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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 1

TENEMENT NAME TENTH LEGION No 5IM/15

3688·7N

PLAN – MAP REFERENCE TASH 2 TASH 15

CO-ORDINATES 5268·20E AZIMUTH 330° GRID DRILLERS S. RIMAK COMMENCED 23·4·81 DEPTH 150·9m. HOLE No. TLC8

RL COLLAR 229·34m INCLINATION -50° DRILL TYPE BOYLES 37 COMPLETED 6·5·81 CASING LEFT NIL DPO No(s) 30102, 30104, 30103

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
				nc	TRICONED TO 6.0m - NO CORE												
6·0	7·0	0·1	NQto	?M	6·0 – 15·0 MAGNETITE	6·0-15·0 Extremely weathered -	932178	8·1	10·5	0·7	200	25	800	2·5	10	×	
7·0	8·0	0·1	47·0m		Only core recovered fragments of	residual magnetite, porous with											
8·0	10·5	0·7			washed magnetite - probably subcrop	red and brown interstitial clay.											
10·5	13·0	—			rubble for the major part, but some												
13·0	15·0	0·2			in situ material that has been	Weathered and broken with high											
15·0	16·5	0·9			cored and the clay matrix washed	core losses to ≑38·6m.											
16·5	18·0	0·4			away.												
18·0	19·5	0·5		?Css	15·0 – 16·5 CLAY WITH MAGNETITE		179	15·0	16·5	0·9	525	25	1575	2·5	20	140	
19·5	21·0	0·6			Brown banded extremely weathered												
21·0	22·5	0·3			rock - some Mn and ~2% very												
22·5	24·0	0·3			fine grained magnetite Banding 60° LCA												
24·0	25·5	0·4			16·5 – 18·0 CLAY		180	16·5	18·0	0·4	425	25	675	×	60	100	0·125
25·5	27·0	0·9		?Css	Yellow soft, crumbly, silty clay.												
27·0	28·5	1·5		M	18·0 – 22·5 MAGNETITE		181	18·0	19·5	0·5	475	125	500	×	10	×	
28·5	30·0	1·4			Black massive soft crumbly		182	19·5	21·0	0·6	425	25	450	×	10	×	
30·0	31·5	1·5			weathered magnetite, some hard		183	21·0	22·5	0·3	75	25	600	2·5	25	×	
31·5	33·0	1·5			crystalline intervals.												
33·0	34·5	1·5			21·0 – 22·5 Black soft friable												
					magnetite with ? Mn oxides 5·5%.												
				Css	22·5 – 53·6 WEATHERED CALC		184	22·5	24·0	0·3	550	100	1450	×	35	×	0·025
					SILICATE		185	24·0	25·5	0·4	450	25	1725	2·5	30	×	
					22·5 – 28·2 Dark brown ochreous	22·5 – 28·2 Dark brown colour due	186	25·5	27·0	0·9	825	25	7950	2·5	20	×	
					weathered rock, some ?Mn oxides	to Mn oxides? Has 2-3% finely	187	27·0	28·5	1·5	250	×	1·47%	2·5	4	×	
					, weakly banded - poorly defined	dissem mag.	188	28·5	30·0	1·4	50	×	9400	2·5	×	×	0·008
					parting at 70° LCA.												
					28·2 – 33·4 Pale brown/cream friable	28·2-33·4 traces magnetite, some	189	30·0	31·5	1·5	75	25	1·26%	×	×	×	
					sandy textured weathered rock	extremely weathered ? serpentinite	190	31·5	32·9	1·4	200	×	9550	2·5	7	×	
					- granular calc-silicate skarn analogous	stringers and traces weathered ?epidote.	191	32·9	33·6	0·7	750	×	9650	×	30	20	
					to that beneath the upper magnetite												
					lens in TLC 3?												

