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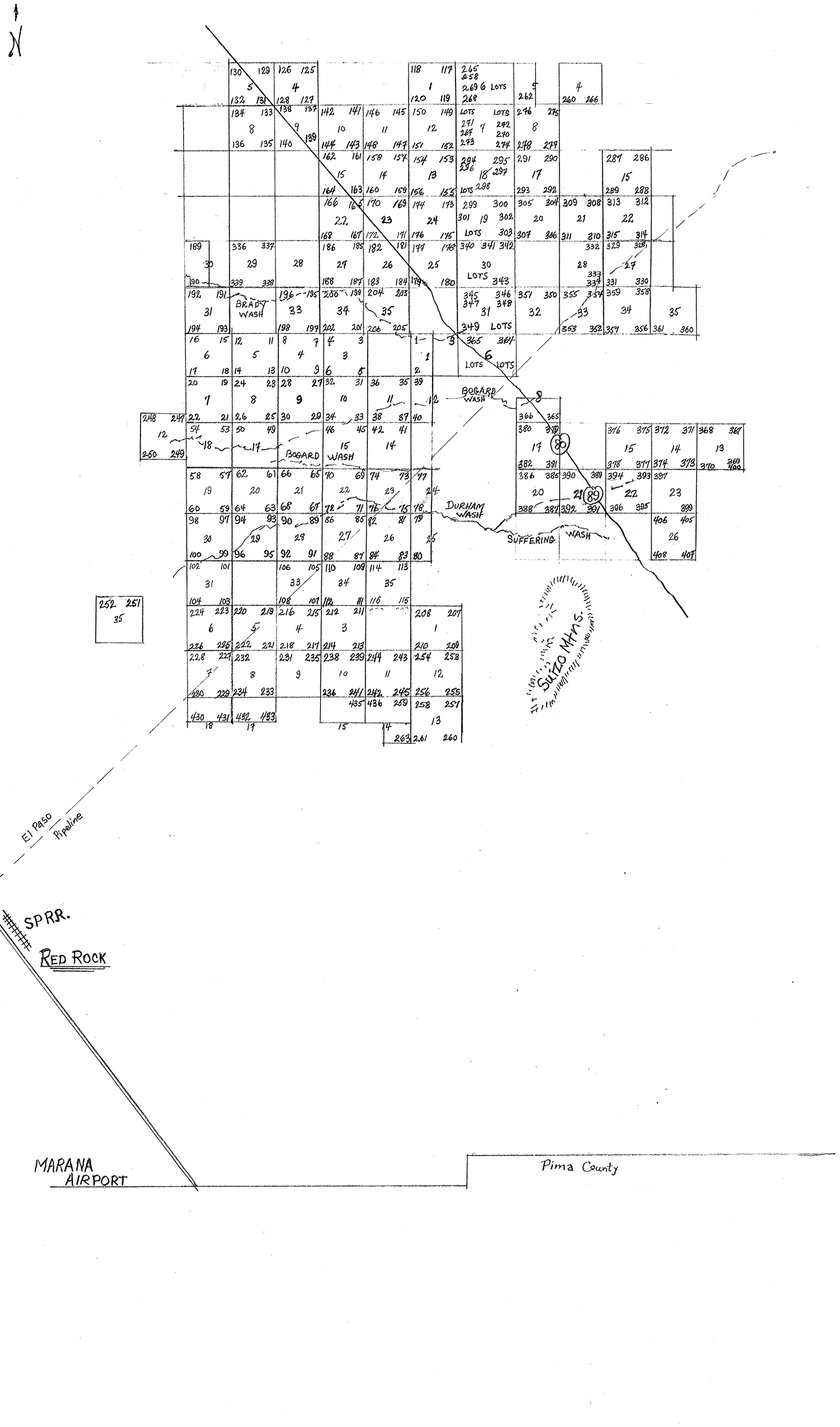
PINAL COUNTY, ARIZONA

AIME Claims Map

Nov. 4, 1958 ~~2017~~



5756 E. Burns
Tucson, Arizona 85711
(602) 745-5738

Dear Sirs:

Please find enclosed a report on the 60,000 acre alluvial magnetite iron range situated in Pinal County, Arizona about midway between Tucson and Phoenix.

Twenty-five years of study have indicated that mining can be effected to approximately 400 ft. At this depth the magnetite reserve is about 5 Billion tons. A minimum value of $20.00 per ton gives an iron ore reserve value of $100 billion.

In addition to the magnetite there are some local markets for the vast tonnages of sand and gravel co-occurring with the iron ore.

Ten years ago exploration and research began to determine the residence of precious metals within the alluvial "iron" range. Initial reconaissance had indicated a probable gold residence.

Studies to date indicate that there is a residence of 1/10th ounce of gold(Au.) present and recoverable along with every ton of magnetite recovered. The Au. occurs with the magnetite as very fine gold; much in Micron sized particles. Todays technology via several processes of most advanced precious metals recovery allows obtention of such fine gold.

In order to obtain 1 long ton of magnetite at approx. 64% Fe. unbeneficiated it requires handling 10-11 cubic yards of the alluvial aggregate. The costs for such mining would depend upon the volume tonnage mined, and the method employed; whether via dry handling or hydraulic mining (i.e. large dredges). Water is available for long term hydraulic mining and this seems preferable due extreme aridity of climate and wind-dust-EPA factors.

Newer coal reduction processes exist to produce iron and steel than well known hydrogen reduction systems. Rights of ways for a slurry line are now being sought to bring coal from Northern Arizona's vast coal reserves to Central and Southern Arizona. Numerous feedstocks for hydrogen are available and direct reduction iron and steel is well competetive and more profitable than foreign imports from any country.

An alternate consideration to immediate production of iron and steel from the ultra-hi-purity magnetite is to now have gold as the primary mineral recovery. At current market value the 1/10th oz. Au. is valued in the range of $38-40. A maximal cost for mining and recovery of the gold is estimated at $10.25 to $11.50 per ton. Technology of mining and metallurgy will cause costs to vary.

The owners of this alluvial range are desirous of finding a developer or co-holding corporation, party, or group. The owners are flexible in their thinking, and negotiations can readily be entertained for lease-purchase, outright sale, or mutually agreeable co-holding terms prior to major development.

(continues page 2)

Visits to the range for purposes of viewing and reconaissance sampling can be made by calling the undersigned at the telephone number indicated. (This is a residence-office telephone without answering service and contact will be direct with the Arizona resident geologist and co-locator of the Federal mining claims on the range. Evenings are generally a good time for telephone contact. During daytime business hours a leave-word person-to-person can be given to Ms. Lee Dunn at " The Dufflebag ": Telephone- (602) 323-1841.

Lawyers familiar with the range and its values are available upon short term notification for negotiation with principals having interest in securing this property or co-holding.

Your attention and review of this general preliminary data is most appreciated.

Will you kindly advise as to your interest.

Yours very truly,

William M. Hazel

William M. Hazel

A.I.M.E

Associates

present

THE PINAL COUNTY

ARIZONA IRON RANGE

ARIZONA'S ALLUVIAL MAGNETITE

IRON RANGE

IN PINAL COUNTY

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THE PYE REPORT

SECTION 1

WILLARD D. PYE
Consulting Geologist

3418 North Forgeus Avenue
Tucson, Arizona 85716

Telephone 327-2956

November 22, 1978

Re: Alluvial Iron Deposits
Pinal County, Arizona

The writer has been interested since 1957 in the alluvial iron deposits located between Tucson and Florence, Arizona. Between 1957 and the present the writer has gathered a great deal of information regarding these iron deposits and their potential use as a source of iron and has compared them with similar alluvial deposits in various other parts of the United States and foreign countries. Although he has written a number of letters concerning the subject iron deposits to date he has not written a comprehensive report on them.

U.S. Highway 80 passes through the Eastern portion (of the range) and U.S. Interstate 10 and the main line of the Southern Pacific Railroad pass along the Western side of the claims. The projected International Airport to serve the Tucson-Phoenix Metropolitan area will be located about three miles north of the property. In addition, the projected course of the main canal of the Central Arizona Project will be built along the Western edge of the Range. A cement plant is located a few miles to the southwest of the Range, and one of the world's largest underground and open-pit mining areas encircles the Range in all directions. In the copper leaching programs of the mines large volumes of metallic iron are used to extract the copper from its compounds.

The relief of the claims area is minimal and the entire area is generally accessible by field vehicle motor transport.

The writer has made no drillings or assays of any of the alluvial deposits. The thickness of the alluvium in the basin as based upon various drillings that have been made by others, is estimated over a thousand feet, according to the U.S. Geological Survey. In other places in the alluvial basin it is naturally much thinner, having a nil thickness along the margins of some of the hills which project through the alluvium to the surface. Assays made by others investigating have indicated an average iron content of 5% with a high iron content of 20%. As is true of all alluvial deposits, the iron content fluctuates rapidly from place to place depending upon the course of the ancient stream channels which deposited the alluvial debris. It has been reported that the iron content increases with depth, although this may be fortuitous with the location of the bore holes.

The iron content of some of the sands is best seen along the various dry stream channels. After a rain the bottom of the stream channels appear black with heavy minerals. However under the surface layer of black sand, quartz sand with minor disseminated iron grains are the rule. The black iron sands are composed mainly of magnetite and related iron bearing minerals. These comprise most of the "heavy minerals" of the deposit.

The sources of the iron apparently are the magnetite bearing basic intrusive rocks of the Tortilla Mountains to th northeast of the claims, Black Mountian to the East and

the Tortolita Mountians to the Southeast, as well as other mountains and hills in other directions.

Your claims lie in a basin surrounded by these highlands. Weathering of the rocks has broken them down into sand-grain sizes and streams have carried the debris into the basin area where natural hydraulic factors have separated the various "sand" sizes according to their specific gravity and size. Coarse gravel sized detritus is rare.

Although no analyses of the heavy mineral were made by the writer, it is understood that the majority of the heavy minerals consist of magnetic magnetite and non-magnetitic black sands. The later are iron-titanium minerals. A large percentage of the magnetic magnetite can be separated by simple magnetic processes. It is understanding of the non-magnetic fraction which will secure additional yield.

The lighter minerals, mainly quartz, can be washed and separated then classified into sand, gravel and other sizes during the heavy mineral separation. The various sizes can be stockpiled for sand and gravel use as concrete aggregate. There is a ready market for these in the rapidly expanding Tucson-Phoenix area and the Southwest. The C.A.P. will require vast amounts of sand and gravel in lining their canals.

There is sufficient ground water on the property for all needs. Further, additional water can be conserved during the rainy periods by building a series of dams or dikes across the stream channels and gaps in the hills which are adjacent to the claims area.

The availability of this and other water will permit the use of floating dredges. Although the dredge method appears most simple there are other ways for handling the large volume of alluvium and extracting the values from them.

Water will not be wasted since it will be returned to the ground water reservoir through seepage downward through the sand in which the ponds are excavated.

In a sense, the iron bearing minerals have already been "mined", "milled", and "sized" or "classified by natural processes". This saves expensive mining and most of the costs of grinding. Separation and concentration into the various usable metallic and non-metallic components are the remaining operations. In addition, the availability of fuel, electricity at site, transportation, and the presence of nearby markets for the various products from the ore deposit results in the solution of many economic problems that often exist in a new major mining operation.

It is believed that the heavy mineral extraction should rate primary merit. There is, however gold which may possibly underwrite some of the costs. The other by products as sand and gravel will create additional income for the company operating the property.

It is the writer's opinion that the property deserves development as a profitable mining operation. Today the many economic and technological changes have made the older studies as to feasibility of extracting the magnetic iron obsolete and have brought new potentials into play. Of

interest is that two small placer mines are operating areas peripheral to your claims within the same general alluvium, but in reportedly lower grade materials than are found on your ore deposit.

After the heavy minerals, sand gravel and other products from the alluvium have been removed, the area can readily be restored to its natural environment with its natural desert vegetation and ecosystem.

In this portion of Arizona where the magnetite deposit lies cotton, fruit, nuts (pecans), lettuce and other produce is grown using irrigation water with in the basin.

Yours very truly,

Willard D. Pye

Willard D. Pye
Consulting Geologist
Arizona State Board of
Technical Registration #4013

THE
DADARX GEOLOGICAL
ENGINEERING
REPORT

SECTION 2

Arizona
Ores

Investigation of Magnetite Iron Ore Reserves in Pinal County :

Introduction:

This report is written to summarize studies and data on the alluvial magnetite which situates in Pinal County, Arizona some 45 miles north of Tucson. The writer, a professional mining engineer specialized in iron ores internationally for some 30 years, has carefully examined the deposits as well as the confirmatory data consisting of drilling reports, geophysical data, and geological data during a period of some 6 months. Recommendations as to the economic values, usages to which this ore might serve, and the indicated profitability of this ore to a steel company are set forth herein.

The Orebody:

The orebody exists in the form of an alluvial basin and outwash alluvial plain or alluvial fan. It situates in Townships 7, 8, & 9 South, Ranges 11, 12, East, Gila & Salt River Maridian.

The ore exists as granular sub-rounded magnetite derived from gneiss, schists, and granitics probably Navadan tectonic revolution upheaval responsible for intensive mountain building in the Rocky Mountain Southwestern U.S.

The ore is easily seen in this placer basin as it is black and most readily seen in the sands. It exists, however, throughout, as is more easily determined with a

magnet. The extent of the orebody covers some 120 square miles or about 86,000 acres. Numerous, some 20, traverses of the property have proven that the ore is well distributed horizontally even though there is greater concentration in some areas than others on the surface. This is to be expected in a deposit of this nature where meandering streams are responsible for carrying in the magnetite freed by mechanical and chemical processes from its source rocks. Examination of the gneisses, schists, and granitics from which this magnetite has been derived revealed an average Fe. content of 15.2%.

Wide distribution horizontally having been established, and a sources from which billions of tons might logically have moved by water transport during geologic time, the writer then investigated the various drilling reports in order to determine the vertical distribution of the magnetite and its likely average depth within the basin.

A Summary of data pertinent to <u>drilling confirmation</u> follows:

1. U.S.G.S. Test Holes show magnetite consistently to better than 1000 ft.

2. Drilling done under Odin M. Sundness of Crucible and USS showed on some 15 Sections that slightly better than 5% Fe. recovery would be feasible.

3. Subsequent drilling throughout the range within some 38 Sections; --- showed that a 5.1% Fe. recovery overall would be likely.

4. It is understood that there are currently blocked out 100 million tons of ore in the East Central

portion of the range which could serve for economic warranty to interested capable developers.

5. While nothing contraindicates further reconnaissance drilling there is nothing significant to be said favoring it.

RESERVES:

The material, or "sands", in place have an average weight of 135 pounds.

A 200 ft. depth there are therefore approximately 45,000 long tons of magnetite recoverable from one acre.

Over the 60,000 acres presented there are, therefore, about 2,700,000,000 (2.7 Billion) long tons of recoverable magnetite.

Grade of Ore:

This is a very high Fe. content grained magnetite. Using primitive methods of dry recovery magnetite from 63 to 65% Fe. is recoverable. Analyses at Larch Hibbing, Minn. and at Eisenhauer Laboratories, Los Angeles show the magnetite to have an Fe. content varying from 65 to 67.4% Fe. The seeming discrepancy may be attributed to the primitive recovery methods and the fact that the magnetite was unwashed in field recovery samples. Dredging would yield the higher Fe. content magnetite.

Economic Value:

The Ore

This is a highly valuable commercial iron oxide iron ore in its unbenificiated state. It is readily pelletized by the addition of small amounts of clay, to yield a perfect blast furnance feed.

A pelletizing plant should be given consideration as one possibility, for the pellets being high Fe. content would be a welcome increment to Fe. content at Fontana, or Columbia-Geneve's operatons in Utah; or both.

The ore is an ideal ore for conversion to iron via direct reduction. Even in its unbenificiated state a sponge iron yielding 96 - 98% Fe., with no deleterious elements has been obtained. The addition of carbon yields excellent tool quality (grade) carbon steel. With slight, low cost beni-ficiation by grinding to 71 to 71.5% Fe. at 100 Mesh the ore reduced to powder via hydrogen and trace CO produces an ultra-high purity iron powder suitable for electronics industries, automated production of sheet, bar, strip, plate etc., and is readily converted to stainless steel powder.

