

# **20<sup>th</sup> Century Alchemy**

**by Joe E. Champion**

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Dear Reader:

This book covers my personal and scientific historical accounts for the last four years. Exacting details for replication of nuclear reactions are enclosed. Replication should only be attempted by trained scientific or technical personnel with proper equipment. Otherwise, one could cause harm to themselves and the environment.

Respectfully,

A handwritten signature in black ink, appearing to read "Joe E. Champion". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Joe E. Champion



## PREFACE

Twentieth Century Alchemy is a publication which covers the debate which has plagued man for millenniums. "Can one cause an element to change from itself to another by a chemical reaction?" Well, my good friend, Dr. John O'M Bockris from Texas A&M University is now conjuring a new breed of scientists fluttering throughout their laboratories adorned in their black robes, wearing conical hats with their pet horned toads, sprinkling elixir on lead to convert it to gold.

However, the reality is, alchemy, in the true sense of the word, has been present since the beginning of our Universe. Mother Nature is the master Alchemist in the formation of elements. Man's witness of alchemy was first recorded around 5,000 B.C. in Chinese and Egyptian writings. During the last 2,000 years, claims to be able to chemically synthesize gold have been maintained in Europe and Asia. Such claims have undoubtedly been a vehicle to many frauds. During the Middle Ages, laws were established against alchemy. Although, after review of this book one must question the motives of such laws. Were they established to protect the innocent, or to prevent competition of elixirists of the kingdom?

During the early 1900's, science was directed by Doctors Rutherford and Bohr to accept the fact that transmutation, i.e. nuclear change, occurs only from high energy reactions and cannot be stimulated by chemical changes. Even I was a disciple of this doctrine until the late 1980's when experiments within my laboratory and the laboratories of others indicated that nuclear change can occur at extremely low energies. These low energies are what one would expect from a chemical reaction.

In 1989, I was asked to view a phenomenon witnessed for over thirty years by hobby chemist, Mr. Jack Keller. The reaction, which he assumed to be that of a "collection process, ll indeed was a newly discovered nuclear event. This discovery now allows one to create, through nuclear transmutation, gold and platinum from mercury, silver and palladium from cadmium, rhodium from silver, plus numerous other elements from recorded reactions.

Prior to publication, I pondered the implications the book and the science could have on society. I recognized there were positive, as well as negative aspects of the science to consider. I will never forget Dr. Jerry Gaston's, Dean of Sociology at Texas A&M remarks, when he

was first introduced to the scientific phenomenon. Regarding the synthetic production of precious metals, he stated, words to the effect, "If this science is true, it would cause worldwide economic chaos with far reaching, irreparable damage to certain Third World nations."

However, in mid-1992 I spent considerable time in Washington, D. C. trying to obtain Government support. Through the coordinating efforts of the highly respected Mr. Glen Young, Esquire and Miss Nancy Meacham, both from Wichita, Kansas, I met with the senior aides of Senators Dole and Kassebaum. I educated them on the technological aspects of the science. They were presented the envisioned positive capabilities of the science in ridding the world of radioactive waste, providing low energy, non-polluting, low cost energy, and cleaning up our environment as well as the negative possibility cited by Dr. Gaston.

This was not the Senators' first introduction to the science. Their initial exposure to the technology came from a private presentation two months earlier by Mr. Alan Loiben, Esquire and Miss Meacham. Mr. Loiben, a Chicago attorney and valued friend has been involved with the science since its inception and has represented me for the past eight years in my various scientific endeavors. Because of his professional involvement, he was able to articulate directly to the Senators, in terms in which they could understand, the dangers this technology posed for mankind if improperly supported. But Washington turned a deaf ear.

This was not the first case of deafness in Washington. There were others. In November of 1991, a Congressional Representative from Houston, Texas, contacted in my behalf by Mr. George Jacobs Esq., also of Houston, was notified of the implications of the science. In the same time frame, federal intelligence agencies were informed. Further, since the reaction is a nuclear occurrence, administrators and scientists attached to the Department of Energy (DOE), National Regulatory Commission (NRC) and Atomic Energy Commission (AEC) were notified and supplied technical papers. All, apparently, swept interest in the science aside.

I have made a valid, sincere effort to involve the leaders of our Government in the proper control, administration and support of the science. Many offices in our Government have heard of the advantages as well as the possible side effects of the science. The question is, why the deaf ear from the Government? Was it due to my lack of

pedigree? Was the technology considered impossible since it challenged the laws of high energy physics?

When I first notified the Government, I was only producing milligrams of precious metals from a kilogram of starting material. **Now we are obtaining grams from the same kilogram of material.** Our cost of production is only ten cents per gram of precious metals, or roughly three dollars per ounce. Further improvements in the cost of production are considered likely as we continue our commercial production venture.

I am fully aware that many readers of this publication will have the question, why write a book on the subject? My answer, simply stated, is that too many learned scientists and Governments have been unwilling to open their minds to the possibility that yet undiscovered laws exist in science which effect our Universe. This book could be considered a primer for the skeptics, or, at least, a generator of thoughts.

You will observe in this publication the verification of the science. Only a portion of those involved have been mentioned. Further, those of you capable of duplicating the detailed procedures will be able to provide personal verification through replication of my experiments.

I wish to thank Mr. Keller and his wife, Ruth, who allowed me the opportunity to make this discovery. A special thanks to Dr. John O'M Bockris, who through his wiry Brit humor, forced me to strive to the highest level of scientific integrity. Of course, he would not accept this book as a "proper" presentation, but circumstances have dictated this level is necessary for a publication of this magnitude. Also, this publication would never had succeeded without the due diligence and assistance of Retired Captain Roger Briggs, U.S.N. and Mr. Greg Tabat, whose belief in the science allowed this to be published during my fallacious incarceration.

Joe E. Champion



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"It is the first step in science to recognize the advancements made by mankind all but destroy the society in which they occur."

Alfred Whitehead

## CHAPTER I

### INTRODUCTION

From centuries before the reign of Cleopatra, the luster of gold has mesmerized mankind. Kings and rulers alike summoned their magicians and commissioned physicians to partake in the studies of alchemy. For even in Fourth Century China, alchemy was elevated to a medical science because the magical concoction of "Drinkable Gold" was considered the elixir of eternal life.

During the early Renaissance, most European monarchs had at least one or two alleged gold makers on their payrolls with exclusive licenses for production of noble metals. With the issuance of a commission, the rulers made laws declaring it illegal for others to practice this mystical art. Even Isaac Newton dabbled in alchemy, as recorded in his journals, and conducted several laboratory experiments to test its applicability.

As modern day science evolved, starting in the middle of the 19th Century, it was assumed as an absolute fact that one could not bring about the change of one element to another without energies stupendously greater than that of any chemical reaction. Thus, the laws of scientific absolutes are once again being challenged.

This book is not about gold, but the transmutation of elements. It is for the hobbyist, the high school chemistry buff, the seekers of knowledge, and whoever wishes to gain an understanding of how the universal formation of elements occurred. You will find simple procedures, where, with basic equipment, one can bring about by nuclear change the transmutation of one element to another.

As I will go into much greater detail later, the cause of change from one element to another only occurs through a nuclear reaction. The discovery I made did nothing to change the universal laws of science. I only defined a new set of conditions under which a nuclear reaction can occur.

TWO POTENTIAL AREAS OF DANGER EXIST WHEN EXPERIMENTING WITH THIS SCIENCE. THEY ARE RADIATION AND THE TOXICITY OF VAPORS. BEFORE ATTEMPTING ANY EXPERIMENTS WITHIN THIS AREA, CONSULT AN EXPERT IN THE SUBJECT OF LABORATORY SAFETY.

**"THE NEW GOLDEN RULE"**

**"Ye who makes thy own  
gold, makes thy own  
rules."**

**J. Champion**

In this book, you will learn different procedures on how one synthetically produces gold from a portion of mercury. The reason I chose gold as the primary metal is, for years, gold has become the status symbol of wealth. It's malleable and ductile conditioning makes for beautiful jewelry and artifacts. Gold is produced today from mining. South Africa is producing two-thirds of the world's supply. South Dakota and Nevada are the only two states in the U.S. which are producing commercial quantities. Other countries involved in gold production include Canada, Russia, Brazil and countries within Southeast Asia.

People today have little comprehension of the massive work that is required to make an ounce of gold. For example, an average mining company must process upwards of twenty tons of mineralized ore to produce one troy ounce (31.103 grams) of gold. When the efficiency of the process covered in this text is maximized, it will require the conversion of less than a pound of mercury to produce an ounce of gold and platinum! Tests of the "Champion Process" within the last year have shown the equivalence of up to 32 troy ounces of gold production from one ton of synthesized minerals. This does not take into consideration the platinum and other metals produced in the same operation!

Of course, gold is financially vulnerable due to its relationship to the various international currencies. This

was evident in a conversation with Mr. Brian Russell, Consulate For Energy and Mining, South African Embassy, Washington, D.C.. When I asked him for the cost to mine an ounce of gold in South Africa, he immediately asked the question, "What is the value of gold today?" The answer is a numbers game, for if the value of gold is high, they can afford to mine a much lower grade of ore at higher costs, and the reverse when the price is at a lower value.

However, there did appear to be an unwritten rule communicated that day. There would be a major problem for South Africa if the value of gold was to fall beneath, say, \$300.00 U.S. per ounce. This is easily rationalized due to the centuries of mining within the country which has depleted their high grade reserves. The point is, with new transmutation technologies, we can create the expensive metals from abundant, inexpensive premixed base metals.

Platinum, another precious metal economically valued higher than gold, was discovered in the Ural Mountains of Columbia, South America in 1735. Later, large deposits were found in South Africa. This country now supplies sixty percent of the world's production. Thirty percent is produced in Russia, with the remaining ten percent of the platinum reserves being mined as trace metals in the vast nickel deposits of Ontario, Canada.

In association with platinum, the precious metal industry recognized a series of elements known as the PLATINUM GROUP METALS, or better known as "PGMs." The Platinum Group Metals, in addition to Platinum (Pt), consist of iridium (Ir) , osmium (Os) , palladium (Pd), rhodium (Rh) and ruthenium (Ru) . A portion of these metals are now present in your everyday life. For example, palladium, platinum and rhodium can be found in automobile catalytic converters. Their function is to transform, or reduce the harmful engine fumes to non-toxins. These metals are also found in other similar industrial applications where the reduction of harmful hydrogenous compounds are required. Iridium appears in many fountain pen tips. Palladium is used in numerous hydrogenation, dehydrogenation and jewelry applications. Rhodium, the rarest of the PGM's is in high demand for its use in catalytic converters. In the "Champion Process," Rhodium and palladium are created through a nuclear conversion of silver.

The largest natural reserve of silver is located in Mexico which supplies approximately 80% of the world's demand for native silver. Silver, similar to lead, has been

labeled a toxic substance by environmental laws. As a result, its use has been curtailed, whereas recycling efforts have been maximized. one of silver's largest industrial requirements is the production of diagnostic x-ray film. Silver consists of two natural isotopes, one of which(107) is partially consumed during the x-ray process. Because of this selective isotopic consumption, recycled silver is not recommended for the synthetic production of rhodium.

The sporadic rambling to this point was necessary to demonstrate the general requirements of the varying reactions and to illustrate the potential restructuring of wealth between nations. For example, Mexico, as a nation, hosts the largest in-ground reserves of mercury for the Western Hemisphere. Thus, the future of Mexico's importance to the world increases as a supplier of synthetically produced gold and PGM's. The key to the future value of precious metals is not from the advancement of mining techniques, but from the advancement of transmutive techniques made possible by the Champion Process.

If you took a poll now, the skeptics should far outnumber the believers. However, new discoveries are coming forth daily. In March 1993, Life Magazine reported on Lea Potts, a 15-year old high school student who created diamonds with a welding torch in the family's garage. This is a known event within the scientific community. Scientists are now working on ways to create diamonds easier, cheaper and more efficiently.

The world of alchemy opens many new exciting challenges to mankind, as well as setting forth potential disasters. Both topics will be reviewed in Chapter VII.

## CHAPTER II

### HISTORY

*"Scientists are educated to believe that all new knowledge comes in tiny increments, grains of sands piled one on another. Indeed, that is how most knowledge is gained. Therefore, they are never prepared for the visionaries who arrive at new insights which, overnight, utterly transform an entire field of inquiry.,,*

*Dean Kootz  
Phantoms*

In 1989, Mr. Jack Keller and his wife visited me while I was employed as Senior Scientist for the Santa Fe Research Center in Columbia, Tennessee. Jack was commissioned to review a selective precipitation process using electromagnetic resonance techniques which had been developed at the Center. During his three day stay, he spent considerable time with my associate Larry Shelton, a physicist also assigned to my project. Jack told Larry he had a process he referred to as "growing gold.

He claimed he was able to capture, through his reverse pyramid electrolysis cell, large amounts of gold which was never witnessed in the starting material by the most sophisticated of instruments. Of course, Larry and I, as professionals, dismissed this as the dreams of a madman. Upon Jack's departure from the laboratory, we never conceived that he and I would visit again.

Later in the year, Jack invited Larry and his wife to join him in Oregon where he was associated with Bristol Silica Mining. It seems that Larry was the first learned scientific type who would listen to Jack's story. Upon returning, after visiting for two weeks, Larry was convinced that something unusual was occurring. Even though he was unsure of the origin, he felt it deemed further investigation.

In 1990, I had an opportunity to visit the Keller's and viewed first hand the "growing gold" process. After Larry's report, I felt confident that I was going to witness something strange, but I had convinced myself that

Jack had only stumbled onto a new collection or recovery process. Alchemy was not in my vocabulary at that time. After the first five hours of my visit, I had gained an eighty percent confidence level that thirty years ago, Jack had stumbled into a discovery which was to have a major impact on modern day science.

To have a clear understanding as to how everything evolved, it is necessary to regress about thirty years in history. I think it important to give credit to all involved in this discovery. Of course, I am repeating many events as they were told to me, so I cannot attest first hand to the absolute authenticity of the following segment.

During the postwar period of World War II, a Czechoslovakian geologist, Dr. Walter Lussage, took haven in a boarding house operated by the Kellers' in Washington. During his residence with the Kellers', he continued to assert his knowledge in the field of alchemy by accomplishing minor experiments with Jack's assistance. During the time Dr. Lussage was conducting experiments with Jack, he was gaining tenure at the University of Washington. Within the University, Dr. Lussage became associated with Doctors Becker, T. Miller, and J. Miller. This group formed an unusual combination, for Dr. Becker and Dr. T. Miller were chemists and Dr. Janice Miller was a physicist. This group was commissioned by Mr. Victor Denny to develop a recovery process for microfine gold associated with geological deposits of a micaceous schist located near Cle Elum, Washington. The project, totally financed by Mr. Denny, was successful and gained immediate rewards for the group.

