

2.21326

Report on Mapping  
At the Madsen Mine  
(Owned by Claude Resources, Saskatoon Manitoba)  
By Placer Dome Canada Ltd. for  
Purposes of Assessment Filing 2001



Scott Petsel – Geologist  
Tuesday, August 8th, 2000

RECEIVED  
APR 26 2001  
ASSESSMENT



52K13NW2006 2.21326 BAIRD

010

Table of Contents

**Table of Contents**.....1  
**Introduction**.....2  
**Property and Location** .....2  
**History**.....2  
**Mapping and Traverses**.....3  
**General Geology**.....3  
**Property Geology**.....3  
    Alteration  
    Mineralization  
**Summary** .....5  
**References**.....6  
**Statement of Qualifications**.....7  
**Figures** .....8



52K13NW2006 2.21326 BAIRD

010C

## Introduction

This report documents the 1" = 100' scale mapping of the Madsen Mine's Central Deformation – Iron Carbonate zone as completed between July 6<sup>th</sup> and August 8<sup>th</sup>, 2000 by consulting geologists, Scott Petsel and Peter Read. The evaluation was completed with the help and support of the geology department at the Campbell Mine for the benefit of the Placer Dome's regional exploration program in the Red Lake District. Stuart Morris, Placer Dome's Chief Geologist, at the Campbell Mine was responsible for defining the objectives of the evaluation and supervised the evaluation team.

The Madsen Mine is the Red Lake District's 3<sup>rd</sup> largest producer, having produced 2.5 million ounces (moz) historically. The Madsen property is sizeable with 224 patented claims covering over 10,000 acres. Although improving with the recent work of the Ontario Geologic Survey, the geology of the mine property remains poorly understood but highly prospective. Claude Resources, the Saskatchewan based junior company and operator of the Seabee mine, is currently owner of the Madsen property. The evaluation was completed entirely under a confidentiality agreement between Placer Dome Canada Limited (PDCL) and Claude Resources with no financial responsibility between either party.

## Property and Location

The Madsen Mine is located in northwestern Ontario, Canada approximately 10 kilometers from the town of Red Lake and 25 kilometers from Placer Dome's Campbell Mine (Figure 1). The mine property is fully accessible and crosscut by a 2-lane, paved highway (Hwy. 216). The property straddles the Baird and Heyson Township boundary. The UTM coordinates of the #2 Shaft, Madsen's main production shaft, are 435,519E, 5,646,326N. The claims are located on the Ministry of Natural Resources claim map plan G-3739.

The topography, fauna and flora are typical of the Canadian Shield, characterized by small hills with pine and deciduous forest cover and locally intermittent swamps. Lakes cover 20-30% of the property and limit access to those areas not currently accessible by road.

## History

The history of the Madsen Mine provides an understanding of the difficulties in evaluating the potential of the property. A brief account follows:

Madsen Red Lake Gold Mines Ltd. (MRLGM) was incorporated in 1935 and began working the #1 Vein to the 5<sup>th</sup> level from the #1 Shaft. In 1936, a company geologist, Austin McVeigh, found mineralization approximately 3000 feet to the west of the #1 Shaft. In 1938 the #2 shaft was sunk on the mineralized units that now bear his name and production began at 300 ton per day (tpd). This was later increased to 800 tpd. In 1962 the shaft was enlarged and this shaft is still used by current owner, Claude Resources.

In the early 1970's, after more than 30 years of continuous production, MRLGM began to struggle with an orebody that was becoming increasingly deep and laterally far from the shaft. The shaft bottom, 4300 feet from the collar, was set within an ultramafic unit. A stockholder dividend program that funneled profits away from the mine was limiting exploration funds and the known ore was gradually being mined out. A last ditch effort to review exploration opportunities led to the discovery of a high-grade vein now named the #8 Zone. Drifts were driven west from the shaft, through the ultramafic package, to reach the zone. Severe ground control problems were encountered in the ultramafics. The ore was developed from more competent andesitic rocks found within the footwall of the ore. Before production commenced the mine closed. The closure of the mine was largely due to the problems mentioned above, but a labor dispute appears to have been the final blow. The threat of an on-coming strike caused the management to sell the mine to another company with the #8 Zone reserves largely intact. MRLGM sold the property to Bulora Mining Co. in 1974. In 1976, having pillaged the #8 Zone without leaving detailed geologic or production records of current standards, Bulora went bankrupt.

A former MRLGM employee formed Madsen-Rowland Mines and revived the property in late 1976. Madsen-Rowland Mines was able to consolidate the Starrat Mine into the property land package in the late 70's, otherwise the project sat idle for a period of years. From 1980 to 1983, Noranda optioned the property and attempted to recompile records while recalculating the reserves based on 6-foot mining widths. They briefly drilled and explored an area of the McVeigh tuff and a few extensions of the mine before reverting the property to its owner. In 1988, the Madsen Gold Corporation acquired the property and added the Aiken-Russet ground to its holdings.

In 1997, Claude Resources acquired the property from Madsen Gold Corporation and consolidated the Buffalo Mine into the Madsen-Starrat land package completing the 10,000-acre total. They rehabbed portions of the upper levels of the mine, mined pillars, drilled shallow targets and open-cast mined for bulk sampling purposes on several narrow veins (DeVilliers and #1 Zone). A ramp was also driven on the McVeigh mineralized "tuff" and small stopes produced minor amounts of gold. A more accurate historical account can be found in the Madsen Gold Corp., Feasibility Report, 1993.

### **2001 Mapping and Traverses**

Several surface traverses were executed during the summer of 2001 to assist in the evaluation of the Mafic-ultramafic contact in the "Central Deformation – Iron Carbonate Zone" of the Madsen Property. The pre-existing 1"= 400' scale map constructed from historic data and field outcrop mapping was used to confirm gross lithologies. Many of the significant outcrops thought to be important to the overall geologic picture were visited. The traverses were accompanied by the completion of the 1" = 200' scale map that is enclosed with the report. An existing local grid was used for location in the field. Mapping was completed on claims 11509, 12821, 12820, 12522, 12527a (figure 2). Within the mapped areas there are large stripped outcrops known as the Upper and Lower Stripped Areas on sections 13100E and 13400E. These outcrops expose the contact relationship between tholeiitic pillow basalts and an ultramafic flow and represent a focal point of the 1"=200' mapping.

During the traverses, structural observations, lacking on most previous Madsen work, were recorded in a field notebook for future plotting in stereographic projection. A copy of the field notes has been kept with the Madsen data files.

### **General Geology**

The property lies in the northeast corner of the east-west trending Red Lake greenstone Belt of the Uchi Subprovince of the Archean Superior Province of the Canadian Shield. In the Red Lake area the belt consists mainly of volcanic rocks and lesser amounts of clastic sedimentary and is bounded on all sides by large batholiths.

### **Property Geology**

Elements of the regional geology required to place the Madsen Mine in a regional context were gathered from existing articles (Sandborn-Barrie et al., 2000 and others) and knowledgeable Placer Dome staff. At the Madsen Mine many qualified geologists have written detailed geologic descriptions of lithologic units over the years. More recent reports with which to get a more encompassing picture of the geology at Madsen are provided by, Dube' et al., 2000 and Zhang, 1996. The following geologic description will attempt to provide a brief summary of the general geologic setting.

The Madsen property is underlain by the Archean age, Balmer and Confederation Assemblages of weakly to moderately metamorphosed volcanic dominated sequences. The two assemblages are separated by an angular unconformity that represents a minimum 200 million-year time gap.

The Balmer Assemblage ranges in age between 2.99 Ga and 2.96 Ga and is characterized by tholeiitic pillowed to massive basalts interlayered with subvolcanic intrusions and ultramafic flows of komatiitic affinity.

The Confederation assemblage has been dated on the Madsen property in two locations and shows ages of 2.744 +/-1 Ga 2.746 +36/-17 Ga., respectively. Rocks of the Confederation package are more felsic in nature. The assemblage contains mafic volcanoclastic rocks, gabbros, dacites, spherulitic rhyodacites, rhyolites and quartz or quartz-feldspar, porphyritic, crystal lapilli tuffs.

Recent work by Dube' et al., 2000 and Sandborn-Barrie et al., 2000, have identified a polymictic conglomeratic unit basal to the confederation assemblage and define its lower contact as the unconformity between the Balmer and Confederation rocks. A recent date taken from the conglomerate show detrital zircons of Ball age (2.94 Ga) within the unit and hydrothermally reset zircons coincident with intrusive activities, namely the Killala-Baird Batholith (2.708 Ga). This unit lies just above the Austin mineralized "tuff" and its true age is unknown. The conglomeratic unit displays the effects of moderate deformation characterized as D2 by Dube' et al., 2000. A bedding parallel S1 (N030/65°) foliation in an elongate clast is locally crenulated by S2 (N087/70°).

The corridor of weak to moderate deformation which characterizes the structural features of the polymictic conglomerate mentioned above and the Madsen mineralization is known as the "Howey Bay-Flat Lake Deformation Zone"(HBFL). The corridor of heterogeneous, weak to moderate, differential strain exhibits minor tight folds with a consistent SW vergence, flattening features, rotated grains with strain tails indicating left lateral motion or SW vergence, weak C-S fabrics locally, elongation lineations (2:1) and a variably exposed SW-NE axial planar (S2) cleavage. The corridor, where observed, is no more than several hundred feet wide. Outside of the corridor the structural features that characterize the HBFL are difficult to recognize. A high strain gradient is indicative of the rapid change from highly deformed to undeformed pillows noted in the detailed mapping of the Central Iron-Carb Zone completed during this evaluation and at the 8600 Zone near Starrat.

Other deformation corridors parallel to the HBFL are apparent and have been documented by Zhang 96'. These include the Central Deformation Zone, trending N010° centered on the eastern shore of and under Russet Lake, and the Western Deformation Zone west of Russet Lake (striking N340°). Faults of significant size were not recognized from the surface mapping.

### **Alteration**

Both the Balmer and Confederation sequences are metamorphosed to varying degrees of greenschist grade. An amphibolite facies metamorphism as a result of metasomatic activity related to plutonism is found along the trend of the mineralized Austin and McVeigh "tuffs" and as a thermal aureole haloing the intrusives.

Hydrothermal alteration proximal to the Madsen ore body is well described by Dube' et al., 2000 as comprising variable portions of andalusite, staurolite, garnet, chloritoid, biotite and quartz. The deposits two alteration facies can be characterized as an aluminous outer zone and an inner zone.

The outer aluminous zone is generally meters to 10 of meters wide. Tholeiitic pillows in the aluminous outer zone are generally replaced by biotite, garnet, andalusite and actinolite. The outer alteration zone is generally barren and exhibits low strain.

The inner alteration zones are characterized a metasomatic layering or banding of biotite and amphibole-rich bands that is produced by replacement, impregnations and fracture filling (Dube' et al., 2000). The McVeigh and Austin mineralized zones are located within the inner alteration zone. The inner zone displays depleted sodium and carbonate with high potassium and sulfide.

