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555 BURRARD ST.
VANCOUVER 1, B.C.

Report On
1972
Geochemical Diamond Drilling
And
Trenching Program
Williams Creek Property
DAWSON RANGE JOINT VENTURE
Boy, War, Will, Mac, Man, Dun
TK, Tody and Zero Claims
115-I-7

Latitude 62° 16', Longitude 136° 41'

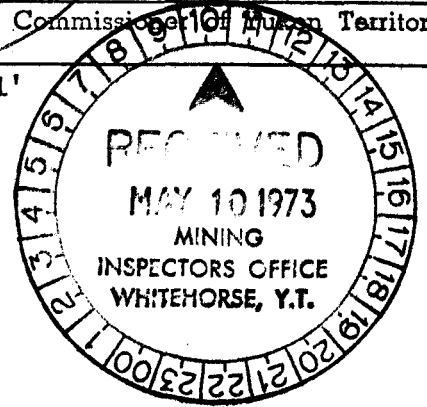
Whitehorse Mining Division
Yukon Territory
February, 1973

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of \$14,035.00

H. B. Craig
Resident Geologist or
Resident Mining Engineer

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

[Signature]
Commissioner of Yukon Territory



Alan R. Archer

Consulting Geological Engineer

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INTRODUCTION

The exploration work described in this report was carried out by Archer, Cathro & Associates Ltd. on behalf, of Dawson Range Joint Venture during the period May-August, 1972. Supervision was provided by the writer A.R. Archer.

This work was directed towards exploring the remainder of the Williams Creek property for additional mineralized zones and evaluating the best of these by diamond drilling along with the No.4, 5, and No, 8 Zones found in 1971. Surface work consisted of 26,000 cubic yards of bulldozer trenching, 5022 ft. of diamond drilling in eight holes, road repair, 1.3 miles of new road construction, 19.5 miles of baseline cutting and 94 miles of soil sampling.

PROPERTY, LOCATION AND ACCESS

The property consists of one block of 396 claims recorded at Whitehorse, Yukon Territory as follows:

<u>Claim Name</u>	<u>Record No's.</u>	<u>Lapse Date</u>	<u>Ownership</u>
Boy 1-26	Y51099-124	9 Mar, 77	
Boy 27	Y51125	9 Mar, 78	
Boy 28	Y51126	9 Mar, 79	
Boy 29-30	Y51127-28	9 Mar, 78	
Boy 31-56	Y51129-54	9 Mar, 77	
Boy 57	Y51155	9 Mar, 79	134 Boy Claims
Boy 58	Y51156	9 Mar, 77	owned 90% DRJV
Boy 59	Y51157	9 Mar, 79	10% A. Arsenault
Boy 60-78	Y51158-76	9 Mar, 77	
Boy 83-86	Y51181-84	9 Mar, 79	
Boy 87-110	Y51185-208	9 Mar, 77	
Boy 115-128	Y51213-26	9 Mar, 77	
Boy 137-150	Y51235-48	9 Mar, 77	

Will 1-119	Y59520-638	9 Mar, 76	
War 1-24	Y59352-75	9 Mar, 76	Will, War, Mac, Man,
War 25-40	Y59639-54	9 Mar, 76	Dun and Zoro claims
Mac 1-6	Y59376-81	9 Mar, 76	100% DRJV
Man 1-16 Fr.	Y58831-46	9 Mar, 77	
Dun 1-4 Fr.	Y59382-85	9 Mar, 76	
Zoro 1-8	Y66787-794	20 July, 73	

<u>Claim Name</u>	<u>Record No.'s</u>	<u>Lapse Date</u>	<u>Ownership</u>
Tody 35-58	Y48213-36	9 Jan.,75	Tody claims 85%
Tody 97-120	Y48275-98	9 Jan.,75	DRJV, 15% Spokane
Tody 159	Y48329	9 Jan.,75	National Mines
Tody 161-180	Y48331-50	9 Jan.,75	
TK 1-8	Y35159-66	11 June,74	----- Mitsubishi Option -----

The property is located at Latitude 60°16', Longitude 136°41' about 25 miles northwest of Carmacks . Access is by a 7½ mile tote trail suitable for four wheel drive vehicles which leaves the Mt. Freegold Road at M.P. 22.

HISTORY

The first lode claims were staked in July, 1898 by placer miners enroute along the Yukon River to the Klondike on copper showing in bedrock canyons near the mouths of Merrice, Williams, Nancy Lee and Hoocheekoo Creeks, north of the claim group. The original showing is narrow fissure fillings occupying discontinuous quartz filled shears along a volcanic intrusive contact. Most of the development, including the adits was completed prior to 1910. The claims were later consolidated under the ownership of Dr. J. O. Lachapelle, a Dawson dentist, and a few tons of ore shipped to the Granby Smelter in 1917. Fourteen of the original crown-granted claims are owned by Carmacks resident Mrs. Ida Goulter. No record exists of work in this vicinity during the past fifty years.

The 134 claims which form the core of Williams Creek property, were staked by Whitehorse business men G. Wing and A. Arsenault late in the rush which followed the Casino discovery and were recorded on 9 March, 1970. Dawson Range Joint Venture examined the claims in July and a formal agreement was executed in September, 1970. A further 185 claims were staked during the period September-November 1970. Mitsubishi owns eight TK claims within the Boy claim block. They were staked on a magnetic low and recorded on June 11, 1969.

In July, 1970 two mineralized outcrops , the No. 1 and No. 2 Zones were found by prospecting. Neither zone responded to reconnanissance geochemical silt sampling. Work during the remainder of the field season consisted of 800 x 400 foot grid soil survey of 14 square miles, about \$22,500 (assessment credit) of bulldozer trenching, and two x-ray size diamond drill holes totalling 103 feet on the No. 1 Zone.

In 1971 from June to October work included 15.3 miles of road construction, more than 127,000 cubic yards of bulldozer trenching, 18,317 feet of diamond drilling in 25 holes, 64 line miles of grid geochemistry, 17 line miles of EM 16 and magnetite survey, a test I.P. survey, 30 line miles of cut and surveyed baseline, geological mapping of the property, airphoto coverage, regional exploration north and east of the property and staking of additional claims.

In May 1971 DRJV optioned the TK claims from Mitsubishi and in July 1971 a block of sixty-nine claims,Tody group,was optioned from Spokane National Mines Inc.

1972 EXPLORATION PROGRAM

Linecutting and Geochemical Survey

A total of 19.5 miles of baseline were cut and surveyed by White, Hosford & Impey, Whitehorse Land Surveyors in June, 1972. These extended the 1971 grid system south of Williams Creek to cover the southern portion of the claim group including the optioned Tody claims. Topographic control was provided by an airphoto mosaic prepared by Northwest Survey Corp. Ltd. from its airphotos flown in 1971. The cut lines were surveyed with transit and chain to establish hubs at true horizontal intervals of four hundred feet.

Soil samples, taken at 200 foot intervals on lines 800 feet apart, were located by pace and compass between the surveyed baselines and were marked with

an eighteen inch lath picket numbered with a co-ordinate relative to the baseline. Two areas where mineralized float had been found in 1970 were sampled on lines 400 feet apart. The soil sample was obtained from a B or occasionally a B+C horizon by digging below the volcanic ash and underlying fossil organic layer. Samples were assayed for copper by Chemex Labs. Ltd. North Vancouver, B.C. using atomic absorption spectrometry of a nitric-perchloric extraction of a minus eighty mesh fraction.

For purposes of interpretation, 30 ppm copper is considered threshold, 50 ppm copper is anomalous and 100 ppm copper or greater is strongly anomalous. Soil sample values relative to the baseline system are illustrated on Figures W11N and W11S. Three moderately anomalous areas were found. Two of these, No. 9 and No. 13 Zones, were areas where minor copper mineralization was found by prospecting in 1970. The three anomalies plus a single line anomaly were explored by bulldozer trenching. Trenching located weakly mineralized zones at each anomaly which are described individually in the following section of the report. It is interesting to note that the intensity of each geochemical anomaly is more or less proportional to the grade of the zone uncovered. Moreover, although the new zones are very low grade (less than 0.1 per cent copper) they exhibit a very strong geochemical contrast. With such a contrast, it is unlikely that any better grade zones of significant width or length have been missed.

Geology and Bulldozer Trenching

Figures W10 N and W10 S illustrate the location of new zones (No. 9, 10, 11, 12 and 13) trenched in 1972. Outcrops are almost non-existent south of Williams Creek and the only new surface geological data gathered in 1972 is from trenching and the road cut to the No. 12 Zone. Other than minor trench cleaning, no bulldozing was done on zones explored in 1971. New

zones explored by bulldozing in 1972 are described individually as follows-

No. 9 Zone - Float from this zone was found by prospecting in 1970.

The area was soil sampled with a 200 by 400 foot spacing in 1972 and the portion of strongest response was exposed by two trenches, as illustrated on Figure W30. The zone consists of medium to coarse grained hornblende (40 per cent) and plagioclase (60 per cent). Foliation is weakly developed on its contact with the dioritic country rock. Numerous narrow pegmatite dikes cut both the zone and country rock. Mineralization occurs as minor malachite staining, that was found to decrease in quantity with depth of trenching. The source of the copper oxide appears to be minute, equally distributed, amounts of copper occurring in the hornblende either as a high background or as microscopic grains of sulfide. The area of best oxide mineralization assayed 0.06 per cent copper over a width of 210 feet. This zone, except for the higher feldspar content, is very similar in appearance to the amphibolite zone(or stock) with high copper background found on the northern part of the property in 1971.

No. 10 Zone - This zone, which is actually a group of sub-parallel zones, was found by soil sampling. The geochemical anomaly is a little over 3000 feet long and is of weak to moderate intensity with peak values up to 600 parts per million copper. Although there is no outcrop in the area, bulldozing revealed that overburden depth is less than three feet and seldom exceeds six feet. Figure W31 illustrates geology and trench samples. Mineralization is found in a series of foliated hornblende diorite zones somewhat similar to the No. 1 Zone, but with less quartz and biotite. Most of the copper occurs as weak malachite staining which, like the No. 9 Zone, decreases in quantity with depth

of trenching. Very minor chalcopyrite and pyrite was noted in the western zone cut in the trench at 87, 200 North. Only the sections of best mineralization were sampled and no assay exceeded 0.1 per cent copper. There is no evidence of sufficient surface leaching to suggest the possibility of better grades at depth.