Various pieces of documentation regarding communications between the group were made available to me. However, it was unclear to me if they realized the scientific occurrences they were viewing were nuclear in nature, or not. From the notes relating to radiation studies provided by Gulf Atomic Research in the 1960's and notations from Dr. Janice Miller, I would have to assume that at least she was aware a nuclear event of unknown origin was occurring.

However, I think it of importance to note that there is no question as to the "founder" or "discoverer" of the technology, as it is related to this group, was Dr. Lussage. Dr. Lussage, deceased in 1977, left no trace to the legacy of his knowledge. I have no idea who may have passed the information to him, or, if he acquired it strictly upon his

own. Due to the lack of computerized records and the destruction of accounts by the War, I was unable to make any progress into the European past of Dr. Lussage.

As the group began to prosper, they established a pilot plant with full geological research facilities in Seattle. These facilities, still in museum-like conditions as of 1992, are physically associated with Dr. Troy Becker's residence.

It was during this time frame that various portions of Lussage's secret were given to Jack, thus beginning his knowledge of metallurgy. It is interesting to note that Jack's initial education was in a field of metallurgy which is not even practiced today. The importance here is that if Jack had a formal education, he would not have been able to accept what he viewed as valid to the laws of science and would have always doubted his results, whereas just the opposite occurred. By accepting absolutes, i.e., that given to him by Lussage, Jack was able to experiment with varying formulas and matrixes to increase the efficiencies in the nuclear reactions, while all along he thought he was developing a collection technique for atomic particle gold.

As time advanced, Lussage's group of scientists went in a direction opposite from Jack Keller. Keller advanced his inherent knowledge within his hobby shop while a black cloud started to appear over the doctors.

In the early 1970's the scientists, after reaching success within their Seattle facility, struck out to build a large production plant outside Carson City, Nevada. Tonnages of material were processed yielding large amounts of the Platinum Group Metals (PGMs) in the form of salts. These are chemically known as chlorides. Shortly after inception, both of the Millers passed away, reportedly of cancer, which is of interest.

Also, somehow the Federal Government became upset with the operation. This was reported by Dr. Troy Becker in a sworn affidavit dated in 1983. There was a trial in a Federal Court based on fraud against the surviving members of the group, Lussage and Becker, However, Lussage died one year before the trial date leaving Becker, as the only survivor of the group to face the charge alone. There was no way that Becker could explain that they were taking a mineral, that when analyzed showed no gold, silver, or PGMs, and from that mineral his group was able to process up to 5.0% by weight of the mineral in precious metals. For example:

They would take a ton of mineral, which is 1,000,000 grams or 2,200 pounds, and after processing produce 50 kilograms of gold and PGMs. So 50 kg - 110.3 pounds =1,515 troy ounces.

Becker's only opinion he used in his defense was the gold and PGMs were always present and only his technique would identify and recover these metals. Now the prosecutor, claiming fraud, brought forth numerous "expert" witnesses with formal education in geology and metallurgy who contradicted all claims made by Dr. Becker. The concurrence of the qualified witnesses was, if the purported levels of gold and PGMs were present, Becker must have "salted" the furnace with these metals. The result of the trial was Dr. Becker spent five years of a fifteen-year sentence in a federal prison for not understanding the mechanics of a nuclear reaction. Had he the proper understanding, he could have presented it successfully to the court and scientific communities.

What is disappointing is the statement made by Dr. Becker in a notarized affidavit after his release. He stated that a person who claimed he was with the CIA had just returned from overseas. His mission was to inform Dr. Becker that the group ("The Platinum Group") would not tolerate any additional production of PGMs. If he was to continue his production, he would either be re-jailed or killed. However, they had no problems if he wished to continue his production of only gold and silver.

Dr. Becker, as the last surviving member of the group, is a living legacy of the existence of the Platinum Group. Also, in my single interview with Dr. Becker, he was still referring to their procedure as an atomic particle collection process.

As I stated earlier, my initial introduction to the science came by chance when I visited the Kellers' home in Anacortes, Washington in 1990. This was roughly a year after I first met them in my laboratories in Columbia, Tennessee. Upon arrival, Jack related in great detail the history I just shared with you. He also commented upon impressive laboratory reports of experiments he had accomplished over the decades. We made arrangements then for me to view an experiment the following morning.

Jack picked me up early for breakfast and explained what steps we would follow on the first demonstration. To convince me that we did not have contaminated ("salted") chemicals, we stopped at a feed store where we bought a 50 pound bag of sodium nitrate ( $\text{NaNO}_3$ ) off the shelf. This chemical is sometimes referred to as nitrate of sodium. Next I we stopped by a convenience store for a bag of every day charcoal. The other component required for the demonstration was a mineralized black sand. Black sand is a portion of ore with the sand, silica and silicates removed. In this particular case, we used a mineral from a tailing pile, the waste from a mill after they have removed the mineral for which they are mining. The black sand we used came from a closed precious metal refinery. Billions of tons of this waste exist within North America. I will address this in more detail later.

The black sand was analyzed by fire assay process to determine the amount of gold and silver present. It is normal to find trace amounts of gold and silver associated with tailing piles. Milling is usually done by mechanical processes which ordinarily lack high efficiencies.

The process used in determination of gold and silver quantity is called a fire assay. This procedure consists of taking a chemical flux, mixing it with the ore and placing it in a high temperature clay crucible in a small electric oven at  $1,000^\circ\text{C}$  for two hours. In this phase, most of the metals are reduced and collected inside lead which was included in the flux. The metals are then easily separated when poured into a conical (not to be confused with witchcraft) mold. When cool, the lead is removed and cleaned of all slag, a glassy residue, and placed in a cupel. A cupel is a little cup which was first reported in Egypt around 5,000 B.C. originally, chemists prepared the cupel from bone ash, a process in which bones (in the case of the Egyptians, human bones) were burnt until they were reduced to ashes. These ashes were then mixed with a small amount of moist clay, molded and allowed to dry. A similar process is used today in the production of cupels, except a chemical compound has been substituted for the bone ash. At any account, the lead is set in the cupel and placed in the electric furnace at  $900^\circ\text{C}$ . When the lead becomes molten, it soaks into the base of the cupel, like water into a sponge, leaving the precious gold, silver and the PGMs on top in their pure state. This was the process used by Keller to determine the amounts of new gold and silver he gained during his experiments.

During the first demonstration, Keller prepared the following concoction:

Black Sand	90 grams
Charcoal	90 grams
Sodium Nitrate (NaNO <sub>3</sub> )	<u>270 grams</u>
Total	450 grams

(Note: All weight and measures reported from point on are in the metric system.)

Prior to mixing, Keller used an impact mill grinder to reduce all compounds to screen less than a 200-mesh size, an approximate fineness of talc. Then he thoroughly mixed the chemicals until they were evenly distributed. At this point, he placed the powder into a one kilogram can, specifically, an empty two and a half pound coffee can. He then placed the can on a smooth, dry surface and ignited the chemicals and mineral with a small torch.

The mixture ignited slowly, but within 20 seconds it had reached a temperature of 700°C. At this point, the reaction took on a new appearance, simulating a small volcano. Small nodules of magma were being released from the can. The temperature increased to a point where sulfur was also being released from the black sand (the black sand is a sulfide based mineral). The reaction lasted for a total of 90 seconds, ending abruptly. After allowing the matrix to cool, visual inspection showed a residue identical to that of volcanic lava. It wasn't hard to imagine our universe four and a half billion years ago with the gaseous clouds forming from the subsurface volcanic activity.

The molten matrixes of newly transmuted minerals filled the fractures and fissures of the subsea terrestrial mountains during the age we presume the planet to be covered with water. By viewing this ninety-second reaction, it was apparent to me, as it probably would be to you, how the elements originated within our universe. Also, this simple reaction will aide in the understanding of the voids within the Grand Unified Theory, the mathematical emporium which ties together the Birth --- > Life --> Death of our universe.

To return to the demonstration, the analytical results were as, follows:

Before the process, there was a total of:  
Gold (Au) ----- > 0.18 milligrams (mg)  
Silver (Ag) ----- > 1.35 mg  
After the reaction, the results were:  
Gold (Au) ----- > 212.705 mg  
Silver (Ag) ----- > 856.800 mg

It was easy to interpolate the gold increased over 1,000 times and the silver increased over 800 times from before ignition to after ignition. This was a major scientific phenomenon!

To maintain objectivity, I prepared four more mixtures and performed the experiments from start to finish. I was meticulous with sampling details removing material just prior to ignition and immediately after weighing and pulverizing the magma residue. To have an unbiased view, I sent the before and after samples of the four experiments I accomplished in Jack's presence to Environmental Services Laboratories in Chicago, Illinois for a total precious metal analysis. The results from these tests impressed me to the point of starting a three-year research program. I now have the ability to share my newly gained knowledge with the world.

The qualitative results varied between the four after burn samples, but one thing which remained constant was the analysis of the before burn samples. They all showed trace amounts of gold and silver with no detection of PGMs. In the after ignition samples, significant levels of platinum, palladium, iridium and rhodium were recorded. Thus, this simple process allowed for the production of all precious metals, whereas Jack felt it was only a process for gold and silver.

With independent verification, it was time to roll-up the sleeves to determine the mechanism-the theoretical cause for the reaction and establish experimental evidence to validate the mechanics. The process was much too detailed to attempt at Jack's location. With the financial support of Mr. Thom Robinson, Gold Spinners International, and the

personal support of Mr. Lee Smith, Lake City, Florida, I was able to conduct the next phase of research at Mr. Smith's laboratory.

I was at an advantage in the research for I was aware of the reaction with a fair opinion as to the cause, or as I termed it, the "Trigger Mechanism." The following were the targeted goals of the three month research program in Lake City:

- Replication of the original experiment using different black sands.
- Acceleration/deceleration of the transmutive elements. This was to validate the mathematical pathways I had established.
- Validation of secondary and tertiary radioactive decay modes since primary radiation was confirmed to be enveloped within the heat matrix.
- Simplification of the Keller Process to eliminate multiple process steps. Jack's transmutive process was stable; however, the collection process left a lot to be desired. During the transmutive phase, he produced millions and millions of precious metal atoms. These atoms were sporadically located throughout the after burn magma. He had no chemical process to cause them to group together in the original burn so they could be easily collected during the fluxing process.
- Establish the parameters for the next phase of experimentation.

To start, Lee and I processed a number of ores to view the different effects. Black sands from Canada and Arizona were selected for their "known" distinctive qualities. I had predicted the following nuclear pathways:

Mercury	---	>	Platinum	+	Helium
*Mercury	---	>	Gold	+	Helium
Cadmium	---	>	Palladium	+	Helium
*Cadmium	---	>	Silver	+	Helium
Indium	---	>	Silver	+	Helium
Silver	---	>	Rhodium	+	Helium
*Silver	---	>	Palladium	+	Helium

Palladium	---	>	Ruthenium	+	Helium
Gold	---	>	Iridium	+	Helium
*Platinum	----	>	Iridium	+	Helium

Note: Actually, these are multi-step reactions with secondary steps not shown. They will be discussed in detail in Chapter III.)

After undertaking a replication of the Keller Process to insure repetition, I resolved the collection process during the burn cycle by simply adding a proportional molar weight of lead which created a high temperature amalgamator. This caused the atomic particles to be collected into nodules immediately upon formation. Also, there was a secondary benefit from the lead, for within the residue are newly created radioactive elements. These radioactive isotopes decay in short order, nominally 18-35 hour half-lives, or less than eight days total. The lead collector acts as a particle shield to absorb a portion of the beta radiation decay which would normally be emitted to the atmosphere.

Now, with replication and homogeneity occurring within the experiments, the next phase was the confirmation of whether my theorized mathematical reactions were correct or not. This was checked and cross checked with the follow matrix:

	Yes	No
Was the original mineral quantitatively sufficient in mercury to produce the amount of gold witnessed?	X	
By adding "X" percent in grams of mercury, did the gold production definitely increase?	X	
After chemical removal of all mercury, was there any indication of newly transmuted gold?		X

After the confirmation of the starting element from which the NEW gold was synthesized, it was a simple process to repeat the procedure for the synthetic production of silver, palladium and rhodium. Confirmation of the mechanical process was also confirmed for these elements.

At this time, all of the scheduled experiments were satisfactorily completed except for the determination of the secondary and possible tertiary decay. This was the

most difficult step to take at Lee Smith's facility, for his laboratory lacked any sophisticated radiation monitoring equipment. The only thing we could determine was that immediately after ignition, the radiation was in the order of one magnitude higher than twenty-four hours later. The only equipment available was a field survey meter and the repetitiveness was not sufficient to develop a decay curve. A decay curve allows for the calculation of the radioactive half-life. This radioactive half-life factor permits identification of the possible new radioactive isotopes that were created. However, I still considered this phase of testing successful due to the positive identification of new radioactive isotopes. This was the conclusion of the testing activity scheduled in association with Gold Spinners International, Mr. Robinson and Mr. Smith.

The next phase was to relocate to Chicago for data assimilation, formalization of the theoretical processes, recording (data sampling) of new data and determination of the next phase of research. After review of the data, I was able to computer illustrate the decay chain for approximately twenty percent of the known isotopes.

Next, I designed a series of experiments which varied with starting chemicals and accelerated ignition principles. As experimental and physical data was finalized, it was date-stamped and stored with attorney Alan Loiben in Chicago, Illinois to insure propriety of discovery. Alan was the focal point of my archives throughout this and subsequent discoveries.

The next phase was a quasi-clandestine experimental program which will never be seen within the etiquette section of scientific journals. This was in Hot Springs, Arkansas where I, with the assistance of Mr. Michael Boyd, Deer Park, Texas and Mr. Frank Mitchell, Sante Fe, Tennessee set up a six million BTU furnace to excite the nuclear reaction at a higher temperature.

I think now it would be good to interject that at this time there was no doubt we had transmutation. Also, it was now definitely defined by experimental evidence as to the type of nuclear occurrence we were experiencing. This gave me a realistic opinion as to the "Trigger Mechanism."

Further, there was no doubt that for some reason certain isotopes were being selectively fissioned. I say "selectively fissioned" because all primary fission components were alpha particles, i.e., charged helium. With

this known fact, it was easy to calculate the energies generated from the nuclear reactions. It also was not difficult to determine that upscaling of the reaction to larger amounts of material will cause enormous amounts of energy to be released unless care was exercised. This, coupled with the fact that even though over fifty experiments had been conducted to date, I accepted the fact that, other than my theories, I knew little of the reaction limitations.

Also, from the epidemiological studies of the deceased doctors, Jack Keller and Dr. Becker, over sixty percent of the people associated with this technology in the past had (or has in the case of Keller) leukemia. This form of rare cancer is known to be caused by a certain type of radiation.

