Welland 800282 82F/GW

WELAND MINING LIMITED

HOLE 1 - 639	
0 - 58	Brecclated silicified chart with skarn minerals and graned) or its fragments - well mineralized with chalcopyrite, pyrmotite, pyrite, molybdenite and pentlandite. Some potach feldapor. Average - 0.325 Cu, 0.089 MoS2.
58 - 89	Limy brecclated chert with some pyrite and chalcopyrite. 79 - 68 assayed04 Cu, .05 MoS2.
88 - 118	Limy brecciated chert skorn sections with some suiphides.
118 - 127	Limy brecciated chart, well mineralized with pyritatite.

HOLE A - 45°

0-11

Casing

11 - 60

Brecciated augita perphyny foldspathic with stringers of orthoclase.

43 - 48 massive pyrrhatite.

Water last 3 60', returned through Hola No. 8.

O-2

Cosing

Precedence silicified limy chert with skern minerals chalcopyrite, pyrrhotite and molybdonite.

Average = 0.742 Cu, 0.228 MoS₂.

Predspar porphyry.

97 = 117 assayed = .01 Cu.

Chert silicified, some skern and minor pyrrhotite.

O = 3

Cosing

3 = 60

Limy breccloied silicified chert with some skem. Miner amounts of pyrrhotite, cholcopyrite, pyrite and molybdenus.

60 = 127

Skam with pyrrhotite and chalcopyrite, brecaleted rock could be chert or feldspor porphyry originally. Granitic texture.

HOLE 4 = 359

0 - 250

Proceleted foldspethic ouglito parphyry, some stringers of arthoclese and some pyrrhotise.

I' lamprophyre 3 97'.

Silicious 116 - 119' - sampled.

HOLE 5 - 30°	
0 - 28	Limy volcanies.
28 - 32	Lamprophyra dike.
32 - 243	Limy volcanics with skarn patches and scattered sulphides.
248 - 252	Feldspathic silicaous volcanics, some skarn patches.
252 - 280	Very limy rock, brecciated, altered and looks like red granite, well mineralized with disseminated chalcopyrite and molybdenite.
200 - 291	Mixture of red granite and brecclated volcanics - less mineralization, disseminated.
291 - 325	Red granitic appearing limy sediments.
325 - 345	Similar rocks becoming darker.

HOLE 6 - 30°	
0 - 63	Cherty augita perphyry agglemorate pyrita, vary limy in parts. Breaclated areas of skam.
63 - 1 69	Limy brecelated volcenies - grenitized pyrmotite and chalcopyrite in low grade patches.
168 = 253	Feldspar porphyry.
253 - 234	Stiticeous brecciated ilmy agglomerate skarn 253 to 265.
204 - 346	Ereceleted limy volcanics = 50% red granitic skern = well mineralized in patches = copper and molybdenite well disseminated.

HOLE 7 - 30°	
0 - 179	Feldspar perphyry, altered in places with sulphides. Limy siltstone, some silicified areas with chalcopyrine and pyrmetite. Limy granitized (augite perphyry?), some disseminated pyrmetite.
179 - 316	
316 - 330	
303 - 393	Feldipar porphyry.

O = 160

Feldspathic augite perphyry, some skarn areas, some pyrrhatite, pyrite, and chalcopyrite.

Stillalfied chart and skarn, almost barren of sulphicas.

360 = 414 Augite purphyry with some disseminated pyrrhotite and pyrite.

HOUS 9 - 450

0 - 35

Feldspar porphysy.

35 - 61

Augite perphyry with skarn well mineralized with pyrrhatite, chalcepyrite, molybdenite and pyrite.

61-90

Augite porphyry silicified.

90 - 143

Felipathic augite purphyry.

HOLE 11 - 72°	
0 - 167	Skem well mineralized with chalcopyrite, pyrthetite, pyrthetite, pyrite and molybdenite. Brecalated altered chart. Limy in part.
167 - 175	Quartz carbonate zone.
175 - 210	Brecclated feldspaible augite purphyry.
210 - 270	Brecciated chart altered to skam, good sulphides.
270 - 207	Felipathic augite purphyry patches, well minoralized cham.
237 - 377	Limy fine grained augite parphyry patches of low grads skarn mineralization.

HOLE 13 - 45°

0 - 34

Augite porphyry boulders with one granite boulder.

34 - 94

Broken chert.

HOLE 14 - 45°

0 - 43

Limy dark hornfels.

43 - 45

Faldspar porphyry dike.

45 - 90

Limy breccioted sediments.

MAMMOTH CLAIM GROUP NELSON AREA, B.C.

INTRODUCTION

Welland Consolidated Mining Ltd. (N.P.L.) hold a block of mining claims in the Nelson Mining Division of British Columbia, the subject claims being known as the "Mammoth Group".

