ANNUAL REPORT

MINING LEASE 23812

SPRING HILL

FOR THE PERIOD 16/1/13 to 15/1/14

Contact: rbradey@thormining.com

Target commodities: gold

GDA 94 – Zone 52

1:250000 Pine Creek

1:100000 Pine Creek

March 2014

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SUMMARY

Mining Lease ML23812 which covers the historic Spring Hill gold mining centre was previously held by Tennant Creek Gold (NT) Pty Ltd until it was acquired by Western Desert Resources Ltd in July 2007. In mid- 2011 WDR Gold entered into a JV agreement with TM Gold (a subsidiary of Thor Mining PLC). TM Gold has now earned the right to 80 per cent share in the project. ML23812 encompasses a published JORC compliant Indicated resource of **3**79,000 ounces of gold within 9.5 million tonnes at a concentration of 1.24 grams per tonne gold at a one gram per tonne gold cut-off grade. Ongoing resource development drilling continued during the year with the completion of 2,171 metres of reverse circulation drilling targeting areas most likely to enhance the existing mining resource. The revised resource estimate will be reported in the next annual report.

INTRODUCTION

BACKGROUND

The Mining Lease was held by Tennant Creek Gold (NT) Pty Ltd until it was acquired by Western Desert Resources Ltd in July 2007. The tenement covers the historic Spring Hill gold mining centre. In mid-2011, WDR Gold entered into a JV agreement with TM Gold, (a wholly owned subsidiary of Thor Mining PLC) for an initial 25% interest and earning up to 80% interest of the Spring Hill project. TM Gold has now earned rights to a 51% interest in the project and has completed 60% (A$900,000) of the $1.5 million expenditure obligation to increase its interest to 80%.

LOCATION AND ACCESS

The tenement is located about 200km south east of Darwin in the Top End of the Northern Territory (Figure 1).

Access is by the sealed Stuart Highway south from Darwin, and then by the unsealed Spring Hill road. Access within the project area is by 4WD tracks. Portions of the tenement are inaccessible to vehicles due to the rough terrain.

CLIMATE

The climate is semi-arid, tropical with warm dry winters and hot wet summers. The average annual rainfall is 1200mm with most falls in the wet season.

TOPOGRAPHY AND VEGETATION

The project area is located within the Uplands physiographic division. The Uplands represent low steep-sided hills separated by narrow valleys. The area is within the Mary River system which drains to the north.

The Spring Hill project is located on the crest of two steep sided ridges which rise about 180 metres above the surrounding country. The country is typically highly dissected tropical savannah. Soils are skeletal and poorly developed.

The area can be classified as Low Woodland with *Eucalyptus tintinnans* (Salmon Gum) being the dominant tree species with a *Sorghum* grassland understorey.

