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ASX release

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High grade heavy rare earth element (HREE), uranium and gold discovery

Assay results of recent samples from Killi Killi Hills (WA)

- 45 reconnaissance rock chip analyses have returned highly encouraging HREE.
- HREE mineralisation may be associated with anomalous gold and uranium.
- 20%+ of TREEO in prime samples is high value HREEO
- Preliminary petrology and crystallography indicate pervasive hydrothermal mineralization associated with a flat-dipping basal conglomerate unconformity.
- Sample KK43 returned 1.28% HREEO and 4.8% TREEO+Y
- Sample KK15 showed gold at 9.6 g/t

Orion Metals Ltd (ASX: ORM) is pleased to report early success with assay results for the reconnaissance rock chip samples (mostly outcrops) on its recently acquired, 100% owned Killi Killi Hills tenements.

The Killi Killi Hills prospect was tested extensively in 1969 for its uranium potential. Characterisation samples were also analysed for rare earth elements (REE) by the imprecise methods of the day. No systematic sampling and analysis for REE was conducted during this exploration program because of the uranium focus, inadequate laboratory methods, indeterminate market and prohibitive costs at the time.

The purpose of this recent sampling was to confirm the existence and distribution of HREE indicated by the historical work within a 1-3 metre thick basal conglomerate that extends for 2kms in outcrop as a major regional unconformity.

Two known radiometric anomalous zones which are located approximately 1km apart were tested in 1969 for uranium and were sampled in this exploration program to obtain material for chemical analysis, petrological examination and preliminary metallurgical testing. In total, 45 samples (KK01 to KK45) were collected recently from the representative rock of or near the basal conglomerate.

Results have confirmed that 20 samples contain significant levels of the “heavy” Rare Earth Elements (HREE) including dysprosium, ytterbium, and erbium associated with significant levels of other members of the suite of elements (refer **Table 1**). A maximum value for yttrium of 2.06% was recorded and the calculated average yttrium for the 45 samples was 1,327ppm. Uranium was recorded in a number of the samples up to a maximum of 326ppm.

Petrological work is now being undertaken to confirm that the REE mineralisation is contained in xenotime, of possible hydrothermal origin, as past studies suggested. The sample analyses indicate that the mineralisation is not hosted in veins and it appears pervasively mineralised and possibly associated with interstitial cubic crystals throughout the conglomerate/course sandstone. This unconformity conglomerate unit may have offered preferential permeability

for migrating hydrothermal solutions. Uranium, gold, HREE and LREE have different dissolution and crystallisation rates so this may have concentrated the HREE along the unconformity.

SAMPLE	LREE grams per tonne					HREE grams per tonne								
	Y	La	Ce	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
KK02	1,840	314	1,064	1,818	458	53	357	54	318	63	177	20	107	13
KK03	1,927	259	967	1,550	450	53	355	54	325	65	186	22	116	14
KK04	3,038	517	1,898	3,050	702	74	533	85	524	105	312	37	204	25
KK05	943	432	1,490	2,069	400	33	186	25	146	30	94	12	66	8
KK06	1,423	320	1,046	1,497	348	38	263	40	235	47	131	15	77	9
KK07	1,151	348	1,119	1,668	364	36	241	35	201	39	111	12	67	8
KK08	835	390	1,285	1,703	313	30	193	29	173	36	107	13	78	9
KK16	1,069	324	1,015	1,279	280	28	181	28	182	39	125	16	93	11
KK27	444	677	1,860	2,120	449	44	225	27	111	20	50	7	38	4
KK28	1,572	335	755	1,586	441	54	426	71	431	88	213	28	152	19
KK32	721	875	1,926	2,039	351	32	179	25	143	32	85	13	76	9
KK33	2,832	824	1,935	4,325	1,179	164	1,084	167	929	178	413	51	260	30
KK34	1,417	990	1,740	3,495	726	69	437	69	432	94	249	37	207	25
KK35	1,000	846	2,171	2,400	441	41	248	42	275	63	176	27	161	20
KK36	896	858	1,426	2,009	364	38	237	38	253	57	161	24	137	18
KK37	1,296	527	1,443	2,676	734	85	465	61	294	54	121	15	82	9
KK42	439	1,290	4,350	3,930	373	27	188	21	80	14	38	3	13	2
KK43	20,600	767	2,290	1,710	916	224	2,060	461	3,460	781	2,140	294	1,560	218
KK44	7,190	508	1,885	1,990	607	96	807	154	1,090	251	719	99	555	79
KK45	4,810	499	1,850	2,210	534	74	568	118	766	169	508	71	423	56

Table 1 - LREE (light rare earth elements La-Sm) and HREE (heavy rare earth elements Eu-Lu) prime samples from Killi Killi Hills rock chips

Gold analyses were also conducted on or near the basal conglomerate unit and 25% of the samples tested showed anomalous levels of gold (>0.1g/t Au) with a maximum of 9.7g/t Au in sample KK25. This may have significant implications in regard to the economics and mineralisation processes for Killi Killi, as major gold deposits regularly occur in uranium bearing conglomerates such as Alligator River in the Northern Territory (which also have a gold association).