The Range

Largest iron ore reserve thus far found in Pacific or Intermountain West. Reserves to support a giant steel in-dustry for hundred of years. Ideal market location to California, Texas and inter-mountain West.

The range offers an ideal year round working climate; unlike the taconites, Labrador, Atlantic City, or New Mexico (Hanna) taconites.

The ore can be produced from this range at lowest possible costs, and well below any applying currently anywhere in the iron industry.

A major source of natural gas for conversion to reducing gas is within and adjacent to the range.

Water reserves to support large scale industrialization is under development through state and federal programs, although there is adequate water within the basin for both dredging and production of steel.

Electric power rates in the competative circumstance of government and private electric utilities make this most attractive from a cost consideration factor in power requirement in conversion to steel.

Markets:

Existing production which is grossly inadequate insures a rapid growth market, as well as the ability to supply market demands. Even with doubling of capacaties at Fontana there is still a market gap of about 3 million tons of steel annually in the Pacific and Southwest. Location of industries would increase in Arizona if steel were available. It is hardly conceivable that Lloyds of London and Chase-Manhattan would predict Phoenix as one of the nation's three largest cities without consideration of the predictability of Phoenix being a major steel cantor.

Kaiser's acquistion of Allison, for all practical purposes, provides a ready market outlet. Location is excellent and has expansion potential. U.S. Steel at Tampa

under Oil Well Supply offers possibilities to pipe production. A major Cleveland interest situated in Tampa is specialized in Foundry metals as another steel company is in electric furnace and rolling mills.

While California's markets will continue to grow, Arizona itself and West Texas, Central Texas and the inter-mountain Southwest present market opportunities which could absorb a calculated 2.6 to 3 million tons of steel annually due the rapid population growth and industrial expansion. The call for ultra-high purity metals and quality stainless steel will continue. Defense industries and N.A.S.A. should be given due consideration.

Recommendations:

1. Acquire the range after consultation with Eastern steel interest most likely to move into West; possibly a joint acquisition.

2. Consult our industrial groups as to lowest costs in hydrogen, oxygen, and nitrogen; dry ammonias for stainless.

3. Determine our relationships industrially to insure supplies of carbon for conversion of reduced iron to carbon steels.

4. Obtain engineering opinions from companies with volume mining via bucket suction dredging. (Thus far opinions indicate a ton @ 65% Fe. can be produced for from 90¢ to $1.10 unbenificiated).

Arizona
Ores

5. Effect engineering based upon an integrated mining operation and a pelletizing plant and a direct reduction facility at the site.

6. Explore financial groups which have awareness of this range whom we have cooperated with or participated with in joint venture iron ore developments.

By:

5-23-7

Registered Mining Engineer
State of Texas
State of California

THE OFFERING

PART I

SECTION 3

OFFERING POSSIBLE DUE RESULTS IN UNIFICATION:

After nearly a quarter century there is accord between the two meaningful claimants of The Range.

Inspection of an conveyance can be rapidly made in view of this significant unification.

Your inquiry with such specificity as you require is invited.

NATURE OF THIS OFFERING:

Sale with down payment and end price presents an attractive possibility.

Blocked out ore, from a 100 million ton blocked reserve, might be placed if guaranty is desired in exchanges.

Alternatives probably exist which can make payment and conveyances quite simple and attractive for this heart of The Range.

OWNERSHIPS AND THEIR REPRESENTATION:

Leslie D. Price, Attorney at Law
for: A.I.M.E Associates
(Arizona Iron. Minls. Expln.)
821 Kanawha Valley Building
Charleston, West Virginia 25302
(304) 343-5154

or

William M. Hazel
5756 East Burns
Tucson, Arizona 85711
(602) 745-5738

THE PROPOSED DEVELOPMENT:

IT'S NATURE

PART II

SECTION 3

AN INTEGRATED MINING AND IRON AND STEEL PRODUCING DEVELOPMENT

1. In the integrated mining and reduction operation the production of concentrated magnetite iron ore would be geared as nearly as possible to reduction plant facilities eliminating unnecessary stockpiling.

2. The magnetite concentrate can be obtained most economically employment of suction dredges. The iron ore and its matrix would be brought onto the barge where the coarser material would be scalped and returned to the pond. The magnetite ore fines would then be pumped by flex lines to the shore for subsequent de-watering, magnetic separation, and recovery of secondary values.

3. Dredging is indicated as the problem of tailings disposal and material handling is non-existent or at an abosolute minimum.

4. Costs of obtaining a concentrate via hydraulic mining would be aprroximately 50% of those of dry open pit methods.

5. Adequate long term industrial water is assured.

6. Much engineering consideration has been given to mining via bucket wheel and even though sales of sand, pea gravel, aggregate could be substantial the tailing disposal would create land use difficulties greatly increasing costs.

ORE REDUCTION PLANT AND STEELMAKING FACILITIES

1. The ore concentrate would then be transferred to an adjacent hydrogen reduction plant where the unbeneficiated or beneficiated fines would be reduced to iron powder. Iron powder not used locally would be briquetted for shipment as electric furnace feed.

2. The ideal locations for electric furnances and for a continuous compaction automated steel and alloy plant would be on millsites provided adjacent to the iron claims and thus further integrated steelmaking via conventional heat systems and advanced automated steel making which is in the capacity of several corporations.

3. Significant transportation costs savings are a consideration in totally integrated mining, reduction and steelmaking complex.

4. A pelletizing facility can operate simultaneously with a hydrogen reduction facilty.

5. Phoenix and Tucson electronic and other industries may diversify their operations to include briquette usage or iron powder.

6. Hydrogen will be provided either by turn key or on-site production facility. Hydrogen is competive with coal or less costly when all coal costs are considered.

ECONOMIC UNIQUENESS OF AREA AND SOME MARKET IMPLICATIONS:

1. With 6 miles of the SW edge of the range there is the East-West mainline of the Southern Pacific Railroad.

2. There is adequate water for a total industrial complex consisting of mining, ore reduction and steelmaking in tonnage equal to those of the existing great midwest steel centers.

3. A new power plant having adequate capacity for steelmaking situates about 6 miles from the range. Salt River and Federal power nearby offer very attractive rates. Existing power facility having capacity is on rail 6 miles from range.

4. No overburden stripping and removal costs are involved as in the Minnesota taconites.

5. There is a Southwestern and Pacific Coast market for the potentiated products as iron ore, powdered iron, briquets, skelp, pipe, etc.

6. Automation advances assures vast increase in consumption of iron powder as in continuous compaction for higher quality steels and compaction alloys.

7. There is access to world markets via direct rail to the free port of Puerto Penasco or Guyamas, Sonora, Mexico where facilities for shipping are being expanded.

8. An ideal climate for year round operations exists.

9. Recent development show that this magnetite has qualities which can be made into a type transformer core causing transmission costs of electricity to be reduced by billions of dollars annually. Market sales nationally could be projected annually to several hundred millions and consume about one-half million tons of benificiated magnetite.

FOREIGN PRODUCTION ALTERNATIVE:

1. Ship ore to Mexico, and effect reduction somewhere adjacent to border or Puerto Penasco, Sonora, and in so doing reduce costs.

2. Develop mining operation geared solely to production of magnetite iron ore fines for the world markets in Asia and Europe.

   * Either of these or both, (they are not preclusive) are of increasing interest to cartels, extra-nationals and to money.

GEOLOGICAL BRIEF:

1. The iron range exists an an alluvial basin-valley fill between two mountain ranges in Southern Pinal County, Arizona about 45 miles north of Tucson.

2. The source of the magnetite and associated minerals is from granitic an gneissic rocks of Laramide age in the mountainous uplift areas to the East.

3. Examination and expert sampling plus testing show the source plutonic rocks to have a 15+% Fe. (iron) content averaging 64.7% Fe.

4. The area indicating most favorable economic development is the basin and outwash plain where A.I.M.E., Blankinship and Les Girls mining properties situate.

5. A short distance from the iron range is the western world's largest single reserve of copper ore held jointly by Great Lakes iron interests and a multinational petrochemical company. Geochemical exploration and reconnaisance drilling to the desirable depth should be done on the Range for Cu. determinations.

6. The depth of the iron rich basin is indicated at a maximum 3500' depth. U.S. Geological Survey test holes show magnetite to a depth of 1010 ft. Other minerals were not logged.

7. The topographic presentation is that of nearly flat relief with an average declination of 93' per linear mile east to west across the alluvium. While there are marked geophysical anomalies, possibly representing some other phenomenon, the whole claimed area is remarkable in averaging 5% Fe. being recoverable.

8. The range mineralization is the product of classical mechanical weathering processes.

9. Of the numerous geological reports written the one by Dr. Willard D. Pye most probably best describes the geology of the range.

METALURGICAL BRIEF:

1. This magnetite is a fine grained high purity magnetite as it occurs in its natural state as it has been freed by forces of weathering and transport from gangue minerals.

2. This magnetite is readily upgraded by low-cost relatively coarse grind to 100 or 150 mesh where 69% and 71.2% Fe. are obtained respectively. A high proportion of the magnetite, perhaps 35% is 66% Fe. in its natural state. Thirty-eight thousand tons collected through relatively primitive dry magnetic separators, making one pass, yielded an average Fe. content of 63.8%.

3. Studies of direct reduction steel produced from this magnetite having 69 - 70% Fe. content have shown consistent total reduction of the oxide. The iron content of the steel produced was 99.21%. Fractional remaining unreduced elements were alumina and silica with minute traces of carbon and titanium. There was no deleterious sulphur or phosphorus.

4. Studies and evaluations, including those of major petrochemical research institutes, inducate that the aluminas, ilmenite, and other minerals could be developed into metals, pigments, carbides, ceramics, refractories, abrasives, etc.

5. The steel produced is ductile, malleable, and non-pyrophoric.

6. Both the steel and high Fe. direct reduction iron is readily altered to ultra-fine carbon steels via conventional methods or through carbons recently developed by the petrochemical industry.

7. A briquet or sponge of 85 - 87% Fe. is readily produced using lower purity reducing gases. These products have been demonstrated to be ideal smelting furnace feed for making pig iron.

8. Furthering production from the hydrogen produced ultra-pure iron powder yields, with proper treatment what can only be termed direct stainless steel or stainless steel powder.

9. Satisfactory results have been achieved in the alloying of the iron powder with copper, nickel and other metal powders, volume powder production would lend to automated, computerized continuous compaction of innumberable items including sheet, skelp, and plate, etc.

RESERVES:

The Dadarx Report indicated 2.7 billion as being recoverable at feasible mining depths.

No absolute projections are possible. As least several billions of tons can be mined along with sands, gravels, and gold.

The only comparable anomaly in size is Kursk and there, unlike Arizona, tremenous cold and quite thick overburdens were encountered in development.

THE RESERVES

1 Acre .....43,560 sq. feet

140 lbs. per cu. ft. .....13,214,000 lbs.
at 25 ft. depth, or

with Fe. Recovery factor 5% .....3,063 tons of ore
@ 65% Fe.

1 Acre 200 ft. deep .....24,504 tons of ore
@ 65% Fe.

640 Acres @ 200 ft. deep .....X 15,682,560 tons of ore*
(1 Square Mile) @ 65% Fe.

60,000 Acres plus or 100 Sections =.....1.56 Billion tons
of ore @ 65% Fe.

* Long tons, 2,240 lbs.

The five (5%) recovery factor used by Mr. Sundness in his calculations is based upon magnetic separation tests conducted at the Arizona Bureau of Mines laboratories. During the testin an early model Dings Cross-Belt Magnetic Separator, Type E, was used. This piece of equipment has since been superseded by more effective methods of separation.

Research conducted by Carpco Corporation of Jacksonville, Florida in High Tension Electric Separation would appear to offer excellent possibilities for upgrading the recovery factor to about six percent.** Assuming this to be the minimal range of upgrading then a recovery of approximately 5000 long tons of ore per acre @ 65% Fe. at 25 ft. depth can be expected. Calculations then show possible tonnage as follows:

** "High Tension Electrostatic Separation" by R.E. Barthelemy - Director of Research, Carpco Research & Engineering Co., Jacksonville, Florida - Engineering & Mining Journal - December 1958.

MARKET VALUE AND RESERVES VALUE:

As of April 15, 1979 the fair market value for iron ore with this high Fe. content is $28.00 per ton, based upon Great Lakes and Minnesota prices to steel makers.

(64% Fe. is basis for computation).

A reserve of 1.6 Billion tons has a value of
$28.00 X 1.6 Billion; or
$44.8 Billion

Fair value should be indicated for all other minerals than magnetite as they are mined and used in commerce.

DRILLING OF THE IRON RANGE:

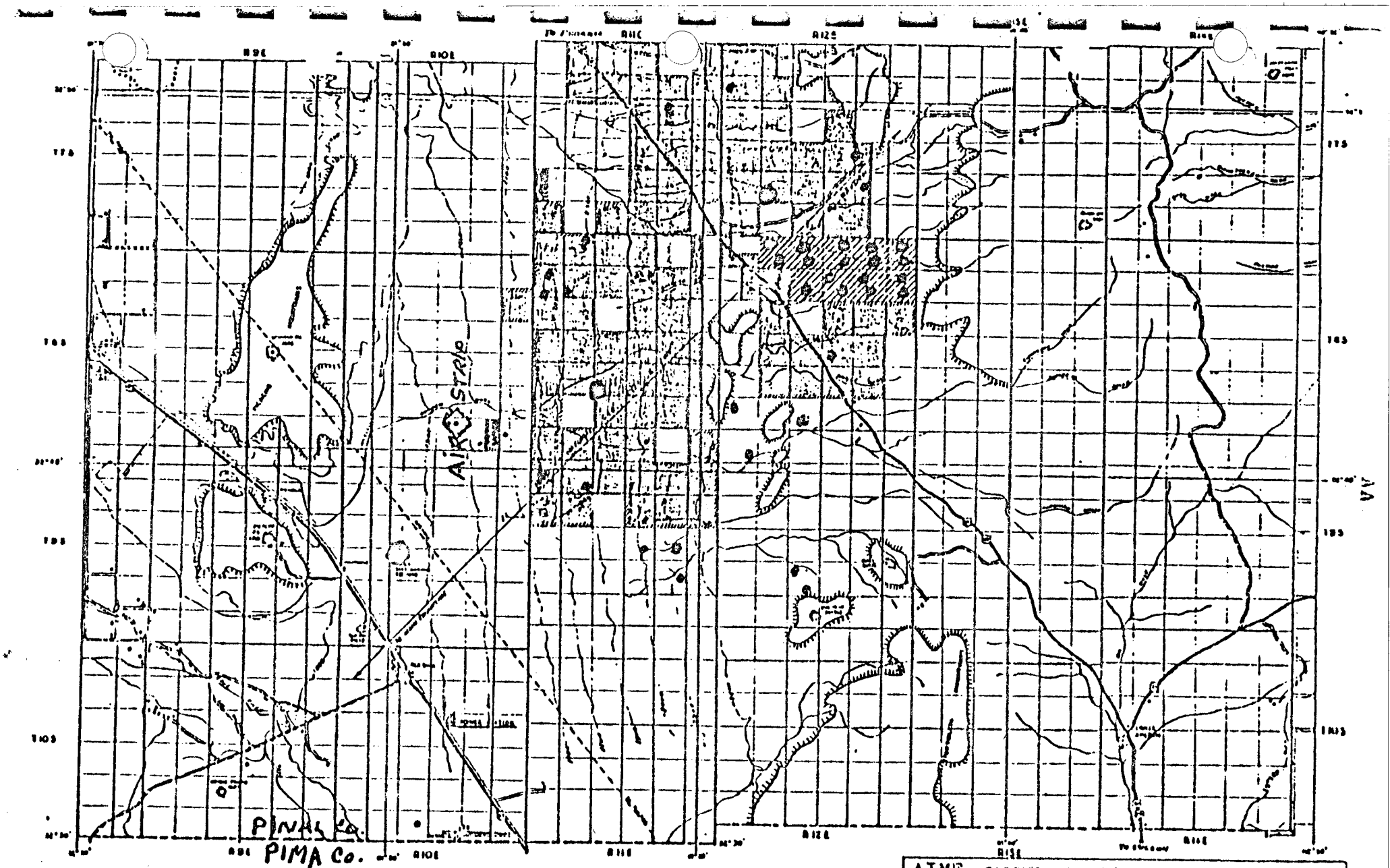
Drilling has taken place in varying amounts and depths on some 60 Sections (38,000 acres).