No. 11 Zones - This zone was found by trenching a single line geochemical anomaly with a peak value of 437 ppm copper. The location and assays are illustrated on Figure W10 S. The trench exposed a zone about 300 feet wide of weakly foliated biotite diorite. Mineralization occurs as minor malachite which, like the No. 9 and 10 Zones, decreased in quantity with depth of trenching. No sulfides were seen and there is no evidence of leaching. The best mineralized portion assayed 0.08 per cent copper over a width of 190 feet. The zone occurs in an area of residual till well above the level of glaciation. Geochemical response on lines to the north and south returned only background values and no further trenching was considered warranted.

No. 12 and 13 Zones - Results of trenching on these zones is illustrated on Figure W32. As can be seen, it is possible that these are the ends of a single zone. The 2400 foot interval separating them could not be effectively explored by either soil sampling or bulldozer trenching due to glaciofluvial cover. The No. 12 Zone was found by prospecting in 1969 and was soil sampled on a 200 foot by 400 foot spacing in 1972. A soil anomaly about 2000 feet long and 600 feet wide, with peak values to 1760 ppm copper, was explored by five trenches. Construction of a tote road from the camp to the No. 12 Zone located the No. 13 Zone on the south bank of Williams Creek. Geochemical response over the No. 13 Zone area is weak due to the glacial till cover but does contain erratic

above threshold (plus 40 ppm) values.

The No. 12 Zone, traced for a length of 1300 feet, is a series of steep dipping, sub-parallel zones of schistose, hornblende-rich rock which is very similar to the No. 1 Zone except for a lower content of biotite and quartz. Mineralization occurs as malachite with minor chalcopryrite and bornite and is most abundant where the biotite content is highest. The best assay obtained was 0.73 per cent copper over a width of 19.0 feet. An unusual feature of No. 12 Zone is the presence of minor red-orange garnet and small pockets of magnetite, which usually occur near the footwall. Mineralized portions of the zone show little continuity between the trenches. There is no evidence of significant leaching.

The No. 13 Zone could only be exposed for a strike length of 200 feet as it is covered by glaciofluvial till to the south and runs into the muskeg-filled Williams Creek valley to the north. It averages about 150 feet wide and consists of irregularly spaced and narrow schistose, hornblende biotite zones within a K-feldspar rich biotite hornblende diorite. The area of K-feldspar enrichment define the boundaries of the zone within the dioritic country rock. Mineralization consists of malachite, bornite and minor chalcopryrite and is most abundant in or near the schistose sections. The southernmost trench average 0.19 per cent copper over a 175 foot width, within which a central section graded 0.28 per cent over 75 feet. This zone could represent a more granitized equivalent of a No. 1 Zone-type roof pendant.

Diamond Drilling

The 1971 drill core was logged in detail during early 1972 and rough plotted on sections at a scale of one inch to forty feet. The intrusive country rock was divided into three units and two varieties of dikes, and the mineralized zone was classified into seven units. The subdivision is based mainly on degree of schistosity and hornblende-biotite ratios. These maps have not been drafted and are not included in this report. Figures W17 to W23 illustrate a simplified version of the logging of the 1971 drilling at a scale of one inch to 100 feet. Mineralized sections of all holes are stored in the Territorial Government core shed at Whitehorse while the remaining core is stored in covered racks at the Williams Creek camp.

A total of 5022 feet in eight holes was drilled in 1972. A table of detailed assay results for each hole is included in the appendix and the geology is illustrated on the maps referred to in the following summary. The drilling was done with BQ wireline equipment under contract by Arctic Diamond Drilling Ltd. of Whitehorse at an all inclusive rate of \$8.50 per foot to 800 feet and \$9.50 per foot below this depth. Other than unexpectedly deep overburden at Hole 8-1, no significant drilling problems were encountered.

<u>Hole No.</u>	<u>Depth</u>	<u>Comments</u>
1-18 (see Fig. W26)	800'	-drilled on the Mitsubishi TK claims to fulfill agreement requirements and to test the projected extension of the No. 1 Zone north. No mineral or zones intersected.
4-1 (see Fig. W17)	610'	-drilled on section zero to intersect the No. 4 Zone about 400 feet below surface. The zone narrowed with the best grade being 0.42 per cent Cu over 17 feet (523-540) and 1.18 per cent Cu over 10 feet (550-560) . Mineralization was mainly bornite and the zone was poorly developed.

<u>Hole No.</u>	<u>Depth</u>	<u>Comments</u>
4-2 (see Fig. W28)	873'	-drilled west to intersect the No. 4 Zone on section 400 South. No zone located
4-3 (see Fig. W28)	370'	-drilled east to intersect the No. 4 Zone on section 400 South. The zone, which was 220 ft. wide on surface, was found to finger out at depth and to be faulted on the footwall (east) side accounting for Hole 4-2 missing the zone. The best assay was 0.63% Cu over 6.7 ft. (252.3-259.0).
8-1 (see Fig. W29)	801'	-drilled from east to west to cut the No. 8 Zone, by camp, about 400 feet below surface. No zone located.
8-2 (see Fig. W29)	403'	-collared on the west side of No. 8 Zone near the camp to cross-section between the zone and Hole 8-1. No zone was located indicating that the No. 8 Zone is either faulted off or fingers out quickly at depth.
13-1 (see insert on Fig. W32)	415'	-drilled to test the No. 13 Zone exposed in a road cut about 2000' east of camp on the south side of Williams Creek. About 125 feet of weakly mineralized (mainly malachite with bornite) zone was cut. The zone contains narrow schistose bands within a hybrid zone in the main intrusive. The best grade was 15 feet assaying 0.5% Cu (115'-130').
5-3 (see Fig. W27)	750'	-drilled about 300 feet below 1971 Hole 5-1 to test the downward extension of a bornite section near the footwall of the No. 5 Zone. The zone was found at the projected location but only traces of mineralization were obtained.

Conclusions

The 1972 work has not located any new zones of economic interest. The soil sampling has proven to be a cheap and definitive exploration method above

the levels of recent glaciation. There are only two remaining surface exploration possibilities, other than testing the No. 1 Zone to depth. The first is the No. 3 Zone described in the 1971 report. This is a broad geochemical anomaly in an area of glacial till varying from 50 feet to 150 feet or more in depth. Geophysical methods are not expected to be very effective because of the nature of the mineralization and overburden depth and further exploration will probably have to be done by cross section drilling, which will be expensive due to the extensive casing required. The other exploration possibility is the 2400 foot long glacial overburden covered portion of the No. 13 Zone South to the No. 12 Zone. This section could be explored by a series of fairly shallow drill holes starting 400 feet south of the No. 13 Zone trenching. Depth of glacial till in this area is not expected to exceed 50 feet. These are the only new zones found in 1972 where assays exceed 0.1 per cent copper over a significant width and where abundant biotite, the best mineral indicator, is found.

The 1972 work has not changed the writers concept of zone formation and source of mineralization that is outlined in detail in the 1971 report. In summary, the zones appear to be linear roof pendants of Triassic andesitic volcanics similar to that found on the eastern edge of the property. The degree of mineralization in individual roof pendants, or zones, is partially related to biotite content. What is not certain is whether the mineralization has preferentially mineralized biotite rich zones or whether the biotization was produced during the process of mineralization.

SUMMARY AND RECOMMENDATIONS

Geochemical exploration followed by bulldozer trenching located five new mineralized zones (No. 9 to 13 Zones) during 1972 at the Williams Creek property. Most of the property has now been explored by soil sampling. This technique has proven so effective that it is doubtful if any significant undetected areas of surface mineralization remain in the unglaciated portions. None of the new zones, with the exception of the No. 12 and 13 Zones, returned assays exceeding 0.1 per cent copper. The No. 12 and 13 Zones, which could be the ends of a single zone, are separated by 2400 feet of glacial till covered terrain that could not be explored by geochemistry or bulldozer trenching. The No. 21 Zone, trenched over a 1300 foot length, returned assays as high as 0.73 per cent copper across 19.0 feet but mineralization is erratically distributed and there is no obvious drill target. The No. 13 Zone could only be exposed for a length of 200 feet before it strikes under the glacial cover, but returned more consistent assays which averaged 0.19 per cent copper over a 175 foot width. A diamond drill hole about 120 feet below the No. 13 Zone average 0.21 per cent copper over a true width of 63 feet. The No. 4, 5 and 8 Zones found in 1971 were further explored by diamond drilling but none returned sufficient width or grade of mineralization to warrant additional work. The only remaining surface exploration targets, other than drilling the No. 1 Zone to depth, are (a) the No. 3 Zone (found in 1971), which is defined by a broad geochemical anomaly in an area of deep glacial till, and (b) the thinner glacial till covered extension of the No. 13 Zone south toward the No. 12 Zone. It is the writers opinion that neither

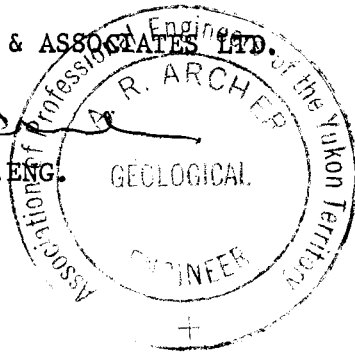
target justifies exploration until the road and camp are reopened for further development of the No. 1 Zone.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES LTD.

A. R. Archer

A.R. Archer, P.ENG.



