

# Provenance and Tectonic Implications of Sedimentary Rocks of the Paleozoic Chiron Basin, Eastern Transbaikalia, Russia, Based on Whole-Rock Geochemistry and Detrital Zircon U–Pb Age and Hf Isotopic Data

Ludmila I. Popeko <sup>1</sup>, Yulia N. Smirnova <sup>2</sup>, Victor A. Zaika <sup>2</sup>, Andrey A. Sorokin <sup>2,\*</sup> and Sergey I. Dril <sup>3</sup>

<sup>1</sup> Kosygin Institute of Tectonics and Geophysics, Far Eastern Branch, Russian Academy of Sciences, Khabarovsk 680000, Russia; popeko@itig.as.khb.ru

<sup>2</sup> Institute of Geology and Nature Management, Far Eastern Branch, Russian Academy of Sciences, Blagoveshchensk 675000, Russia; smirnova@ascnet.ru (Y.N.S.); zaika\_v\_a\_88@mail.ru (V.A.Z.)

<sup>3</sup> Vinogradov Institute of Geochemistry, Siberian Branch, Russian Academy of Sciences, Irkutsk 664033, Russia; sdril@igc.irk.ru

\* Correspondence: sorokin@ascnet.ru

**Table S1.** Chemical composition of the sedimentary rocks of the Chiron Basin.

Sample	Khara-Shibir Formation								
	Sandstone								
	Y-92	Y-92-2	Y-92-3	Y-92-5	Y-92-6	Y-92-7	Y-98	Y-98-1	Y-98-2
Major elements (wt.%)									
SiO <sub>2</sub>	73.30	75.09	73.96	73.53	67.31	72.89	74.46	73.15	72.86
TiO <sub>2</sub>	0.39	0.44	0.39	0.34	0.45	0.41	0.29	0.21	0.24
Al <sub>2</sub> O <sub>3</sub>	12.71	11.85	12.35	12.32	13.71	12.57	12.09	13.01	12.81
Fe <sub>2</sub> O <sub>3</sub> *	2.33	1.39	1.69	1.30	3.26	2.50	1.53	1.65	1.50
MnO	0.03	0.02	0.03	0.06	0.05	0.05	0.03	0.04	0.04
MgO	0.75	0.55	0.65	0.63	1.24	0.82	0.67	0.63	0.79
CaO	1.03	0.89	0.90	0.80	0.95	0.97	0.84	0.85	0.87
Na <sub>2</sub> O	4.38	5.60	5.36	6.15	6.43	5.01	6.39	5.73	6.70
K <sub>2</sub> O	3.18	2.94	3.29	3.39	3.49	3.04	2.73	3.27	2.97
P <sub>2</sub> O <sub>5</sub>	0.11	0.08	0.10	0.09	0.13	0.09	0.05	0.06	0.05
LOI	1.19	0.84	0.87	1.01	2.70	1.15	0.62	0.81	0.88
Total	99.40	99.69	99.59	99.62	99.72	99.50	99.70	99.41	99.71
CIA	50	46	47	45	46	49	45	47	45
CIW	58	52	54	52	53	56	50	54	50
WIP	72	80	81	89	95	77	86	84	91
STI	88	88	88	88	86	88	89	89	89
Rare Earth Element (ppm)									
La	12.09	21.71	25.55	22.98	20.74	19.89	19.10	12.42	10.48
Ce	37.79	47.27	67.26	47.15	51.52	58.61	40.95	24.88	20.67
Pr	3.02	4.74	5.23	4.54	4.52	4.32	4.11	2.66	2.26
Nd	11.18	16.81	18.78	16.54	15.97	15.84	15.02	9.80	8.27
Sm	1.94	2.94	3.15	2.78	2.74	2.71	2.49	1.72	1.50
Eu	0.43	0.57	0.60	0.53	0.53	0.54	0.54	0.50	0.43
Gd	1.59	2.35	2.56	2.30	2.28	2.34	2.10	1.54	1.31
Tb	0.26	0.33	0.37	0.34	0.35	0.36	0.29	0.22	0.18
Dy	1.64	1.81	2.04	1.95	2.09	2.10	1.61	1.26	1.03
Ho	0.32	0.31	0.35	0.34	0.38	0.38	0.28	0.23	0.19
Er	1.09	1.00	1.08	1.05	1.28	1.24	0.89	0.72	0.58
Tm	0.17	0.14	0.15	0.14	0.18	0.18	0.12	0.10	0.08
Yb	1.27	1.04	1.07	1.02	1.38	1.31	0.88	0.72	0.61
Lu	0.19	0.15	0.15	0.14	0.21	0.19	0.13	0.10	0.09

[La/Yb]n	6.48	14.15	16.19	15.37	10.19	10.31	14.81	11.74	11.71
Eu/Eu*	0.73	0.64	0.62	0.62	0.63	0.64	0.70	0.91	0.92
ΣREE	73	101	128	102	104	110	88	57	48
Trace Element (ppm)									
Li	16.74	5.90	7.19	7.25	29.02	15.63	7.65	8.33	8.88
Rb	119	83	94	99	114	99	89	113	81
Sr	241	158	158	176	231	224	190	208	249
Ba	797	621	586	541	702	693	658	779	817
Y	27.00	24.00	25.00	26.00	26.00	26.00	24.00	25.00	23.00
Th	9.38	11.02	8.28	6.43	10.74	8.49	5.94	4.68	4.88
U	1.22	1.05	0.92	0.76	1.70	1.13	0.77	0.65	0.82
Zr	227	254	233	157	297	237	106	84	103
Hf	1.92	1.81	1.54	1.07	2.25	1.87	0.90	0.82	0.85
Nb	11.00	12.00	13.00	11.00	11.00	13.00	9.00	9.00	9.00
Ta	0.63	0.99	0.73	0.52	0.79	0.82	0.46	0.41	0.39
Zn	70.30	47.14	51.39	50.04	73.75	53.32	40.06	56.95	51.97
Co	7.00	6.00	6.00	6.00	11.00	8.00	6.00	5.00	6.00
Ni	19.00	23.00	17.00	22.00	18.00	19.00	22.00	25.00	18.00
Sc	4.14	2.62	2.73	1.56	4.71	3.77	2.06	1.86	2.03
V	33.00	26.00	35.00	28.00	34.00	34.00	16.00	19.00	16.00
Cr	76.00	97.00	74.00	88.00	58.00	64.00	100.00	84.00	94.00
Pb	12.98	8.19	9.57	8.46	13.48	11.81	10.94	13.21	12.88
Sample	Khara-Shibir Formation								
	Sandstone								
	Y-98-3	Y-98-4	Y-98-5	Y-98-6	Y-98-7	Y-98-8	Y-98-9		
Major elements (wt.%)									
SiO <sub>2</sub>	71.77	73.09	73.57	73.50	74.70	73.47	73.17		
TiO <sub>2</sub>	0.22	0.29	0.21	0.22	0.28	0.21	0.22		
Al <sub>2</sub> O <sub>3</sub>	13.38	12.70	12.68	13.39	12.68	12.99	13.66		
Fe <sub>2</sub> O <sub>3</sub> *	1.21	1.74	1.56	1.60	1.76	1.39	1.19		
MnO	0.02	0.04	0.03	0.03	0.05	0.02	0.02		
MgO	0.57	0.73	0.57	0.59	0.49	0.56	0.49		
CaO	0.76	0.87	0.85	0.93	0.99	0.87	0.89		
Na <sub>2</sub> O	6.96	5.95	5.82	4.61	4.46	5.64	5.30		
K <sub>2</sub> O	3.48	2.97	3.15	3.44	2.89	3.23	3.34		
P <sub>2</sub> O <sub>5</sub>	0.06	0.06	0.06	0.06	0.06	0.05	0.05		
LOI	1.02	1.10	0.90	1.13	1.08	0.87	0.93		
Total	99.45	99.54	99.40	99.50	99.44	99.30	99.26		
CIA	45	46	47	51	51	48	50		
CIW	51	53	53	59	58	54	57		
WIP	97	84	84	76	70	83	81		
STI	88	88	89	89	89	89	88		
Rare earth element (ppm)									
La	9.50	16.09	13.37	15.89	10.57	10.12	11.09		
Ce	17.55	52.23	29.04	30.02	41.82	17.98	23.36		
Pr	2.02	3.67	2.78	3.28	2.62	2.28	2.38		
Nd	7.44	13.00	10.30	11.86	9.40	8.32	8.84		
Sm	1.30	2.22	1.80	2.06	1.68	1.47	1.54		
Eu	0.38	0.49	0.50	0.53	0.37	0.43	0.44		
Gd	1.13	1.82	1.58	1.86	1.30	1.25	1.32		
Tb	0.16	0.28	0.23	0.26	0.20	0.18	0.18		
Dy	0.91	1.58	1.34	1.46	1.19	1.02	1.05		
Ho	0.17	0.29	0.24	0.26	0.22	0.19	0.20		
Er	0.53	0.90	0.76	0.82	0.70	0.59	0.63		
Tm	0.08	0.13	0.11	0.11	0.10	0.08	0.09		
Yb	0.54	0.91	0.75	0.76	0.72	0.58	0.65		
Lu	0.08	0.13	0.11	0.11	0.10	0.08	0.10		
[La/Yb]n	11.96	11.97	12.14	14.16	9.91	11.86	11.54		
Eu/Eu*	0.94	0.72	0.88	0.81	0.74	0.94	0.92		
ΣREE	42	94	63	69	71	45	52		
Trace element (ppm)									
Li	7.20	9.34	6.78	6.87	6.07	6.77	5.40		
Rb	103	100	111	120	107	118	122		
Sr	215	207	208	172	222	202	203		

Ba	811	697	711	753	626	721	775
Yb	0.54	0.91	0.75	0.76	0.72	0.58	0.65
Y	22.00	25.00	24.00	24.00	24.00	26.00	23.00
Th	4.41	7.81	4.96	4.84	5.74	4.71	4.65
U	0.59	0.80	0.65	0.36	0.66	0.71	0.69
Zr	85	117	91	81	116	87	86
Hf	0.84	0.99	0.82	0.81	0.77	0.80	0.84
Nb	7.00	9.00	8.00	8.00	8.00	8.00	8.00
Ta	0.36	0.89	0.34	0.37	0.35	0.31	0.31
Zn	44.26	72.30	41.11	44.48	45.37	41.10	43.27
Co	5.00	6.00	6.00	6.00	6.00	5.00	5.00
Ni	24.00	24.00	20.00	19.00	22.00	23.00	21.00
Sc	1.64	2.26	1.76	1.84	1.62	1.61	1.65
V	17.00	26.00	23.00	21.00	20.00	18.00	25.00
Cr	78.00	89.00	89.00	62.00	80.00	73.00	64.00
Pb	11.86	12.30	12.17	11.90	10.59	12.15	12.89

Sample	Shazagaitui Formation												
	Sandstone				Silty sandstone						Siltstone		
	Y-96-3	Y-97	Y-97-7	Y-97-11	Y-96	Y-96-1	Y-96-4	Y-96-5	Y-97-1	Y-97-2	Y-97-3	Y-97-4	Y-96-2
Major Elements (wt.%)													
SiO <sub>2</sub>	66.25	70.21	71.27	71.03	68.30	69.39	66.70	62.56	63.00	65.45	60.43	65.35	59.48
TiO <sub>2</sub>	0.54	0.44	0.47	0.48	0.54	0.39	0.53	0.40	0.59	0.61	0.47	0.67	0.40
Al <sub>2</sub> O <sub>3</sub>	12.80	13.98	13.24	13.37	12.92	10.87	13.19	10.98	13.08	14.07	12.26	13.99	11.03
Fe <sub>2</sub> O <sub>3</sub> *	4.58	3.14	2.82	3.32	4.37	3.39	3.57	4.12	6.51	5.34	3.04	4.70	2.29
MnO	0.10	0.03	0.04	0.03	0.06	0.06	0.11	0.22	0.11	0.06	0.19	0.06	0.21
MgO	1.51	1.03	0.97	0.93	1.18	1.03	1.28	1.11	1.37	1.57	1.01	1.87	1.08
CaO	3.57	0.96	0.95	1.01	2.78	4.83	3.16	8.00	4.28	2.52	8.54	2.18	10.85
Na <sub>2</sub> O	3.00	4.66	5.10	4.43	2.99	1.68	3.82	2.91	2.28	2.86	3.86	4.38	3.95
K <sub>2</sub> O	2.60	3.11	3.14	3.25	2.56	2.47	2.59	2.11	2.94	3.15	2.00	2.86	1.85
P <sub>2</sub> O <sub>5</sub>	0.15	0.13	0.14	0.15	0.15	0.10	0.16	0.13	0.16	0.16	0.14	0.22	0.16
LOI	4.28	1.90	1.40	1.52	3.36	4.82	4.14	6.85	4.70	3.53	7.27	3.03	7.91
Total	99.38	99.59	99.54	99.52	99.21	99.03	99.25	99.39	99.02	99.32	99.21	99.31	99.21
CIA	47	52	50	51	50	43	47	34	47	53	34	50	28
CIW	53	60	57	59	56	48	52	36	53	60	36	56	30
WIP	63	75	79	74	60	52	69	68	61	64	77	75	83
STI	86	86	87	86	86	88	86	87	85	85	86	84	86
Rare Earth Element (ppm)													
La	35.31	29.53	27.31	36.50	35.83	25.24	40.95	30.68	41.60	42.92	32.10	50.10	30.36
Ce	70.26	62.36	57.12	74.39	69.87	49.30	73.01	62.18	86.07	88.48	60.07	101.70	57.22
Pr	7.47	6.51	6.59	7.69	7.36	5.03	8.35	6.55	9.07	9.51	6.83	10.73	6.13
Nd	28.64	24.16	24.81	28.22	27.74	18.77	31.92	25.13	35.87	37.14	26.28	41.23	23.24
Sm	5.01	3.95	4.23	4.64	4.84	3.22	5.66	4.31	6.48	6.68	4.58	7.06	4.04
Eu	1.08	0.75	0.80	0.85	1.04	0.71	1.24	0.96	1.24	1.32	1.11	1.29	0.89
Gd	4.36	3.02	3.48	3.66	4.27	2.70	5.08	3.78	5.65	6.07	4.20	5.94	3.60
Tb	0.60	0.40	0.46	0.48	0.60	0.39	0.70	0.54	0.82	0.86	0.62	0.82	0.49
Dy	3.23	2.10	2.43	2.54	3.38	2.18	3.98	3.06	4.79	5.10	3.78	4.50	2.74
Ho	0.58	0.37	0.42	0.46	0.62	0.40	0.73	0.56	0.88	0.94	0.73	0.79	0.50
Er	1.79	1.19	1.30	1.44	1.88	1.27	2.23	1.76	2.80	2.99	2.35	2.45	1.58
Tm	0.23	0.16	0.17	0.19	0.25	0.17	0.28	0.23	0.36	0.39	0.31	0.31	0.20
Yb	1.57	1.12	1.19	1.36	1.72	1.20	1.87	1.60	2.57	2.70	2.21	2.09	1.37
Lu	0.22	0.16	0.17	0.20	0.25	0.17	0.26	0.22	0.36	0.37	0.31	0.29	0.19
[La/Yb] <sub>n</sub>	15.24	17.90	15.60	18.26	14.10	14.29	14.89	13.04	10.99	10.93	9.87	16.31	15.09
Eu/Eu*	0.69	0.64	0.62	0.61	0.68	0.72	0.69	0.71	0.61	0.62	0.76	0.59	0.70
ΣREE	160	136	130	163	160	111	176	142	199	205	146	229	133
Trace Element (ppm)													
Li	22.20	14.28	11.78	13.72	19.30	21.07	20.33	24.87	33.57	33.84	20.70	30.89	15.03
Rb	97	94	99	101	107	124	104	73	120	125	79	108	61
Sr	469	152	173	177	519	469	539	554	359	293	572	277	867
Ba	906	791	738	821	913	779	881	691	844	872	571	848	748
Y	29.00	24.00	26.00	28.00	34.00	29.00	35.00	26.00	37.00	38.00	28.00	33.00	23.00
Th	8.73	10.73	9.69	12.37	10.59	8.40	8.89	8.58	15.08	14.05	10.70	18.67	6.70
U	1.55	1.44	1.25	1.30	2.11	1.76	1.64	3.18	2.50	2.32	1.41	2.12	1.55
Zr	210	209	227	235	212	166	215	229	198	225	212	194	242
Hf	1.91	1.86	1.99	2.10	2.28	1.96	2.01	2.17	2.77	3.02	2.22	2.24	1.75

