## ASSESSMENT REPORT ON THE KING PROPERTY



ALBERNI MINING DIVISION NTS 92F/2E LATITUDE 49° 06' LONGITUDE 124° 36'

FOR

## MANDALAY RESOURCES CORPORATION 710-750 WEST PENDER STREET VANCOUVER, BC V6C 2T7

BY

### DR. J. DURO ADAMEC, P. GEO. 48-1745 FELL AVENUE NORTH VANCOUVER, BC V7P 3L9

**NOVEMBER 30, 2000** 

GEOLOGICAL SURVEY BRANCH



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#### SUMMARY

The King claims consisting of two four post claims covering about 2,000 acres in the Alberni Mining Division, B. C. is presently explored by Mandalay Resources Corporation. The property is located some 20 km southeast of Port Alberni on Vancouver Island, B. C.

Several past producing mines occur in the property vicinity.

The claims are underlain by a complex, poorly resolved, interlayered and intergradational succession of basaltic pillowed flows; broken and whole pillow breccias; various basaltic volcaniclastics including agglomeratic lapilli tuff, crystal and lithic tuff, and cherty tuff; jasper; thick basaltic flows; and dacitic agglomeratic lapilli tuff. All of the rocks belong to the Upper Paleozoic Sicker Group, however it is not clear whether they are part of the Nitinat Formation or Myra Formation, or both. The Sicker Group sequence appears to be upright, northwest to north trending, and dipping shallowly to moderately  $(20 - 40^\circ)$  to the southwest.

Basaltic Sicker Group flows are cut by Tertiary (?) feldspar (-hornblende) porphyritic andesite dykes on the claim. Similar dykes are closely associated with past-producing gold mines in the area such as the Havilah Mine.

Exploration program carried out on the King Property included rock sampling. Gold in rock values up to 14321.9 ppb were obtain from the property. Some of the anomalous gold values have coincident anomalous copper, silver and zinc.

Futher exploration is recommended for the property, consisting of detailed geological mapping, prospecting and sampling.

#### INTRODUCTION

The King claims, consisting of two four post-metric claims, covering some 2,000 acres in the Alberni Mining Division, BC are presently explored by Mandalay Resources Corporation. The company has carried out limited rock sampling on the property in August 2000 for the purpose of fulfilling assessment work requirements. The work was carried out from August 9 to August 12, 2000 by three-man crew. The writer has previously examined the property.

This report documents limited rock sampling, describes regional and property geology and provides recommendation for further success contingent exploration on the King claims.

#### LOCATION AND ACCESS

The King Property is located on Vancouver Island, at the headwaters of China Creek, some 20 kilometers southeast of Port Alberni, British Columbia. The geographic location is 49° 06' North latitude and 124° 36' West longitude.

The claims are accessible from Port Alberni via 20 km of good gravel road up China Creek and than up McQuillan Creek to the King Solomon Basin(Figure 1).

#### TOPOGRAPHY AND VEGETATION

The King Property is in the Vancouver Ranges, one of the three subdivisions of the Vancouver Island Mountains, in turn, a major subdivision of the Insular Mountains. The claims cover the uppermost headwaters of China and McQuillan Creek. The slopes are rugged and steep with frequent bluffs and cliffs. Elevation ranges from 550 meters (1 800 feet) at northern part of the claims to 1 500 meters (4 900 feet) at the peak of McQuillan.

The property area is covered by stands of fir, spruce and predominantly by hemlock. Adequate water for exploration purposes is available from numerous steep run-off creeks that drain mountain areas.

Annual precipitation is in order of 250 cm. In general, climate is moderate, more or less typical of coastal B. C. The 5-month period between June and October is the best for fieldwork.



#### PROPERTY DEFINITION

The King Property consists of two four post mineral claims covering 2 000 acres, located in Alberni Mining Division, British Columbia (Figure 2).

The claims are owned by Mandalay Resources Corporation and L. Ruza, 50 % each. Details pertaining to the status of the claims are tabulated below.

