



GEOLOGICAL, GEOCHEMICAL REPORT
on the

MW MINERAL CLAIMS

MW 1-8; 11-14	YA 33049-060
MW 9, 10	YA 33804, 805
MW 15-28	YA 33806-819
MW 31-48	YA 33820-837

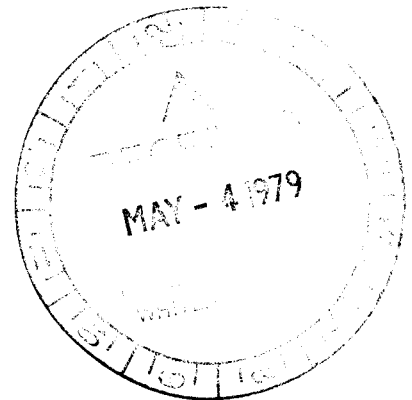
MAP SHEET 105B/3

LAT. $60^{\circ}03'N$; LONG. $131^{\circ}28'W$

WATSON LAKE M.D. YUKON

by

J.C. STEPHEN



090458

WORK DONE: June 8; July 7, 11-31 1979

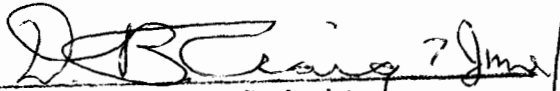
February 1979

BY: J.C. STEPHEN EXPLORATIONS LTD.

FUNDED BY: D.C. SYNDICATE

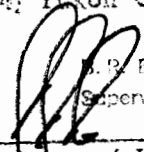
This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

\$6,300.00



~~Resident Geologist or
Resident Mining Engineer~~

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


J. P. BAXTER
Supervising Mining Recorder

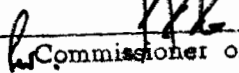

Commissioner of Yukon Territory

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M.W. CLAIM GROUP

SUMMARY

The MW 1-8 and 11-14 claims were staked in June, 1978 on lead, zinc, silver showings provided by the Musselwhite brothers as a result of their prospecting in 1946. Staking was started during a local staking rush while snow covered most of the area. After preliminary examination the remainder of the claim group was staked to take in the limestone-quartzite contact and part of the limestone-granite contact.

Work in the field was carried out by J.T. Turner and B. Atkinson, both graduate geologists. The lead, zinc, silver showings were examined and some trenching was done on the No. 1 showing.

Assay of an arsenopyrite bearing skarn float gave 1.39% tin and led to further prospecting for tin. Similar material was found in place near the north side of the property. Some trenching and sampling was done with some samples running over 4% tin.

Mapping was done on 1" - ½ mile airphotos as no adequate base map was available. This information was transferred to an enlargement of the 1:50,000 topographic map and should be considered of a preliminary nature only.

Soil and talus samples indicate anomalous values for lead and zinc which may not be related to the known showings. Results to date have not been encouraging as to the size of these showings but it is recommended that more detailed work be undertaken.

LOCATION AND ACCESS

FIGURE 11

The claim group is situated approximately ten miles WNW of Swift River (Mile 733) on the Alaska Highway. It is about six miles northeast of Log Tung and about 4 1/4 miles ESE of the Pure Silver adits.

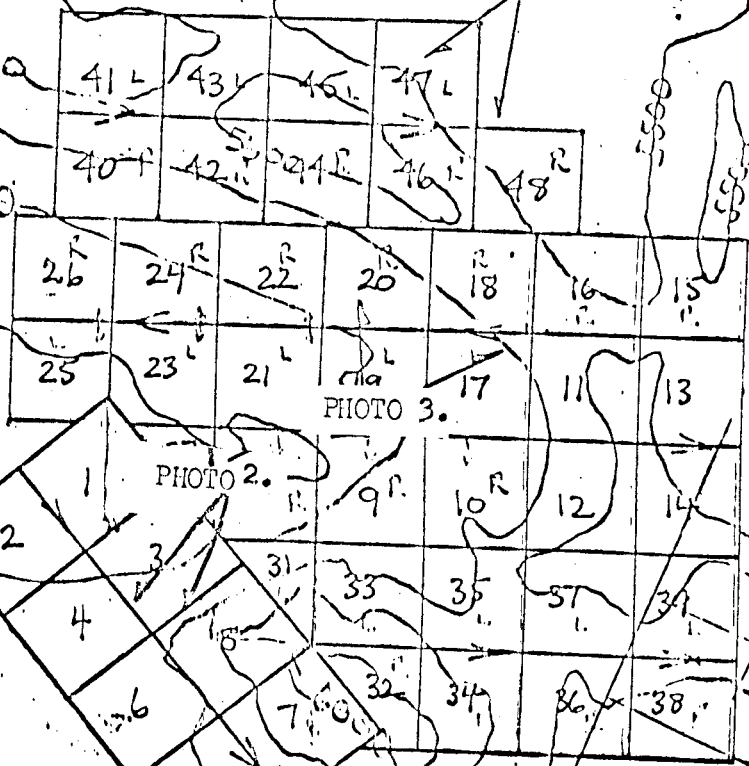
Topography is generally rugged around the south, east and north sides of the claim group. The central part of the group is occupied by a wide valley draining to the WNW.

