



Overburden Drilling Management Limited
Unit 107, 15 Capella Court
Nepean, Ontario, Canada, K2E 7X1
Tel: (613) 226-1771 Fax: (613) 226-8753
odm@storm.ca www.odm.ca

Laboratory Data Report

Client Information

Alberta Geological Survey
4999 - 98 Avenue
Suite 402
Edmonton, AB
T6B 2X3

dean.meek@aer.ca

Attention: Dean Meek

christopher.swoboda@aer.ca

Christopher Swoboda

gloria.lopez@aer.ca

Gloria Lopez

calla.knudson@aer.ca

Calla Knudson

Data-File Information

Date: February 21, 2023

Project name:

ODM batch number:

2844

Sample numbers:

AER22TS-1010, AER22TS-1027, AER22TS-2004, AER22TS-2012,
AER22TS-3004, AER22TS-4030, AER22TS-4039, AER22TS-4051,
AER22TS-5011, AERCL227004, AERCL227052, AERCL227054,
AERCL227059, AERCL227068, AERHL225011, AERHL225018,
AERHL225023, AERHL225029, AERHL225036, AERHL225037,
AERHL225039, AERHL225048, AERHL225071, AERHL225082,
AERHL225087, AERHL225105, AERHL225106

Data file: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023

Number of samples in this report: 27

Number of samples processed to date: 84

Total number of samples in project: 299

Preliminary data:

Final data:

Revised data:

X
X

Samples Processed For:

Gold, KIM, MMSIM, Apatite

Processing Specifications:

1. Submitted by client: Till and sand/gravel samples mostly prescreened to -2.0 mm in the field.
2. One ± 300 g archival split taken from each sample.
3. All samples panned for gold, PGMs and fine-grained metallic indicator minerals.
4. +0.25 mm table concentrates refined by heavy liquid separation at S.G. 3.0 and 3.2 to obtain mid-density and heavy mineral concentrates (MDCs and HMCs).
5. Nonferromagnetic mineral fractions of 0.25-2.0 mm MDCs and HMCs picked for apatite and indicator minerals.
6. 1.0-2.0 mm, 0.5-1.0 mm and nonparamagnetic (>1.0 amp) 0.25-0.5 mm HMC fractions examined for scheelite by UV lamping.

Notes

Mike Crawford
Laboratory Manager

Primary Sample Processing Weights and Descriptions

Client: Alberta Geological Survey

File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023

Total Number of Samples in this Report: 27

ODM Batch Number(s): 2844

Sample Number	Weight (kg wet)					Screening and Shaking Table Sample Descriptions													
						Clasts (+2.0 mm)					Matrix (-2.0 mm)					Colour			Class
											Percentage								
	Bulk Rec'd	Archived Split	Table Split	+2.0 mm Clasts	-2.0 mm Table Feed	Size	V/S	GR	LS	OT*	S/U	SD	ST	CY	ORG	SD	CY		
AER22TS-1010	10.4	0.3	10.1	0.3	9.8	P	75	15	10	TR	U	-	Y	+	N	LOC	BE	TILL	
AER22TS-1027	10.2	0.3	9.9	0.5	9.4	P	75	15	10	TR	U	-	Y	+	N	LOC	BE	TILL	
AER22TS-2004	10.1	0.3	9.8	0.3	9.5	P	30	30	30	10	U	-	Y	+	N	MN	MN	TILL	
AER22TS-2012	12.1	0.3	11.8	0.0	11.8		No Clasts					S	-	+	+	N	DOC	DOC	SILT + CLAY
AER22TS-3004	12.5	0.3	12.2	1.7	10.5	P	55	15	30	0	U	Y	Y	Y	N	BE	BE	TILL	
AER22TS-4030	11.4	0.3	11.1	0.3	10.8	P	65	30	0	5	U	-	Y	+	N	BE	BE	TILL	
AER22TS-4039	13.0	0.3	12.7	0.6	12.1	P	60	20	15	5	U	-	Y	+	N	BE	BE	TILL	
AER22TS-4051	18.4	0.3	18.1	0.6	17.5	P	65	20	10	5	U	-	Y	+	N	GY	GB	TILL	
AER22TS-5011	11.7	0.3	11.4	0.8	10.6	P	65	20	10	5	U	-	Y	+	N	OC	OC	TILL	
AERCL227004	10.5	0.3	10.2	0.0	10.2		No Clasts					U	-	Y	+	N	GY	GY	TILL
AERCL227052	8.9	0.3	8.6	0.0	8.6		No Clasts					S	FM	-	N	N	OC	NA	SAND + GRAVEL
AERCL227054	10.7	0.3	10.4	0.0	10.4		No Clasts					S	FM	-	N	N	LOC	NA	SAND + GRAVEL
AERCL227059	10.8	0.3	10.5	0.0	10.5		No Clasts					S	FM	-	N	N	LOC	NA	SAND + GRAVEL
AERCL227068	11.6	0.3	11.3	0.0	11.3		No Clasts					S	FM	-	N	N	DOC	NA	SAND + GRAVEL
AERHL225011	6.6	0.3	6.3	0.0	6.3		No Clasts					S	FM	-	N	N	OC	NA	SAND + GRAVEL
AERHL225018	6.8	0.3	6.5	0.0	6.5		No Clasts					S	FM	-	N	N	OC	NA	SAND + GRAVEL
AERHL225023	11.1	0.3	10.8	0.0	10.8		No Clasts					S	MC	-	N	N	OC	NA	SAND + GRAVEL
AERHL225029	12.8	0.3	12.5	0.0	12.5		No Clasts					S	FM	-	N	N	OC	NA	SAND + GRAVEL
AERHL225036	9.5	0.3	9.2	0.0	9.2		No Clasts					S	FM	-	N	N	OC	NA	SAND + GRAVEL
AERHL225037	12.0	0.3	11.7	0.0	11.7		No Clasts					S	FM	-	N	N	OC	NA	SAND + GRAVEL
AERHL225039	10.8	0.3	10.5	0.0	10.5		No Clasts					S	FM	-	N	N	DOC	NA	SAND + GRAVEL
AERHL225048	10.4	0.3	10.1	0.0	10.1		No Clasts					S	FM	-	N	N	OC	NA	SAND + GRAVEL
AERHL225071	10.8	0.3	10.5	0.0	10.5		No Clasts					S	FM	-	N	N	OC	NA	SAND + GRAVEL
AERHL225082	10.0	0.3	9.7	0.0	9.7		No Clasts					S	FM	-	N	N	DOC	NA	SAND + GRAVEL
AERHL225087	9.8	0.3	9.5	0.0	9.5		No Clasts					S	FM	-	N	N	DOC	NA	SAND + GRAVEL
AERHL225105	8.8	0.3	8.5	0.0	8.5		No Clasts					S	FM	-	N	N	DOC	NA	SAND + GRAVEL
AERHL225106	7.1	0.3	6.8	0.0	6.8		No Clasts					S	FM	-	N	N	DOC	NA	SAND + GRAVEL
*Clasts listed as OT are Quartz.																			

