The Journey Begins

What Our World Wants…

What Our World Needs…

The Piedra Amarilla Has

“Below the blue sky of the Atacama dessert the yellow earth will yield the minerals for our green future”

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Katusa's Investment Insights

May 21, 2021

America the Broken

By Marin Katusa

Dear Reader,

You've heard someone say some variation of this recently…

"What a crazy time to be alive!" Or, "We live in interesting times".

But none of those are true. For centuries, times like these have been *the rule*.

The United States has been in turmoil for much of its history:

- The Revolutionary War
- The Civil War
- The Great Depression,
- The Cold War
- The Vietnam War
- Natural Disaster impacts such as Hurricane Katrina.

It's a long list of stormy times. And every single one of those heartbreaking events has led to renewed growth and prosperity for the American people.

But there *is* something unusual about our time: a complete breakdown of some of America's most critical aspects.

Take infrastructure, for example.

In 2021, the American Society of Civil Engineers released its latest "report card" on United States infrastructure. The overall grade: C-.

One in four bridges that are driven across every day in America is deficient or *obsolete.*

But that's nothing compared to other systems that are part of everyday American life. These, among others, are all in shambles:

- The tax code
- Medicaid
- Healthcare
- Education
- Corporate welfare

That list wasn't just made up. It came from a senior U.S. Senator.

The big problem is that the government has become so flawed and ineffective that the "C-" in each of these areas is on pace to quickly turning into an "F".

How can America turn back from a certain collision course with absolute catastrophe?

Well, there could be an "enlightened" coup—as we've seen slight glimmers over the past two decades.

Or perhaps changes in the way American democracy operates or hold a new constitutional convention to rewrite the rules.

Or maybe create a new, *viable* third party… the first one in more than a century. I just don't see any of those happening any time soon.

But here is an option that is viable—one that's uniquely American— and is most likely.

It's called a "**Sputnik moment**."

Mass Chaos Always Leads to American Prosperity

On October 4, 1957, the Soviet Union launched Sputnik 1. It was the world's first man-made satellite.

When the news media greatly exaggerated the danger of the situation, the United States went into shock.

One scientist wrote that the day Sputnik orbited the Earth was the day the U.S. became a "second-rate power." But in a private meeting, President Eisenhower revealed that he knew the opposite was true.

Russia has "done us a good turn," said Eisenhower.

Because with that launch, the Soviet Union had thrust the powerful American machine into action. Remarkably…

- **NASA was created from the ground up in under a year.**

And a decade later, the first men landed on the moon. And they were American astronauts, not Soviet cosmonauts.

Within 20 years, the Soviet Union was *gone*. And the United States was the undeniable, unassailable world leader in space and the world.

- **It's been the same throughout all of U.S. history. America has waited until its back is up against a wall before acting.**

And when it *does* act, it absolutely *crushes* whatever problems oppose it.

Right Now, America's Back is up Against a Wall

The coronavirus ripping across the nation has already resulted in major tax code changes and bailouts.

It's disrupted the education system: Home schooling has "exploded" according to the US census through to 2021.

The strength of Medicaid and the healthcare system are about to meet the test of a lifetime.

It might be hard to look past a market experiencing major volatility and uncertainty.

- **The Colonial pipeline, the most important petroleum product pipeline in the eastern United States, was hacked for $90 million in bitcoin…**

The nation is bombarded by the media to turn on each other, family vs family and neighbor vs neighbor. In one conflict after another…

But the coronavirus has done America a good turn.

Because**… this is America's Sputnik moment**.

This is what will force a healthcare overhaul, an education renovation, an economic restructuring. All in the name of not getting beat by a virus and foreign competitors.

This is what will set foreign policy and domestic economy on the path toward another half-century of record-breaking growth and prosperity.

- **In short, the fears of these completely *normal* times will propel the incredible success of the next.**

There Will Be No Return to "Business as Normal"

As Thomas Wright from the Brookings Institution wrote:

> "The longer the pandemic goes on, *the more the world will change*."

For the United States, that means a change in a very good way.
Because when it comes down to it, times like these are what the United States was made for.

We're going to see massive changes in society… in policy… in politics… and *especially* in business.

Which is even more good news:

- **The more the world changes, the more investment opportunities there are.**

You see, investment opportunities arise when there is a difference between *value* and *perception.* And when rapid change happens, those differences are all over the place.

It gets even better.
Many changes that were already underway when the pandemic hit is going to be dramatically accelerated.

- **The faster the world changes, the *greater* the investment opportunities are.**

We're Watching History Happen in Real Time… But at 16x Fast Forward Speed…

Huge companies will buy out little ones.
Companies will bring their supply chains home to the United States. Companies head over their heels in debt will quickly fade away.

New sectors are being created now that will takeover the existing titans in the marketplace. And you will have the opportunity to get rock-solid companies at rock-bottom prices.

Eventually, as the director of the NIAID said, "We will get over this, and this will end."

When that happens, you'll want to be ready.
Because maybe not today, and maybe not by this summer — but soon, and for the rest of your life, *America will rise*.

What Comes *After* the Catastrophe Is What's Important

Right now, people are claiming that the coronavirus will kill us. If not physically, then economically. But that's based on their limited insight.

- **Yes, the Coronavirus inflicted great pain in the short term. But in the long term, it will propel the United States to historical greatness.**

As a private investor, it's easy to be distracted by the layoffs, the new jobless claims, and the case counts reports by the mass media.

But while everyone else is panicking at the first signs of turmoil, great investors are looking forward. They're looking past the coronavirus.
They're planning for a future when the United States will have once again surge far past its competition.

Because time and again, America has fixed its problems *without* a regularly scheduled revolution.

And America is going to do it again.
Infrastructure, which we're rapidly finding out is necessary to maintain the integrity of vital supply chains and a calm public, will be one of the first to get an

upgrade.
It will be an upgrade that will cost trillions of dollars...

- **President Biden proposed a $2 trillion package in his 2021 plan. That's enough to fix nearly every bridge, road, sewer, and school in the United States.**

Now, with interest rates at historical lows, borrowing that amount will be far more attractive.

That massive infrastructure development will need China's levels of resources to construct: copper, iron, and oil.

You don't have to look farther than home depot to see the price of lumber rocketing higher. Or the gas pump to see that oil prices are elevated.

Savvy investors are already mapping out which decimated resource stocks they want to pick up for dirt cheap.

- **Because those stocks are eventually going to fly higher than they've ever been before.**

And when the coronavirus is gone and the country has been fixed, it will be America the beautiful—once again.
Regards,

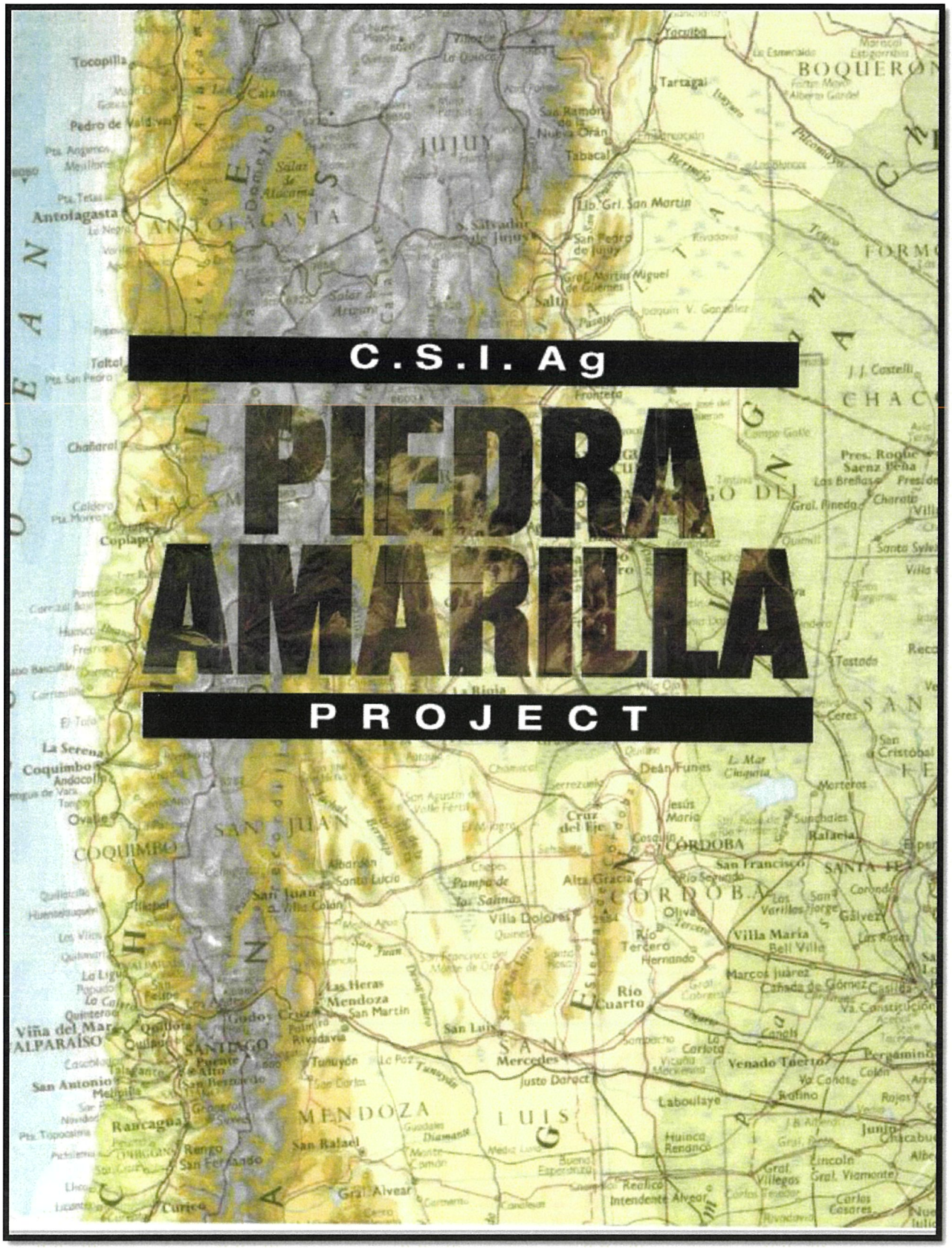
Marin Katusa

THE WHAT ?

History

B

The Journey Begins

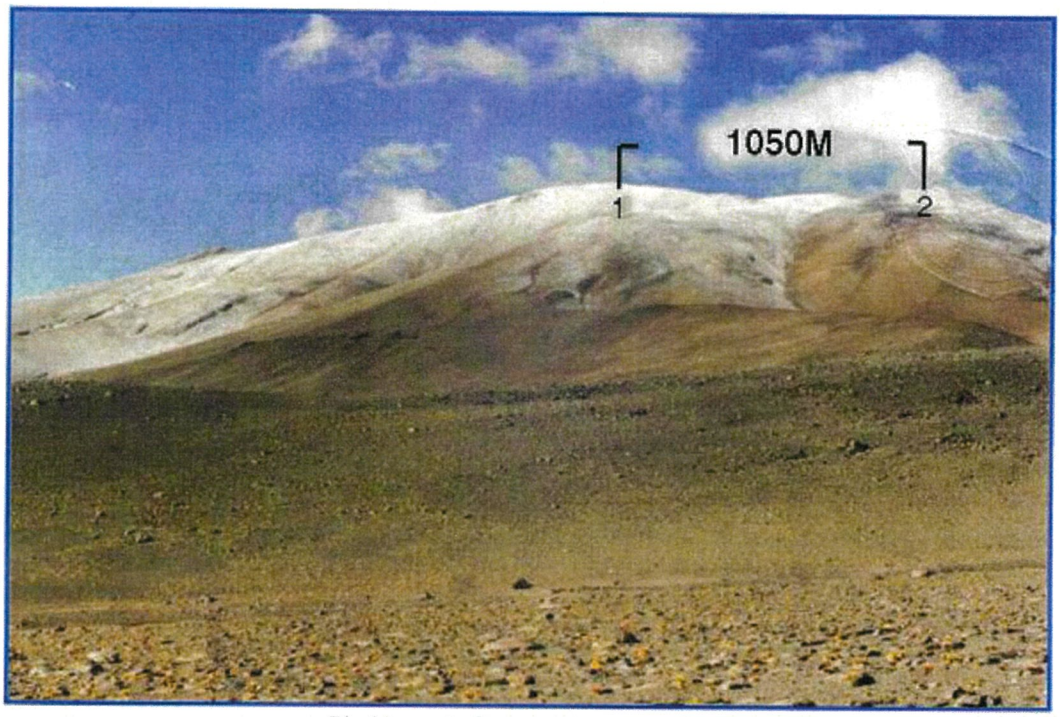


OVERVIEW

The Piedra Amarilla Properties and associated mineral rights represent a mining opportunity of uncommon merit. The minerals include approximately 30% of known global sulfur reserves. The host rock simultaneously contains some of the world's largest known deposits of titanium, concentrations of gold projected to be over $24 billion, and traces of silver. The titanium content has a value more than three times that of the sulfur content. The estimated value of the minerals, according to surveys conducted by The Ralph M. Parsons Company, independent assay groups and the Government of Chile, is $38 billion in indicated/inferred reserves, with additional billions of dollars in inferred reserves. The ores are of very high grade, within a conveniently soft host rock located near the surface and with minimal overburden. As a result, extraction and recovery costs will be comparably low.

Sufficient ore reserves are indicated on the Piedra Amarilla Properties to sustain a Project Life of approximately twenty years at the processing rate of 25,000 tons per day.

C.S.I. Ag seeks a qualified mining development group and investment participants to develop the Piedra Amarilla Properties to full commercial production and to operate mining and processing facilities on a long-term basis.



Blocking out of reserves in perspective.

CHILE: A FAVORABLE CLIMATE

Chile is the single most active mining country in the world. A stable, democratically elected Chilean Government actively encourages foreign investments and protects the interests of foreign mining companies. Mining ventures, which attracted over 70% ($1.76 billion) of the nation's total foreign investment in 1994, are controlled through the highly supportive Ministry of Mines, which is comprised of four regulatory agencies and three state-owned mining companies. Chilean mining legislation and foreign investment structure is being recognized and adopted as the economic model for much of Latin America.

The Chilean Constitution guarantees exceptionally strong rights to miners and mining interests. The Government of Chile has twice awarded the Piedra Amarilla Properties First Place in its annual competition to determine the most important mineral resource development opportunities in the country. These awards were granted to C.S.I Ag in 1989 for Sulfur, and in 1990 for Titanium. On both occasions the Government of Chile expressed its willingness to provide financial and technological support for the project as well as open access to rail transport and a deep water port with existing bulk ore facilities.

These awards were given to C.S.I. Ag after the Chilean Government regulatory agency CORFO contracted the services of INTEC-CHILE a Chilean Technological Group, to investigate the mineral availability and commercially viable extraction of the reserves. C.S.I. Ag enjoys excellent relations with Senior Representatives of the Government and the Bureau of Mines in Chile.

The Government requires only modest royalties. A normal level of corporate taxation will apply to the mining and refinery operations once they are in commercial operation. Copies of all pertinent tax regulations, legal opinions, registration documents with the Chilean Bureau of Mines and mineral extraction licenses that are not found in this summary, are available from C.S.I. Ag upon request.

FOREIGN INVESTORS

Many of the world's largest companies are actively engaged in mining and minerals operations in Chile including Phelps Dodge, Anglo-American Corporation, RTZ, Freeport, BHP, Cyprus Amax, Chevron, Mitsubishi, The Nippon Mining Company, Sumitomo, Shell, Placer Dome, Barrick Gold and others. Similarly, many of the world's leading banks are increasingly investing in mining and mineral activities in Chile.

THE PIEDRA AMARILLA PROPERTIES

Piedra Amarilla is located in the North-Central region of Chile where some of the world's largest known reserves of important industrial minerals can be found. The Escondida Project, the

Projection of low overburden.

largest copper operation in the world, is located nearby, as is the Copiapo Area where gold production has recently replaced copper as the dominant mineral activity in a region where, ten years ago, there were few prospects of gold.

Geologists, currently retained by C.S.I. Ag, explored over 100 square miles of potential mining prospects in the region over the past fifteen (15) years prior to C.S.I. Ag selecting the Piedra Amarilla Properties as the most desirable mining concession. Continuing investigations for the past ten (10) years by specialists currently retained by C.S.I. Ag as full-time staff in Chile, have brought further credibility to the additional studies and reports prepared by INTEC-CHILE for Minexco, NEW independent assays taken by top geologist in 1997 and the research arm of C.S.I. Ag in Chile. All studies and reports are available upon request. The Properties comprise nine individual areas, seven of which are contiguous sites and two non-contiguous, totaling 2500 hectares, or 6,175 acres.

Located in the Piedra Parada Mining District, approximately 200 miles Northeast of Copiapo, (260 20' S. Latitude - 680 45' W. Longitude), the Properties are connected by access roads which lie approximately 50 miles from a railhead and rail systems. These connect to a deep water port about 80 miles away. This port has bulk ore handling facilities in place that have been offered to C.S.I. Ag for it's use and development.

The Government of Chile has granted C.S.I Ag unrestricted access to the railhead facilities and to government-owned bulk transport rolling stock. C.S.I. Ag can also secure use of the bulk loading facility from the Port Authority, which is supportive of the Piedra Amarilla Project, as it will stimulate the local economy and regional employment. The Port Authority will also provide C.S.I Ag with a grant of land within the Port Area to establish bulk ore storage facilities.

Ordnance Survey maps, geological and topographical maps, aerial photographs, hydrology studies and ground level video's and photographs are available on the Properties, the road system, the port and the bulk handling facilities.

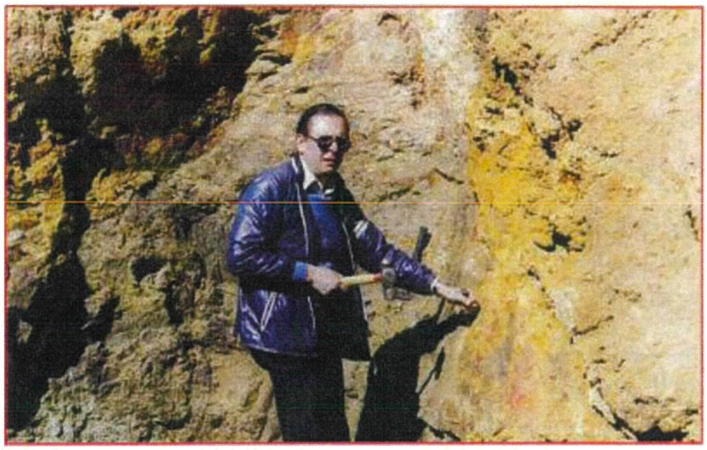
PRINCIPAL MINERAL RESERVES

Four of the Piedra Amarilla Properties have undergone extensive sampling, trenching and pit excavation to definitively calculate accurate ore reserves. The Government of Chile (CORFO and INTEC-CHILE) and The Ralph M. Parsons Company have produced extensive reports on these properties. The remaining five Piedra Amarilla Properties have been subjected to extensive random sampling which indicates substantial additional reserves of titanium and sulfur.

Mineable reserves on the portion of the four mineral properties tested are estimated to exceed 174,000,000 metric tons. Silica (SiO_2) makes up more than 72.5% of the host rock and more than 90% of discharged tailings. Sulfur is mineralized in high grade pockets and veins within a caliche structure, with overall content established in excess of 12%. The principal commercially valuable minerals contained in the host rock are Gold and Titanium Dioxide in rutile form. The business priority of the Piedra Amarilla venture is the extraction and production of gold and titanium products, with sulfur recovered as a major by-product.

The titanium content has a value several times that of the sulfur content. Titanium products are in great demand in the aerospace, medical and recreational industries e.g. the golf club industry. Gold reserves are considerable through the NEW 1997 assays, declarations and reports. Additional by-products will include Silver, Tellurium and high grade Silica.

OWNERSHIP AND SECURITY



Carlos Ulricksen, Geologist, Director of National Mining Service. Prominent leader in assay interpretation work.

The land concession title and the mineral and extraction rights of the Piedra Amarilla Properties are owned 100% by C.S.I. Ag. This company was formed specifically as a holding company for the Properties and is registered in the Turks and Caicos Islands. The Company and the Properties are in good standing with no current liabilities, claims, encumbrances, liens, debts or litigation. All titles, licenses and taxes are current. All of the outstanding shares of C.S.I. Ag are owned by Mr. Gary Pierce. Mr. Pierce has an extensive mechanical and structural engineering and construction background and many years of experience with a major US corporation, Morrison Knudsen, in design, development and build-out of major plants and infrastructure in the oil and gas, port facilities, chemicals and steel industries.

C.S.I. Ag holds title to the land concession and to the mineral rights free and clear. The mineral and extraction rights have been granted to C.S.I. Ag by the Chilean Ministry of Mines pursuant to an issued exploitation concession. The rights have been properly registered and are held in-perpetuity. Traditionally, the Government of Chile retains all surface rights to undeveloped properties. However, in the case of remotely located properties, the Government automatically grants surface rights to the owner of the concession and mineral rights. These rights are granted on an irrevocable basis for a nominal one-time payment.

Copies of "Chain of Title" to the properties, key corporate documents, resolutions concerning essential issues, minutes of meetings of the Board of Directors recording matters concerning control and ownership of C.S.I. Ag, copies of share certificates, Articles of Incorporation, and Corporate Imperils are all available for review.

C.S.I. Ag has also secured legal opinions from one of the most prestigious law firms in Chile confirming the absolute legitimacy and security of all mineral extraction rights and property rights as herein represented.

Trenching on Piedra Amarilla 131 Property

GENERAL EVALUATION

In 1988, The Ralph M. Parsons Company completed a study of ore deposits at Piedra Amarilla. The data and the property were again evaluated in 1989, 1990, 1991, 1994, and 1995 by a number of government groups and certified geologists. The data was compiled in reports, assays and technological surveys. In 1995-1996 this data was reviewed by two top U.S. specialists in mineralogy and mining. The reports from these well-respected consultants, as well as from The Ralph M. Parsons study are available for review. These opinions have been recently updated based upon information supplied by the Chilean agencies and the US Bureau of Mines. The Government of Chile has also completed its own assessment of the type, value and extent of mineral content of the Properties. There has been NEW additional assays taken and certified by independent groups from Canada which are looking for support from the Canadian Stock Exchange as investing and developing participants. Copies of these reports are also available.

A major new method of processing titanium has been developed. This ore processing method, the Titanium Dioxide Pigment From Concentrates Acid Sulfation Method, results in greatly reduced costs in the extraction process. The Piedra Amarilla will be among the first mines to profit from the efficiencies of this new technology. INTEC-CHILE has also developed a new technology for extracting sulfur that will allow economic processing of ore of lower grades than had been previously feasible. This technology is available to C.S.I. Ag. at little or no cost. The net result of these improvements, along with the high grade and easy accessibility of the Piedra Amarilla ores means that C.S.I. Ag will be able to extract and process the minerals at much lower rates than industry competitors. This will provide Piedra Amarilla with a significant commercial advantage over current suppliers of titanium and sulfur worldwide.

The average cost of mining and extraction at Piedra Amarilla was originally estimated in 1991 by Minexco, a data collection and reporting agent in Chile for C.S.I. Ag, to be approximately $ 41 US per ton. At that time, the recoverable mineral deposits were valued at $112 US per ton. The 1995 estimated price from Mr. Karl Meyers, mineral consultant, for the same minerals after recovery has risen to $131 US per ton, while mining and extraction costs have been reduced due to new technology.

The ratio of extractable minerals to overburden is less than 1:1 which is extremely low. This, along with the mineral-bearing deposits which have been extensively tested by pit and lateral trenching methods, establishes substantial inherent value in these properties.

The indicated and inferred reserves of recoverable deposits were established in 1991 to be in excess of $22 billion US. This evaluation was based on the reserves of titanium, sulfur, silica and limited gold reserves alone. Since that time, mineral values have escalated and a greater expanse of the Properties has been tested. With the NEW gold assays, evaluations, declarations and advancements in mineralogy, the reserves in gold alone are estimated over $24 billion on four of the nine properties (about 1/3 of properties) and only at depths of 150 feet. The estimated value of such reserves has increased appreciably to exceed the $38 billion dollar level.

Historically there have been sufficient surveys, evaluations, development, investigations, reports and investments made to qualify Piedra Amarilla Properties well within inferred and indicated reserves. These values for known mineral reserves are substantiated by The Ralph M. Parsons Company, Chilean Government Agencies, INTEC-CHILE,MECA, Minexco, NEW 1997 assays and investigations conducted by C.S.I. Ag..

Recovery of samples.

MANAGEMENT HISTORY

Ownership and control of the Piedra Amarilla Properties is exclusively vested in C.S.I. Ag following significant expenditures and commitments to constitute the Properties to their current status, to discharge all obligations and to establish title rights, ownership, mineral extraction rights, feasibility studies, licenses, legal opinions and to determine full mineral extraction processes.

C.S.I. Ag has retained the services of a Financial Advisor from a leading Investment Banking Group. The Financial Advisor is establishing a Data Room to present the properties to prospective strategic partners/developers and to facilitate the due diligence process. The Financial Advisor will also be a part of the C.S.I. Ag Management Group in developing and negotiating appropriate terms and conditions for participation in the long-term operation of the Piedra Amarilla Mine.

DEVELOPMENT PROGRAM

Build-out costs to establish the mine infrastructure and all related facilities have been reduced from an estimated $520 million, estimated by The Ralph M. Parsons Company in 1990, to approximately $300 to $350 million today. This has been accomplished by new developments in ore processing technology.

Bleaching White of Sulfur and Titanium

C.S.I. Ag proposes to develop the Piedra Amarilla Properties in three phases to minimize the economic investment risk and to enhance the value of the Properties.

Phase One / Further Confirmation of Reserves:

Extensive trenching and pitting has already been completed, together with substantial laboratory analysis to confirm the degree of reserves. Additional sampling and testing will be conducted to precisely determine the indicated value and extent of the mineral deposits to be extracted. The richness of the mineral content is self-evident at the surface over major sections of the Properties. It is important to MAP the properties anomalies for drilling purposes and returns. The gold at surface is showing economically feasible reserves on large scale recovery. Sulfur and other minerals originally flowed freely from sub-volcanic levels through surface outlets (Chilites). The minerals were deposited in clearly visible strata formations at the surface. Aerial and ground-level photography clearly indicates the presence of extensive mineral deposits. It is a simple matter to determine the lateral and vertical extent of the deposits by pitting, trenching, drilling and core-sampling. A considerable amount of the work has already been completed by The Ralph M. Parsons Company and others.

The costs involved to convert inferred and indicated reserves into measured reserves are relatively low, due to the soft nature of the host rock and a shallow drilling level of approximately 400 feet maximum. The time required is approximately six months.

It is anticipated that further reports will confirm extraordinarily large reserves of titanium and sulfur as estimated by Mr. Bud Long, U.S. Mining Engineer, along with Mr. Karl Meyers, U.S. Metallurgist, who have conducted a recent evaluation of all reports, assays and documentation compiled on the Piedra Amarilla Project.

Phase Two / Pilot Mining Operation and Processing Facilities

C.S.I. Ag proposes to establish a pilot mining operation and processing facilities to recover, on the conservative side, approximate total net value of titanium products per ton $45.00, approximate total net value of sulfur products per ton $7.00, approximate total net

value of gold products per ton $11.55, approximate total net of value silver products per ton $1.13, approximate total net value of silica sand products per ton $9.00 and the additional minerals named in the "Pilot Plant" report. An outline summary on the "Pilot Plant" has been prepared by Chilean Engineering Companies and C.S.I. Ag.'s geologist and staff. The "Pilot Plant" would not produce the same recovery ratio as would full operation, but will establish proven reserves. This summary is available upon request. Subject to unforeseen circumstances, this output will be based upon estimates furnished to C.S.I. Ag and should produce annual "gross profit" revenues in excess of $13 million U.S. per year .

More importantly, the Pilot Phase will revise the value of the ores located in the Piedra Amarilla Properties to the highest categorization, above the levels of "Indicated" and "Inferred," as established by the U.S. Bureau of Mines. "Proven Reserves" are the highest categorization and are established only after the commencement of mining and extraction operations, when actual performance results have been demonstrated. Once this level has been reached, the inherent value of the Piedra Amarilla Properties increases enormously. The "Property Value Differential" between Inferred and Proven Reserves is over 9000%.

The costs involved in Phase One and Two can be completed within a total of $20 million U.S. The pilot mining operation and build-out of the processing facilities can be implemented concurrently with the Phase One ore reserve confirmation program. The processing facilities can be operational within the same six month time frame required for Phase One. With the proper financial support, Phase One can be by-passed, with Phase Two producing gold concentrate within six months, with Titanium as a cost-effective by-product.

Phase Three / Full Commercial Operation:

As stated earlier, overall infrastructure development for the Piedra Amarilla Program will take two to three years and $300 to $350 million to complete. This phase is not discussed in depth here because the details will vary depending on the approach taken by the strategic mining developer/operator.

C.S.I. Ag recognizes that a project of this magnitude requires access to major sources of funding and the direct involvement of principal mining and mineral industry corporations. Accordingly, C.S.I. Ag will appoint a strategic Financial Advisor to structure the overall program. No commitments have yet been made to any investment or mining industry parties. C.S.I. Ag offers a clean opportunity for involvement in the development and long-term operation of the Mine.

PROPOSAL FOR PARTICIPATION

C.S.I. Ag estimates an initial funding of $20 million U.S. will be required to develop the Piedra Amarilla Properties. These funds are required to definitively assess the ore reserve, to develop "Pilot Plant" mining operations, to establish ore processing facilities and other essential infrastructure, and to complete the extensive work involved in securing strategic agreements with developers/operators, and/or processing industries, and/or mineral trading companies.

C.S.I. Ag proposes to Lease the mining and mineral extraction rights of the Properties to a major mining, trading or mineral processing company on a long-term basis. The mining Lessee will

also pay C.S.I. Ag a Royalty based on the tonnage and quality of ore removed. The arrangement provides the developer/operator full control and flexibility to develop the Properties as it professionally determines. C.S.I. Ag, however, retains ownership of the Properties and of the associated mineral rights in perpetuity. C.S.I. Ag will also impose reasonable requirements concerning the time frame within which the Properties are to be brought into commercial production. Minimum output requirements will also be established to ensure against the "mothballing" of the Properties should a conflict of interest ever arise between C.S.I.Ag. and the strategic mining interests of the Lessee. The $20 million funding sought by C.S.I.. Ag shall be spent on expenditures related to consummating the development, marketing and infrastructure of the Piedra Amarilla Project. The funding shall be made only after the funding entity has been afforded a full opportunity to complete a thorough "due diligence" review.

3 meter deep trench sampling.

STRATEGIC MINING DEVELOPER/PARTNER

Should a financially qualified and professionally capable mining company wish to undertake all of the above Phases of the overall Project, C.S.I. Ag is willing to enter a rental and royalty agreement and/or options prior to commencement of such agreement that will grant the company complete control of the development and subsequent operation of the Mine, the extraction and processing of the ores and the worldwide marketing of these major resources for the life of the Mine.

IN CONCLUSION

The Piedra Amarilla Properties contain one of the world's largest titanium deposits, significant concentrations of gold and approximately 30% of the known global sulfur reserves. Demand for sulfur is a known constant and the market for titanium is undergoing significant growth. With recent technological developments and with very little overburden, extraction and recovery costs are relatively low.

THE WHAT ?

GEOCRONOLOGY

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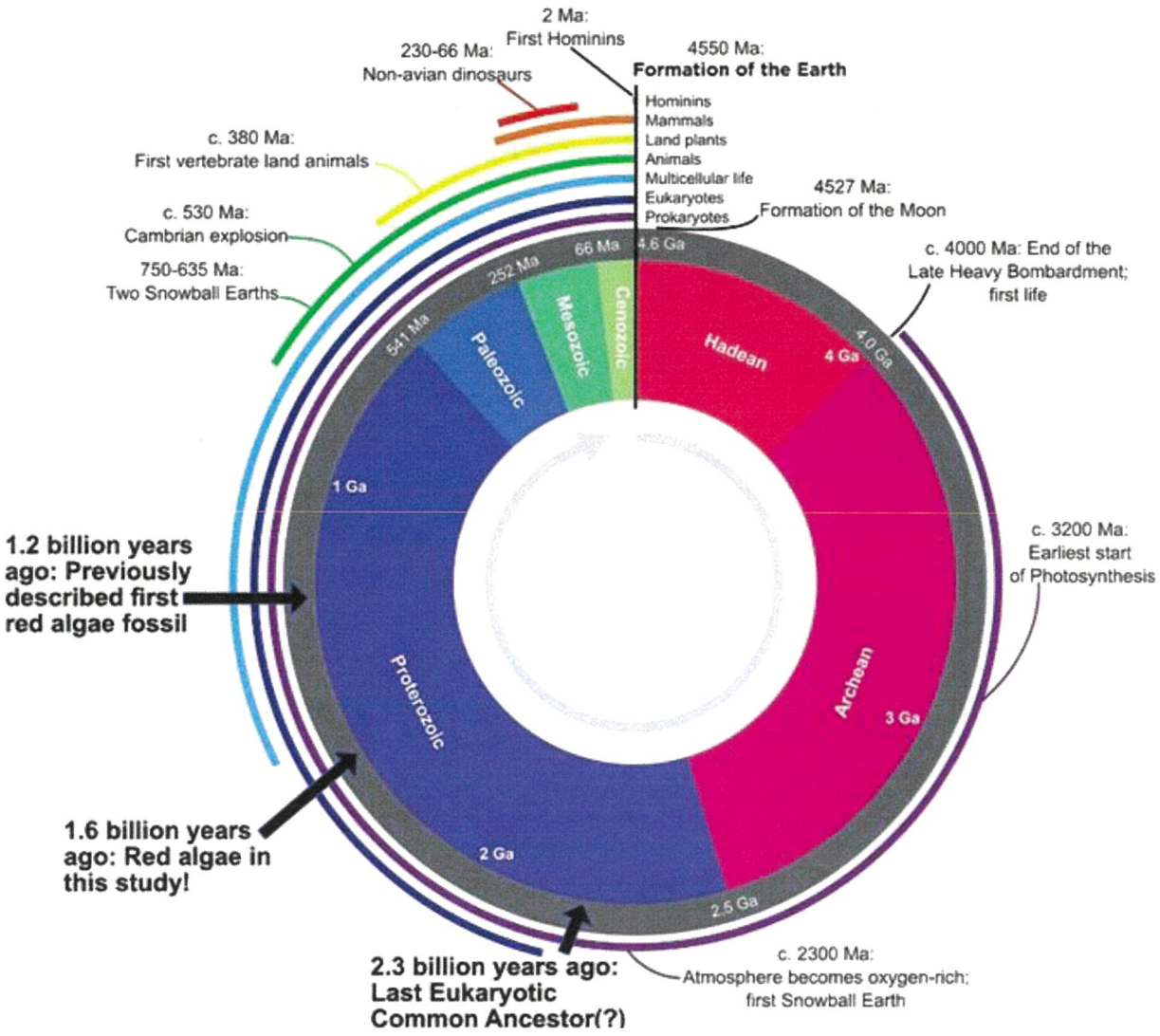


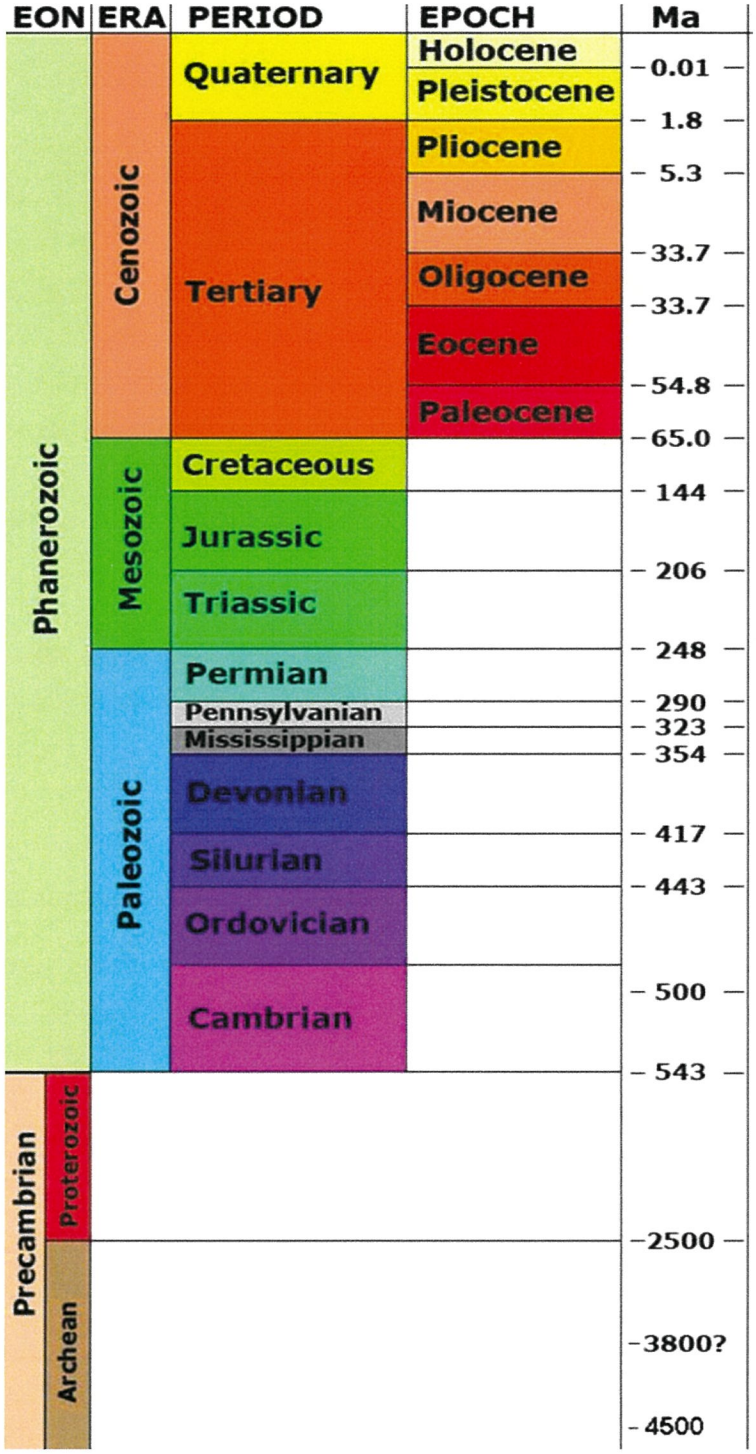
Geological time clock of earth

The Piedra Amarilla mining potential and Tectonic history started about 55 Mya with the hard collision of the westward bound South American Plate against the eastward bound Nazca Plate. It started on our clock about 11:55 position of the hour hand at the beginning of the light green Cenozoic geological period.

The following pages offer a brief pictorial overview of the timeline of events and Geo-physiology mechanisms that evolved into one of the world's greatest mineral deposits. Potentially producing several Hundreds of BILLIONS and possibly TRILLIONS of dollars' (USD) worth of minerals for world consumption. Industries such as Semiconductors: Solar PV cells, Sensors/Telecommunications, Automobiles: ICE/EV, Aerospace: Civil/Military, Shipbuilding: Maritime/Navel, Energy, Medical/Pharmaceutical, Agriculture. Including abundant Precious Metals.

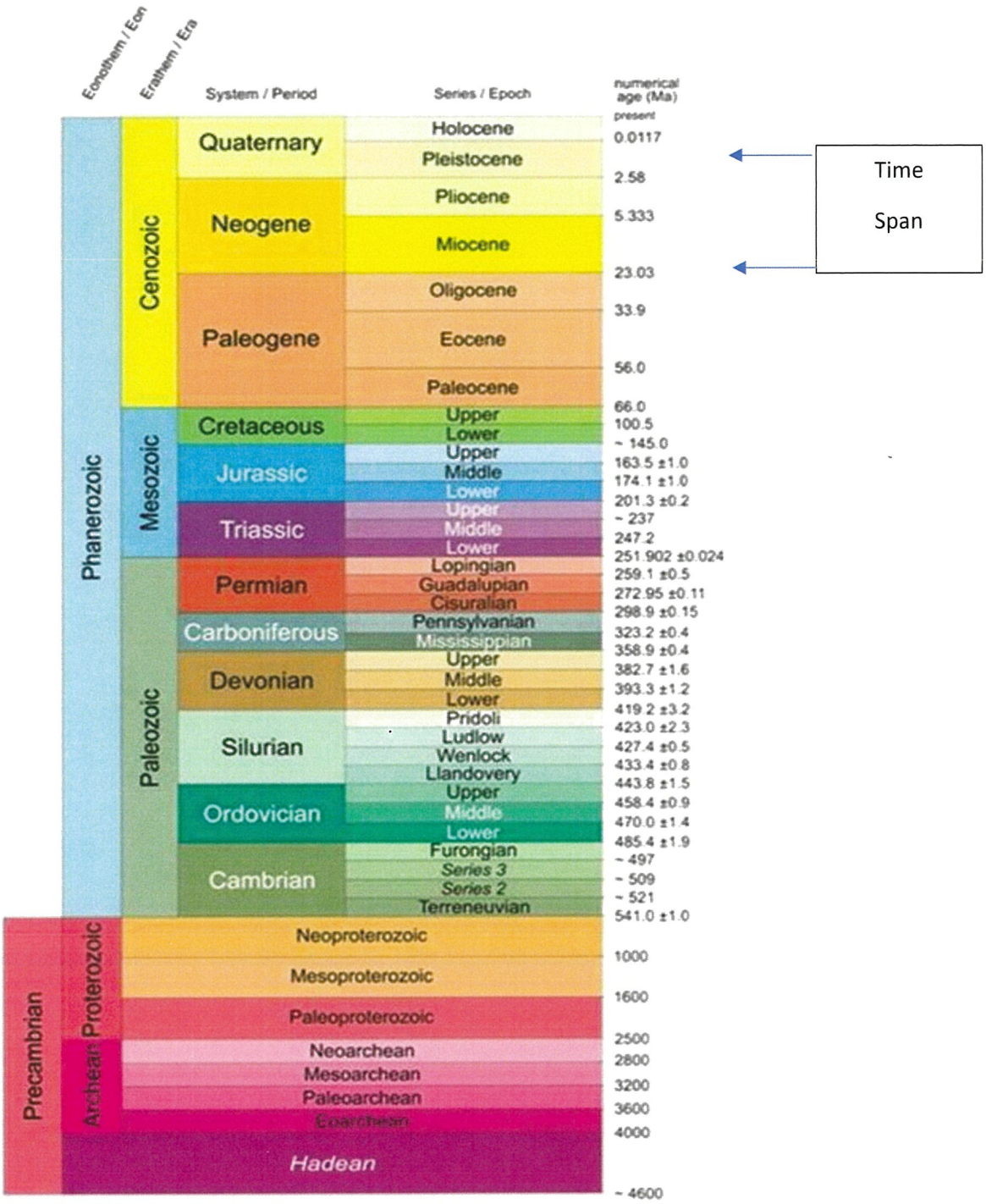
Prior to 2004 **Tertiary PERIOD** was used

The feasibility study done by the **R.M. Parsons Co.** and the **Chilean agencies CORFO, INTEC-CHILE** studies prior to and during the Parsons work refer to this period. This was later-Tertiary now known as Mid-Miocene through Pliocene Epochs. About 20 -23 Mya. This has been changed to reflect modern Stratification dating.

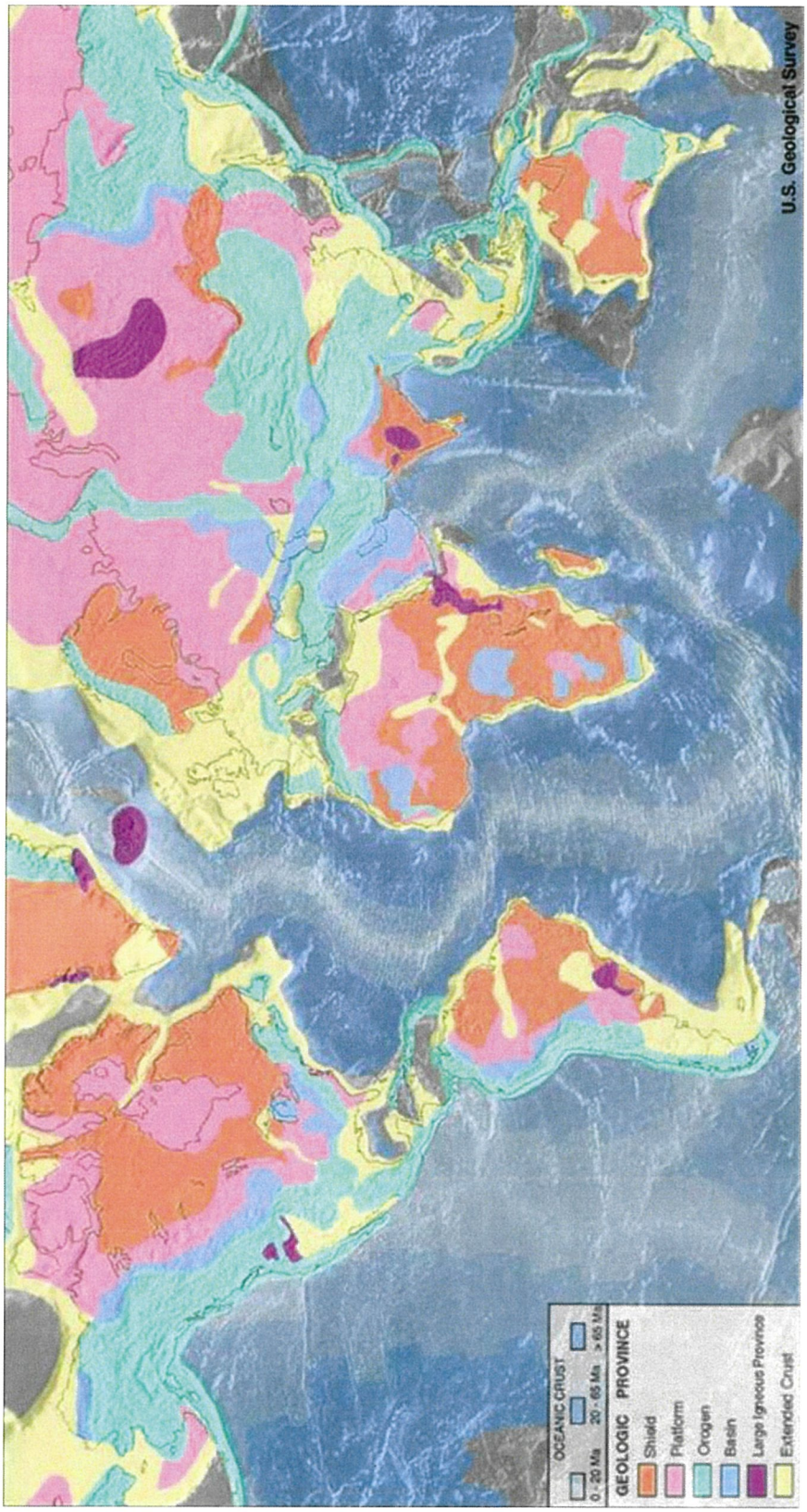


Post 2004 showing **PALEOGENE / NEOGENE** replacing Tertiary Period

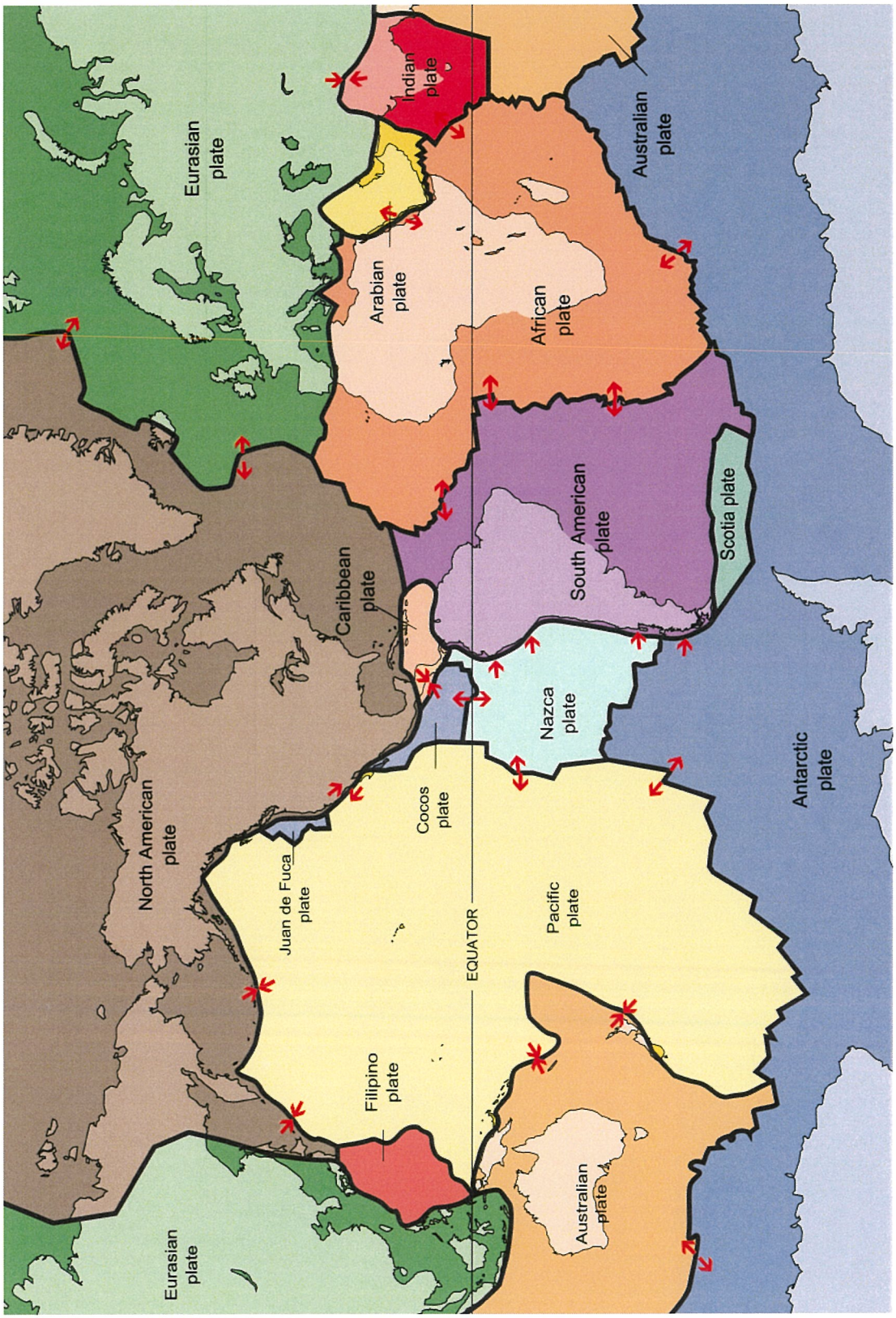
Today the early Neogene Period and about 1.5 Million years into the Pleistocene Epoch cover the formative years of Tectonic Orogen (mountain building /uplifting) and cyclic volcanic accretion/ stratification of the basin containing the **Piedra Parada Properties** and associated **Piedra Amarilla Properties.**



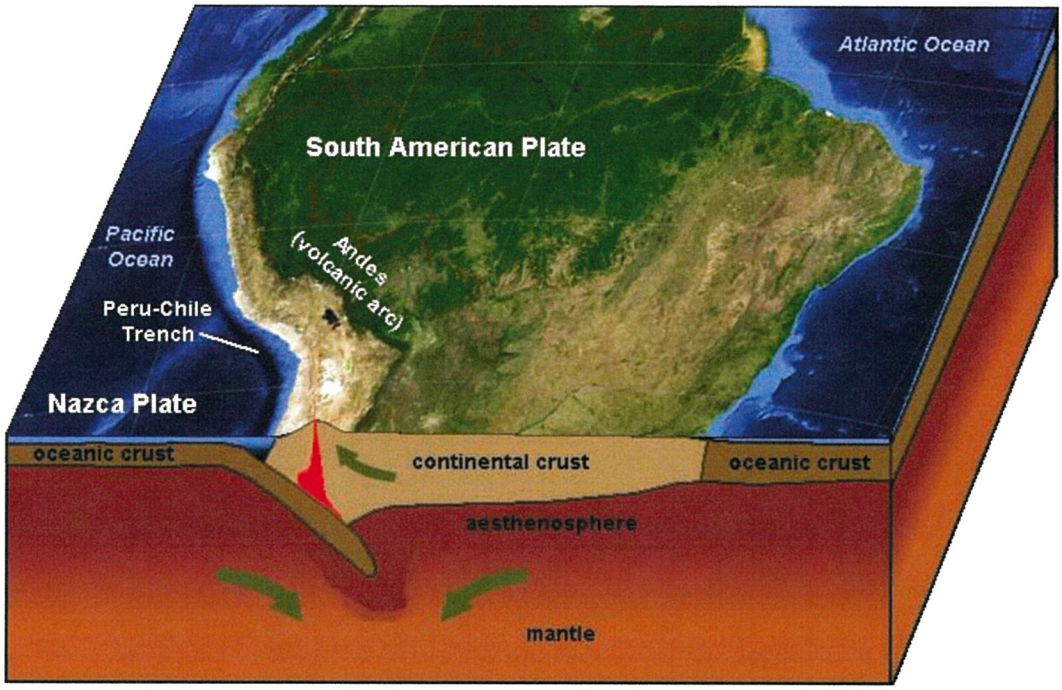
USGS Geologic Provinces: Orogen, mountain building is light green areas (noted in the color legend)



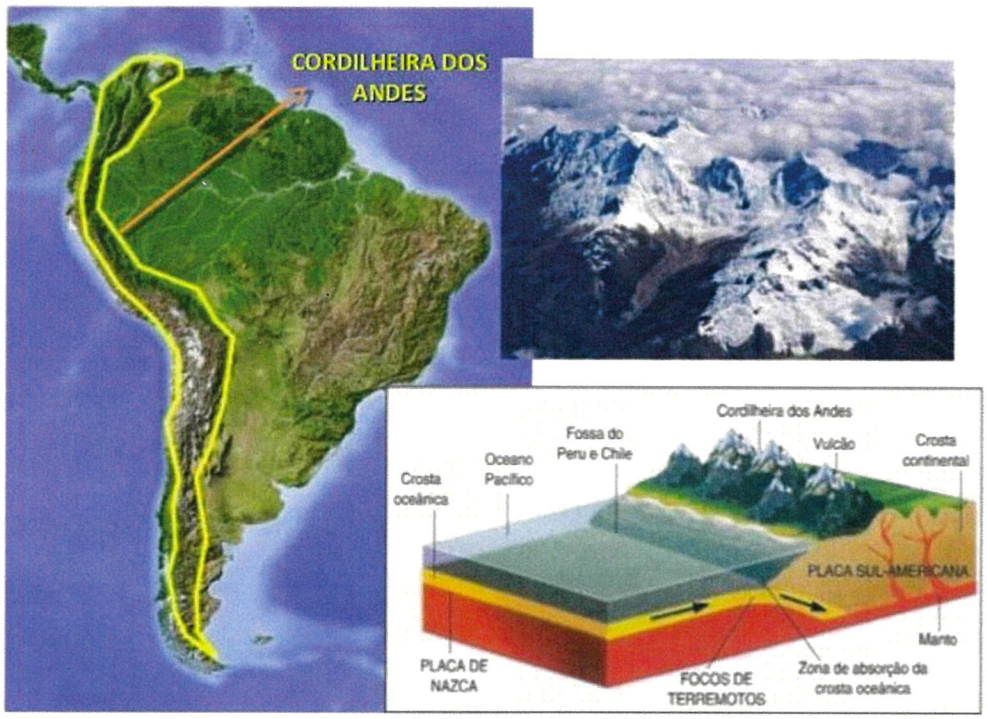
The **two Active Tectonic Plates** responsible for the SA Cordillera Orogen**: Nazca and South American Plates**



View looking North: Showing the Nazca plate sub-ducting under the continental crust with Volcanics

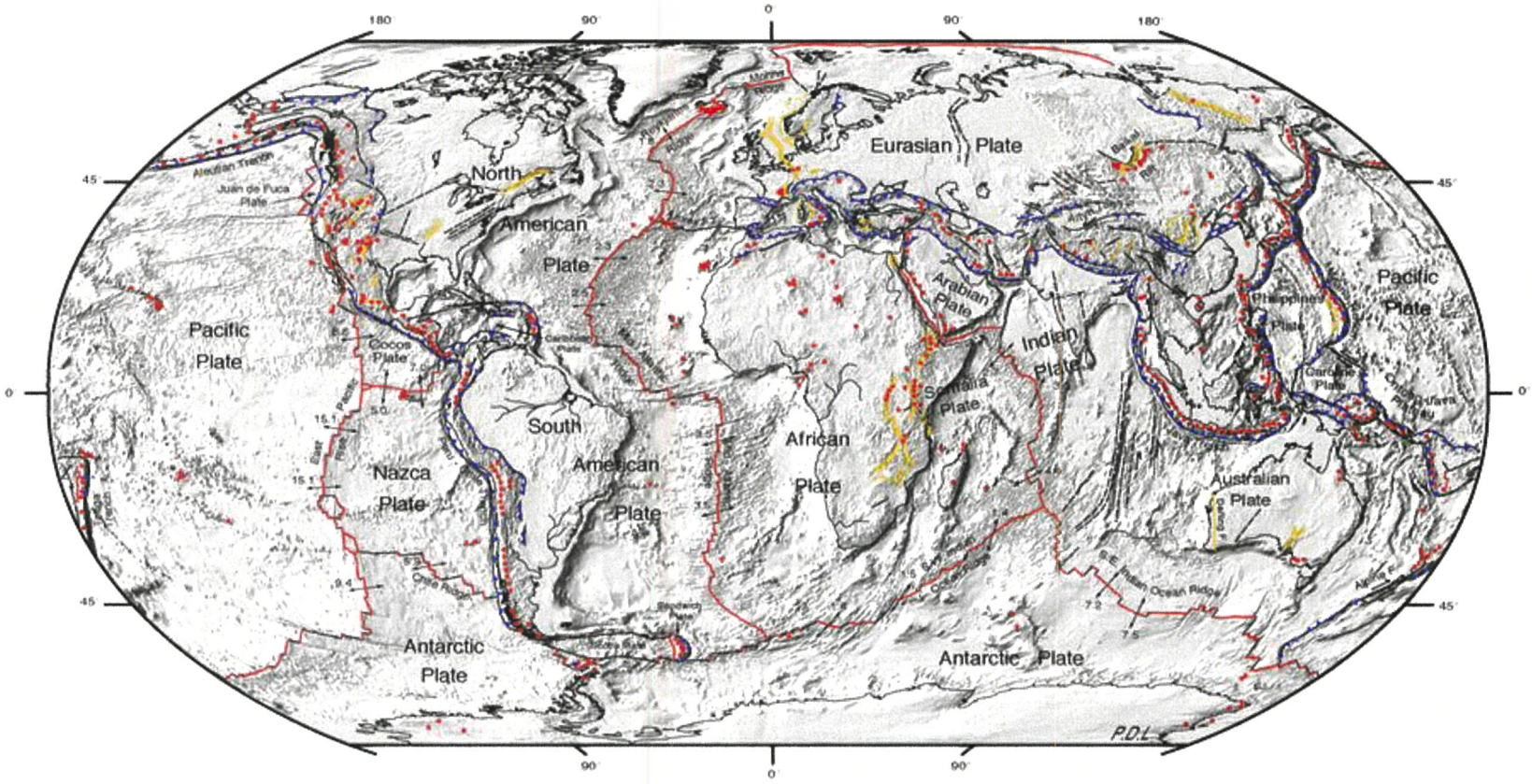


The Andean Cordillera with a view of the peaks and valleys that harbor abundant mineralization that has gifted this part of the earth.



