

CURRAGH INC.

Inter-Office Memorandum

TO: Srdjan Bulatovic
Lakefield Research

FROM: Gregg A. Jilson
Vice-President, Exploration
Whitehorse Office

RE: **Samples**

004936

DATE: 06 19 1992

We have dispatched to you today three pails of half drill core samples from the Dy ore deposit. The contents of the three pails are as follows:

Pail #1 65340 through 65348

Pail #2 65334 through 65339

Pail #3 65172 through 65176

Instructions on testwork will be forthcoming from Godfrey Mc Donald. I enclose a copy of a memo describing the samples.

The samples were shipped via Motorways, Pro. No. #WHS-029079-1 on June 19, 1992.

CURRAGH INC.

Inter-Office Memorandum

TO: Godfrey McDonald
Vice-President, Metallurgy
Toronto Office

FROM: Gregg A. Jilson
Vice-President, Exploration
Whitehorse Office

cc: Cameron Reed, Chief Geologist, Faro
Srjdan Bulatovic, Lakefield Research

RE: **Dy Metallurgical Samples**

DATE: 06 19 1992

A typical intersection of Dy sulphide was selected from hole 91DY05. The intersection is from 588.5 m depth to 601.5m depth. A band of carbonaceous phyllite 2.3m thick has been included. Each assay interval has been bagged separately so that they can be combined as required. The sample is in 2 pails (#1 and #2).

The core was not noticeably oxidized from its 1.2 years of storage, most of which would have been at below zero temperatures (this includes 1 full summer and only the beginning of the second which, regrettably, has not yet provided much above zero temperature!).

The interval, includes relatively minor baritic ore (4G) and very little massive pyritic ore (4E). This is unusual for most deposits but not particularly unusual for this part of the Dy deposit (the B Zone). The sample is relatively zinc rich compared to lead but this again is a characteristic of the B Zone (this sample averages 25-30% of base metal as lead (Pb/Pb+Zn) whereas the overall deposit averages 43% as lead or 38% for B Zone). The sample is also higher grade than average. The sulphide zones average approximately 20% Pb+Zn; overall the average grade is 16% if the 2.3m waste interval is added in. The deposit averages 12.9% Pb+Zn at a 9% cutoff grade (the B zone averages 13.05%).

When compositing you may or may not wish to include sample 65339, the graphitic phyllite waste (unit 5A) or you may want to include a limited amount, say 10-20%, to mimic overall expected dilution. In any case a test on that sample alone would be pointless and probably quite frustrating.

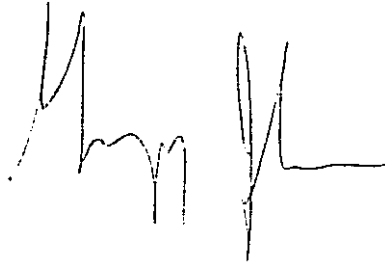
The third pail contains a small sample of as typical a carbonaceous quartzite ore as we could find. The grade is a little low (8.1% Pb+Zn) but the ore is otherwise representative. The core was not oxidized.

Summary assay logs are attached along with copies of the relevant portions of the drill core logs.

If you chose to re-assay the core I would like to get a copy of the results in order to check precision.

If you do mineralogy on selected pieces of intact core, I would recommend a representative piece from interval 65176 for 4A, 65337 for 4G, 65334 and 65346 for 4C/4D.

If you require further samples or more information on the geology, please don't hesitate to contact me.

A handwritten signature in black ink, appearing to be 'M. M. M.', written in a cursive style.

Curragh Inc.

Dy Deposit – 1992 metallurgical samples

DDH 91-DY-05 (pails 1&2)

sample number	from (m.)	to (m.)	interval (m.)	Pb+Zn (%)	Pb (%)	Zn (%)	Ag (g/t)	Au (g/t)	Pb/(Pb+Zn)
65334	588.5	590.0	1.5	11.96	4.10	7.86	61.4	0.98	34.3%
65335	590.0	590.5	0.5	14.92	4.32	10.60	66.7	0.88	29.0%
65336	590.5	591.6	1.1	33.40	11.20	22.20	190.8	0.83	33.5%
65337	591.6	592.2	0.6	25.31	9.21	16.10	130.7	1.27	36.4%
65338	592.2	592.7	0.5	14.68	4.58	10.10	87.4	0.55	31.2%
<u>65339</u>	<u>592.7</u>	<u>595.0</u>	<u>2.3</u>	<u>0.50</u>	<u>0.21</u>	<u>0.29</u>	<u>3.5</u>	<u>0.12</u>	<u>42.0%</u>
65340	595.0	595.5	0.5	12.94	3.55	9.39	85.6	0.85	27.4%
65341	595.5	595.8	0.3	12.45	3.00	9.45	70.5	0.51	24.1%
65342	595.8	596.5	0.7	5.18	1.09	4.09	13.3	0.32	21.0%
65343	596.5	597.1	0.6	2.40	0.75	1.65	9.8	0.09	31.3%
65344	597.1	597.7	0.6	31.19	7.29	23.90	192.1	0.62	23.4%
65345	597.7	598.0	0.3	8.96	2.57	6.39	31.2	0.31	28.7%
65346	598.0	599.2	1.2	31.03	8.23	22.80	169.8	0.62	26.5%
65347	599.2	599.8	0.6	20.55	6.95	13.60	106.1	0.94	33.8%
65348	599.8	601.5	1.7	27.60	6.20	21.40	108.6	0.47	22.5%
Averages:									
	588.5	592.7	4.2	20.16	6.77	13.39	108.92	0.92	33.6%
	595.0	601.5	6.5	20.49	5.17	15.31	100.89	0.53	25.2%
	588.5	601.5	13.0	16.84	4.81	12.03	86.25	0.58	28.6%
For comparison									
	CRI entire deposit+9% cutoff			12.87	5.54	7.33	81.1	0.87	43.0%
	CAMC B2 Zone at 9% cutoff			13.05	4.91	8.14	82.6	0.76	37.6%