*Clasts listed as OT are Quartz.

Gold Grain Summary

Client: Alberta Geological Survey

File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023

Total Number of Samples in this Report: 27

ODM Batch Number(s): 2844

Sample Number	Number of Visible Gold Grains				Nonmag HMC Weight*	Calculated PPB Visible Gold in HMC			
	Total	Reshaped	Modified	Pristine		Total	Reshaped	Modified	Pristine
AER22TS-1010	4	3	1	0	39.2	43	41	2	0
AER22TS-1027	2	2	0	0	37.6	27	27	0	0
AER22TS-2004	0	0	0	0	38.0	0	0	0	0
AER22TS-2012	0	0	0	0	47.2	0	0	0	0
AER22TS-3004	0	0	0	0	42.0	0	0	0	0
AER22TS-4030	0	0	0	0	43.2	0	0	0	0
AER22TS-4039	0	0	0	0	48.4	0	0	0	0
AER22TS-4051	1	1	0	0	70.0	<1	<1	0	0
AER22TS-5011	1	1	0	0	42.4	1	1	0	0
AERCL227004	2	2	0	0	40.8	17	17	0	0
AERCL227052	0	0	0	0	34.4	0	0	0	0
AERCL227054	0	0	0	0	41.6	0	0	0	0
AERCL227059	0	0	0	0	42.0	0	0	0	0
AERCL227068	0	0	0	0	45.2	0	0	0	0
AERHL225011	1	1	0	0	25.2	246	246	0	0
AERHL225018	0	0	0	0	26.0	0	0	0	0
AERHL225023	2	2	0	0	43.2	424	424	0	0
AERHL225029	4	2	2	0	50.0	36	31	4	0
AERHL225036	0	0	0	0	36.8	0	0	0	0
AERHL225037	2	2	0	0	46.8	215	215	0	0
AERHL225039	0	0	0	0	42.0	0	0	0	0
AERHL225048	0	0	0	0	40.4	0	0	0	0
AERHL225071	0	0	0	0	42.0	0	0	0	0
AERHL225082	0	0	0	0	38.8	0	0	0	0
AERHL225087	3	3	0	0	38.0	110	110	0	0
AERHL225105	0	0	0	0	34.0	0	0	0	0
AERHL225106	0	0	0	0	27.2	0	0	0	0

* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 0.4% of the table feed.

Detailed Gold Grain Data

Client: Alberta Geological Survey

File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023

Total Number of Samples in this Report: 27

ODM Batch Number(s): 2844

Sample Number	Dimensions (µm)			Number of Visible Gold Grains				Nonmag HMC Weight* (g)	Calculated V.G. Assay in HMC (ppb)	Metallic Minerals in Pan Concentrate
	Thickness	Width	Length	Reshaped	Modified	Pristine	Total			
AER22TS-1010	5	C	25	25	1		1		1	No sulphides.
	8	C	25	50	1	1	2		4	
	20	C	100	100	1		1		38	
							4	39.2	43	
AER22TS-1027	5	C	25	25	1		1		1	No sulphides.
	18	C	75	100	1		1		26	
							2	37.6	27	
AER22TS-2004	No Visible Gold									No sulphides.
AER22TS-2012	No Visible Gold									Tr (~30 grains) marcasite (25-150 µm).
AER22TS-3004	No Visible Gold									No sulphides.
AER22TS-4030	No Visible Gold									No sulphides.
AER22TS-4039	No Visible Gold									No sulphides.
AER22TS-4051	5	C	25	25	1		1		<1	Tr (~100,000 grains) marcasite (25-50 µm).
							1	70.0	<1	
AER22TS-5011	5	C	25	25	1		1		1	No sulphides.
							1	42.4	1	
AERCL227004	8	C	25	50	1		1		2	No sulphides.
	15	C	75	75	1		1		16	
							2	40.8	17	
AERCL227052	No Visible Gold									No sulphides.
AERCL227054	No Visible Gold									No sulphides.
AERCL227059	No Visible Gold									Tr (~30 grains) marcasite (25-50 µm).
AERCL227068	No Visible Gold									Tr (~300 grains) marcasite (25-50 µm).
AERHL225011	31	C	150	175	1		1		246	Tr (~1000 grains) marcasite (25-50 µm).
							1	25.2	246	
AERHL225018	No Visible Gold									No sulphides.
AERHL225023	29	C	125	175	1		1		111	Tr (~300 grains) marcasite (25-50 µm).
	40	C	200	225	1		1		313	
							2	43.2	424	
AERHL225029	5	C	25	25		1	1		<1	Tr (~1000 grains) marcasite (25-50 µm).
	8	C	25	50	1		1		1	
	10	C	50	50		1	1		4	
	20	C	100	100	1		1		30	
							4	50.0	36	

* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 0.4% of the table feed.

Detailed Gold Grain Data

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ODM Batch Number(s): 2844

Sample Number	Dimensions (µm)			Number of Visible Gold Grains				Nonmag HMC Weight* (g)	Calculated V.G. Assay in HMC (ppb)	Metallic Minerals in Pan Concentrate
	Thickness	Width	Length	Reshaped	Modified	Pristine	Total			
AERHL225036	No Visible Gold									Tr (~1000 grains) marcasite (25-75 µm).
AERHL225037	18	C	75	100	1		1		21	Tr (~1000 grains) marcasite (25-75 µm).
	36	C	150	225	1		1		194	
								2	46.8	
AERHL225039	No Visible Gold									Tr (~1000 grains) marcasite (25-50 µm).
AERHL225048	No Visible Gold									Tr (~100 grains) marcasite (25 µm).
AERHL225071	No Visible Gold									Tr (~100 grains) marcasite (25 µm).
AERHL225082	No Visible Gold									Tr (~1000 grains) marcasite (25-50 µm). Tr (~5000 grains) pyrite (25-100 µm).
AERHL225087	10	C	50	50	1		1		5	Tr (~300 grains) marcasite (25-50 µm).
	22	C	75	150	1		1		50	
	22	C	100	125	1		1		55	
							3	38.0	110	
AERHL225105	No Visible Gold									Tr (~500 grains) marcasite (25-50 µm).
AERHL225106	No Visible Gold									Tr (~100 grains) marcasite (25-50 µm).

* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 0.4% of the table feed.

Heavy Mineral Concentrate Processing Weights

Client: Alberta Geological Survey

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Total Number of Samples in this Report: 27

ODM Batch Number(s): 2844

Sample Number	Weight of -2.0 mm Table Concentrate (g)														
	Total	-0.25 mm	0.25-2.0 mm Heavy Liquid Separation at S.G. 3.0 and 3.2												
			Total	S.G. <3.0	Total S.G. >3.0 HMC	-0.25 mm (wash)	Mag HMC	S.G. 3.0 to 3.2 Total	Nonferromagnetic Fractions						
									Total	S.G. >3.2					
										Processed Split					
										%	Weight	0.25 to 0.5	0.5 to 1.0 mm	1.0 to 2.0 mm	
AER22TS-1010	930.9	698.6	232.3	224.3	8.0	1.1	0.3	2.3	4.3	100.0	4.3	2.9	1.1	0.3	
AER22TS-1027	687.4	474.7	212.7	208.6	4.1	0.5	0.2	1.2	2.2	100.0	2.2	1.4	0.6	0.2	
AER22TS-2004	875.3	609.2	266.1	262.8	3.3	0.4	0.1	1.3	1.5	100.0	1.5	0.9	0.4	0.2	
AER22TS-2012	375.4	189.7	185.7	185.6	0.05	0.0	<0.01	0.03	<0.01	100.0	<0.01	<0.01	0.0	0.0	
AER22TS-3004	629.5	436.2	193.3	191.6	1.7	0.4	<0.01	0.6	0.7	100.0	0.7	0.5	0.2	0.04	
AER22TS-4030	895.6	543.6	352.0	349.3	2.7	0.6	0.07	0.8	1.2	100.0	1.2	0.9	0.2	0.1	
AER22TS-4039	550.9	431.4	119.5	115.4	4.1	0.7	0.1	1.0	2.3	100.0	2.3	1.4	0.6	0.3	
AER22TS-4051	1055.2	693.3	361.9	336.1	25.8	9.4	0.3	2.8	13.3	100.0	13.3	6.0	4.6	2.7	
AER22TS-5011	740.8	494.5	246.3	237.9	8.4	1.6	0.2	2.5	4.1	100.0	4.1	2.6	1.2	0.3	
AERCL227004	365.7	311.0	54.7	54.1	0.6	0.2	<0.01	0.2	0.2	100.0	0.2	0.2	0.03	<0.01	
AERCL227052	1372.6	1076.9	295.7	291.4	4.3	2.2	<0.01	0.9	1.2	100.0	1.2	1.1	0.03	0.02	
AERCL227054	1129.0	778.9	350.1	348.0	2.1	0.5	0.02	0.7	0.9	100.0	0.9	0.9	<0.01	<0.01	
AERCL227059	1495.0	363.4	1131.6	1098.9	32.7	6.5	0.8	5.4	20.0	100.0	20.0	15.8	3.5	0.7	
AERCL227068	1186.0	800.7	385.3	381.8	3.5	1.0	<0.01	1.3	1.2	100.0	1.2	1.1	0.1	0.02	
AERHL225011	1418.1	1013.0	405.1	348.9	56.2	9.5	3.6	14.3	28.8	69.4	20.0	7.8	5.8	6.4	
AERHL225018	697.0	265.0	432.0	383.3	48.7	5.9	3.7	6.1	33.0	60.6	20.0	13.7	5.5	0.8	
AERHL225023	827.5	375.9	451.6	387.2	64.4	9.9	3.6	9.3	41.6	48.1	20.0	12.0	5.9	2.1	
AERHL225029	1132.5	841.0	291.5	218.1	73.4	12.3	4.9	11.5	44.7	44.7	20.0	5.1	8.5	6.4	
AERHL225036	642.9	263.0	379.9	290.5	89.4	9.4	9.8	6.6	63.6	31.4	20.0	12.7	6.2	1.1	
AERHL225037	984.8	408.9	575.9	476.6	99.3	14.0	7.0	12.3	66.0	30.3	20.0	14.5	4.1	1.4	
AERHL225039	1078.0	673.8	404.2	290.7	113.5	16.1	3.1	10.7	83.6	23.9	20.0	1.2	6.2	12.6	
AERHL225048	903.0	803.4	99.6	91.9	7.7	3.7	0.1	1.9	2.0	100.0	2.0	2.0	0.02	<0.01	
AERHL225071	1120.6	496.7	623.9	492.1	131.8	11.5	21.4	12.7	86.2	23.2	20.0	4.1	10.2	5.7	
AERHL225082	1216.2	426.1	790.1	700.5	89.6	13.2	6.9	9.3	60.2	33.2	20.0	6.5	7.6	5.9	
AERHL225087	1013.9	583.3	430.6	331.0	99.6	13.9	7.4	11.5	66.8	29.9	20.0	7.8	7.6	4.6	
AERHL225105	693.0	348.0	345.0	324.4	20.6	5.4	0.9	3.6	10.7	100.0	10.7	9.5	1.0	0.2	
AERHL225106	1090.7	171.3	919.4	842.8	76.6	5.3	5.3	14.9	51.1	39.1	20.0	7.0	10.2	2.8	

0.25-0.5 mm Paramagnetic/Non-Paramagnetic Fraction Weights

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Sample Number	Weight of 0.25-0.5 mm S.G. >3.2 Nonferromagnetic Heavy Mineral Fractions (g)					
	Total	Paramagnetic			Nonparamagnetic	
		Strongly (<0.6 amp)	Moderately (0.6-0.8 amp)	Weakly (0.8-1.0 amp)	>1.0 amp	>1.0 amp Lights*
AER22TS-1010	2.93	0.25	2.18	0.42	0.07	0.01
AER22TS-1027	1.39	0.15	0.86	0.35	0.03	NA
AER22TS-2004	0.94	0.14	0.58	0.13	0.09	<0.01
AER22TS-2012	<0.01	Undersized concentrate therefore not electromagnetically separated.				
AER22TS-3004	0.46	0.01	0.10	0.33	0.02	NA
AER22TS-4030	0.94	0.14	0.65	0.10	0.05	NA
AER22TS-4039	1.43	0.17	0.92	0.29	0.05	<0.01
AER22TS-4051	6.03	0.98	0.76	0.42	3.85	0.02
AER22TS-5011	2.57	0.03	0.38	2.03	0.12	0.01
AERCL227004	0.23	0.06	0.09	0.04	0.04	NA
AERCL227052	1.11	0.21	0.67	0.13	0.07	0.03
AERCL227054	0.87	0.19	0.51	0.10	0.06	0.01
AERCL227059	15.81	5.97	7.29	1.95	0.56	0.04
AERCL227068	1.11	0.10	0.75	0.14	0.11	0.01
AERHL225011	7.77	1.00	4.43	1.34	0.96	0.04
AERHL225018	13.68	6.25	5.77	1.05	0.60	0.01
AERHL225023	12.03	3.29	6.06	2.13	0.53	0.02
AERHL225029	5.10	0.31	2.05	0.63	2.09	0.02
AERHL225036	12.69	4.15	4.83	1.33	2.36	0.02
AERHL225037	14.51	5.82	5.80	1.75	1.11	0.03
AERHL225039	1.23	0.06	0.35	0.10	0.72	<0.01
AERHL225048	2.03	0.09	0.95	0.67	0.28	0.04
AERHL225071	4.08	0.62	2.87	0.34	0.23	0.02
AERHL225082	6.52	0.94	4.33	0.46	0.77	0.02
AERHL225087	7.84	1.22	3.92	0.60	2.04	0.06
AERHL225105	9.52	2.24	4.16	1.57	1.45	0.10
AERHL225106	7.01	1.11	3.84	1.10	0.93	0.03

