COMINCO LTD.

EXPLORATION

NTS: 105 O/7

WESTERN DISTRICT

ASSESSMENT REPORT

DIAMOND DRILLING

ON THE

HESS PROPERTY

Situated at: 130°41'W, 63°17'N

MAYO MINING DISTRICT

YUKON TERRITORY

6 SEPTEMBER 1983

M.R. MURRELL

TABLE OF CONTENTS

ATTACHMENTS

COMINCO LTD.

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I. INTRODUCTION

The Hess claims were staked in 1976 and 1977 to cover an area of barite with local minor occurrences of lead and zinc. The property has been mapped geologically, prospected and sampled. The main showing, on the Hess 61 claim, has been sketch-mapped, chip sampled and hand trenched.

The property is underlain by the Ordovician-Silurian Road River Group and the Devono-Mississippian Earn Group. The "barite" bed in the Road River hosts the known mineralization, and consists of a mixture of barite, witherite, and limestone.

II.. SUMMARY

Field work on the Hess property was carried out during the period July 9 to August 7, 1983. It included brief geological mapping in order to spot the impending drill hole, and drilling a single 105.5 metre NQ, BQ hole. Drilling was carried out by Caron Drilling of Whitehorse, and helicopter support was by Northern Mountain Helicopters with a field base at MacMillan Pass, Yukon Territory.

III. LOCATION AND ACCESS

The Hess Property is located 365 km northeast of Whitehorse, Y.T., and about 32 km west of MacMillan Pass. The property is fairly rugged, covering some of the peaks of the Hess Mountains. Access to MacMillan Pass is via good gravel road in the summer, or by fixed wing to a gravel airstrip. Access to the property is by helicopter.

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IV. TENURE

The Hess Property consists of a contingent group of 88 claims within the Mayo Mining District. They were staked from September 3, 1976 to September 6, 1977. The anniversary date for all is December 2, with most coming due in 1983. Work during 1983 far exceeds the maximum allowable for assessment work under current Yukon regulations.

V. DIAMOND DRILLING

A total of 105.5 metres (346 feet) of NQ and BQ was completed in one hole by Caron Drilling. The hole is located near the northern boundary of the Hess 61 claim. Its bearing is 72^{o} and its dip -45^{o}. The purpose was to test for the possible down dip extension of good grade zinc-lead surface mineralization, that has surrounding lower grade mineralization. The rocks intersected included cherty mudstones and three wide areas of barite-witherite-limestone. Trace to minor amounts of galena were often found spattered through the baritic sections. Sphalerite was seen only in a few minor instances. Assays are pending.

The core is stored at the camp at Cominco's Nidd property, about 10 km to the southeast.

Report by: Mike Murrell
Mike Murrell, Project Geologist

Endorsed by: Derek Rhodes
D. Rhodes, Senior Geologist

Approved for Release by:
G. Harden, Manager
Exploration
Western District

MRM/skm
Distribution
Mining Recorder (2)
Western District (1)
MRM

APPENDIX A

IN THE MATTER OF THE YUKON QUARTZ MINING ACT

AND IN THE MATTER OF DIAMOND DRILLING

CARRIED OUT ON MINERAL CLAIMS OF THE HESS PROPERTY

LOCATED IN THE MAYO MINING DISTRICT, YUKON TERRITORY

MORE PARTICULARLY N.T.S.: 105 O/7

A F F I D A V I T

I, MICHAEL R. MURRELL, OF THE DISTRICT OF NORTH VANCOUVER, IN THE PROVINCE OF BRITISH COLUMBIA, GEOLOGIST, MAKE OATH AND SAY:-

1. THAT I am employed as a geologist by Cominco Ltd. and, as such have a personal knowledge of the facts to which I hereinafter depose;

2. THAT annexed hereto and marked "Appendix B" to this my affidavit is a true copy of expenditures on diamond drilling carried out on mineral claims on the Hess Property.

3. THAT the said expenditures were incurred between the 9th day of July 1983 and the 7th day of August, 1983, for the purpose of mineral exploration on the above noted property.

Signed: _____

M.R. Murrell
Project Geologist

6 September 1983

APPENDIX B

STATEMENT OF EXPENDITURES

ON THE

HESS CLAIM GROUP

Period of Field Work - July 9 - August 7, 1983

Diamond Drilling carried out on Hess 61 Claim:

Direct Contract Costs	$25,107
Supplies, equipment, personnel mobilization	799
Communications	950
Assaying	500
Supervision - M.R. Murrell 30 days @ 244	7,320
Domicile 30 days @ 40	1,200
Transportation - Fixed Wing & Shipping	300
- Helicopter	25,529
	$61,705

APPENDIX C

STATEMENT OF QUALIFICATIONS

I, Michael R. Murrell of 1662 Ralph Street, in the District of North Vancouver, British Columbia, hereby state that I was graduated from the University of Alberta, Edmonton, with a B.Sc. (Hon-Geology) in 1966. During my undergraduate summers, I worked for B.A. Oil (now Gulf Oil), and a small mining company. Upon graduation, I joined Cominco Ltd. and have worked on many aspects of mining exploration since that time.