Killi Killi Hills has another similarity to the uranium deposits of Arnhem Land in that the areas of mineralization are associated with regional unconformities in a similar manner to the Jabiru Ranger Uranium mine (and the Athabasca Basin in Canada). This geological setting may bestow significant down-dip potential for HREE-U-Au mineralisation in the basal conglomerate unit at Killi Killi as well as feeder zones and the primary source of mineralisation.

	REE Name~	Symbol	Atomic Number	Atomic Mass	APPLICATIONS	Oxide FOB Value^ AS per kg	Value of Metal per g in Oxide^
	Scandium	Sc	21	45.0	Fuel cells, aluminium alloys, lighting, stabilized zirconia	\$1,600	\$2.45
	Yttrium	Y	39	88.9	Phosphors, material enhancer, ceramics, stabilized zirconia, fuel cells, superconductors	\$55	\$0.07
LREE	Lanthanum	La	57	138.9	High refractive index glass, flint, hydrogen storage, battery-electrode, camera lens	\$43	\$0.05
	Cerium	Ce	58	140.1	chemical oxidizing agent, polishing powder, yellow pigment, Self-cleaning ovens	\$41	\$0.05
	Praseodymium	Pr	59	140.9	Rare-earth magnets, laser, green colors in glass and ceramics, flint	\$72	\$0.09
	Neodymium	Nd	60	144.2	Rare-earth magnets, laser, violet colors in glass and ceramics, ceramic capacitor	\$75	\$0.09
	Promethium	Pm	61	145.0	Nuclear battery - unstable isotopes		
	Samarium	Sm	62	150.4	Rare-earth magnets, Laser, neutron capture, maser	\$34	\$0.04
HREE	Europium	Eu	63	152.0	Red and blue phosphors, laser, mercury-vapor lamp	\$534	\$0.62
	Gadolinium	Gd	64	157.3	Magnets, high refractive index glass, laser, x-ray tube	\$28	\$0.03
	Terbium	Tb	65	158.9	Green phosphors, laser, fluorescent lamp	\$568	\$0.65
	Dysprosium	Dy	66	162.5	Rare-earth magnets, laser	\$267	\$0.31
	Holmium	Ho	67	164.9	Lasers	\$446	\$0.51
	Erbium	Er	68	167.3	Laser, vanadium steel	\$291	\$0.33
	Thulium	Tm	69	168.9	Portable X-ray machine, lasers, super conductors	\$703	\$0.80
	Ytterbium	Yb	70	173.0	Infrared Laser, chemical reducing agent, High-temperature superconductors (YBCO)	\$710	\$0.81
	Lutetium	Lu	71	175.0	PET Scanners, high refractive index lenses, magnetic bubble memory	\$834	\$0.95

Table 2 - Rare Earth Elements, applications and pricing. ^ FOB price ex China as of 14 Sept 2010 - sourced from metal pages, alibaba, asianmetal & shanghai metals market with USD\$ to AUD\$ rate of 93 cents. ~As defined by IUPAC, rare earth elements or rare earth metals are a collection of seventeen chemical elements in the periodic table, namely scandium, yttrium, and the fifteen lanthanides.

Recent interest in HREE's in the north Tanami region has been encouraged by the work of Northern Uranium Ltd (ASX:NTU) on its examination of quartz-xenotime veins and the

Gardiner Range unconformity to the north of Killi Killi Hills. The Killi Killi Hills mineralization confirms the prospectivity of the area and NTU's discovery may be indicative of the type of feeder zone or source of the concentrated pervasive mineralization which has so far been observed.

The Directors of Orion Metals Ltd believe that the acquisition of the Killi Killi Hills tenements and the confirmation of high concentrations of heavy REE, uranium and gold has added considerably to its REE exploration portfolio.

