



# Data Recovery Investigations: Murvaul Creek Site (41PN175), Panola County, Texas

(CSJ 1222-01-014, Atlanta District)

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VOLUME II: APPENDICES

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## APPENDIX A: ARTIFACT DATA TABLES



**A-1: INVENTORY OF CERAMIC VESSEL SHERDS**



Inventory of Ceramic Vessel Sherds from the Murvaal Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>50 x 50 cm Units</b>							
Unit 003, 40-50	39		1				1
Unit 003, 50-60	41		1				1
Unit 003, 60-70	43		1			1	2
Unit 003, 70-80	45		1			1	2
Unit 005, 00-20	248	1	1				2
Unit 005, 20-40	249		1				1
Unit 005, 40-60	250		2			1	3
Unit 005, 60-80	251		3	1		6	10
Unit 005, 80-90	252					1	1
Unit 006, 00-20	255		1			3	4
Unit 006, 20-40	257		2			1	3
Unit 006, 40-60	260	1	4	1		1	7
Unit 006, 60-80	263		3			2	5
Unit 007, 20-40	128	1	1			3	5
Unit 007, 40-60	129		10			12	22
Unit 007, 60-80	130					1	1
Unit 008, 00-20	131		2				2

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>50 x 50 cm Units</b>							
Unit 008, 20-40	134		3		1	1	6
Unit 009, 00-20	140					1	1
Unit 009, 20-40	141		6			3	9
Unit 009, 40-60	142		3			1	4
Unit 010, 00-20	144		6	1		4	11
Unit 010, 20-40	147		2			6	8
Unit 011, 00-20	153					3	3
Unit 011, 20-40	154				2	2	4
Unit 012, 20-40	158		3			3	6
Unit 013, 00-20	88					2	2
Unit 013, 20-40	89		2			2	4
Unit 013, 40-60	90		3	1		4	8
Unit 013, 60-80	91		2			2	4
Unit 014, 00-10	49		1				1
Unit 014, 10-20	52		7			1	8
Unit 014, 20-30	55		11	1		6	18



Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>50 x 50 cm Units</b>							
Unit 014, 30-40	58		2			1	3
Unit 015, 40-50	79		1				1
Unit 016, 40-50	271		1			1	2
Unit 018, 00-20	279		2			1	3
Unit 018, 20-40	280	1	1				2
Unit 019, 20-40	285		2				2
Unit 020, 00-20	164		2			2	4
Unit 020, 20-40	165		1	1		2	4
Unit 021, 00-20	167		4				4
Unit 021, 20-40	170	1	6			2	9
Unit 022, 00-20	176			1		2	3
Unit 022, 20-40	177	1	3			7	11
Unit 023, 20-40	181		1		1	1	4
Unit 023, 40-60	184		1				1

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>50 x 50 cm Units</b>							
Unit 023, 60-80	187		1				1
Unit 023, 80-90	190		3				3
Unit 024, 20-40	194		3			5	8
Unit 024, 40-60	195		2			2	4
Unit 024, 60-80	196					1	1
Unit 024, 80-90	197		1				1
Unit 025, 00-20	199		1			3	4
Unit 025, 20-40	202		7		1	1	9
Unit 025, 40-60	205		3			3	6
Unit 026, 00-20	93	1	2			1	4
Unit 026, 20-40	94		14			6	20
Unit 026, 40-60	95		1	1		1	3
Unit 027, 00-20	97					2	2
Unit 027, 20-40	100		8			1	9
Unit 027, 40-60	103		3				3
Unit 027, 60-80	106			1			1
Unit 028, 00-20	112		1				1

Inventory of Ceramic Vessel Sherds from the Murvaal Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>50 x 50 cm Units</b>							
Unit 029, 20-40	116					1	1
Unit 030, 20-40	323		3			1	4
Unit 031, 00-20	329		1				1
Unit 032, 00-20	332		2			2	4
Unit 033, 00-20	341		5			1	6
Unit 033, 20-40	342	1	1				2
Unit 034, 00-20	317	1	1			2	4
Unit 035, 00-20	288		6			4	10
Unit 035, 20-40	289		4			3	7
Unit 036, 00-20	291					1	1
Unit 036, 20-40	294		3			1	4
Unit 037, 00-20	300		4			3	7
Unit 037, 20-40	301		3	3	1		7

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>50 x 50 cm Units</b>							
Unit 038, 00-20	303		2	1			3
Unit 038, 20-40	306	1	12	1		2	16
Unit 038, 40-60	309		3				3
Unit 039, 00-20	315		2			2	4
Unit 039, 20-40	316		2			1	3
Unit 040, 00-20	211		1	1		2	4
Unit 040, 20-40	214		7			2	9
Unit 040, 40-60	217		5			4	9
Unit 041, 20-40	224		5	1		1	7
Unit 041, 40-60	225		2			3	5
Unit 042, 20-40	230		1				1
Unit 042, 40-60	233		1			1	2
Unit 044, 00-20	350					1	1
Unit 044, 20-40	351		5			3	8
Unit 047, 00-20	364		4		1	1	6

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>50 x 50 cm Units</b>							
Unit 049, 00-20	376		1		1	5	7
Unit 050, 00-20	385			2	1	3	6
Unit 050, 20-40	386		2			3	5
Unit 051, 00-20	388				1	1	2
Unit 051, 20-40	391		2			2	4
Unit 052, 00-20	400		2				2
Unit 052, 20-40	401	1	1				2
Unit 053, 20-40	406		3			2	5
Unit 054, 20-40	413	1	1			5	7
Unit 054, 40-60	414		2				2
Unit 055, 00-20	416					1	1
Unit 055, 20-40	419					1	1
Unit 055, 40-60	422		1			2	3
Unit 056, 20-40	429		1				1

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>50 x 50 cm Units</b>							
Unit 056, 40-60	430		2				2
<b>Block 1</b>							
Unit 057, 10-20	433				2		2
Unit 059, 00-10	440		1				1
Unit 059, 10-20	445		2				2
Unit 060, 10-20	448		2				2
Unit 060, 10-20	449		1				1
<b>Block 2</b>							
Unit 061, 00-10	455		1				1
Unit 061, 10-20	456		1			1	2
Unit 061, 10-20	457		1	1			2
Unit 061, 10-20	458		1			1	2
Unit 061, 20-30	503	1	4			4	9
Unit 061, 20-30	504		1			1	2
Unit 061, 20-30	505			1			1
Unit 061, 20-30	554					1	1
Unit 061, 30-40	592					1	1

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 2</b>							
Unit 061, 30-40	593		1			1	2
Unit 061, 30-40	594					1	1
Unit 061, 40-50	855		2		1	2	5
Unit 061, 40-50	856		5			1	6
Unit 061, 40-50	857		3			2	5
Unit 061, 40-50	858					1	1
Unit 061, 50-60	879					1	1
Unit 061, 50-60	880					1	1
Unit 062, 00-10	461		1				1
Unit 062, 00-10	464		1				1
Unit 062, 10-20	506		1				1
Unit 062, 10-20	508		2				2
Unit 062, 20-30	673		1			1	2
Unit 062, 20-30	674		3		1	1	5
Unit 062, 20-30	678		1			2	3
Unit 062, 20-30	679		1			1	2
Unit 062, 30-40	596		3			1	4
Unit 062, 30-40	597		3		1		4
Unit 062, 30-40	598		4			1	5
Unit 062, 30-40	599					1	1
Unit 062, 30-40	600		2	1			3

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 2</b>							
Unit 062, 30-40	601	1					1
Unit 062, 40-50	1043		5			4	9
Unit 062, 40-50	1044		7			5	12
Unit 062, 40-50	1045					1	1
Unit 062, 50-60	881		1				1
Unit 063, 10-20	510		2				2
Unit 063, 10-20	511			1			1
Unit 063, 10-20	512		2				2
Unit 063, 10-20	513		1				1
Unit 063, 20-30	602		1			1	2
Unit 063, 20-30	603					1	1
Unit 063, 20-30	604		1				1
Unit 063, 20-30	605		2				2
Unit 063, 30-40	680		3				3
Unit 063, 30-40	681		4			2	6
Unit 063, 30-40	682		4			5	9
Unit 063, 30-40	683		2	1		1	4
Unit 063, 40-50	882		2			1	3
Unit 063, 40-50	883					1	1
Unit 064, 00-10	468			1			1



Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 2</b>							
Unit 064, 10-20	515		1				1
Unit 064, 10-20	516		1				1
Unit 064, 20-30	550		1			1	2
Unit 064, 20-30	551		2			1	3
Unit 064, 20-30	552		2			3	5
Unit 064, 20-30	553					1	1
Unit 064, 30-40	606					1	1
Unit 064, 30-40	607		3			2	5
Unit 064, 30-40	608		5			3	8
Unit 064, 30-40	609		3	1			4
Unit 083, 00-10	718		1				1
Unit 083, 00-10	719			1			1
Unit 083, 00-10	720			1			1
Unit 083, 10-20	743			1		1	2
Unit 083, 10-20	745		4			1	5
Unit 083, 20-30	797		4			1	5
Unit 083, 20-30	798		2		1	1	4
Unit 083, 20-30	799		1			1	2
Unit 083, 20-30	801	1					1
Unit 083, 30-40	859		6			1	7
Unit 083, 30-40	860		7	1		4	12

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 2</b>							
Unit 083, 30-40	861		1			1	2
Unit 083, 30-40	862		1			1	2
Unit 083, 30-40	863		1			1	2
Unit 084, 00-10	721		1				1
Unit 084, 00-10	722		1				1
Unit 084, 00-10	723		3				3
Unit 084, 10-20	802		2			2	4
Unit 084, 10-20	803	1	1			1	3
Unit 084, 10-20	804		1				1
Unit 084, 10-20	805					2	2
Unit 084, 10-20	806		1				1
Unit 084, 20-30	807		1			1	2
Unit 084, 20-30	808		1	1			2
Unit 084, 20-30	809		1				1
Unit 084, 20-30	810		2	1		1	4
Unit 084, 20-30	811		1			1	2
Unit 084, 30-40	864		3			3	6
Unit 084, 30-40	865					1	1
Unit 084, 30-40	866	1	1			1	3
Unit 084, 30-40	867		9			6	15
Unit 084, 30-40	868				1	3	4

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 2</b>							
Unit 085, 00-10	724		2				2
Unit 085, 00-10	725		2				2
Unit 085, 00-10	727		4			1	5
Unit 085, 00-10	728		1				1
Unit 085, 10-20	812		4			1	5
Unit 085, 10-20	813		2			1	3
Unit 085, 10-20	814		2			5	7
Unit 085, 10-20	815		1			2	3
Unit 085, 20-30	816		2				2
Unit 085, 20-30	817		3			4	7
Unit 085, 20-30	818		2			1	3
Unit 085, 20-30	819		1				1
Unit 085, 20-30	820		1				1
Unit 085, 30-40	869		1	3			4
Unit 085, 30-40	870		3	1		1	5
<b>Block 3</b>							
Unit 065, 00-10	470			1			1
Unit 065, 00-10	472			1			1
Unit 065, 10-20	517		5				5
Unit 065, 10-20	518					1	1

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 3</b>							
Unit 065, 10-20	519					1	1
Unit 065, 10-20	520					1	1
Unit 065, 10-20	521	1	1		1	2	5
Unit 065, 20-30	524		1				1
Unit 065, 30-40	610		1				1
Unit 066, 00-10	478		1	1			2
Unit 066, 10-20	525		4			1	5
Unit 066, 10-20	526		2				2
Unit 066, 10-20	527	1	2				3
Unit 066, 10-20	528			1		1	2
Unit 066, 20-30	533					1	1
Unit 066, 20-30	534		1				1
Unit 067, 00-10	479		1				1
Unit 067, 10-20	529		1	1			2
Unit 067, 10-20	530		1				1
Unit 067, 10-20	531			1		3	4
Unit 067, 20-30	541					1	1
Unit 067, 20-30	543		1				1
Unit 067, 20-30	544			1			1

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 3</b>							
Unit 068, 00-10	484					1	1
Unit 068, 00-10	485		1			2	3
Unit 068, 10-20	537		2				2
Unit 068, 10-20	538		1			1	2
Unit 068, 10-20	539		1	1		3	5
Unit 068, 10-20	540					1	1
Unit 068, 20-30	616					1	1
Unit 068, 20-30	617		2	1	1	1	5
Unit 068, 20-30	618		2			1	3
Unit 069, 00-10	487				1		1
Unit 069, 00-10	488		1				1
Unit 069, 00-10	489		1			1	2
Unit 069, 00-10	490		2		1	4	7
Unit 069, 10-20	545					1	1
Unit 069, 10-20	546		2			3	5
Unit 069, 10-20	547		1			2	3
Unit 069, 10-20	548		1			1	2
Unit 069, 10-20	589		1				1
Unit 069, 20-30	622		1				1
Unit 069, 20-30	623	1	3	1		2	7
Unit 069, 20-30	624			1			1

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 3</b>							
Unit 069, 20-30	625		1				1
Unit 070, 00-10	491	1					1
Unit 070, 00-10	492		1				1
Unit 070, 00-10	493		1			1	2
Unit 070, 00-10	494			1			1
Unit 070, 10-20	560				2	2	4
Unit 070, 10-20	561	1	2	1		1	5
Unit 070, 10-20	562					2	2
Unit 070, 10-20	563		1				1
Unit 070, 20-30	629					1	1
Unit 071, 00-10	497			1		1	2
Unit 071, 10-20	564		1	1			2
Unit 071, 10-20	565		2				2
Unit 071, 10-20	566		2			1	3
Unit 071, 20-30	632					1	1
Unit 071, 20-30	633					1	1
Unit 072, 00-10	500		1				1
Unit 072, 00-10	502					1	1
Unit 072, 10-20	567		2	1			3

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 3</b>							
Unit 072, 10-20	568					1	1
Unit 072, 10-20	569		1				1
Unit 072, 10-20	570		1				1
Unit 072, 10-20	571					1	1
Unit 072, 20-30	636					1	1
Unit 072, 20-30	637		1			1	2
Unit 072, 20-30	638		2	1		4	7
Unit 072, 30-40	640		1				1
Unit 072, 30-40	643		1				1
<b>Block 4</b>							
Unit 073, 00-10	572		1			1	2
Unit 073, 10-20	574		2				2
Unit 073, 10-20	575		1				1
Unit 073, 10-20	576		1				1
Unit 073, 20-30	644		2			3	5
Unit 073, 20-30	645					1	1
Unit 073, 20-30	646	1	1				2
Unit 073, 20-30	647		1			5	6
Unit 073, 30-40	697	1		1		5	7
Unit 073, 30-40	698		3			1	4
Unit 073, 30-40	699					1	1

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 073, 40-50	1724		8	1		10	21
Unit 073, 40-50	1725		1		2		1
Unit 073, 50-60	1726	1	5			9	15
Unit 074, 00-10	577					1	1
Unit 074, 00-10	578		1				1
Unit 074, 10-20	579		1				1
Unit 074, 10-20	580		1				1
Unit 074, 10-20	581		1				1
Unit 074, 20-30	648		2				2
Unit 074, 20-30	649			1			1
Unit 074, 20-30	650		3			2	5
Unit 074, 20-30	651	1	3			1	5
Unit 074, 30-40	701		5				5
Unit 074, 30-40	702		3			1	4
Unit 074, 30-40	703					1	1
Unit 074, 30-40	704		1				1
Unit 074, 40-50	1729		7	1		2	10
Unit 074, 40-50	1730		2			1	3
Unit 074, 50-60	1731	1	2				3
Unit 074, 50-60	1732		1			1	2
Unit 074, 60-70	1735			1			1



Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 074, 60-70	1736		1				1
Unit 075, 00-10	582					1	1
Unit 075, 00-10	583		1				1
Unit 075, 10-20	652					2	2
Unit 075, 10-20	653		3				3
Unit 075, 10-20	654		2	1		1	4
Unit 075, 20-30	655		5			1	6
Unit 075, 20-30	657		1				1
Unit 075, 20-30	658		4			1	5
Unit 075, 30-40	729		3			1	4
Unit 075, 30-40	730		2			1	3
Unit 075, 30-40	731		1			1	2
Unit 075, 30-40	732		5			1	6
Unit 075, 40-50	1737		1				1
Unit 076, 00-10	584		1			1	2
Unit 076, 10-20	585		2				2
Unit 076, 10-20	586		1			1	2
Unit 076, 20-30	659			1		1	2
Unit 076, 20-30	660		6			2	8
Unit 076, 20-30	661		2			2	4

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 076, 20-30	662		5			3	8
Unit 076, 30-40	733		1			1	2
Unit 076, 30-40	734		4			2	6
Unit 076, 30-40	735	1	5			4	10
Unit 076, 30-40	736		6			3	9
Unit 077, 10-20	663					1	1
Unit 077, 10-20	664	1	2			2	5
Unit 077, 10-20	665		3				3
Unit 077, 10-20	666		4			2	6
Unit 077, 20-30	705		3				3
Unit 077, 20-30	706		5	1		1	7
Unit 077, 20-30	707		4		1		5
Unit 077, 20-30	708		6	1		1	8
Unit 077, 30-40	737		4			2	6
Unit 077, 30-40	738		1				1
Unit 077, 30-40	739					2	2
Unit 078, 10-20	667		8				8
Unit 078, 10-20	668		2	1		1	4
Unit 078, 10-20	669		1			1	3
Unit 078, 10-20	670		2			2	4

Inventory of Ceramic Vessel Sherds from the Murvaal Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 078, 20-30	671	1	6		1		8
Unit 078, 20-30	672	1	11		1	6	20
Unit 078, 20-30	709		6			1	7
Unit 078, 20-30	710	1	5	1		2	9
Unit 078, 30-40	713		1			1	2
Unit 078, 30-40	714		2			2	4
Unit 078, 30-40	715		4	1		2	7
Unit 078, 30-40	716		3			1	4
Unit 086, 10-20	1118		1				1
Unit 086, 20-30	1233		3				3
Unit 086, 20-30	1234		1				1
Unit 086, 20-30	1235		3			1	4
Unit 086, 20-30	1236		9			1	10
Unit 086, 30-40	1419		1			2	3
Unit 086, 30-40	1420		3			1	4
Unit 086, 30-40	1421		9			2	11
Unit 086, 30-40	1422		1				1
Unit 086, 40-50	1747					1	1
Unit 087, 10-20	1120		3			1	4
Unit 087, 10-20	1121		1			1	2

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 087, 10-20	1122					1	1
Unit 087, 10-20	1123		6		1	2	9
Unit 087, 20-30	1253		1			1	2
Unit 087, 20-30	1254	1	4			1	6
Unit 087, 20-30	1255		1			1	2
Unit 087, 20-30	1256		2			2	4
Unit 087, 30-40	1471			1			1
Unit 087, 30-40	1472					2	2
Unit 087, 30-40	1473		5	2	1	2	10
Unit 087, 30-40	1474		9			7	16
Unit 087, 40-50	1752					1	1
Unit 087, 40-50	1753		1			1	2
Unit 088, 10-20	1125		1				1
Unit 088, 10-20	1126					2	2
Unit 088, 10-20	1127		2				2
Unit 088, 10-20	1128		1			2	3
Unit 088, 20-30	1257			1		4	5
Unit 088, 20-30	1258		2			2	4
Unit 088, 20-30	1259		1			1	2
Unit 088, 20-30	1260		3				3
Unit 088, 30-40	1476		4	1	1	2	8

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 088, 30-40	1477		5				5
Unit 088, 30-40	1478		7	1		2	10
Unit 088, 30-40	1479		6	1		5	12
Unit 088, 40-40	1480			1			1
Unit 088, 40-50	1755	1	3			3	7
Unit 088, 40-50	1756		1				1
Unit 088, 42-42	1481			1			1
Unit 089, 00-10	1129					1	1
Unit 089, 00-10	1130		1				1
Unit 089, 10-20	1134		2	1		1	4
Unit 089, 10-20	1135		4			1	5
Unit 089, 20-27	1261		4			8	12
Unit 089, 20-27	1262		6			1	7
Unit 089, 20-27	1264		3	1			4
Unit 089, 27-30	1363		3	1			4
Unit 089, 27-30	1364		3		1		6
Unit 089, 27-30	1365		6			3	9
Unit 089, 27-30	1366		2			2	4
Unit 089, 30-40	1423		1			2	3
Unit 089, 30-40	1424		1			6	7
Unit 089, 30-40	1425		4			1	5

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 089, 40-50	1759					1	1
Unit 090, 10-20	1137		2		1		3
Unit 090, 10-20	1138		3				3
Unit 090, 10-20	1139		5	1		1	7
Unit 090, 10-20	1140		1	1		3	5
Unit 090, 20-27	1265		2			1	3
Unit 090, 20-27	1266		5			3	8
Unit 090, 20-27	1267		2			1	3
Unit 090, 20-27	1268		4				4
Unit 090, 20-27	1269					1	1
Unit 090, 27-30	1367		5				5
Unit 090, 27-30	1368	1	1				2
Unit 090, 27-30	1369		6			1	7
Unit 090, 27-30	1370		6			2	8
Unit 090, 30-40	1482	1	16	1	1	12	31
Unit 090, 30-40	1483		7		1	1	9
Unit 090, 30-40	1484					1	1
Unit 090, 30-40	1485		6		1	2	9
Unit 090, 40-50	1760		1				1
Unit 090, 40-50	1761		1			1	2
Unit 090, 40-50	1762					1	1

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 091, 10-20	1142		3				3
Unit 091, 10-20	1143		2				2
Unit 091, 10-20	1144		1			1	2
Unit 091, 10-20	1145		2	1			3
Unit 091, 20-28	1270					3	3
Unit 091, 20-28	1271		6			2	8
Unit 091, 20-28	1272		1			2	3
Unit 091, 20-28	1273		1				1
Unit 091, 28-30	1371		1			1	2
Unit 091, 28-30	1373		2				2
Unit 091, 28-30	1374		3				3
Unit 091, 30-40	1488		10		1	4	15
Unit 091, 30-40	1489		9	2		2	13
Unit 091, 30-40	1490		1			1	2
Unit 091, 30-40	1491		2			2	4
Unit 091, 50-60	1765					1	1
Unit 092, 08-18	938		2	1			3
Unit 092, 08-18	939			1		1	2
Unit 092, 08-18	940		3				3
Unit 092, 18-28	1146		2			2	4

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 092, 18-28	1147		3			1	4
Unit 092, 18-28	1148					1	1
Unit 092, 18-28	1149		4			2	6
Unit 092, 28-38	1237		5	1		3	9
Unit 092, 28-38	1238		12	2		1	15
Unit 092, 28-38	1239					1	1
Unit 092, 28-38	1240		2	1		1	4
Unit 092, 38-48	1375		1				1
Unit 093, 10-20	1150		4			1	5
Unit 093, 10-20	1151		1			4	5
Unit 093, 10-20	1152		2				2
Unit 093, 10-20	1153		6			1	7
Unit 093, 20-25	1274		1			4	5
Unit 093, 20-25	1275		3	1		3	7
Unit 093, 20-25	1276		2			2	4
Unit 093, 20-25	1277		1				1
Unit 093, 25-30	1376		4			1	5
Unit 093, 25-30	1377					1	1
Unit 093, 25-30	1378		5			2	7
Unit 093, 25-30	1379		1				1
Unit 093, 30-40	1381		4	2		9	15



Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 093, 30-40	1382		3				3
Unit 093, 30-40	1383		4			1	5
Unit 093, 40-50	1768		7			1	8
Unit 094, 00-10	1087		1				1
Unit 094, 10-20	1154		2				2
Unit 094, 10-20	1155		3			1	4
Unit 094, 10-20	1156	1	3			1	5
Unit 094, 10-20	1157	1				4	5
Unit 094, 20-25	1278		2				2
Unit 094, 20-25	1279					2	2
Unit 094, 20-25	1280		2		1	1	4
Unit 094, 20-25	1281		1			4	5
Unit 094, 25-30	1384	1	2				3
Unit 094, 25-30	1385		4			1	5
Unit 094, 25-30	1386		4			2	6
Unit 094, 25-30	1387		1				1
Unit 094, 30-40	1388		1				1
Unit 094, 30-40	1389		1				1
Unit 095, 00-10	1088		1			1	2
Unit 095, 00-10	1089			1			1

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 095, 10-20	1158		3			1	4
Unit 095, 10-20	1159		5	1		2	8
Unit 095, 10-20	1160		4				4
Unit 095, 10-20	1161	1	4	1		4	10
Unit 095, 20-27	1282	1				3	4
Unit 095, 20-27	1283		3			1	4
Unit 095, 20-27	1284		3			6	9
Unit 095, 20-27	1285		4	1		5	10
Unit 095, 27-30	1391		7			1	8
Unit 095, 27-30	1392		2				2
Unit 095, 27-30	1393		3				3
Unit 095, 27-30	1394		4		1	1	6
Unit 095, 27-30	1395	1					1
Unit 095, 30-40	1396		2			2	4
Unit 095, 30-40	1397		1			1	2
Unit 095, 30-40	1398		2				2
Unit 095, 30-40	1399		1	1		1	3
Unit 096, 10-20	1162	1	4			4	9
Unit 096, 10-20	1163		1				1
Unit 096, 10-20	1165		8				8
Unit 096, 20-29	1286		2			3	5

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 096, 20-29	1287		2	1		1	4
Unit 096, 20-29	1288		2				2
Unit 096, 20-29	1289	1	4			2	7
Unit 096, 28-28	1332					1	1
Unit 096, 28-30	1400					1	1
Unit 096, 28-30	1401		3			3	6
Unit 096, 28-30	1402		1				1
Unit 096, 28-30	1403		2				2
Unit 096, 30-40	1404		2			3	5
Unit 096, 30-40	1405	1	3			1	5
Unit 096, 30-40	1406		3			2	5
Unit 096, 30-40	1407		1			1	2
Unit 097, 00-10	942		1				1
Unit 097, 00-10	943		1				1
Unit 097, 10-20	944		3	1			4
Unit 097, 10-20	945					1	1
Unit 097, 10-20	946		4			1	5
Unit 097, 10-20	947				1	3	4
Unit 097, 20-30	1166		1				1
Unit 097, 20-30	1167					1	1
Unit 097, 20-30	1168		1			2	3

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 097, 30-39	1290		1	2			3
Unit 097, 30-39	1291					2	2
Unit 097, 30-39	1292		2				2
Unit 097, 30-39	1293		1				1
Unit 097, 40-50	1409					2	2
Unit 097, 40-50	1410		1				1
Unit 097, 50-60	1774		3				3
Unit 097, 50-60	1775					1	1
Unit 098, 00-10	1113					1	1
Unit 098, 10-20	1091		4			1	5
Unit 098, 10-20	1093		2			1	3
Unit 098, 10-20	1094		5	1		1	7
Unit 098, 20-30	1169		3			3	6
Unit 098, 20-30	1170		3			2	5
Unit 098, 20-30	1171		7	1			8
Unit 098, 20-30	1172		2			3	5
Unit 098, 30-35	1294		2				2
Unit 098, 30-35	1295		4				4
Unit 098, 30-35	1296		2				2
Unit 098, 30-35	1297		6			1	7
Unit 098, 34-40	1411		1				1

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 098, 34-40	1412		2			2	4
Unit 098, 40-50	1414		4	1		1	6
Unit 098, 50-60	1776		4	1	1	2	8
Unit 099, 00-10	1098					1	1
Unit 099, 10-20	1173		2	1		1	4
Unit 099, 10-20	1174		6			1	7
Unit 099, 10-20	1175		4	1	1	1	7
Unit 099, 10-20	1176		5			2	7
Unit 099, 20-26	1298		5			3	8
Unit 099, 20-26	1299		3	1			4
Unit 099, 20-26	1300		1				1
Unit 099, 20-26	1301		2				2
Unit 099, 26-30	1415					1	1
Unit 099, 26-30	1416					1	1
Unit 099, 30-40	1418	1					1
Unit 100, 00-10	1099		1			1	2
Unit 100, 10-20	1177		3			1	4
Unit 100, 10-20	1178		5	1		1	7
Unit 100, 10-20	1179		5			1	6
Unit 100, 10-20	1180		4	1		4	9

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 100, 20-27	1302		5	1		1	7
Unit 100, 20-27	1303		5			1	6
Unit 100, 20-27	1304		6			3	9
Unit 100, 20-27	1305		5	1	1	3	10
Unit 100, 27-30	1427		1				1
Unit 100, 27-30	1429		4			1	5
Unit 100, 27-30	1430		1				1
Unit 100, 30-40	1432					1	1
Unit 100, 30-40	1433					1	1
Unit 101, 00-10	1100				1		1
Unit 101, 10-20	1181		2				2
Unit 101, 10-20	1182					1	1
Unit 101, 10-20	1183		4				4
Unit 101, 10-20	1184		3		1		4
Unit 101, 20-27	1306		4				4
Unit 101, 20-27	1307		2			2	4
Unit 101, 20-27	1308		4			2	6
Unit 101, 20-27	1309		1			1	2
Unit 101, 27-30	1435		2				2
Unit 101, 27-30	1436		3			1	4
Unit 101, 27-30	1437		2			4	6

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 101, 27-30	1438					2	2
Unit 101, 30-40	1439		1			1	2
Unit 101, 30-40	1440		3			2	5
Unit 101, 30-40	1441					1	1
Unit 101, 40-50	1685		1				1
Unit 101, 40-50	1998		2				2
Unit 102, 00-10	948		1				1
Unit 102, 00-10	949		4			1	5
Unit 102, 10-20	950		1				1
Unit 102, 10-20	951		2			2	4
Unit 102, 10-20	952		5			1	6
Unit 102, 10-20	953		5			2	7
Unit 102, 20-30	1185					1	1
Unit 102, 20-30	1186		3			1	4
Unit 102, 20-30	1188		3			2	5
Unit 102, 30-40	1310		2	1		1	4
Unit 103, 00-10	954					1	1
Unit 103, 00-10	955		2				2
Unit 103, 10-20	964		2	1		2	5
Unit 103, 10-20	965		5				5

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 103, 10-20	966		3			2	5
Unit 103, 10-20	967		3			1	4
Unit 103, 20-30	1189	1	4			1	6
Unit 103, 20-30	1190		3				3
Unit 103, 20-30	1191		4		1	2	7
Unit 103, 20-30	1192		2			3	5
Unit 103, 30-40	1313		4				4
Unit 103, 30-40	1314		3	1		1	5
Unit 103, 30-40	1315		1				1
Unit 103, 30-40	1316		1				1
Unit 104, 00-10	1102		5		1	2	8
Unit 104, 00-10	1103		2				2
Unit 104, 00-10	1104		3			1	4
Unit 104, 00-10	1105		2				2
Unit 104, 10-20	1193		6	1		2	9
Unit 104, 10-20	1194		7	2		1	10
Unit 104, 10-20	1195	1	4	2		1	8
Unit 104, 10-20	1196					1	1
Unit 104, 20-25	1317	1	4				5
Unit 104, 20-25	1318		4	1		4	9
Unit 104, 20-25	1319		2	1			3



Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 104, 20-25	1320		3			1	4
Unit 104, 25-30	1448		1			2	3
Unit 104, 25-30	1449		3			1	4
Unit 104, 25-30	1450		1				1
Unit 105, 00-10	1107		1	1		2	4
Unit 105, 00-10	1108		1				1
Unit 105, 00-10	1109		1				1
Unit 105, 10-20	1197		1			2	3
Unit 105, 10-20	1198	1	6			1	8
Unit 105, 10-20	1199		8	1		2	11
Unit 105, 10-20	1200		3	1		1	5
Unit 105, 10-20	1201		1				1
Unit 105, 20-23	1241		1			3	4
Unit 105, 20-23	1242		3			2	5
Unit 105, 20-23	1244		2				2
Unit 105, 20-24	1232		1				1
Unit 105, 24-30	1452		1			1	2
Unit 105, 24-30	1453		2			1	3
Unit 105, 24-30	1454		1			2	3
Unit 105, 24-30	1455		4	1		1	6
Unit 105, 30-40	1457		1				1

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 105, 40-50	1608					1	1
Unit 106, 00-10	1110		5				5
Unit 106, 00-10	1111		4			1	5
Unit 106, 00-10	1112		2			1	3
Unit 106, 10-20	1202		2				2
Unit 106, 10-20	1203		4			1	5
Unit 106, 10-20	1204	1	6			1	8
Unit 106, 20-23	1245		4		1	3	8
Unit 106, 20-23	1248		1			2	3
Unit 106, 25-30	1460		1			1	2
Unit 106, 25-30	1461		5			2	7
Unit 106, 25-30	1462		1				1
Unit 106, 25-30	1463		2	1		1	4
Unit 106, 30-40	1464		1			1	2
Unit 106, 30-40	1465		1				1
Unit 106, 30-40	1466		2				2
Unit 106, 30-40	1467		1			1	2
Unit 118, 00-09	1511		3				3
Unit 118, 09-19	1513		1				1
Unit 118, 09-19	1514		6			1	7

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 118, 09-19	1515		1			1	1
Unit 118, 09-19	1516		2	1			3
Unit 118, 19-29	1612		1			1	2
Unit 118, 19-29	1613	1	6	1		2	10
Unit 118, 19-29	1614		4			1	5
Unit 118, 19-29	1615		4			4	8
Unit 118, 29-39	1617		6			2	8
Unit 118, 29-39	1618		4				4
Unit 118, 29-39	1619	1	2		1		4
Unit 118, 29-39	1620	1	10	1		1	13
Unit 119, 00-09	1493		3			1	4
Unit 119, 09-19	1583		3			1	4
Unit 119, 09-19	1584		1			3	4
Unit 119, 09-19	1585		4				4
Unit 119, 19-29	1621		2			5	7
Unit 119, 19-29	1622					3	3
Unit 119, 19-29	1623		7			2	9
Unit 119, 29-39	1624		3				3
Unit 119, 29-39	1625		1				1
Unit 119, 29-39	1626		1			1	2
Unit 119, 39-49	2005					1	1

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 120, 05-10	1496		2				2
Unit 120, 05-10	1497		2				2
Unit 120, 05-10	1498	1	2				3
Unit 120, 10-15	1518		2				2
Unit 120, 10-15	1519		6			1	7
Unit 120, 10-15	1520					1	1
Unit 120, 15-20	1522		1				1
Unit 120, 15-20	1523		4	1		4	9
Unit 120, 20-25	1627		3	1		1	5
Unit 120, 20-25	1628		5			2	7
Unit 120, 20-25	1629		4			2	6
Unit 120, 20-25	1630		1			1	2
Unit 120, 25-30	1631		1			2	3
Unit 120, 25-30	1632		6			1	7
Unit 120, 25-30	1633		8	1			9
Unit 120, 25-30	1634		3		1	1	5
Unit 120, 30-35	1636		1		1	2	4
Unit 120, 30-35	1637		2			1	3
Unit 120, 30-35	1638		3	1		2	6
Unit 120, 35-40	1639		3			1	4
Unit 120, 35-40	1640					1	1

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 120, 35-40	1641		1				1
Unit 120, 35-40	1642		2			1	3
Unit 121, 00-12	1525		2				2
Unit 121, 00-12	1526		3				3
Unit 121, 00-12	1527		2			1	3
Unit 121, 00-12	1528		1			1	2
Unit 121, 12-22	1529		2			2	4
Unit 121, 12-22	1530		3				3
Unit 121, 12-22	1531		2			1	3
Unit 121, 12-22	1532		1		1	1	3
Unit 121, 12-22	1533		4			3	7
Unit 121, 22-32	1586		4	1		2	7
Unit 121, 22-32	1587	1	5			3	9
Unit 121, 22-32	1588		5		1	2	8
Unit 121, 22-32	1589	1	3	1		1	6
Unit 121, 32-42	1644	1	3				4
Unit 121, 32-42	1645	1					1
Unit 121, 32-42	1646		1				1
Unit 122, 00-14	1499			1			1
Unit 122, 00-14	1501		3				3

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 122, 00-14	1502		2			2	4
Unit 122, 14-24	1571	1	7				8
Unit 122, 14-24	1572		5			2	7
Unit 122, 14-24	1573		3			5	8
Unit 122, 14-24	1574		1			1	2
Unit 122, 24-34	1647		2				2
Unit 122, 24-34	1648		6			4	10
Unit 122, 24-34	1649		3			1	4
Unit 122, 24-34	1650		3	1		3	7
Unit 122, 34-44	1651		2				2
Unit 122, 34-44	1653		1				1
Unit 123, 00-05	1503		1			1	2
Unit 123, 00-05	1504		1				1
Unit 123, 05-10	1505					1	1
Unit 123, 05-10	1507					1	1
Unit 123, 05-10	1508		1				1
Unit 123, 10-15	1534				1	1	2
Unit 123, 10-15	1535					1	1
Unit 123, 15-20	1539		2			1	3
Unit 123, 15-20	1540				2	1	3
Unit 123, 15-20	1541					1	1

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 123, 20-25	1590		4			1	5
Unit 123, 20-25	1591		4			2	6
Unit 123, 20-25	1592		1		1	1	3
Unit 123, 20-25	1593		1			1	2
Unit 123, 20-25	1594		2				2
Unit 123, 25-30	1655		6				6
Unit 123, 25-30	1656		4				4
Unit 123, 25-30	1657		4	1		2	7
Unit 123, 25-30	1658		8			3	11
Unit 123, 30-35	1659		2			1	3
Unit 123, 30-35	1660		2				2
Unit 123, 30-35	1661		1			1	2
Unit 123, 30-35	1662	1	1			1	3
Unit 123, 35-40	1664					1	1
Unit 123, 40-45	1666		1				1
Unit 123, 40-45	1667					1	1
Unit 123, 40-45	1668		1				1
Unit 123, 40-45	1669					1	1
Unit 124, 00-06	1543		2				2
Unit 124, 06-11	1544		8			2	10
Unit 124, 06-11	1545		3	2			5

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 124, 06-11	1546		1				1
Unit 124, 06-11	1547		2				2
Unit 124, 11-16	1548		3				3
Unit 124, 11-16	1549			1			1
Unit 124, 11-16	1550			1		1	2
Unit 124, 11-16	1551		2				2
Unit 124, 16-21	1552		1		1		2
Unit 124, 16-21	1553		1		1		2
Unit 124, 16-21	1554				1		1
Unit 124, 16-21	1555		2		1		3
Unit 124, 21-26	1575		1				1
Unit 124, 21-26	1576		3		1		4
Unit 124, 21-26	1577		1		1		2
Unit 124, 21-26	1578		3				3
Unit 124, 26-31	1596					2	2
Unit 124, 31-36	1670		1				1
Unit 124, 31-36	1671					1	1
Unit 124, 31-36	1672		1				1
Unit 125, 00-05	1556		1				1
Unit 125, 00-05	1557		2				2
Unit 125, 05-10	1559		1				1



Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 125, 05-10	1560		3				3
Unit 125, 05-10	1561			1			1
Unit 125, 10-15	1562					1	1
Unit 125, 10-15	1563		2			1	3
Unit 125, 10-15	1565		1	2		1	4
Unit 125, 15-20	1566		4			1	5
Unit 125, 15-20	1567		1				1
Unit 125, 15-20	1569		1				1
Unit 125, 20-25	1579		2			2	4
Unit 125, 20-25	1580					2	2
Unit 125, 20-25	1581		4				4
Unit 125, 20-25	1582					2	2
Unit 125, 25-30	1598		5	1		2	8
Unit 125, 25-30	1599		3			1	4
Unit 125, 25-30	1600	1	2			1	4
Unit 125, 25-30	1601		5				5
Unit 125, 30-35	1676		1				1
Unit 125, 30-35	1677		1			1	2
Unit 125, 30-35	1678			1			1
Unit 125, 30-35	1679		1				1
Unit 125, 35-40	1680					2	2

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 126, 00-12	1690		2				2
Unit 126, 00-12	1691		4				4
Unit 126, 00-12	1692		1			1	2
Unit 126, 00-12	1693		3				3
Unit 126, 12-22	1694		4		1	3	8
Unit 126, 12-22	1695		6		1		7
Unit 126, 12-22	1696		11	2			13
Unit 126, 12-22	1697	1	4	3		5	13
Unit 126, 22-32	1702		2				2
Unit 126, 22-32	1703					1	1
Unit 126, 22-32	1704		2				2
Unit 126, 22-32	1705		2				2
Unit 126, 32-42	1788		1				1
Unit 126, 42-52	1790		1				1
Unit 127, 00-11	1698		1				1
Unit 127, 00-11	1699		7				7
Unit 127, 00-11	1700		3	1		1	5
Unit 127, 00-11	1701		1			1	2
Unit 127, 11-21	1706		6			2	8
Unit 127, 11-21	1707		2	1			3
Unit 127, 11-21	1708		11	2		2	15

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 4</b>							
Unit 127, 11-21	1709		8			2	10
Unit 127, 21-31	1710		2			2	4
Unit 127, 21-31	1711		2			2	4
Unit 127, 21-31	1712		2				2
Unit 127, 21-31	1713	1	2				3
Unit 127, 31-41	1792	1	1			3	5
Unit 127, 31-41	1793					1	1
<b>Block 5</b>							
Unit 079, 10-20	748					4	4
Unit 079, 20-30	749		1	1			2
Unit 079, 20-30	750	1	2			4	7
Unit 079, 20-30	751		2			2	4
Unit 079, 20-30	752		5			1	6
Unit 079, 30-31	753		1				1
Unit 079, 30-31	755		5				5
Unit 079, 31-40	756		3			4	7
Unit 079, 31-40	757		4	1		2	7
Unit 079, 31-40	758	1	5				6
Unit 079, 31-40	759		3			2	5
Unit 079, 40-50	821		3				3
Unit 079, 40-50	822		1			3	4

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 5</b>							
Unit 079, 40-50	823		1		1		2
Unit 080, 10-20	760		2			1	3
Unit 080, 20-30	761		3			1	4
Unit 080, 20-30	762		2				2
Unit 080, 20-30	763	2	3			2	7
Unit 080, 20-30	764		3			2	5
Unit 080, 30-32	765					1	1
Unit 080, 30-32	766		1			2	3
Unit 080, 30-32	767		1			2	3
Unit 080, 30-32	768		1				1
Unit 080, 32-40	769		1		1	1	3
Unit 080, 32-40	770		3			2	5
Unit 080, 32-40	771		7	1	1	4	13
Unit 080, 32-40	772					1	1
Unit 080, 40-50	779		4				4
Unit 080, 40-50	828		1			2	3
Unit 080, 40-50	829		1			1	2
Unit 080, 50-60	1719					1	1
Unit 080, 60-70	1720					1	1
Unit 081, 10-20	773		2				2

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 5</b>							
Unit 081, 10-20	774		1				1
Unit 081, 10-20	775					1	1
Unit 081, 20-30	776		2			1	3
Unit 081, 20-30	777		1			1	2
Unit 081, 20-30	778		2				2
Unit 081, 30-32	781		3				3
Unit 081, 30-32	782		2				2
Unit 081, 32-40	785		1				1
Unit 081, 32-40	786		2			1	3
Unit 081, 32-40	787		1			1	2
Unit 081, 32-40	788	1					1
Unit 081, 40-50	825		4	1		3	8
Unit 081, 40-50	826	1	2			1	4
Unit 082, 10-20	789					1	1
Unit 082, 10-20	790		1				1
Unit 082, 20-30	791					1	1
Unit 082, 20-30	792		6			1	7
Unit 082, 20-30	793		2				2
Unit 082, 20-30	794		1				1
Unit 082, 30-32	795		2				2
Unit 082, 32-40	831		2			1	3

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 5</b>							
Unit 082, 32-40	832		2			2	4
Unit 082, 40-50	834		4			6	10
Unit 082, 40-50	835	1	1				2
Unit 082, 40-50	836		2				2
Unit 082, 40-50	837		4	1		3	8
Unit 082, 50-60	1722		1			1	2
<b>Block 6</b>							
Unit 107, 10-25	839		4			4	8
Unit 107, 10-25	841		4				4
Unit 107, 25-35	842		3			3	6
Unit 107, 25-35	843		1			2	3
Unit 107, 25-35	844		1			1	2
Unit 107, 25-35	845		1			1	2
Unit 107, 35-45	887		1			1	2
Unit 107, 35-45	888		1				1
Unit 107, 45-55	889		1				1
Unit 107, 45-55	890					3	3
Unit 108, 10-25	847		3			1	4
Unit 108, 10-25	848					1	1
Unit 108, 10-25	849		1			1	2

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 6</b>							
Unit 108, 10-25	850		1				1
Unit 108, 25-35	851	1	1			4	6
Unit 108, 25-35	852		4	1		2	7
Unit 108, 25-35	853		7			1	8
Unit 108, 25-35	854		5				5
Unit 108, 35-45	892		3			1	4
Unit 108, 35-45	893		4			3	7
Unit 108, 35-45	894		1			1	2
<b>Block 7</b>							
Unit 109, 00-10	897	1	2				3
Unit 109, 00-10	898	1	2			1	4
Unit 109, 00-10	899					2	2
Unit 109, 00-10	900		1				1
Unit 109, 10-20	901		1		1		2
Unit 109, 10-20	902		3				3
Unit 109, 10-20	903					1	1
Unit 109, 20-30	931		1		1	8	10
Unit 109, 20-30	932		3			1	4
Unit 109, 20-30	933		4				4
Unit 109, 20-30	934		7			1	8
Unit 109, 30-38	956		9	1	1	12	23

## Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 7</b>							
Unit 109, 30-38	957	2	15	2	1	6	26
Unit 109, 30-38	958		3			4	7
Unit 109, 30-38	959				1	1	2
Unit 110, 00-10	905					1	1
Unit 110, 10-20	906		3				3
Unit 110, 10-20	907		1			1	2
Unit 110, 10-20	908		1				1
Unit 110, 10-20	909		2			2	4
Unit 110, 20-30	910	1	2			2	5
Unit 110, 20-30	911		4			2	6
Unit 110, 20-30	912		3	1			4
Unit 110, 20-30	913		1	2		1	4
Unit 110, 30-38	960		6			4	10
Unit 110, 30-38	961		1			2	3
Unit 110, 30-38	962					1	1
Unit 110, 30-38	963		1			1	2
Unit 111, 00-10	915		2			1	3
Unit 111, 10-20	918		4			1	5
Unit 111, 10-20	919		3			1	4
Unit 111, 10-20	920	1	4		1		6



Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 7</b>							
Unit 111, 20-30	921		4			3	7
Unit 111, 20-30	922		12			2	14
Unit 111, 20-30	923		7	1			8
Unit 111, 20-30	924	2	5			1	8
Unit 111, 30-38	968		2	1			3
Unit 111, 30-38	969		3			2	5
Unit 111, 30-38	970		3			3	6
Unit 111, 30-38	971		2	2		2	6
Unit 111, 38-40	972					1	1
Unit 111, 38-40	973					1	1
Unit 111, 38-40	974		1			1	2
Unit 111, 38-40	975		2				2
Unit 111, 40-50	976		2			1	3
Unit 111, 40-50	977		4		1	2	7
Unit 111, 40-50	978		3			2	5
Unit 111, 40-50	979		5				5
Unit 111, 50-60	995					1	1
Unit 111, 50-60	996		1				1
Unit 111, 50-60	997		1			1	2
Unit 111, 50-60	1046		6				6
Unit 111, 60-70	1048		1				1

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 7</b>							
Unit 112, 10-20	927		2				2
Unit 112, 10-20	928		3				3
Unit 112, 10-20	929		2			2	4
Unit 112, 10-20	930					2	2
Unit 112, 20-30	980		9	1		3	13
Unit 112, 20-30	981		2				2
Unit 112, 20-30	982		4	1		3	8
Unit 112, 20-30	983		2	1			3
Unit 112, 30-38	984		6	1		1	8
Unit 112, 30-38	985		3			3	6
Unit 112, 30-38	986		2			5	7
Unit 112, 30-38	987		1			2	3
Unit 112, 38-40	989		2			1	3
Unit 112, 38-40	990					1	1
Unit 112, 40-50	991		3				3
Unit 112, 40-50	992		1			1	2
Unit 112, 40-50	993		1			1	2
Unit 112, 40-50	994		1			2	3
Unit 112, 50-60	1050	1	2			1	4
Unit 112, 50-60	1051		4			1	5
Unit 112, 50-60	1052		1				1
Unit 112, 50-60	1053		2				2

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 7</b>							
Unit 112, 60-70	1054					1	1
Unit 112, 60-70	1056		1			1	2
<b>Block 8</b>							
Unit 113, 10-20	999		1	1		1	3
Unit 113, 10-20	1000		3			1	4
Unit 113, 10-20	1001					1	1
Unit 113, 10-20	1002					1	1
Unit 113, 20-30	1003		3				3
Unit 113, 20-30	1004		4	2		2	8
Unit 113, 20-30	1005		1			1	2
Unit 113, 30-37	1006		2				2
Unit 113, 30-37	1007		2			1	3
Unit 113, 30-37	1008		3				3
Unit 113, 30-37	1009		3			3	6
Unit 113, 37-41	1059		2			1	3
Unit 113, 37-42	1060					2	2
Unit 113, 37-42	1061		1				1
Unit 113, 39-42	1062					1	1
Unit 113, 41-50	1063		7			7	14
Unit 113, 42-50	1064		5			3	8
Unit 113, 42-50	1065	1	4			4	9

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 8</b>							
Unit 113, 42-50	1066		8			5	13
Unit 113, 50-60	1207		2				2
Unit 113, 50-60	1208		3				3
Unit 113, 60-70	1249		1				1
Unit 114, 10-20	1011		1			1	2
Unit 114, 10-20	1012		1			3	4
Unit 114, 10-20	1013		4			1	5
Unit 114, 20-30	1014		6	1		3	10
Unit 114, 20-30	1015		1				1
Unit 114, 20-30	1016		7				7
Unit 114, 20-30	1017		7			1	8
Unit 114, 30-40	1067		7			1	8
Unit 114, 30-40	1068		5			3	8
Unit 114, 30-40	1069		6			1	7
Unit 114, 30-40	1070	1	9			1	11
Unit 114, 40-42	1071		4				4
Unit 114, 40-42	1072	1	7		1	5	14
Unit 114, 40-42	1073		4		1	2	7
Unit 114, 40-42	1074		2	1		4	7
Unit 114, 42-50	1075		6		1	4	11
Unit 114, 42-50	1076	1	6	1		4	12

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 8</b>							
Unit 114, 42-50	1077	1	7	1		6	15
Unit 114, 42-50	1078		9	2		7	18
Unit 114, 51-60	1210		3			1	4
Unit 114, 51-60	1211		2			1	3
Unit 114, 51-60	1212		4			2	6
Unit 114, 51-60	1213		3				3
Unit 115, 10-20	1019					1	1
Unit 115, 10-20	1020	1	2			1	4
Unit 115, 10-20	1021		1				1
Unit 115, 10-20	1022		2			2	4
Unit 115, 20-30	1023		1				1
Unit 115, 20-30	1024		3	1		2	6
Unit 115, 20-30	1025		3	1		1	5
Unit 115, 20-30	1026		2				2
Unit 115, 20-30	1027		1				1
Unit 115, 30-37	1028		5			2	7
Unit 115, 30-37	1029		5	1		1	7
Unit 115, 30-37	1030		2			4	6
Unit 115, 30-37	1031		2			1	3
Unit 115, 38-40	1079		2	1		1	4
Unit 115, 38-41	1082		2			1	3

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 8</b>							
Unit 115, 39-40	1081		5	1		1	7
Unit 115, 39-41	1080		3				3
Unit 115, 40-50	1214		10	1		9	20
Unit 115, 40-50	1215		6	1		2	9
Unit 115, 40-50	1216		5		1	9	15
Unit 115, 40-50	1217		4			2	6
Unit 115, 50-60	1219		1				1
Unit 115, 50-60	1220					1	1
Unit 115, 50-60	1221		1				1
Unit 116, 10-20	1033		1			2	3
Unit 116, 20-30	1034		3				3
Unit 116, 20-30	1035		8	2		2	12
Unit 116, 20-30	1036		8			3	11
Unit 116, 20-30	1037		2				2
Unit 116, 30-38	1039		2				2
Unit 116, 30-38	1040		6		1	2	9
Unit 116, 30-38	1041		7	1		1	9
Unit 116, 30-38	1042		1			1	2
Unit 116, 39-41	1085		2				2
Unit 116, 39-41	1086		1				1
Unit 116, 40-43	1083		5				5

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 8</b>							
Unit 116, 40-43	1084	1	1				2
Unit 116, 41-52	1222		6	1		5	12
Unit 116, 41-52	1223		3			3	6
Unit 116, 41-52	1224		6	1	1	4	12
Unit 116, 41-52	1225		6			8	14
Unit 116, 50-61	1228		1			7	8
Unit 116, 50-61	1229		2				2
Unit 117, 00-05	1321					1	1
Unit 117, 05-10	1322		1				1
Unit 117, 10-15	1323		2				2
Unit 117, 10-15	1325		2				2
Unit 117, 10-15	1326					1	1
Unit 117, 15-20	1327		1				1
Unit 117, 15-20	1328		1				1
Unit 117, 15-20	1329		3				3
Unit 117, 15-20	1330		1				1
Unit 117, 20-25	1338		2				2
Unit 117, 20-25	1339		5			2	7
Unit 117, 20-25	1469		2			3	5
Unit 117, 20-25	1470		1			1	2
Unit 117, 25-30	1340		9	1	1	10	21

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Block 8</b>							
Unit 117, 25-30	1341	1	12			11	24
Unit 117, 25-30	1342		17			7	24
Unit 117, 25-30	1343	1	7	1		2	11
Unit 117, 29-29	1336					1	1
Unit 117, 30-35	1344		11	1		7	19
Unit 117, 30-35	1345		10		1	15	26
Unit 117, 30-35	1346		9			4	13
Unit 117, 30-35	1347	1	12	1		5	19
Unit 117, 35-40	1348		10			4	14
Unit 117, 35-40	1349	1	8	1		6	16
Unit 117, 35-40	1350		1			3	4
Unit 117, 35-40	1351		4			7	11
Unit 117, 40-45	1352		5			5	10
Unit 117, 40-45	1353		2				2
Unit 117, 40-45	1354	1	5			1	7
Unit 117, 40-45	1355					1	1
Unit 117, 45-50	1357		2			1	3
Unit 117, 45-50	1358	1	1				2
Unit 117, 45-50	1359		2				2
Unit 117, 45-50	1360					1	1
Unit 117, 55-60	1362					1	1



Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Features</b>							
Feature 108, 50-66	1973					1	1
Feature 47, 55-63	1870		13	2		5	20
Feature 47, 55-63	1871		4	1		7	12
Feature 51, 60-70	1877					1	1
Feature 51, 60-70	1878					1	1
Feature 53, 60-70	1881		1				1
Feature 53, 60-70	1882		3			1	4
Feature 55, 65-72	1885		12			11	23
Feature 55, 65-72	1886		10			5	15
Feature 56, 65-83	1887		2			4	6
Feature 56, 65-83	1888	1					1
Feature 57, 60-90	1889		2		1	3	6
Feature 57, 60-90	1890	1	1	1		2	5
Feature 58, 65-79	1891		1			1	2

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Features</b>							
Feature 58, 65-79	1892					2	2
Feature 59, 65-74	1893		1				1
Feature 62, 65-70	1899					1	1
Feature 68, 65-85	1907				1	2	3
Feature 68, 65-85	1908	2					2
Feature 69, 65-74	1910					1	1
Feature 70, 60-82	1911		1				1
Feature 70, 60-82	1912		1				1
Feature 73, 60-74	1917		2				2
Feature 75, 55-08	1919					1	1
Feature 75, 55-08	1920		5		1	3	9
Feature 79, 55-79	1927		2			4	6
Feature 80, 55-63	1929		1				1

Inventory of Ceramic Vessel Sherds from the Murvaul Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Features</b>							
Feature 82, 60-69	1932			1			1
Feature 86, 60-67	1939		1				1
Feature 87, 60-75	1940					2	2
Feature 88, 90-24	1942		1				1
Feature 89, 90-10	1944		2			1	3
Feature 89, 90-10	1945		1				1
Feature 97, 65-92	1956		6			13	19
Feature 97, 65-92	1957		3	3		4	10
Unit 063, Feature 2, 40-42	874		2				2
Unit 064, Feature 1, 33-35	873		2		1	2	5
Unit 075, Feature 15, 40-47	1819		1			1	2
Unit 076, Feature 9, 40-53	1805		3			3	6

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Features</b>							
Unit 076, Feature 9, 40-53	1807		1				1
Unit 076, Feature 9, 40-53	2002		2		2	5	9
Unit 077, Feature 17, 40-52	1822		1				1
Unit 080, Feature 4, 60-70	2008					1	1
Unit 080, Feature 4, 70-80	2007		1				1
Unit 086, Feature 9, 45-45	1714					1	1
Unit 087, Feature 6, 40-56	1797		3			3	6
Unit 087, Feature 7, 40-53	1800		10			13	23
Unit 087, Feature 7, 40-53	1802		5				5
Unit 087, Feature 7, 40-53	2001					1	1
Unit 090, Feature 12, 42-51	2009		2				2
Unit 090, Feature 7, 48-48	1716					1	1
Unit 098, Feature 19, 50-61	2010					1	1

Inventory of Ceramic Vessel Sherds from the Murvault Creek site (41PN175).

Provenience	Prov. No.	Plain Rim	Plain Body	Plain Base	Decorated Rim	Decorated Body	N
<b>Features</b>							
Unit 120, Feature 28, 41-53	1838		1				1
Unit 120, Feature 29, 41-55	1840		2			2	4
Unit 120, Feature 29, 41-55	2000	1	4			7	12

Notes:

In Unit 52, 30-40 Prov. No. 401, the plain rim and plain body sherd counts include multiple fragments of a larger sherd from the same vessel. Also, in Unit 97, 15-25 944 the plain base sherd count represents a pedestal base sherd.



**A-2: PROVENIENCE OF DECORATED SHERDS BY DECORATIVE METHOD**













Provenience of Decorated Sherds by Decorative Method, Murvaal Creek Site.

Provenience	Prov. No.	I	cP	tP	fP	I-P	B	B-I	B-P	B-A	B-I-P	A	A-I	A-I-B	E	RS	LN	
<b>50 x 50 cm Units</b>																		
Unit 040, 40-60	217	-	-	-	-	-	2	-	-	-	-	-	-	-	2	-	-	
Unit 041, 20-40	224	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 041, 40-60	225	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
Unit 042, 40-60	233	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 044, 00-20	350	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 044, 20-40	351	-	-	-	-	1	1	-	-	-	-	-	-	-	1	-	-	
Unit 047, 00-20	364	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Unit 049, 00-20	376	1	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
Unit 050, 00-20	385	2	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 050, 20-40	386	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	
Unit 051, 00-20	388	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	
Unit 051, 20-40	391	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 053, 20-40	406	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 054, 20-40	413	1	-	-	-	-	3	-	-	-	-	-	-	-	1	-	-	

































Provenience of Decorated Sherds by Decorative Method, Murvaal Creek Site.

Provenience	Prov. No.	I	cP	tP	fP	I-P	B	B-I	B-P	B-A	B-I-P	A	A-I	A-I-B	E	RS	LN	
<b>Block 4</b>																		
Unit 096, 10-20	1165	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unit 096, 10-20	1162	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Unit 096, 20-29	1286	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
Unit 096, 20-29	1287	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Unit 096, 20-29	1289	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Unit 096, 28-28	1332	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Unit 096, 28-30	1400	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Unit 096, 28-30	1401	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
Unit 096, 30-40	1407	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unit 096, 30-40	1404	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
Unit 096, 30-40	1405	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Unit 096, 30-40	1406	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Unit 097, 10-20	947	-	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-
Unit 097, 10-20	945	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Unit 097, 10-20	946	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Unit 097, 20-30	1167	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unit 097, 20-30	1168	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
Unit 097, 30-39	1291	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-
Unit 097, 40-50	1409	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Unit 097, 50-60	1775	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-























Provenience of Decorated Sherds by Decorative Method, Murvaul Creek Site.

Provenience	Prov. No.	I	cP	tP	fP	I-P	B	B-I	B-P	B-A	B-I-P	A	A-I	A-I-B	E	RS	LN	
<b>Block 5</b>																		
Unit 079, 31-40	757	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Unit 079, 31-40	759	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Unit 079, 40-50	822	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-
Unit 079, 40-50	823	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unit 080, 10-20	760	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Unit 080, 20-30	764	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Unit 080, 20-30	761	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Unit 080, 20-30	763	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-
Unit 080, 30-32	765	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Unit 080, 30-32	766	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Unit 080, 30-32	767	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Unit 080, 32-40	769	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Unit 080, 32-40	770	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-
Unit 080, 32-40	771	2	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-
Unit 080, 32-40	772	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Unit 080, 40-50	828	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-
Unit 080, 40-50	829	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Unit 080, 50-60	1719	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Unit 080, 60-70	1720	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Unit 081, 10-20	775	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-





Provenience of Decorated Sherds by Decorative Method, Murvaul Creek Site.

Provenience	Prov. No.	I	cP	tP	fP	I-P	B	B-I	B-P	B-A	B-I-P	A	A-I	A-I-B	E	RS	LN	
<b>Block 6</b>																		
Unit 107, 35-45	887	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
Unit 107, 45-55	890	2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 108, 10-25	848	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 108, 10-25	849	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 108, 10-25	847	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 108, 25-35	852	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	
Unit 108, 25-35	853	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 108, 25-35	851	1	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	
Unit 108, 35-45	892	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 108, 35-45	893	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	
Unit 108, 35-45	894	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
<b>Block 7</b>																		
Unit 109, 00-10	898	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
Unit 109, 00-10	899	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 109, 10-20	901	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
Unit 109, 10-20	903	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 109, 20-30	931	2	-	-	-	-	6	-	-	-	-	-	-	-	1	-	-	
Unit 109, 20-30	932	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
Unit 109, 20-30	934	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
Unit 109, 30-38	956	2	-	-	-	-	9	-	-	-	-	-	-	-	2	-	-	





Provenience of Decorated Sherds by Decorative Method, Murvaul Creek Site.

Provenience	Prov. No.	I	cP	tP	fP	I-P	B	B-I	B-P	B-A	B-I-P	A	A-I	A-I-B	E	RS	LN	
<b>Block 7</b>																		
Unit 112, 40-50	992	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 112, 40-50	993	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 112, 40-50	994	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
Unit 112, 50-60	1051	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 112, 50-60	1050	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
Unit 112, 60-70	1054	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
Unit 112, 60-70	1056	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
<b>Block 8</b>																		
Unit 113, 10-20	999	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Unit 113, 10-20	1000	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 113, 10-20	1001	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Unit 113, 10-20	1002	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 113, 20-30	1004	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
Unit 113, 20-30	1005	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 113, 30-37	1007	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Unit 113, 30-37	1009	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
Unit 113, 37-41	1059	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 113, 37-42	1060	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
Unit 113, 39-42	1062	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Unit 113, 41-50	1063	1	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	
Unit 113, 42-50	1065	-	-	-	-	-	2	-	-	-	-	1	-	-	1	-	-	





Provenience of Decorated Sherds by Decorative Method, Murvaal Creek Site.

Provenience	Prov. No.	I	cP	tP	fP	I-P	B	B-I	B-P	B-A	B-I-P	A	A-I	A-I-B	E	RS	LN	
<b>Block 8</b>																		
Unit 116, 30-38	1040	-	-	-	-	-	1	-	1	-	-	1	-	-	-	-	-	
Unit 116, 30-38	1041	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 116, 30-38	1042	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 116, 41-52	1222	2	-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	
Unit 116, 41-52	1223	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	
Unit 116, 41-52	1224	1	-	-	-	1	2	-	1	-	-	-	-	-	-	-	-	
Unit 116, 41-52	1225	1	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	
Unit 116, 50-61	1228	1	-	2	-	-	3	-	-	-	-	-	-	-	1	-	-	
Unit 117, 00-05	1321	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 117, 10-15	1326	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Unit 117, 20-25	1339	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
Unit 117, 20-25	1469	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
Unit 117, 20-25	1470	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Unit 117, 25-30	1340	-	-	1	-	-	9	1	-	-	-	-	-	-	-	-	-	
Unit 117, 25-30	1341	3	-	-	-	-	7	1	-	-	-	-	-	-	-	-	-	
Unit 117, 25-30	1342	1	-	-	-	-	5	-	-	-	-	-	-	-	1	-	-	
Unit 117, 25-30	1343	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 117, 29-29	1336	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Unit 117, 30-35	1344	1	-	-	-	-	5	1	-	-	-	-	-	-	-	-	-	
Unit 117, 30-35	1347	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	
Unit 117, 30-35	1346	-	-	-	-	-	3	-	-	-	-	-	-	-	1	-	-	









Provenience of Decorated Sherds by Decorative Method, Murvaal Creek Site.

Provenience	Prov. No.	I	cP	tP	fP	I-P	B	B-I	B-P	B-A	B-I-P	A	A-I	A-I-B	E	RS	LN
<b>Features</b>																	
Unit 087, Feature 7, 40-53	2001	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Unit 087, Feature 7, 40-53	1800	5	-	-	-	-	7	-	-	-	-	-	-	-	1	-	-
Unit 090, Feature 7, 48-48	1716	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Unit 098, Feature 19, 50-61	2010	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Unit 120, Feature 29, 41-55	1840	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Unit 120, Feature 29, 41-55	2000	-	-	1	-	-	6	-	-	-	-	-	-	-	-	-	-

I=incised; cP=circular punctated; tP=tool punctated; fP=fingernail punctated; I-P=incised-punctated; B=brushed; B-I=brushed-incised; B-P=brushed-punctated; B-A=brushed-applied; B-I-P=brushed-incised-punctated; A=applied; A-I=applied-incised; A-I-B=Applied-incised-brushed; E=engraved; RS=red-slipped; LN=lip notched



## A-3: DETAILED SHERD ANALYSIS



Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>50 x 50 cm Units</u>							
Unit 005, 60-80	251	Base	bone-hemat.	F	E SM	10.3	
Unit 007, 40-60	129	Body	bone	E	-	6	
Unit 008, 00-20	131	Body	bone	H	-	6	
Unit 009, 20-40	141	Body	bone/SP	B	I/E SM	6.8	
Unit 014, 20-30	55	Body	grog	A	E SM	5.5	
Unit 015, 40-50	79	Body	bone	F	-	7.2	all four fragments crossmend
Unit 016, 40-50	271	Body	bone	F	-	8.8	
Unit 018, 20-40	280	Body	grog-organics	G	I SM	9.1	
Unit 020, 20-40	165	Body	bone-hemat.	A	-	9.2	
Unit 021, 00-20	167	Body	grog/SP	G	-	6.5	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>50 x 50 cm Units</u>							
Unit 022, 20-40	177	Rim	grog	G	-	5.2	D-RO
Unit 026, 20-40	94	Body	bone	A	E SM	6.4	
Unit 026, 40-60	95	Body	bone	B	-	8	
Unit 027, 20-40	100	Body	bone-organics	F	I/E SM	6.8	
Unit 027, 60-80	106	Base	grog/SP	G	-	10.2	
Unit 030, 20-40	323	Body	grog	F	I SM	10.1	
Unit 035, 00-20	288	Body	bone-hemat.-organics	E	-	8.6	organics
Unit 038, 00-20	303	Base	grog	G	-	10	
Unit 038, 20-40	306	Body	bone/SP	F	I SM	9.6	
Unit 038, 20-40	306	Base	bone-hemat.	F	-	9.4	
Unit 052, 20-40	401	Rim	grog/SP	F	-	9.5	D-RO, 15+ OD; pieces of large plain sherds from same vessel (323 g)
Unit 056, 20-40	429	Body	grog	E	-	8.2	Sherds refit



Detailed Sherd Analysis, Murvaul Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 1</u>							
Unit 059, 00-10	440	Body	bone-hemat.	A	-	8.3	
Unit 059, 10-20	445	Body	bone-hemat.	A	-	8.2	
<u>Block 2</u>							
Unit 061, 10-20	457	Base	grog-bone	F	-	10.3	
Unit 061, 20-30	503	Rim	grog	H	-	6.3	D-RO
Unit 061, 40-50	857	Body	bone-hemat.-grog	G	I SM	6.7	
Unit 062, 30-40	601	Rim	grog-bone	C	-	4.9	D-RO
Unit 062, 40-50	1044	Body	bone	F	I SM	8.8	
Unit 063, 10-20	510	Body	bone-hemat.	F	-	8	
Unit 063, 30-40	682	Body	bone-organics	F	I SM	7.1	
Unit 063, 30-40	683	Base	grog	G	-	10.5	
Unit 064, 30-40	608	Body	bone-hemat.-organics	F	-	9	
Unit 064, 30-40	609	Body	bone-hemat.-organics	G	-	6.7	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 2</u>							
Unit 083, 20-30	801	Rim	bone-hemat.	A	I SM	7.5	D-RO, ext f, 14+ OD, INAA- broken into three pieces
Unit 083, 30-40	860	Base	grog/SP	F	E SM	10.1	
Unit 084, 10-20	803	Rim	grog/SP	B	-	8	D-RO, 17+ OD
Unit 084, 20-30	810	Body	grog/SP	B	-	7.1	
Unit 084, 20-30	808	Body	grog	B	-	7.4	
Unit 084, 30-40	864	Body	bone	F	I SM	7.1	
Unit 085, 00-10	725	Body	grog-hemat.	A	-	7.7	
<u>Block 3</u>							
Unit 065, 00-10	470	Base	grog	F	-	10.5	
Unit 065, 10-20	521	Rim	bone	G	I SM	8	D-RO, 13+ OD; INAA
Unit 066, 10-20	526	Body	grog/SP	B	I SM	6.7	
Unit 069, 20-30	623	Rim	-	F	-	4.9	D-RO, 21+ OD, INAA
Unit 069, 20-30	623	Body	grog	H	I SM	9.6	
Unit 069, 20-30	625	Body	grog	A	-	6.5	
Unit 069, 20-30	622	Body	grog/SP	F	E SM	7.9	

Detailed Sherd Analysis, Murvaul Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 3</u>							
Unit 070, 00-10	491	Rim	grog	A	-	6.4	D-Ro, INAA
Unit 071, 10-20	564	Base	bone-grog	G	I SM	9.4	
Unit 072, 30-40	640	Body	grog	G	I/E SM	7.2	
<u>Block 4</u>							
Unit 073, 20-30	646	Rim	grog/SP	B	-	5.9	D-RO, 16+ OD
Unit 073, 20-30	644	Body	grog	G	-	9.4	
Unit 073, 30-40	697	Rim	grog/SP	G	-	8.3	D-RO
Unit 073, 40-50	1724	Body	bone-organics	F	-	7.1	
Unit 073, 50-60	1726	Rim	bone-organics	F	-	6.7	--RO
Unit 073, 50-60	1726	Body	grog/SP	G	I SM	6.6	
Unit 074, 10-20	580	Body	bone-hemat.	A	-	9.4	
Unit 074, 40-50	1729	Base	grog	G	-	9.7	
Unit 074, 50-60	1731	Body	bone	A	-	5.9	
Unit 076, 20-30	660	Body	bone-hemat.	A	-	8.3	
Unit 076, 20-30	659	Base	grog/SP	B	-	10.9	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 4</u>							
Unit 076, 30-40	733	Body	grog/SP	G	-	7.3	residue sample
Unit 077, 10-20	664	Body	grog	A	I/E SM	7.3	
Unit 077, 20-30	708	Body	grog-bone	B	-	6.3	
Unit 078, 10-20	667	Body	grog	B	-	8	
Unit 078, 10-20	668	Base	grog	B	-	10.2	
Unit 078, 20-30	672	Body	bone	B	-	6.6	
Unit 078, 20-30	709	Body	bone-hemat.	G	-	7.5	
Unit 078, 20-30	710	Rim	bone-grog	B	-	5.6	--RO, ext f
Unit 086, 20-30	1236	Body	bone/SP	F	-	5.8	
Unit 086, 20-30	1236	Body	bone-hemat./SP	B	-	8.4	residue sample
Unit 087, 10-20	1120	Body	bone	F	-	6.2	
Unit 087, 30-40	1471	Base	grog/SP	F	-	8.2	
Unit 088, 30-40	1477	Body	bone	F	-	5.1	
Unit 088, 30-40	1478	Base	grog/SP	F	-	9.8	
Unit 088, 40-40	1480	Base	grog	G	-	12.9	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 4</u>							
Unit 089, 10-20	1134	Base	grog	G	-	11	
Unit 089, 10-20	1135	Body	bone	C	-	7.7	
Unit 089, 20-27	1264	Body	bone-grog	G	-	6.6	
Unit 090, 10-20	1139	Base	grog/SP	H	-	9.4	
Unit 090, 20-27	1267	Body	grog	F	-	8.8	
Unit 090, 20-27	1265	Body	grog-bone/SP	G	-	6.5	
Unit 090, 27-30	1370	Body	grog	G	I SM	6.3	
Unit 090, 30-40	1482	Body	grog-organics	F	I SM	8.1	
Unit 090, 30-40	1482	Body	bone	B	-	7.1	
Unit 090, 30-40	1485	Body	bone	G	-	9	
Unit 091, 10-20	1145	Base	grog-bone-organics	G	-	11.2	
Unit 091, 30-40	1489	Base	grog	G	-	11.5	
Unit 092, 08-18	938	Body	bone	B	-	6.6	
Unit 092, 08-18	940	Body	grog/SP	B	I/E SM	5.1	
Unit 092, 18-28	1147	Body	bone-hemat.	F	-	9.4	
Unit 092, 28-38	1237	Body	bone-hemat.	F	-	7	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 4</u>							
Unit 092, 28-38	1238	Base	grog/SP	F	-	11	
Unit 093, 10-20	1153	Body	grog	G	-	8.9	
Unit 094, 25-30	1384	Body	bone/SP	F	I/E SM	6.3	
Unit 095, 00-10	1089	Base	grog	A	-	10.2	
Unit 095, 27-30	1393	Body	grog	F	-	5.1	
Unit 095, 27-30	1394	Body	bone-hemat./SP	A	E SM	6.9	
Unit 095, 30-40	1398	Body	grog/SP	H	E SM	5.9	
Unit 095, 30-40	1396	Body	grog/SP	F	E SM	5.7	
Unit 095, 30-40	1399	Base	grog/SP	H	I/E SM	9.2	
Unit 096, 20-29	1289	Body	grog-bone-hematite	F	-	7.6	
Unit 096, 20-29	1287	Base	grog	B	E SM	8.9	
Unit 096, 28-30	1401	Body	bone	F	-	7.1	
Unit 097, 10-20	944	Pedestal base	grog-hemat.	A	-		pedestal base sherd-diameter of the attachment is 28.9 and the diameter of the leg is 21.9

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 4</u>							
Unit 097, 10-20	946	Body	bone	B	-	8.7	
Unit 097, 30-39	1290	Base	grog	E	-	11.5	
Unit 097, 40-50	1410	Body	grog	F	-	5.8	
Unit 098, 10-20	1094	Body	bone-hemat.	B	-	8.9	
Unit 098, 20-30	1171	Base	grog	F	-	8.7	
Unit 098, 30-35	1294	Body	bone-grog	G	-	6.9	
Unit 099, 10-20	1176	Body	grog-bone	F	-	8.2	
Unit 099, 10-20	1175	Base	grog/SP	G	E SM	10.5	
Unit 099, 10-20	1173	Base	grog	B	-	11.2	
Unit 099, 20-26	1299	Base	grog	G	-	11.5	
Unit 099, 20-26	1300	Body	bone-grog	G	-	6.4	
Unit 099, 30-40	1418	Rim	grog	A	-	5.7	D-RO, 16+ OD; INAA
Unit 100, 10-20	1179	Body	grog-bone/SP	G	-	9.1	
Unit 100, 20-27	1305	Body	grog/SP	G	E SM	5.6	
Unit 100, 20-27	1302	Body	bone-hemat.	F	-	7.8	
Unit 100, 20-27	1304	Body	grog	G	-	8.1	residue sample
Unit 100, 27-30	1430	Body	bone	B	I SM	6.7	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 4</u>							
Unit 101, 20-27	1306	Body	bone-grog-organics	H	-	6.7	
Unit 101, 40-50	1998	Body	grog	D	-	6.9	
Unit 102, 10-20	952	Body	grog	G	-	9.2	
Unit 103, 10-20	966	Body	grog	F	-	8.8	
Unit 103, 10-20	965	Body	bone/SP	E	-	9	
Unit 103, 10-20	964	Body	grog	E	-	8.3	
Unit 103, 10-20	967	Body	bone-hemat.	G	-	7	
Unit 103, 20-30	1190	Body	bone-hemat.	C	-	7.2	
Unit 104, 00-10	1104	Body	grog-bone	B	-	7.9	
Unit 104, 10-20	1195	Rim	grog/SP	B	-	6.6	--RO
Unit 104, 10-20	1194	Base	grog-hemat.	G	-	10.8	
Unit 104, 20-25	1318	Body	bone-grog	G	-	7.6	
Unit 105, 00-10	1107	Base	grog	G	E SM	9.3	
Unit 105, 10-20	1199	Base	bone	G	-	10.3	
Unit 105, 10-20	1198	Body	bone/SP	A	-	7.7	
Unit 105, 20-23	1241	Body	grog/SP	F	-	6.7	



Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 4</u>							
Unit 105, 20-24	1232	Body	bone	F	-	6.8	Bottle; C14/TL sample- destroyed during process
Unit 105, 24-30	1455	Base	grog/SP	F	-	10.5	
Unit 106, 00-10	1110	Body	bone-grog	F	-	7.1	
Unit 106, 30-40	1466	Body	grog	A	-	7.7	
Unit 118, 09-19	1514	Body	grog	F	-	6.5	
Unit 118, 09-19	1515	Body	bone-hemat.	F	-	8.4	
Unit 118, 19-29	1615	Body	grog	G	-	7.2	
Unit 118, 29-39	1619	Rim	bone-hemat./ SP	A	-	5.7	D-RO, 14+ OD
Unit 118, 29-39	1618	Body	grog	G	-	6.8	
Unit 118, 29-39	1620	Base	grog/SP	B	I SM	10.1	
Unit 120, 05-10	1497	Body	grog/SP	G	I/E SM	8.9	
Unit 120, 15-20	1523	Body	grog	G	-	6.4	
Unit 120, 20-25	1628	Body	grog	G	-	8.5	
Unit 120, 20-25	1629	Body	bone	A	-	7.7	
Unit 120, 20-25	1627	Base	grog/SP	F	-	10	
Unit 120, 25-30	1633	Body	bone-hemat.	G	-	5.6	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 4</u>							
Unit 120, 35-40	1639	Body	bone-organics	G	-	6.6	
Unit 121, 00-12	1526	Body	bone	G	-	7.7	
Unit 121, 00-12	1527	Body	grog-hemat.	A	-	7.1	
Unit 121, 22-32	1587	Rim	SP	B	-	7.5	D-RO, scalloped
Unit 121, 32-42	1644	Rim	bone	B	I SM	7.9	D-RO, 14 OD
Unit 122, 00-14	1501	Body	grog	B	-	7.4	
Unit 122, 00-14	1502	Body	grog	A	-	9.5	
Unit 122, 14-24	1572	Body	bone-hemat.	H	-	7.2	
Unit 122, 24-34	1648	Body	bone-hemat./ SP	F	-	6.3	
Unit 123, 05-10	1508	Body	bone	F	E SM	7	
Unit 123, 25-30	1657	Base	bone-hemat.- organics	F	-	11.5	
Unit 124, 06-11	1545	Base	grog	F	-	10	
Unit 124, 11-16	1549	Base	grog/SP	F	-	10.8	
Unit 125, 15-20	1566	Body	bone-organics	F	-	6.9	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 4</u>							
Unit 125, 25-30	1600	Rim	bone	F	I/E SM	6.2	bowl, D-RO; INAA and petrography
Unit 125, 30-35	1678	Base	grog/SP	H	-	9.3	
Unit 126, 12-22	1696	Body	grog/SP	G	-	7.1	
Unit 126, 12-22	1697	Base	grog/SP	G	-	10.8	
Unit 126, 32-42	1788	Body	grog-hemat./SP	G	-	8	
Unit 127, 00-11	1699	Body	bone	G	-	9.2	
Unit 127, 21-31	1713	Body	grog/SP	G	E SM	6.2	
Unit 127, 31-41	1792	Body	bone	G	-	7.9	
<u>Block 5</u>							
Unit 079, 20-30	749	Base	grog-organics	G	-	11.9	
Unit 079, 30-31	755	Body	grog	F	-	6.6	
Unit 079, 40-50	822	Body	bone	G	E SM	6.6	
Unit 080, 40-50	779	Body	bone-hemat.	F	-	6.4	
Unit 081, 10-20	773	Body	grog	A	-	6.6	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 5</u>							
Unit 081, 40-50	826	Rim	bone	F	-	5.8	D-FL
<u>Block 6</u>							
Unit 107, 10-25	841	Body	bone-hemat.	G	-	7.2	
Unit 108, 25-35	852	Base	grog	G	-	10.7	
Unit 108, 35-45	892	Body	bone-organics	F	-	7.1	
<u>Block 7</u>							
Unit 109, 00-10	898	Body	grog/SP	B	-	5.9	
Unit 109, 00-10	900	Body	grog/SP	G	-	7.7	Bt
Unit 109, 10-20	902	Body	grog-bone	A	-	5.4	
Unit 109, 30-38	956	Base	grog	F	I/ESM	8.8	
Unit 109, 30-38	957	Base	grog/SP	A	-	9	
Unit 109, 30-38	957	Body	bone	C	-	7.1	
Unit 110, 10-20	909	Body	grog-organics	F	-	9.4	
Unit 110, 20-30	913	Base	grog/SP	B	-	9.5	
Unit 110, 20-30	912	Base	bone	G	-	9.2	
Unit 111, 20-30	922	Body	grog/SP	A	-	6.9	

Detailed Sherd Analysis, Murvaul Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 7</u>							
Unit 111, 20-30	923	Base	grog-bone	F	-	10	
Unit 111, 30-38	971	Base	bone-hemat.	G	-	10.5	
Unit 111, 40-50	978	Body	grog-bone	G	-	8.4	
Unit 112, 10-20	927	Body	bone-hemat.-grog	E	-	7.7	
Unit 112, 20-30	981	Body	bone-grog	F	-	7.9	
Unit 112, 20-30	983	Base	grog	A	-	9	
Unit 112, 30-38	984	Body	bone-hemat.	F	-	8.3	
Unit 112, 40-50	992	Body	grog	H	-	6.7	
Unit 112, 50-60	1051	Body	bone	F	I/E SM	7.7	
<u>Block 8</u>							
Unit 113, 30-37	1009	Body	bone-hemat.	A	-	9.2	
Unit 113, 41-50	1063	Body	grog-organics	F	E SM	9.6	
Unit 113, 42-50	1066	Body	grog-bone/SP	F	-	8.3	
Unit 113, 42-50	1064	Body	grog-bone/SP	G	I/E SM	6	
Unit 114, 20-30	1014	Body	grog-bone	F	-	7.7	
Unit 114, 20-30	1016	Body	grog/SP	A	-	6.6	
Unit 114, 30-40	1070	Body	grog/SP	G	-	7.4	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 8</u>							
Unit 114, 30-40	1069	Body	grog-organics	F	I SM	8.2	
Unit 114, 30-40	1067	Body	bone-hemat.	C	-	5.5	
Unit 114, 40-42	1072	Rim	bone/SP	F	-	6.2	--RO
Unit 114, 42-50	1076	Body	grog	G	-	12.1	
Unit 114, 42-50	1078	Base	grog-bone	G	-	10.2	
Unit 114, 42-50	1077	Body	grog	G	I/E SM	6	
Unit 114, 42-50	1078	Body	bone-organics	E	-	7	
Unit 114, 51-60	1213	Body	grog-bone	B	-	5.8	
Unit 115, 20-30	1024	Base	grog-bone	B	-	11.4	
Unit 115, 30-37	1028	Body	grog-bone-hematite	F	-	5.7	
Unit 115, 30-37	1029	Body	bone-hemat.	F	-	6.7	
Unit 115, 39-40	1081	Base	grog/SP	G	-	10.9	
Unit 115, 40-50	1215	Base	bone	G	-	8.9	
Unit 115, 40-50	1215	Body	bone-hemat.	F	-	6.8	
Unit 115, 40-50	1215	Body	grog-organics	F	-	7.1	
Unit 116, 20-30	1035	Body	grog	A	-	7.6	
Unit 116, 20-30	1037	Body	grog	F	-	7.3	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Block 8</u>							
Unit 116, 30-38	1041	Body	bone	B	-	7.3	
Unit 116, 30-38	1040	Body	bone	F	-	6.7	
Unit 116, 39-41	1086	Body	grog	F	-	8.3	
Unit 116, 39-41	1085	Body	bone-hemat.	A	-	5.6	
Unit 116, 40-43	1084	Rim	grog-bone-hematite	A	-	7	D-FL
Unit 116, 41-52	1222	Base	grog	F	-	12.4	
Unit 117, 20-25	1339	Body	bone-hemat.	F	-	7	
Unit 117, 25-30	1341	Body	bone	A	-	9.2	
Unit 117, 25-30	1343	Rim	bone	F	-	6.6	D-RO
Unit 117, 25-30	1342	Body	grog	G	-	8.7	
Unit 117, 25-30	1340	Base	grog/SP	G	-	9.6	
Unit 117, 30-35	1344	Body	grog-organics/SP	F	I SM	7.6	interior red wash/SP
Unit 117, 30-35	1345	Body	bone-organics	F	-	7.9	
Unit 117, 35-40	1349	Body	bone-hemat.	E	-	6.2	
Unit 117, 35-40	1348	Body	bone-hemat.	F	-	8.2	
<u>Features</u>							
Feature 47, 55-63	1870	Body	grog	F	-	7.1	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Plain</b>							
<u>Features</u>							
Feature 55, 65-72	1885	Body	grog	F	I/E SM	8	
Feature 55, 65-72	1886	Body	grog/SP	E	I SM	8.7	
Feature 70, 60-82	1912	Body	bone-hemat.	F	-	7.1	
Feature 79, 55-79	1927	Body	bone-grog	B	I SM	6.4	
Feature 82, 60-69	1932	Base	grog-hemat.	F	-	9	
Unit 064, Feature 1, 33-35	873	Body	grog-organics	F	I SM	8	
Unit 087, Feature 7, 40-53	1800	Body	grog	A	I SM	5.4	
Unit 087, Feature 7, 40-53	1802	Body	grog/SP	G	-	7.6	
Unit 120, Feature 29, 41-55	2000	Body	bone-hemat.-organics	D	-	7.7	
<b>Pipe Sherd</b>							
<u>50 x 50 cm Units</u>							
Unit 008, 20-40	134		bone	F	-	5.4	D-RO, elbow pipe



Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Pipe Sherd</b>							
<u>50 x 50 cm Units</u>							
Unit 023, 20-40	181		grog	-	-	4	long-stemmed pipe; D-RO
<u>Block 4</u>							
Unit 078, 20-30	672		bone	G	-	4.2	4 OD
<b>Decorated</b>							
<u>50 x 50 cm Units</u>							
Unit 003, 60-70	43	Body	bone	G	-	6.7	
Unit 003, 70-80	45	Body	bone-organics	F	-	7	
Unit 005, 60-80	251	Body	bone	B	I SM	7.9	
Unit 005, 80-90	252	Body	bone/SP	G	-	7.7	
Unit 006, 00-20	255	Body	bone	B	-	8	
Unit 006, 40-60	260	Body	bone-hemat.	G	I SM	7.9	
Unit 006, 60-80	263	Body	bone-grog/SP	G	E SM	6	Bt
Unit 007, 40-60	129	Body	grog-hemat./SP	F	-	5.1	
Unit 007, 40-60	129	Body	bone	G	-	8.6	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>50 x 50 cm Units</u>							
Unit 009, 00-20	140	Body	bone/SP	H	I SM	5.1	
Unit 010, 00-20	144	Body	grog-hemat.	G	-	9.3	
Unit 010, 20-40	147	Body	bone	B	-	9	
Unit 011, 00-20	153	Body	bone-hemat.	B	-	9.2	
Unit 011, 20-40	154	Rim	bone-organics	B	I SM	8	
Unit 013, 00-20	88	Body	bone	F	I SM	8.6	
Unit 013, 20-40	89	Body	bone-grog	K	-	10	
Unit 014, 20-30	55	Body	bone	B	-	7.7	CB
Unit 022, 20-40	177	Body	bone	G	I SM	7.5	
Unit 024, 40-60	195	Body	bone-hemat.	F	-	6.7	
Unit 025, 40-60	205	Body	bone	G	I SM	8.3	
Unit 026, 20-40	94	Body	bone-organics	B	E SM	6.7	CPB
Unit 027, 20-40	100	Body	grog	G	-	12.7	

Detailed Sherd Analysis, Murvaul Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>50 x 50 cm Units</u>							
Unit 032, 00-20	332	Body	bone-hemat.	E	-	6	
Unit 033, 00-20	341	Body	grog-bone/SP	F	-	4.9	
Unit 035, 00-20	288	Body	grog-bone	G	-	8.4	
Unit 037, 20-40	301	Rim	bone	F	-	6.9	EV-RO
Unit 039, 00-20	315	Body	bone-grog	F	-	7.6	
Unit 040, 00-20	211	Body	bone	E	-	8.9	
Unit 040, 40-60	217	Body	bone-hemat.	H	-	7.1	
Unit 041, 40-60	225	Body	bone	E	I SM	7.6	
Unit 047, 00-20	364	Rim	bone-grog	G	-	6.3	D-Ro; 17 cm OD
Unit 049, 00-20	376	Body	bone-grog	G	I SM	6	
Unit 049, 00-20	376	Body	bone	F	-	6.5	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>50 x 50 cm Units</u>							
Unit 054, 20-40	413	lower rim-body	grog/SP	G	-	6.2	
Unit 055, 20-40	419	Body	bone	C	I SM	9	
<u>Block 1</u>							
Unit 057, 10-20	433	Body	bone-hemat.	G	-	8.1	petrography
<u>Block 2</u>							
Unit 061, 10-20	458	Body	grog/SP	A	-	8.2	
Unit 061, 30-40	592	Body	bone	F	-	8.5	
Unit 061, 30-40	594	Body	bone-grog	F	-	9.9	
Unit 061, 40-50	855	Rim	bone-hemat.	G	-	7.3	D-RO
Unit 061, 40-50	855	Body	grog	B	-	6.7	petrography
Unit 061, 50-60	879	Body	bone-organics	H	I SM	7.6	petrography
Unit 062, 20-30	678	Body	bone-organics	B	-	7.4	
Unit 062, 20-30	674	Rim	bone	B	-	7	EV-RO
Unit 062, 40-50	1044	Body	bone	E	-	10.5	
Unit 063, 30-40	681	Body	bone-organics	G	-	8.2	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 2</u>							
Unit 063, 30-40	682	Body	bone	A	I SM	7	
Unit 063, 40-50	883	Body	grog-bone	G	-	8.3	
Unit 063, 40-50	882	Body	bone-organics	A	-	7.3	
Unit 064, 20-30	553	Body	bone-hemat.	A	-	7	
Unit 064, 30-40	608	Body	bone	E	I SM	7.1	
Unit 064, 30-40	607	Body	bone	I	-	6.2	
Unit 083, 10-20	745	Body	bone-hemat.-organics	F	-	7.6	
Unit 083, 10-20	743	Body	bone-hemat.-organics	G	-	7	
Unit 083, 20-30	798	Rim	grog	G	-	7.4	D-RO
Unit 083, 30-40	861	Body	grog/SP	B	I SM	6.6	
Unit 083, 30-40	859	Body	bone	E	-	7	
Unit 083, 30-40	862	Body	grog-bone/SP	F	-	5.9	
Unit 084, 20-30	811	Body	grog	H	I SM	6.2	
Unit 084, 20-30	807	Body	grog/SP	G	-	6.6	
Unit 085, 00-10	727	Body	bone-hemat.	F	-	9.6	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 2</u>							
Unit 085, 10-20	815	Body	grog	B	-	7.4	
Unit 085, 20-30	818	Body	grog	B	I SM	8.3	
Unit 085, 20-30	817	Body	bone-hemat.	A	-	8.8	
<u>Block 3</u>							
Unit 066, 20-30	533	Body	bone-grog	L	-	9.6	INAA and petrography- destroyed during the processess
Unit 067, 10-20	531	Body	bone	F	-	6.6	
Unit 068, 00-10	485	Body	bone-hemat.	C	I SM	6.7	petrography
Unit 068, 10-20	539	Body	grog-organics	G	-	5.5	
Unit 068, 20-30	617	Rim	bone-hemat.	B	-	6.4	
Unit 069, 10-20	546	Body	bone-hemat.	A	-	6.7	
Unit 069, 10-20	547	Body	bone-grog	F	I SM	9.3	
Unit 069, 20-30	623	Body	grog	H	-	7.6	
Unit 070, 10-20	560	Rim	bone	A	-	6.4	D-RO
Unit 070, 20-30	629	Body	bone-grog	G	I SM	6	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 3</u>							
Unit 071, 00-10	497	Body	grog/SP	G	-	7.1	
Unit 072, 00-10	502	Body	bone-hemat.-organics	G	-	7.3	
Unit 072, 20-30	636	Body	bone-hemat.	A	-	6.4	
<u>Block 4</u>							
Unit 073, 00-10	572	Body	bone	E	I SM	9.4	
Unit 073, 20-30	647	Body	bone-organics	F	-	7	
Unit 073, 30-40	697	Body	bone-organics	L	-	7.8	
Unit 073, 40-50	1724	Rim	bone-hemat.	A	I SM	7.1	D-RO; INAA and petrography
Unit 073, 40-50	1724	Body	bone	E	-	7.1	
Unit 073, 40-50	1724	Rim	grog	B	-	4.9	RO, ext f
Unit 073, 50-60	1726	Body	bone-hemat.	A	-	5.4	
Unit 074, 40-50	1730	Body	bone-grog	H	I SM	5	
Unit 074, 40-50	1729	Body	bone-hemat.-organics	F	-	7.8	
Unit 075, 00-10	582	Body	bone-hemat.-organics	F	-	8.4	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 4</u>							
Unit 075, 20-30	658	Body	bone-grog-hematite	A	-	7.9	
Unit 075, 20-30	655	Body	bone	B	-	6.4	
Unit 076, 30-40	735	Body	bone-hemat.	A	-	8.3	
Unit 078, 10-20	668	Body	bone	K	-	5.7	
Unit 078, 10-20	670	Body	bone	H	-	6.2	
Unit 078, 30-40	716	Body	grog-bone-hematite	A	-	6.7	
Unit 078, 30-40	715	Body	grog	B	-	6.4	
Unit 078, 30-40	714	Body	bone-hemat.	G	-	6.5	
Unit 086, 30-40	1421	Body	bone-organics	H	-	9.4	
Unit 086, 30-40	1420	Body	bone	H	-	5.6	petrography
Unit 086, 30-40	1419	Body	bone	G	-	6.1	
Unit 087, 10-20	1123	Rim	bone	B	-	9.4	D-RO
Unit 087, 20-30	1254	Body	bone-grog-organics	F	-	9.2	
Unit 087, 20-30	1255	Body	bone	B	-	5.7	



Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 4</u>							
Unit 087, 30-40	1473	Rim	grog	B	-	5.2	D-RO, ext f
Unit 087, 30-40	1474	Body	bone-hemat.	H	-	7.2	
Unit 088, 30-40	1479	Body	bone-hemat.	F	-	7	
Unit 088, 40-50	1755	Body	bone-hemat.	G	-	7.9	
Unit 089, 27-30	1366	Body	bone-hemat.	F	-	5.7	
Unit 089, 30-40	1425	Body	bone-organics	B	-	7.3	
Unit 089, 30-40	1424	Body	bone	B	-	6.7	
Unit 089, 30-40	1423	Body	bone-grog-organics	F	-	5.9	
Unit 089, 30-40	1424	Body	bone	A	-	8.8	
Unit 090, 10-20	1137	Rim	bone/SP	B	I SM	9.4	EV-RO
Unit 090, 10-20	1140	Body	bone-organics	G	I SM	6.8	
Unit 090, 30-40	1482	Body	bone-grog	G	-	8.1	
Unit 090, 30-40	1483	Rim	bone-grog	B	-	7.3	D-RO, ext. thickened
Unit 090, 30-40	1482	Rim	bone-grog-hematite	F	-	7.4	D-RO, 15+ OD; INAA and petrography
Unit 090, 30-40	1484	Body	bone	F	-	5.4	

Detailed Sherd Analysis, Murvaul Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 4</u>							
Unit 091, 20-28	1271	Body	grog-hemat.	G	-	8.7	
Unit 091, 20-28	1270	Body	grog-bone-hematite	G	-	9.2	
Unit 091, 30-40	1490	Body	grog	F	I SM	6.7	
Unit 091, 30-40	1491	Body	grog/SP	B	E SM	5.7	
Unit 091, 30-40	1489	Body	grog-organics	F	-	7.2	
Unit 091, 30-40	1488	Rim	bone-hemat.	B	-	7.2	D-RO, 18+ OD
Unit 091, 30-40	1488	lower rim-body	bone	H	-	8	
Unit 091, 50-60	1765	Body	bone-hemat.-organics	B	-	6.7	
Unit 092, 18-28	1146	Body	grog/SP	F	-	8.8	
Unit 092, 28-38	1239	Body	grog/SP	B	-	5.8	
Unit 093, 20-25	1275	Body	grog-organics	G	-	7.3	
Unit 093, 20-25	1274	Body	bone	E	-	7.6	
Unit 093, 25-30	1378	Body	bone-organics	E	-	6.2	
Unit 093, 25-30	1376	Body	bone	E	-	7.6	
Unit 093, 25-30	1377	Body	bone-organics	H	-	6.1	
Unit 093, 30-40	1381	Body	grog-bone	B	-	5.7	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 4</u>							
Unit 094, 20-25	1281	Body	bone-hemat.	C	-	8.5	
Unit 094, 20-25	1280	Rim	bone	F	-	6.1	D-FL; petrography
Unit 094, 25-30	1385	Body	bone-organics	F	-	5.3	
Unit 095, 10-20	1159	Body	bone	B	-	4.6	
Unit 095, 10-20	1161	Body	bone-grog	B	-	6.5	
Unit 095, 20-27	1285	Body	bone-hemat.-organics	F	-	6.7	
Unit 095, 20-27	1284	Body	bone-organics	G	-	8.4	
Unit 095, 20-27	1285	lower rim	bone-hemat.	K	I SM	8.4	petrography
Unit 095, 27-30	1394	Rim	hematite	A	-	4.6	horizontal and curvilinear brushed-incised;--RO, 9 OD
Unit 096, 10-20	1162	Body	bone	B	-	7.3	
Unit 096, 28-28	1332	Body	-	B	-	7.8	C14/TL sample-destroyed during process
Unit 096, 30-40	1406	Body	bone-organics	F	-	6.7	
Unit 097, 20-30	1168	Body	bone	B	I SM	7.6	
Unit 097, 30-39	1291	Body	bone-organics	G	-	7.3	

Detailed Sherd Analysis, Murvaul Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 4</u>							
Unit 097, 40-50	1409	Body	bone	G	-	7.1	
Unit 098, 20-30	1169	Body	bone-organics	H	-	6.6	
Unit 098, 30-35	1297	Body	bone-organics	G	-	8.1	
Unit 099, 00-10	1098	Body	bone	B	-	6.5	
Unit 099, 10-20	1176	lower rim body	grog/SP	F	-	8.4	petrography
Unit 099, 10-20	1176	Body	bone	L	-	6.7	
Unit 099, 10-20	1175	Body	bone	B	-	8.1	
Unit 099, 10-20	1174	Body	bone	B	-	7.6	
Unit 099, 26-30	1416	Body	bone-hemat.	A	-	8.7	
Unit 099, 26-30	1415	Body	grog-bone/SP	A	-	6.6	
Unit 100, 10-20	1180	Body	grog/SP	G	I SM	5.8	
Unit 100, 10-20	1177	Body	bone	E	-	6.8	
Unit 100, 20-27	1304	Body	bone-organics	H	-	7.1	
Unit 100, 20-27	1303	Body	bone	H	-	5.5	
Unit 100, 20-27	1302	Body	bone-hemat.	K	I SM	7.8	
Unit 100, 27-30	1429	Body	bone-hemat.	G	-	6.3	
Unit 100, 30-40	1433	Body	bone-organics	C	-	6.8	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 4</u>							
Unit 101, 27-30	1436	Body	bone-organics/SP	H	-	8.5	
Unit 101, 30-40	1440	Body	grog	G	E SM	7.5	
Unit 102, 10-20	953	Body	grog-bone	F	-	7.1	
Unit 102, 20-30	1188	Body	bone-organics	G	-	8.2	
Unit 102, 20-30	1186	Body	bone-hemat.	E	-	6	
Unit 103, 10-20	964	Body	bone-hemat./SP	C	E SM	5.6	
Unit 103, 20-30	1192	Body	bone-grog	B	-	6.5	
Unit 103, 20-30	1191	Rim	bone	H	-	7.5	EV-RO
Unit 104, 00-10	1104	Body	bone	F	-	7.3	
Unit 104, 10-20	1196	Body	bone	K	-	7.9	
Unit 104, 20-25	1318	Body	bone	G	-	6.8	
Unit 104, 20-25	1320	Body	bone-hemat.-organics	H	-	6.7	
Unit 105, 00-10	1107	Body	bone	E	-	9	
Unit 105, 10-20	1197	Body	bone-hemat.	F	-	8	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 4</u>							
Unit 105, 20-23	1241	Body	bone	H	-	6.7	INAA and petrography
Unit 105, 24-30	1454	Body	grog/SP	H	E SM	5.4	
Unit 106, 10-20	1203	Body	bone-hemat.	A	-	6.9	
Unit 106, 20-23	1245	Rim	bone-hemat.	A	-	6.8	D-RO
Unit 106, 25-30	1460	Body	grog/SP	H	I/E SM	5.7	
Unit 118, 19-29	1612	Body	bone-hemat.	C	-	7.3	
Unit 118, 19-29	1615	Body	grog-hemat.	D	-	9.5	
Unit 118, 19-29	1613	Body	bone-hemat.	G	-	7.4	
Unit 118, 29-39	1617	Body	grog/SP	B	I SM	5.6	
Unit 119, 19-29	1621	Body	bone	H	-	5.2	
Unit 119, 19-29	1622	Body	bone-hemat.	G	-	7.6	
Unit 119, 39-49	2005	Body	bone-hemat.	F	-	6.6	
Unit 120, 20-25	1630	Body	bone-grog	B	-	5.3	
Unit 120, 25-30	1632	Body	bone-grog	G	-	8.2	
Unit 120, 30-35	1638	Body	bone-organics	H	I SM	6.9	
Unit 120, 30-35	1636	Rim	bone	F	-	6.4	D-RO, 13+ OD
Unit 120, 35-40	1639	Body	bone	G	E SM	5.6	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 4</u>							
Unit 121, 22-32	1589	Body	grog/SP	C	-	7.3	
Unit 121, 22-32	1586	Body	bone	B	-	6	
Unit 121, 22-32	1588	Body	bone	F	-	8.8	
Unit 121, 22-32	1587	Body	bone-hemat.	L	-	6.9	
Unit 122, 14-24	1573	Body	grog/SP	H	-	5.6	
Unit 122, 14-24	1572	Body	grog-bone	G	-	5.3	
Unit 122, 24-34	1649	Body	bone	G	I SM	4.9	
Unit 123, 05-10	1505	Body	bone-grog	F	-	7.2	
Unit 123, 05-10	1507	Body	grog/SP	G	I SM	6.2	
Unit 123, 10-15	1534	Rim	bone	B	-	5.9	D-RO
Unit 123, 10-15	1535	Body	bone	E	-	9.4	
Unit 123, 15-20	1540	Body	bone	H	-	9.9	
Unit 123, 15-20	1541	Body	bone-hemat.	F	-	7.8	
Unit 123, 20-25	1592	Body	grog-bone/SP	G	-	8.4	
Unit 123, 30-35	1662	Body	bone-grog	G	I SM	6.5	
Unit 123, 40-45	1667	Body	grog/SP	F	I SM	6.1	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 4</u>							
Unit 124, 31-36	1671	Body	bone-hemat.-organics	F	-	8.4	
Unit 125, 10-15	1563	Body	grog-bone-hematite	F	-	8.4	residue sample
Unit 125, 20-25	1579	Body	grog	H	I/E SM	6.5	
Unit 125, 25-30	1599	Body	grog	D	-	5.9	
Unit 125, 25-30	1598	Body	bone-hemat.-organics	B	-	9.8	
Unit 125, 30-35	1677	Body	grog	B	I SM	6.2	petrography
Unit 125, 35-40	1680	Body	bone-hemat.	F	-	7.7	
Unit 126, 12-22	1695	Rim	bone-grog	B	-	6.5	D-RO, 15+ OD
Unit 127, 11-21	1706	Body	bone	A	-	6.5	
Unit 127, 11-21	1709	Body	grog/SP	B	-	6.6	
Unit 127, 11-21	1708	Body	grog	F	-	8.9	
Unit 127, 21-31	1710	Body	bone	B	-	8	
<u>Block 5</u>							
Unit 079, 10-20	748	Body	grog/SP	B	-	6	



## Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 5</u>							
Unit 079, 20-30	751	Body	bone-grog	H	-	5.7	
Unit 079, 20-30	750	Body	grog	G	-	7.6	
Unit 079, 31-40	756	Body	bone-hemat.	G	-	6.9	
Unit 079, 31-40	757	Body	bone-organics	H	-	8.3	
Unit 079, 40-50	822	Body	bone-hemat.	F	-	5.4	
Unit 080, 30-32	766	Body	bone-hemat.	F	-	5.9	
Unit 080, 32-40	771	Rim	bone-grog	B	-	5.5	D-RO, ext f
Unit 080, 32-40	771	Body	bone-hemat.	F	-	8.7	
Unit 080, 32-40	772	Body	grog-bone	G	-	5.3	
Unit 080, 50-60	1719	Body	bone	A	I SM	7.2	
Unit 081, 10-20	775	Body	grog-hemat./ SP	G	-	5.2	
Unit 081, 20-30	776	Body	bone	F	-	6.7	
Unit 081, 40-50	825	Body	grog	F	I SM	6.4	petrography
Unit 081, 40-50	826	Body	bone-hemat.	H	-	6.2	
Unit 082, 10-20	789	Body	grog	F	-	7.9	INAA and petrography- destroyed during the processes
Unit 082, 32-40	832	Body	bone	H	-	6.4	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 5</u>							
Unit 082, 40-50	834	Body	bone-organics	G	-	8.9	
Unit 082, 40-50	837	Body	bone-hemat.	F	-	6.9	
<u>Block 6</u>							
Unit 107, 10-25	839	Body	bone-hemat.	B	-	7.9	
Unit 107, 25-35	842	Body	bone-hemat.	E	-	5.2	
Unit 107, 35-45	887	Body	bone	G	I SM	5.7	
Unit 108, 25-35	851	Body	bone	G	-	7.6	
Unit 108, 25-35	853	Body	bone-hemat.	F	-	10	
Unit 108, 35-45	893	Body	bone	G	-	5.6	
<u>Block 7</u>							
Unit 109, 20-30	934	Body	grog	F	E B	4.9	
Unit 109, 20-30	931	Rim	bone-grog	G	-	7.4	CB; D-RO; INAA and petrography-partially destroyed
Unit 109, 30-38	958	Body	bone-grog	G	-	6.4	
Unit 109, 30-38	959	Body	bone-hemat.	G	-	8	
Unit 109, 30-38	956	Body	grog/SP	G	-	5.4	
Unit 109, 30-38	956	Rim	bone	B	-	6.7	D-RO

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 7</u>							
Unit 109, 30-38	957	Body	bone	F	-	5.8	
Unit 109, 30-38	956	Body	bone	F	-	7.1	
Unit 110, 20-30	911	Body	bone	E	-	8.2	
Unit 110, 30-38	961	Body	grog	G	-	6.7	
Unit 110, 30-38	960	Body	grog-hemat.	G	-	6.7	Bt; INAA and petrography, broken in half
Unit 110, 30-38	960	Body	bone-organics	F	-	7.1	
Unit 111, 10-20	920	Rim	grog-bone	B	-	6.6	D-RO
Unit 111, 20-30	921	Body	bone-grog	G	I SM	7	
Unit 111, 20-30	924	Body	grog/SP	E	-	7.2	
Unit 111, 38-40	974	Body	bone-grog	B	I SM	6.7	
Unit 111, 38-40	972	Body	bone	G	-	5.6	
Unit 111, 50-60	997	Body	bone-grog	H	-	6.6	
Unit 112, 10-20	930	Body	bone	G	-	7	
Unit 112, 20-30	980	Body	bone-organics	G	-	7	
Unit 112, 30-38	986	Body	bone-hemat.	F	I SM	9	
Unit 112, 50-60	1050	Body	grog/SP	G	-	5.6	
Unit 112, 60-70	1054	Body	bone	B	-	4.9	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 8</u>							
Unit 113, 10-20	1001	lower rim/body	grog	B	-	5.3	CB
Unit 113, 10-20	1000	Body	bone-hemat.	G	-	6.2	
Unit 113, 20-30	1004	Body	bone-organics	B	-	6.5	
Unit 113, 30-37	1009	Body	bone-hemat.-organics	F	-	7.6	
Unit 113, 37-41	1059	Body	grog	G	-	6.9	Bt
Unit 113, 41-50	1063	Body	grog-bone	G	-	8.1	
Unit 113, 42-50	1066	Body	bone-organics	G	-	6.2	
Unit 113, 42-50	1066	Body	bone	B	-	6.5	
Unit 113, 42-50	1065	Body	bone	G	E B	5.7	CPB
Unit 114, 10-20	1011	Body	grog/SP	G	-	9.2	
Unit 114, 20-30	1014	Body	bone-organics	G	-	7.3	
Unit 114, 40-42	1073	Body	grog/SP	G	I/E SM	5.8	
Unit 114, 40-42	1072	Body	bone	G	I SM	7.7	
Unit 114, 42-50	1078	Body	bone-hemat.	H	-	9.4	
Unit 114, 42-50	1076	Body	bone-hemat.	E	-	6.3	
Unit 114, 51-60	1212	Body	grog-bone-hematite	G	-	8.3	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 8</u>							
Unit 115, 38-40	1079	Body	bone-hemat.	E	-	7.3	
Unit 115, 39-40	1081	Body	bone	B	I SM	6.3	
Unit 115, 40-50	1215	Body	bone-hemat.	G	-	7.2	
Unit 115, 40-50	1216	Body	bone	G	-	7.6	
Unit 115, 40-50	1215	Body	bone	G	-	8.9	TP listed detailed analysis from 2 decorated sherds in P1215 - only one is in the artifact bag. This may be an error in the original data.
Unit 115, 50-60	1220	Body	bone-organics	G	-	10.5	
Unit 116, 20-30	1036	Body	bone	H	I SM	8.4	
Unit 116, 30-38	1041	Body	bone	E	-	7	
Unit 116, 41-52	1223	Body	bone	H	-	6.6	
Unit 116, 41-52	1224	Body	grog	E	-	10.6	
Unit 116, 41-52	1224	Rim	grog	F	-	7.6	D-RO, 23 OD
Unit 116, 41-52	1225	Body	bone-hemat.	G	-	7.4	
Unit 116, 50-61	1228	Body	grog/SP	G	-	7	
Unit 116, 50-61	1228	Body	bone	G	-	11.6	
Unit 116, 50-61	1228	Body	grog	B	-	10.3	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 8</u>							
Unit 117, 25-30	1341	Body	bone-hemat.	F	-	7.9	
Unit 117, 25-30	1342	Body	bone-hemat.	B	-	7.9	
Unit 117, 25-30	1340	Body	bone-hemat.	A	-	8.5	
Unit 117, 29-29	1336	Body	bone-hemat.	A	-	9.9	C14/TL sample-not selected for TL, 2nd half recovered
Unit 117, 30-35	1345	Body	bone-hemat.	A	I/E SM	5.5	
Unit 117, 30-35	1345	Rim	bone-organics	F	I SM	4.4	D-RO, 15+ OD
Unit 117, 30-35	1345	Body	bone-hemat.	A	-	7.9	
Unit 117, 30-35	1346	Body	bone	E	-	9.7	
Unit 117, 30-35	1346	Body	grog-bone	G	-	6.9	
Unit 117, 30-35	1347	Body	bone-hemat.	E	I SM	7.7	
Unit 117, 30-35	1344	Body	bone-organics	C	-	7.9	
Unit 117, 35-40	1349	Body	bone	B	-	5.4	
Unit 117, 35-40	1350	Body	grog	A	-	10	
Unit 117, 35-40	1351	Body	bone-grog	G	-	6.5	
Unit 117, 35-40	1351	Body	bone/SP	B	-	5.8	
Unit 117, 40-45	1352	Body	grog/SP	G	-	7.5	
Unit 117, 40-45	1355	Body	grog-hemat.	A	-	7.5	

Detailed Sherd Analysis, Murvaal Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Block 8</u>							
Unit 117, 40-45	1352	Body	bone	E	I SM	6.7	
Unit 117, 45-50	1360	Body	grog-organics	F	-	6.6	
<u>Features</u>							
Feature 47, 55-63	1871	Body	bone-hemat.	H	-	9.1	
Feature 55, 65-72	1886	Body	bone-hemat.-organics	A	-	6.4	
Feature 55, 65-72	1886	Body	bone	K	-	7.7	
Feature 55, 65-72	1886	Body	bone-hemat.	B	-	6.4	
Feature 55, 65-72	1885	Body	bone	B	-	6.7	
Feature 55, 65-72	1885	Body	bone-organics	F	-	7.2	
Feature 56, 65-83	1887	Body	bone-hemat.	E	-	9.7	
Feature 57, 60-90	1889	Rim	SP	B	I/E B	5.9	D-RO
Feature 58, 65-79	1891	Body	bone	H	I SM	7.6	
Feature 62, 65-70	1899	Body	bone	B	-	7.8	

Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Features</u>							
Feature 68, 65-85	1907	Body	bone	E	-	7.8	
Feature 75, 55-08	1920	Rim	bone-grog-organics	H	-	8.2	EV-RO
Feature 79, 55-79	1927	Body	bone-hemat.	F	-	4.9	
Feature 87, 60-75	1940	Body	bone	B	I SM	6.4	
Feature 97, 65-92	1956	Body	bone	B	I SM	7.4	
Feature 97, 65-92	1956	Body	bone-hemat.-organics	G	-	8.8	
Feature 97, 65-92	1957	Body	bone-hemat.	G	I SM	8.1	
Unit 064, Feature 1, 33-35	873	Rim	bone-hemat.	B	E B	5.2	D-RO
Unit 076, Feature 9, 40-53	1805	Body	bone-grog	B	-	4.9	AMS sample
Unit 076, Feature 9, 40-53	2002	Rim	bone	H	-	6	17 cm OD; INAA and petrography-2 fragments
Unit 086, Feature 9, 45-45	1714	Body	bone-hemat.	A	-	6.2	C14/TL sample-destroyed during the process



Detailed Sherd Analysis, Murvault Creek site.

Provenience	Prov. No.	Sherd Type	Temper	FC	ST	Th (mm)	Comments
<b>Decorated</b>							
<u>Features</u>							
Unit 087, Feature 7, 40-53	1800	Body	grog	G	-	7	
Unit 087, Feature 7, 40-53	1800	Body	bone-hemat.	G	-	7.1	
Unit 087, Feature 7, 40-53	1800	Body	bone	B	-	6.4	
Unit 090, Feature 7, 48-48	1716	Body	bone-hemat.-organics	B	I SM	7.2	
Unit 120, Feature 29, 41-55	2000	Body	bone-grog-hematite	F	-	8.7	

SP=sandy paste; hemat.=hematite; Firing conditions: A=oxidized; B=reduced; C-E, incompletely oxidized; F-H, reduced, but cooled in open air; I-L=sooted, smudged, refired; X=multiple oxidized and reduced bands in core; I=interior; E=exterior; SM=smoothed; B=burnished; OR=organic residue; D=direct rim; EV=everted rim; Ro=rounded lip; ext f=exterior folded lip; OD=orifice diameter; CB=carinated bowl; CPB=compound bowl; BT=bottle



## **A-4: CHIPPED STONE TOOLS**



Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>50-x-50 cm unit</b>										
Unit 021	0 - 20	167	209	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): CVX Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 2.1 Max Length (in mm): 25 Max Width (in mm): 15 Max Thickness (mm): 6 Edge Angle: 25	Flake Attrition: BFB Crushing: UNL Smoothing: UNL Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.5991311 Base/Stem Width:	
Unit 051	40 - 60	394	298	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Unclassified	Stage: FST Portion: STM Failure/Discard: ESH Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): IND Edge Morphology (right lateral): IND Flake Scar Pattern: IND Edge Construction Type: IND Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.7 Max Length (in mm): 8 Max Width (in mm): 20 Max Thickness (mm): 5 Edge Angle: 30	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: STM Point Ratio: 2.552941 Base to Blade Ratio (width): 1 Base/stem ratio: 0 Base Form: 3 Stem Form: 0 Curvature (left): 0 Curvature (right): 0 Shoulder Junction: 0	
<b>Block 2</b>										
Unit 062 NW¼	10 - 20	507	341	Technology: Chipped Stone Group: Tool Subgroup: core-based Type: Subtype: Unclassified	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): CVX Edge Morphology (left lateral): CVX Edge Morphology (right lateral): CVX Flake Scar Pattern: RDM Edge Construction Type: BFC Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 15.4 Max Length (in mm): 44 Max Width (in mm): 25 Max Thickness (mm): 12 Edge Angle: 60	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	QZT	Point Class: STM Point Ratio: 0.5712986 Blade Length (left): 34.66 Blade Length (right): 35.51 Stem Length: 11.62 Neck Thickness: 9.95 Neck Width: 15.35 Base to Blade Ratio (length): 0.2642711 Base to Blade Ratio (width): 0.580414 Base/stem ratio: 2 Base Form: 2 Stem Form: 4 Curvature (left): 2 Curvature (right): 2 Shoulder (left): 42 Shoulder (right): 52 Shoulder Junction: 1	
Unit 062 SE¼	30 - 40	600	355	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: FRG Failure/Discard: MFL Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): IND Edge Morphology (right lateral): IND Flake Scar Pattern: IND Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 5 Max Length (in mm): 30 Max Width (in mm): 15 Max Thickness (mm): 12 Edge Angle: 45	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.4796962 Base/Stem Width:	

## GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175

## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 2</b>										
Unit 064 NE¼	30 - 40	608	384	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Kent	Stage: FST Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: COL Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 4.8 Max Length (in mm): 38 Max Width (in mm): 21 Max Thickness (mm): 8 Edge Angle: 35	Flake Attrition: BFB Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: OBS	FWD	Point Class: STM Point Ratio: 0.5484124 Blade Length (left): 30.51 Blade Length (right): 30.45 Stem Length: 8.46 Neck Thickness: 6.86 Neck Width: 11.94 Base to Blade Ratio (length): 0.221989 Base to Blade Ratio (width): 0.6248804 Base/stem ratio: 1 Base Form: 2 Stem Form: 4 Curvature (left): 2 Curvature (right): 3 Shoulder (left): 16 Shoulder (right): 28 Shoulder Junction: 1	Analyzed by Tomka
Unit 085 SW¼	0 - 10	724	703	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): STR Edge Morphology (right lateral): CCV Flake Scar Pattern: IND Edge Construction Type: UNB Proximal Edge Grinding: OBS	Quantity: 1 Weight (in g): 0.7 Max Length (in mm): 21 Max Width (in mm): 12 Max Thickness (mm): 3 Edge Angle: 25	Flake Attrition: BFB Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.5812832 Base/Stem Width:	
Unit 085 NW¼	30 - 40	870	714	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Unclassified	Stage: FST Portion: STM Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): IND Edge Morphology (right lateral): IND Flake Scar Pattern: IND Edge Construction Type: BFC Proximal Edge Grinding: OBS	Quantity: 1 Weight (in g): 0.6 Max Length (in mm): 10 Max Width (in mm): 19 Max Thickness (mm): 5 Edge Angle: 30	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	QZT	Point Class: STM Point Ratio: 1.875632 Neck Thickness: 5.1 Neck Width: 12.22 Base to Blade Ratio (width): 1 Base/stem ratio: 0 Base Form: 2 Stem Form: 3 Curvature (left): 0 Curvature (right): 0 Shoulder Junction: 0	Archaic expanding stem, likely Ensor or other subtype

## GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175

## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 3</b>										
Unit 065 SW¼	0 - 10	470	393	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Unclassified	Stage: FST Portion: MED Failure/Discard: BND Alteration: THR Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.8 Max Length (in mm): 16 Max Width (in mm): 13 Max Thickness (mm): 4 Edge Angle: 20	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: OBS	CRT	Point Class: STM Point Ratio: 0.7953253 Base/Stem Width: Neck Thickness: 3.85 Neck Width: 4.45 Base Form: 0 Stem Form: 0 Curvature (left): 3 Curvature (right): 3 Shoulder (left): 0 Shoulder Junction: 1	since tip, right shoulder, and stem were missing from impact fractures no measurements were made
Unit 066 NE¼	20 - 30	535	411	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: FRG Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): IND Edge Morphology (right lateral): IND Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.9 Max Length (in mm): 19 Max Width (in mm): 16 Max Thickness (mm): 7 Edge Angle: 35	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	FWD	Point Class: NAP Point Ratio: 0.8196977 Base/Stem Width:	
Unit 067 SW¼	40 - 50	687	428	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: REJ Portion: PRX Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): CVX Edge Morphology (right lateral): CVX Flake Scar Pattern: RDM Edge Construction Type: UNC Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 4.1 Max Length (in mm): 24 Max Width (in mm): 30 Max Thickness (mm): 5 Edge Angle: 25	Flake Attrition: BFC Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	JPR	Point Class: NAP Point Ratio: 1.240989 Base/Stem Width:	small microflakes indicative of use wear are present along with polish within 1 mm of the edge are present on lateral and proximal edges
Unit 069 SW¼	10 - 20	545	451	Technology: Chipped Stone Group: Tool Subgroup: core-based Type: Subtype: Angostura	Stage: REJ Portion: BSH Failure/Discard: ESH Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): IND Flake Scar Pattern: IND Edge Construction Type: IND Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 6.4 Max Length (in mm): 32 Max Width (in mm): 22 Max Thickness (mm): 7 Edge Angle: 30	Flake Attrition: BFU Crushing: NPR Smoothing: NPR Polish: PRX Etching/Pitting: NPR Hafting Evidence: OBS	CRT	Point Class: NAP Point Ratio: 0.6915094 Base/Stem Width:	Analyzed by Tomka, specimen represents a projectile point that has been reworked as a graver, Regional Edwards

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 3</b>										
Unit 070 SW¼	20 - 30	629	468	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Not Applicable	Stage: FST Portion: MED Failure/Discard: PRV Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): CVX Edge Morphology (right lateral): IND Flake Scar Pattern: IND Edge Construction Type: BFU Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 4.3 Max Length (in mm): 30 Max Width (in mm): 21 Max Thickness (mm): 6 Edge Angle: 25	Flake Attrition: BFU Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	FWD	Point Class: NAP Point Ratio: 0.7078243 Base/Stem Width:	Analyzed by Tomka
Unit 070 General	40 - 50	691	470	Technology: Chipped Stone Group: Tool Subgroup: core-based Type: Subtype: San Patrice	Stage: FST Portion: PME Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFC Proximal Edge Grinding: OBS	Quantity: 1 Weight (in g): 3.4 Max Length (in mm): 34 Max Width (in mm): 25 Max Thickness (mm): 4 Edge Angle: 25	Flake Attrition: BFB Crushing: NPR Smoothing: NPR Polish: PRX Etching/Pitting: NPR Hafting Evidence: OBS	CRT	Point Class: SDN Point Ratio: 0.7397504 Stem Length: 8.68 Neck Thickness: 20.75 Neck Width: 3.66 Notch Depth(left): 2.06 Notch Depth (right): 2.06 Notch Ratio: 0.08273092 Base to Blade Ratio (length): 0.2578728 Base to Blade Ratio (width): 0.9176707 Base/stem ratio: 1 Base Form: 3 Curvature (left): 3 Curvature (right): 3 Shoulder (left): 44 Shoulder (right): 45	var. St. Johns, Analyzed by Tomka, tip missing so blade lengths were not measured
Unit 071 SW¼	30 - 40	635	479	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: REJ Portion: CMP Failure/Discard: IND Alteration: THR Edge Morphology (distal): STR Edge Morphology (left lateral): CCV Edge Morphology (right lateral): CVX Flake Scar Pattern: RDM Edge Construction Type: BDU Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 3 Max Length (in mm): 36 Max Width (in mm): 18 Max Thickness (mm): 5 Edge Angle: 25	Flake Attrition: UDU Crushing: NPR Smoothing: NPR Polish: SHD Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.4972543 Base/Stem Width:	



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## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 3</b>										
Unit 072 NW¼	30 - 40	641	493	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Ellis	Stage: FST Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 4.6 Max Length (in mm): 33 Max Width (in mm): 22 Max Thickness (mm): 7 Edge Angle: 35	Flake Attrition: BFB Crushing: NPR Smoothing: SPX Polish: SHL Etching/Pitting: NPR Hafting Evidence: OBS	CRT	Point Class: CRN Point Ratio: 0.6540899 Blade Length (left): 26.61 Blade Length (right): 25.46 Stem Length: 6.42 Neck Thickness: 5.28 Neck Width: 15.03 Notch Depth(left): 3.11 Notch Depth (right): 2.41 Notch Ratio: 0.127365 Base to Blade Ratio (length): 0.1937821 Base to Blade Ratio (width): 0.822335 Base/stem ratio: 1 Base Form: 2 Curvature (left): 3 Curvature (right): 3 Shoulder (left): 21 Shoulder (right): 15	Analyzed by Tomka
Unit 072 NW¼	30 - 40	641	493	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): CVX Edge Morphology (left lateral): CVX Edge Morphology (right lateral): CVX Flake Scar Pattern: RDM Edge Construction Type: UNU Proximal Edge Grinding: OBS	Quantity: 1 Weight (in g): 7.7 Max Length (in mm): 35 Max Width (in mm): 22 Max Thickness (mm): 10 Edge Angle: 45	Flake Attrition: UFU Crushing: NPR Smoothing: NPR Polish: DEL Etching/Pitting: NPR Hafting Evidence: OBS	FWD	Point Class: NAP Point Ratio: 0.6228344 Base/Stem Width:	Analyzed by Tomka
<b>Block 4</b>										
Unit 073 SW¼	40 - 50	1724	514	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Not Applicable	Stage: PRF Portion: PRX Failure/Discard: PRV Alteration: OTH Edge Morphology (distal): IND Edge Morphology (left lateral): CVX Edge Morphology (right lateral): CVX Flake Scar Pattern: RDM Edge Construction Type: BFC Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 2.3 Max Length (in mm): 30 Max Width (in mm): 21 Max Thickness (mm): 4 Edge Angle: 25	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.7000675 Base/Stem Width:	Analyzed by Tomka

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## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 4</b>										
Unit 075 SE¼	30 - 40	732	549	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: THR Edge Morphology (distal): CVX Edge Morphology (left lateral): CVX Edge Morphology (right lateral): CCV Flake Scar Pattern: RDM Edge Construction Type: UDB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.6 Max Length (in mm): 19 Max Width (in mm): 12 Max Thickness (mm): 3 Edge Angle: 15	Flake Attrition: UDB Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.6212447 Base/Stem Width:	Analyzed by Tomka
Unit 076 NE¼	30 - 40	735	559	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz	Stage: FST Portion: PME Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.4 Max Length (in mm): 13 Max Width (in mm): 12 Max Thickness (mm): 3 Edge Angle: 20	Flake Attrition: BDB Crushing: NPR Smoothing: NPR Polish: SHD Etching/Pitting: NPR Hafting Evidence: OBS	CRT	Point Class: STM Point Ratio: 0.9403324 Stem Length: 3.37 Neck Thickness: 2.1 Neck Width: 3.61 Base to Blade Ratio (length): 0.2545317 Base to Blade Ratio (width): 0.264257 Base/stem ratio: 2 Base Form: 1 Stem Form: 1 Curvature (left): 3 Curvature (right): 3 Shoulder (left): 55 Shoulder (right): 40 Shoulder Junction: 1	tip missing from impact fracture, no blade measurements taken
Unit 076 NW¼	30 - 40	734	560	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: DIS Failure/Discard: ESH Alteration: THR Edge Morphology (distal): STR Edge Morphology (left lateral): IND Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BDB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 2.3 Max Length (in mm): 23 Max Width (in mm): 16 Max Thickness (mm): 6 Edge Angle: 35	Flake Attrition: BFB Crushing: BLT Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.6949227 Base/Stem Width:	

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## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 4</b>										
Unit 078 NE¼	20 - 30	709	583	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz/Bassett	Stage: FST Portion: LEM Failure/Discard: BND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): CVX Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.5 Max Length (in mm): 18 Max Width (in mm): 10 Max Thickness (mm): 5 Edge Angle: 30	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: STM Point Ratio: 0.5196078 Blade Length (left): 15.95 Stem Length: 4.12 Neck Thickness: 2.67 Neck Width: 3.52 Base to Blade Ratio (length): 0.2244009 Base to Blade Ratio (width): 0.2264151 Base/stem ratio: 3 Base Form: 1 Stem Form: 1 Curvature (left): 2 Curvature (right): 3 Shoulder (left): 8 Shoulder Junction: 1	Right shoulder is missing from an impact fracture, corresponding measurements were not made
Unit 078 SW¼	20 - 30	671	586	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BDU Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.4 Max Length (in mm): 14 Max Width (in mm): 15 Max Thickness (mm): 6 Edge Angle: 30	Flake Attrition: BFU Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 1.066128 Base/Stem Width:	
Unit 078 SW¼	30 - 40	713	590	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): CVX Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: NAP Edge Construction Type: UFD Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 2.1 Max Length (in mm): 23 Max Width (in mm): 22 Max Thickness (mm): 4 Edge Angle: 30	Flake Attrition: UFD Crushing: NPR Smoothing: NPR Polish: SHD Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.9773735 Base/Stem Width:	Analyzed by Tomka
Unit 086 SW¼	10 - 20	1115	720	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Not Applicable	Stage: BLK Portion: IND Failure/Discard: PRV Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFC Proximal Edge Grinding: OBS	Quantity: 1 Weight (in g): 2.7 Max Length (in mm): 22 Max Width (in mm): 17 Max Thickness (mm): 7 Edge Angle: 30	Flake Attrition: NPR Crushing: NPR Smoothing: PPX Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.7916667 Base/Stem Width:	

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## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 4</b>										
Unit 088 SE¼	20 - 30	1260	759	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz	Stage: FST Portion: CMP Failure/Discard: BND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): SER Edge Morphology (right lateral): SER Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.5 Max Length (in mm): 19 Max Width (in mm): 10 Max Thickness (mm): 3 Edge Angle: 25	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: OBS	CRT	Point Class: STM Point Ratio: 0.5570897 Blade Length (left): 13.04 Blade Length (right): 14.48 Stem Length: 5.73 Neck Thickness: 2.69 Neck Width: 5.56 Base to Blade Ratio (length): 0.3043016 Base to Blade Ratio (width): 0.3050524 Base/stem ratio: 3 Base Form: 0 Stem Form: 1 Curvature (left): 3 Curvature (right): 2 Shoulder (right): 0 Shoulder Junction: 1	very small portion of base and left shoulder missing from impact fractures, corresponding measurements not taken
Unit 090 SW¼	36 - 36	1487	838	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Unclassified	Stage: FST Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): CVX Edge Morphology (right lateral): CVX Flake Scar Pattern: COL Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 6.3 Max Length (in mm): 39 Max Width (in mm): 26 Max Thickness (mm): 6 Edge Angle: 30	Flake Attrition: BFU Crushing: NPR Smoothing: NPR Polish: SHD Etching/Pitting: NPR Hafting Evidence: OBS	CRT	Point Class: CRN Point Ratio: 0.6811706 Blade Length (left): 33.14 Blade Length (right): 34.61 Stem Length: 5.59 Neck Thickness: 6.1 Neck Width: 17.33 Notch Depth(left): 2.87 Notch Depth (right): 1.46 Notch Ratio: 0.08231939 Base to Blade Ratio (length): 0.1447811 Base to Blade Ratio (width): 0.5551331 Base/stem ratio: 1 Base Form: 2 Curvature (left): 2 Curvature (right): 2 Shoulder (left): 15 Shoulder (right): 14	Analyzed by Tomka, expedient projectile point resembles Kent subtype
Unit 092 NW¼	18 - 28	1147	869	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: REJ Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: IND Edge Construction Type: UDB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.5 Max Length (in mm): 21 Max Width (in mm): 11 Max Thickness (mm): 8 Edge Angle: 25	Flake Attrition: UDB Crushing: NPR Smoothing: NPR Polish: SHD Etching/Pitting: NPR Hafting Evidence: NOB	QZT	Point Class: NAP Point Ratio: 0.5301543 Base/Stem Width:	Analyzed by Tomka

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## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 4</b>										
Unit 093 SW¼	20 - 25	1274	884	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Not Applicable	Stage: PRF Portion: DIS Failure/Discard: MFL Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): CVX Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1 Max Length (in mm): 14 Max Width (in mm): 18 Max Thickness (mm): 5 Edge Angle: 25	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 1.248084 Base/Stem Width:	
Unit 093 SE¼	30 - 40	1383	891	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Not Applicable	Stage: PRF Portion: DIS Failure/Discard: BND Alteration: THR Edge Morphology (distal): CVX Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BDB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.4 Max Length (in mm): 17 Max Width (in mm): 18 Max Thickness (mm): 4 Edge Angle: 25	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 1.066589 Base/Stem Width:	distal projectile point tip, could not select Point Class since missing stem/shoulder
Unit 095 SE¼	10 - 20	1161	916	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: PME Failure/Discard: ESH Alteration: THR Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: IND Edge Construction Type: UNB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 3.9 Max Length (in mm): 36 Max Width (in mm): 17 Max Thickness (mm): 9 Edge Angle: 35	Flake Attrition: UFB Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.4729242 Base/Stem Width:	Analyzed by Tomka
Unit 095 NE¼	27 - 30	1393	923	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Unclassified	Stage: INR Portion: DME Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.1 Max Length (in mm): 23 Max Width (in mm): 15 Max Thickness (mm): 4 Edge Angle: 25	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	QZT	Point Class: NAP Point Ratio: 0.6480687 Base/Stem Width:	Distal Arrow point, since stem/shoulder were missing it was not possible to select Point Class (bag originally incorrectly stated P.1382)

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## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 4</b>										
Unit 098 NE¼	20 - 30	1171	974	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): CVX Edge Morphology (left lateral): IND Edge Morphology (right lateral): IND Flake Scar Pattern: IND Edge Construction Type: UFD Proximal Edge Grinding: OBS	Quantity: 1 Weight (in g): 1.8 Max Length (in mm): 17 Max Width (in mm): 21 Max Thickness (mm): 6 Edge Angle: 30	Flake Attrition: UFB Crushing: NPR Smoothing: NPR Polish: SHD Etching/Pitting: SHD Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 1.252695 Base/Stem Width:	
Unit 099 NE¼	10 - 20	1175	991	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): IND Edge Morphology (right lateral): CCV Flake Scar Pattern: IND Edge Construction Type: UNU Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.3 Max Length (in mm): 17 Max Width (in mm): 9 Max Thickness (mm): 3 Edge Angle: 25	Flake Attrition: UFU Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.5543159 Base/Stem Width:	Analyzed by Tomka
Unit 099 NW¼	10 - 20	1174	992	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: IND Edge Construction Type: UNB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.7 Max Length (in mm): 20 Max Width (in mm): 11 Max Thickness (mm): 3 Edge Angle: 25	Flake Attrition: UFU Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: Point Ratio: 0.5837173 Base/Stem Width:	Analyzed by Tomka
Unit 105 General	10 - 20	1201	1096	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: PRX Failure/Discard: ESH Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: IND Edge Construction Type: UNU Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.3 Max Length (in mm): 11 Max Width (in mm): 12 Max Thickness (mm): 2 Edge Angle: 15	Flake Attrition: UFU Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 1.101073 Base/Stem Width:	

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## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 4</b>										
Unit 105 NW¼	10 - 20	1198	1098	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: PME Failure/Discard: ESH Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): CVX Edge Morphology (right lateral): STR Flake Scar Pattern: IND Edge Construction Type: UNB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.4 Max Length (in mm): 19 Max Width (in mm): 17 Max Thickness (mm): 5 Edge Angle: 30	Flake Attrition: BFB Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.9037153 Base/Stem Width:	
Unit 118 NE¼	19 - 29	1614	1392	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Unclassified	Stage: FST Portion: MED Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.7 Max Length (in mm): 15 Max Width (in mm): 15 Max Thickness (mm): 4 Edge Angle: 20	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	QZT	Point Class: STM Point Ratio: 1.01178 Base/Stem Width: Neck Thickness: 2.81 Neck Width: 6.49 Base Form: 0 Stem Form: 0 Curvature (left): 3 Curvature (right): 3 Shoulder (left): 5 Shoulder (right): 0 Shoulder Junction: 1	tip and stem are both missing from impact fractures, corresponding measurements were not taken
Unit 120 SE¼	20 - 25	1630	1430	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): CCV Flake Scar Pattern: IND Edge Construction Type: UNU Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.7 Max Length (in mm): 20 Max Width (in mm): 16 Max Thickness (mm): 8 Edge Angle: 25	Flake Attrition: UFU Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	FWD	Point Class: NAP Point Ratio: 0.8044776 Base/Stem Width:	Analyzed by Tomka
Unit 120 SW¼	25 - 30	1631	1435	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz/Bassett	Stage: FST Portion: PME Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.6 Max Length (in mm): 18 Max Width (in mm): 15 Max Thickness (mm): 4 Edge Angle: 25	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: OBS	QZT	Point Class: STM Point Ratio: 0.8082192 Stem Length: 4.33 Neck Thickness: 2.68 Neck Width: 3.85 Base to Blade Ratio (length): 0.2372603 Base to Blade Ratio (width): 0.1342373 Base/stem ratio: 3 Base Form: 5 Stem Form: 1 Curvature (left): 3 Curvature (right): 3 Shoulder (left): 20 Shoulder (right): 18 Shoulder Junction: 1	tip is missing, corresponding measurements were not taken

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## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 4</b>										
Unit 123 NW¼	15 - 20	1539	1491	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): CCV Edge Morphology (right lateral): STR Flake Scar Pattern: IND Edge Construction Type: UNU Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1 Max Length (in mm): 19 Max Width (in mm): 21 Max Thickness (mm): 4 Edge Angle: 30	Flake Attrition: BFU Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 1.128495 Base/Stem Width:	Analyzed by Tomka
Unit 123 NE¼	30 - 35	1661	1503	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Unclassified	Stage: FST Portion: BSH Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): IND Edge Morphology (right lateral): IND Flake Scar Pattern: RDM Edge Construction Type: IND Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.6 Max Length (in mm): 17 Max Width (in mm): 9 Max Thickness (mm): 5 Edge Angle: 30	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: STM Point Ratio: 0.5167064 Base/Stem Width: Shoulder Junction: 1	only the left shoulder and a small portion of the base are present, corresponding measurements were not taken
Unit 125 NW¼	15 - 20	1567	1551	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz	Stage: PRF Portion: CMP Failure/Discard: HST Alteration: THR Edge Morphology (distal): STR Edge Morphology (left lateral): STR Edge Morphology (right lateral): CCV Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.7 Max Length (in mm): 20 Max Width (in mm): 13 Max Thickness (mm): 5 Edge Angle: 30	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	QZT	Point Class: STM Point Ratio: 0.6527638 Blade Length (left): 15.16 Blade Length (right): 14.63 Stem Length: 5.95 Neck Thickness: 2.84 Neck Width: 4.91 Base to Blade Ratio (length): 0.298995 Base to Blade Ratio (width): 0.2709777 Base/stem ratio: 3 Base Form: 1 Stem Form: 1 Curvature (left): 3 Curvature (right): 4 Shoulder (left): 0 Shoulder (right): 0 Shoulder Junction: 2	
Unit 126 NE¼	0 - 12	1692	1568	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: IND Edge Construction Type: UNC Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.8 Max Length (in mm): 19 Max Width (in mm): 14 Max Thickness (mm): 4 Edge Angle: 20	Flake Attrition: UFC Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.7153135 Base/Stem Width:	Analyzed by Tomka



## GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175

## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 4</b>										
Unit 127 NW¼	21 - 31	1711	1593	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz	Stage: FST Portion: PME Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.5 Max Length (in mm): 15 Max Width (in mm): 13 Max Thickness (mm): 3 Edge Angle: 25	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: STM Point Ratio: 0.8327847 Stem Length: 5.85 Neck Thickness: 2.44 Neck Width: 4.16 Base to Blade Ratio (length): 0.3851218 Base to Blade Ratio (width): 0.1928854 Base/stem ratio: 3 Base Form: 1 Stem Form: 1 Curvature (left): 3 Curvature (right): 3 Shoulder (left): 11 Shoulder (right): 10 Shoulder Junction: 1	tip missing from impact fracture, corresponding measurements not taken
Unit 127 NW¼	21 - 31	1711	1593	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz/Bassett	Stage: FST Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.6 Max Length (in mm): 21 Max Width (in mm): 12 Max Thickness (mm): 4 Edge Angle: 20	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: SHD Etching/Pitting: NPR Hafting Evidence: OBS	FWD	Point Class: STM Point Ratio: 0.5786705 Blade Length (left): 19.45 Blade Length (right): 15.89 Stem Length: 3.59 Neck Thickness: 2.48 Neck Width: 3.85 Base to Blade Ratio (length): 0.1716882 Base to Blade Ratio (width): 0.1206612 Base/stem ratio: 3 Base Form: 5 Stem Form: 1 Curvature (left): 3 Curvature (right): 3 Shoulder (left): 6 Shoulder (right): 0 Shoulder Junction: 1	the right shoulder and stem are oddly formed, likely the result of reworking
Unit 127 SW¼	21 - 31	1710	1595	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): IND Flake Scar Pattern: IND Edge Construction Type: UNU Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.7 Max Length (in mm): 24 Max Width (in mm): 11 Max Thickness (mm): 4 Edge Angle: 20	Flake Attrition: UFU Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	QZT	Point Class: NAP Point Ratio: 0.450211 Base/Stem Width:	

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## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 4</b>										
Unit 087, Feature 7 SW½	40 - 53	1802	1604	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Bonham	Stage: FST Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): CVX Edge Morphology (left lateral): CCV Edge Morphology (right lateral): CCV Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.8 Max Length (in mm): 18 Max Width (in mm): 13 Max Thickness (mm): 5 Edge Angle: 25	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: SHD Etching/Pitting: NPR Hafting Evidence: OBS	CRT	Point Class: STM Point Ratio: 0.7669516 Blade Length (left): 11.66 Blade Length (right): 13.04 Stem Length: 6.38 Neck Thickness: 2.83 Neck Width: 6.65 Base to Blade Ratio (length): 0.3635328 Base to Blade Ratio (width): 0.4836553 Base/stem ratio: 2 Base Form: 2 Stem Form: 2 Curvature (left): 4 Curvature (right): 4 Shoulder (left): 0 Shoulder (right): 0 Shoulder Junction: 1	
<b>Block 5</b>										
Unit 080 SW¼	40 - 50	779	624	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz	Stage: FST Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: UNB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.4 Max Length (in mm): 17 Max Width (in mm): 10 Max Thickness (mm): 2 Edge Angle: 25	Flake Attrition: BFD Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	QZT	Point Class: STM Point Ratio: 0.5816092 Blade Length (left): 14.08 Blade Length (right): 13.69 Stem Length: 5.65 Neck Thickness: 2.11 Neck Width: 4.09 Base to Blade Ratio (length): 0.3247127 Base to Blade Ratio (width): 0.2835968 Base/stem ratio: 3 Base Form: 2 Stem Form: 1 Curvature (left): 3 Curvature (right): 3 Shoulder (left): 8 Shoulder (right): 5 Shoulder Junction: 2	
Unit 080 SW¼	40 - 50	779	624	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz	Stage: FST Portion: PRX Failure/Discard: PRV Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): IND Edge Morphology (right lateral): IND Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.5 Max Length (in mm): 13 Max Width (in mm): 17 Max Thickness (mm): 3 Edge Angle: 20	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: STM Point Ratio: 1.273739 Stem Length: 4.58 Neck Thickness: 3.05 Neck Width: 5.61 Base to Blade Ratio (length): 0.3397626 Base to Blade Ratio (width): 0.2329645 Base/stem ratio: 2 Base Form: 0 Stem Form: 1 Curvature (left): 0 Curvature (right): 0 Shoulder (left): 20 Shoulder (right): 22 Shoulder Junction: 1	tip missing, corresponding measurements not made

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## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 5</b>										
Unit 081 SE¼	40 - 50	827	644	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: PRX Failure/Discard: PRV Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): IND Flake Scar Pattern: RDM Edge Construction Type: BFU Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 2.9 Max Length (in mm): 21 Max Width (in mm): 15 Max Thickness (mm): 9 Edge Angle: 45	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.6828132 Base/Stem Width:	
<b>Block 7</b>										
Unit 110 NW¼	20 - 30	911	1185	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: REJ Portion: CMP Failure/Discard: PLL Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): IND Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFD Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.4 Max Length (in mm): 22 Max Width (in mm): 15 Max Thickness (mm): 4 Edge Angle: 20	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.6806839 Base/Stem Width:	
Unit 111 NW¼	0 - 10	915	1193	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: THR Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): IND Flake Scar Pattern: IND Edge Construction Type: UNU Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.3 Max Length (in mm): 24 Max Width (in mm): 12 Max Thickness (mm): 5 Edge Angle: 30	Flake Attrition: UFU Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.4757999 Base/Stem Width:	
Unit 111 NW¼	10 - 20	918	1196	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: THR Edge Morphology (distal): STR Edge Morphology (left lateral): IND Edge Morphology (right lateral): IND Flake Scar Pattern: IND Edge Construction Type: UFD Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.6 Max Length (in mm): 15 Max Width (in mm): 14 Max Thickness (mm): 3 Edge Angle: 15	Flake Attrition: UFD Crushing: NPR Smoothing: DIS Polish: SHD Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.931479 Base/Stem Width:	

## GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175

## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 7</b>										
Unit 111 NE¼	50 - 60	996	1215	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: PLL Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): IND Edge Morphology (right lateral): CVX Flake Scar Pattern: RDM Edge Construction Type: BFU Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 2 Max Length (in mm): 22 Max Width (in mm): 18 Max Thickness (mm): 5 Edge Angle: 30	Flake Attrition: BFU Crushing: NPR Smoothing: NPR Polish: SHL Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.8029622 Base/Stem Width:	
Unit 111 SW¼	60 - 70	1047	1220	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Unclassified	Stage: FST Portion: STM Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): IND Edge Morphology (right lateral): IND Flake Scar Pattern: IND Edge Construction Type: BFC Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.2 Max Length (in mm): 12 Max Width (in mm): 21 Max Thickness (mm): 5 Edge Angle: 25	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: OBS	JPR	Point Class: STM Point Ratio: 1.855903 Stem Length: 11.52 Neck Thickness: 5.18 Neck Width: 14.56 Base to Blade Ratio (length): 1 Base to Blade Ratio (width): 1 Base/stem ratio: 1 Base Form: 2 Stem Form: 3 Curvature (left): 0 Curvature (right): 0 Shoulder Junction: 0	Archaic expanding stem, likely Ensor or other subtype
<b>Block 8</b>										
Unit 114 SE¼	30 - 40	1070	1285	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BDB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.2 Max Length (in mm): 19 Max Width (in mm): 15 Max Thickness (mm): 4 Edge Angle: 25	Flake Attrition: BFU Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.7887771 Base/Stem Width:	
Unit 115 SW¼	50 - 60	1218	1323	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: CMP Failure/Discard: IND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: UNB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 1.8 Max Length (in mm): 22 Max Width (in mm): 15 Max Thickness (mm): 5 Edge Angle: 30	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	QZT	Point Class: NAP Point Ratio: 0.6784566 Base/Stem Width:	

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## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<b>Block 8</b>										
Unit 116 NW¼	50 - 61	1227	1343	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz	Stage: PRF Portion: CMP Failure/Discard: HST Alteration: NOB Edge Morphology (distal): CVX Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.6 Max Length (in mm): 17 Max Width (in mm): 13 Max Thickness (mm): 3 Edge Angle: 25	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	FWD	Point Class: STM Point Ratio: 0.776285 Blade Length (left): 12.92 Blade Length (right): 13.37 Stem Length: 4.2 Neck Thickness: 2.47 Neck Width: 5.23 Base to Blade Ratio (length): 0.2453271 Base to Blade Ratio (width): 0.1948834 Base/stem ratio: 3 Base Form: 1 Stem Form: 1 Curvature (left): 3 Curvature (right): 3 Shoulder (left): 10 Shoulder (right): 10 Shoulder Junction: 1	likely an unfinished Perdiz point
Unit 117 NW¼	20 - 25	1469	1358	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz	Stage: FST Portion: FRG Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): IND Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.2 Max Length (in mm): 15 Max Width (in mm): 10 Max Thickness (mm): 3 Edge Angle: 20	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: STM Point Ratio: 0.6722296 Stem Length: 5.64 Neck Thickness: 2.66 Neck Width: 5.38 Base to Blade Ratio (length): 0.376502 Base to Blade Ratio (width): 0.1737835 Base/stem ratio: 3 Base Form: 5 Stem Form: 1 Shoulder (left): 0 Shoulder Junction: 1	impact fracture has removed the tip, one face, and right lateral edge, corresponding measurements were not taken
Unit 117 NE¼	25 - 30	1342	1361	Technology: Chipped Stone Group: Tool Subgroup: simple detachment-based Type: Subtype: Not Applicable	Stage: INR Portion: PME Failure/Discard: ESH Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: IND Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 3.5 Max Length (in mm): 24 Max Width (in mm): 13 Max Thickness (mm): 12 Edge Angle: 20	Flake Attrition: BFB Crushing: UNL Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: NAP Point Ratio: 0.5211499 Base/Stem Width:	

## GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175

## Chipped Stone Tool Data

Unit	Depth (cm)	Prov. No.	Lot No.	Taxonomy	Attributes	Metric Information	Wear Patterning	Raw Material	Projectile Point Data	Comment
<i>Feature</i>										
Feature 47 W½	55 - 63	1871	1651	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Unclassified	Stage: FST Portion: DME Failure/Discard: BND Alteration: NOB Edge Morphology (distal): STR Edge Morphology (left lateral): RCV Edge Morphology (right lateral): RCV Flake Scar Pattern: RDM Edge Construction Type: BFB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.2 Max Length (in mm): 13 Max Width (in mm): 10 Max Thickness (mm): 3 Edge Angle: 20	Flake Attrition: NPR Crushing: NPR Smoothing: NPR Polish: SHD Etching/Pitting: NPR Hafting Evidence: NOB	CRT	Point Class: STM Point Ratio: 0.799843 Base/Stem Width: Neck Thickness: 2.46 Neck Width: 5.57 Base Form: 0 Stem Form: 0 Curvature (left): 5 Curvature (right): 5 Shoulder Junction: 0	shoulders and stem missing, no measurements taken on these attributes
Feature 47 W½	55 - 63	1871	1651	Technology: Chipped Stone Group: Tool Subgroup: complex detachment-based Type: Subtype: Perdiz	Stage: FST Portion: PME Failure/Discard: BND Alteration: NOB Edge Morphology (distal): IND Edge Morphology (left lateral): STR Edge Morphology (right lateral): STR Flake Scar Pattern: RDM Edge Construction Type: UNB Proximal Edge Grinding: NOB	Quantity: 1 Weight (in g): 0.2 Max Length (in mm): 10 Max Width (in mm): 10 Max Thickness (mm): 2 Edge Angle: 15	Flake Attrition: UFU Crushing: NPR Smoothing: NPR Polish: NPR Etching/Pitting: NPR Hafting Evidence: OBS	CRT	Point Class: STM Point Ratio: 1.028283 Stem Length: 4.27 Neck Thickness: 2.11 Neck Width: 4.27 Base to Blade Ratio (length): 0.4313132 Base to Blade Ratio (width): 0.1277014 Base/stem ratio: 3 Base Form: 5 Stem Form: 1 Curvature (left): 0 Curvature (right): 0 Shoulder (left): 25 Shoulder (right): 28 Shoulder Junction: 1	tip is missing from impact fracture, corresponding measurements not taken

A-5: CORES





## GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175

## Core Data

Unit	Depth (cm)	Prov. No.	Lot No.	Technology Group	Subgroup Class	Subclass	Cortex	Raw Material	Weight (in g)	Qty	Analysis Comment
<b>Block 4</b>											
Unit 086 NE¼	50 - 60	1749	734	Chipped Stone	Non-tool core	unrefined tested cobble/pebble	1	CRT	3.7	1	
Unit 100 SE¼	20 - 27	1305	1010	Chipped Stone	Non-tool core	unrefined tested cobble/pebble	4	QZT	51.4	1	single flake was removed form one end
Unit 123 NE¼	20 - 25	1592	1495	Chipped Stone	Non-tool core	refined unidirectional	4	CRT	27.4	1	
Unit 124 SE¼	16 - 21	1555	1527	Chipped Stone	Non-tool core	unrefined tested cobble/pebble	4	CRT	34.3	1	
<b>Block 8</b>											
Unit 116 NW¼	30 - 38	1040	1331	Chipped Stone	Non-tool core	refined bidirectional	0	QZT	3.1	1	
Unit 117 NW¼	30 - 35	1345	1367	Chipped Stone	Non-tool core	unrefined tested cobble/pebble	4	CRT	21.5	1	