During the first phase of Arkansas testing, I used an unorthodox principle by making two changes at once. I took the upgraded chemical matrix developed in Florida and increased the volume by a factor of ten. Instead of using a torch for ignition, I put the chemicals in a carbon graphite crucible and placed it within the furnace. Then I brought the temperature up to approximately 350°C (660 degrees F), at which time an explosion occurred. Vast amounts of gases and slag escaped from the furnace. However, the results were phenomenal! Below is the before and after comparison:

#### **ARKANSAS TEST RESULTS**

<u>BEFORE BURN</u>	<u>AFTER BURN</u>
1.0 kg Black Sands	
1.0 kg Coal (Mineral Coal)	35.0 g Rhodium
3.0 kg Sodium Nitrate	44.0 g Gold
0.3 kg Lead	6.0 g Platinum
0.2 kg Silver	
1.0 kg Mercury Chloride (HgCl <sub>2</sub> )	

(Note: "kg" stands for kilograms, or 1,000 grams)

During the ignition phase of this experiment, I calculated temperatures exceeded 1,500°C for a thirty-second period. Also, the energy released from the radiation of the nuclear reaction would be greater than the total energy of 200 pounds of T.N.T.. Following standard procedures, we repeated the experiment to insure we had accuracy in our results. After four weeks of testing in Arkansas, it was then time to relocate to another geographic area, Mexico.

Arrangements were made to move the test facility to Guanajuato, Mexico. This region was chosen due to its vast local mineralization and the educational facilities associated with the University of Guanajuato.

Within the University, there were two major and one minor goals to accomplish. First, to determine the exact chemical composition of the mineral, the black sands which caused successful transmutation. This was necessary to confirm the "Trigger Mechanism." By this time, I had reasoned this mechanism to be the silicon oxide, or better known as "quartz." The reasons for this analytical analysis series included:

1. To insure that the precious metals were not hidden in some obscure form in the original mineral and only presented themselves after this high temperature burn.

2. Determination of how to build a chemical matrix with reagent (pure) grade chemicals in place of the mineral containing trace amounts of precious metals.

These were important steps, for with this information I could then start to selectively present this discovery to the scientific community in a theoretical and practical form.

The second goal was to have the University of Guanajuato's Institute of Scientific Investigations, under the direction of Dr. Garcia Torres validate my previous findings.

A third goal, of minor importance, was to determine how the professionals within the geological field would take to having a new theory on how mineralization occurred in the Universe. This proved to be a disaster! I am not sure if it was my delivery method or lack of Spanish, but I will never forget the statement from one of the unnamed professors.

"If you put a kilogram (2 pounds) of chicken in a pot, you will never have more than a kilogram of chicken within the pot."

The translation, "Transmutation--Hah--bah, you must be joking!"

At least Dr. Torres was more open-minded. I gave him a chemical matrix consisting of mineral, carbon(C), sodium nitrate( $\text{NaNO}_3$ ), lead(Pb) and mercury(Hg) . I wrote out the procedures in total and departed, allowing him to acquire

new chemicals and to proceed unobstructed by me. On September 10, 1991, Dr. Torres prepared an affidavit stating the following results:

Mineral before the reaction (100 grams total)  
silver ----- 0.35 mg  
Gold ----- 4.00 mg

Mineral composition after the reaction  
Silver ----- 0.96 mg  
Gold ----- 17.00 mg

Translated excerpts from his report follows:

"The tests, sample preparations, and analysis were conducted by University personnel, without comprise of Dr. Champion."

"I can not consider the increase to be from a chemical reaction. It's probably a new nuclear reaction."

"In the thermal process, there was no external nor internal radiation source. Clearly the reaction (nuclear) started with the heat (burn) and terminated at the end."

This was a major event in the development of the science, for this was the first external scientific community review, and it passed!

Also, within the Inorganic Chemistry Department of the University, the analytical composition study of the mineral was finalized. The analysis was completed by the following techniques:

--- Fluorescence x-ray.  
--- Flame atomic absorption spectroscopy.  
--- Electron microscopy.

After detailed analysis of five different ores known to accelerate with transmutive properties, the following chemical matrix with crystalline formations would be required to synthetically produce precious metals:

SiO<sub>2</sub> --- Quartz  
FeSO<sub>4</sub> --- Iron Sulfide

PbO	---	Lead Oxide
CaO	---	Calcium Oxide
HgS	---	Mercury Sulfide (Cinnabar)
Cd	---	Cadmium

This mixture, along with:

C	---	Carbon,
NaNO <sub>3</sub>	---	Sodium Nitrate or KNO <sub>3</sub> -Potassium Nitrate
S	---	Sulfur
HgCl	---	Mercury Chloride
Ag	---	silver

will allow for the synthetic production of:

Au	---	Gold
Ir	---	Iridium
Pt	---	Platinum
Pd	---	Palladium
Rh	---	Rhodium

The starting chemical matrix worked with sporadic results. However, I think the most important point is that when the chemical matrix is properly prepared, it has a reproductive factor of over sixty percent. This was later increased to ninety plus percent when an error was determined in the crystalline structure of the FeSO<sub>4</sub>, the iron oxide. The difference dealt with a magnetic susceptibility at high temperatures, i.e., greater than 750°C.

After the completion of the research in Guanajuato, I returned to Texas to build an electromagnetic resonance simulation chamber. The concept was copied from a system I constructed in 1988 for the Santa Fe Research Center. The original research was in isolation of specific isotopes via "Selective Precipitation." one evening after building the new chamber, physicist Larry Shelton and I were cleaning up from that day's experiment, when Larry noticed some debris in the bottom of the resonance chamber. The chamber should have been free from substance. Larry carefully removed the residue by siphoning (the aqueous solution was 30% molar nitric acid--HNO<sub>3</sub>) Upon inspection in a petri dish under a

low power (x60) microscope, the debris had the appearance of golden colored spheres, laced with colored wires.

We took a portion, about 100 mg, of the spheres and placed it in a high speed centrifuge for separation. The density was so great that the spheres shattered the centrifuge tube. At this time, we started to take the discovery with more enthusiasm. On a detailed inspection of the spheres, we found them undergoing an oxidation process. They lost no clarity. They did solidify into an appearance of golden translucent marbles. We were able to cause total dissolution of a fraction of the sphere in an acid mixture of hydrochloric and nitric acids called aqua regia. (Aqua regia translated means "King's Water" or "Ruler's Water." It was discovered by the ancient Egyptians and is the most common acid mixture which will dissolve gold.) After dissolving the spheres, we analyzed by Atomic Absorption Spectroscopy and determined the embedded wires to be gold and iridium.

The acid solution was that of a silica base metal solution of a specific silicate. The experiment was replicable. It was this replication for which we were searching when duplicating the system in the NASA area of Houston, Texas in early 1992.

At this time, an associate was contacted by the Merrill Lynch office in Dallas, Texas regarding gaining a financial backer for continued research. A source was located in California by the name of William L. Telander. After an interview with Mr. Telander, I felt it safe to go forward. After proving the science was real to Mr. Telander in Houston and having the duplication we needed, we relocated the electromagnetic resonance stimulation chamber to the laboratories of Dr. John O'M Bockris, Department of Chemistry, Texas A&M University. Dr. Bockris, a Distinguished Professor of Chemistry at A&M, is one of the world's foremost authorities in electro-chemistry.

I was received with mixed feelings inside Dr. Bockris's group. Dr. Bhardwaj, the senior scientist and Mr. Minevski, a graduate student, both of chemistry disciplines, were openly optimistic, while Dr. G. Lin, a nuclear physicist was negative. Dr. Lin's favorite saying as he walked down the hall was, "No, no, no, no!" Because of the time constraint, I rapidly attempted three demonstrations of the electromagnetic resonance experiment -- all failures. This made Dr. Lin happy. The reader should not misunderstand the situation with Dr. Lin. We were not adversaries? but life would have been simpler for a physicist if my theories were

proven wrong. However, with what was to happen next, Dr. Lin and I became close, while I unknowingly developed new opposition within the group at the University.

To move forward, I elected to wait until I had thirty (30) days of unobstructed time to clarify the defects within the electromagnetic resonance system. The next process was a demonstration of the thermal process on which I had worked for two years.

The first official, or unofficial, depending upon whose views you are considering, experiment started around April 15, 1992. We were using chemicals in containers from various laboratories in the University. Some of the containers had previously been opened, thus exposing the chemicals to air and possible contamination. Regardless, I demonstrated a questionable radiation curve. Electrical noise in the laboratory was interfering with the instruments. However, there was no question as to the presence of a radiation decay. Only its constant was in question.

Unknown to me until a later date, and maybe still unknown to his colleagues, Dr. Lin performed and recorded four additional radiation studies with different chemical compositions. His purpose may have had dual motives. An undisclosed purpose may have been to disprove my findings through determining an easy, alternative explanation to what I was producing. The obvious motive was to find out why a chemical reaction caused a deviation in radiation decay. Each of Dr. Lin's four recorded tests provided differing decay curves with different radioactive isotopes being created. This was an important factor to me. Not only from the fact of the new radioactive isotopes being obtained by an independent researcher, for I was well aware of the phenomenon, but I was able to gain Lin's respect as a colleague instead of an outsider.

Starting April 30th, a series of validation tests were commenced. I was permitted entry to the building and my office. They had supplied me with a desk and I was permitted access to the library. However, the laboratories, chemicals and samples were off limits to me. During the tests, Drs. Bockris and Bhardwaj took the chemicals and samples home at night to prevent any question of tampering. The first five tests produced varying levels of gold, platinum, iridium and rhodium. The anomalous radiation from the new, rapid decaying isotopes were measured only on a portion of the experiment.

About this time, the financial backer, Mr. Telander and I selected a name for the business venture which had encompassed our relationship with the science. We named our venture "The Philadelphia Project." This name was taken from the World War II science experiment by the same name which dealt with EMR (electromagnetic resonance). Since transmutation involves the same process, this choice of title was considered a natural selection.

During the course of the experiments, Dr. Roberto Monti joined us, Texas A&M and The Philadelphia Project, as a visiting and a staff scientist, respectively. Dr. Monti, a physicist, had developed theories years ago that errors existed in the universal laws, including those developed by Albert Einstein. His right wing approach made him a renegade to our profession. In his research, he found reported low energy nuclear reactions discovered by Vanquelin in 1799. Vanquelin found that a biological transmutation occurred in chickens which produced calcium through a reaction of silicon plus carbon. Now modern day scientists such as Oshawa, Kushi, Kervran, Komaki and others have attempted to replicate these low energy reactions recorded through the past centuries.

Since neither Dr. Monti nor I were "staff members" of Texas A&M University, and of more importance, since we were supporters of low energy nuclear reactions, it was necessary that we be barred from the University during any further validation of the science. The only scientist in favor of this idea was Dr. Bhardwaj, and his opinion was strong enough to carry.

From this point forward, things started to come apart within the University's evaluation of the science. The first major mass failures in transmutation started to appear. When Monti returned, without my presence, the tests would work. When Dr. Lin measured for radioactive decay, it was present (the presence of new radioactive decay indicates the definite formation of new isotopes--transmutation) . However, when Dr. Bhardwaj worked alone or in concert with others, the results frequently failed. He frequently followed a failed test with the typical statement, "I told you so, Dr. Bockris! It does not work!" With the stigma of the past--the incarceration of Dr. Becker and the numerous other stories involving persecution of scientists and miners by governments and other interests caused me to suspect Dr. Bhardwaj of possibly being influenced by opposing group to commit "lax procedures" in the conduct of the experiments. I do not think he could shrink to outright sabotage. Also, information which tended to confirm my suspicions came from

two sources. The information was that Dr. Bhardwaj was a Government agent for a well known U.S. agency. The first disclosure came from his colleague, Dr. Lin, and sometime later I received corresponding information from Mr. Richard Boswell, Caleb International Investigations, Huntington Beach, California.

The following is a review of the University's evaluation results through December, 1992, as provided me by Texas A&M:

TEXAS A&M TEST SUCCESS RATE

Scientists Failure	Total	Gold Success	Radiation Success	Success
Champion/Monti/Lin/Bhardwaj	6	6	2	0
Lin (Radiation decay tests)	4	---	4	0
Monti/Lin/Bhardwaj	1	1	1	0
Lin (June 9, 1992)	1	0	0	1
Bhardwaj/Lin/Minevski	11	3	2	6
Totals:	23	10	9	7

If I erred in the judgement of Dr. Bhardwaj, I will publicly apologize.

During the later portion of the Texas A&M testing program, I established an independent program with Mid-States Recycling Inc, Rosemont, Illinois. Under the direction of Mr. Ellis Brown and their metallurgist, Mr. Don Patel, Monti and I developed new procedures. The two of us were present during the first four tests, then we excused ourselves to prevent any potential claims of self-contamination of our own

experiments. As recorded, MidStates had over 35 successful production runs in which gold, platinum and palladium were produced. When Drs. Bhardwaj and Lin conducted an experiment there, the experiment failed. Somehow, the silicon oxide was omitted, an essential ingredient! The only failure known to me at Mid-States had Dr. Bhardwaj involved. This test was added to the record at Texas A&M University.

An important question was, "Will the reaction upscale? Can we use larger batches of mixtures and achieve correspondingly greater results?" Another series of experiments were accomplished, and are still in progress. These experiments raised the starting matrix from approximately 1,800 grams to 3,000 grams. The experiments quoted now are the only ones accomplished within Mid-States Recycling facilities. They do not reflect on several previous experiments where the analysis of those experiments were not certified by recognized facilities. The increase in weight of the starting matrix indicates that the production accelerates at a (x) (unknown exponential) rate greater than the projected rate one would expect. This can be accounted by the fact the transmutation cycle, the resonance nuclear reaction, lasts for a longer period.

From experience gained during my first research trip to Mexico, I was able to determine that a major phenomena had occurred. The larger the reaction, reactions using greater than 15 kilograms of material, the lower the production. After detailed analysis, it was apparent that the transmutation cycle was of such length the starting matrix transmuted to the precious metals, then proceeded to continue to transmute to elements less than precious. To prevent this occurrence for the positive energy transmutations, it is necessary to add to the starting matrix the metals you wish to acquire in the process. The purpose of this is simple. The resonance qualities of the metals that were added act as a stopping agent in the process. To understand completely, it is necessary to refer to the similarity of the nuclear magnetic resonance qualities of the starting and ending isotopes.

The experimental data collected during the previous three years allows empirical validation that not only can precious metals be synthesized from a nuclear reaction in the "cold" (without a high energy nuclear reaction), but can be produced economically.

To review an interesting point in the transmutations accomplished within the Mid-States facilities, Runs 1, 2, 3 and 4 contained 50 grams of cadmium metal, whereas Runs 5

and 6 did not. The first four runs produced palladium, whereas the last two did not. Also, runs 7 and 8 provided visual indications of high increases of gold and platinum.