A first stage drilling program has been developed and steps are now underway to complete the statutory requirements for access to the site so that drilling can commence. We anticipate commencement of drilling within 90 days.



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[://www.orionmetals.com.au/projects.htm](http://www.orionmetals.com.au/projects.htm)

Technical information and exploration results contained in this report have been compiled by Orion Metals Ltd. Director Adrian Day is a member of the Australasian Institute of Geoscientists and has relevant experience in relation to what is being reported on to qualify as 'Competent Persons', as defined by the Australasian Code for Reporting of Minerals Resources and Reserves. Mr Day consents to the inclusion in this release based on the information in the form and context in which it appears.

I confirm that I have prepared this announcement for release to the ASX and agree to its publication.



Adrian Day



Figure 1 - Basal conglomerate rock chip sample KK43

KILLI KILLI HILLS WA ROCK SAMPLES

Indicative contained REE value per tonne in AUD

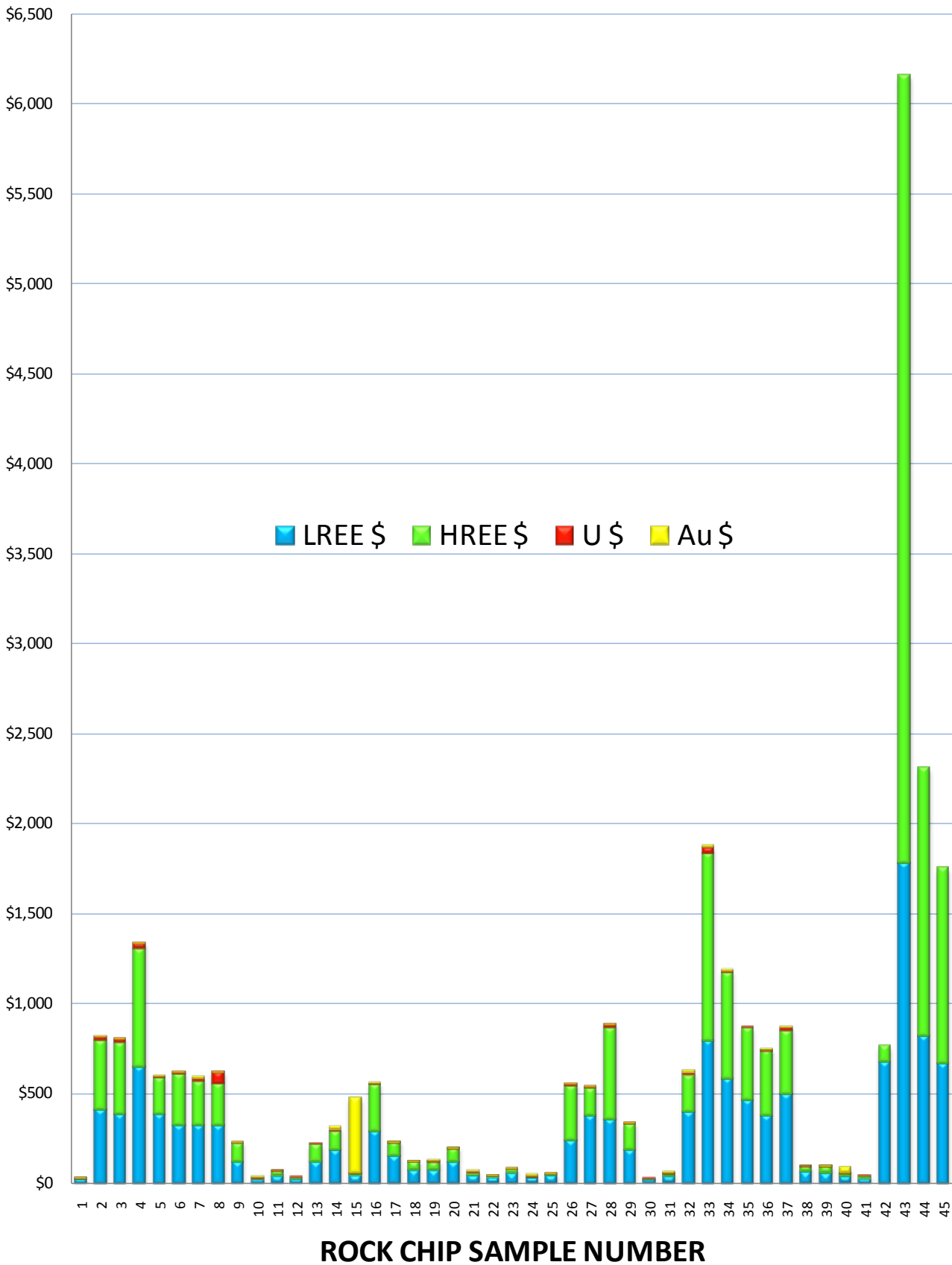


Figure 2 - Value of REE, Au and U in 45 rock chip samples. Crustal abundance average value is approximately \$55 per tonne.

