#### 7 February 2023

24 Month Price Target: (>A\$0.50)

#### **CAPITAL STRUCTURE**

Share Price	\$0.10
Net Asset Value	A\$15m
12 Month Range	\$0.09- \$0.25
Market Cap (undiluted)	\$21m
Issued Shares	208.6m
Options A\$0.30 Mar 24	19.7m
Fully dil capital @ A\$0.30	228.3m
Cash (est)	A\$3.1m

#### DIRECTORS

Brian Rodan
David Nixon
Keith Murray
Sebastain Andre

Exec Chairman + CEO Technical Director Non-Exec Director Company Secretary



# **TOP SHAREHOLDERS**

40.14%
5.74%
4.32%
2.67%
2.40%
68.0%

This report has been written by Martin Place Securities Pty Ltd.

Data has been sourced from available public information and reflects the author's own assessments.

# ICENI GOLD LTD (ICL.ASX)

14 MILE WELL 850KM<sup>2</sup> YILGARN PROJECT MIDWAY BETWEEN LEONORA AND LAVERTON IN HIGHLY PROSPECTIVE LAVERTON GREENSTONE BELT

# 1. SUMMARY

# SOPHISTICATED TENEMENT-WIDE EXPLORER IN VIRGIN ELEPHANT COUNTRY USING INDUSTRY-BEST GEOLOGISTS AND LATEST TECHNOLOGIES.

Iceni Gold as a grass roots explorer raised A\$20m in April 2021 ASX IPO.

The now-850km<sup>2</sup> of tenements have been aggregated over many years, are strategically located between Leonora and Laverton and are very sparsely explored, under thick transported cover and previously considered unprospective.

The first phase of activity across the entire tenement package has identified numerous structures and anomalies and currently eight high quality target areas have been generated for assessment in the next phase of exploration at the 14 Mile Well Project.

#### **1.1 KEY POINTS**

### 14 MILE PROJECT - GOLD POTENTIAL WEST OF CELIA-CLAYPAN FAULT

- \* Multi target project in near-virgin terrain exploring for:-
- Intrusion related gold deposits in syenites and monzonites
- Orogenic lode gold deposits
- Granitoid hosted gold deposits
- Epithermal gold systems tellurium and bismuth anomalies
   VMS base metal systems
  - \* Key industry leaders as contracted geotechnicians
  - \* New concepts applied and targets confirmed
  - \* Strategic location provides long term gold industry value
  - \* Early stage explorer but has very large potential upside

Iceni Gold is a remarkable and unique explorer with a focussed portfolio of contiguous tenements located in between the important gold centres of Leonora and Laverton WA which host some of Australia's largest gold mines and important companies like **Northern Star, Anglo Gold, Hoover House**(Genesis/St Barbara/Dacian) are here.

Results to date are very encouraging and reflect the commitment to new geological thought and new technologies which are providing ground breaking interpretations.

Eight target areas have been identified to date for the Round 2 drilling programme and it is only a matter of time before a major discovery is likely.

This is a complex yet simple report for a very complex and revolutionary company.

#### Table 1 Iceni Gold 14 Mile Well Targets

Iceni Gold		14 Mile Well Proje	ect			
Target Area	Structure	Features	eatures Nuggets Targets Rocktype		Rocktype	Prospectivity
Claypan	Claypan Fault	Many faults		Granitic instrusion	Andesitic volcs	High
North 1 TOTK N-5	Castlemaine Fault	101g/t chip samples		Vein structures	Syenite	High
Deep Well	Deep Well Granite	Stockwork veining		Granodiorite	Syenite	High
Danjo NE	Danjo Batholith	Major geochem anomaly		Highly faulted	Mafics	High
Goose Well	Syenite intrusion	Gold in sulphide veins	Many	Syenite	Syenite	High
Everleigh Well	Castlemaine Fault	580m drill anomalies	Numerous	Danjo Batholith	Dolerite	Very high
Guyer Well	Guyer Fault Shear	Geochem/drill anomalies	Numerous	Danjo Batholith	Granite/mafics	Very high
Monument	Monument Batholith	Major Au geochem anoma	aly	Monument Bathol	Monzogranite	High

#### **Table 2 Financial features**

Year End 30 June	2021	2022
Assets	25,245	27,325
Cash	17,368	7,798
Accum losses	(2,385)	(3,702)
Net equity	24,210	24,918
Net equity per share (cts)	12.1	11.9
Shares on issue (m)	199.6	208.6

Contiguous tenements acquired over past five years

#### Western Australia

- Project location



Important gold mines along Kilkenny and Celia Fault Zones- many on the western side of the Celia Fault structure



Castlemaine and Guyer Faults are under transported cover splays off Celia Fault Zone

# 2.0 ICENI GOLD - IN PROFILE

ICL was listed on ASX in April 2021 after raising A20m for exploration funding for  $\sim$ 600km<sup>2</sup> of contiguous tenements in WA comprising the **14 Mile Well Project**.

The Project is well located in Mt Margaret District in the Murrin Domain of the Laverton Greenstone Belt within the Kurnalpi Terrane of the Yilgarn Craton in a suite of metavolcanic and metasedimentary rocks and mafic and felsic intrusives.

The geology is complex with several periods of deformation, volcanic activity and intrusion by a variety of rock types.

The 14 Mile Well Project is situated between two major structural trends, Kilkenny and Celia Fault Zones, that each host important gold mines. Despite 100moz in regional deposits only modest gold production and quite limited exploration have taken place on these tenements dating back to ~ 1900 primarily due to thick transported cover.

An experienced team gives a strong platform for ICL to develop these key assets.

### 2.1 Iceni Gold – West Australia Tenement Assets

### 14 Mile Well Project tenements - Mt Margaret Goldfields

The Project is located south of the Leonora – Laverton Road and abuts Dacian's (Hoover) Mt Morgans Mine tenements and east of Saturn Metals' Apollo gold deposit. The important Wallaby/Granny Smith and Sunrise Dam mines are just <30km away.

The Project is divided into

- Northern Tenements
- Southern Tenements

Iceni is actively exploring the entire tenement area using some of the industry's best geo technician consultants for exploration concepts and programmes and by employing state of the art techniques in geophysics, Deep Ground Penetrating Radar(DGPR), geochemistry (including CSIRO UFF+ ultrafine soil sampling), rock chip sampling and alluvial gold sampling. Over 42,000km of air core and >17,000m of diamond drilling has been carried to date, >16,000 UFF+ samples and >5000 rock chip samples collected and over 1000 alluvial nuggets recovered.

These surveys have penetrated the thick cover and have given Iceni a very powerful data base that has identified new key structural faults(including delineating 2<sup>nd</sup> and 3<sup>rd</sup> sub structures) and highlighted geophysics targets. The project-wide UFF+ survey has provided a valuable assessment including numerous large gold and multi-element soil anomalies that have been verified to date by drilling and by alluvial gold recoveries.

Link to prospectus and IGR Investor Centre | Iceni Gold Limited

ICL has recognized the significance of the Celia-Claypan Fault and has determined that its newly-appreciated Castlemaine and Guyer splay faults within the tenements are key features and has provided the following Target Areas.

- Claypan little previous gold exploration
- Deep Well only previous reconnaissance exploration
- North 1 little previous gold exploration
- Danjo NE no previous exploration
- Goose Well syenite intrusion with some previous exploration
- Everleigh Well Redcastle goldfield and some drilling
- Guyer Well 5km gold geochem anomaly and numerous nuggets
- **Monument** no previous exploration

#### Table 3 Financial History

Year End 30 June	2021	2022
Total assets	25,245	27,325
Exploration & Evaluation Assets	6,765	16,558
Cash	17,368	7,798
Exploration expenditure	(2,038)	(7,428)
Accum losses	(2,385)	(3,702)
Net equity	24,210	24,918
Net equity per share (cts)	12.1	11.9
Shares on issue (m)	199.6	208.6

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Well located along the Castlemaine Fault amongst numerous other gold deposits in Laverton

Blanketed by very thick transported cover so is significantly underexplored

Eight priority Target Areas defined along and around the Castlemaine and Guyer splay faults

Claypan North 1 Deep Well Danjo NE Goose Well Everleigh Guyer Monument

Excellent progress from grass roots exploration on under cover prospects

# 3.0 THE ICENI STORY SO FAR - IN SUMMARY

**The 14 Mile Well Project** is located west of Laverton on the **Castlemaine Fault** which is a splay off the major 700km **Celia-Claypan Fault Zone** that is the mineralizing conduit for numerous gold mines in the Yilgarn.

The ICL tenements have little outcrop and have thick transported soil cover that has discouraged exploration and hides these major faults and other structures.

Figure 1 14 Mile Well Project and surrounding gold deposits



Iceni's surveys have identified eight priority Target Areas in tenements based around the **Castlemaine Fault** and also the **Guyer Fault** splay in the easternmost tenements.

Figure 2 14 Mile Well Project – Eight major Target Areas



ICL carried out tenement-wide CSIRO UFF+ geochem sampling that has identified within these Target Areas 14 gold anomalies of at least 1000m and up to 5000m. Figure 3 14 Mile Well Project – Fourteen major UFF+ geochem anomalies

Iceni collected >16,000 CSIRO UFF+ geochem soil samples across the entire 850km<sup>2</sup> of tenement holdings

Fourteen gold anomalies defined.

Some up to 5000m in strike length

Big anomalies suggest large scale mineralisation

Anomalies on eastern side extend into Dacian's identified prospects

ICL has followed up geochem anomalies with

Extensive field traverses

>42,000m of aircore

>17,000m of diamond drilling

>5,000 rock chip sampling

Syenite intrusions are important

Syenite intrusions have been associated with important gold deposits in the region

ICL has found six so far on its tenements and another two on tenement boundaries in the north



Iceni has followed up these anomalies with aircore and diamond drilling and has intersected gold mineralisation and also noted gold-hosting **syenite** intrusions (yellow circles) as occur in several surrounding mines such as Wallaby and Jupiter.

Figure 4 Syenite intrusions around 14 Mile Well project



The most advanced prospects are in the

- Everleigh and
- Guyer

target areas.

Large geochem anomalies have been followed up

#### So far:-

Everleigh maiden-drilled the Castlemaine Fault and has had reported encouraging gold mineralisation over much of a 900m diamond hole.

Numerous gold nuggets found to suggest gold sourced from Castlemaine Fault.

Guyer has provided geochem anomalies over much of the 15km of the Guyer Fault.

Aircore drilling has determined bedrock gold anomalies over 8km and BIF along Guyer Fault

Gold nuggets in paleochannels

Gold mineralisation encountered over 2500m in aircore results in 11km Danjo Granite-greenstone contact

Gold nuggets in paleochannels at Guyer and Everleigh are telling a very positive story.

*Could become exploration targets* 

Paleochannel nugget gold at Sunrise Dam provided over 450koz of easily mined low cost gold at mine start up. The most advanced prospects are in the Everleigh and Guyer Target Areas but the tenement-wide assessment is likely to lead to many more high potential prospects.

Figure 5 Key points of current focus for Iceni Gold



#### Figure 6 Summary of Guyer North and Everleigh gold nugget finds

#### Summary

ICENI GOLD

#### **Guyer North**

- Majority of nuggets from Guyer North are transported
- High purity suggests supergene modification
- Nugget trend coincides with UFF+ Au anomaly
- Correlates with the Unconformity at the base of transported cover
- Gold likely to be coming from the granite contact to the west

#### **Everleigh Embayment**

- Nuggets are transported
- Drainage on the Castlemaine Fault
- Vein textures are similar to gold bearing veins observed in outcrop within the Danjo Granite at East Well
- Gold likely to be coming from the 2<sup>nd</sup>/3<sup>rd</sup> order structures off the Castlemaine Fault



## Iceni activity by end FY22

- 16,700m of diamond drilling
- 31,300m air core
- 11,500 UFF+ soil samples
- 2000 rock chip samples

First systematic explorer here

Numerous important mines within 50km radius of the 14 Mile Well Project tenements

# *Celia Fault Zone supports many deposits*



Note many of the major fields are along the western side of the Celia Fault - Jundee, Bronzewing, Darlot, Porphyry, Carosue Dam.

Leonora region gold deposits sit along the Kilkenny Fault

Laverton deposits sit within the Celia Fault Zone

# 4.0 INVESTMENT REVIEW

ICL has delivered some very constructive exploration results since listing less than two years ago. It has built on its pre-IPO work and in its first phase of exploration had drilled 16,700m diamond core and 31,300m of air core by end June 2022. Over 11,500 UFF+ and 2000 rock chip samples had also been taken. These numbers are now higher.

The Iceni 14 Mile Well project is midway between **Leonora** and **Laverton** in the Eastern Goldfields of WA and abuts Dacian's Mt Morgans mining operation. Saturn Metal's Apollo Gold Project is about 10km to the West. Granny Smith and Sunrise Dam are just across Lake Carey and within 20km, Red October within 30km and many other major mines are within 50km.

This ground had never been consolidated so ICL is the first systematic explorer.

It is an early stage explorer but with a sophisticated programme and results to date are highly encouraging for making discoveries to create significant value for shareholders.

This region is at the join of East Murchison and Mount Margaret districts and is one of the most important gold producing regions in Australia. Consolidation of the region is underway with Hoover House Ltd aggregating St Barbara and Dacian. More to come.





Source: Iceni Gold

**Leonora** to the west sits on the **Keith Kilkenny Fault System** extending over 300km and has produced over 27moz in just the area of this study and has another 16moz of current resources.

**Laverton** to the east has the 700km **Celia Fault Zone System** and along the eastern boundary to the Kurnalpi Terrain and has great influence over gold mineralisation in the Laverton Terrane with over 17moz production and another 43moz of current resources(WA Geol Survey data).

Note that many of the major fields along the Celia Fault are on the western side-Jundee, Bronzewing, Darlot, Porphyry, Carosue Dam. Regional gold mines are very well known and include **Gwalia**, King of the Hills, Granny Smith, Wallaby, Sunrise Dam, Red October and Mt Morgans.

# Major regional mines include Kilkenny Fault

- Gwalia,
- King of the Hills,
- Carosue Dam

# Celia- Claypan Fault Zone

- Mt Morgans
- Granny Smith,
- Wallaby,
- Sunrise Dam,
- Red October and



Generally within the Yilgarn `Green' is mafic `Pink' is granitoid

Nimy Resources has also just magically turned its Yilgarn `pink' into `green' as a new greenstone belt



Much of the Yilgarn is under 20-70m of cover and still underexplored



Source: Iceni Gold

The Yilgarn Craton is one of Australia's most productive geological regions. It makes up 75% of WA's gold production which in turn is ~75% of Australia's 340tpa gold output.

