

Report on 2017 Excavations at Wonderwerk Cave, Kuruman District (9/2/055/0005)
 approximately at 27° 50' 47.76" S, 23° 33' 13.32" E

Permit 80/12/05/017/51

Dates: May 20-June 17

Permit Holder: Michael Chazan (University of Toronto)

Feature	Squares Excavated in 2017	z
<i>Operation 1 (Excl Bench)</i>		
R	K500, J499, J500, J498, J497, K499, K497, K498, K500, I500, K496	Red water deposited sands
<i>Operation 2 (Excl)</i>		
LD	J504, I503, J502, J503, H503	Red/brown/grey, occasional concretions, lithic debitage common. Dissected by SG.
SG	J503, I503, H503	Red/brown. No concretions. Burrow/disturbance cutting through LD and LCT. Sediment very loose.
LCT	H503, I503, I502, J502, I504	Brown/grey/white. Frequent large concretions. Hard sediment, breaking when scraping. Low find density. Soft brown sediment between & underneath.
GRS	I504, H504, H503	Brown. Occasional concretions. Lots of dolomite gravel on whitish-brown crust. Very soft brown sediment underneath, with much less and smaller gravel. LSA chert lithics. Gravely lying on crust of whitish-brown concretions. Those are breaking off easily in cobble-sized pieces. Theory - this is the transition from Str. 5 to 6 (Beaumont)
JKR	I 504, I503, H504, H503	Brown, very soft sediment without gravel, reddish when brushed. Occasional concretions. Upper c. 5cm sterile, then lithics and dolostones. Concretions appearing underneath?
<i>Operation 3 (Excl)</i>		
SR cleaning	L487, M487	Brown to dark brown with dung and hair, also includes underneath/mixed in reddish pink feature with pink and white soft concretions. Small concretions, large dolostones, LSA artefacts. Silty-sandy, red-grey, lots of small gravel.

		Pockets of dark brown sediment (burrows?), some degraded dolostone.
SR	L487, M487, L488, M488, K488, K489, J488	Heavily concreted bright pink sediment with few finds. degrading dolostones, gravel and concretions. Pinkish, black and white spots occasionally. Heavy gravel layer of soft silty sand with many (>10) large rocks throughout.
TS	L489, M489, L488	Sediment soft, sandy red/pinkish with harder concretions and white or dark brown inclusions. Shiny grey inclusions. Gravels, lots of microfauna. Finds of macrofauna and stalagmites. Black and white patches. Weathered dolostones.
<i>Operation 4 (Exc2)</i>		
TR	UU474, VV474, WW474	Red, no concretions except in lowest part. Flat lying rocks & stalagmites. Some burrows with brown sediment.
IG	VV474, UU474	Yellow/brown, occasional concretions, soft sediment.
PN	VV474, UU474	Red, no concretions. Very soft sediment. Grey burrow casts, lots of microfauna in that area. Weathered dolostones. Underneath hard layer with many small rocks coming out.

Personnel

Name	Role	Dates
Michael Chazan	Project director	May 20-June 17
Francesco Berna	Project director	May 20-June 17
Michaela Ecker	Spatial data manager	May 20-June 17
Sara Rhodes	PhD student University Tuebingen, Lab manager	May 20-June 17
Candice Koopowitz	Masters student, SFU	May 20-June 17
Erin Vermeulen	Undergraduate student, UofT	May 20-June 17
Zoe Helleiner	Undergraduate student, UofT	May 20-June 17
Rosa Moll	Masters student, University of the Witwatersrand	May 20-June 17
Neels Namusa	Employee	May 20-June 17
Amy Fox	PhD student, UofT	May 20-June 5
Chester Kaplan		May 20-June 5
Matthew Shaw	Masters student, UCT	May 20-May 26
Visitors:		
Liora Horwitz	Project director	
Sharon Holt	National Museum Bloemfontein	
Louis Scott	Pollen expert, University of the Free State	

All samples and artifacts curated at the McGregor Museum unless exported under permit for analysis.

Excavation methods and supplies

The spatial coordinates of all finds and samples are plotted with a total station. All sediments are sieved through a Flote-Tech flotation machine which separates out a heavy fraction and botanical material. Botanicals are dried and bagged for future study. Heavy fraction is sorted to remove any archaeological or paleontological material. Sediments are removed by bucket with bucket context recorded in the database. A 50 g. sediment sample is removed from each bucket before sieving and saved for future research. Large stones are kept separate from the sediment bucket and the weighed before examination to be sure they are not artifactual before discard. The weight of the rock buckets is recorded in the database along with the weight of the sediment bucket before sieving. A laboratory facility has been organized on site with capacity to run FTIR analysis on sediment and bone and limited capacity for preparing micromorphology thin section. The lab is also equipped with a standard microscope and a dinolite digital microscope. At the end of each season all sensitive profiles and surfaces are protected with loosely filled sandbags.

Beginning in 2017 the following laboratory procedures were laid out:

LAB PROCEDURES:

AFTER THE CAVE:

1. Weigh bucket with contents on hanging scale and note weight on Bucket Form.
2. Add weight of bucket without sediment to form
3. Take subsample of 200g from bucket (deduct 2g for bag weight for each sample), weighed on the flat scale. Pack subsample in plastic bag and pack a 'Sediment subsample tag' with it (in extra small bag). Add subsample weight to form. Write tag information on bag with Sharpie.
4. Calculate Sediment weight (Full bucket – Empty bucket) and note on form.
5. Put subsample in crate and write ID number on list on crate.
6. Bucket is ready for flotation.
7. If the bucket contains a second 'rock bucket': Weigh the rock bucket with the hanging scale. Subtract bucket weight and enter onto form. Wet material??, then place the material, with its tag, onto tarp for inspection. Keep separate from different rock buckets contents.

After Flotation:

1. Note Date of Flotation on form. Enter any comments (e.g. if not used standard procedure and why), and circle Y/N if botanical fraction was stored.
2. Dry according to drying system, separated by botanical and bulk sediment. The small original find tag stays with the botanical remains. The form stays with the bulk material.

2.1 Botanical material:

- 2.1.1 Should be on the tray trolley drying in mesh with original find tag.

2.1.2 Once dried, place contents into tinfoil and into bag with its tag and then into box marked “WW 2017 Botanical”.

2.2 Bulk material: Store according to system until sorting.

• **Sorted material:**

1. After sorting, circle Y on the bucket form and note date.
2. Write individual tags for all material types and the sorted bulk material (junk).
3. Submit form for data entry (see below).
4. Sorted material (little bottles) go with individual small ID tags in bags and are packed into museum boxes by 1) by Operation Area and then 2) material (lithic, microfauna, macrofaunal, other).
5. Sorted Bulk material (Junk) is put in crate by Operation area. The ID number is added to crate number list (should be kept with the box).

• **Unsorted material:**

1. Leave unsorted material on the tray for the afternoon shift.
2. Once completely dry, bag unsorted material in plastic bags and include the bucket tag in the bag.
3. Whomever does data entry for the day (Sara) will also enter the bucket tag data from the unsorted/unpicked sediment
4. Once the bucket tag data is entered, place the bag of unsorted/unpicked sediment in the black plastic tub. Add a level of bubble wrap between each layer of bags for cushioning. Add the ID number onto inventory list of box.

AT THE END OF THE DAY:

1. Type all finished bucket forms into WW database. Check the Y/N box for database entry.
2. If a sorted bulk material (Junk) crate is full, enter the ID's from the handwritten list into an excel list, backup, print and put on crate. Give the crate the next Crate number.

WW 2017 Bucket ID _____ Operation # _____ Date ___/___/2017

Square _____ Feature _____ Excavator _____

Picture taken Micromorph pedestal

Color: Red/Yellow/Brown/Grey/White/Black

Concretions: Frequent/Occasional/Absent

Samples _____

Discarded slabs:

Comment:

Reason Closed:

Lab	
Full bucket	_____g
Empty bucket	_____g
Sediment sample (-2g)	_____g
Sediment weight	_____g
Rock bucket weight	_____g
Flotation	
Date	_____
Comment:	
Botanical Material Stored: Y/N	
Heavy Fraction	
Sorted: Y/N	Date _____
Entered into Database Y/N	

