



**UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
AFGHANISTAN SMALL AND MEDIUM ENTERPRISE DEVELOPMENT PROJECT
ASSESSMENT OF AFGHANISTAN GEMSTONE INDUSTRY**

SIBLEY INTERNATIONAL CORP.

for Development Alternative Inc. (DAI)

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Assessment of Afghanistan Gemstone Industry

I. Executive Summary

Under the Soviet regime, with respect to minerals including gems and precious metals, Afghanistan was referred to as “the icebox of the Soviet Union” implying that valuable reserves were recognized but that they would not be tapped in the near term. Now, as Afghanistan emerges as a new economy it must identify natural resources and other economic sectors to invigorate its fiscal condition through which social and other conditions may improve. It is estimated that there are more than 1,400 mineral occurrences in Afghanistan, more than 120 of which may be attributed to gems.

Status of the Afghan Gem Industry

The Afghan gem industry is operating in accordance with firmly entrenched ways of doing business that include smuggling of Afghan precious and semiprecious gems out of the country as raw material and family operated mine activities that rely on arms length deal making with the Ministry of Mines, if any government involvement at all. Capacity among government officials to regulate the sector to be market based is virtually non-existent and relies on Soviet practices of production-based operations, monthly mine rights’ payments instead of royalty schemes and little to no value chain operations that traditionally add up to 40% of gemstone value to its original value (i.e., transport, processing, cutting, polishing).

The Afghan gem industry is operating in a legal and regulatory vacuum. While the Minerals Law was adopted in 2005, capacity and understanding among government officials and mine operators remains considerably low and ineffective application of legal terms is the result. Strongly entrenched relationships and ways of doing business mean that government is not gaining national revenues that would ordinarily come in the form of taxes, custom collections, licensing and authorization fees and royalties.

Technically, most gem mining conducted in Afghanistan is done using very antiquated tools and equipment, including considerable hand work that in other more developed settings would be done with automated tools and equipment. Experts refer to Afghan small scale mining as “13th century technique”. There is no health and safety regime in place or equipment that would normally include helmets, goggles, gloves and proper safety footwear. There is mapping in some regions and not in others with virtually no consideration of environmental impacts to land, water and air.

A palpable disconnect between the Afghan government and the miners has not helped to legitimize existing mine operations where possible, complicated by inadequate and unfinished legal and regulatory reform in the Afghan government. Further, the Ministry of Mines promotes an unrealistic belief that the gem mines will be commercially developed by the foreign private sector yet continues to isolate international potential with the introduction of excessive fees, royalty rates and other costs that are unpredictable and add up to investment requirements far beyond comparable international value for similar market entry.

Nonetheless, there has been considerable interest in the gem industry of Afghanistan from Afghan and international investment interests since 2002. Pending more clear legal and regulatory frameworks, it is likely that these interests will pursue project development as they have throughout Central Asia and other gem markets throughout the developing world in recent years.

Potential for the Afghan Gem Sector

At a time when Afghanistan seeks to enhance its domestic revenues and to create diverse but sustainable job opportunities, gem mining makes strong economic, social and political sense. Opportunities for gem mining are present in virtually every part of the country and initial support from Government to facilitate a market-based sector is evident. Markets for the sector include domestic production and sales but more viably, export markets as close as China, Pakistan and India and as far as Europe and the United States. Optimistic estimates are that for every mine job created in a developing region, up to 90 additional jobs may be created to support the value chain; even half of this would have significant value for local and national economic growth.

Gemstone imports into the US in 2005 hit a record high with a total value of \$755M as reported by Colored –Stone Magazine. The total import value for cut ruby, emerald, and sapphire was \$412M, a 15.7% growth over 2004. In terms of individual gemstones, emeralds saw the biggest jump in value. While the import total increased by 12.4%, the price per carat was up 71%. (Colored-Stone Magazine Editor-in-Chief, Morgan Beard, July/August 2006.) This is indicative of the growing demand for fine gemstones such as those found in Afghanistan and Columbia, both countries known for the high quality of emeralds having the same mineral components. Rubies and sapphires experienced the same dynamic increase in imports into the US. There are similar statistics for Europe and other world markets which will be presented in another section of this report. These numbers provide a very clear indication of the potential for growth of gemstone exports from Afghanistan in the near term and in the long term. It should be noted that Afghan rubies, emeralds, sapphires, lapis lazuli, and many of the semi-precious stones are recognized internationally for their superior quality in comparison to gems from other areas.

This assessment

A Sibley International team of international experts visited Afghanistan to work with Afghan experts to assess the feasibility of a US Agency for International Development (USAID)-funded initiative to restore and revitalize the Afghan gemstone mining industry. This trip was logistically supported by the Afghanistan Small and Medium Enterprise Development (ASMED) project implemented by DAI in Kabul. The members of the Sibley team, Donna Sibley, Gary Bowersox, and Lawrence Snee visited Afghanistan from May 3 to May 16, 2007. Mary Louise Vitelli worked offsite during this time. The members of the Sibley team collectively have more than 70 years experience working in the gemstone sector in Afghanistan.

The Sibley team conducted a broad spectrum of meetings and site visits while in Afghanistan representing all levels of the gemstone industry. These included Afghan, American, British and other government officials; Afghan tribal elders; gem miners; gem traders; gem processors; and gem retail merchants.

Site visits were made to the Jegdalek ruby deposits, the Panjshir emerald deposits, the Women's Vocational Center, several lapis lazuli and other gemstone polishing centers in Kabul, and the Afghan Geological Survey gem-identification laboratory sponsored by the British Geological Survey.

