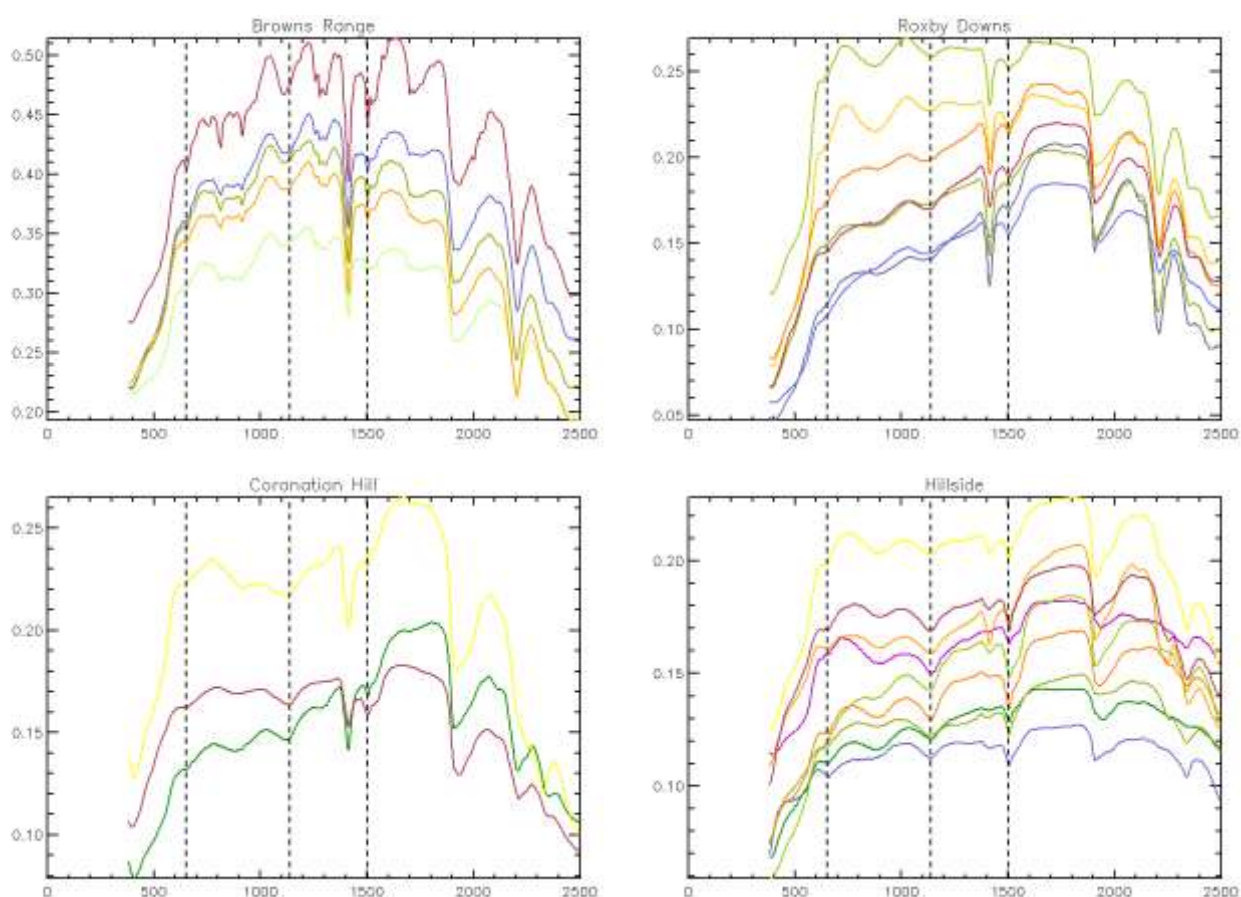


Uranium MOMA
Andy Green 3 January 2019

This note documents some results from a MOMA that uses a scalar that responds when the features around 1125 nm and 1508 nm are both present. These two features are thought to relate to the presence of uranium minerals^{1,2}. The results are available on CorStruth as part of the REE MOMA.

