ENEGIS, LLC

Geologic Investigation of Solid and Fluid Minerals of the North Caucasus Mountains near Akki, Chechnya, Russia

Submitted to:

Dr. Attila Kovacs, Vienna, Austria

Mr. Ele Baysarov, Moscow, Russia

Submitted by:

Jeffrey Eppink, President
Enegis, LLC
12301 Donaldson Court
Fairfax, VA 22033
Phone: 1+ 703.861.4189
Fax: 1+ 703.. 738.7022
JEppink@Enegis.com

April 2007

Introduction

Enegis, LLC, is pleased to present this proposal to Mssrs. Kovacs and Baysarov for a reconnaissance study of solid and fluid minerals near the village of Akki, Chechnya, Russia located by the coordinates:

42° 51’ 24,98’’ N
45° 14’ 13,13’’ E

There are indications that silver, copper and lead in the remote past along the banks of the river crossing the area and the waters of a nearby lake contains H_2S. In addition, coal may have been produced in the area. The client is interested to understand what can be learned about this setting based upon such limited information on a remote basis to make a judgment regarding the prospectivity of this area of Caucasus Mountains

We have looked into this matter and believe a fair amount of work could be done remotely to assess Mr. Baysarov’s area of interest, which we define as the village of Akki and surrounds (see Figure 1). The silver, copper and lead shows near the rivers could be a positive sign that mineral deposits are amenable to detection using remote sensing imagery.

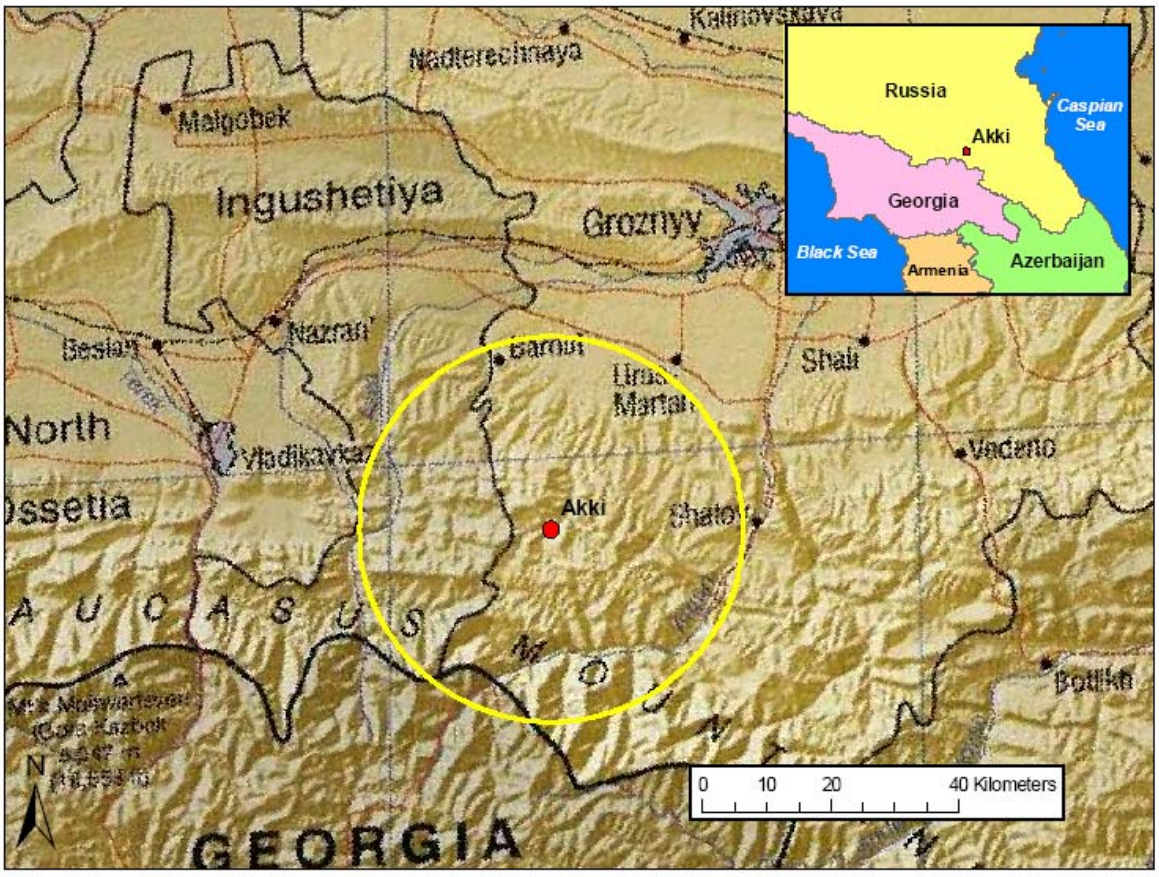

Figure 1. Location map for the project.

