Mandrake farm-in targets Ni-Cu-PGE mineralisation 70km NE of Perth

Date: 14 April 2020

ASX Code: MAN

Capital Structure
Ordinary Shares: 266,341,510
Unlisted Options:
206,675,077 (3c exercise)
Current Share Price: 1.3c
Market Capitalisation: $3.5M
Cash: $3.6M (Dec 31 2019)
Debt: Nil

Directors

Patrick Burke
Non-Executive Chairman

James Allchurch
Managing Director

Ben Phillips
Non-Executive Director

Lloyd Flint
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Highlights

- **Mandrake to farm-in to highly prospective 140km² exploration licence application (ELA) in the Jimperding Metamorphic Belt 70km NE of Perth.**
- **ELA located 30km east of Chalice Gold Mines Limited's exciting new Julimar Ni-Cu-PGE discovery and is contiguous with ELA's pegged by Chalice following their discovery.**
- **Targeting Ni-Cu-PGE mineralisation hosted in intrusive complexes.**
- **Work undertaken by Australian Anglo American and North Flinders Mines in the 1970s identified various prospects including the Newleyine Prospect.**
- **Terms of the farm-in include:**
  - **Upfront payment of $40,000 in cash**
  - **Mandrake to expend $100,000 to earn a 51% interest in ELA 70/5345**
  - **Mandrake to expend a further $200,000 to earn a further 29% (total 80%) interest in ELA 70/5345**
- **Mandrake well positioned to fund exploration - $3.6M cash (Dec 31 2019).**