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 2

TENEMENT NAME TENTH LEGION No. 6IM/75

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. TLC 8

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		
34·5	35·8	0·4			31·4 – 33·4 Inter-bedded brown/cream		932192	33·6	34·5	0·9	625	×	6750	2·5	5	×	0·008		
35·8	37·3	0·3			sandy textured material and thinly		193	34·5	35·8	0·4	300	×	5950	2·5	×	×			
37·3	38·6	0·8			laminated dark chocolate brown		194	35·8	36·1	0·3	150	25	1725	2·5	×	×			
38·6	39·8	0·6			manganiferous clay as for 22·5-28·2		195	36·1	38·6	0·8	100	×	2100	2·5	3	×			
39·8	41·0	1·2			- originally Css/Cst, inter-bedded?		196	38·6	40·4	1·2	25	300	650	2·5	20	×	0·017		
41·0	44·0	2·8			33·4-45·2 White calc silicate rock	33·4-45·2 patches & coarsely	197	40·4	41·9	1·5	25	25	525	2·5	8	×			
44·0	47·0	3·0			extensively altered, with irregular patches	crystalline chlorite, and epidote	198	41·9	43·8	1·9	25	×	425	×	15	×			
47·0	48·5	1·4			& chloritic alteration and epidote	veinlets. Traces mag, sp?	199	43·8	45·2	1·4	25	×	275	×	10	×			
48·5	51·5	3·0			- similar rocks occur in TLE 3 28-45m		200	45·2	47·0	1·8	50	×	375	2·5	9	×	×		
51·5	54·5	3·0			and the upper part of TLC 4.														
54·5	57·5	3·0			45·2 – 47·0 Distinct breccia fabric	45·2 – 47·0 – No obvious mineralisation													
57·5	60·5	3·0			- rounded clasts of calc silicate in a	47·0 – 51·4 – Minor chlorite-epidote													
60·5	63·5	3·0			grey chloritic matrix with a hard	veining													
					black mineral in interstices. 5-7%.	50·9-51·2 Zone of po, py, marcasite	GRIND SAMPLES.												
					47·0 – 51·4 As above 33·4-45·2, but	with mag and chlorite : trace sp, 70° LCA.	932763	47·0	50·6		400	65	570	0·8	×	×			
					the alteration acquires a distinctly		764	50·6	53·6		790	21	6400	0·5	×	55			
					banded character – 5mm – 25cm														
					bands @ 70° LCA.														
					51·4 – 53·6 Massive crystalline mottled	51·4-53·6 traces py, chlorite, one													
					green and white calc silicate skarn	magnetite zone – 3cm at 51·7m.													
					rock – dense and heavy.														
					Contact 80°		CUT SAMPLES												
				S/M	53·6 – 63·2 ? SERPENTINITE WITH MAGNETITE		932135	53·6	54·9	1·5	600	200	3·0%	×	10	×			
					Pale yellow-green(?) serpentinised bgr	53·6 – 58·0 Mag disseminated 30-40%;	136	54·9	55·6	0·7	175	150	9600	×	15	×	×		
					calc silicate matrix with bands of	variable 10-15% to 80-90% for a few	137	55·6	56·5	0·9	825	75	2·2%	×	8	×			
					crystalline black magnetite distributed	cm. Sp variable throughout trace – 10%,	138	56·5	58·0	1·5	750	100	2·71%	×	10	×			∞
					throughout 30-40%.	2-3% overall.	139	58·0	58·9	0·9	700	125	4·26%	2·5	10	×			∞
						58·0-58·9 Dark green serpentinite	140	58·9	60·1	1·2	625	125	2·38%	×	15	×	×		∞
						matrix, mag and sp as above.	141	60·1	61·5	1·4	350	100	1·35%	×	15	×			0·0
						58·9 – 63·2 As above, sparse calcite	142	61·5	62·4	0·9	575	250	1·68%	2·5	20	×			0·0
						stringers	143	62·4	63·1	0·7	200	175	8300	2·5	15	×			

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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. T.L.C.8.

