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WOMBAT MINING & EXPLORATION CO.

372 Hackberry Circle

Prescott, Arizona 86301

February 15, 1989

Mr. Hugo Dummet, District Geologist
Westmont Mining Inc.
2341 S. Friebus Ave., #12
Tucson, AZ 85713

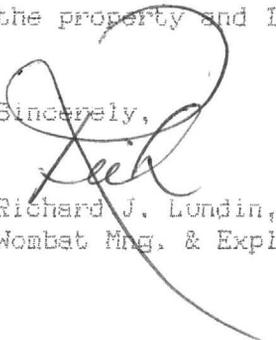
Dear Hugo:

Please find enclosed a Sample Contract for supplying the information on the Blue Bell and De Soto Properties. I have enclosed in Attachment "C" a partial listing of the data that I have on these properties. Please note in Attachment "B" to the Sample Contract that I have included in the Total Contract Price of \$2,500.00 the cost and expense of two Field Days giving a tour of the Blue Bell and De Soto properties.

If you are still interested in obtaining this data, please give me a call so that I can get it all together and the Field Days scheduled prior to March 17th, as I am going on vacation to New Orleans over the week of March 18-25.

I have not heard anything further on the Newsboy but hope that Kiewit and Westmont can get together on a program that will add bring this excellent property into speedy production. Thank you for your illuminating tour of the property and I hope to see you again soon.

Sincerely,


Richard J. Lundin, Gen. Mgr.
Wombat Mng. & Exploration

AGREEMENT FOR CONSULTING SERVICES

Westmont Minerals Exploration Co. of 5701 East Glenn #120, Tucson, AZ 85712, Known hereafter as the CLIENT, agrees to employ WOMBAT MINING & EXPLORATION CO. Known hereafter as WOMBAT for professional consulting services at the rates indicated on the attached Price List. (see Attachment "A") WOMBAT agrees to perform all work to the highest technical standards and warranty such work unconditionally. (For a full description of the work to be done see Attachment "B") WOMBAT further guarantees the confidentiality of all such work. The term of this agreement shall be from March 1, 1989 to April 15, 1989 but may be extended by the mutual consent of the parties. It is understood by and agreed to by all parties to this agreement that WOMBAT will bill the CLIENT on a semi-monthly basis and will expect prompt payment for it's services. It is further understood that interest will be charged at the rate of 1 1/2% per month on all accounts not paid in 30 days and that no further work will be done for the CLIENT or on the CLIENT'S behalf until the account is paid in full. It is WOMBAT'S policy to require a \$1,250.00 U.S. deposit to be paid at the time of execution of this agreement and prior to any work being done for the CLIENT or on the CLIENT'S behalf. This deposit will be deducted from the last billing by WOMBAT to the CLIENT. It is understood by WOMBAT that a budgetary limitation of \$2,500.00 has been placed on the Project by the CLIENT, and that this limitation may be increased as the project progresses, after approval by the CLIENT.

Date _____

For WOMBAT
Richard J. Lundin, Gen. Mgr.

Date _____

For the CLIENT

ATTACHMENT "A"

1989 Price List

All Services:

Personnel:

Associate Professional	\$50.00/Hr.
Sr. Professional	\$35.00/Hr.
Jr. Professional	\$25.00/Hr.*
Technical	\$20.00/Hr.*

Mileage: Two Wheel Drive Vehicle \$.35/Mile**
Four Wheel Drive Vehicle \$.50/Mile**

Expenses: All Expenses incurred on the CLIENT'S behalf
will be billed to the CLIENT at cost plus a
10% handling fee.

Interest will be charge at 1 1/2% per month on all accounts not
paid in 30 days. Projects that require an addition to WOMBAT'S
infrastructure will have an administrative and overhead charge
added. Invoices are sent on a semi-monthly basis.

*As we are a federal contractor, overtime is charged as per
Federal guidelines on these personnel.

**Subject to change due to location.

ATTACHMENT "B"

WOMBAT will provide to the CLIENT the Following Technical Services:

1. Compilation of all available data on the Blue Bell and De Soto Properties in the Black Canyon Mining District into two sets of Sourcebooks which will contain copies of all Reports, Maps, Assay Logs, Geologic Logs and other incidental information that pertains to the above mentioned properties and are in the Files of WOMBAT (see Attachment "C" for a partial listing of this information). One Set of Sourcebooks will be delivered to the CLIENT and the other will be forwarded to the Property Owner or his Representative.
2. 10 hours of Field Consultation at each of the above mentioned properties.

ATTACHMENT "C"

Available materials pertaining to the above mentioned properties include:

Blue Bell Property

Arizona Bureau of Geology and Mineral Technology File and Clipping File Data

Arizona Department of Mines and Mineral Resources File Data

Blue Bell Mine Exploration Program, J.M. Proudfoot, 1981

Report on the Geology and Exploration Potential, D.P. Rogers, 1981

Report for Pronto Explorations Ltd., G.R. Clark, 1981

Colvocoresses, G.M., 1942

Assay Results for David P. Rogers, 1981, 1982, 1984, 1984

Petrographic Report by Charles P. Berkey, 1919

Report by Richard E. Mieritz, 1962

Noranda, 1977

Report by R. E. Mieritz, 1970

Mine Management Co. of Arizona, 1976

Still & Still Memorandum, 1958

Summary Report on the Geology, Mineral Resources and Economic Potential of the Blue Bell Mine Area....With Comments on the Results of the 1983-1984 Drilling Program, R. J. Lundin, 1984

Memorandum and Progress Reports, R. J. Lundin, 1984a, 1984b, 1984c

Assays, Field Maps and Sample Descriptions, Wallaby Enterprises Inc., 1981

Report of Investigations in the Blue Bell Mine Area for Quintana Minerals, R.J. Lundin, P.A. Anderson and Wallaby Enterprises Inc. Staff, 1981

Wallaby Enterprises Geologic and Assay Logs from Drilling at the Blue Bell Mine (1983-1984), R. J. Lundin

AMOCO Minerals Co. Drill Logs, Geologic Maps, Assays, Geophysical Data and a Summary Report, 1976

Wondjina Research Institute Field Trip Guide to the Blue Bell Mine (1985)

Miscellaneous Colored Geologic Maps and Cross-Sections by R. E. Mieritz, J. M. Proudfoot, D.P. Rogers and others

Cuttings from the 1983-1984 Drilling Program

Aerial Photos, Sample Maps of Various Underground Workings, Production and Assay Data Plotted on Various Longitudinal Sections

De Soto Property

Arizona Bureau of Geology and Mineral Technology File and Clipping File Data

Arizona Department of Mines and Mineral Resources File Data

Diamond Drill Hole Logs, Knox, Kaufman, Inc. 1979

Report by R. H. Seraphin, 1974

Report by G.M. Colvocoresses, 1946

Preliminary Production Evaluation for Cutlass Exploration Ltd., by C.M. Armstrong, 1974

Geologic Report by R.E. Mieritz, 1970

Report of Investigations by R.D. Luethe for Chevron Oil Co. with Drill Logs, Assay Data and Geophysical Report, 1981

Geological Evaluation by Richard E. Mieritz, 1973

Report by Still & Still, 1958

Report by Fred Gibbs, 1959

Summary Report on the Geology, Mineral Resources and Economic Potential of the De Soto Mine Area....With Comment on the Results of the 1983-1984 Drilling Program, R.J. Lundin, 1984

Memorandum and Progress Reports, R. J. Lundin, 1984a, 1984b, 1984c

Assays, Field Maps and Sample Descriptions, Wallaby Enterprises Inc., 1981

Report of Investigations in the De Soto Mine Area for Quintana Minerals, R.J. Lundin, P.A. Anderson and Wallaby Enterprises Inc. Staff, 1981

CAGS Field Trip Guide to the De Soto Mine, R.J. Lundin, 1985

Report to Billiton Minerals, D. White, 1982

Report by J. Pierce, 1984

Assays, and a Summary Report on the Property to Texasgulf Western Inc, R.J. Lundin, 1982

Miscellaneous Colored Geologic Maps and Cross-Sections by R. E. Mieritz, D.P. Rogers, R.D. Luethe, E. De Witt, R.J. Lundin and others

Cuttings from the 1983-1984 Drilling Program

Pronto Explorations

Limited

Suite 3001, South Tower, Royal Bank Plaza, Toronto, Ontario M5J 2J1
Telephone (416) 865-0005

Pronto has a five year option from October 16, 1981 to purchase the Bluebell Property from Mr. Sherwood Owens and Mrs. Kate Owens. As shown in the report by Glenn R. Clark P.Eng. of January 4, 1982, initial exploration will cost in the order of \$3.6 million U.S., with a minimum amount \$0.2 million U.S. paid to the optioners.

Due to the size of the exploration budget, Pronto is seeking a joint venture partner or another financing method on this property.

1.0 Basic terms of a joint venture would be:

- (i) Earn: 50 per cent interest by spending U.S. \$1.5 million in property and option payments.
- (ii) After initial \$1.5 million, joint venture and Pronto to share costs 50-50.
- (iii) During exploration a management committee will be formed to approve the exploration procedure and budget.
- (iv) Upon completion of the initial exploration, a feasibility study will be completed.
- (v) A favourable feasibility report that leads to production would be used to obtain joint bank credit to finance the project.
- (vi) A mutually agreed buy out formula would be negotiated.

2.0 Pronto would alternatively consider a drill fund type financing on the Bluebell property. The expenditures (\$4.0 million U. S.) would be used as Tax write-off items by the investors. In the event of commercial production, the investors would be entitled to a return of funds plus.

3.0 Pronto needs general funds and would entertain a private placement now and a public underwriting later for our share of the Bluebell costs. Pronto is currently applying for listing on the Vancouver exchange.

In addition to the Bluebell property, Pronto has a 25 percent net profit interest in the Potash Exploration in Western Newfoundland with Camflo and Noranda. Drilling is currently taking place.

Agreement in principal on Robinson's potash property in western Newfoundland with Chevron.

Pronto has oil and gas rights on 85,000 acres (approximately) west coast of Newfoundland.

No work is currently being done on the optioned DeSoto property in Arizona.

The total number of issued shares is 2,096,005 common shares without par value, out of authorized total of 6 million shares.

The number of shares remaining in the Treasury consists of 3,903,995 common shares without par value and 3,000,000 non-cumulative, convertible, redeemable, non-voting special shares without par value.

GARY:
Your copy per
RSM.

December 18, 1981

TO: R.H. Faskin *PROMTO EXPLORATIONS LTD*
FROM: J.M. Proudfoot

RE: Bluebell Mine Exploration Program

The Bluebell Mine was extensively mined to the 1200 level up to 1926. Further development continued to the 1500 level with stopes being started on the 30 and 40 shoots. A winze was sunk 70 feet below the 1500 level. In 1927 the pumps were pulled and the mine allowed to fill with water. No operations have taken place below the water level since that time. All work has been done in the upper levels in the oxide and supergene zones. The exploration targets of immediate interest are those to depth and include the ore shoots 1 through 4. The two methods of exploring for this ore would be:

1. To drill from surface long diamond drill holes to intersect the 4 zones at depth or,
2. To re-equip the mine with a plant and shaft such that the workings could be dewatered and rehabilitated to the bottom level. Work could then proceed on the bottom level to outline and explore the zones at depth.

It is felt that the first method of drilling from surface would entail a considerable cost with the possibility that the targets might not be intersected at all, or might be intersected at narrow sections. The work from surface could prove inconclusive and would still require the eventual dewatering and rehabilitation of the mine to truly map and understand the ore zones at depth.

The second method of dewatering before any deep drilling and going to the bottom entails more risk. This risk has been reduced to a large extent by the literature search, which has failed to find any non-collaborating information. i.e. - the information as presented to Pronto has been essentially verified by outside sources, thus the longitudinal section showing the ore at depth and continuing to depth is in all probability correct. The one item that is missing is a set of level plans showing each of the levels. As of last week a plan of the shaft to 900 and the number 1 stoping area has been obtained. This gives a much better picture of the apparent dip of the zones within the rhyolite beds.

The plan of attack for the dewatering and rehabilitation of the Bluebell Mine is as follows:

1. Two weeks ago the water level as indicated by Mine Management Corporation was checked by bringing a rotary drill in to re-open the two drill holes drilled in 1974-75 for water. The hole drilled 410 feet was re-opened and entered the stope above the 500 level in the 40 shoot. No water was intersected thus the water level must be below the bulkhead on the 400 level. The deeper hole was opened to 435 feet, but could not be cleaned to the bottom due to caving ground at about 300. No water was intersected to 435. Due to the height of the collar of the drill hole above the mine shaft collar, this level would be just about where Mine Management said the water level was in 1974. I have spoken to the original driller of this hole, and he said he hit water at 600 feet which would put the water elevation about 390 feet below the collar of the main shaft.

The water level is still not established with certainty, nor is the amount of copper within the water. It is proposed to drill the new hole into the 10 stope to intersect that stope about the 800 level. A hole of 650 to 750 feet is envisioned. As we have the new plans of the level, we should be able to ascertain the target with certainty. This hole would give us:

- (1) The actual water level, (2) the copper content of that water, and (3) the hole could be enlarged to except a casing and fairly high volume pump.

It is planned that this pump would do the initial dewatering from 400 level to the 800 level, while the hoist, head frame and mine plant are being installed and initial shaft sinking is completed down to the bulk head. Once the initial shaft sinking is done to the bulk head, the rehabilitation of the shaft would carry through until the water level is reached, at this point the larger pump would be installed in the shaft and most of, or all of, the dewatering would then take place out through the shaft. It is anticipated that the rate of advance would depend primarily on the speed of the water being removed from the mine. The shaft timber and services would be reconditioned and replaced where necessary on the way to the bottom. Very little work would be done on any of the levels other than making the stations safe as the primary thoughts are to get to the bottom as quickly as possible. However, geological mapping and surveying of the levels where accessible, would be done as the dewatering is carried on. Possibly some diamond drilling would be done on the 500 and 800 north drifts. Once the mine is dewatered, then Phase I would be completed. This is the point at which the information that we have been given will prove to be reliable or not. If it is reliable, which I believe it is, then Phase II would be carried on which includes a crosscut into the hanging wall, a parallel drill drift and a drilling program to outline ore to 800 - 1000 feet below the lowest level. At the same time drilling and possibly some rehabilitation of the drifts would be done on the 1200 and 800 south levels. The target of the exploration of the program, is to develop three quarters to 1.2 million tons of good grade copper, gold, silver ore such that a decision might be made to erect a mill on the property. Should the results on the 1500 after dewatering indicate that the information supplied is not correct, then a decision must be made to either stop the project and recover what funds are available from the sale of surplus equipment, or to look at the salvage operation to recover what ore was indicted by the geological mapping.

