

MINNOVA

820264

MEMORANDUM

DATE: September 26, 1991

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TO: D. H. Watkins

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FROM: A. J. Davidson

SUJET
SUBJECT: Curragh Resources Inc.'s STRONSAY (Cirque) deposit

File Cirque
NTS

Attached please find a clipping from yesterday's Globe and Mail regarding the Socred's announcement that if elected they would spend \$37 million on transportation facilities to help Curragh develop the Stronsay deposit (35 million tonnes @ 2.1% Pb, 7.9% Zn and 1.4 opt Ag). In the same article it mentions that Curragh is currently looking for a JV partner for the Stronsay deposit. It is likely that at least 50% would be available.

Using the economic parameters mentioned in the article and using only a 20 year mine life at average grade (although a higher grade core exists) the project has a total cash flow of \$291 million, an NPV @ 10% of \$8.6 million, and an IRR of 11%. I am trying to find out the size and grade of the "higher grade" core.

This may be the time to contact Curragh at your level to see if JV terms might be workrd out or at least to get a better look at the data. However, remember that this \$37 million for infrastructure is only an election promise and without it the thing falls apart!

I've also attached a map showing Ecstall Mining's (Chris Graf) claims in the area. These are well located along strike from Cirque and have showings of their own. They are obviously currently available and Chris also reccommends staking additional claims if the Socreds get elected. We have been looking at this area and this type of sedex target for some time and we will continue to monitor this situation closely. The Cirque sedex type of target in the Kechika trough certainly becomes more attractive with added government supplied infrastructure.

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A newer venture is the Carlota
 copper prospect in Arizona, which
 could come into production in 1993.
 The financial newsletter Canadian
 Resources & Penny Mines Analyst
 rates Cambior shares as a buy for
 aggressive investors. Although ac-
 knowledging that there is little rea-
 son to expect gold prices to improve
 soon, "the Omai and Carlota pros-
 pects give the company the potential
 to boost income in the 1990s."

the debt, and I'm not really saying
 forget about the debt (in this case)."
 said Brian Chesnut, an analyst with
 Richardson Greenshields of Canada
 Ltd. in Winnipeg.

pleted. However, Mr. DesRosiers
 said that for the next two or three
 years at least, the company is likely
 to enjoy a good runup as the indus-
 try recovers.

Canadian investors

up by 45.4 per cent next year

Price-earnings and p/e ratios	
Price-earnings ratio for the next 12 months	
14.3	
14.2	
12.8	
12.8	
11.4	
13.1	
36.9	

One stock market where money managers seem to agree with the analysts is Britain's.

British companies "have an enormous backlog of orders and clean balance sheets," says Ms. Voule of Capital Management.

Saying that "they've had it much tougher than anybody else and a horrendous interest-rate curve which nobody else has had," she sees British companies rebounding strongly as the country's interest rates fall along with inflation, which she predicts will be at 4 per cent or less in the fourth quarter.

Mr. Breedon of Alliance sees signs of economic recovery in Britain and expects to "see significant signs of consumer confidence returning, brought about by lower interest rates."

"Evidence of that is the propensity of relatively cash-rich companies to buy other companies," he says.

Indeed, Britain has just witnessed three major takeover bids: Hanson PLC for Beazer PLC, BTR PLC for Hawker Siddeley Group PLC and Williams-Holdings PLC for Racal Electronics PLC.

In addition, Mr. Breedon believes London's stock market could get a kick from the British Treasury, which he believes will try to push interest rates even lower as next year's general election approaches.

B.C. to support Curragh development

BY ALLAN ROBINSON
 Mining Reporter

Curragh Resources Inc. has won the support of the British Columbia government to proceed with the \$140-million development of the Stronsay lead and zinc project, but financing is not yet in place and the question of ownership is unresolved.

Development of the Stronsay project in northern British Columbia will make Curragh one of the top four producers of lead and zinc concentrates in the Western world, Curragh said.

Yesterday, at the outset of a provincial election, the B.C. Ministry of Energy Mines and Petroleum Resources said it has "reached agreement in principle" to spend \$37-million on transportation facilities to help Curragh develop the Stronsay mine.

Final environmental approvals, the first under the new B.C. environmental legislation, are also said to be under way, the government said.

The government's \$37-million contribution includes \$12-million for an air strip, \$10-million for a rail link to an all-weather barge on Williston Lake in order to remove the ore, and \$15-million for bulk terminal facilities at Squamish.

Clifford Frame, chairman of Toronto-based Curragh, estimates that the direct capital costs of the project will be \$140-million and the company will need another \$20-million in working capital. Construction of the 3,500-tonne-a-day mine and mill is to begin in the spring of 1992.

However, Mr. Frame said, there could be changes in the eventual

ownership of Stronsay Corp., the company developing the project located 240 kilometres northwest of Fort St. John. Curragh owns 70 per cent of Stronsay and Asturiana De Zinc SA, a Spanish zinc smelter, owns 30 per cent.

