KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

020758

To Mr. J. Carrington *From* Mr. W.M. Sirola

Subject GRUM PROJECT - GRAVITY & TOTAL SULPHIDE DETERMINATION *Date* December 2, 1976

The assay office telephoned the results of the gravity determinations on the drill core and I have scribbled these on to the attached sheets, together with total sulphide estimates. The total sulphide estimates were derived by dividing Pb + Zn x 0.7 and adding that number to the pyrite content. ?

The massive sulphides have an average specific gravity of 4.13 and an average estimated total sulphide content of 75.6%. The quartz sulphides (P) have an average specific gravity of 3.23 and an average total sulphide content of 38.2%.

There is patently very little relationship between the Pb + Zn content and the specific gravity because the very low grades in the massive sulphides, for example, have a slightly higher specific gravity than the much higher grade Pb + Zn content. In the case of the "P" type mineralization, average gravities for low grades are only slightly below those for the higher grades.

So far so good. However, the total sulphide contents are estimates only and when I plotted these figures versus specific gravity on a graph, it became apparent that there were virtually no samples except a few heavy in barite, which fell in the 50% to 70% range. I see no way for filling this gap, short of determining the lead-zinc content plus the iron content of all of the samples. Hopefully this will provide some total sulphide figures in the 50 - 70% range. I have advised the lab (General Testing) to proceed with this work and will send the results as soon as they are available.

Bill

W.M. Sirola

Attach.

BY J. PAXTON DATE Oct. 17/76 SUBJECT ORE SPECIFIC GRAVITY SHEET NO. 1 OF 2

CHKD. BY DATE GRUMI JOINT VENTURE JOB NO.

LE	LOCATION SECT.	LOCATION LAT.	DEPTH M	TAG No.	GEOL. TYPE	ESTIMATED PERCENTAGES Pb+Zn	Py	$BaSO_4$	Qtz.	SERICITE	ASSAY OFFICE REPORT Pb	Zn	Ag	S.G.	REMARKS EST TOTAL S
66	76W	3N	75	162C	M	3	75	Nil	10	Nil	0.46	0.09		4.39	79.3
59	76W	3N	40	167C	MB	4	35	40	5	Nil	5.44	11.03		4.41	40.7
9	74W	3N	86.8	170C	MBb	3	70	5	5	Nil	2.25	2.41		4.44	74.3
35	80W	7N	181.5	175C	MB	4	70	10	5	Nil	6.30	9.23		4.20	75.7
35	-do	-do	181.2	176C	MB	2	75	5	5	Nil	0.54	0.67		4.32	77.9
135	-do	-do	175.7	179C	M	3	75	Nil	10	Nil	0.19	0.06		4.03	79.3
129	76W	5N	75	180C	M	2	70	Nil	10	Nil	0.11	0.07		3.83	72.9
129	-do	-do	76	181C	M	4	75	Nil	5	Nil	0.65	0.31		4.41	80.7
129	-do	-do	86	184C	M	5	75	Nil	15	Nil	4.31	4.46		4.30	82.7
126	76W	76X-C	90.8	185C	MB	4	65	25	Nil	Nil	3.86	0.72		4.35	70.7
126	76W	76X-C	95	186C	M	2	80	Nil	5	5	0.97	0.80		4.36	82.9
													Av	4.185	(74.3 %)
66	76W	3N	75.5	164C	MIQ	6	70	Nil	15	Nil	6.58	8.35		4.19	78.6
59	76W	3N	36.5	166C	MB	7	50	35	Nil	Nil	7.93	10.90		4.50	60.1
59	76W	3N	45.6	168C	MB	6	40	40	5	Nil	6.18	11.00		3.83	48.6
47	74W	6N	1.7	173C	M	7	70	Nil	10	Nil	13.56	14.59		3.92	80.0
133	80W	7N	184.2	177C	MB	9	75	Nil	10	Nil	2.94	3.57		4.15	87.8
129	76W	5N	74.5	183C	MB	7	65	15	5	Nil	2.63	4.92		3.92	75.1
212	73W	3N	59.5	187C	MB	8	60	20	5	Nil	4.04	9.99		4.01	71.4
212	-do	-do	64	190C	MBb	7	70	10	5	Nil	0.53	4.04		4.23	80.0
179	68W	2N	36.5	191C	MB	8	65	20	Nil	Nil	2.43	5.68		4.38	76.4
179	62W	2N	35.1	192C	MB	9	65	20	Nil	Nil	0.56	4.66		4.45	77.9
150	80W	Remuck	141	193C	MB	6	70	15	Nil	Nil	2.21	1.14		4.25	78.6
													Av	(4.175)	(74.0 %)
84	72W	5N+18	2.5	161C	MB	20	40	Nil	25	10	10.33	9.76		3.26	68.6
66	76W	3N	75.1	163C	MB	18	60	Nil	10	5	12.69	17.36		4.41	85.7
89	76W	3N+22.5	21.5	165C	MB	10	70	Nil	5	Nil	14.64	26.77		4.34	84.3
39	74W	3N	82.5	169C	MB	20	50	20	5	Nil	8.61	20.28		3.50	78.6
39	-do	-do	82.4	171C	MB	18	45	15	10	Nil	11.43	26.74		3.68	70.7
39	-do	-do	83.5	172C	MBb	10	60	10	10	Nil	9.14	12.56		4.41	74.3
47	79W	6N	0.3	174C	M	10	70	Nil	10	Nil	7.73	8.85		3.66	84.3
135	80W	7N	172	178C	MB	15	30	45	5	Nil	7.82	9.92		4.39	51.5
126	76W	76X-C	105.3	188C	MB	10	75	Nil	5	Nil	5.28	5.29		4.41	89.3
126	-do	-do	103.5	189C	MB	10	80	Nil	Nil	Nil	11.21	18.36		(3.67)	94.3
150	80W	Remuck	139	194C	MB	20	55	20	Nil	Nil	6.46	5.17		4.38	83.6
													A	(4.03)	(78.6 %)