DDH 90-DY-07 (pail 3)

65172	595.5	596.0	0.5	3.30	1.39	1.91	10.6	0.08	42.1%
65173	596.0	596.5	0.5	13.27	5.19	8.08	70.6	0.11	39.1%
65174	596.5	597.2	0.7	0.44	0.11	0.33	7.9	0.03	25.0%
65175	597.2	598.2	1.0	15.12	6.25	8.87	97.9	0.59	41.3%
65176	598.2	599.8	1.6	7.01	3.11	3.9	45.9	0.51	44.4%
Average:									
	595.5	599.8	4.3	8.12	3.39	4.73	50.57	0.35	41.8%

Drill Hole: 90DY07 Section:
 Northing: 900768.6 Easting: 597774.6 Elevation: 1034.2
 Length: 686.7 Core: DDH Record: 65

ASSAYS

Sample #	---Depths---	Int	Rec	Rock	Rock	Pulp	Pb+Zn	Pb	Zn	Ag	Au
	From To	m	%	Unit	Code	S.G.	%	%	%	g/t	g/t
	.0 381.8	381.8		WASTE							
65139	381.8 383.4	1.6		4LO		2.76	.08	.07	.01	.1	.01
65140	383.4 384.7	1.3		4LO		2.79	.02	.01	.01	.1	.01
65141	384.7 385.1	.4		4K0S		2.76	.14	.06	.08	.1	.01
65142	385.1 387.2	2.1		4LOS		2.84	.02	.01	.01	.1	.02
65143	387.2 388.4	1.2		4LOS		3.08	1.65	.76	.89	10.1	.19
65144	388.4 390.1	1.7		4E0S		3.58	.41	.33	.08	12.9	.30
65145	390.1 391.7	1.6		4E0		4.04	.50	.32	.18	11.4	.53
65146	391.7 393.4	1.7		4E0		3.83	.04	.03	.01	9.9	.41
65147	393.4 394.9	1.5		4C0		3.41	.13	.07	.06	5.7	.25
65148	394.9 396.6	1.7		4C0		3.24	.17	.14	.03	6.0	.22
65149	396.6 398.6	2.0		4C0		4.05	1.06	.87	.19	12.1	.19
65150	398.6 400.6	2.0		4C0		3.21	.64	.46	.18	7.3	.16
65151	400.6 401.6	1.0		4C0		3.44	.23	.16	.07	9.2	.81
65152	401.6 402.8	1.2		4C0		3.15	.23	.17	.06	8.5	.38
65153	402.8 403.9	1.1		4C0		3.06	.16	.14	.02	6.5	.18
65154	403.9 405.7	1.8		4C0		2.78	.07	.06	.01	2.7	.06
65155	405.7 407.1	1.4		4C0		3.16	.22	.18	.04	6.3	.30
65156	407.1 408.1	1.0		4L14		3.00	.54	.24	.30	4.4	.13
65157	408.1 409.6	1.5		4L14		2.76	.09	.07	.02	.7	.14
65158	409.6 410.0	.4		5A69		2.78	.04	.03	.01	.1	.01
65159	410.0 410.7	.7		5B219		2.67	.05	.03	.02	.1	.06
65160	410.7 413.0	2.3		5A19		2.54	.09	.05	.04	.8	.01
65161	413.0 414.4	1.4		5A109		2.79	.06	.02	.04	.4	.01
65162	414.4 416.6	2.2		5B6		2.68	.02	.01	.01	.1	.02
65163	416.6 417.3	.7		5B619		2.74	.02	.01	.01	.4	.01
65164	417.3 418.4	1.1		4C0		3.22	.07	.05	.02	3.4	.19
65165	418.4 419.0	.6		5B612		2.71	.04	.03	.01	1.8	.01
	419.0 587.4			WASTE							
65166	587.4 587.9	.5		4A0		2.43	5.52	1.98	3.54	10.4	.03
65167	587.9 589.0	1.1		5B6		2.72	.02	.01	.01	2.2	.01
65168	589.0 590.7	1.7		4A04		3.19	5.81	2.19	3.62	29.4	.11
65169	590.7 592.4	1.7		4A04		2.67	6.09	1.94	4.15	19.6	.05
65170	592.4 594.2	1.8		4A0		2.59	.23	.07	.16	3.1	.01
65171	594.2 595.5	1.3		4A0		2.75	2.04	.66	1.38	6.5	.01
65172	595.5 596.0	.5		4A0		2.57	3.30	1.39	1.91	10.6	.08
65173	596.0 596.5	.5		4A4		2.99	13.27	5.19	8.08	70.6	.11
65174	596.5 597.2	.7		4A0		2.58	.44	.11	.33	7.9	.03
65175	597.2 598.2	1.0		4A4		2.97	15.12	6.25	8.87	97.9	.59
65176	598.2 599.8	1.6		4A04		3.01	7.01	3.11	3.90	45.9	.51
65177	599.8 601.7	1.9		4L1		2.79	.99	.45	.54	7.2	.08
65178	601.7 603.0	1.3		4L1		2.74	.02	.01	.01	.1	.07
65179	603.0 603.9	.9		4A4		3.56	12.77	5.41	7.36	86.7	.22
	603.9 686.7			WASTE							

