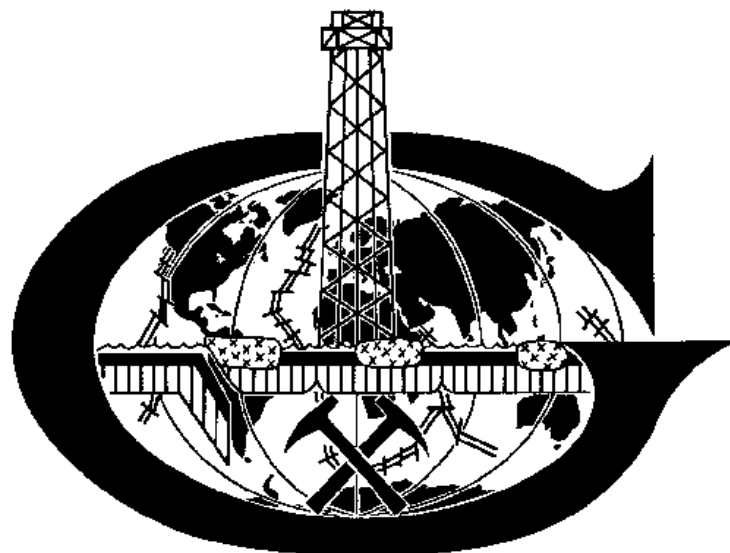

**GEOEXPLORERS' EXPERIENCE IN EVALUATION AND
ASSESSMENT OF THE MINE TAILINGS AND EXPLORATION
FOR BASE AND PRECIOUS METALS DEPOSITS**

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INTRODUCTION

SYNOPSIS ON THE EXPERIENCE OF GEOEXPLORERS INTERNATIONAL, INC. QUALIFICATIONS

Geoexplorers International, Inc. was established in 1974 and ever since has been active worldwide. It has served as a highly reputable and internationally renowned consulting corporation (incorporated in March, 1977, in the State of Colorado, USA).

Since 1994 Geoexplorers International, Inc. reoriented its primary business focusing on:

- Carrying its own research, evaluation of the discovery potential, exploring, acquiring and developing mineral and petroleum resources.
- Larger exploration targets, Geoexplorers International, Inc. carries jointly with venture partner(s).
- In the case of discovery recoverable reserves, assessed favorably by economic feasibility study, which require considerable investment capital, subject deposits are destined for development and production, Geoexplorers International, Inc., carries jointly with venture partner(s).

Geoexplorers International, Inc., during its over 37 years of uninterrupted, highly successful activity, as consulting, then as exploration and development corporation, provided professional and management services to many major, medium size and junior corporations, the USA's and foreign governments, international organizations, and financial institutions.

Geoexplorers International through its extensive activity has gained worldwide experience, particularly in practically oriented research, exploration for economically viable mineral and petroleum deposits, **including evaluation of the mine tailings**.

In 1996 Geoexplorers International, Inc. acquired a majority of the outstanding common shares of **ACTIVE GOLD CORPORATION** (State of Nevada Corp.). This corporation, ever since its acquisition is in good standing, debt-free, and is still inactive. However, it can be activated for public trading at any time with much lower cost than initial public offering (IPO).

Geoexplorers International, Inc. exclusively owns **ZEOLITHOS de MEXICO S.A. de C.V.**, which is legally registered for business activity in Mexico. Then Zeolithos owns 100% of equity interest in four exploration and exploitation concessions (total of about 1,330 acres or 605 hectares) in central Mexico. Within these concessions there is at least 100 million tons potential resources of high purity, clinoptilolite-rich zeolites, without any overburden. The main business of Zeolithos de Mexico is operation management, mining, processing and marketing of exceptionally clinoptilolite-rich natural zeolites.

Geoexplorers International, Inc. and Zeolithos de Mexico S.A. de C.V., are fully committed to progressive research on the most effective and beneficial applications of natural zeolites, and profitable solutions for healthy environmental ecology.

GEOEXPLORERS' EXPERIENCE IN EVALUATION AND ASSESSMENT OF THE MINE TAILINGS EXPLORATION FOR BASE AND PRECIOUS METALS DEPOSITS

It is well known that each mining operation produce dumps and/or tailings. Most of them are made concurrently with mining operations and ore processing. Numerous mine tailings had been and others are being considered for reprocessing with anticipation to recovery of a valuable minerals and/or metals which are being recovered. Very often enormous value is retained in the mine tailings. Such value was left over, because most often cutoff grade of ore has been set depended on the price of the commodity of main interest for mining, recovery and production, inadequate ore processing equipment, technology applied, or of only interest of certain recoverable metals. Examples of such cases are numerous in the mine dumps and tailings.

Geoexplorers International, Inc. and Dr. Jan Krason, through worldwide consulting activity, prior and concurrent involvement in exploration, particularly for base and precious metals – including platinum group elements (PGE), became exceptionally well familiar with many, often very big mine dumps and tailings. Many of them, in a numerous countries, mine dumps and/or tailings we thoroughly evaluated, technologically and economically assessed, often jointly with evaluation of the discovery ore potential.

Flotation tailings projects, which Geoexplorers International studied, evaluated and sustained experience, two were particularly big. Those two, beside tonnage of mine tailings, their economic vales were exceptionally big. In terms of reserves and potential values were similar to KGHM's mine tailings. Summarized description of those two projects is as follow:

MURUNTAU THE WORLD'S LARGEST GOLD MINE IN UZBEKISTAN

In October 1984, Newmont Mining Corporation, searching new ideas for exploration that to be considered and followed during next five years, invited Jan Krason as keynote speaker for Corporate Annual Conference. He, having already personal information with reference to the type and grade of mineralization and production rates, and being familiar with Russian scientific publications, presented **“Muruntau the World's Largest Gold Mine in Uzbekistan as the Model of Exploration for Similar Deposits”**.

Subsequently, Jan Krason authored **“ECONOMIC GEOLOGY OF MURUNTAU – THE WORLD'S LARGEST GOLD DEPOSITS** (including 125 pages of the text with numerous graphic illustrations and tables). Abstract of it **“Muruntau: The World's Largest Gold Producing Complex”** was published in **A Special Issue “GOLD” of Mining Engineering**, November 1984, p.154-155.

At that time and during the Soviet Union domination over Uzbekistan, Muruntau Gold Mine, in spite being in operation for prior 25 years, was totally closed to outside visitors. Therefore, some of the Newmont's staff geologists and managers were very skeptical to the reliability of data and proposed by Jan Krason recommendations. Nevertheless, having already well prepared “home work”, in 1991, shortly after disintegration of the Soviet Union and declaration of independence by Uzbekistan, Newmont geologists visited Muruntau Gold Mine. They confirmed prior information, collected several samples and found intriguing amount of gold in the huge Muruntau “mine dumps”, which in fact contained pre-crashed rock material containing gold, but with the amount higher than cutoff grade of ore i. e. 1.5g/t Au. Apparently, analytical results of those samples collected by Newmont geologists, particularly in one-ton sample collected during subsequent visit to Muruntau also personally by Newmont CEO, averaged higher gold contained than said cutoff grade.

