

# **SEBROF RESOURCES PTY LIMITED**

A.C.N. 602 581 288

## **EPM 26219 “Croydon South”**

### **CROYDON PROJECT**

#### **FINAL REPORT FOR EPM 26219**

**05/12/2016 to 04/12/2021**

<b>TENEMENT HOLDER:</b>	<b>SEBROF RESOURCES PTY LTD</b>
<b>REPORT SUBMITTER:</b>	<b>SEBROF RESOURCES PTY LTD</b>
<b>AUTHORS:</b>	<b>N. FORBES</b>
<b>MAP SHEETS:</b>	<b>1: 250 000    Croydon SE54-11</b> <b>1: 100 000    Croydon 7361</b>
<b>COMMODITIES:</b>	<b>Au, Ag, Cu, Sn &amp; Graphite</b>
<b>GEOGRAPHIC COORDS:</b>	<b>-18° 22'S / 142°21'E</b>
<b>TECTONIC:</b>	<b>Croydon Province</b>
<b>DATE:</b>	<b>5 December 2021</b>

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**Note:**

**This report complies with the MRA reporting regulations as prescribed in sections 13B, 13C or 13D of the Mineral Resources Regulation 1989. The exploration work completed on these tenements complies with the Work Program in the tenure document. Expenditures on the tenements have been met or exceeded.**

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# 1. SUMMARY

The Croydon Project was established in 2016 by Sebrof Resources Pty Ltd (Sebrof), a private company established to explore for minerals in Queensland. Along with EPM 26270 Croydon East, the project was initiated to investigate the graphitic granites of the Esmeralda Super-suite in the Croydon Province. Sebrof was primarily targeting gold mineralisation associated with the graphitic granite, both Croydon style vein structures and potential mesothermal feeder structures.

The Croydon South tenement is located immediate south of the Croydon Goldfield where Moonlight Creek and Mesozoic sequences cover the Proterozoic sequences. This has affectively shielded any potential mineralisation from historical prospecting and modern geochemical exploration methods. This makes the tenement “greenfield”, effectively unexplored and therefore untested.

Sebrof believes there is scope to identify blind gold mineralisation below thin cover at depths amenable to shallow mining. Interpretation of available magnetics and regional seismic transect indicates crustal tapping structures lineaments and structures aligning with the Croydon gold Field indicating potential fluid pathways and extensions of mineralisation.

Sebrof planned a high risk exploration strategy to conduct shallow RAB drilling to test basement depth, geology and potential mineralisation along the identified north south structures. The design of the program was to target magnetic signatures associated with intersecting structures and potentially a combination of grid design and track based drilling to minimise land disturbance. Sebrof ultimately didn't complete any drilling within the EPM with all work completed either reconnaissance or desktop.

Sebrof recommends ground based geophysical techniques such as EM and magnetics to identify potential targets for drill testing.

## 2. INTRODUCTION

EPM 26219 Croydon South is 100% held and managed by Sebrof Resources Pty Ltd (Sebrof). The tenement was granted on the 5 December 2016 for a period of 5 years.

Sebrof exploration rationale was to target extensions of the Croydon Gold Field mineralisation in areas where Cainozoic and Mesozoic cover sequences have hidden mineralisation from historic prospectors targeting outcrop and modern mineral explorers using geochemical techniques.

The tenement initially comprised 54 sub-blocks within the Normanton Block, and largely located across eastern areas of Mittagong Station. Following a review at the end of first year of tenure, Sebrof relinquished the eastern 35 sub-blocks to concentrate on the potential blind mineralisation in the western half of the tenement.

The tenement is located south of the town of Croydon and is accessed from Croydon Mittagong Road. Croydon South is located on the Croydon (7361) 1:100,000 map sheets on the Croydon SE55 11 1:250,000 map sheet.

The remaining tenement area is covered by Cainozoic and Mesozoic sediments, beneath which is known Proterozoic basement rocks believed to be part the Esmeralda Supersuite. Sebrof is primarily targeting concealed and sub cropping hydrothermally altered graphitic granite as potential host for mineralisation.

### 3. LOCATION, ACCESS & SETTING

The Croydon Project area is located in North West Queensland and is 20km south of the township of Croydon. The tenement is accessed via the Croydon-Mittagong Road which is a formed dirt road which accesses the Gulf Development Road approximately 5km south of Croydon. (Figure 2)

The Project is located predominantly on Mittagong Station. The project is contained within the Croydon (SE54-11) 1:250,000 and the Croydon (7361) 1:100,000 map sheets and is centred on 142°20'E -18°20'S.

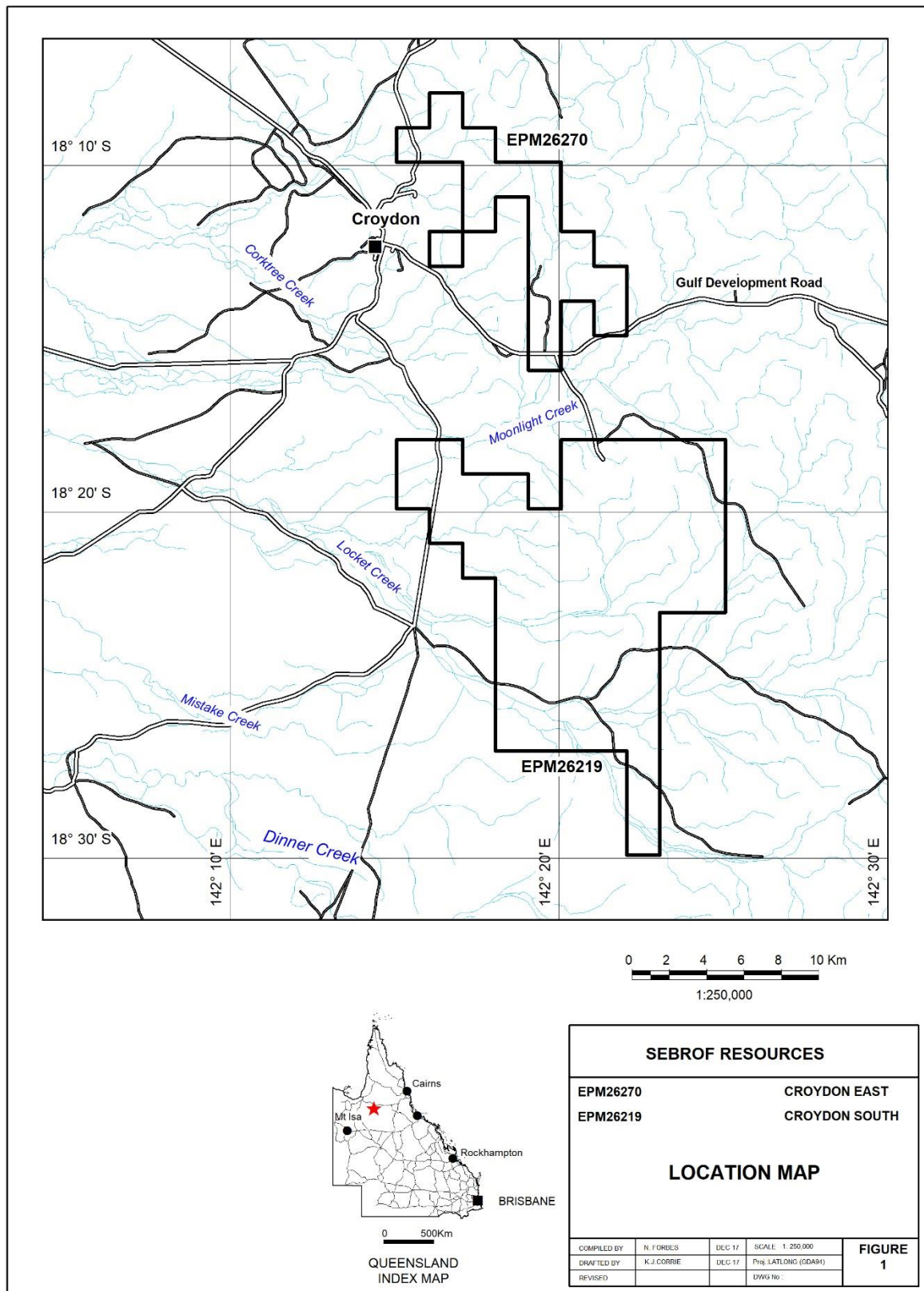
The Croydon South EPM is set on flat open country in the western half, to hilly terrain in the east with Pastoral activities of cattle breeding and grazing being the main land use.