↑ interval sample ↓

Drill Hole: 910Y05 Section:
 Northing: 901217.8 Easting: 597497.9 Elevation: 1086.6
 Length: 709.9 Core: DDH Record: 85

ASSAYS

Sample #	---Depths---		Int	Rec	Rock	Rock	Pulp	Pb+Zn	Pb	Zn	Ag	Au
	From	To	m	%	Unit	Code	S.G.	%	%	%	g/t	g/t
0	.0	584.9	584.9	.0	WASTE		.00	.00	.00	.00	.0	.00
65381	430.8	431.7	.9	100.0	5B4		2.81	.19	.06	.13	1.9	.01
65382	431.7	432.1	.4	100.0	4C0		3.26	.31	.23	.08	3.4	.34
65383	432.1	433.0	.9	100.0	5B4		2.61	.03	.01	.02	.8	.01
65384	433.0	434.3	1.3	100.0	4E0		3.17	.06	.02	.04	1.3	.35
65385	434.3	436.9	2.6	100.0	5B4		2.80	.07	.01	.06	.6	.01
65386	436.9	437.7	.8	100.0	5C4		2.85	.08	.01	.07	.9	.02
65387	437.7	439.8	2.1	100.0	4G8		3.83	.13	.08	.05	5.6	.63
65388	439.8	440.6	.8	100.0	4G84		3.58	2.01	1.09	.92	16.9	.59
65389	440.6	442.4	1.8	100.0	5C4		3.10	1.24	.57	.67	7.1	.10
65390	442.4	443.5	1.1	100.0	4E7		3.88	3.96	2.35	1.61	27.0	.73
65391	443.5	446.1	2.6	100.0	5C46		2.85	.10	.03	.07	.6	.07
65392	451.3	452.5	1.2	100.0	5C67		2.77	.13	.05	.08	1.9	.02
65393	452.5	453.7	1.2	100.0	4K0		3.62	.19	.11	.08	5.0	.30
65394	453.7	455.3	1.6	100.0	4K87		3.31	.13	.08	.05	4.4	.34
65395	455.3	456.5	1.2	100.0	4K*		3.54	.04	.02	.02	5.5	.32
65396	456.5	457.7	1.2	100.0	4K0		3.79	.09	.03	.06	3.8	.44
65397	457.7	458.4	.7	100.0	4K7		3.82	.08	.05	.03	3.6	.59
65398	458.4	459.0	.6	100.0	4K0		3.68	.13	.09	.04	4.1	.36
65399	459.0	461.2	2.2	100.0	4L0		2.82	.06	.01	.05	1.2	.01
65400	461.2	461.6	.4	100.0	4CE4		3.42	2.01	.98	1.03	14.6	1.92
65401	461.6	463.3	1.7	100.0	4E48		4.11	1.08	.83	.25	11.8	.91
65402	463.3	464.5	1.2	100.0	4E48		4.25	1.62	.87	.75	11.9	.65
65403	464.5	465.4	.9	100.0	4CE8		3.73	2.39	1.24	1.15	16.9	.49
65404	465.4	466.4	1.0	100.0	5B4		2.78	.10	.04	.06	1.8	.05
0	466.4	543.2	76.8	.0	WASTE		.00	.00	.00	.00	.0	.00
65358	543.2	543.7	.5	100.0	5A6		2.79	.03	.01	.02	3.1	.07
65359	543.7	544.1	.4	100.0	5A6S		2.81	.69	.28	.41	5.2	.06
65360	544.1	544.4	.3	100.0	4H8		3.42	12.60	4.05	8.55	99.6	.29
65361	544.4	545.1	.7	100.0	4044		3.45	10.63	3.41	7.22	69.1	.42
65362	545.1	546.0	.9	100.0	5A6S		2.80	.16	.05	.11	.9	.06
65363	546.0	548.0	2.0	100.0	5A6S		2.79	.21	.04	.17	.7	.08
65364	548.0	549.2	1.2	100.0	4A14		2.87	6.53	2.01	4.52	39.9	.31
65365	549.2	549.5	.3	100.0	5A6		2.77	1.94	.51	1.43	8.3	.11
65366	549.5	549.9	.4	100.0	5A69		2.84	3.05	1.01	2.04	17.8	.28
65367	549.9	550.9	1.0	100.0	5B4		2.81	.92	.81	.11	10.8	.10
65368	550.9	552.4	1.5	100.0	4L14		2.59	4.71	1.82	2.89	31.5	.66
65369	552.4	553.5	1.1	100.0	5C46		2.81	.16	.07	.09	.6	.04
65370	553.5	554.7	1.2	100.0	5C46		2.78	.52	.20	.32	2.6	.07
65371	554.7	555.1	.4	100.0	5A61		2.74	.70	.30	.40	5.5	.09
65372	555.1	558.2	3.1	100.0	5C7		2.75	.11	.02	.09	.1	.02
65373	558.2	559.0	.8	100.0	5A6		2.67	1.09	.26	.83	1.3	.02
65374	559.0	559.4	.4	100.0	5C7		2.82	.60	.25	.35	2.6	.01
65375	559.4	560.7	1.3	100.0	5A6		2.74	3.76	1.44	2.32	19.5	.44

