30 September 2021

Latest Assay Results Confirm and Extend High Purity Silica Sand at Cape Flattery Silica Sands Project

Highlights

- Assays from the August 2021 drilling program confirm significant intervals of high purity silica sand at Metallica's 100% owned Cape Flattery Silica Sands Project
- Intercepts include:
  - CFS026, 20m @ 99.65% SiO_2 from 1m[1] below surface
  - CFS042, 25m @ 99.53% SiO_2 from 1m below surface
  - CFS050, 21m @ 99.26% SiO_2 from 1m below surface
  - CFS090, 24m @ 99.33% SiO_2 from 1m below surface
  - CFS103, 27m @ 99.34% SiO_2 from 1m below surface
  - CF109, 25m @ 99.48 % SiO_2 from 1m below surface
  - CFS111, 13m @ 99.59% SiO_2 from 1m below surface
- Resource estimation work will commence in October 2021 and is expected to be completed in Q4 2021
- Metallurgy testing of the high grade, high purity sand will commence in October 2021
- The Project is adjacent to the designated Port of Cape Flattery.

Metallica Minerals Limited (**Metallica**, ASX: MLM) is pleased to announce that assay results have been received for all of the 1,610 samples from the 98-hole infill and step-out drilling program completed at Metallica's Cape Flattery project in August 2021[2]. The holes were drilled on the eastern part of EPM25734, which is located immediately north of Mitsubishi's silica sand mining operation at Cape Flattery (see Figure 1 on the following page).

The drilling at Metallica's Cape Flattery project was undertaken between the 26 July and 6 August 2021. A total of 98 holes were drilled using a tractor mounted vacuum rig. The drilling was undertaken after the successful completion of a Cultural Heritage Survey.

Metallica Executive Chairman, Theo Psaros said "We are pleased with the drilling results and are looking forward to announcing an upgrade to the resource estimate in the coming months. I am particularly happy that these results have confirmed the continuity of high purity silica sands in the Cape Flattery sand dune system. This demonstrates immediate potential to increase the overall size of the resource and to increase the confidence levels in the resource categories within Cape Flattery. The team at Ausrocks have received the assay data and will commence their independent review and resource estimation including these results. Metallica remains on track to announce an upgraded resource in mid Q4 of 2021."

[1] All intercepts calculated using a 98.5% SiO2 Cut Off Grade, with a minimum intercept width of 3m and with a maximum of 3m of internal dilution

[2] First reported in ASX release dated 12th August, "98 Hole Drilling Program & Bathymetric Survey Study successfully completed"

Mr Psaros added “we appreciate we have much work to do, and we are enthusiastic about our project and its potential. The Project is located alongside the world’s largest silica sand mine that produces a well-recognised quality product. The growing demand for this commodity further supports Metallica’s push to develop this project.”

All holes were drilled vertically. Step out drilling was conducted on a nominal 200m by 200m grid pattern. Infill drilling was completed on a nominal 100m by 100m grid to increase the confidence in the mineral resource. The holes were sampled at 1m intervals with the entire sample collected and bagged prior to being dispatched to ALS in Brisbane for assay.

Drilling was stopped prematurely in a small number of holes when they intersected water. This resulted in these holes terminating in high grade zones which are above the nominated Cut-off Grade (COG) of 98.5% SiO_2. Photographs of the chip trays for each hole were taken for a digital record of the hole and these are stored in a database with the relevant assay results so visual comparisons can be made between grade and sand quality (see Figure 2 and Figure 3 on the following page).

