

MEMORANDUM

Date: February 5, 2013

To: Mrs. Karen Roche, University Secretary

From: Dr. Azim Mallik, Chair, Senate Research Committee

Subject: *Motion from the Senate Research Committee re Proposed Establishment of a Centre of Excellence*

The Senate Research Committee passed the following Motion by electronic vote held on February 5, 2013:

Moved** by Dr. Philip Hicks, **seconded** by Dr. Batia Stolar that the Senate Research Committee recommend approval of the proposed establishment of a **Centre of Excellence in Sustainable Mining and Exploration (CESME)

Carried



DR. AZIM MALLIK, Chair
Senate Research Committee (2012/13)

Attached (1)

A proposal to establish a research Centre of Excellence in Sustainable Mining and Exploration (CESME)

Prepared by:

Pete Hollings (Geology), Peggy Smith (Natural Resource Management), Scott Hamilton (Anthropology), Doug Morris (Biology)

The following researchers have expressed an interest in participating in the Centre:

Lionel Catalan (Engineering), Aicheng Chen (Chemistry), Han Chen (Natural Resource Management), Andrew Conly (Geology), Bahram Dadgostar (Business Administration), Amanda Diochon (Geology), Phil Fralick (Geology), Tony Gillies (Engineering), Scott Hamilton (Anthropology), Mary Louise Hill (Geology), Doug Morris (Biology), Mani Rappon (Chemistry), Peggy Smith (Natural Resource Management).

1 Purpose, Rationale, Mission and Goals

Purpose

The Centre of Excellence in Sustainable Mining and Exploration will encourage and support research, education and outreach activities regarding the nature and impacts of mineral resource exploration and extraction particularly in Northern Ontario.

Rationale

Northern Ontario's dynamic mining sector is booming, creating challenges regarding how best to undertake sustainable economic development while ensuring environmental protection and respecting constitutionally protected Aboriginal and Treaty rights. The Centre of Excellence in Sustainable Mining and Exploration will help address these challenges by linking Lakehead University researchers with partners from First Nations, Metis, government, and industry. This collaborative approach recognizes that Canadian natural resource development requires sophisticated planning, collaboration, assessment, implementation, and remediation strategies that are calculated to minimize negative environmental, socio-economic, and cultural impacts. In the context of the Centre we are using the term sustainable to imply reconciliation of the three pillars of environmental, social equity, and economic demands (2005 World Summit on Social Development) that is now widely recognized by the mining industry.

Through the Centre academic, community, government, and industry partners will carry out cutting-edge research in discovery, advanced exploration, and development, and address the environmental and social aspects of mineral extraction.

Mission

The Centre of Excellence in Sustainable Mining and Exploration will:

- Support the development of community-based research and outreach activities in both the Lakehead community and the region as a whole
- Generate research projects that facilitate sustainable resource development in Northern Ontario and evaluate the current and future ecological, social, and economic impacts of development
- Apply research outcomes from Northern Ontario projects to broader sustainable development issues in other northern Canadian and international jurisdictions and apply the lessons learned in other jurisdictions to Northern Ontario

Goals

The Centre of Excellence in Sustainable Mining and Exploration will:

- Increase the capacity for mineral deposit research at Lakehead University and enhance the reputation of the institution in the region, nationally and internationally
- Increase the capacity for research into the environmental impact of mining and the sustainability of this activity in Northern Ontario
- Increase the capacity for research into the social impacts of mining, especially into the involvement of local and First Nation and Métis communities and the recognition of Aboriginal and treaty rights
- Increase the capacity for research into mining and mineral processing
- Initiate interdisciplinary research into these fields and develop multidisciplinary research proposals for funding agencies and research partners
- Bring together a diverse range of researchers at Lakehead University working in fields related to mining exploration, sustainable mining, and environmental and community impacts
- Make Lakehead University the hub for sustainable resource extraction research in Northern Ontario

Achieving the Centre's goals

The goals of the Centre will be met by initiating the following activities:

- Initiate discussions with the wider community to shape the research activities of the Centre.
- Generate multidisciplinary research proposals and apply for external funding
- Invite and fund proposals for research and outreach activities
- Recruit and foster faculty, postdoctoral fellows, postgraduate, graduate, and undergraduate student participation
- Establish working relationships with similar national and international centres (e.g., Mineral Deposit Research Unit (MDRU) at the University of British Columbia, Mineral Exploration Research Centre (MERC) at Laurentian, CODES – ARC Centre of Excellence in Ore Deposits at the University of Tasmania, Centre for Exploration Targeting (CET) at the University of Western Australia)
- Develop and maintain a website for the Centre

2 Relevance

The Institutional Vision, Proposed Mandate Statement, and Priority Objectives submitted to the Ministry of Training, Colleges and Universities in October 2012 describes Lakehead's mission as a "comprehensive and research intensive university linked to a regional imperative" and that "the University will continue to focus on providing high quality interactive learning environments that include diverse experiential learning opportunities, involve our communities, and are delivered using a variety of technology enabled applications that reflect contemporary developments in engaging learners". One of the priorities listed in that document is "Economic Development and Community Partnerships - Enabling the University and our communities to work together with a central focus on learning opportunities, research, and economic development". The proposed new Centre, which will initially focus on the challenges related to resource extraction in Northern Ontario, will clearly address these issues, and as such the Centre fits clearly within the mandate of the University. Furthermore, the Centre of Excellence will sustain and stimulate the economy in Northern Ontario and establish Lakehead University as a major national and international player in economic geology and sustainable development.

