of the analytical results in conjunction with laboratory certificates.

25.1 Risks and Uncertainties

As with any early-stage exploration project there exists potential risks and uncertainties. Highwood will attempt to reduce risk/uncertainty through effective project management, engaging technical experts, and developing contingency plans.

Highwood and the QP have verified a deposit of ooidal ironstone at the Spirit River Section Pit 1. However, the exposure is currently being actively mined within an Alberta Government quarry permit. Consequently, Highwood mitigation strategy options are to 1) form a partnership with the current quarry owner, or more likely, 2) explore their properties for other deposits of the Bad Heart Formation ironstone. If the Company selects the second option there is some uncertainty in whether Highwood can locate a significant deposit of ironstone that has the thicknesses, geochemical composition, and accessibility to make it a reasonable prospect for potential economic extraction.

The Bad Heart Formation's low iron content and mineralogy has historically hindered metallurgical processes that can economically beneficiate the ironstone to production grade iron levels. Additional metallurgical testing is required, and it is possible that a new technology is required to economically upgrade the iron content of the ironstone. New technology risk adds to the existing high technical risk prevalent in metallurgical processes. In addition, metallurgical companies use various chemical agents on regular basis for surface treatments and cleansing operations. Widespread use of chemical agents in various metallurgical processes could create health and environment related risks. Lastly, the metallurgical industry is highly dependent on financial market changes. Further studies are necessary to identify industry specific best practices to manage metallurgical risk in beneficiating the Bad Heart Formation ironstone.

Because Highwood's Lithium-Brine Project is reliant on pre-existing oil and gas wells that are managed and operated by current petro-companies, there is some risk associated with a dependency on the petro-operation and continued brine access. It is possible that situations could arise where the petro-companies shut down well production – for example – due to poor commodity prices, depletion of petroleum product reserves, and/or production well performance of the reservoir. As a mitigation strategy, Highwood could permit and drill their own wells or consider options such as purchasing the well, renting the operation of the well, etc.

26 Recommendations

26.1 Ironstone Fe-V Project

The author concludes that Highwood's Ironstone Fe-V Project represents a project of merit. A two-phased program is recommended with Phase 1 evaluating the metallurgical potential of the Bad Heart Formation and a Phase 2 program based on the results of the Phase 1 work to explore Highwood's permits for high ooidal ironstone stratigraphic units within one or more of the Highwood sub-properties for further evaluation and to increase the confidence level of the data toward mineral resource estimation(s).

The total estimated cost of Phase 1 and Phase 2 of the recommended exploration work, with a 10% contingency, is CDN$126,500 and CDN$4,642,000, respectively. The total estimated cost of the recommended exploration work, with a 10% contingency, is CDN$4,768,500 (Table 26.1).

Phase 1 work recommendations include preliminary metallurgical activities intended to explore and define the reasonable prospects of potential economic extraction. The test work includes the collection of a bulk sample of the ooidal ironstone. The author recommends the Swift Creek Section Pit 1 due to its location within the Property, accessibility, and readily available excavation equipment. The collection is subject to the approval of the current Quarry licence holder.

The beneficiation test work should continue to evaluate the effectiveness of the SL/RN process, and direct reduction processes, in producing hot briquetted iron. The test work would include an evaluation of potential co-products, which could include vanadium, arsenic, manganese, zinc, cobalt, chromium, molybdenum, nickel, phosphorous, lead, antimony, tungsten, rare-earth elements, and gold according to Olson et al. (2006). Co-product elements might enhance the economic potential of the low iron ironstone.

Consequently, the objectives of the proposed metallurgical project are:

1. Develop a preliminary flowsheet for recovery technique of iron and vanadium from the Bad Heart Formation ironstone.

2. Assess and develop a preliminary processing scheme for the recovery of other elements of interest.

The cost to collect the bulk sample and conduct preliminary metallurgical test work is estimated at CDN$70,000.

In addition to metallurgical work, the author advocates that Phase 1 includes ongoing compilation work and field investigations that involve geological mapping studies to assess historical Bad Heart Formation occurrences and to determine potential Phase 2 target locations. The cost of the geological studies is estimated at CDN$45,000.

Table 26.1 Future work recommendations for Highwood's Ironstone Fe-V and Lithium-Brine Projects.

A) Ironstone Fe-V Project

Phase	Item	Activity	Cost estimate (CDN$)	Sub-total (CDN$)
Phase 1	1	Collect a bulk sample of the Bad Heart Formation ooidal ironstone for metallurgical test work	$10,000	
	2	Preliminary benchtop metallurgical test work to beneficiate the ironstone to higher levels of iron and a preliminary evaluation of potential co-products such as vanadian, rare earth metals, etc. and their extrability potential.	$60,000	
	3	Ongoing compilation work and geological mapping studies to assess historical Bad Heart Formation occurrences and to determine Phase 2 target locations	$45,000	**$115,000**
Phase 2	1	Complete a heli-borne, detailed (100- to 200-m line spacing), high-resolution, aeromagnetic (HRAM) survey to delineate target areas for drilling. Complement the HRAM survey with a high-frequency electromagnetic survey(s) such as DIGHEM	$1,625,000	
	2	Conduct a diamond drilling program with the intent to drill 75 to 100 holes of approximately 60 m depth totalling 6,000 m.	$2,100,000	
	3	Ongoing metallurgical test work to test and/or refine the Phase 1 metallurgical results.	$450,000	
	4	Technical reporting and potential resource modelling and estimations on selected deposits	$45,000	**$4,220,000**
			Sub-total	**$4,335,000**
			Contingency (10%)	**$433,500**
			Total	**$4,768,500**