The target price proposal as outlined by J.S. Redpath Corporation, is essentially a cost plus type of contract with an incentive bonus which the Contractor uses to make the saving of funds throughout the project of benefit to the client and to the contractor. As long as the target estimate is within the range of the incentive arrangement, this procedure or type of contract works very well. Should the actual cost exceed the estimate such that the contractor does not receive any fee, then the contractor is working on a cost plus a 10% overhead and has no incentive to save money. Conversely, if the target is much too high and the savings too great, then once the contractor has made his additional bonus fee he has no incentive to save the client's money. The target is and has to be an estimate that is obtainable and is not too loose. This type of job cannot be bid on a unit price basis as the unknowns are too great and the contractor would include high contingencies for all sorts of anticipated problems. Once the initial work is done i.e. the shaft rehabilitation and dewatering, the contract for Phase II could probably be bid as unit cost, but the company would then have to take over the operation of the mine support and hoisting etc.. I have reviewed the cost estimates and feel that it is reasonable and slightly conservative, thus the cost should be within budget at the bottom. The target proposal includes a large amount of equipment, buildings, etc., being supplied by the contractor on a rental basis. Once the determination is made as to the Phase I results, then Pronto could exercise the option to purchase the rental equipment. The total cost of the program at 3.5 million, if successful, would establish a mineable reserve of 1 million tons at a cost of \$3.50 per ton of reserve. The indicated increase in gold, silver values to depth, should produce a reserve considerably more valuable than that indicated by the production to date.

Appendix I

Bluebell Mine Exploration Project

Budget

- Phase I - Surface set-up, Rehabilitate and Dewater survey, Geological mapping, Drilling
- Phase II - Drive 1500 level exploration x cut and drift drill for depth extension to ore reserves

Phase I

J.S. Redpath Corporation Target Cost Proposal

U.S.

7.3 Mobilization	\$ 12,200
7.5 Shaft Plant Set-Up	240,000
7.7-7.9 Initial Dewatering Drill Hole and Pumping	70,060
7.11 Mine Dewatering below 800 level	37,875
7.12 Mine Plant Electric Power	69,090
7.21 Shaft Rehabilitation Collar to 400 level	220,200
7.24 Shaft Rehabilitation 400 to 800 level	153,600
7.22 Shaft Rehabilitation 800 to 1,500 level	321,600
7.23 Drift and Station Rehabilitation (1,500 level)	<u>24,600</u>
Phase I Job Cost	\$1,149,225
J.S.R. Overhead 10%	114,923
J.S.R. Fee 7%	<u>88,490</u>
Phase I Total Contractor Cost	1,352,638
Major purchases	219,500
Arizona transaction privilege tax 26%	40,876
Contingency 5%	80,651
Surface and underground geological mapping	48,000
Surface drilling Blue Thunder 1200' @ \$20	24,000
Underground drilling 500 - 800N 3200' x \$20	64,000
Management costs 4%	<u>73,187</u>
Total Phase I	\$1,902,852
Demobilization	7,700
Shaft plant take down	15,500
Overhead and fee	4,106
Recovery from Surplus Equipment Sales	<u>(108,700)</u>
Phase I Total Cost to Job Co	\$1,901,458

Phase II

J.S. Redpath Corporation Target Cost Proposal

	<u>U.S.</u>
7.11 Mine Dewatering below 800 level	\$ 89,890
7.12 Mine Plant Electric Power	63,450
7.13 Mine Services Drifting	232,400
7.14 Mine Services Diamond Drilling	108,000
7.31 Drifting Single Heading	124,000
7.32 Drifting Double Heading	174,800
7.33 Miscellaneous Drift Excavation	21,528
7.41 Diamond Drilling Mobilization - Demobilization	4,800
7.42 Diamond Drilling Set-Up and Move	3,025
7.43 Diamond Drilling 15,000 @ \$15.67	<u>235,050</u>
Phase II Job Cost	\$1,056,943
J.S.R. Overhead 10%	105,694
J.S.R. Fee 7%	<u>81,385</u>
Phase II Contractor Cost	1,244,022
Arizona Transaction Priviledge tax 2.6%	32,344
Contingency 5%	63,818
Additional Drilling, Geological Mapping, Sampling, Assaying, etc.	154,800
Management 4%	<u>59,800</u>
Total Phase II	<u>\$1,554,784</u>
Total Phase I and II	<u>\$3,457,636</u>

NO GO

Surplus Equipment Sales

Hoist	\$ 20,000
Headframe	10,000
Betsy Cryderman	10,000
Sinking Supplies	12,000
Electrics	15,000
Deepbell pump	7,200
Shaft Supplies	22,500
Dewatering Pump	10,000
House Trailer	<u>2,000</u>

\$108,700

royalties until all monies expended to explore and commercialize the operation have been earned and retained from profits. The lease runs to December 31, 1977. Under certain circumstances MMCA could be required to vacate the property. These circumstances evolve about the possibility that a major oil company presently drilling in the area might exercise its right to acquire the property. MMCA believes on the basis of present knowledge that the oil company's exploration program will not develop a sufficiently large enough project to justify acquiring the property. Therefore, MMCA believes, but can give no assurance that the lease will be extended if MMCA is in steady production.

For this reason, and others set out below, it is planned to mine and treat 40,000 to 50,000 tons of high grade ore first and leach in place 400,000 tons of low grade thereafter.

5.0 Principal Features of Mine

5.1 Mineralization

Yavapai schist - mineralized zone averages 125' in thickness - ore occurs in high grade lenses. Ore below 300' to 400' level massive sulphide, above this level ores are mixed oxides and sulphides (largely chalcocite).

5.2 Surface Ore

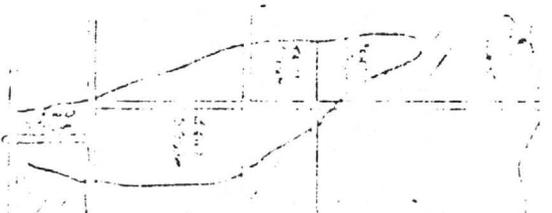
The first 100' to 150' in depth can be mined from surface with average values for entire width of zone held between 0.7% and 0.8% copper. This block contains 400,000 to 500,000 tons, of which very high grade (3% and above) occur in 10 to 12 feet at both footwall and hanging wall, and are easily selectively mineable.

5.3 Underground Reserves

At the time the mine was closed in 1927, assay maps and reports confirm 275,000 to 300,000 tons of 3.0% copper ore developed reserve.

5.4 Condition of Mine Shaft

The main 6' x 12' shaft is to a depth of 1500', but is plugged from approximately 75' to 410' with timbers and loose material bulldozed into the shaft on orders of a mine inspector in the 1950's. A bulkhead at the 410' level has undoubtedly held this plug.



LEGEND
 11 Number of Sample
 12.5 Average Wash
 1002-0% Cu
 112-0% per km Ag
 1015- " " Au



Traced from
STOPE MAP
 of
BLUEBELL MINE
 Southwest Metals Company
 Mayer, Ariz.
 Assays to Jan. 19, 1927

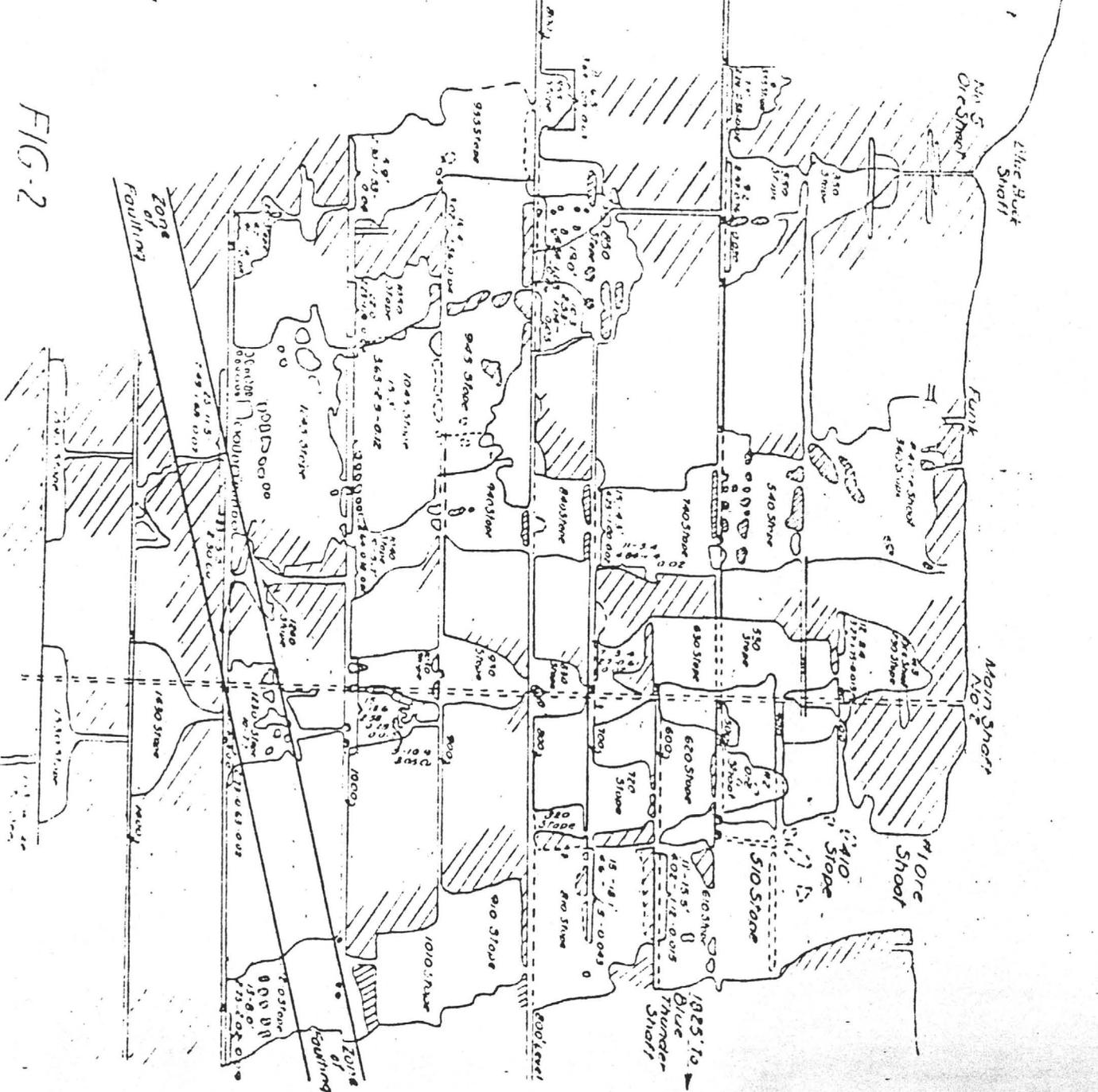


FIG-2

SUMMARY OF ESTIMATED COSTS AND QUANTITIES

Section Number	Description	Unit Cost	Units	Estimated Quantity	Estimated Total
7.3	Mobilization	\$ 12,200.00	Lump Sum	1	\$ 12,200.00
7.4	Demobilization	7,700.00	Lump Sum	1	7,700.00
7.5	Shaft Plant Set-up	240,000.00	Lump Sum	1	240,000.00
7.6	Shaft Plant Take-Down	15,500.00	Lump Sum	1	15,500.00
7.7	Initial Dewatering Drill Hole	18.00	Lineal Foot	680	12,240.00
7.8	Initial Dewatering Materials	24,300.00	Lump Sum	1	24,300.00
7.9	Initial Dewatering Operating Expense	310.00	Calendar Day	84	26,040.00
7.11	Mine Dewatering - below 700 Level	505.00	Calendar Day	253	127,765.00
7.12	Mine Plant Electric Power	470.00	Work Day	282	132,540.00
7.13	Mine Servicing - Drifting	2,800.00	Work Day	83	232,400.00
7.14	Mine Servicing - Diamond Drifting	2,000.00	Work Day	54	108,000.00
7.15	Casing Initial Dewatering Hole	11.00	Lineal Feet	680	7,480.00
7.21	Shaft Rehabilitation: Collar to 400 Level	734.00	Lineal Feet	300	220,200.00
7.22	Shaft Rehabilitation: 800 to 1500 Level	402.00	Lineal Feet	800	321,600.00
7.23	Drift and Station Rehabilitation	4,100.00	Work Days	6	24,600.00
7.24	Shaft Rehabilitation: 400 to 800 Level	384.00	Lineal Feet	400	153,600.00
7.31	Drifting - Single Heading	200.00	Lineal Feet	620	124,000.00

SUMMARY OF ESTIMATED COSTS AND QUANTITIES (CONTINUED)

Section Number	Description	Unit Cost	Units	Estimated Quantity	Estimated Total
7.32	Drifting - Double Heading	\$ 190.00	Lineal Feet	920	\$ 174,800.00
7.33	Miscellaneous Drift Excavation	3.90	Cubic Feet	5,520	21,528.00
7.34	Split Set Rockbolts	4.10	Bolt - Feet	0	0.00
7.41	Diamond Drill Mobilization/ Demobilization	4,800.00	Lump Sum	1	4,800.00
7.42	Diamond Drill Set-up/Move	605.00	Each	5	3,025.00
7.43	Diamond Drilling - BMD4 or AM34 Core				
7.43.1	0 - 250 Feet	13.70	Lineal Feet	3,000	41,100.00
7.43.2	250 - 500 Feet	14.50	Lineal Feet	4,000	43,500.00
7.43.3	500 - 750 Feet	15.45	Lineal Feet	3,000	46,350.00
7.43.4	750 - 1,000 Feet	16.60	Lineal Feet	3,000	49,800.00
7.43.5	1,000 - 1,250 Feet	18.10	Lineal Feet	3,000	54,300.00
7.51	Delays				
7.51.1	No. 2 Shaft Rehabilitation	250.00	Hour	0	0.00
7.51.2	1500 Level Drift Development	230.00	Hour	0	0.00
7.51.3	Diamond Drilling	180.00	Hour	0	0.00
7.52	Extra Work Rates				
7.52.1	Direct Hourly Labor	22.00	Manhour	0	0.00