The Centre is also aligned with the current academic plan. That plan identifies six research priorities of which this Centre will conduct research activities that will relate closely to four of them: Cultures, Societies, and Social Justice; the Environment and Natural Resources; First Nation, Metis and Inuit (Aboriginal) Research; and Northern Studies. As such, the Centre clearly fits the goals of the plan.

3 Life Expectancy & Budget

At this point, we are planning on an initial five-year life span for the Centre from 2012-2017 with the ultimate goal of establishing the Centre as a permanent fixture on campus. We believe that this will be sufficient time for us to establish the Centre and determine whether or not we can in fact meet the goals of establishing Lakehead University as a major national and international player in economic geology and sustainable development. At the end of the five-year period, we will review the achievements of the Centre to determine whether or not it should continue for a further five-year period. In addition, we fully expect to be a part of the regular review process for research centres outlined by the Vice-President (Research, Economic Development & Innovation).

The Centre Management Team is comprised of experienced researchers with a strong track record of both publishing their results and securing external funding. Initial start-up funding has been provided by the senior administration at Lakehead University in order to develop and promote the Centre. Once established, Centre members will work together to attract additional funding to allow the Centre to develop and grow. This will be achieved by developing larger, multidisciplinary research proposals for external funding, both private and public. A detailed budget proposal for the first five years of the Centre is provided in Appendix A.

4 Research Plan

The overarching research plan of the Centre of Excellence in Sustainable Mining and Exploration is to increase research and outreach activities that enhance and assess development strategies for Northern Ontario. The research undertaken will fall into three broad themes:

- Mineral exploration and mineral extraction including mine development and mineral processing
- Social, economic and environmental impacts of mineral resource exploration and extraction
- First Nations and Métis engagement

Current and future Centre research activities will focus on supporting and developing projects and outreach initiatives within each of these themes, along with relevant funding proposals. In addition, these themes fit within the research activities of many of the faculty members who have expressed an interest in becoming members of the Centre, many of whom have already obtained significant external funding for their research activities.

5 Commitments by Lakehead University

As stated in the budget section of this document, the proposed Centre has already received a strong signal of support from Lakehead University, having been granted a \$30,000 start up fund by the Provost. At this time, we do not envisage any additional infrastructure commitments from the university beyond the basic accounting, invoicing, and bill payment services offered by the Office of Finance. As the Centre grows and is successful in attracting external funding, we will build in funding for additional support such as secretarial services or teaching relief. In short, the Centre is designed to be self-supporting.

6 University Facilities

The Centre of Excellence in Sustainable Mining and Exploration will not require additional space commitments from the University at this time and will use existing facilities according to established rules and procedures

7 Membership

The goal of membership is not to maximize affiliate members, but to create a network of committed associates who wish to make substantive contributions and take on essential roles.

Centre members will be designated as Research Associates. Research Associates are defined as faculty members, staff, undergraduate students, graduate students, and post-doctoral researchers at Lakehead University and other partner research universities.

Research Associates are also defined as research partners outside of higher education in schools, government, non-government organizations, and in the business community.

Membership will be established by invitation and application. Those seeking membership will be required to describe their interests in relation to the activities of the Centre. This will then be reviewed, initially by the Management Team and later by the Centre members. Membership will be ongoing and maintained by participation in Centre activities. Membership can expire through non-participation in Centre activities (as deemed by the Management Team).

