



**CALTOR SYNDICATE**  
 LOCATION OF  
 CLAIM GROUPS CAB 1-8 & 9-16  
 ON CLAIM MAP 105F-14  
 WHITEHORSE M.D. YUKON -

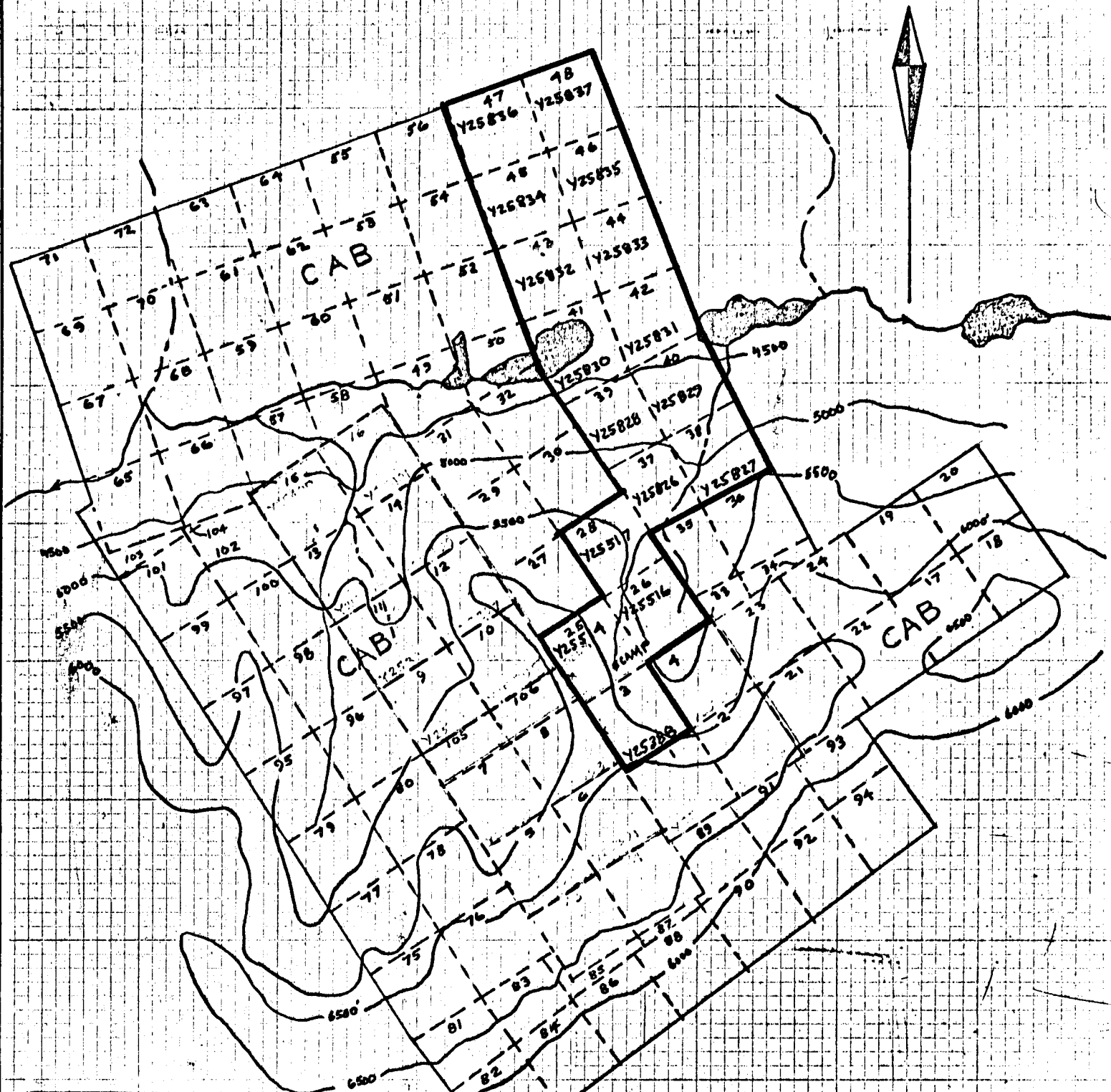
DDH# R1-71 Vertical  
 600'

DDH# R2-71 -50°  
 251' (still drilling)  
 July 31, 1971

TWIN MTN  
 7347

JA

091149



# CALTOR SYNDICATE

LOCATION OF  
CLAIM GROUPS GROUPING # 3

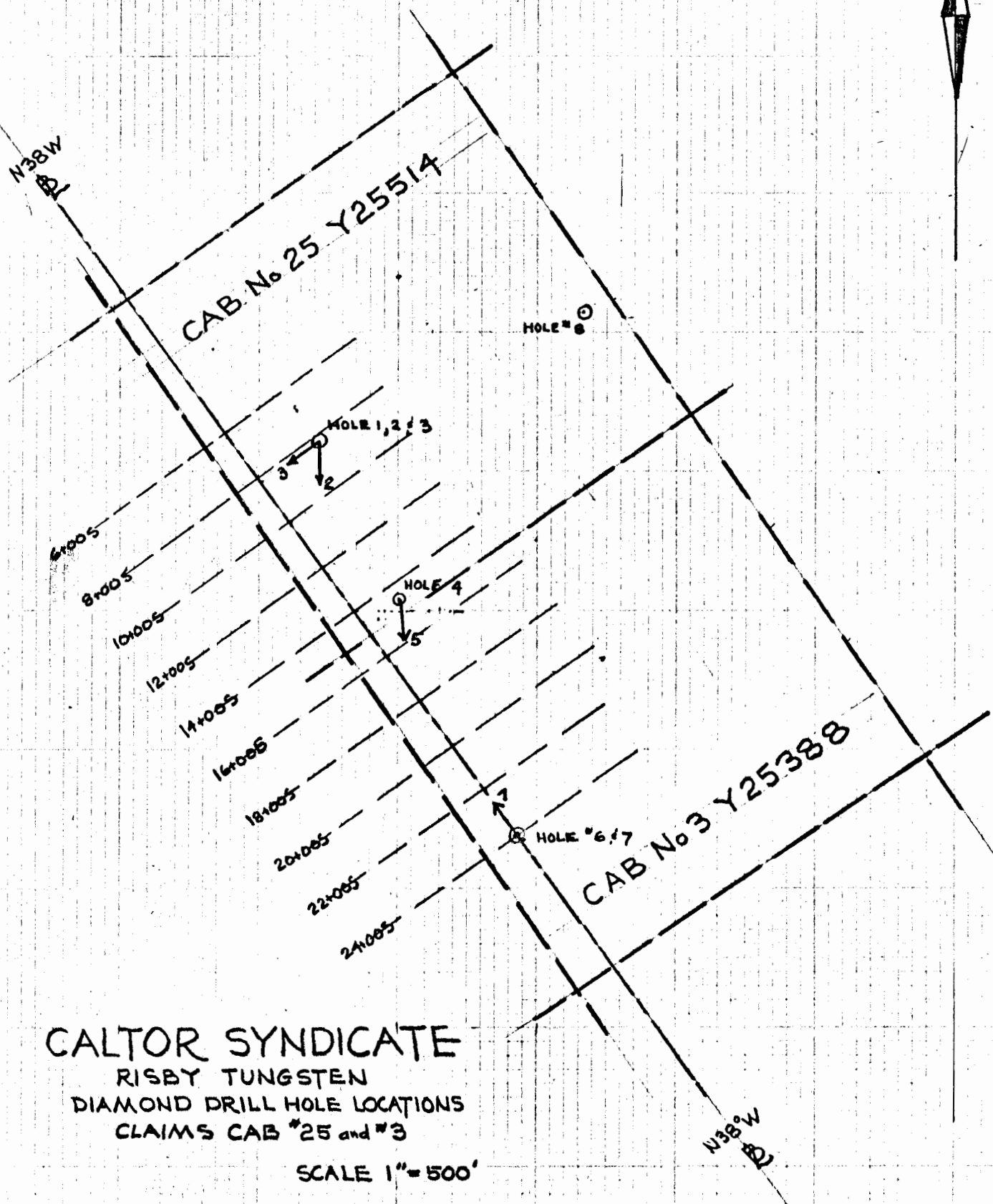
ON CLAIM MAP 105F-14  
WHITEHORSE M.D. YUKON -

SCALE 1" = 1/2 MILE

TWIN MTH



7347



CALTOR SYNDICATE  
RISBY TUNGSTEN  
DIAMOND DRILL HOLE LOCATIONS  
CLAIMS CAB #25 and #3

SCALE 1" = 500'

DRILL HOLE LOG

(RISBY TUNGSTEN)

091142

DD53

R-1-71

DIP TESTS

Property ~~CALTOR SYNDICATE~~

Hole Number

At ..... Ft. ....  
 At ..... Ft. ....  
 At ..... Ft. ....  
 At ..... Ft. ....  
 At ..... Ft. ....  
 At ..... Ft. ....

At WHITEHORSE M.D. YUKON  
 Claim No. CAB GROUP  
 Working Place CAB 25 \* 425514  
 Baseline Footage 8+205  
 Baseline Offset 2+50E  
 Date Started 25 JULY 1971  
 Date Completed 29 JULY 1971

Dip VERTICAL  
 Length 601'  
 Bearing -  
 Elev. Collar 550'  
 Horiz. Trace .....  
 Vert. Trace .....  
 Date Logged 31 JULY 1971

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
2.0	5.5	Boulders and rock rubble - CASING			
5.5	544.0	META SEDIMENTARY GNEISS - a medium grained, light green colored material composed of alternating biotite micaceous bands with some chlorite, and quartz bands often containing carbonate mineralization. These bands are aligned from 30° to 45° to the core axis. The micaceous bands show individual mica (biotite) crystals aligned parallel to the existing gneissosity 5.5'- 7.0' frost shattered and fractured, with powder, red, iron oxide coating the surfaces. 9.0' Past here chlorite is present as greenish "dots" scattered throughout tiny pyrite cubes are present for several feet. 12.0'-13.5' a zone of intense cross fracturing, with red, dusty iron oxide on the surfaces. 14.0' a 1/2" white quartz vein at 20° CA. 14.8' an 18° CA shear, with re-crystallized biotite, and iron oxide. 15.0' Past here the gneissic banding becomes "wavy" 16.5' an iron oxide coated 15° CA fracture 17.1' a chloritic fracture at 15° CA, followed by a 60° CA iron oxide coated fracture, then 18" of intensely fractured material. 19.0' Past here the micaceous banding tends to become lenticular 21.0' and 22.5' 60° closely spaced shears with re-crystallized biotite 23.7' a 1" quartz vein at 20° CA 24.0'-27.0' an intensely sheared zone with cross fractures, at 45°-60° CA, many lined with iron oxide 24.5-24.8. a crushed zone, the rock here has been crushed and ground to an almost clay like consistency.			

Logged by

*[Signature]*

A	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		27.2' - 30.1' a hairline calcite vein, "ivory" but essentially parallel the CA			
		31.0' - 32.0' a sheared and fractured zone			
		34.0' - 38.6' a fractured zone, with red iron oxide coating the surfaces.			
		39.0' - 40.0' an altered zone, with a powdery white, crushed material, lined by vuggy quartz			
		41.0' - 42.3' a $\frac{3}{4}$ " - 1" quartz vein cross the gneissosity producing small scale drag folding in the gneissic bands; followed by numerous closely spaced fractures			
		44.1' - 45.3' an intensely fractured zone, with minor slickensided shearing.			
		46.5' - 47.3' a similar fractured zone			
		52.1' - 54.0' a sheared zone, with numerous small $\frac{1}{16}$ " - $\frac{1}{32}$ " crystalline calcite veins, and re-crystallized mica bands; followed by several $45^{\circ}$ - $60^{\circ}$ hairline calcite veins			
		57.0' - 59.2' a fractured zone, with small randomly oriented quartz veins.			
		58.6' a small brecciated zone, cemented by transparent, colorless, stubby terminated prisms of what appears to be a zeolite mineral.			
		59.8' a $15^{\circ}$ CA shear, lined with "flattened" brown-yellow prisms, possibly a carbonate: Past here the gneissosity becomes more irregular, with closely spaced 1" - 3" iron oxide coated fractures, and hairline calcite veins.			
		64.0' Past here the micaceous bands again tend to be lenticular, aligned at $50^{\circ}$ - $60^{\circ}$ CA, indicating the overall dip of the rock is steepening.			
		65.6' several closely spaced, intersecting, shears and fractures, which gradually become more widely spaced.			
		70.0' a micro-brecciated zone, somewhat vuggy lined with micro druse of a colorless zeolite mineral.			
		71.4' a 1" calcite vein at $85^{\circ}$ CA.			
		72.0' a $5^{\circ}$ CA, calcite coated fracture.			
		72.7' - 74.0' an intensely sheared and fractured zone, with numerous small calcite veins.			
		74.5' - 76.5' a hard, grey, massive siliceous zone; followed by several feet of closely spaced fractures, with calcite and iron oxide coatings, and a white powdery clay-like substance			

DM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
		81.1- 81.7' a hard grey-blue sheared (15°CA) siliceous zone		
		83.0-85.0' small, randomly oriented, 1/32"-1/16" calcite veins.		
		85.0-93.5' an intensely fractured zone, with some slickensided shearing, producing a broken, blocky zone, with minor pyrite smears. (note. 5.5 feet of penetration with 4.0' of recovered core)		
		95.2' an iron oxide coated 20°CA shear		
		97.5 a 1/4" white crystalline calcite vein, with parallel micaceous bands perpendicular to the core axis (CA)		
		98.5' and 99.0 a 2" wussy quartz vein lined with micro-hexagonal coatings of a black shiny iron oxide.		
		99.9'-100.4' an intensely sheared and fractured zone, with red iron oxide.		
		100.5'-100.8' a hard, massive, blue-grey siliceous zone; followed by a 7" soft green chloritic zone; then a 5°CA, calcite covered shear		
		103.0' Past here an overall slight increase in the biotite mica, and chlorite content giving a darker green color.		
		104.4' a 1/2" white, crystalline calcite vein at 60°CA.		
		104.6-105.2' - a zone with numerous lenticular quartz and calcite blebs and veinlets with chloritic inclusions		
		105.7'-106.4' - a zone showing contorted, tightly folded, banding.		
		107.0 Past here an overall increase in the siliceous content, giving a grey-blue coloration		
		108.4'-110.8' numerous shears and hairline calcite veins; followed by a 6" calcite and mica vein, which is sheared and fractured, and in places exhibits micro-brecciation.		
		110.0'-116.7' a hard, massive, unfractured, blue-grey siliceous zone, with scattered bands of chlorite, aligned at 50°-60°CA.		
		116.7-120.0' an irregular, almost "crushed" zone, with numerous quartz-carbonate veins, and micro brecciated zones cemented by calcite.		
		119 - a 7" wide brecciated zone, with calcite cementation, and crossed at 15°CA, by a slickensided shear. - This zone probably represents a fairly large faulted zone.		
		122.0-131.0 - 9' of penetration - with only 7.0' of recovered core. an intensely sheared and fractured zone		

M	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
		128.0'-130.0' - intensely fractured and broken up, some zones of a white clay like material, and crossed by numerous hair-line calcite veins, and veins of a colorless, transparent crystalline zeolite		
		131.2' a crystalline calcite vein at 5° ca, covered with small dendritic growths, possibly a manganese oxide.		
		131.3'-132.5' a massive, hard, blue-grey siliceous zone		
		134.0'-135.2' an intensely sheared and fractured zone, with about 70% recovery, some clay-like alteration occurs.		
		136.5-140.0' a sheared and fractured zone, with numerous white randomly oriented calcite veins.		
		140.2'-141.3' a blue-grey siliceous zone with poorly formed pink feldspar crystals, and scattered hair line calcite veins.		
		143.0-145.8 - a "wavy" shallow angled slickensided shear, with extensive cross fracturing, especially around 144.0'-145.0', also this zone displays a crushed texture, with rock fragments in a ground up matrix of mica and chlorite.		
		146.9'-150' an intensely fractured zone, around 147.0 to 147.8 the material has been ground up to a dark <del>red</del> extremely fine grained matrix containing angular siliceous rock fragments.		
		150.5-151.0 - a small scale shallow angle fault showing 1/4" displacement of the gneissic banding.		
		151.5-153.0 a "wavy" crystalline zeolite vein, ends in a small brecciated zone with drusy linings of the zeolite, and stained by iron oxide		
		* 153.0-154.0 - intensely sheared zone with 50% recovery		
		* 154.0-157.0 " " " " 40% recovery		
		* 157.0-159.0 " " " " 50% recovery		
		* 159.0-163.0 " " " " 50% recovery		
		* 163.0-164.0 a fractured siliceous zone with 50% recovery		
		* 164.0-165.0 a fractured zone with 40% recovery		
		* 165.0-167.0 a fractured zone with 60% recovery		
		* 167.0-168.0 an intensely fractured zone with 15% recovery		
		* 168.0-171.0 a fractured zone with 75% recovery.		
		* 171.0-173.0 a fractured zone with 75% recovery		

\* note these footages are the actual drill footages where the core tube was jammed

*[Signature]*

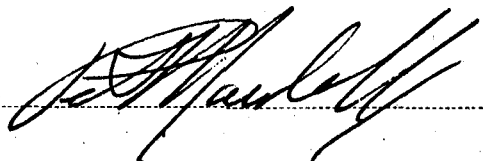
TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
	173.0'-178.0' again an intensely sheared and fractured zone, with much of the fractured surfaces covered by iron oxide		
	175.0- a 6" soft, green colored, chloritic zone		
	178.5- 180.2 - a crushed zone, with a soft, friable, dark green to light green matrix composed of the mica and <del>chlorite</del> chlorite content, and containing <del>angular</del> angular quartz fragments		
	180.8'- 181.3' a crushed zone similar to that at 178.5		
	183.0'- 185.0' a crushed zone similar to that at 178.5; followed by a 2° slickensided shear, past here are numerous mica faults and small shears, crossed by hairline calcite veins.		
	190.9' - a 6" zone of a white, powdery, material like crushed quartz, or possibly a volcanic ash material.		
	191.2 - 192.0 a zone of crushed rock, showing an extremely fine grained soft dark matrix, with angular quartz fragments, ending with a 2" zone of a white powdery material.		
	192.8'- 193.0' - a zone of crushed material similar to the above		
	193.5'- 197.2' a fractured breccia, and crushed zone, cemented by crystalline calcite.		
	200.1 a 30° fracture, cross cutting the 60° CA gneissosity		
	201.0 Past here the micaceous bands are more widely spaced, up to 3" apart, and tending towards being lenticular		
	205.0'- 206.0 - an intensely fractured zone; past here the micaceous bands assume a more gneissic texture, and are spaced closer together.		
	207.0 - 208.1 a fractured and brecciated zone, cemented by calcite.		
	208.8' a 3/4" quartz vein at 75° CA, containing chlorite as inclusions		
	209.4' a 1" quartz-chlorite vein at 80° CA.		
	210.3' a 3" quartz vein at 65° CA, parallel the gneissosity		
	210.8 a 5° CA slickensided shear.		
	211.3 a 3" curving quartz vein with incipient feldspar crystals; followed by a 5° CA slickensided shear		
	217.8 - 223.0 a sheared and fractured zone, with calcite and iron oxide on the surfaces (about 70% core recovery)		
	226.0 a 1/2" followed by a 3/4" quartz vein		
	228.0 - 230.0 a fractured zone (with 80% core recovery)		

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
		220.6' a 45° CA slickensided shear, followed by a 7", soft, green, chloritic vein, crossed by hairline calcite veins.		
		231.5' a 6" sheared and fractured zone, with iron oxide coating the surfaces.		
		233.0-248.0' a large extensively sheared and fractured zone, quite broken up and blocky, numerous crystalline calcite veins up to 1/4" wide occur along with iron oxide coatings.		
		238.5' a well developed 5° CA slickensided shear, with chlorite.		
		240.0' a 5° slickensided shear, with re-crystallized mica		
		242.0' a 60° CA chloritized, slickensided shear; followed by several 1/4" quartz-carbonate veins at 60° CA.		
		246.0' a 5° CA slickensided shear; Past 248.0' material again becomes a more competent meta-gneiss. sedimentary gneiss.		
		249.8' a 75° CA, 2" quartz vein with chloritized contacts; followed by a randomly oriented hairline calcite vein		
		251.0' a 5° CA hairline calcite vein; followed by a 60° CA fracture		
		252.9' a 7" quartz vein at 80° CA, with a sheared upper contact, followed by several inches of "wavy" gneissic banding.		
		255.5' several 1/2" quartz veins parallel the 55° gneissosity		
		256.6' a "ragged" angular fracture coated with iron oxide.		
		257.3' several closely spaced, slickensided shears.		
		258.0' several 1/4" to 1" quartz veins lined with chlorite		
		259.0' a 1 1/4" quartz vein at 30° CA; Past here the mica bands again become elongated and lenticular.		
		260.0' and 260.3' 60° CA cross-shears, slightly slickensided		
		262.4' a cross-shear at 48° CA, and a 30° fracture.		
		263.0' a slickensided, calcite lined shear at 20° CA		
		263.6' a slickensided, serpentized shear at 60° CA		
		264.0' a 15° CA, slickensided shear.		
		266.9' a 1 1/4" quartz vein at 60° CA, with chloritized contacts.		
		269.0' a 1/2" quartz vein at 60° CA, with parallel mica veins		
		270.0' a 3/4" 60° CA quartz vein, with 30° CA cross fracturing		
		271.0' a 5° CA, calcite lined fracture, with tiny pyrite cubes.		
		275.0' a 4" chlorite lined quartz vein		
		275.6' a 6" chlorite lined quartz vein; followed by "wavy" banding		

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
		277.5' a 70° CA, slickensided cross-shear (gneissosity 70° opposite direction) followed by a long hairline calcite vein parallel the CA.		
		279.5' several 65° CA shears; followed by a 1/2" quartz vein, then a series of iron oxide coated fractures spaced from 2"-2' apart.		
		282.0' a small scale brecciated zone, cemented by calcite.		
		282.6' a 2° CA "ragged" fracture, lined with calcite and iron-oxide Past here a very uniform material, with a 70° CA gneissosity.		
		290.0' Past here a slight increase in the siliceous content, with "clots" of green chlorite, and widely spaced micaceous banding		
		292.4' 70° CA calcite and chlorite veins.		
		293.0-294.1 a faulted zone, crushed and brecciated, crossed by a 5° CA slickensided shear, then 2' of a massive grey-blue siliceous material.		
		298.0-299.0 several iron-oxide coated cross fractures at 60° CA.		
		300.0' a 3" zone of numerous hairline calcite and chlorite veins		
		301.0' a 3" massive white quartz vein, at 80° CA.		
		303.1' two - 1/4" quartz veins parallel the 80° CA gneissosity		
		304.5' a 30° slickensided shear		
		304.8' a slickensided "stepped" shear at 5° CA; followed by a 3/4" 5° CA quartz vein, and a 1/4" 65° CA quartz vein		
		307.0'-307.6' a fractured zone with iron oxide stains		
		308.0' a 20° CA, iron oxide coated fracture.		
		310.2' a 3", chlorite lined quartz vein at 80° CA		
		311.5' a 20° CA fracture; followed by a 3/4" quartz vein at 60° CA		
		313.5'-315.0' a "ragged" fracture generally parallel the CA, crossed by a 20° CA fracture lined with crystalline calcite, and an 80° CA 3/4" quartz vein.		
		316.2 a 35° CA calcite and iron oxide coated fracture		
		318.7 intersecting 10° and 15° CA fractures		
		319.3 an 80° CA slickensided shear; followed by several 30°-60° iron oxide coated fractures		
		320.6 a 60° CA slickensided shear		
		321.0 Past here the gneissosity is "wavy" and aligned at 45° CA		