Shortly after Newmont delegation first visit, also this author - on behalf of Geoexplorers International visited Muruntau. His name was recognized in Uzbekistan as the first author of public disclosure published in English, some information on Muruntau Gold Mine.

This author spent several days in Muruntau, made detailed geological observations not only in the extremely big open pit (n. b. ~300 m deep and ~3 km wide), but also ore processing plants, mine dumps and ore processed tailings. Among others, he found that at Muruntau Mine ore average 4.5g Au/t, prior and at that time cutoff grade was 1.5g Au/t. The most intriguing finding was approximately 700,000,000 ton of the above mentioned "dump", most likely averaging at least 1.0g Au/t. In addition, about 6,000,000 t of similar gold content pre-crushed rock material, from current production was added to the "dump" every year.

Apparently, Newmont was swift, successfully proceeded with business arrangements and agreement, committing over US \$200,000,000 investment for 50 : 50% profit split with Muruntau Gold Mine (i. e. Uzbek Government). Newmont introduced to Uzbekistan heap leaching technology and in less than two years, commenced production. Production rate averaged about 500,000 oz Au/y, at the production cost US \$200 /oz Au. Newmont's mining operation at Muruntau became largest western investment mining project in the former Soviet Union.

It might be also noticed that although Newmont's officials were aware of this author's initiation of the "Muruntau Project", "*because possible financial liability*", this author has not been credited with any related honors.

NORILSK MINING AND METALLURGICAL KOMBINAT IN THE FAR NORTH OF RUSSIA

Norilsk Mining and Metallurgical Kombinat (Norilsk GMK) 1 operates two mines in Norilsk, four active mines and another two, are in the final phase of development, including Talnakh (located about 30 km to the NE of Norilsk). Two flotation plants process ore from both locations. There are also three separate smelters, which process nickel, copper, and pyrrhotite concentrates. Locally produced platinum group metals concentrate is smelted and refined in Krasnoyarsk. The population of Norilsk is about 180,000 people. But, population of the region, including Dudinka (located 79 km. to the west of Norilsk, connected with it by railroad) amounts to about 360,000, out of which 124,000 people work directly for Norilsk GMK.

The ore of Norilsk and Talnakh mining districts has complex mineralogy, is mining and beneficiating mainly for **nickel and copper with cobalt, and platinum group elements (PGE)**. Gold and silver occur in lesser amounts.

At Norilsk GMK there are two tailings reservoirs - inactive (operated from 1949 through 1975), known as "Norilsk 1" and active since 1976, i.e. already for 24 years), known as "Lebiazhe" (this one also stores tailings from Talnakh flotation plant). In the first one, there is at least 300 million tons of tailings material, which in Russia are known and considered as "technogenic ore" (i.e. with economic value of any metal, including, nickel, copper, cobalt, gold, silver, and particularly platinum, palladium, that can be recovered with profit). In the second reservoir there is at least 150 million tons of similar type tailings or technogenic ore. With flotation tailings is being deposited about 15 million tons with estimated 480,000 oz PGE/y.

Norilsk GMK operates on one of the world's largest ore-bearing metallogenic provinces of the above-mentioned base and precious metals. With reference to the PGE content, Norilsk and nearby Talnakh deposits are said to be richest in the world. According to Johnson Matthey, Norilsk GMK and South Africa in 2003 supplied about 91.2 % of the entire world's supply of platinum and 82.75% of palladium. On the same year North America supplied: 4.66% Pt and 13.45% Pd (Platinum, 2003).

Although Norilsk GMK has been in large-scale operation since 1949, proven ore reserves are still sufficient for 150 years of exploitation at the current rate of about 12,000,000 t of ore/y. The massive sulfide type ore, with its thickness reaching 45 m, contains an average of over 20% copper, several % of nickel, and about 30g/t PGE. Brecciated ore average 4% copper, 2.7% nickel, about 10.8 g/t PGE, 0.6 g/t gold, and 9.9 g/t silver. Disseminated ore average of 1 % copper, 0.5 % nickel, about 4.63 g/t PGE, 0.22 g/t gold, and 3.2 g/t silver (Distler et al., 1993). M. A. Kaufman guesses that the gross value of Norilsk and Talnakh deposits must considerably exceed US\$ 250 billion (see E&MJ, Feb. 1993, p.40-43). If considering the recent profound political changes in post-communist Russia and her rapid, friendly cooperation with the world's principal PGE producers of South Africa, independently of present and future investment climate in both countries, one may anticipate close collaboration between them, including management, technology, production rates, sales and most importantly prices.

One may also conclude that because giant ore reserves and comparable, well established, although in the severe Russian Far North climatic conditions, Norilsk mining and metallurgical operation, for many years, will have strong impact on the world's market of nickel, copper and particularly platinum group metals. Such impact may be caused by Norilsk GMK of partial privatization and acquisition 58% of Stillwater Mining Corp. in Montana, USA, trading on New York Stock Exchange.

The results of participation in the "Open International Competitive Bid for Reprocessing and Commercial Recovery of PGE from the Norilsk 1 Tailings Reservoir", in which Geoexplorers International, Inc. participated, were announced on August 6, 1993. On the same date by the Letter No. 14-322/2618, Norilsk GMK announced that Geoexplorers International, Inc., won the bid. As proposed, and anticipated, Geoexplorers International, Inc. has been granted exclusive rights jointly with Norilsk GMK to proceed with detailed evaluation and development of the Flotation Tailing of Norilsk 1 Reservoir with consideration of concurrent production.

Subsequently, this author promoted "Norilsk Flotation Tailings PGE Project" and among others, found particularly interested EXXON Minerals Corp. and BHP. EXXON Minerals Corp. was ready to invest initially US \$50,000,000. After this author's special presentation for BHP, beside tonnage of the tailings reserves, including already known factual analytical data, also BHP specialists independently confirmed and concluded that the Norilsk Tailings Project contain recoverable US \$12 billion.

Unfortunately, because of inadequate confidentiality precautions against theft of the confidential information, Norilsk Flotation Project was stolen from Geoexplorers International, Inc. It was acquired by one of the major internationally active banks. Then, Norilsk GMK applying tailings processing technology recommended by Geoexplorers International, Inc., recovers the base and precious metal including particularly PGE from flotation tailings.

1 – Please notice that all factual data are as of 1993

OTHER PROJECTS

ALBANIA – CHROMITE BULQIZA AND KALIMASH MINING DISTRICTS

In November 2006 Jan Krasoń visited both mining districts, including particularly presently inactive ore processing plants and tailings. Evaluation of all data and gathered information resulted in the Business Opportunity Report. Beside favorable evaluation results of the flotation tailings, averaging at least 10% Cr (n. b. in the past ore processed recovered only ~28% Cr, out of ore averaged ~40%Cr). Author's recommendations included particularly:

- consider additional exploration and development of large proven and potential reserves of chromite-bearing ore.
- reprocessing of the chromite and platinum-bearing tailings, and consider large (at least 100 million tons, open pit mineable) lateritic nickel ore averaging at least 1%Ni.