Meetings were held with gemstone miners and ruling families in Jegdalek and Panjshir as well as with miners, traders, transporters and exporters of Afghan gems in Kabul. Other discussions and meetings were conducted with international mine advisors as well as representatives of USAID, DAI, BearingPoint, the Afghan Reconstruction Group (ARG) at the US Embassy, the British Geological Survey, and Altai Consulting. Within the Afghan government, meetings were held with

the Afghan Minister of Mines, the Afghan Geological Survey (AGS), the Afghan Export Commission, the President of the Shamshad Television, and the President of the landmine clearing foundation.

The trip was highly productive and highly visible. There is a clear unanimity in the belief that the revitalization of the Afghan gemstone industry can have a fundamental impact in the development and growth of the Afghan economy. There is broad based agreement that the industry needs substantial assistance in all aspects of the value chain “from mines to markets” as identified in the June 2006 independent assessment conducted by Sibley International.

II. Objective

The objective of this assignment was to update an earlier assessment of the institutional, technical, legal, regulatory, financial, logistical, and other conditions bearing on small-scale gemstone mining, processing, and marketing in Afghanistan. The earlier assessment was conducted in April-August 2006 by Sibley International and members of its team. This resulted in the unsolicited proposal for the Immediate Remediation of the Gemstone Industry in Afghanistan which was submitted to USAID/Kabul by Sibley International in June 2006 and further clarified to USAID in September 2006.

III. Background

Gemstones mining in Afghanistan started more than 7,000 years ago. Many of the fine emeralds, rubies, lapis lazuli, sapphires and tourmalines mined and processed in Afghanistan can be found in historic collections around the world, including the British Crown Jewels, the Taj Mahal and the Royal Crown Jewels in Russia. Throughout the recent years of war with Russia and then the Taliban, the gemstone industry flourished, providing much-needed financial resources to both. Today it is a fraction of what it had been historically. Since 2002, with the coming of the new Afghanistan government in Kabul, the gemstone industry has suffered significantly and many mining areas have been closed or partially closed. Tribal people who mined throughout the war years have been publicly referred to as smugglers by Afghan government officials. Commonly the only resource these miners have for survival is to turn to illegal and dangerous occupations such as poppy cultivation.

A lack of government connectiveness to the sector and its resulting lack of government support for more than two decades has resulted in the destruction of any government sanctioned infrastructure for trading in the gemstone industry and the continued use of primitive and dangerous mining methods used by the artisan miners. It is estimated that roughly 95% of gemstone production is transported into Pakistan and sold at drastically below market prices. Virtually none of the value chain for gemstones remains in Afghanistan resulting in very large financial losses to the artisan miners, the gemstone processors, the gem traders, the government of Afghanistan, the social infrastructure and employment opportunities for the Afghans. Currently the Afghan government is working without tax, duties or foreign currency from the gem industry.

A report, “Geology and Mineral Resources of Afghanistan”, published by the United Nations in 1995, concluded that among other efforts to rebuild the economy, “gold and gas exploration and the rehabilitation of the gemstone industry are critical because all are good sources of foreign deposits, a critical component in the stabilization of the Afghan economy”.

Revitalization and remediation of this industry can help to legitimize existing operations, attract foreign investment, provide jobs and incomes to Afghans, provide the artisan miners security in their rights to mine, insure safer mining and processing techniques to the artisans, and provide legitimate income to the Government of Afghanistan (GOA).

IV. Specific Task

The specific Tasks in the Statement of Work developed by DAI for Sibley International required:

1. Meeting with leading artisan miners in at least two or three mining regions, possibly Jegdalek and Panjshir Valley.
2. Reevaluating the Institutional, Legal and Regulatory Framework based on the Minerals Law approved by Parliament in July 2005.
3. Evaluating other small gemstone initiatives that have been funded by other donor organizations.
4. Evaluating existing lapidary and gem-identification centers.
5. Developing a Market Opportunity Analysis to examine the size of the international and internal markets for specific gems in the short term and in the long term.
6. Developing an Intervention Opportunity Analysis to identify Afghan partners and local BDS firms that will be able to build their capacity as they work through the improvement of the gem trade in Afghanistan.

The Deliverables for the tasks of this fact-finding trip are:

1. A written assessment of the feasibility of holding a forum with government officials, and other gemstone specialists, including miners, traders, processors, and marketers, to identify legislative and regulatory barriers to the revitalization of the gemstone industry.
2. Oral and written reports summarizing the findings the Sibley team.

V. Summaries of the Results of Each Task

This report is the written summary of the Sibley team visit to Afghanistan. The oral report was presented to Mr. Jim Hellerman, DAI Chief of Party for the Afghanistan Small and Medium Enterprise Development (ASMED) Project and Mr. Zdravko Sami, Private Sector Specialist and ASMED CTO, USAID in Kabul on May 16, 2007. This report also includes recommendations regarding a forum of government officials, donor organizations, gemstone miners, traders and exporters, and others with interests in the gemstone industry. The objective of the forum would be to identify and seek resolution of the legal and regulatory barriers to the revitalization of the gemstone industry.

The Sibley team found no formal source of surveys or information regarding much of the mining industry, the exceptions being geological surveys and reviews of the legal situation. The team relied on its past experience and its colleagues and associates in the Afghan gemstone industry to conduct particular part of the overall assessment. It is, therefore, anecdotal in nature. Nonetheless, the team is confident that it fully captures the essence of the situation as it exists in Kabul.