Sample bucket tag

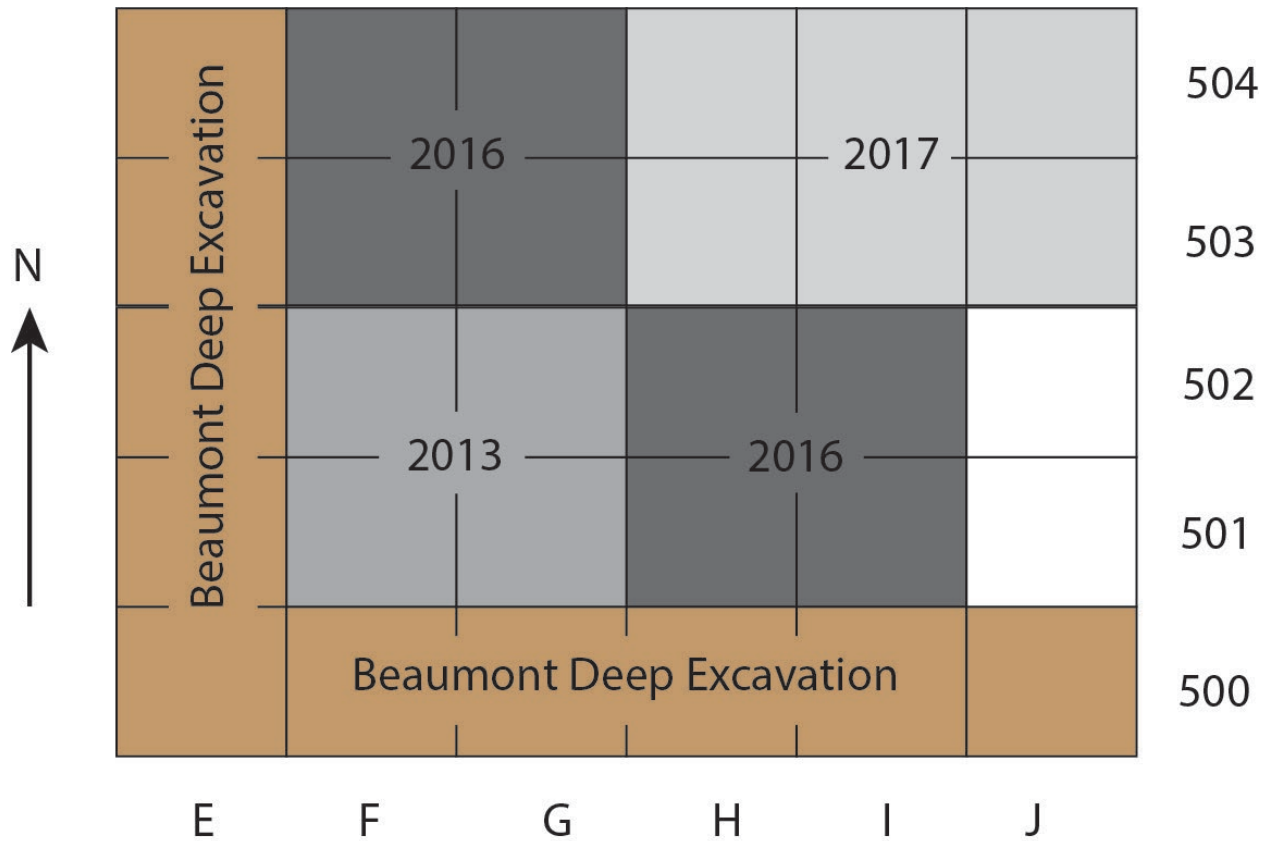
Description of Excavation

Operation 1

This was a continuation of the previous season of high precision excavation. All excavation was in the basal Feature R.

Operation 2

The goal was to expand the exposure of the surface within GC (grey compact) from the 2013 and 2016 seasons. The excavation focused on a step to the north of approximately 20 cm. to the north of the exposed surface. This proved to be a very complex deposit so excavation was slow. Excavation exposed a series of stratigraphic features that appear to represent infills of either fissures or channels.



Plan of Operation 2 excavation by season.

Operation 3

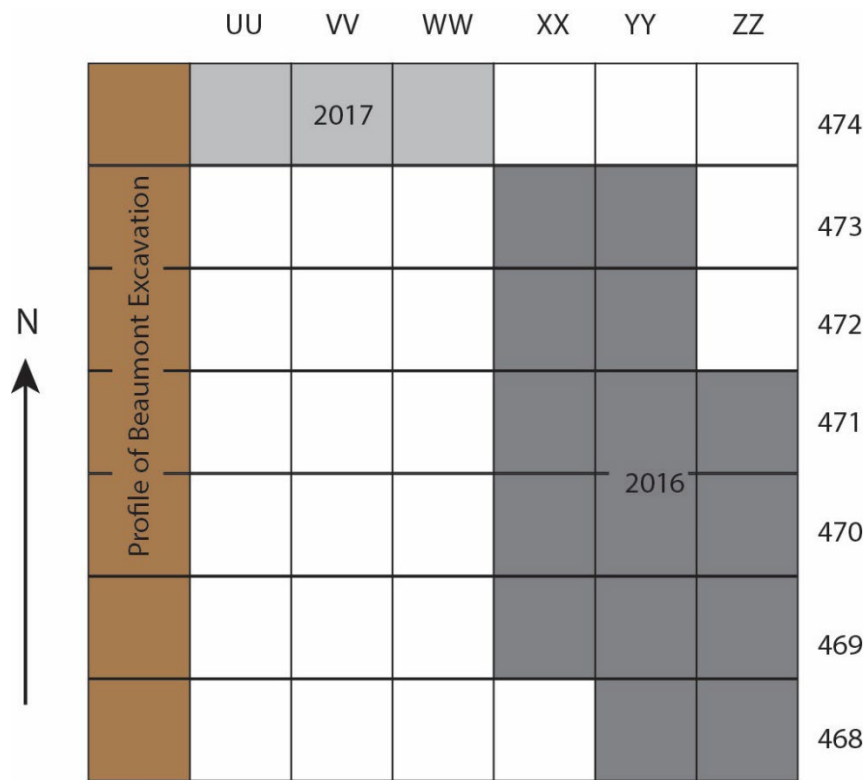
Excavation continued on the southeastern profile of Beaumont's Excavation 1. The goal of this excavation is to document the uppermost Acheulean deposits (Beaumont St. 8-5) that slope downward towards the north (cave entrance) and are therefore best exposed in this area. The sequence is characterized by significant concretions that formed after sediment deposition.



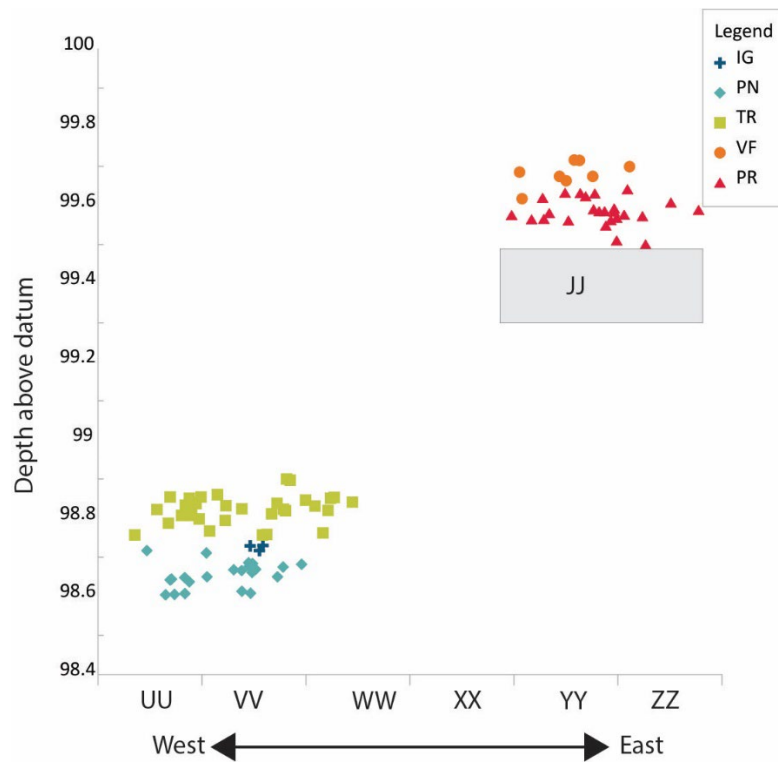
Excavation in Operation 3. The cement block retaining wall is visible to the west.

Operation 4

In 2016 excavation of the standing pedestal in this area had produced a profile that documented fine grain sediments underlain by a dense rubble deposit. In this season we moved to the west where a step in Beaumont's excavation allowed us to continue this sequence downwards. Excavation exposed a sequence of soft sediments dominated by red silts and sands.



Plan view of 2016 and 2017 Excavation Areas



Vertical projection of lithic finds from Operation 4, 2016 and 2017. Note that no artifacts were recovered from Feature JJ and that the base of this feature was not reached in excavation.

Spatial Context of Lithic Artifacts Recovered

X	Y	Z	ID	FEATURE	COMMENT
500.517	501.621	98.459	1733	GRS	small flake, possibly burnt
500.225	501.717	98.391	1786	GRS	small chert flake
500.527	501.589	98.451	1768	GRS	worked dolomite
500.351	501.523	98.430	1783	GRS	chert flake
500.313	501.568	98.422	1787	GRS	small flake, rolled
500.538	501.721	98.451	1767	GRS	small chert flake
500.291	501.513	98.422	1794	GRS	chert flake
500.257	501.516	98.413	1796	GRS	dolomite flake
500.367	501.464	98.436	1807	GRS	small flake
500.184	501.403	98.400	1810	GRS	small flake
494.293	487.052	98.730	1523	IG	modified slab
494.276	486.801	98.717	1525	IG	flake?
494.232	486.966	98.729	1524	IG	possible fragments of biface ID1461
500.843	501.171	98.347	1889	JKR	small flake
500.888	501.428	98.345	1888	JKR	dolomite flake?
500.818	501.518	98.326	1886	JKR	dolomite flake?
500.554	501.785	98.343	1878	JKR	flake?
500.048	501.770	98.307	1906.2	JKR	large flake dolomite
500.065	501.658	98.294	1906.1	JKR	large flake dolomite
500.069	501.714	98.298	1906	JKR	large flake dolomite
500.015	502.009	98.298	1900	JKR	flake?
500.032	502.024	98.305	1904	JKR	flake fragment?
500.667	501.653	98.346	1876	JKR	worked chert
500.751	501.795	98.330	1863	JKR	modified slab
500.849	501.735	98.327	1864	JKR	core
500.859	501.994	98.338	1865	JKR	dolomite flake?
500.915	501.978	98.332	1872	JKR	core?
500.903	501.828	98.347	1870	JKR	dolomite flake
500.964	501.696	98.355	1873	JKR	dolomite flake?
500.124	501.159	98.392	1548	LCT	flake?
500.693	501.412	98.451	1660	LCT	small flake
501.150	501.610	98.472	1684	LCT	small flake
500.770	501.464	98.545	1316	LD	biface fragment
501.016	501.313	98.531	1322	LD	
501.264	501.312	98.523	1369	LD	small flake
501.491	501.276	98.489	1450	LD	flake fragment
500.633	501.125	98.488	1421	LD	flake fragment?
500.131	501.093	98.428	1536	LD	burnt, potlid
494.153	486.681	98.668	1713	PN	small modified slab
494.258	486.803	98.669	1710	PN	shattered dolomite, possibly burnt
494.241	486.682	98.661	1712	PN	dolomite slab, possibly worked
494.224	487.020	98.686	1707	PN	dolomite flake
494.234	486.910	98.680	1708	PN	dolomite flake

