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REPORT ON

GEOLOGICAL MAPPING, DIAMOND DRILLING

GEOCHEMICAL AND PANNING SURVEYS

CONDUCTED MAY 20 TO JULY 20, 1979

Ayduck 1-24 Claims - YA22850-YA22873
Hidden 1-32 Claims - YA23425-YA23456
33-66 Claims - YA23650-YA23683
67-170 Claims - YA24275-YA24378
170-178 Claims - YA24539-YA24546

WHITEHORSE MINING DISTRICT

CLAIM SHEET 105F/6

Latitude 61°26'N Longitude 133°22'W

J.G. ABBOTT, P.Eng.

090961

From: Mining Recorder at Whitehorse File No.

To: Supervising Mining Recorder - Whitehorse, Y.T.

FOR ACTION:

_____ New Application for Lease to Prospect: Name_____

_____ Renewal Appl'n Lease to Prospect: Name_____ No._____

_____ Affidavit of Expenditure on Placer Lease: Name_____ No._____

_____ Assignment of Prospecting Lease No._____

From_____ To_____

_____ Grouping Appl'n under Sec. 52(2) Yukon Placer Mining Act: Owner_____

✓ Diamond Drill Logs:

Owner: Archer, Cathro + Associates Ltd. Claim Sheet No. 105-F-6

_____ Quartz Assessment Report

Claims: Hidden, Ayduck Claim Sheet No.

Type of Report: D.D. + Geological Mapping, Geochemical + Panning Surveys

Submitted By:

Claims work performed on: see report

$ Req. for renewal application:

This report was submitted in 1980 for D.D. done in 1979 and is for your files only. The other aspects of the report is for informational purposes only and was submitted to substantiate the drilling.

Signature

Date 29-1-82

Reply action

Date Ref

Signature

Date

090961

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SUMMARY AND RECOMMENDATIONS

The Ayduck-Hidden claim group was staked in 1978 by Cub Joint Venture (Cassiar Asbestos Corporation Ltd., Highland Crow Resources Ltd. and Union Carbide Canada Ltd.) to cover two new tungsten occurrences discovered within middle Paleozoic carbonate, shale and quartzite along the southwestern margin of the Nisutlin Batholith. Limited geologic mapping and hand trenching plus widely spaced soil sampling and pan sampling were conducted around the showings later that year. This work indicated a zone two to five m thick, grading 0.5 per cent WO_3 or less with some higher grade centers up to 1.0 per cent WO_3 at the Ayduck showing. The flat-lying mineralized zone is at least 700 m long and is terminated abruptly, possibly by faulting, about 300 m along strike from its projected contact with the batholith. The size of the Hidden showing was uncertain due to poor exposure. Trenching in the coarse felsenmeer, which includes slabs up to 2 m thick, suggested an average grade of better than one per cent WO_3. Several strong and extensive soil panning, geochemical and magnetic anomalies were outlined in overburden-covered areas near the showing.

In 1979, most of the property was mapped at 1:5000 scale while the area around the Hidden showing was mapped at 1:2000 scale. The panning and geochemical surveys were extended to cover the entire batholith contact between the Hidden and Ayduck showings and also to cover an area south of the Hidden showing.

Eight holes totalling 3000 feet were drilled to test both the Hidden showing and strong panning anomalies nearby but only weak and erratic skarn alteration, without significant mineralization, was encountered. The discovery showing appears to be too small to have economic potential. No new significant panning anomalies were found elsewhere on the property, but the original anomaly on Nigel Peak was found to be over twice as large and extend further uphill than originally thought

in 1978. The anomaly, as defined by the 200 grain contour, is 1900 m long and varies between 500 and 1000 m wide. Within that boundary, a more anomalous area of over 2000 grains is 1000 m long and 300 m wide. Several small areas with greater than 10,000 grains occur within the core.

The Hidden anomaly is more likely related to a north-trending fracture system and Tertiary feldspar porphyry dykes than to a conventional skarn deposit. The size and intensity of the soil anomaly warrant further detailed stratigraphic and structural mapping and geophysical surveys to determine if there is any potential for a stockwork-type porphyry deposit. Emphasis should be placed on the relationship of mineralization to alteration, faulting and fracture patterns.

INTRODUCTION

The Ayduck-Hidden claim group was staked by CUB Joint Venture in July and September, 1978 and expanded in June and July 1979. The property contains two new tungsten occurrences situated along the southwest side of the Nisutlin Batholith and encompasses the entire batholith contact between the Big Salmon River on the west and Caribou Creek on the east.

In 1978, field work consisted of preliminary geologic mapping, soil panning, geochemical and geophysical surveys and limited hand trenching. During the 1979 program, conducted beween May 20 and July 20, about 1000 additional soil panning and geochemical samples were taken, most of the property was mapped at 1:5000 scale and a small area near the Hidden showing was detailed at 1:2000 scale, and eight holes totalling 915 m (3000 feet) were drilled near the Hidden showing.

The project was managed and conducted by Archer, Cathro and Associates Ltd. Field work was supervised by geologists J.G. Abbott and C.A. Main. Trevor Bremner spent about two weeks mapping the property.

PROPERTY, LOCATION AND ACCESS

The property consists of 202 contiguous claims recorded in the name of Archer, Cathro and Associates Ltd. at the Whitehorse Mining Recorder's office as follows:

Claim Name	Grant Numbers	Expiry Date
Ayduck 1-24	YA22850-YA22873	1 Dec/83
Hidden 1-32	YA23425-YA23456	1 Dec/83
33-66	YA23650-YA23683	1 Dec/83
67-170	YA24275-YA24378	1 Dec/84
170-178	YA24539-YA24546	1 Dec/84

The property is located at 61°26'N and 133°22'N within claim sheet 105F/6, approximately 20 km west of the Canol Road. Access in 1979 was by helicopter from a camp at Rose River, Mile 85 on the Canol Road. The camp was situated 120 km by road north of Johnsons Crossing, which is 130 km along the Alaska Highway east of Whitehorse. Big Salmon Lake, located 15 km to the south of the property, is the nearest lake large enough for fixed-wing, float-equipped aircraft.

FIELD AND ANALYTICAL PROCEDURES

Scheelite is a resitate mineral that tends to disperse more by physical rather than chemical means in the surface environment. As a result, soil panning is an effective alternative to geochemistry. Soil samples collected in that panning survey were slightly over a pan in size, weighed 2.5 to 3.0 kg., and were collected in large plastic bags. The samples were collected at helicopter pads and flown to camp for panning. Concentrates were collected in filter papers, dried and then examined under an ultraviolet lamp.

Most of the concentrates from the grid surveys contained too much scheelite for normal counting and estimates were made by spreading the concentrates evenly

over grid paper, counting the number of grains within four or five randomly selected squares to obtain the average, and multiplying by the total number of squares covered by concentrates.

As a check on panning results, soil samples for geochemical analysis were collected in kraft envelopes from each pan sample and shipped to Chemex Labs Ltd., North Vancouver, B.C. for routine geochemical analysis. Soil samples were pulverized like rock samples to ensure that coarse scheelite grains would be included in the assay since tungsten disperses in soil mainly as clastic grains of scheelite.

All samples were analyzed for tungsten with a colorometric determination after fusing with potassium bisulfate, leaching with concentrated HCl, extracting into an amyl acetate solution containing dithiotoluene, and reducing interfering elements with stannous fluoride in a hot water bath.

All samples were also analyzed for copper using a nitric-perchloric acid extraction and atomic absorption spectrometry.

Baselines were chained, picketed and cut where necessary and sample lines were located by using compass and topofil without slope correction. Stations were marked with 1 m lath pickets on baselines and above timberline and with flagging elsewhere.

GEOMORPHOLOGY

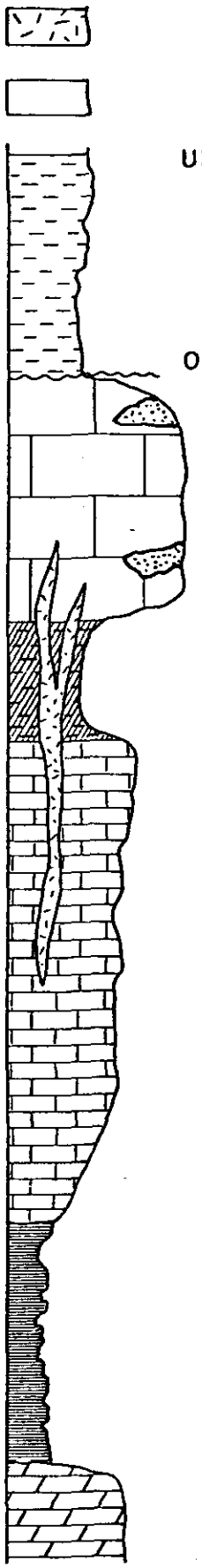
The property occurs within an area of moderate relief along the southwestern margin of the Pelly Mountains. The morphology of the area is dominated by surficial and topographic features produced both by local valley glaciation and by the youngest of at least two periods of Cordillera-wide ice-sheet glaciation.

