NEW GUINEA GOLD CORPORATION

MACMIN (PNG) LTD & GMNH

MACMIN (PNG) LTD IS A
WHOLLY OWNED SUBSIDIARY of
NEW GUINEA GOLD CORPORATION

EXECUTIVE SUMMARY

of

FEASIBILITY STUDY

MT SINIVIT GOLD PROJECT

June 2004

Papua New Guinea Strategy

New Guinea Gold Corporation (NGG) has interests in twelve projects in Papua New Guinea. Four projects are considered core projects, on which NGG's funds are focused. Three of the core projects (Sinivt, Normanby and Sehulea) are partly drilled, have modest resources and / or reserves and are considered to have untested potential which could yield major gold ore bodies (plus 1 million ozs contained gold). The fourth core project (Mt Penck-NGG beneficial interest 60%, Vangold Resources beneficial interest 40%) has extensive surface indications of gold in soils and trenches and is scheduled for initial drill testing in June 2004.

The remaining eight projects are all significant projects with major orebody potential as determined from extensive exploration completed to date. Two projects, which have geological similarities to Lihir and Porgera, (Feni and Crater Mt.), respectively have been joint ventured to third parties who are sole funding exploration. NGG considered joint venturing appropriate for the projects even though they have significant gold in drill holes and potential in excess of five million contained ozs of gold, because both projects require multi million dollar expenditures to proceed them to the next phase of evaluation.

Four properties are held jointly with Vangold Resources and expenditures are presently shared 50/50. Low key / low cost exploration is proceeding and subject to results, any of these projects could be upgraded to a core project in the future.

Two projects with significant copper potential, Simuku and Mt. Nakru are being explored by NGG and NGG / Vangold respectively. Exploration is low key but could be upgraded dependent on results.

NGG's business plan, based on present resources, is to develop three mines over the next three years. These mines should yield 40,000 ozs gold per annum and a net cash flow of $10 million per annum for four to five years. At the same time, exploration will proceed on these projects, the other core projects and remaining projects to define additional and new resources.

Its most important to note that none of the proposed mine projects have been fully explored. Exploration was terminated in 1998/1999 due to market conditions and reduced funds available to NGG and its parent company Macmin Silver Ltd. All three mine projects could yield much larger and longer life mines than are presently proposed. The resources defined to date, and considered for mining, come from relatively small parts of large mineralized systems. **In particular, Normanby and Sehulea have multimillion oz gold potential.**

NGG operates in PNG through its wholly owned subsidiary Macmin (PNG) Limited (a PNG private company which holds title to the properties).

The Sinivit mine revised Feasibility study is intended as the first of three such studies The remaining two studies will relate to the proposed Imwauna Mine (Normanby Property) the Weioko Mine (Sehulea Property), and should be completed in 2005 and 2006 respectively. An original Feasibility Study was completed for Sinivit in 1997 by external consultants Ausenco Limited. This feasibility envisaged gold extraction over a three year period by a 100,000 tonne per annum CIP Plant. Development did not proceed on the basis of this feasibility because of lower gold prices in the late 1900's.

A review of the project, which minimizes and reduces the mining / processing period and changes the processing from CIP to non reusable vats has significantly improved the economics of the project and has produced a positive feasibility.

The revised feasibility was carried out 'In House' by NGG and Macmin Silver Limited under the supervision of R McNeil, a qualified person and Fellow of the Australian Institute of Mining and Metallurgy. Independent studies were completed on the mine plan by Colin Wregg, Consultant Mining Engineer, a qualified person and Fellow of the Australian Institute of Mining and Metallurgy and metallurgical testwork by staff of the metallurgical consulting firm, AMMTEC Limited of Perth, Western Australia.

For further information on NGG see our web site www.newguineagold.ca .

1. INTRODUCTION

The Sinivit project is a joint venture between Macmin (PNG) Ltd and Gold Mines of Niugini Holdings Ltd (GMNH), with Macmin (PNG) Ltd as operator. Macmin (PNG) Ltd holds a 90% equity and GMNH 10% equity in the project. In addition Macmin (PNG) Ltd holds approximately 20% equity in GMNH. Macmin (PNG) Ltd is a wholly owned subsidiary of New Guinea Gold Corporation a public company listed on the Toronto Venture Exchange, Canada.

The main points / conclusions in the feasibility study are as follows:

• Oxide Reserves	306400 tonnes @ 5.31 g/t gold
• Oxide Resource	511,900 tonnes @ 4.32 g/t gold
• Sulphide resource	218,300 tonnes @ 9.46 g/t gold
• Mine Plan	306450 tonnes ore , 600600 tonnes waste
• Process	Vat Leach
• Recovery by Carbon Stripping	Carbon Columns Atmospheric Zadra elution
• Gold production	45,044 ozs
• Gold recovery	88 %
• Operating Cost	$24/t of ore
• Capital Cost	$6.2 million
• Cash cost (before tax/royalty/ cost of capital)	$168/oz gold
• Cash flow (before tax/royalty/cost of capital)	$17.5 million
• Project net cash flow	$8.85 million
• Gold Price	AUD $548 (about US$375)

- Note – all figures in this study are $AUD unless otherwise specified.

The project has considerable upside:

- An additional 12,000 to 30,000 ozs Au may be added to reserves from oxide resources extending the mine life.
- The existing higher grade telluride/gold resource of approximately 70,000 ozs Au may be marketable as a concentrate.
- An exploration concept has been developed which, if proven to be factual, could locate a multimillion ounce telluride/gold orebody.