CORE SAMPLING 1972 DRILLING

<u>Hole No.</u>	<u>Final Depth(feet)</u>	<u>Footage Interval</u>	<u>Copper Assay(%)</u>
1-18	800	unmineralized	
4-1	610	164.0-173.5	0.07
		523.0-530.0	0.50
		530.0-540.0	0.35
		540.0-550.0	0.11
		550.0-560.0	1.18
4-2	873	unmineralized	
4-3	370	200.7-210.0	0.08
		210.0-216.4	0.36
		234.0-235.6	0.31
		252.3-259.0	0.63
5-3	750	621.0-630.0	0.02
		630.0-650.0	0.02
		650.0-670.0	0.04
		670.0-690.0	0.02
		690.0-701.3	0.02
8-1	801	unmineralized	
8-2	403	unmineralized	
13-1	415	115.0-120.0	0.55
		120.0-130.0	0.47
		130.0-140.0	0.10
		140.0-150.0	0.17
		150.0-160.0	0.13
		160.0-170.0	0.13
		170.0-180.0	0.12
		180.0-190.0	0.03
		190.0-200.0	0.08
		200.0-210.0	0.04
		210.0-220.0	0.02
		220.0-230.0	0.03
		230.0-240.0	0.03
		240.0-250.0	0.01
		250.0-260.0	0.01
		260.0-270.0	0.01
		270.0-280.0	0.01
		280.0-290.0	0.01
		290.0-300.0	0.01



LEGEND

- CARNACKIS VOLCANICS - Blue-gray or purplish-gray. Probably diorite or andesite. Feature phenocrysts (20%) hornblende and mica phenocrysts (10%) in a felsic matrix.
- HORNBLende DIORITE - Medium to coarse grained, non-foliated (20%) hornblende (15) abundant quartz and perthite dikes.
- HORNBLende DIORITE with quartzite and granite dikes. Hornblende diorite (10%) quartzite (10%) granite (10%) other foliated volcanic contact. Hornblende diorite (10%) quartzite (10%) granite (10%) other foliated volcanic contact. Most prominent on east side of property and near to Bonanza King mine. Very coarse phenocrysts of hornblende (10%) quartzite (10%) granite (10%) other foliated volcanic contact. Predominantly matrix but may be up to 10% hornblende in some parts of property (3) Areas where hornblende diorite is associated with quartzite and granite (10%) hornblende diorite.
- HORNBLende DIORITE with quartzite and granite dikes. Hornblende diorite (10%) quartzite (10%) granite (10%) other foliated volcanic contact. Hornblende diorite (10%) quartzite (10%) granite (10%) other foliated volcanic contact. Most prominent on east side of property and near to Bonanza King mine. Very coarse phenocrysts of hornblende (10%) quartzite (10%) granite (10%) other foliated volcanic contact. Predominantly matrix but may be up to 10% hornblende in some parts of property (3) Areas where hornblende diorite is associated with quartzite and granite (10%) hornblende diorite.
- AMPHIBOLITE - Medium to coarse grained, non-foliated, strongly magnetic (occasionally magnetite a major constituent) hornblende predominant (80%) other foliated (10%) quartzite (10%) granite (10%) other foliated volcanic contact. Occasionally bands of hornblende are layered with bands of altered volcanic for widths up to 10 feet at the contact. Volcanics in these areas are altered to a fine grained hornblende gneiss.
- HORNBLende and/or BIOTITE GNEISS - Similar in texture and composition to Zone No. 1 but generally unmineralized.

SYMBOLS

- A-11
- Old shaft
- Old pit
- Road
- Mineralized zone
- Fault line orientation
- Boundary of rock outcrop or shadow bedrock fault
- Approximate geological contact
- Observed geotectonic contact

FIG. W-10N
 ARCHER, CATHRO & ASSOCIATES LTD.
GEOLOGY AND CLAIM LOCATION
 WILLIAMS CREEK PROPERTY
 DAWSON RANGE JOINT VENTURE
 SCALE 1" = 100' (approx.)



SEE FIG. W 10

SEE FIG. W 10

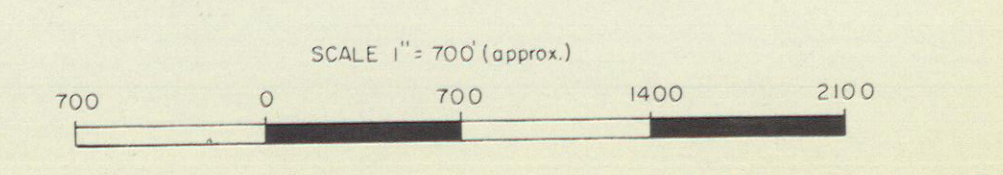
SEE FIG 31
No. 10 Zone

SEE FIG. W 32
No. 12 & 13 Zone

- LEGEND**
- == Trenches
 - Road
 - ▨ Mineralized zone
 - - - Approximate geological contact
 - Observed geological contact

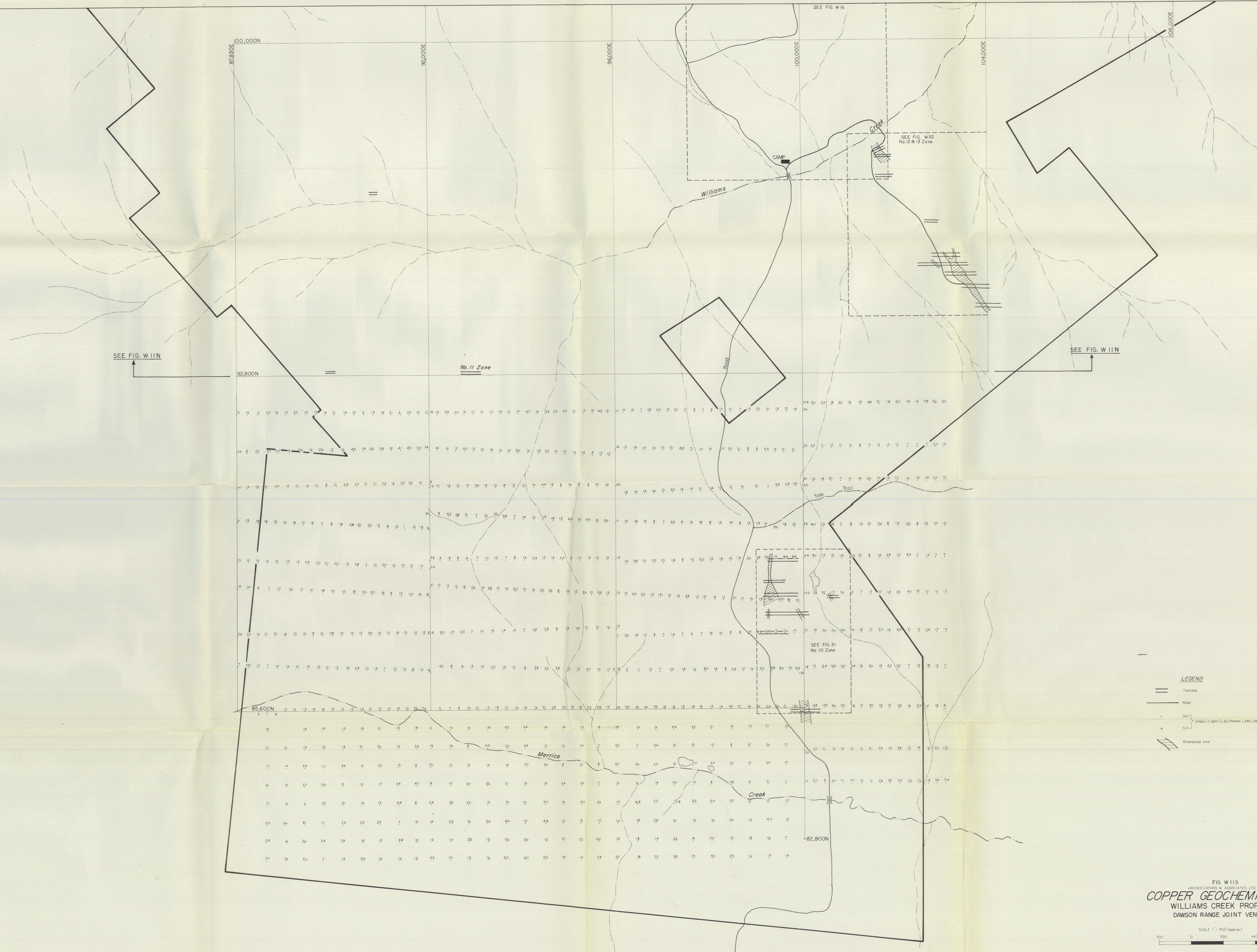
SEE FIG. W FOR GEOLOGICAL LEGEND

FIG. W 105
 AMERICAN ENGINEERING & ASSOCIATES LTD.
GEOLOGY AND CLAIM LOCATION
 WILLIAMS CREEK PROPERTY
 DAWSON RANGE JOINT VENTURE



THIS DRAWING SHOWS GOVERNMENT AIR PHOTO ENLARGEMENTS - SCALE MAY NOT BE EXACT

To accompany report dated Feb. 1973



SEE FIG. W11N

SEE FIG. W11N

SEE FIG. W32
No. 12 & 13 Zone

SEE FIG. 31
No. 10 Zone

LEGEND

- == Trenches
- Road
- Soil assays in ppm Cu by ChemeX Labs Ltd.
- x Silt
- ▨ Mineralized zone

FIG. W11S
ARCHER/CATHERINE ASSOCIATES LTD.
COPPER GEOCHEMISTRY
WILLIAMS CREEK PROPERTY
DAWSON RANGE JOINT VENTURE

SCALE 1" = 700' (approx.)
700 0 700 1400 2100

TOPOGRAPHY FROM GOVERNMENT AIR PHOTO ENLARGEMENTS. SCALE MAY NOT BE EXACT.

To accompany report dated Feb. 1973.

