

to:
from: C. Tilson

005142

1 Nov 83

re: Gold values for Grum deposit, Section 80W

I enclose summary statistics (Table I-V) for gold assays for section 80W at Grum along with the actual histograms of data arranged by ore facies.

As you can see the numbers are significantly higher than those for Faro deposit for comparable ore facies. These samples, and those for Faro, represent a small portion of the overall deposits thus may not be representative of the whole deposits.

At Grum the massive facies are generally more auriferous than less massive facies as shown on table II. There is also a correlation of gold content with Pb+Zn grade as shown on Table III. Baritic and non baritic facies are not particularly distinguishable especially surprising since 4G is such a high grade facies; this may be due to dilution by barite if gold is dependant on total sulfide content.

Carbonate (calcite dolomite and ankerite) bearing facies ^(av. 1.25 g/tonne) are comparable to non carbonate bearing facies. Pyrrhotitic facies ^(av. 1.23 g/t) are not well represented but have comparable values to other massive ore types.

Ray Jh

Table I

gold content by ore facies

<u>ore facies</u>	<u>av gold</u>	<u>no. of samples</u>	<u>gold content of comparable facies at Faro Zn</u>
4A	0.93	310	0.28
4BCD	1.08	103	~ 0.15 - 0.20
4EF	1.66	86	0.16
4G	1.54	53	—
4H	1.23	3	~ 0.23
4K	0.67	11	—
4L	0.56	35	—

Given gold content by ore facies with a comparable Faro gold content for the same facies. Note that for both deposits this is an areally restricted sample thus should not be considered representative of the deposits as a whole.

Table II

Increasing total sulphide →

	<30% tot S ⁼	30-80% tot S ⁼	>80% tot S ⁼
graphitic <5% Pt ₂ N	0.82 (4A0)	1.12 (4A3)	
graphitic >5%	1.01 (4A4)	1.35 (4A34)	
non graphitic <5%	0.99 (4C0)	1.23 (4C3)	1.53 (4E0)
non graphitic >5%	0.80 (4D0)	1.73 (4D3)	1.72 (4E4)

gold content of ore facies arranged in order of increasing total sulphide content.

Table III

increasing Pb+Zn grade →

	< 5%	5-10%	> 10%
non graphitic quartzose	0.99 (4C0)	0.80 (4D0)	1.16 (404)
graphitic quartzose	0.82 (4A0)	1.01 (4A4)	(no representatives)
massive, non baritic	1.53 (4E0)	1.72 (4E4)	← (included in 5-10%)
baritic massive	(included in 5-10%) →	1.15 (4G0)	1.64 (4G4)

gold content of ore facies arranged
in order of increasing Pb+Zn grade

Table IV

	massive non baritic (no visible BaSO_4) 4E0 + 4E4	massive barite bearing 2-10% visible BaSO_4 4E6 + 4E46	massive baritic >10% visible BaSO_4 4G0 + 4G4
all grades	1.66 (n=66)	1.75 (n=14)	1.54 (n=53)

gold content versus barite content in
massive ore facies

Table V
Group 80W - summary statistics for GOLD

		av gold (gm/tonne)	std dev.	no. of samples	range (gm/tonne)
<u>Graphitic quartzose ores 4A</u>					
4A0	<5% Pb+Zn	0.82	0.49	153	0.1-3.43
4A4	>5% Pb+Zn	1.01	0.52	130	0.1-2.7

<u>Quartzose ores 4BCD</u>					
4BC	<5% Pb+Zn	0.99	0.48	33	0.2-2.3
4D0	5-10% Pb+Zn	0.80	0.57	20	0.1-2.8
4D4	>10% Pb+Zn	1.16	0.70	34	0.2-2.7