Note Prob. Av = 4.13 for Massive including Pb

BY J. PAXTON DATE Oct. 17/76 SUBJECT ORE SPECIFIC GRAVITY SHEET NO. 2 OF 2

CHKD. BY ..... DATE ..... GRUM! JOINT VENTURE JOB NO .....

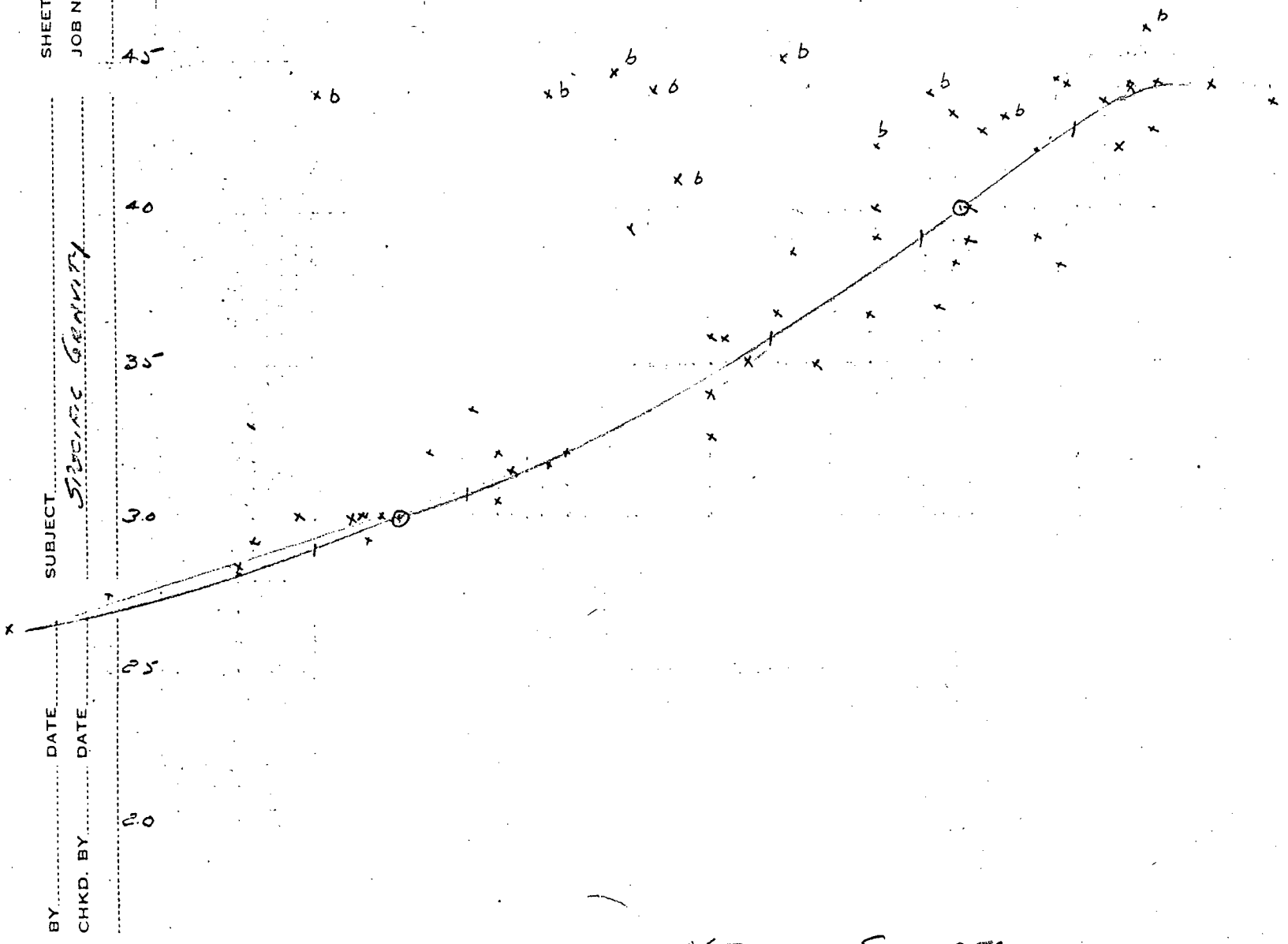
DD HOLE	LOCATION SECT.	LOCATION LAT.	DEPTH m	TAG No.	GEOL. TYPE	ESTIMATED PERCENTAGES Pb+Zn	Py	$BaSO_4$	Qtz.	SERICITE	ASSAY OFFICE REPORT Pb	Zn	Ag	S.G.	REMARK
1-129	76W	5N	74.5	182C	P	4	35	Nil	45	10	0.87	2.89		3.44	40.7
1-156	80W	3N+11	49.4	197C	PG	4	30	Nil	50	10	1.51	1.08		2.87	35.7
1-152	80W	Remuck	21.7	200C	P	3	25	Nil	50	20	1.47	0.59		2.65	29.3
1-152	-do	-do	38.1	382C	PG	5	25	Nil	30	10	2.66	3.47		2.86	32.2
1-170	84W	5N+85	1.3	387C	P	3	40	Nil	35	15	2.79	5.19		3.57	44.3
1-170	-do	-do	1.9	388C	PG	4	35	Nil	40	15	1.15	2.29		3.31	40.7
1-177	62W	2N	4.1	391C	P	5	25	Nil	30	20	0.29	3.48		3.01	32.2
1-177	-do	-do	9.0	392C	PG	2	25	Nil	45	10	0.11	0.19		2.93 ✓	27.9
1-183	68W	2N	5.5	394C	P	5	30	Nil	45	5	1.86	4.46		3.87	37.2
1-156	80W	3N+11	51.6	196C	P	5	40	Nil	35	5	2.47	1.59		3.50	47.2
													Av	3.20	36.75
1-152	80W	Remuck	23	199C	P-Sb	8	5	Nil	30	45	2.86	5.09		2.76	16.4
