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DRILLHOLE Nº ZT-82-13 Page 1 of 7 **drill log** metric

PROJECT	ZEEHAN - TASMANIA Nº 7860	ELEVATION		COMMENCED	12-12-82	BORE HOLE SURVEY	EASTMAN SINGLE SHOT CAMERA.										
PROSPECT	OCEANA	DIP COLLAR	−60	COMPLETED	16-2-83	Depth	Dip	Bearing	Depth	Dip	Bearing	Depth	Dip	Bearing			
CO-ORDINATES	3685 N 1250 E	CORE SIZE	HQ, NQ, BQ	TOTAL LENGTH	346 m.	122	58	034	282	60	027·5						
BEARING	090 G 037 M 048 T	LOGGED BY	PAJ	ADD FEB WINDRILL DIAMOND DRILL.		218	60	030	290	59	026						
						250	60	029	317	59	026						

METERAGE From	METERAGE To	DESCRIPTION	MINERALIZATION	SAMPLE Nº	METERAGE From	METERAGE To	METERAGE Length	ASSAYS Cu	Pb	Zn	Ag	Mn
0.00	43.60	HOINA FORMATION. Micaceous light grey to green nodular siltstone, HW to CW, stumpy textured, with minor argillaceous sandstone interbeds. Tectonic breccia's and clay filled crush zones @ 13-16m, 23.3-24.5m, 28.3-29.5m, 33-36.3m. Bedding 20° to c.a. @ 43.5 m.										
43.60	67.00	INTERBEDDED MICACEOUS LAYERED AND MASSIVE SANDSTONES. Layered and massive yellow brown (minor grey) micaceous argillaceous sandstones, minor shales and quartzites, minor zones of nodular argillaceous sandstone. Tectonic breccia's @ 53.2-53.45, 58.3-63.3 (minor malachite staining?). Bedding 15° to c.a. @ 48.00 metres, 10° to c.a @ 65.0 m.	Trace Malachite?									
67.00	80.60	QUARTZ CONGLOMERATE. — GORDON LIMESTONE. White quartz pebbles, with minor Hoina fragments set in a quartz sandstone, muscovite minor argillite matrix. Core very broken. Sequence appears to be recrystallized and silica cemented.	Trace pyrite.									
80.60	95.50	CW QUARTZ GRIT AND ARGILLITES. Yellow to light creamy grey quartz grit containing minor conglomerate fragments and quartz grit set within a clay matrix. Minor sections of HW grey green argillaceous fine sandstone.		91692	91	92	1	80	1000	770	1	150
				91693	92	93	1	210	4200	780	1	70
				91694	93	94	1	350	4300	720	3	110
				91695	94	95	1	470	3700	1900	14	135
				91696	95	96	1	90	1900	140	25	14

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METERAGE From	METERAGE To	DESCRIPTION	MINERALIZATION
95.50	98.00	MOTTLED CLAYSTONE. Mottled grey and crimson coloured claystone.	
98.00	121.30	INTERBEDDED GREY BROWN AND CRIMSON COLOURED CW. CLAYSTONE. Interbedded mottled orange, brown, grey, and minor crimson coloured clays. Minor zones of ironstone (nodular) from 103 - 108 m and 115 - 118 m. Core recovery variable - average 25-30%.	
121.30	131.50	BROWN CLAYSTONE. Ferruginous yellow orange clays, last metre having minor nodules of massive brown goethite.	
131.50	140.50	GREY TO WHITE CLAYSTONE. Light grey to white claystones with minor zones of pale yellow claystones containing minor nodules of goethite.	
140.50	143.60	MOTTLED CLAYSTONE. Mottled brown, red, white claystone.	
143.60	181.50	INTERBEDDED LAMINAR DARK GREY CLAYS AND BROWN SILICIFIED DOLOMITE. Laminar grey to black, argillaceous and sandy clays, showing intense deformation and folding (locally) interbedded with brown ferruginous? massive to weakly laminar and in part brecciated dense dolomite (silicified?) 151.3 - 152.6 m., 152.8 - 166.0 m. Possible relict bedding laminations 37° to ca @ 150 m., 45° to ca @ 169 metres.	Abundant fine grained pyrite in dark clays.