STATEMENT OF ESTIMATED COSTS AND QUANTITIES (CONTINUED)

Section Number	Description	Unit Cost	Units	Estimated Quantity	Estimated Total
7.52.2	Supervision and Indirects				
7.52.2.a	No. 2 Shaft Rehabilitation	\$ 590.00	Work Day	0	\$ 0.00
7.52.2.b	1500 Level Drift Development	813.00	Work Day	0	0.00
7.52.2.c	Diamond Drilling	369.00	Work Day	0	0.00
7.52.3	Equipment Rental	Various	Various	0	0.00
7.52.4	Miscellaneous	Cost +10%	Various	0	0.00
7.53	Long Term Standby				
7.53.1	No. 2 Shaft Rehabilitation	170.00	Calendar Day	0	0.00
7.53.2	1500 Level Drift Development	155.00	Calendar Day	0	0.00
7.53.3	Diamond Drilling	190.00	Calendar Day	0	0.00
7.61	Engineering Design	Consulting Rates	Various	1	0.00
	TOTAL DIRECT COST				\$ 2,229,368.00
7.62	Overhead	10%	Various	0	222,936.80
	TOTAL TARGET COST				\$ 2,452,304.80
7.63	Target Fee	7%	Target Fee	0	\$ 171,661.34
	TOTAL TARGET PRICE				\$ 2,623,966.14

STATEMENT OF ESTIMATED COSTS AND QUANTITIES (CONTINUED)

<u>Description</u>	<u>Unit Cost</u>	<u>Units</u>	<u>Estimated Quantity</u>	<u>Estimated Total</u>
Incentive Fee	N/A	Incentive Fee	0	\$ 0.00
Major Purchases	\$ 219,500.00	Lump Sum	1	219,500.00
Insurance	Actual Cost	Various	0	0.00
Interest	Prime Rate	Various	0	0.00
Bonding	Actual Cost	Various	0	0.00
SUBTOTAL PROJECT BILLINGS				
Arizona Transaction Privilege Tax	2.6%	Various		<u>\$ 2,843,466.14</u>
				<u>73,930.12</u>
TOTAL PROJECT BILLINGS				<u><u>\$ 2,917,396.26</u></u>

REPORT
on the
GEOLOGY and EXPLORATION POTENTIALS
of the
BLUE BELL MINE, MAYER, ARIZONA.


David P. Rogers, P.Eng.
November 25, 1981



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November 25, 1981

To: Pronto Explorations Limited,
Toronto, Ontario

The following report summarizes my visit to the Blue Bell deposit in October, 1981 and an office study of the available data and partial reconstruction of same. My objective was to attempt to verify the reality of the data and to come up with a geological appraisal of the mine property, development to date, exploration potentials and recommendations relative to the land holdings. A strict engineering approach to the relative tonnage and grade is not possible. However, I am satisfied that the data available is true data and that the mine operators did a good job of mining and development. The published production figures are true and the best indication of tonnage and grade. The recognition of the deposit as a Cu-Au-Ag-Zn-Pb deposit of volcanogenic origin allows reasonable geological extrapolation to evaluate the potential tonnages and grade remaining to be outlined.

The large amount of underground workings available upon which to base exploration, development and mining is a valuable asset both in dollars and time.

It is strongly recommended that the company proceed directly with dewatering and rehabilitation of the main shaft. It is reasonable to consider the possibility of making a fair dollar return during 1982 on cement copper from mine water once the chemistry and a system of washing old workings are completed.

The data have been turned over to Glenn Clarke, Consulting Geologist, for an outside opinion suitable for financing and Securities Commission requirements. He is to have his report completed before December 20.

The economics, past and present, plus costs and timing of proceeding with dewatering and rehabilitation are reported on separately by J.M. Proudfoot.

Yours truly,



David P. Rogers, P.Eng.

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Claim Map

Longitudinal Section of Blue Bell Mine

LIST OF REFERENCE DATA

Reports by G.M. Colvocoresses and C.T. Van Winkle
Longitudinal Section 1" = 50'
Blue Bell Shaft Area 1" = 50'
Patent Claim Notes and Plans
X-section Blue Buck Shaft 1" = 60'
Amoco DDH Logs
Amoco Geology Map, 1" = 200'
Amoco P.E.M. Surveys
Amoco Geology of Area (DeWitt) 1" = 2000'
Geology of Mine Area (Cox) 1" = 500'
Lindgren, Ore Deposits of the Jerome and Bradshaw Mountains, Arizona
Gilmour and Still, The Geology of the Iron King Mine, Arizona

CONCLUSIONS

It is my opinion that the Blue Bell base metal-gold-silver deposit warrants an immediate de-watering program with the main objective being access to the bottom workings on the 1350 and 1500 levels in order to carry out an underground drilling program to the 2400'-2900' levels. The purpose of this initial drilling plan is to test the extension to depth and to drill indicate an additional 800,000 to 1,500,000 tons of sulphide ore to the 2900' level in the central portion of the mine as developed to date (Nos. 1,3,4,5 zones).

Concurrently it is felt that exploration on the 500 and 800 levels along the extension of the ore horizon both north and south could indicate the presence of an additional 500,000 to 1,000,000 tons of sulphide ore to the 1500 level. If these lateral tonnages are found then it is reasonable to assume that they could double the potential in tonnage from the 1500 level to the 2900 levels.

Approximately one million tons have been mined to date and the geologic setting provides for the good possibility of developing an additional between 1.5 and 2.5 millions tons to the 2900 level and still be open to depth.

The mine was developed and operated as a copper mine with reasonable values of gold and silver. The zinc-lead values were not recovered. It was shut down in 1927 due to low copper prices and allowed to flood.

With today's gold-silver prices and milling advances to enable recovery of zinc and lead, the property has considerable increase in the value of the contained metals. The apparent increase in gold and silver values (from 0.05 Au to 0.075-0.10 Au range) (from 1.5 to 2.0 oz Ag range) indicated in the 1200 to 1500 level working is encouraging. The copper content appears to remain in the 2.5 to 3.0% range. The ore shoots appear to be lengthening (strike length) and maintaining good average widths.

A letter written in the 1940's states that three drill holes below the 1500 level showed the sulphides continuing to the 1800 level. This is encouraging, but no factual data has been found to back it up.

At today's metal prices and the significant price increases expected in both base metals and precious metals within the next 12 to 18 months and holding through most of the 1980's, the Blue Bell property has the potential of becoming a Cu-Au-Ag mine in the upper quartile of the median sized volcanogenic ore deposits (Boldy, 1981, CIM, vol. 74, No. 834, pg. 58) comprising 3.35 million tons with a gross value of \$310 million or \$93.00/ton.

Of importance is the fact that workings exist to the 1500 level and can be dewatered, rehabilitated, re-surveyed, mapped and sampled and drilled within the next 5 to 7 months in order to establish the tonnage and grade potential. Actual mining and milling could start within 18 to 24 months in time to capitalize on the expected increase in metal prices.

Table 26.3

Tonnage-grade data, volcanogenic sulphide deposits, Noranda district

Deposit	Status	Size (M/Tons)	% Cu	% Zn	oz. Ag	oz. Au
Horne	Past producer	60.26	2.20	--	0.40	0.17
Queмонт	Past producer	16.35	1.20	1.80	0.54	0.12
Amulet A	Past producer	5.30	5.12	5.50	1.40	0.04
Magusi	Prospect	4.11	1.20	3.60	0.90	0.03
<u>Norbec</u>	Past producer	4.00	2.80	4.71	1.40	0.03
Joliet	Past producer	3.70	1.12	--	0.25	0.01
Millenbach	Producer	3.58	3.69	4.73	1.72	0.03
Macdonald	Inactive producer	3.25	0.07	4.77	0.63	0.02
Mobrun	Prospect	3.00	0.62	2.30	0.60	0.05
<u>Corbett</u>	Active development	2.93	2.92	1.98	0.59	0.03
Aldermac	Past producer	2.07	1.48	--	0.20	0.01
E. Waite	Past producer	1.50	4.13	3.30	0.90	0.05
G. Waite	Past producer	1.25	4.70	3.00	0.60	0.03
New Inco	Prospect	1.15	2.11	--	0.50	0.03
Amulet C	Past producer	0.60	2.12	8.50	2.00	0.02
Delbridge	Past producer	0.40	0.55	8.60	2.00	0.07
Vauze	Past producer	0.37	2.94	1.00	0.80	0.02
Amulet F	Past producer	0.28	3.54	3.40	0.10	0.02
D'Eldona	Past producer	0.10	0.30	5.00	0.76	0.12
		114.20	2.14	1.37	0.59	0.12

Blue Bell
Potential

Note: 1-Grade and tonnage figures include production and reserves.

2-District metal content:

Copper	2,455,000 tons
Zinc	1,542,000 tons
Silver	67,378,000 ounces
Gold	13,704,000 ounces

BOLDY CIM OCT. 1981

TABLE 1: Statistical data — Precambrian volcanogenic ore deposits (n = 115)

Deposit Type	Percentile	Tonnes (000,000)	(*) Value/Deposit (\$000,000)	(*) Value/Tonne (\$)	Frequency Occurrence (%)
Mid-Upper Decile	(5%)	45.35	5,472	121	4.0
Upper Decile (Mean)	(10%)	12.05	1,404	116	7.0
Upper Quartile	(25%)	6.20	714	115	9.0
Median (Modal)	(50%)	3.35	310	93	12.0
Lower Quartile	(75%)	1.27	125	99	15.0
Lower Decile	(90%)	0.35	40	114	} >45.0
		0.30	33	110	
		0.13	14	107	

BLUE BELL POTENTIAL

Note: (*) Net pre-smelter value. Based on recovery of 90% copper, 85% zinc, 65% silver and 50% gold. 1981 Prices based on \$2.40 kg Cu, \$1.00 kg Zn, 0.65¢ g Ag, \$22 g Au.

RECOMMENDATIONS

1. Proceed with arranging for dewatering and rehabilitation of the shaft (in progress).
2. Carry out tests on copper content and acidity of mine water from vertical holes to 900 level. Check acid consumption and dam site for ponding mine water. Study various approaches of producing cement copper from mine water and recirculated water in certain stope areas. (in progress)
3. Survey in shafts and a baseline along strike of zone for tying in detailed surface mapping and underground. (being arranged)
4. Hire a full time mining geologist with volcanogenic experience (in progress).
5. Carry out initial Mercury (Hg) vapour test profiles (being arranged).
6. Resurvey, map and sample old workings as they become available.
7. Proceed with surface and underground drill program as soon as mapping and workings allow. A general outline approach is included in this report.

INTRODUCTION

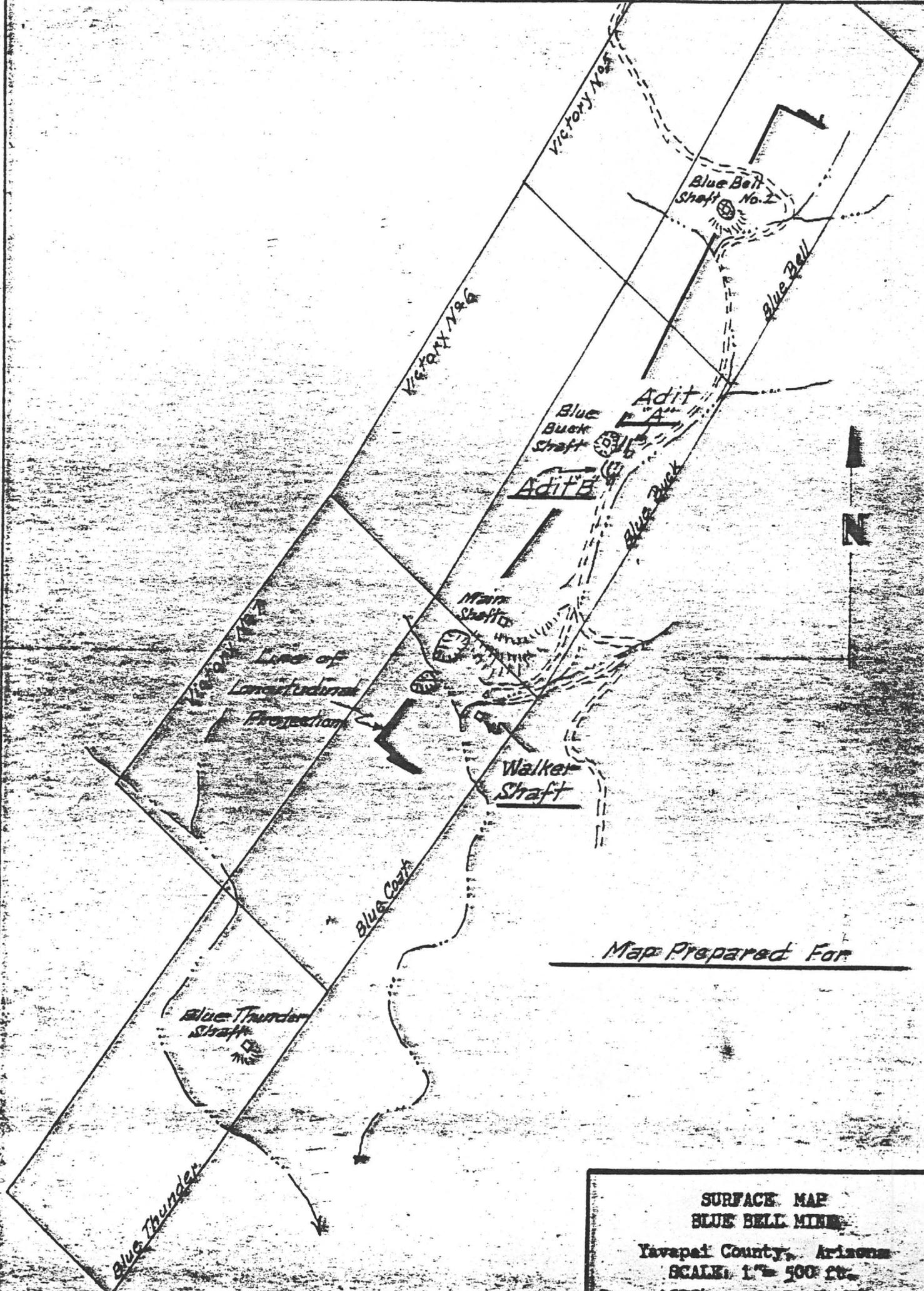
The Blue Bell mine is situated about 4 miles south of Mayer, Big Bug Mining District, Yavapai Co., Arizona, U.S.A.. Good access by gravel road exists and power lines are within 3 or 4 miles of the property. The town of Mayer provides a satisfactory housing base.