We examined data that we have in hand or are accessible to us and, as it turns out, there appears to be a reasonable amount of information. The U.S. Geological Survey (USGS) is nearby in Northern Virginia and is a tremendous resource for geologic information, some of which we anticipate will cover the area of interest. In addition, we have industry contacts who could be queried about the area. We suggest a two-pronged approach to scope the area: an information and literature review followed by an analysis of remote sensing data to assess the area. The study would have two primary tasks as presented below.

For this project, Enegis will team with Upstream Resources, LLC, a firm specializing in solid minerals exploration and development. The principals from these twp firms, Jeffrey Eppink and Dr. Patrick Okita, collectively have over 50 years of experience in activities relevant to this project. Their resumes are attached. Enegis and Upstream Resources each have about five staff with geologic, research and mapping skills.

Proposed Scope of Work

Following is the scope of work for the study.

Task 1: Information and literature review. The objective of this task will be to assess (a) fundamentals geologic terrain, (b) regional and specific studies on resource assessments, and (c) specific resource occurrences of interest (silver, copper, lead, coal, and natural gas).

We would review sources such as academic literature, industrial data reports, and contacts knowledgeable of the trans-Caucasus region. Part of the literature search will need to canvass the Russian literature and maps for some of their resource assessments. We anticipate that the USGS may have these resources in-house (maps, especially, will be quick and expeditious in identifying prospectivity). We also have the USGS oil and gas assessment for the region, which shows known fields.

We suspect the geologic data will fall into two categories that can be extrapolated into the area of interest: (1) terrain studies that will be of superficial benefit and (2) specific sites that won't occur in the study area but may be germane to it. We feel that there is significant information available, however, we will not know the viability of this approach until we actually conduct it.

With regard to hydrogen sulfide, it could be associated with natural gas, but is also found in oil, geothermal fluids or it simply could be the anaerobic decay of organic matter. If the H_2S were to be sampled and isotopic analysis performed, a firm assessment could be made as to the presence of a petroleum system. Sampling for H_2S is a very dangerous activity that we recommend only be conducted under controlled circumstances. No field work is proposed at this time as part of this proposal.

Task 2: Analysis of remote sensing data. The objective of this task will be to analyze and interpret satellite imagery with respect to minerals on interest. Imagery search and acquisition would be done in a two-step process to expedite acquisition. First, initial inspection of scene collections (MDA, SPOT, USGS) for post-2000 and Landsat 7 scenes only should identify 3 to 6

images that meet minimum quality guidelines (cloud cover, errors, time of day, sensors, etc.). (For example, a cursory look indicates that there appears to be very good Landsat 7 ETM+ image acquired in late 2001 that could be used for the project.)

The second step should be to evaluate the suitability of multispectral versus hyperspectral analysis. This will largely be determined by the nature of the geologic conditions and mineralization models under investigation.

Under this task, we would prepare base maps for the study area (topographic, basic infrastructure and culture (for reference only), basic geology) and populate database with site locations of relevance (e.g., mines, coal, oil, gas). Subsequently, we would perform basic processing of imagery (stitch/crop, georef/orthorectify, layer to base maps) and define and apply processing algorithms for mineral resource models.

Task 3: Reporting and presentation. The findings for the study would be conveyed in a Power Point presentation that would cover the methodology and results. Maps and images would also be produced for the study area. Presentation of the study would be made in Vienna, Austria on a mutually determined date.

Project Schedule and Deliverables

We anticipate that the project would take about 12 weeks to complete from signing of a contract. The timing of the project to some degree will depend upon whether we will need to program for satellite imagery, although at this time we believe that there will be adequate imagery in inventory. If imagery needs to be acquired, we may be subject to satellite schedules, which could delay data acquisition by a few weeks.

