

**AUDIT OF MINERAL RESERVE ESTIMATE**  
**With NOTES on Changes to**  
**TECHNICAL REPORT 43.101**

**PIMENTON MINE**

**Region V, Chile**

Property owned by  
Compañía Minera Pimentón  
a Subsidiary of  
South American Gold and Copper Company Ltd.

Report Prepared by  
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March, 2005

**NOTES ON CHANGES TO  
PIMENTON MINE PROJECT TECHNICAL REPORT (June 2002)**

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### 3. SUMMARY

As requested, I have reviewed the Mineral Reserves Estimate prepared by the Pimenton Mine Staff, which can be summarized as follows:

	<u>Tonnes</u>	<u>Gold gpt</u>	<u>Copper %</u>
<b>Proven Mineral</b>	16,112	15.33	1.32
<b>Probable Mineral</b>	41,920	15.19	1.31
<b>Total Mineral Reserves</b>	58,032	15.2	1.3

The estimate uses the same reserve blocks, procedures, and methodology which were applied in June 2002 to arrive at the Mineral Reserve for restarting the Pimenton Mine.

As in the original estimate, Proven blocks are derived from Measured Resource blocks (estimated to extend 5 meters above and 5 meters below a drift where samples taken every 1.5 meters along a vein give a weighted average of Gold equivalent grade which exceeds the Cutoff grade over a length of 20 meters or more). Probable blocks are derived from Indicated resource blocks (estimated to extend an additional 15 meters above or below a "measured" block). In the present estimate, the calculated volumes (vein width \* length \* height of block) are converted to metric tonnes by multiplication by a tonnage factor of 2,75 tonnes per cubic meter. The 2002 estimate used 2.9 tonnes per cubic meter (assuming less overall dilution with cut-and-fill mining.)

The conversion from Resources (measured & indicated) to Mineral Reserves (proven and probable) was made by applying mining dilution and mining recovery to the resource tonnes.

Grades from sublevels have been incorporated in the estimate where appropriate. Raises driven above stoping blocks have generally confirmed the vertical continuity of the vein structures between 3430 level and 3470 level, improving the confidence level of the estimate. However, sample data from the raises have not been included in the Reserve Estimate of grade.

One parameter that has changed is the planned mining width. During the initial months of operations, the mining method was changed from "cut-and-fill with resuing" to "open stoping with stull support." This method is expected to be more productive and involved an increase in planned mining width from 55 centimeters to 80 centimeters. This higher planned dilution results in lowered mining grades to the mill (which has been a reality in the first six months of operations). The overall gold production is planned to be increased by taking advantage of the currently unused milling capacity.

During my visit to the mine on February 12, 2005, I was able to confirm the approximate status of mineral extraction as of the end of 2004, following some 7 months of production operations. The Mineral Reserve Balance is approximately as follows:

Starting Reserve 2004	67,800
Additional dilution allowance	<u>10,170</u>
Subtotal	77,970
Less	
Extraction from Reserves	-16,033
Blocks removed from Reserve	- 6,600
Plus Production outside of reserve	<u>+ 3,246</u>
Net Change in 2004	- 19,387
Ending Mineral Reserve 2004	58,583

In addition, Pimenton has Mineral Resources estimated as follows:

**Mineral Resources (additional)**

	<u>Tonnes</u>	<u>Gold gpt</u>	<u>Copper %</u>
Inferred Class A	28,700	15.31	1.33
Inferred Class B	171,020	19.37	1.61
	<u>199,721</u>	<u>18.8</u>	<u>1.6</u>

These Inferred Mineral Resources are distinct from the reserve categories reported above. The Class A Inferred Resources are projections from 20 to 40 meters vertically above or below the established reserve blocks as defined by channel sampling on existing level(s). This material was previously classified as "possible" ore reserves under the previous mining disclosure NP-2A guidelines. This resource (Inferred Class A) is assigned a fairly high probability of being converted to Mineral Reserves as development progresses on the new 3,390 level with drifting planned on the Lucho, Leyton and Michelle vein structures.

My conclusion is that the 2005 Pimenton Mineral Reserve and Resource estimate uses appropriate methods and data for projecting tonnes and grades from sampling of the mining stopes, sublevels, and raises.

**SEAL**

**Signed John J. Selters, P.E**

**Registered Professional Engineer  
In Mining Engineering  
N° 11381 State of Colorado**

(under s. 8.1 of NI 43-101)

**Re: Technical report (the “Report”) on the Reserves and Proposed Operating Plan for the Pimenton Mine, Region V, Chile (the “Property”) of South American Gold and Copper Company Limited (the “Company”) pursuant to National Instrument 43-101 (“NI 43-101”)**

**I, John J. Selters**, residing at Robinson Crusoe 1150, #903, Las Condes, Santiago, Chile, do hereby certify that:

1. I am an Independent Consulting Mining Engineer working for the Company.
2. I am a graduate of [Colorado School of Mines](#), with a [Engineer of Mine Degree](#), and have practiced my profession continuously since 1961; working in Peru and Chile from 1961 through 1971 and in Chile from 1988 to the present.
3. My statement of qualifications is attached. Recent relevant experience is as follows:
  - (a) El Indio (Santiago, Chile) - President of gold and copper mining company with operations in the high cordillera producing 300,000 ounces per year of gold and 35,000 tonnes per year of copper. Mining systems included mechanized cut-and-fill with segregation of extremely high grade ores for direct shipping to smelters.
  - (b) Minera Can Can (Copiapó) - Gold mine: Mining Consultant responsible for conceptual design of underground mining systems for improvement of recovery and head grades.
  - (c) Minera Cobrex (La Serena) - Copper mine: General Manager 1993 - 1994. Revised underground mining systems and develop new reserves to allow expansion of flotation plant from 400 tpd to 1200 tpd.
  - (d) Minera San Esteban (Copiapó) - Gold-copper mine: Consultant on mining system planning and general operations improvement for three underground vein mines and a central flotation plant.
  - (e) Minera Carola (Copiapó) - Copper mine producing 2500 tpd. Design and conceptual planning assistance on longer term mine operating strategy and design for underground blasthole stopes for steeply dipping copper orebodies.
  - (f) Andina Mine (Los Andes, Chile) 1968 to 1971, General Mine Superintendent during construction and startup of a 10,000 tpd block

cave copper mine. Snow and avalanche safety systems applied in conditions similar to Pimenton Mine site.

- (g) Cerro De Pasco Corp. (Peru) (1961 to 1968) Various positions; starting from Mine Foreman at Morococha, where I supervised mining of narrow veins with cut-and-fill and shrinkage systems. In 1966 I was appointed Project Manager for the design, construction, and initial operations of the 1000 tpd Cobriza flotation plant and underground mine producing copper concentrates from a remote location with self-contained campsite and power generation facilities.
4. I am a Professional Engineer registered with the Colorado State Board of Registration for Professional Engineers. I am also a member of the Canadian Institute of Mining, and the Society of Mining Engineers of AIME (USA).
  5. I am a “qualified person” for the purposes of NI 43-101.
  6. I prepared a Preliminary Review of Feasibility for the Pimenton Mine in 1999, up-graded to a Preliminary Feasibility study in September of 2002. I reviewed the Mineral Reserve Estimate in February 2005.
  7. I last visited the Property in February of 2005 for a period of one day.
  8. I am the author of the Report (writing sections 1 through 8; 13 through 26). Sections 9 through 12 were abstracted from earlier reports on the geology of the property.
  9. I am not aware of any material fact or material change with respect to the subject matter of the Report that is not reflected in the Report, of which the omission to disclose would make the Report misleading.
  10. I am independent of the Company upon application of the tests set out in section 1.5 of NI 43-101.
  11. I have read NI 43-101 and Form 43-101F1 and the Report has been prepared in compliance therewith.

**DATED** this 28th day of February  
, 2005

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[John J. Selters]

[Original has QP Seal]

#### **4. INTRODUCTION AND TERMS OF REFERENCE**

All basic terms of reference remain the same as in the original July 2002 Technical Report.

Overhand cut-and-fill stoping is a system consisting of drilling and blasting a sequence of overhand cuts, removing the ore with scrapers or mechanical loaders and filling the space to an appropriate level to provide a working floor for drilling the next cut. In the “resuing” variation of cut-and-fill, the narrow vein is blasted onto a temporary floor, with the high-grade material being scraped to a central raise for gravity passage to the level below. After two short cuts in the vein, the flooring is removed and a section of the footwall waste rock is blasted and in the stope. After introducing enough external fill to bring rock up to the desired level, the temporary floor is placed again to repeat the extraction cycle.

Stull Stoping has been introduced as the principal mining method. This is an overhand, open- stoping technique applied to narrow veins where-in drillers work from temporary flooring planks placed on “stulls” ( or short posts placed at right angles between the hanging wall and footwall of the vein). The broken ore falls by gravity to the stope bottom where (at Pimenton) it is moved by scrapers to loading chutes for transfer to underground haulage trucks.

##### **b) Purpose**

This report is prepared to accompany a Qualified Person audit of the Mineral Resources and Reserves of the Pimenton Mine, which were updated to December 2004 by Minera Pimenton personnel.

This report is confined to the high-grade vein mining aspect of the Pimenton mine only. The potential and economics of low-grade bulk-minable resources in the Pimenton area are not within the scope of this report.

c) Sources of Information and Data

This audit report has been prepared using data from SAGC's Santiago office files, and from files received from the Minera Pimenton Mine Manager including the following:

- "Balance Año .xls", Year Balance 2004, giving the reconciliation between sales of concentrates and the tonnes and grade of mineral processed at the Pimenton Plant
- "Balance Mineral Mina.xls" Mine Mineral Balance (2004), giving a summary of the mine production records
- "Muestra Mines MT.xls", a listing of samples taken during the year, organized by Stope, and Level. Detailed Locations are given in UTM coordinates.
- "Reserves 2005, v.1.zip" 6.35 MB This includes a set of Plans and sections in Autodcad, Sample Database in Excel Files.
- "Camera Grade Composite.xls",
- "Cutoff grade preliminary.xls", giving some recent cost data for consideration in estimating the Cutoff Grade

A complete list of original references is included in Section 23 of the original Technical Report.

d) The Extent of Field Involvement of Qualified Person

John Selters, Qualified Person (Q.P.) and author of this audit, visited the Pimenton Mine in February, 2005 and inspected workings on three levels 3470, and 3430 in the Lucho Michelle area. The new adit on the 3375 level (Esperanza) was also inspected. This inspection was conducted in company



of Matthew Thomson, Chief Geologists and Acting Mine Manager who is responsible for the Resource and Reserve estimate. Stephen Houghton , President of SAGC also accompanied the QP on the visit.