Signed: _____
M.R. Murrell
Project Geologist

6 September 1983

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	HESS PROPERTY	District	Mayo M.D.	Hole No.	HE83-1		
Commenced	July 24, 1983	Location	West of Hess 61 Showing	Tests at	Acid -99.7m(-45°)	Hor. Comp.	74.6 m
Completed	July 27, 1983	Core Size	NQ BQ	Corr. Dip	-45°	Vert. Comp.	74.6 m
Co-ordinates				True Brg.	72°	Logged by	M.R. Murrell
Objective	To test for possible extension of a Zn, Pb, Ag mineralized surface showing within a barite horizon of the Road River Formation.			% Recov.		Date	July 28 - Aug. 3/83

Claim: Hess 61 | T Brg. 72° | Collar Dip -45° | Elev. 1518 m | Length 105.5 m | Hole No. HE83-1 | Sheet 1

Metres From	Metres To	Description	Sample No.	Length	Analysis
0	1.0	Overburden (Air)			
1.0	39.2	Black cherty mudstone. Surface exposure shows outcrop of thin bedded to rubbly weathering (2-4 cm beds) of black cherty mudstone. Hole is drilled (at the start) almost parallel to bedding, so likely this interval cuts very little section - perhaps in the order of a few metres only. A few minor silty units show that bedding can be cross cutting the core, but this can be explained by the numerous small-scale kink folds seen in outcrop. Mudstone is black, fine grained, hard (sil. or cherty) and appears to be made up of undulatory mottled black blobs on fragments representing soft sediment or plastic flowage. (Weathering pattern would be rubbly, as found on surface near the drill, beyond the initial few metres of thin bedded material). The individual blobs or fragments are distinguished by slight changes in color (black vs. dark grey), or locally by minute pin-point white specks (barite?). These fragments are tightly packed so that there are no interstitial infillings. Entire section is broken and oxidized so that rusty limonite is prevalent on irregular fracture surfaces. Local well broken gravelly sections may be representing fault zones and include: 6.7 - 7.0, 7.8 - 8.0, 11.8 - 12.0, 12.6 - 12.7, 21.2 - 21.5 (graphitic gouge), 24.0 - 24.4(?), 35.8 - 37.8. This last section is possibly a major fault for it swells on the drill rods and locks the NQ core barrel down the hole.			
		Possible pin-point barite at 8.2 - 13.5 and 20.7			
		"Crackle-breccia" zone at 26.0 - 27.0 just above a 3 cm wide dirty quartz vein(?) that is probably parallel to bedding at 20°. Below this point the core is black, carbonaceous to almost graphitic looking, but is still very hard and silicified. Weathering and			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property HESS	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. HE83-1 | Sheet 2

Metres From	To	Description	Sample No.	Length	Analysis
		leaching predominates from 34.6 - 36.3, probably reflecting the nearby large fault.			
		36.3 - 38.0 - No recovery - Reduced from NQ to BQ. NQ bit unscrewed while drilling through and had to be burnt into place.			
		38.0 - 39.2 Mudstone as previous, but contains a short section at the start of "cemented gouge" - A ground up cherty siltstone that has been cemented by limonite, consequently leached. This is followed by thin limonitic stained quartz veins (usually at 40^{o}) and random quartz veins, over 30 cm. Quite leached over the last metre, and a slickensided surface is seen. Cuts core at 40^{o} with slickensides plunging 15^{o} off of the down dip face.			
39.2 - 49.4		Light grey to white mixture of barite, witherite, and possibly limestone. Variable in overall appearance and contains several bands of black matrixed mudstone with large white "bubbles" of blebby "barite".			
		39.2 - 40.2 Brecciated looking barite. Contact with above unit is at about 70^{o} however it is not regular - the overlying mudstone squirts down into the barite as interstitial fillings over the first 2 to 3 cm. This healed breccia unit consists of ill-defined blocks of dark to medium grey limy witherite(?) enmeshed in a matrix of similar material. (Thin section work necessary). Bedding is quite indistinct, but could be about 80^{o}. Cut by a few irregular low-angle quartz veins.			
		40.2 - 42.7 Bedded barite and short muddy-blebby units. Overall is medium to tan-grey with an almost laminated look with darker creamy grey-brown material.			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property HESS	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. HE83-1	Sheet 3

Metres From	To	Description	Sample No.	Length m.	Analysis -ppm Pb	Zn	Ag	Cu	Sb
		Texture is actually quite variable even over this thin unit:							
		15 cm of silicified but calcareous dark grey to black matrixed (cherty mudstone?) with 40% blebby to blebby-streaky witherite(?) at 65°.							
		50 cm of a rounded to elongate granular textured grey to dark grey witherite separated by flow textured fine grained "colloform" looking streaks of tan witherite. Overall bedding suggested at 70°.							
		20 cm of laminated looking material with coarser grained white witherite separated by thin tan-brown laminations. Probably a gradation from the above rock.							
		25 cm of brecciated-healed, material. Contains some darker grey rock that has been cut up - stock-work fashion, by later limy "veins".							
		15 cm of semi-laminated witherite as previous. (Bedding at 50°).							
		65 cm of tan brown matrix with white rounded to streaky blebs (25%).							
		50 cm of laminated to mottled marbly looking witherite that has a few healed low angle fractures healed by black fine grained witherite.							
		20 cm of tan brown matrix with white blebs.							
		Samples: 41.5 - 42.7	976	1.2	256	2240	4.6	84	47
	42.7 - 44.8	Spotted mudstone with a few intervening 15 cm wide "barite" zones, trace Pb. The spotted mudstone is black and fine grained and contains about 30 to 40% rounded white to light grey witherite blebs (calcareous) as blebs usually about 2 to 3 mm across. Bedding consistently 40-45°. The "barite" beds are mottled to streaky and contain patchy to disseminated-							

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property HESS	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
					HESS-1	4