KILLI KILLI HILLS WA ROCK SAMPLES REEO %

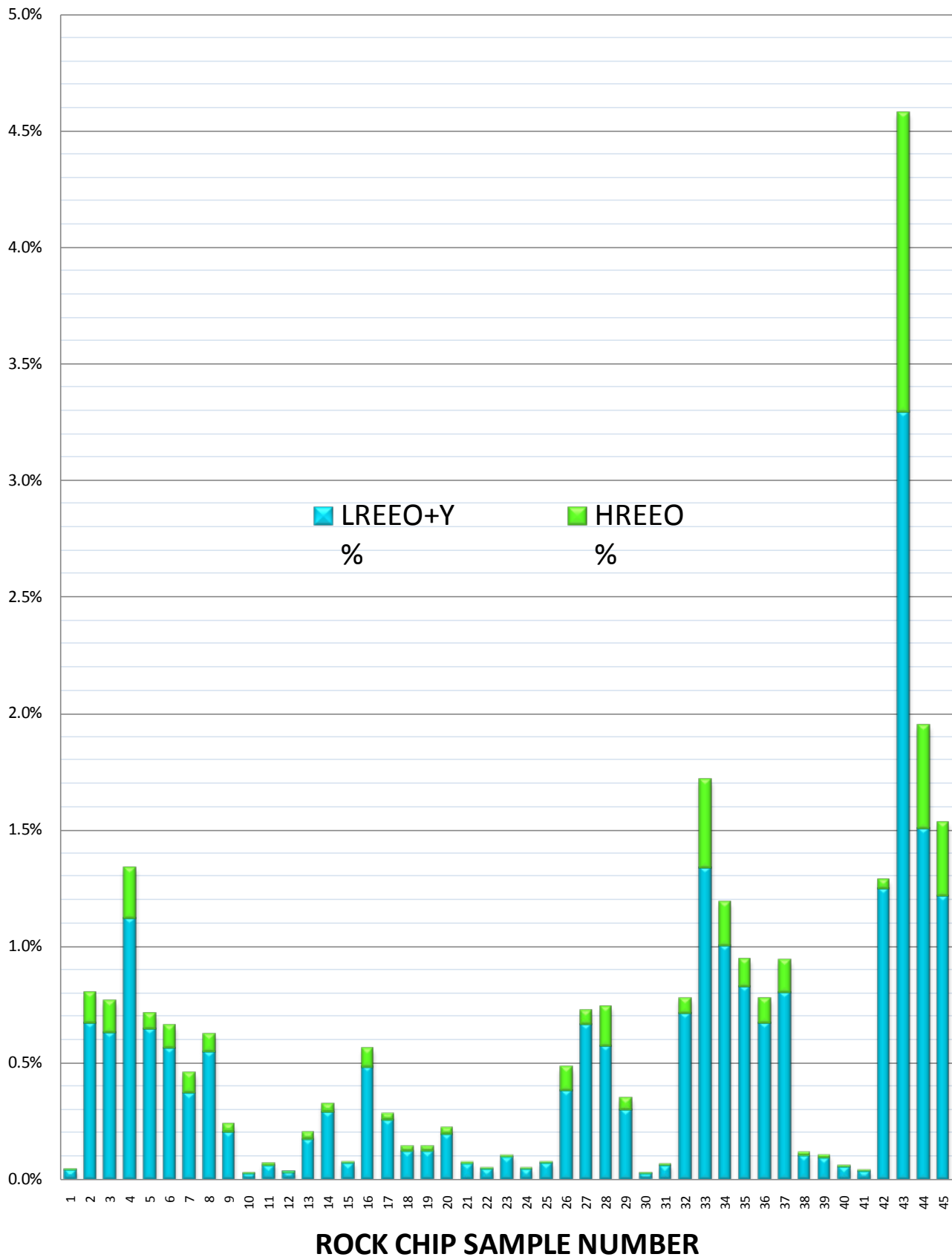


Figure 3 - % of heavy REE oxide and light REE oxide + Y oxide in 45 rock chip samples. Crustal abundance average value is approximately 0.03% for REE oxides