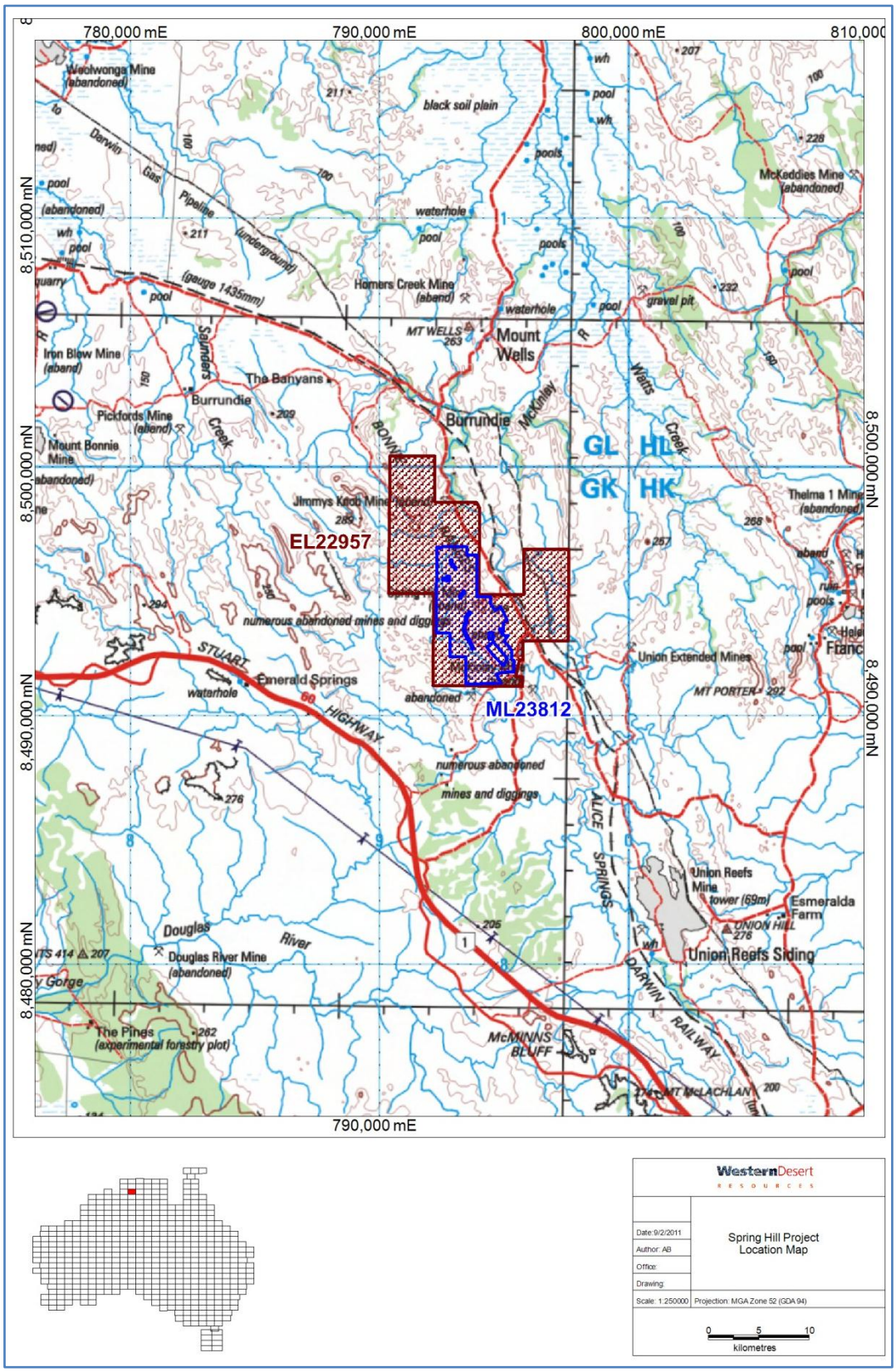

Figure 1: Location ML23812 – Spring Hill

TENURE

MINING/MINERAL RIGHTS

ML 23812 was provisionally granted to Tennant Creek Gold (NT) Pty Ltd on 16th January 2004 conditional on completion of a boundary survey. Problems were encountered with carrying out the survey which was completed in August 2005. The lease was finally granted in March 2007.

The tenement was purchased by WDR Gold Pty Ltd, a wholly owned subsidiary of Western Desert Resources Ltd, on July 20th 2007. In mid-2011, WDR Gold entered into a JV agreement with TM Gold, (a wholly owned subsidiary of Thor Mining PLC) for an initial 25% interest and earning up to 80% interest of the Spring Hill project.

ML 23812 surrounds a number of pre-existing mining claims which are shown on Figure 3.

LAND TENURE

The tenement is located within the boundaries of Perpetual Pastoral Leases 815 (Mary River West).

NATIVE TITLE

The Spring Hill project falls within the area of a registered Native Title Claim DC 01/6 Mary River West.

ABORIGINAL SACRED SITES

There are no known sacred sites within the project area. The Aboriginal Areas Protection Authority issued Authority Certificate C2008/159 over the Mining Lease on 15th August 2008.

GEOLOGY

REGIONAL GEOLOGY

The project area is located within the Palaeoproterozoic Pine Creek Orogen, which is aged between 2470-1870Ma. The Pine Creek Orogen consists of a sequence of psammitic and pelitic sediments, tuffs and minor volcanics. The sediments have been intruded by granitoids of the Cullen Batholith of Palaeoproterozoic age. The regional geology is shown on figure 2.