DIGITAL TECTONIC ACTIVITY MAP OF THE EARTH

Tectonism and Volcanism of the Last One Million Years



Actively-spreading ridges and transform faults

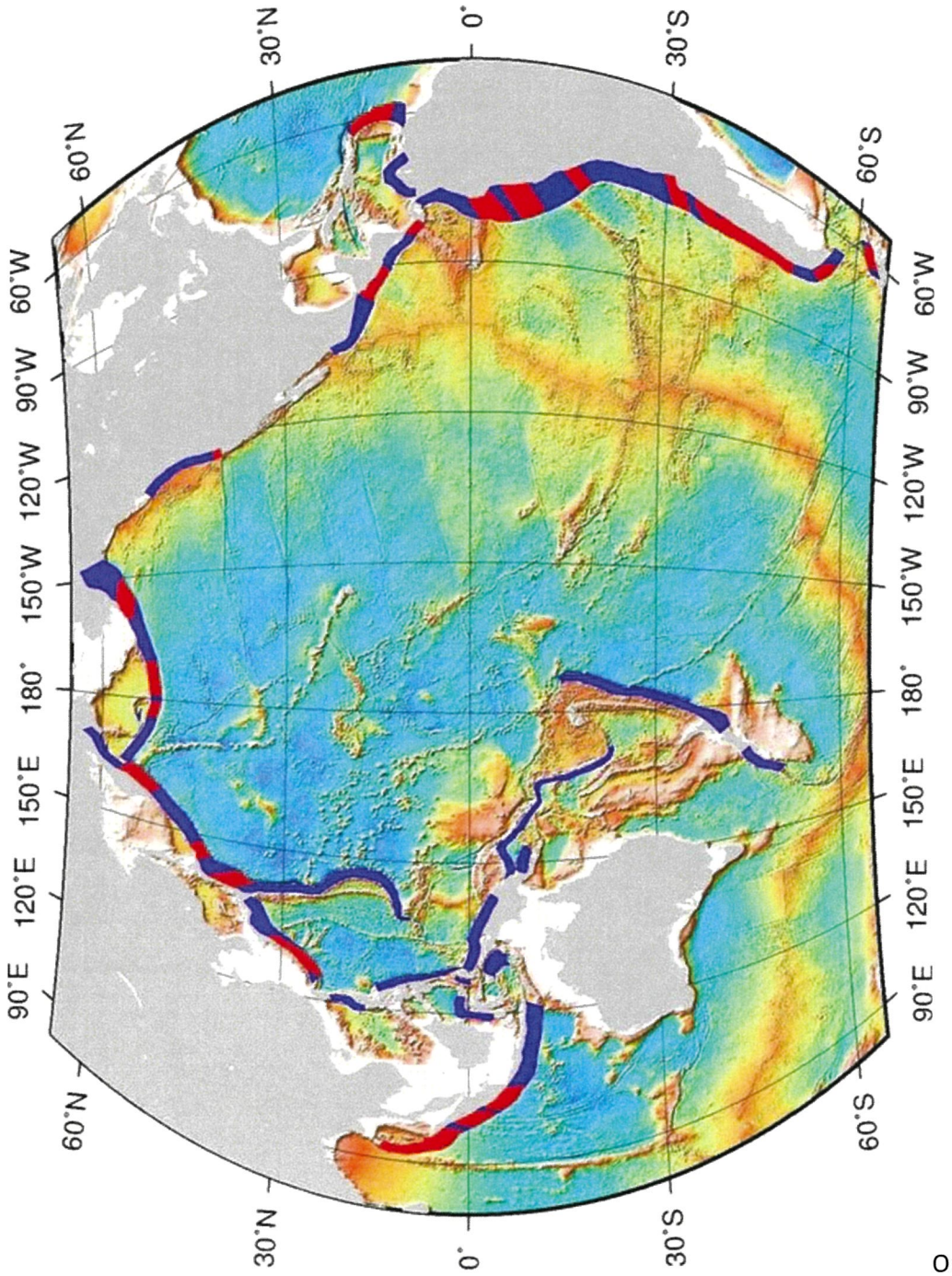
Total spreading rate, cm/year

Major active fault or fault zone; dashed where nature, location, or activity uncertain

Normal fault or rift; hachures on downthrown side

Reverse fault (overthrust, subduction zones); generalized; barbs on upthrown side

Volcanic centers active within the last one million years; generalized. Minor basaltic centers and seamounts omitted.

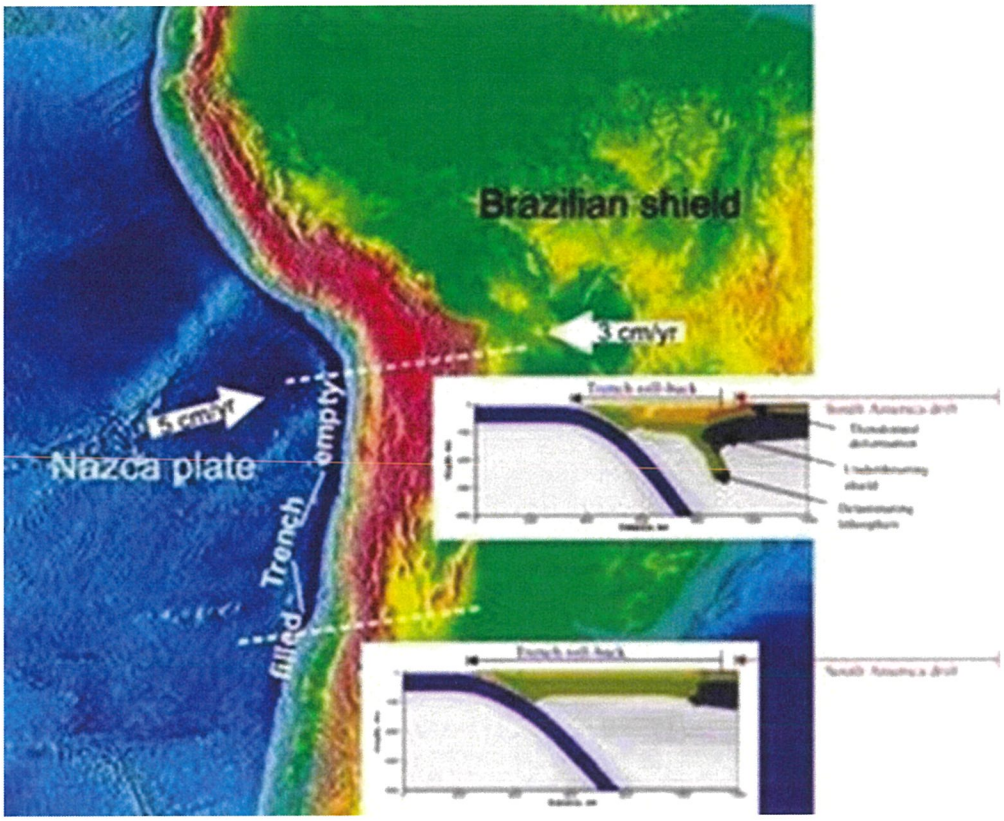


Orogenic

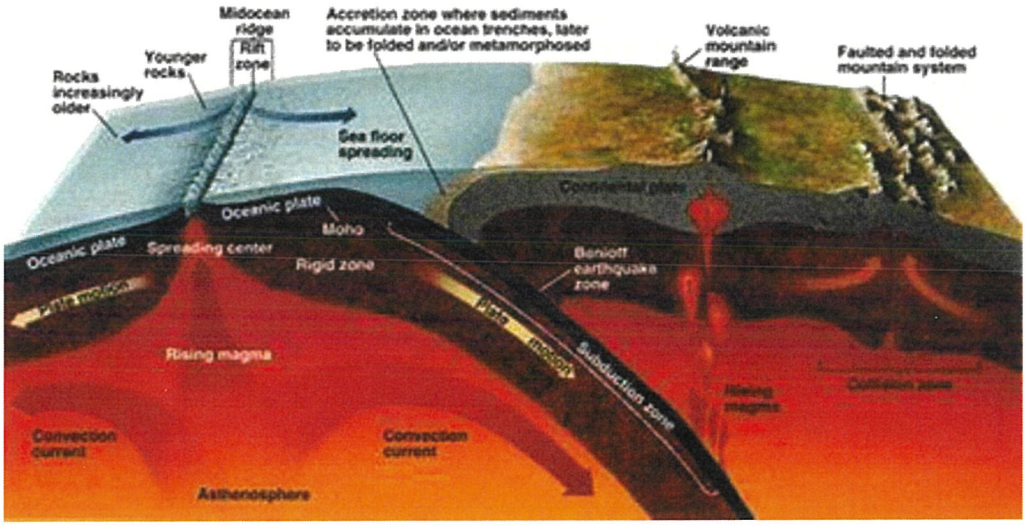
The Ring-of-Fire subduction variations

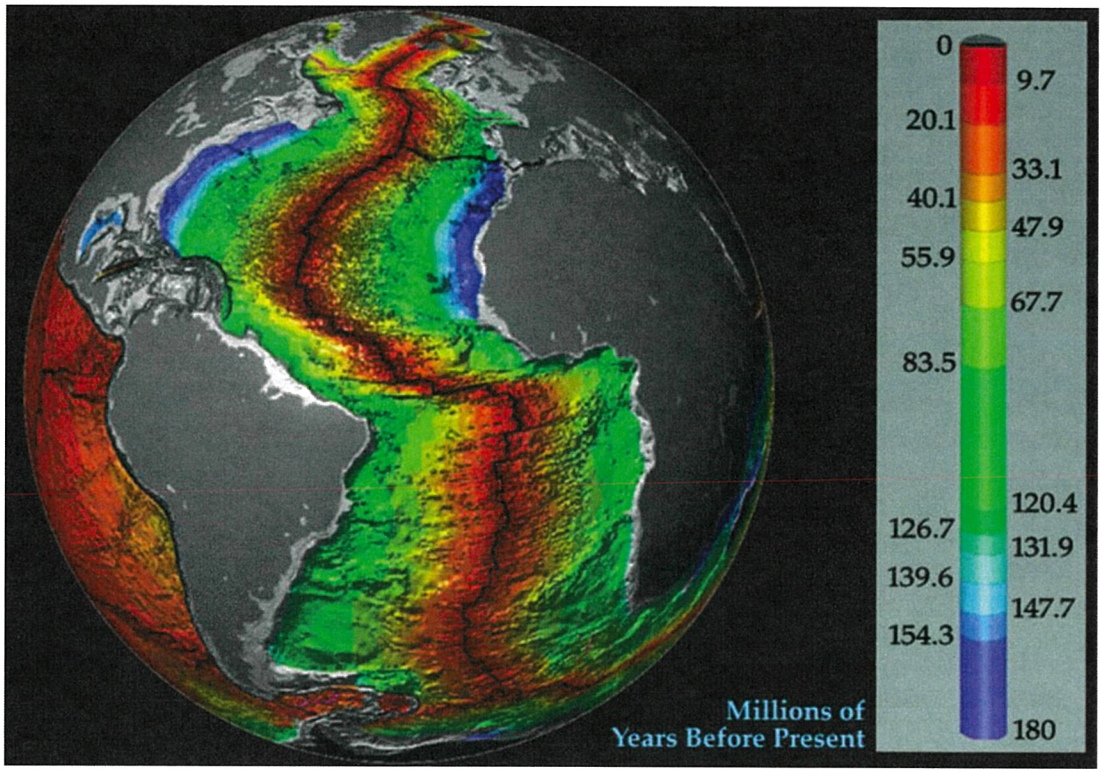
Showing the relative rates of subduction: Blue bands are steeper the Red bands are shallower. The blue band at the top of the page along the west coast of Chile between the 30^0S to 15^0S is where the Region III is located.

Location of Region III is the “BEND” of the west coast of Chile

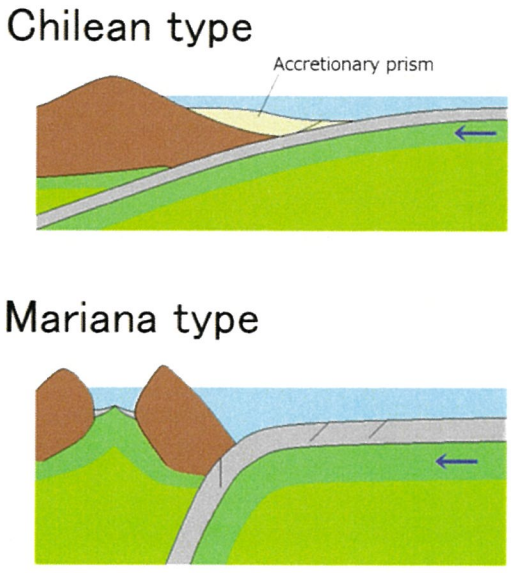


Model of the Orogen process



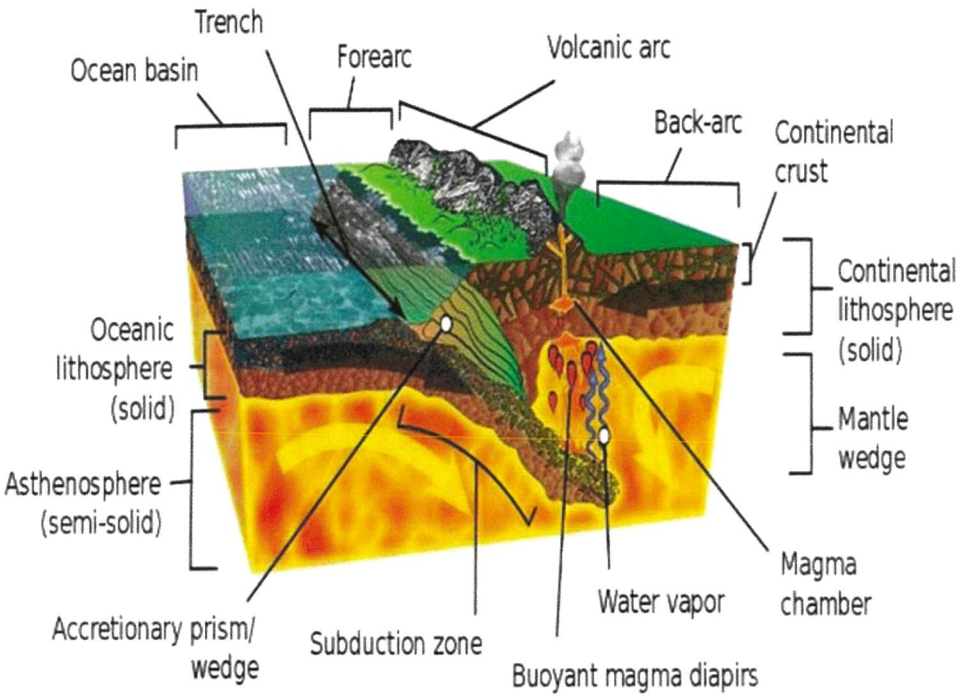


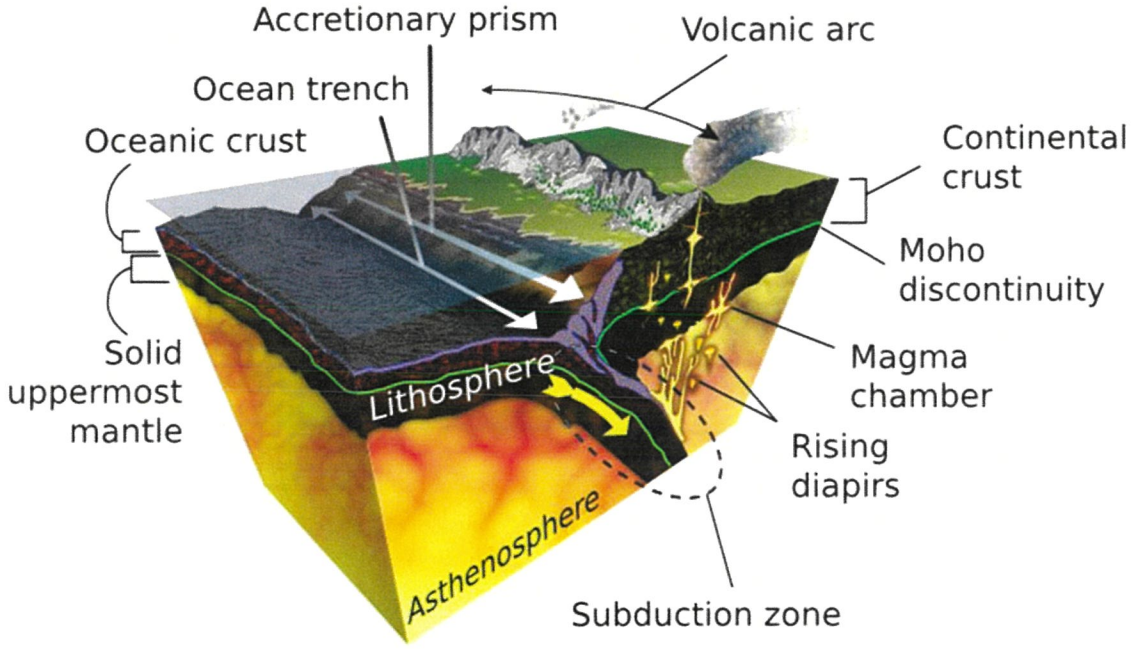
The geological "TIME - Thermomiter" showing the correlation of mid-ocean (Atlantic) spreading and commpresion from the Pacific ocean Nazca plate (along Chile west coast). Our area The Piedra Parada (PP) basin is the "BEND" location mid-south america the past 33 My. This is responsible for the abundant mineralization of the Piedra Parada basin.



General Sub-duction types

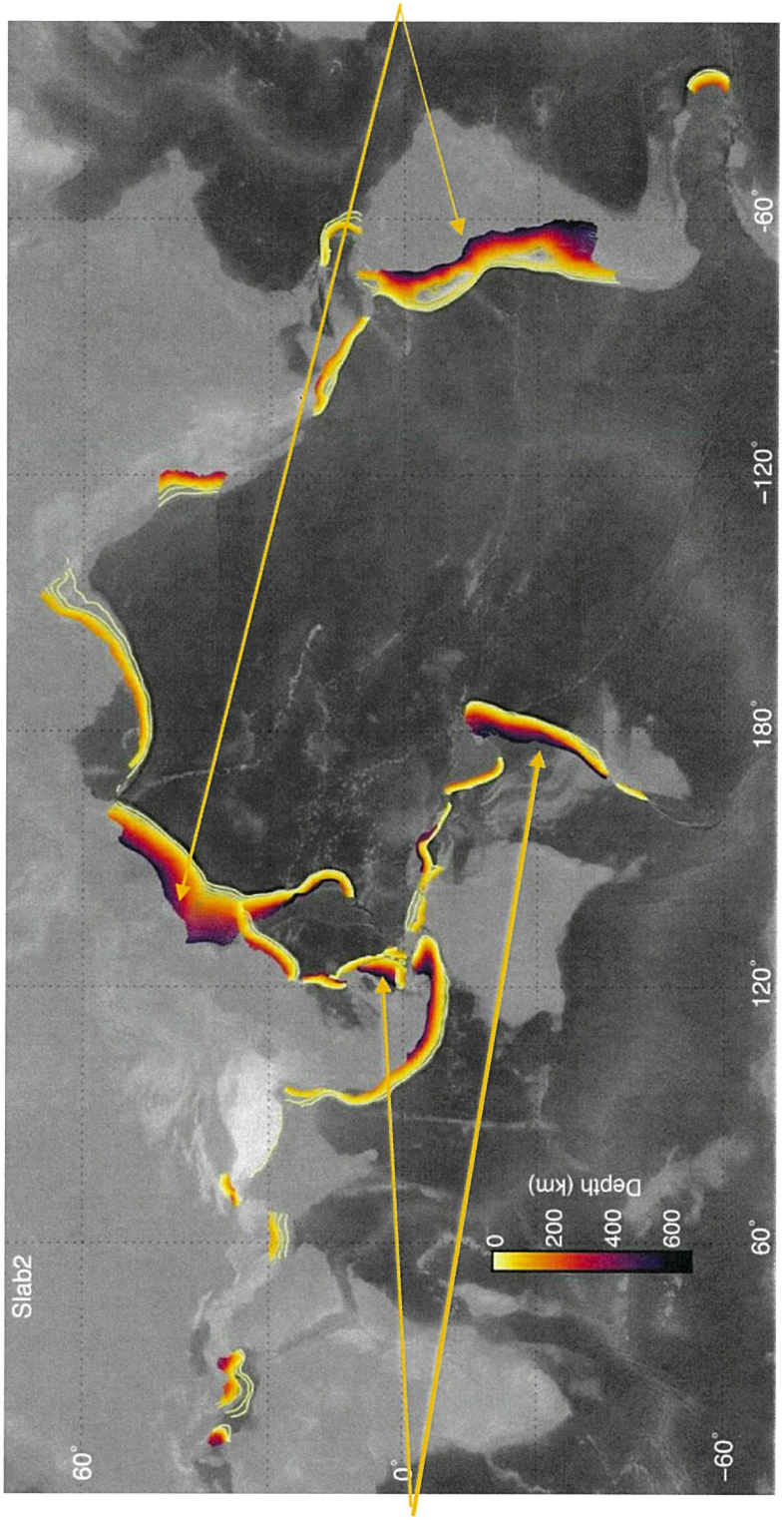
.



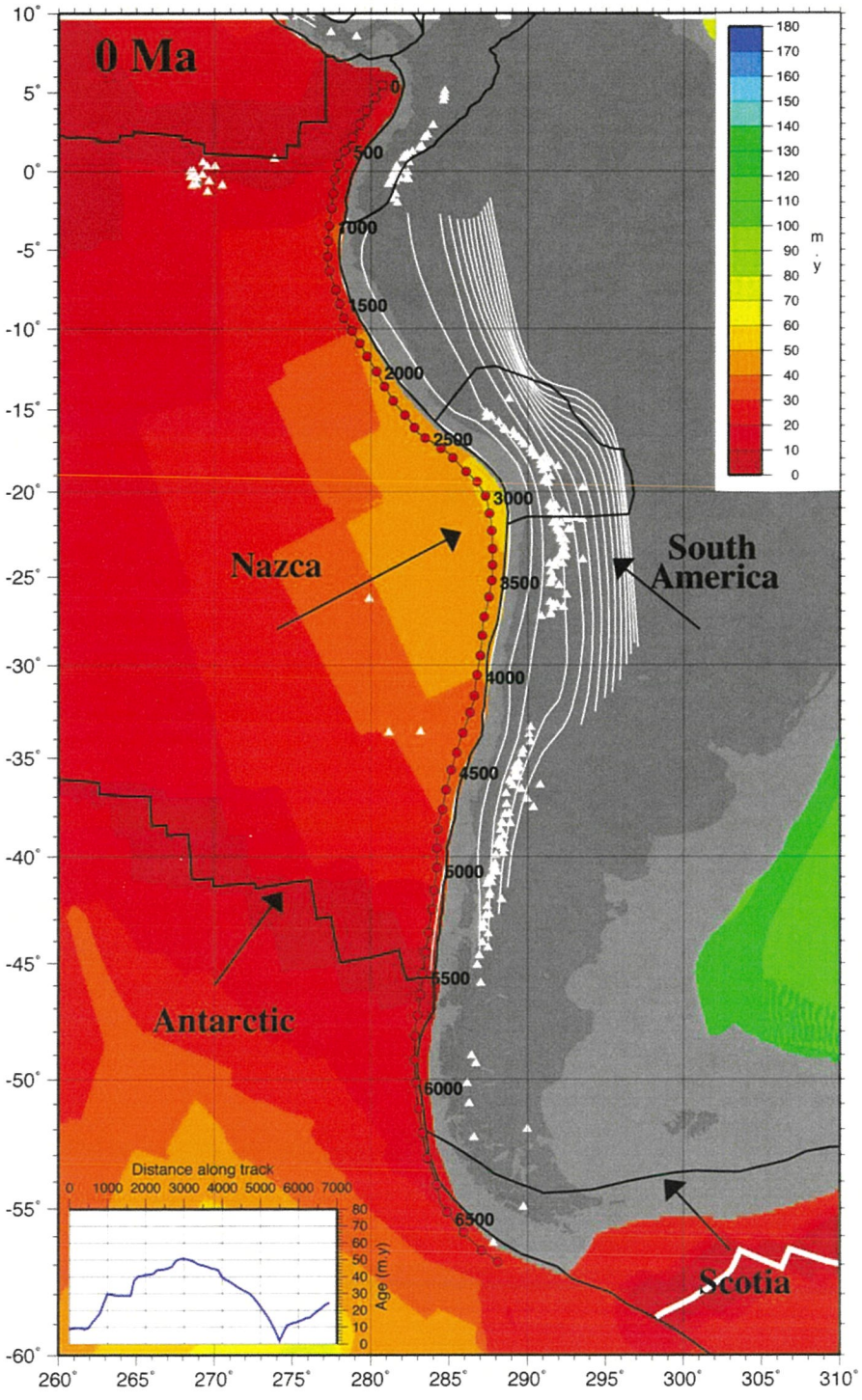


Models of Sub-duction process (typical Chilean)

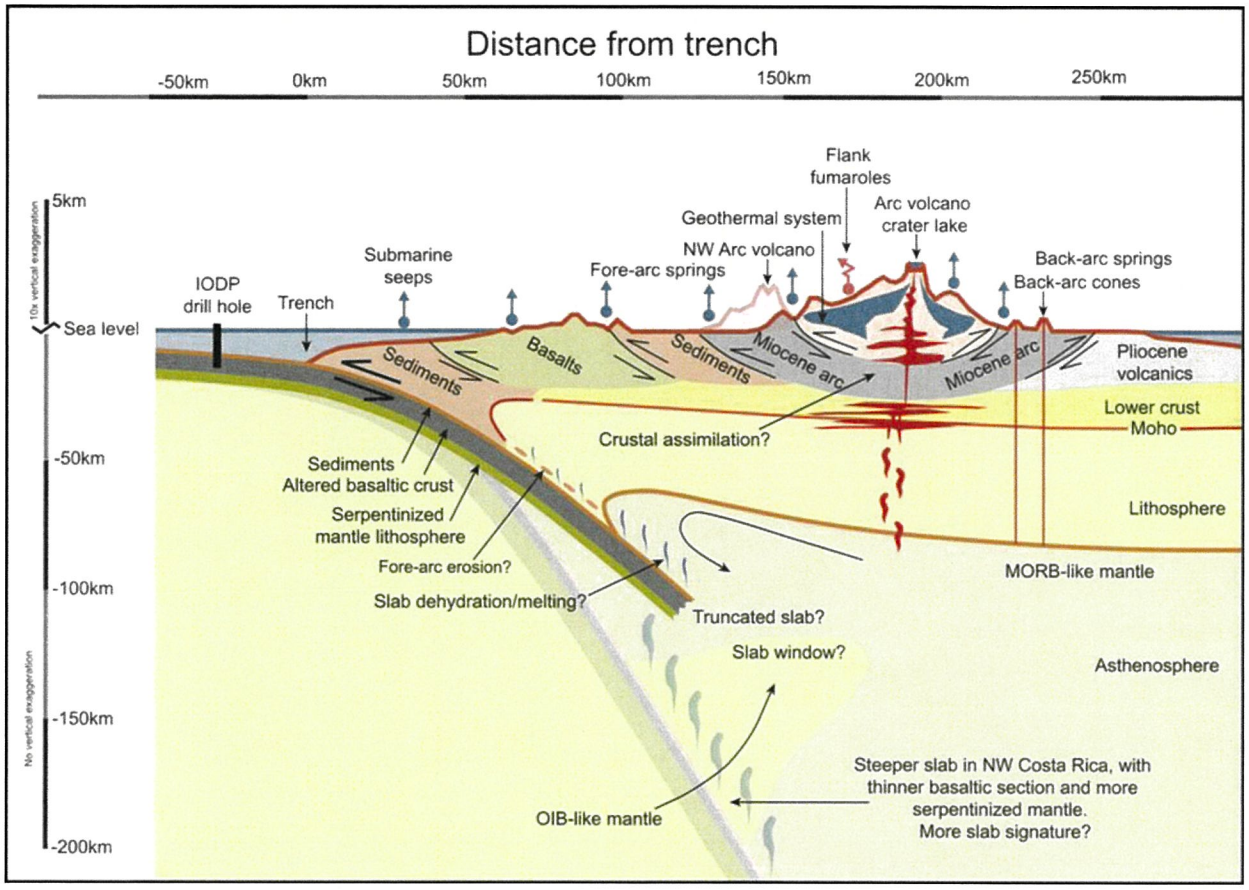
Chilean type (Less than 50^0)



Mariana type (Steep angle of attack greater than 50^0)

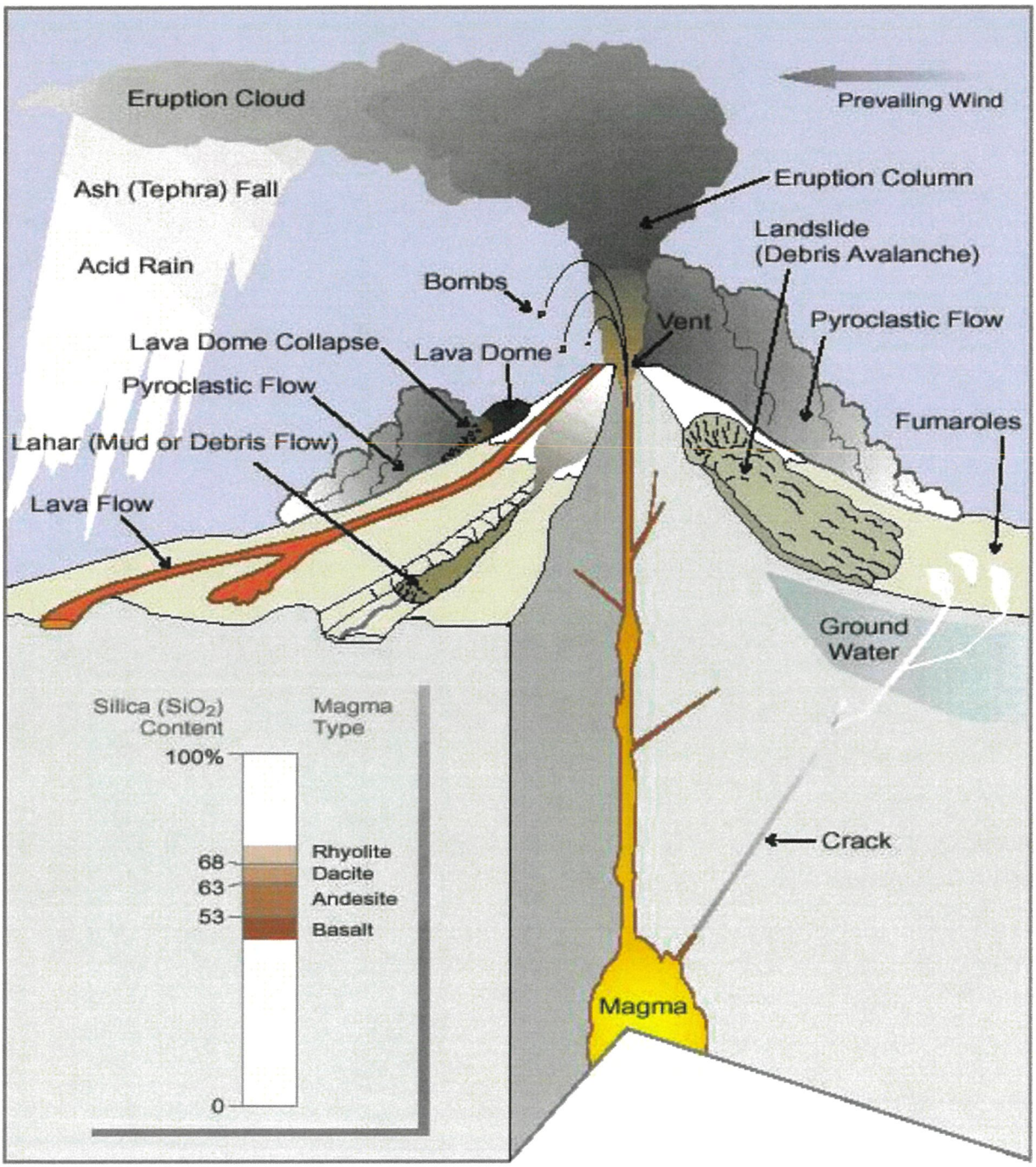


The **Chilean Type subduction** allows a tremendous accumulation of mineralization over a relatively short time. This has allowed the "crown" of this volcanic formation to remain as formed without the weathering and wearing down of the strata. This allows continued leaching from the Hydrothermal fluids that percolate through the upper strata forming the Oxide Zone

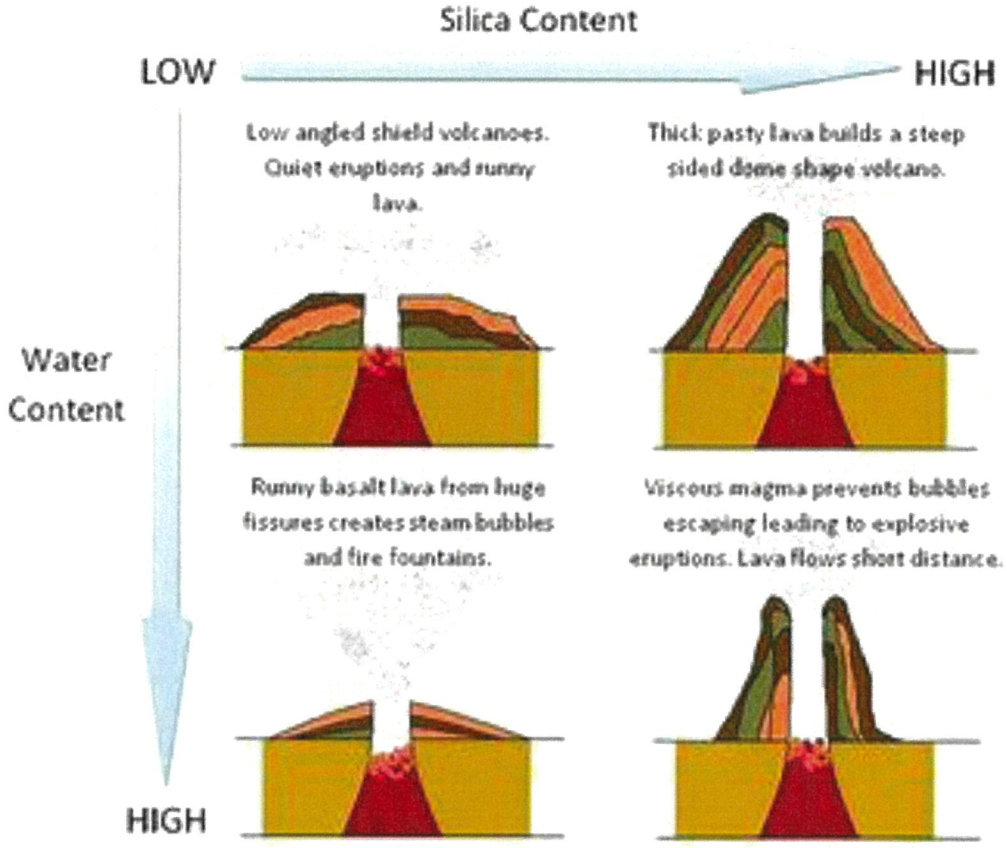


The Compressional forces of the sub-duction combined with the counter resistive (compressive) forces of the continental land mass combines to produce an Arc deformation of former crustal assimilations. The U-shape under the volcano shown above. Combined with the weight of mass accumulation of volcanic eruptions from the rising Lava of the magmatic Plutons thins the base of the Arc. This increases the deformation and produces the FORE-ARC and BACK-ARC. Physiologies commonly observed as in the Piedra Parada area as various Vents – cinder cones, Strata from cyclic eruptions, Lava domes, Strato volcanos and springs that form Salars from the meteoric (hot) mineralized hydrothermal fluids.

This process of the Hydrothermal fluids percolating down through the earth forms mineralized strata of oxides above the water table and then reduces the minerals at and below the water table with a primary deposit at further depth. This is known as **a Supergene system** and produces some of the most prolific mineable deposits on earth**. This is what the Piedra Prada mine is.**

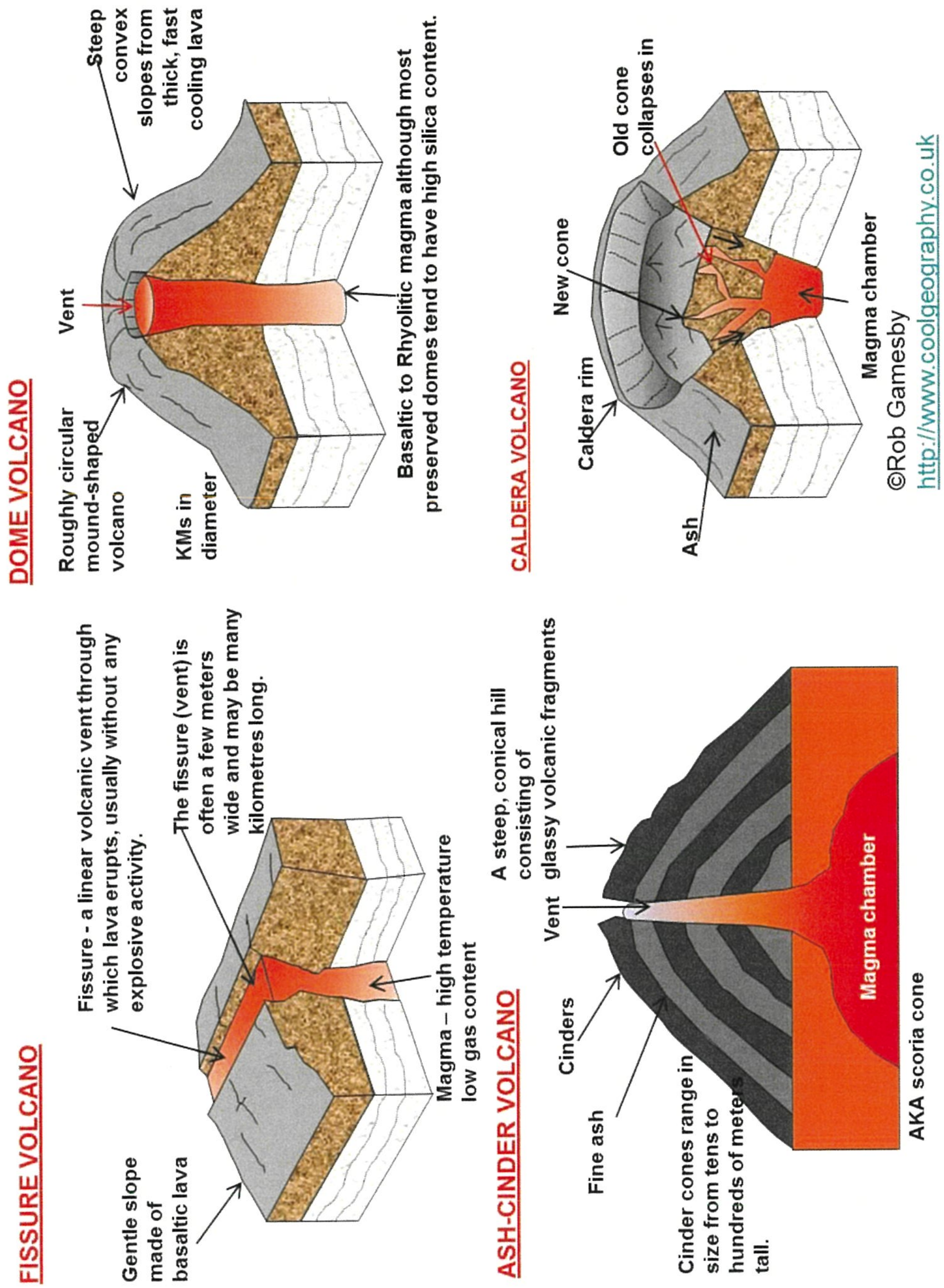


Composition of the Lava determines the type and structure of the volcano. The Piedra Prada basin types are Rhyolite, Dacite, Andesite which are high in Silica with water content from low to high. This is why the **Silica production** from the Piedra Parada properties will be **High Purity**.



The Volcano types of the Piedra Parada basin are shown on the right with upper right of **Dome** type. The lower right is the **Strato** type.

The conduits or pipes of these structures are of a Breccia (broken/ cracked) type. They are structures like the famed Cripple Creek, Colorado, The Queen, Fiji, and the Carpathian, Ukraine. All renown epithermal volcanics that produced **"World Class"** deposits.



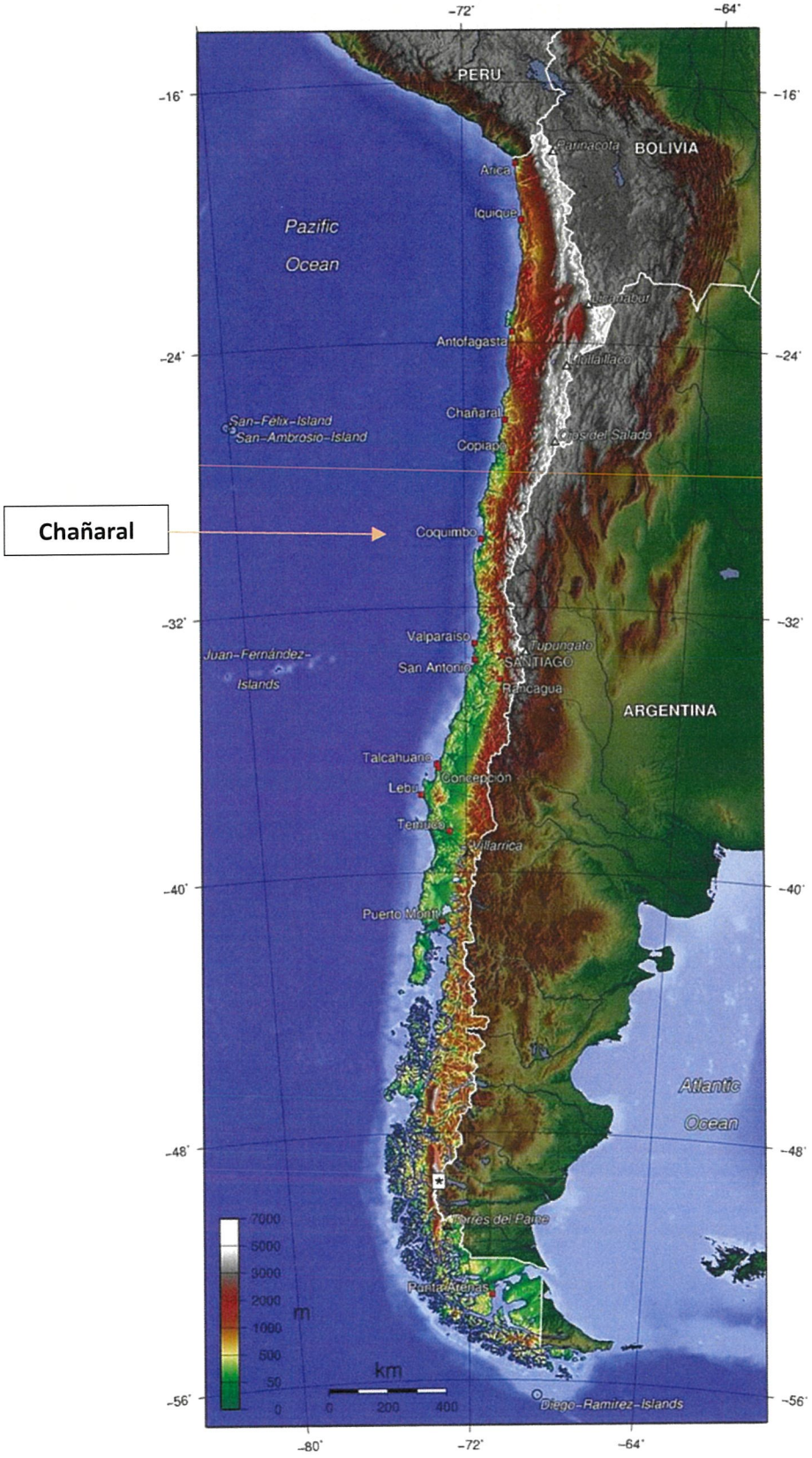
The Piedra Parada basin does not have Fissure Volcanos. The structure proposed by Dr. Ulricksen the director of National Mining Services of Chile is a **CALDERA** volcanic structure formed the overall PP basin from an earlier large Dome volcano that collapsed from magma deflating as the gas content effused decreasing its volume. The breccia pipes and fissures formed after the congealed mass cooled to form the plug basin. Later eruptions traveled up through these features and formed the structures, found with in the basin, as Ash-Cinder, Dome and Strato volcanos from the predominant Dacitic trending to Rhyolitic lavas. This process also shows the cyclic deposits as the stratified layers from continuous eruptions - depositions over time. The same Caldera structures are prevalent within the surrounding region.

THE WHERE ?

PROPERTIES

D

WHERE ?
SAT and MAPS



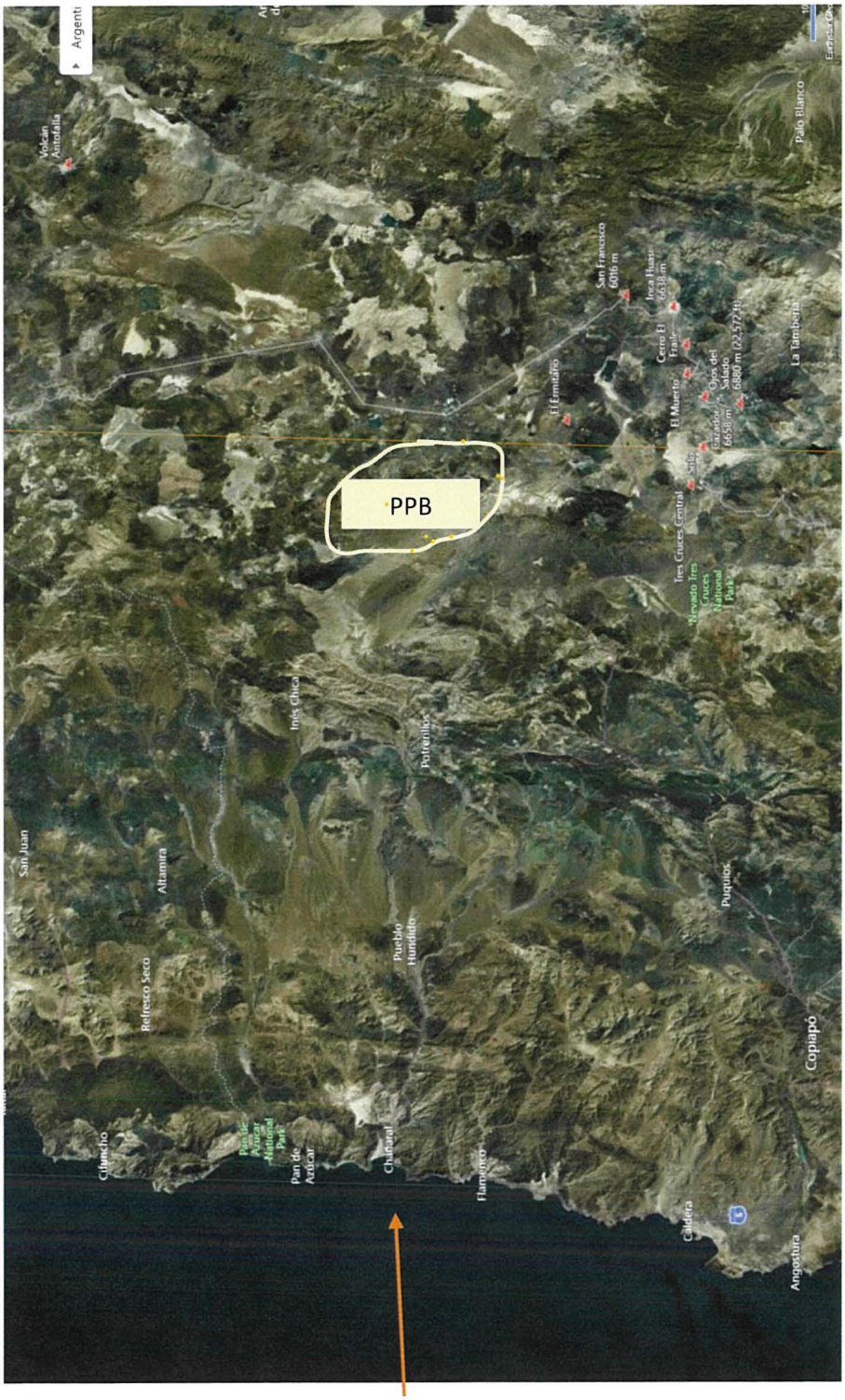
Chile

WHERE ?
SAT and MAPS

★ **Located within the SE boundary of the triangle bordering Argentina**

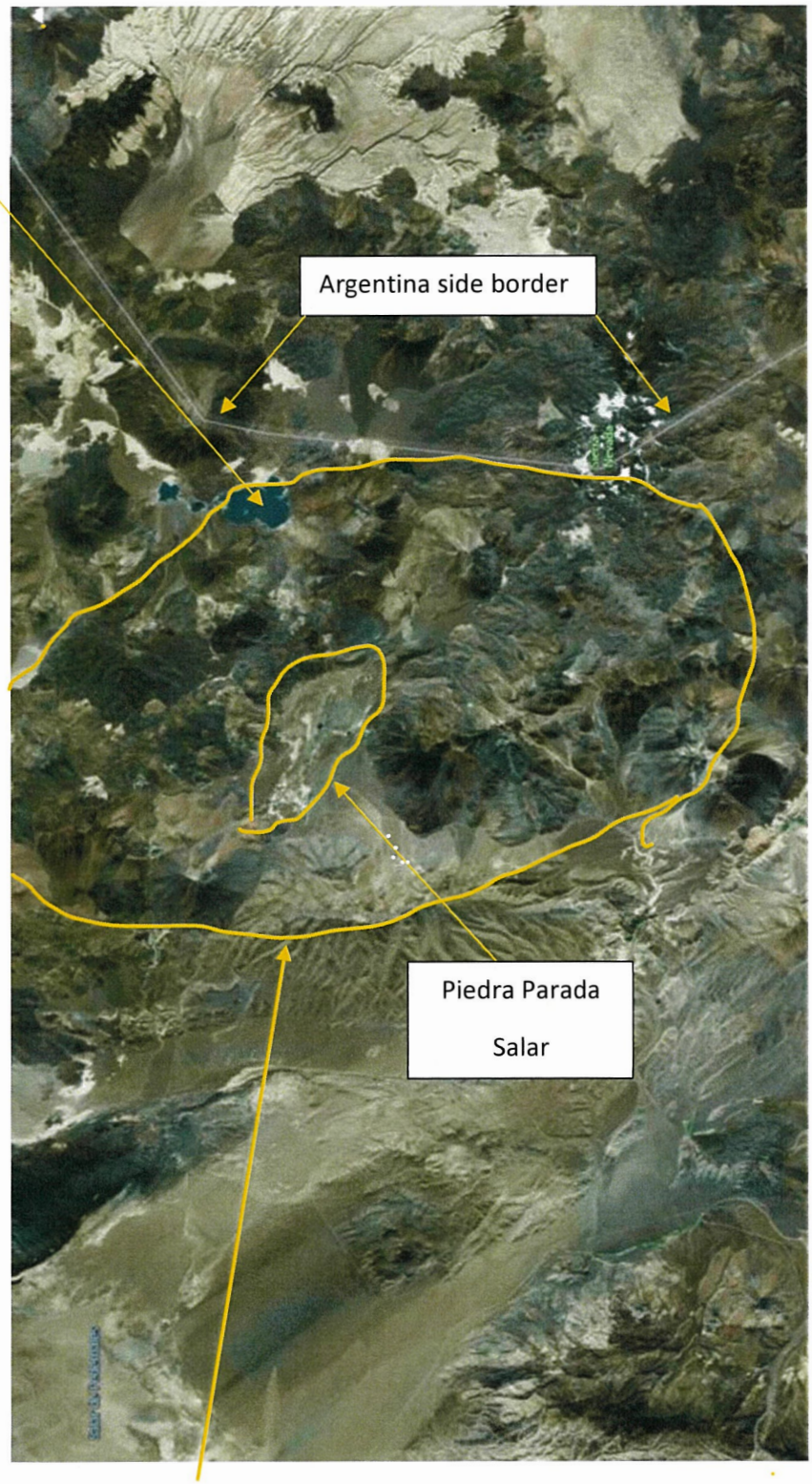
WHERE ?
SAT and MAPS

Piedra Prada Basin - PPB



WHERE ?
SAT and MAPS

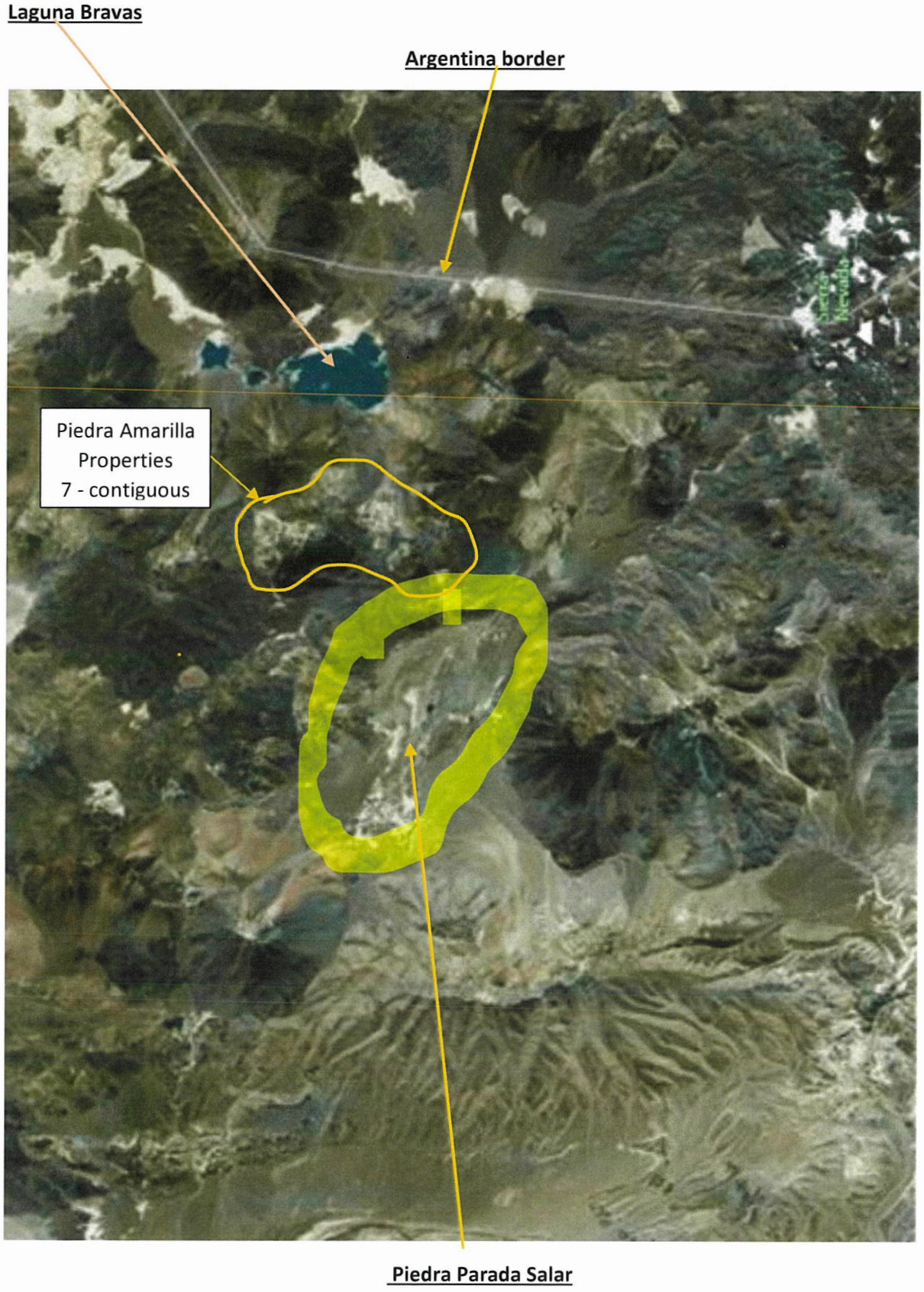
Laguna Bravas



Caldera rim of Piedra Parada Basin

Approximately 240 Mi^2 area

WHERE ?
SAT and MAPS



WHERE ?
SAT and MAPS

C.S.I. has been actively prospecting in Copiapo area since 1986. Most of the explorations had been concentrated in a remote area known as the Piedra Parada Basin, (In 1999 all prospecting was halted), which is located some 250 kms northeast of Copiapo. A number of important mineral claims containing Titanium, Sulfur, and GOLD/SILVER have since been constituted, and additional claims, were started by C.S.I. and were in the process of being constituted until, C.S.I.'s business transactions were impeded.