**A-6: GROUNDSTONE**



GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PNI75  
Groundstone Analysis

Unit	Depth (cm)	Prov. No.	Lot No.	Grinding	Polish	Pecking	Etching/pitting	Wear Location	Battering	Completeness	Raw Material	Size (in mm) L-x-W-x-T	Weight (in g)	Qty	Analysis Comment
<b>Block 2</b>															
Unit 084 NW¼	20 - 30	747	691	False	False	False	False	One end	True	Complete	OTH (Sandstone)	61-x-49-x-38	139.7	1	slightly smoothed, round but flat rock, light battered marks on one end, slight discoloration on one side may suggest burning
<b>Block 4</b>															
Unit 077 SW¼	30 - 40	711	577	False	True	True	True	Multiple surfaces	True	Complete	QZT	91-x-63-x-34	287.3	1	well polished on all surfaces, 2 shallow pits on opposite flat surfaces; multiple striations on narrow end and 1 side, battered on opposite end
Unit 086 NE¼	40 - 50	1746	731	False	True	False	True	Multiple surfaces	True	Complete	ISS	77-x-64-x-29	304.4	1	one face polished with subtle pit in center, multiple edges battered
Unit 097 SE¼	30 - 40	1331	959	True	True	False	False	One side, one end	True	Complete	ISS	200-x-122-x-53	1899.8	1	long flat rock used as grinding slab and battered on one end

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Groundstone Analysis

Unit	Depth (cm)	Prov. No.	Lot No.	Grinding	Polish	Pecking	Etching/pitting	Wear Location	Battering	Completeness	Raw Material	Size (in mm) L-X-W-X-T	Weight (in g)	Qty	Analysis Comment
<b>Block 4</b>															
Unit 077 SW¼	30 - 40	712	1774	False	True	False	True	Multiple surfaces	True	Complete	ISS	87-x-67-x-37	291	1	triangular, one face polished with pitted depression in center, multiple striations on one edge, battering on narrow edge

**A-7: DEBITAGE**











Geo-Marine, Inc.  
GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Debitage Analysis

Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 2</b>																	
Unit 061 SW¼	40 - 50	855	337	Unanalyzed	1	0.3											
Unit 062 NE¼	30 - 40	598	352	Unanalyzed	1	0.3											
Unit 062 NE¼	30 - 40	599	353	Unanalyzed	2	2											
Unit 062 NE¼	20 - 30	677	346	Unanalyzed	1	0.2											
Unit 062 NE¼	20 - 30	676	345	Unanalyzed	2	2.2											
Unit 062 NW¼	20 - 30	675	348	Unanalyzed	2	0.2											
Unit 062 SW¼	20 - 30	673	350	Unanalyzed	1	2.5											
Unit 062 SW¼	30 - 40	596	356	Unanalyzed	1	0.1											
Unit 063 NE¼	30 - 40	682	369	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 063 SE¼	10 - 20	513	363	Unanalyzed	1	1.8											
Unit 063 SW¼	30 - 40	680	372	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	1
Unit 064 General	20 - 30	553	380	Analyzed	1	0.7	LPR	PWS	LOC	FWD	3		N	COM	2	CRT	1
Unit 064 NE¼, Feature 1	33 - 35	873	385	Analyzed	2	0.4	LPR	PWS	LOC	QZT	4		I	COM	4	CRT	1
Unit 064 NW¼	30 - 40	607	386	Analyzed	2	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 064 NW¼	10 - 20	514	379	Unanalyzed	1	0.2											
Unit 064 SE¼	30 - 40	609	387	Analyzed	1	1	LPR	PWS	LOC	QZT	4		I	BRK	4	CRT	1
Unit 064 SE¼	20 - 30	552	383	Analyzed	1	1.1	LPR	PWS	LOC	CRT	3		N	COM	2	CRT	1
Unit 064 SE¼	20 - 30	552	383	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	1
Unit 083 NE¼	30 - 40	861	675	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	3
Unit 083 NE¼	30 - 40	861	675	Analyzed	1	1.4	LPR	PWS	REG	CRT	3		Y	COM	0	ABR	3
Unit 083 NE¼	30 - 40	861	675	Analyzed	1	0.1	LPR	PWS	LOC	FWD	4		I	COM	0	FLT	3
Unit 083 NW¼	40 - 50	885	679	Analyzed	1	1	LPR	PWS	LOC	QZT	3		N	FRG	0	IND	1
Unit 083 SE¼	10 - 20	746	667	Unanalyzed	1	0.3											
Unit 083 SE¼	20 - 30	800	671	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	0	IND	1
Unit 083 SW¼	30 - 40	859	678	Analyzed	1	0.3	LPR	PWS	LOC	QZT	4		I	COM	0	CPX	2
Unit 083 SW¼	30 - 40	859	678	Analyzed	1	0.7	LPR	PWS	LOC	QZT	4		I	DEB	1	IND	2

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 2</b>																	
Unit 083 SW¼	30 - 40	859	678	Analyzed	1	1.6	LPR	PWS	LOC	SLM	3		N	COM	0	IND	2
Unit 083 SW¼	10 - 20	743	668	Unanalyzed	3	8.8											
Unit 083 SW¼	20 - 30	797	673	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	BRK	0	ABR	1
Unit 084 General	10 - 20	806	684	Unanalyzed	3	0.8											
Unit 084 General	20 - 30	811	689	Analyzed	1	0.2	LPR	PWS	LOC	QZT	3		N	COM	4	CRT	2
Unit 084 General	20 - 30	811	689	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	2
Unit 084 NE¼	10 - 20	804	685	Unanalyzed	5	1.3											
Unit 084 SE¼	20 - 30	810	692	Analyzed	1	2.6	LPR	PWS	LOC	CRT	3		N	COM	4	CRT	1
Unit 084 SE¼	10 - 20	805	687	Unanalyzed	2	1.8											
Unit 084 SW¼	30 - 40	864	698	Analyzed	1	0.4	LPR	PWS	REG	CRT	4		I	COM	0	IND	2
Unit 084 SW¼	30 - 40	864	698	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	2
Unit 084 SW¼	30 - 40	864	698	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	1
Unit 084 SW¼	10 - 20	802	688	Unanalyzed	1	2.2											
Unit 085 General	0 - 10	728	699	Unanalyzed	1	0.3											
Unit 085 NE¼	30 - 40	871	713	Analyzed	1	0.4	LPR	PWS	LOC	CRT	3		Y	COM	0	CPX	1
Unit 085 NE¼	10 - 20	814	704	Unanalyzed	1	0.2											
Unit 085 NE¼	30 - 40	871	713	Analyzed	1	1.6	LPR	PWS	LOC	CRT	3		N	COM	0	CPX	1
Unit 085 NE¼	0 - 10	726	700	Unanalyzed	2	1.7											
Unit 085 NE¼	30 - 40	871	713	Analyzed	1	4	LPR	PWS	LOC	CRT	2	ABS	N	COM	0	FAC	1
Unit 085 NW¼	20 - 30	817	710	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	BRK	1	FLT	1
Unit 085 SE¼	0 - 10	727	702	Unanalyzed	1	0.3											
Unit 085 SE¼	10 - 20	815	706	Unanalyzed	2	0.8											
Unit 085 SW¼	30 - 40	869	715	Analyzed	1	2.6	LPR	PWS	LOC	CRT	3		N	COM	2	CRT	1
Unit 085 SW¼	10 - 20	812	707	Unanalyzed	2	2.7											
Unit 085 SW¼	30 - 40	869	715	Analyzed	1	1.3	LPR	PWS	LOC	CRT	3		N	COM	0	CPX	1
Unit 085 SW¼	30 - 40	869	715	Analyzed	1	2.9	LPR	PWS	LOC	CRT	2	ABS	N	BRK	0	CPX	1





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<b>Block 4</b>																	
Unit 073 SW¼	40 - 50	1724	514	Unanalyzed	10	10											
Unit 073 SW¼	20 - 30	644	508	Unanalyzed	3	1											
Unit 073 SW¼	50 - 60	1726	516	Unanalyzed	4	2.9											
Unit 073 SW¼	30 - 40	697	512	Unanalyzed	1	0.8											
Unit 074 NW¼	40 - 50	1730	530	Unanalyzed	1	0.3											
Unit 074 NW¼	30 - 40	702	527	Unanalyzed	2	0.4											
Unit 074 NW¼	50 - 60	1732	533	Unanalyzed	2	1.7											
Unit 074 SE¼	20 - 30	651	524	Unanalyzed	2	3.5											
Unit 074 SE¼	30 - 40	704	528	Unanalyzed	1	5											
Unit 074 SW¼	50 - 60	1731	535	Unanalyzed	1	0.4											
Unit 074 SW¼	40 - 50	1729	531	Unanalyzed	6	2.5											
Unit 075 NE¼	30 - 40	731	547	Analyzed	1	0.4	LPR	PWS	LOC	CRT	4		I	BRK	4	FLT	1
Unit 075 NE¼	20 - 30	657	543	Unanalyzed	3	1.1											
Unit 075 NW¼	30 - 40	730	548	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	FRG	0	IND	2
Unit 075 NW¼	30 - 40	730	548	Analyzed	1	0.8	LPR	PWS	LOC	CRT	4		I	DEB	4	IND	2
Unit 075 SE¼	30 - 40	732	549	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	0	IND	1
Unit 075 SE¼	30 - 40	732	549	Analyzed	1	0.04	LPR	PWS	LOC	FWD	5		I	DEB	0	IND	1
Unit 075 SE¼	30 - 40	732	549	Analyzed	1	1.4	LPR	PWS	LOC	QZT	3		N	FRG	4	IND	1
Unit 075 SE¼	20 - 30	658	545	Unanalyzed	2	0.1											
Unit 075 SW¼	20 - 30	655	546	Unanalyzed	2	0.4											
Unit 075, Feature 10 N½	40 - 50	1808	1608	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Unit 075, Feature 10 S½	40 - 50	1810	1609	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	1	IND	1
Unit 075, Feature 14 E½	40 - 50	1817	1613	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	0	FLT	1
Unit 075, Feature 15 W½	40 - 47	1819	1614	Analyzed	1	0.04	LPR	PWS	LOC	QZT	5		I	FRG	1	IND	1
Unit 075, Feature 15 W½	40 - 47	1819	1614	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	0	IND	1
Unit 075, Feature 15 W½	40 - 47	1819	1614	Analyzed	3	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	2



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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 4</b>																	
Unit 075, Feature 40 S½	40 - 60	1859	1640	Analyzed	1	0.04	LPR	PWS	REG	CRT	5		I	COM	0	CPX	1
Unit 076 NE¼	30 - 40	735	559	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	BRK	0	FLT	1
Unit 076 NE¼	30 - 40	735	559	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	0	FLT	1
Unit 076 NE¼	30 - 40	735	559	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	1
Unit 076 NE¼	30 - 40	735	559	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	BRK	0	CPX	1
Unit 076 NE¼	50 - 60	1741	565	Analyzed	1	0.8	LPR	PWS	LOC	CRT	4		I	DEB	1	IND	1
Unit 076 NE¼	20 - 30	661	555	Unanalyzed	2	0.4											
Unit 076 NE¼	30 - 40	735	559	Analyzed	1	1.2	LPR	PWS	LOC	CRT	4		I	FRG	3	IND	1
Unit 076 NE¼	30 - 40	735	559	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 076 NW¼	20 - 30	660	556	Unanalyzed	4	3											
Unit 076 NW¼	30 - 40	734	560	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	2
Unit 076 NW¼	30 - 40	734	560	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	3	CRT	2
Unit 076 NW¼	30 - 40	734	560	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	COM	0	FLT	2
Unit 076 SE¼	30 - 40	736	561	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	3
Unit 076 SE¼	30 - 40	736	561	Analyzed	2	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	3
Unit 076 SE¼	30 - 40	736	561	Analyzed	1	0.04	LPR	PWS	REG	CRT	4		I	COM	0	FLT	3
Unit 076 SE¼	20 - 30	662	557	Unanalyzed	4	1.6											
Unit 076 SE¼	30 - 40	736	561	Analyzed	1	0.7	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	3
Unit 076 SE¼	30 - 40	736	561	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	3
Unit 076 SE¼	10 - 20	586	554	Unanalyzed	1	1.5											
Unit 076 SW¼	30 - 40	733	562	Analyzed	2	0.4	LPR	PWS	LOC	QZT	4		I	FRG	0	IND	1
Unit 076 SW¼	30 - 40	733	562	Analyzed	1	0.4	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 076 SW¼	20 - 30	659	558	Unanalyzed	4	1											
Unit 076 SW¼	30 - 40	733	562	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	IND	1
Unit 076, Feature 13 E½	40 - 50	1815	1612	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Unit 076, Feature 9 E½	40 - 53	1805	1606	Analyzed	19	0.2	LPR	PWS	INT	USX	6		I	DEB	0	IND	1

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 4</b>																	
Unit 076, Feature 9 E½	40 - 53	1805	1606	Analyzed	16	0.5	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Unit 076, Feature 9 W½	40 - 53	2002	1766	Analyzed	1	1.2	LPR	PWS	LOC	CRT	4		I	COM	0	ABR	1
Unit 076, Feature 9 W½	40 - 53	2002	1766	Analyzed	1	0.4	LPR	PWS	LOC	CRT	4		I	DEB	2	IND	1
Unit 076, Feature 9 W½	40 - 53	1807	1607	Analyzed	10	0.1	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Unit 077 NE¼	20 - 30	707	570	Unanalyzed	1	0.3											
Unit 077 NE¼	10 - 20	665	566	Unanalyzed	1	0.6											
Unit 077 NW¼	20 - 30	706	571	Unanalyzed	2	1.7											
Unit 077 NW¼	10 - 20	664	567	Unanalyzed	1	5											
Unit 077 SE¼	10 - 20	666	568	Unanalyzed	2	1											
Unit 077 SE¼	20 - 30	708	572	Unanalyzed	1	0.5											
Unit 077 SW¼	10 - 20	663	569	Unanalyzed	1	0.6											
Unit 077 SW¼	30 - 40	737	576	Analyzed	1	1.6	LPR	PWS	LOC	CRT	3		N	DEB	2	IND	1
Unit 077 SW¼	20 - 30	705	573	Unanalyzed	3	3											
Unit 077, Feature 17 E½	40 - 52	1822	1616	Analyzed	1	1.5	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Unit 077, Feature 17 E½	40 - 52	1822	1616	Analyzed	2	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Unit 077, Feature 18 E½	40 - 48	1824	1617	Analyzed	2	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Unit 078 NE¼	20 - 30	709	583	Unanalyzed	3	0.6											
Unit 078 NW¼	30 - 40	714	588	Analyzed	1	0.5	LPR	PWS	LOC	QZT	4		I	COM	0	CPX	1
Unit 078 NW¼	30 - 40	714	588	Analyzed	1	1.3	LPR	PWS	LOC	CRT	3		N	FRG	0	IND	1
Unit 078 NW¼	30 - 40	714	588	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Unit 078 NW¼	30 - 40	714	588	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	1
Unit 078 NW¼	40 - 50	1744	591	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	IND	1
Unit 078 NW¼	20 - 30	672	584	Unanalyzed	6	3											
Unit 078 SE¼	20 - 30	710	585	Unanalyzed	2	0.8											
Unit 078 SE¼	30 - 40	716	589	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	1
Unit 078 SE¼	30 - 40	716	589	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	1



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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 4</b>																	
Unit 087 NW¼	30 - 40	1472	745	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	BRK	0	ABR	1
Unit 087 NW¼	40 - 50	1751	749	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 087 NW¼	50 - 60	1754	752	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	BRK	1	CRT	1
Unit 087 NW¼	50 - 60	1754	752	Analyzed	1	1.3	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Unit 087 NW¼	10 - 20	1121	737	Unanalyzed	2	2.7											
Unit 087 SE¼	30 - 40	1474	746	Analyzed	1	0.4	LPR	PWS	LOC	CRT	4		I	DEB	3	IND	1
Unit 087 SE¼	20 - 30	1256	742	Unanalyzed	3	0.5											
Unit 087 SE¼	30 - 40	1474	746	Analyzed	2	0.2	LPR	PWS	LOC	CRT	4		I	FRG	1	IND	2
Unit 087 SE¼	30 - 40	1474	746	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	BRK	4	FLT	2
Unit 087 SE¼	30 - 40	1474	746	Analyzed	2	0.8	LPR	PWS	LOC	QZT	4		I	DEB	0	IND	2
Unit 087 SE¼	30 - 40	1474	746	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	2
Unit 087 SE¼	40 - 50	1753	750	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 087 SW¼	10 - 20	1120	739	Unanalyzed	1	1.6											
Unit 087, Feature 6 E½	40 - 56	1797	1601	Analyzed	3	0.1	LPR	PWS	LOC	CRT	5		I	FRG	4	IND	3
Unit 087, Feature 6 E½	40 - 56	1797	1601	Analyzed	2	0.04	LPR	PWS	LOC	CRT	5		I	FRG	1	IND	3
Unit 087, Feature 6 E½	40 - 56	1797	1601	Analyzed	1	0.8	LPR	PWS	LOC	QZT	4		I	FRG	2	IND	3
Unit 087, Feature 6 E½	40 - 56	1797	1601	Analyzed	1	0.3	LPR	PWS	REG	JPR	4		I	COM	0	CPX	3
Unit 087, Feature 6 E½	40 - 56	1797	1601	Analyzed	2	0.6	LPR	PWS	LOC	CRT	4		I	FRG	1	IND	3
Unit 087, Feature 6 E½	40 - 56	1797	1601	Analyzed	22	0.1	LPR	PWS	LOC	USX	6		I	DEB	0	IND	3
Unit 087, Feature 6 E½	40 - 56	1797	1601	Analyzed	20	0.4	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	3
Unit 087, Feature 6 E½	40 - 56	1797	1601	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	3
Unit 087, Feature 6 W½	40 - 56	1799	1602	Analyzed	1	0.8	LPR	PWS	LOC	CRT	4		I	DEB	3	IND	1
Unit 087, Feature 6 W½	40 - 56	1799	1602	Analyzed	7	0.1	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Unit 087, Feature 6 W½	40 - 56	1799	1602	Analyzed	7	0.2	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Unit 087, Feature 7 NE½	40 - 53	1800	1603	Analyzed	22	0.2	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Unit 087, Feature 7 NE½	40 - 53	1800	1603	Analyzed	4	0.4	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1

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<b>Block 4</b>																	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	Analyzed	21	0.5	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Unit 087, Feature 7 NE½	40 - 53	1800	1603	Analyzed	4	0.8	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	1
Unit 087, Feature 7 NE½	40 - 53	1800	1603	Analyzed	3	0.2	LPR	PWS	LOC	QZT	4		I	FRG	0	IND	1
Unit 087, Feature 7 SW½	40 - 53	1802	1604	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Unit 087, Feature 7 SW½	40 - 53	1802	1604	Analyzed	20	0.1	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Unit 087, Feature 7 SW½	40 - 53	1802	1604	Analyzed	16	0.4	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Unit 088 NE¼	30 - 40	1478	761	Analyzed	1	1.2	LPR	PWS	LOC	CRT	3		N	DEB	4	IND	1
Unit 088 NE¼	20 - 30	1259	757	Unanalyzed	1	0.1											
Unit 088 NE¼	30 - 40	1478	761	Analyzed	1	0.4	LPR	PWS	LOC	CRT	4		I	COM	1	FLT	1
Unit 088 NE¼	40 - 50	1756	797	Analyzed	1	0.9	LPR	PWS	LOC	FWD	3		N	COM	0	FLT	1
Unit 088 NW¼	30 - 40	1477	792	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	COM	2	FLT	1
Unit 088 NW¼	10 - 20	1126	754	Unanalyzed	1	1.2											
Unit 088 NW¼	40 - 50	1755	798	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	0	ABR	1
Unit 088 NW¼	20 - 30	1258	758	Unanalyzed	2	2.7											
Unit 088 NW¼	30 - 40	1477	792	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	1
Unit 088 NW¼	30 - 40	1477	792	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 088 NW¼	30 - 40	1477	792	Analyzed	1	0.8	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	1
Unit 088 NW¼	30 - 40	1477	792	Analyzed	2	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	CRT	1
Unit 088 SE¼	30 - 40	1479	793	Analyzed	2	0.8	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 088 SE¼	30 - 40	1479	793	Analyzed	2	0.4	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	1
Unit 088 SE¼	10 - 20	1128	755	Unanalyzed	3	3.5											
Unit 088 SW¼	20 - 30	1257	760	Unanalyzed	2	3.2											
Unit 088 SW¼	30 - 40	1476	795	Analyzed	2	0.6	LPR	PWS	LOC	CRT	4		I	COM	1	FLT	2
Unit 088 SW¼	30 - 40	1476	795	Analyzed	1	0.8	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	2
Unit 088 SW¼	10 - 20	1125	756	Unanalyzed	1	0.3											
Unit 088 SW¼	30 - 40	1476	795	Analyzed	1	0.3	LPR	PWS	LOC	QZT	4		I	FRG	1	IND	2

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 4</b>																	
Unit 088 SW¼	30 - 40	1476	795	Analyzed	1	2.5	LPR	PWS	LOC	QZT	3		Y	FRG	1	IND	2
Unit 088 SW¼	50 - 60	1758	799	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Unit 088 SW¼	30 - 40	1476	795	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	2
Unit 089 NE¼	27 - 30	1365	811	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	4	FLT	1
Unit 089 NE¼	30 - 40	1425	815	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 089 NE¼	27 - 30	1365	811	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	1
Unit 089 NE¼	27 - 30	1365	811	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	1	IND	1
Unit 089 NE¼	27 - 30	1365	811	Analyzed	1	1	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	1
Unit 089 NE¼	27 - 30	1365	811	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 089 NE¼	27 - 30	1365	811	Analyzed	1	0.3	LPR	PWS	LOC	QZT	4		I	COM	0	FLT	1
Unit 089 NE¼	20 - 27	1263	807	Unanalyzed	2	0.5											
Unit 089 NW¼	30 - 40	1424	816	Analyzed	1	0.5	LPR	PWS	LOC	CRT	3		Y	COM	0	ABR	1
Unit 089 NW¼	20 - 27	1262	808	Unanalyzed	2	0.6											
Unit 089 NW¼	27 - 30	1364	812	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	2
Unit 089 NW¼	27 - 30	1364	812	Analyzed	1	0.1	LPR	PWS	REG	NVC	4		I	DEB	0	IND	2
Unit 089 SE¼	10 - 20	1135	805	Unanalyzed	1	0.3											
Unit 089 SE¼	0 - 10	1131	801	Unanalyzed	1	0.3											
Unit 089 SE¼	27 - 30	1366	813	Analyzed	2	0.6	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	2
Unit 089 SE¼	27 - 30	1366	813	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	FRG	0	IND	2
Unit 089 SW¼	20 - 27	1261	810	Unanalyzed	1	0.4											
Unit 089 SW¼	30 - 40	1423	818	Analyzed	1	0.4	LPR	PWS	LOC	CRT	4		I	FRG	1	IND	1
Unit 090 NE¼	20 - 27	1267	825	Unanalyzed	5	5.1											
Unit 090 NE¼	27 - 30	1369	829	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	2
Unit 090 NE¼	27 - 30	1369	829	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	BRK	0	FLT	2
Unit 090 NE¼	30 - 40	1484	833	Analyzed	1	0.04	LPR	PWS	LOC	LMS	4		I	FRG	0	IND	1
Unit 090 NE¼	30 - 40	1484	833	Analyzed	2	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	IND	1

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 4</b>																	
Unit 090 NE¼	27 - 30	1369	829	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	BRK	4	FLT	2
Unit 090 NE¼	30 - 40	1484	833	Analyzed	2	0.5	LPR	PWS	LOC	CRT	4		I	FRG	1	IND	1
Unit 090 NE¼	30 - 40	1484	833	Analyzed	3	1	LPR	PWS	LOC	QZT	4		I	DEB	1	IND	1
Unit 090 NW¼	30 - 40	1483	834	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	COM	0	FLT	3
Unit 090 NW¼	30 - 40	1483	834	Analyzed	1	6.6	LPR	PWS	LOC	QZT	2	ABS	N	DEB	4	IND	3
Unit 090 NW¼	30 - 40	1483	834	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	DEB	0	IND	3
Unit 090 NW¼	30 - 40	1483	834	Analyzed	1	0.6	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	3
Unit 090 SE¼	27 - 30	1370	831	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	1
Unit 090 SE¼	30 - 40	1485	835	Analyzed	2	0.9	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	2
Unit 090 SE¼	10 - 20	1140	822	Unanalyzed	2	1.5											
Unit 090 SE¼	30 - 40	1485	835	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	BRK	0	CPX	2
Unit 090 SE¼	30 - 40	1485	835	Analyzed	1	0.1	LPR	PWS	LOC	ISS	4		I	FRG	0	IND	2
Unit 090 SE¼	30 - 40	1485	835	Analyzed	1	1.1	LPR	PWS	LOC	CRT	3		N	COM	1	FLT	2
Unit 090 SE¼	30 - 40	1485	835	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	2
Unit 090 SE¼	27 - 30	1370	831	Analyzed	1	0.4	LPR	PWS	LOC	CRT	4		I	DEB	1	IND	1
Unit 090 SE¼	20 - 27	1268	827	Unanalyzed	3	1.7											
Unit 090 SW¼	27 - 30	1367	832	Analyzed	1	1.3	LPR	PWS	LOC	CRT	3		N	FRG	1	IND	2
Unit 090 SW¼	30 - 40	1482	836	Analyzed	1	0.04	LPR	PWS	REG	CRT	5		I	COM	0	CPX	3
Unit 090 SW¼	30 - 40	1482	836	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	1	ABR	3
Unit 090 SW¼	30 - 40	1482	836	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	2	FLT	3
Unit 090 SW¼	30 - 40	1482	836	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	BRK	1	CPX	3
Unit 090 SW¼	10 - 20	1137	823	Unanalyzed	4	1.8											
Unit 090 SW¼	30 - 40	1482	836	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	3
Unit 090 SW¼	30 - 40	1482	836	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	1	IND	3
Unit 090 SW¼	40 - 50	1760	842	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	DEB	1	IND	1
Unit 090 SW¼	30 - 40	1482	836	Analyzed	2	0.8	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	3







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<b>Block 4</b>																	
Unit 093 NW¼	20 - 25	1275	882	Unanalyzed	5	2.4											
Unit 093 NW¼	25 - 30	1377	886	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 093 NW¼	25 - 30	1377	886	Analyzed	2	0.1	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	1
Unit 093 NW¼	25 - 30	1377	886	Analyzed	2	0.1	LPR	PWS	LOC	CRT	5		I	COM	0	FLT	1
Unit 093 NW¼	25 - 30	1377	886	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Unit 093 NW¼	30 - 40	1381	890	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Unit 093 NW¼	30 - 40	1381	890	Analyzed	1	0.3	LPR	PWS	LOC	QZT	4		I	COM	1	CRT	1
Unit 093 NW¼	30 - 40	1381	890	Analyzed	1	1.5	LPR	PWS	LOC	QZT	3		Y	DEB	1	IND	1
Unit 093 SE¼	40 - 50	1768	894	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	COM	3	CRT	1
Unit 093 SE¼	20 - 25	1277	883	Unanalyzed	3	1.2											
Unit 093 SE¼	10 - 20	1153	879	Unanalyzed	3	1.7											
Unit 093 SE¼	30 - 40	1383	891	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Unit 093 SE¼	25 - 30	1379	887	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 093 SW¼	25 - 30	1376	888	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	3
Unit 093 SW¼	30 - 40	1380	892	Analyzed	1	0.7	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	3
Unit 093 SW¼	30 - 40	1380	892	Analyzed	2	0.9	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	3
Unit 093 SW¼	25 - 30	1376	888	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	COM	0	FLT	3
Unit 093 SW¼	25 - 30	1376	888	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	1	FLT	3
Unit 093 SW¼	30 - 40	1380	892	Analyzed	1	4.8	LPR	PWS	LOC	FWD	2	ABS	N	COM	4	CRT	3
Unit 093 SW¼	20 - 25	1274	884	Unanalyzed	3	0.8											
Unit 093 SW¼	25 - 30	1376	888	Analyzed	1	0.3	LPR	PWS	LOC	FWD	4		I	DEB	0	IND	3
Unit 094 NE¼	20 - 25	1280	901	Unanalyzed	5	2.5											
Unit 094 NE¼	10 - 20	1156	897	Unanalyzed	2	2.7											
Unit 094 NW¼	25 - 30	1385	906	Analyzed	2	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	2
Unit 094 NW¼	25 - 30	1385	906	Analyzed	1	0.2	LPR	PWS	LOC	QZT	4		I	DEB	0	IND	2
Unit 094 NW¼	25 - 30	1385	906	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	2

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 4</b>																	
Unit 094 NW¼	20 - 25	1279	902	Unanalyzed	1	0.1											
Unit 094 NW¼	10 - 20	1155	898	Unanalyzed	1	0.2											
Unit 094 SE¼	10 - 20	1157	899	Unanalyzed	2	0.4											
Unit 094 SE¼	20 - 25	1281	903	Unanalyzed	7	6.8											
Unit 094 SE¼	25 - 30	1387	907	Analyzed	1	0.6	LPR	PWS	LOC	CRT	3		N	COM	0	IND	1
Unit 094 SW¼	25 - 30	1384	908	Analyzed	1	0.4	LPR	PWS	LOC	FWD	4		I	COM	0	FLT	2
Unit 094 SW¼	25 - 30	1384	908	Analyzed	1	0.6	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	2
Unit 094 SW¼	20 - 25	1278	904	Unanalyzed	1	0.5											
Unit 095 NE¼	40 - 50	1771	931	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	2	IND	1
Unit 095 NE¼	20 - 27	1284	918	Unanalyzed	4	1.5											
Unit 095 NE¼	10 - 20	1160	914	Unanalyzed	4	1.8											
Unit 095 NE¼	27 - 30	1393	923	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	FRG	0	IND	1
Unit 095 NW¼	20 - 27	1283	919	Unanalyzed	3	1.1											
Unit 095 NW¼	30 - 40	1397	928	Analyzed	1	0.5	LPR	PWS	LOC	QZT	4		I	FRG	0	IND	1
Unit 095 NW¼	27 - 30	1392	924	Analyzed	2	0.5	LPR	PWS	LOC	CRT	4		I	COM	0	IND	1
Unit 095 NW¼	10 - 20	1159	915	Unanalyzed	1	0.6											
Unit 095 SE¼	20 - 27	1285	920	Unanalyzed	6	4.6											
Unit 095 SE¼	27 - 30	1394	925	Analyzed	2	0.4	LPR	PWS	LOC	QZT	4		I	FRG	0	IND	3
Unit 095 SE¼	30 - 40	1399	929	Analyzed	1	0.8	LPR	PWS	LOC	QZT	3		N	COM	4	CRT	1
Unit 095 SE¼	30 - 40	1399	929	Analyzed	1	0.04	LPR	PWS	LOC	QZT	4		I	COM	0	FAC	1
Unit 095 SE¼	40 - 50	2003	932	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 095 SE¼	27 - 30	1394	925	Analyzed	1	0.04	LPR	PWS	LOC	QZT	5		I	COM	0	CPX	3
Unit 095 SE¼	27 - 30	1394	925	Analyzed	1	0.1	LPR	PWS	LOC	FWD	4		I	BRK	2	FLT	3
Unit 095 SE¼	10 - 20	1161	916	Unanalyzed	5	5.5											
Unit 095 SE¼	27 - 30	1394	925	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	DEB	1	IND	3
Unit 095 SW¼	27 - 30	1391	926	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	1









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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 4</b>																	
Unit 104 NE¼	25 - 30	1449	1086	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Unit 104 NE¼	25 - 30	1449	1086	Analyzed	1	0.9	LPR	PWS	LOC	CRT	3		N	DEB	1	IND	1
Unit 104 NW¼	10 - 20	1194	1079	Unanalyzed	2	0.5											
Unit 104 NW¼	25 - 30	1448	1087	Analyzed	1	1.1	LPR	PWS	LOC	ISS	4		I	COM	0	FLT	2
Unit 104 NW¼	25 - 30	1448	1087	Analyzed	1	0.04	LPR	PWS	LOC	QZT	4		I	FRG	1	IND	2
Unit 104 NW¼	20 - 25	1318	1083	Unanalyzed	2	0.8											
Unit 104 SE¼	25 - 30	1450	1088	Analyzed	1	0.5	LPR	PWS	LOC	QZT	4		I	COM	4	CRT	1
Unit 104 SE¼	10 - 20	1196	1080	Unanalyzed	2	0.8											
Unit 104 SW¼	10 - 20	1193	1081	Unanalyzed	3	0.5											
Unit 104 SW¼	20 - 25	1317	1085	Unanalyzed	1	1											
Unit 104 SW¼	0 - 10	1102	1077	Unanalyzed	2	1.7											
Unit 105 NE¼	0 - 10	1108	1093	Unanalyzed	1	0.1											
Unit 105 NE¼	10 - 20	1199	1097	Unanalyzed	1	0.3											
Unit 105 NE¼	30 - 40	1458	1111	Analyzed	1	1.9	LPR	PWS	LOC	CRT	3		N	COM	4	CRT	1
Unit 105 NW¼	20 - 23	1242	1102	Unanalyzed	3	1.1											
Unit 105 NW¼	10 - 20	1198	1098	Unanalyzed	2	2											
Unit 105 NW¼	24 - 30	1453	1108	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 105 NW¼	30 - 40	1457	1112	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	0	IND	1
Unit 105 SE¼	30 - 40	1459	1113	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 105 SE¼	10 - 20	1200	1099	Unanalyzed	1	0.2											
Unit 105 SW¼	20 - 23	1241	1105	Unanalyzed	2	2.2											
Unit 105 SW¼	0 - 10	1106	1757	Unanalyzed	1	1.5											
Unit 105 SW¼	24 - 30	1452	1110	Analyzed	1	0.3	LPR	PWS	LOC	QZT	4		I	COM	1	CRT	1
Unit 105 SW¼	10 - 20	1197	1100	Unanalyzed	3	0.6											
Unit 105 SW¼	24 - 30	1452	1110	Analyzed	1	1.8	LPR	PWS	LOC	QZT	3		N	COM	0	FLT	1
Unit 106 General	30 - 40	1468	1133	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	BRK	0	CPX	1



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<b>Block 4</b>																	
Unit 106 NE¼	20 - 23	1247	1124	Unanalyzed	1	0.1											
Unit 106 NE¼	10 - 20	1204	1120	Unanalyzed	1	0.5											
Unit 106 NE¼	25 - 30	1462	1128	Analyzed	1	1.6	LPR	PWS	LOC	QZT	4		I	COM	4	CRT	1
Unit 106 NW¼	20 - 23	1246	1125	Unanalyzed	1	0.2											
Unit 106 NW¼	10 - 20	1203	1121	Unanalyzed	1	0.1											
Unit 106 NW¼	25 - 30	1461	1130	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	2
Unit 106 NW¼	25 - 30	1461	1130	Analyzed	1	0.5	LPR	PWS	LOC	QZT	4		I	DEB	2	IND	2
Unit 106 NW¼	25 - 30	1461	1130	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	2
Unit 106 NW¼	25 - 30	1461	1130	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	2
Unit 106 NW¼	25 - 30	1461	1130	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	0	FAC	2
Unit 106 SE¼	25 - 30	1463	1131	Analyzed	1	0.7	LPR	PWS	LOC	QZT	4		I	COM	1	CRT	1
Unit 106 SE¼	20 - 23	1248	1126	Unanalyzed	1	0.1											
Unit 106 SE¼	10 - 20	1205	1122	Unanalyzed	3	1.1											
Unit 106 SE¼	0 - 10	1112	1119	Unanalyzed	2	0.6											
Unit 106 SW¼	20 - 23	1245	1127	Unanalyzed	7	1.1											
Unit 106 SW¼	10 - 20	1202	1123	Unanalyzed	2	1.3											
Unit 106 SW¼	25 - 30	1460	1132	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	COM	0	FLT	1
Unit 118 General	19 - 29	1616	1391	Analyzed	1	1.2	LPR	PWS	LOC	CRT	4		I	BRK	1	FAC	1
Unit 118 NE¼	29 - 39	1619	1398	Analyzed	1	0.6	LPR	PWS	LOC	QZT	4		I	COM	4	FLT	1
Unit 118 NE¼	19 - 29	1614	1392	Analyzed	1	0.2	LPR	PWS	LOC	QZT	4		I	COM	0	FLT	3
Unit 118 NE¼	19 - 29	1614	1392	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	3
Unit 118 NE¼	19 - 29	1614	1392	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	3
Unit 118 NE¼	19 - 29	1614	1392	Analyzed	1	3.1	LPR	PWS	LOC	CRT	2	ABS	N	COM	1	CPX	3
Unit 118 NE¼	9 - 19	1514	1387	Unanalyzed	1	2.5											
Unit 118 NW¼	29 - 39	1618	1399	Analyzed	2	0.4	LPR	PWS	LOC	CRT	4		I	COM	0	ABR	1
Unit 118 NW¼	29 - 39	1618	1399	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1





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<b>Block 4</b>																	
Unit 121 General	12 - 22	1533	1451	Unanalyzed	1	0.4											
Unit 121 NE¼	12 - 22	1531	1452	Unanalyzed	3	4.5											
Unit 121 NE¼	22 - 32	1588	1456	Analyzed	1	0.3	LPR	PWS	LOC	QZT	4		I	COM	4	CRT	1
Unit 121 NW¼	32 - 42	1644	1461	Analyzed	1	1	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Unit 121 NW¼	0 - 12	1526	1448	Unanalyzed	2	0.5											
Unit 121 NW¼	22 - 32	1587	1457	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	COM	0	FLT	1
Unit 121 NW¼	32 - 42	1644	1461	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 121 NW¼	12 - 22	1530	1453	Unanalyzed	1	0.1											
Unit 121 SE¼	22 - 32	1589	1458	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 121 SE¼	12 - 22	1532	1454	Unanalyzed	2	1											
Unit 121 SW¼	12 - 22	1529	1455	Unanalyzed	1	0.2											
Unit 121 SW¼	22 - 32	1586	1459	Analyzed	1	0.04	LPR	PWS	LOC	FWD	4		I	COM	0	FLT	3
Unit 121 SW¼	22 - 32	1586	1459	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	FRG	3	IND	3
Unit 121 SW¼	22 - 32	1586	1459	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	1	IND	3
Unit 121 SW¼	22 - 32	1586	1459	Analyzed	1	0.4	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	3
Unit 121 SW¼	22 - 32	1586	1459	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	3
Unit 121 SW¼	22 - 32	1586	1459	Analyzed	1	0.4	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	3
Unit 121 SW¼	32 - 42	1643	1463	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	DEB	0	IND	1
Unit 121 SW¼	22 - 32	1586	1459	Analyzed	1	0.04	LPR	PWS	LOC	QZT	4		I	COM	0	FLT	3
Unit 121 SW¼	22 - 32	1586	1459	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	1	FLT	3
Unit 122 NE¼	0 - 14	1501	1464	Unanalyzed	1	1.2											
Unit 122 NE¼	24 - 34	1649	1472	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	1	CPX	1
Unit 122 NE¼	24 - 34	1649	1472	Analyzed	2	0.5	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	1
Unit 122 NE¼	14 - 24	1573	1468	Unanalyzed	1	2.2											
Unit 122 NE¼	34 - 44	1653	1476	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	0	FAC	1
Unit 122 NW¼	24 - 34	1648	1473	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 4</b>																	
Unit 122 NW¼	24 - 34	1648	1473	Analyzed	1	1.1	LPR	PWS	LOC	CRT	4		I	DEB	2	IND	1
Unit 122 SE¼	0 - 14	1502	1466	Unanalyzed	1	0.2											
Unit 122 SE¼	34 - 44	1654	1478	Analyzed	1	1.7	LPR	PWS	LOC	CRT	3		N	FRG	4	IND	1
Unit 122 SE¼	24 - 34	1650	1474	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	BRK	0	CPX	2
Unit 122 SE¼	24 - 34	1650	1474	Analyzed	1	0.8	LPR	PWS	LOC	QZT	3		N	COM	1	FLT	2
Unit 122 SE¼	24 - 34	1650	1474	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	COM	4	CRT	2
Unit 122 SE¼	24 - 34	1650	1474	Analyzed	1	0.5	LPR	PWS	LOC	QZT	4		I	COM	1	CRT	2
Unit 122 SE¼	14 - 24	1574	1470	Unanalyzed	2	3											
Unit 122 SW¼	24 - 34	1647	1475	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 122 SW¼	14 - 24	1571	1471	Unanalyzed	3	2.2											
Unit 122, Feature 31 S½	49 - 55	1844	1630	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	1
Unit 122, Feature 32 S½	49 - 57	1845	1631	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	FRG	1	IND	1
Unit 123 General	20 - 25	1594	1494	Unanalyzed	1	0.3											
Unit 123 NE¼	30 - 35	1661	1503	Analyzed	1	0.7	LPR	PWS	LOC	QZT	4		I	COM	0	FLT	1
Unit 123 NE¼	20 - 25	1592	1495	Unanalyzed	3	1.1											
Unit 123 NE¼	25 - 30	1657	1499	Analyzed	2	0.1	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	1
Unit 123 NE¼	10 - 15	1536	1486	Unanalyzed	1	0.5											
Unit 123 NE¼	30 - 35	1661	1503	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 123 NE¼	25 - 30	1657	1499	Analyzed	2	1.7	LPR	PWS	LOC	CRT	4		I	COM	2	CPX	1
Unit 123 NW¼	20 - 25	1591	1496	Unanalyzed	1	0.89											
Unit 123 NW¼	35 - 40	1664	1507	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Unit 123 NW¼	35 - 40	1664	1507	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	BRK	0	FAC	1
Unit 123 NW¼	30 - 35	1660	1504	Analyzed	2	0.3	LPR	PWS	LOC	CRT	4		I	DEB	1	IND	1
Unit 123 NW¼	30 - 35	1660	1504	Analyzed	1	0.3	LPR	PWS	LOC	FWD	4		I	COM	1	CRT	1
Unit 123 NW¼	25 - 30	1656	1500	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	BRK	0	FLT	1
Unit 123 NW¼	25 - 30	1656	1500	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 4</b>																	
Unit 123 SE¼	10 - 15	1537	1488	Unanalyzed	1	0.1											
Unit 123 SE¼	25 - 30	1658	1501	Analyzed	1	2.5	LPR	PWS	LOC	CRT	3		N	DEB	4	IND	1
Unit 123 SE¼	5 - 10	1508	1484	Unanalyzed	2	1.2											
Unit 123 SE¼	30 - 35	1662	1505	Analyzed	1	0.4	LPR	PWS	LOC	QZT	4		I	COM	1	FLT	1
Unit 123 SE¼	30 - 35	1662	1505	Analyzed	1	0.04	LPR	PWS	LOC	QZT	4		I	COM	0	FLT	1
Unit 123 SE¼	20 - 25	1593	1497	Unanalyzed	2	0.8											
Unit 123 SW¼	25 - 30	1655	1502	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 123 SW¼	5 - 10	1505	1485	Unanalyzed	1	0.5											
Unit 123 SW¼	35 - 40	1663	1509	Analyzed	1	0.1	LPR	PWS	REG	NVC	4		I	COM	0	FLT	1
Unit 123 SW¼	30 - 35	1659	1506	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	1
Unit 123 SW¼	25 - 30	1655	1502	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	1	FLT	1
Unit 123 SW¼	15 - 20	1538	1493	Unanalyzed	1	0.2											
Unit 123 SW¼	20 - 25	1590	1498	Unanalyzed	3	1.1											
Unit 124 NE¼	16 - 21	1554	1525	Unanalyzed	3	2											
Unit 124 NE¼	6 - 11	1546	1517	Unanalyzed	1	0.4											
Unit 124 NE¼	21 - 26	1577	1529	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	BRK	1	CRT	
Unit 124 NW¼	26 - 31	1595	1534	Analyzed	1	0.1	LPR	PWS	REG	CRT	4		I	FRG	0	IND	2
Unit 124 NW¼	21 - 26	1576	1530	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	COM	4	CRT	2
Unit 124 NW¼	21 - 26	1576	1530	Analyzed	1	0.8	LPR	PWS	LOC	FWD	4		I	COM	3	CRT	2
Unit 124 NW¼	0 - 6	1542	1515	Unanalyzed	1	0.4											
Unit 124 NW¼	6 - 11	1545	1518	Unanalyzed	2	1.3											
Unit 124 NW¼	11 - 16	1549	1522	Unanalyzed	1	0.2											
Unit 124 NW¼	16 - 21	1553	1526	Unanalyzed	2	0.6											
Unit 124 NW¼	26 - 31	1595	1534	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	2	CRT	2
Unit 124 SE¼	26 - 31	1597	1535	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	1
Unit 124 SE¼	21 - 26	1578	1531	Analyzed	1	0.2	LPR	PWS	LOC	QZT	4		I	DEB	4	IND	2

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 4</b>																	
Unit 124 SE¼	21 - 26	1578	1531	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	0		2
Unit 124 SE¼	21 - 26	1578	1531	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	FRG	1	IND	2
Unit 124 SE¼	16 - 21	1555	1527	Unanalyzed	2	0.4											
Unit 124 SE¼	21 - 26	1578	1531	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	1		2
Unit 124 SE¼	6 - 11	1547	1519	Unanalyzed	1	0.1											
Unit 124 SE¼	21 - 26	1578	1531	Analyzed	2	0.6	LPR	PWS	LOC	CRT	4		I	COM	4		2
Unit 124 SW¼	6 - 11	1544	1520	Unanalyzed	1	0.3											
Unit 124 SW¼	16 - 21	1552	1528	Unanalyzed	4	1.1											
Unit 124 SW¼	36 - 41	1673	1539	Analyzed	1	0.04	LPR	PWS	LOC	QZT	4		I	COM	4	CRT	1
Unit 125 NE¼	15 - 20	1568	1550	Unanalyzed	1	0.4											
Unit 125 NE¼	25 - 30	1600	1558	Analyzed	1	0.5	LPR	PWS	LOC	QZT	3		N	COM	0	CPX	1
Unit 125 NE¼	25 - 30	1600	1558	Analyzed	1	3.5	LPR	PWS	LOC	QZT	3		N	FRG	0	IND	1
Unit 125 NE¼	10 - 15	1564	1546	Unanalyzed	1	0.2											
Unit 125 NW¼	20 - 25	1580	1555	Analyzed	1	0.2	LPR	PWS	LOC	QZT	4		I	COM	0	FLT	1
Unit 125 NW¼	30 - 35	1677	1563	Analyzed	1	0.4	LPR	PWS	LOC	QZT	4		I	FRG	4	IND	1
Unit 125 NW¼	25 - 30	1599	1559	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 125 NW¼	15 - 20	1567	1551	Unanalyzed	3	0.6											
Unit 125 NW¼	25 - 30	1599	1559	Analyzed	1	0.7	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Unit 125 SE¼	10 - 15	1565	1548	Unanalyzed	4	1.3											
Unit 125 SE¼	25 - 30	1601	1560	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	1
Unit 125 SE¼	5 - 10	1561	1544	Unanalyzed	1	3.5											
Unit 125 SE¼	15 - 20	1569	1552	Unanalyzed	3	0.5											
Unit 125 SE¼	25 - 30	1601	1560	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	DEB	1	IND	1
Unit 125 SW¼	15 - 20	1566	1553	Unanalyzed	2	1.3											
Unit 125 SW¼	5 - 10	1558	1545	Unanalyzed	1	0.2											
Unit 125 SW¼	30 - 35	1676	1565	Analyzed	1	0.04	LPR	PWS	LOC	QZT	4		I	COM	4	CRT	1

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 4</b>																	
Unit 125 SW¼	20 - 25	1579	1557	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	0	REJ	1
Unit 126 NE¼	22 - 32	1704	1576	Analyzed	2	0.3	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 126 NE¼	12 - 22	1696	1572	Unanalyzed	2	0.4											
Unit 126 NW¼	22 - 32	1703	1577	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 126 NW¼	22 - 32	1703	1577	Analyzed	1	1.1	LPR	PWS	LOC	CRT	4		I	FRG	3	IND	1
Unit 126 NW¼	12 - 22	1695	1573	Unanalyzed	6	2.7											
Unit 126 NW¼	0 - 12	1691	1569	Unanalyzed	3	2											
Unit 126 SE¼	12 - 22	1697	1574	Unanalyzed	2	0.5											
Unit 126 SW¼	12 - 22	1694	1575	Unanalyzed	7	3.7											
Unit 126 SW¼	32 - 42	1787	1582	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 127 NE¼	21 - 31	1712	1592	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	1
Unit 127 NE¼	21 - 31	1712	1592	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	2	FLT	1
Unit 127 NE¼	11 - 21	1708	1588	Unanalyzed	2	1.1											
Unit 127 NE¼	0 - 11	1700	1584	Unanalyzed	3	2.9											
Unit 127 NW¼	11 - 21	1707	1589	Unanalyzed	3	1.3											
Unit 127 NW¼	21 - 31	1711	1593	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	BRK	0	FLT	1
Unit 127 NW¼	21 - 31	1711	1593	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	2	IND	1
Unit 127 NW¼	21 - 31	1711	1593	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	1
Unit 127 NW¼	21 - 31	1711	1593	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	1
Unit 127 NW¼	0 - 11	1699	1585	Unanalyzed	1	0.3											
Unit 127 SE¼	11 - 21	1709	1590	Unanalyzed	1	3											
Unit 127 SE¼	21 - 31	1713	1594	Analyzed	1	1.4	LPR	PWS	LOC	CRT	3		N	COM	4	FLT	1
Unit 127 SW¼	11 - 21	1706	1591	Unanalyzed	3	1											
Unit 127 SW¼	31 - 41	1791	1598	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	1
<b>Block 5</b>																	
Unit 079 NE¼	40 - 50	823	604	Analyzed	1	0.6	LPR	PWS	LOC	CRT	4		I	DEB	2	IND	1



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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 5</b>																	
Unit 079 NE¼	40 - 50	823	604	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	DEB	1	IND	1
Unit 079 NE¼	31 - 40	758	600	Analyzed	1	0.7	LPR	PWS	LOC	QZT	3		N	COM	4	CRT	1
Unit 079 NE¼	40 - 50	823	604	Analyzed	1	0.3	LPR	PWS	LOC	CRT	3		N	COM	4	CRT	1
Unit 079 NW¼	31 - 40	757	601	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	2
Unit 079 NW¼	31 - 40	757	601	Analyzed	1	1.2	LPR	PWS	LOC	QZT	4		I	COM	4	CRT	2
Unit 079 NW¼	31 - 40	757	601	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	COM	4	IND	2
Unit 079 SE¼	31 - 40	759	602	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	BRK	0	CPX	1
Unit 079 SE¼	31 - 40	759	602	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	BRK	0	CPX	1
Unit 079 SW¼	31 - 40	756	603	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	BRK	0	FLT	1
Unit 080 NE¼	32 - 40	771	617	Analyzed	1	0.8	LPR	PWS	LOC	CRT	4		I	COM	0	ABR	1
Unit 080 NE¼	40 - 50	828	621	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	1
Unit 080 NW¼	40 - 50	780	622	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	3	FLT	1
Unit 080 NW¼	40 - 50	780	622	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	1
Unit 080 NW¼	30 - 32	766	614	Unanalyzed	1	0.4											
Unit 080 SE¼	20 - 30	764	611	Unanalyzed	1	0.6											
Unit 080 SW¼	20 - 30	761	612	Unanalyzed	1	0.1											
Unit 081 NE¼	30 - 32	783	635	Unanalyzed	1	5											
Unit 081 NE¼	32 - 40	787	639	Analyzed	1	0.4	LPR	PWS	LOC	QZT	4		I	BRK	0	CPX	1
Unit 081 NE¼	20 - 30	778	632	Unanalyzed	1	0.3											
Unit 081 NW¼	20 - 30	777	633	Unanalyzed	1	0.1											
Unit 081 NW¼	40 - 50	826	643	Analyzed	1	0.4	LPR	PWS	REG	CRT	3		Y	COM	0	FLT	1
Unit 081 SE¼	30 - 32	784	637	Unanalyzed	1	0.2											
Unit 081 SW¼	30 - 32	781	638	Unanalyzed	2	1.3											
Unit 082 NE¼	30 - 32	796	652	Unanalyzed	1	2.7											
Unit 082 NE¼	20 - 30	793	648	Unanalyzed	1	0.4											
Unit 082 NW¼	40 - 50	835	659	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1







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<b>Block 8</b>																	
Unit 114 NE¼	42 - 50	1077	1291	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	BRK	1	CRT	1
Unit 114 NW¼	30 - 40	1068	1284	Unanalyzed	2	1.6											
Unit 114 NW¼	40 - 42	1072	1288	Unanalyzed	7	3.2											
Unit 114 NW¼	42 - 50	1076	1292	Analyzed	2	0.9	LPR	PWS	LOC	QZT	4		I	DEB	0	IND	1
Unit 114 SE¼	42 - 50	1078	1293	Analyzed	1	1.3	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	1
Unit 114 SE¼	40 - 42	1074	1289	Unanalyzed	1	0.3											
Unit 114 SE¼	30 - 40	1070	1285	Unanalyzed	4	1.7											
Unit 114 SW¼	42 - 50	1075	1294	Analyzed	1	0.6	LPR	PWS	LOC	QZT	4		I	BRK	0	FLT	1
Unit 114 SW¼	40 - 42	1071	1290	Unanalyzed	6	2											
Unit 114 SW¼	20 - 30	1014	1282	Unanalyzed	3	3.2											
Unit 114 SW¼	30 - 40	1067	1286	Unanalyzed	1	0.4											
Unit 115 General	20 - 30	1027	1303	Unanalyzed	2	1.6											
Unit 115 NE¼	20 - 30	1025	1304	Unanalyzed	1	0.4											
Unit 115 NE¼	50 - 60	1220	1320	Analyzed	1	0.5	LPR	PWS	LOC	QZT	4		I	FRG	1	IND	1
Unit 115 NE¼	30 - 37	1030	1308	Unanalyzed	2	3.7											
Unit 115 NE¼	39 - 40	1081	1312	Unanalyzed	2	0.6											
Unit 115 NW¼	30 - 37	1029	1309	Unanalyzed	3	2.2											
Unit 115 NW¼	40 - 50	1215	1317	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 115 NW¼	10 - 20	1020	1300	Unanalyzed	1	0.1											
Unit 115 NW¼	40 - 50	1215	1317	Analyzed	1	0.7	LPR	PWS	LOC	CRT	4		I	BRK	3	CRT	1
Unit 115 NW¼	40 - 50	1215	1317	Analyzed	1	1.1	LPR	PWS	LOC	CRT	3		N	DEB	0	IND	1
Unit 115 SE¼	40 - 50	1217	1318	Analyzed	1	0.5	LPR	PWS	LOC	CRT	3		N	COM	3	FLT	1
Unit 115 SE¼	40 - 50	1217	1318	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 115 SE¼	40 - 50	1217	1318	Analyzed	1	0.6	LPR	PWS	LOC	CRT	3		N	COM	0	FLT	1
Unit 115 SE¼	30 - 37	1031	1310	Unanalyzed	1	2.5											
Unit 115 SW¼	40 - 50	1214	1319	Analyzed	2	1.3	LPR	PWS	LOC	QZT	4		I	DEB	3	IND	2



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<b>Block 8</b>																	
Unit 117 NE¼	20 - 25	1470	1357	Unanalyzed	1	0.6											
Unit 117 NE¼	15 - 20	1329	1353	Unanalyzed	1	0.2											
Unit 117 NE¼	40 - 45	1354	1375	Analyzed	1	0.6	LPR	PWS	LOC	QZT	4		I	COM	3	CRT	1
Unit 117 NW¼	30 - 35	1345	1367	Analyzed	1	0.8	LPR	PWS	LOC	CRT	4		I	DEB	2	IND	2
Unit 117 NW¼	35 - 40	1349	1371	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	BRK	1	CRT	1
Unit 117 NW¼	30 - 35	1345	1367	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	2
Unit 117 NW¼	30 - 35	1345	1367	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	2
Unit 117 NW¼	25 - 30	1341	1362	Unanalyzed	1	0.6											
Unit 117 NW¼	30 - 35	1345	1367	Analyzed	1	0.5	LPR	PWS	LOC	CRT	3		N	COM	0	FAC	2
Unit 117 NW¼	30 - 35	1345	1367	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	2
Unit 117 NW¼	20 - 25	1469	1358	Unanalyzed	2	0.5											
Unit 117 NW¼	30 - 35	1345	1367	Analyzed	1	1	LPR	PWS	LOC	CRT	4		I	DEB	2	IND	2
Unit 117 NW¼	35 - 40	1349	1371	Analyzed	2	2.6	LPR	PWS	LOC	CRT	3		N	COM	4	CRT	1
Unit 117 NW¼	35 - 40	1349	1371	Analyzed	2	0.9	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 117 NW¼	10 - 15	1324	1350	Unanalyzed	1	0.8											
Unit 117 NW¼	40 - 45	1353	1376	Analyzed	1	0.6	LPR	PWS	LOC	FWD	3		N	COM	0	FLT	3
Unit 117 NW¼	40 - 45	1353	1376	Analyzed	1	0.7	LPR	PWS	REG	CRT	3		N	FRG	0	IND	3
Unit 117 NW¼	40 - 45	1353	1376	Analyzed	1	0.9	LPR	PWS	LOC	CRT	3		Y	DEB	2	IND	3
Unit 117 NW¼	40 - 45	1353	1376	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	3
Unit 117 NW¼	30 - 35	1345	1367	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	2
Unit 117 SE¼	30 - 35	1347	1368	Analyzed	3	1.2	LPR	PWS	LOC	CRT	4		I	COM	1	FLT	2
Unit 117 SE¼	15 - 20	1330	1355	Unanalyzed	2	1.1											
Unit 117 SE¼	25 - 30	1343	1364	Unanalyzed	11	8											
Unit 117 SE¼	30 - 35	1347	1368	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	2
Unit 117 SE¼	30 - 35	1347	1368	Analyzed	2	0.7	LPR	PWS	LOC	CRT	4		I	DEB	1	IND	2
Unit 117 SE¼	30 - 35	1347	1368	Analyzed	1	0.3	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	2

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Block 8</b>																	
Unit 117 SE¼	30 - 35	1347	1368	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	1	IND	2
Unit 117 SE¼	30 - 35	1347	1368	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	2
Unit 117 SE¼	35 - 40	1351	1372	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	1
Unit 117 SE¼	35 - 40	1351	1372	Analyzed	1	4.4	LPR	PWS	LOC	CRT	3		N	COM	3	CRT	1
Unit 117 SE¼	30 - 35	1347	1368	Analyzed	1	1.5	LPR	PWS	LOC	CRT	4		I	FRG	3	IND	2
Unit 117 SW¼	15 - 20	1327	1356	Unanalyzed	1	0.6											
Unit 117 SW¼	25 - 30	1340	1365	Unanalyzed	1	0.4											
Unit 117 SW¼	35 - 40	1348	1373	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Unit 117 SW¼	10 - 15	1323	1352	Unanalyzed	1	0.2											
Unit 117 SW¼	30 - 35	1344	1369	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	1	IND	1
Unit 117 SW¼	30 - 35	1344	1369	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	1
Unit 117 SW¼	30 - 35	1344	1369	Analyzed	2	0.6	LPR	PWS	LOC	CRT	4		I	DEB	3	IND	1
<b>Feature</b>																	
Feature 100 E½	50 - 57	1962	1741	Analyzed	1	1.8	LPR	PWS	LOC	CRT	3		N	COM	4	CRT	1
Feature 103 N½	50 - 54	1966	1745	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 105 NW½	50 - 60	1969	1747	Analyzed	2	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 105 SE½	50 - 60	1968	1748	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 108 E½	50 - 66	1973	1752	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 108 W½	50 - 66	1974	1753	Analyzed	1	0.04	LPR	PWS	LOC	QZT	5		I	COM	0	IND	1
Feature 45 N½	55 - 65	1867	1647	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 46 W½	55 - 59	1868	1649	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 47 E½	55 - 63	1870	1650	Analyzed	3	0.04	LPR	PWS	LOC	CRT	5		I	COM	0	CPX	2
Feature 47 E½	55 - 63	1870	1650	Analyzed	1	0.3	LPR	PWS	LOC	FWD	4		I	COM	1	CRT	2
Feature 47 E½	55 - 63	1870	1650	Analyzed	1	1.5	LPR	PWS	LOC	CRT	3		N	COM	1	CRT	2
Feature 47 E½	55 - 63	1870	1650	Analyzed	2	0.04	LPR	PWS	LOC	CRT	5		I	FRG	4	IND	2
Feature 47 E½	55 - 63	1870	1650	Analyzed	11	0.5	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	2



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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Feature</b>																	
Feature 47 E½	55 - 63	1870	1650	Analyzed	11	0.1	LPR	PWS	INT	USX	6		I	DEB	0	IND	2
Feature 47 W½	55 - 63	1871	1651	Analyzed	7	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 47 W½	55 - 63	1871	1651	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	DEB	0	IND	1
Feature 47 W½	55 - 63	1871	1651	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Feature 47 W½	55 - 63	1871	1651	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	1
Feature 47 W½	55 - 63	1871	1651	Analyzed	1	1.8	LPR	PWS	LOC	QZT	3		Y	DEB	0	IND	1
Feature 47 W½	55 - 63	1871	1651	Analyzed	1	0.4	LPR	PWS	LOC	FWD	4		I	COM	0	FLT	1
Feature 47 W½	55 - 63	1871	1651	Analyzed	3	0.8	LPR	PWS	LOC	CRT	4		I	FRG	1	IND	1
Feature 47 W½	55 - 63	1871	1651	Analyzed	2	0.04	LPR	PWS	LOC	CRT	5		I	FRG	4	IND	1
Feature 47 W½	55 - 63	1871	1651	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	FRG	1	IND	1
Feature 51 N½	60 - 70	1878	1658	Analyzed	2	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 51 N½	60 - 70	1878	1658	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	0	CPX	1
Feature 51 S½	60 - 70	1877	1657	Analyzed	2	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 53 E½	60 - 70	1881	1662	Analyzed	1	2.7	LPR	PWS	LOC	CRT	3		N	COM	4	FLT	1
Feature 53 E½	60 - 70	1881	1662	Analyzed	4	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 53 W½	60 - 70	1882	1661	Analyzed	1	1	LPR	PWS	LOC	FWD	4		I	DEB	2	IND	2
Feature 53 W½	60 - 70	1882	1661	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	2
Feature 53 W½	60 - 70	1882	1661	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	1	CPX	2
Feature 53 W½	60 - 70	1882	1661	Analyzed	3	0.04	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	2
Feature 54 E½	60 - 65	1884	1664	Analyzed	1	0.04	LPR	PWS	LOC	QZT	5		I	COM	1	IND	1
Feature 55 N½	65 - 72	1886	1666	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	BRK	0	CPX	1
Feature 55 N½	65 - 72	1886	1666	Analyzed	1	0.6	LPR	PWS	LOC	CRT	4		I	COM	4	CRT	1
Feature 55 N½	65 - 72	1886	1666	Analyzed	1	1.3	LPR	PWS	LOC	CRT	3		Y	COM	0	FLT	1
Feature 55 N½	65 - 72	1886	1666	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Feature 55 S½	65 - 72	1885	1665	Analyzed	1	0.04	LPR	PWS	LOC	CRT	4		I	FRG	4	IND	1
Feature 55 S½	65 - 72	1885	1665	Analyzed	1	0.5	LPR	PWS	LOC	CRT	4		I	COM	2	CRT	1

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Feature</b>																	
Feature 55 S½	65 - 72	1885	1665	Analyzed	7	0.3	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Feature 55 S½	65 - 72	1885	1665	Analyzed	1	0.1	LPR	PWS	REG	CRT	4		I	COM	0	FLT	1
Feature 55 S½	65 - 72	1885	1665	Analyzed	3	0.8	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Feature 55 S½	65 - 72	1885	1665	Analyzed	4	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 56 E½	65 - 83	1887	1668	Analyzed	8	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	2
Feature 56 E½	65 - 83	1887	1668	Analyzed	2	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	2
Feature 56 E½	65 - 83	1887	1668	Analyzed	1	0.04	LPR	PWS	LOC	QZT	5		I	DEB	0	IND	2
Feature 56 W½	65 - 83	1888	1667	Analyzed	2	0.04	LPR	PWS	LOC	CRT	5		I	FRG	1	IND	1
Feature 56 W½	65 - 83	1888	1667	Analyzed	4	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Feature 56 W½	65 - 83	1888	1667	Analyzed	2	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Feature 56 W½	65 - 83	1888	1667	Analyzed	12	0.1	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 57 E½	60 - 90	1889	1669	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	4	CRT	1
Feature 57 E½	60 - 90	1889	1669	Analyzed	2	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Feature 57 E½	60 - 90	1889	1669	Analyzed	7	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 57 W½	60 - 90	1890	1670	Analyzed	1	3	LPR	PWS	LOC	QZT	3		Y	DEB	2	IND	3
Feature 57 W½	60 - 90	1890	1670	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	3
Feature 57 W½	60 - 90	1890	1670	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	FRG	1	IND	3
Feature 57 W½	60 - 90	1890	1670	Analyzed	2	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	3
Feature 57 W½	60 - 90	1890	1670	Analyzed	1	0.04	LPR	PWS	REG	CRT	5		I	COM	0	CPX	3
Feature 57 W½	60 - 90	1890	1670	Analyzed	6	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	3
Feature 58 N½	65 - 79	1891	1671	Analyzed	5	0.3	LPR	PWS	LOC	CRT	5		I	DEB	0	IND	1
Feature 58 N½	65 - 79	1891	1671	Analyzed	14	0.1	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 58 S½	65 - 79	1892	1672	Analyzed	1	1.3	LPR	PWS	LOC	QZT	3		N	COM	0	FLT	2
Feature 58 S½	65 - 79	1892	1672	Analyzed	7	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	2
Feature 58 S½	65 - 79	1892	1672	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	0	FLT	2
Feature 59 NE½	65 - 74	1894	1674	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Feature</b>																	
Feature 59 SW½	65 - 74	1893	1673	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Feature 60 N½	65 - 70	1896	1676	Analyzed	2	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 62 E½	65 - 70	1899	1679	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 62 W½	65 - 70	1900	1680	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	0	IND	1
Feature 68 E½	65 - 85	1907	1688	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 70 N½	60 - 82	1912	1692	Analyzed	1	0.3	LPR	PWS	LOC	QZT	4		I	DEB	0	IND	1
Feature 72 NW½	60 - 74	1915	1695	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 72 NW½	60 - 74	1915	1695	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	0	IND	1
Feature 72 SE½	60 - 74	1914	1694	Analyzed	4	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 72 SE½	60 - 74	1914	1694	Analyzed	1	6.4	LPR	PWS	LOC	CRT	2	ABS	Y	COM	2	FAC	1
Feature 73 NW½	60 - 74	1917	1697	Analyzed	3	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 73 NW½	60 - 74	1917	1697	Analyzed	2	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Feature 73 NW½	60 - 74	1917	1697	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	FRG	3	IND	1
Feature 73 SE½	60 - 74	1916	1696	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Feature 73 SE½	60 - 74	1916	1696	Analyzed	2	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 75 W½	55 - 108	1920	1699	Analyzed	7	0.1	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 75 W½	55 - 108	1920	1699	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	1	CRT	1
Feature 75 W½	55 - 108	1920	1699	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	2	CRT	1
Feature 75 W½	55 - 108	1920	1699	Analyzed	5	0.1	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Feature 76 N½	55 - 77	1922	1701	Analyzed	2	0.1	LPR	PWS	LOC	CRT	5		I	DEB	0	IND	1
Feature 76 N½	55 - 77	1922	1701	Analyzed	2	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 76 S½	55 - 77	1921	1700	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	1
Feature 76 S½	55 - 77	1921	1700	Analyzed	1	2.2	LPR	PWS	LOC	CRT	3		Y	DEB	1	IND	1
Feature 78 S½	55 - 75	1924	1703	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1

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Unit	Depth (cm)	Provenience No.	Lot No.	Level of Analysis	Quantity	Weight (in g)	General Period	Region	Material	Lithology	Size Grade	Edge Modification	Thermal Alteration	Completeness	Cortex	Platform	Minimum Number of Nodules
<b>Feature</b>																	
Feature 79 S½	55 - 79	1927	1706	Analyzed	1	0.1	LPR	PWS	LOC	QZT	4		I	FRG	0	IND	1
Feature 79 S½	55 - 79	1927	1706	Analyzed	15	0.1	LPR	PWS	INT	USX	6		I	DEB	0	IND	15
Feature 79 S½	55 - 79	1927	1706	Analyzed	1	0.04	LPR	PWS	LOC	QZT	5		I	FRG	0	IND	1
Feature 82 S½	60 - 69	1931	1711	Analyzed	2	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 85 S½	60 - 73	1936	1715	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Feature 86 NW½	60 - 67	1938	1718	Analyzed	1	1.3	LPR	PWS	LOC	CRT	4		I	COM	1	CRT	3
Feature 86 NW½	60 - 67	1938	1718	Analyzed	2	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	FLT	3
Feature 86 NW½	60 - 67	1938	1718	Analyzed	1	0.4	LPR	PWS	REG	CRT	4		I	FRG	0	IND	3
Feature 86 SE½	60 - 67	1939	1717	Analyzed	1	0.5	LPR	PWS	LOC	QZT	4		I	DEB	0	IND	1
Feature 87 E½	60 - 75	1940	1720	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 87 E½	60 - 75	1940	1720	Analyzed	1	0.04	LPR	PWS	LOC	CRT	5		I	COM	0	FLT	1
Feature 87 W½	60 - 75	1941	1719	Analyzed	4	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 88 S½	90 - 124	1942	1721	Analyzed	1	0.2	LPR	PWS	LOC	CRT	4		I	COM	0	CPX	1
Feature 88 S½	90 - 124	1942	1721	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 93 S½	50 - 54	1950	1729	Analyzed	1	0.04	LPR	PWS	LOC	QZT	4		I	COM	4	CRT	2
Feature 93 S½	50 - 54	1950	1729	Analyzed	1	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	2
Feature 93 S½	50 - 54	1950	1729	Analyzed	1	1.9	LPR	PWS	LOC	CHL	4		I	FRG	4	IND	2
Feature 97 E½	65 - 92	1956	1735	Analyzed	1	0.1	LPR	PWS	LOC	CRT	4		I	FRG	0	IND	1
Feature 97 E½	65 - 92	1956	1735	Analyzed	2	0.04	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Feature 97 E½	65 - 92	1956	1735	Analyzed	22	0.2	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 97 W½	65 - 92	1957	1736	Analyzed	6	0.1	LPR	PWS	LOC	CRT	5		I	FRG	0	IND	1
Feature 97 W½	65 - 92	1957	1736	Analyzed	3	0.1	LPR	PWS	LOC	CRT	5		I	FRG	1	IND	1
Feature 97 W½	65 - 92	1957	1736	Analyzed	9	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1
Feature 99 E½	50 - 54	1959	1738	Analyzed	2	0.04	LPR	PWS	INT	USX	6		I	DEB	0	IND	1

**A-8: FIRE-CRACKED ROCK**



Geo-Marine, Inc.  
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 FCR Analysis Data

Unit Type	Depth (cm)	Prov. No.	Lot No.	Artifact No.	Class	Raw Material	Qty	Weight (in g)
<b>50 x 50 cm Units</b>								
Unit 007	20 - 40	128	165	9	FCR	Chert	1	2
Unit 014	20 - 30	55	188	21	FCR	Ironized Sandstone	1	2.5
Unit 026	20 - 40	94	231	21	FCR	Quartzite	1	7
<b>Block 2</b>								
Unit 083 SE¼	30 - 40	862	677	3	FCR	Quartzite	1	0.5
Unit 084 SE¼	30 - 40	867	697	18	FCR	Quartzite	1	8.2
Unit 084 SE¼	30 - 40	867	697	19	FCR	Ironized Sandstone	1	3.1
Unit 083 NW¼	10 - 20	744	1769	1	FCR	Quartzite	1	7.5
<b>Block 3</b>								
Unit 065 NW¼	0 - 10	471	392	1	FCR	Quartzite	1	5.2
Unit 065 NE¼	10 - 20	519	394	2	FCR	Silt-stone	1	4
Unit 065 NE¼	10 - 20	519	394	3	FCR	Ironized Sandstone	1	35.6
Unit 070 NE¼	0 - 10	493	460	3	FCR	Chert	1	3.2
Unit 071 SE¼	10 - 20	566	474	4	FCR	Chert	1	4
Unit 071 SW¼	20 - 30	631	478	1	FCR	Fossilized Wood	1	2.6
Unit 071 SW¼	20 - 30	631	478	2	FCR	Fossilized Wood	1	1.5
<b>Block 4</b>								
Unit 073 NE¼	20 - 30	646	505	4	FCR	Quartzite	1	1.9
Unit 073 SW¼	50 - 60	1726	516	15	FCR	Quartzite	1	4.3
Unit 074 NW¼	30 - 40	702	527	6	FCR	Quartzite	1	3.3
Unit 075 SE¼	20 - 30	658	545	6	FCR	Fossilized Wood	1	22
Unit 078 NE¼	30 - 40	715	587	9	FCR	Quartzite	1	7
Unit 086 NE¼	40 - 50	1746	731	2	FCR	Fossilized Wood	1	122.6
Unit 087 NW¼	20 - 30	1254	741	8	FCR	Quartzite	1	23.2
Unit 087 SE¼	20 - 30	1256	742	6	FCR	Silt-stone	1	2.2
Unit 087 NW¼	30 - 40	1472	745	13	FCR	Ironized Sandstone	1	8
Unit 087 NW¼	30 - 40	1472	745	14	FCR	Ironized Sandstone	1	2
Unit 088 SE¼	30 - 40	1479	793	18	FCR	Quartzite	1	11.4

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 GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
 FCR Analysis Data

Unit Type	Depth (cm)	Prov. No.	Lot No.	Artifact No.	Class	Raw Material	Qty	Weight (in g)
<b>Block 4</b>								
Unit 093 NW¼	30 - 40	1381	890	24	FCR	Ironized Sandstone	1	4.2
Unit 096 SW¼	10 - 20	1162	936	10	FCR	Quartzite	1	2.5
Unit 099 NE¼	0 - 10	1097	987	1	FCR	Ironized Sandstone	1	5
Unit 099 NE¼	20 - 26	1300	995	4	FCR	Ironized Sandstone	1	2.7
Unit 100 NE¼	10 - 20	1179	1004	14	FCR	Ironized Sandstone	1	1.4
Unit 100 NE¼	27 - 30	1429	1012	9	FCR	Quartzite	1	1.7
Unit 102 NW¼	10 - 20	951	1044	5	FCR	Chert	1	2.9
Unit 104 SE¼	10 - 20	1196	1080	10	FCR	Ironized Sandstone	1	3.1
Unit 105 SE¼	10 - 20	1200	1099	11	FCR	Ironized Sandstone	1	1.8
Unit 106 NW¼	10 - 20	1203	1121	7	FCR	Chert	1	1.1
Unit 118 SW¼	9 - 19	1512	1390	5	FCR	Chert	1	4.9
Unit 119 SE¼	9 - 19	1585	1406	5	FCR	Chert	1	10.3
Unit 122 NW¼	14 - 24	1572	1469	11	FCR	Chert	1	2.1
Unit 122 SW¼	24 - 34	1647	1475	10	FCR	Chert	1	6.9
Unit 125 SE¼	15 - 20	1569	1552	6	FCR	Ironized Sandstone	1	1.5
Unit 126 SE¼	12 - 22	1697	1574	17	FCR	Chert	1	1
<b>Block 5</b>								
Unit 080 NW¼	32 - 40	770	618	7	FCR	Silt-stone	1	3.4
Unit 082 SW¼	32 - 40	830	657	1	FCR	Chert	1	3.9
<b>Block 6</b>								
Unit 108 NW¼	25 - 35	852	1155	8	FCR	Chert	1	4.3
<b>Block 7</b>								
Unit 109 SW¼	30 - 38	956	1178	35	FCR	Chert	1	4.2
<b>Block 8</b>								
Unit 114 SE¼	10 - 20	1013	1277	6	FCR	Ironized Sandstone	1	3
Unit 114 NE¼	20 - 30	1016	1279	10	FCR	Ironized Sandstone	1	1.6
Unit 114 SW¼	20 - 30	1014	1282	11	FCR	Quartzite	1	5.4
Unit 116 SE¼	50 - 61	1229	1344	4	FCR	Chert	1	0.1



GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
FCR Analysis Data

Unit Type	Depth (cm)	Prov. No.	Lot No.	Artifact No.	Class	Raw Material	Qty	Weight (in g)
<b>Block 8</b>								
Unit 117 SE¼	25 - 30	1343	1364	17	FCR	Ironized Sandstone	1	5.4
Unit 117 NE¼	30 - 35	1346	1366	16	FCR	Chert	1	1.3
Unit 117 NE¼	30 - 35	1346	1366	17	FCR	Ironized Sandstone	1	13.3
Unit 117 NW¼	30 - 35	1345	1367	33	FCR	Chert	1	2
Unit 117 NW¼	30 - 35	1345	1367	35	FCR	Ironized Sandstone	1	119.4
Unit 117 SE¼	30 - 35	1347	1368	27	FCR	Chert	1	4.5
<b>Features</b>								
Unit 087, Feature 7 NE½	40 - 53	1800	1603	33	FCR	Chert	1	0.4
Unit 087, Feature 7 NE½	40 - 53	1800	1603	34	FCR	Ironized Sandstone	1	11.5
Unit 087, Feature 7 NE½	40 - 53	1800	1603	35	FCR	Unidentified Metamorphic-ironstone	1	9.4
Unit 087, Feature 7 NE½	40 - 53	1800	1603	36	FCR	Unidentified Metamorphic-ironstone	1	1.2
Unit 120, Feature 29 N½	41 - 55	1840	1627	21	FCR	Silt-stone	1	4.8
Unit 076, Feature 9 W½	40 - 53	2002	1766	12	FCR	Quartzite	1	74.7
Unit 120 NW¼, Feature 29 N½	48 - 48	2006	1767	1	FCR	Chert	1	162.6



## A-9: ECOFACTS



GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>50-x-50 cm unit</b>											
Unit 001	0 - 10	2	137	2	Animal Bone	Unworked	Testudines	Element=Carapace; Side=complete;	10	0.4	
Unit 001	0 - 10	2	137	1	Vegetal	Nutshell	Unanalyzed		1	0.05	
Unit 001	0 - 10	1	137	4	Animal Bone	Unworked	Small Mammal	Element=Unidentified; Side=fragment; Weathering=yes	1	0.4	
Unit 001	0 - 10	1	137	5	Animal Bone	Unworked	Small Mammal	Element=Unidentified long bone; Side=complete; Weathering=yes	1	0.4	
Unit 001	0 - 10	1	137	1	Animal Bone	Unworked	Testudines	Element=Carapace; End=pleural; Side=complete;	12	2.1	
Unit 001	0 - 10	1	137	2	Animal Bone	Unworked	Small Mammal	Element=Vertebral body; Side=fragment; Weathering=yes	1	0.4	cervical?
Unit 001	0 - 10	1	137	3	Animal Bone	Unworked	Small Mammal	Element=Vertebrae; Side=fragment; Weathering=yes	1	0.9	
Unit 002	0 - 10	18	141	3	Vegetal	Charcoal	Unanalyzed		26	0.05	
Unit 002	20 - 30	24	143	1	Vegetal	Charcoal	Unanalyzed		43	0.05	
Unit 002	20 - 30	22	143	2	Vegetal	Charcoal	Unanalyzed		1	0.05	
Unit 002	30 - 40	27	144	1	Vegetal	Charcoal	Unanalyzed		38	0.05	
Unit 002	10 - 20	21	142	1	Vegetal	Charcoal	Unanalyzed		40	0.05	

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Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>50-x-50 cm unit</b>											
Unit 002	40 - 50	30	145	1	Vegetal	Charcoal	Unanalyzed		59	0.05	
Unit 003	70 - 80	45	151	3	Animal Bone	Unworked	Testudines	Element=Carapace; Side=complete;	1	0.1	
Unit 003	20 - 30	35	146	2	Animal Bone	Unworked	Testudines	Element=Carapace; Side=complete;	6	0.8	
Unit 003	30 - 40	37	147	1	Animal Bone	Unworked	Testudines	Element=Carapace; End=pleural; Side=complete;	15	2	
Unit 003	30 - 40	37	147	2	Animal Bone	Unworked	Testudines	Element=Carapace; End=pleural; Side=fragment;	1	0.05	
Unit 003	30 - 40	37	147	3	Animal Bone	Unworked	Small Mammal	Element=Vertebrae; Side=fragment;	1	0.9	
Unit 003	30 - 40	37	147	4	Animal Bone	Unworked	Small Mammal	Element=Vertebral body epiphysial plate; Side=fragment;	1	0.01	
Unit 004	0 - 20	241	152	2	Vegetal	Charcoal	Unanalyzed		32	0.05	
Unit 004	20 - 40	244	153	2	Vegetal	Charcoal	Unanalyzed		34	0.05	
Unit 004	40 - 60	247	154	2	Vegetal	Charcoal	Unanalyzed		34	0.05	
Unit 006	0 - 20	256	160	2	Vegetal	Charcoal	Unanalyzed		65	0.05	
Unit 006	20 - 40	259	161	2	Vegetal	Charcoal	Unanalyzed		11	0.05	
Unit 006	40 - 60	262	162	2	Vegetal	Charcoal	Unanalyzed		17	0.05	
Unit 006	60 - 80	265	163	2	Vegetal	Charcoal	Unanalyzed		3	0.05	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>50-x-50 cm unit</b>											
Unit 006	80 - 90	268	164	2	Vegetal	Charcoal	Unanalyzed		2	0.05	
Unit 008	40 - 60	139	170	2	Vegetal	Charcoal	Unanalyzed		31	0.05	
Unit 008	0 - 20	133	168	2	Vegetal	Charcoal	Unanalyzed		25	0.05	
Unit 008	20 - 40	136	169	2	Vegetal	Charcoal	Unanalyzed		40	0.05	
Unit 009	20 - 40	141	172	12	Vegetal	Nutshell	Unanalyzed		1	0.05	
Unit 010	20 - 40	149	175	2	Vegetal	Charcoal	Unanalyzed		40	0.05	
Unit 010	40 - 60	152	176	2	Vegetal	Charcoal	Unanalyzed		5	0.05	
Unit 010	0 - 20	146	174	2	Vegetal	Charcoal	Unanalyzed		30	0.05	
Unit 010	0 - 20	144	174	15	Vegetal	Charcoal	Unanalyzed		2	0.3	
Unit 012	40 - 60	163	181	2	Vegetal	Charcoal	Unanalyzed		9	0.05	
Unit 012	0 - 20	157	179	2	Vegetal	Charcoal	Unanalyzed		2	0.05	
Unit 012	20 - 40	160	180	2	Vegetal	Charcoal	Unanalyzed		28	0.05	
Unit 014	20 - 30	57	188	2	Vegetal	Charcoal	Unanalyzed		52	0.05	
Unit 014	20 - 30	55	188	22	Animal Bone	Unworked	Small Mammal	Element=Vertebral body and neural canal; Side=fragment;	1	0.3	
Unit 014	10 - 20	54	187	2	Vegetal	Charcoal	Unanalyzed		35	0.05	
Unit 014	40 - 50	63	190	2	Vegetal	Charcoal	Unanalyzed		41	0.05	
Unit 014	30 - 40	60	189	2	Vegetal	Charcoal	Unanalyzed		38	0.05	

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Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Commen
<b>50-x-50 cm unit</b>											
Unit 014	0 - 10	51	186	2	Vegetal	Charcoal	Unanalyzed		38	0.05	
Unit 014	50 - 60	66	191	2	Vegetal	Charcoal	Unanalyzed		58	0.05	
Unit 015	30 - 40	78	195	2	Vegetal	Charcoal	Unanalyzed		9	0.05	
Unit 015	10 - 20	72	193	2	Vegetal	Charcoal	Unanalyzed		29	0.05	
Unit 015	40 - 50	81	196	2	Vegetal	Charcoal	Unanalyzed		18	0.05	
Unit 015	20 - 30	75	194	2	Vegetal	Charcoal	Unanalyzed		7	0.05	
Unit 015	60 - 70	87	198	2	Vegetal	Charcoal	Unanalyzed		20	0.05	
Unit 015	0 - 10	69	192	2	Vegetal	Charcoal	Unanalyzed		31	0.05	
Unit 015	50 - 60	84	197	2	Vegetal	Charcoal	Unanalyzed		19	0.05	
Unit 017	0 - 20	275	201	2	Vegetal	Charcoal	Unanalyzed		27	0.05	
Unit 017	20 - 40	278	202	2	Vegetal	Charcoal	Unanalyzed		15	0.05	
Unit 019	20 - 40	287	206	2	Vegetal	Charcoal	Unanalyzed		28	0.05	
Unit 019	0 - 20	284	205	2	Vegetal	Charcoal	Unanalyzed		16	0.05	
Unit 021	40 - 60	175	212	2	Vegetal	Charcoal	Unanalyzed		6	0.05	
Unit 021	20 - 40	172	211	2	Vegetal	Charcoal	Unanalyzed		12	0.05	
Unit 022	0 - 20	176	213	4	Vegetal	Charcoal	Unanalyzed		13	0.05	
Unit 023	0 - 20	180	215	2	Vegetal	Charcoal	Unanalyzed		27	0.05	
Unit 023	60 - 80	189	218	2	Vegetal	Charcoal	Unanalyzed		2	0.05	



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Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>50-x-50 cm unit</b>											
Unit 025	0 - 20	201	226	2	Vegetal	Charcoal	Unanalyzed		14	0.05	
Unit 025	60 - 70	210	229	2	Vegetal	Charcoal	Unanalyzed		5	0.05	
Unit 025	20 - 40	204	227	2	Vegetal	Charcoal	Unanalyzed		31	0.05	
Unit 025	40 - 60	207	228	2	Vegetal	Charcoal	Unanalyzed		18	0.05	
Unit 027	20 - 40	102	234	2	Vegetal	Charcoal	Unanalyzed		17	0.05	
Unit 027	40 - 60	105	235	2	Vegetal	Charcoal	Unanalyzed		27	0.05	
Unit 027	60 - 80	108	236	2	Vegetal	Charcoal	Unanalyzed		50	0.05	
Unit 027	80 - 90	111	237	2	Vegetal	Charcoal	Unanalyzed		7	0.05	
Unit 027	0 - 20	99	233	2	Vegetal	Charcoal	Unanalyzed		15	0.05	
Unit 030	0 - 20	322	240	2	Vegetal	Charcoal	Unanalyzed		18	0.05	
Unit 030	20 - 40	325	241	2	Vegetal	Charcoal	Unanalyzed		2	0.05	
Unit 032	20 - 40	337	246	2	Vegetal	Charcoal	Unanalyzed		5	0.05	
Unit 032	40 - 50	340	247	2	Vegetal	Charcoal	Unanalyzed		4	0.05	
Unit 032	0 - 20	334	245	2	Vegetal	Charcoal	Unanalyzed		24	0.05	
Unit 034	40 - 60	349	253	2	Vegetal	Charcoal	Unanalyzed		1	0.05	
Unit 034	20 - 40	346	252	2	Vegetal	Charcoal	Unanalyzed		12	0.05	
Unit 034	0 - 20	319	250	2	Vegetal	Charcoal	Unanalyzed		6	0.05	
Unit 036	40 - 60	299	259	2	Vegetal	Charcoal	Unanalyzed		1	0.05	

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>50-x-50 cm unit</b>											
Unit 036	0 - 20	293	257	2	Vegetal	Charcoal	Unanalyzed		27	0.05	
Unit 036	20 - 40	294	258	5	Vegetal	Charcoal	Unanalyzed		1	0.05	
Unit 036	20 - 40	296	258	2	Vegetal	Charcoal	Unanalyzed		4	0.05	
Unit 037	20 - 40	301	261	8	Vegetal	Charcoal	Unanalyzed		1	0.05	
Unit 038	0 - 20	305	262	2	Vegetal	Charcoal	Unanalyzed		14	0.05	
Unit 038	20 - 40	308	263	2	Vegetal	Charcoal	Unanalyzed		38	0.05	
Unit 038	40 - 60	311	264	2	Vegetal	Charcoal	Unanalyzed		17	0.05	
Unit 038	60 - 70	314	265	2	Vegetal	Charcoal	Unanalyzed		8	0.05	
Unit 039	20 - 40	316	267	4	Vegetal	Nutshell	Unanalyzed		1	0.05	possible nut shell
Unit 040	0 - 20	213	268	2	Vegetal	Charcoal	Unanalyzed		6	0.05	
Unit 040	20 - 40	216	269	1	Vegetal	Charcoal	Unanalyzed		14	0.05	
Unit 040	40 - 60	219	270	2	Vegetal	Charcoal	Unanalyzed		7	0.05	
Unit 040	60 - 80	222	271	2	Vegetal	Charcoal	Unanalyzed		6	0.05	
Unit 042	20 - 40	232	276	2	Vegetal	Charcoal	Unanalyzed		27	0.05	
Unit 042	0 - 20	229	274	3	Vegetal	Charcoal	Unanalyzed		19	0.05	
Unit 042	0 - 20	229	274	2	Vegetal	Nutshell	Unanalyzed		2	0.05	
Unit 042	20 - 40	230	275	2	Vegetal	Charcoal	Unanalyzed		24	0.05	
Unit 042	40 - 60	233	277	5	Vegetal	Charcoal	Unanalyzed		4	1	

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Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>50-x-50 cm unit</b>											
Unit 042	40 - 60	235	277	2	Vegetal	Charcoal	Unanalyzed		37	0.05	
Unit 042	60 - 80	238	278	1	Vegetal	Charcoal	Unanalyzed		34	0.05	
Unit 043	0 - 20	120	279	2	Vegetal	Charcoal	Unanalyzed		16	0.05	
Unit 043	20 - 40	123	280	2	Vegetal	Charcoal	Unanalyzed		2	0.05	
Unit 044	20 - 40	351	283	9	Vegetal	Charcoal	Unanalyzed		1	1	
Unit 045	0 - 20	355	1768	2	Vegetal	Charcoal	Unanalyzed		15	0.05	
Unit 045	20 - 40	358	286	2	Vegetal	Charcoal	Unanalyzed		4	0.05	
Unit 047	0 - 20	366	288	2	Vegetal	Charcoal	Unanalyzed		5	0.05	
Unit 049	0 - 20	378	291	2	Vegetal	Charcoal	Unanalyzed		13	0.05	
Unit 049	20 - 40	381	292	2	Vegetal	Charcoal	Unanalyzed		6	0.05	
Unit 051	20 - 40	393	297	2	Vegetal	Charcoal	Unanalyzed		14	0.05	
Unit 051	60 - 80	399	299	2	Vegetal	Charcoal	Unanalyzed		5	0.05	
Unit 051	0 - 20	390	296	2	Vegetal	Charcoal	Unanalyzed		58	0.05	
Unit 051	40 - 60	396	298	1	Vegetal	Charcoal	Unanalyzed		8	0.05	
Unit 053	0 - 20	405	302	2	Vegetal	Charcoal	Unanalyzed		30	0.05	
Unit 053	20 - 40	406	303	6	Vegetal	Charcoal	Unanalyzed		2	0.1	
Unit 053	20 - 40	408	303	2	Vegetal	Charcoal	Unanalyzed		21	0.05	
Unit 053	40 - 60	411	304	2	Vegetal	Charcoal	Unanalyzed		4	0.05	

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>50-x-50 cm unit</b>											
Unit 054	20 - 40	413	305	8	Vegetal	Nutshell	Unanalyzed		1	0.3	
Unit 055	40 - 60	424	310	2	Vegetal	Charcoal	Unanalyzed		7	0.05	
Unit 055	20 - 40	421	308	2	Vegetal	Charcoal	Unanalyzed		35	0.05	
Unit 055	60 - 80	427	311	1	Shell	Unworked		Side=fragment;	1	0.01	flotation
Unit 055	60 - 80	427	311	2	Vegetal	Charcoal	Unanalyzed		3	0.05	
Unit 055	0 - 20	418	307	2	Vegetal	Charcoal	Unanalyzed		16	0.05	
<b>Block 2</b>											
Unit 061 SE¼	40 - 50	858	332	2	Vegetal	Charcoal	Unanalyzed		3	0.3	
Unit 083 NW¼	30 - 40	860	676	14	Vegetal	Charcoal	Unanalyzed		1	0.8	crushed in lab
Unit 083 SW¼	30 - 40	859	678	13	Vegetal	Charcoal	Unanalyzed		3	0.6	
Unit 084 NE¼	30 - 40	866	695	4	Vegetal	Charcoal	Unanalyzed		8	5.8	
<b>Block 3</b>											
Unit 065 SE¼	10 - 20	521	396	6	Vegetal	Charcoal	Unanalyzed		1	0.6	
Unit 072 SW¼	30 - 40	640	495	3	Vegetal	Charcoal	Unanalyzed		21	18.1	
Unit 072 SW¼	20 - 30	636	491	2	Vegetal	Charcoal	Unanalyzed		55	18.3	
Unit 072 SW¼	40 - 60	694	498	2	Vegetal	Charcoal	Unanalyzed		9	6.5	
<b>Block 4</b>											
Unit 073, Feature 11 E½	40 - 49	1811	1610	1	Vegetal	Charcoal	Unanalyzed		10	0.05	<0.1 g, qty estimated

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Block 4</b>											
Unit 073, Feature 11 W½	40 - 49	1812	1786	1	Vegetal	Charcoal	Unanalyzed		2	0.2	
Unit 074 SE¼	10 - 20	581	520	2	Vegetal	Charcoal	Unanalyzed		2	0.1	
Unit 074 SW¼	30 - 40	701	529	7	Animal Bone	Unworked	Unidentified	Element=Unidentified mammal bone; Side=fragment;	1	0.3	
Unit 075, Feature 10 N½	40 - 50	1808	1608	3	Vegetal	Quercus subg. Quercus	Macrobotanicals		1000	42	
Unit 075, Feature 10 S½	40 - 50	1810	1609	7	Vegetal	Carbonized cone scale	Pinus sp.		39	0.13	
Unit 075, Feature 10 S½	40 - 50	1810	1609	3	Vegetal	Wood charcoal	Not examined for species		1217	16.31	
Unit 075, Feature 10 S½	40 - 50	1810	1609	5	Vegetal	Wood charcoal	Quercus sp.		1	0.02	
Unit 075, Feature 10 S½	40 - 50	1810	1609	6	Vegetal	Wood charcoal	Quercus subg. Quercus		19	0.6	
Unit 075, Feature 10 S½	40 - 50	1810	1609	8	Vegetal	Carbonized botanical	Indeterminable		1	0.01	
Unit 075, Feature 10 S½	40 - 50	1810	1609	10	Vegetal	Carbonized rachis	Zea mays		1	0.05	cupule
Unit 075, Feature 10 S½	40 - 50	1810	1609	4	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	1	0.05	flotation
Unit 075, Feature 10 S½	40 - 50	1810	1609	9	Vegetal	Carbonized nutshell	Quercus sp.		1	0.01	

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Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis/Comments
<b>Block 4</b>											
Unit 075, Feature 10 S½	40 - 50	1810	1609		Vegetal	Wood charcoal	Quercus subg. Quercus		1	0.5	Discarded after analysis; Six rings; expended for AMS dating
Unit 075, Feature 10 S½	40 - 50	1810	1609	2	Vegetal	Carbonized bark			1	0.01	
Unit 075, Feature 15 W½	40 - 47	1819	1614	7	Vegetal	Wood charcoal	Pinus sp.		6	0.04	
Unit 075, Feature 15 W½	40 - 47	1819	1614	8	Vegetal	Carbonized rachis	Zea mays		1	0.01	cupule
Unit 075, Feature 15 W½	40 - 47	1819	1614	13	Vegetal	Carbonized resin	Pinus sp.		1	0.01	
Unit 075, Feature 15 W½	40 - 47	1819	1614	14	Vegetal	Carbonized botanical	Indeterminate		2	0.01	
Unit 075, Feature 15 W½	40 - 47	1819	1614	11	Vegetal	Wood charcoal	Quercus sp.		3	0.02	
Unit 075, Feature 15 W½	40 - 47	1819	1614	12	Vegetal	Wood charcoal	Hardwood		1	0.01	
Unit 075, Feature 15 W½	40 - 47	1819	1614	9	Vegetal	Carbonized nutshell	Carya sp.		7	0.15	
Unit 075, Feature 15 W½	40 - 47	1819	1614	10	Vegetal	Wood charcoal	Quercus subg. Lobatae		1	0.01	
Unit 075, Feature 40 S½	40 - 60	1859	1640	2	Vegetal	Charcoal	Unanalyzed		3	0.05	<0.1 g. qty estimated

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Block 4</b>											
Unit 076 NW¼	40 - 50	1740	563	1	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	1	0.2	
Unit 076, Feature 13 E½	40 - 50	1815	1612	3	Vegetal	Charcoal	Unanalyzed		5	0.05	<0.1 g. qty estimated
Unit 076, Feature 44 E½	51 - 56	1864	1644	2	Vegetal	Charcoal	Unanalyzed		50	0.3	qty estimated
Unit 076, Feature 9 E½	40 - 53	1805	1606	21	Vegetal	Carbonized resin	Pinus sp.		1	0.01	
Unit 076, Feature 9 E½	40 - 53	1805	1606		Vegetal	Carbonized nutshell	Carya sp.		1	0.05	Discarded after analysis; Expended for AMS dating
Unit 076, Feature 9 E½	40 - 53	1805	1606	12	Vegetal	Wood charcoal	Pinus sp.		14	0.15	
Unit 076, Feature 9 E½	40 - 53	1805	1606	13	Vegetal	Carbonized bark	N/A		1	0.04	
Unit 076, Feature 9 E½	40 - 53	1805	1606	15	Vegetal	Carbonized nutshell	Juglandaceae		9	0.12	
Unit 076, Feature 9 E½	40 - 53	1805	1606	16	Vegetal	Semi-carbonized wood	Pinus sp.		2	0.01	
Unit 076, Feature 9 E½	40 - 53	1805	1606	18	Vegetal	Carbonized nutshell	Juglans nigra		2	0.06	
Unit 076, Feature 9 E½	40 - 53	1805	1606	22	Vegetal	Carbonized botanical	Indeterminate		12	0.06	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis/Comments
<b>Block 4</b>											
Unit 076, Feature 9 E½	40 - 53	1805	1606	10	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	4	0.1	flotation
Unit 076, Feature 9 E½	40 - 53	1805	1606	24	Vegetal	Wood charcoal	Not examined for species		59	0.48	
Unit 076, Feature 9 E½	40 - 53	1805	1606	23	Vegetal	Wood charcoal	Quercus sp.		4	0.08	
Unit 076, Feature 9 E½	40 - 53	1805	1606	11	Vegetal	Wood charcoal	Carya sp.		1	0.01	
Unit 076, Feature 9 E½	40 - 53	1805	1606	19	Vegetal	Carbonized cone scales	Pinus sp.		4	0.01	
Unit 076, Feature 9 E½	40 - 53	1805	1606	20	Vegetal	Carbonized nutshell	Quercus sp.		1	0.005	< 0.01 g
Unit 076, Feature 9 E½	40 - 53	1805	1606	17	Vegetal	Carbonized nutshell	Carya sp.		11	0.22	
Unit 076, Feature 9 E½	40 - 53	1805	1606	14	Vegetal	Wood charcoal	Hardwood		1	0.01	
Unit 076, Feature 9 W½	40 - 53	1807	1607	5	Vegetal	Charcoal	Unanalyzed		100	1.5	qty estimated-sent for macrobotanical analysis combined with 1805
Unit 076, Feature 9 W½	40 - 53	2002	1766	13	Vegetal	Nutshell	Unanalyzed		1	0.2	



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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Block 4</b>											
Unit 076, Feature 9 W½	40 - 53	1807	1607	4	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	1	0.01	flotation
Unit 077 SE¼	10 - 20	666	568	10	Vegetal	Wood	Unanalyzed		1	1.1	
Unit 077 SE¼	30 - 40	739	575	3	Vegetal	Nutshell	Unanalyzed		11	0.3	
Unit 077, Feature 17 E½	40 - 52	1822	1616	4	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	3	0.05	flotation
Unit 077, Feature 17 E½	40 - 52	1822	1616	5	Vegetal	Charcoal	Unanalyzed		12	0.05	<0.1 g, qty estimated
Unit 077, Feature 18 E½	40 - 48	1824	1617	2	Vegetal	Charcoal	Unanalyzed		13	0.05	<0.1 g, qty estimated
Unit 077, Feature 21 W½	40 - 48	1830	1620	1	Vegetal	Charcoal	Unanalyzed		1	0.05	<0.1 g, qty estimated
Unit 086 SE¼	30 - 40	1422	727	9	Vegetal	Nutshell	Unanalyzed		1	0.3	
Unit 087 NW¼	30 - 40	1472	745	15	Vegetal	Nutshell	Unanalyzed		1	0.05	
Unit 087, Feature 6 E½	40 - 56	1797	1601	15	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	4	0.05	flotation
Unit 087, Feature 6 E½	40 - 56	1797	1601	16	Vegetal	Charcoal	Unanalyzed		100	1.5	qty estimated
Unit 087, Feature 6 W½	40 - 56	1799	1602	4	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	1	0.01	flotation

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Block 4</b>											
Unit 087, Feature 6 W½	40 - 56	1799	1602		Vegetal	Carbonized nutshell	Carya sp.		5	0.14	Discarded after analysis; Thick; Expended for AMS dating
Unit 087, Feature 7 NE½	40 - 53	1800	1603	40	Vegetal	Wood charcoal	Carya sp.		2	0.08	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	47	Vegetal	Carbonized botanical	Indeterminate		27	0.17	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	45	Vegetal	Carbonized resin	Pinus sp.		8	0.04	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	44	Vegetal	Carbonized nutshell	Quercus sp.		8	0.03	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	49	Vegetal	Carbonized nutshell	Carya sp.		76	1.09	
Unit 087, Feature 7 NE½	40 - 53	1800	1603		Vegetal	Carbonized nutshell	Carya sp.		1	0.12	Discarded after analysis; Expended for AMS dating
Unit 087, Feature 7 NE½	40 - 53	1800	1603	42	Vegetal	Carbonized cone scales	Pinus sp.		3	0.02	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	43	Vegetal	Wood charcoal	Pinus sp.		9	0.07	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	31	Vegetal	Carbonized nutshell	Juglandaceae		12	0.09	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Block 4</b>											
Unit 087, Feature 7 NE½	40 - 53	1800	1603	48	Vegetal	Semi-carbonized wood	Pinus sp.		2	0.07	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	39	Vegetal	Wood charcoal	Hardwood		1	0.01	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	46	Vegetal	Carbonized nutshell	Juglans nigra		2	0.11	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	38	Vegetal	Wood charcoal	Not examined for species		109	0.89	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	50	Vegetal	Charcoal	Unanalyzed		150	2.7	qty estimated-sent for macrobotanical analysis combined with 1802
Unit 087, Feature 7 NE½	40 - 53	1800	1603	41	Vegetal	Wood charcoal	Quercus sp.		8	0.1	
Unit 087, Feature 7 NE½	40 - 53	1800	1603	37	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	3	0.05	flotation
Unit 087, Feature 7 SW½	40 - 53	1802	1604	13	Vegetal	Charcoal	Unanalyzed		125	1.2	qty estimated-sent for macrobotanical analysis-combined with 1800
Unit 089 SE¼	30 - 40	1426	817	1	Vegetal	Charcoal	Unanalyzed		50	1.1	broke in lab; quantity estimated

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis/Comments
<b>Block 4</b>											
Unit 089 SE¼	27 - 30	1366	813	9	Vegetal	Nutshell	Unanalyzed		1	0.05	<0.1 g
Unit 089 SW¼	30 - 40	1423	818	6	Vegetal	Nutshell	Unanalyzed		3	0.05	<0.1 g
Unit 090, Feature 12 E½	42 - 51	1813	1611	2	Vegetal	Charcoal	Unanalyzed		10	0.05	<0.1 g, qty estimated
Unit 090, Feature 26 E½	46 - 54	1836	1624	1	Vegetal	Charcoal	Unanalyzed		15	0.1	qty estimated
Unit 090, Feature 8 SE½	42 - 51	1803	1605	1	Vegetal	Charcoal	Unanalyzed		7	0.05	<0.1 g, qty estimated
Unit 091 SE¼	30 - 40	1491	859	13	Vegetal	Charcoal	Unanalyzed		2	0.3	
Unit 093, Feature 37 E½	40 - 46	1853	1636	2	Vegetal	Charcoal	Unanalyzed		2	0.05	<0.1 g, qty estimated
Unit 094 SW¼	20 - 25	1278	904	4	Vegetal	Charcoal	Unanalyzed		1	0.5	
Unit 094, Feature 20 E½	40 - 53	1828	1619	1	Vegetal	Charcoal	Unanalyzed		8	0.05	<0.1 g, qty estimated
Unit 098, Feature 19 N½	50 - 61	1826	1618	1	Vegetal	Charcoal	Unanalyzed		20	0.05	<0.1 g, qty estimated
Unit 099 NW¼	0 - 10	1096	988	1	Animal Bone	Unworked	Small Mammal	Element=vertebrae; Side=fragment;	1	0.9	
Unit 100 NE¼	27 - 30	1429	1012	10	Vegetal	Charcoal	Unanalyzed		2	0.4	
Unit 101 NE¼	20 - 27	1308	1026	12	Vegetal	Wood	Unanalyzed		1	0.2	charred wood
Unit 101 NE¼	10 - 20	1183	1022	8	Vegetal	Wood	Unanalyzed		1	0.1	charred wood
Unit 101 SE¼	10 - 20	1184	1024	6	Vegetal	Wood	Unanalyzed		2	0.8	charred wood

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis/Comments
<b>Block 4</b>											
Unit 101 SW¼	20 - 27	1306	1029	7	Vegetal	Charcoal	Unanalyzed		2	0.4	
Unit 104 SE¼	10 - 20	1196	1080	11	Vegetal	Wood	Unanalyzed		1	0.4	charred wood
Unit 105 NE¼	0 - 10	1108	1093	2	Animal Bone	Unworked	Small Mammal	Element=Scapula; End=medial; Side=fragment,	1	1	
Unit 105 NW¼	0 - 10	1107	1094	5	Animal Bone	Unworked	Procyon lotor	Element=Femur; End=distal; Side=fragment, Butchery=possible spiral fracture, green breaks;	1	3.9	refit-diaphysis and epiphysis
Unit 105 SW¼	20 - 23	1241	1105	5	Vegetal	Wood	Unanalyzed		1	0.3	charred wood
Unit 106 NE¼	10 - 20	1204	1120	11	Vegetal	Charcoal	Unanalyzed		1	0.2	
Unit 106 NE¼	25 - 30	1462	1128	4	Vegetal	Charcoal	Unanalyzed		1	0.05	
Unit 106 SW¼, Feature 22 W½	46 - 54	1610	1138	1	Vegetal	Charcoal	Unanalyzed		10	0.05	<0.1 g, qty estimated
Unit 120 NE¼	35 - 40	1641	1440	2	Vegetal	Charcoal	Unanalyzed		1	0.05	<0.1 g
Unit 120 SE¼	35 - 40	1642	1442	6	Vegetal	Charcoal	Unanalyzed		1	0.05	<0.1 g
Unit 120 SW¼	35 - 40	1639	1443	4	Vegetal	Charcoal	Unanalyzed		3	0.05	<0.1 g
Unit 120, Feature 28 S½	41 - 53	1838	1626		Vegetal	Carbonized nutshell	Carya sp		5	0.1	Discarded after analysis; Thick. Expended for AMS dating
Unit 120, Feature 29 N½	41 - 55	1840	1627	28	Vegetal	Wood charcoal	Not examined for species		291	3.03	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Block 4</b>											
Unit 120, Feature 29 N½	41 - 55	1840	1627	32	Vegetal	Carbonized botanical	Indeterminate		10	0.06	
Unit 120, Feature 29 N½	41 - 55	1840	1627	27	Vegetal	Wood charcoal	Prunus sp.		1	0.02	
Unit 120, Feature 29 N½	41 - 55	1840	1627	25	Vegetal	Wood charcoal	Quercus sp.		2	0.06	
Unit 120, Feature 29 N½	41 - 55	1840	1627	26	Vegetal	Semi-carbonized wood	Pinus sp.		8	0.04	
Unit 120, Feature 29 N½	41 - 55	2000	1445	17	Vegetal	Charcoal	Unanalyzed		15	0.6	
Unit 120, Feature 29 N½	41 - 55	1840	1627	30	Vegetal	Carbonized nutshell	Quercus sp.		1	0.01	
Unit 120, Feature 29 N½	41 - 55	1840	1627	33	Vegetal	Wood charcoal	Pinus sp.		16	0.28	
Unit 120, Feature 29 N½	41 - 55	1840	1627	24	Vegetal	Wood charcoal	Quercus subj. Lobatae		1	0.04	
Unit 120, Feature 29 N½	41 - 55	1840	1627	31	Vegetal	Carbonized resin	Pinus sp.		26	0.36	
Unit 120, Feature 29 N½	41 - 55	1840	1627	29	Vegetal	Carbonized nutshell	Carya sp.		5	0.12	
Unit 121 SE¼	12 - 22	1532	1454	11	Vegetal	Wood	Unanalyzed		1	0.3	Charred wood
Unit 122, Feature 31 S½	49 - 55	1844	1630	2	Vegetal	Charcoal	Unanalyzed		2	0.05	<0.1 g. qty estimated

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis/Comments
<b>Block 4</b>											
Unit 122, Feature 32 S½	49 - 57	1845	1631	2	Vegetal	Charcoal	Unanalyzed		10	0.05	<0.1 g. qty estimated
Unit 123 NW¼	35 - 40	1664	1507	5	Vegetal	Charcoal	Unanalyzed		4	0.3	
Unit 123 SE¼	45 - 50	1687	1514	2	Vegetal	Charcoal	Unanalyzed		10	4.5	
Unit 123 SE¼	20 - 25	1593	1497	6	Vegetal	Wood	Unanalyzed		1	0.2	
Unit 123, Feature 30 N½	49 - 58	1843	1629	1	Vegetal	Charcoal	Unanalyzed		85	1.2	qty estimated
Unit 123, Feature 30 S½	49 - 58	1841	1628	5	Vegetal	Wood charcoal	Pinus sp.		20	0.29	
Unit 123, Feature 30 S½	49 - 58	1841	1628	1	Vegetal	Carbonized botanical	Indeterminate		5	0.04	
Unit 123, Feature 30 S½	49 - 58	1841	1628	2	Vegetal	Wood Charcoal	Pinus sp.		1	0.11	Four rings
Unit 123, Feature 30 S½	49 - 58	1841	1628	3	Vegetal	Carbonized resin	Pinus sp.		1	0.01	
Unit 123, Feature 30 S½	49 - 58	1841	1628	4	Vegetal	Wood charcoal	Not examined for species		223	1.96	
Unit 123, Feature 30 S½	49 - 58	1841	1628		Vegetal	Carbonized cone fragments	Pinus sp.		1	0.09	Discarded after analysis; Expended for AMS dating
Unit 124 SW¼	21 - 26	1575	1532	3	Vegetal	Charcoal	Unanalyzed		1	0.1	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Block 4</b>											
Unit 125 NE¼	35 - 40	1681	1566	1	Animal Bone	Unworked	Small Mammal	Element=Vertebrae-cervical; Side=fragment; Weathering=possible	1	1.3	long, thick spinous process
Unit 126 NW¼	22 - 32	1703	1577	5	Vegetal	Charcoal	Unanalyzed		2	0.2	
Unit 127 NE¼	21 - 31	1712	1592	7	Vegetal	Wood	Unanalyzed		1	1.2	charred wood
Unit 127 NW¼	11 - 21	1707	1589	15	Vegetal	Charcoal	Unanalyzed		1	0.2	
<b>Block 5</b>											
Unit 082 SE¼	40 - 50	837	660	13	Vegetal	Charcoal	Unanalyzed		2	0.6	
<b>Block 6</b>											
Unit 108 NW¼	35 - 45	892	1159	5	Vegetal	Charcoal	Unanalyzed		6	0.6	crushed in lab
Unit 108 SE¼	25 - 35	854	1156	6	Vegetal	Charcoal	Unanalyzed		1	0.4	
<b>Block 7</b>											
Unit 109 NW¼	10 - 20	902	1168	4	Vegetal	Wood	Unanalyzed		3	0.5	
Unit 109 SW¼	30 - 38	956	1178	36	Animal Bone	Unworked	Unidentified	Element=Unidentified mammal bone; Side=fragment; Weathering=yes	1	0.3	
Unit 111 SE¼	50 - 60	997	1217	3	Vegetal	Charcoal	Unanalyzed		1	0.05	<0.1 g
Unit 111 SW¼	30 - 38	968	1206	4	Vegetal	Charcoal	Unanalyzed		1	0.05	
Unit 112 NE¼	40 - 50	993	1238	3	Vegetal	Charcoal	Unanalyzed		1	0.2	
Unit 112 SW¼	20 - 30	980	1230	17	Vegetal	Wood	Unanalyzed		1	0.5	Charred



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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comments
<b>Block 7</b>											
Unit 112 SW <sup>1</sup> / <sub>4</sub>	30 - 38	984	1234	12	Vegetal	Charcoal	Unanalyzed		1	1	
<b>Block 8</b>											
Unit 114 SW <sup>1</sup> / <sub>4</sub>	40 - 42	1071	1290	7	Animal Bone	Unworked	Testudines	Element=Carapace; End=peripheral; Side=fragment;	1	0.05	
Unit 117 SE <sup>1</sup> / <sub>4</sub>	35 - 40	1351	1372	14	Vegetal	Charcoal	Unanalyzed		1	0.3	
<b>Feature</b>											
Feature 100 E <sup>1</sup> / <sub>2</sub>	50 - 57	1962	1741	3	Vegetal	Charcoal	Unanalyzed		45	0.6	qty estimated
Feature 100 W <sup>1</sup> / <sub>2</sub>	50 - 57	1961	1740	3	Vegetal	Charcoal	Unanalyzed		35	0.6	qty estimated
Feature 100 W <sup>1</sup> / <sub>2</sub>	50 - 57	1961	1740	2	Shell	Unworked		Side=fragment;	2	0.01	flotation
Feature 103 N <sup>1</sup> / <sub>2</sub>	50 - 54	1966	1745	2	Vegetal	Charcoal	Unanalyzed		10	0.1	qty estimated
Feature 103 S <sup>1</sup> / <sub>2</sub>	50 - 54	1965	1744	1	Vegetal	Charcoal	Unanalyzed		20	0.1	qty estimated
Feature 105 NW <sup>1</sup> / <sub>2</sub>	50 - 60	1969	1747	3	Vegetal	Macrobotanica 1 sample	Unanalyzed		500	15.8	Macrobotanical sample; quantity estimated
Feature 105 SE <sup>1</sup> / <sub>2</sub>	50 - 60	1968	1748	4	Vegetal	Wood charcoal	Carya sp.		2	0.01	
Feature 105 SE <sup>1</sup> / <sub>2</sub>	50 - 60	1968	1748	10	Vegetal	Carbonized resin	Pinus sp.		3	0.01	
Feature 105 SE <sup>1</sup> / <sub>2</sub>	50 - 60	1968	1748	11	Vegetal	Wood charcoal	Not examined for species		174	2.68	
Feature 105 SE <sup>1</sup> / <sub>2</sub>	50 - 60	1968	1748	9	Vegetal	Carbonized nutshell	Carya sp.		43	1.5	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 105 SE½	50 - 60	1968	1748	2	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	2	0.01	flotation
Feature 105 SE½	50 - 60	1968	1748	8	Vegetal	Carbonized nutshell	Juglandaceae		6	0.12	
Feature 105 SE½	50 - 60	1968	1748	3	Vegetal	Cone fragments	Pinus sp.		21	2.04	
Feature 105 SE½	50 - 60	1968	1748	12	Vegetal	Cone scale fragments	Pinus sp.		1272	6.87	
Feature 105 SE½	50 - 60	1968	1748	5	Vegetal	Carbonized botanical	Indeterminate		2	0.01	
Feature 105 SE½	50 - 60	1968	1748	6	Vegetal	Wood charcoal	Pinus sp.		1	0.01	
Feature 105 SE½	50 - 60	1968	1748		Vegetal	Carbonized nutshell	Carya sp.		1	0.07	Discarded after analysis; Artifact used for AMS dating
Feature 105 SE½	50 - 60	1968	1748	7	Vegetal	Wood charcoal	Quercus subg. Quercus		17	0.28	
Feature 107 N½	50 - 58	1972	1750	1	Vegetal	Charcoal	Unanalyzed		10	0.1	qty estimated
Feature 107 S½	50 - 58	1971	1751	1	Vegetal	Charcoal	Unanalyzed		15	0.1	qty estimated
Feature 108 E½	50 - 66	1973	1752	5	Vegetal	Charcoal	Unanalyzed		25	0.2	qty estimated
Feature 108 E½	50 - 66	1973	1752	3	Shell	Unworked		Side=fragment;	1	0.01	flotation
Feature 108 W½	50 - 66	1974	1753	3	Vegetal	Charcoal	Unanalyzed		30	0.2	qty estimated

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis/Comments
<b>Feature</b>											
Feature 110 E $\frac{1}{2}$	50 - 56	1976	1755		Vegetal	Carbonized rachis	Zea mays		1	0.01	Discarded after analysis; Cupule; nearly whole; 4.35-x-1.8 mm; Expended for AMS dating
Feature 110 E $\frac{1}{2}$	50 - 56	1976	1755	3	Vegetal	Carbonized nutshell	Carya sp., thick		1	0.01	
Feature 110 E $\frac{1}{2}$	50 - 56	1976	1755	1	Vegetal	Carbonized nutshell	Quercus sp.		4	0.01	
Feature 110 W $\frac{1}{2}$	50 - 56	1977	1756	2	Vegetal	Charcoal	Unanalyzed		75	9	qty estimated
Feature 45 N $\frac{1}{2}$	55 - 65	1867	1647	3	Vegetal	Charcoal	Unanalyzed		125	1.2	qty estimated
Feature 45 N $\frac{1}{2}$	55 - 65	1867	1647	2	Shell	Unworked		Side=fragment;	1	0.01	flotation
Feature 45 S $\frac{1}{2}$	55 - 65	1866	1646	2	Vegetal	Charcoal	Unanalyzed		150	2.9	qty estimated
Feature 46 E $\frac{1}{2}$	55 - 59	1869	1648	1	Vegetal	Charcoal	Unanalyzed		10	0.05	<0.1 g; qty estimated
Feature 46 W $\frac{1}{2}$	55 - 59	1868	1649	2	Vegetal	Charcoal	Unanalyzed		12	0.05	<0.1 g; qty estimated
Feature 47 E $\frac{1}{2}$	55 - 63	1870	1650	33	Vegetal	Charcoal	Unanalyzed		50	0.8	qty estimated
Feature 47 E $\frac{1}{2}$	55 - 63	1870	1650	32	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	4	0.05	flotation
Feature 47 W $\frac{1}{2}$	55 - 63	1871	1651	26	Vegetal	Charcoal	Unanalyzed		60	0.4	qty estimated
Feature 48 E $\frac{1}{2}$	55 - 61	1873	1653	1	Vegetal	Charcoal	Unanalyzed		150	1.1	qty estimated

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis/Comments
<b>Feature</b>											
Feature 48 W½	55 - 61	1872	1652	2	Vegetal	Macrobotanica l sample	Unanalyzed		100	4.9	Macrobotanical sample, quantity estimated
Feature 49 N½	55 - 60	1875	1655	1	Vegetal	Charcoal	Unanalyzed		20	0.05	<0.1 g, qty estimated
Feature 49 S½	55 - 60	1874	1654	1	Vegetal	Charcoal	Unanalyzed		8	0.05	<0.1 g, qty estimated
Feature 51 N½	60 - 70	1878	1658	4	Vegetal	Charcoal	Unanalyzed		100	0.6	qty estimated
Feature 51 S½	60 - 70	1877	1657		Vegetal	Carbonized nutshell	Carya sp.		2	0.01	Discarded after analysis; Thick: Expended for AMS dating
Feature 52 E½	60 - 75	1880	1660	1	Vegetal	Charcoal	Unanalyzed		85	0.6	qty estimated
Feature 52 W½	60 - 75	1879	1659	1	Vegetal	Charcoal	Unanalyzed		25	0.2	qty estimated
Feature 53	60 - 70	2020	1775	13	Vegetal	Carbonized bark			1	0.01	
Feature 53	60 - 70	2020	1775	6	Vegetal	Semi-carbonized wood	Pinus sp.		2	0.01	
Feature 53	60 - 70	2020	1775	7	Vegetal	Carbonized nutshell	Juglandaceae		5	0.04	
Feature 53	60 - 70	2020	1775	8	Vegetal	Carbonized nutshell	Carya sp.		21	0.32	
Feature 53	60 - 70	2020	1775	9	Vegetal	Wood charcoal	Ulmus sp.		1	0.01	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 53	60 - 70	2020	1775	4	Vegetal	Wood charcoal	Pinus sp.		13	0.07	
Feature 53	60 - 70	2020	1775	3	Vegetal	Wood charcoal	Carpinus caroliniana		1	0.01	
Feature 53	60 - 70	2020	1775	14	Vegetal	Wood charcoal	Quercus sp.		3	0.03	
Feature 53	60 - 70	2020	1775	2	Vegetal	Carbonized botanical	Indeterminate		8	0.07	
Feature 53	60 - 70	2020	1775	5	Vegetal	Wood charcoal	Not examined for species		37	0.15	
Feature 53	60 - 70	2020	1775	12	Vegetal	Carbonized resin	Pinus sp.		10	0.08	
Feature 53	60 - 70	2020	1775	10	Vegetal	Wood charcoal	Juglans nigra		2	0.03	
Feature 53	60 - 70	2020	1775	11	Vegetal	Carbonized cone scale	Pinus sp.		2	0.01	
Feature 53	60 - 70	2020	1775	1	Vegetal	Carbonized nutshell	Quercus sp.		1	0.01	
Feature 53 W½	60 - 70	1882	1661	11	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	2	0.1	flotation
Feature 53 W½	60 - 70	1882	1661	12	Shell	Unworked		Side=fragment;	1	0.01	flotation
Feature 54 E½	60 - 65	1884	1664	4	Vegetal	Charcoal	Unanalyzed		7	0.05	<0.1 g. qty estimated
Feature 54 E½	60 - 65	1884	1664	3	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	1	0.05	flotation
Feature 54 W½	60 - 65	1883	1663	2	Vegetal	Charcoal	Unanalyzed		15	0.05	<0.1 g. qty estimated

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 55 N½	65 - 72	1886	1666	22	Vegetal	Charcoal	Unanalyzed		30	0.4	qty estimated
Feature 55 S½	65 - 72	1885	1665	32	Vegetal	Charcoal	Unanalyzed		75	1.2	qty estimated
Feature 56 E½	65 - 83	1887	1668	10	Vegetal	Charcoal	Unanalyzed		110	1.7	qty estimated
Feature 56 W½	65 - 83	1888	1667	5	Vegetal	Carbonized rachis	Zea mays		4	0.02	
Feature 56 W½	65 - 83	1888	1667	10	Vegetal	Carbonized nutshell	Carya sp. Thick		12	0.47	
Feature 56 W½	65 - 83	1888	1667	9	Vegetal	Carbonized nutshell	Juglans nigra		1	0.07	
Feature 56 W½	65 - 83	1888	1667	12	Vegetal	Carbonized seed	Diospyros virginiana		2	0.11	
Feature 56 W½	65 - 83	1888	1667		Vegetal	Carbonized kernel fragment	Zea mays		1	0.04	Discarded after analysis; Expended for AMS dating
Feature 56 W½	65 - 83	1888	1667	11	Vegetal	Carbonized nutshell	Quercus sp.		3	0.02	
Feature 56 W½	65 - 83	1888	1667	8	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	2	0.05	flotation
Feature 57	60 - 90	2021	1776	9	Vegetal	Carbonized nut husk	Carya sp.		1	0.02	
Feature 57	60 - 90	2021	1776	16	Vegetal	Carbonized nutshell	Juglandaceae		30	0.26	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 57	60 - 90	2021	1776	1	Vegetal	Wood charcoal	Not examined for species		275	1.76	
Feature 57	60 - 90	2021	1776	17	Vegetal	Carbonized nutshell	Carya sp.		137	1.84	
Feature 57	60 - 90	2021	1776	14	Vegetal	Carbonized nutshell	Quercus sp.		1	0.01	
Feature 57	60 - 90	2021	1776	13	Vegetal	Carbonized rachis	Zea mays		7	0.06	cupules 3 nearly whole
Feature 57	60 - 90	2021	1776	12	Vegetal	Wood charcoal	Carya sp.		1	0.01	
Feature 57	60 - 90	2021	1776	11	Vegetal	Wood charcoal	Fraxinus sp.		10	0.08	
Feature 57	60 - 90	2021	1776	6	Vegetal	Carbonized seed	Zea mays		1	0.01	fragment
Feature 57	60 - 90	2021	1776	5	Vegetal	Carbonized botanical	Indeterminate		5	0.02	
Feature 57	60 - 90	2021	1776	10	Vegetal	Wood charcoal	Quercus sp.		5	0.04	
Feature 57	60 - 90	2021	1776	8	Vegetal	Wood charcoal	Pinus sp.		1	0.01	
Feature 57	60 - 90	2021	1776	2	Vegetal	Carbonized resin			1	0.01	
Feature 57	60 - 90	2021	1776	7	Vegetal	Wood charcoal	Quercus subg. Quercus		1	0.01	
Feature 57	60 - 90	2021	1776	15	Vegetal	Semi-carbonized nutshell	Quercus sp.		1	0.01	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 57	60 - 90	2021	1776	4	Vegetal	Carbonized cone scales	Pinus sp.		3	0.03	
Feature 57	60 - 90	2021	1776	3	Vegetal	Wood charcoal	Quercus subg. Lobatae		2	0.04	
Feature 58	65 - 79	2022	1777	3	Vegetal	Wood charcoal	Quercus subg. Quercus		1	0.02	
Feature 58	65 - 79	2022	1777	9	Vegetal	Carbonized rachis	Zea mays		2	0.02	cupule fragments
Feature 58	65 - 79	2022	1777	13	Vegetal	Wood charcoal	Pinus sp.		8	0.07	
Feature 58	65 - 79	2022	1777	12	Vegetal	Carbonized botanical	Indeterminate		9	0.05	
Feature 58	65 - 79	2022	1777	10	Vegetal	Carbonized nutshell	Juglandaceae		20	0.12	
Feature 58	65 - 79	2022	1777	8	Vegetal	Carbonized seed	Zea mays		1	0.01	kernel fragment
Feature 58	65 - 79	2022	1777	7	Vegetal	Wood charcoal	Quercus subg. Lobatae		4	0.04	
Feature 58	65 - 79	2022	1777	6	Vegetal	Wood charcoal	Carya sp.		1	0.01	
Feature 58	65 - 79	2022	1777	4	Vegetal	Wood charcoal	Not examined for species		47	0.32	
Feature 58	65 - 79	2022	1777	2	Vegetal	Wood charcoal	Quercus sp.		3	0.03	
Feature 58	65 - 79	2022	1777	1	Vegetal	Carbonized nutshell	Carya sp.		63	1.55	



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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 58	65 - 79	2022	1777	11	Vegetal	Carbonized nutshell	Quercus sp.		5	0.02	
Feature 58	65 - 79	2022	1777	5	Vegetal	Wood charcoal	Fraxinus sp.		3	0.02	
Feature 59 NE½	65 - 74	1894	1674	3	Vegetal	Charcoal	Unanalyzed		40	0.1	qty estimated
Feature 59 SW½	65 - 74	1893	1673	5	Vegetal	Charcoal	Unanalyzed		65	0.3	qty estimated
Feature 60 N½	65 - 70	1896	1676	2	Shell	Unworked		Side=fragment;	10	0.01	flotation
Feature 60 N½	65 - 70	1896	1676	3	Vegetal	Charcoal	Unanalyzed		25	0.2	qty estimated
Feature 60 S½	65 - 70	1895	1675	2	Vegetal	Charcoal	Unanalyzed		45	0.1	qty estimated
Feature 61 E½	60 - 68	1897	1678	2	Vegetal	Carbonized seed	Phalaris caroliniana		1	0.01	
Feature 61 E½	60 - 68	1897	1678		Vegetal	Carbonized nutshell	Carya sp.		2	0.02	Discarded after analysis; Thick; Expended for AMS dating
Feature 61 E½	60 - 68	1897	1678	1	Vegetal	Carbonized nutshell	Quercus sp.		2	0.01	
Feature 61 W½	60 - 68	1898	1677	1	Vegetal	Macrobotanica l sample	Unanalyzed			26.3	Macrobotanical sample
Feature 62	65 - 70	2023	1778	10	Vegetal	Carbonized nutshell	Juglandaceae		40	0.23	
Feature 62	65 - 70	2023	1778	11	Vegetal	Carbonized nutshell	Carya sp.		199	5.17	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature 62</b>	65 - 70	2023	1778	9	Vegetal	Carbonized seed	Zea mays		2	0.01	kernel fragment
Feature 62	65 - 70	2023	1778	8	Vegetal	Wood charcoal	Carya sp.		4	0.05	
Feature 62	65 - 70	2023	1778	7	Vegetal	Carbonized botanical	Indeterminate		7	0.03	
Feature 62	65 - 70	2023	1778	6	Vegetal	Wood charcoal	Quercus subg. Lobatae		1	0.02	
Feature 62	65 - 70	2023	1778	4	Vegetal	Carbonized resin	Pinus sp.		2	0.01	
Feature 62	65 - 70	2023	1778	2	Vegetal	Carbonized nutshell	Quercus sp.		1	0.01	
Feature 62	65 - 70	2023	1778	3	Vegetal	Wood charcoal	Fraxinus sp.		1	0.01	
Feature 62	65 - 70	2023	1778	1	Vegetal	Wood charcoal	Quercus subg. Quercus		14	0.18	
Feature 62	65 - 70	2023	1778	13	Vegetal	Wood charcoal	Not examined for species		604	5.44	
Feature 62	65 - 70	2023	1778	12	Vegetal	Carbonized cone scale	Pinus sp.		988	3.36	
Feature 62	65 - 70	2023	1778	5	Vegetal	Carbonized seed	Pinus sp.		3	0.01	
Feature 65 N½	65 - 89	1904	1684	2	Vegetal	Charcoal	Unanalyzed		80	1.5	qty estimated

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis/Comments
<b>Feature</b>											
Feature 65 S $\frac{1}{2}$	65 - 89	1903	1683		Vegetal	Carbonized nutshell	Carya sp.		3	0.07	Discarded after analysis; Thick; Expedited for AMS dating
Feature 68	65 - 85	2024	1779	10	Vegetal	Wood charcoal	Not examined for species		30	0.29	
Feature 68	65 - 85	2024	1779	1	Vegetal	Carbonized nutshell	Carya sp.		51	0.99	
Feature 68	65 - 85	2024	1779	11	Vegetal	Wood charcoal	Ilex sp.		1	0.01	
Feature 68	65 - 85	2024	1779	9	Vegetal	Wood charcoal	Quercus subg. Quercus		6	0.07	
Feature 68	65 - 85	2024	1779	8	Vegetal	Wood charcoal	Carya sp.		5	0.07	
Feature 68	65 - 85	2024	1779	7	Vegetal	Carbonized cone scale	Pinus sp.		1	0.01	
Feature 68	65 - 85	2024	1779	6	Vegetal	Wood charcoal	Quercus subg. Lobatae		3	0.05	
Feature 68	65 - 85	2024	1779	5	Vegetal	Wood charcoal	Pinus sp.		2	0.02	
Feature 68	65 - 85	2024	1779	4	Vegetal	Carbonized nutshell	Quercus sp.		2	0.01	
Feature 68	65 - 85	2024	1779	3	Vegetal	Carbonized nutshell	Juglandaceae		13	0.09	
Feature 68	65 - 85	2024	1779	2	Vegetal	Carbonized botanical	Indeterminate		6	0.03	
Feature 68	65 - 85	2024	1779	13	Vegetal	Wood charcoal	Acer sp.		2	0.01	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 68	65 - 85	2024	1779	12	Vegetal	Wood charcoal	Hardwood		1	0.01	
Feature 69 N <sup>1</sup> / <sub>2</sub>	65 - 74	1910	1690	2	Shell	Unworked		Side=fragment;	4	0.05	flotation
Feature 69 S <sup>1</sup> / <sub>2</sub>	65 - 74	1909	1689	1	Vegetal	Charcoal	Unanalyzed		60	0.6	qty estimated
Feature 70 N <sup>1</sup> / <sub>2</sub>	60 - 82	1912	1692	4	Vegetal	Charcoal	Unanalyzed		70	0.6	qty estimated
Feature 70 S <sup>1</sup> / <sub>2</sub>	60 - 82	1911	1691	2	Vegetal	Charcoal	Unanalyzed		40	0.4	qty estimated
Feature 72	60 - 74	2025	1780	5	Vegetal	Carbonized nutshell	Carya sp.		17	0.2	
Feature 72	60 - 74	2025	1780	1	Vegetal	Wood charcoal	Carya sp.		3	0.05	
Feature 72	60 - 74	2025	1780	2	Vegetal	Wood charcoal	Quercus subg. Quercus		14	0.18	
Feature 72	60 - 74	2025	1780	3	Vegetal	Carbonized nutshell	Quercus sp.		16	0.06	
Feature 72	60 - 74	2025	1780	10	Vegetal	Carbonized resin	Pinus sp.		8	0.09	
Feature 72	60 - 74	2025	1780	8	Vegetal	Carbonized botanical	Indeterminate		14	0.09	
Feature 72	60 - 74	2025	1780	4	Vegetal	Carbonized nutshell	Juglandaceae		4	0.04	
Feature 72	60 - 74	2025	1780	7	Vegetal	Wood charcoal	Not examined for species		185	1.79	
Feature 72	60 - 74	2025	1780	6	Vegetal	Wood charcoal	Pinus sp.		1	0.01	
Feature 72	60 - 74	2025	1780	9	Vegetal	Wood charcoal	Prunus sp.		2	0.02	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 73 NW <sup>1</sup> / <sub>2</sub>	60 - 74	1917	1697	7	Vegetal	Charcoal	Unanalyzed		75	0.6	qty estimated
Feature 73 SE <sup>1</sup> / <sub>2</sub>	60 - 74	1916	1696	4	Vegetal	Macrobotanica l sample	Unanalyzed		150	2.5	Macrobotanical sample; quantity estimated
Feature 75 W <sup>1</sup> / <sub>2</sub>	55 - 108	1920	1699	14	Vegetal	Carbonized seed	Portulaca oleracea		1	0.01	
Feature 75 W <sup>1</sup> / <sub>2</sub>	55 - 108	1920	1699	17	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	7	0.1	flotation
Feature 75 W <sup>1</sup> / <sub>2</sub>	55 - 108	1920	1699		Vegetal	Carbonized nutshell	Carya sp.		24	1	Discarded after analysis; Thick; Expended for AMS dating
Feature 75 W <sup>1</sup> / <sub>2</sub>	55 - 108	1920	1699	19	Vegetal	Carbonized nutshell	Quercus sp.		1	0.01	
Feature 75 W <sup>1</sup> / <sub>2</sub>	55 - 108	1920	1699	18	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	1	0.01	flotation
Feature 76 N <sup>1</sup> / <sub>2</sub>	55 - 77	1922	1701	6	Vegetal	Charcoal	Unanalyzed		175	4.1	qty estimated
Feature 76 S <sup>1</sup> / <sub>2</sub>	55 - 77	1921	1700	5	Vegetal	Charcoal	Unanalyzed		150	2.5	qty estimated
Feature 76 S <sup>1</sup> / <sub>2</sub>	55 - 77	1921	1700	4	Shell	Unworked		Side=fragment;	1	0.01	flotation
Feature 78 N <sup>1</sup> / <sub>2</sub>	55 - 75	1925	1704	2	Vegetal	Charcoal	Unanalyzed		50	0.6	qty estimated
Feature 78 S <sup>1</sup> / <sub>2</sub>	55 - 75	1924	1703	2	Vegetal	Charcoal	Unanalyzed		55	0.5	qty estimated
Feature 79	55 - 79	2026	1781	21	Vegetal	Carbonized tuber	Nymphaeaceae		8	1.85	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Commen
Feature 79	55 - 79	2026	1781	23	Vegetal	Wood charcoal	Quercus subg. Lobatae		2	0.13	
Feature 79	55 - 79	2026	1781	15	Vegetal	Wood charcoal	Pinus sp.		5	0.03	
Feature 79	55 - 79	2026	1781	19	Vegetal	Carbonized nutshell	Juglans nigra		1	0.02	
Feature 79	55 - 79	2026	1781	3	Vegetal	Carbonized nutshell	Carya sp.		34	0.87	
Feature 79	55 - 79	2026	1781	17	Vegetal	Wood charcoal	Quercus subg. Quercus		5	0.06	
Feature 79	55 - 79	2026	1781	9	Vegetal	Carbonized nutshell	Quercus sp.		1	0.01	
Feature 79	55 - 79	2026	1781	16	Vegetal	Carbonized nutshell	Juglandaceae		9	0.13	
Feature 79	55 - 79	2026	1781	2	Vegetal	Wood charcoal	Hardwood, Ring porous		3	0.07	
Feature 79	55 - 79	2026	1781	13	Vegetal	Wood charcoal	Salicaceae		1	0.01	
Feature 79	55 - 79	2026	1781	12	Vegetal	Carbonized rootlet			1	0.01	
Feature 79	55 - 79	2026	1781	10	Vegetal	Carbonized stem			4	0.01	
Feature 79	55 - 79	2026	1781	22	Vegetal	Wood charcoal	Acer sp.		4	0.08	
Feature 79	55 - 79	2026	1781	8	Vegetal	Wood charcoal	Ulmus sp.		1	0.01	

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Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 79	55 - 79	2026	1781	7	Vegetal	Carbonized seed	Rhus sp.		13	0.02	
Feature 79	55 - 79	2026	1781	1	Vegetal	Wood charcoal	Carya sp.		2	0.09	
Feature 79	55 - 79	2026	1781	6	Vegetal	Carbonized tuber	Indeterminate		373	3.13	
Feature 79	55 - 79	2026	1781	4	Vegetal	Carbonized rind	Cucurbita sp.		1	0.01	
Feature 79	55 - 79	2026	1781	5	Vegetal	Carbonized bark			23	0.23	
Feature 79	55 - 79	2026	1781	14	Vegetal	Wood charcoal	Not examined for species		31	0.26	
Feature 79	55 - 79	2026	1781	20	Vegetal	Carbonized seed	Zea mays		2	0.01	1=germ
Feature 79	55 - 79	2026	1781	11	Vegetal	Carbonized botanical	Indeterminate		33	0.3	
Feature 79	55 - 79	2026	1781	18	Vegetal	Wood charcoal	Diffuse-porous hardwood		1	0.01	
Feature 79 S½	55 - 79	1927	1706	12	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	1	0.05	flotation
Feature 80 N½	55 - 63	1929	1707	3	Vegetal	Charcoal	Unanalyzed		25	0.3	qty estimated
Feature 80 S½	55 - 63	1928	1708	2	Vegetal	Charcoal	Unanalyzed		10	0.05	<0.1 g, qty estimated
Feature 80 S½	55 - 63	1928	1708	1	Shell	Unworked		Side=fragment;	1	0.01	flotation

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 82 N½	60 - 69	1932	1710	2	Vegetal	Charcoal	Unanalyzed		45	0.2	qty estimated
Feature 82 S½	60 - 69	1931	1711	2	Vegetal	Charcoal	Unanalyzed		65	0.3	qty estimated
Feature 84 E½	60 - 65	1935	1714	1	Vegetal	Charcoal	Unanalyzed		40	0.3	qty estimated
Feature 84 W½	60 - 65	1934	1713	1	Shell	Unworked		Side=fragment;	1	0.01	flotation
Feature 84 W½	60 - 65	1934	1713	2	Vegetal	Charcoal	Unanalyzed		3	0.05	<0.1 g; qty estimated
Feature 85	60 - 73	2027	1782	12	Vegetal	Carbonized nutshell	Carya sp.		61	0.85	
Feature 85	60 - 73	2027	1782	5	Vegetal	Wood charcoal	Salicaceae		3	0.02	
Feature 85	60 - 73	2027	1782	8	Vegetal	Wood charcoal	Pinus sp.		3	0.04	
Feature 85	60 - 73	2027	1782	13	Vegetal	Carbonized nutshell	Juglandaceae		15	0.15	
Feature 85	60 - 73	2027	1782	3	Vegetal	Wood charcoal	Carya sp.		4	0.11	
Feature 85	60 - 73	2027	1782	1	Vegetal	Wood charcoal	Quercus subg. Quercus		2	0.04	
Feature 85	60 - 73	2027	1782	2	Vegetal	Wood charcoal	Not examined for species		127	1.07	
Feature 85	60 - 73	2027	1782	7	Vegetal	Wood charcoal	Quercus sp.		2	0.01	
Feature 85	60 - 73	2027	1782	11	Vegetal	Carbonized bark			4	0.02	
Feature 85	60 - 73	2027	1782	6	Vegetal	Wood charcoal	Prunus sp.		6	0.12	



GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 85	60 - 73	2027	1782	10	Vegetal	Carbonized nutshell	Quercus sp.		16	0.05	
Feature 85	60 - 73	2027	1782	9	Vegetal	Carbonized botanical	Indeterminate		7	0.05	
Feature 85	60 - 73	2027	1782	4	Vegetal	Carbonized resin	Pinus sp.		9	0.07	
Feature 85 N½	60 - 73	1937	1716	2	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	1	0.01	flotation
Feature 86	60 - 67	2028	1783	4	Vegetal	Wood charcoal	Not examined for species		19	0.35	
Feature 86	60 - 67	2028	1783	2	Vegetal	Wood charcoal	Hardwood		2	0.03	
Feature 86	60 - 67	2028	1783	6	Vegetal	Carbonized botanical	Indeterminate		4	0.03	
Feature 86	60 - 67	2028	1783	7	Vegetal	Carbonized bark			1	0.01	
Feature 86	60 - 67	2028	1783	8	Vegetal	Carbonized nutshell	Juglandaceae		8	0.06	
Feature 86	60 - 67	2028	1783	9	Vegetal	Carbonized nutshell	Carya sp.		4	0.11	
Feature 86	60 - 67	2028	1783	10	Vegetal	Carbonized cone scale	Pinus sp.		1	0.01	
Feature 86	60 - 67	2028	1783	3	Vegetal	Wood charcoal	Quercus sp.		5	0.03	
Feature 86	60 - 67	2028	1783	1	Vegetal	Wood charcoal	Pinus sp.		13	0.09	

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 86	60 - 67	2028	1783	5	Vegetal	Carbonized resin	Pinus sp.		3	0.02	
Feature 87 E½	60 - 75	1940	1720	15	Vegetal	Wood charcoal	Quercus subg. Quercus		6	0.13	
Feature 87 E½	60 - 75	1940	1720	7	Vegetal	Pine cone	Pinus sp.		1689	9.06	qty est. from subsample of 50
Feature 87 E½	60 - 75	1940	1720	8	Vegetal	Corn glumes	Zea mays		18	0.04	
Feature 87 E½	60 - 75	1940	1720	11	Vegetal	Carbonized botanical	Indeterminate		4	0.01	
Feature 87 E½	60 - 75	1940	1720	16	Vegetal	Wood charcoal	Ilex sp.		1	0.05	
Feature 87 E½	60 - 75	1940	1720	17	Vegetal	Wood charcoal	Quercus subj Lobatae		3	0.04	
Feature 87 E½	60 - 75	1940	1720	18	Vegetal	Wood charcoal	Quercus sp.		6	0.12	
Feature 87 E½	60 - 75	1940	1720	14	Vegetal	Corn cupules	Zea mays		29	0.36	whole
Feature 87 E½	60 - 75	1940	1720	13	Vegetal	Corn cupules	Zea mays		68	0.36	fragmentary
Feature 87 E½	60 - 75	1940	1720	12	Vegetal	Carbonized nutshell	Carya sp.		13	0.16	thick-shelled

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis/Comments
<b>Feature</b>											
Feature 87 E½	60 - 75	1940	1720		Vegetal	Carbonized rachis	Zea mays		3	0.03	Discarded after analysis; Artifact used for AMS dating; Cupule measurements: 6.6 x 3.3 x 1.6 deep; 5.0 x 2.7 x 1.5 (wings missing); third fragment too eroded for measurement
Feature 87 E½	60 - 75	1940	1720	20	Vegetal	Wood charcoal	Pinus sp. Hard		4	0.11	
Feature 87 E½	60 - 75	1940	1720	5	Vegetal	Carbonized nutshell	Carya sp.		1	0.05	
Feature 87 E½	60 - 75	1940	1720	9	Vegetal	Cane stem	Arundinaria gigantea		2	0.02	
Feature 87 E½	60 - 75	1940	1720	10	Vegetal	Pine seed	Pinus sp.		14	0.02	
Feature 87 E½	60 - 75	1940	1720	21	Vegetal	Macrobotanica l sample	Unanalyzed		1000	18.6	Macrobotanical sample-partial sent for macrobotanical analysis; quantity estimated
Feature 87 E½	60 - 75	1940	1720	19	Vegetal	Wood charcoal	Not examined for species		25	0.17	
Feature 87 W½	60 - 75	1941	1719	3	Vegetal	Macrobotanica l sample	Unanalyzed			32.2	Macrobotanical sample

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 88 N½	90 - 124	1943	1722	8	Vegetal	Wood charcoal	Not examined for species		555	9.99	
Feature 88 N½	90 - 124	1943	1722	9	Vegetal	Carbonized resin	Pinus sp.		27	0.55	
Feature 88 N½	90 - 124	1943	1722	2	Vegetal	Carbonized bark	Pinus sp.		13	0.09	
Feature 88 N½	90 - 124	1943	1722	11	Vegetal	Wood charcoal	Hardwood		1	0.02	
Feature 88 N½	90 - 124	1943	1722	7	Vegetal	Wood charcoal	Pinus sp.		19	0.55	
Feature 88 N½	90 - 124	1943	1722	1	Vegetal	Carbonized cone scale	Pinus sp.		4	0.12	
Feature 88 N½	90 - 124	1943	1722	4	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	1	0.01	flotation
Feature 88 N½	90 - 124	1943	1722	5	Vegetal	Carbonized nutshell	Carya sp.		5	0.11	
Feature 88 N½	90 - 124	1943	1722	10	Vegetal	Semi-carbonized bark			1	0.01	
Feature 88 N½	90 - 124	1943	1722	12	Vegetal	Carbonized bark	Pinus sp.		181	1.62	
Feature 88 N½	90 - 124	1943	1722	14	Vegetal	Carbonized Liana			3	0.06	
Feature 88 N½	90 - 124	1943	1722	17	Vegetal	Carbonized seed	Acalyplea sp.		1	0.01	

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis/Comments
<b>Feature</b>											
Feature 88 N½	90 - 124	1943	1722	6	Vegetal	Carbonized botanical	Indeterminate		1	0.07	
Feature 88 N½	90 - 124	1943	1722	13	Vegetal	Semi-carbonized wood	Pinus sp.		4	0.02	
Feature 88 N½	90 - 124	1943	1722	15	Vegetal	Carbonized seed	Indeterminate		1	0.01	
Feature 88 N½	90 - 124	1943	1722	16	Vegetal	Carbonized rachis	Zea mays		2	0.01	
Feature 88 N½	90 - 124	1943	1722		Vegetal	Wood charcoal	Pinus sp.		1	0.29	Discarded after analysis; Four rings; used for AMS dating
Feature 88 S½	90 - 124	1942	1721	6	Vegetal	Pinus sp. Hardwood	Macrobotanical		1000	31.8	
Feature 89	90 - 110	2029	1784	9	Vegetal	Carbonized bark			6	0.04	
Feature 89	90 - 110	2029	1784	2	Vegetal	Carbonized flower scar	Cucurbita sp.		2	0.01	
Feature 89	90 - 110	2029	1784	5	Vegetal	Carbonized botanical	Indeterminate		14	0.08	
Feature 89	90 - 110	2029	1784	10	Vegetal	Carbonized nutshell	Carya sp.		8	0.2	
Feature 89	90 - 110	2029	1784	6	Vegetal	Wood charcoal	Liquidamber styraciflua		18	0.66	

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 89	90 - 110	2029	1784	8	Vegetal	Semi-carbonized bark			5	0.08	
Feature 89	90 - 110	2029	1784	11	Vegetal	Carbonized resin	Pinus sp.		1	0.05	
Feature 89	90 - 110	2029	1784	4	Vegetal	Wood charcoal	Carya sp.		1	0.02	
Feature 89	90 - 110	2029	1784	7	Vegetal	Carbonized nutshell	Juglandaceae		6	0.07	
Feature 89	90 - 110	2029	1784	3	Vegetal	Wood charcoal	Pinus sp.		1	0.02	
Feature 89	90 - 110	2029	1784	1	Vegetal	Wood charcoal	Not examined for species		237	6.92	
Feature 92 N½	50 - 55	1949	1727	1	Vegetal	Charcoal	Unanalyzed		50	1.1	qty estimated
Feature 92 S½	50 - 55	1948	1728	2	Vegetal	Charcoal	Unanalyzed		50	0.5	qty estimated
Feature 93 N½	50 - 54	1951	1730	1	Vegetal	Charcoal	Unanalyzed		27	0.3	qty estimated
Feature 93 S½	50 - 54	1950	1729	4	Vegetal	Charcoal	Unanalyzed		80	0.6	qty estimated
Feature 94 N½	50 - 61	1953	1732	2	Vegetal	Charcoal	Unanalyzed		150	0.8	qty estimated
Feature 94 S½	50 - 61	1952	1731	2	Vegetal	Charcoal	Unanalyzed		75	0.6	qty estimated
Feature 97	65 - 92	2030	1785	14	Vegetal	Carbonized rachis	Zea mays		4	0.02	
Feature 97	65 - 92	2030	1785	1	Vegetal	Carbonized nutshell	Carya sp.		127	2.87	

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 97	65 - 92	2030	1785	2	Vegetal	Carbonized nutshell	Juglandaceae		45	0.35	
Feature 97	65 - 92	2030	1785	3	Vegetal	Wood charcoal	Pinus sp.		4	0.12	
Feature 97	65 - 92	2030	1785	4	Vegetal	Wood charcoal	Sassafras albidum		6	0.06	
Feature 97	65 - 92	2030	1785	5	Vegetal	Carbonized nutshell	Juglans nigra		1	0.09	
Feature 97	65 - 92	2030	1785	6	Vegetal	Carbonized resin	Pinus sp.		1	0.01	
Feature 97	65 - 92	2030	1785	7	Vegetal	Carbonized nutshell	Quercus sp.		11	0.07	
Feature 97	65 - 92	2030	1785	8	Vegetal	Wood charcoal	Quercus subg. Lobatae		1	0.02	
Feature 97	65 - 92	2030	1785	10	Vegetal	Wood charcoal	Flex sp.		1	0.01	
Feature 97	65 - 92	2030	1785	13	Vegetal	Wood charcoal	Not examined for species		165	1.38	
Feature 97	65 - 92	2030	1785	9	Vegetal	Carbonized botanical	Indeterminate		16	0.13	
Feature 97	65 - 92	2030	1785	15	Vegetal	Wood charcoal	Hardwood		4	0.06	
Feature 97	65 - 92	2030	1785	11	Vegetal	Wood charcoal	Carya sp.		1	0.01	
Feature 97	65 - 92	2030	1785	12	Vegetal	Wood charcoal	Quercus subg. Quercus		3	0.04	
Feature 97 W <sup>1</sup> / <sub>2</sub>	65 - 92	1957	1736	17	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	1	0.1	flotation

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Ecofact Data

Unit	Depth (cm)	FS No.	Lot No.	Artifact No.	Class	Type	Other	Details	Qty	Weight (in g)	Analysis Comment
<b>Feature</b>											
Feature 99 E½	50 - 54	1959	1738	2	Vegetal	Charcoal	Unanalyzed		60	1.2	qty estimated
Feature 99 W½	50 - 54	1960	1739	1	Animal Bone	Unworked	Unidentified	Element=Unidentified; Side=fragment;	1	0.01	flotation
Feature 99 W½	50 - 54	1960	1739	2	Vegetal	Charcoal	Unanalyzed		25	0.4	qty estimated



## **A-10: HISTORIC ARTIFACTS**



GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PN175  
Historic Artifact Data

Unit Type	Depth (cm)	Prov. No.	Lot No.	Artifact No.	Class	Type	Other	Dates	Group	Qty	Analysis Comment
<b>50 x 50 cm Units</b>											
Unit 001	20 - 30	7	138	1	Glass	Aqua	Body sherd	Indeterminate	Domestic	1	
Unit 001	30 - 40	10	139	1	Glass	Aqua	Body sherd	Indeterminate	Domestic	1	
Unit 002	0 - 10	18	141	2	Glass	Clear	Angular fragment	Indeterminate	Indeterminate	1	
Unit 002	10 - 20	19	142	1	Glass	Aqua	Body sherd	Indeterminate	Domestic	2	
Unit 002	20 - 30	22	143	1	Glass	Aqua	body sherd	Indeterminate	Domestic	4	
Unit 002	30 - 40	25	144	1	Glass	Aqua	Body sherd	Indeterminate	Domestic	8	Probably from same vessel as glass in P28
Unit 002	40 - 50	28	145	1	Glass	Aqua	Body sherd	Indeterminate	2	27	Probably from same vessel as glass in P25
Unit 002	40 - 50	28	145	2	Glass	Aqua	Body sherd	post-1888	2	1	Embossed "Bal[]]" in script with "MASON" in block letter below (Toulouse 1969:32)
Unit 002	40 - 50	30	145	2	Glass	Clear	Angular fragment	Indeterminate	Indeterminate	1	
Unit 002	40 - 50	28	145	3	Glass	Aqua	Jar base	1898 to 1940s	Domestic	1	Four sherds that refit: with valve mark (Lindsey 2013); embossed "4 M . . ."; probably from save vessel as P25
Unit 002	40 - 50	28	145	4	Glass	Aqua	Angular fragments	Indeterminate	Domestic	8	Probably from same vessel as P25
Unit 003	20 - 30	35	146	1	Glass	Aqua	Body sherd	Indeterminate	Domestic	2	
Unit 051	0 - 20	388	296	3	Metal	Iron	Wire nail	post-1890	Architectural	1	Common nail; 16d; 8.9 cm
Unit 051	0 - 20	388	296	4	Metal	Iron	Wire nail	post-1890	Architectural	1	Common nail; 20d; 10.2 cm

GMI 22005.01.06.xx and 22005.00.09.xx, Data Recovery Excavations at Site 41PNI175  
Historic Artifact Data

Unit Type	Depth (cm)	Prov. No.	Lot No.	Artifact No.	Class	Type	Other	Dates	Group	Qty	Analysis Comment
<b>Block 1</b>											
Unit 058 SE¼	10 - 20	438	315	1	Metal	Iron	Chain link	Indeterminate	Activities	1	ca. 49-x-12-x-6.5 mm in size
<b>Block 2</b>											
Unit 061 SE¼	30 - 40	595	331	1	Glass	Aqua	Body sherd	Indeterminate	Domestic	1	
Unit 062 NW¼	30 - 40	597	354	5	Glass	Aqua	Body sherd	Indeterminate	Domestic	1	
<b>Block 4</b>											
Unit 073 SW¼	20 - 30	644	508	7	Glass	Aqua	Body sherd	Indeterminate	Domestic	1	
Unit 076 NW¼	0 - 10	584	552	3	Glass	Amber/brown	Body sherd	Indeterminate	Domestic	1	With stippled exterior
Unit 100 SW¼	10 - 20	1177	1007	8	Building Materials	Brick	Handmade	pre-1903	Architectural	1	
Unit 101 NE¼	10 - 20	1183	1022	7	Metal	Iron	Cut nail	1840-1890	Architectural	1	Fragment
<b>Block 7</b>											
Unit 109 NE¼	10 - 20	903	1167	2	Glass	Clear	Body sherd	post-1880	Domestic	2	
<b>Block 8</b>											
Unit 117 NW¼	30 - 35	1345	1367	36	Building Materials	Mortar	Not applicable	Indeterminate	Architectural	1	
<b>Features</b>											
Feature 47 W½	55 - 63	1871	1651	23	Glass	Aqua	body sherd	Indeterminate	Domestic	2	
Feature 53 W½	60 - 70	1882	1661	9	Glass	Aqua	body sherd	Indeterminate	Domestic	1	
Feature 55 S½	65 - 72	1885	1665	33	Glass	Clear	Angular fragment	post-1880	Indeterminate	1	<6 mm
Feature 57 E½	60 - 90	1889	1669	12	Glass	Clear	Angular fragment	post-1880	Indeterminate	1	<2 mm

**APPENDIX B: RADIOCARBON, OSL, AND THERMOLUMINESCENCE  
DATING**



**B-1: RADIOCARBON**







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**Darden Hood**  
President

**Ronald Hatfield**  
**Christopher Patrick**  
Deputy Directors

March 15, 2013

Dr. James Abbott  
Texas Department of Transportation  
Cultural Resource Management  
Environmental Affairs Division  
125 East 11th Street  
Austin, TX 78701  
USA

RE: Radiocarbon Dating Results For Samples 41PN175-1232, 41PN175-1332, 41PN175-1336, 41PN175-1714, 41PN175-1799, 41PN175-1800, 41PN175-1805, 41PN175-1810, 41PN175-1838, 41PN175-1841, 41PN175-1877, 41PN175-1888, 41PN175-1897, 41PN175-1903, 41PN175-1920, 41PN175-1940, 41PN175-1943, 41PN175-1968, 41PN175-1976, 41PN175-1982-2, 41PN175-1982-5, 41PN175-1982-7, 41PN175-1982-12, 41PN175-1982-14, 41PN175-1984-5, 41PN175-1984-8, 41PN175-1984-12

Dear Dr. Abbott:

Enclosed are the radiocarbon dating results for 27 samples recently sent to us. They each provided plenty of carbon for accurate measurements and all the analyses proceeded normally. As usual, the method of analysis is listed on the report with the results and calibration data is provided where applicable.