Metres From	To	Description	Sample No.	Length m.	Analysis - ppm Pb	Zn	Ag	Cu	Sb
		streaky pyrite grains locally to 10%. Trace amounts of black granular							
		PbS grains are sometimes associated with the pyrite in trace amounts.							
		A few clots or aggregates of black PbS are also present near the end							
		of this section. "Barite" - 42.7 - 42.9, 43.1 - 43.3, 44.1 - 44.3,							
		44.4 - 44.5.							
		Sample: 42.7 - 43.8 - Contains pin-point orange-	977	1.1	9380	E 10600	37.1	257	900
		cream ZnS @ 42.7-42.9							
		43.8 - 44.8	978	1.0	E 17320	E 11700	51.6	496	1770
	44.8 - 47.3	Mineralized barite zone. Mainly mottled to wavy striped medium and light							
		grey "barite" with small pyrite cubes randomly scattered throughout.							
		Several individual galena grains or grain aggregates with pyrite. Pin-							
		points of very fine orange-tan sphalerite is also present over short							
		silicic sections (ie. 46.1 - 46.3) but is found in minor amounts.							
		PbS becomes quite coarse grained, with pyrite at 46.3 - 46.8. Appears							
		to surround, or be interstitial to the coarser clots or grains of pyrite.							
		(Est. 5% Pb). Pyrite and Pb content drops off after this.							
		Sample: 44.8 - 46.1	979	1.3	E 18080	E 10920	54.4	484	1920
		46.1 - 46.3	980	0.2	8500	9920	59.1	670	850
		46.3 - 46.8	981	0.5	39300	9290	228.0	531	1280
		46.8 - 47.3	982	0.5	34600	23900	140.0		
	47.3 - 49.4	Spotted mudstone - Black matrix cherty mudstone with increasing amount						1256	3270
		of light grey coarse rounded grey blebs of barite down-hole. First							

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property HESS	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. HE83-1 | Sheet 5

Metres From	To	Description	Sample No.	Length m.	Analysis - ppm Pb	Zn	Ag	Cu	Sb	
		20 cm is 35% elongate coarse blebs, rapidly changing to about 75-85% grey blebby barite that start to consolidate to bands, locally with disseminated grains of pyrite and spots of Pbs. ZnS. Bedding changes from 80° at start of section to 45° at 48.5 m to 20° soon after. 48.9 - 49.1 is very pyritic as coarse (2-3 mm) blebs with dusty PbS, AnS Last 30 cm is a broken, probable fault zone - gravelly, and the wierd bedding directly above could be drag folding.								
		Sample: 47.3 - 48.3	983	1.0	19390	15500	73.6	365	1870	
		48.3 - 49.1	984	0.8	22100	46700	81.7	923	1930	
49.4	50.0	Limestone and minor cherty mudstone. Limestone is medium to dark grey fine grained, granular to sugary textured and cut by thin wispy calcite veinlets. Mudstone is black, hard, cherty and cut by a stockwork of thin white quartz veins immediately below the 49.4 fault zone. Quartz veins at approximately 15-20°. Bedding probably about the same.								
50.0	55.5	Cherty mudstone - black, siliceous, hard, very fine grained. Structureless except for a few thin (1 cm) bands of dark grey siltstone cutting at about right angles to core, elsewhere bedding is suggested at 60°. Local pin-point pitting is in evidence. Whole section is broken and locally is moderately oxidized. Most chunks are irregular and less than 5 cm long. No apparent slickensides present. No quartz veining.								
		Sample: 54.5 - 55.5 Mudstone	985	1.0	206	380	2.2	55	18	

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Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property HESS	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
					HF83-1	6

Metres From	Metres To	Description	Sample No.	Length m.	Analysis - ppm Pb	Zn	Ag	Cu	Cu
55.5	73.3	Barite - witherite zone - Most is light grey to white, with a variety of textures, and includes a few probable fault zones. Mineralization not as pronounced as previous barite section - occurs as sporadic specks to small clastics or a thin veinlet usually associated with crystalline pyrite. In one instance, colloform sphalerite is present (64.6).							
55.5	57.0	Brecciated barite - much as described higher in hole. Fuzzy ill-defined whitish fragments set in a matrix of darker material. All is healed to competent core. All is calcareous. Few stylolitic wisps locally. Oxidized and broken core from 56.4 - 56.6 and could have been the "spotted mudstone" rock type.							
		Sample: 55.5 - 57.0	986	1.5	5920	7200	18.8	71	218
57.0	60.5	Interbedded 30-40 cm bands of the "spotted mudstone" rock type and cream to white fine grained bedded to massive barite with fine disseminated pyrite, with gradations and intermixing of the two types.							
57.0	58.0	Dominantly the spotted type, but appears smeared out and impregnated by up to 15% fine pyrite (in 2 fine-grained sections) and interstitially to the rounded white witherite blebs as if the pyrite has replaced original mudstone. Much of the darker siliceous material is not calcareous. Bedding at 20^{o} to 40^{o}							
		Sample: 57.0 - 58.0	987	1.0	2720	340	47.7	210	383
58.0	59.2	Fine disseminated pyrite (up to 30%) in white witherite, followed by a mottled textured "spotted mudstone" that has							

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property HESS	District	Hole No.								
Commenced	Location	Tests at	Hor. Comp.							
Completed	Core Size	Corr. Dip	Vert. Comp.							
Co-ordinates		True Brg.	Logged by							
Objective		% Recov.	Date							