*SG <3.20 heavy liquid separation clean-up of >1.0 amp fraction.

Metamorphosed/Magmatic Massive Sulphide Indicator Mineral (MMSIM) Counts

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Sample Number	Gold Grains	0.25 to 0.5 mm Nonferromagnetic Heavy Mineral Fraction																		Remarks	Picked Grains	
		Sulphide/Arsenide + Related Minerals				Mg/Mn/Al/Cr Minerals																
		>1.0 amp			<1.0	>1.0 amp							<1.0 amp					>1.0 amp				
		% Cpy	Misc. Prime MMSIMs	% Pyrite	% Goethite	# Grains + Colour Spinel	Misc. Prime MMSIMs*	% Red Rutile	% Ky	% Sil	% Tm	% St	% Sps	Olivine		% Opx	% Cr*	Phosphates				% REE Bearing Minerals
													% Fo*	% Fay			% Ap	% Mz				
AER22TS-1010	0	0	0.1 sphalerite (1 gr)	0.4 (3 gr)	5 (~1500 gr)	1 blue-green gahnite; 1 pink spinel	0	0.5 (6 gr)	10 (~80 gr)	3 (~25 gr)	0	1 (10 gr)	0	0	0	0	0	4 (~30 gr)	Tr (2 gr)	0	Almandine-hornblende/diopside assemblage. SEM check from 0.25-0.5 mm fraction: 1 blue-green gahnite versus spinel candidate = 1 gahnite.	0.25-0.5 mm fraction: 1 sphalerite 1 gahnite 1 spinel 6 red rutile 20 representative apatite 2 monazite
AER22TS-1027	0	0	1 barite (3 gr)	0	20 (~2500 gr)	0	Tr ruby corundum (1 gr)	0.5 (2 gr)	6 (~20 gr)	3 (10 gr)	0	0	0	0	0	0	0	4 (11 gr)	2 (5 gr)	0	Almandine-goethite-hornblende/diopside-leucoxene assemblage.	0.25-0.5 mm fraction: 3 barite 1 ruby corundum 2 red rutile 11 apatite 5 monazite
AER22TS-2004	0	0	70 barite (~600 gr); Tr fluorite (2 gr)	Tr (1 gr)	10 (~900 gr)	0	0	Tr (1 gr)	0	0	0	0	0	0	0	0	0	1 (2 gr)	0	0	Almandine-hornblende-augite/barite-epidote assemblage.	1.0-2.0 mm fraction: 7 barite 0.5-1.0 mm fraction: 10 representative barite 0.25-0.5 mm fraction: 10 representative barite 2 fluorite 1 red rutile 7 apatite
AER22TS-2012	0	0	0	0	30 (~30 gr)	0	0	0	0	0	0	0	0	0	0	0	0	1 (1 gr)	0	0	Undersized concentrate therefore not electromagnetically separated and mineral assemblage not listed. Main minerals are almandine, goethite and hornblende.	0.25-2.0 mm fraction: 1 apatite

*Low-Cr diopside, forsteritic olivine and chromite are referenced on KIM data.

Metamorphosed/Magmatic Massive Sulphide Indicator Mineral (MMSIM) Counts

Client: Alberta Geological Survey
File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023
Total Number of Samples in this Report: 27
ODM Batch Number(s): 2844

Sample Number	Gold Grains	0.25 to 0.5 mm Nonferromagnetic Heavy Mineral Fraction																			Remarks	Picked Grains
		Sulphide/Arsenide + Related Minerals				Mg/Mn/Al/Cr Minerals																
		>1.0 amp			<1.0	>1.0 amp							<1.0 amp				>1.0 amp					
		% Cpy	Misc. Prime MMSIMs	% Pyrite	% Goethite	# Grains + Colour Spinel	Misc. Prime MMSIMs*	% Red Rutile	% Ky	% Sil	% Tm	% St	% Sps	Olivine		% Opx	% Cr*	Phosphates		% REE Bearing Minerals		
													% Fo*	% Fay			% Ap	% Mz				
AER22TS-3004	0	0	30 barite (~30 gr)	60 (~60 gr)	70 (~3000 gr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Goethite-hematite/marcasite-barite assemblage.	0.5-1.0 mm fraction: 3 barite 0.25-0.5 mm fraction: 10 representative barite
AER22TS-4030	0	0	0	0	10 (~800 gr)	0	0	2 (6 gr)	50 (~200 gr)	0	2 (7 gr)	0	0	0	0	0	0	0	0	0.5 florencite (2 gr)	Almandine-hornblende/kyanite-leucoxene assemblage.	0.25-0.5 mm fraction: 6 red rutile 7 tourmaline 2 florencite
AER22TS-4039	0	0	6 barite (~30 gr)	0.2 (1 gr)	20 (~2500 gr)	1 green gahnite	0	1 (4 gr)	50 (~250 gr)	0.5 (2 gr)	5 (~25 gr)	0	0	0	0	0	0.5 (2 gr)	0.5 (2 gr)	0.5 florencite (3 gr)	Almandine-goethite/kyanite-leucoxene-diopside assemblage. SEM check from 0.25-0.5 mm fraction: 1 green gahnite candidate = 1 gahnite.	1.0-2.0 mm fraction: 2 barite 0.5-1.0 mm fraction: 12 barite 0.25-0.5 mm fraction: 10 representative barite 1 gahnite 4 red rutile 10 representative tourmaline 2 apatite 2 monazite 3 florencite	
AER22TS-4051	0	0	0.1 barite (~40 gr)	99 (~40,000 gr)	1 (~200 gr)	1 blue-green gahnite; 1 blue-green spinel	0	0	Tr (~80 gr)	Tr (2 gr)	0	0	0	0	0	0	0	0	0	Tr florencite (2 gr)	Siderite-almandine/marcasite assemblage. SEM checks from 0.25-0.5 mm fraction: 2 blue-green gahnite versus spinel candidates = 1 gahnite and 1 spinel.	0.5-1.0 mm fraction: 1 barite 0.25-0.5 mm fraction: 10 representative barite 1 gahnite 1 spinel 2 florencite
AER22TS-5011	0	0	20 barite (~2000 gr)	3 (~300 gr)	60 (~40,000 gr)	0	0	0	70 (~7000 gr)	Tr (10 gr)	0	0	0	0	0	0	0	0	0	0	Goethite-almandine/kyanite-barite assemblage. 0.5-1.0 mm fraction contains trace (~20 grains) barite.	0.5-1.0 mm fraction: 10 representative barite 0.25-0.5 mm fraction: 10 representative barite