Determinations are that the magnetite is relatively evenly distributed both horizontally and vertically. The notable exception is the State Lease catch basin near Suizo Mountians where very considerably higher Fe. is blocked out.

The range's overall recoverable iron is in excess of 5.1% Fe.

100,000,000 tons of magnetite have already been blocked out.

There are several cupriferous anomalies which may warrant serious attention in view of their location relative to the enormous discoveries made by a diversifying iron company within this mineralized zone.



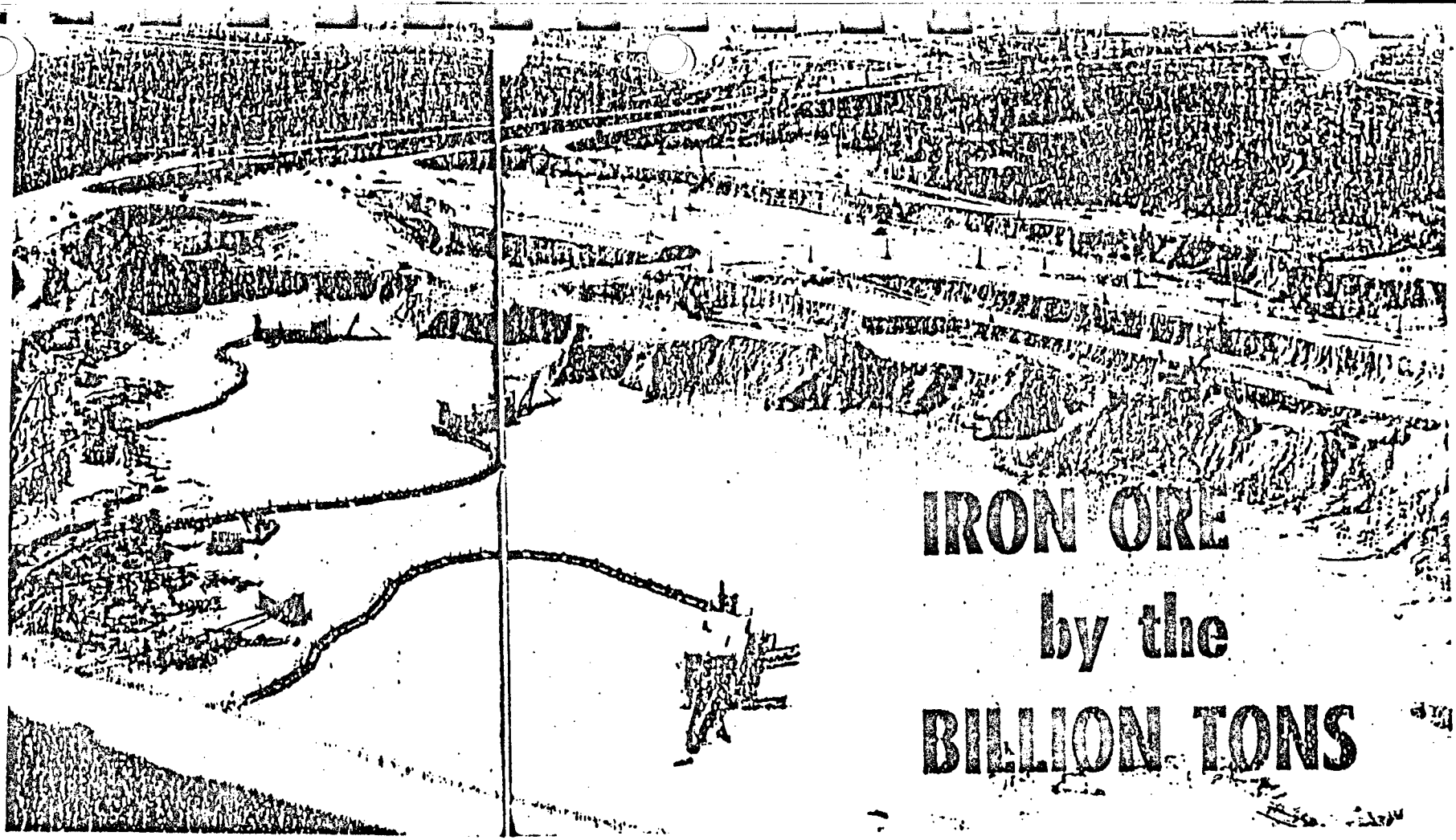
Orang[illegible] = Sundness Report Area

● Blue = Various and Sundry 200" or greater

● Red = USGS 1000" holes (magnetite to bottom)

(All approximate locations)

Wate[illegible] Dozed in 3"-4" by GA -Artesian ??



IRON ORE by the BILLION TONS

Lebedinsky quarry on the Oskolets River, where ore is mined by the open-pit method. A layer of 300 feet of earth had to be removed to uncover a seam so rich that the ore does not even need dressing.

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...oviet state.

The first year of the plan, 1959, was marked by two major events in the history of the Kursk Magnetic Anomaly. One was the completion of the South Korobkovsky mine and ore concentration plant in the area of the Stary Oskol deposit. Ore is extracted here by the underground method, and the annual capacity of the mine is up to three million tons. The miners and plant workers live in the new city of Gubkin, named after the prominent geolo-

New Deposits Discovered

Accessible deposits are constantly being uncovered in the Kursk Magnetic Anomaly. Work is now in full swing at the construction site of the Mikhailovsky quarry where the ore will be mined by the open-pit method. It will be completed in 1960, one year ahead of the original schedule.

A group prospecting during the summer of 1958 found a deposit estimated at 10 billion

INDICATED COSTS OF IRON PRODUCTION

PART III

SECTION 3

ORE PRODUCTION AND MINING COSTS:

Indicated costs for production of iron via dredging are as follows:

Dredging	2.25 to 3.75
Magnetic separation	1.25 to 2.10

So for recovery of unbenificiated ore the costs would be from $3.50 to $5.85 based upon producing 1 million tons per year. The Fe. content would be in the range of 64.0 to 64.7% Fe.

If grinding to increase Fe. content the likely charge including capital costs would be from $3.00 to $5.00 per ton for an ore of approximately 71.4% Fe., having a low estimated cost of $6.50 per ton to a high estimated cost of $10.85 per ton.

It is believed that a middle range figure of about $8.75 per ton will be the actual ore cost exclusive of royalty.

REDUCED IRON COSTS

Given an iron ore cost of approximately $12.75 (1.25 tons of ore for 1 ton of reduced iron) and a hydrogen reduction cost of $23.00 to $26.00 per ton the costs per ton of reduced iron at The Range is form $35.75 to $38.75 per ton.

The cost of direct reduction iron on the range is slightly less than half for comparable Fe. iron produced in the Eastern and Great Lakes region by blast furnaces.

Materials Newsfront

OPEN PIT - DRY MINING AND DRY SEPARATION:

If dry and open pit methods of mining are preferred it is quite likely that only slightly higher costs would be applicable than via hydraulic mining.

The major advances of the past several decades have made feasible low cost operations where tonnage to gangue ratios as those on the iron range are found.

It is likely that with advances in technology in open pit methods, dry magnetic separation etc. that the costs per ton worked dry would be only slightly more than hydraulic methods.

As increased costs would be negligible there would be no effect on the ratio of costs for ore from the range as compared to those in the East.

SECONDARY VALUES OFFSETTING COSTS:

1. There is gold in a significant enough amount to help defray mining costs.

2. Sand, gravel and aggregate represent readily marketable products.

3. Ilmenite and aluminas can be readily recovered. With significant tonnage production these would have values.

COMPARATIVE ORE COSTS:

Costs for ore as well as iron products are significantly lower than those in the Central and Easter U.S.A.

With Direct shipping ores at approximately $22.00 per ton at 51.5 Fe. there is a considerable price difference indicated by Arizona ore which could be delivered at 70+ Fe. for about $10.00 (Delivery point Red Rock or other Range millsite).

RECOMMENDATIONS FOR DIRECT REDUCTION

TO POWDERED IRON

PART IV

SECTION 3

CONSIDERATIONS INDICATING DIRECT REDUCTION:

1. Capital costs of direct reduction are approximately 50% those of conventional blast furnace methods.

2. Where there is a shortage of metallurgical coal and there is relatively low cost hydrogen from petroleum or other source.

3. Where there is high Fe. content ore, such as prevail with the Arizona Range's magnetite ore fines occurring naturally with an Fe. content above 64%.

4. Pilot tests using three different processes of Direct Reduction have proved production costs less than half those of conventional steel producers. With controlled economic circumstances it is likely this cost can be substantially reduced.

   Market trends are sometimes significant as well as technological trends with respect to process usage and

5. Direct reduction is seemingly indicated when ore fines can be ground at low cost to a feedstock to produce iron powder. Iron powder has the multiple value of being used for automated continuous compaction, converted into sponge or briquette for electric furnace conversion to steel.

USE AS A SCRAP SUBSTITUTE:

Steelmakers throughout the industry have found that semi-reduced iron about 85-87& Fe. in the form of either briquette or sponge can be used ideally as a scrap substitute.

Assuming hydrogen derived from a fuel oil feedstock a semi-reduced sponge can be produced for approximately $30.00 per ton at 1 million TYP basis. That this price can be achieved does not constitute advocacy of semi-direct reduction, but merely serves to show low costs of direct reduction.

(High purity iron, in the range of 97-99, when reduced as powder potentiates not only reduced iron powder but sponge and briquette of high Fe. content by simple techniques.)

TECHNICAL REFERENCES

PART V

SECTION 3

DREDGE ENGINEERING AND SALES:

Among the companies which have ability probably related to magnetite fines recovery are:

Eagle Iron Works, Des Moines, IA
Ellicott Machinery, Baltimore
DRAVO, Pittsburgh
YUBA, Benecia, California

HYDROGEN:

Those having indicated hydrogen capability are:

Union Carbide
Selas Corporation in conjuction with such as C.F. Braun or Ralph M. Parsons, Air Products etc.

TOTAL DESIGN ENGINEERING:

Potentials appear to be:

Ralph M. Parsons
Braun,
Badger
and possibly Flour-Utah as well as others.

AUTOMATED CONTINUOUS COMPACTION OF METALS POWDERS:

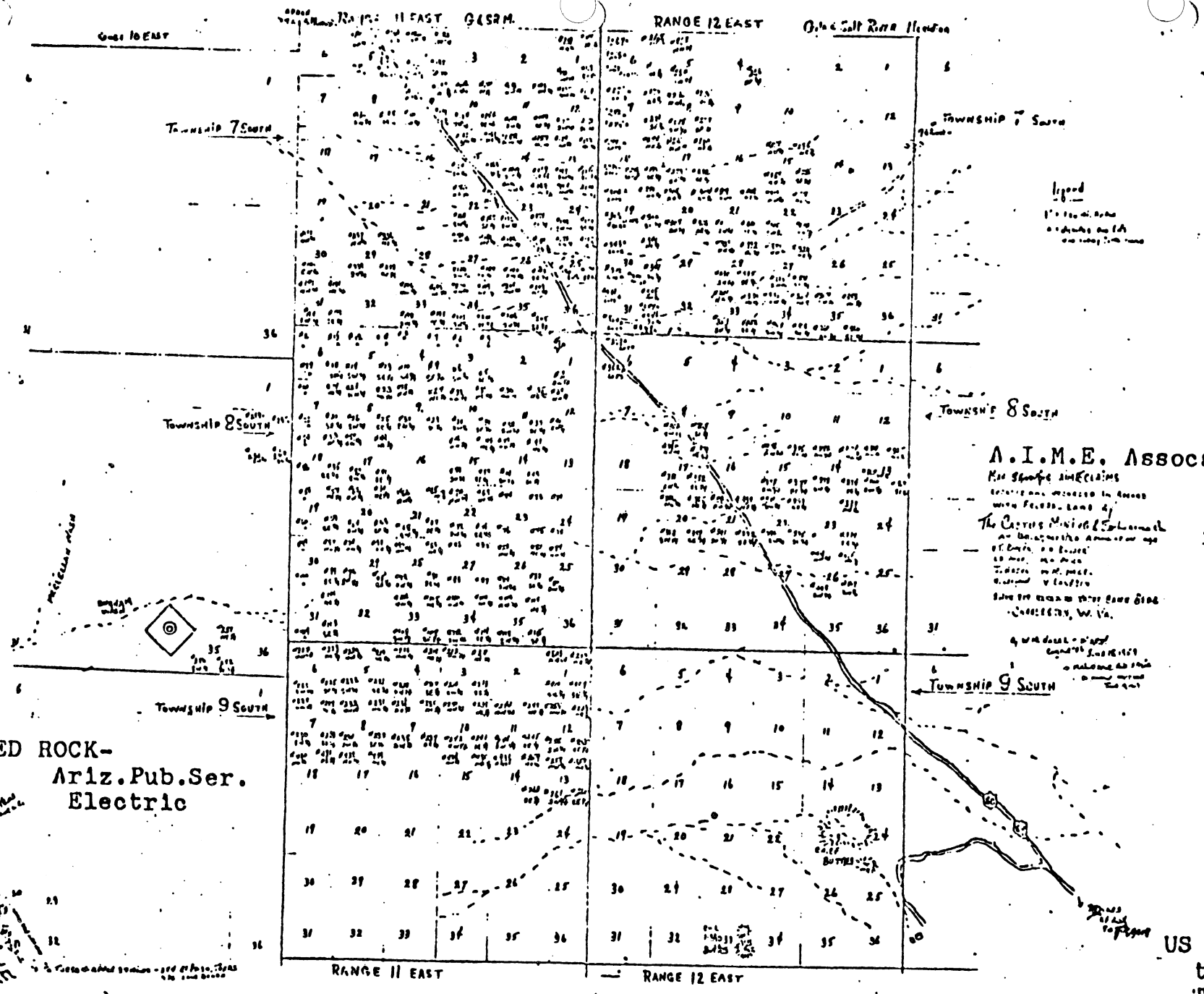
Westinghouse, East Pittsburgh
Electric Furnaces (Direct Smelting)
LECTROMELT, McGraw-Edison, Pittsburgh

MAPS OF RANGE, CLAIMS AND REGION

PART VI

SECTION 3

MAP showing the Final Magnetite Iron Range



TIAGO & A.I.M.E.
BASIC CLAIMS
MAP

THE PINAL COUNTY
ARIZONA ALLUVIAL IRON RANGE

Situates within the southern Pinal Basin (See map). Economically profitable minerals are magnetiite, gold and to a limited extent others. The iron content is approximately 5%. Over 100 square miles to a depth of 200 feet there is a minimally recoverable 2.5-2.7 billion tons although some estimated are higher. This places this anomaly comparable to the Krusk (USSR) anomaly in size and iron content.

Gold exists in very fine particles and also as colloids. the pattern of gold occurrence and distribution is yet understood. Indications are that the gold values will defray a worthwhile portion of the mining costs. The magnetite naturally occurring needs be beneficiation as it varies from 64 to 67.5 Fe. content. It is ideal unbeneficiated for the most advanced methods of direct reduction, where inclusive minor element alloying is the desired product. Slight benificiation yields the ultrapurity reduced irons. Pellets can be made without any benificiation.