1-164	82W	3N	10.2	385C	PG	6	30	Nil	25	15	1.51	3.24		3.00	38.6
1-152	80W	Remuck	37	381C	PG	10	25	Nil	30	5	3.13	8.08		3.01	39.3
1-164	82W	3N	9.5	384C	PG	9	35	Nil	35	5	6.25	7.77		3.22	47.8
1-170	84W	5N+8.5	1.5	386C	PG	8	20	Nil	40	10	3.19	3.50		3.37	31.4
1-203	72W	4N	46	389C	P	10	15	Nil	40	10	9.66	6.93		3.22	29.3
1-203	72W	4N	47	390C	P	9	20	Nil	40	20	7.35	3.95		3.02	32.8
1-183	68W	2N	5	393C	P	5	35	Nil	40	5	2.02	3.95		3.57	40.2
1-128	76W	5N+20	7.8	400C	P	10	35	Nil	40	10	2.47	5.95		3.22	49.3
													Av	3.15 ✓	36.12
1-156	80W	3N+11	50.5	195C	P	12	20	Nil	40	10	8.60	14.09		3.17	37.2
1-152	80W	Remuck	23.6	198C	P	18	10	Nil	40	20	7.02	13.29		3.06	35.7
1-152	-do	-do	36.5	380C	PG	15	20	Nil	25	15	2.61	8.56		2.93	37.2
1-164	82W	3N	7.8	383C	PG	12	25	Nil	30	20	3.87	8.83		3.17	42.2
1-156	80W	3N+11	65.4	396C	P-Ba	10	40	15 ✓	20	5	2.73	6.91		4.39 ✓	51.3
1-206	71W	6N	41.2	397C	P	12	25	Nil	35	20	1.98	6.06		3.11	37.2
1-206	-do	-do	40.5	398C	PG	12	30	Nil	20	15	7.67	12.76		3.90 ✓	47.2
1-128	76	5+20	7.0	399C	P	20	15	Nil	30	20	5.74	16.46		3.19	43.6
													Av	3.36	41.8