*Low-Cr diopside, forsteritic olivine and chromite are referenced on KIM data.

Metamorphosed/Magmatic Massive Sulphide Indicator Mineral (MMSIM) Counts

Client: Alberta Geological Survey
File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023
Total Number of Samples in this Report: 27
ODM Batch Number(s): 2844

Sample Number	Gold Grains	0.25 to 0.5 mm Nonferromagnetic Heavy Mineral Fraction																		Remarks	Picked Grains	
		Sulphide/Arsenide + Related Minerals				Mg/Mn/Al/Cr Minerals																
		>1.0 amp			<1.0	>1.0 amp								<1.0 amp				>1.0 amp				
		% Cpy	Misc. Prime MMSIMs	% Pyrite	% Goethite	# Grains + Colour Spinel	Misc. Prime MMSIMs*	% Red Rutile	% Ky	% Sil	% Tm	% St	% Sps	Olivine		% Opx	% Cr*	Phosphates				% REE Bearing Minerals
													% Fo*	% Fay			% Ap	% Mz				
AERCL227004	0	0	0	3 (10 gr)	4 (~60 gr)	0	0	Tr (1 gr)	80 (~250 gr)	0	0	2 (5 gr)	0	0	0	0	0	0	Tr (1 gr)	0	Almandine-augite-hornblende/kyanite-leucoxene assemblage.	0.25-0.5 mm fraction: 1 red rutile 1 monazite
AERCL227052	0	0	0	8 (~80 gr)	0	5 pink, blue, green	0	0	60 (~600 gr)	0	5 (~50 gr)	0	0	0	0	0	0	1 (12 gr)	2 (~20 gr)	Tr florencite (1 gr)	Almandine-hornblende/kyanite-leucoxene assemblage. "Pyrite" is mostly marcasite.	0.25-0.5 mm fraction: 5 spinel 10 representative tourmaline 12 apatite 5 representative monazite 1 florencite
AERCL227054	0	0	0	2 (10 gr)	Tr (10 gr)	5 blue-grey, blue-green	0	Tr (1 gr)	70 (~100 gr)	0	1 (5 gr)	0	0	0	0	0	0	1 (5 gr)	0.5 (3 gr)	0	Almandine-hornblende/kyanite-diopside assemblage. SEM checks from 0.25-0.5 mm fraction: 2 blue-green gahnite versus spinel candidates = 2 spinel.	0.25-0.5 mm fraction: 5 spinel 1 red rutile 5 tourmaline 3 monazite
AERCL227059	0	Tr (1 gr)	0	10 (~600 gr)	4 (~6000 gr)	2 blue-green gahnite; 12 blue-grey, purple, pink spinel	0	Tr (~20 gr)	70 (~4000 gr)	Tr (10 gr)	5 (~300 gr)	0.5 (~30 gr)	0	0	0	0	0	Tr (~20 gr)	2 (~120 gr)	Tr florencite (~15 gr)	Almandine/kyanite assemblage. SEM checks from 0.25-0.5 mm fraction: 4 blue-green gahnite versus spinel candidates = 2 gahnite and 2 spinel. "Pyrite" is mostly mantled marcasite.	0.25-0.5 mm fraction: 1 chalcopyrite 2 gahnite 12 spinel 10 representative red rutile 10 representative tourmaline 5 representative monazite 5 representative florencite
AERCL227068	0	0	0	15 (~150 gr)	Tr (10 gr)	0	Tr colourless corundum (1 gr); Tr low-Cr diopside (1 gr)	0	80 (~800 gr)	0	0	0	0	0	0	0	0	1 (10 gr)	2 (~20 gr)	0	Almandine-hornblende/kyanite-marcasite assemblage. SEM check from 0.25-0.5 mm fraction: 1 colourless corundum candidate = 1 corundum.	0.25-0.5 mm fraction: 1 corundum 1 low-Cr diopside 5 representative monazite

*Low-Cr diopside, forsteritic olivine and chromite are referenced on KIM data.

Metamorphosed/Magmatic Massive Sulphide Indicator Mineral (MMSIM) Counts

Client: Alberta Geological Survey
File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023
Total Number of Samples in this Report: 27
ODM Batch Number(s): 2844

Sample Number	Gold Grains	0.25 to 0.5 mm Nonferromagnetic Heavy Mineral Fraction																		Remarks	Picked Grains				
		Sulphide/Arsenide + Related Minerals				Mg/Mn/Al/Cr Minerals																			
		>1.0 amp			<1.0	>1.0 amp								<1.0 amp								>1.0 amp			
		% Cpy	Misc. Prime MMSIMs	% Pyrite	% Goethite	# Grains + Colour Spinel	Misc. Prime MMSIMs*	% Red Rutile	% Ky	% Sil	% Tm	% St	% Sps	Olivine		% Opx	% Cr*	Phosphates				% REE Bearing Minerals			
														% Fo*	% Fay			% Ap	% Mz						
AERHL225011	0	0	4 sphalerite (~400 gr); 15 barite (~1500 gr); Tr fluorite (1 gr)	60 (~6000 gr)	4 (~2500 gr)	2 blue	Tr ruby corundum (1 gr)	Tr (1 gr)	0	0	Tr (~30 gr)	0	0	0	0	0	0	0	Tr (~25 gr)	0	Almandine-augite/marcasite-barite assemblage. SEM checks from 0.25-0.5 mm fraction: 5 arsenopyrite versus pyrite candidates = 5 pyrite. 1.0-2.0 mm and 0.5-1.0 mm fractions contain 6% (~100 grains) and 8% (~600 grains) barite, respectively.	1.0-2.0 mm fraction: 10 representative barite 0.5-1.0 mm fraction: 5 sphalerite 10 representative barite 0.25-0.5 mm fraction: 20 representative sphalerite 5 pyrite resembling arsenopyrite 10 representative barite 1 fluorite 2 spinel 1 ruby corundum 1 red rutile 10 representative tourmaline 5 representative monazite			
AERHL225018	0	0	Tr molybdenite (1 gr); 95 barite (~6000 gr)	0.5 (~30 gr)	4 (~5000 gr)	0	0	0	0	0	0	0	0	0	0	0	0	0	4 (~250 gr)	0	Almandine-ilmenite/barite assemblage. 1.0-2.0 mm and 0.5-1.0 mm fractions contain 10% (~25 grains) and 5% (~300 grains) barite, respectively.	1.0-2.0 mm fraction: 10 representative barite 0.5-1.0 mm fraction: 10 representative barite 0.25-0.5 mm fraction: 1 molybdenite 10 representative barite 5 representative monazite			