1. Task 1. Meetings with leading artisan miners in at least two or three mining regions, possibly Jegdalek and Panjshir Valleys.

a. During the May 2007 visit, the Sibley team spent two day in the Jegdalek ruby mining area. The mines of the two village-controlled parts of the ruby belt were visited; mining methods were assessed; geologic control of the ruby layers was evaluated; village elders were interviewed; local schools were visited; and meetings were held with local and district government officials.

b. The Sibley team also visited the Panjshir Valley emerald mines for three days. Again, mining methods were assessed; geologic control of the emerald-rich zones was evaluated; village elders were interviewed; local schools were visited; meetings were held with local and district government officials.

The following is a general summary of the gem mines based on these current visits as well as the numerous visits made by Gary Bowersox and Lawrence Snee to Afghan gem mines over many years. These include emerald (Panjshir Valley district, Parwan province), ruby (Jegdalek deposit, Kabul province), lapis lazuli (Sar-e-Sang deposit, Badakhshan province), and gem-bearing pegmatites (throughout Nuristan). Although site visits to the mines in Badakhshan and Nuristan were not done on this trip, they are included in this summary to provide a more complete discussion of the Afghan gemstone industry

Emerald deposits in the Panjshir Valley were visited by the Sibley team. The Panjshir emeralds have been mined since approximately 1985. There are no known actively producing emerald deposits in Afghanistan outside the Panjshir Valley although Kazmi and Snee (1989) reported emerald deposits in Nuristan. The known emerald deposits of the Panjshir Valley in Parwan Province lie along the valley's southeastern side near the village of Khenj (Kazmi and Snee, 1989; Bowersox and others, 1991), which is about four hours by car north of Kabul. The emerald-bearing zone occupies an area about 3-km wide and 20-km long. The quality of the emeralds is high, comparable to the best production of the Muzo mine in Columbia.

The main mining areas are known as Darkhenj, Mikeni, Butak, Buzmal, Bakhi and Darun. The mines are owned and exploited by the villagers of Khenj and are under the political control of the local families. Individual mines or pits are owned and operated by teams of five to seven men. Agreements are made on sharing the proceeds and paying taxes in the valley. Because of the unsafe methods used by the miners, the Panjshir emerald mines are exceptionally dangerous. Each 'mine' is actually a collection of dozens of pits and tunnels driven into the mountainside as deep as 50 meters. The miners commonly "follow the color" with relatively little understanding of geologic constraints. (The color followed by the miners is a hydrothermally altered zone along which beryllium-rich fluids flowed and interacted with chromium-bearing hostrock to form emerald.) The mines are at altitudes between 10,000 and 14,000 feet where commonly up to 6 feet of snow cover the ground in the winter, making mining conditions harsh and dangerous.

Ruby deposits of the Jegdalek area were also visited by the Sibley team. This mining area is the most accessible of all Afghanistan's gem mines, located about 100 km east of Kabul near the Jalalabad – Kabul road. The mine is actually a 4-km long belt of several parallel ruby-rich marble layers. The mining area is controlled by two separate village groups, one controls the western part of the belt, the other the eastern part. Each ruby-rich layer is a vertically oriented meter-wide bed at the widest. Here, too, the miners "follow the color" (they are actually following chromium and iron-rich layers that were clays that are now metamorphosed to mica-

rich layers). The miners trace these layers for up to 70 meters in depth. Again mining methods are primitive and collapse of the mine walls commonly kills miners.

Reports from ruby miners suggest that the deposits are large. The crystals range from a light purple-red to a deep 'pigeon's blood' red. The best quality stones are similar to those found in Mogok, Burma. Quality faceted stones as large as 10 carats have been seen in the market, but good-quality specimens rarely exceed 5 carats. Estimated output of Jegdalek with proper mining could be several million dollars per year. Ownership and political control is similar to the Panjsher emerald mines.

Lapis lazuli deposits of Sar-e-Sang, Badakhshan were not visited during this trip, but have been visited by Sibley team members in the past. The Sar-e-Sang lapis lazuli mines located in Badakhshan in Northeast Afghanistan date back to at least 5,000 BC and are arguably the oldest mines in the world. The mines are primarily located in the difficult to access Kowcha Valley in southern Badakhshan. In this area the peaks rise steeply to over 18,000 feet. Mining is restricted to summer months because the winters are too harsh. Miners live in mining villages away from their families. Access to the mines is up the steep valley walls. Mining methods here are as primitive as in other gem mines of Afghanistan. Production is still good but lapis is commonly stock piled due to the remoteness of the region. Lapis is one of the easiest minerals to cut and polish into gems and objects of art. Many of the skilled lapis lazuli workers have recently moved back to Kabul from areas in Pakistan, but many still live in Pakistan.

Semiprecious gems of the Nuristan pegmatite region also were not visited by the Sibley team on this trip, but have been visited in the past.. Nuristan is the most inaccessible gemstone mining area of Afghanistan and one of the most isolated and difficult places in the world. Villages known to be involved in the pegmatite mining business are Mawi, Suraj (the two which seem to be the most productive), Nilaw, and Korgal. Despite harsh conditions, Nuristan miners work year round. The Nuristan deposits are entirely pegmatite-hosted (that is, occurring in coarsely crystallised igneous rocks), and consist of tourmaline, kunzite, aquamarine, spodumene and morganite. The pegmatite veins vary greatly in shape and size, but are generally veins or lenses up to 40 meters thick and up to several kilometers long. The gem-bearing areas of the pegmatite are usually encountered 10 to 20 meters below the surface. Crystals of tourmaline, spodumene, and beryl (aquamarine, morganite and goshenite) occur in cavities up to 50 centimeters across. The crystals are remarkable for their high quality, size, and diversity of colors. In addition to gems that can be cut or polished, the pegmatites provide extraordinary specimen-quality material for private collectors and museums.