The web directory containing the table of results and PDF download also contains pictures including, most importantly the portion actually analyzed. These can be saved by opening them and right clicking. Also a cvs spreadsheet download option is available and a quality assurance report is posted for each set of results. This report contains expected vs measured values for 3-5 working standards analyzed simultaneously with your samples.

All results reported are accredited to ISO-17025 standards and all analyses were performed entirely here in our laboratories. Since Beta is not a teaching laboratory, only graduates trained in accordance with the strict protocols of the ISO-17025 program participated in the analyses. When interpreting the results, please consider any communications you may have had with us regarding the samples.

If you have specific questions about the analyses, please contact us. Your inquiries are always welcome.

Our invoice will be emailed separately. Please, forward it to the appropriate officer or send VISA charge authorization. Thank you. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely,

Digital signature on file



# REPORT OF RADIOCARBON DATING ANALYSES

Dr. James Abbott

Report Date: 3/15/2013

Texas Department of Transportation

Material Received: 3/6/2013

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 344076 SAMPLE : 41PN175-1232 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (bulk sherd organics): acid washes 2 SIGMA CALIBRATION : Cal AD 1300 to 1370 (Cal BP 650 to 580) AND Cal AD 1380 to 1410 (Cal BP 570 to 540)	610 +/- 30 BP	-26.3 o/oo	590 +/- 30 BP
Beta - 344077 SAMPLE : 41PN175-1332 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (bulk sherd organics): acid washes 2 SIGMA CALIBRATION : Cal AD 1430 to 1480 (Cal BP 520 to 470)	470 +/- 30 BP	-27.2 o/oo	430 +/- 30 BP
Beta - 344078 SAMPLE : 41PN175-1336 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (bulk sherd organics): acid washes 2 SIGMA CALIBRATION : Cal AD 1260 to 1290 (Cal BP 690 to 660)	720 +/- 30 BP	-24.6 o/oo	730 +/- 30 BP
Beta - 344079 SAMPLE : 41PN175-1714 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (bulk sherd organics): acid washes 2 SIGMA CALIBRATION : Cal AD 970 to 1030 (Cal BP 980 to 920)	1060 +/- 30 BP	-26.7 o/oo	1030 +/- 30 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "\*\*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.



# REPORT OF RADIOCARBON DATING ANALYSES

Dr. James Abbott

Report Date: 3/15/2013

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 344080 SAMPLE : 41PN175-1799 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1450 to 1640 (Cal BP 500 to 310)	360 +/- 30 BP	-25.5 o/oo	350 +/- 30 BP
Beta - 344081 SAMPLE : 41PN175-1800 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1460 to 1650 (Cal BP 490 to 300)	350 +/- 30 BP	-26.4 o/oo	330 +/- 30 BP
Beta - 344082 SAMPLE : 41PN175-1805 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1450 to 1530 (Cal BP 500 to 420) AND Cal AD 1540 to 1550 (Cal BP 410 to 400) Cal AD 1550 to 1630 (Cal BP 400 to 320)	350 +/- 30 BP	-23.6 o/oo	370 +/- 30 BP
Beta - 344083 SAMPLE : 41PN175-1810 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1440 to 1500 (Cal BP 510 to 450) AND Cal AD 1500 to 1510 (Cal BP 450 to 440) Cal AD 1600 to 1620 (Cal BP 350 to 330)	430 +/- 30 BP	-26.3 o/oo	410 +/- 30 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "\*\*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.



# REPORT OF RADIOCARBON DATING ANALYSES

Dr. James Abbott

Report Date: 3/15/2013

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 344084 SAMPLE : 41PN175-1838 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1450 to 1640 (Cal BP 500 to 310)	340 +/- 30 BP	-23.5 o/oo	360 +/- 30 BP
Beta - 344085 SAMPLE : 41PN175-1841 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 670 to 780 (Cal BP 1280 to 1170) AND Cal AD 790 to 810 (Cal BP 1160 to 1140) Cal AD 850 to 850 (Cal BP 1100 to 1100)	1330 +/- 30 BP	-29.0 o/oo	1260 +/- 30 BP
Beta - 344086 SAMPLE : 41PN175-1877 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1430 to 1490 (Cal BP 520 to 460) AND Cal AD 1600 to 1610 (Cal BP 350 to 340)	440 +/- 30 BP	-26.3 o/oo	420 +/- 30 BP
Beta - 344087 SAMPLE : 41PN175-1888 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1480 to 1650 (Cal BP 470 to 300)	30 +/- 30 BP	-7.8 o/oo	310 +/- 30 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "\*\*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.



# REPORT OF RADIOCARBON DATING ANALYSES

Dr. James Abbott

Report Date: 3/15/2013

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 344088 SAMPLE : 41PN175-1897 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1450 to 1530 (Cal BP 500 to 420) AND Cal AD 1540 to 1550 (Cal BP 410 to 400) Cal AD 1550 to 1630 (Cal BP 400 to 320)	400 +/- 30 BP	-27.1 o/oo	370 +/- 30 BP
Beta - 344089 SAMPLE : 41PN175-1903 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1300 to 1360 (Cal BP 640 to 590) AND Cal AD 1380 to 1420 (Cal BP 570 to 530)	580 +/- 30 BP	-25.9 o/oo	570 +/- 30 BP
Beta - 344090 SAMPLE : 41PN175-1920 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1450 to 1640 (Cal BP 500 to 310)	310 +/- 30 BP	-23.4 o/oo	340 +/- 30 BP
Beta - 344091 SAMPLE : 41PN175-1940 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1450 to 1640 (Cal BP 500 to 310)	100 +/- 30 BP	-10.0 o/oo	350 +/- 30 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "\*\*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.



# REPORT OF RADIOCARBON DATING ANALYSES

Dr. James Abbott

Report Date: 3/15/2013

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 344092 SAMPLE : 41PN175-1943 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 690 to 880 (Cal BP 1260 to 1060)	1220 +/- 30 BP	-24.2 o/oo	1230 +/- 30 BP
Beta - 344093 SAMPLE : 41PN175-1968 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1450 to 1640 (Cal BP 500 to 310)	360 +/- 30 BP	-24.7 o/oo	360 +/- 30 BP
Beta - 344094 SAMPLE : 41PN175-1976 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1280 to 1320 (Cal BP 670 to 630) AND Cal AD 1350 to 1390 (Cal BP 600 to 560)	400 +/- 30 BP	-9.4 o/oo	660 +/- 30 BP
Beta - 344095 SAMPLE : 41PN175-1982-2 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1520 to 1560 (Cal BP 420 to 390) AND Cal AD 1630 to 1670 (Cal BP 320 to 280) Cal AD 1780 to 1800 (Cal BP 170 to 150) AND Cal AD 1950 to 1950 (Cal BP 0 to 0)	290 +/- 30 BP	-26.6 o/oo	260 +/- 30 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "\*\*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.



# REPORT OF RADIOCARBON DATING ANALYSES

Dr. James Abbott

Report Date: 3/15/2013

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 344096 SAMPLE : 41PN175-1982-5 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1480 to 1650 (Cal BP 470 to 300)	340 +/- 30 BP	-26.8 o/oo	310 +/- 30 BP
Beta - 344097 SAMPLE : 41PN175-1982-7 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1670 to 1780 (Cal BP 280 to 170) AND Cal AD 1800 to 1890 (Cal BP 150 to 60) Cal AD 1900 to 1950 (Cal BP 50 to 0) AND Cal AD 1950 to post 1950 (Cal BP 0 to post 1950)	150 +/- 30 BP	-25.4 o/oo	140 +/- 30 BP
Beta - 344098 SAMPLE : 41PN175-1982-12 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 350 to 370 (Cal BP 1600 to 1580) AND Cal AD 380 to 440 (Cal BP 1570 to 1510) Cal AD 490 to 510 (Cal BP 1460 to 1440) AND Cal AD 520 to 530 (Cal BP 1430 to 1420)	1650 +/- 30 BP	-25.8 o/oo	1640 +/- 30 BP
Beta - 344099 SAMPLE : 41PN175-1982-14 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 130 to 250 (Cal BP 1820 to 1700)	1790 +/- 30 BP	-23.3 o/oo	1820 +/- 30 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "\*\*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.



# REPORT OF RADIOCARBON DATING ANALYSES

Dr. James Abbott

Report Date: 3/15/2013

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 344100 SAMPLE : 41PN175-1984-5 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1320 to 1350 (Cal BP 630 to 600) AND Cal AD 1390 to 1430 (Cal BP 560 to 520)	560 +/- 30 BP	-25.6 o/oo	550 +/- 30 BP
Beta - 344101 SAMPLE : 41PN175-1984-8 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1450 to 1640 (Cal BP 500 to 310)	360 +/- 30 BP	-25.4 o/oo	350 +/- 30 BP
Beta - 344102 SAMPLE : 41PN175-1984-12 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1300 to 1370 (Cal BP 650 to 580) AND Cal AD 1380 to 1420 (Cal BP 570 to 530)	580 +/- 30 BP	-24.9 o/oo	580 +/- 30 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "\*\*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.



# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.3:lab. mult=1)

**Laboratory number: Beta-344076**

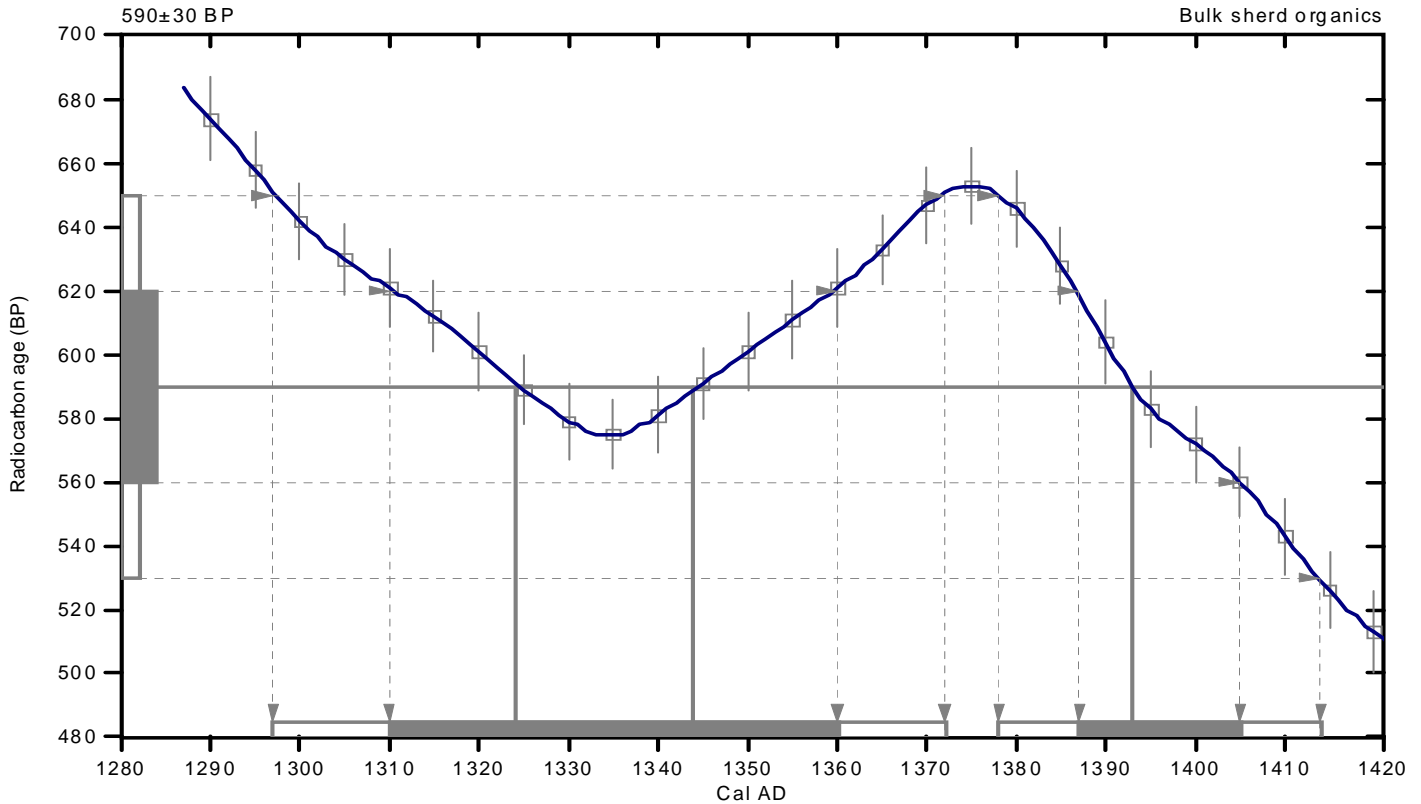
**Conventional radiocarbon age: 590±30 BP**

**2 Sigma calibrated results: Cal AD 1300 to 1370 (Cal BP 650 to 580) and  
(95% probability) Cal AD 1380 to 1410 (Cal BP 570 to 540)**

Intercept data

Intercepts of radiocarbon age  
with calibration curve: Cal AD 1320 (Cal BP 630) and  
Cal AD 1340 (Cal BP 610) and  
Cal AD 1390 (Cal BP 560)

**1 Sigma calibrated results: Cal AD 1310 to 1360 (Cal BP 640 to 590) and  
(68% probability) Cal AD 1390 to 1400 (Cal BP 560 to 540)**



## References:

### *Database used*

*INTCAL09*

### *References to INTCAL09 database*

*Heaton, et.al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et.al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et.al., 1993, Radiocarbon 35(1):137-189, Oeschger, et.al., 1975, Tellus 27:168-192*

### *Mathematics used for calibration scenario*

*A Simplified Approach to Calibrating C14 Dates*

*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322*

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-27.2:lab. mult=1)

Laboratory number: **Beta-344077**

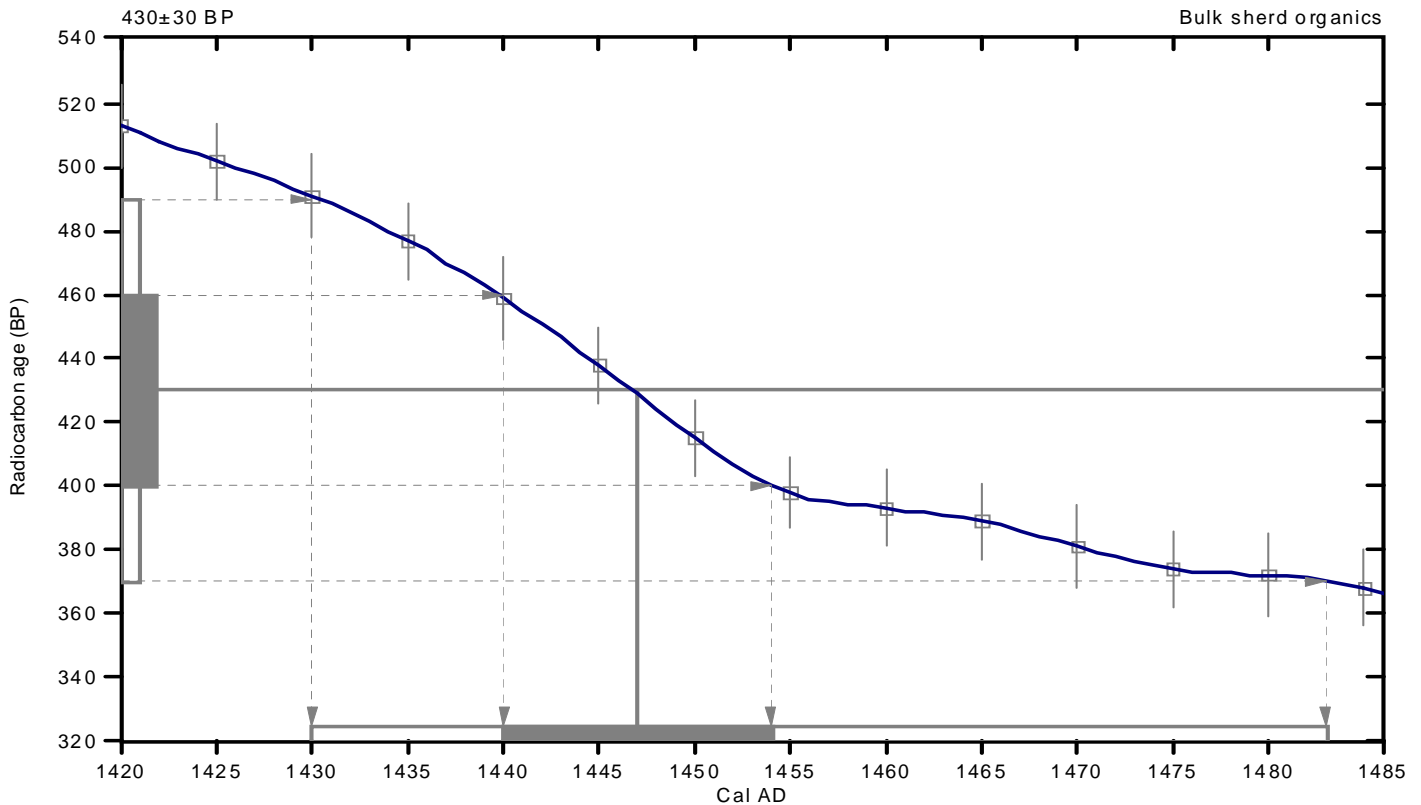
Conventional radiocarbon age: **430±30 BP**

**2 Sigma calibrated result: Cal AD 1430 to 1480 (Cal BP 520 to 470)**  
(95% probability)

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1450 (Cal BP 500)

**1 Sigma calibrated result: Cal AD 1440 to 1450 (Cal BP 510 to 500)**  
(68% probability)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-24.6:lab. mult=1)

**Laboratory number: Beta-344078**

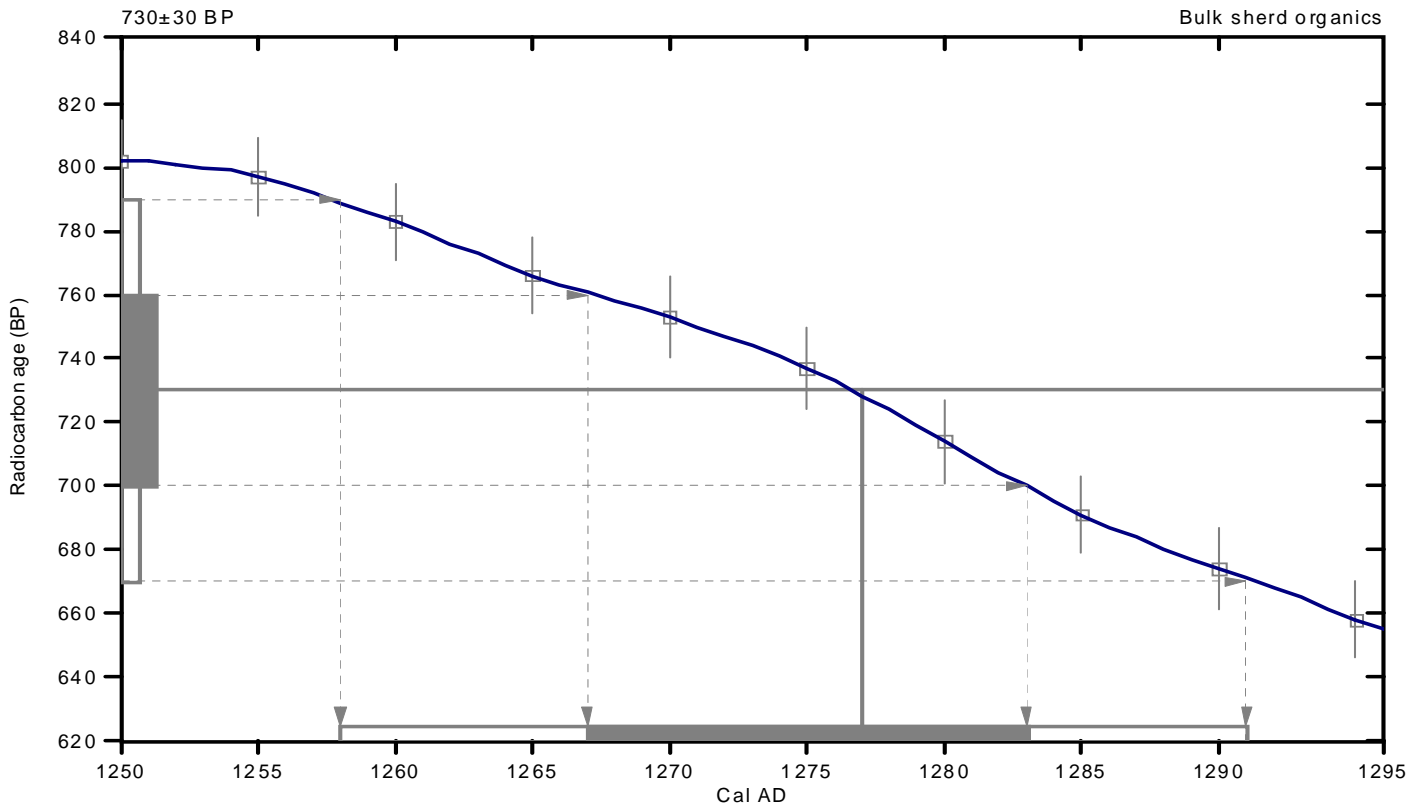
**Conventional radiocarbon age: 730±30 BP**

**2 Sigma calibrated result: Cal AD 1260 to 1290 (Cal BP 690 to 660)  
(95% probability)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1280 (Cal BP 670)

**1 Sigma calibrated result: Cal AD 1270 to 1280 (Cal BP 680 to 670)  
(68% probability)**



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et.al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et.al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et.al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et.al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.7:lab. mult=1)

**Laboratory number: Beta-344079**

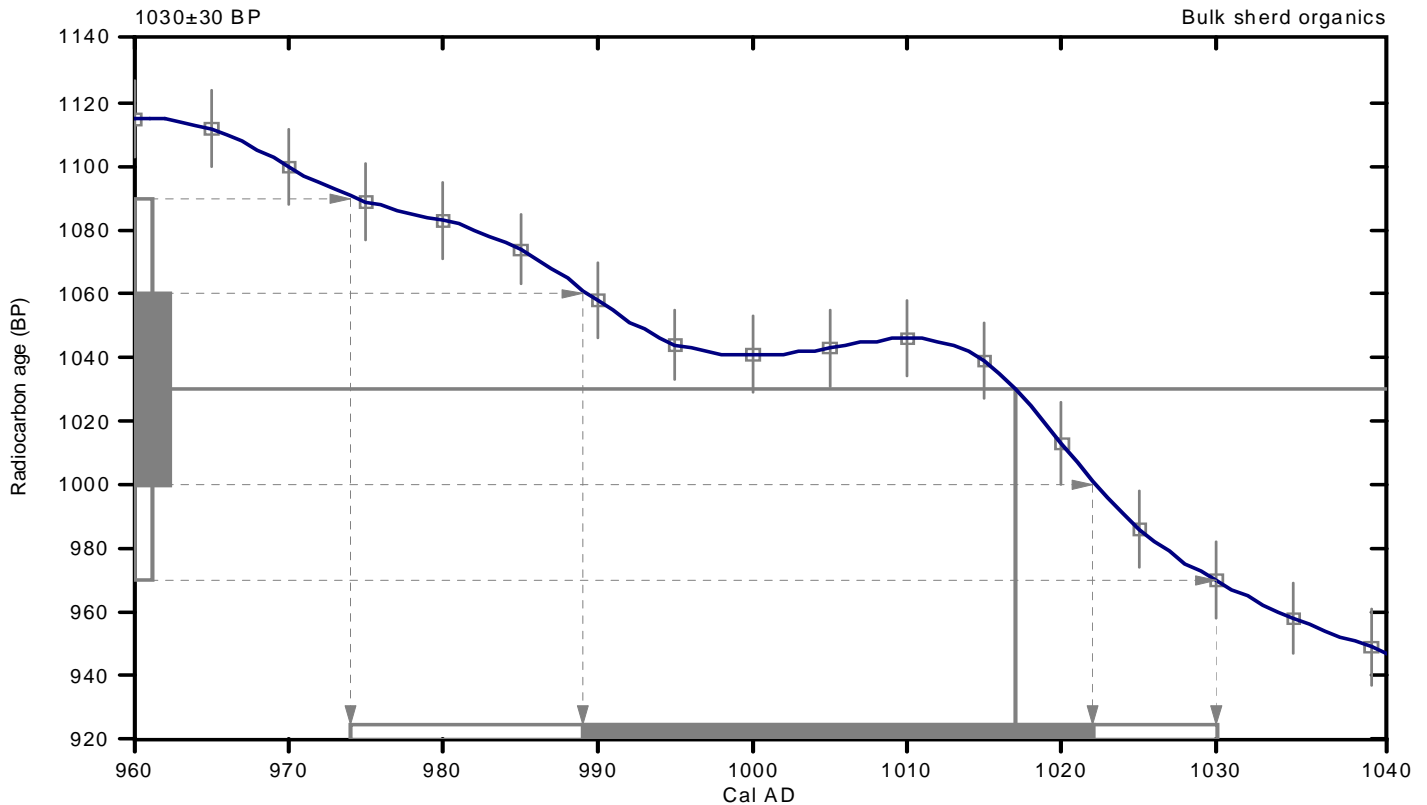
**Conventional radiocarbon age: 1030±30 BP**

**2 Sigma calibrated result: Cal AD 970 to 1030 (Cal BP 980 to 920)  
(95% probability)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1020 (Cal BP 930)

**1 Sigma calibrated result: Cal AD 990 to 1020 (Cal BP 960 to 930)  
(68% probability)**



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et.al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et.al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et.al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et.al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-25.5:lab. mult=1)

**Laboratory number: Beta-344080**

**Conventional radiocarbon age: 350±30 BP**

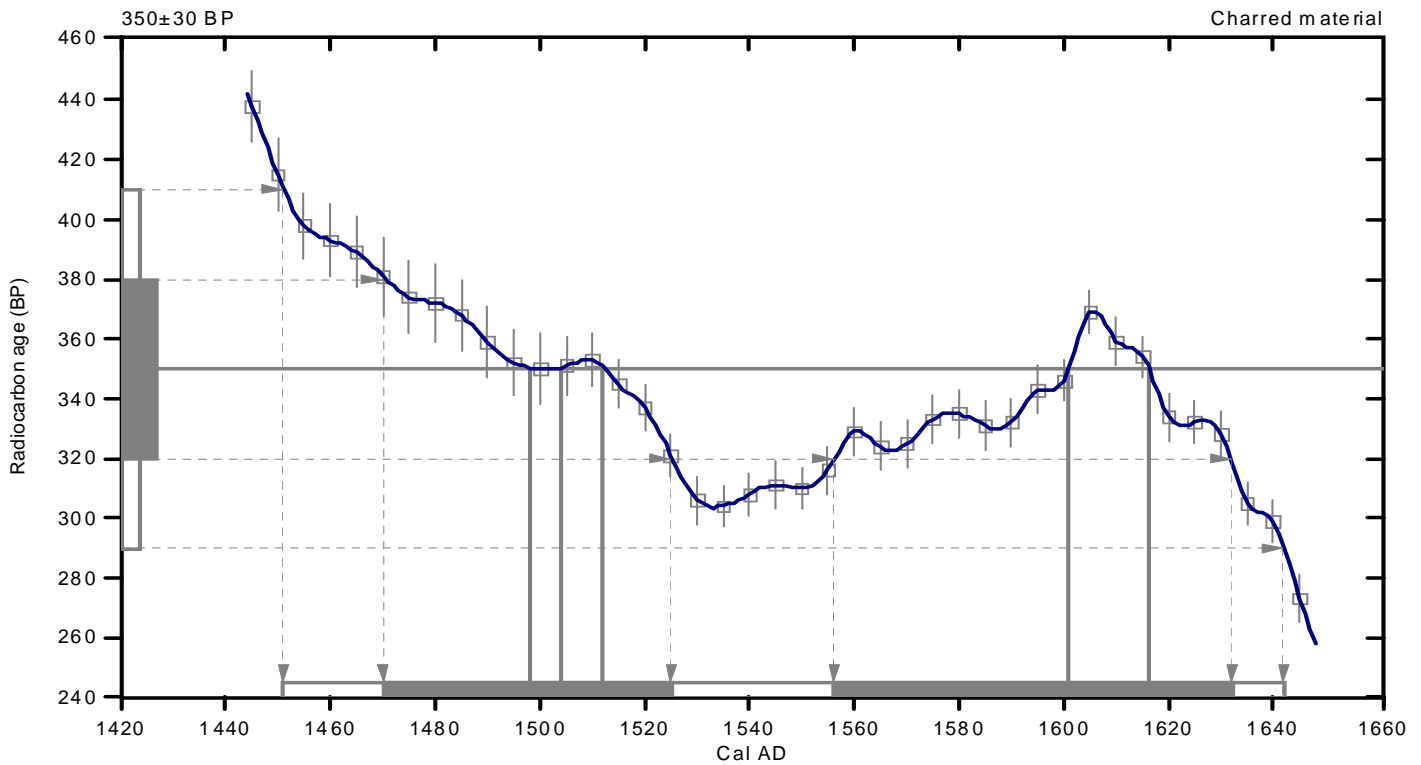
**2 Sigma calibrated result: Cal AD 1450 to 1640 (Cal BP 500 to 310)  
(95% probability)**

Intercept data

Intercepts of radiocarbon age  
with calibration curve:

Cal AD 1500 (Cal BP 450) and  
Cal AD 1500 (Cal BP 450) and  
Cal AD 1510 (Cal BP 440) and  
Cal AD 1600 (Cal BP 350) and  
Cal AD 1620 (Cal BP 330)

1 Sigma calibrated results: Cal AD 1470 to 1520 (Cal BP 480 to 420) and  
(68% probability) Cal AD 1560 to 1630 (Cal BP 390 to 320)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.4:lab. mult=1)

**Laboratory number: Beta-344081**

**Conventional radiocarbon age: 330±30 BP**

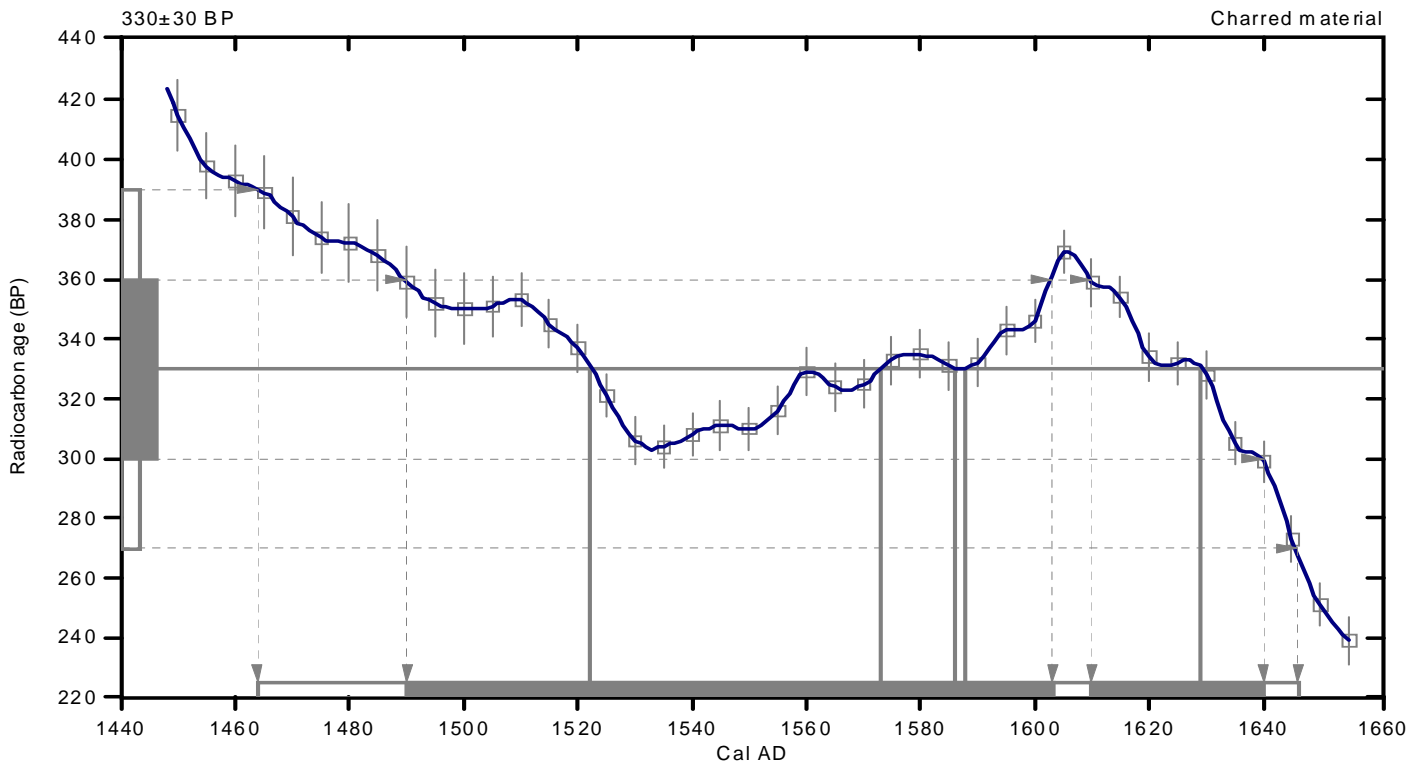
**2 Sigma calibrated result: Cal AD 1460 to 1650 (Cal BP 490 to 300)  
(95% probability)**

Intercept data

Intercepts of radiocarbon age  
with calibration curve:

Cal AD 1520 (Cal BP 430) and  
Cal AD 1570 (Cal BP 380) and  
Cal AD 1590 (Cal BP 360) and  
Cal AD 1590 (Cal BP 360) and  
Cal AD 1630 (Cal BP 320)

1 Sigma calibrated results: Cal AD 1490 to 1600 (Cal BP 460 to 350) and  
(68% probability) Cal AD 1610 to 1640 (Cal BP 340 to 310)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-23.6:lab. mult=1)

**Laboratory number: Beta-344082**

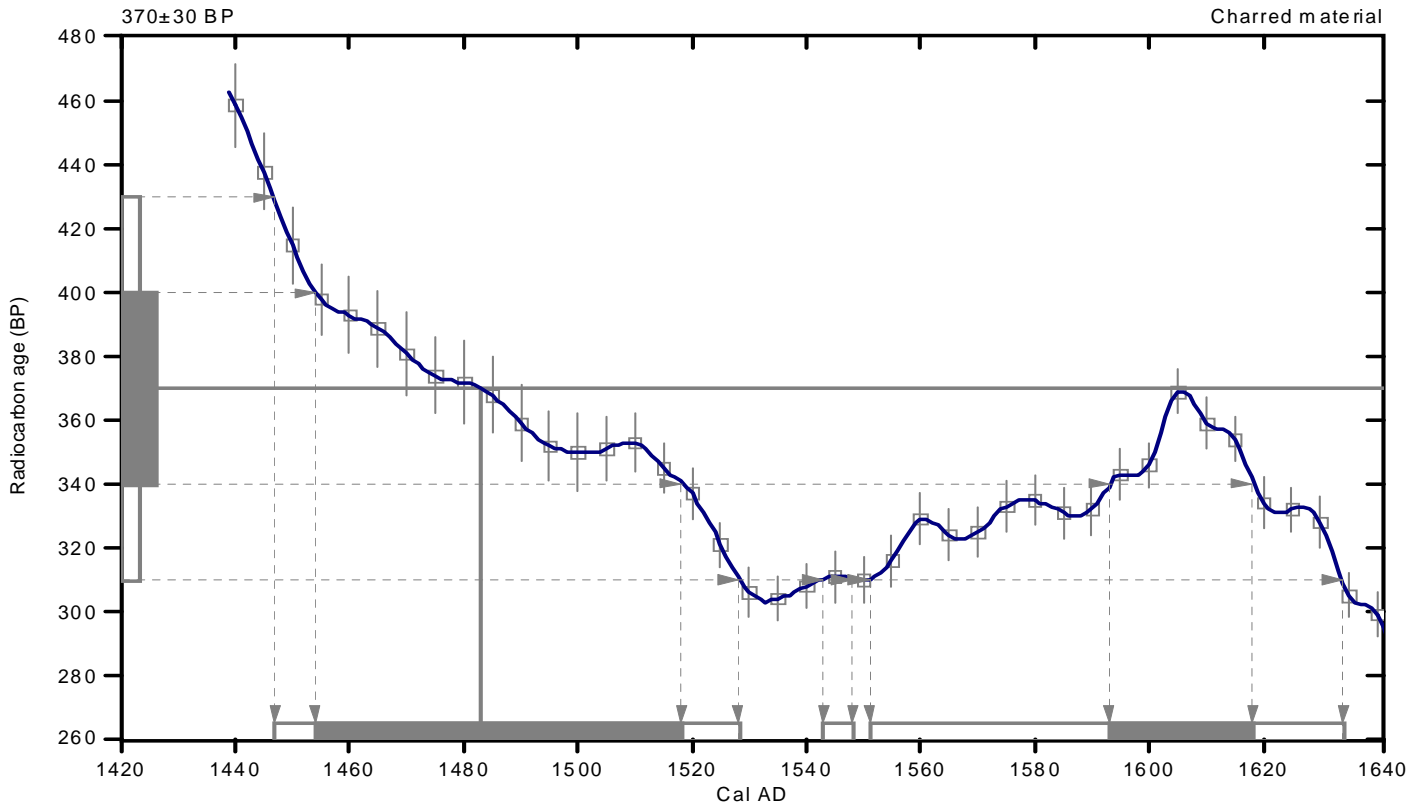
**Conventional radiocarbon age: 370±30 BP**

**2 Sigma calibrated results: Cal AD 1450 to 1530 (Cal BP 500 to 420) and  
(95% probability) Cal AD 1540 to 1550 (Cal BP 410 to 400) and  
Cal AD 1550 to 1630 (Cal BP 400 to 320)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1480 (Cal BP 470)

**1 Sigma calibrated results: Cal AD 1450 to 1520 (Cal BP 500 to 430) and  
(68% probability) Cal AD 1590 to 1620 (Cal BP 360 to 330)**



## References:

### *Database used*

*INTCAL09*

### *References to INTCAL09 database*

*Heaton, et.al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et.al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et.al., 1993, Radiocarbon 35(1):137-189, Oeschger, et.al., 1975, Tellus 27:168-192*

### *Mathematics used for calibration scenario*

*A Simplified Approach to Calibrating C14 Dates*

*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322*

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.3:lab. mult=1)

Laboratory number: **Beta-344083**

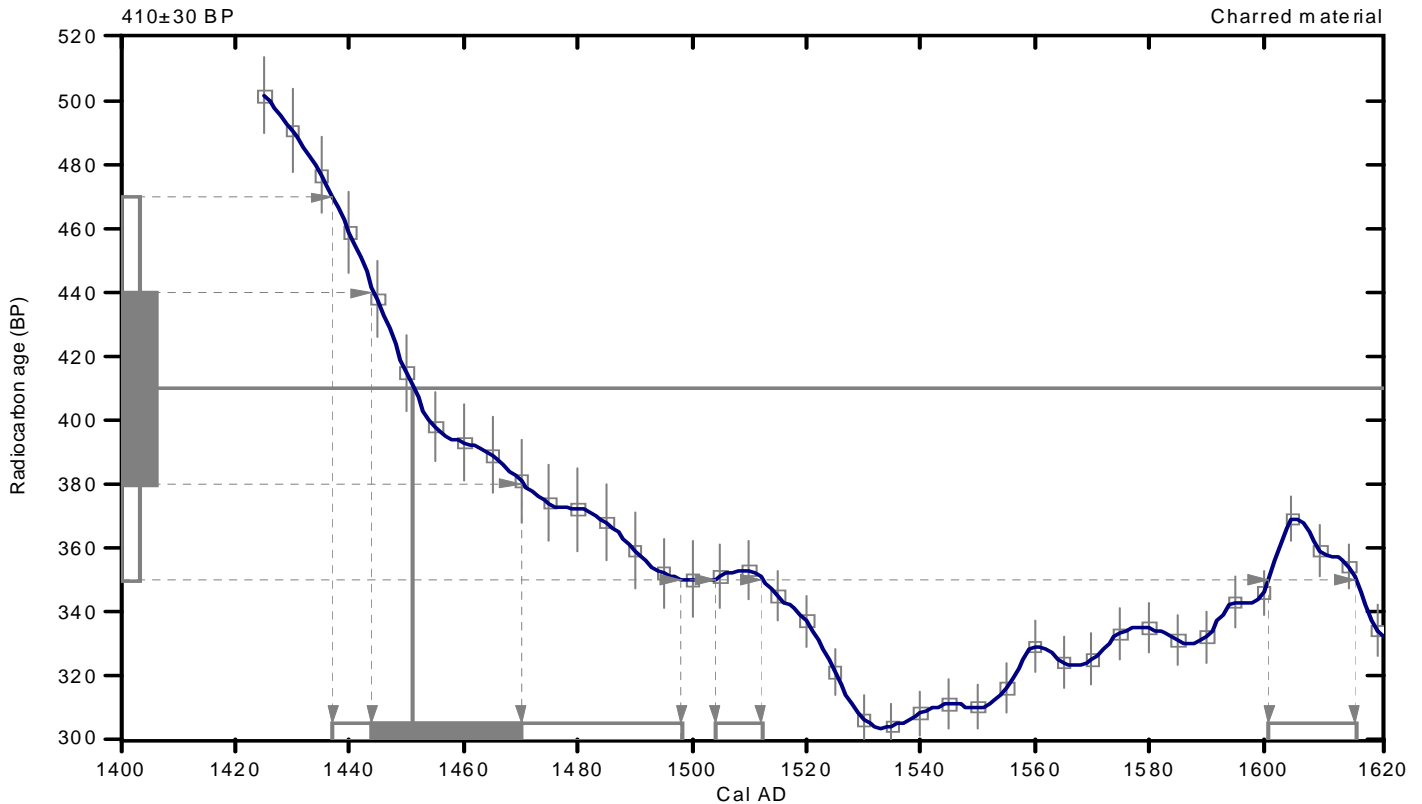
Conventional radiocarbon age: **410±30 BP**

**2 Sigma calibrated results:** **Cal AD 1440 to 1500 (Cal BP 510 to 450) and**  
**(95% probability)** **Cal AD 1500 to 1510 (Cal BP 450 to 440) and**  
**Cal AD 1600 to 1620 (Cal BP 350 to 330)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: **Cal AD 1450 (Cal BP 500)**

**1 Sigma calibrated result:** **Cal AD 1440 to 1470 (Cal BP 510 to 480)**  
**(68% probability)**



## References:

### Database used

*INTCAL09*

### References to *INTCAL09* database

*Heaton, et.al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et.al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et.al., 1993, Radiocarbon 35(1):137-189, Oeschger, et.al., 1975, Tellus 27:168-192*

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322*

## Beta Analytic Radiocarbon Dating Laboratory

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-23.5:lab. mult=1)

**Laboratory number: Beta-344084**

**Conventional radiocarbon age: 360±30 BP**

**2 Sigma calibrated result: Cal AD 1450 to 1640 (Cal BP 500 to 310)  
(95% probability)**

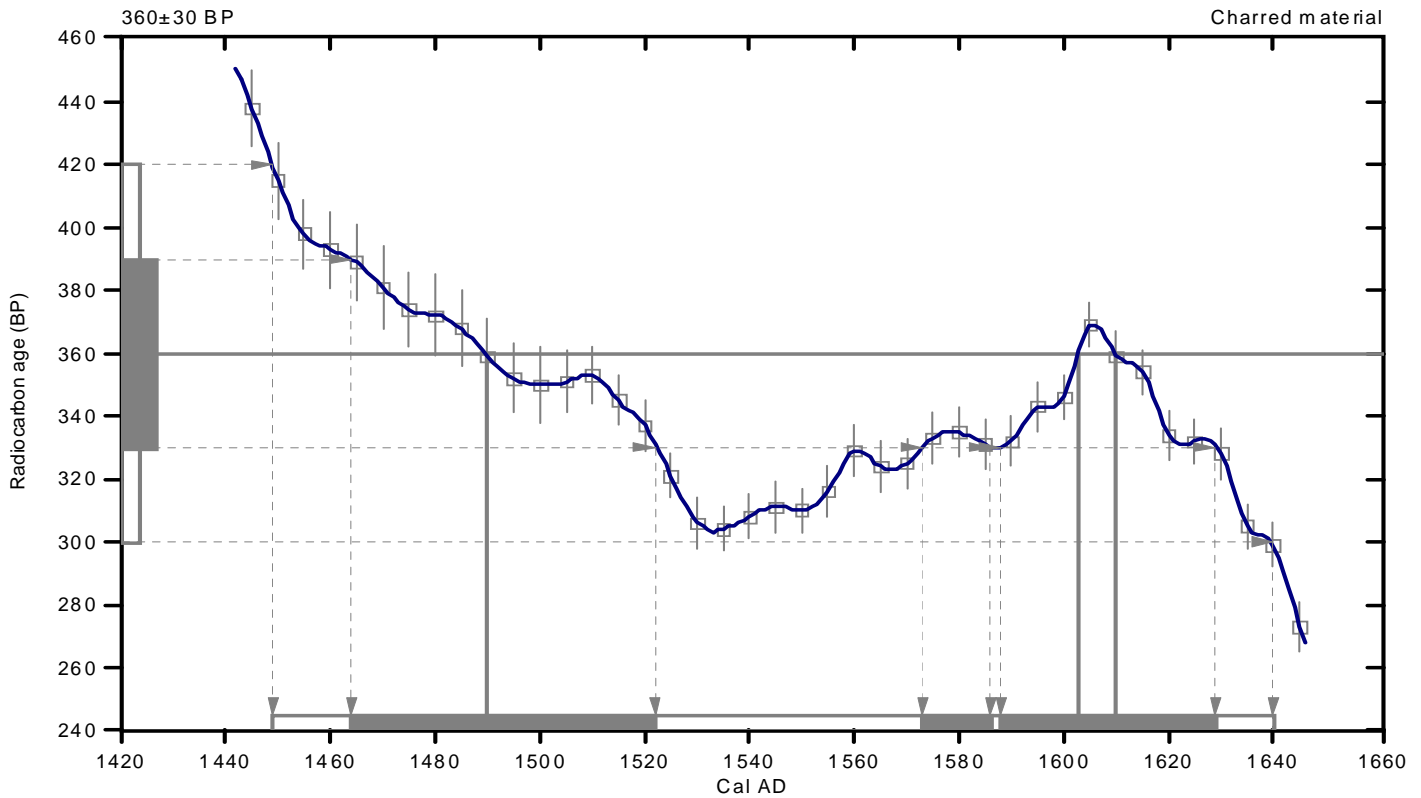
Intercept data

Intercepts of radiocarbon age  
with calibration curve:

Cal AD 1490 (Cal BP 460) and  
Cal AD 1600 (Cal BP 350) and  
Cal AD 1610 (Cal BP 340)

1 Sigma calibrated results:  
(68% probability)

Cal AD 1460 to 1520 (Cal BP 490 to 430) and  
Cal AD 1570 to 1590 (Cal BP 380 to 360) and  
Cal AD 1590 to 1630 (Cal BP 360 to 320)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-29;lab.mult=1)

**Laboratory number: Beta-344085**

**Conventional radiocarbon age: 1260±30 BP**

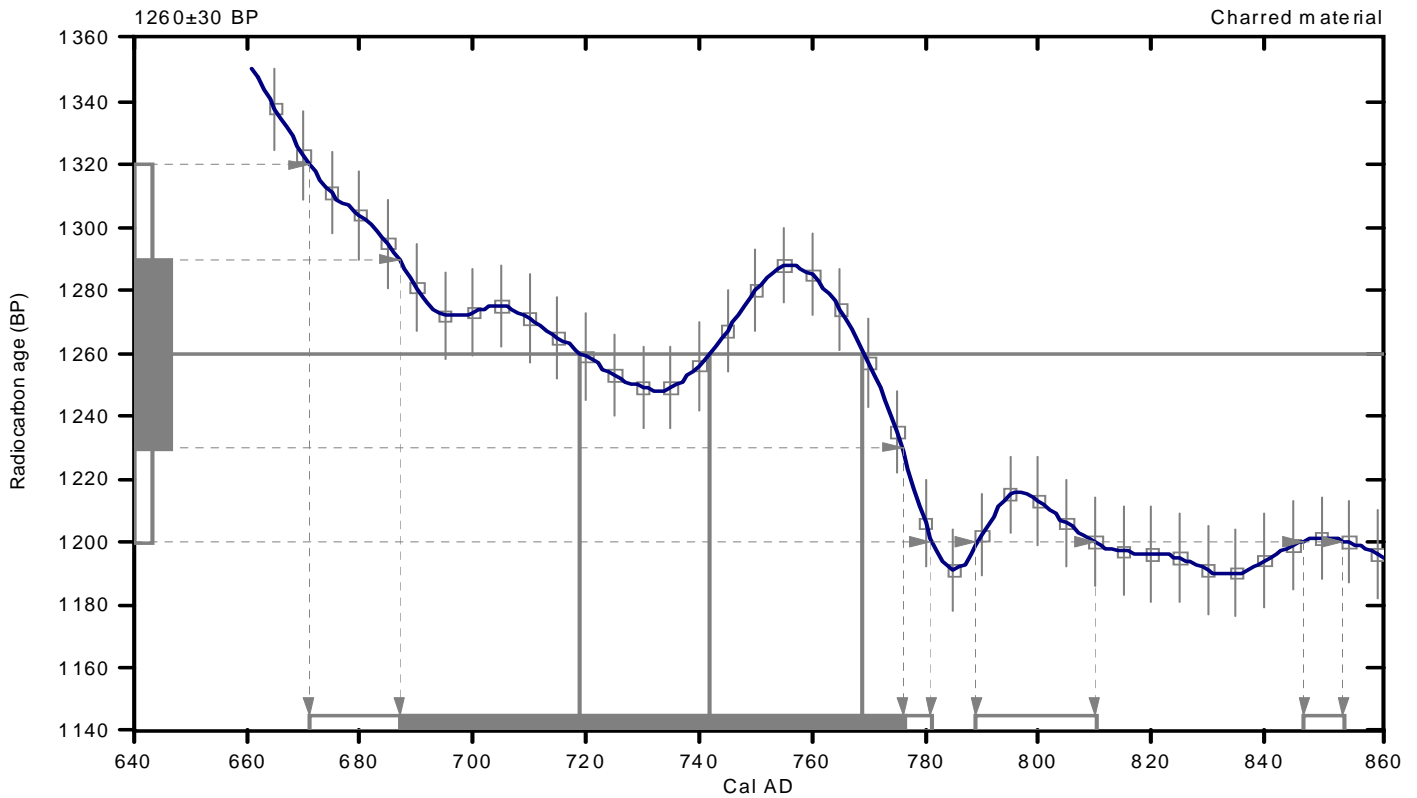
**2 Sigma calibrated results: Cal AD 670 to 780 (Cal BP 1280 to 1170) and  
(95% probability) Cal AD 790 to 810 (Cal BP 1160 to 1140) and  
Cal AD 850 to 850 (Cal BP 1100 to 1100)**

Intercept data

Intercepts of radiocarbon age  
with calibration curve:

Cal AD 720 (Cal BP 1230) and  
Cal AD 740 (Cal BP 1210) and  
Cal AD 770 (Cal BP 1180)

1 Sigma calibrated result: Cal AD 690 to 780 (Cal BP 1260 to 1170)  
(68% probability)



References:

*Database used*

*INTCAL09*

*References to INTCAL09 database*

*Heaton, et al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et al., 1993, Radiocarbon 35(1):137-189, Oeschger, et al., 1975, Tellus 27:168-192*

*Mathematics used for calibration scenario*

*A Simplified Approach to Calibrating C14 Dates*

*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322*

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.3:lab. mult=1)

**Laboratory number: Beta-344086**

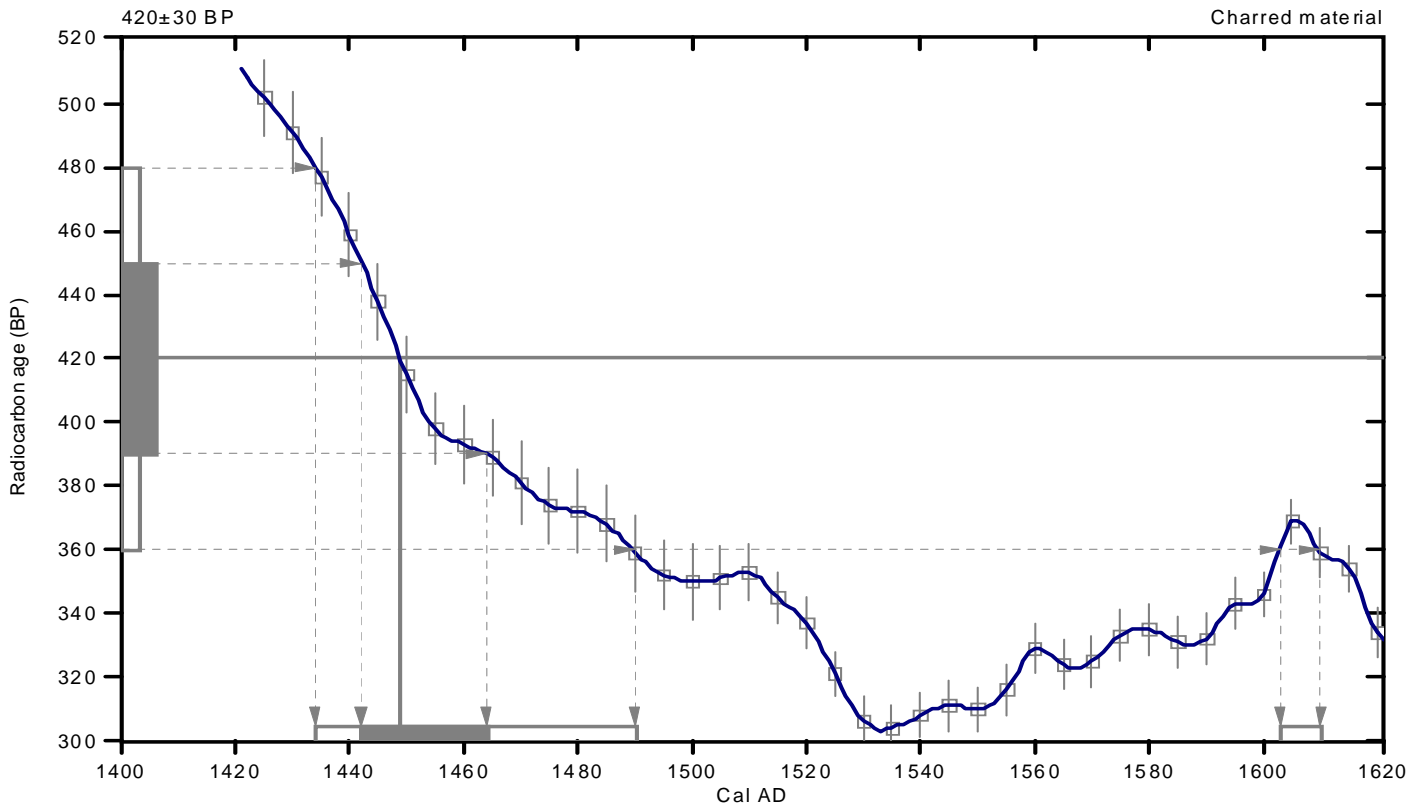
**Conventional radiocarbon age: 420±30 BP**

**2 Sigma calibrated results: Cal AD 1430 to 1490 (Cal BP 520 to 460) and  
(95% probability) Cal AD 1600 to 1610 (Cal BP 350 to 340)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1450 (Cal BP 500)

1 Sigma calibrated result: Cal AD 1440 to 1460 (Cal BP 510 to 490)  
(68% probability)



## References:

### *Database used*

*INTCAL09*

### *References to INTCAL09 database*

*Heaton, et.al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et.al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et.al., 1993, Radiocarbon 35(1):137-189, Oeschger, et.al., 1975, Tellus 27:168-192*

### *Mathematics used for calibration scenario*

*A Simplified Approach to Calibrating C14 Dates*

*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322*

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-7.8:lab. mult=1)

**Laboratory number: Beta-344087**

**Conventional radiocarbon age: 310±30 BP**

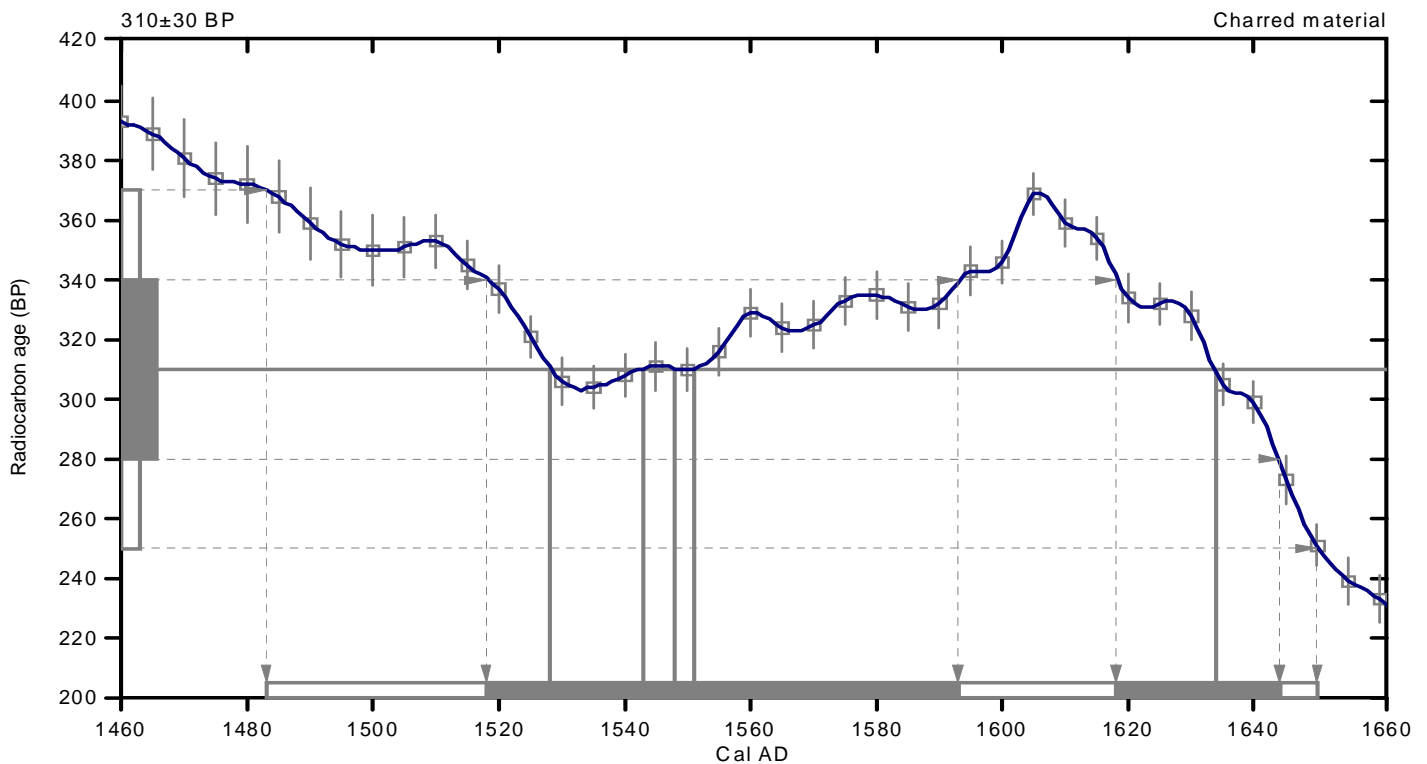
**2 Sigma calibrated result: Cal AD 1480 to 1650 (Cal BP 470 to 300)  
(95% probability)**

Intercept data

Intercepts of radiocarbon age  
with calibration curve:

Cal AD 1530 (Cal BP 420) and  
Cal AD 1540 (Cal BP 410) and  
Cal AD 1550 (Cal BP 400) and  
Cal AD 1550 (Cal BP 400) and  
Cal AD 1630 (Cal BP 320)

1 Sigma calibrated results: Cal AD 1520 to 1590 (Cal BP 430 to 360) and  
(68% probability) Cal AD 1620 to 1640 (Cal BP 330 to 310)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et.al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et.al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et.al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et.al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-27.1:lab. mult=1)

Laboratory number: **Beta-344088**

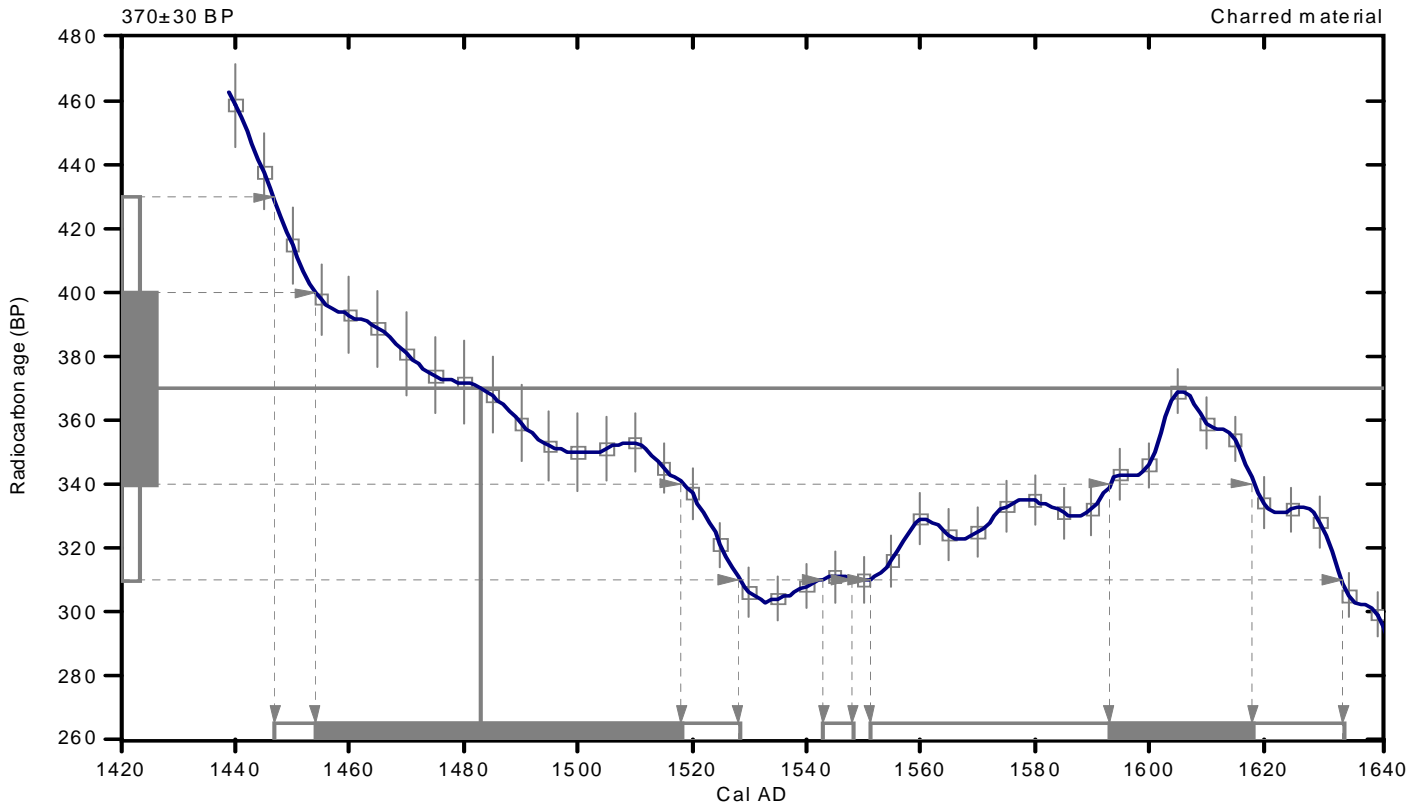
Conventional radiocarbon age: **370±30 BP**

**2 Sigma calibrated results:** Cal AD 1450 to 1530 (Cal BP 500 to 420) and  
(95% probability) Cal AD 1540 to 1550 (Cal BP 410 to 400) and  
Cal AD 1550 to 1630 (Cal BP 400 to 320)

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1480 (Cal BP 470)

**1 Sigma calibrated results:** Cal AD 1450 to 1520 (Cal BP 500 to 430) and  
(68% probability) Cal AD 1590 to 1620 (Cal BP 360 to 330)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-25.9:lab. mult=1)

**Laboratory number: Beta-344089**

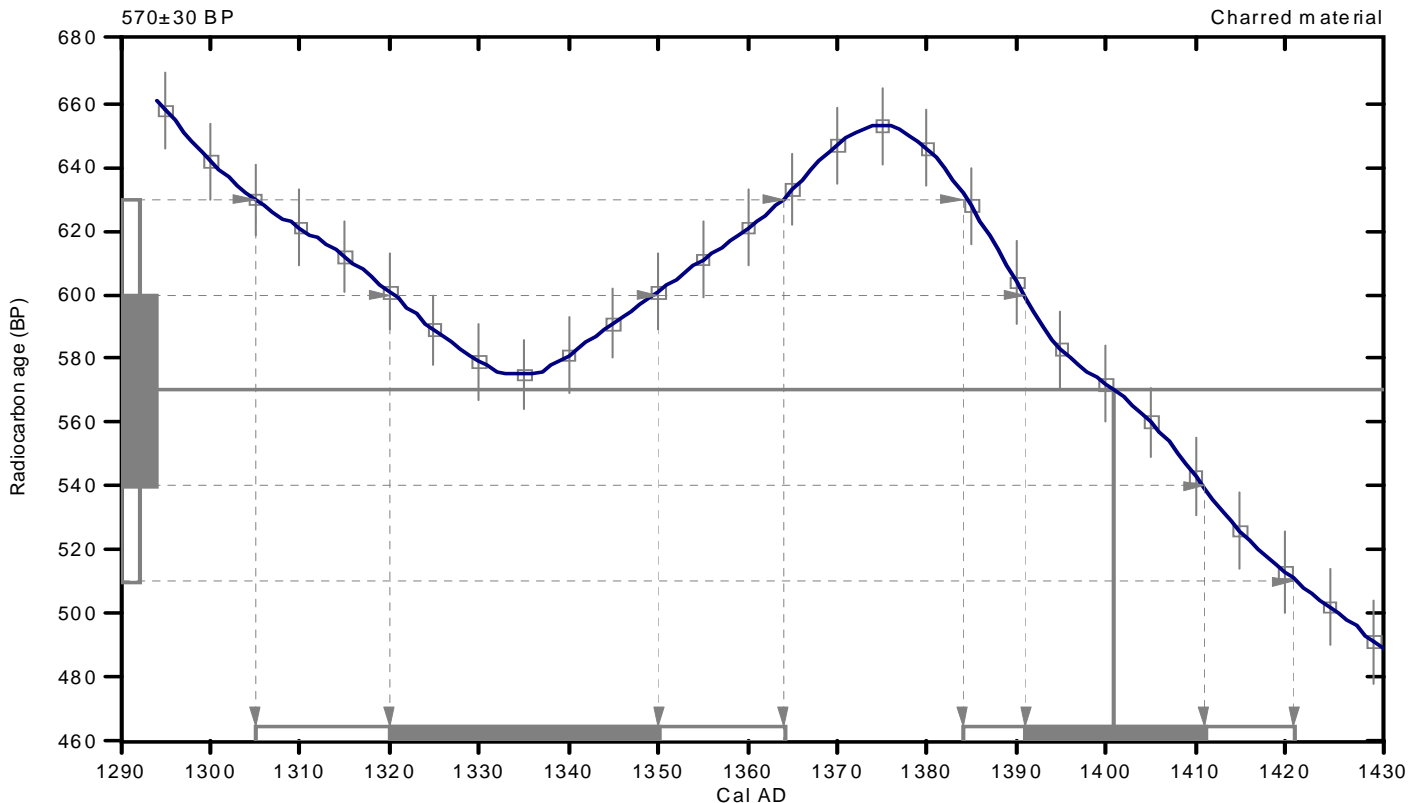
**Conventional radiocarbon age: 570±30 BP**

**2 Sigma calibrated results: Cal AD 1300 to 1360 (Cal BP 640 to 590) and  
(95% probability) Cal AD 1380 to 1420 (Cal BP 570 to 530)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1400 (Cal BP 550)

**1 Sigma calibrated results: Cal AD 1320 to 1350 (Cal BP 630 to 600) and  
(68% probability) Cal AD 1390 to 1410 (Cal BP 560 to 540)**



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-23.4:lab. mult=1)

**Laboratory number: Beta-344090**

**Conventional radiocarbon age: 340±30 BP**

**2 Sigma calibrated result: Cal AD 1450 to 1640 (Cal BP 500 to 310)  
(95% probability)**

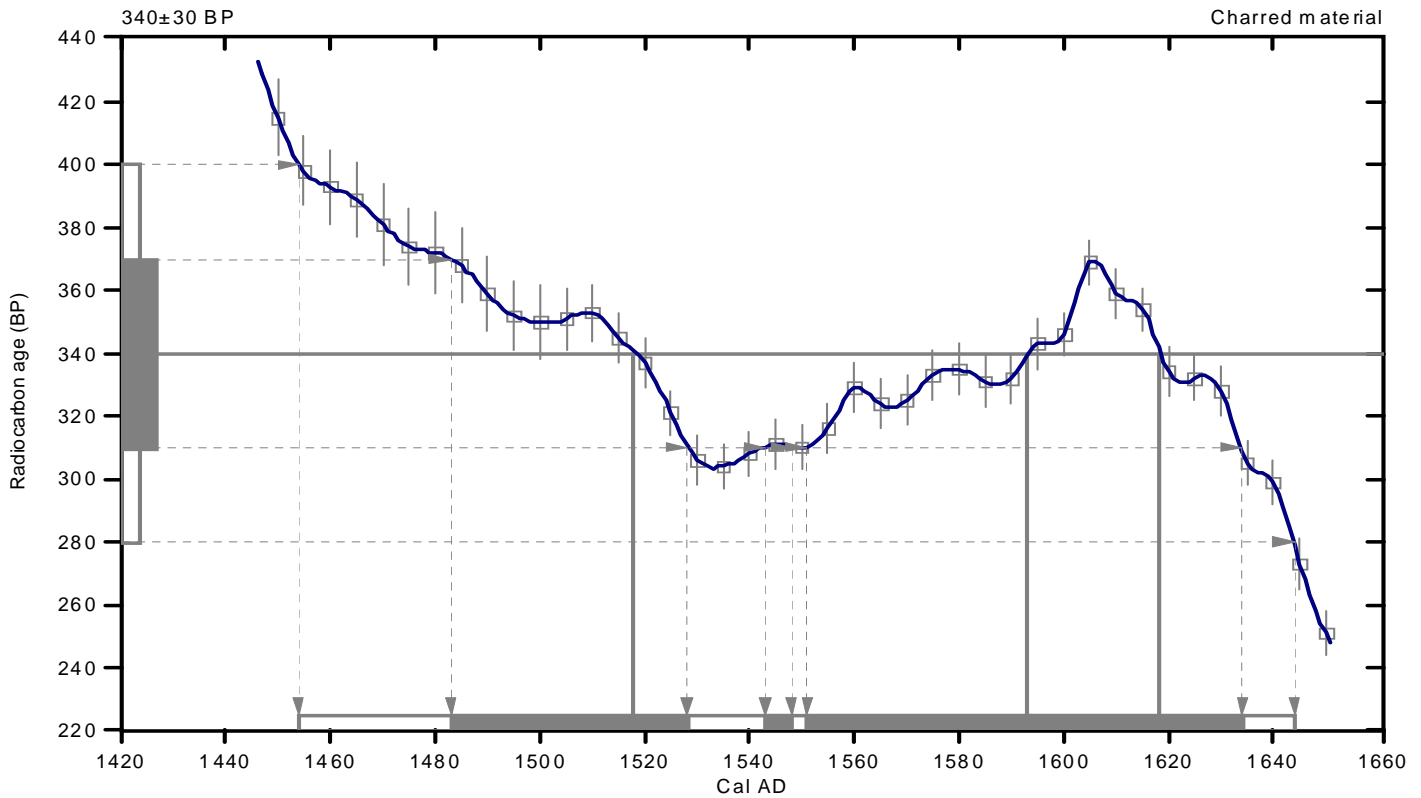
Intercept data

Intercepts of radiocarbon age  
with calibration curve:

Cal AD 1520 (Cal BP 430) and  
Cal AD 1590 (Cal BP 360) and  
Cal AD 1620 (Cal BP 330)

1 Sigma calibrated results:  
(68% probability)

Cal AD 1480 to 1530 (Cal BP 470 to 420) and  
Cal AD 1540 to 1550 (Cal BP 410 to 400) and  
Cal AD 1550 to 1630 (Cal BP 400 to 320)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et.al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et.al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et.al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et.al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-10:lab. mult=1)

**Laboratory number: Beta-344091**

**Conventional radiocarbon age: 350±30 BP**

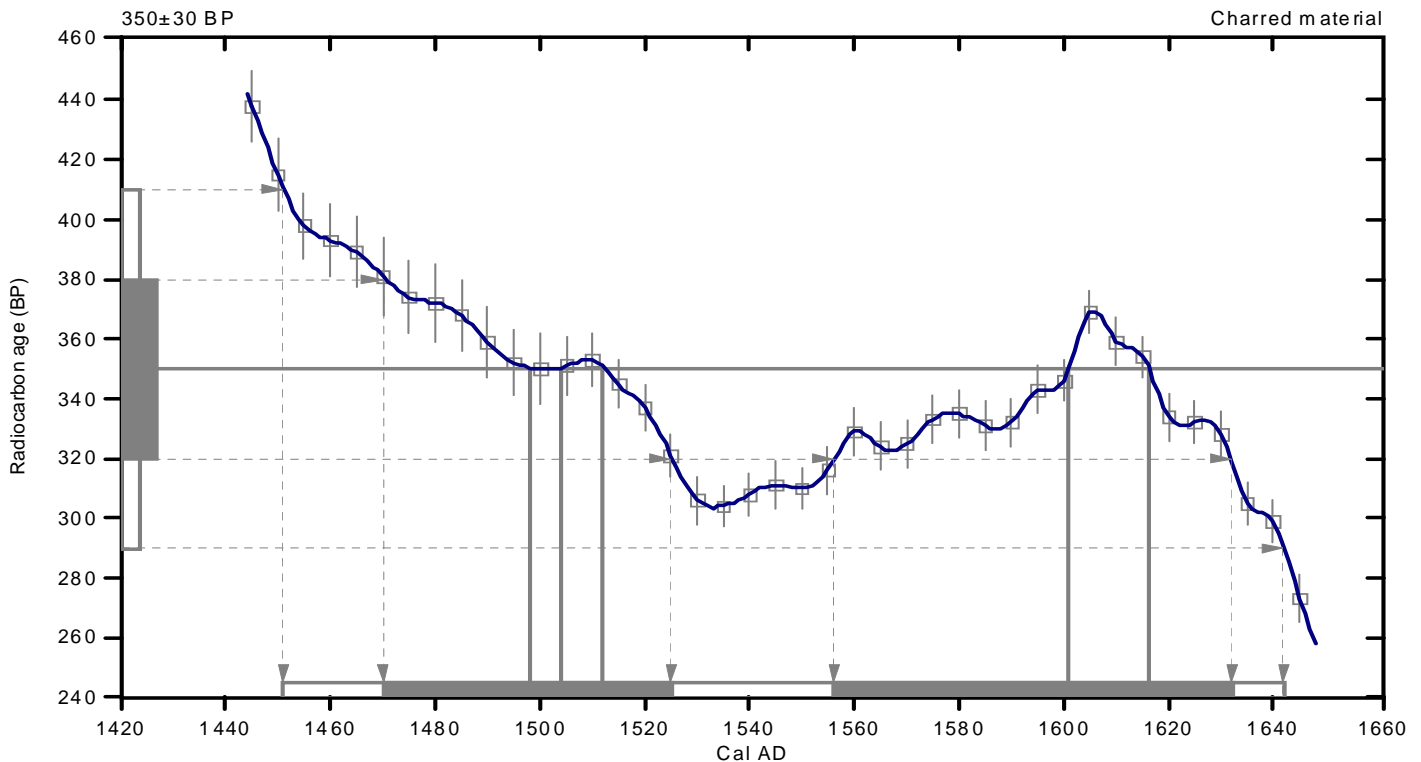
**2 Sigma calibrated result: Cal AD 1450 to 1640 (Cal BP 500 to 310)  
(95% probability)**

Intercept data

Intercepts of radiocarbon age  
with calibration curve:

Cal AD 1500 (Cal BP 450) and  
Cal AD 1500 (Cal BP 450) and  
Cal AD 1510 (Cal BP 440) and  
Cal AD 1600 (Cal BP 350) and  
Cal AD 1620 (Cal BP 330)

1 Sigma calibrated results: Cal AD 1470 to 1520 (Cal BP 480 to 420) and  
(68% probability) Cal AD 1560 to 1630 (Cal BP 390 to 320)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150,  
Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-24.2:lab. mult=1)

Laboratory number: **Beta-344092**

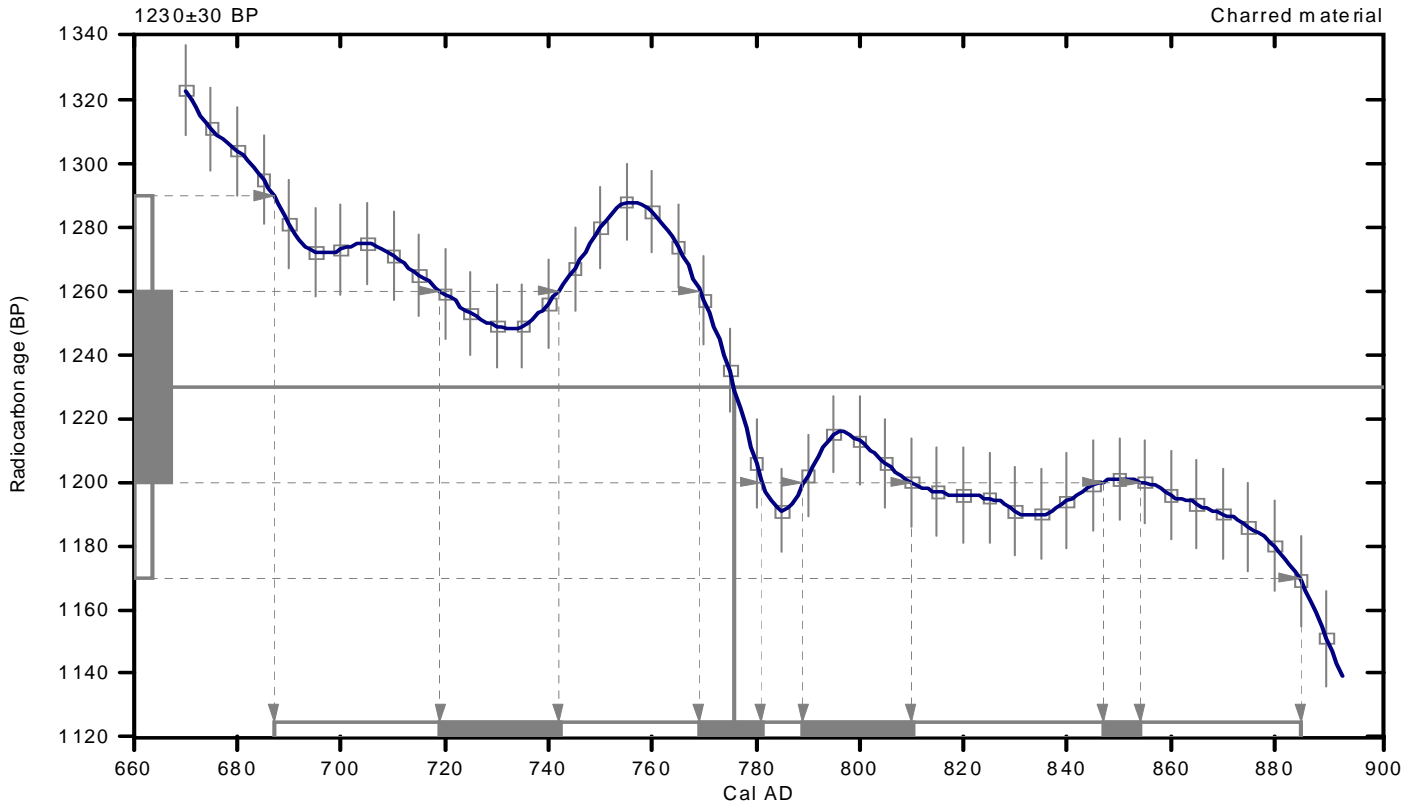
Conventional radiocarbon age: **1230±30 BP**

**2 Sigma calibrated result: Cal AD 690 to 880 (Cal BP 1260 to 1060)**  
**(95% probability)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: **Cal AD 780 (Cal BP 1170)**

1 Sigma calibrated results: **Cal AD 720 to 740 (Cal BP 1230 to 1210) and**  
**(68% probability) Cal AD 770 to 780 (Cal BP 1180 to 1170) and**  
**Cal AD 790 to 810 (Cal BP 1160 to 1140) and**  
**Cal AD 850 to 850 (Cal BP 1100 to 1100)**



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-24.7:lab. mult=1)

**Laboratory number: Beta-344093**

**Conventional radiocarbon age: 360±30 BP**

**2 Sigma calibrated result: Cal AD 1450 to 1640 (Cal BP 500 to 310)  
(95% probability)**

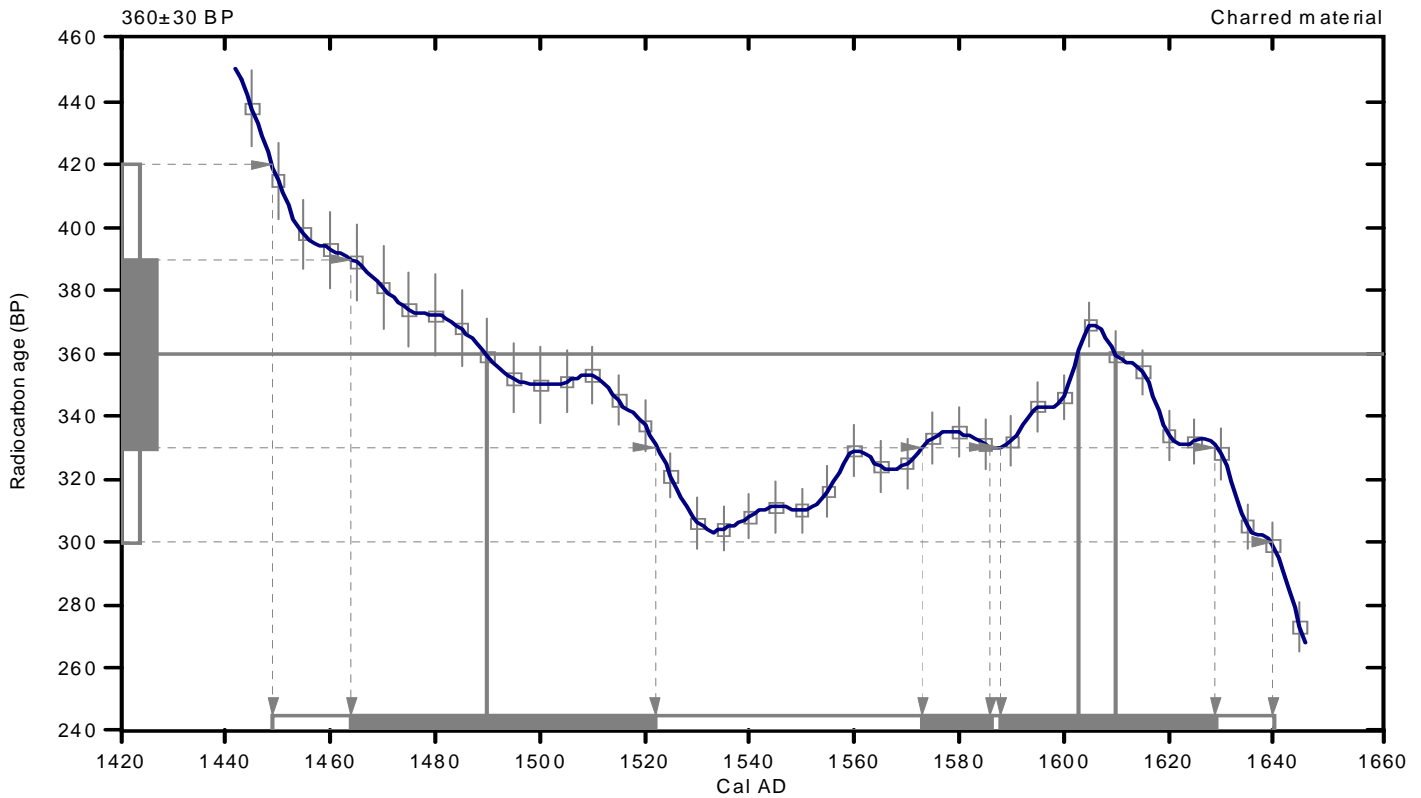
Intercept data

Intercepts of radiocarbon age  
with calibration curve:

Cal AD 1490 (Cal BP 460) and  
Cal AD 1600 (Cal BP 350) and  
Cal AD 1610 (Cal BP 340)

1 Sigma calibrated results:  
(68% probability)

Cal AD 1460 to 1520 (Cal BP 490 to 430) and  
Cal AD 1570 to 1590 (Cal BP 380 to 360) and  
Cal AD 1590 to 1630 (Cal BP 360 to 320)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-9.4:lab. mult=1)

**Laboratory number: Beta-344094**

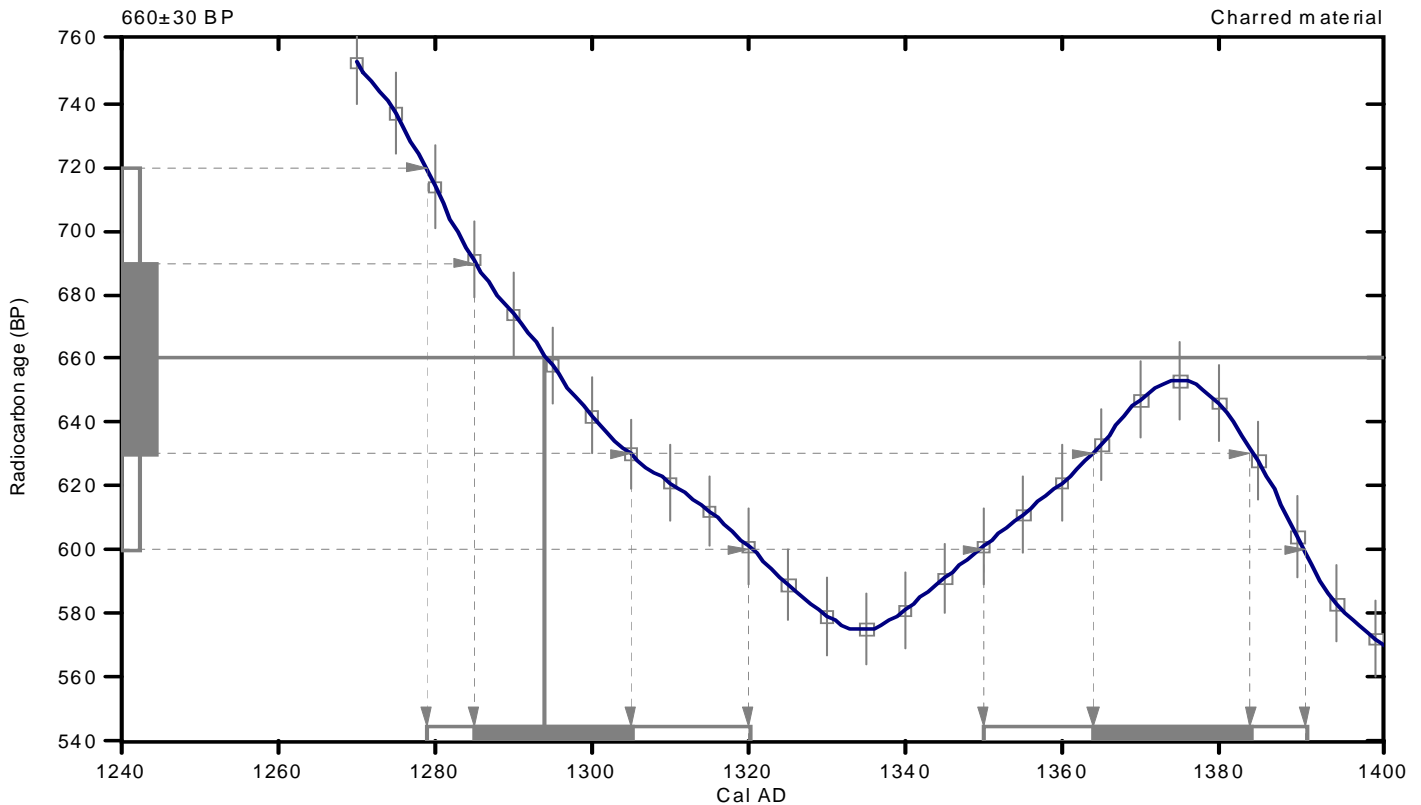
**Conventional radiocarbon age: 660±30 BP**

**2 Sigma calibrated results: Cal AD 1280 to 1320 (Cal BP 670 to 630) and  
(95% probability) Cal AD 1350 to 1390 (Cal BP 600 to 560)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1290 (Cal BP 660)

**1 Sigma calibrated results: Cal AD 1280 to 1300 (Cal BP 660 to 640) and  
(68% probability) Cal AD 1360 to 1380 (Cal BP 590 to 570)**



## References:

### *Database used*

*INTCAL09*

### *References to INTCAL09 database*

*Heaton, et.al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et.al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et.al., 1993, Radiocarbon 35(1):137-189, Oeschger, et.al., 1975, Tellus 27:168-192*

### *Mathematics used for calibration scenario*

*A Simplified Approach to Calibrating C14 Dates*

*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322*

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.6:lab. mult=1)

**Laboratory number: Beta-344095**

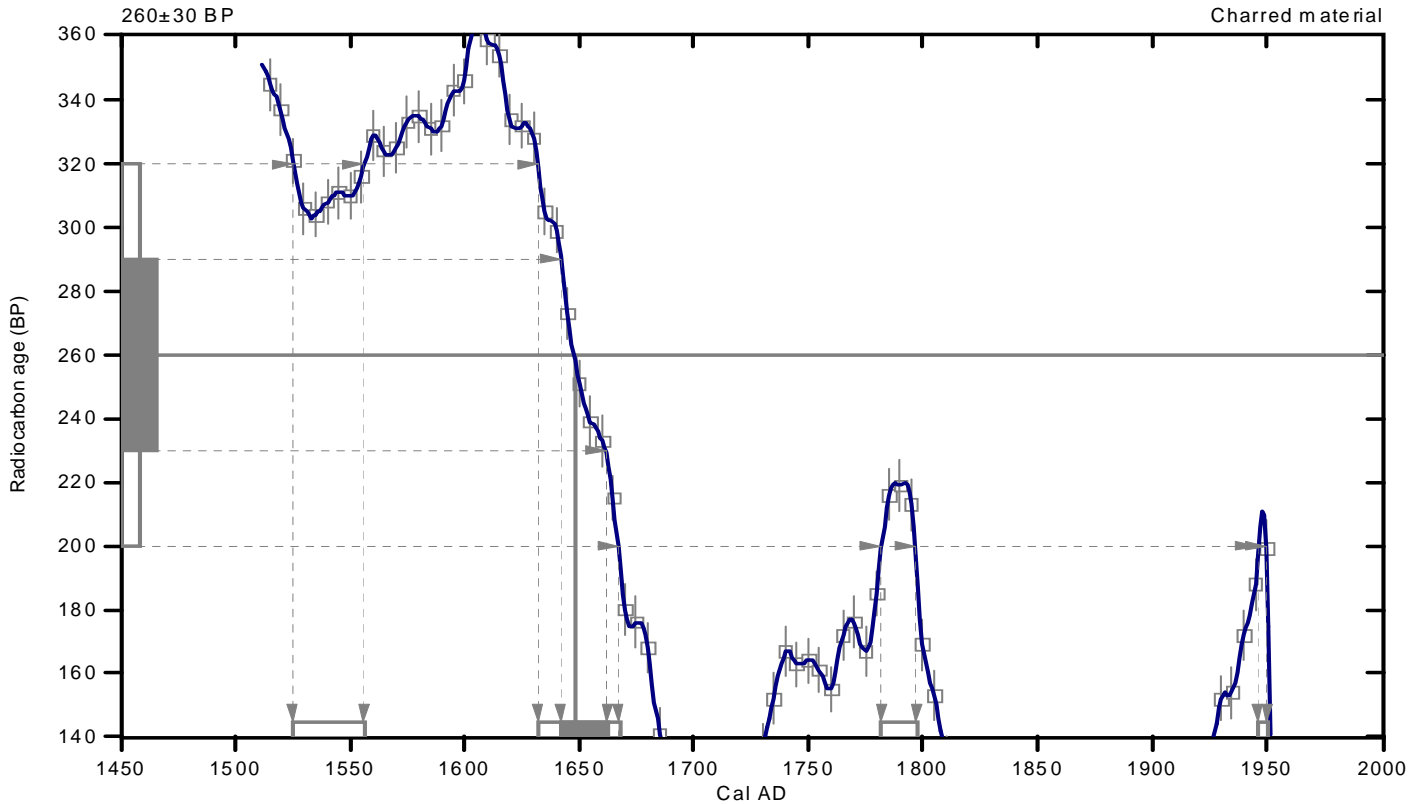
**Conventional radiocarbon age: 260±30 BP**

**2 Sigma calibrated results: Cal AD 1520 to 1560 (Cal BP 420 to 390) and  
(95% probability) Cal AD 1630 to 1670 (Cal BP 320 to 280) and  
Cal AD 1780 to 1800 (Cal BP 170 to 150) and  
Cal AD 1950 to 1950 (Cal BP 0 to 0)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1650 (Cal BP 300)

1 Sigma calibrated result: Cal AD 1640 to 1660 (Cal BP 310 to 290)  
(68% probability)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.8:lab. mult=1)

**Laboratory number: Beta-344096**

**Conventional radiocarbon age: 310±30 BP**

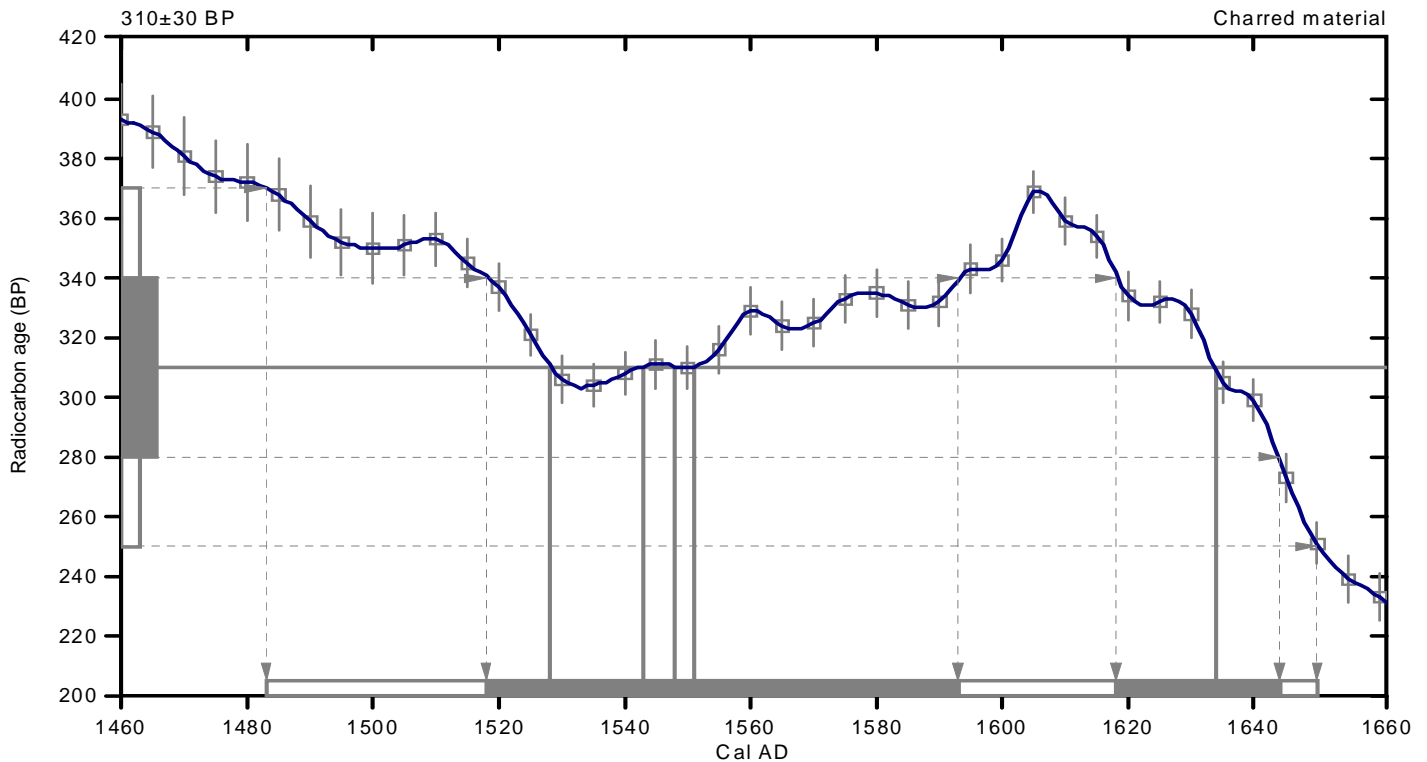
**2 Sigma calibrated result: Cal AD 1480 to 1650 (Cal BP 470 to 300)  
(95% probability)**

Intercept data

Intercepts of radiocarbon age  
with calibration curve:

Cal AD 1530 (Cal BP 420) and  
Cal AD 1540 (Cal BP 410) and  
Cal AD 1550 (Cal BP 400) and  
Cal AD 1550 (Cal BP 400) and  
Cal AD 1630 (Cal BP 320)

1 Sigma calibrated results: Cal AD 1520 to 1590 (Cal BP 430 to 360) and  
(68% probability) Cal AD 1620 to 1640 (Cal BP 330 to 310)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et.al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et.al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et.al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et.al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-25.4:lab. mult=1)

**Laboratory number: Beta-344097**

**Conventional radiocarbon age: 140±30 BP**

**2 Sigma calibrated results: Cal AD 1670 to 1780 (Cal BP 280 to 170) and  
(95% probability) Cal AD 1800 to 1890 (Cal BP 150 to 60) and  
Cal AD 1900 to 1950 (Cal BP 50 to 0) and  
Cal AD 1950 to post 1950 (Cal BP 0 to post 1950)**

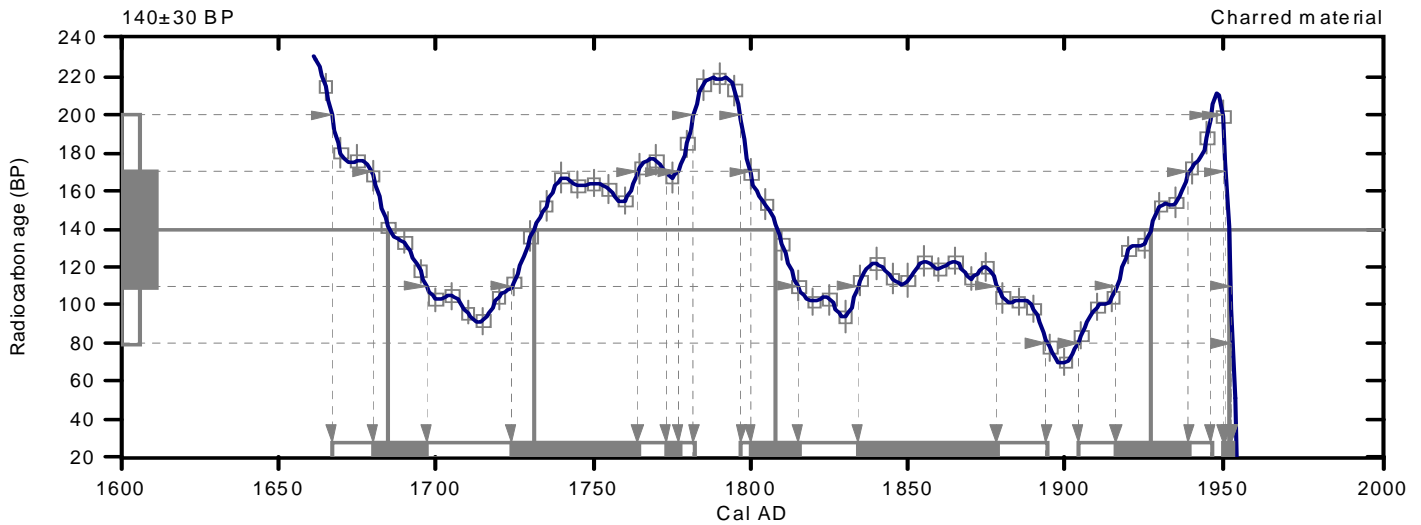
Intercept data

Intercepts of radiocarbon age  
with calibration curve:

Cal AD 1680 (Cal BP 260) and  
Cal AD 1730 (Cal BP 220) and  
Cal AD 1810 (Cal BP 140) and  
Cal AD 1930 (Cal BP 20) and  
Cal AD Post 1950

1 Sigma calibrated results:  
(68% probability)

Cal AD 1680 to 1700 (Cal BP 270 to 250) and  
Cal AD 1720 to 1760 (Cal BP 230 to 190) and  
Cal AD 1770 to 1780 (Cal BP 180 to 170) and  
Cal AD 1800 to 1820 (Cal BP 150 to 140) and  
Cal AD 1830 to 1880 (Cal BP 120 to 70) and  
Cal AD 1920 to 1940 (Cal BP 30 to 10) and  
Cal AD Post 1950



References:

*Database used*

*INTCAL09*

*References to INTCAL09 database*

*Heaton, et al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et al., 1993, Radiocarbon 35(1):137-189, Oeschger, et al., 1975, Tellus 27:168-192*

*Mathematics used for calibration scenario*

*A Simplified Approach to Calibrating C14 Dates*

*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322*

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-25.8:lab. mult=1)

**Laboratory number: Beta-344098**

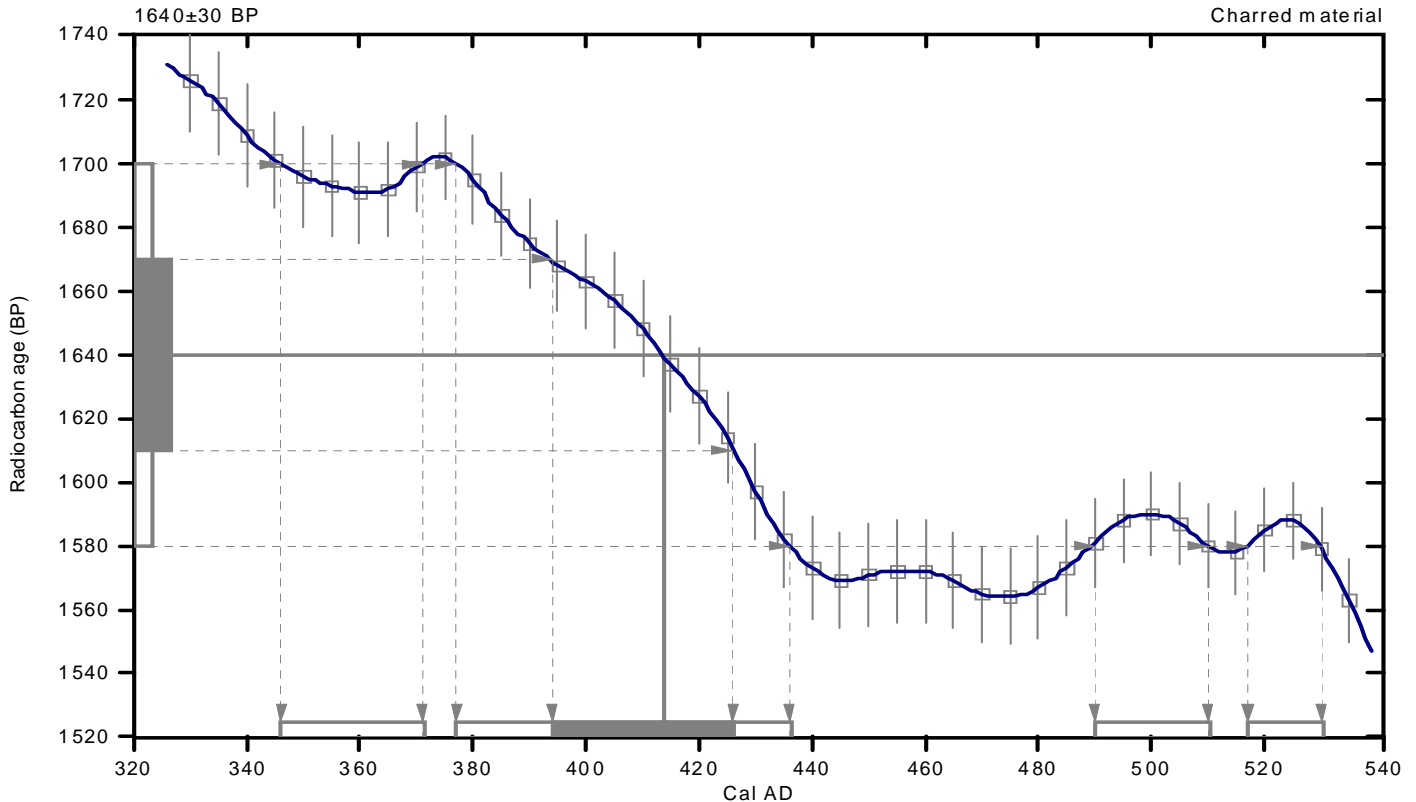
**Conventional radiocarbon age: 1640±30 BP**

**2 Sigma calibrated results: Cal AD 350 to 370 (Cal BP 1600 to 1580) and  
(95% probability) Cal AD 380 to 440 (Cal BP 1570 to 1510) and  
Cal AD 490 to 510 (Cal BP 1460 to 1440) and  
Cal AD 520 to 530 (Cal BP 1430 to 1420)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 410 (Cal BP 1540)

1 Sigma calibrated result: Cal AD 390 to 430 (Cal BP 1560 to 1520)  
(68% probability)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et.al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et.al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et.al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et.al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-23.3:lab. mult=1)

**Laboratory number: Beta-344099**

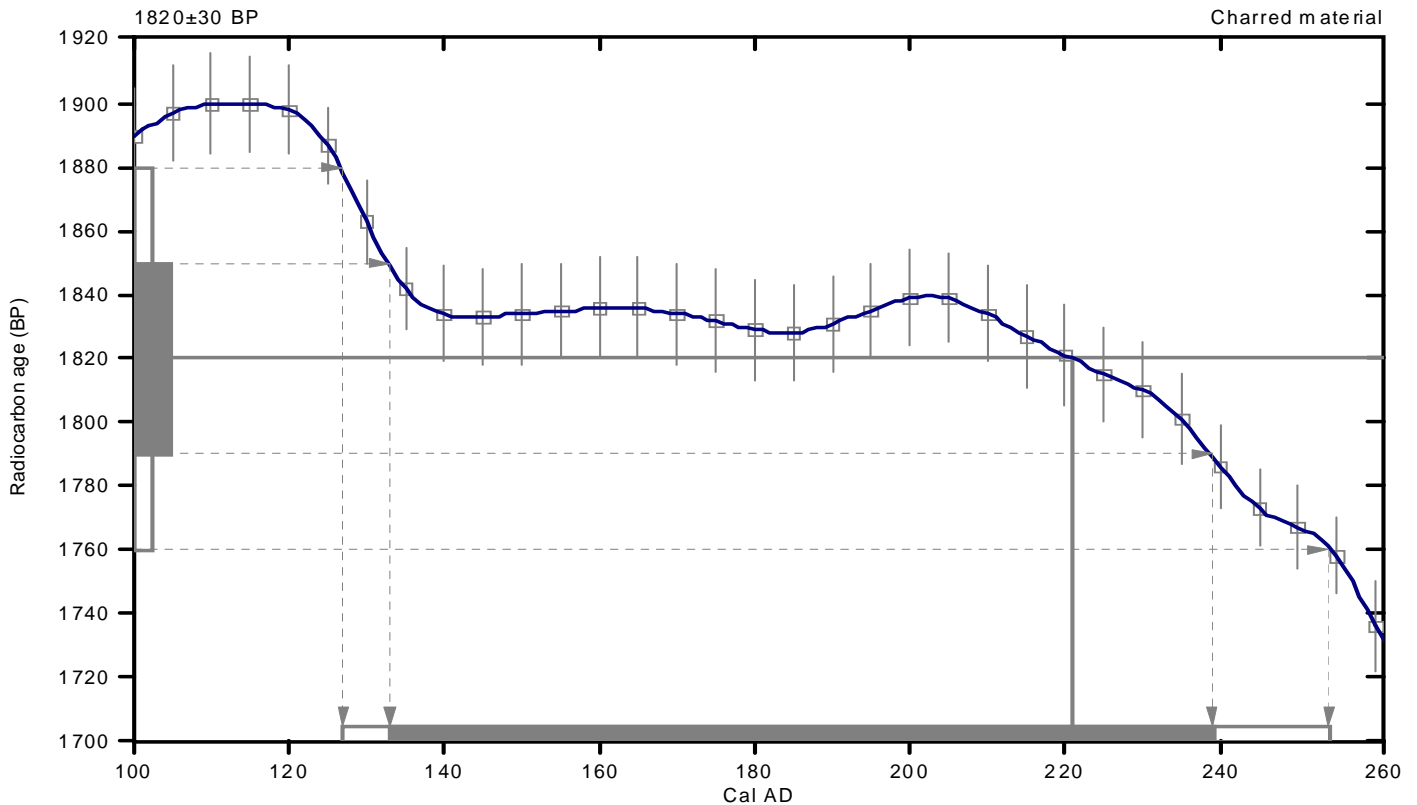
**Conventional radiocarbon age: 1820±30 BP**

**2 Sigma calibrated result: Cal AD 130 to 250 (Cal BP 1820 to 1700)  
(95% probability)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 220 (Cal BP 1730)

**1 Sigma calibrated result: Cal AD 130 to 240 (Cal BP 1820 to 1710)  
(68% probability)**



## References:

### *Database used*

*INTCAL09*

### *References to INTCAL09 database*

*Heaton, et.al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et.al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et.al., 1993, Radiocarbon 35(1):137-189, Oeschger, et.al., 1975, Tellus 27:168-192*

### *Mathematics used for calibration scenario*

*A Simplified Approach to Calibrating C14 Dates*

*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322*

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-25.6:lab. mult=1)

**Laboratory number: Beta-344100**

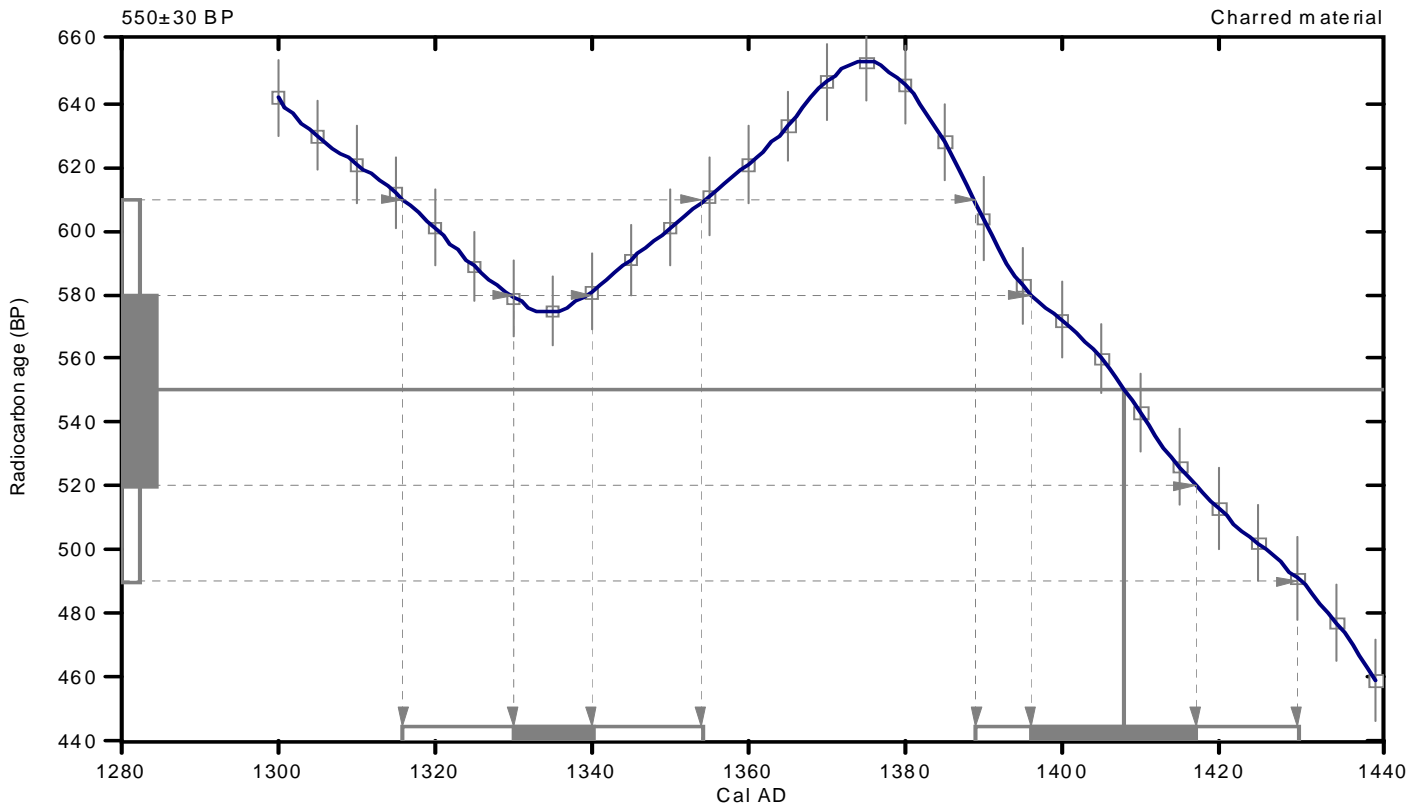
**Conventional radiocarbon age: 550±30 BP**

**2 Sigma calibrated results: Cal AD 1320 to 1350 (Cal BP 630 to 600) and  
(95% probability) Cal AD 1390 to 1430 (Cal BP 560 to 520)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1410 (Cal BP 540)

**1 Sigma calibrated results: Cal AD 1330 to 1340 (Cal BP 620 to 610) and  
(68% probability) Cal AD 1400 to 1420 (Cal BP 550 to 530)**



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et.al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et.al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et.al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et.al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-25.4:lab. mult=1)

**Laboratory number: Beta-344101**

**Conventional radiocarbon age: 350±30 BP**

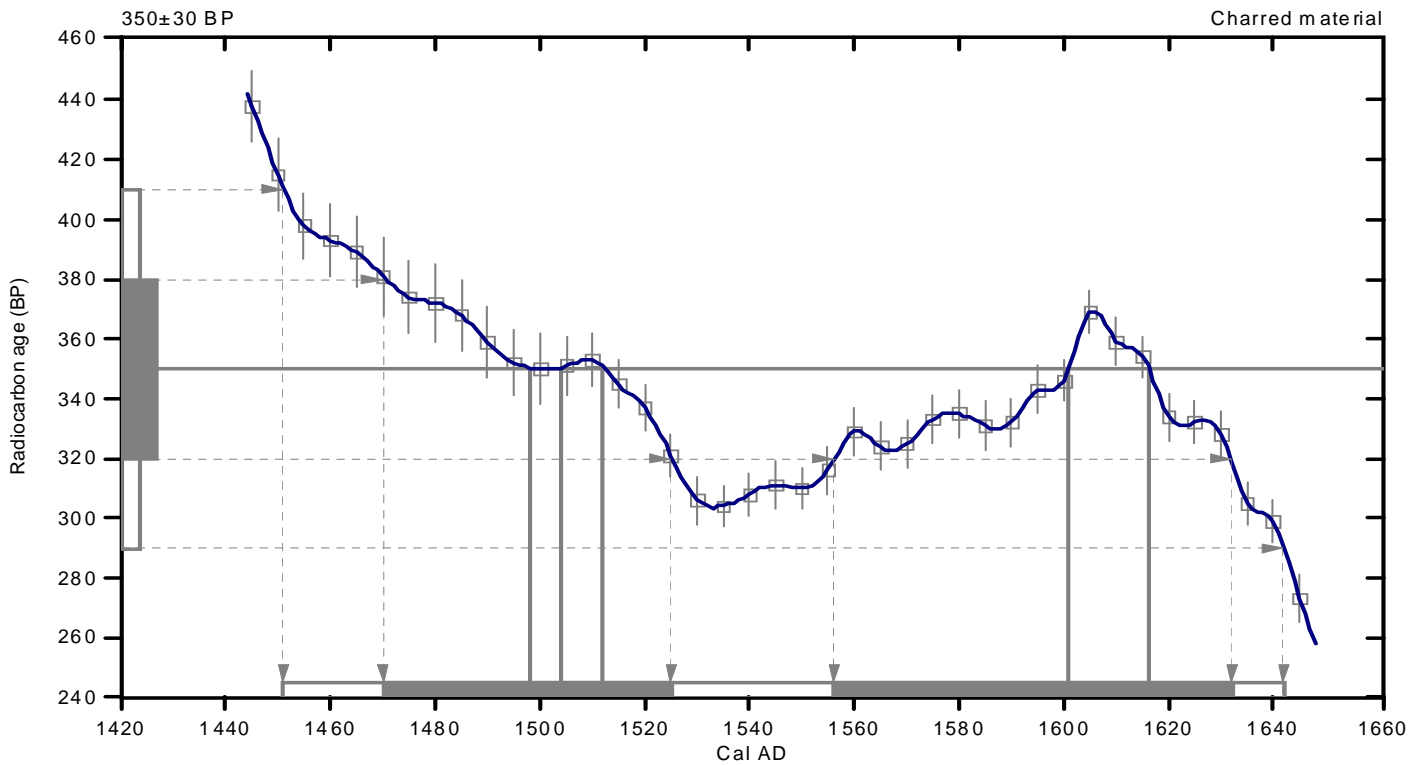
**2 Sigma calibrated result: Cal AD 1450 to 1640 (Cal BP 500 to 310)  
(95% probability)**

Intercept data

Intercepts of radiocarbon age  
with calibration curve:

Cal AD 1500 (Cal BP 450) and  
Cal AD 1500 (Cal BP 450) and  
Cal AD 1510 (Cal BP 440) and  
Cal AD 1600 (Cal BP 350) and  
Cal AD 1620 (Cal BP 330)

1 Sigma calibrated results: Cal AD 1470 to 1520 (Cal BP 480 to 420) and  
(68% probability) Cal AD 1560 to 1630 (Cal BP 390 to 320)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et.al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et.al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et.al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et.al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-24.9:lab. mult=1)

Laboratory number: **Beta-344102**

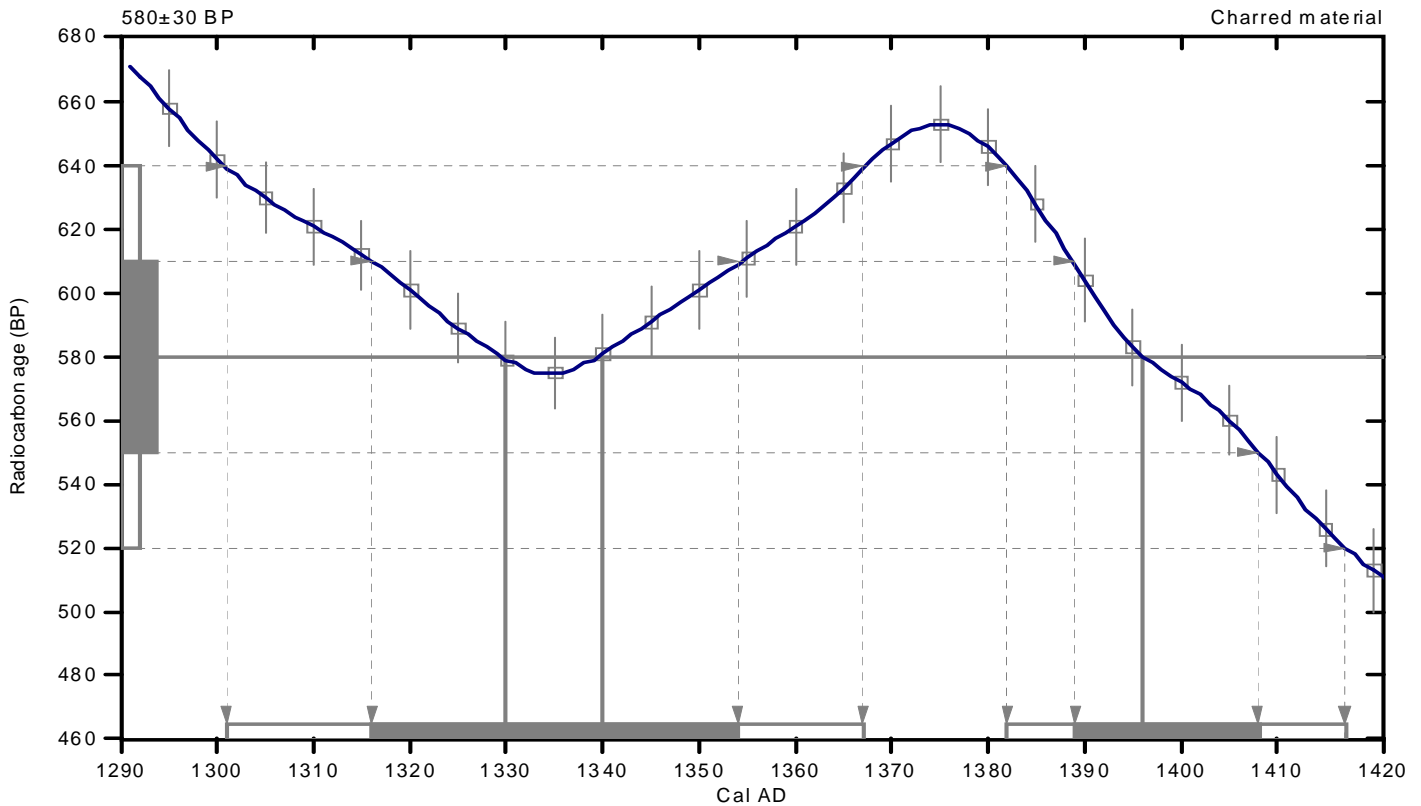
Conventional radiocarbon age: **580±30 BP**

**2 Sigma calibrated results:** Cal AD 1300 to 1370 (Cal BP 650 to 580) and  
(95% probability) Cal AD 1380 to 1420 (Cal BP 570 to 530)

Intercept data

Intercepts of radiocarbon age  
with calibration curve: Cal AD 1330 (Cal BP 620) and  
Cal AD 1340 (Cal BP 610) and  
Cal AD 1400 (Cal BP 550)

**1 Sigma calibrated results:** Cal AD 1320 to 1350 (Cal BP 630 to 600) and  
(68% probability) Cal AD 1390 to 1410 (Cal BP 560 to 540)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et.al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et.al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et.al., 1993, Radiocarbon 35(1):137-189, Oeschger, et.al., 1975, Tellus 27:168-192

### Mathematics used for calibration scenario

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322

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**Darden Hood**  
President

**Ronald Hatfield**  
**Christopher Patrick**  
Deputy Directors

June 19, 2013

Dr. James Abbott  
Texas Department of Transportation  
Cultural Resource Management  
Environmental Affairs Division  
125 East 11th Street  
Austin, TX 78701  
USA

RE: Radiocarbon Dating Results For Samples 41PN175-597, 41PN175-623, 41PN175-1224, 41PN175-1579, 41PN175-1587, 41PN175-1805

Dear Dr. Abbott:

Enclosed are the radiocarbon dating results for six samples recently sent to us. They each provided plenty of carbon for accurate measurements and all the analyses proceeded normally. As usual, the method of analysis is listed on the report with the results and calibration data is provided where applicable.

The web directory containing the table of results and PDF download also contains pictures including, most importantly the portion actually analyzed. These can be saved by opening them and right clicking. Also a cvs spreadsheet download option is available and a quality assurance report is posted for each set of results. This report contains expected vs measured values for 3-5 working standards analyzed simultaneously with your samples.

All results reported are accredited to ISO-17025 standards and all analyses were performed entirely here in our laboratories. Since Beta is not a teaching laboratory, only graduates trained in accordance with the strict protocols of the ISO-17025 program participated in the analyses. When interpreting the results, please consider any communications you may have had with us regarding the samples. If you have specific questions about the analyses, please contact us. Your inquiries are always welcome.

Our invoice will be emailed separately. Please, forward it to the appropriate officer or send VISA charge authorization. Thank you. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely,

  
Digital signature on file



# REPORT OF RADIOCARBON DATING ANALYSES

Dr. James Abbott

Report Date: 6/19/2013

Texas Department of Transportation

Material Received: 6/13/2013

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 351054 SAMPLE : 41PN175-597 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (bulk sherd organics): acid washes 2 SIGMA CALIBRATION : Cal AD 1220 to 1280 (Cal BP 740 to 670)	850 +/- 30 BP	-29.4 o/oo	780 +/- 30 BP
Beta - 351055 SAMPLE : 41PN175-623 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (bulk sherd organics): acid washes 2 SIGMA CALIBRATION : Cal AD 1270 to 1310 (Cal BP 680 to 640) AND Cal AD 1360 to 1390 (Cal BP 590 to 560)	750 +/- 30 BP	-29.5 o/oo	680 +/- 30 BP
Beta - 351056 SAMPLE : 41PN175-1224 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (bulk sherd organics): acid washes 2 SIGMA CALIBRATION : Cal AD 1280 to 1320 (Cal BP 670 to 630) AND Cal AD 1350 to 1390 (Cal BP 600 to 560)	740 +/- 30 BP	-29.5 o/oo	670 +/- 30 BP
Beta - 351057 SAMPLE : 41PN175-1579 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (bulk sherd organics): acid washes 2 SIGMA CALIBRATION : Cal AD 1430 to 1480 (Cal BP 520 to 470)	490 +/- 30 BP	-28.9 o/oo	430 +/- 30 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "\*\*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.



## REPORT OF RADIOCARBON DATING ANALYSES

Dr. James Abbott

Report Date: 6/19/2013

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 351058 SAMPLE : 41PN175-1587 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (bulk sherd organics): acid washes 2 SIGMA CALIBRATION : Cal AD 1270 to 1310 (Cal BP 680 to 640) AND Cal AD 1360 to 1390 (Cal BP 590 to 560)	750 +/- 30 BP	-29.1 o/oo	680 +/- 30 BP
Beta - 351059 SAMPLE : 41PN175-1805 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (bulk sherd organics): acid washes 2 SIGMA CALIBRATION : Cal AD 1450 to 1530 (Cal BP 500 to 420) AND Cal AD 1540 to 1550 (Cal BP 410 to 400) Cal AD 1550 to 1630 (Cal BP 400 to 320)	440 +/- 30 BP	-29.5 o/oo	370 +/- 30 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "\*\*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.

# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-29.4:lab. mult=1)

**Laboratory number: Beta-351054**

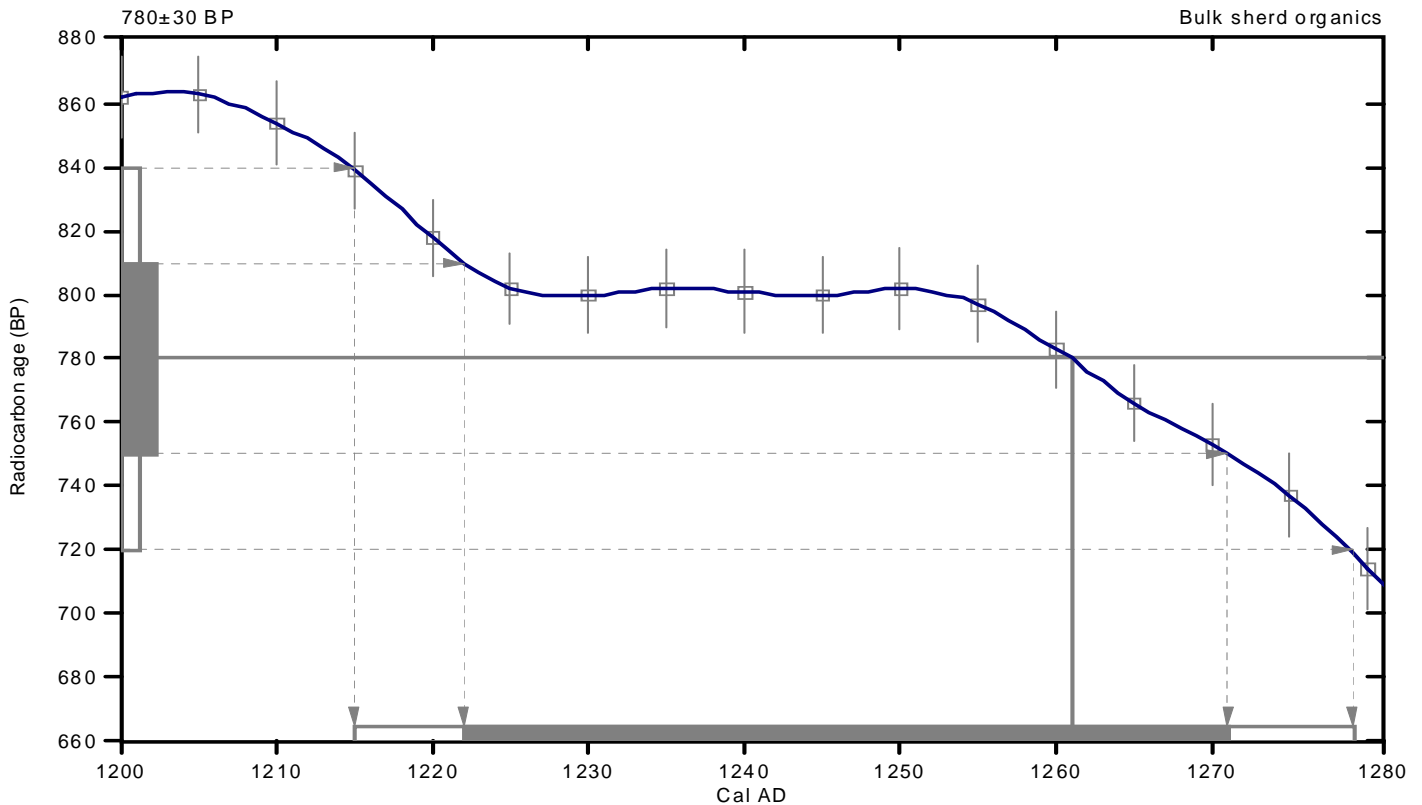
**Conventional radiocarbon age: 780±30 BP**

**2 Sigma calibrated result: Cal AD 1220 to 1280 (Cal BP 740 to 670)  
(95% probability)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1260 (Cal BP 690)

**1 Sigma calibrated result: Cal AD 1220 to 1270 (Cal BP 730 to 680)  
(68% probability)**



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-29.5:lab. mult=1)

**Laboratory number: Beta-351055**

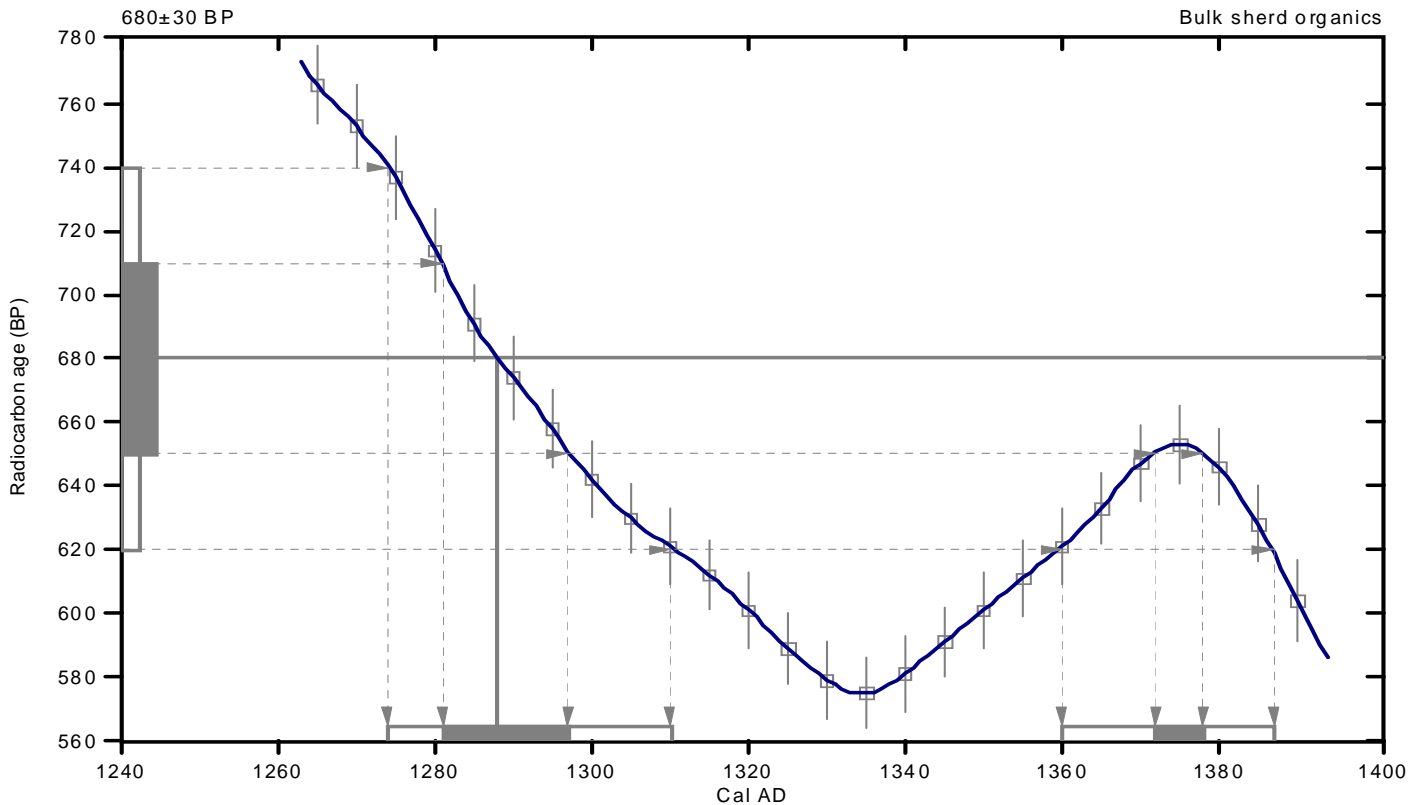
**Conventional radiocarbon age: 680±30 BP**

**2 Sigma calibrated results: Cal AD 1270 to 1310 (Cal BP 680 to 640) and  
(95% probability) Cal AD 1360 to 1390 (Cal BP 590 to 560)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1290 (Cal BP 660)

**1 Sigma calibrated results: Cal AD 1280 to 1300 (Cal BP 670 to 650) and  
(68% probability) Cal AD 1370 to 1380 (Cal BP 580 to 570)**



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-29.5:lab. mult=1)

**Laboratory number: Beta-351056**

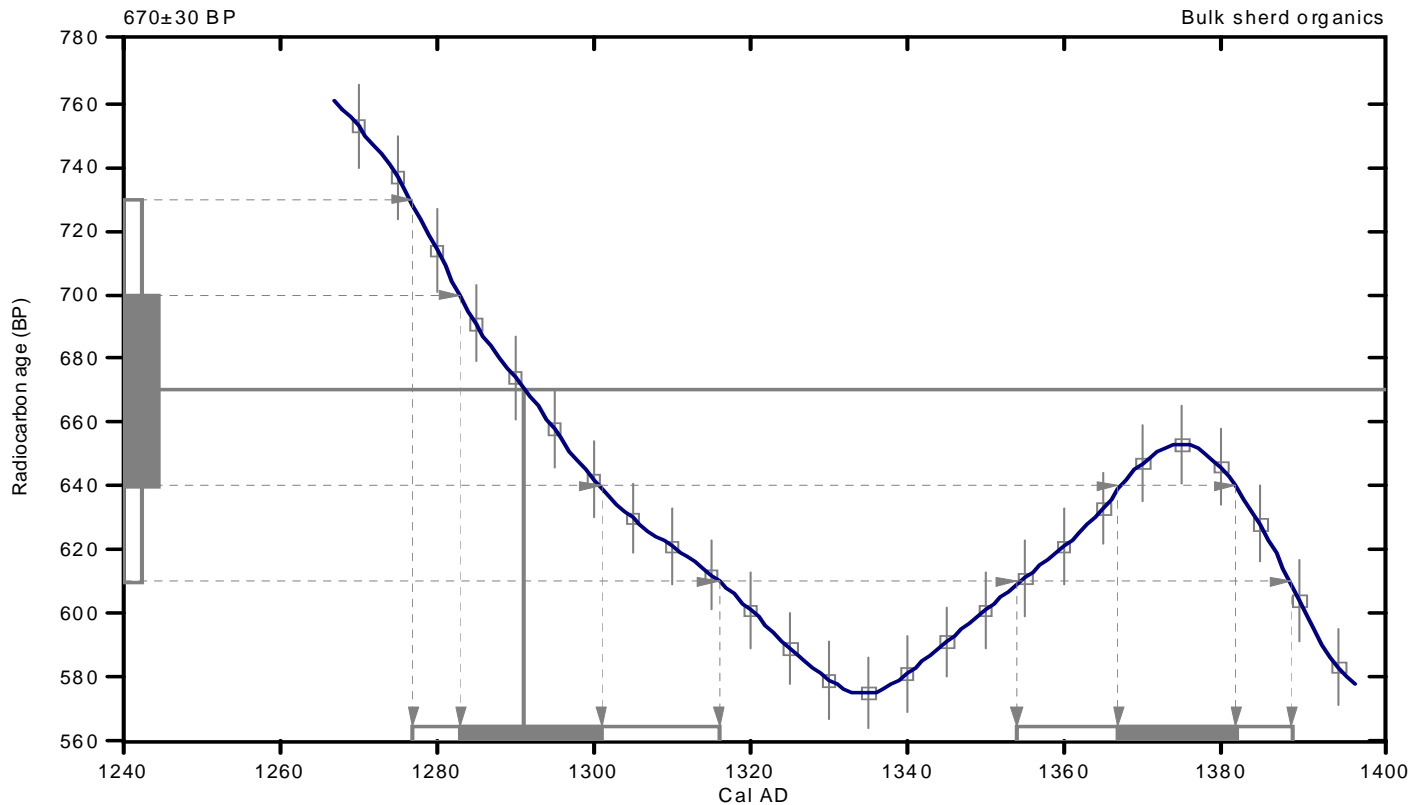
**Conventional radiocarbon age: 670±30 BP**

**2 Sigma calibrated results: Cal AD 1280 to 1320 (Cal BP 670 to 630) and  
(95% probability) Cal AD 1350 to 1390 (Cal BP 600 to 560)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1290 (Cal BP 660)

**1 Sigma calibrated results: Cal AD 1280 to 1300 (Cal BP 670 to 650) and  
(68% probability) Cal AD 1370 to 1380 (Cal BP 580 to 570)**



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-28.9:lab. mult=1)

Laboratory number: **Beta-351057**

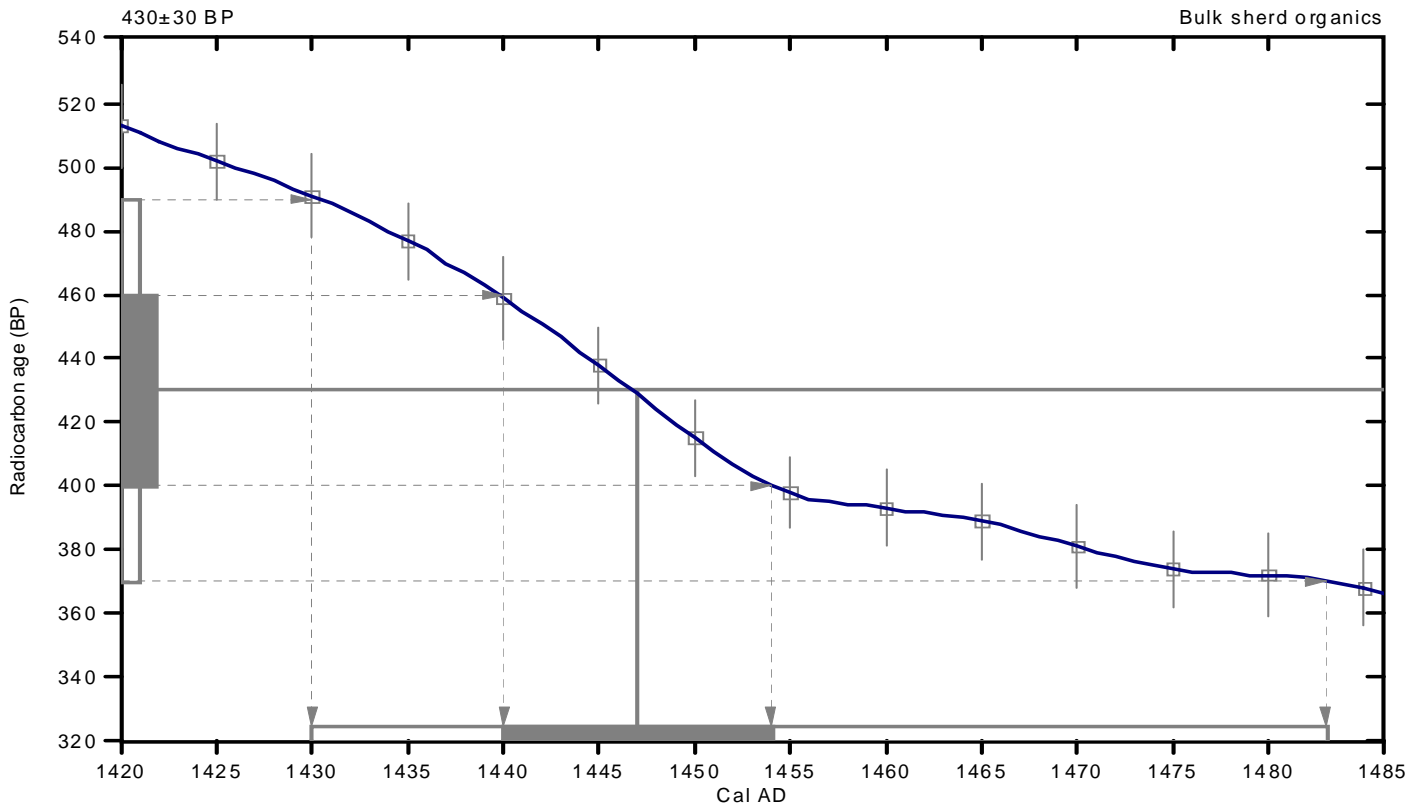
Conventional radiocarbon age: **430±30 BP**

**2 Sigma calibrated result: Cal AD 1430 to 1480 (Cal BP 520 to 470)**  
(95% probability)

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1450 (Cal BP 500)

**1 Sigma calibrated result: Cal AD 1440 to 1450 (Cal BP 510 to 500)**  
(68% probability)



## References:

### Database used

INTCAL09

### References to INTCAL09 database

Heaton, et.al., 2009, *Radiocarbon* 51(4):1151-1164, Reimer, et.al., 2009, *Radiocarbon* 51(4):1111-1150, Stuiver, et.al., 1993, *Radiocarbon* 35(1):137-189, Oeschger, et.al., 1975, *Tellus* 27:168-192

### Mathematics used for calibration scenario

*A Simplified Approach to Calibrating C14 Dates*

Talma, A. S., Vogel, J. C., 1993, *Radiocarbon* 35(2):317-322

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-29.1:lab. mult=1)

**Laboratory number: Beta-351058**

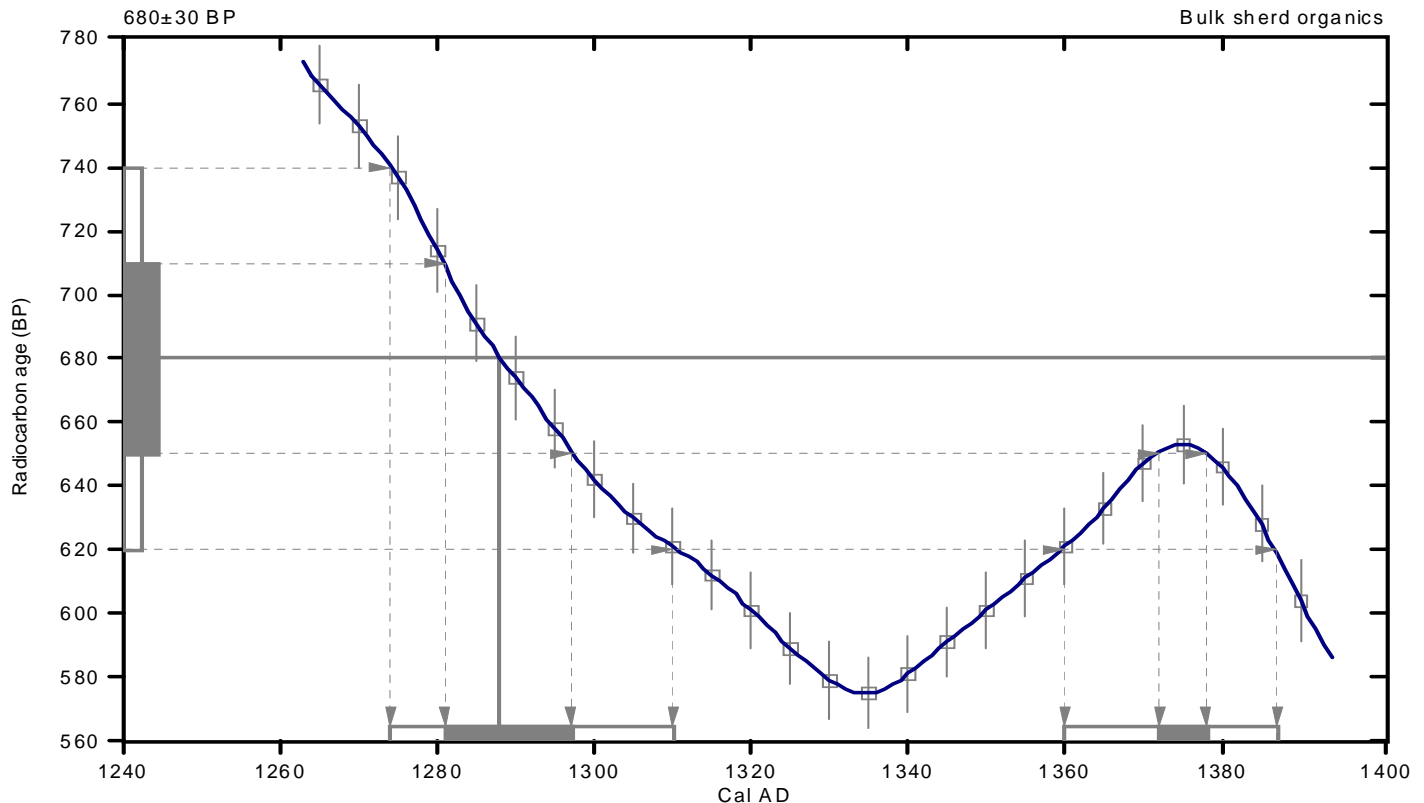
**Conventional radiocarbon age: 680±30 BP**

**2 Sigma calibrated results: Cal AD 1270 to 1310 (Cal BP 680 to 640) and  
(95% probability) Cal AD 1360 to 1390 (Cal BP 590 to 560)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1290 (Cal BP 660)

**1 Sigma calibrated results: Cal AD 1280 to 1300 (Cal BP 670 to 650) and  
(68% probability) Cal AD 1370 to 1380 (Cal BP 580 to 570)**



## References:

### *Database used*

*INTCAL09*

### *References to INTCAL09 database*

*Heaton, et al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et al., 1993, Radiocarbon 35(1):1-244, Oeschger, et al., 1975, Tellus 27:168-192*

### *Mathematics used for calibration scenario*

*A Simplified Approach to Calibrating C14 Dates*

*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322*

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# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-29.5:lab. mult=1)

**Laboratory number: Beta-351059**

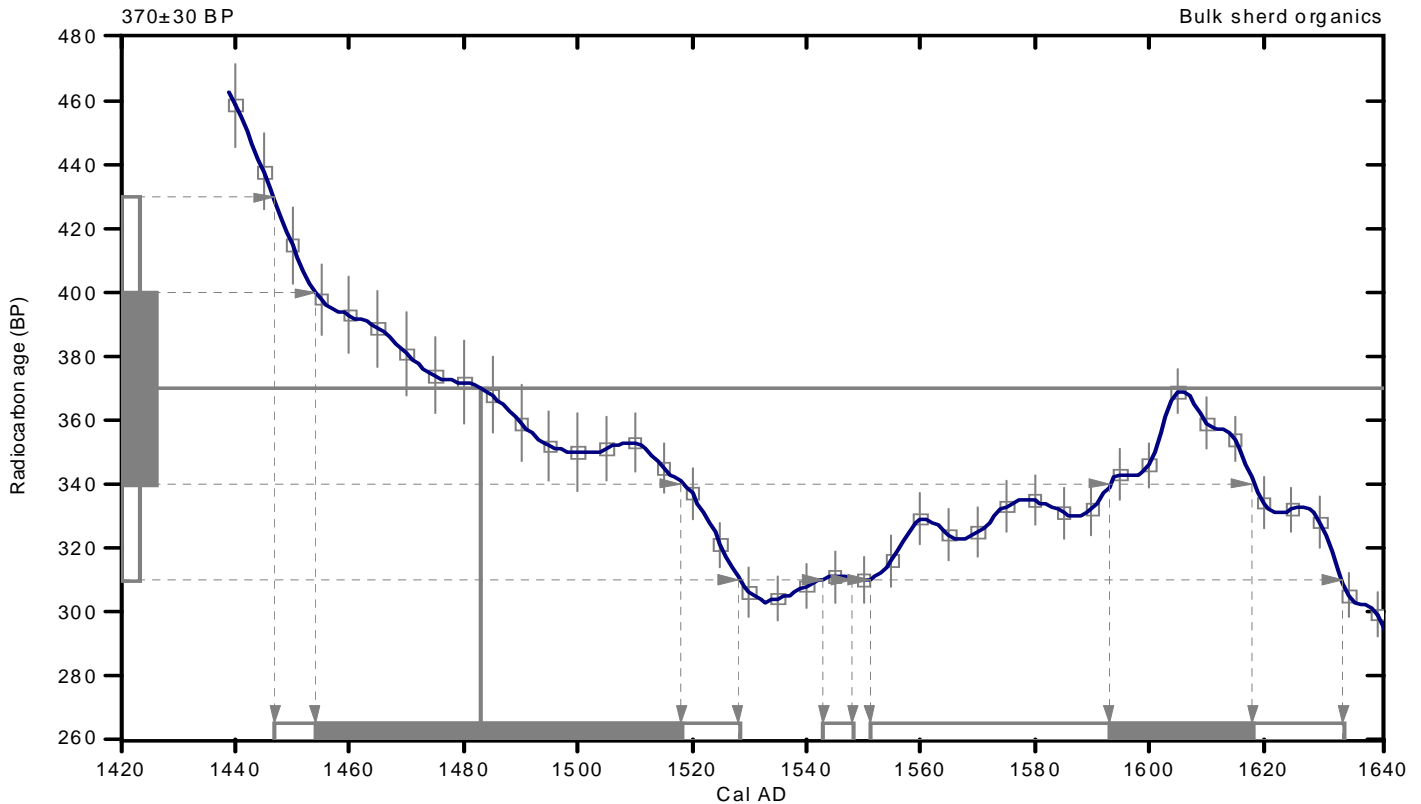
**Conventional radiocarbon age: 370±30 BP**

**2 Sigma calibrated results: Cal AD 1450 to 1530 (Cal BP 500 to 420) and  
(95% probability) Cal AD 1540 to 1550 (Cal BP 410 to 400) and  
Cal AD 1550 to 1630 (Cal BP 400 to 320)**

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1480 (Cal BP 470)

**1 Sigma calibrated results: Cal AD 1450 to 1520 (Cal BP 500 to 430) and  
(68% probability) Cal AD 1590 to 1620 (Cal BP 360 to 330)**



## References:

### *Database used*

*INTCAL09*

### *References to INTCAL09 database*

*Heaton, et.al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et.al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et.al., 1993, Radiocarbon 35(1):137-189, Oeschger, et.al., 1975, Tellus 27:168-192*

### *Mathematics used for calibration scenario*

*A Simplified Approach to Calibrating C14 Dates*

*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322*

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**B-2: OSL**





**Abstract:** Optical luminescence dating (OSL) at the single grain level was applied to coarse quartz grains extracted from three samples taken from the 41 FN 175 site, East Texas. All samples responded acceptably to OSL measurement but analysis of sample replicates indicated all samples had appreciable palaeodose scatter. This is taken to indicate either partial bleaching prior to burial or post-depositional disturbance. Whilst efforts have been made to mitigate the effects of this and ages have been calculated, results for these samples should be treated with some caution. The best estimates of ages range from  $0.23 \pm 0.02$  ka (Shfd12032) to  $0.94 \pm 0.08$  ka (Shfd12033).