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		323.6' a 30°CA slickensided shear, with re-crystallized chlorite			
		324.0' 1/4" quartz vein containing small pyrite cubes; followed by 18" of a massive, hard, blue-grey, siliceous material.			
		325.8' - 327.0' Crushed zone, the rock has been mechanically crushed, and broken up, iron oxide coats much of the surfaces, along with numerous calcite veins. Tiny 1/32" - 1/16" pyrite cubes are scattered throughout this zone. Past here again a hard blue-grey siliceous material			
		229.0' - 230.1' a zone containing numerous calcite veins			
		331.2' a 2" wide micro brecciated zone, with calcite cementation			
		333.6' a 2" quartz vein with light pink "incipient" feldspar crystals. The gneissic bands have been drag folded along the contact of this vein.			
		335.0' Several closely spaced, iron-oxide coated fractures.			
		336.1' a brecciated zone with fragments ranging in size from 1/2" to 2", slight movement, and calcite cementation, along with minor amounts of chloritic cementation.			
		339.0' - 340.1' a brecciation zone similar to that at 336.1			
		341.0' a 60°CA slickensided shear, coated with calcite			
		341.6' a small faulted zone showing 1/4" movement (displacement) of the gneissic banding - fault aligned at 30°CA; followed by several closely spaced fractures and slickensided shears			
		343.7' a 60°CA calcite lined fracture; followed by a 5°CA soft, black, chloritic vein, 1/16" wide.			
		345.6' a 1/4" calcite vein at 60°CA, followed by a small brecciated zone with 1/2" - 1" calcite cemented fragments.			
		347.0' a 6" wide brecciated zone, with calcite cementation, containing tiny pyrite cubes; followed by a hairline calcite vein at 2°CA.			
		348.3 - 351.0 a fractured zone, with iron-oxide and calcite coatings			
		352.0 - 356.1 - a fractured zone, exhibiting iron-oxide staining & 75% core recovery			
		Past here an increase in the mica content, and the gneissic banding is aligned at <del>60</del> 70°CA			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		359.0' - 360.1' a fractured zone, again the surfaces are covered by a red "dust" of iron oxide; followed by a 2" quartz vein			
		360.8 - 361.5 fractured zones, broken up and blocky.			
		363.0' a 3/4" quartz vein; Past here a slight increase in the siliceous content.			
		364.1' a 4" brecciated zone, cemented by calcite, towards the end this zone is intensely crushed with a fine-grained groundmass and blocky quartz fragments			
		365.0' - 365.9' - a small calcite lined fault zone, with 1/8" displacement in the gneissic lands.			
		366.8' a 3/4" wide crushed and brecciated zone aligned at 55°CA followed by a 3" quartz vein; Past here fractures become widely spaced from 6" to 12" apart.			
		372.0' Past here a slight overall increase in the siliceous content, with scattered chlorite veins.			
		379.4' a 10° CA slickensided shear			
		380.0' a concordant quartz vein			
		381.0 - 382.1' a sheared, crushed, and brecciated zone, with calcite and chlorite cementation.			
		382.2' a 65° slickensided shear; followed by 6" of brecciated material			
		384.7' a 1/4" quartz vein at 65°CA, parallel to the gneissosity.			
		385.7' - 388.1' - a harder, dense, blue-grey siliceous zone, with numerous coarsely crystalline quartz veins and blebs, lined with chlorite			
		392.0 a 3" quartz vein; followed by a 1/2" quartz-carbonate vein			
		393.4 an iron-oxide coated "ragged" fracture at 15°CA			
		394.5 a 6" wide brecciated zone, with fragments up to 2", and calcite cementation; followed by several fractures.			
		394.5 - 397.0' a more siliceous zone, crossed by a 1/8" calcite vein at a shallow angle.			
		397.5 - 399.6 a fractured zone, with <del>much</del> iron-oxide coating many of the surfaces. Numerous slickensided, pyrite "smeared" shears also occur throughout this zone			



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
		403.0- 406.1 an intensely sheared zone, many shears are slickensided and many surfaces are covered with calcite with minor pyrite cubes, and pyrite "smears". Cross fracturing is also common.		
		405.3 a 4" 70° CA quartz zone, relatively un-sheared.		
		407.5' several 60°- 70° CA fractures, and a 2" quartz vein.		
		409.0 - 416.0 a brecciated and crushed zone, calcite cementation in the brecciated areas, and the crushed areas show the mica and chlorite has been ground up into an extremely fine-grained matrix, with angular to subrounded quartz fragments. Several shears at 60° CA, seem to post-date the brecciation. Past here there is a slight overall increase in the siliceous content.		
		417.9 - 426.2' a zone of large scale brecciation, with large fragments up to 6", calcite and quartz cementation is present, along with several graphite covered shears		
		419.5 a well developed, graphite and calcite covered shear at 5° CA.		
		421.0 Several small quartz veins, with minor pyrite		
		424.0 a 4" massive white quartz vein at 45° CA		
		427.0' a 1/4" quartz vein - from 427.0 to 431.0 numerous closely spaced iron-oxide coated fractures, generally parallel the 70° gneissosity		
		431.0' a slight overall increase in the siliceous content of the rock.		
		437.8' - 438.3' a 1/16" to hairline calcite vein, generally parallel the CA, but with a series of angular "steps", followed by a 1/4" 50° CA quartz vein cross cutting the gneissosity.		
		441.0 a 15° CA iron oxide coated fracture		
		442.0 Past here the gneiss exhibits closely spaced fractured and slickensided shearing, often with graphite on the surfaces along with minor pyrite cubes		
		447.0 Past here the rock exhibits voids, possibly caused by movement along fractures, or "incipient brecciation", some of these voids are lined with red iron oxide		
		449.8' a 4" brecciated zone, with calcite cementation, and some extremely finely ground material, with angular quartz		
		451.0' a 4" brecciated zone similar to that above		
		454.0' a long, shallow angle, iron oxide coated fracture, with some cross fractures.		

OM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		455.2' a 2" siliceous zone with small pyrite cubes			
		456.7' - 457.2' a brecciated and crushed zone, exhibiting some voids not filled with the cementing quartz and calcite. Past 456.5 the rock has been crushed to an extremely fine grained matrix of biotite and chlorite with angular quartz fragments, and minor amounts of pyrite.			
		457.5' a slight overall increase in biotite micaceous lamination aligned at 60°CA, several chloritic bands occur.			
		460.0' - 460.5' a crushed zone, with a fine grained dark grey matrix of mica and chlorite, with angular quartz fragments, and secondary calcite.			
		462.5' a small crushed zone similar to that at 460.0'			
		463.5' a small crushed zone similar to that at 460.0, but with pyrite along the contacts, and minor amounts of calcite cementation.			
		467.0' - Past here a rather diffuse zone of an almost slate like material, with slaty cleavage at 60°CA, and pyrite cubes.			
		468.5' a 10°CA slickensided shear, a similar shear at 468.6'			
		469.5' a "ragged" shallow angle fracture			
		471.2' - 473.0' numerous soft, light green colored, chloritic bands, with slickensided shears; followed by a 1/2" brecciated quartz vein.			
		474.0' a 10°CA shear, with micro pyrite cubes on the surfaces, followed by 1 1/2' of coarsely brecciated material, cemented by calcite and quartz, ending in a small finely crushed zone.			
		475.8' - 476.7' a hard, blue-grey, siliceous zone, with chloritic inclusions			
		479.0' a cross-fractured, 10°CA shear, slickensided, with re-crystallized calcite and "smeared" pyrite on the surfaces.			
		481.0' a "mazy" fracture, with what appears to be epidote mineralization			
		481.8' - 482.1' a finely crushed zone with secondary quartz and calcite with cubic crystals of pyrite; then the zone assumes a more uniform appearance with only widely spaced fractures and scattered hairline calcite veins			
		491.0 - 493.5 an intensely sheared zone, with numerous pyrite cubes and pyrrhotite grains; followed by several inches of finely crushed material			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		493.5' Past here material tends to become more siliceous			
		494.4' "wavy" 1/4" quartz vein at 80°CA; followed by a 20°CA hairline vein.			
		495.6' Past here an overall decrease in the siliceous content.			
		496.0' a 4" wide fractured zone, with minor surface coatings of calcite			
		499.4' a 1/2" <del>adhesive</del> vein quartz vein at 75°CA			
		500.1' a 3" fractured zone; followed by a 1/2" quartz vein at 75°CA containing small pyrite grains and "clots" of chlorite			
		501.1' a 1/2" quartz vein at 85°CA containing grains of pyrite and pyrrhotite; followed by a 20°CA chloritized shear.			
		501.7' - 502.7' a 4" and a 3" chloritic quartz vein at 70°CA, parallel the gneissosity, both contain small grains of pyrrhotite			
		504.0' - 508.0' an intensely fractured and sheared zone, with numerous slickensided shears at 70°CA - many shear surfaces have "smears" of pyrite and chlorite, ending with a small zone of extremely crushed material.			
		509.0' a 4" quartz vein, concordant to the 70° gneissosity			
		510.4' a 30°CA, slickensided shear, with "smeared" pyrite			
		511.0' a cross fractured 70°CA shear, with coatings of chlorite			
		513.0' Past here material gradually becomes more siliceous, with scattered pyrite grains and aggregates, usually associated with a dark colored, extremely fine grained chlorite.			
		514.2' 1/2" quartz vein at 50°CA			
		516.0' a 45°CA chloritized shear, with cross fracturing			
		518.0' a 6" wide, intensely fractured zone.			
		520.0' - 522.8' an intensely fractured and sheared zone, generally the shearing is parallel the "wavy" 65°-80° gneissosity, also scattered hairline calcite veins are common through this zone. Past here a more uniform, meta-sediment gneiss with fracturing spaced from 2" to 7" apart.			
		526.5' a 1/4" quartz carbonate vein, crossing the gneissosity at 50°CA			
		527.8' a 4" crushed and ground-up zone, with secondary calcite			
		529.0' - Past here an increase in the <del>siliceous content</del> biotite mica and chloritic content - the material has been crushed and brecciated with calcite cementation, and numerous small voids.			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		533.8' a 6" wide massive hard siliceous zone, then crushed and brecciated again.			
		538.0' Past here material becomes more irregular - altered appearing, with numerous grains of pyrite and pyrrhotite, usually associated with chlorite.			
		540.0' a 1" irregular, discontinuous vein of pyrite and pyrrhotite grains			
		542.0' a 2" discontinuous vein of pyrite and pyrrhotite <del>in</del> grains containing about 2% euhedral white crystals of scheelite (note fluorescence blue under ultra-violet light) material ends at 544.0			
544.0	551.0	SKARN ZONE, mainly a light green material composed of tightly packed, prismatic crystals with a more or less random orientation, this could possibly be diopside. Also present are very poorly formed subhedral to elongated pink crystals, that actually blend into the green material, there could possibly be a garnet material. Interstitial carbonate material is also present, along with numerous veins and disseminated grains of pyrrhotite, pyrite and minor amounts of chalcopyrite			
SAMPLE		* SAMPLE # 2151 from 544.6 to 546.3 a total of 1.7' - have a zone of pyrrhotite, pyrite, and minor chalcopyrite in a dark green chloritic matrix, with about 5% euhedral white scheelite ASSAY:			
SAMPLE		SAMPLE # 2152 from 542.7 to 550.4 a total of 0.7' again similar to the material at 544.6. ASSAY			
551.0	553.2	551.0 - 553.2' a meta sedimentary granitic zone, containing negligible sulphides or scheelite.			
553.2	557.0	SKARN ZONE. again essentially similar to the skarn at 544.0			
SAMPLE		SAMPLE # 2153 from 555.6' to 556.3, a total of 0.7' contains more sulphide material than the other zones. ASSAY			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
570.0	570.0	SILICEOUS META-SEDIMENTARY ENGESS, essentially similar to the previously described material, with a granulosity ranging from 75°-80° CA, and containing numerous quartz vesicles. 560.3 a 3" zone of a soft, dark green chloritic material 561.2'-562.4' a crushed and fractured zone, intensely sheared with numerous slickensided surfaces. Past here a slight overall increase in the siliceous content for about 7", then a decrease 564.0. Tiny pyrite and pyrobitite vesicles common 567.0'-569.1' a sheared and brecciated zone, cemented by calcite part of this material has been intensely crushed into a fine grained matrix, with quartz fragments. ends 570.0		
570.0	574.7	SEARN ZONE a light green material, probably diopside makes up the largest portion of the rock, there appear to be poorly formed "incipient garnets". Ultra-violet examination shows only scattered fluorescent grains of sahalite. 571.3 a 1/4" pyrobitite vein with scattered euhedral sahalite making up an extremely small percentage. 574.0. Past here material tends to display a gneissic texture, with an increase in sulphide content; then a 40° slickensided chloritized shear ends at 574.7 with a sharp 25° CA contact		
574.7	576.2	QUARTZITIC INTRUSIVE, a <sup>576.2</sup> <del>white</del> material of quartz and feldspar with scattered kaolinite flakes, medium to coarse grained 576.0 a 50° CA slickensided shear		
576.2	601.0	GRANITIC ROCK (INTRUSIVE) a white, coarse grained, gneissic textured rock of quartz and feldspar, with many scattered kaolinite crystals. Muscovite mica is more common than the kaolinite variety. This material displays only a few widely spaced fractures and relatively few shears. Ultra-violet examination shows only widely scattered small crystals fluorescing blue. END OF HOLE		

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		HOLE No R-1-71 a 600' vertical hole at B20 S - 250 E			
		The following list is of samples taken and assay results, unavailable at the time the log of the hole was made.			
				W <sub>2</sub>	Cu
538.8	542.3	an altered (oxidized) zone, possibly 1% scheelite by u.v. exam.	*2158	0.68%	0.04%
542.2	544.6	a diopside skarn with 1-2% visible scheelite by u.v. exam.	*2157	0.39%	0.02%
544.6	546.3	contains up to 5% scheelite in a sulphide rich skarn	*2151	2.15%	0.10%
546.3	549.7	skarn with about 0.5% visible scheelite (u.v. examination)	*2154	0.14%	0.02%
549.7	550.4	skarn with sulphides, and up to 5% scheelite - u.v. exam.	*2152	0.42%	0.03%
550.4	553.6	gneissic zone. negligible scheelite	*2155	Tr	0.02%
553.6	555.6	Siliceous skarn with negligible scheelite	*2156	Tr	0.02%
555.6	556.3	up to 3% visible scheelite in a skarn zone with sulphides	*2153	5.21%	0.04%
556.3	557.0	Skarn zone with negligible visible (u.v.) scheelite	*2192	0.23%	0.06%
570.0	574.7	Skarn zone, with negligible sulphides (u.v. examination)	*2193	0.05%	0.02%

091148

**DRILL HOLE LOG**  
**CALTOR SYNDICATE**

**DIP TESTS**

Property RISBY TUNGSTEN Hole Number R-2-71  
 At ..... Ft. ..... Dip 49°  
 Claim No. CAB 25 Length 476.0  
 Working Place Y 25514 Bearing 180°  
 Baseline Footage 8120.5 Elev. Collar 5920 ASL  
 Baseline Offset 2150 E Horiz. Trace .....  
 Date Started 30 JULY 1971 Vert. Trace .....  
 Date Completed 3 AUG 1971 Date Logged 5 AUG 1971

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
0.0	7.0	CASING			
7.0	<del>7.0</del> 317.0	METASEDIMENTARY GNEISS a green colored, medium grained material of alternating biotite mica, and quartz carbonate, chlorite bands aligned at 75°-80° CA, many of the micaceous bands tend to be lenticular. Initially the material exhibits closely spaced, iron oxide coated fractures at 90°-60° CA.			
		11.0' a 1 1/2" white quartz vein, concordant with the gneissosity			
		12.5' a 1" quartz vein at 75° CA, parallel the gneissosity; followed by an iron oxide coated fracture at 25° CA; then several inches of intensely fractured material.			
		17.0' - 20.1' an intensely fractured and sheared zone, with some slickensided surfaces, and commonly coated with iron oxides.			
		21.6' - 22.8' an intensely fractured and sheared zone (as at 17.0)			
		25.8' - 26.3' an fractured and sheared zone, as at 17.0', with chlorite also present on the fracture surfaces.			
		28.0' a cross-fracture, at 5° CA, lined with secondary calcite and chlorite			
		32.0' - 34.5' an intensely fractured and sheared zone, numerous shear surfaces have been ground to a clay like consistency. Past here a slight overall increase in the siliceous content, the gneissosity is more poorly formed and pink feldspathic veinlets and aggregates are present.			
		36.0' a calcite lined fracture at 5° CA.			
		37.2' - 37.3' an intensely fractured zone, with iron oxide common on surfaces, followed by several feet of closely spaced fractures.			
		39.3' a 1" quartz-calcite vein, with parallel micaceous veins at 75° CA			

Logged by [Signature]

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
		39.5' a 75°CA, fracture, lined with a druse of zeolite crystals: Past here the bedding becomes "wavy"		
		41.0' a 3" calcite-quartz vein at 85°CA lined with "contorted" biotite bands; followed by a 1 1/2" quartz vein.		
		42.0' several poorly formed garnet crystals in a micaceous zone		
		44.4' a 1/2" carbonate vein at 80°CA, lined by chlorite; followed by numerous intersecting fractures, and "voids" caused by fracturing.		
		45.0' Past here a slight increase in the siliceous content.		
		47.0' a 2" calcite-quartz vein at 85°CA lined with biotite and chlorite		
		47.8' a crushed zone, crushing and movement has left numerous small voids, and <del>omitted</del> soft zones of a white clay-like material.		
		48.5' Past here the gneissic bands become more uniform		
		50.0' a 1/2" vein of white platy hexagonal calcite crystals, with some quartz, and pyrite grains - tiny prismatic zeolite crystals line the calcite.		
		51.3' a 3/4" calcite vein, with numerous tiny parallel biotite veins at 80°; followed by a 5°CA, 1/8" band of zeolite crystals.		
		52.5' several iron oxide coated intersecting fractures.		
		54.0' a 3" wide series of friable biotite bands.		
		55.0' a 1" fractured quartz vein at 80°CA; followed by several shallow angle fractures lined with calcite and iron oxide.		
		56.5' a 1" calcite and zeolite vein at 80°CA.		
		59.8' Several closely spaced fractures lined with calcite and zeolites.		
		61.9' a 3" quartz-carbonate vein, with coarsely crystalline friable biotite veins.		
		63.0'-69.0' an intensely fractured and sheared zone (with 70% recovery)		
		63.2' a 2" aplitic quartz vein.		
		66.0' a 5" hard, white, massive siliceous zone.		
		68.0' several vuggy calcite veins		
		69.4-72.0' an intensely fractured and sheared zone, numerous surfaces lined with druses of zeolites.		
		70.4'-71.2' an aplitic quartz-carbonate zone		

OM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		71.2-74.0 a massive, grey, hard, siliceous zone, with scattered veins of chlorite.			
		74.0-75.0 an intensely fractured zone, with zeolite on surfaces			
		75.0-76.8 closely spaced 45°-60° iron oxide coated <del>shear</del> fractures			
		76.8-82.3 MAJOR FAULT ZONE - intensely sheared and crushed. The matrix is an extremely fine-grained dark green to white material containing angular rock fragments. post crushing calcite and zeolite veins are common.			
		78.0-78.6. an uncrushed siliceous zone			
		80.0. a vuggy calcite vein - the vugs are lined with zeolites; followed by a 5°CA, calcite vein; Fault zone ends with a chlorite lined shear. at 82.3			
		87.0. a 1/4" vein of tightly packed prismatic zeolites; followed by a 20°CA fracture lined with iron-oxides, zeolites and calcite			
		88.0' a fractured zone, with movement leaving 1" voids lined with 1/16" rounded or "etched" calcite scalenohedrons.			
		88.3-89.3 an almost SLATE LIKE material, dark grey bands, alternating with quartz-calcite bands - giving a slaty cleavage aligned at 80°CA.			
		91.0' Past here gneissosity more pronounced at 80°CA, with a slight increase in quartz.			
		92.4' a 2" zone containing grains and aggregates of pyrite			
		92.4'-93.5' an almost stannite like altered zone			
		96.5'-97.5' a FAULT. crushed and fractured zone, crossed by post-movement zeolite veins			
		100.6' a 1/4" vein of 1/32"-1/16" colorless zeolite prisms			
		101.2'-101.7' an intensely fractured zone, with iron oxide coating			
		102.9' a 10°CA shear zone, covered with zeolite crystals; followed by several closely spaced fractures.			
		105.0' a small scale brecciated zone, cemented by calcite			
		106.0' a 1/2" vein of vuggy colorless zeolites, with 1/16" doubly terminated calcite crystals, then a 6" sheared and fractured zone			
		107.3' a 7" zone of massive, hard, grey siliceous material			
		108.0-112.5 a zone of intense fractures and shearing			

DM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		110.5 - 112.0 a brecciated zone, fragments from 1/2" to 6", cemented by calcite and zeolites; Past here several feet of closely spaced fractures, many have a druse of zeolites on the surfaces			
		114.0 - 115.0 a brecciated zone, fragments from 1/16" to 6", little movement, cemented by calcite and zeolites; Past here fractured, with iron oxide coatings			
		117.0 - 118.5 CRUSHED FAULTED ZONE - rock ground to an extremely fine grained dark biotite, and chlorite groundmass, with angular quartz fragments			
		119.0 - 123.0 Several 1/4" - 1/2" white to colorless "drusy" zeolite veins aligned at 2° - 5° CA. cross-fracturing occurs through this zone.			
		123.5 - 125.0 an intensely fractured and sheared zone, with alteration along shear surfaces.			
		125.6 a 1/4" wide zeolite vein at 80° CA; followed by a 5° zeolite coated fracture. then a zone with randomly oriented hairline calcite and zeolite veins.			
		127.5 - 128.5 an intensely fractured zone, with iron oxide coatings			
		128.5 - 129.1 a brecciated zone, 1/16" - 2" fragments, cemented by calcite			
		129.6 - 132.0 FAULTED ZONE - rock crushed and ground to an extremely fine grained, dark grey, biotite, calcite, and chlorite groundmass, with angular quartz rock fragments			
		130.0 - 133.0 material here crushed to a clay like consistency; followed by an uncrushed quartz vein			
		134.8 - an uncrushed quartz vein.			
		135.0 a relatively uncrushed quartz carbonate zone, with "wavy" gneissosity			
		137.7 a 10" relatively uncrushed quartz zone.			
		139.0 - 139.5 a crushed zone, similar to that at 129.6			
		141.5 - 142.3 a crushed zone, similar to that at 129.6			
		142.5 - 143.3 a crushed zone, exhibiting less mechanical breakage than that at 129.6, but otherwise similar: Past here gneissosity at 75° - 80° CA, the biotite bands tend to be lenticular			
		146.0 a fractured zone with several small scale "voids"			
		147.0 Past here gneissosity tends to become "wavy"			
		150.0 a 1" quartz vein, with calcite			
		153.0 a 1/2" vein of "platy" hexagonal white calcite crystals, lined by biotite veins at 80° CA.			
		155.0 - 156.0 Several closely spaced, chlorite coated shears at 60° - 80° CA			

OM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		160.8' a 1" concordant quartz vein			
		165.0' a 5° CA, chlorite and calcite lined fracture, with some iron oxides			
		167.7' a 1", 80° CA quartz vein, followed by a hairline calcite vein.			
		168.8' a 5° CA "ragged" fracture; followed by several lenticular quartz veins.			
		169.8' - 170.4' a brecciated zone, with elongated 1/4" - 1/2" fragments cemented by quartz and calcite.			
		172.0' a 2" quartz vein at 80° CA, with "wavy" chlorite lined contacts.			
		179.3 - 180.0' a cross fractured zone, with iron oxide staining, followed by a hairline calcite vein, generally parallel the CA.			
		181.0' - 183.7' a shear zone, parallel the 75° gneissosity, with numerous "quartz healed" tensional fractures.			
		185.0' a 2" quartz vein at 70° CA, crossed by a shallow angle shear			
		186.0' Past here closely spaced cross fractures with iron oxide stains, also slickensided shears			
		189.8' a 1 1/2" raggy carbonate vein at 80° CA lined by variscous material. Past here pyrite occurs as disseminated grains, especially associated with coarse grained biotite bands.			
		195.0' - 196.0' a cross fractured zone, blocky, with calcite veins. Past here a slight overall increase in biotite and chlorite content.			
		202.4' intersecting, zeolite coated shearing			
		206.4' several slickensided shears at 10° CA.			
		209.1 - 211.0' numerous quartz lenses, closely spaced fractures, and hairline calcite veins.			
		212.0' Past here numerous iron oxide coated, closely spaced fractures.			
		213.0 - 213.7' a brecciated zone, with 1/2" - 7" fragments, wide (up to 2") movement cemented by calcite and crystalline zeolites; followed by 15" of closely spaced fractures, then into a less fractured siliceous zone.			
		223.0 - 228.0' a fractured and sheared zone, numerous slickensided surfaces. 225.0' a 4" zone of crystalline white, hydrated, zeolites			
		228.0' Past here rock is more siliceous			
		230.8 - 232.0' a dense, white, hard, siliceous zone, with minor hairline calcite veins			

DM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		235.3 a 1" quartz vein, parallel the gneissosity; followed by a 5° CA, slickensided shear			
		237.0' a 6" vuggy zone of zeolites and calcite			
		240.1' a 6" massive white quartz vein, at 80°, parallel the gneissosity. Past here, very uniform with only widely scattered fractures.			
		253.5' a 15° CA slickensided shear, lined with calcite.			
		258.0' a 1½" quartz vein; followed by hairline calcite veins			
		263.9' a 1" calcite vein parallel the 80° gneissosity			
		264.3' - 267.0' a massive, hard, grey, siliceous zone, with scattered chloritic banding.			
		268.1' - 269.0' a massive siliceous zone.			
		271.6' - an iron oxide coated, 30° CA fracture; followed by a 80° fracture			
		272.0' an iron oxide coated fracture at 40° CA			
		273.6' a 50° CA, iron oxide coated fracture; followed by several hairline, randomly oriented quartz veins.			
		275.0' - 277.8' a massive, light grey colored, siliceous zone			
		277.0 - 277.3 a soft light green chloritic vein.			
		277.5 a 30° CA, fracture.			
		281.4 - 283.0 a sheared, micaceous zone; followed by several small calcite lenses and hairline calcite veins.			
		Past here gneissic lands tend to be "wavy", and fractures spaced from 4" - 10" apart.			
		287.2' a 30° CA shear coated with re-crystallized biotite			
		292.1' a 1" massive, white, quartz vein at 80° CA			
		295.0' a 5° CA, "ragged" fracture, iron oxide coated, with cross-fractures			
		297.3' a 10" massive, white quartz vein, with incipient pink feldspar crystals, ends with a 3" zone of quartz-calcite and biotite veins			
		300.1' a 2.0' long massive siliceous zone, crossed by a 20° CA fracture			
		302.1 Several closely spaced fractures at 60° CA.			
		303.0 Past here micaceous banding tends to be lenticular			
		305.0 a 5° CA "ragged" fracture with minor dark green chlorite			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
		306.0 Past here gneissic landing tends to be more uniform, aligned at 75° CA, fractures widely spaced, up to 18" apart		
		307.0-309.0 the matrix tends to be more siliceous, with widely spaced chloritic veins.		
		313.5' a 3" siliceous zone, with an 80° CA lenticular calcite vein, crossed by a hairline calcite-chlorite vein parallel CA.		
		316.0' a 1" quartz vein at 80° CA material ends with a sharp contact at 317.0		
17.0	318.3	SKARN ZONE a coarse-grained, light green material, composed mainly of diopside, quartz and calcite, and containing scattered chloritic bands, and small pyrite grains disseminated throughout ends with a sharp contact.		
18.3	335.0	META SEDIMENTARY GNEISS - a green colored, coarse-grained material composed of alternating biotite, and quartz, carbonate, chlorite bands aligned at 80° CA, initially, fractures are widely spaced, up to 18" apart		
		321.0 a 6" rather "diffuse" siliceous zone		
		322.8, 323.1 and 323.7 two 1" and a 3" quartz vein parallel the gneiss.		
		325.0 a 2" quartz vein, parallel the 80° gneissosity		
		326.0-327.4 a massive, light grey siliceous zone. containing a 1" chlorite vein at 326.6		
		327.7 an overall increase in the mafic content (chlorite and biotite)		
		327.8 a lens of dark green, soft, chloritic material; followed by numerous hairline calcite veins.		
		328.1 an 80° CA slickensided shear.		
		328.6 - 330.1 a crushed and brecciated zone, cemented by zeolites, with numerous "vuggy" areas		
		332.0' a "ragged" 60° CA fracture; followed by hairline calcite veins.		
		333.5' a 10° CA slickensided shear, covered with chlorite.		
35.0	342.6	335.0-342.6 a light grey, massive siliceous zone INTRUSIVE granitic textured with euhedral grey feldspar, interstitial quartz and muscovite.		