Access during 1978 was by helicopter which was based at Pine Lake airstrip. The property is, however, approximately 13 miles north of the Alaska Highway up the valley of Screw Creek and its west branch.

REGISTER OF CLAIMS

Name	Record Numbers	Record Date
NW1-8	YA 33049-056	June 15 1978
9, 10	33804, 805	July 17 1978
11-14	33057-060	June 15 1978
15-28	33806-819	July 17 1978
31-48	33820-837	July 17 1978

PHOTO 1.



SLUDGE LOCATION LINE

Scale 1" = 1/2 mile

Teslin

Watson Lake

Adanac

1 : 2,500,000

D.C. SYNDICATE
M.W. CLAIM GROUP
LOCATION & SKETCH MAP

FIGURE I

HISTORY

The lead zinc silver showings designated No. 1 and No. 2 were discovered by the Musselwhite brothers in 1946. Early in 1978 photographs of the locations and assay results were made available to J.C. Stephen. Staking was done before snow had melted from the area because of the widespread staking being carried out by Dupont-Duval and Welcome North.

When prospecting commenced our crews found what appears to be the Musselwhite camp and sample chip marks and stakes with still legible marking were found on the No. 1 showing.

GEOLOGY

GSC Map 10-1960 Wolf Lake shows the regional geology of the area. Host rocks are Upper Devonian and Lower Mississippian Unit 8 hornfels, quartzite, argillite and skarn and Unit 9 limestone, chert and dolomite. Lower and/or Middle Mississippian Unit 10 chert pebble conglomerate occurs on the mountain in the south east portion of the property.

These formations are intruded by quartz monzonite of the Seagull batholith lying to the north east of the property.

ROCK TYPES MAP I

1. Quartzite, Siltstone, Argillite:

This unit is equivalent to Unit 8 of the GSC Map 10-1960. It contains black fine grained siltstone and argillite and considerable quartz rich sandstone or quartzite. A specimen of this rock from above the No. 1 Zone lead zinc showing was examined by Dr. K.D. Watson and is described as follows:-

"... a rock unit resembling either rhyolitic rock (possibly tuffaceous) with abundant quartz eyes or quartz-rich sandstone. I have now examined a thin-section of the rock and have found that it is the latter.

About 90% of the rock consists of subrounded grains of quartz, mainly 0.25-1.0mm. in diameter (medium and coarse sand sizes). These are contained in a very fine matrix rich in sericite, quartz, and biotite. A few grains of zircon, tourmaline and opaque material (magnetite?) were seen in the matrix."

2. Andesite:

This unit consists of some lapilli tuff together with flows containing plagioclase crystals in a fine grained matrix. In the field these rocks were classed as andesite. It is generally green in color, somewhat soft and contains blebs of carbonate.

3. Dolomite Limestone:

This dolomite is interbedded with limestone. It is generally white in color and weathers buff brown.

4. Limestone:

Most of the limestone horizon is thin bedded white and "flaggy". Some portions are more massive clean and white, often with chert nodules.

On the north side of the ridge above the quartz monzonite contact (Claims MW 45, 47) thick lenses of chert are included in this unit. Photo 1. shows this feature with the cherty horizons prominent on the cliff face.

On claims MW 5 and 7 crinoids and coral are prominent within the limestone.

5. Conglomerate:

Lenses of chert pebble conglomerate lie, apparently unconformably, above the limestone and dolomite.

6. Skarn:

The MW-2 showing is a zinc lead bearing skarn which appears to consist of an epidote, zinc rich zone with minor magnetite, an epidote rich zone and a magnetite garnet tremolite zone. It is in close proximity to the quartz-monzonite contact in the upper part of the limestone sequence.