*Low-Cr diopside, forsteritic olivine and chromite are referenced on KIM data.

Metamorphosed/Magmatic Massive Sulphide Indicator Mineral (MMSIM) Counts

Client: Alberta Geological Survey
File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023
Total Number of Samples in this Report: 27
ODM Batch Number(s): 2844

Sample Number	Gold Grains	0.25 to 0.5 mm Nonferromagnetic Heavy Mineral Fraction																			Remarks	Picked Grains
		Sulphide/Arsenide + Related Minerals				Mg/Mn/Al/Cr Minerals																
		>1.0 amp			<1.0	>1.0 amp							<1.0 amp					>1.0 amp				
		% Cpy	Misc. Prime MMSIMs	% Pyrite	% Goethite	# Grains + Colour Spinel	Misc. Prime MMSIMs*	% Red Rutile	% Ky	% Sil	% Tm	% St	% Sps	Olivine		% Opx	% Cr*	Phosphates		% REE Bearing Minerals		
														% Fo*	% Fay			% Ap	% Mz			
AERHL225023	0	0	0.7 sphalerite (~40 gr); 50 barite (~2500 gr)	1 (~50 gr)	8 (~8000 gr)	2 blue	Tr sapphire corundum (1 gr)	0	8 (~400 gr)	Tr (~25 gr)	Tr (~20 gr)	0	0	0	0	0	0	Tr (6 gr)	6 (~300 gr)	0	Almandine-ilmenite-augite/barite-rutile assemblage. 0.5-1.0 mm fraction contains 2% (~150 grains) barite.	1.0-2.0 mm fraction: 4 barite 0.5-1.0 mm fraction: 10 representative barite 0.25-0.5 mm fraction: 20 representative sphalerite 10 representative barite 2 spinel 1 sapphire corundum 10 representative tourmaline 6 apatite 5 representative monazite
AERHL225029	0	0	0.2 sphalerite (~40 gr); 4 barite (~800 gr)	95 (~20,000 gr)	2 (~600 gr)	0	0	0	Tr (10 gr)	0	0	0	0	0	0	0	0	0	Tr (1 gr)	0	Almandine-augite/marcasite assemblage. 1.0-2.0 mm and 0.5-1.0 mm fractions contain 2% (~40 grains and ~200 grains, respectively) barite.	1.0-2.0 mm fraction: 10 representative barite 0.5-1.0 mm fraction: 1 sphalerite 10 representative barite 0.25-0.5 mm fraction 20 representative sphalerite 10 representative barite 1 monazite

*Low-Cr diopside, forsteritic olivine and chromite are referenced on KIM data.

Metamorphosed/Magmatic Massive Sulphide Indicator Mineral (MMSIM) Counts

Client: Alberta Geological Survey
File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023
Total Number of Samples in this Report: 27
ODM Batch Number(s): 2844

Sample Number	Gold Grains	0.25 to 0.5 mm Nonferromagnetic Heavy Mineral Fraction																			Remarks	Picked Grains
		Sulphide/Arsenide + Related Minerals				Mg/Mn/Al/Cr Minerals																
		>1.0 amp			<1.0	>1.0 amp							<1.0 amp					>1.0 amp				
		% Cpy	Misc. Prime MMSIMs	% Pyrite	% Goethite	# Grains + Colour Spinel	Misc. Prime MMSIMs*	% Red Rutile	% Ky	% Sil	% Tm	% St	% Sps	Olivine		% Opx	% Cr*	Phosphates		% REE Bearing Minerals		
														% Fo*	% Fay			% Ap	% Mz			
AERHL225036	0	0	0.2 sphalerite (~40 gr); 15 barite (~4000 gr)	75 (~2000 gr)	4 (~4000 gr)	1 pink	0	Tr (3 gr)	Tr (~40 gr)	Tr (~10 gr)	Tr (~20 gr)	0	0	0	0	0	0	0	3 (~800 gr)	0	Almandine-ilmenite/marcasite-barite assemblage. SEM checks from 0.25-0.5 mm fraction: 5 arsenopyrite versus pyrite candidates = 5 pyrite; and 1 pink spinel versus almandine candidate = 1 spinel. 0.5-1.0 mm fraction contains 4% (~300 grains) barite.	1.0-2.0 mm fraction: 10 barite 0.5-1.0 mm fraction: 2 sphalerite 10 representative barite 0.25-0.5 mm fraction: 20 representative sphalerite 1 galena 5 pyrite resembling arsenopyrite 10 representative barite 1 spinel 3 red rutile 10 representative tourmaline 5 representative monazite
AERHL225037	0	Tr (2 gr)	0.5 sphalerite (~50 gr); 10 barite (~1000 gr)	50 (~5000 gr)	5 (~6000 gr)	4 grey-green	0	Tr (3 gr)	5 (~500 gr)	Tr (5 gr)	0	1 (~100 gr)	0	0	0	Tr (10 gr)	0	Tr (~30 gr)	Tr (~30 gr)	Tr florencite (2 gr)	Almandine/marcasite-epidote assemblage. SEM checks from 0.25-0.5 mm fraction: 4 gahnite versus spinel candidates = 4 spinel. 1.0-2.0 mm and 0.5-1.0 mm fractions contain 15% (~20 grains) and 1% (~40 grains) barite, respectively.	1.0-2.0 mm fraction: 10 representative barite 0.5-1.0 mm fraction: 10 representative barite 0.25-0.5 mm fraction: 2 chalcopyrite 20 representative sphalerite 10 representative barite 4 spinel 3 red rutile 20 representative apatite 5 representative monazite 2 florencite

*Low-Cr diopside, forsteritic olivine and chromite are referenced on KIM data.

