

AV Geoscience and Professionalism*

Tom Sneddon¹

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¹Director of Geoscience and Outreach – APEGA (<https://www.apega.ca>; email@apega.ca)

Abstract

A Professional Geoscientist is expected to choose an area of specialty within the rather broad group of activities and pursuits contained in Section 5(1) of the Engineering and Geoscience Professions Act that fits that person's academic training and professional experience, in short, the practitioner's competence. If a practitioner strays outside that envelope, the outcome can be dire for public health and safety.

Competence is not a static entity, however, and as a Professional grows in both academic learning and the hands-on version of knowledge known as "experience," the scope of practice envelope grows with it.

Progressive geoscientists enthusiastically, but skeptically and gradually, adopt the new ways as their confidence and competence with them grows to the point where it can be safely used for routine work.

Selected References

Canadian Oil and Gas Evaluation Handbook (COGEH), Definitions of oil and gas resources and reserves: COGEH. Website accessed August 8, 2015, <http://digitaldfw.com/cgaus/cogeh.pdf>.

Findlay, D., T. Nardin, A. Wright, and R. Salehi Mojarad, 2014, Modeling lateral accretion in McMurray Formation fluvial-estuarine channel systems: Grizzly Oil Sands' May River SAGD Project, Athabasca: Search and Discovery Article #51014 (2014). Website accessed August 8, 2015, http://www.searchanddiscovery.com/documents/2014/51014findlay/ndx_findlay.pdf.

Alberta Securities Commission (ASC), 2013, Standards of Disclosure for Oil and Gas Activities: National Instrument 51-101, May 29, 2013. Website accessed August 8, 2015, <https://www.osc.gov.on.ca/en/13338.htm>.



Geoscience and Professionalism

Tom Sneddon, P.Geo.;
APEGA Director of Geoscience
Canadian Playmaker Forum
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Prologue



*“Bad men need nothing more to compass their ends,
than that good men should look on and do nothing.”*

John Stuart Mill,

Inaugural Address Delivered to the University of St. Andrews,
February 1, 1867

Outline



- What is a “Professional Geoscientist”?
- The Professional Career Path
- Development of Competence
- The Code of Ethics
- Continuing Professional Development (CPD)
- Innovation – obligations and constraints
- Responsibilities of the Petroleum Geoscientist
- Example: Classification and Evaluation of Resources/Reserves
- Summary

What is a “Professional Geoscientist?”



- Possession of a licence to practice geoscience issued under an act of a provincial legislature
- Right to title of Geoscientist, Geologist, Geophysicist, Geochemist or Environmental Geoscientist



