

E.C.J.
Bud Roswell
019645

GRUM JOINT VENTURE

BULK SAMPLING

DIRECTIVES

1. Development Heading Designation and Sample Number Allocation

First, it should be made clear that the entire bulk sampling programme is under the daily guidance of the site superintendent.

The nomenclature and sample number allocation for the 2N and 4N inclines and declines are as follows:

<u>Designation</u>	<u>Sample Number</u>
INC. 2N-E	1001, 1002, 1003 etc.
DEC. 2N-W	2001, 2002, 2003 etc.
INC. 4N-E	3001, 3002, 3003 etc.
DEC. 4N-W	4001, 4002, 4003 etc.

(See attached plan)

The nomenclature and sample number allocations for the cross cuts are as follows:

<u>Designation</u>	<u>Sample Number</u>
#1 X-C	101, 102, 103 etc.
#2 X-C	201, 202, 203 etc.
#3 X-C	301, 302, 303 etc.
#4 X-C	401, 402, 403 etc.
#5 X-C	501, 502, 503 etc.
#6 X-C	601, 602, 603 etc.
#7 X-C	701, 702, 703 etc.

(See attached plan)

The nomenclature and sample number allocation for the vertical raises are as follows:

<u>Designation</u>	<u>Sample Number</u>
Rse A-26	5001, 5002, 5003 etc.
Rse A-23	6001, 6002, 6003 etc.
Rse A-21	7001, 7002, 7003 etc.
Rse A-24	8001, 8002, 8003 etc.

The nomenclature and sample number allocation for 4N access incline are as follows:

<u>Designation</u>	<u>Sample Number</u>
4N ACC	9001, 9002, 9003 etc.

The sample number to be marked on the tags should be as follows:

- 2N-E 1002 etc.
- #3 X-C 302 etc.
- Rse A-26 5002 etc.
- 4N ACC 9002 etc.

(Note: When plotted on plans or sections to illustrate - by surveying department - only sample number need be shown plus date of advance.)

2. Mine-Run Bins and Crushed Product Storage

Mine-run bins are designated 1 to 4 inclusive. The crushed and sampled material from the development is to be stored in one of the two ore stockpiles - high grade $> 10\%$ estimated combined lead and zinc; low grade, 10% and $< 10\%$ estimated combined lead and zinc but $> 4\%$. All material estimated below the 4% will be rejected as waste and, of course, not crushed and sampled.

3. Responsibility of the Underground Contractor

At the start of each day (day shift), the contractor's job supervisor is to provide a progress and advance report to the site superintendent for the previous 24 hours. He is to state clearly what headings were advanced, how many rounds were removed in each extension (Round 1, Round 2, Round 3 etc.) what the footage of advance was for each round, and into what mine-run bin was each respective round dumped.

(Note: Not more than one round may be dumped in any one bin.)

Graveyard shift is to be considered the final shift for the recording of the 24 hour advance.

At mid-month and at the end of each month, the contractor's job supervisor and site superintendent are to check out jointly the work accomplished for the period and materials used. On concurrence, both the site superintendent and contractor's job supervisor must undersign the bi-monthly statement before forwarding for invoice preparation.

4. Responsibility of Crushing Contractor

For every day of operation, the contractor's job supervisor must provide a statement on the following day to the site superintendent, indicating clearly the hours of machine operation and the hours of work incurred by each member of the crew with their respective rates. If the statement is satisfactory, the site superintendent will undersign.

(Note: The Crushing Plant and conveyances must be completely free at all times of material from the last processed round before proceeding to the next.)

5. Sampling Tower Operation

One man will be assigned full time to this operation. He will, under the direction of the site superintendent, be responsible to operate the sampling tower and prepare the required sample for each heading round of advance. Approximately 40 to 50 lbs of sample material is usually obtained per round from this set-up.

The operator must daily provide the site superintendent with a brief report in writing on what development rounds were sampled on the previous day, what sample numbers were assigned, and where the material for each round was respectively stored.

To avoid confusion, the date noted on the sample slips must correspond with the recorded date (24 hour) for the advance.

- (Note: 1. All this above data requires transcription by the Surveyor's Dept. onto a master control sheet maintained for each respective development heading.
2. The above instructions correspond to a one-shift crushing operation (8 to 10 hours per day). Should two shifts be required, the afternoon shift operator must leave a report for dayshift.
3. In order to maintain sequential sample numbers, keep a sample book separately for each heading.)

6. Surveying Department (C.M.S.)

The surveyor will be under the general direction of the project manager for C.M.S.

He will be responsible to provide engineering surveys for the development and to maintain development on line and grade.

The surveyor is to daily, at the start of the dayshift, survey or measure out in the field the development advance for the previous 24 hours and to plot same on a 40 scale plan. Each round of advance is to be shown separately as per illustration attached.

The surveyor's department is also required to transcribe the information daily onto the master control sheet to be maintained for each respective heading.

At mid-month and at the completion of each month, the surveyor's department is to provide 200' scale prints illustrating the underground progress for the period, showing clearly each round of advance, date of advance, and sample number thereto assigned.

(Note: C.M.S. Surveying department will provide also all necessary survey controls for underground diamond drilling and prints and plans thereto.)

7. Geological Department (Grum)

This department is to note the geology as the underground extensions advance, provide geological guidance, develop underground geology plans, produce monthly assay plans of the underground development, maintain site records on geology, materials (plus dates) sent out for assaying and the assay results.

(Note: The geology department in the field is to maintain discriminatory colouring in bulk assay plans for the following:

- > ^{15% +} 15% combined Pb and Zn
- 12 to-15% Pb and Zn
- 10 to-12% Pb and Zn
- 8 to-10% Pb and Zn
- 6 to- 8% Pb and Zn
- 4 to- 6% Pb and Zn