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. | Sheet

Metres From	Metres To	Description	Sample No.	Length m.	Analysis -ppm Pb	Zn	Ag	Cu	Sb
		a light grey matrix and coarse disseminated pyrite grains (10%) and a few small spots of galena. Bedding at 10° and 70° - probably a small fold in this area.							
		Sample: 58.0 - 59.2	988	1.2	4790	3680	43.7	641	970
		59.2 - 60.5 Mottled to marble textured tan-white smears of calcareous witherite, with up to 20% fine disseminated to interwashed pyrite. Bedding parallel to core over most part, but locally to 40°.							
		Sample: 59.2 - 60.5	989	1.3	9270	5470	60.5	984	670
		60.5 - 61.1 Broken and rusty zone in calcareous witherite - gravel has disseminated pyrite cubes. Represented by about 30 cm of core (lost core here). Vuggy quartz vein.							
		Sample: 60.5 - 61.1	990	0.6	6690	5030	25.4	138	244
		61.1 - 65.1 Mottled to flow-banded with local blebby zones. Overall white to light grey, fine grained. Pyrite in minor amounts disseminated throughout, but more in the cleaner white bedded looking witherite. Galena present as a few scattered black spots to aggregates and possibly associated with a few healed fractures. ZnS seen in just a few spots as minute yellowish red specks as on a contact between white marble textured and spotted mudstone at 62.3, or as small 1 cm colloform clusters surrounded by black PbS as at 64.6. Cut by a few fault zones - 63.7 - 64.0 (gouge) and 65.0 - 65.3							

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property HESS	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. HE83-1	Sheet 8

Metres From	To	Description	Sample No.	Length m.	Analysis - ppm Pb	Zn	Ag	Cu	Sb	
		Samples: 61.1 - 62.1	991	1.0	9260	14900	46.5	234	229	
		62.1 - 63.3	992	1.2	22400	25300	75.8	416	2390	
		63.3 - 64.6 - Includes two fault zones	993	1.3	14160	11110	31.5	183	1130	
		(gouge at 64.0)								
		64.6 - 65.1 - Colloform Zn with Pb in	994	0.5	7500	9250	15.6	208	403	
		barite (?)								
		65.1 - 66.1 Spotted mudstone-barite. First metre is black background matrix with coarse rounded to elongate "worm-burrow" type white witherite or barite. Includes a 15 cm band of mottled barite-witherite with a few small disseminated streaks of pyrite-galena. Bottom part of section has 60% slightly finer white-grey blebs in a semi-bedded fashion (50-55°) including a few minute specks of disseminated pin-point orange ZnS.								
		Sample: 65.1 - 66.5	995	1.4	5530	7240	38.2	91	1320	
		66.5 - 68.0 Semi-laminated to bedded looking - Mainly white fine grained with thin darker grey-brown streaks becoming more bedded-looking down-hole. Central section looks brecciated and healed. Pyrite as scattered disseminated grains. Zn and Pb present as dark red and black grains (coarse) at 67.5 over less than 1 cm.								
		Sample: 66.5 - 68.0	996	1.5	9730	8290	35.3	166	1320	
		68.0 - 69.3 "Spotted mudstone" - Light to medium grey calcareous matrix with 50% white witherite blebs. Note the matrix is not muddy as usual, but texturally is the same as previous "spotted mudstones". Streaky to bedded								

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property HESS	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. HE83-1	Sheet 9

Metres From	To	Description	Sample No.	Length m.	Analysis-ppm Pb	Zn	Ag	Cu	Sb
		at 50°.							
		Sample: 68.0 - 69.3	997	1.3	1896	2130	8.2	9	507
		69.3 - 73.3 Brecciated barite. Typical of those brecciated healed zones seen previously. Large (2-5 cm) angular but ill-defined white blocks of witherite have been further fractured, separated and infilled interstitially by slightly coarser dark grey to almost black witherite-(limestone?) Cut by a few quartz-calcite veins, a few stylolites, and a few oxidized zones (ie. 71.0, 72.8).							
		Samples: 69.3 - 70.8	998	1.5	229	379	2.5	32	38
		70.8 - 72.3	999	1.5	261	441	2.2	28	65
		72.3 - 73.3 - Last 0.5 m very oxidized - chocolate brown.	1000	1.0	177	7310	2.5	65	124
73.3 - 84.4		Mudstone - black fine grained and massive, but becoming slightly interbedded with siltstone towards the end of the section. Very carbonaceous looking, but all is cherty or silicified. Quite broken, with limonite on fracture surfaces between 73.3 and 77.3, and contains several thin quartz veins within this section cutting at 45° to 65°. Possible faulting (minor) associated such as 74.5, 75.7.							
		77.3 - 80.2 Fairly massive with a hint of bedding at 55° (slightly silty). Locally very slightly calcareous, and has a few wispy quartz-calcite veins randomly oriented.							
		80.2 - 84.4 Crackle breccia zone. Very weak with wispy quartz veins at the start,							

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property HESS	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. HE83-1	Sheet 10