Mr. Frame said Curragh and Asturiana have been involved in what he described as "friendly" discussions that could lead to the two companies winding up their interlocking ownership positions. Along with its 30-per-cent interest in Stronsay, Asturiana owns 5 per cent of Curragh. Curragh, in turn, owns 20.8 per cent of Asturiana.

Mr. Frame said Curragh and Asturiana are considering breaking up because they have been unable since 1989 to reach an agreement to create a joint international marketing organization to carry out metal sales activities. For Curragh this was to be an important part of its continuing relationship with Asturiana.

Mr. Frame said both Curragh and Asturiana support a continuing relationship in which Curragh would supply concentrate to the smelting company.

Mining analysts say Curragh has been looking for joint venture partners for both the Stronsay (formerly known as Cirque) and Sa Dena Hes (formerly known as the Mt. Hundere) projects.

Curragh is also trying to raise \$55-million through the issue of 11-per-cent convertible debentures to spend on the development of its Faro mines in Yukon. None of this money will be allocated to the Stronsay project, Mr. Frame said.

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anager Mark Breedon
 Capital Management
 says, "We've seen a
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ECSTALL MINING CORPORATION

KECHIKA TROUGH ZINC PROJECT

Ecstall's Pie, Akie, Yuen-Noel and Kwadacha zinc properties are located in the prolific Kechika Trough zinc district of northeastern B.C. This world class (sedex) lead-zinc district, dormant since the 1977-82 period when exploration work was intense and the major regional scale mineralized trend first recognized, has experienced renewed activity in 1989 with several significant projects being carried out.

Numerous significant (Red Dog type) barite-lead-zinc deposits, such as the +30 million ton (8.6% zinc, 3.5% lead) Cirque deposit, occur there in the regionally extensive and highly prospective Devonian age Gunsteel Formation. The Cirque deposit, recently referred to in the Northern Miner as "Canada's largest undeveloped zinc resource", is being aggressively developed by the major zinc mining company, Curragh Resources Ltd. who have built 30 km of access road, driven a 3000 foot adit, and are presently taking a 3000 ton bulk sample. This \$8.4 million reserve development programme is due to be completed by the middle of the year and production should start by early 1992 after capital expenditure of \$109 million.

Curragh also owns the similar but under explored Elf and Fluke barite-lead-zinc sedex deposits, located further south along the Gunsteel Formation, which undoubtedly will undergo intense exploration once the Cirque project is in production.

On the Mt. Alcock barite-lead-zinc deposit, located 15 km north of Cirque, Teck Corporation, through VSE listed junior Triumph Resources Ltd., has carried out a significant sampling, geophysical surveying and diamond drilling program in 1989. A lead zinc soil sample and coincident IP geophysical anomaly, over 2500m long, has been outlined. Seven drill holes were completed to test a 200m strike length of the mineralized zone and the best drill hole assayed 3.84% Pb, 5.5% Zn over 8.8m including 4.5% Pb, 9.7% Zn over 3.6m. An aggressive drilling program is planned for 1990 to test the large anomaly.

The Pie claims were staked in 1978 to cover lead-zinc mineral showings along the strike extension of Gunsteel Formation shales, south from the Cirque deposit. They also adjoin the north boundary of Curragh's Fluke claims. Several showings of galena and sphalerite as well as extensive beds of nodular and massive barite occur on the Pie Claims. A soil sample survey outlined a large coincident lead-zinc anomaly, over 5 km long, that follows the contact between Gunsteel shales and Kwadacha reef limestone. Facies relationships and structures along the reef front -shale transition zone need to be mapped in detail, and this information combined with a geophysical survey and the previous soil sample results will outline several diamond drill targets.

The Akie claims adjoin the south boundary of Curragh's Fluke claims. They are underlain largely by Gunsteel Formation within which a previous soil sample survey outlined a significant barium-zinc-lead anomaly, which may be an extension of the Fluke mineralization, that has never been diamond drill tested. A program involving geological mapping, prospecting and I.P. geophysical surveying is required to explore the Akie claims further to define drill targets.

The Yuen-Noel claims adjoin the north boundary of the Cirque claims, and cover the northern strike extent of Gunsteel Formation, from the Cirque deposit. Previous exploration work outlined a zinc-lead soil sample anomaly 1000m long, which has never been drill tested. A program involving blast trenching, prospecting, I.P. geophysical surveying and drilling is required to test this target.

The Kwadacha claim covers a large bedded barite deposit over 1 km wide and of unknown strike length, within an eastern belt of the Gunsteel Formation. Two other claims within this eastern belt cover an area of a Gunsteel Formation surrounding Aramis lakes from which lake sediment samples containing high zinc-lead-silver contents were obtained during a GSC survey.

No recent work has been done on any of these claims, however with the adjacent Cirque deposit being readied for production, a significant exploration program is planned for the Pie, Akie, Yuen-Noel and Kwadacha claims next season, possibly under a joint-venture with a major mining company.

The Kechika Trough is a world class zinc-lead-barite mineral district, and Ecstall Mining Corporation's claims are well positioned along the Gunsteel Formation to participate in its long term mining development, which is presently underway as evidenced by the progress on Curragh's Cirque project and Teck's Mt. Alcock project.

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