PAYMASTER MINES LTD.

GEOLOGICAL AND GEOPHYSICAL SURVEY

PEGASEUS CLAIM GROUP
WATSON LAKE M.D.
105 A-10,15

60° 44' N. 128° 48' W.

John Ostler, M.Sc.

September 14-23, 1979.

090495

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

$ 4,800.00

J a Morin

A/ Resident Geologist or
Resident Mining Engineer

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

B. R. BAXTER
Supervising Mining Recorder

Per Commissioner of Yukon Territory

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PAYMASTER MINES LTD.

GEOLOGICAL AND GEOPHYSICAL SURVEY

PEGASEUS CLAIM GROUP
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105 A-10,15
60 44' N. 128 48' W.

1. INTRODUCTION

The writer was employed by Paymaster Mines Ltd. through Cassiar East Yukon Expediting Ltd. to conduct a geological and geophysical survey of the Pegaseus claim group. The survey comprises a magnetometer survey and a geological cross-section through the claim group.

The writer; John Ostler, of Watson Lake and Vancouver conducted the survey with the assistance of Harry F. Malbet of Vancouver and Joel Thomlinson of Watson Lake.

2. PROPERTY

The property (figure 1) comprises:

Pegaseus 1-32 No. YA35549 to YA35580

The claims are believed to be owned by Paymaster Mines Ltd. npl of Vancouver, B.C.

The Pegaseus group is located one half mile west of Oscar Lake in the Watson Lake Mining District. The claims are centred on 60° 44' N. 128° 48' W. They are bounded by the Bailey claims to the west and by the Peg claims to the east.

3. PHYSICAL SETTING

The Pegaseus claims are on a moderate slope near the base of a mountain, west of Oscar Lake. The area of the claims is covered with dense forest consisting of a ground cover of tangled willow and alder

bushes beneath a canopy of spruce trees.

Access to the area is by float plane from Watson Lake, Yukon; about 50 miles away. The area covered by the Pegaseus Claims is most easily reached from an old cleared campsite on the southwest shore of Oscar Lake.

4. MAGNETOMETER SURVEY

Two base lines were established along the arms of the claim group on the centre-lines of the claims (figure 2), along which, two grids of traverse lines at 1500' intervals were laid out. The north grid is centred on the Pegaseus 5-6 claim boundary and the south grid is centred on the Pegaseus 20-22 claim boundary.

All lines were chained, flagged and blazed. The undergrowth along the base lines was slashed to facilitate access to the claims through the dense forest.

The base lines (Base Line and 1500 N. Line) comprise 19,200' of line and the grid lines comprise 19,500' of line. The total length of chained line is 38,700'.

Magnetometer readings were taken at 100' intervals on all lines (appendix 1) with a McPhar M700 magnetometre. Base station readings were taken at the camp site on the southwest shore of Oscar Lake every morning and evening, to test for diurnal variation of the magnetic field.

The magnetometer survey is a reconnaissance survey, designed to gain a general appreciation of the magnetic response of the rocks beneath the whole claim group, and to locate any anomalous areas that may be present. A line spacing of 1500' was used to maximize the grid area.

5. RESULTS OF THE MAGNETOMETER SURVEY

Base station readings vary between a maximum of 2700 gammas and a minimum of 2350 gammas. Most readings are between 2500 and 2600 ga.

It is the opinion of the writer that the distortion of data from diurnal variation is not sufficient to distort the general results of the magnetometer survey, so uncorrected raw data is presented (figures 3,4). However, because of the similarity of the survey data, any subsequent intensive surveys would require frequent base-station checks at regular intervals to facilitate the removal of distortion from survey results.

In general, the variation of magnetic response over the claims is slight. Readings seem to be normally distributed between values of about 2000 to 3200 gammas (figures 3,4).

At the north and west ends of the claim group, readings are higher than over the area to the southeast. The difference may reflect proximity to a grannodiorite-metasediment contact that trends north-northeast south-southwest, located about 1.25 miles west of the Pegaseus Claims.

In the areas of both the north and south grids (figures 3,4), the pattern of magnetic response is interpreted as linear bands trending northeast-southwest. The bands trend in a direction similar to the strike of rock strata exposed near the north end of the claim group. The bands may reflect the attitudes of underlying rock strata. If so; the magnetometer survey can be used to predict the structures of rocks underlying the Pegaseus Claims.

Two very high readings were taken at 800N-3000W and 700N-1500W that do not correspond with the general trend of the data for the south

grid (figure 4). These values may be due to iron-bearing mineralization along a fault that trends east-west. Because of the lack of rock exposure, the existance of such a fault could not be verified.

6. GEOLOGICAL CROSS-SECTION

The geology of the east-west trending ridge that transects the north end of the Pegaseus Claim Group was mapped (figure 5), to compile a cross-section of strata similar to those underlying the claim group.