## **Mineralization**

Mineralization surrounding the Madsen #2 shaft is contained in altered mafic volcanoclastics known as the Austin and McVeigh "tuffs". Mineralization consists of sulfide replacement-style lenses of laminated, veined and disseminated pyrite, pyrrhotite, and arsenopyrite with occasional chalcopyrite. Sulfide content does not seem to be a characteristic of high-grade mineralization. 10-30% pyrite is generally barren. Better gold values may be found in rocks of 5-10% pyrite. Gold mineralization may have a relationship with silicification and arsenic or antimony. Quartz veining in the ore body is usually small, discontinuous and contains insignificant gold values (Dube' et al., 2000). High-grade mineralization can be found as lenses focused in the nose of F2 folds surrounded by a folded shell of lower grade mineralization. The lenses of mineralization are parallel to foliation and 20° oblique to the strike of the lithologic contacts. Individual lenses are generally elongate in the dip direction. Collectively the lenses rake down the fold nose to the NE at 40-50 degrees. The replacement style mineralization of Madsen is atypical of the Red Lake district.

## **The Central Iron-Carb Zone Detailed Mapping**

The Central Iron-Carb Zone mapping of the upper and lower stripped areas delineates the contact between a thick sequence of relatively undeformed tholeiitic pillow basalts and a gooey talcose/serpentinized ultramafic displaying a high degree of attenuation. The location of the mapped outcrops can be found in Figure 2. The pillow basalts have been chloritized and sericitized and contain cherty interstitial material. They are not flattened and do not display a foliation. They are however, cut by an alteration/solution channel that displays "hydrothermal karsting" on weathered surfaces, a high degree of foliation, faulting and occasional quartz veining. The solution channels are similar in mineralogy and alteration to the inner alteration zone consisting of banded biotite-chlorite and carbonate and appear in two orientations N120 and N-S to N030. The unit in the layer parallel direction occasionally appears to cut up section. The N120 direction contains localized ore grade intercepts and may have a component of right-lateral offset.

The iron-carb horizon in the Central Iron-Carb Zone is well exposed and traceable in the detailed mapping. This zone appears to be layer-parallel and exists of carbonate and ankerite as latticework veins in (pillow shaped?) lenses of iron oxide. This zone may represent a variation of the hydrothermal karsting

The contact between the ultramafic rocks and the tholeiitic basalts is conformable and locally cut by late-stage dioritic intrusives, which exhibit black wall alteration, chill margins and silicification halos on the order of a few feet. The dip of the contact in the surface exposure is moderately steep, 65°. This varies widely from its next known location at depth where mapping of the same interpreted contact through several levels shows a dip of 35-45 degrees.

The ultramafic package of rocks in the lower stripped area is strongly attenuated and extremely soft due to the addition of talc the serpentine into the unit. More competent units within the ultramafic complex are strongly boudined as is seen in the bra-shaped boudin of peroxenite in the lower stripped area. Foliation within the unit is contact and layer parallel for the most part but a fold nose plunging moderately NNW is recognized in the outcrop. It is doubtful whether competent veins could propagate through the unit but the competency contrast between the units may localize mineralization along its contacts. Study of the ultramafic package along strike indicates that large rafts of undeformed and unaltered tholeiitic pillow basalts do exist within the unit. These rigid bodies may host mineralization where crossed by vein structures within the unit. Or, just as likely, mineralization may occur in the strain shadow of the large rigid bodies in the unit as some evidence may suggest for the #8 Zone.

## **Summary**

A portion of the Work program during the summer of 2000 consisted of the construction of a 1"=100' scale map of the Central Deformation/iron carbonate zones on the Madsen Property. Much was learned about the geology that has benefited the review of the property for potential mineralization.

Further detailed mapping is recommended across Russet Lake and along strike to further outline and define the stratigraphy for the purpose of evaluating the potential for mineralization on the property.

**References**

**Dube', B., Balmer, W., Sanborn-Barrie, M., Skulski, T.,**

2000: A preliminary report on the amphibolite-facies, disseminated-replacement-style mineralization at the Madsen Gold Mine, Red Lake, Ontario; Current Research 2000-C17; Geologic Survey of Canada. 11p.

**Madsen Gold Corporation (MGC),**

1995?; Promotional material; 4 p.

**Madsen Gold Corporation (MGC),**

1993: Feasibility report on the Madsen Mine; In-house report; 131 p.

**Panagapko, D.,**

1999: Report on the 1988 exploration program on the Madsen Gold Corp. Property, Red Lake District Ontario; In house report prepared for Claude Resources; 68 p.

**Parker J. R.,**

2000: Volcanogenic Massive Sulfide (VMS) mineralization in the Red Lake greenstone belt, Northwestern Ontario, Western Superior Province; Ontario Geologic Survey; In progress; 16 p.

**Sandborn-Barrie, M., Skulski, T., Parker, J., Dube', B.,**

2000: Integrated regional analysis of the Red Lake greenstone belt and its mineral deposits, western Superior Province Ontario; Current Research 2000-C18 Geologic Survey of Canada. 16 p.

**Zhang, G.,**

1996: Report on the field studies of structure, alteration and Au mineralization of the southwestern part of Madsen Gold Corp. Property, Red Lake Greenstone belt, western Ontario; In-house report for Madsen Gold Corp.; 33 p.



**Statement of Qualifications**

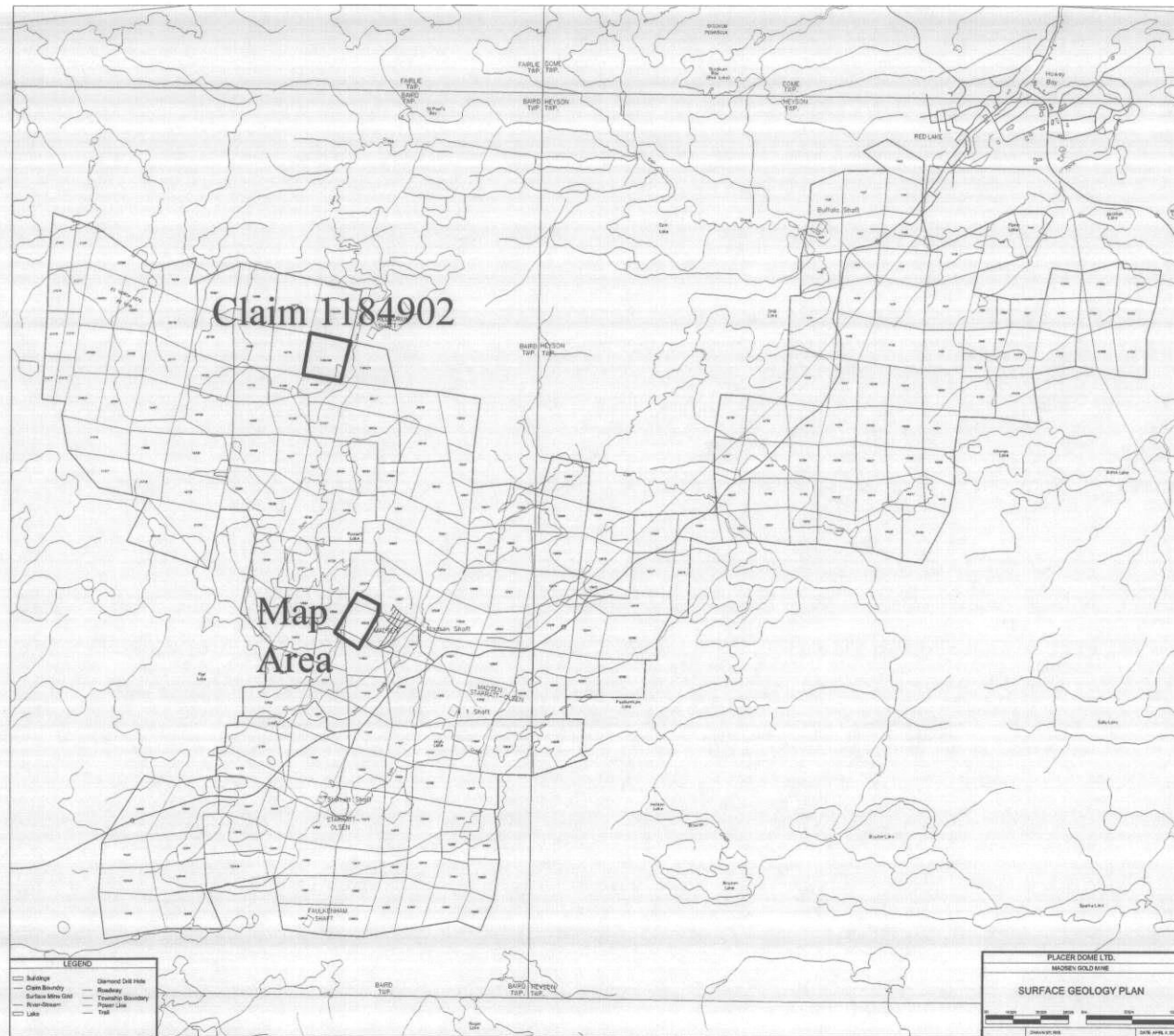
I Scott A. Petsel, do hereby certify that:

- I am a private geologic consultant receiving compensation from Placer Dome Canada Ltd. For an evaluation of the Madsen Mine Property.
- I graduated from Fort Lewis College in 1987 and hold a Bachelor of Science Degree in Geology.
- I have been practicing my profession continuously since graduation and have worked in the USA, Canada, Russia, Mexico and The Philippines.
- I am a Certified Professional Geologist (CPG-10071) registered with the American Institute of Professional Geologists (AIPG).
- I am directly responsible for the work outlined in this report
- I have no interest, either direct or indirect in Claude Resources, nor do I expect to receive any, and I have written this report as an independent consultant.

Signed at Balmertown, Ontario, this 8th day of August 2000.