The claim group was originally located for purposes of investigation of a prominent gossan zone that occurred over an extensive area. Subsequently trenching magnetometer surveying and diamond drilling operations were carried out on the claims.

The claims are located on a prominent north-south striking ridge and are at an elevation of approximately 6,150 feet above mean sea level. There is little overburden coverage on the main showing but overburden and talus conditions increase in a northerly direction. The most northerly showing occurs about 1,300 feet north of the main showing and at this point the elevation is approximately 5,500 feet above mean sea level.

GEOLOGY

The main area where gossan is in evidence can best be described as a metamorphic complex. Surface examination and diamond drilling indicate the effects of an igneous intrusion into sedimentary rock types. Material encountered would grade from grano-diorite, through various types of skarn to altered sediments. There was little material that did not show pronounced metamorphic alteration. Various occurrences of porphyry were also present. Silicification was pronounced throughout all core holes drilled on the main showing that existing along the base line from 400 feet south of the shaft area to 400 feet north of the shaft.

There were numerous slips in evidence but no indication of any pronounced fault action. A number of pronounced scarp faces were present in all areas surrounding the main ridge containing the gossan deposit.

MINERALIZATION

The sulphide minerals are quite prominent in the gossan area and in the diamond drill core. These comprised chalcopyrite, pyrrhotite, pyrite, molybdenite and pentlandite. Outside the main mineralized zone the amounts of molybdenite and chalcopyrite decreased substantially.

EXPLORATORY WORK

legive. It number of house were drilled as fordom

1. Trenching and thus gave shall an penetration.

A number of hand trenches were sunk both on the main mineralized showing and at some more remote points to the north, south and southeasterly directions. Those on the shaft-zone area showed localized

concentrations of molybdenite and chalcopyrite. The limited depth (about 20 feet) to which the shaft could be examined also showed fair molybdenite and chalcopyrite mineralization.

The trenches 1300 feet north of the shaft showed a limited amount of chalcopyrite but no molybdenite.

2. Geophysical - Magnetometer

The second secon

A magnetometer survey was carried out over the portion of the ridge extending from 700 feet south of the shaft to a distance 500 feet north. Fairly pronounced anomalous conditions existed south and, to some extent, easterly from the shaft. This is understandable since these areas represent the main zones of gossan accumulation and would therefore be the areas of heavy iron sulphide concentration.

3. Diamond Drilling

A total of 15 holes were drilled on the property and represented a footage total of 3,415 feet. The drilling program would have to be described as inconclusive. A number of holes were drilled in random directions, apparently in an effort to establish possible trending directions for mineralized zones. The holes were for the most part, flat angled holes and thus gave shallow penetration.

Holes 1 and 2 were drilled immediately north of the shaft and were located in the vicinity of the main zone of molybdenite mineralization. Results obtained were:

Hole No. 1

Molybdenum 4.5 to 27.5 feet $\frac{0.185\%}{23.0}$

Copper 4.5 to 49.0 feet $\frac{0.39\%}{44.5}$

Hole No. 2

Molybdenum 12.0 to 34.0 feet $\frac{0.687\%}{22.0^{\circ}}$

Copper 12.0 to 79.0 feet $\frac{0.518\%}{67.0}$

Hole No. 5 - 100 feet north of shaft

Copper 259.0 to 279.0 feet $\frac{0.412\%}{20.0^{\circ}}$

Molybdenum Negligible

Hole No. A - approximately 400 feet north of shaft

Molybdenum 43.0 to 55.6 feet 0.25% 12.6

Copper 43.0 to 55.6 feet $\frac{0.18\%}{12.6^{\circ}}$

Hole No. 11 - 75 feet northeast of shaft

Molybdenum 0 to 11.6 feet $\frac{0.88\%}{11.6}$

Copper 0 to 72.0 feet $\frac{0.627\%}{72.0}$

The balance of the holes carried low to insignificant amounts of copper or molybdenum.

GENERAL-

- 1. The gossan zone on these claims is extensive and locally significant values in molybdenum and copper have been obtained.
- 2. Localization of values of consequence, in Diamond Drill Holes No. 1, 2, 5 11 and A may be indicative of an east-west trending zone of mineralization rather than the north-south trend that was being pursued.
- 3. Dump material from the shaft showed a considerable amount of intrusive material of a porphyritic nature. Reports indicate that this rock was from a cross-cut at the bottom of the shaft.

 The location was inaccessible and while the direction of the tunnel was likely in an easterly direction this is not fully established. The amount of underground work would not, however, be of much consequence, based on the volume of the dump.
- 4. The formation changes significantly in a northward direction and loses the molybdenite mineralization. Copper is in evidence and seems to be related to shearing and fissures in the rock, which although strongly metamorphosed carries more sedimentary material than the gossan zone area.

5. The specific ridge is pretty sharply defined and is either governed on the east and west sides by formational changes or there may be some fault action.