The area northwest of Oscar Lake was mapped by the Geological Survey of Canada (Map 19-1966) at a scale of 1":4 miles. The local stratigraphy was depicted on the map as a Devonian to Mississippian clastic sedimentary assemblage intruded to the west by a Cretaceous grannodioritic batholith.

The writer's mapping revealed a complex stratigraphy of clastic sedimentary strata interbedded with limestones intruded to the west by a grannodioritic batholith.

The sedimentary sequence comprises a fine-grained greywacke unit containing minor quartzitic siltstone and limestone beds overlain by a transgressive sequence. The transgressive sequence consists of orthoquartzitic cross-bedded siltstones passing gradually upward to dark plain-bedded impure siltstones. These are in abrupt contact with an overlying carbonaceous slate-greywacke unit in which the slates predominate near the base and graded greywacke beds are most common near the top. The greywackes are overlain by wavy-banded limestone.

The writer interprets the siltstones to have been deposited in a near-shore environment in progressively deepening water. The carbonaceous

slates and greywackes may represent filling of a quiet euxinic basin by turbidite deposition caused by a pulse of uplift and erosion in an adjacent source area. The wavy banded limestones may have been deposited as a lime mud in an open basin.

The sedimentary sequence is intruded by a hornblende-biotite granno-diorite 1.25 miles west of the Pegaseus Claims. Near the intrusive contact, greywackes and pelites from the lower unit in the sedimentary sequence have been metamorphosed to hornfels and carbonates have been converted to skarns.

The most common mineral assemblage of the skarns observed in trenches near the intrusive contact is

calcite, apatite $\pm$ sheelite, pyrrhotite, pyrite, phlogopite

Calcite and apatite are commonly coarse-crystalline, commonly longer than 1 cm. Apatite is light yellow-brown. Sheelite occurs as pale brown equant grains that are very difficult to distinguish from calcite in normal light. The sulphides occur as fine grains unevenly disseminated throughout the skarn.

It must be remembered that skarn mineralogy and texture are highly variable and that the above description may be accurate locally only.

7. ECONOMIC POTENTIAL

The area covered by the Pegaseus Claims is underlain by clastic and carbonate strata near a contact with a large batholith. The carbonate strata exposed in the contact aureole of the batholith have been metasomatized, locally forming sheelite (tungsten-bearing) skarns. Such skarns are significant exploration targets because they may contain large tungsten ore-bodies.

Where it is exposed along the cross-section, the intrusive contact dips steeply east. However, west of the south end of the Pegaseus Claim Group, the dip of the contact is shallower. This indicates that the attitude of the contact is irregular and may extend beneath the Pegaseus Claims at depth.

8. RECOMMENDATIONS

The lack of rock outcrop on the area covered by the Pegaseus Claims dictates an emphasis on geophysical and geochemical exploration methods.

I recommend:

1. that silt samples and pan concentrates from the streams crossing the claims be taken and analised for tungsten
2. that the magnetometer survey be extended to areas on the claims not covered by the north and south grids

Respectfully submitted,

October 1, 1979.

John Ostler, M.Sc.

9. REFERENCE

1967: Map 19-1966, Geology, Watson Lkae,Yukon Territory; Geological Survey of Canada

10. PROGRAM COST ESTIMATE

Aircraft; Watson Lake to Oscar Lake 2 trips about 200 miles total	400.00
Food	500.00
Magnetometer rental	125.00
Radio and camp equipment rental	125 → 125.00
Administration	100.00
Wages	
1 line cutter 10 days @ $100/day	1000.00
1 geophysical technician 10 days @ $100/day	1000.00
1 geological consultant 14 days @ $125/day	1750.00
	5000.00

John Ostler, M.Sc., Consulting Geologist
for
Cassiar East Yukon Expediting Ltd.

CERTIFICATE

I, John Ostler, of 1902-1501 Haro Street in the City of Vancouver Province of British Columbia, DO HEREBY CERTIFY:

THAT I am a consulting Geologist with business addresses at 1902-1501 Haro Street in the City of Vancouver, Province of British Columbia and at Box 193 (Lot 2, Block 14) in the Local Improvement District of Watson Lake, Yukon Territory.

THAT I am a graduate of Carleton University of Ottawa, Ontario, where I obtained my Master of Science degree in Geology in 1977.