494.191	486.883	98.666	1709	PN	dolomite, possibly a flake
494.390	487.001	98.675	1711	PN	dolomite flake
494.227	487.074	98.677	1706	PN	dolomite, possibly worked
493.735	487.184	98.717	1704	PN	dolomite flake
494.479	486.690	98.682	1699	PN	worked ironstone
494.243	486.848	98.684	1697	PN	dolomite flake
494.021	486.719	98.711	1695	PN	dolomite flake
493.939	487.147	98.637	1761	PN	burnt ironstone
493.854	487.082	98.644	1762.1	PN	
493.917	487.179	98.648	1762	PN	dolomite flake?
494.363	486.654	98.650	1757	PN	burned biface shatter
494.254	487.005	98.669	1756	PN	dolomite flake
493.847	486.601	98.642	1760	PN	dolomite flake
494.024	487.129	98.650	1845	PN	dolomite flake, retouched at one end
493.868	486.968	98.605	1846	PN	flake, disintegrating
493.825	486.686	98.604	1854	PN	small flake, burnt
493.918	487.041	98.607	1845.1	PN	dolomite flake, retouched at one end
494.192	486.832	98.613	1851	PN	dolomite flake?
494.234	486.971	98.608	1852	PN	dolomite flake?
501.172	498.827	96.360	1503	R	?
501.446	498.529	96.330	1512	R	
501.131	498.791	96.364	1502	R	?
501.223	498.940	96.380	1500	R	
501.530	498.550	96.313	1551	R	?
501.644	498.915	96.340	1552	R	small flake?
501.524	498.325	96.328	1544	R	
500.950	499.326	96.334	1620	R	
501.354	498.223	96.262	1624	R	
501.075	499.067	96.341	1610	R	
501.173	498.328	96.300	1611	R	
501.413	498.844	96.307	1688	R	small flake
501.148	498.569	96.321	1671	R	small flake
501.006	498.880	96.353	1654	R	?
500.973	499.576	96.288	1653	R	?
501.209	498.538	96.317	1667	R	small flake
501.093	498.694	96.360	1666	R	worked piece
501.208	498.910	96.295	1662	R	small flake
501.170	499.790	96.276	1686	R	small flake
500.359	501.261	98.437	1486	SG	flake
500.410	501.462	98.433	1487	SG	small flake
502.208	493.270	99.042	1315	SR	blade
502.591	493.191	98.955	1314	SR	chert core
502.621	493.307	98.974	1311	SR	burnt
502.405	493.377	99.005	1310	SR	biface fragment
502.426	493.355	99.003	1309	SR	biface fragment
502.385	493.309	98.983	1307	SR	biface fragment

502.308	493.418	99.022	1302	SR	flake
502.607	493.407	99.037	1304	SR	modified slab, burnt?
502.112	494.274	98.590	1585	SR	Feature unsure, igneous flake
501.895	493.852	98.974	1747	SR	flake fragment
501.729	493.887	98.974	1745	SR	biface shatter
501.868	493.960	98.950	1785	SR	dolomite biface
501.772	493.911	98.945	1785.1	SR	
501.830	493.782	99.820	1792	SR	weathered dolomite flake
501.930	493.718	99.831	1793	SR	chert flake
501.954	494.171	98.922	1778	SR	modified ironstone slab
501.936	493.743	99.800	1801	SR	chert block, worked?
501.294	493.720	98.920	1770	SR	shattered biface, ironstone
501.743	493.851	98.949	1774	SR	worked dolomite
501.990	493.782	98.988	1777	SR	core
501.565	494.043	98.904	1822	SR	ironstone flake
501.403	493.845	98.912	1814	SR	burned ironstone, possibly artefact
501.854	494.011	98.927	1823	SR	chert flake
501.454	493.825	98.916	1815	SR	ironstone shatter
501.990	493.784	98.855	1830	SR	
501.730	494.100	98.859	1839	SR	banded ironstone flake
501.915	493.959	98.923	1828	SR	flake, possibly burnt
501.394	493.928	98.857	1840	SR	dolomite, possibly worked
501.618	493.905	98.863	1836	SR	ironstone shatter
501.555	493.833	98.895	1835.1	SR	
501.622	493.880	98.874	1835	SR	biface
501.904	494.169	98.885	1831	SR	modified slab
501.951	493.688	98.885	1829	SR	small modified slab
501.422	493.829	98.865	1841	SR	ironstone shatter
502.005	493.855	98.888	1830.1	SR	biface, for CT scanning
501.998	493.719	98.885	1830.2	SR	
501.995	493.704	98.843	1916	SR	small flake
501.594	494.008	98.829	1911	SR	biface shatter
501.665	493.845	98.829	1912	SR	flake
501.861	493.729	98.897	1914	SR	dolomite core?
501.198	494.093	98.890	1858.1	SR	large dolomite core
501.419	494.079	98.798	1862	SR	dolomite, core?
501.624	493.989	98.837	1908	SR	dolomite flake
501.249	494.011	98.864	1858	SR	large dolomite core
502.662	493.329	99.286	1065	SR cleaning	triangular flake frag *
502.177	493.027	99.289	1063	SR cleaning	
502.283	493.103	99.296	1061	SR cleaning	BIF flake
502.200	493.202	99.297	1060	SR cleaning	BIF flake
502.005	493.150	99.279	1059	SR cleaning	BIF flake
502.523	493.415	99.274	1055	SR cleaning	BIF frag
502.773	493.367	99.258	1054	SR cleaning	bidirectional bladelet core
502.830	493.209	99.285	1053	SR cleaning	burned

502.601	493.231	99.286	1052	SR cleaning	dolomite flake
502.618	493.217	99.289	1051	SR cleaning	chert flake
502.751	493.390	99.277	1049	SR cleaning	
502.208	493.123	99.294	1048	SR cleaning	
502.057	493.095	99.294	1047	SR cleaning	flake frag
501.996	493.217	99.289	1046	SR cleaning	chert flake
502.523	493.191	99.274	1077	SR cleaning	retouched piece
502.190	493.357	99.262	1083	SR cleaning	flake, igneous?
502.619	493.003	99.273	1078	SR cleaning	large chert flake
502.577	493.274	99.291	1075	SR cleaning	small chert core
502.064	493.281	99.285	1058	SR cleaning	BIF flake
502.937	493.187	99.230	1103	SR cleaning	
502.841	493.296	99.271	1101	SR cleaning	
502.656	493.087	99.254	1155	SR cleaning	BIF slab
502.199	493.053	99.260	1179	SR cleaning	very small flake
502.965	493.197	99.237	1106	SR cleaning	
502.773	493.138	99.255	1153	SR cleaning	chert flake
502.521	493.273	99.257	1168	SR cleaning	small core?
502.502	493.305	99.251	1173	SR cleaning	chert flake
502.084	493.329	99.239	1109	SR cleaning	
502.023	493.390	99.255	1108	SR cleaning	
502.943	493.026	99.233	1104	SR cleaning	
502.112	493.259	99.239	1183	SR cleaning	flake frag
502.201	493.393	99.262	1181	SR cleaning	flake
502.224	493.373	99.265	1180	SR cleaning	flake
502.957	493.099	99.228	1107	SR cleaning	
502.963	492.983	99.215	1138	SR cleaning	
502.950	493.127	99.208	1137	SR cleaning	
502.579	493.277	99.253	1158	SR cleaning	chert flake core
502.909	493.026	99.230	1131	SR cleaning	
502.438	493.075	99.262	1097.2	SR cleaning	
502.395	493.041	99.272	1097.1	SR cleaning	
502.443	493.036	99.257	1097	SR cleaning	
502.947	493.056	99.259	1096	SR cleaning	
502.629	493.172	99.251	1166	SR cleaning	small flake
502.787	493.195	99.261	1095	SR cleaning	
502.552	493.383	99.248	1167	SR cleaning	weathered flake
502.422	493.080	99.247	1175	SR cleaning	small flake
502.929	493.139	99.218	1117	SR cleaning	
502.029	493.304	99.274	1094	SR cleaning	
502.480	492.975	99.267	1097.4	SR cleaning	
502.280	493.057	99.282	1093	SR cleaning	
502.362	493.105	99.275	1092	SR cleaning	
502.519	493.297	99.271	1152	SR cleaning	small flake
502.483	493.147	99.236	1174	SR cleaning	BIF flake
502.108	493.307	99.242	1110	SR cleaning	