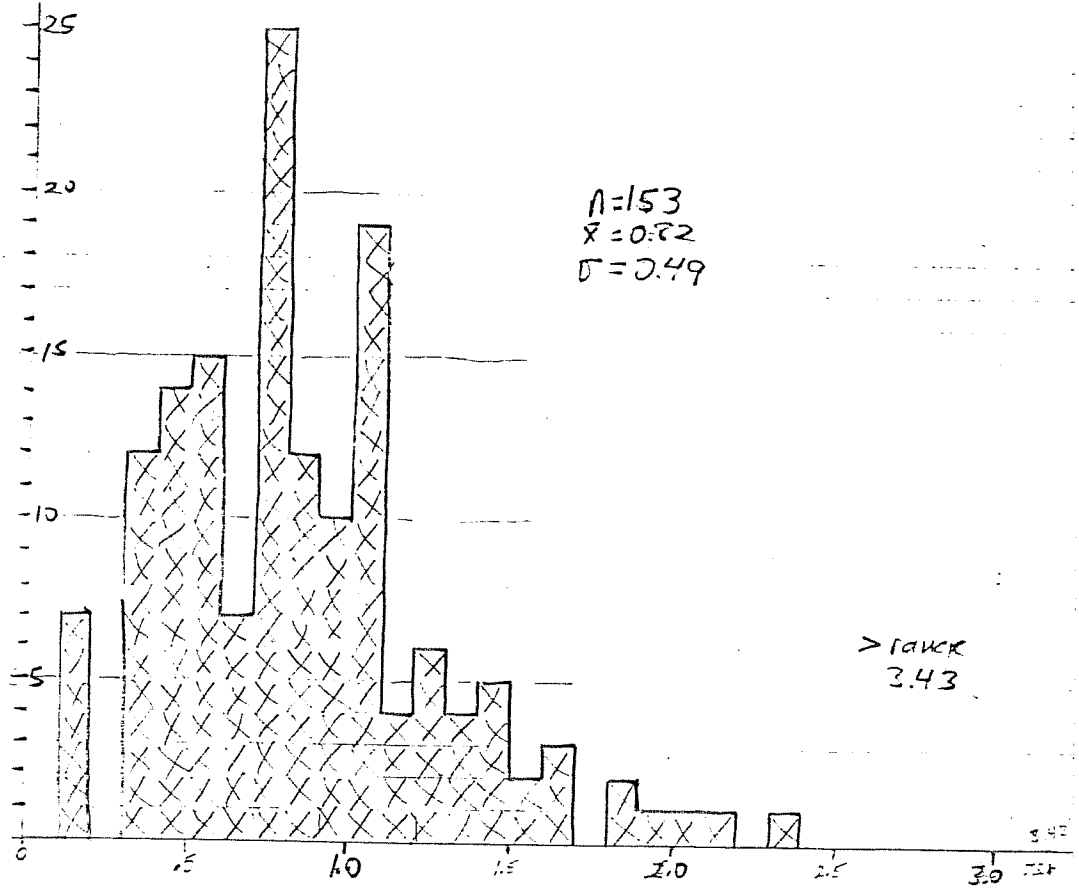
<u>Semi-massive ores 4ACD3, 4E1</u>					
4A30	graphitic <5%	1.12	0.43	25	0.6-2.4
4A34	graphitic >5%	1.35	(0.55)	2	0.8-2.0
4C3	non-graphitic <5%	1.23	(0.55)	9	0.5-2.2
4D3	non graphitic >5%	1.73	(0.61)	7	0.7-2.9

<u>Massive ores 4EFGHK</u>					
4E0	non baritic, <5% Pb+Zn	1.53	0.74	22	0.4-2.9
4E4	non baritic, >5% Pb+Zn	1.72	0.78	44	0.5-4.46
4E6+4	barite bearing, all grades	1.75	(0.40)	14	1.1-2.1
4G0	baritic >10% Base, <10% Pb+Zn	1.15	(0.41)	11	0.6-2.2
4G4	baritic >10% Base, >10% Pb+Zn	1.64	0.70	42	0.7-4.05
4K	carbonate rich, all grades	0.67	(0.63)	11	0.2-2.2
4E*	carbonate bearing, all grades	1.47	(0.64)	8	0.5-2.5
4G*	carbonate bearing baritic, all grades	1.90	(0.60)	7	1.2-3.1
4H	pyrrhotitic, all grades	1.23	(0.78)	3	0.3-2.2