2. *PROJECT SUMMARY*

2.1 Description of Project

The Mt Sinivit project contains a gold reserve and resource. In addition to the known reserve and resource the tenements have excellent potential to host additional multi-million ounce gold resources.
The project is situated south of Rabaul in East New Britain, Papua New Guinea (Figure 1).
The project is connected by road to Kokopo and Rabaul.
The resources include both oxide gold and telluride/copper/gold resources. At this stage it is planned to mine the oxide reserves only but preliminary studies suggest that it may also be economic to mine out additional oxide resources and the telluride/copper/gold resources in the future.

The gold mineralisation was discovered in 1983 by Esso and since that time in excess of $10 M has been spent on exploration and development studies, mainly by explorers other than GMNH / MACMIN.

Previous explorers, all major companies, have considered the resource too small to meet internal development guidelines. However, the feasibility study completed by Macmin (PNG) Ltd indicates that the oxide reserve can be profitably extracted given a gold price in the order of AUD $ 545.

Macmin has other gold resources or potential to define gold resources in Papua New Guinea and plans to develop the Wild Dog deposit sequentially with these additional resources, such as those occurring within the Normanby tenement. Such sequential development will allow significant cost savings and this will increase the profitability of mining both the Mt Sinivit and Normanby reserves/resources.

Subject to financing and receipt of government approval, the Mt Sinivit deposit could be producing by June 2005. Cash flow analysis of the base scenario suggests that an IRR of 102% and a surplus after tax over the life of the mine of $*8,057,140*. NPV at 9% discount rate is *$6 million.*

2.2 Tenements

Type	**Date of Application**	**Date of Grant**	**Area sq.kms**
Mining Lease 122	9/11/94	February 1996 Under renewal	3.55
Mining Easement 70	9/11/94	February 1996 Under renewal	0.41
Exploration Licence 1140		May 1995 Current	44.2

2.3 **Reserve/Resource**

The reserve on which the feasibility study is based was calculated specifically for the study by Australian Mine Design and Development Pty Limited (AMD). Their calculations are shown below as the oxide Mining Reserve.

The resource estimates shown below were calculated by Curtis and Lindley.

The oxide Mining Reserve is included within the oxide Resource. It is expected that further evaluation of the oxide Resource will result in at least 50% of the oxide Resource, which is at present not included in the oxide Reserve, being added to the oxide Reserve.

The sulphide resource requires additional study to determine whether or not this gold can be economically extracted.

Type of Reserve/Resource	**Tonnes**	**Grade g/t Au**	**Au/ozs**
Oxide Mining Reserve	**306,400**	**5.31 (uncut)**	**52300**
Total Oxide Resource	511,900	4.32	71100
Total Sulphide Resource	218,300	9.46	66,400
TOTAL RESOURCE	**810,200**	**5.05**	**131,700**

A total of 9975 metres of drilling have been completed in and around the Wild Dog deposit.

No Holes	**Type of Drilling**	**Metres**	**Drilled by**	
71	Diamond/Core	12,790		Esso/City Resources
40	R. C. Percussion	1,833		Esso/City Resources
51	Diamond	4,985		Highlands Gold
22	R.C.Roller	767		GMNH
184	**TOTAL**	**8,875**		

The resource calculations used results from 59 drill holes. The reserve calculation used results from 36 holes and surface trenches.

2.4 **Mining/Processing**

The mine plan at Mt Sinivit envisages three small open pits mining a total of 117,413 bcm of ore, 324873 bcm of waste over a 15 month period. Initially 60790 bcm of waste material will be removed and used to form up roads and to commence the vat wall construction. It is expected that at the completion of these pits a further 6,000 ozs Au will be recovered from oxide Resources at nearby Kavursuki which are not presently included in the Reserve. The waste to ore strip ratio is expected to be 1.96 : 1.
In addition there are further resources of oxide gold totaling approximately 20,000 ozs. It is estimated that 50% of this gold may ultimately be mined adding further to the mine life.

The gold extraction would be by way of a Vat Leach Operation with gold recovery on to carbon. The carbon will be stripped in a Zadra type elution circuit and the resulting product smelted onsite to produce Dore.

2.5 Capital/Operating Cost

The anticipated capital cost of the project is $6,137,400. Operating cost is $24.08 / tonne of ore.

2.6 Financial Summary.

Cash flow analysis for the base scenario is shown in Table 1.

This analysis indicates a project IRR of 102%, NPV of $6,077,487.00 at a discount rate of 9% and net cash flow after tax of $8,057,140.00. Cash cost/oz gold produced is AUD $168. In addition the plant is expected to have a significant residual value. Project cash flow before tax, royalty and repayment of capital is approximately $17.5M. The gold price used is equivalent to $AUD548. Because of fluctuating exchange rates it is inaccurate to use the US$ gold price. Most costs are incurred in $AUD or PNG Kina. The AUD $gold price on June 22nd was AUD $570.00.