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
63·5	66·3	2·8		Csd	63·2-65·3 CALC SILICATE ROCK	63.2-64.6 mag 2-3%, trace sp, in blebs	932144	63·1	64·6	1·5	25	50	1375	×	×	×	×
66·3	69·0	2·6			Green, brown and white banded calc	and stringers.	145	64·6	65·0	0·4	175	125	3.81%	×	6	×	
69·0	72·5	3·4			silicate rock, which has been subjected	64.6-65.0 Serpentinite band with	146	65·0	65·3	0·3	575	100	4300	×	×	×	
72·5	75·5	3·5			to minor alteration/metasomatism - some	40% mag, sp 2-3% in central											
75·5	78·5	3·0			serpentinite bands and stringers	65.0-65.3 trace mag, garnets.											
78·5	81·0	2·7			Contact 65°												
					65·3-68·2 SERPENTINISED CALC SILICATES												
					WITH MAGNETITE.												
				S/M	65·3-66·1 Dark green serpentine with	65.3-66.1 py 1%; trace sp.	147	65·3	66·0	0·7	250	75	8200	×	8	×	
					black magnetite 30%. Banded 65°		148	66·0	66·9	0·9	150	100	1400	×	9	×	×
				Cst/S	66·1-68·2 Bone white calc silicate	66.1-68.2 – py 3-5%, in irregular bands	149	66·9	68·2	1·3	575	75	6150	×	9	×	
					with green/grey serpentinised intervals: mag.	to 2cm thick.											
					10%: Banded 60°												
					Contact 70°												
				Css	68·2-72·7 CALC SILICATE SKARN	68.2-70.6 mag 1%, py 1-2%, strong	150	68·2	69·0	0·8	250	150	5750	2·5	×	×	
					White fine grained rock with irregular	trace sp → 1%	151	69·0	70·6	1·6	75	175	5900	×	×	×	
					bands and patches to 2cm of dark	70.6-72.7 Sp locally in 10 cm intervals											
					green serpentinite or white calcite.	to 15%, overall 1-2%, mag 2-3% assoc.	152	70·6	71·6	1·0	75	100	1.41%	×	3	×	×
					"Altered 'Cst' type of calc-silicate.	with serpentine, blebs disseminated py. to 1%.	153	71·6	72·1	0·5	×	75	1600	×	7	×	
					72·7-85·7 CALC SILICATE ROCK	72.7-73.9 magnetite 1-2% in fine stringers	154	72·1	72·7	0·6	50	325	5400	×	×	×	
					Bone white f.gr. rock with weak	, sp 1-2%											
					sporadic serpentinite alteration.	73.9-75.0 Finely disseminated mag 5-7%	155	72·7	73·9	1·2	25	50	1975	×	5	×	
				Cst/Lst	73·9-75·0 Altered limestone – remnant 2×1cm	in limestone; trace sp.	156	73·9	75·0	1·1	25	50	2500	×	4	×	0·008
					lenses of grey limestone surrounded by												
					bands of green serpentinite and white calc-silicates.												
				Cst	75·0-75·8 Bone and cream calc silicate	75.8-75.8 trace magnetite, garnet.	157	75·0	75·8	0·8	25	50	225	×	6	×	
					as above.		158	75·8	77·4	1·6	50	450	725	5·0	4	×	
				Css	75·8-77·6 Qtz-epidote-garnet rock	75.8-77.6 Epidote 30% along fractures	159	77·4	78·8	1·4	25	1175	375	5·0	10	×	
					-alteration stockwork.	, with garnet 10% and residual white and	160	78·8	79·1	0·3	100	275	1·36%	2·5	7	×	0·008
				Cst	77·6-81·3 Bone and greenish white calc	greyish pink qtz. Traces disseminated mag.	161	79·1	80·2	1·1	75	×	425	×	10	20	
					silicate rock with minor serp/mag banding to 30°	77.6-81.3 mag 1-2% with black serp, trace sp	162	80·2	81·3	1·1	25	300	3600	×	5	×	