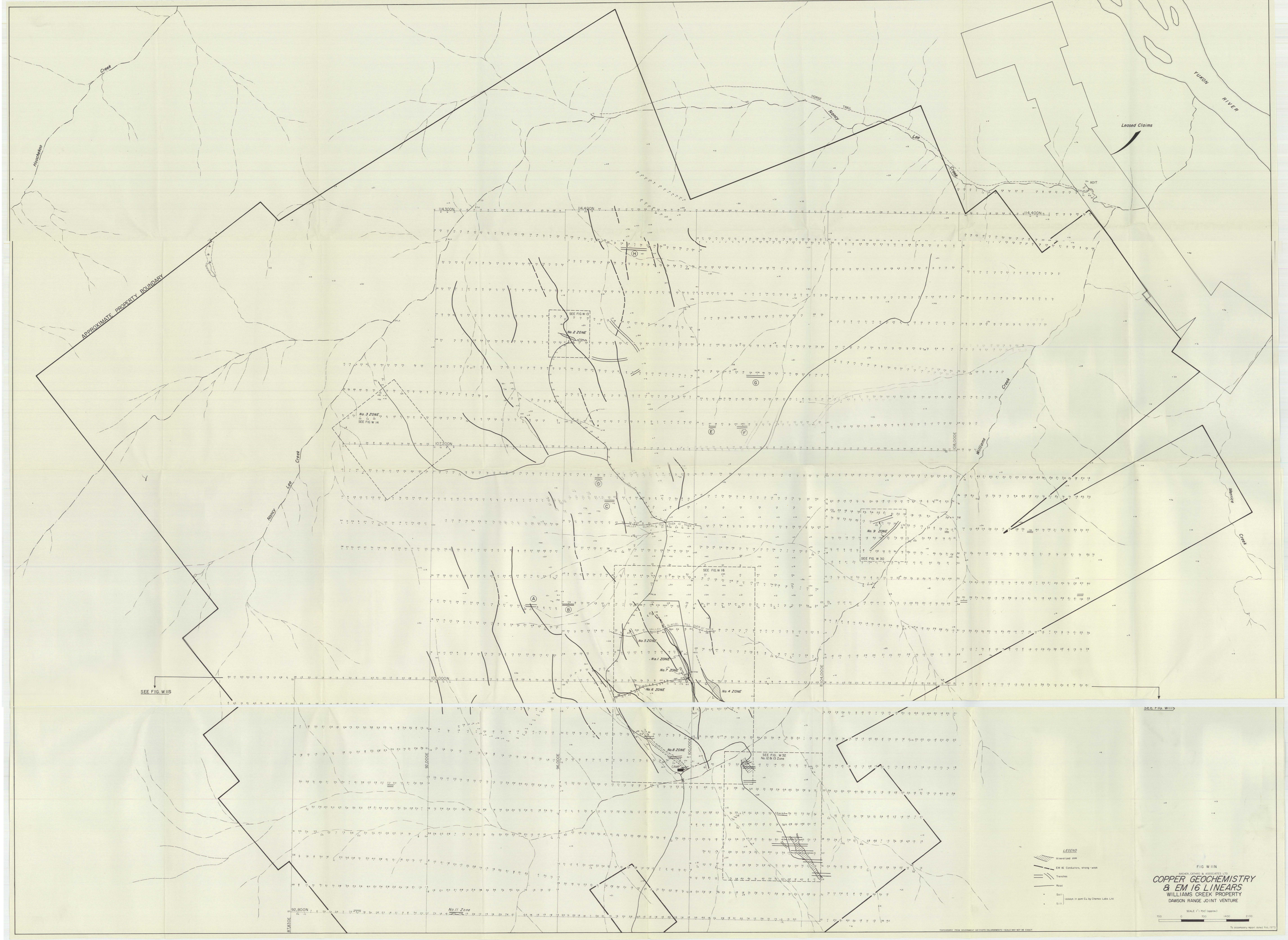
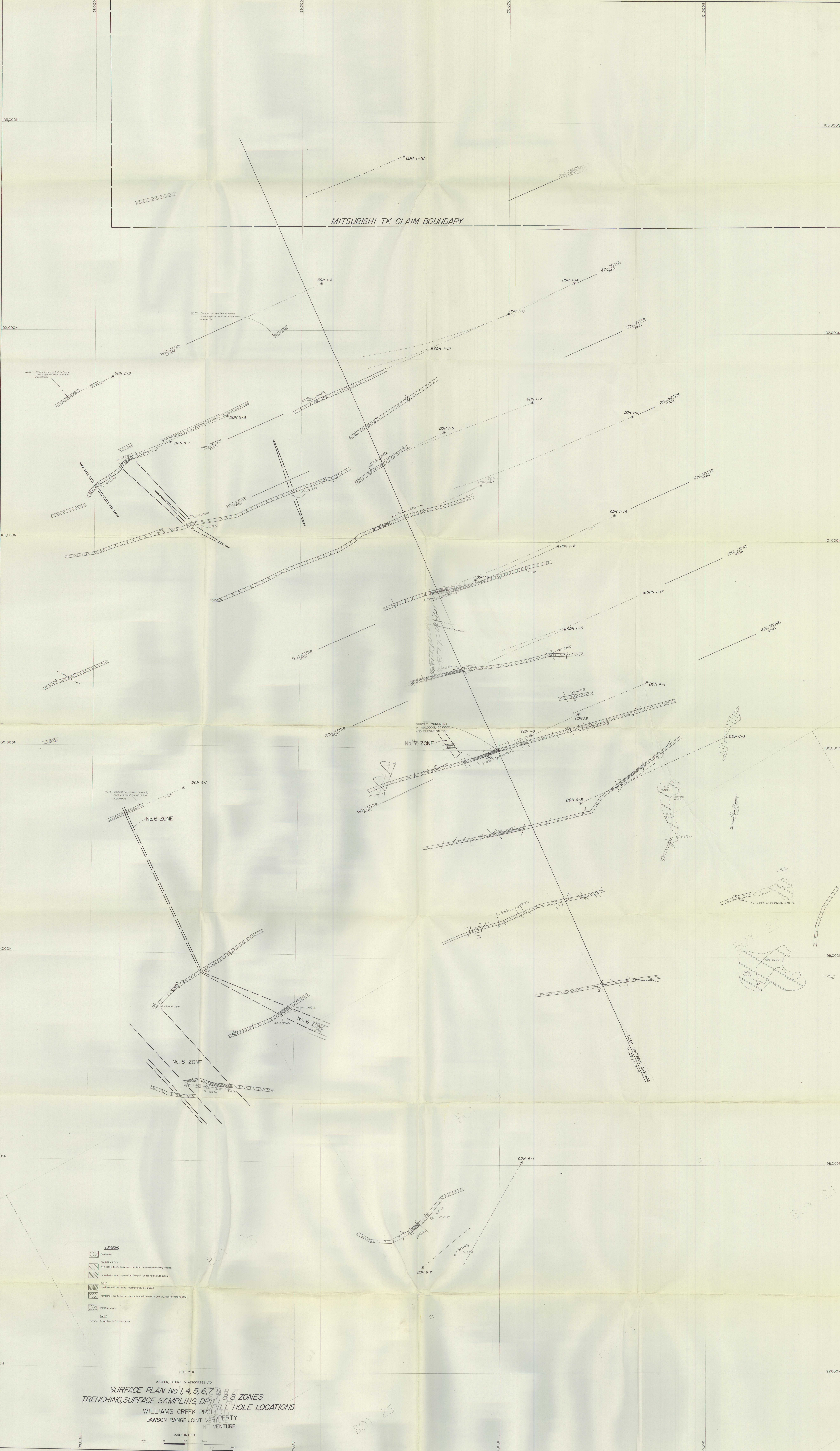


FIG. W11N
 BROWER, CARTER & ASSOCIATES LTD.
COPPER GEOCHEMISTRY
& EM 16 LINEARS
 WILLIAMS CREEK PROPERTY
 DAWSON RANGE JOINT VENTURE

SCALE 1" = 100' (approx.)
 0 100 200 300 400 500

TOPOGRAPHY FROM GROUNDWORK AS PHOTO INFLUENCED - SCALE MAY NOT BE EXACT
 To accompany report dated Feb. 1971



MITSUBISHI TK CLAIM BOUNDARY

SURVEY MONUMENT
 AT 100,000N 99,000E
 AND ELEVATION 3900'

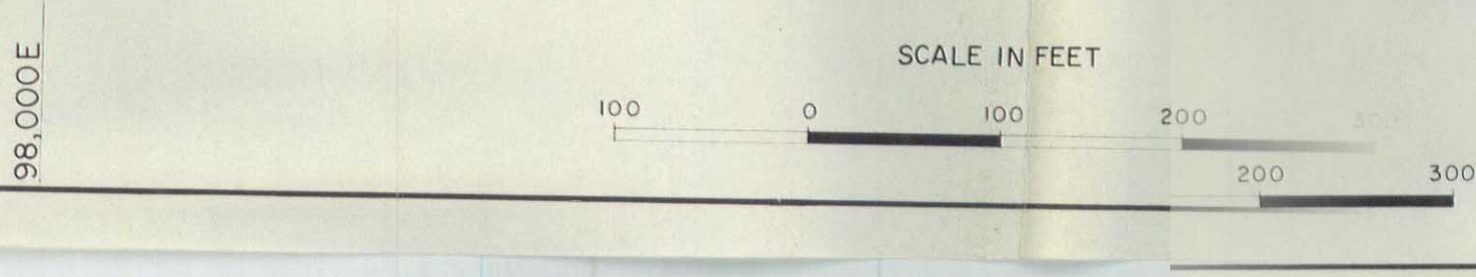
NOTE - Bedrock not reached in trench,
 zone interpreted from drill hole
 information

NOTE - Bedrock not reached in trench,
 zone interpreted from drill hole
 information

NOTE - Bedrock not reached in trench,
 zone interpreted from drill hole
 information

- LEGEND**
- Overburden
 - Coarsest rock
 - Harder than medium coarse grained, weakly foliated
 - Granitic quartz - plagioclase, biotite, feldspar, hornblende, garnet
 - Zone
 - Harder than medium coarse grained, fine grained
 - Harder than medium coarse grained, medium coarse grained, west to east foliated
 - Fault
 - Direction of fracture-slip

FIG. W-16
 ARCHER, CATMO & ASSOCIATES LTD.
 SURFACE PLAN No. 1, 4, 5, 6, 7, 8 ZONES
 TRENCHING, SURFACE SAMPLING, DRILL HOLE LOCATIONS
 WILLIAMS CREEK PROPERTY
 DAWSON RANGE JOINT VENTURE
 NT VENTURE