Claim Name	Units	Tenure #	Expiry Date
King	16	364 999	August 22, 2001
King I	16	365 000	August 24, 2001

Work has been filed and expiry date will apply when Assessment report is accepted.

#### HISTORY

Mining in the area dates back to 1860's when the headwater of China Creek, the Nitnat River and Franklin River were placer mined. Lode mining dates back to the 1890's when gold bearing quartz veins were located and staked on Mineral Creek, at the head of McQuillan Creek in the King Solomon basin and at the head of China Creek in the Golden Eagle basin.

The area was inactive due to low metal prices from the early 1900's until the 1930's and remained active until the late 1940's.

Several past producing mines occur in the property vicinity. The Thistle Mine produced 2,760 oz gold, 2,120 oz silver and 681,435 lbs copper from 6,920 tones of ore, originaly considered by Stevenson (1945) and Carson (1968). Disseminated and massive sulphide mineralization occurs as lenses and bands with pyritic quartz sericite schist and at the contact of quartz sericite schist with chloritized mafic volcanic rocks (Sicker Group). Disseminated sulphide mineralization occurs throughout the host rocks. The deposit may be of syngenetic-volcanogenic origin (Neale, 1985). It is located immediately south west of the King claims.

The Havilah Mine located on the King claim (1,046 tones produced 259 oz gold, 1,404 oz silver) and Vancouver Island Gold Mine (483 tones produced 384 oz gold, 52 oz silver) are quartz vein deposits hosted by andesite and andesite tuff of the Sicker Group.

The Black Panther Mine is a quartz vein deposit hosted by a shear zone in Sicker Group andesite and Island Intrusions diorite located 3 km south of the King



claims. Production of 1,890 tones of is yielded 509 oz gold, 953 oz silver, 12,319 lbs lead and at least 4,478 lbs zinc and 498 lbs copper. The other mines in the broader area are: Mineral Creek, Regina to the north from the King Property and B&K and Black Lion to the the south (Figure 5).

In 1962, Hunting Surveys conducted a regional airomagnetometer survey over the area for the Canadian Pacific Railway, covering the claim block.

During the period 1963 – 1966 Gunnex Ltd. carried out a regional mapping program with some prospecting and silt sampling in the area.

A brief program of reconnaissance geological mapping, rock sampling and prospecting was carried out on the McQuillan claim, by MPH Consulting Limited for Nexus Resource Corporation during 1983 – 1984. The work partly covered northwest corner now King Property.

A limited rock and silt sampling was carried out in 1999 to fulfill assessment requirements.

#### REGIONAL GEOLOGY

The regional geology of the Alberni Map Area has been mapped and interpreted by Muller, 1969 and Stevenson, 1945. There are some differences in the bedrock geology of the King Property (Figure 4).

The oldest rocks belong to the Sicker Group, Permian and older in age, and have been folded into a broad, north to northwesterly trending synclinal structure. The "Older Sediments" of Stevenson are comprised principally of pyroclastics (tuff and volcanic breccias) and flow breccias, plus much smaller quantities of jasper, chart, and limestone, and occur in two distinct belts. The volcanic assemblage is the basal sequence of the Sicker Group, unit 1 of Muller, Pennsylvanian and older in age. The limestone, chart and jasper belong to the Buttle Lake Formation, the uppermost sequence of the Sicker Group, unit 3 of Muller.

The "older" China Creek Andesite of Stevenson "overlies the older sediments and is folded with the sediments in a synclinal belt"; and, accordingly, may belong to the Karmutsen Formation of Triassic age, unit 5 of Muller. Muller, however, shows basal Sicker volcanic, unit 1, in the area mapped by Stevenson as China Creek Andesite. The China Creek Andesite consists principally of fine-grained, dark green andesite that generally has an amygdaloidal structure, plus a smaller proportion of purplish, amygdaloidal andesite. Occasional lenses of dark gray chart and red jasper are intercalated with the andesite. The Franklin Creek Basalt of Stevenson, an augite basalt, underlies the western half of the China Creek map-area, and typifies dark green to almost black, pillow basalts of the Triassic Karmutsen Formation. On the structure sections, Stevenson shows the Franklin Creek Basalt in fault contact with the Sicker Group "Older Sediments". Unconformable contact with the Sicker Group volcanic (Muller unit 1) and sediments (Muller unit 3, Buttle Lake Formation) also is indicated.