On Claims MW 11 and MW 45 contact zones occur close to the granite. Some silicification has occurred and in part skarns containing garnet, tremolite, actinolite and magnetite were developed.

7. Quartz Monzonite

This is part of the Seagull Batholith. The rock is brown weathering, blocky and jointed. It is a medium grained biotite quartz monzonite.

7a. Diabase:

Two bodies of diabasic intrusive rock occur. One on MW 12 is about 700 feet long and cross cuts the limestone beds. The second occurs as a sill like body in MW-1 showing. It is about 3 feet thick and 20 to 50 feet long. The rock is medium to coarse grained, dark in color, brown weathering with diabasic texture.



PHOTO 1. Dark chert bands in white flaggy limestone.
North side of ridge on M.W. 45, 46

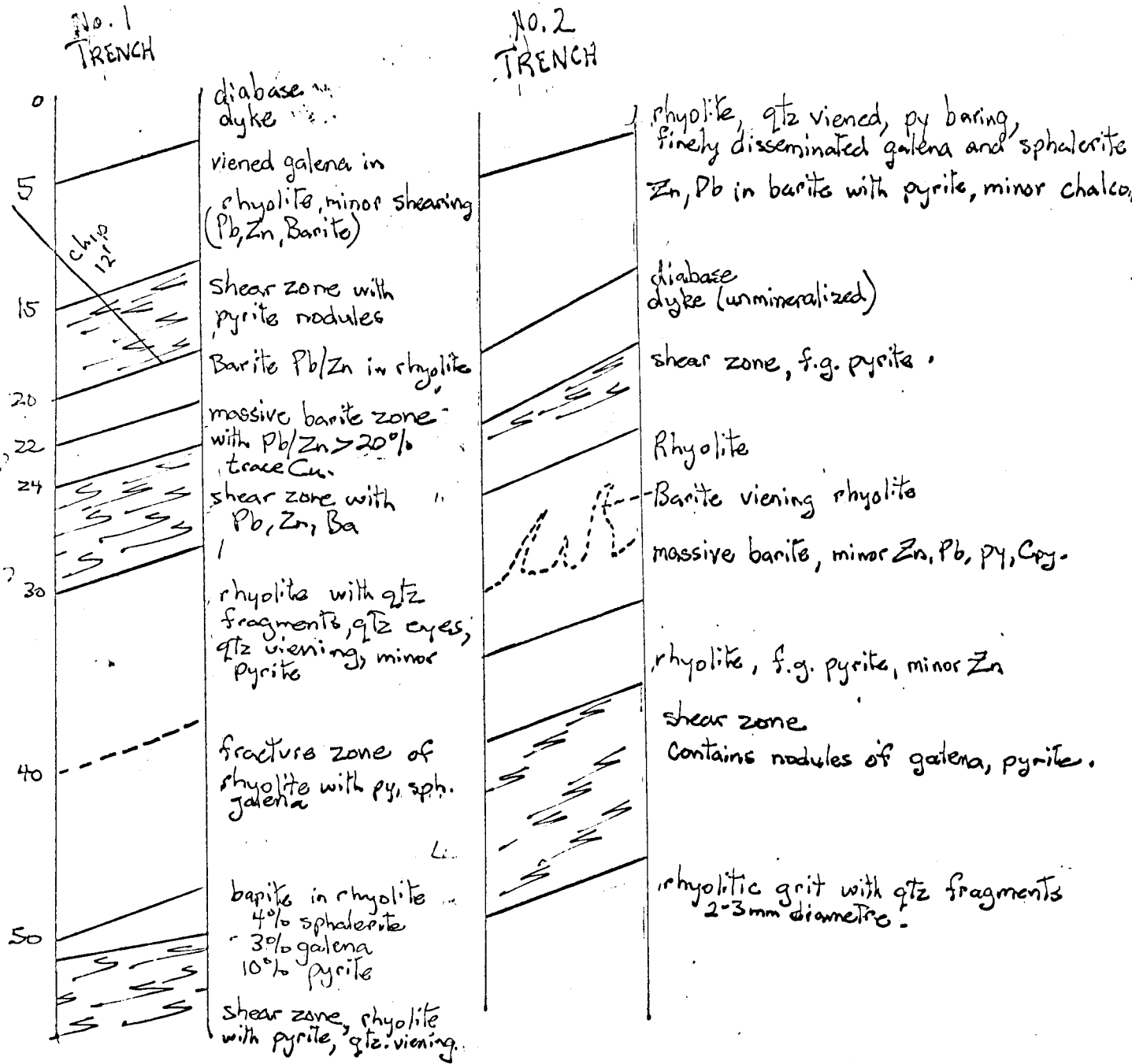


FIGURE III

D.C. SYNDICATE

M.W. CLAIM GROUP

No 1 SHOWING

DIAGRAM OF STRATIGRAPHY
IN TRENCHES

MINERALIZATION

No. 1 Showing Pb Zn Ag Ba

Figures II and III are diagrammatic representations of this mineralized zone. Photo 2, shows the trenches.

Mineralization consists of a 2 foot thick vein or bed of barite, white and massive, which is either a series of lenses or is broken up by faulting interbedded with siltstones which are variously mineralized.

Sphalerite and galena mineralization is irregularly distributed in quartzitic sediments and siltstones. Some mineralization occupies fractures in the sediments.

Pyrite is associated with galena and sphalerite in the lower part of the section and as seams and blebs in sheared siltstone. Weathering of pyrite produces a rusty red gossan which is apparent as a color anomaly covering a small area on the hillside.

Chip sampling across 12 feet of Trench No. 1 gave the following results:-

<u>Sample No.</u>	<u>Width</u>	<u>Pb %</u>	<u>Zn %</u>	<u>Ag oz</u>	<u>Ba SO₄%</u>
0368	2'	1.64	1.11	1.22	
0369	2'	2.20	0.96	0.44	
0370	2'	2.17	2.30	0.52	
0371	2'	1.51	4.43	0.84	
0372	2'	1.14	3.91	0.36	
0373	2'	0.10	1.56	0.05	
29049A	Picked	1.19	5.06	1.48	12.7%

These grades are probably representative although there are lenses of higher grade material. It seems, from Turners Figure III this sampling did not cover the whole zone.

This zone alone is considered too small and low grade to warrant further work.

No. 2 Showing Pb Zn Ag

This is a sphalerite galena bearing skarn zone of small dimensions. Individual samples could be collected with significant grade. The zone however was considered too small for detailed work.