Metamorphosed/Magmatic Massive Sulphide Indicator Mineral (MMSIM) Counts

Client: Alberta Geological Survey
File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023
Total Number of Samples in this Report: 27
ODM Batch Number(s): 2844

Sample Number	Gold Grains	0.25 to 0.5 mm Nonferromagnetic Heavy Mineral Fraction																			Remarks	Picked Grains
		Sulphide/Arsenide + Related Minerals				Mg/Mn/Al/Cr Minerals																
		>1.0 amp			<1.0	>1.0 amp								<1.0 amp				>1.0 amp				
		% Cpy	Misc. Prime MMSIMs	% Pyrite	% Goethite	# Grains + Colour Spinel	Misc. Prime MMSIMs*	% Red Rutile	% Ky	% Sil	% Tm	% St	% Sps	Olivine		% Opx	% Cr*	Phosphates		% REE Bearing Minerals		
												% Fo*	% Fay			% Ap	% Mz					
AERHL225039	0	0	Tr sphalerite (4 gr); 6 barite (~400 gr)	90 (~6000 gr)	4 (~200 gr)	0	0	0	0	0	0	0	0	0	0	0	0	0	Tr (2 gr)	0	Almandine-augite/marcasite assemblage. 1.0-2.0 mm and 0.5-1.0 mm fractions contain 3% (~100 grains and ~250 grains, respectively) barite.	1.0-2.0 mm fraction: 10 representative barite 0.5-1.0 mm fraction: 4 sphalerite 10 representative barite 0.25-0.5 mm fraction: 4 sphalerite 10 representative barite 2 monazite
AERHL225048	0	0	0.8 sphalerite (24 gr); 8 barite (~250 gr)	20 (~600 gr)	0	1 pink	Tr ruby corundum (1 gr)	0	12 (~400 gr)	Tr (10 gr)	1 (~30 gr)	0	0	0	0	0	6 (~200 gr)	2 (~60 gr)	Tr florencite (1 gr)	Almandine-hornblende-augite/epidote-marcasite-diopside assemblage. SEM checks from 0.25-0.5 mm fraction: 2 pink spinel versus ruby corundum candidates = 1 spinel and 1 ruby corundum.	0.5-1.0 mm fraction: 4 barite 0.25-0.5 mm fraction: 24 sphalerite 10 representative barite 1 spinel 1 ruby corundum 10 representative tourmaline 20 representative apatite 5 representative monazite 1 florencite	
AERHL225071	0	0	Tr sphalerite (3 gr); 90 barite (~2000 gr)	1 (~25 gr)	0.5 (~250 gr)	0	0	0	0.5 (10 gr)	0	0	Tr (2 gr)	0	0	0	Tr (~50 gr)	0	Tr (~25 gr)	0	Almandine-augite/barite assemblage. SEM checks from 0.25-0.5 mm fraction: 5 sphalerite versus titanite candidates = 5 titanite. 1.0-2.0 mm and 0.5-1.0 mm fractions contain 5% (~40 grains and ~600 grains respectively) barite.	1.0-2.0 mm fraction: 10 representative barite 0.5-1.0 mm fraction: 10 representative barite 0.25-0.5 mm fraction: 3 sphalerite 5 titanite resembling sphalerite 10 representative barite 20 representative apatite	

*Low-Cr diopside, forsteritic olivine and chromite are referenced on KIM data.

Metamorphosed/Magmatic Massive Sulphide Indicator Mineral (MMSIM) Counts

Client: Alberta Geological Survey
File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023
Total Number of Samples in this Report: 27
ODM Batch Number(s): 2844

Sample Number	Gold Grains	0.25 to 0.5 mm Nonferromagnetic Heavy Mineral Fraction																			Remarks	Picked Grains
		Sulphide/Arsenide + Related Minerals				Mg/Mn/Al/Cr Minerals																
		>1.0 amp			<1.0	>1.0 amp							<1.0 amp				>1.0 amp					
		% Cpy	Misc. Prime MMSIMs	% Pyrite	% Goethite	# Grains + Colour Spinel	Misc. Prime MMSIMs*	% Red Rutile	% Ky	% Sil	% Tm	% St	% Sps	Olivine		% Opx	% Cr*	Phosphates		% REE Bearing Minerals		
														% Fo*	% Fay			% Ap	% Mz			
AERHL225082	0	0	Tr sphalerite (6 gr); 40 barite (~3000 gr)	50 (~4000 gr)	Tr (~100 gr)	0	0	0	0	0	Tr (4 gr)	0	0	0	0	0	0	Tr (1 gr)	3 (~250 gr)	0	Almandine/marcasite-barite assemblage. 1.0-2.0 mm and 0.5-1.0 mm fractions contain 20% (~300 grains) and 15% (~1500 grains) barite, respectively.	1.0-2.0 mm fraction: 10 representative barite 0.5-1.0 mm fraction: 1 sphalerite 10 representative barite 0.25-0.5 mm fraction 6 sphalerite 10 representative barite 4 tourmaline 1 apatite 5 representative monazite
AERHL225087	0	0	0.1 sphalerite (~30 gr); 70 barite (~14,000 gr)	25 (~5000 gr)	Tr (~50 gr)	0	0	0	Tr (10 gr)	0	0	Tr (5 gr)	0	0	0	0	0	Tr (~80 gr)	0	0	Almandine-ilmenite-augite/barite-marcasite assemblage. SEM check from 0.25-0.5 mm fraction: 1 sapphire corundum versus lazorite candidate = 1 kyanite. 1.0-2.0 and 0.5-1.0 mm fractions contain 40% (~200 grains) and 30% (~3000 grains) barite, respectively.	1.0-2.0 mm fraction: 10 representative barite 0.5-1.0 mm fraction: 10 representative barite 0.25-0.5 mm fraction: 20 representative sphalerite 10 representative barite 1 kyanite resembling sapphire corundum 20 representative apatite
AERHL225105	0	0	3 sphalerite (~500 gr); 40 barite (~6000 gr)	15 (~1500 gr)	1 (~800 gr)	Tr ruby corundum (1 gr)	Tr low-Cr diopside (2 gr)	0	Tr (~50 gr)	Tr (5 gr)	Tr (~40 gr)	0	0	0	0	0	0	Tr (~60 gr)	Tr (~30 gr)	0	Almandine-hornblende-augite/barite-epidote assemblage. SEM check from 0.25-0.5 mm fraction: 1 ruby corundum candidate = 1 ruby corundum. 0.5-1.0 mm fraction contains 8% (~100 grains) barite.	1.0-2.0 mm fraction: 3 barite 0.5-1.0 mm fraction: 4 sphalerite 10 representative barite 0.25-0.5 mm fraction: 20 representative sphalerite 10 representative barite 1 ruby corundum 2 low-Cr diopside 10 representative tourmaline 20 representative apatite 5 representative monazite

*Low-Cr diopside, forsteritic olivine and chromite are referenced on KIM data.