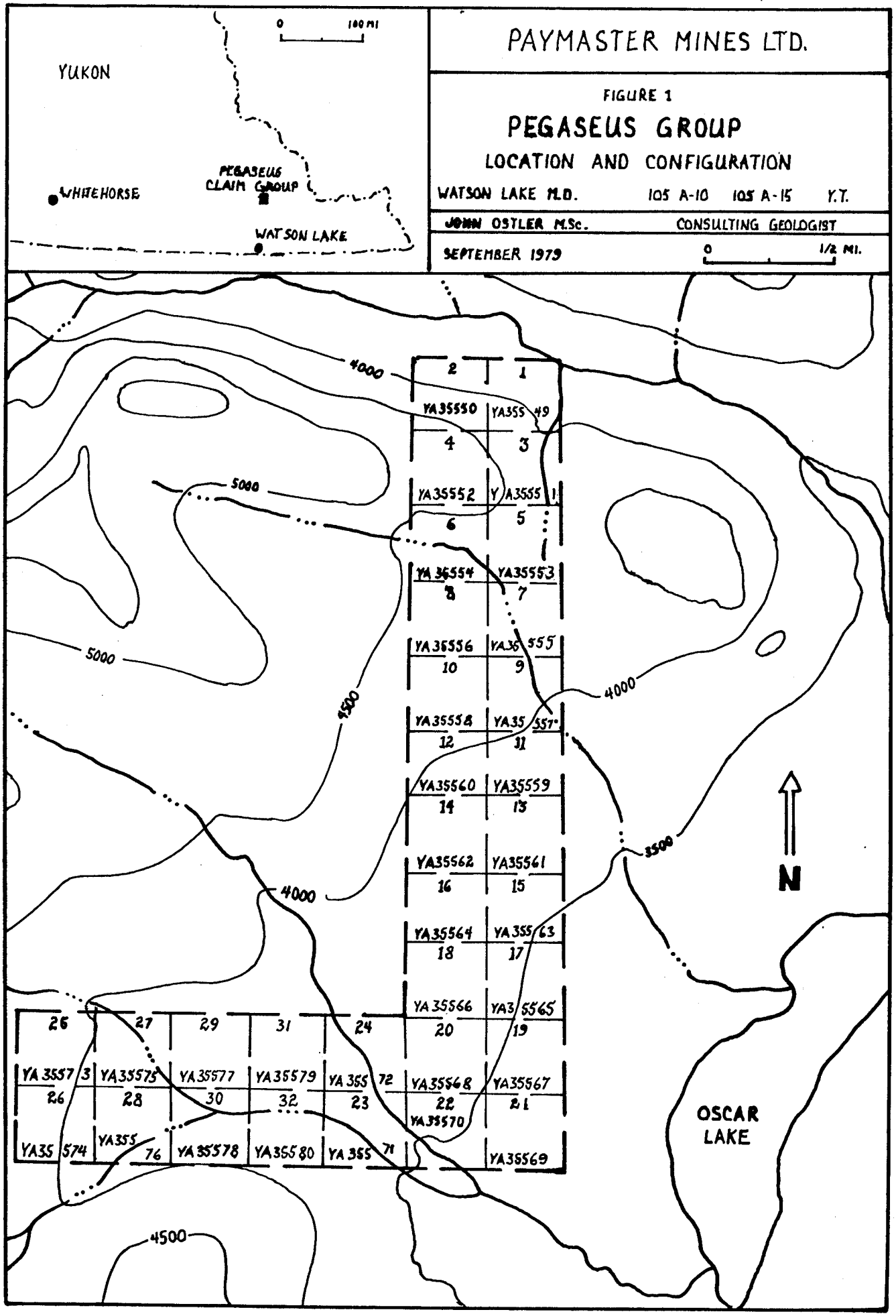
THAT I have been engaged in the study and practice of the geological profession continuously for 10 years.