Mt Sinivit Project Cashflow

Table 1

CASH FLOW MODEL BASE

1.5 YEAR Mining 1 year Processing 1.5 years

		TOTAL FOR PROJECT	YEAR 1	YEAR 2	YEAR 3		
OXIDE ORE MINED	TONNES	306448		306448			
GRADE OF ORE (GRAMS PER TONNE)				5.31			
GOLD PRODUCTION	OUNCES	46044		34533	11511	0	75% Production during mining phase
		AUD $'000	AUD $'000	AUD $'000	AUD $'000	AUD $'000	25% from continuing vat leaching
REVENUE FROM GOLD PRODUCTION		25230		18922	6307	0	
CAPITAL COSTS			-6200			850	
OPERATING COSTS		-7750		-7355	-395	0	
DEPRECIATION		-6200		-3567	-2633		
ROYALTY& LEVY 2% + 1.9% ON GOLD		-984		-738	-246	0	
TAXABLE INCOME		10296	-6200	7263	3033	850	
LESS TAX PAYMENT (tax adjusted for royalty treatment)	30%	-3089			-2179	-910	
SURPLUS AFTER TAX PMT.		7207	-6200	7263	854	-60	
ADD BACK DEPRECIATION				3567	2633	0	
CASH FLOW FROM THE PROJECT		8057	-6200	10829	3488	-60	

RETURN ON PROJECT		
INTERNAL RATE OF RETURN =		102%
NET PRESENT VALUE @	6%	$6,669,920
NET PRESENT VALUE @	9%	$6,077,487
NET PRESENT VALUE @	12%	$5,541,793

SUMPTIONS

METALLURGICAL RECOVERY		88%	
CONVERSION RATE - GRAMS TO OUNCES		31.10	
GOLD PRICE ($US)		$ 400.00	
CONVERSION RATES	$AUD	1.00	
	= KINA	2.38	
	= $US	0.73	
OPERATING COSTS	$AUD	24.00	PER TONNE

DEPRECIATION CALCULATED TO WRITE OFF PLANT OVER 1.50 YEARS
TOTAL CAPITAL COSTS TO BE INCURRED IN YEAR 1 = 6,200,000
ASSUMED RESIDUAL VALUE AFTER 1.5 YEARS = 850,000 (OF MOVEABLE PLANT)
Gold Grade Uncut average for the reserve

2.7 **Resource Potential**

Dr I. D. Lindley has developed a conceptual model which envisages that the known Wild Dog mineralisation could be indicative of a multi-million ounce telluride/gold resource. This resource would occur in structures which intersect the Wild Dog structure known as the Wild Dog Gunsap Mountain Jog, and in parallel structures such as the Gunsap Mountain Structure. Drill testing of this concept is still to be carried out.

2.8 **Government/Landowner Relations**

The Papua New Guinea Government, as part of a policy to promote smaller mines in Papua New Guinea, is very supportive of the Mt Sinivit project.

The local Baining landowners are also supportive of the project, are significant shareholders in GMNH and have signed a compensation agreement to allow mining to proceed.

3. SITE LOCATION AND HISTORY

The Mt Sinivit Gold Project is located 50km south-southwest of Rabaul in the Baining Mountains of the Gazelle Peninsula, East New Britain Province, Papua New Guinea. The deposit is located on the Gazelle (SB 56-2) 1 :250,000 and Merai (9388) 1: 1 00,000 map sheets at latitude 4. 37'S, longitude 152. 03'E (Figure 1).

The deposit forms part of a larger 26km long zone of auriferous quartz vein mineralisation in the Nengmutka region. There are no surface indications or previous records of any prospecting activity or production from the region, although it has been noted that traces of gold were found in the main streams draining the Baining Mountains.

The Wild Dog deposit was discovered in July 1983, fourteen months after the commencement of a detailed sampling and mapping program in the 90km2 area between the headwaters of the Nengmutka and Rapmarina Rivers. Regional sampling during this period indicated that auriferous quartz float was shedding from the main divide separating these two rivers. The follow up work led to the discovery of two isolated siliceous outcrops in Evarem and Vullelga Creeks, within the Rapmarina River catchment. The position of the outcrops indicated a possible north-northeasterly trending vein (now known as the central vein). During April 1984 to September 1987 Esso Papua New Guinea Inc/City Resources (PNG) PTY Limited completed a total of 71 diamond drillholes (12,790m) and 40 reverse circulation drillholes (1,833m) on the Wild Dog deposit defining three zones of mineralisation viz Southern and Northern Oxide Zones and the Northern Sulphide Zone.

The project remained inactive until 1990 when Highlands Gold Limited assumed ownership. During February 1990 to April 1991 Highlands Gold completed an additional 20 diamond drillholes (1,957m) on the Wild Dog deposit in a program primarily directed towards the evaluation of the oxide portion of the deposit. Exploration and diamond drilling (31 holes; 3,028m) of previously located veins nearby to the Wild Dog deposit also defined significant oxide mineralization in the 900m distant Kavursuki deposit.

The project again remained inactive until October 1993 when GMNH, under an agreement with Highlands Gold Limited, commenced a program of exploration specifically directed towards an economic evaluation of the Wild Dog and Kavursuki deposits as a small scale mining proposition. During this program an additional 22 reverse circulation drillholes (767m) were completed on the Southern Oxide Zone. A detailed structural, lithological and alteration mapping program was also completed in the area between the Wild Dog and Kavursuki deposits. This work culminated in the application for a Mining Lease and the submission of a Development Proposal in November 1994. Exploration expenditure to the present time (across the entire Nengmutka project) totals in excess of K7.4m. MACMIN and GMNH entered into a joint venture agreement in regard to the project in August 1995.

The project was acquired by NGG in 2004 as a part of the acquisition of Macmin PNG Limited. Macmin Silver Limited retains a 1% NSR royalty on the project.

