SAMPLE PREPARATION

Splits of all zircon samples were mounted in epoxy, then polished, imaged with reflected and transmitted light (optical microscope). The expoxy was then coated with Au and imaged using cathodoluminescence (scanning electron microscope). All zircons analyzed were selected at random as to avoid introducing operator bias into the population. Cathodoluminescence imaging of samples permitted targeting of coherent domains within grains for analysis.

SHRIMP-RG ANALYSES

Pb/U ratios and ages were calibrated with reference to the R33 standard zircon sample from a quartz diorite of the Braintree Complex, Vermont. R33 is 419 Ma as determined by single grain and multi-grain conventional U-Pb analyses (Black et al., 2004), and has proven to be a very reproducible standard. Data were reduced using Squid and Isoplot/Ex (Ludwig, 2003). Detrital age data are plotted as histograms with superimposed relative age probability curves in order to represent both the age measurement and the associated uncertainty. Phanerozoic grains were evaluated carefully using uncorrected $^{207}Pb/^{206}Pb$ and $^{238}U/^{206}Pb$ data on Tera-Wasserburg concordia diagrams and any data requiring significant common Pb corrections were eliminated. All measurements are at the 95% confidence level (1σ).

LA-MC-ICP-MS ANALYSES

Masurements conducted by laser blation multicollector inductively coupled plasma mass spectrometry (LA-MC-ICPMS) at the University of Arizona followed the protocol of Gehrels et al. (2003). LA-ICP-MS Pb/U ratios and ages were calibrated with reference to standard zircon sample SL3, a megacryst from Sri Lanka (Roddick and van Breemen, 1994).Analyses were carried out through ablation of the zircon with a New Wave/ Lambda Physik DUV193 Excimer laser operating at a wavelength of 193 nm and using a spot diameter of 35 μm. The analysis lasts for 20 seconds, during which time 20 discrete measurements are collected as a pit 20 μm in depth is excavated due to progressive laser ablation. Ablated zircon is carried in argon gas into a Micromass Isoprobe, which is equipped with a flight tube of sufficient width that U and Pb isotopes are measured simultaneously. The measurements are made in static mode, by using Faraday detectors for ^{238}U, ^{232}Th, and ^{208}Pb, ^{207}Pb, ^{206}Pb and an ion-counting channel for ^{204}Pb adjusted to have a gain of 1.0 relative to the Faraday collectors. Ion yields are ~1 mV per ppm. Water is aspirated during laser ablation analysis which eliminates the tendency for ^{204}Pb signal intensities to drop when ablated material is injected into the plasma.

Common Pb corrections are made by using the measured ^{204}Pb and assuming initial Pb composition from Stacey and Kramers (1975)(with uncertainties of 1.0 for $^{206}Pb/^{204}Pb$ and 0.3 for $^{207}Pb/^{204}Pb$). Our measurement of ^{204}Pb is unaffected by the presence of ^{204}Hg because backgrounds are measured on peaks (thereby subtracting any background ^{204}Hg and ^{204}Pb), and because very little Hg is present in the argon gas. Background 204 peak intensity is ~310 cps. For a typical zircon, 204 peak intensity is ~620 cps. Given that ^{204}Hg does not increase in intensity during ablation, an increase peak in peak intensity must be due to ^{204}Pb.

Interelement fractionation of U and Pb ranges up to 20%, whereas isotopic fractionation of Pb is generally <5%. Every fifth measurement was done on the SL3 standard zircon from Sri Lanka with an age of 564 Ma in order to correct for Pb/U fractionation. The resulting uncertainties are generally ~2% (2σ) for $^{207}Pb^*/^{206}Pb^*$ and $^{206}Pb^*/^{238}U$ ages (asterisks indicate that Pb has been corrected for common-Pb).

DATA REDUCTION AND DISPLAY

All measurements by both techniques are given in Table 1. Errors are reported at the 1σ level. The errors for the two techniques are not directly comparable, however, because SHRIMP errors are the standard error of 5 measurements, whereas the LA-ICP-MS errors are the standard deviation of 12 measurements. For both techniques, common Pb-corrections are based on the measured $^{206}Pb/^{204}Pb$.

$^{206}Pb/^{204}Pb$ is uncorrected measured ratio. Discordance was calculated only for grains with reliable Pb^{206}/Pb^{207} ages. Discordance due to either Pb loss from the grain during a metamorphic or tectonic event, or due to radiogenic inheritance was encountered in ~15% of the total grains analyzed. Data which were discarded for analysis due to large error (>10%) and >20% discordance are given in italics. Concordia diagrams for each sample produced using the Isoplot plotting program of Ludwig (2001) include only data with ≤10% error and ≤20% discordance. The following decay constants were used: $^{235}U\ \lambda = 9.7485 \times 10\text{-}10$, and $^{238}U\ \lambda = 1.55125 \times 10\text{-}10$ ($^{238}U/^{235}U = 137.88$). Probability and histogram plots were generated using Isoplot (Ludwig, 2003).

REFERENCES

Black, L.P., Kamo, S., Allen, C., Davis, D., John N. Aleinikoff, J., Valley, J., Mundil, R., Campbell, I.H., Korsch, R., Williams, I.S. and Foudoulis, C., 2004, Improved 206Pb/238U microprobe geochronology by the monitoring of a trace-element related matrix effect; SHRIMP, ID–TIMS, ELA–ICP–MS and oxygen isotope documentation for a series of zircon standards: Chemical Geology, v. 205, n. 1-2, pp. 115-140.

Gehrels, G.E., Yin, A., and Wang, X., 2003, Detrital-zircon geochronology of the northeastern Tibetan Plateau: Geological Society of America Bulletin, v. 115, n. 7, pp.881-896.

Ludwig, K.R., 2001, SQUID: A user's manual: Berkeley, Geochronology Center Special Publication No. 2., 19 p.

Ludwig, K.R., 2003, ISOPLOT 3.0: A Geochronological Toolkit for Microsoft Excel: Berkeley Geochronology Center Special Publication No. 4, 71 pp.

Roddick, J.C., and van Breemen, O., 1994, U-Pb zircon dating; a comparison of ion microprobe and single grain conventional analyses: Current Research - Geological Survey of Canada, Report: 1994-F, p. 1-9.