502.909	493.042	99.239	1118	SR cleaning	
502.963	493.020	99.234	1123	SR cleaning	
502.338	493.270	99.254	1124	SR cleaning	
502.395	493.251	99.255	1176	SR cleaning	small flake
502.403	493.348	99.265	1125	SR cleaning	
502.970	493.138	99.223	1135	SR cleaning	
502.896	493.091	99.216	1134	SR cleaning	
502.501	493.010	99.271	1097.3	SR cleaning	
502.428	493.177	99.253	1111	SR cleaning	
502.949	493.034	99.206	1132	SR cleaning	
502.323	493.364	99.264	1177	SR cleaning	small flake
502.920	493.049	99.203	1133	SR cleaning	
502.414	493.114	99.244	1164.2	SR cleaning	incised piece
502.969	493.061	99.189	1143	SR cleaning	
502.910	493.099	99.202	1141	SR cleaning	
502.934	493.025	99.193	1140	SR cleaning	
502.965	493.046	99.190	1144	SR cleaning	
502.476	493.094	99.244	1164.4	SR cleaning	incised piece
502.899	492.971	99.177	1149	SR cleaning	
502.422	493.096	99.243	1164.1	SR cleaning	incised piece
502.888	493.130	99.197	1148	SR cleaning	
502.917	493.149	99.205	1146	SR cleaning	
502.473	493.133	99.246	1164.3	SR cleaning	incised piece
502.924	492.973	99.200	1145	SR cleaning	
502.447	493.109	99.231	1164	SR cleaning	incised piece *
502.632	493.010	99.245	1160	SR cleaning	flake frag
502.760	492.972	99.248	1161	SR cleaning	flake
502.561	493.306	99.268	1151	SR cleaning	chert flake
502.010	493.145	99.201	1239	SR cleaning	flake
502.618	493.095	99.218	1227	SR cleaning	very small flake
502.128	493.389	99.243	1219	SR cleaning	dolomite flake
502.674	493.228	99.142	1245	SR cleaning	retouched flake
502.422	493.003	99.235	1225	SR cleaning	flake
502.861	493.137	99.171	1240	SR cleaning	quartz core
502.864	493.041	99.171	1241	SR cleaning	chert flake
502.745	493.246	99.173	1238	SR cleaning	core
502.505	493.359	99.218	1218	SR cleaning	worked chert
502.847	493.018	99.214	1230	SR cleaning	bladelet
502.242	493.299	99.224	1231	SR cleaning	flake
502.077	493.119	99.197	1193.3	SR cleaning	
502.068	493.054	99.204	1193.4	SR cleaning	
502.360	493.320	99.214	1232	SR cleaning	dolomite core
502.718	493.225	99.138	1246	SR cleaning	bladelet core
502.279	493.019	99.250	1192	SR cleaning	chert core
502.404	493.173	99.233	1191	SR cleaning	small chert flake
502.633	493.052	99.219	1229	SR cleaning	BIF flake

502.051	493.052	99.215	1193.1	SR cleaning	
502.470	493.278	99.235	1190	SR cleaning	incised
502.403	492.990	99.230	1224	SR cleaning	bladelet core
502.591	493.005	99.224	1204	SR cleaning	flake
502.855	493.031	99.222	1199	SR cleaning	BIF flake
502.045	493.128	99.211	1193.2	SR cleaning	
502.647	493.004	99.216	1213	SR cleaning	flake
502.556	493.030	99.212	1212	SR cleaning	flake
502.823	493.058	99.153	1243	SR cleaning	small chert core
502.013	493.321	99.240	1208	SR cleaning	flake
502.453	493.193	99.220	1209	SR cleaning	flake
502.622	493.316	99.225	1198	SR cleaning	large flake
502.763	493.061	99.162	1242	SR cleaning	flake
502.118	493.095	99.086	1256	SR cleaning	
494.498	487.024	98.846	1252	TR	cobble possibly worked
494.407	486.882	98.900	1254	TR	flake
494.424	486.881	98.897	1253	TR	flake
493.939	487.032	98.851	1255	TR	flake frag?
493.972	486.636	98.837	1291	TR	small flake, burnt
493.847	486.885	98.854	1290	TR	small flake
493.962	486.608	98.840	1281	TR	small flake
493.950	486.851	98.818	1297	TR	small flake
493.902	486.617	98.807	1283	TR	small flake
493.963	486.622	98.841	1282	TR	small flake
493.995	486.578	98.854	1280	TR	small flake
494.361	486.725	98.838	1336	TR	large flake
494.392	486.649	98.823	1346.1	TR	large flake
494.402	486.687	98.819	1336.1	TR	large flake
494.074	486.884	98.860	1328	TR	small flake
494.192	486.975	98.824	1339.1	TR	large flake??
494.112	487.084	98.794	1340	TR	weathered BIF slab
494.335	486.708	98.811	1346	TR	large flake
494.543	486.684	98.831	1342	TR	chert cobble
494.636	486.908	98.853	1331	TR	ignious flake
494.723	486.527	98.841	1334	TR	potlid?
494.618	486.760	98.851	1343	TR	flake?
494.606	486.738	98.820	1344	TR	ironstone slab
494.115	487.038	98.832	1339	TR	large flake??
493.944	486.723	98.807	1462	TR	flake
494.582	486.637	98.762	1454	TR	two flakes
493.783	486.945	98.822	1463	TR	lithic?
494.312	486.812	98.758	1456	TR	flake fragment
493.987	486.621	98.798	1461	TR	biface
494.291	486.920	98.757	1455	TR	shattered? Burnt
493.920	486.552	98.833	1461.1	TR	biface
494.037	487.059	98.767	1528	TR	

493.677	486.780	98.757	1527.1	TR	large flake
493.838	486.737	98.787	1527	TR	large flake
502.636	494.165	98.723	1363.1	TS	large dolomite flake?
502.551	494.075	98.714	1363.2	TS	large dolomite flake?
502.614	494.046	98.718	1363.3	TS	large dolomite flake?
502.658	494.024	98.695	1367	TS	core/polyhedron
502.618	494.111	98.691	1363	TS	large dolomite flake?
502.771	494.222	98.709	1379	TS	small flake?
502.166	494.139	98.746	1359	TS	modified slab
502.128	494.104	98.744	1358	TS	modified slab
502.177	494.220	98.722	1360	TS	biface
502.146	494.273	98.741	1360.1	TS	
502.213	494.165	98.739	1360.2	TS	
502.192	494.058	98.719	1358.1	TS	
502.325	494.359	98.628	1435	TS	flake
502.363	494.165	98.602	1434	TS	modified slab
502.352	494.251	98.594	1433	TS	
502.849	494.236	98.658	1405.2	TS	irosntone slab
502.194	494.231	98.540	1443	TS	ironstone slab?
502.948	494.256	98.676	1405.1	TS	irosntone slab
502.928	494.284	98.617	1423	TS	flake fragment
502.902	494.248	98.644	1405	TS	irosntone slab
502.421	494.231	98.651	1418	TS	flake?
502.750	494.207	98.470	1471	TS	
502.655	494.279	98.515	1465	TS	hammerstone
502.549	494.341	98.503	1469	TS	modified slab
502.487	494.214	98.435	1481	TS	unworked BIF slab
502.464	493.564	98.702	1495	TS	ironstone slab
502.459	493.617	98.650	1498	TS	ironstone slab, possibly worked
502.170	493.784	98.675	1504	TS	flake
502.231	493.684	98.690	1506	TS	modified slab
502.472	493.566	98.662	1498.1	TS	ironstone slab, possibly worked
502.422	493.726	98.624	1511	TS	?
502.364	493.750	98.612	1520	TS	
502.454	493.669	98.671	1498.2	TS	ironstone slab, possibly worked
502.718	494.050	98.528	1539	TS	heavily weathered, core??
502.412	493.965	98.555	1560	TS	ironstone slab fragment
502.247	493.791	98.595	1562	TS	biface
502.356	493.757	98.554	1563	TS	biface, ironstone
502.304	493.721	98.553	1563.1	TS	biface, ironstone
502.386	493.725	98.602	1563.3	TS	biface, ironstone
502.342	493.794	98.553	1565	TS	modified, ironstone slab?
502.345	493.850	98.529	1567	TS	modified dolomite slab
502.336	493.964	98.535	1567.2	TS	modified dolomite slab
502.326	493.803	98.540	1563.2	TS	biface, ironstone
502.381	493.743	98.557	1567.1	TS	modified dolomite slab