Photo by the author

The Professional Career Path Knowledge & Experience



Time 

Age

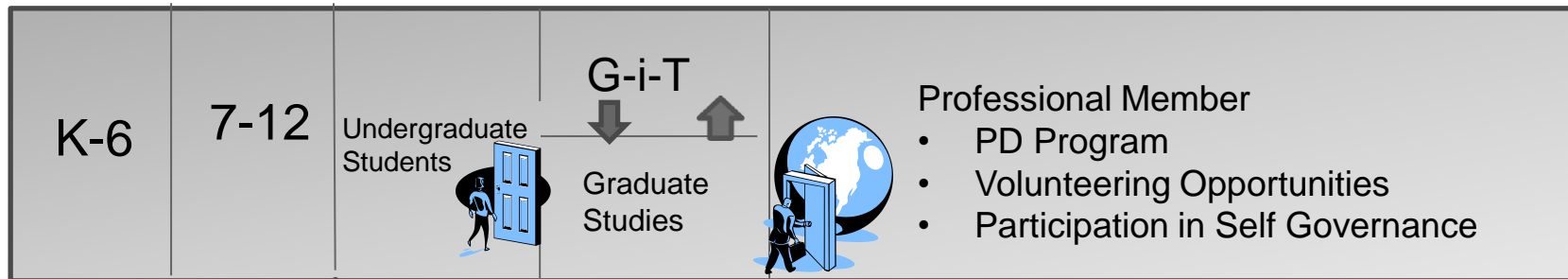
6-12yrs

13-17

18-28

22-35+

23-50+

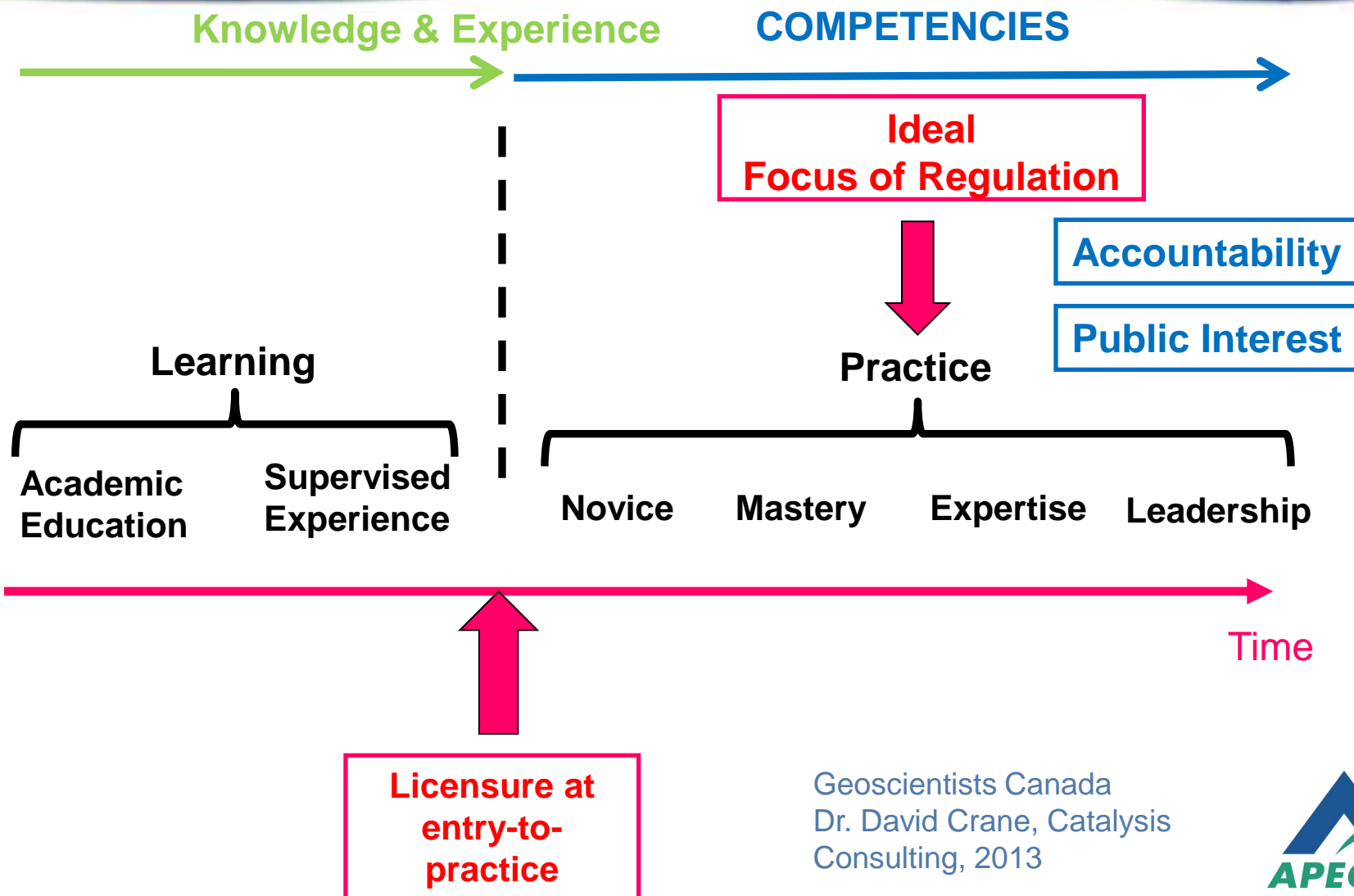


University
Acceptance

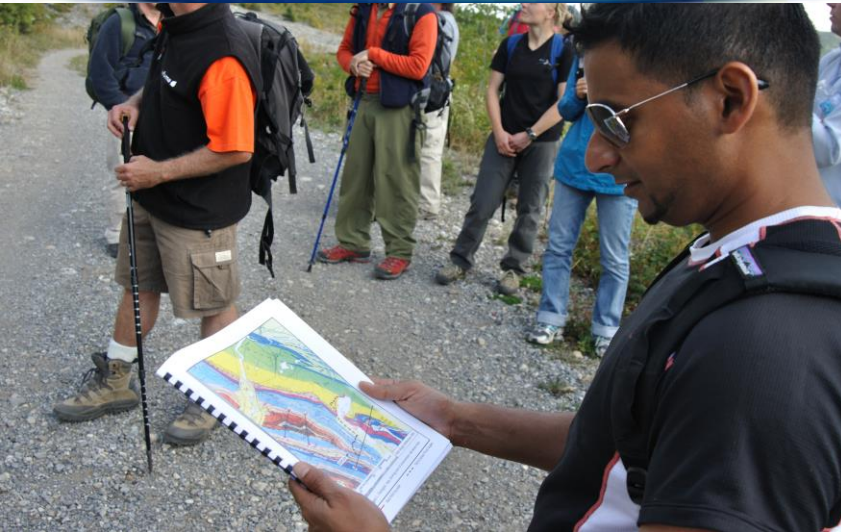
Application
Earth Ring

Member
Induction

Development of Competence



Continuing Professional Development



The Code of Ethics



- Embedded in the Act