METAL ANALYSIS SHEET

SAMPLE	LREE grams per tonne					HREE grams per tonne									REE & U & Au g/t			
	Y	La	Ce	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	LREE +Y	HREE	U	Au
Crust	18	46	9	24	7	1	6	1	5	1	3	0	3	1	120	20	1.8	0.001
KK01	16	50	133	100	19	2	12	1	4	1	1	0	1	0	320	23	3.6	0.050
KK02	1,840	314	1,064	1,818	458	53	357	54	318	63	177	20	107	13	5,509	1,162	112.0	0.050
KK03	1,927	259	967	1,550	450	53	355	54	325	65	186	22	116	14	5,167	1,190	121.0	0.050
KK04	3,038	517	1,898	3,050	702	74	533	85	524	105	312	37	204	25	9,214	1,899	159.0	0.050
KK05	943	432	1,490	2,069	400	33	186	25	146	30	94	12	66	8	5,343	600	51.4	0.070
KK06	1,423	320	1,046	1,497	348	38	263	40	235	47	131	15	77	9	4,639	854	86.4	0.040
KK07	1,151	348	1,119	1,668	364	36	241	35	201	39	111	12	67	8	4,654	750	78.4	0.300
KK08	835	390	1,285	1,703	313	30	193	29	173	36	107	13	78	9	4,533	668	362.0	0.050
KK09	612	99	336	479	120	14	100	15	89	19	47	5	28	3	1,649	320	34.7	0.010
KK10	35	25	66	45	10	1	8	1	6	1	3	0	2	0	185	24	16.3	0.090
KK11	153	46	130	93	24	5	30	5	27	5	12	1	7	1	450	93	27.2	-
KK12	51	32	84	66	15	2	12	2	8	2	4	0	3	0	251	33	15.0	-
KK13	422	95	335	444	100	11	66	10	62	15	46	6	37	5	1,406	258	41.2	-
KK14	485	194	673	830	193	19	97	13	75	17	50	6	37	5	2,384	318	31.3	0.360
KK15	35	69	210	194	41	4	19	2	8	1	4	1	3	0	552	43	6.9	9.700
KK16	1,069	324	1,015	1,279	280	28	181	28	182	39	125	16	93	11	3,978	703	25.6	0.100
KK17	333	231	717	686	132	14	81	11	58	12	34	4	27	3	2,104	244	8.7	0.020
KK18	261	76	229	302	104	13	72	8	41	8	19	2	10	1	976	174	6.6	0.020
KK19	278	70	227	297	98	12	62	8	40	8	21	2	13	2	973	168	7.5	0.030
KK20	471	84	303	540	158	16	91	11	63	14	34	4	19	2	1,560	255	10.6	0.070
KK21	77	61	186	175	35	4	21	2	13	3	7	1	6	1	537	57	26.5	0.060
KK22	38	48	139	117	23	3	14	2	7	1	4	0	3	0	368	35	9.9	0.010
KK23	61	104	321	257	44	5	23	3	13	3	8	1	7	1	790	61	36.8	0.030
KK24	27	50	131	115	27	3	14	1	5	1	2	0	2	0	353	29	3.4	0.260
KK25	43	75	220	204	35	4	18	2	8	1	4	0	3	0	579	40	6.7	0.120
KK26	991	173	548	1,067	339	40	271	40	241	48	121	18	97	12	3,127	888	75.7	0.050
KK27	444	677	1,860	2,120	449	44	225	27	111	20	50	7	38	4	5,555	527	61.0	0.100
KK28	1,572	335	755	1,586	441	54	426	71	431	88	213	28	152	19	4,704	1,481	116.0	0.040
KK29	401	199	566	979	307	36	186	22	99	21	48	7	40	5	2,460	463	49.5	0.040
KK30	13	33	66	56	13	2	9	1	4	1	2	0	2	0	186	20	5.5	-
KK31	69	67	147	138	34	4	25	3	16	3	7	1	6	1	457	65	12.0	0.190
KK32	721	875	1,926	2,039	351	32	179	25	143	32	85	13	76	9	5,915	594	48.0	0.330
KK33	2,832	824	1,935	4,325	1,179	164	1,084	167	929	178	413	51	260	30	11,108	3,276	199.0	0.300
KK34	1,417	990	1,740	3,495	726	69	437	69	432	94	249	37	207	25	8,373	1,619	47.5	0.220
KK35	1,000	846	2,171	2,400	441	41	248	42	275	63	176	27	161	20	6,863	1,053	29.4	-
KK36	896	858	1,426	2,009	364	38	237	38	253	57	161	24	137	18	5,556	962	20.1	0.040
KK37	1,296	527	1,443	2,676	734	85	465	61	294	54	121	15	82	9	6,693	1,186	99.1	0.130
KK38	196	82	234	255	59	8	45	6	30	6	15	2	9	1	829	121	6.9	-
KK39	196	74	209	219	45	5	30	5	28	7	18	2	14	2	745	111	3.1	0.020
KK40	89	58	149	109	22	3	15	2	14	3	10	1	8	1	429	57	3.8	0.830
KK41	71	39	90	65	14	2	12	2	11	2	7	1	6	1	283	43	2.6	-
KK42	439	1,290	4,350	3,930	373	27	188	21	80	14	38	3	13	2	10,382	384	-	-
KK43	20,600	767	2,290	1,710	916	224	2,060	461	3,460	781	2,140	294	1,560	218	26,283	11,198	-	-
KK44	7,190	508	1,885	1,990	607	96	807	154	1,090	251	719	99	555	79	12,180	3,849	-	-
KK45	4,810	499	1,850	2,210	534	74	568	118	766	169	508	71	423	56	9,903	2,754	-	-