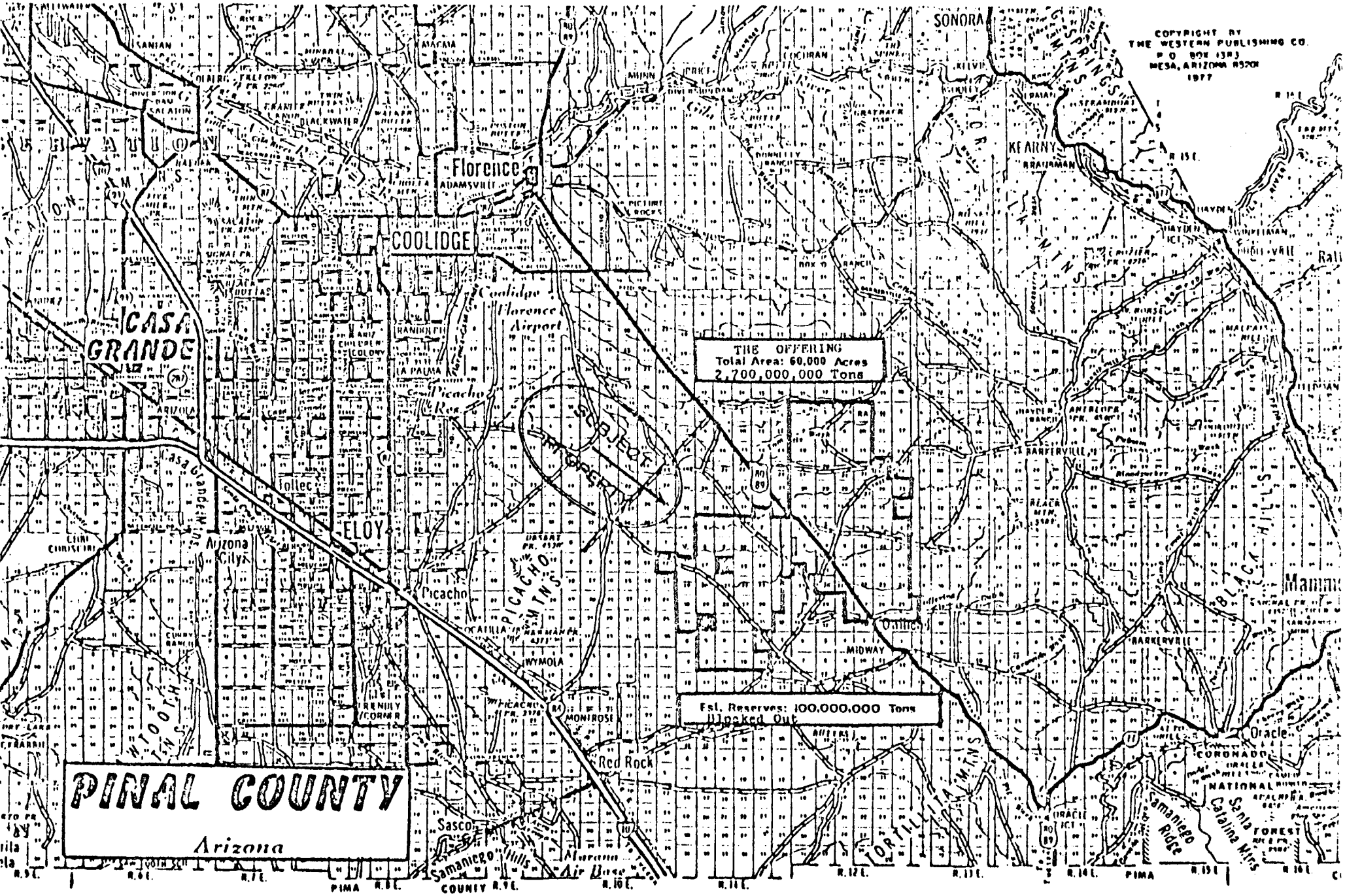
A certain amount of sand and gravel can be made available for market.

A.I.M.E. Associates holdings comprise the largest portion of the range or some 97 square miles.

All indications are that this iron range can be mined via dredging using environmentally sound procedures, or that it can be worked dry with bucket wheel type equipment.

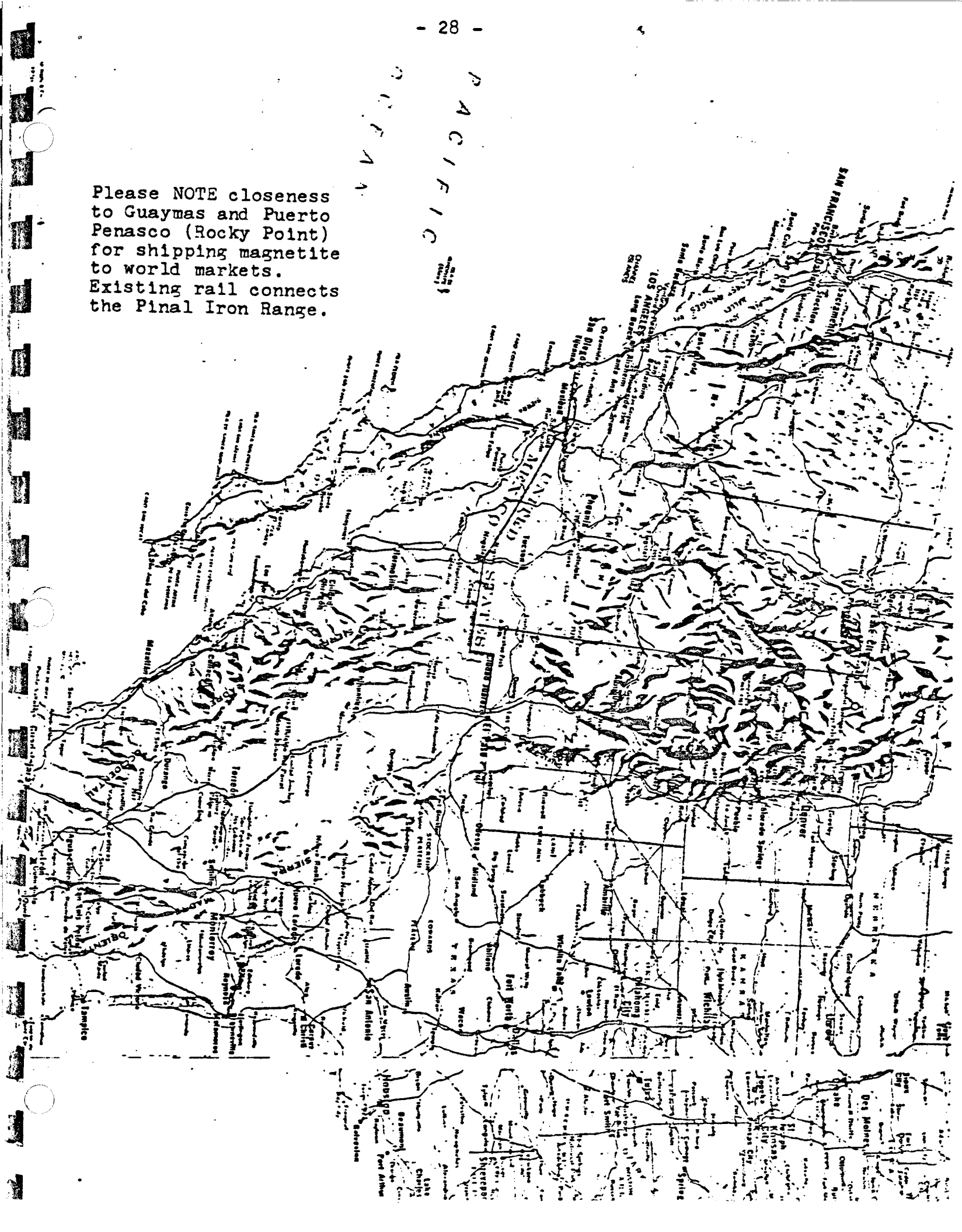
* Competitors independent estimators derived same estimates.

This map show the iron range relative to Tucson and Phoenix which are growing as a corridor to becoming one of the largest "land-locked" metro areas in the USA; and possibly the world dependent upon how Chase-Manhattan projections are interpreted or computerized.



COPYRIGHT BY
THE WESTERN PUBLISHING CO.
P O BOX 1383
MESA, ARIZONA 85201
1977
THE OFFERING
Total Area: 60,000 Acres
2,700,000,000 Tons
Est. Reserves: 100,000,000 Tons
Blocked Out
SUBJECT PROPERTY
PINAL COUNTY
Arizona
Florence
COOLIDGE
CASA GRANDE
ELOY
Picacho
Red Rock
Oracle
Coolidge Florence Airport
Picacho Res.
Arizona City
Casa Grande Mtns
Samaniego Hills
Marana Air Base
Samaniego Ridge
Santa Catalina Mtns
Tortillita Mtns
Black Hills
Kearny
Sonora
Mammoth
Oracle
Midway
Wymola
Montrose
Sasco
Barkerville
Coronado National Forest
PIMA COUNTY

Please NOTE closeness to Guaymas and Puerto Penasco (Rocky Point) for shipping magnetite to world markets. Existing rail connects the Pinal Iron Range.



INDICATED CAPITALIZAION EXCLUSIVE

AMORTIZATION FOR 5 MILLION TPY INTEGRATED

MINING AND AUTOMATED POWDERED IRON

FACILITY ON A.I.M.E. SITE, PINAL COUNTY

as per March 11, 1982

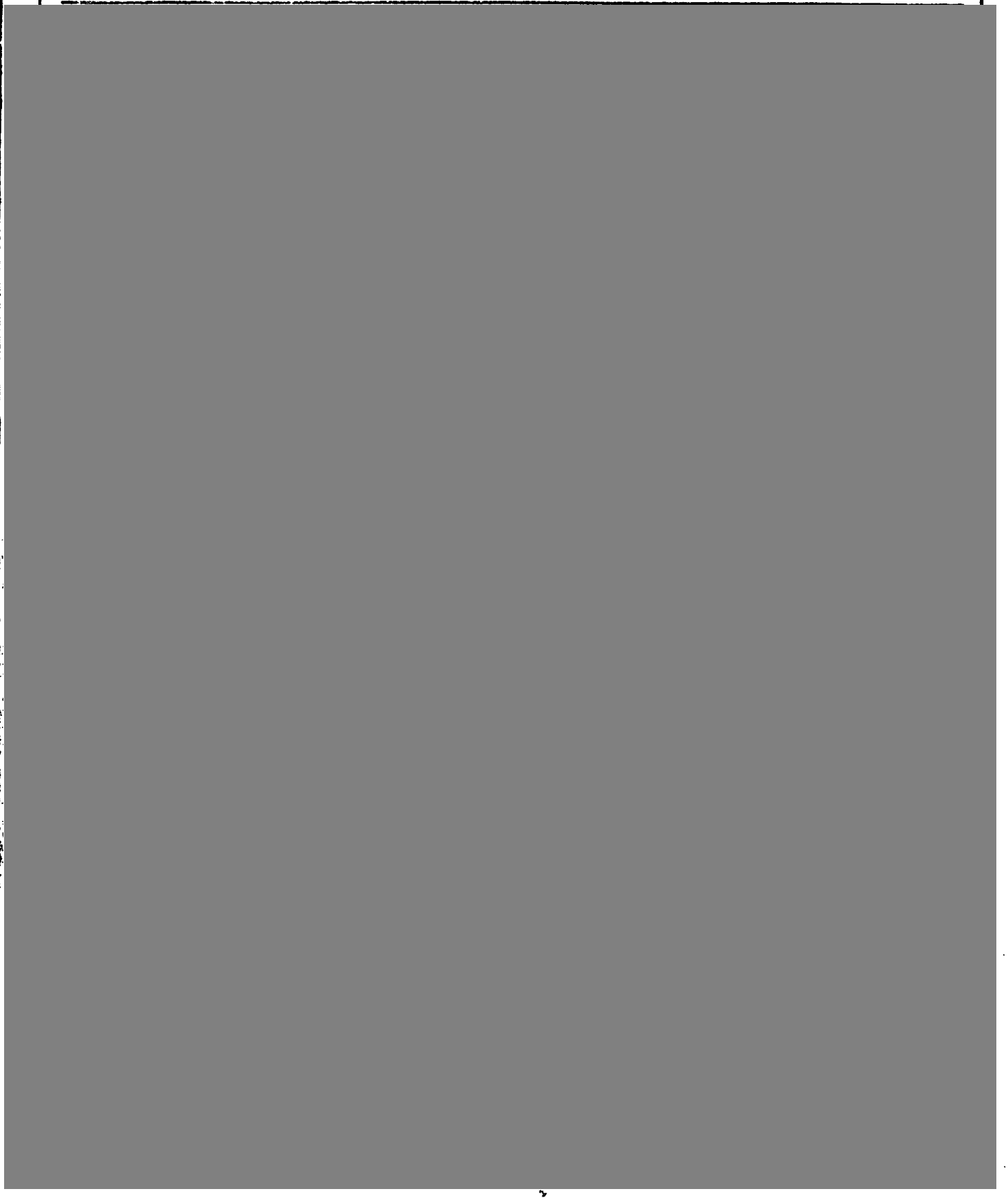
$412,000,000.00

Estimates provided by engineering branches
(in house) of multi-national consortium
with vast petro-hydrogen experience.

IT MOST PROBABLE THAT ANY SERIOUS PARTY
WOULD CONSULT THOSE SPECIALIZED IN
ALLUVIAL MINING, HYDROGEN GENERATION
FORM VARIOUS FEEDSTOCKS, AND POWDER METALLURGY.

ANNUAL STATISTICAL REVIEW

U.S. Raw Steel Production, Rate of Capability Utilization



Grover:

Here is map of Final iron range AIME Claims (needs copying)

and

proposed 10% for you if we can put it together.

I believe we can.

Please call me.

Thanks

Bill Hazel

325-8886

United States Communities S.A.

6211 NORTH CAMPBELL AVENUE • TUCSON, ARIZONA 85718 • PHONE (602) 299-1955

June 22, 1984

Hazel's Mineral Surveys
2660 N. Alvernon, A114
Tucson, AZ 85712

Attn: Mr. William M. Hazel

Dear Mr. Hazel:

This is to certify that we will pay you Ten Percent (10%) of our net profits for any transaction within ninety (90) days hereof concerning any mining properties in which we have an interest.

Very truly yours,

UNITED STATES COMMUNITIES S.A.

By Don Maxon, President

STATE OF ARIZONA)
COUNTY OF PIMA) ss.

SUBSCRIBED AND SWORN to before me this 22nd day of June, 1984.

Notary Lisa Lynn Coquillard

My commission expires 8/18/87

cc: files

CHARLES E. GREY, GEOLOGIST
PETROLEUM, MINING, GROUND WATER
RARE MINERALS

September 13, 1983

Mr. Don Maxon
6211 N. Campbell
Tucson, Arizona 85718

Dear Don:

As per your request, I will reaffirm the method by which I sampled the Cerrillos Mining Claims during the 1960 era.

During the early 1960's I entered several of the old mine shafts on a drop bucket and took assay samples every ten feet of depth of over 200 feet. Most of the old shafts are caved as of this writing. I had the samples assayed for precious and base metals and found the property to be economic.

During this period I sampled the surface in over 400 locations. These samples were assayed and found to contain commercial quantities of precious metals in the syenites and olivene bearing rocks.

As you are aware these samples were all assayed by leaching techniques and not by standard fire assay methods. The tonnage of proven ore is well in excess of 30 million tons by actual measurement of the tested areas.

I trust this is the information you need.

Sincerely yours,

Charles E. Grey

Charles E. Grey, Ph.D.

CHARLES E. GREY, GEOLOGIST
PETROLEUM, MINING, GROUND WATER
RARE MINERALS

M G-13/

November 26, 1980

Mr. Don Maxon
Maxon Construction Co.
6211 N. Campbell
Tucson, Arizona 85718

Dear Mr. Maxon:

During July and August of 1976 I certified the Fullerton Property in the Cerrillos District of New Mexico to contain in excess of one-half ounce of noble metals as well as, approximately 10 to 12 ounces of silver, 10-15 percent combined of Lead and Zinc, and up to .3 percent of Copper. Subsequently, much higher assays have been ascertained by yourself and others.

Since I started to work in the Cerrillos District in 1956, I have found the average vein-gangue materials in the Cash Entry through the 142 Payday Claims westward to the Fullerton to contain values in excess of one-half ounce of Gold and Noble Metals, and, from 11 to 17 percent of Lead and Zinc combined, up to 22 ounces of Silver, and as much as 1.85 percent of Copper.