The deliverable will comprise a power point presentation packet showing the methodology and results. In addition, imagery and maps of the study area will be produced as hard copies and in electronic version.

Project Point of Contact

Mr. Jeffrey Eppink, President
Enegis, LLC
12301 Donaldson Court
Fairfax, VA 22033
Phone: 1+ 703.861.4189
Fax: 1+ 703.. 738.7022
JEppink@Enegis.com

Cost Proposal

Enegis proposes to perform the work as described above for a fixed price of $US 80,000, which includes travel to Vienna for two persons. All requested work that is beyond the agreed-

upon scope and period of performance of this proposal will be billed on a time and materials basis.

Terms are 1/3 of project price due upon signing of the contract followed by 1/3 due upon delivery electronic delivery of the project deliverables and the final 1/3 due upon presentation of the project.

Resumes

Jeffrey Eppink

Patrick Okita

JEFFREY F. EPPINK

EDUCATION:

1996 M.B.A., Virginia Polytechnic Institute and State University, Pamplin College of Business, Fairfax, VA
1981 M.S., Applied Geophysics, University of Southern California, Los Angeles, CA
1978 B.S., Geology (cum laude), California State Polytechnic University, Pomona, CA

PROFESSIONAL EXPERIENCE:

Currently President of Enegis, LLC, Inc., Mr. Eppink has over 26 years of consulting, technical, and analytical, experience in a wide variety of energy projects worldwide, including geothermal and oil and gas. Mr. Eppink has given numerous presentations to senior industry executives and government officials and has provided testimony and presentation to the U.S. Congress and the White House on energy issues. His employment history is as follows:

Enegis, LLC	President	2006-present
Advanced Resources International	Senior Vice President	1998-2006
ICF Kaiser International	Project Manager	1991-1998
American Association for the Advancement of Science	Diplomacy Fellow in U.S Dept. of State	1992/93
Chevron Overseas Petroleum, Inc.	Exploration/Development	1981-90
Jet Propulsion Laboratory/NASA	Research Assistant	1978-81

Mr. Eppink's experience includes participation in the following projects:

- North American Unconventional Natural Gas Study: For a large non-U.S. O&G company, Mr. Eppink provided a study of over 85 plays, examining unconventional gas resources (CBM, tight gas, gas shales), examining production and economic metrics, play characteristics, F&D, drilling, capex, opex costs, success rates; well depths, drilling environments, well spacing, production decline, EURs, local wellhead price and play ranking. Further, technology application, play concepts, surface conditions, regional drilling issues and activity, leasing terms and fiscal requirements, legislative, regulatory and policy issues, regional gas market and infrastructure and the competitive landscape were examined.

- Energy Policy and Conservation Act (EPCA) Inventory: For this high-visibility effort for the U.S. Departments of Interior, Agriculture and Energy, Mr. Eppink designed, organized and executed an effort to collect extensive surface data and analyze oil and gas resources on federal lands according to a hierarchy of land access categorization. One of the fundamental challenges of the effort was to design an analysis that provides meaningful results from a complex set of data. The EPCA Phase I Inventory was released in January 2003 and covered the following basins: San Juan, Paradox, Uinta/Piceance, Greater Green River, Powder River and Montana Thrust Belt. Currently Mr. Eppink directed the EPCA Phase II Inventory, which covers Northern Alaska (NPR-A and ANWR), Wyoming Thrust Belt, Florida Peninsula and the Appalachian and Black Warrior basins. He is currently directing

the EPCA Phase III Inventory, which cover the whole of the U.S.

- Geothermal Royalty Rate Determination: This work arose from the Energy Policy Act of 2005 (EPACT), which addresses Federal geothermal leasing. An analysis was designed and developed by Mr. Eppink to compare the "gross proceed" method under EPACT with the "netback" pre-EPACT method to determine under what conditions the two methods would be revenue neutral. The work is being used to assess the viability of proposed Federal geothermal royalty rates arising from the EPACT and involved examination of geothermal resources, development, appropriate technology application, consideration of distances to the existing grid, and detailed economics.