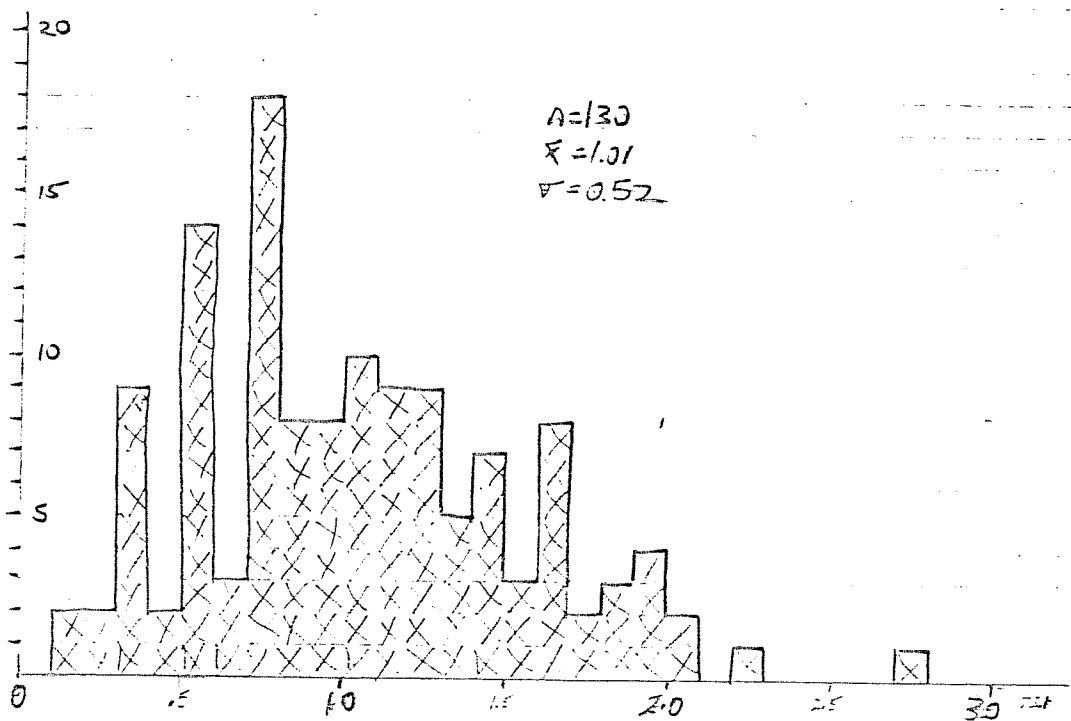
<u>Alteration overprint 4L</u>					
4L	all grades	0.56	0.45	35	0.1-2.4

av. all ore types = 1.10

600

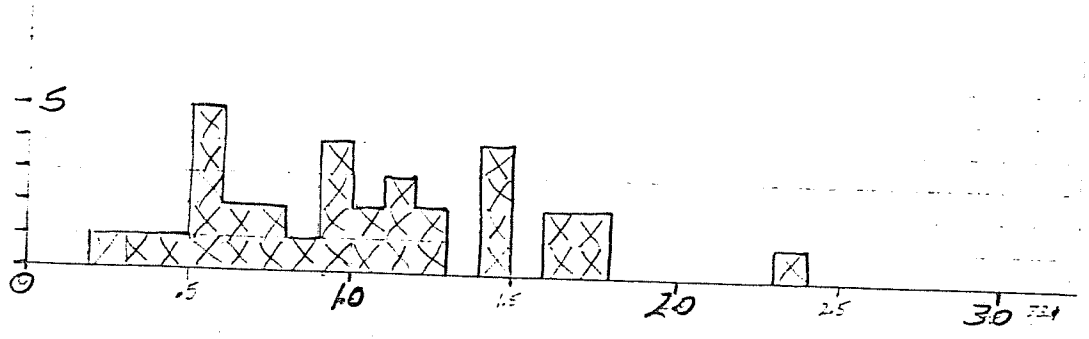


$4A0 + 4A1 + 4A3 + 4C5 + 4A2 + 4A12$
 graphitic quartzose (< 5% Pb+Zn)