Nb	12.00	12.00	11.00	10.00	11.00	10.00	10.00	10.00	14.00	14.00	12.00	13.00	9.00
Ta	0.61	0.34	0.45	0.55	0.77	0.54	0.65	0.71	1.08	1.08	1.54	0.84	0.54
Zn	104.22	70.41	51.31	69.69	99.23	72.26	95.87	95.59	124.87	126.37	71.30	105.14	87.93
Co	11.00	10.00	9.00	9.00	9.00	9.00	10.00	10.00	13.00	13.00	9.00	13.00	8.00
Ni	23.00	26.00	23.00	22.00	27.00	16.00	26.00	20.00	25.00	27.00	24.00	27.00	17.00
Sc	6.54	4.73	4.57	5.65	6.39	4.71	5.92	5.20	10.22	9.94	8.39	10.12	4.11
V	56.00	58.00	45.00	53.00	60.00	32.00	46.00	47.00	81.00	87.00	61.00	84.00	26.00
Cr	43.00	67.00	78.00	66.00	40.00	33.00	42.00	45.00	49.00	45.00	44.00	52.00	33.00
Pb	13.72	10.92	12.73	14.11	18.29	16.36	17.16	13.18	23.46	22.95	16.98	24.92	13.26

Sample	Zhipkhoshi Formation									
	Sandstone									
	Y-93	Y-94	Y-94-1	Y-94-5	Y-94-7	Y-94-8	Y-95	Y-95-1	Y-95-2	
Major elements (wt.%)										
SiO <sub>2</sub>	77.22	55.81	71.12	69.87	69.12	68.44	78.00	77.87	77.81	
TiO <sub>2</sub>	0.34	0.38	0.54	0.50	0.49	0.50	0.30	0.27	0.27	
Al <sub>2</sub> O <sub>3</sub>	11.29	10.10	13.03	13.39	13.29	11.94	10.53	11.04	10.55	
Fe <sub>2</sub> O <sub>3</sub> *	1.62	1.47	2.72	2.86	3.32	2.56	1.05	1.18	1.03	
MnO	0.03	0.52	0.07	0.04	0.04	0.07	0.01	0.03	0.03	
MgO	0.53	0.83	1.02	1.28	1.41	1.01	0.54	0.55	0.46	
CaO	0.91	14.71	1.07	1.70	1.88	4.48	0.82	0.92	0.85	
Na <sub>2</sub> O	4.14	3.73	5.82	5.08	5.04	5.15	6.85	5.82	7.16	
K <sub>2</sub> O	2.48	1.73	1.70	2.72	2.72	1.51	0.96	1.05	0.67	
P <sub>2</sub> O <sub>5</sub>	0.06	0.14	0.16	0.19	0.17	0.14	0.07	0.07	0.08	
LOI	0.98	10.03	2.23	1.85	2.03	3.59	0.60	0.79	0.78	
Total	99.60	99.45	99.48	99.48	99.51	99.39	99.73	99.59	99.69	
CIA	50	22	49	48	48	40	43	47	43	
CIW	57	24	53	54	53	42	45	50	44	
WIP	63	89	74	78	78	74	75	66	75	
STI	89	87	86	86	86	86	90	90	90	
Rare earth element (ppm)										
La	25.52	24.96	30.00	40.04	41.11	28.92	19.05	17.57	15.36	
Ce	52.26	52.40	57.83	84.44	83.28	59.04	42.53	39.93	34.22	
Pr	5.34	5.54	6.58	8.31	8.49	6.13	4.19	3.927	3.45	
Nd	19.22	21.39	25.47	31.98	32.62	23.52	15.56	14.74	12.95	
Sm	3.14	3.68	4.27	5.47	5.51	4.04	2.47	2.41	2.14	
Eu	0.61	0.90	0.94	1.24	1.21	0.98	0.58	0.58	0.52	
Gd	2.52	3.24	3.45	4.75	4.68	3.38	1.83	1.93	1.70	
Tb	0.35	0.45	0.47	0.67	0.66	0.49	0.23	0.25	0.23	
Dy	1.90	2.54	2.61	3.81	3.69	2.68	1.15	1.34	1.20	
Ho	0.33	0.47	0.47	0.68	0.68	0.49	0.19	0.23	0.22	
Er	1.06	1.46	1.56	2.09	2.13	1.54	0.62	0.72	0.70	
Tm	0.15	0.19	0.21	0.28	0.28	0.20	0.09	0.10	0.10	
Yb	1.04	1.30	1.45	1.93	1.96	1.40	0.62	0.69	0.66	
Lu	0.15	0.19	0.21	0.28	0.28	0.20	0.09	0.10	0.10	
[La/Yb] <sub>n</sub>	16.60	13.00	14.10	14.08	14.24	14.04	21.00	17.24	15.73	
Eu/Eu*	0.64	0.78	0.72	0.73	0.71	0.78	0.80	0.79	0.81	
ΣREE	114	119	136	186	187	133	89	84	74	
Trace element (ppm)										
Li	7.81	12.07	15.62	16.16	19.48	15.41	6.41	9.88	10.14	
Rb	92	52	67	91	85	57	39	46	30	
Sr	204	662	335	406	403	545	173	170	151	
Ba	589	789	593	1362	1379	622	271	318	181	
Y	26.00	20.00	22.00	34.00	33.00	23.00	16.00	17.00	15.00	
Th	6.22	6.13	7.31	9.00	8.73	6.66	3.83	3.73	3.56	
U	1.14	1.45	1.46	1.47	1.41	1.41	0.76	0.70	0.72	
Zr	230	230	231	389	341	252	113	106	99	
Hf	1.96	1.88	2.19	2.58	2.56	2.00	1.05	1.00	0.99	
Nb	11.00	10.00	10.00	14.00	14.00	12.00	10.00	9.00	9.00	
Ta	0.58	0.62	0.60	0.75	0.76	0.51	0.32	0.28	0.33	
Zn	62.91	59.62	81.28	118.11	99.17	61.35	51.70	36.53	25.76	
Co	6.00	6.00	8.00	9.00	10.00	8.00	5.00	5.00	5.00	
Ni	18.00	16.00	28.00	21.00	22.00	24.00	21.00	26.00	25.00	
Sc	2.47	4.73	5.55	5.70	6.00	4.83	1.64	2.02	1.70	
V	27.00	42.00	50.00	50.00	43.00	40.00	22.00	19.00	21.00	

Cr	83.00	44.00	65.00	57.00	58.00	59.00	108.00	89.00	86.00
Pb	10.01	12.22	15.35	14.06	14.87	12.85	7.65	9.75	8.51

  

Sample	Zhipkhoshi Formation								
	Sandstone						Siltstone		
	Y-95-3	Y-95-5	Y-95-6	Y-95-7	Y-95-8	Y-95-9	Y-94-2	Y-94-4	Y-94-6
Major Elements (wt.%)									
SiO <sub>2</sub>	77.51	77.44	79.07	78.94	77.66	72.68	69.90	66.34	65.94
TiO <sub>2</sub>	0.26	0.29	0.29	0.30	0.43	0.16	0.51	0.52	0.48
Al <sub>2</sub> O <sub>3</sub>	10.36	10.99	10.26	10.23	10.85	13.78	12.22	12.76	13.11
Fe <sub>2</sub> O <sub>3</sub> *	1.14	1.21	1.01	1.08	1.43	1.61	2.61	3.49	2.50
MnO	0.01	0.03	0.02	0.01	0.02	0.03	0.08	0.07	0.07
MgO	0.48	0.44	0.51	0.47	0.52	0.49	1.01	1.44	1.30
CaO	0.77	0.83	0.86	0.83	1.04	1.03	3.11	3.95	4.37
Na <sub>2</sub> O	7.51	6.66	6.04	6.52	4.69	5.10	5.07	2.75	5.23
K <sub>2</sub> O	0.60	0.64	0.59	0.53	1.75	3.67	1.73	3.00	2.63
P <sub>2</sub> O <sub>5</sub>	0.27	0.07	0.06	0.33	0.11	0.06	0.14	0.14	0.20
LOI	0.63	0.84	0.72	0.51	0.96	0.82	3.10	4.89	3.82
Total	99.54	99.44	99.43	99.75	99.46	99.43	99.48	99.35	99.65
CIA	42	46	46	44	48	49	44	46	40
CIW	43	47	47	46	53	57	47	52	44
WIP	78	70	64	68	62	82	72	65	85
STI	90	90	90	90	88	89	86	86	86
Rare Earth Element (ppm)									
La	17.45	16.56	19.81	20.10	27.73	14.49	29.84	41.27	40.24
Ce	39.41	37.23	44.93	43.29	61.83	30.32	59.44	81.14	81.78
Pr	4.02	3.78	4.54	4.65	6.42	3.12	6.56	8.48	8.24
Nd	14.90	14.28	16.76	17.52	23.89	11.62	24.86	32.12	30.91
Sm	2.49	2.40	2.83	2.99	3.91	1.96	4.26	5.40	5.12
Eu	0.58	0.54	0.64	0.67	0.80	0.57	1.02	1.13	1.07
Gd	1.91	1.83	2.19	2.40	3.08	1.61	3.63	4.68	4.31
Tb	0.24	0.23	0.28	0.32	0.42	0.23	0.51	0.64	0.62
Dy	1.21	1.17	1.38	1.65	2.18	1.31	2.86	3.66	3.48
Ho	0.21	0.21	0.23	0.28	0.37	0.24	0.52	0.67	0.64
Er	0.71	0.68	0.74	0.88	1.14	0.80	1.64	2.13	2.07
Tm	0.10	0.09	0.10	0.12	0.15	0.11	0.22	0.28	0.28
Yb	0.75	0.70	0.75	0.86	1.06	0.79	1.49	1.92	1.90
Lu	0.11	0.10	0.11	0.12	0.15	0.12	0.21	0.27	0.27
[La/Yb] <sub>N</sub>	15.72	16.06	18.02	15.84	17.72	12.39	13.60	14.57	14.39
Eu/Eu*	0.78	0.76	0.75	0.74	0.68	0.95	0.77	0.67	0.67
ΣREE	84	80	95	96	133	67	137	184	181
Trace Element (ppm)									
Li	5.44	16.19	7.38	7.94	10.94	5.29	16.18	21.69	14.89
Rb	30	27	30	26	65	113	67	116	84
Sr	117	193	127	107	216	348	479	427	407
Ba	148	344	155	123	655	1322	720	1453	1049
Y	16.00	14.00	15.00	15.00	25.00	22.00	26.00	36.00	29.00
Th	3.78	3.71	4.06	4.28	7.41	3.73	7.17	9.22	8.76
U	0.81	0.73	0.78	0.89	1.10	0.74	1.50	1.64	1.49
Zr	100	115	112	118	234	108	266	259	319
Hf	1.18	1.06	1.18	1.26	1.64	0.93	2.17	2.46	2.55
Nb	9.00	8.00	10.00	12.00	10.00	9.00	10.00	13.00	14.00
Ta	0.36	0.35	0.37	0.37	0.52	0.37	0.58	0.69	0.73
Zn	16.45	31.20	15.46	21.44	61.45	61.86	80.88	132.52	82.55
Co	5.00	5.00	4.00	5.00	6.00	6.00	8.00	10.00	8.00
Ni	24.00	22.00	21.00	20.00	22.00	18.00	23.00	28.00	24.00
Sc	1.69	1.70	1.76	1.64	2.46	1.62	5.36	7.47	6.33
V	13.00	23.00	20.00	17.00	41.00	16.00	59.00	69.00	47.00
Cr	143.00	122.00	81.00	158.00	88.00	66.00	97.00	50.00	48.00
Pb	7.58	8.55	7.43	6.60	9.86	15.18	14.21	16.26	12.52

Notes: major element oxides in weight percent (wt.%); trace elements and rare earth element in parts per million (ppm); LOI—loss on ignition; Fe<sub>2</sub>O<sub>3</sub>\*—total iron expressed as Fe<sub>2</sub>O<sub>3</sub>. Eu/Eu\* = Eu<sub>N</sub>/Sqrt(Sm<sub>N</sub> × Gd<sub>N</sub>); subscript N, chondrite normalized value [1]. CIA = 100\*(Al<sub>2</sub>O<sub>3</sub>/(Al<sub>2</sub>O<sub>3</sub> + CaO + Na<sub>2</sub>O + K<sub>2</sub>O)) [2,3]; CIW = 100\*((Al<sub>2</sub>O<sub>3</sub>/(Al<sub>2</sub>O<sub>3</sub> + CaO + Na<sub>2</sub>O)) [4]; WIP = 100\*((2\*Na<sub>2</sub>O/0.35) +

$$\begin{aligned} & (\text{MgO}/0.9) + (2*\text{K}_2\text{O}/0.25) + (\text{CaO}/0.7) \text{ [5]; STI} = 100*((\text{SiO}_2/\text{TiO}_2)/((\text{SiO}_2/\text{TiO}_2) + (\text{SiO}_2/\text{Al}_2\text{O}_3) + \\ & (\text{Al}_2\text{O}_3/\text{TiO}_2))) \text{ [6].} \end{aligned}$$

Table S2. U-Th-Pb LA-ICP-MS data for zircons from metasedimentary rocks of the Chiron Basin.