502.861	493.745	98.589	1543	TS	modified slab? Dolomite?
502.866	493.674	98.594	1543.1	TS	modified slab? Dolomite?
502.805	493.777	98.598	1543.2	TS	modified slab? Dolomite?
502.704	493.820	98.624	1535.L1	TS	
502.674	493.870	98.540	1593	TS	modified BIF slab
502.264	493.644	98.477	1642	TS	worked dolomite?
502.188	493.743	99.406	1633	TS	ironstone core
502.223	493.781	99.379	1632	TS	modified ironstone slab
502.299	493.860	99.385	1631	TS	modified ironstone slab
502.846	493.807	98.412	1679	TS	worked dolomite block
502.364	493.851	98.381	1665	TS	large dolomite flake
502.288	493.863	98.393	1669	TS	large dolomite flake?
502.372	493.630	99.374	1725	TS	chert block with one removal

Spatial Context of Faunal Samples Recovered

X	Y	Z	ID	TYPE	FEATURE
500.931	501.563	98.539	1318	MACROFAUNA	LD
500.917	501.552	98.542	1317	MACROFAUNA	LD
494.453	487.060	98.685	1702	MACROFAUNA	PN
494.499	487.004	98.680	1763	MACROFAUNA	PN
501.096	498.809	96.367	1508	MACROFAUNA	R
501.693	498.431	96.261	1750	MACROFAUNA	R
502.391	493.220	99.022	1303	MACROFAUNA	SR
501.857	494.003	98.982	1749	MACROFAUNA	SR
501.588	494.052	98.918	1799	MACROFAUNA	SR
501.491	493.937	98.895	1813	MACROFAUNA	SR
501.561	493.988	98.868	1907	MACROFAUNA	SR
502.489	493.362	99.278	1081	MACROFAUNA	SR cleaning
502.618	493.176	99.275	1080	MACROFAUNA	SR cleaning
502.940	493.040	99.225	1122	MACROFAUNA	SR cleaning
502.710	493.349	99.249	1170	MACROFAUNA	SR cleaning
502.502	493.190	99.248	1169	MACROFAUNA	SR cleaning
502.569	493.232	99.260	1157	MACROFAUNA	SR cleaning
502.974	493.384	99.246	1105	MACROFAUNA	SR cleaning
502.046	493.352	99.246	1113	MACROFAUNA	SR cleaning
502.283	493.271	99.251	1185	MACROFAUNA	SR cleaning
502.965	493.029	99.226	1130	MACROFAUNA	SR cleaning
502.271	493.327	99.265	1091	MACROFAUNA	SR cleaning
502.158	493.325	99.258	1114	MACROFAUNA	SR cleaning
502.450	493.012	99.256	1112	MACROFAUNA	SR cleaning
502.354	493.161	99.274	1098	MACROFAUNA	SR cleaning
502.956	493.141	99.227	1116	MACROFAUNA	SR cleaning
502.921	493.057	99.196	1139	MACROFAUNA	SR cleaning
502.389	493.234	99.232	1234	MACROFAUNA	SR cleaning
502.272	493.346	99.256	1194	MACROFAUNA	SR cleaning

502.283	493.007	99.255	1195	MACROFAUNA	SR cleaning
502.312	493.312	99.232	1217	MACROFAUNA	SR cleaning
502.847	493.107	99.238	1206	MACROFAUNA	SR cleaning
502.629	493.121	99.242	1201	MACROFAUNA	SR cleaning
502.105	493.407	99.073	1277	MACROFAUNA	SR cleaning
502.176	493.373	99.074	1277.1	MACROFAUNA	SR cleaning
493.886	487.111	98.844	1250	MACROFAUNA	TR
493.837	487.157	98.844	1251	MACROFAUNA	TR
494.011	486.611	98.846	1292	MACROFAUNA	TR
501.232	501.520	98.552	1279	MACROFAUNA	TR
500.771	501.413	98.555	1279.1	MACROFAUNA	TR
494.579	486.712	98.794	1392	MACROFAUNA	TR
494.627	486.977	98.766	1395	MACROFAUNA	TR
494.675	486.848	98.741	1459	MACROFAUNA	TR
493.855	487.089	98.786	1526	MACROFAUNA	TR
502.227	494.170	98.666	1406	MACROFAUNA	TS
502.371	494.285	98.714	1384	MACROFAUNA	TS
502.926	494.059	98.723	1366	MACROFAUNA	TS
502.569	494.190	98.709	1371	MACROFAUNA	TS
502.173	494.180	98.717	1376	MACROFAUNA	TS
502.827	494.245	98.696	1380	MACROFAUNA	TS
502.715	494.057	98.684	1383	MACROFAUNA	TS
502.310	494.295	98.757	1357	MACROFAUNA	TS
502.450	494.154	98.637	1424	MACROFAUNA	TS
502.294	494.246	98.587	1441	MACROFAUNA	TS
502.303	494.352	98.598	1442	MACROFAUNA	TS
502.878	494.123	98.664	1404	MACROFAUNA	TS
502.766	494.237	98.627	1414	MACROFAUNA	TS
502.424	494.160	98.628	1428	MACROFAUNA	TS
502.412	493.824	98.541	1578	MACROFAUNA	TS
502.394	493.808	98.554	1580	MACROFAUNA	TS
502.459	493.745	98.461	1640	MACROFAUNA	TS
502.474	493.646	98.469	1640.1	MACROFAUNA	TS
502.460	493.763	98.465	1640.2	MACROFAUNA	TS
502.725	493.829	98.383	1681	MACROFAUNA	TS
502.314	493.869	98.405	1673	MACROFAUNA	TS
502.780	493.640	98.444	1651	MACROFAUNA	TS
502.797	493.683	98.428	1649	MACROFAUNA	TS
502.874	493.804	98.448	1647	MACROFAUNA	TS
502.370	493.083	99.278	1068	OES	SR cleaning
502.381	493.037	99.283	1067	OES	SR cleaning
502.616	493.348	99.306	1056	OES	SR cleaning
502.653	493.234	99.266	1079	OES	SR cleaning
502.951	493.285	99.245	1102	OES	SR cleaning
502.957	493.120	99.211	1136	OES	SR cleaning
502.952	493.412	99.240	1100	OES	SR cleaning

502.689	493.082	99.244	1171	OES	SR cleaning
502.326	493.370	99.260	1187	OES	SR cleaning
502.293	493.305	99.249	1188	OES	SR cleaning
502.431	493.416	99.251	1126	OES	SR cleaning
502.916	492.957	99.253	1119	OES	SR cleaning
502.440	493.335	99.276	1128	OES	SR cleaning
502.973	493.157	99.231	1129	OES	SR cleaning
502.033	493.039	99.277	1099	OES	SR cleaning
502.985	493.197	99.253	1120	OES	SR cleaning
502.959	493.152	99.223	1121	OES	SR cleaning
502.450	493.328	99.273	1127	OES	SR cleaning
502.929	493.060	99.193	1142	OES	SR cleaning
502.544	493.388	99.255	1163	OES	SR cleaning
502.660	493.065	99.255	1162	OES	SR cleaning
502.946	492.984	99.185	1147	OES	SR cleaning
502.529	493.252	99.240	1203	OES	SR cleaning
502.162	493.339	99.245	1215	OES	SR cleaning
502.623	493.256	99.147	1247	OES	SR cleaning
502.808	493.016	99.156	1244	OES	SR cleaning

Spatial Context of Botanical Samples Recovered

X	Y	Z	ID	FEATURE	COMMENT
502.016	493.401	99.288	1071	SR cleaning	wood
502.325	493.370	99.272	1082	SR cleaning	wood, possibly artifact
502.375	493.148	99.238	1186	SR cleaning	possibly artifactual *
502.634	493.033	99.235	1197	SR cleaning	
502.703	493.324	99.236	1196	SR cleaning	sheep dung
502.454	493.091	99.214	1235	SR cleaning	
502.277	493.000	99.249	1202	SR cleaning	sheep dung
502.424	494.243	98.660	1425	TS	calcified root?
502.882	494.054	98.647	1416	TS	?

Spatial Context of Geological Samples Recovered

X	Y	Z	ID	TYPE	FEATURE	COMMENT
498.573	510.740	99.732	1090	GEOLOGY		
500.280	501.544	98.417	1788	GEOLOGY	GRS	burnt ironstone
494.516	487.088	98.781	1522	GEOLOGY	IG	speleothem
494.049	486.632	98.748	1531	GEOLOGY	IG	weathered ironstone?
500.519	501.452	98.330	1891	GEOLOGY	JKR	
500.790	501.663	98.335	1880	GEOLOGY	JKR	dolomite
500.794	501.474	98.316	1887	GEOLOGY	JKR	burnt or weathered dolomite
500.536	501.154	98.351	1890	GEOLOGY	JKR	weathered dolomite