AUSTRALIA

This author visited Australia in 1976, 1981 and 1996.

VISIT IN 1976

It was in conjunction with participation in the **25th International Geological Congress (IGC)**. During the Congress, which lasted ten days, most of the sessions that he attended referred to the sediment - hosted type nonferrous metals. He also lectured on “**Geological conditions of the metallogeny and required criteria in exploration for stratiform ore deposits**”. In conjunction with IGC he visited:

IN THE NORTHERN TERRITORIES

- **RANGER 1 AND 2, JABILUKA 1 AND 2 AND NABRALEK URANIUM DEPOSITS**

In 1976; Ranger 1 and 2 had proven 110,500 tons of ore ranging 0.25 - 0.35% U₃O₈, Jabiluka 1 and 2 had proven 227,800 tons of ore ranging 0.25 – 0.45% U₃O₈, plus >500,000 tons of ore averaging 13.9 g Au/t, and Nabrelek had proven 10,500 tons of ore averaging 0.25% U₃O₈. **It should be noticed that although all these ore bodies are hosted in chloritic green schists, but initially they were black shales of Lower Proterozoic, than they were retrogressively metamorphosed.** They were deposited on the eastern flank of large. Pine Geosyncline of which on the western flank is located Rum Jungle (n. b. south of Darwin) also with uranium ore body, which produced 863,000 tons of ore averaged 0.28 – 0.4 % U₃O₈ and with average 2.7% Cu.

- **TENNENT CREEK**

Tennant Creek with its Mining District is located about 550 km SSE from Darwin. In that vicinity this author attentively studied in the field, copper and gold-bearing deposits and visited the following mines: **PEKO Mines, including: WARREGO Mine, ACE HIGH KATHLEEN Mine and Noble's Nob Mine.**

Generally, all these mines operate on partly metamorphosed sedimentary-hosted copper and gold deposits. They are confined to regionally and locally deformed Peko Syncline. The sedimentary sequences include shales, siltstones, silicified dolomite and fine lithic graywackes. Hematitic shales are common and this term is used for a specific rock type such as hematitic shale or siltstone. The hematitic shale grade laterally and vertically into bedded siltstone and through iron enrichment into hematite and quartz hematite. There is a wide range of features in the sediments giving indications of provenance, depositional environment. The porphyroids intrusions are intermixed with sediments. It has been concluded that porphyroids have been formed from hydro-mobilized sediments.

Main commodity of all of the above-identified mines is copper with gold and bismuth. During this authors visit to those mines, Warrego Mine ore grade averaged 2.94% Cu, 0.18% Bi and 2.9 – 8g/t Au. However, locally occur large blocks of ore averaging 100 and over g/t Au. Concentrate averaged: 25.9% Cu, 1.39% Bi and 22.4 – 40 g/t Au. Recovered: Cu 96%, Bi 83.3%, and Au from 82.7 to 54.7%.

Although all the above-identified deposits and ore bodies are considered as sediment-hosted, they are different from Polish copper-silver deposits and ore bodies. **However, researchers studying and certainly KGHM's extended interest in "THE RED-BED-TYPE PRECIOUS METALS IN THE SIERSZOWICE-POLKOWICE COPPER MINING DISTRICT, SW POLAND". (Pieczonka, J. at al. 2008, Kucha, H., and others) may also learn a lot getting familiar even with such far distant copper-gold ore bodies as those of the Tennant Creek Mining District, Australia.**

IN QUEENSLAND

MOUNT ISA and Mount Isa Mines

Prior to this authors visit Mount Isa, he was employed by ASARCO whose Mount Isa Mines (operated under MIM) were subsidiary. Since at that time he managed exploration for sediment-hosted copper deposits, among others, he thoroughly studied Mount Isa deposits. That study included detailed observations and analysis of about 350 kg ore samples (n. b. for that purpose shipped from Australia to Denver).

Therefore, his visit Mount Isa Mines, was with similar interest like after over 20 years (being forbidden reentry to Poland) visiting KGHM's former Konrad Mine in 1988, and subsequently Lubin, Sierszowice, Polkowice and Rudna Mines.

Since certainly Polish geologists are also familiar with geology of the Mount Isa deposits and ore bodies, independently that the latter, main commodity are Pb, Zn, Cu, and Ag, they are sediment-hosted. The magnitude of their reserves (at least initially), the production rate, ore processing technology, producing also flotation tailings, was comparable with the KGHM's.

During this author staying Mount Isa he also visited also **Mary Kathleen Uranium Mine.**

Uranium ore averaging 0.13 U₃O₈ is hosted in more calcareous with garnetiferous massive enrichment (mainly of grossular) sediments of 1,500 million years old that is of the same age as Mount Isa ore bodies. At Mary Kathleen Mine operations produced 17,000,000t/y. It is interpreted and understood that at Mary Kathleen uranium was leached out of volcanic breccia pipe and deposited along its periphery within garnetiferous zone.

Than out of **TOWNSVILLE** (n. b. located 835 km east from Tennant Creek) this author **visited GEPKO'S Mount Morgan Copper Mine.**

The Mount Morgan copper ore and gold-bearing ore body was brought into modern mining operation in 1932. After 46 years of open pit mining company moved more than 124 million tons of material, comprising approximately of 39 million tons of ore and **85 million tons of overburden** and produced 74,073 kg of gold, 32,270 kg of silver, 222,588 tons of copper and 578,000 of pyrites.

The Mount Morgan ore body was a large irregularly shaped mass of silica and pyrite, which carried gold, copper and silver-bearing mineralization. The host rocks for gold-copper mineralization include interbedded rhyolites, dacites, andesites and quartzite-siltstone-tuff with lenses of dolomitic limestone. Much of the host rock sequence has locally undergone extensive alteration, silicification, fracturing, brecciation and faulting.

IN NEW SOUTH WELLS

This author visited **WOODLAWN Copper Lead – Zinc Deposit.**

This deposit was discovered in 1970 and subsequently developed the mine in open pit operations by **JODODEX Australian Ltd. ST JOE MINERALS Corporation.** Mineralized are Ordovician – Silurian graptolitic shales interbedded with volcanics. Ore body itself is located at the base of acidic volcanics. There are also present post-ore doleritic sills.

Ore body developed into mining operation had 10,000,000 t of ore, averaging 1.6% Cu, but at surface exposed gossan averaged: 0.47% Cu, 0.65% Pb, 0.09% Zn, 3.17 g/t Au and 500g/t Ag. **By the approval of the mining authority it was planned and allowed to dispose 50 million tons of the waste into local George Lake.**

BROKEN HILL

Adelaide, which is located 500 km to the southwest, is the closest major city to Broken Hill.