No	Analysis	Th, ppm	U, ppm	<sup>206</sup> Pb/ <sup>204</sup> Pb	U/Th	Isotope Ratios*					Ages, Ma										D	
						<sup>206</sup> Pb/ <sup>207</sup> Pb	±1s, %	<sup>207</sup> Pb/ <sup>235</sup> U	±1s, %	<sup>206</sup> Pb/ <sup>238</sup> U	±1s, %	Rho	<sup>206</sup> Pb/ <sup>238</sup> U	±1s	<sup>207</sup> Pb/ <sup>235</sup> U	±1s	<sup>207</sup> Pb/ <sup>206</sup> U	±1s	CA	±2s		
Sample Y-99: a shale of the Aga-Borshchovochnyi metamorphic Formation																						
1	Y-99 Spot 1	101	188	41469	1.9	17.4719	1.1	0.6381	1.9	0.0809	1.6	0.82	501.5	7.6	501.2	7.6	499.7	24.2	501	14	0.366320545	
2	Y-99 Spot 2	33	392	49717	12.1	14.8459	0.9	1.3537	1.7	0.1458	1.4	0.84	877.5	11.5	869.1	9.7	848.0	18.8	869	19	3.474379744	
3	Y-99 Spot 3	46	114	5542	2.5	17.6895	1.0	0.7285	1.6	0.0935	1.2	0.78	576.2	6.7	555.7	6.7	472.3	21.8				
4	Y-99 Spot 4	158	379	39440	2.4	17.4388	0.9	0.6773	1.5	0.0857	1.3	0.83	530.1	6.5	525.1	6.3	503.8	19.0	527	12	5.20694766	
5	Y-99 Spot 5	29	136	67881	4.7	8.2839	0.7	5.7439	1.5	0.3452	1.3	0.88	1911.9	21.7	1938.0	12.9	1966.0	12.6	1952	22	-2.7557455	
6	Y-99 Spot 6	15	13	20690	0.9	6.7517	2.0	8.6816	2.4	0.4253	1.3	0.55	2284.5	25.0	2305.2	21.5	2323.5	33.9	2298	41	-1.67726314	
7	Y-99 Spot 7	189	262	17863	1.4	15.2561	1.1	1.1989	1.7	0.1327	1.3	0.76	803.3	10.0	800.1	9.6	791.0	23.5	801	18	1.553223151	
8	Y-99 Spot 8	71	91	46017	1.3	6.1203	1.1	10.8345	1.8	0.4811	1.5	0.81	2532.2	30.8	2509.0	16.9	2490.3	17.9	2501	31	1.683890434	
9	Y-99 Spot 10	116	175	11122	1.5	16.3859	2.8	0.6776	3.1	0.0806	1.3	0.42	499.5	6.2	525.4	12.7	639.3	60.6	500	12	-21.8657048	
10	Y-99 Spot 11	91	449	68375	5.0	17.0345	0.9	0.7885	1.8	0.0975	1.5	0.86	599.5	8.7	590.3	7.9	555.2	19.3	592	16	7.976343352	
11	Y-99 Spot 12	99	376	1190739	3.8	16.9652	0.9	0.8029	1.5	0.0988	1.2	0.80	607.6	7.0	598.5	6.8	564.1	19.5	602	13	7.716341765	
12	Y-99 Spot 13	59	122	214241	2.1	6.0873	1.0	10.3828	1.4	0.4586	0.9	0.67	2433.3	19.3	2469.5	13.0	2499.4	17.5	2469	26	-2.64314437	
13	Y-99 Spot 14	75	124	90418	1.7	15.1347	1.1	1.2144	2.0	0.1334	1.6	0.84	807.0	12.5	807.2	11.0	807.8	22.5	807	22	-0.0991228	
14	Y-99 Spot 15	23	154	20158	6.8	14.9611	1.3	1.3190	1.9	0.1432	1.4	0.74	862.6	11.4	854.1	11.0	831.9	26.7	858	21	3.696826385	
15	Y-99 Spot 16	188	683	211926	3.6	17.3792	1.1	0.6570	1.8	0.0828	1.5	0.81	513.1	7.2	512.8	7.3	511.3	23.4	513	14	0.34541054	
16	Y-99 Spot 17	21	21	6833	1.0	8.8092	1.2	5.4619	2.2	0.3491	1.8	0.82	1930.4	29.5	1894.6	18.5	1855.7	22.3	1883	36	4.02560287	
17	Y-99 Spot 18	25	65	24582	2.6	13.1726	1.1	1.7449	1.6	0.1668	1.2	0.76	994.3	11.5	1025.3	10.6	1092.0	21.4				
18	Y-99 Spot 19	77	165	66448	2.2	16.6853	1.0	0.7731	1.7	0.0936	1.4	0.83	576.8	7.9	581.6	7.6	600.2	20.9	580	15	-3.89825448	
19	Y-99 Spot 21	113	243	7266	2.2	17.6759	1.3	0.6392	2.0	0.0820	1.5	0.75	507.9	7.4	501.8	8.0	474.0	29.6	506	14	7.157161245	
20	Y-99 Spot 22	25	114	49243	4.5	16.8279	1.4	0.7849	2.0	0.0958	1.4	0.71	589.9	7.9	588.3	8.8	581.8	30.0	589	15	1.404530867	
21	Y-99 Spot 23	239	291	31508	1.2	16.9011	1.0	0.7445	1.6	0.0913	1.3	0.80	563.2	7.0	565.0	7.1	572.3	21.3	564	13	-1.58879061	
22	Y-99 Spot 25	36	92	204094	2.6	16.9383	1.2	0.7682	1.8	0.0944	1.4	0.77	581.6	7.8	578.7	8.0	567.6	25.1	580	15	2.472651774	
23	Y-99 Spot 26	26	14	48764	0.6	6.0074	1.2	10.9960	1.8	0.4793	1.3	0.76	2524.2	28.1	2522.8	16.5	2521.6	19.4	2522	32	0.101990467	
24	Y-99 Spot 27	181	365	26021	2.0	17.0698	0.8	0.7560	1.3	0.0936	1.0	0.79	577.0	5.7	571.7	5.7	550.7	17.5	574	11	4.77839338	
25	Y-99 Spot 28	122	245	31966	2.0	16.9705	1.2	0.7756	1.9	0.0955	1.4	0.78	588.0	8.1	583.0	8.3	563.4	25.6	586	15	4.375147975	
26	Y-99 Spot 29	236	154	50667	0.7	9.4110	1.0	4.3532	1.5	0.2973	1.2	0.77	1677.7	17.0	1703.5	12.4	1735.4	17.5	1705	25	-3.32350845	
27	Y-99 Spot 30	3	254	74853	94.8	14.5370	1.0	1.4590	1.6	0.1539	1.2	0.77	922.7	10.3	913.6	9.4	891.5	20.7	916	18	3.500200708	
28	Y-99 Spot 31	36	96	3031135	2.7	16.6641	1.0	0.7858	1.5	0.0950	1.2	0.77	585.1	6.6	588.8	6.9	603.0	21.4	587	13	-2.95963923	
29	Y-99 Spot 32	32	269	133030	8.5	17.1390	0.8	0.6718	1.4	0.0835	1.1	0.81	517.3	5.5	521.8	5.6	541.8	17.6	519	11	-4.53623503	
30	Y-99 Spot 33	26	117	34787	4.5	17.2128	1.3	0.6510	1.8	0.0813	1.3	0.71	503.9	6.2	509.1	7.2	532.4	27.4	505	12	-5.35654151	
31	Y-99 Spot 34	86	260	50176	3.0	16.6590	1.0	0.8211	1.5	0.0992	1.1	0.73	610.0	6.5	608.6	7.0	603.6	22.7	610	12	1.05871797	
32	Y-99 Spot 35	152	302	14989	2.0	16.8892	1.2	0.8281	1.9	0.1015	1.5	0.77	623.1	8.9	612.6	9.0	573.8	27.0	618	17	8.586390301	
33	Y-99 Spot 36	26	83	6797	3.1	16.6388	1.2	0.8750	1.9	0.1056	1.5	0.77	647.4	9.0	638.3	9.0	606.2	26.3	643	17	6.782632723	
34	Y-99 Spot 37	65	157	10704	2.4	16.8575	1.1	0.7440	1.7	0.0910	1.2	0.75	561.5	6.7	564.7	7.2	578.0	23.9	563	13	-2.85664139	
35	Y-99 Spot 38	55	82	19292	1.5	5.8481	1.0	11.7475	1.7	0.4985	1.4	0.81	2607.3	29.1	2584.5	15.6	2566.7	16.3	2577	29	1.582785821	
36	Y-99 Spot 39	55	152	10587	2.8	17.1304	1.7	0.7603	2.1	0.0945	1.2	0.59	582.1	6.8	574.2	9.1	542.9	36.6	581	13	7.208374877	
37	Y-99 Spot 40	137	244	44144	1.8	15.3186	1.1	1.2171	1.6	0.1353	1.2	0.75	817.9	9.5	808.4	9.2	782.4	22.9	812	17	4.530735959	
38	Y-99 Spot 41	33	96	147982	2.9	14.0348	1.2	1.5974	1.8	0.1627	1.3	0.73	971.6	11.5	969.2	11.0	963.8	24.7	970	21	0.813206368	
39	Y-99 Spot 42	56	185	47702	3.3	16.7177	1.2	0.7684	1.6	0.0932	1.2	0.71	574.5	6.3	578.8	7.2	596.0	24.9	576	12	-3.60733574	
40	Y-99 Spot 43	95	207	9674	2.2	17.2025	1.7	0.7549	2.5	0.0942	1.8	0.73	580.5	10.1	571.1	10.9	533.7	37.5	577	19	8.756978843	
41	Y-99 Spot 44	81	161	38539	2.0	17.3819	1.1	0.6530	1.6	0.0824	1.2	0.72	510.1	5.8	510.3	6.6	511.0	25.0	510	11	-0.16961437	
42	Y-99 Spot 45	113	231	68018	2.0	6.0284	0.9	10.7497	1.4	0.4702	1.1	0.75	2484.4	21.8	2501.7	13.0	2515.8	15.4	2505	26	-1.24574097	
43	Y-99 Spot 46	54	67	13054	1.3	14.8083	1.2	1.2446	1.7	0.1337	1.1	0.68	809.1	8.5	821.0	9.3	853.3	25.3	813	16	-5.1748679	
44	Y-99 Spot 47	31	46	9891	1.5	16.7614	1.8	0.6933	2.3	0.0843	1.4	0.62	521.9	7.2	534.8	9.7	590.4	39.7	524	14	-11.6064551	
45	Y-99 Spot 48	61	180	38678	2.9	16.4721	1.2	0.7899	1.8	0.0944	1.3	0.73	581.6	7.1	591.1	7.9	628.0	26.2	584	14	-7.38698658	
46	Y-99 Spot 49	3	73	58527	29.1	16.6052	1.0	0.8305	1.7	0.1001	1.4	0.81	614.8	8.2	613.9	8.0	610.6	22.2	614	15	0.682827595	
47	Y-99 Spot 50	611	316	20882	0.5	17.4235	0.9	0.6601	1.3	0.0834	1.0	0.75	516.7	4.9	514.7	5.3	505.8	19.0	516	9.5	2.158810407	
48	Y-99 Spot 51	58	115	36255	2.0	16.7702	1.0	0.7779	1.6	0.0947	1.3	0.80	583.0	7.2	584.3	7.2	589.2	21.0	584	1		

57	Y--9 Spot 60	54	125	86362	2.3	9.5220	1.0	4.1321	1.8	0.2855	1.5	0.83	1618.9	21.1	1660.7	14.6	1713.8	18.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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119	Y-99 Spot 127	110	153	24994	1.4	14.4978	1.0	1.4068	1.6	0.1480	1.2	0.77	889.7	10.2	891.8	9.5	897.1	20.9	891	18	-0.83093015
120	Y-99 Spot 128	146	203	16598	1.4	16.5954	1.1	0.8513	1.7	0.1025	1.3	0.76	629.1	7.7	625.4	7.9	611.9	23.6	627	15	2.814811628
121	Y-99 Spot 129	30	136	47668	4.6	5.3571	1.7	11.8035	4.9	0.4588	4.6	0.94	2434.3	92.5	2588.9	45.5	2712.3	27.6	2692	49	-10.2500461
122	Y-99 Spot 130	115	398	31578	3.5	17.0445	1.1	0.7885	1.6	0.0975	1.2	0.74	599.8	6.6	590.3	7.0	553.9	23.2	596	13	8.286559408
Chiron Basin																					
Sample Y-98: a sandstone of the Khara-Shibir Formation																					
1	Y-98 Spot 1	170	425	72554	2.5	18.3448	0.8	0.4630	1.4	0.0616	1.1	0.80	385.5	4.1	386.3	4.4	391.2	18.3	385.8	8	-1.46784921
2	Y-98 Spot 2	116	182	151337	1.6	18.7056	1.1	0.4094	1.7	0.0556	1.2	0.74	348.6	4.2	348.5	4.9	347.4	25.2	348.6	8.3	0.367084069
3	Y-98 Spot 3	99	180	4104	1.8	19.9122	1.4	0.3831	1.8	0.0553	1.2	0.66	347.3	4.0	329.3	5.1	204.2	31.4			
4	Y-98 Spot 4	237	484	69505	2.0	18.4393	0.9	0.4595	1.5	0.0615	1.2	0.80	384.6	4.5	383.9	4.8	379.7	20.6	384.3	8.7	1.281459328
5	Y-98 Spot 5	221	495	183632	2.2	18.6953	0.8	0.4120	1.3	0.0559	1.1	0.80	350.5	3.7	350.3	4.0	348.6	18.2	350.5	7.2	0.542124358
6	Y-98 Spot 6	240	513	62909	2.1	18.9387	1.0	0.4146	1.8	0.0570	1.5	0.84	357.2	5.4	352.2	5.5	319.3	22.4	355	10	11.86741323
7	Y-98 Spot 7	94	199	137863	2.1	18.4164	1.1	0.4140	1.8	0.0553	1.4	0.80	347.1	4.9	351.7	5.4	382.5	24.4	348.3	9.6	-9.25898948
8	Y-98 Spot 8	359	793	53501	2.2	18.7815	0.7	0.4127	1.6	0.0562	1.5	0.90	352.7	5.1	350.8	4.9	338.2	15.9	351.3	9.7	4.290286527
9	Y-98 Spot 9	189	351	26180	1.9	18.3733	1.0	0.4687	1.5	0.0625	1.1	0.74	390.7	4.1	390.3	4.8	387.7	22.4	390.6	8.1	0.766468769
10	Y-98 Spot 10	70	137	4556	2.0	19.0719	1.4	0.4585	1.9	0.0634	1.3	0.69	396.5	5.0	383.2	6.0	303.4	31.3	393.5	9.8	30.72049889
11	Y-98 Spot 11	77	164	9441	2.1	19.2668	1.2	0.4189	1.6	0.0586	1.0	0.66	366.9	3.7	355.3	4.7	280.2	26.8	364.8	7.2	30.95324187
12	Y-98 Spot 12	295	318	17182	1.1	18.7228	0.9	0.4446	1.4	0.0604	1.1	0.76	378.1	3.9	373.5	4.4	345.3	20.7	376.8	7.6	9.49009994
13	Y-98 Spot 13	171	193	19624	1.1	18.8670	1.3	0.4021	1.7	0.0550	1.2	0.68	345.4	4.0	343.2	5.0	327.9	28.7	345.1	7.9	5.33134656
14	Y-98 Spot 14	306	550	20593	1.8	16.9863	1.3	0.6598	1.9	0.0813	1.3	0.70	504.0	6.3	514.5	7.5	561.4	28.9	506	12	-10.2241603
15	Y-98 Spot 15	219	869	8485	4.0	17.0863	1.7	0.4561	2.1	0.0565	1.3	0.59	354.6	4.4	381.5	6.8	548.6	37.8			
16	Y-98 Spot 16	242	494	60231	2.0	18.9100	1.0	0.3872	1.7	0.0531	1.3	0.79	333.7	4.3	332.4	4.8	322.8	23.6	333.4	8.5	3.394252726
17	Y-98 Spot 17	746	636	38836	0.9	18.7672	1.0	0.4068	1.9	0.0554	1.6	0.83	347.6	5.3	346.6	5.5	340.0	23.8	347	10	2.237151019
18	Y-98 Spot 18	88	155	6882	1.8	17.5664	2.2	0.4181	2.7	0.0533	1.5	0.56	334.7	4.8	354.7	8.0	487.7	49.0	335.4	9.7	-31.3772999
19	Y-98 Spot 19	54	132	56254	2.4	18.4174	1.2	0.4165	1.7	0.0557	1.2	0.71	349.1	4.1	353.5	5.0	382.4	26.7	349.8	8.1	-8.68804821
20	Y-98 Spot 20	579	757	101760	1.3	18.6085	0.8	0.4004	1.5	0.0541	1.2	0.84	339.4	4.1	341.9	4.2	359.1	17.9	340.3	8	-5.49515804
21	Y-98 Spot 21	192	283	15431	1.5	18.7243	1.0	0.4065	1.5	0.0552	1.2	0.78	346.6	4.0	346.4	4.5	345.1	21.6	346.5	7.8	0.423314312
22	Y-98 Spot 22	125	333	8040	2.7	19.1116	1.5	0.4344	2.1	0.0602	1.4	0.67	377.0	5.0	366.3	6.3	298.6	34.8	375	9.9	26.27319783
23	Y-98 Spot 23	394	544	35578	1.4	18.8173	0.8	0.4122	1.5	0.0563	1.2	0.82	353.0	4.1	350.5	4.3	333.9	18.7	352	8	5.722331208
24	Y-98 Spot 24	181	263	35575	1.5	18.7042	1.1	0.4053	1.8	0.0550	1.5	0.80	345.2	4.9	345.5	5.4	347.5	25.2	345.2	9.7	-0.68270187
25	Y-98 Spot 25	144	260	30242	1.8	18.3782	1.0	0.4665	1.5	0.0622	1.1	0.74	389.0	4.2	388.7	4.9	387.2	22.9	388.9	8.3	0.476460504
26	Y-98 Spot 26	63	167	25129	2.7	18.5983	1.0	0.4205	1.5	0.0567	1.1	0.74	355.8	4.0	356.4	4.6	360.4	23.2	355.9	7.8	-1.26661112
27	Y-98 Spot 27	44	165	10930083	3.7	18.3002	1.1	0.4280	1.5	0.0568	1.1	0.71	356.4	3.8	361.8	4.7	396.7	24.3	357.2	7.5	-10.1681953
28	Y-98 Spot 28	229	425	144916	1.9	18.4974	1.1	0.4175	1.9	0.0560	1.5	0.80	351.5	5.2	354.3	5.6	372.6	25.3	352	10	-5.67530608
29	Y-98 Spot 29	217	408	108702	1.9	18.4455	0.8	0.4376	1.7	0.0586	1.5	0.88	366.9	5.3	368.6	5.2	378.9	17.8	368	10	-3.17658236
30	Y-98 Spot 30	151	203	189769	1.3	18.3550	0.9	0.4570	1.4	0.0609	1.1	0.78	380.8	4.2	382.1	4.6	390.0	20.5	381.2	8.2	-2.34595421
31	Y-98 Spot 31	244	255	35996	1.0	18.3937	0.9	0.4659	1.4	0.0622	1.1	0.77	388.9	4.2	388.4	4.6	385.3	20.5	388.7	8.2	0.940928838
32	Y-98 Spot 32	189	359	45228	1.9	18.8085	1.0	0.4130	1.8	0.0564	1.4	0.82	353.4	5.0	351.0	5.2	335.0	22.9	352.6	9.7	5.515887718
33	Y-98 Spot 33	166	308	19061	1.9	18.4116	1.3	0.4298	1.9	0.0574	1.4	0.72	359.9	4.8	363.0	5.8	383.1	29.2	360.4	9.5	-6.05297878
34	Y-98 Spot 34	225	355	50824	1.6	18.4989	0.9	0.4770	1.6	0.0640	1.3	0.82	400.0	4.9	396.0	5.1	372.4	20.2	398.3	9.6	7.408955471
35	Y-98 Spot 35	128	201	6881	1.6	19.2844	1.2	0.3975	1.8	0.0556	1.3	0.72	348.9	4.4	339.8	5.1	278.1	28.0	346.8	8.6	25.47232044
36	Y-98 Spot 36	63	97	44855	1.5	18.1843	1.3	0.4614	1.8	0.0609	1.4	0.73	381.0	5.0	385.2	5.9	410.9	28.1	381.8	9.9	-7.29121914
37	Y-98 Spot 37	134	187	11636	1.4	18.9040	1.4	0.4075	1.9	0.0559	1.3	0.68	350.6	4.4	347.0	5.5	323.5	31.5	350	8.6	8.382802608
38	Y-98 Spot 38	127	220	22131	1.7	18.7391	0.9	0.4365	1.5	0.0594	1.3	0.81	371.7	4.5	367.8	4.7	343.3	20.2	370.2	8.8	8.256008756
39	Y-98 Spot 39	123	328	21851	2.7	18.3861	1.0	0.4229	1.6	0.0564	1.3	0.79	353.8	4.4	358.1	4.9	386.2	22.5	354.9	8.7	-8.39086096
40	Y-98 Spot 40	164	484	25580	2.9	18.9953	0.9	0.4174	1.6	0.0575	1.3	0.82	360.6	4.7	354.2	4.9	312.5	21.5	358	9.1	15.37582752
41	Y-98 Spot 41	69	249	39171	3.6	18.3808	1.3	0.4156	1.8	0.0554	1.3	0.72	347.8	4.4	352.9	5.4	386.8	28.1	348.6	8.7	-10.0928785
42	Y-98 Spot 42	1729	1172	548	0.7	7.1668	13.9	0.9171	14.0	0.0477	1.6	0.11	300.3	4.7	660.8	68.3	2220.6	242.9			
43	Y-98 Spot 43	131	257	6525	2.0	19.3219	1.1	0.3758	1.5	0.0527	1.1	0.72	331.0	3.5	324.0	4.2	273.6	24.3	329.6	6.9	20.99991634
44	Y-98 Spot 44	122	229	6338	1.9	18.9559	0.9	0.4028	1.6	0.0554	1.3	0.83	347.6	4.4	343.7	4.6	317.2	19.8	346	8.6	9.58151379
45	Y-98 Spot 45	135	360	18499	2.7	18.6913	1.0	0.4136	1.6	0.0561	1.2	0.78	351.8	4.2	351.4	4.7	349.1</				