SAMPLE Nº	METERAGE From	METERAGE To	METERAGE Length	ASSAYS Cu	Pb	Zn	Ag	Mn
91697	96	97	1	28	2000	190	4	8
91698	97	98	1	34	2300	40	18	6
91699	98	99	1	80	3800	1700	7	48
91700	99	100	1	160	5200	900	3	50
91774	100	101	1	105	5000	170	2	26
91775	101	102	1	48	1800	420	1	28
91776	102	103	1	100	1400	1400	3	60
91777	103	104	1	100	1600	1600	2	130
91778	104	105	1	75	1900	1400	5	90
91779	105	106	1	70	2900	3400	3	200
91780	106	107	1	60	3100	5100	1	210
91781	107	108	1	80	2200	3400	1	280
91782	108	109	1	42	1350	1200	1	50
91783	109	110	1	70	2100	1300	1	200
91784	110	111	1	80	2600	2250	1	490
91785	111	112	1	120	2600	3400	1	900
91786	112	113	1	70	3000	730	<1	65
91787	113	114	1	110	3200	1300	1	120
91788	114	115	1	130	3300	1900	1	310
91789	115	118	3	110	3700	7000	2	350
91622	118	119	1	60	2400	2050	1	240
91623	119	120	1	50	1300	1500	1	190
91624	120	121	1	60	1750	1750	1	480
91625	121	122	1	90	2250	2350	1	1050
91626	122	123	1	70	2150	3350	1	880
91627	123	124	1	70	2700	3150	1	640
91628	124	125	1	60	2050	1800	1	610
91629	125	126	1	70	1900	2750	3	240
91630	126	127	1	90	3500	3750	2	460
91631	127	128	1	80	2500	3350	1	880
91632	128	129	1	90	2400	3250	1	1000
91633	129	130	1	80	2100	2650	1	1100
91634	130	131	1	80	2500	3000	1	890
91635	131	132	1	44	1550	960	1	420
91636	132	133	1	60	1600	3100	2	960
91637	133	134	1	60	1650	1500	2	220
91638	134	135	1	95	2400	1200	2	210
91639	135	136	1	150	3650	1150	7	160
91640	136	137	1	65	1450	2550	3	540

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METERAGE From	METERAGE To	DESCRIPTION	MINERALIZATION	SAMPLE Nº	METERAGE From	METERAGE To	METERAGE Length	ASSAYS Cu	Pb	Zn	Ag	Mn
181.50	212.80	INTERBEDDED BROWN SILICIFIED		91641	137	138	1	165	2600	2900	2	1050
		DOLOMITE BRECCIA? AND GREY CLAYS.		91642	138	139	1	280	4050	1250	2	300
		Sequence of heavily brecciated, massive,		91643	139	140	1	70	1300	300	15	110
		brown, fined grained dense silicified		91644	140	141	1	34	1550	1000	2	200
		dolomites within a grey clay matrix.		91645	141	142	1	30	1550	1050	3	330
		Minor vughs in dolomite breccia and		91646	142	143	1	80	2300	1700	3	330
		minor quartz grains.		91647	143	144	1	70	1750	1500	3	210
				91648	144	145	1	60	1850	510	10	195
212.80	230.00	DARK GREY GRAPHITIC CLAYSTONE.		91649	145	146	1	80	2050	760	6	260
		Weakly laminar dark grey graphitic and		91650	146	147	1	280	2350	550	105	280
		argillaceous clays containing minor HW		91790	147	148	1	190	3200	110	115	80
		fragments of silicified grey dolomite. Core		91791	148	149	1	38	9700	460	2	130
		between 214.3 - 217.0m, either cavity or		91792	149	150	1	26	2300	3100	1	210
		washed away during drilling.		91793	150	151	1	42	340	6100	1	50
				91794	151	152	1	10	40	3300	1	1.1%
230.00	242.00	HW to CW QUARTZ SILTSTONE AND		91795	152	153	1	16	150	4300	1	1.5%
		INTERBEDDED SANDSTONE.		91796	153	154	1	10	220	5700	2	1.9%
		Mottled grey and brown massive siltstones		91797	154	157	3	6	110	1.05%	2	3.7%
		with brown interbeds of medium grained		91798	157	159	2	6	340	1.65%	2	4.5%
		sandstone.		91799	159	163	4	8	80	1.75%	2	5.5%
				91800	163	166	3	10	34	2.40%	2	4.05%
242.00	253.30	INTERBEDDED GREY WEAKLY SILICIFIED		91801	166	167	1	14	80	3200	2	3.15%
		SILTSTONES AND FINE GRAINED SANDSTONES.		91802	167	168	1	18	40	4000	1	1.6%
		Sequence of siltstones and sandstones		91803	168	169	1	16	60	5400	2	2.4%
		partially silicified with minor zones of		91804	169	172	3	100	1850	2100	3	145
		brecciation and brecciated brown silicified		91805	172	173	1	18	160	1.15%	1	7000
		dolomites towards the base of the unit.		91806	173	174	1	16	110	2.10%	1	1.1%
				91807	174	175	1	26	350	4500	2	140
253.30	255.30	BRECCIA - TECTONIC?		91808	175	178	3	360	1900	2700	4	130
		Angular fragments up to 2cm in width set		91809	178	179	1	40	740	4500	3	125
		within a dark brown silicified argillaceous?		91810	179	180	1	30	390	0.85%	3	1.5%
		dolomite matrix. Breccia is clast support.		91811	180	181	1	20	270	1.10%	2	3.2%
				91812	181	182	1	6	75	1.45%	2	6.0%
255.30	286.90	Pb-Zn MINERALIZATION WITHIN	264 - 286 = 22m	91813	182	183	1	6	34	1.00%	2	6.6%
		SIDERITIC DOLOHITE HOST.	Est @ 10% Pb-Zn.	91814	183	184	1	8	60	7300	2	6.2%
		255.3 - 259.9m : coarse grained siderite,		91815	184	185	1	8	110	6600	2	5.9%
		minor galena in silicified dolomite.		91816	185	186	1	20	200	6300	2	2.3%
		259.9 - 263.0 m : matrix support breccia,		91817	186	187	1	18	110	7200	2	2200
		angular fragments of silicified dolomite,		91818	187	188	1	18	70	7800	2	3.9%