In 1905 The Zinc Corporation Ltd. was formed in Victoria to recover zinc from residues that had accumulated on the Broken Hill field since the commencement of mining and treatment of lead and zinc sulphide ores. **In the earlier days of the field there was no known method of economically recovering zinc remained in tailings.**

Than, through various reorganizations of the company, new and larger ore bodies were discovered and successfully developed. From 1936 Broken Hill Consolidated Ltd., than with Australian Mining and Smelting Company Ltd., later operated as Broken Hill Proprietary Company Limited or BHP, through acquisition of Billiton, was renamed **BHP Billiton Limited** and became the world's largest mining company.

This author, in 1976, visited also Broken Hill Mines and made his own observations in the ground surface and underground mining excavations. He has learned much more about one of the world's largest silver-lead-zinc mineral deposits.

Than in 1990s, he was retained by BHP and privileged to provide his own consulting services.

IN WESTERN AUSTRALIA

First, this author visited **ALCOA'S JARRAHDALÉ BAUXITE MINE**.

Bauxite mineralization, in the area south of Perth, particularly within Jarrahdale Mine, has been developed and rests on the granodiorite. Within the mine, bauxite veneer average 5m thick and overall contains 35% Al₂O₃, it covers about 30 square miles, with cutoff 27.5% Al₂O₃. Bauxite ore contain also 25 – 30% Fe₂O₃ and about 1.3% SiO₂. Upper part of ore is enriched with vanadium. At the time of said visit, Jarrahdale Mine mined 10,000 t/day of bauxite ore. Ore grade and its thickness were controlled by 15 m deep holes drilled in a grid 15 x 15m and geochemical analysis. Areas mined out are immediately rehabilitated and recultivated with local vegetation.

Although at the time of this author's visit to Jarrahdale Mine bauxite was not of his primary interest, but in 2008 Australian CSIRO, Research Branch in Perth, Dr. Rob Hough, leading author, announced findings "**Nanoparticles of gold found in Western Australia Clays**", eventually of Jarrahdale Mine bauxite or similar saprelite or laterite. According to CSIRO News Release "Clays from the fracture surface were analyzed. **There was no gold visible, but analysis showed the clays contained up to 59 parts per million of gold.** The research team concluded that the nanoparticles of gold had imaged represented the "invisible gold" in the clay, and this **nano-sized gold** was common in similar environment".

KALGOORIE

Kalgoorlie is located about 613 km east from Perth. In 1976 this author visited **CHARLOTTE GOLD MINE**, at that time **owned and operated by WESTERN MINING CORPORATION**. The visit included observations on the ground and in the underground mine excavations. In the Charlotte Mine gold was found in the quartz veins and potassic-altered zones, which occur within locally silicified dolerite. There was 3.3 million ounces of ore that averaged 5.3g/t Au. At the time of Charlotte Mine development and this author's visit, the cutoff grade was 3g/t Au.

The visiting and detailed ground surface observations in the **KALGOORLIE, COOLGARDIE AND BOULDER** (n.b. repeated by this author in August 1981), very well known **large gold-bearing mining district, involved particularly old miners tailings covering large area. Apparently, presence in and extraction of gold from gold-bearing lateritic cover by small miners, who produced >39 million ounces of gold, lead to the discovery and mining of the gold out of the above identified hard rocks ore bodies.**

KAMBALDA town and KAMBALDA NICKEL MINES are located 75 km southeast of Kalgoorlie – Coolgardie, geologically within Archean Yilgran Block, a cratogenic unit.

At the time of this author's visit to the area and the **JUAN MINE**, he has learned and observed that at Kambalda's about 80% of nickel occurs within olivine-rich peridotite. But observations in the larger vicinity of Kambalda show that overall nickel mineralization and its other ore bodies, occur within ultrabasic, basic and acid volcanics and associated sedimentary rocks. At the time this author's visit, Kambalda Mines produced 60,753t of ore/y, averaging 2.2% Ni.

However, it has been reported that in 2010 Australian Mincor Resources only from South Kambalda Operations produced 244,352t of dry ore with average 2.65% Ni. The North Kambalda Operations produced 109,701t of ore with average 3.36% Ni.

Main purpose of his author's second visit to Kalgoorlie (in August 1981) was to conduct **Workshop on "The Hydro-Geochemistry as Exploration Approach for Base and Precious Metals"**. That Workshop, he conducted for staff professional geologists and engineers of Western Mining Corporation.

In Western Australia this author visited also **Newman Iron Mine, owned and operated by Mount Newmont Mining Company.**

At the time of his visit, Newman Iron Mine operated on 777 sq. km mineral lease, with 1.2 billion tons of proven hematitic-type ore reserves, with 54% Fe/t, including 350 million tons of high grade ore averaging 63.5% Fe. Production rate was 40 million tons of iron ore per year. Main part on Newman Mine, obviously open pit, was located 425 km east from town Port Hedland with the seaport where iron was transported to by railroad trains to and exported from. This author visited also Port Hedland Sea Port facilities.

Obviously, such giant mining operations face also enormous environmental problems and challenge. Problems like; needs of dust suppression, within the mine and along railroad truck, water supply, irregular torrential rains causing detrimental water flooding, and recultivation, were also brought to this author's attention.

As the result of the above summarized observations made and knowledge gained in Australia, by order of Kennecott Exploration Inc., **in June 1980, this author completed very extensive study on "Uranium Deposits in Australia, Concepts in Exploration for New Deposits and Districts"**.

VISIT TO AUSTRALIA IN 1981

This visit **was also in conjunction with** 5th Australian Geological Convention on **"Sediments Through Ages" held in Perth.**

Before Convention, among others, also this author participated in the **Work Shop** on the **"Modern Carbonate and Evaporate Sediments of Shark Bay and Lake Macleod, Western Australia"**.

The Work Shop was lead by Dr. Brian W. Logan, Professor of Sedimentology and Marine Geology Group, Department of Geology, University of Western Australia.

Instructions and field observations began out of **Geralton – Carnarvon** located about 790 km north from Perth. They were conducted out of Western Australian University Sea Vessel, offshore and along the beaches, intermittently on shore. Special attention was drowning to and observations were made on the features and characteristics of the shallow seawater sedimentology, development of algal mats, associated other plankton flora and macro fauna. Very special observations were made on recently grown and very uniquely well-developed stromatolites - some of them as high as 2 m. Their wide spread on large area at Carbla Point, at Shark Bay, is one known in the world. **See Photos.**

After observations made out of the ship and onshore along the beaches, participants of the Work Shop, were provided small planes for relatively slow-low-height flights over Shark Bay, than over large Macleod Evaporate Basin. Then, observations were made on the ground, including evaporate sequence in the cross sections, variety and quality of salts produced out of the solar and open pits within Lake Mcleod.