DM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		337.5 an aplitic quartz vein, with incipient pink feldspar crystals			
		338.2-338.6 an intensely fractured zone.			
		341.0 a 6" somewhat altered zone - to a diopside-glossularite skarn, with calcite blebs. ends with a sharp 65° contact			
2.6	352.8	DIOPSIDIC SKARN, with numerous meta-sedimentary gneissic zones, in effect unaltered material. Fractures are widely scattered throughout aligned at 40°-55° CA, numerous fractures are coated with secondary calcite. Material contains negligible visible sulphides, and an ultra-violet examination uncovered no evidence of scheelite. ends with a sharp contact			
2.8	373.6	METASEDIMENTARY GNEISS, a green colored material, composed of alternating biotite-chlorite and quartz-carbonate-chlorite bands aligned at 80° CA 353.0 a 1" quartz vein parallel the gneissosity, lined with pyrite 353.5 a 35° CA slickensided shear, followed by chlorite rimmed pyrite grains 356.0' a "ragged" 2° CA fracture 357.6' a 10° CA calcite coated fracture 360.0' The overall content of biotite increases 368.5' a 1/2" quartz vein, with calcite and pyrite, at 80° CA 369.2' a 1" quartz vein at 80°; followed by several quartz-calcite lenses lined with fine grained dark chlorite. ends 373.6			
3.6	378.9	INTRUSIVE initially a medium to coarse grained, granitic textured, light grey material composed of 50+% euhedral feldspar and interstitial quartz with minor biotite and muscovite. Gneissic textured zones aligned at 60° CA are common 375.2' a 2" band of pink poorly formed feldspar crystals. 376.5' an iron oxide coated, 80° CA fracture. 377.0 an 80° CA fracture, with kaolinized feldspar 377.8 a 3", white, massive quartz vein with smaller, parallel quartz vein at 70°-80° CA each with a sharp contact			

DM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				W <sub>02</sub>	Cu
9	412.6	<p>SHEARED GNEISSIC INTRUSIVE, containing biotite bands aligned at 60-80°CA in a feldspar-quartz matrix. Numerous shears, "healed" by biotite are present. Material contains 1%-2.0% disseminated pyrite and pyrrhotite grains. Gradually the gneissic texture fades into a more granitic textured material.</p> <p>380.6 Past here rounded xenoliths of skarn material occur, these are up to 3" long and are composed of diopside and garnet with quartz and calcite.</p> <p>382.5 a slickensided 5°CA shear, with "smears" of pyrite.</p> <p>384.0 - 386.2 an intensely fractured zone, with calcite covered major fractures parallel the CA. Again the material assumes a gneissic texture, then into an area of "slaty - cleavage"</p> <p>388.0 - 388.6 a cross-sheared and fractured zone, with large "wavy" calcite veins.</p> <p>389.5 - 390.0 a intensely fractured zone.</p> <p>390.0 - 393.0 a crushed zone, the matrix is an extremely fine-grained dark grey material containing angular quartz fragments, and secondary calcite veining, ends with a coarsely brecciated zone cemented by calcite.</p> <p>398.5 intersecting 20° and 30° iron oxide coated fractures.</p> <p>405.0 Past here 1% disseminated pyrite cubes.</p> <p>408.0 - 412.0 intensely crushed and sheared zone (similar to 390.0) material ends at 412.6</p>			
2.6	413.8	<p>SKARN ZONE diopside-quartz-carbonate, some small scale faulting, contains about 1%-2% disseminated pyrite and 0.5% disseminated scheelite as indicated by ultra-violet examination.</p>			
	*2159	<p>SAMPLE TAKEN</p> <p>ends with a 20° sharp contact</p>	*2159		
3.8	432.7	<p>SHEARED SLATE LIKE MATERIAL - initially a 5" quartz vein, then into a contorted, sheared carbonate rich slate, gradually the slaty cleavage is aligned at from 75°CA - 85°CA.</p> <p>416.0 fractures present past here, also an increase in quartz veins.</p> <p>417.0 - 418.6 intensely fractured, iron oxide common - becoming brecciated, cemented by calcite with pyrite</p>			

M	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				K <sub>2</sub> O <sub>3</sub>	Cu
		421.0 a 1 1/2" alteration zone composed of a powdery green-white material			
		421.4 a 1/2" rounded quartz-calcite-chlorite inclusion			
		425.5 a 4" quartz vein fractured at 45° CA, with iron-oxide			
		426.0 Past here material becomes darker colored, more slate like, with up to 1.5% disseminated pyrite			
		430.0 - 433.0 a major fracture, parallel to CA, "wavy", with iron-oxide coated cross-fractures - Ends with a gradual change. at 432.7			
2.7	442.6	SKARN ZONE - mainly coarsely crystalline diopside, with carbonates, "fleshy-pink" poorly formed grossularite garnets are common, along with up to 1.0% disseminated pyrite grains, and scattered bands of cuboidal scheelite, as indicated by ultra violet examinations.			
		438.2 - 441.0 in this zone the rock assumes a more <sup>intrusive</sup> texture, probably intermediate between the intrusive and the skarn.			
	*2163	Sample from 432.7 - 434.0 - contains 0.5% scheelite by est.	*2163	0.19%	0.02%
	*2164	Sample from 434.0 - 435.3 negligible visible scheelite	*2164	Tr	0.01%
	*2161	Sample from 435.3 - 438.2 - contains 1.0% scheelite by est.	*2161	<del>0.12%</del> 0.12%	0.02%
	*2162	Sample from 438.2 - 441.0 - <sup>contains no visible scheelite</sup> contains <del>no visible scheelite</del> quartz.	*2162	Tr	0.02%
	*2160	Sample from 441.1 - 442.6 - contains 1.0% scheelite by est.	*2160	0.92%	0.02%
2.6	468.5	METASEDIMENTARY GNEISS composed of alternating biotite-quartz, and quartz-calcite-chlorite bands aligned at 80° CA			
		448.0' a 5° CA "ragged fracture" with iron oxide			
		449.6 - 450.0 several intersecting fractures.			
		451.0' - several rounded quartz-carbonate inclusions and veins			
		453.0 - a zone similar to that at 451.0			
		456.8 - a 30° CA calcite coated fracture			
		463.0 several chlorite coated "wavy" - "curved" fractures			
		464.0 a small brecciated zone, cemented by calcite and zedlites			
		466.8 a 4" quartz vein at 80° CA, lined with re-crystallized biotite ends at 468.5			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				CUO <sub>2</sub>	CU
385	470.1	SKARN a diopside-carbonate-quartz material, with some disseminated pyrite-pyrrhotite grains and small amounts of euhedral scheelite - ends with a gradual change			
	*2165	Sample from 468.5 - 470.1 - negligible scheelite	*2165	0.26%	0.03%
470.1	476+	METASEDIMENTARY GNEISS - composed of alternating biotite-chlorite and quartz-chlorite-carbonate bands aligned at 80° CA, initially this banding tends to be wavy: 472.0' part here several "diffuse" quartz bands.			
		HOLE ENDS AT 476.0			

091148

**DRILL HOLE LOG**  
**CALTOR SYNDICATE**

**DIP TESTS**

Property RISBY TUNGSTEN Hole Number E-3-71  
 At ..... Ft. ..... At ..... Dip 66°  
 Claim No. CAB # 25 Length 353.0  
 Working Place "Y 25.514" Bearing 218°  
 Baseline Footage 8120° S Elev. Collar 5920 ASL  
 Baseline Offset 2150 E Horiz. Trace .....  
 Date Started 4 AUGUST 71 Vert. Trace .....  
 Date Completed 6 AUGUST 71 Date Logged 10 AUG 71

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
2.0	4.0	CASING			
4.0	20.0	METASEDIMENTARY GNEISS - composed of coarsely crystalline bands of biotite, alternating with fine grained quartz-carbonate-chlorite bands aligned at 80°-85° CA. For the first several feet the material is fractured and first shattered with heavy deposits of powdery-red, iron oxide on the surfaces. 14.0' Past here fractures spaced up to 8" apart. 18.5'-20.3' an intensely sheared zone, with slickensided surfaces, ending in an intensely crushed, and ground up zone, with an extremely fine grained dark grey matrix containing angular quartz fragments. 21.5 - 21.8 a fractured zone. 22.0 a 75° CA slickensided shear; Past here biotite occurs in lenticular form. 24.3 a 1" quartz vein at 80° CA. 25.8 - 26.1 a zone of closely spaced fractures, with calcite on surfaces. 29.4 - a small, diffuse, quartz zone: Past here grain size more uniform. 35.0 - 32.6 a calcite-zeolite vein - in and out of the core. 38.0 - a 4" zone of friable, closely spaced biotite bands with zeolites. 38.8' - 39.9' FAULT. a crushed and ground-up zone, with an extremely fine-grained matrix, and crushed rock fragments. much of the material is cemented by a white crystalline material. The cemented portion is more coarsely crushed and manganese oxide dendrites are common. 43.8' - 44.6' numerous somewhat friable biotite veins. 45.0' a 3" zone similar to that at 43.8. 46.7' - 48.0' an intensely fractured and sheared zone. 52.0 Past here landing tends to be more "wavy".			

Logged by [Signature]

OM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		56.0-57.0 a fractured and sheared zone, with some calcite and zeolite on surfaces.			
		58.5-61.1 a massive light green chloritic-siliceous zone.			
		61.2' a crystalline zeolite vein at 15°CA; followed by a 1/4" quartz-carbonate vein.			
		63.8' a 4" zone crushed to a clay-like consistency. FAULT. Part here intensely fractured			
		66.8 a 1/2" and a 1/4" quartz vein at 70°CA			
		69.0'-74.0' a "wavy"- "twisted" fracture, generally parallel the CA, and coated with iron oxides.			
		70-73. a zone of numerous cross fractures.			
		74.6' a 1" vein of a white powdery material			
		75.1' a 1" quartz vein at 80°CA; followed by a "ragged" 5°CA fracture			
		77.6' a zeolite coated "ragged" fracture at 5°CA			
		79.7' a 6" quartz vein, brecciated, and wuggy, cemented by drusy zeolites; followed by a 15°CA "ragged" fracture.			
		81.5' -85.2' FAULT ZONE, crushed and brecciated material, numerous secondary calcite veins			
		82.0 Part here coarse brecciation, fragments up to 7", little movement, cemented by calcite, then a relatively uncrushed zone, then back into a finely ground up material.			
		84.0. very coarsely brecciated to about 85.2'			
		87.0 a 2°CA, zeolite coated fracture; followed by calcite veins, parallel the 80° gneissosity material ends at 90.0'			
0	98.0	CALCITE with METASEDIMENTARY - in places this material is a marble, but there are biotite zones, in which the material assumes a more gneissic texture. 91.7 a 1/4" band of white material that fluoresces brilliant green under ultra-violet examination. 95.6 a 6" micaceous zone 97.6 a zone of tight small scale folding ends with a gradual change.			

M	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
0		METASEDIMENTARY GNEISS a greenish colored material, composed of alternating coarsely crystalline biotite, and finer grained quartz-carbonate-chlorite bands aligned at 70° CA; initially the material exhibits closely spaced, iron-oxide coated fractures.		
		102.0' a 5° CA, "ragged" iron oxide coated fracture.		
		103.0' a "diffuse" siliceous zone; followed by a small quartz vein then to a small scale brecciated zone.		
		103.5' - 107.5' a zone exhibiting extremely fine grained, dark colored, folded and contorted banding, ending in a soft, green colored chloritic zone. Past here again a more normal gneissic material.		
		111.0' a fractured, altered, siliceous zone, some white powdery material on the fracture surfaces.		
		112.0' - 113.5' material is coarsely brecciated, and cemented by calcite and zeolites.		
		114.0 a graphite covered, slickensided shear at 40° CA, then a waxy zone		
		115.1 a 4" quartz-chlorite vein; then several shallow angle zeolite covered fractures.		
		119.3' a zeolite covered 5° CA fracture.		
		120' - 123.5' - an intensely fractured zone - about 55% recovery		
		123.5' - 124.0' a relatively unfractured zone with 95% recovery		
		124.0 - 125.0 an intensely fractured zone.		
		125.6 - 128.1 FAULT ZONE - very finely crushed matrix, with angular rock fragments - some areas are sheared and brecciated, with zeolite and calcite cementation.		
		128.1 - 130.6 a siliceous zone, with notable amounts of chlorite, and scattered pyrite grains.		
		130.6 - 159.6 FAULT ZONE - initially intensely fractured and sheared, with secondary calcite and zeolites. After several feet the material is crushed to a fine grained, clay-like, dark matrix, with small angular rock fragments - then coarsely brecciated with calcite cementation.		
		139.0 - 140.7 a siliceous zone		
		141.0 Past here again extremely finely crushed, crossed by zeolite veins especially around 145.0		
		150.0 Past here again coarsely brecciated, with calcite cementation, many of the shears in this zone have graphite on the surfaces		

DM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		153.6' - 157.9' a relatively unaltered, or unbroken gneiss.			
		157.9' - 158.9' again a crushed and altered zone, with kink folds displayed by the altered biotite bands.			
		164.7' a 2" wavy crystalline quartz vein, with incipient feldspar.			
		169.1' a 5° CA, slickensided, iron oxide coated shear, with some cross-fracturing; Part here micaceous lamination tends to be lenticular and more widely spaced.			
		170.1' a 5° CA "ragged" fracture.			
		172.2' a 2" quartz vein followed by parallel chlorite veins at 25° CA			
		175.0' several closely spaced fractures, followed by a 1" quartz vein at 80° CA			
		177.6' two, 1/2" quartz-feldspar veins			
		179.3' a clay covered fracture at 5° CA; Part here a very uniform gneiss.			
		184.5' a 3/4" massive, white, soft vein, possibly lawite or zeolite.			
		185.0' Part here fractures closely spaced at 1/2" - 2" centers			
		186.5' a 15° CA slickensided shear; Followed by a 4" massive quartz vein.			
		187.1' a 5° CA "ragged" fracture, with an iron oxide coating			
		188.0' a 3" zone with small "eyes" of dark chlorite, and displaced lamination			
		188.7' a 1/2" quartz vein with iron oxide staining, followed by a 5° CA fracture.			
		190.0' a 1" quartz vein, with chloritic inclusions			
		191.2' a 1 1/2" quartz-carbonate vein; followed by a 1/4" carbonate vein all parallel the 80° CA gneissosity			
		192.0' Part here several small chloritic "eyes" in quartz veins.			
		193.0' - 195.0' a fracture, essentially parallel the CA, lined with iron-oxide and zeolites, ends with a 1" quartz vein.			
		198.0 - 200.8' a long fracture, essentially parallel the CA, but wavy with numerous cross-fractures.			
		199.0 a 1/2" white, splitic, quartz vein.			
		200.8 Part here numerous shallow angle <del>shear</del> fractures.			
		202.0' - 204.0' Several groups of closely spaced, slickensided shears at 50° - 70° CA, with re-crystallized black chlorite on surfaces.			
		206.1 - 207.0' a shallow angle, iron-oxide, coated fracture, with slickensided cross-shearing.			
		209.0 - 210.3 a zone of fairly intensive shearing, and fracturing, iron-oxide is common on many of the surfaces			

M	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		211.7' a 15° CA, slickensided, iron-oxide coated shear, followed by closely spaced intersecting shears and fractures.			
		213.0'-214.1' an intensely fractured and sheared zone, with 50% recovery			
		214.3' a "ragged" shallow angle fracture, with cross fractures, and several 1/8" calcite veins at 80° CA			
		216.8' a 40° CA, fracture			
		218.2' a 1" wide, quartz-calcium vein at 80° CA, parallel the gneissosity			
		218.3-221.0 several large, white, massive quartz veins occur throughout this zone, many of these veins have brecciated contacts; followed by a "ragged" iron oxide fracture essentially parallel the CA to 224.0			
		225.8 a 30° CA "ragged" fracture			
		227.1 a slickensided, slightly curved, shear at 80° CA; followed by several iron-oxide coated fractures			
		227.9'-231.5' an intensely cross fractured zone, with about 60% recovery			
		232.1'-232.9' an intensely cross fractured zone, much iron-oxide; then more widely spaced fractures 6"-10" apart, aligned from 55°-70° CA			
		234.1' a 3" quartz vein colored green by chloritic inclusions			
		235.0'-236.1 a calcite, and iron oxide coated "curving" fracture at 2° CA			
		236.6' a 15° CA fracture in a chloritic zone.			
		241.0' Several closely spaced fractures; followed by a 15° CA, calcite lined fracture			
		243.3' a 15° CA slickensided shear, coated with calcite and chlorite			
		243.6'-245.3' a hard, grey-green, siliceous zone, with chlorite inclusions			
		246.0' an 80° CA, 1 1/4" white quartz vein; followed by a 75° CA 4" quartz vein.			
		247.3' a 1 1/2", 80° CA, quartz vein with incipient pink feldspar crystals			
		248.1' a 1" quartz vein, with poorly formed feldspar crystals			
		248.3' Past here gneissic bands become folded and contorted, with numerous small quartz-calcite veins. This zone is sheared, with iron-oxide coated, slickensided surfaces			
		252.5'-253.7' a zone of intense fracturing			
		256.0'-257.2' a zone of intense fracturing - blocky, iron oxide coated, and with several slickensided 80° CA shears.			
		257.5' Past here the gneissic material again assumes a more normal texture			
		258.3'-259.1' a coarsely brecciated zone, with 2"-6" fragments, cemented by calcite			
		263.0'-264.0' a calcite lined 2° CA fracture with small pyrite crystals			

DM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		264.1-266.6' a coarsely brecciated zone, with calcite cementation, some fine grained material caused by intense crushing			
		267.2 a 1/4" "flowing" 10°CA quartz-calcite vein.			
		267.4 a 4" crushed zone, an extremely fine-grained, dark ground-mass with small angular quartz fragments.			
		267.8'-271.0' a coarsely brecciated zone - 1" to 6" fragments, with a movement of up to 1", cemented by a massive white quartz			
		272.4 a 15°CA "ragged" fracture, lined with iron-oxides.			
		273.0 - 299.0 a coarsely brecciated zone, with 1" to 10" fragments, in places movement up to 1" cemented by a white, massive, quartz "stepped" post brecciation fractures are common throughout this zone, along with numerous veinlets of calcite			
		280.0 Material becomes slate-like with extremely fine grained grey-colored bands aligned at 60°CA. numerous graphite coated bands			
		283.0-285.0 post brecciated fracture zone, with coatings of iron oxide			
		290.0' a 1" wide quartz lens, rimmed with calcite.			
		293.0' a 1" "blocky" quartz vein; followed by a 1/2" quartz-calcite vein essentially parallel the CA			
		298.0' Material gradually changes back to a more normal gneiss			
		301.0' a 2" quartz vein, lined with a powdery white material			
		303.0' a 2" wide, soft, green-colored, chloritic zone; followed by a 1° CA slickensided shear			
		304.4' - 305.0' a large white quartz vein, crossed by a slickensided shear, and iron-oxide coated fractures.			
		306.0' - a 15°CA iron-oxide and chlorite coated shear			
		307.0' a slight overall increase in siliceous material past here			
		307.5' a 1" kaolinized, quartz-feldspar vein at 70°CA			
		308.5' a 10°CA, slickensided, calcite lined shear; followed by a 3" quartz zone with tiny green chloritic inclusions.			
		310.1 Past here an overall increase in biotite bands			
		311.0 Past here shears and fractures 1"-2" apart			
		312.0'-314.0' a slickensided shear generally parallel the CA with cross-fractures			
		317.0-322.0 a coarsely brecciated zone, with 1/2"-7" fragments, little movement, cemented by a combination of quartz and calcite. Several later, iron oxide coated fractures occur			

TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
	322.1 a 10° CA, iron-oxide coated fracture; followed by a 10° slickensided shear.		
	322.2-323.0 an intensely fractured zone, blocky, many surfaces are coated with iron-oxide or chlorite.		
	323.9: 327.1 a massive, white, quartz zone, with "diffuse" white to grey feldspar stringers. Chlorite is present as "wavy" bands		
	330.5'-331.0' an intensely <del>fractured</del> sheared zone.		
	331.4' an 80° CA, slickensided shear; followed by numerous iron-oxide coated cross fractures at 30° and 70° CA.		
	Material ends with a sharp 35° contact at 332.9		
9	336.5 SKARN. DIPSIDE-CARBONATE. a coarsely crystalline, light green colored material, with only scattered pyrite and pyroxenite stringers. Ultra-violet examination indicated negligible scheelite.		
	334.0 a 40° CA, slickensided shear, with a white powdery material on the surface, possibly kaolinite.		
	335.1 and 335.2 slickensided 30° CA shears.		
	335.5 a calcite-dipside vein		
	material ends with a sharp contact.		
5	358.0* METASEDIMENTARY GNEISS. a material composed of coarsely crystalline biotite bands alternating with a finer grained quartz-carbonate-chlorite bands aligned at about 80° CA.		
	Initially the material exhibits closely spaced, iron oxide coated <sup>fractures</sup> <del>shears</del>		
	342.5 - 344.5 a "ragged" iron-oxide coated fracture, essentially parallel the core axis, with numerous cross fractures.		
	347.0 a 1" quartz vein, parallel the 80° gneissosity		
	350.0 two 1" <del>quartz</del> chlorite veins, parallel the 80° gneissosity		
	END OF HOLE 553		

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		322.1 a 10° CA, iron-oxide coated fracture; followed by a 10° slickensided shear.			
		322.2- 323.0 an intensely fractured zone, blocky, many surfaces are coated with iron-oxide or chlorite.			
		323.9' - 327.1' a massive, white, quartz zone, with "diffuse" white to grey feldspar stringers. Chlorite is present as "many" bands			
		330.5' - 331.0' an intensely <del>blocky</del> sheared zone.			
		331.4' an 80° CA, slickensided shear; followed by numerous iron-oxide coated cross fractures at 30° and 70° CA.			
		Material ends with a sharp 35° contact at 332.9			
32.9	336.5	SKARN. DIOPSIDE-CARBONATE. a coarsely crystalline, light green colored material, with only scattered pyrite and pyrrhotite stringers. Ultra-violet examination indicated negligible scheelite.			
		334.0 a 40° CA, slickensided shear, with a white powdery material on the surface, possibly kaolinite.			
		335.1 and 335.2 slickensided 30° CA shears.			
		335.5 a calcite-diopside vein			
		material ends with a sharp contact.			
36.5	358.0*	METASEDIMENTARY GNEISS. a material composed of coarsely crystalline biotite bands alternating with a finer grained quartz-carbonate-chlorite bands aligned at about 80° CA.			
		Initially the material exhibits closely spaced, iron oxide coated <del>shears</del> <sup>fractures</sup> .			
		342.5 - 344.5 a "ragged" iron-oxide coated fracture, essentially parallel the core axis, with numerous cross fractures.			
		347.0 a 1" quartz vein, parallel the 80° gneissosity			
		350.0 two 1" <del>quartz</del> chlorite veins, parallel the 80° gneissosity			
		END OF HOLE 553			