65376	560.7	561.3	.6	100.0	5F46	2.85	.14	.04	.10	.1	.01
65377	561.3	562.1	.8	100.0	5A61	2.94	1.22	.31	.91	3.9	.16
65378	562.1	562.8	.7	100.0	5C6	2.80	.27	.06	.21	.1	.02
65379	562.8	563.3	.5	100.0	5C6	2.82	.24	.06	.18	.1	.04
0	563.3	579.5	16.2	.0	WASTE	.00	.00	.00	.00	.0	.00
65380	579.5	580.5	1.0	100.0	5A69	2.85	3.13	1.07	2.06	19.7	.23
0	580.5	584.9	4.4	.0	WASTE	.00	.00	.00	.00	.0	.00
65329	584.9	585.6	.7	100.0	4E4	4.04	19.29	9.05	10.24	123.0	1.25
65330	585.6	586.5	.9	100.0	4G0*	4.32	10.24	5.46	4.78	89.0	1.02
65331	586.5	587.7	1.2	100.0	4G0	4.30	18.66	8.06	10.60	132.3	1.16
65332	587.7	588.2	.5	100.0	5A61	2.85	1.64	.48	1.16	4.3	.36
65333	588.2	588.5	.3	100.0	4C4	3.42	5.04	2.31	2.73	32.2	.81
65334	588.5	590.0	1.5	100.0	4D4	3.68	11.96	4.10	7.86	61.4	.98
65335	590.0	590.5	.5	100.0	4C4	3.34	14.92	4.32	10.60	66.7	.88
65336	590.5	591.6	1.1	100.0	4G4	4.23	33.40	11.20	22.20	190.8	.83
65337	591.6	592.2	.6	100.0	4G44 } baritic	3.68	25.31	9.21	16.10	130.7	1.27
65338	592.2	592.7	.5	100.0	4C48	3.36	14.68	4.58	10.10	87.4	.55
65339	592.7	595.0	2.3	100.0	5A6	2.58	.50	.21	.29	3.5	.12
65340	595.0	595.5	.5	100.0	4A4	3.39	12.94	3.55	9.39	85.6	.85
65341	595.5	595.8	.3	100.0	4D4	3.73	12.45	3.00	9.45	70.5	.51
65342	595.8	596.5	.7	100.0	4G48 } baritic	3.86	5.18	1.09	4.09	13.3	.32
65343	596.5	597.1	.6	100.0	5C14	3.26	2.40	.75	1.65	9.8	.09
65344	597.1	597.7	.6	100.0	4G44 } baritic	3.88	31.19	7.29	23.90	192.1	.62
65345	597.7	598.0	.3	100.0	5C41	3.18	8.96	2.57	6.39	31.2	.31
65346	598.0	599.2	1.2	100.0	4D4	3.94	31.03	8.23	22.80	169.8	.62
65347	599.2	599.8	.6	100.0	4D44	3.89	20.55	6.95	13.60	106.1	.94
65348	599.8	601.5	1.7	100.0	4G4 } baritic	3.39	27.60	6.20	21.40	108.6	.47
65349	601.5	603.7	2.2	100.0	5A6	2.54	.16	.05	.11	.1	.04
65350	603.7	604.4	.7	100.0	5B46	2.69	.13	.06	.07	.1	.06
65351	604.4	604.6	.2	100.0	4H84	3.74	10.58	3.44	7.14	50.8	.11
65352	604.6	605.8	1.2	100.0	10E9	2.86	.48	.16	.32	1.5	.06
65353	605.8	606.3	.5	100.0	5B16	2.86	.05	.03	.02	.1	.03
65354	606.3	606.7	.4	100.0	4H0	4.22	12.86	3.29	9.57	60.2	.16
65355	606.7	607.0	.3	100.0	10C99	3.47	14.41	3.81	10.60	67.2	.43
65356	607.0	607.5	.5	100.0	4K0	3.77	13.89	4.35	9.54	108.6	.42
65357	607.5	608.1	.6	100.0	4E04	4.11	9.24	2.60	6.64	49.4	.40
0	608.1	709.9	101.8		WASTE						

interval sample

Code	From		To		Recov.	No.	Unit	Description		
	10	14	16	20					22	24
	599.4	600.0				153	AAA	(500 : 400) . 98:01:01 Very dark gray to black non-calcareous graphitic quartzite is variably mineralized ranging from moderately strong to locally very strong. Unit is P_5 foliated with highly siliceous bands common and hosting the majority of the moderately strong mineralization. Siliceous bands are common 0.5-1.5 cm wide. Strongly mineralized intervals are common on dm scale highly siliceous and has sph mineralization disseminated throughout with only a very subtle banding parallel S_2 (?). Unit hosts 5-7% clotted and stringy quartz-dolomite veins and wires and bands at 500 and 400 which do not exceed 3 cm in width. From 599.4 - 600.0 AAA is C_5 foliated with 0.2-0.5 cm bands with high A_2 content and moderate sph content defining a C_5 fabric. Rock is hard, slightly brittle, rarely moderately broken and good recovery throughout. Upper and lower contacts are sharp and parallel S_2 . Internal contacts also parallel S_2 . ESTIMATED grade 10-15%.		
	600.0	603.0				154	AK11	→ 5B61 Light-medium gray slightly buff unit is non-calcareous variably siliceous, P_5 foliated and hosts 10% stringy clotted networks of quartz dolomite veins which crosscut S_2 at variable relationships. Silicification is generally moderate to locally non-strengthening and locally weak. Unit		