BOY 25

BOY 21

BOY 26

FO

98,000E

99,000E

100,000E

101,000E

97,000N

98,000N

99,000N

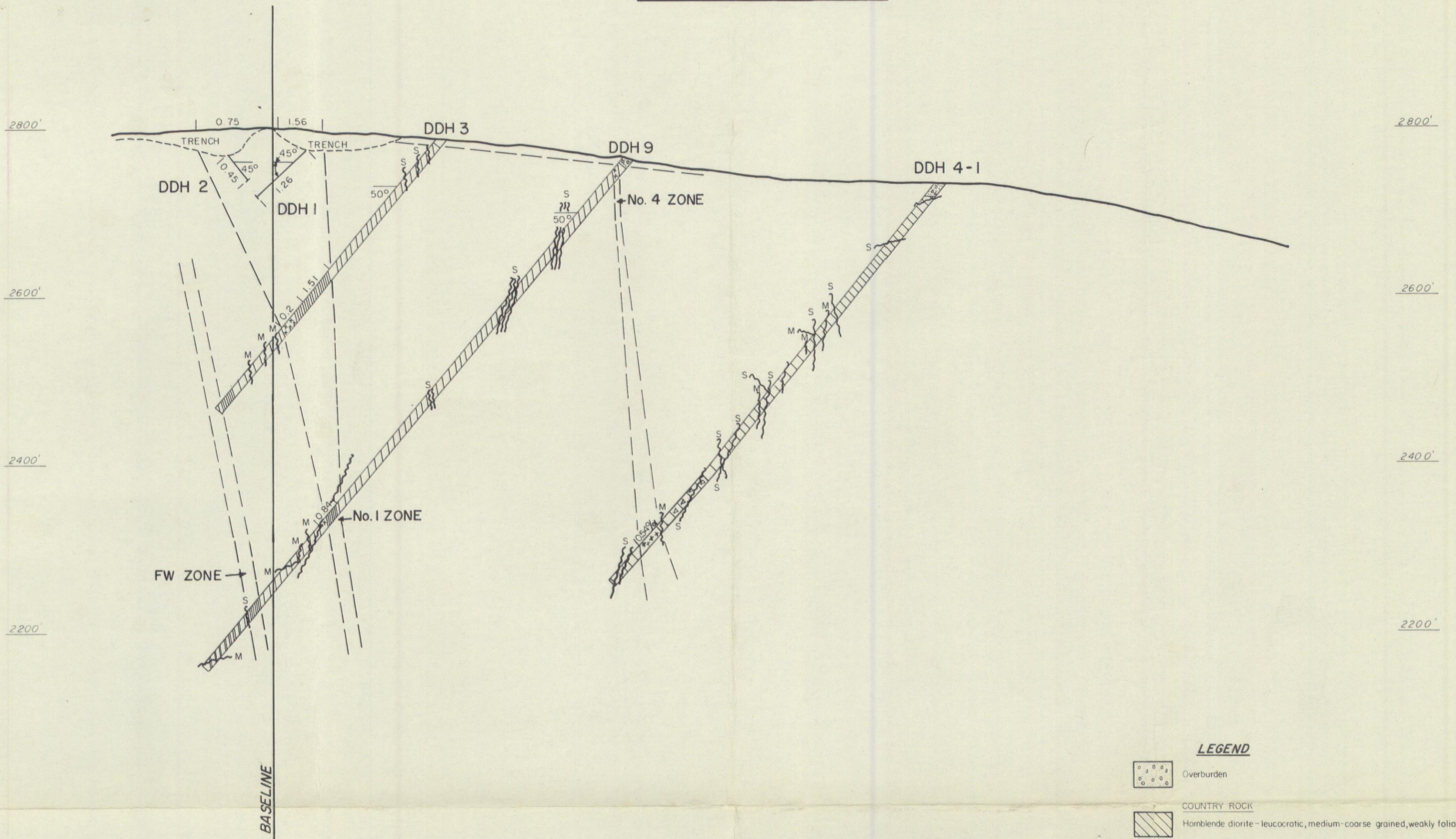
100,000N

101,000N







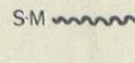

102,000N

103,000N

SECTION 0+00

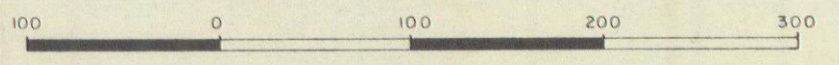


LEGEND

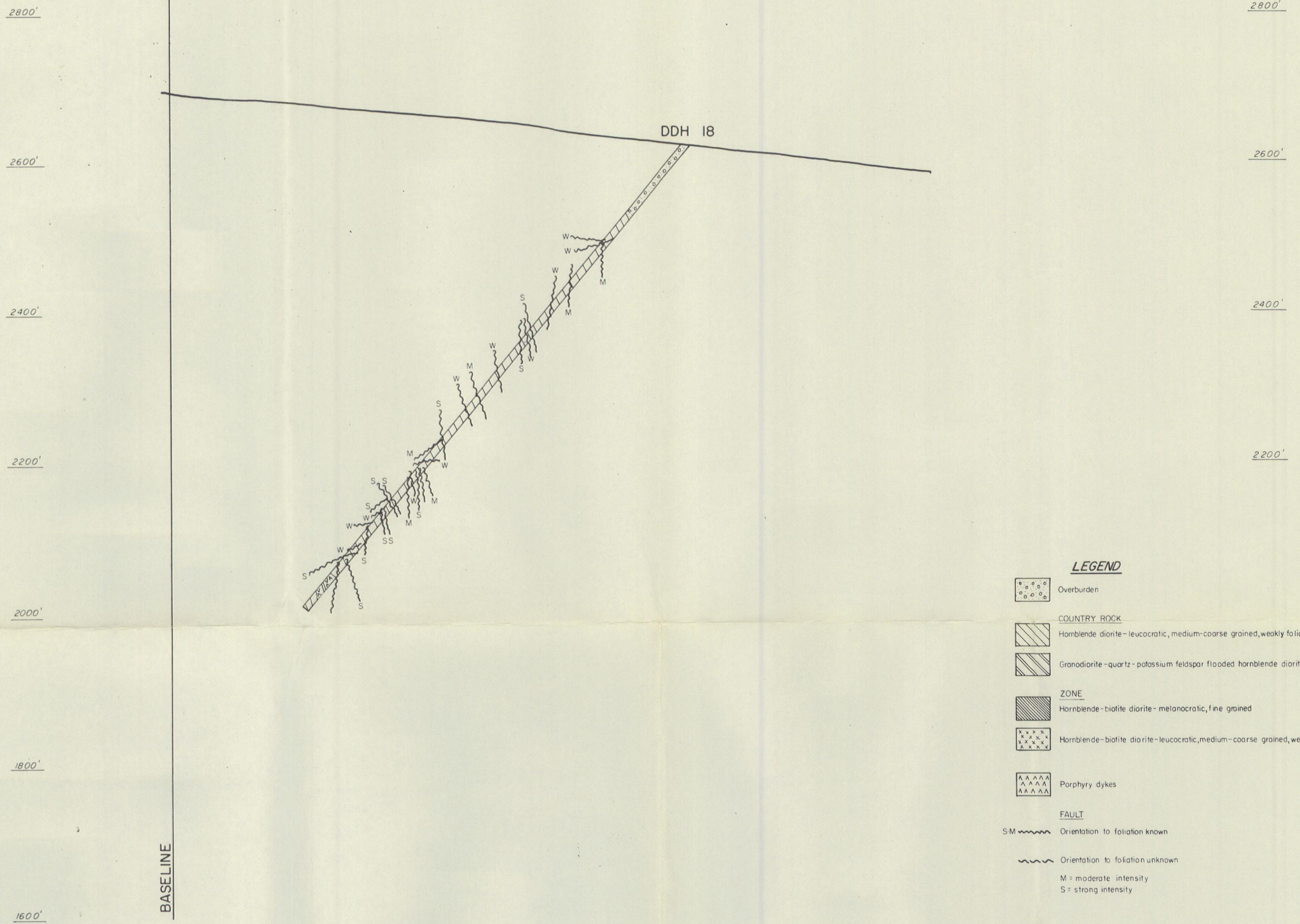
-  Overburden
- COUNTRY ROCK**
-  Hornblende diorite - leucocratic, medium-coarse grained, weakly foliated.
-  Granodiorite-quartz-potassium feldspar flooded hornblende diorite
- ZONE**
-  Hornblende-biotite diorite - melanocratic, fine grained
-  Hornblende-biotite diorite - leucocratic, medium-coarse grained, weak to strong foliated
-  Porphyry dykes
- FAULT**
-  SM Orientation to foliation known
-  Orientation to foliation unknown
- M = moderate intensity
- S = strong intensity

NOTE -
 All sections looking northwest
 Baseline and surface profile from 1971 surveyed baseline cut
 at N 25° W from base station 100,000E, 100,000N at trench 0+00







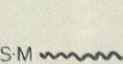
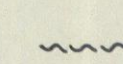
FIG W17A
 ARCHER, CATHRO & ASSOCIATES LTD
SECTION 0+00 NORTH
No. 1 ZONE
 WILLIAMS CREEK PROPERTY
 DAWSON RANGE JOINT VENTURE
 SCALE IN FEET (VERTICAL & HORIZONTAL)



SECTION 3200 NORTH

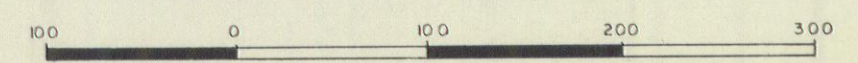


LEGEND

-  Overburden
- COUNTRY ROCK**
-  Hornblende diorite - leucocratic, medium-coarse grained, weakly foliated.
-  Granodiorite - quartz - potassium feldspar flooded hornblende diorite
- ZONE**
-  Hornblende-biotite diorite - melanocratic, fine grained
-  Hornblende-biotite diorite - leucocratic, medium-coarse grained, weak to strong foliated
-  Porphyry dykes
- FAULT**
-  SM Orientation to foliation known
-  Orientation to foliation unknown
- M = moderate intensity
- S = strong intensity

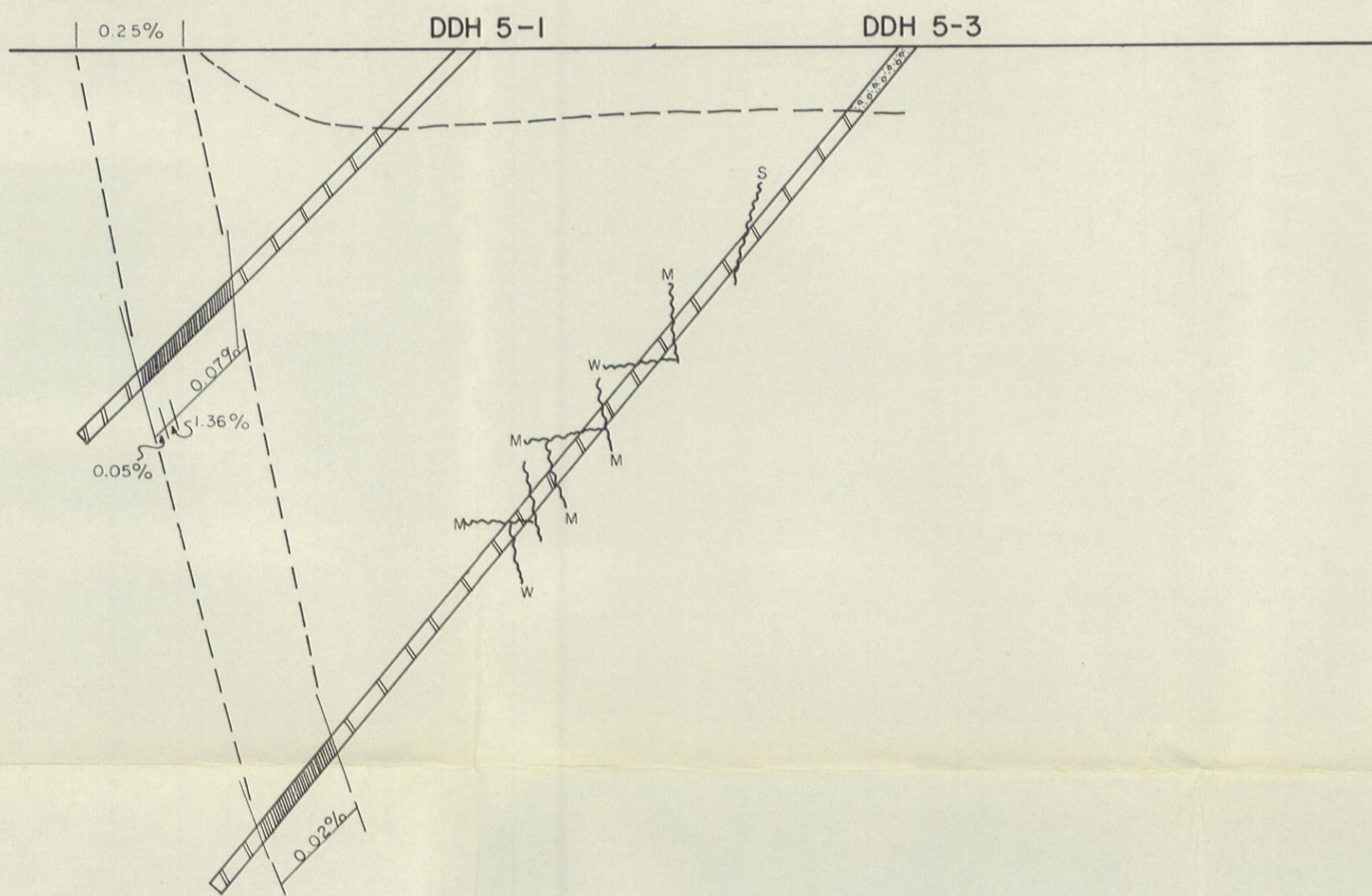
All sections looking northwest.
Baseline and surface profile from 1971 surveyed baseline cut
at N 25° W from base station 100,000E, 100,000N at trench 0+00