Table 2: Killi Killi Hills samples showing uranium, gold, LREE (light rare earth element) and HREE (heavy rare earth element oxides in each sample

METAL OXIDE CALCULATIONS SHEET

SAMPLE	LREEO g/tonne					HREEO g/tonne									Total REEO g/tonne			REEO %			
	Y	La	Ce	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	LREEO +Y	HREEO	TREEO	LREEO+Y %	HREEO %	TREEO+Y %	HREEO/TREEO %
Crust	23	54	11	28	8	1	7	1	5	1	3	0	3	1	149	23	172	0.01%	0.00%	0.02%	13.53%
KK01	20	59	163	117	22	3	14	1	5	1	1	0	1	0	385	26	411	0.04%	0.00%	0.04%	6.35%
KK02	2,337	368	1,307	2,120	531	61	411	63	365	72	202	23	122	15	6,686	1,334	8,020	0.67%	0.13%	0.80%	16.64%
KK03	2,447	304	1,188	1,808	522	61	409	62	373	75	213	25	132	16	6,290	1,366	7,655	0.63%	0.14%	0.77%	17.84%
KK04	3,858	606	2,331	3,557	814	86	614	98	601	120	357	42	232	29	11,181	2,179	13,360	1.12%	0.22%	1.34%	16.31%
KK05	1,198	507	1,830	2,413	464	38	214	29	168	35	107	13	75	9	6,425	689	7,114	0.64%	0.07%	0.71%	9.68%
KK06	1,807	375	1,285	1,746	404	43	303	46	270	53	150	17	88	11	5,624	980	6,604	0.56%	0.10%	0.66%	14.84%
KK07	1,462	408	1,375	1,946	422	42	278	40	231	44	127	14	76	9	5,618	861	6,479	0.56%	0.09%	0.65%	13.29%
KK08	1,060	457	1,578	1,986	363	35	222	33	199	41	122	15	89	11	5,457	767	6,224	0.55%	0.08%	0.62%	12.32%
KK09	777	116	413	559	139	16	115	17	102	21	54	6	32	4	2,009	368	2,377	0.20%	0.04%	0.24%	15.48%
KK10	45	30	81	53	11	2	9	1	7	1	4	0	3	0	225	28	253	0.02%	0.00%	0.03%	10.94%
KK11	194	54	160	109	28	5	34	5	31	6	14	1	8	1	550	106	657	0.06%	0.01%	0.07%	16.21%
KK12	64	38	104	77	18	2	14	2	10	2	5	1	3	0	304	38	342	0.03%	0.00%	0.03%	11.05%
KK13	536	112	412	518	116	13	76	11	72	18	53	7	42	5	1,707	296	2,003	0.17%	0.03%	0.20%	14.77%
KK14	616	228	827	968	224	22	111	14	86	20	57	7	42	5	2,876	364	3,241	0.29%	0.04%	0.32%	11.25%
KK15	45	81	258	226	48	5	22	2	9	2	4	1	4	0	661	49	710	0.07%	0.00%	0.07%	6.94%
KK16	1,358	380	1,247	1,492	325	33	209	32	209	44	143	18	106	13	4,818	807	5,624	0.48%	0.08%	0.56%	14.35%
KK17	423	271	881	800	153	17	94	12	66	14	39	5	30	4	2,535	281	2,816	0.25%	0.03%	0.28%	9.97%
KK18	331	89	281	352	121	15	83	9	46	9	22	2	12	1	1,180	200	1,380	0.12%	0.02%	0.14%	14.48%
KK19	353	82	279	346	113	14	72	9	46	10	24	3	15	2	1,179	193	1,373	0.12%	0.02%	0.14%	14.09%
KK20	598	99	372	630	183	19	105	13	73	16	39	4	22	3	1,888	292	2,181	0.19%	0.03%	0.22%	13.41%