500.763	501.571	98.333	1882	GEOLOGY	JKR	dolomite
500.786	501.556	98.359	1881	GEOLOGY	JKR	dolomite
500.830	501.704	98.336	1880.3	GEOLOGY	JKR	dolomite
500.796	501.594	98.360	1880.1	GEOLOGY	JKR	dolomite
500.541	501.804	98.341	1879	GEOLOGY	JKR	weathered dolomite
500.448	501.879	98.309	1894	GEOLOGY	JKR	burnt dolomite?
499.989	501.790	98.289	1905	GEOLOGY	JKR	dolomite
500.724	501.686	98.363	1880.2	GEOLOGY	JKR	dolomite
500.016	501.852	98.292	1903	GEOLOGY	JKR	dolomite
499.971	501.842	98.287	1905.2	GEOLOGY	JKR	dolomite
499.995	501.726	98.300	1905.1	GEOLOGY	JKR	dolomite
500.050	501.884	98.286	1903.1	GEOLOGY	JKR	dolomite
500.294	501.609	98.329	1901	GEOLOGY	JKR	dolomite, possibly burnt
500.207	502.013	98.309	1898	GEOLOGY	JKR	burnt ironstone
500.368	501.847	98.329	1896	GEOLOGY	JKR	heavily wheatered dolomite
500.952	501.888	98.354	1869	GEOLOGY	JKR	dolomite
500.948	501.921	98.338	1871	GEOLOGY	JKR	dolomite
500.953	501.716	98.338	1875	GEOLOGY	JKR	dolomite
500.929	501.704	98.332	1874	GEOLOGY	JKR	burnt dolomite?
500.820	501.986	98.336	1866	GEOLOGY	JKR	dolomite
501.465	501.492	98.445	1676	GEOLOGY	LCT	dolomite
501.122	500.937	98.312	1724	GEOLOGY	LCT	dolomite
500.940	501.567	98.534	1323	GEOLOGY	LD	
494.263	486.608	98.657	1714	GEOLOGY	PN	speleothem
494.081	486.975	98.676	1705.1	GEOLOGY	PN	large dolomite block, object not kept, weight in rock bucket
493.992	486.835	98.692	1705	GEOLOGY	PN	large dolomite block, object not kept, weight in rock bucket
493.931	486.974	98.727	1694	GEOLOGY	PN	speleothem
494.449	487.059	98.693	1698	GEOLOGY	PN	shattered dolomite, possibly burnt
494.029	487.063	98.707	1696	GEOLOGY	PN	dolomite, possibly burnt
494.169	486.707	98.657	1758	GEOLOGY	PN	gravel conglomerate
493.750	487.048	98.638	1847	GEOLOGY	PN	dolomite
493.933	486.809	98.597	1848	GEOLOGY	PN	dolomite fragments
493.887	486.604	98.608	1849	GEOLOGY	PN	dolomite, burnt?
493.759	486.601	98.650	1850	GEOLOGY	PN	burnt ironstone
494.041	487.042	98.632	1853	GEOLOGY	PN	dolomite, burnt?
501.739	498.471	96.505	1274	GEOLOGY	R	black sediment
501.719	499.002	96.508	1272	GEOLOGY	R	
501.747	499.318	96.500	1269	GEOLOGY	R	
501.756	499.329	96.522	1270	GEOLOGY	R	
501.722	497.841	96.432	1276	GEOLOGY	R	

500.918	499.881	96.453	1263	GEOLOGY	R	
500.514	499.930	96.436	1262	GEOLOGY	R	orangesediment
501.186	499.322	96.338	1426.1	GEOLOGY	R	POSS COPROLITE
501.172	499.299	96.356	1426	GEOLOGY	R	POSS COPROLITE
501.360	501.106	98.387	1515	GEOLOGY	SG	weathered slab
502.283	493.227	98.969	1312	GEOLOGY	SR	weathered dolomite/ironstone, fits with ID 1313
502.319	493.211	98.971	1313	GEOLOGY	SR	weathered dolomite/ironstone, fits with ID 1312
501.774	494.062	98.904	1800	GEOLOGY	SR	gravel concretion
501.643	493.933	98.951	1784	GEOLOGY	SR	chert
501.789	493.866	98.939	1791	GEOLOGY	SR	dolomite
501.584	493.957	98.924	1798	GEOLOGY	SR	shattered ironstone
501.993	493.708	98.955	1779	GEOLOGY	SR	small dolomite slab
501.810	493.695	98.986	1782	GEOLOGY	SR	quartz pebble
501.238	493.772	98.928	1772	GEOLOGY	SR	triangular dolomite slab
501.601	493.822	98.943	1773	GEOLOGY	SR	dolomite cobble
501.730	493.772	99.009	1775	GEOLOGY	SR	dolomite slab
501.763	493.881	98.962	1776	GEOLOGY	SR	burned ironstone slab
501.418	494.001	98.909	1812	GEOLOGY	SR	weathered dolomite
501.517	493.927	98.896	1809	GEOLOGY	SR	weathered dolomite, object discarded
501.542	494.011	98.913	1821	GEOLOGY	SR	dolomite fragment
501.440	493.994	98.930	1820	GEOLOGY	SR	weathered dolomite
501.455	493.871	98.878	1819	GEOLOGY	SR	burnt ironstone
501.371	493.787	98.864	1818	GEOLOGY	SR	ironstone slab, one natural spall, possibly burnt
501.529	493.982	98.907	1808	GEOLOGY	SR	dolomite with breccia
501.922	494.038	98.901	1827	GEOLOGY	SR	burnt ironstone
501.346	494.021	98.860	1842	GEOLOGY	SR	dolomite
501.977	493.751	98.867	1838	GEOLOGY	SR	thin BIF slab
501.950	493.785	98.857	1837	GEOLOGY	SR	BIF spall
502.099	494.188	98.808	1832	GEOLOGY	SR	burnt ironstone slab
501.006	493.776	98.895	1833	GEOLOGY	SR	chert
501.787	493.682	98.832	1917	GEOLOGY	SR	dolomite
501.789	493.847	98.856	1913	GEOLOGY	SR	burnt dolomite?
501.776	494.204	98.825	1910	GEOLOGY	SR	BIF slab
501.549	493.992	98.869	1884	GEOLOGY	SR	dolomite
501.625	494.165	98.800	1909	GEOLOGY	SR	dolomite
501.258	493.914	98.811	1859	GEOLOGY	SR	dolomite
501.228	493.848	98.816	1860	GEOLOGY	SR	BIF slab, burnt?
501.203	494.001	98.780	1883	GEOLOGY	SR	heavily wheatered dolomite

501.292	494.061	98.810	1892	GEOLOGY	SR	dolomite, object discarded
501.281	494.032	98.799	1893	GEOLOGY	SR	dolomite
502.915	493.337	99.258	1057	GEOLOGY	SR cleaning	
502.568	493.315	99.311	1050	GEOLOGY	SR cleaning	
502.298	493.270	99.247	1084	GEOLOGY	SR cleaning	chert slab
502.179	493.442	99.282	1070	GEOLOGY	SR cleaning	chert slab
502.662	493.228	99.280	1076	GEOLOGY	SR cleaning	BIF slab
502.549	493.339	99.264	1074	GEOLOGY	SR cleaning	BIF slab
502.634	493.390	99.256	1073	GEOLOGY	SR cleaning	BIF slab
502.065	493.046	99.271	1072	GEOLOGY	SR cleaning	stalagmite?
502.895	493.422	99.231	1154	GEOLOGY	SR cleaning	
502.957	493.300	99.226	1115	GEOLOGY	SR cleaning	
502.503	493.408	99.253	1172	GEOLOGY	SR cleaning	BIF
502.846	493.287	99.242	1165	GEOLOGY	SR cleaning	BIF frag
502.607	493.161	99.262	1159	GEOLOGY	SR cleaning	
502.793	493.157	99.228	1228	GEOLOGY	SR cleaning	
502.067	493.088	99.184	1193	GEOLOGY	SR cleaning	large cobble
502.569	493.106	99.224	1207	GEOLOGY	SR cleaning	
502.765	493.095	99.222	1205	GEOLOGY	SR cleaning	ironstone chert
502.721	492.980	99.236	1200	GEOLOGY	SR cleaning	thin ironstone slab
502.298	493.320	99.237	1214	GEOLOGY	SR cleaning	
502.442	493.399	99.226	1210	GEOLOGY	SR cleaning	chert
502.145	493.300	99.222	1216	GEOLOGY	SR cleaning	
493.914	487.088	98.822	1289	GEOLOGY	TR	
494.431	486.863	98.898	1294	GEOLOGY	TR	ironstone slab, burnt