## **5. DISCLAIMER**

In the preparation of this report, the Qualified Person (QP) held discussions with owners and management. The QP has relied on the sample data, calculation models, and mine maps provided by SAGC. This information was verified in part by the field visit to working stopes on the Michelle vein.

With regard to metallurgical performance, the QP has relied on the summary metallurgical balance sheets and the smelter settlement sheets, which have been reconciled for the period from June 1 through December, 2005.

## **6. PROPERTY DESCRIPTION AND LOCATION**

There are no changes in this section; which was summarized as follows;

- a) The primary Mining Claims at Pimenton constitute 2.660 hectares. Additional protective claims cover 110 hectares. (Figure 2, Section 26)
- b) Location:

The center of the mining area is (UTM coordinates):

N - 6.407.500 m

E - 386.000 m

The geographic coordinates (approximately) are:

70°12' West longitude

32°28' South latitude

This location is within the San Esteban Comuna, in Los Andes Province of Chile's Fifth Region. The town of Los Andes is the administrative center for legal matters pertaining to the project. (Figure 1, Section 26)

## **7. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

This section is basically unchanged since the 2002 Technical Report. A work force of approximately 150 people has been established. The only observation is that the current high metal prices have made recruitment of qualified mine and mill specialists more difficult and expensive.

- b) Access is via the main international highway between Santiago or Valparaíso and Mendoza (Routes 57 and 60) to the Maitenes hydroelectric plant, 12 km east of the town of Los Andes. From this point, the project is reached via a gravel road, which climbs to a pass at 3.400 meters elevation to descend again to the level of the Río Colorado at 2.500 meters thereafter following the course of the river to 3.000 meters elevation where the road climbs steeply to reach the Pimenton camp site and plant at 3.400 meters. The total road distance to Santiago is 174 km of which 84 km is the un-surfaced section from Maitenes to Pimenton. (see original TR Fig. 1, 4 – Section 26).
- c) The nearest established living area is the Aconcagua Valley, beginning at Maitenes where rural housing and small villages have built up along the river for 12 kilometers downstream to Los Andes, a town of about 150.000 people. Transportation to the mine is by company-owned vans from the Aconcagua Valley and Los Andes.

## 8. HISTORY

Following on the history described in the 2002 Technical Report, the project was financed and began mine re-opening and reinstallation of the mill during the summer 2003-2004. Milling operations began in June 2004 and continued to year-end with some interruptions for modifications to the crushing circuit, which increased the daily throughput capacity (to 230 tpd).

Production history for 2004.

### QUARTERLY PRODUCTION SUMMARY

	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
PRODUCTION STATISTICS:	1 & 2 Qt	1 6 2 Qt	3 Qt	3 Qt	4Qt	4 Qt	Year	year
Safety incidents		7		7		9		23
Loss Time Accidents		2		6		5		13
Frequency/200,000 hr. Worked								11.12
DEVELOPMENT								
Development, meters	295.0	282.9	190.0	10.2	205.0	134.7	690.0	427.8
Preparation, meters	565.0	548.7	170.0	270.2	162.0	85.7	897.0	904.6
Exploration, meters	555.0	107.4	165.0	0.0	130.0	0.0	850.0	107.4
MINING								
Ore to Mill	9,360.0	2,879.0	9,341.0	5,808.0	9,650.0	7,350.1	28,351.0	16,037.1
Ore Grade, g/t Au	17.92	10.22	17.63	14.22	15.15	11.00	16.88	12.03
Ore Grade, g/t Ag	14.71	10.04	15.00	11.23	14.82	13.75	14.84	12.17
Ore Grade, % Cu	1.52	0.81	1.41	1.19	1.23	0.91	1.39	1.00
MILLING								
Ore milled, dry tones	9,360.0	1,401.1	9,341.0	7,194.1	9,650.0	5,195.9	28,351.0	13,791.1
Ore Grade, g/t Au	17.92	5.72	17.63	10.77	15.15	9.15	16.88	9.65
g/t Ag	14.71	9.37	15.00	10.74	14.82	12.99	14.84	11.45
% Cu	1.52	0.72	1.41	0.97	1.23	0.86	1.39	0.90
CONCENTRATION								
Recovery - % Au	91.00%	92.04%	91.00%	95.04%	91.20%	91.03%	91.08%	93.40%
% Ag	84.00%	75.33%	84.00%	78.39%	81.32%	64.82%	83.09%	72.32%
% Cu	91.00%	93.44%	91.00%	94.27%	91.00%	89.55%	91.00%	92.51%
Tonnes Concentrate (dry)	520.00	67.90	518.9	417.6	559.0	269.7	1,598.0	755.2
Grade, g/t Au	3368.20	99.44	184.06	101.53	148.52	70.78	174.04	90.37
g/t Ag	3764.87	143.64	213.23	132.94	194.33	144.53	205.92	138.04
% Cu	449.21	13.90	23.03	15.78	19.36	14.76	22.50	15.25
Knelson concentrates								
Gold, oz	1779.94	20.07	1,747.2	1,004.6	1,618.2	777.6	5,145.4	1,802.3
Silver, oz	221.32	4.31	225.2	162.1	245.2	153.3	691.7	319.7
METAL PRODUCED								
Gold, oz	4,908.3	237.2	4,818.2	2,367.9	4,287.5	1,391.4	14,014.0	3,996.5
Silver, oz	3,718.1	317.9	3,782.9	1,947.1	3,738.0	1,406.6	11,239.0	3,671.6
Copper, lb	286,095	20,814	263,517	145,557	238,637	88,178	788,249	254,550
Gold, Eq. Oz	5,591.1	305.9	5,452.5	2,844.7	4,866.8	1,683.7	15,910.4	4,834.3

## **9. GEOLOGIC SETTING**

No change in this section from the 2002 Technical Report.

## **10. DEPOSIT TYPES**

No change in this section from the 2002 Technical Report.

## **11. MINERALIZATION**

No change in this section from the 2002 Technical Report.

## **12. EXPLORATION**

Within the area of this Resource Estimate, the primary exploration has been the advance of a new tunnel to provide access to vein extensions below the Lucho/Leyton/Michelle area. The tunnel is oriented as a cross-cut to the vein systems and was started from a portal constructed at the 3375 elevation.

This tunnel has cut one new structure ( Esperanza) near the portal and year-end 2004 had a total advance of 180 meters. Approximately 330 meters additional advance is required to reach the Michelle vein. In this interval the crosscut is expected to intersect the downward projection of another undeveloped vein, Yamila, cut earlier in a diamond drill hole.

## **13. DRILLING**

With regard to the Pimenton Mine Resource estimate, there has been no change in this section from the 2002 Technical Report. No additional exploration drilling has been conducted in the Mine area per se.

There has been additional drilling in connection with exploration of a bulk mineable porphyry target, which is outside the scope of this Audit.

## **14. SAMPLING METHOD AND APPROACH**

The in-stope sampling methods are essentially the same as described in the 2002 Technical Report. In the stopes observed, the sample channels are being cut with impact hammers ( electric and/or pneumatic). The channels cross the vein structures at approximately 90 degrees to the dip. Approximately 5 kilos are taken from each sample. In the stopes, the channels are cut at 1.5 meter intervals (horizontal) along the stope face, and this sampling pattern is repeated after every third cut, which translates into a vertical spacing of 5 to 6 meters.

The channel locations are surveyed by instrument to locate all samples in 3-D UTM coordinates. This information is included in the computer database on Excel spreadsheets, for eventual three dimensional analysis in the Datamine software.

In the raises and drifts, the channels are cut across the vein and wall rock at intervals of 1.5 meters along the vein structure.

Each channel is normally segmented with three samples; one over the mineralized vein itself, and one sample from the lower grade wall-rock on either side (dilution material).

The cut sample material is collected on a canvas sheet and transferred to plastic bags which are tagged with a unique sample number and stapled. The sampling crew is led by a geologist and/or a experienced sample boss, who deliver the sample bags directly to the ACME preparation laboratory at site.

As a control of “as-mined” grade during the extraction, each truckload or loader bucket of broken mineral coming from a given stope or workplace is sampled by taking one shovel full at random from the exposed content each load coming out of the mine portal. These samples are place in individual barrels marked for the active workplaces.

## **15. SAMPLE PREPARATION, ANALYSIS, SECURITY**

Sample preparation and analysis is performed on site at a third-party laboratory installed and operated by Acme Laboratories, with monitoring and technical support from their Santiago staff. Review of this facility was not part of this audit, the assumption being that ACME, as a well-known laboratory operator in the mining industry, would be using equipment and procedures appropriate for a high-grade gold mine.

## **16. DATA VERIFICATION**

As the scope of this audit was defined as a review of the Resource and Reserve **estimate methodology**, no independent sampling or data verification was undertaken. The QP opinion is that not much would be accomplished by random independent sampling.

A review of the stope sampling records indicates that the primary high-grade vein structures exist with dimensions from 5 centimeters width up to 70 centimeters with perhaps the most typical being 20 to 30 centimeters of sulfide vein. The sublevel

sampling has in most cases verified the sampling of the actual vein width in the original drifts below.

There are major departures from the operating plan ( and associated Reserve Estimate) in the amount of wall rock dilution that has occurred during the first year of operations. This appears to be due to a failure to apply a scheme of trim blasting the vein material with short holes to minimize dilution in the planned cut-and-fill scheme involving resuing, which scheme was designed for a limited milling capacity.

The current mine production records are considerably higher in terms of tonnage and grade than the milling records, which are at variance with the metal contents in concentrates sold. It is doubtful that much can be accomplished in terms of reconciliation of the past numbers. The various means of measuring tonnage delivered to the plant and ore head grade to the plant grade have been deficient during the first six months of operation. Corrective actions however are being taken to rectify these deficiencies.

To date the ultimate check has been the payable amounts of gold and copper contained in the concentrates sold to Enami. The geologic staff and managers of Minera Pimenton are concerned about perfecting their sampling and volumetric measurement of materials mined and those amounts remaining in the Reserves.

## **17. ADJACENT PROPERTIES**

No change in this section from the 2002 Technical Report. There are no significant changes in nearby or adjacent properties which have relevance to high-grade narrow vein mineral resources which are the subject of this audit.

## **18. MINERAL PROCESSING AND METALLURGICAL TESTING**

The basic parameters of mineral processing assumptions have been confirmed by the operations data and concentrate sales during the second half of 2004. However, full confidence in these performance figures will only be possible with improved systems of measuring tonnage input (by accurate belt scale) and grades of gold and copper in the plant heads, tails, and concentrates (automatic sampling systems), the latter of which has now been installed.

