EL47/1971 - Zeehan Plans

1. Oonah Tin Prospect – Outcrop Plan
2. Summary map showing known silver-lead production
3. Queen Hill area – Interpretive summary plan
4. Queen Hill area – Surface geology
5. Queen Hill – Composite plan including extent of workings at 1910
6. Zeehan town chart

LEASE BOUNDARY M.L. 35M/72

BEARING 066°30'

BASE LINE 5000 E (Astro Grid)

JUNCTION WORKINGS

GALENA, PYRITE IN QUARTZ SIDERITE VEIN MATERIAL ON DUMPS

Black and grey shales on dumps

MAIN SHAFT

MINORS SHAFT

DONAH MAIN SHAFT

DAM

Scale 1:500

0 10 20 30 Metres

GRID NORTH

MAGNETIC NORTH

GALENA LODE (NORTH)

LEGEND

UPPER PROTEROZOIC

QUARTZITES
Micaceous, minor tourmaline.

BASIC VOLCANICS
Spilites, mainly altered scoriaceous breccia with pumice fragments, vesicles filled with pale green Mg-chlorite and dolomite.

SUCCESS CREEK GROUP

GREY SHALES
Pyritic, carbonaceous in places, dolomite in minor veinlets and as bedding plane films, minor tourmaline.

BLACK SHALES
Carbonaceous, pyritic, fine grained tourmaline.

MINERALISATION
Argentiferous galena, stannite in zones of brecciation with white quartz veining

Fault zone

Diamond drill collar

C.R.A. EXPLORATION PTY. LIMITED

OONAH TIN PROSPECT
ZEEHAN - TASMANIA

OUTCROP PLAN - SOUTH SHEET

geologist: A. McKay	scale: 1:500	report no:
drawn: T.G.D.S.	date: June 1980.	plan no:

E.L. 47/71

NAME	LEAD (Tons)	Silver (oz)	Production Years
Quigleys	32·5	2754	1912 - 1925
Barnetts	60·4	7231	1910 - 1949

PRODUCTION IN ZEEHAN FIELD

NAME	LEAD (Tons)	SILVER (oz)	PRODUCTION YEARS
Montana Silver Lead	2304	279,348	1899 - 1958
Zeehan Western	26,300	4,800,000	1901 - 1928
Junction	15	8728	1888 - 1906
Zeehan - Montana	49,580	7,058,122	1892 - 1936
Oonah	11,724	2,050,135	1888 - 1925
Queen	16,532	1,973,746	1902 - 1929
Mt. Zeehan	1540	166,850	1883 - 1893
Despatch	No recorded production		
New Great Eastern	No ore produced		
Tasmanian Crown	113	15,737	1893 - 1956
Florence	10,200	1,400,000	1900 - 1910
Argent No. 2	1,750	207,347	1899 - 1925
Argent No. 5	1,100	170,000	1915 - 1917
Argent No. 6	1,398	183,763	1920 - 1925
Spray, Brittania, Mt. Zeehan	41,700	6,456,674	1893 - 1923
Nike	2.149	225,830	1896 - 1954
Grubbs, Colonel North	1534	127,225	1890 - 1909
Victoria Zeehan	15	850	
Nubeena	325	42,000	1894 - 1910
Montague No.1	115	1500	1887 - 1894
Maxim	60	10,000	1890 - 1910
Watt & McAuliffs & North Austral	250	50,000	1901 - 1905
Austral Valley	800	33,000	1907 - 1913
Silver King	5000	350,000	1887 - 1908
Zeehan Bell	600	27,500	1890 - 1908
Sunrise	36	4,760	1892 - 1910
Oceana	14,902	614,981	1893 - 1960
TOTALS	190,042	26,258,096	