57	Y-98 Spot 57	270	605	45073	2.2	18.5215	0.9	0.4157	1.8	0.0559	1.5	0.86	350.4	5.3	352.9	5.3	369.7	20.3	352	10	-5.21576818
58	Y-98 Spot 58	280	574	26572	2.1	19.0757	1.0	0.4146	1.5	0.0574	1.2	0.77	359.7	4.1	352.2	4.5	302.9	21.8	357.4	8	18.7474517
59	Y-98 Spot 59	198	319	12063	1.6	18.9683	1.1	0.4530	1.7	0.0624	1.3	0.77	389.9	4.9	379.4	5.3	315.7	24.5	386.4	9.5	23.49427853
60	Y-98 Spot 60	152	495	96403	3.3	18.2991	1.0	0.4598	1.8	0.0611	1.6	0.85	382.0	5.8	384.1	5.8	396.8	21.6	383	11	-3.72872773
61	Y-98 Spot 61	317	511	37330	1.6	18.8517	0.9	0.4158	1.7	0.0569	1.5	0.85	356.6	5.1	353.0	5.2	329.7	20.7	354.9	9.9	8.129509267
62	Y-98 Spot 62	65	123	29376	1.9	18.6012	1.4	0.4440	1.9	0.0599	1.3	0.68	375.1	4.7	373.0	5.9	360.0	31.4	374.8	9.3	4.202147266
63	Y-98 Spot 63	109	180	6654	1.7	19.1144	2.2	0.3972	2.6	0.0551	1.3	0.51	345.7	4.4	339.6	7.4	298.3	50.5	345.3	8.7	15.90760491
64	Y-98 Spot 64	231	326	15357	1.4	18.9479	1.0	0.4257	1.4	0.0585	1.0	0.71	366.7	3.7	360.1	4.4	318.2	23.0	365.3	7.2	15.24185222
65	Y-98 Spot 65	81	126	32902	1.6	18.2385	1.1	0.4238	1.7	0.0561	1.3	0.75	351.8	4.5	358.8	5.3	404.3	25.6	353.1	8.9	-12.9845866
66	Y-98 Spot 66	55	113	23688	2.1	18.5373	1.0	0.4161	1.6	0.0560	1.2	0.77	351.0	4.1	353.2	4.7	367.8	22.9	351.5	8.2	-4.54824574
67	Y-98 Spot 67	423	538	28935	1.3	17.7325	1.0	0.4821	1.6	0.0620	1.3	0.81	387.9	5.0	399.5	5.4	466.9	21.3			
68	Y-98 Spot 68	203	647	16772	3.2	17.9847	0.9	0.4666	1.7	0.0609	1.4	0.84	381.0	5.3	388.9	5.4	435.5	20.0	384	10	-12.5132804
69	Y-98 Spot 69	71	95	4819	1.3	19.5334	1.2	0.3958	1.7	0.0561	1.2	0.71	351.9	4.0	338.6	4.8	248.6	27.1			
70	Y-98 Spot 70	216	493	15161	2.3	19.0089	0.9	0.4113	1.6	0.0567	1.3	0.82	355.7	4.6	349.8	4.8	310.9	21.1	353.5	8.9	14.43178717
71	Y-98 Spot 71	138	386	20107	2.8	18.7829	0.9	0.4187	1.5	0.0571	1.2	0.81	357.7	4.3	355.1	4.6	338.0	20.4	356.8	8.3	5.821556608
72	Y-98 Spot 72	122	206	13571	1.7	18.5189	1.1	0.4272	1.7	0.0574	1.2	0.74	359.8	4.3	361.2	5.1	370.0	25.1	360.1	8.5	-2.76250568
73	Y-98 Spot 73	236	524	38467	2.2	18.4391	0.8	0.4177	1.4	0.0559	1.2	0.83	350.6	4.0	354.4	4.3	379.7	18.1	351.8	7.9	-7.67559726
74	Y-98 Spot 74	171	295	10781	1.7	18.8622	0.9	0.4202	1.6	0.0575	1.3	0.83	360.4	4.7	356.2	4.9	328.5	20.7	358.7	9.1	9.70982389
75	Y-98 Spot 75	244	187	3618	0.8	19.5434	1.1	0.4221	1.5	0.0599	1.0	0.65	374.7	3.6	357.5	4.5	247.4	26.1			
76	Y-98 Spot 76	240	495	52489	2.1	17.5970	0.9	0.4346	1.6	0.0555	1.4	0.85	348.1	4.7	366.4	5.1	483.9	19.0			
77	Y-98 Spot 77	199	301	22648	1.5	18.4157	1.2	0.4551	1.8	0.0608	1.3	0.73	380.6	4.7	380.9	5.6	382.6	27.0	380.6	9.3	-0.5195997
78	Y-98 Spot 78	279	541	142775	1.9	18.4639	0.9	0.4161	1.6	0.0557	1.4	0.85	349.7	4.7	353.2	4.9	376.7	19.2	351.1	9.3	-7.17177949
79	Y-98 Spot 79	291	377	35394	1.3	18.5207	0.6	0.4182	1.5	0.0562	1.3	0.90	352.4	4.5	354.7	4.4	369.8	14.5	353.9	8.7	-4.68792751
80	Y-98 Spot 80	158	262	7496	1.7	18.7991	1.2	0.4423	1.8	0.0603	1.3	0.73	377.7	4.8	371.9	5.6	336.1	27.7	376.3	9.5	12.3650484
81	Y-98 Spot 81	66	147	5434	2.2	19.9384	1.5	0.3892	2.0	0.0563	1.3	0.67	353.1	4.6	333.8	5.7	201.1	34.5			
82	Y-98 Spot 82	221	608	1559	2.8	13.3000	5.1	0.6304	5.3	0.0608	1.5	0.27	380.7	5.4	496.4	21.0	1072.7	103.3			
83	Y-98 Spot 83	187	269	7689	1.4	19.2371	1.8	0.3967	2.3	0.0554	1.4	0.61	347.4	4.8	339.2	6.7	283.7	42.1	346.4	9.5	22.46247702
84	Y-98 Spot 84	219	319	212682	1.5	18.5287	1.1	0.4353	1.6	0.0585	1.1	0.71	366.6	4.1	366.9	4.9	368.8	25.4	366.7	8	-0.59883948
85	Y-98 Spot 85	212	367	35750	1.7	18.2663	0.9	0.4839	1.6	0.0641	1.3	0.82	400.7	5.2	400.8	5.4	400.8	20.7	401	10	-0.02552995
86	Y-98 Spot 86	115	114	5842	1.0	19.1620	1.3	0.4528	1.7	0.0630	1.2	0.70	393.6	4.6	379.3	5.5	292.6	28.6			
87	Y-98 Spot 87	68	132	14552	2.0	17.8726	1.2	0.5046	1.6	0.0654	1.0	0.65	408.6	4.2	414.8	5.5	449.5	27.0	409.5	8.2	-9.08573484
88	Y-98 Spot 88	127	281	3542	2.2	20.0165	4.3	0.3892	4.5	0.0565	1.2	0.26	354.5	4.0	333.8	12.8	192.1	100.9	354.8	8.1	84.5385385
89	Y-98 Spot 89	166	215	32444	1.3	18.0624	0.9	0.4606	1.6	0.0604	1.3	0.84	377.8	4.8	384.7	5.0	425.9	19.3	380.3	9.4	-11.2945343
90	Y-98 Spot 90	246	938	99420	3.8	18.4036	0.9	0.4606	1.6	0.0615	1.3	0.82	384.8	4.8	384.7	5.1	384.1	20.5	384.8	9.4	0.197380937
91	Y-98 Spot 91	117	348	10940	3.0	18.8386	1.1	0.4085	1.7	0.0558	1.3	0.77	350.3	4.5	347.8	5.0	331.4	24.7	349.6	8.8	5.704222893
92	Y-98 Spot 92	249	450	31872	1.8	18.2398	0.9	0.4601	1.4	0.0609	1.1	0.80	381.1	4.2	384.3	4.5	404.1	19.2	382	8.2	-5.70099828
93	Y-98 Spot 93	70	138	25943	2.0	18.8119	1.2	0.4100	1.8	0.0560	1.3	0.74	351.0	4.5	348.8	5.2	334.5	27.2	350.5	8.8	4.914250528
94	Y-98 Spot 94	240	339	12906	1.4	18.7003	1.0	0.4079	1.6	0.0553	1.3	0.80	347.2	4.3	347.3	4.7	348.0	21.7	347.3	8.5	-0.22837126
95	Y-98 Spot 95	132	204	27110	1.6	18.6282	1.1	0.4712	1.5	0.0637	1.1	0.72	398.0	4.3	392.0	5.0	356.7	24.2	396.6	8.5	11.57503063
96	Y-98 Spot 96	89	228	22578	2.6	17.5076	1.4	0.4454	1.9	0.0566	1.3	0.67	354.8	4.4	374.1	5.9	495.2	30.8			
97	Y-98 Spot 97	333	1258	140931	3.8	18.3437	0.8	0.4321	1.5	0.0575	1.2	0.84	360.5	4.3	364.7	4.5	391.4	18.1	362	8.5	-7.88515987
98	Y-98 Spot 98	143	267	23971	1.9	18.4701	1.0	0.4500	1.6	0.0603	1.2	0.77	377.5	4.4	377.3	5.0	375.9	22.7	377.4	8.7	0.40846048
99	Y-98 Spot 99	94	151	5627	1.6	19.0816	1.3	0.4099	1.7	0.0568	1.1	0.66	355.9	3.9	348.8	5.0	302.2	28.9	354.7	7.7	17.77392019
100	Y-98 Spot 100	51	131	7134	2.6	19.3307	1.5	0.4092	1.9	0.0574	1.1	0.60	359.7	4.0	348.3	5.6	272.5	34.9	358.2	7.9	32.00296858
101	Y-98 Spot 101	252	557	30966	2.2	18.4717	0.8	0.4204	1.7	0.0564	1.5	0.89	353.4	5.1	356.4	5.0	375.7	17.0	355.2	9.9	-5.94538924
102	Y-98 Spot 102	153	306	5912	2.0	19.3786	1.0	0.3923	1.7	0.0552	1.4	0.80	346.2	4.6	336.1	5.0	266.9	24.0	342.5	9	29.71142269
103	Y-98 Spot 103	152	350	25627	2.3	18.7362	0.9	0.4172	1.5	0.0567	1.2	0.82	355.6	4.3	354.1	4.5	343.7	19.3	355.1	8.4	3.48554072
104	Y-98 Spot 104	225	501	97817	2.2	18.5349	0.9	0.4176	1.6	0.0562	1.4	0.84	352.2	4.7	354.3	4.9	368.1	20.0	353	9.1	-4.29772837
105	Y-98 Spot 105	98	146	84132	1.5	18.7135	1.0	0.4410	1.6	0.0599	1.2	0.77	374.9	4.5	371.0	5.0	346.4	22.9	373.8	8.8	8.229282787
106	Y-98 Spot 106	56	163	6323	2.9	19.1982	1.0	0.4112	1.8	0.0573	1.4	0.81	359.1	5.0	349.7	5.2	288.3	23.7	355.3	9.7	24.56101051
107	Y-98 Spot 107	96	214	4205	2.2	17.8340	2.1	0.4498	2.5	0.0582	1.3	0.53	364.7	4.7	377.1	7.9	454.3	47.1	365.3	9.4	-19.7226588
108	Y-98 Spot 108	175	323	39595	1.8	18.4301	1.0	0.4153	1.6	0.0555	1.3	0.79	348.4	4.3	352.7	4.8	380.8	22.0	349.5	8.5	-8.50541502
109	Y-98 Spot 109	907	1307	28640	1.4	17.8036	1.0	0.4679	1.6	0.0604	1.3	0.79	378.3	4.7	389.7	5.2	458.1	21.7			
110	Y-98 Spot 110	109	240	13069	2.2	18.6782	1.1	0.4511	1.6	0.0611	1.3	0.77	382.5	4.7	378.1	5.2	350.7	23.8	381.2	9.2	9.080690116
111	Y-98 Spot 111	199	377	37475	1.9	18.2232	1.0	0.4655	1.4	0.0615	0.9	0.69	385.0	3.5	388.1	4.5	406.1	22.5	385.5	7	-5.1984512
112	Y-98 Spot 112	104	161	31971	1.5	16.6350	1.4	0.5083	1.8	0.0614	1.1	0.62	383.8	4.2	417.3	6.2	606.7	30.6			
113	Y-98 Spot 113	123	285	6453	2.3	19.0978	2.3	0.4144	2.7	0.0574	1.4	0.52	359.9	4.8	352.0	7.9	300.3	52.1	359.3	9.6	19.86210358
114	Y-98 Spot 114	237	648	227872	2.7	18.2801	1.1	0.4592	1.9	0.0609	1.5	0.82	381.2	5.6	383.7	5.9	399.2	24.0	382	11	-4.50655091
115	Y-98 Spot 115	89	194	483505	2.2	18.6473															