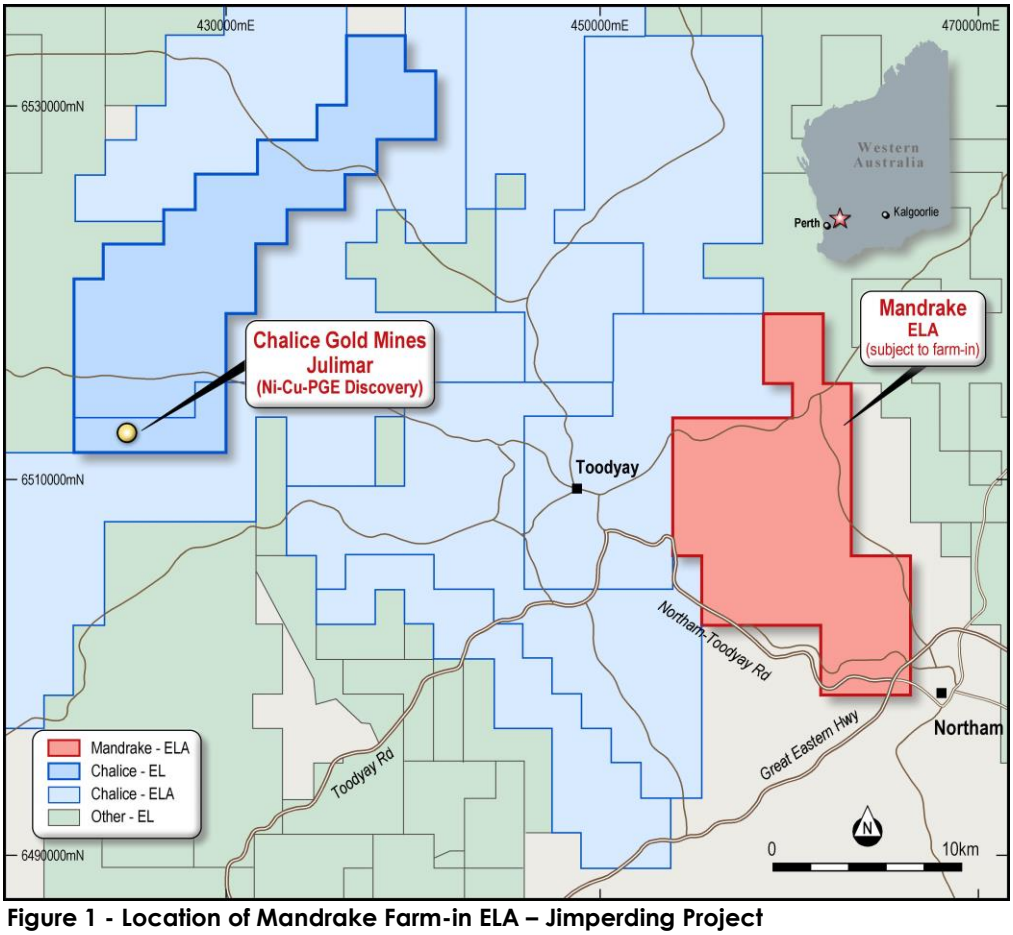

Figure 1 - Location of Mandrake Farm-in ELA – Jimperding Project

Jimperding Project

Mandrake Resources Limited (**ASX: MAN**) (**Mandrake** or the **Company**) is pleased to advise that it has entered into a conditional binding Heads of Agreement with Andean Energy Resources Pty Ltd (**AER**) to farm-in to exploration licence application (**ELA**) 70/5345 (**Jimperding Project**), in the Jimperding Metamorphic Belt located 70km north east of Perth, Western Australia.

The Jimperding Project lies approximately 30km east of Chalice Gold Mines Limited's (**Chalice**) Julimar Ni-Cu-PGE discovery announced on 23 March 2020. The 140km^2 ELA comprising the Jimperding Project was applied for on 4 March 2020.

The Jimperding Metamorphic Belt is in the northern part of the southwestern Yilgarn Craton and comprises Archaean gneisses, arkosic paragneiss and banded-iron formation, interleaved with a variety of garnetiferous orthogneiss and ultramafic units[1].

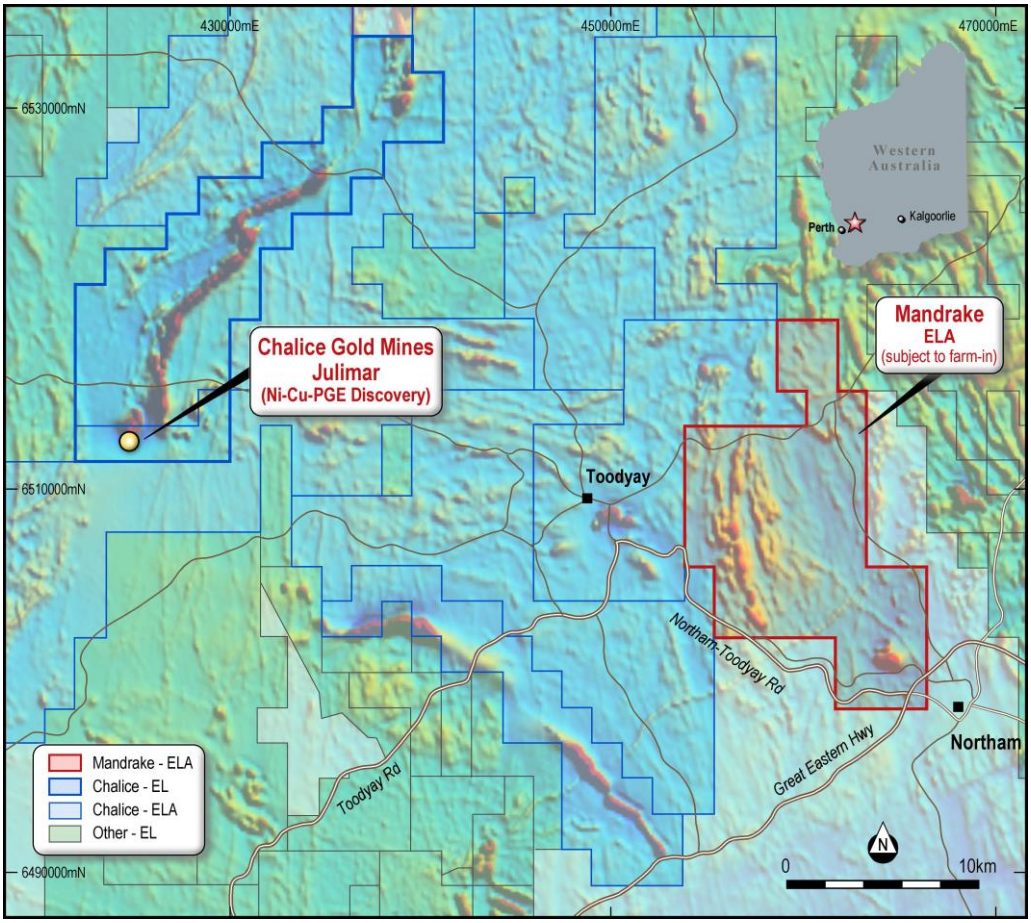

Figure 2 - Regional Aeromagnetics – Jimperding Project

Regional work conducted by Harrison (1986) suggested that some of the mafic/ultramafic bodies in the terrane may be remnants of larger layered intrusives

[1] Wilde, S.A. (2001), Jimperding and Chittering Metamorphic Belts, Southwestern Yilgarn Craton, WA – A Field Guide. 4th International Archaean Symposium. Geol Survey of WA.

and thus targets for platinum group element (PGEs)[2]. The recent Julimar discovery in the area appears to validate this assessment.