Metres From	To	Description	Sample No.	Length m.	Analysis - ppm Pb	Zn	Ag	Cu	Sb
		gaining in intensity down hole so the last 20 cm is 50% wispy to staccato quartz veining. Brecciation in quartz at 83.4 to 83.5 shows minor amounts of small clots to streaky yellow-orange sphalerite grains with graphitic breaks. No Zn seen in the rest of this crackle zone. Last 1½ metres has numerous thin (1-2 cm) silty bands showing some plastic deformation. Bedding somewhat variable, but is 30-45° overall.							
		Sample: 83.4 - 84.4	39501	1.0	704	1470	3.2	106	177
84.4 - 95.6		Barite-witherite Zone. White to very light grey. Quite similar to the previous in overall aspects, and can be subdivided into various units.							
		84.4 - 86.0 Brecciated witherite-barite. Mainly white to light tan-grey large (10-20 cm) blocks that are cracked in infilled with minor amounts of the coarser medium grey calcareous infilling, with a few angular pebbles of the same material. All competent - ie. core is in 30-40 cm long pieces. Bedding not apparent over much of this section, but could be parallel to core towards the bottom end. Minor breaking and oxidizing along a 40° fracture at 85.4							
		Sample: 84.4 - 86.0	39502	1.6	361	1300	5.8	144	58
		86.0 - 87.0 Massive thin bedded light grey witherite. Well bedded with streaks of darker grey "laminations" defining the bedding at about 15°, but curling tightly over at the end of this section.							
		Sample: 86.0 - 87.0	39503	1.0	2670	3550	17.7	83	830

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Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property HESS	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		*True Brg.*	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
					HE83-1	11

Metres From	Metres To	Description	Sample No.	Length	Analysis - ppm Pb	Zn	Ag	Cu	Sb
		87.0 - 88.5 Brecciated witherite-barite zone. Light white-grey rather jumbled effect grading centerally through a more typical brecciated zone, and the bottom 0.5 metre is more bedded than brecciated. Bedding at 60°.							
		Samples: 87.0 - 87.5	39504	0.5	14	23	.8	5	<4
		87.5 - 88.0 - fine disseminated pyrite over 5 cm.	39505	0.5	544	285	19.2	393	537
		88.0 - 88.5	39506	0.5	925	1520	3.8	29	358
		88.5 - 90.6 "Spotted mudstone". Texture much the same as other spotted mudstones, but the matrix is only about 25% and is medium grey (not black) fine grained calcareous witherite. The light grey witherite blebs are touching throughout and form 75% of the core as rounded to semi-bedded bands. Blebs are about 1 to 2 mm across and sometimes smaller. Bedding well displayed at 75°. No sulphides are apparent.							
		90.6 - 95.6 Very thin bedded witherite-barite, with numerous brecciated to semi-brecciated sections. Basic rock type was very light grey and white thin bedded (1-3 mm beds) somewhat sandy textured witherite and barite that usually shows bedding about 75°. But several sections are brecciated, with angular fragments (1-2 cm across) of the above material separated by 40% darker calcareous material to give a healed breccia appearance. Widest breccia zone is 92.8 to 93.3 Darker bands become darker over the last metre of core giving bedding at 65° to 70°. Contact is sharp but undulatory at 70°.							

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property HESS	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. HE83-1 | Sheet 12

Metres From	Metres To	Description	Sample No.	Length	Analysis
95.6	105.5	Carbonaceous Mudstone. Jet black, massive, silicified (cherty?) but broken into usually short (<5 cm) pieces parallel to bedding at 85°. Graphite very common on fracture surfaces and increases down-hole. Only a few thin (1 cm) slightly silty bands apparent. Becomes rapidly quite broken, showing slickensides and difficult to core. Last 4 metres represented by only 1½ metres of chips - washing away. Wore bit out in 20 ft.			
		END OF HOLE @ 105.5 metres			
		Runs and Recoveries - See Page 13			

211-0437

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

MUM)

Property Hess	District	Hole No. HE83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by M.R. Murrell
Objective		% Recov. Overall = 82%	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. HE-83-1 | Sheet 13

Analysis

METERS From	METERS To	Description	Sample No.	Length

Runs and Recoveries

Metres From	Metres To	Length (m)	Recovery	%	From	To	Length (m)	Recovery	%	From	To	Length (m)	Recovery	%
1.0	3.7	2.7	0.8	30	29.6	31.1	1.5	1.5	100	55.5	57.0	1.5	1.5	100
3.7	5.2	1.5	1.5	100	31.1	32.6	1.5	1.5	100	57.0	59.0	2.0	2.0	100
5.2	6.7	1.5	1.4	93	32.6	34.1	1.5	1.5	100	59.0	61.6	2.0	1.6	80
6.7	8.2	1.5	0.9	60	34.1	35.7	1.6	1.6	100	61.0	61.6	0.6	0.6	100
8.2	9.8	3.1	1.6	52	35.7	36.0	0.3	0.3	100	61.6	64.0	2.4	2.1	88
9.8	11.3	1.5	1.0	67	36.0	36.3	0.3	0.3	100	64.0	64.6	0.6	0.5	83
11.3	12.8	1.5	1.1	73	36.3	38.4	2.1	0.4	59	64.6	65.5	0.9	0.8	89
12.8	14.3	1.5	1.0	67	38.4	41.5	3.1	3.1	100	65.5	68.0	2.5	1.5	60
14.3	15.5	1.2	0.5	42	41.5	42.7	1.2	1.2	100	68.0	71.0	3.0	2.8	93
15.5	17.4	1.9	0.7	37	42.7	44.8	2.1	2.1	100	71.0	72.8	1.8	1.5	83
17.4	18.9	1.5	0.8	53	44.8	46.9	2.1	2.1	100	72.8	74.7	1.9	1.5	79
18.9	19.5	0.6	0.4	67	46.9	48.5	1.6	1.5	94	74.7	75.9	1.2	1.2	100
19.5	20.7	1.2	1.2	100	48.5	49.4	0.9	0.7	78	75.9	76.8	0.9	0.6	67
20.7	21.6	0.9	0.8	89	49.4	50.3	0.9	0.9	100	76.8	77.4	0.6	0.5	83
21.6	23.2	1.6	1.6	100	50.3	51.2	0.9	0.6	67	77.4	80.2	2.8	2.8	100
23.2	24.8	1.6	1.6	100	51.2	52.1	0.9	0.9	100	80.0	80.8	0.8	0.2	25
24.8	26.5	1.7	1.6	94	52.1	54.0	1.9	1.5	79	80.8	81.4	0.6	0.4	67
26.5	28.0	1.5	1.5	100	54.0	54.9	0.9	0.6	67	81.4	84.4	3.0	2.9	97
28.0	29.6	1.6	1.6	100	54.9	55.5	0.6	0.3	50	84.4	87.5	3.1	3.0	97