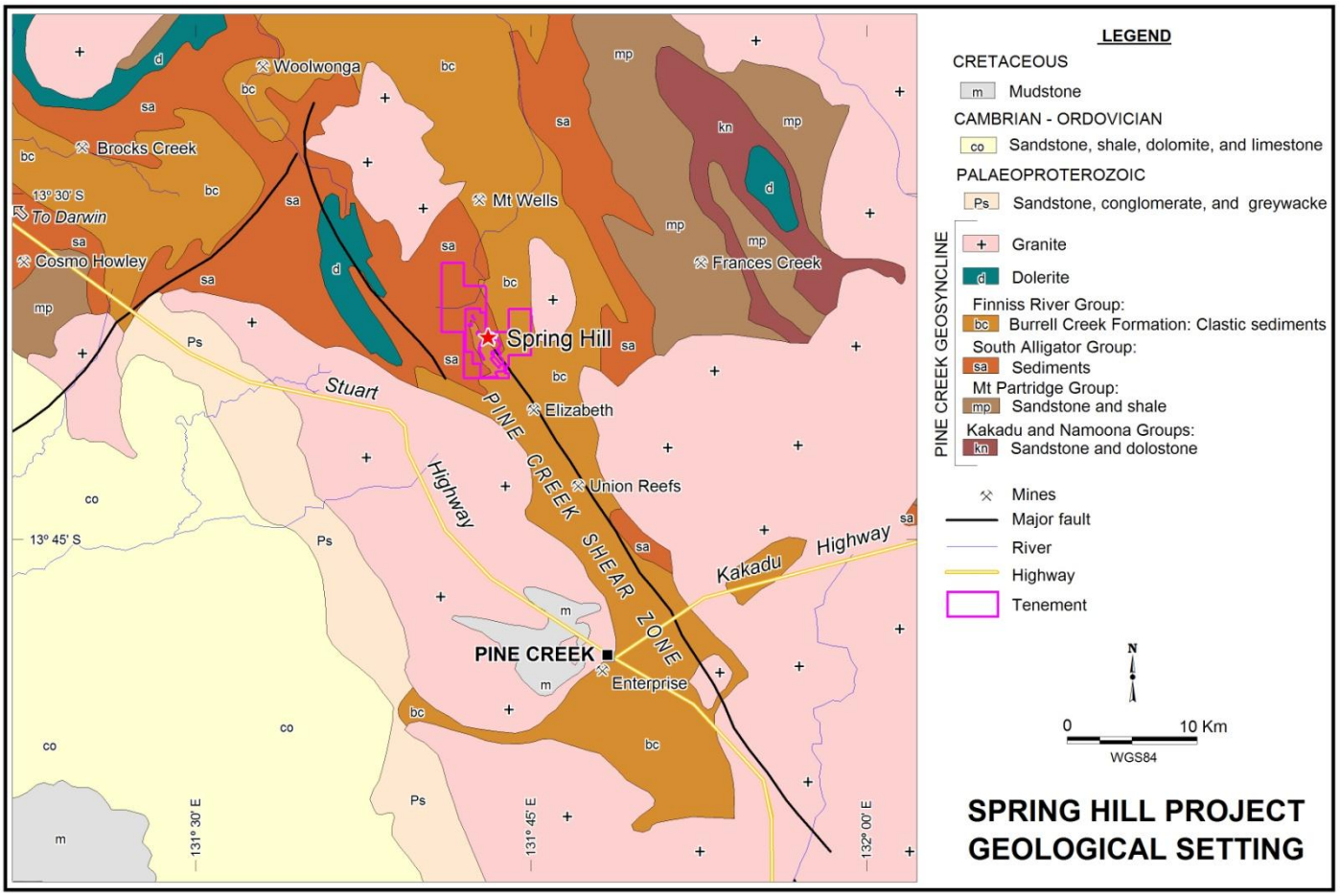

Figure 2: Regional Geology

LOCAL GEOLOGY

The main project area is underlain by sandstones, siltstones and shales of the Mount Bonnie Formation of the South Alligator Group (figure 3). Gold mineralisation occurs within this formation close to the axis of a tight regional anticline which plunges to the south east.

Gerowie Tuff underlies the Mt Bonnie Formation and crops out in the core of the anticline to the north of the main workings.

In the southwest corner of the mining lease the Mt Bonnie Formation has been folded around an anticline which is orientated in parallel to that at Spring Hill.

The gold mineralisation in the Spring Hill goldfield occurs in two separate zones –the Hong Kong sheeted vein zone and the historic mining centre of the Main, Middle and East lodes (figure 4).

The Hong Kong zone contains a sheeted vein system which dips steeply to the south east (70°). The bedding in this area dips steeply to the west. The quartz veins vary in width from several millimetres to 0.5m, and contain pyrite when unweathered. The zone has a strike length of about 1000m and a width of about 100m.

The historic mining centre contains three main leader veins, which are lodes between 0.4 and 1.5m in width containing quartz with Pyrite, Galena and Arsenopyrite. These were mainly veined in the oxidised zone where the grade averaged 30g/t Au. Bedding parallel veins and saddle reefs also occur within the mined area.