Major valleys are usually well developed and U-shaped with local relief of up to 600 m, while the highest peaks exceed 2000 m in elevation. Treeline is situated at an elevation of about 1350 m throughout the area. Near the property, outcrop is mainly confined to ridge crests. On the Ayduck claims, talus fans are common below timberline on steeper slopes but on the Hidden claims, talus or outcrop is almost non-existent below timberline. Overburden is probably thin over the whole property with the exception of valley bottoms. However, downslope movement appears to be considerable and at least two recent landslide scars have been recognized on the Hidden property. One is situated about 300 m south of the Hidden showing and is about 150 m wide. The other, about 100 m wide, is situated 500 m east of Nigel Peak on the southern margin of the property.

GEOLOGY

Tectonically, the property is situated at the western margin of Pelly Cassiar Platform. All sedimentary rocks underlying the property are middle Paleozoic in age and on a regional scale belong to the Nasina (unit OSDqc) and "Black Clastic" (unit uDMs) facies of Tempelman-Kluit. The Nasina Facies is characterized by black or grey, variably calcareous or dolomitic siltstone and graphitic slate that are the westward, outboard, deeper water equivalents of the thick, shallow water, platformal, carbonate rocks that define Pelly Cassiar Platform. Blocks of dolomite and limestone occur locally within the Nasina Facies and are important units on the Hidden property. There, the clastic and carbonate rocks are complexly interfingered and were probably formed near the facies boundary of Pelly Cassiar Platform.

TABLE OF FORMATIONS



CRETACEOUS and/or TERTIARY

KTfp — Docite porphyry dikes – dark brown, with vesicles and calcite-filled amygdules

Kqm — Nisutlin Batholith – quartz monzonite

UPPER DEVONIAN and MISSISSIPPIAN

uDMs — Slate – Minor Siltstone - black, non-calcareous

ORDOVICIAN, SILURIAN and DEVONIAN

Sq — Massive grey quartzite

Sd — Sandy Dolomite – massive, light grey and tremolite-diopside skarn

OSs ? — Slate, black, graptolitic, weathers rusty

OSDqc — Limestone, light grey, "wavy bonded", pellet texture, with interbedded green-grey silty shale

OSsl — Graphitic Limestone and black calcareous shale

OSc — Bonded Dolomite - white, massive, with thin black bands

The "Black Clastic" facies overlies both the "Nasina Facies" and Pelly Cassiar Platform and includes black, non-calcareous slate, grit and chert pebble conglomerate.

The geology of the Hidden property is shown at a scale of 1:5,000 on Figure 1 (in pocket). Detailed geology near the Hidden showing is shown at a scale of 1:2,000 in Figure 2 (in pocket) and geological cross-sections through diamond drill holes are shown in Figure 3 (in pocket). Diamond drill logs are located in the Appendix at the back of the text. The various map units are described in the Table of Formations on the following page.

The Nasina and "Black Clastic" facies rocks form an alternating sequence of carbonate and clastic rocks over 1200 m thick that have been tentatively subdivided into six map units. The oldest belong to unit OSc and consist of at least 100 m of massive white dolomite with thin black bands. This unit is only exposed in drill core and in a few outcrops near the Hidden showing.

The dolomite is overlain by up to 200 m of recessive, black, graphitic calcareous slate and minor grey fetid limestone of unit OSsl. The main Hidden showing occurs within fetid grey limestone at the top of this unit. This unit is in turn gradational with unit OSDqc. On a regional scale, OSDqc refers to the Nasina facies as a whole, but on the Hidden property it is used to describe over 500 m of grey-green silty shale interbedded with black graphitic shale and distinctive, thinly laminated silty limestone. These rocks undergo marked lateral facies changes and some lithologies are similar to those within other units.

Unit OSDqc is gradational with, and overlain by, up to 100 m of recessive, rusty weathering, black non-calcareous slate of unit OSs. A monograptus found within the slates southeast of Nigel Peak is probably Silurian in age.

Low-lying areas west of the main Hidden showing are underlain by massive, light grey sandy dolomite of unit Sd. The dolomite, which is up to 300 m thick and interbedded with lenses of massive grey quartzite of unit Sq, is difficult to distinguish from that of unit OSc. The Ayduck showing occurs at the top of unit Sd.

At least 300 m of black, graphitic non-calcareous, siliceous slate of unit uDMs also underlies much of the area west of the main Hidden showing. Although these rocks belong to the "Black Clastic" facies, chert grit and pebble conglomerate are absent and the shales can be mistaken for older rocks.

Porphyritic granodiorite or quartz-monzonite of the Nisutlin Batholith (unit Kqm) underlies the northern margins of the property. The batholith appears to have sharp contacts that dip steeply southwards.

Two north-trending, dark brown, feldspar porphyry dykes up to 10 m wide with vesicles and calcite-filled amygdules are exposed near the main Hidden showing. They belong to a suite of porphyritic dykes and associated subvolcanic flows of Upper Cretaceous or Tertiary age (unit KTfp) that occur throughout western Quiet Lake map sheet and cut the Nisutlin Batholith. A small exposure of quartz-biotite-feldspar porphyry located south of Nigel Peak could belong to either unit Kqm or to unit KTfp.

The sedimentary sequence appears to form an unrepeated sequence that dips gently to moderately to the southwest that is cut obliquely by the Nisutlin Batholith. Open, upright, northwest-trending folds with amplitudes as large as 100 m or more have been mapped near the main Hidden and Ayduck showings. These structures do not appear to greatly affect the overall distribution of rock types. A penetrative cleavage dips southwestwards subparallel to bedding in fine grained clastic rocks but there is no evidence that it is accompanied by large scale folds.

The dominant structural elements on the property are north-trending normal faults. The similarity of some of the different map units, however, makes recognition of these structures difficult in places where detailed stratigraphic and structural evidence is absent. Faulting is most intensely developed near the main Hidden showing, where displacement of 1000 m or more has been measured. Offsets of the margin of the Nisutlin Batholith and parallel airphoto lineaments that can be traced into the granite indicate that the faults postdate the emplacement of the batholith. The orientation of the Tertiary dykes parallel to the faults suggests that the two may be related. An exception to the general northerly trend of faults is a postulated northeasterly-trending structure situated between diamond drill holes 4 and 7 (see Figure 2). This fault has been interpreted from drill hole data but other interpretations may be possible with further work.

DRILLING

Diamond drilling was contracted to Amity Drilling of Whitehorse and was performed with a Longyear 34 model drill equipped with hydraulic head and wireline attachments. All holes were drilled using BQ rods and water circulation. A total of 3000 feet (915 m) was drilled over a period of 41 days. Excluding 7 days that were spent on Hole 1, which caved, the drilling rate for the remainder was about 85 feet per day. The ground cored well as long as casing was driven well into bedrock with mud. Tricone bits were used to case the holes through 30 to 84 feet of blocky talus. Drill core is stored at the H.S. Bostock core library in Whitehorse.

The holes were drilled as follows:

Hole	Location (m) N	Location (m) W	Azimuth	Dip	Depth (ft)	Depth (m)
1	109.00	125.75	340	70	116	35.4
2	109.00	125.75	-	90	501	157.8
3	109.00	125.75	340	60	382	116.5
4	110.8	125.75	340	70	240	73.2
5	110.25	126.50	120	50	421	128.4
6	107.90	124.80	070	70	427	130.2
7	112.70	125.00	070	70	501	152.8
8	115.75	126.00	-	90	412	125.7
					3000	915.0

Holes 1, 2 and 3 were drilled to intersect the interpreted downdip extension of the showing to the southeast and failed to encounter any skarn or scheelite mineralization. Hole 5 was drilled beneath the showing from the northwest to check the possibility that mineralization is steeply dipping. A 2 m section assaying 0.95% WO_3 was encountered within veined and brecciated dolomite along a strong fault zone. This mineralization has no apparent relationship or similarity to the surface showing.

Holes 4, 6, 7 and 9 were drilled to the north and east of the showing to test panning anomalies and obtain geological information. Only minor dark green, siliceous skarn and occasional grains of scheelite were encountered in these holes and no core was assayed.

PANNING AND GEOCHEMISTRY

Soil panning and geochemical surveys were conducted on three separate grids measuring 1600 m by 2400 m, 1000 m by 1400 m and 1600 m by 1800 m respectively. Sample spacing varied from 50 m intervals on pace and compass lines (spaced 100 or 200 m apart in low priority areas to 25 m intervals on lines spaced 50 m apart in anomalous areas) between cut baselines. A total of about 100 samples were collected. Panning results from the entire property are plotted at a scale of 1:10,000 on Figure 4 (in pocket) and detail near the Hidden showing at a scale of 1:2,000 on Figure 5 (in pocket). Geochemical results are plotted at the same scales on Figures 6 and 7 (in pocket).

The 1978 panning survey extended a hundred metres or so above the discovery showing and, by coincidence, showed a weak response on that side that made it appear the anomaly was closed off. This seemed logical because barren or very weakly mineralized outcrop or talus becomes more abundant outside the 1978 grid in a south (uphill) direction. However, additional grid sampling in that direction in 1979, after the drilling had started, revealed that most intense portions of the anomaly occur towards Nigel Peak and that the full anomaly occupies more than twice the original area.