Code	From	To	Recov.	No.	Unit	Description						
1	10	14	16	20	22	24	26	28	30	34	35	
												dense barite as disseminations and patches. Off-white creamy weakly calcareous, fig dolomite as laminae parallel S_2 and patches. Very good core recovery. Good R&D. Gradational upper contact parallel S_2 . Sharp lower contact at CA 80°.
L	5877	5882			5A61	(5A6) 60:40						Dark grey to black graphitic phyllite with off-white quartz-dolomite siltstone laminae/beds following $S_1, S_2/S_2$. Very weakly calcareous. PS_2 and CS_2 foliated. Black graphitic fracture surfaces. Moderately hard (weakly silicified). Disseminated mg euhedral-cubic pyrite cubes; 3-6%, overall. Veinlet-filling fig, subhedral pyrrhotite 1-2%, overall. Very good core recovery. Good R&D. Sharp upper contact at CA 80°. Sharp lower contact at CA 40°. Non-silicified unit occurring at 587.9-588.2 is dark grey to black, PS_2 and CS_2 foliated, graphitic (fractures) and moderately soft (to soft). Gradational contact with 5A61
L	5882	5885			4CA							Sphalerite-bearing pyritic quartzite containing 55% quartz, 25% pyrite, 15% dolomite and 5% pyrrhotite. Very weakly calcareous. PS_2 foliated. Grey-white-brassy yellow fracture surfaces. Hard. Brassy yellow, fig (euhedral-cubic?) pyrite as bands and disseminations. Brown fig sphalerite as disseminations, laminae parallel S_2 . Very good core recovery. Good R&D. Sharp upper contact at CA 90°. Gradational lower contact.
L	5885	5900			4DA							

Code	From			To			Recov.			No.			Unit	Description	
	10	14	16	20	22	24	26	28	30	34	35				
														<p>lutite and 10% dolomite. Very weakly calcareous. PS_2 and (rarely) CS_2 foliated. Brassy yellow-white-gray fracture surfaces. Hard. Brassy yellow fig. (subhedral-cubic?) pyrite as bands (1-5cm wide) parallel S_2. Reddish-brown fig. subhedral sphalerite as laminae-bands (1-3mm. wide) following S_1, S_2. Off-white (cream) fig., soft, weakly calcareous dolomite as patches and laminae following S_1, S_2. Locally vuggy (dissolved calcite).</p> <p>Very good core recovery. Good R&D. Gradational upper contact. Gradational upper contact. Gradational upper, lower contacts parallel S_2.</p>	
L	59.00	59.03											5A16	9	<p>Dark gray to black weakly silicified graphitic phyllite with off-white quartz-dolomite laminae following S_1, S_2. Very weakly calcareous. CS_2 and PS_2 foliated. Graphitic fracture surfaces. Moderately hard (weakly silicified). Reddish-brown sphalerite laminae following S_1, S_2. Very good core recovery. Good R&D. Gradational contacts parallel S_2.</p>
L	59.03	59.05											454		<p>Sphalerite-bearing pyritic massive sulphide containing 70% pyrite, 20% quartz, 5% sphalerite, 5% dolomite. Very weakly calcareous. Massive to PS_2 foliated. Brassy-yellow-gray-white fracture surfaces. Hard. Brassy yellow fig. (subhedral-cubic?) pyrite as masses. Reddish-brown fig. (subhedral?) sphalerite as patches and laminae parallel S_2. Off-white (cream) fig. weakly calcareous (10% HCl acid reaction) dolomite as patches. Very good core recovery. Good R&D. Gradational contacts parallel S_2.</p>