- National Petroleum Council (NPC) Natural Gas Reports. Mr. Eppink participated in both of the recent NPC natural gas reports. For this 1999 NPC study, Mr. Eppink performed the critical analysis of the impacts of surface restrictions on natural gas resource development in Rocky Mountain Basins, one of the two major areas of future natural gas supply identified by the NPC. Mr. Eppink's work included guidance on production cost determinations for natural gas on a basin basis. He also provided critical review of the 2003 report.

- Gulf of Mexico Oil and Gas Supply: For the American Petroleum Institute and the Independent Petroleum Association of America, Mr. Eppink conducted a scenario analysis of the benefits in terms of incremental production to the Nation of the continuance of the terms of the Deepwater Royalty Relief Act. The modeling analysis provided assessment involving resource base determination, full project costs and economics and leasing with production forecasts and government revenues over a 20 year projection. The project also included collection and explicit verification of E&P discovered resource and field-by-field production data, cost data, and infrastructure data.

- Greater Green River Basin Assessment For this critical basin in the western U.S., Mr. Eppink performed an in-depth resource assessment of the emerging resources of the Mesaverde and Frontier formations. The project was conducted for the U.S. Dept. of Energy (USDOE), and included remote sensing image and potential field data evaluation to determine basin architecture, geochemical data evaluation, petroleum systems basin modeling, estimation of resources-in-place, and the potential for economic recovery. The analysis was Geographic Information Systems (GIS) intensive and very detailed, examining the recoverable resource potential on a township by township basis, providing insight into determination of sweet-spot areas for these unconventional gas plays. The study included the development of a model to determine market-price clearing developable resources.

- Kazakhstan Lease Evaluation/Basin Analysis. Mr. Eppink performed an in-depth assessment of a geologic basin in northern Kazakhstan for a Russian oil and gas company. The analysis included remote sensing interpretation, seismic analysis, oil seep analysis, and geologic modeling and petroleum systems analysis. The analysis also made recommendations for addition acreage acquisition, which the client acted upon.

- Inventoried Roadless Areas Analysis. This study, which analyzed the resource impacts of the proposed "inventoried roadless areas" (50 million acres in the lower-48 states), has been

widely quoted. Mr. Eppink has presented the study to White House officials and Senate and House energy committees. The study, which was funded by the USDOE, was presented by Mr. Eppink to the White House.

- Assessment of Canadian Oil Sands. In the mid-1990s, Mr. Eppink conducted a study which analyzed the oil sands in western Canada in terms of resources, the technologies being applied, costs of extraction and processing, and projected development. A spreadsheet model was developed to allow for the consideration of various scenarios. The study was conducted for a private pipeline company.

- Training for Russian Oil and Gas Managers. Mr. Eppink developed and instructed a seminar for Russian oil and gas managers on project/prospect evaluation as practiced in international oil and gas companies. The seminar emphasized the technological evaluation (including basin analysis) of projects. The training was provided through the International Business School of Moscow and was presented over 30 times.

- Geochemical Modeling of the Zhu-1 Depression, South China Sea. Conducted for Chevron Overseas Petroleum, Inc., Mr. Eppink was a principal team member involved in seismic interpretation and basin analysis and for exploration efforts in the South China Sea. Petroleum systems analysis in the project ranged from biomarker analysis, mapping of lacustrine source rocks, maturity profiling an mapping, migration pathway mapping and seismic stratigraphy. The team's exploration efforts resulted in three oil discoveries, two of which have been developed and contain reserves of over 200 mm barrels.

- Nigerian Reserves Assessment using 3D Seismic. While at Chevron Overseas Petroleum, Inc., Mr. Eppink served as Project Leader for a team of twelve employees involved in a reserves review of two of Nigeria's largest oil fields (Delta South and Meren). Technical aspects included analysis of 3-D seismic data and interpretation of petrophysical data from 92 wells. Subsequently, a synthesis of the data into an improved geological reservoir model was performed, reserves were determined and optimal reservoir management plans were developed. Total reserves assessed were over 1.1 billion barrels of oil-in-place.

SELECTED REPORTS AND PRESENTATIONS:

Geothermal Development on Federal Lands: Projection of Royalty Impacts Resulting from the Energy Policy Act of 2005, Dept. of the Interior, 2007

Energy Policy and Conservation Act Inventory of Federal Lands (Phase III Inventory), U.S. Dept. of Interior, see the website http://www.blm.gov/epca 2006 (senior author).