# DRILL HOLE LOG

091149

## DIP TESTS

Property RISBY TUNGSTEN Hole Number R-4-71  
 At WHITE HORSE MINE DISTRICT Dip VERTICAL  
 At C.A.B. # 25 Length 334.0  
 At CLAIM Y25314 Bearing   
 At 147505 Elev. Collar 5800 ASL  
 At 1150E Horiz. Trace   
 At 8 AUG 71 Vert. Trace   
 Date Completed 11 AUG 71 Date Logged 11 & 12 AUG 71

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
0.0	6.0	CASING			
6.0	32.0	CASING - very poor recovery - frost shattered, fractured, dirt filled zones - some recovered boulder material.			
32.0	40.0	META SEDIMENTARY GNEISS - composed of alternating coarsely crystalline biotite and finer grained quartz-chlorite-calcite bands. This material is frost shattered and fractured - with 20% recovery.			
40.0	52.0	INTRUSIVE - a light grey, coarse grained, granular textured material composed of 55%+ feldspar, 40% interstitial quartz, with biotite and muscovite. Initially, material has closely spaced fractures, and several gneissic zones. 45.0' a 3" crushed zone, with secondary zeolite mineralization 45.5'-48.6' an intensely fractured zone, with some slickensided shears, and iron oxide stains are common. 48.6'-50.0' a medium-grained siliceous zone, with chloritic banding giving a faintly gneissic texture. 50.0'-52.0' an intensely fractured zone, the central portion is finely ground with some angular quartz fragments. Several 60° slickensided shears occur through this area, with some sericite mica.			
52.0'	56.5'	METASEDIMENTARY GNEISS composed of alternating coarsely crystalline biotite, and finer grained quartz-chlorite-calcite bands at 50°-70° alignment - these bands tend to be irregularly spaced 54.0' a small crushed zone, with secondary calcite			

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FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
		54.5 a zone of finer-grained material, grey colored, with an almost slate-like cleavage		
6.5	60.8	INTRUSIVE - a feldspar-quartz, granular textured material, in places biotite and feldspar assume gneissic like banding, aligned at about 60°CA. 58.0 Here material is unfractured, almost white colored ends with a 30° sheared contact, lined with zeolite crystals.		
0.8	104.5	SHEARED METASEDIMENTARY GNEISS - a gneissic material, of biotite, and quartz-carbonate-chlorite-bands, in places converted to a slate-like cleave. Dark grey, fine-grained bands, sometimes contorted. Numerous slickensided shears aligned at 70°CA occur through this zone. 65.3-66.7 an intensely fractured and sheared zone, with numerous slickensided surfaces. Part here many of the biotite bands aligned at 70°CA tend to be sheared. 72.1' a 1/2" white quartz vein, parallel the gneissosity 73.0' a series of small quartz veins, in a soft green chloritic zone. 73.7' a 1" brecciated vein at 30°CA, with calcite cementation 75.0' a "ragged" iron-oxide coated fracture. 78.0' a 2" quartz vein crossing the gneissosity at 60°CA 81.5'-83.0' a brecciated zone with 1/2"-1" fragments cemented by a white crystalline zeolite. 84.0' a major shear, essentially parallel the CA, lined with 1/4"-1/2" crystalline calcite and zeolites - also numerous cross fractures, and drag folds in the gneissic bands near this shear. 87.0'-87.5' a massive, white, siliceous zone, with numerous chlorite inclusions 91.0'-92.0' a SKARN vein, no visible scheelite (ultra violet examination) 94.0' a "flowing" 1/2" to 1" quartz vein, with chloritic inclusions 97.6' a 1/2" quartz vein, with incipient feldspar crystals, and pyrite grains followed by a 2" white quartz zone. 100.1 - 101.0 a massive, white, opaque quartz zone with veins of chlorite Then a more siliceous material ends with a sharp contact at 104.5		

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
4.5	113.0	INTRUSIVE - a medium grained, light grey material, with 55% subhedral feldspar, 40% interstitial quartz, and minor amounts of biotite and muscovite, along with green clots of a chloritic material 108.0' a 2° CA, iron-oxide coated, "ragged" fracture 110.0' a 45° CA, iron-oxide coated fracture. 111.0' a 4" intensely fractured zone, with some manganese-dioxide dendrites on surfaces. ends with a sharp contact at 113.0			
3.0	124.8	METASEDIMENTARY GNEISS composed of coarsely crystalline biotite lands alternating with finer-grained quartz-carbonate-chlorite lands, all aligned at about 60° CA. Initially, several fractures occur, lined with "smears" of pyrite. 114.9' a 1" quartz vein parallel the 60° CA gneissosity 115.8'-116.3' a crushed zone, with an extremely fine grained, dark, matrix containing angular quartz fragments. 118.0'-119.1' a crushed and sheared zone, similar to that at 115.8, but cemented by zeolites. 121.5' a 1/2" - 3/4" calcite vein, with pyrite grains at 65° CA. 122.5' a 2 1/2" white quartz vein; followed by a "wavy" 1/2" quartz vein, then several inches of tightly folded material. Ends 124.8.			
4.8	130.0	SILICEOUS MARBLE a white, coarse grained material, very siliceous in places, and containing quartz-carbonate veins with poorly formed garnets. 125.8- material becomes more slate-like - ends at 130.0'			
0.0	149.4	METASEDIMENTARY GNEISS composed of coarsely crystalline biotite <sup>lands</sup> <del>lands</del> alternating with finer-grained quartz-carbonate-chlorite lands - initially these lands are quite "wavy". Pyrite is commonly associated with the biotite. 134.5' a 4" wide diopside skarn vein. 135.0' a 2" quartz vein at 80° CA; followed by a 10° CA calcite lined fracture 136.2' a 1" quartz vein; followed by a 3" zone of "wavy" mica lands. 138.0' a 50° CA shear; part here an increase in the chlorite content. 139.0' a 65° CA, chlorite lined shear 141.7' a 1/4", 60° CA calcite vein, cutting through a 3" chloritic zone 142.0 Part here a more uniform gneiss, with 60° CA banding			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		144.5' a 45°CA, slickensided, chlorite covered shear			
		145.0' several closely spaced 45° slickensided shears, with pyrite "smeurs"			
		147.1' a 35°CA, 1" quartz vein, in a green chloritic zone			
		148.1' a 5°CA calcite vein, lined with iron oxides.			
		149.3' a 3" chloritic vein, with parallel calcite veins at 55°CA ends 149.4			
9.4	160.5	DIOPSIDE SKARN - a coarsely crystalline, light green colored material with minor amounts of quartz and carbonate, and elongated "dirty pink" poorly formed garnets. No visible sulphides or scheelite (Ultra-violet check) 151.0 an iron-oxide coated fracture at 5°CA, Part here a major calcite lined fracture, essentially parallel the CA, with cross-fracturing 152.0 Material assumes a faintly gneissic texture 152.2 a 5°CA "ragged" fracture ends with a sharp contact at 160.5 at 80°CA			
2.5	176.5	INTRUSIVE - a white-grey, medium to coarse grained granular material composed of about 55% semi-hedral feldspar, 40% interstitial quartz, with liotite and muscovite 162.8 a 30°CA shear lined with secondary calcite 163.7 a 80°CA Fracture; followed by feldspar-quartz vein parallel the CA. 167.7 two fractures at 60°CA and 70°CA 169.0' - 170.0' - 170.4' iron oxide, and calcite coated, 20°CA, shears. 171.0' - 172.0' Several intersecting 30°CA-40°CA shears. 172.5 - a 2°CA, shear, with kaolinite along the surface, followed by several intersecting shears at 30°-40° to 176.0 material ends with a sharp 30°CA contact at 176.5			
6.5	185.0	DIOPSIDE SKARN a coarse-grained, green, material mainly prismatic intergrown diopside, with scattered quartz and calcite veins 178.1-178.4 60° Fe Oxide coated Fractures; Part here the grain size decreases 179.0 a chlorite lined fracture at 45°CA 179.8' a 45°CA "ragged" fracture followed by a zone with poorly formed garnets 182.0 a 40°CA "ragged" fracture; followed by several 45°CA fractures material ends with a sharp contact at 185.0 minor stringers of scheelite were noted by Ultra-Violet examination			

COM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				WO <sub>3</sub>	CU
	"2166	177.6 - 182.0 Sample taken - 1.0% estimated scheelite	2166	0.18%	0.02%
	2167	182.0 - 185.0 Sample taken - negligible scheelite	2167	0.13%	0.02%
5.0	196.5	SLATE LIKE material - extremely fine-grained grey bands, alternating with fine grained quartz-carbonate bands, with a slate like 65° CA cleavage - Graphite is present along many of the cleavage surfaces 188.0' a 3" wide "kink-folded" zone 193.1' a 3" wide siliceous zone with small quartz bands, followed by a fracture at 60° CA 195.0' Past here pyrite becomes more common along surfaces. ends with a brecciated zone, cemented by zeolites			
6.5	198.4	SKARN - a green diopside material, coarse-grained with incipient garnets, pyrite grains are common throughout along with about 1% ultra-violet examinations of the scheelite.			
	"2168	Sample taken from 196.4 - 198.4 material ends with a sharp contact at 60° CA	"2168	0.32%	0.02%
8.4	202.1	SKARN - a fine grained diopside material with no scheelite or pyrite 199.0 - 200.1 a coarsely brecciated zone, with quartz cementation ends with a series of 60° slickensided shears at 202.1			
2.1	222.0	METASEDIMENTARY GNEISS - composed of coarsely crystalline biotite bands alternating with fine-grained quartz-carbonate-chlorite bands aligned at from 60° - 70° CA. 202.8 a 50° CA shear, lined with calcite, followed by a 35° slightly ragged fracture. then an overall increase in the biotite content 205.3 numerous coarse-grained biotite dots; followed by a 10° CA calcite lined fracture. 208.0' Several inches containing small white quartz lenses; followed by a 5° CA slickensided shear, lined with white calcite 208.6' a 1/4" white calcite vein at 45° CA; followed by a parallel shear. 209.6' a 1" - 70° CA quartz vein; followed by a 3/4" quartz vein at 70° CA. 211.0' a 1 1/4" quartz vein at 80° CA, followed by a "curved" shear at 10° CA 213.0' a curved, calcite lined, 10° CA shear; followed by a "ragged" fracture 215.8' a 10° CA shear; followed by a layer of iron-oxide stained calcite			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				WO <sub>3</sub>	CU
		218.5' - 219.3' a crushed and intensely sheared zone, at 80°CA 219.3' - 222.0' a massive, grey green siliceous zone. material ends at 222.0			
2.0	223.5	ALTERED INTRUSIVE contains about 50% euhedral-subhedral feldspar, much of which is altered to a white kaolinite, about 30% interstitial quartz, and up to 20% biotite crystals, and minor muscovite. Material is closely fractured. ends with a sharp chilled contact.			
3.5	228.0	INTRUSIVE, a coarse grained dark colored material, with 40% subhedral feldspar 30% interstitial quartz and 30% biotite crystals - only widely spaced fractures. material ends with a sharp contact.			
5.0	232.1	METASEDIMENTARY GNEISS: the alternating micaceous, and quartz-carbonate bands are aligned at 30°-85°CA, with numerous skarn like zones near the contacts. ends sharply.			
2.7	245.0	SKARN a green colored material composed mainly of prismatic, intergrown crystals of diopside, with lesser amounts of quartz-carbonate, and poorly formed strossularite garnet crystals. 232.0 - 236.4 a vein composed of about 40% granular pyrrhotite and pyrite with chalcopyrite stringers and 1-2% euhedral scheelite as indicated by ultra violet examination: part here scheelite content decreases. 241.9 - 242.5 up to 10% disseminated pyrrhotite and pyrite, with ultra-violet examination indicating 1%-2% scheelite as euhedral xls. 242.5 - 243.5 a band of unaltered meta sedimentary gneissic material 243.5 - 245.0 zone contains about 10%-15% pyrrhotite and pyrite, with about 2% euhedral scheelite disseminated through it. ends at 245.0			
SAMPLE	"	2169 - 232.1 - 236.4 estimate 1%-2% scheelite	"	2169	2.42% 0.13%
SAMPLE	"	2170 - 236.4 - 238.0 " 0.5% scheelite	"	2170	0.62% 0.03%
SAMPLE	"	2171 - 238.0 - 241.9 " negligible scheelite	"	2171	0.24% 0.02%
SAMPLE	"	2172 - 241.9 - 242.5 " 1-2% scheelite	"	2172	1.27% 0.05%
SAMPLE	"	2173 - 242.5 - 243.5 gneissic material no scheelite	"	2173	0.02% 0.02%
SAMPLE	"	2174 - 243.5 - 245.0 " 1-2% scheelite.	"	2174	0.47% 0.05%
5.0	255.3	METASEDIMENTARY GNEISS - biotite, alternating with quartz-carbonate-chlorite bands aligned at 50°CA - The material is fractured throughout 250.0 a 3" quartz zone, followed by several iron-oxide coated fractures ends with a sharp contact			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				UO <sub>2</sub>	Ca
55.3	262.4	DIOPSIDE SKARN - composed of coarsely crystalline, prismatic diopside contains lesser amounts of quartz-carbonate and poorly formed garnets, pyrrhotite and pyrite is present as scattered veinlets and grains ultra violet examination shows 1-2% disseminated scheelite - declining towards end of hole - material ends with a sharp contact.			
	SAMPLE	* 2175 255.3 - 256.6 - 1-2% scheelite	* 2175	0.08%	0.04%
	SAMPLE	* 2176 256.6 - 262.4 - 0.5% scheelite.	* 2176	0.02%	0.03%
2.4	268.8	METASEDIMENTARY GNEISS limonite bands alternating with chlorite rich quartz-carbonate bands aligned at 40° CA, only scattered fractures and shears 265.0 assumes an almost skarn like appearance - ends with a 70° contact			
6.8	334.0	INTRUSIVE - a light grey, speckled color, composed of 50% cuboidal grey feldspar, 40% interstitial quartz, and 10-15% biotite flakes 273.0' Several intersecting 30° and 60° fractures 282.0' Several small "diffuse" quartz zones, with widely spaced fractures at 40°-50° CA: then a series of hairline calcite veins. 285.0' Hairline calcite veins, a "ragged" fractures 289.5'-292.0' a crushed zone, then into an altered and crushed zone, with kaolinization of the feldspar; then into large scale brecciation, cemented by calcite 291.4' a 3" feldspathic zone completely altered to kaolinite 301.4'-303.5' alteration zone. kaolinization of the feldspar, with some adsorbed iron oxides giving a buff-brown color. 312.8 - 314.4 a large iron-oxide coated fracture, essentially parallel the core axis, with numerous cross fractures. 318.3 - 318.7 a zone of kaolinized feldspar crystals, ending in a feldspar rich zone, altered to a soft, clay-like kaolinite; followed by several iron-oxide coated fractures. 324.8' a "diffuse" zone, 6" wide of feldspar stringers, and crystalline aggregates and "clots" of biotite. 326.0' Several closely spaced, iron oxide coated 35°-40° CA fractures HOLE ENDS AT 334.0			

# DRILL HOLE LOG

091149

R-5-71

**DIP TESTS**

Property RISBY TUNGSTEN Hole Number           
 At 60° Ft. 247.0 At          Dip 66°  
 At          Ft.          Claim No. CAB # 25 Length 247.0  
 At          Ft.          Working Place CLAIM Y25514 Bearing 175°  
 At          Ft.          Baseline Footage 14150.5 Elev. Collar 5800' ASL  
 At          Ft.          Baseline Offset 1750 E Horiz. Trace           
 At          Ft.          Date Started 11 AUGUST 71 Vert. Trace           
 Date Completed 18 AUGUST 71 Date Logged 14 + 15 AUG 71

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
0.0	6.0	CASING			
6.0	117.4	METASEDIMENTARY GNEISS composed of alternating coarsely crystalline biotite bands and finer-grained, light green colored, quartz-carbonate-chlorite bands aligned at 80° CA. Initially, this material is frost shattered, intensely fractured and broken up, with iron-oxide and clay seams common. From 6.0' to 27.0' - only 55% core recovery; Past here, fractures are still closely spaced. 30.7' - a soft, fine grained, light green chloritic zone; followed by a 2" quartz vein at 80° CA, then several hairline to 1/16" calcite veins, lined with chlorite; then 10" of grey siliceous material. 32.0' a "ragged" 2° CA iron oxide coated fracture in a siliceous zone. 34.0' a 2" vein of soft, green, chlorite; followed by a 4" massive white quartz vein lined with parallel chlorite veins; then followed by several feet of chlorite rich material, intensely fractured, and in places ground up to a clay like consistency. 36.5' a 2° CA slickensided shear, lined with white calcite 39.0' Past here fractures spaced 1" - 3" apart, with scattered calcite 43.1 - 43.7' a micaceous zone, of closely spaced biotite bands, followed by a 4" white massive quartz zone. 44.5' - 46.1' an intensely fractured zone 46.1 - 46.5 a "diffuse" chloritic-calcite zone; followed by 2.0' of a dense grey siliceous material, with "wavy" diffuse feldspar veins. 51.3' a "ragged" shallow angle fracture, lined with 1/8" thick calcite 54.0' a "diffuse" 2" thick quartz vein; followed by a 1/4" calcite vein 56.7' a 2" quartz-chlorite vein. 58.0' a 3" quartz vein, with thin internal chlorite bands			

Logged by J. Marshall

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		60.1' a tightly "kink" folded zone; followed by a shallow angled, iron oxide coated fracture.			
		62.7' a 3" quartz-chlorite vein at 80° CA, parallel the gneissosity			
		64.7' a 3" quartz-chlorite vein, parallel the gneissosity			
		68.0' a 2" quartz-chlorite band; Part here mica bands are spaced farther apart, in a green green' quartz-chlorite-carbonate matrix			
		69.4'-70.0' a micaceous zone, about 85% biotite, with blue-green chlorite			
		72.3-77.0 a fairly dense, gray, siliceous zone,			
		77.0 Part here almost a pure quartz, with some scattered incipient feldspar crystals, and inclusions of chlorite. Gradually fractures become more closely spaced.			
		82.0' again part here a siliceous zone, with chlorite, and only widely scattered mica bands.			
		88.4' a chlorite lined, 1" quartz vein containing large pyrite grain			
		90.0' Several quartz-chlorite veins, many containing small host rock xenoliths.			
		92.0' 20° CA, hairline calcite veins; followed by a 3" quartz-chlorite vein.			
		95.0' Past here numerous shallow angle, hairline calcite veins			
		97.1'-97.2' an intensely crushed and ground up zone			
		99.0' Past here a chlorite bearing siliceous zone, with rounded incipient feldspar crystals.			
		101.0 Past here again a more normal gneiss			
		104.0 a zone containing numerous small chlorite and calcite veins			
		104.5-105.0 an intensely sheared zone, at 70° CA, with some graphite on surfaces, secondary calcite is also common.			
		106.7'-108.2' a zone of closely spaced biotite bands, containing tiny, elongated, quartz-calcite lenses aligned at 85° CA			
		109.0 Past here a slight overall increase in chlorite in the matrix			
		111.1' a 1/4" 40° CA quartz vein, fractured on both contacts			
		112.4' a 40° CA shear			
		113.2' a "slightly ragged" 25° CA shear, with a clay like surface alteration			
		116.0' Hairline, dendritic quartz veins essentially parallel the CA			
		117.4' a chlorite lined, 1" quartz vein ends with a gradual change.			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				UO <sub>2</sub>	Cu
117.4	120.5	DIOPSIDE SKARN, contain poorly formed, "fleshy" pink garnet crystals, and minor amounts of sulphides 118.5 - 119.8 - a zone containing an estimated 1.0% euhedral scheelite ends with an iron oxidized, coated, fractured contact.			
SAMPLE	" 2177	117.4 - 120.5	" 2177		
120.5	124.8	METASEDIMENTARY GNEISS, initially material has thin green chlorite layers in a chlorite and biotite rich material 123.0 Part here gneissic laminae is better formed, but "wavy" ends with a sharp 30° contact at 124.8			
124.8	140.7	DIOPSIDE SKARN - composed of intergrown large diopside prisms, with quartz and carbonate material, initially contain an estimated 2% scheelite. 126.3 - 127.3 a massive white, unmineralized quartz vein at 80°C 127.3 Part here scheelite up to 0.5% noted by ultra-violet investigation 129.2 a 5° iron oxide coated <del>shear</del> fracture 129.2 - 130.8 material contain up to 5% disseminated pyrite and pyrrhotite with small amounts of scheelite. 130.8 - 131.4 an unmineralized, massive white quartz vein. 132.7 - 135.7 contains about 5-7% disseminated pyrite and pyrrhotite, with about 2.0% euhedral scheelite (ultra violet investigation) 136.7 - 139.5 a zone containing 1% disseminated scheelite. material ends with a sharp contact at 140.7			
SAMPLES	" 2178 - 124.8 - 125.3	Skarn with 1-2% scheelite	" 2178	0.02%	0.02%
	" 2179 - 125.3 - 127.3	quartz vein	2179	0.02%	0.02%
	" 2180 - 127.3 - 129.2	0.5% estimated scheelite	2180	0.035%	0.02%
	" 2181 - 129.2 - 132.7	negligible scheelite	2181	0.18%	0.02%
	" 2182 - 132.7 - 135.7	7% sulphides 2% scheelite	2182	0.08%	0.02%
	" 2183 - 135.7 - 136.7	quartz vein	2183	Tr	0.02%
	" 2184 - 136.7 - 139.5	5% sulphides and 2% scheelite	2184	0.23%	0.02%
	" 2185 - 139.5 - 140.7	negligible scheelite	2185	0.02%	0.02%
140.7	150.3	METASEDIMENTARY GNEISS, initially crushed, but gradually assuming a gneissic texture, with some tightly folded zones, and crushed zones material ends with a 3" crushed and ground up contact at 150.3			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				WO <sub>3</sub>	Cu
50.3	158.9	DIOPSIDE SKARN composed mainly of intergrown large prismatic crystals (poorly formed) of diopside, with quartz and carbonate mineralization. Pyrite and pyrrhotite are scattered throughout 151.0 a biotite rich zone 157.0 hairline to 1/4" wavy calcite veins are common 158.3 a 30° CA slickensided shear material ends with a 3" brecciated zone, cemented by calcite.			
SAMPLE	" 2186	150.3 - 153.0 skarn very little visible scheelite	" 2186	0.03%	0.02%
	" A	153.0 - 156.8 skarn	" A	0.45%	0.02%
	" B	156.8 - 158.9 skarn	" B	0.17%	0.02%
58.9	179.5	METASEDIMENTARY GNEISS initially closely fractured, composed of alternating biotite bands, and quartz-carbonate-chlorite bands aligned at 70°-80° CA. 163.8 a graphite coated, slickensided shear at 30° CA 166.8 - 167.1 three 1/4" white calcite veins, "wavy" lined with pyrite 169.0 a 6" zone of "wavy" quartz and calcite veins. 170.0 - 171.0 a more siliceous groundmass 171.6 - 172.5 an intensely sheared zone, at 80° CA, slickensided. cross fracturing as far as 173.6'; followed by 1/4" calcite veins 176.0 - 176.7 an intensely fractured zone, then becoming crushed with small rock fragments in a ground up matrix. 179.0 a slickensided 5° CA shear, material ends with an 85° CA contact			
79.5	182.8	INTRUSIVE. a light <del>red</del> colored, coarsely granular material, about 50% feldspar, 40% interstitial quartz, with biotite and muscovite. Material has widely spaced fractures with kaolinization of the feldspar near these fractures. Ends with an 85° brecciated contact.			
82.8	186.5	METASEDIMENTARY GNEISS essentially similar to that at 158.9, initially has 1/2" - 1" spaced fractures. Ends with a 5° slickensided sheared contact.			
86.5	194.6	INTRUSIVE. a coarsely granular light colored material composed of about 50% <sup>3</sup> white feldspar, 40% interstitial quartz, with biotite and muscovite. Material contains scattered stringers of pyrite, and scattered iron-oxide coated fractures. ends with a 60° contact			



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				WO <sub>3</sub>	Cu
194.6	196.0	DIPSIDE SKARN - prismatic diopside, and poorly formed grossularite garnets, with pyrite and pyrrhotite stringers - ends with a sharp contact.			
SAMPLE	"C"	194.6 - 196.0 only min scheelite	"C"	0.13%	0.02%
202.0	209.4	INTRUSIVE - a light grey colored, coarsely granular to granitic textured material composed of about 55% subhedral feldspar, 40% interstitial quartz and biotite with muscovite. Fractures & run from 6" - 12" apart, and are usually kaolinized. 207.0 Part here much of the feldspar tends to be kaolinized, some of the kaolinite pseudo-morphs after feldspar are "etched" out leaving voids. ends with a sharp contact at 209.4 aligned at 60° CA			
228.7	228.7	GRANITIC TEXTURED INTRUSIVE, initially, the feldspar 90-95% of the volume, tends to be a light green color. Biotite occurs in faintly gneissic banding aligned at 70° CA and makes up as much as 40% by volume, giving an overall dark color. 210.0 an 80° CA 1/2" quartz vein, with pyrite grains along the contact; followed by a 1 1/4" mafic chlorite vein at 30° CA again lined by pyrite grains: Part here material has some alteration (feldspar to kaolinite) and only widely spaced fractures. ends with a sharp 45° contact at 228.7			
247	247	INTRUSIVE a light colored, coarse grained material made up of about 45% euhedral feldspar, 30% interstitial quartz, and biotite crystals with some muscovite, also contains minor scattered pyrite grains. 228.7 - a 10" white quartz vein, part here scattered fractures 231.0 Part here a fractured, siliceous zone, 4-6" long, stained by iron oxides, some of the feldspar (10%± altered to white kaolinite) 235.0-237.0 a fractured zone (1"-6" apart) with iron oxide, and kaolinite on the surfaces. 239.4 a 8" quartz zone, fractured and stained by iron oxide; part this material becomes more mafic 243.5 a 16" white massive quartz vein, with large aggregates of pyrite and pyrrhotite associated with chloritic blebs. HOLE ENDS 247			

091142

# DRILL HOLE LOG

CALTOR SYNDICATE

## DIP TESTS

At ..... Ft. ....  
 At ..... Ft. ....  
 At ..... Ft. ....  
 At ..... Ft. ....  
 At ..... Ft. ....  
 At ..... Ft. ....