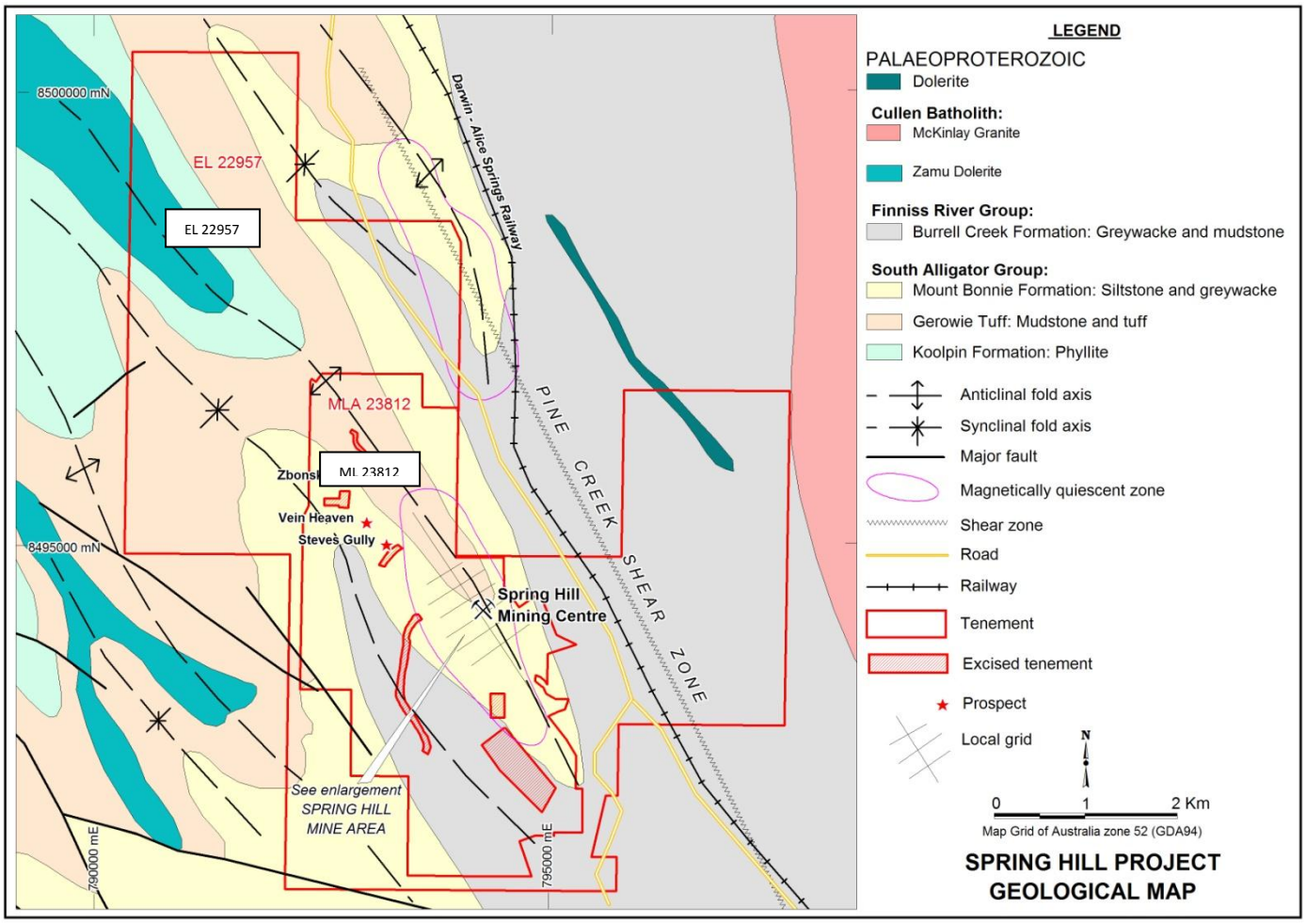

Figure 3: Local Geology

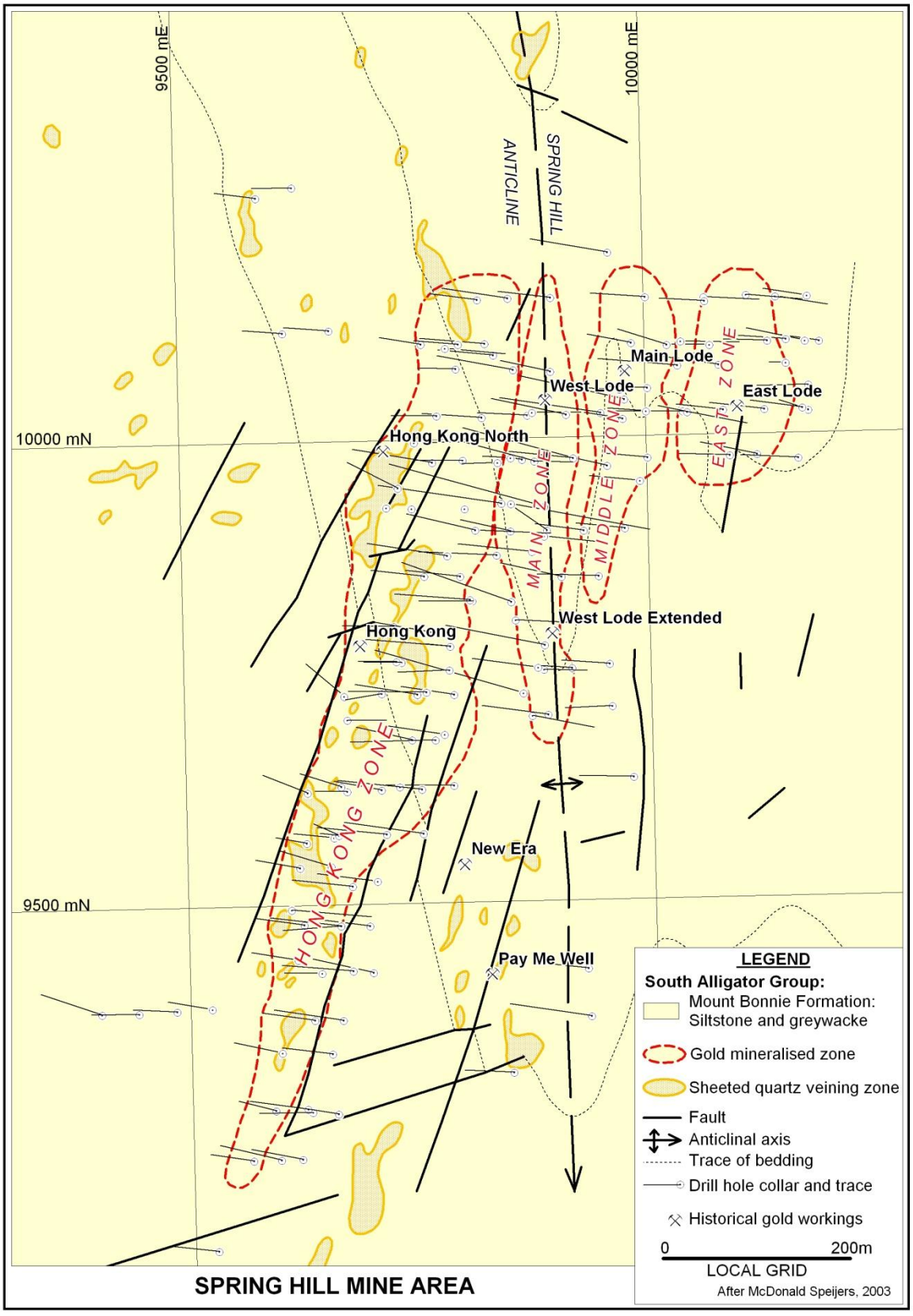

Figure 4: Ore Zones & previous drilling locations

PREVIOUS EXPLORATION

MINING HISTORY

The tenement covers the Spring Hill goldfield. Gold was discovered in the area in the 1870's. Mining activities took place between 1880 and 1905, and then intermittently until 1966. Total recorded production was about 22,000 oz of gold which was mainly derived before 1900. Mining mainly took place on the Main and Middle lodes with the oxidised ore being worked to depths in excess of 100m.

In the 1930's an adit was driven from the eastern side of Spring Hill to test the previously mined lodes at a depth of about 120m. Further work on the Main Adit and excavation of the South Adit were carried out in the 1940's with recorded production of 650oz of gold.

Treatment of alluvial deposits in creeks draining from the western side of Spring Hill has occurred in recent years.

EXPLORATION BY PREVIOUS COMPANIES

Territory Resources (1985-88)

Gridding, mapping, costeaning and drilling were carried out over the previously mined East, Middle and Main Lodes.

Billiton Australia (1988-92)

Exploration was carried out by the Spring Hill Joint Venture between Billiton and Ross Mining NL.

Billiton initially carried out a regional drainage survey, geological mapping, and rock-chip sampling. It also carried out a low level aeromagnetic survey.