The anomaly, as defined by the 200 grain contour, is 1900 m long and varies between 500 and 1000 m wide. A more anomalous area of over 2000 grains is 1000 m long and 300 m wide. Several small anomalies of greater than 10,000 grains occur within the core. Although downslope movement of overburden may have increased the size of the northern and western parts of the anomaly, the scheelite appears to be locally derived for the most part.

The original Hidden showing is expressed as a single panning anomaly of greater than 10,000 grains, but most of the anomalous area cannot be related to any known showing of significant size or grade. The most intense portion of the anomaly is situated above timberline where outcrop is relatively abundant and soil cover thin.

The anomaly associated with the Ayduck showing is the second largest. The area containing greater than 200 grains measures 250 m by 750 m. Mineralization occurs upslope from a discontinuous core zone with greater than 2000 grains. The zone is over 700 m long. No follow-up work was done on this anomaly.

Numerous small anomalies of greater than 200 grains occur between the Hidden and Ayduck showings but only two appear to be large and intense enough to be significant. One small anomaly with a core of up to 15,000 grains occurs 200 m downslope from the Upper Ayduck showing. The anomaly may reflect the known mineralization which is well exposed above timberline or it could indicate a buried extension. The other anomaly is a northwest-trending linear zone 1000 m long located 600 m east of the Ayduck anomaly. The core of the anomaly contains greater than 2000 grains and core samples ran greater than 10,000 grains. The anomaly was not followed up and the origin is unknown. The anomaly occurs within a prominent airphoto lineation and may be associated with a fault.

The tungsten geochemistry confirms the panning results, in a general way, with values of about 100 ppm W corresponding to 200 grains of scheelite and 200 ppm to 2000 grains.

MINERALIZATION

No new significant mineralization was discovered in 1979 and the original showing found on the Hidden property remains the best discovery to date. The showings occurs within dark grey fetid limestone of unit OSsl and consists of an area of felsenmeer 40 m long and 30 m wide located at grid coordinates 109 + 50N on line 126W. Mineralized fragments commonly range from 0.3 to 1.0 m across and were originally interpreted as frost-heaved outcrop. Trenching proved that these were actually rotated and lying in soil and unmineralized talus. The largest mineralized block seen is about 2-3 m thick. Two large hand trenches, drilled and blasted into the showing, failed to expose bedrock but gave a representative sample of bedrock grade. The largest, most westerly trench could not be chip sampled in any meaningful way so it was tested by collecting five chip samples, each weighing about 5 kg, that were representative of approximately 50 tonnes of talus and muck lying below the trench. Assays of the five samples ranged from 0.89 to 1.39 per cent WO_3, with an arithmetic average of 1.17 per cent WO_3. The other trench, 31 m along strike to the east of the first, was chip sampled and assayed 1.72 per cent WO_3 over 1.5 m at the face and 0.91 per cent WO_3 over 4 m on the floor, which was partially obscured by dirty wall rock material. Copper assays in both trenches were less than 0.05 per cent.

The showing can be traced for a total exposed length of 41 m and soil sampling suggests a further extension of 200 m to the west. Holes 1, 2 and 3 were drilled immediately uphill from the showing and intersected only black limestone, weakly developed siliceous diopside skarn, and traces of scheelite. Since the trace of bedding within the plane defined by the three holes is nearly horizontal, the float is either transported or has no significant lateral extent parallel to

bedding. Field evidence indicates little transport. The intense structure intersected in Hole 5, west of the showing, suggests that it could be faulted off in this direction. A major normal fault, downthrown on the west side, was mapped immediately to the west of Hole 5. The faults seen in the drill hole could represent branches of this fault.

Most of the dolomite intersections from Holes 1, 2, 3, 4 and 5 rapidly decomposed upon exposure to air. The type of alteration causing this effect is not well understood but is presumably related to mineralization.

Numerous small, dark, siliceous skarn zones were found within silty limestone and dolomite along the north and west sides of Nigel Peak. Some occur along the margins of the porphyry dykes, others along known faults and still others as isolated patches. All carry minor amounts of scheelite but none are larger than a metre wide and 10 m long or reach consistent grades greater than 0.2% WO_3.

In the same area, many outcrops show varying degrees of alteration. Typically, the alteration occurs as narrow bleached zones along fracture surfaces and selective replacement of certain horizons. Locally, garnet-diopside skarn forms the alteration assemblage. Minor scheelite is present along many fracture surfaces. Although these fractures have not been studied in detail, they have been observed throughout the area between the discovery showing and Nigel Peak. They are best exposed in the cliff north of Nigel Peak where they are spaced as closely as 2 or 3 per metre over large areas.

CONCLUSIONS

The origin of tungsten mineralization on the Hidden-Ayduck property is still poorly understood. Although, at first glance, the Nisutlin Batholith appears to be the source of mineralization, there is growing evidence to suggest that it may be genetically related to younger porphyry dykes intruded along a north-trending fracture system:

(a) the best mineralization occurs on Nigel Peak, 500 to 1500 m from the batholith contact, where carbonate rocks are present;

(b) mineralization is most abundant in areas of most intense fracturing;

(c) scheelite-bearing skarn is locally developed along the margins of porphyry dykes;

(d) scheelite grading 0.95% WO_3 over 2 m within a fault zone was cut in drill core near the Hidden showing;

(e) bleaching or silicification occurs in alteration envelopes around fractures containing traces of scheelite and selectively replaces certain horizons.

The intense scheelite anomaly on Nigel Peak is still partially unexplored. The most likely origin is that it is derived from erratic grains of scheelite localized along faults, fractures and in numerous skarn zones. The possibility that it is derived from a conventional garnet-diopside-pyrrhotite skarn is unlikely because of the large size of the anomaly and the fairly abundant exposures of unmineralized rock within the anomaly.

The large size of the area containing unmineralized fractures and the presence of only two narrow dykes suggests the possibility that the low-grade mineralization represents a stockwork above a buried intrusion.

Further exploration of the Hidden-Ayduck property should consist mainly of detailed stratigraphic, structural and petrologic studies. Efforts should be concentrated on determining the relationship of mineralization to fracturing and to mapping the intensity and patterns of fracturing and alteration. VLF/EM and magnetometer surveys should be expanded to aid in both mapping and detecting mineralization.

Respectfully submitted,

ARCHER, CATHRO AND ASSOCIATES LTD.

Grant Abbott

/mc

J.G. Abbott, M.Sc., P.Eng.

DRILL HOLE LOG

HIDDEN
HOLE No. 1
PAGE 1 OF 1

COORDINATES 109.00 N, 125.75 W
ELEVATION
DIP 60°
AZIMUTH 340°
SCALE 1" = 33.3'

CORE SIZE BQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY T. BREMNER

FOOTAGE	DESCRIPTION	DIP
	Talus and broken ground	
41		
50	Unit OSDgc - pale calc-silicate, minor greenish diopside skarn, interbedded with grey-green shale.	
54.8	0.3' pale calc-silicate skarn	
56.1	0.4' visual estimate 0.5% WO_3 0.4' pale calc-silicate; tr. WO_3	
72.0	0.4' pale calc-silicate skarn; tr. WO_3	
81	Unit OS_{sl} - black, graphitic, calcareous shale and limestone; occasional interbeds of light grey-green pellet limestone	
100		
116	EOH	
	Remarks- Hole extremely fractured throughout, with calcite veins, quartz veins, ponous brecciated zones and limonite	
150		

DRILL HOLE LOG

HIDDEN
HOLE No. 2
PAGE 1 OF 2

COORDINATES 105.00 N, 125.75 W
ELEVATION 1600m
DIP 90°
AZIMUTH —
SCALE 1" = 33.3'

CORE SIZE BQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY T. BREMNER.

