



Keith F. Mobley, P.E., G.E.

President/Senior Geotechnical Engineer

EDUCATION

B.Sc., Civil Engineering, Montana State University, Bozeman, MT - 1976.

M.E., Emphasis in Geochemical Engineering, Dartmouth College, Hanover, NH - 1988

GENERAL EXPERIENCE

Keith is a geotechnical engineer with a wide variety of arctic and subarctic experience. Keith's responsibilities have included management of projects for foundation and retaining structure design, seismic stability evaluation for landslide areas, thermal and slope stability analyses, surface and subsurface hydrology, environmental evaluations, hazardous waste management, civil engineering design, and geophysics. Keith has extensive experience developing and conducting field exploration programs in remote areas of Alaska. In 2000, Keith founded Northern Geotechnical Engineering which has expanded its service to include engineering, laboratory, field material testing, special inspection, instrumentation, and construction management for earthworks projects. Many of the projects that Keith has completed have involved unconventional techniques for obtaining the subsurface information needed to properly design the project. Keith specifically tailors the methods used to match the available equipment and the purpose of the design. Keith's designs are also modified from the conventional to match the specific purpose of the project, the environment in which the project is located, and the equipment most easily available to complete the construction. Keith's experience completing construction projects in remote locations provides a solid background for the design process and a unique ability to adapt the constraints imposed on engineering operations by the arctic and subarctic. Keith has served as an expert witness for eight different cases involving disputed geotechnical information that impacted construction projects. His clients have included owners, engineers, and the State of Alaska. Keith's services have included written findings, depositions, and court appearances. Much of the work has involved educating the legal team how to improve their effectiveness arguing for the client.

KEY PROJECTS

East Dock Extension, Trident Seafoods, Inc., Akutan Island, Alaska 2014 - Keith was the design-build lead and construction oversight manager for a 900-ft long dock with 30 to 45 feet of draft for ships up to 700 feet long. The combi-wall (Z-section sheetpiles combined with pipe piles) that Keith designed was constructed on schedule and under budget.

Strategic Reconfiguration Project, Alyeska Pipelines Services, Various Locations, Alaska 2004 - Keith was brought onto the project during the initial phase of construction to re-design the foundation system at 4 different pump stations along the trans-Alaska oil pipeline. The original design was overly conservative using the same design for very diverse geotechnical conditions. It was estimated that the revised pile foundation system which Keith developed saved the project in excess of five million dollars. Keith was the lead engineer for the inspection of the foundation construction, and personally inspected the foundation construction at Pump Stations 1 and 4.

Cabin Creek Dam, City of Petersburg, Petersburg, Alaska 1996 – Keith provided a complete package from feasibility study through completion of construction for a new domestic and commercial water supply served by a 38-ft high rock fill dam. The feasibility study developed included cost estimates, reliability of the water supply, redundancy, and the potential for future expansion. Keith collected and analyzed streamflow data including the installation of remote data collection system, streamflow measurements for data calibration, development of storm unit hydrographs, and comparison to existing long-term databases. Keith was responsible for the design work for the dam, appurtenant structures, outlet works, permit submittals, bid specifications, and cost estimating was completed. Keith also supervised the on-site development of the methods used for the core construction, material processing in the rock quarry, and performed all of the soil and concrete material testing. Construction was substantially completed ahead of schedule and within budget

PROFESSIONAL REFERENCES

Kurt Esveldt, Project Coord., Trident Seafoods, (206) 783-3818, kurta@tridentseafoods.com
Dave Grenier, President, Triad Engineering, Inc., (907) 561-6537, davegrenier@triadak.com
Russ Eby, Principal, Ebyco LLC (907) 250-5701, ebycoinc@gmail.com
Joe Zech, President, Western Marine Co., (206) 622-9170, joe@wmc2775.com

PROFESSIONAL QUALIFICATIONS

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| Registration | 1981 | Professional Civil Engineer – Alaska (CE 5066) |
| Registration | 1979 | Professional Civil Engineer – California (CE 30683) |
| Registration | 1998 | Professional Geotechnical Engineer – Alaska (GE 2389) |
| Member | 1999 to Present | Municipality of Anchorage Geotechnical Advisory Com. |
| Member | 2012 to Present | Vice-Chair of GBA’s Geotechnical Business Council |
| Member | 1979 to Present | American Society of Civil Engineers |
| Member | 1995 to Present | Earthquake Engineering Research Institute |
| Member | 2014 to Present | International Code Council |
| Member | 2012 to Present | Engineers Without Borders |
| Certificate | 1980 | Troxler Nuclear Densometer Operations Training Course |

PROFESSIONAL PUBLICATIONS

"Special Pile Foundations for a Coastal Permafrost Site" (with H.P. Thomas). ASCE Fourth International Cold Regions Engineering Specialty Conference, Anchorage, Alaska, 1986.

"In-Situ Decontamination of Soils Using Chelating Agents: A Laboratory Study." Second National Symposium on Environmental Geotechnology, Shanghai, China, 1989.

"PS 5 Sewage Lagoon Embankment Stabilization" (with J.C. Harle) ASCE Sixth International Cold Regions Engineering Specialty Conference, Hanover, New Hampshire, 1991.

"Trans-Alaska Pipeline Reinsulation in Atigun Pass" (with J.E. Ferrell) Sixth International Conference on Permafrost, Beijing, China, 1993.

“Use of Chelating Agents for Soil-Metal Decontamination” Poster Paper (with I.K. Iskandar &H.M. Selim) Contaminated Soils-Third International Conference on the Biochemistry of Trace Elements, Paris, France, 1995.

“Development on an Earthquake Induced Landslide” Seventh International Conference on Soil Dynamics and Earthquake Engineering, Xania, Crete, Greece, 1995.

“Thermal Assessment of Passive Cooled Foundation Soils Beneath the Trans-Alaska Pipeline at Atigun Pass” (with Mike R. Fitzpatrick and John E. Ferrell) Seventh International Permafrost Conference, Yellowknife, Canada, 1998.

“Analysis of Flooding Effects on a Landfill Permafrost Containment System” (with L.J. Barlow) Eighth International Permafrost Conference, Zurich, Switzerland, 2003