No. 3 Showing Sn

On claims MW 18 and 20 narrow skarn zones were discovered as a result of tracing arsenopyrite bearing float.

These skarns are possibly lens like in nature, up to four feet in width and conformable with the thin bedded limestones. Whether they are related to the thick chert horizons has not been demonstrated. Two occurrences were trenched and sampled which are very similar in appearance and are about 400 feet apart.

Mineralization consists primarily of arsenopyrite which contains considerable tin. Turner has done some work on samples on his own time and reports the tin is contained primarily in stannite and nordenskioldine (Ca Sn B₂ O₆). Minor sphalerite is present and a little native bismuth. Some fairly spectacular specimens of bornite chalcopyrite mineralizations were found.

The original pieces of float which led to this discovery assayed 1.39% Sn and 0.89% Sn.

The easterly trench (No. 1) assayed:-

Sample 0374	across 2.5'	0.06% Cu	0.01% WO ₃	4.20% Sn
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The westerly trench (No. 2) assayed:-

Sample 0375	across 3.5'	0.11% Cu	0.01% WO ₃	4.88% Sn
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GEOCHEMISTRY

Silt Sampling

Silt sampling was conducted over a wide area to the south north and northwest.

In the valley draining the central part of the property no particularly anomalous results were obtained in silt samples. One "kick" of 455 ppm Zn occurs in drainage from the north which may originate near the limestone - quartzite contact. Lead values in the main stream vary from 4 to 26 ppm and in tributary streams from 6 to 28 ppm. No tungsten anomaly is indicated and these particular silts were not run for tin.

In the area surrounding the property no particularly anomalous results were obtained for any of Cu Zn W or Sn. Sampling was not done directly to the east where the SLOUCE claims had been staked by Dupont-Duval on tin geochemistry.

Soil and Talus Sampling

Two lines of samples were taken below the No. 1 Pb Zn showing and are shown on Map I Geology and Geochemistry. Little response is shown directly below the known showings but strong lead and zinc values were obtained a short distance to the north east. Lead values range up to 1050 ppm while zinc values reach 4050 ppm. It is felt this zone should be investigated.