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

SHEET No. 4
TENEMENT NAME TENTH LEGION No. 5LM175
PLAN – MAP REFERENCE
CO-ORDINATES AZIMUTH DRILLERS COMMENCED DEPTH HOLE No. T.L.C.8
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
81·0	84·0	3·0		M/s.	81·3 – 82·0 Magnetite 40% associated with	81·3-82·0 Sp 1%, associated with mag.	932163	81·3	82·0	0·7	50	×	1·1%	×	9	×	
84·0	87·1	3·1			dark green, almost black serpentinite, some		164	82·0	82·6	0·6	25	×	1·03%	×	10	×	0·017
87·1	89·9	2·7			remnant patches white calc silicates		165	82·6	83·3	0·7	25	175	6300	2·5	25	×	
89·9	92·9	3·0			82·0 – 85·7 White calc silicate rock with	82·0-85·7 Mag 15-20% in bands with	166	83·3	83·9	0·6	50	50	4250	2·5	4	×	
92·9	95·9	3·0			0·5cm → 10 cm bands of mag/serpentinite	serpentinite; trace sp.	167	83·9	84·2	0·3	150	×	1·31%	2·5	55	×	
95·9	99·0	3·1			as above 81·3-82·0, 30%. Some sparse		168	84·2	85·7	1·5	75	100	4975	×	6	×	0·017
99·0	102·4	3·4			bands grey lst near base of interval.												
102·4	105·4				Contact 60°		GRIND SAMPLES.										
105·4	108·4	3·0		lst/Cst	85·7 – 97·9 ALTERED LIMESTONE	85·7-95·7 Mag diosem 2-3% throughout	932765	85·7	88·8		26	30	470	0·3	×	20	
					Banded grey and white rock – the	lst, overall 1-2%, traces po, py and rare	766	88·8	91·6		47	22	710	0·3	4	15	
					grey is a crystallic impure limestone	sp in small zones to 3 cm.	767	91·6	95·7		18	18	90	0·2	×	×	
					with finely diosem mag, frequently	95·7 – 97·5 po, py diosem in bands	CUT SAMPLES										
					with green 2-8 mm serpentinite rims	to 30 cm thick, 10-20%; overall 3-5%	932169	95·7	97·0	1·3	175	×	1925	2·5	7	×	
					surrounding irregular bands and intervals	97·5 – 97·9 10% Mag in serpentinised limestone	170	97·0	97·5	0·5	×	50	425	×	7	×	
					of bone white calc silicate rock, which	, trace py	171	97·5	97·9	0·4	150	×	4475	2·5	7	50	
					may be up to 1·2 m thick.												
					Contact 55°		GRIND SAMPLES										
				Ss/Cst	97·9 – 101·4 BLACK SILTSTONES/CALC SILICATES.	97·9 – 101·4 No obvious mineralisation	932768	97·9	101·2		64	18	148	1·0	×	110	
					Thinly bedded black siltstones which	, traces py in some calc-silicate intervals.											
					alternate with, and have been invaded												
					by, white and pink calc-silicates.												
					Hard, hornfelsed; bedded 50-60°												
					Contact 70°												
				Cst	101·4 – 104·6 Calc Silicate Rock.	101·4 – 104·6 minor epidote and pale	769	101·2	104·6		38	27	640	1·0	25	75	
					Bone white calc silicate, with greenish	brown garnets, mostly in the greenish	932308	104·8	THIN SECTION SAMPLE								
					coarser grained intervals	crystalline intervals.											
					Contact 50°		CUT SAMPLES										
				lst/Cst	104·6 – 106·7 ALTERED LIMESTONE	104·6-106·7 f.gr. mag 2-3%, traces	932172	104·6	105·4	0·8	25	100	725	2·5	6	×	0·042
					As above 85·7 – 97·0, but lesser	po, py. Some mag has been	173	105·4	106·7	1·3	75	25	175	5·0	×	×	
					intervals of calc-silicates	partially converted to reddish											
						haematite											