Stacey, J.S., and Kramers, J.D., 1975, Approximation of terrestrial lead isotope evolution by a two-stage model: Earth and Planetary Science Letters, 26, 207–221.

Table 2. Results of U-Pb isotopic analyses of reference source rock detrital zircon grains by Laser-Ablation Multicollector ICP Mass Spectrometery (LA-ICP-MS-MC).

				Isotopic ratios					Apparent ages (Ma)						
Analysis	U (ppm)	206Pb 204Pb	Th/U	207Pb* 235U	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U	± (Ma)	206Pb* 207Pb*	± (Ma)	% disc.	Best age (Ma)	± (Ma)
Formation: Yanchang				**Age: Late Triassic**					**N=83**		**Lat/Long: 35 16.252 N/106 50.93 E**				
02UTYAN3-2	262	28095	0.4	0.90	2.5	0.10744	1.3	0.51	657.8	8.2	630.9	47.0		657.8	8.2
02UTYAN3-3	424	73458	0.4	9.71	6.2	0.43759	5.9	0.94	2339.8	115.0	2465.5	35.0		2465.5	35.0
02UTYAN3-4	215	76932	0.4	5.39	1.8	0.33914	1.0	0.54	1882.5	16.3	1884.9	27.9		1884.9	27.9
02UTYAN3-6	201	87839	0.4	10.46	2.4	0.45178	1.9	0.78	2403.1	37.8	2536.9	25.5		2536.9	25.5
02UTYAN3-7	84	10448	0.7	4.44	2.3	0.29534	1.0	0.44	1668.2	15.0	1785.1	38.4		1785.1	38.4
02UTYAN3-8	327	44647	0.1	8.60	5.4	0.42666	5.0	0.94	2290.6	97.2	2302.0	31.8		2302.0	31.8
02UTYAN3-10	46	10272	1.0	10.12	3.5	0.44825	3.1	0.90	2387.5	62.3	2494.5	25.2		2494.5	25.2
02UTYAN3-11	149	45252	0.3	5.21	1.4	0.33215	1.0	0.71	1848.8	16.1	1859.5	17.7		1859.5	17.7
02UTYAN3-12	115	39677	0.4	10.79	1.3	0.46507	1.1	0.85	2461.9	22.4	2539.9	11.4		2539.9	11.4
02UTYAN3-13	188	55618	1.2	9.71	2.2	0.45221	1.7	0.76	2405.1	34.0	2409.5	24.8		2409.5	24.8
02UTYAN3-15	252	13481	0.5	4.89	6.4	0.31120	5.8	0.91	1746.6	89.1	1864.3	48.6		1864.3	48.6
02UTYAN3-16	135	33933	0.5	9.10	1.8	0.42612	1.5	0.86	2288.2	29.7	2400.6	15.7		2400.6	15.7
02UTYAN3-17	94	1235	0.9	0.30	8.2	0.04034	1.8	0.22	254.9	4.6	388.3	180.5		254.9	4.6
02UTYAN3-20	393	5923	0.7	0.33	6.9	0.04458	1.8	0.27	281.1	5.1	367.0	149.4		281.1	5.1
02UTYAN3-19	122	23696	0.8	11.01	3.0	0.47660	2.9	0.95	2512.4	59.4	2532.7	15.8		2532.7	15.8
02UTYAN3-21	275	19526	0.5	10.62	1.7	0.43587	1.2	0.71	2332.1	23.5	2622.8	19.8		2622.8	19.8
02UTYAN3-22	118	22708	0.9	5.31	1.5	0.33572	1.0	0.69	1866.0	16.2	1874.2	19.2		1874.2	19.2
02UTYAN3-23	486	72308	0.4	5.11	2.5	0.32887	2.1	0.86	1832.9	34.0	1844.4	22.4		1844.4	22.4
02UTYAN3-24	515	4110	1.4	0.29	2.1	0.04196	1.4	0.68	265.0	3.7	201.4	35.6		265.0	3.7
02UTYAN3-25	33	2333	0.7	5.95	9.7	0.35716	9.5	0.98	1968.7	161.3	1967.0	36.0		1967.0	36.0
02UTYAN3-26	418	102396	0.7	5.68	1.4	0.34829	1.0	0.69	1926.4	16.7	1930.8	18.6		1930.8	18.6
02UTYAN3-28	135	4169	1.3	0.27	5.7	0.04019	2.7	0.48	254.0	6.7	128.5	117.5		254.0	6.7
02UTYAN3-29	509	141067	0.6	10.38	1.8	0.45145	1.0	0.54	2401.7	20.1	2525.3	26.0		2525.3	26.0
02UTYAN3-30	205	4178	1.2	0.44	4.6	0.05844	3.4	0.76	366.1	12.3	398.3	66.8		366.1	12.3
02UTYAN3-31	69	6791	0.9	4.75	4.3	0.30142	3.9	0.92	1698.3	58.3	1868.7	30.9		1868.7	30.9
02UTYAN3-32	275	54462	0.2	5.42	2.8	0.34031	2.6	0.92	1888.1	42.5	1886.6	20.5		1886.6	20.5
02UTYAN3-33	221	47865	0.2	9.72	5.2	0.45028	4.3	0.82	2396.5	85.4	2419.2	51.1		2419.2	51.1
02UTYAN3-34	255	2982	0.8	0.29	2.5	0.04168	1.4	0.57	263.3	3.7	228.8	48.1		263.3	3.7
02UTYAN3-35	158	1188	0.9	0.38	6.0	0.04397	2.2	0.37	277.4	6.1	670.1	119.4		277.4	6.1
02UTYAN3-36	454	2163	0.5	0.30	12.6	0.03912	2.0	0.16	247.4	4.8	455.4	278.1		247.4	4.8
02UTYAN3-37	286	81428	0.2	6.54	1.6	0.37192	1.2	0.75	2038.4	20.2	2063.4	18.2		2063.4	18.2
02UTYAN3-39	226	9180	0.9	0.28	2.9	0.04054	1.1	0.39	256.2	2.8	180.4	61.8		256.2	2.8
02UTYAN3-40	137	16349	0.6	4.77	2.9	0.30147	2.8	0.98	1698.6	42.5	1874.5	10.7		1874.5	10.7
02UTYAN3-41	245	907	1.2	0.23	14.4	0.04064	2.0	0.14	256.8	5.0	-242.4	362.2		256.8	5.0
02UTYAN3-44	523	26144	0.2	6.49	4.6	0.35032	4.2	0.90	1936.1	69.9	2155.9	35.3		2155.9	35.3
02UTYAN3-45	249	18851	1.8	1.56	2.2	0.15891	1.9	0.86	950.7	16.7	961.4	23.3		950.7	16.7
