Vertex completes Engineering Study of the redesigned recently acquired Gravity Gold Plant

ASX ANNOUNCEMENT 21ST FEBRUARY 2024

HIGHLIGHTS:

- **Vertex has received a new Engineering study for the recently acquired Gekko gravity gold plant, from Gekko Systems.**

The major changes between the new build PFS plant and the re-engineered acquired plant are listed below:

- **Flowsheet changes,**
  - ✓ **3 stage crushing instead of 2 stages.**
  - ✓ **Slightly lower nominal throughput rate**
  - ✓ **Smaller but multiple Gold Centrifuges**
  - ✓ **Smaller regrind Mill (ML1500 instead of ML3000)**
  - ✓ **InLine Pressure Jig instead of Spirals**
- **Water and Power Demand changes**
  - ✓ **Raw Water demand dropped to 10 m^3/h from 35 m^3/h**
  - ✓ **Installed power has reduced from 688 kW to 365 kW.**
- **CAPEX changes**
  - ✓ **Lower Capex**
  - ✓ **Refurbishment and re-use of various fixed plant from both the Reward and Morningstar Plants**
- **OPEX Changes**
  - ✓ **Power consumption and maintenance requirements have been changed to suit the new flowsheet and throughput.**
- **Reduced Build Time**
- **The Gekko plant is ideally suited to the free milling, high-grade Reward ore, with expected gold recoveries of 92%[1].**
- **The Reward Gold Mine PFS is being updated to incorporate the lower capex of the Gekko plant.**
- **The Reward Gold Mine is well-placed for a simple start-up:**
  - ✓ **The existing gravity processing plant is located adjacent to the Reward Mine portal.**
  - ✓ **Existing mine development extends into the resource, so only stripping and refurbishment of the access is required.**
  - ✓ **Second means of egress is already established.**
  - ✓ **Some underground fleet and utility services are already in place.**
  - ✓ **Permitted Mining licence and DA in place for plant, stockpiles, and the Reward underground mine.**
  - ✓ **Permitted tailings dam has capacity to allow immediate commencement of operations.**
- **Recent trial processing of stockpiled material adjacent to the gold plant established that the average feed grade was 2 g/t. Trial processing was suspended in December 2023 due to plant reliability. It is the Company's opinion that the stockpiled material will have a favourable economic benefit when processed at a higher rate. It is planned to process these stockpiles as the first feed to the new plant, to establish early cashflows while developing the high-grade stopes in the Reward Mine.**

[1] Refer to Reward PFS announcement dated 3 January 2024.

VERTEX MINERALS LIMITED (ASX:VTX) ("Vertex" or the "Company") is pleased to announce that it has received the engineering study for the newly acquired and designed 16 t/h-rated Gekko gold gravity processing plant to be used for future onsite processing of gold ore at its Hill End gold project. the study was undertaken by Gekko Systems.

Benefits of the new plant include.

- The upgraded refurbished plant will be able to treat up to 120ktpa – existing plant 30ktpa.
- PLC operated sequenced Stop/Start capability
- Requires 2 operators - keeping operating costs down.
- Full monitoring, including density, mass flows, and sampling.
- Rigid gold security.
- Can be monitored remotely.
- Gekko Systems supported.
- Full spare parts support.
- Ergonomic design.
- State of the Art safety systems.
- Lower power usage.
- Lower water usage
- Significant savings on a new build.
- Moves gold production forward up to 5 months compared to the new build contemplated in the PFS.
- Provides the opportunity to process stockpiles economically while we develop the underground.

Gekko are world leaders in the manufacture of gold processing plants and machinery with their plants boasting small footprints and low environmental impact. An added attraction to Vertex is that the Australian-made Gekko plant is modular providing for scalability and ease of modification.

Figure 1 The Morning Star Gekko Modular Gravity Gold plant looking west.

Figure 2 The Morningstar Gekko Modular Gravity Gold plant looking north.