119	Y-98 Spot 119	262	668	27186	2.6	18.8159	0.8	0.4251	1.4	0.0580	1.2	0.84	363.6	4.2	359.7	4.2	334.1	17.3	361.9	8	8.844514001
120	Y-98 Spot 120	302	495	90098	1.6	18.7633	0.9	0.3981	1.7	0.0542	1.5	0.85	340.2	4.9	340.3	5.0	340.4	20.3	340.2	9.5	-0.05762863
121	Y-98 Spot 121	220	190	218407	0.9	18.1699	0.9	0.4700	1.7	0.0620	1.4	0.84	387.6	5.2	391.2	5.4	412.7	20.4	389	10	-6.0903373
122	Y-98 Spot 122	71	157	7807	2.2	18.7632	1.4	0.4705	2.0	0.0641	1.4	0.71	400.2	5.4	391.5	6.4	340.4	31.7	398	11	17.56324879
123	Y-98 Spot 123	147	394	5463	2.7	15.5605	3.5	0.5087	3.9	0.0574	1.6	0.42	360.0	5.7	417.6	13.3	749.4	74.4			
124	Y-98 Spot 124	23	78	20263	3.3	18.3628	1.5	0.4616	2.4	0.0615	1.9	0.77	384.8	6.9	385.4	7.7	389.0	34.4	385	14	-1.10001699
125	Y-98 Spot 125	50	115	20625	2.3	18.5046	1.2	0.4194	1.7	0.0563	1.3	0.73	353.2	4.3	355.7	5.2	371.7	26.7	353.6	8.6	-4.98998475
126	Y-98 Spot 126	108	164	27306	1.5	18.4762	1.4	0.4265	1.8	0.0572	1.1	0.62	358.4	3.9	360.7	5.6	375.2	32.6	358.6	7.8	-4.47776498
127	Y-98 Spot 127	116	242	37346	2.1	18.7014	1.0	0.3961	1.5	0.0537	1.2	0.78	337.5	3.9	338.8	4.4	347.9	21.6	337.8	7.8	-2.98478731
128	Y-98 Spot 128	116	303	33103	2.6	18.7104	1.0	0.4354	1.5	0.0591	1.2	0.77	370.2	4.2	367.0	4.6	346.8	21.7	369.3	8.2	6.736153267
129	Y-98 Spot 129	216	334	14212	1.5	18.6066	1.0	0.4580	1.6	0.0618	1.3	0.78	386.8	4.7	382.9	5.1	359.4	22.5	385.5	9.2	7.633143984
130	Y-98 Spot 130	130	138	6240	1.1	19.0371	1.3	0.3922	2.1	0.0542	1.6	0.78	340.1	5.4	336.0	6.0	307.5	30.3	339	11	10.61103787
<i>Sample Y-97: a sandstone of the Shazogaitui Formation</i>																					
1	Y-97 Spot 2	12	50	46752	4.0	5.9595	1.2	10.4667	2.2	0.4526	1.8	0.84	2406.8	36.6	2477.0	20.2	2535.1	20.1	2506	35	-5.06122027
2	Y-97 Spot 3	624	906	55030	1.5	17.7750	0.8	0.4227	1.6	0.0545	1.3	0.85	342.2	4.5	358.0	4.8	461.6	18.7			
3	Y-97 Spot 4	374	1400	176153	3.7	6.7870	1.3	6.9328	2.4	0.3414	2.1	0.85	1893.4	33.8	2102.9	21.5	2314.5	22.1			
4	Y-97 Spot 5	115	281	130140	2.4	8.5531	0.8	5.4246	1.4	0.3367	1.2	0.83	1870.5	19.0	1888.8	12.1	1908.8	14.3	1895	23	-2.00568663
5	Y-97 Spot 6	119	545	135454	4.6	7.9988	0.7	6.1982	1.3	0.3597	1.0	0.81	1980.9	17.7	2004.2	11.2	2028.3	13.2	2011	21	-2.33444357
6	Y-97 Spot 7	367	559	3943	1.5	5.4406	2.3	11.5384	2.6	0.4555	1.2	0.45	2419.6	24.0	2567.7	24.5	2686.8	38.6			
7	Y-97 Spot 8	58	165	2100077	2.9	4.7679	0.7	16.3029	1.2	0.5640	0.9	0.78	2883.1	21.3	2894.7	11.3	2902.8	12.0	2898	22	-0.67626493
8	Y-97 Spot 9	255	669	68583	2.6	8.1290	0.8	5.4598	1.5	0.3220	1.2	0.83	1799.6	19.2	1894.3	12.7	1999.6	14.8			
9	Y-97 Spot 10	160	266	65613	1.7	17.7619	0.8	0.4596	1.5	0.0592	1.3	0.84	370.9	4.6	383.9	4.9	463.3	18.7			
10	Y-97 Spot 11	87	106	42224	1.2	8.7501	0.9	5.2396	1.4	0.3327	1.1	0.77	1851.2	17.1	1859.1	11.7	1867.8	15.8	1860	23	-0.88741553
11	Y-97 Spot 12	450	1232	230022	2.7	8.3091	0.8	5.7093	1.3	0.3442	1.0	0.78	1906.9	16.6	1932.8	11.1	1960.6	14.4	1937	22	-2.74104941
12	Y-97 Spot 13	161	371	6895437	2.3	8.4018	0.8	5.8841	1.3	0.3587	1.1	0.81	1976.1	18.6	1958.9	11.7	1940.8	14.0	1954	23	1.817011515
13	Y-97 Spot 14	35	665	235828	19.2	8.4713	0.8	5.5733	1.3	0.3426	1.0	0.80	1899.0	16.8	1912.0	11.0	1926.1	13.9	1915	22	-1.40279698
14	Y-97 Spot 15	268	770	133134	2.9	7.8376	0.9	6.6859	1.6	0.3802	1.3	0.82	2077.3	23.8	2070.8	14.4	2064.3	16.4	2069	27	0.632013754
15	Y-97 Spot 16	372	552	62508	1.5	18.7677	0.9	0.4004	1.5	0.0545	1.1	0.78	342.2	3.8	341.9	4.3	339.9	20.8	342.1	7.5	0.678150865
16	Y-97 Spot 17	256	303	494096	1.2	8.5040	0.8	5.5115	1.4	0.3401	1.1	0.82	1887.0	18.3	1902.4	11.7	1919.2	13.8	1907	22	-1.67278086
17	Y-97 Spot 18	85	829	62177	9.7	7.9549	0.7	5.8511	1.3	0.3377	1.1	0.83	1875.7	18.0	1954.0	11.5	2038.0	13.0			
18	Y-97 Spot 19	122	436	256615	3.6	6.5620	0.8	8.8424	1.3	0.4210	1.0	0.81	2265.1	19.9	2321.9	11.7	2372.2	12.8			
19	Y-97 Spot 20	613	1502	40690	2.5	7.2935	0.9	6.3778	1.7	0.3375	1.5	0.86	1874.7	23.8	2029.2	15.0	2190.2	15.2			
20	Y-97 Spot 21	125	119	469244	1.0	8.6251	1.0	5.3564	1.5	0.3352	1.1	0.77	1863.6	18.3	1877.9	12.7	1893.7	17.1	1879	25	-1.59116849
21	Y-97 Spot 22	195	640	265803	3.3	8.4756	0.8	5.6068	1.3	0.3448	1.0	0.81	1909.7	16.9	1917.1	10.9	1925.2	13.5	1919	21	-0.80150086
22	Y-97 Spot 23	577	1430	34457	2.5	8.5364	1.0	4.4366	1.9	0.2748	1.6	0.84	1565.1	21.9	1719.2	15.5	1912.3	18.1			
23	Y-97 Spot 24	121	574	237855	4.7	7.9870	0.9	5.8746	1.5	0.3404	1.3	0.82	1888.8	20.7	1957.5	13.4	2030.9	15.7			
24	Y-97 Spot 25	498	1299	802185	2.6	8.4189	0.7	5.7818	1.4	0.3532	1.3	0.89	1949.8	21.6	1943.7	12.5	1937.2	11.9	1940	21	0.651979978
25	Y-97 Spot 26	173	737	2817117	4.3	8.5961	0.8	5.1983	1.3	0.3242	1.1	0.80	1810.3	17.1	1852.3	11.5	1899.8	14.5			
26	Y-97 Spot 27	40	481	4087384	12.1	8.4821	0.8	5.6016	1.9	0.3447	1.7	0.92	1909.5	28.7	1916.3	16.3	1923.8	13.6	1921	25	-0.74353473
27	Y-97 Spot 28	62	92	25200	1.5	18.4254	1.3	0.4588	1.8	0.0613	1.3	0.71	383.7	4.7	383.4	5.7	381.4	28.2	383.7	9.3	0.619150174
28	Y-97 Spot 30	51	704	310934	13.9	6.3410	0.7	9.8395	1.3	0.4527	1.1	0.83	2407.3	22.3	2419.9	12.3	2430.4	12.5	2425	22	-0.95179948
29	Y-97 Spot 31	190	310	806756	1.6	18.3433	1.2	0.4441	1.7	0.0591	1.2	0.68	370.2	4.2	373.1	5.3	391.4	27.9	370.6	8.2	-5.42605872
30	Y-97 Spot 32	331	360	33557	1.1	18.2931	0.8	0.4642	1.3	0.0616	1.0	0.77	385.4	3.6	387.2	4.1	397.6	18.2	385.9	7.1	-3.05532885
31	Y-97 Spot 33	314	797	578006	2.5	8.7319	0.6	5.2052	1.5	0.3298	1.4	0.91	1837.4	22.3	1853.5	13.1	1871.6	11.6	1864	21	-1.82961625
32	Y-97 Spot 34	221	481	154196	2.2	8.1842	0.9	5.9061	1.5	0.3507	1.2	0.81	1938.0	20.5	1962.1	13.1	1987.6	15.8	1969	25	-2.49411554
33	Y-97 Spot 36	59	90	39760	1.5	8.8350	0.9	5.1348	1.5	0.3292	1.2	0.81	1834.4	19.3	1841.9	12.7	1850.4	16.0	1844	25	-0.8654049
34	Y-97 Spot 37	100	113	148081	1.1	9.9144	0.7	5.1421	1.4	0.3326	1.2	0.86	1851.0	19.8	1843.1	12.1	1834.2	13.0	1839	22	0.913546925
35	Y-97 Spot 38	58	793	340347	13.7	8.4869	0.8	5.5719	1.4	0.3431	1.1	0.83	1901.6	18.7	1911.8	11.8	1922.8	13.8	1915	23	-1.09800567
36	Y-97 Spot 39	440	695	213256	1.6	18.6647	0.8	0.3943	1.2	0.0534	1.0	0.79	335.3	3.2	337.5	3.6	352.4	17.2	335.9	6.3	-4.82649921
37	Y-97 Spot 40	365	674	312558	1.8	8.3738	0.8	5.7038	1.6	0.3466	1.4	0.86	1918.1	23.1	1931.9	14.0	1946.8	14.7	1938	25	-1.47222832
38	Y-97 Spot 41	189	497	587935	2.6	6.4398	0.8	9.1779	1.5	0.4288	1.3	0.87	2300.5	25.9	2355.9	14.1	2404.2	12.9			
39	Y-97 Spot 42	269	283	115215	1.0	8.5373	0.9	5.5353	1.6	0.3429	1.4	0.84	1900.5	22.7	1906.1	14.1	1912.1	16.1	1908	27	-0.60781579
40	Y-97 Spot 43	176	229	72271	1.3	14.6311	1.0	1.3702	1.9	0.1455	1.6	0.86	875.5	13.2	876.3	11.0	878.2	19.7	876	22	-0.30651507
41	Y-97 Spot 44	344	897	170073	2.6	7.1416	0.7	6.7799	1.6	0.3513	1.4	0.89	1940.9	23.2	2083.1	13.7	2226.7	12.1			
42	Y-97 Spot 45	90	112	75310	1.2	8.7934	0.9	5.4762	1.5	0.3494	1.2	0.80	1931.7	20.1	1896.9	13.0	1858.9	16.4	1888	26	3.918181119
43	Y-97 Spot 46	142	136	60610	1.0	8.7249	0.7	5.4476	1.2	0.3449	1.1	0.84	1910.0	17.4	1892.4	10.7	1873.0	12.0	1886	20	1.974985816
44	Y-97 Spot 47	70	773	201396	11.1	6.7992	0.8	7.5483	1.8	0.3724	1.6	0.91	2040.6	28.8	2178.7	16.3	2311.4	13.0			
45	Y-97 Spot 49	114	214	28919	1.9	18.5797	1.0	0.4425	1.6	0.0597	1.2	0.79	373.6	4.5	372.0	4.9	362.6	22.1	373.1	8.9	3.0152216
46	Y-97 Spot 50	24	63	75449	2.6																