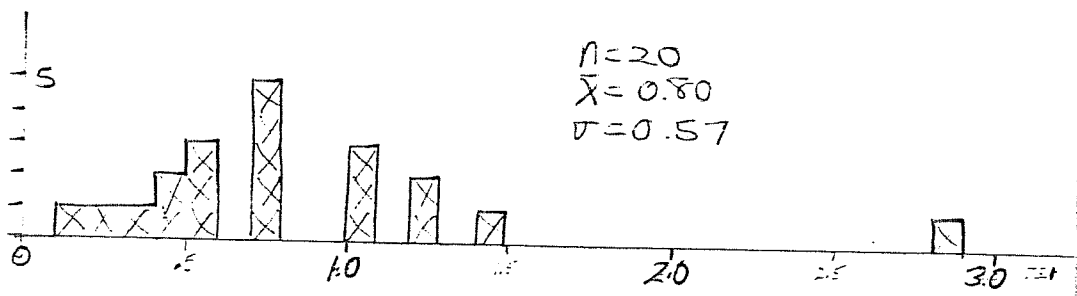


$4A4 + 4A14 + 4AD + 4D5$
 graphitic quartzose (> 5% Pb+Zn)

$n=33$
 $\bar{x}=0.99$
 $\sigma=0.48$



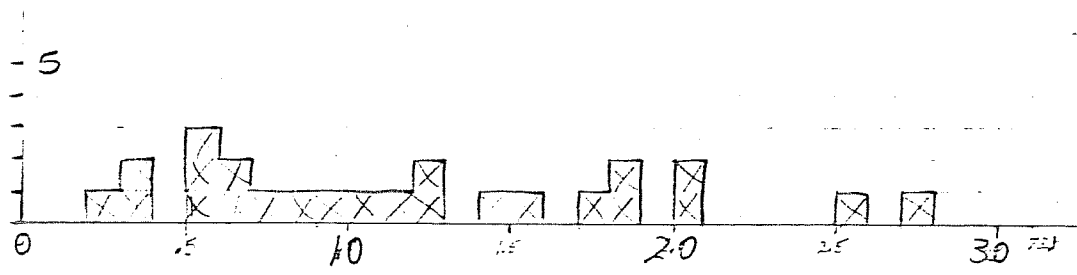
$4CO + 4BO + 4CL + 4DL$
 quartose disseminata, non grafica ($< 5\% P_6 + 2n$)



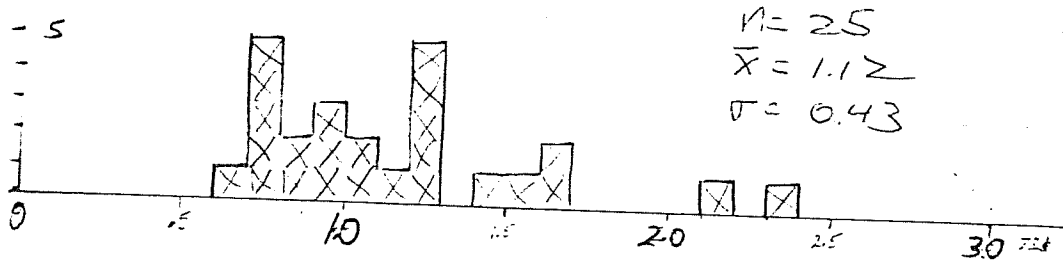
$n=20$
 $\bar{x}=0.80$
 $\sigma=0.57$

$4DO + 4CD + 4BL$
 quartose disseminata, non grafica ($> 5\% < 10\%$)

$n=24$
 $\bar{x}=1.16$
 $\sigma=0.70$

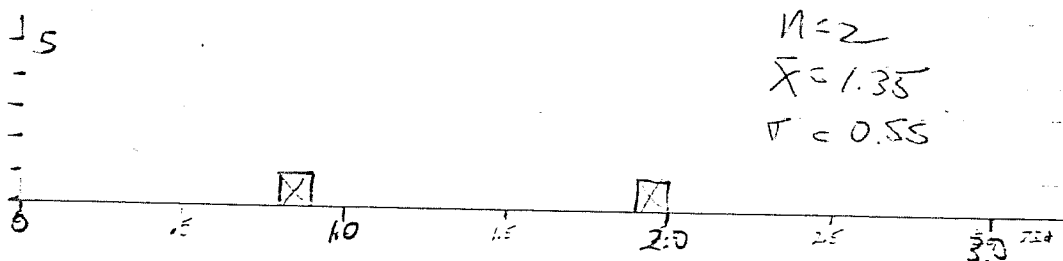


$4D4$
 quartose disseminata, non grafica ($> 10\% P_6 + 2n$)