Further exploration included the establishment of a grid, soil sampling, costeaning, drilling, metallurgical testwork, a TEM and an IP survey, and structural mapping. Billiton carried out a total of five drilling campaigns comprising ten diamond and 83 RC holes.

The TEM survey located a conductor with a length of at least one kilometre that lies directly beneath the Middle Lode workings and parallels the axis of the Spring Hill Anticline.

The exploration also delineated a low-grade sheeted quartz vein system to the west of the main historical workings, named the Hong Kong Zone, where a resource was estimated.

Ross Mining NL (1993-97)

1993 and 1994 Ross Mining contracted Eupene Exploration to carry out exploration of the Spring Hill tenements. Three phases of drilling were carried out (nine diamond and 145 RC holes). The drill programmes included infill and twin hole drilling in the Hong Kong Zone and the Main and East Lode areas and exploration drilling at the Vein Heaven and Steve's Gully Prospects.

A total of 23,627m of drilling was carried out by Billiton and Eupene Exploration, of which 1,658m was cored.

The drilling pattern is shown in Figure 4. In general, holes were drilled on 25 metre sections over the strike length of the Hong Kong Zone and the Main, Middle, and East Lodes. Most holes were drilled

from east to west. The distance between holes on the same lines varied, but was mostly of the order of 25m.

During 1995 and 1996 Ross Mining carried out environmental investigations, metallurgical testwork on core samples, resource and reserve estimations, and scoping studies.

The metallurgical testwork indicated that the mineralisation is free milling. Agitation leach tests on six oxide and four transition zone samples returned between 92% and 99% gold extraction, and on seven sulphides samples returned between 77% and 99%, with an average of 88%. Column leach testwork indicated that the oxide and transition zone material was suited to heap leach treatment, but the sulphide zone mineralisation was not.

Acacia Resources Ltd (1998)

Acacia Resources Ltd completed a data review and validation of Ross Mining's resource model. It separated the model into two major domains, the Hong Kong Zone and the Main and East Lode area.

Tennant Creek Gold (NT) Pty Ltd (2002-2003)

TCG commissioned McDonald Speijers to undertake a scoping study on the Spring Hill Project. The study examined the project viability in terms of operating cost. Data compilation was carried out.

For the Hong Kong Zone and the Main, Middle, and East Lode zones an Indicated Resource of 3.6Mt at 2.34g/t Au, for 274,000oz of contained gold, was estimated at a 1g/t Au assay cut-off grade. Pit optimisations were carried out for A$550 and A$600 gold prices utilising a cost structure that was appropriate at the time, but that may no longer be relevant.

The resulting optimal pit shells indicated that, at the inputs used, mining may have been feasible within seven separate small pits, with maximum depths of between 20m and 40m.

Pan Resources plc (2006)

Pan Resources plc held an option to purchase Spring Hill from Tennant Creek Gold. A reinterpretation of the exploration data from Spring Hill was carried out with an emphasis on the geophysical data.

Conclusions from the review included:

- The Spring Hill mineralisation occurs within a magnetically quiet zone, which may represent episodes of magnetite destruction.
- The association of gold mineralisation with sulphides indicates that EM surveys should be able to provide information on possible gold mineralisation at depth beneath the historical workings. Billiton's 1989 TEM survey proved this concept.

Western Desert Resources Ltd (2007-2008)

Office studies were carried out including database compilation, literature research, drill section output and planning for future drilling programmes. Satellite imagery (Quickbird VHR) was purchased for the Spring Hill area.

The previous metallurgical test work carried out by Ross Mining NL was reviewed by Bemex Corporation. Drill core samples from Spring Hill were sent to Ammtec Laboratories for physical

testwork. An airborne EM survey was flown by GeoForce using their Skytem system over the tenement during September 2008. A metallurgical scoping study was undertaken by Bemex Corporation Pty Ltd. An ore reserve estimation and scoping study was carried out by McLean Geological and Mining Consultants in association with McDonald Speijers.

In September 2008 Geoforce Pty Ltd completed the collection of 283 line km of SkyTEM AEM data over EL22957 and ML23812. The data was collected in an East-west orientation with a 150m survey line separation. During the reporting period, Western Desert Resources engaged Montana G.I.S. to undertake further detailed interpretation of this data. This entailed interrogation of the data profiles and conductivity depth images/models as well as identification and prioritisation of basement conductors.

TMGold Pty Ltd

2011 TM Gold commenced a diamond drilling program in September. Seven holes of the thirteen hole program was completed when the drilling was suspended in December 2011 due to the annual wet season. The objective of the program was to test the down dip extension of the gold mineralization below 150m. The seven diamond holes completed (SHDD001-SHDD007) comprised a total of 1573.7 metres.

2012 Difficult drilling conditions in the oxide zone were the primary cause of the slow penetration rates in the previous year. As a result RC pre-collars were adopted for the 2012 program. The program comprised 570 metres of RC pre-collar and 1612 metres of diamond tail. Objectives of this program were to finalise the program commenced in 2011 to test down dip extensions to the Hong Kong lode below 150 metres and to test for separate deeper mineralisation within the Koolpin Formation. Collar location is shown below in the collar location plan.

WORK COMPLETED 16/1/13 to 15/1/14

The following works were completed on the mining lease ML23812:

April: The signing of a non-binding Memorandum of Understanding (MOU) in respect of toll treatment of Spring Hill ore at the Union Reefs gold processing facility operate by Crocodile Gold.

June: A pit optimisation study by independent consultants AVCS Pty Ltd identified an initial mining inventory of 900,000 tonnes primarily comprising oxide ore. A Notice of Intent was drafted and lodged with the Northern Territory Department of Mines and Energy as the first stage in permitting a proposed oxide mining operation at Spring Hill.

