Notes on Fair Computer Model & Planning

(notes given to R. Vasagie)

006985

Fair Computer Model

27/7/83.

Compositing of DDH samples

Please refer to attached DDH coding form.

DDH 'from' and 'to' lengths of similar geology are broken out by the geologist and coded for horizon, primary geology and secondary geology. For intervals with assays a compositing code is also assigned.

e.g. 15602

- 1 → horizon
- 5 → primary geology
- 6 → secondary geology
- 02 → compositing code (2nd composite down hole)

These intervals may range in the main from 5' to 20'.

Generally composites are made for DDH intersections of sulphide bearing rock even if relatively low grade. The intent is to create a block model reflecting the grade of the material in the block and to then accept or reject a block based on whether it falls above or below the cut-off.

Block grade will be estimated from surrounding DDH composites of similar geology. The composite is arrived from individual samples by allowing for weighting of sample length and specific gravity.

A particular composite may be overall

(3)

above cut-off while individual samples within may be below. Usually mining will not be able to separate at such small lengths.

Mintec is primarily an open-pit modelling system and is not well suited to underground situations or modelling of thin horizons where horizon thickness is only 1-2 times block height. Current block for new model at Faro is plan, 35' x 35', height 20'.

SC COMPUTER SCIENCES CANADA, LTD.

FROM SECTION 124+22 CODING FORM DATE

Line No. DDHID

Card Col.	FROM	TO	CODE			
1	8.2E-1					
2	0.0	44.0	196			
3	44.0	154.4	932			
4	154.4	280.4	930			
5	280.4	418.6	912			
6	418.6	496.6	915			
7	496.6	505.0	211	01		
8	505.0	515.0	156	02		
9	515.0	524.0	188	03		
10	524.0	536.2	144	04		
11	536.2	550.9	113	05		
12	550.9	[redacted] →			550.9 565.6	1 1 1 06
13	575.5	603.6	915		565.6 575.5	1 1 1 07
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						

(2)

Faro Mine Planning

1) Economic ultimate limits analysis.
2) Ultimate Pit design
3) Phase design and reserves calculation.

Note: Following figures do not include storage costs on CSC.

1) Economic ultimate limits analysis.
(Dipper sub-system).
With programs run at generally high priority (9) this could be around $20,000 per deposit resulting in 2-3 pit outlines for varying economics.
(This does not include 'phone charges)
- can often be covered under direct line costs.

2) Ultimate Pit Design.
(Strip per sub-system).
Generate pit outlines from digitized pit bottom and pushbacks.

a) generate outlines (priority 9) $15 / run. (may require 6 runs to get acceptable outline)
b) plot outlines (priority 9) $5 / run on Textronix.
c) plot outlines on Calcomp from Faro H-P3000 - no in-house cost except for transmission of data from CSC to H-P3000. Only done for final outlines.
Cost to transmit data CSC → H-P3000 $5 / run.

Above figures in 2) do not include connect time charges or 'phone charges Please turn to next page.

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2) continued.
Average connect time per run 15 mins
∴ $5/run.
∴ Overall cost per run as above is $20/run.

3) Phase Design and Reserves Calculation.
(7 Phases at Faro)

a) Digitize Phases at Faro. – in-house cost.
b) Submit digitized phases to CSC. – for all phases $100.
c) Calculate block partials within outlines. – high priority 9 all phases $100
d) Calculate reserves (say 3 cut-offs.) – high priority (9) av. $50/phase.
low priority (6) av. $20/phase.
e) Summarize reserves. – high priority (9) av $5/phase.
f) Transmit report from CSC to HP3000 via RJE.
– for all phases $100.

These figures in 3) do not include phone charges. Again phone charges can often be covered by direct line costs.

∴ Overall procedure 1× for 7 phases (high priority 9) cost $625.
~ Overall procedure 1× for 7 phases (with low priority calc & reserves overnight) cost $475.

Note: None of 1), 2), 3) Sections programs have actually been run on Release 10 version of Minter and

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are estimated based on experience with Release 9 version. They are therefore subject to some speculation. Release 10 should be more efficient.

P. L. C.
27/7/83

Eng. '84 Budget attached.
Minitec Agreement attached.
CSC contract Attached.