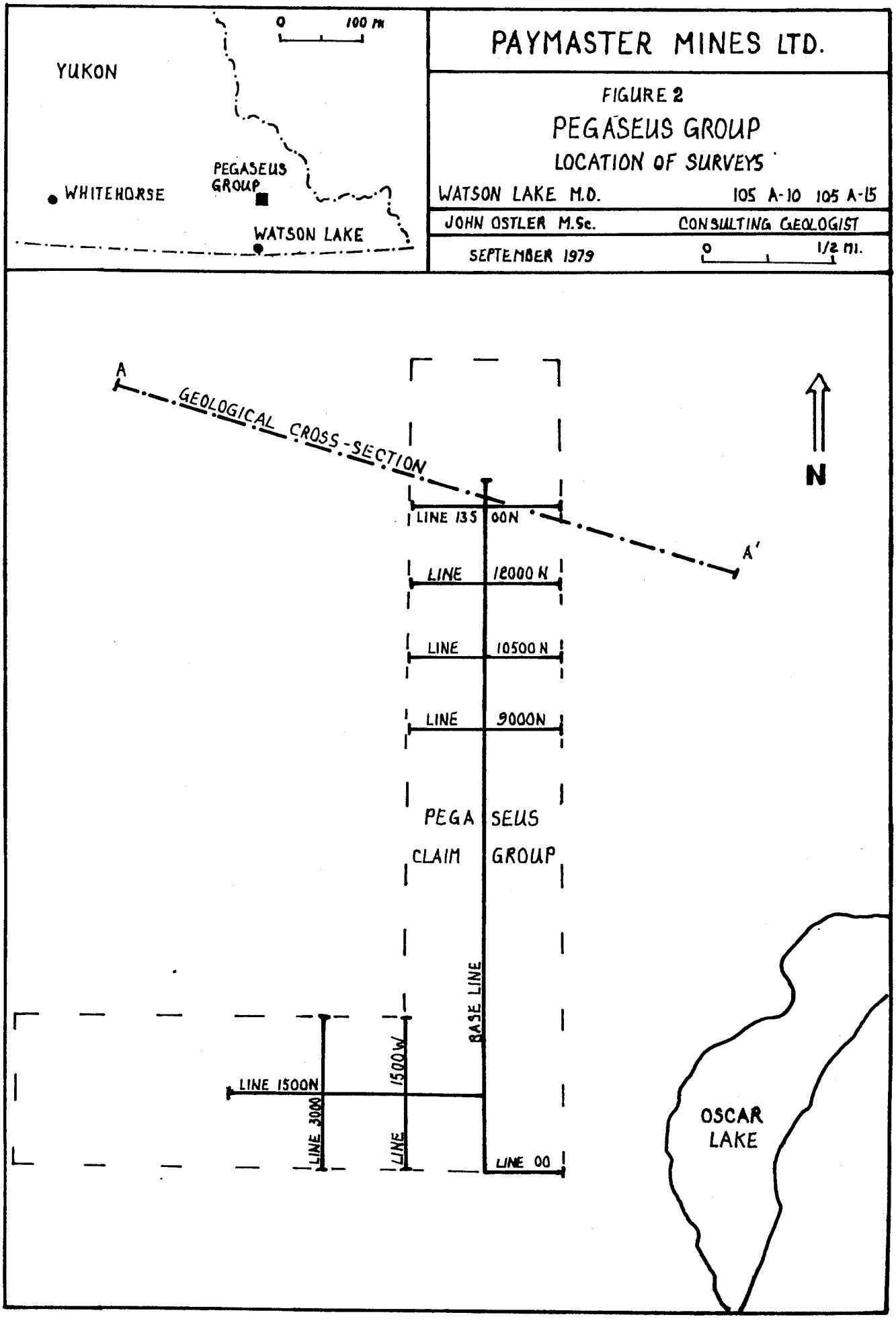
THAT this report is based on a personal examination of the Pegaseus Group and surrounding area, assisted by Harry F. Malbet of Vancouver, British Columbia and Joel Thomlinson of Watson Lake, Yukon from September 14 to 23, 1979.

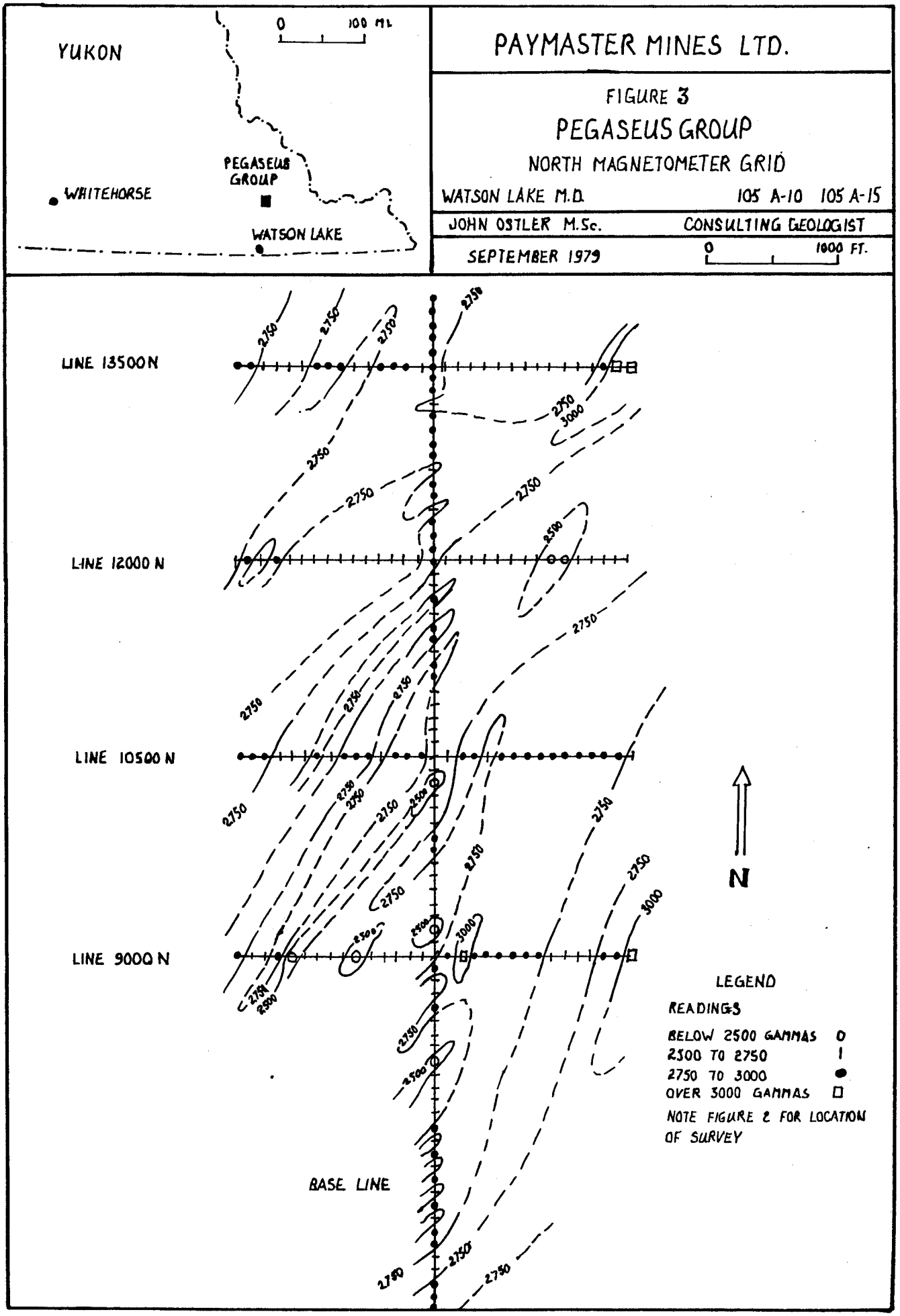
THAT I have no interest in the Pegaseus Claim Group nor in the securities of Paymaster Mines Ltd. n.p.l., nor do I expect to receive any.