Scott A. Petsel, B.Sc.  
CPG-10071  
Consulting Geologist

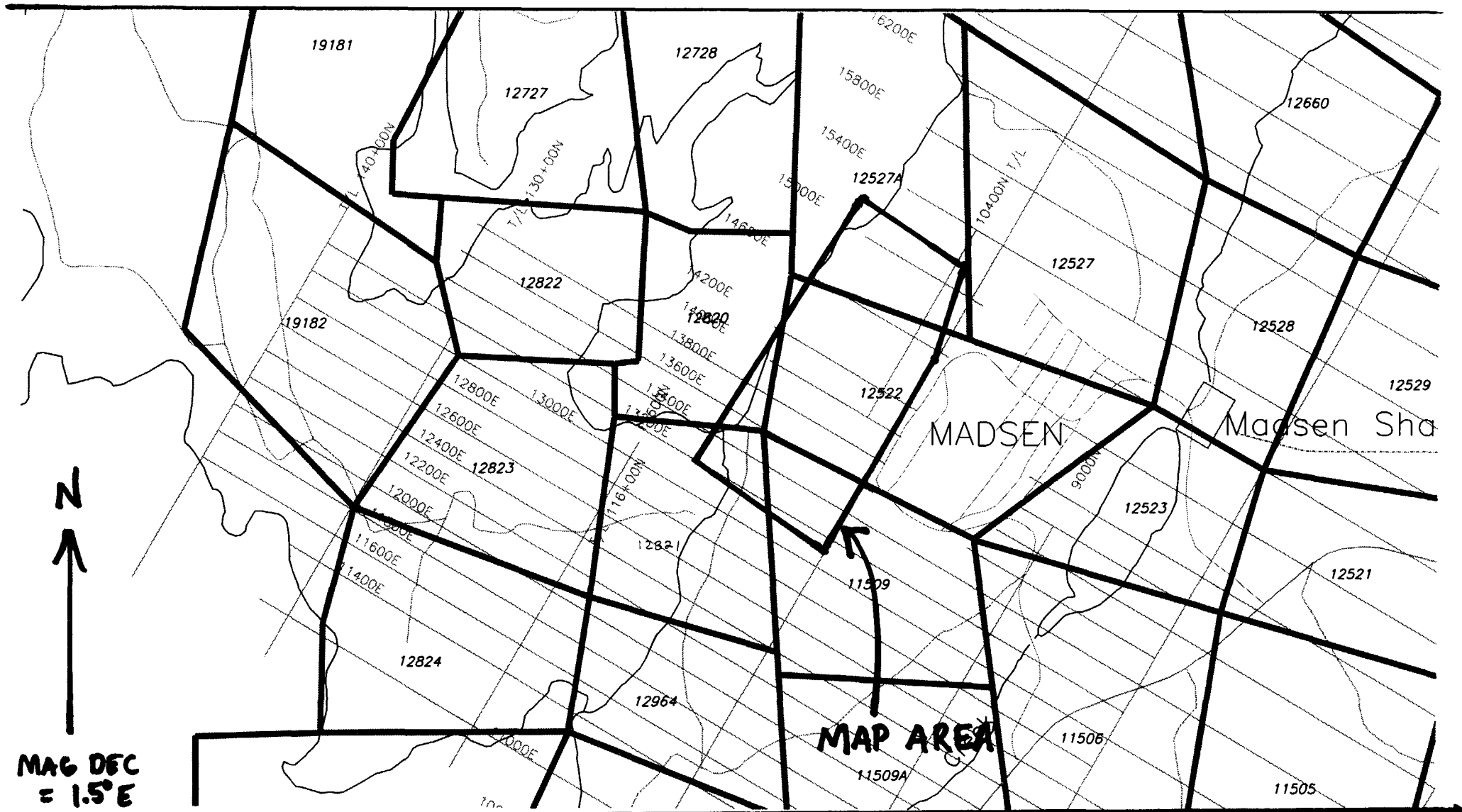
Figure 1



Madsen Mine Claim Location  
and Contiguity Map

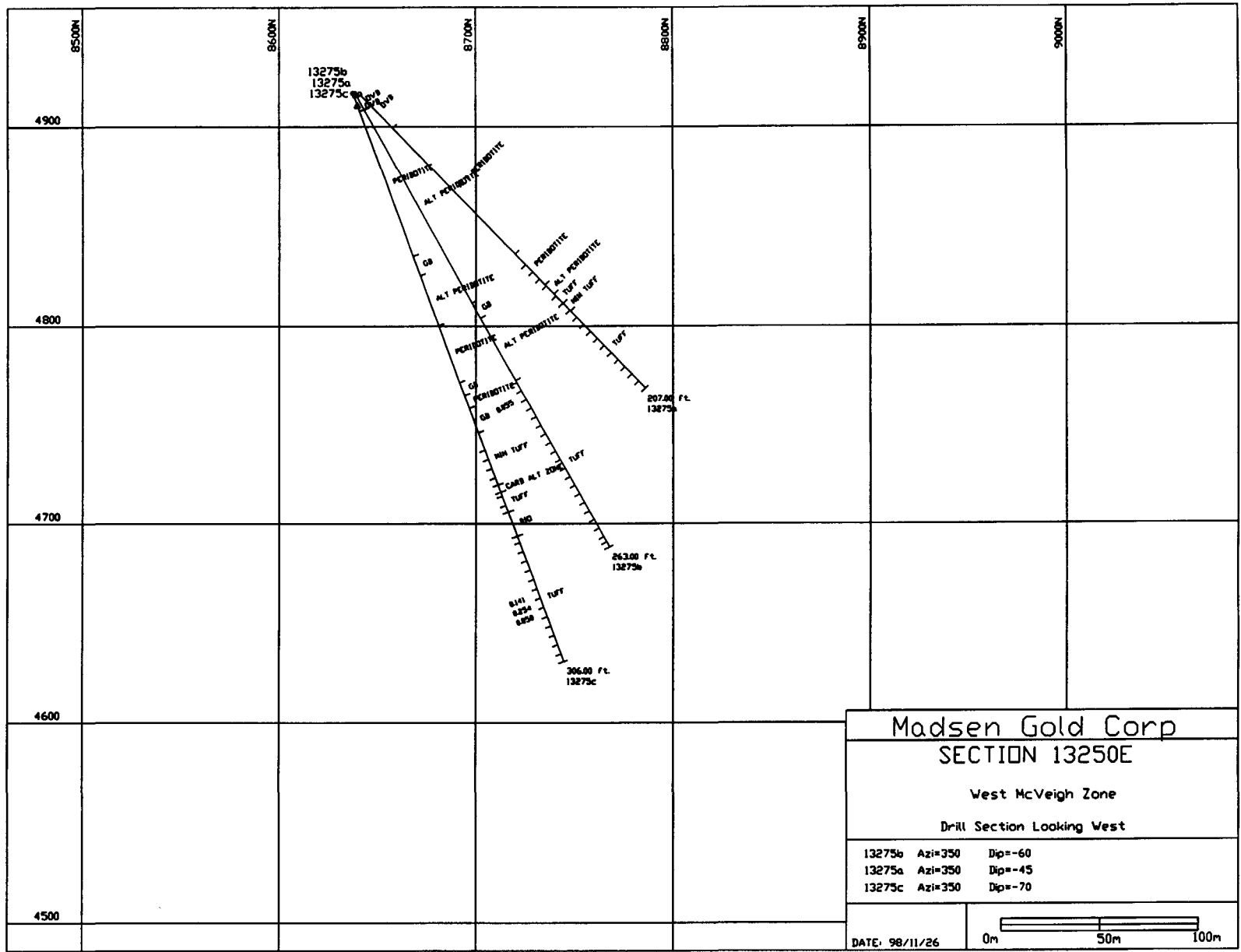
1000m

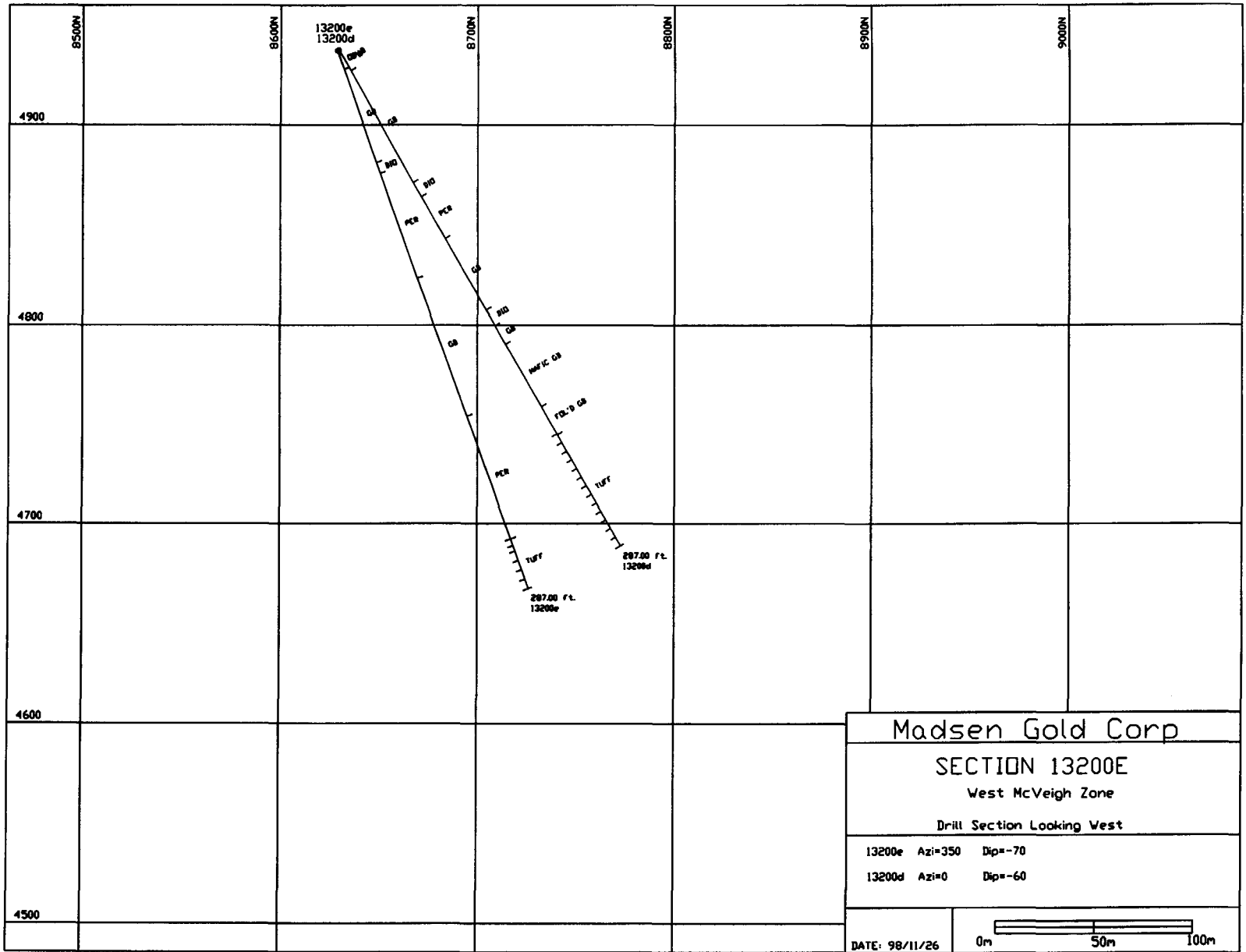
FIGURE 2

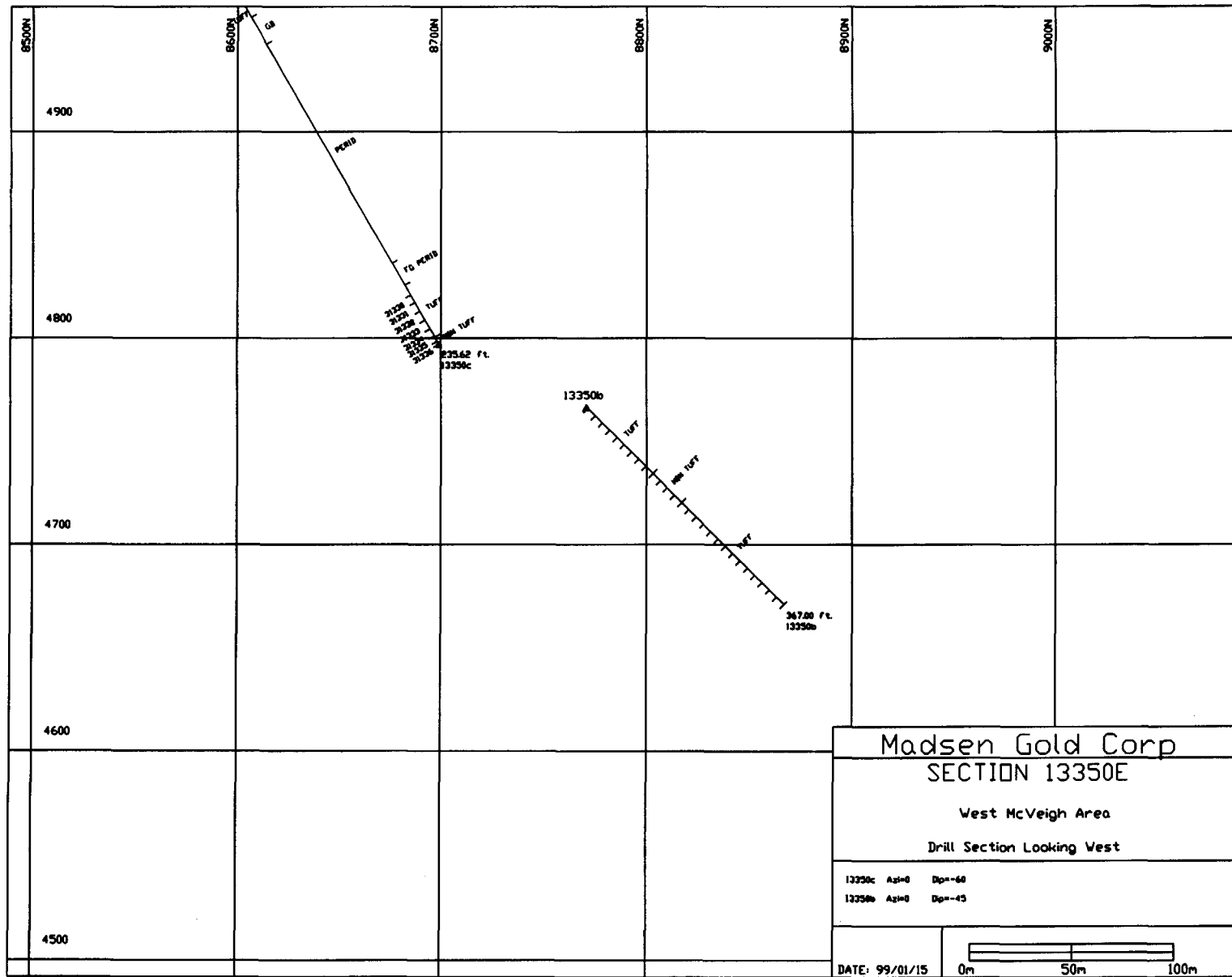


DETAILED LOCATION OF MAP AREA, GRID & CLAIMS.

1000'









# 2001 Diamond Drilling

## Short Form Legend:

lt	light	ca	core axis
diss	disseminated	min	minor
po	pyhrotite	tr	trace
py	pyrite	brx	breccia
cpy	chalcophrite	saa	same as above
mag	magnetic/magnetite	bio	biotite
wk	weak	gnt	garnet
mod	moderate	xcutting	cross cutting
Foln	foliation	qv	quartz vein
brkn	broken	EOH	end of hole
ω	with	ovb	overburden
cb	carbonate	v	very
F.P.	feldspar porphyry	hema	hematite