FOOTAGE	DESCRIPTION	DIP
	Talus and broken ground	
50		
67.5	dolomite - fractured, veined, and porous minor WO_3 at 67.5' over 0.1' — Unit OSDgc	
90	crushed shale and dolomite	
92	siltstone	
93	dolomite	
98	thinly laminated grey-green limestone	
100		
110	dark grey calcareous silty shale	
128	crushed dolomite and shale	
127	dolomite	
140	clay gouge	
141		
150	grey-green calcareous silty shale	
155	pale green, foliated calc-silicate skarn	
164	grey-green calcareous silty shale	
172	pale green, foliated calc-silicate skarn	
175		
	dark grey silty shale	
200		
207	pale green foliated calc-silicate skarn	
216	light grey-green limestone	
218	dark grey shale	
224	pale green foliated calc-silicate skarn	
232	calcareous dark grey shale	
235	crushed limestone	
237		
	highly fractured, black, graphitic calcareous shale and black fetid limestone — Unit OS_{s1}	
250		
279	crushed, dark olive-grey shaly limestone — Unit OSc	
284	crushed dolomite	
289	massive white dolomite	

DRILL HOLE LOG

HIDDEN
HOLE No. 2
PAGE 2 OF 2

COORDINATES
ELEVATION
DIP
AZIMUTH
SCALE

CORE SIZE
HOLE STARTED
HOLE COMPLETED
LOGGED BY

FOOTAGE	DESCRIPTION	DIP
301	massive white dolomite	
	dark grey chloritic skarn	Unit OSc
305	massive white dolomite, clay alteration along fractures	
319	dark grey-green chloritic skarn	
326	massive white dolomite	
339	soft, altered white dolomite	
345		
350	massive white dolomite	
373	soft, altered white dolomite	
394	massive white dolomite	
400		
402	crushed, soft altered white dolomite	
414	massive white dolomite	
431	soft altered dolomite	
434	massive, white dolomite	
438	crushed white dolomite	
450		
461	massive white dolomite	
476	crushed rusty dolomite and clay	
484	massive white dolomite	
500		
501	EOH	

DRILL HOLE LOG

HIDDEN
HOLE No. 3
PAGE 1 OF 2

COORDINATES 108.00N, 125.75
ELEVATION 1600M
DIP 60°
AZIMUTH 340°
SCALE 1" = 33.3'

CORE SIZE BQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY T. BREMNER

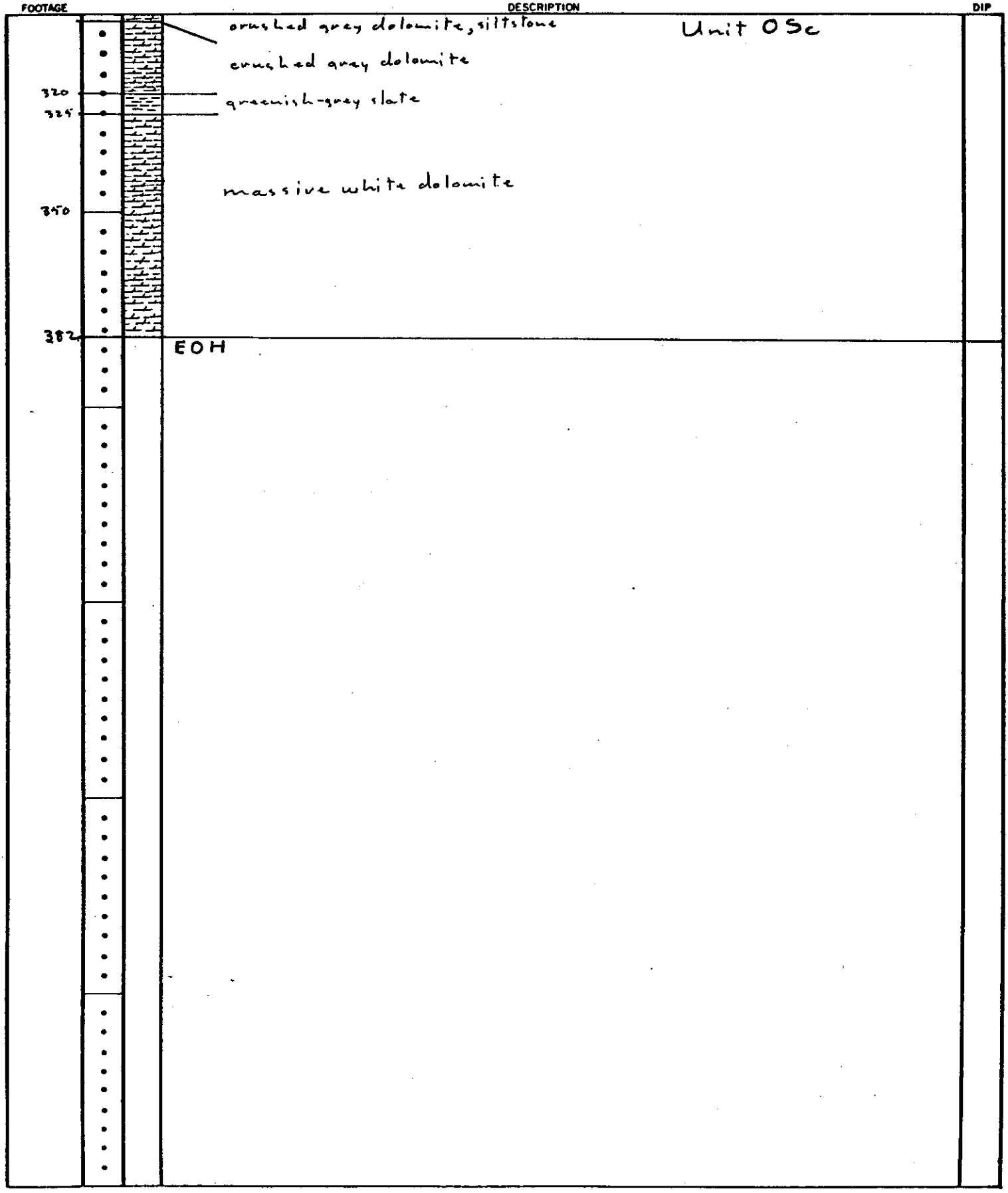
FOOTAGE	DESCRIPTION	DIP
0	Talus and broken ground	
50		
65	Unit OSDgc	
	grey-green calcareous siltstone and shale, strongly veined and fractured	
100		
104	light grey pellet limestone	
119	dark grey silty, calcareous shale minor limestone	
150		
166	interlaminated shale and dolomite	
174	rusty crushed dolomite	
186	massive white dolomite	
200		
211	Unit OS_{sl}	
	dark grey-green calcareous, graphitic silty shale	
250		
254	dark, foliated grey-green skarn	
275	dark grey-green siltstone	
281	dark speckled greenish skarn	
286	crushed, light grey dolomite, siltstone	
	Unit OS_c	
300		

DRILL HOLE LOG

HIDDEN
HOLE No. 3
PAGE 2 OF 2

COORDINATES
ELEVATION
DIP
AZIMUTH
SCALE

CORE SIZE
HOLE STARTED
HOLE COMPLETED
LOGGED BY



DRILL HOLE LOG

HIDDEN
HOLE No. 4
PAGE 1 OF 1

COORDINATES 110.8N, 125.25W
ELEVATION 1490M
DIP 70
AZIMUTH 340
SCALE 1"=33.3'

CORE SIZE BQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY T. BREMNER

FOOTAGE	DESCRIPTION	DIP
	overburden	
30		
36	light grey dolomitic limestone — Unit OSc?	
	light grey dolomitic limestone intensely fractured	
50		
62		
	light grey dolomitic limestone	
88	greenish grey shale	
96	clay and gouge	
97	grey limestone } fault zone	
101	clay and gouge	
103		
	highly fractured grey dolomitic limestone	
129	grey dolomitic limestone	
142	fault zone; calcareous clay and intensely fractured limestone	
150		
169	massive light grey dolomitic limestone	
194	fault zone; intensely fractured limestone	
198		
200	massive white dolomitic limestone	
209	light grey and white dolomitic limestone with shaley laminae	
240	EOH	
250		
300		

DRILL HOLE LOG

HIDDEN
HOLE No. 5
PAGE 1 OF 2

COORDINATES 110.25N 126.50W
ELEVATION 1500 M
DIP 50°
AZIMUTH 120°
SCALE 1"=33.3'

CORE SIZE BQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY T. BREMNER

FOOTAGE	DESCRIPTION	DIP
50		
65	black graphitic limestone	Unit OS_1?
70	massive white dolomite	
81	grey green shale	Unit OS_c?
86	massive white dolomite	
100		
119	grey green shale	
125	white dolomite intensely fractured	
150		
151	fault zone; crushed dolomite and graphitic shale	
175	grey green calcareous shale	
196	massive white dolomite	
200		
	clay gouge and alteration	
	intensely fractured and brecciated dolomite	
250		
259	greenish grey shale intensely fractured	
273	black graphitic limestone	
277	limonitic, intensely fractured and veined dolomite and gouge	7' of 0.95% WO_3 (277'-284')
284	light grey veined and brecciated skarn	
288	light, grey green calcareous shale highly fractured and faulted to 330'	
300		

HIDDEN
HOLE No. 5
PAGE 2 OF 2

DRILL HOLE LOG

COORDINATES
ELEVATION
DIP
AZIMUTH
SCALE

CORE SIZE
HOLE STARTED
HOLE COMPLETED
LOGGED BY

FOOTAGE	DESCRIPTION	DIP
	light grey green calcareous shale fractured and faulted	
	light grey shaley calcareous dolomite; intensely fractured and altered.	
350		
356	grey green calcareous silty shale	
364		
	black graphitic limestone and graphitic calcareous shale Unit ?	
400		
	EOH	

DRILL HOLE LOG

HOLE No. 6
PAGE 1 OF 2

COORDINATES 107.80N, 124.80W
ELEVATION 1745M
DIP 70°
AZIMUTH 070°
SCALE

CORE SIZE BQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY T. BREMNER

FOOTAGE	DESCRIPTION	DIP
	talus and overburden	
13	Unit OSDgc	
	thinly laminated, light to dark grey or greenish grey silty limestone interbedded with greenish grey shaley siltstone	
50		
99		
100	speckled, greenish grey foliated skarn	
113	thinly laminated silty limestone and silty shale.	
180		
187	dark grey siltstone	
143	thinly laminated silty limestone and grey shale	
148	pale, calc-silicate skarn	
150	dark grey shale	
155	thinly laminated silty limestone	
165		
168	dark grey shale	
173	thinly banded dolomite	
	dark grey calcareous siltstone	
200		
227	crush zone	
237	crush zone	
240	crush zone	
250		
258		
263	dark green foliated skarn	
	dark grey silty shale.	
282		
296	grey dolomite fault gouge	
300		