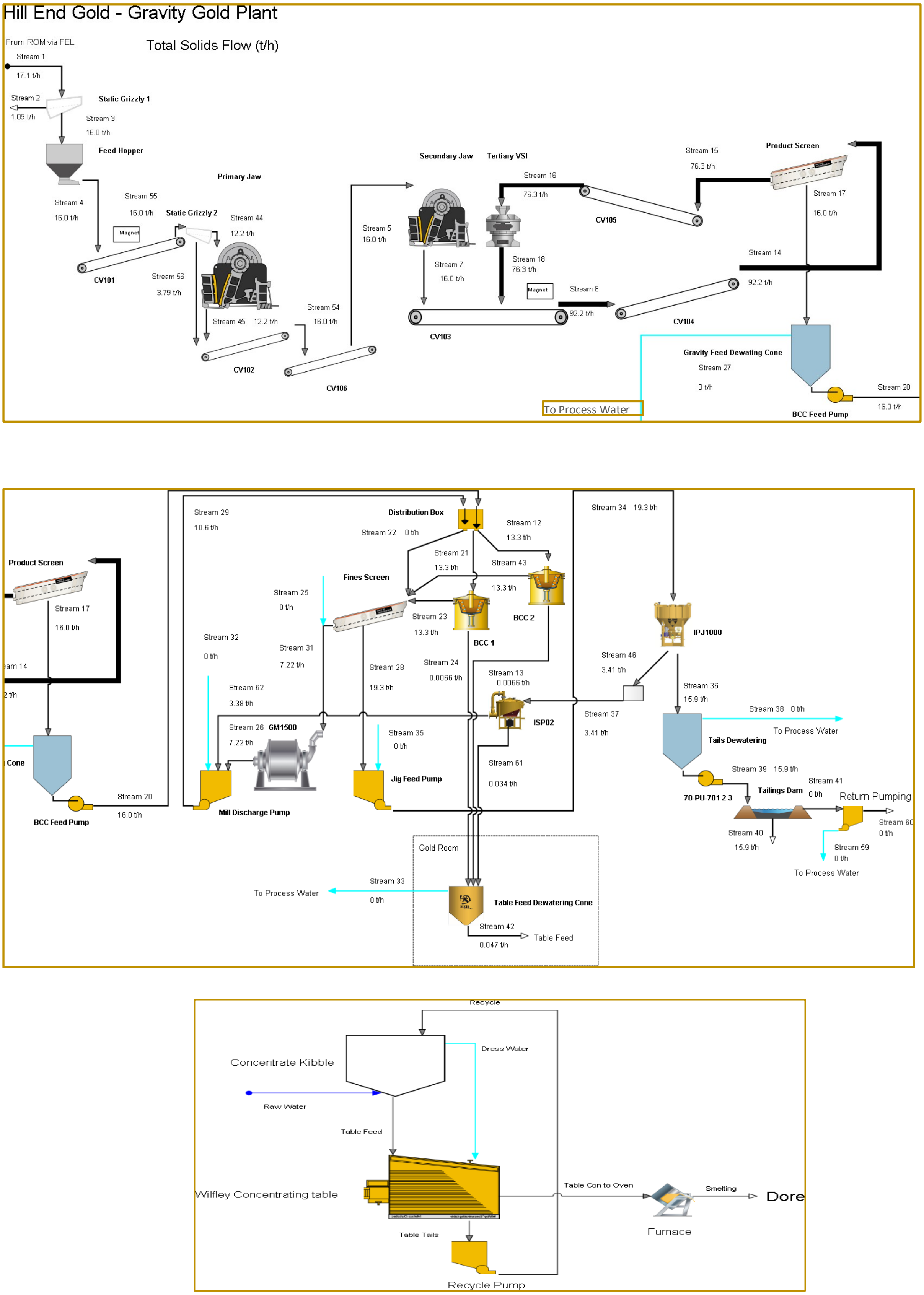

Figure 3 Proposed refurbished flow sheet of the new plant.