Mill Recoveries are reported at 93% and 91% for Gold and Copper respectively, versus the 91 % projected in the 2002 Technical Report. These recoveries are tied back to the concentrate sales figures.

The Knelson gravity concentrator has been installed to improve direct recovery of gold and the mill capacity has been firmed up to over 200 tonnes per day by refinements to the secondary crushing system.

Refinements to the milling operation yet to be completed include improved sampling systems, improved accuracy of the belt weightometer, and implementation of concentrate regrinding to improve the copper grade of the concentrate.

In February of 2005, the mill is operating on campaigns every 2<sup>nd</sup> week, with maintenance and construction work being done during the down periods.

## **19. MINERAL RESOURCE AND RESERVE ESTIMATES**

The Mineral Reserves Estimate prepared by the Pimenton Mine Staff, can be summarized as follows:

	<u><b>Tonnes</b></u>	<u><b>Gold gpt</b></u>	<u><b>Copper %</b></u>
<b>Proven Mineral</b>	16,112	15.33	1.32
<b>Probable Mineral</b>	41,920	15.19	1.31
<b>Total Mineral Reserves</b>	58,032	15.2	1.3

The estimate uses the same reserve blocks, procedures, and methodology which were applied in June 2002 to arrive at the Mineral Reserve for restarting the Pimenton Mine.

At that time, the only sampling available was on the main levels at 40-meter intervals.

A major supposition of that estimate was the vertical continuity of the vein thickness and grades between the levels, which needed to be proved by driving raises.

Grades from sublevels (4 meters above the 3430 level) have been now incorporated in the estimate by averaging with the sample grades from the level below and the level above. Though generally consistent, there are some exceptions, most notably on the Katy vein where the sublevel found grades too low to be mined with "stull" stoping.

Raises driven above stoping blocks were reported to have generally confirmed the vertical continuity of the veins between 3430 level and 3470 level, improving the confidence level of the estimate. However, sample data on those raises was not available, and has not been incorporated in the estimate.

In some cases, probable reserve blocks might have been upgraded to proven status by the completion of raises. In that sense, continuing with the prior block classification is prudent though somewhat conservative. Other raises encountered vein splits, vein thinning and lean zones which had to be left as pillars.

It is reported that a sub-horizontal fault has affected several of the stopes as they approached the 3470 level. There was no major offsetting of the vein but instead a thinning and diminishment of the vein grades for several meters.

Geologic mapping and preparation of sections and plans to analyze these variations in vein tenor (both grade and thickness) was not current at the time of the visit (Feb 2005). However, an experienced narrow vein geologist is beginning to do this mapping and analysis, which should be a great help in preparing to the next reserve estimate.

Sampling data being taken as the stope faces move upwards has been incorporated in the Datamine model with 3-D coordinates established by instrument survey. However, this data is not yet being fully incorporated in the modeling and projection of mineral reserves.

With this level of sampling data, and geologic mapping, it should now be possible to use more sophisticated geostatistical techniques to project trends of ore "shoots". The Datamine software is reported to be particularly good for this application (underground, narrow veins).

The assumptions, parameters, and methods used in the two estimates are:

	<u>Estimate 2002,</u>	<u>Estimate 2005</u>
Vein Mining Width (minimum)	0.45 meters	0.70 meters
Dilution( overbreak)	0.10 meters (m)	0.10
Mining Method( stoping)	- Overhand cut and fill (short cuts with resuing)	Overhand Stull
	- 0.90 m. cut depth on vein	drill cuts 1.2 m
	slash to 1.20 m. width after taking vein (2 cuts)	
Specific Gravity (tpcm)	2.9	2.75
Cut off Grade, gm Au Equiv	13.7 gm Au Equiv.	11
With Gold Price US\$/oz	310	420
Copper price US \$/lb	0.68	1.40



One parameter that has changed is the planned mining width. During the initial months of operations, the mining method was changed from “cut-and-fill with resuing” to “open stoping with stull support.” This method is expected to be more productive and involved an increase in planned “minimum” mining width from 55 centimeters to 80 centimeters. This higher planned dilution results in lowered mining grades to the mill ( which has been a reality in the first months of operations). The overall gold production is planned to be increased by increasing the plant operating time, taking advantage of the currently unused milling capacity.

For the 2005 B Mineral Reserve estimate, the specific gravity was reduced from 2.90 to 2.75, as a compensation for the increased amount of planned wall rock dilution. Beginning in February, the mill-head sample is now being tested for specific gravity every shift; results shown in Attachment H give an average of 2.95 tonnes per cubic meter.

### Cutoff Grade

The Cutoff Grade assumed for Blocks included the Mineral Reserve estimate is 11 grams of Gold (Au Eq) per tonne. This is based on the QP estimate that a unit cost of \$ 127 per tonne of ore can be achieved at an operating rate of 3500 tonnes milled per month.

Au Eq is calculated using 420 US\$/ ounce of gold, and a copper price of US\$ 1.40 per pound. Using these prices, corrected for mill and smelter recovery factors, the Gold equivalent grade is calculated as follows:

$$1 \% \text{ Cu} = 2.2 \text{ grams gold}$$

$$\text{AuEq (grams)} = \text{Au grade (gpt)} + 2.2 * \text{Cu grade (\% Cu T)}.$$

The concept of Cutoff grade is complex at the moment because of number of variables which are not well established:

- The cost per tonne of ore is distorted by inaccurate cost statements ( the average operations cost for 3 months end December were \$ 297,000 per month but these costs included uncanceled expenses related to plant modifications incurred during this 3 month period and substantial repair costs to mine equipment. The mine manager stated that the monthly cost should be about US\$ 250,000.
- The cost per tonne is extremely sensitive to the rate of milling. This is because a high portion of the current costs are effectively fixed costs ( month to month). In terms of mining/milling costs, going from 2300 tpm to 3500 tpm can be done with a few more drillers and additional consumables.
- The three months ended December 2004 cost picture is not balanced in terms of exploration, and mine development, stope preparation to replace

reserves due to the change in mining method and emphasis placed on stope development.

- The costs presented do not include smelting, refining, royalties, or financial costs and return of capital.

Furthermore, while the matter of mine dilution is of concern, the fact that excess mill capacity is available makes taking the additional dilution rock through the mill possible with little increase in the overall monthly cost. The key point is to assure getting the planned amount gold from the “reserve tonnage processed”.

### Reserve Reconciliation

During the visit to the mine on February 12, 2005, the approximate status of mineral extraction was reviewed as of the end of 2004, following some 7 months of production operations. Details of those estimates are in Attachment C and copies of the long sections showing the stope profiles are shown in Attachments D through G.

The reported production by the mine was 16,033 tonnes. Considering some minor changes in Reserve Blocks, the approximate balance of Mineral Reserves for the year is as shown below:

### **Reserve and Reconciliation ( approximate)**

	<b>tonnes</b>
<u>Beginning 2004 Proven and Probable Reserve</u>	67800
Additional dilution 55cm > 80cm      15.00%	10,170
2004 Reserve ( adjusted for Open Stoping)	<u>77,970</u>
<u>Changes to Reserve during 2004</u>	
Katy, Vein                      sublevel discouraging	-4,800
Lucho, 3560                    upper blocks dropped	-1,800
Mining Production estimate, 2004	-16,033
Lucho 0, 3430 ( mined outside reserve)	1,390
Michelle Vein, additions	<u>2,186</u>
Net Change	<u>-19,057</u>
<u>Reserve at end of 2004</u>	58,913

In addition, Pimenton has Mineral Resources estimated as follows:

**Mineral Resources (additional)**

	<b><u>Tonnes</u></b>	<b><u>Gold gpt</u></b>	<b><u>Copper %</u></b>
<b>Inferred Class A</b>	28,700	15.31	1.33
<b>Inferred Class B</b>	171,020	19.37	1.61
	<b>199,721</b>	<b>18.8</b>	<b>1.6</b>

These Inferred Mineral Resources are distinct from the reserve categories reported above. The Class A Inferred Resources are projections from 20 to 40 meters vertically above or below the established reserve blocks as defined by channel sampling on existing level(s). This material was previously classified as “possible” ore reserves under the previous mining disclosure NP-2A guidelines. This resource (Inferred Class A) is assigned a fairly high probability of being converted to Mineral Reserves as development progresses on the new 3,390 level with drifting planned on the Lucho, Leyton and Michelle vein structures.

The Class B Inferred Resources remain unchanged from the 2002 estimate. They were previously estimated by projection for existing Lucho area ore zones below the Class A inferred blocks (elevation 3,390) down to an elevation of 3,185 meters where a diamond drill intersection indicates the continuation of high-grade ore to that depth. This estimate continues to be valid.

. As before, the Mineral Reserves and Inferred Mineral Resources are located on the Lucho/Leyton and Michelle vein systems at Pimenton and do not include any estimates from the recently discovered Carmela vein, which lies 800 meters to the southeast, and nineteen identified geochemical anomalies which lie to the northwest of the Lucho/Leyton, which could host additional gold veins. Additionally, no credit has been given to the Maria Elena sector gold veins, on which four levels of adits have been driven totaling approximately 900 meters. Maria Elena lies 1,200 meters to the south of Lucho/Leyton.

## **20. OTHER RELEVANT DATA**

Only one change from 2002 Technical Report

“The Pimenton mine is located in rugged topography which periodically receives heavy snow fall with resultant avalanches on the steep slopes.”

As the result of concern about safety of operations, Minera Pimenton has implemented a rigorous control program for winter operations, which includes the contracting of avalanche control specialists and equipment during periods of possible heavy snowfall.

## **21. INTERPRETATION AND CONCLUSIONS**

- The calculation methods for estimate of Mineral Reserves are consistent with the 2002 estimate and use the same reserve blocks and nomenclature. New sample data from sublevels has been incorporated where appropriate.
- The principal difference is in the assumption of a higher planned dilution (increase from 55cm minimum mining width to 80 cm minimum mining width) due to the change of mining width. This has not been applied in all cases.
- Density (Specific Gravity) used in the 2002 Reserve estimate was 2.95, assuming higher sulfides content due to very tight control of the mining dilution. The current estimate uses 2.75, adjusting for the inclusion of more non-sulfide rock in the broken ore. Recent measurements on plant feed indicate a density of 2.95.
- The mineralized vein widths in sublevels is showing reasonable correlation with the level data used in the 2002 Resource estimate. One exception is the Katy vein above 3430 where it proved to be quite low-grade and irregular on the sublevel. Those reserve blocks have been removed from the inventory.
- The Michelle vein on the south end ( Blocks 2,3, and 4, level 3430) has shown better grades, and vein widths, and has steepened towards the south end of Block 2.
- Several raises between levels 3430 and 3470 have demonstrated reasonable vertical continuity of the vein structure. Sampling of only two of those raises is available in the sample data base.
- A sub-horizontal fault has been described as affecting some of the stopes going between 3430 and 3470 level. This fault apparently does not off-set the veins, but does seem to cause a diminishment of sulfide grade and thickness over several meters of vertical height. No geologic mapping was available depicting this fault.