Location - Piedra Parada Basin.

The Piedra Parada Basin is located at 26° 20' South Latitude and 68° 45' West Longitude. The basin region is bordered on the south and to the east by large caldera formations, some 20kms in diameter, including the Wheelwright, Laguna Escondida, and Trident(Argentina) calderas.

To the west of the Piedra Parada Salar(additional mining property explored by C.S.I., "NOT" in this package for development at this time), is found the Cordillera Claudio Guy, the oldest regional geologic formation, the northern portion of which is formed by two volcanic structures which either eroded or subsided into caldera structures.

To the north of the Piedra Parada Basin lie a string of volcanoes known collectively as Cerros Colorados. Together these natural boundaries form a rectangular area of interest 50 kms north-south by 30 kms east-west, equivalent to 1500 kms2. Within this geographical area are located the mineral properties. A large majority of the properties are located between the Piedra Parada Salar and Lagunas Bravas, a 25 km north-south by 18 km east-west area (400 kms2).

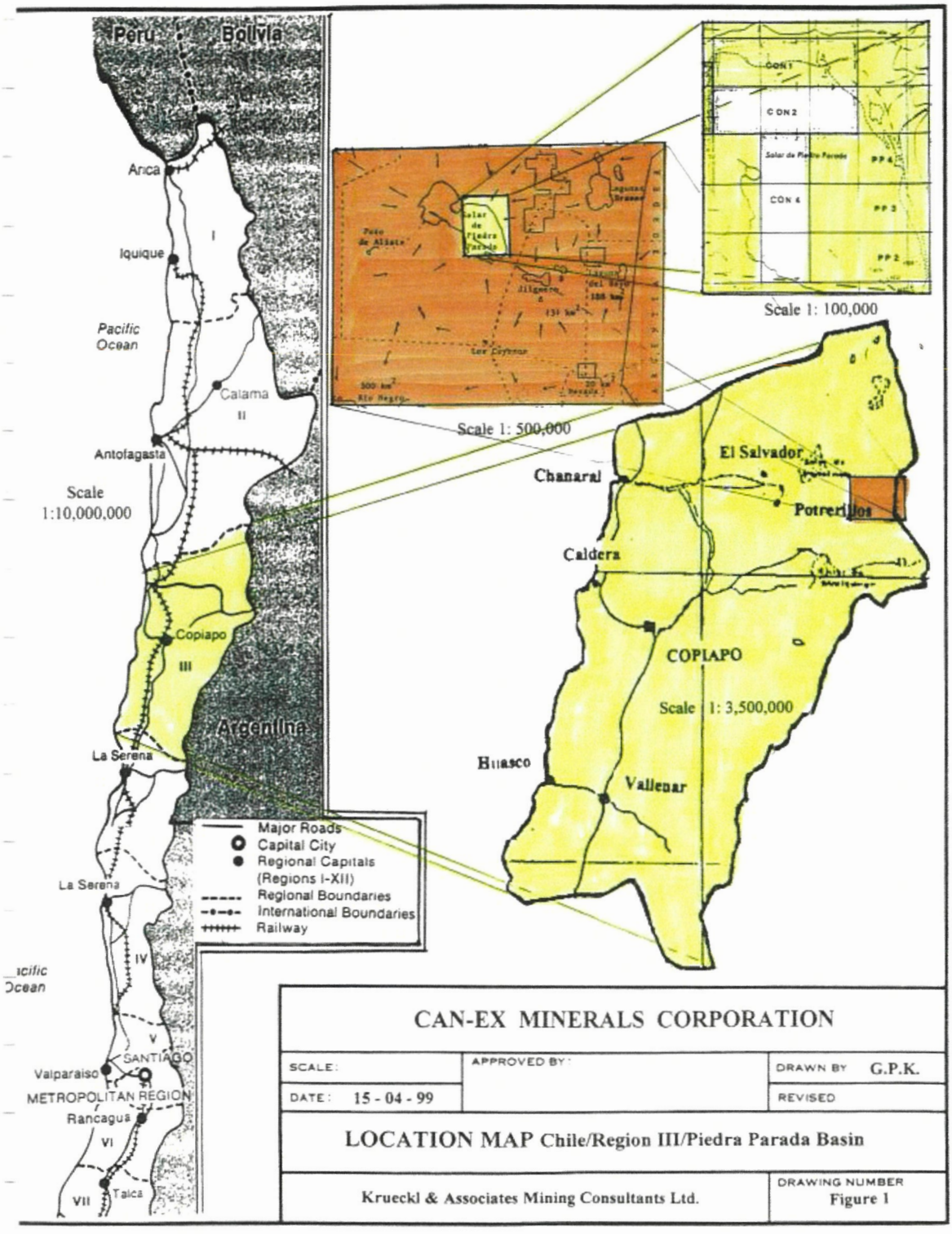
Current Mineral Properties.

A number of mineral properties were explored and claimed by C.S.I. in 1987. Other properties were claimed by a 'subsidiary' of C.S.I. in Chile In 1986, this affiliated company which has C.S.I. as its largest shareholder(since vacated). Initial mineral interest was centered in native sulfur and gold values found in a number of areas within the Piedra Parada basin.

Basic geological prospecting was enhanced by the use of aerial photography, taken at 10,000 meters, at scales of 1:50,000 and 1:40,000. Also incorporated were satellite LANSAT photographs, including the infrared series.

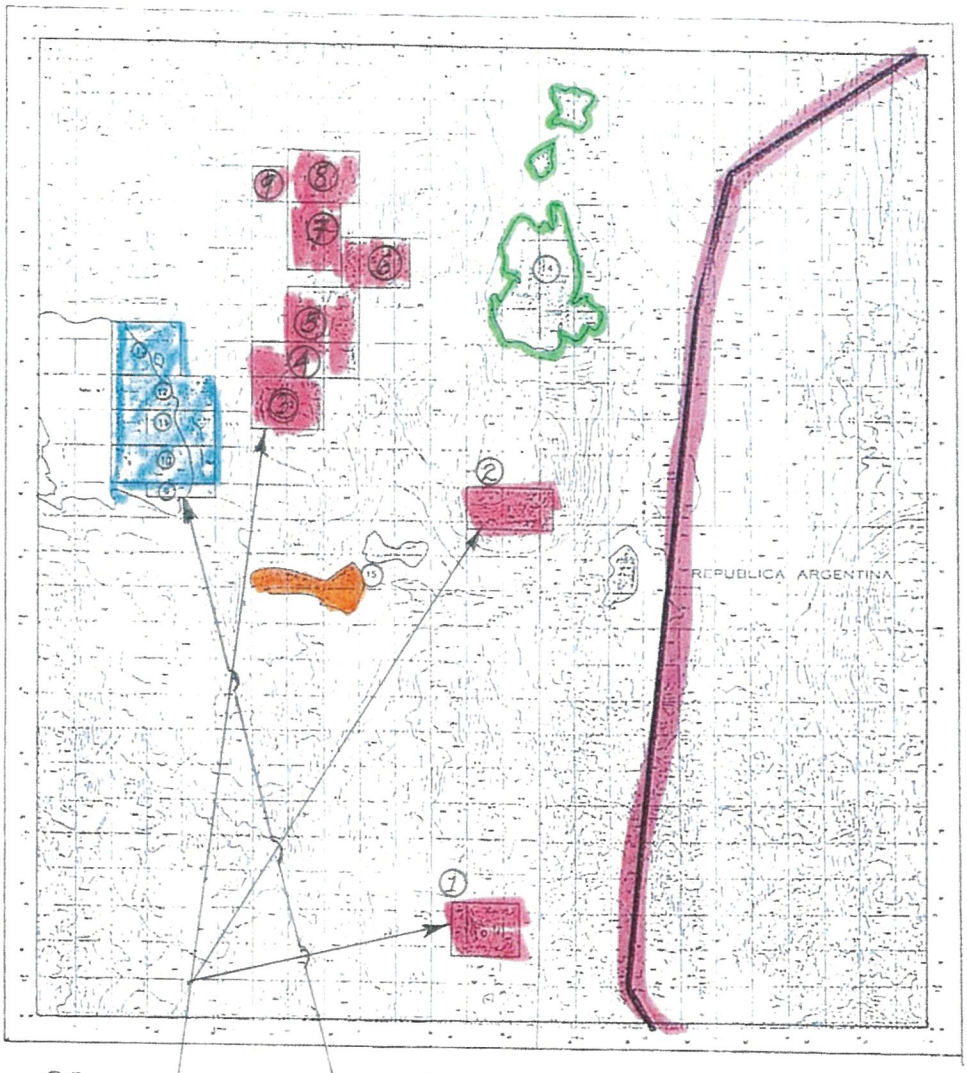
At this time the Piedra Amarilla properties were FULLY CONSTITUTED...

WHERE ?
SAT and MAPS



The ORANGE area is the main interest

WHERE ?
SAT and MAPS



PA
PARSONS

	1.- Piedra Amarilla	71	41
	2.- Piedra Amarilla	101	71
	3.- Piedra Amarilla	131	101
ST ④	Piedra Amarilla	161	131
ST ⑤	Piedra Amarilla	191	161
	6.- Piedra Amarilla	221	191
ST ⑦	Piedra Amarilla	251	221
ST ⑧	Piedra Amarilla	281	251
	9.- PIEDRA AMARILLA		281

ST = SAMPLE TRENCHES

PP
CON-EX

9.-	Sanson I	1-10
10.-	Sanson II	1-30
11.-	Sanson III	1-30
12.-	Sanson IV	1-30
13.-	Sanson V	1-30
14.-	Lake Brava	
15.-	Lake Jilguero	

PARSONS PIT-SAMPLES

WATER SOURCE

P. 9 3

DEF-504992

WHERE ?
SAT and MAPS

Piedra Amarilla Properties (Corrected from: GUERRERO-OLIVOS summary_2017)	Area size
1) 41-70	300 hectares
2) 71-100	288 hectares Target property #1
3) 101-130	300 hectares
4) 131-160 ST	300 hectares
5) 161-190 ST	300 hectares
6) 191-220	300 hectares
7) 221-250 ST	300 hectares
8) 251-280 ST	300 hectares
9) 282-290 (281-290)	100 hectares
Total **ST = Sample Trenching**	**2488 hectares**

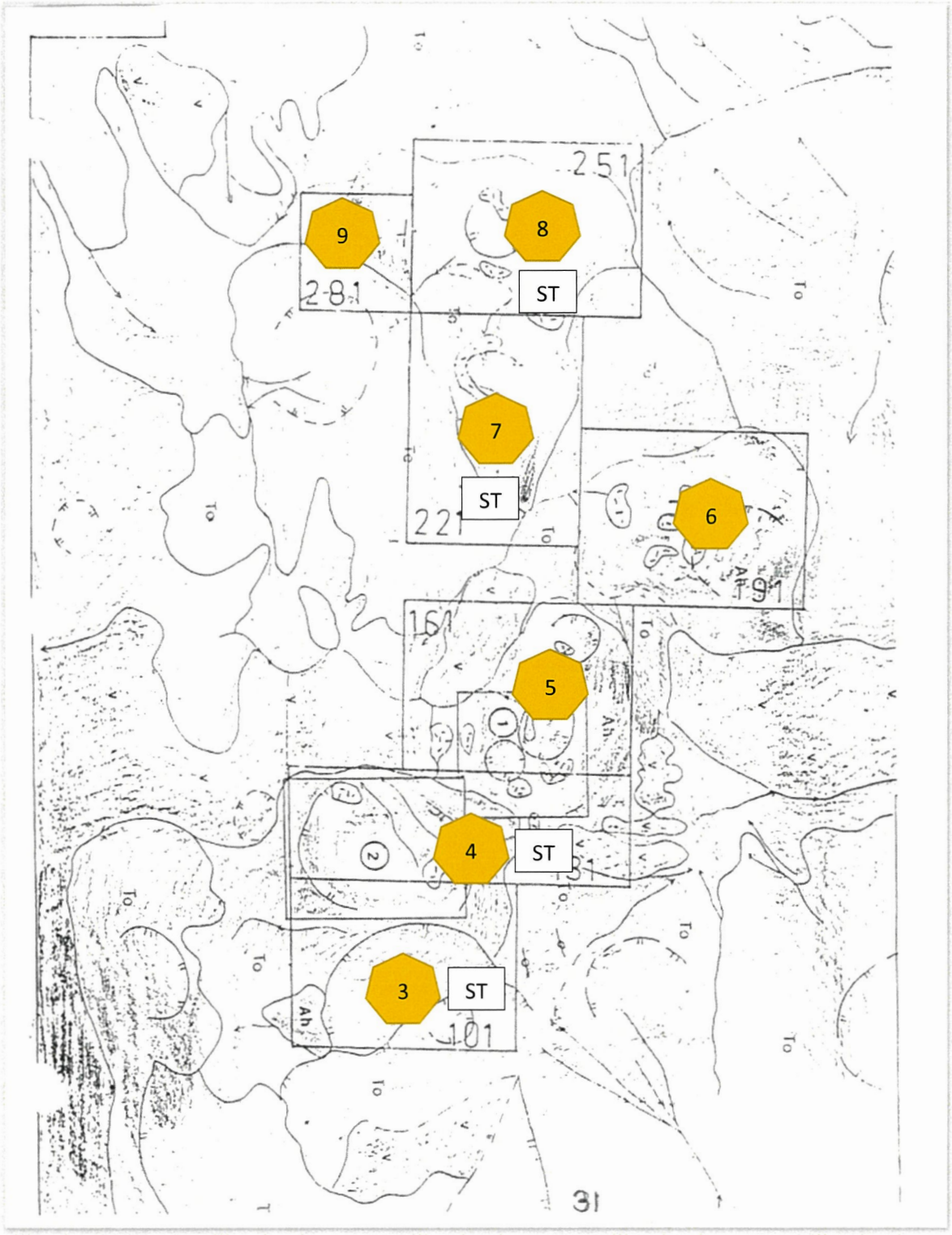
PIEDRA AMARILLA CONSTITUTED MINERAL PROPERTIES,
Owned by C.S.I. Ag. Limited.

1. Piedra Amarilla 41 - 300 Hectacres
2. Piedra Amarilla 71 - 288 Hectacres
3. Piedra Amarilla 101 - 300 Hectacres
4. Piedra Amarilla 131 - 300 Hectacres
5. Piedra Amarilla 161 - 300 Hectacres
6. Piedra Amarilla 191 - 300 Hectacres
7. Piedra Amarilla 221 - 300 Hectacres
8. Piedra Amarilla 251 - 300 Hectacres
9. Piedra Amarilla 281 - 300 Hectacres

A list of the Constituted mineral properties owned by C.S.I. Ag. Ltd., in the Piedra Parada area are listed above. Complete and total ownership was transferred to **Mr. GARY J. PIERCE**, in 1995, with and through share transfer. By previous owners, for fees and assistance accumulating to several millions of U.S. dollars. The total properties comprise of over 2500 hectacres(2688), and Properties 3 - 9 are contiguous and embrace about two/thirds (2/3) of the total land amount. Properties 4, 5, 7, and 8, have been extensively studied during the stages and reports in pre-feasibility steps and contain the bulk of the information discovered in the geological and metallurgical studies...totalling 6,175acres(Appox.).

WHERE ?
SAT and MAPS

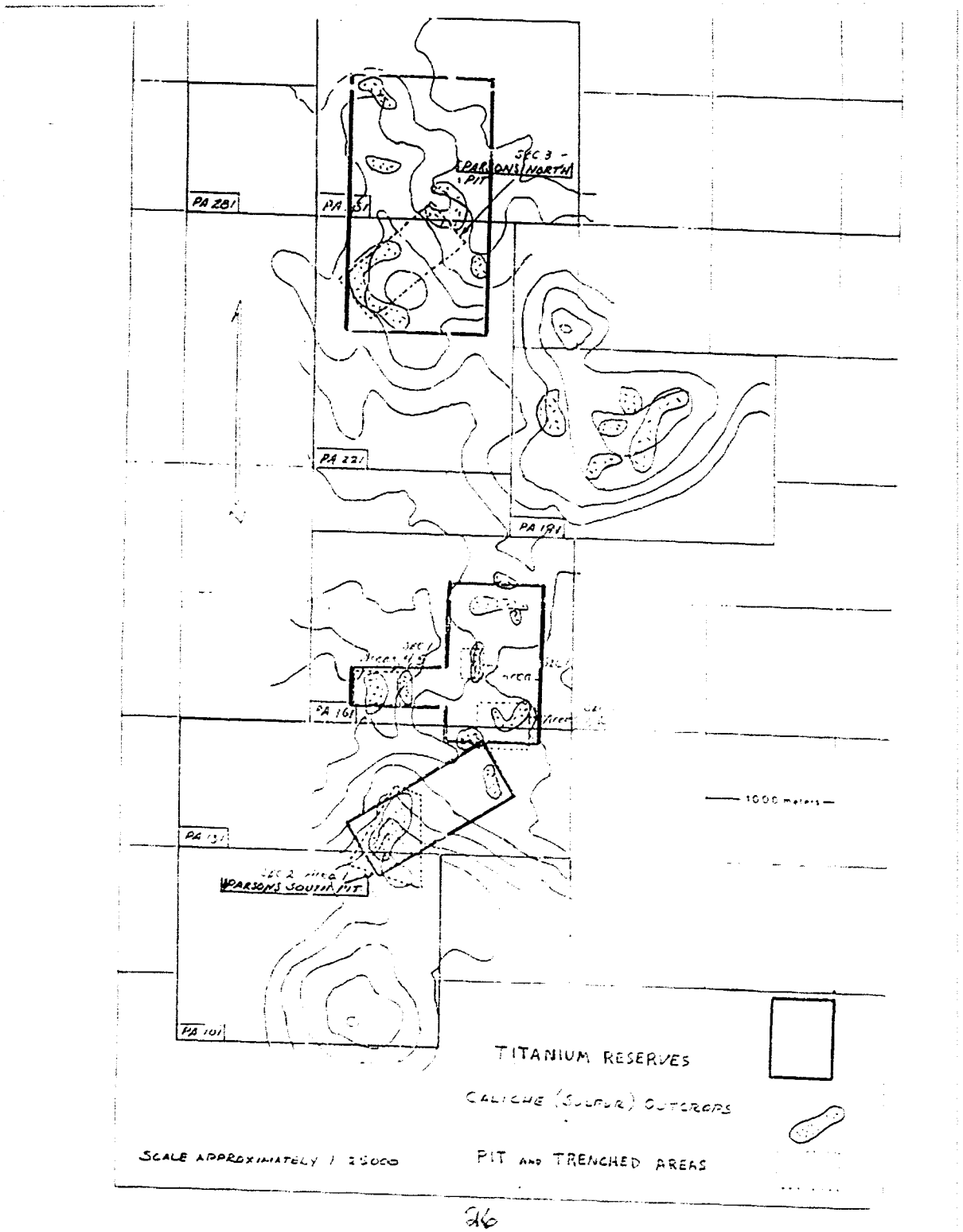
Piedra Amarilla Properties



Sample trenching (ST): 8,7,4,3

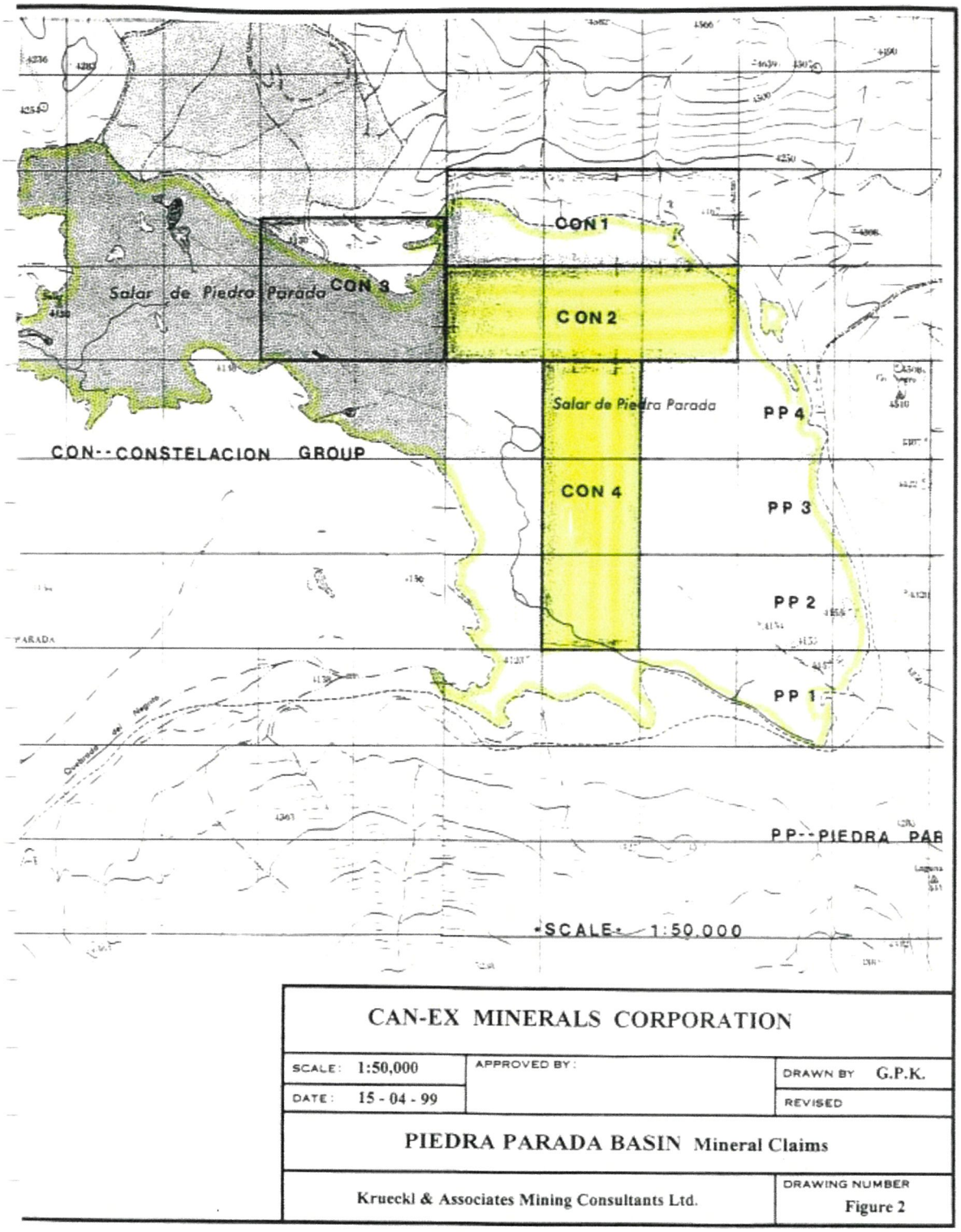
WHERE ?
SAT and MAPS

The PAP with the selected areas for Sampling

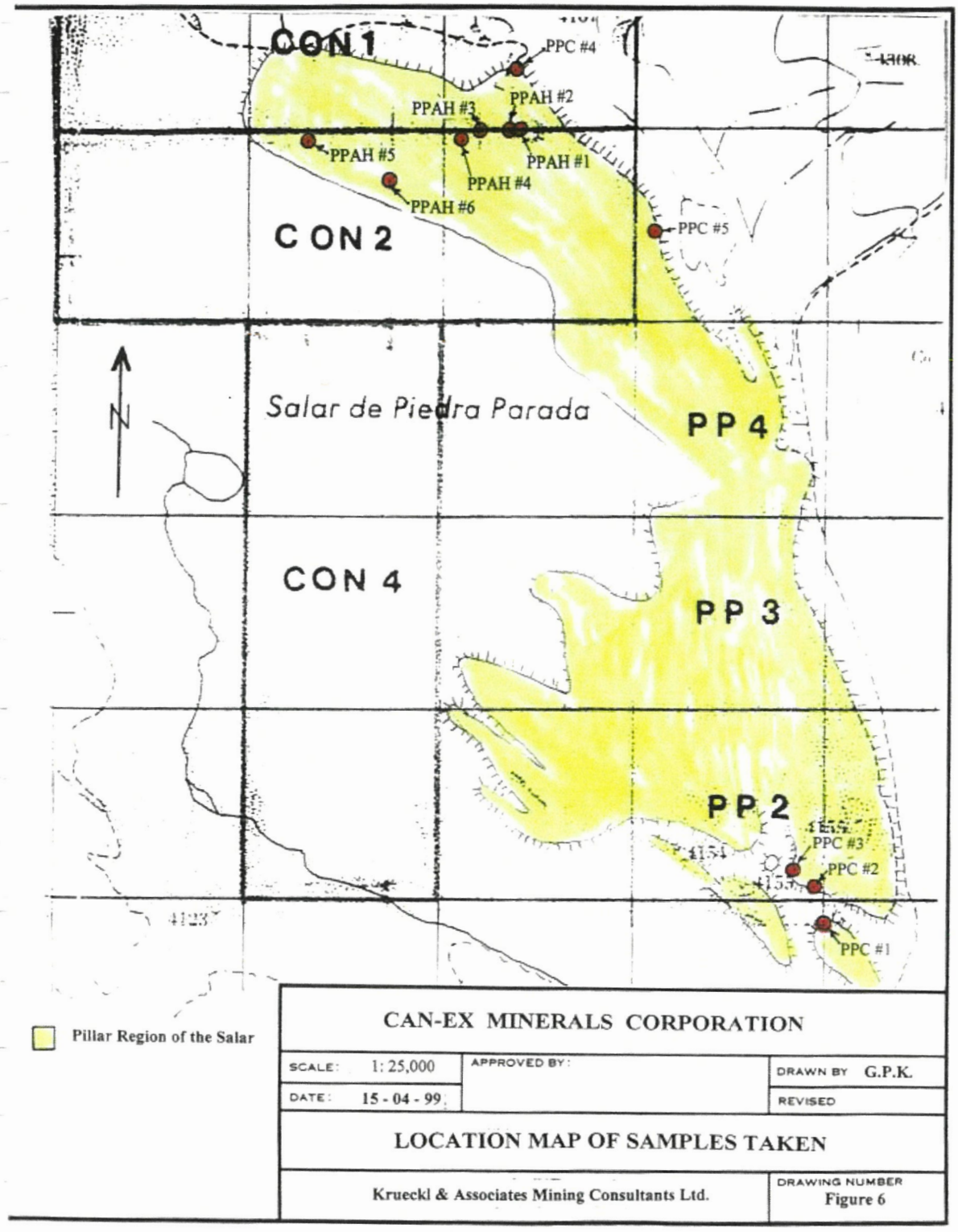


WHERE ?
SAT and MAPS

Piedra Parada and Constellation Properties of the Salar

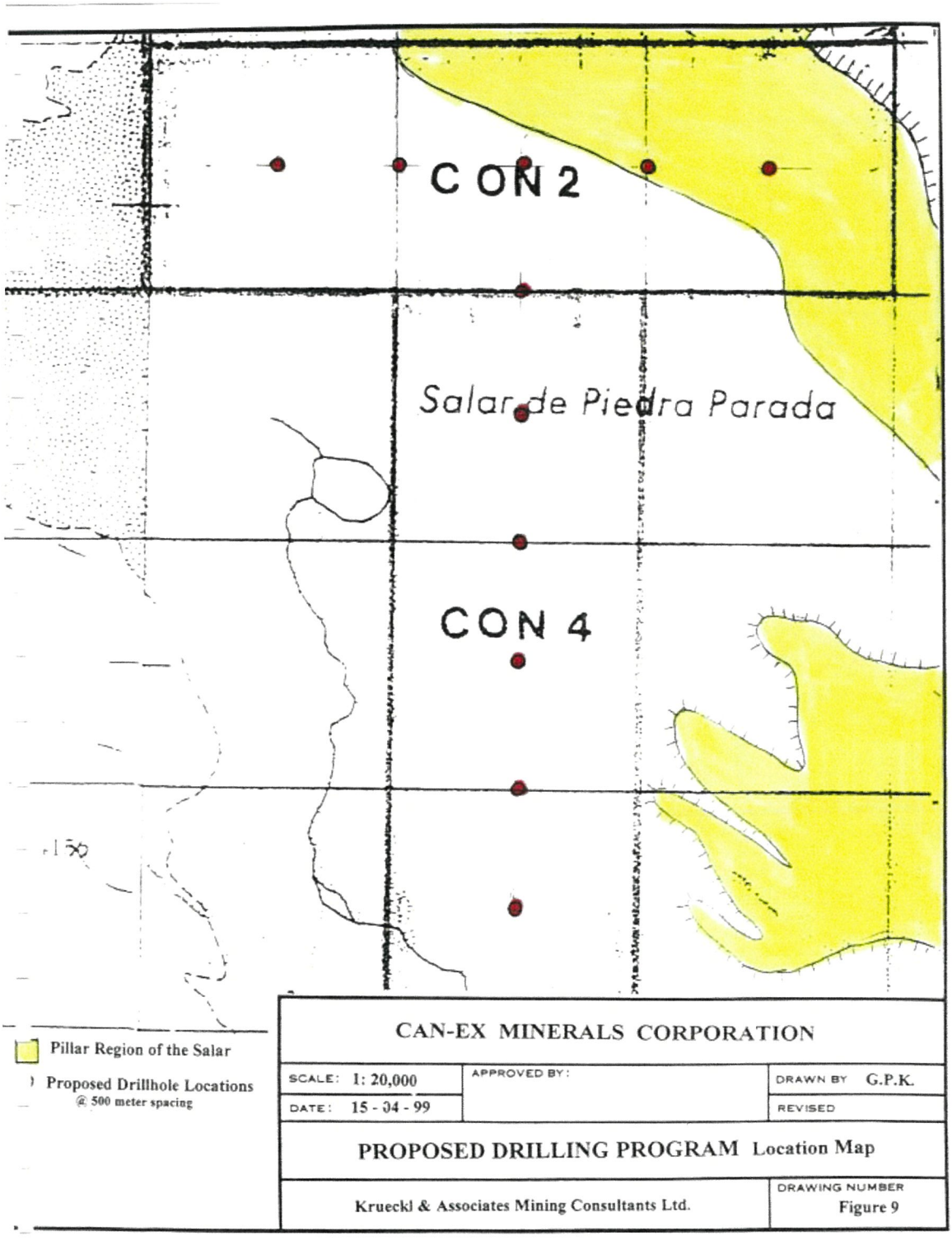


WHERE ?
SAT and MAPS

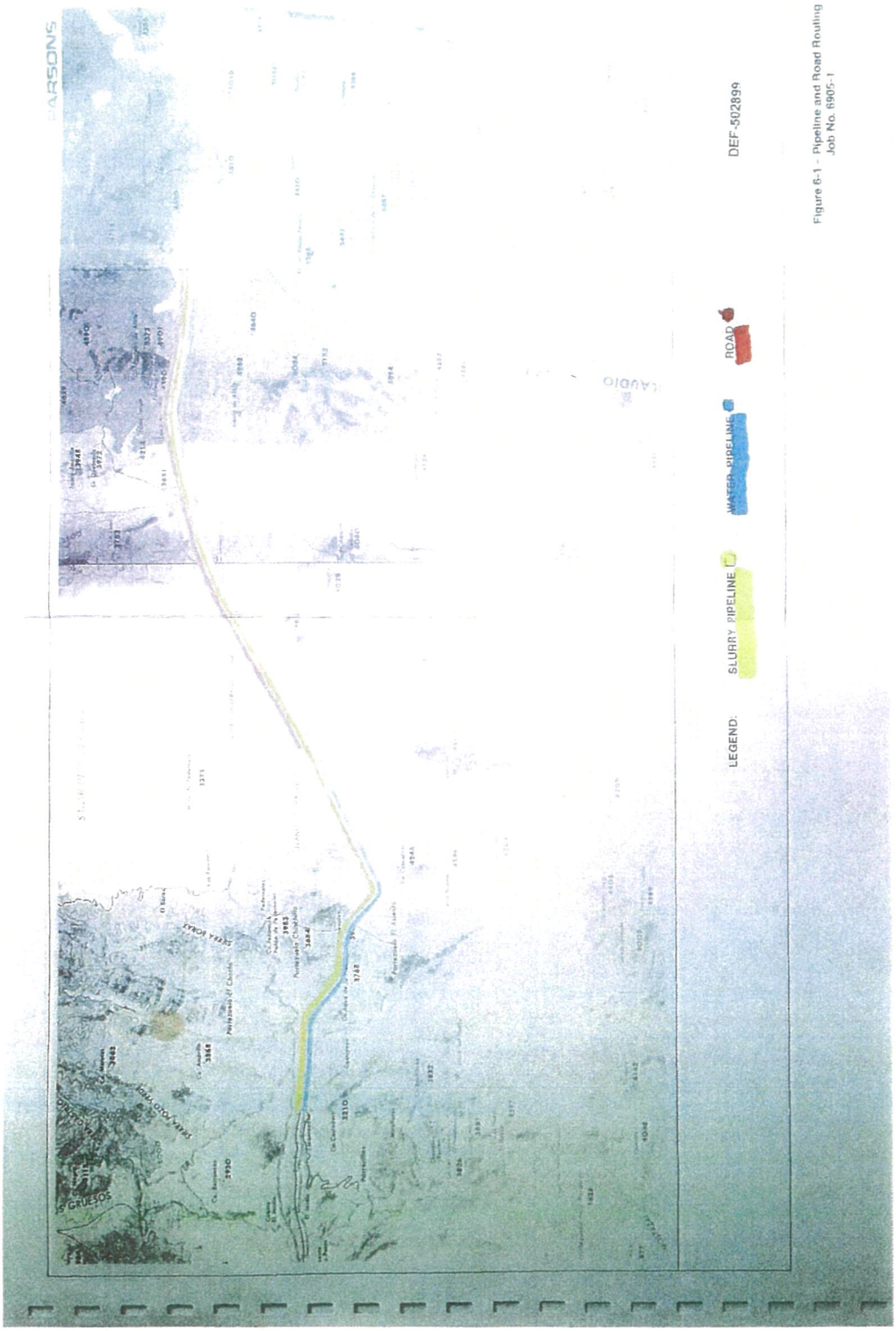


WHERE ?
SAT and MAPS

Proposed Drilling – Profiling layout

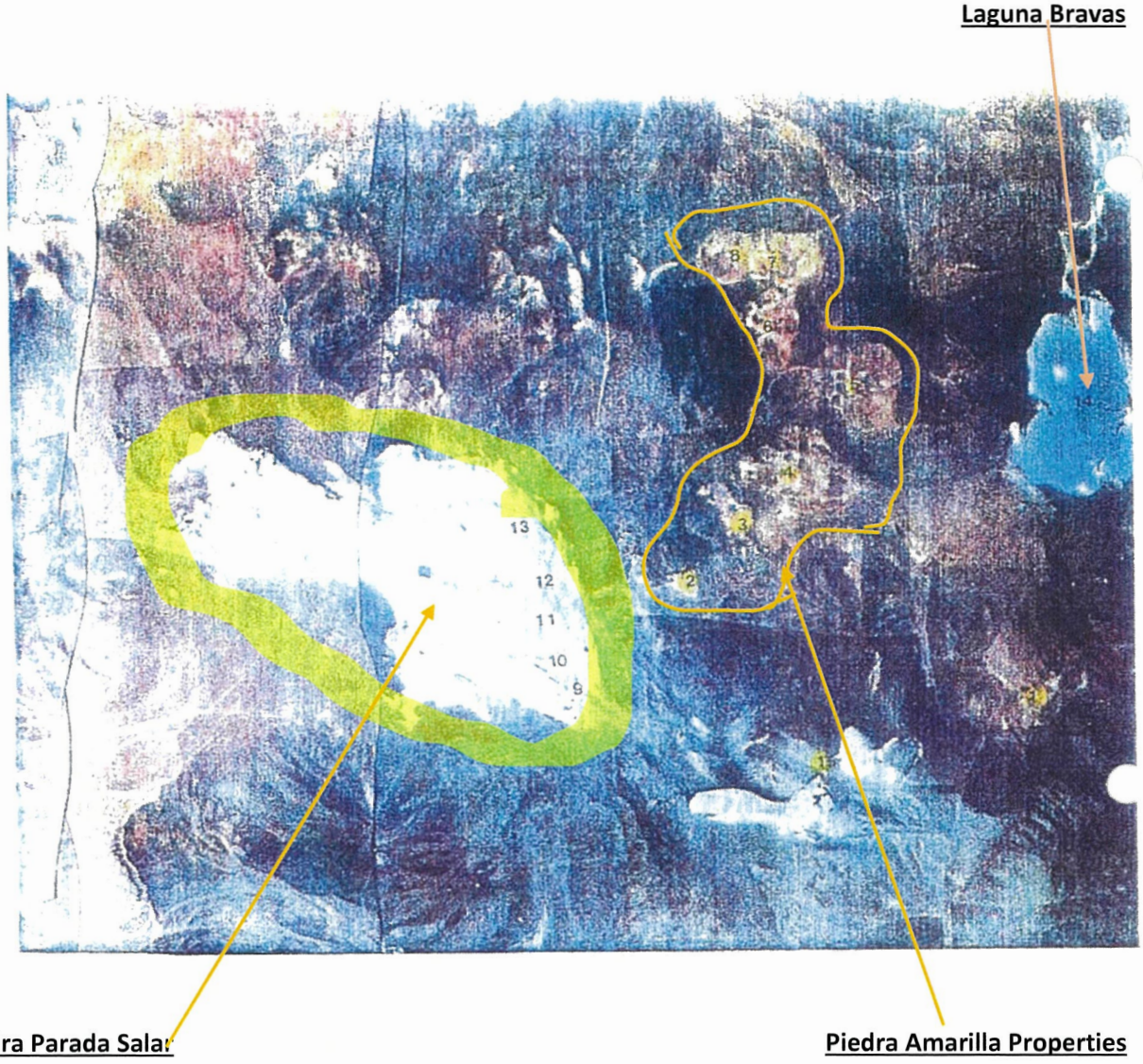


WHERE ?
SAT and MAPS



WHERE ?
SAT and MAPS

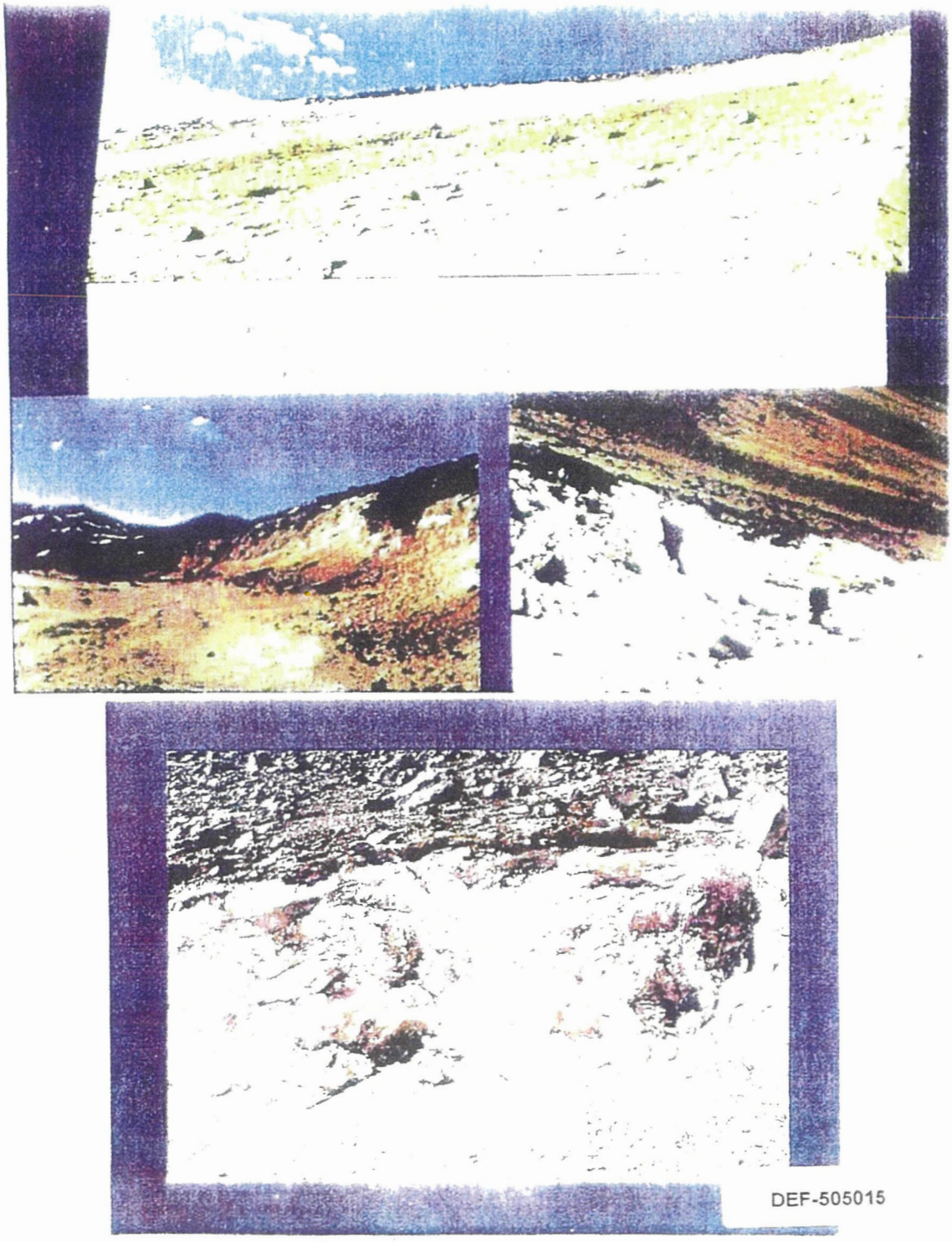
View looking North



The image was taken by LANDSAT and provides a colorized view of the mineralization within the PP Basin.

WHERE ?
SAT and MAPS

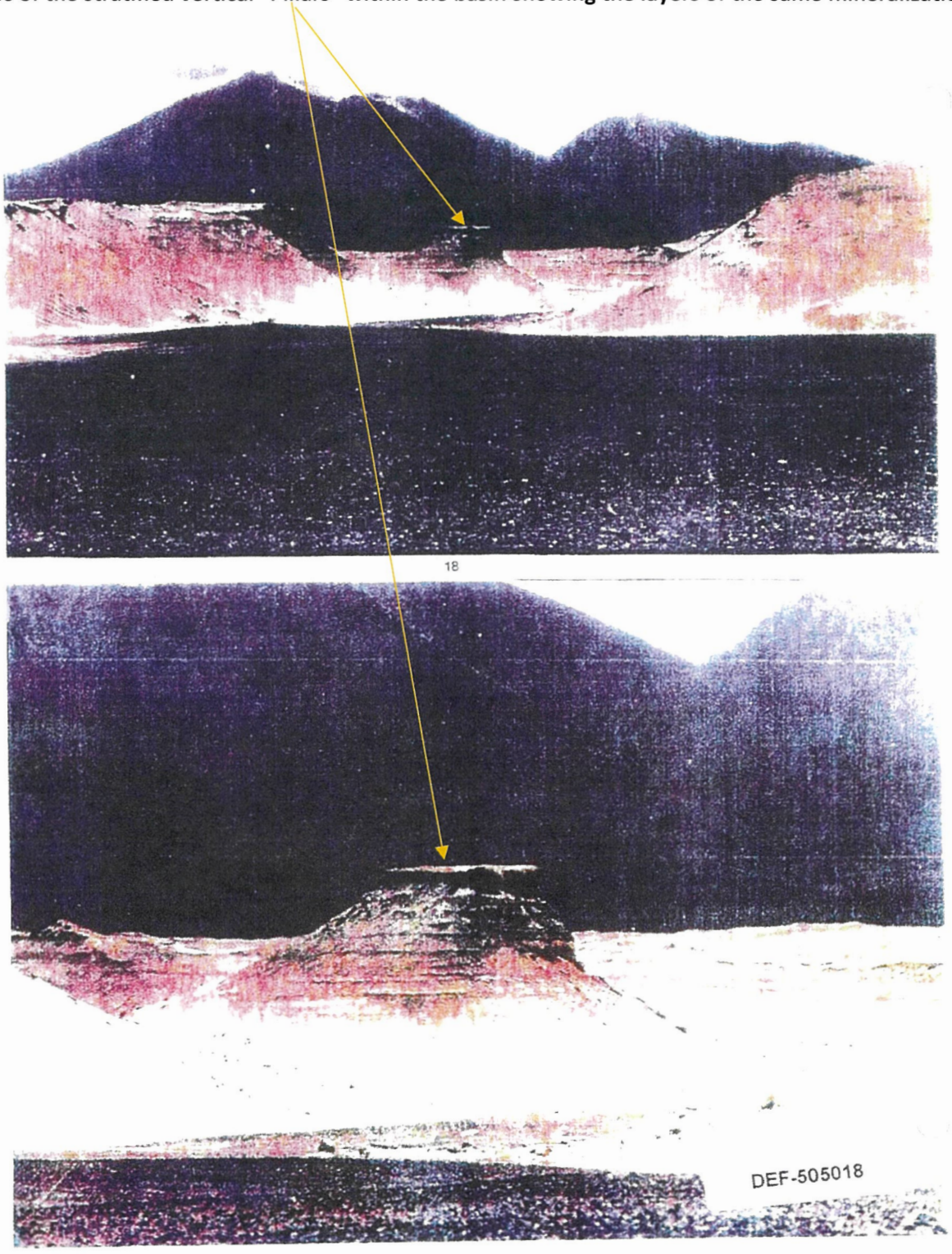
<u>Titanium dioxide</u> (Rutile) not snow as white pigment covering the surface



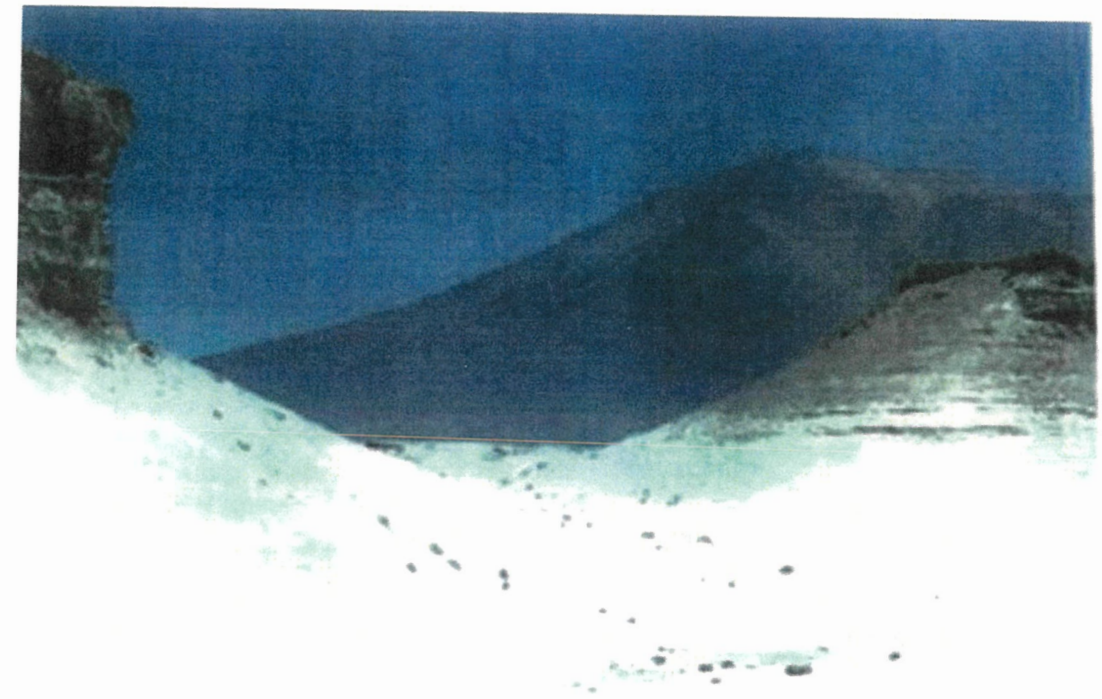
WHERE ?
SAT and MAPS

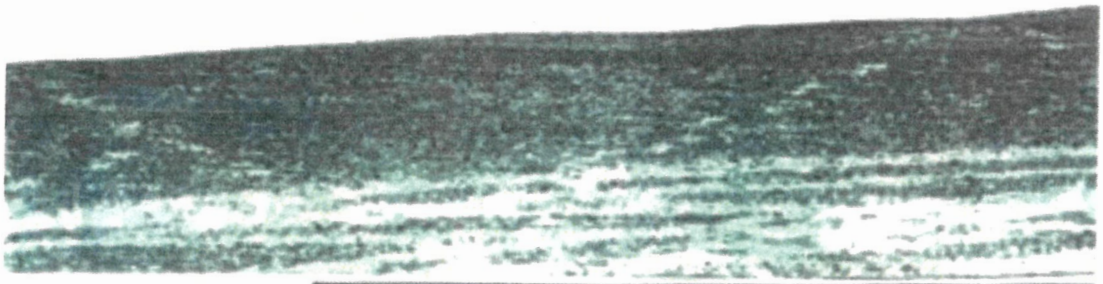
The yellow – orangish colors of Limonite, sulfur and other iron, titanium, sulfur, selenium and other compounds and elements.

