

# NORTHERN GEOTECHNICAL ENGINEERING, INC. / TERRA FIRMA TESTING

Laboratory Testing

Geotechnical Engineering

Instrumentation

Construction Monitoring Services

Thermal Analysis

## Andrew C. Smith, CPG

**Senior Geologist** 

### **EDUCATION**

Bachelor of Science, Geology, Stephen F. Austin State University, Nacogdoches, TX – 1999 Master of Science, Geology, Idaho State University, Pocatello, ID – 2002

#### **GENERAL EXPERIENCE**

Andrew has 15 years of broad-based experience working in geology, engineering, research, and construction-related fields and applications and he is a Certified Professional Geologist licensed by the State of Alaska. Andrew is a skilled field geologist, and has recorded several thousand hours of subsurface exploration logging and surficial geologic field mapping. Andrew has extensive experience with a variety of both conventional and innovative subsurface data acquisition techniques, including several forms of geophysical data acquisition. Andrew is a proven project manager, and he has coordinated and managed subsurface exploration programs, remediation efforts, and construction projects all across Alaska; as well as overseas. Andrew has extensive experience operating in remote parts of Alaska, and is familiar with the complications that can arise from operating in these remote areas. Andrew has extensive experience working with municipal, state, tribal, and federal agencies, as well as a good working reputation with exploration contractors statewide, and he is known for his ability to deal with, and find workable solutions to complex field situations. Andrew has excellent technical writing abilities, and he often provides peer review and writing guidance to both senior and junior staff. Andrew exhibits the professional experience and leadership abilities required to successfully execute an effective and informative geotechnical assessment.

#### **KEY PROJECTS**

<u>SEIC Phase II Pipeline, Sakhalin Island, Russia, Royal Dutch Shell, 2007-2008</u> – Andrew served as one of two onsite geotechnical/geological engineers who assisted in the design and construction of 17 individual pipeline trench fault crossings along a 200+ km gas/oil pipeline.

<u>Harbor Access Road, Akutan Island, Alaska, Native Village of Akutan, 2010-2011</u> – Andrew coordinated and managed a geotechnical exploration program aimed at characterizing the soils along the alignment of a proposed access road to connect the Village of Akutan to the small boat harbor located at the head of Akutan Bay. The project involved a variety of geotechnical and geological exploration and mapping techniques, including the use of a GPR survey.

<u>Livengood Gold Project, Livengood, Alaska, AMEC, 2011-2012</u> — Andrew served as field manager for a crew of up to seven field engineers/geologists supporting subsurface exploration activities associated with a feasibility analysis for a proposed open-pit gold mine. Andrew and his crew supported a refrigerated-brine rock core drilling program aimed at characterizing bedrock structure and permafrost conditions for the proposed mine infrastructure installations.

<u>CGF-CCP Operations Center Facility, Prudhoe Bay, Alaska, BP Exploration Inc., 2014</u> – Andrew served as project manager and oversaw the execution of a subsurface exploration

program aimed at characterizing permafrost conditions at the site of a planned facility operations center. In addition to his regular responsibilities, Andrew was also tasked with specialized equipment mobilization, work permit compliance, and safety management.

<u>Site 4 Gravel Borrow Evaluation, Eagle River, Alaska, Eklutna Services, Inc., 2014-2015</u> – Andrew designed, coordinated, and managed a multi-phased borrow source evaluation for a potential 300+ acre gravel borrow mine. The evaluation included preliminary site reconnaissance, exploratory test pit excavation, confirmation soil boring programs, and topographic survey to establish and characterize the nature, extent, and minability of the gravel resource.

#### PROFESSIONAL REFERENCES

Bob Braunstein, CPG, President, BGES, Inc., (907) 644-2900, <a href="mailto:bob@bgesinc.com">bob@bgesinc.com</a>
Rob Retherford, CPG, President, Alaska Earth Sciences, (907) 522-4664, <a href="mailto:rmr@aes.alaska.com">rmr@aes.alaska.com</a>
Mike Hagen, Senior Geologist, RMEA, Inc., (208) 524-2353, <a href="mailto:mike.rmea@gmail.com">mike.rmea@gmail.com</a>
Kyle Brown, President, Discovery Drilling, Inc., (907)344-5934, <a href="mailto:kyle@discoverydrilling.com">kyle@discoverydrilling.com</a>

#### PROFESSIONAL QUALIFICATIONS

License	2011	Alaska Certified Professional Geologist (AK #663)
Certificate	2015	GBA Fundamentals of Professional Practice (Class #24)
Certificate	2005	ICC Underground Storage Tank Decommissioning
Certificate	2006/2014	ACI Concrete Field Testing Technician (Grade 1)
Certificate	2002/2004/2007	40-hour HAZWOPER
	2010/2012	
Certificate	2005	Troxler Nuclear Densometer Operations Training Course
Certificate	2011	AIPG Certified Professional Geologist
Certificate	2005	WAQTC asphalt/aggregate technician
Certificate	2011	PDI, Inc. SPT and Pile Driving Analyzer Training Course
Certificate	2010	GSSI UtilityScan GPR Training Course
Credential	2007/2014	North Slope Training Co-operative Badge - Unescorted
Credential	2007	MOA Approved Special Inspector for Piles, Piers, and Soils
Credential	2004	ADEC Qualified Person
Credential	2014	BP Exploration Permit Authority
Member	2009	Geoprofessional Business Association (GBA)
Member	2010	American Institute of Professional geologists (AIPG)
Member	2010	Geological Society of America
Member	2010	Association of Environmental and Engineering Geologists
Member	2010	Alaska Geological Society

#### PROFESSIONAL PUBLICATIONS

Kruger, J. M., A. C. Smith, and J. A. Welhan, 2002, Microgravity and magnetic detection of mafic dikes, fissures, and lava tubes in basalt: potential barriers and fast-flow paths for contaminant migration within the eastern Snake River Plain, Idaho [extended abstract]: Society of Exploration Geophysicists Annual meeting Expanded Technical Program Abstracts with Biographies, 2002, v. 72, p. 1440-1443.