The government currently has an unequally applied moratorium on gem mining. In the Jegdalek area, the government imposed work stoppage is severely affecting the ruby mines. The mines are closed, but the poppy crop is the largest ever witnessed by several of the Sibley team. Just two years ago, very little evidence of poppy growing existed in this area. Today, poppies are abundant. The miners rationalize that they need to feed their families and without the income from mining there is nothing else to rely on for income. In contrast, in Panjshir, emerald mining is vigorous and there is no evidence of poppy growing. In fact, government officials in Panjshir are proud of the fact that the mines are active and that miners do not need to resort to growing poppies to feed their families.

The miners acknowledge the lack of adequate resources and training for safe extraction of gems. They have been seeking resources from the GOA and donor organizations to provide basic equipment including small pneumatic hand-held drills, safe blasting materials, and training in safe and environment-friendly mining techniques. The primary markets for their gems at this time are across the borders with Pakistan and Tajikistan. Government actions have virtually stopped all trading through Kabul which leaves little choice but to trade in other ways. The moratorium on mining in Jegdalek has led to a very pronounced increase in the growth of poppies for the miners to survive.

Candid discussions with the miners in Jegdalek and Panjshir and other miners who came to Kabul to meet with the Sibley team revealed their deep distrust of the central government, the Ministry of Mines, and the Minerals Law of 2005. The Sibley team also had numerous meetings with Afghan national government officials, American government official, World Bank advisors to the Afghan government, gem miners, several NGO representatives, and others to discuss the state of the Minerals Law and the impact it is having on the Afghan gem-mining industry. Discussions with James Yeager, Senior Advisor to the Minister of Mines and Industries, and with Suleman Fatimie, CEO of the Export Promotion Center of Afghanistan, revealed major concerns in the applicability of the Minerals Law of 2005 to small-scale and artisanal gem-mining activities.

Uncertainties in many aspects of the law are obvious. These uncertainties include issues such as the definition of size of claims, responsibility of miners to the government, responsibility of the government to the miners, fairness of the proposed 15% royalty imposed by the government on miners, lack of support of the government to the miners, and enforcement issues. There is a clear disconnect between the miners and the central government officials. Some of these issues could be resolved with a forum of government officials and the various participants in the Afghanmining industry. This forum is discussed in Task F of this report.

2. Task 2. Reevaluation of the Institutional, Legal and Regulatory Framework based on Minerals Law approved by Parliament in July 2005. (Donna, what about attaching the report as an annex and keep this summary piece here?)

a. Institutional Framework

A key challenge to a functioning gem market in Afghanistan is the manner in which the institutional and governance arrangements are designed and operating. Firmly entrenched ways of doing business combined with a lack of modern gem market operations is resulting in ad hoc resource extraction, virtually no state return in the form of taxes, licensing fees, custom payments, and no capacity building that would ensure sustainability of safe and viable gemstone operations. The inadequacy of these arrangements provides considerable areas for corrupt practices. Left unchanged, the financial, resource and environmental consequences could be devastating for the long-term development of the country.

AFGHAN GOVERNMENT INSTITUTIONS TO SUPPORT THE GEM INDUSTRY

| Institution | Location | Core Function |
|---|--|--|
| Ministry of Mines (MoM) | Ministry of Mines, Kabul | The state authority responsible and administrator for the state property in the minerals sector. |
| Inter-ministerial Committee | Convened by transaction by the Ministry of Mines, Officer of Minister and Mines Department; includes Ministries of Finance, Justice and others | Oversee/supervise contracting in the sector. |
| Mine Cadastre | Ministry of Mines, Kabul | Receive and approve applications for mineral rights; maintain registry books, survey mapping on mineral rights. |
| Mine Inspectorate | Ministry of Mines, Kabul | Financial and technical inspections and evaluations; inspect sights, facilities, books and records; order penalties and fines. |
| Environmental Protection Department | Ministry of Mines, Kabul | Issue regulations for and monitor environmental compliance in the sector. |
| Geological Survey – Small Scale Mine Unit | A department of the Ministry of Mines, offices located at different Kabul site. | Research, mapping of mineral resources. |

Other institutions to consider in assessing how the Afghan gem industry is structured:

1. The National Environmental Protection Agency (NEPA) established in 2005, is also responsible for land, air and water quality and is expected to have some role in assessing the environmental impacts of gem and other mining activities.
2. The Afghanistan Investment Support Agency (AISA) is intended to serve as a coordinating unit to facilitate investor and economic sector developments engaging with investors, chambers of commerce, embassies and donors. AISA maintains a web page that includes minerals and gem information and conducts worldwide investment promotion programs that include mining projects; the Ministry of Mines has indicated

hesitance to work with AISA citing its own ability to do the work that AISA proposes to do.

3. In 2005, the Ministry of Mines helped to establish the Afghan Gem Center (sometimes referred to as the Afghan Emerald Center) based in Tamini, Kabul as a point for “one-stop shopping” for dealers and customers. Plans called for this center to house more than 40 stalls/small shops as well as a satellite office of the Ministry of Mines for the collection of taxes and royalties; thus the center, as approved by the Minister of Mines, would have both public sector and private sector functions to balance. However, this Center has not been established and the business is apparently defunct and there are no apparent plans for the reopening of this center.