Certainly, Work Shop Education, with extra-ordinary direct observation offshore and onshore, caused provoking thoughts. Among others, lesson learned by this author in the Shark Bay and in Lake Macleod, appear to be very helpful in understanding, eventually similar sedimentological and paleogeographic conditions transitional between Rothliegend into Zechstein, that could occurred at least in the North-Sudetic and For-Sudetic region.

During the above mentioned Convention this author lectured on “**Sediment-hosted ore deposits of the Permian Metallogenic Epoch**”. Lecture, beside world-class of KGHM Polska Miedz, S. A., already mined out copper-silver deposits of Mansfeld-Sangerhusen and other areas in Germany, wide spread copper occurrences in the US Permian Basin and in the type-locality of Fore-Ural Mountains, Permian Basin.

As an immediate result of said lecture, followed with discussion and meetings at the Convention, lecturer has been invited to share his information and ideas with:

- **CSIRO Branch Office in Perth**
Lecture delivered for interrelated discussion carried with scientists and staff researchers in Perth.
- **Utah Development Corporation, n. b. later acquired by BHP**
Lecture delivered and on site several days consulting provided in **Brisbane**.
- **BHP Branch Office for South Australia**
Lecture delivered in **Adelaide**. After that and discussion with BHP Branch Manager and staff geologists this author was also requested to log core samples of black shales, out of exploratory holes, drilled somewhere in vicinity of the Warloo Copper Mine, at the western flank of the Adelaide geosyncline, north of Adelaide.
- **Bureau of Mineral Resources – later named and presently known as Geological Survey of Australia, Headquarters in Canberra**
Lecture has been delivered for and subsequent, extensive interrelated discussion was held with large group staff scientists and researchers.
- **Goldfields Co. Ltd., Branch Office in Canberra.**
Lecture and interrelated consulting was delivered for staff geologists.
- **C.R.A., Branch Office in Canberra.**
Lecture and interrelated consulting was delivered for and very extensive, broad discussion was held with staff geologists.

- **CSIRO Branch Office in Sydney**

Lecture delivered for and subsequent extensive discussion held with large team staff scientists and researchers. After that this author visited CSIRO laboratories and research facilities, with special interest of those applied for geochemical and mineralogy cal analysis and related research.

Apparently, also learned that JODODEX geologists flown from their Office in Canberra for attendance of this author lecture in CSIRO.

VISIT TO AUSTRALIA IN 1996

This visit to Australia was related to the “**Conference on “Resources ‘96” organized by Mines & Energy South Australia**”, held in Adelaide in December 1996.

Although during the Conference many good lectures and worthy to consider ideas were presented, but main purpose of this author’s attendance was to visit **Olympic Dam Mine**.

It should be noticed that in 1970s Western Mining Corporation (WMC) explored for stratiform or sediment-hosted copper deposits. Such copper mineralization was already known from Adelaide Supergroup sediments of South Australia. Mount Gunson old small miners mine was of special interest to WMC. Initial exploration was already committed. However, meanwhile Mines & Energy South Australia, released newly completed surveyed map (n. b. 1:250,000). Such maps were publicly available. On the map, in the vicinity of Roxby Downs, WMC geologists noticed evident magnetic anomaly. That become intrigued, and in spite that Roxby Downs area was located far away from Mount Gunson, WMC geologists and management decided to check it by exploratory drilling. They drilled 10 holes and their results were mixed. In some of them ore grade of copper mineralization, with some gold and uranium was found. Evidently, there was no stratiform type mineralization. Initially it was believed that mineralized found was of some other type – eventually associate with weathered granite?

Therefore WMC, to avoid further exploration risk, approached numerous companies searching co-investor or investors. **At that time, one of such companies asked also this author to evaluate results of those ten-drilled holes. Apparently, he was also hesitant to recommend it favorably.**

Than finally, WMC found BP. This one committed co-investment further exploratory drilling and eventual development and for that acquired 49% of the equity interest.

Rest of the history of Olympic Dam is already well known. Among others, it has been reported that Olympic Dam is located 560 km north of Adelaide. It is also known that Olympic Dam was brought into production in 1988.

It is 4th World’s Largest copper + silver deposit, 5th largest gold deposit and the largest uranium deposit.

All from underground mining produce about 200,000t of copper, 25,000kg (804,000oz) of silver, 4,000t of uranium, and 28,000kg (90,000oz) of gold per year.

Certainly KGHM is also aware that BHP Billiton after additional, already committed investment, in 2013 Olympic Dam will mine 72 million tons of ore, 730,000t of copper, 19,000t of uranium oxide and 25t (804,000oz) of gold per year.

Obviously, environmental considerations at Olympic Dam operations are unimaginable and comparable to those faced by KGHM in its operations.

Those are the reasons why this author strived to visit Olympic Dam, and did so after its almost 10 years of operation, and similarly like with KGHM, continuously keeps following up-to-date information.

BOLIVIA - TIN AND GLOD IN ORURO AREA - ANTIPLANO REGION

In the Oruro area, this author visited almost all past and presently active mining operations, particularly observed small miners operations and studied geological features, assembled and studied relevant literature and found that gold occurs within Miocene age Kholpana Formation.

The Kholpana Formation is confined to one of the Antiplano basins resting on folded and faulted, Upper Ordovician-Upper Devonian age sequence (total almost 2,000 m thick). In some areas of Antiplano, Lower Paleozoic sediments-host base metals, tin, silver and gold mineralization with gold-bearing quartz veins, overlaid by glacio-marine and red-clayey sediments, alternating micaceous sandstones, siltstones, and black shales, partially overlaid by Soledad Volcanics and Pleistocene - Recent sediments.

Although small miners active in the basin apply extremely primitive procedure of gold extraction, recovering on average 1g Au per miner per day, at least some of the findings range from 8 to 10 g Au/m³, and sometime as much 180g Au/m³.

In spite of extensive observation made in the field, it is still insufficient for reliable assessment. Gold resources potential is good in the Kholpana basin, considering the above-mentioned amount - wide horizontal, and significant vertical distribution of gold.

Eventually, there might be at least 5,000,000 mineable ounces of gold, averaging recoverable at least 1 g Au/m³.

CANADA – ALBERTA, BRITISH COLUMBIA AND NOVA SCOTIA

IN ALBERTA – KIMBERLAY AND CRANBROOK AREAS

This author, during employment by **ASARCO**, visited and thoroughly studied the **SULLIVAN** Lead and Zinc Mine, than explored for similar type sediment-hosted deposit mainly within brecciated, quartzitic, silty, organic-rich sediments of Proterozoic age.

It should be noticed that the Sullivan lead and zinc ore body was discovered by ASARCO. Than, because very fine grains of the Pb and Zn – bearing minerals, ASARCO in spite of being major mining company and the owner of most of the metallurgical smelters in the US, Canada and Mexico, was unable to solve metallurgical problem. In 1918 Canadian COMINCO acquired the Sullivan ore body, solved metallurgical problem and Sullivan for many years became the largest Canadian Pb and Zn Mine.