FIG. W26
ARCHER, CATHRO & ASSOCIATES LT. D.
SECTION 3200 NORTH
No. 1 ZONE
WILLIAMS CREEK PROPERTY
DAWSON RANGE JOINT VENTURE
SCALE IN FEET (VERTICAL & HORIZONTAL)

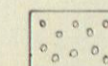


SECTION 2000 NORTH

(LOOKING NORTH)

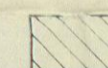


LEGEND



Overburden

COUNTRY ROCK



Hornblende diorite-leucocratic, medium-coarse grained, weakly foliated

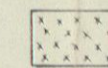


Granodiorite-quartz-potassium feldspar flooded hornblende diorite

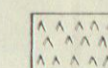
ZONE



Hornblende-biotite diorite-melanocratic, fine grained

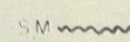


Hornblende-biotite diorite-leucocratic, medium-coarse grained, weak to strong foliated

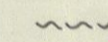


Porphyry dykes

FAULT



Orientation to foliation known



Orientation to foliation unknown

M = moderate intensity

S = strong intensity

BASELINE

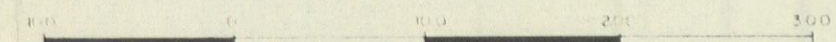
FIG W27

ARCHER, CATHRO & ASSOCIATES LTD.

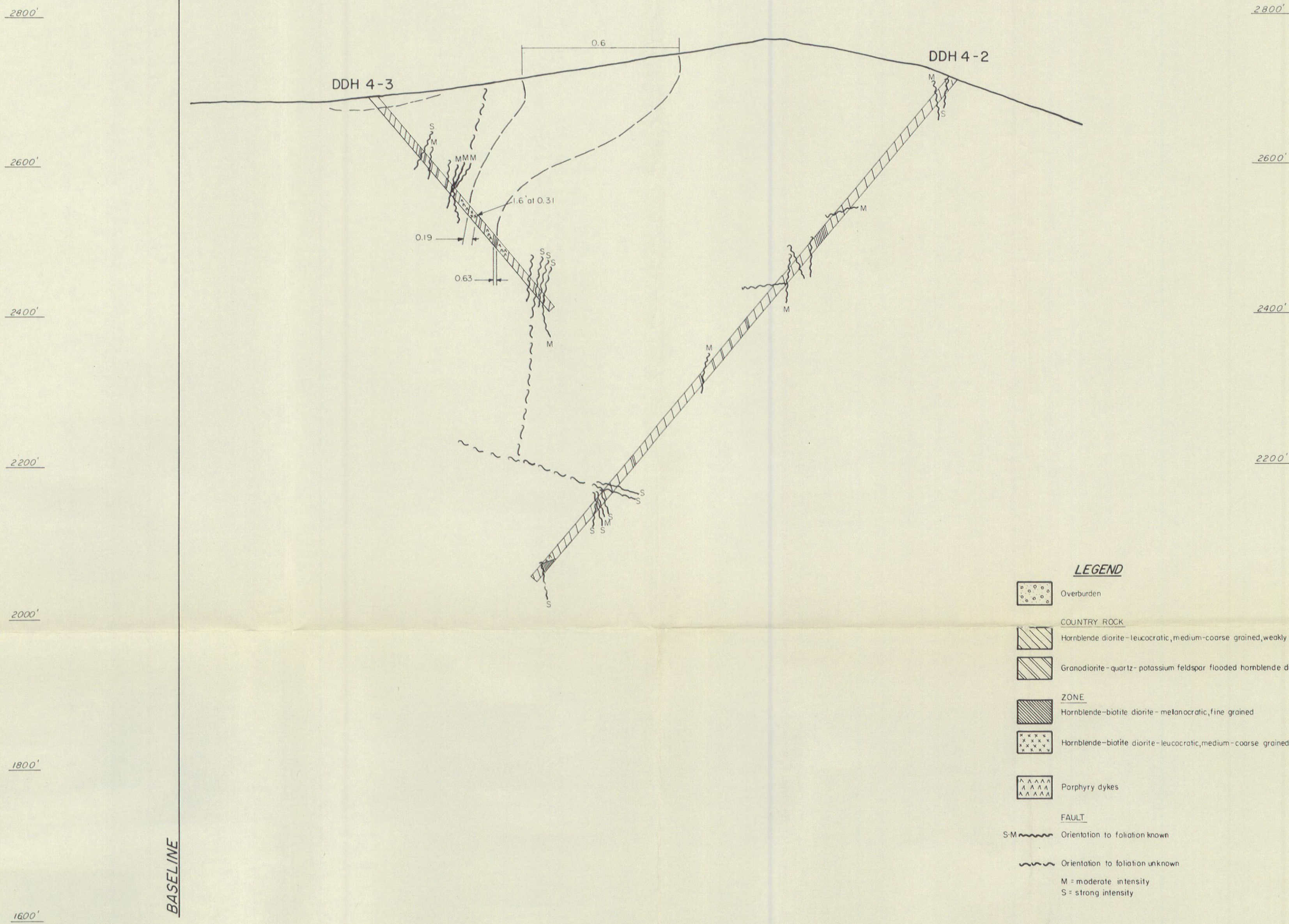
SECTION 2000 NORTH
No. 5 ZONE

WILLIAMS CREEK PROPERTY
DAWSON RANGE JOINT VENTURE

SCALE IN FEET (VERTICAL & HORIZONTAL)



SECTION 400 SOUTH

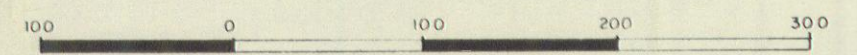


LEGEND

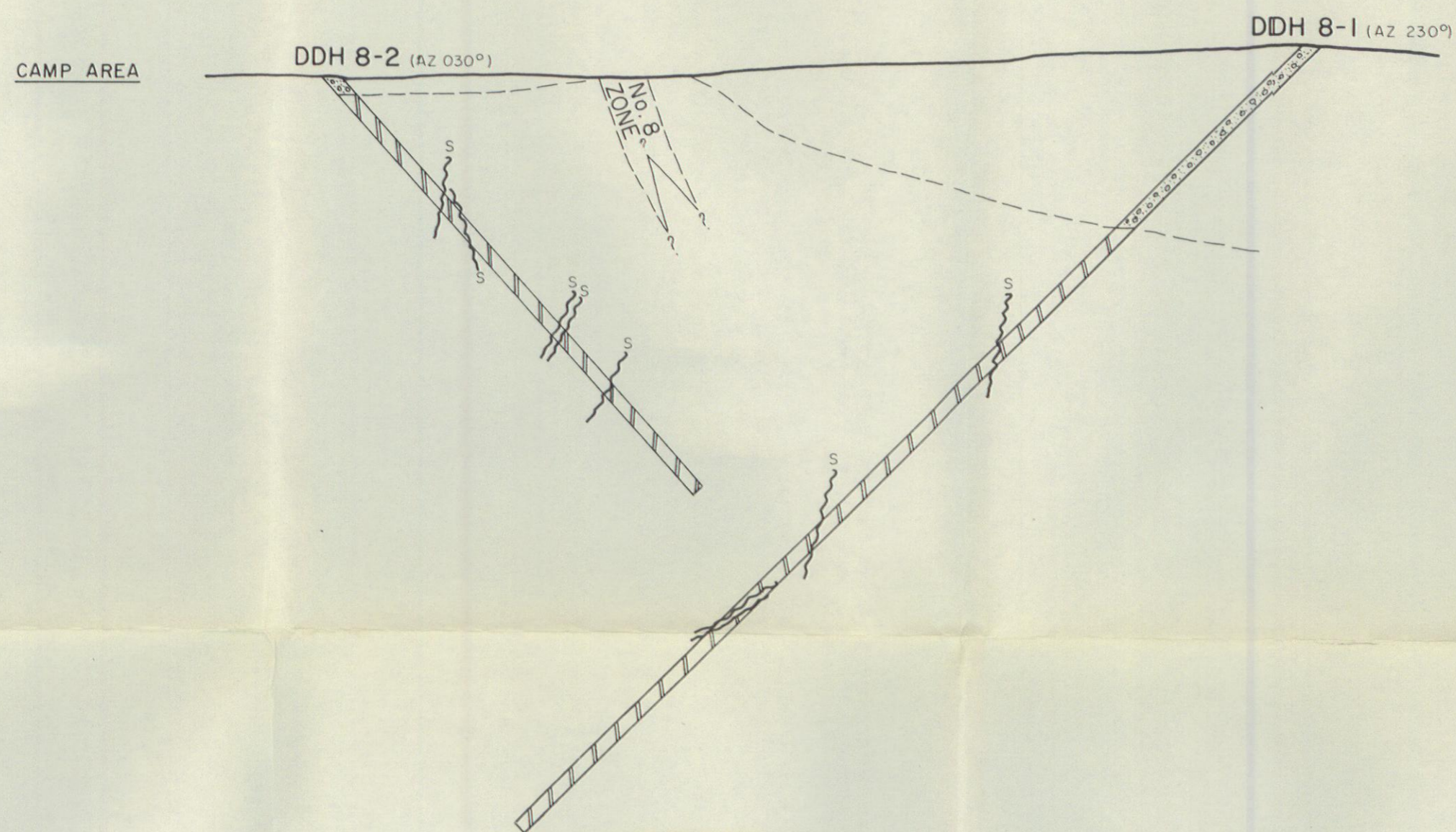
- Overburden
- COUNTRY ROCK**
- Hornblende diorite-leucocratic, medium-coarse grained, weakly foliated.
- Granodiorite-quartz-potassium feldspar flooded hornblende diorite
- ZONE**
- Hornblende-biotite diorite-metanocratic, fine grained
- Hornblende-biotite diorite-leucocratic, medium-coarse grained, weak to strong foliated
- Porphyry dykes
- FAULT**
- Orientation to foliation known
- Orientation to foliation unknown
- M = moderate intensity
- S = strong intensity

