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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1

TENEMENT NAME TENTH LEGION No. 51.M/75.

PLAN – MAP REFERENCE TASH 2 TASH 16

CO-ORDINATES 3551.02N 5029.1E AZIMUTH 315° GRID DRILLERS S.RIMAK COMMENCED 14.3.81 DEPTH 134 m HOLE No. THC4

RL COLLAR 223.6 m INCLINATION -50° DRILL TYPE BOYLES 37 COMPLETED 20.3.81 CASING LEFT 4m NW (collar) DPO No(s) 26669/26672 26671

DEPTH From (M)	DEPTH To(M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....) Cu	Pb	Zn	Ag	Sn	W	Au
			NQ	NC	0-4.0m TRICONE DRILLED – NO CORE.				GRIND		SAMPLES						
4.0	7.0	2.6		Cst	4.0 – 24.35 CALC SILICATE ROCK	Minor chlorite-epidote veining	869962	4.0	9.5	5m	27	23	180	<1	8	55	
7.0	8.5	1.5			Bone coloured f.gr tremolite-diopside	7.7m Bedding 40°		9.5	14.5	5m	38	9	100	<1	6	40	
8.5	10.5	1.9			assemblage, with patches of pinkish brown and	Extensively brecciated and disrupted		14.5	19.5	5m	26	10	103	<1	4	50	
10.5	13.5	3.0			green well bedded more diopside	– the white tremolite alteration		19.5	24.4	4.9m	130	14	500	1	<4	140	
13.5	16.0	2.5			rich material 0.3 – 1.0m. Some epidote	appears to post-date the green and brown	932296	10									
16.0	19.5	3.4			veining.	material. Some thin calcite stringers	297	22	THIN		SECTION		SAMPLES.				
19.5	22.5	2.9			Gradually becomes greener and more	and segregations	298	25									
22.5	25.5	2.9			chloritic and altered with depth												
25.5	28.5	3.0			(after about 16 m) – grossly brecciated												
28.5	31.5	3.0			and metasomatised fabric.												
31.5	34.5	2.9			Contact 65°				CUT		SAMPLES.						
34.5	37.5	3.0		Css	24.35 – 31.9 CHLORITE-RICH CALC	Grossly brecciated, metasomatised	877675	24.4	26.0	1.6	5	25	200	×	30	×	
37.5	40.5	2.8			SILICATE ROCK.	fabric – totally recrystallised.	676	26.0	26.6	0.6	5	15	150	×	3	×	×
40.5	43.5	3.0			Dark green coarsely crystalline chlorite	24.35 – 26.0 no obvious mineralisation	677	26.6	26.9	0.3	5	20	275	0.5	25	×	
43.5	46.5	3.0			in interstices of white crystalline	26.0 – 26.5 Granular mag with chlorite	678	26.9	27.2	0.3	5	20	90	×	6	×	
46.5	49.5	2.7			tremolite with recrystallised white	10%	679	27.2	27.8	0.6	5	20	155	×	7	×	
					residual calcite	26.5 – 26.9 Mag 70-80%, green serpentinite	680	27.8	28.4	0.6	×	10	115	×	7	×	0.008
						matrix. Py 1-2%.	681	28.4	29.6	1.2	×	15	185	×	10	×	
						26.9-27.5 Pinkish brown crystalline garnets	682	29.6	31.2	1.6	×	15	215	×	10	×	
						15% 20%	683	31.2	32.6	1.4	25	30	740	×	15	×	
						27.5 – 28.0 Granular mag with chlorite, 10%.											
						28.0 – 31.9 Patches of very crystallic											
				↓	Contact 75°	chlorite, mag rare, trace trace py.											
				Csd	31.9 – 47.90 CALC SILICATE ROCK?	31.9 – 35.1 Major epidote veining	684	32.6	34.1	1.5	10	20	120	×	10	×	×
					Medium green f.gr diopside rich	and alteration. Sparse thin calcite veins.	685	34.1	35.3	1.2	5	45	115	×	10	×	
					matrix, with paler mottlings (tremolite?)	35.1 – Extensively brecciated, with			GRIND		SAMPLES						
					and brownish portions – possibly	greenish alteration proceeding along	869966	35.1	40.1	5.0	160	9	166	1	4	165	
					idocrase?; or more sediment rich	fractures. Little obvious mineralisation	967	40.1	44.0	3.9	60	5	107	<1	6	80	
					portions – less altered.	, parts of the rock have a 'spotted' fabric	968	44.0	47.9	3.9	63	14	193	1	<4	60	
				↓	35.4 Bedding? 70° TCA	Patches of green crystalline chlorite occur rarely.	932299	43.2	THIN		SECTION		SAMPLE				