IN BRITISH COLUMBIA

This author, during employment by ASARCO, than when consulting for ANACONDA, visited and thoroughly studied several major mines and mining operations including: ENDACO Molybdenum Mine, BRITANIA Copper Mine of ANACONDA, TEXADA Copper Mine on Vancouver Island, GRANBY Copper Mines (of porphyry type) and ENDAKO Placer Development Ltd., MOLYBDENUM Mine, and GIBLARTAR Mines Ltd., a Copper Mine, in NW British Columbia.

Than when exploring for new copper deposits, among others he visited a numerous areas. In the Kamloops area he briefly visited, examined and evaluated **AFTON, AJAX, CRESTON and PATHLOOK** deposits, recently acquired from **ABACUS** by **KGHM**.

IN NOVA SCOTIA

This author, when consulting for **SHELL RESOURCES, INC.**, among others, in the vicinity of Cape Breton, thoroughly examined mineralization of the **YAVA** Lead and Zinc Mine.

It is very interesting to notice that in the Yava Mine, metalliferous mineralization is hosted in the sandstones, and is distributed and concentrated almost exactly like copper-silver mineralization in the Weissliegende of KGHM's Rudna Mines. But the mineralization in the Yava Mine is hosted in the Lower Carboniferous Age sandstones, directly overlaid by highly bituminous limestones interbedded with silty shales of the Windsor Formation.

CHILE – COPPER WITH GOLD PROJECT

In 2007 main objective of this author's visit to **LA LIGUA - TILAMA** Project Area 235 km north from Santiago, was examination of the prior mine workings – prospects and evaluation of the economically viable ore body potential. Anticipated was porphyry type copper with gold mineralization and potential of a mineable tonnage of ore-grade reserves. Observations in the field found that Cu with Au of chalcopyrite and bornite type mineralization occurs along contact zone between dark-gray limestone and andesitic-type volcanics. Locally they appeared to be of significant ore grade, but because no supporting indications were found for a mineable ore potential reserves, subsequently the interest in the project was dropped.

EGYPT

This author, as recipient of the post-masters degree scholarship, being admitted to the Cairo University, entire 1959 year spent in Egypt. Meanwhile, most of the time, he participated with Geological Survey of Egypt, in several Geological Expeditions and jointly explored for various mineral deposits. In the vicinity of the Baharia Oasis, in Western Desert, mapped, in detail sampled, assessing potential iron ore reserves. Then in various parts of Eastern Desert of Egypt explored and evaluated various mineral deposits, including copper (of massive sulfides), lead and zinc, uranium, chromium with PGE, iron, and phosphate with REE.

In April through June 1975 and later in 1979, in Egypt, among others, made detailed evaluation of the base and precious metals potential in Eastern Desert of Upper Egypt. This author carried the Project for former Trans-World Egyptian Petroleum Corporation, subsidiary of St Joe Mining Corp. Among others, said evaluation included old mining tailings and potential deposits of old mines including: Omo Samiuki – with massive sulfides copper and nickel mineralization, Darhip Copper Mine and its tailings, Abu Galaga ilmenite deposit, Hamesh Copper Mine, Umm Gheig Lead – Zinc Mine, and ancient Egyptian El Aradiya gold mine workings and tailings.

Recently (i. e. since 1995), in the latter general area, located 28 km west from Marsa Alem located on the coast of Red Sea, new gold deposit has been discovered and by very extensive drilling, 7,000,000 ounces of gold have been well proven. Gold Mine will be operated under the name Sukari Gold Mine. Pharaoh Gold Mines, a wholly owned subsidiary of Centamin Egypt Ltd. and the Egyptian Mineral Resources Authority, jointly own the mine. Mining operation began in February 2009, and intending to produce 200,000 oz Au/y.

FIJI – GOLD IN VUNDA AREA

Project involved evaluation of old and recently made mine tailings after poorly extracted gold mainly from gold-bearing laterite, developed mainly on the shoshonite basement. However, the primary objective was initial exploration for economically viable mineable gold-bearing deposit.

GHANA – GOLD IN OBUASI AND TARKWA AREAS

In 1987 project involved evaluation of old and recently made Ashanti Gold Mines tailings after extraction of gold, mainly from gold-bearing quartz veins in the carbon-rich siliceous greenstone-type ore.

Then in 2007 and 2008 this author visits the Kabriso Gold Mining operations, operating on very rich clayey alluvial sediments (averaging ~20 g Au/m³), resulted in preliminary evaluation of the potential larger ore reserves, including gold and platinum within widespread, up to several meters thick lateritic cover.

HAITI – GOLD AND COPPER

In Haiti, Geoexplorers International and personally this author has been active since 1981 and is still active. Initially, provided consulting services for United Nations Development Program (UNDP) and UN Revolving Fund, than for Inter-American Bank (IDB), Government of Haiti and numerous major and junior mining corporations. This author's activity in Haiti resulted in the discovery of three gold deposits, which recently are being developed into production, also by Newmont Mining Co.

Prior to and in 2007, copper with an average 0.5% and average 1 g/t of gold in a minimum 500 million tons of ore, well documented and partially proven by exploratory drilling, this author highly recommended to KGHM.

Geoexplorers activity in Haiti, among others, included evaluation of the **flotation tailings** after extraction of copper with lesser amount of gold, produced from skarn-type ore body of a former **MEME Mine**, located 16 km north of Gonaives, the third largest city of Haiti. Beside old mine tailings there are still relatively good geological premises indicating for a minimum 6,000,000 tons of ore averaging ~2% copper with 1g/t gold.

KAZAKHSTAN – NONFERROUS METALS INVENTORY OF THE MINE TAILINGS

Beside recent (i. e. in 2007) evaluation of the most likely major oil potential within Western Zharkamys II and Karmakir Exploration Concessions, located near to Aktobe (former Aktyubinsk), in Western Kazakhstan, in 1987 **Geoexplorers International received complete Inventory of all Mine Tailings, mostly of nonferrous and precious metals, in the entire Kazakhstan**, including Almalyk a major copper mine located in Uzbekistan. Already at that time, Geoexplorers International and personally this author, has been requested to promote those tailings to potential investors, for acquisition, development, processing and more efficient than before, recovery mainly of base and precious metals.

Many of those mine tailings, including of **DHEZKHAZGAN Cooper Mine** (n. b. generally similar to KGHM mines), this author visited and evaluated. Evaluation entailed flotation tailings in Kazakhstan, Uzbekistan, Russia, and Ukraine, but also others in Central and Eastern Europe, Africa, USA, and Canada.

Generally, an attitude toward “mine and flotation tailings business”, among American and Canadian companies is negative. However, Newmont reversed that attitude in **Muruntau. Pegasus Gold**, a major Canadian gold producer jointly with **Goldbelt Resources**, took “tailings project” also seriously in Kazakhstan. Goldbelt Resources, at the investment of US \$3,000,000 acquired 102,000,000 t tailings assaying 0.74 g Au/t and 5.71 g Ag/t, with proven reserves 1,600,000 oz of gold, and 5,400,000 oz of silver. Goldbelt Resources, from its tailings project in Kazakhstan, plan to produce 151,000 oz of gold and 720,000 oz of silver, annually.