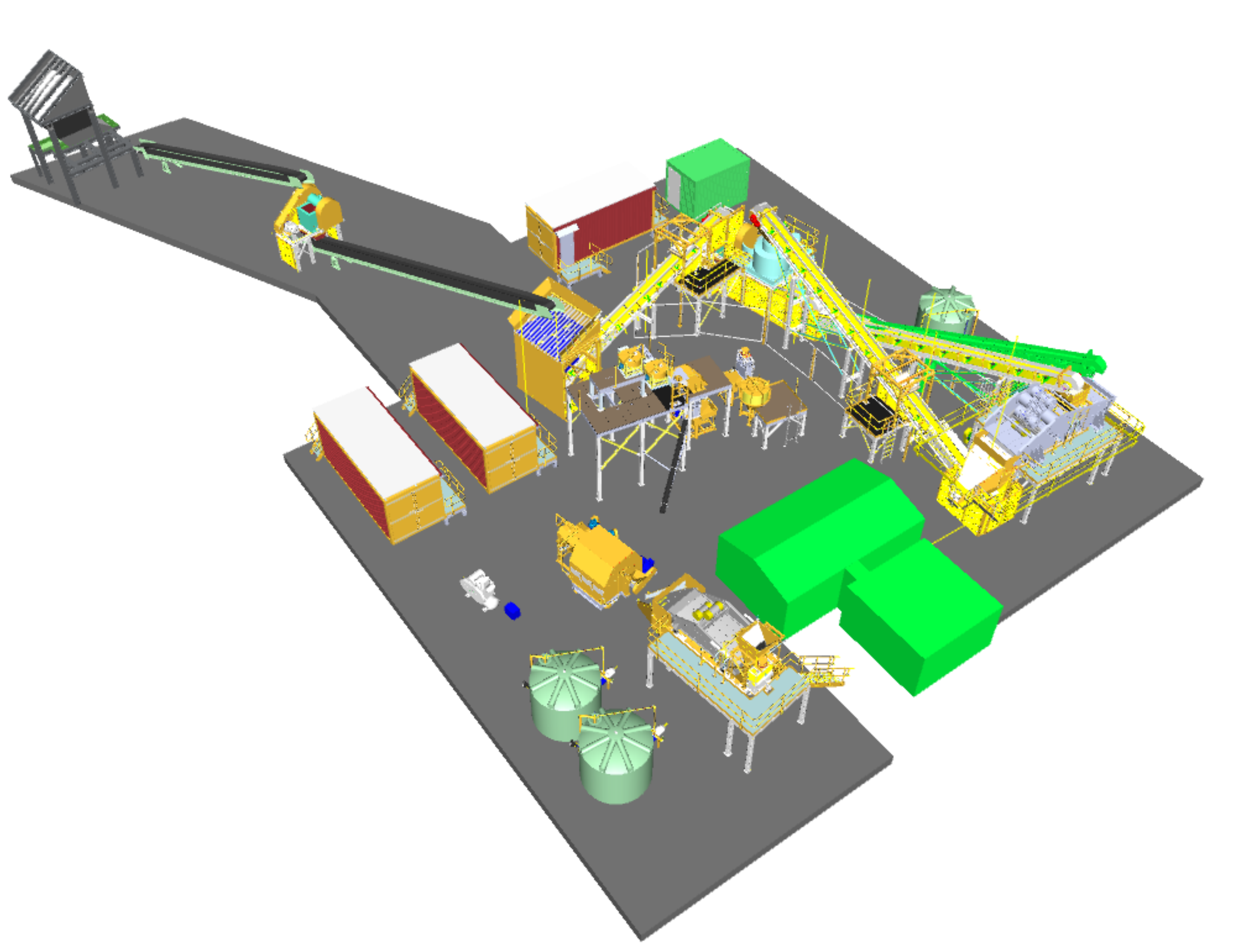

Figure 4 Indicative plant layout, next to the Amalgamated Portal (entrance to the High Grade Reward Gold Mine)