SOUTH ZEEHAN - COMSTOCK FIELD

NAME	LEAD (Tons)	SILVER (oz)	PRODUCTION YEARS
Comstock & South Comstock	545	57,096	1888 - 1952
North Comstock	No record of production		
Silver Stream	165	9,200	1888 - 1903
Boss	70	6,500	1888 - 1916
Susannite	20	3,500	1888 - 1923
Sylvester	274	16,560	1893 - 1950
Doric	0·5	30	1928
T.L.E.	200	30,000	1888 - 1911
Stonehenge	30	2,700	1888 - 1894
North Tasmanian	Production unknown		
Swansea	1319	35,630	1925 - 1929
Tasmanian (ind. N. Tas.)	720	41,229	1893 - 1953
Silver Duke	No production		
TOTALS	3,343·5	202,445	

Scale 1 : 250,000

E.L. 1/77 C.R.A. EXP. P/L
C.R.A. EXP. P/L
E.L. 42/71 RENISON LTD.
E.L. 47/71 GIPPSLAND MINERALS N.L.
E.L. 11/76 RENISON LTD.
Zeehan
SPL 129 MT. LYELL MG. & RLY. CO. LTD.
AMOCO MINERALS AUST. LTD. E.L. 4/78

TENTH LEGION
Part SPL 129
MT. LYELL MG. & RLY. CO. LTD.

KYNANCE
SILVER STREAM 9·5% Cu, 2oz/T Ag
123M/47 E.Z. CO. LTD
NORTH COMSTOCK
SYLVESTER Assays 40-50% Pb 76 oz/T Ag
SUSANNITE
COMSTOCK Av. assays 50% Pb 60oz/T Ag
SOUTH COMSTOCK
THE BOSS MINE
BOSS
BRITANNIA MINE
BRITTANIA
SOUTH COMSTOCK
T.L.E MINE
T.L.E. Assays range 754-765% Pb 105-118 oz/T Ag
STONEHENGE
TASMANIAN Assays 64% Pb, 36oz/T Ag includes Swansea
SWANSEA
SILVER DUKE

DORIC
QUIGLEYS Assays 62% Pb, 42oz/T Ag
BARNETT'S Assays 60% Pb, 45oz/T Ag
MONTANA SILVER LEAD approx. 2 km North West of Zeehan Western Shaft. Assays up to 60% Pb, 55oz/T Ag
WESTERN EXT.
GREAT WESTERN
ZEEHAN WESTERN Recorded assays indicate Ag assays ranged from 85-100+ oz/T. No.11 (800 ft N.L. produced ore assaying 77.3% Pb, 148·5 oz/T. Average assays 50% Pb, 90oz/T Ag
SIMPSONS
ZEEHAN'S WESTERN
MINOPS 35M/72
JUNCTION
CROWN
OONAH
OONAH BROADHAVEN'S Open Cut
No.5 QUEEN
ZEEHAN MONTANA MINE
MONTANA No.1
DESPATCH
RENISON LTD. 68M/73 SAND & STONE LEASE
No.2 MONTANA
QUEEN
No.2 QUEEN
No.3 QUEEN
No.4 QUEEN
QUEEN EXT.
STORMSDOWN Open Cut
RAYNES Open Cut
NEW MT. ZEEHAN 50M/76
KING EXT'D Assays range 40-50% Pb 30-80 oz/T Ag
CONSOLIDATED LEASE 36M/81
WILLIAM SHAFT
QUEEN EXT'D
No.4 ARGENT
ARGENT
FLORENCE
FLAHERTY
NIKE
No.2 ARGENT
No.3 ARGENT
No.5 ARGENT
No.6 ARGENT
ASTLES SHAFT
SILVER QUEEN
MANGANESE HILL
MOYLES
No.1 SPRAY
49M/76 J.D. CLARK
SPRAY Assays 67·9% Pb 100oz/T Ag
MT. ZEEHAN (TAS.)
CENTRAL BALSTRUP Assays ranged up to 530oz/T Ag 30% Pb
BALSTRUP
SILVER KING Assays 25oz/T Ag 70-75% Pb
MONTAGU No.1
MONTAGU
MAXIM
WATT & McAULIFF
NORTH AUSTRAL
FAHEYS TRIB.
ZEEHAN BELL SILVER Assays showed 47% Pb 48oz/T Ag., later Exp. showed poor min. at depth. highest assays 13% Pb, 43oz/T Ag
BELL
SUNRISE Assays ranged 69-73% Pb 80-90oz/T Ag
COLONEL NORTH Assays range 20-80% Pb 20-120 oz/T Ag. Average assays 65% Pb, 50oz/T Ag
VICTORIA ZEEHAN
FOAM
WAVE
GRUBBS
NUBEENA Assays range 37·3-100oz/T Ag 56·5-70% Pb
SOUTH NUBEENA
AUSTRAL Assays about 5% Pb 15oz/T Ag
AUSTRAL
OCEANA
OCEANA