epi	epidote	sph	sphalerite
Q	quartz	lamp	lamprophyre
fg	fine grained	gy	grey
mg	medium grained	gn	green
cg	coarse grained	med	medium
pos	possibly	bn	brown
uct	upper contact	alt'n	alteration
lct	lower contact	alt'd	altered
altn	alteration	dk	dark
chl	chlorite	tca	to core axis
stg	stringers	perid	peridotite
vnlt	veinlet	per	peridotite
asso	associated	dio	diorite
ct	contact	gb	gabbro
bs	bracket sample		



# NEWMAC INDUSTRIES LTD.

CONTRACT DIAMOND DRILLING TELEPHONE (604) 573-5351 • 5351 BLUNDELL PLACE, KAMLOOPS, B.C. V2C 6C8

October 08, 1998

Invoice # M004

Claude Resources Inc.  
P.O. Box 7380  
200,224 - 4th Avenue South  
Saskatoon, Saskatchewan  
S7K 5M5

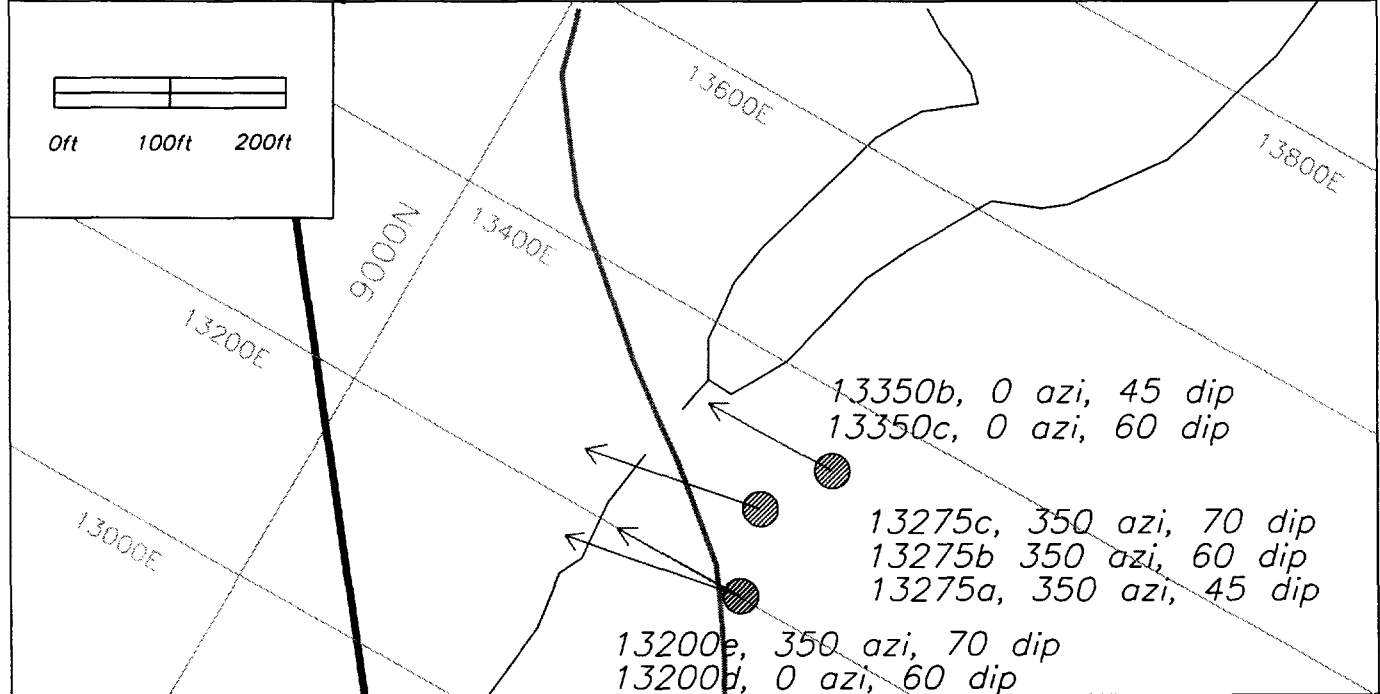
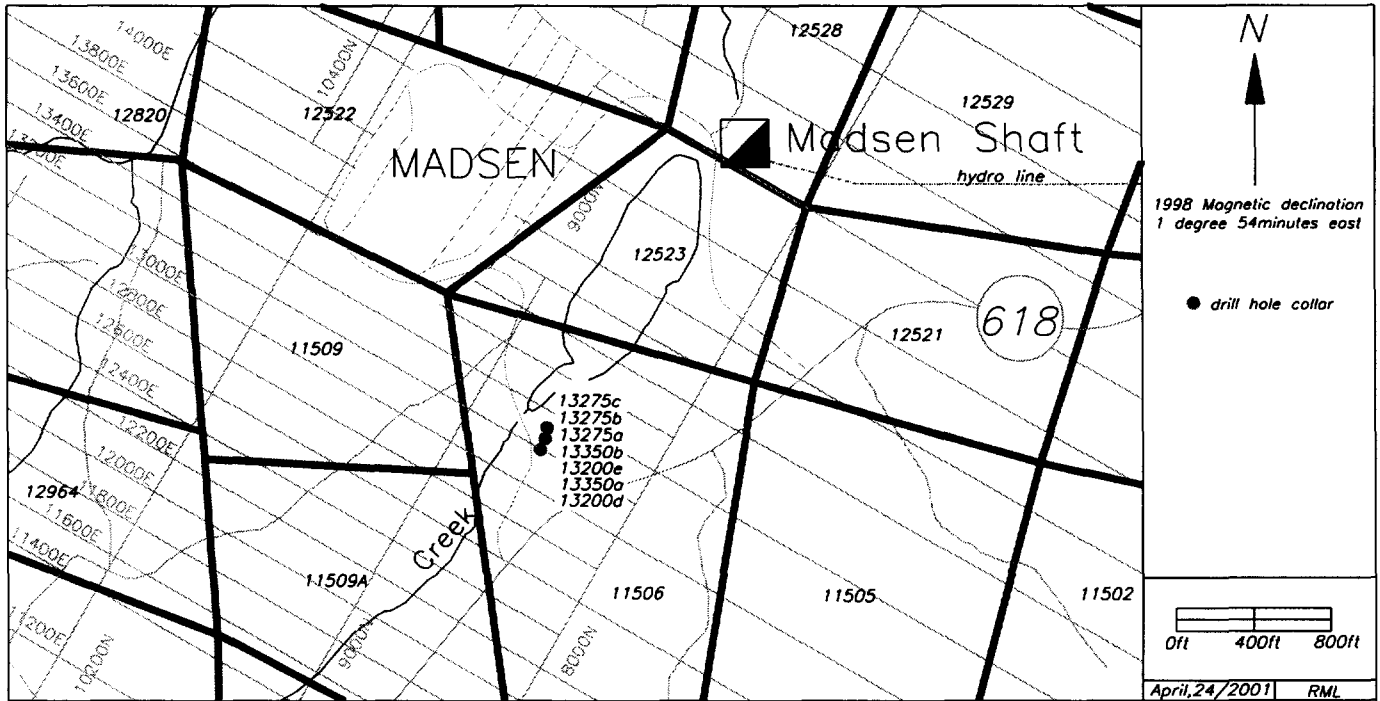
Dear Sirs,