The total acreage of the Fullerton, Cash Entry and Payday Claims cover over 3000 acres of contiguous ore veins. I do not know of another property to contain such uniform values and to have such a large acreage of validated claims and Patented Ore-bearing ground.

Sincerely yours,

Charles E. Grey

Charles E. Grey, Ph.D.

Mark: Ore Concentrate

Consignment of 250 pounds subject material, received May 3, under your seal as acknowledged by our certificate of receipt of like date, was officially sampled using the method of Brunton (A.I.M.E. 25, p. 826), quartered, coned and riffle cut. Sample so taken was analyzed per procedure, certified as set forth in separate document this date. Findings as to precious and noble metal content of this ore concentrate are as follow:

		Oz per Ton		Value Per Ton	Value Per 100 Ton	Our 40% Share
Gold (Au)	1.79%	522	@ 130	$ 67,860	$ 6,786,000	$ 2,714,400
Palladium (Pd)	18.80%	5483	@ 40	219,320	21,932,000	8,772,800
Platinum (Pt)	20.80%	6066	@ 140	849,240	84,924,000	33,969,600
Other Platinates*	24.69%	7201	@ 200	1,440,200	144,020,000	57,608,000
					$257,662,000	$103,064,800

*Complex of Iridium, Osmium, Rhodium and Ruthenium

5756 E. Burns
Tucson, Arizona 85711
(602) 745-5738

Dear Sirs:

Please find enclosed a report on the 60,000 acre alluvial magnetite iron range situated in Pinal County, Arizona about midway between Tucson and Phoenix.

Twenty-five years of study have indicated that mining can be effected to approximately 400 ft. At this depth the magnetite reserve is about 5 Billion tons. A minimum value of $20.00 per ton gives an iron ore reserve value of $100 billion.

In addition to the magnetite there are some local markets for the vast tonnages of sand and gravel co-occurring with the iron ore.

Ten years ago exploration and research began to determine the residence of precious metals within the alluvial "iron" range. Initial reconaissance had indicated a probable gold residence.

Studies to date indicate that there is a residence of 1/10th ounce of gold(Au.) present and recoverable along with every ton of magnetite recovered. The Au. occurs with the magnetite as very fine gold; much in Micron sized particles. Todays technology via several processes of most advanced precious metals recovery allows obtention of such fine gold.

In order to obtain 1 long ton of magnetite at approx. 64% Fe. unbenificiated it requires handling 10-11 cubic yards of the alluvial aggregate. The costs for such mining would depend upon the volume tonnage mined, and the method employed; whether via dry handling or hydraulic mining (i.e. large dredges). Water is available for long term hydraulic mining and this seems preferable due extreme aridity of climate and wind-dust-EPA factors.

Newer coal reduction processes exist to produce iron and steel than well known hydrogen reduction systems. Rights of ways for a slurry line are now being sought to bring coal from Northern Arizona's vast coal reserves to Central and Southern Arizona. Numerous feedstocks for hydrogen are available and direct reduction iron and steel is well competetive and more profitable than foreign imports from any country.

An alternate consideration to immediate production of iron and steel from the ultra-hi-purity magnetite is to now have gold as the primary mineral recovery. At current market value the 1/10th oz. Au. is valued in the range of $38-40. A maximal cost for mining and recovery of the gold is estimated at $10.25 to $11.50 per ton. Technology of mining and metallurgy will cause costs to vary.

The owners of this alluvial range are desirous of finding a developer or co-holding corporation, party, or group. The owners are flexible in their thinking, and negotiations can readily be entertained for lease-purchase, outright sale, or mutually agreeable co-holding terms prior to major development.

(continues page 2)

Visits to the range for purposes of viewing and reconaissance sampling can be made by calling the undersigned at the telephone number indicated. (This is a residence-office telephone without answering service and contact will be direct with the Arizona resident geologist and co-locator of the Federal mining claims on the range. Evenings are generally a good time for telephone contact. During daytime business hours a leave-word person-to-person can be given to Ms. Lee Dunn at " The Dufflebag ": Telephone- (602) 323-1841.

Lawyers familiar with the range and its values are available upon short term notification for negotiation with principals having interest in securing this property or co-holding.

Your attention and review of this general preliminary data is most appreciated.

Will you kindly advise as to your interest.

Yours very truly,

William M. Hazel

William M. Hazel

A.I.M.E

Associates

present

THE PINAL COUNTY

ARIZONA IRON RANGE

This will certify that AIME will pay 10% of finders fee for a taker of co-venturer.

13 July 1984
Co. of Pima
State of Arizona

William M. Hazell
Co-Attorney in Fact
A.I.M.E. Assocs.
Charleston, W. Va.

ARIZONA'S ALLUVIAL MAGNETITE

IRON RANGE

IN PINAL COUNTY

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THE PYE REPORT

SECTION 1

WILLARD D. PYE
Consulting Geologist

3418 North Forgeus Avenue
Tucson, Arizona 85716

Telephone 327-2956

November 22, 1978

Re: Alluvial Iron Deposits
Pinal County, Arizona

The writer has been interested since 1957 in the alluvial iron deposits located between Tucson and Florence, Arizona. Between 1957 and the present the writer has gathered a great deal of information regarding these iron deposits and their potential use as a source of iron and has compared them with similar alluvial deposits in various other parts of the United States and foreign countries. Although he has written a number of letters concerning the subject iron deposits to date he has not written a comprehensive report on them.

U.S. Highway 80 passes through the Eastern portion (of the range) and U.S. Interstate 10 and the main line of the Southern Pacific Railroad pass along the Western side of the claims. The projected International Airport to serve the Tucson-Phoenix Metropolitan area will be located about three miles north of the property. In addition, the projected course of the main canal of the Central Arizona Project will be built along the Western edge of the Range. A cement plant is located a few miles to the southwest of the Range, and one of the world's largest underground and open-pit mining areas encircles the Range in all directions. In the copper leaching programs of the mines large volumes of metallic iron are used to extract the copper from its compounds.

The relief of the claims area is minimal and the entire area is generally accessible by field vehicle motor transport.

The writer has made no drillings or assays of any of the alluvial deposits. The thickness of the alluvium in the basin as based upon various drillings that have been made by others, is estimated over a thousand feet, according to the U.S. Geological Survey. In other places in the alluvial basin it is naturally much thinner, having a nil thickness along the margins of some of the hills which project through the alluvium to the surface. Assays made by others investigating have indicated an average iron content of 5% with a high iron content of 20%. As is true of all alluvial deposits, the iron content fluctuates rapidly from place to place depending upon the course of the ancient stream channels which deposited the alluvial debris. It has been reported that the iron content increases with depth, although this may be fortuitous with the location of the bore holes.

The iron content of some of the sands is best seen along the various dry stream channels. After a rain the bottom of the stream channels appear black with heavy minerals. However under the surface layer of black sand, quartz sand with minor disseminated iron grains are the rule. The black iron sands are composed mainly of magnetite and related iron bearing minerals. These comprise most of the "heavy minerals" of the deposit.

The sources of the iron apparently are the magnetite bearing basic intrusive rocks of the Tortilla Mountains to th northeast of the claims, Black Mountian to the East and

the Tortolita Mountians to the Southeast, as well as other mountains and hills in other directions.

Your claims lie in a basin surrounded by these highlands. Weathering of the rocks has broken them down into sand-grain sizes and streams have carried the debris into the basin area where natural hydraulic factors have separated the various "sand" sizes according to their specific gravity and size. Coarse gravel sized detritus is rare.

Although no analyses of the heavy mineral were made by the writer, it is understood that the majority of the heavy minerals consist of magnetic magnetite and non-magnetitic black sands. The later are iron-titanium minerals. A large percentage of the magnetic magnetite can be separated by simple magnetic processes. It is understanding of the non-magnetic fraction which will secure additional yield.

The lighter minerals, mainly quartz, can be washed and separated then classified into sand, gravel and other sizes during the heavy mineral separation. The various sizes can be stockpiled for sand and gravel use as concrete aggregate. There is a ready market for these in the rapidly expanding Tucson-Phoenix area and the Southwest. The C.A.P. will require vast amounts of sand and gravel in lining their canals.

There is sufficient ground water on the property for all needs. Further, additional water can be conserved during the rainy periods by building a series of dams or dikes across the stream channels and gaps in the hills which are adjacent to the claims area.

The availability of this and other water will permit the use of floating dredges. Although the dredge method appears most simple there are other ways for handling the large volume of alluvium and extracting the values from them.

Water will not be wasted since it will be returned to the ground water reservoir through seepage downward through the sand in which the ponds are excavated.

In a sense, the iron bearing minerals have already been "mined", "milled", and "sized" or "classified by natural processes". This saves expensive mining and most of the costs of grinding. Separation and concentration into the various usable metallic and non-metallic components are the remaining operations. In addition, the availability of fuel, electricity at site, transportation, and the presence of nearby markets for the various products from the ore deposit results in the solution of many economic problems that often exist in a new major mining operation.

It is believed that the heavy mineral extraction should rate primary merit. There is, however gold which may possibly underwrite some of the costs. The other by products as sand and gravel will create additional income for the company operating the property.

It is the writer's opinion that the property deserves development as a profitable mining operation. Today the many economic and technological changes have made the older studies as to feasibility of extracting the magnetic iron obsolete and have brought new potentials into play. Of

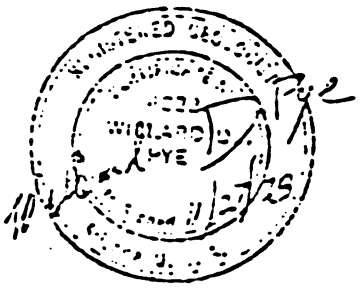
interest is that two small placer mines are operating areas peripheral to your claims within the same general alluvium, but in reportedly lower grade materials than are found on your ore deposit.

After the heavy minerals, sand gravel and other products from the alluvium have been removed, the area can readily be restored to its natural environment with its natural desert vegetation and ecosystem.

In this portion of Arizona where the magnetite deposit lies cotton, fruit, nuts (pecans), lettuce and other produce is grown using irrigation water with in the basin.

Yours very truly,

Willard D. Pye



Willard D. Pye
Consulting Geologist
Arizona State Board of
Technical Registration #4013

THE
DADARX GEOLOGICAL
ENGINEERING
REPORT

SECTION 2

Arizona
Ores

Investigation of Magnetite Iron Ore Reserves in Pinal County :

Introduction:

This report is written to summarize studies and data on the alluvial magnetite which situates in Pinal County, Arizona some 45 miles north of Tucson. The writer, a professional mining engineer specialized in iron ores internationally for some 30 years, has carefully examined the deposits as well as the confirmatory data consisting of drilling reports, geophysical data, and geological data during a period of some 6 months. Recommendations as to the economic values, usages to which this ore might serve, and the indicated profitability of this ore to a steel company are set forth herein.

The Orebody:

The orebody exists in the form of an alluvial basin and outwash alluvial plain or alluvial fan. It situates in Townships 7, 8, & 9 South, Ranges 11, 12, East, Gila & Salt River Maridian.

The ore exists as granular sub-rounded magnetite derived from gneiss, schists, and granitics probably Navadan tectonic revolution upheaval responsible for intensive mountain building in the Rocky Mountain Southwestern U.S.

The ore is easily seen in this placer basin as it is black and most readily seen in the sands. It exists, however, throughout, as is more easily determined with a

magnet. The extent of the orebody covers some 120 square miles or about 86,000 acres. Numerous, some 20, traverses of the property have proven that the ore is well distributed horizontally even though there is greater concentration in some areas than others on the surface. This is to be expected in a deposit of this nature where meandering streams are responsible for carrying in the magnetite freed by mechanical and chemical processes from its source rocks. Examination of the gneisses, schists, and granitics from which this magnetite has been derived revealed an average Fe. content of 15.2%.

Wide distribution horizontally having been established, and a sources from which billions of tons might logically have moved by water transport during geologic time, the writer then investigated the various drilling reports in order to determine the vertical distribution of the magnetite and its likely average depth within the basin.

A Summary of data pertinent to <u>drilling confirmation</u> follows:

1. U.S.G.S. Test Holes show magnetite consistently to better than 1000 ft.

2. Drilling done under Odin M. Sundness of Crucible and USS showed on some 15 Sections that slightly better than 5% Fe. recovery would be feasible.

3. Subsequent drilling throughout the range within some 38 Sections; --- showed that a 5.1% Fe. recovery overall would be likely.

4. It is understood that there are currently blocked out 100 million tons of ore in the East Central

portion of the range which could serve for economic warranty to interested capable developers.

5. While nothing contraindicates further reconnaissance drilling there is nothing significant to be said favoring it.

RESERVES:

The material, or "sands", in place have an average weight of 135 pounds.

A 200 ft. depth there are therefore approximately 45,000 long tons of magnetite recoverable from one acre.

Over the 60,000 acres presented there are, therefore, about 2,700,000,000 (2.7 Billion) long tons of recoverable magnetite.

Grade of Ore:

This is a very high Fe. content grained magnetite. Using primitive methods of dry recovery magnetite from 63 to 65% Fe. is recoverable. Analyses at Larch Hibbing, Minn. and at Eisenhauer Laboratories, Los Angeles show the magnetite to have an Fe. content varying from 65 to 67.4% Fe. The seeming discrepancy may be attributed to the primitive recovery methods and the fact that the magnetite was unwashed in field recovery samples. Dredging would yield the higher Fe. content magnetite.

Economic Value:

The Ore

This is a highly valuable commercial iron oxide iron ore in its unbeneficiated state. It is readily pelletized by the addition of small amounts of clay, to yield a perfect blast furnance feed.

A pelletizing plant should be given consideration as one possibility, for the pellets being high Fe. content would be a welcome incrament to Fe. content at Fontana, or Columbia-Geneve's operatons in Utah; or both.

The ore is an ideal ore for conversion to iron via direct reduction. Even in its unbeneficiated state a sponge iron yielding 96 - 98% Fe., with no deleterious elements has been obtained. The addition of carbon yields excellent tool quality (grade) carbon steel. With slight, low cost beni-ficiation by grinding to 71 to 71.5% Fe. at 100 Mesh the ore reduced to powder via hydrogen and trace CO produces an ultra-high purity iron powder suitable for electronics industries, automated production of sheet, bar, strip, plate etc., and is readily converted to stainless steel powder.

The Range

Largest iron ore reserve thus far found in Pacific or Intermountain West. Reserves to support a giant steel in-dustry for hundred of years. Ideal market location to California, Texas and inter-mountain West.

The range offers an ideal year round working climate; unlike the taconites, Labrador, Atlantic City, or New Mexico (Hanna) taconites.

The ore can be produced from this range at lowest possible costs, and well below any applying currently anywhere in the iron industry.

A major source of natural gas for conversion to reducing gas is within and adjacent to the range.

Water reserves to support large scale industrialization is under development through state and federal programs, although there is adequate water within the basin for both dredging and production of steel.

Electric power rates in the competative circumstance of government and private electric utilities make this most attractive from a cost consideration factor in power requirement in conversion to steel.

Markets:

Existing production which is grossly inadequate insures a rapid growth market, as well as the ability to supply market demands. Even with doubling of capacaties at Fontana there is still a market gap of about 3 million tons of steel annually in the Pacific and Southwest. Location of industries would increase in Arizona if steel were available. It is hardly conceivable that Lloyds of London and Chase-Manhattan would predict Phoenix as one of the nation's three largest cities without consideration of the predictability of Phoenix being a major steel cantor.

Kaiser's acquistion of Allison, for all practical purposes, provides a ready market outlet. Location is excellent and has expansion potential. U.S. Steel at Tampa

under Oil Well Supply offers possibilities to pipe production. A major Cleveland interest situated in Tampa is specialized in Foundry metals as another steel company is in electric furnace and rolling mills.

While California's markets will continue to grow, Arizona itself and West Texas, Central Texas and the inter-mountain Southwest present market opportunities which could absorb a calculated 2.6 to 3 million tons of steel annually due the rapid population growth and industrial expansion. The call for ultra-high purity metals and quality stainless steel will continue. Defense industries and N.A.S.A. should be given due consideration.

Recommendations:

1. Acquire the range after consultation with Eastern steel interest most likely to move into West; possibly a joint acquisition.