Property RISBY TUNGSTEN  
 At WHITEHORSE N.D. YUKON  
 Claim No. CAB # 3  
 Working Place QMM # Y25368  
 Baseline Footage 24100 S  
 Baseline Offset 0100  
 Date Started 17 AUG 1971  
 Date Completed 22 AUG 1971

Hole Number P-6-71  
 Dip VERTICAL  
 Length 600'  
 Bearing —  
 Elev. Collar 6090' ASL  
 Horiz. Trace .....  
 Vert. Trace .....  
 Date Logged 24 AUG 1971

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				WO <sub>2</sub>	Cu
0.0	4.0	CASING no recovery			
4.0	7.0	INTRUSIVE - a grey quartz, biotite groundmass, with grey cuboidal feldspar phenocrysts - about 60% recovery. intensely fractured			
7.0	20.8	METASEDIMENTARY GNEISS composed of alternating brown biotite, as crystalline bands, with a finer grained greenish colored quartz-carbonate-chlorite bands aligned at 80° CA 7.0 - 15.5' extremely fast shattered and fractured 20% core recovery 15.5 - 16.2 a siliceous zone, with green chlorite inclusions 17.3 a 1" quartz vein at 70° CA; Past here an increase in the mica content, ends with a sharp contact.			
20.8	25.0	DIOPSIDE SKARN - composed chiefly of large, poorly formed prismatic diopside crystals with some quartz and carbonate. incipient pink garnets are present, along with scattered pyrite grains. Ultra-violet investigation shows very little scheelite - 24.5 a shear, at 30° CA.			
		SAMPLE # 2199 - 21.0 to 25.0 only scattered scheelite crystals.	# 2199	0.01%	0.02%
25.0		METASEDIMENTARY GNEISS brown biotite bands alternating with finer-grained greenish colored quartz-carbonate-chlorite bands aligned at 55° - 60° CA, initially very irregularly spaced, and the mica bands tend to be lenticular. Only scattered iron-oxide coated fractures. 29.1 a "diffuse" 4" granitic vein, followed by a black fine grained chloritic vein, and a "stepped" 3/4" granitic vein. 30.5 - 31.1' a porphyritic granite intrusive with feldspar phenocrysts 31.4 - 34.8' a porphyritic granite intrusive vein with feldspar phenocrysts, material is fractured at 2° CA, with a "ragged" iron oxide coated surface			

Logged by [Signature]

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		36.4 a 4" siliceous zone with chloritic inclusions			
		36.8 - 39.0 a zone of friable hydrous biotite, with numerous "wavy" quartz-calcite veins, large scale brecciation in the central portion with minor pyrite			
		39.0 - 39.5 a zone showing small scale drag folds in the landing.			
		40.8' a 1 1/2" 60° CA quartz-carbonate vein; followed by similar, although smaller veins; Past here a very uniform gneiss.			
		54.0' Past here a slight increase in the quartz content.			
		59.0' a 6", soft, green chloritic vein			
		60.0' - 61.2' a small "incipient" skarn zone, green diopside with poorly formed garnets (ultra violet examination shows negligible schreibelite) Past here the angle of gneissosity steepens to 70° CA			
		66.8' a 2" quartz vein lined with chlorite.			
		68.0' - 69.3' an overall increase in the chlorite content.			
		73.0' an overall increase in the biotite content, up to 60-70% biotite			
		74.5' a 3/4" wide quartz lens; followed by a fractured 2" wide quartz vein the gneissic bands show drag folding along the 30° CA contacts of this vein.			
		76.8' a 1" "jagged" quartz vein, showing displacement of gneissic bands			
		77.0 a 3" quartz vein, parallel the gneissosity			
		81.3 and 82.3' a 6" and 5" quartz-chlorite zone.			
		83.1' - 84.2' a massive white quartz vein, with large poorly formed garnets			
		87.0' - 87.8' several 2" quartz veins			
		90.0 Past here an overall decrease in the mica content, landing tends to be lenticular			
		101.0' - 102.6' a siliceous zone, with numerous small feldspathic stringers			
		104.0' - 105.2' a siliceous zone, with irregular intragranular chlorite, the biotite bands here tend to be lenticular and far discontinuous.			
		109.4' a 1/4" calcite vein at 80°, followed by a 50° CA slickensided shear.			
		111.5' a 2" quartz vein, at 80° CA, with poorly formed feldspar crystals.			
		113.0' a 3" massive, white quartz vein; Past here an increase in the amount of biotite bands.			
		114.1' a 2" quartz vein, with about 20% chlorite inclusions			
		114.7' a fracture at 75° CA			
		115.8' a 2° CA "ragged" fracture, coated with chlorite and iron-oxides.			
		118.0' Several closely spaced fractures; followed by a 3" massive quartz vein then a 5° CA iron oxide coated fracture			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				WO <sub>3</sub>	CU
		120.3' - 122.3' a siliceous rich groundmass with several "clots" of pyrite			
		124.0' Past here the gneissic banding ranges from 65°CA to 80°CA			
		129.0' Past here the gneissic banding becomes more erratic			
		131.2' a 45°CA slickensided shear			
		133.0' a 2" quartz vein with numerous pink feldspar, poorly formed crystals. then an iron-oxide coated fracture running for several feet parallel the CA			
		138.0' a 5°CA, calcite coated shear; followed by a parallel fracture			
		139.8' a calcite lined 30°CA fracture; followed by a 60°CA fracture.			
		140.0' Past here the gneissic bands become more uniform			
		140.3' a 5°CA, chlorite and calcite coated, slickensided shear.			
		142.0' Several closely spaced 80°CA fractures.			
		146.0' a 3" chlorite rich zone; followed by a 10" massive quartz vein with poorly formed pink feldspar crystals.			
		151.3' a 30°CA iron-oxide coated fracture; followed by a 15°CA fracture; then a 10° calcite coated shear.			
		152.0' two 5°CA, calcite coated slickensided shears 1/4" apart.			
		153.0' a 1" lens of quartz, followed by several feet of closely spaced iron-oxide coated fractures. 1"-2" apart.			
		159.8 - 161.3 FAULT. crushed zone, an extremely finely ground up material containing angular quartz fragments			
		163.0 Past here the gneissic banding becomes more irregular, with a slight overall increase in siliceous material; small garnet-diopside veins are scattered through this zone - ends with a <del>sharp</del> gradual change			
163.6	190.0	DIOPSIDE SKARN - a coarsely crystalline material of prismatic, intergrown diopside crystals, with some quartz and carbonates, garnets are not common. Numerous less altered gneissic zones are scattered throughout. 165.0' a 2" white, crystalline quartz vein with large chlorite inclusions 167.0' to 168.3 a large "curving" iron oxide coated fracture 168.5' a 25°CA iron oxide coated "ragged" fracture 169.0' a 70°CA fracture; then a 1" iron oxide stained quartz vein 170.0' Past here a more definite skarn material with poorly formed pink garnet bands, and only scattered euhedral scheelite 176.0' a 3/4" quartz vein; followed by an iron-oxide coated fractured zone with scattered pyrite grains			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				WO <sub>3</sub>	CU
		177.5' a 2" iron-oxide stained quartz vein with chlorite lined contacts at 70°C			
		Part here scattered quartz and biotite vein, in places assumes a gneissic texture, small cubical, white crystals, probably feldspar are common			
		180.2' a 3/4" white quartz vein at 80°C; Part here pyrite and pyrrhotite stringers are common			
		183.9 a 2" iron oxide stained quartz vein with chlorite inclusions			
		186.2-189.2 a quartz rich zone, becoming gneissic in texture			
		188.0 a 5°C fracture, lined with 1/4" of calcite with iron-oxide and manganese-dioxide dendrites; then several 60°C qtz veins ending at 190.0			
SAMPLES		* 2187 - 163.6 to 168.0 skarn only scattered schreibite. low	2187	0.02%	0.02%
		2188 - 168.0 to 173.0 skarn " " " "	2188	0.03%	0.02%
		2189 - 173.0 to 178.0 skarn " " " "	2189	0.02%	0.02%
		2190 - 178.0 to 183.0 skarn " " " "	2190	0.09%	0.02%
		2191 - 183.0 to 188.0 skarn " " " "	2191	tr	0.02%
		2194 - 188.0 to 190.0 skarn " " " "	2194	0.01%	0.02%
190.0	192.0	INTRUSIVE a coarse grained material, "speckled" color, about 75% feldspar and quartz, with the remainder being biotite. ends with a calcite lined 60°C contact			
192.0	198.3	SKARN - diopside, with some quartz and carbonate, along with scattered poorly formed pink grossularite garnets. Ultra-violet examination shows no visible schreibite. 192.0 a calcite lined 80°C fracture. 193.0 a 3/4" quartz vein followed by a 3" garnet zone; Part here very thinly disseminated pyrite and pyrrhotite grains. 197.1 a 3/4" quartz-calcite vein at 65°C 198.0 several small galena crystals in hairline calcite veins ends with a gradual change			
198.3	213.4	METASEDIMENTARY GNEISS, the coarse brown biotite bands alternate with finer grained quartz-chlorite-carbonate bands aligned at 80°C. 192.0 a shallow angle "wavy" calcite coated fracture with cross fractures. 200.1 a iron oxide coated 20°C fracture 200.2-200.7 an intensely cross fractured zone			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		200.7 - 202.6 - a crushed and brecciated zone, some large fragments with up to 1/2" movement, numerous iron oxide coated voids caused by lack of cement.			
		203.1' a 3" brecciated zone, similar to that at 200.7			
		204.0' a 2" carbonate-quartz vein with tiny siderite rhombs			
		208.0' iron oxide coated fractures at 75°CA, 30°CA and 75°CA.			
		209.0' Past here the landing becomes quite irregular			
		211.4' Several closely spaced 30°CA-80°CA fractures			
		213.0 a 5" quartz carbonate vein at 25°CA. material ends with a gradual change			
213.4	226.3	SKARN - a diopside variety, generally tends to be poorly developed, with many gneissic zones. Ultra-violet examination revealed no visible scheelite.			
		215.3' a 5°CA 3/4" calcite quartz vein, followed by green clots of chlorite			
		217.0' hairline calcite vein parallel the CA, with minor pyrite grains			
		218.0' Several closely spaced, 20°CA, iron oxide coated fractures			
		218.5-219.5 a zone of intensive cross-fracturing.			
		219.5-220.2 a massive white quartz vein, followed by a 1/2" 30°CA quartz vein, then a 3/4" quartz vein, and numerous closely spaced fractures.			
		223.0-226.3' here the ground mass is quite siliceous			
		224.8 an iron oxide "ragged" fracture at 5°CA; with minor cross fracturing and small quartz blebs with pyrite grain. Material ends with a gradual change			
226.3	250.3	METASEDIMENTARY GNEISS - alternating brown biotite and greenish quartz-chlorite-carbonate bands aligned at 70°-80°CA, initially has small scattered quartz veins.			
		231.0 Several chlorite rimmed quartz lenses, and an 80°CA quartz vein			
		232.0 Part here several 80° and 40° Fractures in a chloritic zone.			
		235.2 a 1 1/2" quartz vein at 70°CA			
		241.0 a 5°CA calcite lined fracture, with minor iron oxides, then numerous 1/4" wide quartz calcite lenses			
		246.7 a 3" massive white quartz vein lined with pink feldspar crystals			
		248.3 two 1 1/2" quartz chlorite vein - material ends with a gradual change			
250.3	253.6	DIOPSIDE SKARN ZONE coarse grained green diopside material, with large poorly formed garnet crystals, only scattered pyrite. (Ultra-violet examination indicates no visible scheelite - ends with a 2" sulphide rich zone			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
253.6	255.4	METASEDIMENTARY GNEISS - bands aligned at 45° CA, ends in a fine grained, green colored, soft chloritic zone at 255.4 with a 80° contact.			
255.4	272.8	INTRUSIVE a coarse-grained, white-grey colored, granitic textured material mainly feldspn and quartz, with black biotite flakes throughout 257.0 a 5° CA iron-oxide coated fracture; Part here grain size increases, now 45% cuboidal feldspn, 35% interstitial quartz and 20% biotite 262.0 - 262.5 a granitic vein - Part here biotite content increases 266.5 - 267.8 a white feldspn-quartz medium grained intrusive vein with sharp "flowing" contacts ends with a sharp 85° CA contact at 272.8			
272.8	277.4	METASEDIMENTARY GNEISS - alternating biotite, and quartz-chlorite carbonate bands 273.0 a 2" granitic intrusive vein; followed by a 3" quartz zone. 274.5 a 4" intrusive granitic vein at 10° CA, followed by a 3" quartz vein with chlorite - material ends with a gradual contact			
277.4	278.0	DIOPSIDIC SKARN ZONE - with negligible visible sulphides or scheelite, has a relict granitic texture, some scattered pyrite, pyrrhotite and chalcopyrite stringers ends with a intrusive contact.			
278.0	282.2	INTRUSIVE - a coarse grained, white, feldspn-quartz material - gradually grain size increases, then the feldspn is somewhat altered to kaolinite 281.1 - 282.1 an intensely crushed and kaolinized zone - ends with a sharp contact			
282.2	286.0	DIOPSIDE SKARN with small poorly formed garnets, and blue quartz veins 284.0 Part here sulphide stringers are noted - Ultra violet examination uncovered no scheelite - ends with a 60° contact at 286.0			
	361.0				
361.0	366.0	ALTERED INTRUSIVE coarse grained kaolinized feldspn, with interstitial quartz, much iron-oxide staining and secondary calcite 286.4 - 287.3 closely spaced manganese-dioxide covered fractures 288.0 - several closely spaced, iron-oxide coated 30° - 60° CA fractures 290.0 an altered and sheared zone			

*[Handwritten Signature]*

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
		291.0 a dark colored, soft, chloritic zone; followed by several 80°CA calcite vein; then a 5" soft, dark colored chloritic zone, with about 10% disseminated pyrite and pyrrhotite		
		294.1 a 1/4" wavy calcite vein with 1/8" pyrite cubes		
		294.3 a wuggy dolomite-calcite vein		
		293.0-296.0 material is coarsely brecciated, with calcite cement, past here material assumes a more gneissic texture.		
		298.5 numerous cross fractures		
		301.5' - 309.6 a FAULT - fractured, crushed and brecciated zones.		
		304.0. Past here material is finely ground to a dark clay like material with angular rock fragments. Then becomes coarsely brecciated, with calcite cementation; then again crushed and ground up.		
		309.4' an altered (sericitized) and fractured zone		
		310.0' Much of the feldspn is altered to a soft yellowish material		
		313.0'-317.0' wavy, discontinuous quartz-feldspn vein, with chlorite lined wuggy areas.		
		317.2' a small scale fault with 1/2" displacement.		
		318.1-319.5' a white, wuggy, quartz vein, with small quartz crystals past 319.0 material becomes pink (micro inclusions of hematite?)		
		319.5 - 323.0 a feldspn rich zone, altered to a clay like consistency		
		328.7 a 1" quartz vein at 80°CA; then a fracture parallel the CA.		
		330.0 Past here iron-oxide coated, 50°-70°CA fractures 2"-3" apart		
		331.4 Past here the feldspn becomes more unaltered and fresh appearing		
		335.3 - 336.0 a quartz rich zone - then only scattered fractures		
		344.5 a 5°CA fracture, followed by a 70° vein of fine grained black material with pyrite grains.		
		345.6 - 346.0 a relatively unaltered zone		
		347.0 Past here feldspn again altered to a soft yellowish colored material		
		348.1 a 4" zone of feldspn altered to a white clay like kaolinite		
		352.2 feldspn again altered to a yellowish color, then a 2" fault zone at 30°CA, brecciated fragments from 1/32" - 3/4" cemented by a fine-grained black chloritic material, then 10" of coarsely brecciated material		
		355.0 - 357.0 a relatively unaltered, fresh appearing zone.		
		357.3 - 358.0 closely spaced, iron-oxide coated fractures, past here the feldspn is again altered to a yellowish color (sericitization)		

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		material ends at 361.0 with a sharp intrusive contact.			
61.0	368.3	INTRUSIVE - a medium grained, quartz rich, light colored material, fine grained below contact, some of the cubedral feldspar is kaolinized 362.4' a 3" coarse grained intrusive vein at 80°C 365.0'-366.7' an iron-oxide coated, "ragged" fracture, nearly parallel to the CA Past here clots of chlorite with quartz. Ends with a sharp contact.			
68.3	372.0	METASEDIMENTARY GNEISS - mineralogy similar to other described gneisses, with a gneissosity of 60°-80°CA, scattered quartz veins and fractures spaced 2"-6" apart			
72.0	372.9	INTRUSIVE - a coarse grained, light colored, granitic textured quartz-feldspar intrusive "speckled" with biotite flakes - material ends with a sharp contact.			
72.9	373.3	METASEDIMENTARY GNEISS - biotite with quartz-carbonate-chlorite bands at 80°CA			
73.3	377.0	INTRUSIVE - 45% subhedral white feldspar, 35% interstitial quartz with biotite flakes light colored, "speckled" with a granular texture - and scattered quartz veins.			
77.0	379.1	METASEDIMENTARY GNEISS - a biotite rich variety with a 60°-80° gneissosity 378.2' a 2" quartz vein at 65°CA, lined with biotite and muscovite.			
779.1	381.5	SKARN - a diopside variety - coarse grained, with quartz and carbonate, some rather poorly developed gneissic texture. Initially, the material is coarsely brecciated, 1"-2" fragments cemented by chlorite. Ultra-violet examination shows negligible amounts of scapolite. 379.6 a 1" crushed zone, quartz fragments in a finely crushed matrix past here some scattered pyrite stringers. ends with a sharp contact.			
81.5	421.3	INTRUSIVE - a coarse grained, light colored, feldspar-quartz-biotite material, initially exhibits a gneissic texture, and is coarsely brecciated 382.6 a brecciated zone, with voids lined by yellow carbonate rhombs 386.5 a crushed and brecciated zone, some quartz fragments in the groundmass, past here coarsely brecciated, fragments from 1" to 12", cemented by calcite and minor amounts of pyrite grain to 392.0			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		393.3 - 394.1 faint gneissic banding and "clots" of chlorite, followed by several inches of closely spaced fractures.			
		395.0 Past here the feldspar is slightly altered to a yellowish colored material			
		396.0 closely spaced (2"-4" apart) fractures past here, with chlorite			
		398.4' - 399.0' a biotite, chlorite zone with a gneissic texture.			
		400.0' an iron-oxide coated fracture; Past here the grain size increases			
		402.0 Past here biotite has segregated into gneissic banding.			
		403.2 - 408.1 biotite has segregated into 80°CA gneissic banding			
		407.0 a 10" zone of almost pure biotite aligned at 70°CA.			
		408.3 Past here a relatively unaltered intrusive material, with scattered fractures.			
		412.8 - 414.4 a zone with a fine grained, soft, dark grey matrix, with tiny white phenocrysts (feldspar?)			
		Past here the grain size increases, with some kaolinization of the feldspar			
		416.0 feldspar altered to a yellowish material, possibly sericite, fractures coated with a clay-like kaolinite.			
		419.0 - less alteration, with a shallow angle "ragged" fracture ends with a sharp contact			
421.3	424.0	INTRUSIVE - initially a chilled contact, with an increase in grain size			
424.0	425.4	INTRUSIVE - a sharp 35° contact to a fine grained, soft matrix with tiny white phenocrysts (feldspar) ends with a sharp contact.			
425.4	472.5	INTRUSIVE - a fine grained, chilled contact contains about 50% cuboidal white feldspar, 35% interstitial quartz and 15% biotite flakes. Material has fairly widely scattered 30°CA fractures			
		431.0 Past here grain size decreases again, then into an intensely fractured zone			
		434.0 Past here material has a coarse-grained granitic texture			
		438.4 a 1" quartz vein, the feldspar along the contacts has been kaolinized.			
		439.5 a 1" quartz vein at 80°, with kaolinized feldspar along the contact			
		441.3 a 1" 20°CA quartz vein, with kaolinized feldspar along the contact.			
		444.5' - 445.6' several closely spaced, intersecting, kaolinized fractures.			
		447.8' a 6" quartz zone; followed by 70° iron oxide coated fractures			
		451.5' an 80°CA, 1" quartz vein in a 6" kaolinized zone			
		453.0' a 10°CA, iron-oxide coated fracture, then several 60°CA fractures			
		456.5 a 4" quartz vein, then a similar 3" zone			
		462.7 - 465.0 a zone of 7/8" poly synthetically twinned white feldspar phenocrysts			
		468.4 a 2" iron-oxide stained quartz vein at 30°, followed by a similar vein			
		472.5 a 1" iron oxide stained quartz vein at 30°CA, then a similar vein.			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		473.0 - 473.8 a zone containing enlarged feldspar phenocrysts, in a fine grained siliceous groundmass; also a hairline calcite vein.			
		474.1 a 4" fine grained zone with $\frac{1}{16}$ " - $\frac{1}{8}$ " white feldspar phenocrysts			
		475.3 - 476.9 a faulted, brecciated zone, 1" - 3" fragments cemented by chlorite and pyrite, with many uncemented voids			
		477.2 a 3" zone with $\frac{1}{8}$ " subhedral feldspar phenocrysts: ends 477.5			
77.5	482.7	METASEDIMENTARY GNEISS alternating brown biotite bands and chlorite and carbonate rich <del>green</del> siliceous bands aligned at 30° CA 479.0' - 479.4' an INTRUSIVE vein, feldspar and quartz. 481.5' a 1" vein of a fine grained, soft, green chloritic material; followed by 2" of altered intrusive material - ends with a sharp 70° contact			
82.7	531.4	INTRUSIVE - initially altered, with kaolinized feldspar, stained with iron-oxide. Gradually alteration decreases and material is about 50% euhedral feldspar, 40% interstitial quartz, and from 10% - 15% biotite with muscovite. 489.0 a 4" iron-oxide stained quartz vein, ending with a 60° skewed contact 492.1 - 493.5 an altered kaolinized zone 495.4 a 2" quartz vein at 80° CA 498.1 a 1" quartz vein at 40° CA, lined with chlorite, feldspar has been kaolinized 2" either side of the vein. 502.0 5" of iron oxide stained quartz, with kaolinized feldspar; followed by an iron-oxide coated 30° CA fracture 503.4 a 2" zone in which the feldspar has altered to kaolinite. 504.0 - 505.0 a siliceous zone with disseminated feldspar phenocrysts and "clots" of soft green chlorite: Past here an increase in biotite. 507.6 - 511.5 an ALTERED zone, most of the feldspar is altered to pseudomorphs of soft white kaolinite; "clots" of bright green chlorite are common 508.3 a 1" iron oxide stained quartz vein at 70° CA 510.0 a 7" zone feldspathic zone of tightly packed altered phenocrysts. 513.6' several 20° CA, iron oxide coated fractures; and a 2" iron-oxide stained quartz vein at 30° CA. 516.8' a 60° slickensided shear, then only widely spaced (18") fractures 520.4 - 521.1 a zone in which the feldspar has altered to white kaolinite, then several closely spaced iron oxide coated fractures			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		523.8 - 527.0 an altered zone, with kaolinized feldspar, and numerous iron-oxide coated fractures, kaolinization appears to have been initiated along the fractures. Material ends at 531.4			
31.4	600*	<p>ALTERED FELDSPAR PORPHYRY, fairly large partially kaolinized, white feldspar phenocrysts, in a fine grained quartz, biotite, and possibly feldspar groundmass. Carbonate veins of siderite or ankerite are common.</p> <p>535.0 Past here the feldspar is almost totally altered to kaolinite, with some adsorbed iron-oxides giving a buff color.</p> <p>536.0 a 2" kaolinized feldspathic vein, material is also fractured.</p> <p>537.5 a 5" iron-oxide stained quartz vein</p> <p>540.0' - 541.0': a quartz vein with pyrite stringers associated with chlorite followed by a 3" vein of either siderite or ankerite (iron carbonates)</p> <p>541.4 - 543.6 - a relatively unaltered zone (40% feldspar - 35% quartz and 25% biotite)</p> <p>542.8 a small intensely fractured zone.</p> <p>543.6 - 544.0 a quartz zone with "clots" of chlorite and pyrite, and closely spaced 20°CA fractures, the 2" of unaltered material; then another 14" of quartz.</p> <p>545.0' Past here the material is again relatively unaltered</p> <p>546.0 a 5°CA, 1/2" quartz vein</p> <p>547.1 a 4" quartz vein, followed by an unaltered siliceous zone</p> <p>548.8' a 3" chlorite lined quartz vein.</p> <p>551.5' a 6" quartz zone, with incipient feldspar crystals, and thinly disseminated small feldspar phenocrysts.</p> <p>552.0 Past here, fractures more closely spaced (3"-6" apart)</p> <p>560.8 a 1" soft, green chlorite vein; followed by a 3/4" quartz vein at 75°CA</p> <p>561.8 a 3/4" quartz vein, displaced centrally 3/4" with distorted biotite bands.</p> <p>562.3 a 20°CA slickensided shear, with kaolinization on the surface</p> <p>563.8 a 3" quartz vein at 70°CA, with large biotite crystalline aggregates followed by a 6" quartz chlorite vein, then several 40°CA cross-fractures.</p> <p>566.0 a 4" "diffuse" quartz zone, with kaolinized, 40°CA fractures.</p> <p>568.5 - 569.6 a massive, white quartz vein, lined with green chlorite, with small feldspathic veins, some altered to white kaolinite.</p> <p>572.8 - 573.5 an altered zone, kaolinized feldspar, and yellow brown-carbonate lined fractures.</p> <p>578.6 a 30°CA, iron-oxide coated, slickensided <sup>shear</sup> <del>fracture</del>.</p>			