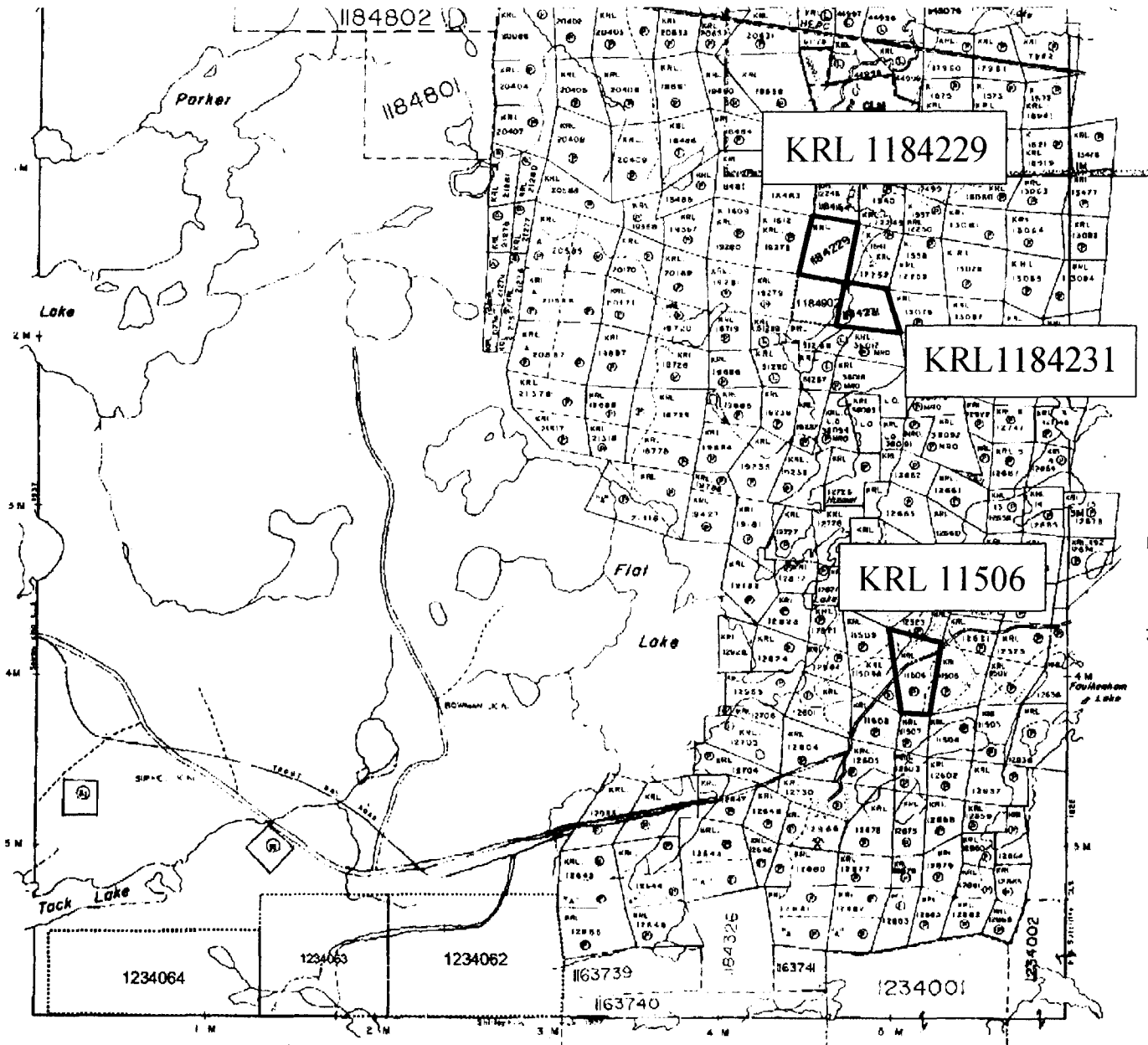
Please accept this as the Invoice for the drill holes completed between September 22 and October 07, 1998, on your 1998 fall Red Lake Diamond Drilling Project. Hole S98-29 was drilled in August 1998, of which 46 feet were not included on Invoice #M003. This missing footage is included here.

<u>DRILL HOLE</u>	<u>DEPTH</u>	<u>AMOUNT</u>
12400 G	660 Ft.	\$ 9054.88
12350 D	747	10248.48
12200 D	605	8300.30
12000 C	657	9013.72
10400 E	607	8327.74
13400 F	204	2798.78
✓ 13350 C	290	3978.66
✓ 13350 B	367	5035.06
✓ 13275 C	306	4198.17
✓ 13275 B	263	3608.23
✓ 13275 A	207	2839.94
✓ 13200 E	287	3937.50
✓ 13200 D	287	3937.50
S98-29	<u>46</u>	<u>631.10</u>
<b>TOTAL</b>	<b>5533 Ft.</b>	<b><del>\$75,910.06</del></b>

#27535.06

Continued....





FAULKENHAM LAKE G 1773

DISTRICT OF  
KENORA  
PATRICIA PORTION

RED LAKE  
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	⊙	C.S.
CROWN LAND RAIF	⊙	C.S.
LEASFS	⊙	L.O.
LOCATED LAND	⊙	L.O.
LICENSE OF OCCUPATION	⊙	M.R.D.
MINING RIGHTS ONLY	⊙	S.R.D.
SURFACE RIGHTS ONLY	⊙	S.R.D.
ROADS	—	
IMPROVED ROADS	—	
KING'S HIGHWAYS	—	
RAILWAYS	—	
POWER LINES	—	
MARSH OR MUSKEG	—	
MINES	⊙	
CANCELLED	⊙	

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

Areas withdrawn from staking under Section 43 of the Mining Act

Claim No. File Date Disposition

⊙ 1702/70 1000 10/14 21 20/74 220 2200 10/20/2000

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES AND ACCURACY IS NOT GUARANTEED THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RESEARCH MINISTRY OF NORTHERN DEVELOPMENT AND MINES FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON

**FOREST ACTIVITY INFO!**  
THIS TOWNSHIP AREA FALLS WITHIN

AND MAY BE SUBJECT TO FORESTRY THE M.N.R. UNIT FORESTRY FOR THE CONTRACTED AT:

P.O. BOX 8088  
RED LAKE, ONTARIO  
(507) 772-2263

Heyson Twp. G 3736

PLAN NO. G-3739

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH



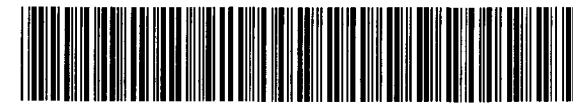
**Diamond Drilling Log**  
**Journal de forage au daimant**

Complete this form and related sketch in duplicate.  
Remplir en deux exemplaires la présente formule et le croquis annexé

Fill in on every page  
Remplir ces cases à chaque page

Hole No. Forage n°	Page No. Page n°
13200e	1

Drilling Company Compagnie de forage <b>Newmac Industries Ltd.</b>		Collar Elevation Elévation du collier <b>4938.00</b>	Bearing of hole from true North/Position du forage par rapport au nord vrai <b>350.00</b>	Total Footage Avancement total du forage <b>287.00'</b>	Dip of Hole at Inclinaison du forage au Collar/collier <b>-70.00</b>	Address/Location where core stored Adresse/endroit où la carotte est stockée <b>Madsen Mine Site</b>	Map Reference No. N° de référence sur la carte <b>G-3739</b>	Claim No. N° de concession minière <b>KRL-11506</b>				
Date Hole Started Date de commencement du forage <b>Oct. 02, 1998</b>	Date Completed Date d'achèvement <b>Oct. 04, 1998</b>	Date Logged Date d'inscription au journal <b>Oct. 06, 1998</b>	Logged by Inscrit par <b>D. A. Panagapko</b>		<b>287.00</b> <b>-70.00</b> Ft./Pi	Core size - BQ	Location (Twp. Lot, Con. or Lat. and Long.) Emplacement (canton, lot, concession, ou latitude et longitude) <b>BAIRD</b>					
Exploration Co., Owner or Optionee Compagnie d'exploration, propriétaire ou titulaire d'option <b>Madsen Gold</b> <b>P.O. Box 7380</b> <b>200, 224 - 24<sup>th</sup> Avenue South</b> <b>Saskatoon, Saskatchewan S7K 5M5</b>		Date submitted Date de dépôt <b>April 7, 2001</b>	Submitted by (Signature) Déposé par (signature) <b>Roland Landry</b>		Ft./Pi		Property Name Nom de la propriété <b>Madsen Gold</b>					
Footage/Avancement		Rock type Type de roche	Description (Colour, grain size, texture, minerals, alteration, etc.) Description (Couleur, granulométrie, texture, minéraux, transformation, etc.)				Planar Feature Angle/Angle des caractéristiques planes	Core Specimen Footage/Longueur en pieds des carottes prélevées	Your Sample No. N° d'échantillon du prospecteur	Sample Footage/Niveau de prélevement de l'échantillon From/De To/A	Sample Length Longueur de l'échantillon	Assays/Analyses minéralurgiques
From/De	To/A											



52K13NW2006 2.21326 BAIRD

020

\*For features such as foliation, bedding, schistosity, measured from the long axis of the core.  
\*Exemples de caractéristiques : foliation, schistosité, stratification. L'angle est mesuré par rapport à l'axe longitudinal de la carotte.

†Additional credit available. See Assessment Work Regulation.  
†Des crédits supplémentaires sont offerts. Consulter les règlements relatifs aux travaux d'évaluation.  
Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen

HOLE No.: 13200e

Collar Eastings: 13200.00

Collar Northings: 8630.00

Collar Elevation: 4938.00

Grid: mine

Collar Inclination: -70.00

Grid Bearing: 350.00

Final Depth: 287.00 feet

Logged by: D.A. Panagapko

Date: Oct 6, 1998

Down-hole Survey: sperry sun

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	ASSAYS WIDTH Au (opt)
0	10	OVERBURDEN				
10	59.5	GABBRO Fine to medium-grained, massive, med gy gn, non-magnetic, contains 10-15% fine-grained interstitial calcite. Narrow fault gouge zones at 43.7, 49.1, 51.5, 52.4. Sharp lower intrusive contact.				
59.5	65.2	DIORITE Massive, very fine grained dk gy dike, minor fracturing, lower contact at 40 deg, marked by minor fault gouge.				
65.2	120.9	PERIDOTITE Med gn-gy to med gy below 180 ft.; massive, medium to coarse-grained gabbroic texture throughout. Strongly magnetic. Cut by 5% narrow carbonate veins at random angles. Unit is possibly a strongly altered gabbro. Minor hematite filled fractures. Sharp lower contact where grain size changes. Thin section sample taken at 88.5 ft.				
120.9	194.7	GABBRO Coarse-grained, massive, composed of 30% mafic minerals that have been altered to serpentine; 70% feldspars strongly alt'd to clay minerals. Thin section sample taken at 151 ft. Strongly				

HOLE No: 13200e



# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen

HOLE No.: 13200d

Collar Eastings: 13200.00

Collar Northings: 8630.00

Collar Elevation: 4940.00

Grid: mine

Collar Inclination: -60.00

Grid Bearing: 0.00

Final Depth: 287.00 feet

Logged by: D.A. Panagapko

Date:

Down-hole Survey: sperry sun

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS		
				FROM	TO	WIDTH Au (opt)
0	12	OVERBURDEN				
12	76.4	GABBRO Medium-grained, massive uniform texture, non-magnetic, gy gn. Mod soft, locally cut by narrow calcite stringers. 16.1-17.2 Fine-grained diorite dike. 47.9-48.2 Narrow fault gouge, gabbro is quite altered, talcose. 61.5-64.5 Coarse-grained strongly magnetic dike, possibly a phase of the gabbro. Sharp lower contact at 40 deg.				
76.4	84.5	DIORITE Massive fine-grained dk gy dike, local weak alt'n to k-feldspar. Sharp lower contact at 40 deg tca.				
84.5	108.6	PERIDOTITE Medium-grained, massive, med gy, cut by numerous narrow talc- carbonate veinlets often forming a hairline stockwork. Unit is strongly magnetic. 107-108.6 Weakly foliated carbonate alt'n zone. Lower contact marked by change to coarse textured unit, contact at 40 deg.				
108.6	149.7	ALTERED GABBRO				

HOLE No: 13200d

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13200d

Page 2

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS		
				FROM	TO	WIDTH Au (opt)
		Coarse-grained, massive strongly magnetic unit that has been pervasively altered to talc, serpentine and calcite. Mafic minerals are altered to chlorite-serpentine, feldspars to clay minerals. 146.5-149.7 Weakly foliated carbonate alt'n zone; lt gy with minor calcite veinlets.				
149.7	159.1	DIORITE Fine to medium-grained, massive dike with 5-10% biotite crystals, possibly a lamprophyre. Cut by narrow calcite-serpentine veins.				
159.1	169.8	GABBRO Similar composition to previous gabbro, but finer-grained and weakly foliated, cut by narrow calcite veinlets. Gradational lower contact.				
169.8	206.2	MAFIC GABBRO Similar to unit at 12-76.4 ft. Fine to medium-grained, massive, weakly magnetic. Distinguished from previous unit by more mafic character (<15% feldspar) and finer grained texture. Much less altered than previous unit. More intensely veined below 197 ft.				
206.2	222.5	FOLIATED GABBRO Similar to previous unit, but moderately well foliated, pale gy with pervasive carbonate alt'n. Becomes more massive below 217 ft.				