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C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 2
TENEMENT NAME TENTH LEGION No. 51M/75
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC4
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by:) Cu	Pb	Zn	Ag	Sn	W	Au
49·5	52·5	2·5		Cst	47·3 Bedding 60° Contact 60° 47·90 – 52·9 CALC SILICATE ROCK.	No obvious mineralisation; pervasive calcite stringers.	877686	47·9	50·7	2·8	15	40	150	×	35	10	
52·5	55·5	3·0			Pale green and bone white f.gr.	48·0 – 48·5 Pink cryptollic garnets with	687	50·7	52·9	2·2	5	20	125	×	10	×	
55·5	58·5	2·8			? tremolite – diopside rock, very similar	epidote 20-25%, minor calcite veining.											
58·5	61·5	3·0			to 4·0 – 24·35m. Excessive yellow-green												
61·5	64·5	2·8			epidote alteration and veining, esp.												
64·5	67·5	3·1			51·3 – 52·9m.												
67·5	70·5	2·8			Contact 68°												
70·5	73·4	3·1		Css	52·9 – 57·7 CALC SILICATE SKARN	52·9 – 53·5 Po diosem as small blebs, 3%	688	52·9	53·5	0·6	160	25	435	×	×	×	×
					Granular grey-green rock – mainly diopside	53·5 – 54·9 Minor epidot, chlorite	689	53·5	54·9	1·4	50	40	760	0·5	15	×	
					, with extensive chloritic alteration.	54·9 – 55·4 Mag diosem along fractures, 10%	690	54·9	55·4	0·5	180	90	1·3%	0·5	15	15	
					Mottled appearance, with minor residual	; with sp 3-5%.											
					intervals of 47·9 – 52·9, above	55·4 – 56·1 Irregular masses of mag 40%	691	55·4	56·1	0·7	75	90	2·4%	×	15	×	
					Contact 35° 55·4 – 56·1 Magnetite with serpentinite	, sp 7-10% as interstitial blebs											
					60-80%.	56·1 – 56·9 Mag, diosem, 5-7%; with po	692	56·1	56·9	0·8	450	40	6900	×	15	×	×
						2-5%; py 1-2% diosem and also in small											
						calcite – sp veins 1-2%.											
					Contact 80°	56·9 – 57·7 Trace po	693	56·9	57·7	0·8	50	30	1650	×	35	×	
				lst/cst	57·7 – 73·0 ALTERED LIMESTONE	57·7 – 59·6 Very finely diosem po 5%	694	57·7	59·1	1·4	65	35	640	×	6	×	
					Grey finely banded impure recrystallised	59·6 – 65·4 Serpentinite 10-20% of rock	695	59·1	59·6	0·5	35	20	140	×	×	×	
					limestone, serpentinised, with bands of	; rare traces diosem po.	696	59·6	61·0	1·4	5	35	210	×	4	×	×
					yellow and green serpentinite up to	65·4 – 67·2 Po in small veinlets 2-3%,	697	61·0	61·4	0·4	15	25	105	×	×	×	
					10 cm thick, usually at 70° LCA. In places	locally some mag. veinlets 1-2%	698	61·4	62·3	0·9	5	40	135	×	7	×	
					totally altered to bone white and green	67·2 – 67·6 Black chert band – rare trace py.	699	62·3	63·2	0·9	×	25	140	×	6	×	
					calc silicate assemblages for up to 1m.	67·6 – 68·0 Green banded calc silicate, 50°	700	63·2	63·8	0·6	×	20	60	×	4	×	×
					Very distinctive 'stripey' rock.	; trace py, marcasite along banding.	701	63·8	64·5	0·7	×	30	115	×	4	×	
					The grey carbonate intervals usually have	68·0 – 6 Magnetite/serpentinite banding 50°	702	64·5	65·4	0·9	5	25	385	×	8	×	
					up to 5% very finely diosem po, which	to LCA, 35% of rock. Trace sp?	703	65·4	66·1	0·7	100	30	3500	×	25	×	
					makes the rock magnetic.	69·6 – 71·7 Very finely diosem mag in	704	66·1	67·2	1·1	60	15	330	×	25	×	×
					Most banding 80-85° LCA	lst 5-7%, locally 10-15%.	705	67·2	67·6	0·4	5	10	60	×	×	×	
					65·4 – 73·0 Greater percentage of calc silicate	71·7 – 73·0 Calc silicate rock, minor	706	67·6	68·0	0·4	35	650	600	1·0	25	10	
					rock – 80% overall	mag in grey bands to 5cm.	707	68·0	68·9	0·9	90	225	1800	1·0	50	×	