Formulas used in the initial Mid-States tests were:

RUNS 1, 2, 3 AND 4

Carbon	300 grams
Potassium Nitrate	900 grams
Sulfur	80 grams
Silicon Oxide	120 grams
Iron Sulfate	100 grams
Cadmium	30 grams
Mercury Chloride	100 grams
Lead Oxide	50 grams
Silver	5 grams
calcium oxide	30 grams

RUNS 5 AND 6

Carbon	450 grams
Potassium Nitrate	1,350 grams
Sulfur	135 grams
Silicon Oxide	120 grams
Iron Sulfate	150 grams
Mercury Chloride	100 grams
Lead Oxide	100 grams
Silver	10 grams
Calcium Oxide	40 grams

RUNS 7 AND 8

Carbon	450 grams
Potassium Nitrate	1,350 grams
Sulfur	135 grams
Silicon Oxide	120 grams
Iron Sulfate	150 grams
Mercury Chloride	500 grams
Lead Oxide	100 grams
Silver	10 grams
Calcium Oxide	40 grams

In all cases, the material was reduced to less than 200 mesh, then mixed until homogeneous. The material was then placed in a 40-pound crucible with 1,000 watts applied to the furnace. Ignition occurred within three minutes, lasting for approximately 90 seconds. After the high temperature burn, the period of transmutation, the furnace temperature was raised to approximately 2,000°C and allowed to stabilize

for 1.5 hours. The mixture was poured into a mold and cooled. Following separation of slag and the button as described in Chapter IV, both were analyzed.

To put these scientific findings into another relationship, I think it is necessary to view the ratios of what one ton of chemicals produces verses the richest mineralized ores in the world. In general, most companies are mining ores containing less than 5.0 grams per ton. Whereas, in our worst case situation, we are converting 1.0 ton of chemicals to 200 grams of gold.

From the examples shown above, one can vary the chemical compositions to vary the quantity and type of new elements desired.

In September of 1992, Dr. Monti and I went in different directions. He went west to re-evaluate the original works of Keller. Up until this point, I was the only scientist in the group to have an interview with Mr. Keller. I went south to Mexico.

Dr. Monti's visit with Keller was successful. With my assistance, they were able to work with an analytical laboratory in Las Vegas and gain verification of the three-step process I had viewed in the beginning.

My second trip to Mexico was motivated to provide large scale testing of the technology. I theorized a process wherein one could take one of the many abandoned silver mines, or depleted silver veins and conduct an in-ground nuclear reaction. This reaction would, if successful, cause the depleted silver vein to become a rich deposit of rhodium and palladium. This test was pre-empted by wet conditions and a 600 kilogram test monitored by the media and the Government of Mexico. This successful test received widespread attention in the press throughout Latin America.

Also planned in this next phase was an in-ground nuclear reaction in a mercury (cinnabar) mine. If successful, this would convert the mercury mine to a gold-platinum-iridium mine.

Through all this, there was no question of success, only the problems of upscale design and logistics. Then, I had a very dark cloud gather over me in my quest to establish the science.

On December 11, 1992, I was preparing for an interview with media representatives in Mexico City. Unfortunately, I

missed the meeting with the press because I was picked up and taken to Arizona by a combined group of FBI agents, Mexican Federales and Interpol. As I was led into the Phoenix airline terminal, I was arrested by Arizona police and taken to the Maricopa County Jail. I learned en route from one of my FBI escorts, and later from Roger Briggs that my business partner and friend, William Telander, had betrayed me through a false story he gave to the FBI that I was about to do a traitorous act in passing nuclear secrets to certain third world leaders, Quadhafi and Castro. Simultaneous to my kidnapping out of Mexico, my personal effects and 20 years of computerized notes, files, experiments, data and all history were stolen from my personal storage in Mexico by Telander and his girl friends, Miss Mateo and Miss Meacham.

Even though I became a political prisoner in jail, my morale was not broken. I was able to continue my work in the science through others. I collaborated with Drs. Bockris, Bush(CalPolyTech) and Monti on a theoretical scientific paper which will be published in the near future.

Also, with the aid of Retired Navy Captain Roger Briggs, who has given me much needed assistance since I was jailed, testing of the science continued. In April of this year, Roger met with Wayne Palmer, owner of C & W Mining, Buckeye, Arizona. Six tests were performed at Palmer's field site. The experiments were designed to establish parameters for commercial application of the transmutable capabilities of the science. The tests were highly successful. Transmutation occurred in all the experiments and valuable information was gained on commercial application. The results of the first test were analyzed at the field site by fire assay and atomic absorption, then validated independently at Chemex of Sparks, Nevada (fire assay), at Iseman Consulting in Mesa, Arizona (by microwave technology) and at Texas A&M by ICP (Inductive Coupled Plasma). All the assays confirmed transmutation occurred.

As occurs in science so often, when one ventures into the field of applied science, new discoveries are made. Thus, the case in Mesa, Arizona in Greg Iseman's laboratory where I gave him chemical compositions to analyze through a new microwave technology he employed. Unknown to Iseman, his microwave digestion process was not taking "estranged ores" and placing them into a solution which could be analyzed. Instead, he was creating conditions which allowed for his microwave process, an industrial microwave supporting high pressure bottles, to synthetically produce, through nuclear transmutation, gold and PGMs. I will be reporting additional

data on this type of transmutation stimuli after further confirmations.

Following the experiments conducted by Wayne Palmer, Roger Briggs and Greg Iseman in April and May, 1993, Mr. Palmer and I undertook a series of different experiments. Palmer conducted the experiments and I provided the guidance, mathematics and reasoning via telephone and letters from jail. our purpose was not only to validate other portions of the transmutation process, but, more importantly, to establish the final parameters of commercial production of gold and PGMs. This has been successfully accomplished by development of a mechanical resonance system. This system allows for resonance, transfer of magnetic susceptibility and dissipation of heat. In the process, two commercial systems have been developed for production of precious metals. Both systems have proven to be environmentally friendly, with one operating with a dry transfer mechanism and the other using a liquid media.

I collected data for this report through May, 1993, and with the ever fast changing world, the data presented could be old news, or obsolete within a few months.

## Chapter III

### EXPLANATION OF RESONANCE REACTION

#### INTRODUCTION

Madam Marie Curie, a famous physicist and chemist, along with her husband Pierre made a significant scientific discovery in 1898. They were able to isolate a few grams of radium from tons of pitchblende, a mineral consisting largely of uranium oxide. With the discovery of the first unstable (radioactive) element, science underwent a change of direction. At the beginning of this century, physicists were in a position to undertake the study of the physical structure of the other and of the atom.

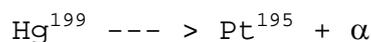
Numerous scientists were soon to make a name for themselves. Bohr and Rutherford developed principles which in 1913 allowed the symmetrical planetary model of the atom to become the "official science." In 1905, Einstein presented the foundation for the Laws of Relativity with the Special Laws to shortly follow. A few years later, in 1919, Rutherford and Chadwicke were the first to "split the atom. ll Rutherford I s work gave rise to the idea that enormous forces were needed to cause nuclear changes. This was the origin of high energy physics.

During this time frame, Einstein,, Fermi, Rutherford, Bohr, Pauli and Plank were but a few of the noted scientists who finished the foundation of nuclear physics, sealing off

any possibilities, until now, of "low energy" nuclear change.

### THE RESONANCE REACTION

An alpha fission can be forced to occur on any isotope have a magnetic moment at extremely low energies. This experimentally proven phenomena validates the new alpha model theories of the atom. moreover, such transmutations show the existence of a new class of nuclear reactions for which the energy transfer does not follow the electromagnetic relations.



Within this reaction we can easily calculate the reaction energy using standard equations.

$$\begin{aligned} Q &= (M_x - M_y - M_a) \times 931.5 \text{ MeV/u} \\ Q &= (\text{Hg}^{199} - \text{Pt}^{195} - \text{He}^4) \times 931.5 \\ Q &= 0.8272 \text{ MeV} \end{aligned}$$

This reaction is easy to accept because of the positive energy release. Let us now review another proven fundamental alpha (a) fission:



Calculating the energy of this reaction through the same equations we have:

$$\begin{aligned} Q &= (\text{Ag}^{107} - \text{Rh}^{103} - \text{He}^4) \times 931.5 \\ Q &= -2.8015 \text{ MeV} \end{aligned}$$

In retrospect to the energy/mass equation, it is impossible for this endothermic nuclear transmutation to occur unless the starting isotopes have a threshold energy greater than Q. Yet it has been replicated at low energy levels in numerous experiments. The only explanation for this reaction is that the nucleus stores energy until its quantum is of sufficient size to cause the release of the alpha particles.

In what form can the energies be stored? Before stating an opinion of this question, one must accept the fundamental interactions of elementary particle physics to be in error, or at least for nuclear reactions what occur at lower energies. There are two troubled areas:

1. The equation  $E=mc^2$  can not be generalized to energies and interactions different from the electromagnetic ones. Gravity is considered so weak that it only reacts when amounts of mass are involved.

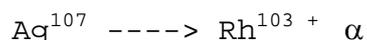
2. Contrary to the principles of relativity, a material medium exists, and this media is able to collect potential energy which can change into matter. The Electro-weak Interaction, which is intimately tied to the deep principals of special relativity, is this transfer mechanism. When the low energy transmutation reaction starts, the energies present are not of sufficient quantum as required by the existing conservation laws.

In addition, this particular nuclear reaction only occurs when the starting isotope has a magnetic moment. it is assumed when the nucleus is placed with a resonance field and stored, it is then qualitized to a specific precession. This nucleus will store energy through different reactions within the surrounding force field. At the point when  $Q$  is greater than required to break the alpha bond, only then will the nucleus emit an alpha particle. To understand fully, we will divide the reactions into their two categories, the positive energy reaction and the negative energy reaction.

To start the positive energy reaction, it is necessary for the nucleus to store energy in a way which is different than is supposed by classical quantum mechanics, up to the point where an alpha particle can tunnel through the classical coulomb barrier.

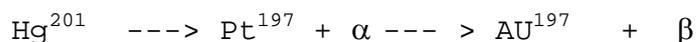
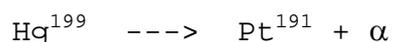
In this reaction, such as the  $Hg^{199} - Pt^{195} = a$ , the energies from the ground state must only be increased to a level of  $(x)$ , at which time the alpha particle can tunnel through the nuclear barrier.

In the case of the negative energy reaction, the nuclear pathway is most difficult, for it is necessary to "pump" energy into the nucleus which will store it until the fission of the alpha particle can occur. An example of the negative energy reaction is:



In this case, it is necessary to increase the mass of the starting nucleus to a quantum greater than  $Q$  of the transitional level required for a mass balance after fission.

After completion of over three hundred(300) experiments, I have seen that the previously mentioned reaction can only be accomplished on isotopes with magnetic moments. An example of this is mercury which has seven stable isotopes found in nature, but only Hg<sup>199</sup> and Hg<sup>201</sup> have the required magnetic moment. These isotopes gave the following reactions:



After detailed mass spectroscopy studies, the only platinum isotopes found were the ones noted above. Numerous other examples were seen in the laboratory with multiple isotopic elements. This proved the reaction to be limited to isotopes with magnetic moments.

If one could accept the fact that the symmetrical planetary models of the atom are inconsistent with the actual structure, it then would be logical to accept an asymmetrical model of the nucleus as postulated by others in the past. With an asymmetrical body, the columbic field itself could not be symmetrical, nor could it be uniform in repulsion energies. This can account for the ease in tunneling of the alpha transmutations. And the asymmetrical model may explain why the primary transmutations seen in the low energy fission of isotopes with the magnetic moments was always an alpha particle. Secondary and tertiary nuclear reactions will occur only if the isotopes produced from the alpha fission were unstable. Normal decay will then occur typically through a beta or positron emission.

Another example of the utility of this reaction is as follows:



This reaction is accomplished easily by neutron absorption of the starting U<sup>238</sup> isotope. The next phase is to place the Pu<sup>239</sup> (Pu<sup>239</sup> has the required magnetic moment) within a resonance reactor, thus causing the following alpha fission:



By using this method, it is possible to synthetically produce U<sup>235</sup> in its empirically pure state without the need

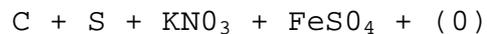
of sophisticated centrifuges, or laser isotopic separators. Also, this process, when engineered correctly, will allow for the recycling of  $\text{Pu}^{239}$  as a renewed fuel within the existing nuclear reactors.

## CHAPTER IV

### EXPERIMENTAL EXAMPLES

The production of transmuted isotopes can be achieved by numerous chemical reactions, assuming that one has the basic understanding of the process. In a thermal process, it is necessary to achieve two major components: heat and resonance.

Heat can be generated by several means, but most common is the following general formula:



There are several variations which can be applied to the above, such as:



Other forms of heat can be generated with gases, although an imminent danger is present with such reactions.

Within the heat matrix a fundamental resonance function is due to  $\text{SiO}_2$  (silicon oxide) in the form of quartz crystals.  $\text{SiO}_2$  creates the resonance conditions for the absorption of the energy of the nuclei. Gold (Au) and

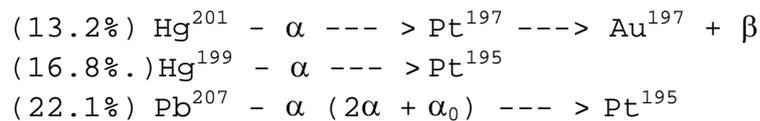
silver (Ag) act as catalysts of the fission of the basic metals such as lead (Pb) and mercury (Hg).

Since chemical reactions start nuclear reactions, it is useful to counterbalance the "positive" energy obtained by the nuclear fissions of heavy elements (Pb, Hg) with "negative" energy nuclear fissions of the lighter isotopes. To this aim, cadmium (Cd) is an important element. Consider as an example the following matrix of chemicals:

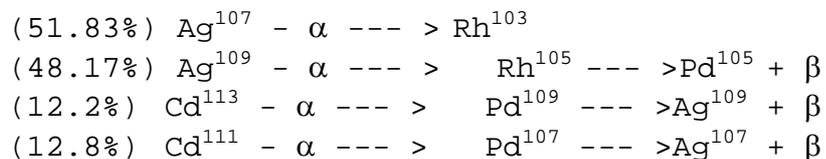
COMMON CHEMICAL MATRIX AND CHEMICAL PURPOSES

	Iron sulfate(FeSO <sub>4</sub> )	100 grams
Heat	Sulfer(S)	80 grams
Generators	Carbon(C)	300 grams
	Potassium nitrate (KNO <sub>3</sub> )	900 grams
Resonance	Silicon oxide(SiO <sub>2</sub> )	120 grams
Generators	Calcium oxide(CaO)	30 grams
Catalyst	Silver(Ag)	5 grams
Basic	Mercury choloride(HgCl)	100 grams
Metals	Lead Oxide(PbO)	50 grams
	Cadmium(Cd)	30 grams

The reaction, started by ignition through the joint action of SiO<sub>2</sub> and CaO, causes the following nuclear esoenergetic reactions:



and the following endoenergetic reactions:



In what precedes, we have considered only "cold fission" reactions. But maybe other, different nuclear reactions are occurring in the compound.

To synthetically produce precious metals, I have laid out two basic programs. One is with empirically pure chemicals. The second uses mineralized black sands with only a trace of gold.