HOLE No: 13200d



# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13200d

Page 3

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS		
				FROM	TO	WIDTH Au (opt)
222.5	287	TUFF	31453	222.00	227.00	5.00 TRACE
		Banded biotite alt'd basalt, mod well silicified throughout.	31454	227.00	232.00	5.00 0.023
		Unit is a bn gy colour down to 246 ft then chlorite percentage increases.	31455	232.00	237.00	5.00 TRACE
		227.7-238.2 Weakly mineralized zone with 1-2% blebby po	31456	237.00	242.00	5.00 0.029
		and trace py in narrow bands parallel to foliation. Very minor	31457	242.00	247.00	5.00 TRACE
		garnets scattered throughout section.	31458	247.00	252.00	5.00 TRACE
		276.2-280.2 Weak po mineralization, as blebby zones parallel	31459	252.00	257.00	5.00 TRACE
		to foliation in a med gy tuff.	31460	257.00	262.00	5.00 0.017
			31461	262.00	267.00	5.00 TRACE
			31462	267.00	272.00	5.00 0.031
		287.0 ft END OF HOLE	31463	272.00	277.00	5.00 TRACE
			31464	277.00	282.00	5.00 0.019
			31465	282.00	287.00	5.00 0.025

### DOWN-HOLE SURVEY DATA

DEPTH	INCLINATION	BEARING
287.00	-60.00	2.00

HOLE No: 13200d



# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen

HOLE No.: 13275a

Collar Eastings: 13262.19

Collar Northings: 8640.97

Collar Elevation: 4916.43

Grid: mine

Collar Inclination: -45.00

Grid Bearing: 350.00

Final Depth: 207.00 feet

Logged by: D.A. Panagapko

Date: Oct 5, 1998

Down-hole Survey: sperry sun

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	ASSAYS	
					TO	WIDTH Au (opt)
0	24	OVERBURDEN				
24	112.4	<p>ALTERED PERIDOTITE</p> <p>Massive, med-dk gy with a greenish colour down to 30.7 ft. Unit is cut by minor narrow carbonate veins down to 64.5' where vein percentage increases. Talc alteration also increases with depth with talc mostly associated with fractured areas.</p> <p>82.3-86 Carbonate vein subparallels core axis.</p> <p>At 99 ft a healed fault contains coarse-grained pyrite crystals. Rock becomes progressively more altered with depth; hematite filled fractures become common below 93 ft. Lower contact where texture changes to a very fine-grained unit.</p>				
112.4	134.2	<p>PERIDOTITE</p> <p>Fine-grained, massive, dk gn unit that is strongly magnetic. Not talc alt'd like previous interval. Cut by minor calcite filled fractures. Minor epidote developed near fractures.</p> <p>116.2 1" clay filled fault gouge, hematite alteration for 2' above fault.</p>				
134.2	140.6	<p>ALTERED PERIDOTITE</p> <p>Similar to unit described above but alt'n is more intense and unit is a lighter grey.</p>				

HOLE No: 13275a

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13275a

Page 2

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS		
				FROM	TO	WIDTH Au (opt)
		137.7 1" clay filled fault gouge, hematitic alteration. Lower contact marked by 1" pyrite filled vug. with brick red hematite along one contact of pyrite.				
140.6	147.2	TUFF Biotite alt'd, weakly garnetiferous unit, minor carbonate veining. Possible cordierite as blue-gy subhedral crystals. Lower contact marked by change to more siliceous unit.	31434	142.00	147.00	5.00 TRACE
147.2	152.5	MINERALIZED TUFF Dk gy, well banded unit (at 55 deg) with cordierite rich interval at 150-151 ft. Mineralization consists of trace blebby po and minor fine-grained py at 151.6-152.4. Sulphides associated with a more mafic (chloritic) section.	31435	147.00	152.00	5.00 TRACE
152.5	207.0	TUFF Return to typical biotite rich altered mafic volcanic; some sections contain 2-5% garnet. Part of unit may be a flow top breccia as med gy 'fragments' are surrounded by a chloritic groundmass. Very minor pyrite as fine-grained crystals in narrow fractures.	31436	152.00	157.00	5.00 TRACE
			31437	157.00	162.00	5.00 TRACE
			31438	162.00	167.00	5.00 TRACE
			31439	167.00	172.00	5.00 TRACE
			31440	172.00	177.00	5.00 TRACE
			31441	177.00	182.00	5.00 TRACE
			31442	182.00	187.00	5.00 TRACE
		207.0 ft END OF HOLE	31443	187.00	192.00	5.00 TRACE
			31444	192.00	197.00	5.00 TRACE
			31445	197.00	202.00	5.00 TRACE
			31446	202.00	207.00	5.00 TRACE

HOLE No: 13275a

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13275a

Page 3

---

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS	
				FROM	TO

### DOWN-HOLE SURVEY DATA

DEPTH	INCLINATION	BEARING
207.00	-46.00	4.00

HOLE No: 13275a



# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
 HOLE No.: 13275b  
 Collar Eastings: 13262.53  
 Collar Northings: 8638.44  
 Collar Elevation: 4917.02  
 Grid: mine

Collar Inclination: -60.00  
 Grid Bearing: 350.00  
 Final Depth: 263.00 feet

Logged by: D.A. Panagapko  
 Date: Oct 5, 1998  
 Down-hole Survey: sperry sun

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS		
				FROM	TO	WIDTH Au (opt)
0	10	OVERBURDEN				
10	121.2	<p>ALTERED PERIDOTITE</p> <p>Massive medium to coarse-grained texture, mod veined through-out. Medium greyish gn changing to a medium gy; strongly magnetic. Altered feldspar makes up about 15% of the rock below about 43 ft. Rock has a gabbroic texture and may be a strongly magnetic gabbro, but talc alt'n indicates a more ultramafic origin. Below 57 ft rock is cut by numerous carbonate veinlets at random orientations. Veins become more numerous with depth and some are serpentine in composition.</p> <p>116-117 Fault zone; brecciated talcose interval.</p> <p>117-121.2 Zone is cut by several narrow biotite lamprophyre kes, talc alteration increases towards lower contact.</p>				
121.2	130.0	<p>GABBRO</p> <p>Dk gn, medium-grained, massive, non-magnetic. Locally alt'd to chlorite/epidote. Contains trace disseminated pyrite. Cut by narrow talc-serpentine veinlets. Lower contact at 30 deg.</p>				
130.0	166.0	<p>ALTERED PERIDOTITE</p> <p>Lt to med gy, massive texture. Rock has been strongly alt'd to talc with numerous calcite veinlets at random angles tca.</p>				

HOLE No: 13275b

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No. : 13275b

Page 2

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS		
				FROM	TO	WIDTH Au (opt)
		133-136 Gabbro dike, broken up, possible fault zone. Patchy hematite staining below 163 ft. Fault zone at 165-165.5.				
166.0	263.0	TUFF	31414	167.00	172.00	5.00 0.023
		Well banded medium bn to gn altered mafic volcanic. Banding at 55 deg and is defined by alternating biotite and chlorite rich layers. Locally 2-3% garnets in intervals up to 1 ft thick.	31415	172.00	177.00	5.00 0.055
		180.4-181 More felsic interval with 2-3% layered po.	31416	177.00	182.00	5.00 0.017
		Garnets persist to 188 ft. Biotite alt'n is pervasive down to 223 ft with only minor unaltered basalt layers.	31417	182.00	187.00	5.00 TRACE
		223-233.2 Carbonate alt'd interval with dolomite as irregular masses (60-70% of unit) over intervals of 1-2 ft.	31418	187.00	192.00	5.00 TRACE
		Below 237 ft unit is weakly carb alt'd and contains only trace fine-grained po.	31419	192.00	197.00	5.00 TRACE
			31420	197.00	202.00	5.00 TRACE
			31421	202.00	207.00	5.00 TRACE
			31422	207.00	212.00	5.00 TRACE
			31423	212.00	217.00	5.00 TRACE
			31424	217.00	222.00	5.00 TRACE
			31425	222.00	227.00	5.00 TRACE
		263.0 ft END OF HOLE	31426	227.00	232.00	5.00 TRACE
			31427	232.00	237.00	5.00 TRACE
			31428	237.00	242.00	5.00 TRACE
			31429	242.00	247.00	5.00 TRACE
			31430	247.00	252.00	5.00 TRACE
			31431	252.00	257.00	5.00 TRACE
			31432	257.00	260.00	3.00 TRACE
			31433	260.00	263.00	3.00 TRACE

HOLE No: 13275b



# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13275b

Page 3

---

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS	
				FROM	TO

### DOWN-HOLE SURVEY DATA

DEPTH	INCLINATION	BEARING
263.00	-61.00	1.00

HOLE No: 13275b



# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
 HOLE No.: 13275c  
 Collar Eastings: 13262.66  
 Collar Northings: 8637.45  
 Collar Elevation: 4917.08  
 Grid: mine

Collar Inclination: -70.00  
 Grid Bearing: 350.00  
 Final Depth: 306.00 feet

Logged by: D.A. Panagapko  
 Date: Oct 5, 1998  
 Down-hole Survey: sperry sun

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS		
				FROM	TO	WIDTH Au (opt)
0	10	OVERBURDEN				
10	87.6	<p>PERIDOTITE</p> <p>Massive, med-dk gn gy, becoming dk gy below 49'. Rock is mod to strongly magnetic throughout and is mod alt'd to talc. Calcite occurs as narrow fracture fillings and also as interstitial carbonate. Below 51 ft unit contains trace to 1% fine-grained disseminated pyrite.</p> <p>59-62 Serpentine-talc vein follows parallel tca.</p> <p>62-87.6 intense vein zone with 5-10% narrow serpentine-carbonate veinlets cutting core at random angles. Several narrow fault gouges occur in this interval.</p>				
87.6	98.0	<p>GABBRO</p> <p>Dk gn, massive, medium to coarse-grained, gabbroic texture. Non-magnetic, contains 2-3% pink feldspar. Lower contact marked by 0.3' fine-grained biotite lamprophyre dike.</p>				
98.0	124.8	<p>ALTERED PERIDOTITE</p> <p>Medium gy, massive unit, similar to previous unit except more carbonate altered. Cut by minor calcite veins with trace pyrrhotite. Lower contact where rock becomes darker gy.</p>				

HOLE No: 13275c

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13275c

Page 2

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS			
				FROM	TO	WIDTH Au (opt)	
124.8	155.4	<b>PERIDOTITE</b> Dk gy to bk, massive, strongly magnetic, cut by narrow calcite veinlets that also contain 1-2% pyrite. Minor narrow dk gn jadeite veinlets. Below 145.3 rock becomes lighter gy and contains more carbonate especially below 151 ft.					
155.4	162.4	<b>GABBRO</b> Medium-grained with fine grained chilled margins, massive, cut by narrow calcite veinlets, non-magnetic.					
162.4	169.2	<b>PERIDOTITE</b> Lt gy, altered massive unit similar to section at 124.8-155.4. Numerous calcite veinlets and some broken core, possibly a fault zone at 169.0.					
169.2	182.5	<b>GABBRO</b> Same as unit previously described except more badly fractured. Medium to coarse-grained, cut by calcite and jadeite veinlets. Last 5 ft of unit is badly broken up.					
182.5	210.8	<b>MINERALIZED TUFF</b> Biotite-chlorite alt'd mafic volcanic, mod well banded, med gy to bn, silicified. 182.8-184.9 Magnetic, alt'd ultramafic dike. 187.3-192.2 Magnetic ultramafic dike, similar to previous unit. Mineralization consists of minor concentrations of pyrite and pyrrhotite usually as narrow fracture fillings; most abundant at 203.5-204.5; less than 2% overall. Lower contact marked by	31392 31393 31394 31395	192.00 197.00 202.00 207.00	197.00 202.00 207.00 210.80	5.00 5.00 5.00 3.80	0.025 0.025 TRACE 0.023

