

JOE G. NORRIS – Principal Geologist **NORCOSGO, LLC,**
CPG # 8002



*Mr. Norris currently serves as the **Principal Geologist** for **NORCOSGO, LLC**. His responsibilities include the preparation of detailed reserve studies; detailed studies of geologic problems encountered in mining; industrial mineral audits and reserve estimates; the development and supervision of exploration and mapping programs; and management of mineral property in the Appalachian Basin . He has underground mining experience, including shift boss and mine manager. With 40 years of experience, he has been involved in the design and implementation of regional exploration programs and the evaluation of individual prospects and properties for a variety of minerals and fuels, including precious, base, strategic, and platinum group metals; industrial rocks and minerals; and coal.*

PROFESSIONAL EXPERIENCE

In **October 2005**, Mr. Norris took the position as principal geologist with **NORCOSGO, LLC**. His responsibilities include the supervision of a wide range of projects variously involving coal, precious and base metals, and industrial rocks and minerals. These projects range from geologic assessments, mining feasibility studies, environmental assessments and audits, mineral property and equipment appraisals, to the management of large parcels of mineral lands in the Appalachian Basin.

His experience in **geologic assessments** includes both projects involving reserve estimation as well as those involving geologic problems encountered in mining. He is experienced at in-mine mapping of both coal and metals mines as a tool in the identification and solution of mining problems related to depositional environments, structural features, and mining techniques.

The area of Mr. Norris' practice naturally lead to his participation in **mine feasibility studies**, where he participated in the evaluation of mines and mineral properties as candidates for acquisition, in the development and evaluation of mine plans, and in the on-going assessment of operating mines. A portion of this work was conducted on a recurring and periodic basis for landowners at lessees' mines on their property, as well as for the mines' operators.

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His experience in **environmental assessments and audits** is extensive, having participated in studies throughout the U.S. These include assessments on properties involving a specific mining operation to those containing 300 thousand acres of surface and 5 million acres of mineral ownership in seven states.

Mr. Norris has been a key member of appraisal teams and his **appraisal experience** includes resources as varied as coal, precious metals, phosphate, trona, and crushed stone, sand, and gravel.

In **September 1990**, Mr. Norris took the position as **Vice President of Geology** for **Stagg Resource Consultants, Inc.** His responsibilities included the supervision of a wide range of projects variously involving coal, precious and base metals, and industrial rocks and minerals. These projects ranged from geologic assessments, mining feasibility studies, and environmental assessments and audits to mineral property and equipment appraisals.

In **early 1990**, Mr. Norris was a **Lead Geotechnical Inspector** for **Morrison-Knudsen Engineers**. In this position, he was responsible for quality control during the reconstruction of a breached dam, the Quail Creek Reservoir in St. George, Utah. He also developed a program for testing aggregate, different types of concrete, and oversaw the inspection of materials and workmanship to assure specifications were being met.

In **1989**, Mr. Norris was employed by **Woodbridge Corporation**, as the **General Mine Manager** of the Bessie G Mine in Hesperus, Colorado. He was responsible for the supervision of the gold mining operation, which included the design, development, exploration, production, and technical aspects of mining.

In **1987**, Mr. Norris was promoted to **Chief Gold Geologist** for a subsidiary of **Energy Fuels, Gold Star Corporation**. In this position, he was instrumental in the development and implementation of exploration, development, and production drilling programs for the company. His responsibilities included; production accountability, grade control, surveying, engineering, ore management, and permitting of the company's active operations, as well as the evaluation of gold properties for acquisition.

In **1984**, Mr. Norris accepted the position of **Senior Project Geologist - exploration** with **Energy Fuels Nuclear, Inc.** His responsibilities included the supervision of exploration drilling and geologic mapping of uranium-bearing solution collapse breccia deposits. This program resulted in the identification of Energy Fuel's largest uranium breccia deposit, which is its most current mining operation. Mr. Norris also conceived a new working model for uranium deposition in breccia pipes which is used today.

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In **July 1982**, Mr. Norris accepted the position of **Vice President of Minerals** with **Gulf Energy Corporation**. His responsibilities included the development and implementation of a program to investigate and acquire precious metal and strategic mineral properties. During this program, he conducted extensive geologic investigations and feasibility studies on a variety of prospects throughout the western United States.

Mr. Norris was employed by **Alan K. Stagg & Associates, Inc.**, in **June 1976**, as a field geologist. His initial responsibilities included geologic mapping, supervising diamond core drills and logging core, and calculating coal reserves.

Mr. Norris was named resident geologist at the company's Golden, Colorado, office, which he opened in December 1980. His responsibilities in this position included the supervision of coal consulting projects and the investigation and evaluation of precious metal prospects in the western United States.