## THERMAL 2 EXPERIMENT

First is the laboratory report of the "Thermal 2 Experiment. 11 Thermal 2 uses empirically pure chemicals. This experiment, and the Thermal 4 Experiment, described later in this chapter, were two of the many tests conducted at Texas A&M University in College Station, Texas. Thermal 2 Experiment was accomplished on May 22, 1992 by Drs. Bockris, Monti, Bhardwaj, Lin, Mr. Minevski and me.

The assay results from ICP(Inductive Coupled Plasma) analysis were obtained on June 2, 1992. The assay indicated that the product of the mixture after ignition contained about 570 parts per million (ppm) of gold. Since reagent (high purity) chemicals were used, there was no gold in the mixture before initiating transmutation. The 570 parts per million of gold in the after treatment material indicated this amount of gold was created, i.e., transmuted out of a mixture of chemicals containing no gold before treatment.

#### TRANSMUTATION PHASE--THERMAL 2 EXPERIMENT

The total mixture of chemicals -and the weight of each chemical used in Thermal 2 are shown on the following page. The total weight of the chemicals was 1,715 grams (g).

The chemicals were weighed separately and then mixed together. Ninety (90) grams of mixture was sent for analysis. The remaining 1,625 grams were ignited by a torch in an empty 2.5 pound coffee can. The fire lasted about 90 seconds. The weighing, mixing, and firing were accomplished by Drs. Lin and Monti. This completed the process of transmutation. The next step was to analyze the amount of transmutation we achieved.

#### CHEMICALS USED IN THERMAL 2 EXPERIMENT

Chemical	Weight	Chemical Supplier
C	300 g	Johnson Matthey, 300 mesh, 99.5% purity
KNO <sub>3</sub>	900 g	Baker, 99.2% purity
S	80 g	Spectrum
SiO <sub>2</sub>	120 g	EM Science, 60-200 mesh
FeSO <sub>4</sub>	100 g	Chempure
Cd	30 g	Johnson Matthey, 325 mesh, 99.5% purity
Hg <sub>2</sub> Cl <sub>2</sub>	100 g	Fisher, 99.98% purity
PbO	50 g	Johnson Matthey, 99.99% purity
Ag	4.99 g	Johnson Matthey, 100 mesh, 99.95% purity

CaO	30 g	Baker, Reagent Grade
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#### PREPARATION FOR ANALYSIS--THERMAL 2 EXPERIMENT

The mixture had melted during the firing process into a rock-like substance which appears very similar to solidified lava from a volcano. After cooling down, the product was crushed into powder to about the consistency of talc powder (200 mesh). This was done in an impact mill. The pulverizing was accomplished by Dr. Monti and Mr. Minevski. The total weight of the after ignition product powder was 849 grams.

Two methods were used to analyze the powder residue from the burn. The first method used a TWO-STEP procedure. The TWO-STEP method was conducted by Drs. Lin and Monti as follows:

- 1 . In the first of two steps, thirty (30) grams of the total of 849 grams of residue powder was placed in a crucible, a special container capable of withstanding the high temperatures of a furnace. Standard ore flux of 150 grams was added to the 30 grams of product and thoroughly mixed. The flux was Action Mining Services', the chemical formula of which is  $PbO$ ,  $Na_2B_4O_7$ ,  $SiO_2$ ,  $Na_2CO_3$ . Thirty (30) grams of sodium borate (Fisher) was added on top the mixture. Two 12-inch nails were then inserted into the mixture.
2. The crucible was placed into a furnace and heated to  $1,100^{\circ} C$  for about two hours. At the end of two hours, the mixture had become molten. The appearance was very similar to what lava looks like before it cools and hardens.
- 3.The crucible was removed from the furnace and the molten mixture was carefully poured into a steel mold.
4. After separating the two parts, the lead was found to weigh 61 grams and the slag weighed 104 grams.
5. The slag was then crushed into powder by the impact mill. The powder was again weighed and found to equal 101 grams. Three grams were lost in the crushing action. This was considered normal.
- 6.The 101 grams of slag was mixed with 101 grams powder residue and 1,010 grams standard flux.

7. The slag mixture and the lead were separated into two equal parts.

8. The SECOND STEP of the TWO-STEP method, conducted by Drs. Monti and Lin, was to place the slag mixtures and the two lead pieces into two crucibles. Each crucible had one part of the slag and one part of the lead. The lead was buried deep in the mixture. Forty(40) grams of sodium borate was layered on top. Two nails were inserted into each crucible as before.

9. The crucibles were heated to 1,100°C for about two hours, thus entering the mixture into a molten state.

10. The molten mixtures were poured into separate steel molds and allowed to cool to room temperature.

11. The lead parts were separated mechanically from the glassy slag and weighed. The total weight for the lead pieces was 472 grams.

12. The lead pieces were cut into eight parts and each piece was placed in a cupel.

13. The cupels were heated in a furnace to 950°C for 23 hours. After becoming molten and cooled, each cupel had a bead. Dr. Monti weighed the eight beads and arrived at a total weight of 0.716 grams. The beads were then set aside temporarily for future use in ICP measurements.

The SECOND METHOD used only ONE STEP in the preparation for analysis procedure. This method was very similar to the first step (number 1 through 7 above) of the two-step treatment, except that the slag measurement is omitted. Of the remaining 819 grams (30 grams were used in the first method), 481 grams were removed for the second procedure. The 481 grams of powder was mixed with flux in the ratio of 1:5. Four hundred (400) grams of powder was mixed with flux by Dr. Bhardwaj, 30 grams and flux were mixed by Drs. Lin and Monti, and 51 grams were mixed with flux by Dr. Monti. The total mixture was divided and placed into eight crucibles.

The procedure for treatment was the same as was described above in steps one through seven, with the exception the slag is omitted. The cupels were heated to 950°C for 2-3 hours. After removal from the furnace and cooled, the slag was separated from the pieces of lead and discarded. The weight of all the lead was 980 grams and was

mechanically separated into smaller parts. Each part of the lead was positioned in a cupel, placed in the furnace and, after becoming molten and cooled, weighed out to a total of 3.44 grams. From the beads, 3.3 grams were used for the ICP measurement and 0.14 grams was used for the EDS (Electron Dispersing Spectroscopy or, better known as the Electron Microscope) measurements. This part of the experiment was done by Dr. Monti.

#### ICP ANALYSIS--THERMAL 2 EXPERIMENT

For the purposes of Thermal 2 Experiment, although there are other precious metals in the residue powder, we only wished to determine the amount of transmuted gold. The steps taken were as follows.

1. First, we prepared the ICP standard. 8.9 milligrams of gold was dissolved in 50 milliliters of 10% aqua regia solution. Then 5 milliliters of this solution was diluted into 50 milliliters for the ICP measurement. The ICP measurement of the gold in the standard solution was entered as 17.8 parts per million.
2. The beads from the TWO-STEP (first) method, a total of 0.716 grams and 3.3 grams from the second method were used in the ICP measurement.
3. The beads were placed separately into 50 milliliters of 20% nitric acid solutions for 2-3 hours. Some of the metals dissolve, but the gold does not. The solution is filtered, leaving an undissolved residue in the filter.
4. The undissolved portions are then dissolved separately in 5 milliliters of aqua regia solutions. This dissolves the gold and places it into the solution.
5. Five milliliters of both of the resulting solutions were diluted to 50 milliliters for the ICP measurement. These steps were accomplished by Dr. Bhardwaj and Mr. Minevski.

The ICP measurement of the concentration of gold in the samples prepared by the TWO-STEP method and the SECOND METHOD were 132.8 parts per million (ppm) and 445.9 parts per million (ppm), respectively. Dr. Larry UnRuhe of the Texas A&M Agriculture Department conducted the assay.

#### CALCULATIONS TO DETERMINE AMOUNT OF GOLD CREATED

1. THE TWO-STEP METHOD: We had 132.8 ppm. We compared it to the standard we made which had 8.9 milligrams of gold

dissolved therein so that it became 17.8 ppm in the standard solution.

$$132.8 \times 8.9 / 17.8 = 66.4 \text{ milligrams (mg)}$$

The total product powder, the after burn residue, was 131 grams, or 131,000 milligrams. Thus the concentration of gold by the TWO-STEP method was:

$$66.4 / 131,000 = 507 \times 10^{-6} = 507 \text{ ppm}$$

2. THE SECOND METHOD: We had 445.9 ppm of product powder. We compared it to the standard solution we made which had 8.9 mg of gold dissolved therein so that it became 17.8 ppm in the standard solution.

$$445.9 \times 8.9 / 17.8 = 223 \text{ mg}$$

Beads of 3.3 grams out of 3.43 grams obtained were used for the ICP measurement. The total product powder obtained in the SECOND METHOD was 481 grams, or 481,000 milligrams.

Thus, the concentration of gold was:

$$223.0 \text{ mg} \times 3.43 / 3.3 / 481,000 = 482 \times 10^{-6} = 482 \text{ ppm.}$$

Therefore, based on the ICP measurements, about 500 ppm of gold was transmuted in Thermal 2 Experiment.

From the above figures, if we desired to obtain 1 gram of gold, Thermal 2 Experiment indicated that we may need 2 kilograms of mixed chemical (C, KNO<sub>3</sub>, S, SiO<sub>2</sub>, FeSO<sub>4</sub>, Cd, Hg<sub>2</sub>Cl<sub>2</sub>, PbO, Ag, and CaO), 5 kilograms of flux, and 1 kg of sodium borate.

Dr. Bockris selected samples of the before and after ignition for independent analysis exterior to the University. The following is an abstract of the independent assays:

ANALYSIS ABSTRACT OF INDEPENDENT ASSAYS

Laboratory	Sample	Au	Ir	Ps	Pt	Rh	Ru
Mintek Labs Randburg, S. Africa	Before	0.0	0.00		0.0	0.0	0.0
	After	848.0	0.12		0.2	1.8	0.0
Bonder Clegg Ontario, Canada	Before	0.1	--	0.0	0.0	--	-
	After	910.0	--	2785.0	180.0	--	-
Chemex Labs, Inc Sparks, Nevada	Before	0.0	--	0.00	0.00	0.0	-
	After	>100.0	--	4.03	0.62	0.3	-

(Results reported in parts per million)  
( -- means not tested)

In review of the abstract you will see variations between assay reports. This can be explained in part by the phenomenon known as the "Particle Sparsity Effect."

#### **THERMAL 4 EXPERIMENT**

This experiment was conducted in the Chemistry laboratories at Texas A&M University on June 10, 1992. Drs. Bockris, Bhardwaj, Monti, Lin and I conducted the experiment.

#### **TRANSMUTATION--THERMAL 4 EXPERIMENT**

In this case, we used a mineral from Action Mining which had a small, but measurable amount of gold and silver. The total weight of the chemicals listed below was 770 grams. The chemical composition was as follows:

#### **CHEMICALS USED IN THERMAL 4 EXPERIMENT**

Chemical	Weight	Chemical Supplier
Mineral 2	100 g	Action Mining, 1.6 ppm Au/4.8 ppm Ag
PbO	20 g	Johnson Matthey, 99.99% purity
C	150 g	Johnson Matthey, 300 mesh, 99.5% purity
KNO3	450 g	Baker, 99.2% purity
S	30 g	Spectrum
Hg <sub>2</sub> Cl <sub>2</sub>	20 g	Fisher, 99.8% purity

The chemicals were weighed separately, and then mixed together. The mixture was placed in an empty 2.5 pound coffee can and then ignited. The mixture was set afire by torch, with the fire burning out after about 90 seconds. The weighing, mixing and igniting were done by Drs. Lin, Monti and me.

## RADIATION ANALYSIS--THERMAL 4 EXPERIMENT

After ignition of Thermal 4 mixture, I accomplished the analysis of radiation using a multi-channel analyzer with a Ludlem Beta detector. The total radiation count was  $2.2 \times 10^4$  counts per minute (CPM). Five specific energy peaks were observed. Under the same conditions, these peaks were not present during Thermal 1, 2 or 3 Experiments.

## PREPARATION FOR ANALYSIS--THERMAL 4 EXPERIMENT

1. After the molten mixture had cooled down, the after burn residue was milled into a powder (200 mesh) by an impact mill. The total weight of the powder was 360 grams after ignition. This step was completed by Dr. Monti.
2. Fifty(50) grams of the after burn powder was placed in each of two crucibles and mixed with 150 grams of standard ore flux (Action Mining Services, the chemical mix being  $PbO$ ,  $Na_2B_4O_7$ ,  $SiO_2$ ,  $Na_2CO_3$ ) Thirty(30) grams of sodium borate was layered on top of the mixture. Two 3-inch nails were then inserted into the crucibles.
3. The crucibles were placed in a furnace and heated to  $1,100^\circ C$  for about two and one-half hours. Upon removal, the molten mixture was poured into steel containers.
4. After cooling, the two samples were noted to have two parts. one part was a glassy substance, the slag, and immersed inside was the second part, a piece of lead. The slag weighed 72.2 grams and the lead at 61.0 grams from each crucible.
5. The slag was crushed into powder by the impact mill. The total weight of the slag from the two crucibles was 140.0 grams.
6. Fifty(50) grams of the slag was then mixed with 150 grams of flux and a layer of 30 grams of sodium borate added on top. A nail was inserted into the crucible and the crucible was treated in the furnace as before.
7. The lead retrieved from the slag treatment weighed 58 grams. The lead, added to the lead from step 4 above was mechanically separated into three parts. Each part of the lead was put in a cupel. The cupels were heated to  $950^\circ C$  for one and one-half hours. A bead was recovered from each cupel. The total bead weight was 0.019 grams.

8. The next step involved treating the remaining 90 grams of slag. The remainder was divided into 45 grams parts and each was mixed with 135 grams of flux and 30 grams of sodium borate. Again a 3 inch nail was inserted into the mixtures. The crucibles were heated to 1,100°C for about two hours. The molten mixtures were poured into a steel container to cool. The lead was retrieved from the slag as before. The combined weight from the two lead pieces was 111.5 grams.

9. The lead was mechanically separated into smaller parts and each was put into cupels. The cupels were heated to 950°C for one and one-half hours.

10. The total weight of these beads were 0.0503 grams.

11. The final step involved digesting the beads in nitric acid solution. The part that did not digest was dissolved in aqua regia solution and taken to ICP for analysis. The total weight of gold was detected to be 47.3 milligrams. This is equivalent to 1,700 parts per million of gold in the treated mineral 2 used in the experiment.

12. The slag from the 111.5 grams and 58 grams lead samples were then simultaneously crushed in the impact mill and the total weight of the slag powder was noted to be 330 grains. Three hundred(300) grams of the powder was then mixed with 900 grams of flux and a 180 gram layer of sodium borate was added on top. The sample was then divided into six parts and placed in crucibles. Nails were inserted into the six crucibles. After running the crucibles through the furnace and separating the lead pieces from the slag, the total weight of the lead was 365 grams. The cupel process was repeated and 10 silver colored beads were retrieved. The total weight was 0.02 grams. This showed that this slag did not contain significant amounts of gold.

The weight of gold extracted from Thermal 4 Experiment was estimated to be 170 milligrams. The total mineral 2 used was 100 grams.