All sections looking northwest.
 Baseline and surface profile from 1971 surveyed baseline cut
 at N 25° W from base station 100,000E, 100,000N at trench 0400









FIG. W 28
 ARCHER, CATHRO & ASSOCIATES LTD.
SECTION 400 SOUTH
No. 4 ZONE
 WILLIAMS CREEK PROPERTY
 DAWSON RANGE JOINT VENTURE
 SCALE IN FEET (VERTICAL & HORIZONTAL)



SECTION No. 8 ZONE
(LOOKING NORTH)



LEGEND

-  Overburden
- COUNTRY ROCK**
-  Hornblende diorite - leucocratic, medium-coarse grained, weakly foliated.
-  Granodiorite - quartz - potassium feldspar flooded hornblende diorite
- ZONE**
-  Hornblende-biotite diorite - melanocratic, fine grained
-  Hornblende-biotite diorite - leucocratic, medium-coarse grained, weak to strong foliated
-  Porphyry dykes
- FAULT**
-  S-M Orientation to foliation known
-  Orientation to foliation unknown
- M = moderate intensity
- S = strong intensity

Section is idealized for demonstration by plotting azimuths as being coplanar. DDH 8-2 is actually slightly fore-shortened in this plane.

FIG. W 29

ARCHER, CATHRO & ASSOCIATES LTD.

DRILL SECTION No. 8 ZONE

WILLIAMS CREEK PROPERTY
DAWSON RANGE JOINT VENTURE

SCALE IN FEET (VERTICAL & HORIZONTAL)

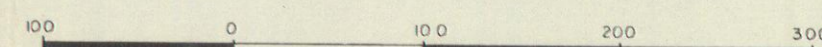
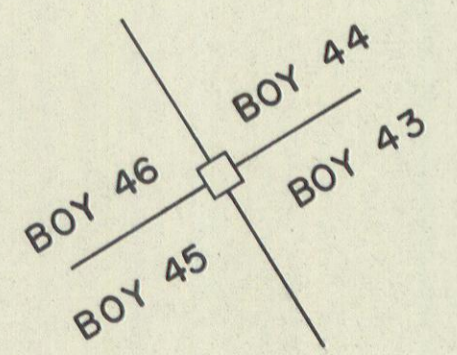
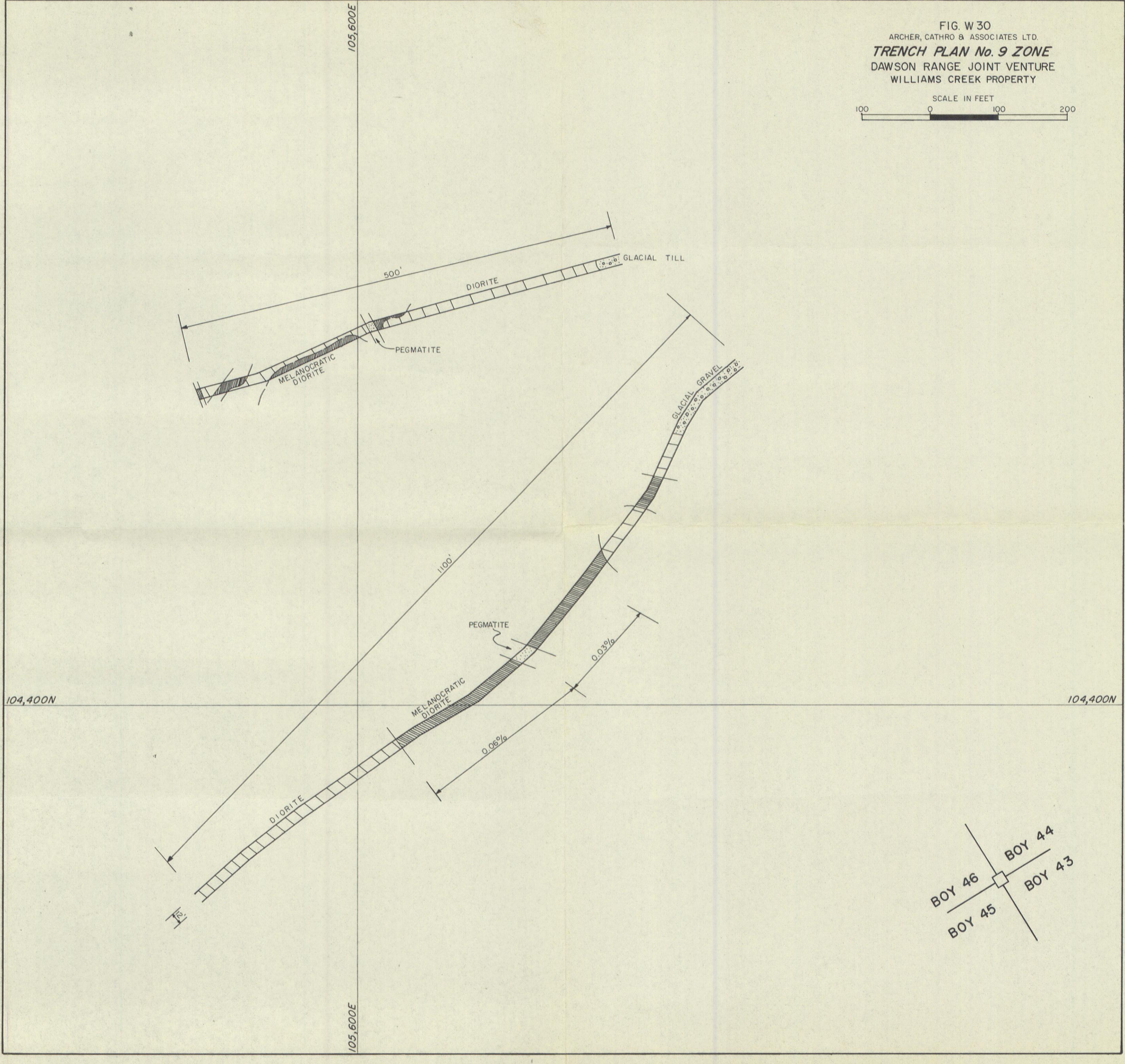
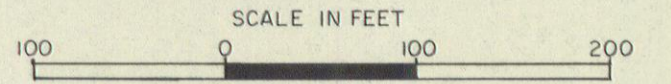
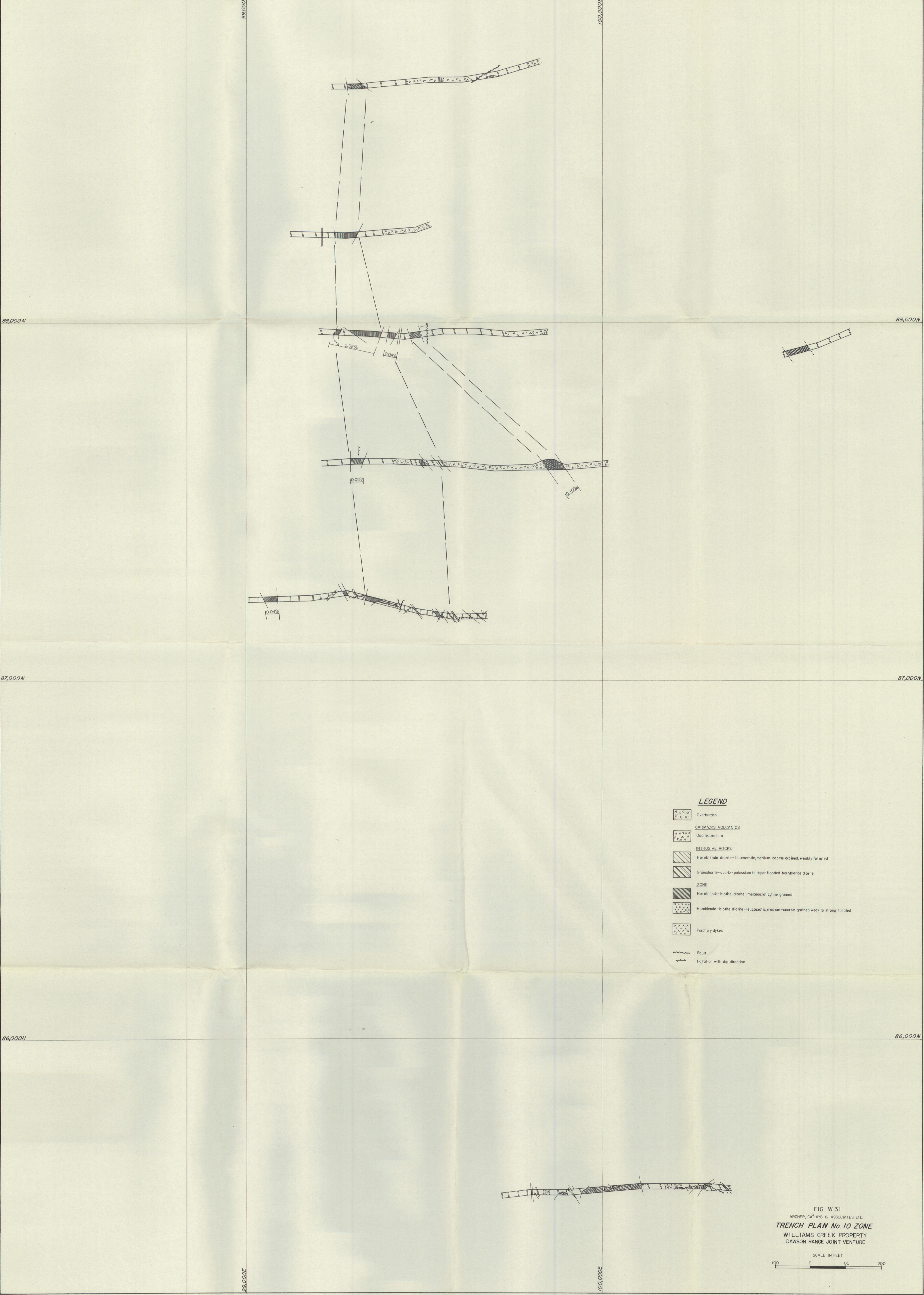