02UTYAN3-46	314	12502	1.0	0.32	2.8	0.04461	1.7	0.61	281.4	4.7	282.7	50.3		281.4	4.7
02UTYAN3-47	55	1880	0.5	0.27	6.8	0.04233	3.4	0.50	267.3	8.8	-5.6	141.9		267.3	8.8
02UTYAN3-48	133	21372	1.6	9.85	1.8	0.43820	1.5	0.82	2342.6	29.3	2487.1	17.7		2487.1	17.7
02UTYAN3-49	290	6445	0.9	0.30	3.3	0.04175	1.5	0.46	263.6	4.0	272.8	66.9		263.6	4.0
02UTYAN3-50	261	63101	0.5	5.80	1.3	0.36102	1.1	0.86	1987.0	19.4	1902.5	12.2		1902.5	12.2
02UTYAN3-52	195	6718	1.2	0.25	3.2	0.03705	1.4	0.43	234.5	3.1	171.5	67.4		234.5	3.1
02UTYAN3-53	167	60087	0.1	5.56	1.9	0.34728	1.3	0.69	1921.6	21.5	1896.7	24.5		1896.7	24.5
02UTYAN3-54	117	5736	0.6	0.30	3.1	0.04456	1.5	0.49	281.1	4.2	121.5	64.7		281.1	4.2
02UTYAN3-55	430	72274	0.3	2.87	5.5	0.22973	5.0	0.91	1333.1	59.8	1435.8	43.1		1435.8	43.1
02UTYAN3-56	303	73827	0.1	5.11	3.2	0.31367	3.0	0.92	1758.7	45.7	1927.5	22.8		1927.5	22.8
02UTYAN3-57	296	39499	0.2	5.46	2.2	0.33118	1.9	0.86	1844.1	30.3	1950.2	20.2		1950.2	20.2
02UTYAN3-58	101	10032	1.0	8.94	2.9	0.40706	2.7	0.92	2201.5	49.7	2447.8	19.2		2447.8	19.2
02UTYAN3-59	539	66698	0.1	4.81	2.8	0.30138	2.5	0.89	1698.2	37.1	1892.7	22.7		1892.7	22.7
02UTYAN3-60	231	14533	0.7	4.14	10.7	0.28958	10.3	0.96	1639.4	149.8	1689.9	53.3		1689.9	53.3
02UTYAN3-61	226	13458	0.6	4.67	10.5	0.28603	9.7	0.92	1621.7	138.4	1932.4	73.2		1932.4	73.2
02UTYAN3-62	210	28736	0.7	10.57	2.2	0.45613	2.0	0.90	2422.4	40.1	2538.6	16.1		2538.6	16.1
02UTYAN3-65	515	86059	0.2	5.41	2.2	0.33404	1.6	0.73	1857.9	26.1	1919.1	27.3		1919.1	27.3
02UTYAN3-66	153	3498	0.7	0.48	5.3	0.06369	1.4	0.26	398.0	5.3	398.4	115.3		398.0	5.3
02UTYAN3-67	159	5959	0.7	5.34	1.8	0.33691	1.1	0.62	1871.8	18.5	1878.3	25.8		1878.3	25.8
02UTYAN3-68	149	41253	0.9	10.99	3.1	0.48219	2.3	0.74	2536.8	47.5	2510.4	35.2		2510.4	35.2
02UTYAN3-69	440	3401	1.1	0.26	2.9	0.03647	1.8	0.63	230.9	4.1	284.4	51.2		230.9	4.1
02UTYAN3-70	312	4890	1.2	0.40	9.5	0.05364	7.2	0.76	336.8	23.6	347.1	141.5		336.8	23.6
02UTYAN3-71	363	70511	0.2	5.22	3.4	0.32351	3.0	0.88	1806.8	47.3	1912.8	28.7		1912.8	28.7
02UTYAN3-72	202	46432	1.1	6.61	1.7	0.36998	1.0	0.60	2029.3	17.4	2091.9	23.6		2091.9	23.6
02UTYAN3-73	77	13674	1.1	5.06	2.1	0.33459	1.7	0.82	1860.6	27.5	1793.8	22.0		1793.8	22.0
02UTYAN3-74	217	50144	0.4	5.84	1.5	0.36033	1.0	0.66	1983.7	17.1	1920.6	20.3		1920.6	20.3
02UTYAN3-75	198	31514	0.4	5.09	1.2	0.32723	1.0	0.84	1824.9	15.9	1847.0	11.6		1847.0	11.6
02UTYAN3-76	161	43484	0.8	10.99	4.2	0.47222	3.5	0.85	2493.3	73.4	2546.3	36.2		2546.3	36.2
02UTYAN3-78	226	1968	1.1	0.32	3.6	0.04255	1.7	0.48	268.6	4.5	403.3	70.0		268.6	4.5
02UTYAN3-79	232	21464	0.5	5.39	2.5	0.33839	2.3	0.92	1878.9	37.7	1888.4	17.5		1888.4	17.5
02UTYAN3-80	392	22178	0.2	5.81	4.1	0.34367	3.6	0.87	1904.3	58.9	1995.1	35.6		1995.1	35.6
02UTYAN3-81	197	5165	0.7	0.32	3.1	0.04611	1.5	0.48	290.6	4.2	197.3	62.7		290.6	4.2
02UTYAN3-83	265	74646	0.5	5.57	1.7	0.34528	1.1	0.67	1912.0	18.9	1909.9	22.6		1909.9	22.6
02UTYAN3-84	385	24737	0.2	10.44	4.1	0.44013	2.8	0.67	2351.2	54.4	2578.1	51.0		2578.1	51.0
02UTYAN3-85	167	42123	0.8	5.04	1.3	0.32132	1.1	0.82	1796.2	17.2	1861.9	13.9		1861.9	13.9
02UTYAN3-87	1206	27149	0.1	4.82	4.9	0.30510	4.4	0.89	1716.5	65.9	1873.6	40.4		1873.6	40.4
02UTYAN3-88	74	31042	0.8	11.47	2.6	0.48995	2.1	0.83	2570.5	44.7	2555.1	24.1		2555.1	24.1
02UTYAN3-89	519	34701	0.1	10.18	1.9	0.44523	1.5	0.81	2374.0	30.7	2515.5	18.8		2515.5	18.8
02UTYAN3-90	28	7856	2.3	10.64	1.9	0.46088	1.6	0.84	2443.5	32.9	2531.8	17.7		2531.8	17.7
02UTYAN3-91	19	4463	2.3	5.63	2.5	0.34184	1.6	0.64	1895.5	25.6	1948.7	33.8		1948.7	33.8
02UTYAN3-92	251	2012	1.0	0.29	11.6	0.03675	2.7	0.23	232.7	6.1	484.8	248.8		232.7	6.1
02UTYAN3-93	199	2771	0.9	0.32	20.2	0.04253	3.4	0.17	268.5	9.0	396.5	450.8		268.5	9.0
02UTYAN3-95	159	42641	0.6	9.84	1.6	0.45437	1.4	0.85	2414.6	27.6	2424.8	14.4		2424.8	14.4
02UTYAN3-96	532	7433	0.2	5.11	9.8	0.31334	9.6	0.98	1757.1	146.9	1929.8	38.6		1929.8	38.6