Figure 1: Looking west over Mesozoic cover





Figure 2: Location Map



## **Environmental Considerations**

The tenure holds Environmental Authority (EA) for Level 2 Code Compliant activities, formerly termed a Standard EA. The environmental authority for EPM 26219 is EPSX04029516. At this stage there are no significant additional conditions attached to the EA of EPM 26219, apart from a reminder to comply with the Code of Environmental Compliance for Exploration and Mineral Development Projects.

### ***Endangered Regional Ecosystems***

EPM 26219 no longer has any Category B environmentally sensitive areas following the sub-block relinquishment.

### ***Other Environmentally Sensitive Areas***

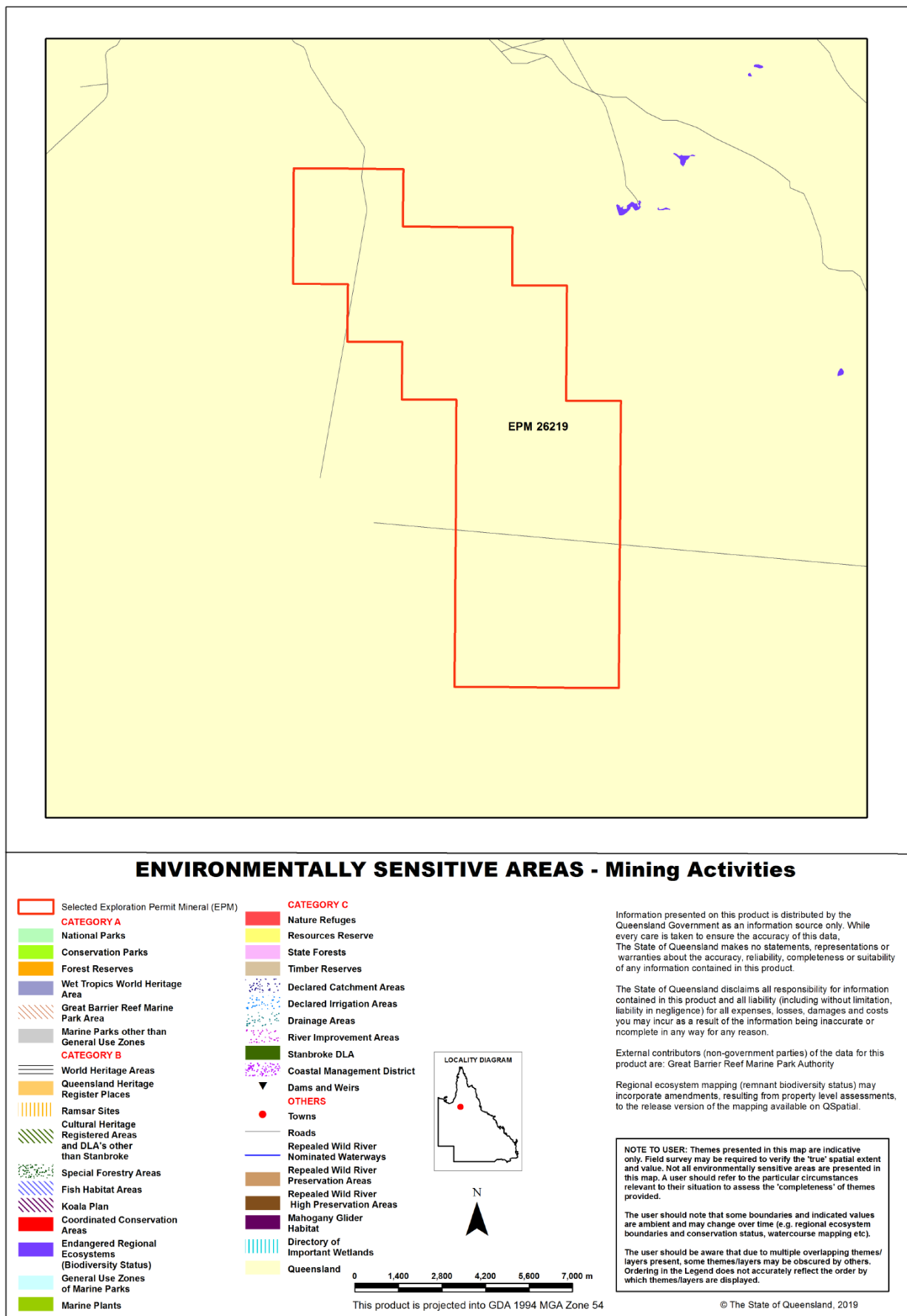
There are no other environmentally sensitive areas identified.

### ***Cultural Heritage / Aboriginal Cultural Heritage / Heritage Sites***

Initial searches have shown that there are no Aboriginal Cultural Heritage sites within this EPM, as recorded by the Department of Natural Resources and Water.

MLM understands that all significant Aboriginal cultural heritage in Queensland is protected under the *Aboriginal Cultural Heritage Act 2003*. MLM takes all reasonable and practical measures to ensure that their activities do not harm Aboriginal Cultural Heritage, as required under the legislation.

Figure 3: Environmentally Sensitive Areas



## 4. TENURE

The tenement holder is Sebrof Resources Pty Ltd which is currently a privately-owned Queensland based and focussed company. Croydon South initially comprised 63 Sub Blocks.

Following a review of available data at the end of the first year, Sebrof relinquished 35 sub-blocks, the entire eastern half of the tenement to concentrate on the potential blind mineralisation under the shallow cover sequences in the western half of the tenement.

Following a relinquishment of 35 sub blocks in 2018 at the end of Year 1, the tenement now comprises 28 sub blocks. Details of which are tabulated in Table 1

Table 1: Sub blocks in EPM

REGION	BLOCK	SUB-BLOCKS	TOTAL
NORM	1996	Q R V W X Y	6
NORM	1997	Q R S T U V W X Y Z	0
NORM	2068	B C D E H J K O P T U X Y	13
NORM	2069	A B C D E F G H J K L M N O P Q R S V W X	3
NORM	2140	D E J K	4
NORM	2141	A B C F G H N S X	2
Total			28

### Tenement restrictions

There are no tenement restrictions identified.

