Faculty/Portfolio:Faculty of Science

Unit: Department of Physics

Position Title: Research Associate

Position Type/Job Family: Research Associate

Incumbent Name (if applicable):Click here to enter text.

Date of Completion:Click here to enter a date.

**SIGNATURES:** The signatures below indicate that all parties have read and understand the information in this Position Description.

**INCUMBENT (if applicable)**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Name Signature Date*

**PRINCIPAL INVESTIGATOR/SUPERVISOR**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Name Signature Date*

**CHAIR/DEAN/VICE-PRESIDENT**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Name Signature Date*

**POSITION SUMMARY:** Give a brief summary of the position covering the main responsibilities, the framework within which the position has to operate, and the main contribution to the organization.

This person hired into this position will be a senior researcher with an established track record in

industry, and with a strong record of publications in peer-reviewed journals.

They will undertake innovative research as part of the geothermal theme of the Helmholtz Alberta Initiative (HAl). This is a major University of Alberta initiative to develop cleaner methods for extracting energy from the Athabasca oilsands. Research is planned in 6 inter related study areas in a joint Canadian-German research program that will last for 5 years, and which is beginning in 2010.

The successful candidate will be expected to work independently, with decisions made in consultation with the Principal Investigator. Tasks will include:

* Overseeing the operations of the HAl geothermal research program and providing quality assurances and quality control to ensure that this research meets international standards.
* Defining yearly goals and research objectives for the Helmholtz Alberta Initiative (HAl) geothermal research program.
* Performing administrative duties at the managerial level. This will include writing reports and budget requests.
* Developing a regional database of geothermal data in Alberta (thermal gradients and conductivities). This will include correction of these data for climatic effects, and quality control and assurance.
* Analysis of thermal and stress data from deep boreholes. This will be used to determine suitable locations for possible fracturing tests and geothermal energy production.
* Indirect supervision of undergraduate and graduate students, including (a) working on data analysis and interpretation in the laboratory and (b) collecting field data at work sites in Alberta.
* Supervision of the HAl geothermal project manager. This will include obtaining permission for fieldwork and arranging contracts with drilling and exploration companies.
* Fostering communications with off campus research partners. This will include both industry and government partners in Canada and Germany.
* Writing research papers and presenting research results at international meetings.
* Overseeing the operations of geothermal research in this project and providing assurances that the quality of this research meets international standards.

**KNOWLEDGE, SKILLS AND ABILITIES:** Provide a list of the most important knowledge, skills and abilities including knowledge about practical procedures, specialized techniques, analytical and conceptual skills, and abilities and skills needed for interaction with others. Specify the level (or type) of post-secondary education that is required.

* PhD in geology, geophysics or related subject
* At least 20 years’ experience working in geothermal research
* At least 20 years’ experience working commercial geothermal studies, and the ability to interact with drilling and geophysical contractors
* Familiarity with geophysical exploration methods as applied to geothermal exploration
* Strong record of first-author publications in peer-reviewed scientific journals

**ORGANIZATION CHART:** An organization chart must be included, indicating supervisor, peers and other positions in the area/unit.