4. While the High Economic Council and Cabinet of Ministers and some inter-ministerial meetings are occasionally convened to review specific gem industry project issues, there are no meaningful regulatory structures in place to guide gem sector development, ensure technically reliable operations or to protect customers.

In theory each of the institutions listed in the above table is now established in the sector. Although these arrangements are based on established international standards, for Afghan gem mining in the near term they may be too ambitious and over-burdensome. The actual manner in which these institutions function in Afghanistan is not market-based. Instead, where government is involved, Soviet era central planning processes and decision making prevail; more common is government’s lack of engagement if not awareness of gem mining where local influences dominate operations and government does not benefit financially as it could from those operations.

As a result, the Afghan gem industry lacks clear operating rules, predictable processes, systematic contracting, procurement and enforcement, and a trained cadre of government officials, operation managers, lawyers, accountants and project finance specialists to implement them. Consequently, significant legislative, institutional, regulatory and procedural gaps remain, as well as structural inefficiencies that result in a lack of transparency and national revenue gain. Streamlining of gem industry governance arrangements can have an immediate impact on how the sector can immediately develop while contributing to the national economy.

b. Legal Framework

The hierarchy of legal acts to support market gem mining in Afghanistan has not sufficiently taken shape; considerable clarity is required. The Constitution of Afghanistan provides the legal foundation from which the country’s mineral and gem resources can develop. The development of new institutions that support the legal system as well as the realignment and redefinition of existing institutions needs to be supported. Judicial reform is underway but embedded in a highly transitional phase of development. No administrative procedures are in place that would be used prior to the court system and include dispute resolution, contract review and processing and mine operation monitoring and oversight. Regulatory functions are carried out through a series of informal relations and historic practices that do not necessarily comport with fair market or

predictable practices. Commercial legislation is developing in Afghanistan that will impact gem operations. Specific mine legislation is limited to the 2005 Minerals Law.

The Minerals Law was approved by Cabinet in July 2005. This law addresses any and all aspects of minerals and mining. Its provisions allow for the public tender of minerals in Afghanistan. The provisions are drafted using internationally accepted industry standards. Commencing in 2003, the law was drafted by a team of international legal and mining experts. Because of the breadth of new concepts and lack of market understanding, little meaningful contribution from Afghan counterparts took place. The current legal framework in which the Afghan gem industry is functioning does not necessarily reflect all aspects of the Minerals Law. The Ministry of Mines is not presently staffed or adequately equipped to implement the provisions of the Minerals Law. As a result, the application of sound legal provisions is not taking place; instead operations are either conducted at arms length with the Minister of Mines agreement to terms or outside the scope of government participation.

Because the law was in place before the official establishment of Parliament, the law is set to be reviewed by the Economic Committee of Parliament in summer 2007. International mining experts have indicated that there are some flaws in the law notably with respect to the clarity of small scale mining requirements that should be clarified and resolved in mining regulations.

Nonetheless, sufficient guidelines exist in the law to provide a sound market-basis for contract terms. For example, under the law, Minerals Licenses and Authorizations can be issued as follows:

1. Minerals License for exploration
2. Minerals license for exploitation
3. Authorization for quarry exploration
4. Authorization for quarry exploitation
5. Authorization for permanent quarry exploitation
6. Authorization for tailings exploitation
7. Authorization for artesian exploitation
8. Authorization for treatment, processing, transformation, transportation or trading of minerals

The law further provides clear understanding of the duration for these licenses and authorizations:

1. Minerals Exploration – 3 years from date of registration with Cadastre; can renew for two consecutive terms, 3 years each.
2. Minerals Exploitation¹ – 30 years from registration with Cadastre with renewal ability for 5 year duration until exhaustion of deposit.
3. Small Scale Mine Exploitation – 10 years from registration with Cadastre including renewal period.

¹ Exploitation includes transformation.

4. Quarry Authorizations – 6 months from Cadastre registration with 2 6-month consecutive renewal periods possible. Maximum 4 sq. km. Quarry exploitation authorization must start within 6 months of registration with Cadastre.

5. Quarry Exploration – 3 months from Cadastre registration.

6. Quarry Exploitation – 10 years from Cadastre registration; 5 year renewal periods until exhaustion of deposit.

7. Temporary Quarry Exploitation – no more than 2 years from Cadastre registration.

A critical aspect of operations where the existing Minerals Law is silent is on the fiscal arrangements with respect to actual license and authorization amounts as well as ranges for royalty amounts. These are essential areas to be addressed; they could be covered in regulations or even ministerial policy but are not. As a result, hand shake-based deal making continues to provide an unpredictable basis on which these amounts are negotiated.

In addition to the Minerals Law, the application of other standard Afghan legal provisions is provided for in the Minerals Law, specifically:

1. Labor Laws
2. Environmental Laws/regime
3. Rights of Way requirements (land access)
4. Use of International Accounting Standards (IAS)
5. Use of Project Infrastructure (with payment of reasonable fee)
6. Requirement to submit and apply Health & Safety plans to government authority
7. Explosive/blasting requirements/norms noted per government requirements
8. Preservation of cultural heritage requirements
9. Dispute resolution using administrative procedures
10. Where necessary, criminal law applies

Of importance, inconsistency in the application of law as well as inadequate public information about legal rights and responsibilities has resulted in an increasing public distrust of how gem operations are being conducted in Afghanistan.

c. Regulatory Framework

From a market perspective, the gem industry of Afghanistan is presently operating in a regulatory vacuum. Where government is involved in a gem mine operation, the activity is regulated by contract. Contracts are generally negotiated directly between Ministry of Mines, commencing either with a local Ministry representative or with the Department of Mines at the Ministry. All deals are ultimately reviewed and approved by the Minister and the terms do not necessarily comport with provisions of the Minerals Law. While an inter-ministerial committee

can be – and sometimes is - put in place on an ad hoc basis, it does not appear to be as frequently used for gem mining as it is with larger scale mine and other resource contracts. It is essential to note that government is not always involved in these gem operations.