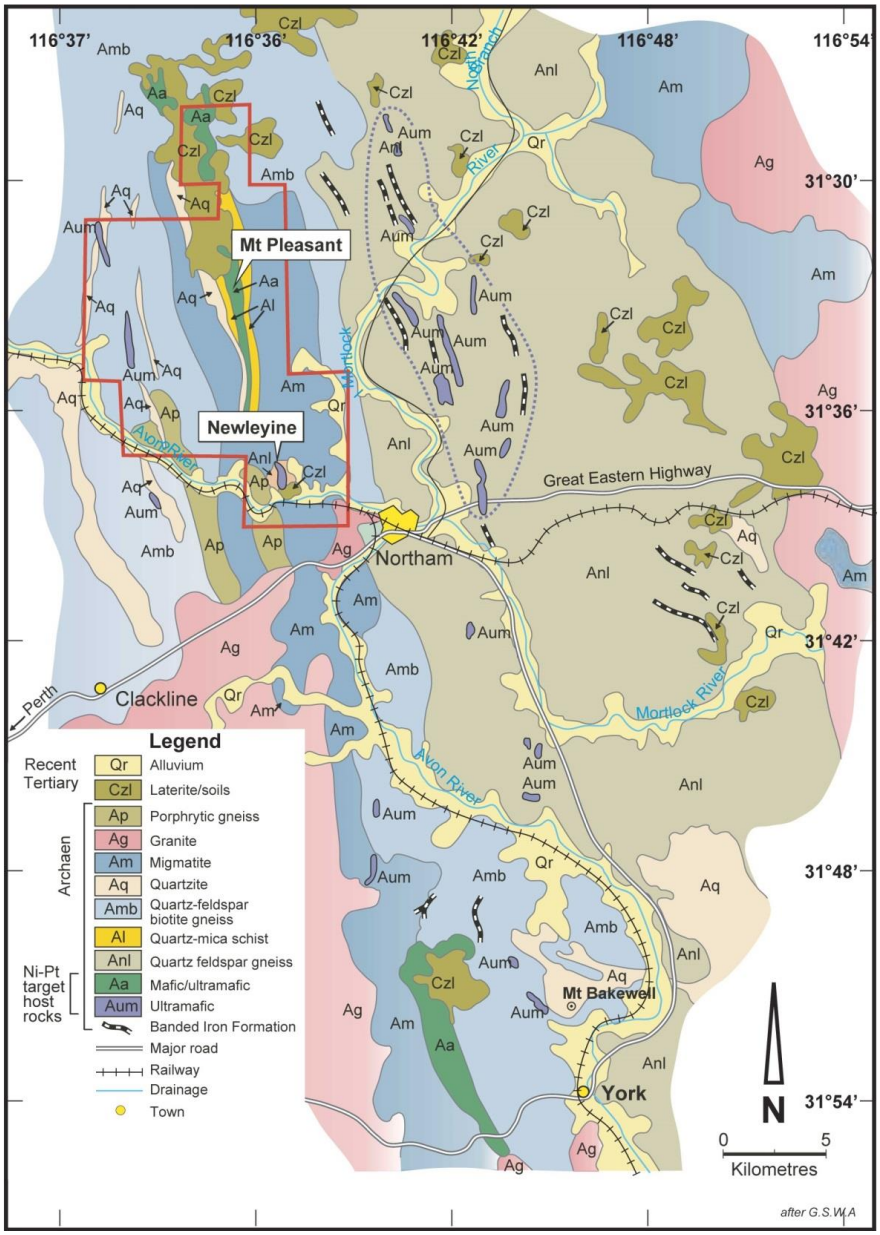

Figure 3 - Surface Geology – Mt Pleasant and Newleyine Prospects, Jimperding Project

Previous Exploration

Previous exploration was primarily undertaken in the late 1970s by Australian Anglo American (**Australian Anglo**) and North Flinders Mines Limited (**NFM**).