Views of the stratified vertical "Pillars" within the basin showing the layers of the same mineralization



WHERE ?
SAT and MAPS





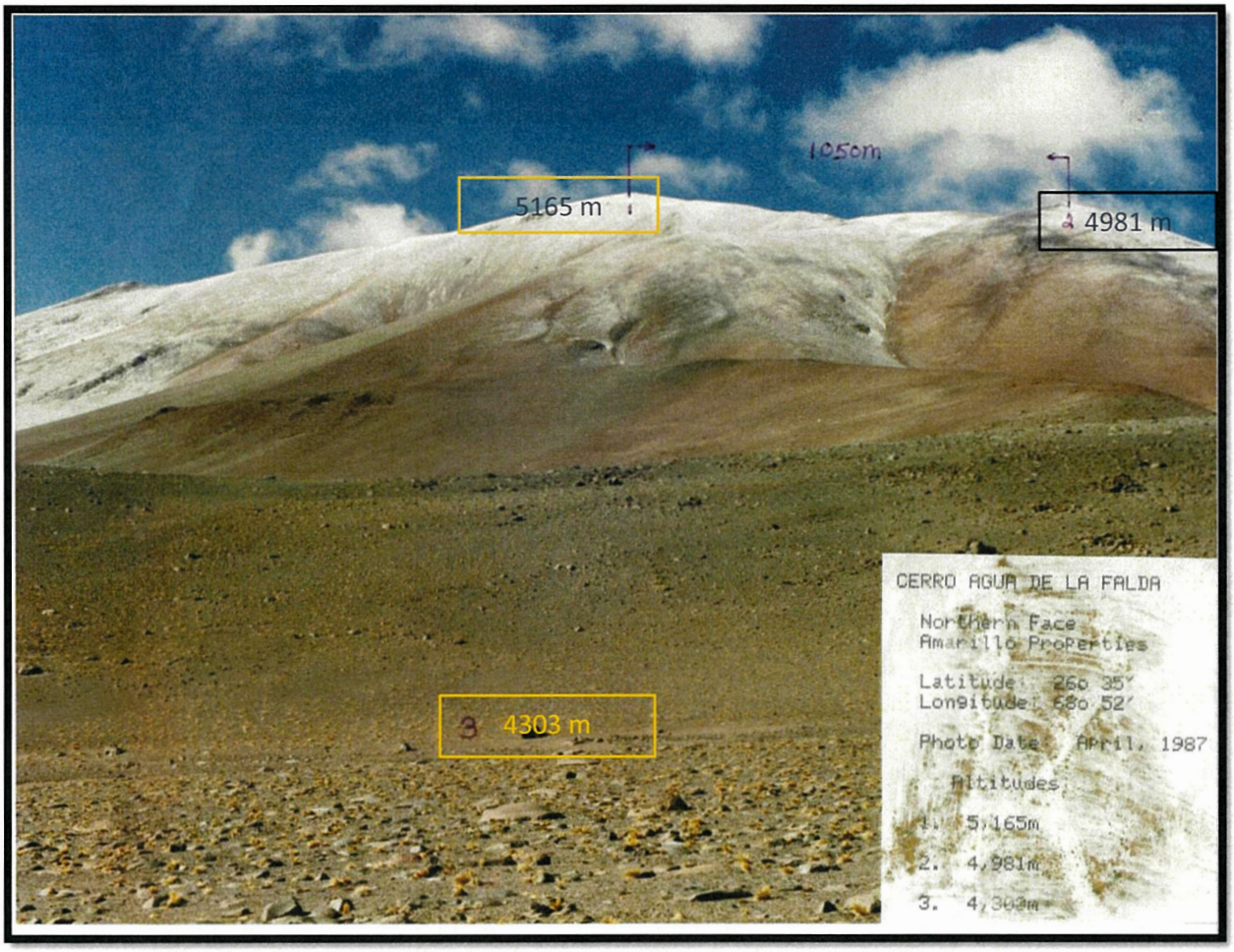
CAN-EX MINERALS CORPORATION

SCALE	APPROVED BY	DRAWN BY G.P.K.
DATE		REVISED

PHOTOGRAPH OF VERTICAL PILLARS

Krueger & Associates Mining Consultants Ltd.	DRAWING NUMBER Figure 8

WHERE ?
SAT and MAPS



Elevation markers of north face

White "Snow Cap" of Titanium dioxide (Rutile) naturally occurring pigment overlaying the ores of Limonite (iron) brownish, Ilmenite (Titanium) grayish, Krennerite (Tellurium/gold, silver) with Sulfur (yellowish) and other mineral ores. With outcrops of Silica rich Rhyolite-Dacite ridges.

THE WHEN ?

DECLARATIONS AND DATA

E

TABLE OF CONTENTS

DISCLAIMER

The information contained herein has been prepared to assist interested parties in making an evaluation of the Piedra Amarilla Mining Properties (Project), and does not purport to be all inclusive, or to contain all relevant information concerning the Project. Information contained herein is believed to be reliable. As such, the opinions expressed herein are evaluations based on judgements as of this date only and upon business analysis practices believed to be valid. Because of this the accuracy of the conclusions cannot be guaranteed or warranted. In all cases, interested parties should conduct their own investigation and analysis of C.S.I. Ag, the Project, and the data set forth in this business overview (Overview).

This Overview includes certain statements, estimates, and projections with respect to the anticipated future performance of the Project. Such statements, estimates, and projections reflect assumptions by Manthe-Lippert & Associates and/or C.S.I. Ag concerning anticipated results, which assumptions may or may not prove to be correct. No representations are made or assurances given as to the accuracy of such statements, estimates, or projections.

By receipt of this Overview, the Recipient acknowledges and agrees that: (1) the information contained herein is of a highly confidential nature therefore the Recipient will maintain and control all of such information, and all other information relating to the Project and/or C.S.I. Ag in accordance with and/or prior to a confidentiality agreement ("the Agreement"); being/or having been executed with the Company governing such confidential material; (the "Material"). (2) none of such Material will be used by the Recipient or any if its employees or representatives in any manner whatsoever; in whole or in part, other than in connection with its evaluation of the Project for the purpose of considering a transaction between the Recipient and C.S.I. Ag (3) the Recipient will not reproduce this or any Material to any person other than a limited number of the Recipient's employees or professional representatives, who have a clear need to know such information of or for the purpose of evaluating the Project, and who are informed by the Recipient of the confidential nature of such information and Recipient's responsibilities and agreement with respect thereto. (4) if the Recipient does not wish to pursue this matter; the Recipient will return the Overview and all copies of the Overview to C.S.I. Ag as soon as practicable, together with any other Material relating to the Project and/or C.S.I. Ag, which the Recipient may have received. (5) any proposed actions by the Recipient which are inconsistent in any manner with the foregoing Agreements will require the prior written consent of C.S.I. Ag.

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C.S.I. AG

THE

PIEDRA AMARILLA MINING PROPERTIES

INTRODUCTION

In excess of 1,500 hundred pages of documentation has been reviewed regarding C.S.I. Ag and the 2,500 hectares (6,175 acres) mining claims known as Piedra Amarilla Mining Properties. These Properties are situated in the Chilean Mining District of Piedra Parada located in Region Three, a 77,700 square kilometer (30,000 square mile) area of Northern Chile. Much of the documentation is in the form of certified and/or original documents, studies, test results and evaluations from experts in the areas being addressed in the reviewed documentation.

An independent course of inquiry has been undertaken to verify certain of the metallurgical and market assumptions made by C.S.I. Ag and/or its consultants. While not yet completed nothing learned materially contradicts the key metallurgical and market assumption made by C.S.I. Ag and/or its consultants.

Several knowledgeable people associated with and/or having knowledge of C.S.I. Ag and/or the Properties have been interviewed in person or by telephone.

The following representations and conclusions, based on information and evaluation, can be supported by credible third party verifications and certified documents. Should this be required, said third party verifications and other documentation will be made available to any responsible party.

C.S.I. AG, A TURKS & CAICOS CORPORATION

✦C.S.I. Ag was incorporated in July of 1989.
✦ It is a Corporation in good standing.
✦ The sole owner is Mr. Gary J. Pierce, a United States Citizen.
✦ The sole director and president is Mr. Gary J. Pierce.
✦C.S.I. Ag owns and holds the property and mineral rights on and for the Piedra Amarilla Mining Properties.
✦ After completion of the proper due diligence, on May 6th of this year, the law firm of Figueroa, Valenzuela and Company issued its formal legal opinion letter as to the ownership of Piedra Amarilla Mining Properties.
✦ The conclusions contained in the letter are quoted as follows.

> ✦ *The Piedras Amarillas Mineral properties are current and valid, and are the sole and exclusive property of C.S.I. Ag.*
> ✦ *The Piedras Amarillas Mineral properties have been fully constituted since October 1989 and are therefor subject to the four year statue of limitations protecting them from third parties concerning any prior mineral claims, or concerning any errors made by the Piedras Amarillas's owners during the constitution process. So, the time period to instigate legal procedure against the Piedras Amarillas elapsed in 1993.*
> ✦ *The Piedras Amarillas Mineral properties have full and preferential rights for exploitation. An in-depth property schematic study showed that prior to the Piedras Amarillas there were no existing claims or concessions which would have to be respected.*
> ✦ *In the same area covered by the Piedras Amarillas properties there have been no mineral claims filed on top of these by third parties against which the owners would have to defend themselves.*
> ✦ *In the region adjacent to the Piedras Amarillas, there are a few exploration and exploitation claims which are outlined on the attached map.*
> ✦ *Regarding the surface rights, we can inform according to the Office of Land Management that the surface rights on the Piedras Amarillas belong to the State of Chile, and there are no registered private land owner.*

PIEDRA AMARILLA MINING PROPERTIES

Location & Geological Characteristics

✦ The Properties are located in one of the most mineral rich areas in the world, the mineralization of which includes the world's largest reserves of copper, nitrates, lithium carbonate, and important resources of iron ore, gold, silver, molybdenum, sulfur, and various commercial salts.
✦ The Properties are situated in Region Three of Chile which in 1995 produced the following: gold - 1,120, 500 troy ounces; silver - 25,940,000 troy ounces; copper - 473,000 metric tons; sulfuric acid - 60,000 metric tons; molybdenum - 5,000 metric tons.

- The Properties are composed of a group of related volcanic cinder cones of late Tertiary age.
- The Properties have experienced several separate periods of hydrothermal mineralization, when super heated solutions, charged with steam and other gases escaped from the congealing magma in enormous quantities, carrying with it mineral matter which deposited at higher levels where the pressure and temperature were less intense.
- The minerals deposited at or near the surface during these episodes have proven to be varied and abundant.

Economically Significant Minerals

- Of the nine claims making up the Piedra Amarilla properties, four properties totaling 1,200 hectares (2,965), have been extensively studied.
- These studies serve as the basis for the following geological and metallurgical conclusions reached.
- Mineralization deposited within the structures of the Piedra Amarilla properties has been identified and in many cases quantified using a variety of analytical means.
- These include atomic absorption, fire assay, x-ray fluorescence, wet chemical leaching analysis, and microscopic studies.
- Significant mineralization found on the Properties includes titanium in various forms, sulfur, tellurium gold and silver, among others.

Titanium

- Titanium in the rutile state (TiO2) is widely and abundantly distributed through out the properties.

    - Rutile is the most economically desirable of all titanium minerals because of the ease of its conversion into commercial grade pigment and metal.
    - Rutile comprises 3.20% by volume of the ore body, which is more than three times the presence of rutile in the typical rutile deposit.

Sulfur

- Sulfur is found as localized deposits, following fissures and channel ways of the volcanic domes, creating veins that give the mineralization a style reminiscent of pegmatite or dike formations.
- Channel ways of nearly pure sulfur can be found ranging from a few centimeters to over four meters in width.

Gold

- Gold is found in the native state as well as a compound of tellurium abundant in the deposit.

- ✦ Native gold has been assayed at 0.2 to 0.34 grams per ton of head ore.
- ✦ Gold values associated with telluride mineralization have been tentatively identified at 4.5 grams per ton of head ore.

- ✦ The telluride mineralization is thought to consist of krennerite (Au,Ag)Te2 with a minor proportion of calaverite (AuTe2).
- ✦ Primary gold mineralization in the Piedra Amarilla deposit is assumed to have taken place during the liquid phases of hydrothermal activity which accounts for its abundance in the telluride state.

RESERVES

Background

- ✦ Ore body reserves have been quantified in three different mineralized sections within the core of the Piedra Amarilla property group.
- ✦ These mineralized sections cover portions of Piedra Amarilla 131, 161, 221, and 251.
- ✦ The identified reserves have been quantified as both indicated and inferred, according to the Mineral Resource Classification System of the U.S. Bureau of Mines.
- ✦ The reserve exploration program to quantify the Piedra Amarilla reserves was outlined in April, 1988 in conjunction with the R.M. Parsons engineering company of Pasadena, California, who was commissioned to execute a pre-feasibility sulfur study on the mineral properties.
- ✦ Field exploration was carried out by Minexco in June and early July of 1988.
- ✦ Areas for extraction of bulk samples were identified by personnel from INTEC-Chile during a site visit subsequent to the trenching program.
- ✦ Sample extraction for assay work was supervised by Minexco senior geologist Carlos Ulriksen.
- ✦ Extraction of bulk samples was executed by a crew from Jorquera Limitada, a mine engineering firm specializing in topographic work from Copiapo.
- ✦ Fourteen of the eighteen tons of bulk samples was sent to the INTEC-Chile laboratories in Santiago, with the other four tons going to the Marambic laboratory in Copiapo.

Sampling Procedures & Results

- ✦ Ore reserves in Sections 2 and 3 were quantified by trenching predetermined areas associated with caliche mineralization.
- ✦ Section 1 was quantified by digging shallow pits for removal of bulk samples, and by sampling large outcrops which are exposed as hardened tufts
- ✦ The trenched areas were sampled along 15 meter horizontal channels in both the mid-walls and floors.
- ✦ Some 15 tons of samples were removed from Sections 2 and 3, and about 5 tons from Section 1.

✦ Each of the Properties sampled was subdivided into 100 meter x 100 meter sections (one hectare) and sample results plotted and given a preponderance or area of influence of approximately 100 meters.
✦ Depth dimensions of inferred and indicated ore reserves were conservatively determined using local geological characteristics such as outcrops and exposed caliche.

Titanium

✦ Blocked titanium reserves in the form of rutile (Ti02) total 112,720,000 metric tons grading 3.20% of the ore body by volume and is classified as follows.

✦ 18,960,000 metric tons indicated reserves grading 3.63% of the ore body by volume.
✦ 93,760,000 metric tons inferred reserves grading 3.11% of the ore body by volume.

✦ Combined indicated and inferred reserves of titanium in the Ti02, correspond closely to the average of the bulk samples assayed by INTEC-Chile and SGS (3.04% Ti02).
✦ Most of the individual field samples gathered for assaying were combined locally to form composite samples then split into several representative samples.
✦ These representative samples were in turn sent to and assayed by Geolab in Santiago and Rogers in the United States.
✦ Total titanium reserves encompass the same reserve areas as those blocked out for sulfur and gold, with some minor adjustments to reflect localized sampling.

Titanium Byproducts

✦ While assaying for titanium a number of other elements were found in some of the assays.
✦ Strontium appears to be the most consistent byproduct (secondary minerals), averaging 0.3% by volume of the titanium reserves ore body.
✦ Total reserves of celestine (SrSO4) in the blocked out titanium reserves of Piedra Amarilla are estimated at 710,136 metric tons.

Sulfur

✦ Blocked out sulfur reserves are set at 100,800,000 metric tons and classified as follows.

✦ Indicated reserves of 21,120,000 metric tons grading 19.84% sulfur.
✦ Inferred reserves of 79,760,000 metric tons grading 10.66% sulfur.

✦ These grades correspond closely to the composite bulk samples assayed by INTEC-Chile of medium grade and low grade caliche, containing 20.5% and 10.5% sulfur respectively.
✦ In projecting sulfur grades into inferred mineralized areas, sulfur values were given as approximately 50% of the values contained in the adjacent indicated reserves.
✦Additional drilling on the Piedra Amarilla properties may show that sulfur beds lie beneath many of the alluvial areas thereby greatly increasing the blocked out reserves.

✦It should be noted that the sulfur reserves on the Piedra Amarilla 41 property have not been sampled nor blocked out, but based on visual evidence the aggregate reserves contained therein surpass all of the other Piedra Amarilla properties in both quantity and grade.

Sulfur Byproducts

✦ Arsenic while present in assays at an average of 27 ppm is not a recoverable byproduct in the proposed metallurgical recovery processes.
✦ Selenium totals 3,081 metric tons in the blocked sulfur ore body thereby making it a mineral to recover as a byproduct.
✦ Tellurium's presence in the total sulfur blocked ore body is calculated at 697 metric tons and can be recovered during the final filtration of the molten sulfur in the typical sulfur recovery process circuit.
✦ Kaolinite is thought to total 2.2 million metric tons.

Gold & Silver

✦ Total gold reserves are at blocked at 115,920,000 metric tons averaging 4.5 grams per metric ton, classified as follows.

- ✦ 19,200,000 metric tons of indicated reserves averaging 4.74 grams per metric ton.
- ✦ 96,720,000 metric tons inferred reserves of averaging 4.46 grams per metric ton.

✦ Initially, field samples of ore were checked for gold values using standard fire assay procedures and the results were disappointing.
✦ After that composite samples were then sent to the United States for analysis of gold and other metals using x-ray fluorescence.
✦ The x-ray fluorescence results showed unusually high values of both gold and silver.
✦ The gold values were largely contained in telluride minerals, with free gold accounting for only a fraction of the total gold values.
✦ Assays set silver concentration at 7.5 grams per ton in the same ore body tested for the presence of gold.
✦ At this concentration silver is only economically recoverable as a by-product in the gold recovery process.
✦ Four out of five samples tested for platinum and palladium show significant values of palladium and interesting amounts of platinum contained in the ore samples.

Silica

✦ Total silica reserves are in excess of 90,000,000 metric tons.
✦ Silica is thought to comprise about 72% of the host rock in the blocked ore body
✦ After extraction of the economic minerals, certain portions of the discharged tailings will contain relatively pure grades of silica quartz (90%).

Total Reserve Summary

✦ Based on the sampling and assay work done to date the total reserves on sections of the Piedra Amarilla properties is as follows (using 1995 average prices).

Mineral	Grade	Net Reserves	Unit Value	Reserve Value
✦ Titanium	3,20%	3,602,000 m/t	$ 2,332.00 m/t	$ 8,399,864,000
✦ Sulfur	12.58%	12,692,000 m/t	$ 105.00 m/t	$ 1,332,660,000
✦ Gold	4.50 g/t	552,117,000 gms	$ 12.00 gm	$ 6,625,404,000
✦ Silver	7.50 g/t	869,400,000 gms	$ 0.17 gm	$ 147,798,000
✦ Celestine	0.63%	710,000 m/t	$ 78.00 m/t	$ 55,380,000
✦ Selenium	30.54 g/t	3,126 m/t	$ 10,758.00 m/t	$ 33,629,508
✦ Tellurium	6.91 g/t	707 m/t	$550,000.00 m/t	$ 388,850,000
✦ Kaolinite	2.20 g/t	2,219,000 m/t	$ 128.00 m/t	$ 284,032,000
✦ Silica	72.5%	126,125,000 m/t	$ 25.00 m/t	$ 3,153,125,000
				$ 20,420,742,508

✦ The sample base and the assay work done on them to determine the above reserves is adequate for determination of indicated and inferred reserves.
✦ Additional trenching and some drilling will be required, in conjunction with a detailed geological study, to move the reserves now classified as indicated and inferred to measured reserves.
✦ This work would at least double the amount of sulfur now considered to be present as well as materially increasing the amounts of other minerals already known to be present.
✦The developing of a larger sample base by testing those sections of Properties not sampled will undoubtedly add significantly to the reserve base by uncovering additional minerals in those areas.

METALLURGICAL STUDIES & PROCESS CIRCUIT DESIGN

Background

✦ Metallurgical studies are a condition precedent to and an integral part of designing a cost effective, efficient processing circuit to recover minerals.
✦ Prior to the pre-feasibility study executed by the Parsons Company in 1988, only two metallurgical studies had been undertaken on the Piedra Amarilla properties ore.
✦ Parsons pre-feasibility study addressed the weaknesses of the metallurgical work done to that time and set the tone and direction undertaken in subsequent metallurgical work.
✦ It should be noted that a number of metallurgical studies have been performed on bulk ore samples extracted from the pits and trenches of the Piedra Amarilla properties by credible entities and individuals concurrent with and subsequent to Parson's work..
✦ Some of these studies have been executed by INTEC-Chile, and are mostly targeted at the recovery of the elemental sulfur reserves present on the properties.

✦ One major study covering the marketing and production of sulfur and titanium undertaken by INTEC-Chile is currently published in preliminary draft form and is in the possession of both INTEC-Chile and Corfo.
✦ The parameters for the metallurgical work outlined hereinafter are influenced to some degree by the ability to produce and/or market the finished products.

✦Titanium pigment, for example, is produced instead of marketing rutile concentrates, because of the difficulty and expense in producing 95% plus TiO2 grade concentrates.
✦The metallurgical flow-sheet for sulfur recovery as outlined herein has been extensively researched and will suffer few if any modifications in subsequent studies.
✦ The flow-sheets for both rutile and telluride gold recovery are based on fewer study criteria, and include such factors as process of elimination and supposition. (Substantial data was borrowed from metallurgical flow-sheets developed by other companies on ore samples of varying characteristics.)
✦Thus, during future metallurgical studies, the flow-sheets for both gold and rutile may undergo major changes from those presented here. (For example, it might be shown in later studies that the production of titanium pigment is more economical using a chlorination method rather than the sulfation method.)

✦ All processing and recovery assumptions in the below detailed processing and recovery approaches assume an operation mining and processing 25,000 metric tons of ore daily.

Sulfur Recovery

✦ The principle steps in recovery of elemental sulfur are outlined in the flow-sheets found in figures 26, 27, and 28.
✦ Sulfur concentrates are recovered during various stages of flotation, with final concentrates feeding a continuous autoclave smelting operation.
✦ Melted sulfur will be formed into prill using standard prill technology.

Primary Flotation

✦ INTEC-Chile as developed flotation device and worked out a "flash" flotation technique which will be employed as a pre-concentration step prior to the primary rougher flotation step. (Since sulfur is naturally hydrophobic, conventional flotation cells have difficulty evacuating the sulfur concentrate with sufficient speed, resulting in a backup of sulfur product within the cells, and a partial up-welling of quartz gangue material, which is evacuated along with the sulfur.)
✦ This "flash" flotation device consists of using large volume cylindrical tanks, operated in the same manner as a conventional flotation cell.
✦ Sulfur concentrate is evacuated from the tank over a spillway by turbulent air bubbles forced into the slurry.
✦ "Flash" flotation can be used to upgrade primary flotation sulfur feed, eliminating substantial amounts of gangue material.

✦ INTEC-Chile has determined that due to the flotation kinetics of sulfur, low grade sulfur ore of say, l0% sulfur by volume, can be concentrated in primary rougher flotation using the same amount of conventional flotation cells as ore containing 30% sulfur. (This makes virtually all of the lower grade sulfur reserves economically recoverable.)

✦ Primary flotation material consists of minus 35 mesh feed which has been reduced using primary and secondary jaw crushers, and tertiary reduction using back-to-back centrifugal rock against rock mills.

✦ Mine feed input material averages 15.1% sulfur, which is higher than the overall project average of 12.58%. (It is presumed that ore extraction will begin near the tops of the various volcanic domes where the sulfur content is higher, thus during the first years of the project sulfur extraction will be higher than in the latter years.)

✦ Mine feed for this circuit will be mixed with a sulfur rich autoclave byproduct having a sulfur content of 51.5% called agglomerate. (Tests by INTEC-Chile have shown that this agglomerate byproduct can be recovered when recycled prior to primary flotation.)

✦ Thus total feed material (combined mine feed and agglomerate) is projected during the first years of operation to average 15.7% sulfur.

✦ The stations in the primary floatation section of the sulfur recovery circuit are as follows.

✦ The SAG mill which reduces the total feed material, 25,462 metric tons daily, to 100% minus 35 mesh

✦ The hydro-cyclone classifier which splits the feed material into a plus 35 mesh, which is returned to the SAG mill, and a minus 35 mesh, which is reports to the conditioning station.

✦ The primary rougher floatation cells, which receive the feed from the conditioning station, makes the initial split to concentrated sulfur and tailings.

✦ The sulfur concentrates generated are then processed through a cleaner flotation step which further concentrates the received material into a super concentrate of 1,503 metric tons containing 92.7% sulfur for transport to the autoclave.

✦ The primary rougher floatation cells tailings and the cleaner flotation step tailings are also further processed through a scavenger flotation station which splits the received materials into 7,048 metric tons of concentrates containing 35.8% sulfur which is then sent to the secondary flotation step and 16,911 metric tons of tails containing 0.48% sulfur which will be used in the Ti02 recovery operation is stockpiled.

Secondary Flotation

✦ The 7,048 metric tons of primary scavenger concentrates (35.85% sulfur) generated in the primary flotation phase report to the secondary flotation circuit.

✦ This feed material is classified using hydro-cyclones with the underflow reporting to a secondary SAG mill, where it is ground to 70% minus 100 mesh.

✦ This classification step helps to separate the finer sulfur particles from the gangue material, and will allow the primary scavenger concentrates to become substantially upgraded during secondary flotation.

- ✦ The steps for secondary flotation are similar to those of primary flotation, with production of a final cleaner concentrate which reports to the autoclave, and a scavenger concentrate which reports to a tertiary grinding circuit in preparation for final flotation.
- ✦ It should be noted the scavenger tails from secondary flotation will be upgraded by using large volume spiral concentrators.
- ✦ Since the total volume of the material to be treated in this step with spiral concentrators is less than 10% of the original primary feed, this step can be accomplished for a very modest capital investment, and may add as much as 40 more tons per day of sulfur to the secondary scavenger concentrates.
- ✦ The reporting sequence from the secondary floatation circuit is as follows.

✦ The final sulfur concentrates, 1,322 metric tons containing 87.5% sulfur by volume, is transported to the autoclave.
✦ The total scavenger concentrates, 3,873 metric tons containing 34.7% sulfur by volume, is sent to the tertiary floatation circuit.
✦ The spiral tails, 1,853 metric tons containing 1.1% sulfur which will eventually be used in the Ti02 recovery operation is stockpiled.

Tertiary Flotation

- ✦ Tertiary floatation is similar to the secondary flotation except that scavenger concentrates are recycled to the tertiary conditioning tank and scavenger tails are not treated with gravitational spirals.
- ✦ The total feed stock to the tertiary flotation is a combination of material from the secondary flotation scavenger concentrates, 3,873 metric tons containing 34.7% sulfur and a recycled 115 metric tons of tertiary cleaner-scavenger floatation concentrates containing 33.7% sulfur.
- ✦ Secondary scavenger concentrates are classified with the underflow feeding a SAG mill where they are ground to 80% minus 200 mesh.
- ✦ This differential grinding allows separation of sulfur from the gangue mineral and upgrading of the concentrates in a tertiary flotation step.
- ✦ The final reporting sequence from the tertiary floatation circuit is as follows.

  - ✦ The final sulfur concentrates, 1,398 metric tons containing 92.7% sulfur by volume, is transported to the autoclave.
  - ✦ The total scavenger concentrates, 115 metric tons containing 33.4% sulfur by volume, is recycled in the tertiary floatation circuit.
  - ✦ The cleaner-scavenger tails, 2,475 metric tons containing 0.38% sulfur for use in the Ti02 recovery operation is stockpiled.

Autoclave

- ✦ The primary purpose of the autoclave circuit is to melt the sulfur in preparation for prilling, prilled sulfur being the final product.

- ✦ INTEC-Chile has developed a method which allows continuous autoclaving of sulfur concentrates.

    - ✦ Continuous autoclaving operation is much more cost effective than conventional batch autoclaving
    - ✦ The technology was developed with a partial subsidy from Corfo and under the terms and conditions of the agreement previous to the study any new technology developed in this area would be the jointly owned by Corfo and Minexo (C.S.I. Ag)

- ✦ The total daily flotation concentrate feed to the autoclave is 4,223 metric tons which is 91% sulfur by volume.
- ✦ Concentrates entering into the autoclave are melted at a pre-determined temperature (plus or minus 130° C) in a pressurized environment.
- ✦ The resulting molten sulfur bath separates into three distinct layers according to specific gravity, each of which is tapped and bled.

    - ✦ The top layer consists largely of superheated water which is the melting medium.

        - ✦ It is by volume 97 metric tons at 58% sulfur and water.
        - ✦ It is discharged to the waste stockpile for eventual recycling.

    - ✦ The middle layer contains liquid sulfur referred to as melted bleed.

        - ✦ It is by volume 3,663 metric tons at 97% sulfur.
        - ✦ The melted bleed is subjected to pressure filtration which results in the following.

            - ✦ 3,525 metric tons of prilling feed at 99.8% purity.
            - ✦ 139 metric tons of filter cake containing 25.7% sulfur discharged to the waste stockpile.

    - ✦ The bottom layer is made up of the unmelted solid particles and some molten sulphur.

        - ✦ It is by volume 462 metric tons containing 51.5% sulfur.
        - ✦ This agglomerate waste is recycled to the primary floatation circuit as feed stock.

Prilling

- ✦ The 3,525 metric tons of molten sulfur (prilling feed) at 99.8% purity referenced earlier is converted to prilled sulfur.
- ✦ Of the prill feed stock 14 metric tons, at a 98.8% sulfur content is waste and discharged to the waste stockpile.
- ✦ The balance, 3,511 metric tons, in prill form at 99.8% purity, is earmarked for usage as follows.

- ✦ 330 metric tons transferred to C.S.I. Ag's sulfuric acid manufacturing plant.
- ✦ 3,181 metric tons sold on the open market, mainly for export from Chile.

✦ Wastes, totaling 250 metric tons daily, from the de-watering bleed, filter cake, and prilling will be stockpiled for future exploitation.

- ✦ The wastes still contain significant sulfur residue, 42.3% by volume, and can be economically processed as a blending feed stock material.
- ✦ These wastes may well contain a commercially recoverable quantity of gold.

Sulfuric Acid Manufacture

✦ As sulfuric acid is an essential ingredient in the recovery of titanium (TiO2) and Nobel metals (gold, silver, PGM) it will be produced as an adjunct to the sulfur recovery process.
✦ About 10% of the prilled sulfur produced will be internally consumed in the sulfuric acid manufacturing plant.
✦ This plant will produce about 1,000 metric tons per day of sulfuric acid.

- ✦ Of this amount, 650 metric tons will be internally used in the production of titanium pigment (Ti02) and the recovery of Nobel metals, primarily gold.
- ✦ The balance, 350 tons, will be sold to area users, mostly to regional copper recovery operations.

Precious Metals Recovery

✦ The precious metals content of the Piedra Amarilla ore body is largely in the form of gold and silver tellurides.
✦Platinum group metals, especially palladium, are also found, as both sulfides and tellurides.
✦ No significant recovery consideration has been given to the platinum group metals as a part of the metallurgical work done to date
✦ Leaching experiments designed to test gold recovery limit direct leaching of the tellurides to a secondary consideration due to the problems in dropping the gold from solution.
✦ On average only 28% of the gold values originally leached into the solution, precipitated and was recovered.
✦ This indicates that the gold and silver tellurides must be oxidized prior to leaching in order to liberate the leach solution.
✦ A number of oxidation procedures are available which will permit chemical reduction of the tellurides and recovery of elemental gold and silver.
✦ First, a satisfactory procedure must be engineered for recovering the telluride values in a concentrate form.

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Concentration - General Considerations

- ✦ Two common methods of concentration have been evaluated.
- ✦ Those being, flotation and gravimetric.
- ✦ Flotation has been eliminated for if the flotation method were to be used on the Piedra Amarilla ore, it would most likely have to take place after removal of the sulfur, but before titanium flotation.
- ✦ Attempts to float the tellurides ahead of sulfur flotation would be futile since sulfur is naturally hydrophobic, and a large portion would float off, complicating the subsequent sulfation steps.
- ✦ Also flotation of sulfur ahead of telluride flotation does have the disadvantage of co-floating a portion of the tellurides.
- ✦ Therefore gravimetric concentration is being considered as the preferred method of concentrating the gold and silver containing tellurides.

Gravimetric Concentration

- ✦ The Knelson centrifugal gravity concentrator as been chosen as the most promising method for inexpensively recovering the majority of telluride minerals.
- ✦ The Knelson is capable of recovering a significant percentage of the high density minerals from diverse head ores.
- ✦ The Knelson is effective even at the smaller mesh sizes, and in the case of tellurides can recover mineral particles down to about 30 microns.
- ✦Given the particle size recovery parameters of the Knelson equipment preliminary ore milling is feasible at a minus 35 mesh which is sufficient to effect liberation of the telluride minerals.
- ✦ Milling down to a minus 35 mesh is a cost effective milling range for preparation of the ore for concentration.
- ✦ Knelson concentrators will also be placed following the secondary and tertiary sulfur grinding circuits.
- ✦ Some additional telluride mineralization will be recovered after these steps, as will tramp iron from the milling. (It should be noted tramp iron needs to be removed as it has a tendency to react with the slightly acidic sulfur during flotation, which this ore will be subjected to, especially if saline or brine water is used. This produces a discoloration of the final sulfur product and may result in either penalties or lower pricing in the market.)
- ✦ At full production, 25,000 metric tons of ore processed, daily primary concentrates will total 18.3 metric tons.
- ✦ Of this amount about 2.75 metric tons will be tramp iron, which can be removed, leaving 15.6 metric tons of concentrates for gold and silver recovery processing.

Primary Concentrate Grade

- ✦ Mine feed to the grinding circuit will average 4.5 grams of gold and 7.5 grams of silver per metric ton of ore, mostly in the telluride form.

- At full production of 25,000 metric tons of ore processed daily this equates to 112,500 grams of gold and 187,500 grams of silver per day available for recovery.
- When the mine feed is spiked with the autoclave agglomerate the total circuit feed increases to 25,462 metric tons containing 124,050 grams of gold and 206,250 grams of silver.
- Upon completion of the finial concentration step the resultant rougher gravity concentrates, 18.3 metic ton will contain 93,046 grams of gold and 154,456 grams of silver.

Gold Recovery Process

- The rougher gravity concentrates, 18.3 metric tons, containing 93,046 grams of gold and and 154,456 grams of silver is run through a wet magnetic separation process with a resultant split of magnetic and non-magnetic concentrates.
- The magnetic concentrates, 3.5 metric tons, contain 1,396 grams of gold and 2,331 grams of silver.
- The non-magnetic tailings 14.8 metic tons, contain 91,650 grams of gold and 153,055 grams of silver.

    - The non-magnetic tails will be further concentrated by a Knelson Gravity Cleaner with the resultant split of super-concentrate and tailings.

        - The tailings, 13.3 metric tons, containing 13,748 grams of gold and 22,959 grams of silver.
        - The super-concentrate, 1.5 metric tons, containing 77,903 grams of gold and 130,098 grams of silver.

    - The super-concentrate are then processed as follows:

        - An H_204 sulfation bath
        - Oven roasting
        - H_20 Quench
        - H_20 leaching of sulfates

    - The processed concentrates are in turn fired in a doré furnace.

        - 1,200 grams of gold and 2,004 grams of silver will be lost as gases.
        - 3,895 grams gold and 6,504 grams of silver will be retained in the doré slag.
        - 72,808 grams of gold and 121,589 grams of silver will be in doré form ready for shipment to a refinery.

    - An additional 24,991 grams of gold and 41,734 grams of silver will be recovered by processing the magnetic concentrates, tailings, and slag generated by processing the rougher concentrates and the sulfur filter cake and rutile filter cake (waste tailings) generated from the sulfur and rutile recovery sections of the process and recovery circuit.

- ✦ This recovery is obtained by H_2S04 and NaCN leaching of the waste tailings, with the NaCN leach, containing 31,239 grams of gold and 52,168 grams of silver, being filtered through a Merrill Crowe Zinc Precipitator, which at 80% recovery, recovers 24,991 grams of gold and 41,734 grams of silver in doré form.
- ✦ For each 25,000 metric tons of head ore processed a total of 97,808 grams of gold and 163,339 grams of silver is recovered to the doré state.

Titanium (Ti02) Recovery

✦ Tailings totaling 20,951 metric tons from the primary, secondary, and tertiary flotation sub-circuits in the sulfur recovery operation will be the primary feed stock for the titanium plant.
✦ Using tails as feed stock in the titanium recovery process is of economic benefit for the following reasons.

- ✦ With the extraction of sulfur, the titanium grade of the ore increases about 18% from 2.7% to 3.2% by volume.
- ✦ Pulp from the sulfur flotation operation will be classified with about 45% of the feed stock already being a minus 200 mesh thereby requiring only about 55% of the feed stock to be run through a SAG mill for reduction to a minus 200 mesh.

✦ The minus 200 mesh feed stock is processed through a complex gravity concentration circuit beginning with a rougher gravity concentration station.
✦ The gravity concentration system is designed to give the feed stock (pulp) several passes through large capacity spiral concentrators, especially the different middles and rougher tailings.
✦ A final gravity concentrate of 1,036 metric tons containing 55% Ti02, is produced in the spiral concentrators.
✦ This concentrate is then further processed through a series of flotation concentration stations generating 693 metric tons of concentrates containing 74% Ti02.
✦ This super-concentrate is passed through a magnetic separation station splitting the super concentrate as follows.

- ✦ Non-magnetic concentrate of 513 metric tons at 95% purity.
- ✦ Magnetic concentrates of 188 metric tons containing 14% Ti02.

✦ The 513 metric tons of 95% pure Ti02 reports to a pigment station where it is subjected to a acid (H_2S04) digestion.
✦ The resultant precipitate is then roasted producing 445 metric tons of 98.7% pure Ti02.
✦ Of the 445 metric tons of the 98.7% pure Ti02,

- ✦ 55 metic tons will be sent to the Ti sponge plant, and
- ✦ the balance 390 metic tons is sold as a finished product (Ti02).

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- The tailings from the initial rougher gravity concentration station are subjected to secondary gravimetric concentration then run through a sulfuric acid leach and fresh water rinse resulting in 1,463 metric tons of 98.7% pure Ti02 recovered for further processing to silicon metal.
- The final tails generated, amounting to 18,415 metric tons per day, are stockpiled as an inert material with no residual economic value.

Titanium Sponge (Ti) Manufacture

- A portion of the Ti02 concentrate or final pigment (in prill form) will be sent to the chlorination plant for use in the manufacture of titanium sponge (Ti).
- Total daily feed to this plant for the production of Ti is 55 metric tons of Ti02 at 98.7% purity.
- The steps for manufacturing titanium sponge are as follows.

    - The Ti02 is combined with a like amount of coke and cooked at 990^{C} producing 100 metric tons of TiC14.
    - The 100 metric tons of TiC14 is in turn is subjected to a Na process at 1040^{C} which results in 24 metric tons of Ti being formed.
    - The 24 metric tons of Ti is then crushed and given a dilute acid leach bath.
    - Next the crushed and washed Ti is compacted and alloyed.
    - In the finial steps the compacted and alloyed Ti is melted in a vacuum arc chamber and then cast into ingot form.

- The daily output of this operation is 23 metic tons of titanium sponge at 99.8& purity.
- The titanium sponge will be sold into the export market.

Silicon Metal & High Purity Silicon Manufacture

- The 1,463 metric tons of high purity Si02 tailings (98.7% Si02) which is produced daily by the sulfur recovery operation will be used as feed stock for the production of silicon metal.
- On a daily basis 1,463 metric tons of high purity Si02 tailings is mixed with 400 metric tons of coke.
- Then the resulting blend is burned off in a furnace and the molten material cast into pellets.
- These pellets are in turn crushed and sized.
- The end product in this operation is 605 metric tons daily of 98.5% pure silicon metal.

    - Of this amount, 575 metric tons will be sold into the export market.
    - The balance, 30 metric tons, will be converted, in a series of beneficiation and reduction processes, into 13 metric tons of high purity (99.85%) electronics grade silicon for sale in the export market.

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MINING PLAN

- The mine plan for the Piedra Amarilla properties ore body has been developed by Parsons with significant input from INTEC-Chile.
- The mine plan takes into consideration the following.

    - The characteristics of the ore body.
    - The results of the metallurgical studies.
    - Market conditions relating to the various minerals and metals present and available for extraction.
    - The general climatological, topographic and geological conditions of the area.

- The mining plan calls for extraction of 25,000 metric tons per day of ore to feed the mill at a rate of 22,500 tons per day (90% operating efficiency).
- The surplus ore, 2,500 metric tons per day will be stockpiled.
- Mining operations are scheduled for 330 days per year with a planned shutdown of 35 days during the June-July period for scheduled maintenance of ore extraction and transport machinery.
- Therefore, during the planned shutdown of the mine the mill will utilize the stockpiled ore.
- Parsons identified two pit areas to be developed into open pit mines for initial ore extraction.
- Identified as the Parsons North and South Pits, these encompass sections 1 and 3 of the identified mining reserves on the Piedra Amarilla properties.
- It should be noted that in its original study, Parsons used a sulfur cut-off grade of 20% for determining initial pit parameters.
- With the addition of titanium and gold minerals recovery to the ore processing circuit, no cut-off grade is being used as the sulfur is now being recovered as a byproduct.
- Parsons original plan called for equal extraction from each of the two pits and blending of the ore prior to beneficiation in order to achieve grade uniformity.
- To expand the ore available for blending a third pit will be developed in section 2.
- Each of the pits could then contribute a minimum of 8,333 metric tons per day in order to achieve the 25,000 metric tons per day goal.
- Blending of the ore would probably best be done following initial ore crushing and milling, and after flash flotation for primary removal of sulfur concentrates.
- Actual extraction of ore may be subcontracted out to reputable Chilean mining contractors, which would save substantial money in initial capital outlays for ore extraction equipment.
- Ore reduction will probably take place at or near the Pits.
- Primary jaw crushers and secondary rock-to-rock crushers appear to be the most economic choice.
- Ore reduction equipment at each pit will have surplus production capacity so that ore reduction equipment at two of the pits can compensate should a shut down occur at the third pit.
- Pre-stripping and stripping requirements for the identified ore body are minimal.

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✦ In the pre-feasibility study Parsons estimated an overall stripping ratio of waste-rock to ore of 1:7.
✦ Mining activities will begin at the top of the volcanic domes, eventually working downward and outward.

PROJECT ECONOMICS

Project Economic Assumptions

✦ Parsons designed a turn key mining, and minerals recovery and manufacturing operation rated at 25,000 metric tons per day rate.
✦ Parsons also assumed the ore body being sufficient in size and recoverable minerals content to support a 25,000 metric ton a day, 330 day a year operation for a minium of 15 years.
✦ The mining plan and recovery operation advanced by Parsons is predicated on the 174 million metric tons of indicated and inferred ore reserves containing the following:

Mineral	Grade	Net Reserves	Unit Value	Reserve Value
✦ Titanium	3,20%	3,602,000 m/t	$ 2,398.00	$ 8,637,596,000
✦ Sulfur	12.58%	12,692,000 m/t	$ 105.00	$ 1,332,660,000
✦ Gold	4.50 g/t	552,117,000 gms	$ 12.00	$ 6,625,404,000
✦ Silver	7.50 g/t	869,400,000 gms	$ 0.17	$ 147,798,000
✦ Celestine	0.63%	710,000 m/t	$ 78.00	$ 55,380,000
✦ Selenium	30.54 g/t	3,126 m/t	$ 10,758.00	$ 33,629,508
✦ Tellurium	6.91 g/t	707 m/t	$ 550,000.00	$ 388,850,000
✦ Kaolinite	2.20 g/t	2,219,000 m/t	$ 128.00	$ 284,032,000
✦ Silica	72.5%	126,125,000 m/t	$ 25.00	$ 3,153,125,000
				$ 20,658,474,508

✦ Parsons turn key mining, and minerals recovery and manufacturing operation design further assumes a recovered and manufactured products stream as follows.

Mineral	Final Production	% Recovery	Daily Production	Internal Usage	Net Daily Production
✦ Ti02	Pigment	68%	445 m/t	55 m/t	390 m/t
	Ti Sponge	95%	23 m/t	-0-	23 m/t
✦ Sulfur	Prills 99.8%	93%	3,511 m/t	330 m/t	3,181 m/t
	$S_2 04$	99%	1,000 m/t	650 m/t	350 m/t
✦ Silica	Silicon Metal	8%	605 m/t	30 m/t	575 m/t
	Silicon (99.8%)	n/a	13 m/t	n/a	13 m/t
✦ Gold	Doré	80%	6,386 gms	n/a	6,386 gms
✦ Silver	Doré	70%	122,109 gms	n/a	122,109 gms

✦ It should be noted that while Parsons used a head ore concentration factor of 4.5 grams of gold in the telluride form and 7.5 grams of silver in the telluride form in its reserve calculation, it used the head ore concentration of .33 grams of gold and 4.8 grams of silver in their free (elemental) form in its annual recovery (above) and revenue projections (below).

✦ The Parsons plan calls for annual revenues of one billion dollars generated as shown below.

Product	Net Annual Production	Price Per Unit	Annual Revenues
✦ Ti02 Pigment	140,400 m/t	$ 2,310.00	$ 324,324,000
✦ Ti Sponge Metal	8,280 m/t	$ 13,200.00	$ 109,296,000
	Total Revenues Titanium Products:		**$ 433,620,000**
✦ Sulfur Prilled	1,145,160 m/t	$ 105.00	$ 120,241,800
✦ Sulfuric Acid	180,000 m/t	$ 42.00	$ 7,560,000
	Total Revenues Sulfur Products:		**$ 127,801,800**
✦ Silicon Metal (98.5%)	207,000 m/t	$ 1,650.00	$ 341,550,000
✦ Silicon Metal (99.8%)	4,680 m/t	$ 15,400.00	$ 72,072,000
	Total Revenues Silicon Products:		**$ 413,622,000**
✦ Gold	2,298,960 gms	$ 11.930	$ 27,426,593
✦ Silver	43,959,240 gms	$ 0.142	$ 6,242,212
	Total Revenues Precious Metals:		**$ 33,668,805**
	Total Annual Revenues:		**$ 1,008,712,605**

Capital Development Costs

✦ Capital costs for this turn-key mining and recovery operation (including transport port up-grading) is projected, by Parsons, at $582 million dollars, expended over a two year period.

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✦ A summary of the capital costs for the Parsons plan (to the base of 1000) is as follows.

Category	Major Equipment	Bulk Material	Labor & Indirect	All Other	Total
✦ Mine	$ 15,118	$ 0	$ 0	$ 3,903	$ 19,021
✦ Crush & Convey	$ 15,358	$ 19,484	$ 8,348	$ 10,590	$ 53,780
✦ Grinding	$ 6,717	$ 6,873	$ 2,947	$ 3,178	$ 19,715
✦ Flotation-Drying	$ 12,980	$ 12,964	$ 5,558	$ 6,003	$ 37,505
✦ Acid Product/Recvry	$ 37,420	$ 22,350	$ 9,615	$ 16,130	$ 85,515
✦Melt/Form/Cast/Flter	$ 46,831	$ 49,491	$ 21,210	$ 13,089	$ 130,621
✦ Water Supply	$ 1,389	$ 4,260	$ 1,841	$ 16,339	$ 23,829
✦ Tails Dam/Reclm	$ 1,605	$ 2,241	$ 962	$ 10,956	$ 15,764
✦ Power Supply	$ 540	$ 575	$ 245	$ 42,560	$ 43,920
✦ Auxiliary Facilities	$ 503	$ 293	$ 127	$ 13,915	$ 14,838
✦ Rail Road	$ 6,800	$ 1,560	$ 8,727	$ 44,230	$ 61,317
✦ Port	$ 1,159	$ 1,635	$ 703	$ 1,698	$ 5,195
✦ Engineering	$ 0	$ 0	$ 0	$ 18,000	$ 18,000
✦Sub Total	**$ 146,420**	**$ 121,726**	**$ 60,283**	**$ 200,591**	**$ 529,020**
✦Contingency 10%	$ 14,642	$ 12,173	$ 6,028	$ 20,059	$ 52,902
✦Grand Total	**$ 161,062**	**$ 133,899**	**$ 66,311**	**$ 220,650**	**$ 581,922**

Annual Operating Costs

✦ The Parsons plan anticipates annual operating costs for the operation, when running at capacity, to be as follows.

✦	**Labor**	
a)	1300 workers @ $1,800/ monthly @ 12 months	$ 28,080,000
b)	150 supervisors @ $3,000/ monthly @ 12 months	$ 5,400,000
c)	50 managers @ $8,000/ monthly @ 12 months	$ 4,800,000
d)	Contract labor @ 35% of a-b-c above	$ 13,398,000
e)	Contract mining @ $1.35 p/m/t @ 9,000,000 m/t yearly	$ 11,700,000
f)	Contract services, engineering, drilling, etc	$ 2,000,000
g)	Medical, travel, etc. @ 10% of a → f. above	$ 6,538,000
	Sub Total Labor:	**$71,916,000**

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Consumables & Maintenance

a)	Fuel @ 400,000 m/t @ $475 p/m/t	$	190,000,000
b)	Carbon coke @ 150,000 m/t @ $120 p/m/t	$	18,000,000
c)	Autogenous Grinding Media @ 90,000 m/t @ $50 m/t	$	4,500,000
d)	Chemical reagents @ 85,000 m/t @ $50 m/t	$	15,300,000
e)	Steel @ 4,000 m/t @ $1000 m/t	$	4,000,000
f)	Special clothing, boots, gloves, etc.	$	1,950,000
g)	Camp services, food, laundry, transport, etc.	$	13,050,000
h)	Plant & process maintenance @ $0.75 ton processed ore	$	6,750,000
I)	Rolling stock maintenance @ $0.25 ton processed ore	$	2,250,000
j)	Port related costs @ $0.56 ton processed ore	$	5,000,000
	Sub Total Consumables & Maintenance:	**$**	**260,800,000**

✦ **Contingencies**

a)	0.075% of total operating costs	**$**	**24,953,700**

✦ **Administration & corporate overhead**

a)	Chilean office 1% of total operating costs & contingencies	$	3,576,000
b)	U.S. office 1% of total operating costs & contingencies	$	3,576,000
c)	Legal, accounting, insurance 3% of operational costs	$	10,730,000
	Sub Total Administration & Corporate Overhead:	**$**	**17,882,000**

Grand Total Annual Operational Costs: **$** **375,551,700**

Economic Evaluation

✦ Based on the below listed considerations and factors;

- ✦ the volume of the ore body,
- ✦ the amount and types of recoverable minerals in the ore body,
- ✦ the recovering and manufacturing processes to be used, and,
- ✦ 1988 market prices for the recovered and manufactured minerals and products,

- following then is an accurate overview of the Piedra Amarilla mining, and minerals recovery and manufacturing project.

✦ Total project capital cost	$581,922,000
✦ Mine life	15 years
✦ Annual operating days	360 days
✦ Daily production	25,000 m/t
✦ Extraction value per m/t of ore	$112.29
✦ Operating cost per m/t of ore	$ 41.73

✦ Pegging operating costs per metric ton of ore at $41.73 and the extraction value of the minerals and products at $112.29 leaves $70.56 a metric ton of ore processed operating income.
✦ The Parsons simplified economic evaluation model (see below) for the Piedra Amarilla mining, and recovery and manufacturing operation assumes full production in year three and level production there after for a period of 12 years.
✦ Parsons made several key assumptions in developing the following economic evaluation scenario (see below) which projects cash available for distribution.
✦ These key assumptions are as follows.

- ✦ A two year build-out with full production beginning in year three.
- ✦ Accelerated depreciation with $382,323,000 written off in year one, $79,142,000 written off in year two, $68,085,000 written off in year three, $14,354,000 written off in years four, five and six, and the balance, $9,310,000 written off over years seven and eight.
- ✦ Sources of funds.
  - ✦ Equity infusion of $174,577,000 (30% of cash required).
  - ✦ An Export Credit Loan of $247,316,000 (42.5% of cash required), nine year repayment schedule, interest only until production begins (level payment and amortization).
  - ✦ Preferred debt loan of $160,029,000 (27.5% of cash required), ten year repayment, interest only until production begins (level payment and amortization).

✦ Following then is Parson's income model (to the base of 1000) which shows year three revenues of $1 billion plus and $496,493,000 cash for distribution after adding back depreciation of $382,323,000 and a loss carry forward of $23,868,000.
✦ Cumulative 13 year revenues are $13.138 billion generating cash for distribution of $4.867 billion.

Category	Yr 3	Yrs 4-7	Yrs 8-11	Yrs 12-15	Total
Revenues	$ 1,010,648	$ 4,042,592	$ 4,042,592	$ 4,042,592	$ 13,138,424
Opr. Expenses	$ 375,553	$ 1,502,212	$ 1,502,212	$ 1,502,212	$ 4,882,189
Opr. Income	$ 635,095	$ 2,540,380	$ 2,540,380	$ 2,540,380	$ 8,256,235
Interest Expense	$ 40,671	$ 131,602	$ 64,846	$ 2,526	$ 239,645
Depreciation	$ 382,323	$ 175,935	$ 23,664	$ 0	$ 581,922
Loss/Carry Fwrd	$ 23,868	$ 0	$ 0	$ 0	$ 23,868
Taxable Income	$ 188,233	$ 2,232,843	$ 2,451,870	$ 2,537,854	$ 7,410,800
Tax @ 37%	$ 69,646	$ 826,152	$ 907,192	$ 939,006	$ 2,741,996
Principal Pymt	$ 28,285	$ 144,222	$ 210,788	$ 24,090	$ 407,385
Equity	$ 0	$ 0	$ 0	$ 0	$ 0
Deprec. Add Bak	$ 382,323	$ 175,935	$ 23,664	$ 0	$ 581,922
Loss Add Back	$ 23,868	$ 0	$ 0	$ 0	$ 23,868
Cash For Distr.	$ 496,493	$ 1,438,404	$ 1,357,554	$ 1,574,758	$ 4,867,209

C.S.I. Ag PLAN OF ACTION

Plan Of Action Overview

✦ C.S.I. Ag has, based on the above information and conclusions, committed to building a mining company which in five years will generate $1 billion a year in revenues and yielding annual operating income of $635,095,000 (63% of revenue).
✦ Funding for this undertaking will come in the form of equity and debt capital obtained from both private and public sources.
✦ To meet its objective of a billion dollar a year company in five years, C.S.I. Ag will enter into joint venture and strategic partner relationships if and when required.
✦ C.S.I. Ag's action plan is divided into three stages with each succeeding stage predicated on the results of the previous stage.

- ✦ The first stage requires a $1,000,000 infusion of capital and will result in a limited mining and recovery operation being funded.
- ✦ The second stage requires a $9,000,000 cash infusion of capital and will result in a producing, profitable limited mining and recovery operation and a full blown mining and recovery operation funded.
- ✦ The third stage will require a $582,000,000 cash infusion and will result in a producing, profitable full blown mining, and recovery and manufacturing operation like or similar to the one described in the Parsons study.

Stage One-Mobilization

✦ Stage One will last six months.
✦ Funding required for this stage is $1,000,000.
✦ The following will be accomplished during this six month period with the expenditure of $1,000,000.

- ✦ A fully supported and documented five year business plan will be drawn up.
- ✦ Sufficient additional exploration and assay work will be completed on the mining properties to;
  - ✦ significantly increase the volume of the ore body and the recoverable reserves.
  - ✦ re-catagorize a majority of the inferred and indicated reserves to measured reserves thereby increasing the asset value of the reserves.
- ✦ All required permitting and authorization work completed with Chilean government agencies for Stage Two activities and operations.
- ✦ The Stage Two limited production mining plan and processing facilities will be designed and engineered.
- ✦ All major agreements in place for constructing and bringing operational Stage Two mining and limited production facilities.