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C.R.A. EXPLORATION PTY. LIMITED
DRILL CORE LOG

SHEET No. 3
TENEMENT NAME TENTH LEGION No. 5IM/75
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. THC4
RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by ANALABS) Cu	Pb	Zn	Ag	Sn	W	Au
					Contact 72°												
73·4	76·5	3·0		S/M	73·0 – 80·9 SERPENTINITE/MAGNETITE	73·0 – 73·4 Mag 10%	877708	68·9	69·6	0·7	10	85	340	x	25	x	0·008
76·5	79·3	2·8			finely banded green (serp), white (carbonates	73·4 – 75·1 Mag 40%, with green serp and	709	69·6	70·1	0·5	15	115	380	x	7	x	
79·3	82·4	2·8			and residual minerals) and black (mostly mag)	white residual minerals.	710	70·1	71·7	1·6	20	80	590	x	7	x	
82·4	85·3	3·0			rock, rather incompletely altered, with up	75·1 – 77·5 Mag 20-30%, variable 10-50%	711	71·7	73·0	1·3	5	90	600	x	60	x	
85·3	88·3	3·2			to 0·6 m bands of mag/serp alternating	, with bottle green serp or dissem in pale	712	73·0	73·4	0·4	5	45	490	x	40	x	x
88·3	91·5	3·4			with thinner banded mixtures of all three.	green serpentinised carbonates.	713	73·4	75·1	0·7	30	90	560	x	60	x	
91·5	95·5	3·0				77·5 – 78·3 Mag 10% in serp stockwork within	714	75·1	76·2	1·1	60	1000	365	5·0	140	x	
95·5	98·5	3·0				bone white calc-silicates	715	76·2	77·5	1·3	75	700	490	5·0	140	x	
98·5	101·5	3·0				78·3 – 78·9 Mag 40% in green serpentinite	716	77·5	78·3	0·8	25	155	620	x	65	v	x
101·5	104·5	3·0				78·9 – 79·4 Mag 15%, finely dissem in calc silicates	717	78·3	78·9	0·6	35	40	225	x	50	x	
104·5	107·5	3·0				79·4 – 80·9 Mag 25-30% in serpentinite (80 cm	718	78·9	79·4	0·5	x	50	175	x	30	x	
107·5	110·5	3·0			Contact 60°	bands; overall 15-20%.	719	79·4	80·2	0·8	10	95	390	x	55	x	
110·5	113·5	3·0		S/Lst	80·9 – 87·25 SERPENTINISED LIMESTONE	80·9 – 82·6 Mag 1-2% in discrete zones	720	80·2	80·9	0·7	235	620	9500	4·0	120	25	0·025
					White carbonate rich rock, with minor	, some dissem. blebs. Trace py in thin veinlets	721	80·9	82·3	1·4	5	50	220	0·5	60	20	
					intervals of bony white calc-silicate	82·6 – 87·25 Rare blebs magnetite (trace)	722	82·3	83·9	1·6	x	65	500	x	x	x	
					minerals, highly contorted grossly banded	; even more rare thin py veinlets.	723	83·9	85·5	1·6	x	50	240	x	20	x	
					fabric with extensive yellowish greeny brown		724	85·5	87·3	1·8	x	40	470	x	5	x	0·017
					serpentinite in 5mm → 10 cm bands throughout.													
					? Possibly the calcite is an alteration												
					product associated with the serpentinisation												
					of a calc silicate rock?.												
					Contact 65°		725	87·3	88·5	1·2	5	30	80	x	15	x	
				Cst	87·25 – 92·6 CALC SILICATE ROCK.	87·25 – 91·3 Traces of mag, po, sp	726	88·5	89·9	1·4	5	30	180	x	25	x	
					Bone coloured diopside/tremolite rock	associated with sparse serpentinite	727	89·9	91·3	1·4	35	50	2500	x	20	x	
					, banded 40-60°, minor dark (chloritic?)	bands.											
					alteration along small fractures	91·3 – 92·6 Pyrrhotite in bands to 15cm	728	91·3	92·2	0·9	260	40	290	x	15	x	0·008
					Some minor grey banded lst interbeds	with epidote, partially degraded to py	729	92·2	94·1	1·9	35	40	750	x	20	x	
					Contact 70°	10-12%.	730	94·1	95·0	0·9	5	30	85	x	15	30	
				Lst/(S)	92·6 – 113·0 ALTERED LIMESTONE	92·6 – 96·5 1-2% finely dissem po, mag?	731	95·0	95·4	0·4	5	45	65	x	x	x	
					See 57·7 – 73·0 for description.	96·5 – 98·0 5% finely dissem po, py 1%, mag?	732	95·4	96·5	1·1	20	45	70	x	10	20	0·017
						98·0 – 99·5 Mag, dissem, 10%; po 2-3%, py(tr)	733	96·5	98·0	1·5	20	50	155	x	7	x	

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 4

TENEMENT NAME TENTH LEGION No 5IM/75

PLAN – MAP REFERENCE

CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. TLC4

RL COLLAR INCLINATION DRILL TYPE COMPLETED CASING LEFT DPO No(s)