HOLE No: 13275c

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13275c

Page 3

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS			
				FROM	TO	WIDTH Au (opt)	
		carbonate alt'n zone.					
210.8	214.8	CARB ALT'N ZONE Lt gy, medium to coarse grained interval, fractured zone with abundant calcite. Few flecks of py and po. Sharp lower contact at 50 deg.	31396	210.80	214.80	4.00	0.014
214.8	225.5	TUFF Continuation of biotite alt'd mafic volcanic, narrow chlorite-calcite zones, not mineralized.	31397 31398 31399	214.80 217.00 222.00	217.00 222.00 225.50	2.20 5.00 3.50	TRACE TRACE TRACE
225.5	238.6	DIORITE Fine-grained, massive intermediate intrusive dike, uniform medium dk gy. Cut by narrow chlorite filled fractures. Minor tuff section at 236.8-237.5'. Sharp lower contact at 80 deg.					
238.6	306.0	TUFF Biotite altered mafic volcanic, as described above. Minor carbonate alt'n zones, unit is mod silicified throughout. Weak mineralization (1% po + py) at 270-277'. Sulphides occur as fol'n parallel streaks. Narrow intervals have 10-15% garnet.	31400 31401 31402 31403 31404 31405	238.60 242.00 247.00 252.00 257.00 262.00	242.00 247.00 252.00 257.00 262.00 267.00	3.40 5.00 5.00 5.00 5.00 5.00	0.019 TRACE TRACE TRACE TRACE 0.007
	306.0	END OF HOLE	31406 31407 31408 31409 31410 31411	267.00 272.00 277.00 282.00 287.00 292.00	272.00 277.00 282.00 287.00 292.00 297.00	5.00 5.00 5.00 5.00 5.00 5.00	0.141 0.254 0.050 0.013 0.042 0.025

HOLE No: 13275c

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13275c

Page 4

---

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS			
				FROM	TO	WIDTH Au (opt)	
			31412	297.00	302.00	5.00	TRACE
			31413	302.00	306.00	4.00	TRACE

### DOWN-HOLE SURVEY DATA

DEPTH	INCLINATION	BEARING
306.00	-69.00	2.00

HOLE No: 13275c



# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen

HOLE No.: 13350b

Collar Eastings: 13318.83

Collar Northings: 8606.79

Collar Elevation: 4928.46

Grid: mine

Collar Inclination: -45.00

Grid Bearing: 0.00

Final Depth: 367.00 feet

Logged by: D.A. Panagapko

Date: Oct 4, 1998

Down-hole Survey: sperry sun

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS			
				FROM	TO	WIDTH Au (opt)	
0	22	OVERBURDEN					
22	33.5	ULTRAMAFIC DIKE Lt gy to lt gn, massive, very soft, probably originally a coarse-grained peridotite/pyroxenite that has been strongly alt'd to talc. 27-31.8 Very fine grained diorite dike, black, massive. Sharp lower contact at 75 deg.					
33.5	47.2	TUFF Med bn to gy, banded, probably a basaltic rock that is alt'd to biotite and chlorite. Sections are silicified and minor calcite veinlets cut core. More intense talc-carbonate alt'n at 39.2-41.6. Sharp lower contact at 60 deg.	31349 31350 31351	33.50 37.00 42.00	37.00 42.00 47.00	3.50 5.00 5.00	0.015 TRACE TRACE
47.2	54.9	GABBRO Massive, dk gn, fine to medium-grained; contains minor patches of chlorite/epidote alt'n. Sharp lower contact marked by narrow calcite veinlet at 45 deg.					
54.9	176.3	PERIDOTITE Colour varies from a medium gy to a dk gn in the upper part of the unit; becomes dk gy again below 102', although this is a gradational change. Unit is massive, medium-grained and					

HOLE No: 13350b



# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13350b

Page 2

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS		
				FROM	TO	WIDTH Au (opt)
		mod soft. Strongly magnetic throughout. 73.1-74.5 Very coarse grained gabbro dike. Rock is typically cut by narrow calcite veinlets in a random fracture pattern. Calcite is sometimes associated with pale gn serpentine (jadeite?). Below 152 unit becomes more alt'd with talc-carbonate along with patchy hematite staining. Fracturing has increased with a fault at 171' (1 ft lost core). Narrow diorite dike where fault occurs. Very lt gy, speckled texture towards lower contact, where chloritic alt'n begins.				
176.3	196.2	TUFF	31352	177.00	182.00	5.00 TRACE
		Dk gy, biotite alt'd mafic volcanic, minor chlorite rich bands.	31353	182.00	187.00	5.00 TRACE
		Mod silicified. Trace to 1% pyrrhotite occurring as ovoid	31354	187.00	192.00	5.00 TRACE
		blebs, trace fracture related pyrite. Local patches with up to 5% garnet. Lower contact marked where sulphide percentage increases.	31355	192.00	196.00	4.00 TRACE
196.2	204.7	MINERALIZED TUFF	31356	196.00	199.00	3.00 TRACE
		Biotite-chlorite alt'd basalt unit as above with disseminated to massive sulphide mineralization. Generally 1-2% blebby pyrite and trace pyrrhotite.	31357	199.00	202.00	3.00 TRACE
		202.4-204.5 Interval with 60-70% fine grained pyrite and 1-2% fine pyrrhotite. Tuff is strongly silicified in this section. Pyrite appears to cut across the banding so that it may be a replacement feature. Sharp lower contact to mineralization.				
204.7	277	TUFF	31358	202.00	205.00	3.00 TRACE

HOLE No: 13350b

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13350b

Page 3

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS			
				FROM	TO	WIDTH Au (opt)	
		Silicified, biotite alt'd mafic volcanic with narrow (<6") chlorite rich intervals. Moderately silicified throughout. Very minor blebby po and disseminated fine-grained py. Below 266' garnet percentage increases to 3-4% overall with narrow concentrations to 20%.	31359	205.00	207.00	2.00	TRACE
			31360	207.00	212.00	5.00	TRACE
			31361	212.00	217.00	5.00	TRACE
			31362	217.00	222.00	5.00	TRACE
			31363	222.00	227.00	5.00	TRACE
			31364	227.00	232.00	5.00	0.109
			31365	232.00	237.00	5.00	TRACE
			31366	237.00	242.00	5.00	TRACE
			31367	242.00	247.00	5.00	TRACE
			31368	247.00	252.00	5.00	0.007
			31369	252.00	257.00	5.00	0.007
			31370	257.00	262.00	5.00	0.041
			31371	262.00	267.00	5.00	0.011
			31372	267.00	272.00	5.00	TRACE
			31373	272.00	277.00	5.00	TRACE
277	297	<b>MINERALIZED TUFF</b>	31374	277.00	282.00	5.00	TRACE
		Same unit as described above but with minor increase in sulphide content. This section characterized by 1% blebby po and fracture related py evenly distributed throughout interval. Patchy chlorite-epidote-calcite alt'n over short lengths.	31375	282.00	287.00	5.00	TRACE
			31376	287.00	292.00	5.00	TRACE
			31377	292.00	297.00	5.00	TRACE
297	367	<b>TUFF</b>	31378	297.00	302.00	5.00	TRACE
		Same unit as described at 204.7-277 ft. Mod garnet-rich down to 328.7 then reverts to biotite alt'd volcanic with minor chlorite rich sections. Very weak mineralization consisting of a few specks of pyrrhotite.	31379	302.00	307.00	5.00	TRACE
			31380	307.00	312.00	5.00	TRACE
			31381	312.00	317.00	5.00	TRACE
			31382	317.00	322.00	5.00	TRACE
			31383	322.00	327.00	5.00	TRACE

HOLE No: 13350b

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13350b

Page 4

---

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	ASSAYS		WIDTH Au (opt)
					TO		
	367 ft	END OF HOLE	31384	327.00	332.00	5.00	TRACE
			31385	332.00	337.00	5.00	0.037
			31386	337.00	342.00	5.00	TRACE
			31387	342.00	347.00	5.00	TRACE
			31388	347.00	352.00	5.00	TRACE
			31389	352.00	357.00	5.00	TRACE
			31390	357.00	362.00	5.00	TRACE
			31391	362.00	367.00	5.00	0.019

### DOWN-HOLE SURVEY DATA

DEPTH	INCLINATION	BEARING
367.00	-44.00	13.00

HOLE No: 13350b



**Diamond Drilling Log**

**Journal de forage au daimant**

Complete this form and related sketch in duplicate. Remplir en deux exemplaires la présente formule et le croquis annexé

Fill in on every page Remplir ces cases à chaque page



Hole No. Forage n°	Page No. Page n°
13350c	1

Drilling Company Compagnie de forage <b>Newmac Industries Ltd.</b>		Collar Elevation Élévation du collier <b>4928.55</b>	Bearing of hole from true North/Position du forage par rapport au nord vrai <b>0.00</b>	Total Footage Avancement total du forage <b>290.00'</b>	Dip of Hole at Inclinaison du forage au Collar/collier   <b>-60.00</b>	Address/Location where core stored Adresse/endroit où la carotte est stockée <b>Madsen Mine Site</b>	Map Reference No. N° de référence sur la carte <b>G-3739</b>	Claim No. N° de concession minière <b>KRL-11506</b>			
Date Hole Started Sept. 27, 1998 Date de commencement du forage	Date Completed Sept. 29, 1998 Date d'achèvement	Date Logged Oct. 04, 1998 Date d'inscription au journal	Logged by D. A. Panagapko Inscrit par		290.00 Ft./Pi	-5900 °	Location (Twp. Lot, Con. or Lat. and Long.) <b>BAIRD</b> Emplacement (canton, lot, concession, ou latitude et longitude)				
Exploration Co., Owner or Optionee Compagnie d'exploration, propriétaire ou titulaire d'option <b>Madsen Gold</b> <b>P.O. Box 7380</b> <b>200, 224 – 24<sup>th</sup> Avenue South</b> <b>Saskatoon, Saskatchewan S7K 5M5</b>		Date submitted Date de dépôt <b>April 7, 2001</b>	Submitted by (Signature) Déposé par (signature) <i>Roland Landry</i>		Ft./Pi	°	Property Name Nom de la propriété <b>Madsen Gold</b>				
Footage/Avancement		Rock type Type de roche	Description (Colour, grain size, texture, minerals, alteration, etc.) Description (Couleur, granulométrie, texture, minéraux, transformation, etc.)			Planar Feature Angle/°/Angle des caractéristiques planes	Core Specimen Footage/Longueur en pieds des carottes prélevées	Your Sample No. N° d'échantillon du prospecteur	Sample Footage/Niveau de prélèvement de l'échantillon	Sample Length Longueur de l'échantillon	Assays/Analyses minéralurgiques
From/De	To/A							From/De	To/A		