4. PROJECT TENEMENTS

The project is presently the subject of three tenements. An exploration license EL 1140 is held by Macmin (PNG) Ltd and is due for renewal in May 2005.

Mining Lease ML 122 and Mining Easement ME 70 were due for renewal in February 2004 and are currently in the renewal process.

5. RESOURCE/RESERVE STUDIES

Resource estimates have been completed on the Wild Dog deposit (Southern and Northern Oxide Zones and Northern Sulphide Zone) by City Resources (PNG) Pty Limited in 1987/88 and by R.Curtis & Associates in August 1991 and May 1994. A resource estimate for the Kavursuki deposit (oxide zone) was completed by R.Curtis & Associates in December 1994 and for the Central Oxide Zone by D. Lindley in July 1995.

A mining reserve was completed by Australian Mine Design and Development Pty Limited on the Southern, Central and Northern Oxide Zones in October 1995.

These resource estimates conform to the "Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves".

5.1 Curtis & Lindley Resource Calculations

The resource estimates by Curtis (1991 and 1994) and Lindley (1995) are summarised in Table 2.

The assumptions used were as follows:

- Southern Oxide and Northern Oxide Zones - 1.0g/t Au cut off grade and 0.5 dilution envelope, S.G 2.5.
- Central Oxide Zone - 1.0g/t Au cut off grade and 20 g/t Au high assay cut, S.G. 2.5
- Kavursuki Zone - 0.5 g/t Au cut off, S.G 2.5
- Northern Sulphide Zone - 5 g/t Au cut off, S.G 2.5

The total resource was estimated at 810,200 tonnes at 5.05g/t Au for 131,700 ozs contained gold.

TABLE 2

CURTIS & LINDLEY - RESOURCES

ZONE	**TYPE OF RESOURCE RESERVE**	**TONNES**	**GRADE *g/t* Au**	**Au/Ozs**	**Calculated**
Southern Oxide	Measured	105,800	4.5	15,300	R Curtis
	Indicated	64,000	3.41	7,000	R Curtis
	Inferred	11,200	3.81	1 ,400	R Curtis
	Total	**181,000**	**4.07**	**23,700**	
Northern Oxide	Measured	66,200	3.80	8,100	R Curtis R Curtis
	Indicated	33,000	4.82	5,100	R Curtis R Curtis
	Inferred	15,500	4.98	2,500	R Curtis R Curtis
	Total	**114,700**	**4.25**	**15,700**	
Central Oxide	Indicated	76,900	4.43	11 ,000	D Lindley
Kavursuki	Inferred	219,300	2.10	14,800	R Curtis
	(including)	(44,200)	(4.00)	(5,700)	
	Total Oxide Resource	**591,900**	**3.42**	***65,200***	
Northern	Indicated	201,600	9.43	61,100	R Curtis
Sulphide					
	Inferred	16,700	9.97	5,400	R Curtis
	Total	218,300	9.46	66,500	
TOTAL RESOURCE		810,200	5.05	131,700	

5.2 **Australian Mine Design & Development Calculations**

The resource and reserve estimates of oxide ore by Australian Mine Design and Development Pty Ltd are summarised in Table 3. These estimates were calculated using SURPAC. Assumptions used were a dilution envelope of 0.5m, cut off grade of 0.5g/t Au and a 22g/t Au high assay cut. In addition, any resource with a copper content of greater than 2,500ppm was excluded.

The mining reserve, uncut, is 306,449 tones at 5.31g/t Au for 52322 ozs contained gold. Stripping ratio is 1.96:1.

At this point in time we have no data based on mining experience to indicate what, if any grade cut is a reasonable assumption though the reserve was calculated using a statistical high assay cut of 22g/t Au. This reduces the reserve grade to 4.0g/t Au.

A specific gravity of 2.61 was used for the ore. This is the average of approximately 130 determinations on ore grade core samples.

If a specific gravity of 2.61 was used for the resource calculation the volume of ore would increase by 4%, to approximately 843,000 tonnes and contained gold to 137,000 ozs.

TABLE 3

AUSTRALIAN MINE DESIGN AND DEVELOPMENT - OXIDE RESOURCES & RESERVES

ZONE	**TYPE OF RESOURCE RESERVE**	**TONNES**	**Au GRADE *(g/t)* UNCUT**	**Au GRADE *g/t* CUT**	**Cu GRADE ppm**
TOTAL OXIDE	Undiluted Resource	413096	4.40	3.42	323
TOTAL OXIDE	Diluted Resource	510,000	3.8	2.93	336
SOUTHERN OXIDE	Mining Reserve	119498	3.82	3.79	378
CENTRAL OXIDE	Mining Reserve	74421	4.33	3.81	391
NORTHERN OXIDE	Mining Reserve	112530	7.55	4.36	116
TOTAL OXIDE	**Mining Reserve**	**306449**	**5.31**	**4.00**	**-**

Total gold in cut reserve - 39,447 ozs Total gold in uncut reserve - 52,376 ozs
Ore volume - 117,413 m3
Waste volume - 255,600 m3

5.3 **Discussion of Reserve/Resource Calculations**

Curtis considered the major part of the resource in the Northern and Southern oxide zones to be in the Measured category. AMD categorised the entire resource as Indicated. Macmin and GMNH consider that Curtis's categories are-as valid as AMD's as there is extensive three dimensional information for parts of the orebody. The difference in categories is therefore a subjective opinion. As in most gold deposits successful mining will depend heavily on good grade control and this point is well recognised by the Joint Venture.