DEPTH From (M)	DEPTH To(M)	Core Rec. (M)	Core Size	Graphic Log	CORE DESCRIPTION	SPECIAL FEATURES Weath, Alteration, Fracturing, Veining, Mineralization	Sample No.	From (M)	To (M)	Rec (M)	ASSAY VALUES (Analysed by.....) Cu	Pb	Zn	Ag	Sn	W	Au
113·5	116·5	3·0			99·5 - 101·3 Silicified zone with 15% po,	partially degraded to py.	877734	98·0	99·8	1·8	15	50	320	×	30	×	
116·5	119·5	3·0			101·3 - 106·2 Grey spotted carbonate	101·3 - 106·2 rare po in carbonates, some	735	99·8	101·3	1·5	165	130	4200	0·5	70	30	
119·5	122·4	2·7			, not so well banded, extensively	rare blebs magnetite	736	101·3	102·7	1·4	25	40	350	0·5	40	×	0·050
122·4	125·2	3·0			serpentinised - yellow and brown serp > 50%	106·2 - 113·0 Minor mag veining, some	737	102·7	104·5	1·8	×	35	85	×	15	×	
125·2	128·5	3·5			of rock.	very finely disem mag; trace po.	738	104·5	106·2	1·7	10	40	150	×	15	×	
128·5	131·5	3·2			106·2 - 113·0 Greater percentage of lst, again		739	106·2	107·4	1·2	×	30	75	×	15	×	
131·5	134·0	2·3			moderately well banded at approx 60°.		740	107·4	108·9	1·5	5	40	160	×	15	×	0·017
				↓	Contact		741	108·9	110·3	1·4	20	35	90	×	35	×	
				Css	113·0 - 116·2 CALC SILICATE SKARN ROCK	113·0 - 113·6 Po disem 10-15%, 1-2% sp	742	110·3	110·8	0·5	5	45	75	×	30	×	
					Green, pink and white F.gr. calc silicate	, trace py in veinlets.	743	110·8	112·1	1·3	15	35	90	×	10	×	
					rock, extensively silicified and	113·6 - 114·3 Minor disem mag in more	744	112·1	113·0	0·9	35	30	120	×	55	×	0·025
					converted to a grey massive rock	finely banded portions.	745	113·0	113·6	0·6	215	50	2150	×	45	40	
					with disem po.	114·3 - 116·2 Po disem in 10-30 cm intervals	746	113·6	114·3	0·7	10	55	360	0·5	310	×	
						, 10-15%, elsewhere 1-2%. Patchy disem	747	114·3	115·3	1·0	105	35	830	×	170	×	
						mag. Minor haematite; and traces py in	748	115·3	116·2	0·9	125	190	3500	2·0	230	15	0·008