211-0437

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property Hess	District	Hole No. HE83-1	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by M.R. Murrell
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. HE-83-1 | Sheet 14

METERS From	To	Description													Sample No.	Length	Analysis
Metres		Runs and Recoveries															
From	To	Length (m)	Recovery	%	From	To	Length (m)	Recovery	%	From	To	Length (m)	Recovery	%			
87.5	90.5	3.0	3.0	100													
90.5	93.6	3.1	3.1	100													
93.6	96.6	3.0	3.0	100													
96.6	97.8	1.2	1.2	100													
97.8	98.1	0.3	0.2	67													
98.1	99.7	1.6	0.6	38													
99.7	101.2	1.5	1.2	80													
101.2	102.4	1.2	0.2	17													
102.4	105.5	3.1	0.5	16													

211-0437

ASSESSMENT REPORTS

Map No.: 105 O-7 Type of Work: Diamond Drilling

Report filed under: Cominco Ltd. by Caron Diamond Drilling - Whse. Y.T.

Date performed: 9 July to 7 August, 1983

Location: Lat.: 63° - 16"

Long: 130° - 45' 1 Hole 346 Ft. on Hess No. 61 - YA15902

Area: Hess River Area

CLAIM Name & No.:

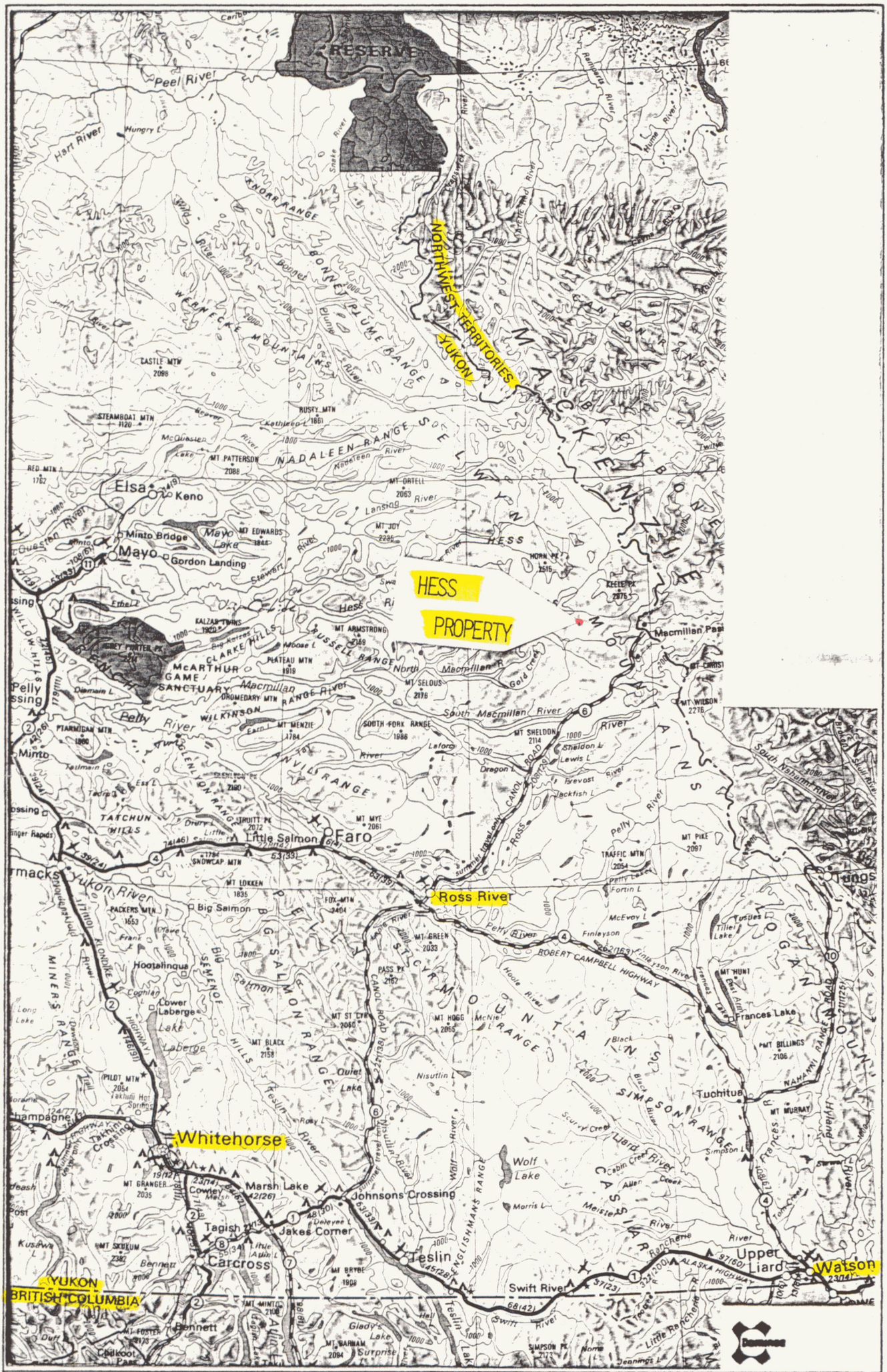
Hess No. 1 - 91 Fr. YA6595 - YA16071

Work done by: Caron Diamond Drilling

Work done for: Cominco Ltd.

