

# **Minutes of the 5<sup>th</sup> Annual Meeting of the Western Canada Sedimentary Basin (WCSB) Workshop of Provincial and Federal Geological Surveys**

**February 12<sup>th</sup> and 13<sup>th</sup>, 2004**  
**Geological Survey of Canada Boardroom**  
**3303, 33<sup>rd</sup> St. NW**  
**Calgary, AB**

**Chairperson:** Ruth Bezys, Manitoba Geological Survey

**Present:**

Manitoba Industry and Economic Development: Ruth Bezys (Manitoba Geological Survey); Carol Martiniuk (Petroleum Branch)  
North Dakota Geological Survey: Julie LeFever  
Alberta Geological Survey: Glen Prior, Dinu Pana, Reg Olson, Stefan Bachu, Rick Richardson  
Geological Survey of Canada: Jack Wendte, Simon Hanmer, Martin Fowler, Mark Williamson, Tony Hamblin, Benoit Beauchamp, Terry Poulton, Kirk Osadetz  
National Energy Board: Brent Hogue  
CS Lord Northern Geoscience Centre - NWT: Adrienne Jones, Carolyn Relf  
Yukon Government: Riona Freeman  
Saskatchewan Industry and Resources: Chris Gilboy  
BC Ministry of Energy and Mines: Vic Levson, Derek Brown

## **February 13<sup>th</sup>, 2004**

### **1. Welcome and Introduction**

Ruth Bezys welcomed everyone and attendees introduced themselves. The agenda was approved as submitted.

### **2. Program Review and Update**

Each agency provided short presentations, with the Geological Survey of Canada going first. Copies of the Power Point presentations have been sent to all participants on CD.

#### **2.1 Geological Survey of Canada – Tony Hamblin**

- Currently running a matrix management system
- Update on GSC science programs involving the WCSB: Clean Environment (Groundwater, Metals in the Environment), Development of the North, Sustainable Development of Natural Resources (CGMS & CGKN), TGI, and Climate Change
- A review of previous WCSB meeting action items and what has been done: (CBM research, data integration, communication with industry and public, hydrogeology, structural compilation of the WCSB

- Presentations were made to SEPAC and CAPP, resulting in a strong letter of support for CGMS
- Provided a list of specific project priorities (see powerpoint)
- Examples of co-operative projects: Williston Basin Architecture and HC potential – TGI II (joint GSC/SIR/IEDM/academia); GIS Structural Compilation of WCSB; Bowser and Sustut Basins Project; CGKN
- Co-operative Geological Mapping Strategy (CGMS) – was discussed further with Simon Hanmer the following day

## **2.2 BC Ministry of Energy and Mines – Vic Levson**

- Outlined oil and gas division structure in the ministry; has an expanding Energy Geoscience program; staff growing
- Main focus of Resource Development and Geoscience Branch: Petroleum Geoscience, Surficial Geology and Aggregate, GIS, Corelab, Resource Development
- Review of oil and gas program: shallow and deep gas, tight gas, shale gas, coalbed gas and interior basins
- Conventional WCSB goals: resource assessments, high potential gas plays (Liard Basin, Slave Pt, Shallow), promote exploration, increase industry activity and production
- Possible partnerships with the GSC & AGS: Bowser Project, Liard Basin, interior basins (Liard & Nechako), resource assessments, CBG, surficial and aggregate program
- WCSB Committee Project
  - Basement Structural Compilation database: no progress from BC, but see potential for NE BC (energy and minerals)
- Discussed recent NE BC regional studies, Liard Basin, interior basins development strategy
- Surficial and Aggregate Geology: support O & G activity, strong collaboration with AGS & GSC
- Future programs: CO<sub>2</sub> sequestration and acid gas injection in BC and diamond potential

## **2.3 Alberta Geological Survey – Reg Olson**

- Overview of AGS within AEUB and review of core activities 1999-2003 wrt to energy and minerals
- Opportunities and challenges: Kyoto and climate change; CGMS; first nations – traditional land use – consultation process; mineral development strategy; northern development; water for life
- Provincial and federal ‘drivers’ – outline of key strategic priorities
- Changing directions at the AGS to take advantage of the existing and potential priorities
- Included some highlights about each of the AGS technical sections: Unconventional Gas and Oil Sands section (CBM, oil sands, shale gas, tight gas); Groundwater section (Athabasca and Cold Lake oil sands,

groundwater mapping for water for life strategy); Greenhouse and Acid Gas Storage section: (sequestration potential, acts on behalf of the ministry on issues related to sequestration); Northern Mapping Section (geological mapping, drift thickness and bedrock topography mapping, geochem surveys, aggregate mapping); Northern Resources section (known and potential mineral resources in AB, thematic studies, outreach)

- WCSB working group – AGS implemented the ‘Regional Tectonic Structure Compilation of the WCSB’ in 2003 – all provinces to participate with GSC
- Want to see some ground rules: focus on WCSB; emphasize energy, but not to the exclusion of minerals, and x-border cooperation; what about aggregate?; need to develop at least one ‘clear’ action item from each WCSB meeting

#### **2.4 Saskatchewan Industry and Resources – Chris Gilboy**

- Expanding the geoscience framework – current programs: Weyburn CO<sub>2</sub> Monitoring and Storage Project; TGI Williston Basin Architecture and Hydrocarbon Project; SK West Block stratigraphic and hydrogeological framework; shallow gas; university grant program; Geoscape (S SK); O & G resource assessment
- Want to expand SK’s geoscience framework; will support implementation of CGMS
- High employment from SK’s mineral and energy industries
- Outlined SIR Petroleum Geology Branch staff – current capacity and responsibilities
- Outlined capacity gaps and where they could be filled with GSC scientists through CGMS
- Outlined the university grant program and recent published products
- Outlined in detail the Weyburn and TGI II studies, their results and relevance to WB