Note: Arith. Av of Py Pg = 3.23 for .30-.50% total Sulphides

Grim Joint Venture

PLOT OF TOTAL SULPHIDES
VERSUS
SPECIFIC GRAVITY OF DRILL CORE

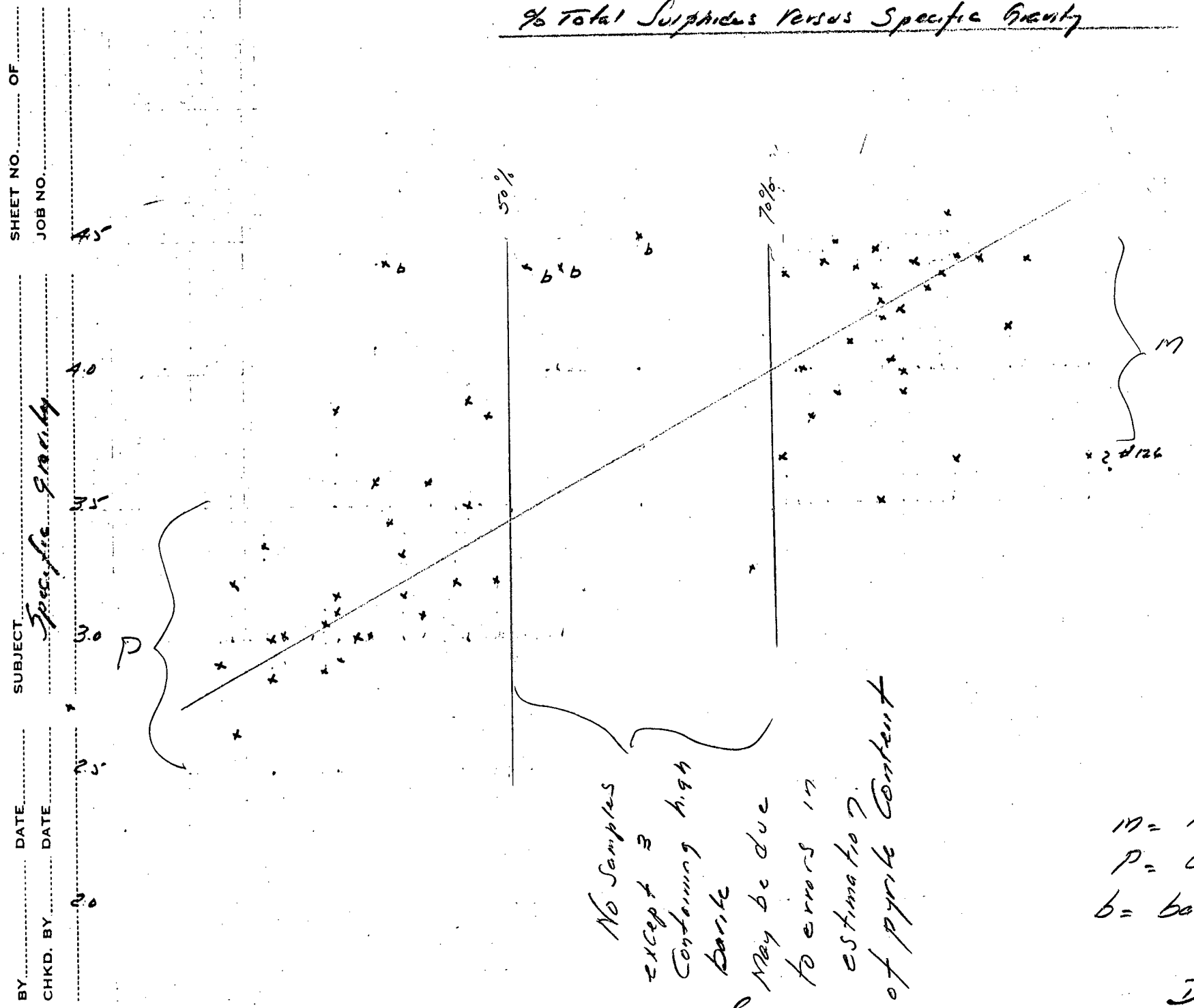
SHEET NO. ____ OF ____
JOB NO. ____
SUBJECT Specific Gravity
BY ____ DATE ____
CHKD. BY ____ DATE ____



% TOTAL SULPHIDES.