DRILL HOLE LOG

COORDINATES
ELEVATION
DIP
AZIMUTH
SCALE

CORE SIZE
HOLE STARTED
HOLE COMPLETED
LOGGED BY

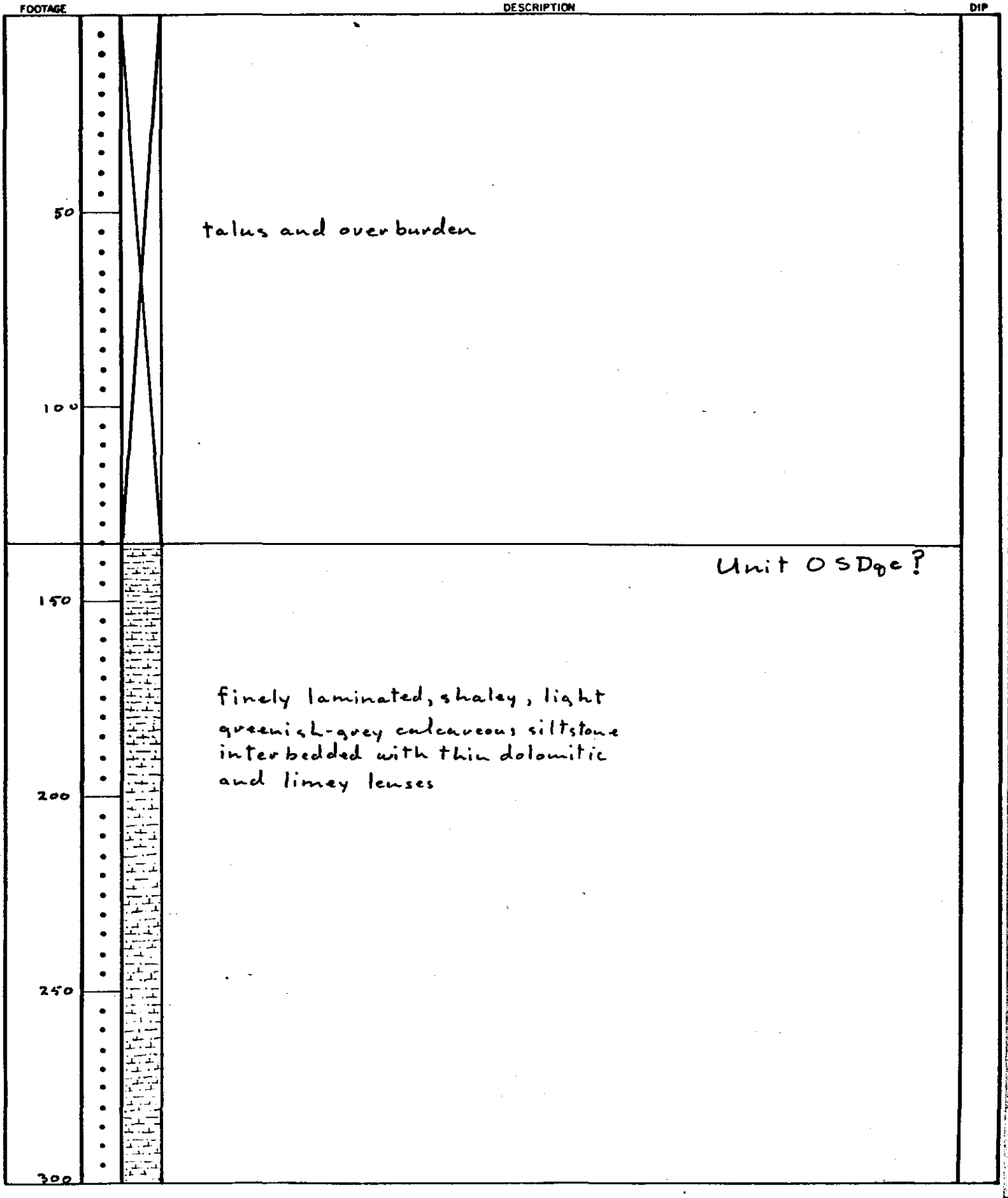
FOOTAGE	DESCRIPTION	DIP
309	thinly laminated grey limestone	
318	grey siltstone	
323	thinly laminated grey limestone	
337	grey siltstone	
350	thinly laminated grey limestone	
356		
374	dark grey siltstone	
395	thinly laminated grey limestone	
397	dark grey shale	
399	dark green foliated skarn	
400	dark grey calcareous shale	
420	pale green calc-silicate skarn	
427	E.O.H.	

DRILL HOLE LOG

HOLE No. 7
PAGE 1 OF 2

COORDINATES 112.70 N, 125.00 W
ELEVATION 1402 M
DIP 70°
AZIMUTH 070°
SCALE 1" = 33.3'

CORE SIZE BQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY T. BREMNER



HIDDEN
HOLE No. 7
PAGE 2 OF 2

DRILL HOLE LOG

COORDINATES
ELEVATION
DIP
AZIMUTH
SCALE

CORE SIZE
HOLE STARTED
HOLE COMPLETED
LOGGED BY

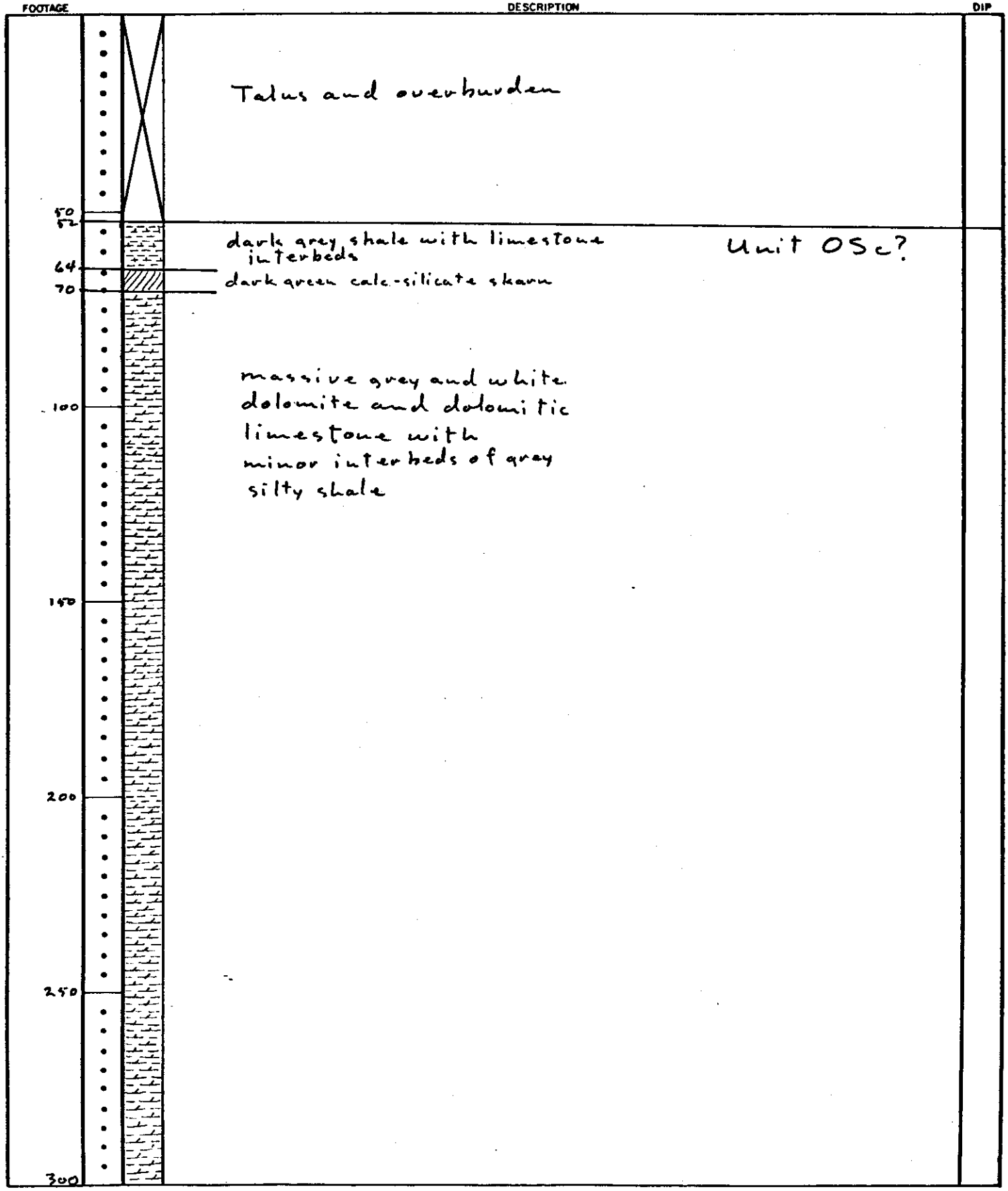
FOOTAGE	DESCRIPTION	DIP
300	Unit OSD$_{gc}$?	
350		
359'	Unit OS$_{sl}$?	
363	dolomite + quartz vein	
365	dolomite + quartz vein	
381	dolomite + quartz vein	
	black, graphitic calcareous shale and minor black graphitic limestone	
400		
437	dolomite + quartz vein	
450		
457	dolomite + quartz vein	
474	dolomite + quartz vein	
476	dolomite + quartz vein	
484	fault gouge	
487	dolomite + quartz vein	
496	pale, banded greenish calc-silicate and black and white banded dolomite	
500		
501	E.O.H.	