NFM conducted surface mapping and sampling at the Newleyine prospect. Surface sampling of the 1.5km long Newleyine ultramafic intrusive by way of 90

[2] Harrison, P.H (1986), Professional Papers for 1984. Rep 19. Geol Survey of WA.

rock chip samples returned assay values up to 0.52% Ni and 805ppm Cu (see Table 2, Figure 4 and Figure 6).

Three exploratory diamond drill holes completed by Australian Anglo established the presence of widespread Ni-Cu-Fe sulphide mineralisation of 0.24% Ni and 172ppm Cu over drill widths of up to 240m through a dunite body (see Table 1 and Figure 5). Samples were evidently not assayed for PGEs or gold.

In 1996, exploration by BHP near the Mt Pleasant prospect identified anomalous nickel mineralisation within a 10km long, north trending mafic amphibolite.

The historic information provided in this release is based on the following report from WAMEX: '*Third Quarter Report - North Flinders Mines Limited Joint Venture Prospecting Programme (Fehlberg, 1978)'*. This material, indicating potential mineralisation, is included in this release as it provides a rationale behind Mandrake's decision to earn-in to the Jimperding Project.

Upon grant, Mandrake will undertake field assessments to validate work completed to date at the Newleyine and Mt Pleasant prospects as well as further ground-based investigations and geophysical work targeting intrusive complexes across the 140km^2 Jimperding Project. With $3.6M in cash as at December 31 2019, Mandrake is well funded to undertake this work.

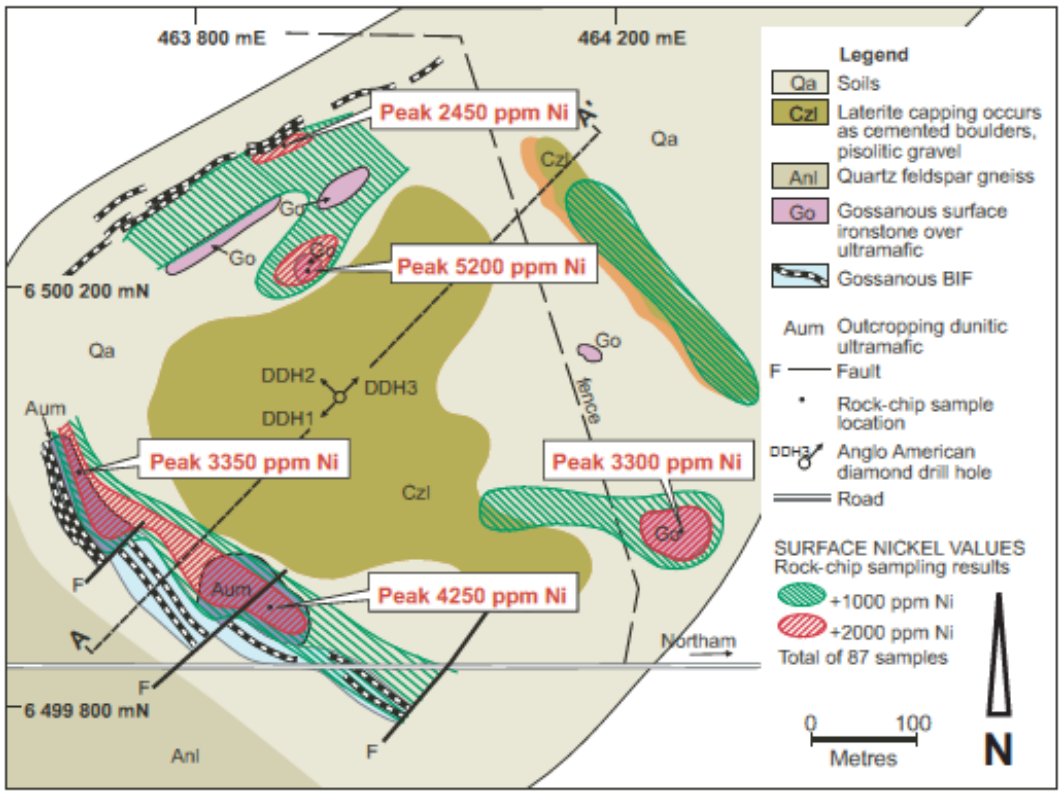

Figure 4 - Newleyine Prospect – Rock Chip Samples and Drill Collar Locations

Forthcoming Work

AER has commenced liaison with land-holders in the area to secure land access for exploration activities and this work will continue to be progressed.