Part E.L. 4/78
AMOCO MINERALS

Scale 1 : 10, 000
0 100 200 300 400 500 600 700 800 900 1000 metres

REFERENCES :-
Tas. Mines Dept. A.H. Blissett, 1962
Tas. Mines Dept. Williams & Both Report No.11, 1971
Twelvetrees & Ward, 1910
Plan by Tas. Mines Dept. Waller, 1908

Aberfoyle Exploration Pty Ltd

Geology:	NORTH WEST TASMANIA	Location code:
Drawn: R.J.E.	EXPLORATION LICENCE 47/71	Date: March, 1980
Traced: R.J.E.	Summary Map showing known Silver-Lead Production - Zeehan area	Scale: 1:10, 000
Checked:		Plate No QH 151
Revised by: Date:		


— LEGEND —
Devonian
Db Bell Shale
Df Florence Quartzite
Silurian
Sc Crotty Quartzite
Ordovician
Og Gordon Limestone
Cambrian
€c Crimson Creek Formation
Proterozoic Oonah Formation
M Montana Beds
QS Quartzite & black slate
LQS Quartzite & lt grey slate
Q Quartzite
V Volcanics
Zeehan
QUEEN HILL
MONTANA
SEVERN
GOLF COURSE
POVERTY POINT Open Cut
No 2 MONTANA SHAFT
QUEEN No 4 SHAFT
NEW MOUNT ZEEHAN
DESPATCH FAULT
ADAMS STREET
TARLETON STREET
MAIN STREET
TRENT STREET
EMMA STREET
WILSON STREET
Core Storage
ABERFOYLE EXP. Office
ABERFOYLE HOUSE
SINGLE MENS QUARTERS
Montana Reference Plane (1062m MSL)
Golf Course Reference Plane (1062m MSL)
Severn Reference Plane
Queen Hill Reference Plane
TRIAL HARBOUR ROAD
3480
3040
2620
G.N. M.N.
11°14'00"
Magnetic north correct 1978 annual change easterly by 04'
SCALE
metres 0 20 40 60 80 100 metres
REFER PLATE QH 138 FOR DETAILED LEGEND
Revised by | Date
S.M.R. | 25/1/83
S.M.R. | 29/4/83
Aberfoyle Exploration Pty Ltd
Geology: S.M. Richardson
Drawn: R.J.E.
Traced: J.L.R.
Checked:
Revised by: SMR Date: 2/8/82
NORTH WEST TASMANIA
QUEEN HILL AREA
INTERPRETIVE SUMMARY PLAN
Location code:
Date: February, 1982
Scale: 1: 2,500
Plate No QH 181

80/25	00/25	20/25
80/12	00/12	20/12
80/00	00/00	20/00

Index to adjoining sheets

Aberfoyle Exploration Pty Ltd

NORTH WEST TASMANIA

QUEEN HILL AREA

SURFACE GEOLOGY

Geology: J.R.T.	Location code:
Drawn:	Date: June, 1980
Traced: R.J.E.	Scale: 1:2,500
Checked:	Plate Nº QH161-00/12
Revised by: Date:	