Code	From	To	Recov.	No.	Unit	Description
L	5905	5916			4GA	<p>Sphalerite (+galena)-bearing baritic massive sulphide containing 55% galena, 20% sphalerite, 10% barite, 5% dolomite, 10% quartz and trace galena. Very weakly calcareous. Massive to PS_2 foliated. Brass yellow-brown-white-grey fracture surfaces. Hard. Brass yellow fig. (cubical-cubic?) pyrite as masses and bands (2-10 cm wide). Purplish red-brown metallic fig. (subhedral?) sphalerite as patches and bands (0.5-3 cm wide) parallel S_2. Off-white, soft non-calcareous, dense barite as disseminations as patches. Trace purplish grey fig.-mg. cubical-cubic galena within sphalerite patches (590.9, etc.). Vuggy, with vugs at 590.5-590.8 as ellipses elongate parallel S_2 (0.5-1.5 cm long). Dense, heavy.</p> <p>Very good core recovery. Good to very good RQD. Gradational contacts parallel S_2. Slickensided lower contact ($083^\circ/44^\circ$ to strike of S_2).</p>
L	5916	5922			4G44	<p>Sphalerite-rich baritic massive sulphide containing 35% sphalerite, 30% pyrite, 20% quartz, 10% barite and 5% carbonate (dolomite + calcite). Weakly to moderately calcareous. Massive to PS_2 foliated. Purplish red-brown, brassy yellow, white-grey fracture surfaces. Hard. Cross-cut by laminae or veinlets subparallel S_2 containing quartz-dolomite-Mg chlorite (olive-grey). Vuggy at 592.1-592.2 with vugs (1-2 cm dia.) still containing some calcite. No galena seen. Dense, heavy.</p> <p>Purplish reddish-brown fig. (subhedral?) sphalerite as masses, bands (2-5 cm wide) parallel S_2. Brass yellow fig. (cubical-cubic?) pyrite as masses, bands (2-4 cm wide) parallel S_2 and disseminations. Off-white fig. cubical barite as disseminations and patches, is soft, non-calcareous and dense. Off-white (cream) fig. (cubical?) dolomite as patches. Calcite as vug-fillings (partial) along veinlets at 592.1-592.2.</p>

Code	From	To	Recov.	No.	Unit	Description					
1	10	14	16	20	22	24	26	28	30	34	35
L	5922	5927			4C48	(100#) 80:20 Sphalerite-magnetite-bearing pyritic quartzite with minor quartz breccia containing 35% quartz, 35% pyrite, 10% sphalerite, 10% magnetite, 10% carbonate (dolomite + calcite). Weakly to moderately (veinlets) calcareous. Massive to P_{S_2} foliated. Minor healed oligoclase clast-supported breccia. Hard. Brassy yellow fig. (cubical-cubic?) pyrite as masses and bands (2-5cm wide) parallel S_2 . Purplish red-brown fig. (subhedral?) sphalerite as bands (1-3cm wide) parallel S_2 and selvages of quartz bands (veinlets?) within breccia (592.5-592.6). Black fig. (subhedral?) strongly magnetic magnetite as patches and veinlet-fillings (both at 592.5-592.6). Off-white fig. (cubical?) dolomite as patches. Off-white calcite-quartz veinlet network at 592.5-592.6 at $\alpha 0^\circ-30^\circ$. Very good core recovery. Good R&D. Gradational upper contact parallel S_2 . Sharp lower contact at $\alpha 80^\circ$ (parallel S_2). White-buff bull quartz at 592.6-592.7 is cut by calcite-quartz veinlets at $\alpha 0^\circ-30^\circ$, is moderately calcareous, hard, and has sharp contacts with 4C48.					
L	59.27	59.50			5A6	(5761:5A9:100#) 60:30:08:02 Black to dark gray graphitic phyllite with off-white quartz-dolomite siltstone laminae/bands following $S_1, S_2/S_3$. Very weakly calcareous, C_{S_2} and P_{S_2} foliated. Black graphitic fracture surfaces. Moderately soft to soft. Trace brassy yellow mg. cubical-cubic pyrite as veinlet-filling within late quartz-calcite veinlets at $\alpha 0^\circ-60^\circ$. Good core recovery. Fair R&D. Blacky core at 593.5, 594.4-594.6. Sharp upper contact at $\alpha 80^\circ$. Sharp lower contact at $\alpha 75^\circ$. (Dehlinite) fractures near lower contact. Dark gray weakly silicified graphitic phyllite is weakly calcareous, moderately					

Code	From	To	Recov.	No.	Unit	Description
1	10	14	16	20	22 24 26 28	30 34 35
						Sphalerite-bearing graphitic phyllite at 592.7-592.9 is dark gray, weakly calcareous, moderately soft and has gradational contact with 5A6.
						Ball quartz-calcite veinlet at CA 25° at 593.4 is moderately calcareous, hard, vuggy and cross-cuts S_2 having sharp contacts with 5A6.
L	59.50	59.55			4A41	NOT RIBBON-BANDED. Black to dark grey graphitic phyllite with sphalerite, pyrite bands (not ribbon-banded). Very weakly calcareous. PS_2 and CS_2 foliated. Black graphitic fracture surfaces. Sometimes with brassy-yellow and purplish red-brown colours (sulphides). Moderately hard (silicified). Vuggy (1-10mm dia.) at 595.0-595.5. Contains 20% pyrite and 10% sphalerite. Brassy yellow fig.-mg. euhedral-cubic pyrite as bands (1-3cm wide) parallel S_2 and laminae (wisps) following S_1 . Purplish red-brown laminae-bands (1-5mm wide) parallel S_2 . Very good core recovery, RQD. Sharp upper contact at CA 80°. Sharp lower contact at CA 75°.
L	59.55	59.58			4DA	Sphalerite-bearing pyritic massive sulphide containing 60% pyrite, 30% sphalerite, 8% quartz, 2% dolomite (?). Very weakly calcareous. Massive to PS_2 foliated. Brassy yellow purplish red-brown-white fracture surfaces. Hard. Brassy yellow fig. (euhedral-cubic?) pyrite as masses and bands (2-6cm wide) parallel S_2 . Purplish red-brown fig. (subhedral?) sphalerite as bands (1-3cm wide) parallel S_2 . Off-white (creamp) fig. dolomite as patches.