Mandrake is continuing to collate historical information pertaining to the Jimperding Project, some of which requires digitisation and incorporation into the database.

Various geophysical surveys (primarily magnetics) have been conducted over the Jimperding Project. These datasets have largely been acquired with a view to re-processing and utilization for targeting.

Farm-in Terms

Mandrake has executed a binding Heads of Agreement (**HoA**) with AER detailing the terms of the farm-in agreement to ELA 70/5345. The HoA is conditional upon a 30-day due diligence period in favour of Mandrake. The terms of the agreement are:

- Cash payment to AER of $40,000
- Mandrake to expend $100,000 to earn a 51% interest in ELA 70/5345
- Mandrake to expend a further $200,000 to a earn a further 29% (total 80%) in ELA 70/5345
- AER to be free-carried through to the commencement of a Bankable Feasibility Study at which point a Joint Venture will be incorporated between Mandrake and AER
- Mandrake to satisfy all expenditure related to grant of EL70/5345
- Mandrake able to withdraw at any time prior to attainment of 51% interest in the ELA

Berinka Pine Creek Project Update

As announced on 20 March 2020, Mandrake is currently awaiting assay results from the reconnaissance rock chip sampling work conducted at the Berinka Pine Creek Project in the Northern Territory. Results will be released as soon as received.

Current travel restrictions enforced by the Northern Territory and Western Australian state governments pursuant to the Covid-19 pandemic have prevented any further work at Berinka. Further, the Northern Land Council has suspended non-essential travel to the Aboriginal communities in the Berinka area and is monitoring the activities of exploration companies closely.

An application to undertake drilling at the Berinka Pine Creek Project, known as a Mining Management Plan (MMP), was submitted to the Northern Territory Department of Primary Industry and Resources (DPIR) in August 2019. The

Company is in the process of modifying the MMP application. Dependent on Covid-19 restrictions, a drilling programme testing several targets is scheduled for mid-2020, immediately following the wet season.

This announcement has been authorized by the board of directors of Mandrake.

Enquires please contact:
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About Mandrake Resources

Mandrake is a junior exploration company established with the purpose of exploring and developing gold, nickel, copper and other mineral opportunities. The Company owns a mineral exploration project located in the prolific Pine Creek Orogen of the Northern Territory and is focussed primarily on gold exploration.

For further information visit www.mandrakeresources.com.au

Competent Person's Statement

The technical information in this announcement that relates to Exploration Results of the Jimperding Project has been compiled and assessed under the supervision of Mandrake Managing Director, Mr James Allchurch. Mr Allchurch is a Member of the Australian Institute of Geoscientists. He has sufficient experience that is relevant to the style of mineralisation and type of deposit 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 (JORC). Mr Allchurch consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Table 1: Summary of historic Australian Anglo American diamond drilling at the Newleyine Prospect - Jimperding Project

Drill Hole ID	Drill Type	Total Depth	Datum	Easting*	Northing*	RL (m)	Azimuth (deg)	Dip (deg)	Results
DDH1	DD	205m	Zone 52 (GDA94)	463900	6500100	Not Provided	225	-60	None Provided. Assumed insignificant
DDH2	DD	Not Provided	Zone 52 (GDA94)	463900	6500100	Not Provided	315	-60	None Provided. Assumed insignificant
DDH3	DD	240m	Zone 52 (GDA94)	463900	6500100	Not Provided	45	-60	240m drill hole averaged 0.25% Ni and 172ppm Cu

* - As determined by triangulating coordinates from plan. Three holes drilled form one drill pad.