The mine produces from 1903 to 1926 and was allowed to flood in 1927. Minor high grading contractors worked to the 300 level on a very small scale during the 1940's. Recorded production was approximately 1,150,000 tons averaging 3.18% Cu, 0.06 oz Au and 1.5 oz Ag. Ore was shipped to a mill-smelter in Humbolt.

The main property consists of nine (9) patented lode claims (179.196 acres) and six (6) unpatented claims. An additional (56) claims were added during the 1970's tying on the north:northeast and Pronto Explorations Limited have added an additional 27 claims on the west: southwest in November, 1981.

The principal mine operators (excluding minor leasors) stressed a well laid out tonnage type operation while in operation.

The compilation reports by Colvocoresses and Van Winkle written in 1941 provide the basic information, calculations and history plus recommendations on the Blue Bell deposit and should be studied in conjunction with my report.



Map Prepared For

**SURFACE MAP
BLUE BELL MINE**
Yavapai County, Arizona
SCALE: 1" = 500 FT.
June, 1977 R. E. Merritt

EXPLORATION HISTORY

- Operated during 1903 to 1926/27 period and flooded
- Leasors mined small tonnages in upper working during 1930's-40's
- 1940's - The State of Arizona tried to claim the mine but lost their case in the Supreme Court, Arizona and did not appeal. Ownership reverted to The Consolidated Arizona Smelting Co.
- 1957 - Sherwood Owens of Tuscon, Arizona purchased the property and during the following years attempted to have someone operate the property.
- 1969-73 - Mine Management Group, Phoenix, had a lease on the property with the idea of producing cement copper from the mine waters and tentative zones of low grade 0.5 to 1.0% Cu (mixed oxide-sulphide) from surface area lying between main shaft and the Nob Shaft. This project never got going and would appear to have been a complete promotion.
- 1974-75 - Amoco Minerals optioned the property and carried out reconnaissance mapping and a ground PEM (electromagnetic survey) of the property to follow up on regional AEM survey anomalies. They drilled two holes through a strong conductor (barren sulphide iron formation) in the hanging wall zone between the main shaft and the Blue Thunder. They did no testing of the old workings or the main base metal sulphide ore horizon. Amoco drilled two more PEM anomalies (3 holes in barren sulphide iron formations) in the Cedar's area north of the Blue Bell mine. Amoco dropped the property option in March, 1977 on the basis of no encouragement as to new deposits. The property has been idle since 1977 to the present.

- 1981 - Pronto Explorations Limited of Toronto, Canada completed an option-purchase agreement with the owner Sherwood Owens in October, 1981.

TECHNICAL DATA

Unfortunately virtually no level plans or sections exist or have been located to date (this is still being tracked down by J.M. Proudfoot). The principal data available are reports by G.M. Colvocaresses, ex mine manager and C.T. Van Winkle (Nov. 1941) assembled in the 1940's. They only came up with a longitudinal section with some assay data on the main workings and plan and sections of the Blue Bell (Nob) shaft workings. A large number of underground drill holes have been recorded by Colvocaresses but there are gaps in the numbering indicating additional holes were drilled - probably in the upper levels. These holes have been plotted roughly by D. Rogers (accurate locations do not exist in most places) which give a reasonable picture in certain areas of the workings. R. Mieritz has redrawn some of the original data in a compilation effort during the 1960's and 1970's.

GENERAL MINING GEOLOGY

The Blue Bell Mine is a volcanogenic massive sulphide (Cu,Au,Ag, Pb,Zn) deposit of Precambrian age. Known economic base metal-precious metal zones have been partially mined along strike for approximately 2500' and to depth of 1200' with additional development on the 1350' and 1500' levels. The mineralized host horizon extends for 4200' between the Blue Bell (Nob) Shaft workings on the north to the Blue Thunder adit-shaft area in the south.

The individual mined shoots as indicated by the longitudinal section (stopes and some assays) are elliptical cigar shapes, partially en echelon which to date show a depth to length ratio of 5 to 10 to 1. However, if you group the apparent ore shoots (6) within their geologic total sulphide mineralization relationship and treat them as another rock unit(s) in the volcanic sequence, the mined and developed sulphide zone to date is about 1.5:1 ratio on strike length to depth. There appear to be at least 3 separate sulphide lenses and in several places four lenses in a parallel or stacked relationship within the upper ore horizon of the rhyolite pile. Two or more of these lenses appear to have merged in the number 4 and 5 zones on the 1000 to 1500 levels.

The depth potential is considered to be excellent. The Iron King Zinc-Pb-Ag-Cu deposit about 5 miles to the northwest in the same relative rock sequence was mined to 2600 ft. before it closed due to depressed metal prices and was still in "ore". The geology of the sulphide zones is published and clearly shows continuity in style, mappability and was easily predicted from level to level with confidence.

No underground geology or modern volcanogenic mapping exists on the Blue Bell deposit other than a preliminary surface sketch map by an Amoco geologist in 1974. This mapping is inadequate and has to be redone.

Preliminary surface reconnaissance on the property October 20-26, 1981 and an approximation of the existing stope, assay and drilling data into a series of cross sections and level interpretations have been made by D.F. Rogers and certain patterns and style of the geology are recognized.

Detailed surface mapping and an accurate survey net tied in with systematic mapping of the surveyed underground working during de-watering and rehabilitation of the workings will rapidly provide a real picture of what the habit of the deposit is. Drilling from underground can be logically carried out as soon as the specific areas of interest are reopened.

Of particular interest is the significant increase in gold-silver content within and adjacent to the stope areas on the 1200', 1350' and 1500' levels. We have no idea what the relative change in the basic sulphide type or lead-zinc mineralization is in the same area at this time.

One interpretation is that the increase in values (change in zoning) is due to approaching a center of sulphide deposition at depth perhaps within 500 to 1500' of the 1500' level and therefore potentially thicker and richer base metal-precious metal values. If we assume that at least 1/3 of the deposit has been eroded relative to present surface profile then one approach is as follows:

Mined: Surface to 1500' level

Assume: 1500' to a main centre of mineralization

Total	3000'
1/3 erosion loss	1500'
	<hr/>
	4500'

Using 4500' as the original depth of deposit indicated, note that this is approximately equal to the surface strike length along the host horizons. Therefore the deposit(s) should continue to at least the 3,000' level with possible significant improvements in copper grade and precious metals towards and beyond a "centre". Whether mineralization would terminate against a "centre" or continue on the other side (very possible) is unknown, but if so then there could be an additional 1000' to 3000' down to the 4500' or 6500' levels.

Zinc is known throughout the deposit but no records of the variations in grade or occurrence exist. The possibility of significant Zn-Ag-Pb-Cu-Au zones containing higher silver occurring in a lateral position within the volcanogenic sequence is considered very good.

To date the records show that they have mined two "ore types":

1. Crude (Basic) Ore (Smelting Ore) so-called

- basically massive pyrite-quartz with high copper (3% range) and gold (0.05 range), silver (1.5 oz range) with minor Pb-Zn in 1% range.

It is apparent from the records that the "massive pyrite" or crude ore sections vary considerably in copper content and that assay walls were used.

It is not clear how the Au-Ag values varies with the copper content. Some assay data indicate the Au-Ag values continue in the sulphides even if the copper content falls.

2. Siliceous Ore (Flux Ore)

- much higher quartz content and less pyrite. The chalcopyrite varies within this type and again assay walls are indicated. The Cu content is in the 1.5 to 3.0% Cu range with a lower Au (0.03 to 0.05 range and Ag 0.50 to 1.0 oz, Pb-Zn in the 1% range.

Analysis of Typical Ore

	Basic	Siliceous
Au	0.06 oz	0.04 oz
Ag	2.0 oz	1.5 oz
Cu	3.25%	3.0%
Pb	1.0%	1.0%
Zn	1.5	1.0
SiO ₂	42.0	57.0
Al ₂ O ₃	3.0	4.0
MgO	1.5	1.0
CaO	1.0	1.0
S	24.5	17.0
Fe	22.0	15.0

From the reports and assay data available, it appears that much of the x-cuts, samples and drill hole samples were only assayed visually for copper content and if of interest then actually assayed for Cu and not always for Au and Ag and only occasionally for Zn and Pb.

The following assays are from dump samples:

		oz/ton Au	oz/ton Ag	% Cu	% Pb	% Zn
AZ - 1	Massive Sulphide-Quartz	0.030	4.40	11.5	0.52	2.96
AZ - 2	Massive Sulphide-Quartz	0.005	1.20	2.36	0.34	1.28
AZ - 3	Siliceous (Qtz-Sulphide)	0.090	0.88	13.0	0.006	0.030

With todays gold and silver prices it will be necessary and I expect fruitful to carefully remap the workings and carryout a major sampling program underground with a view to delineating Au-Ag-Cu-Pb-Zn zones rather than Cu-Au-Ag alone.

In the past they defined their stoping relative to the copper content alone. The old drill data available show regular sections with mixed medium grade (1% to 2% Cu) and low grade (0.2% to 1.0% Cu) across widths of 10', 15', 20', 30' and longer sections. Total metals assay product could well make combinations of wider sections of milling grade ore.

ORE ZONES

Number 1 Zone

Extends from the surface to 1200' level. The operating management expected it to be picked up in the 1350 and 1500' level and recommended that the 1350 and 1500' levels be extended south through the #1 zone projection. It was cut (minor displacement) by major flat fault zone just below the 1000' level but continues strongly below the fault on the 1200' level.

Strike length varies from 140 to 220' and up to 18' thick and mined length of 1200'. The southern edge of this zone has not been explored from the 900 level down.

Only assays available on 1200 level:

Cu	Au	Ag	
2.40	0.10	2.10	
8'			Range

Also note here that some low grade copper samples still ran higher than the mine average in Au and Ag.

Number 2 Zone

The Number 2 Zone would appear to be separated from the #1 zone by a cross-cutting dyke (Lindgren Report).

It occurs from the 100 to 200' level down to 800' level where it appears to pinch out as mined, or perhaps phases out into number one shoot of which it is probably an original part.

Number 3 Zone

Extends from the surface down to lowest workings in the winze at 1550' where it is 20' thick at mine average grade (2.77 Cu) or (3% + Cu

over 15'). No Au or Ag values given. This zone varies from 80 to 200' strike length to 20' thickness and over 1550' in depth length. It appears to be increasing in strike length (260') in the 1400 and 1500' levels and maintaining good width 15' to 20' ranges.

The Number 4 Zone

The Number 4 Zone is continuous from surface to the 1200' level where it is affected by the major flat fault zone although management felt it continued through the fault but they had not developed this area to date. In the long section it appears to thin out and/or coalesce with the #5 zone in the 1000 to 1200' level.

The Number 5 Zone

The Number 5 Zone commences with the Blue Buck Shaft on the surface but does not appear to have been developed (open to exploration) to any extent until the 700 level where it apparently blossoms out into strike length of 300 foot range with widths up to 30 ft. and continues strongly to the 1200' level (extensively mined). It is much complicated by faulting on the 1200 and 1350 level. This area was just being opened up and explored when the mine was closed. Management felt that this would provide a prime development area to at least the 1500' level and for at least 300' below to the 1800' level.

Of special interest are the relative increases in strike length, width and two fold increase in apparent Au (0.08 to 0.10 oz) and Ag (1.5 to 2.0 oz Ag).

The sparse assay data in this area also indicated that Au-Ag values tend to continue in lower grade copper zones. It is apparent from assay and drill hole data available that copper was the main metal looked for and that no great attempt to delineate or recognize Au or Au-Ag was made.

The Number 55 Zone

The Number 55 Zone appears as a side zone between the 500' level and the 1200' level. It was mined extensively in the 955 and 1055' stopes but was not extensively explored or mined between the 800 and 500 levels. It is complicated by the fault on the 1200' and is unexplored below the 1200' and the operating management recommended extending the drifts on 1350 and 1500 to the projection of the 55 zone.

The exploration potential to the north of the 55 zone below the Blue Bell (Nob) blossom is wide open and considered to be very good potential.

Although nothing of interest was indicated by their drifting and drilling on the 800' level their work was inconclusive and careful mapping of the zones, faults, dikes and habit will allow a logical follow-up. There are certainly four separate sulphide horizons noted on the 410 level and 530 level (60 zone) which are weakly demonstrated on the 800' level. The area at depth is wide open and offers excellent exploration potential.

Of interest is drill data on my sections through the Blue Buck Shaft which shows the Iron Formation appearing in the Hanging Wall.

The records are poor so it is hard to tell if the Iron Formation has been in the Hanging wall throughout the whole mine, or is just coelesing with the base metal sulphides in places. This geology is of interest from the point of view of checking for significant gold zones.

MERCURY HALO PROGRAM

The use of mercury (Hg) vapour halos to indicate the possible presence of buried base metal sulphide zones along the "ore horizon" of the Blue Bell property is considered to be worthwhile. Boldy obtained excellent profiles over the Iron King and other deposits in a test survey carried out several years ago.

Stage 1 Scintrex Surface Hg gas program

Profiles every 200' along the ore horizon from 1000' north Nob Shaft through Blue Thunder to 1000' south of Blue Thunder extension.

Approximately 2.5 miles = 13,200' = 66 profiles.

Only require the baseline staked out and profiles marked, pace and compass profiles to be 1500' to 2000' long. Stations every 75' = 20 readings/line x 66 = 1320 readings.