MEXICO – GOLD IN SYNORA, OXACA, NUEVO LEON, SAN LUIS POTOSI AND OTHER STATES

Since 1984 through 1990s and recently, Geoexplorers International, Inc., and particularly this author many times visited numerous mining districts in Mexico. He evaluated particularly copper, silver and gold potential, including mine tailings and placer type deposits. Moreover, **Zeolithos de Mexico, S. A.** independently registered in Mexico, is wholly owned by Geoexplorers International, Inc., which owns four exploration concessions covering of 605 hectares terrain having potential for much over 100 million tons of open-pit mineable reserves of the clinoptilolite-rich zeolites.

NICARAGUA – GOLD AND COOPER

In Nicaragua this author visited several mining sites and areas, evaluating particularly potential for gold and copper deposits, followed with investigation of the land status and areas open for acquisition. However, initial investors changed their mind when much bigger capital was necessary and subsequently withdraw their interest in Nicaragua.

PANAMA – GOLD AND COPPER

In Panama, Spaniards discovered gold in 1502. Subsequently, they mined out 30 tons of gold (964,530 oz of Au), mainly of placer type deposits from Varaguas Province. In 1960s **Stefan Wleklinski** (n. b. Polish, at that time residing in Argentina), employed by UNDP, thoroughly examined all old mines and former prospects, including **MARGAJA** Copper Mine. S. Wleklinski (whom this author had contact already in 1960s, still in Poland, than met him in the UN Headquarters in New York), authored excellent – high quality Report (n. b. dated 1964).

In 1980 and than in 1987, this author followed S. Wleklinski's recommendations. In 1980, this author spent over 30 days sampling and evaluating gold mineralization in very heavy jungle, mainly of the Rio Concepcion tributaries, than in 1987 also in other areas of the Varaguas Province.

As the result, the **SEA-LEASE PANAMA Ltd., S. A.** acquired some properties, followed with several exploratory drilling, but because of insufficient funds stopped further activity in Panama. Nevertheless, in the same general area of Panama, subsequently Texasgulf, Inc. discovered major copper deposit. They proved to be big – mineable ore body, but subsequently **Elf Aquitaine Oil Co.**, acquired Texasgulf, Inc., and then dropped mining activity.

PHILIPPINES – CHROMITE IN THE DINAGAT ISLAND

In 1991, this author's assignment and the project's scope in Philippines by and for UN Revolving Fund, financially sponsored by Japanese Marubeni Corporation, included in depth evaluation of the rate of production, recovery, and production costs. Moreover, this author's main task included investigation and determination of the tonnage of high-grade chromite ore, unofficially smuggled and shipped to China by Chinese vendors, without paying any taxes to the Philippines Government.

RUSSIA

This author (as the US Citizen and scientist) began traveling to the former Soviet Union in 1984, already at that time and for several subsequent years, through 1990s. **Each time he has been invited and considered as a guest of the Soviet Academy of Sciences. At that time, he attended and lectured at numerous international and Soviet scientific conferences, visited scientific institutions and mining operations, including particularly gold mines in the Amur Region, Buriatia, Yakutia, Khabarovski Kray, Primorie, Sakhalin, Magadan Region, Kamchatka, Gornyi Altay, Novosibirsk Region and others in the European Russia.**

In 1990 Geoexplorers International, Inc. won highly competitive Research Project and was awarded Contract by the U.S. Bureau of Mines. The scope of the Research Project involved gathering information and data for the US Bureau of Mines Minerals Availability System (MAS). Said scope included 34 mineral commodities of the entire former Soviet Union, including assessment of mineral reserves and resources, determination of the mining and ore processing technology and its capacity. Performance of the US Bureau of Mines Contract involved Geoexplorers International, Inc., professional staff and about 30 Soviet professionals and scientists, including professors and academicians. By mid-1991, numerous Profile Reports of MAS have been completed. But because, particularly in 1990 and 1991, there were many Aeroflot aircrafts crashes and accidents, the U.S. Department of State warned all to consider traveling precaution to avoid eventual US Government liabilities (i.e. including to Geoexplorer's personnel as the US Government Contractor). Therefore, after about 30% advancement of the Contract, the U.S. Bureau of Mines stopped its further execution.

Subsequently, for the following five years **BHP-Billiton** Limited retained this author as Senior Geologist with assignment for New Business Development, mainly in Russia and Newly Independent States of the former Soviet Union, Poland and Romania. Using said opportunity, this author visited many areas, particularly those with already identified and proven ore reserves of gold and nonferrous metals, that included visit and evaluation of big **Volnogorsk** and **Irsha Titanium-Zirconium** Mines in Ukraine. In Uzbekistan, besides visiting giant **Muruntau Gold Mine**, he also visited the areas and at least briefly examined documentations referring to major gold-bearing ore bodies; **Daugustau, Amantaitau and Vyskovoltinye**.

UNITED STATES OF AMERICA

This author ever since arriving in 1969 and settling permanently in Denver, Colorado, has been professionally very active. Initially, Texasgulf, Inc. employed him. He managed (staff of six geologists, among others, equipped for most of the time with helicopter) exploration, mainly for copper and associated gold, in the states of Arizona and New Mexico, with irregular assignments for projects in Nevada and Western Texas. Already at that time, in Arizona and New Mexico, he visited all copper mines (n. b. producing >30% of the US total production) and thoroughly studied their deposits. Having considerable knowledge of those, he examined and evaluated many areas and properties with the geological characteristics indicating potential for new discoveries.

Than when being employed by ASARCO, during almost two years, he explored for sediment-hosted copper deposits in the US Permian Basin, mainly in Texas and Oklahoma. Meanwhile, in both states, he visited, examined and sampled many – probably most ground surface outcropped copper occurrences. At the same time, he logged and sampled cuttings out of tens oil wells and collected thousands of samples for geochemical analysis. Than he evaluated their analytical results and authored numerous reports, maps, cross sections and others.

After about two years of exploration in the US Permian Basin, ASARCO became impatient and this author was assigned for exploration of also sediment-hosted copper and silver deposits within the Belt Supergroup in western Montana, Idaho and Alberta, Canada. This author, after visiting operating mines and becoming generally familiar with geology of the Cordilane Mining District in Idaho, as one of the first, he visited, examined and sampled (n. b. in underground edits) of earlier discovered by Kennecott Exploration Inc. Spar Lake copper with silver deposit. Contrary to the earlier Kennecott evaluation, evaluation by this author for ASARCO became favorable. Than, the Spar Lake (later renamed as Troy Mine), for many years became the US largest silver producer.