Balancing Natural Gas Policy –Fueling the Demands of a Growing Economy, National Petroleum Council, See http://www.npc.org, 2003 (reviewer).

Energy Policy and Conservation Act Inventory of Federal Lands (Phase I Inventory), prepared for the U.S. Dept. of Interior, see the website http://www.doi.gov/news/030116a.htm , 2003 (senior author).

Assessment of Natural Gas and Oil Supply Issues in the Deepwater Gulf of Mexico Royalty Relief, Offshore Technology Conference paper OTC paper 13225, 2001 (principal author).

Meeting the Challenges of the Nation's Growing Natural Gas Demand, National Petroleum Council, See http://www.npc.org, 1999 (reviewer) (co-author).

An Application of Engineering Economics in Production Sharing Contracts, A Case Study of India
International Association of Energy Economics annual meeting, New Delhi, India, 1997 (co-author).

Inventoried Roadless Areas Resources Assessment: prepared for the USDOE, 2000, see http://www.fossil.energy.gov/programs/oilgas/publications/roadless/ari_112000.pdf , (principal author).

Western Hemispheric Hydrocarbon Sector Decision Support System, (prospectus), joint project presented for development for the Latin American Energy Organization (OLADE), 1996 (co-author).
Estimation of Reserves Potential of the Oriente Basin and Impact on the TransAndean Pipeline, Ecuador, due diligence work for a private Canadian client, 1994 (principal author).

Implications of Recent Paleozoic Discoveries for Exploration Strategies in the Arabian Peninsula, prepared for Chevron Overseas Petroleum, Inc., 1990 (principal author).

Evaluation of the Mardin Anticline, Turkey: Structural and Geochemical Aspects of Prospectivity, prepared for Chevron Overseas Petroleum, Inc., 1990 (co-author).

Reserves Evaluation of Meren Oil Field, Offshore Nigeria, prepared for Chevron Overseas Petroleum, Inc., 1989 (principal author).

Geochemical Modeling of the Zhu-1 Depression, South China Sea, prepared for Chevron Overseas Petroleum, Inc., 1985 (principal author).

PROFESSIONAL AFFILIATIONS, REGISTRATIONS, AND PERSONAL DATA:

- Registered Geologist, State of California
- Registered Geophysicist, State of California
- American Association of Petroleum Geologists, member
  - Member of the Committee on Resource Evaluation, AAPG
- Society of Exploration Geophysicists, member
- International Association for Energy Economics, member
- Listed in Who's Who in the West, and Who's Who in the World 1995-2005, Who's Who in Finance and Industry 1997-2004.
- **Nationality**: USA

Curriculum vitae for:

Patrick Masao Okita, Ph.D.
Principal

UPSTREAM RESOURCES

EDUCATION

Ph.D.	Geology	University of Cincinnati	Cincinnati, Ohio
MSc.	Geology	Louisiana State University	Baton Rouge, Louisiana
B.Sc.	Geology & Biology *Honors and Distinction*	University of Rochester	Rochester, New York

CORE COMPETENCIES

- ⌘ Successful leader of integrated exploration and business assessment teams that identify, capture, and realize resource opportunities.
- ⌘ Internationally recognized scientific and professional reputation in the earth science communities.
- ⌘ Diverse experience that integrates scientific, economic, and societal issues in industrial, government and academic approaches to resource development.
- ⌘ Wide-ranging roles establishing capacity building and stakeholder association mechanisms, leveraged on industrial mineral development.
- ⌘ Aptitude for integrated geologic evaluation using mapping, drilling, geophysics, and geochemistry; knowledge-capture via relational, GIS, and 3D visualization software; proficient in all analytical methods common to earth science investigations; excellent computer and mechanical skills.