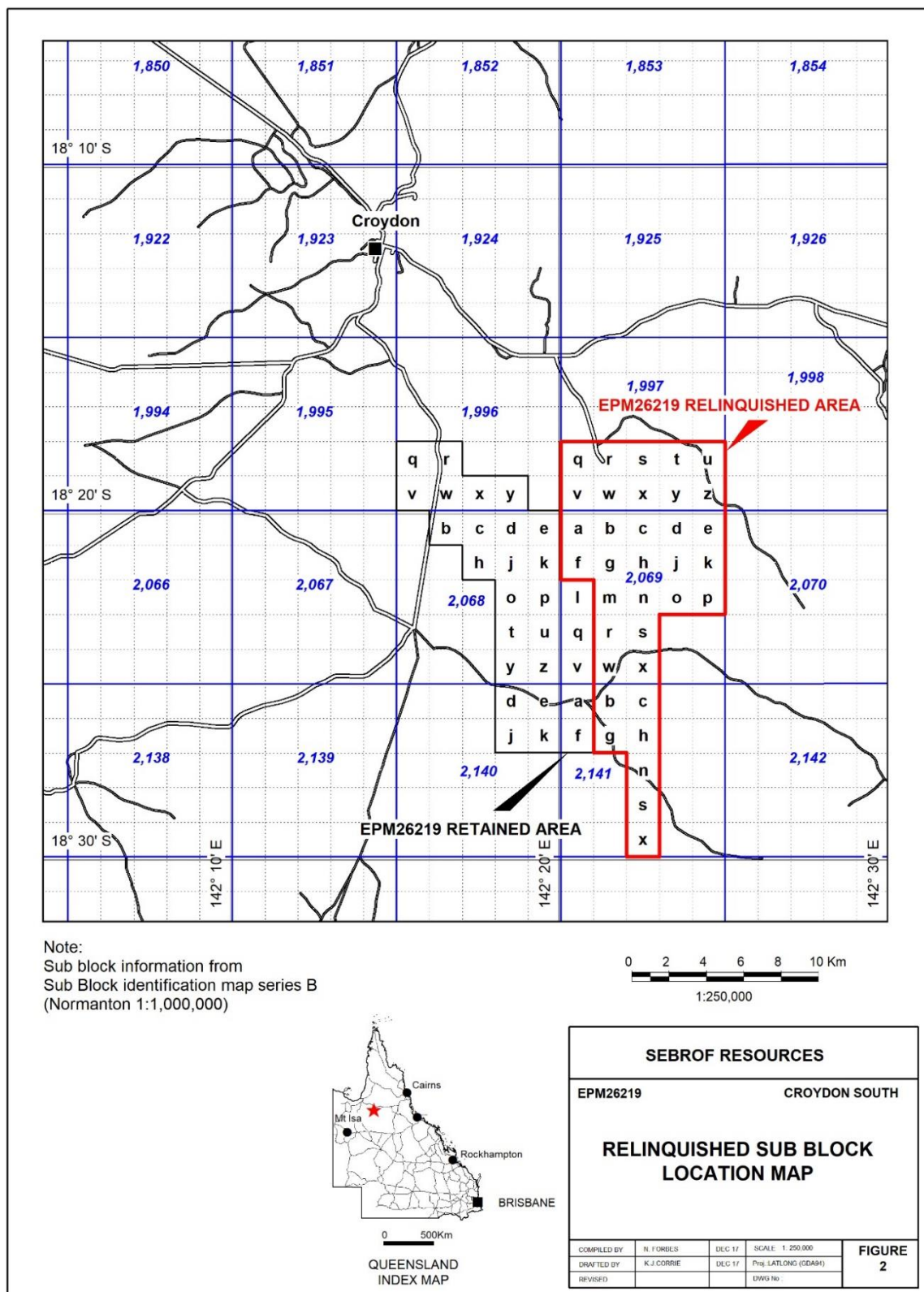
### Native Title

The relevant Native Title Parties are the Tagalaka People #2 Tagalaka Aboriginal Corporation RNTBC (Registered Native Title Claimant)

QCD2012/013 (Native Title Tribunal Number)

QUD6020/2001 (Federal Court Number)

Figure 4: Sub Block Location Map



## 5. EXPLORATION RATIONALE

Sebrof is targeting primarily gold mineralisation and its association with the graphitic granites of the Esmeralda Granite as seen in the proximal Croydon Gold Field which has historically yielded 60 tonnes of bullion, of which 33 tonnes was gold. Sebrof is targeting north south crustal tapping structures identified within the magnetics and seismic profiles where they sub crop below shallow Mesozoic cover screening potential mineralisation from historic prospecting and geochemical exploration techniques.

These north south structures, likely mafic dykes with remnant magnetism may represent conduits for mineralising fluids for the Croydon gold fields to the north and as such may represent larger more diffuse styles of gold mineralisation for amenable to modern larger scale mining methods.

Croydon style mineralisation (Croydon Veins) is considered to be mesothermal and constrained to quartz rich north trending linear structures. These structures have had numerous historical descriptors and have been variously called quartz reefs, lodes, veins and breccias. They appear to be remnants of north south vein structures associated late stage structural activity and thrust faults of the Proterozoic Croydon Volcanics and Esmeralda Granite. The Au/Ag mineralisation is generally confined to these structures where they are intersected by NW trending structures while hosted within or proximal to graphitic granite.

The Croydon style mineralisation was exploited historically as the mineralising structures were of a size and grade amenable to the then hand-held mining techniques. Modern mechanised mining techniques require larger mineralised structures to satisfy minimum sized throughput and production required to meet modern mining economics.

Gold mineralisation at Croydon is generally restricted to the Esmeralda Granite and Croydon Volcanics near where they contact. The Croydon Volcanics are considered (Budd 2001) to be coeval with the Esmeralda Granite as they have similar ages and chemistry.

Graphitic granite is interpreted to be the remnants of predominantly assimilated carbonaceous sediment protolith. Magmatic assimilation and differentiation appears to have concentrated residual carbon in the margins of the Esmeralda Granite, namely the roof. Subsequent reworking and hydrothermal alteration have resulted in exotic graphitic granites with xenoliths of remnant protolith and aggregations of graphite into blebs.

Gold mineralisation is likely a redox reaction when active vein structures fluids precipitate Au /Ag out when contacting carbon.

Corktree Creek an east west oriented water courses approximately 5km south of Croydon appears to be the southern limit of known gold mineralisation of the Croydon gold field. Along with Moonlight Creek to the south, these water courses have deposited alluvium/colluvium across the target Proterozoic obscuring outcrop and any geochemical signature.

The alluvium associated with creek screen the targeted rock units and is impermeable to geochemical prospecting.

It could be assumed that late 19<sup>th</sup> and early 20<sup>th</sup> century prospectors would have closely inspected all ground along the Croydon gold field structure and evidence of 'Diggings' on any quartz vein / quartz breccia outcropping would be visible or have been historically reported like many workings in the region.

Old time prospectors lacked techniques to search under sedimentary cover and seasonable flooding of creeks would have made major excavations impractical.

Additionally, prospectors would have been using quartz veining and graphitic granite as a target geology marker as it is associated with gold mineralisation as much as Croydon veins. To the south of Croydon, little to no graphitic granite has been mapped or identified. Graphitic granite is relatively soft and preferentially weathers and rarely outcrops, except where silicified. Whilst it may not outcrop, graphitic granite with remarkable similarity to the Croydon material has been identified 70km south of Croydon at the "Warrior Graphite Deposit" in a similar lithology and along the same north south structures commented on before.



This lack of outcrop was also detailed by Rands (1896) who systematically mapped all the Croydon gold workings in 1894/95 and documented the styles of mineralisation and the geology associated with the mineralisation.

Additionally, it was known that the Quartz Lodes were generally more productive in the graphitic granite as graphite was always associated with gold mineralisation.

