

## **MINING & EXPLORATION ACTIVITIES**

### **MT WINDSOR JOINT VENTURE**

#### **Highway Project**

**Grange Resources Limited (“Grange”) 30%**

**Thalanga Copper Mines Pty Ltd (“TCM”) 70%**

Mining of Stage 2 of the Highway open pit copper mine was successfully completed on 4 December 2001. Ore production from Highway commenced in October 1999 and despite two pit wall failures the mine was completed to its design depth of 230 metres. During the life of the mine approximately 1.6 million tonnes of ore grading 5.5% copper containing over 87,000 tonnes of copper metal have been produced. This represents approximately 15% more copper metal than anticipated in the 1998 feasibility study. Reconciliation against milled material will be undertaken after all ore has been processed.

The completion of the pit to design depth and the recovery of copper significantly greater than anticipated are excellent achievements and a credit to all personnel involved in the project.

Work is currently underway to recover up to 60,000 tonnes of additional ore from the haul ramps at the base of the Highway pit. A new portal near the base of the pit and short drive from the Reward Deeps decline have recently been established to allow haulage of this Highway Stage 3 ore via the decline. Mining of the ore is scheduled to be completed during February 2002.

Current stockpiles of ore are sufficient to maintain feed to the Thalanga mill until the end of February 2002 and the Stage 3 ore will enable production to be continued during March 2002.

The Thalanga mill continued to perform at a high level during the quarter. Tonnes treated, concentrate production and copper metal in concentrate were all above budget for the quarter. Copper recovery and concentrate grade were maintained in line with budget.

During the quarter 212,873 tonnes of ore grading 5.78% copper and 0.92 g/t gold were processed through the Thalanga plant for the production of 41,594 tonnes of copper concentrate containing 27.71% copper and 0.87 g/t gold.

A summary of production statistics for the Highway Project for the December 2001 quarter and project to 31 December 2001 is presented in Table 1.

Sales revenue of \$xx million from the sale of yyyy tonnes of 27% copper concentrate was recorded during the period.

The project generated an operating profit before depreciation and amortisation of \$aa million and a net profit of \$bb million for the quarter.

<b>TABLE 1 MT WINDSOR JOINT VENTURE HIGHWAY PROJECT – PRODUCTION STATISTICS FOR COPPER</b>					
	<b>Mar 01 Quarter</b>	<b>June 01 Quarter</b>	<b>Sept 01 Quarter</b>	<b>Dec 01 Quarter</b>	<b>Project to 31 Dec 01</b>
<b>COPPER ORE</b>					
<b>Ore Mined (tonnes)</b>	<b>281,694</b>	<b>268,594</b>	<b>187,391</b>	<b>226,028</b>	<b>1,654,801</b>
<b>Ore Milled (tonnes)</b>	<b>191,980</b>	<b>213,097</b>	<b>219,318</b>	<b>212,873</b>	<b>1,502,116</b>
Head grade - Copper %	5.32	7.37	5.66	5.78	5.38
- Gold (g/t)	1.18	0.99	0.98	0.92	1.09
- Silver (g/t)	11.00	10.9	10.3	9.5	10.3
Metal Recovery - Copper %	93.34	94.63	92.54	93.67	91.64
- Gold %	17.0	23.3	19.0	19.0	17.7
- Silver %	28.9	36.9	29.4	33.1	30.9
<b>Concentrates Produced (tonnes)</b>	<b>34,585</b>	<b>53,498</b>	<b>41,673</b>	<b>41,594</b>	<b>273,952</b>
Concentrate Grade - Copper %	27.56	27.79	27.57	27.71	27.04
- Gold (g/t)	1.11	0.92	1.00	0.87	1.02
- Silver (g/t)	17.34	16.02	16.3	16.35	17.02

### **Reward Deeps and Conviction Project (Grange 30%, TCM 70%)**

Infill diamond drilling of the Reward Deeps and Conviction deposits is currently being carried out from underground. The infill drilling of the Reward Deeps deposit has been completed and the resource model is currently being updated. Infill drilling is underway at Conviction and should be completed during the first week of February.

The low copper price and worse than expected drill results from the upper section of the Reward Deeps deposit has necessitated a re-evaluation of the underground mining project to ensure it remains viable and the project economics are maximised. As a consequence the development of the Reward Deeps/Conviction underground mine has been delayed

pending the completion of the drilling programme and the re-evaluation of the project feasibility. The evaluation is expected to be completed in March 2002.

Assuming the re-evaluation of the project confirms its continuing viability production of ore from underground should recommence during the second quarter of 2002. The delay in ore production from the Reward Deeps/Conviction underground mine will result in the closure of the Thalanga mill for several months whilst the ore stockpile is being built up.

At the time the development of the mine was put on hold 1130 metres of the decline had been completed representing approximately 63% of its planned total length of 1800 metres.

### **Exploration (Grange 30%, TCM 70%)**

Exploration drilling at the Acquittal prospect failed to intersect significant mineralisation. Down hole electromagnetic surveys were carried out on selected holes and no off hole anomalies were recorded.

Exploration targets within the joint venture tenements are being prioritised with a view to undertaking further exploration drilling during the next quarter.

### **FRESHWATER (Homestake Mining Company (“Homestake”) 100%, Grange - Production Royalty)**

Homestake has provided the following information on activities relating to the Freshwater project during the September 2001 quarter.

### **Operations**

During the December quarter mining of the Catfish deposit was completed and by the end of December mining of the Dogfish pits was nearing completion. Mining commenced at the North Perch pit during the quarter.

Development of the Plutonic East underground mine is progressing well and production from the Freshwater leases is expected during the June quarter. A small amount of low-grade development ore was produced from Plutonic East during the December quarter.