ZEEHAN WESTERN MINE (Pb Ag)
Shaft collar 75' above elevation. Mont #1
1000' vertical shaft, but most are above 300' level.
400-700': no lodes.
At 800', lode 4' wide, stoped over 1000' length.
At 1000', 3 narrow lodes.
Workings full of water.
ZEEHAN WESTERN LTD.
OONAH MINES LTD.
OONAH MINE
Major workings. Extensive adit & shaft to 450'.
Est. collar RL 720. Lodes strike W of N, dip E, except Carbonate Lode.
Faulted {Slide strikes N75W, dip 75°NE (post-mineralisation) 1½' - 2' of crushed rock
GALENA LODE - S of slide, shoot 1L to 5L (≈ 200' vert) - upper levels only.
WEST CARBONATE LODE - {S of slide, strike NE; mixture stannite & siderite
STANNITE LODE (main producer)
N & S of slide
Argentiferous Sn-Cu sulphides (product Cu-Ag matte, Cu-Sn alloy)
Best stopes 3L to 6L (≈ 300' vert.)
. 4L 2½'-6' lode, short (120') stopes.
. 5L 2½'-4' " " "
Lodes graphitic. Well defined bands.
Stannite, pyrite, chalcopyrite, quartz (+ Bi, W, F)
Pbs rare in stannite Lode.
In places, lode developed as overlapping narrow lenses at low angle to strike (p.88)
MONTANA No.1 MINE
1 LEVEL WORKINGS
MONTANA #1 MINE
800' vert. shaft. Est. collar RL680. 1L est. RL 570. 2L est. RL 490.
Complicated extensive underground workings.
Pb-Ag lodes in slates, occasional quartzite - micaceous sandstone
Contemporaneous spilites (spilitic tuffs to north)
Undisturbed strike W of N
dip E of N
4 major faults (SLIDES)
No. 1: Wedge-like, distorted & crushed slate, qtz. stringers & siderite
200' wide at surface. Dip to NE, about 45° (p.80)
100' wide 500' below surface.
FW well defined, HW merging
Lodes do not penetrate fault zone, but are common where dragged against slide.
No. 2: Narrow, 1½ to 3' wide, persisting in depth. Dip to NE.
Takes lode over 8 levels.
No. 3: About 30' broken ground; dip to NE.
No. 4: Position not known; dip to SW.
Lodes occur N & S of fault zones (SLIDES)
Pb-Ag ore in shoots on various levels, but mineral assemblage same, all levels, i.e. not zoned (p.77). However PbS more frequent near slides.
In section, lode appears at successive lenses, varying dimensions.
MAGNETIC NORTH
MONTANA #2 MINE
500' vert. shaft
Lodes worked for PbS
No. 1 lode 6" to 1½', generally poor.
No. 2 lode . stoped over 500' on 3L; lost on 4L
. ore lenses irregular, in pyritic vein (in slates)
. lode on fault line.
In south drive, py lode (No. 2) splits - HW & FW lodes 6'-20' apart
Sth, 3L, pyritic, 3'-4' wide.
* Between No. 1, No. 2 lodes, massive pyrite with mixed silica, siderite (form unexplored in 1910) General increase of pyrite in lower workings.
MONTANA No. 2 MINE
LEVELS 1 & 2 WORKINGS
OONAH MINE
Placer 7
Placer 1,6
BRADSHAWS (BRUCE'S TRIBUTE)
Series of overlapping lenses of pyrite, up to 30' wide.
Lodes adjacent to margin of spilite. Assay 0·8 to 0·4% Sn, trace Cu.
(Mined for H_2SO_4 manufacture)
Absence of defined walls; enclosures of slate within pyrite.
Placer 400W
ZEEHAN MONTANA MINE LTD.
ZEEHAN QUEEN LTD.
QUEEN HILL
G7 G8
G14
CLARKE'S LODE (access from adits & Queen Workings)
At junction spilites and slates
Lode 4½' wide; solid ore 2' wide.
Shoot 200' long; stoped for galena over 100'.
Mined for galena