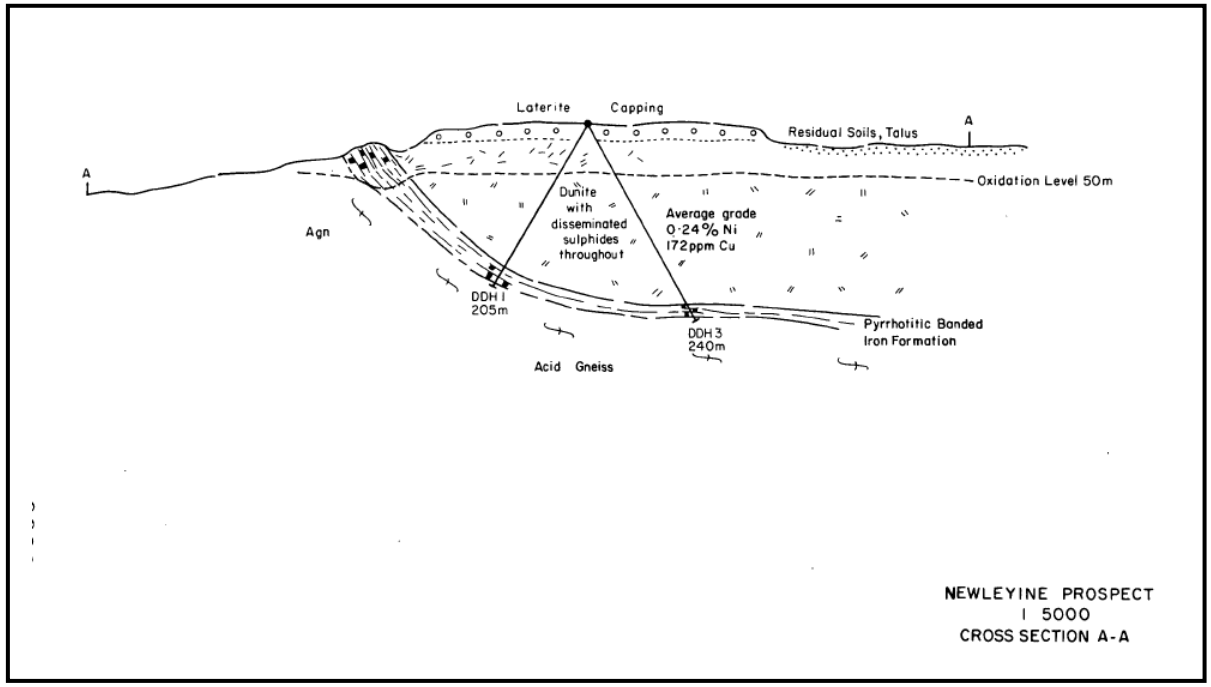

Figure 5 – Original Newleyine Prospect Cross Section A – A' (See Fig 4)

Table 2: Historic rock chips collected by North Flinders Mines NL at the Newleyine Prospect - Jimperding Project (sample locations shown on Figure 6)

Sample ID	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ni (ppm)
19061	75	15	20	75
19062	105	20	25	95
19063	105	35	100	300
19064	85	20	110	285
19065	110	30	170	570
19066	135	240	310	2450
19067	80	90	80	225
19068	230	225	365	2250
19069	180	140	340	800
19070	650	2050	210	1450
19071	805	4050	205	1500
19072	600	1050	190	1300
19073	356	465	140	710
19074	375	340	90	375
19075	580	185	110	640
19076	360	200	65	255
19077	330	185	55	210
19078	465	155	105	410
19080	400	140	110	360
19081	330	110	80	210
19082	110	35	150	1950
19083	80	30	25	100
19084	120	100	295	1750
19085	165	105	240	1750
19086	40	40	40	105
19087	210	150	330	1100
19088	250	150	130	155

Sample ID	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ni (ppm)
19089	130	130	300	1050
19090	60	40	140	110
19091	60	35	205	165
19092	35	65	35	60
19093	65	50	25	60
19094	390	5	85	3350
19095	200	NR	80	2500
19096	35	NR	45	400
19097	260	5	70	2900
19098	415	10	70	2900
19099	185	10	70	370
19100	125	15	60	190
19101	70	15	50	175
19102	225	10	110	2550
19103	105	15	55	235
19104	400	5	75	3000
19105	300	20	70	370
19106	90	20	50	200
19107	125	20	50	180
19108	120	5	60	2450
19109	140	5	75	1900
19110	60	NR	60	3200
19111	340	145	170	3000
19112	80	NR	80	4250
19113	125	15	100	660
19114	40	15	45	355
19115	205	25	115	760

Sample ID	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ni (ppm)
19116	30	25	240	1350
19117	30	40	235	1350
19118	70	35	225	1400
19119	290	140	340	1600
19120	350	170	265	1500
19121	185	35	295	1750
19122	125	70	280	2800
19123	185	200	235	3300
19124	200	130	280	2550
19125	180	60	310	2100
19126	165	30	310	2100
19127	190	40	285	2050
19128	185	80	295	2750
19129	240	55	280	1550
19130	440	110	145	1600
19131	540	30	185	2000
19132	155	70	240	1300
19133	255	40	240	1700