Sericite alteration associated with Croydon style mineralisation is indicative of hydrothermal alteration. Dating of the sericite indicates a Palaeozoic age, which contradicts the Proterozoic age of the host rocks but could be resultant from later stage alteration event most likely postdating the mineralising event. Some explorers interpret there may be a mineralising event associated with the Palaeozoic alteration event which may be part of a major mineralising event in North Queensland.

The modern phase of mining at Croydon in the 1990's stimulated the largest modern exploration program within the Croydon region, but this in itself restricted exploration to outcropping Croydon vein style of mineralisation to augment mill feed. This has restricted thinking to smaller scale mining and exploration completed reflects that.

Modern geophysics, namely aeromagnetic has confirmed the continuity of magnetic signatures of structures along the same trend as Croydon under cover. Specific targeting of intersections of cross-cutting structures. This has been confirmed to a lesser extent at the historic Esmeralda Gold Field 80km south of Croydon

Following the 2007 seismic transect (07GA-IG1) completed by Geoscience Australia (GA), GA identified a series of crustal-penetrating shear zones with apparent dips to the southwest, in the Croydon area. A series of crustal-penetrating shear zones were recognised in the hanging wall of the fossil subduction zone relationship between crustal penetrating shear zones and Croydon. The GA regard the surface extension of these shear zones to have potential for lode gold deposits, an interpretation supported by the Croydon goldfield, which lies along strike from the shear zones.



## 6. GEOLOGICAL SUMMARY

### Regional

Located within the Georgetown Inlier, the project areas cover the Proterozoic Croydon Province which predominantly comprises the Croydon Volcanics and the Esmeralda Supersuite. The Esmeralda Supersuite Granites can be unusually abundant and extensively graphitic. As portions of the interpreted Esmeralda Supersuite is concealed between the Croydon Volcanics along with younger Cainozoic and Mesozoic sediments, detailed investigations of the geology are limited where cover exists.

The Esmeralda Supersuite has traditionally been categorised as an S-Type granites including the targeted Esmeralda Granite. The Esmeralda Granite (GSQ Record 1997/1) is a coarse-grained biotite granite containing inclusions of graphite and xenoliths of graphitic meta-sedimentary rocks. More recently in 2002 Geoscience Australia has proposed that the Esmeralda Granite could potentially be actually an I-Type granite based on the hypothesis that the abundant graphite has reduced the oxidation state of the granite where it assimilates with the country rock to that of a S-Type granite. Other I-Type features of the granites are the presence of magnetite which demonstrates an oxidised nature to the granite. Geoscience Australia even categorised the Esmeralda granite as a Hiltaba Type granite highly prospective for gold. As only the granite margins are exposed in outcrop and therefore the only areas studied, the original source rocks could be a combination of lithologies.

Mackenzie (1988) noted that “parts of the granite are extremely rich in graphite,” observing at Croydon a tabular zones 120m thick and several kilometres long are packed with graphitic metasedimentary enclaves and masses of *almost pure graphite* set in a matrix of intensely hydrothermally altered granite.

Table 2: Geological Sequence in the North Western Georgetown Inlier

UNIT	AGE	LITHOLOGY
	Quaternary	Sand, gravel, silt & mud – alluvial and channel deposits
	Tertiary-Quaternary	Residual and alluvial sands, gravels, silt and soil
	Tertiary-Quaternary	Ferricrete, alluvium and colluvium
Wallumbulla Formation	Cretaceous	Sandstone and mudstone
Gilbert River Formation	Jurassic-Cretaceous	Dominantly sandstones, lesser finer clastics
Eulo Queen Group	Jurassic	Sandstones and siltstones and minor conglomerates
	Permian	Rhyolites, local andesites and granodiorites
Inorunie Group	Mid to Late Proterozoic	Dominantly sandstones and orthoquartzites, minor siltstones and mudstones
Esmeralda Granite (& minor granites)	Middle Proterozoic	Dominantly biotite granites, some with muscovite, garnet
Croydon Volcanic Group	Middle Proterozoic	Dominantly rhyolites and dacites, minor sediments and andesites
Forest Home Trondhjemite	Middle Proterozoic	Biotite trondhjemite
Langlovale Group	Middle Proterozoic	Sandstone overlain by finer clastics
Etheridge Group	Middle Proterozoic	Dominantly fine clastics including carbonaceous shales

## Local Geology

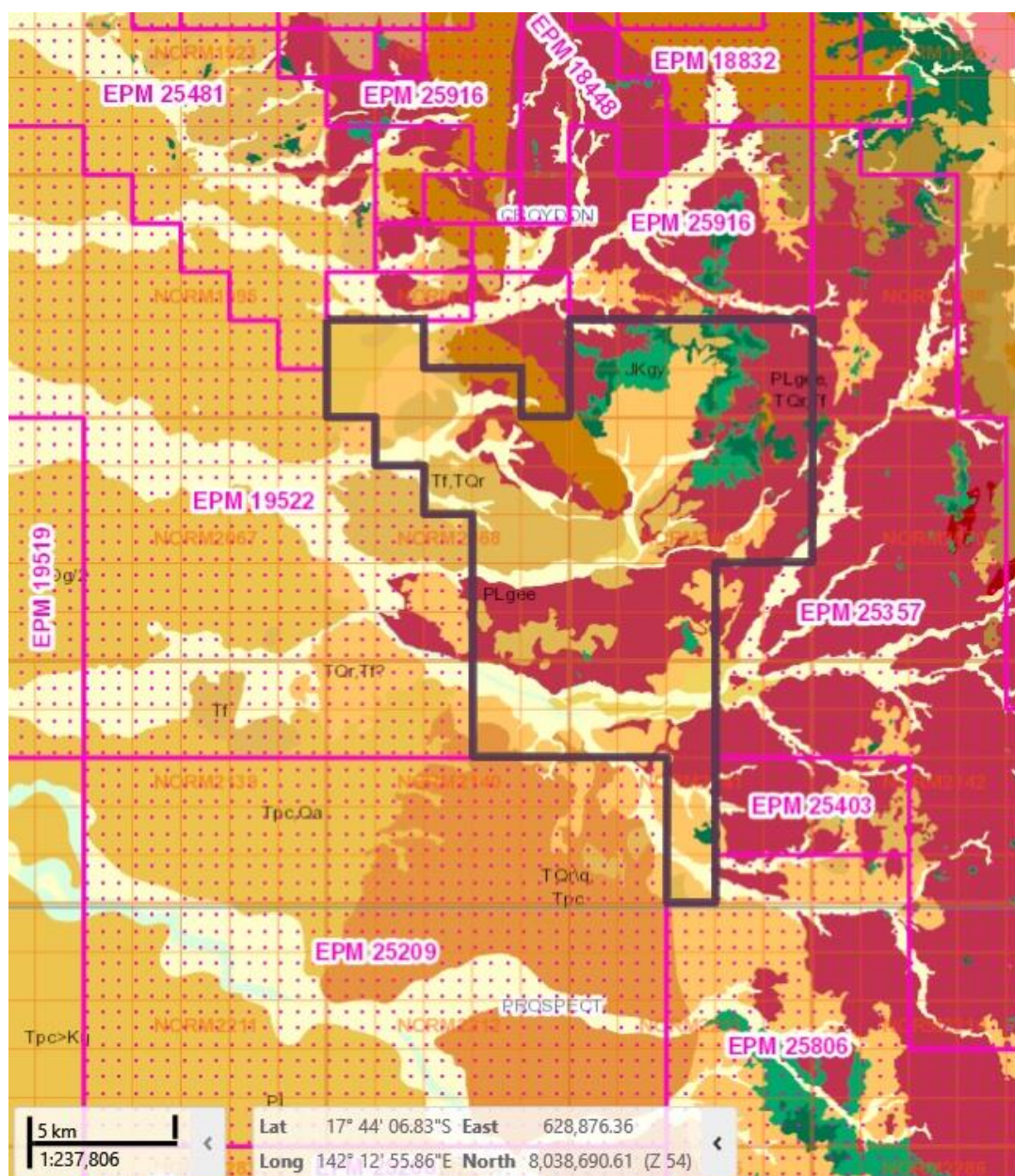
The Esmeralda Granite and the uncomfortably overlying Croydon Volcanics are interpreted to be the basement unit for entire tenement.