FIG. W 30
 ARCHER, CATHRO & ASSOCIATES LTD.
TRENCH PLAN No. 9 ZONE
 DAWSON RANGE JOINT VENTURE
 WILLIAMS CREEK PROPERTY





LEGEND

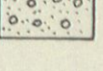
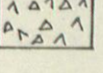
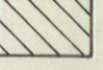
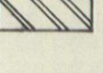
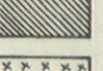
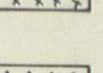
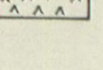
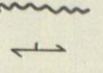

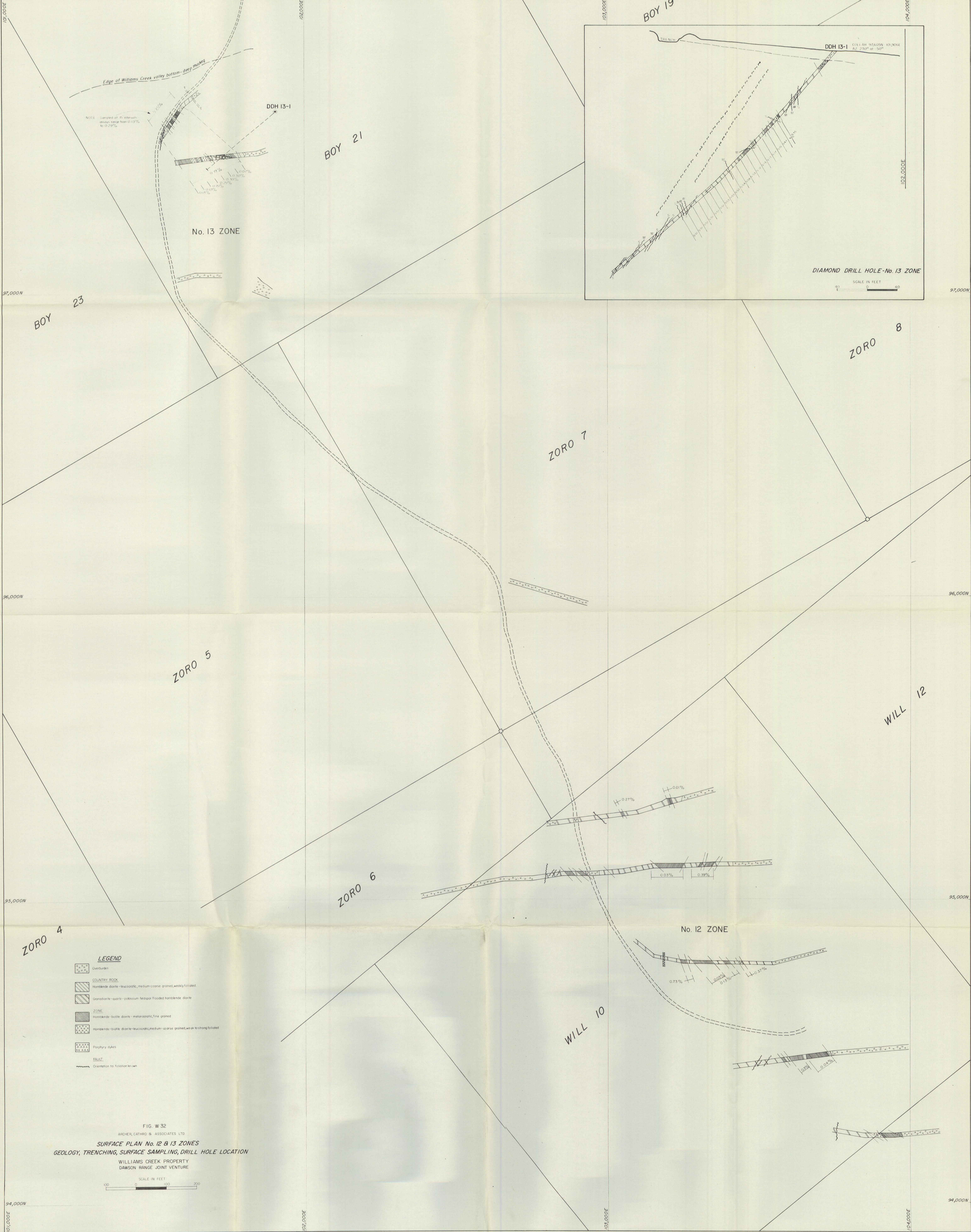
-  Overburden
- CARMACKS VOLCANICS**
-  Dacite, breccia
- INTRUSIVE ROCKS**
-  Hornblende diorite - leucocratic, medium-coarse grained, weakly foliated
-  Granodiorite - quartz - potassium feldspar flooded hornblende diorite
- ZONE**
-  Hornblende - biotite diorite - melanocratic, fine grained
-  Hornblende - biotite diorite - leucocratic, medium-coarse grained, weak to strong foliated
-  Porphyry dykes
-  Fault
-  Foliation with dip direction

FIG W31
 ARCHER, CATHER & ASSOCIATES LTD
TRENCH PLAN No. 10 ZONE
 WILLIAMS CREEK PROPERTY
 DAWSON RANGE JOINT VENTURE

SCALE IN FEET
 100 0 100 200

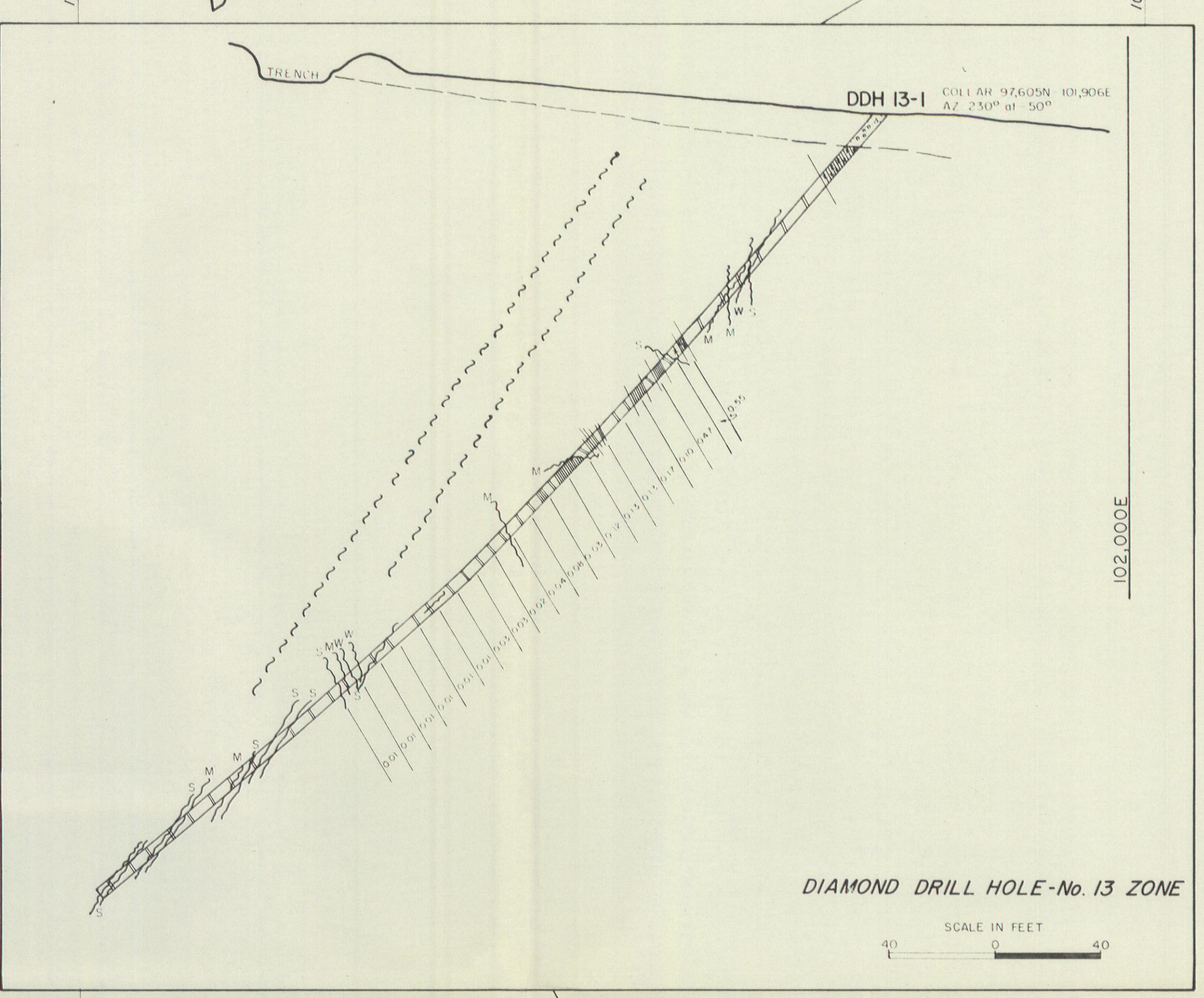


Edge of Williams Creek valley bottom - deep marked

NOTE: Compared at 20 meters above base from 0.13% to 0.29%

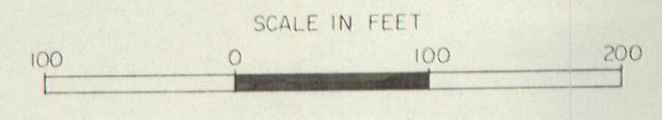
DDH 13-1

No. 13 ZONE



- LEGEND**
- Overburden
 - COUNTRY ROCK**
 - Hornblende diorite - leucocratic, medium-coarse grained, weakly foliated
 - Granodiorite - quartz - potassium feldspar flooded hornblende diorite
 - ZONE**
 - Hornblende - biotite diorite - melanocratic, fine grained
 - Hornblende - biotite diorite - leucocratic, medium-coarse grained, weak to strong foliated
 - Porphyry dykes
 - FAULT**
 - Orientation to foliation in rock

FIG. W 32
 ARCHER, CATHER B. ASSOCIATES LTD.
 SURFACE PLAN No. 12 & 13 ZONES
 GEOLOGY, TRENCHING, SURFACE SAMPLING, DRILL HOLE LOCATION
 WILLIAMS CREEK PROPERTY
 DAWSON RANGE JOINT VENTURE



101,000E 102,000E 103,000E 104,000E

97,000N 96,000N 95,000N 94,000N