50	Y-97 Spot 54	96	168	92117	1.8	6.3417	0.8	9.7533	2.4	0.4488	2.3	0.95	2389.9	46.1	2411.8	22.4	2430.3	12.9	2427	25	-1.66169136
51	Y-97 Spot 55	39	178	2675621	4.6	15.0095	1.0	1.1737	1.5	0.1278	1.2	0.76	775.5	8.4	788.4	8.3	825.2	20.3	782	16	-6.02335533
52	Y-97 Spot 56	182	367	26883	2.0	18.0196	1.3	0.5030	2.7	0.0658	2.3	0.87	410.6	9.2	413.7	9.1	431.2	29.3	412	18	-4.79295145
53	Y-97 Spot 57	287	419	516660	1.5	6.0411	0.8	10.6330	1.7	0.4661	1.6	0.90	2466.3	32.0	2491.6	16.1	2512.2	12.7	2506	24	-1.82702255
54	Y-97 Spot 59	133	292	145743	2.2	8.7765	0.8	5.4599	1.5	0.3477	1.3	0.85	1923.6	21.3	1894.3	12.9	1862.4	14.3	1882	24	3.284389827
55	Y-97 Spot 60	221	382	69460	1.7	18.5956	0.9	0.3874	1.5	0.0523	1.2	0.80	328.5	3.9	332.5	4.3	360.7	20.8	329.4	7.7	-8.92876694
56	Y-97 Spot 61	73	139	85541	1.9	8.8626	1.0	5.2465	1.8	0.3374	1.5	0.84	1874.1	25.2	1860.2	15.6	1844.8	17.8	1855	29	1.588449013
57	Y-97 Spot 62	96	601	837151	6.3	8.4632	0.7	5.5662	1.5	0.3418	1.3	0.88	1895.4	22.2	1910.9	13.2	1927.8	13.2	1919	23	-1.68185581
58	Y-97 Spot 65	452	340	11377	0.8	16.4284	0.9	0.5114	1.5	0.0610	1.2	0.78	381.4	4.4	419.4	5.3	633.7	20.4			
59	Y-97 Spot 66	81	1153	376448	14.2	7.9985	0.8	5.9913	1.2	0.3477	0.9	0.76	1923.7	15.4	1974.6	10.5	2028.4	13.8			
60	Y-97 Spot 67	162	368	24960	2.3	18.7274	0.8	0.4483	1.5	0.0609	1.2	0.82	381.2	4.5	376.1	4.6	344.7	18.9	379	8.7	10.58180115
61	Y-97 Spot 68	229	560	1520294	2.4	6.5704	0.7	9.1081	1.7	0.4342	1.6	0.92	2324.7	31.1	2348.9	15.9	2370.0	11.6	2364	22	-1.91057561
62	Y-97 Spot 69	66	59	35834	0.9	19.2521	1.8	0.3695	2.2	0.0516	1.3	0.58	324.4	4.1	319.3	6.2	281.9	41.9	324	8.2	15.08970818
63	Y-97 Spot 70	117	236	98587	2.0	8.7624	0.7	5.2368	1.5	0.3329	1.3	0.88	1852.7	21.4	1858.6	12.8	1865.3	12.8	1862	22	-0.67710155
64	Y-97 Spot 71	17	353	136709	20.3	8.8156	0.8	5.0925	1.2	0.3257	1.0	0.77	1817.7	15.1	1834.9	10.5	1854.4	14.3	1837	21	-1.97847951
65	Y-97 Spot 72	158	387	311497	2.4	8.6005	0.8	5.3399	1.4	0.3332	1.1	0.82	1854.0	18.3	1875.3	11.9	1898.9	14.4	1881	23	-2.36270808
66	Y-97 Spot 73	98	291	9147	3.0	15.1019	4.2	0.4976	4.3	0.0545	1.3	0.29	342.2	4.2	410.1	14.6	812.3	86.8			
67	Y-97 Spot 75	70	93	72773	1.3	8.8791	0.9	5.2687	1.5	0.3394	1.3	0.82	1884.0	20.4	1863.8	13.0	1841.4	15.9	1858	25	2.312012377
68	Y-97 Spot 76	128	406	2437133	3.2	6.1840	0.8	10.1448	1.3	0.4552	1.0	0.79	2418.3	20.3	2448.1	11.7	2472.9	13.0	2456	22	-2.20532342
69	Y-97 Spot 77	56	125	321733	2.2	5.5906	0.7	12.4616	1.2	0.5055	1.0	0.82	2637.4	21.7	2639.8	11.4	2641.7	11.4	2641	21	-0.1643842
70	Y-97 Spot 78	171	610	280139	3.6	8.4266	0.7	5.6889	1.2	0.3478	1.0	0.84	1924.2	17.2	1929.7	10.6	1935.5	11.8	1932	20	-0.58235147
71	Y-97 Spot 79	35	86	106350	2.4	8.3458	0.8	6.0538	1.4	0.3666	1.2	0.83	2013.4	20.5	1983.6	12.5	1952.7	14.4	1973	24	3.103726736
72	Y-97 Spot 80	88	165	206659	1.9	6.3570	0.6	10.4413	1.0	0.4816	0.7	0.76	2534.3	15.7	2474.7	9.1	2426.2	10.7			
73	Y-97 Spot 81	90	164	91994	1.8	6.3587	0.7	9.6591	1.2	0.4456	0.9	0.81	2375.9	18.8	2402.8	10.7	2425.7	11.4	2412	20	-2.05442068
74	Y-97 Spot 82	81	72	103076	0.9	8.6585	0.8	5.3253	1.4	0.3346	1.1	0.78	1860.4	17.2	1872.9	11.6	1886.8	15.2	1875	23	-1.39702019
75	Y-97 Spot 83	225	697	74450	3.1	6.4554	0.9	7.8432	1.6	0.3674	1.3	0.82	2017.0	22.6	2213.2	14.3	2400.1	15.4			
76	Y-97 Spot 84	35	302	601339	8.7	6.0866	0.7	10.4320	1.3	0.4607	1.1	0.85	2442.7	22.5	2473.9	12.1	2499.6	11.7	2487	21	-2.27704277
77	Y-97 Spot 85	79	328	16826	4.1	16.9538	0.9	0.5081	1.7	0.0625	1.4	0.83	390.8	5.2	417.1	5.7	565.6	20.1			
78	Y-97 Spot 86	328	401	395419	1.2	6.3674	0.6	9.6576	1.3	0.4462	1.1	0.87	2378.3	22.6	2402.7	12.0	2423.4	10.8	2414	20	-1.86134454
79	Y-97 Spot 87	106	157	361980	1.5	6.0328	0.7	11.2129	1.2	0.4908	1.0	0.81	2574.2	20.8	2541.0	11.2	2514.5	11.7	2530	21	2.374761925
80	Y-97 Spot 88	79	194	5414800	2.5	8.7401	0.8	5.2456	1.5	0.3327	1.3	0.84	1851.3	20.4	1860.1	12.9	1869.9	14.9	1863	24	-0.99701215
81	Y-97 Spot 89	164	405	218252	2.5	8.3769	0.8	5.2973	1.4	0.3220	1.1	0.82	1799.4	17.4	1868.4	11.6	1946.1	14.0			
82	Y-97 Spot 90	380	715	63098	1.9	18.0750	0.7	0.4585	1.4	0.0601	1.2	0.87	376.4	4.3	383.2	4.3	424.4	15.1	379.5	8.3	-11.3069694
83	Y-97 Spot 93	85	160	65756	1.9	17.7909	1.3	0.4295	1.9	0.0554	1.4	0.72	347.9	4.6	362.8	5.8	459.6	29.2			
84	Y-97 Spot 94	622	1210	1222798	1.9	6.0361	0.7	11.0435	1.4	0.4837	1.2	0.87	2543.2	25.2	2526.8	12.8	2513.6	11.4	2519	22	1.17926089
85	Y-97 Spot 95	470	1087	31522	2.3	6.2949	0.8	8.4151	1.3	0.3844	1.1	0.79	2096.6	19.1	2276.8	12.2	2442.8	13.9			
86	Y-97 Spot 97	39	153	158133	3.9	7.4629	0.8	7.1010	1.5	0.3845	1.3	0.83	2097.4	22.9	2124.2	13.6	2150.2	14.7	2134	25	-2.458242
87	Y-97 Spot 98	96	185	261547	1.9	8.5582	0.9	5.5080	1.5	0.3420	1.2	0.82	1896.4	20.3	1901.8	13.0	1907.7	15.6	1903	25	-0.59256876
88	Y-97 Spot 99	94	291	138813	3.1	8.5550	0.7	5.5564	1.3	0.3449	1.1	0.84	1910.2	18.5	1909.4	11.5	1908.4	13.1	1909	22	0.09528633
89	Y-97 Spot 100	50	95	78364	1.9	16.8559	1.6	0.4839	2.0	0.0592	1.2	0.59	370.7	4.4	400.8	6.8	578.2	35.8			
90	Y-97 Spot 101	305	752	65982	2.5	8.6656	0.5	5.1238	1.3	0.3222	1.1	0.90	1800.3	17.9	1840.1	10.7	1885.3	9.8			
91	Y-97 Spot 102	136	264	59353	1.9	17.9091	0.9	0.4678	1.6	0.0608	1.3	0.82	380.4	4.8	389.7	5.2	444.9	20.6	383.1	9.5	-14.4959753
92	Y-97 Spot 103	58	486	69428	8.4	8.4148	0.7	5.4386	1.5	0.3321	1.4	0.90	1848.4	21.9	1891.0	13.0	1938.0	11.9			
93	Y-97 Spot 104	78	151	6919	1.9	15.4643	2.7	0.5178	3.0	0.0581	1.2	0.40	364.1	4.2	423.7	10.2	762.5	57.1			
94	Y-97 Spot 105	477	402	40657	0.8	18.7388	1.6	0.4578	2.4	0.0622	1.8	0.75	389.3	6.7	382.7	7.5	343.4	35.5	387	13	13.36942377
95	Y-97 Spot 106	88	140	93199	1.6	17.5419	1.0	0.5955	1.5	0.0758	1.2	0.78	471.0	5.4	474.4	5.8	490.8	21.2	472	11	-4.03940111
96	Y-97 Spot 107	293	344	284770	1.2	18.6930	0.9	0.3916	1.4	0.0531	1.1	0.79	333.6	3.6	335.5	4.0	348.9	19.5	334.1	7.2	-4.39106458
97	Y-97 Spot 108	166	240	766328	1.5	6.0115	0.7	10.6643	1.5	0.4652	1.3	0.89	2462.3	26.7	2494.3	13.6	2520.5	11.4	2511	21	-2.30735949
98	Y-97 Spot 109	244	304	127566	1.2	8.0571	0.8	5.8814	1.6	0.3438	1.4	0.88	1905.1	23.2	1958.5	13.9	2015.4	13.4			
99	Y-97 Spot 110	357	460	70847	1.3	19.1245	1.0	0.3782	1.9	0.0525	1.7	0.86	329.7	5.3	325.7	5.3	297.1	21.9	328	10	11.00019598
100	Y-97 Spot 112	160	403	244234	2.5	6.0609	0.7	10.6263	1.2	0.4673	1.0	0.81	2471.8	20.4	2491.0	11.3	2506.7	11.9	2497	21	-1.39521859
101	Y-97 Spot 113	57	447	82069	7.9	8.6435	0.7	4.5182	1.4	0.2834	1.3	0.88	1608.3	18.1	1734.3	12.0	1889.9	12.6			
102	Y-97 Spot 114	422	279	285870	0.7	18.4358	1.0	0.4426	1.6	0.0592	1.3	0.80	370.8	4.7	372.1	5.1	380.1	22.3	371.2	9.2	-2.46058014
103	Y-97 Spot 115	73	99	202350	1.4	6.1350	0.8	10.9115	1.5	0.4857	1.2	0.85	2552.1	26.2	2515.6	13.7	2486.3	13.2	2500	24	2.648685304
104	Y-97 Spot 116	147	1412	147084	9.6	8.4202	0.7	5.6896	1.3	0.3476	1.1	0.85	1923.2	18.9	1929.8	11.5	1936.9	12.6	1933	21	-0.70771401
105	Y-97 Spot 117	146	218	75861	1.5	8.7652	0.7	5.3799	1.5	0.3422	1.3	0.88	1897.0	21.1	1881.7	12.5	1864.7	12.7	1874	22	1.733479308
106	Y-97 Spot 118	143	374	219678	2.6	8.8651	0.7	5.1409	1.3	0.3307	1.1	0.83	1841.7	17.4	1842.9	11.2	1844.2	13.3	1843	21	-0.13814942
107	Y-97 Spot 119	79	95	197776	1.2	8.7326	0.9	5.3462	1.8	0.3387	1.5	0.86	1880.6	25.0	1876.3	15.2	1871.4	16.3	1874	28	0.490493509
108	Y-97 Spot 120	387	226	6																	