- In general, in stoping between levels 3430 and 3470, vein widths and grades are showing more variation in the vertical sense than was expected in the original 2002 estimate ( prepared before raises were driven through).
- Laboratory analysis of samples from the mine are reported to be available within 24 hours of submittal. This is an important element in grade control for guidance of stoping and development work. In this sense, it is somewhat a variance that some of the raises which were run ahead of the stopes do not have sample data.
- Of the current Mineral Reserve of 58,000 tonnes, approximately 20,000 tonnes are below the 3430 level.

## **22. RECOMMENDATIONS**

- Now that production routines, organization, and startup problems have been addressed, emphasis needs to be placed on geologic projection and detailed mine planning which must include the development work to sustain and increase Mineral Reserves.
- The processing rate during 2004 has been about 2300 tonnes per month or 76 tonnes per calendar day. The stated operating goal is to reach 150 tonnes per day, or 4500 tonnes per month. For that to become a sustainable reality, development and stope preparation will need to be accelerated and performed against a rigorous schedule. First on the 3375 level and quickly followed by development of another lower level ( 3325?).
- The development and maintenance of the Mining Reserve estimate should be a primary task for some individual with the skills, time, and resources, subject to overview by the Mine Geologist. This is a dynamic situation, which must be closely coordinated with a Mine Planning engineer ( lacking at the time of the QP visit), but has been subsequently hired.
- In the mine, geologic mapping and grade control appear to need more effort and focus, with more rapid feedback and posting of information to mining captains. Raises should be mapped and sampled more frequently as they are the first indicators of the vein grade and thickness going ahead of the stope faces. The sub-horizontal fault above 3430 level (mentioned in Sect. 21) should be mapped and projected if possible to see if it has influence on other veins.
- Given the grade-thickness variations seen to date in the vertical and horizontal sense, a more sophisticated resource modeling system should be

considered, using geostatistical techniques closely coordinated with geological mapping and projections. The Datamine 3-D modeling system already in use lends itself to this approach. A specialist in this discipline could give an evaluation of the viability of this approach.

- Given the degree of grade-thickness variations observed (or described) in the vertical sense (raises and stope faces), the number of stopes available for production at any given time will need to be increased. Raises need to be driven ahead of the faces. The mining method change to “stull” stoping may need to be revisited for some of the narrower vein sections, as cut-and-fill has more flexibility in dealing with vein flattening and thinning, or lean zones.
- Another concern is the probable loss of high-density gold-rich fines during the mining and ore handling process. This factor may account for a significant part of the grade difference between the mines estimate of ore mined and the grade of material delivered to the mill.

## **23. References**

External References are unchanged since the 2002 Technical Report. Pimenton internal files ( digital) were supplied as follows.

- “Balance Año .xls”, Year Balance 2004, giving the reconciliation between sales of concentrates and the tonnes and grade of mineral processed at the Pimenton Plant
- “Balance Mineral Mina.xls” Mine Mineral Balance (2004), giving a summary of the mine production records
- “Muestra Mines MT.xls” , a listing of samples taken during the year, organized by Stope, and Level. Detailed Locations are given in UTM coordinates.
- “Reserves 2005, v.1.zip” 6.35 MB This includes a set of Plans and sections in Autocad, Sample Database in Excel Files.
- “Camera Grade Composite.xls”,
- “Cutoff grade preliminary.xls”, giving some recent cost data for consideration in estimating the Cutoff Grade

## **ATTACHMENTS**

- A. YEAR 2005-B MINERAL RESERVE ESTIMATE**
- B. MINE PRODUCTION SUMMARY**
- C. PRODUCT SALES AND MINERAL BALANCE**
- D. STOPE SUMMARY 2004**
- E. Long Section, Lucho/Leyton Vein**
- F. Long Section, Leyton Vein**
- G. Long Section, Michelle Vein**
- H. PLAN of LEVEL 3430**
- I. CUTOFF GRADE CONSIDERATIONS**
- J. MINERAL DENSITY MEASUREMENTS**



## COMPANIA MINERA PIMENTON

## 2005-B SUMMARY OF

## MINERAL RESOUCRE AND RESERVE BLOCKS

Attachment A\_1

Vein	Block Number	Measured Tons	Indicated Tons	Total Tons	Inferred Tons	Width diluted	AU g/ton	CU %	AuEq	Tons Remaining	Proven Tons	Probable Tons	Inferred Tons
		5m	15m		20m						5m	15m	20m
Includes dilution to a minimum width of 80 cm													
Manterola	3390 MT1	363	1089	1452	1452	0.80	15.31	0.24	15.83	100%	363	1089	1452
Manterola	3430 MT1	363	363	726	0	0.80	15.31	0.24	15.83	100%	363	363	0
Michelle	3390 MC1	472	1416	1888	1888	0.82	21.18	2.28	26.10	100%	472	1416	1888
Michelle	390 MC2 comb	1008	3025	4033	4033	0.82	11.21	0.79	12.92	100%	1008	3025	4033
Michelle	3390 MC3												
Michelle	3390 MC4												
Michelle	3390 MC5	114	342	456	456	0.83	11.25	0.87	13.14	100%	114	342	456
Michelle	3430 MC1	472	1416	1888		0.82	21.18	2.28	26.10	0%	0	0	0
Michelle	330 MC2-4 comb	1008	3025	4033		0.82	11.21	0.79	12.92	75%	756	2269	0
Michelle	3430 MC3												
Michelle	3430 MC4												
Michelle	3430 MC5	114	342	456	456	0.83	11.25	0.87	13.14	100%	114	342	456
Michelle	3470 MC3	110	330	440	330	0.80	8.93	0.81	10.68	100%	110	330	330
Michelle	3470 MC4	564	1410	1974		0.82	9.73	0.84	11.54	100%	564	1410	0
Michelle	3510 MC4	174	523	697	615	0.84	12.27	0.68	13.75	100%	174	523	615
Michelle	3510 MC5	110	330	440	440	0.80	14.69	0.75	16.30	100%	110	330	440
Michelle	3510 MC6	110	330	440	440	0.80	11.13	1.34	14.03	100%	110	330	440
Leyton	3390 LE1	446	1338	1784	1784	0.81	17.39	1.15	19.88	100%	446	1338	1784
Leyton	3390 LE3	916	2748	3664	3664	0.83	20.93	2.47	26.28	100%	916	2748	3664
Leyton	3390 LE4	450	675	1125	900	0.83	19.24	1.90	23.35	100%	450	675	900
Leyton	3390 LE5	440	1320	1760	1760	0.80	19.29	2.46	24.61	100%	440	1320	1760
Leyton	3430 LE1	798	2395	3194		0.87	22.12	1.24	24.79	50%	399	1198	0
Leyton	3430 LE3	915	2653	3568		0.83	20.92	1.88	24.97	25%	229	663	0
Leyton	3430 LE4	450	1350	1800		0.83	19.24	1.90	23.34	85%	383	1148	0
Leyton	3430 LE5	784	1664	2448		0.80	10.23	1.22	12.86	90%	705	1497	0
Leyton	3470 LE2	653	1699	2352		0.84	11.14	0.79	12.85	100%	653	1699	0
Leyton	3470 LE3	1264	3285	4549		0.93	17.90	1.68	21.52	100%	1264	3285	0
Leyton	3470 LE4	1215	3158	4373		0.85	10.82	1.04	13.07	100%	1215	3158	0
Leyton	3510 LE2	628	879	1507		0.80	14.45	1.15	16.93	100%	628	879	0
Leyton	3510 LE3	1133	1823	2957		0.82	21.55	1.99	25.86	100%	1133	1823	0
Leyton	3510 LE4	823	1859	2682		0.85	17.45	1.76	21.26	100%	823	1859	0
Leyton	3510 LE5	289	866	1155	1155	0.83	10.44	0.79	12.14	100%	289	866	1155
Leyton	3510 LE6	110	330	440	440	0.80	8.88	1.07	11.19	100%	110	330	440
Leyton	3540 LE2	385	1155	1540	1416	0.80	12.72	1.01	14.90	100%	385	1155	1416
Leyton	3540 LE3	514	1542	2056	2056	0.81	11.97	1.22	14.62	100%	514	1542	2056
Leyton	3540 LE4	423	1268	1691	1691	0.83	17.34	1.29	20.13	100%	423	1268	1691
Lucho	3390 LU1	932	2795	3727	3727	0.85	14.22	0.85	16.07	100%	932	2795	3727
Lucho	3430 LU1	912	2779	3691		0.84	17.34	1.06	19.63	40%	365	1111	0
Lucho	3560 LU1	Not included											
Lucho	3560 LU2	Not included											
											16,960	44,126	28,700

APPLYING 80% ore recovery during regular production plus 15% pillar recovery for a total of 95% ore recovery

## MINERAL RESERVE TONS AND GRADE 2005-B

Tonnes	Proven	Probable	Total	Avg Width
diluted to 80 cm	16,960	44,126	61,086	0.83
Mine Recovery	95%	95%	95%	
Mine Recoverable M	16,112	41,920	58,032	
<u>Grades</u>				
Au g/t	15.33	15.19	15.23	
Cu %	1.32	1.31	1.31	
Au Eq g/t	18.19	18.02	18.07	



## 2005-B SUMMARY OF

## MINERAL RESOURCE AND RESERVE ESTIMATE

Mineral Reserves

	<u>Tonnes</u>	<u>Gold gpt</u>	<u>Copper %</u>
Proven Mineral	16,112	15.33	1.32
Probable Mineral	41,920	15.19	1.31
<b>Total Mineral Reserves</b>	<b>58,032</b>	<b>15.2</b>	<b>1.3</b>

<u>Contained Ounces</u>	<u>Proven</u>	<u>Probable</u>	
Au Oz	7,943	20,475	28,418
Au Equiv Oz.	9,422	24,291	33,713

Mineral Resources (additional)

	<u>Tonnes</u>	<u>Gold gpt</u>	<u>Copper %</u>	<u>Au Equiv.</u>
Inferred Class A	28,700	15.31	1.33	18.18
Inferred Class B	171,020	19.37	1.61	22.86
<b>Inferred Resources</b>	<b>199,721</b>	<b>18.8</b>	<b>1.6</b>	<b>22.19</b>