02UTYAN3-97	170	1960	1.3	0.27	10.7	0.03816	3.3	0.30	241.4	7.7	253.7	235.7	241.4	7.7
02UTYAN3-98	452	23455	0.5	5.24	8.2	0.31329	8.1	0.99	1756.9	124.6	1974.6	20.0	1974.6	20.0
02UTYAN3-100	81	26361	1.1	10.58	1.5	0.46199	1.2	0.81	2448.4	24.3	2519.4	14.7	2519.4	14.7
Formation: Xujiahe			#DIV/0!	**Age: Late Triassic**					**N=94**		**Lat/Long: 30 05.334 N/ 102 42.965 E**			
02UTXJ1-1	59	3765	3.0	1.42	4.7	0.15119	4.1	0.88	907.6	34.6	871.8	46.7	907.6	34.6
02UTXJ1-3	323	16154	1.5	1.15	5.8	0.12463	5.8	0.99	757.2	41.1	840.0	14.5	757.2	41.1
02UTXJ1-2	324	4648	3.5	0.61	3.7	0.07501	3.2	0.87	466.3	14.5	559.3	39.1	466.3	14.5
02UTXJ1-4	128	21137	1.3	5.23	1.8	0.32960	1.7	0.94	1836.5	27.6	1881.2	11.5	1881.2	11.5
02UTXJ1-5	506	81304	0.1	4.61	2.7	0.29657	2.3	0.86	1674.3	34.0	1842.4	24.3	1842.4	24.3
02UTXJ1-6	260	19603	1.1	0.89	1.6	0.10631	1.0	0.62	651.3	6.2	619.0	27.4	651.3	6.2
02UTXJ1-7	198	2611	1.4	1.23	4.0	0.13106	1.8	0.44	793.9	13.1	875.2	73.5	793.9	13.1
02UTXJ1-8	316	71397	0.3	5.30	1.4	0.33317	1.0	0.70	1853.7	16.1	1884.4	18.2	1884.4	18.2
02UTXJ1-9	159	9526	1.1	1.16	1.8	0.13093	1.1	0.60	793.2	8.2	750.8	31.1	793.2	8.2
02UTXJ1-11	455	11733	0.4	0.40	9.5	0.05458	9.3	0.97	342.6	30.9	360.5	49.4	342.6	30.9
02UTXJ1-12	218	34289	1.3	3.31	4.4	0.25629	4.3	0.98	1470.8	57.0	1501.1	15.0	1501.1	15.0
02UTXJ1-13	227	26183	1.1	1.09	2.3	0.12416	2.2	0.93	754.5	15.5	739.4	18.4	754.5	15.5
02UTXJ1-14	171	4589	0.4	0.88	7.2	0.09394	6.8	0.95	578.8	37.9	873.2	47.0	578.8	37.9
02UTXJ1-15	777	55390	0.1	1.24	1.1	0.13540	1.0	0.89	818.6	7.7	811.9	10.5	818.6	7.7
02UTXJ1-16	387	20937	0.8	0.76	6.8	0.09160	6.7	0.99	565.0	36.2	621.3	25.1	565.0	36.2
02UTXJ1-17	305	20972	0.8	0.55	2.8	0.07200	2.5	0.89	448.2	10.8	416.6	28.2	448.2	10.8
02UTXJ1-18	383	36513	0.3	1.58	1.6	0.16302	1.3	0.77	973.5	11.3	939.0	21.6	973.5	11.3
02UTXJ1-19	70	939	1.3	0.24	14.5	0.03947	7.0	0.48	249.5	17.2	-126.2	315.2	249.5	17.2
02UTXJ1-20	68	8074	1.3	1.06	6.7	0.12160	6.3	0.95	739.8	44.1	715.0	45.3	739.8	44.1
02UTXJ1-21	211	7580	0.6	1.05	2.6	0.11989	1.5	0.60	729.9	10.6	725.8	43.6	729.9	10.6
02UTXJ1-22	211	8834	0.3	0.42	2.3	0.05913	1.9	0.82	370.3	6.9	283.6	30.3	370.3	6.9
02UTXJ1-23	291	50918	0.9	4.98	1.5	0.31717	1.0	0.68	1775.9	15.5	1863.2	19.5	1863.2	19.5
02UTXJ1-24	120	11299	0.6	1.35	2.2	0.14761	1.7	0.77	887.5	14.3	816.7	29.7	887.5	14.3
02UTXJ1-25	239	30975	0.3	4.12	2.0	0.29894	1.7	0.84	1686.1	25.5	1621.4	20.8	1621.4	20.8
02UTXJ1-26	258	806	10.8	0.30	29.0	0.03629	4.4	0.15	229.8	10.0	634.4	628.6	229.8	10.0
02UTXJ1-27	542	92004	0.2	5.11	2.8	0.31880	2.0	0.72	1783.9	31.7	1900.3	35.4	1900.3	35.4
02UTXJ1-28	375	40461	0.9	1.33	1.8	0.14631	1.7	0.93	880.2	13.8	798.8	13.8	880.2	13.8
02UTXJ1-29	257	32807	0.4	4.64	5.4	0.30125	4.9	0.92	1697.5	73.4	1825.5	39.0	1825.5	39.0
02UTXJ1-30	147	39759	0.9	6.97	1.5	0.38414	1.4	0.92	2095.6	24.4	2119.7	10.2	2119.7	10.2
02UTXJ1-32	411	64768	0.3	4.99	1.7	0.31384	1.4	0.83	1759.6	22.2	1885.2	17.3	1885.2	17.3
02UTXJ1-33	499	80134	0.1	4.57	3.3	0.29460	3.2	0.97	1664.5	46.6	1840.7	13.8	1840.7	13.8
02UTXJ1-34	609	45596	0.3	5.05	2.7	0.31085	2.6	0.96	1744.9	39.4	1921.9	13.0	1921.9	13.0
02UTXJ1-35	341	27000	0.4	5.25	1.5	0.33082	1.2	0.80	1842.4	18.5	1882.9	15.8	1882.9	15.8
02UTXJ1-36	483	38149	0.5	6.02	8.7	0.35373	8.6	0.99	1952.4	145.4	2006.3	21.3	2006.3	21.3
02UTXJ1-37	159	837	1.1	0.29	12.9	0.03615	3.7	0.29	228.9	8.4	555.8	270.3	228.9	8.4
02UTXJ1-38	524	14243	1.6	0.54	2.3	0.07017	2.1	0.92	437.2	8.9	431.7	20.0	437.2	8.9
02UTXJ1-39	550	56421	0.6	4.63	2.0	0.29223	1.9	0.92	1652.7	27.3	1877.0	14.4	1877.0	14.4
02UTXJ1-40	161	15315	0.0	0.72	1.6	0.08947	1.0	0.64	552.4	5.3	552.0	26.3	552.4	5.3
02UTXJ1-42	240	9847	0.5	0.66	1.4	0.08409	1.0	0.70	520.5	5.0	500.4	22.5	520.5	5.0