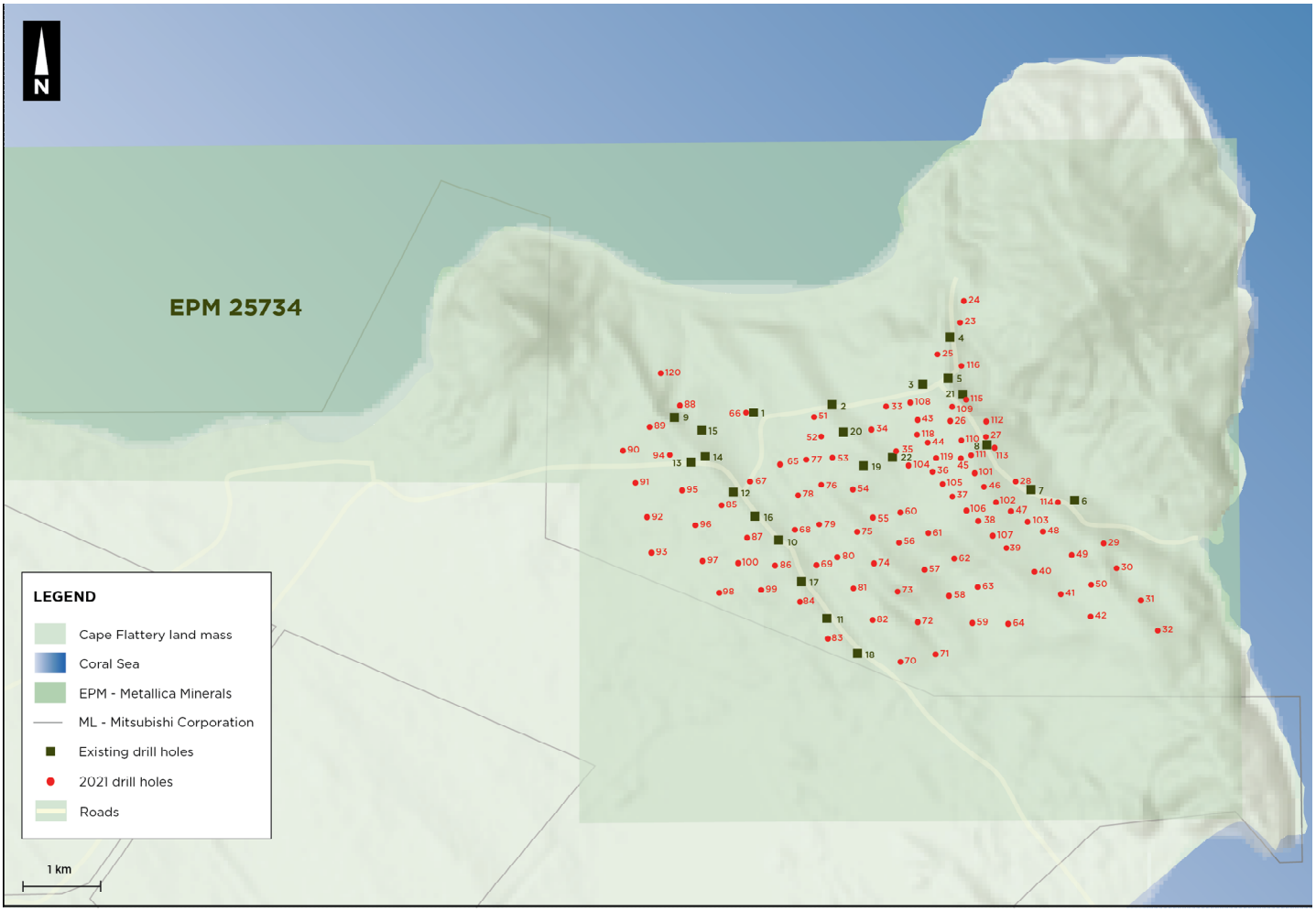


Figure 1. *EPM 25734 - Drill hole location map,*

Of the 98 holes drilled, 82 holes recorded significant intercepts of SiO_2 mineralization. The 15 holes which returned no significant results were drilled either on the margins of the dune field or on the western edge of the field. The results for the drilling programme are presented in Table 1.

Chip Tray Photograph	Hole_ID	From	To	Sample No.	Colour	Lith	SiO2	Al2O3	Fe2O3	TiO2	Total	LOI
	CFS026	0	1	_	gy	sa	_	_	_	_	_	_
	CFS026	1	2	38651	wh	sa	99.68	0.04	0.02	0.03	100.1	0.3
	CFS026	2	3	38652	wh	sa	99.71	0.03	0.01	0.04	99.93	0.11
	CFS026	3	4	38653	wh	sa	99.37	0.03	0.02	0.04	99.66	0.15
	CFS026	4	5	38654	wh	sa	99.41	0.04	0.01	0.05	99.68	0.12
	CFS026	5	6	38655	wh	sa	99.66	0.03	0.02	0.05	99.92	0.11
	CFS026	6	7	38656	wh	sa	99.61	0.04	0.02	0.05	99.96	0.18
	CFS026	7	8	38657	wh	sa	99.85	0.05	0.02	0.06	100.2	0.18
	CFS026	8	9	38658	wh	sa	99.44	0.07	0.05	0.11	99.89	0.14
	CFS026	9	10	38659	wh	sa	99.51	0.04	0.03	0.07	99.82	0.13
	CFS026	10	11	38660	wh	sa	99.72	0.04	0.04	0.08	100.05	0.13
	CFS026	11	12	38661	wh	sa	99.53	0.03	0.02	0.07	99.83	0.14
	CFS026	12	13	38662	wh	sa	99.59	0.04	0.03	0.08	99.85	0.1
	CFS026	13	14	38663	wh	sa	99.4	0.04	0.03	0.07	99.7	0.14
	CFS026	14	15	38664	wh	sa	99.48	0.04	0.03	0.08	100.3	0.64
	CFS026	15	16	38665	wh	sa	99.81	0.04	0.03	0.07	100.1	0.13
	CFS026	16	17	38666	wh	sa	99.94	0.04	0.03	0.07	100.2	0.11
	CFS026	17	18	38667	wh	sa	99.61	0.03	0.03	0.06	99.88	0.13
	CFS026	18	19	38668	wh	sa	100	0.03	0.03	0.05	100.25	0.12
	CFS026	19	20	38669	wh	sa	99.97	0.06	0.11	0.05	100.35	0.13
	CFS026	20	21	38670	wh	sa	99.77	0.18	0.07	0.12	100.45	0.25