Cainozoic and Mesozoic sequences cover the western half of the tenement with areas of Proterozoic outcropping in the east.

Based on the type of mineral occurrence, there appears to be a phase change in Esmeralda granite with gold (Au) occurrences in the northern area of the tenement, and tin (Sn) to the east. This may represent different phases within the granite which has not been mapped or readily identifiable in outcrop, but does correlate with a difference in gravity.

The western half of the tenement area is therefore relatively unknown with the only data available from interpretation of geophysical data and some water bore logs. Basement within the western areas of EPM 26219 is and the area is currently mapped as “unknown basement” but is interpreted to be the Esmeralda Supersuite granites based on Magnetics and continuity.

Figure 5: EPM 25779 Geology



## **Mineralisation**

No mineralisation has been identified within the tenement.

Small historic alluvial Tin occurrences have been identified draining from the known Tin occurrences to the east of the tenement.

## ***Graphite***

Graphitic granite within the Esmeralda Supersuite has been partially explored for and the documented occurrences at Croydon are to the north, and the exceptionally similar Warrior deposit 70km to the south. Preliminary metallurgical analysis at the Warrior Deposit indicate there is potential to recover and beneficiate high value hydrothermal graphite, but no assessment of economic potential has been completed.

Magmatic assimilation and differentiation appears to have concentrated residual carbon in possible cupola structures in the roof sequence the Esmeralda Granite. Subsequent reworking and hydrothermal alteration have resulted in exotic graphite granites with xenoliths of remnant protolith and aggregations of hydrothermal graphite into blebs.

Graphitic mineralisation appears to be consistent and pervasive within the graphitic granite unit and aerially large.

## ***Croydon Style Gold Mineralisation***

Due to the location of the EPM being immediately south of the Croydon Goldfields, mineralisation models are initially based on Croydon Style gold mineralisation. The gold mineralisation is interpreted to be plutonic veins of mesothermal origin and associated with late stage structures associated with the Proterozoic Esmeralda Granite.

A paragenetic sequence of events as proposed by the then BMR;

1. Extrusion of Croydon Volcanics through graphitic metamorphics of the Etheridge Group.
2. Intrusion of Esmeralda Granite by partially stopping of graphitic metamorphics of the Etheridge Group to just below volcanic pile.
3. Differential contraction of pluton during cooling and compaction of overlying volcanic producing orthogonal joints and minor faulting.
4. Activation of low-angle fracture zones parallel to unconformity between volcanics and granite resulting in over thrusting and brecciation.
5. Multiphase injection of silicic hydrothermal fluids along sub vertical faults resulting in quartz veining stockworking of the over thrust zones and quartz veins along the feeder faults.
6. Gold, silver and sulphides deposited in late stage quartz veining, particularly in the reducing graphitic zones.
7. Later movement along faults resulting in offsetting of lodes.

From this there are three (3) main types of lode:

1. quartz stockwork breccias (most common),
2. euhedral buck quartz veins, and
3. sheeted quartz veins.

## 7. PREVIOUS EXPLORATION

With close proximity to the Croydon Gold Fields, the area has have been subject to prospecting since the 1890s presumably targeting Corydon Style gold mineralisation hosted with quartz vein structures, notably in the north and east of the tenement where the Proterzoic outcrops. To the east of the Project area is Tin (Sn) mineralisation which was exploited small scale historically.

Modern exploration using surface geochemistry and geophysical techniques didn't commence until the 1960's, and to date only first stage stream sediment sampling and rock chip sampling has been completed within the permit making it relatively unexplored. There is no reported exploration drilling, and information from registered water bores is scant.

The shallow Cainozoic and Mesozoic cover sequences in the western half of the tenement has resulted in the Proterozoic units being unexplored.

Pancontinental Mining Limited completed the most thorough exploration in the tenement area from the mid 1980 to the early 1990s. They were associated with the modern gold mining operations at Croydon and were predominantly exploring for mineralised Croydon vein style mineralisation to secure mill feed.

Table 3 summarises work completed by the different companies exploring within and proximal to EPM 26219.

Table 3: Croydon South Reported Previous Exploration

<b>EPM(s)</b>	<b>Company</b>	<b>CRs</b>	<b>Dates</b>
261	Unknown	NA	1964-1965
<ul style="list-style-type: none"> <li>No reports on QDEX</li> </ul>			
298	Carpentaria Exploration Company Pty Ltd (MIM)	2702	1965-1966
<ul style="list-style-type: none"> <li>Overlapped eastern half of EPM.</li> <li>Targeting Tin (Sn) mineralisation in the Stanhills Tin Field</li> <li>Following historic small scale 'gougings' in 'chlorite lodes' and greisen's.</li> <li>Some air flush percussion drilling (871 feet) was completed at the "Queen" and "Vincent Lodes," with sub-economic results.</li> <li>MIM followed up all known Tin occurrences and did summarise their findings which is significantly more than other explorers have reported.</li> </ul>			
551	Pickands Mather & Co International	2946	1969-1969
<ul style="list-style-type: none"> <li>Overlapped only 2 sub-blocks at the north of the EPM.</li> <li>Exploring for Au and Base Metals within historic Croydon Mining Field.</li> <li>Geological mapping, geochemical &amp; geophysical survey was completed in 1968 of most historic reefs, including;</li> <li>176 Stream Sediment samples</li> <li>70 Soil Samples</li> <li>185 Rock Chip Samples</li> <li>Considered potential small and to remote.</li> </ul>			
675	Pioneer Mining & Exploration Pty Ltd	4232	1969-1971
<ul style="list-style-type: none"> <li>No work completed as Pioneer was assessing "Auriferous Deep Lead Alluvium" in their northern tenements and would extend that drilling south into EPM 675 based on good results. Results were discouraging.</li> </ul>			
929	Saracen Minerals NL	4404	1971-1972
<ul style="list-style-type: none"> <li>Saracen was targeting tin and molybdenum mineralisation and possible uranium in Mesozoic cover. Utilising newly acquired aerial photographs, geological mapping was undertaken across the EPM. All identified greisen and chloritic lodes were located and sampled with only trace cassiterite present after panning heavy fraction of crushed sample. No anomalous molybdenum was identified and scintillometer readings didn't warrant further investigations of the Mesozoic. Proposed costeaning and drilling was postponed due to flooding and was never completed before relinquishment.</li> </ul>			
E1836 & 1874	Newmont Pty Ltd	6786	1977-1979
<ul style="list-style-type: none"> <li>Newmont were concentrating their exploration on the Stanhills tin field. Some rock chip sampling and drilling was completed</li> <li>Detailed investigation of the tin lodes was completed.</li> <li>Excellent description (Synthesis) of mineralisation is summarised in CR 6979_1</li> <li>Petrology Report included</li> </ul>			
2247	Ravenshoe Tin Dredging Ltd	6979	1979-1980
<ul style="list-style-type: none"> <li>Ravenshoe was targeting the alluvial tin near the old tin workings of Mount Cassiterite and Stanhills. Ravenshoe considered the areas for 'Dry Blowing' of alluvial for cassiterite, in the drainage from the historical tin workings.</li> </ul>			
2307	Unknown	9109	1980-1981
<ul style="list-style-type: none"> <li>No reports on QDEX</li> </ul>			
2308	Unknown	NA	1979-1980
<ul style="list-style-type: none"> <li>No reports on QDEX</li> </ul>			
2427	Unknown	NA	1980-1981



