

Foreword	11
Preface	13
Acknowledgement	15
List of Abbreviations	17
INTRODUCTION	19
REVIEW OF THE PROBLEM	21
TERMINOLOGY	23
GENERAL CHARACTERISTICS OF CAVE/KARST FILL	25
GEOGRAPHY, GEOLOGY AND KARST IN SLOVENIA	27
GEOGRAPHY	27
GEOLOGY	29
KARST	31
PALAEOMAGNETIC METHODS AND MAGNETOSTRATIGRAPHY	33
PALAEOMAGNETISM OF KARST SEDIMENTS	35
Historical Review	35
The History of Palaeomagnetic Research of Karst Sediments In Slovenia	37
FIELD PROCEDURES	38
LABORATORY PROCEDURES	41
PROCESSING	42
OTHER METHODS	45
MINERALOGICAL ANALYSES	45
X-ray Analysis	45
Thermal Analysis	45
EDAX Analysis	45
Heavy Mineral Analysis	45
TH/U DATING	46
PALAEONTOLOGY	46
Mammalian Stratigraphy	46
Palynology	46
THE STUDY SITES	47
KARST AREAS IN SLOVENIA	52
Geology and Geomorphology of The Dinarski Kras	52
Kras	52

Nabrežinski Kras.....	53
Divaški Kras	54
Karst of Matarsko Podolje.....	56
Podgorski Kras	56
Karst of Notranjska	56
Postojnski Kras.....	58
Slavenski Ravnik.....	60
Karst of Križna Jama.....	60
Dolenjski Kras.....	60
Geology and Geomorphology of Alpine and Isolated Karsts.....	60
Julian Alps.....	60
Kamnik-savinja Alps	63
Ponikovski Kras	63
Velenje Basin	63
ITES	66
Črnotiče Quarry	66
Site Location and Characteristics.....	66
Črnotiče I.....	68
Profile Location and Characteristics	68
Lithology	68
Mineralogical and Chemical Analyses.....	70
Palaeomagnetic Results	70
Palaeontology	73
Discussion of Results	73
Črnotiče II.....	74
Profile Location and Characteristics	74
Lithology.....	74
Main Profile.....	75
Right Profile.....	75
Upper Part	76
Palaeomagnetic Results	76
Palaeontology	78
Marifugia Cavatica	79
Mammalian Remains.....	80
Non-mammalian Rests.....	81
Discussion of Results	81
Discussion of Results From Both Profiles.....	82
Briščiki	83
Site Location and Characteristics.....	83
Profile	84
Lithology	84
Palaeomagnetic Results	84
Discussion of Results	85
Kozina Profile	87
Site Location and Characteristics.....	87
Profile	87
Lithology	87
Palaeomagnetic Results	87
Palynology	88
Discussion of Results	89
Divača Profile	92
Site Location and Characteristic	92
Profile	92

Lithology.....	93
Mineralogy	94
Palaeomagnetic Results	94
Palynology	95
Discussion of Results	95
Jama pod Kalom	97
Site Location.....	97
Profile	98
Lithology.....	98
Mineralogy	98
Palaeomagnetic Results	98
Th/U Dating	99
Discussion of Results	101
Grofova Jama	103
Site Location and Characteristics.....	103
Profiles.....	104
Lithology.....	104
Mineralogy	106
Palaeomagnetic Results	106
Discussion of Results	108
Divaška Jama	111
Site Location and Characteristics.....	111
Profile	112
Lithology.....	112
Mineralogy	113
Palaeomagnetic Results	114
Th/U Dating	115
Discussion of Results	116
Trhlovca	117
Site Location and Characteristics.....	117
Profile	118
Lithology.....	118
Mineralogy	120
Palaeomagnetic Results	121
Palynology	121
Discussion of Results	121
Račiška Pečina	124
Site Location and Characteristics.....	124
Profile	125
Lithology.....	125
Mineralogy	126
Palaeomagnetic Results	127
Palaeontology.....	129
ESR Dating	130
Discussion of Results	130
Pečina v Borštu	132
Site Location and Characteristics.....	132
Dome-like Stalagmite.....	133
Palaeomagnetic Results	133
Fold Test.....	134
Th/U Dating	136
Discussion of Results	136
Križna Jama	137