Below No. 2 Pb Zn showing and extending around the side of the valley below No. 3 Sn showing two lines of soil and talus samples were taken. There is a strong response for zinc below No. 2

showing with anomalous values in the range of 300 to 11000 ppm. The strength and extent of these results is out of proportion to the known mineralization and would bear further investigation.

There is no apparent indication of the No. 3 Sn showing in the samples taken. Two "kicks" for tin of 9 and 22 ppm are isolated and not very impressive. There is no indication of the copper mineralization associated with No. 3 showing.

CONCLUSIONS

Although considerable time has been spent on this property it has not been well mapped. There is geochemical evidence for lead zinc mineralization, presumably in addition to, and possibly more extensive than, the two zones presently known.

There is no record of samples from No. 2 zone. It should be checked for possible tin content.

Soil and talus sampling should be continued between No. 1 and No. 2 showings and the limestone horizons should be re-examined for lead zinc mineralization.

The tin mineralization so far located is too narrow to be economic. However the high grades suggest the zone may be worth further investigation. Additional soil and talus sampling in the area and to the west should include arsenic in the list of elements to be determined. Silt samples in the area north of the ridge have not all

been run for tin and those in close proximity should be checked

A budget of \$5,500 was suggested in a letter dated November 13 to conduct additional mapping and geochemistry.



PHOTO 3. Limestone ridge containing Showing No. 3 (Tin)

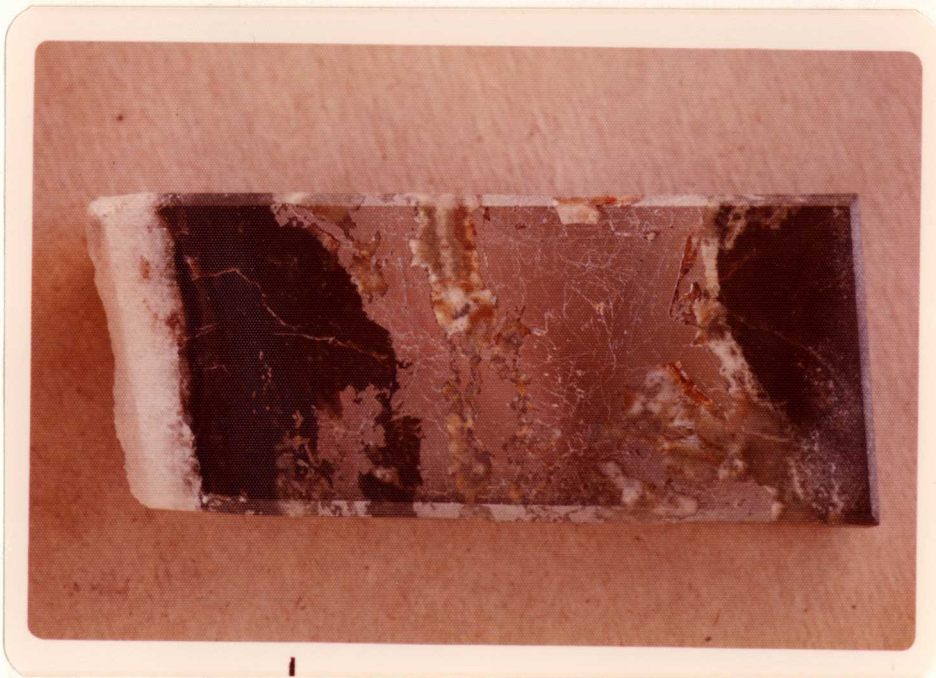
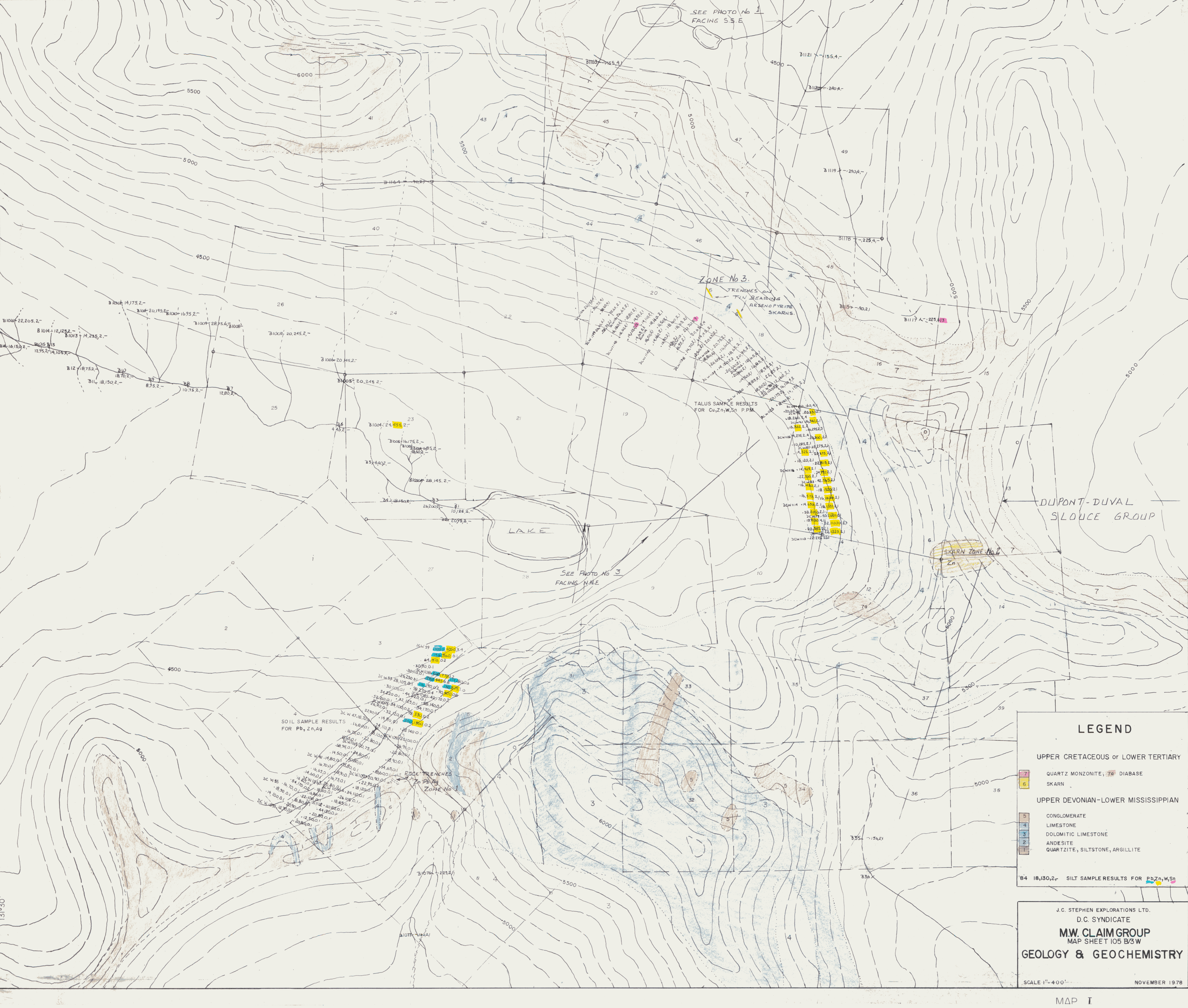