112	Y-97 Spot 124	443	686	68757	1.5	8.4605	0.7	5.3896	1.9	0.3309	1.7	0.93	1842.6	27.7	1883.2	16.0	1928.3	12.4	1914	23	-4.44815798
113	Y-97 Spot 126	178	308	40336	1.7	17.5610	1.2	0.4721	1.8	0.0602	1.3	0.73	376.6	4.7	392.6	5.7	488.4	26.5			
114	Y-97 Spot 127	146	430	233226	2.9	6.6881	0.8	8.3649	1.4	0.4059	1.1	0.79	2196.3	20.3	2271.4	12.4	2339.7	14.3			
115	Y-97 Spot 129	146	303	1587224	2.1	6.5703	0.7	8.5523	1.4	0.4077	1.3	0.89	2204.5	23.4	2291.5	12.9	2370.0	11.2			
116	Y-97 Spot 130	129	308	400834	2.4	8.7094	0.7	5.2825	1.3	0.3338	1.1	0.86	1856.9	17.5	1866.0	10.8	1876.2	11.8	1870	20	-1.03139139
<i>Sample Y-94: a sandstone of the Zhipkhoshi Formation</i>																					
1	Y-94 Spot 1	183	451	113433	2.5	18.2162	0.7	0.4895	1.2	0.0647	1.0	0.80	404.1	3.9	404.6	4.1	407.0	16.2	404.3	7.5	-0.70503874
2	Y-94 Spot 2	97	114	118351	1.2	15.2069	0.8	1.2123	1.4	0.1338	1.1	0.81	809.3	8.7	806.3	7.8	797.8	17.2	807	15	1.443940241
3	Y-94 Spot 3	46	78	11947	1.7	16.9525	3.1	0.4551	3.2	0.0560	1.1	0.33	351.1	3.6	380.8	10.3	565.7	66.8	351.3	7.2	-37.937233
4	Y-94 Spot 4	84	142	105405	1.7	18.6831	0.8	0.3926	1.4	0.0532	1.2	0.82	334.2	3.9	336.2	4.1	350.1	18.6	334.9	7.6	-4.52786324
5	Y-94 Spot 5	197	342	58765	1.7	17.6932	1.3	0.4049	2.0	0.0520	1.5	0.76	326.7	4.8	345.2	5.8	471.8	28.4			
6	Y-94 Spot 6	68	137	33458	2.0	17.9699	2.1	0.4677	2.4	0.0610	1.3	0.52	381.6	4.7	389.6	7.9	437.4	46.6	382	9.4	-12.7572689
7	Y-94 Spot 7	112	243	41075	2.2	18.9238	0.6	0.3682	1.1	0.0506	1.0	0.86	317.9	3.0	318.3	3.1	321.1	13.0	318.1	5.9	-0.98917764
8	Y-94 Spot 9	73	228	105278	3.1	18.0423	1.2	0.4575	1.8	0.0599	1.3	0.73	375.0	4.7	382.5	5.6	428.4	26.9	376.3	9.2	-12.4691523
9	Y-94 Spot 10	159	336	111471	2.1	18.8538	0.7	0.3949	1.3	0.0540	1.1	0.83	339.1	3.6	337.9	3.7	329.5	16.6	338.7	7	2.930633437
10	Y-94 Spot 11	193	270	305814	1.4	19.2742	0.8	0.3575	1.3	0.0500	1.0	0.80	314.5	3.2	310.3	3.4	279.3	17.5	313.2	6.2	12.60368642
11	Y-94 Spot 12	47	162	101541	3.5	18.9474	1.0	0.3711	1.5	0.0510	1.2	0.78	320.8	3.7	320.5	4.2	318.2	21.8	320.7	7.3	0.810056643
12	Y-94 Spot 13	148	136	52692	0.9	17.0967	1.5	0.6473	1.8	0.0803	1.0	0.57	497.9	5.0	506.8	7.2	547.3	32.6	498.9	9.8	-9.01482837
13	Y-94 Spot 14	78	109	23519	1.4	19.0442	1.0	0.4056	1.7	0.0560	1.4	0.81	351.5	4.7	345.7	4.9	306.7	22.2	349.3	9.1	14.6143866
14	Y-94 Spot 15	23	53	98373	2.3	8.8209	0.7	5.1907	1.4	0.3322	1.2	0.84	1849.1	18.6	1851.1	11.7	1853.3	13.3	1852	22	-0.22381014
15	Y-94 Spot 16	64	101	511832	1.6	18.7747	0.9	0.4191	1.4	0.0571	1.1	0.76	357.9	3.8	355.4	4.3	339.1	20.8	357.3	7.4	5.567076554
16	Y-94 Spot 19	94	204	108960	2.2	17.8451	1.0	0.4227	1.7	0.0547	1.3	0.81	343.5	4.5	358.0	5.0	452.9	21.6			
17	Y-94 Spot 20	82	126	111489	1.5	14.7239	0.9	1.2622	1.5	0.1348	1.2	0.80	815.9	9.4	828.9	8.7	865.1	19.0	825	17	-5.74228319
18	Y-94 Spot 21	50	123	80610	2.5	18.2325	0.8	0.5007	1.5	0.0662	1.2	0.83	413.5	4.9	412.2	5.0	405.0	18.3	412.9	9.5	2.094837304
19	Y-94 Spot 23	38	46	34619	1.2	15.2956	0.9	1.1592	1.6	0.1286	1.3	0.83	780.2	9.5	781.6	8.5	785.6	18.3	781	17	-0.69364126
20	Y-94 Spot 24	79	127	620521	1.6	8.4164	0.6	5.6721	1.2	0.3464	1.0	0.87	1917.3	17.2	1927.1	10.2	1937.7	10.4	1932	18	-1.0509604
21	Y-94 Spot 25	124	287	81865	2.3	18.6617	0.9	0.3863	1.4	0.0523	1.1	0.80	328.7	3.6	331.7	4.0	352.7	19.2	329.4	7.2	-6.80326246
22	Y-94 Spot 26	145	304	93569	2.1	18.7196	0.7	0.3849	1.4	0.0523	1.2	0.85	328.5	3.8	330.7	3.9	345.7	16.4	329.3	7.4	-4.95721981
23	Y-94 Spot 29	75	69	37294	0.9	19.1560	1.2	0.3816	1.6	0.0530	1.1	0.67	333.2	3.5	328.2	4.4	293.3	26.6	332.4	6.8	13.57884572
24	Y-94 Spot 30	40	44	93953	1.1	18.8836	1.2	0.3829	1.6	0.0525	1.1	0.67	329.7	3.5	329.2	4.6	325.9	27.4	329.6	7	1.154958954
25	Y-94 Spot 31	42	127	1069440	3.0	8.7261	0.7	5.2748	1.3	0.3340	1.1	0.86	1857.6	18.2	1864.8	11.2	1872.8	12.0	1868	20	-0.81114769
26	Y-94 Spot 32	11	32	56373	3.0	7.6239	0.8	7.1036	1.5	0.3930	1.2	0.84	2136.5	22.3	2124.5	13.0	2112.9	13.8	2120	24	1.118622927
27	Y-94 Spot 33	184	188	96537	1.0	19.0757	0.9	0.3930	1.3	0.0544	1.0	0.75	341.4	3.4	336.5	3.8	302.9	20.1	340.2	6.6	12.71826578
28	Y-94 Spot 34	146	131	122167	0.9	18.9967	1.0	0.3757	1.4	0.0518	0.9	0.69	325.5	3.0	323.9	3.8	312.4	22.7	325.3	5.9	4.204880721
29	Y-94 Spot 36	142	434	169077	3.1	18.6523	0.7	0.4170	1.2	0.0564	1.0	0.80	353.9	3.3	353.9	3.6	353.9	16.2	353.9	6.5	0.016097289
30	Y-94 Spot 37	28	87	140547	3.2	5.9459	0.8	11.4246	1.5	0.4929	1.3	0.85	2583.1	27.2	2558.4	14.1	2538.9	13.5	2548	25	1.742303369
31	Y-94 Spot 38	258	296	66720	1.1	18.9747	0.8	0.3675	1.1	0.0506	0.7	0.70	318.1	2.3	317.8	2.9	315.0	17.1	318.1	4.5	1.000072087
32	Y-94 Spot 39	189	246	69464	1.3	19.0462	0.7	0.3836	1.3	0.0530	1.1	0.85	333.0	3.7	329.7	3.8	306.4	15.9	331.5	7.2	8.672236881
33	Y-94 Spot 40	124	184	273291	1.5	8.4989	0.6	5.6712	1.2	0.3497	1.0	0.84	1933.3	16.6	1927.0	10.2	1920.2	11.3	1925	19	0.679807679
34	Y-94 Spot 41	178	249	73047	1.4	18.4649	0.9	0.4114	1.7	0.0551	1.5	0.86	345.9	5.0	349.9	5.2	376.6	20.2	347.5	9.8	-8.15829998
35	Y-94 Spot 42	42	74	95748	1.8	8.0436	0.6	6.3507	1.3	0.3706	1.2	0.88	2032.4	20.4	2025.5	11.7	2018.4	11.2	2022	20	0.695699847
36	Y-94 Spot 43	133	370	112708	2.8	18.6062	0.6	0.4176	1.4	0.0564	1.3	0.91	353.5	4.3	354.3	4.1	359.4	13.0	354.1	8.2	-1.63395087
37	Y-94 Spot 44	53	150	71229	2.8	17.5885	0.8	0.6322	1.4	0.0807	1.2	0.82	500.2	5.6	497.5	5.6	485.0	18.2	499	11	3.137097124
38	Y-94 Spot 45	157	254	108050	1.6	19.0863	0.8	0.3823	1.6	0.0529	1.3	0.85	332.6	4.3	328.8	4.4	301.7	18.5	330.9	8.4	10.25700767
39	Y-94 Spot 46	29	43	12720	1.5	19.2847	1.2	0.4027	1.9	0.0564	1.5	0.77	353.4	5.1	343.6	5.6	278.0	28.1	350.4	9.9	27.11499178
40	Y-94 Spot 47	150	249	45383	1.7	18.8034	0.8	0.3990	1.4	0.0544	1.1	0.80	341.7	3.6	340.9	3.9	335.6	18.6	341.5	7	1.826702335
41	Y-94 Spot 48	66	167	131629	2.5	17.4181	0.8	0.6473	1.4	0.0818	1.2	0.84	506.9	5.7	506.8	5.6	506.4	16.7	507	11	0.092287384
42	Y-94 Spot 49	249	318	166115	1.3	18.9695	0.9	0.3680	1.4	0.0507	1.1	0.79	318.5	3.5	318.2	3.9	315.6	20.0	318.4	7	0.929072193
43	Y-94 Spot 50	18	27	15131	1.5	19.4171	1.8	0.3657	2.2	0.0515	1.3	0.59	323.9	4.2	316.5	6.1	262.3	41.9	323.1	8.3	23.47911215
44	Y-94 Spot 51	44	105	237787	2.4	8.0482	0.6	6.3867	1.2	0.3730	1.0	0.85	2043.3	17.5	2030.4	10.4	2017.4	11.1	2025	19	1.286444164
45	Y-94 Spot 52	48	157	204546	3.3	8.7982	0.8	5.1335	1.4	0.3277	1.1	0.83	1827.3	18.1	1841.7	11.6	1857.9	13.7	1847	22	-1.64863967
46	Y-94 Spot 53	299	382	1362650	1.3	18.8549	0.7	0.3648	1.5	0.0499	1.3	0.88	313.9	3.9	315.8	4.0	329.4	15.9	314.8	7.6	-4.68523273
47	Y-94 Spot 54	109	294	763355	2.7	16.4145	1.3	0.4779	2.1	0.0569	1.6	0.77	356.8	5.6	396.6	6.8	635.6	28.1			
48	Y-94 Spot 55	76	176	94365	2.3	18.5773	0.9	0.4032	1.6	0.0543	1.3	0.82	341.1	4.3	343.9	4.6	362.9	19.9	342	8.4	-5.99996842
49	Y-94 Spot 56	45	59	54482	1.3	8.8866	0.9	5.2401	1.4	0.3379	1.0	0.75	1876.5	16.7	1859.2	11.7	1839.8	16.6	1858	24	1.990082908
50	Y-94 Spot 57	236	186	116299	0.8	18.8854	1.0	0.3872	1.7	0.0531	1.3	0.81	333.2	4.4	332.3	4.7	325.7	22.0	332.9	8.6	2.303721029
51	Y-94 Spot 58	53	66	17458	1.2	18.7748	0.8	0.4590	1.4	0.0625	1.2	0.84	391.0	4.6	383.6	4.6	339.0	17.7	387.3	8.8	15.31471066
52	Y-94 Spot 59	81	98	276358	1.2	18.9658	1.1	0.3755	1.6	0.0517	1.2	0.76	324.8	3.9	323.7	4.6	316.0	24.6	324.6		

57	Y-94 Spot 66	17	45	293444	2.7	15.1169	1.0	1.2477	1.5	0.1369	1.2	0.77	826.9	9.1	822.4	8.6	810.3	20.6	824	17	2.048917231
58	Y-94 Spot 68	34	56	88251	1.6	18.6298	1.0	0.4356	1.5	0.0589	1.1	0.73	368.8	3.9	367.1	4.5	356.5	22.7	368.4	7.6	3.43803923
59	Y-94 Spot 69	33	80	99420	2.4	18.8206	1.0	0.3994	1.7	0.0545	1.3	0.78	342.3	4.3	341.2	4.8	333.5	23.3	342	8.5	2.651164842
60	Y-94 Spot 70	25	73	78584	3.0	12.2612	0.7	1.9929	1.3	0.1773	1.0	0.82	1052.2	10.2	1113.1	8.7	1234.1	14.6			
61	Y-94 Spot 71	64	217	374237	3.4	14.8081	0.9	1.3335	1.7	0.1433	1.4	0.84	863.2	11.3	860.4	9.6	853.3	18.6	861	19	1.155495028
62	Y-94 Spot 72	150	548	702259	3.6	18.1136	0.7	0.5254	1.4	0.0691	1.2	0.84	430.4	4.8	428.7	4.8	419.6	16.5	429.6	9.3	2.577444726
63	Y-94 Spot 73	16	62	26776	3.8	18.9168	1.0	0.4529	1.5	0.0622	1.1	0.71	388.8	4.0	379.3	4.7	322.0	23.5	386.5	7.8	20.75934002
64	Y-94 Spot 74	9	17	3482	1.9	20.2217	1.8	0.3688	2.2	0.0541	1.3	0.60	339.7	4.4	318.8	6.0	168.3	41.0			
65	Y-94 Spot 75	183	277	92816	1.5	18.9902	0.8	0.3768	1.3	0.0519	1.0	0.78	326.3	3.2	324.7	3.6	313.1	18.6	325.9	6.3	4.188457695
66	Y-94 Spot 76	79	128	33640	1.6	18.6850	1.1	0.4093	1.7	0.0555	1.3	0.77	348.1	4.3	348.4	4.9	349.9	24.0	348.2	8.5	-0.50048561
67	Y-94 Spot 77	133	181	195686	1.4	18.7971	0.8	0.3880	1.5	0.0529	1.2	0.82	332.4	3.9	332.9	4.1	336.3	18.9	332.5	7.6	-1.17133451
68	Y-94 Spot 78	26	67	207717	2.6	8.8433	0.6	5.1737	1.3	0.3320	1.2	0.88	1847.9	18.6	1848.3	11.2	1848.7	11.3	1848	20	-0.04166782
69	Y-94 Spot 80	74	109	89464	1.5	18.8360	0.9	0.3803	1.4	0.0520	1.1	0.79	326.6	3.6	327.3	4.0	331.7	19.7	326.8	7	-1.51311607
70	Y-94 Spot 81	36	81	93449	2.2	18.9985	1.1	0.3800	1.8	0.0524	1.4	0.77	329.2	4.4	327.1	5.0	312.2	25.6	328.6	8.7	5.447506613
71	Y-94 Spot 82	35	106	514146	3.0	15.4309	0.9	1.1775	1.4	0.1318	1.0	0.76	798.3	7.8	790.1	7.5	767.1	18.7	794	14	4.075738882
72	Y-94 Spot 83	256	366	145252	1.4	18.8353	0.7	0.3713	1.3	0.0507	1.1	0.85	319.1	3.4	320.6	3.5	331.7	15.1	319.7	6.6	-3.81770575
73	Y-94 Spot 84	47	76	165104	1.6	7.9917	0.7	6.3882	1.5	0.3704	1.3	0.88	2031.4	22.5	2030.7	12.9	2029.8	12.4	2030	22	0.078602632
74	Y-94 Spot 85	83	147	967913	1.8	19.0429	0.6	0.4018	1.1	0.0555	0.9	0.81	348.3	3.1	342.9	3.3	306.8	14.8	343.6	6	13.51312823
75	Y-94 Spot 86	43	193	458370	4.5	17.1839	0.7	0.6463	1.5	0.0806	1.3	0.88	499.6	6.4	506.2	6.0	536.1	15.8	504	12	-6.81710815
76	Y-94 Spot 87	56	270	118821	4.9	17.5739	0.7	0.6209	1.4	0.0792	1.1	0.84	491.2	5.4	490.4	5.3	486.8	16.3	491	10	0.899778783
77	Y-94 Spot 88	56	154	83196	2.8	19.0572	0.8	0.4046	1.5	0.0559	1.2	0.83	350.9	4.2	345.0	4.3	305.1	18.9	348.5	8.1	15.00599729
78	Y-94 Spot 89	71	330	206799	4.6	18.6179	0.8	0.4297	1.2	0.0581	0.9	0.75	363.8	3.2	363.0	3.7	358.0	18.4	363.6	6.3	1.615868138
79	Y-94 Spot 91	1440	558	151737	0.4	18.4467	0.5	0.4643	1.2	0.0621	1.0	0.88	388.7	3.9	387.2	3.8	378.8	12.2	387.7	7.4	2.60411106
80	Y-94 Spot 92	108	171	96322	1.6	18.2535	0.7	0.4531	1.4	0.0600	1.2	0.85	375.7	4.2	379.5	4.3	402.4	15.7	377.4	8.2	-6.63651624
81	Y-94 Spot 94	61	87	27120	1.4	19.0284	1.0	0.3871	1.4	0.0534	1.0	0.72	335.6	3.3	332.2	4.0	308.6	22.2	335	6.4	8.762844533
82	Y-94 Spot 95	20	73	118942	3.7	8.8607	0.7	5.3464	1.3	0.3437	1.1	0.82	1904.6	17.5	1876.3	11.0	1845.1	13.3	1868	21	3.22175975
83	Y-94 Spot 96	38	84	261316	2.2	5.1442	0.7	14.5731	1.3	0.5440	1.1	0.84	2800.0	25.4	2787.8	12.6	2779.0	11.8	2783	22	0.755796774
84	Y-94 Spot 97	95	186	45730	2.0	18.6265	1.2	0.3998	1.8	0.0540	1.4	0.76	339.2	4.6	341.5	5.3	356.9	26.4	339.7	9	-4.95727324
85	Y-94 Spot 98	23	46	362742	2.0	8.5670	0.7	5.6753	1.4	0.3528	1.2	0.85	1947.9	19.8	1927.6	12.0	1905.9	13.1	1919	22	2.202293087
86	Y-94 Spot 99	87	183	75435	2.1	18.9621	0.9	0.3738	1.4	0.0514	1.0	0.76	323.3	3.3	322.5	3.8	316.5	20.4	323.1	6.5	2.149191263
87	Y-94 Spot 101	50	82	91530	1.6	14.5246	0.6	1.4186	1.2	0.1495	1.1	0.86	898.2	8.9	896.8	7.4	893.3	13.2	897	15	0.543029421
88	Y-94 Spot 102	23	60	87894	2.6	9.0987	0.7	3.9282	1.4	0.2593	1.2	0.87	1486.4	15.9	1619.5	11.1	1797.0	12.2			
89	Y-94 Spot 103	44	94	146288	2.1	18.1831	0.8	0.5108	1.6	0.0674	1.4	0.88	420.4	5.8	419.0	5.6	411.1	17.4	419	11	2.272410594
90	Y-94 Spot 104	17	45	57776	2.6	15.1850	0.9	1.2071	1.4	0.1330	1.1	0.79	805.0	8.3	803.9	7.7	800.8	18.0	804	15	0.516480304
91	Y-94 Spot 105	75	191	189198	2.5	18.9661	0.8	0.3646	1.4	0.0502	1.1	0.80	315.6	3.4	315.6	3.7	316.0	18.8	315.6	6.7	-0.13069068
92	Y-94 Spot 106	316	394	219525	1.2	19.0204	0.9	0.3747	1.3	0.0517	0.9	0.69	325.0	2.8	323.1	3.6	309.5	21.2	324.7	5.5	5.013977631
93	Y-94 Spot 107	59	219	2569080	3.7	8.3419	0.7	5.7969	1.5	0.3509	1.3	0.86	1938.8	21.3	1946.0	12.8	1953.6	13.4	1949	23	-0.75839642
94	Y-94 Spot 108	135	315	57846	2.3	18.4306	0.8	0.4447	1.3	0.0595	1.1	0.82	372.4	3.9	373.5	4.1	380.8	16.9	372.8	7.6	-2.20518382
95	Y-94 Spot 109	63	74	105668	1.2	8.7856	0.7	5.3438	1.4	0.3407	1.2	0.85	1889.8	19.7	1875.9	12.0	1860.5	13.2	1870	22	1.574198382
96	Y-94 Spot 110	119	172	100002	1.4	16.2056	2.9	0.4869	3.1	0.0573	1.0	0.31	358.9	3.3	402.8	10.3	663.1	62.8			
97	Y-94 Spot 111	128	191	121774	1.5	18.0848	0.7	0.4916	1.3	0.0645	1.1	0.84	403.0	4.3	406.0	4.4	423.2	16.2	404.3	8.4	-4.7672276
98	Y-94 Spot 112	172	317	167919	1.8	17.4655	0.8	0.5933	1.1	0.0752	0.9	0.75	467.3	3.9	472.9	4.3	500.5	16.8	468.9	7.6	-6.62621203
99	Y-94 Spot 113	40	79	85425	2.0	18.4532	0.9	0.4186	1.4	0.0561	1.1	0.78	351.6	3.7	355.1	4.2	378.0	19.6	352.4	7.4	-6.99174443
100	Y-94 Spot 114	22	54	81300	2.4	15.3166	0.7	1.2151	1.4	0.1350	1.2	0.86	816.6	9.4	807.5	8.0	782.7	15.7	807	16	4.323797245
101	Y-94 Spot 116	18	59	58053	3.3	18.6387	1.1	0.3922	1.6	0.0530	1.3	0.76	333.1	4.1	335.9	4.7	355.5	23.9	333.7	8.1	-6.28477761
102	Y-94 Spot 117	54	275	98261	5.1	18.5536	0.8	0.4271	1.5	0.0575	1.3	0.86	360.4	4.5	361.1	4.5	365.8	17.4	360.7	8.7	-1.47843019
103	Y-94 Spot 118	133	241	13557	1.8	16.1656	2.8	0.4719	3.0	0.0553	1.2	0.41	347.3	4.2	392.5	9.9	668.4	59.2			
104	Y-94 Spot 119	35	84	117774	2.4	15.0979	0.9	1.2668	1.5	0.1388	1.1	0.76	837.7	8.7	830.9	8.3	812.9	19.8	834	16	3.051475577
105	Y-94 Spot 120	163	251	459381	1.5	18.6889	0.9	0.3851	1.2	0.0522	0.8	0.70	328.2	2.7	330.8	3.4	349.4	19.5	328.5	5.4	-6.07838072
106	Y-94 Spot 121	53	73	46645	1.4	19.1535	0.8	0.3793	1.3	0.0527	1.0	0.75	331.2	3.1	326.5	3.6	293.6	19.3	330.1	6.1	12.78302434
107	Y-94 Spot 122	126	169	26325	1.3	17.2459	1.8	0.4118	2.1	0.0515	1.0	0.50	323.9	3.3	350.2	6.1	528.3	39.1			
108	Y-94 Spot 123	92	221	120522	2.4	18.1728	0.9	0.5228	1.6	0.0689	1.3	0.82	429.8	5.3	427.1	5.4	412.3	19.9	429	10	4.229003016
109	Y-94 Spot 124	55	146	162047	2.7	19.1382	0.8	0.3690	1.4	0.0512	1.1	0.80	322.1	3.6	318.9	3.9	295.4	19.4	321.1	7	9.031547644
110	Y-94 Spot 125	100	170	63882	1.7	14.3115	0.8	1.4314	1.5	0.1486	1.3	0.86	893.4	10.6	902.2	8.8	923.7	15.5	903	18	-3.28922282
111	Y-94 Spot 126	72	138	130549	1.9	18.7401	0.9	0.4140	1.4	0.0563	1.1	0.77	353.0	3.6	351.7	4.1	343.2	19.7	352.7	7.1	2.856616927
112	Y-94 Spot 127	49	100	291635	2.0	15.2141	0.7	1.2152	1.2	0.1342	1.0	0.79	811.5	7.3	807.6	6.8	796.8	15.6	809	13	1.844468538
113	Y-94 Spot 128	35	226	584485	6.4	5.9676	0.7	10.8330	1.4	0.4691	1.2	0.85	2479.4	23.9	2508.9	12.7	2532.8	12.2	2521	22	-2.10649723
114	Y-94 Spot 129	79	268	97174	3.4	18.6348	0.8	0.3840	1.3	0.0519	1.0	0.79	326.3	3.2	330.0	3.6	355.9	17.8	327.2		