And so, the majority of small mine including gem operations presently underway in Afghanistan is unregulated. The processes are not predictable or necessarily consistent in their application. Regulatory systems are simply not in place. As a consequence of this unregulated gem sector, considerable fiscal implications arise that are connected with reduced royalty and fee payments that ordinarily revert to government in support of the national budget. There are also important environment, health and safety implications where regularized inspections, operational review (i.e., processing, transport, working conditions) and extraction methods are conducted in ad hoc and traditional ways that generally do not comport with modern standards of performance and efficiency.

As part of a World Bank grant, mine regulations are to be drafted to include technical, administration and environmental aspects of operations. These regulations are authorized under the Minerals Law, but have not yet been drafted. Still, additional supporting legislation is required, institutional support to implement the law and regulations, and notably in the case of small scale mining, some additional redrafting of authorizing legislation would be useful.

Likely included as part of the World Bank grant but for now clearly absent from how the government presently conducts gem industry operations is information management of contract terms, protocols for negotiation, tender and procurement processes and independent audit and oversight functions. Virtually no computerization of government's oversight of gem activities is in place, a lack of standard information systems hardware leaves managers to rely on mobile phones, individual connections and handwritten inspection task lists. Improved systemization of how the government addresses gem operations is needed if to capitalize on these valuable national resources.

Although BearingPoint is currently implementing an Economic Governance Program funded by USAID, representatives from the company indicated to the Sibley team that the Ministry of Mines is not even on the list of GoA ministries to receive assistance under this contract. Other means of achieving a functional and legal environment for the gemstone industry must be planned and implemented, perhaps starting with the recommended forum.

3. Task C. Evaluation of other small gemstone initiatives that have been funded by other donor organizations.

Very little support to the small gem sector has been provided by the donor community. In the broader context of earth science studies in support of Afghan reconstruction, the British and the US Geological Survey teams have conducted mineral and gemstone survey and mapping programs, some of which are still underway. Both of these agencies have helped in the restoration of the Afghan Geologic Survey building and staff. The British Geological Survey has established a Gem Identification Laboratory in the AGS building, they have also assisted the AGS staff in publication of fact sheets on gem deposits of Afghanistan. Equally important, the British Geological Survey has inventoried, scanned and translated (many documents were in Russian) some of the many older publications salvaged by AGS staff during the war years. The work of both the USGS and the BGS verify the quality and quantity of the gemstone deposits in

Afghanistan. Dr. Snee, a member of the Sibley team, was actively associated with this USGS project until his recent retirement from the USGS.

The Sultan Razia Gem Cutting Company, a spin off of an Italian Aid program was observed to have a sound basis for rapid expansion. This would require additional funding, training, and proper equipment. The management infrastructure appeared to be in place. This cutting operation is of particular interest because it encouraged women living in low economic areas of Kabul to join the work force as apprentice cutters and polishers of gemstones. This program was initially designed to build capacity for Afghan women in three areas: gem cutting and polishing, cell phone repair and assembly of solar lanterns. For gem cutting and polishing, the initial plan was to train 20 Afghan women who could then begin businesses; 9 women graduated from the program facing great family and other pressures. These women function as a cooperative and the model is one that may be replicated at very low cost for long term business opportunity.

In May, 2006, the Government of Afghanistan signed a \$30 million grant agreement with the World Bank for the sustainable development of natural resources. This grant will help to strengthen the institutions supporting mineral development, including gemstones, in Afghanistan. The grant is to fund the establishment of market-based Inspectorate and Cadastre functions at the Ministry of Mines and to fund mine sector experts to assist in drafting environmental, technical/operational and fiscal mining regulations commencing in summer 2007. Funding under this grant has been slow to disperse although increased hope for mobilizing assistance in coming months is noted by the World Bank.

Representatives of the US Department of Defense recently contacted members of the Sibley team to express their interest in working with the Government of Afghanistan and donor organization working within the gemstone industry. To the knowledge of the Sibley team, no action has been taken by DOD other than this expression of interest. This is an item for follow-up in the next phase of gemstone industry development.

The Aga Kahn Foundation has also expressed an interest in assisting with the revitalization of the gemstone industry, perhaps with some funding for a gemstone center in Kabul. To the knowledge of the Sibley team, no action has been taken on this potential initiative. This is another item for follow-up in the next phase of gemstone industry development.

4. Task 4. Evaluating existing lapidary and gem-identification centers

As part of the May 2007 assessment of the gemstone industry, the Sibley team visited more than six lapidary operations in Kabul where designers and cutters were interviewed. There is no known formal source of surveys or information regarding lapidary centers or lapidary work being done in Afghanistan. As stated in a previous section of this report, the Sibley team relied on its past experience and its colleagues and associates in the Afghan gemstone industry to conduct this particular part of the overall assessment. It is, therefore, anecdotal in nature. Nonetheless, the team is confident that it fully captures the essence of the situation as it exists in Kabul.