As with the **Boulder-Lefroy Fault** that extends from Bardoc beyond the Paddington goldmine to the north, 160km through Kalgoorlie and down to Norseman and hosting over 150moz, the **Kilkenny Fault** and **Celia Fault Systems** in this region have provided over 40moz of production and over 60moz of current JORC resources.

The Yilgarn Craton is generally considered to be typically made up of mafic (magnesium and iron rich) rocks as low level metamorphosed sediments and volcanic rocks with mafic intrusions of dolerites (usually the `green' on geological maps) and also of felsic (feldspar and silica) granitoid rocks (shown as `pink' on these maps).

Mineralizing fluids within these rocks have remobilised or introduced gold and other metals as deposits in rock reservoirs that are typically associated with the major geological structural features.

#### This is the current conventional wisdom for many of gold deposits in the Yilgarn.

Although the Yilgarn Craton is the key gold producing region of Australia, as much as 70% is under transported sediment cover of 20-70m without outcrop with much of the underlying geology only being interpreted rather than actually known.

Over the past 20 years or so much of the unfavourable `pink' granitoid material under cover has actually been found to be mafic and `green'.

#### This seems to be the case with some rocks under cover in the 14 Mile Well Project.

ICL's work has shown that the regional North-South trending granitoid Danjo Monzonite/granite/tonalite in reality has evidence of multiple intrusive phases and other prevailing lithologies that are greenstone belt sequences of mafic composition and volcanoclastics of felsic composition. Portfolio built up strategically over more than five years

Deep soil cover of 20-30m... ...some areas have >100m of cover

Within a major gold mining region

Some of the northern tenements are contiguous with mines and prospects owned by Dacian Gold (Genesis Minerals/Hoover House).

The ICL tenements run along the western shore of Lake Carey..... Jupiter Mine at top



Anglo Gold Wallaby and Granny Smith in top right just <30km away across lake

Anglo Gold's Sunrise Dam just <30km away to in bottom right on the eastern side of the lake

Sediments in the lake may indicate a special geological and structural relationship with gold deposition nearby

See Fig 13

Saturn Metals Apollo Hill Gold Project is 10km to the west

Historic Redcastle mine west of Everleigh

Wallaby/Granny Smith (>15moz) and Sunrise Dam (>12moz)



#### 4.1 Iceni Gold's approach to the 14 Mile Well Project

ICL and its MCA predecessor have built up this strategic tenement package through the aggregation of numerous small claims into the Northern Tenements and applied for new permits in the Southern Tenements.

The 14 Mile Well Project typically has a deep transported soil cover of 20-30m with some areas in excess of 100m with very little outcrop and runs along the western edge of the Lake Carey salt lake.

Consequently, whilst early mining has taken place near Everleigh in the west and Yundamindera and Pennyweight Point in the south it has generally been historically unattractive for prospectors and larger explorers.

However, the proximity of Anglo Gold's Granny Smith and Sunrise Dam mines to the east shore of Lake Carey had in recent years allowed that company to express confidence in the regional gold potential further west including under the salt lake.

Figure 9 Iceni Gold 14 Mile Well Project Tenements



Source: Iceni Gold

The Northern Tenements had previous minor prospecting at Everleigh and in the north east were close to the Westralia mine of the Mt Morgans operations of Dacian.

For the Southern Tenements, mining took place further south at Yundamindera but much of area was considered barren, under soil cover and too close to Lake Carey.

Beyond the tenement boundaries lies Saturn Metals' 1.47moz @ 0.6g/t Apollo Hill heap leach project to the west and to the southwest is Redcastle's high grade historic Redcastle Mine(1832oz @23.8g/t) and Pennyweight Point is in the south east.

The region has little outcrop but extensive deep alluvial cover leading into Lake Carey.

Numerous gold geochem anomalies have been delineated by ICL and afterwards followed up by drilling.

Coarse alluvial gold nuggets have been recently recovered by Iceni at Guyer, Everleigh and Goose Well confirming gold prospectivity within the 14 Mile Well Project.

Important mines Wallaby/Granny Smith(>15moz) and Sunrise Dam(>12moz) are less than 30km to the east and Red October ( 3moz) is 30km to the south east.

The 14 Mile Well Project is off the Leonora-Laverton main road and `across the road' to the south from the Murrin Murrin lateritic nickel operation.

The terrain is typical Yilgarn with little outcrop, widespread transported soil cover, ephemeral streams and salt lakes that make prospecting and exploration difficult.

The region is clearly amongst gold mines and so highly prospective but exploration in these terrains would require advanced remote sensing for proper assessment.

Figure 10 Terrain photo of 14 Mile Well Project near Granny Smith and Sunrise Dam



Source: Google Earth

To properly explore this terrain, ICL and its predecessor MCA took a big company approach to these very strategically positioned tenements. They applied a formal scientific assessment to its land tenure and began actively exploring the entire area using some of the industry's best geo technician consultants for exploration concepts and programmes and by employing state of the art techniques in geophysics, geochemistry (including CSIRO UFF+ ultrafine) and rock chip and soil sampling.

Over 59,000m of air core and diamond drilling has been carried out to date in the first phase of exploration.

Some very encouraging outcomes have already been achieved under this deep transported soil cover, particularly at North Guyer and Everleigh Well.

The company initially assessed that whilst the transported cover blanketed most of the 14 Mile Well Project tenements they had real potential for discovery of gold and other metals in the form of deposits from particular styles of mineralisation:-

- Intrusion related gold
- Orogenic lode gold
- Granitoid hosted gold
  - Epithermal gold systems

The defined exploration programme was one would look below the cover and would integrate:-

- advanced geophysics such as gravity, aero magnetics and DGPR
- classical structural geology mapping techniques
- geochemistry such as rock chip and soil sampling including using UFF+
- geometallurgy
- focussed searches for alluvial gold

The water flow is to the east into lake Carey.

Major gold mines are just across the salt lake.

Exploration here has been a big job and it certainly invites new large scale remote sensing technologies

A blank canvas to start with ...

The geology was mostly unverified ..

Thick transported sediment cover

What could be found beneath surface

#### Any and all of these

- Intrusion related gold
- Orogenic lode gold
- Granitoid hosted gold
- Epithermal gold systems

The programme to date has been very successful within numerous prospects rapidly developing.

Geological evidence from pre IPO work showed some very high grade (+100g Au/t) rock chip samples in a number of places.

Also the potential was recognised of finding syenite rock types (which are related to numerous gold deposits in the region including the Wallaby, Jupiter and Cameron Well gold deposits) that could lead to gold mineralisation accumulations.

Some rock chips from the Target Areas also delivered very high levels of pathfinder elements - bismuth and tellurium.

Very encouraging high grade samples in rock chips

Looking for syenite type rocks

 Table 4 Iceni Gold's extraordinary rock chip sampling results

+100g/t gold with very high bismuth and tellurium	<b>N1-5 TOT</b>	<
	ME20131	13
	WW200723	110
	BR200202	101
	BR200703	75
	WW191131	61

Iceni took CSIRO UFF+ samples across the entire tenement areas

>16,000 UFF+ samples

ICP-MS assaying techniques give outstanding results

52 element assays

Fourteen important gold anomalies have been delineated so far

Diamond holes at Everleigh Well gave low grade gold mineralisation over 900m of the hole

Follow up drilling of 23,000m air core at Guyer over 15k strike and 1000m wide zone has confirmed gold mineralisation.

14 Mile V	Vell	Rock ch	nips	g/t		
Sample	Gold	Silver	Bismuth	Tellurium		
<b>N1-5 TOT</b>	ĸ					
ME20131	135	1220	1.09	0.66		
WW200723	110.5	505	1.47	3.75		
BR200202	101.5	548	1.41	1.26		
BR200703	75.7	341	1.22	1.29		
WW191131	61.8	507	3.4	2.06		
Danjo NE						
WW2002025	26.8	14.5	18.22	7.33		
BR200205	4.69	78.7	117.5	56.4		
WW190531	3.67	4.02	29.5	25.3		
Eveleigh	Well					
MWG 5003	2.68	5.96	0.181	8.65		
MWG 8006	2.3	0.02	0.05	0.07		

Source: Iceni Gold

One of the most important surveys was the Project-wide CSIRO UFF+ geochem soil sample survey that has provided a valuable assessment including over a dozen encouraging 1000m - 5000m gold and multi-element soil anomalies.

The soil survey commenced on the 14 Mile Well Project in 2017 and there are now over 16,000 UFF+ samples.

The CSIRO UFF+ technique was developed to target ultra-fine soil particles, less than 2 microns in size, and so form geochemical signatures that reflect orebodies lying many metres below the surface and otherwise potentially hidden beneath transported cover. The UFF+ technique takes only the clay particles which have very high surface areas to attract metals and gives a better overall indication of element anomalism.

New 4 Acid Independently Coupled Plasma Mass Spectroscopy (ICP-MS) assaying techniques are able measure elements down to 0.01ppm.

Analysis of UFF+ samples has provided measurements of 52 elements.

This is very helpful in assessing presence of key pathfinder elements including arsenic, tellurium and bismuth.

Near Infra-Red (NIR) and Fourier Transform Infra-Red (FTIR), hyperspectral data, Electrical Conductivity (EC), soil acidity (pH), colour and soil sizing have also been used.

UFF+ soil samples at 14 Mile Well have so far identified more than a dozen anomalous areas. Of particular interest are the areas with anomalous gold values associated with favorable alteration mineral distributions, pathfinder elements (like silver or tellurium), or geophysical features.

The areas with higher gold grades or more anomalous samples are considered to be more prospective. Exploration effort is focused in these areas as they have an increased probability for the discovery of an ore body.

Drilling programmes to date have delivered low grade gold mineralisation including as much as 900 metres downhole at Everleigh and aircore at Guyer has confirmed gold along the Danjo Granite-greenstone contact and within the Guyer Shear.

Near-source gold nuggets were also found in paleochannels at North Guyer, Everleigh Well and Goose Well.

The UFF+ geochem surveys provided some encouraging gold anomalies

Six targets were identified in the IPO prospectus

Over twelve now.

#### Nomenclature

14 = 14 Mile Well Project UF = UFF+ CSIRO 014 = Survey number

Encouraging results at East Well have shown a 5,000m gold anomaly .....

....and Everleigh Well gave a 2500m gold and multielement soil anomaly

Guyer gave over 15000m of gold anomalies that have been followed up by successful aircore drilling

Some on east are very close to Dacian Gold mines and prospects

Gold anomalies near Dacian prospects/mines:-

- Danjo NE
- East Well
- North Guyer



These CSIRO UFF+ and geophysics surveys were coordinated had identified six Target Areas at the time of the March 2021 prospectus

- Claypan
- Deep Well
- North 1
- Danjo NE
- Guyer Well
- Eveleigh Well

Since then, the number has expanded to eight with more than a dozen gold anomalies being identified on the tenements with several having strikes of over 1000m.

#### Figure 11 Iceni Gold - CSIRO UFF+ Project-wide soil sampling



Source: Iceni Gold

At least four have extensions into existing geochem anomalies on Dacian project tenements to the east.

Along the eastern margin of the tenement in the north, gold anomalies were identified at Claypan (14UF014), Danjo NE (14UF007), East Well (14UF002) and Guyer N (14UF003) adjacent to Dacian (Hoover House) mines at **Westralia** and prospects at **Robinta** and **Ambassado**r.

Additional anomalies were identified at Burge's Bore, Hage Bore, Crossroads, Everleigh and Breakaway.

A detailed graphic is at Fig 76 page 68.

#### Programme was comprehensive

Using the geochemistry, geophysics, geology and structural analysis The CSIRO UFF+ was critical

Identification of the Castlemaine Fault and Guyer Faults as splays off the Celia Claypan Fault Zone

Syenites can be associated with gold mineralisation

VMS targets generated

#### Target Areas

- Claypan
- Deep Well
- North 1
- Danjo NE
- Goose Well
- Eveleigh Well
- Guyer Well
- Monument

#### 4.1.1 ICENI GOLD TARGET ASSESSMENTS

Iceni has used the key basic factors of **geochemistry**, **geophysics**, **geology** and **structural analysis** to assess these tenements.

**Geochemistry** using the CSIRO UFF+ soil sampling across the tenements has had important input to the determination of Iceni's principal target areas.

**The important regional granite/tonalite intrusion**, the Danjo Batholith, and the contacts between sediments and subsequent mafic intrusions offer opportunities for accumulations of gold mineralisation and have been identified using geophysics.

The important structural splays off the key Celia-Claypan Fault being Castlemaine and Guyer Faults have become key determinants in target assessments.

**These Faults** are zones of weakness that can allow passage of mineralizing fluids and those identified on the tenements are essentially unexplored.

**Syenite rock types** have been recognised on these tenements and they are noted to be important in nearby gold mines at Jupiter, Wallaby and Cameron Well.

As set out in detail below, syenites are a rock type with low quartz but high levels of potassium alkali minerals that have been highly mobile magmas that appear to have fractionated from monzonite granites leaving behind monzodiorites.

Syenites as high fluidity magmas can break upwards along zones of weakness and carry or provide conduits and fractures for gold bearing hydrothermal fluids.

VMS base metal sulphides deposits are also present regionally and ICL has identified prospects at 14 Mile Well Project.

#### Figure 12 Iceni Gold Principal Target Areas



Source: Iceni Gold

Technical understanding of the Yilgarn Craton is increasing rapidly

Evidence found of epithermal gold deposits

Geochem is highlighting Te and Bi

Scott Halley's work on Yilgarn geochemistry has highlighted the tellurium as probably being part of earlier epithermal systems

Low temperature hydrothermal mineralization will remobilise bismuth and tellurium

In the Yilgarn, basalts can have their gold mineralisation remobilized.

Sediments on top of these basalts can become zones of weakness and may be responsible for the Lake Carey salt lake to the east of Iceni's tenements

The large scale geochem sampling with 52 element testing has given a good understanding of the local geology The technical understanding of the Yilgarn Craton has increased substantially in recent years as mapping, mining and geochemistry have provided substantially more data and stronger evidence for geological history. It has only been in the last decade that major advances have been made in the understanding of the tectonic evolution of the Kurnalpi and Kalgoorlie terranes.