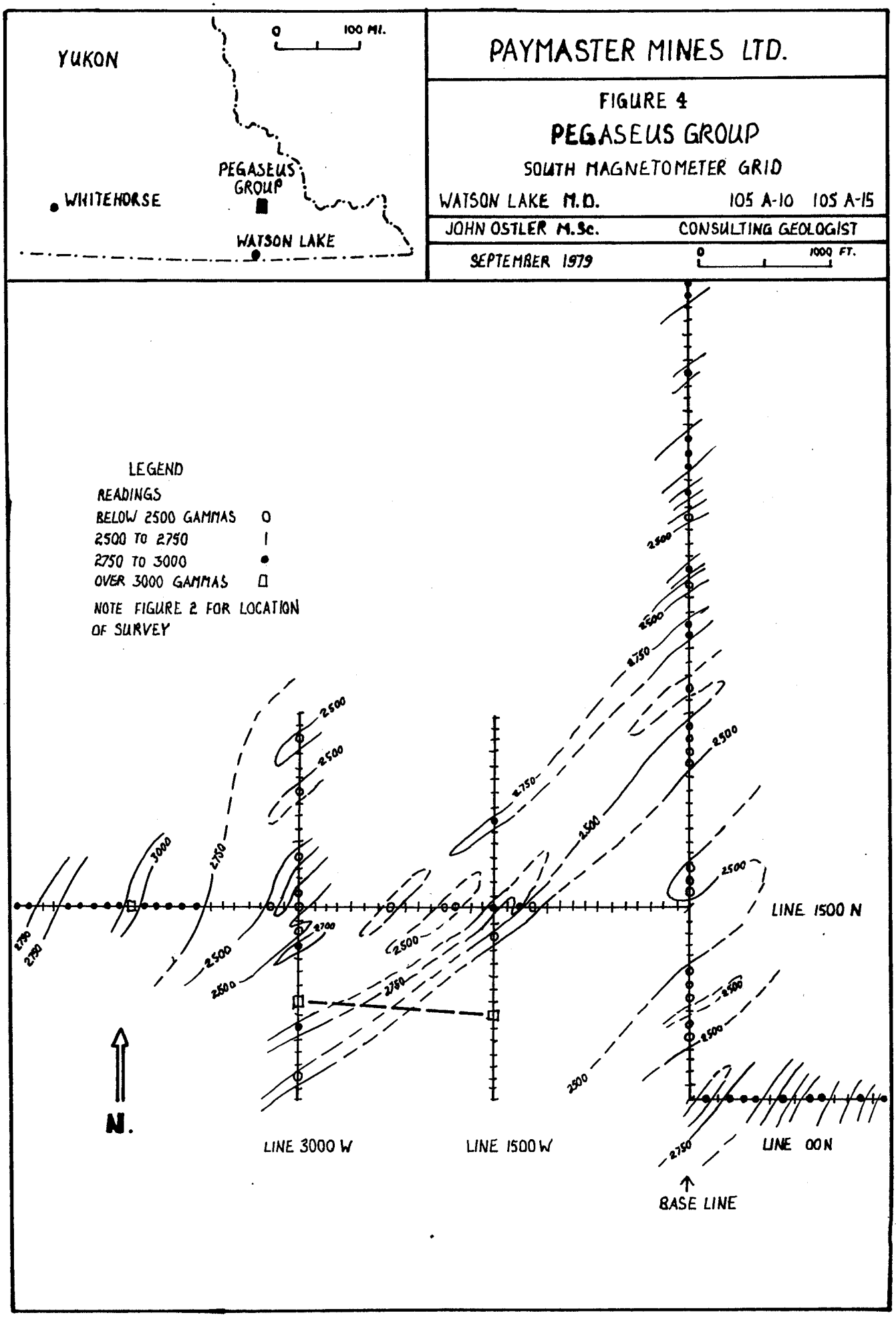
Dated in Watson Lake, Yukon
October 1, 1979