Sample ID	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ni (ppm)
19134	95	75	230	1750
19135	150	70	275	1700
19136	250	335	190	1000
19138	260	80	330	2750
19139	285	65	170	750
19140	100	40	80	570
19141	110	40	45	320
19142	245	45	180	1250
19143	450	35	85	480
19144	195	30	90	680
19145	240	45	55	190
19146	220	25	55	470
19147	35	50	25	150
19148	115	40	55	195
19149	420	40	90	555
19150	65	35	35	200
19151	355	200	180	5200

NR – No results

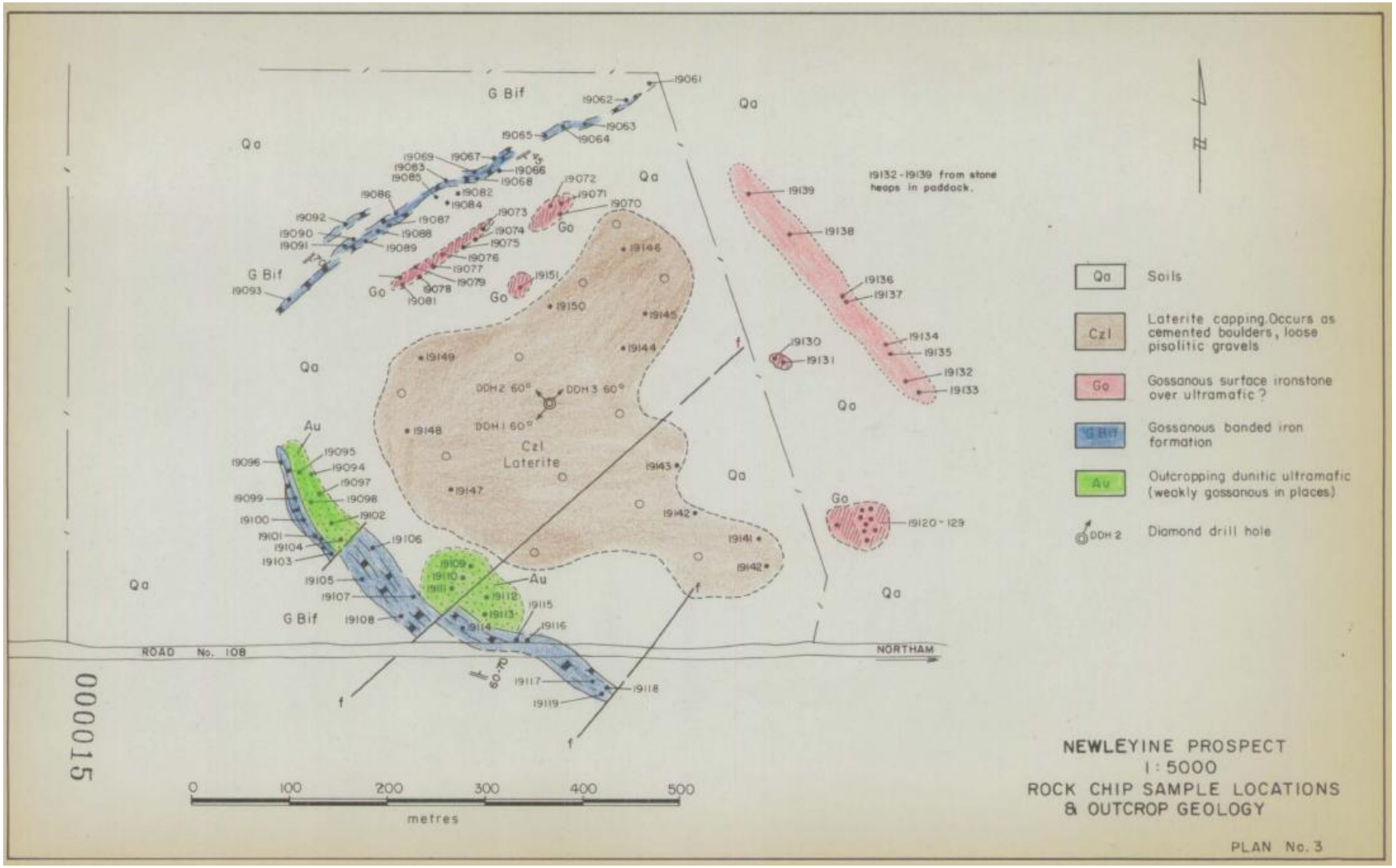

Figure 6 - Original Newleyine Prospect Diagram showing Rock Chip and Drill Collar Locations from *'Third Quarter Report - North Flinders Mines Limited Joint Venture Prospecting Programme (Fehlberg, 1978)'*