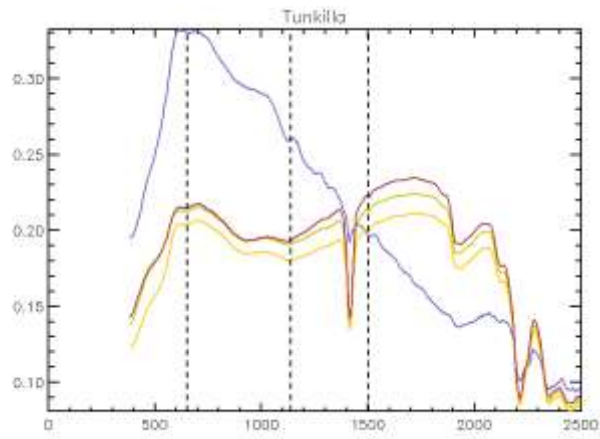
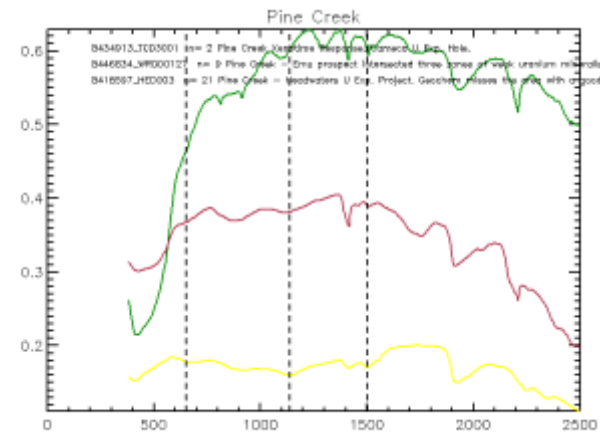
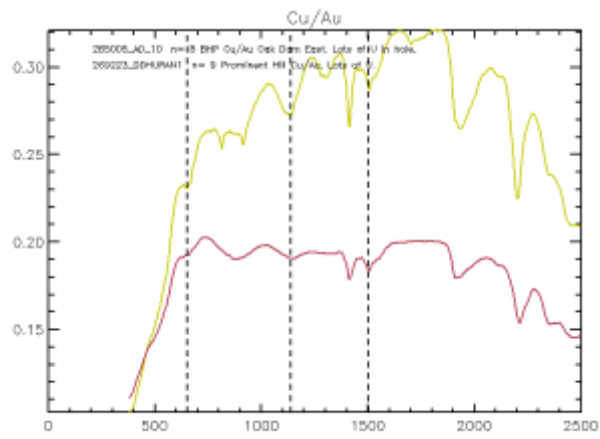
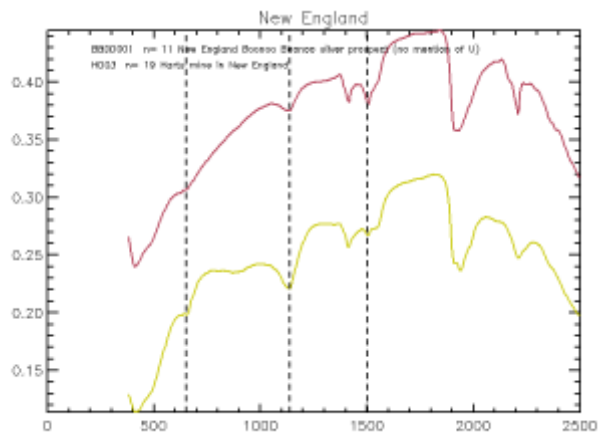
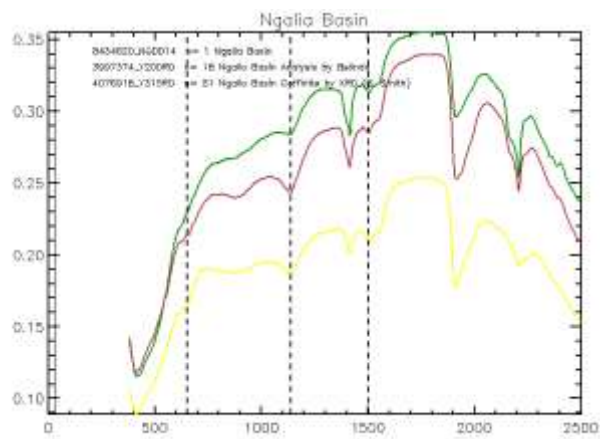
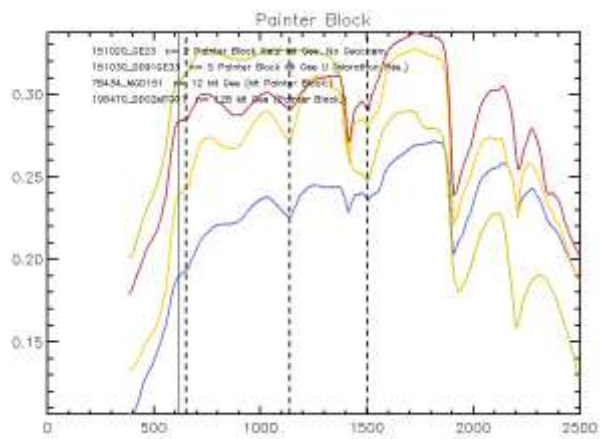
While it seems clear that the scalar is responding to holes that are known to have anomalous uranium geochemistry I haven't been able to check to see how the geochemical results match the scalar as a function of depth. It is also not clear what important known uranium occurrences have been completely missed.