- ✦ All operating sub-contractors to be used in Stage Two retained.
- ✦ Letters of intent and purchase orders in place for the sale of Stage Two production output to credit worthy users or purveyors.
- ✦ Key corporate and operations people needed for Phase Two identified, recruited, and retained.
- ✦ Legal, accounting, banking and other professional service groups retained.
- ✦ The $9,000,000 required to bring the limited production undertaking operational and profitable in-hand.

Stage Two-Limited Production

- ✦ Stage Two will span a period of five years beginning upon successful completion of Stage One.
- ✦ It should be noted that based on the full production operation (25,000 metric tons per day) becoming operational, the limited production plant will be taken off-line and used for evaluating ore and testing minerals recovery processes. Any outstanding debt and cash short-fall make up required to support this facility will be underwritten by the full blown operation.
- ✦ The mining, recovery and manufacturing assumptions used to work up the preliminary study which serves as the basis for Stage Two operations were taken from the Parsons report and from information developed by INTEC-Chile.
- ✦ Total capital required from outside sources, based on this preliminary study, is $9,000,000.
- ✦ The $9,000,000 will be expended for build-out and start-up costs as well as working capital until the operation is supported by its own cash flow.
- ✦ The $9,000,000 will be expended, by category, as follows.

✦ $ 3,160,000	Working Capital
✦ $ 600,000	Infrastructure Improvements
✦ $ 2,800,000	Ore & Mineral Processing Equipment
✦ $ 1,835,000	Refining Equipment & Systems
✦ $ 325,000	Buildings & Facilities
✦ $ 280,000	Vehicles & Forklifts
$9,000,000	

- ✦ Based on processing 190,080 metric tons of ore annually (operational capacity) and recovering the primary minerals contained in the ore, annual operating costs, at full production, are pegged at $7,176,000.
- ✦ The $ 7,176,000 will be expended, by category, as follows.

✦ $ 1,016,000	Wages & Salaries
✦ $ 1,589,000	Contractual Services (including ore extraction)
✦ $ 1,015,000	Consumables
✦ $ 2,670,000	Mining and Processing costs not otherwise covered
✦ $ 886,000	GS&A
$ 7,176,000	

✦ Stage Two annual revenues, when operating at full production, are projected at $13,068,000.
✦ The $13,068,000 will be generated, by category, as follows.

✦ $ 1,581,465	4,560 Troy ounces of Gold at $385.00 per Troy ounce
✦ $ 292,723	60,819 Troy ounces of Silver at $5.35 per Troy ounce
✦ $ 536,025	855 metric tons of Rutile Concentrates at $626.93 per metric ton.
✦ $ 7,669,728	3,699.3 metic tons of Titanium (Ti02) at $2,073.30 per metric ton.
✦ $ 1,146,182	12,177 metric tons of Sulfur at $94.13 per metric ton
✦ $ 321,235	6,660 metric tons of Kaolin at $48.23 per metric ton
✦ $ 1,520,640	26,400 metric tons of Silica Sand at $57.60 per metric ton
$13,068,000	

✦ Based on below listed considerations and factors -

- ✦ the volume of the ore body,
- ✦ the amount and types of recoverable minerals in the ore body,
- ✦ the recovering and manufacturing processes to be used, and,
- ✦ 1994 market prices for the recovered and manufactured minerals and products.

- following then is an accurate overview of the Piedra Amarilla limited production operation.

✦ Total project capital cost	$ 9,000,000
✦ Annual operating days	330 days
✦ Daily production	576 m/t
✦ Extraction value per m/t of ore	$ 68.75
✦ Operating cost per m/t of ore	$ 37.75

✦ Pegging operating costs per metric ton of ore at $37.75 and the extraction value of the minerals and products at $68.75 of ore processed generates $31.00 a metric ton of ore processed operating income.
✦ The simplified economic evaluation model (see below) for the limited production operation assumes full production in year two and level production there-after for a period of 12 years.
✦ Several key assumptions were made in developing the following economic evaluation scenario (see below) which projects cash available for distribution.
✦ These key assumptions are as follows.

- ✦ A one year build-out with full production beginning in year two.
- ✦ A five year straight line deprecation schedule.
- ✦ Sources of funds anticipated are loans,
  - ✦ totaling 100% of the outside cash infusion needed,
  - ✦ bearing interest at the rate of 10% per annum on the outstanding balance,
  - ✦ year one interest only, and,
  - ✦ a five year payback starting in the first year of production.

✦ It should be noted that 100% debt financing is not a feasible approach to funding Stage Two.
✦ Following then is a simplified economic evaluation model (to the base of a 1000) for Stage Two which shows year two revenues of $13,068,000 and $1,789,000 cash for distribution after adding back depreciation of $1,200,000.
✦ Cumulative five years of operating revenues are $65,340,000 generating cash for distribution of $10,079,000.

Category	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Total
Revenues	$ 13,068	$ 13,068	$ 13,068	$ 13,068	$ 13,068	$ 65,340
Opr. Expenses	$ 7,176	$ 7,176	$ 7,176	$ 7,176	$ 7,176	$ 35,880
Opr. Income	$ 5,892	$ 5,892	$ 5,892	$ 5,892	$ 5,892	$ 29,460
Interest Expense	$ 900	$ 720	$ 540	$ 360	$ 180	$ 2,700
Depreciation	$ 1,200	$ 1,200	$ 1,200	$ 1,200	$ 1,200	$ 6,000
Loss/Carry Fwrd	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Taxable Income	$ 3,792	$ 3,972	$ 4,152	$ 4,332	$ 4,512	$ 20,760
Tax @37%	$ 1,403	$ 1,470	$ 1,536	$ 1,603	$ 1,669	$ 7,681
Principal Pymt	$ 1,800	$ 1,800	$ 1,800	$ 1,800	$ 1,800	$ 9,000
Equity	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Deprec. Add Bak	$ 1,200	$ 1,200	$ 1,200	$ 1,200	$ 1,200	$ 6,000
Loss Add Back	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Cash For Distr.	$ 1,789	$ 1,902	$ 2,016	$ 2,129	$ 2,243	$ 10,079

✦ In addition to going operational, as described above, all of the things to be done before Stage Three can begin will be undertaken and completed in Stage Two.
✦ The following will be accomplished during the first two years of Stage Two and will be funded from the cash flow from Stage Two production revenues.

✦ A fully supported and documented ten year business plan will be drawn up.
✦ Sufficient additional exploration and assay work will be competed on the mining properties to accomplish;

✦ significantly increase the volume of the ore body and the recoverable reserves
✦ re-catagorize a majority of the inferred and indicated reserves to measured reserves thereby increasing the asset value of the reserves.

✦ All required permitting and authorization work completed with Chilean government agencies for Stage Three activities and operations.
✦ Full blown production mining plan, and processing and manufacturing facilities (25,000 metric tons per day) designed and engineered based on the experience and findings in Stage Two and current world market conditions for the minerals and products being recovered and manufactured.
✦ All major agreements in place for constructing and bringing operational the 25,000 metric ton a day mining, and production and manufacturing facilities.
✦ All additional needed operating sub-contractors retained.

- ✦ Letters of intent and purchase orders in place for the sale of the production output from the 25,000 metric ton a day mining, and production and manufacturing facilities to credit worthy users or purveyors.
- ✦ Any additional key corporate and operations people needed for Phase Three start-up identified, recruited, and retained.
- ✦ Any additional or new legal, accounting, banking and other professional services groups required for Stage Three retained.
- ✦ The $582 million needed to bring operational and profitable the 25,000 metric ton a day mining, and production and manufacturing undertaking in-hand.

Stage Three-Full Blown Production

- ✦ C.S.I. Ag is committed to building a mining company which in five years will generate $1 billion a year in revenues and yield annual operating income of $635,095,000 (63% of revenue).
- ✦ Current projections suggest Stage Three will cost about one-half of a billion dollars.
- ✦ This Stage will be undertaken based on the experience and findings in Stage Two and current world market conditions for the minerals and products being recovered and manufactured.
- ✦ In view of this no further comment will be made in this writing relating to Stage Three matters.

ENTITIES & PERSONS INVOLVED IN PROPERTIES DEVELOPMENT

Background

- ✦ Since the mid-1980's several million in cash and cash equivalents has been expended to prove up the Piedra Amarilla properties as a world class ore body, and an economically viable mining, and minerals recovery and manufacturing opportunity.
- ✦ These monies have been spent to prove up the size of the ore body, the various minerals -- including their form and concentration-- in the ore body, and develop an economically viable approach to recovering the minerals.
- ✦ The entities and certain key persons involved in these endeavors includes but is not limited to the Chilean government through CORFO and INTEC-Chile, The Parsons Group, Carlos E. Ulriksen, Bernard G. Long, and Karl F. Meyers.

Entities

CORFO

- ✦ CORFO is the Chilean Economic Development Agency created in 1939 to stimulate Chile's production activities.
- ✦ CORFO has offices in each of Chile's 13 Regions, including Region Three where the Piedra Amarilla properties are located.
- ✦ CORFO carries out its mission by assisting the development of companies in Chile through contributions in the areas of technological development, financing, technical assistance and management consulting.

- Currently CORFO is in charge of 24 State owned companies operating in such diverse areas as sanitation, electrical power generation and transmission, transportation, mining, technology research, and one agency that helps small and medium size companies.
- CORFO twice selected the Piedra Amarilla properties as the most significant ore body in Chile meriting further evaluation.
- CORFO decision resulted in two grants of $60,000 each being awarded for work on the Piedra Amarilla properties.

    - The first award was given in 1989 for the sulfur potential of the Properties.
    - The second award was given in 1990 for the titanium potential of the Properties.

INTEC-Chile

- INTEC-Chile is a non-profit Corporation created by the Chilean Economic Development Agency, CORFO, in 1968.
- It was commissioned to make accessible to the technological and management information businesses operating in Chile will require to reach a world-class competitiveness level.
- As of 1995 INTEC-Chile has concentrated its activities in four divisions.
- These divisions and the primary function of each is as follows.

    - The Environmental Technologies Division, which helps insure all operations and activities in country are carried out in compliance with Chilean law, and assists in the analysis and selection of technological and economically sound procedures and processes for compliance purposes.
    - The Process Technologies Division, which assists companies in finding and implementing a combination of information technologies, electronics and instrumentation and the integration of these for;

        - productive, administrative, marketing and other process improvements, and to,
        - increase productivity, reduce costs, improve product quality, and foster flexible manufacturing.

    - The Organizational Management Technologies Division, acts as management support for the other Divisions and to companies doing business in Chile.
    - The Chemical Laboratories Division, acts as support for the other divisions and assist private sector companies in establishing and developing their own laboratory infrastructure and procedures, including space and facilities design, equipment selection, staff training, and implementation of new analytical techniques.

- INTEC-Chile also undertakes "matchmaking" programs in order to join up Chilean and American or Canadian companies with similar interests to discuss information and technology exchange possibilities as well as business opportunities.

The Parsons Group (Ralph M. Parsons Company)

- ✦ The Parsons Group is the world's second largest engineering-contractor group.
- ✦ Its 1995 billings were $1.045 billion and it employed over 10,000 people.
- ✦ The Parson Group is considered a premier source of consulting, design, engineering, construction , operations and program/project management service.
- ✦ Parson has a strong presence in Latin America and has a good working relationship with the Chilean government in general and specifically with CORFO and INTEC-Chile as well as the private business sector in Chile.
- ✦ Parsons Overseas Company (A member of the Parsons Group), headquartered in Pasadena, California undertook and completed the 1988 Pre-feasibility Study which serves as the basis for much of the information contained in this writing.
- ✦ Given the prominence of Parsons it its fields of endeavor no further comment regarding them will be made in this writing.
- ✦ If further information regarding Parsons fields of endeavor and expertise is sought Parsons Overseas Company can be contacted by phone at 818-440-2000 and by fax at 818-440-2630; and Parsons Latin America can be contracted by phone at 818-440-4402 and by fax at 818- 440-2966.

Persons

Senior Carlos E. Ulriksen

- ✦ Carlos E. Ulriksen, (55), a Chilean national, is currently employed by the Chilean government as the Director of National Mining Services.
- ✦ Carlos Ulriksen is considered an expert in interpreting the assay work done on the Piedra Amarilla properties.
- ✦ Senior Ulriksen has an extensive background in the field of geology.
- ✦ He received a MSci Equivalent-Geologist degree from the Universidad de Chile
- ✦ Senior Ulriksen has held the position of professor and taught photographic interpretation in the Geology Department of Universidad del Norte (Antofagasta) and ore microscopy at Universidad de Chile and Dalhausie University, Halifax, N.S. Canada.
- ✦ He has served as an economic geologist for the Chilean Instituto de Investidaciones Geolgicas, as the Deputy Director Geology Department and later the National Director of Servicio Nacional de Geologia y Mineria for Chile, and as the Senior Geologist for the Geological Survey of Chile.
- ✦ Senior Ulriksen has also worked as the Chief of Exploration and/or Chief Senior Geologist on several copper, gold and other minerals and metals projects, many in Northern Chile, for foreign governments and multinational private mining companies.

Bernard G. "Bud" Long

- ✦ Bud Long, 60, is a graduate mining engineer having received his Bachelor of Science Degree from the South Dakota School of Mines & Technology.
- ✦ Mr Long is a registered professional engineer in Nevada (#09516), and Texas (#39734), and is a registered geologist in California (#1769).

✦ Mr Long is currently the President of Long Engineering Company which does consulting engineering for gold and silver, talc, gypsum, limestone, and coal mining and recovery projects.
✦ His consulting company does claim surveying, exploratory drilling, project feasibility studies, process improvements, and environmental engineering.
✦ Mr Long has served as Vice President of Operations, Kaiser Coal Corporation; Vice President of Mining, Coastal States Energy Company, Shell Oil Company; and Director of Western Operations, Pfizer, Inc.
✦ During his work career Mr Long has directed capital and operating expenditures of in excess of $100 million a year.
✦ He has also had bottom line responsibility for the development and implementation of numerous cost saving and product improvement projects in the mining and minerals recovery industry.

Karl F. Meyers

✦ Karl Meyers, 68, is a mining and minerals consultant currently operating out of Las Vegas, Nevada.
✦ Mr Meyers attended Texas A&M University where he received Bachelor of Science Degrees in Agriculture, Military Science, and Preparatory Medicine. Mr Meyer also did graduate work in biochemistry at Texas A&M.
✦ Mr Meyers has been the president of or otherwise served in a senior management capacity for several uranium exploration and mining companies.
✦ He has designed, engineered and constructed several minerals recovery plants using floatation, gravimetric, and chemical recovery technologies both in the United States and Mexico.
✦ Mr Meyer was granted, as a co-developer, Siphon Gravity Classifier, U.S. Patent Number 4,961,842.
✦ Mr Meyer's patented process has several direct application in the minerals recovery from the Piedra Amarilla properties.

Other Entities and Persons

✦ C.S.I. Ag has established numerous additional contracts and relationships with entities and individuals which can and in many instances are already contributing to progressing the Piedara Amarilla Mining Properties undertaking.
✦ Who they are and what their contributions are or can be are known to and should be discussed with C.S.I. Ag senior management.

MARKETING & SALES

✦ As of this writing "work-up" information is being gathered for use in doing a detailed analysis of near and long term market conditions for all of the recoverable minerals and value added products that will be considered for recovery and manufacture by C.S.I. Ag.
✦ Markets for titanium, sulfur, and silica --in all forms-- gold and silver, celestine, selenium, tellurium, and kaolinite are being considered and evaluated.

✦ Evaluation includes, but is not limited to, uses, users, and usage; pricing history, current prices and anticipated pricing levels for the near and long term.
✦ A regional analysis of markets, including shipping cost sensitivity, will be undertaken for those minerals or value added products with which it is appropriate to do so.
✦ The market study will address the issue of direct sales verses selling through brokers and or purveyors or other "middle-men" on a product by product basis.
✦ It should be noted that some market exploration has already been undertaken by C.S.I. Ag with the following results.

- ✦ A major copper producer with substantial operations in Chile has expressed an interest in purchasing all of the sulfur produced off of the Properties for its use in copper refining, either for cash or kind (copper).
- ✦ An Asian syndicate has suggested an arrangement whereby in exchange for funding C.S.I. Ag's Piedra Amarilla mining program it would receive as a part of its consideration for funding the right to market all production from the operation.
- ✦ Another multi-national marketing group is in the process of making a take or pay proposal to C.S.I. Ag.

✦ Preliminary market information shows that both titanium and sulfur demand and pricing have fallen off slightly since the middle to late 1980's.
✦ However current market activity for both products has increased over the past year, a trend which is expected to continue through the turn of the century.
✦ This has resulted in a lessening of salable reserves and an upswing in prices.
✦ Gold and silver pricing has increased modestly since the late 1980's.
✦ On balance nothing has occurred or is forecast to occur in the minerals and value added products markets which will prevent C.S.I. Ag from meeting the volume of sales and margins shown in the Parsons study.
✦ To help insure these margins are met, C.S.I. Ag may have to adjust its recovery ratios to maximize profit in view of market conditions.

CONCLUSIONS

✦ C.S.I. Ag should promote the Piedra Amarilla Mining Properties to their full economic potential and has the right to do so.
✦ The reasons for this conclusion are as follows.

- ✦ C.S.I. Ag owns and holds the property and mineral rights on and for the Piedra Amarilla Mining Properties.
- ✦ The known mineral reserves on the Properties have an extraction value of in excess of $20 billion.
- ✦ Of the $20 billion in mineral reserves; $16.5 billion are in the form of titanium ($8,399,864,000), sulfur ($1,332,660,000), and gold ($6,625,404,000) and silver ($147,798,000).

✦ The technologies required to recover the minerals, and where advisable create value added products, (Ti titanium sponge and sulfuric acid) are all currently being used in the industry and have proven out as reliable, efficient, and cost effective.

✦ Ready markets exist for the minerals and value added products that can be recovered from or produced as a part of the recovery process.

✦ Given the contemplated costs for recovering the minerals and producing the value added products and the selling prices for the minerals and value added products, profits in the limited production stage (190,080 metric tons of ore processed annually) will be adequate (15%) and in the full blown production (9,000,000 metric tons of ore processed annually) substantial (35% of revenues).

✦ The entities and individuals which have progressed and proven the Piedra Amarilla properties potential as a world class mining operation are capable and credible; those being the Chilean government through CORFO and INTEC-Chile, The Parsons Group, Carlos E. Ulriksen, Bernard G. Long, and Karl F. Meyers.

NEXT STEP

✦ Based on all of the above C.S.I. Ag should undertake Stage One by first obtaining the $1,000,000 needed to fund it, and once funded, accomplish all that must be completed to allow Stage Two to go forward, including having the $9,000,000 funding requirement projected for Stage Two in hand.

Published: September 24, 1996
Revised: October 18, 1996

PROPERTY EVALUATION REPORT

on the

CONSTELACION 2 & 4 MINERAL CLAIMS
PIEDRA PARADA BASIN AREA
REGION III, CHILE

for

CAN-EX MINERALS CORPORATION

by

GEORGE P. KRUECKL, P. Eng.
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May 31, 1999

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SUMMARY

The CONSTELACION mineral claims are located, close to the border with Argentina, in the Northwestern corner of Chile's Region III. This is also the location of the now famous Maricunga gold belt in Chile's Region III. The claims have a mean elevation of 4,150 meters (13,600 feet) above sea level. The mining claims cover part of an enclosed drainage basin known as the Piedra Parada Salar, and cover a total area of 600 hectares (1,500 acres). The basin drains an area covering 500 square kilometers (200 square miles) of land. Water inflows are as local runoff and from thermal springs that enter the Salar at the margins and from the area underneath the Salar basin. The Salar basin has layers of mineral salts (gypsum, anhydride . . . etc.) that are also inter bedded with siltstone, sandstone and iron minerals in varying thicknesses. About 90 to 95% of the water that flows into the Salar are from thermal spring waters. The thermal springs, on ground surface, enter the Salar from about a dozen different points. Thermal springs also enter the Salar from below from the Salar basin. According to Ulriksen, Wilkins and Shattwell, these thermal springs are remnants of an older geothermal system.

Water entering the Salar, especially the thermal waters, have leached minerals from the local volcanic formations, near surface and at depth. Thermal waters carry large amounts of sulfates, chlorides and other salts into the Salar. The thermal waters charged with chlorides and sulfides have leached precious metals (gold, silver . . . etc.) and other base metals such as lead, zinc, titanium, strontium and so on. Anciently, the geothermal system provided a much more abundant supply of minerals from the boiling level of the upper magma chamber. This geothermal system was probably responsible for the deep alteration zones on the surrounding hills. Evidence for this is in the color anomalies present in the composite aerial photo shown in Figure 4.

As the geothermal system became less active, the water inflow into the Salar also diminished, causing the briny mineral solutions to decant into horizontal beds because of water evaporation. This mineral resource was uplifted in the eastern portion of the Salar due to local block-faulting. According to Ulriksen, this mineral resource consists of layered beds whose main component is inter bedded gypsum. Gypsum is inter bedded, in varying thicknesses, with siltstone, sandstone and iron minerals.

Evidence from sampling carried out by Ulriksen, Gardner, Wilkins, Shattwell and K&A suggests that the mineral resource is real and therefore requires further investigations. Auger samples were taken by Gardner at the western and southern margin of the Salar. The assay results for these samples show that the mineralization occurs in areas other than the Pillar region of the basin. In addition, considering the extent of alteration resulting from the geothermal system in the area, it is very likely the Salar basin has precious and other metals throughout. At this time however, we do not have information on the intensity and extent of this mineralization.

Economic minerals are primarily gold and silver. Mr. M. Sierakoski (metallurgist) of Tucson, Arizona, USA, investigated the potential for precious metal recovery for the suite of minerals contained in the Piedra Parada Basin. These investigations are currently ongoing and have given

encouraging results for the recovery of precious metals. Possible by-products include titanium, strontium, and a wide suite of salt bearing minerals.

Much of the mineralization within the Salar is understood by studying the geology of the formations surrounding the Salar. These formations mark the boundary for the drainage basin. A large portion of the data is from the adjacent Piedra Amarilla properties, located a few kilometers to the east and northeast. These mineral properties are visible in aerial photographs, and are composed of the light-yellowish hydrothermally altered areas in the upper right hand portion of the aerial photo (Figure 4). In 1988, the R.M. Parsons company of Pasadena did a preliminary feasibility study on these properties for sulfur recovery. In 1989 and 1990 CORFO did a series of studies for both sulfur and titanium dioxide recovery.

Precious metals are associated with all of the different mineral and detrital formations in the Salar, which currently have been sampled to a maximum depth of some 25 meters. Certain formations, such as those associated with iron mineralization carry more precious metals then the other formations. Recoveries of the precious metals in the samples suggest an average value of 3 grams gold per metric ton, for portions of the Salar having the potential for ore reserves.

Should only the CONSTELACION 2 and 4 **"CON 2 & 4"** be considered for production potential, the detailed drilling program will expose some 30 to 50 million metric tons of mineral resource, assuming an average depth to the bottom of the Salar for each drill hole is 25 meters. At this point however, the ore to waste stripping ratio for this mineral resource is not known. Current information suggests a stripping ratio of about 1:1.

The next phase of work (called Phase I) will involve a two part drilling program. The first part of the program is exploratory drilling to locate a site for the second part, involving detailed drilling for ore reserves. The second part of the Phase I program would outline some ten years ore reserves, assuming a production level of 3,000 metric tons per day for 350 days per year. An exploratory drilling program involving both auger and core drilling is recommended for the first part of Phase I. Exploration drilling will be carried out at a spacing of 500 meters, for a total footage of 660 meters. The detailed drilling for ore reserves will be carried out at a spacing of 200 meters, for a total footage of 750 meters.

This effort would provide sufficient mineralogical information on the mining potential of this resource so that a preliminary feasibility study can be undertaken. Further, the Phase I work programs should include collecting all relevant other information on environment and mining infrastructure at the Piedra Parada Basin site required for the Preliminary Mine Feasibility Study. The study would consider all those items normally considered in arriving at total project capital and operating costs.

PREAMBLE

CAN-EX Minerals Corp. a Nevada corporation has contracted Krueckl & Associates Mining Consultants Ltd. **"K&A"**, of Vancouver, British Columbia, Canada to carry out a preliminary property evaluation on the mineral properties called the CON 2 & 4, located in Chile's Region III. K&A's mandate is to give an independent opinion on the economic value of the CON 2 & 4 mineral claims.

In this regard, K&A sent a representative, George P. Krueckl, P. Eng., to the city of El Salvador, Chile, to carry out the evaluation of the CON 2 & 4 mineral claims. El Salvador is some 122 kilometers, 76 miles by road, west of the mineral claim. El Salvador was the site that had motel accommodations from which K&A, and accompanying parties, would travel daily to carry out the property evaluation.

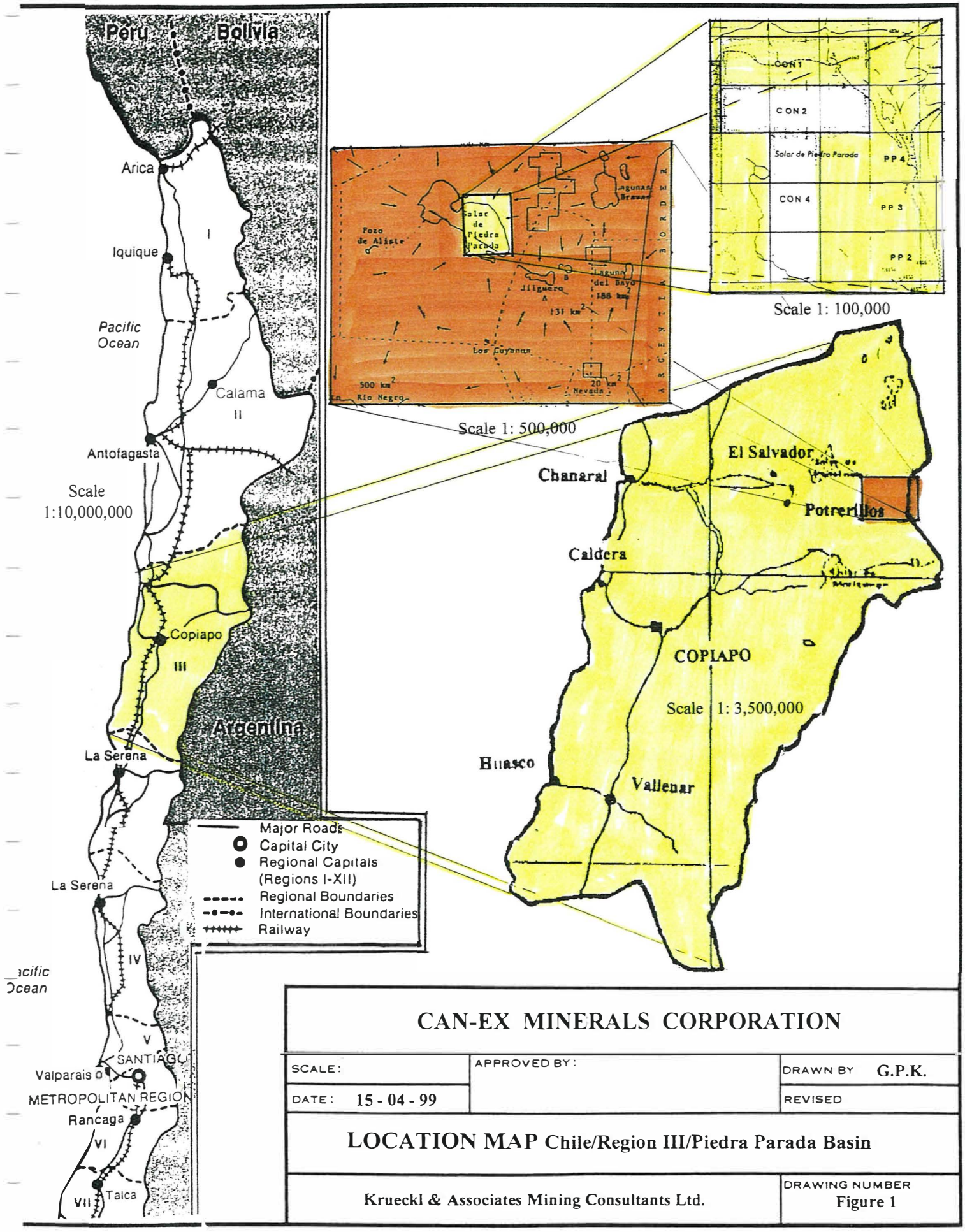
Garth Johnson and Harold Gardner, mineral prospectors, provided transportation to the mineral claims. They accompanied K&A to the claims to show the site and provide assistance as required. They also provided all oral and written information on the mineral claims and surrounding area. These included current maps, geological reports and information on previous investigations carried out on the mineral showing of the claims and adjacent areas.

PROPERTY LOCATION & DESCRIPTION

Chile is divided politically into 13 regions, including the Metropolitan Region of Santiago, which is not numbered like the other 12 regions. Region I is at the northern border with Peru and the other regions follow in sequence to Region XII at the southern end. Further, each region has a capital as shown in Figure 1. This report deals largely with Region III, whose capital is Copiapo, as outlined in the boxed area of Figure 1.

Region III is mainly a mining region, and produced almost two billion dollars' worth of exported mineral products per year. Many of the world's largest mining companies have operations or exploration offices located in the Region. Mineral production in order of importance includes copper, silver, gold, iron ore, cement . . . etc. Copiapo, the Region's capital, is a major industrialized city, with a metropolitan population of 140,000 inhabitants. Copiapo has a full selection of industrial shops and services that cater to the mining industry, and modern banks, office buildings, hotels, restaurants, and grocery stores to meet individual and family needs. Daily air service to Santiago is provided from three different airlines on Boeing 737 jets. Communications include cell phone service, internet, E-mail, cable and satellite television, and several long distance phone carriers.

Region III is located in the Atacama desert, which begins in southern Peru and ends in the northern portion of Region III. While the northern portion of Region III is generally lacking most plant-life, the southern portion of the Region is reminiscent of the U.S.A. southwest deserts. The Region covers a total of more than 75,000 square kilometers (30,000 square miles).



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DATE: 15 - 04 - 99		REVISED

LOCATION MAP Chile/Region III/Piedra Parada Basin

Krueckl & Associates Mining Consultants Ltd.	DRAWING NUMBER Figure 1

The CONSTELACION mineral claims are located close to the border with Argentina in the Northwestern corner of Chile's Region III. This area is now the famous Maricunga gold belt in Chile's Region III. Figure 1 illustrates the location of the mineral claims in relation to the Region's most important cities. The claims have a mean elevation of 4150 meters (13,600 feet) above sea level. Figure 2 shows' the exact location of the properties on the topographical map and important regional features such as lakes, mountains, the Argentina border, and adjacent mineral claims.

ACCESSIBILITY, PHYSIOGRAPHY, CLIMATE & LOCAL RESOURCES

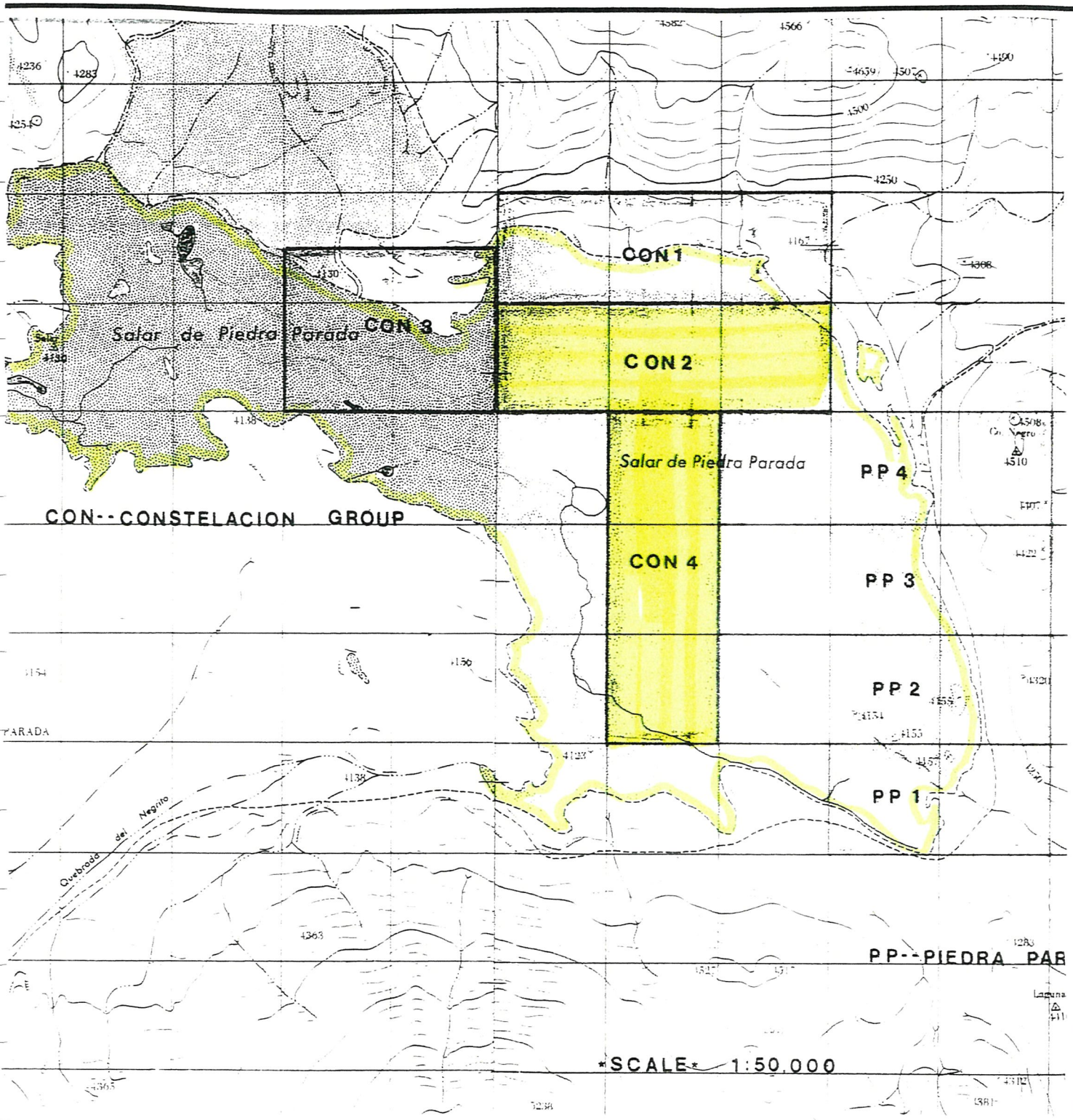
Accessibility and Physiography:

The CONSTELACION mineral claims are located approximately 122 kilometers (76 miles) by road east of the city of El Salvador. The claims are accessible by following the road from El Salvador to Llano La Ola for a distance of about 60 kilometers (38 miles), and then turning east for the remainder of the distance. Most of this road is traversed along a combination of unimproved dirt roads and trails (see Figure 3). At kilometer 70 to 83, the traverse has difficult road conditions, including steep grade, washboard, ruts and sandy conditions. From about kilometers 88 to 100, the traverse, near the entrance of the Piedra Parada Basin, also have difficult road conditions including narrow road, steep grade, soft and wet sections, washboard, ruts, and boulders. Most of this has been caused in the last six months by intense use of the access roads by heavy trucks and drill rigs. Placer Dome of Vancouver has had up to four drill rigs in simultaneous operation and consequently taxed the access road's capacities, with little or no road maintenance.

The CON 2 & 4 mineral properties cover 600 hectares of the Piedra Parada enclosed basin area. In Chile, these enclosed drainage basins are common in the northern portion of the higher Andes' plain, and locally are known as "Salars". As with the Piedra Parada Salar, drainage of streams and other runoff is cutoff by the presence of many high peaks and ranges, thus creating closed drainage basins in which the waters migrate to the lower elevations.

The Piedra Parada Salar is such an enclosed drainage basin, covering an area of about 500 square kilometers (about 200 square miles). An important portion of the product of the surrounding hills and mountains has subsequently remained within the confines of the basin. These have migrated to the Salar and include erosional products, such as water-borne silt and soils, wind-blown soils, pyroclastic materials, and so on. By far the most important products are the dissolved minerals carried by water runoff and thermal springs. To a larger extent, an ancient geothermal system, which upon evaporation, have deposited large amounts of minerals, salts, and even precious metals within the confines of the Salar.

Figure 2 illustrates the position of the mineral claims with respect to the boundaries of the Salar. The claims consist of two adjoining mineral properties covering an area of 600 hectares (about 1,500 acres). This area was anciently the lowest area of the drainage basin and thus received the influx of mineral and erosional products. Due to local and regional block-faulting, the shaded area has been uplifted, some six to 25 meters (20 to 80 feet), in the eastern portion of the Salar. Many if not most of the Salars in this area of Chile are similarly tilted upward from west to east.



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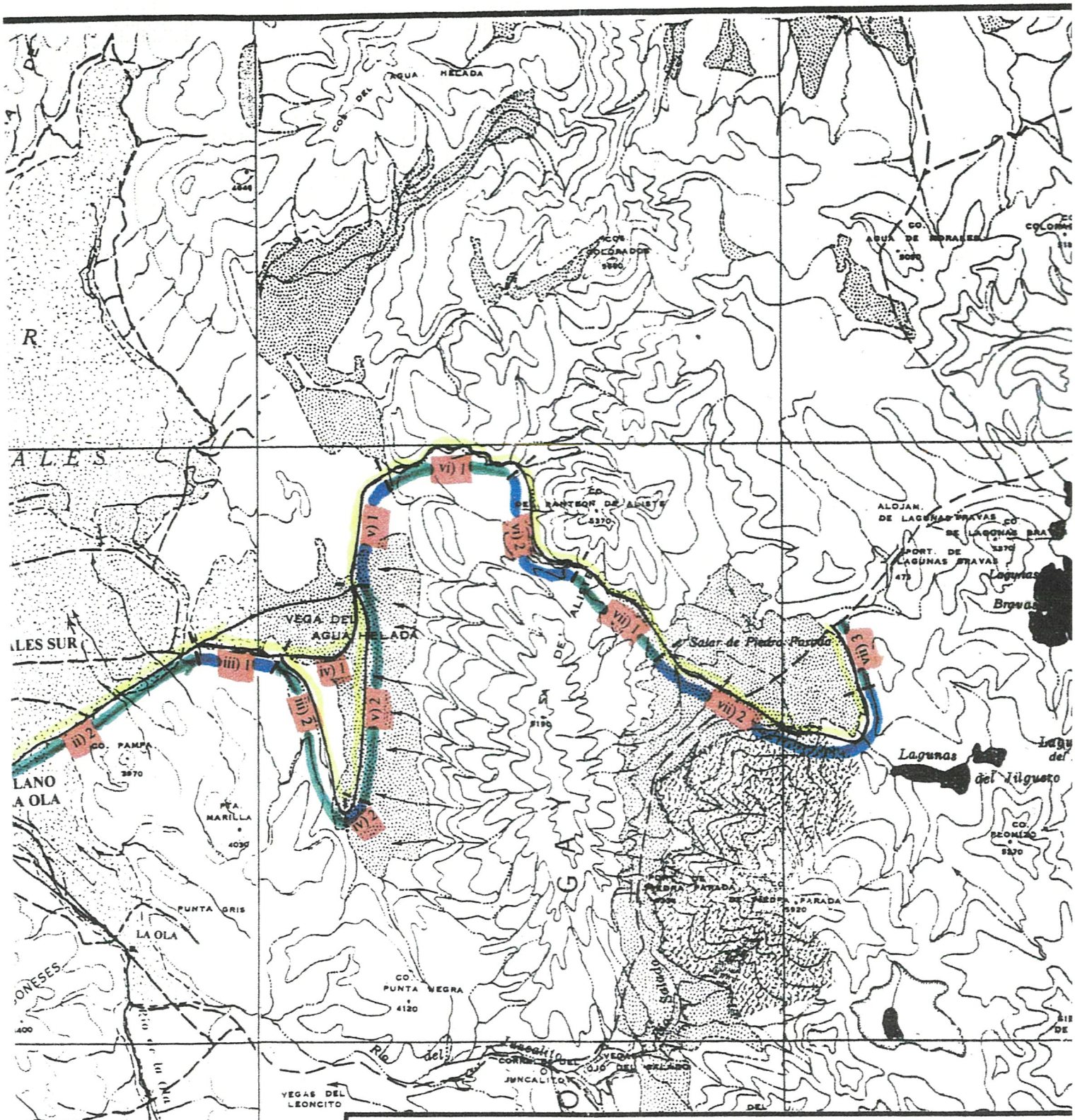
PIEDRA PARADA BASIN Mineral Claims		
Krueckl & Associates Mining Consultants Ltd.		DRAWING NUMBER Figure 2



CAN-EX MINERALS CORPORATION

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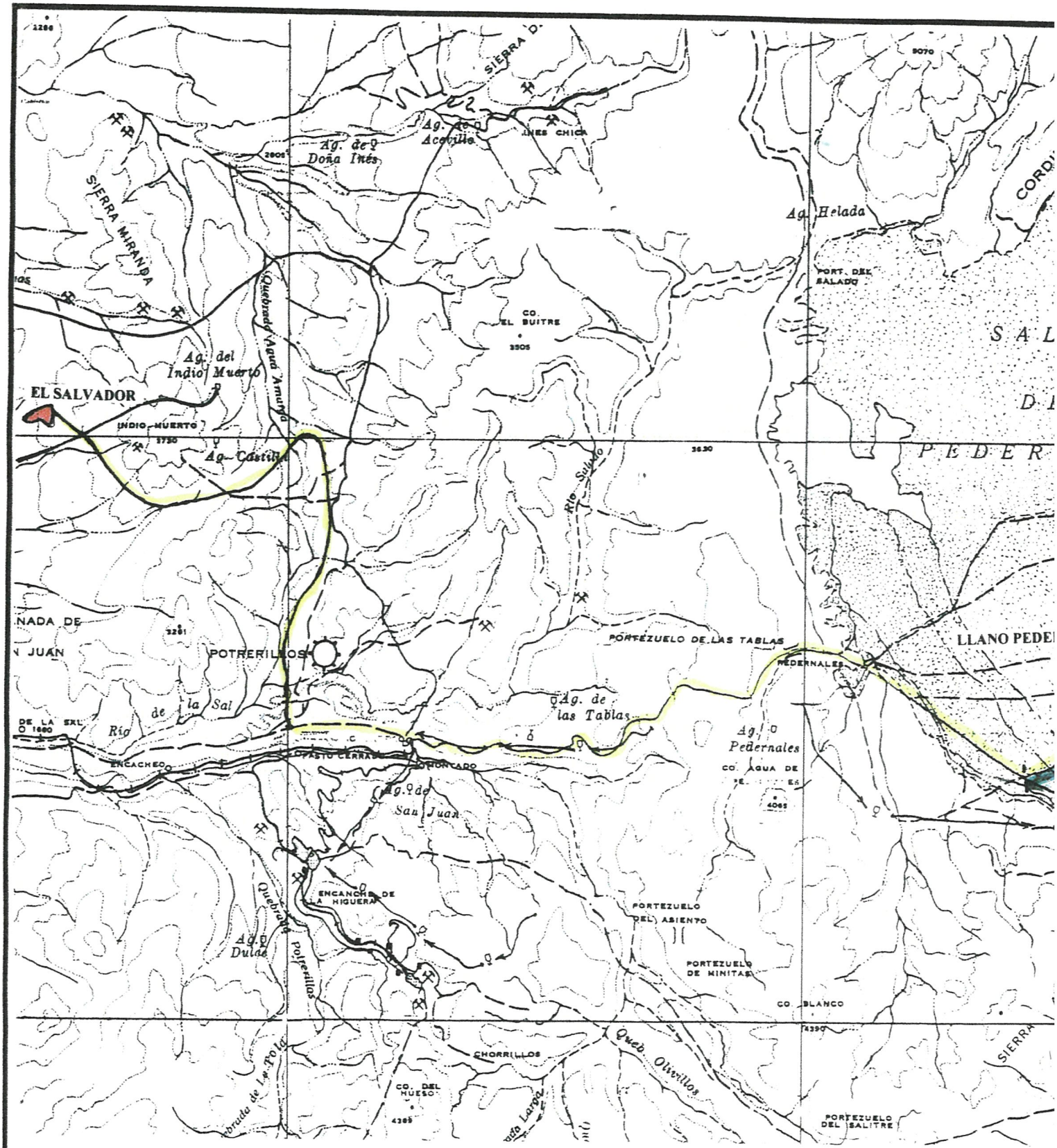
DATE: 15 - 04 - 99		REVISED

Access Roads & Surrounding Topography

Krueckl & Associates Mining Consultants Ltd.	DRAWING NUMBER Figure 3


SIERRA D
Ag. de Doña Inés
Ag. de Acevillo
INES CHICA
SIERRA MIRANDA
Ag. Helada
PORT. DEL SALADO
CO. EL BUITRE
3505
Quebrada Agua Amarga
Ag. del Indio Muerto
EL SALVADOR
INDIO MUERTO
3750
Ag. Castillo
Río Salado
3630
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3281
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PEDERNALES
Ag. de las Tablas
Río de la Sal
PASO CERRADO
ENCACHEO
Ag. de San Juan
Ag. de Pedernales
CO. AGUA DE
4065
ENCANCHE DE LA HIGUERA
Quebrada Polvaredas
Ag. de Dulce
PORTEZUELO DEL ASIENTO
PORTEZUELO DE MINITAS
CO. BLANCO
4390
CHORRILLOS
CO. DEL HUESO
4385
Queb. Olivillos
PORTEZUELO DEL SALITRE

Climate:

The climate is characterized as northern "altiplano", a dry climate with warm summers and cool to cold winters. Maximum summer temperatures can reach to 30 degrees centigrade, and winter daytime temperatures are often in the 10 to 15 degrees centigrade range. Minimum winter temperatures can reach -25 degrees centigrade, at night, but only occasionally. Winter nighttime temperatures are normally zero to -10 degrees centigrade.

Total annual precipitation usually does not exceed more than 45 centimeters (18 inches) of combine snowfall, except in El Nino years. Another factor, are the constant afternoon windy conditions, where winds often average 30 to 50 kilometers (20 to 30 miles) per hour. The direction of the afternoon winds is from west to east.

On seismic activity the maximum 10 year S wave is 6.8 on the Richter, and the maximum 10 year P wave of 6.3 on the Richter. Vegetation is sparse, consisting of low shrub grasses and mosses at spring or thermal sites. Wildlife consists of guanacos, a cousin to the llama, and a few desert foxes.

HISTORY

Although Region III was not founded until the mid 1740's, Copiapo was actually the site of the first camps of the Spaniards who entered Chile from Peru beginning in 1536. Copiapo subsequently, served as a way-station for Spanish Conquistadors traveling from Lima to Santiago. The name "Copiapo" was derived by the Spanish from the local indigenous Indians, and means "Cup of Gold", referring to the many gold veins and workings in the nearby hills.

Although Copiapo's mining roots go back hundreds of years, it was not until 1832 that mining became a dominant economic force. In that year, a huge silver strike was found about 65 kilometers (40 miles) south at Chanarcillo, and the first large commercial mining operation in Chile was undertaken. Chanarcillo would eventually become the world's third largest silver producer. This mine would be netting sales through the 1870's of more than two hundred million dollars in silver bullion, which adjusted for inflation is equivalent to several billion dollars today.

Although the mine began to play out in the 1880's, many miners stayed in the area to work other subsequent strikes of gold and silver. Several small copper operations were initiated before the turn of the century in the area. However, most of the small mining operations in the region ceased during World War I. This began a cycle of boom and bust which continued through the 1970's. Declining copper prices during the 1970's and early 1980's placed the Copiapo area in a prolonged recession. In 1983, as part of a general economic reform, Chile adopted a new mining law, which gave ownership guarantees to foreign companies and projects.

By 1985, several of the world's foremost mining companies were in the Region, exploring and developing different projects. By 1995, Region III produced 1.9 billion dollars of mineral commodities, almost all of which was exported to offshore buyers in Japan, Europe, and the United States.

GEOLOGY

REGIONAL GEOLOGY

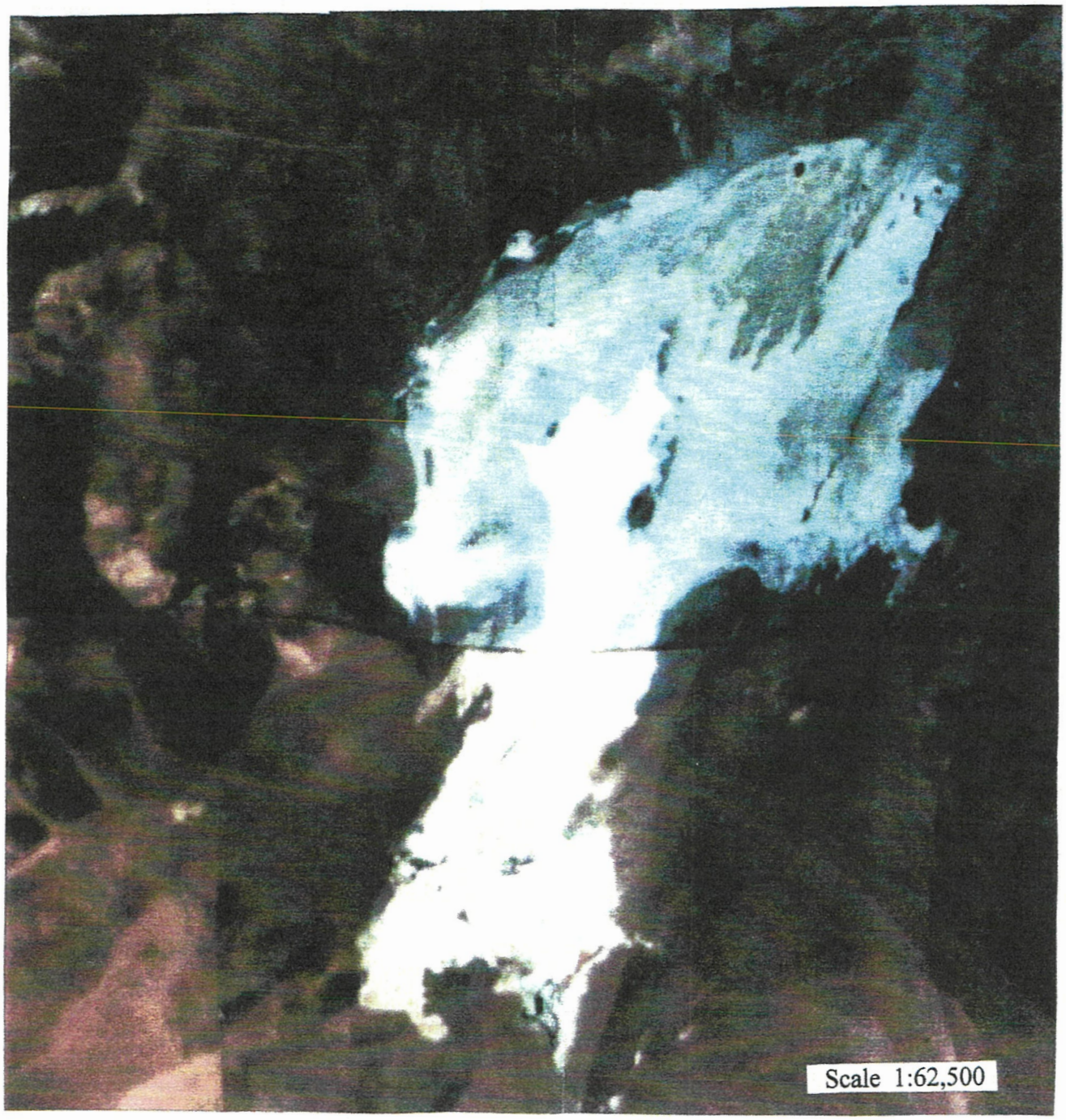
Much of the mineralization within the Salar can be understood by studying the geology of the formations surrounding the Salar within the drainage basin. A large portion of the data is from the adjacent Piedra Amarilla properties, located a few kilometers to the east and northeast. These mineral properties are visible in the aerial photo shown in Figure 4. These properties have on them the light-yellowish hydrothermally altered areas in the upper right hand portion of the photo. In 1988, the R.M. Parsons company of Pasadena carried out a preliminary feasibility study on these properties for sulfur recovery. In 1989 and 1990 CORFO carried out a series of studies for both sulfur and titanium dioxide recovery.

Extensive sampling to a depth of only 10 meters, indicated sulfur reserves of 22 million metric tons, and averaging 3.0% titanium dioxide. Geochemical sampling done by the Anglo America Mining Company showed a near surface gold content averaging 30 parts per-billion. Later analytical studies carried out by Rogers Research in the United States showed gold values as mineral tellurides averaging 3 to 4 grams-per-ton. Intec-Chile later confirmed tellurium values averaging 19 ppm in the lower grade sulfur areas and 32 ppm in the higher grade sulfur areas. Intec-Chile also found native silver and silver chloride mineralization on the properties.

These properties are rich in feldspars containing calcium, potassium, sodium, and other salts that, along with the sulfur are easily leached. The Piedra Amarilla properties comprise only a small part of the drainage basin, but show the rich mineralization available to be leached into the Salar. The total area of geologic formations drained by the basin has been calculated at 40 cubic kilometers of largely porous volcanic andesite.

Mosaic of aerial photos (Figure 5) shows the Piedra Parada Salar drainage basin. The Salar is in center of photographs. Light-yellow colored areas are hydrothermally altered volcanic of andesitic composition. These areas have been chemically altered in the past by the intrusion of gases and liquids, leaving behind rich minerals including gold and silver mineralization. Part of these minerals have subsequently been leached from the higher areas in the drainage basin, following which have drained into the Salar. These minerals were deposited in the Salar either through a change in pH or through evaporation processes.

A study of the water sources in the basin showed that most ground surface water entering the Salar does so at the margins, mostly as thermal springs. However, additional thermal springs may be flowing into the Salar from the area underneath the basin. The basin is covered by mineral salts (gypsum, anhydride . . . etc.), which are also inter bedded with siltstone, sandstone and iron minerals in varying thicknesses. These waters are unusually rich in chlorine, averaging more than 1,200 ppm, which is more than 30 times the amount found in adjacent river systems such as the Paipote Canyon or Copiapo River. The combination of warm thermal waters and high chloride content makes an excellent leaching agent for minerals contained in the surrounding country rock, especially metals such as gold and silver.



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CAN-EX MINERALS CORPORATION

SCALE:	APPROVED BY:	DRAWN BY G.P.K.
DATE: 15 - 04 - 99		REVISED

PIEDRA PARADA BASIN AERIAL PHOTO

Krueckl & Associates Mining Consultants Ltd.	DRAWING NUMBER Figure 4

Precious Metals Mineralization

The presence of gold and silver in the Salar has not even been a consideration for most exploration geologists. However, the leaching of precious metals from country rock and its subsequent deposition was outlined in several studies of Romberger and others (see Appendixes I). Gold is probably transported into the Salar as both chloride and bisulfide complexes. The high chloride content of the local thermal waters makes an excellent leaching agent, and the presence of large amounts of sulfur in the basin allow for leaching as a bisulfide.