Inferred Ounces

Au Oz	120,666
Au Equiv Oz.	142,475

Note: Inferred Resources are of a lower level of estimating confidence and are not directly additive to the Mineral Reserve Estimate  
The inferred blocks represent possible mineral extensions which must be verified by additional mine development before being incorporated into a mining plan

YEAR      2004Reserve and Reconciliation ( approximate)

	<u>tonnes</u>
Beginning 2004 Proven and Probable Res	67800
Additional dilution 55cm > 8      15.00%	10,170
2004 Reserve ( adjusted for Open Stopin	77,970

Changes to Reserve during 2004

Katy, Vein      sublevel discouraging	-4,800
Lucho, 3560      upper blocks dropped	-1,800
Mining Production estimate, 2004	-16,033
Lucho 0, 3430 ( mined outside reserve)	1,390
Michelle Vein, additions to Reserve	1,856
<b>Net Change</b>	<b>-19,387</b>

Reserve at end of 2004      58,583

Michelle Vein Block Comparison  
2002 Estimate (tonnes)

MC-3		
MC 4		
MC5T	85	253
3470 MC-3	75	226
MC 4	502	1506
MC5T	105	316
6T	38	113
3510 MC-4	187	563
MC-5	105	316
MC-6	38	113
<b>TOTALS</b>		<b>4541</b>

Michelle Vein Block Comparison  
2005-B Estimate (tonnes)

MC-3	0
MC 4	0
MC5T	911
3470 MC-3	440
MC 4	1974
MC5T	0
6T	0
3510 MC-4	1312
MC-5	880
MC-6	880
<b>TOTALS</b>	<b>6397</b>

**PIMENTON PROJECT**  
**Gold Equivalent Calculation**

Updated March 2005

Attachment A\_3

	<u>Price</u>	<u>Mill Recovery</u>	<u>Smelter Payable</u>	<u>Refine Cost</u>
GOLD, OZS	\$420.00 USD/oz	92.00%	95.42%	\$10.50
GOLD, Gr 31.1035	\$13.50 USD/gm			\$0.37
COPPER	\$1.40 USD/lb	94.00%	93.55%	\$0.1200

Net Value of

1 gram gold = ((price) \* (Mill Recovery %) \* (Smelter Payable %)) - (Refining Cost)  
 = \$11.48  
 1 % Copper = ((price/lb)\*(22.05 lb/%-t)\*(Mill Rec)\*(Smelter Payable))-Refine Cost  
 = \$24.82

<b>1% Cu= 2.16 grams of gold</b>
----------------------------------

<u>Gold</u>	<u>Au Grade</u>	
Concentrat	90.00 gm/mt	100.00%
Deduct	1.00	-1.11%
		<u>98.89%</u>
Smelter Schedule Payable		97.00%
Percent payable		95.92%
Handling Loss Deductions		-0.50%
<b>Pay % of Au in Concentrate</b>		<b><u>95.42%</u></b>

<u>Copper</u>	<u>Cu Grade</u>	
Concentrat	20.00 %	100.00%
Deduct	1.00 %	-5.00%
		<u>95.00%</u>
Smelter Schedule Payable		99.00%
Percent payable		94.05%
Handling Loss Deduction		-0.50%
<b>Pay % of Cu in Concentrate</b>		<b><u>93.55%</u></b>

2004 Production by Stope

Reserve Blk	Stope	Jan - May			Junio			Julio			Agosto			Septiembre			Octubre			Noviembre			Diciembre			Year	2004		
		Total	Grades		Total	Grades		Total	Grades		Total	Grades		Total	Grades		Total	Grades		Total	Grades		Total	Grades		Total	Grades		
		Product	Au g/t	Cu %	Product	Au g/t	Cu %	Product	Au g/t	Cu %	Product	Au g/t	Cu %	Product	Au g/t	Cu %	Product	Au g/t	Cu %	Product	Au g/t	Cu %	Product	Au g/t	Cu %	Product	Au g/t	Cu %	
MC-2 3430	1	413	4.93	0.43	41	11.83	0.86	118	13.2	0.66									126	9.24	0.66	186	13	1	884	8.67	0.63		
MC-3&4 3430	2	207	4.72	0.43	18	10.83	0.86	122	14.1	1.23															347	8.33	0.73		
LU-1 3430	3	522	7.25	0.67	246	13.02	1.21	411	17.02	1.2	156	10.54	0.86	180	13.04	0.78	406.5	13.04	0.88	148.5	9.13	0.88	797	10	0.88	2867	11.37	0.91	
LE-1 3430	4	478	7.58	0.39	154	14.16	0.78	72	17.16	0.78	210	9.02	0.53	7.56	11.07	0.6	171.5	11.07	0.53	283.5	7.75	0.53	928	8	0.3	2304.56	8.91	0.43	
LE-3 3430	5	254	7.56	1.06	276	15.63	1.53	414	17.5	1.53	429	13.25	1.53	912.5	15.18	1.93	1726.5	15.18	1.39	1429	10.63	1.34	648	6	0.5	6089	12.86	1.38	
LE-5 3430	6	126	4.6	0.86				75	13.7	1.73															201	8.00	1.18		
MC-1 3430	7				144	15.33	1	215	18.6	1	654	18.21	1.01	403.5	17.91	1.93	72	17.91	0.01	183	12.54	0.01				1671.5	17.31	1.08	
MC-5 3430	8																								0	0.00	0.00		
MT 1 3430	9							160	18	0.44	483	13.23	0.26	502.5	11.4	0.26	106.5	11.4	0.22	138	8	0.22				1390	12.46	0.27	
KT-1 3430	10							75	12.3	0.6															75	12.30	0.60		
LE-4T 3430	11										156	10.87		48	8.03	0.76									204	10.20	0.18		
		2000	6.46	0.59	879	14.32	1.18	1662	16.60	1.13	2088	13.99	0.81	2054.06	14.42	1.39	2483	14.46	1.16	2308	10.10	1.00	2559.0	8.48	0.58	16033.06	12.03	0.95	

COMPAÑÍA MINERA PIMENTON  
Product Sales and Mineral Balance

ATTACHMENT C  
QUARTERLY PRODUCTION SUMMARY

	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
PRODUCTION STATISTICS:	1 & 2 Qt	1 6 2 Qt	3 Qt	3 Qt	4Qt	4 Qt	Year	year
Safety incidents		7		7		9		23
Loss Time Accidents		2		6		5		13
Frequency/200,000 hr. Worked								11.12
DEVELOPMENT								
Development, meters	295.0	282.9	190.0	10.2	205.0	134.7	690.0	427.8
Preparation, meters	565.0	548.7	170.0	270.2	162.0	85.7	897.0	904.6
Exploration, meters	555.0	107.4	165.0	0.0	130.0	0.0	850.0	107.4
MINING								
Ore to Mill	9,360.0	2,879.0	9,341.0	5,808.0	9,650.0	7,350.1	28,351.0	16,037.1
Ore Grade, g/t Au	17.92	10.22	17.63	14.22	15.15	11.00	16.88	12.03
Ore Grade, g/t Ag	14.71	10.04	15.00	11.23	14.82	13.75	14.84	12.17
Ore Grade, % Cu	1.52	0.81	1.41	1.19	1.23	0.91	1.39	1.00
MILLING								
Ore milled, dry tones	9,360.0	1,401.1	9,341.0	7,194.1	9,650.0	5,195.9	28,351.0	13,791.1
Ore Grade, g/t Au	17.92	5.72	17.63	10.77	15.15	9.15	16.88	9.65
g/t Ag	14.71	9.37	15.00	10.74	14.82	12.99	14.84	11.45
% Cu	1.52	0.72	1.41	0.97	1.23	0.86	1.39	0.90
CONCENTRATION								
Recovery - % Au	91.00%	92.04%	91.00%	95.04%	91.20%	91.03%	91.08%	93.40%
% Ag	84.00%	75.33%	84.00%	78.39%	81.32%	64.82%	83.09%	72.32%
% Cu	91.00%	93.44%	91.00%	94.27%	91.00%	89.55%	91.00%	92.51%
Tonnes Concentrate (dry)	520.00	67.90	518.9	417.6	559.0	269.7	1,598.0	755.2
Grade, g/t Au	3368.20	99.44	184.06	101.53	148.52	70.78	174.04	90.37
g/t Ag	3764.87	143.64	213.23	132.94	194.33	144.53	205.92	138.04
% Cu	449.21	13.90	23.03	15.78	19.36	14.76	22.50	15.25
Knelson concentrates								
Gold, oz	1779.94	20.07	1,747.2	1,004.6	1,618.2	777.6	5,145.4	1,802.3
Silver, oz	221.32	4.31	225.2	162.1	245.2	153.3	691.7	319.7
METAL PRODUCED								
Gold, oz	4,908.3	237.2	4,818.2	2,367.9	4,287.5	1,391.4	14,014.0	3,996.5
Silver, oz	3,718.1	317.9	3,782.9	1,947.1	3,738.0	1,406.6	11,239.0	3,671.6
Copper, lb	286,095	20,814	263,517	145,557	238,637	88,178	788,249	254,550
Gold, Eq. Oz	5,591.1	305.9	5,452.5	2,844.7	4,866.8	1,683.7	15,910.4	4,834.3

**PIMENTON MINE**
**2004 Reserves and Production Summary**
**Attachment D**

Stope N°	Level	Reserve Block	Tonnes Adjusted(a)	Au gpt	Cu %	Reserve Remaining Percent	Reserve Reduction Tonnes	Year 2004	Production records 2004		Apparent Excess Dilution (b)	
									tonnes	Au gpt		
1	3430	MC-2	4,033	11.2	0.8	75%	3025	1,008	884	8.7	29% Note 1	87.67%
2	3430	MC-3 MC-4				75% 75%			347	8.3	Note 2	
3	3430	LU-1	3,691	17.3	1.1	40%	1,476	2,215	2,867	11.4	52% Note 3	129.45%
4	3430	LE-1	3,194	22.1	1.2	50%	1,597	1,597	2,305	8.9	148% Note 4	144.33%
5	3430	LE-3	3,568	20.9	1.9	25%	892	2,676	6,089	12.9	63% Note 5	227.57%
6	3430	LE-5	2,448	10.2	1.2	90%	2,203	245	201	8.0	28% Note 6	82.12%
7	3430	MC-1	1888	21.2	2.3	0%	0	1888	1,672	17.3	22% Stope finishec	88.55%
8	3430	MC-5	456	11.3	0.9	100%	456	0	0		Note 8	
9	3430	MT-1	726	15.3	0.2	100%	726		1,390	12.5	Note 9 Note 9a	
10	3430	KT-1	2,393	13.1	1.9	0%	0	2,393	75	12.3	7% Note 10 after Sublevel	3.13%
11	3430	LE 4T	1,800	19.2	1.9	85%	1,530	270	204	10.2	89% Note 11	75.54%
			<b>24,196</b>	<b>16.6</b>			11,905	12,291	<b>16,033</b>	<b>12.0</b>	38%	

Note (a) Grades and tonnages adjusted from 55 cm mining width plus 10 cm dilution to 70 cm minimum plus 10 cm dilution

Note (b) this Index is calculated by dividing Reserve Au grade by the production Au Grade. It is a rough indication of the success of dilution in excess of the planned mining with.