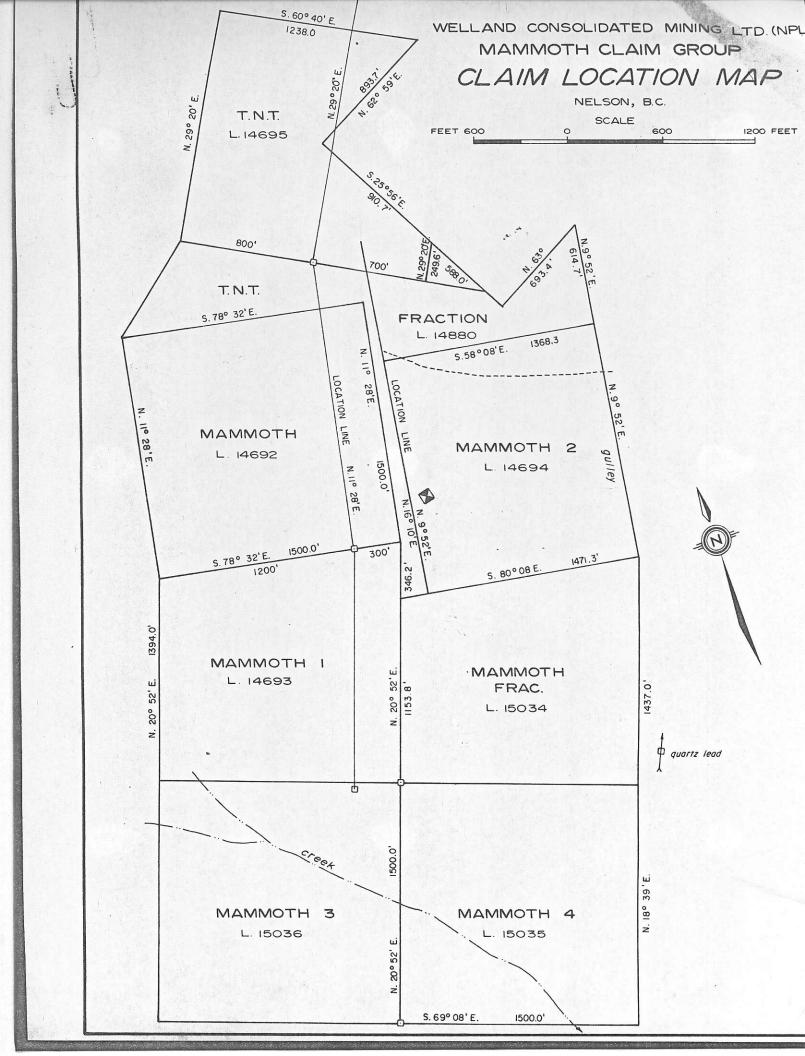
CONCLUSIONS AND RECOMMENDATIONS

- 1. The property needs a full and proper exploratory program. The drilling and other work done to date serves a purpose but leaves much to be desired in regard to constructive information.
- The claims should be geologically mapped, a thorough magnetometer survey made and upon the results of these consideration be given to further diamond drilling.
- 3. The gossan zone may only be a reflection of the pyrrhotite and pyrite mineralization present in the formation but the volume of chalcopyrite and molybdenite present locally is suggestive of more than a localized pocket.
- 4. Should the possibility of an east-west zone of copper and molybdenum mineralization exist, one would have to consider the possibility of the existence of a fault or shear zone crossing the normal strike direction of the formation and under such conditions more thorough examination should be made along the east and west shoulders of the ridge which might carry mineralized zones conforming to the areal strike direction.

Respectfully submitted,

P. Eng. P. Geol.

Vancouver, B.C. April 30, 1971



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ALRAE ENGINEERING LTD.

North		
East		
Elevation_	5,500'	
Azimuth	East	
Dip	-300	
Logged By_		

(Mr Travers)

WELLAND CONSOLIDATED MINES LTD.

Mammoth Property

Nelson, B.C.