The Yilgarn is now seen as rocks that have been subject to roughly east-west compression and the rocks appear to be no different to those formed at much later periods and even being formed today.

One very important conclusion drawn by geologists is that a very early period of epithermal (i.e., non-orogenic) gold mineralisation had taken place prior to the formation of the major gold deposits which are orogenic origin or intrusion related.

The key to epithermal gold deposits is the low temperature formation and key pathfinder elements are bismuth, silver and tellurium.

Iceni has picked up rock chips with high grade gold with elevated bismuth and tellurium (see Table 4) suggesting the ancient epithermal nature.

This has been picked up along the Castlemaine Fault in the Eveleigh Well target.

Geochemistry Consultant Scott Halley has assessed that Yilgarn type geology with pillow basalts are very likely to have gold in epithermal style deposits with the pathfinder signatures of bismuth and tellurium.

Figure 13 Metal Zoning in low temperature epithermal environments



Source: Scott Halley 2022

ICL-commissioned studies have provided information on litho geochemistry and the relationships between alteration mapping and pathfinder element associations.

Analysis has also been carried out the integration of whole rock chemistry with the contained mineralogy identified from shortwave infrared analysis(SWIR)

The results coupled with magnetic anomalies demonstrate the possible presence of syenite-series granitoids which can host gold such as at the Wallaby deposit.

It has been shown that part of the area has experienced the tectonic activity signature provided by a typical syenite-type magmatic series.

Some of the areas of alteration also show reasonable association with gold pathfinder elements and are indicative of ancient epithermal systems particularly immediately to the east of Everleigh Well and further to the south along the Castlemaine Fault.

#### 4.2 ICENI GOLD'S PROGRAMME FOR 2023

ICL has a busy schedule for 2023

ICL has had active programme since listing with 49,000m drilled by FY2022 and more planned in FY2023.

The programme from the 2021 IPO Prospectus planned a first phase of base line data collection using a wide range of geochem and geophysics surveys and early stage drilling.

 Table 5
 2021 Prospectus Exploration Budget

Exploration Budget				
	Year 1	Year 2	Total	
Claypan	0.98	0.79	1.77	14%
North 1 TOTK N-5	1.36	0.75	2.11	17%
Deep Well	0.72	0.54	1.26	10%
Danjo NE	0.70	0.85	1.55	12%
Everleigh Well	0.40	0.53	0.93	7%
Guyer Well	1.25	0.95	2.20	18%
Gravity/Geochem Surveys	1.50	1.20	2.70	22%
Total	6.91	5.61	12.52	100%

Source: Iceni Gold

As of 31 December 2022 Iceni had spent A\$16m of this two year programme.

#### 4.2.1 ACHIEVEMENTS

Iceni's achievements to date have been primarily data collection and analysis and follow through exploration drilling.

The results and conclusions very significant for a greenfields exploration programme.

- The recognition of the significance and distribution of the Danjo Batholith
- the identification Claypan-Celia Fault and of fault splays as the Castlemaine Fault and the Guyer Fault
- Tenement wide UFF+ geochem coverage resulting in over a dozen gold anomalies especially
  - Everleigh 2500m anomaly
  - Guyer Fault trend over 15,000m
  - o Guyer granite-greenstone contact over 11,000m
  - Guyer East Well 5000m gold anomaly
- Drill results that include
  - o 900m mineralised hole at Eveleigh
  - 600m alteration zones at ...
  - 2500m of granite-greenstone mineralised zones at Guyer

The next phase of activity will focus on recent drill results with important gold mineralisation encountered at:-

- North Guyer through results of air core programme
- Everleigh Well with extensive downhole gold mineralisation
- Gold nugget collections at North Guyer, Everleigh Well and Goose Well
- Deep Well 11 DDH holes.

Table 6 14 Mile Well Project IPO Target Areas

Iceni Gold		14 Mile Well Proje	ect			
Target Area	Structure	Features	Nuggets	Targets	Rocktype	Prospectivity
Claypan	Claypan Fault	Many faults		Granitic instrusion	Andesitic volcs	High
North 1 TOTK N-5	Castlemaine Fault	101g/t chip samples		Vein structures	Syenite	High
Deep Well	Deep Well Granite	Stockwork veining		Granodiorite	Syenite	High
Danjo NE	Danjo Batholith	Major geochem anomaly		Highly faulted	Mafics	High
Goose Well	Syenite intrusion	Gold in sulphide veins	Many	Syenite	Syenite	High
Everleigh Well	Castlemaine Fault	580m drill anomalies	Numerous	Danjo Batholith	Dolerite	Very high
Guyer Well	Guyer Fault Shear	Geochem/drill anomalies	Numerous	Danjo Batholith	Granite/mafics	Very high
Monument	Monument Batholith	Major Au geochem anom	aly	Monument Bathol	Monzogranite	High

# Project targeting

Outstanding follow through results

#### Achievements

Excellent base work

#### 14 Mile Well project has

- right address
- right rocks
- right reactions
- right structures

#### 4.3 ICENI GOLD'S EXPLORATION APPROACH

Iceni has recognized that these tenements are strategically located in a highly endowed gold region yet have had hardly any exploration to date.

The value proposition for Iceni and its shareholders is very attractive by having:-

- Right Address For Gold
  - Leonora-Laverton gold fields
- Right Rocks For Gold
  - o intrusions: mafic group granites, syenites & lamprophyres
  - **Right Reactions For Gold** 
    - Alteration and textures show reactions for gold deposition
- Right Structures For Gold

Intrusion related gold

Orogenic lode gold

Intrusion related gold

• Castlemaine and Guyer Faults

Consequently, Iceni has carried out a very thorough multidisciplinary integrated approach to exploration through a good understanding of current thought leaders views on the development of various styles of gold mineralisation in the Yilgarn Craton.

Some are targets of standard exploration models and others are novel.

- Volcanic massive ulphides (VMS)/Epithermal gold Iceni is particularly interested in the presence and location of syenites.

However, the main styles of gold mineralisation sought by Iceni, and having already identified the first three, are

- Orogenic lode
- VMS/Epithermal

Intrusion related

Intrusion related gold

Gold targets

# Gold mineralisation in granite over almost 900m



Intrusion related gold systems (IRGS) are becoming recognized in the Yilgarn with Red 5's King of the Hills a recent example.

A review of the geophysical databases has highlighted the signatures of several previously unidentified bodies including possible syenite group intrusions.

Features like sub circular discrete magnetic features are analogous to Wallaby, Jupiter and Cameron Well deposits and associated with mafic group rocks with syenite group intrusives and have been found.

ICL has carried out reviews of syenite associated gold signature geochemistry and drilling to date has identified such rocks at Goose Well, Burge's Well and Hage's Well.

The tenements are dominated by the Danjo Monzogranite, parts of which have been reclassified from a barren ganitoid to being mafic group intrusions based on leading edge geochemical and petrographic studies.

Drilling at Everleigh Well FMDD0032 in granites encountered low grade gold mineralisation for much of its 900m downhole with FMDD00034 also showing similar grades over a shallower 400m hole FMDD00036.

#### Orogenic lode gold

These are typical Yilgarn deposits and ICL is seeking gold in deep primary structures within the 14 Mile Well Project and targets have been identified along faults over considerable distances at:-

- Celia-Claypan fault 9 kilometres within 14 Mile Well Project
- Castlemaine Fault 28 kilometres
- Guyer Fault 15 kilometres

2nd and 3rd order fluid pathways off the primary structures have also been recognised and orogenic lode gold was also encountered in the two Everleigh Well holes.

Danjo NE has encountered 4-8m of anomalous gold in aircore drilling.

#### Volcanic Massive Sulphides (VMS)

Iceni has encountered rock types usually associated with VMS deposits and alteration characteristics have indicated the flow of fluids through the rocks.

VMS clusters are within 50km of The 14 Mile Well Project.

ICL has used several innovative technologies in its exploration activities

ICL has also used magnetic data margin analysis from Fathom Geophysics.

These studies assist in showing second and third level structures leading from the major structures.

These subordinate structures can be very important for hosting mineralisation

This technology assists with identifying those additional structures

Faults and rounded structures stand out well

#### **Epithermal gold**

Epithermal gold has a low temperature origin and is not considered common in the Yilgarn. However, ICL has found numerous rock samples of epithermal character and high grade gold. And very interestingly, geochemical anomalies of typical of epithermal deposits of high gold, silver, bismuth and tellurium have been identified in the North-1 and Danjo NE target areas.

Geochemists have identified non-orogenic gold deposits that pre date the first Yilgarn orogenic gold deposits of 2650 my BP by around 15m years.

Each of ICL's eight Target Areas has several positive exploration signatures and potential for up to four different styles of gold mineralisation have been identified.

As noted Iceni has carried out a wide range of surveys using innovative technologies.

The use of deep ground penetrating radar (DPGR) has assisted with the delineation of contacts between differing lithologies and also for the location of fault zones. DPGR acts in a similar manner to seismic surveys.

Other state of the art exploration technology including magnetic data margin analysis.

Fathom Geophysics carried out advanced filtering and processing of the magnetic data.

As a result of this type of modelling, the structure of a particular orientation can be filtered out from the data to aid interpretation and identification of dilation sites.

The modelling also attempted to identify sub circular features that may relate to syenite and or mafic suite of intrusions.

The Castlemaine and Celia-Claypan Faults are interpreted as being in contact with the western and eastern margins of the Danjo Batholith respectively.

Figure 14 Advanced structural analysis from magnetic data – Fathom Survey



ource: Fathom, 2017

Source: Iceni Gold

These Castlemaine and Guyer Faults are key structural features and second and third order structures off them identified by the Fathom Geophysics help to gain a better understanding of potential mineralisation.

Iceni has had a unique approach for a small company

Recognised the large scale opportunity

Acquired the worst street in a very valuable neighbourhood

# Carried out the surveys to upgrade the value

Assessed the results which clearly generated value

Confirmed presence and significance of the Castlemaine and Guyer Faults

Developing understanding of deep historic geology

Recognising syenites in this region

### 4.4 VALUATION PROCESS

The approach taken by Iceni Gold is probably unique for a small company in the history of the Yilgarn goldfields in WA.

Iceni and its predecessor MCA Nominees recognised a large underexplored area between two of Australia's largest gold bearing structures and hosts to over 100 million oz of production.

The tenements in these areas had been effectively tied up by numerous small claims or were areas considered part of the granitoid geology so were not attractive to larger explorers. In addition the bedrock was hidden by up to 60 metres of cover and this transported sediment blankets over 70% of Iceni's tenements.

### This is literally the worst street in a valuable neighborhood.

MCA's aggregated tenements fitted into two areas

- the North being aggregated holdings and
- the South being new applications

ICL has then carried out very sophisticated surveys involving new concepts in Yilgarn geology, new geophysical tools, CSIRO UFF+ ultrafine technology and also and a surprisingly large amount of ground traverses.

This approach has provided encouraging results with some of the most surprising coming from actual onground prospecting.

The key outcomes have been

- recognition of the significance of the Castlemaine and Guyer Faults
- encouraging results from numerous high grade rock chip samples
- numerous gold geochem anomalies extending at least 1000m
- widespread presence of gold pathfinder elements tellurium and bismuth
- magnetic and gravity margin analysis guiding target assessment
- the deep historic geology in the Yilgarn has involved several orogenic events
- recognition of seemingly uninviting felsic granitoids being mafic intrusions
- recognition of syenite granitic intrusions as potential gold carriers
- recognition of epithermal style mineralisation predating orogenic mineralisation

The Castlemaine and Guyer Faults are newly recognized structural splay fault features running off the Celia-Claypan Fault Zone that could act as conduits and reservoirs for fluid flows that could be gold bearing.

Basic practices of outcrop rock sampling fieldwork has provided ICL geologists with hard evidence of exploration potential. Very high grades combined here with the useful UFF+ geochem results are very encouraging.

The discovery of rocks with high gold content accompanied by very high tellurium and bismuth gives further evidence of mineralisation styles.

The deep historic geology in the Yilgarn shows several orogenic events tieing in with the arrival of orogenic gold deposits beginning about 2650 million years ago but epithermal style mineralisation has also been identified that actually predates the orogenic gold.

Iceni has also recognised on its tenements the occurrence of syenite granitic intrusions that have also been associated with important gold deposits such as Wallaby, Cameron Well and Jupiter in the surrounding region.

The key issue then becomes the approach to giving value to these tenements.

ICL has spent about A\$16m (~80%) of its cash on exploration activities and consultants in the past 18 months and has increased the value of the tenements.

The IPO asset vend was premoney A\$20m with the raising of A\$20m.

Current consolidation and rationalisation are now highlighting the regional significance

These initial results should be considered exceptional from a grass roots exploration programme

Large scale geochem anomalies have been followed up by drilling

Gold mineralisation over extended strike lengths and confirmed by recovery of gold nuggets

Large scale geochem anomalies have been followed up by drilling

Gold mineralisation over extended strike lengths and confirmed by recovery of gold nuggets

These two key targets are just the start

The regional value significance of the 14 Mile Well Project can be seen in the current rationalisation of the Leonora - Laverton region by Genesis (Hoover House) involving Genesis, St Barbara, Dacian and Kin Mining. Significant gold production is being consolidated and large sums of money are being involved.

### Highlights of Value Addition to date

Considerable value has been added to these tenements, particularly in the Dec Qtr 2022 for three of the Target Areas but all eight have great promise.

#### Claypan

- Recognition of parallel structures to key Celia-Claypan Fault Zone
- Banded Iron Formation (BIF) occurrences
- VMS style alteration
- Strong alteration and sulphides ecountered in diamond drilling

#### **Everleigh Well**

- First drill tests of Castlemiane Fault
- Major geochem anomalies
- Gold mineralisation noted over 900m and 400m resp in two diamond holes
- Gold nuggets showing nearby primary source

#### Guyer

- Large gold geochem anomalies extending over 15 km of Guyer Fault
- Mineralisation over 8000m so far of 11,000m of granite-greenstone contact
- Gold nuggets showing nearby primary source

#### Figure 15 Major geochem gold anomalies



Source: Iceni Gold

Book value of tenements was A\$20m at IPO.

Post IPO expenditures would have added considerable value to these tenements.

The book value of the tenement portfolio was A\$20m in the 2021 IPO.