Metamorphosed/Magmatic Massive Sulphide Indicator Mineral (MMSIM) Counts

Client: Alberta Geological Survey
File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023
Total Number of Samples in this Report: 27
ODM Batch Number(s): 2844

Sample Number	Gold Grains	0.25 to 0.5 mm Nonferromagnetic Heavy Mineral Fraction																			Remarks	Picked Grains
		Sulphide/Arsenide + Related Minerals				Mg/Mn/Al/Cr Minerals																
		>1.0 amp			<1.0	>1.0 amp						<1.0 amp					>1.0 amp					
		% Cpy	Misc. Prime MMSIMs	% Pyrite	% Goethite	# Grains + Colour Spinel	Misc. Prime MMSIMs*	% Red Rutile	% Ky	% Sil	% Tm	% St	% Sps	Olivine		% Opx	% Cr*	Phosphates		% REE Bearing Minerals		
														% Fo*	% Fay			% Ap	% Mz			
AERHL225106	0	Tr (1 gr)	1 sphalerite (~120 gr); 90 barite (~10,000 gr)	8 (~1000 gr)	4 (~25,000 gr)	0	Tr ruby corundum (1 gr)	Tr (1 gr)	0	0	Tr (2 gr)	0	0	0	0	0	0	0	0	0	Almandine-augite/barite assemblage. SEM check from 0.25-0.5 mm fraction: 1 ruby corundum versus almandine candidate = 1 ruby corundum. 1.0-2.0 mm and 0.5-1.0 mm fractions contain 2% (~30 grains) and 4% (~400 grains) barite, resepectively.	1.0-2.0 mm fraction: 10 representative barite 0.5-1.0 mm fraction: 6 sphalerite 10 representative barite 0.25-0.5 mm fraction: 1 chalcopyrite 20 representative sphalerite 10 representative barite 1 ruby corundum 1 red rutile 2 tourmaline

*Low-Cr diopside, forsteritic olivine and chromite are referenced on KIM data.

Kimberlite Indicator Mineral Counts

Client: Alberta Geological Survey
File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023
Total Number of Samples in this Report: 27
ODM Batch Number(s): 2844

Sample Number	Number of Grains																													
	Pseudo-KIMs						KIMs																							
	1.0 to 2.0 mm		0.5 to 1.0 mm		0.25 to 0.5 mm		1.0 to 2.0 mm								0.5 to 1.0 mm								0.25 to 0.5 mm							
	Low-Cr diopside*		Low-Cr diopside*		Low-Cr diopside*		GP		GO		DC		IM		CR*		FO*		GP		GO		DC		IM		CR*		FO*	
	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P
AER22TS-1010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AER22TS-1027	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AER22TS-2004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AER22TS-2012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AER22TS-3004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AER22TS-4030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AER22TS-4039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AER22TS-4051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AER22TS-5011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERCL227004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERCL227052	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERCL227054	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERCL227059	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERCL227068	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225023	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225029	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225036	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225037	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225071	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225082	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225087	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225105	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AERHL225106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1

T = Total number of grains in sample. Total is estimated if number is greater than number of picked grains.
P = Number of picked grains in sample.
* Low-Cr diopside, forsteritic olivine and chromite also referenced on MMSIMs data.

Kimberlite Indicator Mineral Remarks

Client: Alberta Geological Survey

File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023

Total Number of Samples in this Report: 27

ODM Batch Number(s): 2844

Sample Number	Remarks
AER22TS-1010	No KIM remarks.
AER22TS-1027	No KIM remarks.
AER22TS-2004	No KIM remarks.
AER22TS-2012	No KIM remarks.
AER22TS-3004	No KIM remarks.
AER22TS-4030	No KIM remarks.
AER22TS-4039	No KIM remarks.
AER22TS-4051	No KIM remarks.
AER22TS-5011	1 IM from 0.25-0.5 mm fraction has partial alteration mantles.
AERCL227004	No KIM remarks.
AERCL227052	No KIM remarks.
AERCL227054	No KIM remarks.
AERCL227059	No KIM remarks.
AERCL227068	No KIM remarks.
AERHL225011	No KIM remarks.
AERHL225018	No KIM remarks.
AERHL225023	No KIM remarks.
AERHL225029	No KIM remarks.
AERHL225036	No KIM remarks.
AERHL225037	No KIM remarks.
AERHL225039	No KIM remarks.
AERHL225048	No KIM remarks.
AERHL225071	No KIM remarks.
AERHL225082	No KIM remarks.
AERHL225087	No KIM remarks.
AERHL225105	No KIM remarks.
AERHL225106	No KIM remarks.

Apatite Separates

Client: Alberta Geological Survey

File Name: 20232820 - AER - Alberta Geological Survey - (KIM, MMISM) - Jan 2023

Total Number of Samples in this Report: 27

ODM Batch Number(s): 2844

Sample Number	Apatite Grains in S.G. 3.0-3.2, 0.25-2.0 mm Concentrates			Remarks
	Estimated Total %	Number		
		Estimated Total	Picked	
AER22TS-1010	5	50	0	
AER22TS-1027	5	20	9	
AER22TS-2004	Tr	10	10	
AER22TS-2012	0	0	0	
AER22TS-3004	Tr	1	1	
AER22TS-4030	Tr	1	1	
AER22TS-4039	6	25	18	
AER22TS-4051	2	30	20	
AER22TS-5011	0	0	0	
AERCL227004	2	12	12	
AERCL227052	5	200	8	
AERCL227054	1	40	20	
AERCL227059	1	200	20	
AERCL227068	0.5	40	20	
AERHL225011	Tr	100	20	
AERHL225018	Tr	30	20	
AERHL225023	1	250	16	
AERHL225029	Tr	5	5	
AERHL225036	Tr	80	20	
AERHL225037	0.5	600	0	
AERHL225039	Tr	40	20	
AERHL225048	2	150	0	
AERHL225071	3	4000	0	
AERHL225082	Tr	30	19	
AERHL225087	1	900	0	
AERHL225105	Tr	50	0	
AERHL225106	Tr	11	11	