02UTXJ1-43	312	57011	0.6	5.40	1.2	0.34277	1.0	0.83	1900.0	16.5	1868.5	12.1	1868.5	12.1
02UTXJ1-44	295	38919	0.4	2.14	1.3	0.19813	1.1	0.81	1165.3	11.5	1151.2	15.4	1151.2	15.4
02UTXJ1-45	432	43142	0.3	5.24	1.5	0.32723	1.0	0.67	1825.0	15.9	1898.3	20.0	1898.3	20.0
02UTXJ1-47	95	6192	1.3	1.01	2.6	0.11937	2.2	0.86	726.9	15.4	657.1	28.4	726.9	15.4
02UTXJ1-48	386	16624	0.3	0.54	3.0	0.07158	2.6	0.88	445.7	11.3	411.9	32.1	445.7	11.3
02UTXJ1-49	330	22008	0.3	1.00	1.6	0.11686	1.3	0.79	712.5	8.6	669.4	21.6	712.5	8.6
02UTXJ1-50	373	56283	0.4	5.24	1.3	0.32710	1.0	0.74	1824.3	15.9	1899.5	16.2	1899.5	16.2
02UTXJ1-51	450	65325	0.7	5.14	2.0	0.32319	1.9	0.94	1805.3	30.2	1886.3	12.3	1886.3	12.3
02UTXJ1-52	216	7112	1.4	0.53	2.5	0.07192	1.9	0.75	447.7	8.2	334.5	38.0	447.7	8.2
02UTXJ1-53	134	10006	0.8	5.02	1.4	0.31327	1.1	0.78	1756.8	16.4	1900.2	15.5	1900.2	15.5
02UTXJ1-54	264	10528	1.6	0.52	1.7	0.06939	1.2	0.70	432.5	4.9	367.4	27.0	432.5	4.9
02UTXJ1-55	288	50233	0.3	5.49	1.4	0.34422	1.0	0.72	1906.9	16.5	1890.6	17.1	1890.6	17.1
02UTXJ1-56	79	17576	0.8	4.58	1.8	0.31071	1.7	0.90	1744.2	25.4	1746.1	14.3	1746.1	14.3
02UTXJ1-57	247	5617	0.7	0.31	1.9	0.04584	1.0	0.52	289.0	2.8	163.1	38.9	289.0	2.8
02UTXJ1-58	48	10811	0.8	5.39	3.5	0.34675	3.4	0.97	1919.1	56.2	1844.7	14.0	1844.7	14.0
02UTXJ1-59	67	2046	1.5	0.31	8.4	0.05363	5.4	0.65	336.8	17.8	-216.9	160.3	336.8	17.8
02UTXJ1-60	207	8572	0.5	0.46	2.2	0.06319	1.4	0.63	395.0	5.2	308.7	38.4	395.0	5.2
02UTXJ1-62	135	12859	1.6	1.06	2.1	0.12107	1.5	0.71	736.7	10.5	717.2	31.7	736.7	10.5
02UTXJ1-63	312	7388	1.0	0.52	2.3	0.06924	1.9	0.84	431.6	8.0	398.5	27.5	431.6	8.0
02UTXJ1-64	144	9474	1.5	1.21	2.1	0.13540	1.9	0.90	818.6	14.6	761.0	19.4	818.6	14.6
02UTXJ1-65	134	37795	0.5	12.15	2.1	0.49909	1.8	0.87	2609.9	39.2	2621.1	17.1	2621.1	17.1
02UTXJ1-66	502	11222	0.9	0.97	5.6	0.10631	5.4	0.97	651.3	33.5	806.6	28.5	651.3	33.5
02UTXJ1-67	513	56714	0.3	2.86	2.6	0.23932	2.2	0.83	1383.1	27.4	1350.4	28.2	1350.4	28.2
02UTXJ1-69	469	87501	0.1	5.01	1.9	0.31150	1.3	0.69	1748.1	20.4	1904.9	25.0	1904.9	25.0
02UTXJ1-68	376	12798	1.0	0.54	3.6	0.07138	3.2	0.87	444.5	13.5	413.4	39.1	444.5	13.5
02UTXJ1-70	268	14405	0.6	1.21	3.1	0.13202	2.9	0.95	799.4	22.0	828.7	20.7	799.4	22.0
02UTXJ1-71	86	1107	12.2	0.88	2.2	0.11454	1.4	0.63	699.0	9.2	432.5	38.3	699.0	9.2
02UTXJ1-72	89	22920	0.8	5.27	2.1	0.33266	1.8	0.85	1851.3	28.5	1877.6	19.7	1877.6	19.7
02UTXJ1-73	290	85980	1.0	11.09	1.3	0.48296	1.0	0.78	2540.1	21.0	2523.8	13.3	2523.8	13.3
02UTXJ1-74	476	78976	0.3	4.18	3.7	0.26771	3.3	0.88	1529.2	44.3	1853.8	31.1	1853.8	31.1
02UTXJ1-75	673	92891	0.3	7.43	6.2	0.38533	5.8	0.93	2101.1	103.7	2226.4	40.4	2226.4	40.4
02UTXJ1-76	297	25238	1.1	1.59	3.0	0.15626	2.6	0.87	936.0	22.4	1039.0	30.2	936.0	22.4
02UTXJ1-77	901	29330	1.0	10.03	4.1	0.42585	4.0	0.98	2287.0	77.4	2565.9	15.3	2565.9	15.3
02UTXJ1-78	302	31217	0.3	4.89	4.0	0.30455	4.0	0.98	1713.8	59.6	1902.0	14.8	1902.0	14.8
02UTXJ1-79	79	9906	1.1	1.33	2.2	0.14389	1.3	0.56	866.6	10.1	838.8	38.5	866.6	10.1
02UTXJ1-80	283	18220	0.8	1.45	1.9	0.14936	1.6	0.88	897.4	13.7	937.4	18.6	897.4	13.7
02UTXJ1-81	524	6716	0.7	0.25	2.6	0.03661	2.1	0.82	231.8	4.8	205.9	33.9	231.8	4.8
02UTXJ1-82	731	6053	0.5	1.00	4.1	0.10995	3.9	0.95	672.5	25.2	803.8	25.9	672.5	25.2
02UTXJ1-83	162	39694	0.7	11.02	1.3	0.49217	1.0	0.75	2580.1	21.3	2480.5	14.9	2480.5	14.9
02UTXJ1-84	42	3028	1.2	1.30	6.0	0.14469	2.0	0.33	871.1	16.2	774.9	119.9	871.1	16.2
02UTXJ1-85	71	7325	0.8	0.79	3.8	0.09949	1.2	0.32	611.4	7.2	511.2	79.2	611.4	7.2
02UTXJ1-86	300	43660	1.3	1.96	1.8	0.18631	1.3	0.74	1101.4	13.5	1106.9	23.8	1106.9	23.8
02UTXJ1-87	315	51357	1.0	4.90	1.2	0.31032	1.1	0.90	1742.3	16.8	1872.3	9.6	1872.3	9.6
02UTXJ1-88	279	43888	0.4	5.32	1.3	0.33327	1.0	0.82	1854.2	16.7	1891.8	13.2	1891.8	13.2