Date	Good standing to	Date	Good standing to
17/10/83	2nd December, 1988		

091490



Drawn by: MRM	Traced by:		
Revised by	Date	Revised by	Date

MRM

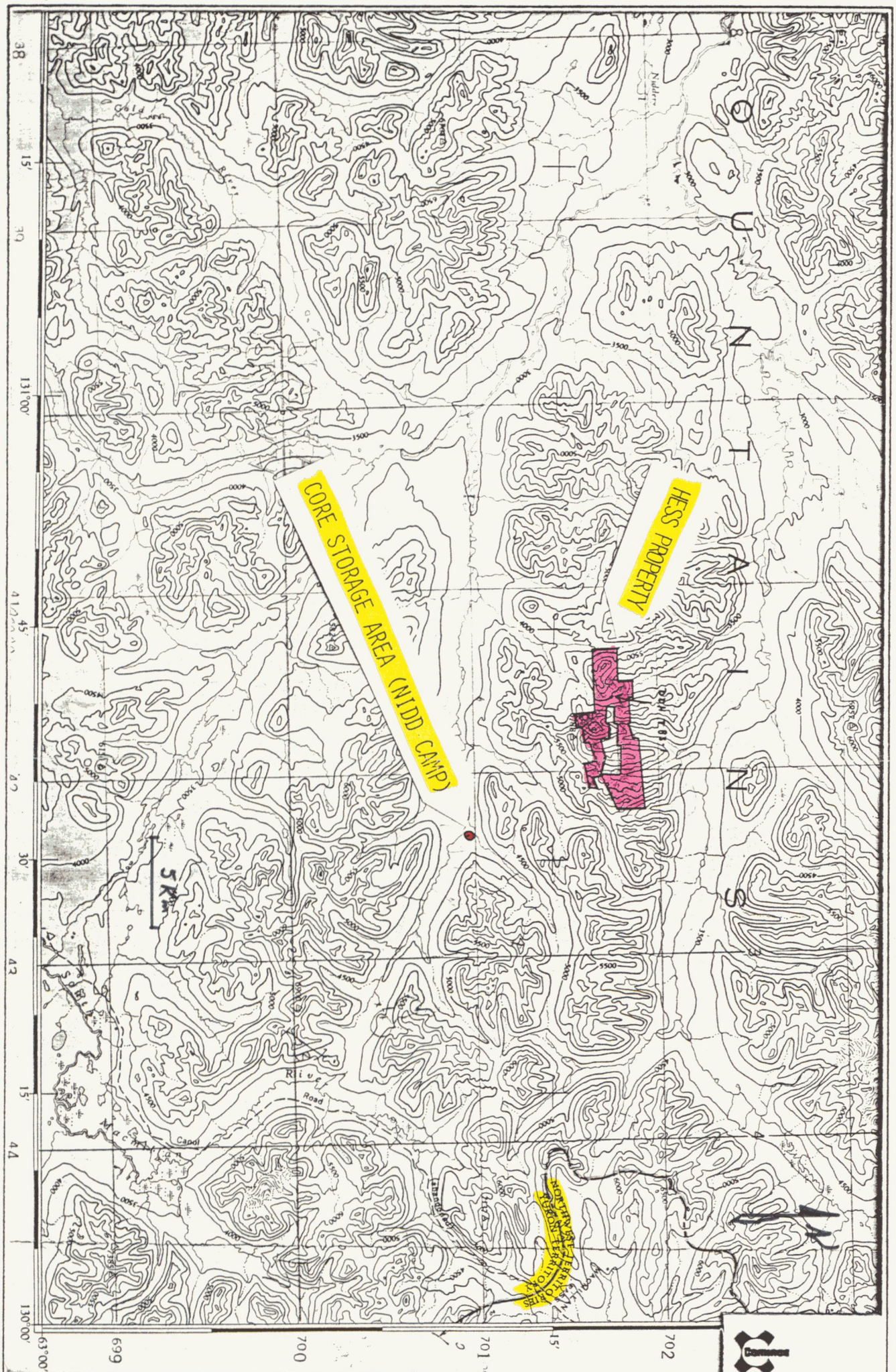
HESS PROPERTY

091490

Scale: 1: 2,500,000	Date: Sept 6, 1983	Plate: A

NCI 112A CL

210-0610



Drawn by: MRM		Traced by:	
Revised by	Date	Revised by	Date

B
MRM.