0204 (03/91) \*For features such as foliation, bedding, schistosity, measured from the long axis of the core. †Additional credit available. See Assessment Work Regulation.  
 \*Exemples de caractéristiques : foliation, schistosité, stratification. L'angle est mesuré par rapport à l'axe longitudinal de la carotte. †Des crédits supplémentaires sont offerts. Consulter les règlements relatifs aux travaux d'évaluation.  
 Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
 HOLE No.: 13350c  
 Collar Eastings: 13318.65  
 Collar Northings: 8605.29  
 Collar Elevation: 4928.55  
 Grid: mine

Collar Inclination: -60.00  
 Grid Bearing: 0.00  
 Final Depth: 290.00 feet

Logged by: D.A. Panagapko  
 Date:  
 Down-hole Survey: sperry sun

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS		
				FROM	TO	WIDTH Au (opt)
0	10	OVERBURDEN				
10	24.8	GABBRO Massive, dk gn, medium-grained, non-magnetic. Contains 5-7% biotite in small phenocrysts. Cut by a few calcite-filled hairline fractures. Sharp lower contact at 40 deg.				
24.8	32.5	ALTERED ULTRAMAFIC Dk gy massive unit that is strongly magnetic, with magnetite occurring in fractures. Rock is quite soft and contains 10-15% talc; probably an altered ultramafic intrusive (peridotite?). Sharp lower contact at 45 deg.				
32.5	42.5	GABBRO Fine-grained dk gn mafic intrusive that is intercalated with a talcose dike rock (magnetic) at: 34.3-34.9, 37-38.5, 41.6-42.5. Minor fault gouge at 38.5'. Lower gabbro contact is very fine-grained.				
42.5	52.5	TUFF Chlorite-biotite altered mafic volcanic, unmineralized, cut by narrow calcite veins. Intruded by a lt gy, magnetic dike at 45.3-47. Sharp lower contact at 45 deg.				

HOLE No: 13350c

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13350c

Page 2

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS			
				FROM	TO	WIDTH Au (opt)	
52.5	67.4	GABBRO Fine to locally medium-grained, massive, fresh to weakly alt'd (epidote + calcite). Non-magnetic. Cut by 2" quartz vein at 53.4'. Sharp lower contact where magnetic unit starts.					
67.4	190.1	PERIDOTITE Massive, med gn near upper contact, grading to bk, medium-grained intrusive, strongly magnetic throughout. Minor talc alt'n and calcite veinlets. Cut by soft, talcose strongly magnetic dike at 102.6-105.7, med gy. Below 132' becomes med-dk gy, medium-grained mottled texture. Variably altered to talc-carbonate. Minor fault gouge at: 138.9, 139.5, 159.3 (.4 ft lost core), 162.2 (.3 ft lost core), 175.8, 177.7. Alteration appears to increase with depth. Sharp lower contact where grain size changes.					
190.1	202.5	FINE-GRAINED PERIDOTITE Dk gy to bk, very fine grained strongly magnetic unit, could be less altered equivalent of previous unit. Muddy fault gouge developed at 201.6, 202.4. Lower contact marked by fault gouge.					
202.5	231.6	TUFF Typical biotite alt'd mafic volcanic with areas of moderate carbonate alt'n. Minor patches of disseminated pyrrhotite. 205.2-208.6 Coarse-grained gabbro dike. Lower contact is gradational, marked by first appearance of sulphides.	31330 31331 31332 31333 31334	208.00 212.00 217.00 222.00 227.00	212.00 217.00 222.00 227.00 231.00	4.00 5.00 5.00 5.00 4.00	0.019 TRACE TRACE TRACE TRACE

HOLE No: 13350c

# Madsen Gold Corp.

## DIAMOND DRILL LOG

PROPERTY: madsen  
HOLE No.: 13350c

Page 3

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	ASSAYS			
				FROM	TO	WIDTH Au (opt)	
231.6	242.2	MINERALIZED TUFF Med-dk gy-bn, well banded tuff that has been pervasively silicified. Minor chlorite-rich bands. Sulphides consist of pyrite and pyrrhotite as bands of fine-grained crystals, 2-3% overall but concentrated in 0.5-2" bands at: 237.2, 240.9. Minor quartz segregations in with disseminated pyrite. Arbitrary lower contact where sulphides drop off.	31335	231.00	234.00	3.00	TRACE
			31336	234.00	237.00	3.00	0.025
			31337	237.00	240.00	3.00	0.013
			31338	240.00	242.00	2.00	0.017
242.2	290	TUFF Continuation of unmineralized tuff as described above, garnet starts appearing at 271 ft. Becomes med gy towards end of hole. Very minor disseminated pyrite. 258.4-262.2 Talc alt'd ultramafic dike, strongly magnetic.  290 ft END OF HOLE	31339	242.00	247.00	5.00	TRACE
			31340	247.00	252.00	5.00	TRACE
			31341	252.00	257.00	5.00	TRACE
			31342	257.00	262.00	5.00	TRACE
			31343	262.00	267.00	5.00	TRACE
			31344	267.00	272.00	5.00	TRACE
			31345	272.00	277.00	5.00	0.013
			31346	277.00	282.00	5.00	0.019
	31347	282.00	287.00	5.00	0.276		
	31348	287.00	290.00	3.00	0.095		

### DOWN-HOLE SURVEY DATA

DEPTH	INCLINATION	BEARING
290.00	-59.00	12.00

HOLE No: 13350c





Date: 2001-JUL-19

GEOSCIENCE ASSESSMENT OFFICE  
933 RAMSEY LAKE ROAD, 6th FLOOR  
SUDBURY, ONTARIO  
P3E 6B5

MADSEN GOLD CORP.  
1 RICHMOND STREET WEST  
SUITE 500  
TORONTO, ONTARIO  
M5H 3W4 CANADA

Tel: (888) 415-9845  
Fax: (877) 670-1555

**Submission Number:** 2.21326  
**Transaction Number(s):** W0120.30046

Dear Sir or Madam

**Subject: Approval of Assessment Work**

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact BRUCE GATES by email at [bruce.gates@ndm.gov.on.ca](mailto:bruce.gates@ndm.gov.on.ca) or by phone at (705) 670-5856.

Yours Sincerely,



Ron Gashinski  
Supervisor, Geoscience Assessment Office

**Cc:** Resident Geologist

Roland Marc Landry  
(Agent)

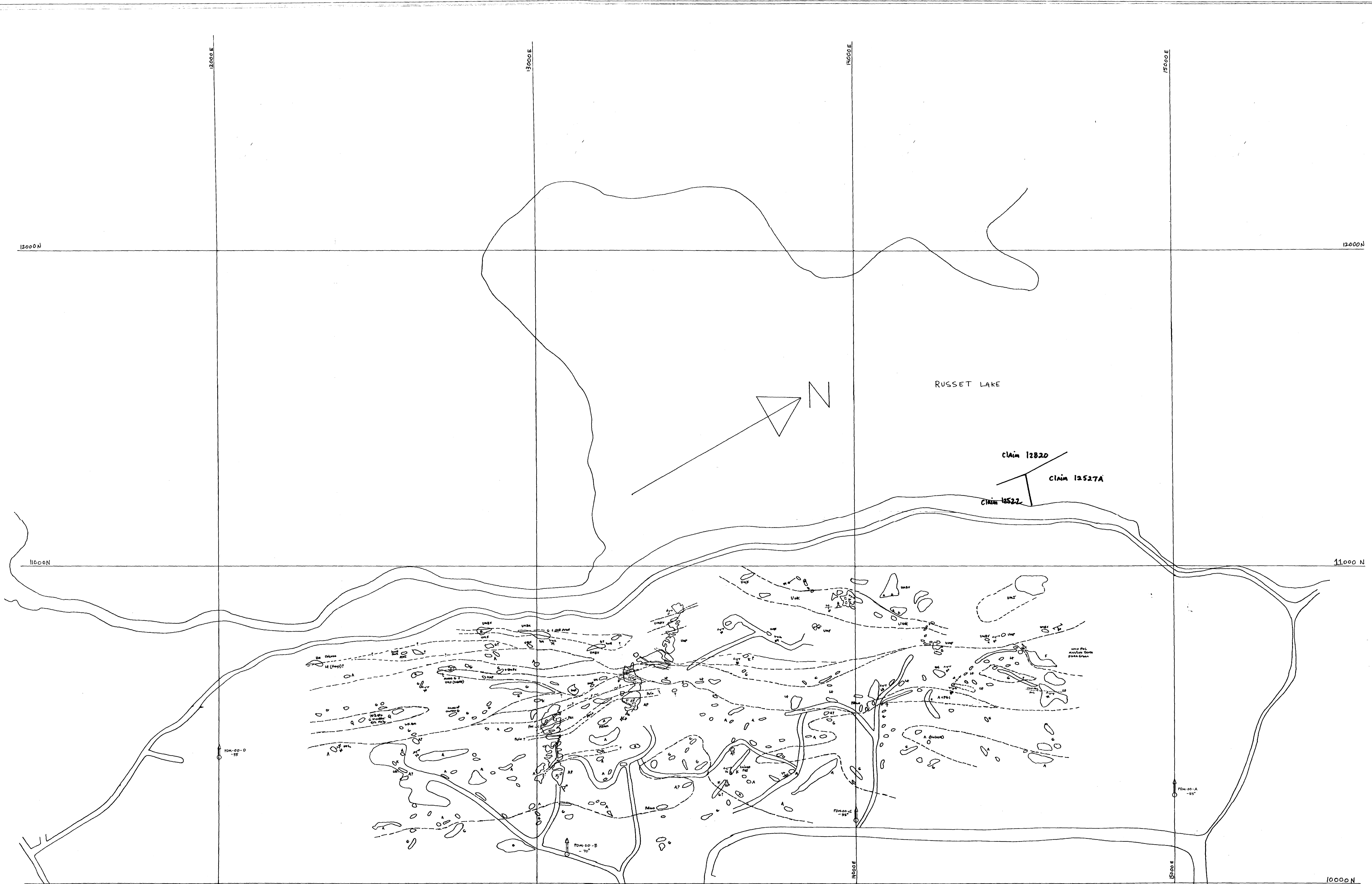
Madsen Gold Corp.  
(Assessment Office)

Assessment File Library

Madsen Gold Corp.  
(Claim Holder)

Claude Resources Inc.  
(Claim Holder)





**CENTRAL DEFORMATION ZONE**  
**THE MADSEN MINE**  
 1" = 200' GRID NORTH = N300°

N  
 Measdec = 15°E

- LEGEND**
- A - BASALT (MAGNETIC ANDALUSITE)  
   m = MASSIVE  
   p = FOLIATED
  - lt - LAPILLI TUFF (ULTRACHALKY FLOW)
  - C - GABBRO
  - ms/ps - MEDIUM OR FINE GRAINED ANDALUSITE (ULTRACHALKY)
  - UN - ULTRACHALKY  
   UNF = FLOW  
   UNB = BRECCIATED OR LAPILLI  
   UNI = ULTRACHALKY ANDALUSITE
  - UAK - KANANUKITES
  - K - ?? SOLUTION CHANNEL (BANKING AT F. FLOW)

- CONTACT  
   DASHED IF WEAKENED
- OUTCROP
- ROAD OR TRAIL
- FOLIATION (UNDEFORMED)
- QUARTZ VEIN
- FILLER DIPS DIRECTION
- QUARTZITE?

MAPPING OF CLAIMS 12527, 12522 & 12521, 12820  
 100'