The main quartz diorite stock that typifies the Island Intrusions of Middle to Upper Jurassic age, strikes north northwesterly through the western portion of the China Creek map-area. The intrusive cuts the Franklin Creek Basalt, varies in width from 1 to 4 km, and is more than 20 km in length.

The intrusive diorite body mapped by Stevenson that strikes northerly through Mount Mcquillan coincides extremely well with a low-magnitude aero magnetic "high" defined by the 56,700 gamma contour. The McQuillan Diorite is about 7 km long and  $\frac{1}{2}$  to 1 km wide; and probably also correlates with the Jurassic Island Intrusions. Diabase dykes to about 1 m thick cut the diorite. Much of the diorite has been brecciated, and then healed by the introduction of siliceous, aplitic material, some of which also occurs as small dykes.

Stevenson also mapped three small bodies of feldspar porphyry adjacent to the McQuillan Diorite on the west, which reportedly are accompanied by numerous sills and dykes of similar composition.

#### STRUCTURE

The Buttle Lake Arch, Cowichan-Horne Lake Arch and Nanoose Uplift are north-northwesterly trending axial uplifts and are believed to be the oldest structural elements in south central Vancouver Island. Uplifting occurred before the late Cretaceous, and possibly before the Mesozoic (Muller and Carson, 1969). Sicker Group volcanic and sedimentary rocks occur at the core of these uplifts.

Asymmetric southwest verging anticline structures characterized by sub vertical southwest limbs and moderately dipping northeast limbs are reported at Buttle Lake and in the Cameron-Nitinat River area. Intense shearing and metamorphism to chlorite-actinolite and chlorite-sericite schist occurs in steep and overturned limbs of folds. Overlying Buttle Lake Formation limestones are relatively undeformed except where they are thin.

Vancouver Group units are not as intensely folded; gentle monoclinal and omal structures have been mapped. However, Karmutsen Formation volcanic rocks locally conform to the attitude of underlying Myra and Buttle Lake Formations (Muller, 1980).



Some early Mesozoic faulting occurred in the area prior to emplacement of Island Intrusions. Middle to Upper Jurassic intrusive activity (Island Intrusions) occurred along northwesterly trends.

Extensive west-northwest trending faulting occurred during the Tertiary and is best illustrated by large displacements of Nanaimo Group sediments. The north trending Alberni Valley fault is traced over 45 miles and displaces a section of Karmutsen Formation approximately 5,000 feet (Muller and Carson, 1969).

#### LOCAL GEOLOGY AND MINERALIZATION

The King claims are underlain by a complex interlayered and intergradational succession of basaltic pillowed flows; broken and whole pillow braccias, locally hematite altered, various basaltic volcaniclastic rocks including agglomeratic lapilli tuff, crystal and lithic tuff and cherty tuff, jasper, thick? basaltic flows and dacitic? agglomeratic lapilli tuff, all of the Sicker Group.

However, any brief program of rock and silt sampling is insufficient to determine the overall distribution of the units, their direction of dip and therefore, their stratigraphic order or succession.

Figure shows the location of rock samples. Nine rock chip samples are taken from mineralized outcrops with massive sulphide mineralization (K004- K012) and returned from 18,6ppb to 14,321.9 ppb goldaccross 0.10m. Very high silver, copper,lead and zinc values are recorded as well(table page 6).Rock samples K001 to K003 are floats collected from the hillside.