Immediate follow-up of anomalous zones with 75' to 100' line intervals and 50' readings. Estimate 15 profiles x 800' = 240 readings.

Rental of Scintrex equipment and shipping for 15 day period = \$ 2,500.00

Plus 15 days field technician @ \$200/day = \$ 3,000.00

Expenses @ \$15/day = \$ 750.00

\$ 6,250.00

This program should provide from 2 to 4 locations for follow-up detail and then drilling for hidden sulphides along the zone.

Stage 1a Rock Sample Amoco drill holes @ 50' intervals and have analysed at Bondar Clegg

1200' ÷ 50' = 24 samples x \$ 5.00 = \$ 120.00

One day = \$ 300.00

Stage 2 Rock sample program from selected surface profiles

say 100 samples x \$5.00 = \$ 500.00
collecting cost.

Underground sample program along 800 level

say 150 samples x \$5.00 = \$ 750.00

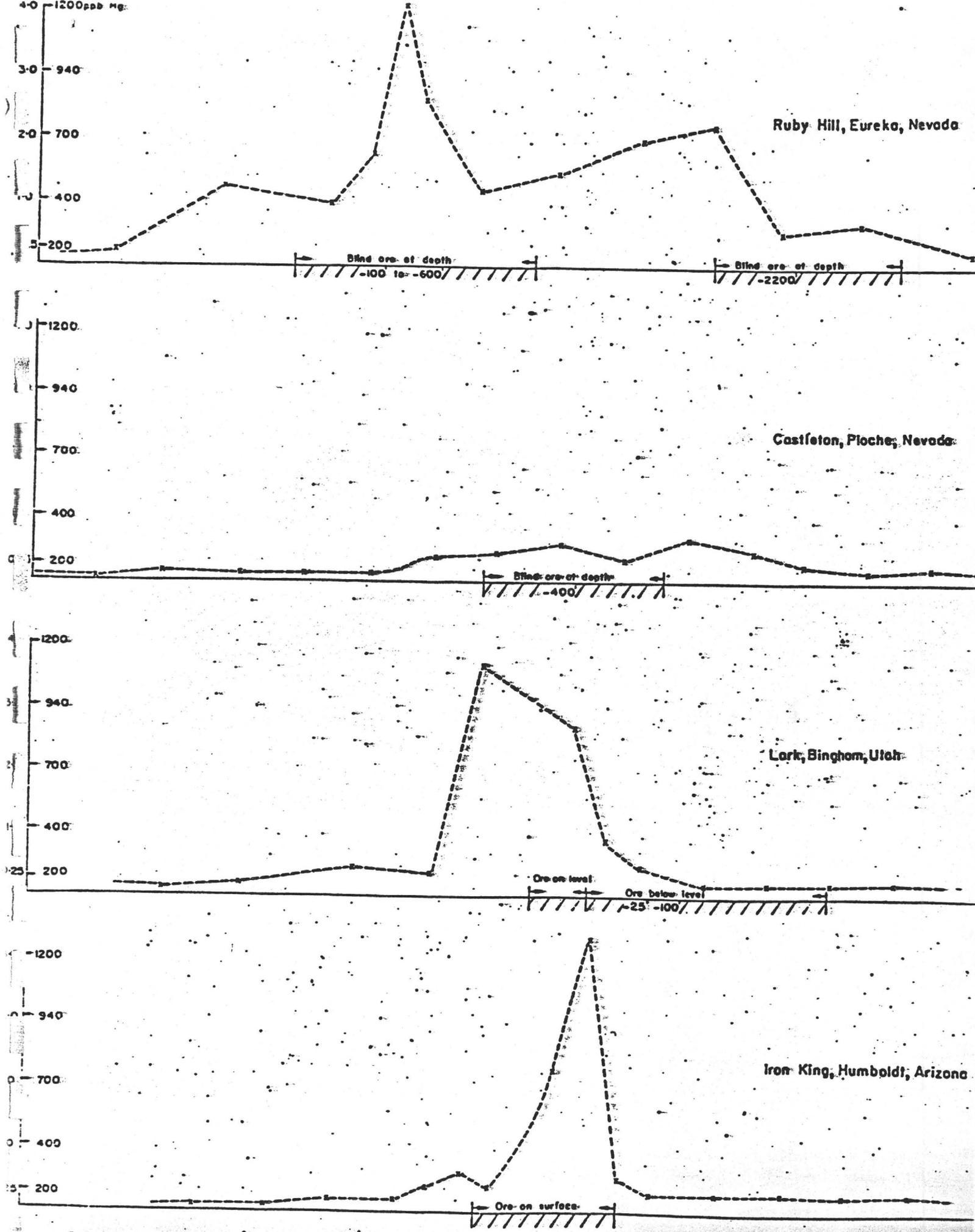
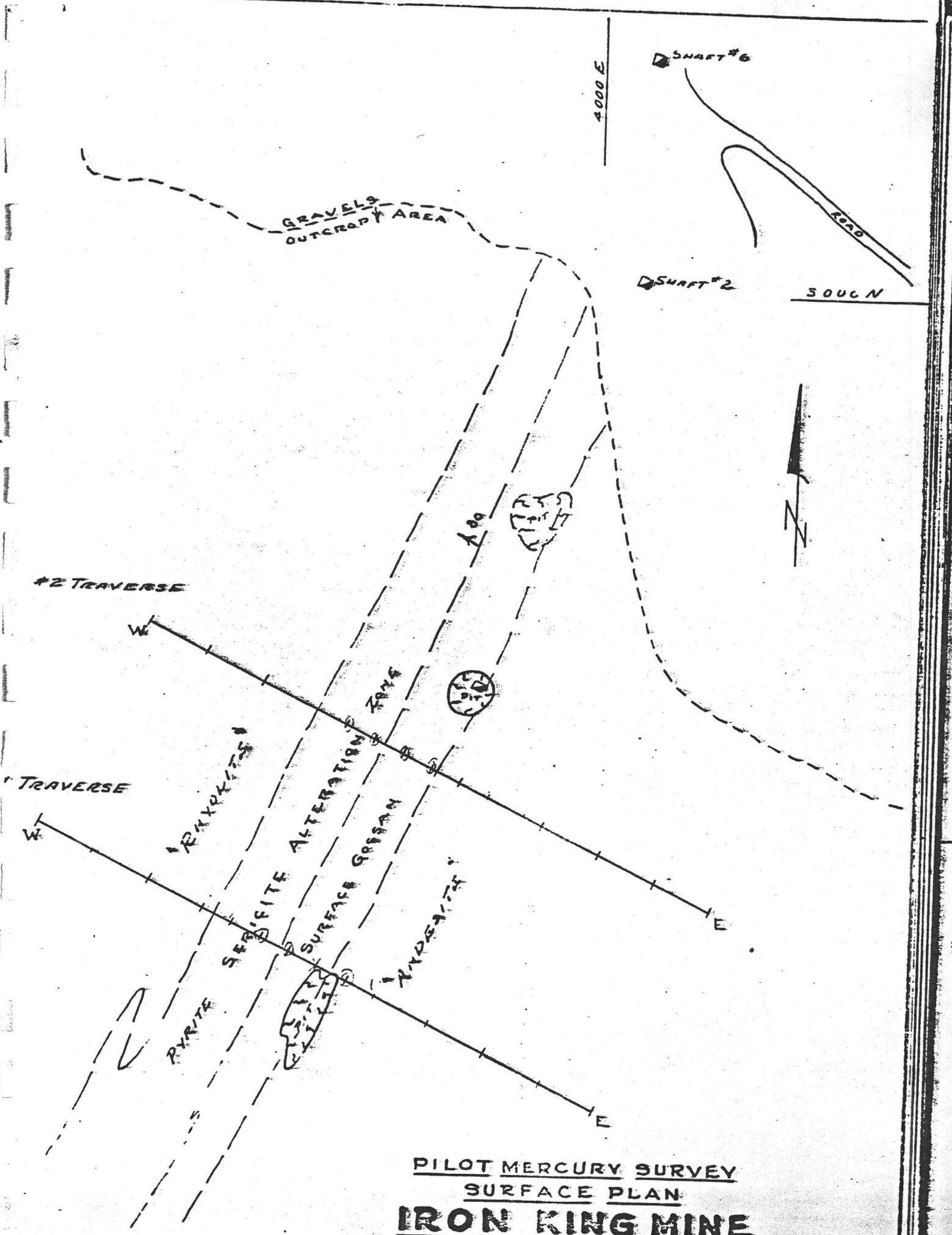
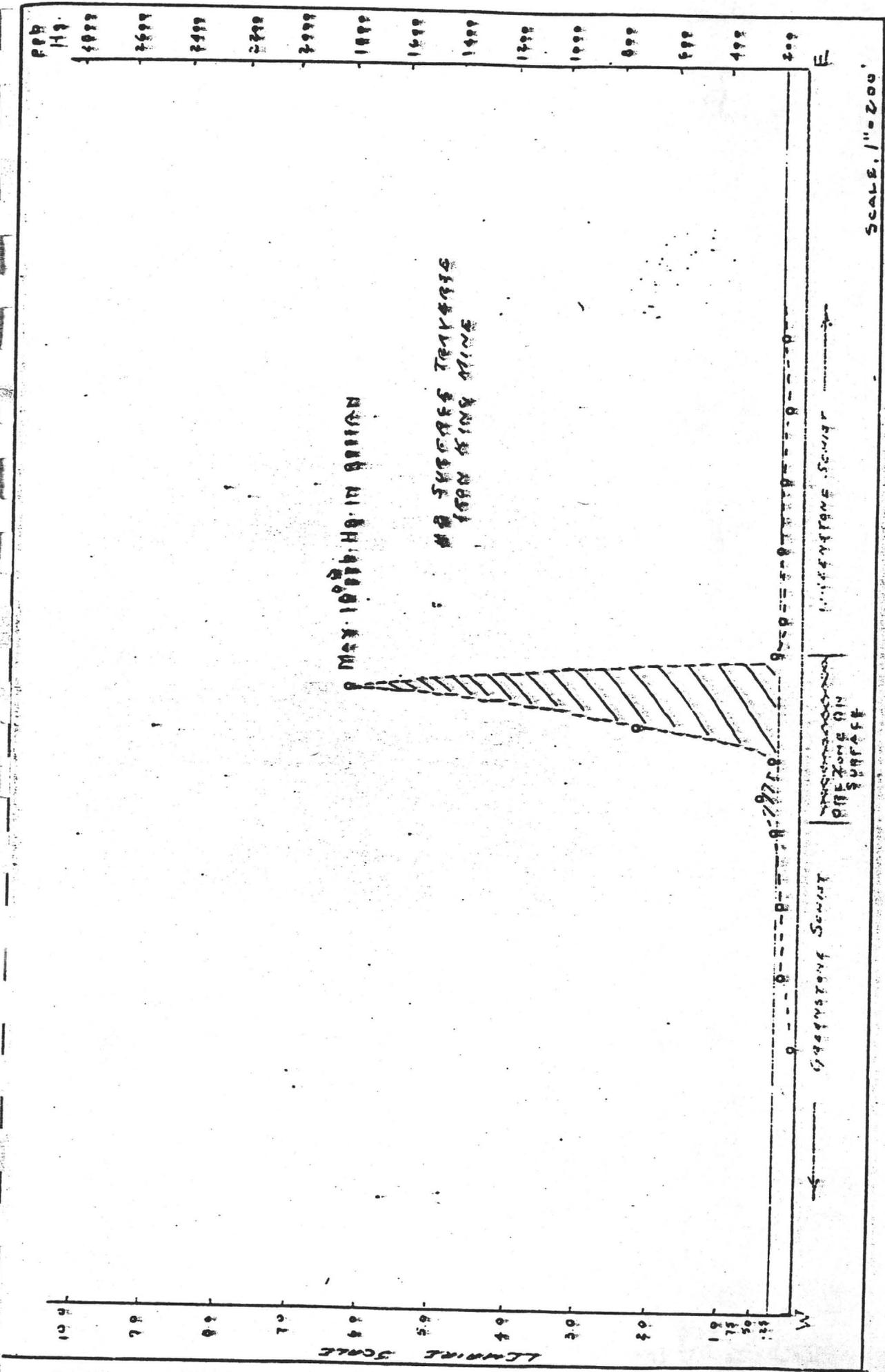


Fig. 5 Selected Rock-Chip Mercury Profiles, Nevada, Utah & Arizona.