EPM(s)	Company	CRs	Dates
<ul style="list-style-type: none"> <li>No reports on QDEX</li> </ul>			
2597	Australian Anglo American Searches Pty Ltd	11366	1980-1982
<ul style="list-style-type: none"> <li>Only eastern end of large EPM area covers central portion of EPM area.</li> <li>Anglo exploring large area surrounding Croydon Volcanics over 932 Sub Blocks</li> <li>Exploring for detrital gold in Tertiary sediments derived from auriferous basement.</li> <li>Drill hole CAD 39 was drilled just west of EPM 26219 area. Cored to only 15.8m and ended in Mesozoic / Cainozoic units.</li> </ul>			
3819	Pancontinental Mining Limited	14259, 15839, 15840, 16206, 16532	1984-1986
<ul style="list-style-type: none"> <li>Southern half of large EPM area covers northern portion of current EPM area</li> <li>Initially exploring southern Croydon veins, some drilling at Jolly Tar, noted 40 to 50% graphite.</li> <li>Surry Hills prospect discussed, minimal diggings (east of Jolly Tar)</li> <li>2nd Year prospected "Alluvial Springs" at Surrey Hills and rock chipped. Photo-lineament identified, no Croydon veins</li> <li>Drilled other prospects, Jolly Tar, Tunnel Hill, Goanna, Packsaddle.</li> </ul>			
3916	Adams, Keith Charles	15069	1985-1985
<ul style="list-style-type: none"> <li>Only Western half of large EPM area covers southern half of EPM 26219 area</li> <li>Work carried out on the EPM consisted of stream sediment sampling, panning and brief geological mapping and assaying. Work was quantifying the alluvial tin resources in the creeks.</li> </ul>			
4405	Pancontinental Mining Limited	16928, 18235, 18396, 19868, 20971	1986-1989
<ul style="list-style-type: none"> <li>SE end of EPM 15069 area covers northern portion of EPM 26219 area</li> <li>Identified "Bee Line Reef" and "Whiplash Reef" in EPM area</li> <li>The Croydon Volcanic is mapped locally as Surry Hills</li> <li>CR 20971_1 Whiplash has 4 rock chip sample collected all 0.003 to 0.005 g/t.</li> <li>Whiplash is Bucky Qtz Reef 150m long about ~2m in width. No graphite or breccia.</li> <li>Bee Line had 15 Rock Chips between 0.03 and 0.16 g/t</li> <li>Bee Line has no breccia or graphite and is 420m long and 2m wide.</li> <li>Pancon conducted EM over Croydon Gold Field, identified steeply dipping graphitic granites.</li> <li>Photogeological interpretation was completed over Croydon Gold Fields. Suggesting T1 thrust faults are shallow east dipping resulting from the Croydon Volcanics being thrust over Esmeralda Granite.</li> <li>CR 18235_2 Landsat interpretation of lineaments a very useful reference.</li> </ul>			
4715	Pancontinental Mining Limited	17627, 18365, 18657, 19408, 20521	1986-1989
<ul style="list-style-type: none"> <li>Only eastern half of large EPM area covers central portion of EPM 26219</li> <li>1<sup>st</sup> Six Months <ul style="list-style-type: none"> <li>Reconnaissance</li> <li>Remote Sensing – photogeological interpretation using false colour Landsat and infrared high resolution air-photography.</li> <li>6 percussion holes (PWB series) drilled in an interpretation structure along Locket Ck All intersected unaltered non graphitic granite at 60 to 70m.</li> </ul> </li> <li>2<sup>nd</sup> Six Months</li> </ul>			



EPM(s)	Company	CRs	Dates
<ul style="list-style-type: none"> <li>○ BCL survey, all sample BDL</li> <li>○ Rock chipping of qtz veins</li> <li>○ 25K Geological interpretation</li> <li>• 3<sup>rd</sup> Six Months <ul style="list-style-type: none"> <li>○ Exploration focused on “Croydon Hope” &amp; “Wonder Why” prospects which are just north of the project area.</li> <li>○ BCL survey, all sample BDL</li> </ul> </li> <li>• Rock chip descriptors in CR 17627_4 very useful.</li> </ul>			
4847	Lake Gold Pty Ltd	18494, 19632, 20587	1987-1990
<ul style="list-style-type: none"> <li>• Small area of western edge of large EPM area covers central portion of EPM 26219</li> <li>• Tenement initially targeted SE extensions of the gold mineralisation of Croydon and tin mineralisation</li> <li>• Targeting tin, initially hard rock and then alluvial</li> <li>• One Stream Sediment #51032 returning (0.09 SnO<sub>2</sub>/m<sup>3</sup>) on Poley Nob Ck within EPM 26219.</li> <li>• Stream sediment survey resulted in western half on tenement (Mesozoic cover) being relinquished</li> </ul>			
5756	Pancontinental Mining Limited	21396, 21879, 22160, 26199	1988-1990
<ul style="list-style-type: none"> <li>• SE area of EPM area covers most of the EPM 26219</li> <li>• Pancon actively explored the Tunnel Hill, Flying Pig, London Moon, Jolly Tar and Waratah Prospects which are not in the EPM 26219.</li> <li>• Overlap area was relinquished first and doesn't appear to be explored.</li> <li>• Noted the Jolly Tar prospect had Au resources in Qtz veins in graphitic unit.</li> <li>• Didn't identify any economic resources and the relinquishment coincided with cessation of mining activities at Croydon</li> </ul>			
9839	North Queensland Mining Pty Ltd	26596, 27169, 28362, 28363, 29613	1993-1997
<ul style="list-style-type: none"> <li>• Small EPM covering one sub blocks on northern edge of EPM</li> <li>• Most work concentrated off the EPM on historic workings such as Moonstone and Jubilee where quartz veins/breccia outcropped.</li> <li>• The historic workings known as Alluvial Springs was also inspected and rock chipped within EPM 26219</li> <li>• Mineralisation is associated with NS Croydon lineament with prospects located where NW lineaments intersect (Moonstone, Jubilee)</li> <li>• Identified graphite as significant component of gold mineralisation</li> <li>• Identified lineaments as controls for mineralisation</li> <li>• Note alluvium screen EPM 26219 from lineament studies using air photo interpretation</li> <li>• Gold Mineralisation and Qtz vein development are magmatic hydrothermal in origin.</li> <li>• Steeply dipping graphitic horizons are control on spatial distribution of Au mineralisation.</li> <li>• Bucky Qtz had low gold numbers</li> <li>• Alluvial Prospect – low gravel ridge on east bank of Moonlight Ck tributary. Low Au numbers 20 x 20m grid sampling (sed or rock chip?) Native title issues at the time difficult for small operators</li> </ul>			
9866	North Queensland Mining Pty Ltd	26199	1994-1995
<ul style="list-style-type: none"> <li>• Small EPM cover a few sub blocks on northern edge of EPM 26219</li> <li>• Appears to be explored as an add-on to EPM 9839 to include additional historic workings identified in the area.</li> </ul>			