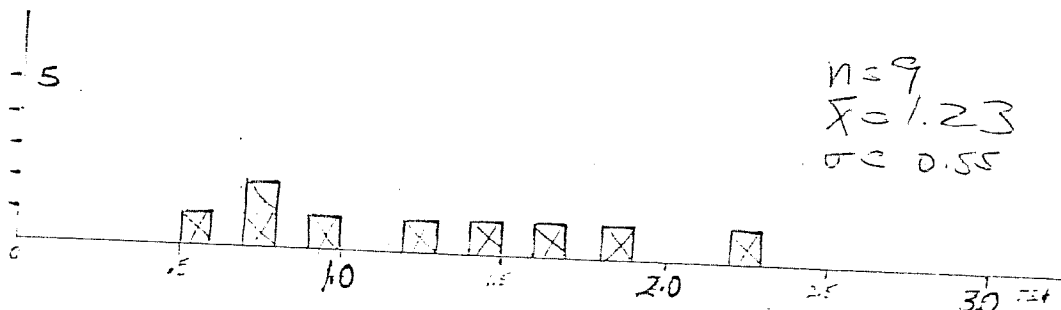
4A3 + 4A4E

semi-massive graphitic (< 5% Pb+Zn)



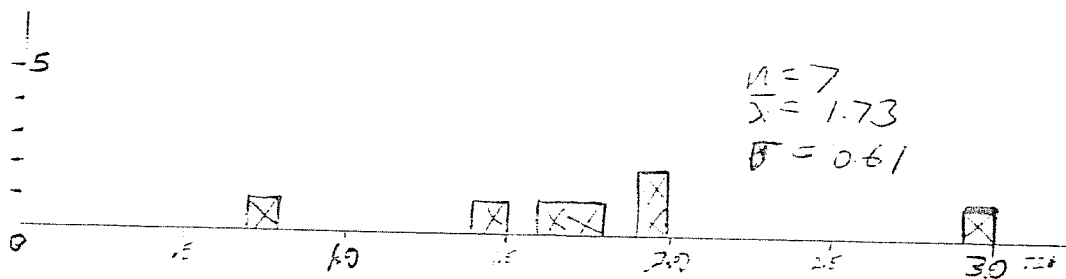
4A34 + 4A4E + 4A24

semi-massive graphitic (> 5% Pb+Zn)



4C3 + 4CE + 4E10

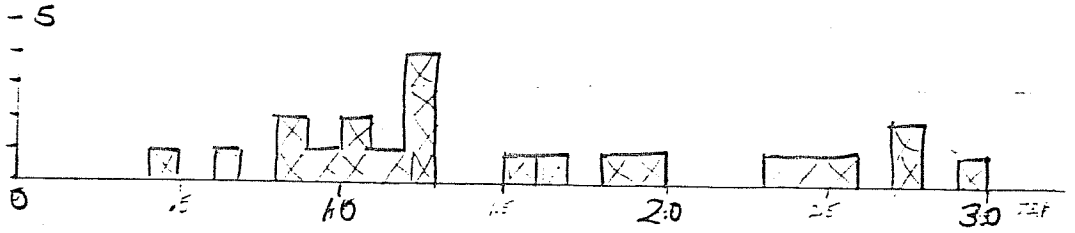
semi-massive, non graphitic (< 5% Pb+Zn)