Each of the major Target Areas has been given a notional book value that includes estimated previous capitalised exploration expenditures and post IPO expenditures (less administrative writeoffs) determined from the relative amount of activity. All exploration to date has been capitalised and none expensed. No figure has been sourced direct from Iceni and are all estimates.

The expenditures and results to date would suggest that the farmin value of each Target Area would be more than double such exploration expenditures.

These figures have been tabulated as potential contributors to earnings from yet to be found resources that could be delivered to any one of several operating mills in the region.

Valuation Matrix	ICL	\$ 0.10												
Year end 30 June	2021	2022	2023	2024	2025	2026	2027	2026	Book V	alue	Market	Value	Apprais	ed Value
Project	Contribu	tions to e	arnings		A\$m			Revenue	A\$M	A\$/sh	A\$M	A\$/sh	A\$M	A\$/sh
Claypan	0.0	0.0	0.0	0.0	0.0	0.0	10.0	50	6	0.03	10	0.05	10	0.05
North 1 TOTK N-5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	15	8	0.04	10	0.05	12	0.06
Deep Well	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	2	0.01	8	0.04	10	0.05
Danjo NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	2	0.01	5	0.02	8	0.04
Goose Well	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0.00	2	0.01	10	0.05
Everleigh Well	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0	6	0.03	12	0.06	20	0.10
Guyer Well	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0	10	0.05	15	0.07	50	0.24
Monument	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0.00	2	0.01	5	0.02
Interest/cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	3	0.01	3	0.01	3	0.01
Admin	-1.8	-1.0	-1.2	-2.0	-2.0	-3.0	-4.0			0.00		0.00		0.00
									37	0.18	67	0.32	128	0.61
Total Pretax	-1.8	-1.0	-1.2	-2.0	-2.0	-3.0	51.0							
Tax	0.0	0.0	0.0	0.0	0.0	0.0	-15.3							
Net	-1.8	-1.0	-1.2	-2.0	-2.0	-3.0	35.7	95	37	0.18	67	0.32	128	0.61
Cash generation	-1.8	-1.0	-1.2	-2.0	-2.0	-3.0	76							
Capex	1.3	6.2	8	8	15	50	50							
EPS	-0.01	0.00	-0.01	-0.01	-0.01	-0.01	0.17							
CFPS	-0.01	0.00	-0.01	-0.01	-0.01	-0.01	0.36							
DPS	0	0	0	0	0	0	0							
Shares on Issue*	180.0	208.6	208.6	208.6	208.6	208.6	208.6							

#### Table 7 Valuation Matrix of Iceni Targetted Areas

Source: MPS

The Book Value as noted is a notional split of historic and post IPO expenditures.

Market Value as book vale together with any third party valuation.

Appraised Value is a risk adjusted assessment that is entirely hypothetical.

The targets involved in the 14 Mile Well Project are potentially large and as considerable infrastruture exist in the region the development thresholds are low.

At present the Guyer Well Target Area is the highest value followed by Everleigh Well then Goose Well.

It is likely that other Target Areas will have considerable increases in value over the next 12months as their prospects are better understood.

4.5 USE OF TECHNOLOGY

#### Introduction

Iceni has innovative corporate policies that have emphasised the value in large scale data collection using the best available systems to create as much information value as possible whilst reducing risk by multifactor reinforcement of the suitability of targets.

This big data approach even in exploration companies in utilising machine learning and artificial intelligence can substantially to improve the productivity of geotechnicians by completing months of assessment work in just days or even hours.

The technology ranges from the CSIRO UFF+ soil sampling, airborne and ground based gravity and magnetics to specialised studies including Near Infra-Red (NIR) and Fourier Transform Infra-Red (FTIR) hyperspectral data, Electrical Conductivity (EC), soil acidity (pH), colour and soil sizing have also been used.

Advanced Spaceborne Thermal Emission and Reflection radiometer (ASTER) is a long - used technique for identifying surface clay types are very helpful in identifying alteration zones.

Iceni has also usefully used Ground Penetrating Radar to more clearly see the structure of underlying lithology in a similar manner as with seismic with particular success in identifying extent of fault zones.

### 4.5.1 GEOCHEMISTRY

CSIRO UFF+ geochem mentioned above has been useful in the tenement-wide assessment of mineralisation and given the 800km<sup>2</sup> area the data gathered is substantial.

ICP-MS lab processes are very accurate and now allow geochem maps and data to be used with the assumption of a high level of continuity.

These large data systems encourage the use of Artificial Intelligence (AI) and Machine Learning (ML).

CSIRO has been carrying out Machine Learning NextGen analytics on its UFF+ soil results with Iceni a ML client.

Figure 16 Iceni's Gold anomalies from UFF+ geochem



Source: Iceni Gold

Australia has almost 70% of its bedrock land surface area blanketed by transported cover.

Remote sensing has become more and more important as these blanketed areas become exploration targets.

Evolving technologies are making the explorationist's tasks more sophisticated but in doing so reduce risk and costs.

Iceni has been the largest single user of UFF+ to date.

Iceni did a project wide UFF+ study with outstanding results

- Fourteen +1000m gold anomalies delineated so far

#### 4.5.2 Geophysics

Iceni has used a wide variety of geophysics techniques to gain a better understanding of the underlying basement geology.

Gravity and magnetics have been key systems but latest technologies provide many algorithms that show a wide range of variabiliy and rate of change of the resulting data to provide further insights.

The most significant features have been identifying the extent of the Danjo Batholith and the three faults mentioned earlier.

Magnetics has highlighted the regional structures being:-

- The Danjo Batholith
- The Celia-Claypan Fault
- The Castlemaine Fault
- The Guyer Fault
- The Everleigh Embayment
- The Danjo Grano-Diorite Contact



Figure 17 Magnetics map of the 14 Mile Well Project and key Targets

Source: Iceni Gold

Deep Ground Penetrating Radar has provided the detail on the extent of all of the shear zones associated with these major faults.

Deep Ground Penetrating Radar highlights the weathering of rocks around faults

Figure 18 N-S DGPR line through historical drill holes - Deep Well Target



Source: Ultramag 2020

Source: Iceni Gold

Figure 19 Location of DGPR lines in relation to Iceni's Target Areas



Source: McLelland & Bosch, 2020a, b

#### Iceni carried out DGPR surveys in 2019 and 2020

Claypan

Deep Well

Everleigh Well

And Guyer

The Fathom system of gravity modelling is able to locate boundaries and highlight potential second and third order structures that could be associated with mineralisation.

The Celia, Castlemaine and Guyer Faults stand out Gravity modelling can assist with delineating structures.

The Fathom technology helps locate boundaries between minor lithological blocks and highlights potential zones of weakness.

These assist in identifying second and third order structures(faults or other zones of weakness) that mineralizing fluids might follow.

This graphic shows clearly the trace of the Celia Fault with Castlemaine and Guyer Fault splays.

Figure 20 Gravity-derived structure detection - parallel to major domain boundaries



Source: Fathom, 2021.

Note: Tenement boundary in yellow. Red diamonds = selected deposits. Pink diamonds = current operating mines. Parallel structures. Blues to reds represents strength of interpretation respectively using a 1,600 m minimum wavelength.

Source: Iceni Gold

Regional structures previously hidden beneath cover are now visible and fit within target

areas

#### 4.5.3 Structural Geology

The magnetics and gravity survey data have helped Iceni build up a strong initial understanding of the geology within its tenements but this will be an evolving matter as drilling confirms rock type and helps better understand the potential pathways for mineralisation despite there being 20-100m of transported cover.

The **Claypan** target has numerous structures subparallel to the Claypan-Celia Fault so offers many potential gold prospects.

**North 1** has numerous substructures including the main Castlemaine Fault and subparallel lineaments.

Everleigh has the main Castlemaine Fault throughout its length.

Exploration results so far include

•

- 5000m long gold anomaly in magnetic dolerite
- Diamond core drilling through the fault has reported gold mineralisation and alteration along the length of a 900m hole.

Guyer has the equally important Guyer Fault

To the east of Yundamindera, numerous subparallel curved structures follow the rounded southern base of the Danjo granite contact with the metasediments and a historic 50,000oz from Yundamindera and 3000oz from Pennyweight Point have been recovered from mines on these structures outside of ICL's tenements.

It is clear from this diagram that there are many structures to allow flow of hydrothermal fluids ranging from the contact between various rock types to internal rock fracturing to the influence of the key faults.

Figure 21 Breakdown of 14 Mile Well Project geological sections



Source: Iceni Gold

These faults are seen as major influences on mineralisation

Celia-Claypan Fault into the Claypan Target Area

Castlemaine Fault

Guyer Fault

Faults

The the structural geological model has been refined and now incorporates updated views on the major faults.

Notably the Claypan splay of the Celia Fault Zone in the north and the Castlemaine and Guyer regional first order faults running N-S have great significance in the project area.

The Claypan Splay in has numerous subparallel structures that are highly prospective.

The **Castlemaine Fault** is a regional structure and appears as an extensive zone of granite/basalt intercalation, veining, brecciation and local structural damage.

It traverses 30km right through the 14 Mile Well Project tenements north-south.

It is near vertical and exhibits strong hydrothermal character that appears to be the controlling feature in hydrothermal activity in much of the 14 Mile Well Project tenements.

Historic prospecting and shallow shaft work along the Fault has been only to the west but a recent Iceni drill hole encountered significant sulphide mineralisation including chalcopyrite (Cu) to the east of the fault at Everleigh Well FMDD00034 and opens up prospects on both sides.

The **Guyer Fault** is an important structure running along the Danjo batholith eastern contact.

ICL has already delineated a 8000m geochem anomaly along the Guyer Fault and results from a 23,000m aircore drilling programme have confirmed gold mineralisation (up to 2g/t) along 2500m of strike along the contact between theDanjo Granite and greenstones.

The Guyer project has also recovered over 500 gold nuggets showing near source origin as well as transported nuggets in a paleochannel.



Figure 22 Celia Fault (red) and its splays (black) - Castlemaine Fault and Guyer Fault

Source: Iceni Gold

Consultant Dr Walter Witt noted similarities between the interpreted cross section through the project and those for Victory, Defiance and Revenge areas of the St Ives Goldfield south of Kalgoorlie.

The Celia Fault and the splay Castlemaine and Guyer faults may also be analogues to the major Boulder-Lefroy Fault and the Victory-Repulse splay fault respectively.

St lves gold mineralisation appears to be controlled by third order structures in the footwall of the second order Repulse splay fault which shows similar characteristics to the Castlemaine Fault splay.

This structural relationship is highlighted in the Fathom gravity analysis in Fig 20.

The Boulder-Lefroy Fault extends 200km from beyond Bardoc in the north to below Paris in the south. Figure 23 Boulder -Lefroy Fault running through the Kalgoorlie region

The Boulder – Lefroy Fault runs for over 200km and has provided mineralising fluids to some of Australia's largest gold deposits



Main gold deposits related to the Boulder-Lefroy Fault Zone with Paris at the southern end Source: Torque Metals

#### 4.5.4 YILGARN EPITHERMAL GOLD DEPOSITS

Epithermal gold deposits are generally associated with recent or younger rock types in volcanic areas. Epithermal (meaning near surface heat) deposits are found near rising hot fluids in volcanic regions.

However ICL has collected high grade epithermal colloform variegated rocks at TOTK. These high grade samples often carry high grade tellurium and bismuth that are typical of low temperature hydrothermal gold deposits .

Table 8 High grade gold in rock chip samples

N1-5 TOTK		Rock chips		g/t
Sample	Gold	Silver	Bismuth	Tellurium
ME20131	135	1220	1.09	0.66
WW200723	110.5	505	1.47	3.75
BR200202	101.5	548	1.41	1.26
BR200703	75.7	341	1.22	1.29
WW191131	61.8	507	3.4	2.06

Syenites are coarse grained intrusive rocks with high proportions of potassium rich minerals

They are from very mobile magmatic fluids ...

..and can have very strong correlation with gold mineralisation, especially in major Greenstone Belts.

Are associated with Yilgarn gold deposits...

Wallaby

Mt Morgans

Golden Delicious

Sunrise Dam

Iceni has found six within its tenements

## **5.0 THE IMPORTANCE OF SYENITES**

Syenites are coarse-grained intrusive igneous rocks with high proportions of alkali feldspars (usually potassium-rich orthoclase) and little or no quartz.

They can be considered as a part of a family of low quartz rocks that also include monzonites and monzodiorites.

Syenite is a more fluid fractionated melt rock component that has worked its way higher in the crust and leaves behind alkali depleted rocks that become monzonites or monzodiorites. Syenites are often associated with lamphrophyres which are also like kimberlites.

These highly volatile rock types are very mobile magmatic fluids acting under great pressure and are powerful enough to squeeze along faults or between rock types to travel near vertically very quickly. An analogy is the kimberlites that carry diamonds that must have been formed at great depth and pressure to create them and then deliver them within a very short geological time frame to bring these crystals intact to the surface.

Syenites have a strong correlation with gold mineralisation.

Syenites are widespread in the Yilgarn Archean rocks and are often related to important ore bodies. Here in the Laverton Terrane prominent deposits are Wallaby, Mt Morgans (Cameron Well, Jupiter, Ganymede) and Golden Delicious.

Iceni has already identified syenites at six locations in its tenements.

Figure 24 Occurrence of regional syenites – some are related to gold deposits



Source: Iceni Gold

Syenites are high in alkalis (potassium, sodium) and represent active magmas that can be fluid and highly mobile in geological structures.

#### Figure 25 Classification of Syenite Family of Rocks



Source: Iceni Gold

Syenites are important rock type because of their relative volatility and fluidity within and as magmas.

Their characteristics include

- Intrude from depth and flow along deep fault type structures
- Deep structures can tap gold bearing fluids
- Heat can provide alteration of surrounding intruded rock
- Are brittle so can fracture
- Fractures create brecciation pathways for hydrothermal fluids

#### Figure 26 Example of orebodies related to syenites



High fluidity can cause

magmas

fracturing in country rocks



The 14 Mile Well Project is surrounded by syeniterelated gold deposits

It could be expected that many more will be found in the Yilgarn once recognised

Recognised internationally as being associated with gold in greenstone belts Figure 28 Known syenite-related gold deposits with 150km of 14 Mile Well Project



Source: Iceni Gold

### Syenite: association with gold deposits

The association of syenite intrusions with gold deposits is widespread and is a well documented characteristic of gold deposits around Laverton and also in the Abitibi Greenstone Belt in Canada where syenites are commonly sought targets for gold mineralisation.