02UTXJ1-89	207	32700	0.9	6.42	2.1	0.36408	1.9	0.92	2001.5	33.2	2069.4	14.5	2069.4	14.5
02UTXJ1-90	90	5516	0.6	1.17	4.0	0.13366	1.5	0.36	808.7	11.1	730.2	80.0	808.7	11.1
02UTXJ1-91	160	3382	1.0	0.50	7.2	0.06401	2.7	0.37	400.0	10.4	460.1	148.8	400.0	10.4
02UTXJ1-92	106	11019	0.5	1.41	2.1	0.14886	1.1	0.55	894.6	9.5	895.1	36.1	894.6	9.5
02UTXJ1-93	195	58109	0.1	10.65	1.5	0.46867	1.0	0.68	2477.7	20.6	2506.2	18.0	2506.2	18.0
02UTXJ1-94	329	66271	0.2	4.66	2.6	0.30227	2.2	0.84	1702.6	33.4	1827.2	25.9	1827.2	25.9
02UTXJ1-95	469	100682	0.2	5.12	1.4	0.32270	1.0	0.72	1802.9	15.7	1879.9	17.1	1879.9	17.1
02UTXJ1-97	153	31399	0.4	5.50	1.5	0.34289	1.0	0.68	1900.6	16.5	1901.6	19.1	1901.6	19.1
02UTXJ1-98	76	7491	1.0	1.77	7.5	0.16594	7.2	0.96	989.7	65.9	1128.3	42.3	1128.3	42.3
02UTXJ1-99	178	6272	0.8	0.49	3.4	0.06702	2.9	0.84	418.2	11.6	350.6	41.6	418.2	11.6
02UTXJ1-100	355	9951	0.7	0.26	1.9	0.03783	1.2	0.62	239.4	2.8	205.5	35.0	239.4	2.8
Formation: Yufang			**#DIV/0!**	**Age: Late Cambrian**					**N=85**		**Lat/Long: 31 50.605 N/ 104 27.588 E**			
05LCYU1-2	548	67631	0.3	6.55	4.5	0.35399	4.3	0.96	1953.6	72.7	2152.3	23.2	2152.3	23.2
05LCYU1-3	171	8108	0.7	1.13	5.3	0.12400	4.8	0.92	753.6	34.4	815.6	42.9	753.6	34.4
05LCYU1-5	432	9723	1.8	0.76	6.9	0.08388	4.8	0.70	519.3	24.1	809.5	102.1	519.3	24.1
05LCYU1-4	271	21185	0.8	1.58	2.6	0.15782	2.3	0.91	944.7	20.4	1002.6	21.8	944.7	20.4
05LCYU1-6	56	4436	0.7	1.17	3.2	0.13531	2.4	0.75	818.1	18.3	699.3	44.7	818.1	18.3
05LCYU1-7	726	59245	0.2	1.51	4.6	0.15239	4.5	0.98	914.4	38.5	986.7	20.4	914.4	38.5
05LCYU1-8	642	19108	0.4	0.67	2.4	0.08343	1.7	0.70	516.6	8.2	542.0	37.4	516.6	8.2
05LCYU1-9	177	5025	0.5	0.76	5.0	0.09116	2.1	0.43	562.4	11.6	633.9	96.8	562.4	11.6
05LCYU1-10	71	4304	1.0	0.64	3.4	0.08507	1.7	0.51	526.3	8.7	411.4	64.7	526.3	8.7
05LCYU1-11	522	177756	0.2	9.46	1.5	0.42122	1.1	0.70	2266.0	20.5	2485.9	18.4	2485.9	18.4
05LCYU1-12	605	43204	0.2	5.76	8.2	0.32451	8.2	0.99	1811.7	129.1	2080.0	18.2	2080.0	18.2
05LCYU1-13	145	13297	1.5	1.17	2.0	0.13276	1.0	0.50	803.6	7.6	743.3	36.5	803.6	7.6
05LCYU1-14	136	12679	0.8	1.30	3.0	0.13505	1.9	0.63	816.6	14.7	918.5	48.2	816.6	14.7
05LCYU1-15	53	4441	0.8	1.09	4.8	0.12436	1.8	0.38	755.6	12.9	726.9	94.1	755.6	12.9
05LCYU1-16	150	19454	0.5	4.77	4.3	0.30157	4.1	0.97	1699.1	61.6	1876.5	19.0	1876.5	19.0
05LCYU1-17	295	16783	1.8	1.22	2.7	0.13475	2.5	0.93	814.9	19.3	795.8	21.2	814.9	19.3
05LCYU1-18	87	8701	0.5	1.91	2.2	0.18648	1.7	0.78	1102.3	17.1	1053.2	27.7	1053.2	27.7
05LCYU1-19	388	17313	0.4	0.86	1.6	0.10103	1.3	0.79	620.5	7.6	656.6	21.7	620.5	7.6
05LCYU1-20	101	34573	0.5	5.35	2.0	0.33743	1.5	0.75	1874.3	24.1	1879.6	23.5	1879.6	23.5
05LCYU1-21	116	11980	0.9	1.21	4.1	0.13002	2.9	0.71	788.0	21.7	855.3	60.1	788.0	21.7
05LCYU1-22	86	3783	0.8	0.64	7.4	0.08347	4.4	0.59	516.8	21.6	421.1	133.8	516.8	21.6
05LCYU1-24	816	17174	1.0	0.65	2.1	0.07988	1.0	0.47	495.4	4.8	561.9	41.2	495.4	4.8
05LCYU1-26	111	7287	0.7	0.67	2.8	0.08506	1.4	0.49	526.3	7.0	504.6	54.0	526.3	7.0
05LCYU1-27	274	25709	1.3	1.67	2.7	0.16632	2.4	0.88	991.8	21.8	1013.4	26.5	1013.4	26.5
05LCYU1-29	141	12771	1.1	1.10	3.2	0.12255	2.6	0.82	745.2	18.6	768.2	39.5	745.2	18.6
05LCYU1-30	247	61446	1.2	9.06	4.9	0.39348	4.2	0.86	2138.9	76.0	2527.0	42.0	2527.0	42.0
05LCYU1-31	232	19656	1.9	1.46	1.9	0.15135	1.6	0.84	908.5	13.3	926.8	20.9	908.5	13.3
05LCYU1-32	252	12459	1.1	1.03	6.5	0.11472	6.3	0.97	700.1	41.8	774.1	34.9	700.1	41.8
05LCYU1-33	100	3074	1.1	0.63	11.8	0.07599	6.5	0.55	472.1	29.7	598.3	212.5	472.1	29.7
05LCYU1-34	405	32660	0.3	1.85	8.7	0.16561	8.6	0.99	987.9	79.1	1220.0	20.5	1220.0	20.5
05LCYU1-35	52	5245	1.2	1.29	3.8	0.14231	2.4	0.65	857.7	19.7	797.3	60.3	857.7	19.7