**Table S3.** Hf isotopic data for zircons from metasedimentary rocks of the Chiron Basin.

No	Analysis	$(^{176}\text{Yb} + ^{176}\text{Lu}) / ^{176}\text{Hf}$ , (%)	$^{176}\text{Lu}/^{177}\text{Hf}$	$^{176}\text{Hf}/^{177}\text{Hf}$	$\pm 1\sigma$ , %	Age, Ma	$\epsilon_{\text{Hf}}(t)$	$\pm$	$t_{\text{Hf}}(\text{DM})$ , Ga	$t_{\text{Hf}}(\text{C})$ , Ga
<b>Chiron Basin</b>										
<i>Sample Y-99: a shale of the Aga–Borshchovochnyi metamorphic Formation</i>										
1	Y-99 Spot 1	11.9	0.000718	0.282369	0.000018	501.5	-3.47	0.61	1.24	1.44
2	Y-99 Spot 31	18.7	0.001249	0.282546	0.000017	585.1	4.41	0.57	1.01	1.11
3	Y-99 Spot 37	9.4	0.000746	0.282563	0.000019	561.5	4.71	0.65	0.97	1.07
4	Y-99 Spot 43	8.4	0.000573	0.282402	0.000018	580.5	-0.50	0.61	1.19	1.35
5	Y-99 Spot 44	10.3	0.000613	0.282315	0.000014	510.1	-5.16	0.47	1.31	1.53
6	Y-99 Spot 45	14.5	0.001004	0.281150	0.000022	2515.8	-2.62	0.74	2.93	2.98
7	Y-99 Spot 50	74.7	0.003622	0.282585	0.000020	516.7	3.54	0.69	1.01	1.10
8	Y-99 Spot 74	12.4	0.000916	0.282517	0.000019	495	1.60	0.68	1.04	1.18
9	Y-99 Spot 75	20.8	0.001266	0.282323	0.000022	611.6	-2.91	0.76	1.32	1.50
10	Y-99 Spot 81	17.0	0.001041	0.282424	0.000018	518.8	-1.24	0.64	1.17	1.34
11	Y-99 Spot 84	22.6	0.001530	0.282482	0.000017	837.5	7.42	0.59	1.10	1.15
12	Y-99 Spot 95	8.4	0.000702	0.282460	0.000019	582.4	1.52	0.66	1.11	1.25
13	Y-99 Spot 105	14.3	0.000860	0.282596	0.000015	574.3	6.12	0.54	0.92	1.01
14	Y-99 Spot 107	9.1	0.000580	0.282359	0.000017	520.4	-3.36	0.59	1.25	1.45
15	Y-99 Spot 111	9.6	0.000749	0.282465	0.000018	586.7	1.78	0.64	1.11	1.24
16	Y-99 Spot 117	17.8	0.001181	0.282393	0.000021	590.9	-0.84	0.74	1.22	1.38
17	Y-99 Spot 120	0.4	0.000021	0.282391	0.000018	804.8	4.30	0.61	1.19	1.29
<i>Sample Y-98: a sandstone of the Khara–Shibir Formation</i>										
1	Y-98 Spot 2	12.8	0.000830	0.282380	0.000016	348.6	-6.39	0.54	1.23	1.47
2	Y-98 Spot 5	15.3	0.000968	0.282314	0.000021	350.5	-8.70	0.75	1.32	1.59
3	Y-98 Spot 12	14.0	0.000948	0.282173	0.000015	378.1	-13.10	0.54	1.52	1.83
4	Y-98 Spot 19	11.4	0.000681	0.282547	0.000021	349.1	-0.44	0.74	0.99	1.17
5	Y-98 Spot 38	21.6	0.001319	0.282571	0.000015	371.7	0.76	0.52	0.97	1.13
6	Y-98 Spot 41	20.7	0.001401	0.282615	0.000018	347.8	1.79	0.62	0.91	1.05
7	Y-98 Spot 43	10.4	0.000718	0.281943	0.000014	331	-22.19	0.49	1.83	2.25
8	Y-98 Spot 59	23.0	0.001385	0.282345	0.000017	389.9	-6.87	0.60	1.29	1.53
9	Y-98 Spot 61	18.3	0.001235	0.282608	0.000017	356.6	1.76	0.60	0.92	1.06
10	Y-98 Spot 63	11.8	0.000729	0.282607	0.000015	345.7	1.62	0.51	0.91	1.06
11	Y-98 Spot 68	16.5	0.001087	0.282504	0.000013	381	-1.36	0.46	1.06	1.24
12	Y-98 Spot 69	6.6	0.000403	0.282368	0.000019	351.9	-6.64	0.65	1.23	1.49
13	Y-98 Spot 73	17.4	0.001169	0.282340	0.000018	350.6	-7.83	0.63	1.29	1.55
14	Y-98 Spot 81	9.2	0.000572	0.282632	0.000017	353.1	2.70	0.58	0.87	1.01
15	Y-98 Spot 94	16.0	0.001076	0.282594	0.000014	347.2	1.10	0.50	0.93	1.09
16	Y-98 Spot 99	26.3	0.001709	0.282693	0.000019	355.9	4.64	0.65	0.81	0.92
17	Y-98 Spot 106	18.3	0.001216	0.282579	0.000015	359.1	0.79	0.53	0.96	1.11
18	Y-98 Spot 111	16.9	0.001075	0.282297	0.000015	385	-8.61	0.51	1.35	1.61

19	Y-98 Spot 116	22.9	0.001460	0.282559	0.000017	361	0.05	0.59	0.99	1.15
20	Y-98 Spot 130	10.9	0.000635	0.282452	0.000020	340.1	-3.98	0.70	1.12	1.34
<i>Sample Y-97: a sandstone of the Shazagaitui Formation</i>										
1	Y-97 Spot 3	17.4	0.001142	0.282488	0.000017	342.2	-2.79	0.59	1.08	1.28
2	Y-97 Spot 11	8.2	0.000515	0.281433	0.000023	1867.8	-6.35	0.78	2.51	2.66
3	Y-97 Spot 16	32.8	0.001978	0.282648	0.000024	342.2	2.71	0.85	0.88	1.00
4	Y-97 Spot 18	6.2	0.000398	0.281394	0.000018	2038	-3.74	0.58	2.55	2.66
5	Y-97 Spot 42	6.1	0.000350	0.281374	0.000015	1912.1	-7.25	0.50	2.58	2.74
6	Y-97 Spot 43	15.7	0.001008	0.282463	0.000020	875.5	7.85	0.67	1.12	1.16
7	Y-97 Spot 60	9.6	0.000637	0.282688	0.000018	328.5	4.11	0.65	0.79	0.92
8	Y-97 Spot 61	9.9	0.000689	0.281352	0.000019	1844.8	-9.96	0.63	2.63	2.82
9	Y-97 Spot 67	28.8	0.001896	0.282187	0.000016	381.2	-12.81	0.55	1.54	1.82
10	Y-97 Spot 85	12.9	0.000928	0.282146	0.000021	390.8	-13.78	0.74	1.55	1.88
11	Y-97 Spot 90	73.9	0.004066	0.282395	0.000028	376.4	-6.06	0.98	1.32	1.48
12	Y-97 Spot 109	11.3	0.000701	0.281446	0.000016	2015.4	-2.84	0.53	2.50	2.60
13	Y-97 Spot 113	12.2	0.000731	0.281501	0.000016	1889.9	-3.73	0.53	2.43	2.55
14	Y-97 Spot 114	44.9	0.002517	0.282187	0.000019	370.8	-13.15	0.66	1.56	1.83
15	Y-97 Spot 115	18.0	0.001110	0.281171	0.000023	2486.3	-2.73	0.76	2.91	2.97
16	Y-97 Spot 116	7.1	0.000431	0.281673	0.000024	1936.9	3.81	0.80	2.18	2.21
17	Y-97 Spot 120	37.9	0.002223	0.282255	0.000029	368.7	-10.73	1.02	1.45	1.71
18	Y-97 Spot 121	11.9	0.000766	0.282180	0.000021	349.7	-13.45	0.74	1.50	1.83
19	Y-97 Spot 122	10.7	0.000672	0.282438	0.000019	879.5	7.25	0.64	1.14	1.20
<i>Sample Y-94: a sandstone of the Zhipkhoshi Formation</i>										
1	Y-94 Spot 1	40.3	0.002759	0.282453	0.000041	404.1	-3.12	1.43	1.18	1.35
2	Y-94 Spot 3	26.5	0.001781	0.282947	0.000030	351.1	13.52	1.06	0.44	0.46
3	Y-94 Spot 33	28.2	0.001651	0.281979	0.000017	341.4	-20.91	0.61	1.82	2.19
4	Y-94 Spot 34	13.1	0.000890	0.283000	0.000023	325.5	15.04	0.80	0.36	0.36
5	Y-94 Spot 38	13.3	0.001027	0.282714	0.000021	318.1	4.73	0.75	0.76	0.88
6	Y-94 Spot 48	10.9	0.000813	0.282613	0.000022	506.9	5.27	0.76	0.90	1.00
7	Y-94 Spot 53	12.4	0.001090	0.282674	0.000026	313.9	3.21	0.90	0.82	0.96
8	Y-94 Spot 64	32.7	0.002257	0.281642	0.000020	1870.9	-1.06	0.67	2.33	2.40
9	Y-94 Spot 69	15.6	0.001144	0.282734	0.000028	342.3	5.93	0.99	0.74	0.84
10	Y-94 Spot 95	11.4	0.000844	0.281621	0.000023	1845.1	-0.59	0.76	2.27	2.35
11	Y-94 Spot 99	10.3	0.000769	0.282510	0.000022	323.3	-2.34	0.78	1.04	1.25
12	Y-94 Spot 108	33.2	0.001919	0.282334	0.000030	372.4	-7.77	1.07	1.33	1.56
13	Y-94 Spot 112	24.7	0.001825	0.282683	0.000030	467.3	6.58	1.03	0.82	0.90
14	Y-94 Spot 118	13.1	0.000837	0.282591	0.000015	347.3	1.06	0.53	0.93	1.09
15	Y-94 Spot 127	32.1	0.002349	0.282298	0.000019	811.5	-0.09	0.67	1.40	1.52



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