Porphyry intrusions and lamprophyres are considered a critical ingredient in assessing gold prospectivity in Archean greenstones. High level porphyries and the suite of alkaline intrusions that include syenites, monzonites and lamprophyres are closely linked with gold mineralisation within the Laverton district.

Gold mineralisation can be hosted within the syenite, on the contact of the syenite intrusion or within the country rock near the syenite intrusion.

The schematic cross section shows the relationship between the syenite alteration pipe and the ore lenses in the mineralized structures in the Wallaby system.

A geological model of the Wallaby deposit showing the broad geological framework that is around the central intrusions.

Syenites at Wallaby ...

Syenites (pink) at Sunrise Dam

Affecting structure and alteration in the Sunrise Dam mineralising system



Figure 29 Wallaby Geological Model - syenite intrusions and ore lenses in fractures



The Jupiter deposit is hosted by syenite intrusions. It was discovered in the 1980s and mined in the 1990s.

Figure 30 Schematic cross section through the Jupiter gold deposit



Source: Iceni Gold

Syenites at the Jupiter deposit in the Mt Morgans operations

## 6.0 YILGARN CRATON

Yilgarn rocks appear to be the same rock types being formed in active mountain building regions like PNG today

The large scale fault systems are probably very deep and have access to the mantle

Most of WA's gold comes from these Kalgoorlie-Kurnalpi terranes The Yilgarn craton is by far Australia's most important gold producing region and it has been recognised as typical of the worldwide greenstone belts of Archean age between 2675 and 2630 million years.

Greenstone belts around the world include prolific regions such as the Abitibi Belt in Canada and the massive Birimian Belt in West Africa.

The geological maps of the Yilgarn have traditionally shown the gold bearing greenstones belts as green and the mostly barren granitic material as pink.

This has been the major influencing feature where the greenstones have been mafic volcanic and igneous materials with interbedded volcaniclastics and another sediments.

In the Yilgarn, numerous major structures such as the Boulder-Lefroy Fault, the Celia-Claypan Fault Zone and the Keith Kilkenny Fault have provided mineralising fluids in North-South greenstone structures that have been developed by E-W compression.

Figure 31 Geological setting showing the eastern part of the Yilgarn Craton



Source: GSWA

Votes: Upper case names are terranes; lower case names are domains. Major late structures and basins are Ce (Claypan) Fault, Ida Fault, and Kilkenny Fault (KF).

Source: Iceni Gold

For many years exploration in the Yilgarn has been about geochemistry and finding the gold where it is with less regard for the actual geology itself.

It has only been in very recent times that academic geologists have been considering the actual structure of these greenstone belts.

What has become clearer is that these greenstones and the granites are part of the same crustal accretion and/or shortening that can be seen around the world at present with island arc geology.

Accordingly, the Yilgarn is made up of several periods of crust formation with consecutive major orogenic events that have created individual terrains separated by major regional N-S faults and general E-W compressional force.

The major boundary fault structures appear to be deep and give access the mantle.

This changing paradigm is important and Iceni is setting it self up as one of its leaders.

The Yilgarn has been split up into a number of terranes with major structural borders.

Kalgoorlie, Kurnalpi and Laverton are three of the most important terranes and host most of the Yilgarn gold production.

Figure 32 Known Deposits in the Kalgoorlie-Kurnalpi Terranes



Source: Iceni Gold

The major bordering structures here appear deep and may access the upper mantle.

Structures such as the Boulder-Lefroy Fault have a very strong correlation with gold mineralisation which can occur within bands several kilometres wide on either side of the main structure.

For Iceni, the major bordering structures are the Kilkenny Fault System and Celia-Claypan Fault.

Iceni's 14 Mile Well Project is well located in the Kurnalpi Terrane and on the edge of the Laverton Terrane.

Well positioned between Kilkenny and Celia-Claypan faults

Second and third order faults can often provide reservoir structures for gold mineralisation

These faults

Celia Claypan

Castlemaine

Guyer

Have major regional significance ...

..as well as local significance

#### Figure 33 Murrin Domain between Kilkenny Fault and Celia-Claypan Fault Systems



Source: Witts, 2020

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Source: Iceni Gold

Importantly, the 14 Mile Well Project covers portions of three second and third order splay faults off the main Celia Fault System.

- Celia-Claypan Fault along north east tenements
  - Castlemaine Fault Splay over 30km running N-S in 14 Mile Project tenements
- Guyer Fault Splay 15 km running N-S within the ICL tenements

Figure 34 14 Mile Well Project, the Faults and the domains of the Yilgarn Craton



Source: Iceni Gold

#### Castlemaine Fault

Is probably the key controlling structure for hydrothermal activity within the 14 Mile Well Project

#### **The Castlemaine Fault**

The Castlemaine Fault is a significant regional structure as an extensive zone of granite and basalt intercalation showing brecciation and local structural damage.

The Fault is oriented N-S, is sub vertical with a true width of around 50m and has the potential to extend to considerable depth with links to the mantle.

It traverses 30 kilometres through the entire 14 Mile Well Project tenement

The Fault is interpreted to be a key controlling structure for hydrothermal activity within the 14 Mile Well Project and alteration and mineralisation have been encountered on both the western and eastern sides.

The Fault forms a contact between the monzogranite and adjacent greenstone sequence and it has been a significant regional focus for hydrothermal activity.

The structures show the monzogranite batholith with Important local structures and the spine of the 30km Castlemaine Fault being a conduit for mineralizing fluids and leading to substantial alteration.

Figure 35 Structural Character of the Geology within the 14 Mile Well Project



Source: Iceni Gold
Orogenic gold was emplaced over 2675-2630m years BP but evidence shows non orogenic gold from epithermal sources as much as 15my earlier.

Metamorphism through granitic heat

Deformation in several stages

Granitic and porphyry intrusions .....including syenites

Kurnalpi Terrane pre dates Kalgoorlie Terrane There is general agreement within the academic literature that the bulk of the gold endowment within the Kalgoorlie-Kurnalpi Terranes is orogenic with most mineralisation occuring during several periods of deformation.

It is also now postulated that a non-orogenic period of gold mineralisation occured about 15-20my earlier in geological time and likely to be low temperature near-surface epithermal style.

Iceni has rock chip samples of such epithermal character and soil sampling, especially utilising the CSIRO UFF+ procedure and ICP-MS, has shown widespread occurrence of low temperature elements As, Bi and Te. (See P8 and Fig pp)



Figure 36 Time framework for gold mineralisation within the Kalgoorlie-Kurnalpi rift

Source: Modified from Witt et al., 2020

Source: Iceni Gold

The Yilgan has had several stages of greenstone belt orebodies that begin around 2665my BP and has seen subsequent periods of granite and porphyry magmatism.

Syenite magmatism appears to have occured over 2665-2630 my BP.

Several periods of deformation at occured over the same period of E-W compression with contemporaneous metamorphism that was the source of the orogenic gold. mineralisation along those major fault structures.

The geochemistry record also notes gold occurrences that predate the orogenic gold deposition and major fault structures And is obvious maybe thermal gold deposits showing the typical colloform epithermal rock textures, high grade gold with silver and tellurium.

The current standard of geology now allows for a far better analysis of the structural components of the Yilgarn.

*Structures can be seen in plan view* 

And also in cross section.

The faults and their fault blocks can be structured ...

...the significance of syenites becomes clearer here.

Iceni engaged consultants to develop litho-structural models that show interpreted movement of sections of the geology.

The figure below shows a plan view of major structures including faults and contacts between rock types.





Source: Iceni Gold

Two cross sections have been presented.

Cross section A-A'(SSW-NNE) shows the interpreted compression and uplift of blocks together with their likely fault planes, including the major Castlemaine Fault and Claypan Celia fault. Syenites are highlighted by red circles.





Source: Iceni Gold

The interpretation highlights the Danjo granitoid batholith and several proposed syenite intrusions working their way up through the rock.

Cross section B-B' (WSW-ENE) shows the Monument Granite, the Danjo Granite and an example of a known syenite.





Cross sections assist in understanding faults and flow of mineralising fluids.

Source: CSA, 2018

Understanding the structural character has allowed Iceni geologists to develop more focussed exploration targets.

Source: Iceni Gold

Leonora- Laverton currently produces about 30% of the Yilgarn gold output.

Leonora is associated with the Kilkenny Fault.

Laverton with the Celia-Claypan Fault Zone

## 7.0 REGIONAL GOLD MINING HISTORY

The Yilgarn Craton produced over 250 tonnes (~8moz) In 2021 with the Kalgoorlie region being the largest and Leonora – Laverton producing just over 30% with **East Murchison** (~11%) and **Mt Margaret** (21%) districts being important.

Production for **Leonora** is based on mineralisation associated with the Keith Kilkenny Fault Zone and **Laverton** associated with the Celia Fault Zone.

Note that the East Murchison and Mt Margaret Districts are administrative zones and while associated with gold mining history they do not reflect the geology.

## 7.1 HISTORIC PRODUCTION EAST MURCHISON DISTRICT

Gold production in this district peaked in 1998 and has generally declined along with the output from the Gwalia mine and Agnew.

East Murchison was once 20% of West Australian output but now is only around 10%.

Figure 40 East Murchison Annual Gold Production 1990-2021



Source: WA Mines Dept MPS

## **Gold Resources Production – From North to South**

Key mines were Agnew, Thunderbox, King of the Hills and Carosue Dam with endowments of over 4.0moz and leader Gwalia with over 12moz.





Source: WA Mines Dept MPS

East Murchison is currently around 700kozpa and 11% of WA's gold output.

Gwalia has been the biggest deposit

## Mt Margaret region is around 1,400kozpa and currently just over 20% of WA gold output

## 7.2 HISTORIC PRODUCTION MT MARGARET DISTRICT

Gold output from the Celia Fault Zone, has in contrast to the East Murchison has been on more of a growth path with output rising from 0.8mozpa to around 1.4mozpa. Mt Margaret Has risen from 10% of WA output to over 20%.

Figure 42 Mt Margaret Annual Gold Production 1990-2021



Source: WA Mines Dept MPS

Granny Smith has been a massive 15moz endowment with 8oz production and 7moz resources. Sunrise dam is also a very large 13moz with historic production of >6moz.

Figure 43 North to South Laverton Celia Fault Zone Gold Deposits



Source: WA Mines Dept MPS

Output growth trend is up

Granny Smith is the largest deposit with 15moz

Followed by Sunrise Dam

Each of these is on the eastern side of Lake Carey and just under 30km from the 14 Mile Well Project

Many smaller gold deposits ~1-2moz have been found and mined The 14 Mile Well project is very well positioned in regional Yilgarn geology

Iceni's management has carried out tenement wide geochem and geophysical surveys to come up with eight major target areas

The treatment here is on a North to South basis but it is clear that Everleigh and Guyer are currently the most advanced projects with the best results to date.

However there is sufficient evidence in each of these target areas to suggest the major project might develop in any one of them

The low level of thorough exploration and the very thick blanket of transported cover leaves all these Target Areas with considerable upside potential.

- Claypan
- North 1
- Deep Well
- Danjo NE
- Everleigh
- Guyer
- Monument
- Goose Well

## 8.0 ICENI GOLD 14 MILE WELL PROJECT

Data so far in this report has provided strong technical evidence that the 14 Mile Well Project is an exceptional portfolio of tenements strategically located in one of the Yilgarn's best addresses yet is remarkably underexplored.

Figure 44 14 Mile Well Project – Eight major Target Areas



Source: Iceni Gold

Iceni's systematic pre-IPO programme of rockchip sampling, UFF programmes and various geophysical surveys identified six key targets

- Claypan
- North 1
- Deep Well
- Danjo NE
- Everleigh
- Guyer

Two more have been added.

- Monument
- Goose Well

The projects are treated sequentially in the following pages.



High potential from numerous Claypan fault splays

VMS potential

This is geologically very busy

## 8.1 CLAYPAN TARGET AREA

## **Key Points**

- Northernmost target
- Mostly under surface cover and under explored
- Structural intersection between Claypan-Celia and Castlemaine Faults
- Includes 9km Claypan Fault splay on eastern side
- Multiple second order structures in felsic and mafic volcanics
- Continuous into the Genesis Mt Morgans operations tenements
- Domal or basin structure and intrusions similar to nearby large gold deposits
- Potential syenite intrusion below
- 2,000m Au-Te-W soil anomaly delineated higest grade samples
  - Ten hole 3,000m diamond driil programme completed
    - Assays awaited
- Regional presence of VMS deposits noted and recognised in geochemistry
- Banded Iron Formation (BIF) for VMS also noted
- Considered high prospectivity for gold mineralisation

Targets for Claypan were developed from geology and geochemistry with the concluding focus on an area situated on the structural intersection between the northwest trending Claypan- Celia fault and the interpreted northern extension of the Castlemaine Fault and specifically in an interpreted flexure along the Celia Fault.

Exploration potential here is high and studies are targeting VMS and syenitic intrusive rocks.

This region is underexplored despite its location along this Celia Claypan Splay Fault which runs over 9 kilometres and this structure hosting numerous gold deposits elsewhere including the adjacent Mt Morgans. Esso had drilled in the Claypan region in the early 1980s for VMS base metals but had not assayed for gold.

Cover is very deep but geophysical studies have interpreted a dome/basin like structure with outcrops of sedimentary rock and intrusions.

The DGPR (red lines in figure below) has identified the extent of Celia Claypan Fault shear zone between the granitoids and the mafic rocks.

The Celia Fault Zone passes along the eastern margin of the 14 Mile Well Project and has a significant change in orientation where it interacts with the Castlemaine Fault, its second order splay. A large mafic intrusion is also noted here. **Figure 45** The Celia-Claypan Fault runs NW-SE along border of Tenement



The Celia Fault is of major significance and a flexure inside the Claypan Target Area hold promise for gold mineralisation

This flexure opens the possibility of gold mineralisation conduits

Claypan drilling plan showing completed and planned drilling relative to the flexure of the Celia fault and UFF+ anomaly zones. Arrows highlight the trend of the sub outcropping Banded Iron Formation (BIF) beneath the cover.