HIDDEN
HOLE No. 8
PAGE 1 OF 2

DRILL HOLE LOG

COORDINATES 115.75 N, 126.00 W
ELEVATION 1275 M
DIP 90
AZIMUTH –
SCALE 1" = 33.3'

CORE SIZE BQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY T. BREMNER



HIDDEN
HOLE No. 8
PAGE 2 OF 2

DRILL HOLE LOG

COORDINATES
ELEVATION
DIP
AZIMUTH
SCALE

CORE SIZE
HOLE STARTED
HOLE COMPLETED
LOGGED BY

FOOTAGE	DESCRIPTION	DIP
300		
307	Unit OSc?	
	Unit Kqm	
	massive, medium grained porphyritic quartz monzodiorite or quartz monzonite	
350		
400		
	EOH	

H.S.BOSTOCK CORE LIBRARY

WHITEHORSE, YUKON TERRITORY

INDIAN & NORTHERN AFFAIRS 090961

SER. NO.	LIBRARY LOC.	PROPERTY	DRILLED FOR	YR.	HOLE NO.	BOX NO.	INTERVAL FROM	INTERVAL TO	N.T.S.	CORE	REMARKS
79798	42	HIDDEN	ARCHER CATH'D	79	H-79-1	1	10	35	105F6	BQ	
79799						2	35	59			
79800						3	59	79			
79801						4	79	98.5			
79802						5	98.5	116			
79803					H-79-2	1	7	61			
79804						2	61	82			
79805						3	82	102			
79806						4	102	125			
79807						5	125	146			
79808						6	146	168			
79809						7	168	189			
79810						8	189	211			
79811						9	211	233			
79812						10	233	257			
79813						11	257	282			
79814						12	282	305.5			
79815						13	305.5	327			
79816						14	327	349			
79817						15	349	371			See #79905 to #79910 for
79818					H-79-3	1	18	76			end of hole #2
79819						2	76	98			
79820						3	98	120			
79821						4	120	141			
79822						5	141	163			

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SER. NO.	LIBRARY LOC.	PROPERTY	DRILLED FOR	YR.	HOLE NO.	BOX NO.	INTERVAL FROM	INTERVAL TO	N.T.S.	CORE	REMARKS
79823	42	HIDDEN	ARCHER CATHRO	79	H-79-3	6	163	186	105F6	BQ	
79824						7	186	207			
79825						8	207	234			
79826						9	234	258			
79827						10	258	282			
79828						11	282	312			
79829						12	312	338			
79830						13	338	362			
79831						14	362	382			
79832					H-79-4	1	30	57			
79833						2	57	79			
79834						3	79	103			
79835						4	103	127			
79836						5	127	152			
79837						6	152	179			
79838						7	179	205			
79839						8	205	227			
79840						9	227	240			
79841					H-79-5	1	38	81			
79842						2	81	109			
79843						3	109	137			
79844						4	137	180			
79845						5	180	204			
79846						6	204	217			
79847						7	217	248			

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INDIAN & NORTHERN AFFAIRS

SER. NO.	LIBRARY LOC.	PROPERTY	DRILLED FOR	YR.	HOLE NO.	BOX NO.	INTERVAL FROM	INTERVAL TO	N.T.S.	CORE	REMARKS
79848	42	HIDDEN	ARCHER CATHRO	79	H-79-5	8	248	269.5	105F6	BQ	
79849						9	269.5	294			
79850						10	294	311			
79851						11	311	336			
79852						12	336	355			
79853						13	355	378			
79854						14	378	392			
79855						15	392	421			
79856					H-79-6	1	10	32			
79857						2	32	55			
79858						3	55	77			
79859						4	77	86			
79860						5	86	110			
79861						6	110	128.5			
79862						7	128.5	151			
79863						8	151	173			
79864						9	173	197			
79865						10	197	221			
79866						11	221	242			
79867						12	242	265			
79868						13	265	289			
79869						14	289	312			
79870						15	312	336			
79871						16	336	359			
79872						17	359	382			

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NORTHERN AFFAIRS AND NATIONAL RESOURCES & ENV. BRANCH
INDIAN & NORTHERN AFFAIRS

SER. NO.	LIBRARY LOC.	PROPERTY	DRILLED FOR	YR.	HOLE NO.	BOX NO.	INTERVAL FROM	INTERVAL TO	N.T.S.	CORE	REMARKS
79873	42	HIDDEN	ARCHER CATHRO	79	H-79-6	18	382	406	105F6	BQ	
79874						19	406	427			
79875					H-79-7	1	15	139			
79876						2	139	164			
79877						3	164	196			
79878						4	196	238			
79879						5	238	276			
79880						6	276	301			
79881						7	301	325			
79882						8	325	354			
79883						9	354	381			
79884						10	381	409			
79885						11	409	432			
79886						12	432	454			
79887						13	454	480			
79888						14	480	501			
79889					H-79-8	1	8	69			
79890						2	69	93			
79891						3	93	115			
79892						4	115	138			
79893						5	138	162			
79894						6	162	186			
79895						7	186	210			
79896						8	210	233			
79897						9	233	256			

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INDIAN & NORTHERN AFFAIRS

SER. NO.	LIBRARY LOC.	PROPERTY	DRILLED FOR	YR.	HOLE NO.	BOX NO.	INTERVAL FROM	INTERVAL TO	N.T.S.	CORE	REMARKS
79898	42	HIDDEN	ARCHER-CATHRO	79	H-79-8	10	256	279	105F6	BQ	
79899						11	279	302			
79900						12	302	325			
79901						13	325	348			
79902						14	348	371			
79903						15	371	398			
79904						16	398	412			
79905					H-79-8	16	371	394			
79906						17	394	415			
79907						18	415	438			
79908						19	438	468			
79909						20	464	488			
79910						21	488	501			

QUATERNARY

Q — Glacial till

CRETACEOUS and/or TERTIARY

KTfp — Dacite porphyry dikes – dark brown, with vesicles and calcite-filled amygdules

Kqm — Nisutlin Batholith – quartz monzonite

UPPER DEVONIAN and MISSISSIPPIAN

uDMs — Slate – Minor Siltstone – black, non-calcareous

ORDOVICIAN, SILURIAN and DEVONIAN

Sq — Massive grey quartzite

Sd — Sandy Dolomite – massive, light grey and tremolite-diopside skarn

OSs ? — Slate, black, graptolitic, weathers rusty

OSDqc — Limestone, light grey, wavy banded, pellet texture, with interbedded green-grey silty shale

OSsl — Graphitic Limestone and black calcareous shale

OSc — Banded Dolomite – white, massive, with thin black bands

SYMBOLS

- Geological boundary – defined, approximate
- Fault – defined, approximate
- Bedding – inclined
- Syncline, anticline
- Diamond drill hole

FIGURE 1

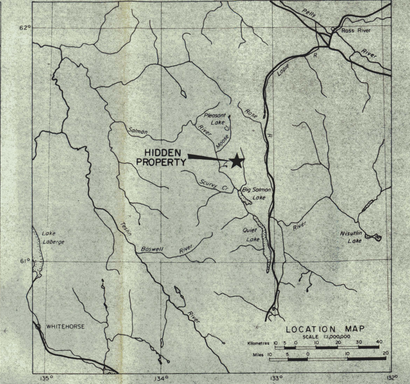
ARCHER, CATHRO & ASSOCIATES LTD

GEOLOGY

HIDDEN PROPERTY

CUB JOINT VENTURE

SCALE 1:10,000



LEGEND

CRETACEOUS

KTfp — Dacite porphry dikes- dark brown, with vesicles and calcite-filled amygdules

UPPER DEVONIAN and (?) MISSISSIPAN

uDMs — Slate-minor siltstone-black, non-calcareous

ORDIVICIAN, SILURIAN and DEVONIAN

Sd — Sandy Dolomite-massive light grey and tremolite-diopsid skarn

OSs — Slate, black, graptolitic, weathers rusty

OSDqc — Limestone - light grey, wavy banded, pellet texture, with interbedded green-grey silty shale

OSsl — Graphitic Limestone and black calcareous shale

OSc — Banded Dolomite - white massive, with thin black bands

SYMBOLS

- geological contact- defined, approximate
- limit of outcrop
- fault- defined ; approximate ; dot indicates downthrown side
- bedding ; incline
- cleavage
- lineation
- fracture
- anticline, syncline
- skarn zone
- DDH-79-1 diamond drill hole