Upon reaching the Salar, the gold can be deposited out of solution in several ways. If transported as a bisulfide, an increase or decrease in pH can cause deposition. The pH of the Salar waters varied from 8.25 - 8.5, compared with an average pH of 6.8 of the thermal waters. Oxidation is the preferred mechanism of gold deposition, as oxygen activity strongly affects the solubility of gold bisulfide complexes. A decrease in overall sulfur activity (or content) will also cause gold bisulfide complexes to deposit out of solution.

If the gold is transported as a chloride complex, an increase in pH may result in deposition. Another factor would be a significant change in temperature. The Salar waters are cooler than the thermal waters entering it. A significant portion of the gold, which had leached from the surrounding country rock, probably deposits out of solution before reaching the Salar. However, any gold reaching the Salar would find a ripe environment for active deposition.

Other Economic Minerals

Several additional minerals occurring in the reserves could conceivably be recovered on an economical basis. Lead minerals, strontium, and titanium dioxide present the best possibilities. Strontium is used in several military applications, such as flares, fireworks, and in infrared instruments, but the total world consumption is small on an annual basis. Lead is out of political favor.

Titanium dioxide presents a possible alternative. Uses are as a whitening pigment in paints, office paper, and rubber and plastic products. Annual world consumption is better than three million metric tons, and growing at an annual rate of more than 3%. Conceivably, part of the titanium mineral could be captured in the gravitational circuit, creating a low grade concentrate. Additional capital investment would be required to upgrade the concentrates to market standards. Additional processing would require electrostatic and magnetic separation equipment.

Upgraded concentrates could be sold on the world market to plants specializing in finished titanium products. Depending on the amount of titanium recovered, annual project revenues could increase from five to ten million dollars per year. For purposes of the economic evaluation of the Piedra Parada Salar Basin, it is assumed that the project will produce none of these additional products for sale.

LOCAL GEOLOGY

The dynamics of Salars and other evaporite bodies are poorly researched and understood. Recent development of the large lithium and potassium reserves at the Salar de Atacama in Chile's 2nd Region has spawned new studies. These studies help to shed some light on the geologic formation and development of Salars. In most Salars, the rate of water evaporation is much greater than the rate of replenishment. This causes the water-borne minerals and salts to deposit out of solution as the water evaporates. Studies done by CORFO and Foote Minerals suggest that the evaporation rates in this area of Chile are among the highest in the world. This is due to the high degree of solar radiation at these high altitudes and the general lack of cloud cover for most of the year.

In addition, most of the Salars have large surface areas compared to the amount of water inflow. As with the Piedra Parada, most of the Salar is covered with no more than a foot or so of water, even during spring runoff. Another factor is the constant afternoon windy conditions, where winds often average 30 to 50 kilometers (20 to 30 miles)-per-hour.

There are no in-depth studies on the Piedra Parada Salar. CODELCO, the large Chilean copper producer has constituted many mineral claims on the much larger Pedernales Salar, located some 50 kilometers (30 miles) to the west. Several gas and oil companies have drilled deep exploration wells in the Pedernales plain south of the Pedernales Salar, located about 40 kilometers (25 miles) to the west.

In early 1989 Harold Gardner invited Carlos Ulriksen of MINEXCO to investigate the Piedra Parada Salar for precious metal and other minerals. The investigations carried out by Ulriksen was the only geologic study on the Piedra Parada Salar. The work involved a sampling program conducted on part of the mineral resources within the uplifted mineralized beds (pillars). Samples taken were mainly channel samples as follows:

Sample #	Weight	%TiO2	%Pb	%Sr	Au g/t	Ag g/t
U-1	10kg	2.0	0.9	3.7	0.2	18
U-2	10	1.83	1.2	2.1	Trace	16
U-3	10	1.67	1.2	3.5	Trace	13
U-4	10	2.00	0.6	1.7	0.2	15
U-5	10	1.83	0.6	1.5	0.1	13
U-6	10	1.67	0.7	2.4	0.3	10
U-7	10	1.67	0.7	1.6	0.8	9
U-8	10	1.83	1.4	2.3	0.7	7
U-9	10	1.67	1.4	2.4	0.7	16
U-10	5	1.00	0.1	0.8	Not	Tested
U-11	5	1.36	Not	Tested	Not	Tested
U-12	5	1.27	Not	Tested	Not	Tested
Total&Average	105	1.65	0.88	2.2	0.33	13.22

TiO2, Pb and Sr were analyzed using x-ray fluorescence while Au and Ag were analyzed via Atomic Adsorption. Samples 1 to 9 were taken by channel sample cuts and Samples 10 to 12 were taken

horizontally along the margin of the Salar. Ulriksen postulates that the Salar occupies an area formerly inhabited by an ancient caldera that subsequently subsided, forming a lowland depression. Initially, water escaped to the southwest through the Rio Negro and Juncalito drainage canyons. During the late Tertiary, elevation of the Cuyanos Range at the southern portion of the Salar enclosed the basin, cutting off all drainage to the outside and setting the stage for development of the Salar. It was the Ulriksen investigations and writings that stimulated interest by others in the Piedra Parada Salar.

During early 1998 Harold Gardner and Garth Johnson took three samples on the Pillars. These were large channel samples, cut deep into the Pillar walls. The location coordinates and assay values for gold were as follows:

Sample #	Coordinates	Increment	Length	Au gm/metric ton
G/J-1	529,005E & 7,083,860N	0 - 8 m	8 m	-
		8 - 14m	6 m	3.370
G/J-2	529,025E & 7,083,890N	0 - 8 m	8 m	-
		8 - 14 m	6 m	3.750
G/J-3	528,900E & 7,083,800N	0 - 10 m	10 m	-
		10 - 15 m	5 m	5.450

The increments represented by 0 - 8 m for sample G/J-1 and G/J-2 plus that represented by 0 - 10 m for G/J-3 were not taken, therefore could not be assayed for gold.

Later, during 1998 Gardner invited Joseph Wilkins (geologist), of Saint Joe Mining Ltd., and David Shattwell (geologist) of Equatorial Mining Ltd., to visited the Pillar site to take channel samples. One set of channel samples were taken at coordinates 528,995E & 7,083,900N. The assay values for gold were as follows:

Footage	Increment	Au gm/metric ton
0 - 4 m	4 m	-
4 - 6 m	2 m	0.973
6 - 8 m	2 m	0.185
8 - 10 m	2 m	3.020
10 - 12 m	2 m	0.955
12 - 14 m	2 m	1.540
14 - 16 m	2 m	1.969
16 - 18 m	2 m	0.750
18 - 20 m	2 m	0.212

During the same site visit by Wilkins, Shattwell and Gardner, additional samples SWEx1, SWEx2 and SWSx1 were taken by Gardner. These samples were taken in the south central and west central part of the Piedra Parada Salar basin. Sample SWEx1 was taken on the bench next to the Salar surface whereas the other two, SWEx2 and SWSx1, were taken on the Salar surface. Gold values for these samples assayed as follows; SWEx1 = 0.000; SWEx2 = 0.329; and SWSx1 = 0.211. Although these samples were taken to a depth of only 0.5 meters, they did show that gold values are

present in the south central and west side of the Salar.

Composition

Most of the western portions of the surface of the Piedra Parada Salar are either wet or encrusted with salt in one form or another. The Northwestern and central portion of the Salar is encrusted by an extremely white salt that has an unusually smooth and uniform appearance. Most of this area is underlain by wet saline mud at very shallow depths.

The mineral terraces covered by the Piedra Parada claims are formed mainly by beds of gypsum. However these are inter-layered with gypsum mixed with clays, (principally kaolin), small amounts of quartz, fine grained sandstone, iron minerals largely as limonite or hydrated pyrites and siltstone. These beds lie horizontally and are uniform throughout the deposit. Individual beds range in thickness from 0.5 meters to more than 3.5 meters. The thicker beds are composed mainly of gypsum and anhydride, alloyed with kaolin and other clays.

A typical profile as catalogued by Ulriksen shows from top to bottom:

- Kaolin mixed with gypsum	3.0 meters
- Iron Oxides (limonite)	0.5 meters
- Gypsum and clays	3.5 meters
- Limonite and other iron oxides	1.0 meters
- Gypsum	2.0 meters

The profile covers the exposed depth of the mineral reserves. It is not known how far below the surface the mineralization continues. However, based on drilling done at the Atacama Salar and the general dimensions of the Piedra Parada Salar, it is not unreasonable to think that the mineralization continues for several feet. Toward the center of the Salar the mineralization could continue for hundreds of feet, containing ancient fossilized sedimentary beds.

Mineralogical Composition

Extensive field examination and laboratory analysis permit a preliminary knowledge of the chemical makeup of the mineral resources. Predominating is salt of chlorides and sulfates, followed by silicates, and finally metallic sulfate minerals. A breakdown of the individual minerals is found in Table 1.

To better understand the mechanics of chemical deposition within the Salar, several water samples were taken from different thermal springs entering the Salar at the margins. Some eleven different springs have been identified thus-far. It is however, probable that some water may enter the Salar through ground seepage toward the middle sections and thus be visually undetectable.

Thermal springs contribute by far the largest volume of water entering the Salar. Due to limited snowfall, water runoff during spring thaws is only occasional, as most of the water percolates into the porous ground before reaching the Salar. The volume of water entering through thermal springs

has been tentatively set at between 100 and 200 liters-per-second. The water flow increases in the spring and diminishing at the end of summer and fall periods. The average mineral content of the thermal waters sampled is found in Table 2.

Table #1
Composition of Mineral Resources

Calcium Sulfate - as gypsum & anhydride		+/- 40%
Calcium, Sodium & Potassium Chloride		+/- 10%
Other Salts	- Calcium Carbonate, Potassium Sulfate, Barium Sulfate, Strontium Sulfate, Magnesium Sulfate, Sulfate Salts of Br, Li, & Fl	+/- 10%
Silicates	- Clays, Alunite, Kaoline	+/- 10%
	- Quartz, Sandstone, Siltstone	+/- 15%
Metallic Minerals		
	- Iron minerals	+/- 10%
	- Titanium Dioxide	+/- 2%
	- Lead minerals	+/- 1.5%
	- Manganese minerals	+/- 0.5%
	- Chromates	+/- 0.3%
	- Copper minerals	+/- 0.2%
	- Zinc minerals	+/- 0.2%
	- Other	+/- 0.5%
	Total	100.0%

Table #2

Thermal Springs Salt Content

Salt	Content in ppm
Chlorine	1,200
Sodium	841
Sulfates	750
Calcium	322
Carbonates	316
Potassium	88
Magnesium	58

AVERAGE pH - 6.8

MINING PARAMETERS

General

The value of precious metals to be recovered varies from about $14.00 to $23.00 per metric ton. When considering mining parameters for the flat laying mineral formations **"layers"** in the basin, it is important to understand that inexpensive mining and processing techniques will be required. The mining technique being investigated should allow for the fact that certain layers are waste and since, blasting would disturb the ore/waste contact, another mining method should be considered. A rock breaking technique such as caterpillar tractor with ripper attachment would be recommended. It is very likely that ripping will be adequate, since the hardness of gypsum is only 2 on Mohs scale of hardness. Ripping would satisfy the need to keep the ore/waste contact from being disturbed.

Gypsum and most of the other materials in the Salar, which contains precious metals, are porous (have good permeability). Therefore, additional crushing or grinding of this material will likely not be required before processing the material.

The processing of the ore would involve heap or vat leaching using water to recover precious metal and other mineral values in a water solution. Subsequently, the solution would be further processed using a system developed by S S International Mining Enterprises Inc. of Tucson, Arizona, the details of which were not available at time of writing this property evaluation report. Alternatively, other processing systems such as Solvent Extraction Electro Winning, Standard Merille Crowe and the rather unique Laminar Pneumatic System technologies are also available.

Both the Solvent Extraction Electro Winning and Merial Crowe processing systems require additional testing to define the operating parameters for the saline water solution being processed. The key to the Laminar Pneumatic System technology is the sophisticated manner in which it is able to acquire and suspend particles of water and other elements (or minerals) within a low pressure air stream. The suspended water and other particles are broken apart by a microprocessor control system. Salts and other elements (or minerals) and impurities are then separated out, leaving pure water and the essential trace minerals.

Other elements and/or minerals separated out include the titanium dioxide, strontium and lead minerals which were assayed previously as part of the mineral resource of the salar. The water generated by this process is extremely useful for pumping to rural sites for farming, particularily for fish farms and growing a variety of fruits and vegetables. Further, the water can be sent to urban areas for use in residental and industrial sites.

Infrastructure

Water: The most likely source for water is the thermal springs that flow into the Piedra Parada basin. An estimated twelve million liters daily flows into the Salar.

Power: Since no high tension electric power lines are near the area, it is likely that a diesel

electric power generating plant would be installed at the site.

Roads: Road upgrading would be required for the proposed Phase I work since large flat bed trucks need to travel to the Piedra Parada Basin site to deliver portable trailers, drilling and other equipment. For the Phase I work estimate, the access road from El Salvador to the Piedra Parada Basin, involving some 140 kilometers, was subdivided into seven sections.

	Section of Road		Distance
i)	El Salvador to Llano Pedernales Sur Road		47km
ii)	1. Llano Pedernales Sur Road	-1st. half of section	13km
	2.	-2nd half of section	13km
iii)	1. Llano de Los Gases Blancos Rd.	-pickup truck route	5km
	2. -------> Traveling south	-flat bed truck route	7.5km
iv)	1. Vega del Agua Helada Road	-pickup truck route	4.5km
	2. -------> ridge on flat bed route	-flat bed truck route	0.5km
v)	1. Llano de la Vega Helada Road	-pickup truck route	5.5km
	2. -------> Traveling north	-flat bed truck route	10km
vi)	1. Rio de la Cueva Road	-Rio portion of road	7km
	2.	-Rio to height of land	5km
vii)	1. Piedra Parada Basin Road	-first portion of road	6km
	2.	-Llano de P.P.portion of rd.	13km
	3.	-portion west of P.P.Basin	3km
Distance of road upgrading			80km
Distance of road for pickup truck from El Salvador to P. P. Basin			122km
Distance of road for flat bed truck from El Salvador to P. P. Basin			135.5km

Airstrips:

Santiago: The airport at Santiago is an international airport having airlines form many countries world wide, most of these being to countries in North and South America, Europe and the far eastern Asia.

Copiapo: Daily air service to Santiago is provided from three different airlines on Boeing 737 jets.

El Salvador: Daily air service to Copiapo is provided from _____ different airlines.

New airstrip: A new airstrip for the Piedra Parada Basin site will likely not be required since, the airstrip at El Salvador will be adequate. The roads will be upgraded from El Salvador to the Basin site, making a one hour and thirty minutes trip to the Basin possible. Further, the elevation of the Basin and surrounding area is too high to allow for the installation of an airstrip that will allow safe landing and takeoffs for fixed winged aircraft.

SITE INVESTIGATIONS (MARCH 1999)

Preliminary Research

When the preliminary evaluation on the CONSTELACION 2 & 4 Mineral Claims located in the Piedra Parada basin was assigned to Krueckl & Associates Mining Consultants Ltd. **"K&A".** A representative of K&A carried out research into the technical detail available from previous site investigations. In addition, K&A was also interested in finding out who are the principal personnel involved with previous investigations. Further, what information is available on the metallurgy of the Piedra Parada mineral resource.

A) Technical Research

Initially, K&A obtained a copy of the report that gave an outline of the previous work carried out on the Piedra Parada Basin. This report contained information on location, access routes, geography, mineral claim maps, regional and local geology, description of the mineral resource including; Mineralogical composition, precious metals content and other economic minerals. Further, the report outlined the accepted understanding for the source of mineralization and the metallurgical characteristics that may dictate the direction for processing this resource.

K&A prepared a listing of elements, minerals and detrital materials contained in the Piedra Parada Salar. Further, K&A investigated the chemical properties and physical characteristics of these to understand why they are part of the Salar. This research included the following:

a) Chemical composition of minerals and how these relate to each other and the various elements and detrital material in the Salar;

b) Chemical and other characteristics that allow for leaching of elements and minerals in the thermal springs which flow through volcanic rocks that originate from an ancient caldera that subsided, forming a lowland depression;

c) Economic use of various elements and minerals found in the Piedra Parada Salar;

d) Listing of detrital material (clays, siltstone, sandstone . . . etc.) contained in the Salar because of wind/water erosion from adjacent areas and from other sources (volcanic ash, lava flows . . . etc.);

e) A review of likely sources of detrital material based on possible historical tectonic events and geological environments;

B) Principal Personal Involved with Previous Investigations

K&A researched the professional status of the principal personnel involved with previous investigations, including the type of investigations carried out by each and the conclusions each reached because of their work.

C) Analytical Laboratory Used

K&A submitted all samples to S S International Mining Enterprises Inc. **"S & S Laboratory"**, ~~with address~~ at 2420 North, Huachuca Drive, Tucson, Arizona 85745, USA, Phone (520) 622-8283. The S & S Laboratory is a private laboratory headed by J. Michael Sierakowski (metallurgist). S & S works with a number of large chemical companies, including Henkle, Pennzoil, and Conoco. The Pennzoil-Conoco joint venture Pennreco employs S & S Laboratory for worldwide distribution of many copper-oxide diesel based reagents. Mr. Sierakoski has developed a number of reagents for gold extraction that have been patented. Mr. Sierakoski is a recognized international metallurgical expert. S & S Laboratory has processed all samples submitted by Gardner, Wilkins and Shattwell.

Investigation Strategy

It was decided to carry out a three-part investigation of the Piedra Parada mineral resource as follows:

a) Carry out sufficient sampling of the site to corroborate the analytical and metallurgical results of previous investigations on the Piedra Parada mineral resource. In addition, confirm the presence and spatial relationship of important structural features in the Piedra Parada Basin and surrounding terrain;

b) Carry out specific research to confirm the presence of thermal springs and evidence of an ancient caldera that has subsided. This research should give credence to conclusions reached by the previous investigators concerning the origin of the Piedra Parada Salar and how these geological processes resulted in the source and extent of mineralization on the CON 2 & 4 claims;

c) Carry out discussions with the principal investigators, and/or review writings . . . etc., to decide how they carried out their work and what factors contributed to the conclusions reached. Further, it was felt that such discussions, and/or reviews of writings . . . etc., should be centered on:

- -the local and regional geological environment;
- -the analytical and metallurgical results obtained;
- -the requirements for additional investigations;
- -the infrastructure available in Regional III to carry out additional investigations, and;
- -the infrastructure available should the Piedra Parada mineral resource be placed into production.

Sampling and Site Research

Sampling of the Piedra Parada Basin was carried out mainly in areas where previous sampling had been undertaken, however, several additional sites were included on or near the CON 2 & 4 claims because it was necessary to confirm that these contained similar mineralization. Where possible an attempt was made to duplicate sample sites to give corroborating evidence. Further, auger hole sampling was carried out on the CONSTELACION 2 claim because channel sampling of vertical faces was not available for about 95% of this site.

In carrying out the work regarding site research K&A needed to:

a) confirm the presence of previous investigators' description and understanding of important structural features, and;

b) to confirm their conclusions regarding local and regional geological environments and how these influenced the source and extent of mineralization;

It was decided to carry out the a) and b) research, listed above, concurrently with the sampling program. This was necessary due to site visit time constraints and, since all sampling was carried out by persons under K&A's supervision, time was available for K&A to make observations on items listed in a) and b) above.

Two types of samples were taken as listed in Table #3. These were auger hole drilling and channel sampling of pillar formations. Auger hole drilling involved using an eight centimeters (3 inches), diameter hand held auger, with 1.5 meters (5 feet) extendable rods, which can drill vertical holes to ten meters (30 feet) depth (See Figure 7).

The other type of sample taken was channel sampling of vertical pillars as those shown in the Figure 8 photograph. Channel samples were taken with a geologist's pick. Each auger and channel sample taken weighed about five kilograms (11 lbs.). Some fifty samples were taken, at sites shown in Figure 6, during the four-day site visit, which ended March 21, 1999.

Samples were field split using a Jones splitter into approximate one kilogram size. Before shipping to the laboratory, the samples were laid end to end and photographed as shown in the photograph in Figure 10. As seen in the photo, the rich diversities of colors suggest a strong variation in mineral content. The lighter colored samples are dominated by gypsum, quartz and salts, while the darker colored samples have a higher content of iron and other base metals.

The samples were sealed and numbered in course plastic bags and shipped in sealed buckets to the S S International Mining Enterprises Inc. **"S & S Laboratory"** in Tucson, Arizona. In the Lab. the samples were further split into 200 gram units, and each sample individually processed in bottle rolls.

The first series of bottle rolls utilized distilled water. The liquor was subsequently filtered and the accompanying gold content read using standard atomic absorption methods. The readings were filtered for sodium impurities, and A.A. was zeroed using a strong sodium chloride water based liquor. In addition, results were spot checked by making known additions of gold standard and then checking the readings. The laboratory gold standard for adjusting the Atomic Absorption equipment are calibrated gold chloride solutions in varying denominations of 1 gram, 5 grams, and so on. Since the suspected gold mineral in the ore is thought to be a water soluble gold chloride, the use of known additions of internationally accepted gold standard give the readings a high degree of confidence.

The second series of bottle rolls used the filtered solids from the first test for recovery of residual gold. An ammonium based reagent was employed. The liquor was filtered and read using standard A.A. equipment. The results of the two tests show that more than 90% of the recovered gold is water soluble.

The analytical results shown in Table #3 are those obtained in the bottle rolls using distilled water as follows:

Table #3

Auger Holes	Coordinates from GPS readings	Sample #	Increment meters	Length meters	Gold g/t	Silver g/t
PPAH#1	527,404E	4401	0.0-1.5	1.5	0.0	0.0
	7,088,000N	4402	1.5-3.0	1.5	0.0	0.0
PPAH#2	527,370E	4403	0.0-1.5	1.5	0.0	0.0
	7,087,999N	4404	1.5-3.0	1.5	0.0	0.0
PPAH#3	527,200E	4405	0.0-1.0	1.0	0.0	0.0
	7,088,000N					
PPAH#4	527,090E	4406	0.0-1.0	1.0	0.125	0.0
	7,087,977N	4407	1.0-1.7	0.7	0.0	0.0
Clay Sample in water	527,065E 7,087,977N	4451	0.0-0.5	0.5	0.5	0.0
PPAH#5	526,293E	4408	0.0-1.4	1.4	0.178	0.0
	7,087,950N	4409	1.4-2.1	0.7	0.0	0.0
		4410	2.1-2.4	0.3	0.0	0.0
PPAH#6	526,775E	4411	0.0-1.2	1.2	0.0	0.0
	7,087,730N	4412	1.2-2.3	1.1	0.125	0.0
		4413	2.3-3.0	0.7	0.0	0.0
Channel Samples	Coordinates from GPS readings	Sample #	Increment meters	Length meters	Gold g/t	Silver g/t
PPC#1A	529,000E	4414	0.0-5.2	5.2	0.125	0.0
B	7,083,904N	4415	5.2-8.6	3.4	0.575	0.075
C		4416	8.6-11.6	3.0	3.5	0.108
D		4417	11.6-14.0	2.4	1.0	0.0
E		4418	14.0-18.0	4.0	0.803	0.088
F		4419	18.0-20.1	2.1	0.675	0.05
G		4420	20.1-21.6	1.5	0.178	0.0
Weighted Average Values: 0-4m=0.125g; 4-8m=0.440g; 8-18m=1.646g; 18-22m=0.434g						
PPC#2A	528,985E	4421	0.0-3.0	3.0	0.0	0.0
B	7,084,039N	4422	3.0-6.4	3.4	1.875	0.05
C		4423	6.4-7.9	1.5	0.5	0.0
D		4424	7.9-10.0	2.1	1.725	0.0875

E		4425	10.0-12.7	2.7	1.25	0.0
F		4426	12.7-14.5	1.8	3.125	0.075
G		4427	14.5-17.2	2.7	1.25	0.0
H		4428	17.2-19.9	2.7	2.25	0.025
I		4429	19.9-22.6	2.7	1.25	0.0

Weighted Average Values: 0 - 4 m = 0.469 g; 4 - 8 m = 1.356 g; 8 - 22.6 m = 1.732 g;

PPC#3A	528,860E	4430	0.0-4.3	4.3	0.39	0.0
B	7,084,150N	4431	4.3-7.0	2.7	0.125	0.0
C		4432	7.0-9.1	2.1	0.625	0.0
D		4433	9.1-11.2	2.1	3.075	0.075
E		4434	11.2-13.3	2.1	3.0	0.037
F		4435	13.3-15.4	2.1	2.31	0.05
G		4436	15.4-17.5	2.1	0.875	0.0
H		4437	17.5-19.0	1.5	0.75	0.0
I		4438	19.0-21.1	2.1	1.25	0.0

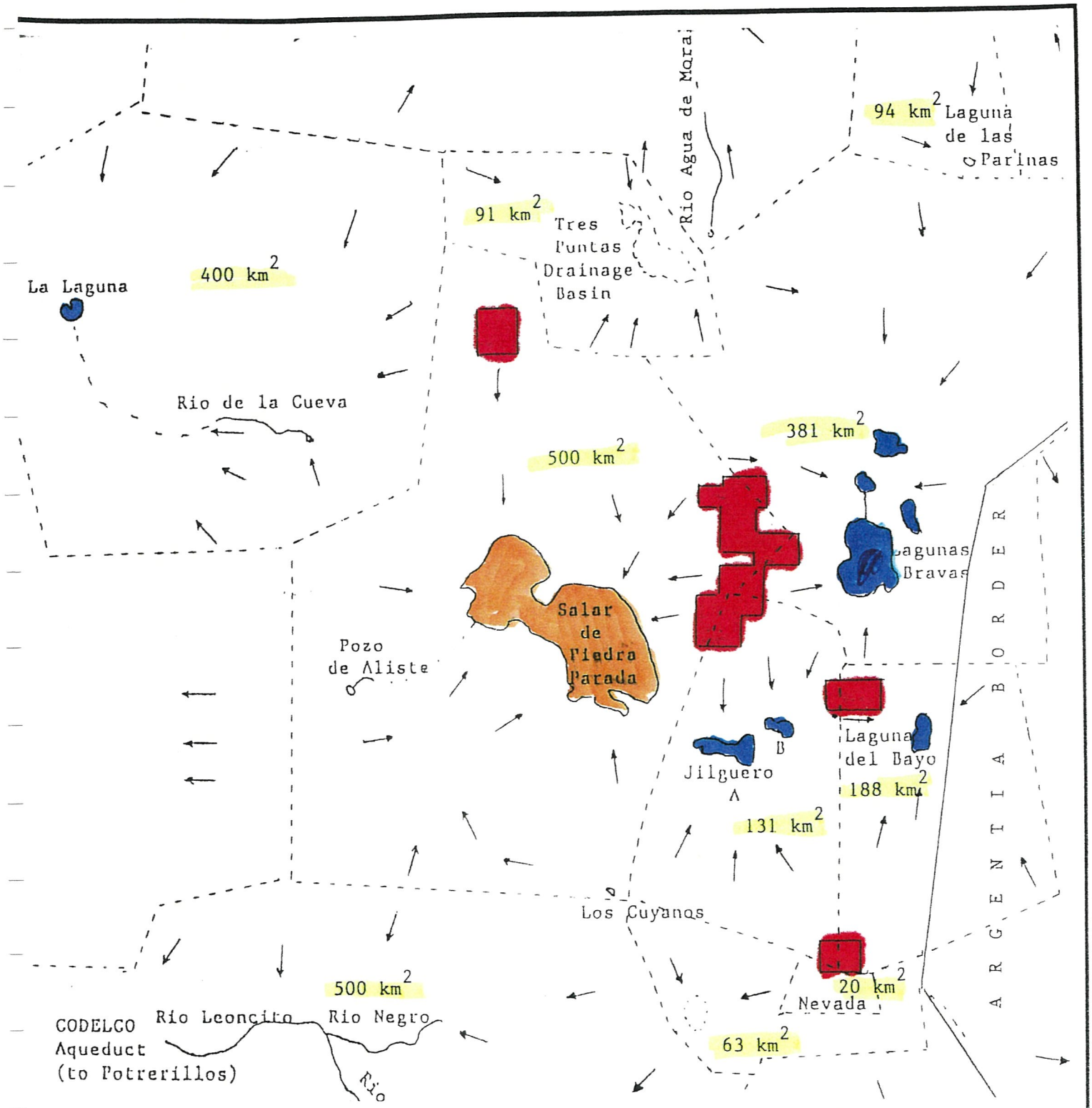
Weighted Average Values: 0-4m=<u>0.390g</u>; 4-8m=<u>0.270g</u>; 8-21.1m=<u>1.823g</u>;
" " PPC#1, 2&3 0.328g/t 0.689g/t 1.820g/t 1.095g/t

PPC#4A	527,266E	4439	0.0-1.9	1.9	0.1	0.0
B	7,088,286N	4440	1.9-3.7	1.8	0.0	0.0
C		4441	3.7-5.5	1.8	0.625	0.0
D		4442	5.5-7.1	1.6	0.25	0.0
E		4443	7.1-8.8	1.7	0.29	0.0
F		4444	8.8-10.4	1.6	0.76	0.0
G		4445	10.4-12.8	2.4	0.0	0.0

Weighted Average Values: 0-4m=0.098g; 4-8m=0.400g; 8-12.8m=0.302g; 12.8-18m=????g

PPC#5A	528,104E	4446	0.0-0.9	0.9	2.5	0.2
-space	7,087,450N		0.9-1.6	0.7	--	--
B		4447	1.6-2.3	0.7	0.125	0.0
C		4448	2.3-3.4	1.1	0.25	0.0
D		4449	3.4-5.7	2.3	0.0875	0.0
E		4450	5.7-6.7	1.0	0.0	0.0

Weighted Average Values: 0-4m=0.889g; 4-6.7m=0.055g; 6.7-8m=????g; 8-18m=????g



CAN-EX MINERALS CORPORATION

SCALE: 1:250,000	APPROVED BY:	DRAWN BY G.P.K.
DATE: 15 - 04 - 99		REVISED

PIEDRA PARADA SALAR Drainage Basin

Krueckl & Associates Mining Consultants Ltd.

DRAWING NUMBER
Figure 5

V. Davide Siniscalchi

141 W. Jackson Blvd. Suite 1320A
Chicago, Illinois 60604
Phone # 312-435-5252
Fax # 312-435-5257

CURRICULUM VITAE

Mr. Siniscalchi is currently involved in devising marketing strategies for a number of business projects internationally. Since 1986, he has gained an impressive experience in the investigation and marketing of business and investment opportunities in many countries.

In 1990, he was actively involved in all the marketing aspects of Nova Plus Fund 1, a closed-end investment fund managed in the Bahamas. His tasks in relation to Nova Plus Fund 1 included its structuring, preparation of its marketing piece, and setting up of a sales force in Europe.

In 1993, he was also involved in the successful marketing of an investment fund, Pleiades, that is presently being managed in Luxembourg.

In his business endeavors, Mr. Siniscalchi has offered a wide range of services that also comprise international corporate structuring, nominee and management services, as well as advisory services I all aspects of international private banking.

Furthermore, in the years, Mr. Siniscalchi has developed a unique network of highly qualified professionals that stand ready to assist him in any and all facets of business worldwide.

Some of his clients and business relationships include United Nations-Sponsored ACP Investment and Trade Bank, Washington D.C. (U.S.A.); Cabinet Ferracci-Roman, Geneva (Switzerland); Studio Dott. MArio O. Liguori, Rome (Italy); Fiat Allis, Turin (Italy); Ministerio de Obras Publicas y Transportes, San Jose' (Costa Rica); Bureau of External Affairs of the Kazakhstan Republic.

Long Engineering — MINING & RECLAMATION

August 12, 1996

Mr. Gary Pierce
3792 Berry Drive
Studio City, CA 91064

Dear Mr. Pierce:

I have carefully reviewed the "DECLARATION", concerning the pre-feasibility study for the Piedra Amarilla Properties, prepared by Mr. V. Davide Siniscalchi and submitted to you on August 8, 1996.

Mr. Siniscalchi is correct in his conclusion that this is a formidable gold property with a potential reserve of 522 million ounces recoverable and which is capable of producing over 800,000 ounces per year. His gross income calculations from gold and titanium production are correct and he is very close in estimating the mining and mineral extraction costs at $30 US dollars per ton. Parsons a suggested a price of a little over $32 per ton.

The gross realization that Mr. Siniscalchi presented are essentially the same as Karl Meyers used in the "Executive Summary" when sulfur revenues are not included.

If I can be of further assistance you can reach me at 803 658 3039 ex 11.

Sincerely

LONG ENGINEERING

B. G. "Bud" Long P. Eng
President

PROFESSIONAL ENGINEER-STATE OF NEVADA
BERNARD G. LONG
MINE
No. 005[illegible]

313 Vallarte Drive Henderson, NV 89014 702 898 0390

Long Engineering MINING & RECLAMATION

December 15, 1995

Mr. Gary Pierce
3792 Berry Drive
Studio City, CA 91604

Dear Mr. Pierce:

Mr. Karl Meyers presented me with an updated report by Parsons, entitled "PIEDRA AMARILLA PROJECT, TITANIUM AND BYPRODUCTS STUDY", completed for C.M.I. - Minexco. This was a follow up prefeasibility study of the "CHILE SULFUR PROJECT", also completed by Parsons on November 15, 1988.

The Sulfur study indicates a very large Chilean sulfur deposit, easily minable by surface methods with high recovery using conventional milling and metallurgical processes. Gold and silver were considered byproduct. Once the prefeasibility was complete, the metallurgist learned the deposit contained Rutile, a Titanium Oxide, and other Titanium compounds which are much more valuable than Sulfur.

The deposit is located in Northern Chile, east of El Salvador, in the Andes Mountains, near the Argentina border, and at an average elevation of 4500 meters. Vehicle Access is on unimproved 4WD roads. The climate and elevation are well suited for year around mining.

I spent a considerable length of time reviewing the "Titanium and Byproducts Study" and found the report to be quite thorough, even though the Titanium reserves, 174 million tons, were classified as "Inferred". Areal photos along with ground measurements, surface sampling, and trenching was extensive over large areas of the property. The property is large, 3800 hectares which is well over 9,000 acres. Sufficient bulk samples were taken to give uniform results and good metallurgical results.

Rutile was the chief Titanium mineral, and one of the easiest to extract metallurgically. Gold quantities were reported to be .26 grams and .33 grams per ton. These are low grade reserves, and are only recoverable as a Titanium/Sulfur byproduct. Sulfur then becomes a secondary product as does Silica. In total, the aggregate minerals in these surface minable deposits are definitely economical and are of sufficient volume to classify the deposit as "World Class".

The Parson report is well documented and reflects excellent field work and elaborate laboratory testing and analysis, typical of Parson' work that I have reviewed in the past. It is obvious, however, that this is a prefeasibility study, and much more work is required, particularly in deep drilling, to define the measured reserves. Typical of much of Parson's work, ore reserves, as reported are usually conservative, leaving a likely possibility of there

313 Valiarte Drive Henderson, NV 89014 702 898 0390

Gary Pierce cont. P.2)

being considerable more, most likely in depth.

I would recommend, without further contemplation that the owners, or others interested parties follow up with a full blown feasibility study, bringing into focus, current market demand and delivered prices of Titanium pigment, followed by an up dated capital and operating cost estimate. A major drilling campaign has to be considered as the next step in proving the reserves and expanding the metallurgy to the deep ore grades. Reverse circulation drilling combined with a number of twinned core holes on a well defined geologic spacing should commence once the marketing studies and cost are brought up to date.

Additional spot drilling is often required once the ore zones, faults, fractures and offsets are determined from the preliminary drilling . This additional drilling, more often than not, will increase the reserves. It will provide a better understanding of the various features of the ore body, including structure and grade, and will permit reclassification from "Inferred to Indicated and Measured reserves, which is necessary to finalize a "bankable feasibility study".

Lastly, it is very important that the final metallurgical process be given close scrutiny by a second party. In many cases, the successful outcome of a world class ore deposit is dependent upon the correct application of extractive metallurgical processes.

If I can be of any further assistance in evaluating the merits of this project, I can arrange to be at your disposal.

Sincerely yours,

LONG ENGINEERING

B. G. Long P.E.
President

copy: Karl Meyers

PROFESSIONAL ENGINEER-STATE OF NEVADA
BERNARD G LONG
MINE
NO. 09576

Karl F. Meyers
Mineral Consultant
P.O. Box 60261
Las Vegas, Nv. 89160

December 16, 1995

Mr. Gary Pierce
3792 Berry Drive
Studio City, Ca. 91604

Dear Mr. Pierce:

My associate, Mr. Bernard G. Long, P.E., has, in his letter of December 15, 1995, adequately addressed the status of the mineral reserves located in the "CHILE SULFUR PROJECT" and the "PIEDRA AMARILLA PROJECT" previously reported by Parsons (1988) and C.S.I.-Minexco, (1990).

The addition of titanium values to the reserve calculations greatly enhances the opportunity for economic success of the project. Two percent titanium, when processed into sponge, adds a gross value to the ores of more than $100 per ton at current prices.

Titanium oxide (Rutile) having a specific gravity of 4.6 allows for gravity concentration, if desired. Other titanium recovery methods employ digestion with sulfuric acid which may be produced locally.

The sulfur may be removed by leaching with hydrogen sulfide and ammonia; may be vaporized under vacuum or concentrated by flotation.

Laboratory tests are in order, using the latest technologies, to determine the most economic large scale methods of recovering the titanium and sulfur values from the subject ores.

The gold and silver values given in the report appear to be minimal.

Using the average calculated values per ton given for the deposit:

TiO2	Ti	Sulfur	Gold	Silver
2.7%	1.62%	18.72%	0.32g	6.78g

and assuming recoveries of 90% and using November 1995, E & M J prices of:

	TiSponge		%Rec	%Ti	#/%		
	$4.00/#	x	0.90	x 1.62	x 20	=	$116.64
Sulfur @ $60.00/ton							
	$0.03/#	x	0.90	x 18.72	x 20	=	$ 10.11
Gold	$385.10/oz	x	0.90	x oz/31.1g	x 0.32g	=	$ 3.57
					Total per ton		$130.32

Given the total inferred ore reserves of 173,800,000 tons @ $130.32 gross recoverable values results in an estimated recoverable value of $22,650,000,000.

As postulated by Mr. Long, more definitive work on the deposit could well increase the gross value above by quantifying and increasing the known values. Both Mr. Long and myself are pleased to be of technical assistance to you in the evaluation of this project and will be happy to assist you further in this endeavor.

Sincerely yours,

Karl F. Meyers

Karl F. Meyers

DECLARATION

By V.Davide Siniscalchi Representing what is believed to be true after a complete review of documentation as per Metallurgical Studies "Table 16".

(This declaration supersedes any other prior declaration concerning the same subject.)

At the request of Mr. Gary Pierce, I, V. Davide Siniscalchi, hereby declare as follows.

I. I commissioned the law firm of Hickey, Driscoll, Kurfirst, Patterson & Melia in Chicago to verify the legal title of a mining concession held by C.S.I. AG., Turks & Caicos, and the ownership of record of the stock of C.S.I. AG. After extensive legal research and to the best of my knowledge, no legal evidence was found to disclaim or disprove the claims of ownership made by Mr. Gary Pierce concerning that above.

II. I extensively reviewed a pre-feasibility study of the Piedra Amarilla Properties in Chile conducted by Minexco Ltda., for and on behalf of C.S.I. AG., in 1990. Assuming the veracity and the accuracy of the information in the study, I was able to assess the following findings.

A) The major authority quoted in the report that supervised inspection of some of the Piedra Amarilla Properties sites, and consequent sampling, measurements, and production data is Mr. Carlos Ulricksen, geologist, director of National Mining Service (Chile), and prominent leader in assay interpretation work.

B) The Piedra Amarilla Properties are situated in Region III and approximately 200 miles northeast of Copiapo in the Piedra Parada Mining District. They include nine parcels of land, of which only four, identified as parcels number 131, number 161, number 221, and number 251, provided sites for inspection, measurement, sampling, and production data studies.Each of these parcels measures three hundred hectares.

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C) Mineral reserves were quantified as both indicated and inferred according to the Mineral Resource Classification System of the U.S. Bureau of Mines. Quantity was assessed by trenching predetermined areas, by digging shallow pits for removal of bulk samples, and by sampling large outcrops which are exposed as hardened tuffs. Trenched areas were sampled along 15-meter horizontal channels, in both the mid-walls and floors, and samples were given an area of influence of approximately 100 meters. Trenches varied in length from 30 meters to 100 meters and in depth from 1 meter to 2 1/2 meters. A total of 17 sites were trenched and 15 pits were dug. The methods used to identify the geological structure and to compute its relative indicated tonnage and grade include the following: atomic absorption, fire assays, X-ray fluorescence, chemical leaching analysis, and microscopic studies.

Indicated and inferred reserves of gold tellurides equal 115,920,000 metric tons (19,200,000 metric tons of which are indicated), and indicated and inferred reserves of rutile (TiO_2) equal 112,720,000 metric tons (18,960,000 metric tons of which are indicated).

Indicated reserves identify the tonnage and the grade of the mineral contents present in a geological character. These reserves are computed partly by means of measures, samples, and production data, and partly by making projections over a reasonable distance of the geological character.

Inferred reserves are computed by making projections based on the broad knowledge of the geological character of the inspected sites, on an assumption of continuity of the geological character, and on comparisons with the geological character of adjacent or similar properties whose reserves have been measured with an accuracy of at least 80%. Inferred reserves are computed based mostly on the subjective expert opinion of professionals in geology and other mining-related fields. Margin of errors in making inferences should already be considered by the professionals that compute inferred reserves. Experience in the interpretation of assay works, as well as broad knowledge and deep understanding of the geological character that is being examined, greatly enhances the accuracy of the inferred projections by the expert professional.

Page 3 of 5

D) According to Mr. Carlos Ulricksen, the inferred age of the volcanic formations that constitute most of the Piedra Amarilla Properties is inferred as late tertiary to early, middle quaternary.

E) Region III of Chile comprises an area that is extensively mined, with major mineral extractions including copper, lithium carbonate, nitrates, iron ores, gold, silver, sulphur, and other commercial salts.

F) The host-rock of the Piedra Amarilla Properties is silica that appears intimately associated with rutile mineralization that overlies the silica quartz crystals as clasts and elongated prismatic inclusions. Rutile mineralization is widely and consistently distributed throughout the inspected sites and is believed to have developed not just from hydrothermal inclusion. Rutile is the most economically desirable of all titanium minerals because of the ease of its conversion into commercial grade pigment and metal.

Due to the introduction of large amounts of hydrothermal fluids, carbon dioxide and sulphur, the geological structure shows intense alteration of the silica quartz minerals and relevant presence of gold and silver tellurides, which makes it similar to the one in Cripple Creek, Colorado (U.S.A.), Emperor (Fiji), and the Carpathian Mountains (Ukraine).

G) Metallurgical studies show that gold can be extracted from tellurides by using Knelson centrifugal gravity concentrators and titanium dioxide pigment can be extracted from rutile by using the sulfation method. Titanium dioxide pigment is recovered as a by-product of the recovery process of sulphur. Rutile concentrates are not produced because of the difficulty and high costs in producing 95%+ TiO2 grade concentrates. It is important to understand that such metallurgical assumptions could be replaced, introducing new technology and shifting the chief mineral extraction from sulphur to titanium or gold. For instance, the more economical chlorination method for the recovery of titanium dioxide pigment could be used.

Page 4 of 5

H) Financial calculations in this point II.H are based on the following assumptions.

1. Costs of mining and extraction are fixed at U.S.$30 per metric ton. (This information was provided during a conference call on August 8, 1996 by Hal Gardner, geologist of Minexco Ltda. as a current average cost.)

2. The cost involved in the construction of a full mining facility including processing plants is equal to U.S.$350 million. Such mining facility could be depreciated using the accelerated straight-line depreciation method over the life of the mining facility which is approximately 25 years. Consequently, depreciation for the first year will be equal to U.S.$42 million (12% of cost) and each year thereafter (up to full depreciation) U.S.$14 million (4% of cost).

3. The construction of the full mining facility will be financed with 80% of the cost by using debt financing and 20% of the cost by using equity financing. Debt financing will require the issuance of a ten-year note at 10% interest to be paid annually in arrears. Yearly payments on the debt financing will be equal to U.S.$44.2 million including repayment of the principal.

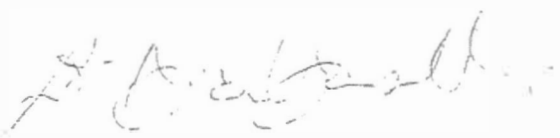
4. No other costs will be considered.

5. Production will start in August 1996.

6. The mining facility will process 25,000 metric tons of minerals per day.

7. C.S.I. AG will produce only titanium dioxide pigment and gold by using respectively the sulfation method with a recovery rate of 3.2% per metric ton (mt.) and the Knelson centrifugal gravity concentrators with a recovery rate of 0.0004% per kilogram (kg.). No production of sulphur, silver tellurides and silica is considered.

8. C.S.I. AG will take over the gap left in the titanium markets by the loss of the Sierra Leone operation. (Data based on the March 1996 Annual Commodities Review Issue, published by E&MJ.) C.S.I. AG will produce only commercial grade titanium dioxide pigment.



Page 5 of 5

9. The price of titanium dioxide pigment is that of 1995 and equals U.S.$1.01 per pound. This price assumption is realistic, especially if it is considered that according to Mr. Joseph Gambogi of the U.S. Bureau of Mines, Division of Mineral Commodities, demand for titanium pigments grew predictably with the global economy and higher prices for titanium metals and pigments reflected the relative rise in demand. (Data based on the March 1996 Annual Commodities Review Issue, published by E&MJ.)

10. As of August 2, 1996, the settle price of the gold (CMX) contract expiring August 1997 is U.S.$402.60.

11. Processing plants will process approximately 6,500,000 metric tons of minerals per year which will yield the following financials:

Gold:
6,500,000,000 kg. X 0.0004% (recovery rate) = 26,000 kg
26,000 kg. X 1000 = 26,000,000 grams
26,000,000 grams X U.S.$12.95 = U.S.$336,700,000

Titanium dioxide pigment:
6,500,000 mt. X 3.20% (recovery rate) = 208,000 mt.
208,000 mt. X U.S.$2225 = U.S.$462,800,000

Total gross profits:
U.S$336,700,000 + U.S.$462,800,000 = U.S.$799,500,000

Operating costs:
U.S.$30 X 6,500,000 mt. = U.S.$195,000,000

Financial costs:
U.S.$44,200,000

Net profits before taxes:
U.S.$550,300,000

V. Davide Siniscalchi

Date: August 8, 1996

STATE OF ILLINOIS)
COUNTY OF COOK)

Subscribed and sworn to before me this 8th day of August, 1996

NOTARY PUBLIC

"OFFICIAL SEAL"

13 | Mineral Processing and Metallurgical Testing

Metallurgical testing analyses as noted on the attachment entitled "Metallurgical Studies" have been carried out by the following mining companies:

- INTEC (Chile)
- R.M. Parsons (Pasadena, CA)
- Rogers Research (Salt Lake City, UT)
- Marambio Lab (Copiapo)
- CIMM (Santiago)
- SGS (Santiago)
- C.S.I. Ag./Minexco

The data contained in these reports was compiled over the period of July 1987 to 1994. The actual reports containing the data for testing and analytical procedures, relevant results, basis for assumptions and predictions for recovery estimates, etc. are not available for inclusion in this report.

METALLURGICAL REPORTS USED FOR DELINEATION;

"METALLURGICAL STUDIES" *Table 16*

Date	Title of Study		Lab/Sponsor
July 1987	Concentration of Sulfur	21pp	Intec-Chile
Oct. 1988	Flotability of Sulfur Caliche	19pp	Intec-Chile
Nov. 1988	Chile Sulfur Project Pre-feasibility Study	157pp	RM Parsons Pasadena, CA
Jan. 1989	Flotability of Sulfur Caliche and Control of Impurities	21pp	Intec-Chile
May 1989	Flotation of Sulfur Caliche	10pp	Intec-Chile
Oct. 1989	Technology for Production of Sulfur on a Large Scale	12pp	Intec-Chile
Oct. 1989	Technology for Production of Sulfur on a Large Scale	28pp	Intec-Chile
Nov. 1989	Titanium and Gold Telluride Distribution in Sulfur Flotation	10pp	Rogers Research Salt Lake City
Nov. 1989	Titanium and Gold Telluride Distribution in Caliche Samples	5pp	Rogers Research Salt Lake City
Dec. 1989	Preliminary Cyanidation Experience Using Caliche Samples	4pp	Marambio Lab Copiapo
Dec. 1989	Flotation of Sulfur Caliche - 3rd Region	290pp	Intec-Chile
Aug. 1990	Mineralogical Characterization of Titanium Bearing Species	7pp	CIMM Santiago
Aug. 1990	Recovery of Industrial Minerals from Sulfur Caliche	30pp	Intec-Chile
Sept. 1990	Preliminary Analysis of a Bulk Caliche Sample	1pp	Marambio Lab Copiapo
Dec. 1990	Chemical and Microscopic Characterization of Ti Bearing Caliche	6pp	Intec-Chile
Jan. 1991	Pilot Flotation of Caliche Sulfur and Melting of Concentrates in Continuous Autoclave	490pp	Intec-Chile
July 1991	TiO2 Concentration Study Proposal	5pp	SGS Santiago
Aug. 1991	Piedra Amarilla Project: Titanium & Byproducts Study	58pp	Compiled By: C.S.I. Ag/Minexco
June 1993	Titanium Marketing Study	60pp	Compiled By: C.S.I. Ag/Minexco
1994	Piedra Amarilla Properties Region 3 - Chile Pre - Feasibility Update	114pp	Compiled By: C.S.I. Ag./Minexco

"ADDITIONAL INFORMATION, ASSAYS, STUDIES, AND REPORT FINDINGS UPON REQUEST"

16 | MINING METHODS

In summary, trenching and pitting has been performed and substantial laboratory analyses have been conducted. Additional sampling and testing will be conducted to determine the amenability or potential amenability of the mineral resources and mineral reserves. The trenching and pitting methods indicate the richness of the mineral content over major sections of the Piedra Amarilla properties.

It is important to MAP the properties anomalies for drilling purposes and returns. The minerals were deposited in clearly visible strata formations at the surface. Aerial and ground-level photography clearly indicate the presence of extensive mineral deposits. It is a simple matter to determine the lateral and vertical extent of the deposits by pitting, trenching, drilling and core-sampling. A considerable number of studies have been completed by The Ralph M. Parsons Company and other mining experts since 1988 through the 1990's. These reports have been evaluated by government groups, certified geologists and mineralogists and will be provided under separated cover.

Another Ore processing method, Titanium Dioxide Pigment from Concentrates Acid Sulfation Method, will greatly reduce the cost of the extraction process. INTEC-CHILE developed a new technology for extracting Sulfur that will allow economic processing of ore of lower grades than had been previously feasible. The net result of these improved processes is that along with the high grade processing and easy accessibility of the Piedra Amarilla ores, C.S.I. Ag. will be able to extract and process the minerals at much lower rates than industry competitors giving the company a significant commercial advantage over current suppliers of Titanium and Sulfur, worldwide.

17 | Recovery Methods

The average cost of mining and extraction at Piedra Amarilla properties was originally estimated in 1990 by Minexco, a data collection and reporting agent in Chile, for C.S.I. Ag., to approximate costs at 41 US dollars per ton. At that time, the recoverable mineral deposits were valued at 12 US dollars per ton. The estimate price from Mr. Karl Meyers, a U.S. mineral consultant for the same minerals after recovery, rose to 131 US dollars, while mining and extraction costs have been reduced due to new technology. (At today's prices, the profitability has skyrocketed.)

The ratio of extractable minerals to overburden is less than 1:1, which is extremely low. This, along with the miner-bearing deposits, which have been extensively tested by pit and lateral trenching methods, established substantial inherent value in these properties.

The indicated and inferred reserves of recoverable deposits were established in the 1990's to be in excess of 22 billion US dollars. This evaluation was based on the reserves of Titanium, Sulfur, Silica and limited Gold reserves alone. Since that time, mineral values have escalated and a greater expanse of the properties has been tested. With the 'new' Gold assays, evaluations, declarations and advancements in mineralogy, the reserves alone are estimated to exceed 24 billion US dollars on four (4) of the nine (9) properties; and only by depths of 150 feet. The estimated value of such reserves has increased appreciably to exceed the 38 billion US dollar level. Also, note that Homestake Mining's estimate was 100 billion US dollars in 1999.

20 | Environmental Studies, Permitting and Social or Community Impact

An Environmental Study has been conducted, however, it is not available for inclusion into this report. However, based on testing and sampling previously done, there were not and are not any known environmental issues that could materially impact the ability of C.S.I. Ag. to extract the mineral resources or mineral reserves from the Piedra Amarilla properties.

Also, based on past experiences in performing trenching and pitting, etc. on the properties, there are no known potential social or community related requirements and plans, negotiations or agreements for the project. Lastly, to the best of our knowledge, there have been no discussions of remediation and reclamation requirements and costs.

21 | CAPITAL AND OPERATING COSTS

Capital and operating costs used in this report are based on studies employed prior to economic studies from Ralph M. Parsons and INTEC-CHILE were conducted. These costs are for an expanded mining project vs. a Pilot Plant operation as mentioned under Item 18. *Project Infrastructure*. The pilot plant has a direct and indirect cost factor of $100 million (non-US currency). The 'Full-Blown' projection is for the buyer's reference in consideration of an ultimate buy-out of the properties as a whole (1992 prices), which has immensely increased in today's market.

Direct and Indirect Costs, Engineering:	$529,020,000	
10% Contingency	52,902	($52,902,000)
Total Capital Costs ('Full Blown' plan)	$581,922,000	

Operating costs are based on feasibility lab work done on sulfur extraction, and preliminary pre-feasibility work on titanium, gold and silver extraction, and preliminary pre-feasibility work on titanium, gold and silver. Costs for mining are projected from contract mining operators in Chile and from historical data provided by INTECT-CHILE in 1992. The cost included for silicon production are best estimated based on furnace feed as a low cost byproduct. These methods have all been adjusted for economic reasons and at today's prices are comparable to previous projections with some being decreased. It is important to remember that at Pilot Plant scale, processing with the same returns on minerals on varied. The costs include for silicon production are best estimates based on furnace feed as a low cost byproduct.

Mining and Processing Cost/Ton	
Mine Extraction	$ 1.30
Consumables - Energy*	27.42
Labor - Management	6.69
Port Costs	.56
Maintenance	1.00
Office, Legal, Insurance	1.99
Contingency @ 7.5%	2.77
Total	$ 41.73

**Energy is estimated to decrease by 30% with new energy patented technology*

Value Mineral Extraction/Ton of Ore Processed	
TiO^2	$ 36.10
Ti Sponge	12.17
Prilled Sulfur	13.36
Sulfuric Acid	.84
Silicon Metal 98.5%	38.03
Silicon Metal 99.85%	8.03
Gold	3.05
Silver	.69
Total	$ 112.29

A basic financial analysis has been made using the same financial criteria found in the Ralph M. Parsons Company report (1988), except that a sensitivity analysis was not prepared. This analysis is based on limited Gold and Silver recovery technology being used, and on a large scale production processing plant.