091148

# DRILL HOLE LOG

**DIP TESTS**

At 40° Ft. 350  
 At \_\_\_\_\_ Ft. \_\_\_\_\_  
 At \_\_\_\_\_ Ft. \_\_\_\_\_  
 At \_\_\_\_\_ Ft. \_\_\_\_\_  
 At \_\_\_\_\_ Ft. \_\_\_\_\_  
 At \_\_\_\_\_ Ft. \_\_\_\_\_

Property RISBY TUNGSTEN  
 At WHITEHORSE M.D. YUKON  
 Claim No. CAB #3  
 Working Place CLAIM Y25388  
 Baseline Footage 24+00.5  
 Baseline Offset 0+00  
 Date Started 22 AUG 1971  
 Date Completed 24 AUG 1971

Hole Number R-7-71  
 Dip 45°  
 Length 352  
 Bearing 322°  
 Elev. Collar 6090 ASL  
 Horiz. Trace \_\_\_\_\_  
 Vert. Trace \_\_\_\_\_  
 Date Logged 24 + 25 AUG 1971

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
0.0	4.0	CASING		0.02	Cu
4.0	16.0	GRANITIC INTRUSIVE: initially about 75% feldspar and quartz and 25% biotite, material is extensively frost shattered (4-10' - about 50% recovery) 10.0'-14.0' very much shattered and fractured (40% recovery) Part here rock becomes more mafic, with minor amounts of pyrite grains. 14-16.0' - about 65% recovery. material ends with a sharp contact.			
16.0'	28.2'	METASEDIMENTARY GNEISS composed of coarsely crystalline brown biotite bands, alternating with green, fine grained quartz-carbonate-chlorite bands aligned at 40°CA. Material is frost shattered and fractured. 16.0 - 21.0. very much shattered and broken up. (60% core recovery) material ends with a sharp 50° CA contact.			
28.2"	32.6"	DIOPSIDIC SKARN - a coarse grained material composed mainly of intergrown diopside prisms with minor quartz and carbonate, poorly formed glaucophane garnets are scattered throughout this zone. Gradually material assumes a gneissic texture - as it gradually changes end with a 40°CA contact.			
		SAMPLE #2197 28.2 - 32.6 only scattered scheelite bands.	#2197	0.02%	0.02%
32.6	40.0	METASEDIMENTARY GNEISS alternating biotite, and quartz-carbonate-chlorite banding at 40°-45°CA, fractures spaced from 6"-12" apart. 33.0 Past here the material becomes more siliceous 36.5 - 37.0 scattered pyrite grains in a siliceous groundmass. ends with a sharp 60° CA contact at 40.0'			
40.0	42.1	INTRUSIVE - a granitic textured feldspar-quartz-biotite material ending with a sharp 65° CA contact - at 42.1			

Logged by [Signature]

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
42.1	47.3	QUARTZ-FELDSPATHIC HORNFELS: quartz and biotite in matrix, with light blue lath-like feldspar crystals (possibly cordierite?) in places the biotite has segregated into granitic textured bands, material has scattered quartz veins and widely spaced fractures at 60°-80°CA - ends with a 25°CA contact.			
47.3	50.0	INTRUSIVE light colored, 55% euhedral feldspar, 40% interstitial quartz and biotite with minor muscovite, some kaolinized fractures.			
50.0	52.8	METASEDIMENTARY GNEISS - biotite bands and quartz-carbonate-chlorite bands aligned at 40°CA			
52.8	54.8	DIOPSIDIC SKARN - a quartz rich variety with poorly formed grossularite garnets several minor bands of disseminated scheelite were noted by ultra-violet examination ends with a wavy contact.			
54.8	66.5	METASEDIMENTARY GNEISS 40°CA alternating biotite, and quartz-carbonate-chlorite bands. 57.3 - 58.5 a zone of intense fracturing, with surface clay and iron-oxide 59.0' - a 3" zone of folded, contorted banding 61.0 - 63.1 a zone with negligible biotite; Material ends with a sharp, small scale brecciated contact.			
66.5	71.5	DIOPSIDIC QUARTZ SKARN: a coarse grained material of intergrown perovskite of diopside with quartz. Only scattered bands of tiny scheelite crystals were noted under ultra-violet examination. Material has a gradual change			
SAMPLE	#2198	66.5 - 71.5	minor scheelite with 1%	between 67.0 & 68"	#2198 0.01% 0.02%
71.5	137.5	METASEDIMENTARY GNEISS - 60°CA alternating biotite, and quartz-carbonate-chlorite banding, with scattered quartz veins and fractures. 78.0 a 4" quartz vein at 60°CA, with incipient pink crystals, and hairline calcite 80.5' a 4" chlorite lined quartz vein with grains of pyrite with minor scheelite. 82.3' a biotite lined 60°CA 1 1/2" quartz vein; followed by a 65°CA shear 84.1' a 10" siliceous vein; followed by a zone of large chlorite aggregates 87.2' a 2" zone of material crushed to a clay-like consistency 88.5 a 1/2" vein of scheelite crystals associated with quartz in a fractural zone			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		89.0 a 45° CA shear; followed by a 1" quartz vein; then a 7" micaceous zone. Then assuming a more normal uniform gneissic texture.			
		94.0 a 1/2" quartz-calcite vein, lined with 1/2" chlorite vein all at 40° CA.			
		94.7 a 8" siliceous zone with about 10%-15% green chlorite			
		98.0 a 6" quartz vein with incipient feldspar			
		99.4 several closely spaced, iron-oxide coated fractures at 45° CA			
		102.8 a 4" fractured quartz vein; then a 2" chloritic vein, and a 4" quartz vein with a 1 1/2" SKARN zone with poorly formed garnets and a band of cubical scheelite. - Then again a more uniform gneiss.			
		107.5-108.3 several 1 1/2" wide quartz-carbonate lenses, with displaced gneissic landing - then again a uniform gneiss			
		113.8 - 115.4 a siliceous zone with about 15% chlorite - fine grained.			
		117.5 - 120.5 a fine grained siliceous zone with about 15% chlorite.			
		119.3 a 30° CA slickensided shear, with colorless acicular crystals.			
		121.5 a calcite and chlorite lined 30° CA shear.			
		123.0 a zone of intersecting fractures.			
		125.0 a 4", 40° CA quartz vein, with incipient feldspar			
		128.0 a 5° CA, slickensided shear, with 40° CA cross fracturing			
		129.1 a 10° CA, slickensided shear covered with calcite and iron-oxides			
		129.5 - 130.1 a quartz vein, with "wavy" contacts, and pyrite bands.			
		134.4 a 1 1/2" intrusive granitic vein at 60° CA, drag folded gneissic bands.			
		135.8 a 20° CA "ragged" fracture, followed by an intrusive quartz vein showing drag folding in the gneissic bands. ends with a sharp 55° contact at 137.5			
137.5	150.0	INTRUSIVE - initially has a somewhat gneissic texture, rapidly assuming a more granitic texture; composed of about 40% grey cubical feldspar phenocrysts in a quartz and biotite groundmass. 145.8 a 1 1/4" quartz vein at 65° CA 146.7 a "diffuse" "dendritic" quartz vein 147.0 a 60° CA slickensided shear, then a 1 1/4" 50° CA quartz vein ends with a 1 1/2" quartz vein at 60° CA at 150.0			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
				WO <sub>3</sub>	CU
50.0		METASEDIMENTARY GNEISS initially a greenish colored quartz-carbonate-chlorite material with scattered brown biotite bands aligned 50°CA. 151.4 a "ragged" iron-oxide coated fracture, parallel the CA, runs for several feet. 153.6 a 2" zone of friable biotite bands, sheared at 60°CA. 154.8 a 30°CA slickensided shear, lined with chlorite. 157.0-158.2 a major shallow angle, slickensided shear, <del>intensely</del> intensely cross-fractured, producing a "blocky" zone. 162.3 - 166.3' a siliceous zone, with scattered lenses of biotite aligned at 60°CA. 167.0 Past here the rock assumes a more normal gneissic texture. 167.7 a folded "wavy" 1/4" quartz-calcite vein. 171.0 a 3/4" quartz-calcite vein, with brecciated contacts; followed by a 1" wide brecciated zone; then a 1/8" quartz-calcite vein, and a 30° slickensided shear. 175.0 Past here a more uniform gneiss, with fractures 3"-6" apart 182.0 a 1/4" calcite-zeolite vein at 65°CA, with brecciated contacts 186.6' a 20°CA, slickensided shear, with chlorite; Past here the overall quantity of mafic materials increases. 188.0 a 1/4" wide quartz, with chloritic inclusions, lens at 65°CA. 188.5-192.0 a zone of intense shearing and fracturing, crossed by several quartz veins. The slickensided shears appear to be aligned at 60°CA (70% recovery) 192.6 a 1 1/2" 60°CA quartz vein; followed by a 1/4" calcite vein 193.8 - 194.6 an intensely fractured zone, blocky and broken up. 195.6 - 196.1 an intensely fractured and sheared zone; the central portion is ground up to a fine grained material with quartz fragments. 198.4 a 1 1/4" lens composed of tiny euhedral scheelite crystals (U.V. examination) 198.6 - 201.6 an intensely fractured quartz zone, in places crushed to 1/2"-2" fragments, iron-oxide staining is common. 201.6 - 208.5 an intensely fractured siliceous zone with up to 20% chlorite bands compared of tiny euhedral scheelite crystals occur through this zone 208.0 - <del>208.5</del> a zone containing bands of euhedral scheelite crystals.			
SAMPLES	* 2195	201.6 - 206.0	* 2195	0.08%	0.02%
	* 2196	206.0 - 208.5	2196	0.02%	0.02%
		209.0 Past here intensely sheared and fractured with numerous quartz veins, and major shearing parallel the CA, with cross fracturing. ends in a brecciated zone at 213.0			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
213.0	225.3	INTRUSIVE a porphyritic texture, with grey, $\frac{1}{8}$ " feldspar phenocrysts in a fine grained quartz, and biotite matrix, with occasional quartz veining, near the contact the material has a somewhat gneissic texture, and is intensely fractured 217.0 Some iron-oxide coated fractures. 220.0 - 222.0 fractures $\frac{1}{4}$ " - $\frac{1}{2}$ " apart, very broken up and blocky 225.0 a 3" zone of vuggy calcite and zeolites, followed by a 30° CA slickensided shear - material ends at 225.3'		
225.3	233.9	DIOPSIDIC QUARTZ SKARN composed of intergrown green prisms of diopside (poorly formed) with quartz-carbonates. Garnets and sulphides were present in only small amounts, and ultra-violet investigation showed negligible scheelite. Initially closely fractured $\frac{1}{2}$ " - 3" apart, but becoming more widely spaced 229.6 more closely fractured again, and some finely ground up, clay-like zones 232.7 - 233.1 a chlorite lined quartz carbonate vein, with minor pyrite		
233.9	240.0	INTRUSIVE an intensely sheared and fractured feldspar, quartz, and biotite material with a gneissic texture. Secondary calcite, and quartz is present in most of the sheared and fractured zones 234.0 rock is ground up to a clay like material 235.0 Part here a large, shallow angle fracture, with kaolinization along it. pyrite, to a large degree altered to red iron oxide pseudo-morphs is present throughout this zone. Material ends with a gradual change		
240.0	279.0	METASEDIMENTARY GNEISS - composed of biotite bands alternating with quartz-carbonate-chlorite bands, initially poorly formed, aligned at 60° CA. Much of this material is crushed, fractured and brecciated. 242.0' a 3" vuggy quartz-carbonate vein, with iron oxides 243.0 a 4" quartz vein, ends with a brecciated contact; Part here large scale (2" - 10" fragments) brecciation, with little movement, and iron-oxide cement. 248.5 a 3" chloritic zone; followed by a $\frac{1}{2}$ " calcite vein, then another chloritic zone, then a more siliceous zone (at 150.0 - a single crystal $\frac{1}{4}$ " of scheelite) 251.2 - 254.0 crushed and fractured zone, with pyrite and iron-oxides; then a more siliceous groundmass, with more widely spaced fractures. 256.4 a 1", iron oxide coated quartz vein		

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY
		257.3 and 258.2 - 1/4", 50°CA, quartz veins, with black iron-oxide pseudomorphs after pyrite		
		260.0 very coarsely brecciated part here		
		261.7 iron-oxide stained calcite veins; Part here a massive, hard, grey siliceous zone to about 264.0±		
		262.3-262.5 a micaceous zone, slightly friable.		
		265.0 a 2°CA, iron oxide coated fracture; followed by a 1 1/2" quartz vein, then the gneissic banding becomes more irregular and "wavy" to "flowing"		
		271.6 - 273.0 a crushed and brecciated zone, with calcite cement, and secondary iron-oxide coated calcite veins		
		273.8- 274.5 a brecciated and crushed zone, cemented with calcite		
		276.5 a 1/2" "wavy" quartz vein; followed by 30°CA shears and fractures.		
		277.4-278.0 a crushed and brecciated zone, in places ground up to a clay-like consistency with scattered quartz fragments. Material ends at 279.0		
279.0	301.0	METASEDIMENTARY GNEISS a higher grade metamorphism than the previously described material, in addition to the biotite, and quartz-carbonate-chlorite banding aligned at 30°CA, this material contains scattered phenocrysts or phenoblasts of feldspar.		
		281.0 several shallow angle 1/8"-1/4" quartz veins.		
		283.5 a 1" brecciated zone, with calcite cementation		
		285.0 a 6" crushed zone - ground up to a clay like consistency		
		286.0-288.1 coarsely brecciated, numerous voids, and limited amounts of calcite and iron-oxide cementation.		
		288.1 - 289.5. a zone of "flowing" - "wavy" banding, with quartz lenses followed by a brecciated zone to 292.2		
		292.2 - 293.5 intensely fractured and crushed in places to a clay-like texture.		
		293.0 gneissic banding, although poorly formed, is again present.		
		298.0-301 material ends in a crushed and brecciated zone.		
301.0	316.4	INTRUSIVE a light grey, granitic textured, to porphyritic textured material, of 1/16"-1/8" subhedral grey feldspar phenocrysts in a finer grained quartz-feldspar-biotite ground mass, many of the phenocrysts appear to be kaolinized		
		314.0 a brecciated zone, cemented by calcite		
		315.4 - 316.1 a band of unaltered meta-sedimentary gneiss material ends at 316.4.		

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
316.4	324.0	DIOPSIDIC SKARN, coarsely crystalline diopside prism with quartz and carbonates, scattered grains and stringers of pyrite and pyrochlore are present. Ultra-violet examination indicated negligible scheelite. 319.4 a 10° "ragged" fracture; followed by a chloritic zone. Past here pyrite stringers are common, ends with a sharp 20°CA contact at 324.0			
324.0	331.2	METASEDIMENTARY GNEISS, alternating coarsely crystalline, brown biotite bands, and greenish, quartz-carbonate-chlorite bands at 60°-40°CA, with only widely spaced fractures 329.5 Past here an overall slight increase in the siliceous content. 330.2 a 20°CA, iron-oxide coated fracture, with parallel calcite veins Past here a more siliceous groundmass with pyrite inclusions, ends with a 65°CA contact			
331.2	342.2	INTRUSIVE a light colored, coarse grained, granitic textured material composed of 55% cuboidal feldspar, 40% interstitial quartz, with minor biotite, muscovite, and unidentified mafics. 335.1 - 338.0 a zone with slight kaolinization of the feldspar, especially along fracture surfaces; Past here a 3.0' siliceous zone 339.0 a "ragged" fracture parallel the core axis, lined with iron oxides. 340.1 a 1/4" micro-brecciated zone cemented by chlorite: Past here there is an overall increase in the grain size Material ends with a sharp, chilled, contact at 342.2			
342.2	343.3	INTRUSIVE - a coarse grained material with 10-20% biotite and 50% feldspar and 30% quartz ends with a sharp contact at 343.3			
343.3	352.0 <sup>+</sup>	INTRUSIVE - a coarse grained, light grey material, with a granitic texture, composed of about 55% subhedral feldspar, 35% interstitial quartz, and 5% biotite with minor muscovite. Material exhibits only widely spaced fractures. 347.0 a 2" quartz vein at 60°CA, lined with kaolinized feldspar. 348.0 a 10°CA fracture, <del>thin</del> , separated by 1/4", this space remains empty of secondary mineralization HOLE ENDS AT 352.0			

## DRILL HOLE LOG

01142

## DIP TESTS

At 65° Ft. 600  
 At ..... Ft. ....  
 At ..... Ft. ....  
 At ..... Ft. ....  
 At ..... Ft. ....  
 At ..... Ft. ....

Property RISBY TUNGSTEN  
 At WHITEHORSE M.D. YUKON  
 Claim No. CAR # 25  
 Working Place CLAIM 425514  
 Baseline Footage 10+00 B  
 Baseline Offset 13+00 E  
 Date Started 27 AUG 1971  
 Date Completed 30 AUG 1971

Hole Number R-8-71  
 Dip VERTICAL  
 Length 600'  
 Bearing .....  
 Elev. Collar 5160.0 ASL  
 Horiz. Trace .....  
 Vert. Trace .....  
 Date Logged 30 AUG 1971

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
0.0	8.0	CASING			
8.0	72.6	METASEDIMENTARY GNEISS, composed of alternating, brown, coarse-grained biotite bands, and greenish, finer grained-quartz-chlorite-carbonate bands aligned at 65°-70° CA. Initially the material is closely fractured. 11.0-12.1 Mafic zone, probably fine grained biotite, brecciated with calcite. 12.1-15.0 a more siliceous groundmass, giving a lighter color 13.0 a 1" quartz vein at 50° CA, fractured at 30° CA 14.0 Several inches of closely spaced fractures, then "wavy" banding 25.0 Several cross fractures, then 3" of material crushed to a clay-like ground mass, with angular quartz fragments; then 10" of intensely fractured rock and 3" of soft green chloritic material. 33.0-36.0 an intensely fractured zone, with some clay-like material on fracture surfaces; Past here fractures 1"-3" apart, with scattered quartz veins 36.2 a 2" quartz vein showing displacement of biotite banding 40.1 a 1/2" quartz vein at 80° CA; Past here banding tends to be "wavy" and "lensy" 43.0-43.6 a zone of closely spaced fractures (1/2"-2") then a 2" quartz vein at 70° CA 46.2-47.3 a concordant quartz vein at 70° CA, fractured, with chlorite inclusions. 53.2-54.0 a folded zone, with contact folded banding, then a concordant quartz vein, then a 4" quartz vein parallel the 60° SNEIRACITY 56.0-57.1 a zone of closely spaced, fractures - 1/2"-2" apart 58.0 Past here a slight overall increase in siliceous material, the biotite banding tends to be lenticular in shape and further apart. 63.0' The siliceous material now comprises over 50% of the total volume. 66.5-68.5' a siliceous groundmass with small lenticular lenses of fine grained biotite 69.0 a 25' CA, zeolite lined fracture, with hairline quartz veining 70.1 a 60° CA fracture; followed by several cross fractures. Material ends with a gradual contact at 72.6			