494.449	486.899	98.858	1294.1	GEOLOGY	TR	ironstone slab, burnt
494.478	486.976	98.850	1295	GEOLOGY	TR	dolomite, possibly burnt
494.544	486.969	98.869	1295.1	GEOLOGY	TR	dolomite, possibly burnt
494.223	486.958	98.818	1285	GEOLOGY	TR	stalagmite
494.363	486.842	98.885	1296.1	GEOLOGY	TR	dolomite
494.066	486.846	98.846	1286	GEOLOGY	TR	stalagmite
494.018	487.040	98.847	1284	GEOLOGY	TR	stalagmite
494.281	486.859	98.846	1296	GEOLOGY	TR	dolomite
494.072	486.614	98.848	1288	GEOLOGY	TR	stalagmite
494.036	486.775	98.844	1287	GEOLOGY	TR	stalagmite
494.777	486.644	98.840	1348.1	GEOLOGY	TR	flat dolomite slab
494.779	486.585	98.837	1348	GEOLOGY	TR	flat dolomite slab
494.264	486.858	98.834	1337	GEOLOGY	TR	flat dolomite slab
494.014	486.728	98.846	1329	GEOLOGY	TR	rock with possible speleothem
494.802	486.868	98.851	1326	GEOLOGY	TR	stalagmite
494.280	486.981	98.820	1338	GEOLOGY	TR	flat dolomite slab
494.166	486.832	98.767	1327	GEOLOGY	TR	stalagmite
494.315	486.939	98.809	1338.1	GEOLOGY	TR	flat dolomite slab
494.320	486.845	98.838	1337.1	GEOLOGY	TR	flat dolomite slab
494.146	486.650	98.855	1330	GEOLOGY	TR	flat dolomite slab
494.559	486.633	98.850	1341	GEOLOGY	TR	stalagmite
494.227	486.654	98.863	1330.1	GEOLOGY	TR	flat dolomite slab
494.705	486.683	98.842	1332	GEOLOGY	TR	incipient stalagmite
494.713	486.636	98.839	1333	GEOLOGY	TR	dolomite
494.571	486.775	98.858	1335	GEOLOGY	TR	dolomite
494.244	486.686	98.808	1345	GEOLOGY	TR	
494.497	487.092	98.779	1398	GEOLOGY	TR	dolomite cobble
494.460	486.870	98.792	1394	GEOLOGY	TR	dolomite cobble
494.066	486.608	98.764	1396	GEOLOGY	TR	dolomite cobble, object not kept
494.223	486.563	98.765	1397	GEOLOGY	TR	dolomite cobble
494.663	486.758	98.734	1458	GEOLOGY	TR	dolomite slab
494.664	486.834	98.669	1453	GEOLOGY	TR	dolomite slab
494.417	486.559	98.762	1457	GEOLOGY	TR	incipient speleothem
502.870	494.097	98.722	1364	GEOLOGY	TS	conglomerate
502.542	494.134	98.732	1365	GEOLOGY	TS	speleothem
502.441	494.122	98.651	1377	GEOLOGY	TS	speleothem
502.603	494.289	98.715	1378	GEOLOGY	TS	speleothem
502.495	494.257	98.698	1382	GEOLOGY	TS	speleothem?
502.356	494.368	98.736	1356	GEOLOGY	TS	
502.551	494.231	98.750	1361	GEOLOGY	TS	speleothem
502.541	494.148	98.734	1362	GEOLOGY	TS	speleothem
502.539	494.109	98.671	1372	GEOLOGY	TS	speleothem?
502.671	494.300	98.554	1440	GEOLOGY	TS	speleothem
502.947	494.220	98.619	1431	GEOLOGY	TS	dolomite with breccia

502.848	494.129	98.600	1410	GEOLOGY	TS	weathered dolomite with breccia
502.385	494.287	98.603	1438	GEOLOGY	TS	
502.606	494.109	98.655	1403	GEOLOGY	TS	speleothem
502.174	494.161	98.602	1436	GEOLOGY	TS	speleothem
502.292	494.199	98.497	1451	GEOLOGY	TS	dolomite with breccia
502.310	494.180	98.567	1437	GEOLOGY	TS	dolomite cobble
502.933	494.067	98.660	1417	GEOLOGY	TS	dolomite with breccia
502.677	494.079	98.625	1415	GEOLOGY	TS	dolomite with breccia
502.261	494.289	98.552	1449	GEOLOGY	TS	dolomite chunk
502.927	494.113	98.646	1412	GEOLOGY	TS	speleothem
502.896	494.158	98.629	1411	GEOLOGY	TS	speleothem
502.502	494.180	98.586	1427	GEOLOGY	TS	speleothem
502.412	494.320	98.666	1409	GEOLOGY	TS	dolomite with breccia
502.369	494.217	98.629	1408	GEOLOGY	TS	dolomite with breccia
502.863	494.052	98.568	1470	GEOLOGY	TS	
502.533	494.376	98.471	1472	GEOLOGY	TS	heavily weathered BIF
502.282	494.100	98.494	1468	GEOLOGY	TS	ironstone or dolomite
502.214	494.339	98.489	1476	GEOLOGY	TS	
502.248	494.147	98.427	1485	GEOLOGY	TS	weathered
502.315	494.210	98.517	1467	GEOLOGY	TS	concretion
502.240	494.112	98.425	1484	GEOLOGY	TS	weathered
502.227	494.283	98.407	1483	GEOLOGY	TS	
502.363	494.146	98.487	1475	GEOLOGY	TS	weathered
502.265	494.177	98.466	1482	GEOLOGY	TS	speleothem
502.361	494.255	98.553	1466	GEOLOGY	TS	
502.419	493.668	98.671	1494	GEOLOGY	TS	biface?
502.372	493.912	98.711	1507	GEOLOGY	TS	speleothem??
502.678	493.859	98.670	1493	GEOLOGY	TS	concretion
502.731	493.874	98.563	1540	GEOLOGY	TS	weathered dolomite
502.463	493.745	98.568	1561	GEOLOGY	TS	heavily weathered dolomite
502.308	493.945	98.535	1564	GEOLOGY	TS	dolomite slab
502.325	493.874	98.572	1566	GEOLOGY	TS	weathered dolomite
502.706	493.992	98.563	1569	GEOLOGY	TS	heavily weathered
502.286	493.895	98.571	1533	GEOLOGY	TS	weathered dolomite
502.304	493.840	98.582	1534	GEOLOGY	TS	weathered dolomite
502.765	493.709	98.522	1557	GEOLOGY	TS	weathered dolomite
502.747	493.764	98.552	1558	GEOLOGY	TS	heavily weathered, possible artifact
502.805	493.886	98.544	1559	GEOLOGY	TS	dolomite cobble
502.386	493.718	98.570	1568	GEOLOGY	TS	dolomite slab
502.264	494.006	98.549	1584	GEOLOGY	TS	ironstone slab
502.827	493.753	98.544	1586	GEOLOGY	TS	heavily weathered dolomite
502.353	493.653	98.544	1602	GEOLOGY	TS	dolomite

502.250	493.705	98.509	1597	GEOLOGY	TS	weathered dolomite
502.302	493.896	98.511	1598	GEOLOGY	TS	weathered dolomite
502.247	493.608	98.545	1583	GEOLOGY	TS	rectangular dolomite slab
502.259	493.570	98.564	1583.2	GEOLOGY	TS	rectangular dolomite slab
502.330	493.713	98.515	1596	GEOLOGY	TS	heavily weathered dolomite
502.204	493.984	98.536	1601	GEOLOGY	TS	weathered dolomite
502.294	493.981	98.524	1599	GEOLOGY	TS	dolomite
502.356	493.706	98.505	1603	GEOLOGY	TS	weathered dolomite
502.688	493.855	98.556	1604	GEOLOGY	TS	unknown soft brown sediment
502.187	493.920	98.533	1600	GEOLOGY	TS	dolomite
502.229	493.679	98.548	1583.1	GEOLOGY	TS	rectangular dolomite slab
502.251	493.772	98.521	1582	GEOLOGY	TS	dolomite cobble, possibly cemented passage feature
502.177	493.711	98.547	1579	GEOLOGY	TS	flowstone
502.320	493.810	98.495	1581	GEOLOGY	TS	weathered dolomite slab
502.780	493.697	98.530	1592	GEOLOGY	TS	heavily weathered dolomite
502.653	493.983	98.500	1594	GEOLOGY	TS	heavily weathered dolomite?
502.431	493.698	98.504	1595	GEOLOGY	TS	heavily weathered dolomite
502.242	493.791	99.374	1635	GEOLOGY	TS	weathered dolomite
502.478	493.773	98.384	1641	GEOLOGY	TS	heavily weathered dolomite
502.202	493.847	99.352	1634	GEOLOGY	TS	weathered dolomite
502.239	493.860	99.354	1636	GEOLOGY	TS	weathered dolomite
502.774	494.030	99.326	1628	GEOLOGY	TS	weathered dolomite
502.309	493.674	99.370	1629	GEOLOGY	TS	weathered dolomite
502.285	493.790	99.376	1630	GEOLOGY	TS	heavily weathered dolomite
502.685	493.786	98.411	1682	GEOLOGY	TS	speleothem
502.847	493.705	98.401	1683	GEOLOGY	TS	dolomite
502.280	493.936	98.382	1672	GEOLOGY	TS	dolomite
502.242	493.729	98.410	1659	GEOLOGY	TS	dolomite
502.414	493.895	98.421	1658	GEOLOGY	TS	dolomite slab
502.607	493.699	98.436	1650	GEOLOGY	TS	heavily weathered dolomite with purple section
502.312	494.006	98.394	1668	GEOLOGY	TS	ironstone or dolomite
502.788	494.014	98.402	1678	GEOLOGY	TS	dolomite with concretion