05LCYU1-36	88	6486	1.2	1.28	3.0	0.13960	1.3	0.43	842.4	10.0	830.1	55.8	842.4	10.0
05LCYU1-38	67	21769	1.1	10.81	1.5	0.46541	1.1	0.69	2463.4	21.7	2542.9	18.6	2542.9	18.6
05LCYU1-39	374	20449	0.8	0.67	2.1	0.08451	1.0	0.48	523.0	5.0	514.7	39.7	523.0	5.0
05LCYU1-41	192	21715	1.4	1.60	2.1	0.16524	1.5	0.70	985.8	13.8	935.7	31.4	985.8	13.8
05LCYU1-42	277	7530	0.7	0.66	6.0	0.08097	5.6	0.93	501.9	27.0	584.5	47.8	501.9	27.0
05LCYU1-44	79	12030	0.4	3.59	5.8	0.25944	5.6	0.97	1487.0	74.5	1628.5	28.2	1628.5	28.2
05LCYU1-43	240	16290	1.0	1.33	3.4	0.13891	2.3	0.68	838.5	18.2	919.0	50.8	838.5	18.2
05LCYU1-45	331	94006	0.6	9.69	5.7	0.42603	5.5	0.96	2287.8	106.5	2507.5	25.4	2507.5	25.4
05LCYU1-46	320	92136	0.6	10.69	1.6	0.47378	1.0	0.61	2500.1	20.7	2494.1	21.9	2494.1	21.9
05LCYU1-48	109	5822	1.0	0.80	3.2	0.09477	2.1	0.67	583.7	11.9	649.6	51.0	583.7	11.9
05LCYU1-51	220	7722	1.1	0.66	1.9	0.08110	1.0	0.52	502.7	4.8	564.0	36.2	502.7	4.8
05LCYU1-52	90	7106	1.8	1.17	4.4	0.12988	3.7	0.82	787.2	27.1	784.1	53.3	787.2	27.1
05LCYU1-53	408	64452	1.0	9.41	5.5	0.41110	5.1	0.93	2219.9	96.1	2517.6	35.3	2517.6	35.3
05LCYU1-54	257	109084	0.2	22.26	1.7	0.64593	1.3	0.80	3212.3	33.6	3184.2	15.8	3184.2	15.8
05LCYU1-55	718	98532	0.2	1.96	1.6	0.18648	1.0	0.61	1102.3	10.1	1096.9	26.2	1096.9	26.2
05LCYU1-56	172	10322	0.7	0.66	2.1	0.08401	1.0	0.47	520.0	5.0	489.5	41.4	520.0	5.0
05LCYU1-57	700	147787	0.3	2.47	4.9	0.20757	3.8	0.78	1215.9	42.0	1348.3	58.9	1348.3	58.9
05LCYU1-58	577	30453	0.6	0.71	1.7	0.08694	1.2	0.71	537.4	6.2	575.0	26.2	537.4	6.2
05LCYU1-59	275	19956	1.5	1.64	3.6	0.15639	3.0	0.85	936.7	26.3	1096.6	37.9	1096.6	37.9
05LCYU1-60	117	10977	1.1	1.12	3.7	0.12912	3.3	0.90	782.8	24.7	707.4	35.1	782.8	24.7
05LCYU1-61	876	48162	0.2	1.56	3.7	0.15754	3.6	0.96	943.1	31.6	987.2	20.5	943.1	31.6
05LCYU1-62	321	48068	0.4	5.46	4.4	0.34244	4.1	0.94	1898.4	68.1	1888.5	27.2	1888.5	27.2
05LCYU1-63	239	82052	0.8	7.81	2.4	0.41385	2.1	0.89	2232.5	39.9	2187.6	18.8	2187.6	18.8
05LCYU1-64	626	25046	0.5	0.68	5.7	0.08544	5.6	0.98	528.5	28.3	529.0	22.1	528.5	28.3
05LCYU1-65	222	6857	0.7	0.64	8.1	0.07626	4.8	0.59	473.8	21.8	631.5	140.6	473.8	21.8
05LCYU1-66	624	32821	0.4	0.74	3.7	0.09078	1.9	0.51	560.1	10.2	576.4	69.9	560.1	10.2
05LCYU1-67	468	86992	0.4	5.21	3.4	0.33249	3.0	0.87	1850.5	48.1	1857.2	30.9	1857.2	30.9
05LCYU1-68	927	49841	0.1	0.80	3.2	0.09276	2.9	0.90	571.8	15.9	697.8	30.1	571.8	15.9
05LCYU1-69	275	9853	0.6	0.68	2.2	0.08478	1.2	0.54	524.6	5.9	534.7	40.2	524.6	5.9
05LCYU1-70	642	43347	0.2	1.41	10.6	0.14654	10.5	0.99	881.5	86.9	922.4	24.1	881.5	86.9
05LCYU1-71	210	18420	0.5	0.68	2.8	0.08594	1.7	0.62	531.5	8.8	512.2	47.4	531.5	8.8
05LCYU1-72	388	46096	0.3	1.66	1.8	0.16744	1.3	0.73	998.0	12.3	982.3	25.5	998.0	12.3
05LCYU1-73	276	7841	0.7	1.14	3.5	0.12409	1.3	0.38	754.1	9.5	833.7	67.8	754.1	9.5
05LCYU1-74	174	75465	0.8	11.22	1.4	0.48395	1.0	0.69	2544.4	21.0	2539.5	17.4	2539.5	17.4
05LCYU1-75	80	7427	1.3	1.12	7.7	0.12189	7.4	0.96	741.4	52.0	825.1	44.2	741.4	52.0
05LCYU1-76	230	7900	0.7	1.13	8.4	0.11496	7.5	0.89	701.5	49.7	957.9	79.8	701.5	49.7
05LCYU1-77	368	20399	0.2	1.45	3.3	0.14487	2.4	0.71	872.2	19.2	1000.7	48.0	872.2	19.2
05LCYU1-78	111	10584	0.7	1.23	4.7	0.13513	4.4	0.95	817.1	33.9	805.2	31.7	817.1	33.9
05LCYU1-79	314	15818	0.6	1.21	3.3	0.12991	2.8	0.87	787.4	21.0	853.5	34.1	787.4	21.0
05LCYU1-81	167	15935	0.5	1.19	1.8	0.13186	1.3	0.74	798.5	9.9	780.6	25.0	798.5	9.9
05LCYU1-82	464	102995	0.4	5.23	1.8	0.33161	1.0	0.56	1846.2	16.1	1870.6	26.7	1870.6	26.7
05LCYU1-85	145	43051	0.8	6.40	2.1	0.36205	1.6	0.75	1991.9	27.5	2074.2	24.7	2074.2	24.7
05LCYU1-86	197	23392	1.0	1.48	2.7	0.15166	1.9	0.70	910.2	16.1	949.2	39.6	910.2	16.1
05LCYU1-87	290	4864	0.4	0.70	3.1	0.08326	1.9	0.63	515.5	9.6	637.7	51.8	515.5	9.6