				↓	Contact 85°	fine calcite veinlets (with mag).	749	116·2	117·0	0·8	15	40	195	×	35	×	
				Csd	116·2 - 134·0 ?CALC SILICATE ROCK.	116·2 - 117·0 Weak trace py; fine calcite veins	750	117·0	117·7	0·7	20	30	160	×	130	×	
				(ss/sh?)	Brown and green thinly bedded	117·0 - 117·7 Green epidote rich rock	751	117·7	119·0	1·3	15	30	60	×	10	×	
					rock, hard tough and very fine grained	117·7 - 119·0 Trace py, weak epidote veining	752	119·0	119·8	0·8	5	20	700	×	130	×	×
					Irregular patches of grey green to	119·0 - 120·3 Green epidote rich rock	753	119·8	120·9	1·1	65	130	670	1·5	290	10	
					white alteration (epidote, chlorite)	120·3 - 120·8 po, py disem 10-15%	754	120·9	121·8	0·9	10	35	170	0·5	25	×	
					associated with fracturing / veining.	120·8 - 121·8 Green epidote veining (weak) tr py.	877755	121·8	123·1	1·3	25	30	990	0·5	120	×	
					Most bedding angles 80-85°	121·8 - 123·1 Epidote rich, 2-5% po (disem)	932114	123·1	125·0	1·9	15	10	170	×	30	×	
					128·7 - 131·1 More greenish diopsidic	minor calcite - py veinlets.	115	125·0	126·8	1·8	30	15	170	×	40	×	
					rock	123·1 - 130·6 Brown rock, extensively	116	126·8	129·0	2·2	60	10	90	×	25	×	×
					131·1 - 134·0 Very well bedded pale	fractured - weak stockworks of dark	117	129·0	130·3	1·3	25	20	215	×	30	200	
					brown and maroon laminae - sediments?	alteration products, rare epidote, rare	118	130·3	131·0	0·7	65	20	1900	×	95	15	
					133·0 Bedding 80°	blebs py. Some ultrabic disem py.?	119	131·0	132·4	1·4	90	15	60	×	30	×	
						130·6 - 130·9 5-7% disem po with epidote, trace sp.	120	132·4	134·0	1·6	85	10	50	×	25	×	×
						130·9 - 134·0 py, ~~po~~ as bedded	932300	114·8	THIN SECTION SAMPLES.								
				↓	END OF HOLE 134·0 m	laminae and fine stringers; 5-7%.	301	134·0									

8000 0100