<b>EPM(s)</b>	<b>Company</b>	<b>CRs</b>	<b>Dates</b>
<ul style="list-style-type: none"> <li>Refer to EPM 9866 for geology and interpretation</li> </ul>			
14890	Conquest Mining Ltd	NA	2005-2006
<ul style="list-style-type: none"> <li>No reports on QDEX</li> </ul>			
15381	Gold Finance & Exploration Pty Ltd (Gold FX Ltd)	NA	2007-2010
<ul style="list-style-type: none"> <li>No reports on QDEX</li> </ul>			
16008	Deep Yellow Ltd	NA	2008-2009
<ul style="list-style-type: none"> <li>Exploring for uranium predominantly to the west of the EPM 26219.</li> <li>Air and ground radiometrics surveys completed.</li> </ul>			
19522	Wilson Minerals Pty Ltd	99813, 1116341	2014-
<ul style="list-style-type: none"> <li>Wilson Minerals is exploring Moonlight Creek sediment hosted uranium, IOCG and high-grade vein graphite and gold deposits. Work completed consisted of a desktop historical exploration study, reprocessing of available geophysics, detailed structural interpretation, and paleo-channel targeting using ASTER imagery.</li> <li>Wilson considered the relinquished sub-blocks to have low exploration potential for the mineralising systems targeted by the Company. No further work is warranted by Wilson.</li> </ul>			
25481	Wilson Minerals Pty Ltd	99818, 109794	2014-
<ul style="list-style-type: none"> <li>Wilson Minerals is exploring Corktree tenement as a potential host to significant potential for IOCG and high-grade vein graphite and gold deposits.</li> </ul>			

## **8. TECHNICAL SUMMARY OF WORK COMPLETED IN YEARS 1 TO 5**

### **Literature & Data Review**

A review of historic exploration has been completed and a summary was outlined in Section 7 of this report.

### **Preliminary Geophysical Review**

Publicly available air magnetic data was interpreted highlighting weakly magnetic north south lineaments connecting to the Croydon Gold Field in the North. (See Figure 6)

### **Geological Model**

A geological model has yet to be developed for EPM 26219 as exploration was at the preliminary stage only. A conceptual model has been proposed and further work is required to develop into a geological model.

Sebrof believed there was scope to identify blind gold mineralisation below thin cover at depths amenable to shallow mining. Interpretation of available magnetics and regional seismic transect indicates crustal tapping structures lineaments and structures aligning with the Croydon gold Field indicating potential fluid pathways and extensions of known mineralisation.

Sebrof planned a high risk exploration strategy to conduct shallow RAB drilling to test basement depth, geology and potential mineralisation along the identified north south structures. The design of the program was to target magnetic signatures associated with intersecting structures and potentially a combination of grid design and track based drilling to minimise land disturbance. Sebrof ultimately didn't complete any drilling within the EPM with all work completed either reconnaissance or desktop

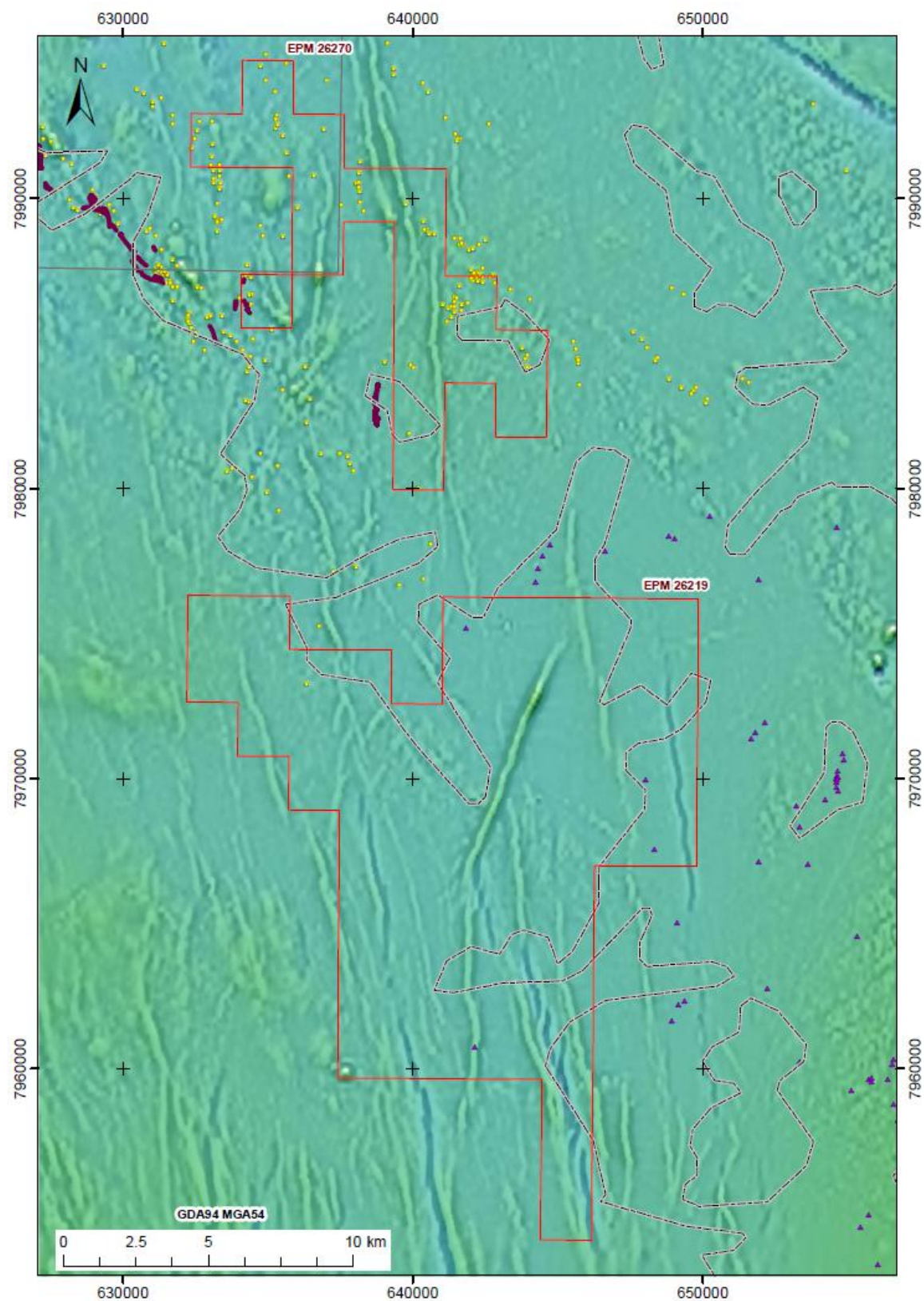
### **Resources & Reserves**

Not Applicable

### **Economic Potential of EPM 26219**

There is no quantifiable economic potential at this stage as the project area is effectively Greenfields and no mineralisation has been identified.