22 | Economic Analysis

Based on the reserves of Titanium, Sulfur, Silica and limited Gold alone, the indicated and inferred reserves of recoverable deposits established in the 1990's was in excess of 22 billion US dollars. Since that time, mineral values have escalated. With new Gold assays, evaluations, declarations and advancements in mineralogy, the reserves alone are estimated to exceed 24 billion US dollars on four (4) of the nine (9) properties; and only by depths of 150 feet. The estimated value of such reserves has increased appreciably to exceed the 38 billion US dollar level. Note that Homestake Mining's estimate was 100 billion US dollars in 1999 and the December 30, 2015 article entitled "Mining Insiders Focus on Peru" by Luke Burgess attached hereto.

The average after taxes and royalties cash, available for distribution is estimated to be $313,806,000 in production years 1 through 11, and $342,806,000 in years 12 through 19 (up to 30 years), yielding an after tax and royalty return on investment (ROI) of 53.8% and 58.9%, respectively. This calculation is at a Full-Blown Plant scale, and will basically identify the lack of speculation needed for a mining company to purchase for a production given to them. These ROI's are 1988 estimates, which have exponentially increased since then with the reduction in Chilean taxes and royalties for commercial production, and the huge increase in Natural Resources Market prices. The last reported accrued taxes totaled $42,967

Conservatively speaking, the increase in market prices across the board is up by 400%. As a result, 4 x $313 million (1988 prices) totals $1.25 billion annually. This data shall be used as nothing more than a reduction of speculation by a conglomerate about Purchase Price Analysis (PPA). The Pilot Plant as a PPA is beneficial for speculations by the Fractional Ownership Property Trust Purchasers, and the end user of a large conglomerate mining company. It demonstrates an exit strategy for the Fractional Trust Owners as to how to sell and provides the end user a calculable starting point after the Pilot Plant mineral returns are proven.

24 | OTHER RELEVANT DATA INFORMATION

The following attached documents supports and/or clarifies information contained in this report.

- C.S.I. Ag. Corporate Resolution
- Confirmation of Concession
- Letter from Ed Tovrea, Past President of MECA
- Bulletin of the Status of Piedra Amarilla
- Letter from Harold Gardner
- Letter from Pilar Oyarzun (Figueroa Valenzuela & CIA) to Gary Pierce
- Article "Miner Insiders Focus on Peru" by Luke Burgess

MELISSA K. RAYMOND
ATTORNEY AT LAW
7734 HERSCHEL AVENUE, SUITE E
LA JOLLA, CALIFORNIA 92037
TELEPHONE (619) 454-0282
FACSIMILE (619) 454-1608

CORPORATE RESOLUTION
October 24, 1995

The Board of Directors of Minerals Exploration Corporation of the Americas ("CSI AG/MECA") hereby resolve that Mr. Gary Pierce, Chief Executive Officer and President of International Security Network ("ISN"), be appointed as President and Owner of CSI AG/MECA.

Be it resolved that Mr. Pierce of ISN shall have and may exercise full control of all matters pertaining to the management of the business and affairs of the CSI AG/MECA corporation, including the Piedra Amarilla properties in Region 3, Chile.

Mr. Pierce of ISN is hereby granted full authority and ownership to the extent provided in the CSI AG/MECA by-laws and within the limitations prescribed by statute. Mr. Pierce shall have signatory privilege as well as the power to authorize the seal of the corporation to be affixed to all papers which may require it.

DATED: 10-25-95

NOTARY:

Edward Tovrea
CSI AG/MECA
President
Chief Executive Officer
Director

DATED: 10/25/95

Harold Gardner
CSI AG/MECA
Director

Witnessed by:

DATED: 10-25 95

David Vander Werff
CSI AG/MECA
Director

Witnessed by: BRUCE WEBB

24 | OTHER RELEVANT DATA INFORMATION *(continued)*

DATED: 10/25/95

Veryl Anderson
CSI AG/MECA
Director

Witnessed by: Doug Anderson

DATED: 25 Oct '95

Gary Pierce
ISN
President
Chief Executive Officer

Witnessed by: KEVYN BRAUN

APPROVED AS TO FORM

DATED: 10-25-95

Melissa K. Raymond
Attorney for MECA

2

MELISSA K. RAYMOND
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LA JOLLA, CALIFORNIA 92037
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January 5, 1996

Dear Mr. Pierce:

CONFIRMATION OF YOUR CONCESSION:

You tendered to me eight million dollars and zero cents in the form of cash, loans and in-kind services. You paid all reinstatement fees necessary to re-activate C.S.I. AG, all legal fees, documentation and filing expenses essential to the company's good standing, and all annual license fees required for the company to retain its constituted exploitation concessions. Further, you labored to develop the Piedra Armarilla mining project in Chile.

In exchange for and in consideration of the aforementioned, I tendered to you full ownership of C.S.I. AG. The company was conveyed to you by me, the sole shareholder and director, of my own free will. The interest you received in the company was free of any liens or other encumbrances; your title is good and true and imparts to you absolute right of authority and ownership in the company.

Sincerely,

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

No. 5193

State of CALIFORNIA
County of SAN DIEGO

On APRIL 4 1996 (DATE) before me, BETTY SPERRY, NOTARY PUBLIC (NAME, TITLE OF OFFICER - E.G. "JANE DOE, NOTARY PUBLIC")

personally appeared EDWARD A. TOVREA (NAME(S) OF SIGNER(S))

☑ personally known to me - OR - ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

BETTY SPERRY
Comm. #1002590
NOTARY PUBLIC CALIFORNIA
SAN DIEGO COUNTY
Comm. Expires Aug. 22, 1997

WITNESS my hand and official seal.

Betty Sperry
SIGNATURE OF NOTARY

OPTIONAL SECTION

CAPACITY CLAIMED BY SIGNER

Though statute does not require the Notary to fill in the data below, doing so may prove invaluable to persons relying on the document.

☑ INDIVIDUAL
☐ CORPORATE OFFICER(S)
TITLE(S)
☐ PARTNER(S) ☐ LIMITED ☐ GENERAL
☐ ATTORNEY-IN-FACT
☐ TRUSTEE(S)
☐ GUARDIAN/CONSERVATOR
☐ OTHER:

SIGNER IS REPRESENTING:
NAME OF PERSON(S) OR ENTITY(IES)

OPTIONAL SECTION

THIS CERTIFICATE MUST BE ATTACHED TO THE DOCUMENT DESCRIBED AT RIGHT

Though the data requested here is not required by law, it could prevent fraudulent reattachment of this form.

TITLE OR TYPE OF DOCUMENT: CONFIRMATION OF YOUR CONCESSION
NUMBER OF PAGES: 1 DATE OF DOCUMENT: JAN. 5, 1996
SIGNER(S) OTHER THAN NAMED ABOVE:

Minerals Exploration Corporation of the Americas M.E.C.A.

September 18, 1998

TO: Gary Pierce
RE: Chilean Mining Properties

HISTORY

In 1988 we approached Shearsonn Lehman NY to help us arrange an equity partner to develop our award winning properties in Chile. They connected us with Mr. William Zylka who proceeded to assist us for some time. However, he later defaulted on his contract.

MISREPRESENTATION

Mr. Zylka contacted some of the major mining companies to co-venture with him in pursuing this matter. Mr. Zylka misrepresented himself to the mining companies and also to us. Consequently, after his default the misrepresentation was acknowledged by those mining companies. Mr. Zylka had the mining companies sign non-circumvention agreements. The companies were interested in the project but could not pursue any involvement because of the agreements. After discussing this with the mining companies they felt it best to let the agreements lapse. Although these non-circumvention agreements would not hold up in court we waited for them to expire.

FINANCING

During the years of 1989-1992 we were approached by the Commercial Advisor to H.R.H. Prince Abdullaziz Bin Saad Bin Abdullaziz Al Saud to obtain financing. Mr. Tovrea was led to believe H.R.H. Prince Abdullaziz Bin Saad Bin Abdullaziz Al Saud was going to arrange financing and co-venture the operation. Mr. Tovrea went to Zurich to research the project with the Commercial Advisior to H.R.H. The Arabs were very interested in the proposal and the project. The Arabs were very focused on sulphur with gold as a secondary measure and the large amounts of titanium dioxide that could be found as well.

INVASION

In 1990 Kuwait was invaded by Iraq while Mr. Tovrea was in Zurich with the Commercial Advisor et al. Their advisors in Saudi Arabia ordered them back to Kuwait to attend to their families and to prepare for conflict.

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Rancagua 0157 Office 508 Santiago Chile 222 1188

24 | OTHER RELEVANT DATA INFORMATION *(continued)*

Tovrea Letter—Page 2

ILLNESS

Mr. Tovrea returned to the United States and became ill with heart disease. At this point he reached out to Gary Pierce. Mr. Pierce was originally brought in for his contracting background was now needed for financial support. Over the period of 1992-1995 Mr. Pierce made an $8,000,000 investment into the company. Mr. Tovrea wanted to relinquish primary responsibility for the company for health reasons. He consequently turned it over to his longtime friend and business associate, Gary Pierce.

SALE

As per documentation represented, Mr. Pierce took over full ownership and all titles to the properties. The price of the sale is confidential.

As per your request I, Edward A. Tovrea, 7734 Herschel Ave. Suite J., La Jolla CA, 92037, state that these claims and statements are true to the best of my recollection and knowledge

Ed Tovrea,

Past President of MECA & CSI Ag

Witness

24 | OTHER RELEVANT DATA INFORMATION *(continued)*

B O L E T I N O F I C I A L D E M I N E R I A

BULLETIN OF THE STATUS OF PIEDRA AMARILLA

The previous investigation of ownership were conducted in the Year of 2000, the 2ed. of August, in Chanaral, Chile; **CERTIFICADOS, Hipotecas y Gravaments (Mortgages & Taxes)**...El conservador de minas que suscribe :

"SOCIEDAD(partnership) C.S.I. AG." The 4th. of January, 1990, this certificate assures that the ownership is in the name of "P I E D R A --- A M A R I L L A 1 6 1 A L 191", located in SIERRA FALDEOS CERROS LAGUNA BRAVA, Municipality; of DIEGO DE ALMAGRO, Providence; of CHANARAL III Region of Atacama, which is number; 51 N° 8, in the REGISTRO DE PROPIEDAD OF MINAS, in the year 1990.
(The additional properties all have the same certificate documentation, all 9(nine) properties...)

On or about the 13th. of January, 2006; there was an additional inquiry to the status of "ownership". With the PROVINCIAS DE COPIAPO, HUASCO Y CHANARAL. The PIEDRA AMARILLA properties were still on the Mining Journal, still showing ZAVALA ARAYA FERNANDO, as fiduciary over the properties. (It is common practice for Non-Domestic Corporations(I.B.C.), to enlist the services of a fiduciary to act on their behalf, while their presents in the Country is not always practical.)

On or about the 7th of March, after a very extensive investigation, the attorney acting on the behalf of **C.S.I. Ag. & VISTA,** authorized to conduct business for Mr. Gary J. Pierce, was informed that the property was still as it had been since conception. At this time it was realized that the previous years taxes(Gravaments) were in the rears(parte posterior). The 'back taxes' were in the amount of $42,967.00. And because the taxes had lapsed, Chilean law allowed them to double the amount owed. The payment was directed to be paid to the GENERAL TREASURY of the COPIACO REPUBLIC.

This payment has not been communicated to the proper authorities. The need to satisfy this payment, is imperative and must be accessible to inquire into the status of the property. The taxes had not been paid and the there was NOT an issue with the non-payment...until the inquiry was made by **CSI and V.S.I.T.A.** employing an Attorney from Chile blindly.

Presently, C.S.I. Ag. Ltd., Attorney; Anthony Thompson, has come forward and is awaiting for the go button to be pushed. The description of the Mining Property is all that is needed for him to instruct the Chilean Attorney to proceed and PAY the back taxes and fees or fines. The attorney will also be instructed to remove Mr. FERNANDO from the position as a Fiduciary figure, and address legal representation in a trust arrangement between C.S.I. Ag. Limited, as a I.B.C.(International Business Company), and the structuring of a network of "Purpose Trusts", holding the Fractional Ownership of the MINING PROPERTIES.

Please know that it in **suggested** for me to be free, to conduct the needed business transactions'. Please understand that this property has been confidentially owned and controlled for 22Years, and it is inconceivable that the intrinsic ownership will be disrupted in any fashion...and to assure this I am looking for a PARTNERSHIP, of FINANCIAL STRENGTH, with a partner that has the foresight to conceive the magnitude of this undertaking and the unbelievable rewards a waiting that PARTNERSHIP...
Sincerely and with my best step forward to full disclosure.....
Respectfully I submit this as fact to the best of my knowledge.

Gary J. Pierce....

24 | OTHER RELEVANT DATA INFORMATION *(continued)*

LETTER SENT TO MR. PIERCE, on August 23,1998.

"Dear Mr. Pierce,"

"Regarding an estimate evaluation of the mineral reserves contained in the PIEDRA AMARILLA MINERAL PROPERTY GROUP, the following can be stated; The initial site work has been at the surface and near surface levels of an immense alteration some seven kilometers long and at least two kilometers wide." (What does that mean...Alteration would be geological system that shows mineralization.)

"This surface alteration is the upper expression of typical epithermal gold and copper system. In most areas of the World the upper portions of the epithermal systems have long since eroded away and the primary copper and gold ore bodies are within typical open pit mining distance from the sufficient to the PIEDRA AMARILLA the epithermal systems are much newer and hence very little of the upper system has had sufficient time to erode away." (Do this mean that you have to dig alittle deeper to get to the Primary Zone.)

"This upper system contains minerals which were originally volatized at relatively low temperatures."(Means when substances turn into gas, sulphur has a low boiling point, if you put a match to it, it goes up into gas.)

"Such as arsenic, tellurium, selenium and sulphur, and hence we refer to this upper system as a former alteration of gaseous origin. These minerals are chemically related to gold and silver values found in the upper system, most of them as tellurides, selenides and arsenides."

"The depth of the upper system was estimated from geological evidence to be at least 100 meters thick but it is likely that it would be several hundred meters thick."

"A second mineralized zone of primary copper and gold exists at depth. This lower zone was explained to you by Homestake after their first visit to the site." (Homestake is a U.S. Based precious metals mining company, in South Dakota for 50 years, and have offices throughout the world.)

"Geologists from Homestake were **impressed** by the size of the alterations at the surface expression. Their opinion was the the Primary Copper and Gold zone would be found at a depth of 1000 meters(this should of been 100 meters). It would be expected that this lower zone would extend to a depth of several hundred meters."

"The combined upper and lower mineralized zones if mined out would yield mineral products in excess of **$100 billion dollars** if sold at todays prices."(This was 1998, and the price of gold was about $300.00 per oz.. That would be the price if you were extract all of that out---and sell them at todays prices.)

"Please feel free to contact me if you have any further questions and I look forward to seeing you in September."

"Sincerely, Harold Gardner."

'In this letter, do you not offer an opinion that that particular project could be Mined and would yield **mineral products in the excess of $100 billion dollars, if sold at today's prices.**' "---I think I said that already."

"Yes, I Harold Gardner wrote this letter and signed this letter, and was not asked by Mr. Pierce, to write such a letter..."

24 | OTHER RELEVANT DATA INFORMATION *(continued)*

FIGUEROA
VALENZUELA
&
CIA
ABOGADOS

GONZALO BIGGS B. • CARLOS FIGUEROA G. • CARLOS FIGUEROA S. • GABEI FUHRMANN S. • PILAR OYARZUN G.
VICENTE SANTA CRUZ G. • MARIA STELLA PEREZ C. • JORGE VALENZUELA D. • LUZ MARIA YERGARA F.

MINERAL PROPERTIES TITLE SEARCH - A LEGAL OPINION

May 06, 1996

TO: Mr. Gary Pierce
President
C.S.I. Ag
Studio City, California
Fax N°: 818-508-1530

REF.: Piedras Amarillas Mineral Properties.
Region III, Chile

Dear Mr. Pierce:

Your Company has retained my office and reguested an in-depth title search and opinion letter regarding ownership of the Piedras Amarillas mineral properties located in the 3rd Region of Chile. Our law firm is recognized as an expert in the field of Chilean Mining legislation, including interpretation of the existing mining code, title searches for determining ownership rights, and all legal aspects related to the legal constitution, protection, defense and maintenence of mineral properties. A further description of our law firm and our major mining clients is attached hereafter as an appendix to this opinion letter.

Background.

C.S.I. Ag acquired the mineral rights to a group of mineral properties known as the Piedras Amarillas in December of 1989. For a brief period of time I served as a Trustee for the transfer of these properties and so I am very familiar with the legal acquisition of these properties initially made by C.S.I. Ag. During that time frame I also did title research and gave legal

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FIGUEROA
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VICENTE SANTA CRUZ G. • MARIA STELLA PEREZ C. • JORGE VALENZUELA D. • LUZ MARIA VERGARA T.

opinion letters reguarding these properties.

There are a total of nine mineral properties, listed hereafter, comprising a total of 2.488 hectares.

The properties are located near the Laguna Brava range, community of Diego de Almagro, Province of Chañaral, Region III.

1.- Piedra Amarilla 41 - 70
2.- Piedra Amarilla 71 - 100
3.- Piedra Amarilla 101 - 130
4.- Piedra Amarilla 131 - 160
5.- Piedra Amarilla 161 - 190
6.- Piedra Amarilla 191 - 220
7.- Piedra Amarilla 221 - 250
8.- Piedra Amarilla 251 - 280
9.- Piedra Amarilla 282 - 290

During December, 1995 a preliminary title search was executed at your reguest and a brief report forwarded to your office on December 13. This present letter is based on a much more in-depth study.

Basis of Study.

The purpose of the title search was to determine:

(1) Ownership of the Piedras Amarillas Mineral properties.
(2) Existence of competing mineral claims in the areas covered by the Piedras Amarillas.
(3) Existence of any leins, mortgages, and other encumbrances against the properties or which might affect the ownership interests.

A number of public institutions and documents were used to gather this information, including the following:

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FIGUEROA
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VICENTE SANTA CRUZ G. • MARIA STELLA PEREZ C. • JORGE VALENZUELA D. • LUZ MARIA VERGARA F.

4.- The Piedras Amarillas Mineral properties have full and preferencial rights for exploitation. An in-depth property schematic study showed that prior to the Piedras Amarillas there were no existing claims or concessions which would have to be respected.

5.- In the same area covered by the Piedras Amarillas properties there have been no mineral claims filed on top of these by third parties against which the owners would have to defend thenselves.

6.- In the region adjacent to the Piedras Amarillas, there are a few exploration and exploitation claims which are outlined on the attached map.

7.- Regarading the surface rights, we can inform according to the Office of Land Management that the surface rights on the Piedras Amarillas belong to the State of Chile, and there are no registered private land owner.

ANNEX - MAP
- BACKGROUND LAW FIRM

Pilar Oyarzún G.

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25 | INTERPRETATION AND CONCLUSION

The Piedra Amarilla properties contain one of the world's largest Titanium deposits, significant concentrations of Gold, other precious metals such as Platinum, Palladium and as rooted in the corporate name, 'Ag' consequential reserves of Silver. Approximately 30% of the worlds economically recoverable Sulfur, thru innovative technological processing methods, is held within these properties.

Demand for Sulfur is a known constant and the world market for Titanium is undergoing significant growth. There is a new compound that has come into light, with the increased need for energy, Lithium - energy for the future. There is a need for additional reports and investigation, however, geological assumptions in assays indicates there is an inherent possibility that Lithium could be a huge element of value on C.S.I.'s balance sheet. Recent technological developments with "little to no" overburden extraction and recovery costs were relatively low in the early 90's, and have remained at a low due to technology. (As a reminder, in 1998 Prince Abdullaziz Bin Saad-Al Saud, sought a 'co-venture' for Sulfur only at a proposed price of $1.3 billion with all additional minerals as products of 'tailings' and the property of C.S.I. for processing.) This is favorable to Piedra Amarilla's project and fixes significant price advantages over their competitors worldwide.

Based upon a trust purchaser's ownership and a return of 50% of the sale price, the Fractional Cooperative Ownership (FCO) Trust can create significant returns. With a conservative Sale Price for the total Piedra Amarilla project, the FCO's would divide 50% of that selling price as 50% owners divided by 5,000 trust purchasers.

As the 1990's estimates and projections at a fully commercial operation indicate, a return of approximately $1+ billion per year in recoverable reserves is practical, escalating as the depths increase in mining and would exponentially increase the properties' value over the lifetime of the project. This does not take into consideration the development of additional mineral's marketing possibilities. Increases are evident as the mine matures into depths of the first few hundred feet. Assets of this property would undergo an enduring increase in worth, calculated by Recovery to Depth (RTD) ratio and the value would be estimated financially in the selling price. The property being sold under Fractional Cooperative Ownership (FCO) Property Trusts or retained by an outside operator is a joint venture with intentions to mine the property. Either way, the purchaser/owner has an 'exit strategy' with a substantial return-on-investment (ROI).

27 | REFERENCES

The following contact information is the last known for the individuals listed below who are cited in this report.

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Rancagua 0157 Office 508
Santiaga, Chile 222 1188

THE *WHY* ?

CURRENT VALUATIONS

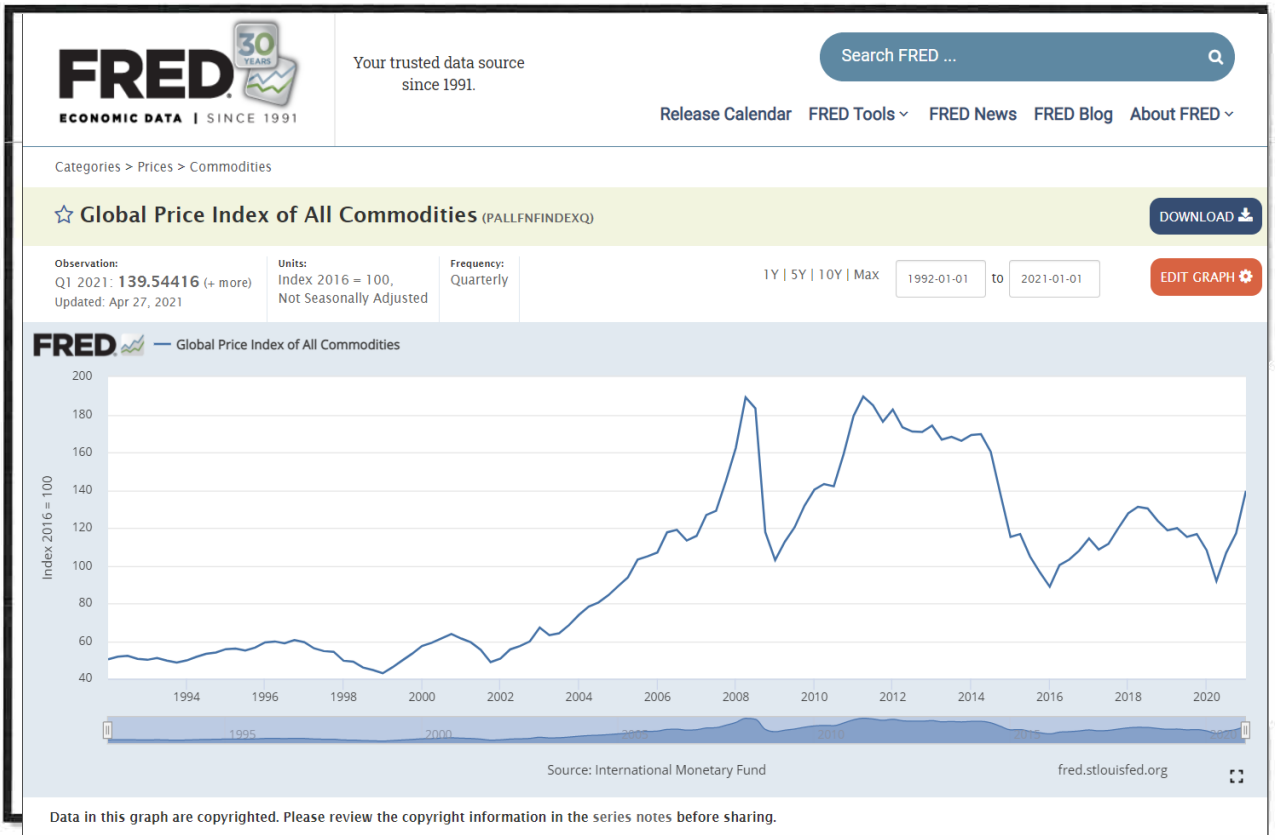
F

THE CYCLE OF MININNG

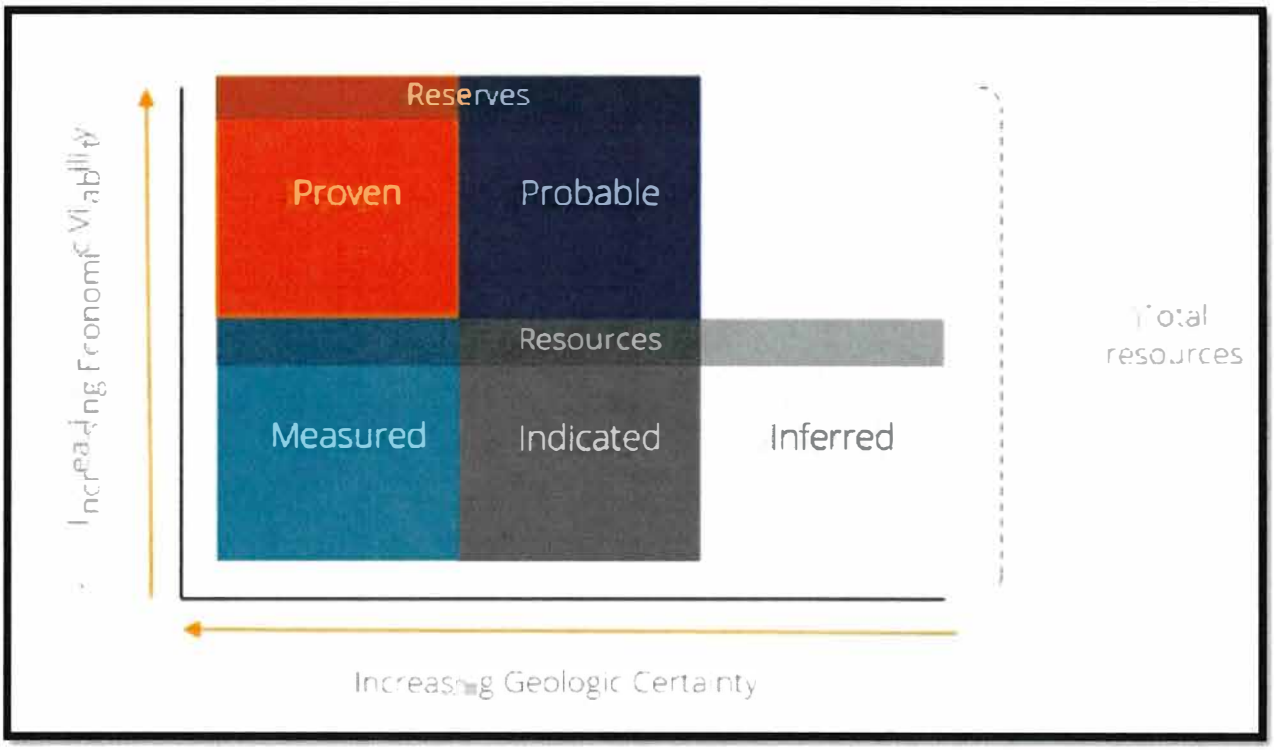
The Current market values of the Piedra Amarilla properties has been the primary focus throughout this summary white paper primarily due to the more extensive exploration and potential of the indicated/ inferred reserves. The Piedra Parada Salar and the Constellation properties as shown in the limited CAN-EX Property Evaluation Report have the similar potential as the PA areas. The two properties do "indicate" Lithium reserves with the posiblity of being extensive.

The mining properties of **the Piedra Amarilla** located in Chilean Mining District of the Piedra Parada of Region III at elevations from 4100 Meters to 4600 Meters **with completed (FS) Feasibility Study by R.M. Parsons Co. are the basis for the current market valuations.**

The Commodity Cycle is in an up-trend and is projected to grow 3.5% to 4% YoY for the decade into the 2030,s



THE CYCLE OF MININNG



The Increasing Geologic Certainty is inverse to time development. **Inferred** reserves imply more time to develop the reserves into production. The PA properties have been (**Measured**) tested to **Indicate** over the areas the types and quantities of reserves that are **Inferred** to a qualifiable depth.

This data can be used by a qualified person to place the area measurements into the higher **Indicated and Measured** categories. This would establish an preliminary NI-43-101 for the properties with ongoing updates from a step-out and infill drill to depth profile program using targeted survey data to periodically update the NI-43-101 to increase the resources and move them to the more valued Measured classification of reserves.

With commencement of mining the Measured reserves are Proven with the Indicated reserves elevated to the Probable.

THE CYCLE OF MININNG

U.S. Bureau of Mines: Mineral Resource Classification system used prior to November 27, 2010. There after the CIM definition standards of the **NI-43-101** rules are used. The rules developed by the CSA – Canadian Securities Administration.

Exceptions apply to these rules by the SEC (USA) for public offered securities in the statement of INFERRED – resource. That this level of classification "not to be assumed that all or any part of this resource can be converted to reserve to be economical /or legal /or exist to be mineable"

This will not apply to the PA/PP properties as this is not an USA securities registration offering also the following applies:

- The **PP-Salar** property has a **Pre-Feasibility study**
- The **PAP** has completed **Feasibility Study**
- **Trench Sampling is the best for Open-Pit mining feasibility with follow on Core drilling for step-out and infill delineation and depth profiles to increase Resources and upgrade to higher Reserve's status.**

MINERAL RESOURCE CLASSIFICATION SYSTEMS

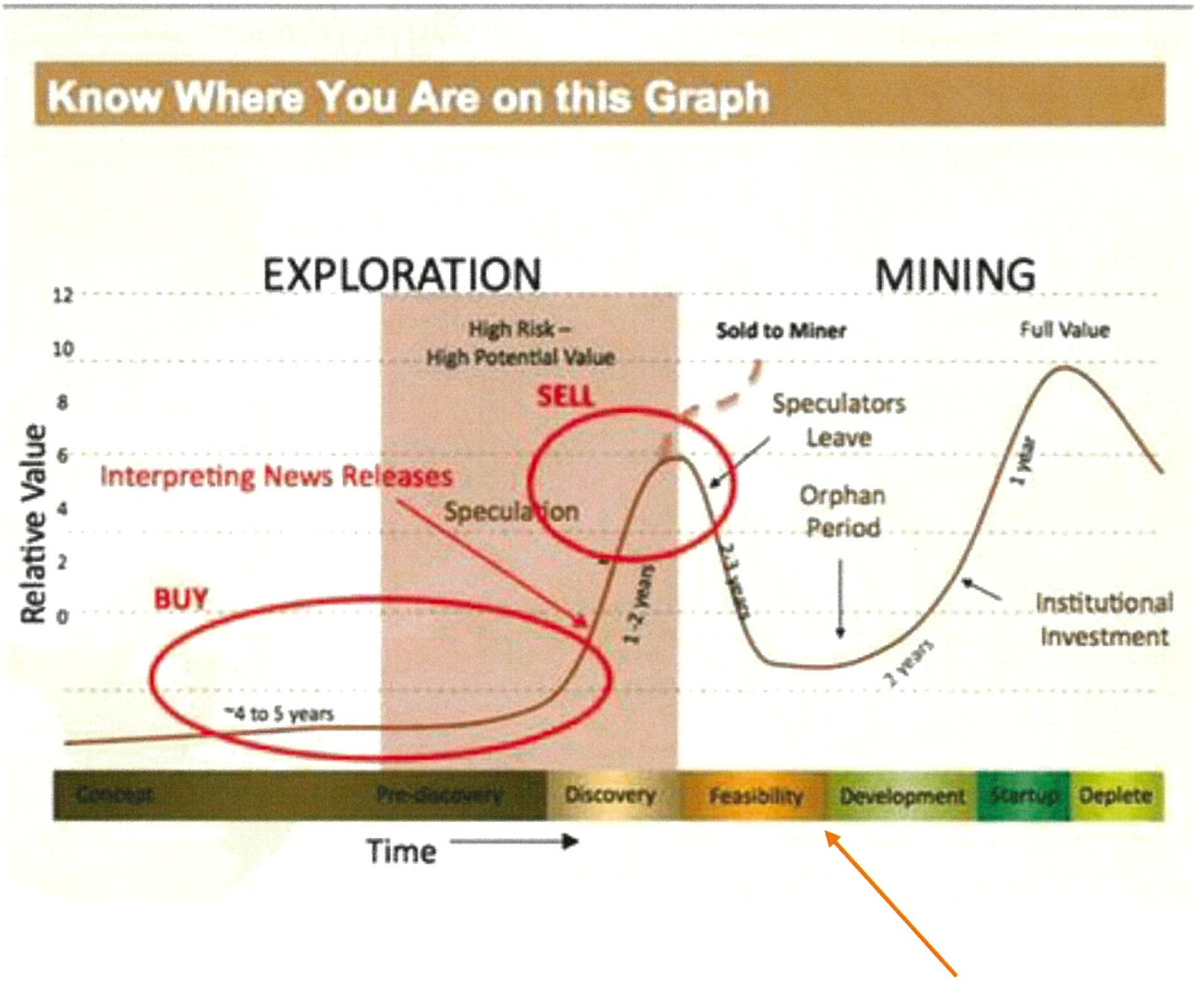
U. S. BUREAU OF MINES

- **Measured.-** Reserves or resources for which tonnage is computed from dimensions revealed in outcrops, trenches, workings, and drill holes and for which the grade is computed from the results of detailed sampling. The sites for inspection, sampling, and measurement are spaced so closely and the geologic character is so well defined that size, shape, and mineral content are well established. The computed tonnage and grade are judged to be acurate within limits which are stated, and no such limit is judged to be different from the computed tonnage or grade by more than 20 percent.

- **Indicated.-** Reserves or resources for which tonnage and grade are computed partly from specific measurements, samples, or production data and partly from projection for a reasonable distance on geologic evidence. The sites available for inspection, measurement, and sampling are too widely or otherwise inappropriately spaced to permit the mineral bodies to be outlined completely or the grade established throughout.

- **Inferred.-** Reserves or resources for which quantitative estimates are based largely on broad knowledge of the geologic character of the deposit and for which there are few, if any, samples or measurements. The estimates are based on an assumed continuity or repetition, of which there is geologic evidence; this evidence may include comparison with deposits of similar type. Bodies that are completely concealed may be included if there is specific geology evidence of their presence. Estimates of inferred reserves or resources should include a statement of the specific limits within which the inferred material may lie.

THE CYCLE OF MININNG



The company CSI.Ag soon to be named AMC is currently located at the **Feasibility – Development** boundry.

Gold and Silver

Current recoverable Gold and market value estimates

Piedra Amarilla properties only

9 properties that total 2488 HECTARES (the 600 Hectares of the Constelacion 2 & 4 properties, located over the Piedra Parada Salar are not covered in this paper). Of the 7 properties contiguous 4 were extensively studied and **Sample Trenched (ST) and Pit dug.**

Samples are taken from selected areas measuring up to 500 m X 1250 m each within the 4 properties. Trenching of 2-12 Meters depth and 6 in. dia. Auger pit holes sampled to .5-1.5 m depth totaling 25,000 Metric Tons (Mt) for assaying with **Strip Ratios less** than 1:1, very **amenable to low-cost open pit mining.**

General Parameters

50meter average depth calculated: Standard (1X) value/depth multiplier.

Estimated values/depth range; 4X/ 200m to 8X/ 400m or more for epithermal alkaline systems of Veins, Fissures and Breccia pipes similar to those found at Cripple Creek, Colorado; Emperor, Fiji; Carpathian, Russia. This comparison was provided by **Homestake mining Co.** Geologists site visits from their EL Hueso mine location at a lower elevation approximately 40 miles west of the properties.

174,000,000 Mt ore calculated contained in the 4 sampled properties (#131, 161, 221 & 281) totaling 1000 Hectares. Resources categorized as “Measured” and “Indicated” with all conservatively placed as Indicated (R.M. Parsons Co.)

Gold in the ground

Samples were original .24g-.33g-Au/Mt (disseminated/free Au) using Fire assay. They were then corrected by X-ray Fluorescence because of the abundant Tellurides (predominant Krennerite) to have a range between 1.5 to 9.8 g-Au/Mt: with an average value of 4.55 g-Au/Mt

Using $1750/ Toz.-Au current (April/2021) price: **This yields $229.32 USD Au/ Mt processed as follows.**

Estimated yield Au only: 174,000,000 Mt ore X 4.55 Au-g/Mt X .90 extraction efficiency = **712,530,000** (721 Mt-Au) g-Au X $56/g-Au = **$39,901,168,000 USD.**

6/4 = 1.5 multiplier for 6 contiguous **properties of 300 Hectares each**, yields **1.5 X $39,901,168,000 = $59,851,752,000 USD** value /50m depth (1081.65 Mt-Au)

Current recoverable Gold and market value estimates

Silver in the ground

Using $26.43 / Toz.-Ag current (April-May/2021) price: **This yields $6.375 USD Ag/ Mt processed as follows.**

Silver values are computed using the same bulk calculations as for Gold at 7.5 g-Ag/Mt.

Estimated yield Ag only: 174,000,000 Mt ore X 7.5 Au-g/Mt X .90 extraction efficiency = 1,175,265,000 (1189.41 Mt-Ag) g-Ag X $.85/g-Ag = **$998,975,250 USD.**

6/4 = 1.5 multiplier for 6 contiguous **properties of 300 Hectares each**, yields **1.5 X $998,975,250 = $1,498,462,875 USD** value /50m depth (1632 Mt-Au)

Total Gold and Silver extraction* production

This yields $236 USD Au + Ag/ Mt processed

*Some assays tested to approx. 8+ g-Au/Mt and 22+ g-Ag/Mt (not included in resource calculations) which may improve yield with increase in depth.

Incredibly significant values of Titanium, Sulfur, Silica to be covered in the following pages. Lithium is proven to be in the Salar with no reserve values stated requiring further sampling and testing. A 25,000 TPD (Tons Per Day) scalable extraction circuit has been designed by Ralph M. Parsons Co**. with Gold and Silver as a byproduct.**

Current recoverable Gold and market value estimates

Reference charts for values used

A number of high-grade projects I'm tracking trade at an average EV/ounce ratio of $72. *None* of the juniors on the list below will be free cash flow-positive anytime soon.

***EV**= Enterprise Value (#-Shares Outstanding X $-Price/share - Obligations)*

***Au Equiv. Ozs.** = M+I+Inf. total reserves*

*Therefore the value of the gold reserves contained in the property = EV/ Au Equiv. Ozs. and would be the **purchase price** for the mining project.*

Gold juniors with high-grade, pre-production projects								
	project location	shares outstand	5/13/21 price	market cap C$ M	Enterprise Value C$	Meas. + Ind. + Inf. Au Eq. oz.	Au Eq. grade g/t	EV / Au Eq. oz.
Rockhaven Resources (PEA)	Yukon	208.0	$0.135	$28	$24	1,632,000	5.2	$15
Gatling Exploration (pre-PEA)	Ontario	40.0	$0.430	$17	$15	960,800	5.4	$16
West Red Lake (RLG) (66%)	Ontario	182.2	$0.075	$14	$13	717,420	7.6	$18
1911 Gold Corp.	Manitoba	48.6	$0.600	$29	$22	1,038,000	5.3	$21
Canagold (two projects) CCM.T	B.C.	70.0	$0.485	$34	$27	1,071,000	10.5	$26
Grande Portage (pre-PEA)	Alaska	93.3	$0.510	$48	$46	1,534,943	9.9	$30
Blue Star Gold (pre-PEA)	Nunavut	278.0	$0.080	$22	$28	831,000	6.9	$34
Getchell Gold	Nevada	72.9	$0.520	$38	$37	1,069,000	6.3	$35
Aurelius Minerals	N. Scotia	27.6	$0.610	$17	$14	374,000	6.8	$38
Fury Gold 3 projects, 2 PEAs	various	117.8	$1.490	$176	$176	3,841,333	6.8	$46
Red Pine	Ontario	47.7	$0.710	$34	$34	726,000	5.4	$47
Bonterra (pre-PEA)	Quebec	90.6	$1.190	$108	$105	2,103,000	6.8	$50
55 North Mining	Manitoba	104.1	$0.120	$12	$12	199,270	6.1	$63
Highgold Mining (pre-PEA)	Alaska	54.6	$1.480	$81	$66	884,000	10.3	$74
Hellostar (pre-PEA)	Alaska	37.0	$1.070	$40	$32	395,825	14.2	$80
Arizona Gold (PFS)	Arizona	346.1	$0.125	$43	$35	421,800	7.4	$84
Maritime Resources	Newfoundland	398.2	$0.190	$76	$72	693,000	8.7	$104
Whitehorse Gold	Yukon	42.7	$1.500	$64	$64	581,201	7.4	$110
AuTECO Minerals (AUT.ax)	Ontario	1,600.0	$0.087	$139	$115	1,000,000	11.3	$115
Osisko Mining (PEA)	Quebec	344.2	$3.100	$1,067	$802	6,138,070	8.3	$131
Lion One Metals	FIJI	155.7	$1.190	$185	$125	767,500	9.2	$163
Gold Mountain	B.C.	49.0	$2.060	$101	$98	549,000	5.6	$178
Radisson Mining	Quebec	245.2	$0.235	$58	$53	289,145	8.6	$182
	averages:	202.3			$88	1,209,448	7.8	$72
Blue Lagoon (pre-PEA)	B.C.	73.3	$0.53	$39	$36	1,000,000	10.0	$27
Blue Lagoon (pre-PEA)		73.3			$36	2,000,000	10.0	$14
Blue Lagoon (pre-PEA)		73.3			$36	3,000,000	10.0	$9

Blue Lagoon could end up near the top of this list, especially if its deposit(s) remain close to 10 g/t Au Eq as it grows. Assuming a resource of 1M ounces, the company would be trading at $28/oz. At 2M ounces, $14/oz, 3M ounces, $9/oz ...

Current recoverable Gold and market value estimates

Titanium

Titanium Pricing

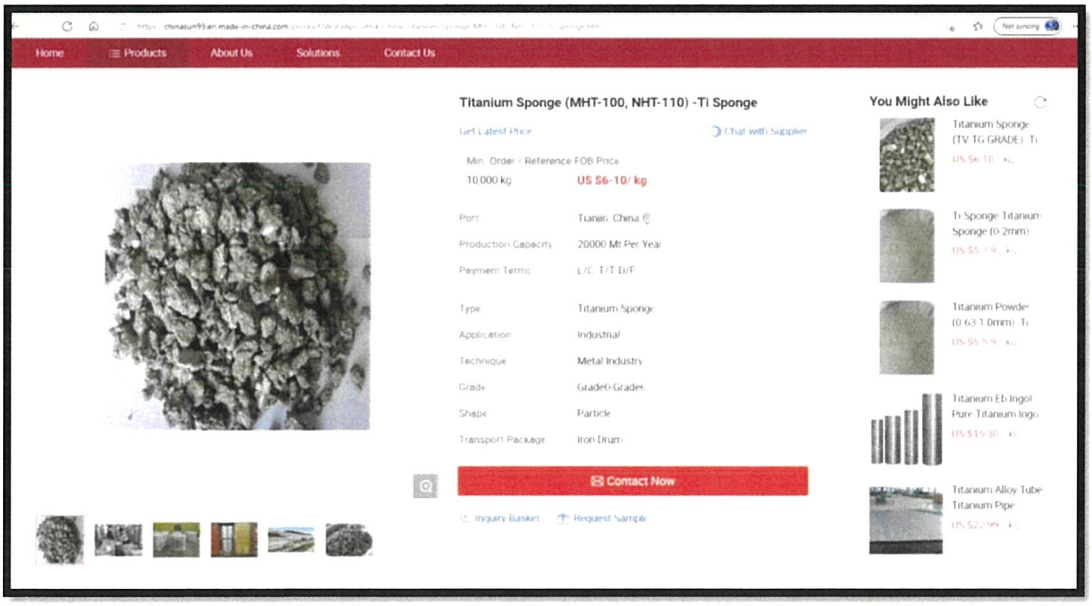
Prices stabilized over the 2013 – 2018 period due to softer markets due to the 2008 recession with the follow-on affects:

- A dip in production 2012 through 2015 with stockpiles greater than normal persisting well through 2016
- A demand forecast beginning in 2017 led to a slow but steady production ramp through 2019 and into early 2020 prior to the pandemic. The pandemic resulted in a drop in production with decrease in demand and orders that resulted in lower prices through remainder of the year.
- A ramp in production is forecast 2021

Types: Sponge

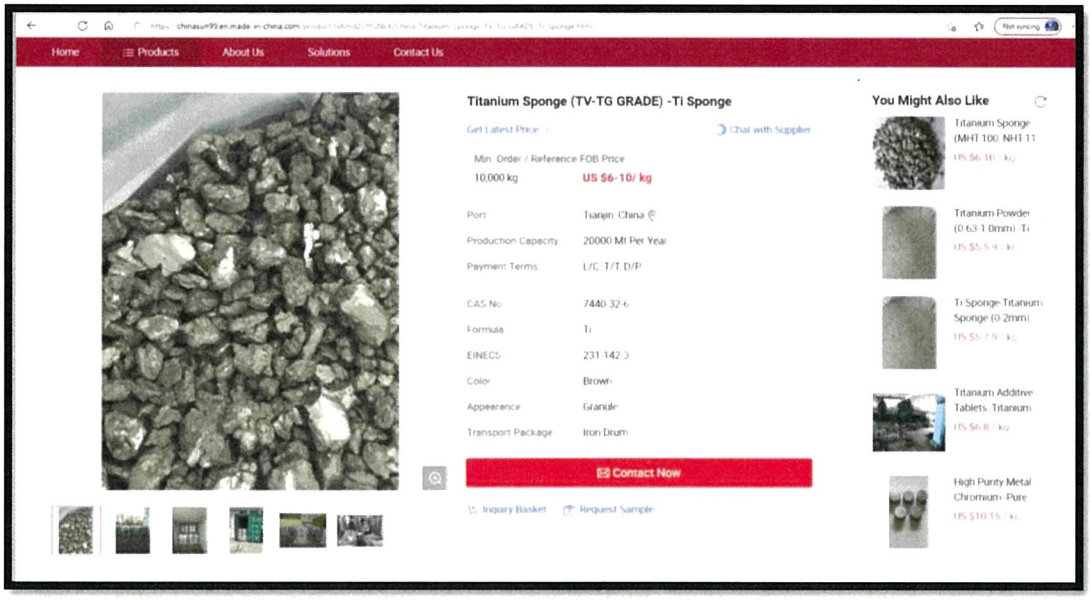
Typical sponge mass after crucible push-out

Typical sponge Particles from post processing of mass (chipping)



Titanium Pricing

Sheared sponge; Granules



- Internal use melt for ingot production
- Sale stock (High and lower grades)

Sponge types usually stored and shipped in 55-galon barrels (positive pressure)

Ingot: Melt refined

Standard Diameters; 200mm to 900mm

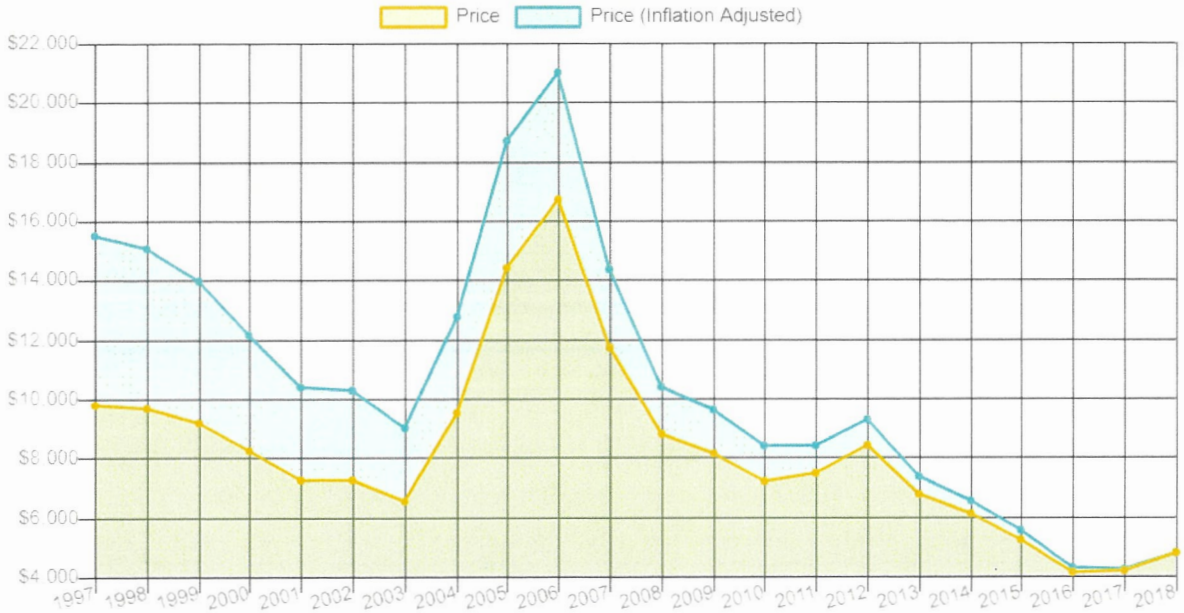
8 to 36 inches

- A – grade; $14-15/Lb. – USA (17,000 Lb. ingot) to $6.70 – 13.60/Lb. China (10,000 Kg min. order)
- B – grade; $ 8.50 – 9/Lb. - USA (17,000 Lb. ingot) to $3 - 6.80/Lb. China (10,000 Kg min. order)
- C – grade; $5.80 – 6/Lb. – USA (17,000 Lb. ingot) to $2 – 2.3/Lb. China (? min. order)

Titanium Pricing

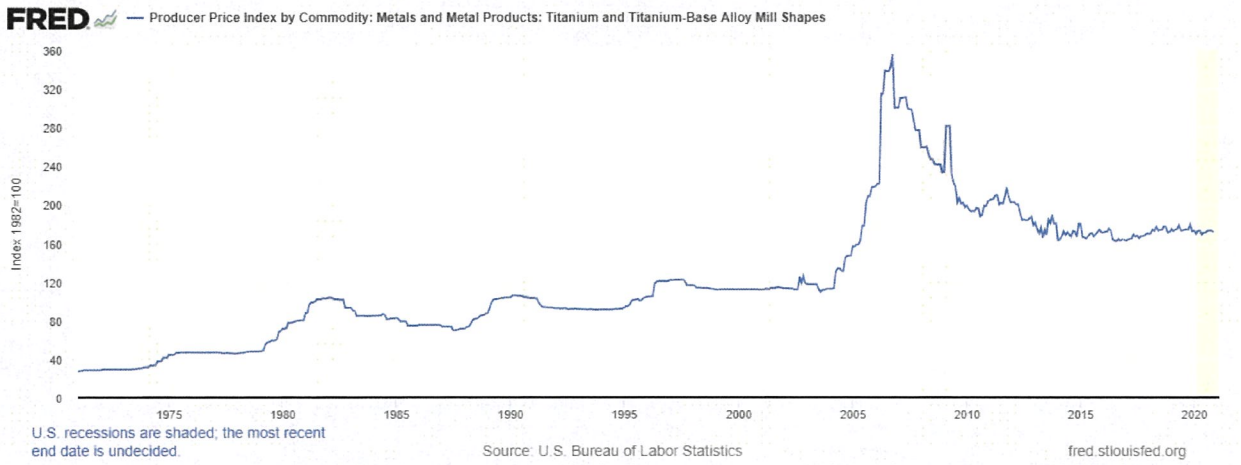
USD per Metric Ton

Year	Price	Price (Inflation Adjusted)	Change
2018	$4,800.00	$4,800.00	14%
2017	$4,150.00	$4,249.60	1%
2016	$4,100.00	$4,294.96	-27%
2015	$5,200.00	$5,572.56	-17%
2014	$6,100.00	$6,543.58	-11%
2013	$6,750.00	$7,356.70	-24%
2012	$8,380.00	$9,270.20	11%
2011	$7,460.00	$8,425.77	4%
2010	$7,190.00	$8,380.68	-13%
2009	$8,130.00	$9,627.97	-8%
2008	$8,800.00	$10,379.73	-33%
2007	$11,700.00	$14,324.74	-43%
2006	$16,700.00	$21,018.92	14%
2005	$14,400.00	$18,704.07	34%
2004	$9,490.00	$12,745.60	31%
2003	$6,520.00	$8,993.16	-12%
2002	$7,270.00	$10,258.28	0%
2001	$7,260.00	$10,408.08	-13%
2000	$8,240.00	$12,143.79	-11%
1999	$9,170.00	$13,973.88	-5%
1998	$9,660.00	$15,044.43	-2%
1997	$9,810.00	$15,522.49	0%

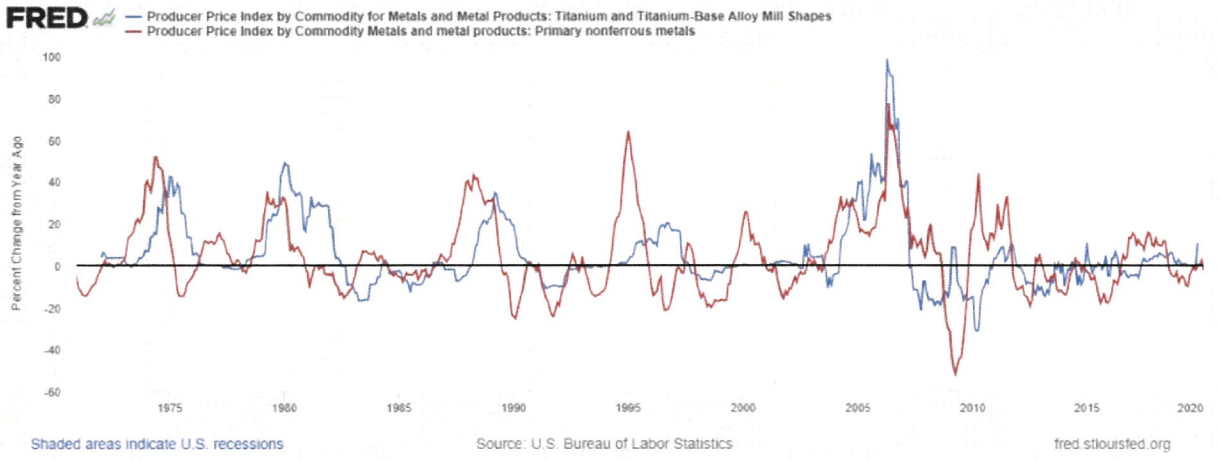


Titanium Pricing

The gray bars denote periods of ressecion

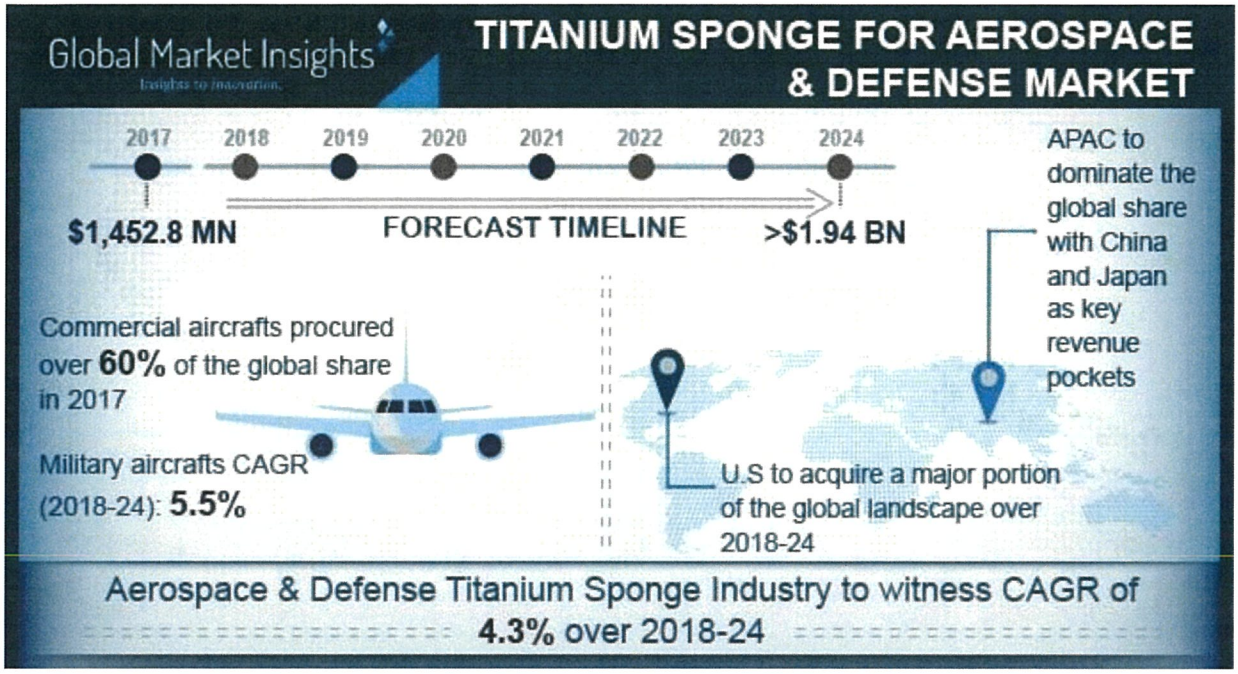


The below chart shows titanium year-over-year price changes next to primary nonferrous metals (aluminum, copper, zinc, etc.) year-over-year price changes. Although the correlation between the two going back to the 1970s is 0.41 (a 10% increase in nonferrous metals prices on average leads to a 4% increase in titanium prices) the correlation breaks down completely starting in 2010 (-0.14 correlation, effectively no correlation).