Note 1 This stope is now a combination of blocks MC-2, 3, 4. The raise through to next level shows that vein is in hanging wall of 3470 Vein in south segment has steepened and appears to be wider than on sublevel below.

Note 2 Blocks MC-2, and MC-3 have been combined into one stope,

Note 3 Continuous production throughout 2004, tonnes are 29 % higher than volume calculation, . Grade dilution is 48%

Note 4 Continuos production through 2004, tonnes are 44 % higher than volume calculation, grade dilution is 48%

Note 5 Continuous production through 2004, produced tonnes are 227% of volume calc., grade dilution is only 63%.

Note 6 Stope production from narrow vein.

Stope 7 Stope finished, produced 88 % of tonnes in reserve

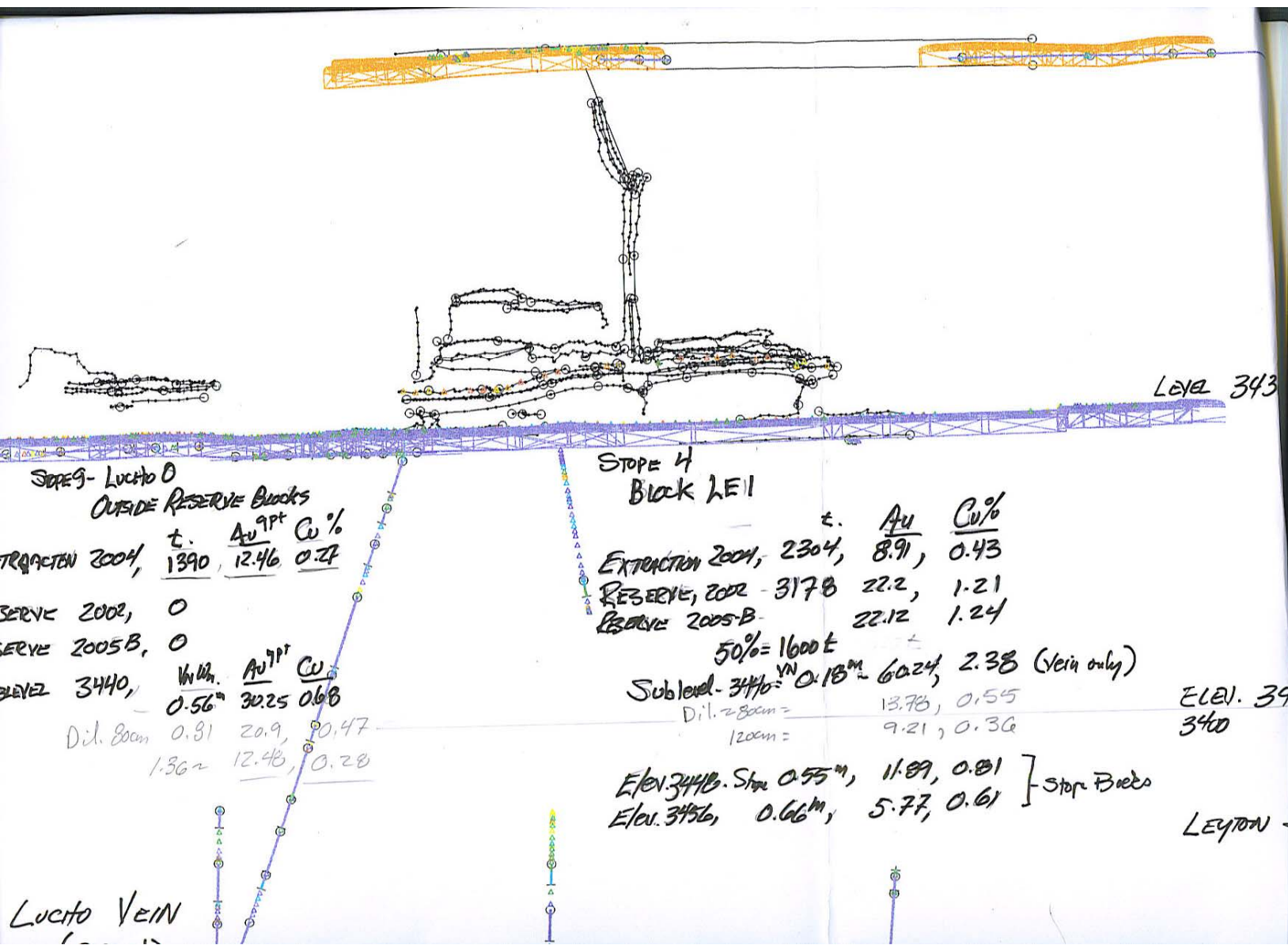
Note 8 Stope just beginning, narrow but high grade

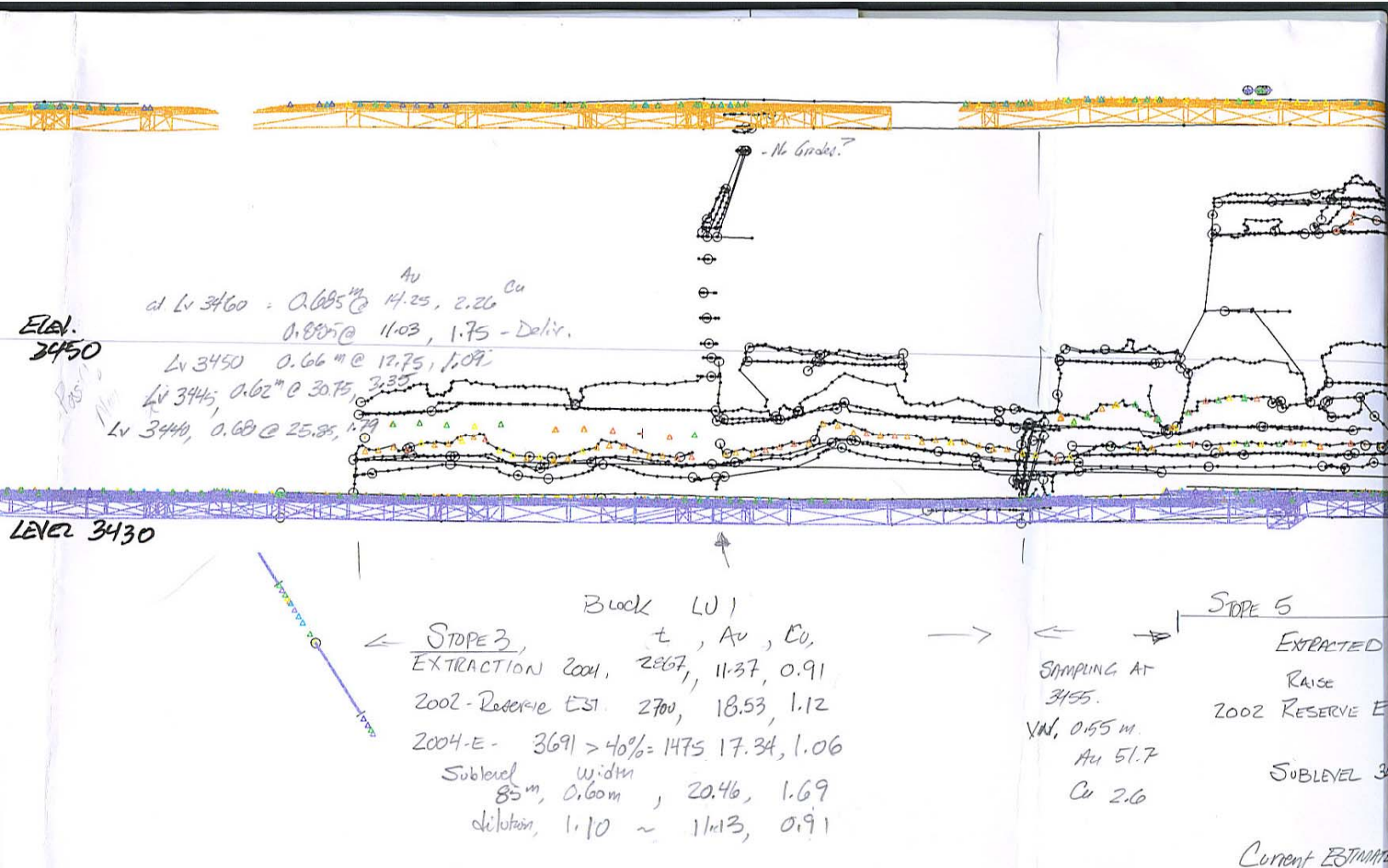
Note 9 Reserve block is still intact

Note 9a This stope was taken up on a vein, outside of the reserve blocks ( Denominated Lucho 0)

Note 10 This block was written down after the sublevel showed a narrow, erratic vein.

Note 11 Narrow vein showing persistence from level.