Figure 6: Magnetics



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Table 4: EPMs 26219 Historic Exploration

Permit	CR	Report Title	Report Type
EPM 261	NA	No Reports in QDEX	
EPM 298	2702	FINAL REPORT, A-P 298M, STANHILLS TINFIELD, QLD, (TECHNICAL REPORT NO. 92).	FINAL
EPM 551	2946	A-P 551M, CROYDON, N. QLD, FINAL REPORT.	FINAL
EPM 793	NA	No Reports in QDEX	
EPMs 1836 & 1874	6979	A-P 1836M, 1874M, ANNUAL & FINAL REPORT ON EXPLORATION AT CROYDON	FINAL
	6786	A TO P 1836M & 1874M, PROGRESS REPORT ON EXPLORATION AT CROYDON FOR THE PERIODS TO 10.04.78 & 10.10.78.	6MTH
EPM 2308	NA	No Reports in QDEX	
EPM 1475	5491	A-P 1475M, CROYDON, REPORT FOR THREE MONTHS ENDING 31.12.75.	OTHER
	5701	FINAL REPORT ON A-P 1475M, NE OF CROYDON, RELINQUISHED ON 31.12.75.	FINAL
EPM 909	NA	No Reports in QDEX	
EPM 929	4404	RELINQUISHMENT REPORT ON A-P 929M, CROYDON.	FINAL
EPM 2247	9109	FINAL REPORT ON A-P 2247M, CROYDON, QLD.	FINAL
EPM 675	4232	FINAL REPORT ON A-P 675M.	FINAL
EPM 2594	9655	REPORT TO THE QUEENSLAND DEPARTMENT OF MINES FOR THE SIX MONTH PERIOD ENDING 16.09.81, A TO P 2588M-2597M, CROYDON AREA.	6MTH
	10322	REPORT TO THE QUEENSLAND DEPARTMENT OF MINES FOR THE SIX MONTH PERIOD ENDING 16.03.82, A TO P 2588M-2597M, CROYDON AREA.	6MTH
	8829	REPORT TO THE DEPT. OF MINES QLD FOR THE SIX MONTH PERIOD ENDING 16.3.81, A TO P 2588M TO 2597M CROYDON AREA.	6MTH
	11590	FINAL REPORT TO THE DEPARTMENT OF MINES, QLD, A TO P 2594M, 2595M AND 2596M, CROYDON AREA.	FINAL
	10321	REPORT TO THE QUEENSLAND DEPARTMENT OF MINES FOR THAT GROUND RELINQUISHED ON 16.09.81, A TO P 2588M-2597M, CROYDON AREA.	RELINQ
	11589	REPORT TO THE DEPARTMENT OF MINES, QLD FOR THE SIX MONTHLY PERIOD ENDING 16.9.82, A TO P 2594M, 2595M AND 2596M, CROYDON AREA.	6MTH
EPM 5756	21396	A-P 5756M, CROYDON, SIX MONTHLY REPORT FOR THE PERIOD 22/8/89 TO 21/2/90	6MTH
	21879	EPM 5756, CROYDON, RELINQUISHMENT REPORT FOR THE YEAR ENDING 21/2/90	RELINQ
	22160	EPM 5756, CROYDON, FINAL REPORT	FINAL
EPM 4405	19868	A-P 4405M, CROYDON, SIX MONTHLY REPORT 5/3/88 TO 4/9/88	6MTH
	18396	A-P 4405M, CROYDON, SIX MONTHLY REPORT 5/9/87 TO 4/3/88	6MTH
	16928	A-P 4405M, CROYDON, SIX MONTHLY REPORT FOR THE PERIOD 5/9/86 TO 4/3/87	6MTH
	20971	A-P 4405M, CROYDON, FINAL REPORT AND SIX MONTHLY REPORT FOR THE PERIOD 5/9/88 TO 22/2/89	FINAL
	18235	A-P 4405M, CROYDON, SIX MONTHLY REPORT 5/3/87 TO 4/9/87	6MTH
EPM 3819	15839	A-P 3819M, MOONLIGHT CREEK, QLD, RELINQUISHMENT REPORT TO 22.08.85.	BRS
	16206	A-P 3819M, MOONLIGHT CREEK, SIX MONTHLY REPORT 23/2/85 TO 22/8/85	6MTH
	14259	A-P 3819M, MOONLIGHT CREEK, SIX MONTHLY REPORT 23/8/84 TO 22/2/85	6MTH
	16532	A-P 3819M, MOONLIGHT CREEK, SIX MONTHLY REPORT & FINAL REPORT 23/2/86 TO 22/8/86	FINAL



Permit	CR	Report Title	Report Type
	15840	A-P 3819M, MOONLIGHT CREEK, SIX MONTHLY REPORT 23/8/85 TO 22/2/86	6MTH
EPM 4715	17627	A-P 4715M, ALEHVALE, SIX MONTHLY REPORT 14/10/87 TO 13/4/88	6MTH
	18657	A-P 4715M, ALEHVALE, N. QLD, RELINQUISHMENT REPORT.	RELINQ
	19408	A-P 4715M, ALEHVALE, SIX MONTHLY REPORT FOR PERIOD 14/4/88 TO 13/10/88	6MTH
	18365	A-P 4715M, ALEHVALE, SIX MONTHLY REPORT 14/4/87 TO 13/10/87	6MTH
	20521	A-P 4715M, ALEHVALE, FINAL REPORT AND SIX MONTHLY REPORT FOR PERIOD 14/10/88 TO 22/2/89	FINAL
EPM 4374	18341	A-P 4374M, CROYDON, REPORT FOR THE SIX MONTHS ENDED 24/8/87	6MTH
	16658	A-P 4374M, CROYDON, SIX MONTHLY REPORT FOR PERIOD ENDING 25/2/87	6MTH
	17853	A-P 4374M, CROYDON, QLD, REPORT ON THE AREA RELINQUISHED ON 24.08.87.	RELINQ
	21232	A-P 3329M, 4123M, 4374M, 4501M, 4540M, 4653M, COMBINED EXPLORATION REPORT FOR THE TWELVE MONTHS ENDED 31/12/88	ANNUAL
EPM 3916	15069	FINAL RELINQUISHMENT REPORT, A-P 3916M.	BRS
EPM 4847	20587	A-P 4847M, MT CASSITERITE, REPORT ON ACTIVITIES FOR YEAR TWO, FOR THE PERIOD 4/8/88 TO 3/8/89	ANNUAL
	19632	A-P 4847M, MOUNT CASSITERITE, REPORT FOR THE SECOND SIX MONTH PERIOD ENDED 3.08.88.	6MTH
	18494	A-P 4847M, MOUNT CASSITERITE, SIX MONTHLY REPORT FOR THE PERIOD ENDED 3.02.88.	6MTH
EPM 2427	NA	No Reports in QDEX	
EPM 2307	NA	No Reports in QDEX	
EPM 9839	26596	EPM 9839, ALEHVALE, FIRST ANNUAL REPORT FOR 16/12/93 TO 15/12/94	6MTH
	29613	EPM 9839, ALEHVALE, FOURTH ANNUAL AND FINAL REPORT FOR PERIOD 16/12/96 TO 23/4/97	FINAL
	28362	EPM 9839, ALEHVALE, THIRD ANNUAL REPORT FOR 16/12/95 TO 15/12/96	6MTH
	28363	EPM 9839, ALEHVALE, SECOND RELINQUISHMENT REPORT FOR PERIOD 16/12/95 TO 15/12/96	RELINQ
	27169	EPM 9839, ALEHVALE, CROYDON, SECOND ANNUAL REPORT FOR PERIOD 16/12/94 TO 31/10/95	6MTH
EPM 9866	26199	EPM 9866, ALEHVALE, FIRST ANNUAL & FINAL REPORT FOR PERIOD 7/1/94 TO 19/12/94	6MTH
EPM 16008	58062	EPM 16008, MISTAKE CREEK, ANNUAL/FINAL REPORT FOR PERIOD 15/1/08 TO 18/2/09	ANNUAL
EPM 14890	NA	No Reports in QDEX	
EPM 15381	NA	No Reports in QDEX	