COUNTRY EXPERIENCE

Argentina, Australia, Botswana, Canada, Chile, China, Ecuador, Egypt, Ethiopia, Guatemala, India, Ireland, Madagascar, Mexico, Morocco, Mozambique, Russia, South Africa, Trinidad and Tobago, UK, USA, Venezuela

COMMODITY EXPERIENCE

Barite, Bauxite, Bitumen, Borate, Coal bed methane, Copper (stratiform), Diatomite, Geothermal, Iron, Kaolin, Limestone, Magnesium, Manganese, Nickel (laterite), Oil & Gas, Oil Sand, Phosphate, Potash, Rare earths, Silica sand, Soda ash (trona), Titanium (mineral sands), Zinc

PROFESSIONAL AFFILIATIONS & CERTIFICATIONS

American Association of Petroleum Geologists – member
American Geophysical Union – member
Environmental Management Systems Auditing – certified 1996
Prospectors and Developers Association of Canada – member
Society of Economic Geologists – member
Society of Mining Engineers – member

SPECIAL SKILLS

Languages: English (native tongue); Spanish – intermediate; Arabic – basic; French – basic; Portuguese – basic; Japanese – basic.

Economic & Legal: Mining Exploration Agreement (Queen's University); Corporate Taxation (Price Waterhouse); Economic Modeling and Project Finance (Queen's University).

PUBLICATION SUMMARY

Over 75 proprietary reports on exploration, technical evaluation, reconnaissance assessment, and country mineral ranking; 18 refereed publications in international journals; 3 theses; contributions to field guides.

UPSTREAM RESOURCES LLC
111 PENNSYLVANIA AVE. • FALLS CHURCH, VIRGINIA 22046 • USA
TEL. 1.703.536.0917 • FAX 1.703.536.0918 • E-MAIL OKITA@UPSTREAMRESOURCES.COM

REFERENCES

References will be provided upon request.

PROFESSIONAL EXPERIENCE

2000 – to date **Upstream Resources LLC** Virginia, USA

Founder & Principal

Established an independent natural resource company to progress mineral and energy resource exploration and development using a holistic methodology, and striving for stewardship in resource evaluation and exploitation. The firm provides commercial, technical, scientific, and educational services and products to support partners and clients involved in natural resource management, investment, development and assessment.

1999 – 2000 **Advanced Resources International Inc.** Virginia, USA

Project Manager, Exploration and Mining Geology

Lead ARI's mineral consulting practice. Clients include petroleum and mining companies, government agencies, banks, insurance companies, law firms, natural resource consumers and consulting companies.

1990 – 1999 **BHP** Worldwide

Exploration Manager Industrial Minerals (1995 – 1999) *BHP World Minerals* *Virginia, USA*

Lead and coordinate worldwide exploration activity for industrial minerals (e.g. borate, iron, kaolin, manganese, nickel, oilsand, potash, titanium, trona); Develop and implement strategic plans coordinated with business units to identify and capture new opportunities; Provide technical support and knowledge management to business development and research divisions. Accountable to senior executive management and governments for safety, security, environmental performance, personnel, and fiscal management.

Country Manager (1992 – 1995) *BHP Minerals International* *Cairo, Egypt*

Resident exploration and business manager responsible for evaluating 16,000 square kilometer acreage; exploration activity and target testing through seismic surveys, drilling, and geochemical programs; Designed and managed deep drilling and coring programs using petroleum drilling rigs.

Exploration Geologist, Steel Raw Materials (1990 – 1992) *BHP-Utah Minerals* *Virginia, USA*

Responsible for acquiring and interpreting geological and related data for manganese reconnaissance programs primarily in the U.S. mid-continent. Recommended district exploration strategies.

1988 – 1990 **U.S. Geological Survey** Virginia, USA

Research Scientist, Office of Mineral Resources

Applied and laboratory research to appraise mineral resource potential and develop exploration models; sedimentary manganese carbonate deposits in China, Mexico, Morocco and Hungary; fossil hydrothermal systems of the Mid-continent Rift; alteration and mineralization at the Bayan Obo rare earth - iron deposit of Mongolia. Shipboard scientist and submersible diver on Gorda Ridge Task Force studying modern seafloor hydrothermal systems.

1986 – 1988 **National Science Foundation** Washington, D.C., USA

Research Fellow

Scientific research on chemical and sedimentary mineral deposits to: (1) determine deposit origin, (2) understand processes of metal concentration and precipitation, and (3) develop exploration models. Discovered characteristic stable isotope patterns and mineral associations in sedimentary manganese deposits leading to development of mineralization models.