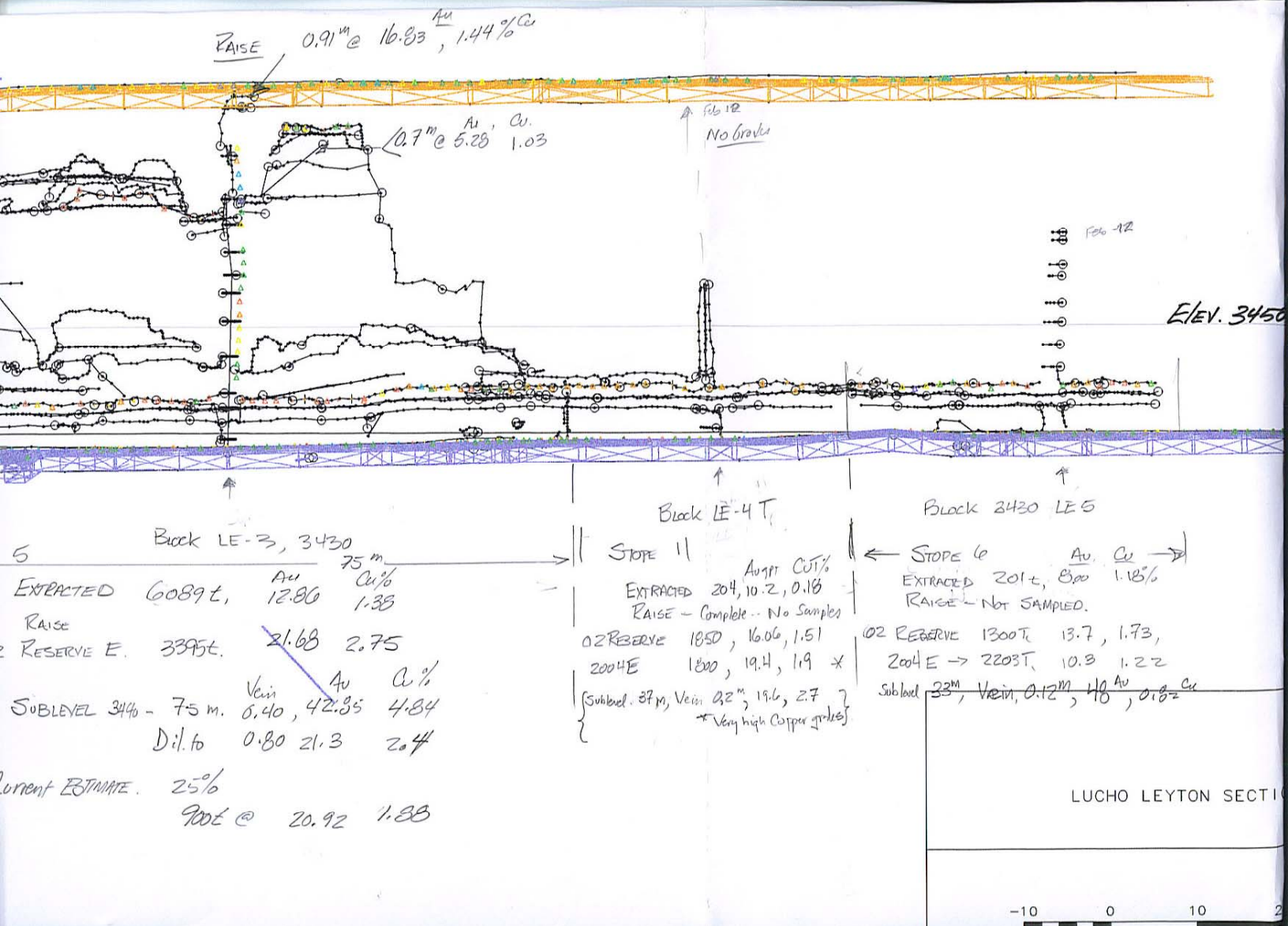




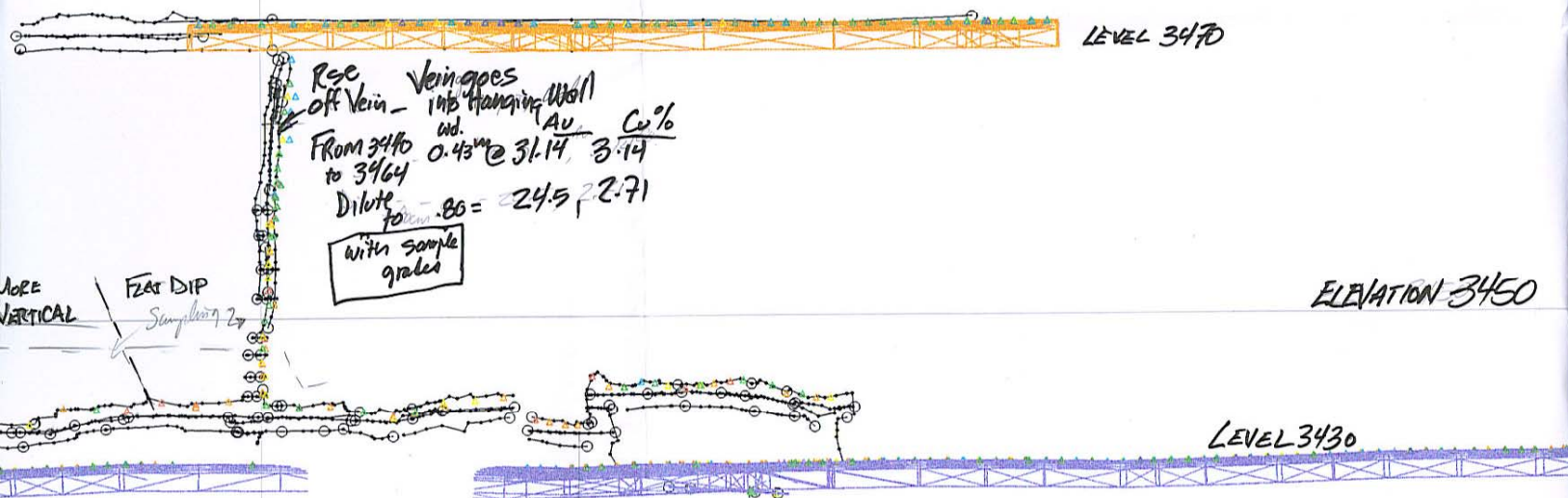
Attachment E-2  
 Lucho - Leyton  
 Vein

# Attachment F

## Leyton Vein North Sector







STOPE No. 1

RESERVE BLK (MC, 2, 3, +4)

	±	Au	Cu
2002 RESERVE	2650	16	0.8
2004 - EXTRACCIÓN	867	8.67	0.63
2005-B RESERVE P.P	11.21	0.87	
@ 75%			
= 3025 ± remaining			
SUBLEVEL 3440, 0.7m	14.37	1.07	