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METERAGE From	METERAGE To	DESCRIPTION	MINERALIZATION
255.3	286.9	CONT: Pb-Zn mineralized siderite in argillaceous silicified dolomite host. 263.0 - 273.5 m: Siderite veinlets and cavity fillings with medium to coarse grained argillaceous recrystallized dolomite, minor galena possibly replacing dolomite. 273.5m - 283.3m: Abundant galena with less dolomite. Siderite as cavity fillings and irregular patches. Galena and less sphalerite is coarse grained and shows evidence of shearing. 283.3 - 286.9 m: Galena becomes less abundant and siderite and dolomite increases.	
286.9	287.2	TECTONIC BRECCIA. Matrix supported, tectonic breccia? with very angular siderite, dolomite, and calcite fragments set in a silicified argillaceous grey dolomite matrix.	
287.2	304.8	MOINA FORMATION. - BRECCIATED SANDSTONE / SPHALERITE MINERALIZED. Brecciated Pelletal grey fine to medium grained, sandstone, recemented matrix of siderite minor sphalerite. Minor tectonic breccias 293 - 295, 296 - 301.5, Lot of Siderite veining in breccias. *NB - Minor redrilled mineralized rock. Bedding 40° to ca@ 301.6m. Core very broken with poor recoveries.	Minor sphalerite.
304.8	305.9	QUARTZ LITHIC CONGLOMERATE. Fine grained quartz, lithic, conglomerate with sandy matrix, minor muscovite. Minor galena and pyrite along fractures.	Minor galena/pyrite along fractures.

SAMPLE Nº	METERAGE From	METERAGE To	Length	ASSAYS Cu	Pb	Zn	Ag	Mn
91819	188	189	1	20	50	4400	2	4.0%
91820	189	190	1	14	28	2700	2	3.6%
91866	190	191	1	16	120	3900	2	3.5%
91867	191	192	1	12	120	5200	2	3.7%
91868	192	193	1	10	140	6400	3	4.1%
91869	193	194	1	10	160	5600	2	3.9%
91870	194	195	1	10	70	3300	2	3.4%
91871	195	196	1	8	55	3400	2	3.9%
91872	196	197	1	12	300	3300	3	3.3%
91873	197	198	1	10	160	4000	2	3.4%
91874	198	199	1	8	120	2800	3	3.6%
91875	199	200	1	14	290	2600	4	2.8%
91876	200	201	1	14	120	2200	4	2.3%
91877	201	202	1	10	300	3200	3	3.6%
91878	202	203	1	10	220	2800	3	2.9%
91879	203	204	1	10	650	2000	4	3.8%
91880	204	205	1	8	440	2600	3	3.8%
91881	205	206	1	8	240	1250	3	3.5%
91882	206	207	1	12	660	2300	3	2.5%
91883	207	208	1	26	1200	4800	5	1.65%
91884	208	217	9	12	190	1400	3	2.95%
91885	217	221	4	12	210	1150	2	1.05%
91886	221	223	2	32	230	2800	2	7300
91887	223	226	3	12	120	3100	2	1.4%
91888	226	227	1	14	230	1300	2	1.65%
91889	227	229	2	16	100	3000	2	1.45%
91890	229	231	2	10	46	4200	2	2.4%
91891	231	232	1	8	42	2600	1	1.4%
91892	232	233	1	16	180	2000	2	1.4%
91893	233	238	5	12	80	1950	1	1.3%
91894	238	240	2	14	330	4600	3	2.6%
91895	240	242	2	12	250	2400	2	1.4%
91896	242	244	2	20	380	6000	3	1.55%
91897	244	245	1	14	460	1750	2	2.7%
91898	245	246	1	20	770	2900	3	2.35%
91899	246	247	1	16	540	2600	2	3.4%
91900	247	248	1	18	330	4300	2	3.3%
91901	248	249	1	14	290	5100	3	3.1%
91902	249	250	1	8	290	4600	3	3.7%