Code	From	To	Recov.	No.	Unit	Description
	10 14 16 20 22 24 26 28				30 34 35	
L	59.58	59.65			4G48	<p>Sphalerite-magnetite-bearing baritic massive sulphide containing 60% pyrite, 20% quartz, 10% sphalerite, 5% magnetite and 5% dolomite. Very weakly calcareous. Massive to PS_2 foliated (locally, CS_2 foliated). Brassy yellow-gray-redish brown-black fracture surfaces. Hard. Heavy, dense.</p> <p>Brassy yellow ^{disseminations} fine-grained, euhedral-cubic pyrite as masses and bands (2-7cm. wide) parallel S_2. Purplish reddish-brown fine-grained (subhedral?) sphalerite as bands (0.5-2.0cm. wide) parallel S_2. Black v.f.g. (subhedral?) strongly magnetic magnetite as patches and laminae following S_1 (locally). Off-white (creamy) fine-grained (subhedral?) dolomite as patches and laminae following S_1, S_2.</p> <p>Very good core recovery, Good R&D. Gradational upper contact parallel S_2. Sharp lower contact at Ct 70°.</p>
L	59.65	59.67			5C14	<p>Light to medium grey v.f.g. aphanitic metabasitic groundmass, white fine-grained anhedral (leucocrase?) phenocrysts and black fine-grained, subhedral (amphibole, pyroxene?) phenocrysts within relict porphyritic igneous texture. Overprinted by white-grey quartz-dolomite laminae, bands parallel S_2. Very weakly calcareous. PS_2 foliated. Grey fracture surfaces. Moderately hard and smooth (weakly silicified). Weak quartz-sericitic bleaching alteration. No sulphides.</p> <p>Very good core recovery, R&D. Sharp upper contact at Ct 70°. Sharp lower contact at Ct 60°.</p>
L	59.67	59.71			4K8	<p>87? VERY MAGNETIC.</p>

Code	From	To	Recov.	No.	Unit	Description
1	10	14	16	20	22 24 26 28	30 34 35
						<p>20% pyrrhotite, 10% quartz. Very weakly calcareous (10% HCl acid reaction). Massive to P₂ foliated. White-gray-black-brown fracture surfaces. Moderately hard. Fuggy at 596.9-597.0 (carbonate-Mg-chlorite? nearby). Off-white to ochre (limonite?) hard, fuggy, very weakly calcareous ankerite(?) as large patches and fracture fillings. Black fig. (subhedral?) magnetite as patches, veinlet fillings and interstitial fillings. Brassy fig. - mg. subhedral pyrrhotite as patches, bands (1-3cm wide) parallel S₂ and veinlet fillings. Very good core recovery. Good R&D. Sharp upper contact at CA 60°. Gradational lower contact parallel S₂.</p>
L	597.1	597.7			4.644	<p>Sphalerite-rich baritic massive sulphide containing 35% sphalerite, 25% pyrite, 20% quartz, 15% barite and 5% dolomite. Very weakly calcareous. Massive to P₂ foliated. Purplish red-brown to brassy yellow, white-gray fracture surfaces. Hard. Heavy, dense.</p> <p>Purplish red-brown fig. (subhedral?) sphalerite as masses and bands (0.5-2.5 cm wide) parallel S₂. Brassy yellow fig. (euhedral-cubic) pyrite as masses and bands (0.5-2.5 cm wide) parallel S₂. Off-white fig. soft, non-calcareous, dense barite as disseminations and patches. Off-white (creamy) fig. soft, weakly calcareous dolomite as patches and laminae, bands parallel S₂.</p> <p>Very good core recovery. Good R&D. Gradational upper contact parallel S₂. Sharp lower contact at CA 70°.</p>
L	597.7	598.0			5.041 9 (4E4) 60:40	<p>Light to ...</p>

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
											<p>stone?) phenocrysts and black fig. subhedral (amphibole, pyroxene?) phenocrysts within redist. porphyritic igneous texture. Overprinted by dark grey matrix bands/laminar off-white quartz-dolomite and reddish brown spherulite laminae parallel S_2. Very weakly calcareous. PS_2 foliated to massive. Grey fracture surfaces. Moderately hard (weakly silicified). Weak quartz-sericite-chlorite alteration. Red-brown spherulite laminae (1-3mm wide) parallel S_2. Very good core recovery. Good R&D. Sharp upper contact at Ct 70°. Sharp lower contact at Ct 80°.</p> <p>Spherulite-rich pyritic massive sulphide occurs at 599.9-599.95. Reddish-brown spherulite occurs as masses, bands parallel S_2.</p>
L	59.8		59.9							4D4	<p>(4D4) 60:40</p> <p>Spherulite-bearing pyritic massive sulphide containing 50% pyrite, 25% spherulite, 15% quartz, 10% dolomite. Very weakly calcareous. Massive to PS_2 foliated. Brassy yellow, purplish red-brown, grey-white fracture surfaces. Hard. Brassy yellow fig. (subhedral cubic) pyrite as masses and bands (2-10cm wide). Honey and red-brown fig. v. fig. (subhedral?) spherulite as masses and bands (1-4cm wide) parallel S_2. Off-white (creamy) f.g. (subhedral?) dolomite as patches, laminae/bands parallel S_2.</p> <p>Very good core recovery. R&D. Sharp upper contact at Ct 80°. Gradational lower contact // S_2.</p> <p>Spherulite-rich (25-40%) equivalent occurs at 599.2-599.8. Unit is purplish reddish-brown and has gradational contact with 4D4. (Sharp contact with 599.8).</p>
L	59.9		60.1							4H8.4	<p>Magnetite-spherulite-bearing massive pyrrhotite sulphides. Isobronze-colored and contain 65% pyrrhotite, 10% magnetite, 10% spherulite, 10% quartz and 5% dolomite. Very weakly calcareous. Massive to PS_2 foliated. Brassy brown fracture surfaces except</p>