John Ostler, M.Sc.


0 100 MI
YUKON
WHITEHORSE
PEGASEUS CLAIM GROUP
WATSON LAKE
PAYMASTER MINES LTD.
FIGURE 1
PEGASEUS GROUP
LOCATION AND CONFIGURATION
WATSON LAKE M.D. 105 A-10 105 A-15 Y.T.
JOHN OSTLER M.Sc. CONSULTING GEOLOGIST
SEPTEMBER 1979
0 1/2 MI.
4000
5000
4500
3500
2
1
YA35550
YA355 49
4
3
YA35552
YA3555 1
6
5
YA 36554
YA35553
8
7
YA35556
YA35 555
10
9
YA35558
YA35 557
12
11
YA35560
YA35559
14
13
YA35562
YA35561
16
15
YA35564
YA355 63
18
17
YA35566
YA3 5565
20
19
26
27
29
31
24
YA 3557 3
YA35575
YA35577
YA35579
YA355 72
26
28
30
32
23
YA35568
YA35567
22
21
YA35570
YA35 574
YA355 76
YA35578
YA35580
YA355 71
YA35569
N
OSCAR LAKE


0 100 m
YUKON
PEGASEUS GROUP
WHITEHORSE
WATSON LAKE
PAYMASTER MINES LTD.
FIGURE 2
PEGASEUS GROUP
LOCATION OF SURVEYS
WATSON LAKE M.D.
105 A-10 105 A-15
JOHN OSTLER M.Sc.
CONSULTING GEOLOGIST
SEPTEMBER 1979
0 1/2 mi.
A
GEOLOGICAL CROSS-SECTION
A'
N
LINE 13500N
LINE 12000 N
LINE 10500 N
LINE 9000N
PEGA SEUS
CLAIM GROUP
BASE LINE
LINE 1500N
1500W
LINE 3000
LINE
LINE 00
OSCAR LAKE


YUKON
0 100 MI.
PEGASEUS GROUP
WHITEHORSE
WATSON LAKE
PAYMASTER MINES LTD.
FIGURE 3
PEGASEUS GROUP
NORTH MAGNETOMETER GRID
WATSON LAKE M.D.
105 A-10 105 A-15
JOHN OSTLER M.Sc.
CONSULTING GEOLOGIST
SEPTEMBER 1979
0 1000 FT.
LINE 13500N
LINE 12000 N
LINE 10500 N
LINE 9000 N
BASE LINE
N
LEGEND
READINGS
BELOW 2500 GAMMAS 0
2500 TO 2750 1
2750 TO 3000
OVER 3000 GAMMAS
NOTE FIGURE 2 FOR LOCATION OF SURVEY


YUKON
0 100 MI.
PEGASEUS GROUP
WHITEHORSE
WATSON LAKE
PAYMASTER MINES LTD.
FIGURE 4
PEGASEUS GROUP
SOUTH MAGNETOMETER GRID
WATSON LAKE M.D. 105 A-10 105 A-15
JOHN OSTLER M.Sc. CONSULTING GEOLOGIST
SEPTEMBER 1979
0 1000 FT.
LEGEND
READINGS
BELOW 2500 GAMMAS 0
2500 TO 2750 I
2750 TO 3000 •
OVER 3000 GAMMAS □
NOTE FIGURE 2 FOR LOCATION OF SURVEY
LINE 1500 N
LINE 3000 W
LINE 1500 W
LINE 00 N
BASE LINE
N.

PAYMASTER MINES LTD.

FIGURE 5

PEGASEUS GROUP

GEOLOGICAL CROSS-SECTION

WATSON LAKE M.D. 105 A-10 105 A-15

JOHN OSTLER M.Sc. CONSULTING GEOLOGIST

SEPTEMBER 1979 0 1000 FT.