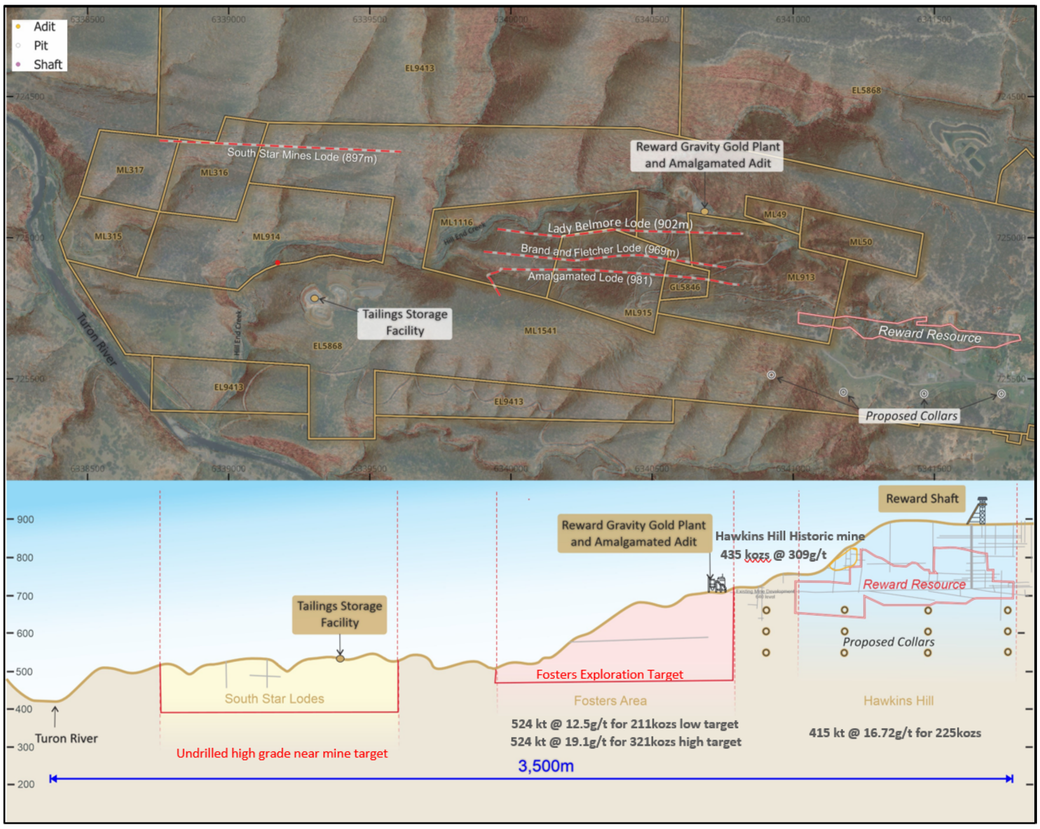

Figure 5 - Long section the location of the feed sources for the Gekko gold plant.

About Gekko

Gekko was founded in 1996 and started out producing InLine Pressure Jigs for continuous gravity separation. The growing demand for energy-efficient devices spurred Gekko to re-invent and advance traditional processing flowsheets. Innovative modular designs, elegant systems and smart manufacturing launched Gekko as a world technical leader in gold processing and low-energy mining solutions. Offering significant cost benefits and a low environmental footprint; Gekko process designers customise self-contained high recovery plants for minimal start-up capital, using high-quality components and in-house expertise. These flexible modular plants are engineered to deliver super-efficient, environmentally friendly recoveries, by combining Gekko's gravity pre-concentration, flotation, and intensive leach technologies.

This announcement has been approved by the Board of Vertex Minerals Limited.

Further Information:

Roger Jackson, Executive Chairman
roger@vertexminerals.com.au

Tully Richards, Technical Director
tully@vertexminerals.com.au

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ABOUT VERTEX MINERALS LIMITED

Vertex Minerals Limited (ASX: VTX) is an Australian-based gold mining and exploration company developing its advanced Hill End gold projects located in the highly prospective Eastern Lachlan Fold Belt of Central West NSW. Other Company assets include the Pride of Elvire gold project and Taylor Rock gold/nickel/lithium project both located in the Eastern Goldfields of WA. The focus of Vertex Minerals is to advance the commercial production of gold from its NSW projects embracing an ethical and environmentally sustainable approach:

- **Gravity Separation**: The deportment of gold at the Hill End Project allows high recovery to a concentrate produced using gravity separation techniques.
- **Direct Smelting**: The use of direct smelting of a gold concentrate eliminates the need to use cyanide as a solvent.
- **Contrast in Density**: These separation techniques take advantage of the contrast in density of gold (ρ=19.3) relative to quartz (ρ=2.65).
- **Benign Tailings**: The tailings will essentially be quartz with little to no sulphide minerals.
- **Recycled Water**: The water can be fully recycled and is clean due to having no metals in the ore.

HARGRAVES GOLD PROJECT (NSW)

- Hargraves Gold project is located approximately 25 km south of the town of Mudgee.
- The goldfield is 4 x 10 km with numerous mineralised structures with little modern exploration.
- An updated mineral resource in accordance with JORC 2012 Code was completed by SRK Consulting (Australasia) Pty Ltd (SRK) – a total of **2.3Mt at 2.38g/t Au for 177koz Au.**

HILL END GOLD PROJECT (NSW)

- Consists of 10 mining leases and three Exploration Licenses located in the core of the Hill End Trough on the eastern Lachlan Fold Belt.
- Gravity Gold Plant
- PFS completed for the Reward Gold Mine
- 24 km of continuous gold lode with gold recovery rate to gravity at +90%.