- Preamble and five Rules of Conduct
- Legally binding
- P.Geo.'s must put the public interest and environment first
- Establishes how P.Geo.'s relate to others

Responsibilities of the Petroleum Geoscientist



Professional Geoscientists discover valuable earth materials and:

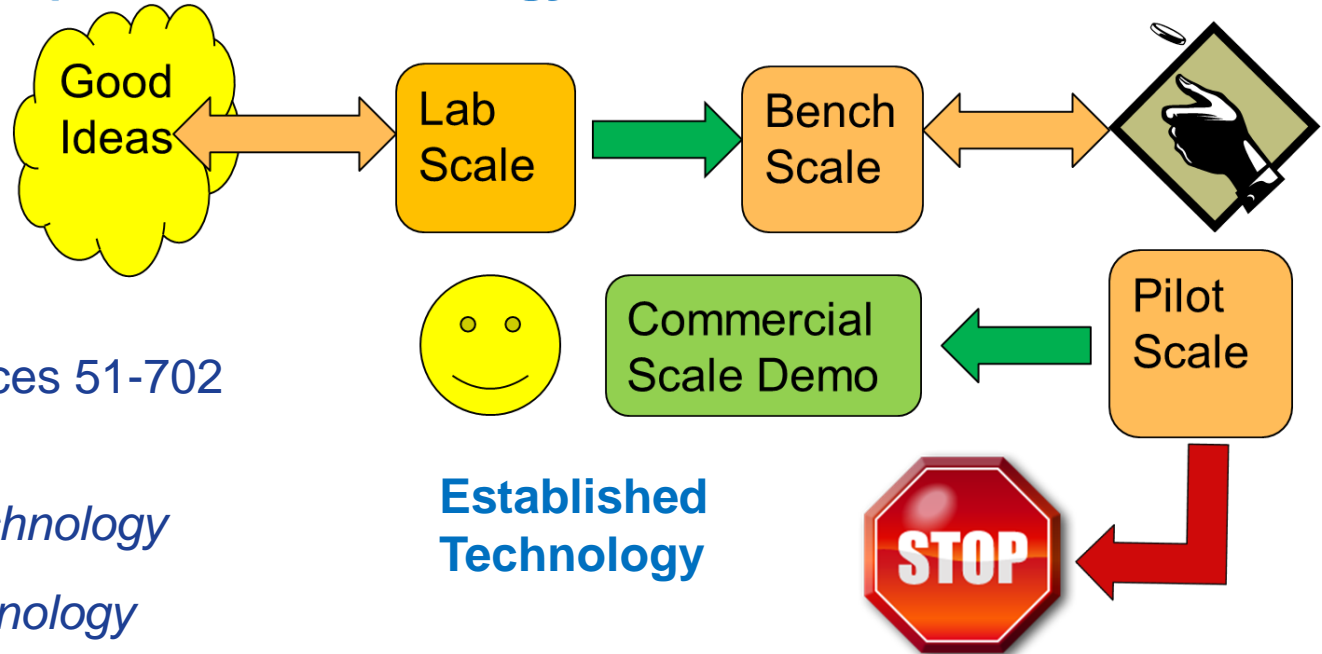
- Measure and interpret deposits
- Classify the deposit
- Report discoveries accurately
- Advise employers and investors