Figure 2. Visual Representation of CFS026

Chip Tray Photograph	Hole_ID	From	To	Sample No.	Colour	Lith	SiO2	Al2O3	Fe2O3	TiO2	Total	LOI
	CFS109	0	1	40115	gy	sa	95.35	0.04	0.06	0.07	99.73	4.1
	CFS109	1	2	40116	wh	sa	99.02	0.04	0.05	0.07	99.49	0.28
	CFS109	2	3	40117	wh	sa	99.17	0.03	0.03	0.08	99.54	0.18
	CFS109	3	4	40118	wh	sa	99.37	0.04	0.04	0.1	99.76	0.16
	CFS109	4	5	40119	wh	sa	99.4	0.03	0.05	0.12	99.82	0.18
	CFS109	5	6	40120	wh	sa	99.41	0.02	0.06	0.13	99.78	0.13
	CFS109	6	7	40121	wh	sa	99.56	0.02	0.06	0.1	99.91	0.13
	CFS109	7	8	40122	wh	sa	99.56	0.06	0.04	0.08	99.91	0.15
	CFS109	8	9	40123	wh	sa	99.35	0.04	0.04	0.09	99.71	0.17
	CFS109	9	10	40124	wh	sa	99.24	0.02	0.04	0.1	99.55	0.13
	CFS109	10	11	40125	wh	sa	99.62	0.02	0.06	0.17	100.05	0.17
	CFS109	11	12	40126	wh	sa	99.52	0.02	0.04	0.11	99.84	0.13
	CFS109	12	13	40127	wh	sa	99.8	0.03	0.03	0.09	100.1	0.15
	CFS109	13	14	40128	wh	sa	99.65	0.03	0.05	0.13	100.05	0.14
	CFS109	14	15	40129	wh	sa	99.48	0.02	0.03	0.08	99.76	0.13
	CFS109	15	16	40130	wh	sa	99.78	0.02	0.06	0.1	100.1	0.12
	CFS109	16	17	40131	wh	sa	99.72	0.02	0.04	0.1	100.05	0.14
	CFS109	17	18	40132	wh	sa	99.29	0.02	0.05	0.09	99.59	0.12
	CFS109	18	19	40133	wh	sa	99.64	0.02	0.04	0.08	99.92	0.11
	CFS109	19	20	40134	wh	sa	99.55	0.04	0.07	0.07	99.88	0.13
	CFS109	20	21	40135	wh	sa	99.61	0.02	0.03	0.05	99.86	0.13
	CFS109	21	22	40136	wh	sa	99.49	0.05	0.04	0.06	99.82	0.16
	CFS109	22	23	40137	wh	sa	99.39	0.02	0.04	0.07	99.67	0.13
	CFS109	23	24	40138	wh	sa	99.6	0.02	0.04	0.05	99.81	0.08
	CFS109	24	25	40139	wh / cr	sa	99.5	0.08	0.08	0.06	99.9	0.15
	CFS109	25	26	40140	wh / cr	sa	99.25	0.16	0.08	0.09	99.76	0.14

Figure 3. Visual Representation of CFS109, showing Chip tray and associated assay results

Table 1. Cape Flattery Silica Project – table of Significant Results

Hole Number	Easting	Northing	RL	Total depth	From (m)	To (m)	Interval (m)	SiO_2	Fe_2O_3	Al_2O_3	TiO_2	Total	LOI
CFS023	8,345,671	321,127	95	14	0	9	9	99.57	0.06	0.04	0.10	99.97	0.17
CFS024	8,345,790	321,147	96	17	1	17	16	99.13	0.15	0.06	0.27	99.79	0.11
CFS025	8,345,441	320,898	78	19	2	10	8	98.98	0.11	0.29	0.10	99.83	0.31
CFS026	8,345,131	321,077	94	21	1	21	20	99.65	0.03	0.05	0.07	100.00	0.17
CFS027	8,345,048	321,274	95	20	1	16	15	99.53	0.08	0.09	0.10	100.00	0.21
CFS028	8,344,804	321,439	70	30	5	23	18	99.38	0.10	0.08	0.14	99.83	0.09
CFS029	8,344,469	321,925	75	19	1	18	17	98.90	0.23	0.19	0.16	99.72	0.19
CFS030	8,344,335	321,997	76	29	4	26	22	98.90	0.25	0.11	0.37	99.83	0.12
CFS031	8,344,158	322,132	88	28	1	28	27	99.14	0.16	0.20	0.11	99.82	0.18
CFS032	8,343,994	322,226	97	30	1	5	4	99.34	0.14	0.06	0.17	99.89	0.13
					13	30	17	99.53	0.15	0.10	0.13	100.07	0.12
CFS033	8,345,209	320,724	71	11	NSR								
CFS034	8,345,082	320,644	100	20	1	20	19	99.48	0.14	0.11	0.13	100.16	0.26
CFS035	8,344,965	320,781	101	30	1	28	27	99.26	0.11	0.05	0.19	99.77	0.12
CFS036	8,344,854	320,982	83	12	1	9	8	99.25	0.08	0.06	0.16	99.74	0.14
CFS037	8,344,719	321,092	78	13	2	10	8	99.36	0.07	0.05	0.14	99.79	0.14
CFS038	8,344,587	321,235	80	14	1	11	10	99.03	0.10	0.05	0.18	99.53	0.13
CFS039	8,344,438	321,391	66	23	1	23	22	99.25	0.06	0.03	0.12	99.62	0.12
CFS040	8,344,312	321,546	64	18	2	16	14	99.33	0.07	0.04	0.12	99.76	0.17
CFS041	8,344,188	321,692	58	13	1	4	3	99.31	0.13	0.06	0.20	99.91	0.15
CFS042	8,344,069	321,856	68	28	1	26	25	99.53	0.14	0.05	0.12	100.03	0.15
CFS043	8,345,135	320,898	55	12	1	9	8	99.68	0.04	0.05	0.09	100.08	0.19
CFS044	8,345,012	320,954	93	10	1	9	8	99.69	0.06	0.04	0.14	100.10	0.13
CFS045	8,344,926	321,137	90	14	1	7	6	99.67	0.03	0.04	0.08	99.95	0.11
CFS046	8,344,774	321,265	89	26	1	5	4	98.64	0.27	0.12	0.15	99.45	0.02
CFS047	8,344,641	321,414	70	21	1	7	6	98.91	0.09	0.08	0.17	99.42	0.13
CFS048	8,344,532	321,591	51	11	0	8	8	99.08	0.06	0.08	0.11	99.68	0.31
CFS049	8,344,403	321,750	34	10	1	9	8	99.25	0.06	0.03	0.10	99.59	0.13
CFS050	8,344,241	321,858	49	24	1	22	21	99.26	0.12	0.05	0.10	99.75	0.17
CFS051	8,345,146	320,329	66	9	1	4	3	99.03	0.24	0.15	0.13	100.03	0.44
CFS052	8,345,043	320,369	68	6	NSR								
CFS053	8,344,926	320,432	76	11	1	8	7	99.39	0.08	0.07	0.12	99.83	0.17
CFS054	8,344,753	320,545	75	17	1	11	10	99.56	0.04	0.04	0.06	99.82	0.15
CFS055	8,344,601	320,656	71	17	1	15	14	99.16	0.15	0.06	0.07	99.72	0.25
CFS056	8,344,465	320,801	76	14	1	7	6	99.58	0.05	0.05	0.09	100.00	0.20
CFS057	8,344,318	320,942	73	15	1	11	10	99.40	0.07	0.06	0.11	99.80	0.16
CDF058	8,344,174	321,077	52	35	0	3	3	99.16	0.07	0.06	0.10	99.68	0.27
					12	25	13	98.93	0.07	0.35	0.06	99.64	0.20
CFS059	8,344,027	321,207	41	20	0	9	9	99.16	0.06	0.22	0.05	99.77	0.27
CFS060	8,344,629	320,807	56	19	7	15	8	98.94	0.15	0.19	0.09	99.77	0.39
CFS061	8,344,518	320,961	44	13	NSR								
CFS062	8,344,380	321,105	36	22	1	11	10	99.32	0.07	0.19	0.07	99.91	0.23
CFS063	8,344,225	321,235	31	11	1	7	6	98.99	0.15	0.21	0.11	99.85	0.34
CFS064	8,344,025	321,404	25	11	NSR								
CFS065	8,344,886	320,144	54	8	1	5	4	99.15	0.06	0.09	0.11	99.62	0.19
CFS066	8,345,169	319,955	55	17	NSR								
CFS067	8,344,793	319,980	78	23	0	21	21	99.20	0.09	0.08	0.17	96.67	0.10