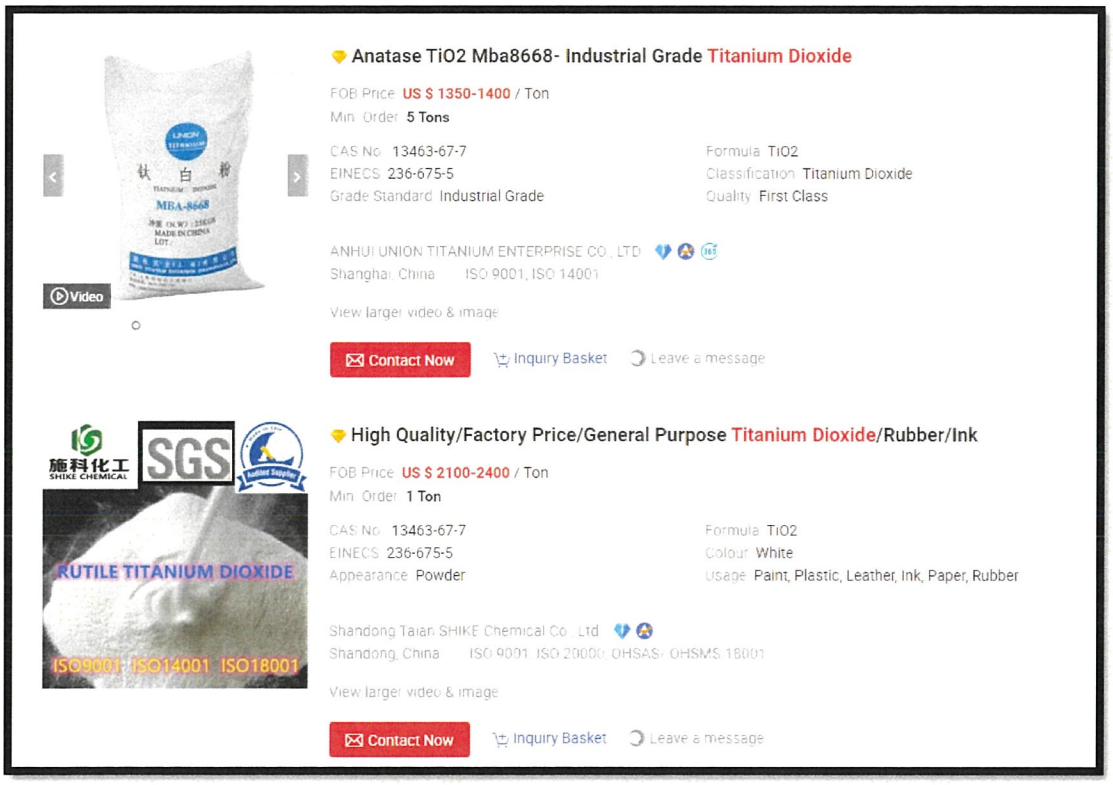


Additionally, as both charts show, the price shocks are near economic recessions but generally not during recessions. To further illustrate this point, the below chart shows the correlation between employment in the transportation industry (left axis – aerospace, autos, rail, etc.) and titanium prices (right axis).

Titanium Pricing



This timeline has been stretched out through 2025-2026 as a result of the pandemic.



Titanium dioxide as Rutile and Anatase wholesale industrial grade bulk pricing

Sulfur

12 | DATA VERIFICATION *(continued)*

PARSONS OVERSEAS COMPANY *Worldwide Engineers/Constructors*

100 WEST WALNUT STREET
PASADENA, CALIFORNIA 91124
(818) 440-2000
Telex WH: 675-336

November 16, 1988

Minerals Exploration Corporation
of the Americas
Post Office Box 8511
La Jolla, California 92038

Attention: Mr. E. A. Tovrea, Jr., President

Subject: Job No. 5905-1 - Chile Sulfur Study
Transmittal of Report
Letter No. PM-6

Gentlemen:

Parsons is pleased to present 15 copies of our Prefeasibility Study Report for a 500,000 mtpy sulfur plant in northern Chile. We believe the work presented conforms with the scope of work as defined in the Agreement.

Please be assured that we stand ready to answer any questions you may have relating to this submittal. It is a most interesting project and we would welcome the opportunity of working with you on the next phases.

Very truly yours,

John W. Ekman
Project Manager

cc Mr. Hal Gardner - w/2 copies
Mr. Hugh Wynne, Jr. - w/1 copy
Mr. C. Vander Werff - w/1 copy
Mr. Fred Schultz - w/1 copy

A SUBSIDIARY OF THE RALPH M. PARSONS COMPANY

SULFUR

(Data in thousand metric tons of sulfur unless otherwise noted)

Domestic Production and Use: In 2018, recovered elemental sulfur and byproduct sulfuric acid were produced at 95 operations in 27 States. Total shipments were valued at about $670 million. Elemental sulfur production was 9.0 million tons; Louisiana and Texas accounted for about 55% of domestic production. Elemental sulfur was recovered, in descending order of tonnage, at petroleum refineries, natural-gas-processing plants, and coking plants by 35 companies at 90 plants in 26 States. Byproduct sulfuric acid, representing about 7% of production of sulfur in all forms, was recovered at five nonferrous smelters in four States by four companies. Domestic elemental sulfur provided 67% of domestic consumption, and byproduct acid accounted for about 5%. The remaining 28% of sulfur consumed was provided by imported sulfur and sulfuric acid. About 90% of sulfur consumed was in the form of sulfuric acid.

Salient Statistics—United States:	2014	2015	2016	2017	2018[e]
Production:					
Recovered elemental	9,050	8,890	9,070	9,070	9,000
Other forms	587	646	673	575	670
Total (rounded)	9,630	9,540	9,740	9,640	9,700
Shipments, all forms	9,670	9,560	9,750	9,700	9,700
Imports for consumption:					
Recovered, elemental[e]	2,370	2,240	1,820	1,860	1,900
Sulfuric acid, sulfur content	1,000	1,160	1,050	954	1,000
Exports:					
Recovered, elemental	2,010	1,840	2,060	2,340	2,300
Sulfuric acid, sulfur content	53	58	59	83	100
Consumption, apparent, all forms[1]	11,000	11,000	10,500	10,000	10,000
Price, reported average value, dollars per ton of elemental sulfur, f.o.b., mine and (or) plant	80.07	87.62	37.88	46.40	70.00
Stocks, producer, yearend	141	138	144	124	110
Employment, mine and (or) plant, number	2,600	2,600	2,500	2,400	2,400
Net import reliance[2] as a percentage of apparent consumption	12	14	7	4	5

Recycling: Typically, between 2.5 million and 5 million tons of spent sulfuric acid is reclaimed from petroleum refining and chemical processes during any given year.

Import Sources (2014–17): Elemental: Canada, 78%; Mexico, 8%; Kazakhstan, 4%; Russia, 4%; and other, 6%. Sulfuric acid: Canada, 62%; Mexico, 20%; and other, 18%. Total sulfur imports: Canada, 73%; Mexico 12%; Kazakhstan, 3%; Russia, 3%; and other, 9%.

Tariff: Item	Number	Normal Trade Relations 12–31–18
Sulfur, crude or unrefined	2503.00.0010	Free.
Sulfur, all kinds, other	2503.00.0090	Free.
Sulfur, sublimed or precipitated	2802.00.0000	Free.
Sulfuric acid	2807.00.0000	Free.

Depletion Allowance: 22% (Domestic and foreign).

Government Stockpile: None.

Events, Trends, and Issues: Total U.S. sulfur production in 2018 was estimated to have increased slightly from that of 2017 and shipments were slightly less than those of 2017. Domestic production of elemental sulfur from petroleum refineries and recovery from natural gas operations decreased slightly. Domestically, refinery sulfur production is expected to remain relatively constant as well as byproduct sulfuric acid, unless one or more of the remaining nonferrous-metal smelters close.

Domestic phosphate rock consumption in 2018 was estimated to be 9% lower than that in 2017, which resulted in decreased demand for sulfur to process the phosphate rock into phosphate fertilizers.

Prepared by **Lori E. Apodaca [(703) 648–7724, lapodaca@usgs.gov]**

SULFUR

World sulfur production was about the same as it was in 2017 but is likely to steadily increase for the foreseeable future. The largest increases in sulfur production during the next 5 years are expected to take place in India, Kuwait, and Saudi Arabia. New sulfur demand associated with phosphate fertilizer projects is expected in Brazil, China, Egypt, India, and Turkey.

Contract sulfur prices in Tampa, FL, began 2018 at around $110 per ton. The sulfur price continued to increase throughout the year and increased to about $140 per ton in mid-October. Export prices were higher than domestic prices. In the past few years, sulfur prices have been variable, a result of the volatility of the demand for sulfur.

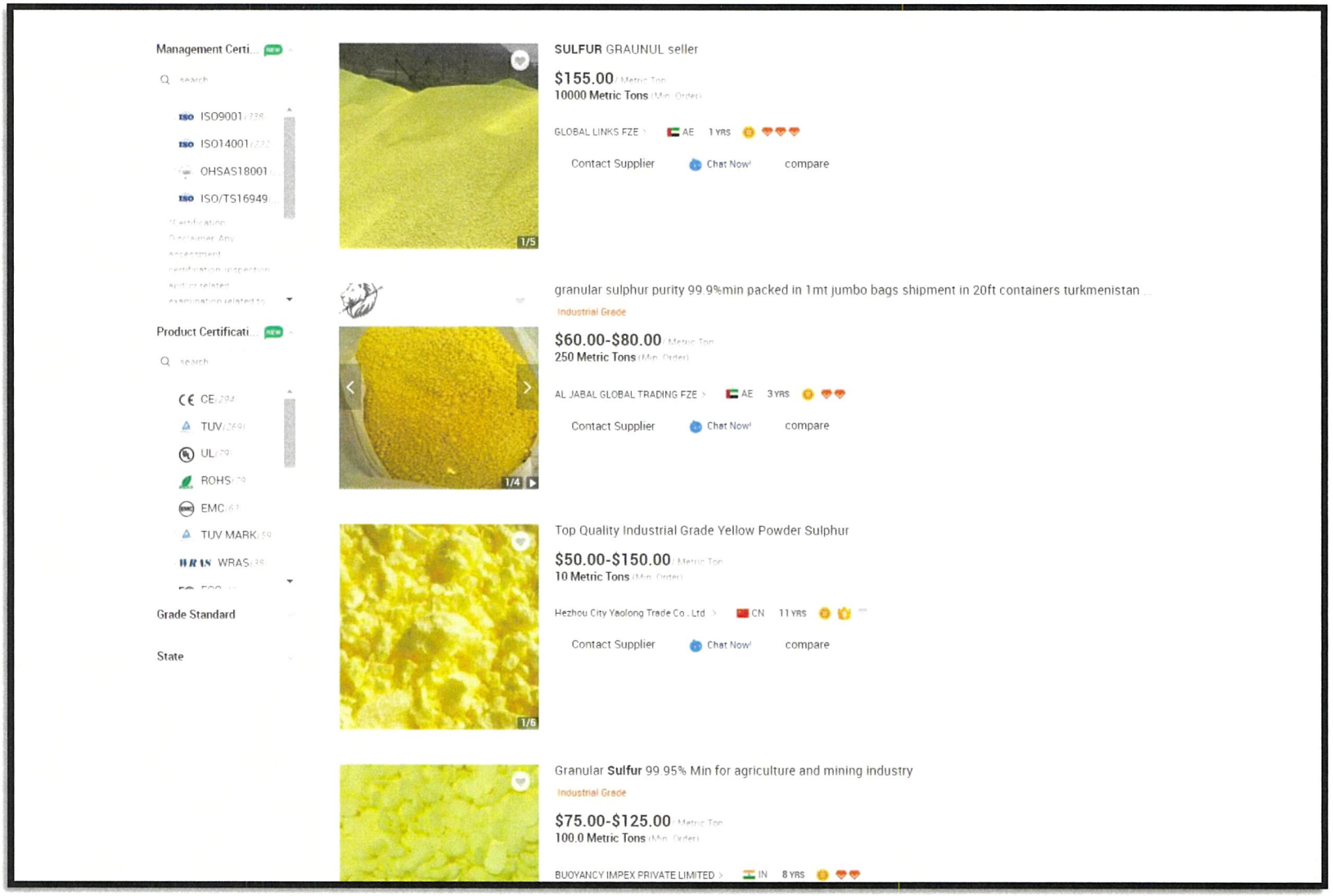
World Production and Reserves:

	Production—All forms		Reserves[3]
	2017	2018e	
United States	9,640	9,700	Reserves of sulfur in crude oil, natural gas, and sulfide ores are large. Because most sulfur production is a result of the processing of fossil fuels, supplies should be adequate for the foreseeable future. Because petroleum and sulfide ores can be processed long distances from where they are produced, sulfur production may not be in the country to which the reserves were attributed. For instance, sulfur from Saudi Arabian oil may be recovered at refineries in the United States.
Australia	900	900	
Brazil	530	530	
Canada	5,460	5,500	
Chile	1,800	1,800	
China[4]	17,400	17,000	
Finland	940	940	
Germany	888	890	
India	3,430	3,400	
Iran	2,200	2,200	
Italy	511	510	
Japan	3,490	3,500	
Kazakhstan	3,520	3,500	
Korea, Republic of	3,080	3,100	
Kuwait	850	850	
Mexico	551	550	
Netherlands	520	520	
Poland	1,240	1,200	
Qatar	2,100	2,100	
Russia	7,080	7,100	
Saudi Arabia	6,000	6,000	
Turkmenistan	610	610	
United Arab Emirates	3,300	3,300	
Venezuela	700	700	
Other countries	3,460	3,500	
World total (rounded)	80,200	80,000	

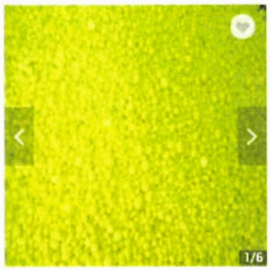
World Resources: Resources of elemental sulfur in evaporite and volcanic deposits, and sulfur associated with natural gas, petroleum, tar sands, and metal sulfides, amount to about 5 billion tons. The sulfur in gypsum and anhydrite is almost limitless, and 600 billion tons of sulfur is contained in coal, oil shale, and shale rich in organic matter. Production from these sources would require development of low-cost methods of extraction. The domestic sulfur resource is about one-fifth of the world total.

Substitutes: Substitutes for sulfur at present or anticipated price levels are not satisfactory; some acids, in certain applications, may be substituted for sulfuric acid, but usually at a higher cost.

eEstimated.
[1]Defined as production + imports – exports + adjustments for industry stock changes.
[2]Defined as imports – exports + adjustments for industry stock changes.
[3]See Appendix C for resource and reserve definitions and information concerning data sources.
[4]China sulfur production includes byproduct elemental sulfur recovered from natural gas and petroleum, the estimated sulfur content of byproduct sulfuric acid from metallurgy, and the sulfur content of sulfuric acid from pyrite.



Sulfur pricing 2020 - 2021



Granular Sulphur 99 Sulphur Lumps Sulphur Powder Bright yellow powder/granule/flake

$15.00-$20.00 / Ton
10.0 Tons (Min. Order)

KEN ENTERPRISE LLC > US 2 YRS

Contact Supplier Chat Now! compare

Granular Sulphur 99 Sulphur Lumps Sulphur Powder Bright yellow powder/granule/flake

$350.00-$500.00 / Metric Ton
20.0 Metric Tons (Min. Order)

SEANK HOT TRADE LIMITED > TH 1 YRS

Contact Supplier Chat Now! compare

Sulfur Granular

$120.00-$350.00 / Metric Ton
10.0 Metric Tons (Min. Order)

Grassel GmbH > AT 2 YRS

Contact Supplier Chat Now! compare

High Grade Lumps Sulphur

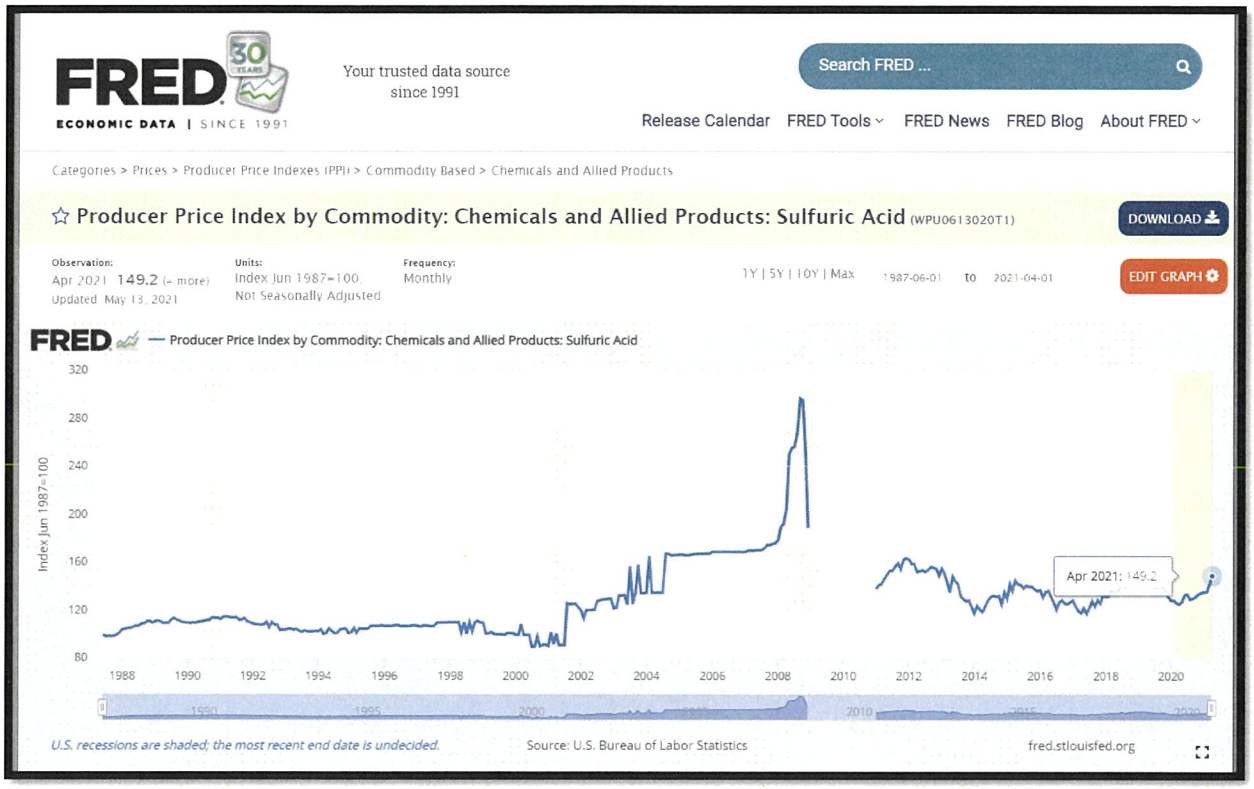
$750.00 / Metric Ton
5000 Metric Tons (Min. Order)

ALVIN SEAFOODS LTD > UK 1 YRS

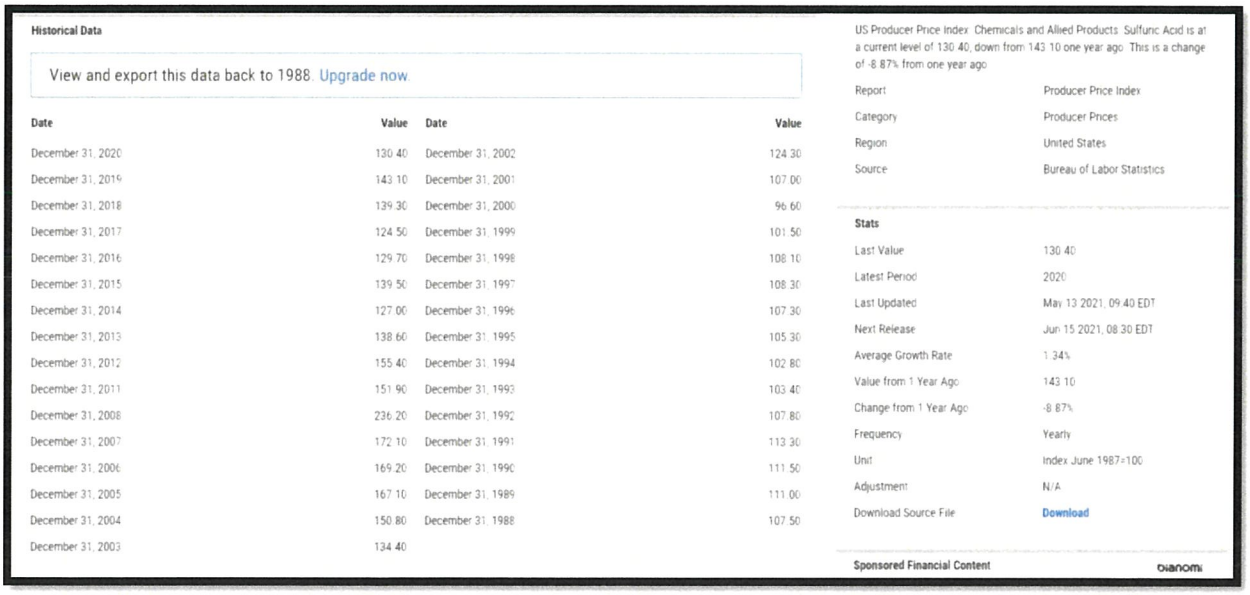
Contact Supplier Chat Now! compare

Sulfur pricing 2020 - 2021

Sulfur pricing 2020 - 2021



The PPI Sulfuric Acid shows approximately 88 at 1996 when Manthe – Lippert associates calculated the annual production values. As of April 2021, it is over 60% increase in pricing.



Historical Data

View and export this data back to 1988. Upgrade now.

Date	Value	Date	Value
December 31, 2020	130.40	December 31, 2002	124.30
December 31, 2019	143.10	December 31, 2001	107.00
December 31, 2018	139.30	December 31, 2000	96.60
December 31, 2017	124.50	December 31, 1999	101.50
December 31, 2016	129.70	December 31, 1998	108.10
December 31, 2015	139.50	December 31, 1997	108.30
December 31, 2014	127.00	December 31, 1996	107.30
December 31, 2013	138.60	December 31, 1995	105.30
December 31, 2012	155.40	December 31, 1994	102.80
December 31, 2011	151.90	December 31, 1993	103.40
December 31, 2008	236.20	December 31, 1992	107.80
December 31, 2007	172.10	December 31, 1991	113.30
December 31, 2006	169.20	December 31, 1990	111.50
December 31, 2005	167.10	December 31, 1989	111.00
December 31, 2004	150.80	December 31, 1988	107.50
December 31, 2003	134.40		

US Producer Price Index: Chemicals and Allied Products: Sulfuric Acid is at a current level of 130.40, down from 143.10 one year ago. This is a change of -8.87% from one year ago.

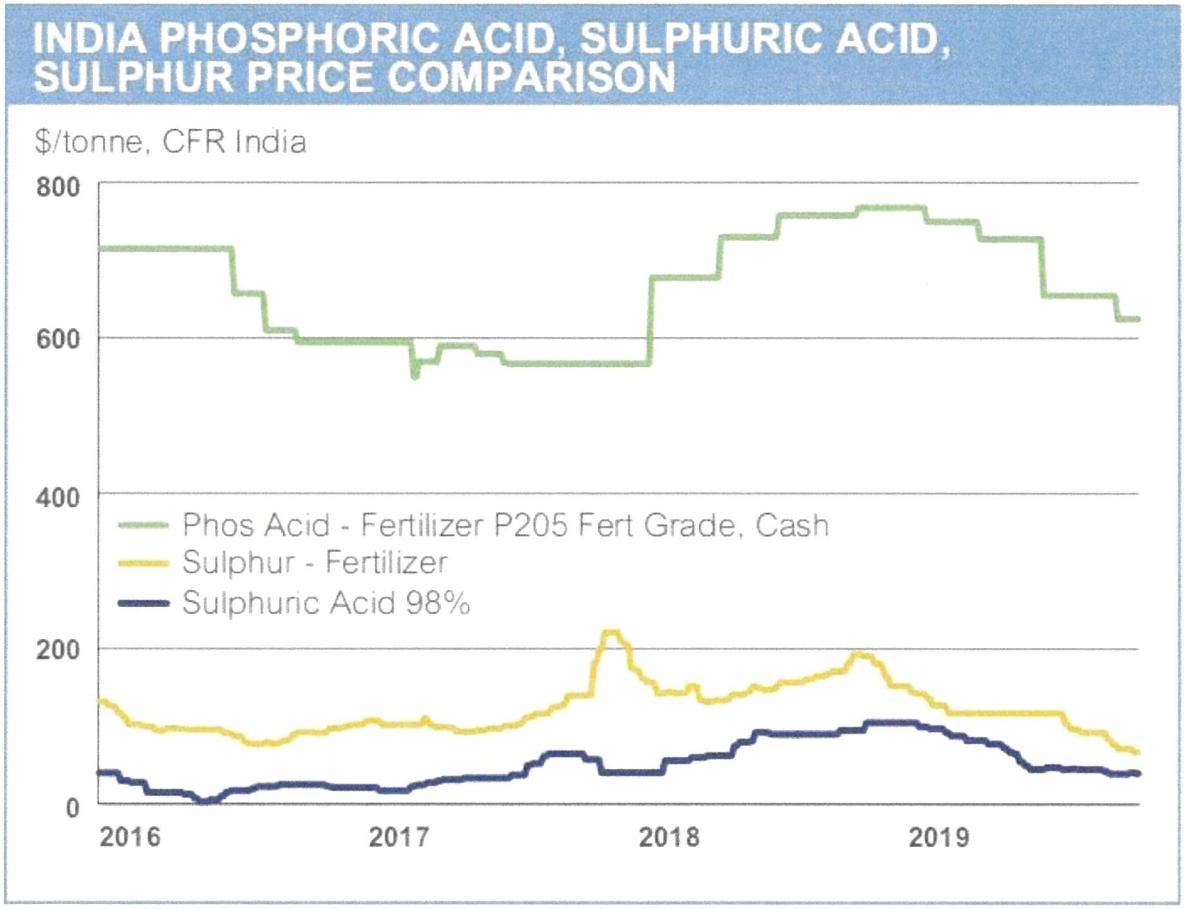
Report	Producer Price Index
Category	Producer Prices
Region	United States
Source	Bureau of Labor Statistics

Stats

Last Value	130.40
Latest Period	2020
Last Updated	May 13 2021, 09:40 EDT
Next Release	Jun 15 2021, 08:30 EDT
Average Growth Rate	1.34%
Value from 1 Year Ago	143.10
Change from 1 Year Ago	-8.87%
Frequency	Yearly
Unit	Index June 1987=100
Adjustment	N/A
Download Source File	Download

Sponsored Financial Content

Sulfur pricing 2020 - 2021



April 2021 China/India price per ton (minimum order) about $92-94 USD.

U. S. SULFUR PRICE HISTORY

($ PER LONG TON)

		RECOVERED					
		ALBERTA M.T. FOB	US-WEST COAST FOB	HOUS-TON DEL	NOLA FOB	FLORIDA CONTRACT DEL	SPOT TAMPA FOB
2005	JAN	27.50	14.50	49.00	52.00	63.00	62.50
	APR	27.50	25.50	49.00	52.00	63.00	62.50
	JUL	27.50	25.50	54.00	57.00	68.00	68.00
	OCT	27.50	25.50	60.50	63.50	74.50	90.00
2006	JAN	23.00	21.00	60.50	63.50	74.50	84.50
	APR	23.00	21.00	54.00	57.00	68.00	78.00
	JUL	N/A	21.00	54.00	57.00	65.00	78.00
	OCT	N/A	13.00	46.00	46.00	60.00	N/A
2007	JAN	(10.00)	1.50	41.50	44.50	55.50	N/A
	APR	20.00	18.50	47.00	50.00	61.00	N/A
	JUL	52.00	71.00	70.00	73.00	84.00	94.00
	OCT	140.00	100.00	98.00	101.00	112.00	127.00
2008	JAN	390.00	375.00	238.00	241.00	252.00	272.00
	APR	600.00	570.00	438.00	441.00	452.00	600.00
	JUL	600.00	570.00	603.00	606.00	617.00	725.00
	OCT	50.00	100.00	135.00	139.00	150.00	N/A
2009	JAN	(20.00)	(15.00)	(15.00)	(11.00)	0.00	N/A
	APR	(20.00)	(12.50)	(10.00)	(6.00)	5.00	20.00
	JUL	(20.00)	3.00	(5.00)	(1.00)	10.00	N/A
	OCT	(10.00)	7.50	15.00	19.00	30.00	80.00
2010	JAN	N/A	30.00	75.00	79.00	90.00	N/A
	APR	N/A	30.00	130.00	134.00	145.00	N/A
	JUL	N/A	30.00	80.00	84.00	95.00	N/A
	OCT	N/A	85.00	145.00	149.00	160.00	N/A
2011	JAN	N/A	180.00	170.00	174.00	185.00	N/A
	APR	45.00	180.00	205.00	209.00	220.00	230.00
	JUL	45.00	192.50	205.00	209.00	220.00	N/A
	OCT	45.00	187.50	205.00	209.00	220.00	N/A
2012	JAN	N/A	175.00	157.00	161.00	172.00	N/A
	APR	N/A	182.50	165.00	169.00	180.00	165.00
	JUL	70.00	185.00	155.00	159.00	170.00	165.00
	OCT	60.00	162.50	145.00	149.00	160.00	N/A
2013	JAN	50.00	150.00	135.00	139.00	150.00	N/A
	APR	55.00	150.00	140.00	144.00	155.00	N/A
	JUL	10.00	68.00	80.00	84.00	95.00	N/A
	OCT	0.00	58.00	60.00	65.00	75.00	N/A
2014	JAN	0.00	145.00	95.00	100.00	110.00	N/A
	APR	55.00	130.00	118.00	122.00	133.00	N/A
	JUL	20.00	140.00	121.00	125.00	136.00	N/A
	OCT	20.00	138.00	114.00	119.00	129.00	N/A
2015	JAN	10.00	165.00	132.00	136.00	147.00	N/A
	APR	10.00	125.00	117.00	121.00	132.00	N/A
	JUL						
	OCT						

Source: Inter-Chem

Lithium

ctic.com/red-hot-battery-market-desperate-for-lithium/5515898/

Lithium

Posted by Editorial Staff | May 31, 2021 | Industry |

Why one little-known company could hold the key to North American energy security, as we enter into the early stages of a 10-year lithium mega trend.

- An historic shift to electric vehicles is triggering a new boom in lithium prices. Battery-grade lithium carbonate, has skyrocketed in price 4%,[1] so far in 2021 to $12,635 per ton, **outperforming the S&P 500 by almost 8 to** 1.[2]
- And with a recent report by the International Energy Agency (IEA) projecting the number of **electric vehicles to grow 1,200%**[3] by the end of the decade, junior resource mining companies are soaring as well.

From an article published by Markettactic.com

The Entire World is Going Electric, Driving Lithium Prices Sky-High

There is little doubt that much of the world is turning away from fossil fuels to electric power.

According to a new report by Fitch Solutions, the global electric vehicle fleet will grow an average of 23.6% a year between 2021 and 2030, reaching **83.6 million vehicles on the road worldwide by 2030 compared to only 300,000 in 2020**.[4]

Although lithium prices pulled back three years ago when production outpaced demand, many analysts believe the overall trend remains very bullish.

The International Energy Agency (IEA) estimates the need for lithium will increase by up **to 70 times[5] over the next 20 years**.

For its part, Fitch Solutions projects that for every 1 million electric vehicles on the road, the electric vehicle market will need 60,000 tons[6] of lithium. At that rate, the world will need between 2 and 5 million tons of high-grade lithium over the next five to ten years.

Current production is estimated to be only around 82,000 tons[7] annually worldwide – a small fraction of what will be needed.

You don't have to be a Wall Street trader to connect the dots here.

Millions of battery-powered cars will hit the road in the 2020s. And each year they'll need more and more lithium.

/red-hot-battery-market-desperate-for-lithium/5515898/

Resource Investors Are Eager For a Repeat of the Boom in Lithium Mining Stocks That Arose in 2015-2018.

Over the past year, investors have already seen share prices of lithium exploration companies rise sharply:

Lithium Americas Corp (Nasdaq: LAC) shot up 274%[8] in the past 52 weeks.

Sociedad Quimica y Minera (NYSE: SQM) soared 141% in the same period.

/red-hot-battery-market-desperate-for-lithium/5515898/

Standard Lithium Corp (OTCL STLHF) skyrocketed 497%[10].

And Piedmont Lithium (Nasdaq: PLL) is up a stunning 866%[11].

And that was just based on anticipation of the imminent shift from oil to electric.

Imagine the spike in lithium demand as a $2.3 trillion infrastructure plan rolls out across the United States.

Argentina's famous Lithium Triangle.

Although found in most places in the world, lithium can only be economically mined when it is found insufficient concentrations, either in hard rock ore or as a component in underground rivers or "brine."

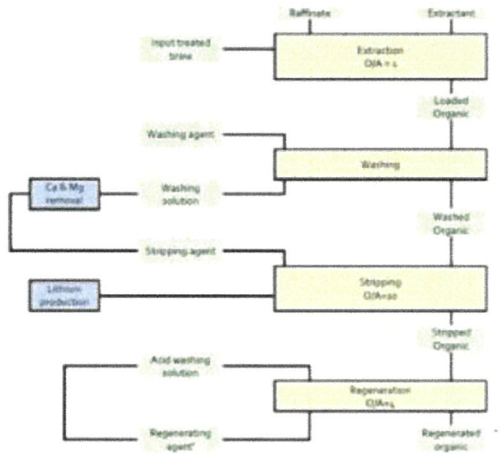
Production of lithium from brine sources is the most economical – with the world's top source of lithium brines being the "Lithium Triangle," a region of the Andes mountains that includes parts of Argentina, Chile, and Bolivia.

Global lithium reserves are currently estimated at around 17 million[12] metric tons (MT) – of which two thirds, or 10.3 million[13] tons, are found in Chile and Argentina.

The Candela II project covers 741 acres[14] on the lithium-rich Argentine salt flats of the Incahuasi salar, where only two other companies are currently exploring: Chinese lithium giant Ganfeng Lithium (OTC: GNENF) and the Australian lithium conglomerate Orocobre, Ltd (OROCF).

But in 2020, it was alerted to the special situation developing in Argentina's Incahuasi Salar by project leader Phil Thomas, a geologist with extensive experience exploring the salt flats of northern Argentina.

Spey Resources's chief executive office Nader Vatanchi, working with Thomas and Dr. Carlos Soretino, an expert on lithium mining in Argentina and a co-inventor of the Ekosolve lithium production system, instantly recognized what they believe is an historic opportunity.



EKOSOLVE PROCESS

- High recovery of Li from brines
- Produces Battery Grade Lithium Carbonate
- Circumvents problems of brine contaminants such as B, Mg and Ca that can interfere with the recovery and quality of BGLC
- Eliminates the need for solar evaporation
- Low operating costs
- Low capital costs
- Environmentally friendly process

The Economics of Lithium Production Make the Incahuasi Salar Very Attractive.

Assuming a 40-meter drilling depth, lithium brine concentrations of 300 parts per million, and a very basic flow rate of 10,000 liters a minute, a lithium facility in this region could potentially produce 287,000 tons[17] of lithium carbonate.

In addition, **Spey Resources Corp. (CSE:SPEY, OTC:SPEYF)** inherits from the previous owner a facility fee agreement to utilize the Ekosolve™ Lithium Solvent Exchange Extraction process.

This will allow it to efficiently manage the processing of the brines to produce lithium carbonate with a grade higher than 99.2% and a recovery of 97%.

At a current price for battery-grade lithium of around $12,635 per ton, that could represent **potential revenues of up to $3.6 billion**[18].

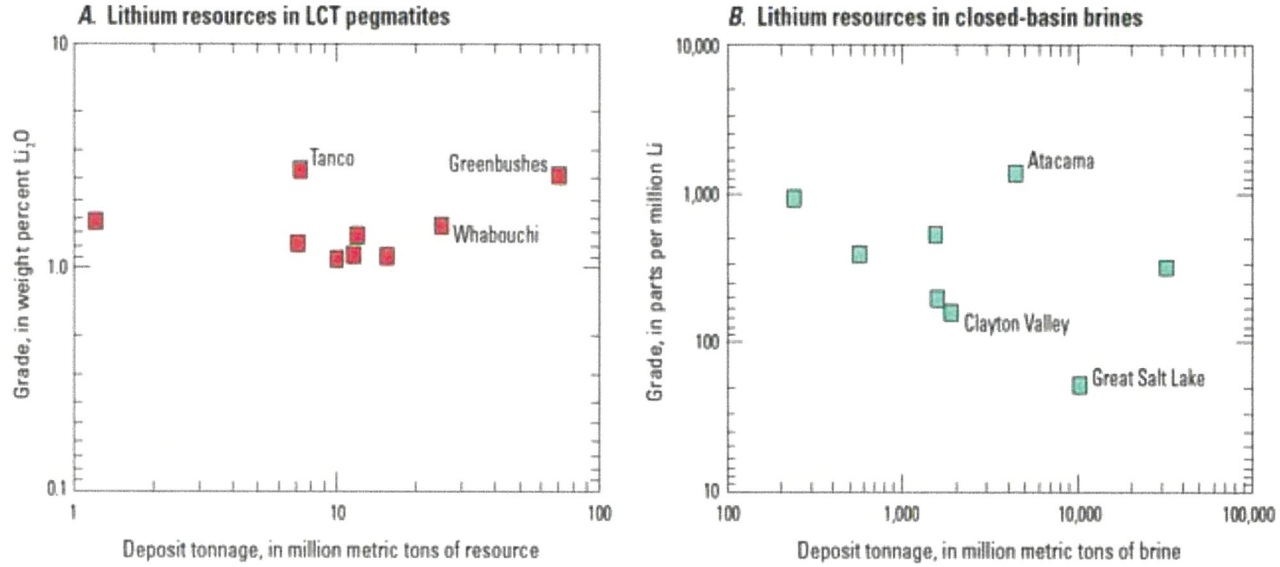


Figure K9. Plots of lithium grade and tonnage for selected world deposits. These plots give an indication of the sizes of deposits that might remain to be found for *A*, lithium-cesium-tantalum (LCT) pegmatites, and *B*, closed-basin brines. Data for the LCT pegmatites are from Bradley and others (2017), and data for the closed-basin brines are from Munk and others (2016). Some of the deposits discussed in the text are labeled.

TABLE 3 .

Piedra Amarilla Properties (131 & 161) Average Mineral Content.

Mineral - Element	Symbol	Content	
Silica (Cristobolite-Tridymite)	SiO2	72.56 %	
Silicates (Kaoline, clays, etc)	SiO2	2.40 %	Est.
Sulfur (Elemental)	S	15.10 %	
Acidity	H2SO4	0.20 %	Est.
Ignition Losses 950 Celsius	See 1	3.89 %	Est.
Titanium Dioxide (Rutile)	TiO2	2.56 %	
Other Titanium (Illmenite)	FeTiO3	0.24 %	
Moisture Content 70 Celsius	H2O	0.75 %	Est.
Alumina	Al2O3	0.68 %	
Carbon	C	0.45 %	Est.
Calcium	CaO	0.25 %	
Iron	Fe	0.23 %	
Sodium	NaO	0.08 %	
Magnesium	MgO	0.06 %	
Potassium	K2O	0.05 %	
Chlorine	Cl	0.034%	
Tin	Sn	0.023%	
Copper	Cu	0.006%	
	SubTotal:	99.563%	

1. Includes sulfates, hydrates, and carbonates (not water, acidity, or elemental sulfur). Est. is estimated content based on information from prior tests or assays.

Arsenic	As	36 ppm
Barium	Ba	<12 ppm
Bismuth	Bi	15 ppm
Boron	B	Yes
Chromium	Cr	12 ppm
Cobalt	Co	< 3 ppm
Gold	Au	0.316 g/t
Iridium	Ir	No
Lead	Pb	6 ppm
Lithium	Li	Yes
Manganese	Mn	22 ppm
Molybdenum	Mo	34 ppm
Nickle	Ni	< 4 ppm
Osmium	Os	No
Palladium	Pd	Yes
Phosphorus	P	Yes
Platinum	Pt	Yes
Rhodium	Rh	Trace
Rubidium	Rb	Yes
Ruthenium	Ru	No
Selenium	Se	26 ppm
Silver	Ag	7 g/t
Strontium	Sr	Yes
Tellurium	Te	26 ppm
Tungsten	W	<200 ppm
Vanadium	V	< 45 ppm
Zinc	Zn	5 ppm
Zirconium	Zr	<200 ppm

*Yes-No values measured via XRF but not calculated in ppm's.

Lithium is present in both the PP Salar and PAP (Data from Parsons PFS)

LITHIUM

(Data in metric tons of lithium content unless otherwise noted)

Domestic Production and Use: The only lithium production in the United States was from a brine operation in Nevada. Two companies produced a wide range of downstream lithium compounds in the United States from domestic or imported lithium carbonate, lithium chloride, and lithium hydroxide. Domestic production data were withheld to avoid disclosing company proprietary data.

Although lithium markets vary by location, global end-use markets are estimated as follows: batteries, 65%; ceramics and glass, 18%; lubricating greases, 5%; polymer production, 3%; continuous casting mold flux powders, 3%; air treatment, 1%; and other uses, 5%. Lithium consumption for batteries has increased significantly in recent years because rechargeable lithium batteries are used extensively in the growing market for portable electronic devices and increasingly are used in electric tools, electric vehicles, and grid storage applications. Lithium minerals were used directly as ore concentrates in ceramics and glass applications.

Salient Statistics—United States:	2015	2016	2017	2018	2019[e]
Production	W	W	W	W	W
Imports for consumption	2,750	3,140	3,330	3,420	2,500
Exports	1,790	1,520	1,960	1,660	1,700
Consumption, estimated[1]	2,000	3,000	3,000	3,000	2,000
Price, annual average, battery-grade lithium carbonate, dollars per metric ton[2]	6,500	8,650	15,000	17,000	13,000
Employment, mine and mill, number	70	70	70	70	70
Net import reliance[3] as a percentage of estimated consumption	>25	>50	>50	>50	>25

Recycling: One domestic company has recycled lithium metal and lithium-ion batteries since 1992 at its facility in British Columbia, Canada. In 2015, the company began operating the first U.S. recycling facility for lithium-ion vehicle batteries in Lancaster, OH.

Import Sources (2015–18): Argentina, 53%; Chile, 40%; China, 3%; and other, 4%.

Tariff: Item	Number	Normal Trade Relations 12–31–19
Other alkali metals	2805.19.9000	5.5% ad val.
Lithium oxide and hydroxide	2825.20.0000	3.7% ad val.
Lithium carbonate:		
U.S. pharmaceutical grade	2836.91.0010	3.7% ad val.
Other	2836.91.0050	3.7% ad val.

Depletion Allowance: 22% (Domestic), 14% (Foreign).

Government Stockpile:[4]

		FY 2019		FY 2020	
Material	Inventory As of 9–30–19	Potential Acquisitions	Potential Disposals	Potential Acquisitions	Potential Disposals
Lithium cobalt oxide (kilograms, gross weight)	750	—	—	—	—
Lithium nickel cobalt aluminum oxide (kilograms, gross weight)	1,620	—	—	—	—
Lithium-ion precursors (kilograms, gross weight)	—	19,000	—	—	—

Events, Trends, and Issues: Excluding U.S. production, worldwide lithium production in 2019 decreased by 19% to 77,000 tons of lithium content from 95,000 tons of lithium content in 2018 in response to lithium production exceeding consumption and decreasing lithium prices. Global consumption of lithium in 2019 was estimated to be about 57,700 tons of lithium content, an increase of 18% from 49,100 tons of lithium content in 2018. However, consumption was lower than anticipated by the lithium industry owing to China scaling back subsidies on electric vehicles, consumers reducing lithium inventories, and lower electric vehicle sales volumes.

Prepared by **Brian W. Jaskula [(703) 648–4908, bjaskula@usgs.gov]**

LITHIUM

Spot lithium carbonate prices in China decreased from approximately $11,600 per ton at the beginning of the year to about $7,300 per ton in December. For large fixed contracts, the annual average U.S. lithium carbonate price was $13,000 per metric ton in 2019, a 24% decrease from that of 2018. Spot lithium hydroxide prices in China decreased from approximately $15,500 per ton at the beginning of the year to about $8,000 per ton in December. Spot lithium metal (99.9% Li) prices in China decreased from approximately $120,000 per ton at the beginning of the year to about $82,000 per ton in December.

Six mineral operations in Australia, two brine operations each in Argentina and Chile, and one brine and one mineral operation in China accounted for the majority of world lithium production. Owing to overproduction and decreased prices, several established lithium operations postponed capacity expansion plans. Junior mining operations in Australia, Canada, and Namibia ceased production altogether.

Lithium supply security has become a top priority for technology companies in the United States and Asia. Strategic alliances and joint ventures among technology companies and exploration companies continued to be established to ensure a reliable, diversified supply of lithium for battery suppliers and vehicle manufacturers. Brine-based lithium sources were in various stages of development in Argentina, Bolivia, Chile, China, and the United States; mineral-based lithium sources were in various stages of development in Australia, Austria, Brazil, Canada, China, Congo (Kinshasa), Czechia, Finland, Germany, Mali, Namibia, Portugal, Serbia, Spain, and Zimbabwe; and lithium-clay sources were in various stages of development in Mexico and the United States.

World Mine Production and Reserves: Reserves for Argentina, Australia, Brazil, Chile, the United States, and Zimbabwe were revised based on new information from Government and industry sources.

	Mine production		Reserves[5]
	2018	2019[e]	
United States	W	W	630,000
Argentina	6,400	6,400	1,700,000
Australia	58,800	42,000	[6]2,800,000
Brazil	300	300	95,000
Canada	2,400	200	370,000
Chile	17,000	18,000	8,600,000
China	7,100	7,500	1,000,000
Namibia	500	—	NA
Portugal	800	1,200	60,000
Zimbabwe	1,600	1,600	230,000
Other[7]	—	—	1,100,000
World total (rounded)	[8]95,000	[8]77,000	17,000,000

World Resources: Owing to continuing exploration, identified lithium resources have increased substantially worldwide and total about 80 million tons. Lithium resources in the United States—from continental brines, geothermal brines, hectorite, oilfield brines, and pegmatites—are 6.8 million tons. Lithium resources in other countries have been revised to 73 million tons. Lithium resources, in descending order, are: Bolivia, 21 million tons; Argentina, 17 million tons; Chile, 9 million tons; Australia, 6.3 million tons; China, 4.5 million tons; Congo (Kinshasa), 3 million tons; Germany, 2.5 million tons; Canada and Mexico, 1.7 million tons each; Czechia, 1.3 million tons; Mali, Russia, and Serbia, 1 million tons each; Zimbabwe, 540,000 tons; Brazil, 400,000 tons; Spain, 300,000 tons; Portugal, 250,000 tons; Peru, 130,000 tons; Austria, Finland and Kazakhstan, 50,000 tons each; and Namibia, 9,000 tons.

Substitutes: Substitution for lithium compounds is possible in batteries, ceramics, greases, and manufactured glass. Examples are calcium, magnesium, mercury, and zinc as anode material in primary batteries; calcium and aluminum soaps as substitutes for stearates in greases; and sodic and potassic fluxes in ceramics and glass manufacture.

[e]Estimated. W Withheld to avoid disclosing company proprietary data. NA Not available. — Zero.

[1]Defined as production + imports – exports. Rounded to one significant digit to avoid disclosing company proprietary data.

[2]Source: Industrial Minerals, IM prices: Lithium carbonate, large contracts, delivered continental United States.

[3]Defined as imports – exports + adjustments for Government and industry stock changes.

[4]See Appendix B for definitions.

[5]See Appendix C for resource and reserve definitions and information concerning data sources.

[6]For Australia, Joint Ore Reserves Committee-compliant reserves were 1.7 million tons.

[7]Other countries with reported reserves include Finland, Mali, and Mexico.

[8]Excludes U.S. production.

THE *HOW ?*

PRODUCTION VALUATIONS

G

Current Annual Income

C.S.I.Ag/AMC projections

Chart annual production data taken from R.M. Parsons Co.PFS and also this Back-testing/ Current Values report of section E) Manthe -Lippert & Associats "PP/PA Project Overview Verification" document.

DAILY PRODUCT RECOVERIES

MINERAL	HEADORE CONTENT	FINAL PRODUCT	% MINERAL RECOVERY	DAILY PRODUCTION	AMOUNT IN BY PRODUCTS	NET DAILY PRODUCTION
TiO2	2.7%	PIGMENT	68%	445 TONS	55 TONS	390 TONS
		TI SPONGE	95%	23 TONS	-	23 TONS
SULFUR	15.1%	PRILLS 99.8%	93%	3511 TONS	330 TONS	3181 TONS
		H2SO4	99%	1000 TONS	500 TONS	500 TONS
SILICA	72.5%	SILICON METAL	8%	605 TONS	30 TONS	575 TONS
		SILICON 99.8%		13 TONS	-	13 TONS
GOLD	0.32 g	BULLION	80%	206 TOZ.	-	206 TOZ.
SILVER	7.0 g	BULLION	70%	3939 TOZ.	-	3939 TOZ.

Updated to current markets

- **Production days per year 330**
- **Maintenance 35 days per year**

*** Process requires 24/7 operation with rolling maintenance schedule.**

**** Average B-grade ($6 to 8.50/Lb.)**

All prices are median FOB China, India, USA

Daly production converted to annual production recoveries

Au = (4.55Au-g/.32Au-g x .9/.8 x 206 Toz./D) = [3295.2]/D x 330 D/y = 1,087,415 Toz./yr. x $1750/Toz = **$1.903 Billion/yr.**

Ag = $1,903,000000 /Au-Ag ratio @67 = **$30,500,000/y**

$S_{15\%}$ = $155.00/Mt x 3181 Mt/D)$_{93\%}$ = $493,055/D x 330 D/y = **$162,708,150 /y**
Sulfuric Acid (H_2SO_4) = $92/Mt x 500 Mt/D = $46,000/D x 330 D/y = **$15,180,000/y**

$Ti_{2.7\%pig}$ = 445Mt/D($Ti_{pig-.68\%}$) x .88 = 390Mt/D x $2300/Mt = $890,000/D x 330D/y = **$293,700,000/y**

***$Ti_{2.7\%sponge}$** = 23Mt/D(Ti, sponge) x **365D/y** = 8,300 Mt/y x $15,300/Mt** = **$142,290,000/y**

$Si_{met.98.5\%}$ = 575Mt/D($Si_{98.5\%}$) x 330D/y = 189,750Mt/y x $2350/Mt = **$445,912,500/y**

TOTAL ANNUAL PRODUCTION INCOME AS OF JUNE,2021: $2,993,290,650

The Piedra Amarilla total reserves from assays of selected areas: Base 1995 pricing

Mineral	Grade	Net Reserves	Unit Value	Reserve Value
✦ Titanium	3,20%	3,602,000 m/t	$ 2,332.00 m/t	$ 8,399,864,000
✦ Sulfur	12.58%	12,692,000 m/t	$ 105.00 m/t	$ 1,332,660,000
✦ Gold	4.50 g/t	552,117,000 gms	$ 12.00 gm	$ 6,625,404,000
✦ Silver	7.50 g/t	869,400,000 gms	$ 0.17 gm	$ 147,798,000
✦ Celestine	0.63%	710,000 m/t	$ 78.00 m/t	$ 55,380,000
✦ Selenium	30.54 g/t	3,126 m/t	$ 10,758.00 m/t	$ 33,629,508
✦ Tellurium	6.91 g/t	707 m/t	$550,000.00 m/t	$ 388,850,000
✦ Kaolinite	2.20 g/t	2,219,000 m/t	$ 128.00 m/t	$ 284,032,000
✦ Silica	72.5%	126,125,000 m/t	$ 25.00 m/t	$ 3,153,125,000
				$ 20,420,742,508

The Piedra Amarilla total reserves from assays of selected areas: Base June 2021 pricing

Mineral	Grade	Net Reserves	Unit Value	Reserve Values (min.)
✦ Titanium	3,20%	3,602,000 m/t	* $ 2300.00/Mt	$ 7,349,881,000
✦ Sulfur	12.58%	12,692,000 m/t	* $ 155.00/Mt	$ 1,967,260,000
✦ Gold	4.50 g/t	552,117,000 gms	# $ 56.00/gm	$ 30,000,918,552
✦ Silver	7.50 g/t	869,400,000 gms	# $ .84 /gm	$ 730,296,000
✦ Celestine	0.63%	710,000 m/t	NC	NC
✦ Selenium	30.54 g/t	3,126 m/t	NC	NC
✦ Tellurium	6.91 g/t	707 m/t	NC	NC
✦ Kaolinite	2.20 g/t	2,219,000 m/t	NC	NC
✦ Silica	72.5%	126,125,000 m/t	* * $ 50.00 /Mt	$ 6,306,250,000
			Total	$45,624,309,550 USD

*& ** based on average /mean feed grades

** average of 98.5% + 72.5% grades based on natural distribution ratios

NC = Not Calculated

= See Gold and Silver Current Values, chapter F explaining value ranges