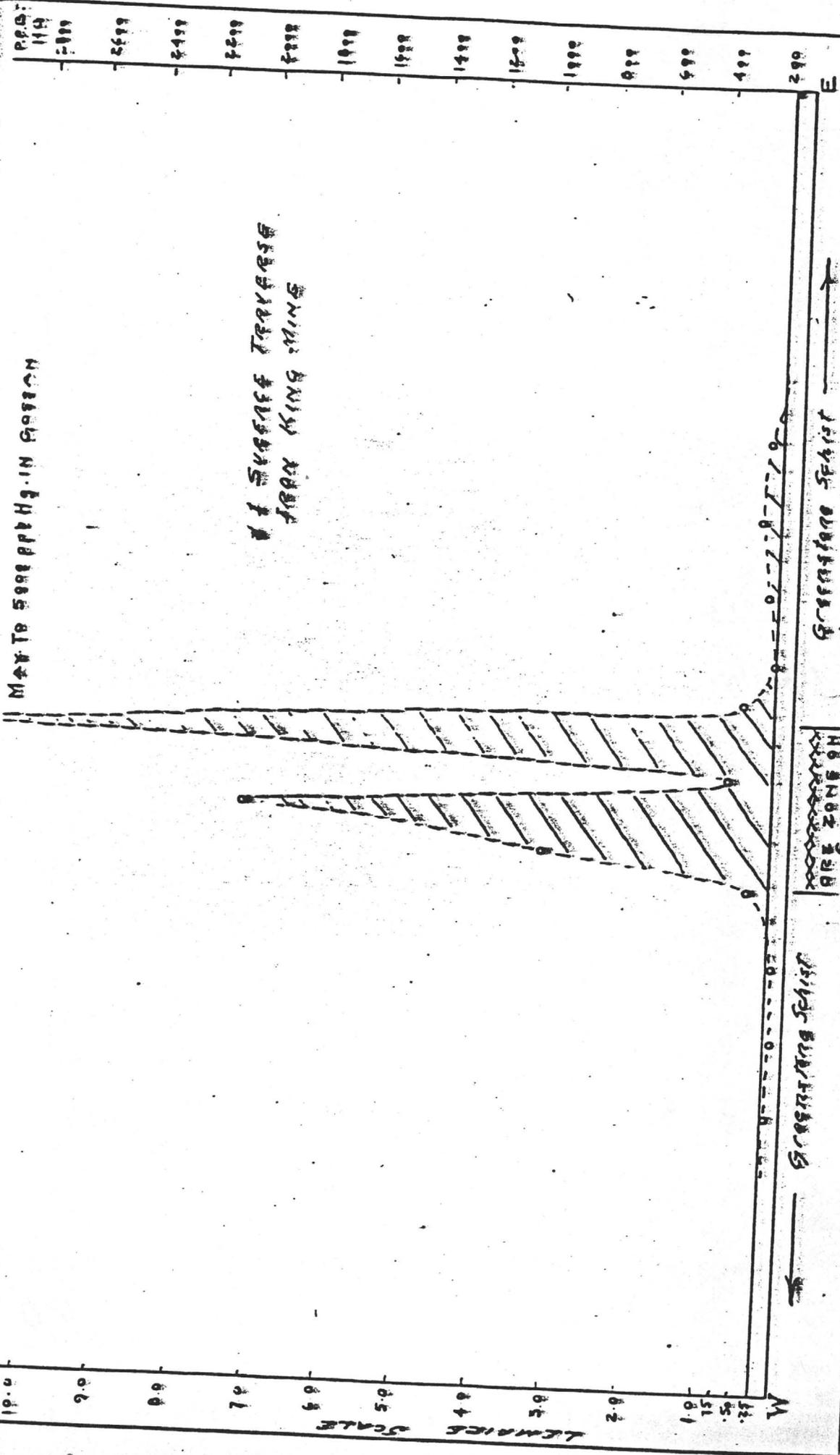
PILOT MERCURY SURVEY
 SURFACE PLAN
IRON KING MINE



PILOT MERCURY SURVEY
SHATTUCK DENN MINING CORP.
 IRON KING MINE
 HUMBOLDT, ARIZONA

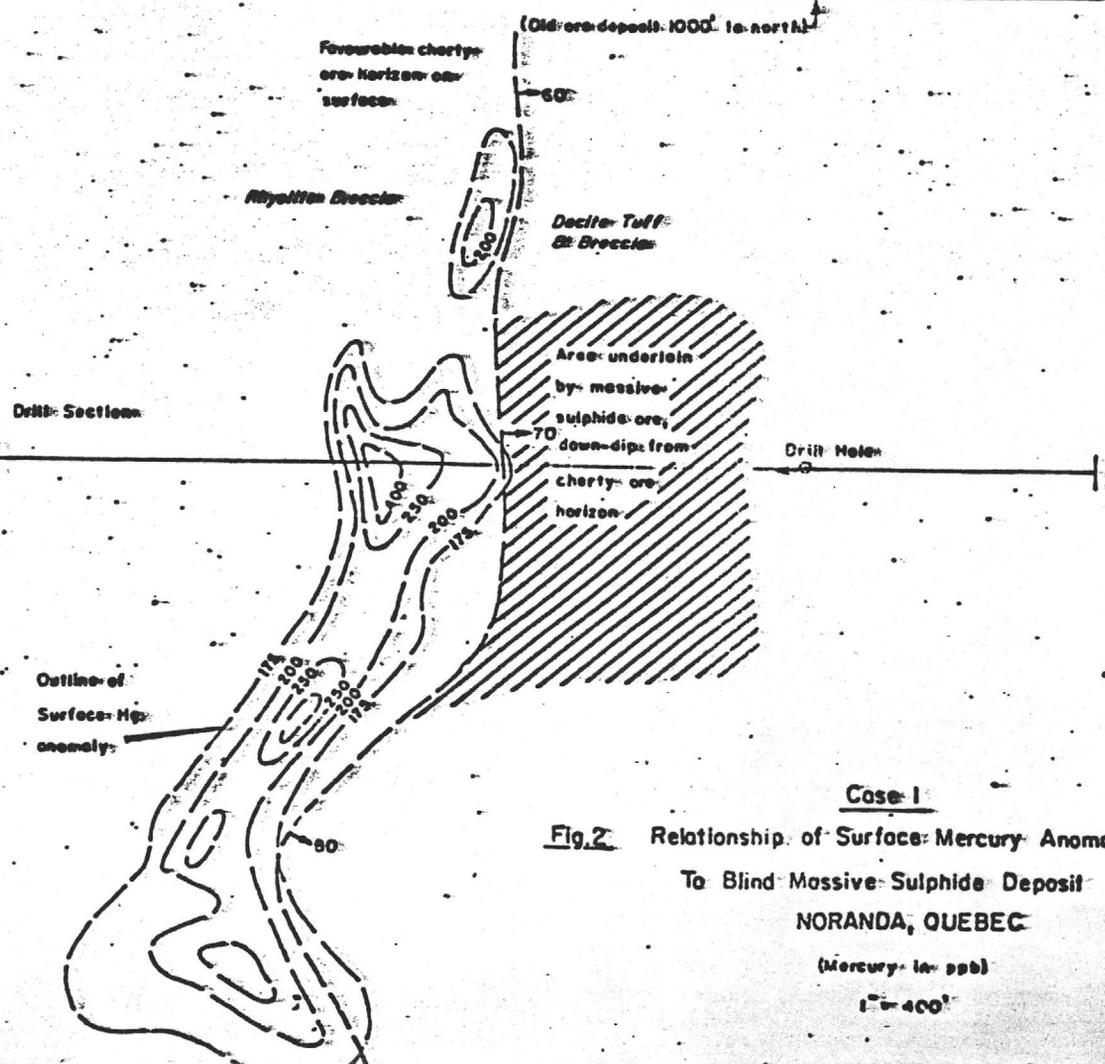
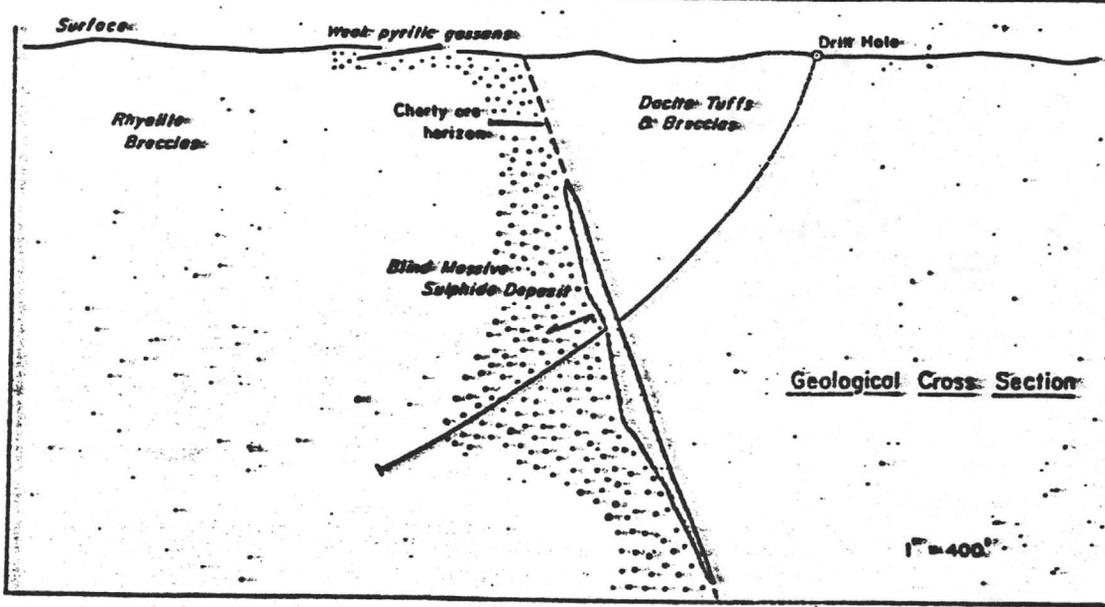
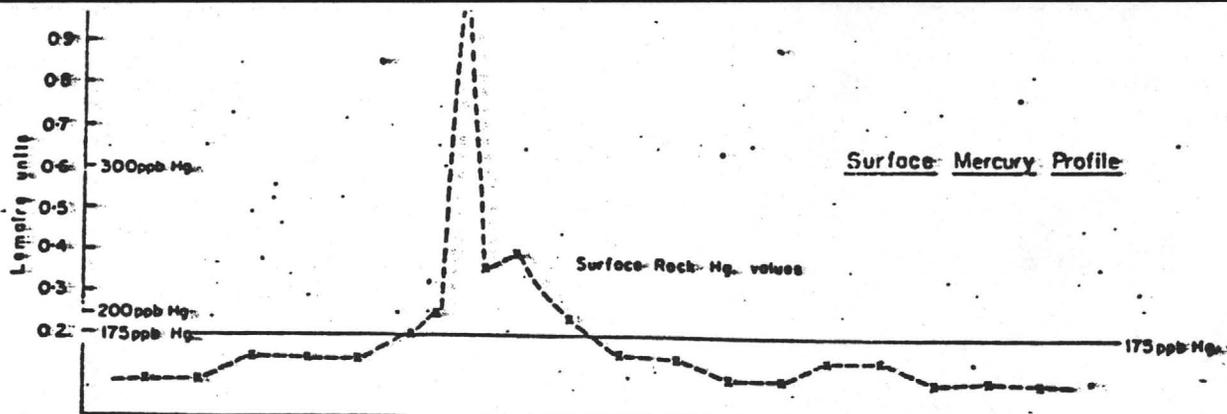
Map to 5000 ft. in Elevation

SHATTUCK DENN IRON KING MINE



SCALE 1"=200'

PILOT MERCURY SURVEY
SHATTUCK DENN MINING CORP,
IRON KING MINE
HUMBOLDT, ARIZONA



N.P. Area represents approx. 650 rock-chip samples.

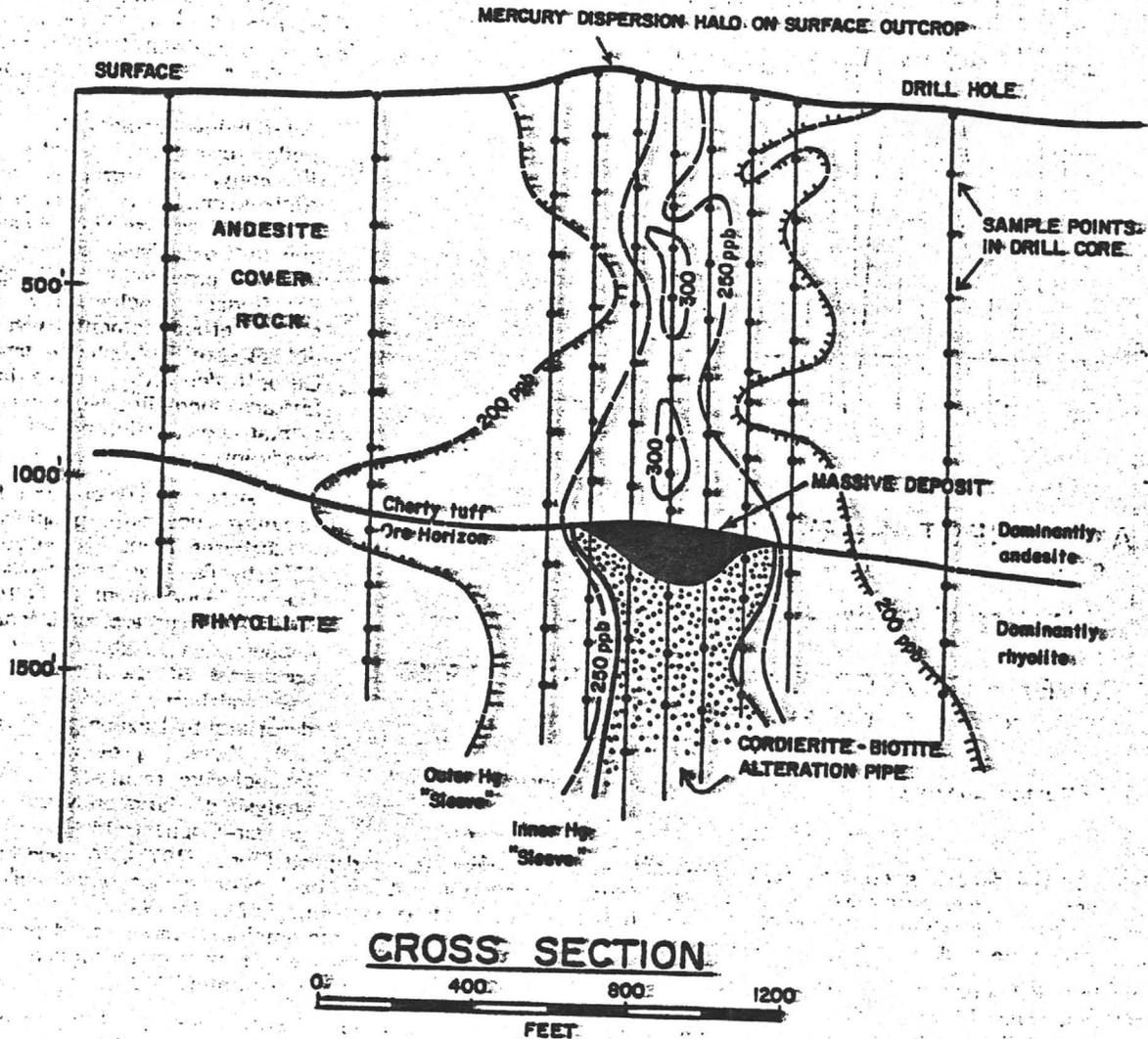
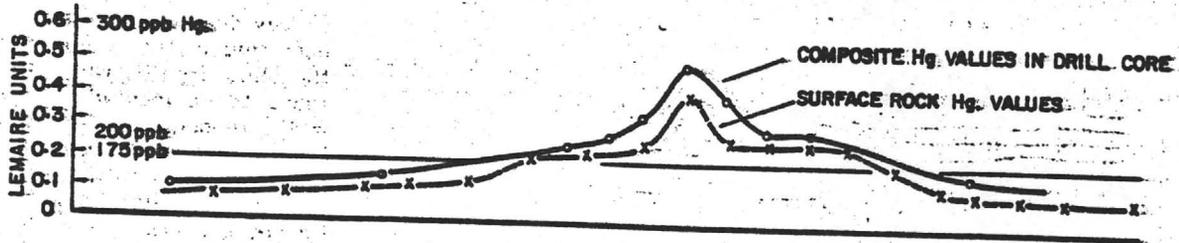


Figure 26.4. Section — Relationship of mercury dispersion halo to a blind massive sulphide deposit, Noranda district.