2. Consult our industrial groups as to lowest costs in hydrogen, oxygen, and nitrogen; dry ammonias for stainless.

3. Determine our relationships industrially to insure supplies of carbon for conversion of reduced iron to carbon steels.

4. Obtain engineering opinions from companies with volume mining via bucket suction dredging. (Thus far opinions indicate a ton @ 65% Fe. can be produced for from 90¢ to $1.10 unbenificiated).

Arizona
Ores

5. Effect engineering based upon an integrated mining operation and a pelletizing plant and a direct reduction facility at the site.

6. Explore financial groups which have awareness of this range whom we have cooperated with or participated with in joint venture iron ore developments.

By:

5-23-7

Registered Mining Engineer
State of Texas
State of California

THE OFFERING

PART I

SECTION 3

OFFERING POSSIBLE DUE RESULTS IN UNIFICATION:

After nearly a quarter century there is accord between the two meaningful claimants of The Range.

Inspection of an conveyance can be rapidly made in view of this significant unification.

Your inquiry with such specificity as you require is invited.

NATURE OF THIS OFFERING:

Sale with down payment and end price presents an attractive possibility.

Blocked out ore, from a 100 million ton blocked reserve, might be placed if guaranty is desired in exchanges.

Alternatives probably exist which can make payment and conveyances quite simple and attractive for this heart of The Range.

OWNERSHIPS AND THEIR REPRESENTATION:

Leslie D. Price, Attorney at Law
for: A.I.M.E Associates
(Arizona Iron. Minls. Expln.)
821 Kanawha Valley Building
Charleston, West Virginia 25302
(304) 343-5154

or

William M. Hazel
5756 East Burns
Tucson, Arizona 85711
(602) 745-5738

THE PROPOSED DEVELOPMENT:

IT'S NATURE

PART II

SECTION 3

AN INTEGRATED MINING AND IRON AND STEEL PRODUCING DEVELOPMENT

1. In the integrated mining and reduction operation the production of concentrated magnetite iron ore would be geared as nearly as possible to reduction plant facilities eliminating unnecessary stockpiling.

2. The magnetite concentrate can be obtained most economically employment of suction dredges. The iron ore and its matrix would be brought onto the barge where the coarser material would be scalped and returned to the pond. The magnetite ore fines would then be pumped by flex lines to the shore for subsequent de-watering, magnetic separation, and recovery of secondary values.

3. Dredging is indicated as the problem of tailings disposal and material handling is non-existent or at an abosolute minimum.

4. Costs of obtaining a concentrate via hydraulic mining would be aprroximately 50% of those of dry open pit methods.

5. Adequate long term industrial water is assured.

6. Much engineering consideration has been given to mining via bucket wheel and even though sales of sand, pea gravel, aggregate could be substantial the tailing disposal would create land use difficulties greatly increasing costs.

ORE REDUCTION PLANT AND STEELMAKING FACILITIES

1. The ore concentrate would then be transferred to an adjacent hydrogen reduction plant where the unbeneficiated or beneficiated fines would be reduced to iron powder. Iron powder not used locally would be briquetted for shipment as electric furnace feed.

2. The ideal locations for electric furnances and for a continuous compaction automated steel and alloy plant would be on millsites provided adjacent to the iron claims and thus further integrated steelmaking via conventional heat systems and advanced automated steel making which is in the capacity of several corporations.

3. Significant transportation costs savings are a consideration in totally integrated mining, reduction and steelmaking complex.

4. A pelletizing facility can operate simultaneously with a hydrogen reduction facilty.

5. Phoenix and Tucson electronic and other industries may diversify their operations to include briquette usage or iron powder.

6. Hydrogen will be provided either by turn key or on-site production facility. Hydrogen is competive with coal or less costly when all coal costs are considered.

ECONOMIC UNIQUENESS OF AREA AND SOME MARKET IMPLICATIONS:

1. With 6 miles of the SW edge of the range there is the East-West mainline of the Southern Pacific Railroad.

2. There is adequate water for a total industrial complex consisting of mining, ore reduction and steelmaking in tonnage equal to those of the existing great midwest steel centers.

3. A new power plant having adequate capacity for steelmaking situates about 6 miles from the range. Salt River and Federal power nearby offer very attractive rates. Existing power facility having capacity is on rail 6 miles from range.

4. No overburden stripping and removal costs are involved as in the Minnesota taconites.

5. There is a Southwestern and Pacific Coast market for the potentiated products as iron ore, powdered iron, briquets, skelp, pipe, etc.

6. Automation advances assures vast increase in consumption of iron powder as in continuous compaction for higher quality steels and compaction alloys.

7. There is access to world markets via direct rail to the free port of Puerto Penasco or Guyamas, Sonora, Mexico where facilities for shipping are being expanded.

8. An ideal climate for year round operations exists.

9. Recent development show that this magnetite has qualities which can be made into a type transformer core causing transmission costs of electricity to be reduced by billions of dollars annually. Market sales nationally could be projected annually to several hundred millions and consume about one-half million tons of benificiated magnetite.

FOREIGN PRODUCTION ALTERNATIVE:

1. Ship ore to Mexico, and effect reduction somewhere adjacent to border or Puerto Penasco, Sonora, and in so doing reduce costs.

2. Develop mining operation geared solely to production of magnetite iron ore fines for the world markets in Asia and Europe.

   * Either of these or both, (they are not preclusive) are of increasing interest to cartels, extra-nationals and to money.

GEOLOGICAL BRIEF:

1. The iron range exists an an alluvial basin-valley fill between two mountain ranges in Southern Pinal County, Arizona about 45 miles north of Tucson.

2. The source of the magnetite and associated minerals is from granitic an gneissic rocks of Laramide age in the mountainous uplift areas to the East.

3. Examination and expert sampling plus testing show the source plutonic rocks to have a 15+% Fe. (iron) content averaging 64.7% Fe.

4. The area indicating most favorable economic development is the basin and outwash plain where A.I.M.E., Blankinship and Les Girls mining properties situate.

5. A short distance from the iron range is the western world's largest single reserve of copper ore held jointly by Great Lakes iron interests and a multinational petrochemical company. Geochemical exploration and reconnaisance drilling to the desirable depth should be done on the Range for Cu. determinations.

6. The depth of the iron rich basin is indicated at a maximum 3500' depth. U.S. Geological Survey test holes show magnetite to a depth of 1010 ft. Other minerals were not logged.

7. The topographic presentation is that of nearly flat relief with an average declination of 93' per linear mile east to west across the alluvium. While there are marked geophysical anomalies, possibly representing some other phenomenon, the whole claimed area is remarkable in averaging 5% Fe. being recoverable.

8. The range mineralization is the product of classical mechanical weathering processes.

9. Of the numerous geological reports written the one by Dr. Willard D. Pye most probably best describes the geology of the range.

METALURGICAL BRIEF:

1. This magnetite is a fine grained high purity magnetite as it occurs in its natural state as it has been freed by forces of weathering and transport from gangue minerals.

2. This magnetite is readily upgraded by low-cost relatively coarse grind to 100 or 150 mesh where 69% and 71.2% Fe. are obtained respectively. A high proportion of the magnetite, perhaps 35% is 66% Fe. in its natural state. Thirty-eight thousand tons collected through relatively primitive dry magnetic separators, making one pass, yielded an average Fe. content of 63.8%.

3. Studies of direct reduction steel produced from this magnetite having 69 - 70% Fe. content have shown consistent total reduction of the oxide. The iron content of the steel produced was 99.21%. Fractional remaining unreduced elements were alumina and silica with minute traces of carbon and titanium. There was no deleterious sulphur or phosphorus.

4. Studies and evaluations, including those of major petrochemical research institutes, inducate that the aluminas, ilmenite, and other minerals could be developed into metals, pigments, carbides, ceramics, refractories, abrasives, etc.

5. The steel produced is ductile, malleable, and non-pyrophoric.

6. Both the steel and high Fe. direct reduction iron is readily altered to ultra-fine carbon steels via conventional methods or through carbons recently developed by the petrochemical industry.

7. A briquet or sponge of 85 - 87% Fe. is readily produced using lower purity reducing gases. These products have been demonstrated to be ideal smelting furnace feed for making pig iron.

8. Furthering production from the hydrogen produced ultra-pure iron powder yields, with proper treatment what can only be termed direct stainless steel or stainless steel powder.

9. Satisfactory results have been achieved in the alloying of the iron powder with copper, nickel and other metal powders, volume powder production would lend to automated, computerized continuous compaction of innumberable items including sheet, skelp, and plate, etc.

RESERVES:

The Dadarx Report indicated 2.7 billion as being recoverable at feasible mining depths.

No absolute projections are possible. As least several billions of tons can be mined along with sands, gravels, and gold.

The only comparable anomaly in size is Kursk and there, unlike Arizona, tremenous cold and quite thick overburdens were encountered in development.

THE RESERVES

1 Acre .....43,560 sq. feet

140 lbs. per cu. ft. .....13,214,000 lbs.
at 25 ft. depth, or

with Fe. Recovery factor 5% .....3,063 tons of ore
@ 65% Fe.

1 Acre 200 ft. deep .....24,504 tons of ore
@ 65% Fe.

640 Acres @ 200 ft. deep .....X 15,682,560 tons of ore*
(1 Square Mile) @ 65% Fe.

60,000 Acres plus or 100 Sections =.....1.56 Billion tons
of ore @ 65% Fe.

* Long tons, 2,240 lbs.

The five (5%) recovery factor used by Mr. Sundness in his calculations is based upon magnetic separation tests conducted at the Arizona Bureau of Mines laboratories. During the testin an early model Dings Cross-Belt Magnetic Separator, Type E, was used. This piece of equipment has since been superseded by more effective methods of separation.

Research conducted by Carpco Corporation of Jacksonville, Florida in High Tension Electric Separation would appear to offer excellent possibilities for upgrading the recovery factor to about six percent.** Assuming this to be the minimal range of upgrading then a recovery of approximately 5000 long tons of ore per acre @ 65% Fe. at 25 ft. depth can be expected. Calculations then show possible tonnage as follows:

** "High Tension Electrostatic Separation" by R.E. Barthelemy - Director of Research, Carpco Research & Engineering Co., Jacksonville, Florida - Engineering & Mining Journal - December 1958.

MARKET VALUE AND RESERVES VALUE:

As of April 15, 1979 the fair market value for iron ore with this high Fe. content is $28.00 per ton, based upon Great Lakes and Minnesota prices to steel makers.

(64% Fe. is basis for computation).

A reserve of 1.6 Billion tons has a value of
$28.00 X 1.6 Billion; or
$44.8 Billion

Fair value should be indicated for all other minerals than magnetite as they are mined and used in commerce.

DRILLING OF THE IRON RANGE:

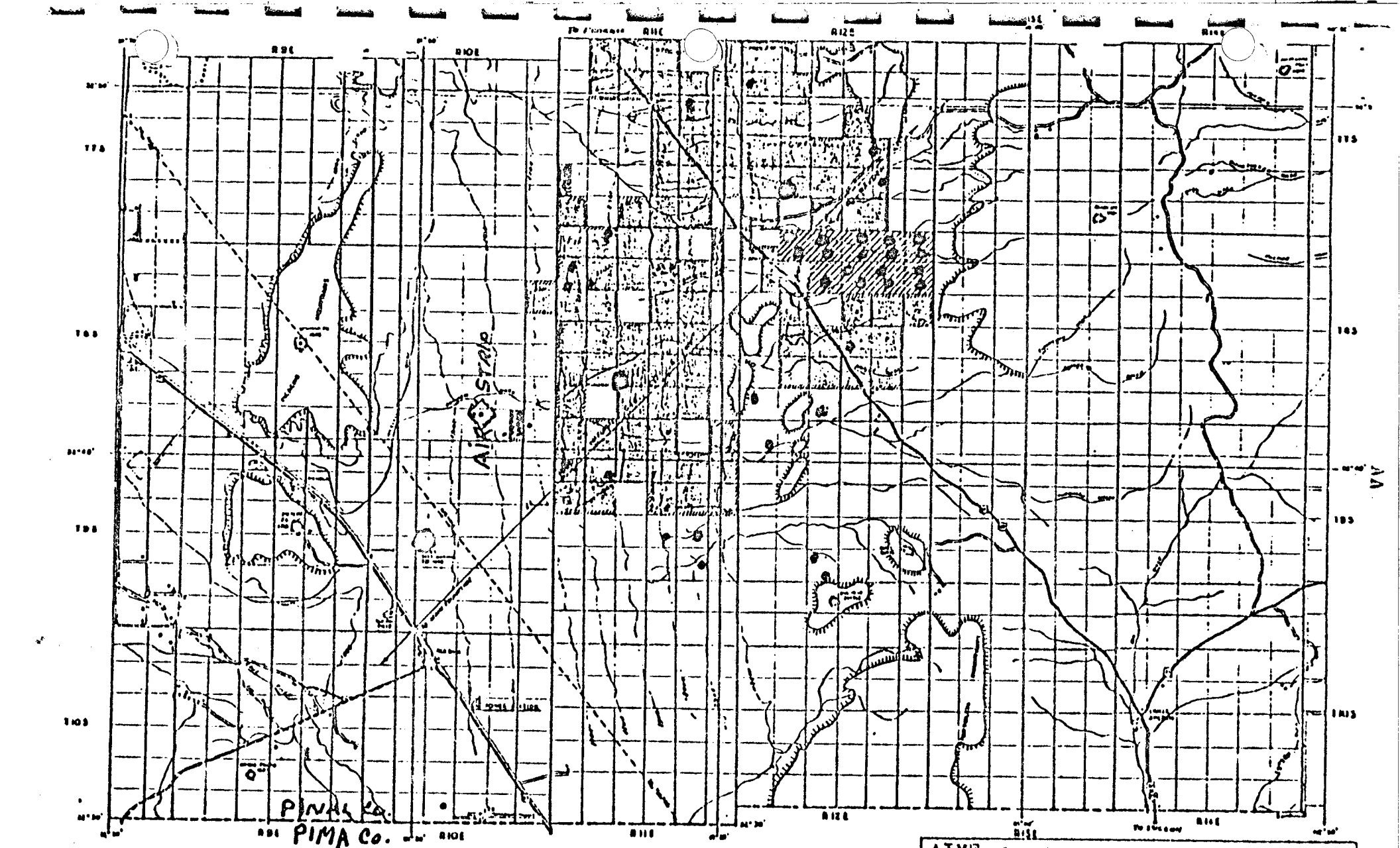
Drilling has taken place in varying amounts and depths on some 60 Sections (38,000 acres).

Determinations are that the magnetite is relatively evenly distributed both horizontally and vertically. The notable exception is the State Lease catch basin near Suizo Mountians where very considerably higher Fe. is blocked out.

The range's overall recoverable iron is in excess of 5.1% Fe.

100,000,000 tons of magnetite have already been blocked out.

There are several cupriferous anomalies which may warrant serious attention in view of their location relative to the enormous discoveries made by a diversifying iron company within this mineralized zone.



