

GRUM JOINT VENTUREREVISED MINERAL INVENTORY - "CHAMP ZONE"

March 21, 1978 (A.Y. Po)

Calculations based on reinterpreted sulphide boundaries. CHAMP zone is bounded by 51W to 63W on cross section and by 13S to 1S on longitudinal section.

Drill Indicated

<u>Category</u>	<u>Metric Tonnes</u>	<u>% Lead</u>	<u>% Zinc</u>	<u>gms/m.t. Silver</u>
+ 12%	140,461	7.16	8.36	79
10 - 12%	342,218	4.71	6.31	63
+ 10%	482,679	5.42	6.91	68
8 - 10%	206,468	3.90	5.14	48
+ 8%	689,147	4.96	6.38	62
6 - 8%	225,979	3.07	3.86	40
+ 6%	915,126	4.49	5.76	57
4 - 6%	777,505	2.34	2.55	33
+ 4%	1,692,631	3.51	4.28	46

Drill Possible

+12%	-	-	-	-
10 - 12%	-	-	-	-
+ 10%	-	-	-	-
8 - 10%	-	-	-	-
+ 8%	-	-	-	-
6 - 8%	37,870	3.28	4.63	34
+ 6%	37,870	3.28	4.63	34
4 - 6%	77,440	1.88	2.60	22
+ 4%	115,310	2.34	3.26	26

GRUM DEPOSIT, Y.T.

MINERAL RESERVE SUMMARY

CHAMP ZONE.
SECTION 52W to 62W (13^s to 1^s)

KERR OPTION

CATEGORY	PROPERTY	Tonnes/m. (longitudinal)			GRADE			TONNES x GRADE			TONNES per 60.69m long. sect.	TONNES CUMULATIVE	REMARKS
		DRILL PROVEN	DRILL INDICATED	TOTAL	Pb %	Zn %	Ag gms/mt.	Pb % mt.	Zn % mt.	Ag gms/mt.			
6-8%	52W	279			3.2	2.9	39	893	809	10881	16932		
	54W	/	(624)		3.28	4.63	34	(2047)	(2889)	(21216)	(37870)		
	56W	1274			2.66	4.24	35	3395	5405	44227	77319		
	58W	1852			3.42	3.66	46	6343	6783	84800	112398		
	60W	318.5			2.59	4.37	33	825	1392	10510	19329		
	62W	/						/	/	/			
	52W-62W	3723.5			3.07	3.86	40	11456	14389	150418	225979		
	52W-62W		(624)		3.28	4.63	34	(2047)	(2889)	(21216)	(37870)		
76		15078.7			4.49	5.76	57	67851	86860	855085		915126	
76			(624)		3.28	4.63	34	(2047)	(2889)	(21216)	(37870)	(37870)	
4-6%	52W	1050			1.98	2.55	39	2079	2681	40704			
	54W		(1276)		1.88	2.60	22	(2399)	(3317)	(28072)			
	56W	2179			2.22	2.32	31	4849	5051	67165			
	58W	2274			2.17	2.91	31	4947	6617	71658			
	60W	3523.3			2.42	2.58	32	8537	9091	113682			
	62W	3784.8			2.53	2.44	34	9582	9216	130518			
	52W-62W	12811.1			2.34	2.55	33	29994	32656	423727	777505		
	52W-62W		(1276)		1.88	2.60	22	(2399)	(3317)	(28072)	(77440)		
70%		27889.8			3.51	4.28	46	97845	119516	1278812		1,692,631	
70%			(1900)		2.34	3.26	26	(4446)	(6206)	(49288)		(115311)	

Date: NOV 13 1978

Calc. by: D.Y. '80

Revised:

GRUM DEPOSIT, Y.T.