Core samples of Spring Hill ore from previous diamond drilling were used to test the potential of x-ray ore sorting application. The initial results using the hand specimens gave sufficient encouragement for a further larger sample of 1.5 tonnes to be collected and tested. The ore sorting process was based on the premise that all gold mineralisation is associated with quartz veins and that x-ray sorting could distinguish and segregate rocks with quartz veins from rocks without quartz veins. Despite a concerted effort with the larger sample and under controlled conditions, the process was not successful and has been abandoned with regard to Spring Hill mineraliseation.

September: Drilling resumed at Spring Hill with an initial drilling program of 2,000 metres of reverse circulation (RC) drilling targeting near-surface mineralisation, potential extensions to high grade mineralisation below historic mining operations, other potential satellite targets within Spring Hill lease area.

At completion of the program 25 holes for 2,171 metres had been drilled as shown in figure 5 (SHRC 235 – SHRC259).

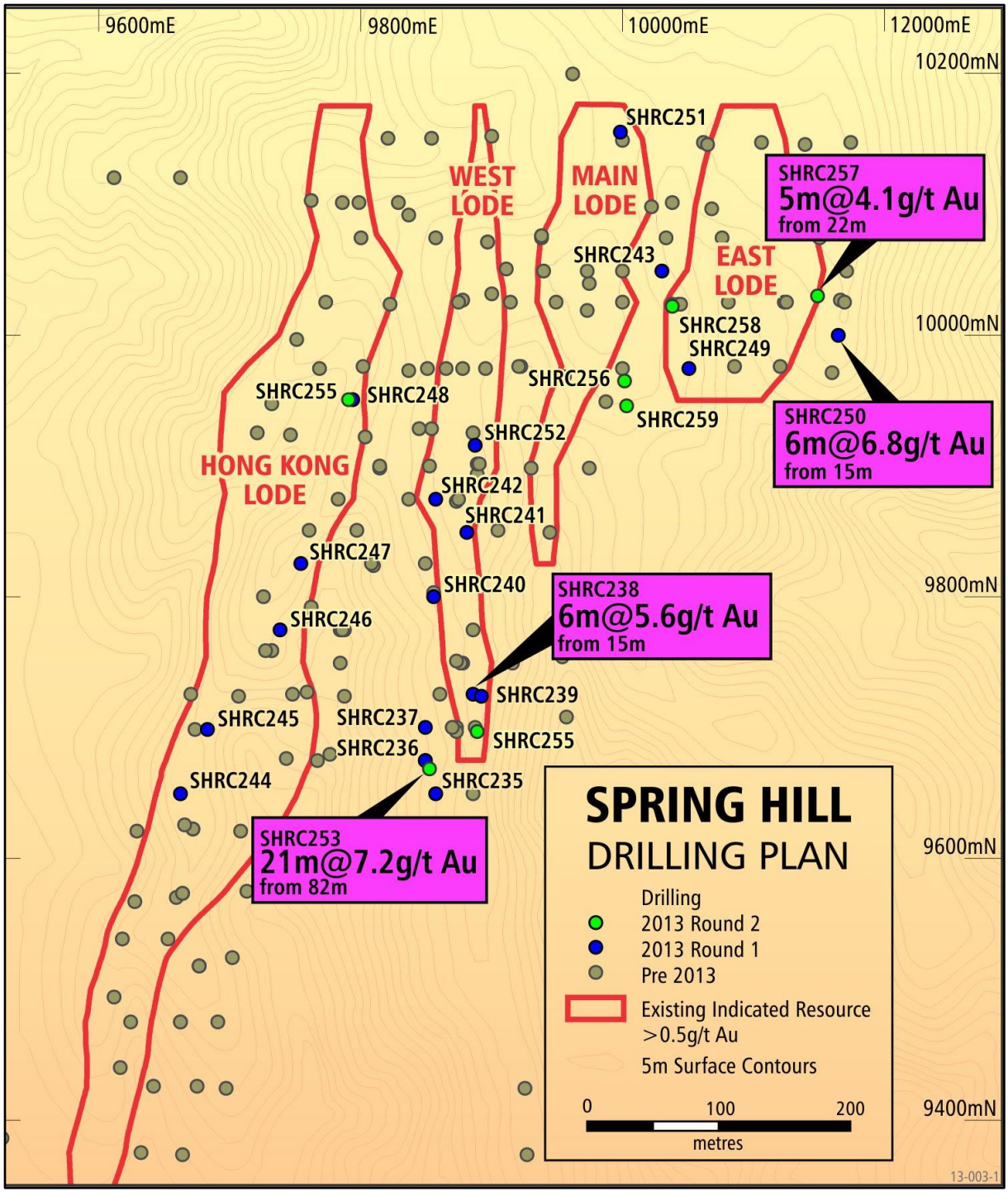

Figure 5: 2013 Spring Hill drill hole collar location plan

Sampling

RC drilling was sampled at one metre intervals using a riffle splitter to collect bulk and calico samples. The calico samples were submitted to Northern Australian Laboratories in Pine Creek for analysis.

QAQC comprised certified standards, blanks and field duplicates which were monitored as assaying progressed.

Geological Logging

Drill logging was completed on hardcopy log sheets and hand entered into the database.

Results

Significant intercepts are summarised in the following table and full results provided in the appended text file.