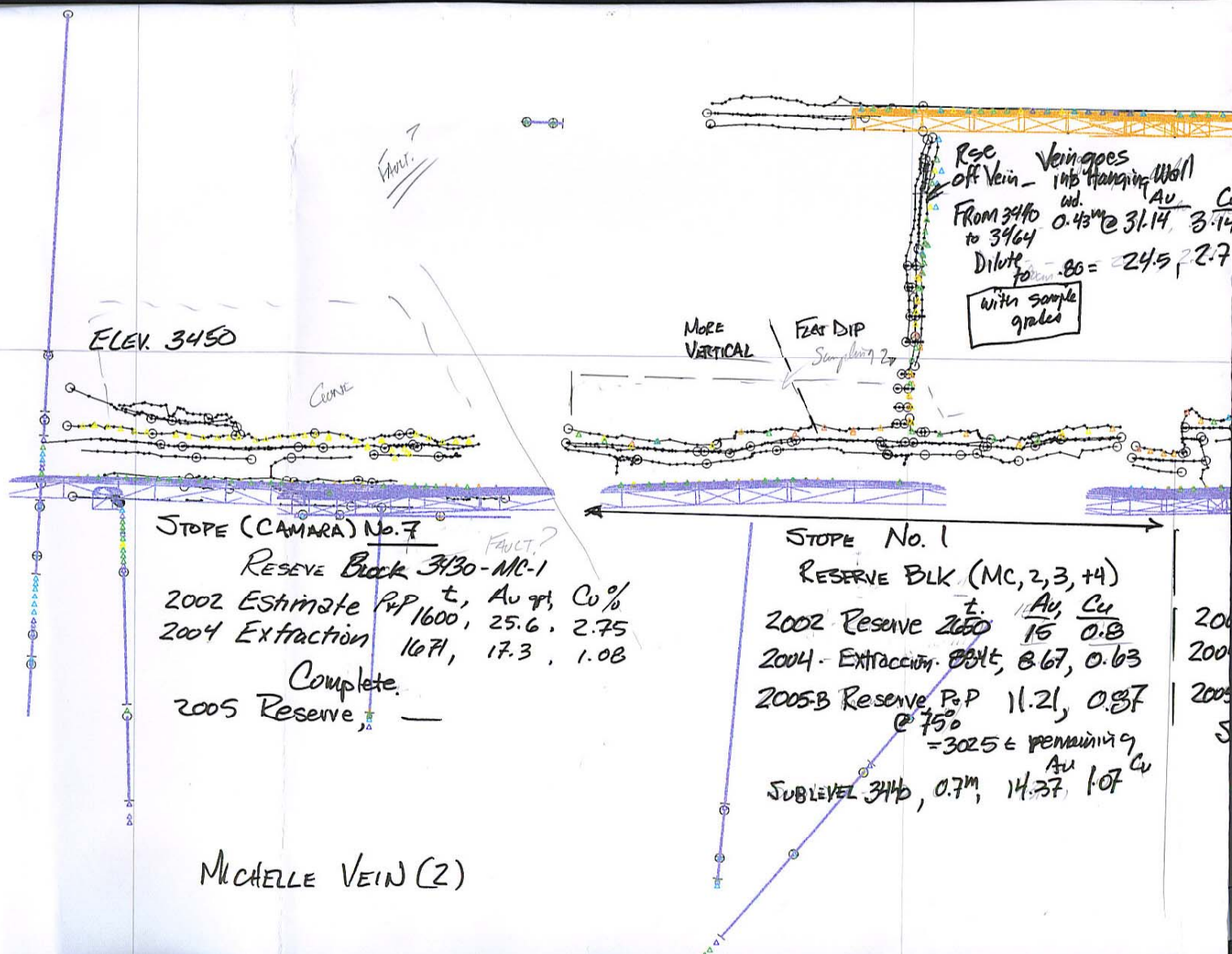
STOPE No. 2

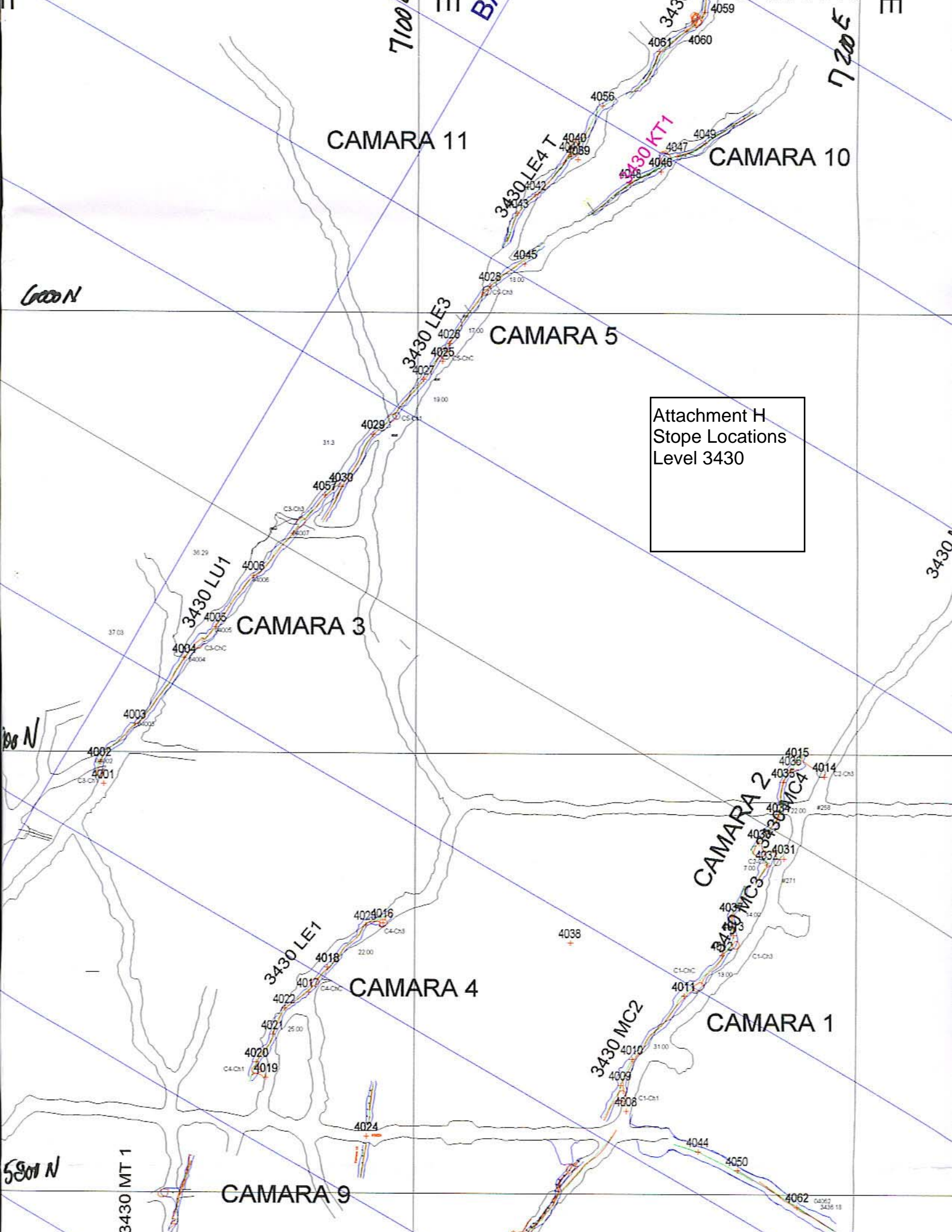
RESERVE BLK MC-5

	±	Au	Cu
2002 RESERVE	280	14.83	1.15
2004 EXTRACCIÓN	347	8.33	0.73
2005-B RESERVE	456	11.25	0.87
Sublevel W	0.29m	13.55	0.65
w/dil. 55cm	0.55	7.07	0.35

NOTES ON  
MICHELLE VEIN  
AS OF DEC - 2004  
by JJ. SELLERS

Attachment G  
Michell Vein  
North Sector







# PIMENTON MINE

Attachment

I

**Analysis of Cutoff Grade Considerations**  
**based on**  
**Preliminary Costs, Last Quarter 2004**

301	Mine Administration	13,207,372	22,963
302	Mine Development	12,194,487	21,202
303	Mine Preparation	7,561,862	13,147
304	Mine Production	39,481,210	68,643
305	Mine Exploración	1,217,031	2,116
306	Mine Ventilation	\$ 581,154	1,010
307	Mine Fortificación	\$ 811,091	1,410
308	Mine Services	\$ 2,448,732	4,257
309	Maintenace and Service Facilities	\$ 3,740,524	6,503
310	Electric Power, Supply and Distribution	\$ 9,198,538	15,993
		<b>90,442,001</b>	<b>157,244</b>

317	Geology	7,408,182	12,880
		<b>7,408,182</b>	<b>12,880</b>

321	Plant Administration	\$ 4,151,068	7,217
322	Crushing Plant	\$ 2,455,879	4,270
324	Primary Ball Mill Grinding	\$ 800,737	1,392
325	Knelson Concentrator Operation	\$ 811,247	1,410
326	Refinery & Smelting	\$ 581,154	1,010
327	Rougher Flotation	\$ 2,019,164	3,511
328	Thickener, Filter & Dryer	\$ 1,853,982	3,223
331	Tailings Dam	\$ 694,832	1,208
332	Recycle Water	\$ 698,277	1,214
335	Metallurgical Laboratories	\$ 1,392,874	2,422
336	Plant maintenance	\$ 7,059,877	12,274
339	Electric Power, Supply and Distribution	\$ 11,653,704	20,261
		<b>34,172,795</b>	<b>59,413</b>

333	Chemical Laboratories (Quality control)	3,321,478	5,775
318	Chemical Laboratories (Quality control)	3,195,427	5,556
		<b>6,516,905</b>	<b>11,330</b>

Q4 2004		Estimate	
tonnes/month		tonnes/month	
2500	Model	3500	
US\$/t	Fixed %	Variable. \$/t	US \$/t
\$9.19	100.00%	\$0.00	\$6.56
\$8.48	40.00%	\$5.09	\$7.51
\$5.26	40.00%	\$3.16	\$4.66
\$27.46	30.00%	\$19.22	\$25.10
\$0.85	30.00%	\$0.59	\$0.77
\$0.40	50.00%	\$0.20	\$0.35
\$0.56	30.00%	\$0.39	\$0.52
\$1.70	80.00%	\$0.34	\$1.31
\$2.60	80.00%	\$0.52	\$2.01
\$6.40	50.00%	\$3.20	\$5.48
<b>\$62.90</b>		<b>\$32.71</b>	<b>\$54.27</b>
\$5.15	70.00%	\$1.55	\$4.12
		<b>\$1.55</b>	<b>\$4.12</b>
\$2.89	100.00%	\$0.00	\$2.06
\$1.71	20.00%	\$1.37	\$1.61
\$0.56	30.00%	\$0.39	\$0.51
\$0.56	20.00%	\$0.45	\$0.53
\$0.40	40.00%	\$0.24	\$0.36
\$1.40	30.00%	\$0.98	\$1.28
\$1.29	30.00%	\$0.90	\$1.18
\$0.48	80.00%	\$0.10	\$0.37
\$0.49	80.00%	\$0.10	\$0.37
\$0.97	80.00%	\$0.19	\$0.75
\$4.91	70.00%	\$1.47	\$3.93
\$8.10	80.00%	\$1.62	\$6.25
<b>\$23.77</b>		<b>\$7.82</b>	<b>\$19.21</b>
\$2.31	80.00%	\$0.46	\$1.78
\$2.22	80.00%	\$0.44	\$1.71
<b>\$4.53</b>		<b>\$0.91</b>	<b>\$3.50</b>

# PIMENTON MINE

## Analysis of Cutoff Grade Considerations

continued

## Attachment

I-2

					Q4 2004			Estimate
					tonnes/month			tonnes/month
					2500	Model		
					US\$/t	Fixed %	Variable. \$/t	US \$/t
340	Electric Power, Supply and Distribution	\$ 809,650	1,408		\$0.56	80.00%	\$0.11	\$0.43
342	Shop of equipment	\$ 16,160,388	28,097		\$11.24	80.00%	\$2.25	\$8.67
		16,970,038	29,504		\$11.80		\$2.36	\$9.10
346	Road maintenance	\$ 6,520,897	11,337		\$4.53	90.00%	\$0.45	\$3.37
347	Winter and avalanche operation	\$ 2,228,600	3,875		\$1.55	90.00%	\$0.15	\$1.15
		8,749,497	15,212		\$6.08	#¡VALOR!	\$0.61	\$4.52
351	Management	\$ 4,547,273	7,906		\$3.16	90.00%	\$0.32	\$2.35
352	Accounting & Finance	\$ 15,946,868	27,725		\$11.09	100.00%	\$0.00	\$7.92
353	Purchasing & Warehouse	\$ 3,315,163	5,764		\$2.31	80.00%	\$0.46	\$1.78
354	Santiago Office	\$ 9,636,105	16,753		\$6.70	100.00%	\$0.00	\$4.79
357	Camp expenses	\$ 13,647,472	23,728		\$9.49	70.00%	\$2.85	\$7.59
359	Electric Power, Supply and Distribution	\$ 3,737,778	6,499		\$2.60	70.00%	\$0.78	\$2.08
361	Safety & Environment	\$ 2,329,170	4,050		\$1.62	80.00%	\$0.32	\$1.25
362	Health Clinic	\$ 2,284,676	3,972		\$1.59	80.00%	\$0.32	\$1.23
371	Los Andes Office	\$ 3,269,228	5,684		\$2.27	90.00%	\$0.23	\$1.69
		58,713,733	102,081		\$40.83		\$5.27	\$30.67
380	Concentrate transport ( 3 months ?)	6,812,019	11,843					
	Concentrate Haulage ( 1 month assumed)		3,948		\$1.58	80.00%	\$0.32	\$1.22
		6,812,019	11,843		\$4.74		\$0.32	\$1.22
<u>Cash cost delivered to Enami</u>								
		229,785,170	399,508					
<u>Smelting &amp; Treatment Charges</u>								
		122	18	Cost / tOre	\$159.80			\$126.61
	Refining, CU	1 %			\$6.78			\$6.78
	Refining, Au	10 gm			\$2.38	\$2.38	\$2.38	\$2.38
					3.37	3.37	3.37	3.37
					\$172.33	\$5.75	\$5.75	\$139.14
Net Value of 1 gram gold					420	Gold \$/Oz	=	\$13.50 per gram
Cut off grade Au Eq grams per tonne recovered								12.8
Total Recovery ( concentrator + smelter payable)						88.35%		88.35%
Cut off Grade Au Eq grams/tonne in Mill Heads						14.4		10.6

**PIMENTON MINE****Measurement of Specific Gravity of Mineral being fed to Mill****Attachment****J**

DETERMINACION DE GRAVEDADES ESPECIFICAS POR PICNOMETRIA					
Date	Shift	Specific Gravity	Leyes		
Fecha	Turno	G, E,	Au	Ag	Cu
01/02/2005	B	2.87	13.42	21	1.373
03/02/2005	B	3.00	12.35	16	0.97
10/02/2005	A	2.83	8.69	13	0.719
14/02/2005	B	3.04	15.46	28	1.303
14/02/2005	B	3.02	14.67	25	1.095
19/02/2005	A	3.00	15.13	23	1.303
	Promedio	<b>2.96</b>			

Muestro Automatico

Muestro Automatico

Determination of solids density on fine ground pulp samples.