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COORDINATION OF GEOTHERMAL RESEARCH

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distribution:

participants.

Dir's

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COORDINATION OF GEOTHERMAL RESEARCH

Meetings in Vancouver on 18th-19th February 1976

On the 18th of February 1976 a meeting took place at the offices of the Geological Survey in Vancouver concerning the content of the contract to be awarded to Nevin Sadlier-Brown Goodbrand Ltd. as a result of the unsolicited proposal for geothermal work in the Yukon. Present were: J.G. Souther of GSC, R.G. Agarwal of DSS and myself of EPB. At a previous meeting in Ottawa it had been decided that only the surface geological and geochemical work and possibly the Airborne Infra-red work were merited at this stage. J.G. Souther, who had not been at the Ottawa meeting, commented that he thought that the Infra-red survey was premature at this stage and would only be useful as a means of detailed exploration of a thermal spring area that was already selected as an interesting target on the basis of geochemical data. He also suggested that use could be made of the self-potential technique at this stage and that this should be included in the specification of work to be done. This was agreed upon. We then proceeded to the office of Nevin Sadlier-Brown Goodbrand Ltd. to discuss the content and terms of the contract. R.G. Agarwal continued the discussions on the following day.

On the 19th of February, L.K. Law and G.C. Rogers of EPB Victoria visited the office of the GSC in Vancouver for a meeting to discuss the direction of geothermal work during the financial year 1976-77. The \$100,000 provided by the Energy Task Force for research into geothermal resources was divided in the manner shown in

the attached table. All of these figures are approximate and subject to modification when contracts are negotiated. \$45,000 will be transferred to the GSC from EPB to cover the costs of the first four items.

There was some discussion on the question of S-wave attenuation studies in the Garibaldi volcanic belt. G.C. Rogers felt that the probability of unequivocal results from such a study was very small since the S-wave component from quarry blasts was small to begin with and subsequent attenuation would be difficult to interpret in terms of the complex crustal structure in volcanic areas. It was agreed to omit this study for this year. The first three items on the lists under the care of J.G. Souther had already been discussed at some length and tentative figures were available: specifications for contracts will be prepared. The testing of the geoprobe had been discussed with L.S. Collett before I left Ottawa. We had agreed to allocate \$10,000 for the testing of this instrument during late 1976, and it was agreed that the target of the testing should be the Meager Creek area where some resistivity surveys had already been done. If successful this apparatus could be used in later years as a primary tool in the examination of geothermal resources. \$25,000 were allocated to a continuation of the study of sedimentary basins that was already under way by Sproule Associates Ltd. of Calgary. A report on the first phase of the project is due at the end of the current financial year, and the final decision as to continuation cannot be made until that report is available and has

been examined thoroughly. The item for geothermal research in the Yukon is connected with the unsolicited proposal by Nevin Sadlier-Brown Goodbrand Associates, mentioned above, and \$15,000 is the commitment by EMR to DSS for the financing of this project. The balance of the funds for the contract will be provided by Bridge financing of DSS. The Lillooet Valley survey was added as a buffer item to absorb small amounts of money that may be left over after the other contracts have been finally arranged. Those present agreed to submit to me copies of all contract specifications prepared as part of the geothermal energy program, so that I can report on progress as required by management or OERD.

It often occurs that spare money appears during the later stages of a financial year that can be used for contracting drilling or other geophysical investigations provided one is prepared. The source of the money is usually the breakdown of plans for contracts or other work that had been going ahead but had been stopped for some unforeseen circumstance. It was decided that the people present would consider the possibilities and would submit to me a list of suggestions for projects of various financial scales. We would then make a selection of these and decide on responsibility for the preparatory work, such as writing up brief specifications and choosing suitable drill sites if appropriate. The end result would be a series of projects that could be picked up on short notice and completed within the remainder of the financial year whatever that should turn out to be - usually about 3 months.

Possibilities suggested were further survey of the floor of the Lillooet Valley, to search for evidence of major faulting, and a deep drilling experiment to search for hot water in the Lillooet Valley for market gardening applications.

It was decided that the target for operations during the year 76-77 would be the upper Lillooet Valley-Meager Creek area. B.C. Hydro have reduced their operations for the coming year and there is a great deal of work that can be done in this area without any risk of duplication of effort. Meager Mountain remains the most promising volcanic centre in the Garibaldi volcanic belt from the geothermal point of view. Mt. Cayley further south looks promising for a volcanological point of view, but has no associated hot springs. Mt. Garibaldi also looks promising but is located inside the boundaries of a provincial park. If a further target area is required in future years it would probably be advantageous to look in a different volcanic belt. The Rainbow Range in the Anaheim volcanic belt was suggested.

I reported to the meeting that I had already been required to fill in some forms for Office of Energy R&D concerning expenditures in future years. This had been required on short notice and I had not had time to consult people at length. I had discussed the matter with L.S. Collett concerning electrical methods and I had spoken with H. Gabrielse on the previous Friday in the absence of J.G. Souther. I explained to the meeting how I had arrived at the figures used, but there were very few comments on these. It was

generally agreed that it was very difficult to forecast expenditures five years into the future at such an early stage of a program.

It was agreed that a progress report similar to the one prepared last year would be prepared this year and those present agreed to submit brief reports of approximately two pages summarizing their activities over the previous summer the status of the results and their plans for the coming summer. These will be compiled, duplicated and circulated as before. The purpose of this report is to keep each other and departmental management informed of progress.

Distribution of Funds 1976-77

<u>Subject</u>	<u>Prepare Spec.</u>	<u>Supervisor</u>	<u>Cost Est. \$1000</u>
Detailed mapping volcanic centres	Souther	Souther	20.
Geochemical study Meager Creek	Souther	Souther	8.5
Age dating of volcanic centres	Souther	Souther	6.5
Testing of Geoprobe	Collett	Collett	10.
Sedimentary basin study	Jessop	Jessop	25.
Magneto-telluric	Law	Law	10.
Yukon study	Unsolicited	Souther	15.
Lillooet valley survey	Law/Souther	Law	5.
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