In terms of contained gold, Curtis and Lindley calculated an oxide resource including Kavursuki of 591,900 at 3.42gt Au to give 65,200 ozs gold. AMD calculated an oxide resource, excluding Kavursuki, of 511,900 at 3.47g/t Au (cut grades) to give 57,200 ozs. If the Kavursuki resource is added to AMD's resource the total resource would stand at 731,200 t at 3.02g/t Au or **72,000 ozs** contained gold. If the uncut grades are used which the J/V consider reasonable, total contained gold rises **to 85,000 ozs**.

The difference between Curtis and AMD can be partly attributed to the lower cut off grade of 0.5g/t Au used by AMD. In practise the cut off grade used will be between 1.0 and 1.5g/t Au.

AMD also support this conclusion and state " …..likely that additional ore will be defined as the pits are developed".

In particular there is a lack of information south of section 9810 and north of section 10550, and additional ore is likely to be defined in these areas.

NGG believe it is reasonable to conclude that there is a substantial oxide resource at Mt. Sinivit which, with additional work, is likely to be added to the reserves.

6. MINING

Macmin has revised the mine plan and intends to implement a schedule similar to that shown in Table 4. The use of a Vat leach process allows for the increase in mining and processing rate which utilizes an economy of scale in the mining operation.

TABLE 4

SINIVIT GOLD PROJECT — **TABLE 2**

0	Unit	Value	
Annual ore prod.	t/a	306,448	
Annual Ore -Sth + Nth Pit only		232,027	
Total Material Target	t/a	1,000,000	(Includes approx. 100,000 t of misc excavation for roads and central pit west wall pit cutback)
Ave Ore Production / month	t/month	19,336	
Ave total Material / month	t/month	71,429	
Ave Calendar days / month		30.4	
Sched. days not worked / annum		12	
Working days / month	Six day week less P hols	25.2	
Working hours / day		10	
Grams per ounce of gold	g	31.1045	

Simplified Mining Schedule based on removing material flitch by flitch.

Assumptions:

15 Month Schedule (3 Months for set up,clearing,dozing,Infrastructure work and prelim. waste mining, 12 Months ore & waste production)
South Pit mined first with North Pit mined after South Pit. Central Pit mined concurrently with both as a second ore source and make up tonnage.
Mining 2 metre Flitches
Ore dilution allowed for in base data for scheduling. Recovery assumed at 100%.
SG of ore: 2.61. SG of waste: 2.35