Much painstaking analysis of data was undertaken by various companies, based on interpreting drilling information, particular emphasis being placed on determining the surface configuration of the Waite rhyolite using isopachs and structural contour plotting of this felsic unit. This unit fortuitously dipped at a gentle angle, and combined with attention of stratigraphy due to faulting, was within reach of some exploratory drillholes. In addition, it was noted that deposits in this sector of the district tended to occur along trends of 070° and 350° relative to the location of the Waite deposit. In 1961, after a long barren period, hole drilled by Lake Dufault Mines discovered the Norbec deposit in Dufresnoy Township, 2 km northeast of the East Main, at a depth of 335 m. This discovery marked a turning point in the fortunes of Lake Dufault Mines.

Geochemical literature regarding the use of mercury as a pathfinder to discover blind sulphide deposits (Fursov, 1958; Ozerova, 1959; Hawkes and Williston, 1962) came to the attention of Falconbridge Exploration in 1963. In addition, previously published data on geochemical investigations of the East Tintic district, Utah (Lovering et al., 1948), revealed that meaningful information could be obtained by analyzing the trace element content of fractures uprake from blind deposits.

Analysis by Falconbridge of surface and drill core samples taken around the recently discovered Norbec deposit using a simple S-1 Lemaire detector, revealed easily detectable anomalous amounts of mercury in the 150-300 ppb range. A distinct primary dispersion halo was found to exist

Recommended Areas of Exploration Potential

Surface

1. Blue Buck to Blue Bell Shaft Area.

With objective of cutting the 3 or 4 footwall copper zones for geology and geometry. Good chance to intersect high grade enriched copper pods similar to the Blue Bell Shaft zones.

Approximately 6 holes x 400' = 2400' x \$15. = \$36,000

2. Blue Thunder Area

With objective of cutting the zones indicated by the adit and shaft mining (5000 tons of high grade) at 100' to 200' level.

2 holes x 400' = 800' x \$15. = \$12,000

3. Blue Thunder Extension (recently staked)

Objective to cross-section under the working to get an idea of the geology and mineralization.

2 holes x 400' = 800' x \$15 = \$12,000

Total Drilling 4000' x \$15 = \$60,000

If DDH = 4000' x \$30. = \$120,000

If percussion = 4000' x \$15. = \$60,000

Underground (Stages during dewatering)

As surveying and mapping follows with dewatering some diamond drilling will be required to follow up. The following areas are not necessarily in order of preference at this stage of knowledge.

1. 500 level Between Blue Buck and Blue Bell (Nob) both up and down to follow up mapping and any indications from the surface drilling.

Estimate 3 holes x 300' = 900'

900' x \$25 = \$22,500

2. 800 Level North between Blue Bell (nob) and 855 stage depending on existence of cross cuts in the hanging wall, consider running cross cut, 200' into HW about mid point.

Drill one hole SE - 50° = 350'

Drill one hole vertical = 550'

900'

This will test the 1000' and 1200' levels

900' x \$25 = \$22,500

X-cut = 200' x \$150 = \$30,000

\$52,500

800 Level Central

1.	Depending on mapping a -20° hole southeasterly from the shaft - No. 1 zone area to cut the entire footwall rhyolite pile.	600'
2.	Depending on mapping and location of old DDH holes, 66, 69, 70 etc. along the drift to Blue Thunder	
	2 holes in footwall @ 300'	600'
	1 hole in hanging wall 200'	200'
3.	Blue Thunder Area - Based on results of surface drilling and mapping on 800 Level and reconstruction of old DDH 62, 63, 64, 65, 67 and 50.	
	2 holes in footwall @ 300'	600'
	2 holes in hanging wall @ 300'	600'
		<hr/>
		2600'
	Follow-up - 2 holes x 200'	400'
		<hr/>
		3000'
	3000' DDH @ \$25/ft.	= \$ 75,000.
	Assume: 2 zones indicated =	
	2 x-cuts x 200' = 400' x \$ 150	= \$ 60,000.
	for drill stations plus 2 drill profiles	
	of 1200' = 2400' x \$25	= \$ 60,000.
		<hr/>
		\$195,000.
		<hr/>

1500 Level

Initial Program To test the downward extensions of 1530 and 1540 zones to about the 2400 level and the 2900 level.

1. 1530 Zone = X-cut 500' into HW from stage area.

1540 Zone X-cut 500' into HW from stage area.

$$1000' \times \$150 = \$ 150,000$$

Each area drill : 1 hole @ -45° = = 650'

1 hole @ -75° = 900'

1 hole vertical = 1300'

2850'

$$2850' \times 2 = 5700' \times \$25./ft. = = \$ 142,500.$$

\$ 292,500.

OR USE

2. One X-cut and Drift south and north

X-cut = 500'

$$1200' \times \$150. = \$ 180,000.$$

Drift south = 700'

X-cut and slash drill station

$$= 3 \text{ holes} = 2850' = 28 \text{ days}$$

$$\text{to } \# 1510 \text{ stope} = 3 \text{ holes} = 2850' = 28 \text{ days}$$

Intermediate holes,

$$\text{@ } 100' \text{ intervals, } -45^\circ = 6 \times 650' = 3900' = 39 \text{ days}$$

(test to 1900)

$$9600' = 95 \text{ days}$$

$$9600' \times \$25. = \$ 240,000.$$

\$ 420,000.

Drift North 700' to 1550 stope are x \$150 = \$ 105,000

Drill 1540(@ 350 North) 3 holes = 2850 = 28 days

Drill 1550(@ 600 North) 3 holes = 2850 = 28 days

Intermediate Holes @ 100'
Intervals, -45° = 2600 = 26 days

8300 = 84 days

8300' x \$25 = \$ 207,500.

\$312,500.

Would indicate (10,30,40,50 stopes from 1500 level)

From
1500 to 3000' Level x 750 t/ft x 1000 t/ft x 1250 t/ft

1,125,000 t. 1,500,000 t. 1,875,000 tons

In addition exploration potentials in the 60,70 zones underlying the Blue Bell could provide:

0 to 1500 level @ 300 t/ft = 450,000 tons

1500 to 3000 level @ 400 t/ft = 600,000 tons

1,050,000 tons

In addition zones south of the 10 zone, between and including the Blue Thunder:

0 - 1500 level @ 300 t/ft = 450,000 tons

1500 - 3000' level @ 500 t/ft = 750,000 tons

1,200,000 tons

SUMMARY

1.	<u>Surface Percussion</u>	Chip sampling	
		4000' x \$15 =	\$ 60,000
		15 day program	
2.	<u>Underground (DDH)</u>		
		500 level north = 900' x \$25 =	\$ 22,500
		800 level north = 900' x \$25 =	52,500
		(includes 200' x-cut x \$150)	
		800 level south = 3000' x \$25 =	195,000
		1500 levels	
		x-cut and drifts = 1900' x \$150 =	285,000
		Drilling 18,000' x \$25 =	450,000
			<hr/>
			\$1,065,000
		Supervision and Travel.	200,000
			<hr/>
			\$1,265,000
			<hr/>

This is a ballpark estimate. Therefore, apart from the cost to rehabilitate and dewater the workings and be set up to operate it will cost in the order of \$1,200,000 to \$1,500,000 to test and indicate (not prove) the ore potentials (1.5 to 3.0 million tons) between the Blue Bell and the Blue Thunder (4200') down to the 3000' level. This program is staged and could be cut down or expanded depending on results.

A minimum of \$750,000 to \$1,000,000 in underground and surface exploration in addition to dewatering and rehabilitation costs will be spent before a no go - drop the property decision could be taken if the tonnage/grade requirements are not found.

TENTATIVE PROGRESS SCHEDULE

1982

- January
(Dec. 1981)
- Commence Shaft Collar Rehabilitation and dewatering.
 - Plane table mapping of surface geology
 - Initial percussion drilling surface
 - Tests on recovering copper from mine water
 - Detailed mercury sampling program to test for additional hidden sulphide bodies along and across the ore horizon stratigraphy.
- Feb/Mar.
- Start underground surveying and mapping
 - Dewatering and shaft rehabilitation continuing
 - Sampling
- Mar/Apr.
- 500 and 800 levels available for mapping and to start underground diamond drill program.
 - Sampling
 - Dewater and rehabilitation continuing
 - Possibly run tests on flood-sprinkle water system on Nob shaft high grade stope area for copper water recovery system 500 level
- May/June
- Mapping, drilling and sampling continued
 - Copper water tests continued
 - End of June on 1500 level
 - Initial mapping and drilling on 800 levels well advanced
- By June 30
- Expect to recommend a follow-up program off 800 level to depth 1500 level in area north of the 850 stopes and south between 810 stope and the Blue Thunder and under the Blue Thunder.

Tentatively - 3 x-cuts x 400' = \$180,000

One drill profile each x-cut

2500' x 3 = 7500' x \$25 = \$187,500

\$367,500

July/Aug. - Driving x-cuts for DDH stations off 1500 level

About 15'/day (70 tons/day) - 300' = 20 days

500' x-cut = 34 days

- Start DDH on 1500 level

- Completed mapping and initial drilling in 800 level

with recommendations to develop ore off the 800 level

Sept/Oct/Nov.

-1500 level from x-cuts: Two headings, north and south.

(140 tons/day) = 47 days each

- By March, 1982 have specific data completed on feasibility of making cement copper from mine water and possible spraying of certain old stope areas for production system with view to income or storing production for 3 to 8 months to capitalize on expected rise in metal prices.

i.e. 100,000 lbs. contained Cu @ \$.80 = \$ 80,000

@ \$1.20 = \$120,000

@ \$1.40 = \$140,000

- 1500 Level. Continue with 2 DDH (one north and one south) and depth profiles.

Coring rate @ 100'/24 hour period

Drifting rate @ 15'/24 hour period

Dec/82

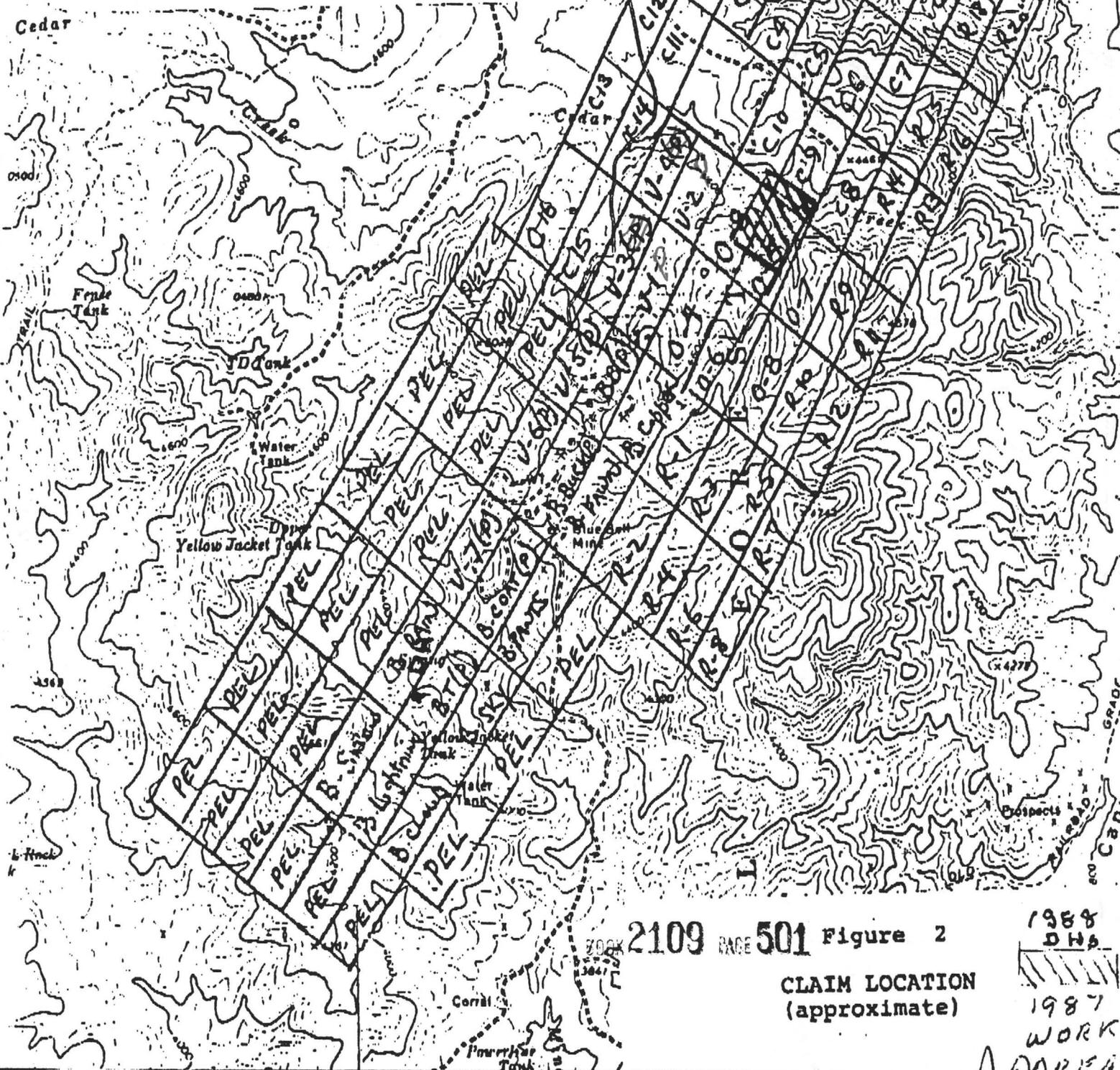
- Completed basic exploration drifting in 1500 level and initial phase of main diamond drilling.