Hole Number	Easting	Northing	RL	Total depth	From (m)	To (m)	Interval (m)	SiO_2	Fe_2O_3	Al_2O_3	TiO_2	Total	LOI
CFS068	8,344,530	320,228	61	14	0	12	12	99.19	0.10	0.13	0.18	99.78	0.15
CFS069	8,344,339	320,348	51	15	2	15	13	98.95	0.26	0.13	0.26	99.82	0.15
CFS070	8,343,812	320,815	22	5	1	5	4	99.03	0.07	0.06	0.16	99.75	0.12
CFS071	8,343,856	321,006	24	8.5	1	6	5	99.14	0.21	0.09	0.17	99.93	0.27
CFS072	8,344,030	320,907	51	14	1	13	12	98.91	0.21	0.26	0.14	99.88	0.31
CFS073	8,344,195	320,795	47	32.5	0	30	30	99.45	0.06	0.05	0.09	99.79	0.14
CFS074	8,344,351	320,664	56	30	1	27	26	99.46	0.08	0.06	0.12	99.87	0.12
CFS075	8,344,522	320,570	51	19	1	17	16	98.68	0.08	0.28	0.11	99.43	0.23
CFS076	8,344,778	320,371	61	14	1	10	9	99.06	0.11	0.08	0.17	99.66	0.18
CFS077	8,344,913	320,287	60	15	1	13	12	99.22	0.03	0.07	0.09	99.62	0.19
CFS078	8,344,719	320,244	63	16.5	1	10	9	98.80	0.22	0.13	0.34	99.75	0.18
CFS079	8,344,562	320,361	43	12	1	10	9	99.23	0.06	0.06	0.14	99.74	0.20
CFS080	8,344,384	320,462	40	13	0	12	12	99.29	0.04	0.10	0.09	99.86	0.30
CFS081	8,344,212	320,552	27	11	1	10	9	99.33	0.07	0.09	0.16	99.91	0.19
CFS082	8,344,040	320,659	24	10	1	10	9	98.94	0.21	0.11	0.35	99.90	0.20
CFS083	8,343,935	320,414	29	4	NSR								
CFS084	8,344,137	320,259	41	11	7	11	4	99.48	0.07	0.09	0.17	99.86	0.22
CFS085	8,344,660	319,824	56	18	3	12	9	98.87	0.17	0.21	0.12	99.60	0.19
CFS086	8,344,335	320,120	48	12	NSR								
CFS087	8,344,486	319,966	55	35.5	1	7	6	99.30	0.04	0.05	0.07	99.60	0.12
					11	15	4	99.05	0.10	0.31	0.08	99.75	99.75
CFS088	8,345,206	319,591	93	19	0	16	16	99.02	0.12	0.14	0.18	99.72	0.23
CFS089	8,345,087	319,426	67	9	NSR								
CFS090	8,344,956	319,280	54	27	2	26	24	99.34	0.12	0.18	0.10	99.95	0.17
CFS091	8,344,781	319,350	45	15	5	14	9	99.09	0.16	0.24	0.11	99.85	0.19
CFS092	8,344,594	319,415	38	23	1	23	22	99.50	0.06	0.05	0.10	99.89	0.15
CFS093	8,344,398	319,441	34	11	NSR								
CFS094	8,344,932	319,538	61	14	NSR								
CFS095	8,344,741	319,607	55	8	NSR								
CFS096	8,344,552	319,681	42	8	NSR								
CFS097	8,344,356	319,722	33	8	NSR								
CFS098	8,344,181	319,815	30	9	NSR								
CFS099	8,344,199	320,045	45	15	1	12	11	99.28	0.10	0.17	0.07	99.85	0.21
CFS100	8,344,347	319,918	43	11	NSR								
CFS101	8,344,848	321,214	83	16	0	16	16	98.65	0.53	0.36	0.12	100.16	0.47
CFS102	8,344,688	321,332	69	14	1	5	4	99.25	0.18	0.13	0.13	10.28	0.56
CFS103	8,344,584	321,506	48	27	0	27	27	99.53	0.11	0.06	0.13	100.31	0.33
CFS104	8,344,886	320,850	92	28	1	28	27	99.21	0.22	0.24	0.14	100.16	0.29
CFS105	8,344,787	321,038	80	18	1	9	8	99.46	0.05	0.04	0.12	99.97	0.26
					15	19	4	99.59	0.10	0.12	0.11	100.18	0.22
CFS106	8,344,642	321,170	81	22	0	18	18	99.05	0.12	0.07	0.15	99.64	0.24
CFS107	8,344,506	321,315	73	10	1	6	5	99.10	0.12	0.05	0.15	99.54	0.07
CFS108	8,345,229	320,857	85	11	1	11	10	99.30	0.07	0.03	0.07	99.82	0.32
CFS109	8,345,210	321,087	93	26	1	26	25	99.48	0.03	0.04	0.09	99.82	0.30