As you can see, the two experiments gave different results. However, each had its purpose to define certain aspects of the transmutive cycle.

#### UPSCALING TO COMMERCIAL LEVELS

The following transmutation examples are based around yet another set of conditions, in this case to determine upscalability to commercial production levels.

Now, the important question was, will the process upscale on a linear factor? To justify this question, a new series of controlled experiments were conducted within the confines of Mid-States Recycling facilities in Rosemont, Illinois.

To start, I decided to once again repeat the experiments conducted at Texas A&M. This decision was based on Mid-States equipment being different from the equipment used in the previous experiments. Mid-States have inductive furnaces, whereas in the past these experiments had been conducted either in alloyed cans or graphite crucibles in gas-fired furnaces. The point of trying the new furnaces was to determine if after the transmutation occurred, could we raise the temperature sufficiently to allow a one-step recovery? In order to have demographic data available, it was necessary to start with a known reaction. Therefore, we had to go back to the same experiments we conducted before.

To date, transmutation has occurred in all experiments at Mid-States except for one experiment conducted by Texas A&M scientists (see Chapter I). A problem did exist with the recovery process in the initial tests at Mid-States. To explain, during the first four heated reactions, only 25% of the metals were recovered. Recovery percentages were based on quantitative gold recovery only. After the minimal recovery, the slag was placed in the furnace. The results proved that after the transmutation, the metals were remaining in an obscured state which required additional metallurgical flux for recovery.

The staff at Mid-States has accumulative experience of over 100 years experience in dealing with metal recovery from different types of material. With this experience, they were able to determine that the precious metals were associating with the carbon. After this was learned, they attempted different procedures to ascertain the best collection process to use after the transmutation cycle.

The best apparent process was to raise the temperature of the chemical matrix after transmutation occurs to temperatures in the range of 2,000°C. Within this temperature range, the silicon oxides would dissociate, thus causing free oxygen within the reaction. This allows for oxidization of the carbon. This process caused an increase in recovery of precious metals within the primary process.

## CHAPTER V

### ANALYTICAL ANALYSIS OF EXPERIMENTS

Within the exemplary model, a series of transmutations will occur, but I will only address the following. They will provide instant validation of low energy transmutation.

We have two major reactions within the starting chemical matrix. These create unstable isotopes with a short half-life. These isotopes are radioactive. The " $t^{1/2}$ " shown below denotes the time required for one-half the unstable isotope to decay into a stable one. In the examples displayed below, the mercury transmutes to an unstable Platinum isotope (radioactive). In 18.3 hours, the "half life" of the isotope, one half the material will become stable. In the next 18.3 hours, half the remaining amount will become stable, and so forth, and so on.





In the case of the Pt<sup>197</sup> isotope, it has an effective decay energy of 360 KeV, and the Rh<sup>105</sup> isotope has a decay energy of 223 KeV. Also, there is a large spectra difference between the gamma energies of these isotopes.

Another form of validation can be achieved by Inductive Coupled Plasma (ICP). Before attempting this method, I suggest you insure the residue to be free of radiation.

Also, if radiation is not witnessed immediately after the thermal process, it is necessary to recheck the experiment for it is doubtful that transmutation occurred. The most common problem for failure in a thermal melt are:

- Moisture in the chemicals.
- Low ignition temperature.

Another interesting analysis is by mass spectroscopy. Using this method, you not only see the element, but you can also identify the exact isotope.

## CHAPTER VI

### **SYNTHETIC PRODUCTION OF PRECIOUS METALS FROM BLACK SANDS**

#### INTRODUCTION

Many of you associated with the mining and/or metallurgical industries have at least once viewed a black sands analysis which reported yields hundreds of times higher in precious metals than physically thought possible. Or, you have viewed reports from people such as Don Jordon (Alpha Research), Greg Iseman (Iseman Consulting) or national corporations like Beckman Laboratories who have repeatedly stated that many "black sands" contain high values of silver, gold, iridium, osmium, palladium, platinum, rhodium and ruthenium. More often than not, these analyses report staggering precious metal yields equating to financial gains in the thousands of dollars per ton. The calculation of in-ground reserves by simple mathematics became the first problem. Most calculators lack sufficient decimal places to display the dollar amount of these inflated reserves.

Needless to say, an unsurmountable second problem quickly surfaced. When the excited black sands owner took his "cache" to the Johnson Matthey's of the world, they would find that the refiner could only find a trace of silver and no gold or platinum metals!

Where is the problem? Are the analytical analyses erroneous or are the refineries trying to protect the "Gold and Platinum Metal" values? One can forget about any cloak and dagger maneuvers from the refineries. For Dr. Cleare, President--Johnson Matthey, North America and Dr. Scheffhauser, Englehart's Vice-President--New Product Development, both wait with anticipation to view the outcome of this continuing research. So why the fallacious analytical reports?

To understand the problems, one must gain a comprehension of industrial procedures used in the refineries. A common procedure in determining gold and platinum metals consists of first reducing the precious metals to a metallic form, a bar or button of (x)% purity. The metallic form is then further reduced to a liquid media by various forms of acids. This acid solution is placed within an apparatus and allowed to be volatilized by a high temperature flame. As the precious metals are volatilized, they, like all of the other elements, absorb energies. Each element has numerous individual absorption wavelengths. By analysis of the absorbed energies and specific wavelengths, the system operator can easily determine the type of metals, precious or not, and arrive at a quantitative relationship to the original starting metallic weight before the dissolving process. Inductive Coupled Plasma (ICP) is a readily accepted technology which provides this data. By the way, this, or similar technologies are utilized by Don Jordon, Greg Iseman and Beckman Laboratories.

Now why can't the Johnson Matthey's detect the high levels of gold and platinum metals seen in these assays? Could it be dubiousness of operator technical skills? What about fraud? These are all obvious questions which have been addressed by numerous people in witness-ship of such reports. To set the record straight, I will unequivocally state no fraud, nor operator errors caused the reports of the inflated high precious metal yields. For the precious metals were present in their analyses. The questions are: How, why, and the reasons why the Johnson Mattheys haven't viewed such an occurrence?

When Jordon, Iseman and Beckman accomplished their analyses, they all used different digestive procedures.

However, the first common denominator was they directly treated the black sands. And second, each used a high temperature digestion process. The following is a typical description of their processes:

Don Jordon:  $\text{NaOH} + \text{H}_2\text{O}_2$  (sodium hydroxide + hydrogen peroxide). Compound is mixed with the mineral, then fused.

Greg Iseman:  $3\text{HCl} + \text{HNO}_3 + \text{HF}$  (Modified Aqua Regia) . The solution and mineral is placed in an industrial microwave until dissolved.

Beckman Laboratories: Acid Bomb. The mineral is mixed with a flammable chemical constituent, then placed within a high pressure container and ignited by a spark.

(These techniques were the ones used at the time data was gathered for this report, 1989 - 1992.)

The underlying reasons for the use of these techniques are twofold. Primarily, each was attempting to develop a process which would give total digestion of the sample. And secondly, they were expediting the time required per analysis; thus, giving their customers a quicker response time.

Back to the original discussion. Why do these laboratories report very high yields of precious metals when the refineries report none from the same sample? Simple, by using different, yet similar technologies, these laboratories are unknowingly creating a "quasi-controlled" nuclear reaction. Yes, they are unknowingly producing precious metals as the result of nuclear reactions. They are causing transmutation.

#### PRECIOUS METAL PRODUCTION

To synthetically produce precious metals, one must first comprehend that to change one element to another requires a nuclear reaction. A nuclear reaction is where the number of protons and neutrons are varied within the nucleus of an atom to give it new physical properties. This change can occur by two mechanisms, fusion and fission.

FUSION is where the nucleus of one atom is combined with the-nucleus of another atom. or, in some cases, the nucleus of the atom is combined with a neutral particle called a neutron. In a fusion reaction, the atomic number of

the element is either the same, or higher after the incident. It is never lower.

On the other hand, FISSION is where the nucleus of one atom is split into two or more constituents. The primary accepted mechanism to achieve fission is by bombardment of the targeted nucleus by neutrons. A newly discovered mechanism can account for selected fission reactions wherein particle bombardment of the nucleus is not required. Refer to Chapter III for discussion.

So, how does one bring about a nuclear reaction which creates precious metals, a process high energy physicists claim impossible at low energies? To answer, I will use a quote by my mentor, "Everybody has a theory," and leave it at that. For now, let us only concern ourselves with the mechanisms, causes, before conditions and ending results.

#### Simple Process to Produce Precious Metals

To synthetically produce precious metals, all one needs is the following:

Black Sands  
Lead Powder ( $\leq 200$ -mesh, reagent grade)  
Charcoal Sodium Nitrate ( $\text{NaNO}_3$ )  
Grinder  
Scales  
Fire assay capability  
Inductive Coupled Plasma, Atomic Absorption, or available commercial facilities for platinum and platinum group metals (PGMs) analysis.

\*\*Note: Almost any black sands which has been washed (gravity separated), consisting of Magnetite ( $\text{Fe}_3\text{O}_4$ ) I or Chalcocite ( $\text{Cu}_2\text{S}$ ) or Chalcopyrite ( $\text{CuFeS}_2$ ), etc .....

STEP ONE.

Individually pulverize the black sands, charcoal and sodium nitrate to a fineness of  $\leq 200$ -mesh. This equates to a particle size of 75 microns. Use caution. A danger of pre-ignition exists from the friction of the grinder and iron associated with the mineral.

STEP TWO.

Before starting, take two samples for reference as follows:

1. 30 grams mineral before grinding.
2. 60 grams mineral after grinding ( $\leq 200$ -mesh).

STEP THREE.

Next weigh out portions of the pulverized material as follows:

Black sands .....	100 grams
Lead Powder .....	50 grams
Charcoal...	200 grams
Sodium Nitrate. ....	<u>600 grams</u>
Total .....	950 grams

STEP FOUR.

Combine the chemicals and material and mix thoroughly. I suggest using a large, clean plastic bag, tightly sealed. Shake thoroughly for no less than four to five minutes. A longer period of mixing is best. The homogeneity of the mixture is extremely important to the efficiency of the reaction.

STEP FIVE.

When complete, place the material in a clean 2.5 pound metallic can. I used an empty coffee can during many of my tests. Next, and probably most important, place the can with the enclosed mixture on a flat surface in a well ventilated area. In a laboratory, a fume hood with sealing view glass and high speed exhaust fan is excellent for this phase. If a fume hood is not available, place the can outside away from

all buildings, animals and people. After ignition, be sure to stay well away from the smoke arising from the burning mixture.

#### STEP SIX.

By using a small torch, or equivalent, ignite the mixture by applying a flame to the surface of the chemicals. The mixture will ignite slowly within five to ten seconds. Within 20 seconds, the average temperature will be approximately 700°C and within 100 seconds, the reaction will terminate.

If the reaction does not meet this criteria, you need to check the following for the cause of failure:

1. Material was not uniformly pulverized to 200mesh.
2. Material was not homogenous in mixture.
3. The chemicals contained moisture (humidity). Note: the sodium nitrate is slightly hygroscopic.
4. The container used to hold the reaction was of such material that it absorbed the energy (heat) from the reaction.

#### STEP SEVEN.

Allow the reaction to cool. Carefully remove all material from the container, weigh and record the weight. This step is very important, for without it, you can not quantitatively determine the efficiency of the reaction.

#### STEP EIGHT.

It is now necessary to pulverize the residue to a fineness of  $\leq 200$ -mesh. At this time, the experiment is complete. The next phase will provide the analytical knowledge of the transmutation results.

#### Determination of Reaction's Success

To determine the success, it is necessary to analyze the metals present after the reaction versus those that were present before the reaction. For silver and gold, this is normally accomplished by a fire assay, a procedure briefly discussed in Chapter IV. If you do not have fire assay capabilities, there are numerous laboratories who can supply

this service for you. For additional information on this assay procedure, consult your local technical library.

Normal reporting of metal weight in fire assays here in the United States is in ounces per pound. The U.S. industry refuses to accept the metric system. The rest of the world uses the metric system, so fire assay weights are listed in grams per ton. As I previously stated, I will continue to use the metric system, i.e. grams per ton. There are several logical reasons for this. The industry laboratories commonly report results in "parts per million" (ppm). In using the metric form, there are 1,000,000 grams in 1.0 metric ton. By using the metric system, you can directly convert ppm's to grams per ton. An example would be: 231 ppm = 231 grams per ton. For the purpose of this section, we are only concerned with ppm. This is due to our requirement to calculate the actual weight of silver and gold before the reaction, so we can compare it to the end results.

To perform a fire assay on this material, the following flux should be used for each 15.0 gram sample:

50.0 grams Lead Oxide (Litharge)  
40.0 grams Borax  
20.0 grams Soda Ash  
10.0 grams Silica  
3.0 grams Flour  
1.0 grams Fluorspar  
124.0 grams Total

Take 15 grams of the pulverized black sands from before the burn and 15 grams of the residue and separately mix each with the above flux. Be sure to use an identification system so you can readily identify which sample is which. Place each sample in a 1,000°C furnace for 2.5 to 3.0 hours. Remove from the furnace, pour the molten mixture into a conical mold and allow to cool.

Following solidification and complete cooling, use a hammer and wire brush to remove the lead button from the slag. Place the clean lead button in a cupel and return to the furnace at 1,000°C. Leave for 1.5 to 2.0 hours, or until the reaction is complete. Remove the cupel from the furnace and allow to cool. Once cool, remove the beads from the cupels, clean, weigh and record the weights of each bead.

The next step requires taking each bead and place them in separate 30% nitric acid (HNO<sub>3</sub>) solutions to dissolve the silver. Be sure to positively mark which sample is which. Decant the solutions, wash and dry the residues. Then weigh the residues. If you are not already aware of these procedures, please refer to a metallurgical reference, or consult a qualified person.

Mathematical Determination of Results  
For Gold and Silver

The AFTER ignition calculations for gold and silver are:

A.  $\frac{\text{Bead wt in grams}}{15 \text{ grams sample wt}} \times 1 \times 10^6 \text{ g/ton} = \text{Ag g/ton Unadjusted}$

$\frac{\text{Parted wt in grams}}{15 \text{ grams sample wt}} \times 1 \times 10^6 \text{ g/ton} = \text{Au g/ton}$

$$\begin{array}{r} \text{Ag g/ton unadjusted} \\ - \text{Au g/ton (or in ppm)} \\ \hline \text{Ag g/ton adjusted (or ppm)} \end{array}$$

To calculate the AFTER ignition weight of gold and silver in grams:

B.  $\frac{\text{Ag g/ton adjusted}}{1 \times 10^6 \text{ g/ton}} \times \text{after/ignition residue wt} = \text{Total Ag g}$

$\frac{\text{Au g/ton}}{1 \times 10^6 \text{ g/ton}} \times \text{after ignition residue wt} = \text{Total Au g}$

Now we will calculate the BEFORE ignition precious metal weights. Repeat the mathematics in "All above using the results from the **pulverized BEFORE** ignition black sands sample. The 100.0 grams shown below was the weight of the original black sands in the before ignition chemical matrix.