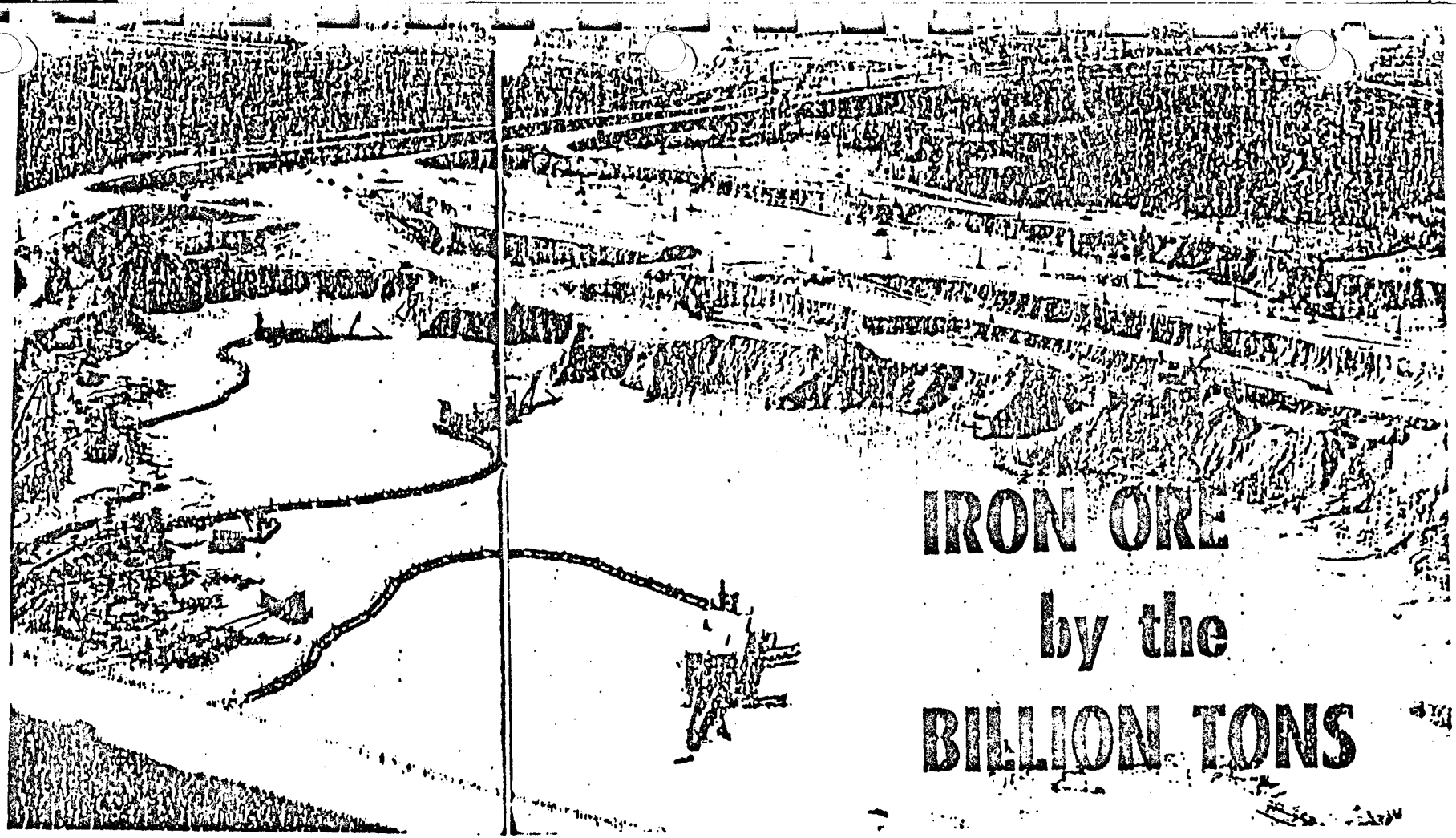
Orange = Sundness Report Area

Blue = Various and Sundry 200" or greater

Red = USGS 1000" holes (magnetite to bottom)

(All approximate locations)

Water Dozed in 3"-4" by GA -Artesian ??



IRON ORE by the BILLION TONS

Lebedinsky quarry on the Oskolets River, where ore is mined by the open-pit method. A layer of 300 feet of earth had to be removed to uncover a seam so rich that the ore does not even need dressing.

...Acade...ti-
...noticed that
...k the com-
...eth, swung
... Later on
...ge reaction
... that came
... Anomaly.
... the buried
... prerevolu-
...y did the
... when the
...during the
... way.
...reserve of
... first pro-
...oviet state.

The first year of the plan, 1959, was marked by two major events in the history of the Kursk Magnetic Anomaly. One was the completion of the South Korobkovsky mine and ore concentration plant in the area of the Stary Oskol deposit. Ore is extracted here by the underground method, and the annual capacity of the mine is up to three million tons. The miners and plant workers live in the new city of Gubkin, named after the prominent geolo-

New Deposits Discovered

Accessible deposits are constantly being uncovered in the Kursk Magnetic Anomaly. Work is now in full swing at the construction site of the Mikhailovsky quarry where the ore will be mined by the open-pit method. It will be completed in 1960, one year ahead of the original schedule.

A group prospecting during the summer of 1958 found a deposit estimated at 10 billion

INDICATED COSTS OF IRON PRODUCTION

PART III

SECTION 3

ORE PRODUCTION AND MINING COSTS:

Indicated costs for production of iron via dredging are as follows:

Dredging	2.25 to 3.75
Magnetic separation	1.25 to 2.10

So for recovery of unbenificiated ore the costs would be from $3.50 to $5.85 based upon producing 1 million tons per year. The Fe. content would be in the range of 64.0 to 64.7% Fe.

If grinding to increase Fe. content the likely charge including capital costs would be from $3.00 to $5.00 per ton for an ore of approximately 71.4% Fe., having a low estimated cost of $6.50 per ton to a high estimated cost of $10.85 per ton.

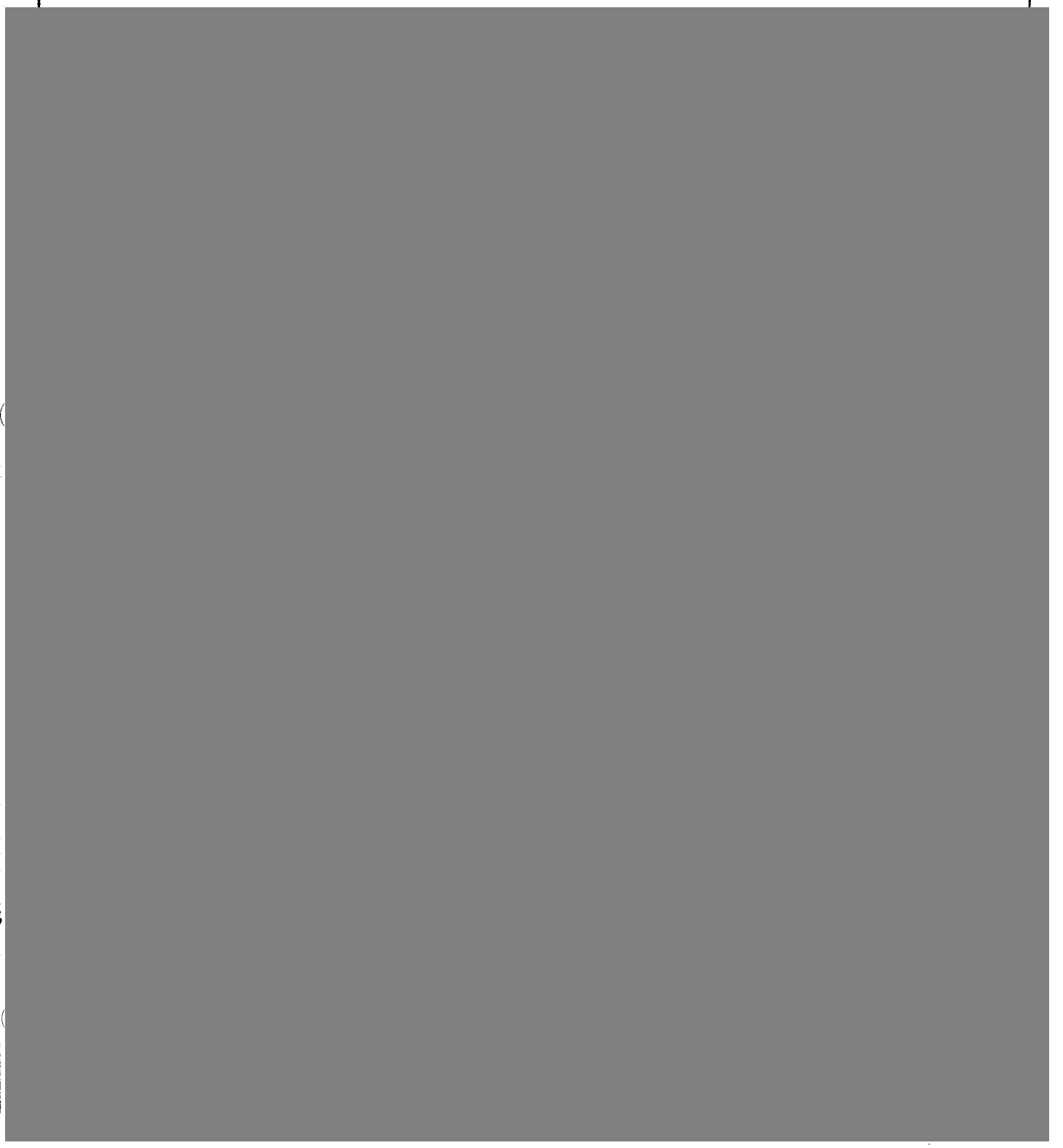
It is believed that a middle range figure of about $8.75 per ton will be the actual ore cost exclusive of royalty.

REDUCED IRON COSTS

Given an iron ore cost of approximately $12.75 (1.25 tons of ore for 1 ton of reduced iron) and a hydrogen reduction cost of $23.00 to $26.00 per ton the costs per ton of reduced iron at The Range is form $35.75 to $38.75 per ton.

The cost of direct reduction iron on the range is slightly less than half for comparable Fe. iron produced in the Eastern and Great Lakes region by blast furnaces.

Materials Newsfront



OPEN PIT - DRY MINING AND DRY SEPARATION:

If dry and open pit methods of mining are preferred it is quite likely that only slightly higher costs would be applicable than via hydraulic mining.

The major advances of the past several decades have made feasible low cost operations where tonnage to gangue ratios as those on the iron range are found.

It is likely that with advances in technology in open pit methods, dry magnetic separation etc. that the costs per ton worked dry would be only slightly more than hydraulic methods.

As increased costs would be negligible there would be no effect on the ratio of costs for ore from the range as compared to those in the East.

SECONDARY VALUES OFFSETTING COSTS:

1. There is gold in a significant enough amount to help defray mining costs.

2. Sand, gravel and aggregate represent readily marketable products.

3. Ilmenite and aluminas can be readily recovered. With significant tonnage production these would have values.

COMPARATIVE ORE COSTS:

Costs for ore as well as iron products are significantly lower than those in the Central and Easter U.S.A.

With Direct shipping ores at approximately $22.00 per ton at 51.5 Fe. there is a considerable price difference indicated by Arizona ore which could be delivered at 70+ Fe. for about $10.00 (Delivery point Red Rock or other Range millsite).

RECOMMENDATIONS FOR DIRECT REDUCTION

TO POWDERED IRON

PART IV

SECTION 3

CONSIDERATIONS INDICATING DIRECT REDUCTION:

1. Capital costs of direct reduction are approximately 50% those of conventional blast furnace methods.

2. Where there is a shortage of metallurgical coal and there is relatively low cost hydrogen from petroleum or other source.

3. Where there is high Fe. content ore, such as prevail with the Arizona Range's magnetite ore fines occurring naturally with an Fe. content above 64%.

4. Pilot tests using three different processes of Direct Reduction have proved production costs less than half those of conventional steel producers. With controlled economic circumstances it is likely this cost can be substantially reduced.

   Market trends are sometimes significant as well as technological trends with respect to process usage and

5. Direct reduction is seemingly indicated when ore fines can be ground at low cost to a feedstock to produce iron powder. Iron powder has the multiple value of being used for automated continuous compaction, converted into sponge or briquette for electric furnace conversion to steel.

USE AS A SCRAP SUBSTITUTE:

Steelmakers throughout the industry have found that semi-reduced iron about 85-87& Fe. in the form of either briquette or sponge can be used ideally as a scrap substitute.

Assuming hydrogen derived from a fuel oil feedstock a semi-reduced sponge can be produced for approximately $30.00 per ton at 1 million TYP basis. That this price can be achieved does not constitute advocacy of semi-direct reduction, but merely serves to show low costs of direct reduction.

(High purity iron, in the range of 97-99, when reduced as powder potentiates not only reduced iron powder but sponge and briquette of high Fe. content by simple techniques.)

TECHNICAL REFERENCES

PART V

SECTION 3

DREDGE ENGINEERING AND SALES:

Among the companies which have ability probably related to magnetite fines recovery are:

Eagle Iron Works, Des Moines, IA
Ellicott Machinery, Baltimore
DRAVO, Pittsburgh
YUBA, Benecia, California

HYDROGEN:

Those having indicated hydrogen capability are:

Union Carbide
Selas Corporation in conjuction with such as C.F. Braun or Ralph M. Parsons, Air Products etc.

TOTAL DESIGN ENGINEERING:

Potentials appear to be:

Ralph M. Parsons
Braun,
Badger
and possibly Flour-Utah as well as others.

AUTOMATED CONTINUOUS COMPACTION OF METALS POWDERS:

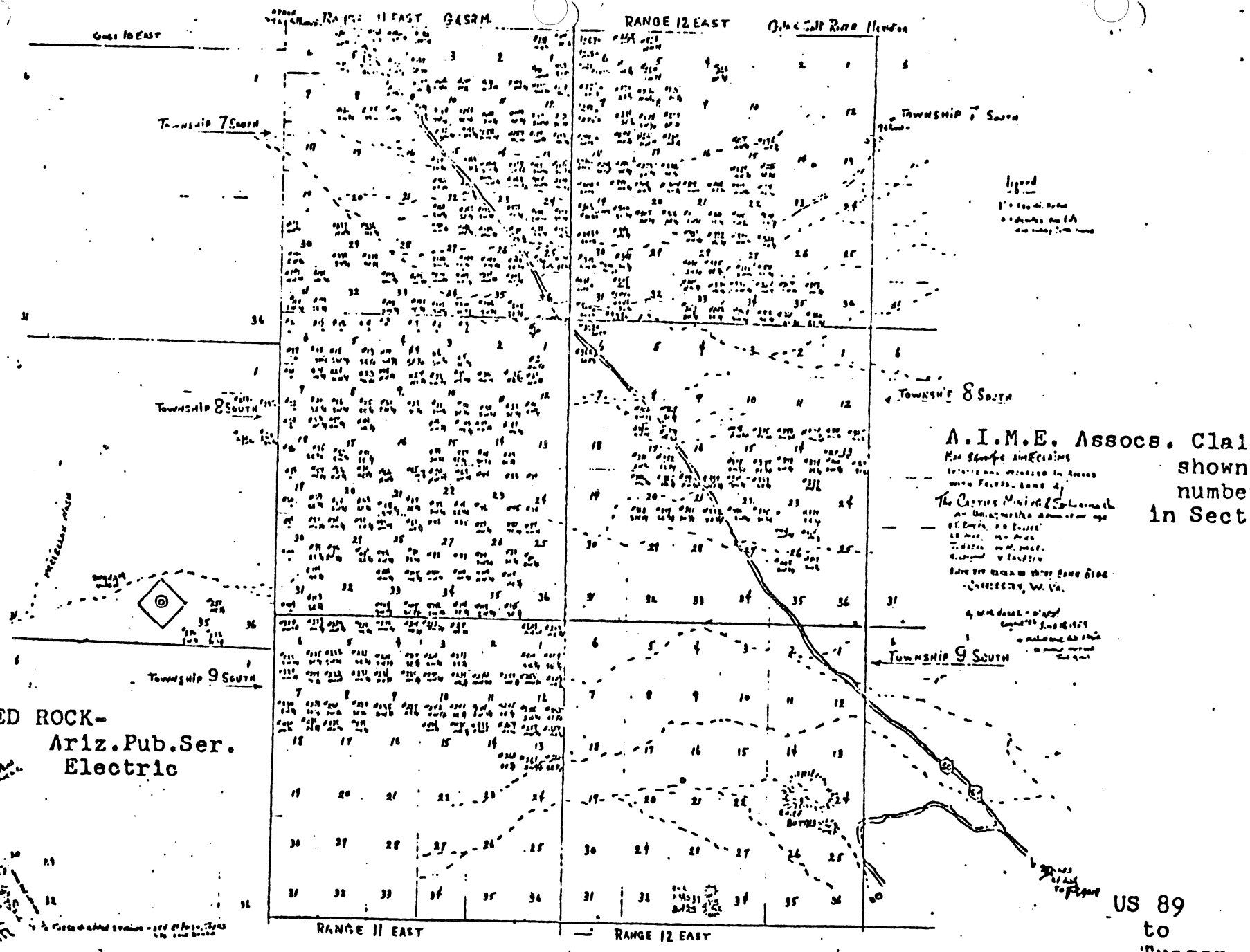
Westinghouse, East Pittsburgh
Electric Furnaces (Direct Smelting)
LECTROMELT, McGraw-Edison, Pittsburgh

MAPS OF RANGE, CLAIMS AND REGION

PART VI

SECTION 3

MAP showing the Final Magnetite Iron Range



TIAGO & A.I.M.E.