The plots below are grouped for each of the major regions that responded to the scalar. Each spectrum is from a different hole. It is the average of all the samples that responded to the scalar for that hole. The dashed vertical lines on each plot are at 652 nm, 1138 nm and 1503 nm



¹ Development of a new near infrared (NIR) tool for quantifying coffinite (USiO₄) in a moderately complex uranium ore analogue, Andrews et. al., *Journal of Geochemical Exploration* 182 (2017) 80–93

² Using HyLogger as a tool to determine mineralogical differences in drill core across the Ngalia Basin. Belinda Smith, Northern Territory Geological Survey, 2012. Annual Geoscience Exploration Seminar (AGES) 2012. Record of abstracts. Northern Territory Geological Survey, Record 2012-002.



The following table shows the results for the MOMA. These results have been filtered manually to reject some holes that have responses caused by the Channel Spectra effect³.

Key

Known U

Good U signal. No U mentioned that I can find.

Weak U. No U mentioned

Not checked out yet

Hole		#	Max Sample	Check
273112_COD008	SA	1	40.12 (170.817m)	
237136_BWM01A	SA	1	89.63 (535.325m)	
8458271_STDH03	NT	1	54.79 (11.642m)	
277548_AD1	SA	1	39.62 (414.893m)	
8446303_Manbulloo_S1	NT	1	67.53 (1081.457m)	
8446281_Golden_Grove_1	NT	1	36.37 (357.167m)	
1852240_MD4	NT	1	58.15 (219.390m)	
8470632_CRDD001	NT	1	53.52 (649.282m)	
14CADD002	WA	1	36.05 (216.345m)	
8434820_NGDD14	NT	1	53.62 (83.504m)	Ngalia Basin
7963300_SLX001	NT	1	44.20 (489.506m)	
4056175_McA3	NT	1	32.41 (350.013m)	
SMD162	WA	1	42.44 (958.830m)	
WMD118	WA	1	91.94 (388.625m)	
18160_HHD_1	SA	1	63.32 (904.054m)	
16794_SR13-2	SA	1	30.49 (176.970m)	
281157_RD302	SA	1	89.00 (522.660m)	
281149_RD1604	SA	1	44.62 (463.852m)	
288780_MSdp14	SA	1	32.73 (219.779m)	
293065_HDD-048	SA	1	58.84 (253.979m)	
HD02	NSW	1	30.85 (38.504m)	
137058_WC_2	SA	1	58.16 (132.865m)	
299057_CDP003	SA	1	58.41 (452.564m)	
149886_Telechie_KD_9	SA	1	62.30 (325.265m)	
8445238_Owen2	NT	1	52.29 (648.737m)	
MSD9	WA	1	30.11 (130.619m)	
SMD165	WA	1	38.97 (123.423m)	
135473_SOC_7	SA	1	42.17 (63.300m)	
20611_SAR9	SA	1	34.71 (867.236m)	
8434913_TCD3001	NT	2	77.49 (110.516m)	Pine Creek Xenotime Response. Cameco U Exp. Hole.
7963224_MURD012	NT	2	45.63 (223.913m)	Bondi Mining. U Exp. Hole. Some U in geochem
293015_HDD-010	SA	2	80.14 (297.467m)	Hillside area. Known low grade U mineralization
293458_HDD-206	SA	2	61.11 (324.214m)	Hillside area. Known low grade U mineralization
151020_GE23	SA	2	87.78 (282.523m)	Painter Block Near Mt Gee. No Geochem
RD86P016	NSW	2	73.16 (374.278m)	
7963458_CHDDH56	NT	2	38.48 (49.090m)	Coronation Hill (No mention U spectra)