## Figure 46 Flexure in Celia Fault and Mafic Intrusive Target



Areas of alteration and mineralisation over 200m have provided evidence of VMS style mineralisation.

a number of VMS deposits are known in the region and some are only 10km away

geological surveys and rock studies have found environments typical of VMS deposits.

## 8.1.2 VMS TARGET

Strong alteration over a very broad area in the Claypan target has been intersected in and the alteration mineralization and stratigraphic position are consistent with a VMS target.

A ten hole programme was completed with some very encouraging textures and over 200m of alteration in felsic and intermediate volcaniclastics was encountered.

Iceni carried out a metallogenic study for the Leonora-Laverton district to review different deposit styles the distribution patterns and geological associations.

Significant VMS deposits are around 100km to the NW at Teutonic Bore /Jaguar/Bentley and the three smaller VMS deposits around Anaconda are less than 10km away to the west.

Figure 47 Metallogenic Map of Region



Source: Iceni Gold

A 14 Mile Well Project study by Dr Walter Witt found andesitic and rhyolitic rocks typical of VMS environments with appropriate alteration indicating fluid flow.

Figure 48 Typical VMS structural Cross Section



10 hole drilling programme provided evidence of environments suitable for VMS.

the drill traces intercepted banded iron formation (BIF) and other alteration evidence

Diamond drilling at Claypan provided cause showing felsic volcanoclastics The ten hole drilling programme carried out by ICL in June Qtr 2022 provided some positive results that are suggesting potential gold-rich VMS deposits.

Drill core to date has shown some very encouraging textures and intersections of over 200m of alteration in felsic and intermediate volcaniclastics.

**Figure 49** Drill traces through BIF and alteration envelope



Jure 2: Oblique schematic sections along the trace of holes FMDD0039 and FMDD0043, looking northwest.

#### Source: Iceni Gold

#### Figure 50 Claypan Diamond Drilling Cores – Showing Felsic Volcanoclastics



Figure 3: Examples of observed alteration styles in drill core from the Claypan Target Area, ranging from pyrite-white mica-chloritoid altered intermediate volcaniclastics to purple fluorite bearing veins.

Banded Iron Formation (BIF) associated with VMS deposits has also been noted and BIF associated gold mineralisation is known at Sunrise Dam and Mt Morgans in the Laverton District.



Ground surveys picked up quartz veins with rock chip samples with high grade gold and elevated Bi and Te.

These encouraging gold grades with high levels of elements Bi and Te may be suggesting epithermal gold mineralisation

N1-1 has some significant geophysical and geochem targets along the Castlemaine fault.

There is a granite greenstone contact and a potential mafic intrusion

## 8.2 NORTH 1-1 TARGET AREA

Key points

- Located directly south of Claypan on Castlemaine Fault
- Targets at
  - North 1-Recon 1
    - o North 1-5
      - TOTK (Temple of the The King)
      - High grade rock chips at TOTK >100g/t Au and >1g/t Te
      - Quartz vein outcrop continuous over >100m
      - Mineralised envelope extended over >400m strike
      - 127 hole aircore programme
      - Drilling produced syenite in core
- Anomalous Ba/V, Au, Ag Bi and Te

Targets generated by consideration of Castlemaine Fault and compilation of geochem surveys and rock chip samples.

Significant high grade rock chips were collected in this target particularly at TOTK where grades of >100g/t and high bismuth and tellurium were recorded.

Table 9 Rock chips samples – very high gold grades and elevated Bi and Te

N1-5 TOTK		Rock ch	g/t	
Sample	Gold	Silver	Bismuth	Tellurium
ME20131	135	1220	1.09	0.66
WW200723	110.5	505	1.47	3.75
BR200202	101.5	548	1.41	1.26
BR200703	75.7	341	1.22	1.29
WW191131	61.8	507	3.4	2.06

Source: Iceni Gold

## 8.2.1 PROSPECT N1-1

Prospect N1-1 Is located in the northern part of North 1 target. The area is partly under transported cover which thickens towards the east. Sporadic outcrops of saprolite and hematite have been observed.

N1-1 has been previously identified as a potential target and was described and interpreted as a late magnetic intrusive proximal to a major structural intersection with a granite/greenstone contact.

Field mapping also identified magnetite alterations in veins and breccia and the DGPR survey data indicates that several more vein sets may also be present.

UFF+ soil geochemistry has defined two anomalies:- one potentially 2000m along strike to the north of the exposed vein and the other one being a possible subparallel lode.

Figure 51 Castlemaine Fault - Central to target formation



Source: Iceni Gold

## 8.2.2 NORTH 1

RAB drilling has been carried out with sulphide mineralisation encountered.

Figure 52 Deep Ground Penetrating Radar Traces North 1 Target

North – 1 has numerous faults several magnetism anomalies

The DGPR has been useful

North 1 Recon 1 Is a magnetic intrusive close to major structural intersection of the Castlemaine Fault and a granite greenstone contact.

Importantly the magnetic signature is similar to syenite related deposits

Three drill holes to date have encountered 400-560m of anomalous mineralisation



Source: SGC 2018

## 8.2.3 NORTH 1 TARGET RECON 1

The North 1 Recon 1 target was identified as a magnetic intrusive close to a major structural intersection of the Castlemaine Fault and a granite/greenstone contact.

The target was confirmed through anomalous grades of Au, Ag, Te and Bi that showed strong detailed correlation with the magnetic signature.

The magnetic signature is similar to known syenite-related deposits in the district (Jupiter, Cameron Well and Wallaby).

## Figure 53 Magnetic anomaly at Recon 1



#### Figure 54 Magnetic Anomaly and Magnetic Inversion Model at Recon1



Source: Iceni Gold

Three holes have been drilled in a 1552m programme.

All three holes encountered extensive and continuous anomalous disseminated sulphide mineralisation to the end of the hole.

Table 10 Recon 1 diamond holes - continuous anomalous disseminated sulphides

- FMDD0030 560m of disseminated sulphides 39-600m
- FMDD0042 396m of disseminated sulphides 22-418m
- FMDD0047 493m of disseminated sulphides42-534m

Encouraging results included andesitic and porphyritic rock types, alteration, sulphides and a strong magnetic halo signature were encountered in each hole.

Hole FMDD0047 encountered sulphide bearing quartz vein at ~231m downhole with pyrrhotite, pyrite, arsenopyrite and chalcopyrite hosted in andesitic volcanics.

Figure 55 Drill core from FMDD0047 showing sulphide bearing quartz vein



Syenite rock type was also encountered.

Anomalous disseminated sulphides noted in diamond drill cores

### 8.2.4 PROSPECT N1-5 TOTK

The Temple of the King (TOTK) prospect.

Rockchip sampling identified a NNW-SSE trending quartz vein carrying up to 135g/t in a poorly exposed part of the northern Danjo Batholith. Rock chips samples have been traced over 400m of strike in a quartz vein.

A total of 36 samples were collected with an average grade of 17g/t Au with Ag, Bi and Te indicating epithermal mineralisation style.

Table 11 Highlights from Rock Chip Sampling over 400m of strike

N1-5 TO	ГК	Rock ch	nips	g/t
Sample	Gold	Silver	Bismuth	Tellurium
ME20131	135	1220	1.09	0.66
WW200723	110.5	505	1.47	3.75
BR200202	101.5	548	1.41	1.26
BR200703	75.7	341	1.22	1.29
WW191131	61.8	507	3.4	2.06

127 aircore holes totalling 3488m were drilled with encouraging initial results. Thirteen diamond holes were completed.

Anomalous gold was encountered beneath the quartz vein and a composite intrusion of syenite, porphyry and lamprophyres has enhanced the prospectivity of the Area.





Rockchip sampling results were 36 samples with an average grade of 17g/t.

Some were over 100g/t.

Three significant gold intersections over 2m intervals

Not high grade but anomalous

hydrothermal fluids have caused the silica hematite alteration in a character known to be associated with the formation of gold deposits in the Laverton District

Altered (top) and strongly altered (bottom) Danjo Granite.



The initial air core programme of 127 holes provided good evidence of alteration beneath the high grade outcrop rock samples and three significant intersections over 2 metres were noted.

Recent AC drilling at TOTK identified three significant gold intersections (see Figure 1):

- FMAC0183 with 2m @ 0.18g/t Au from 20-22m
- FMAC0227 with 2m @ 0.11g/t Au from 28-30m
- FMAC0231 with 2m @ 0.10g/t Au from 4-6m

Whilst only low grade, these gold anomalies identified in the air core drilling at TOTK further reinforces the significant potential for the discovery of gold mineralization particularly within structures cross cutting the margin of the Danjo intrusion or associated with the Castlemaine fault along the western margin.

ICL completed thirteen diamond holes and encountered encouraging porphyries, brecciation, disseminated sulphides and indications of hydrothermal alteration beneath the TOTK outcropping vein.

Importantly, syenites were confirmed and noted to contain disseminated pyrite.

Figure 57 Drill traces encountering porphyries and mafic shears



Source: Iceni Gold

Figure 58 Drill core - Syenites with Potassic Feldspars and disseminated pyrite





Historic drilling

5m @ 3.32g/t Au, 4m @ 0.55g/t and 4m at 0.66g/t Au.

Recent drilling

2m @ 0.13g/t from 34m 2m @ 0.14g/t from 8m

## 8.3 DEEP WELL TARGET AREA

Key Points

- 132 hole 6860m air core drilling programme complete
- 11 diamond coreholes drilled totalling 2184m
- Sulphide and gold mineralisation and alteration noted
- Geochem alteration gold anomaly >1000m identified
- Syenite intrusive encountered
- Monzonite intrusion identified
- Medium prospectivity for gold at deeper levels

Deep Well is in the northwest where the bedrock geology is dominated by a large ellipsoidal granitic intrusion known as the Deep Well Granite and the area has extensive alluvium cover.

The Ultrafine UFF+ soil survey identified anomalous gold and silver with high levels of Bi and Te extending over 1000m with the highest grades gold mostly around the margin of the intrusion.

Gold was reported in historic drilling results which included two holes with intersections including 5m @ 3.32g/t Au, 4m @ 0.55g/t and 4m at 0.66g/t Au.

The main areas of potential gold mineralisation over the granitoid intrusion and are along shear zones and the contact between the granitoid and greenstone sequences in the east.

Figure 59 N-S DGPR line through historic drill holes - Deep Well Target



Source: Ultramag 2020

Source: Iceni Gold

The granite-greenstone contact length of 40 kilometres maybe significant and similar to mineralisation founded the King of the Hills deposit where gold is mostly hosted along the contact zone between granite/diorite and surrounding sequences of ultramafic volcaniclastic rocks.

Figure 60 Deep Well targets showing strong geological distinction

Deep Well target has a potential syenite intrusion



Source: Iceni Gold

The gold anomalies identified in the AC at target FMW44 (see Figure 60) further reinforce the potential for the discovery of gold mineralisation within the 14 Mile Well Project, particularly within structures cross cutting the Deep Well intrusion (targets FMW43 & FMW46) or along its margins (targets FMW40, FMW41 & FMW42).

Earlier drilling by previous operators towards the centre of the granite reported some elevated gold values. Transported cover is very thick and ultrafine analysis did not identify coherent anomalies.

## Danjo NE on the eastern boundaries of the tenements.



Underlain by mafic intrusions

First pass air core drilling brought some results

Some high grade gold in rock chips and elevated bismuth and tellurium

Large UFF+ gold anomaly with extension into Dacian ground

## 8.4 DANJO NE TARGET AREA

Key Points

- Located in north east of 14 Mile West Project
  - >1000m EW trending thick quartz reef
    - Links with TOTK vein
- Likely mafic group intrusion
- Sits within 230km<sup>2</sup> Danjo Granodiorite intrusion
- Major gold anomaly extends into Dacian tenements
- Significant high grade rockchip samples with gold and Te
- 121 hole 4500m air core programme
- 4 holes delivered anomalous gold values
- 7 hole 2800m diamond drilling programme

Danjo NE target is in the northeast of the tenure and underlain by rocks of the Danjo Batholith which are now considered to be mafic intrusions. The target is set on a series of W-NW striking quartz veins that probably have a genetic association with the fault thrusts of similar orientation. The veins are also situated within a corridor linking up with the North 1 target.

No documented historical drilling is known here. Geochem results have been encouraging with the eastern extension of a major gold anomaly being the Robinta Prospect in Dacian tenements.

MCA had conducted several exploration activities including

- rockchip sampling
- geological modelling
- aeromagnetic radiometric in gravity surveys

Assay results from rock chips gave high grades of gold with very high Bi and Te.

Table 12 Rock chips showing very high Bismuth and Tellurium

Danjo NE Ro		Rock ch	nips	g/t
Sample	Gold	Silver	Bismuth	Tellurium
WW2002025	26.8	14.5	18.22	7.33
BR200205	4.69	78.7	117.5	56.4
WW190531	3.67	4.02	29.5	25.3

Source: Iceni Gold

The UFF+ geochem surveys identified a significant gold anomaly which has an extension that carries through across the tenement to Dacian's Robinta prospect which has also had UFF+ soil sampling by Dacian.

Figure 61 Danjo NE major anomaly extending into Dacian tenements



The follow up air core drilling identified four holes with significant gold intersections deserving additional work including

These anomalous gold intercepts are encouraging for recognising that gold mineralisation is present.

- 8m @0.21g/t from 8m
  4m @ 0.76g/t from 12m
- 4m @ 0.37g/t from 0m
- 4m @ 0.22g/t from 28m

Figure 62 Distribution of alteration and porphyry beneath Danjo NE quartz reef



Source: Iceni Gold

The gold anomaly at Danjo NE is associated with the Danjo Granite, which covers an area of ~230 km<sup>2</sup>. A number of large UFF+ gold anomalies are now known to be located within this granite or associated with its margins, particularly when cross cut by structures.

Alteration noted and porphyries encountered in drilling.

## 8.5 GOOSE WELL TARGET AREA

Key Points

- Recent addition as new Target Area
- Exploration target in old workings
- Goose Well quartz syenite intrusion identified
- Prominent magnetite reaction halo recognised
- Gold mineralisation in sulphide bearing quartz veins
- Elevated values of silver, bismuth and tellurium in rock chips
- >150 gold nuggets recovered

Goose well is a newly defined target area on the western edge of the 14 Mile Well Project. The area has historic workings and Iceni has recognised a circular syenite intrusion with high potassium and magnetite halo as key features.

Gold grades >20g/t have been collected in rock chips with gold in sulphides in quartz veins. Anomalous values in silver, bismuth and tellurium are noted in rock chips.