Site Location and Characteristics.....	137
Križna Jama I.....	139
Profile Location.....	139
Lithology.....	139
Mineralogy.....	140
Palaeomagnetic Results.....	141
Th/U Dating.....	143
Discussion of Results.....	143
Križna Jama II.....	145
Profile Location.....	145
Lithology.....	145
Mineralogy.....	146
Palaeomagnetic Results.....	147
Discussion of Results.....	148
Planinska Jama	151
Site Location and Characteristics.....	151
Profile.....	151
Lithology.....	151
Mineralogy.....	152
Palaeomagnetic Results.....	152
Discussion of Results.....	153
Postojnska Jama	156
Site Location and Characteristics.....	156
Spodnji Tartarus North.....	158
Profile Location.....	158
Lithology.....	158
Mineralogy.....	160
Palaeomagnetic Results.....	160
Red Profile.....	160
Yellow Profile.....	161
Th/U Dating.....	163
Discussion of Results.....	163
Spodnji Tartarus South.....	164
Profile Location.....	164
Lithology.....	164
Palaeomagnetic Results.....	165
Th/U Dating.....	167
Discussion of Results.....	169
Spodnji Tartarus, "White Sandstone".....	169
Profile Location.....	169
Lithology.....	169
Mineralogy.....	169
Palaeomagnetic Results.....	169
Discussion of Results.....	169
Umetni Tunel I.....	170
Profile Location.....	170
Lithology.....	170
Mineralogy.....	170
Palaeomagnetic Results.....	170
Discussion of Results.....	172
Umetni Tunel II.....	172
Profile Location.....	172
Lithology.....	172

Mineralogy	173
Palaeomagnetic Results	173
Discussion of Results	174
Biospeleološka Postaja	174
Profile Location.....	174
Lithology.....	174
Palaeomagnetic Results	175
Discussion of Results	176
Male Jame	177
Profile Location.....	177
Lithology.....	177
Palaeomagnetic Results	177
Discussion of Results	179
Stara Jama	180
Site Location and Characteristics.....	180
Lithology.....	180
Palaeomagnetic Results	181
Palaeontology.....	182
Discussion of Results	182
Pisani Rov	182
Site Location and Characteristics.....	182
Lithology.....	182
Palaeomagnetic Results	182
Discussion of Results	184
Discussion of Results From Postojnska Jama.....	185
Zguba Jama	187
Site Location and Characteristics.....	187
Profile	188
Lithology.....	188
Palaeomagnetic Results	188
Discussion of Results	191
Markov Spodmol	192
Site Location and Characteristics.....	192
Profile	193
Lithology.....	193
Palaeomagnetic Results	195
Discussion of Results	198
Hrastje	200
Site Location and Characteristics.....	200
Profile	201
Lithology.....	201
Palaeomagnetic Results	201
Discussion of Results	202
Jama pod Babjim zobom	204
Site Location and Characteristics.....	204
Profile	204
Lithology.....	205
Palaeomagnetic Results	206
Discussion of Results	207
Spodmol nad Planino Jezero	208
Site Location and Characteristics.....	208
Profile	209
Lithology.....	209

Palaeomagnetic Results	209
Discussion of Results	211
Snežna Jama	212
Site Location and Characteristics.....	212
Profile	213
Lithology	214
Palaeomagnetic Results	215
Th/U Dating	216
Discussion of Results	217
Tajna Jama	220
Site Location and Characteristics.....	220
Profile	220
Lithology	220
Mineralogy	221
Palaeomagnetic Results	221
Discussion of Results	223
Velenje	225
Site Location and Characteristics.....	225
Profile	226
Lithology	226
Palaeomagnetic Results	226
Discussion of Results	228
DISCUSSION	229
METHODS	230
INTERPRETATION OF THE MAGNETOSTRATIGRAPHIC RESULTS	231
INTERPRETATION OF THE MINERALOGICAL RESULTS	235
SEDIMENTOLOGICAL INTERPRETATIONS	237
DATING CAVE FILL.....	239
PALAEOGEOGRAPHIC BACKGROUND.....	240
DISCUSSION OF THE AGE INTERPRETATIONS.....	243
CONCLUSIONS	251
REFERENCES	253