C.  $\frac{\text{Ag g/ton (adjusted)}}{1 \times 10^6 \text{ g/ton}} \times 100.0 \text{ g} = \text{Total Ag g before burn}$

$\frac{\text{Au g/ton}}{1 \times 10^6 \text{ g/ton}} \times 100.0 \text{ g} = \text{Total Au g before burn}$

The final step in the calculations for gold and silver generation is to determine the efficiency of our reaction.

Ag g after ignition - Ag g before ignition Total Ag grams produced	Au g after ignition - Au g before ignition Total Au grams produced
--	--

Analytical Analysis of Platinum and PGM's

To analyze for the PGM's, it is necessary to use a laboratory facility which has capabilities of Atomic Absorption Spectroscopy, Inductive Coupled Plasma (ICP), Neutron Activation, etc. Prior to analysis sample preparations are extremely important. The following procedures have performed successfully in association with this type of thermal reaction. The first step is to divide the samples into three categories:

- Black sands before pulverization, before ignition
- Black sands after pulverization, before ignition
- Pulverized after ignition residue

Instruct the laboratory to prepare each of the three samples as follows:

Phase I-

Digest 1.0 gram of sample in 30 ml of hot 30% HNO<sub>3</sub> until there is no further reaction. Decant and dilute to 100 ml total.

Phase II-

Digest remaining residue of Phase I in 5.0 ml of Aqua Regia (3HCl - HNO<sub>3</sub>) until the reaction ceases. Make up to 100 ml.

Phase III-The laboratory should analyze the Phase I liquor for silver and palladium.

Phase IV-The laboratory should analyze the Phase II liquor for gold, iridium, osmium, platinum, rhodium and ruthenium.

To calculate the BEFORE and AFTER results of the PGM analyses, use the following formulas:

Black Sands Before Pulverization

$$\frac{\text{Prec. Metal ppm} \times 100}{1 \times 10^6} = \text{g Black Sands (Before Pulverization) / ton}$$

Black Sands After Pulverization

$$\frac{\text{Prec. Metal ppm} \times 100 \text{ g}}{1 \times 10^{+6} \text{ g/ton}} = \text{g Black Sands(Aft. Pulverization)}$$

After Ignition Calculation

$$\frac{\text{Precious Metal ppm} \times \text{Residue Wt}}{1 \times 10^{+6} \text{ g/ton}} = \text{Grams After Ignition}$$

To simplify, I would suggest making the following chart:

Material	Ag	Au	Ir	Os	Pd	Pt	Rh	Ru
B.S.								
B.P.								
B.S.								
A.P.								
R.A.I.								

B.S.B.P. = Black Sands BEFORE Pulverization  
B.S.A.P. = Black Sands AFTER Pulverization  
R.A.I. = Residue AFTER Ignition

Experimental Discussion

This experimental demonstration is similar to that of Thermal 4 conducted at Texas A&M University and shown in Chapter IV. Two major differences exist.

1. The elimination of Hg<sub>2</sub>Cl<sub>2</sub>(Mercurous Chloride) from the starting chemicals.
2. Analysis procedures for the PGMs.

I used this example, because it is economical and has the highest replication yield of any of the experimental conditions. Also, working with this basic matrix of chemicals wherein the majority of the matrix is common minerals in their native form allows for advanced studies in formation and distribution determination of elements on our planet.

As I first discussed in this chapter, Don Jordon, Greg Iseman, Beckman and others have made claims of high PGMs in numerous samples. If your experiments were successful, you should have seen extremely high results in both the fire assay and platinum group analyses.

From here, we have numerous points to discuss. To start, when you have a basic non-precious metal geological mineralization, it "appears" to be very easily excited into precious metals by being placed in various energy fields. For example, the thermal experiment I just noted; Don Jordon's NaOH + H<sub>2</sub>O<sub>2</sub> fused alkali pretreatment; Greg Iseman's microwave technologies; Beckman's high temperature bomb; and, my previous findings of electromagnetic resonance stimulation (as noted in Chapter II) all provide the necessary conditions to create transformation.

Also, by advancements made by Mr. Wayne Palmer through coordination with Mr. Roger Briggs, historical discoveries were accomplished during my incarceration. Through numerous tests we have produced up to 125.0 grams of precious metals from 2.5 kilograms of black sands at a cost of less than \$0.10 per gram. This figure is not a calculated number based on the processing of (x) tons of material. This \$0.10 per gram is the actual cost to produce one gram of precious metals based on processing 2.5 kilograms, or larger quantities of black sands.

The following describes a process in which one can produce precious metals for less than \$0.10 per gram on small batches and less than \$0.01 per gram in industrial quantities. Yes, synthetic production of precious metals from \$0.31--->\$3.10 per troy ounce! Also, it clarifies the technical errors of why this reaction wasn't previously identified during the past century of technological growth.

#### Simple Commercialized Process for Synthetic Production of Precious Metals

This section will describe the most simple of all processes available in the production of precious metals. The novelty of the process is the base equipment required is relatively inexpensive and this process is totally environmentally friendly, with no pollutants as in the previous processes.

The process is of such simplicity it borders on being ludicrous. For small batches, all that is required is an enclosed laboratory ball mill and black sands. I would recommend Denver Laboratory Ball Mills which are readily available. The black sands used in our tests came from desert deposits outside of Buckeye, Arizona and other sands magnetically separated from rich mineralized copper deposits in New Mexico.

The ball mill should be of such design wherein it is completely sealed and has a metallic liner. The balls must be made of non-coat carbon steel. New Teflon coated material will not work. As in the case of the Denver Laboratory mill we used, we had 11.91 kilograms of steel balls with diameters ranging from approximately one-half to 3 inches. We used 2.5 kilograms of black sands. Seal the container and operate for no less than 6-8 hours without interruption. open and take a representative sample of 50.0 grams. Place in sizing screens. If +70% of the material passes through a 200-mesh screen, then remove all the material from the ball mill. However, if the aggregate particle size is greater than 200-mesh, replace the black sands in the mill and operate for an additional 6-8 hours, repeating the same steps. A note of importance. The minimum six hour continuous operation is an extremely important criteria. With operation of three hour intervals, numerous failures have occurred. Wherein operating a continuous +6.0 hours we have yet to see a failure in the production of precious metals.

Now, once you reach the criteria (+70% 200-mesh) from the ball mill, remove all material. At this time, the starting ratios of the Magnetite ( $\text{Fe}_3\text{O}_4$ ), Hematite ( $\text{Fe}_2\text{O}_4$ ), Chalcopyrite( $\text{FeCuS}$ ) , Pyrite( $\text{Fe}_2\text{S}$ ) within the original black sands, will make the determination as to the qualitative content of the new synthetic metals you just produced. In any event, the quantitative results should be approximately 5.0% total precious metal production from the original black sands weight.

Now, this should bring up two important questions. What is the mechanism employed in this nuclear process? Second, why hasn't this simple reaction been recorded previously?

Within the physical mechanism of this nuclear process, or "nuclear change" (this is a new definition developed by the Department of Energy for a nuclear reaction which occurs at approximately 1,000°K) of the black sands, an entirely different reaction is occurring than that described in Chapter III. A problem exists, for this reaction is even harder for nuclear physics than the "confirmed" low energy fission reactions. The reaction is a "low energy heavy body fusion."

The determination was made after detailed studies of a New Mexico black sands by Texas AM, Tasman Consulting and Chemex Laboratories in April 1993. **Before** process by the ball mill, only trace (detectable, but of insufficient

quantity to measure) quantities of silver were seen. However, **after** testing the following results were reported:

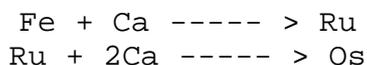
Ru **4,333 g/t** Rh 0 g/t Pd 0 g/t Ag 480 g/t  
 Os **18,020 g/t** Ir**447 g/t** Pt 0 g/t Au 49 g/t

Now compare the above results with the following excerpt from the Periodic Table of Elements:

$_{26}\text{Fe}$	$_{27}\text{CO}$	$_{28}\text{Ni}$	$_{29}\text{CU}$
$_{44}\text{Ru}$	$_{45}\text{Rh}$	$_{46}\text{Pd}$	$_{47}\text{Ag}$
$_{76}\text{Os}$	$_{77}\text{Ir}$	$_{78}\text{Pt}$	$_{79}\text{AU}$

As it is easy to denote, there is a direct correlation between Fe, Ru and Os, for they occupy the same vertical column. Also, Fe is the major constituent ( $\geq 65\%$ ) of the black sands. So how could this occur, and how has it gone unnoticed?

To answer how this could occur is difficult for the mechanisms (mathematics) appear illogical. But, by working backwards, wherein we take the results and the starting matrix and determine the difference, the following is the most logical occurrences:



Based on current day physics, the odds of multiple reactions would be incalculable. Although known to only a few, experiments now being conducted by Dr. Sundaresan at Texas A&M University add credence to these reactions. Dr. Sundaresan developed an extension of experiments accomplished by Dr. C. L. Kervran and recently duplicated by Bhabra Atomic Research Center, Bombay, India in which graphite rods are arced under water (1 amp for 10 hours) producing iron. All possibilities of contamination have been ruled out. Thus, leaving Kervran's following postulation as a logical explanation:



The question remains. If this is the mathematical path, what allows these heavy body fusions to occur?

A problem, or godsend, exists when one applies the simple mathematical alterations to the entire base metal spectrum as it relates to Fe, Co, Ni, and Cu. Combining these metals with the metallic and non-metallic components of the ball mill, one could draw an interesting scenario.

First, let's analyze the component of the ball mill, the carbon steel balls and heat treated liner. With the kinetic energies of the ball mill, a C + O fusion reaction could occur. For ease of definition and in reading what follows, the following decay modes are displayed:

RADIOACTIVE DECAY MODES

β- ----->Beta Decay  
 β+ ----->Positron Decay  
 E.C.----->Electron Coupled

The varying isotopes found in native carbon and oxygen allows for the six following postulations:

Starting Potentials (the natural abundance found in nature is listed in percent above the formula)

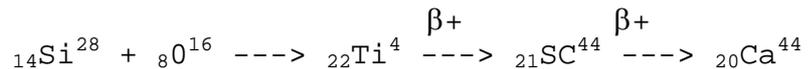
(98.9%) (1.10%)  
 ${}_6\text{C}^{12}$  -----  ${}_6\text{C}^{13}$  (Denotes Isotope number)  
 (99.76%) (0.04%) (0.02%)  
 ${}_8\text{O}^{16}$  -----  ${}_8\text{O}^{17}$  -----  ${}_8\text{O}^{18}$

Possible C + O Fusions

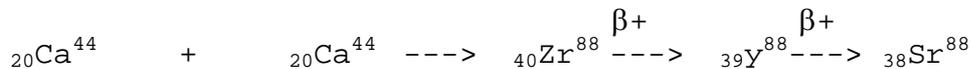
${}_6\text{C}^{12}$	+	${}_8\text{O}^{16}$	- - - - >	${}_{14}\text{Si}^{28}$
${}_6\text{C}^{13}$	+	${}_8\text{O}^{16}$	- - - - >	${}_{14}\text{Si}^{29}$
${}_6\text{C}^{12}$	+	${}_8\text{O}^{17}$	- - - - >	${}_{14}\text{Si}^{29}$
${}_6\text{C}^{13}$	+	${}_8\text{O}^{17}$	- - - - >	${}_{14}\text{Si}^{30}$
${}_6\text{C}^{12}$	+	${}_8\text{O}^{18}$	- - - - >	${}_{14}\text{Si}^{30}$ β-
${}_6\text{C}^{13}$	+	${}_8\text{O}^{18}$	- - - - >	${}_{14}\text{Si}^{31}$ -----> ${}_{15}\text{P}^{31}$

In ratio to the starting isotopic abundance, the most logical production of Silicon would be  ${}_{14}\text{Si}^{28}$  (native natural abundance of 92.23%).

The next reaction I propose is Si + O, with the most logical reaction being:

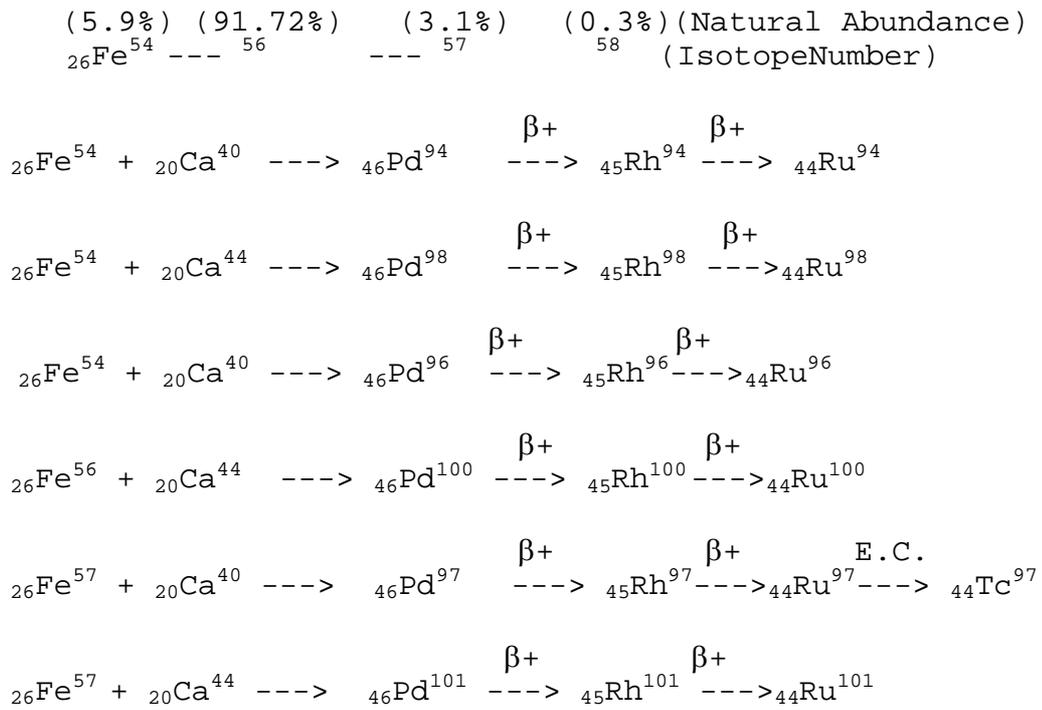


Now, with a mathematical path allowing for the production of  ${}_{20}\text{Ca}^{44}$  and the following reaction wherein:

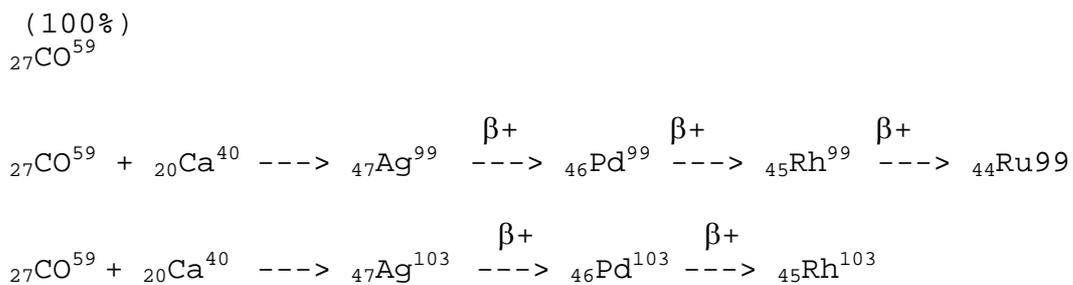


This gives us the two building blocks necessary for producing all of the stable precious isotopes from Fe, Co, Ni and Cu which are demonstrated as follows:

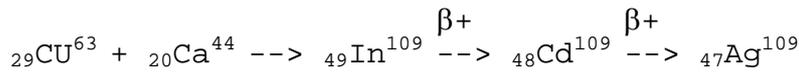
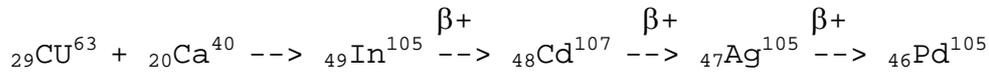
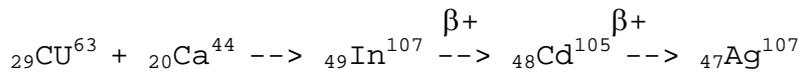
Precious Metal Production Starting From **Iron Base Matrix**



Precious Metal Production starting from **Cobalt Base Matrix**

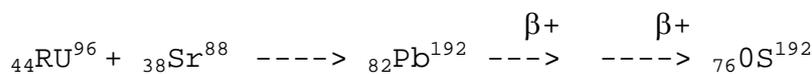
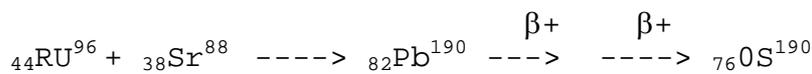
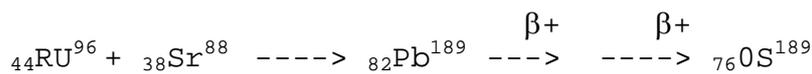
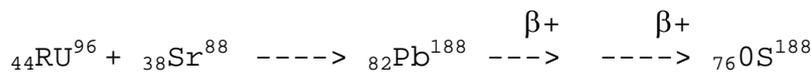
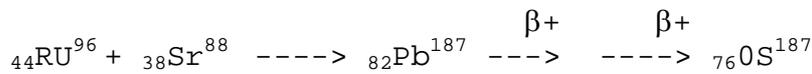
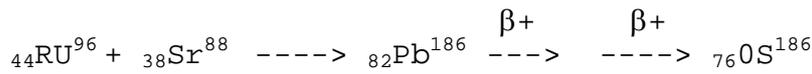
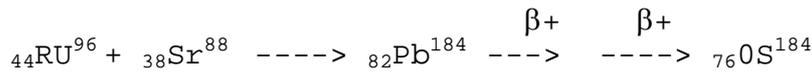






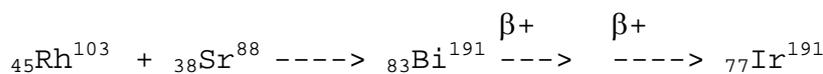
Precious Metal Production Starting From Ruthenium Secondary Matrix

(5.54%) (1.86%) (12.7%) (12.6%) (17.1%) (31.6%) (18.6%)  
 ${}_{44}\text{Ru}^{96}$  ---  ${}_{98}$  ---  ${}_{99}$  ---  ${}_{100}$  ---  ${}_{101}$  ---  ${}_{102}$  ---  ${}_{104}$

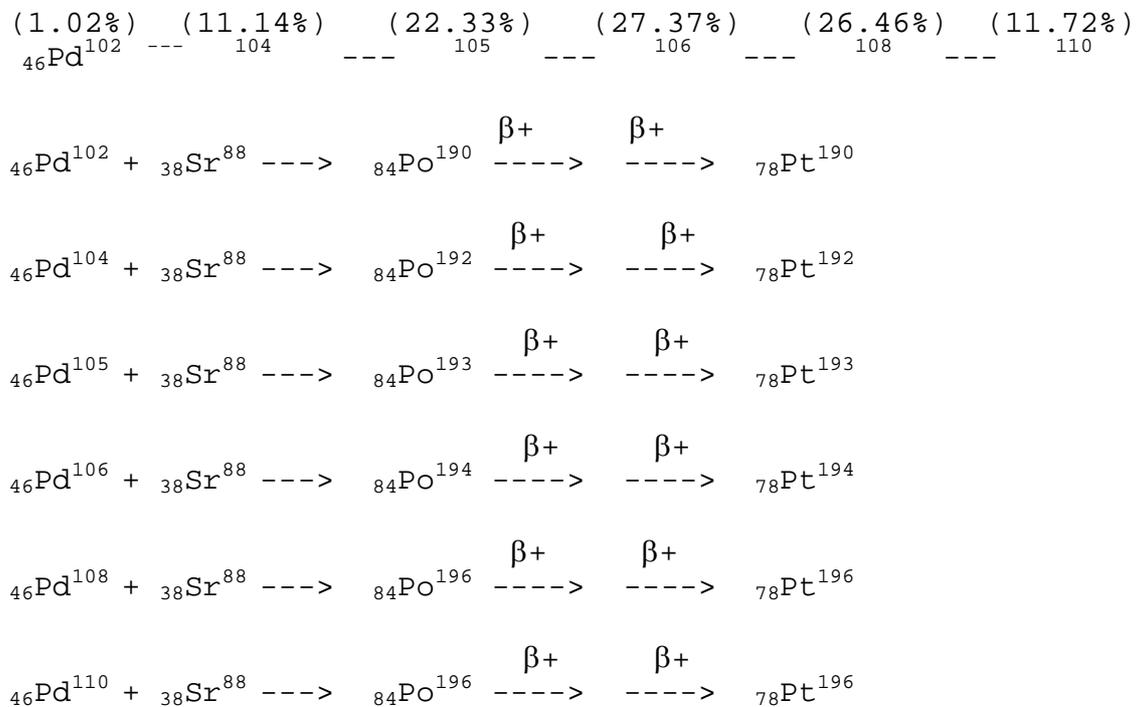


Precious Metal Production Starting From Rhodium Secondary Matrix

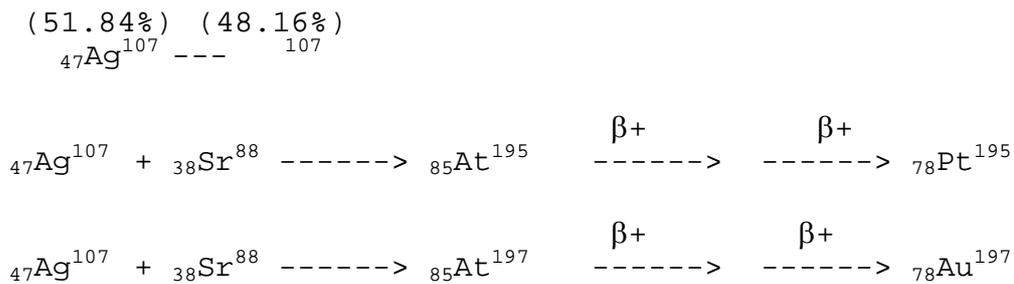
(100%)  
 ${}_{45}\text{Rh}^{103}$



Precious Metal Production Starting From Palladium Secondary matrix



Precious Metal Production Starting From Silver Secondary Matrix



As I have stated before, a theory is only a theory. It will take additional studies to ascertain the exacting causes for such a phenomenon to occur. However, there are numerous validations and justifications to the pre-mentioned building blocks. Two major facts are known:

1. Without pulverization, there is no precious metals with the black sands.

2. After extensive pulverization(6-8 hours), a significant "nuclear change" occurs within the ball mill. Significant in the fact that by weight 0.5% to 10.0% of the original black sands was converted to precious metals. And it is a well known fact that black sands consist primarily of  $Fe_{(x)}O_{(x)}$ 's with Co, Ni, Cu and S.

Until new evidence is presented which challenges the validity of my postulated nuclear building blocks, we can accept them as reasonable mechanisms.

Why has this gone unnoticed? This was easy to determine once I was able to accept the nuclear occurrence. Let me explain. Two sets of conditions remained constant throughout my research:

1. If you pulverize the black sands for three hours, stop, take a sample, and resume, no nuclear change occurs. However, if you pulverize for 6-8 continuous hours, you will have converted 0.5% to 10.0% of the original weight to precious metals.
2. When you attempt a fire assay on the AFTER versus BEFORE pulverized material, you see significant production of silver, small amounts of gold, and no platinum, or PGMs. However, if you analyze the "AFTER" by standard acid digestion and Inductive Coupled Plasma (ICP), or similar techniques, you have tremendous amounts of PGMs and gold. In conjunction with this, no surface analysis procedures such as x-ray fluorescence, electron microscopy, etc., has been successful in detecting the PGMs and the gold.

With the due diligence of Mr. Wayne Palmer and Mr. Roger Briggs, I was able to develop and prove theories for the above. The entire area of the science was discovered, developed and proven during my incarceration. At the time of this writing, I've yet to see the reaction in person. Thus, Wayne and Roger have been my eyes, ears and hands.

First, let me explain the occurrence in paragraph number two above. Using a real number as an example, it is normal to produce 20,000 ppm of ruthenium per batch. Average batches are 2.5 kilograms which would equal 50.0 grams of Ruthenium produced per batch. Now the three main problem areas in paragraph number two above are:

1. Why don't you see the metals in the fire assay (the previously mentioned Johnson Matthey syndrome--this chapter)?
2. Why doesn't surface analysis equipment detect this newly formed metal?
3. Why do you detect the metals with ICP?

The answer is concurrent for all. When "nuclear change" occurs, it is a singular event.



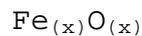
So, with the production of 50.0 grams, we can calculate using Avagado's Formula the total number of reactions as follows:

$$\frac{6.02 \times 10^{23} \text{ atoms/Mole} \times 50 \text{ grams}}{\approx 100 \text{ Ru mass}} = 3 \times 10^{23} \text{ atoms}$$

Sometime during the 6 to 8 hours mill cycle,  $3 \times 10^{23}$  Ruthenium atoms were created. The reaction occurred at an aggregate temperature of  $700^{\circ}\text{C}$  ( $=1,000^{\circ}\text{K}$ ). Neither the temperature nor pressures were of sufficient quantum during the transmutive process to form colloidal particles. Because of this, there was no collection within the fire assay procedures. The fire assay process is only effective on colloidal or larger size particles. A similar reason exist for the surface analysis technologies. They require a minimal particle size of 0.5 micron for accurate detection, or a particle consisting of approximately  $3.4 \times 10^{14}$  atoms. This particle size is non-existent with this reaction. However, since the ruthenium was produced in atomic form, its susceptibility for acid was high. Thus, its digestion was a breeze.

Of course, I validated the ICP by the most logical method. Conversion of ruthenium to ruthenium chlorides. Hence, I was able to physically collect and separate the PGMs.

This left only one question unanswered in the process. Why 6-8 hours of continuous ball mill operation? Before explaining, let me describe the physical conditions of the ball mill. The ball mill is designed to operate wet or dry, so it has excellent seals. of course, in our case, we are operating dry, but we have unusual occurrences. For example, we have the following compounds:



Carbon Steel Balls

Breaking these molecules into atoms, we have:

C, S, O (Heat Generators)

Fe, Cu (Fusion Base)

Sometime during the cycle, sufficient C and O are liberated to effectuate a spontaneous combustion. Thus, transmutation energies. The same properties exist in the thermal burn, and Don Jordon's and Beckman's techniques.

#### Chapter Conclusion

In science, we spend years validating occurrences by attempting to disprove them. In a generic overview of this entire discovery, we have a common denominator. After the process, we have levels from 2 to 120,000 ppm of precious metals which have been identified either by detection or physical recovery. This brings forth two applicable scenarios. They are:

1. A newly discovered nuclear reaction.
2. Precious metals are present in minerals and reagent grade chemicals (refer to Thermal 2 Experiment, Chapter IV) in an undetectable state until after this process.

If number two above is correct, then the geoscientists have made grave miscalculations in elemental distribution which would effect planet density calculations.

## CHAPTER VII

### CONCLUSION

By this time, I would imagine the scientific readers have already skipped the melodramatic portions, went

straight to the facts and proved or disproved the presence of low energy nuclear reactions.

From a socialistic view, the "TECHNOLOGY" as purport will have a damning effect on society, but this is only page one. In the words of the great Paul Harvey, "What's on page two?"

Let's review the highlights. To create a fission event, transmutation, it is necessary for the starting isotope's nucleus to have magnetic properties. From this we can cause an alpha particle fission which in turn creates a new isotope. It takes little imagination to consider the endless possibilities, such as:

Deactivation of radioactive waste by restructuring decay rates by new particle development.

Development of instantaneously produced shorter life radioactive isotopes for radiology and biomedical treatments. Thus, no low-level radioactive waste generated from the medical industry.

Potential for a new form of primary and secondary energy sources to power houses, equipment, vehicles, etc.

Of course, the list will continue to grow as we learn more of the reaction's limitations. This is the ultimate differential between basic and applied research.

Throughout this text, I have made insinuations of potential economic changes in the future. The terminology, "precious metals," as defined by Webster is: Worth much more, rare; valuable. With the potential to synthesize in the "cold" (meaning low energy nuclear reactions), the term "precious metals" may be substituted for "industrial metals." At this time, gold, silver and all the platinum group metals have been made through this thermal nuclear process.

A commercial venture in producing precious metals has commenced. Initial results have shown that for every ton of mineralized material processed, the costs of labor, energy and chemicals amount to less than a hundred dollars per kilogram.

Recovery of precious metals from this ton of material is approximately 5-10% of the ton by weight, or 100 kilograms. One can easily see the restructuring of wealth in the immediate future is not an overly optimistic view. The ability to produce precious metals at a fraction of the

cost required in conventional mining will cause massive restructuring of wealth based on in-ground natural resources. For example, the in-ground reserves in Mexico will play a greater part in our industrial future than the depleted resources of South Africa.

It is really too early to predict now what the future holds for us. Time will tell.

NOTE FROM THE AUTHOR

Dear Reader

Thank you for your study of this paper. I am aware that science and sensationalism has the fluidity of oil and water.

If you represent an academic or government research group wishing in-depth publications and supporting data, please make a formal request to Alan A. Loiben, ESQ. , 5901 N. Cicero Avenue, Suite 301, Chicago, IL 60646.

Respectfully,

A handwritten signature in black ink, appearing to read "Joe Champion", with a stylized flourish at the end.

Joe Champion