Photo Courtesy OilSandsQuest

Innovation-Obligations & Constraints



Experimental Technology



From ASC Staff Notices 51-702
and 53-324

- *Experimental Technology*
- *Established Technology*
 - Technical viability proven, and
 - Demonstrated commercial viability

Example: Classification and Evaluation of Resources/Reserves (1)

NI51-101, COGEH and so forth define the dangerous word “*reserves*”

- A “*discovery*”
- “*indicated resources*”

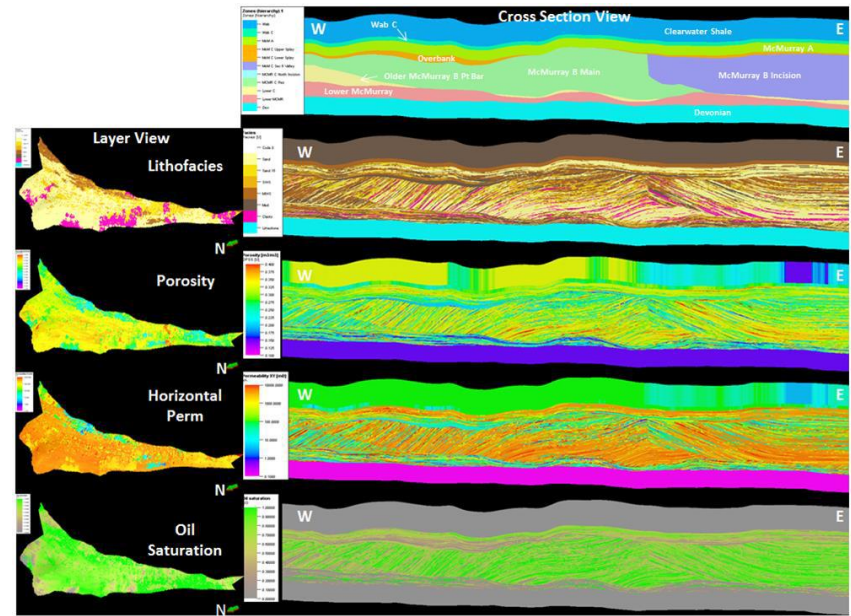


Figure 5. Layer and cross section views at 5X vertical exaggeration from the May River geologic model. From top to bottom, the panels illustrate the stratigraphic framework and the distribution of lithofacies, porosities, permeability and oil saturations. Note discordant channel boundaries and the distribution of IHS lithofacies, class intervals and reservoir parameters along lateral accretion bedding within each channel fill.

**Modeling Lateral Accretion in McMurray Formation
Fluvial-Estuarine Channel Systems: Grizzly Oil
Sands' May River SAGD Project, Athabasca**

Duncan Findlay, Thomas Nardin, Alex Wright, Raheleh
Salehi Mojarad

Grizzly Oil Sands ULC , GeoConvention 2014



Example: Classification and Evaluation of Resources/Reserves (2)



From a geobody to a “Discovery” to “Indicated Resources” is a long road



Photos by the author

...to reportable product in the tank is what it is all about

Example: Classification and Evaluation of Resources/Reserves (3)

- Everything else is “undiscovered resources”



Photo by the author

Summary



- Professional Geoscientists protect the public from unscrupulous people and geohazards
- Licenced practice requires proof of competence and adherence to a legally binding Code of Ethics
- P.Geo.'s must authorize the release of technical information honestly and fairly
- Licenced Professionals are encouraged to innovate according to regulatory requirements for introduction of experimental technology