Production statistics for the September 2001 quarter are summarised in Table 2.

<b>TABLE 2 FRESHWATER PROJECT OPERATING STATISTICS</b>			
	<b>June 2001 Quarter</b>	<b>September 2001 Quarter</b>	<b>December 2001 Quarter</b>
<b>MINING</b>			
Ore Mined (bcm)	33,098	48,211	49,960
Total Material (bcm)	1,132,885	651,384	726,333
Ore mined (tonnes)	66,197	96,422	56,937
<b>TREATMENT</b>			
Ore Milled (tonnes)	66,197	96,197	56,937
Head Grade (g/t)	1.74	2.07	2.23
Recovery (%)	93.1	95.2	96.0
Gold Produced (oz)	3,447	6,095	4,087
Royalty payable to Grange (\$)	41,475	110,887	73,971
Cash Operating Cost (\$/oz)	435	480	644

### Development

63 Reverse Circulation (RC) holes and 1 diamond drill geotechnical hole aggregating 3,619 metres were drilled on the Freshwater leases during the quarter.

Five RC holes for 1,015m were completed at Plutonic East and fifty-eight RC holes and one geotechnical hole for 2,569m were completed at Perch North. Details of the holes that recorded more significant intersections (>10 gram metres/tonne gold) are summarised in Table 3.

<b>TABLE 3 FRESHWATER PROJECT - DECEMBER 2001 QUARTER SIGNIFICANT DEVELOPMENT DRILLING RESULTS (&gt;10g.m/t Au)</b>							
<b>Hole</b>	<b>Northing</b>	<b>Easting</b>	<b>RL</b>	<b>Depth From</b>	<b>Depth To</b>	<b>Metres</b>	<b>Grade</b>
<b>Perch North</b>							
FRC 9529	10821	8961	517.4	36	37	1	1.8
				39	40	1	1.1
				59	60	1	1.1
				72	73	1	10.6
				75	76	1	1.0
				76	77	1	2.4
FRC 9530	10861	8980	517.8	92	96	4	3.1
				97	98	1	1.2
FRC 9537	10760	9080	519.1	11	13	2	12.8
FRC 9541	10780	8970	517.2	14	15	1	1.1
				16	18	2	12.7

<b>TABLE 3 (Continued)</b>							
<b>FRESHWATER PROJECT - DECEMBER 2001 QUARTER</b>							
<b>SIGNIFICANT DEVELOPMENT DRILLING RESULTS (&gt;10g.m/t Au)</b>							
<b>Hole</b>	<b>Northing</b>	<b>Easting</b>	<b>RL</b>	<b>Depth From</b>	<b>Depth To</b>	<b>Metres</b>	<b>Grade</b>
				20	22	2	1.1
FRC 9542	10761	8990	517.2	3	4	1	3.3
				6	9	3	1.8
				10	14	4	1.4
				15	20	5	6.4
				21	26	5	5.3
				27	28	1	4.0
FRC 9543	10740	9010	517.2	8	9	1	6.3
				12	13	1	1.5
				14	15	1	1.3
				16	17	1	2.2
				19	21	2	6.1
				22	24	2	1.9
				26	27	1	2.2
				30	31	1	1.5
FRC 9556	10800	8950	517	28	29	1	4.0
				33	35	2	3.0
				41	45	4	2.8
<b>Plutonic East</b>							
FRC 9562	10580	8180	512	115	118	3	5.6
				123	126	3	3.7

## **Exploration**

Exploration within the Freshwater tenements during the December quarter was again focussed on the Callop Heights area. Three RC holes were drilled to test for continuations of "Plutonic Style" gold mineralisation and to test westerly down-dip extensions of the Callop mafic adjacent to the MMR fault. Two of the holes had to be abandoned prior to reaching target. No significant mineralisation was intersected.

### **RED HILL (Mining Lease M27/57) (Delta Gold Limited (Delta) 100%, Grange 4% Gross Revenue Royalty)**

Grange holds a 4% gross revenue royalty on all production after the first 85,000 ounces of gold produced from the Red Hill mining lease M27/57, which is located approximately 4 km north east of the Kanowna Belle Gold Mine owned and operated by Delta. Delta has provided the following information on activities relating to the Red Hill project during the December 2001 quarter.

Work continued on the Red Hill project Feasibility Study, which remains on schedule for completion in the March 2002 quarter.

The feasibility resource drilling programme was completed during October 2001. Construction of the 20mm and 12mm heap leach trials was also completed during October 2001 and irrigation of the heaps commenced at the end of the month. Early indications on the heap performance are reported to be encouraging and by the end of December 2001 the estimated recoveries were 65% for the 12mm heap and 51% for the 20mm heap.

Metallurgical test work is continuing and process design and cost estimations for a 1.5 million tonne per annum heap leach operation are well advanced.

## **CORPORATE MATTERS**

The Company's primary focus over the past year has been on reducing costs and reviewing and maximising the potential return from existing mining operations. As a consequence of this strategy the Company has divested itself of all technology investments, except its interests in Surfboard Securities limited.

The Company announced a number of initiatives in November 2001, including a focus on mining related activities, changes to the Board and relocation of its corporate and registered office to Perth, effective from 1 February 2002, to reduce costs and minimize overheads.

At a General Meeting of the Company held on 24 January the name of the Company was changed to Grange Resources Limited to reflect the Company's ongoing focus on mining.

*Unless otherwise stated, technical information in this report on mining activities is based on, and accurately reflects, information compiled by Mr Alex Nutter, a full time employee of Surfboard Limited who is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists with more than 5 years experience in the field of activity in which he is reporting.*

**ALEC PISMIRIS**  
Company Secretary