Essentially all current lapidary production is in lapis lazuli and lapis lazuli products which require less sophisticated gemstone faceting skill and experience than rubies, emeralds, sapphires and semi-precious stones. In all the lapidary operations, rudimentary and cobbled equipment and cutting materials were being used. The resilience and determination of the lapidary workers is illustrative of the gemstone industry as a whole

in Afghanistan. Without any infrastructure they continue to labor and to produce works of art for the internal market, usually as a family tradition that goes back for generations. There were no reports of formal export of the products and works of art.

In one center, a young man has been cutting stones for more than ten years, using equipment that he made by hand and following designs from an old but well-recognized and respected journal of cutting designs. He has taught himself how to design, cut and polish gemstones that are sold in local markets. His skills are remarkable primarily for the lack of formal training. With formal training, he could become a highly professional artisan with great demand for his work. The Sibley team introduced him to the BGS and referred him to the Gemstone Identification Lab. He was excited and amazed to learn that he could access these resources (and formal courses) in Kabul.

Altai Consulting recommended in a marketing survey presented to ASMED the establishment of a Gemstone Trading Centre which would centralize gemstone trading in Kabul and would also host an office of the Ministry of Mines to collect taxes and provide assistance to foreign buyers. Altai further recommended that the Gemstone Trading Center be developed with the existent Afghan Emerald Company, a company privately owned by Mohammed Gul from Panjshir Valley with close ties to the Minister of Mines. Inquiry by the Sibley team indicated that the Afghan Emerald Company is now defunct and its offices are apparently closed.

The British Geological Survey equipped a gemstone identification laboratory at the AGS early in 2007. This is the only gemstone lab that the Sibley team identified in Kabul and the regions visited. BGS and AGS are currently conducting classes in the use of the equipment and the identification of gemstones.

5. Task 5. Developing a Market Opportunity Analysis to examine the size of the international and internal markets for specific gems in the short term and in the long term.

The lack of government connectiveness to the gemstone sector and the resulting lack of industry support for the government have created an untenable situation. Currently most of Afghan gems and gem products are being advertised and marketed by Pakistani and other foreign exporters. It is estimated by miners and others within the gemstone industry that roughly 95% of gemstone production is transported into Pakistan and sold at drastically below market prices. There is no recognized value chain for gemstone processing and marketing in Afghanistan. This creates a financial loss every day to the artisan miners, the gemstone processors, the gemstone retail marketers, and the GoA. It also adversely effects the social infrastructure and employment opportunities for the Afghans. Currently the Afghan government is working without tax, duties or foreign currency from the gem industry.

Members of the Sibley team attended a briefing on the gemstone industry prepared by Altai Consulting for DAI. The team also reviewed an earlier report prepared by Altai Consulting for UNDP in 2005. Although the reports were well done, the estimates of the worldwide market for precious and semi-precious stones are drastically under-estimated at \$320 million. Most gemstone experts estimate the market as being more than \$2 billion. A very low estimate of the Afghanistan market is more than \$10 million. The Altai report thus reduces the importance of this industry to Afghanistan.

Colored-Stone Magazine Editor-in-Chief, Morgan Beard, reported the following gemstone import figures in January/February 2001:

| | <u>1999</u> |
|-------------------------|-------------------------------|
| a. USA | \$609 million* |
| b. Europe..... | \$573 million* |
| c. Japan..... | \$159 million* |
| d. Other Countries..... | \$487 million** |
| Total | <u>\$1.828 billion</u> |

* Reported in the Colored Stone Tucson Show Guide – January/February 2001

** Reported by United Nations International Trade Center (ITC)

Gemstone imports into the US in 2005 hit a record high with a total value of \$755M as reported by Colored –Stone. The total import value for cut ruby, emerald, and sapphire was \$412M, a 15.7% growth over 2004. In terms of individual gemstones, emeralds saw the biggest jump in value. While the import total increased by 12.4%, the price per carat was up 71%. This is indicative of the growing demand for fine gemstones such as those found in Afghanistan and Columbia, which have the same mineral components. Rubies and sapphires experienced the same dynamic increase in imports into the US. The dramatic increase in the market for the finest gemstones bodes well for a revitalized gemstone industry in Afghanistan where the top 5% of rubies and emeralds are considered to be in the top 1% of the finest in the world. Rubies are considered to be the rarest and most valuable gemstone in the world, followed by emeralds in second place and diamonds in third place.

In Europe the total imports for gemstones in 2005 increased by more than 9% according to Colored-Stone Magazine Editor-in-Chief, Morgan Beard, July/August 2006. He further reported that “by far the strongest category was cut ruby, emerald, and sapphire, accounting for nearly two-thirds of the gem market”.

Dubai is considered “the City of Gold” and is a major international market for gold and diamond jewelry. Sales in 2004 increased by 40% following a major marketing campaign by the Diamond Trading Company of DeBeers. With this increase the Gulf region became the third-largest market in the world with \$1.5 billion. According to K. T. Baiju, General Manager of the Dubai Gold and Jewellery Group (DGJG) the colored gemstone sector has seen a significant growth in the past three years with consumers looking beyond the diamonds and gold. The Sibley team members have talk with Dubai industry leaders who express a keen interest in the development of an export market in Kubal for the colored gemstones, particularly rubies, emeralds, and sapphires.