Code	From		To		Recov.				No.				Unit	Description	
	10	14	16	20	22	24	26	28	30	34	35				
															Brassy brown v.f.g. (subhedral?) weakly magnetic pyrrhotite as masses. Reddish-brown f.g. (subhedral?) sphalerite as bands parallel S_2 and masses. Off-white (crs. y) f.g. (subhedral?) dolomite as veinlets cross-cutting S_2 at CA $0^\circ-20^\circ, 60^\circ-70^\circ$ separating pyrrhotite clasts with healed minor alignment cleat-supported matrix. Black f.g. (subhedral?) strongly magnetic magnetite as patches and veinlet-fillings. Very good core recovery. Good R&D. Gradational upper contact parallel S_2 . Sharp lower contact at CA 70° .
L	60	12	60	13									SA 1.69	Dark grey to black graphitic phyllite with off-white quartz-dolomite siltstone laminae/bands following $S_1, S_2/S_3$. Very weakly calcareous. PS_2 and CS_2 foliated. Black graphitic fracture surfaces. Moderately hard (silicified, weakly). Contains reddish-brown sphalerite laminae-bands (1-3mm wide) parallel S_2 ; 15% sphalerite, overall. Trace disseminated chalcopyrite along microfractures. White (kaolinite) fracture at low Ct. Good core recovery, R&D. Sharp upper contact at CA 70° . Sharp lower contact at CA 80° .	
L	60	13	60	15									AEA →464 (100) 95:05	Sphalerite-bearing pyritic massive sulphide containing 70% pyrite, 20% quartz, 5% sphalerite and 4% dolomite. Very weakly calcareous. Massive to PS_2 foliated - Brassy yellow fracture surfaces. Hard. Brassy yellow f.g. (subhedral-cubic) pyrite as masses and bands (1-4cm wide) parallel S_2 . Reddish-brown f.g. (subhedral?) sphalerite as bands (1-3cm wide) parallel S_2 . Off-white (crs. y) f.g. subhedral patches (clots) and laminae parallel S_2 . Very good core recovery. Good to fair R&D. Sharp upper contact at CA 80° .	

Code	From		To		Recov.		No.		Unit		Description
	10	14 16	20	22 24	26	28	30	34	35		
											Locally contains 5-10% off-white, non-calcareous, soft, dense barite clots.
L	6035	6037							5A6	→ 5B26	Dark grey to black graphitic phyllite with off-white quartz-dolomite siltstone laminae/beds following $S_1, S_2/S_2$. Very weakly calcareous. CS_2 and PS_2 foliated. Dark grey to black graphitic fracture surfaces. Moderately soft to soft. Pyrite masses and laminae/bands following S_1/S_2 ; 3% pyrite overall. Good core recovery. Fair to poor R&D. Black to "poker-chippy" at 601.6-602.4. Sharp upper contact at $CA 80^\circ$. Gradational lower contact parallel S_2 .
L	6037	6044							5B46	→ 4L01	Light to medium grey phyllite with yellowish-green (quartz-sericite-chlorite alteration) tint and off-white quartz-dolomite siltstone laminae/beds following $S_1, S_2/S_2$. Very weakly calcareous. CS_2 and PS_2 foliated. Moderately hard (weakly silicified). Minor healed slight micrit clast-supported breccia defined by late quartz-dolomite veinlets at several CA angles. Very good core recovery. Good to fair R&D. Gradational upper contact parallel S_2 . Sharp contact at $CA 80^\circ$.
L	6044	6046							AH8A	(4H0) 6040	Magnetite-sphalerite-bearing massive pyrrhotitic sulphide contains 70% pyrrhotite, 10% magnetite, 2% quartz, 5% sphalerite, 5% dolomite. Very weakly calcareous. Massive to PS_2 foliated. Bronze-brown fig (subhedral?) pyrrhotite as masses.

Dy
Metallurgy

CURRAGH RESOURCES INC.

Inter-Office Memorandum

TO: Gregg Jilson
Vice-President, Exploration
Whitehorse Office

FROM: Lee C. Pigage
Senior Geologist
Whitehorse Office

RE: Dy Metallurgical Reports

DATE: 04 27 1992

Copies of the following reports have been given to Godfrey McDonald (April 24, 1992):

1. P.J. Brown. August 23, 1978. Dy-Preliminary Laboratory Test Work. Report to CAMC.
2. T.H. Lafreniere and P.J. Brown. March 31, 1982. Metallurgical Repose of Dy ore, Dy deposit - Vangorda Plateau, Yukon Territory. KRAL report to CAMC.

He was also advised that split core from the drilling programs could be made available for metallurgical testwork.