Strip Ratio	
tonne waste/ tonne ore	1.96
volume waste/ tonne ore	0.83

SUMMARY		Total t ore	Au g/t	Cu ppm	Total	-3 Month -3	-2 Month -2	-1 Month -1	1 Month 1	2 Month 2	3 Month 3	4 Month 4	5 Month 5	6 Month 6	7 Month 7	8 Month 8	9 Month 9	10 Month 10	11 Month 11	12 Month 12	Total
Smoothed Production Schedule - over 15 months				tonnes	1,000,000	20,000	51,429	71,429	71,429	71,429	71,429	71,429	71,429	71,429	71,429	71,429	71,429	71,429	71,429	71,429	1,000,000
Smoothed Production Schedule - over 15 months				bcm	433,776	8,511	21,884	30,395	31,082	31,082	31,082	31,082	31,082	31,082	31,082	31,082	31,082	31,082	31,082	31,082	433,776
Total Material All Pits				tonnes	907,043			37,727	118,178	67,573	64,685	58,097	57,475	70,015	104,549	59,647	53,456	100,515	64,410	50,716	907,043
				bcm		8,511	21,884	16,054	49,206	27,672	26,443	23,640	23,375	28,711	43,407	24,299	21,665	41,690	26,326	20,499	403,381
South Pit																					
South Pit Ore	t				119,499			0	19,336	19,336	19,336	19,336	19,336	19,336	3,486	0	0	0	0	0	119,499
	Au oz				14,558			0	2,714	2,360	2,388	2,299	2,202	2,178	417	0	0	0	0	0	14,558
	Au g/t				3.79			0	4.37	3.80	3.84	3.70	3.54	3.50	3.73	0	0	0	0	0	3.79
	Cu kg				45,160			0	5,725	6,449	8,264	7,772	7,253	8,544	1,153	0	0	0	0	0	45,160
	Cu ppm				378			0	296	334	427	402	375	442	331	0	0	0	0	0	378
South Pit Waste	t				200,827			0	50,807	30,285	30,293	24,816	23,306	34,762	6,557	0	0	0	0	0	200,827
	bcm				85,458			0	21,620	12,887	12,891	10,560	9,918	14,792	2,790	0	0	0	0	0	85,458
Total Material	t				320,326			0	70,142	49,621	49,629	44,152	42,642	54,098	10,042	0	0	0	0	0	320,326
North Pit																					
North Pit Ore	t				112,528			0	0	0	0	0	0	0	15,850	19,336	19,336	19,336	19,336	19,336	112,528
	Au oz				15,781			0	0	0	0	0	0	0	2,354	4,188	3,169	2,402	1,834	1,834	15,781
	Au g/t				4			0	0	0	0	0	0	0	4.62	6.74	5.10	3.86	2.95	2.95	4.36
	Cu kg				13,107			0	0	0	0	0	0	0	1,369	2,000	2,258	2,433	2,523	2,523	13,107
	Cu ppm				116			0	0	0	0	0	0	0	86	103	117	126	130	130	116
North Pit Waste	t				114,022			0	0	0	0	0	0	0	60,824	18,310	12,959	6,198	9,155	6,575	114,022
	bcm				48,520			0	0	0	0	0	0	0	25,883	7,791	5,515	2,637	3,896	2,798	48,520
Total Material	t				226,550			0	0	0	0	0	0	0	76,674	37,645	32,295	25,534	28,491	25,911	226,550
Central Pit																					
Central Pit Ore	t				74,421			0	6,202	6,202	6,202	6,202	6,202	6,202	6,202	6,202	6,202	6,202	6,202	6,202	74,421
	Au oz				9,107			0	675	796	789	828	834	822	818	752	502	322	924	1,045	9,107
	Au g/t				4			0	3	3.99	3.96	4.15	4.18	4.12	4.10	3.77	2.52	1.61	4.64	5.24	3.81
	Cu kg				28,991			0	1,240	1,240	1,796	2,346	2,319	2,256	2,144	1,958	1,518	1,946	4,123	6,105	28,991
	Cu ppm				390			0	200	200	290	378	374	364	346	316	245	314	665	984	390
Central Pit Waste	t				285,746			37,727	41,834	11,750	8,854	7,744	8,631	9,715	11,631	15,800	14,959	68,780	29,717	18,603	285,746
	bcm				121,594			16,054	17,802	5,000	3,768	3,295	3,673	4,134	4,949	6,723	6,366	29,268	12,645	7,916	121,594
Total Material	t				21,528			33,702	-46,750	3,856	6,744	13,331	13,954	1,414	-33,121	11,781	17,972	-29,086	7,019	20,713	21,528
Total Ore - All Pits	t				306,448			0	25,537	25,537	25,537	25,537	25,537	25,537	25,537	25,537	25,537	25,537	25,537	25,537	306,448
	bcm				117,413			0	9,784	9,784	9,784	9,784	9,784	9,784	9,784	9,784	9,784	9,784	9,784	9,784	117,413
	Au oz				39,445			0	3,389	3,156	3,177	3,127	3,035	3,000	3,590	4,939	3,671	2,724	2,758	2,879	39,445
	Au g/t				4.00			0	4.13	3.84	3.87	3.81	3.70	3.65	4.37	6.02	4.47	3.32	3.36	3.51	4.00
	Cu ppm				285			0	273	301	394	396	375	423	183	155	148	171	260	338	285
Total Waste - All pits	t				600,595			37,727	92,641	42,035	39,148	32,560	31,938	44,478	79,012	34,110	27,919	74,978	38,872	25,178	600,595
Total Waste - All pits	bcm				255,572			16,054	39,422	17,887	16,659	13,855	13,590	18,927	33,622	14,515	11,880	31,905	16,541	10,714	255,572

7. METALLURGICAL TESTWORK

There are two distinct ore types - oxide and sulphide. The present development plan envisages the development and extraction of the oxide resource.

7.1 Oxidised ore

Metallurgical testwork on the Wild Dog oxide deposits has been undertaken by a number of groups including City Resources, Warman Laboratories, Ed Newman & Associates and the Julius Kruttschmitt Research Centre. Ed Newman & Associates prepared a review of testwork in July 1994. The gold mineralogy of the oxidised ore is not clear, but cyanide leach liquor assays contain low levels of tellurium, arsenic and copper, suggesting extensive oxidation and remobilisation of gold into leachable forms.

Bond Work Index determinations were completed on oxide ore samples indicating an index of 11.2 KWh/tonne which is low for quartz type materials. The ore is indicated to be composed of many fracture planes.

Column leach testwork carried out in 2003 - 2004 by Macmin and AMMTEC have indicated that material crushed to minus 12.5 mm is leachable in cyanide. Recoveries up to 92 % were obtained with cyanide consumptions of 0.65 kg/t. Ammtec's figure of 88% has been adopted in the financial study. This has indicated that vat or heap leaching is a viable option for recovery of gold from the oxide material.

7.2 Sulphide Mineralisation

Data suggests that gold in sulphide ore is mainly present as gold telluride which is refractory to cyanide leaching. There is sufficient sulphide ore testwork available, however, to show that a flowsheet involving a simple flotation scheme, in a low cost flotation cell such as the Jameson cell, followed by shipment to Mt Isa for treatment in the copper Isasmelt vessel would be feasible. There would be some penalty for tellurium (600-700g/tonne in the concentrate) and low copper, but the gold values would offset this. The presence of an existing infrastructure to mine the oxidized ore, should make this option more feasible.

8. PROCESS DESCRIPTION

The feasibility study is based on the use of Vat Leach technology.
Vat Leaching is the alternative to heap leaching in an environment of high rainfall where excessive dilution of leachate can occur because of the large area exposed on the heap. Vat leaching consists of constructing a dam like structure into which crushed or ground and agglomerated ore is placed. The dams are lined with high density polyethylene liners to prevent loss of leachate and can be covered to prevent ingress of water from rainfall events.

Leachate solution is pumped into the dam through a series of pipes or channels in the base until the ore is completely saturated. After passing through the ore the leachate is drawn off through the same pipework and passed into carbon columns where the precious metals are adsorbed on to activated carbon. The carbon is then eluted with a stronger cyanide solution. The eluate is electro won to produce a product for smelting into bullion.