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C.R.A. EXPLORATION PTY. LIMITED

DRILL CORE LOG

SHEET No. 5

TENEMENT NAME TENTH LEGION No 5M/75

PLAN – MAP REFERENCE

CO-ORDINATES ..... AZIMUTH ..... DRILLERS ..... COMMENCED ..... DEPTH ..... HOLE No. T.L.C.8

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			
					Contact 30°															
108·4	111·4	3·0		Cst	106·7 – 114·9 CALC SILICATE ROCK	106·7 – 109·3 Black magnetite and sp	GRIND	SAMPLES												
111·4	113·9	2·5			As for 101·4 – 104·6, some epidote	disseminations throughout, some	932770	106·7	109·7		47	94	1220	1·4	×	45				
113·9	117·4	3·7			-garnet rich intervals, and bands	bands f.gr. mag – segregation due to	771	109·7	112·6		51	19	135	0·9	7	75				
117·4	120·4	3·0			and patches of remnant limestone and	recrystallisation. 10-15%.	772	112·6	115·5		19	22	440	0·5	3	20				
120·4	123·4	2·9			carbonates.	109·3 – 112·2 Green epidote stockworks and	773	115·5	117·4		47	25	250	0·5	×	20				
123·4	126·4	3·0			109·4 Bedding 35°	pinkish brown? garnets, 20-30%.	774	117·4	120·4		15	11	120	0·2	×	20				
126·4	129·4	3·0			Contact irregular	(idocrase?) Traces banded and disseminated mag.	* 775	120·4	123·5		7	15	90	0·1	×	×				
129·4	132·4	3·0		Lst/Cst	114·9 – 150·9 Altered LIMESTONE.	112·2 – 114·9 Trace disseminated mag.	776	124·6	127·6		7	23	73	0·2	×	×				
132·4	135·4	3·0			As above 85·7 – 97·9, but darker	114·9 – 117·4 Traces disseminated mag. – almost	777	127·6	130·6		10	21	75	0·1	×	×				
135·4	138·4	3·0			grey and finely banded – greater	1-2% in places.	778	130·6	133·6		12	48	138	0·3	×	10				
138·4	141·2	2·8			serpentinisation and lesser calc-silicate	117·4 – 123·5 po disseminations 1-2% as	779	133·6	136·6		11	33	390	0·2	3	15				
141·2	144·3	3·1			alteration. Little calc silicate alteration	blebs and very fine grains, trace	780	136·6	138·9		17	18	230	0·1	5	×				
144·3	147·4	3·1			after 118·3 m, to 124·6	fine py, disseminated magnetite.	* CUT	SAMPLE												
147·4	150·4	3·0			124·7 Banding 55°	123·5 – 124·6 very black – f.gr mag 2-3%	932174	123·5	124·6	1·1	25	25	100	2·5	×	×				
150·4	150·9	0·6			Gradually becomes lighter in colour	, trace po.														
					, with stronger calc-silicate alteration	124·6 – 142·1 traces f.gr. mag, po, py.														
					124·6 m → 142·1	142·1 – 145·9 f.gr mag 1-2%, very fine														
					138·2 Banding 35°	pyrite 1-2%	CUT	SAMPLES												
					142·1 – 145·9 Darker in colour – more	145·9 – 150·9 1-2% f.gr. mag, concentrated	932175	142·1	142·7	0·6	50	25	100	×	×	×				
					magnetite	in limestone intervals; trace very fine	176	142·7	144·3	1·6	25	25	225	×	10	×	0·008			
					145·9 – 150·9 As above, 124·6 – 142·1	pyrite.	177	144·3	145·9	1·6	25	25	275	×	×	×				
					150·8 Banding 52°.		GRIND	SAMPLES												
							932781	138·9	142·1		34	11	150	0·2	6	15				
					END OF HOLE 150·9m!		782	145·9	148·5		58	53	620	1·1	20	55				
							783	148·5	150·9		109	13	140	0·4	×	20				8880603