Hole Number	Easting	Northing	RL	Total depth	From (m)	To (m)	Interval (m)	SiO_2	Fe_2O_3	Al_2O_3	TiO_2	Total	LOI
CFS110	8,345,027	321,139	88	16	1	16	15	99.36	0.13	0.11	0.11	99.94	0.19
CFS111	8,344,945	321,193	91	18	1	14	13	99.59	0.05	0.04	0.09	99.97	0.17
CFS112	8,345,130	321,275	96	20	0	20	20	99.44	0.07	0.06	0.14	99.88	0.13
CFS113	8,344,987	321,322	91	16	0	14	14	99.38	0.07	0.09	0.09	99.88	0.23
CFS114	8,344,690	321,672	53	11	0	9	9	99.33	0.10	0.11	0.06	99.84	0.22
CFS115	8,345,250	321,164	100	26	0	26	26	99.12	0.13	0.06	0.16	99.68	0.16
CFS116	8,345,434	321,136	92	10	1	4	3	99.21	0.05	0.05	0.09	99.68	0.27
CFS117	8,345,494	321,004	88	9	NSR								
CFS118	8,345,057	320,895	93	12	1	7	6	99.03	0.11	0.06	0.24	99.67	0.18
CFS119	8,344,926	321,001	89	14	1	8	7	99.28	0.06	0.04	0.13	99.28	0.26
CFS120	8,345,380	319,485	74	19	1	17	16	99.15	0.20	0.08	0.15	99.84	0.22

1. Topsoil contamination can result in top 1 meter being below 98.5% SiO_2 cut-off (COG), if there was too much organic material in the top 1m of the hole no samples were collected

2. The significant intervals were calculated using a 98.50% SiO2 COG,

3. Only intervals with a minimum width of 3m were reported as this is considered to be the minimum mining width for silica sands

4. A maximum of 3m of internal dilution was included for each intercept, (i.e. only a maximum of three consecutive three samples would be recorded as part of an intercept if they assayed below the COG).

5. NSR – No significant results, ie no intercepts met the criteria to be included in the table

About the Cape Flattery Silica (CFS) Project

Metallica's 100% owned Cape Flattery Silica Sands (CFS) project is adjacent to the world class Cape Flattery Silica Sand mining and shipping operation owned by Mitsubishi. Exploration drilling to date has now confirmed that the sand dunes within EPM 25734 contain high purity silica sands with an in-situ quality which is understood to be comparable to Mitsubishi's Cape Flattery Silica Mine.

Figure 4. *Yearlong Contractors vacuum-based drill rig working at CFS project with Mitsubishi silica sand operations in the background*

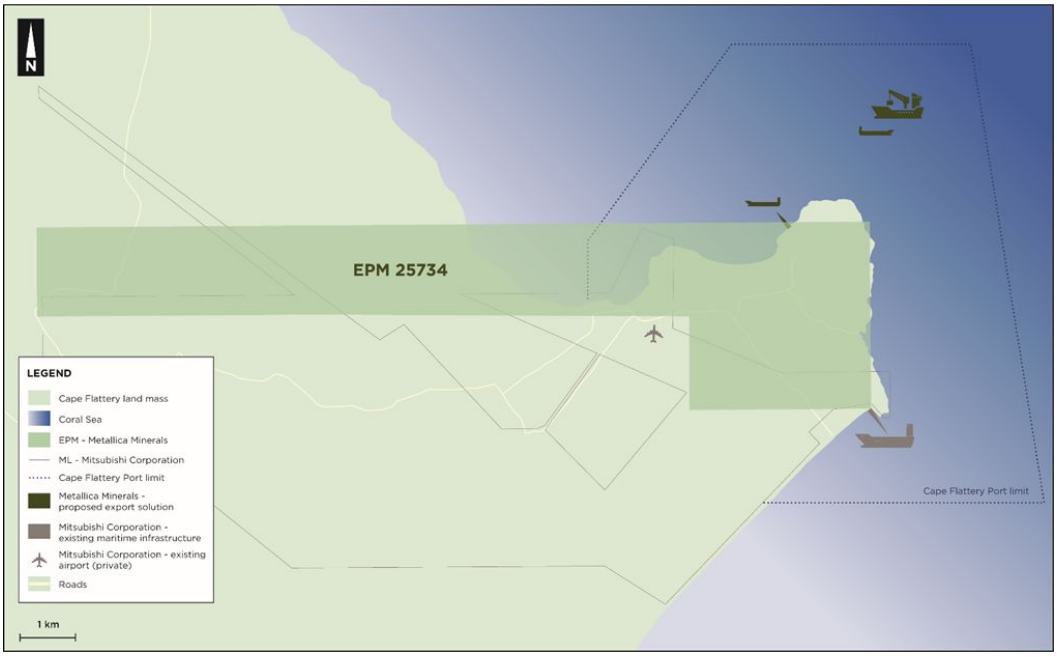


Figure 5 *EPM 25734 location and orientation at Cape Flattery and within the Cape Flattery Port limit*