PRIDE OF ELVIRE GOLD PROJECT (WA)

- Tenements surround the Mt. Elvire homestead approximately 21 0km north of Southern Cross in Western Australia
- The project has seen historical drilling with encouraging gold results achieved.

TAYLOR ROCK PROJECT (WA)

- Located 80 km WSW of Norseman in the Southern Goldfields region of Western Australia.
- The project has both Gold and Nickel potential, interesting historical intercepts have recorded encouraging mineralisation.

HILL END GLOBAL RESOURCE

Hill End Project Mineral Resource Estimate				
Deposit	**Classification**	**Tonnes (kt)**	**Grade Au (g/t)**	**Contained Au (koz)**
Reward Gold Mine[1]	Indicated Inferred	141 278	15.5 17.3	71 155
Sub Total		419	**16.7**	225
Hargraves Project[2]	Indicated Inferred	1,109 1,210	2.7 2.1	97 80
Sub Total		**2,319**	**2.4**	**178**
Red Hill Project	Indicated Inferred	413 1,063	1.4 1.8	19 61
Sub Total		**1,476**	**1.7**	**80**
Project Total	Indicated Inferred	1,663 2,551	3.5 3.6	187 296
Grand Total		**4,214**	3.6	**483**

FOSTERS EXPLORATION TARGET[3]

Deposit	Range	Tonnes (kt)	Au (g/t)	Ounces Au (koz)
Fosters below Reward Gold Mine	Lower Range	524	12.5	211
	Upper Range	524	19	320

Cautionary Statement

The Exploration Target is conceptual in nature as there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource under the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, the JORC Code" (JORC 2012). The Exploration Target is not being reported as part of any Mineral Resource or Ore Reserve.

COMPETENT PERSONS STATEMENT

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by Mr. Roger Jackson, a Director and Shareholder of the Company, who is a 25+ year Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM), Fellow of the Australian Institute of Geoscientists (FAIG) and a Member of Australian Institute of Company Directors. Mr. Jackson has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a

Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves". Mr. Jackson consents to the inclusion of the data contained in relevant resource reports used for this announcement as well as the matters, form and context in which the relevant data appear.

FORWARD LOOKING STATEMENTS AND IMPORTANT NOTICE

This report contains forecasts, projections and forward-looking information. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions it can give no assurance that these will be achieved. Expectations and estimates and projections and information provided by the Company are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are out of Vertex Minerals' control.

Actual results and developments will almost certainly differ materially from those expressed or implied. Vertex Minerals has not audited or investigated the accuracy or completeness of the information, statements and opinions contained in this announcement. To the maximum extent permitted by applicable laws, Vertex Minerals makes no representation and can give no assurance, guarantee or warranty, express or implied, as to, and takes no responsibility and assumes no liability for the authenticity, validity, accuracy, suitability or completeness of, or any errors in or omission from, any information, statement or opinion contained in this report and without prejudice, to the generality of the foregoing, the achievement or accuracy of any forecasts, projections or other forward looking information contained or referred to in this report. Investors should make and rely upon their own enquiries before deciding to acquire or deal in the Company's securities.

JORC COMPLIANCE STATEMENTS

Where statements in this announcement refer to exploration results which previously been reported, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcements, and in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not materially modified from the original market announcements.

[1] For further details of the current resource at Reward, refer ASX Announcement dated 26 June 2023

[2] For further details of the resource at Hargraves and Red Hill, refer to the IGR in the Company's listing prospectus dated 21 October 2021 and released on ASX on 12 January 2022.

[3] For further details of the Fosters Exploration Target, refer ASX Announcement dated 29 August 2023

Sources of information and maps include:

- Geological Survey of NSW Department of Mines survey report GS 1975/279, "Appraisal of geological work involved in mapping in the South Star area, Hill End" by Bowman, Holmes and Baker in October 1975.
- Geological Survey of NSW Department of Mines survey report GS 1977/045, "The South Star line of reefs, Hill End, NSW" by Weber and Baker in March 1977. Good, detailed information on the South Star line of lode.