FIGURE 2

ARCHER, CATHRO & ASSOCIATES LTD

GEOLOGY DETAIL

HIDDEN PROPERTY

CUB JOINT VENTURE

SCALE 1:2000

50 0 50 100 150 200 Metres

090961

To accompany report dated Dec 1979

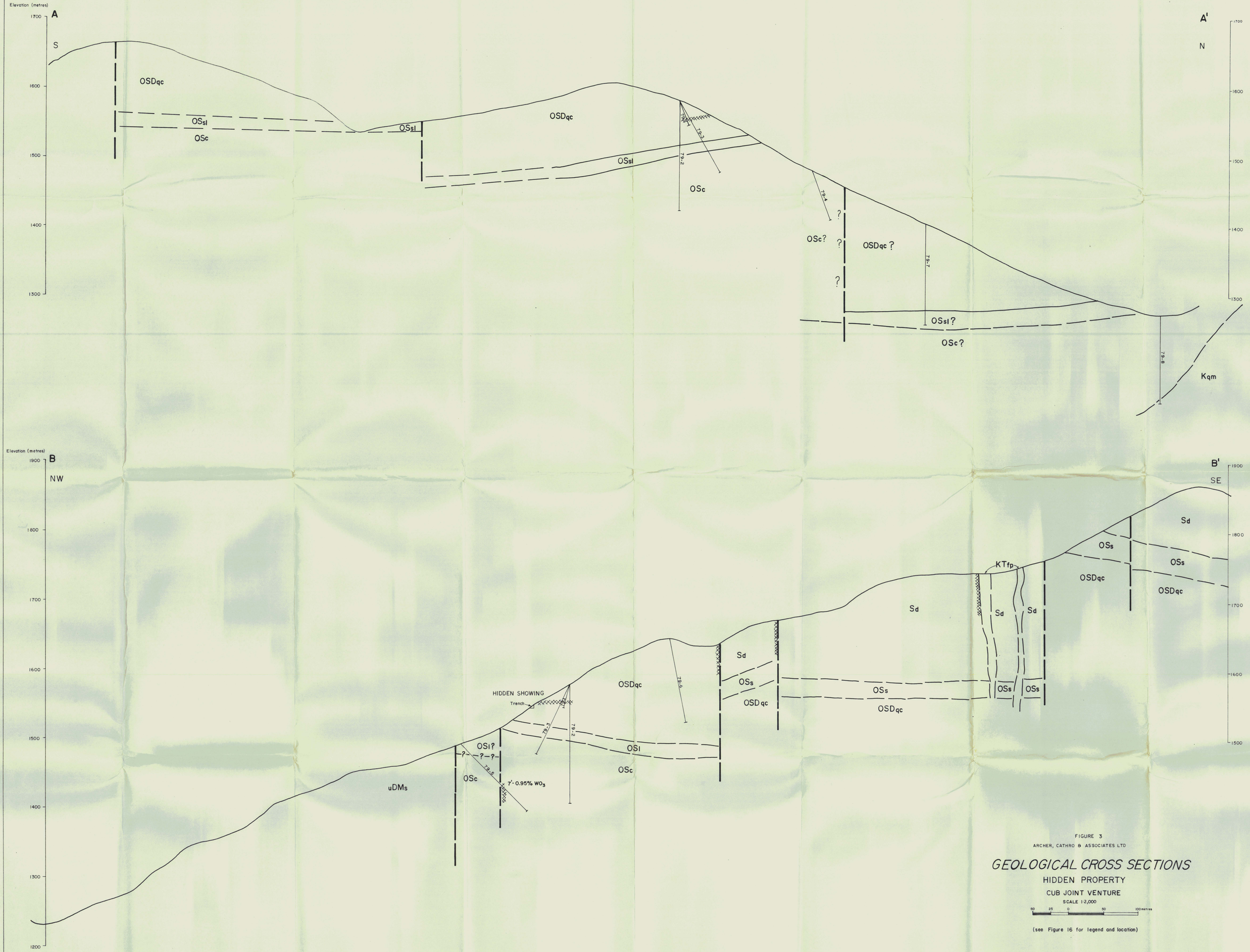


FIGURE 3

ARCHER, CATHRO & ASSOCIATES LTD

GEOLOGICAL CROSS SECTIONS

HIDDEN PROPERTY

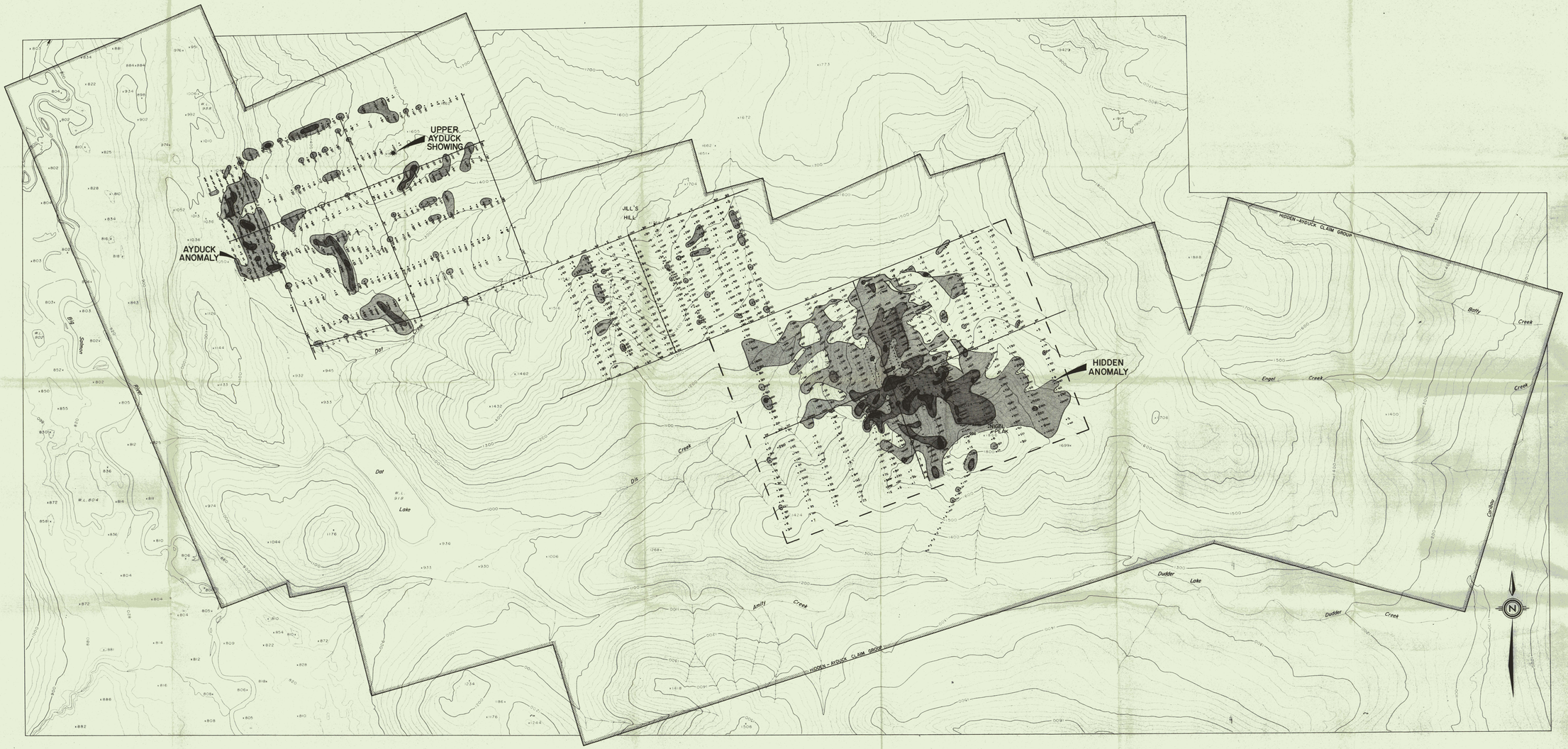
CUB JOINT VENTURE

SCALE 1:2,000

50 25 0 50 100 metres

(see Figure 16 for legend and location)

090961



200 - 2000

2000 - 10000

10 000 +

•10 scheelite grains per pan.