On 2 March 2021, the Company released an upgraded resource in the CFS Eastern Resource Area estimated and summarised in

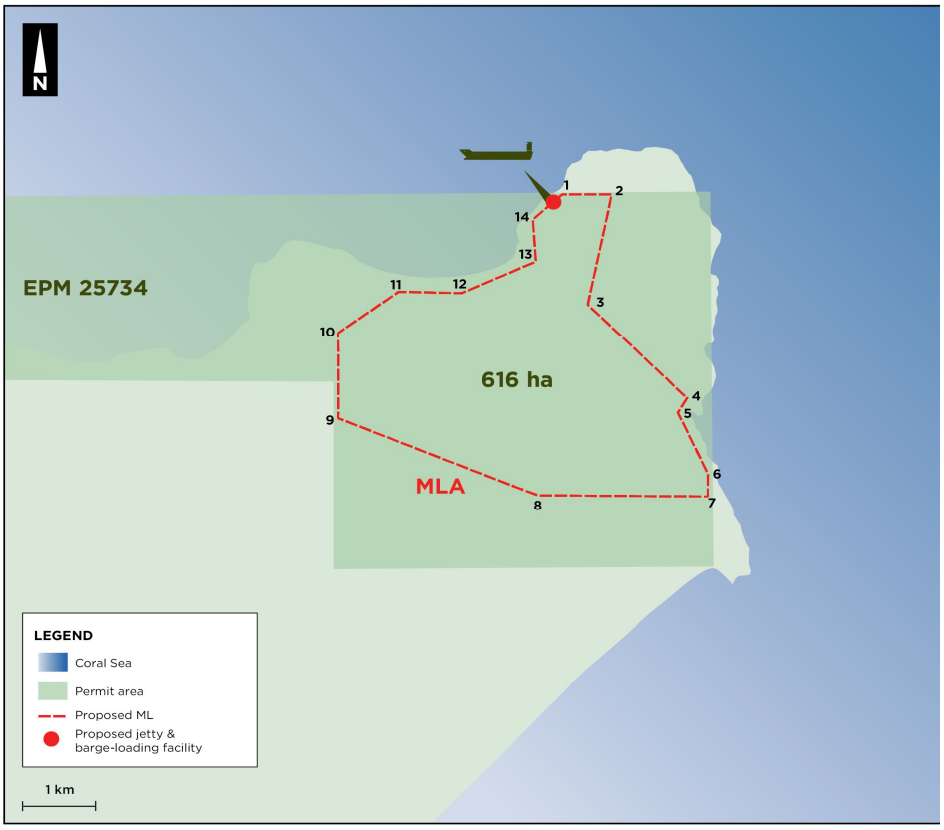
Table 2[3].

Table 2. Cape Flattery Resource as off 2nd March 2021

Classification	Silica Sand (Mt)	Silica Sand (Mm^3)	Density (t/m^3)	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	TiO_2 %	LOI %
Indicated Resource	**5.4**	**3.4**	**1.6**	**99.1**	**0.04**	**0.09**	**0.13**	**0.13**
Inferred Resource	**32.9**	**20.5**	**1.6**	**99.0**	**0.07**	**0.12**	**0.15**	**0.11**
Total	**38.3**	**23.9**	**1.6**	**99.0**	**0.06**	**0.12**	**0.15**	**0.12**

The Resource has been prepared in accordance with the JORC Code 2012 – A cut-off grade 98.5% has been defined based on the surrounding data. These results show there is good potential to produce a premium grade silica product using standard processing techniques.

On 15 June 2021 the Company announced that it had lodged a Mine Lease Application (MLA) for the project[4] , Figure 6.



[3] First Report to the ASX on the 2nd March 2021"38 Mt of High Purity Silica Sand Resource at Cape Flattery Silica Sands Project", Competent persons are Mr Neil Mackenzie-Forbes and Mr Chris Ainslie

[4] First Report to the ASX on the 15th June 2021"MLA Lodged for Cape Flattery Silica"

Figure 6. *Cape Flattery Silica Sand project MLA area boundary and EPM*

On 22 June 2021 the Company released the first metallurgy test results on samples taken from the December 2020 drilling program. The bulk sample metallurgical testing confirmed high quality silica sand product and demonstrated a low contaminant product with an attractive narrow particle size distribution can be produced at a high yield. The test work produced a product with 99.8% SiO_2, 170ppm Fe_2O_3 and 450ppm Al_2O_3 and further work included successful test of process to reduce Fe_2O_3 from 170ppm to 70ppm Fe_2O_3[5] .

This announcement has been approved in accordance with the Company's published continuous disclosure policy and has been approved by the Board.