HESS CLAIMS

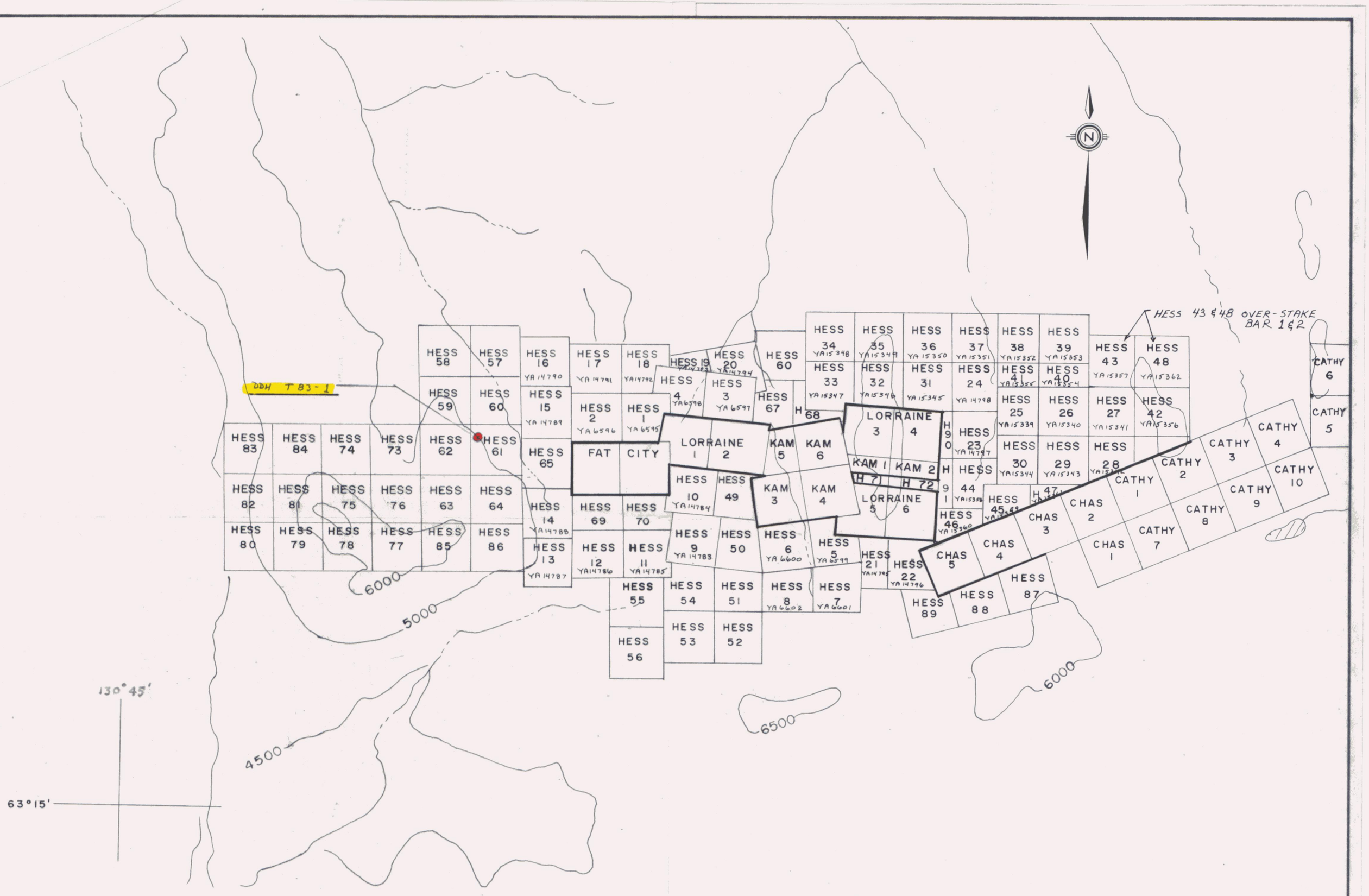
LOCATION MAP AND CORE STORAGE AREA

091490

Scale: 1: 250,000	Date: Sept 6, 1983	Plate: B

NCI - 112A - CL

210-0610



Note: · Only the Hess claims are Cominco
· Contours are in feet

HESS CLAIMS YUKON TERRITORIES

Cominco 105-0-7

Drawn by: RJS		Traced by:	
Revised by	Date	Revised by	Date
MRM	Sept/82		

MRM.

COMINCO HESS GROUP

CLAIM SHEET 105-0-7 091490

Scale: 1" = 1/2 Mi | Date: AUG 1977 | Plate: C

210-6201

△ Survey Point Elevations

1.	1482.6	25.	1553.9
2.	1495.3	26.	1571.1
3.	1505.0	27.	1524.4
4.	1508.4	28.	1508.0
5.	1510.3	29.	1494.8
6.	1515.5	30.	1485.9
7.	1525.3	31.	1492.0
8.	1528.2	32.	1574.0
9.	1541.4	33.	1574.0
10.	1555.3	34.	1547.5
11.	1520.1	35.	1541.7
12.	1529.0	36.	1536.9
13.	1548.7	37.	1487.9
14.	1557.8	38.	1482.6
15.	1573.8	39.	1475.7
16.	1579.5	40.	1505.0
17.	1581.9	41.	1514.2
18.	1581.5	42.	1531.3
19.	1585.4	43.	1518.7
20.	1585.4	44.	1522.8
21.	1578.3	45.	1572.1
22.	1567.9	46.	1581.3
23.	1524.0	47.	1574.2
24.	1539.1	48.	1570.4

CONTOUR INTERVAL 10 METERS
CLAIM BOUNDARY (approximate location)
DIAMOND DRILL HOLE
(H) HELICOPTER PAD
△ SURVEY POINTS (Chain + Compass
CIRQUE

METERS
0 10 20 30 40 50 60 70 80 90 100

HESS PROPERTY

N.T.S. 105 O-7

Drawn by: M.R.M.		Traced by: j.s.h.	
Revised by	Date	Revised by	Date

HESS 61 SHOWING AREA
TOPO AND D.D.H. LOCATION
091490 MAYO M.D., YUKON

Scale: 1:1,000 | Date: Sept. 6, 1983 | Plate: D

210.0620