CLAIMS:

- R = Rain
 - O = Only
 - V = Victory
 - C = Cedar
 - B.Sky = Blue group
- } Owens option

PEL = Pronto Explorations

(P) = patented



2109 PAGE 501 Figure 2

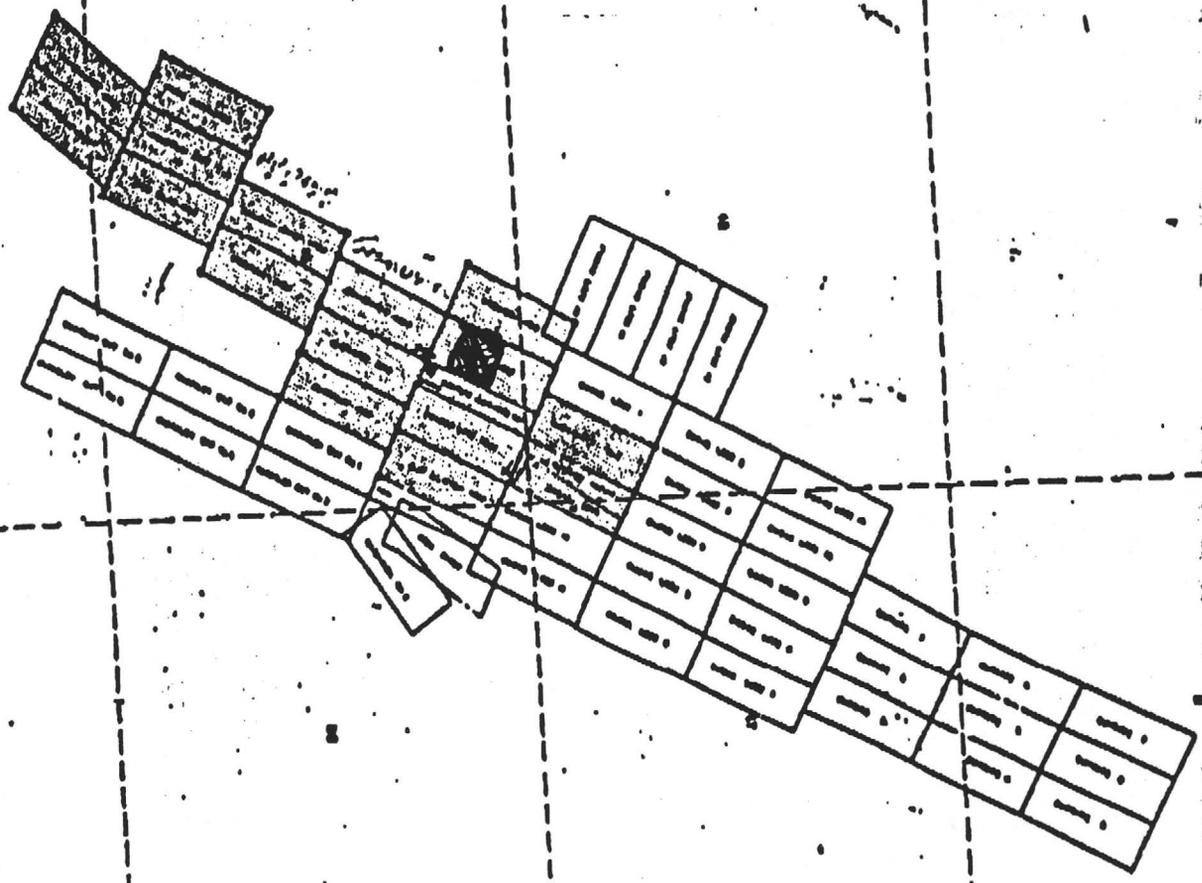
CLAIM LOCATION (approximate)

1988
DHS
1987
WORK
DARSH

R1W

T
11
N

R1E

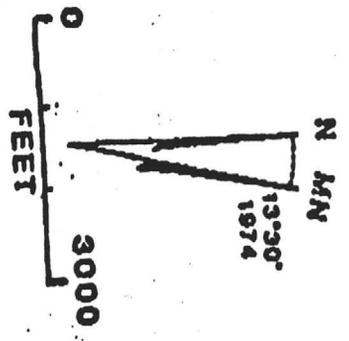


DE SOTO MINE AREA
 YAVAPAI COUNTY, ARIZONA

CLAIMS LOCATION



1988
 : 987
 WORK
 AREA



R.D.L. 2/81
[Signature]
 TUB# 0030

Blue Bell Mine

Level 900'

.044 opt Au } x 45'
4.00 % Cu }

.045 opt Au } x 138'
2.97 % Cu }

.053 opt Au } x 83'
2.54 % Cu }

Level 1000'

.042 opt Au } x 45'
2.28 % Cu }

.053 opt Au } x 60'
2.31 % Cu }

.124 opt Au } x 389'
3.66 % Cu }

Level 1200'

.074 opt Au } 38'
1.72 % Cu }

#1

92 unpatented claims

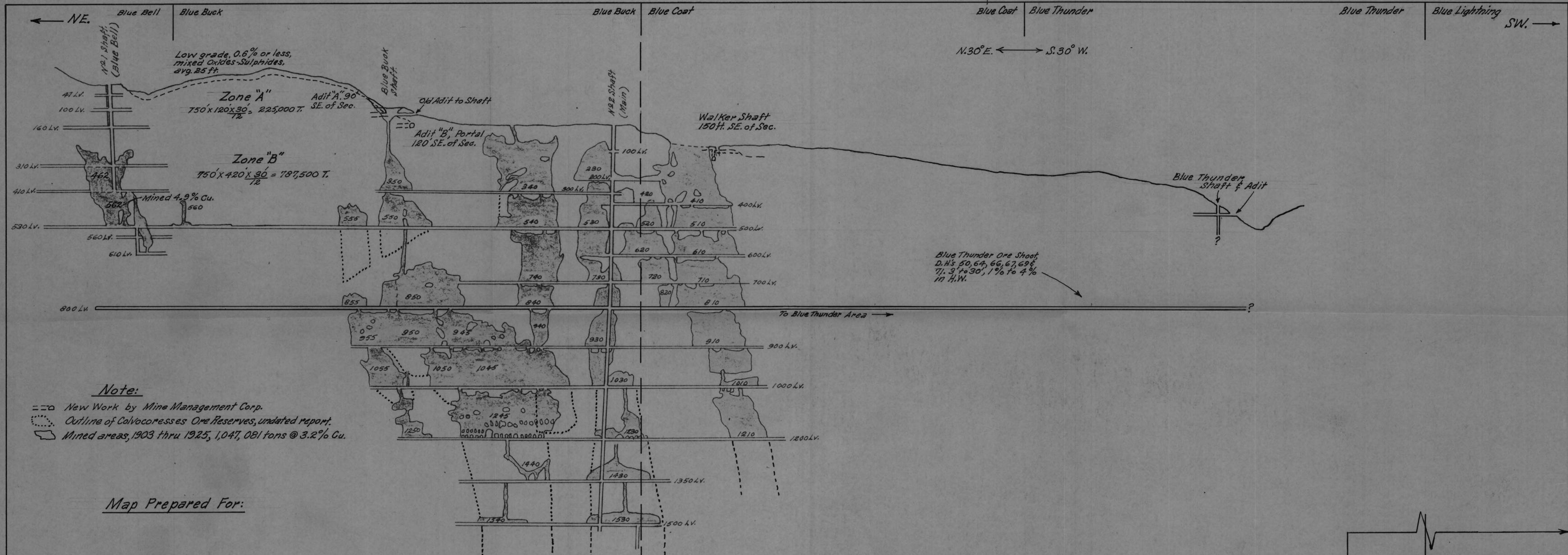
9 patented claims.

1400' Level

.102 opt Au } x 69'
2.59 % Cu }

.079 opt Au } x 45'
2.07 % Cu }

.160 opt Au } x 118'
2.73 % Cu }



Note:
 = = = New Work by Mine Management Corp.
 --- Outline of Calcocresses Ore Reserves, undated report.
 Mined areas, 1903 thru 1925, 1,047, 081 tons @ 3.2% Cu.

Map Prepared For:

1972-73 PROGRAM

1973-74 PROGRAM

LONGITUDINAL PROJECTION
 BLUE BELL MINE
 YAVAPAI COUNTY, ARIZONA
 SCALE: 0 50' 100' 300' 500'
 AUG. 28, 1973 R.E. MERITZ
 MAP No. _____

GAP

DEKALB Mining, Inc.

MEMOTO: File

DATE: March 15, 1982

FROM: G. A. Parkison

SUBJECT: Bluebell Mine, Yavapai County, Arizona

Pronto Exploration Ltd., of Toronto, Canada, sent to DEKALB Mining a joint venture proposal regarding the Bluebell mine. Reports authored by David Rogers, Glenn Clark, and Jim Proudfoot were included in the proposal, as well as some copies of old mine maps. The area was visited by R. J. Miller, G. A. Parkison, and K. M. Emanuel on March 3, 1982.

The Bluebird mine operated intermittently from about 1900 to 1940. Total production was about 1,000,000 tons of ore grading 3.2% Cu, .06 oz./T Au, 1.5 oz./T Ag. Ore was extracted from four steeply-dipping shoots up to 30 feet thick and 100 feet or so long and down to the 1500 level. Ore was developed at the top of a quartz porphyry rhyolite unit (now quartz sericite schist) which is overlain by a fragmental mafic metavolcanic unit. All rock units are of Precambrian age. Surface examination suggests that "stringer" type massive sulfide ore was mined. The geology of the area is considered quite good for additional massive sulfide volcanogenic deposits.

The underlying agreement between Pronto and Sherwood Owens, the owner, is not good. It calls for option payments of \$75,000 to be paid by October, 1982, and an additional \$150,000 by October, 1983, with another \$600,000 being paid October 1984. Pronto proposes an expenditure of \$1,500,000 to earn a 50% interest. Pronto is proposing to spend a total of \$350,000 during the next two years to rehabilitate the main shaft to the 1500 level and examine, explore, and develop additional tonnage below and adjacent to the main Bluebell orebody.

The underlying deal is not good, and the exploration proposal by Pronto is probably not realistic. For these reasons DEKALB has turned back the property. R. J. Miller will write a letter to David Rogers of Pronto to this end.



DEKALB Mining, Inc.

MEMO TO: File

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copy to me and RTM

GAPMMO3
BI

Mar 9, 1982

~~Blue~~ From: GAF
Memo To: file: ~~RE~~
Re: Bluebell Mine, Yavapai County, Arizona

and K/M Emmanuel
March 3, 1982

~~The Bluebell Mine was~~
Pronto Explorations, Ltd. of Toronto, Canada sent to DEKALB Mining a joint venture proposal regarding the Bluebell Mine. The reports authored by David Rogers, Glenn Clark and Tim Proudfoot were included in the proposal as well as some ~~old~~ copies of old mine maps. The area was visited by RT Miller, GAFakeson

The Bluebell mine operated intermittently from about 1900 to 1940. Total production was about 1,000,000 tons of ore grading 3.2% Cu, 0.6% Pb or TAg, 1.5% Zn or TAg. Ore was extracted from four steeply-dipping shafts up to 30 feet thick and 100 feet or so ~~wide~~ long and down to the 1500 level. Ore was developed at the top of a quartz porphyry schist unit (now quartz sericite schist) which is overlain by a fragmental mafic metavolcanic unit. All rock units are of Precambrian age. ~~The~~ Surface examination suggests that "stringer" type massive sulfide ore was mined. The geology of the area is considered quite good for additional massive sulfide volcanogenic deposits.

The underlying agreement ~~with~~ between Pronto and Sherwood ^{owners} (Dover), the owner, is not good. It calls for ~~option payments of~~ \$75,000 to be paid by Oct. 1982, and additional \$150,000 by Oct. 1983, and ^{or additional} 600,000 by Oct. 1984. Pronto proposes an expenditure of \$1,500,000 to earn a 50% interest. Pronto is proposing to spend a total of \$3,500,000 during the next two years to rehabilitate the main shaft to the 1500 level and examine, explore and develop additional tonnage below and adjacent to the main Bluebell orebody.

~~The deal is too steep~~

The underlying deal is not good and the exploration proposal by Prato is probably not realistic. For these reasons DEKALB has turned back the property. R.J. Miller will write a letter to David Rogers of Prato to this end.

copy to me and RJM

Mar 9, 1982

~~Blue~~ From: GAB
Memo To: file: ~~RE~~
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and KM Emmanuel
March 3, 1982

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regarding the Bluebell Mine. The reports authored by
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old mine maps. The area was visited by RJ Miller, GAB Jackson

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the next two years to rehabilitate the main shaft to the
1500 level and examine, explore and develop additional
tonnage below and adjacent to the main Bluebell orebody.

~~The deal is too steep~~

The underlying deal is not good and the exploration proposal by Puerto is probably not realistic. For these reasons DEKALB has turned back the property. R.J. Miller will write a letter to David Rogers of Puerto to this effect.



DEKALB MINING, INC.

1000 PETROLEUM BUILDING • 110-16TH STREET • DENVER, COLORADO 80202 • PHONE 303/292-0980

Robert J. Miller
Executive Vice President

March 10, 1982

Mr. David P. Rogers
Vice President
Pronto Exploration Ltd.
881 Lady Ellen Place, Suite B
Ottawa, Ontario, Canada K1Z 5L4

Dear Dave:

We have received and studied the information on the Blue Bell Mine, Mayer, Arizona, and have visited the property. Although we find the geology very prospective, we feel the underlying agreement is not to our liking at this time. The option payments are too high for us and would not allow us sufficient time to find sufficient ore to justify a new mining investment. Thus we prefer to explore properties at an earlier, less-expensive stage of development. We think your program has a relatively good chance of ultimate success and wish you the best of luck in carrying it out.

Thanking you again for the opportunity to see the data, which is returned herewith.

I am,

Yours sincerely,

Robert J. Miller

RJM/cmf

cc: J. Proudfoot
G. Parkison ✓

Enclosures