For further information, please contact:

Mr Theo Psaros
Executive Chairman
+61 (7) 3249 3000

Mr Scott Waddell
CFO & Company Secretary
+61 (7) 3249 3000

Competent Person Statement

Cape Flattery Silica Sands Resource
The information in this report that relates to Mineral Resources at the Cape Flattery Silica Sands Project is based on information and modelling carried out by Dale Brown, Senior Mining Engineer, Ausrocks Pty Ltd who is a competent person and a Member of the Australasian Institute of Mining & Metallurgy. Dale Brown is employed by Ausrocks Pty Ltd who have been engaged by Metallica Minerals Ltd to prepare this independent report, there is no conflict of interest between the parties.
Dale Brown has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code). Dale Brown consents to the inclusion in the report on the matters based on their information in the form and context in which it appears.

Cape Flattery Silica Sands Exploration Results
The information in this report that relates to the Exploration Sampling and Exploration Results is based on information compiled by Mr Patrick Smith, a Competent Person who is a Member of the Australian Institute of Mining and Metallurgy.

Mr Smith is the owner and sole Director of PSGS Pty Ltd and is contracted to Metallica Minerals as their Exploration Manager. Mr Smith confirms there is no potential for a conflict of interest in acting as the Competent Person. Mr Smith has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Smith consents to the inclusion of this information in the form and context in which it appears in this release/report.

[5] First reported to the ASX on the 22nd June 2021 "Excellent Metallurgical Test Results on Cape Flattery Silica" competent persons, Mr Neil Mackenzie-Forbes, Mr Chris Ainslie, Carl Morandy, Mr Brice Mutton and Mr Kruger

Reference to Previous Releases

Drilling, resource estimates and metallurgical results referred to in this announcement have been previously announced to the market in reports dated; 2nd March, 15th June, 22nd June and the 12th August 2021 and are available to view and download from the Company's website: ASX Announcements — Metallica Minerals Limited***https://metallicaminerals*****.**

Regional aeromagnetic data used as underlays in some figures of this announcement have been previously reported to the market in the report dated 23 September 2020 and can be viewed and downloaded from the Company's website.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. MLM confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Forward-looking statements

Forward-looking statements are based on assumptions regarding Metallica, business strategies, plans and objectives of the Company for future operations and development and the environment in which Metallica may operate.

Forward-looking statements are based on current views, expectations and beliefs as at the date they are expressed and which are subject to various risks and uncertainties. Actual results, performance or achievements of Metallica could be materially different from those expressed in, or implied by, these forward-looking statements. The forward-looking statements contained in this presentation are not guarantees or assurances of future performance and involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of Metallica, which may cause the actual results, performance or achievements of Metallica to differ materially from those expressed or implied by the forward-looking statements. For example, the factors that are likely to affect the results of Metallica include general economic conditions in Australia and globally; ability for Metallica to funds its activities; exchange rates; production levels or rates; demand for Metallica's products, competition in the markets in which Metallica does and will operate; and the inherent regulatory risks in the businesses of Metallica. Given these uncertainties, readers are cautioned to not place undue reliance on such forward-looking statements.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• Drilling samples ranging from 0.5 to 1.0m down hole intervals of vacuum drill rig cuttings were collected from a cyclone. 100% of the sample was collected in a pre-numbered sample bag, with each sample having a mass of between 2.5 to 4kg. • The entire 1m sample was collected on site and dispatched to the laboratory for splitting and analysis • Samples were submitted to ALS Laboratories in Brisbane for drying, splitting and pulverization in a tungsten carbide bowl, and XRF analysis. • Sampling techniques are mineral sands "industry standard" for dry aeolian sands with low levels of induration and slime. • As the targeted mineralization is silica sand, geological logging of the drill material is a primary method for identifying mineralisation. • Samples from this drilling programme will be selected for Metallurgical testwork. These samples will be composited to form a bulk sample. No process for selecting the individual samples for testwork has yet to be determined. .
Drilling techniques	• *Drill type and details.*	• The drilling technique used was vacuum drilling, which was undertaken by Yearlong Contractors using a tractor mounted drill rig. The drill bit diameter was 48mm equivalent to NQ sample size. • Holes were terminated in a clayey sand layer or when the water table was intersected, and wet sand affected sample recovery
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• Visual assessment and logging of sample recovery and sample quality. • Vacuum drilling is low disturbance and low impact, minimising drill hole wall impact and contamination. • Samples are collected in a cyclone which has a clear Perspex casing allowing visual inspection of sample as they are being collected. • Regular cleaning of cyclone and drill rods was utilised to prevent sample

		contamination. • No sample bias occurred between sample recovery and grade. • The consistent weight of the samples indicates that recovery of between 90 to 100% was achieved, lower recoveries (less than 80%) were recorded in the top 1m of each hole due to the presence of organic matter and topsoil
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature.* • *The total length and percentage of the relevant intersections logged*	• Geological logging of the total hole by field geologist, with retention of sample in chip trays to allow subsequent re-interpretation of data if required. • The total hole is logged in 1m intervals; logging includes qualitative descriptions of colour, grain size, sorting, induration and estimates of HM, slimes and oversize utilising panning. • Photographs of each chip tray were taken so a digital visual record of each of the drill holes was obtained • Logging has been captured through field drill log sheets and transferred through to an excel spreadsheet which is then transferred to a central database and storage prior to being provided to a third party consultant for resource estimation.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for*	• The sample for the entire 1m interval was collected from the cyclone as it came out of the cyclone. • The sample was placed in a numbered calico bag, prior to being placed in a poly-weave sack for dispatch to the laboratory • Each sample weighed between 2.5 to 4.0Kg. • The samples were split to 100gram samples for analysis in the laboratory under laboratory-controlled methods • The sample size is considered appropriate for the grain size of material, average grain size (87% material by weight between 0.125mm and 0.5mm • The Competent Person considers the sample preparation to be appropriate for drilling . • The Competent Person considers the sample sizes to be appropriate for