4D3 + 4DE + 4E14

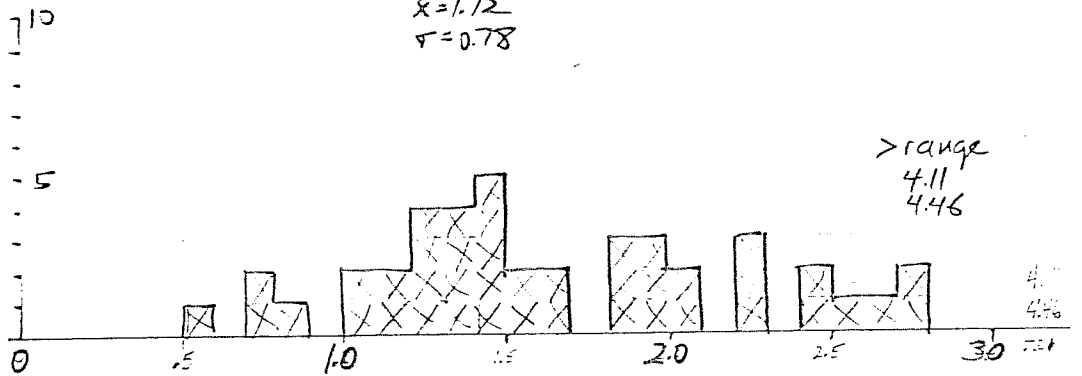
semi-massive, non graphitic (> 5% Pb+Zn)

$n=22$
 $\bar{x}=1.53$
 $\sigma=0.74$



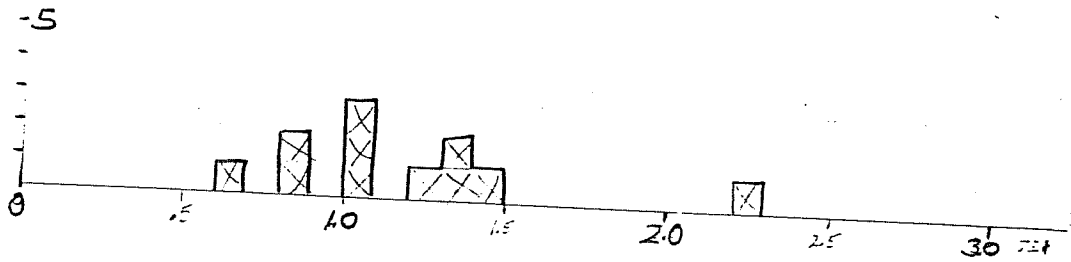
$4E0 + 4E* + 4E8$
 MASSIVE ($< 5\% Pb + Zn$)

$n=44$
 $\bar{x}=1.72$
 $\sigma=0.78$



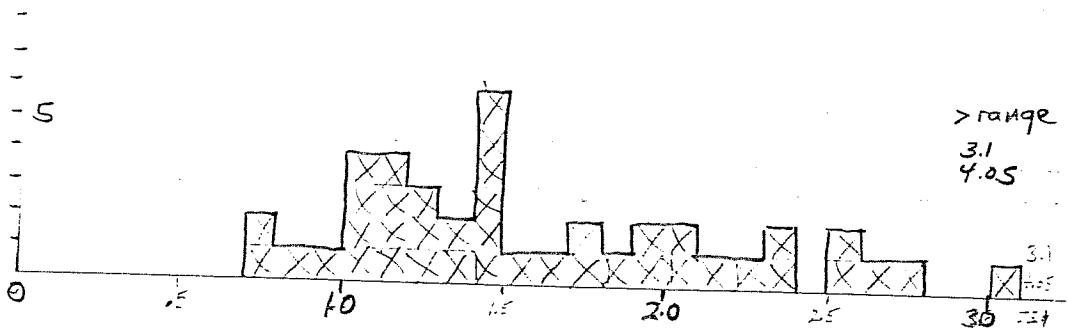
$(4E4 + 4F0 + 4E4*)$
 MASSIVE $> 5\% Pb + Zn$