500.170	499.891	96.459	1258	GEOLOGY	W	
501.747	499.333	96.503	1268	GEOLOGY	W	
500.502	499.924	96.456	1261	GEOLOGY	W	
501.722	497.847	96.449	1275	GEOLOGY	W	grey white sediment
500.314	499.891	96.447	1260	GEOLOGY	W	black sedimentw
501.727	499.003	96.530	1271	GEOLOGY	W	
500.902	499.884	96.467	1264	GEOLOGY	W	
501.172	499.869	96.459	1265	GEOLOGY	W	
501.174	499.868	96.476	1266	GEOLOGY	W	
501.512	499.877	96.501	1267	GEOLOGY	W	
500.043	499.862	96.445	1257	GEOLOGY	W	
501.741	498.482	96.517	1273	GEOLOGY	W	
500.320	499.897	96.465	1259	GEOLOGY	W	
501.210	496.066	96.292	1922	GEOLOGY	W	black within W
501.215	496.077	96.308	1921	GEOLOGY	W	
501.813	496.263	96.334	1920	GEOLOGY	W	
501.196	496.064	96.282	1923	GEOLOGY	W	Red in W
500.568	501.831	98.404	1771	GRAVEL	GRS	
500.928	501.787	98.433	1780	GRAVEL	GRS	
500.255	501.589	98.415	1789	GRAVEL	GRS	
500.204	501.539	98.415	1790	GRAVEL	GRS	
500.265	501.509	98.416	1795	GRAVEL	GRS	chert
500.307	501.619	98.408	1797	GRAVEL	GRS	
500.363	501.467	98.398	1811	GRAVEL	GRS	
500.880	501.955	98.341	1867	GRAVEL	JKR	
500.572	501.915	98.340	1877	GRAVEL	JKR	
500.479	501.722	98.351	1895	GRAVEL	JKR	
500.060	501.590	98.335	1902	GRAVEL	JKR	
500.035	501.990	98.296	1899	GRAVEL	JKR	
500.198	501.972	98.326	1897	GRAVEL	JKR	
500.980	501.950	98.347	1868	GRAVEL	JKR	
500.774	501.132	98.730	1885	GRAVEL	JKR	
501.038	501.587	98.537	1324	GRAVEL	LD	
500.880	501.521	98.532	1320	GRAVEL	LD	
500.832	501.565	98.535	1319	GRAVEL	LD	
500.613	501.383	98.481	1422	GRAVEL	LD	
501.155	499.245	96.387	1420	GRAVEL	R	
501.097	498.813	96.366	1501	GRAVEL	R	
501.322	498.086	96.342	1516	GRAVEL	R	
501.432	498.489	96.302	1517	GRAVEL	R	
501.565	499.439	96.299	1547	GRAVEL	R	
501.525	498.875	96.314	1553	GRAVEL	R	
501.341	498.175	96.300	1622	GRAVEL	R	
501.459	499.154	96.281	1617	GRAVEL	R	
501.382	499.011	96.299	1616	GRAVEL	R	
500.974	499.433	96.328	1637	GRAVEL	R	

501.354	498.222	96.263	1625	GRAVEL	R	
501.354	498.222	96.263	1626	GRAVEL	R	
501.017	499.469	96.293	1638	GRAVEL	R	
501.354	498.223	96.262	1623	GRAVEL	R	
501.042	499.246	96.308	1613	GRAVEL	R	
501.408	499.243	96.285	1614	GRAVEL	R	
501.068	498.578	96.353	1670	GRAVEL	R	
501.133	499.582	96.297	1652	GRAVEL	R	
501.056	498.797	96.327	1663	GRAVEL	R	
501.380	498.913	96.292	1690	GRAVEL	R	
501.412	498.863	96.288	1691	GRAVEL	R	
501.009	498.899	96.334	1661	GRAVEL	R	
501.249	498.938	96.304	1687	GRAVEL	R	
501.240	498.648	96.286	1718	GRAVEL	R	
501.490	499.162	96.293	1726	GRAVEL	R	
501.517	498.593	96.264	1729	GRAVEL	R	
500.495	501.310	98.464	1445	GRAVEL	SG	
500.448	501.206	98.465	1480	GRAVEL	SG	
502.379	493.348	99.002	1308	GRAVEL	SR	
501.565	493.906	98.996	1744	GRAVEL	SR	
501.756	493.981	98.956	1748	GRAVEL	SR	
501.881	493.713	98.981	1743	GRAVEL	SR	
502.683	493.357	99.277	1066	GRAVEL	SR cleaning	
502.025	493.061	99.285	1064	GRAVEL	SR cleaning	
502.451	492.978	99.314	1062	GRAVEL	SR cleaning	
502.214	493.422	99.282	1069	GRAVEL	SR cleaning	
502.340	493.173	99.243	1178	GRAVEL	SR cleaning	
502.142	493.324	99.253	1182	GRAVEL	SR cleaning	
502.115	493.138	99.242	1184	GRAVEL	SR cleaning	
502.593	493.217	99.268	1156	GRAVEL	SR cleaning	
502.608	493.146	99.258	1189	GRAVEL	SR cleaning	
502.396	493.201	99.220	1220	GRAVEL	SR cleaning	
502.576	493.075	99.216	1226	GRAVEL	SR cleaning	
502.423	493.363	99.224	1233	GRAVEL	SR cleaning	

494.719	486.558	98.834	1347	GRAVEL	TR	
494.594	487.061	98.776	1399	GRAVEL	TR	
494.583	486.902	98.793	1393	GRAVEL	TR	
493.863	486.717	98.810	1490	GRAVEL	TR	
502.471	494.152	98.714	1373	GRAVEL	TS	
502.297	494.058	98.695	1375	GRAVEL	TS	
502.556	494.178	98.707	1381	GRAVEL	TS	
502.155	494.247	98.712	1374	GRAVEL	TS	
502.199	493.739	98.675	1505	GRAVEL	TS	
500.739	501.065	98.494	1413	IR	LD	white sediment
494.029	486.702	98.658	1759	IR	PN	
501.731	499.059	96.583	1753	IR	PT	Geo27
501.729	499.063	96.606	1754	IR	PT	Geo28
501.723	499.030	96.567	1752	IR	PT	Geo26
501.147	499.204	96.368	1432	IR	R	MICROFAUNA
501.361	499.212	96.361	1439	IR	R	
501.486	499.044	96.348	1541	IR	R	MICROFAUNA
501.175	498.132	96.289	1618	IR	R	
501.166	498.251	96.321	1609	IR	R	
501.221	498.233	96.320	1612	IR	R	
501.199	499.070	96.310	1608	IR	R	
501.154	498.616	96.309	1680	IR	R	
501.057	499.788	96.331	1685	IR	R	
502.894	493.135	98.985	1305	IR	SR	
502.193	494.164	98.723	1368	IR	TS	
502.443	494.328	98.658	1419	IR	TS	pinkish sediment
502.674	494.182	98.490	1474	IR	TS	
502.602	493.897	99.389	1627	IR	TS	flowstone?
500.841	487.026	101.900	1087	MICROMORPHOLOGY		
500.467	501.639	98.384	1802.1	MICROMORPHOLOGY	GRS	
500.455	501.529	98.450	1802	MICROMORPHOLOGY	GRS	
501.002	501.014	98.546	1727	MICROMORPHOLOGY	LCT	
500.999	500.953	98.483	1727.1	MICROMORPHOLOGY	LCT	
501.770	498.336	96.655	1924	MICROMORPHOLOGY	PT	
501.737	498.425	96.431	1925.1	MICROMORPHOLOGY	PT	
501.763	498.423	96.574	1925	MICROMORPHOLOGY	PT	
501.763	498.339	96.505	1924.1	MICROMORPHOLOGY	PT	
501.368	498.936	96.366	1572	MICROMORPHOLOGY	R	
501.297	499.422	96.326	1571.1	MICROMORPHOLOGY	R	
501.300	499.433	96.350	1571	MICROMORPHOLOGY	R	
501.363	498.916	96.324	1572.1	MICROMORPHOLOGY	R	
501.515	498.407	96.333	1573	MICROMORPHOLOGY	R	
501.513	498.400	96.303	1573.1	MICROMORPHOLOGY	R	
500.885	499.834	96.386	1588	MICROMORPHOLOGY	R	
501.457	499.724	96.302	1570.1	MICROMORPHOLOGY	R	
501.468	499.717	96.376	1570	MICROMORPHOLOGY	R	

500.934	499.729	96.310	1588.1	MICROMORPHOLOGY	R	
501.262	499.575	96.320	1664	MICROMORPHOLOGY	R	
501.256	499.585	96.275	1664.1	MICROMORPHOLOGY	R	
501.455	499.434	96.258	1738.1	MICROMORPHOLOGY	R	
501.461	499.442	96.297	1738	MICROMORPHOLOGY	R	
501.494	498.750	96.300	1737	MICROMORPHOLOGY	R	
501.540	499.777	96.293	1739	MICROMORPHOLOGY	R	
501.531	499.761	96.242	1739.1	MICROMORPHOLOGY	R	
501.494	498.741	96.269	1737.1	MICROMORPHOLOGY	R	
501.491	497.739	96.274	1735.1	MICROMORPHOLOGY	R	
501.495	497.763	96.311	1735	MICROMORPHOLOGY	R	
501.352	498.120	96.306	1736	MICROMORPHOLOGY	R	
501.610	499.760	96.239	1740.1	MICROMORPHOLOGY	R	
501.613	499.770	96.270	1740	MICROMORPHOLOGY	R	
501.348	498.105	96.275	1736.1	MICROMORPHOLOGY	R	
502.921	493.062	98.982	1321	MICROMORPHOLOGY	SR	
502.071	493.947	98.912	1803.1	MICROMORPHOLOGY	SR	
501.947	493.986	99.038	1803	MICROMORPHOLOGY	SR	
502.098	493.941	98.746	1918.1	MICROMORPHOLOGY	SR	
501.984	493.883	98.938	1918	MICROMORPHOLOGY	SR	
494.200	486.897	98.800	1452	MICROMORPHOLOGY	TR	
493.938	486.621	98.792	1521	MICROMORPHOLOGY	TR	
502.538	493.269	99.233	1211	OCHRE	SR cleaning	
498.695	510.712	99.737	1089	MICROMORPHOLOGY		
498.703	510.712	99.698	1089.1	MICROMORPHOLOGY		