9. CAPITAL AND OPERATING COSTS

9.1 **Capital Costs**

The capital cost is $6,137,400 including contingency.

The capital cost includes the purchase of equipment suitable to carry out the mining operation.

A contractor option will be considered depending on timing and the availability of local equipment.

9.2 **Operating Costs**

Operating costs are shown on the accompanying table. Total operating cost is estimated at $24.08 /tonne of ore.

10. FINANCIAL SUMMARY

Financial analysis on the project was completed by MACMIN.

Cost of capital has not been included.

MACMIN's preferred or base case (Table 1) has the following assumptions:

- Capital Cost $6,200,000
- Operating Cost $ 24.08
- Gold Price AUD $ 548.00
- Recovery 88 %
- Residual value of moveable plant Mine Life $ 850,000
- Depreciation To depreciate plant over 1.5 year mine life

Sensitivities on the MACMIN base case include:

	IRR%	**NPV @ 9% $AUD**
• Base case	102	6,077,487
• Capital cost minus 10%	77	6,506,622
• Operating cost minus10%	111	6,506,622
• Gold price minus 10%	77	4,628,972
• Recovery minus 10%	77	4,628,972

11. ENVIRONMENTAL STUDIES

Approval of the Environmental Plan for ML 122 was granted, subject to conditions, by the Minister for Environment and Conservation on 29th January 1996.

Subsequent to this plan further botanical, avifauna, forestry and baseline water quality studies have been carried out.

In December 2003 the Secretary, Department of Environment and Conservation was informed of the Joint venture's intention to proceed with the development of Mt Sinivit and consequently Douglas Environmental Services of Port Moresby was commissioned to prepare a Environmental Management and Monitoring Plan addressing the conditions of the granted EP and reflecting changes in legislation brought about by the introduction of the Environment Act 2004.

The Environmental Management and Monitoring Plan was submitted to the department in May 2004.

12. PROJECT AGREEMENTS

12.1 **Memorandum of Agreement**

Agreement has been reached on the terms of a Memorandum of Agreement (MOA) relating to the Mt Sinivit project between the Independent State of Papua New Guinea, East New Britain Provincial Government, the Uramot Company Limited (representing the landowners) and GMNH.

This agreement, amongst other things, determines the royalty split between the landowners and the provincial government. The present MOA provides for 100% of royalties to be paid to the landowners, with the East New Britain Provincial Government waiving their entitlement providing gross production does not exceed 20,000 ounces of gold per annum. Half of this money will be paid as cash to the Uramot Company and the balance will be paid to the Sinivit Government of

Communities to be spent on projects agreed to by the council and the provincial government.

The agreement was signed on 3rd January 1996.

12.2 **Compensation Agreement**

Following the five months of negotiation, agreement with landowners on a proposed Compensation Agreement for the Mt Sinivit project was reached on 22 March 1994. The agreement was executed on 27 April 1994, and was subsequently registered by the Mining Registrar of the Department of Mining & Petroleum on 5 May 1994. This agreement establishes a schedule of compensation and annual payments applicable to land and plants damaged, destroyed and/or occupied during mining activities within Mining Lease 122 and Mining Easement 70.

13. RESOURCE POTENTIAL

ML 122 and EI 1140 have major resource potential for a multi-million ounce gold discovery.

13.1 Conceptual modeling of the Nengmutka hydrothermal system

Conceptual modeling of the Nengmutka Vein System has utilised a considerable data base which includes recent 1:1,000 scale geological mapping of the northernmost 5km of the Wild Dog Structure. This interval has been trenched in detail and sampling has been complemented by surface and drillhole XRD clay petrology, fluid inclusion and salinity studies. A programme of 1:2,500 scale creek mapping overlaps with this mapping and includes the Gunsap Mountain Structure and adjacent areas (Figure 5). Observations from this work have enabled a refinement of the conceptual model for the hydrothermal system. The model recognises the potential for the juxtaposition of porphyry-type and epithermal gold mineralisation at essentially the same erosional level. This is particularly the case in the western Pacific region where at Baguio, Marian, Paracale, Masara, Umuna, Panguna and Emperor, the gold-bearing vein systems are localised by district-wide structures at roughly the same elevations as mineralised porphyry stocks and up to 4km from them.

The model recognises the strong control of sinistral strike-slip faulting during the late Oligocene-early Miocene vein mineralization episode. The Nengmutka district was dominated by two north northeasterly trending sub-parallel structures termed the Gunsap Mountain and Wild Dog Structures, which are variously (hydrothermal) clay covered or contain outcropping veining and silicification. A fault jog connects the partially exhumed northern end of the Wild Dog Structure with the southern end of the Gunsap Mountain Structure (the driving faults), and indicates the operation of a sinistral shear duplex at the time of Au-Cu vein mineralisation. The following sequence of events is noted for the formation of the Nengmutka Vein System Figure 5.

***Early low sulphidation stage (Figure* 6).** All available data indicates that relatively cool, dilute fluids were responsible for the deposition of the weakly gold mineralised veining and associated silicification along the steeply dipping Wild Dog and Gunsap Mountain Structures. These fluids were predominantly meteoric and circulated to depths as great as 5 to 10km, became heated by a magmatic body and convected to the surface. As the heated water circulated through the host rock it acquired many of its constituents through fluid-rock interaction. The distribution of interlayered illite smectite clay capping centred around the jog structure (Figures 5 & 6) suggests that the region of fluid upflow was along the dilational jog. The development of argillic zones above the upflow zone is typical of low sulphidation deposits such as Creede, CO. The dilational jog has dimensions similar to that hosting the low sulphidation Martha Hill vein deposit which contains a resource of 5.8m oz gold. Crustiform quartz typical in low sulphidation systems and indicative of multiple boiling episodes (triggered by periodic movements along the driving faults) is relatively common in streams draining the clay capped jog structure. The outflow zone of the Nengmutka low sulphidation system was characterised by lateral fluid flow which extended up to 10km from source (Figures 5 & 6).