Logged by



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
72.6	73.0	SILICEOUS SKARN, with pink poorly formed crystalline bands alternating with chlorite, material ends with a fractured contact (U.V. examination showed no schistosity)			
73.0	93.6	INTRUSIVE initially has a fine grained, porphyritic texture near the contact, but rapidly assumes a coarser-grained granitic texture, grey color. Composed of about 45% euhedral feldspar, 25% interstitial quartz, and 20% biotite crystals. 77.0 a 10° CA fracture; Post here only widely spaced fractures 78.3 a 30° CA slickensided fracture. 82.0 a slight overall increase in the quartz content. 83.1 a 1/2", 70° CA quartz vein; followed by a manganese-dioxide coated 50° CA shear. 84.5 a 1" white quartz vein at 80° CA 87.5 Several closely spaced 30° to 45° CA fractures. 88.5 a 50° CA slickensided shear, followed by several fractures and a 1/2" quartz vein with pink feldspar crystals. 93.0 Several closely spaced 40°-60° cross-shears, material ends with a sharp contact			
93.6	159.0	METASEDIMENTARY GNEISS fine-grained, poorly defined texture near the contact, but assuming a gneissic banding of brown biotite, and greenish quartz-carbonate-chlorite, aligned at 60°-70° 94.1 a 1/4" quartz vein lined with chlorite. 95.5-96.7 a siliceous marble vein, with contorted fine grained grey bands; then a 1 1/2" angular quartz inclusion, lined with green chlorite. 97.8 a 4" quartz vein, internally fractured; followed by a 3" wide folded zone; Post here gneissic banding shows open, "flowing" folding. 101.0 a "diffuse" quartz-chlorite zone; followed by a 1/2" micro-brecciated vein 102.9 small scale drag folds occur along a main fault, then into a zone of fracturing - 104.4 - a 3" crushed zone, cemented by "healed rock" 105.8 a "diffuse" 3" wide quartz-chlorite zone 107.4-108.1 a FAULT - crushed rock, with drag folding of the bands 109.0 a small scale, tightly folded zone. 111.1-115.0 a quartz zone, lined with green chlorite, and stringers of discontinuous pyrite, then more quartz and chloritic lenses, with numerous waxy zones. 120.0 a 8" quartz vein with chlorite stringers, and calcite blebs. 126.0 "wavy" lenticular biotite bands, with some drag folding 130.0 a 4" crushed, clay-like zone, with calcite and iron oxides			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		132.0 a shear, coated with graphite			
		133.5 a 25°CA fracture lined with zeolites			
		135.5 a 2°CA, fracture lined with a druse of calcite schalenohedrons; followed by a 3" rounded quartz bleb, lined with chlorite			
		139.0 a 2" quartz vein at 85°CA, lined with chlorite; followed by a 10" rather diffuse quartz zone, extensively fractured.			
		141.6 Past here there is a slight overall increase in the biotite content.			
		145.8-149.5 an intensely fractured zone, with a quartz-calcite vein running essentially parallel the core axis, much of the landing exhibits drag folds along this vein. Towards the end there is large scale brecciation, with calcite cement. Then into a finely crushed and ground up zone.			
		151.3 a 40°CA slickensided shear; followed by several closely spaced fractures.			
		151.1 a 5" quartz vein, parallel the 60°CA gneissosity			
		152.9-153.9 a 60°CA, sheared zone, with cross fracturing, and crushed zones			
		154.2 a 2" quartz vein at 30°CA, sheared, with slickensided surfaces			
		156.0 a 3" quartz vein at 60°CA, vuggy and lined with iron oxide material ends at 159.0, with a chlorite lined 30° contact.			
159.0	169.0	MARBLE a massive white crystalline material, with several thin quartz veins. numerous xenoliths of the gneissic rock occur throughout this material.			
		160.4 Several slickensided shears at 30°-60°CA to 163.0'			
		163.5 Several calcite and zeolite lined 30°-40°CA fractures.			
		164.1-165.9 a gneissic vein, contorted and folded lands along contacts. this vein ends with a 7" crushed and brecciated zone: Past here a very clean white marble, ending with a sharp 60° contact at 169.0			
169.0	231.0	METASEDIMENTARY GNEISS initially the gneissosity has a "wavy" "flowing" texture, with numerous chloritic bands, and hairline calcite veins.			
		170.3. Several quartz-calcite veins from 1/16" - 1/4" lined with chlorite and calcite			
		171.0 an 18" siliceous zone, with chloritic inclusions. Past here "wavy" gneissosity			
		174.0 - 177.0 a "ragged" iron oxide coated fracture in and out of the core crossed by a 1/2" calcite vein at 65°CA. Gneissosity angle decreases to 45°CA.			
		180.0 a 1" vuggy calcite-zeolite vein, with sheared 30°CA contacts.			
		181.4 intersecting fractures at 30° and 60°CA			
		184.0-187.0 overall increase in siliceous content with "wavy" biotite landing			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		188.1 Several closely spaced fractures, faces separated by $\frac{1}{32}$ " voids			
		188.9-192.0 coarsely brecciated (1"-10" fragments) cemented by calcite, then into a crushed zone, numerous secondary calcite veins through this zone			
		193.0 and 194.2- $\frac{1}{2}$ " calcite lined shears, showing drag folds in the landing			
		195.0 Several micro-fault planes at 20°-30°CA, with $\frac{1}{16}$ "- $\frac{1}{8}$ " movement.			
		195.3 Past here the gneissic landing becomes more regular, with scattered lenticular calcite veins up to $\frac{1}{2}$ " wide			
		201.0-201.8 a micaceous zone, crushed and ground up to a clay-like black material. secondary calcite schalenohedrons up to $\frac{1}{8}$ " occur here, along with calcite lined fractures. Part here the gneissic landing angle steepens to 65°CA.			
		203.8' Several closely spaced 30° and 60°CA intersecting fractures			
		205.8 a 45°CA fracture lined with a druse of zeolites			
		206.3-207.1 a large scale fracture parallel the core, with closely spaced cross-fractures, much secondary calcite veins, and calcite schalenohedrons up to $\frac{1}{8}$ "			
		208.0-209.3 a calcite rich matrix, with fine-grained, grey-colored landing.			
		212.0-212.5 clay lined 60° fractures			
		213.2 a 60°CA fracture, lined with a $\frac{1}{4}$ " layer of clay and calcite.			
		220.4 a calcite lined fracture at 30°CA			
		222.1-223.0 closely spaced fractures crossed by a shallow angle hairline calcite vein Part here the angle of gneissosity steepens to 70°CA.			
		224.4 a 70°CA wuggy zeolite vein			
		226.0 a "ragged" shallow angle fracture, Part here fractures tend to be closer together			
		229.5 Several intersecting fractures. Material ends at 231.0 with a 60°CA contact.			
231.0	236.4	FELDSPAR PORPHYRY white to grey, $\frac{1}{16}$ "- $\frac{1}{8}$ " rarely $\frac{1}{4}$ " feldspar phenocrysts, in a fine grained, dark colored, quartz-biotite ground mass. Pyrite occurs as disseminated grains, and small crystalline aggregates. 234.0 a "wavy" chlorite-calcite vein at 15°CA; Part here limited kaolinization occurs in some of the feldspar. 234.8 Past here the rock is brecciated and crushed, with shallow angle shears, lined with "smears" of pyrite. Material ends with a sharp contact			
236.4	232.0	METASEDIMENTARY GNEISS initially the quartz carbonate-chlorite component predominates with only scattered biotite bands at 60°CA 238.0 a $\frac{1}{2}$ " 40°CA quartz-calcite vein lined with "clots" of chlorite			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		243.0 a series of tight monoclinal folds in the greisic banding			
		244.0 a 3" quartz vein, tightly monoclinaly folded, followed by a similar 1" vein; then a calcite lined, wavy slickensided shear - Then uniform greisic bands			
		248.0 a 1/2" quartz vein, parallel the 65° CA gneissosity			
		249.0 a 7" siliceous zone, followed by several calcite lined, slickensided shears at 60° CA, material ends at 252.0 with an 80° contact.			
252.0	292.5	INTRUSIVE - FELDSPAR PORPHYRY made up of about 45% euhedral feldspar phenocrysts in a dark colored, fine-grained, quartz and biotite groundmass.			
		256.0 Several closely spaced intersecting fractures at 30° and 60° CA			
		259.9 - 260.8 - an altered (feldspar to white kaolinite) and fractured zone			
		262.0 - 267.0 - a large fracture, parallel the core axis, with extensive cross fracturing, around 265.0 the feldspar is kaolinized along the fracture.			
		270.0 Past here the crystal size of the biotite increases; and the fractures are spaced from 2" to 4" apart, only rarely coated with iron oxides.			
		275.8 - 276.9 a major fracture, parallel the core axis, with cross fractures			
		278.1 - 284.0 a zone of intense fracturing, many of the surfaces are channels for kaolinization of the feldspar.			
		279.0 - 280.1 a massive light blue-grey, fractured quartz zone			
		281.1 a graphite covered 5° CA shear			
		286.5 - 287.1 a zone of closely spaced 60° CA to 80° CA fractures.			
		290.0 a 50° CA slickensided shear, with some chlorite on the surfaces.			
		291.0 Past here a more siliceous matrix, with numerous "quartz-healed" fractures - ends with a sharp contact at 292.5			
292.5	533.0	METASEDIMENTARY GNEISS about 70% light green colored - quartz - chlorite - carbonate, with coarse grained, widely scattered, lenticular bands of brown biotite aligned at 70° CA.			
		295.1 - 297.7 an intrusive porphyry vein, with green chloritic inclusions			
		299.0 - 300.7 a major shallow angle fracture, with secondary calcite.			
		303.0 Several 1/2" quartz-carbonate veins at 80° and 30° CA, with parallel but contorted chlorite veins.			
		304.0 a 1/2" calcite-quartz vein, with parallel chlorite bands at 70° CA			
		305.1 a 3" zone of tight "kink" folds; followed by a 3" fractured quartz vein and fairly closely spaced 60° to 80° CA fractures			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		307.0 - 309.0 Several zones of open monoclinal folding, followed by a crushed zone			
		309.6 a 1" quartz vein with chlorite inclusions			
		310.5 - 311.5 a faulted and folded zone, with some calcite cemented minor brecciation			
		313.0 - 315.6 a major fracture, calcite lined, parallel the core axis, with cross-fractures and 60° CA slickensided shears			
		314.0 a ground up and crushed zone			
		<del>317.7</del> 317.7 a 1/2" calcite quartz vein at 40° CA. Part here gneissosity at 60° CA.			
		318.5 - 319.6 a fracture zone, with fractures 1" apart			
		321.2 Several siliceous lands and quartz blebs; then an 80° CA slickensided shear			
		322.6 a 5° CA micro fault plane with 1/8" movement; followed by a 1" calcite vein cemented brecciation zone.			
		324.6 a 6" massive, internally fractured quartz vein at 80° CA, the lower contact is sheared at 30° CA - then followed by several fractures lined with clay.			
		326.2 - 329.1 a crushed, folded, brecciated zone, some contorted folded lands, and large scale brecciation (1"-2" fragments) cemented by calcite			
		331.0 Several closely spaced fractures			
		332.5 - 333.1 an intensely fractured zone, part here gneissosity again 70° CA.			
		337.6 a 3" quartz vein, with biotite and chlorite inclusions; followed by a 1/2" veins of biotite and quartz: Part here gneissic lands tend to be "wavy"			
		340.6 - 342.4 a zone of about 70% biotite, with scattered hairline quartz veins.			
		342.8 a 1/8" quartz-calcite vein; followed by a 4" crushed zone with quartz fragments			
		345.0 a 1/2" vuggy quartz vein at 20° CA			
		349.4 a crushed and brecciated, 4" quartz vein, then 4" of crushed gneiss.			
		351.5 a 2" light green chlorite lined quartz vein followed by a 4" diffuse siliceous zone, then another 1" quartz vein, and several 60° CA fractures.			
		352.0 - 352.3 open "wavy" folds in the gneissic lands.			
		353.8 - 355.8 a crushed zone - ground up clay like groundmass with quartz fragments, followed by a coarsely brecciated zone with calcite cementation.			
		357.0 a 3" quartz vein, with chlorite lined, sheared 80° CA contacts			
		358.0 a chlorite lined, 2" quartz vein; followed by several smaller quartz veins with "clots" of biotite			
		359.8 a 10° CA fracture			
		360.7 a 1" quartz vein; followed by a more siliceous matrix			
		361.6 a 5" massive white quartz vein with biotite, followed by intersecting fractures at 30° CA			
		364.0 a slickensided, shallow angle shear, with calcite and pyrite cubes			
		369.0 a zone of closely spaced, intersecting fractures.			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		370.0 a 1" 70°CA quartz vein lined with quartz blebs			
		371.0 Several closely spaced 1/2" to 1 1/2" quartz veins; followed by a 10° chlorite zone			
		372.0 Several angular, 1/4" by 2" calcite veins, then coarsely brecciated, with 1/2" to 4" fragments, with little movement, cemented by calcite to 374.2			
		380.0 a 3/4" quartz vein at 60°CA			
		383.6 - 385.6 closely spaced, pyrite coated fractures			
		386.3' a 2" extremely fine grained grey siliceous zone, followed by a 40° slickensided shear			
		386.6 - 397.0 a zone of closely spaced fractures and slickensided shears, broken up. in effect brecciated with no cement, minor secondary calcite vein with pyrite cubes and grains.			
		395.0 a 6" quartz vein with inclusions of chlorite			
		397.6 - 398.0 Several closely spaced fractures			
		399.4 a 1" quartz vein parallel the 60° gneissosity, followed by a 2" chlorite vein			
		400.1 a 1" thick micro-brecciated zone cemented by quartz, with pyrite along contacts. Part here fractures 4"-10" apart, often with pyrite on their surfaces.			
		403.1 Several, fractured, friable biotite bands, possibly action of ground water			
		405.0 Rounded inclusions of chlorite; then a calcite lined 10° and 60°CA shears.			
		406.0' a 5°CA 1/2" calcite and chlorite vein, with numerous hairline 60°CA calcite veins then into a brecciated zone, cemented by calcite.			
		407.0 Part here material tends to become more siliceous, with calcite veins etc.			
		408.9 - 423.4 MAJOR FAULT - 70% recovery, extensively crushed and brecciated. graphite coated shears are common. In places the rock is ground up to a clay-like consistency, with angular quartz fragments. Pyrite as tiny cubic crystals and asbedded grains is common throughout the zone.			
		420.0 - 429.0 a coarsely brecciated, quartz rich zone, then part here the material is ground up to a clay like consistency.			
		424.3 Part here the gneiss appears to have a higher percentage of carbonate in the banding.			
		427.0 Banding becomes more irregular, tends to become "wavy"			
		428.5 - 429.4 a coarsely brecciated zone (1/2" - 2" fragments) cemented by calcite			
		430.2 a 2" quartz band, fractured at 30°CA			
		430.4 - 433.0 a carbonate zone, with flattened lenses of a buff colored carbonate randomly oriented throughout this zone. Part here gneissic banding becomes more uniform, but still fairly rich in carbonate material			
		437.2 a 1" chlorite vein, lined with quartz			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		438.4 a 45° CA, small scale fault plane			
		441.0 Several large quartz-chlorite inclusions, then a fine grained, dark mafic zone.			
		442.0 a 3/4" quartz vein at 80° CA, containing granular pyrite			
		443.8 a 10" massive, white quartz vein at 70° CA; then numerous small quartz lenses			
		446.0 a 6" zone of an extremely fine grained grey material, with some graphite			
		446.5 - 448.0 an intensely crushed and fractured zone, with surface pyrite.			
		451.0 - 452.1 an intensely fractured zone; Part here gneissic banding at 70° CA.			
		454.0 - a 1" quartz vein, lined with grains of pyrite at 80° CA			
		455.0 - 455.5 a sheared, friable, micaceous vein, silvery-white mica, possibly muscovite			
		459.0 Part here a more uniform gneissic texture, with up to 40% mafic.			
		460.0 a 1" quartz vein at 60° CA, with chlorite inclusions and pyrite cubes.			
		462.5 a 1" quartz vein, parallel the 70° gneissosity			
		463.5 a 5" massive, white quartz vein; followed by a similar 1" vein.			
		467.0 1" calcite vein at 80° CA in a more chloritic matrix.			
		470.0 - 472.5 a sheared zone, slickensided 60° CA shears.			
		471.0 an 80° CA, 1" quartz vein with pyrite cubes			
		473.2 - 474.3 a sheared zone, slickensided 85° CA shears, with some quartz veins			
		476.3 - 476.9 a sheared zone similar to that at 473.2			
		477.9 a 1" sheared zone at 60° CA			
		481.8 - 482.3 a shallow angle, "ragged" fracture, with cross fractures.			
		483.2 three 1/2" wavy, chlorite lined quartz veins			
		485.0 a 1 1/4" 60° CA quartz vein.			
		487.0 - 488.3 numerous veins and lenses of quartz-carbonates, some lined with chlorite			
		489.0 - 491.0 an intensely fractured zone, crossed by a shallow angle slickensided shear.			
		491.9 - 493.8 a shallow-angle, "wavy", slickensided shear; followed by a 12" quartz vein.			
		495.0 Part here green chloritic "clots", and small 1/8" quartz-calcite veins			
		497.5 - 498.1 intersecting fractures - some movement resulting in uncemented voids			
		499.1 a 4" zone of closely spaced fractures; then a 3" massive quartz vein at 70° CA			
		501.0 - 502.0 numerous closely spaced fractures			
		502.0 - 506.0 several 1" - 1 1/2" massive, white quartz veins, zone is crossed by a "ragged" shallow angle fracture.			
		506.5 a 60° CA 1" blue-grey quartz vein.			
		508.9 - 509.3 a slickensided, sheared zone at 60° CA, pyrite "smears" are common			
		511.0 - 513.2 a shallow angle, pyrite "smeared" slickensided shear			
		515 - 516.3 a shallow angle "ragged" shear with flattened pyrite cubes			

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ASSAY	
		517.0 Part here a slight overall increase in mafic material			
		518.1 a 1" white 80°C quartz vein, a similar vein at 518.7			
		520.0 Part here thinly disseminated 1/4" - 1/4" garnets (with inclusions of calcite) to 523.0			
		523.0 Several small 60°C quartz veins, with pyrite cubes			
		525.2 a 1/2" wide quartz lens, followed by a 1/4" 85°C quartz vein			
		526.5 a 8" quartz-carbonate vein, with some micro-faulting, with 1/4" displacement along a 40°C Plane. Part here an overall increase in siliceous material.			
		529.3 a 3" quartz vein at 80°C			
		531.2 a 1 1/2" quartz vein at 80°C; then scattered 1/2" - 1/4" quartz veins. material ends at 533.0 with a fractured 80°C contact			
533.0	535.6	INTRUSIVE - FELDSPAR PORPHYRY an extremely fine grained, dark colored, granular mass (quartz-apatite?) with poorly formed grey feldspar phenocrysts. Material is sheared at a shallow angle, and has numerous hairline calcite veins - each sharp contact.			
535.6		METASEDIMENTARY GNEISS brown biotite bands, alternating with greenish quartz-carbonate-chlorite bands aligned at 60°-70°C, fractures from 3" to 10" apart			
		537.6 - 539.3 a sheared and fractured zone, ground up to a clay like texture			
		543.0 a 2" band of poorly formed small garnets, pink with inclusions of calcite. There is a slight overall increase in the carbonate content, leading to more "diffuse"			
		553.0 a 3" zone of slickensided shearing.			
		555.5 a 10" slickensided shear, lined with re-crystallized biotite.			
		556.7 - 558.1 a zone of intense shearing, slickensided surfaces with muscovite			
		562.7 - 563.3 an intensely sheared zone, slickensided			
		566.1 - 567.8 a massive, white quartz vein, with pyrite stringers, lined with green chlorite, the latter 80°C contact is sheared			
		569.3 - 571.0 closely spaced, slickensided shearing at 60°-80°C, Part here the gneissosity is rather poorly defined, with fractures 1"-2" apart.			
		572.0 - 577.0 (70% recovery) an intensely sheared and crushed zone FAULT PLANE, with several small quartz veins, in places material is crushed to a clay like texture			
		582.1 a 20°C fault plane with 1/2" movement; followed by 6" of intensely sheared and slickensided material ending with a 4" brecciated zone with calcite.			
		582.7 - 587.0 a major slickensided, shallow angle shear, with graphite and pyrite. Part here several scattered quartz veins at 596.7 a 30°C shear material ends at 600.0			



International Jet Air Ltd., B Division  
(Great Northern Airways (1970) Ltd.)  
Box 2870, Whitehorse, Yukon.

021148

TO: [ ]

Caltor Syndicate  
Box 1231  
Whitehorse, Yukon

DATE August 31, 1971

INVOICE NO. B271-71

P.O. NO.

TO: Charge you with the following aircraft charters:

Piper Aztec Aircraft CF-SKI  
Pilot: L.G. Coleman

FLYING: August 4, 1971  
Daily Flight Report No. 23927

248 miles at \$70 per mile \$173.60

PLUS: Waiting time  
0.5 hours at \$30.00 per hour 15.00  
(rate when charterer supplies fuel)

PLUS: Cessna Aircraft CF-WMD  
Pilot: B. Watson

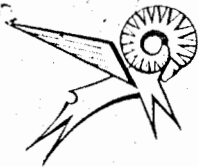
FLYING: August 10, 1971  
Daily Flight Report No. 20826  
250 miles at \$.70 per mile 175.00

INVOICE TOTAL \$363.60

TERMS: One per cent interest per month will be charged on all invoices not paid within 30 days of date issued.

*Risby Tanager*  
JA

WHITEHORSE • DAWSON CITY • ATLIN • MAYO • INUVIK



GREAT NORTHERN AIRWAYS LTD.  
NO. 3 HANGAR McCALL FIELD. CALGARY. ALBERTA

CHARTER TICKET **NO 23927**

A/C ARTIC CF-541 DATE Aug 4/71

NAME CHARTER SYNDICATE

ADDRESS BOX 1231 WHITEHORSE, Y.T.

FROM	MILES	HOURS	CARGO	PASSENGERS/REMARKS
WHITEHORSE				
ROSSA	124			ANTONUK T.
WHITEHORSE	124			

SPECIAL INSTRUCTIONS

	@	PER HOUR
248	@	-70¢ PER MILE
WAITING TIME 1 1/2 H.	@	50¢ PER HOUR
EXTRA LANDINGS	@	PER LANDING
OTHER		

TOTAL CHARGES

*[Signature]*  
PILOT'S SIGNATURE

*[Signature]*  
BASE

*[Signature]*  
CHARTERER'S AUTHORIZATION

STATEMENT COPY

WHITEHORSE • DAWSON CITY • ATLIN • MAYO • INUVIK



GREAT NORTHERN AIRWAYS LTD.  
NO. 3 HANGAR McCALL FIELD, CALGARY, ALBERTA

CHARTER TICKET No 20826

A/C CRJ3NA 185 WND DATE August 10 '71

NAME CALTOR

ADDRESS POK 1231 WHITEHORSE

FROM	MILES	HOURS	CARGO	PASSENGERS/REMARKS
<u>WHITEHORSE</u>				
<u>TO ROSS R.</u>	<u>125</u>			
<u>WHITEHORSE</u>	<u>125</u>			

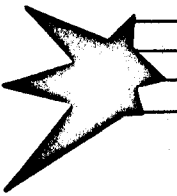
SPECIAL INSTRUCTIONS	@	PER HOUR
	<u>250</u>	<u>@ 70</u>
WAITING TIME	@	PER HOUR
EXTRA LANDINGS	@	PER LANDING
OTHER		
<b>TOTAL CHARGES</b>		

B. Watson  
PILOT'S SIGNATURE

Xy [Signature]  
CHARTERER'S AUTHORIZATION

STATEMENT COPY

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**TRANS NORTH TURBO AIR LTD.**



BOX 1977      PHONE 668-2177  
WHITEHORSE, YUKON

091142

TO:  
Caltor Syndicate  
Box 1231  
Whitehorse, Yukon

Date: September 8, 1971      Invoice No. 781-71

P.O. No.

TO: Charge you with the following helicopter charters:

Bell 206-A Jet Ranger Helicopter CF-CEH  
Crew: Dryzmala & Lancaster

FLYING: September 1 & 2, 1971  
Daily Flight Report No.'s 105 & 106

10.3 hours at \$248.00 per hour \$2,554.40

PLUS: Excess cost of fuel at Ross River  
Charterer assessed with cost of fuel  
over \$.60 per gallon

197 gallons at \$.76 per gallon 149.72  
(rate when carrier supplies fuel)

PLUS: Prorated crew expenses at Ross River 28.00

PLUS: Cost of positioning fuel from Ross River  
per Woody's Fari Statement 159.00

Bell 206-A Jet Ranger Helicopter CF-MBT  
Pilot: C.W. Armstrong

FLYING: September 2, 1971  
Daily Flight Report No. 1000

6.3 hours at \$248.00 per hour 1,562.40  
(rate when carrier supplies fuel)

PLUS: Excess cost of fuel at Ross River  
Charterer assessed with cost of fuel over  
\$.60 per gallon

132 gallons at \$.76 per gallon 100.32

INVOICE TOTAL \$4,553.84

*Risby Tangsten  
TA*

TERMS: One per cent interest per month will be charged  
on all invoices not paid within 30 days of date  
issued.



# TRANS NORTH TURBO AIR LTD.

BOX 1977, WHITEHORSE, YUKON


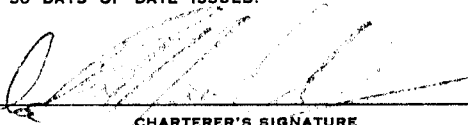
## DAILY FLIGHT REPORT

DATE 1 SEPT 71

CHARTERER:	<u>CALTOR SYNDICATE.</u>		
ADDRESS:			
AIRCRAFT:	<u>206A</u>	CF - <u>CEH</u>	AREA: <input checked="" type="checkbox"/> YUKON B.C. <input type="checkbox"/> ALTA. <input type="checkbox"/> NWT <input type="checkbox"/>

CHARTER FROM:	PASS.	CARGO	MILES	HRS.	PASS. NAMES OR REMARKS
<u>WHITEHORSE</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<u>3.8</u>	<u>Cole + Roda to Road + to Rose RIVER.</u>
<b>TOTALS</b>				<u>3.8</u>	

TNTA FUEL 3.8 HRS. 60 gal. - R.R.

 PILOT'S SIGNATURE	TERMS: ONE PER CENT INTEREST PER MONTH WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.   CHARTERER'S SIGNATURE
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# TRANS NORTH TURBO AIR LTD.



BOX 1977, WHITEHORSE, YUKON

## DAILY FLIGHT REPORT

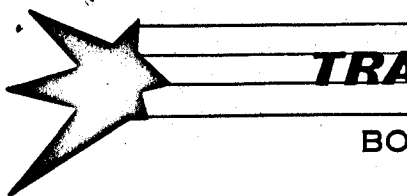
DATE 9-2-71

CHARTERER:	<u>CARTON Syn.</u>		
ADDRESS:			
AIRCRAFT:	<u>Jet Ranger</u>	CF - <u>MIBT</u>	AREA:
			YUKON <input checked="" type="checkbox"/> ALTA. <input type="checkbox"/> B.C. <input type="checkbox"/> NWT <input type="checkbox"/>

CHARTER FROM:	PASS.	CARGO	MILES	HRS.	PASS. NAMES OR REMARKS
<u>Ross River</u>					
<u>Move out drill</u>					
<u>To Highway</u>				<u>6.3</u>	
TOTALS				<u>6.3</u>	
TNTA FUEL	<u>6.3</u>				
					HRS. <u>R.R.</u>

 PILOT'S SIGNATURE	TERMS: ONE PER CENT INTEREST PER MONTH WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.   CHARTERER'S SIGNATURE
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**TRANS NORTH TURBO AIR LTD.**

BOX 1977      PHONE 668-2177  
WHITEHORSE, YUKON



091148

TO:

Caltor Syndicate  
Box 1231  
Whitehorse, Yukon

Date: August 31, 1971

Invoice No. 611-71

P.O. No.