Hole id	North GDA	East GDA	RL GDA	Azimuth	Dip	Hole Depth (m)	From (m)	Interval (m)	True Width	Au g/t
SHRC235	**8493950**	**794225**		**242**	**-55**	**157**	131	3		0.3
						and	148	8		1.05
						including	154	**1**		**3.37**
SHRC236	**8493975**	**794213**		**242**	**-55**	**115**	110	3		0.91
SHRC236A	**8493974**	**794213**		**242**	**-70**	**121**	**31**	**1**		**4.56**
							75	15		1.79
						including	**77**	**1**		**4.42**
						and	**81**	**1**		**7.98**
						and	**85**	**2**		**5.20**
							105	2		0.33
SHRC238	**8494041**	**794221**		**62**	**-55**	**387.1**	**15**	**6.0**		**5.65**
						including	**15**	**3**		**10.86**
							23	3		0.25
							31	5		0.44
SHRC239	**8494038**	**794220**		**242**	**-55**	**52**	11	3		0.42
							33	3		0.29
							46	4		0.25
SHRC240	**8494087**	**794146**		**242**	**-55**	**100**	**25**	**1.0**		**2.61**
SHRC241	**8494148**	**794150**		**242**	**-55**	**70**	0	13		0.64
							17	4		0.41
							23	7		0.80
							39	**1**		**2.25**
							48	3		0.35
							54	3		0.39
							62	4		0.57
SHRC242	**8494157**	**794119**		**242**	**-60**	**64**	0	2		0.40
SHRC243	**8494416**	**794186**		**242**	**-65**	**124**	21	6		1.02
						including	**23**	**1**		**4.17**
							57	2		0.27
							70	3		0.31
							77	4		0.52
							87	3		1.00
							97	2		0.41
SHRC244	**8493863**	**794063**		**242**	**-60**	**43**	3	28		1.18

Hole id	North GDA	East GDA	RL GDA	Azimuth	Dip	Hole Depth (m)	From (m)	Interval (m)	True Width	Au g/t
						including	**10**	**1**		**2.51**
						and	**12**	**1**		**2.69**
						and	**15**	**1**		**2.19**
						and	**18**	**2**		**2.34**
SHRC245	**8493912**	**794051**		**242**	**-70**	**55**	0	13		0.43
							17	3		0.36
SHRC246	**8494001**	**794055**		**242**	**-55**	**82**	1.0	14		1.20
						including	5.0	1		3.66
						and	11	1		2.55
							19	19		0.55
							46	6		0.36
SHRC247	**8494064**	**794063**		**242**	**-55**	**73**	0	8		1.36
						including	**4**	**1**		**6.07**
							11	7		0.59
							21	2		0.42
							28	7		1.18
						including	**33**	**1**		**4.01**
							39	15		0.80
						including	**47**	**1**		**3.31**
						and	**49**	**1**		**2.47**
							60	2		0.58
SHRC248	**8494196**	**794029**		**242**	**-55**	**55**	0	4		0.68
							33	3		0.79
							50	3		0.48
SHRC249	**8494345**	**794237**		**242**	**-60**	**106**	0	7		0.32
							71	6		0.87
							89	13		1.72
						including	**90**	**2**		**3.47**
						and	**93**	**1**		**3.90**
						and	**98**	**1**		**3.56**
SHRC250	**8494406**	**794323**		**242**	**-55**	**52**	8	6		0.92
							15	**6**		**6.83**
						including	**16**	**4**		**10.11**
							25	3		0.66
							30	4		1.64
						including	**31**	**1**		**3.73**
SHRC251	**8494475**	**794120**		**125**	**-60**	**100**	77	2		0.56
							80	5		0.82
						including	**82**	**1**		**2.61**
							87	4		0.57
							94	2		0.63
SHRC252	**8494217**	**794132**		**125**	**-60**	**100**	4	15		0.50
						including	**16**	**1**		**2.32**
							41	3		1.37
						including	46	2		0.23
							49	3		1.33
							60	3		1.22
							73	3		0.52
SHRC253	**8493975**	**794215**	**241**	360	90	103	18	1		1.80
							82	**21**		**7.21**
						including	**88**	**2**		**3.59**
						and	**93**	**10**		**14.07**
SHRC254	**8494017**	**794234**	**263**	055	55	43	0	3		0.35
							12	1		1.62

Hole id	North GDA	East GDA	RL GDA	Azimuth	Dip	Hole Depth (m)	From (m)	Interval (m)	True Width	Au g/t
							18	4		0.61
							26	4		0.95
							32	9		0.42
SHRC255	**8494195**	**794028**	**237**	055	55	55	0	3		0.76
							22	**2**		**2.42**
							35	11		1.21
						including	**42**	**2**		**4.02**
SHRC256	**8494307**	**794207**	**273**	055	55	60	22	3		1.08
							79	2		0.66
SHRC257	**8494433**	**794306**	**267**	055	55	55	0	13		0.35
							22	**5**		**4.07**
						including	**22**	**4**		**5.03**
SHRC258	**8494374**	**794213**	**272**	263	68	163	10	1		0.71
							54	10		1.71
						including	**56**	**3**		**4.32**
							91	2		0.27
							94	2		0.25
							116	3		0.33
							128	7		0.34
							148	7		0.47
SHRC259	**8494290**	**794217**	**281**	055	55	55	51	2		0.36

Table 1: Significant Intercepts Summary

Rehabilitation

All holes for the 2013 drill program have been plugged using PVC pipe and caps. All drilling refuse was cleaned up after the completion of each hole. All rubbish including waste oils and filters has been removed from the site.

Following completion of assays and follow up check assays, the RC bulk samples have been removed and the drill pads scarified to enhance vegetation regrowth.

Resource Update

The resource estimate update from the 2013 drilling had not been completed in time for this report and has not been included.

The previous resource estimates are summarised below (Table 6). All resource categories have been combined for this table.