**1. Introduction:** Three samples from the 41 FN 175 site, East Texas were submitted for OSL dating by Dr Charles Frederick. All luminescence work was carried out at the Sheffield Centre for International Drylands Research (SCIDR) luminescence laboratory. The samples are assumed not to have been exposed to sunlight during sampling or transportation to the laboratory. Upon arrival, each sample was allocated a Sheffield laboratory number (Table 1). This report provides a brief summary of the procedures employed and results obtained for samples.

**Table 1. Sample descriptive data.**

Lab No.	Field Reference	Latitude (N)	Longitude (°W)	Altitude (m)	Sampling Depth (cm below surface)
Shfd12031	Sample 1	32.04	94.37	72	30
Shfd12032	Sample 2	32.04	94.37	72	23
Shfd12033	Sample 3	32.04	94.37	72	45

In order to derive an optically stimulated luminescence (OSL) age both the palaeodose ( $D_e$  - the amount of absorbed dose since the sample was buried) and the dose rate (the estimated radiation flux for the sedimentary bodies) have to be determined. Aitken (1998) gives a detailed explanation of both these parameters. To calculate an age, the palaeodose (expressed in Grays) is divided by the annual dose rate (Grays/yr). An inherent assumption in these age calculations is that the sediment was fully reset or 'bleached' by exposure to sunlight during the last transport event or whilst *in situ* prior to burial and that no post-depositional sediment disturbance has occurred. As part of this investigation, efforts have been taken to establish if these sediments have been bleached prior to burial or disturbed by, for example, bioturbation. As the OSL signal measured at the small single aliquot level of measurement is an average of ~2000 grains the true distribution of  $D_e$  values may be masked. This is of particular significance in heterogeneously dosed samples (e.g. poorly reset/bleached) in which grains with a high  $D_e$  signal will dominate the signal at the expense of grains containing a true burial  $D_e$ . The  $D_e$  of grains recently exhumed and bleached due to bioturbation (referred to as zero-dosed grains) are also masked at the single aliquot level. Thus Dr Charles Frederick requested samples underwent OSL measurement at the single grain level of analysis.

**2. Dose Rate Analysis:** Naturally occurring potassium (K), thorium (Th), rubidium (Rb) and uranium (U) are the main contributors of dose to sedimentary quartz. The concentrations of these elements were determined by inductively

coupled plasma mass spectrometry (ICP) at SGS laboratories Ontario Canada (Table 2). Elemental concentrations were converted to annual dose rates using data from Adamiec and Aitken (1998), Marsh et al. (2002), and Aitken (1998). This took into account attenuation factors relating to sediment grain sizes used, density and palaeomoisture. It has been assumed that the samples formed part of a thick homogeneous unit with no gamma contribution (other than from cosmogenic sources) being received by the samples from other unsampled sedimentary units. Attenuation of dose by moisture used the present-day moisture values as measured in the laboratory with a 3 % error to incorporate fluctuations through time (Table 2). The contribution to dose rates from cosmic sources was calculated using the expression published in Prescott and Hutton (1994; Table 2). Cosmic dose is calculated as a linear decay curve at depths below 50 cm. Above this depth, errors in calculation may lead to an under-estimation of the cosmic dose contribution. As samples were collected from within the top 50 cm of sediment a small error in the calculated cosmic dose rate can be expected.

The dose rates calculated are based on analyses of the sediment sampled at the present day. This assumption is only valid if no movement and/or reprecipitation of the four key elements has taken place since sediment burial and the adjacent sediments to those sampled had similar dose rates. Further analysis would have to be undertaken to establish whether the latter is true and if radioactive disequilibrium is present in the dose rate. It also assumes that the sediments submitted for analyses were representative in terms of radioactivity of sediments within a 50 cm sphere of each OSL sample as all this sediment would be contributing a gamma dose to the OSL samples.

**Table 2.** Summary of results – Dosimetry related data.

Lab Code	U (PPM)	Th (PPM)	Rb (PPM)	K (%)	D <sub>cosmic</sub> <sup>+</sup> (Gy/ka)	Moisture (%)	Dose rate <sup>†</sup> (Gy/ka)
Shfd12031	2.00	4.4	2.78	0.6	0.193 ± 0.01	4.7	1.536 ± 0.059
Shfd12032	2.04	4.6	2.69	0.8	0.195 ± 0.01	4.2	1.756 ± 0.070
Shfd12033	2.49	5.8	3.82	0.8	0.190 ± 0.009	10.3	1.811 ± 0.071

+ Cosmic dose is calculated as a linear decay curve at depths below 50 cm. Above this depth, errors in calculation may lead to an under-estimation of the cosmic dose contribution.

† Total Dose is attenuated for grain size, density and moisture and assuming a saturation value prior to 13 ka before present.

**3. Palaeodose Determination:** The samples were prepared under subdued red lighting following the procedure to extract and clean quartz outlined in Bateman and Catt (1996). Prepared aliquots of the samples were taken from within a size range of 125-180 µm reflecting the dominant size within each sample. All OSL measurements were carried out using a Risø TL DA-15 single grain laser luminescence reader with radiation doses administered using a calibrated <sup>90</sup>strontium beta source. Grains were mounted in 300µm pits with 100 pits per 9.6 mm stainless steel aliquot. A focussed 532 nm Nd:YVO<sub>4</sub> laser provided the stimulation and luminescence detection was through a Hoya U-340 filter placed in front of the photomultiplier tube. All grains were analysed using the single aliquot regenerative (SAR) approach (Murray and Wintle 2000, 2003), in which an interpolative growth curve is constructed using data derived from repeated measurements of a single aliquot which has been given various laboratory irradiations (Figure 1a and 1b). The most appropriate preheat temperature for the site was derived experimentally using single aliquots and a dose recovery test with a range of preheat temperatures (after Murray and Wintle, 2003). As Figure 2 shows the

160 °C for 10 s preheat recovers the 11.6 Gy dose within a few percent. The purity of the quartz extract was checked using infrared stimulated luminescence.

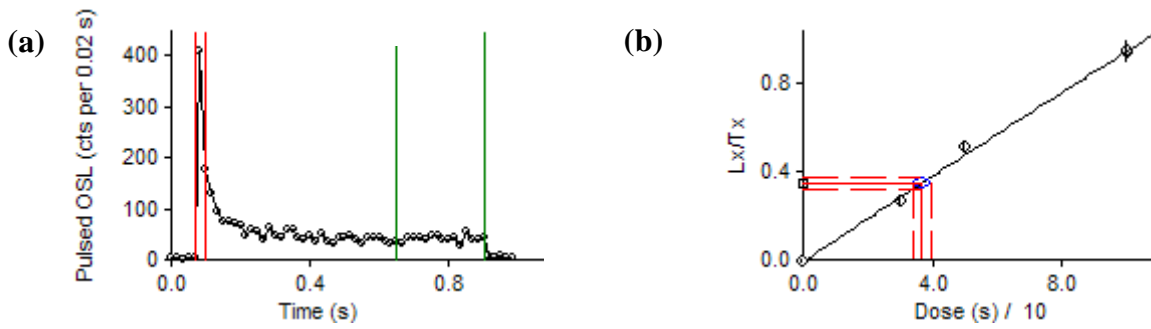


Figure 1: Examples of single grain OSL data (a) single grain OSL decay of naturally acquired signal for sample Shfd12033 (b) Single grain SAR growth curve for sample Shfd12033. Note red lines in (a) and (c) indicate block of data used as OSL signal and green lines indicate block of data used as OSL background. Red lines in (b) and (d) indicate where naturally acquired OSL signal intercepts with SAR growth curve (and associated uncertainties) from which the naturally acquired dose can be calculated.

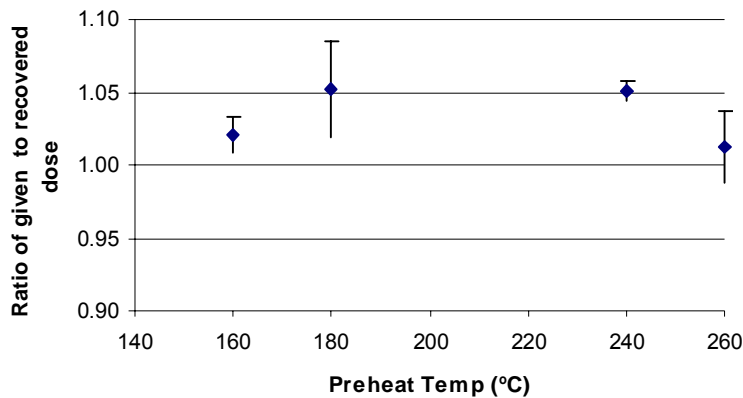


Figure 2 Results of different preheat temperatures in recovering a ~11.6 Gy beta radiation dose from sample Shfd12049.

With all single grain OSL analyses many grains exhibit insufficient OSL signal to be utilised and/or are too poorly behaved for the  $D_e$  to be accurately measured. In this study,  $D_e$  values from individual grains were only accepted they exhibited an OSL signal measurable above background, good growth with dose and the error on the test dose used within the SAR protocol was less than 20%. It was found that the samples exhibited a good proportion of grains with detectable signal and which were well behaved and sufficiently sensitive to laboratory dose that they yielded reliable palaeodoses. In order to get sufficient data, 800 grains were measured for samples Shfd12031 and Shfd12033 and 1000 grains were measured for sample Shfd12032.

**4. Sedimentary bleaching behaviour:** The effects of incomplete bleaching of the sediment during the last period of transport or exposure *in situ* can be profound. Typically, poorly bleached sediments retain a significant level of residual signal from previous phases of sedimentary cycling, leading to inherent inaccuracies in the calculation of a palaeodose value. By plotting the replicate data for each sample as a probability density function some assessment of whether older or younger material has been included in the sample measurements can be made (Figure 3). In principle a well bleached unpost-depositionally disturbed sample should have replicate palaeodose ( $D_e$ ) data which is normally distributed and highly reproducible (See Bateman *et al.* 2003, Fig 3; Bateman *et al.* 2007a). Where post-depositional disturbance or incomplete bleaching prior to sample burial has occurred skewing of this distribution may occur and/or

replicate reproducibility may be lower (Bateman et al 2007a; Bateman *et al.* 2007b). In the case of poorly bleached material skewing should be evident with a high De tail (e.g. Olley *et al.* 2004).

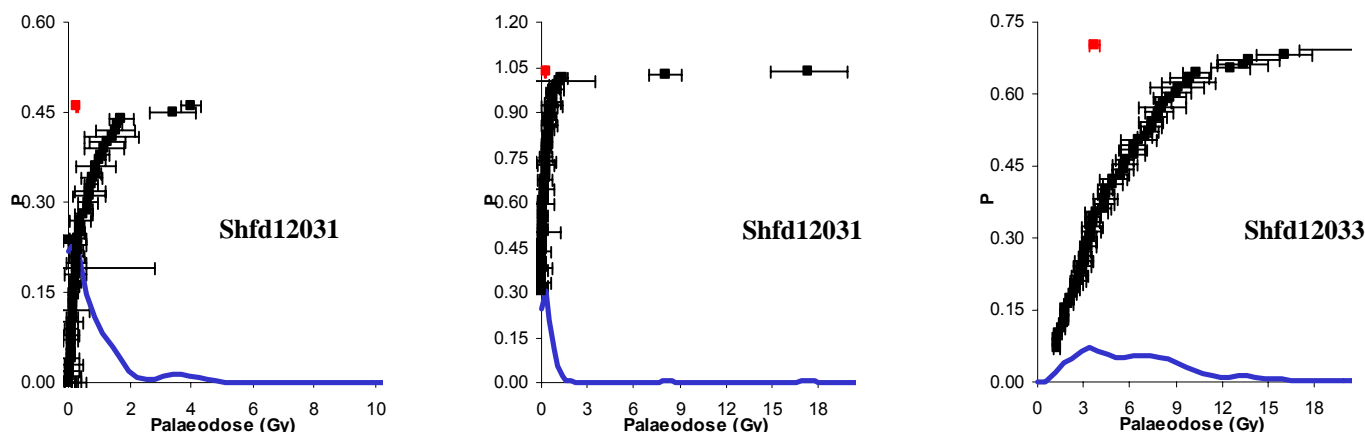


Figure 3: Examples of combined probability density functions for the single grain OSL measurements showing degree of inter-aliquot scatter. Also plotted are individual grain De (black) and the unweighted mean De (red).

As Figure 3 and Table 3 (see also appendix) shows, the De distributions measured for all the samples have some grains with high uncertainties, overall have high OD values, have zero De values and have multiple De modes. This is taken to indicate that the deposits have either undergone some post-depositional disturbance since deposition and/or include unbleached grains. Samples Shfd12031 and Shfd12032 intercept with zero De showing a component of grains within uncertainties of zero whilst Shfd12033 is skewed and more likely to have an unreset component (or grains moved up profile by bioturbation). In order to try and better understand the De distributions, the De values for all samples were statistically analysed using the finite mixture model (FMM: Roberts *et al.* 2000). This model attempts to extract the different multiple components contained within the De distributions. Results from this (excluding any component representing less than 10% of data as per Bateman *et al.* 2010) are shown in Table 3.

**Table 3.** Results of Single grain level of analysis with Finite Mixture modelling used on De data to extract multiple components for each sample. Dominant De and age derived from it highlighted in bold.

Lab Code	Field Ref.	Depth (cm)	FMM component <sup>a</sup>	De (Gy)	Proportion of grains (%)	Dose rate <sup>†</sup> (Gy/ka)	Age (ka)
Shfd12031	Sample 1	30	1	<b>0.43 ± 0.08</b>	59	1.536 ± 0.059	<b>0.28 ± 0.05</b>
			2	1.18 ± 0.13	35	1.536 ± 0.059	0.77 ± 0.09
Shfd12032	Sample 2	23	1	<b>0.40 ± 0.04</b>	84	1.756 ± 0.070	<b>0.23 ± 0.02</b>
			2	0.94 ± 0.20	12	1.756 ± 0.070	0.54 ± 0.12
Shfd12033	Sample 3	45	1	1.71 ± 0.12	19	1.592 ± 0.082	0.94 ± 0.08
			2	<b>3.51 ± 0.23</b>	36	1.592 ± 0.082	<b>1.94 ± 0.15</b>
			3	7.36 ± 0.39	37	1.592 ± 0.082	4.06 ± 0.27

<sup>a</sup> only component representing more than 10% of De data are reported.

<sup>†</sup> Total Dose is attenuated for grain size, density and moisture as well as assuming sample saturation prior to 13 ka before present.

<sup>‡</sup> De extracted using the central age model as good reproducibility

For partially bleached samples it has been argued that the first De mode should closest relate to the true burial age. This is suggested to be the case for sample Shfd12033. For disturbed sediments the dominant (that incorporating the results of the most number of aliquots) should closest relate to the true burial age (Bateman *et al.* 2007a,b). This is suggested to be the case for samples Shfd12031 and Shfd12032.

**5. Age Calculation and Conclusions:** Ages are quoted in ka from the present day (2012) and are presented with one sigma confidence intervals which incorporate systematic uncertainties with the dosimetry data, uncertainties with the palaeomoisture content and errors associated with the De determination. Table 3 shows the final OSL age estimates for each component recognised within a sample). Grain data for each sample are included in appendix 1. The data presented all samples had appreciable De scatter. It is thought this maybe due to post-depositional disturbance for samples Shfd12031 and Shfd12032 and partial bleaching for samples Shfd12033. Whilst efforts have been made to mitigate the impact of this, ages may still incorporate some problems and should be treated with due caution. Ages presented in Tables 3 should be viewed in alongside site stratigraphy and sedimentological evidence that might provide information of depositional and post-depositional contexts within which the OSL results could be interpreted. The best estimates of ages range from  $0.23 \pm 0.02$  ka (Shfd12032) to  $0.94 \pm 0.08$  ka (Shfd12033).

**Prof Mark D. Bateman**

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# Appendix 1

## Single grain data and plots for the 41 FN 175, East Texas.

Sample specific data including:-

- list of De's derived from aliquots
- calculated statics for De distribution (Skewness, kurtosis and sorting)
- calculated means based on a range of statistical models including Finite Mixture Modelling (FMM)
- histogram plot of distribution of De within a sample
- probability density plot (curve) with ranked De data (black points) and probability mean (uppermost red point).

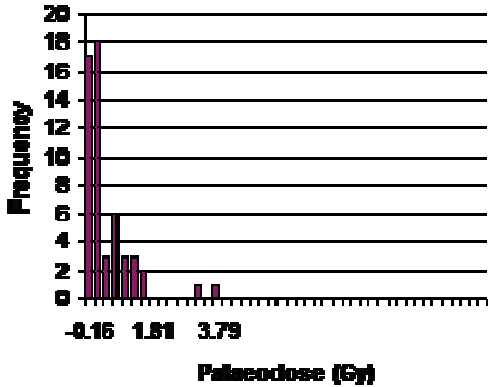
**Field Code:**                      **Sample 1**                      **Site:**    **41 FN 175**  
**Lab Code:**                         **Shfd12031**                      **East Texas**  
**Aliquot Size:**                      **single grain**

Aliquot	Palaeodose (Gy)	error	Aliquot	Palaeodose (Gy)	error
1	1.113	0.195	38	1.162	0.643
2	0.127	0.366	39	0.313	0.299
3	1.719	0.415	40	1.275	0.565
4	-0.044	0.604	41	1.616	0.132
5	0.083	0.309	42	0.083	0.077
6	1.035	0.181	43	0.322	0.256
7	0.166	0.119	44	-0.039	0.228
8	0.147	0.195	45	0.147	0.550
9	0.693	0.511	46	-0.029	0.290
10	0.254	2.545	47	0.273	0.247
11	-0.103	0.149	48	0.718	0.487
12	0.381	0.163	49	1.524	0.633
13	0.093	0.237	50	0.923	0.633
14	0.376	0.149	51	3.384	0.740
15	0.303	0.158	52	0.503	0.275
16	0.249	0.337	53	-0.039	0.106
17	0.083	0.132	54	0.205	0.149
18	0.273	0.318			
19	0.215	0.186			
20	-0.029	0.342			
21	0.156	0.132			
22	0.034	0.386			
23	0.093	0.256			
24	0.396	0.357			
25	0.171	0.149			
26	0.059	0.400			
27	0.903	0.172			
28	-0.005	0.123			
29	-0.098	0.439			
30	0.728	0.218			
31	3.995	0.313			
32	0.112	0.200			
33	0.044	0.318			
34	0.772	0.371			
35	0.640	0.323			
36	1.431	0.881			
37	0.635	0.154			



Field Code: Sample 1  
 Lab Code: Shfd12031  
 Aliquot Size: single grain

Site: 41 FN 175  
 East Texas

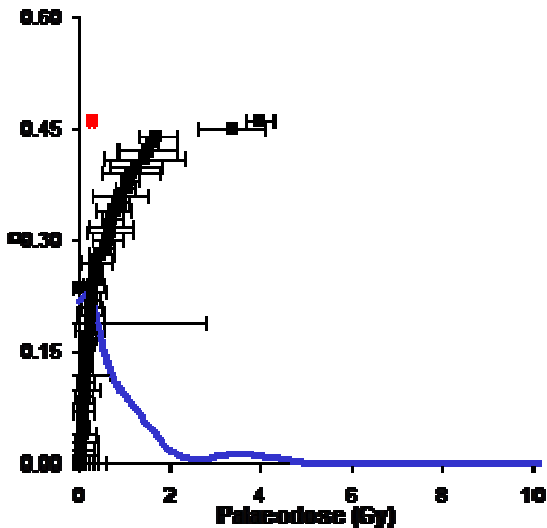


Unweighted		
	All Data	Minus Outliers
Mean (Gy)	0.55	0.32
SD	0.78	0.33
SE	0.11	0.05
N	54	47

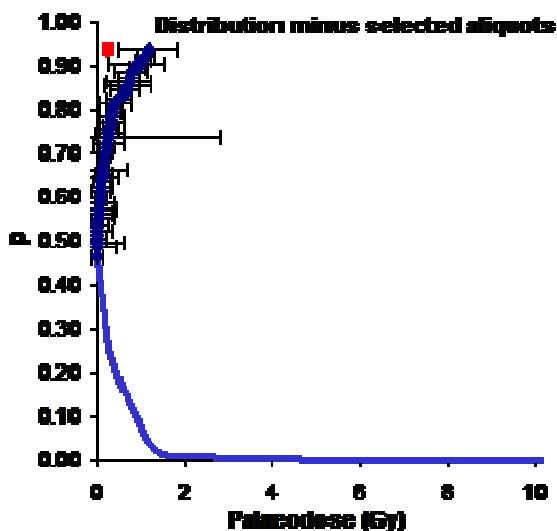
Weighted		
	All Data	Minus Outliers
Mean (Gy)	0.35	0.24
SD	0.54	0.34
SE	0.07	0.05
N	54	47

Probability		
	All Data	Minus Outliers
Mean (Gy)	0.29	0.25
SD	0.37	0.28
SE	0.05	0.04
N	54	47

Central Age Model		
	All Data	Minus Outliers
Mean (Gy)	0.66	0.20
SD	0.12	26.48
OD (all data)	74.26%	
N	54	47



	De (Gy)	error
Minimum	0.00	0.12
Maximum	3.99	0.31
N	54	



De Distribution	All Data	Minus Outliers
Skewness	13.66	0.03
Kurtosis	8.89	0.26
Median	0.26	0.21
Sorting	0.92	0.59

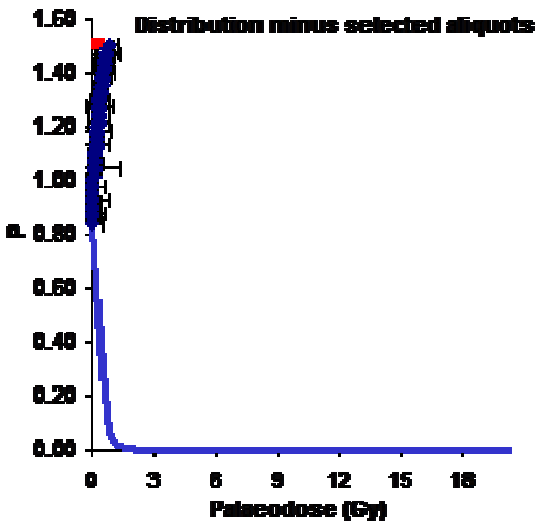
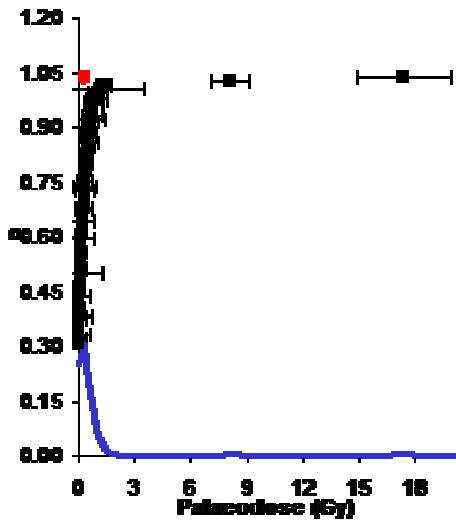
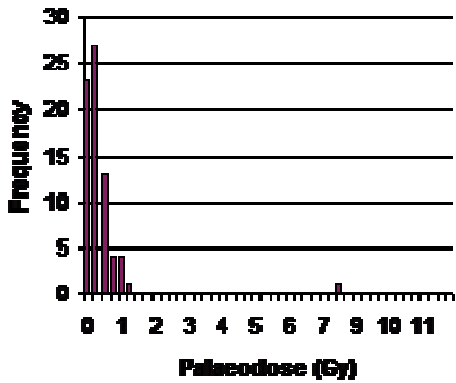
Finite Mixture Modelling			
Component	Mean De (Gy)	Error	Proportion
1	0.43	0.08	59%
2	1.18	0.13	35%
3	3.76	0.55	6%

Field Code:                      Sample 2                      Site: 41 FN 175  
 Lab Code:                        Shfd12032                      East  
 Aliquot Size:                    single grain                      Texas

Aliquot	Palaeodose (Gy)	error	Aliquot	Palaeodose (Gy)	error
1	0.366	0.299	38	0.063	0.091
2	0.127	0.328	39	-0.161	0.177
3	17.370	2.477	40	0.254	0.102
4	8.126	1.061	41	0.591	0.233
5	0.171	0.304	42	0.327	0.204
6	0.557	0.424	43	-0.327	0.405
7	0.479	0.154	44	1.138	2.325
8	0.713	0.516	45	0.303	0.502
9	-0.078	0.275	46	0.762	0.482
10	0.581	0.313	47	0.151	0.190
11	0.342	0.149	48	-0.166	0.186
12	-0.205	0.218	49	0.298	0.228
13	0.742	0.223	50	0.171	0.102
14	0.278	0.163	51	1.333	0.328
15	0.523	0.492	52	0.454	0.110
16	0.640	0.405	53	-0.024	0.149
17	0.151	0.140	54	0.210	0.214
18	0.103	0.251	55	0.151	0.652
19	0.356	0.294	56	0.669	0.672
20	-0.024	0.204	57	0.288	0.099
21	-0.122	0.725	58	0.151	0.110
22	0.552	0.357	59	0.010	0.158
23	-0.435	0.434	60	0.107	1.203
24	0.278	0.136	61	0.518	0.309
25	0.537	0.233	62	0.986	0.181
26	-0.059	0.318	63	0.322	0.439
27	0.308	0.633	64	0.137	0.285
28	0.024	0.294	65	0.723	0.256
29	0.088	0.158	66	-0.381	0.270
30	0.234	0.647	67	0.239	0.190
31	0.127	0.123	68	-0.024	0.608
32	-0.273	0.618	69	-0.161	0.410
33	0.142	0.081	70	1.026	0.482
34	0.137	0.214	71	0.952	0.565
35	0.425	0.294	72	0.039	0.237
36	0.313	0.209	73	0.132	0.177
37	0.488	0.163	74	0.259	0.473

Field Code: Sample 2  
 Lab Code: Shfd12032  
 Aliquot Size: single grain

Site: 41 FN 175  
 E. Texas



Unweighted		
	All Data	Minus Outliers
Mean (Gy)	0.65	0.26
SD	2.19	0.23
SE	0.25	0.03
N	74	67

Weighted		
	All Data	Minus Outliers
Mean (Gy)	0.25	0.22
SD	0.33	0.24
SE	0.04	0.03
N	74	67

Probability		
	All Data	Minus Outliers
Mean (Gy)	0.30	0.27
SD	0.36	0.23
SE	0.04	0.03
N	74	67

Central Age Model		
	All Data	Minus Outliers
Mean (Gy)	0.48	0.09
SD	0.10	9.35
OD (all data)	92.58%	
N	74	67

	De (Gy)	error
Minimum	0.00	0.61
Maximum	17.37	2.48
N	74	

De Distribution	All Data	Minus Outliers
Skewness	34.14	0.00
Kurtosis	49.37	-0.65
Median	0.26	0.21
Sorting	0.50	0.37

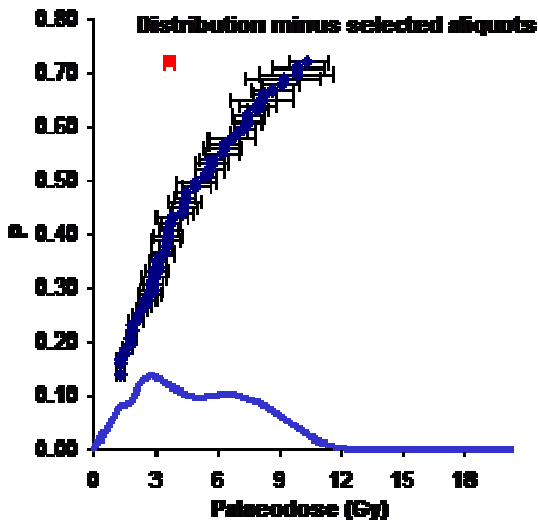
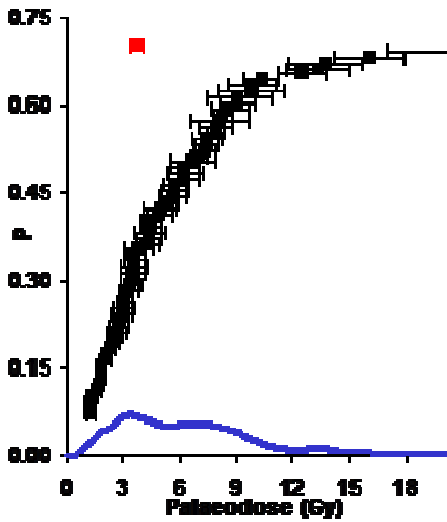
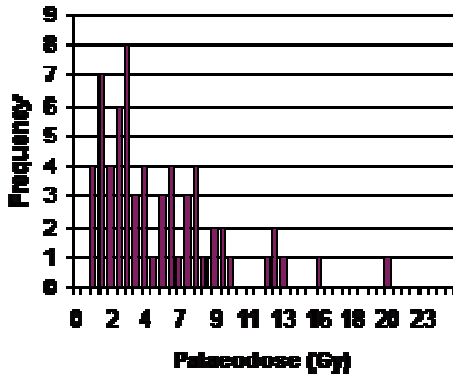
Finite Mixture Modelling			
Component	Mean De (Gy)	Error	Proportion
1	0.40	0.04	84%
2	0.94	0.20	12%
3	11.68	1.68	4%
4			

Field Code:                      Sample 3                      Site: 41 FN 175  
 Lab Code:                        Shfd12033                      East  
 Aliquot Size:                    single grain                      Texas

Aliquot	Palaeodose (Gy)	error	Aliquot	Palaeodose (Gy)	error
1	7.423	0.784	38	6.241	0.915
2	3.120	0.381	39	4.390	0.818
3	1.802	0.190	40	8.624	1.032
4	1.758	0.223	41	6.246	0.774
5	1.797	0.140	42	7.408	0.677
6	16.056	1.852	43	3.570	0.526
7	1.255	0.218	44	3.501	0.662
8	1.592	0.218	45	8.233	0.521
9	3.042	0.570	46	13.366	1.686
10	5.718	0.589	47	26.795	1.598
11	4.429	0.531	48	5.684	0.759
12	2.300	0.261	49	3.550	0.691
13	5.601	0.715	50	4.263	0.565
14	2.837	0.405	51	8.097	1.544
15	2.012	0.357	52	20.500	3.448
16	5.421	0.497	53	12.501	1.276
17	2.095	0.261	54	1.255	0.177
18	1.729	0.132	55	9.874	1.252
19	7.916	0.458	56	9.054	0.935
20	2.559	0.429	57	6.983	0.458
21	7.916	0.881	58	4.429	0.497
22	3.628	0.487	59	3.350	0.516
23	2.476	0.304	60	7.271	0.550
24	2.920	0.570	61	4.361	0.638
25	3.467	0.342	62	3.316	0.521
26	4.932	0.940	63	9.137	1.764
27	13.717	1.979	64	9.816	1.764
28	4.893	0.677			
29	2.681	0.531			
30	6.622	1.159			
31	10.353	0.915			
32	1.402	0.190			
33	6.226	0.798			
34	1.245	0.209			
35	3.789	0.750			
36	3.072	0.390			
37	2.754	0.531			

Field Code: Sample 3  
 Lab Code: Shfd12033  
 Aliquot Size: single grain

Site: 41 FN 175  
 E Texas



Unweighted		
	All Data	Minus Outliers
Mean (Gy)	5.85	4.68
SD	4.68	2.58
SE	0.58	0.32
N	64	58

Weighted		
	All Data	Minus Outliers
Mean (Gy)	2.57	2.51
SD	1.97	2.58
SE	0.25	0.34
N	64	58

Probability		
	All Data	Minus Outliers
Mean (Gy)	3.72	3.63
SD	2.36	2.10
SE	0.29	0.28
N	64	58

Central Age Model		
	All Data	Minus Outliers
Mean (Gy)	4.56	3.99
SD	0.41	0.32
OD (all data)	69.46%	57.92%
N	64	58

	De (Gy)	error
Minimum	1.25	0.21
Maximum	26.79	1.60
N	64	

De Distribution	All Data	Minus Outliers
Skewness	3.46	-0.12
Kurtosis	6.50	-0.79
Median	4.41	4.03
Sorting	0.61	0.45

Finite Mixture Modelling			
Component	Mean De (Gy)	Error	Proportion
1	1.71	0.12	19%
2	3.51	0.23	36%
3	7.36	0.39	37%
4	17.05	1.59	9%



## **B-3: THERMOLUMINESCENCE**





## LUMINESCENCE ANALYSIS OF CERAMICS FROM PANOLA COUNTY, TEXAS

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This report presents the results of luminescence analysis on four ceramic samples from site 41PN175 in Panola County, Texas. The samples were submitted by Geo-Marine, Inc., Plano, Texas. Table 1 lists the samples and provenience information. Laboratory procedures are given at the end of the report.

Table 1. Samples

UW Lab #	Provenience #	Provenience	Burial depth (cm)
UW2713	1232	Block 4, Unit 105, Level 3A	20-24
UW2714	1332	Block 4, Unit 096, Level 3B	28
UW2715	1336	Block 8, Unit 117, Level 6	29
UW2716	1714	Block 4, Unite 086, Level 5	45

### Dose rate

The dose rate was measured on each ceramic and on an associated sediment. Dose rates were mainly determined using alpha counting and flame photometry. The beta dose rate calculated from these measurements on the ceramics was compared with the beta dose rate measured directly by beta counting. These were in statistical agreement for all samples. Moisture content was estimated as  $70 \pm 30$  % of saturated value for the ceramic sherds, and  $10 \pm 5$  percent for the sediments. Table 2 gives the radioactivity data and comparison of the beta dose rate calculated in the two ways mentioned earlier. Table 3 gives all dose rates for each sample. The ceramics have higher radioactivity than the sediments, which is not surprising given their clay content.

Table 2. Radionuclide concentrations

Sample	<sup>238</sup> U (ppm)	<sup>233</sup> Th (ppm)	K (%)	Beta dose rate (Gy/ka)	
				β- counting	α- counting/flame photometry
UW2713	3.07±0.21	7.67±1.06	1.13±0.09	1.64±0.14	1.56±0.08
Sediment	0.69±0.09	3.77±0.75	0.64±0.04		
UW2714	3.15±0.25	13.27±1.46	0.81±0.07	1.36±0.11	1.48±0.08
Sediment	1.80±0.14	5.09±0.90	0.68±0.04		
UW2715	3.82±0.22	3.67±0.83	1.11±0.08	1.69±0.14	1.55±0.08
Sediment	1.98±0.16	6.33±1.02	0.71±0.03		
UW2716	3.88±0.26	8.55±1.26	1.05±0.06	1.67±0.14	1.64±0.07
Sediment	1.62±0.14	6.45±0.94	0.68±0.05		

Table 3. Dose rates (Gy/ka)\*

<i>Sample</i>	<i>alpha</i>	<i>beta</i>	<i>gamma</i>	<i>cosmic</i>	<i>total</i>
UW2713	1.87±0.25	1.36±0.10	0.42±0.04	0.22±0.05	3.88±0.28
UW2714	2.63±0.36	1.33±0.09	0.61±0.05	0.22±0.04	4.79±0.38
UW2715	1.20±0.15	1.27±0.11	0.66±0.06	0.22±0.04	3.35±0.20
UW2716	1.79±0.35	1.41±0.10	0.65±0.05	0.20±0.04	4.05±0.37

\* Dose rates for ceramics are calculated for TL. They will be lower for OSL due to lower b-values. Also the beta dose rate is lower than that given in Table 2 due to moisture correction.

### Equivalent Dose

Equivalent dose was measured for TL, OSL and IRSL has described in the appendix. TL plateaus were relatively broad for two samples, somewhat narrower for the other two (Table 4), ranging from 60 to 130°C in breadth. All but UW2714 showed a sensitivity change with heating. TL anomalous fading was evident in all samples. Fading g-values ranged from 4 to 9% per decade for three samples, but for UW2713 the fading rate was so high that an infinite correction was obtained, suggesting that the fading rate must have changed through time. The TL age was corrected for the other three following Huntley and Lamothe (2001).

Table 4. TL parameters

<i>Sample</i>	<i>Plateau (°C)</i>	<i>1<sup>st</sup>/2<sup>nd</sup> ratio*</i>	<i>fit</i>	<i>Fading g-value**</i>
UW2713	250-380	0.64±0.07	Linear	22±4.1
UW2714	250-310	1	Linear	4.0±2.6
UW2715	250-310	0.76±0.06	Linear	8.8±2.0
UW2716	260-370	1.56±0.14	Linear	8.2±5.6

\*Refers to slope ratio between the first and second glow growth curves. A glow refers to luminescence as a function of temperature; a second glow comes after heating to 450°C.

\*\* A g-value is a rate of anomalous fading, measured as percent of signal loss per decade, where a decade is a power of 10.

OSL/IRSL was measured on 5-7 aliquots per sample (Table 5). There was high scatter among aliquots for UW2715, as evident by over-dispersion, and it would have been high for UW2713 except that one outlier was removed. The IRSL signal on all samples was weak, 8 to 10 times less intense than the OSL signal. This is not uncommon for ceramics. IRSL stems from feldspars, which are prone to anomalous fading. A relatively large IRSL signal may suggest the OSL signal partly stems from feldspars and therefore may fade, so the weak IRSL suggests the OSL is dominated by quartz. The OSL b-value, which is a measure of alpha luminescence efficiency, is also typical of quartz. It is therefore likely the OSL signal stems mainly from quartz and does not fade. As a test of the SAR procedures, the recovered dose was nearly the same as the given dose for all samples. Equivalent dose and b-values are given in Table 6.

Table 5. OSL/IRSL data

Sample	# aliquots*		OSL Over-dispersion (%)	Dose Recovery (OSL)	
	OSL	IRSL		Given Dose (sβ)	Recovered Dose (sβ)
UW2713	5	6	6.9±4.7	50	50.6±2.5
UW2714	7	5	2.8±3.0	20	19.6±0.8
UW2715	6	1	30±1.2	30	32.0±1.2
UW2716	7	4	0	30	29.1±1.4

\* Denotes number of aliquots with measurable signals.

Table 6. Equivalent dose and b-value – fine grains

Sample	Equivalent Dose (Gy)			b-value (Gy μm <sup>2</sup> )		
	TL	IRSL	OSL	TL	IRSL	OSL
UW2713	4.56±0.50	3.11±0.32	2.12±0.10	2.45±0.26	1.27±0.08	0.66±0.03
UW2714	2.20±0.12	3.28±0.32	1.38±0.03	2.52±0.29	1.00±0.12	0.46±0.01
UW2715	2.79±0.23	8.52±0.75	3.33±0.41	1.80±0.14	0.70±0.05	0.34±0.01
UW2716	1.75±0.20	1.94±0.39	1.60±0.03	1.98±0.33	1.28±0.14	0.67±0.02

### Ages

Table 7 gives the derived ages for each sample. On three of the samples, there was agreement in age between OSL and TL corrected for fading. On one even the IRSL age was in agreement. The IRSL was not reliable for the other samples because of weak signal and fading. For UW2713, the TL age was older than the OSL age (840±160 AD). Possibly the heating was not high enough to fully reset the TL signal. It is not likely the problem is the OSL age being too young, because the weak IRSL and the b-value typical of quartz suggested no fading of this signal.

The ages are quite varied, two in the 15<sup>th</sup> century, one in the 12<sup>th</sup> century and one in the 7<sup>th</sup> century AD.

Table 7. Ages

Sample	Age (ka)	% error	Basis for age	Calendar date (years AD)
UW2713	0.84±0.06	7.5	OSL	1170 ± 60
UW2714	0.53±0.03	5.5	OSL/corrected TL	1480 ± 30
UW2715	1.40±0.16	11.4	OSL/corrected TL	610 ± 160
UW2716	0.56±0.03	5.7	OSL/IRSL/corrected TL	1450 ± 30

### Procedures for Thermoluminescence Analysis of Pottery

#### Sample preparation -- fine grain

The sherd is broken to expose a fresh profile. Material is drilled from the center of the cross-section, more than 2 mm from either surface, using a tungsten carbide drill tip. The material retrieved is ground gently by an agate mortar and pestle, treated with HCl, and then settled in acetone for 2 and 20 minutes to separate the 1-8 μm fraction. This is settled onto a maximum of 72 stainless steel discs.

### *Glow-outs*

Thermoluminescence is measured by a Daybreak reader using a 9635Q photomultiplier with a Corning 7-59 blue filter, in N<sub>2</sub> atmosphere at 1°C/s to 450°C. A preheat of 240°C with no hold time precedes each measurement. Artificial irradiation is given with a <sup>241</sup>Am alpha source and a <sup>90</sup>Sr beta source, the latter calibrated against a <sup>137</sup>Cs gamma source. Discs are stored at room temperature for at least one week after irradiation before glow out. Data are processed by Daybreak TLApplic software.

### *Fading test*

Several discs are used to test for anomalous fading. The natural luminescence is first measured by heating to 450°C. The discs are then given an equal alpha irradiation and stored at room temperature for varied times: 10 min, 2 hours, 1 day, 1 week and 8 weeks. The irradiations are staggered in time so that all of the second glows are performed on the same day. The second glows are normalized by the natural signal and then compared to determine any loss of signal with time (on a log scale). If the sample shows fading and the signal versus time values can be reasonably fit to a logarithmic function, an attempt is made to correct the age following procedures recommended by Huntley and Lamothe (2001). The fading rate is calculated as the g-value, which is given in percent per decade, where decade represents a power of 10.

### *Equivalent dose*

The equivalent dose is determined by a combination additive dose and regeneration (Aitken 1985). Additive dose involves administering incremental doses to natural material. A growth curve plotting dose against luminescence can be extrapolated to the dose axis to estimate an equivalent dose, but for pottery this estimate is usually inaccurate because of errors in extrapolation due to nonlinearity. Regeneration involves zeroing natural material by heating to 450°C and then rebuilding a growth curve with incremental doses. The problem here is sensitivity change caused by the heating. By constructing both curves, the regeneration curve can be used to define the extrapolated area and can be corrected for sensitivity change by comparing it with the additive dose curve. This works where the shapes of the curves differ only in scale (i.e., the sensitivity change is independent of dose). The curves are combined using the "Australian slide" method in a program developed by David Huntley of Simon Fraser University (Prescott et al. 1993). The equivalent dose is taken as the horizontal distance between the two curves after a scale adjustment for sensitivity change. Where the growth curves are not linear, they are fit to quadratic functions. Dose increments (usually five) are determined so that the maximum additive dose results in a signal about three times that of the natural and the maximum regeneration dose about five times the natural.

A plateau region is determined by calculating the equivalent dose at temperature increments between 240° and 450°C and determining over which temperature range the values do not differ significantly. This plateau region is compared with a similar one constructed for the b-value (alpha efficiency), and the overlap defines the integrated range for final analysis.

### *Alpha effectiveness*

Alpha efficiency is determined by comparing additive dose curves using alpha and beta irradiations. The slide program is also used in this regard, taking the scale factor (which is the ratio of the two slopes) as the b-value (Aitken 1985).

## *Radioactivity*

Radioactivity is measured by alpha counting in conjunction with atomic emission for  $^{40}\text{K}$ . Samples for alpha counting are crushed in a mill to flour consistency, packed into plexiglass containers with ZnS:Ag screens, and sealed for one month before counting. The pairs technique is used to separate the U and Th decay series. For atomic emission measurements, samples are dissolved in HF and other acids and analyzed by a Jenway flame photometer. K concentrations for each sample are determined by bracketing between standards of known concentration. Conversion to  $^{40}\text{K}$  is by natural atomic abundance. Radioactivity is also measured, as a check, by beta counting, using a Risø low level beta GM multicounter system. About 0.5 g of crushed sample is placed on each of four plastic sample holders. All are counted for 24 hours. The average is converted to dose rate following Bøtter-Jensen and Mejdahl (1988) and compared with the beta dose rate calculated from the alpha counting and flame photometer results.

Both the sherd and an associated soil sample are measured for radioactivity. Additional soil samples are analyzed where the environment is complex, and gamma contributions determined by gradients (after Aitken 1985: appendix H). Cosmic radiation is determined after Prescott and Hutton (1988). Radioactivity concentrations are translated into dose rates following Adamiec and Aitken (1998).

## *Moisture Contents*

Water absorption values for the sherds are determined by comparing the saturated and dried weights. For temperate climates, moisture in the pottery is taken to be  $80 \pm 20$  percent of total absorption, unless otherwise indicated by the archaeologist. Again for temperate climates, soil moisture contents are taken from typical moisture retention quantities for different textured soils (Brady 1974: 196), unless otherwise measured. For drier climates, moisture values are determined in consultation with the archaeologist.

## **Procedures for Optically Stimulated or Infrared Stimulated Luminescence of Fine-grained pottery.**

Optically stimulated luminescence (OSL) and infrared stimulated luminescence (IRSL) on fine-grain (1-8 $\mu\text{m}$ ) pottery samples are carried out on single aliquots following procedures adapted from Banerjee et al. (2001) and Roberts and Wintle (2001). Equivalent dose is determined by the single-aliquot regenerative dose (SAR) method (Murray and Wintle 2000).

The SAR method measures the natural signal and the signal from a series of regeneration doses on a single aliquot. The method uses a small test dose to monitor and correct for sensitivity changes brought about by preheating, irradiation or light stimulation. SAR consists of the following steps: 1) preheat, 2) measurement of natural signal (OSL or IRSL),  $L(1)$ , 3) test dose, 4) cut heat, 5) measurement of test dose signal,  $T(1)$ , 6) regeneration dose, 7) preheat, 8) measurement of signal from regeneration,  $L(2)$ , 9) test dose, 10) cut heat, 11) measurement of test dose signal,  $T(2)$ , 12) repeat of steps 6 through 11 for various regeneration doses. A growth curve is constructed from the  $L(i)/T(i)$  ratios and the equivalent dose is found by interpolation of  $L(1)/T(1)$ . Usually a zero regeneration dose and a repeated regeneration dose are employed to insure the procedure is working properly. For fine-grained ceramics, a preheat of 240°C for 10s, a test dose of 3.1 Gy, and a cut heat of 200°C are currently being used, although these parameters may be modified from sample to sample.

The luminescence,  $L(i)$  and  $T(i)$ , is measured on a Risø TL-DA-15 automated reader by a succession of two stimulations: first 100 s at 60°C of IRSL (880nm diodes), and then 100s at 125°C of OSL (470nm diodes). Detection is through 7.5mm of Hoya U340 (ultra-violet) filters. The two stimulations are used to construct IRSL and OSL growth curves, so that two estimations of equivalent dose are available. Anomalous fading usually involves feldspars and only feldspars are sensitive to IRSL stimulation. The rationale for the IRSL stimulation is to remove most of the feldspar signal, so that the subsequent OSL (post IR blue) signal is free from anomalous fading. However, feldspar is also sensitive to blue light (470nm), and it is possible that IRSL does not remove all the feldspar signal. Some preliminary tests in our laboratory have suggested that the OSL signal does not suffer from fading, but this may be sample specific. The procedure is still undergoing study.

A dose recovery test is performed by first zeroing the sample by exposure to light and then administering a known dose. The SAR protocol is then applied to see if the known dose can be obtained.

The laboratory is currently investigating using pulsed OSL to measure equivalent dose on ceramics. In pulsed mode, the stimulating light is turned off and on in a series of pulses with the luminescence only measured during the off-time. Because the time between stimulation and emission is much longer for quartz than feldspar, an appropriate pulse width can be chosen to eliminate any feldspar signal. Previous work has suggested that a 10  $\mu$ s on-time and 240  $\mu$ s off-time for each pulse, and also using an initial infrared exposure (as in double SAR), will minimize the feldspar signal during the off-time, so that the signal stems mainly from quartz. Pulsed OSL is measured on a Risø DA-20 using similar parameters as in the double SAR. Detection is for 100 s total (both on- and off-time) which includes 400,000 pulses for a total on-time of 4 seconds. This procedure is currently undergoing study because it is not certain 4 seconds is sufficient exposure to deplete the signal.

Alpha efficiency will surely differ among IRSL, OSL and TL on fine-grained materials. It does differ between coarse-grained feldspar and quartz (Aitken 1985). Research is currently underway in the laboratory to determine how much b-value varies according to stimulation method. Results from several samples from different geographic locations show that OSL b-value is less variable and centers around 0.5. IRSL b-value is more variable and is higher than that for OSL. TL b-value tends to fall between the OSL and IRSL values. We currently are measuring the b-value for IRSL and OSL by giving an alpha dose to aliquots whose luminescence have been drained by exposure to light. An equivalent dose is determined by SAR using beta irradiation, and the beta/alpha equivalent dose ratio is taken as the b-value. A high OSL b-value is indicative that feldspars might be contributing to the signal and thus subject to anomalous fading.

### ***Age and error terms***

The age and error for both OSL and TL are calculated by a laboratory constructed spreadsheet, based on Aitken (1985). All error terms are reported at 1-sigma. The reference for  $k_a$  (thousand years before present) is 2010.

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## APPENDIX C: LITHIC MICRO USE-WEAR ANALYSIS



## **Macroscopic and Microscopic Analysis of Lithic Artifact Sample from 41PN175**

by Steve Tomka

On February 15, 2012, the Center for Archaeological Research (CAR) entered into a contract with Geo-Marine, to conduct use-wear analysis of a small sample of lithic artifacts recovered from site 41PN175 located in Panola County, Texas. The assemblage was derived from the data recovery efforts sponsored by the Texas Department of Transportation and conducted by staff of Geo-Marine. The goal of the project was to conduct low-powered use-wear analysis of a representative sample of artifacts, including formal tools such as projectile points and expedient specimens such as utilized flakes, recovered from the site.

The scope of work called for the examination of each tool at a range of magnification, the comparison of the artifacts to specimens with known uses to establish the manner of use of the artifacts, and when feasible, to determine the material that was worked with the tool. In addition, tools were to be examined for the presence/absence of hafting wear, and when tool failure had occurred, the specimen was to be inspected to determine whether the failure occurred during tool use, during manufacture, or following discard.

A total of 20 artifacts was provided to CAR for analysis. The specimens included four projectile points, five nonprojectile point bifaces, a retouched flake, and 10 pieces of lithic debitage. Table C-1 presents the provenience information for each of these artifacts.

### *Macroscopic and Microscopic Use-Wear Analysis Methodology*

Typical macroscopic alterations of tools include catastrophic failure of some portion of the tool during use (i.e., projectile point breakage during impact) and the development of use-related retouch on the working edge (i.e., snap fracture of a knife due to excessive torque while in use) developed as a result of contact with the material being worked. Catastrophic tool failures are most common on functional classes that are exposed to significant forces during typical use such as piercing, cutting, scraping, and perforating. Similarly, hafted tools (e.g., projectile points, knives, scrapers, reamers, and drills) tend to be exposed to greater forces during use compared to their unhafted (hand-held) counterparts because the haft allows more pressure to be exerted on the tool compared to hand-held tool use.

Retouch derived from tool use tends to develop when a portion of the working edge is too weak and unstable to resist the forces applied against it. Such failures include the scalloping of the working edge when using an unmodified flake as a cutting tool, the removal of microflakes from the dorsal or ventral face of a flake when it is engaged in scraping a piece of bone or wood, and the detachment of microflakes from the dorsal face of a flake and generation of step fractures scars on the ventral face when the scraping motion is bidirectional rather than unidirectional. The development of such retouch continues to form

**Table C-1: Artifact Sample Provided to CAR for Micro-wear Analysis**

Lot No.	Block	Unit	Subdatum / Level (Depth cmbds*)	Artifact Category	Functional Category/Task
608	2	64	2 / 4 (45-48)	Dart point	Projectile point and knife
691	3	70	3 / 5 (55-65)	Dart point	Projectile point and knife
641A	3	72	3 / 4 (45-55)	Dart point	Projectile point and knife
1487	4	90	9 / 4 (41)	Dart point	Projectile point and knife
1274	4	93	11 / 3A (35-41)	Misc. biface	Possible knife
629	3	70	3 / 3 (35-45)	Misc. biface	Knife
1724	4	73	4 / 5 (45-55)	Misc. biface	Manufacture failed
1115	4	86	8 / 2 (15-25)	Misc. biface	Manufacture failed
545	3	69	3 / 2 (25-35)	Recycled biface	Graver
641B	3	72	3 / 4 (45-55)	Retouched flake	Adze and possible scraper
1539	4	123	13 / 4 (25-30)	Utilized flake	Scraper
1174	4	99	10 / 2 (25-35)	Utilized flake	Whittling
1710	4	127	10 / 3 (35-45)	Utilized flake	Sawing and whittling
1630	4	120	13 / 3 (35-40)	Utilized flake	Scraping
1147	4	92	11 / 2 ( 25-35)	Utilized flake	Graver
1692	4	126	10 / 1 (10-25)	Utilized flake	Scraper
1161	4	95	9 / 2 (15-25)	Utilized flake	Reamer
713	4	78	4 / 4 (35-45)	Utilized flake	Scraper
1175	4	99	10 / 2 (25-35)	Utilized flake	Scraper (?)
732	4	75	4 / 4 (35-45)	Utilized flake	Scraper

\*cmbds=centimeters below subdatum

until the tool's working edge stabilizes: that is, the forces applied against it have removed all weaker portions of the tool and what remains is a working edge morphology that is sufficiently strong to withstand continued use. Typically, at this stage, the development of use-polish begins to form, and the stable edge is now exposed to prolonged contact with material being worked.

On tools that require some degree of retouch to create and/or shape the working edge, difficulty arises in determining whether damage noted on the edge of a tool results from the process of tool manufacture, tool use, or postdepositional processes. Tool manufacture can produce both step-fracturing (microcrushing of the retouched edge with a percussor or pressure-flaking tool) as well as rounding and smoothing (i.e., platform preparation). Therefore, the most reliable indicator of use-wear on retouched tools is the presence of polish.

On expedient tools representing the utilization of unmodified lithic debris to carry out a task, use-related wear is typically easier to identify since it is not masked by manufacture-related retouch. However, in some instances, expediently employed tools may be retouched once the working edge dulls, and under such circumstance, it may be impossible to correctly interpret the use-history of the tool, given that the retouch will remove the previous working

edge. Conversely, however, expediently employed tools by definition have short use-cycles, and therefore, both the use-retouch that develops on the working edge as well as the use-associated polish is typically less extensive than on so-called formal tools that are repeatedly reused in the performance of the same or similar tasks.

In general, the analyses performed for this study are based on procedures developed and outlined by Ahler (1979), Odell (1996, 1981), Semenov (12964), and Vaughan (1985). The author also relied on an extensive comparative collection of use-worn tool forms as well as replicated manufacture-failed implements to discern and discriminate between manufacture and use-derived retouch.

During the macroscopic and microscopic analysis, each specimen was examined under a range of magnifications using a MEIJI Techno EMZ-13TR binocular microscope with a detached tungsten reflected light illuminator. The magnification ranged from 20X to 140X, and all included microphotographs shown were taken at 40X magnification. The field of view captured in the microphotograph is 1.2 millimeters.

Analysis began with a scan of each face of each artifact without magnification to identify macroscopic edge-wear such as microflaking, step-fracturing, and edge smoothing. The goal of this inspection was to identify and differentiate loci of edge modifications that may have resulted from manufacture, postdepositional damage, and tool use.

Microscopic analysis of each artifact began with the examination of the apparent working edge of the tool as determined during the initial macroscopic inspection. Both faces of the working edge were examined for microflake scarring and the development of use-related polish. Next, the haft element of each hafted artifact was examined for traces of wear. Finally, the body of the tool (i.e., areas away from the working edge) was examined for traces of wear that included the presence of polish on arises. Use-polish is an alteration of the surface of a tool that results in increased reflectivity of that surface. The distribution of the polish was categorized as diffuse, linear, or localized. Diffuse polish is represented by light polish that is diffused over large flat surfaces of the artifact, whereas linear polish tends to be found on arises. Finally, localized polish tends to occur on topographic microfeatures that rise above the surrounding tool surface and are repeatedly in contact with either the haft or the material being worked.

## *Dart Points and Knives*

### **Specimen P608**

Specimen P608 is a plano-convex hafted biface made of petrified wood. The right margin of the specimen (dorsal face up) retains a short segment of edge rounding derived from platform preparation in an attempt to remove a series of step-fractured flake scars that resulted from the poor quality of the raw material. The distal end of the blade, its tip,

exhibits numerous arises with polish, as does the distal tip itself (Figure C-1). Both faces of the point exhibit linear polish on flake ridges as well as step-fracture terminations. Haft-wear polish is present on both faces of the stem and consists of localized polish on high flake-scar ridges. Flake-scar ridges along the blade also exhibit regular linear polish consistent with knife use. The combination of use-polished surfaces and their distribution is consistent with the use of the specimens as a projectile point and cutting tool.

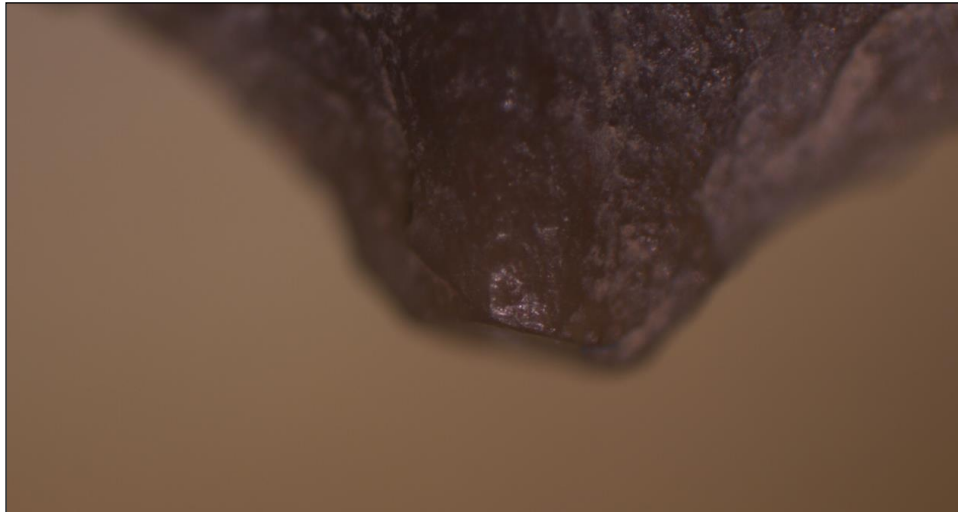


Figure C-1. Specimen P608: light use-wear polish localized on tip of tool.

### **Specimen P691**

Specimen P691 is a proximal, hafted biface fragment broken in use. The margins of the stem as well as the base are heavily ground. The base of the blade is slightly recurved on one margin and smooth on both sides. This blade morphology is indicative of the hafting approach employed by the tool's manufacturer. Specifically, the morphology and its smoothness are suggestive of the wear pattern generated by sinew or other material that wrapped all the way up to and around the base of the blade. Light polish is present on one protrusion near the base of the blade. Haft-wear is minimal in terms of polish, suggesting perhaps that the stem was not tightly held in the shaft or foreshaft. This would be consistent with the hafting approach suggested by the lower blade polish that would draw the point back into the haft. Light polish is present on both faces of the point near the distal break (Figure C-2). This may be light use-wear created by use of the specimen as a knife.

### **Specimen P641A**

Specimen P641A is a dart point made of fine-grained yellow chert. The specimen is complete and has a plano-convex cross section. Light polish is present throughout both faces of the specimen, suggesting engagement against soft material that came in contact with both high ridges and lower portions of the point's topography (Figure C-3). Polish is also visible on the flake-scar ridges formed by the removal of side-notching flakes of the stem. This polish is the result of hafting material being in contact with the stem of the point while

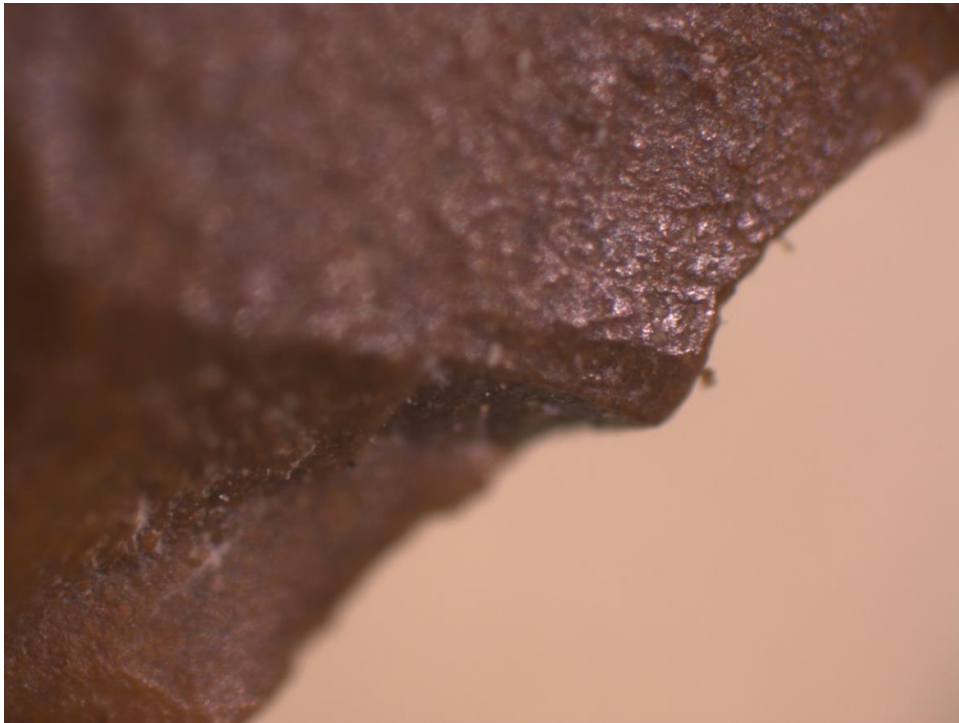
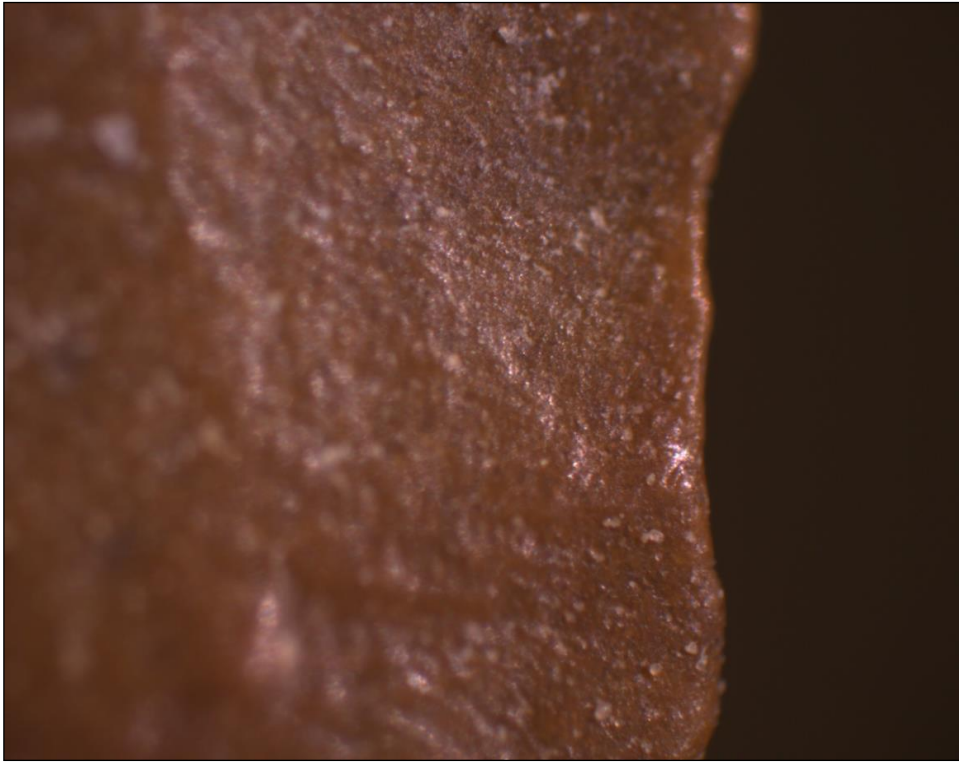
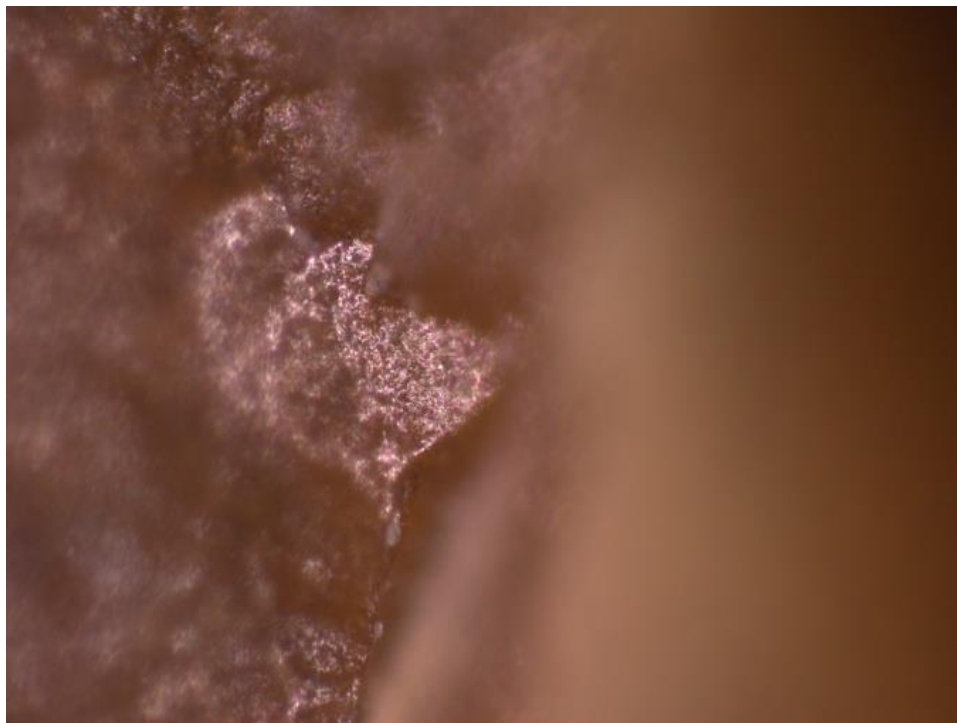


Figure C-2. Specimen P691: light use-wear polish along projectile point edge (upper and lower)



**a**



**b**

Figure C-3. Specimen P641A: (a) use-wear polish along bifacial edge; (b) haft-wear polish near base of blade.



in the shaft or foreshaft of the projectile (see Figure C-3b). Light smoothing also is present on the proximal ends of the blade. This smoothing, in combination with the localized polish, is consistent with the binding agent from hafting extending onto the blade itself. The specimen is complete and exhibits polish on both faces of the blade and hafting polish on both faces of the stem.

### **Specimen P1487**

Specimen P1487 is a complete medium-sized dart point made of chert. Both faces of the stem retain high linear polish on flake-scar ridges derived from hafting (Figure C-4). The lateral edges of the blade exhibit microflaking resulting from manufacture rather than use. The convex face of this plano-convex specimen retains some localized polish near the tip of the specimen. This polish is reminiscent of impact-derived polish resulting from contact with bone. Although the specimen seems rather poorly manufactured, the presence of haft-wear (Figure C-4 upper) does suggest that it was a fully functional point. Perhaps the quality of the manufacture says something about the context of manufacture, which appears to have been rather expedient.

### *Miscellaneous Bifaces*

#### **Specimen P1274**

Specimen P1274 is a small, medial biface fragment made of fine-grained yellow chert. The medial fracture occurred across a coarse inclusion in the parent material. The break may have been precipitated by torque perpendicular to the long axis of the artifact. The distal tip snap break may have been the result of use-failure, and the localized polish adjacent to the break (Figure C-5) is suggestive of use-failure (i.e., contact with bone). The overall appearance of the specimen is that it is an unfinished manufacture-failed artifact. Flake scars are irregular, and the biface is not longitudinally symmetrical. However, the fact that the specimen exhibits considerable polish on one face of the artifact suggests use, as does the polish adjacent to the broken tip. Some of the polish, however, may derive from contact with the metallic surfaces of the hardware cloth typically used in screening the archaeological matrix.

#### **Specimen P629**

Specimen P629 is a silicified wood flake fragment with one bifacially flaked edge opposite a perverse break face. The two lateral margins of this specimen also are missing, and the edge opposite the bifacially shaped working edge appears to have been intentionally left unmodified to form a type of backing. Both faces of the working edge exhibit polish that occurs on high and low areas (Figure C-6). The two ends of the specimen may have been broken in use, but the tool appears to have continued in use judging from use-wear occurring on the break faces.

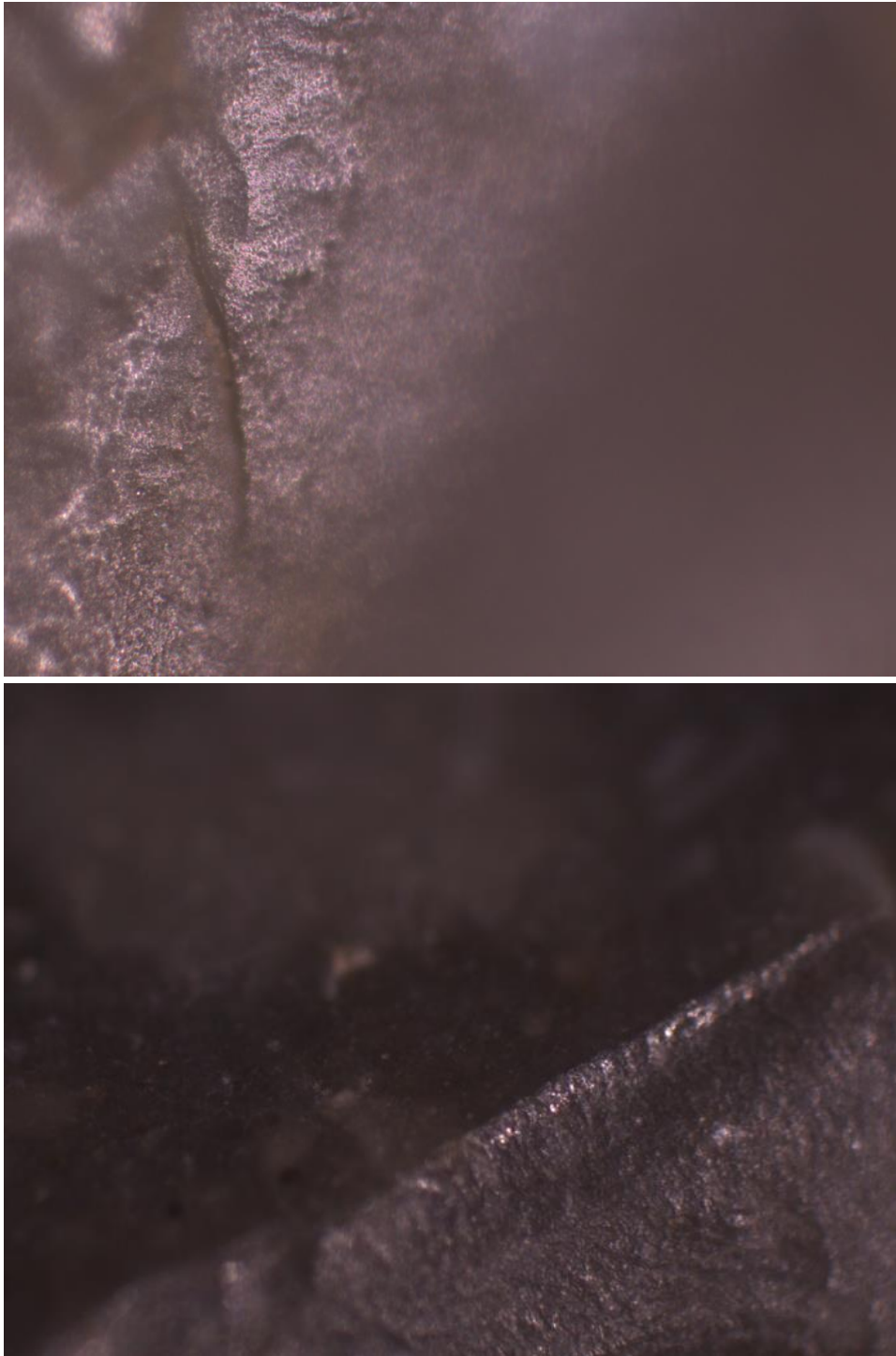


Figure C-4. Specimen P1487: (upper) hafting polish near base of blade; (lower) use-wear on longitudinal ridge.