Page 6

	Au (ppb)Ag	(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)Length								
K001	3758.6	15.8	101	1713	1615	F							
K002	1855	10.1	88	2965	2168	F							
K003	53.2	1.3	2551	33	65	F							
K004	2099	52.5	121	23294	4063	0.30 m							
K005	18.6	0.8	247	44	205	0.10 m							
K006	14321.9	19.6	497	4799	18662	0.10m							
K007	186	7.7	782	720	83	0.10m							
K008	19.3	14	1113	24	202	0.10m							
K009	595.7	79.1	1165	19544	7078	0.30m							
K010	541.2	69.5	1409	12935	19134	0.30m							
K011	57	10,8	5633	70	205	0,20m							
K012	28.9	1.6	3873	44	122	0.20m							

Rock were shipped to Acme Analytical Laboratories in Vancouver. Rock sample description and analytical results are present in Appendix 1 with sample locations shown on Figure 4.

Anomalous concentrations of precious and base metals were found in samples in the King claims.

#### CONCLUSIONS AND RECCOMMENDATIONS

The King property is underlain by rocks of the Upper Paleozoic Sicker Group. The rocks form a complex, interlayered and intergradational succession predominantly of basaltic pillowed flows with intervals of breccias, locally hematitealtered; a variety of basaltic volcanoclastic rocks including agglomeratic lapilli tuff, crystal and lithic tuff, and cherty tuff; hematitic jasper; thick basaltic flows and a major unit of dacitic agglomeratic lapilli tuff. The succession is upright and strikes northwesterly to northerly, and may dip, at least in part, shalowly to moderately (20 - 40°) to the southwest.

The brief 2000 work did not delineate any specific mineralized zones, but rock sampling sampling confirmed the presence of strong precious and base metal mineralization on the property.

Further exploration, including detailed geological mapping, sampling, prospecting on the property is required to evaluate mineral potential of the property.

Respectfully submitted

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Dr. J. Duro Adamec, P. Geo.

November 30, 2000

#### REFERENCES

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- Armstrong, C.M., 1982 Geological and Geochemical Report on the Eagle Property, Alberni Mining Division, BC.
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## APPENDIX I

Statement of costs

# STATEMENT OF COSTS

Field Work between August 9 and August 12, 2000

Mob/Demob Truck rentals & fuel (4 days @ \$ 115/day) Equipment rentals Domicile (3 days 4 men @ \$ 60/day) Geochemistry rock samples	265.00 460.00 70.00 720.00 208.98
Field supplies Report, drafting, copying	59.70 1850.00
3 prospectors (4 days @ \$ 200/day)	2,400.00
TOTAL	\$ 6,033.68

#### STATEMENT OF QUALIFICATIONS

I, JURAJ (DURO) ADAMEC, of North Vancouver, British Columbia, hereby certify:

- 1. I am a graduate of the Commenius University in Bratislava, Slovakia 1978) and I hold Doctorate in Engineering Geology (1982) from the same University.
- 2. I am a certified Professional Geoscientist and member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia.
- 3. I am a Fellow of Geological Association of Canada in good standing.
- 4. I have been practicing my profession as a geologist in Europe, North America, South America and Russia since 1978.
- 5. I have previously examined the King property in 1999.

Dated in North Vancouver, B. C. this 30 day of November, 2000.

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Dr. J. (Duro) Adamec, P. Geo.