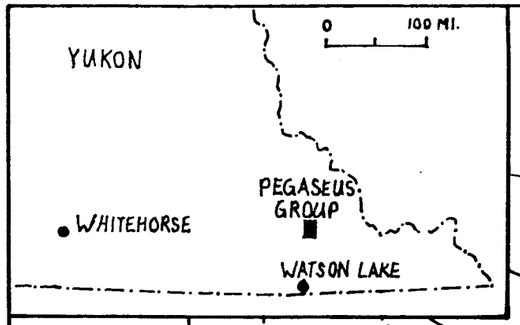


Figure 6

TABLE OF UNITS

6. Hornblende-biotite grannodiorite

Intrusive Contact

5. Wavy-banded limestone; light grey, grey to buff weathering, partially dolomitized

4. Interbedded greywacke and carbonaceous slate; greywacke beds are graded maximum grain size 1 mm, composed of angular quartz grains sedimentary rock fragments and mud rip-ups; carbonaceous slate is flat black weathering to rusty orange

3. Dark grey impure siltstone, weathers to rusty brown, planar-bedded

2. Light grey protoquartzitic siltstone, weathers white, laminae defined by heavy mineral segregations, planar and low-angle cross-beds unrotated palaeocurrents to west

1. Fine-grained greywacke, maximum grain size 0.25 mm , contains impure siltstone and limestone beds up to 10 m thick (1A) metamorphosed equivalent of 1

APPENDIX 1

MAGNETOMETER READINGS

1. Sept. 15, 1979

Base Stn am 2700
Base Stn pm 2500

00N-1500E	2600
-1400E	2630
-1300E	2750
-1200E	2750
-1100E	2610
-1000E	2600
-900E	2750
-800E	2630
-700E	2760
-600E	2800
-500E	2800
-400E	2800
-300E	2900
-200E	2730
-100E	2760
-B Line	2680
100N-B Line	2500
200N-B Line	2660
300N-	2660
400N-	2500
500N-	2400
600N-	2380
700N-	2550
800N-	2400
900N-	2420
1000N-	2420
1100N-	2500
1200N-	2560
1300N-	2580
1400N-	2500
1500N-	2620
1600N-	2430
1700N-	2380
1800N-	1925
1900N-	2570
2000N-	2590
2100N-	2580
2200N-	2600
2300N-	2500
2400N-	2700
2500N-	2580
2600N-	2440
2700N-	2400
2800N-	2460
2900N-	2400
3000N-	2510
3100N-	2700
3200N-	2210
3300N-B Line	2640
3400N-	2590
3500N-	2770
3600N-	2780
3700N-	2780
3800N-	2600
3900N-	2640
4000N-	2410
4100N-	2760
4200N-	2610
4300N-	2600
4400N-	2620
4500N-	2300

APPENDIX 1

MAGNETOMETER READINGS

2. Sept. 16, 1979

Base Stn am 2350
Base Stn pm 2650

4600N-B Line	2660
4700N-	2700
4800N-	2550
4900N-	2820
5000N-	2815
5100N-	2800
5200N-	2700
5300N-	2660
5400N-	2675
5500N-	2740
5600N-	2820
5700N-	2585
5800N-	2545
5900N-	2650
6000N-	2590
6100N-	2670
6200N-	2805
6300N-	2775
6400N-	2875
6500N-	2845
6600N-	2670
6700N-	2575
6800N-	2900
6900N-	2900
7000N-	2715
7100N-	2765
7200N-	2415
7300N-	2770
7400N-	2630
7500N-	2760
7600N-	2640
7700N-	2760
7800N-	2620
7900N-	2650
8000N-	2695
8100N-	2675
8200N-	2495
8300N-	2500
8400N-	2600
8500N-	2600
8600N-	2850
8700N-	2590
8800N-B Line	2550
8900N-	2760
9000N-	2500
9100N-	2525
9200N-	2495
9300N-	2610
9400N-	2500
9500N-	2560
9600N-	2645
9700N-	2655
9800N-	2750
9900N-	2780
10000N-	2740
10100N-	2680
10200N-	2605
10300N-	2450
10400N-	2620
10500N-	2700
10600N-	2675
10700N-	2500
10800N-	2500

APPENDIX 1

MAGNETOMETER READINGS

3. Sept. 17, 1979

Base Stn am	2560
Base Stn pm	2440
10800N-B.Line	2590
10900N-	2700
11000N-	2810
11100N-	2850
11200N-	2605
11300N-	2845
11400N-	2870
11500N-	2600
11600N-	2850
11700N-	2725
11800N-	2745
11900N-	2995
12000N-	2810
12100N-	2895
12200N-	2750
12300N-	2680
12400N-	2940
12500N-	2805
12600N-	2740
12700N-	2805
12800N-	2760
12900N-	2925
13000N-	2900
13100N-	2760
13200N-	2640
13300N-	2740
13400N-	2930
13500N-	2670
13600N-	2940
13700N-	2785
13800N-	2805
13900N-	2730
14000N-	2710