BASIC CLAIMS

MAP

THE PINAL COUNTY
ARIZONA ALLUVIAL IRON RANGE

Situates within the southern Pinal Basin (See map). Economically profitable minerals are magnetiite, gold and to a limited extent others. The iron content is approximately 5%. Over 100 square miles to a depth of 200 feet there is a minimally recoverable 2.5-2.7 billion tons although some estimated are higher. This places this anomaly comparable to the Krusk (USSR) anomaly in size and iron content.

Gold exists in very fine particles and also as colloids. the pattern of gold occurrence and distribution is yet understood. Indications are that the gold values will defray a worthwhile portion of the mining costs. The magnetite naturally occurring needs be beneficiation as it varies from 64 to 67.5 Fe. content. It is ideal unbeneficiated for the most advanced methods of direct reduction, where inclusive minor element alloying is the desired product. Slight benificiation yields the ultrapurity reduced irons. Pellets can be made without any benificiation.

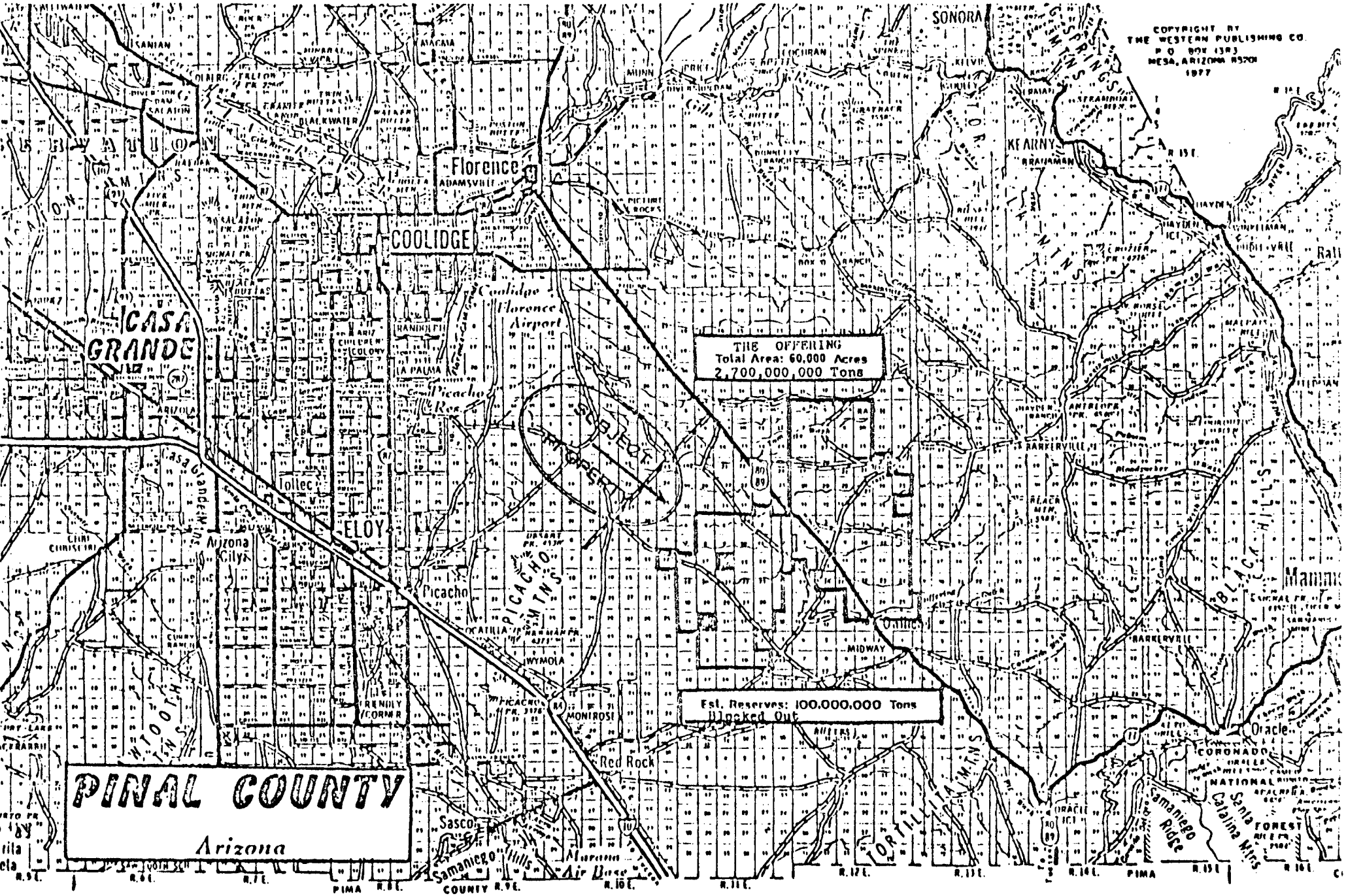
A certain amount of sand and gravel can be made available for market.

A.I.M.E. Associates holdings comprise the largest portion of the range or some 97 square miles.

All indications are that this iron range can be mined via dredging using environmentally sound procedures, or that it can be worked dry with bucket wheel type equipment.

* Competitors independent estimators derived same estimates.

This map show the iron range relative to Tucson and Phoenix which are growing as a corridor to becoming one of the largest "land-locked" metro areas in the USA; and possibly the world dependent upon how Chase-Manhattan projections are interpreted or computerized.



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THE WESTERN PUBLISHING CO.
P.O. BOX 1383
MESA, ARIZONA 85201
1977
THE OFFERING
Total Area: 60,000 Acres
2,700,000,000 Tons
Est. Reserves: 100,000,000 Tons
Blocked Out
PINAL COUNTY
Arizona
Florence
COOLIDGE
CASA GRANDE
ELOY
Picacho
Red Rock
Oracle
Coolidge Florence Airport
Picacho Res.
Arizona City
Casa Grande Mtns
PICACHO MTNS
TORTILLITA MTNS
BLACK HILLS
SUBJECT PROPERTY
SONORA
KEARNY
MIDWAY
MONTROSE
WYMOLA
Sasco
Samaniego Hills
Samaniego Ridge
Santa Catalina Mtns
CORONADO NATIONAL FOREST
PIMA COUNTY

Please NOTE closeness to Guaymas and Puerto Penasco (Rocky Point) for shipping magnetite to world markets. Existing rail connects the Pinal Iron Range.

INDICATED CAPITALIZAION EXCLUSIVE

AMORTIZATION FOR 5 MILLION TPY INTEGRATED

MINING AND AUTOMATED POWDERED IRON

FACILITY ON A.I.M.E. SITE, PINAL COUNTY

as per March 11, 1982

$412,000,000.00

Estimates provided by engineering branches
(in house) of multi-national consortium
with vast petro-hydrogen experience.

IT MOST PROBABLE THAT ANY SERIOUS PARTY
WOULD CONSULT THOSE SPECIALIZED IN
ALLUVIAL MINING, HYDROGEN GENERATION
FORM VARIOUS FEEDSTOCKS, AND POWDER METALLURGY.

Los Cerillos, N.M. Tailings Recovery

(Financial)

Charge to Capital :		
(500 operating days : $7.5 millions)	per diem	$ 15,000.00
Processing Costs		
Recovering gold and platinum	per diem	$ 65,000.00
Total Per Diem Chg.-Capital & Operating		$80,000.00
Net Value Ore Processed		
$400.00 x 500 tons		$200,000.00
Net per diem Profit on ore processed		$120,000.00
Time required to return Capital Outlay		61 days

Loan: Would consider negotiating for % of profit

Investment: for $7.5 million would give 48% in Ltd. Partnership

Security: against a negotiable equitable amount of property

Operational Structure
(Engineering) - Basic flowsheet- primary, secondary &tertiary crushers, thence to sophisticated froth flotation , thence to electrowinning (carbon) yielding Au.&Pt. then pyromet separation if desired.

Equipment : Some HD equipment including crushers and ball mill might be used, but all froth flotation and electrowinning equipment would be new as must be engineered specifically for type of ore feed.

Treasurer: To be selected by mutual agreement of investor and property owner.

Disbursements: To be made upon demand of Systems or Project Engineer. With total $7.5 million in bank prior to commencing operation.

PROPOSAL TO RECOVER PLATINUM AND GOLD FRON LOS CERILLOS, N.M. TAILINGS OWNED BY UNITED STATES COMMUNITIES S.A.

In the Los Cerillos District, Santa Fe County, N.M. on mining properties owned by United States Communities S.A. there are 250,000 tons of available tailings ready for processing to recover .5 oz. Gold and .5 oz. Platinum minerals. The combined minerals values in these tailings have a market worth of about $400.00 per ton.

At $400.00 per ton the 250,000 tons of tailings have a value of $100,000,000.00

To process these tailings would require a capital investment of $7,500,000.00 for metallurgical processing equipment.

The cost per ton processing would be $130.00 per ton; or $32,500,000.00 for total tailings processing costs.

The net projected profit indicated is $60,000,000.00

A 500 TPD operation is envisioned with the length of the project being 500 days; or about 18 months.

(304) 744-9689

LESLIE D. PRICE SRD
ATTORNEY AT LAW
CHARLESTON, WEST VIRGINIA 25301
821 KANAWHA VALLEY BUILDING
TELEPHONE 343-5154
AREA CODE 304

August 1, 1984

Mr. William M. Hazel
2660 N. Alvernon - A114
Tucson, AZ 85712

Dear Bill:

Enclosed is copy of a proposed agreement which Copper and I feel you should get a reaction on from the party of the second part as to whether they are agreeable to signing this document. They may have some changes they want to make.

If they are agreeable to signing the enclosed document, Copper and I will sign an original and two copies and mail same to you for your execution, but you will not leave any signed documents with them unless they execute same in your presence and give you back the original and one copy.

My personal preference is to have them sign first, and then we will do our signing and deliver them a signed copy.

Let me hear from you soon.

I am sending this to your last known address since you have not indicated to me what date you intend to move back with your wife.

As ever,

Les
LESLIE D. PRICE

LDP/mhp

Enclosure

Geover - working on getting letter from Utah saying will co-venture & from Linde (Union Carbide) re: putting in $2.-

BH.

THIS AGREEMENT, Made this 1st day of August, 1984, by and between FRANCIS R. COPPER, WILLIAM M. HAZEL and LESLIE D. PRICE, Attorneys in Fact for A.I.M.E. Federal Placer Mining Claims, Pinal County, Arizona, parties of the first part, and E. GROVER HEINRICH & ASSOCIATES, 1802 West Grant Road, Tucson, Arizona, party of the second part,

WHEREAS, the parties of the first part, under written Power of Attorney from the owners and locaters of approximately 84-1/2 sections (of 640 acres each), have full power and authority to sell and dispose of said Placer Mining Claims, and

WHEREAS, the party of the second part has indicated that it has the expertise to find a purchaser for said claims, either for an end price or an outright sale, for up-front earnest money, plus an overriding royalty interest, payable to the parties of the first part, for as long as mineral shall be mined and produced from said property;

NOW, THEREFORE, WITNESSETH THIS AGREEMENT: That the parties of the first part do hereby AUTHORIZE AND EMPOWER the party of the second part to find a purchaser for said Placer Mining Claims for the consideration hereinafter stated. Should second party be successful in finding a purchaser who enters into an agreement with first parties and consummates the purchase of said claims, first parties agree to pay to second party Ten Percent (10%) of any earnest money paid by said purchaser to first parties during any exploration and development period, as well as Ten Percent (10%) of the total sale price paid upon the consummation of the sale of such property by first parties, as well as Ten Percent (10%) of any overriding royalties which shall be reserved and payable to the parties of the first part, with an express provision in such sale that out of a royalty payable to first par-

ties, second party shall receive Ten Percent (10%) thereof for the life of the reserves.

1. Second party shall have no interest per se in the claims themselves until an agreement is consummated between first parties and the ultimate purchaser, and second party shall hold first parties harmless for any and all expenses incurred by second party in and about the finding of a purchaser for said Placer Claims, and no claims shall be filed against first parties or the claims themselves for any expenses incurred by second party; and second party shall have no right to place any lien of record on first parties' claims as presently registered in the office of the Recorder of Pinal County at Florence, Arizona.

2. It is expressly understood and agreed between the parties hereto that this property is subject to prior sale at any time by first parties to any person, firm, or corporation willing to meet first parties' terms for the sale of said property. Second party's sole dealings hereunder shall be to find such a purchaser and put said purchaser in contact with first parties for the purpose of attempting to reach an agreement with regard to said claims. First parties shall not attempt to prescribe terms and conditions of said sale, as these rights are reserved to first parties. This agreement shall be in force and effect one year from the date hereof and shall be automatically extended for an additional year unless first parties shall mail by certified or registered mail a letter to second party cancelling this agreement within thirty (30) days prior to the end of one year from the date of this Agreement, or any extension herein authorized; provided, however, that if second party has furnished a bona fide purchaser to first parties and this Agreement is cancelled, second party shall

nevertheless be entitled to its compensation hereunder if first parties shall consummate a deal with second party's prospect within a period of two years from the date of this authorization or any automatic extension thereof.

It is further understood and agreed between the parties hereto that first parties do not warrant title to said claims and that any conveyance of said claims will be by a document wherein first parties release and forever quitclaim any and all of their right, title and interest in said Federal Placer Mining Claims, and it shall be the duty of the purchaser, prior to consummating a purchase, to cause its own examination of its records to be made with respect to first parties' title and ownership to said Federal Placer Mining Claims. The claims covered by this Agreement have been registered in the office of the Bureau of Land Management of the United States Government in Phoenix, Arizona, and the following identifying registration numbers have been issued thereon: (See Exhibit "A" attached hereto and made a part hereof.)

WITNESS the following signatures this day and year first above written:

FRANCIS R. COPPER

William M. Hazel

WILLIAM M. HAZEL

LESLIE D. PRICE
Attorneys in Fact for AIME CLAIMS

E. GROVER HEINRICH & ASSOCIATES

BY _____

Its _____

EXHIBIT "A"

Serial Number	Name of Claim
A MC 88026 thru A MC 88037	AIME #1 thru #12
A MC 88038 thru A MC 88040	AIME #14 thru #16
A MC 88041 thru A MC 88053	AIME #18 thru #30
A MC 88054 thru A MC 88092	AIME #32 thru #70
A MC 88093 thru A MC 88101	AIME #73 thru #81
A MC 88102 thru A MC 88108	AIME #83 thru #89
A MC 88109 thru A MC 88138	AIME #91 thru #120
A MC 88139 thru A MC 88197	AIME #125 thru #183
A MC 88198 thru A MC 88219	AIME #185 thru #206
A MC 88220 and A MC 88221	AIME #213 and #214
A MC 88222 and A MC 88223	AIME #217 and #218
A MC 88224 and A MC 88225	AIME #221 and #222
A MC 88226 thru A MC 88247	AIME #231 thru #258
A MC 88248	AIME #262
A MC 88249 thru A MC 88263	AIME #264 thru #278
A MC 88264 thru A MC 88282	AIME #286 thru #304
A MC 88283 and A MC 88284	AIME #306 and #307
A MC 88285 thru A MC 88291	AIME #309 thru #315
A MC 88292 thru A MC 88295	AIME #328 thru #331
A MC 88296 thru A MC 88311	AIME #333 thru #348
A MC 88312 thru A MC 88318	AIME #350 thru #356
A MC 88319 thru A MC 88327	AIME #358 thru #366
A MC 88328 and A MC 88329	AIME #368 and #369
A MC 88330 thru A MC 88338	AIME #371 thru #379
A MC 88339 and A MC 88340	AIME #381 and #382
A MC 88341 and A MC 88353	AIME #385 thru #397
A MC 88354 and A MC 88355	AIME #399 and #400
A MC 88356 thru A MC 88359	AIME #405 thru #408

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