Drum Deposit

% Total Sulphides versus Specific Gravity

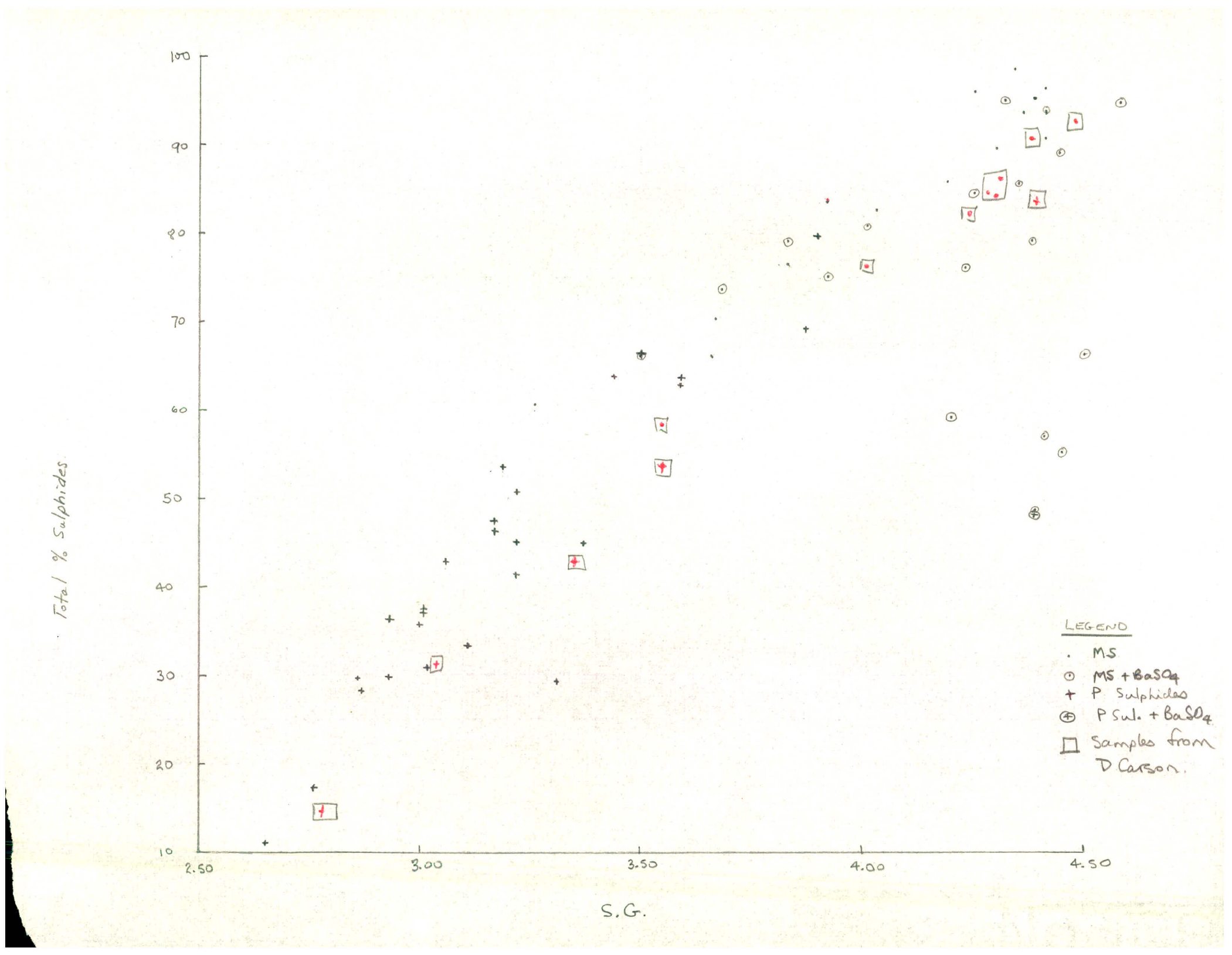


M = Massive Sulph

P = Quartz. pyrite

b = barite

Dec. '76
Wm Sirola


Total % Sulphides
100
90
80
70
60
50
40
30
20
10
2.50
3.00
3.50
4.00
4.50
S.G.
LEGEND
MS
MS + BaSO4
P Sulphides
P Sul. + BaSO4
Samples from D Carson.