MINERAL RESERVE SUMMARY

CHAMP ZONE
SECTION 52W to 62W (13⁵/₄₁ S)

KERR OPTION

CATEGORY	PROPERTY	Tonnes / in. (longitudinal)			GRADE			TONNES X GRADE			TONNES per 60.69 m long. sect.	TONNES CUMULATIVE	REMARKS
		DRILL PROVEN	DRILL INDICATED	TOTAL	Pb %	Zn %	Ag gm/mt.	Pb % mt.	Zn % mt.	Ag gm mt.			
>12%	52W	/	/					/	/	/			
10-20	54W	/	/					/	/	/			
	56W	1248			6.57	9.26	68	8199	11556	84864	75741		
	58W	/	/					/	/	/			
	60W	/	/					/	/	/			
	62W	1066.4			7.86	7.32	91	8382	7806	97042	64720		
	52W-62W	2314.4			7.16	8.36	79	16581	19362	181906	140461	140461	
10-12%	52W	/	/					/	/	/			
	54W	/	/					/	/	/			
	56W	/	/					/	/	/			
	58W	1892			5.32	5.60	68	10063	10596	129480	114825		
	60W	3746.8			4.40	6.68	61	16481	25023	228161	2221393		
	62W	/	/					/	/	/			
	52W-62W	5638.8			4.71	5.31	63	26544	35619	357641	342218		
>10%	52W-62W	7953.2			5.42	6.91	68	43125	54981	539547		482679	
8-10%	52W	/	/					/	/	/			
	54W	/	/					/	/	/			
	56W	2552			3.76	5.18	44	9604	13214	112800	154881		
	58W	640			4.52	5.02	66	2893	3213	42240	38842		
	60W	210			3.68	5.06	48	773	1063	10080	12745		
	62W	/	/					/	/	/			
	52W-62W	3402			3.90	5.14	48	13270	17490	165120	206468		
>8	52W-62W	11355.2			4.96	6.38	62	56395	72471	704667		689147	

Date: MAR 21 1992

Calc'n. by: A.Y. PO

Revised:

MINERAL RESERVE SUMMARY

SECTION 54 W (13^S-15) (53W to 55W)

DATE: March 21, 1977
CALCULATION BY: R.Y.P.

GRUM DEPOSIT

REVISED:

ZONE SEGMENT	DIP Length	Thick- ness	AREA m ²	S.G.	TONNE m	GRADE			TONNE x GRADE			Pb + Zn %	Total Sulph. %	REMARKS		
						Pb %	Zn %	Ag gm/m.t.	Pb% m.t.	Zn % m.t.	Ag gm m.t.					
																One DDH drilled to depth of 25.3 meters by Prospectors Airways in July, 1956. No sulfides intersected by DDH # 162.
																Mineral reserves classified as "possible" the grade Category based on one half (tonnes & grade) of sect. 56W. Assuming that sulfide bands intersected in 56W did not persist longitudinally into 52W. (The 56W sulfide bands is not correlatable with the 52W bands).
T6-8			156		624	3.28	4.63	34								
T>6			156		624	3.28	4.63	34	2047.0	2889	21216	7.91				
T4-6			360		1276	1.88	2.60	22	2399.0	3317	28072	4.48				
T>4			516		1900	2.34	3.26	26	4446.0	6206	49288	5.6				

DRILL INDICATED

MINERAL RESERVE SUMMARY

(KERR OPTION)

SECTION 56W

GRUM DEPOSIT CHAMP ZONE
(135-15) T55W-57W

DATE: 2/21/78
CALCULATION BY: A.Y.P.

REVISED:

ZONE SEGMENT	DIP Length	Thick- ness	AREA m ²	S.G.	TONNE m	GRADE			TONNE x GRADE			Pb + Zn %	Total Sulph. %	REMARKS
						Pb %	Zn %	Ag gm/m.t.	Pb% m.t.	Zn% m.t.	Ag gm m.t.			
⊗ D-1	65	1.6	104	4	416	1.90	2.17	31	790	903	12896	8.07		H.W. of D2
⊗ D-2	65	2.0	130	4	520	4.78	4.33	51	2486	2252	26520	9.11		H.W. of D3
D-3	65	4.8	312	4	1248	6.57	9.26	68	8199	11556	84864			
⊗ D-4	54	3.5	189	4	756	3.31	5.61	40	2502	4241	30240			F.W. of D3
D-5	62	4.0	248	3	744	3.51	5.63	41	2611	4189	30504			
⊗ D-6	55	3.0	165	3	495	2.50	4.14	37	1238	2049	18315			F.W. of D5
DT	35	3.5	123	3	369	3.19	4.64	38	1177	1712	14022			
D-8	59	3.0	177	3	531	2.15	2.64	30	1142	1402	15930			
⊗ D-9	41	1.5	62	3.5	217	2.08	2.68	27	451	625	5859			H.W. of D-10
D-10	39	3.0	117	3.5	410	2.39	4.01	29	980	1644	11890			
D-11	63	4.6	290	3.5	1015	2.43	2.09	32	2466	2121	32480			
D-12	40	3.8	152	3.5	532	3.77	4.76	48	2005	2532	25536			
>12	65	4.8	312	4	1248	6.57	9.26	68	8199	11556	84864	11.83		
10-12	/	/	/	/	/	/	/	/	/	/	/	/		
T >10	65	4.8	312	4	1248	6.57	9.26	68	8199	11556	84864	11.83		
⊗ 8-10	119	2.68	319	4	1276	3.91	5.09	44	4988	6493	56760	9		
* 8-10	102	3.92	400	3.19	1276	3.62	5.27	44	4616	6721	56040	8.89		
T 8-10	221	3.25	719	3.54	2552	3.76	5.18	44	9604	13214	112800	8.94		
⊗ >8	184	3.42	631	4	2524	5.22	7.15	56	13187	18049	141624	12.38		
T >8	286	3.6	1031	3.68	3800	4.68	6.52	52	17803	24770	197664			
⊗ 6-8	55	3.0	165	3	495	2.50	4.14	37	1238	2049	18315	6.6		
* 6-8	74	3.2	240	3.2	770	2.77	4.31	33	2157	3356	25912	7.08		
T 6-8	129	3.1	405	3.1	1274	2.66	4.24	35	3395	5405	44227	6.9		
⊗ >6	341	3.51	1196	3.59	4295	4.43	6.24	50	19041	26819	215979	11.67		
T >6	415	3.46	1436	3.53	5074	4.17	5.95	48	21196	30175	241891	10.2		
⊗ 4-6	106	1.56	166	3.81	633	1.96	2.41	30	1241	1528	18755	4.37		
* 4-6	122	3.2	467	3.31	1546	2.33	2.28	31	3608	3523	48410	4.61		
T 4-6	228	2.77	633	3.4	2179	2.22	2.32	31	4849	5051	67165	4.53		
⊗ >4	521	3.07	1602	3.5	5707	3.93	5.55	46	22439	31703	260646	9.46		
T >4	643	3.2	2069	3.5	7253	3.59	4.85	43	26047	35226	309056	8.44		

MINERAL RESERVE SUMMARY

DRILL INDICATED

SECTION 58W

GRUM DEPOSIT CHAMP ZONE
(135 to 15) (57 W - 59 W)

DATE: Feb. 23/78
CALCULATION BY: P.Y.P.

REVISED:

ZONE SEGMENT	DIP Length	Thick- ness	AREA m ²	S.G.	TONNE m	GRADE			TONNE x GRADE			Pb + Zn %	Total Sulph. %	REMARKS
						Pb %	Zn %	Ag gm/m ³	Pb% m.t.	Zn% m.t.	Ag gm m.t.			
⊗ D-1	71	2.9	206	35	721	4.28	3.06	50	3086	2206	36050	Γ		N.W. of D2
D-2	71	3.7	263	4	1052	5.27	5.01	60	5544	5270	63120	□		
⊗ D-3	71	1.4	99	4	396	3.90	3.8	60	1544	1505	23760	Γ		F.W. of D2
D-4	70	3.0	210	4	840	5.38	6.34	79	4519	5326	66360	□		
⊗ D-5	70	3.5	245	3	735	2.33	4.18	34	1713	3072	24990	Γ		F.W. of D4
⊗ D-6	70	1.8	126	3	378	1.75	3.18	25	661	1202	9450	I		F.W. of D-5
⊗ D-7	68	1.7	116	3	348	1.63	3.06	26	567	1065	9048	I		H.W. of D-8
D-8	61	3.0	183	3.5	640	4.52	5.02	66	2893	3213	42240	Π		
D-9	64	3.0	192	3.5	672	2.47	3.02	40	1660	2029	26880	I		
D-10	68	4.3	292	3	876	2.35	2.65	30	2059	2321	26280	I		
712%	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10-12	141	3.35	473	4	1892	5.32	5.60	68	10063	10596	129480	10.92		
T710	141	3.35	473	4	1892	5.32	5.60	68	10063	10596	129480	10.92		
⊗ 8-10	/	/	/	/	/	/	/	/	/	/	/	/	/	/
* 8-10	61	3.0	183	3.5	640	4.52	5.02	66	2893	3213	42240	9.54		
T-8-10	61	3.0	183	3.5	640	4.52	5.02	66	2893	3213	42240	9.54		
⊗ 78	/	/	/	/	/	/	/	/	/	/	/	/	/	/
T78	202	3.2	656	3.8	2532	5.11	5.45	68	12956	13809	171720	10.56		
⊗ 6-8	212	2.59	550	3.3	1852	3.42	3.66	46	6343	6783	84800	7.08		
* 6-8	/	/	/	/	/	/	/	/	/	/	/	/	/	/
T6-8	212	2.59	550		1852	3.42	3.66	46	6343	6783	84800	7.08		
⊗ >6	202	5.97	1206	3.63	4384	4.40	4.69	58	19299	20592	256520	9.09		
T>6	202	5.97	1206	3.63	4384	4.40	4.69	58	19299	20592	256520	9.09		
⊗ 4-6	138	1.75	242	3	726	1.69	3.12	25	1228	2267	18498	4.21		
* 4-6	132	7.3	484	3.19	1548	2.40	2.81	34	3719	4350	53160	5.21		
T4-6			726	3.13	2274	2.17	2.91	31	4947	6617	71658	5.08		
⊗ >4	202	7.16	1448	3.5	5110	4.02	4.47	54	20527	22859	275018	8.49		
T>4	334	5.78	1932	3.4	6658	3.64	4.08	49	24246	27209	328178	7.72		

DRILL INDICATED

MINERAL RESERVE SUMMARY

KEPP OPTION

SECTION 60 W (135 to 15) (59W to 61W)

DATE: Feb. 27/78
CALCULATION BY: P.Y.P.O
REVISED:

GRUM DEPOSIT CHAMP

ZONE SEGMENT	DIP Length	Thick-ness	AREA m ²	S.G.	TONNE / m	GRADE			TONNE x GRADE			Pb + Zn %	Total Sulph. %	REMARKS
						Pb %	Zn %	Ag g ^m /m ³	Pb % m.t.	Zn % m.t.	Ag g ^m m.t.			
D-1	51	3.4	173.4	3	520.2	2.42	2.50	33	1259	1300	17166	1		
D-2	69	6.6	455.4	3.5	1594	4.06	6.15	54	6471	9803	86076	□		
D-3	66	3.0	198.0	4	792	2.50	1.87	35	1980	1481	27720	1		
⊕D-4	50	2.8	140.0	3.5	490	2.50	3.42	28	1225	1676	13720	1	⊕FW of D5	
D-5	78	6.9	538.2	4	2152.8	4.65	7.07	66	10010	15220	142085	□		
⊕D-6	65	1.4	91.0	3.5	318.5	2.59	4.37	33	825	1392	10510	Γ	⊕FW of D5	
D-7	20	3.0	60.0	3.5	210.0	3.68	5.06	48	773	1063	10080	□		
D-8	55	3.1	170.5	3	511.5	2.69	2.85	43	1376	1458	21994	1		
D-9	47	3.0	141.0	3	423	2.49	2.45	28	1053	1036	11844	1		
D-10	69	3.8	262.2	3	786.6	2.09	2.72	27	1644	2140	21238	1		
>12%	/	/	/	/	/	/	/	/	/	/	/	/	/	
10-12	147	6.76	993.6	3.7	3746.8	4.40	6.68	61	16481	25023	228161	11.08		
>10	147	6.76	993.6	3.7	3746.8	4.40	6.68	61	16461	25023	228161	11.08		
⊕8-10	/	/	/	/	/	/	/	/	/	/	/	/	/	
*8-10	20	3.0	60	3.5	210.0	3.68	5.06	48	773	1063	10080	8.74		
T8-10	26	3.0	60	3.5	210.0	3.68	5.06	48	773	1063	10080	8.74		
⊕8-10	147	6.76	993.6	3.7	3746.8	4.40	6.68	61	16461	25023	228161	11.08		
T>8	167	6.3	1053.6	3.75	3956.8	4.36	6.59	60	17254	26086	238241	11.85		
⊕6-8	165	1.4	91.0	3.5	318.5	2.59	4.37	33	825	1392	10510	8.96		
*6-8	/	/	/	/	/	/	/	/	/	/	/	/	/	
T6-8	165	1.4	91.0	3.5	318.5	2.59	4.37	33	825	1392	10510	6.96		
⊕>6	167	6.85	1144.6	3.7	4275.3	4.22	6.42	58	18079	27478	248751	10.64		
T>6	167	6.85	1144.6	3.7	4275.3	4.22	6.42	58	18079	27478	248751	10.64		
⊕4-6	150	2.8	140	3.5	490	2.50	3.42	28	1225	1676	13720	5.92		
*4-6	238	3.28	945.1	3.2	3033.3	2.41	2.44	33	7312	7415	99962	4.15		
T4-6	()	()	1085.1	3.2	3523.3	2.42	2.58	32	8537	9091	113682	5.00		
⊕>4	167	7.69	1284.6	3.7	4765.3	4.05	6.12	55	19304	29154	262471	10.17		
T>4	455	4.90	2229.7	3.7	7798.6	3.41	4.69	46	26616	36569	362433	8.1		