EDUCATION

Mr. Norris received his **Bachelor of Science** degree in Geology from **Eastern Kentucky University (EKU)** in **1975** and a many courses in hard rock Geology from the **Colorado School of Mines (CSM)** **1978 - 1984**. Some of the more important courses taken are listed below:

Two courses in Advanced Mineral Deposits I & II (CSM)

Geochemical Exploration (CSM)

Uranium Geology & Exploration (CSM)

Igneous and Metamorphic Petrology (CSM)

**Economic Evaluations and Investment Decision-Making
Methods (CSM)**

Geostatistics (CSM)

Technical Communications (CSM)

Mining Economics and Feasibility Analysis (CSM)

Petroleum Geology (EKU)

Sedimentary Petrology (EKU)

Sedimentology (EKU)

Hydrology—WV College of Graduate Studies

Hydrogeology—University of Colorado at Denver

Geomorphology—Marshall University

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Continuing education includes the following advanced courses, short courses, and seminars:

Short course—**Managing Multiple Projects**—Colorado School of Mines

Short course - **Appalachian Coal Deposits** – Carolina Coal Group (PhD John C. Ferm and PhD John C. Horn)

Short course - **Western Coal Geology and Exploration**—University of Michigan (PhD Oval Cross)

Short course - **Professional Guide to On-The-Job Writing**

PROFESSIONAL CERTIFICATIONS

Mr. Norris is a Certified Professional Geologist with the American Institute of Professional Geologists (“AIPG”) --- Certificate Number 8002 and is a past-president of the Virginia Section of the AIPG.

Mr. Norris also holds the following other professional certifications:

Certified Nuclear Technician
Certified in Underground Mine Rescue
Journeyman—brick mason and cement finishers union

PROFESSIONAL REGISTRATIONS

Mr. Norris is a Registered Professional Geologist in seven states.

Alabama	—	Registration No. 823
Alaska	—	Registration No. AA281
Kentucky	—	Registration No. 1623
Texas	---	License No. 1258
Utah	---	Registration NO. 2250
Washington	---	Registration No. 1925
Wyoming	—	Registration No. 945

Mr. Norris is considered a **Geologist** in the following states as the result of a legislative definition of a Geologist.

Colorado	Montana
Nevada	Tennessee

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PROFESSIONAL MEMBERSHIPS

Mr. Norris is a member of the following professional organizations:

Society of Mining, Metallurgy, and Exploration, Inc.
American Institute of Professional Geologists
West Virginia Land and Minerals Owners Association
Appalachian Geological Society

PUBLICATIONS/PROFESSIONAL PAPERS

Mr. Norris is a author or co-author of the following publication:

Hampson, A., and Norris, JG 1988, **Minerals of the Bessie G Gold Mine, La Plata County, Colorado**: Precious Metals Symposium, Golden, Colorado.

Norris, JG 1989, **The Enigma of Uranium Deposition in Solution Collapse Breccia Deposits on the Arizona Strip**; published in Pay Dirt.

Norris, JG, 1993, **The Anomaly of Gypsum Spears and Calcite Crystals in the Root Canal—Scott Hollow Cave, Monroe County West Virginia**, June, 1995 National Spelunkers Society News (NSS)

MILITARY SURVIVE

Mr. Norris received training from the US Army in 1969 and 70, as outlined below:

- Basic Training (Fort Dix, New Jersey)
- Advanced Individual Training—Infantry (Fort Lewis, Washington)
- Non-Commissioned Officers School (Fort Benning, Georgia; Infantry School)
- Airborne Training (Fort Benning, Georgia; Infantry School)
- Ranger Training (Fort Benning, Georgia; Fort Gordon, Georgia; and the Florida Everglades; Infantry School)

Mr. Norris served his country proudly in Vietnam as a sergeant with the 1st Battalion of the 501st Brigade (1/501st) of the 101st Airborne Division in 1970 and 71. While on active duty in Vietnam, Mr. Norris was awarded a: Combat Infantryman Badge, Bronze Star with “V” for valor, Purple Heart, along with Army

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Commendation Metals. Mr. Norris received an honorable discharge in 1971, upon his discharge from active duty.

Mr. Norris is currently active with the Veterans of Foreign Wars of the United States (VFW) at Hurricane, West Virginia, Donel C. Kennard Post 9097. At the Post level, Mr. Norris is the commander of the Honor Guard and a trustee. At the State level Mr. Norris is the Director of the only VFW Youth Camp in the nation, in West Virginia, the liaison between the VFW and the State Veterans Home at Barboursville, West Virginia, chairman of the POW-MIA for the State, chairman of Homeless Vets in the State, and Captain of the Department Honor Guard. Mr. Norris has also served as Aide-de-Camp to the National Commander in Chief of the VFW.

Mr. Norris receives VA compensation for wounds suffered during his "Tour of Duty" in Vietnam.