Intermediate stage. An intermediate stage in the evolution of the Nengmutka hydrothermal system coincided with a pulse in magmatic activity possibly originating from the deep magmatic heat source responsible for driving the convecting waters of the early low sulphidation stage. The magmatic pulse resulted in the high-level emplacement of magnetite-rich sulphur-undersaturated dioritic and monzodioritic stocks and dykes in the northern Nengmutka district. At Wild Dog detailed petrology has demonstrated that dyke emplacement occurred after the veining and silicification of the early low sulphidation event and before the gold-copper mineralized veining of the late high sulphidation event. Some of the high-level dykes tapped pre-existing structures particularly in the vicinity of the north north westerly trending jog, implying that sinistral tectonism accompanied magmatism. A stock intruded into epiclastic rocks in Magiabe Valley, 1 km west of the Wild Dog deposit (Figure 7), contains indications of gold-rich porphyry copper style alteration and mineralization. The tectonic activity during this stage was critical in developing a sub-vertical to vertical brittle fracturing within and adjacent the vein-filled Wild Dog (and Gunsap Mountain) Structure, necessary for the creation of permeable zones of mixing for the subsequent high sulphidation overprint.

Late high sulphidation overprint **(Figure 7)**. Although alunite and enargite (luzonite) have yet to be recognised in significant amounts from the Nengmutka Vein System, the intimate association of gold and copper in overprinting late veins is over-riding evidence for the existence of a late stage high sulphidation environment. This contrasts with the low sulphidation environment where copper is not associated with gold mineralisation, implying basic differences in these two ore deposit environments.

The predominance of gold-copper mineralisation in the Kavursuki and Wild Dog deposits suggests that magmatic fluids ascended along the same fractures tapped by the upflowing early low sulphidation fluids. Evidence from the intermediate stage indicates that sinistral tectonism was responsible for the pulse of magmatic activity and the high-level emplacement or dioritic and monzodioritic stocks. It is therefore likely that this tectonism triggered the upward movement of a dense, high salinity metal-bearing liquid.

It is at this stage when the metal-bearing saline liquid ascended into the porous leached zone (resulting in mineralisation) that the evolution of the Nengmutka system differs from other high sulphidation deposits. There is no evidence for the formation of a porous leached (advanced argillic) zone in the region of fluid upflow in the northern Nengmutka Vein System. Pre-existing interlayered clay capping was advanced to illite-sericite grade alteration, with only localised evidence of low pH leaching indicated by limited pyrophyllite and alunite occurrences. Residual vuggy silica typical of the leaching of high sulphidation systems was not developed. The predominance of vein quartz and silicification (products of quartz precipitation from solution) over residual silica and the presence of hypogene haematite demonstrates that admixture with meteoric water must have been sufficient to raise solution pH, thereby overcoming the inhibiting effect exerted by low pH on quartz precipitation.

As the metal-bearing liquid ascended from depth, the brittle fractures developed during the intermediate stage sinistral tectonism served as suitable receptor sites for the high sulphidation mineralisation.

13.2 **Resource Targets**

Oxidised Ore

The potential for oxide ore is relatively limited and is not likely to exceed 50,000/100,000 ozs

Sulphide Ore

Dilational jog structure: The passage of the metal-rich liquids along pre-existing structures utilised by the low sulphidation system suggests that the dilational jog may be of considerable economic interest. The structure has a 1.5km strike and is capped by a comparatively wide 600m zone of hydrothermal clay. During 1:2,500 scale mapping float of crustiform vuggy silica and possibly residual vuggy silica was noted in creeks draining the jog. Ridgeline soil sampling was completed over the jog in 1984 defining a 700m x 100-200m copper-goldarsenic soil anomaly, suggestive of high sulphidation style mineralisation at depth. No other fieldwork has been completed and the structure remains undrilled along its entire length. The structure is highly prospective for a Martha Hill type deposit with a likely overprint of high sulphidation Wild Dog type gold-copper mineralization.

Driving fault structures: The Wild Dog and Gunsap Mountain driving faults are typically filled with weakly mineralised low sulphidation veining and silicification. Potential exists for high sulphidation gold-copper mineralisation of the Wild Dog type in those portions of the Wild Dog and Gunsap Mountain Structures adjacent to the dilational jog. These areas are undissected and like the jog, remain masked by hydrothermal clays up to 60m thick.

Gold-rich porphyry copper. The limited areal development of alteration patterns in the Magiabe Valley intrusive (Figure 7) suggests that the system is in the early stages of being unroofed. Disseminated chalcopyrite/bornite is present in propylitized wallrocks to the intrusive and disseminated chalcopyrite is present in potassically altered intrusive in Magiabe Creek. The intrusive is magnetite rich, with up to 7% noted in petrology samples indicative of a sulphur undersaturated parent magma. An intensely phyllic altered pebble breccia body in Varеam Creek may be a good target for high-grade disseminated gold-silver mineralisation.