MINERAL RESERVE SUMMARY

DRILL
INDICATED

SECTION 62W (13^S to 1^S) (61 7063W)

DATE: MARCH 21/1977

GRUM DEPOSIT CHAMP ZONE

CALCULATION BY: A.X. P₆

REVISED:

ZONE SEGMENT	DIP Length	Thick- ness	AREA m ²	S.G.	TONNE/ m	GRADE			TONNE x GRADE			Pb + Zn %	Total Sulph. %	REMARKS
						Pb %	Zn %	Ag g ^m /m ³	Pb % m.t.	Zn % m.t.	Ag g ^m m.t.			
D4	43	6.2	266.6	4	1066.4	7.86	7.32	91	8382	7806.0	97042	1		
D5	32	3.0	96.0	4	384.0	2.71	1.85	38	1040	710.0	14592	1		
D6	60	3.0	180.0	3.5	630.0	2.45	3.04	37	1543	1915.0	23310	1		
D7	65	3.0	195.0	3.0	585.0	2.64	2.92	38	1544	1708.0	22230	1		
D8	72	3.5	252.0	3.0	756.0	3.32	2.47	43	2510	1867.0	32508	1		
D9	56	3.2	179.2	4.0	716.8	2.0	2.65	25	1434	1469.0	17920	1		
D10	36	6.6	237.6	3.0	713.0	2.12	2.17	28	1511	1547.0	19958	1		
> 12 1/2% Pb-Zn	43	6.2	266.6	4	1066.4	7.86	7.32	91	8382	7806	97042	15.18		
10-12	-	-	-	-	-	-	-	-	-	-	-	-		
> 10% ⊗ 8-10	43	6.2	266.6	4	1066.4	7.86	7.32	91	8382	7806	97042	15.18		
* 8-10	-	-	-	-	-	-	-	-	-	-	-	-		
T 8-10	-	-	-	-	-	-	-	-	-	-	-	-		
⊗ 8-10	-	-	-	-	-	-	-	-	-	-	-	-		
T > 8	43	6.2	266.6	4	1066.4	7.86	7.32	91	8382	7806	97042	15.18		
⊗ 6-8	-	-	-	-	-	-	-	-	-	-	-	-		
* 6-8	-	-	-	-	-	-	-	-	-	-	-	-		
T 6-8	-	-	-	-	-	-	-	-	-	-	-	-		
⊗ > 6	-	-	-	-	-	-	-	-	-	-	-	-		
T > 6	43	6.2	266.6	4	1066.4	7.86	7.32	91	8382	7806	97042			
⊗ 4-6	-	-	-	-	-	-	-	-	-	-	-	-		
* 4-6	321	3.55	1139.8	3.32	3784.8	2.53	2.44	34	9582	9216	130518	4.97		
T 4-6	321	3.55	1139.8	3.32	3784.8	2.53	2.44	34	9582	9216	130518			
⊗ > 4	-	-	-	-	-	-	-	-	-	-	-	-		
T > 4	364	3.86	1406.4	3.45	4851.2	3.70	3.51	47	17964	17022	227560	7.21		