Iceni has also collected >150 gold nuggets that display textures that indicate some surface transport, supergene enrichment and the preservation of primary textures. Angular gold fragments and gold in quartz vein host suggest a nearby source.

This is another syenite discovery and with associated gold mineralisation (rock chips and nuggets) extending over >2km this should become a high priority target for Iceni.

Figure 63 Circular syenite intrusion with halo and gold nuggets in magnetics graphic



Source: Iceni Gold

The syenite has an obvious circular character that is confirmed by the radiometrics data showing a co-incident high in potassium and this target has a spread of over 2km.

Figure 64 Radiometrics data with high potassium in syenite: + Te in rock chips



Source: Iceni Gold

Source: Iceni Gold

Exploration target around old workings

Circular feature with high potassium syenite intrusion

+20g/t gold in rock chips with elevated silver, bismuth and tellurium.

More gold nuggets

High potassium content in syenite

Very obvious circular target with all the syenite characteristics of wide alteration zone and associated gold.



*Syenite intrusion as circular feature* 

With a magnetite halo and distal gold nuggets

## Something like this?





Target area defined by geophysics, geology and geochem surveys

*Castlemaine Fault is key feature* 

Several geochem gold anomalies – one is 5000m long

Three diamond holes returned very encouraging anomalous mineralisation over 400m and 580m down hole

The Everleigh Embayment provides an excellent structural target

Numerous gold nuggets found

350g specimen stone containing about 10g as visible gold



## 8.6 EVERLEIGH WELL TARGET AREA

**Key Points** 

- Located at SW of 14 Mile Well Project Area
- Target Area determined by confluence of geophysics, geology and geochem
- On Castlemaine Fault which cuts through entire 14 Mile Well tenements
- On western contact of the Danjo Monzogranite and felsic porphyry
- Adjacent to high grade Redcastle historic workings
- Gold in rock chips with high tellurium
- 5000m of gold and magnetics anomaly and the 14UF008 gold anomaly
- Recent 1783m 3 hole diamond drilling confirms gold mineralisation
  - FMDD0032 had anomalous mineralisation along entire 580m hole length
- FMDD0034 had 400m of alteration
- FMDD0036 had 130m of near continuous gold mineralisationn
- Numerous gold nuggets found and suggest nearby source
- High gold mineralisation potential especially in the embayments

One of ICL's most interesting targets and located along the Castlemaine Fault positioned between the Danjo Monzogranite and the greenstone belt sequences.

The Castlemaine Fault is the major regional feature and numerous lower order faults and cross structures are noted and the contact between major rock types offers potential for gold deposits. It is the key controlling structure for hydrothermal activity with alteration and mineralisation.

Target Area has been defined by the Castlemaine Fault and large key gold and magnetics anomalies. Recent drilling results through the fault and on the 14UF008 anomaly were encouraging with extensive gold mineralisation encountered.

ICL notes that `embayments' occur between the Danjo Batholith and the greenstone belt sequences of country rock and there are also many interpreted N-S trending faults which intersect and offset interpreted dolerite units within the greenstone belt sequences. Alteration seems to be highest in these embayment areas.

## Figure 65 Structures - Everleigh Well Target & Everleigh embayment - magnetics



Source: Iceni Gold

Early work here by Iceni identified several outcropping quartz veins in the northern part of the Everleigh Well Target Area with similar orientation to the North 1 TOTK veins and one mineralised trend exhibited gold in narrow quartz reefs at over 70g/t. Field traverses have provided high grade rock chips including 2.68g/t Au with 8.6g/t Te.

Table 13 Rock chips with gold and elevated tellurium

Eveleigh	leigh Well Ro		Rock chips	
Sample	Gold	Silver	Bismuth	Tellurium
MWG 5003	2.68	5.96	0.181	8.65
MWG 8006	2.3	0.02	0.05	0.07

Source: Iceni Gold

ICL has also noted quartz stockwork in dolerites within the greenstones.

The Everleigh Well Target Area links earlier Everleigh prospecting pits and shafts which BHP had previously drilled and also to the historical Redcastle gold mining centre to the west which was discovered in 1894 and produced `1836 oz at 23.8 g/t'.

Iceni has been encouraged by analysis of results from the UFF+ soil program which identified the significant 5000m long NW-SE gold anomaly and the 14UF008 anomaly.

The larger gold anomaly has a strike of 5000m long NW-SE and is over 1km across at its widest point. The coherent shape of the anomaly suggests the source may be close to surface. The UFF+ gold anomaly sits on a prominent magnetic high, interpreted to be associated with a magnetic dolerite unit. This dolerite unit is also interpreted to be the same dolerite that passes through the mineralised Yundamindera area to the south.

The Everleigh - 14UF008 gold anomaly is also highly encouraging and a positive indicator for the possible presence of IRGS or Orogenic Gold mineralisation.

The three diamond holes drilled by Iceni had good responses with extensive down hole anomalous gold. FMDD0032 and FMDD0034 tested the Castlemaine Fault (here at top of Fig 65) and FMDD0036 tested the magnetic dolerite (in centre of Fig 65) in 14UF008. Results are discussed below.

## Figure 66 Everleigh Well geochem target with drill hole locations



BHP had previously identified gold geochem anomalies here and had drilled holes at the Tatong Prospect that produced best results of:-

- 4m @ 1g/t Au
- 2m @ 0.9g/t

Which confirm the presence of mineralisation in this area.

and Te

Rock chips with elevated Bi

#### Redcastle tenements to SW



Gold and magnetic dolerite anomaly over 5000m long

## Three diamond holes drilled



..two to test Castlemaine Fault

> - Both found anomalous gold mineralisation

.. one to test 14UF008

- Found anomalous gold

Castlemaine Fault divides Danjo Tonalite from other units.

Magnetism anomalies helping define targets along the Fault Magnetic dolerites.

Dolerites exhibiting magnetism also present at major Yilgarn gold mines.

Many more targets for further assessment

Iceni's magnetic surveys have assisted in providing data improving structural interpretation for targets especially around the embayment area.

The Castlemaine Fault marks the contact between Danjo Tonalite and felsic porphyries and has numerous magnetic anomalies that offer considerable potential for deposition of gold.

Iceni has identified magnetic dolerites here that are noted to be present in large gold deposits, e.g., Kalgoorlie's Golden Mile, Revenge, Vitory-Defiance, Jundee and Darlot.

Figure 67 Magnetism anomalies running W-NW & associated with Castlemaine Fault



.Source: Iceni Gold

#### Figure 68 Two sections of Deep Ground Penetrating Radar



Source: UltaMag 2020

Source: Iceni Gold

#### 59 Iceni Gold - Martin Place Securities

DGPR highlights the faults and shows different rock types

DGPR showed complex system of shear zones and detected contact between Danjo granite batholith and greenstone sequences

FMDD0032 found alteration over most of the 580m to almost the end of hole.

Pyrite, pyrrhotite noted.

# Presence of gold and chalcopyrite noted in thin sections



Sulphide mineralisation found at 116m on eastern side of Fault

Gold associated with sulphides found at 225m

1m @ 1.80g/t at 591m

2m @ 0.7g/t at 722m

The GDPR survey showed evidence for complex systems of shear zones and also detected the contact between the Danjou Batholith and the greenstone belt sequences including probable crystalline basement or intrusions.

Figure 69 Iceni aeromag imagery with rock chips and fault interpretation



Source: Modified by SRK from data supplied by Iceni Managen

Source: Iceni Gold

## Drilling campaign in 2022

Iceni's recent drilling was the first campaign to specifically test the Castlemaine Fault which had never previously been drilled.

Drill hole FMDD0032 was designed to intercept the N-S oriented Castlemaine Fault and interpret the Everleigh embayment geophysical feature.

The hole intersected the Danjo Monzogranite and a distinctive porphyritic basalt known in the Eastern goldfields as `cat' rock. The granite and cat rock are cut by a number of felsic to intermediate porphyries intrusions that are all altered and contained varying proportions of pyrite and pyrrhotite confirming their likely capacity to transport metals including gold.

The hole showed extensive hydrothermal activity with abundant alteration assemblages and zones of veining over 580m length and almost down to TD at 908m.

## Figure 70 FMDD0032 – gold mineralisation along length of the 900m hole



Extensive hydrothermal activity down the hole in granite.

Mineralisation dominated by pyrite and pyrrhotite FMDD0032 best hits

- 1m @ 1.80g/t at 591m
- 2m @ 0.70g/t at 722m

Mineralisation was observed at 116m on the eastern side of the fault and this was unlike all known old workings which have only been on the western side of the fault.

ICL considers this significant as it demonstrates a potential for mineralisation to be associated with the Castlemaine Fault on the eastern side along the entire 30 kilometres of the structure.

Mineralisation in the garnite was dominated by pyrite, pyrrhotite with lesser chalcopyrite being observed as generally disseminated sulphides or associated with alteration.

Two vein intervals had significant gold intersections 1m @ 1.80g/t at 591m and 2m @ 0.70g/t at 722m and presence in the granite.

Figure 71 FMDD0032 Drill core - gold mineralised quartz veins & sulphides intervals



Source: Iceni Gold

Iceni followed up with FMDD0034 at the Castlemaine Fault to TD of 413m (with 2m @ 0.63g/t and 1m @1.82g/t) and FMDD0036 at the magnetic dolerite site in 14UF008 with very encouraging results.

Figure 72 FMDD0036 - Gold intersections over 75m



Source: Iceni Gold

## FMDD0034

- 2m @ 0.63g/t at 148m
- 1m @ 1.83g/t at 724m

## FMDD0036

- 1m @ 0.98g/t at 137m
- 1m @ 0.89g/t at 147m
- 1m @ 2.27g/t at 155m
- 2m @ 0.97g/t at 170m
- 1m @ 0.93g/t at 170m
- 1m @ 1.66g/t at 212m

#### FMDD0036 gold assays

- 1m @ 0.98g/t at 137m
- 1m @ 0.89g/t at 147m
- 1m @ 2.27g/t at 155m
- 2m @ 0.97g/t at 170m
- 1m @ 0.93g/t at 170m
- 1m @ 1.66g/t at 212m

results are highly encouraging for first pass greenfields exploration

Structure, alteration and mineralisation similar to other intrusion related Yilgarn gold deposits

Magnetic dolerites are also key components with major orogenic gold deposits.

11g gold specimen



## Table 14 FMDD0036 Gold assay results

- 1m @ 0.98g/t at 137m
- 1m @ 0.89g/t at 147m
- 1m @ 2.27g/t at 155m
- 2m @ 0.97g/t at 170m
- 1m @ 0.93g/t at 170m
- 1m @ 1.66g/t at 212m

These results are highly encouraging and this gold mineralisation is associated with the development of sulphides within the magnetic dolerite.

The mineralisation style and the geological observations of structures, alteration and sulphides from this drilling programme are highly encouraging for first pass greenfields exploration.

For the drilling in the granite, the broad suite of alteration assemblages observed within the contact between the monzogranite and adjacent greenstone sequences were typical of mineralized systems within the Yilgarn in this district.

This type of structure interacting with the margins of intrusions is known to be associated with many gold deposits in the Yilgarn Craton in the Leonora and Laverton districts including well known Yilgarn gold deposits Granny Smith, King of the Hills and Jubilee and also just to the south with gold mineralisation at Yundamindera.

The magnetic dolerites here also key components in large orogenic gold deposits as noted with Kalgoorlie's Golden Mile, Revenge, Vitory-Defiance, Jundee and Darlot.

Within FMDD0032 the Castlemaine Fault has down hole thickness of about 130 metres with 50m true width and exhibited strong alteration from hydrothermal fluid activity.

The Castlemaine Fault is extensive (running beyond the 30km in Iceni's tenements) and has the potential to extend to considerable depth and may even be a crustal scale feature with links to the mantle.

The gold nuggets collected near the two drill holes on the fault have been interpreted as coming from a primary bedrock source to the northwest and the nuggets have been found close to the source.



Lots of activity here



Widespread 'fresh elephant droppings here in elephant country'

A significant discovery is likely

Numerous structures within the Guyer Shear zone

## 8.7 GUYER WELL

**Key Points** 

- Iceni's most advanced target
- 15km of Guyer Fault(Shear) in tenements
- 11km granite-greenstone contact exists along Danjo Batholith
  - <25km from Sunrise Dam and Granny Smith mines
- Four zones with significant gold anomalies
  - Guyer North North Guyer 14UF003
  - o Guyer Central 14UF004
  - o Guyer South 14UF005 and 14UF006
  - East Well 14UF002
- Two additional UFF+ anomalies at Burges Bore and Hage's Bore
- Gold bearing rock chip samples recovered
- Ground penetrating radar used along the Fault
- 363 air core holes totalling 23,000m completed
- Gold identified in holes
  - o along Danjo granite-greenstone contact
  - o within Guyer Shear
  - >500 gold nuggets recovered suggesting nearby source
- High gold mineralisation potential especially along Guyer Fault

ICL's most advanced project where the Guyer Fault(Shear) is a key structural feature.

Guyer Well has the Danjo Batholith to the west, a N-S trending belt of mafic greenstone sequences that provide for mineralising targets and is bounded on the east by felsic volcanics. Much of the area, particularly in the south, is blanketed by deep transported cover. DGPR was used to correlate with other datasets and with the Pennyweight Point mineralisation (just outside Iceni tenements but previous mining recovered over 3000oz).

The extensive geochem gold anomalies along the 15km of the trace of Guyer Fault have been followed up with confirmatory aircore drilling results and the collection of a significant quantity of gold nuggets in paleochannels.

This Guyer target has potential for discovering a significant gold resource along the Guyer Shear (greenstones in green below) and also along the contact between Danjo Granite-greenstone belt contact.

## Figure 73 Danjo Tonalite on west with contact of greenstones sequence



ICL used the DGPR to map across the Guyer Shear and follow the structures that could be associated with the Pennyweight Point workings.

Figure 74 DGPR assessment highlighting the Guyer Fault

DGPR gives a useful assessment of the subsurface



Figure 16: DGPR Survey line across the Guyer Shear, where the deepening of the overlying cover sequence has been confirmed by recent AC drilling.



Source: Iceni Gold

The geochem surveys proved very valuable in understanding the mineralisation potential for gold but also for other metals.

Several gold anomalies have been delineated across the Guyer Target Area.