KK21	98	72	228	204	41	5	24	3	14	3	8	1	6	1	647	66	713	0.06%	0.01%	0.07%	9.24%
KK22	48	56	171	136	27	3	16	2	8	2	4	1	4	0	443	40	483	0.04%	0.00%	0.05%	8.22%
KK23	78	122	394	300	51	5	26	3	15	3	9	1	8	1	949	71	1,019	0.09%	0.01%	0.10%	6.92%
KK24	35	58	161	134	32	4	16	1	6	1	3	0	2	0	423	33	456	0.04%	0.00%	0.05%	7.30%
KK25	55	88	270	238	41	4	21	2	9	2	4	1	3	0	695	46	741	0.07%	0.00%	0.07%	6.27%
KK26	1,259	203	673	1,245	393	46	312	47	277	55	138	20	111	14	3,786	1,019	4,806	0.38%	0.10%	0.48%	21.21%
KK27	564	794	2,285	2,473	521	51	259	31	127	23	57	8	43	5	6,643	605	7,249	0.66%	0.06%	0.72%	8.35%
KK28	1,996	393	927	1,850	511	63	491	82	495	100	244	32	173	21	5,701	1,700	7,401	0.57%	0.17%	0.74%	22.97%
KK29	509	233	695	1,142	356	41	214	25	114	24	55	8	46	5	2,949	532	3,481	0.29%	0.05%	0.35%	15.29%
KK30	17	39	81	65	15	2	11	1	5	1	2	0	2	0	223	23	247	0.02%	0.00%	0.02%	9.45%
KK31	87	79	181	161	40	5	28	4	18	4	8	1	6	1	551	75	625	0.06%	0.01%	0.06%	11.94%
KK32	916	1,026	2,366	2,378	407	37	206	29	164	36	97	15	87	11	7,098	682	7,780	0.71%	0.07%	0.78%	8.77%
KK33	3,596	966	2,377	5,045	1,367	190	1,249	192	1,066	204	472	58	296	34	13,372	3,762	17,134	1.34%	0.38%	1.71%	21.96%
KK34	1,800	1,161	2,137	4,077	842	80	504	80	496	108	285	42	236	29	10,024	1,857	11,882	1.00%	0.19%	1.19%	15.63%
KK35	1,270	992	2,667	2,799	511	47	286	48	316	72	201	31	183	23	8,247	1,207	9,455	0.82%	0.12%	0.95%	12.77%
KK36	1,138	1,006	1,752	2,343	422	43	273	44	290	66	184	27	156	20	6,666	1,104	7,770	0.67%	0.11%	0.78%	14.20%
KK37	1,646	618	1,773	3,121	851	99	536	70	337	61	138	18	93	10	8,034	1,363	9,397	0.80%	0.14%	0.94%	14.50%
KK38	249	96	287	297	68	9	52	7	34	7	17	2	10	1	1,003	139	1,142	0.10%	0.01%	0.11%	12.17%
KK39	249	87	257	255	52	6	35	5	32	8	21	3	16	2	904	128	1,031	0.09%	0.01%	0.10%	12.38%
KK40	113	68	183	127	25	3	18	3	16	4	11	1	9	1	520	65	586	0.05%	0.01%	0.06%	11.15%
KK41	90	46	111	76	16	2	14	2	12	3	8	1	7	1	344	50	394	0.03%	0.00%	0.04%	12.65%
KK42	558	1,513	5,343	4,584	433	31	216	24	91	16	43	3	15	2	12,430	441	12,872	1.24%	0.04%	1.29%	3.43%
KK43	26,161	900	2,813	1,995	1,062	259	2,374	531	3,971	895	2,447	336	1,776	248	32,930	12,837	45,767	3.29%	1.28%	4.58%	28.05%
KK44	9,131	596	2,316	2,321	704	111	930	177	1,251	288	822	113	632	90	15,067	4,413	19,480	1.51%	0.44%	1.95%	22.65%
KK45	6,108	585	2,273	2,578	619	86	655	136	879	194	581	81	482	64	12,163	3,157	15,321	1.22%	0.32%	1.53%	20.61%