B) Lithium-Brine Project

Phase	Item	Activity	Cost estimate (CDN$)	Sub-total (CDN$)
Phase 1	1	Brine geochemical assay sampling programs to assess the individual sub-properties	$85,000	
	2	Brine mineral processing bulk brine sampling program(s) and initial benchtop Li extraction work to produce a lithium concentrate.	$70,000	
	3	Hydrogeological studies on selected sub-properties (x2)	$50,000	**$205,000**
Phase 2	1	Ongoing mineral processing test work that includes adjustments and confirmaton benchtop Li extraction test work along with experimental tests to take the Li concentrate to ltihium hydroxide.	$125,000	
	2	Technical reporting and resource modelling and estimations on selected sub-properties (x2)	$90,000	**$215,000**
			Sub-total	**$420,000**
			Contingency (10%)	**$42,000**
			Total	**$462,000**

Phase 2 is dependent up on the positive results of the Phase 1 metallurgical and compilation/geological studies. The Phase 2 activities include an exploration program designed to define the extent of currently documented occurrences of ooidal ironstone and discover potential new sources of ooidal ironstone within Highwoods sub-properties.

A Phase 2 diamond drill program could target those occurrences of Bad Heart Formation ooidal ironstone identified during the Phase 1 compilation work. It is highly recommended, however, that Phase 2 work include a geophysical survey(s).

The Bad Heart region has not been subjected to modern geophysical surveys by the minerals industry. Accordingly, a modern survey could help to delineate stratigraphic continuity of known zones and/or new potential target areas along the zero-subcrop edge of the Bad Heart Formation. A heli-borne, detailed (100- to 200-m line spacing), high-resolution, aeromagnetic (HRAM) survey is recommended to delineate target areas for any future drill program. A survey area of approximately 25,000 line-kilometres is recommended at a cost of approximate CDN$60 per line-kilometer given the size of the survey and proximity to towns, cities, and major roads (total estimate of CDN$1,500,000). The surveys will be divided over the Worsley, Pouce, Dunvegan, and Girouxville sub-properties.

It is further recommended that the HRAM survey be complemented in select near-surface target areas with a shallow-penetrating, frequency-domain multi-coil, electromagnetic system such as DIGHEM. A survey area, or areas, of approximately 1,000 line-kilometres is recommended at a cost of approximate CDN$110 per line-kilometer (total estimate of CDN$110,000).

The analytical data acquired from the HRAM and DIGEM surveys should be reviewed in the context of the GIS modelling, which was created during Phase 1 work, to delineate target areas for diamond drill testing. The cost of this interpretative data processing and integration work is estimated at CDN$15,000. Hence the total estimated cost of the airborne geophysical program is CDN$1,625,000.

The Phase 2 work program includes a diamond drill program to test the geological compilation/mapping and geophysical exploration targets and to core the Bad Heart Formation to determine the 1) lithological characteristics of the Bad Heart including localized ooidal ironstone, 2) geochemical composition of the Bad Heart Formation, and 3) collect additional material for metallurgical testing.

A review of historical drilling (340 holes) shows the depth of the historical holes extend to between 3 m and 272 m (mean of 32.5 m) with only 10 holes extending deeper than 100 m. The author suggests, therefore, that the diamond drilling program could anticipate a 75- to 100-hole diamond drill program with the holes penetrating to depths of approximately 60 m depth (6,000 m total). Using an all-in drill cost of $350/metre, the estimated cost of the drill program is approximately CDN$2,100,000.

A critical and potentially ongoing component within Phase 2 is to conduct additional metallurgical test work to test and/or refine the Phase 1 metallurgical results. The estimated cost of this expanded metallurgical work program is CDN$450,000.

Lastly, it is recommended that Highwood complete technical reporting to support the Company's disclosure of potential advancements at their Ironstone Fe-V Project. It is possible that the Company can elevate the confidence level of their ooidal ironstone targets to the point where the occurrences have reasonable prospects of potential economic extraction, in which case the technical reports can include mineral resource modelling and estimations. The estimated cost of the technical reporting is CDN$45,000.

26.2 Lithium-Brine Project

The author concludes that Highwood's Li-brine sub-properties represent properties of merit. A two-phased program is recommended that continues to assess the Company's sub-properties for their Li-brine potential and defines advanced work for one or more of the sub-properties intended to increase the confidence level of the data toward mineral resource estimation(s).