Hage's Bore anomaly has high gold but also high Rare Earth Element (REE) content associated with a syenite intrusion.

Figure 75 UFF+ Gold anomalies in the Guyer Target



## The geochem is picking up widespread gold mineralisation

East Well

North Guyer

Central Guyer

South Guyer

Burge's Bore

Hage's Well

## Significant geochem anomalies here in the Guyer Target Area

Based on the UFF+ surveys four major prospects were identified.

Three were along the 15km trace of the Guyer Shear trend:-

- Guyer North -14UF003
- Guyer Central 14UF005 and 14UF006
- Guyer South 14UF005 and 14UF006

Another major gold anomaly was at East Well 14UF002.

Two additional anomalies have been identified at Burge's Bore and Hage's Bore.

These UFF+ surveys have produced some very impressive anomalies with the 5km x 5km East Well result and North Guyer which also has a large footprint over 3000m. North Guyer is large and a portion extends into Dacian's Ambassador prospect.

Figure 76 Significant UFF+ gold anomalies at East Well and Guyer North



Source: Iceni Gold

The geochem gold anomalism extends over much of the 15km length of the Guyer Shear in the tenement and ICL followed this up with 23,000m aircore drill programme that covered the 14UF003 key anomaly in the north and the two 14UF005 and 14UF006 anomalies in the south.

Figure 77 > 15km geochem anomalies along the Guyer Shear and aircore drilling



geochem down this Guyer Shear

With air core drilling

Iceni has followed up

And the collection of >500 gold nuggets

The granite-greenstone contact with the Danjo Granite has provided gold mineralisation along

2500m

So far

Total of 11 km of contact

## North Guyer

Nuggets found at Guyer North over 2000m trend



And UFF+ trend was >3000m

Gold anomaly over 2500m here along the granitegreenstone contact

And gold in the greenstones

Figure 78 Aircore drill results at North Guyer with 2km gold nugget trend



Source: Iceni Gold

Results from the North Guyer aircore programme provided encouragement with results coming two separate trends;-

- A 2500m gold anomaly along the Danjo granite-greenstone contact
- A similar length anomaly but in the greenstones themselves

The best results included:-

Table 15 Aircore drill results from North Guyer target

FMAC0800	1 m @0.33g/t at 67m
FMAC0785	1 m @0.61g/t at 52m
FMAC0781	6 m @0.19g/t at 56m
FMAC0778	4 m @0.12g/t at 64m
	3 m @0.50g/t at 72m
FMAC0779	1 m @1.04g/t at 59m
FMAC0756	4 m @0.13g/t at 48m

Most of these air core results came along a 2500m anomaly at the eastern granitegreenstone contact against the Danjo Granite and reflect similar environments in the Leonora-Laverton region that host gold mineralisation at granite-greenstone contacts such as Granny Smith (2.5moz), Jubilee (0.15moz) and King of the Hills (6.0moz) mines.

ICL followed this up with a gold nugget recovery programme after nuggets were found within the geochem anomaly and rock chips found in a BIF unit in the greenstones.

More than 500 nuggets have been found and included both nearby and transported nuggets that have provided valuable insights into the gold source.

The nuggets are also important and paleochannel nugget gold must be considered a resource target given that paleochannel nugget gold deposits have become mines and also have been discovered at major regional gold mines with the outstanding example of Sunrise Dam (only <30km away across Lake Carey)recovering 460koz in paleochannel nuggets as startup high margin ore input.

Sunrise Dam had 460koz of gold nuggets from a paleochannel as its initial ore feed. Rock chips with gold in the Danjo Granite and along the contact.

Iceni found a BIF (Banded Iron Formation) with gold in rock chips (5.16g/t Au) and in drilling in the Guyer Shear zone (4m @ 0.31g/t Au and 4m @ 0.12g/t Au)

These gold nuggets are high grade geochem samples!

Figure 79 Gold results from rock chip and air core drilling



Source: Iceni Gold

The data to date has provided a compelling case for the discovery of one or more significant gold deposits along a 2500m trend.

Figure 80 Gold nuggets recovered from Guyer North programme



Source: Iceni Gold

#### Figure 81 Gold nuggets recovered from Guyer North programme





## Guyer Central

Hole	Northing	Easting	EOH	Ori	Assay
FMAC0609	6,785,697	413,997	73	-90/000	4m at 0.31 g/t Au from 64m
FMAC0705	6,787,200	411,500	77	-60/270	1m at 0.10 g/t Au from 76m
FMAC0706	6,787,200	411,600	78	-60/270	1m at 1.28 g/t Au from 76m
FMAC0711	6,787,203	412,098	87	-60/270	4m at 0.10 g/t Au from 64m
FMAC0722	6,787,197	413,097	84	-60/270	1m at 0.31 g/t Au from 83m
FMAC0731	6,788,393	413,695	67	-60/270	4m at 0.12 g/t Au from 48m

The East Well anomaly has several priority zones within 5km x 5km dimensions.

Figure 82 East Well 5000m x 5000m gold anomaly



Source: Iceni Gold

These will be attended to in due course.

## 8.7.3 BURGE'S BORE

ICL has defined a 2000m x 1000m anomaly that lies over the granite-greenstone contact as part of the 11 km trace encountered in the North Guyer aircore programme.

Figure 83 Burge's Bore 14UF016 geochem anomaly over granite-greenstone contact



Source: Iceni Gold



More gold anomalies.

Traces of a lot of gold over a very large area.

An Elephant.



Big anomalies and extending into Dacian ground.

## The most easterly portion of The 14 Mile Well Project



Facing Granny Smith and Sunrise Dam across the lake.

## Another syenite related



The gossanous quartz vein breccia is located to the north. The view is looking towards the west.



#### 8.7.4 HAGE'S BORE - MULTI-ELEMENT GEOCHEM ANOMALY

The UFF+ geochem survey picked up anomaly 14UF017 in the far east of the Guyer Target Area and associated with a syenite intrusion.

This area is very close to Lake Carey and not far from those well known gold mines Granny Smith and Sunrise Dam less than 25km away.

Figure 84 View across Lake Carey to nearby well known gold mines



Source: Iceni Gold

The gold, Bi and Te anomaly appears to be centred on a syenite related intrusion.

High levels of anomalous rare earth (REE) readings were noted and were found to be coincident with gold and Bi/Te.

The syenite has a magnetic amphibolite halo (as at Goose Well) and a gossanous sulphidic quartz vein breccia surface expression has been located to the north of the intrusion.

The anomalies are about 3km east of the Guyer gold nugget anomaly.

Figure 85 Multi-element anomaly in syenite –gold, Bi, Te and rare earths -REE



Source: Iceni Gold

This area is centred on a granodiorite intrusion with syenite phases and porphyries around its margins.

The syenite phases have been cut by a stockwork quartz vein array visible in the gossanous breccia. The veins are dominated by quartz and display weathered boxworks after sulphides (interpreted to be pyrite).

The occurrence of the rare earths is intriguing and their association with syenites may actually assist in geochem searches for gold.

Iceni has recognised three main priority areas, namely:

- Target 1: Au-Te-Bi (Ag-As) multi-element anomaly associated with a syenite intrusion.
- Target 2: Au-Cu-Ag-Hg multi-element anomaly coincident with a geophysical target.

Target 3: Northerly oriented Pt-Pd (Ni) anomaly coincident with mafic outcrop.

These mineral assemblages associated with syenites are typical of some gold deposits in the Laverton area and the rare earths associated with carbonatites have been found in deposits such as Wallaby. Southern-most Target Area at the SW corner.







## 8.8 MONUMENT TARGET

## **Key points**

- Southernmost Target Area
- Monument Batholith is key geological feature
- Adjacent to the Yandamindera mineral field
- Breakaway Well gold geochem anomaly outlined over >5500m
- Coincident Au-W-Te-Mo geochemical association over monzogranite
- Early stages of exploration

The Monument Target Area was added post-IPO as the seventh key Target Area and associated with the Monument Batholith.

The UFF+ geochem surveys highlighted an anomaly extending over a 5500m x 1000m range. The key anomaly is gold but W, Te and Mo were also picked up and indications are that the Monument Batholith is a Monzogranite .

### Figure 86 Breakaway Well anomaly extending over 5500m x 1000m.



Source: Iceni Gold

The anomaly displays a strong **Au-W-Te-Mo** geochemical association and is interpreted to be underlain by monzogranite. The anomaly has a 5.5km long strike north-south and a 1km width east-west, comprising 5 closely spaced priority zones, as follows:

- Priority 1 Zone: Consists of coherent gold and multi-element anomalism
- Priority 2 Zone: Narrow coherent gold and multi-element anomalism
- Priority 3, 4 & 5 Zones are generally gold only anomalies.

Brian Rodan is very familiar with most Australian underground mines through his mining contracting experience

David Nixon has been a senior player in big company exploration teams

## 9.0 CORPORATE INFORMATION

## 9.1 DIRECTORS OF ICENI GOLD

## Brian Rodan Exec Chairman

Managing Director and owner of Australian Contract Mining Pty Ltd (ACM), a mid-tier contracting company that successfully completed \$1.5B worth of work over a 20-year period. ACM was sold to an ASX listed gold mining company in 2017. Founding Director of Dacian Gold Limited and after its ASX listing in 2012 was Dacian's largest shareholder. Previously Executive Director of Eltin Limited over 15 year tenure.

## David Nixon

### **Technical Director**

David Nixon has over 25 years' experience as an Exploration Geologist predominately in gold in Australia, North America South America and Papua New Guinea.

He has worked on a wide range of gold deposits styles including orogenic lode gold, porphyry, epithermal gold and VMS.

Mr Nixon has worked in senior roles with premier companies including Gold Fields, KCGM and The Barrack Exploration Group.

## Hayley McNamara

Haley McNamara is a principal of Mining AccessLegal and has been advising exploration and mining companies for over two decades both in private legal practice and as General Counsel and Company Secretary for ASX listed BC Iron limited.

Ms McNamara also serves on the West Australian Government's Resource Industry Consultative Committee and is a member of AMEC Mining Legislation and Aboriginal Affairs committees.

### Keith Murray

## Non-exec Director

**Non-exec Director** 

B. Acc, Chartered Accountant (CAANZ) Experience – Mr Murray is a Chartered Accountant with over 40 years' experience at a general manager level in audit, accounting, tax, finance, treasury and corporate governance. During the 1990s Mr Murray was Group Accounting Manager Corporate and Taxation and joint Company Secretary for Eltin Limited and is currently General Manager Corporate and Company Secretary for the Heytesbury Group. Directorships held Siren Gold Limited (current) in other listed Desert Metals Limited (current)

Source: ICL

## 10.2 TOP 20 SHAREHOLDERS AS AT 1 SEPTEMBER 2022 Table 16 Top 20 Shareholders

#### op 20 Shareholders Brian Rodan Group 84,147,226 40.3% 1 5.9% 2 **BNP Paribas Nominees** 12,293,478 Yandal Investments Pty Ltd 9,000,000 4.3% з 4 **Kenneth Hall** 5.560.000 2.7% 5 Zero Nominees Ptv Ltd 5.000.000 2.4% 6 **Carrington Capital Group Pty Ltd** 2,525,000 1.2% 2,150,000 1.0% 7 Stephen Taddei 1.0% 8 Mine Maintenance Management 2,000,000 **CSB Investments Pty Ltd** 1,750,000 0.8% 10 GS & SM Milling 1,575,000 0.8% 0.7% 11 Peto Pty Ltd 1,500,000 H&G Investment Management Pty Ltd 1,412,061 0.7% 12 1,400,000 Perna Holdings Pty Ltd 0.7% 13 14 **Marcus Stoinis Promotions Ptv Ltd** 1,364,820 0.7% 0.6% 15 **St Baranabas Investments Pty Ltd** 1.350.000 0.6% 1,323,443 16 Damian de Gennaro 17 1,250,000 0.6% **Matthew Turner** 18 1.142.857 0.5% Jason Madalena 19 Julie de Gennaro 1,065,672 0.5% 20 **Cossack Holdings Pty Ltd** 1,000,000 0.5% Total 138,809,557 66.6% Total issued capital 208,571,248 100.0%

## 11.1 BALANCE SHEET

Table 17 Balance Sheet

Balance Sheet	A\$000	
Year End 30 June	2021	2022
Current assets		
Cash	17,368	7,798
Receivables	230	226
Other	172	243
Total Current	17,770	8,267
Non Current		
Exploration expenditure	6,765	16,558
Property plant & equipment	597	2,398
Other assets	113	102
Total Non Current	7,475	19,058
Total Assets	25,245	27,325
Liabilities		
Current liabilities		
Trade payables	579	820
Provisions	33	78
Borrowings	231	1,035
Total current liabilities	843	1,933
Non-current liabilities		
Borrowings	192	474
Provisions	-	2
Total non-current liabilities	192	475
Total liabilities	1,035	2,408
Net assets	24,209	24,917
Equity		
Issued capital	24,801	26,826
Equity Reserves	1,795	1,795
Accum losses	(2,385)	(3,702)
Total Equity	24,210	24,918

## 11.2 PROFIT AND LOSS

## Table 18 profit and Loss Statement

Profit and Loss Stater	nent A\$000	
30-J	un 2021	2022
Operating revenue	-	-
Other net	-	20
Total	-	20
Expenses		
Cost of Sales		
Employee benefits	260	245
Contractors	335	420
Exploration write off		-
Other	1,790	671
Total	2,385	1,336
PreTax	(2,385)	(1,316)
Тах	-	-
Net	(2,385)	(1,316)

## 11.3 CASHFLOWS

#### **Table 19 Cash Flows Statement**

Cash Flows Statement	A\$000	
30-Jun	2021	2022
Cashflows from operating activities	(1,235)	(1,242)
Other net	(5)	(62)
Total	(1,240)	(1,304)
Cashflows from investing activities		
Exploration	(2,038)	(9,078)
Fixed assets	(670)	(2,300)
Other	(150)	-
Total	(2,858)	(11,379)
Cashflows from financing activities		
Capital raising	22,191	2,025
Capital raising costs	(1,149)	
Net borrowings	423	1,088
Total	21,466	3,113
Net cashflows	17,368	(9,569)
Opening cash	-	17,368
Closing	17,368	7,798

Simple P&L account

Exploration is currently capitalised

Cashflows

ICL will have an operating burn rate of about A\$4mpa but exploration is likely to step up significantly in the years ahead.

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