Hole No]	LO				
Commenced					
Finished	1968				
Purpose Of	Hole	A	core		

DIAMOND DRILL RECORD

				CORE	LENGTH			Д	SSAYS			ACCUMULATIVE AVERAGES					
FROM	Т0	DESCRIPTION		ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	MoS ₂	AU W	AG W	CU W				
0'	8.0	Casing												* 24			
8.0	100 (100 (100 (100 (100 (100 (100 (100	Andesite, siliceous, greyish-green,	8'	201	12'	10-1		63 W	.033	Tr.							
		mottled with patches of purplish apha-	20'	30'	10'	10-2			.023	Tr.							
		nitic siliceous material and creamy	30 '	40'	10'	10-3			.019	Tr.							
		yellow 1/8" to 1/2" patches of altered	40'	50'	10'	10-4			.023	Tr.							
		feldspar (serecitic?) 3% to 5% dissemi-	50'	60'	10'	10-5			.004	.003							
	NEW THE	nated pyrrhotite. Fractures limonitic.	60'	70'	10'	10-6			.004	Tr.							
		19.5-23.0' - increased pink feldspar(?)	70'	80'	10'	10-7			.004	Tr.							
137		Minor pyrrhotite.	80'	90'	10'	10-8			.003	Tr.							
14 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		23.0-37.5' - greyish-green mottled	90'	100'	10'	10-9			.009	Tr.		***					
		slightly serecitic, minor pyrite.	100'	110'	10'	10-10			.020	Tr.							
	7 A 4 A	At 27.0' - trace of chalcopyrite and	110'	120'	10'	10-11		18 14 18 14	.024	Tr.			and the second		W.		
16 5 6 PA		pyrrhotite.	120'	130'	10'	10-12			.016	Tr.		教育等。 1980年					
		At 36.0' - trace of chalcopyrite.	130'	140'	10'	10-13			.023	.058							
		37.5-39.0' - sheared, 40° to core axis,	140'	150'	10'	10-14			.052	.006				magnific 2			
		limonitic	150'	160'	10'	10-15	TWE.	1463	.019	The second states					# # #		
		39.0-42.5' - mottled, purplish colour	160'	170'	10'	10-16			.022	.002							
		3% to 5% disseminated pyrrhotite.	170'	180.	10'	10-17			.013	Tr.					198		
	- 120 E		180'	190'		10-18	Se a se		.019								
		At 48.5-50.0' - fracturing 45°. to core		202'		10-19			.013				7		1784		
	100	axis, limonitic.															
		50.5-61.0' - greyish green colour, mino							109	/							
		sulphides (pyrrhotite).			Service.	18.0			.18								
1			HE BE						/								

DIAMOND DRILL RECORD

DESCRIPTION			CORE LENGTH				- 1	ASSAYS			ACCUMULATIVE AVERAGES				
FROM TO	DESCRIPTION)	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ	AG OZ.	% CU	MoS ₂	AU W	AG W	CU W			
	61.0-64.0' - rock medium green colour,					Marie R	25.7								
	slightly serecitic, barren.														
	64.0-87.5' - increased pinkish tinge to														
	rock (flooding by K-feldspar?).		1229.18												
	Minor pyrite and pyrrhotite.														
	87.5-90.5' - fractured, vuggy and leache	d													
	slightly chloritic, minor epidote.		44.6里				I A								
	90.5-140.0' - mottled, epidote and										laster.				
	minor chlorite alteration. From 93.0-														
	97.0' two to three percent pyrrhotite														
	disseminated and in thin fracture fil-			The same											
	ling veinlets 30° to core axis. Traces														
	of chalcopyrite and bornite. Pyrrhotite														
	distinctly magnetic. Limonite staining	4.007.0%										\$ 1. A. A.			
	along fractures common.			Seat In			100	重							
	At 135.3' traces disseminated MoS2, 2%						100								
	to 3% disseminated pyrrhotite and traces	3	13.15												
	of chalcopyrite.														
	140.0-180.0' - becoming darker grey in		(**) B.S.		The Control of the Co				14.44						
	overall colour - purplish mottling							6a 2 1 1							
	increasing, 1% to 2% disseminated					推制									
	pyrrhotite and traces of chalcopyrite.	150.0	152.0	miss	ing cor	e.	973								
		160 0	162.0	mice	ing cor	Α.									
		100.0	102.0	MILSS.	riig COI	٠.									

DIAMOND DRILL RECORD

			DI	AMONI	DINIL	L RECOR	KD.								
				CORE	LENGTH			P	SSAYS			ACCUMULA	ATIVE AV	ERAGES	
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU		AU W	AG W	CU W		
			162.0	170.0	3' c	ore mis	sing.		a Article					WE I	
			170.0	180.0	3' c	ore mis	sing.								
	1														
		180.0-202.0' - some of the dark purple													
		mottled areas becoming more well define	d												
		and have the appearance of rounded		45											
	375/1	fragments (ie: a recemented breccia).		7-4-4				T THE						144	
		Groundmass of breccia? contains K-feld-													
		spar and has pinkish tinge. Epidote													
		and serecite alteration noted.		65	To Victor	100									
	120	At 196.0' three inch fragment appears								放射 电影					
		tuffaceous in texture.	1332							Part of the Atlanta					
	· · · · · · · · · · · · · · · · · · ·							W.							
	202.0	END OF HOLE.	Sabella		300	1 in 1 in 1									
				\$ 60 L 19 E			No.								
						算要集			Automitical a						
						1	N Page								
				14.116											
								- 17 Jan 1							
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					335										
aprilia de la companya de la company								7-31							