³ <http://corstruth.com.au/Notes/Possible Channel Spectra in VNIR.pdf>

MSD8	WA	2	64.70 (142.791m)	
218473_RU39_5371	SA	2	40.86 (36.687m)	
12GMSD001	WA	2	39.35 (8.451m)	
210072_LED011	SA	2	72.74 (197.794m)	Tunkilla Au V. weak U.
8434927_MRD002	NT	3	128.21 (128.105m)	Mt Dorothy Prospect near Mary K. (No U mentioned in mineralization)
09ATD019	WA	3	141.14 (144.185m)	
281153_RD2151	SA	3	45.03 (750.601m)	Roxby Downs
523_Ipswich10	Qld	3	45.84 (267.255m)	
237076_MRK005	SA	3	46.87 (398.440m)	
MW-1	NSW	4	108.74 (328.434m)	
OBRD067	WA	4	81.37 (5.532m)	
FOR011	WA	4	77.28 (496.616m)	
7963293_CHDDH102	NT	5	42.92 (272.691m)	Coronation Hill (No mention U spectra)
281159_RD480	SA	5	53.34 (492.699m)	Roxby Downs
20712_PY1	SA	5	45.54 (1152.382m)	Old CSR hole. No U measured.
281140_RD33	SA	5	62.40 (590.728m)	Roxby Downs
293029_HDD-024	SA	5	49.55 (154.230m)	Hillside area. Known low grade U mineralization
MSD7	WA	5	127.24 (94.218m)	Minnie Creek. U Exp. But found Mo.
HBC1150-18	WA	5	42.74 (303.589m)	
151030_DD91GE33	SA	5	77.08 (153.819m)	Painter Block Mt Gee U (Marathon Res.)
293080_HDD-063	SA	6	154.43 (346.401m)	Hillside area. Known low grade U mineralization
281152_RD2137	SA	6	74.56 (557.367m)	Roxby Downs
293063_HDD-046	SA	6	121.60 (149.248m)	Hillside area. Known low grade U mineralization
475_Springsure 19	Qld	6	59.68 (110.102m)	
Thebe 2	WA	6	78.74 (2290.972m)	
09ATD015	WA	7	105.74 (189.775m)	Xenotime Response. Silver Swan Co Austin Prospect Quinns.
8446540_MXCURD002	NT	7	45.76 (431.606m)	Weak U. No mention of U in Belinda's report.
285005_AD_10	SA	8	156.18 (396.692m)	BHP Cu/Au Oak Dam East. Lots of U in hole. SWAN Deposit. CSIRO UNCOVER Report show U.
72561_SwanMEQ1215	Qld	8	74.10 (156.841m)	Cowell Project U Exp. Matches geochem at bottom of hole.
240045_COD12	SA	8	194.28 (269.354m)	
269223_DDHRAN1	SA	9	82.17 (458.485m)	Prominent Hill Cu/Au. Lots of U.
8446834_WRDD0127	NT	9	87.95 (105.224m)	Pine Creek - Emu prospect intersected three zones of weak uranium mineralisation
281144_RD2786A	SA	9	142.03 (383.201m)	Roxby Downs
281137_RD1614	SA	10	50.57 (417.888m)	Roxby Downs
NVCD0102	WA	10	118.69 (280.440m)	Nevoria Au Deposit near Marvel Loch (no mention of U)
BBDD001	NSW	11	404.53 (60.340m)	New England Boonoo Boonoo silver prospect (no mention of U)
293081_HDD-064	SA	11	74.58 (88.619m)	Hillside area. Known low grade U mineralization
293079_HDD-062	SA	11	146.04 (392.291m)	Hillside area. Known low grade U mineralization
78434_MGD151	SA	12	185.08 (219.067m)	Mt Gee (Mt Painter Block.)
293657_HDD-308	SA	16	260.34 (369.464m)	Hillside area. Known low grade U mineralization
3997374_Y200RD	NT	18	84.19 (211.394m)	Ngalia Basin Analysis (B. Smith)
HD03	NSW	19	126.99 (37.904m)	Harts mine in New England
293077_HDD-060	SA	19	148.82 (114.991m)	Hillside area. Known low grade U mineralization
169869_LED004	SA	20	96.33 (205.000m)	Tunkilla Au V. weak U.

8418597_HED003	NT	21	81.22 (285.044m)	Pine Creek - Headwaters U Exp. Project. Geochem misses the area with a good response.
299055_CDP001	SA	27	104.69 (410.638m)	PACE Drilling in SW corner of SA
169559_LED009	SA	30	60.86 (117.940m)	Tunkilla Au V. weak U.
169555_LED002	SA	38	91.43 (172.850m)	Tunkilla Au V. weak U.
281156_RD2568	SA	51	114.81 (496.220m)	Roxby Downs
7963454_CHDDH100	NT	51	74.47 (353.015m)	Coronation Hill (No mention U spectra)
BRA5DD0001	WA	54	442.99 (68.793m)	Browns Range
154534_PDD3_Parabarana	SA	56	237.84 (385.664m)	Parabarana (Near Beverley Deposit)
4076918_Y315RD	NT	81	164.56 (432.381m)	Ngalia Basin Coffinite by XRD (B. Smith)
198470_DD02MTG01	SA	128	319.56 (76.027m)	Radium Ridge Breccia Mt Gee Painter Block
BRWD0018	WA	133	335.19 (150.003m)	Browns Range
BRWD0019	WA	260	788.36 (178.497m)	Browns Range
BRWD0014	WA	278	272.97 (76.498m)	Browns Range
BRGD001	WA	1172	1035.92 (66.319m)	Browns Range