Figure C-5. Specimen P1274: localized polish on tip of flake scar ridge near tip of biface

#### **Specimen P1724**

Specimen P1724 is a biface proximal fragment. The perverse blade fracture suggests that it failed during manufacture, as do some of the irregular flake scars present on both faces of the specimen. Some localized smoothing is present on the edges of the biface, and these appear to represent remnants of platform preparation. Patches of coarse-grained inclusions are present on both faces of the fragment, and specks of orange residue on one such inclusion represents rusted metallic residue. Such residue is common on artifacts recovered from plowed fields where the plow impacts and rubs against the lithic artifact and leaves a line of metallic residue on its face. Over time, this metallic residue rusts, leaving the pattern seen on this artifact (Figure C-7).

#### **Specimen P1115 (no micrograph)**

Specimen P1115 is a proximal biface fragment with smoothing along the base and lateral edges. Smoothing derives from platform preparation rather than use. Microscopic examination of the smoothed edges of the specimen revealed no use-wear polish. Instead, the edges appear to have been smoothed by rubbing a coarse material such as a percussor along the edge. The lateral margins exhibit a substantial amount of step-fracturing, which is consistent with the grinding of the edges in the process of platform preparation. The blade break occurred near the base of the specimen, and its morphology is similar to basal thinning failures. More precisely, the break morphology indicates two unsuccessful base thinning attempts. The first basal thinning attempt did not fully break the specimen but initiated an imbedded fracture plane that weakened the blade near the base. The second attempt at basal thinning created yet another fracture plane, and the specimen broke along this plane while the force also initiated a break along the first imbedded fracture line.

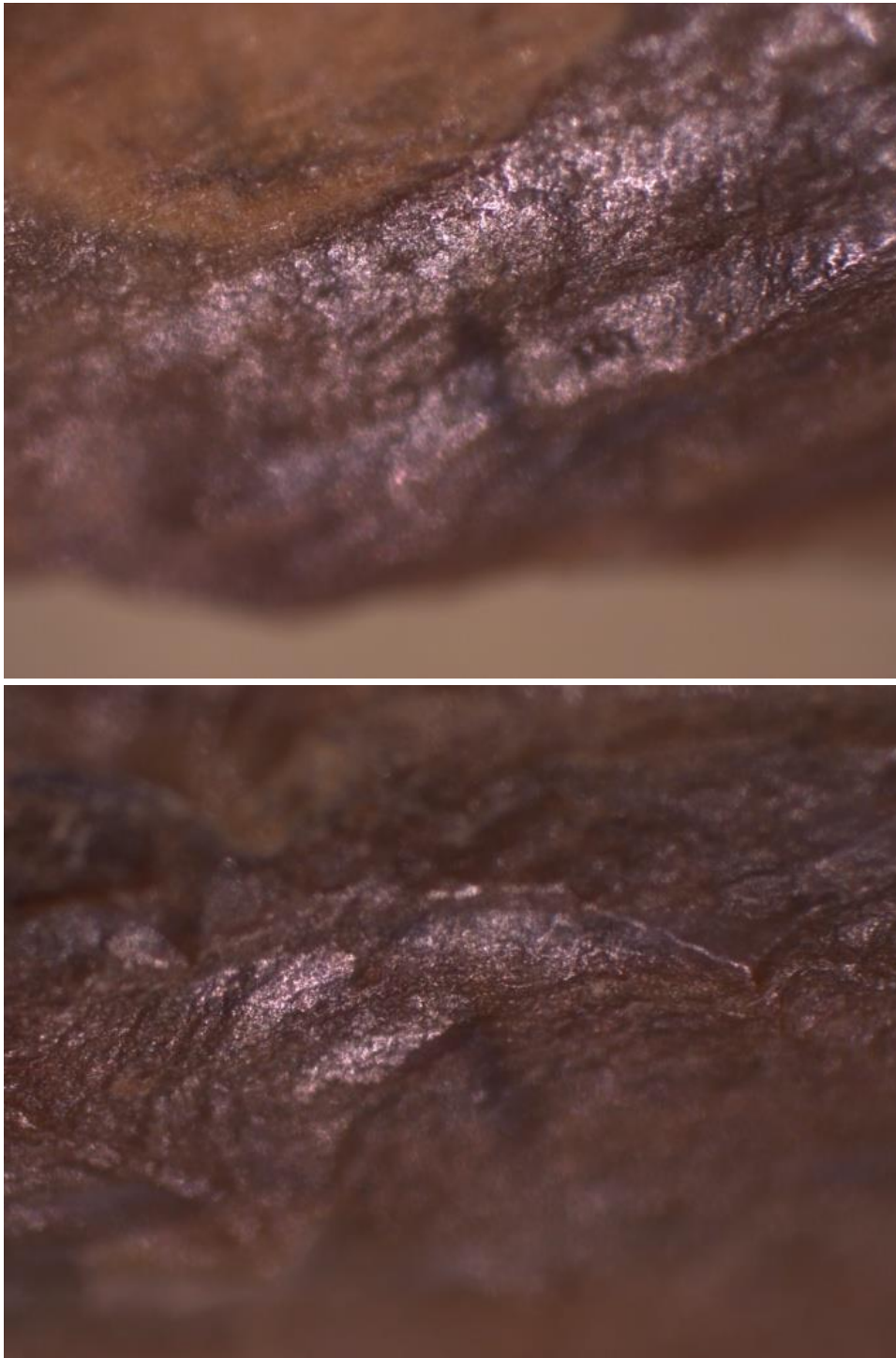


Figure C-6. Specimen P629: (upper and lower) localized use-wear polish along bifacially flaked working edge.



Figure C-7. Specimen P1724: rust spots on the body of specimen.

### **Specimen P545**

Specimen P545 is a recycled projectile point medial fragment. One margin above the narrower break face has been bifacially retouched to create a concave edge. The break face adjacent to this concave edge was employed as a graver. Step-fracturing of the edges of the blade break adjacent to the graver tip is also the product of the use of the tool as a graver. Use-polish is present on the body of the biface in the vicinity of the graver tip, as well as on the tip itself (Figure C-8 upper, lower). One corner of the wider blade break also was employed as a graver tip. Subsequent to this use, the dulling of the graver bit led to a burin flake removal that also removed the entire bifacial edge. Following additional use of this break face as a graver, another attempt was made at creating a bifacial edge, and when this failed, the tool was discarded. A significant amount of heavy polish is present on both faces of the specimen near the former graver tips. The step-fracturing adjacent to the graver tips is also the result of utilization. In addition, diffuse polish is present on the entire body of the biface. Some of this polish may be the result of the original use of the tool as a knife. The well-patterned flaking of the body of the specimen, as well as its biconvex cross section, is reminiscent of late Paleoindian or Early Archaic lanceolate projectile point forms (e.g., Angostura). Recycling of failed projectile points as graters and the subsequent rejuvenation of the working edge through burin removals is commonly seen in Late Paleoindian and Early Archaic assemblages such as the specimens noted in the Lake Limestone region.

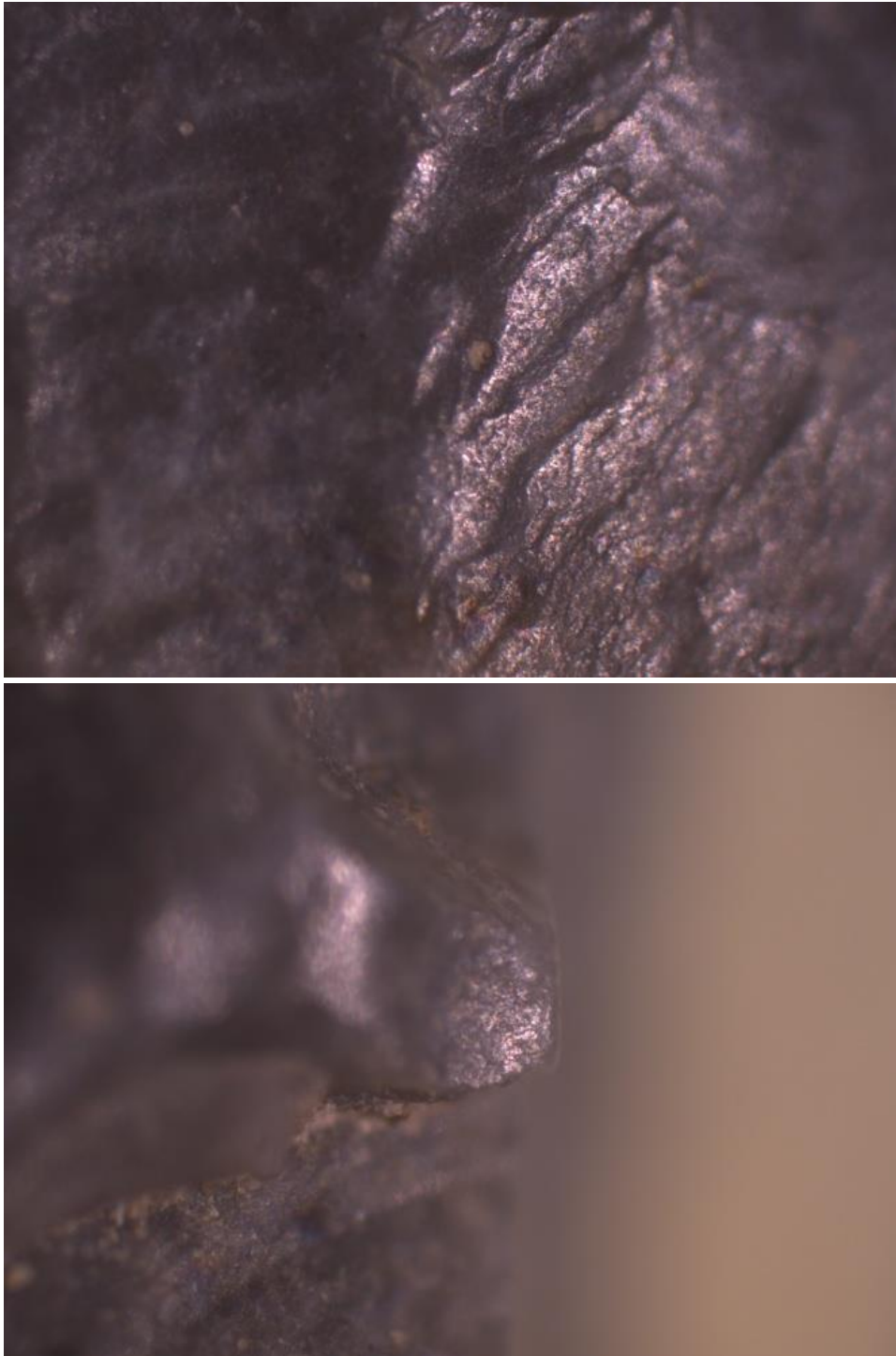


Figure C-8. Specimen P545: use-wear polish on body (upper) and leading edge (lower) of graver on recycled biface.

### *Retouched Flake—Specimen P641b*

Specimen P641B is a marginally beveled secondary flake of silicified wood. The specimen is reminiscent of distally beveled unifaces common in South Texas during the Transitional Archaic and Late Prehistoric. Rather than having the distal end beveled, one of the lateral edges of the parent flake is beveled. It is difficult to distinguish any use-polish on the dorsal and ventral faces adjacent to the working edge because of the high natural polish of the raw

material. Small grains of the material are missing along the edge, indicating that the tool was used in a planing or shaving motion. The rounding and microcrushing evident immediately above and behind (proximal to) the working edge derives from hafting wear (Figure C-9 upper, lower).

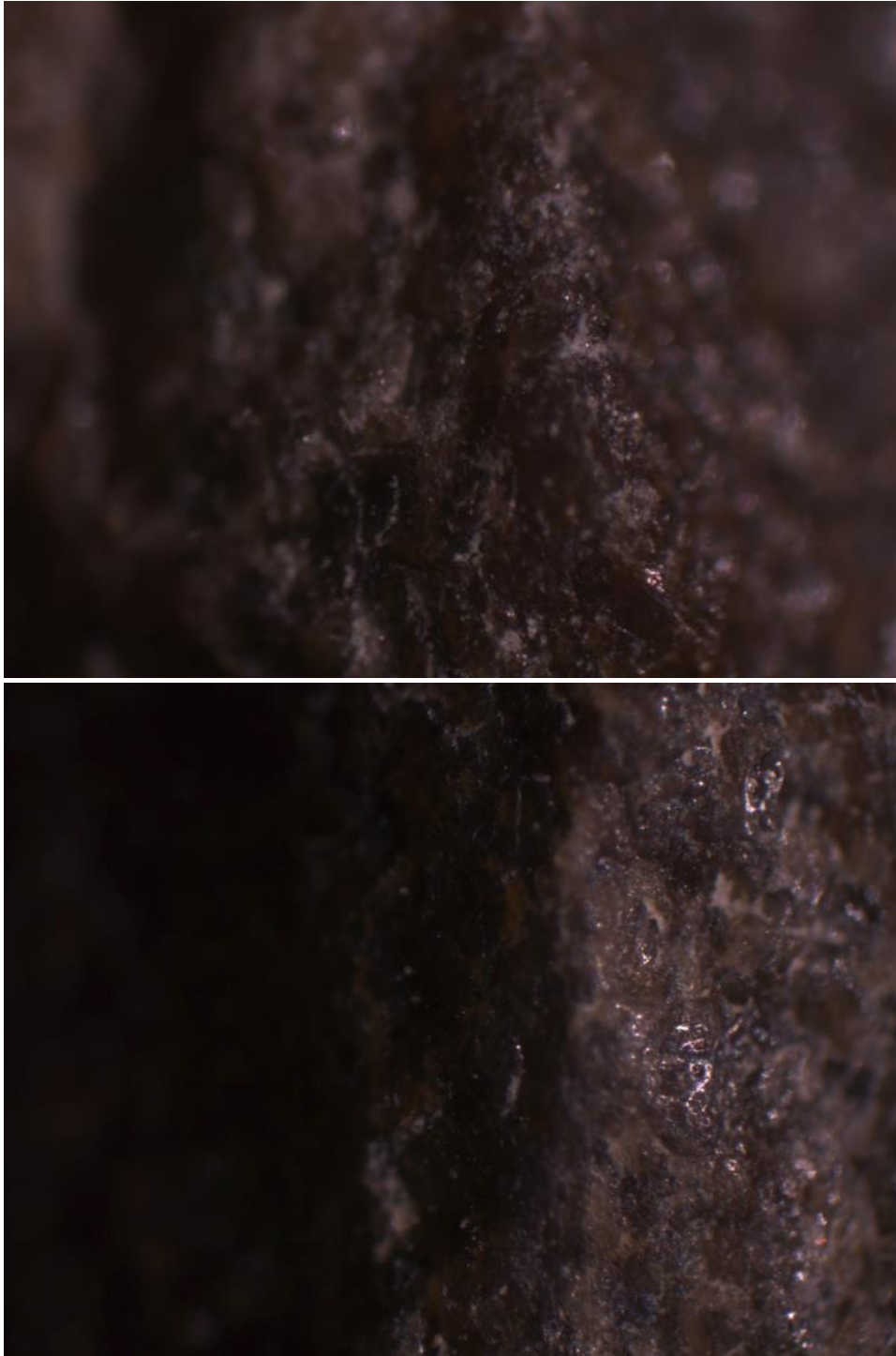


Figure C-9. Specimen P641B: (upper) haft-wear on flake-scar ridge on dorsal face; (lower) use-wear polish on dorsal leading face of tool.

## *Utilized Flakes*

### **Specimen P1539**

Specimen P1539 is a secondary flake of fine-grained yellow chert with coarse-grained inclusions. A concave edge was formed by the removal of a single flake adjacent to the proximal end of the flake. A cluster of microflake scars is present on the dorsal face of the concave surface (Figure C-10 upper), and immediately underneath it—on the ventral face of the concave surface—a crushed area with step-fractured microflake scars (see Figure C-10 lower). Light polish is present on the ventral face of the flake and on the working edge. It appears that the tool represents an expediently used scraper that subsequently was exposed to some postdepositional edge damage. The light, diffuse polish may be simply from prehensile holding of the artifact while in use.

### **Specimen P1174**

Specimen P1174 is a fine-grained red chert secondary bladelet with expedient use-wear scars along one longitudinal margin (Figure C-11 upper). The use-wear is heaviest on the dorsal face of the working edge, with flake scars being in the range of 1.0–1.5 mm in length. However, smaller flake scars and shallow step fractures (see Figure C-11 lower) are also present on the ventral face of the working edge, indicative of the fact that the scraping motion was bidirectional in orientation (i.e., back and forth) along the material being worked. Light polish is present on the microflake-scar ridges on the dorsal face of the working edge (see Figure C-11 upper), suggesting a soft material such as soft wood or green wood being worked with the tool. The duration of the task was very short-term, since the wear is not extensive.

### **Specimen P1710**

Specimen P1710 is a small secondary bladelet of fine-grained quartzite. Very minute and irregular flake scars along one edge have a scalloped appearance that is consistent with the use of the flake as an expedient knife (Figure C-12). Sawing or whittling typically results in edge fracturing that is not invasive onto the edge, but rather removes entire segments of the thin and structurally weak edge. The microflake scarring scallops the edge rather than creating flake scars that are invasive onto the face of the tool. Continued use of the tool would result in the breakage of all weak portions of the edge and its stabilization at a new equilibrium between the strength of the raw material and the amount of force that is applied to the tool edge. The stabilized working edge would have a straight-line appearance rather than the sinuous look provided by the scalloping. The scalloped appearance of the tool is consistent with tool use of a short duration and relatively soft material being worked.

### **Specimen P1630**

Specimen P1630 is a secondary flake of silicified wood. It has one concave lateral edge that has been employed in light scraping tasks. Small—less than 1 mm in length—microflake scars are present along the dorsal face of the working edge (Figure C-13 upper), and light





Figure C-10. Specimen P1539: (upper) step-fracturing along concave working edge; (lower) postdepositional crushing on ventral face.

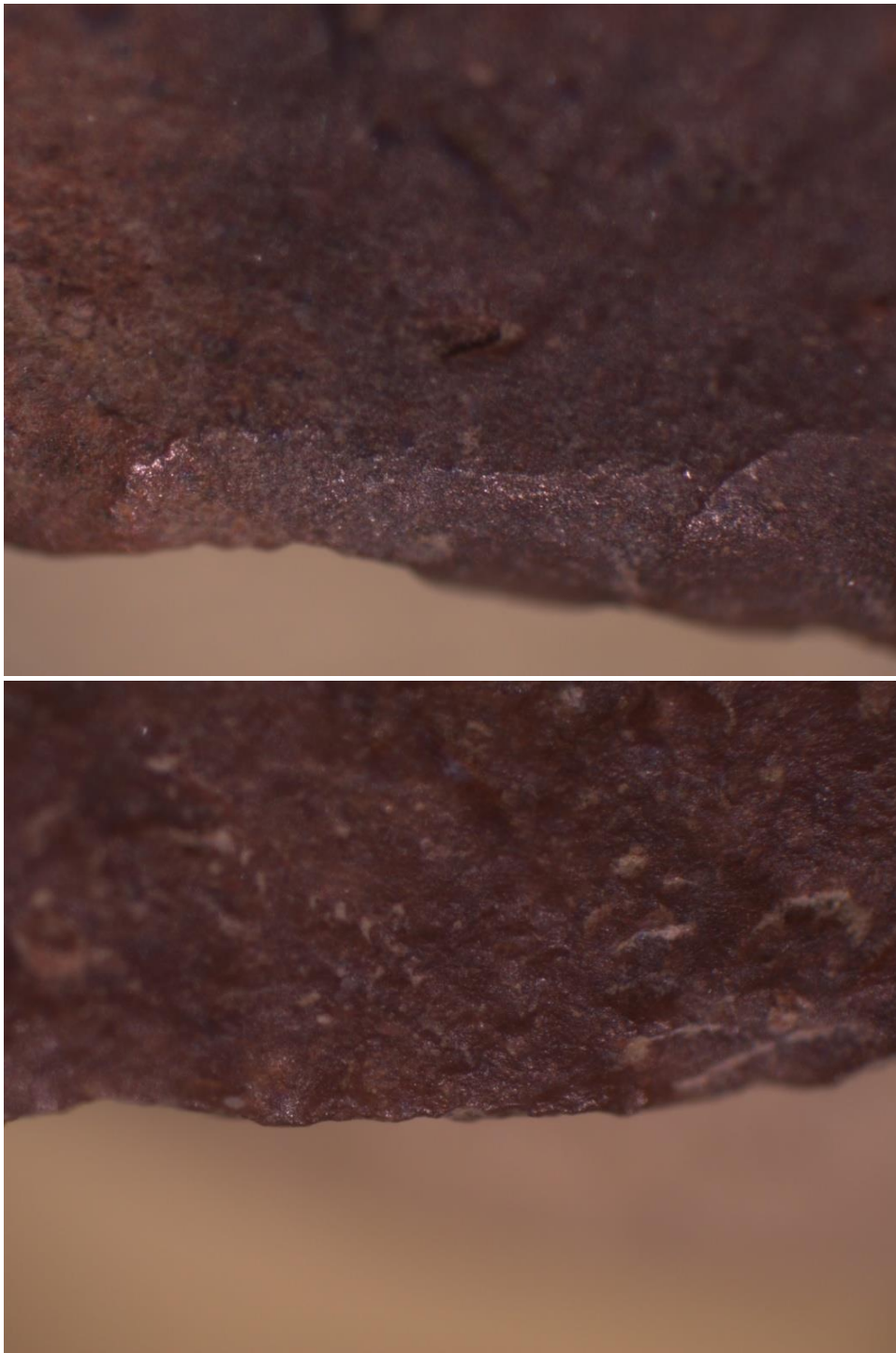


Figure C-11. Specimen P1174: (upper) microflake scars on dorsal face; (lower) step-fracturing on ventral face of working edge.



Figure C-12. Specimen P1710: (upper and lower) scalloped working edge typical of cutting use-wear.

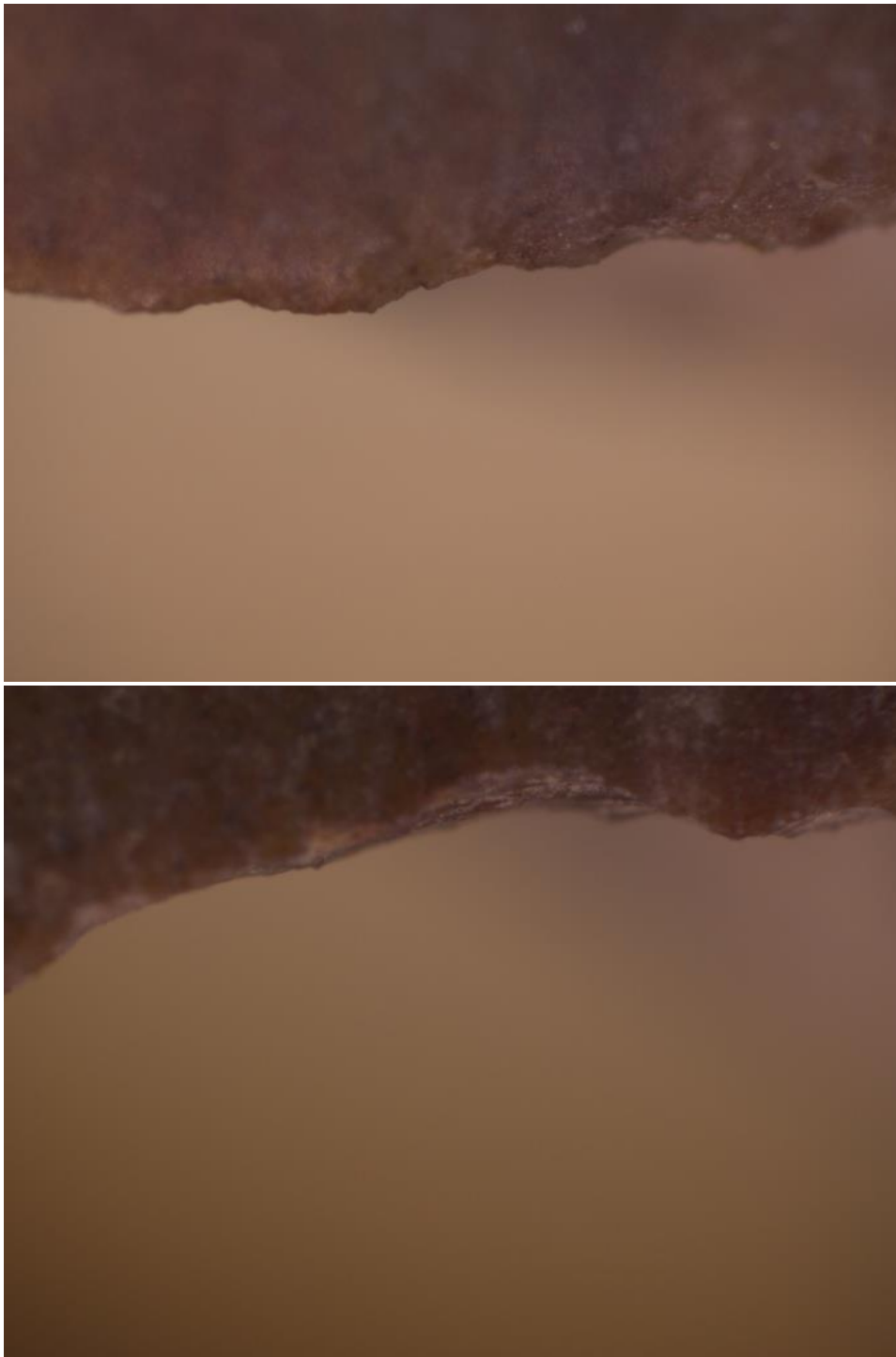


Figure C-13. Specimen P1630: (upper) microflake scarring on dorsal face of working edge; (lower) step-fracturing along working edge.

step-fracturing is noted in the flake scars (see Figure C-13 lower). Judging from the size of the scars and their small number, the tool was utilized in the performance of very light scraping tasks, and the scraping motion tended to be unidirectional rather than bidirectional as in Specimen P1174.

### Specimen P1147

Specimen P1147 is a short, fine-grained quartzite bladelet with a distal graver tip. The tip is formed by the intersection of the two lateral edges rather than being retouched into the current shape. The graver tip has two microflake scars that resulted from use and step-fracturing along one lateral edge that also derived from utilization (Figure C-14). The localized polish present on the working tip suggests that the substance that was being worked was sufficiently soft not to “grind” the naturally polished surface but hard enough to create the microflake scarring.

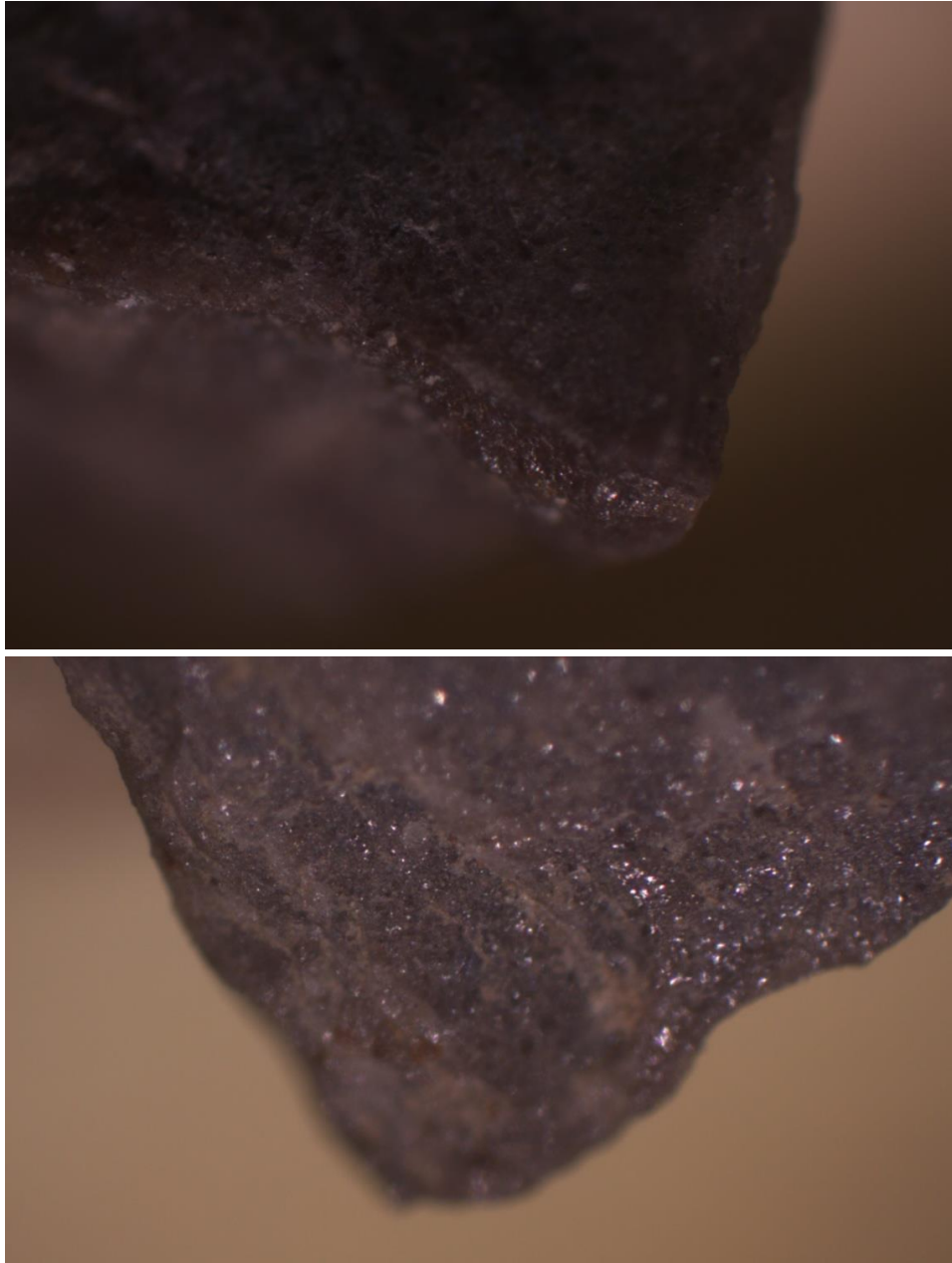


Figure C-14. Specimen P1147: (upper) crushing, and (lower) light step-fracturing of the graver tip.

### **Specimen P1692**

Specimen P1692 is a secondary, distal flake fragment of fine-grained chert with two areas manifesting scraper use-wear. The most extensive use-wear (Figure C-15) is noted on the distal edge of the flake fragment near the corticated flake margin. This working edge has been used sufficiently long to result in the development of light use-polish such as noted in Figure C-15. Use-wear scars are .5–.8 mm in length and very patterned, indicating very uniform pressure and contact with the material being worked. More subtle use-wear is present along the break face of the flake fragment. In both instances, the utilization of the tool resulted in the development of slightly concave working edges.

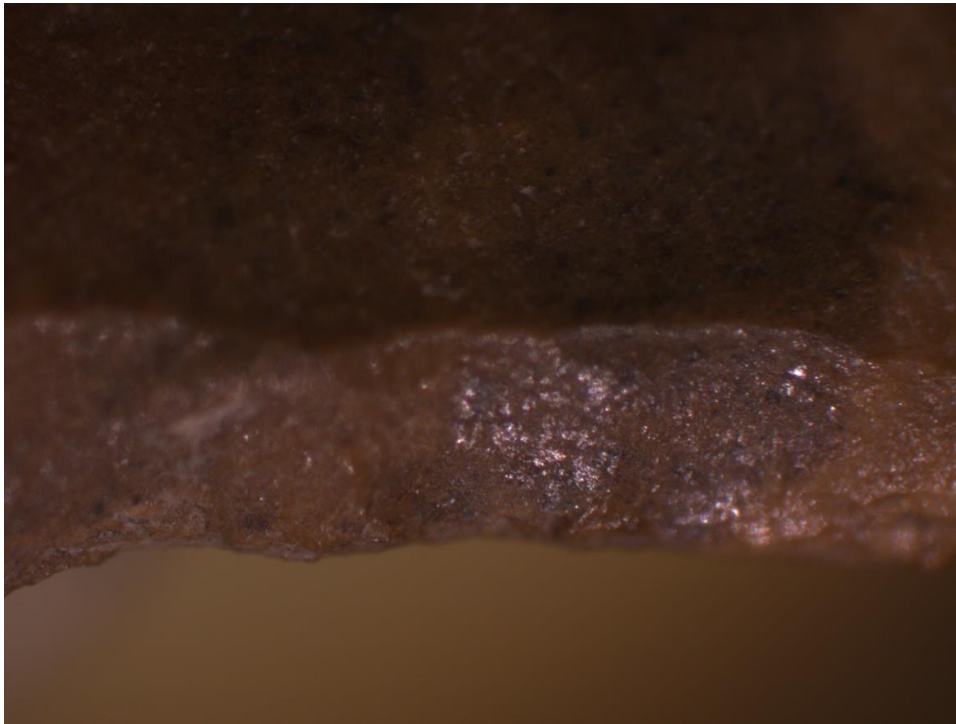


Figure C-15. Specimen P1692: microflaking and light use-polish on dorsal face of working edge.

### **Specimen P1161**

Specimen P1161 is an irregularly shaped longitudinal proximal flake fragment with a broken distal end. The two lateral margins as well as the dorsal flake scar exhibit use-wear. The wear is manifest in the form of microflake step-fracturing and localized light polish. On the concave lateral margin, the use-wear tends to occur on the dorsal face of the edge and is reminiscent of scraping wear, although the combination of wear types and locations of use-wear suggests a more complex picture.

The dorsal flake scar running the length of the specimen exhibits heavy step-fracturing and some localized light polish (Figure C-16 upper). Use-wear on the two lateral edges is manifest in the form of step-fracturing on both faces of the edge and light use-polish in some of the step-fracture scars (see Figure C-16 lower). In addition, the morphology of the



Figure C-16. Specimen P1161: (upper) crushed dorsal flake arise; (lower) light polish and step-fracture scars along one lateral edge.

distal tip fracture is indicative of lateral torque having caused the failure of the tip. The step-fracturing seen on the dorsal ridge of the flake, the step-fracturing present on both faces of the lateral margins, and the break morphology of the tip suggest that the tool was employed as a reamer.

### **Specimen P713**

Specimen P713 is a primary flake of fine-grained yellow chert. Use-wear is noted along one lateral edge, and postdepositional damage is present at two localized spots along the distal end. At one corner of the distal end, downward pressure from the dorsal face resulted in crushing the edge, and the same pressure resulted in the snap fracture of the opposite corner of the distal end. Highly patterned microflaking, consistent with scraper use, is present along one lateral edge (Figure C-17). The edge remains rather sinuous, indicating that tool use was short-lived, and the force applied to the tool and worked material was not sufficiently great to wear down the edge to a more even alignment. Light use-polish began to develop on some flake-scar ridges.



Figure C-17. Specimen P713: microflaking derived from use along dorsal face of working edge; note light use-polish on flake arises.

### **Specimen P1175**

Specimen P1175 is a small secondary flake of yellow fine-grained chert with a semicircular working edge. Examination of the edge's dorsal and ventral surfaces does not exhibit clear signs of postdepositional alterations; therefore, it is likely that the microflaking is the result of tool use. However, no polish was noted along the edge, and the irregular nature of the concave edge (Figure C-18) suggests that the tool was used very lightly and discarded after brief use.





Figure C-18. Specimen P1175: (upper) microflaking on dorsal face of working edge; (lower) uneven ventral face of working edge.

### **Specimen P732**

Specimen P732 is a small secondary flake of fine-grained chert with two lateral edges manifesting traces of use-wear. The most easily identifiable working edge has a semicircular–concave–morphology. Microflake scarring is relatively irregular, and polish is localized, light, and minimal in occurrence within the concave working edge (Figure C-19

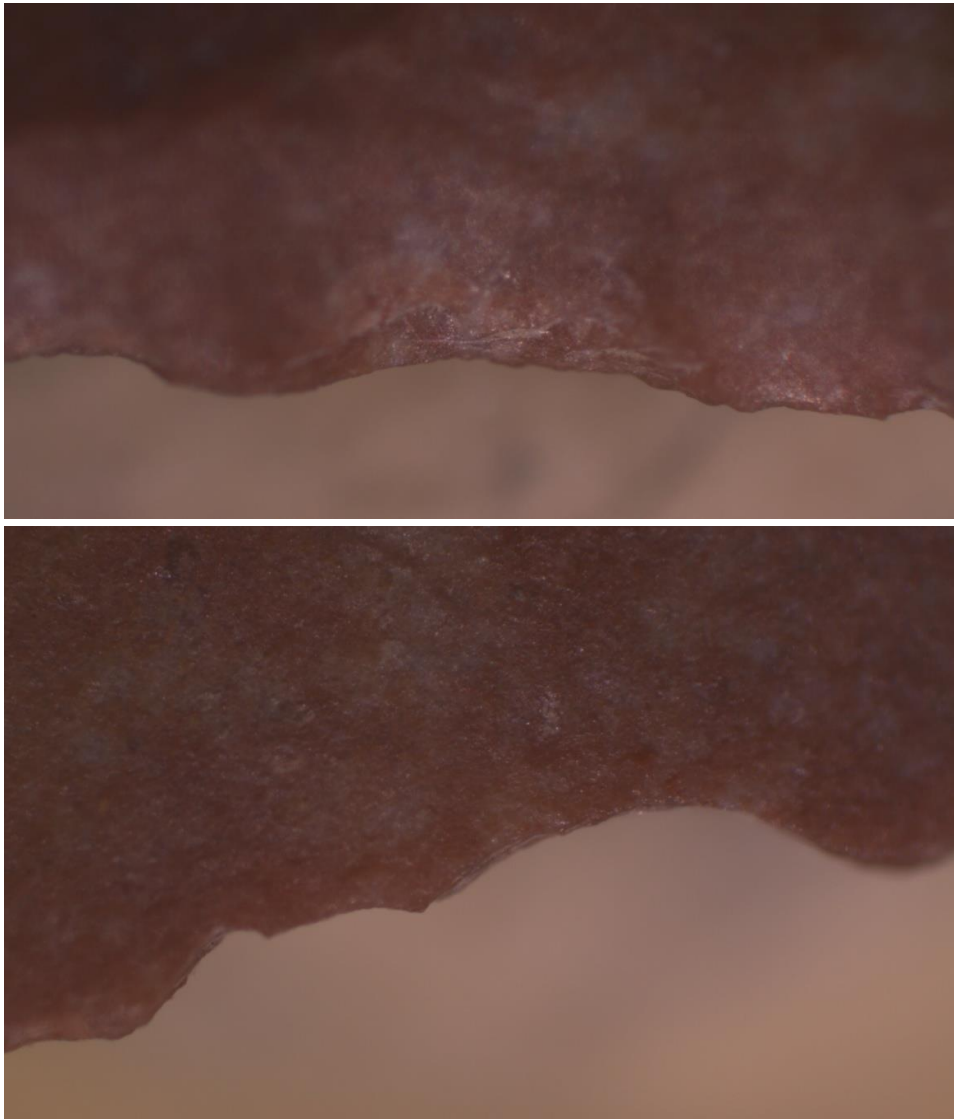


Figure C-19. Specimen P732: (upper) step-fracturing within the concave working edge; (lower) irregular sinuous working edge opposite the concave edge.

upper). The opposite flake margin has a short segment of microflaking consistent with scraping use. This working edge is very sinuous, suggestive of short-term use. Microflake scars also are present on the distal end of the flake, but they are likely the result of the original flake removal or subsequent postdepositional damage. The obtuse angle of these scars is most consistent with postdepositional alterations rather than use. No use-polish was noted on the sinuous edge or the distal end of the flake.

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## APPENDIX D: GEOARCHAEOLOGICAL DATA









E-Horizon	53	87	3.39	3.01	2.35	0.38	1.22	Sandy Loam	67.1	23.05	9.85	20.22	7.07	0.15	-23.15
E-Horizon	54	89	2.88	2.46	2.26	0.43	1.23	Sandy Loam	74	17.88	8.12	22.54	8.93	0.16	-23.41
E-Horizon	55	90	2.57	2.12	2.22	0.44	1.26	Sandy Loam	77.6	15.2	7.2	20.11	9.09	0.14	-22.76
E-Horizon	56	92	3.23	2.75	2.42	0.41	1.18	Sandy Loam	69.1	20.99	9.91	17.39	7.17	0.13	-23.41
E-Horizon	57	94	2.96	2.52	2.33	0.42	1.24	Sandy Loam	72.8	18.56	8.64	16.85	6.85	0.13	-23.00
E-Horizon	58	96	3.44	3.01	2.42	0.39	1.22	Sandy Loam	66.6	22.9	10.5	17.26	-0.29	0.11	-22.28
E-Horizon	59	98	3.48	2.96	2.43	0.45	1.23	Sandy Loam	67	21.8	11.2	16.05	-3.23	0.11	-21.81
E-Horizon	60	100	3.35	2.71	2.47	0.51	1.25	Sandy Loam	69.2	19.4	11.4	16.07	-3.61	0.21	-21.92
E-Horizon	61	102	2.66	2.12	2.22	0.53	1.38	Sandy Loam	77.7	13.99	8.31	14.77	6.60	0.19	-21.75
Upper Bt Horizon	62	104	3.88	3.23	2.61	0.45	1.18	Sandy Loam	62.7	23.5	13.8	17.74	7.60	0.28	-22.66
Upper Bt Horizon	63	106	3.45	2.79	2.49	0.50	1.24	Sandy Loam	68.5	19.3	12.2	16.18	10.36	0.27	-21.95
Upper Bt Horizon	64	108	3.00	2.32	2.32	0.58	1.34	Sandy Loam	74.2	15.3	10.5	14.78	7.59	0.28	-21.48
Upper Bt Horizon	65	110	2.88	2.23	2.29	0.57	1.35	Sandy Loam	75.3	14.99	9.71	15.36	6.57	0.27	-21.99



## APPENDIX E: DROUGHT HISTORY



No.	Trinomial	Digitized Polygon From	Acres	Site Classification	Clusters of 2Σ range or single 2Σ (# of dates in parenthesis)	1200-1249	1250-1299	1300-1349	1350-1399	1400-1449	1450-1499	1500-1549	1550-1599	1600-1649	1650-1680	Period
1	41LR297	THC Atlas	5.91728	LARGE	1440(1)					X						Middle/Late
2	41LR039	THC Site Form (bounding ellipse)	1.616069	SMALL	1305(1)			X								Middle
3	41RR016	THC Atlas	450.998944	LARGE	1306-1307(2); 1480(1);1522(1)			X			X	X				Middle/Late
4	41RR204	THC Atlas	2.554404	SMALL	1350(1); 1532(1)				X			X				Middle/Late
5	41RR011	THC Atlas	2.963723	SMALL	1360-1391(2); 1464-1474(2)				X		X					Middle/Late
6	41RR077	THC Atlas	8.503536	LARGE	1361-1372(2); 1629-1634(2)				X					X		Middle/Late
7	41BW171	Perttula (2005) JNTA No. 22	0.222347	SMALL	1239(1); 1300(1); 1400(1)	X		X		X						Middle/Late
8	41BW003	THC Atlas	80.454759	LARGE	1230(1); 1336(1); 1560-1565(2)	X		X					X			Middle/Late
9	41BW226	THC Atlas	0.57671	SMALL	1265		X									Middle
10	41DT011	Fields et al (1994)	0.617627	SMALL	1229(1);1362(1)	X			X							Middle
11	41DT052	Doehner and Larson (1975)	1.308559	SMALL	1323(1); 1628(1)			X						X		Middle/Late
12	41DT050	Gadus et al (1992)	2.964603	SMALL	1337(1)			X								Middle
13	41HP175	Fields et al (1993)	0.395281	SMALL	1226(1);1346-1374(2); 1462-1472(4);1534-1537(3)	X		X	X		X	X				Middle/Late
14	41HP159	Jurney and Bohlin (1993)	0.216169	SMALL	1376(1)				X							Middle
15	41HP102	Jurney and Bohlin (1993) □	12.970148	LARGE	1248(1); 1457(1)	X					X					Middle/Late
16	41HP116	THC Site Form (bounding box)	0.138348	SMALL	1451(1)						X					Late
17	41HP106	THC Atlas	23.74104	LARGE	1250-1354(6); 1643(1)		X	X	X					X		Middle/Late
18	41HP237	THC Atlas	0.307874	SMALL	1530(1);1595(1)							X	X			Late
19	41TT769	Perttula et al (2010) Caddo Archaeology Journal Vol. 20	0.148229	SMALL	1285(1);1525(1);1635(1)		X					X		X		Middle/Late
20	41TT406	THC Site Form (bounding ellipse)	0.229708	SMALL	1472(1)						X					Late
21	41TT653	THC Site Form (bounding ellipse)	0.041294	SMALL	1332(1);1365-1373(2);1511-1582(14)			X	X			X	X			Middle/Late
22	41MX005	THC Site Form (bounding box)	0.185286	SMALL	1470-1479(2)						X					Late
23	41BW553	THC Atlas	10.406341	LARGE	1391(1); 1488(1)				X		X					Middle/Late
24	41CS151	THC Atlas	10.263643	LARGE	1476(1); 1521(1)						X	X				Late
25	41CS150	THC Site Form (map)	1.985682	SMALL	1354(1)				X							Middle
26	41CS001	THC Atlas	6.328549	LARGE	1364(1)				X							Middle
27	41CS014	THC Atlas	8.186623	LARGE	1316(1); 1444(1)			X		X						Middle/Late
28	41CS085	THC Site Form (bounding box)	0.01112	SMALL	1292(1)		X									Middle
29	41TT373	THC Site Form (bounding ellipse)	0.414097	SMALL	1479(1)						X					Late
30	41TT372	THC Atlas	4.829297	LARGE	1343-1348(2); 1641(1)			X						X		Middle/Late
31	41TT550	THC Atlas	0.602887	SMALL	1228(1);1524-1558(4);1626-1633(2)	X						X	X	X		Middle/Late
32	41TT865	Perttula et al (2003) Caddoan Archaeology Journal	0.592915	SMALL	1538(1)							X				Late
33	41TT672	THC Atlas	9.362097	LARGE	1521(1)							X				Late
34	41TT852	THC Atlas	24.669809	LARGE	1427-1447 ( 6); 1529-1577(13); 1653-1661(6)					X		X	X		X	Late
35	41TT853	THC Atlas	1.979072	SMALL	1518-1572(14); 1646-1660(3)							X	X	X	X	Late
36	41TT851	THC Site Form (bounding box)	22.234276	LARGE	1213; 1234-1260; 1324-1381; 1423-1430; 1522-1577	X	X	X	X	X		X	X			Middle/Late
37	41TT011	THC Atlas	12.467003	LARGE	1385(1)				X							Middle
38	41FK107	THC Site Form (bounding box)	2.470474	SMALL	1350(1)				X							Middle
39	41CP230	Nelson & Perttula (2003) JNTA No. 17	1.493692	SMALL	1528(1); 1632(1)							X		X		Late
40	41CP335	THC Site Form (bounding box)	0.494095	SMALL	1535							X				Late
41	41CP313	THC Site Form (bounding box)	0.395276	SMALL	1275(1);1558(1)		X						X			Middle/Late
42	41CP304	Perttula (2005)	9.881901	LARGE	1305(1);1345-1380(6);1442-1469(4);1518-1566(17)			X	X	X	X	X	X			Middle/Late

No.	Trinomial	Digitized Polygon From	Acres	Site Classification	Clusters of 2Σ range or single 2Σ (# of dates in parenthesis)	1200-1249	1250-1299	1300-1349	1350-1399	1400-1449	1450-1499	1500-1549	1550-1599	1600-1649	1650-1680	Period
43	41CP316	THC Site Form (bounding box)	0.481743	SMALL	1523-1555(2)							X	X			Late
44	41CP245	Perttula & Nelson (2006) JNTA No. 24	1.185828	SMALL	1360				X							Middle
45	41CP408	THC Site Form (bounding box)	0.494087	SMALL	1330-1380(4); 1430(1)			X	X	X						Middle/Late
46	41CP088	THC Atlas	1.187663	SMALL	1550-1590(3); 1660(2)								X		X	Late
47	41CP005		NA	NA	1542							X				Late
48	41CP010	THC Atlas	17.349207	LARGE	1390; 1540				X			X				Middle/Late
49	41UR279	Perttula et al (2004) JNTA No. 19	0.540886	SMALL	1455(1)						X					Late
50	41CP220	THC Site Form (bounding box)	3.705668	SMALL	1440(1); 1520(1)					X		X				Late
51	41CP071	Perttula & Nelson (2004) FNTA No. 5	8.893609	LARGE	1325-1333 (2);1383-1385 (2);1528-1545(4)			X	X			X				Middle/Late
52	41UR129	THC Site Form (map)	0.101959	SMALL	1509(1)							X				Late
53	41UR118	THC Atlas	5.831377	LARGE	1515-1530 (2); 1636-1640(2)							X		X		Late
54	41UR133	THC Atlas	11.281084	LARGE	1430(1); 1520-1565(5); 1640 (1)					X		X	X	X		Late
55	41UR011	THC Site Form (bounding ellipse)	0.065191	SMALL	1465(1)						X					Late
56	41UR144	Turner (1993) NNTA No. 2	0.134394	SMALL	1550-1565(2); 1633(1)								X	X		Late
57	41UR010		NA	NA	1463(1); 1608-1632(3)						X			X		Late
58	41UR315	THC Site Form (map)	2.133598	SMALL	1545-1555(2)							X	X			Late
59	41WD109	Bruseth and Perttula (1981)	0.919266	SMALL	1234(1); 1301(1); 1312(1)	X		X								Middle
60	41WD482	THC Atlas	2.987248	SMALL	1462(1)						X					Late
61	41WD060		NA	NA	1220 (1); 1350(1); 1530(1)	X			X			X				Middle/Late
62	41WD244		NA	NA	1560(1)								X			Late
63	41WD529	THC Atlas	35.460071	LARGE	1466(1)						X					Late
64	41WD055	THC Site Form (map)	0.06528	SMALL	1320-1333(5); 1365-1366(2)			X	X							Middle
65	41SM054		NA	NA	1375(1)				X							Middle
66	41WD046	Perttula et al (1993) NNTA No. 1	25.374678	LARGE	1376(1)				X							Middle
67	41SM055	THC Atlas	27.832209	LARGE	1338(1)			X								Middle
68	41SM195	Walters (2003), JNTA No. 18	1.702837	SMALL	1378(1)				X							Middle
69	41SM193	Walters et al (1998), JNTA No. 11	1.852858	SMALL	1369(1); 1518(1)				X			X				Middle/Late
70	41SM056	Walters (2009), JNTA No. 31	0.266812	SMALL	1360(1)				X							Middle
71	41SM325	Walters (2008) Caddo Archeology Journal Vol. 17	0.494095	SMALL	1295-1300(2); 1345-1365(2);1435(1)		X	X	X	X						Middle/Late
72	41GG069	THC Site Form (map)	4.517011	LARGE	1365(1);1403(1)				X	X						Middle/Late
73	41RK468	THC Atlas	1.223778	SMALL	1425(1)					X						Late
74	41RK243	THC Site Form (bounding box)	2.309916	SMALL	1321(1)			X								Middle
75	41RK342	THC Site Form (bounding box)	0.074115	SMALL	1357(1)				X							Middle
76	41RK214	THC Atlas	1.880838	SMALL	1205(1); 1278-1391(24); 1524(1)	X	X	X	X			X				Middle/Late
77	41HS573	THC Atlas	8.708801	LARGE	1555(1)								X			Late
78	41HS574	THC Atlas	4.637456	LARGE	1330(1)			X								Middle
79	41HS015	THC Atlas	20.849091	LARGE	1305(1); 1350-1395(15); 1401(1); 1443-1574(71);1647-1667(9)			X	X	X	X	X	X	X	X	Middle/Late
80	41HS846	THC Atlas	7.571291	LARGE	1340-1355(2)			X	X							Middle
81	41HS843	THC Site Form (bounding ellipse)	0.14733	SMALL	1555(1)								X			Late
82	41HS231	THC Atlas	11.443515	LARGE	1225-1250(2);1335(2);1440(1)	X	X	X		X						Middle/Late
83	41HS588	THC Atlas	12.1912	LARGE	1355-1380(4);1435-1455(2); 1540-1560(3)				X	X	X	X	X			Middle/Late
84	41RK562	THC Atlas	2.71457	SMALL	1360(1)				X							Middle

No.	Trinomial	Digitized Polygon From	Acres	Site Classification	Clusters of 2Σ range or single 2Σ (# of dates in parenthesis)	1200-1249	1250-1299	1300-1349	1350-1399	1400-1449	1450-1499	1500-1549	1550-1599	1600-1649	1650-1680	Period
85	41RK557	THC Atlas	15.905288	LARGE	1216(1);1360(1);1443(1);1563(1)	X			X	X			X			Middle/Late
86	41RK558	THC Atlas	10.200721	LARGE	1395(1);1563(1)				X				X			Middle/Late
87	41PN149		NA	NA	1547(1)							X				Late
88	41PN175	THC Atlas	0.545261	SMALL	1540(1)							x				Late
89	41HE245		NA	NA	1473(1)						X					Late
90	41SM404	THC Atlas	0.967102	SMALL	1265(1); 1330(1); 1435(1)		X	X		X						Middle/Late
91	41SM300	THC Atlas	14.243882	LARGE	1520(1)							X				Late
92	41SM273	THC Site Form (map)	5.748609	LARGE	1350-1360(2)				X							Middle
93	41HE139	THC Site Form (map)	10.888167	LARGE	1440(1)					X						Late
94	41HE343	THC Site Form (bounding box)	0.691716	SMALL	1540(2)							X				Late
95	41HE080		NA	NA	1331(1)			X								Middle
96	41AN067	Wilson, Perttula & Walters (2012) JNTA No. 38	1.210514	SMALL	1542							X				Late
97	41CE354	THC Atlas	16.845481	LARGE	1240; 1340;1540-1570	X		X				X	X			Middle/Late
98	41CE015		NA	NA	1550								X			Late
99	41AN038		NA	NA	1325-1375(12); 1425-1440(4); 1550(1); 1655(1)			X	X	X			X		X	Middle/Late
100	41AN021		NA	NA	1565								X			Late
101	41AN032	THC Site Form (bounding box)	0.592905	SMALL	1550								X			Late
102	41AN034	THC Site Form (bounding box)	0.002038	SMALL	1535							X				Late
103	41RK170	THC Atlas	9.696205	LARGE	1315-1360(5); 1530(1)			X	X			X				Middle/Late
104	41CE299	THC Atlas	7.450434	LARGE	1518(1); 1550(1)							X	X			Late
105	41AN051	THC Atlas	93.943745	LARGE	1235(1); 1350(1)	X			X							Middle
106	41AN087	THC Atlas	17.765672	LARGE	1462(1); 1540(2)						X	X				Late
107	41CE019	THC Atlas	222.537888	LARGE	1202-1236(17); 1272-1335(11); 1535(1)_55 Early Caddo dates; 28 Formative	X	X	X				X				Middle/Late
108	41H0150	THC Site Form (map)	21.3745	LARGE	1543(1)							X				Late
109	41H0216	Perttula and Nelson (2006)	0.617624	SMALL	1245(1)	X										Middle
110	41H0214	Perttula and Nelson (2006)	1.086771	SMALL	1555(1)								X			Late
111	41NA044	THC Site Form (bounding ellipse)	0.857976	SMALL	1346(1); 1488(1)			X			X					Middle/Late
112	41NA049	THC Atlas	48.359185	LARGE	1287(1);1350-1356(2)		X		X							Middle
113	41NA280	Perttula (2000)	0.864657	SMALL	1540-1555(3)							X	X			Late
114	41NA248	Perttula (2000)	0.44468	SMALL	1340-1350(2)			X	X							Middle
115	41NA285	Perttula (2008)	0.296454	SMALL	1265(1); 1350(1)		X		X							Middle
116	41NA231	Perttula (2008)	1.185815	SMALL	1240-1250(2); 1295(1); 1340-1390(6); 1510-1530(4)	X	X	X	X			X				Middle/Late
117	41NA242	Perttula (2008)	1.383451	SMALL	1315(1);1345-1370(7);1520-1545(2)			X	X			X				Middle/Late
118	41NA235	Perttula (2008)	0.148227	SMALL	1380(3);1430(1);1535(1)				X	X		X				Middle/Late
119	41SY092	THC Atlas	48.80288	LARGE	1346(1);1391-1396(2);1476(1)			X	X		X					Middle/Late
120	41SA123	THC Site Form (bounding ellipse)	1.66013	SMALL	1474(1)						X					Late
<b>Totals</b>						17	14	36	47	20	23	46	29	13	5	





The following is a synopsis of drought/ moisture regimes grouped in 50 year periods for Grid Point 194 (Figure E-1).

The 50 year period from A.D. 1200 to 1249, a 5-year period of moderate to extreme drought begins in A.D. 1198 and continues through A.D. 1202. It also had two single year droughts, one 2-year period of drought, three 3-year drought periods, and one 5-year period of drought. During this 50 year period there were no single or multiple year periods of increased moisture within the region. This was the only instance where there was no wetter than normal period during the period of study.

The 50 year period from A.D. 1250 to 1299 had had two single year droughts, one 2-year period of drought, two 3-year drought periods, and one 5-year period of drought. It had four single year periods of wetter than normal, and a single 3-year period of wetter than normal. The 50 year period from A.D. 1300 to 1349 had seven single year droughts and one 2-year period of drought. The moisture for this period had four single year periods of wetter than normal, a single 2-year period of drought, and one 3-year period of drought.

The 50 year period from A.D. 1349 to 1399 had five single year droughts, two 2-year droughts, and a single 3-year period of drought. The years of 1352, 1360, 1369, 1370, and 1374 are classified as severe or extreme droughts ranging from -3.806 to -5.26 coupled to a 3 year moderate drought occurring from 1365 to 1367. The period also had six single years of increased moisture and one 3-year period of increased moisture.

The 50 year period from A.D. 1400 to 1449 had seven single year droughts and one 3-year period of drought. The period also had seven single years of increased moisture.

The 50 year period from A.D. 1450 to 1499 had four single year droughts, three 2-year periods of drought and one 5-year period of drought. A period of drought begins in 1350 with a severe drought followed by a reprieve of moisture until 1454 when there is 5-year period of severe to extreme drought that last until 1458 followed by single year droughts in 1460, and 1463. This period of drought is followed by two almost consecutive 2-year periods of drought that occur in 1468-1469 and 1472-1473 before the return of a normal or wetter than normal cycle of moisture. The period as whole had two single years of increased moisture and two 2-year period of wetter than normal periods.

The 50 year period from A.D. 1500 to 1549 had three single year droughts and four 2-year periods of droughts. Each of these drought periods are followed by a multiyear period of consecutive normal or wetter than normal moisture. The period had a total of five single year periods of increased moisture.

The 50 year period from A.D. 1550 to 1599 had five single year droughts and three 2-year periods of drought. A 2-year period of drought begins in 1570-1571, followed by a one year reprieve followed by a single year of severe drought. At the end of the century, a 2-year drought begins in 1593 followed by a two year reprieve followed by a two year period of severe drought 1597-1598, and a single year of moderate drought in 1601. The 50 year period had a total of four single year periods, and two 2-year periods of increased moisture.

The 50 year period from A.D. 1600 to 1649 had 4 single year droughts, two 2-year droughts and one 3-year period of drought. It had 3 single years of increased moisture, one 3-year, and one 4-year period of increased moisture. The 4-year period of increased moisture from 1603 to 1606 was bracketed by two single year drought followed by an 11-year period of normal to increased moisture followed by a 3-year period of increased moisture occurring from 1620 to 1622.

The 50 year period from A.D. 1650 to 1699 had 6 single year droughts, and two 2-year periods of drought. The period from 1681 to 1682 experienced moderate to severe drought followed by a normal year followed by a 2-year period of moderate drought. It had three single years of increased moisture, and two 2-year periods of increased moisture.

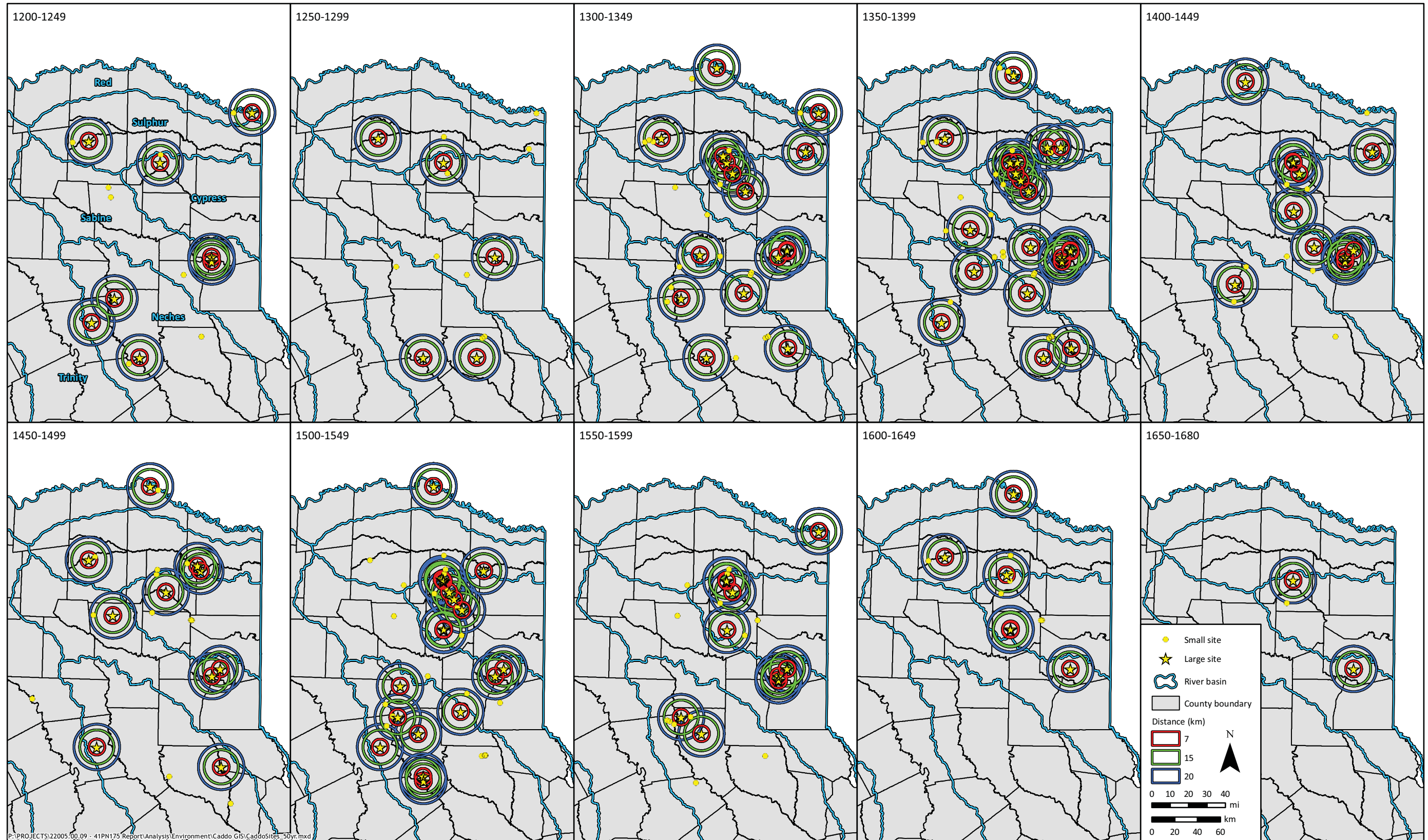


Figure E-1. Drought/moisture regimes grouped in 50 year periods for Grid Point 194.



## APPENDIX F: NEUTRON ACTIVATION ANALYSIS



*Table F-1: Descriptive Information and Compositional Group Assignments*

MURR ANID	Lot. Artifact No.	Prov No.	Caddo Ref Group Association	Ware Desig.
GMI028	414.1	533	Region 7/8/9 core	Fine?
GMI029	514.23	1724	Region 9 Group 3	
GMI030	647.1	789	Region 7/8/9 core	
GMI031	836.27	1482	Region 9 Group 3	
GMI032	1105.4	1241	Region 9 Group 3	
GMI033	1121.6	1203	Region 9 Group 3	
GMI034	1174.14	931	Region 7/8/9 core	
GMI035	1191.1	960	Region 7/8/9 core	Fine?
GMI036	1558.4	1600	Region 7/8/9 core	
GMI037	1766.9	2002	Region 9 Group 3	Fine?
GMI038	TKP-1		Region 9 Group 3	
GMI039	TKP-2		Region 9 Group 3	
GMI040	TKP-3		Region 9 Group 3	
GMI041	TKP-4		Region 9 Group 3	
GMI042	TKP-5		Region 9 Group 3	
GMI043	GEO-1	Quaternary Alluvium	Clay	
GMI044	GEO-2	Fluvatile Terrace	Clay	
GMI045	GEO-3	Carrizo Sands	Clay	
GMI046	GEO-4	Weches Formation	Clay	
GMI047	GEO-5	Queen City Sand	Clay	
GMI048	GEO-6	Reklaw Formation	Clay	
GMI049	GEO-7	41PN175 subsoil	Clay	
GMI050	GEO-8	41PN175 subsoil	Clay	
GMI051	GEO-9	41PN175 subsoil	Clay	

**Table F-2: Unadjusted Internal Compositional Concentrations for the Ceramic Samples**

anid	As	La	Lu	Nd	Sm	U	Yb	Ce	Co	Cr	Cs
GMI028	4.6195	33.2384	0.3729	29.6878	5.8720	3.1564	2.5898	64.8536	14.8122	75.2453	5.6703
GMI029	5.3873	37.2601	0.4033	30.1884	6.4295	3.0061	2.6958	70.1397	10.4701	74.1954	3.8353
GMI030	6.1699	37.5948	0.4706	33.3034	7.1264	2.8108	3.1856	77.6823	20.7079	83.0928	4.5138
GMI031	6.9385	39.6300	0.3715	31.9926	6.3313	2.9964	2.7464	75.0806	11.7598	74.4936	3.7181
GMI032	8.7054	33.1021	0.3352	24.0290	5.0464	2.9376	2.5066	63.8323	10.8658	73.9538	4.2971
GMI033	4.8659	34.2903	0.3482	31.4311	5.4890	3.1237	2.8731	67.2643	13.3357	73.3098	3.7980
GMI034	5.6299	29.0891	0.3309	23.9809	4.2793	3.4133	2.4173	54.1074	4.8933	65.5538	4.8725
GMI035	4.4658	27.4711	0.3652	21.4924	4.1188	3.4187	2.3885	51.2617	5.6400	91.1246	5.9252
GMI036	9.9440	30.9304	0.2357	16.7827	3.5504	3.0001	1.5779	54.5632	5.7629	68.1471	2.9647
GMI037	10.2153	31.5745	0.3391	26.2326	4.6977	3.5118	2.4669	59.9040	12.1573	74.3444	4.3007
GMI038	5.4466	29.9453	0.4693	42.3520	5.8555	4.2898	3.2349	72.9856	11.1119	73.2552	5.1759
GMI039	6.4858	42.8250	0.4454	25.1117	7.5154	3.1725	3.1738	86.0857	11.2165	75.0536	3.7655
GMI040	5.8438	57.3668	0.5727	71.5717	10.6618	4.2902	4.3586	110.4738	17.2968	75.6048	4.9451
GMI041	5.2221	34.6610	0.4864	39.4344	6.4452	4.0447	3.3994	76.4126	11.7660	73.6698	5.1006
GMI042	5.0591	43.9870	0.4917	21.6455	7.2568	3.0072	3.3691	82.5200	12.3920	71.1083	3.4521
GMI043	3.7356	30.0977	0.4749	36.0550	5.2709	3.3585	3.0346	65.5412	10.4409	40.1854	2.7774
GMI044	4.5420	23.6092	0.4521	23.7811	3.8005	3.2739	2.8742	45.9590	2.3270	39.8350	2.2494
GMI045	5.1322	15.6590	0.1907	18.0218	2.4179	2.2529	1.2122	47.2443	3.8206	42.5972	2.4081
GMI046	65.4548	31.6942	0.3743	37.0954	5.2541	2.6664	2.5092	168.0349	28.3768	73.9525	2.0595
GMI047	8.4428	28.0376	0.3931	28.4007	4.4377	2.7601	2.5877	53.9097	6.3925	66.0768	4.0771
GMI048	3.0200	31.4378	0.4048	37.3357	6.1362	2.8245	3.0908	64.7759	6.2286	72.1965	3.7948
GMI049	7.7024	21.9094	0.3364	23.5358	3.5363	3.2432	2.2282	43.6588	3.8892	59.2228	3.1029
GMI050	8.3959	16.4279	0.3831	17.0425	2.7426	3.3444	2.3324	32.7982	3.7485	44.1449	2.2207
GMI051	2.2529	22.6179	0.3738	27.7868	3.6339	2.4935	2.5453	50.5582	5.8755	37.2498	1.1401



Table F-2 (continued)

anid	Eu	Fe	Hf	Ni	Rb	Sb	Sc	Sr	Ta	Tb	Th
GMI028	1.1680	33721.9	6.0366	35.67	64.37	0.7427	12.0866	93.97	1.0617	0.7179	10.6352
GMI029	1.2934	42167.3	6.9261	42.55	72.84	0.6121	10.8187	104.79	0.9764	0.8393	10.1590
GMI030	1.4734	33254.4	6.9911	41.33	63.68	0.7197	12.4645	0.00	1.0159	0.9606	10.9869
GMI031	1.3088	42749.1	6.5969	45.67	65.24	0.6230	11.7462	99.46	0.9493	1.0063	10.0142
GMI032	1.0044	44373.0	6.9987	46.13	66.34	0.6795	11.4462	85.35	0.9617	0.6373	10.6982
GMI033	1.1080	43509.8	7.2263	25.50	63.80	0.6176	11.2922	81.79	1.0088	0.7269	10.2004
GMI034	0.7988	26592.8	7.7358	0.00	58.41	0.6993	9.4683	59.25	1.2442	0.5723	8.8303
GMI035	0.7740	36511.7	7.0442	35.36	73.74	0.7488	14.4672	53.92	1.1054	0.6374	10.7028
GMI036	0.6499	37850.8	5.5145	28.33	49.32	0.6009	9.9964	149.07	0.9375	0.5395	10.2778
GMI037	0.8868	50127.6	6.2341	0.00	62.79	0.6857	10.8057	57.54	0.9157	0.5847	11.8109
GMI038	1.2160	30742.6	6.9611	36.98	74.04	0.7509	12.1658	0.00	1.3180	0.6751	10.7249
GMI039	1.5304	46246.4	7.3782	0.00	65.81	0.6128	11.0372	59.23	0.9957	0.8094	10.1432
GMI040	2.2733	28302.8	6.7391	0.00	81.88	0.8121	12.5981	45.01	1.2483	1.2811	13.5107
GMI041	1.3024	31392.8	7.3068	49.84	72.11	0.7799	12.9464	0.00	1.3525	0.6649	13.2086
GMI042	1.4937	46828.2	7.5522	50.30	61.79	0.5880	10.3244	161.15	0.9564	0.8334	10.8837
GMI043	1.0260	13081.3	12.5612	0.00	64.46	0.6708	5.3868	70.01	0.9538	0.8211	8.3192
GMI044	0.6638	14353.9	14.5432	0.00	30.04	0.7348	4.3164	20.64	1.0113	0.5179	8.3201
GMI045	0.5171	19974.8	2.7901	0.00	69.93	0.5387	9.3415	42.76	0.5387	0.4740	7.0141
GMI046	0.9072	95115.0	10.6452	29.98	42.39	1.8549	8.5054	0.00	0.8651	0.5472	12.7939
GMI047	0.8861	25779.0	8.0595	23.16	58.93	0.7193	8.5422	0.00	0.9099	0.5849	7.0690
GMI048	1.3054	19333.8	6.9454	0.00	68.00	0.6283	11.6304	106.33	0.8405	0.6985	10.3039
GMI049	0.6803	29137.0	9.0744	0.00	55.92	0.7190	7.0583	0.00	0.8422	0.5953	8.1811
GMI050	0.4876	21785.2	11.8552	0.00	51.88	0.7947	4.2124	0.00	0.7733	0.3954	6.9526
GMI051	0.6342	4974.5	13.7156	0.00	36.37	0.5416	2.3794	40.16	0.8569	0.4947	6.1456

Table F-2 (continued)

anid	Zn	Zr	Al	Ba	Ca	Dy	K	Mn	Na	Ti	V
GMI028	89.78	139.46	87264.6	875.8	35686.0	4.4230	9957.9	194.929	1525.5	5110.2	123.68
GMI029	85.20	164.92	77113.9	927.1	27647.4	4.8738	14162.0	236.096	4280.6	4932.6	84.17
GMI030	83.34	172.56	73002.7	405.6	1286.2	5.3820	6654.5	98.315	1196.9	6093.2	82.67
GMI031	94.68	147.40	80859.9	1329.1	21173.4	4.6858	13944.8	696.647	4888.4	5534.6	96.75
GMI032	85.44	173.27	78106.0	840.5	18578.5	3.8808	12131.1	255.304	4178.5	4731.3	111.27
GMI033	91.86	172.13	81105.6	849.6	24101.9	4.2378	13423.4	298.052	4479.6	5220.4	87.22
GMI034	77.87	179.39	87963.8	920.9	19359.2	3.3036	10455.1	405.175	1578.3	5556.8	109.66
GMI035	64.87	164.65	100726.0	937.9	2148.6	3.4479	14185.2	234.292	1804.5	5918.5	134.47
GMI036	87.08	125.44	85088.9	910.1	61523.6	3.0840	10006.1	120.379	1236.9	5494.1	109.75
GMI037	81.30	147.12	76242.0	946.1	18169.1	3.2975	11014.0	326.881	4057.9	4526.1	109.46
GMI038	88.67	189.85	96120.2	631.6	1337.8	4.5735	18049.3	198.34	3639.2	5899.8	122.59
GMI039	156.47	188.43	73240.0	731.9	25136.4	5.3235	12443.4	212.35	4930.2	5013.4	96.26
GMI040	155.34	179.78	82584.9	748.1	6273.1	8.0062	14052.3	1006.86	3380.2	5649.7	100.03
GMI041	91.15	194.57	94567.5	747.2	1867.6	4.5818	16269.2	614.89	3745.3	5562.5	119.48
GMI042	91.68	208.04	72028.2	1056.0	39648.7	5.0353	12386.3	274.13	4915.1	5369.2	87.96
GMI043	38.63	337.90	41335.0	505.9	443.9	4.3164	14534.8	873.11	4210.5	4126.8	56.88
GMI044	20.80	384.37	28065.7	203.9	624.7	3.5315	3704.7	70.20	909.4	4838.1	47.89
GMI045	48.54	85.36	77917.0	534.3	403.5	1.6471	15451.9	58.11	1051.3	2965.3	79.62
GMI046	175.08	263.76	41487.4	171.5	0.0	3.5699	5335.6	559.92	341.5	4158.2	228.98
GMI047	48.44	209.20	63495.4	340.9	921.7	3.5787	9534.9	44.61	1054.1	4807.6	85.89
GMI048	68.81	180.22	76248.0	697.7	1403.0	4.4562	19948.0	67.58	8535.4	4071.1	94.53
GMI049	32.56	230.35	50702.5	353.1	424.6	2.9444	10836.9	45.05	2403.2	3966.5	70.67
GMI050	23.66	310.55	33993.2	329.0	758.8	2.3200	8871.1	47.18	1281.5	4328.9	55.13
GMI051	17.66	349.38	16573.5	374.2	329.6	3.1000	8618.0	195.35	1592.0	3731.3	24.69