In 1974 this author established his consulting activity operating under Geoexplorers International, Inc., a Colorado corporation. Ever since, this corporation has been active (without any interruption), employed up to forty staff professionals and meanwhile temporarily contracted specifically qualified end experienced consultants. Among many—mostly exploration projects, except those above identified in overseas, many more covered various parts, particularly US western states, but including also Virginia, North Carolina, Pennsylvania, New Jersey and Georgia.

In Colorado, Utah, Wyoming, California, Idaho and Montana, Geoexplorers International, Inc., including this author examined, evaluated also mine tailings, including particularly their environmental impact and assessed potential economic validity.

Moreover, during last several years, Geoexplorers International, Inc., including particularly this author, identified, generally similar to KGHM's black shales. Our already extensive sampling of which analytical results indicate mineralization in sediment-hosted precious metals, including PGE, and potential for ore-grade major deposit.

This author, because of his prior (i. e. since 1953) involvement in the research on Polish copper-silver deposits, ever-since his priority interest has been in the sediment-hosted base and precious metals deposits, including up-to-date information referring to KGHM's ore bodies and mining operations. Among others, it is well known that in spite of the genetic-related factors, over 6,000 tons (i.e. >192,907,380 oz) of gold in Nevada, second largest concentration of gold is sediment-hosted. Therefore, using opportunity when having projects in Nevada, particularly during consulting for Newmont Mining Co., Echo Bay Mining Corp. and others, several times he visited various gold mines. He regularly attended International Symposia organized by Nevada Geological Society, always combined with visits to various active gold mines. The latest Symposium that he attended was held in May 2010. Prior to that, he participated in three days visits to five major – all very big, open pit gold mines (sharing the most up-to-date information).

TANZANIA – GOLD AND DIAMONDS

In 1988, in conjunction of the US Congress embargo imposed on South Africa, as a pressure against apartheid, the US Department of States contracted this author to explore for and evaluate mineral deposits potential, particularly, precious metals and chromium as an alternative resource for the US import and supply. During about one month, this author visited and at least briefly examined most of the mining operations in Tanzania, including particularly gold mines and Medui Diamond Mine, operating in one of the world's largest kimberlitic pipe. It should be noticed that in Tanzania, out of 240 already identified kimberlitic pipes (at that time, i. e in 1988), 44 contain diamonds.

VENEZUELA – GOLD AND DIAMONDS

Since 1970s than, particularly during 1990s, this author visited Venezuela, numerous times. Particularly in its eastern regions, he examined most of the gold and diamond mining districts and mine operations. He assembled most of the literature and many unpublished reports, geological and other maps. Than, Geoexplorers International, Inc., on its own, acquired two exploration concessions. Because politically unfavorable climate conditions, most of the foreign mining companies, including Geoexplorers International, Inc., withdrew their interest from Venezuela.

ZIMBABWE – GOLD AND PLATINUM GROUP METALS

This author's assignment for Zimbabwe in 1988 was also by the US Department of State. It was of the same reasons as one the above mentioned assignment in Tanzania. Also in Zimbabwe, during one month this author visited and at least briefly examined most of the gold and chromite mines including their smelters. In greater detail he examined and studied chromite with platinum group mineralization within the Great Dike of Zimbabwe. That including Mimosa Platinum Mine, formerly owned by Australian Delta Mining Company, subsequently acquired, developed and operating by BHP – Billiton Corp.

Please notice that for most of the above briefly described areas and mines, photographic illustrations and more detailed information are also available.

THANK YOU FOR READING THROUGH AND AT LEAST SOME CONSIDERATIONS

DR. JAN KRASOŃ

SUMMARY OF THE CURRICULUM VITAE

Dr. Jan KRASOŃ graduated from University of Wroclaw, Poland, with M. Sc. and Ph. D. degrees. Both majored in Geology (+Ph.D. with minor in Political Economy). He worked for the same university (from 1956-1966) as a research scientist, assistant and associate professor. In 1959, as a recipient of a scientific post-graduate grant, one year he studied at Cairo University. At the same time participated in various exploration projects carried out by the Geological Survey of Egypt.

In 1966-1969, in Libya, as Project Geologist, he contributed to the discovery of a major salt deposit, hosted in large sebkha (then this discovery was the base for development of the chemical plant at a billion dollars investment). Then he served as the expert and advisor in the development of various mineral and water resources to the Government of the Kingdom of Libya.

In 1969, with the professional preference, he immigrated to the USA and settled permanently in Denver, Colorado. As Senior Exploration Geologist and Regional Manager, he worked for Texasgulf, Inc., and Asarco, Inc. (exploring mostly for base and precious metal deposits). **From January 1973 to August 1974, he worked for the Division of Water Resources, State of Colorado.**

In 1974 he established his own company, Geoexplorers International, Inc., which ever since has been active without interruption. As a professional consultant and project manager, he served for about fifty clients, mostly mining and petroleum companies, government agencies, and various international and financial institutions, including United Nations.

- **Dr. Jan KRASOŃ himself has over 50 years of worldwide professional experience in exploration for economically viable mineral and petroleum deposits**, including: practically oriented research and assessment of a great variety of minerals and hydrocarbon resources, geologic and hydrogeological mapping, special environmental-auditing, and management.
- Has broad field of professional specialization and expertise, including: research on sediment-hosted and volcanogenic gold, other precious and base metals, especially those having relationships to hydrocarbons.
- **Has extensive experience in basin characterization, determination of formation, stability, and resources assessment of gas hydrates, and conventional - type hydrocarbon deposits - particularity in the offshore environments.**
- **Since 1974 (uninterrupted over 37 years), he has been President and CEO of Geoexplorers International, Inc., a highly reputable, consulting, then exploration, development, and operating corporation for profit.**
- Professionally, and as business developer has been active in many countries of the world, including: USA, Canada, Mexico, Central and South America, former Soviet Union then Russia, Central Asia, Central and Eastern Europe, Middle East, Africa, South-East Asia and Australia.
- **Jan Krasoń himself worked and lectured in over 60 countries.** Since early 1980s, has initiated multi-million-dollar projects of minerals and petroleum business in the former Soviet Union, then in Russia and Newly Independent States, Eastern and Central Europe.
- He has international experience in property acquisition and negotiation of inter-related business, and trained university students, corporation staff professionals, conducted courses, seminars, workshops offered and delivered for various associations, government agencies, and international organizations.
- **In October 1986 Jan Krasoń, as invited speaker for Annual Conference of Newmont Mining Corp., presented “Muruntau the World’s Largest Gold Mine” in Uzbekistan, and recommended it as exploration model. That presentation, after disintegration of the Soviet Union, among others, triggered interest and resulted in Newmont’s involvement into business in Muruntau, and subsequent benefits production of about 500,000 troy ounces of gold/year (at the production costs lower than US \$200/ounce).**
- Jan Krasoń consulted on and participated in privatization strategy, investment opportunities, and strengthening of management of government institutions and organizations.
- **He authored and co-authored over 130 scientific publications** including geologic maps, wall posters, professional papers, bulletins, separate books, articles, abstracts, and critical reviews (authored also about 300 unpublished, proprietary reports).