4501122

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METERAGE From	METERAGE To	DESCRIPTION	MINERALIZATION	SAMPLE Nº	METERAGE From	METERAGE To	METERAGE Length	ASSAYS Cu	Pb	Zn	Ag	Mn
305.9	325.0	INTERBEDDED GREY GREEN SILTSTONE MINOR SANDSTONE. Interbedded sequence of grey green slumpy textured micaceous siltstones and beige coloured medium grained sandstones. Minor quartz and siderite veining. Matrix support breccias from 324.7 to 325 with light brown angular sandstone fragments set in a grey siltstone matrix. Bedding 45° to ca @ 318m.		91903	250	251	1	10	300	2200	2	1.85%
				91821	251	252	1	18	205	1.1%	2	2.9%
				91822	252	253	1	12	420	9500	2	3.7%
				91823	253	254	1	14	860	7600	3	3.6%
				91824	254	255	1	10	2500	3000	3	7.2%
				91825	255	256	1	10	7650	3000	6	7.2%
				91826	256	257	1	10	1.55%	2600	10	7.4%
				91827	257	258	1	12	6450	1600	6	7.3%
				91828	258	259	1	10	6850	1250	6	7.9%
				91829	259	260	1	12	1.10%	1350	8	7.9%
325.0	328.6	INTERBEDDED GREY GREEN SHALES AND BROWN SANDSTONE. Interbedded grey green shales and fine grained beige sandstone. Bedding 35° to ca @ 326.5 m. Soft sediment deformation textures prominent.		91830	260	261	1	10	6200	2600	5	6.8%
				91831	261	262	1	12	4450	5300	5	6.1%
				91832	262	263	1	12	7950	3600	6	4.7%
				91833	263	264	1	6	1600	670	2	7.9%
				91834	264	265	1	10	5.15%	3100	23	8.2%
				91835	265	266	1	8	2600	2000	3	7.7%
				91836	266	267	1	8	1.22%	950	6	7.6%
328.6	329.2	POORLY SORTED QUARTZ LITHIC GRIT. Poorly sorted, white quart fragments and honey brown sandstone fragments set within a micaceous sandy matrix. Crude layering at 35° to c.a.		91837	267	268	1	8	1.02%	460	7	7.6%
				91838	268	269	1	8	2.75%	690	15	7.9%
				91839	269	270	1	12	3.05%	1200	31	7.8%
				91840	270	271	1	14	7450	4500	6	7.5%
				91841	271	272	1	14	7650	5500	6	7.6%
				91842	272	273	1	16	2.10%	1950	14	7.4%
329.2	340.7	INTERBEDDED GREY GREEN SILTSTONE AND BEIGE SANDSTONE. Thinly bedded grey green siltstones and medium to fine grained beige sandstones with minor thick interbeds of massive brown well sorted medium grained sandstone. Minor soft sediment deformation. Bedding 338.5 m → 45° to ca. Minor quartz siderite veining – trace sphalerite.	Trace sphalerite in siderite veins.	91843	273	274	1	55	11.70%	1900	105	6.1%
				91844	274	275	1	75	7.75%	1550	75	7.6%
				91845	275	276	1	10	3.85%	590	23	7.9%
				91846	276	277	1	12	4.85%	460	25	7.7%
				91847	277	278	1	20	6.45%	740	36	7.1%
				91848	278	279	1	22	9.90%	1100	90	6.5%
				91849	279	280	1	12	19.30%	2600	200	5.8%
				91850	280	281	1	230	38.90%	5.6%	400	3.6%
				91851	281	282	1	24	16.00%	4100	135	7.4%
				91852	282	283	1	80	23.70%	1.70%	200	6.2%
				91904	283	284	1	12	3.75%	5300	20	7.1%
340.7	344.5	INTERBEDDED SILTSTONES AND SNDSTONES. Similar to above units with patches of medium grained sandstone partially replaced by crystalline aggregates of pink sphalerite and minor pyrite. Zone	2cm wide galena sphalerite – massive at 341 m. Minor disseminated Sphalerite at 342±2%	91905	284	285	1	16	1.50%	7600	12	4.7%
				91906	285	286	1	6	2.80%	2300	19	5.9%
				91907	286	287	1	8	1500	1800	3	3.6%
				91908	287	288	1	8	1900	1800	3	4.2%
				91909	288	289	1	8	2200	1300	3	3.3%