The total estimated cost of Phase 1 and Phase 2 of the recommended exploration work, with a 10% contingency, is CDN$225,500 and CDN$236,500, respectively. The total estimated cost of the recommended exploration work, with a 10% contingency, is CDN$462,000 (Table 26.1).

Phase 1 work recommendations include the following activities intended to explore and define the reasonable prospects of potential economic extraction.

- To the Effective Date of this technical report, Highwood has collected brine samples for assay testing from 5 of their 7 sub-properties. Hence the first recommendation is for Highwood to continue to sample brine from Devonian to Precambrian wells at sub-properties that have yet to be tested. This involves obtaining permission from the petro-operator and contracting technicians to travel to the field/pools and collect the brine. This is done in conjunction with the petro-operator and entails collecting brine at sample points that include the wellhead, test separator unit, and processing facilities. A one-litre sample is typically collected for the assay testing that can include routine water analysis and total metals by ICP-OES. The cost of the brine assay sampling programs is estimated at CDN$85,000.

- Highwood suggest collect additional brine fluid from selected sub-properties for the Company's initial benchtop lithium extraction test work. The goal of this work is to produce a lithium concentrate from the Devonian to Precambrian brine. The size of the brine sample can vary from 10-litres to 100-litres dependent on the lab. The work is typically conducted at commercial and/or private laboratories. The estimated cost of this initial mineral processing test work is CDN$70,000 including sample collection, H_2S mitigation, shipping, and analytical test work.

- A hydrogeological assessment of the aquifer(s) is required as per CIM Best Practice Guidelines for Resource Estimation for Lithium Brines (1 November 2012). This work includes investigation and definition of porosity, permeability, transmissivity, storativity, etc., within a deep-seated, confined aquifer. The work is typically conducted by hydrogeological consultants. The estimated cost of hydrogeological studies on 2 separate sub-properties is CDN$50,000.

The Phase 2 work program is subject to the positive results of the Phase 1 initiatives. Phase 2 work recommendations include the following activities intended to refine the lithium recovery processes and conduct mineral resource modelling and estimations.

- As the project advances, the QP recommends ongoing mineral processing test work that includes 1) adjustments to the initial benchtop extract process, 2) develop additional confidence in the development of a Li concentrate, and 3) take the concentrate to a lithium hydroxide form to evaluate the brine and the lithium extraction process to produce battery grade lithium product. The estimated cost of the laboratory-scheduled mineral processing test work is CDN$125,000.

- Technical reporting toward resource estimations that are compliant with National Instrument 43-101 and Canadian Institute of Mining and Metallurgy definition standards and best practice guidelines (2014, 2019). The estimated cost of mineral resource modelling and estimation technical reports on 2 separate sub-properties is CDN$90,000.

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28 Certificate of Author

I, **D. Roy Eccles**, P. Geol., do hereby certify that:

1. I am a Senior Consulting Geologist and Chief Operations Officer of APEX Geoscience Ltd., #100 11450-160 Street, Edmonton, Alberta T5M 3Y7.
2. I graduated with a B.Sc. in Geology from the University of Manitoba in Winnipeg, Manitoba in 1986 and with a M.Sc. in Geology from the University of Alberta in Edmonton, Alberta in 2004.
3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta (APEGA) since 2003, and Newfoundland and Labrador Professional Engineers and Geoscientists (PEGNL) since 2015.
4. I have worked as a geologist for more than 35 years since my graduation from university and have been involved in all aspects of mineral exploration, mineral research, and mineral resource estimations for metallic, industrial, specialty, and rare-earth element mineral projects and deposits.
5. I have read the definition of "Qualified Person", as set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). 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. My technical experience includes Western Canada Sedimentary Basin mineral deposit studies, including the Clear Hills ironstone deposits, and have preformed exploration and preparation of mineral resource estimates for lithium-brine projects in western Canada, southeastern and southwestern United States, and central Europe.
6. I prepared this technical report, and accept, responsibility for all items in "***NI 43-101 Technical Report, Geological Introduction to Highwood Asset Management Ltd.'s Ironstone Iron-Vanadium Project in Northwest Alberta, Canada***, with an effective date of 21 September 2021 (the "Technical Report). I performed an Ironstone Project site inspection on July 13, 2021, and a Lithium-Brine Project site inspection on May 28, 2021 to verify Highwood's land position and the iron-vanadium and lithium-brine mineralization that is the subject of this technical report.
7. To the best of my knowledge, information and belief, the Technical Report contains all relevant scientific and technical information that is required to be disclosed, to make the Technical Report not misleading.
8. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
9. I am independent of Highwood Asset Management Ltd. and the Company's sub-properties, applying all the tests in section 1.5 of NI 43-101 and Companion Policy 43-101CP.
10. Other than research-orientated ironstone and lithium-brine geological studies performed as a geologist with the Alberta Government (2000-2011), I have not had any prior involvement with the Highwood Asset Management Ltd.'s sub-properties that are the subject of the Technical Report.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Effective Date: 21 September 2021
Signing Date: 21 September 2021
Edmonton, Alberta, Canada

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D. ROY ECCLES

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