PHOTO 4. Arsenopyrite, stannite mineralization Showing No. 3



SEE PHOTO No 1
FACING S.S.E

ZONE No 3

TRENCHES ON
TIN BEARING
ARSENOPYRITE
SKARNS

TALUS SAMPLE RESULTS
FOR Cu, Zn, W, Sn P.P.M.

LAKE

SEE PHOTO No 3
FACING N.W.E

DUPONT-DUVAL
SLOUCE GROUP

SKARN ZONE No 2

SOIL SAMPLE RESULTS
FOR Pb, Zn, Ag

ROCK TRENCHES
FOR Pb, Ag
ZONE No 1

LEGEND

UPPER CRETACEOUS or LOWER TERTIARY

- 7 QUARTZ MONZONITE; 7a DIABASE
- 6 SKARN

UPPER DEVONIAN-LOWER MISSISSIPPIAN

- 5 CONGLOMERATE
- 4 LIMESTONE
- 3 DOLOMITIC LIMESTONE
- 2 ANDESITE
- 1 QUARTZITE, SILTSTONE, ARGILLITE

B4 18,130,2- SILT SAMPLE RESULTS FOR Pb, Zn, W, Sn

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M.W. CLAIM GROUP
MAP SHEET 105 B/3W

GEOLOGY & GEOCHEMISTRY

SCALE 1" = 400'

NOVEMBER 1978