$n=11$
 $\sigma=0.41$
 $\bar{x}=1.15$



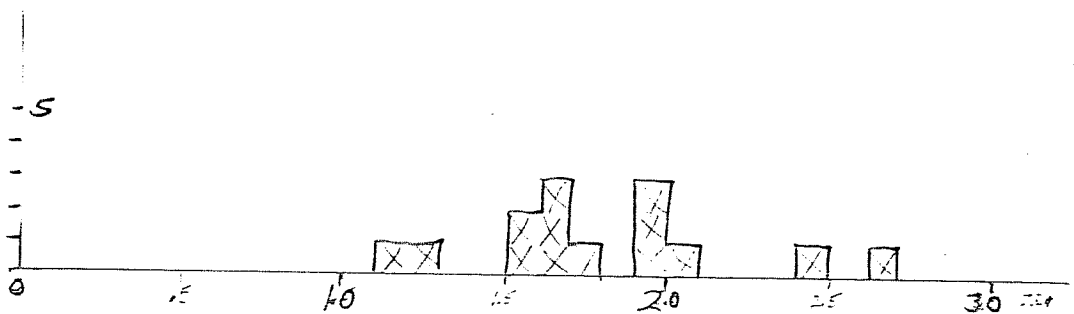
$4E0 + 4E1 + 4E*$
 baritic massive (< 10% Pb+Zn)

$n=42$
 $\bar{x}=1.64$
 $\sigma=0.7$



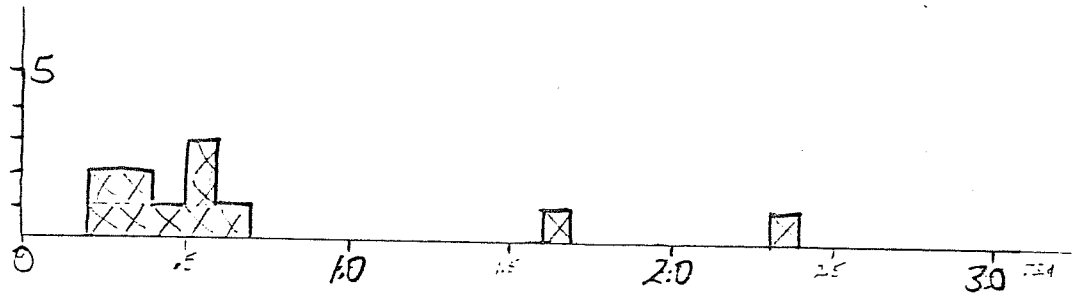
$(4E4 + 4E41 + 4E4*)$
 baritic massive > 10% Pb+Zn

$n=14$
 $\bar{x}=1.75$
 $\sigma=0.40$



$4E6 + 4E68 + 4E46 + 4E84 + 4E6 + 4D46$
 $+ 4E6* + 4E46*$
 barite bearing massive (all grades, < 10% visual barite)

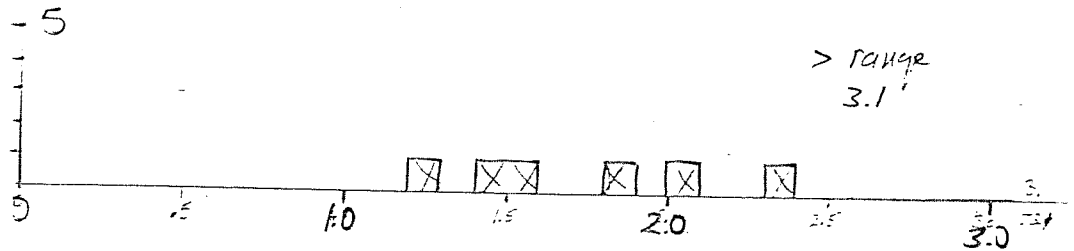
$n=11$
 $\bar{x}=0.67$
 $\sigma=0.63$



4K

Carbonate bearing massive (all grades, mainly < 5% however)

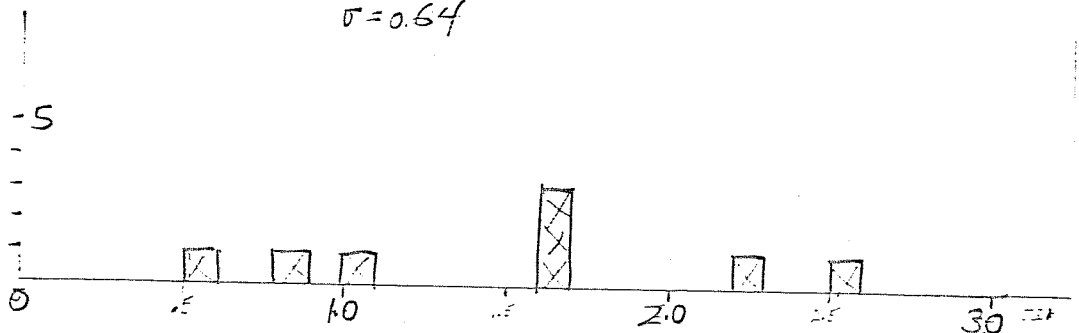
$n=7$
 $\bar{x}=1.9$
 $\sigma=0.6$



4E* + 4E4* + 4E46*

Carbonate bearing massive (all grades)