FIGURE 4

ARCHER, CATHRO & ASSOCIATES LTD

PANNING SURVEY

HIDDEN PROPERTY

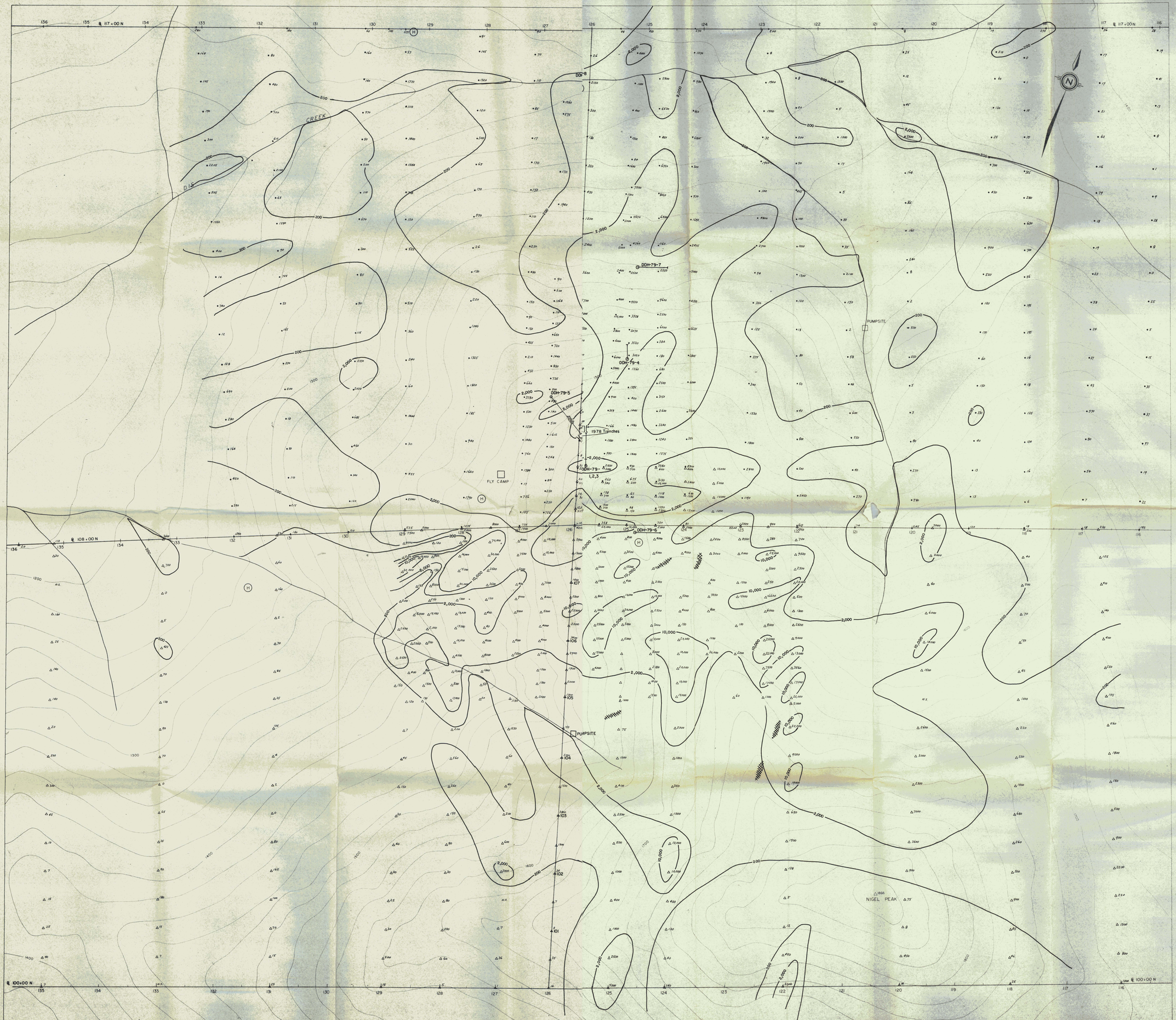
CUB JOINT VENTURE

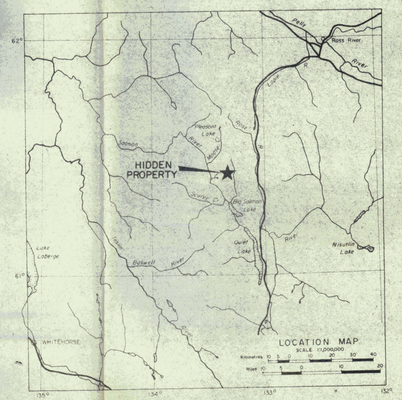
SCALE 1:20,000

200 400 0 100 200 300 400 500 1000 Metres

090961

To accompany report dated Dec. 1979





weakly mineralized garnet diopside skarn

•30,Δ50 Scheelite grains per pan (1976,1979)

FIGURE 5

ARCHER, CATHRO & ASSOCIATES LTD

PANNING DETAIL

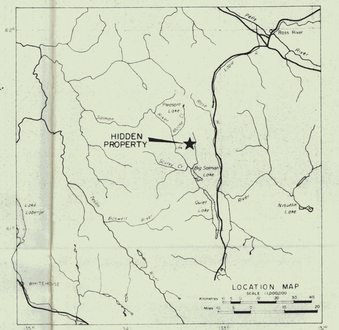
HIDDEN PROPERTY

CUB JOINT VENTURE

SCALE 1:2500

090961

1. geophysical report dated Dec. 1979



100 ppm contour

FIGURE 6

ARCHER, CATHRO & ASSOCIATES LTD

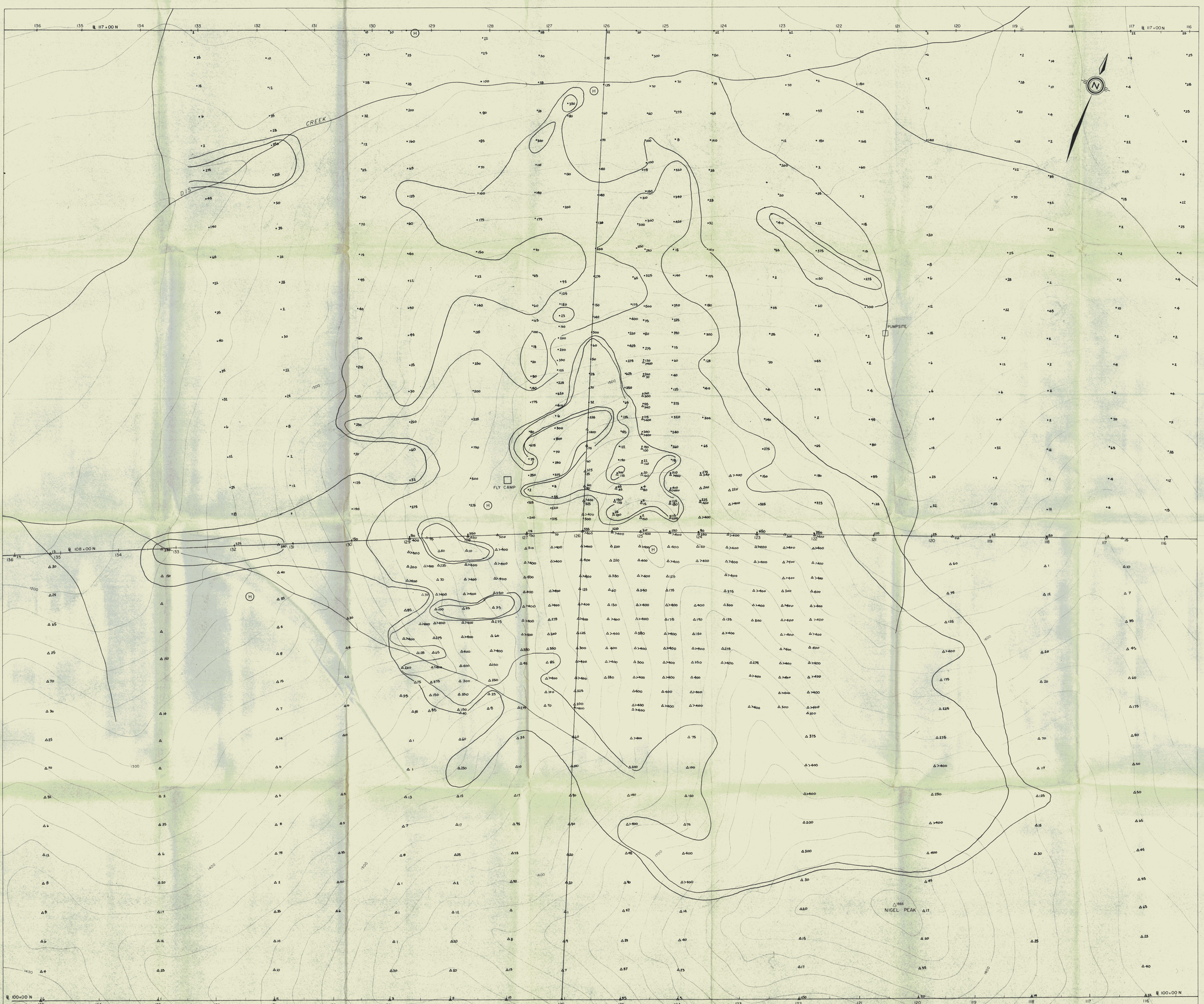
W SOIL GEOCHEMISTRY

HIDDEN PROPERTY

CUB JOINT VENTURE

SCALE 1:10,000

090961



Contours at 100 and 200 ppm

FIGURE 7

ARCHER, CATHRO & ASSOCIATES LTD

W SOIL GEOCHEMISTRY DETAIL

HIDDEN PROPERTY

CUB JOINT VENTURE

SCALE 1:2000

50 0 50 100 150 200 Metres

090961