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metric

METERAGE From	METERAGE To	DESCRIPTION	MINERALIZATION
340.7	344.5	CON'T : later cut by siderite veinlets carrying galena and pale yellow sphalerite. Core badly broken. Minor 2cm wide massive galena and sphalerite (sheared) intercept at 341 metres.	
344.5	346.0	QUARTZ LITHIC GRIT. Coarse grained white quartz and honey brown sandstone, minor siltstone fragments set in a poorly sorted micaceous sand matrix.	
		END OF HOLE.	

SAMPLE Nº	METERAGE From	To	Length	Cu	Pb	Zn	Ag	Mn
91910	289	292	3	8	1250	1700	2	31%
91911	292	293	1	10	1100	1100	2	4.2%
91912	293	294	1	10	1100	2400	2	4.4%
91913	294	295	1	16	1.55%	3800	7	4.6%
91951	295	296	1	30	6500	9000	5	3.8%
91952	296	297	1	24	720	7800	2	2.95%
91953	297	298	1	10	170	4600	1	1.45%
91954	298	299	1	10	560	2200	1	2200
91955	299	300	1	14	1200	1700	1	9300
91956	300	301	1	30	8700	1.10%	9	1.15%
91957	301	302	1	16	1300	1950	2	4800
91958	302	303	1	12	940	2900	2	5300
91959	303	304	1	10	550	1350	2	7400
91960	304	305	1	140	2500	2800	37	5200
91961	305	306	1	18	4800	670	6	7100
91962	306	307	1	8	580	480	2	1200
91963	307	308	1	10	470	1050	2	2250
91964	308	309	1	10	550	1800	2	4900
91965	309	310	1	14	730	1700	3	3300
91966	310	311	1	12	410	850	1	4000
91967	311	312	1	8	430	1150	2	4700
91968	312	313	1	110	490	700	2	4700
91969	313	314	1	10	830	1200	2	3100
91944	314	315	1	8	350	2900	1	7200
91945	315	316	1	10	380	600	1	5500
91946	316	317	1	6	260	540	1	5500
91947	317	318	1	8	460	920	1	7600
91948	318	319	1	6	340	580	1	5200
91949	319	320	1	8	100	520	1	2200
91950	320	321	1	8	450	1700	1	1450
91970	321	322	1	195	1250	3400	8	3650
91971	322	323	1	14	730	870	3	5300
91972	323	324	1	26	750	1150	3	6700
91973	324	325	1	70	580	1150	8	7700
91974	325	326	1	140	270	1100	4	1750
91975	326	327	1	14	50	580	2	750
91976	327	328	1	60	180	300	2	1700
91977	328	329	1	46	50	330	1	1100
91978	329	330	1	12	46	470	1	680

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drill log metric

METERAGE From	METERAGE To	DESCRIPTION	MINERALIZATION	SAMPLE Nº	METERAGE From	METERAGE To	METERAGE Length	ASSAYS Cu	Pb	Zn	Ag	Mn
				91979	330	331	1	24	60	260	1	880
				91980	331	332	1	48	90	510	1	1300
				91981	332	333	1	26	46	280	1	620
				91982	333	334	1	24	44	140	1	850
				91983	334	335	1	34	110	330	3	1200
				91984	335	336	1	22	5700	2.20%	3	1.05%
				91985	336	337	1	10	700	3100	2	8600
				91986	337	338	1	22	560	1400	3	4400
				91987	338	339	1	18	200	700	2	1200
				91988	339	340	1	20	230	540	2	1500
				91989	340	341	1	12	520	1100	2	5100
				91990	341	342	1	155	1.90%	1.90%	63	1.10%
				91991	342	343	1	20	1750	1.15%	5	1.30%

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