	field duplicate/second-half sampling. • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	the type of material being sampled. Appropriate sample sizes and pulverisation of the entire sample support good representivity
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Drilling samples were submitted to ALS Brisbane, where they were dried, weighed and split. • Analysis was undertaken by ALS Brisbane utilising a Tungsten Carbide pulverization, ME-XRF26 (whole rock by Fusion/XRF) and OA-GRA05(H_2O/LOI by TGA furnace). • Samples were assayed primarily for SiO_2, Fe_2O_3, Al_2O_3 and TiO_2 and a range of other elements. • Analysis undertaken determined by a sample code which correlates to drill logs to ensure no sample bias. • QC procedures - No duplicate samples were collected in the field as the entire sample was submitted to the laboratory. However selected duplicate samples will be selected from the coarse rejects at the laboratory , with approximately 1 sample selected per hole for duplication. Inter-laboratory checks will also be undertaken on a further 100 samples. ,
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Significant intersections validated against geological logging and local geology/ geological model. • No holes have been twinned, as the grade continuity in the holes is consistent. • All data captured and stored in both hard copy and electronic format. • No assay data had to be adjusted. • All digital data is verified by the Competent Person. • No adjustments were made to assay data.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• All holes initially located using handheld GPS with an accuracy of 5m for X, Y. • UTM coordinates, Zone 55L, GDA94 datum. • Topographic surface generated from Lidar imagery which was produced

	• *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	by Aerometrex
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Drilling was completed on existing tracks and newly cleared lines which are 100m to 200m apart, the lines are orientated approximately NW – SE • The holes were spaced approximately 200 meters apart and in some areas were infilled to 100m and 50m centres. • Drill spacing, and distribution is sufficient to allow valid interpretation of geological and grade continuity for an Inferred Mineral Resource and potentially an Indicated Mineral and Measured Resource where specified. • There has been no sample compositing.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The dune field has ridges dominantly trending 320º - 330°. • The drill access tracks typically run along or sub-parallel to dune ridges which suggest unbiased sampling, some cross-dune tracks linking the ridges were also drilled • Silica deposition occurs as windblown with angle of rest approximately 35º. Drilling orientation is appropriate for the nature of deposition.
Sample security	• *The measures taken to ensure sample security.*	• Sample collection and transport from the field was undertaken by company Personnel following company procedures. • Samples were aggregated into larger polyweave bags and sealed with plastic zip ties, Bags were labelled and put into palette-crates and sealed prior to being shipped to ALS Townsville. • Samples were delivered direct to ALS in Townsville, where they were transhipped to ALS Brisbane for sample preparation and analysis
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• A review was conducted internally by Metallica Minerals Ltd and a third-party consultants, Ausrocks Pty Ltd, will also review the data prior to undertaking a resource estimate.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Cape Flattery Silica Sands Project is located within EPM 25734 in Queensland and is held by Metallica Minerals Ltd through subsidiary company Cape Flattery Silica Pty Ltd. • A compensation and conduct agreement is in place with the landholder (Hopevale Congress) and native title party. • The tenement is in good standing and there are no impediments to conduct exploration programs on the tenements.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous exploration has been carried out in the area during the 1970's and 80s by Cape Flattery Silica Mines (CFSM). CFSM reported seven (7) holes drilled for 84 meters. These holes intersected sand dunes between 10 and 20 meters in thickness. • The historical exploration data is of limited use since but never assayed for SiO2 and there is poor survey control to determine exact locations of historical holes. • All current exploration programs are managed by Metallica Minerals
Geology	• *Deposit type, geological setting, and style of mineralisation.*	• The geology comprises variably re-worked aeolian sand dune deposits associated with Quaternary age sand-dune complex. • Mineralisation occurs within aeolian dune sands
Drill hole Information	• *A summary of all information material to the understanding of the exploration results* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent*	• A tabulation of the material drill holes is included in the body of this report as Table 1.

	Person should clearly explain why this is the case.	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• The significant intercepts for each drill hole are calculated using a cut off grade of 98.5% SiO2, only intercepts of greater than 3m are considered as significant as that is considered to be the minimal mining width • Internal dilution of upto 3m is included in the reported intercepts • The grade is highly consistent, and the aggregate intercepts use a simple arithmetic average • No top cuts were applied to the data. • No metal equivalents reported.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• As the mineralisation is associated with aeolian dune sands the majority of which are sub-horizontal, some variability will be apparent on dune edges and faces.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar*	• A map of the drill collar locations is incorporated with the main body of the report.

	locations and appropriate sectional views.	
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All exploration results are reported in a balanced manner. All results are supported by clear and extensive diagrams and descriptions. No assays or other relevant information for interpreting the results have been omitted.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Geological observations are consistent with aeolian dune mineralisation. • Groundwater was intersected during drilling at the base of holes, as expected given the dune complex is an aquifer and drilling was undertaken to a maximum depth of 35m. • The mineralisation is unconsolidated sand. • A bulk sample will be composited from the individual samples for metallurgical testwork, this work will commence in Q4 • There are no known deleterious substances. • All exploration results detailed in attached report.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive*	• A limited amount of infill drilling may be required to increase the confidence levels in the resource prior to a PFS and FS • The next stage of exploration on the EPM will be to assess the western targets on the EPM utilising Auger sampling, but this work has yet to be planned