05LCYU1-88	536	71472	0.5	4.79	10.8	0.28867	10.5	0.98	1634.9	152.0	1962.5	41.6	1962.5	41.6
05LCYU1-91	376	18252	0.8	0.68	2.4	0.08459	2.0	0.81	523.4	9.9	535.5	30.8	523.4	9.9
05LCYU1-92	236	10644	0.6	0.68	5.9	0.08158	3.4	0.57	505.6	16.3	604.3	104.8	505.6	16.3
05LCYU1-93	96	14156	0.8	1.73	3.0	0.17145	1.9	0.63	1020.1	17.9	1023.2	47.5	1023.2	47.5
05LCYU1-94	321	21322	0.6	0.68	3.5	0.08143	2.9	0.81	504.6	13.9	618.9	44.6	504.6	13.9
05LCYU1-95	149	22421	0.7	1.29	2.5	0.13717	2.1	0.84	828.7	16.5	878.0	28.9	828.7	16.5
05LCYU1-97	285	16446	0.5	0.83	5.0	0.10056	4.9	0.98	617.7	29.1	601.4	22.0	617.7	29.1
05LCYU1-98	402	9449	1.3	0.63	9.5	0.06600	9.3	0.98	412.0	37.0	900.6	40.6	412.0	37.0
05LCYU1-99	362	9461	2.3	0.76	2.9	0.08760	2.2	0.75	541.3	11.4	693.7	40.9	541.3	11.4
05LCYU1-100	187	11147	0.9	1.63	2.1	0.16410	1.0	0.47	979.5	9.1	990.5	38.0	979.5	9.1