$n=8$
 $\bar{x}=1.47$
 $\sigma=0.64$



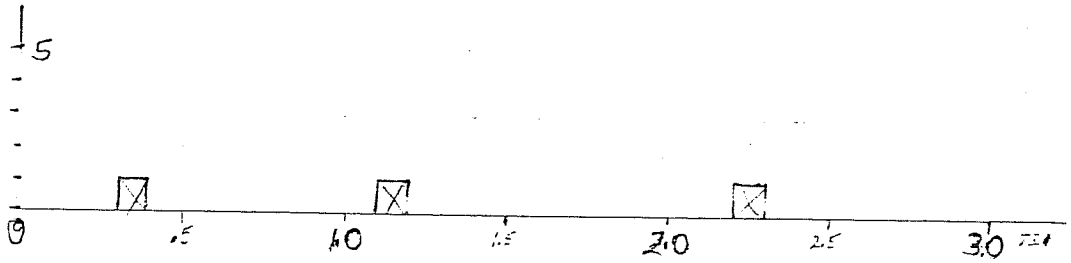
4E* + 4E4* + 4E46*

Carbonate bearing massive (all grades)

$$n=3$$

$$\bar{x}=1.23$$

$$s=0.78$$

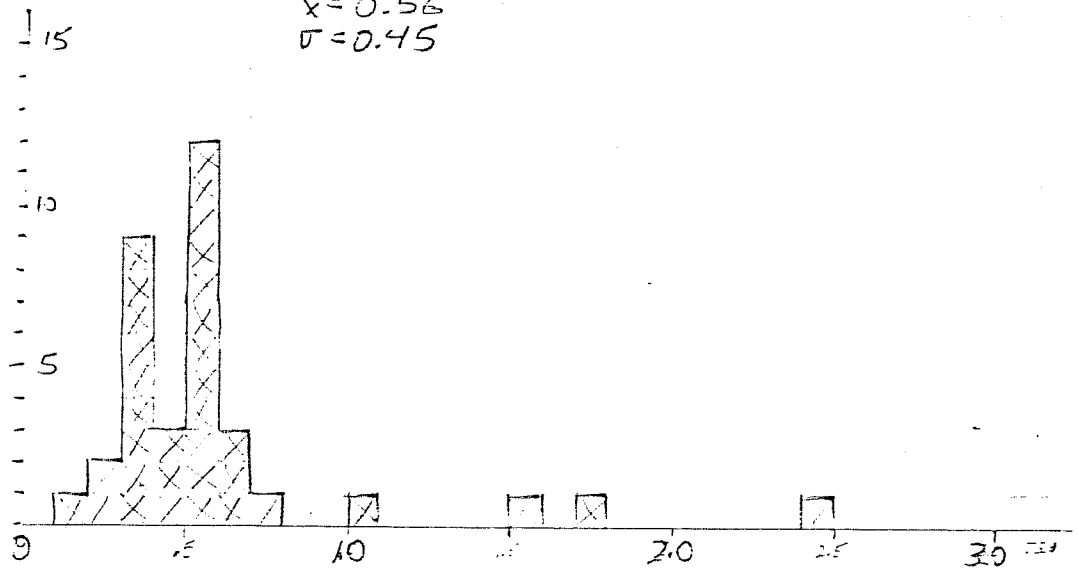


4H0 + 4H1 + 4H4
 pyrrhotitic massive (all grades)

$$n=35$$

$$\bar{x}=0.56$$

$$s=0.45$$



4L
 Alteration overprint (all grades, mostly v. low)