Author	Cutoff (g/tAu)	Tonnes (Mt)	Grade (g/tAu)	Ounces (koz)	Comment
Helsten, 1991	0.5 1.0	3.2 1.7	1.4 1.9	144 104	Polygonal
Richmond, 1995	0.2 0.7	11.9 5.0	0.95 1.64	363 264	Polygonal with 30 g/t top cut
	0.2 0.7	12.7 5.7	0.80 1.29	327 236	Block model using IK – maximum depth 125m
Eupene, 2002	0.7 1.0	2.5 1.3	1.34 1.78	108 74	Block model using IPD
Speijers, 2003	0.5 0.7 1.0	11.5 8.4 5.5	1.07 1.26 1.56	392 341 277	Diluted Recovered Fraction block model – maximum depth 150m
Speijers, 2012	0.5 0.7 1.0	12.7 9.5 6.1	1.06 1.24 1.55	434 379 303	Diluted Recovered Fraction block model – maximum depth 150m

Table 2: Successive Spring Hill resource estimates.

The 2012 Spring Hill resource estimate is also provided in Table 7 grouped by JORC category and ore type.

Category	Measured		Indicated		Inferred		--------- Total --------		
	Tonnes (Mt)	Grade g/t Au	Tonnes (Mt)	Grade g/t Au	Tonnes (Mt)	Grade g/t Au	Tonnes (Mt)	Grade g/t Au	Contained Gold (K oz)
Zone of Oxidation	-	-	4.28	1.15	-	-	4.28	1.15	158
Transition Zone	-	-	1.25	1.20	-	-	1.25	1.20	48
Unweathered Zone	-	-	3.94	1.36	-	-	3.94	1.36	172
Total	-	-	9.5	1.24	-	-	9.5	1.24	379

Table3: Spring Hill 2012 Resource estimate grouped by resource category and ore type.

Conclusion and recommendations

Further potential exists to extend the resource at Spring Hill and at nearby partially drilled prospects previously described by Sheldon et al (1994)[1]. This potential should be further tested with field mapping and follow up reconnaissance geochemistry style drilling such as RAB of air-core.

The 2012 resource estimate has been constrained to a nominal depth of 150 metres based on the economics of open-cut mining in Western Australia. Spring Hill may have some economic advantages due to its location and close proximity to existing infrastructure in addition to the steep site terrain. The economics of this project should be tested via an open-cut mining optimisation study which has the potential increase the resource base.

Proposed work programme for 2014

The proposed work program includes progressing project feasibility and permitting in addition to further evaluating potential resource extensions.

[1] Sheldon T., Scrimgeour I., Edwards D.(Eupene Exploration Ent) (1994), *Exploration Report for Spring Hill 1994.* Unpublished report for Ross Mining.

Lithology_Code	Lithology_Description
AMPH	Amphibolite
AVM	Alluvium
BX	Breccia
CLAY	Clay
CORE LOSS	Core Loss
CRT	Chert
CTE	Calcrete
GR	Granite
GW	Greywacke
HF	Hornfels
MS	Mudstone
OB	Over burden
PEG	Pegmatite
QV	Quartz Vein
SAP	Saprolite
SCH	Schist
SHR	Shear Zone
SK	Skarn
SOIL	Soil
SST	Sandstone
STE	Silcrete
SZ	Siltstone
TSA	Transported Alluvium
TUFF	Tuff
VCRT	Chert Vein
VPY	Pyrite Vein
XCS	Calc

Mineral_Code	Mineral_Description
ab	Albite
ac	Actinolite
ad	Andalusite
ag	Silver (native)
ak	Ankerite
amp	Amphibole
ap	Apatite
as	Aresnopyrite
au	Gold (native)
az	Azurite
ba	Barite
be	Beryl
bi	Biotite

bn	Bornite
ca	Calcite
cas	Cassiterite
cb	Carbonate
cc	Chalcocite
cd	Cordierite
ce	Cerussite
ch	Chlorite
chpy	Chalcopyrite
ci	Cuprite
cl	Chrysocolla
cm	Cummingtonite
co	Corundum
cq	Chalcedony
cs	calc-silicate
cu	Copper (native)
cv	Covellite
cy	Clay
do	Dolomite
dp	Diopside
ep	Epidote
fe	Iron Oxide
feld	Feldspar
fl	Flourite
gh	Gahnite
gn	Galena
go	Goethite
gp	Graphite - Carbon (native)
gr	Granite
gt	Garnet
gy	Gypsum
ha	Halite
hb	Hornblende
hfls	hornfelds
hm	Hematite
il	Illite - Clay
im	Ilmenite
ja	Jarosite
jp	Jasper
ka	Kaolin
kspar	K-Feldspar
lim	Limonite
lx	Leucoxene
ma	Marcasite

mgt	Magnetite
mi	Mica
ml	Malachite
mm	Montmorillonite - Clay
mn	Manganese Oxides
mo	Molybdenite
ms	Magnesite
mu	Muscovite - Sericite
mz	Monazite
oc	Orthoclase
og	Oligoclase
ol	Olivine
oyx	Orthopyroxene
peg	Pegmatite
ph	Phlogopite - Biotite
plag	Plagioclase
pn	Pentlandite
po	Pyrrhotite
ps	Pyrolusite
py	Pyrite
pyx	Pyroxene
qtz	Quartz
rs	Roscoelite - Muscovite
ru	Rutile
s	Sulphur (native)
sc	Scheelite
scap	Scapolite
sd	Siderite
si	Silicate
sl	Sillimanite
sm	Smectite - Clay
sp	Sphalerite
st	Staurolite
su	Sulphide
ta	Talk
to	Tourmaline
trem	Tremolite
wf	Wolframite
wo	Wollastonite
zr	Zircon