TO: Charge you with the following helicopter charters:

Bell 206-A Jet Ranger Helicopter CF-CEH  
Crew: Dryzmala & Lancaster

FLYING: August 22, 1971  
Daily Flight Report No. 90

2.7 hours at \$248.00 per hour      \$ 669.60  
(rate when carrier supplies fuel)

PLUS: Cost of 12 Teflon lined drums not  
returned at \$15.00 each      180.00

PLUS: Bell 206-A Jet Ranger Helicopter CF-MBT  
Crew: Dryzmala & Lancaster

FLYING: August 16 & 26, 1971  
Daily Flight Report No.'s 983 & 995

9.5 hours at \$248.00 per hour      2,356.00  
(rate when carrier supplies fuel)

PLUS: Excess cost of fuel at Ross River  
Charterer assessed with cost of fuel  
over \$.60 per gallon

117 gallons at \$.76 per gallon      88.92

INVOICE TOTAL      \$3,294.52

TERMS: One percent interest per month will be charged on  
all invoices not paid within 30 days of date  
issued.

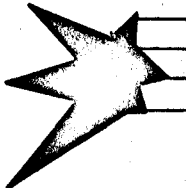
*Risby Tungsten*  
TA







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**TRANS NORTH TURBO AIR LTD.**

BOX 1977      PHONE 668-2177  
WHITEHORSE, YUKON



2253

TO:

Caltor Syndicate  
Box 1231  
Whitehorse, Yukon

091149

Date: August 31, 1971

Invoice No. 610-71

P.O. No.

TO: Charge you with the following helicopter charters:

Bell 47G-3B-1 Helicopter CF-VFC  
Crew: 'Vandenbos & Phillips

FLYING: August 4, 11, 19, 20 & 28, 1971.  
Daily Flight Report No.'s 7973, 7979, 7988, 7991  
& 8004.

8.0 hours at \$155.00 per hour      \$1,240.00  
(rate when carrier supplies fuel)

PLUS: Excess cost of fuel at Ross River  
Charterer assessed with cost of fuel over  
\$.60 per gallon

144 gallons at \$.54 per gallon      77.76

PLUS: Prorated crew expenses at Ross River      70.00  
( $\frac{1}{2}$  cost of 2 men for 5 days)

Bell 206-A Jet Ranger Helicopter CF-XFF  
Crew: Hanulik & MacKay

FLYING: August 7, 1971  
Daily Flight Report No. 352

4.6 hours at \$248.00 per hour      1,140.80  
(rate when carrier supplies fuel)

INVOICE TOTAL      \$2,528.56

TERMS: One per cent interest per month will be charged on all  
invoices not paid within 30 days of date issued.

*Risby Tungsten*  
TH













2053

# ARCTIC DIAMOND DRILLING LTD.

P.O. Box 3204,  
Whitehorse, Yukon Territory

Marwell Area - Phone 668-2440

730 - 510 W. Hastings Street,  
Vancouver, B.C.

Phone 668-3328

091149

September 2, 1971

INVOICE # 888

IN ACCOUNT WITH:

Caltor Syndicate Ltd.,  
Ste. 1011, 2200 Yonge Street,  
Toronto, Ontario

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Mobilization

Unloading charges per Yukon Freight Lines Inv. # 5001

14 hours @ \$ 25.00 per hour

\$ 350.00

*R. S. by Tungsten  
TA*

YUKON FREIGHT LINES LTD.

Box 2900

WHITEHORSE, Y.T.

No 5001

— BILL OF LADING —

TO Mile 119 On Canol Road via Ross River DATE July 18 71 19

FROM Whitehorse Invoice No.

PARTICULARS	HRS. OR MILES	RATE	AMOUNT
Haul fuel and Drill equipt to Mile 119 on R R Canol Road.	276 mi.	1.60	441.60
Unloading 14 HR *	14 HR.	25.00	350.00
Caltex Syndicate /			
P/105-620			
* Chargeable —			
			791.60

SHIPPER \_\_\_\_\_ DRIVER Wilson

CHARGE TO Arctic Diamond Drilling TRACTOR \_\_\_\_\_ TRAILER \_\_\_\_\_

REC'D IN GOOD ORDER \_\_\_\_\_ Subject to Conditions on Back Hereof.

# ARCTIC DIAMOND DRILLING LTD.

P.O. Box 3204,  
Whitehorse, Yukon Territory

Marwell Area - Phone 668-2440

730 - 510 W. Hastings Street,  
Vancouver, B.C.

Phone 668-3328 091149

INVOICE # 904

September 7, 1971

IN ACCOUNT WITH:

Caltor Syndicate Ltd.,  
Ste. 1011 - 2200 Yonge Street,  
Toronto, Ontario

HOLE # 6

Moving

96 man hours @ \$ 6.00	\$ 576.00	
26 machine hours @ \$ 6.00	<u>\$ 156.00</u>	\$ 732.00

Penetrating Overburden

0 - 16 = 16 feet @ \$ 8.50		\$ 136.00
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Coring

16 - 500 = 484 feet @ \$ 8.50	\$ 4114.00	
500-600 = 100 ft. @ \$ 9.50	<u>\$ 950.00</u>	\$ 5064.00

Reaming Casing

16 - 17 = 1 foot @ \$ 7.50	<u>\$ 7.50</u>	\$ 5939.50
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HOLE # 7

Moving

2 man hours @ \$ 6.00	\$ 12.00	
1.5 machine hours @ \$ 6.00	<u>\$ 9.00</u>	\$ 21.00

Testing

2 man hours @ \$ 6.00	\$ 12.00	
1 machine hour @ \$ 6.00	<u>\$ 6.00</u>	\$ 18.00

Penetrating Overburden

0 - 10 = 10 ft. @ \$ 8.50		\$ 85.00
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Coring

10 - 352 = 342 ft @ \$ 8.50		\$ 2907.00
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Reaming Casing

10 - 24 = 14 feet @ \$ 7.50	<u>\$ 105.00</u>	\$ 3136.00
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INVOICE # 904

Caltor Syndicate Ltd.....

HOLE # 8

Moving

80 man hours @ \$ 6.00      \$ 480.00

17 machine hours @ \$ 6.00      \$ 102.00      \$ 582.00

Penetrating Overburden

0 - 8 = 8 feet @ \$ 8.50      \$ 68.00

Coring

8-500= 492 ft. @ \$ 8.50      \$ 4182.00

500-600=100 ft. @ \$ 9.50      \$ 950.00      \$ 5132.00

Testing

2 man hours @ \$ 6.00      \$ 12.00

1 machine hours @ \$ 6.00      \$ 6.00      \$ 18.00      \$ 5800.00

Moving Out

118 man hours @ \$ 6.00      \$ 708.00

\$ 15583.50

*Risby Tungsten  
TAA*

# ARCTIC DIAMOND DRILLING LTD.

P.O. Box 3204,  
Whitehorse, Yukon Territory

Marwell Area - Phone 668-3440

730 - 510 W. Hastings Street,  
Vancouver, B.C. 091142

Phone 668-3328

INVOICE # 889

September 8, 1971

IN ACCOUNT WITH:

Caltor Syndicate Ltd.,  
Ste. 1011 - 2200 Yonge Street,  
Toronto, Ontario

Fuel for Twin Mountain Project

12 drums furnace oil == 540 gallons @ 35.8¢	\$ 193.32
6 drums stove oil = 270 gallons @ 40.9¢	\$ 110.43
4 drums AvGas 80/87	\$ 86.58
Deposit - 1 light drum (left in camp)	\$ 7.00
	<hr/>
	\$ 397.33

Tent Frames Left In Camp

3 only at \$ 230.00 each for material only	\$ 690.00
	<hr/>
	\$ 1087.33

*Risky Tengsten  
TA*

MAKE ALL REMITTANCES  
PAYABLE TO  
IMPERIAL OIL LIMITED  
BOX 2356 - EDMONTON ALTA.



**IMPERIAL OIL LIMITED**

INVOICE NUMBER

042324

SOLD TO *Arctic Diamond Drilling.*

MONTH DAY YEAR

7 16 71

ADDRESS *Box 3204  
Whiteware*

ORDER NUMBER AND/OR REQ. NUMBER

PO 2405

STATION

9085 Whitehorse.

SHIPPED TO		VIA		PPD	COLL	TERMS		MILES CARTED BY AGENT	
<i>Arctic Drilling</i>						<input type="checkbox"/>	<input type="checkbox"/>		
HANDLING LIC. NUMBER		PERMIT NO.	CAR NUMBER	ITEM COUNT	NO. OF DEL.	METH. OF DEL.	<input type="checkbox"/>	NET 30 DAYS	<input type="checkbox"/>
							<input type="checkbox"/>	CREDIT	
BARREL NO.	PKGS. KIND/SIZE	PRODUCT	QUANTITY	PRICE	PROV. TAX	TOTAL PRICE	AMOUNT		
20	HSD	Esso Furnace Oil	900			35.8	322.20		
10	HSD	Esso Stone Oil	450			60.9	184.05		
4	LSD	Esso Av Gas 80/87	180				86.58		
				<i>105-649</i>					
30		HSD Deposit Charge	30	15.00			450.00		
4		LSD Deposit Charge	4	7.00			28.00		
RECEIVED PAYMENT		RECEIVED ABOVE IN GOOD ORDER				INV. TOT.		1070.83	
AGENT <i>A. Lee</i>		CUSTOMER		TOTAL QUAN.					

# ARCTIC DIAMOND DRILLING LTD.

P.O. Box 3204,  
Whitehorse, Yukon Territory

Marwell Area - Phone 668-2440

730 - 510 W. Hastings Street,  
Vancouver, B.C.

Phone 668-3328

INVOICE # 903

September 7, 1971

IN ACCOUNT WITH:

Caltor Syndicate Ltd.,  
Ste. 1011 - 2200 Yonge Street,  
Toronto, Ontario

Room & Board

Aug. 16 to Sept. 1 = 17 days @ \$ 90.00 per day \$ 1530.00

Core Boxes

Aug. 25	45 Core boxes		
Sept. 1	<u>50</u> Core boxes		
TOTAL	95 Core boxes		
Less	<u>15</u> returned with equipment		
TOTAL	80 Core boxes @ \$ 5.00	\$ 400.00	
Sept 1	<u>20</u> lids		
Less	<u>10</u> returned with equipment		
TOTAL	10 lids @ \$ 1.00	\$ 10.00	\$ 410.00
			<u>\$ 1940.00</u>

*Rosky Tungsten  
A.*

# ARCTIC DIAMOND DRILLING LTD.

P.O. Box 3204,  
Whitehorse, Yukon Territory

Marwell Area - Phone 668-2440

730 - 510 W. Hastings Street,  
Vancouver, B.C.

Phone 668-3328

INVOICE # 880  
August 20, 1971

IN ACCOUNT WITH;

Caltor Syndicate Limited,  
Ste. 1011 - 2200 Yonge Street,  
Toronto, Ontario

Hole # 2 (Con't from Inv. # 859)

Coring

257 - 475 = 218 feet @ \$ 8.50 \$ 1853.00

Hole # 3

Moving

26 man hours @ \$ 6.00 \$ 156.00

Penetrating Overburden

0 - 4 = 4 feet @ \$ 8.50 \$ 34.00

Coring

4 - 353 = 349 feet @ \$ 8.50 \$ 2966.50

Reaming Casing

4 - 6 = 2 feet @ \$ 7.50 \$ 15.00 \$ 3171.50

Hole # 4

Moving

66 man hours @ \$ 6.00 \$ 396.00

11 machine hours @ \$ 6.00 \$ 66.00 \$ 462.00

Penetrating Overburden

0 - 28 = 28 feet @ \$ 8.50 \$ 238.00

Coring

28 = 334 = 306 feet @ \$ 8.50 \$ 2601.00 \$ 3301.00

Caltor Syndicate Limited...

Hole # 5

Testing

2 man hours @ \$ 6.00	\$ 12.00	
1 machine hours @ \$ 6.00	<u>\$ 6.00</u>	\$ 18.00

Penetrating Overburden

0 - 12 = 12 feet @ \$ 8.50		\$ 102.00
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Coring

12 - 247 = 235 feet @ \$ 8.50		\$ 1997.50
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Reaming Casing

12 - 22 = 10 feet @ \$ 7.50	<u>\$ 75.00</u>	\$ 2192.50
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Roomand Board

Aug. 1 to 15 = 15 man days @ \$ 90.00		<u>\$ 1350.00</u>
		<u>\$ 11868.00</u>

*Risby Tungsten  
VA*

# ARCTIC DIAMOND DRILLING LTD.

P.O. Box 3204,  
Whitehorse, Yukon Territory

Marwell Area - Phone 668-2440

730 - 510 W. Hastings Street,  
Vancouver, B.C.

Phone 668-3328

INVOICE # 874  
August 20, 1971

IN ACCOUNT WITH:

Caltor Syndicate Ltd.,  
Ste. 1011 - 2200 Yonge Street,  
Toronto, Ontario

Core Boxes

July 28	Delivery Docket # 2388	10 only	
Aug. 6	Delivery Docket # 2442	<u>50</u> only	
	TOTAL -	60 only @ \$ 5.00	\$ 300.00

Cement

Aug 2	Delivery Docket # 2413	1 bag	
Aug 6	Delivery Docket # 2442	<u>1</u> bag	
	TOTAL -	2 bags @ \$ 11.35	\$ 22.70
			<u>\$ 322.70</u>

*Risby Tungsten  
JA*



Caltor Syndicate

2

Invoice 402-71

PLUS:	Excess cost of fuel at Anvil Strip Charterer assessed with cost of fuel over 60¢ per gallon	
	38 gallons at 76¢ per gallon	\$ 28.88
PLUS:	Prorated crew expenses at Faro	<u>14.00</u>
	INVOICE TOTAL	<u><u>\$6,654.08</u></u>

\$ 6,282.08 Risby Project  
 372.00 Laberge Project

OK *[Signature]*

TERMS: One per cent interest per month will be charged on all invoices not paid within 30 days of date issued.



# TRANS NORTH TURBO AIR LTD.

BOX 1977, WHITEHORSE, YUKON

## DAILY FLIGHT REPORT

DATE 15-10-71

CHARTERER:	<u>CACTOR Syndicate</u>		
ADDRESS:	<u>CACTOR SYNDICATE</u>		
AIRCRAFT:	<u>CF - 417</u>	AREA:	YUKON <input type="checkbox"/> ALTA. <input type="checkbox"/> B.C. <input type="checkbox"/> NWT <input type="checkbox"/>

CHARTER FROM:	PASS.	CARGO	MILES	HRS.	PASS. NAMES OR REMARKS
<u>DAILY Fuel cost</u>					
<u>17 units @ 18 hours</u>				<u>9.8</u>	
<b>TOTALS</b>				<u>9.8</u>	

TNTA FUEL 9.8 HRS.

TERMS: ONE PER CENT INTEREST PER MONTH WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

*[Handwritten Signature]*

*[Handwritten Signature]*

PILOT'S SIGNATURE

CHARTERER'S SIGNATURE

# TRANS NORTH TURBO AIR LTD.

BOX 1977, WHITEHORSE, YUKON

## DAILY FLIGHT REPORT

DATE 12 July 1971

CHARTERER: <u>Canadian Scouts</u>
ADDRESS: <u>1401-17th</u>
AIRCRAFT: <u>De Havilland</u> CF - <u>101</u> AREA: YUKON <input type="checkbox"/> ALTA. <input type="checkbox"/> B.C. <input type="checkbox"/> NWT <input checked="" type="checkbox"/>

CHARTER FROM:	PASS.	CARGO	MILES	HRS.	PASS. NAMES OR REMARKS
<u>FP30</u>	<input checked="" type="checkbox"/>			<u>1.0</u>	<u>To Ross River</u> <u>For Med. acc.</u> <u>Reg. FP30.</u>
<b>TOTALS</b>				<u>1.0</u>	

TNTA FUEL 1.8 HRS. Pass

TERMS: ONE PER CENT INTEREST PER MONTH WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

*[Handwritten Signature]*

*[Handwritten Signature]*

PILOT'S SIGNATURE

CHARTERER'S SIGNATURE

NO 911

*Scouting Camp and Drill locations*

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**TRANS NORTH TURBO AIR LTD.**

BOX 1977      PHONE 668-2177  
WHITEHORSE, YUKON



TO: [

Caltor Syndicate  
Box 1231  
WHITEHORSE, Yukon

DATE July 31, 1971

INVOICE NO. 458-71

P.O. NO.

TO: Charge you with the charter of Bell 206 A  
Jet Ranger Helicopter CF-MBT  
Crew: Drzymala and Lancaster

FLYING: July 29, 1971  
Daily Flight Report No. 952

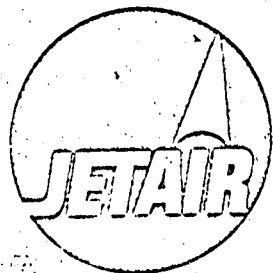
2.3 hours at \$248.00 per hour      \$570.40  
(Rate when carrier supplies fuel)

INVOICE TOTAL      \$570.40

TERMS: One per cent interest per month will  
be charged on all invoices not paid within  
30 days of date issued.

*MA. Risby. Diamond Drillers*





International Jet Air Ltd., B Division  
(Great Northern Airways (1970) Ltd.)  
Box 2870, Whitehorse, Yukon.

TO: Caltor Syndicate  
Box 1231  
WHITEHORSE, Yukon

DATE July 31, 1971

INVOICE NO. B166-71

P.O. NO.

TO: Charge you with the following Aircraft charters:  
Piper Aztec Aircraft CF-SKI  
Pilot: L. G. Coleman

FLYING: July 13 & 25, 1971  
Daily Flight Report No.'s 23911 & 23922  
374 miles at 70¢ per mile \$261.80  
One minimum leg at \$39.00 per leg 39.00

Cessna 185 Aircraft CF-WMD  
Pilot: B. Watson

FLYING: July 1, 1971  
Daily Flight Report No. 20768  
60 miles at 70¢ per mile 42.00

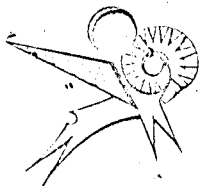
INVOICE TOTAL \$342.80

TERMS: One per cent interest per month  
will be charged on all invoices  
not paid within 30 days of date  
issued.

*Risby Diamond Dullin* \$ 300.80  
*Pine Group* 42.00

*TA*

WHITEHORSE • DAWSON CITY • ATLIN • MAYO • INUVIK



GREAT NORTHERN AIRWAYS LTD.  
NO. 3 HANGAR MCGALL FIELD, CALGARY, ALBERTA

CHARTER TICKET No 23911

A/C *ARTEC CESKI* DATE *July 13/71*

NAME *CALTOR SYNDICATE*

ADDRESS *BOX 1231, WHITEHORSE, Y.T.*

FROM	MILES	HOURS	CARGO	PASSENGERS/REMARKS
<i>WHITEHORSE</i>				
<i>TO ROSS R.</i>	<i>125</i>			<i>P. MARSHALL</i>
<i>WHITEHORSE</i>	<i>125</i>			<i>&amp; PARTY</i>

SPECIAL INSTRUCTIONS

	PER HOUR
<i>250</i>	@ <i>70¢</i> PER MILE
WAITING TIME	@ PER HOUR
EXTRA LANDINGS	@ PER LANDING
OTHER	

TOTAL CHARGES

*L. G. Gano*  
PILOT'S SIGNATURE

*[Signature]*  
CHARTERER'S AUTHORIZATION

CUSTOMER COPY

*Scouting Camp & Drill Locations*

WHITEHORSE • DAWSON CITY • ATLIN • MAYO • INUVIK



GREAT NORTHERN AIRWAYS LTD.

NO. 3 HANGAR McCALL FIELD, CALGARY, ALBERTA

CHARTER TICKET No 23922

A/C ATTEC CF-341 DATE July 25/41

NAME CANTOR SYNDICATE

ADDRESS

FROM	MILES	HOURS	CARGO	PASSENGERS/REMARKS
<u>FARO.</u>				
<u>ROSS R.</u>	<u>ML</u>			<u>2 FAX</u>
<u>WHITEHORSE</u>	<u>124</u>			

SPECIAL INSTRUCTIONS

	PER HOUR	
<u>ML @ 39.00</u>		
<u>124 @ 70¢</u>	PER MILE	
WAITING TIME	@ PER HOUR	
EXTRA LANDINGS	@ PER LANDING	
OTHER		
<b>TOTAL CHARGES</b>		

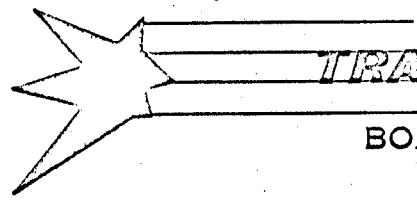
*[Handwritten Signature]*  
PILOT'S SIGNATURE

BASE

*[Handwritten Signature]*  
CHARTERER'S AUTHORIZATION

CUSTOMER COPY

T  
N  
T



**TRANS NORTH TURBO AIR LTD.**

BOX 1977      PHONE 668-2177  
WHITEHORSE, YUKON



TO: [

Caltor Syndicate  
P.O. Box 1231  
WHITEHORSE, Yukon

]

L

]

DATE July 31, 1971

INVOICE NO. 459-71

P.O. NO.

TO: Charge you with the following helicopter charters:  
Bell 47G-2 Helicopter CF-ETR  
Crew: Johnson & Stout

FLYING: July 13 & 14, 1971  
Daily Flight Report No. 6083 & 6085

4.6 hours at \$120.00 per hour      \$ 552.00  
(rate when carrier supplies fuel)

PLUS: Excess cost of fuel at Atlin  
Charterer assessed with cost  
of fuel over 60¢ per gallon

*Whewton Project*  
*\$ 574.55*

55 gallons at 41¢ per gallon      22.55

*TA*

Bell 47G-3B-1 Helicopter CF-RLP  
Crew: Romfo & Miller

FLYING: July 23 & 25, 1971  
Daily Flight Report No. 6925 & 6929

8.5 hours at \$155.00 per hour      1,317.50

PLUS: Excess cost of fuel at Anvil Strip  
Charterer assessed with cost  
of fuel over 60¢ per gallon

*Risby Diamond*  
*Dullin*  
*\$ 1,342.70*

45 gallons at 56¢ per gallon      25.20

*TA*

INVOICE TOTAL

\$1,917.25

TERMS: One per cent interest per month will be  
charged on all invoices not paid within  
30 days of date issued.



TRANS NORTH TURBO AIR LTD.

BOX 1977, WHITEHORSE, YUKON

DAILY FLIGHT REPORT

DATE

*July 25/71*

CHARTERER:

*CANTOR SYNDICATE*

ADDRESS:

*PO Box 1231 WHITEHORSE YK2V*

AIRCRAFT:

*Bell 131*

CF:

*RLP*

AREA:

YUKON  
B.C.

ALTA.  
NWT

CHARTER FROM:

PASS.

CARGO

HRS.

PASS. NAMES OR REMARKS

*Anvil Lake*

*-*

*-*

*1.3*

*Ross River*

*2*

*200*

*2.2*

*Anvil*

*-*

*-*

*1.3*

*3.8*

TOTALS

TNTA FUEL

*3.8*

HRS.

TERMS: ONE PER CENT INTEREST PER MONTH WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

*L. O. Rumpf*

PILOT'S SIGNATURE

*[Signature]*

CHARTERER'S SIGNATURE

No

6929

# ARCTIC DIAMOND DRILLING LTD.

021142

P.O. Box 3204,  
Whitehorse, Yukon Territory

730 - 510 W. Hastings Street,  
Vancouver, B.C.

Marwell Area - Phone 668-2440

Phone 688-3328

August 10, 1971

INVOICE # 859

Caltor Syndicate Ltd.,  
Ste. 1011, 2200 Yonge Street,  
Toronto, Ontario

Moving in and Setting Up

183 man hours @ \$ 6.00 \$ 1098.00

Hole # 1 - 90° x BQ

Penetrating Overburden

0 - 4 = 4 feet @ \$ 8.50 \$ 34.00

Coring

4 - 500 = 496 ft. @ \$ 8.50 \$ 4216.00

500 - 600 = 100 ft. @ \$ 9.50 \$ 950.00 \$ 5166.00

Reaming Casing

4 - 7 = 3 feet @ \$ 7.50 \$ 22.50 \$ 5222.50

Hole # 2 - 50° x BQ

Penetrating Overburden

0 - 6 = 6 ft. @ \$ 8.50 \$ 51.00

Coring

6 - 257 = 251 ft. @ \$ 8.50 \$ 2133.50

Reaming Casing

4 - 6 = 2 ft. @ \$ 7.50 \$ 15.00 \$ 2199.50

Room and Board

Per attached summary \$ 805.00

\$ 9325.00

\* Hole # 2 still in progress

CALTOR SYNDICATE LTD.

MOVING IN AND SETTING UP

DATE	J. BERRY	G. McKENNA	L. PODLECKI	H. CALMEGANE
July 19	14			
20	12	16		
21	12	14		
22	12	12		
23	12	12	8	8
24		12	12	12
25		5	5	5
	<u>62</u>	<u>71</u>	<u>25</u>	<u>25</u>

TOTAL 183 hours

ROOM & BOARD

19th	One man day @ \$ 12.50	\$ 12.50
20 - 22	Six man days @ \$ 12.50	\$ 75.00
23 - 24	seven man days @ \$ 12.50	\$ 87.50
25 - 31	seven man days @ \$ 90.00 min.	<u>\$ 630.00</u>
		<u>\$ 805.00</u>