APPENDIX 1

MAGNETOMETER READINGS

4. Sept. 18, 1979

Base Stn am	2770
Base Stn pm	2650

13500N-100E	2660
-200E	2660
-300E	2640
-400E	2640
-500E	2660
-600E	2620
-700E	2590
-800E	2590
-900E	2560
-1000E	2680
* -1100E	2680
-1300E	2990
-1400E	3000
-1500E	3050
-100W	2650
-200W	2785
-300W	2770
-400W	2775
-500W	2725
-600W	2695
-700W	2800
-800W	2735
-900W	2745
-1000W	2720
-1100W	2740
-1200W	2695
-1300W	2745
-1400W	2750
-1500W	2800

* 13500N-1200E 2680

12000N-100E	2650
-200E	2645
-300E	2680
-400E	2625
-500E	2665
-600E	2650
-700E	2640
-800E	2540
-900E	2495
-1000E	2475
-1100E	2500
-1200E	2660
-1300E	2545
-1400E	2590
-1500E	2595
12000N-100W	2625
-200W	2700
-300W	2595
-400W	2625
-500W	2580
-600W	2740
-700W	2650
-800W	2595
-900W	2740
-1000W	2720
-1100W	2700
-1200W	2780
-1300W	2710
-1400W	2845
-1500W	2690

APPENDIX 1

MAGNETOMETER READINGS

5. Sept. 19, 1979

Base Stn am	2440
Base Stn pm	2670

10500N-100E	2670
-200E	2760
-300E	2800
-400E	2680
-500E	2805
-600E	2810
-700E	2875
-800E	2760
-900E	2805
-1000E	2820
-1100E	2905
-1200E	2890
-1300E	2745
-1400E	2805
-1500E	2650
10500N-100W	2800
-200W	2790
-300W	2850
-400W	2725
-500W	2900
-600W	2810
-700W	2990
-800W	2500
-900W	2800
-1000W	2750
-1100W	2750
-1200W	2710
-1300W	2755
-1400W	2950
-1500W	2850

9000N-100E	2870
-200E	3195
-300E	2950
-400E	2850
-500E	2800
-600E	2895
-700E	2755
-800E	2770
-900E	2705
-1000E	2640
-1100E	2695
-1200E	2650
-1300E	2790
-1400E	2895
-1500E	3000
9000N-100W	2700
-200W	2625
-300W	2580
-400W	2650
-500W	2595
-600W	2475
-700W	2555
-800W	2650
-900W	2645
-1000W	2730
-1100W	2400
-1200W	2810
-1300W	2600
-1400W	2640
-1500W	2790

APPENDIX 1

MAGNETOMETER READINGS

6. Sept. 20,1979

Base Stn am 2500
Base Stn pm 2600

1500N-B.Line	2610
-100W	2660
-200W	2680
-300W	2640
-400W	2595
-500W	2540
-600W	2565
-700W	2675
-800W	2540
-900W	2570
-1000W	2560
-1100W	2490
-1200W	2810
-1300W	2500
-1400W	2780
-1500W	2550
-1600W	2560
-1700W	2590
-1800W	2460
-1900W	2405
-2000W	2605
-2100W	2690
-2200W	2675
-2300W	2495
-2400W	2650
-2500W	2690
-2600W	2650

1500N-2700W	2500
-2800W	2580
-2900W	2685
-3000W	2490
-3100W	2595
-3200W	2475
-3300W	2500
-3400W	2695
-3500W	2670
-3600W	2740
-3700W	2695
-3800W	2855
-3900W	2840
-4000W	2815
-4100W	2870
-4200W	2860
-4300W	3000
-4400W	2900
-4500W	2810
-4600W	2690
-4700W	2760
-4800W	2590
-4900W	2700
-5000W	2740
-5100W	2780
-5200W	2745

APPENDIX 1

MAGNETOMETER READINGS

7. Sept. 21, 1979

Base Stn am	2645
Base Stn pm	2780

1400N-3000W	2500	1400N-1500W	2595
1300N-	2390	1300N-	2490
1200N-	2510	1200N-	2550
1100N-	2580	1100N-	2555
1000N-	2685	1000N-	2600
900N-	2550	900N-	2590
800N-	3200	800N-	2600
700N-	2645	700N-	3050
600N-	2790	600N-	2550
500N-	2565	500N-	2550
400N-	2520	400N-	2650
300N-	2505	300N-	2600
200N-	2495	200N-	2600
100N-	2600	100N-	2700
00N-	2610	00N-	2575
1600N-3000W	2450	1600N-1500W	2590
1700N-	2540	1700N-	2690
1800N-	2595	1800N-	2580
1900N-	2495	1900N-	2555
2000N-	2560	2000N-	2695
2100N-	2560	2100N-	2670-
2200N-	2655	2200N-	2795
2300N-	2670	2300N-	2710
2400N-	2415	2400N-	2740
2500N-	2690	2500N-	2710
2600N-	2560	2600N-	2615
2700N-	2600	2700N-	2660
2800N-	2490	2800N-	2690
2900N-	2620	2900N-	2630
3000N-	2550	3000N-	2650