Lapis lazuli is found in only three countries in the world and many experts believe the lapis lazuli in Badakhshan to be the finest in the world. Dating back to 5,000 BC these deposits are arguably the oldest in the world. Although the greatest economic advantage to Afghanistan is through a value chain that takes the lapis from the mines to the markets for artifacts designed and produced in the country, the Minister of Mines has considered leasing the mines to Chinese or

others private investors for export of the raw material. This would be a travesty for the miners and for the economic growth of Afghanistan. Lapis is one of the easiest minerals to cut and polish into gems and objects of art. Many of the skilled lapis lazuli workers have recently moved back to Kabul from areas in Pakistan in anticipation of positive changes in the gemstone industry in Afghanistan.

The Sibley International unsolicited proposal last year stated that the Afghan gemstone market could grow to \$300 million in three years. This figure was estimated assuming the funding of a gemstone industry revitalization project and assuming the Afghanistan government would support the project with necessary changes in licensing and export procedure and duties. During the last year the government intervened and stopped production in many mining areas and publicly labeled miners as smugglers. The longer the delay in Government and donor assistance for the industry, the greater will be the losses of potential revenue and employment for Afghans and for GoA. The burgeoning growth in the import of colored gemstones in the US, Europe, India, and the Middle East is indicative of the potential for the Afghan market for rubies, emeralds, sapphires, semi-precious stones, lapis lazuli, and gemstone specimen to reach \$300M, but only with the much-needed support of Government and donors.

6. Task F. Developing an Intervention Opportunity Analysis to identify Afghan partners and local BDS firms that will be able to build their capacity as they work through the improvement of the gem trade in Afghanistan.

- a. Numerous meetings were held by the Sibley team with representative of government, NGO, and members of the mining community. These meetings all identify the disconnect between the government and the private sector mining industry as one of the major obstacle to the realization of the important economic potential based in the gemstone industry.

A key challenge to a functioning gem market in Afghanistan is the manner in which the institutional and governance arrangements are designed and operating. Firmly entrenched ways of doing business combined with a lack of modern gem market operations is resulting in ad hoc resource extraction, virtually no state return in the form of taxes, licensing fees, custom payments, and no capacity building that would ensure sustainability of safe and viable gemstone operations. The inadequacy of these arrangements provides considerable areas for corrupt practices. Left unchanged, the financial, resource and environmental consequences could be devastating for the long-term development of the country.

A major Intervention Opportunity to jump-start the Afghan gemstone industry would be a Forum bringing together all the government officials, donor organizations, gemstone miners, traders and exporters, and others with an interest in the gemstone industry to discuss and resolve the issues that continue to choke the industry in Afghanistan. The Afghanistan Investment Support Agency (AISA) is intended to serve as a coordinating unit to facilitate investor and economic sector developments engaging with investors, chambers of commerce, embassies and donors. Including international specialists from the gemstone industry with experience in developed and developing markets would provide a broader prospective and knowledge of international market activities critical to the growth of the Afghan industry.

AISA with USAID could host this facilitated forum for one or two days to identify and seek resolution to the legal and regulatory barriers to the revitalization of the gemstone industry.

b. The Sultan Razia Gem Cutting Company, a spin off of an Italian Aid program was discovered to have a sound basis for rapid expansion. This would require additional funding, training, and proper equipment at a time when the Italian government funding is ending. With the management and physical infrastructure in place the timing is right for an intervention with assistance from USAID.

This cutting operation is of particular interest because it encouraged women living in low economic areas of Kabul to join the work force as apprentice cutters and polishers of gemstones. This program was initially designed to build capacity for Afghan women in three areas: gem cutting and polishing, cell phone repair and assembly of solar lanterns. For gem cutting and polishing, the initial plan was to train 20 Afghan women who could then begin businesses; 9 women graduated from the program facing great family and other pressures. These women function as a cooperative and the model is one that may be replicated at very low cost for long term business opportunity.

c. Members of the Sibley team met with several Afghans who are currently (informally) selling gems outside of Afghanistan. International experts with knowledge of the world gem market could assist the current Afghan traders in order to develop an export program. The goal of the program should be to create a brand name campaign to publicize the variety, quality, and availability of the gem product line from Afghanistan. To further promote the Afghanistan products will require an organized media campaign and gem trade missions and shows. The trade shows will also be important for manufactures to study world customer demands for designs and new products.

d. Representatives of the US Department of Defense recently contacted members of the Sibley team to express their interest in working with the Government of Afghanistan and donor organizations working within the gemstone industry. To the knowledge of the Sibley team, no action has been taken by DOD other than this expression of interest. This is an item for follow-up in the next phase of gemstone industry development.

e. Following up from the Forum could lead to discussions with the Aga Kahn Foundation regarding their interest in developing a Gemstone Center in Kabul as a resource to the Afghan industry and to the external markets and tourists.

f. There are a number of legal and regulatory interventions that could be implemented in conjunction with the World Bank grant for the Afghan Mineral Resources. Thrsse interventions have been identified by a member of the Sibley team, Mary Louise Vitelli, Esq. who served as an advisor to the Minister of Mines during the drafting of the Law on Minerals. Her complete report, "Institutional, Legal and Regulatory Review of the Gem Industry in Afghanistan" can be found in the References section of this report. A skeletal summary of her recommendations include the following:

- Review and assess English and Dari Minerals Law with respect to gem industry aspects;
- Draft regulatory provisions and guidelines specific to gems;

Develop a gem industry road map/policy document;
Streamline gem industry governance arrangements;
Develop a gem royalty regime;
Develop public information materials; and
Train 3-5 resource lawyers in the preparation and negotiation of gem contracts with the government.

g. The implementation of a “mines to market” program would provide a holistic approach to the revitalization of this important sector of the Afghan economy, benefiting both the private sector players and the GoA.

ANNEX I – CONTACT LIST

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