J.W.stollery March 4, 1992 Internal Confidential Memorandum - For discussion purposes only

#### FAIRFIELD MINERALS LTD.

# ELK GOLD PROPERTY SIWASH NORTH GOLD DEPOSIT

## DEVELOPMENT OUTLOOK

The following is a conceptual plan that has evolved from an intense ongoing study of the project. Although a clear path to production has yet to be formulated certain options now appear very appealing and are being vigorously pursued.

Although we have calculated drill indicated reserves of 340,000 tons of 0.647 oz/ton gold containing 220,000 oz, for internal conservative purposes a reserve of 165,000 tons of 0.818 oz/ton gold containing 135,000 oz should be used. These reserves are available from the "Mother Shoot" (100,000 oz) and "B<sub>3</sub> Shoot" (35,000 oz) to the east and would be realized from both open pit and underground mining.

## 1) MINING PLAN

<u>1992</u> :	Open Pit: Estimated Production:	11,000 tons	3 -	"Mother Shoot" 10,000 oz to 15,000 oz Au gross
<u> 1993</u> :	Open Pit:	•		"Mother Shoot"
	Underground:	25,000 tons	<b>3</b> –	"Mother Shoot"
	Estimated Production:			20,000 oz to 25,000 oz Au gross
<u> 1994</u> :	Underground:	40,000 tons	s –	"Mother shoot"/B3
	Estimated Production:			32,000 oz to 48,000 oz Au gross
<u> 1995</u> :	Underground:	40,000 tons	3 -	"Mother Shoot"/B3
	Estimated Production:			32,000 oz to 48,000 oz Au gross
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	Total	121,000 tons	8	94,000 oz to 136,000* oz Au gross

\*Note: The maximum production of 136,000 Au is based on a 4 1/2 foot mining width in lower "Mother Shoot: and "B3 Shoot"

## 2) BENEFICIATION

Options:

- a) Crush on site ship to smelter
- b) Crush on site ship to Brenda
- c) Crush on site ship to Afton, Mascot or Samatosum
- d) Crush on site ship to Beaverdell or Dankoe
- e) Ship bulk to one of above
- f) Onsite mill
- g) Lease portable mill

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## a) Crush on site - Ship to smelter

- Cominco Trail (Pb, Zn)
- ASARCO East Helena (Pb, Zn)
- HBMS Flin Flon (Cu)
- Noranda Val D'or (Cu)

The cost of using a Pb, Zn smelter for our product is prohibitive thus Cominco and ASARCO smelters are out. Mining and processing costs approx. = 1 oz/ton gold.

The Cu smelters of HBMS and Noranda (Horne) could make sense and they are keen to have a gold silica flux. These possibilities are still under active investigation. HBMS wish to meet with us this month.

## b) Crush on Site - Ship to Brenda (25 miles)

This is very appealing. There are two possibilities. We would purchase Blackdome Mill and install at Brenda or use some Brenda equipment and supplement. All infrastructure is in place. Access, power, assay lab, buildings, tailings etc. The Brenda site is proposed to be developed into an industrial park. Our preliminary discussions with them have been very encouraging.

#### c) Crush on site - Ship to Afton, Mascot or Samatosum

All of these are <u>custom milling</u> options. <u>Afton</u> (80 miles) is presently shut down (but on stand by) and our metallurgical consultant, Rod Samuels, is investigating this possibility. <u>Mascot</u> (95 miles) is presently in production. It has a cyanide circuit which could be required if our metallurgical tests indicate a poor gravity/floatation character. <u>Samatosum</u> (150 miles) is presently in production but will close this fall. This option is not appealing for a number of reasons primarily metallurgical.

## d) Crush on site - Ship to Beaverdell (105 miles) or Dankoe (110 miles)

We would have to purchase one of these plants. The Beaverdell site is excellent but the present mill is unappealing. The Dankoe situation is not only complicated by corporate problems but has an on site tailing disposal nightmare along with other problems too numerous to list. Neither of these two possibilities is appealing. Dankoe might be used as a custom milling facility in desparation.

## e) Ship bulk to one of above

This would save crushing cost on site but would expose us to possible abuse on receiving end. We should control and prepare our product as far as possible to maximize returns. (i.e., assay control).

#### f) Onsite mill

Two options available - build new mill or purchase Blackdome mill and move to Siwash North. This will be <u>very costly and time consuming</u> end should only be considered if other better options collapse.

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## g) Lease portable mill

This option has not been fully investigated but a suitable mill may be available in the Fraser Valley. It would require proper set up and could be placed in an area with available power and preconstructed tailings disposal i.e., Brenda or gravel pit south of Pennask Lake. This option has some appeal and will be looked at in the near future. If we crush on site and ship to this facility it could be feasible.

#### Conclusions

The Brenda option is by far the logical choice for the long run if we can make a proper business arrangement. In this regard I met with the Brenda Manager (March 3) and will arrange for a serious business meeting later this month after we determine what equipment, if any, they could supply for milling. If their equipment is unsuitable we should seriously consider the purchase of the Blackdome mill to then be installed at Brenda. Preliminary estimates to purchase, move and set up Blackdome mill is \$2 million and would take six months to complete. The estimated cost to mine 11,000 tons in 1992 is \$0.75 million. Therefore, if we opt for the Blackdome mill Fairfield will require at least \$3.0 million as a bridge before realizing potential revenue from 10,000 - 15,000 oz Au gross.

By the spring of 1993, if all went well, Fairfield should have paid back the bridge and be in a solid position to benefit from 1993 production. If we can produce with the use of some Brenda equipment capital requirements would be much less. On the other hand, in the short run, if we could negotiate a suitable custom milling or smelter arrangement for initial production, minimal capital would be required and our present treasury would suffice.

The answer will become apparent in due course. For those of you who like to count I think you can use an all-in cost of 200c/oz (or less), 95% recovery, gold 0 350 USF x 1.19 = 425c/oz.

This "Development Outlook" will continually change until the final option(s) is determined, which I would expect to occur later this month or in early April.

I will be back in the office March 16 and look forward to your written (on attached return copy of this memorandum) comments and calculations at that time. This is a critical time in Fairfield's career and your considered input is welcome.

#### Notes:

- Acquisition of mining lease is complete. Government approval is pending.
- Government approval granted for new access road (3km to Hwy). This should be ready by mid summer.
- Notice of Work to mine less than 10,000 tonnes has been filed.
- Acid base testing has been completed. Results are favourable.
- A bench scale metallurgical test on core samples is in progress.
- A 20 ton bulk sample should be taken asap for full scale metallurgical testing.
- We still have to jump environmental hurdles and this could be tough and result in unnecessary delays.
- KGH have FFD symbol changed to FFG!!
- Pre-production cost at Blackdome was \$20 million!! and all-in costs were \$317C/oz.
- Expect our initial UG development cost in 1993 to be <\$1.0 million.
- Rod Samuels is our metallurgical consultant.