Lode composite galena-silver-stannite
Note: agglomerate below G3, G4 lode intersection
NEW MT. ZEEHAN SILVER LEAD MNG. CO.
SILVER QUEEN EXT'D.
COMMENTS FROM TWELVETREES, 1910.
HISTORY: Field (Pb Ag) discovered 1887.
Began to close pre-1910.
Valuable minerals, small in quantity in proportion to bulk of lodes.
Old miners believed spilite influenced ore formation (unacceptable to Twelvetrees) and that graphite a bad sign.
ZEEHAN SPILITES
a) Massive: Commonly amygdaloidal, dense, greenish-grey rock with dull lustre. Often traversed by veinlet of chlorite or calcite. Markedly vesicular, with filled vesicles. Amygdales dark green to black, from pinhead to 1/10" size. Disseminated pyrite sometimes visible, sometimes silicified.
b) Breccias: Considerable masses of "breccias and tuffs of varying coarseness". Angular fragments. Pyroclastic origin from thin section. More quartz and feldspar than massive spilites.
c) Dykes: Spilite dyke cuts slates near Zeehan Montana No. 1.
Spilite localities not widespread.
Principally developed within Zeehan Queen, Oonah, Montana and Western Mines.
OTHER PYROCLASTICS (keratophyric tuffs)
Complex character; partly devitrified glass; associated angular fragments of quartz and plagioclase crystals, generally parallel along axis
Distributed in 3 directions radiating from Manganese Hill; (small outcrop of olivine basalt occurs on one of these directions).
QUEEN HILL SLATES, SANDSTONE
On the basis of indistinct traces of organisms, Twelvetrees separates these rocks from all other similar rocks intercalated with spilitic/keratophyric tuffs, etc.
PYRITE - CASSITERITE
In 1910, only occurrence was small vein on Oonah property. But - (p.69) - no analyses to establish presence of cassiterite, bismuth, tungsten or fluorine in (galena-bearing) lodes. (Visible evidence of latter three.)
Property Margin as defined by Joint Venture Agreement
LEGEND.
SP contours
I.P. anomalies
weak
strong
limited to data shown. BMR GEOPHYSICS: 1954, 1963, 1964.
Placer drilling
Proposed C.E.P.L. Drilling 1972
CEPL 1971 Drilling
Property boundary (at 1910)
RECENT ACTIVITY BY OTHERS:
Apollo International Minerals N.L. (at Oonah) *
1969 - 1970 activity:
7000 feet bulldozing
4045 feet diamond drilling
Report:
1) 2 holes, 250' apart; N of mine; indicated 25' lode (?ext. STANNITE LODE);
av. assays: 1·5% Cu
1·1% Sn
3·5 ozs Ag
2) 1 hole, S of mine; below deepest workings; approx. 25' wide. Av. assays: 1·8% Cu
8% Sn
5·4ozs Ag
* On information received November 29, this property may pass to GMNL - CEPL
Current forfeiture application on ML 21M/70 (10 ac.) initiated by GMNL because surface sampling of 3 points within 60 feet in pyritic or siderite/pyrite gave following averages: 15' - 2·4% Sn
11' - 6·0% Sn
9' - 0·5% Sn
ML 21M/70 500' to south
SCALE OF FEET
N.B. Workings location estimated "accurate" within ± 25 feet.
COMINCO EXPLORATION PTY. LTD.
Drawn by: FLH, LVG
Traced by: JB
Checked by:
QUEEN HILL
COMPOSITE PLAN, INCLUDING EXTENT OF WORKINGS AT 1910
(after Twelvetrees)
ZEEHAN
TASMANIA
Location code:
Scale: 1" = 200ft.
Date: Nov. 1971
Plate: QH 19

ZEEHAN

scale : 4 chains = 1 inch.