### APPENDIX III

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Geochemical Data

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SAMPLE#	Ho ppm	Çu pipîli	Pb ppn	Zn ppm	Ag pipiñ	Ni P <b>p</b> m	Co ppm	Mri pipini	Fe X	<b>۸۹</b> ۱۹۹۹	U ppm	Au ppm	Th ppn j	SC ppn	Cd ppm	Sib ppan j	B I ppm	V pipni	Ca X		La ppm		Hg X	βa popun	۲۱ ۲۱	8 spm	Al X	Na X	K X	¥ ppn	Au* ppb
K-001 K-002 K-003 K-004 K-005	76	101 88 2551 121 247	1713 2965 33 23294 44	1615 2168 65 4063 205	10,1	3	<1	110	4.16 14.13	2224 39 4485	<8 <8 <8 <8 <8	3 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2	1 1 8 3 24	20.3 30.3 1.3 77.6 2.6		<3 4 3 4 3 4 3 4	1 104 1	.08 .01 .21 .10 .91	.004 .002 .015 .002 .033	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	28 18	<.01 <.01 .71 <.01 .56	- 1< - 6 - 1<	.01 .01 .05 .01 .26	3	}.20 ,03∢	.01 .03 .01	.01	115 2	3758.6 1855.0 53.2 2099.0 18.6
K-006	67	497 782		18862 83		4	5 14	84 225	13.29 4.31		<8 <8	16 <2	<2 <2	1 16	292.9 .7	21 32	3 <3		.02 ,46	.003 .031	1 1	31 8	.01 .25	5< 27	.01 .03	4 <3 '					14321.9

7 1165 19544 7078 79.1 11 <1 44 7.15 1290 <8 <2 3 1 103.7 856 4 3 .02 .004 1 20 .02 8 1409 12935 19143 69.5 8 19 384 10.95 715 <8 <2 <2 3 255.1 31 23 3 .58 .002 <1 32 .04

<8

57 15

<8 <2 <2

GROUP 10 - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HOL-HNO3-H20 AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 HL, AMALYSED BY TOP-ES. UPPER LINITS - AG, AU, HG, W = 100 PPN; HO, CO, CD, SB, B1, TH, U & B = 2,000 PPM; CU, PB, ZH, HI, HN, AS, V, LA, CR = 10,000 PPN. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZH AS > 1%, AG > 30 PPM & AU > 1000 PPB AU\* BY ACID LEACHED, AMALYZE BY ICP-MS. (10 gm) - SAMPLE TYPE: ROCK R150 60C

3 254.2 28 25 3 .57 .002 <1 32 .04

<8 <2 <2 3 1.4 <3 <3 226 .32 .025</p>

12 -8 -2 -2 16 1.5 -3 3 142 .47 .018

~2 ~2 3 2.7 3 ~3 170 .11 .017

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns,

202 1.4 15 43 897 9.75

205 10.8 32 121 591 11.92

122 1.6 16 115 371 11.50

171 5.6 39 12 807 3.56

NOV 6 2000 DATE REPORT MAILED: DATE RECEIVED:

720

24

7 1378 13899 18897 68.0

70

-44

37

7 782

11 1113

123 5633

27 70

4 3873

83 7.7

NOV 22/00

14 225 4.31 528

7 19 380 10.81 708

14

29

3 23 32 23,7 15 26 79 .59 .099 20 182 .63 162 .09 21 1.86 .04 .18 16

1 15 4.00

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1 21 ,93 9 .08 <3 1.86 .09 .11

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<3 3.43 .01 .03

<1 2.28 .02 .05

4 .09<.01 .06 324

<3 .10 .01 .06 20

<3 ,10<,01 .06 23

19.3

595.7

541.2

535.5

57.0

28.9

190.0

المعدية الدار والأمرين فكالمست

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K-008

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STANDARD C3/DS2

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# APPENDIX IV

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Rock sample Descriptions

- K001 Float, medium coarse quartz diorite with 10% pyrite
- K002 Float, medium coarse quartz diorite with 10% pyrite
- K003 Float, rusty volcanic rock

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- K004 Quartz with pyrite mineralization
- K005 Grey volcanic rock with pyrite
- K006 Grey volcanic rock with pyrite mineralization
- K007 Rusty volcanic rock with pyrite
- K008 Pyritic volcanic rock
- K009 Quartz vein 30 cm wide with pyrite
- K010 Quartz diorite with sulphide mineralization
- K011 Rusty volcanic rock
- K012 Volcanic rusty stained rock