JORC Code, 2012 Edition – Table 1 report template

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 (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Three diamond drill holes were drilled in 1978 by Australian Anglo American as reported in the WAMEX sourced '*Third Quarter Report – North Flinders Mines Limited Joint Venture Prospecting Programme (Barry Fehlberg, 1978)'.* The information in this report is regarded as reliable as pertaining to the historic exploration results. • Based on the knowledge of operating procedures of both North Flinders Mines NL (NFM) and Australian Anglo American (AAA) in use at the time, the Company believes the sampling techniques to be industry standard.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Diamond core drilling performed. Precise details of drilling techniques/contractor(s) used not provided. • Drilling techniques utilized by AAA expected to be in line with industry standards.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure*	• Details for drill sample recoveries are not available.

Criteria	JORC Code explanation	Commentary
	representative nature of the samples. • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	
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. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• No original drilling records have been sighted however lithologies and structures are discussed in the WAMEX sourced '*Third Quarter Report – North Flinders Mines Limited Joint Venture Prospecting Programme (Barry Fehlberg, 1978)'.* • On the basis of the written accounts cited above it is assumed operating procedures of NFM and AAA in use at the time were appropriate.
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 field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Details of sample preparation and processing techniques are not provided however it is assumed laboratory and assay procedures of NFM and AAA and their contractors were industry standard.
Quality of assay data and laboratory	• *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,*	• Assay and laboratory procedures are not provided however it is assumed laboratory and assay procedures of NFM and AAA and their contractors were industry standard and thus the data reliable.

Criteria	JORC Code explanation	Commentary
tests	*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.*	
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.*	• Verification procedures for sampling and assaying are not documented with the historic drilling results.
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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Drill hole locations have been gleaned from plan geological maps using co-ordinates.
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.*	• According to historic plans, drilling appears to have been perpendicular to the strike of the identified intrusive. • No drilling orientation and/or sampling bias has been recognized at this time.
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*	• Three diamond drill holes were drilled from the same drill pad at azimuths differing by 90 degrees in order to investigate anomalous rock chips collected from a saucer-shaped intrusive associated with a BIF.

Criteria	JORC Code explanation	Commentary
	sampling bias, this should be assessed and reported if material.	
Sample security	• *The measures taken to ensure sample security.*	• No information is available on the sample security protocols for the historical drilling.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The data reported is all historical data. No reviews have been undertaken to this point. Mandrake is currently seeking supporting information.

• 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 diamond drill holes are located on exploration licence application ELA 70/5345 which is held 100% by AER • The tenure is in application – application lodged 4 March 2020.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Rock chip sampling undertaken by BHP in the mid-1990s. • Various geophysical surveys and sporadic surface sampling undertaken by junior mining companies.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Ultramafic intrusive associated with a banded iron formation. Ni-Cu-Fe mineralisation within a serpentinised dunite. Archaean Jimperding Metamorphic Belt
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar*	• See Table 1.

Criteria	JORC Code explanation	Commentary
	○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *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 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.*	• No maximum or minimum grades cut-offs have been applied to the historical results. • No metal equivalent values have been 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').*	• Three diamond drill holes were drilled from the same drill pad at azimuths differing by 90 degrees in order to investigate anomalous rock chips collected from a saucer-shaped intrusive associated with a BIF. The drill hole azimuths are roughly perpendicular to the targeted intrusive. • True width not known.
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*	• Refer to figures in announcement.

Criteria	JORC Code explanation	Commentary
	drill hole collar 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.*	• The results reported diagrammatically (rock chips) are considered a balanced reporting of the understanding of the Exploration results and potential
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.*	• Available data from historic or previous exploration parties includes some surface mapping, surface geochemical surveys and geophysical surveys. Mandrake is continuing to seek primary sources of data.
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.*	• As Mandrake work towards granting of the Jimperding Project a detailed desktop review and database compilation will occur along with land access negotiations and targeting work.