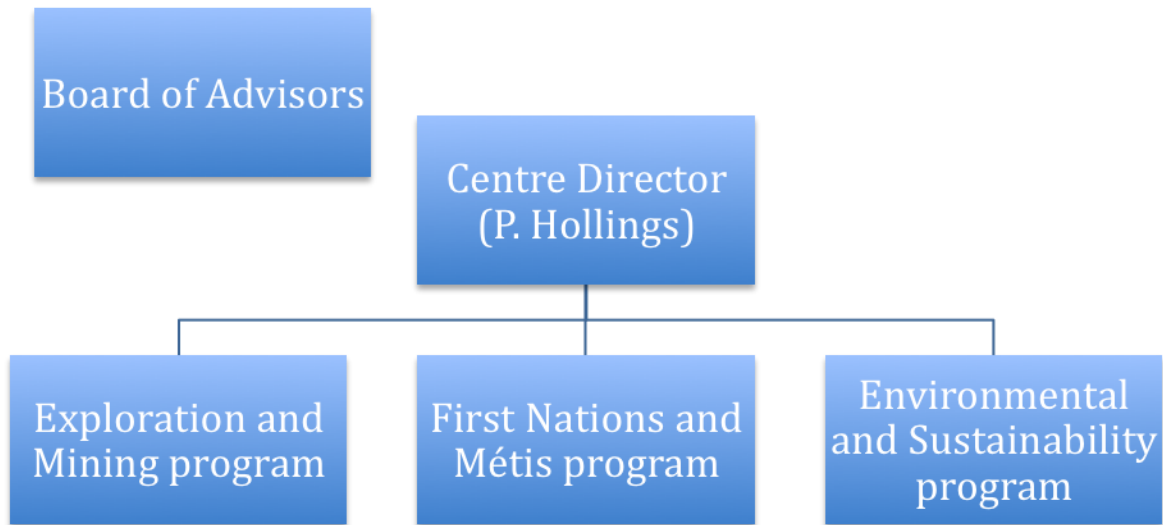
8 Governance

It is proposed that the Centre will comprise of three distinct themes which can broadly be described as: mineral exploration and mining processes, First Nation and Métis relations, and environmental sustainability (exact names subject to change). Each program will have a designated leader with all activities coordinated by the Centre Director. In addition, we are proposing to establish an Advisory Board of community and academic partners who will provide advice to the Centre leaders. We are proposing that the Board would comprise two or three key members of the mining, First Nation and Métis, and academic communities, and possibly local government organizations.

It is anticipated that individual researchers will associate themselves with one or more themes; however, ideally both the theme leaders and the Director will participate in the activities of all themes to facilitate interaction among groups. All Lakehead faculty with relevant research interests will be invited to participate in the Centre.

Governance will be accomplished through a Management Team and an Advisory Board. The Management Team will be composed of the director and three associate leaders who are faculty at Lakehead University and will encompass the broad research themes identified for the Centre. Dr Hollings has agreed to act as the founding Director of the Centre, but theme leaders have yet to be identified. The Management Team will meet bi-monthly, and conduct the business of the Centre (i.e., create and execute a work plan of Centre research and outreach initiatives).

An Advisory Board will be formed to connect Centre activities to the external communities relevant to the Centre in order to provide guidance and focus to the activities of the Centre. We anticipate that the Board will comprise well-respected members of the community with a strong interest in the activities of the Centre. Possible members include Dr. Jim Franklin, past head of the Geological Survey of Canada, local executives of the mining and exploration community and members of appropriate First Nation and Métis communities and groups, as well as academic representatives. It is anticipated that the Board will meet in person once a year with other meetings organized by teleconference when needed.



9 Personnel

The hiring of additional personnel is contingent on future external funding and will follow established Lakehead University policy.

10 Legal Implications

No legal implications are expected.

Appendix A – Five year operating budget

It should be noted that the budget figures below are tentative and depend on the ability of Centre members to raise funds from external sources, which will obviously depend on the success of the Centre in achieving its goals. The external funds referred to below are intended to come from industry partners and do not include money raised from Federal or Provincial granting agencies. Once formed, the members of the Centre will meet in order to develop strategies to collaborate on grant proposals.

Income	Expenditure
Year 1	
Startup funds - \$30,000	Promotional activities - \$17,500*
	Meetings with external partners - \$5000
	Travel - \$2500
	Conferences - \$5000
SUB-TOTAL	\$30,000
Year 2	
Operating budget - \$30,000**	Promotional activities - \$15,000
Funds raised from external sources - \$80,000	Meetings with external partners - \$5000
	Teaching relief for Centre management team (based on 0.5 FCE for the Director and Associate Directors) - \$30,000
	Graduate stipends - \$60,000
SUB-TOTAL	\$110,000
Year 3	
Operating budget - \$30,000**	Promotional activities - \$15,000
Funds raised from external sources - \$80,000	Meetings with external partners - \$5000
	Teaching relief for Centre management team (based on 0.5 FCE for the Director and Associate Directors) - \$30,000
	Graduate stipends - \$60,000
SUB-TOTAL	\$110,000
Year 4	
Operating budget - \$30,000**	Promotional activities - \$15,000
Funds raised from external sources - \$80,000	Meetings with external partners - \$5000
	Teaching relief for Centre management team (based on 0.5 FCE for the Director and Associate Directors) - \$30,000
	Graduate stipends - \$60,000
SUB-TOTAL	\$110,000
Year 5	
Operating budget - \$30,000**	Promotional activities - \$15,000

Funds raised from external sources - \$80,000	Meetings with external partners - \$5000
	Teaching relief for Centre management team (based on 0.5 FCE for the Director and Associate Directors) - \$30,000
	Graduate stipends - \$60,000
SUB-TOTAL	\$110,000
TOTAL	\$470,000

* This includes attendance at the Prospectors and Developers Association of Canada's International Convention and other critical meetings. These are deemed necessary in order to promote the Centre and attract external partners who can contribute both to the direction of the Centre and provide funding

** The Provost has committed to trying to find an ongoing operating budget for the Centre.