Table 3: Killi Killi Hills samples showing Rare Earth Element oxides (REEO) per tonne and the % of LREEO (light rare earth elements La-Sm) and HREEO (heavy rare earth element oxides Eu-Lu)

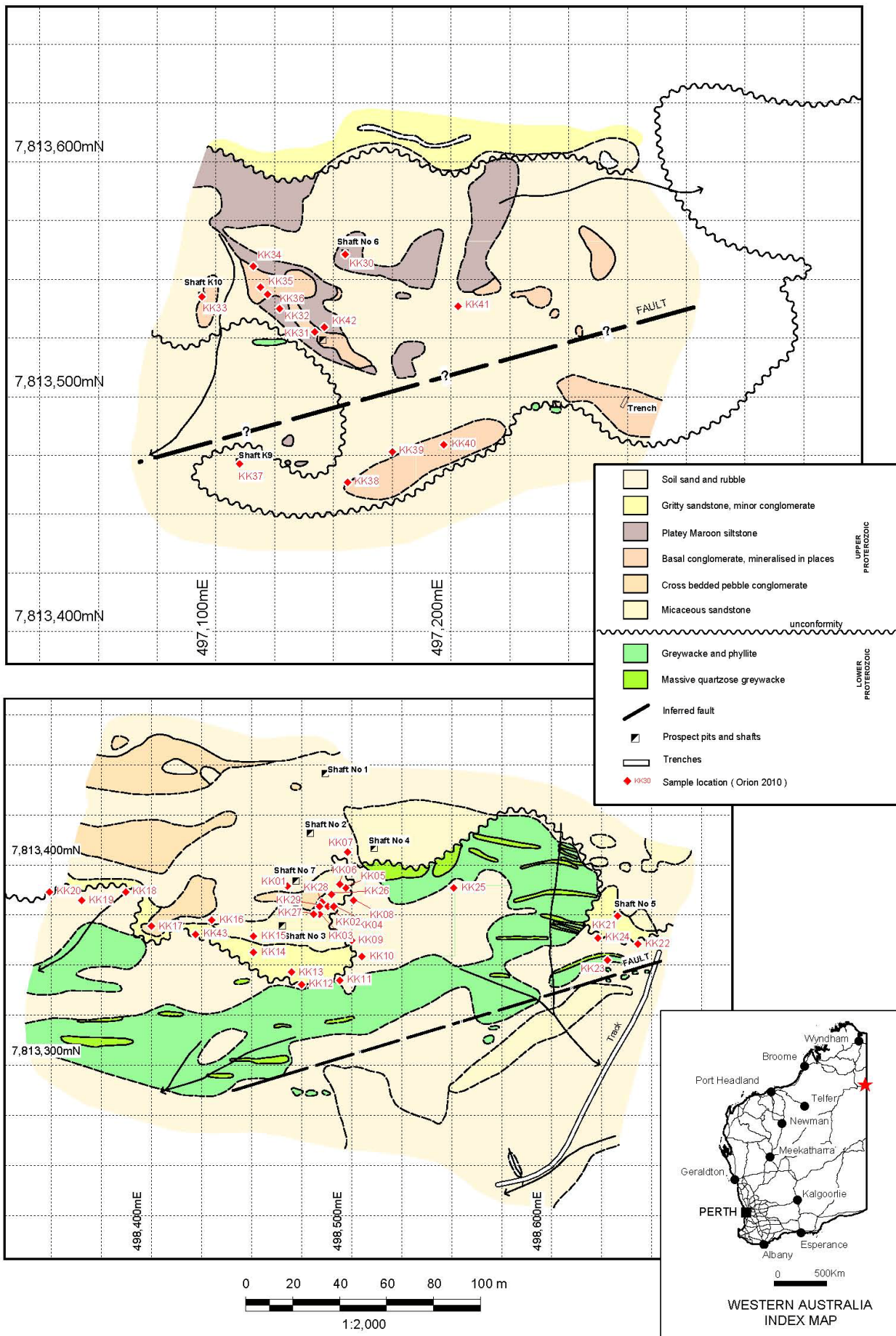


Figure 4: Killi Killi Hills radiometric anomalies, geology and rock chip sample locations.