#### **2.5 Manitoba Industry and Economic Development**

##### **2.5.1 Petroleum Branch – Carol Martiniuk**

- Provided a petroleum industry profile and MB drilling activity
- Outlined the branch’s organizational chart and each section’s responsibilities (Engineering and Inspection; Administration and Geology; Digital Information)
- Geology: conducts regional and field studies; field and pool boundary designations; fm tops; consultation to industry and public
- Branch initiatives: Drilling Incentive Program Amendments; Legislative Amendments; Crown Royalty, Freehold Production Tax Audit and Incentive Computer System; Crown O & G Rights Map; TGI II
- Future Projects: TGI II; Lower Cretaceous regional study; core description inventory; MB’s protected areas initiative (ongoing); foster further projects with other jurisdictions

### **2.5.2 Manitoba Geological Survey – Ruth Bezys**

- Provided a program outline of the Sedimentary and Industrial Minerals Section within the survey and details about certain projects (industrial minerals and aggregate; land use studies; Phanerozoic and Quaternary mapping; general investigations)
- Provided the survey operation budget and organizational chart
- Provided a detailed overview of the Williston Basin Architecture and HC Potential – TGI II project (GSC/SIR/IEDM/academia)

### **2.6 Yukon Government - Riona Freeman**

- Yukon Geological survey has 20 people (mines, energy and environment)
- Main focus: Cordilleran bedrock mapping; regional geochem and geophysics; surficial mapping
- O & G Management Branch – one geologist (does resource assessments; geoscience; FNs outreach) – no capacity
- Need more work in remote areas of northern Yukon

### **2.7 NWT - CS Lord Northern Geoscience Centre – Adrienne Jones**

- Provided an outline of the Centre and the function by discipline (minerals and petroleum - Adrienne)
- Lots of time devoted to protected areas and FNs

### **3.0 Review of progress since last meeting and why meet?**

There was discussion on the role of this group and why meet?

- There were some comments on cross border nomenclature problems, especially within the Cretaceous and that this should be resolved, especially between states and provinces.
- The GSC has a key role within this group; the first step in lobbying is through this group and have individual provinces lobby to the GSC.
- It was suggested that more coordination and motivation was required of the group. We also needed to know who our client base was.
- Some of the **Action Items** noted:
  - Cross border nomenclature issues
  - Role of GSC
  - Official WCSB boundaries
  - CGMS
  - Industry advocacy and outreach

### **4.0 Dinu Pana (AGS) - Structural Compilation of Faults in WCSB**

- This is a GIS compilation; a cooperative project with AGS taking the lead; basement and Phanerozoic
- Can be used for kimberlites

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**5.0 Mark Williamson (GSC) GSC programming**

- Overview of CCGK, Northern Resource Development, Climate Change, Geoscience of Ocean Management, MITE, Sustainable Development, Natural Hazards, Gas Hydrates, Groundwater

**6.0 Simon Hanmer (GSC) CGMS Presentation**

- Emphasizes that this is a 'national initiative, not federal
- Governance is a question
- Initial intent in 2000; the need for governments to invest in public geoscience in support of mining and energy; was originally driven by mining sector; see the need to sustain development of mineral and energy resources
- How is geoscience impacting people
- 10 year plan; \$0.5 billion over 10 years; from both the provinces and feds (all new funding – not re-profiling)
- Can use the WCSB group as a model; has to have a regional approach
- Regional workshops from late March to early May; national workshop in June
- Pilot workshop to be held by Ontario
- Has to be a regional approach and look at minerals and energy
- Will be a Memorandum to Cabinet
- Some ideas
  - Ten year plans: regional approach; beyond Weyburn, WCSB Atlas Version 2; 3D modeling; tar sands; CB gas; fluid flow; foothills
  - Minerals: surficial; aggregate; MVT
  - Capacity issues
  - GSC input highlighted for WCSB: (surficial mapping; geophysics and regional geochem; petroleum systems; basin modeling)
  - Governance

**7.0 Martin Fowler – GSC priorities for CGMS**

- Energy supply is a looming issue
- Federal issues and priorities to be addressed: Sustainable Development of the Natural Resources; Development of the North; Strong and Safe Communities; Aboriginal People; Clean Environment
- Federal geoscience provides information and science; promotes investment in our resources
- Partnerships are key
- GSC Priorities:
  - Themes: resource assessment; petroleum systems/basin architecture; 4D digital atlas; regional thematic studies

- Regional – near future: Mackenzie Corridor/Delta; WCSB gas; oil sands; Gulf of St. Lawrence; Grand Banks; Pacific margins
  - In current program: Williston Basin TGI and Bowser Basin NRD
- Regional – longer term: Arctic Islands; Labrador Shelf; S BC Intermontane Basins; Hudson Bay/Foxe Basin
- WCSB: 4D atlas of whole basin as Earth systems framework; basin gas; oil sands; N AB/S NWT HC potential
- Northern Mainland: Mackenzie Corridor; Mackenzie Delta

### **8.0 Miscellaneous Items and Wrap-up**

The rest of the discussion focused on conducting a WCSB CGMS workshop in the month or two. It would be a 1-2 day workshop held in Calgary and hosted by AGS. The focus will be on energy, with some discussion on minerals and groundwater. The NWT and Yukon need to be involved. The focus is on needs, not programs. All agencies will circulate their objectives before the workshop. Rick Richardson will set up the agenda and meeting.

**ATTENDEES**  
**WCSB WORKSHOP Feb 12 & 13, 2004**  
**Calgary, AB**

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