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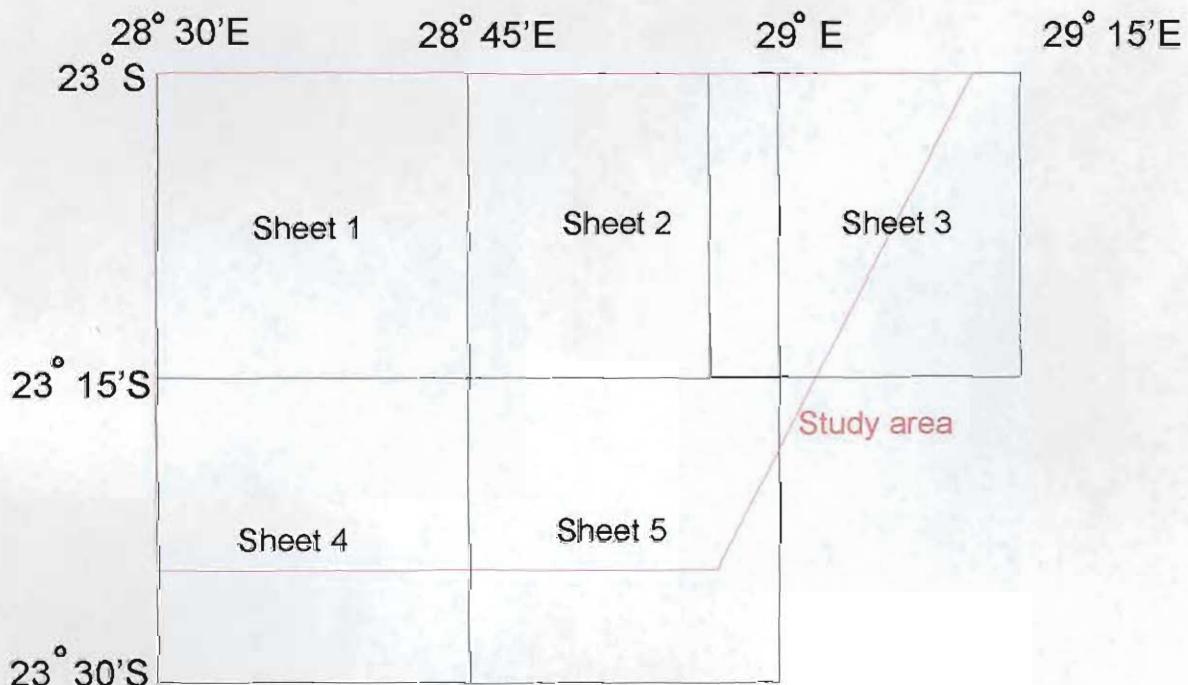
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## **APPENDIX 1: GEOLOGICAL MAPS OF THE STUDY AREA.**

### **Index of Field Map sheets in Appendix 1**



Maps are in folder in back cover

A m	B	C	D	E	F	G %	H %	I %	J %	K %	L	M	N %	O %	P %	Q m	R cm	S cm	T cm	U cm	V cm
87	18					6					24	18	6	18	6	87	3				
86	12					6					18	12	6	12	6	86	2				
85	48					12					60	48	12	48	12	85	4				
84	12					3					15	12	3	12	3	84	4				
83	8					2					10	8	2	8	2	83	4				
82											0	0	0	0	0		82				
81											0	0	0	0	0		81				
80	15					5					20	15	5	15	5	80	3				
79	0					0					0	0	0	0	0		79				
78	30					6					36	30	6	30	6	78	5				
77	25					5					30	25	5	25	5	77	5				
76	10					5					15	10	5	10	5	76	2				
75	4					2					6	4	2	4	2	75	2				
74	2					1					3	2	1	2	1	74	2				
73	65					13					78	65	13	65	13	73	5				
72	35					7					42	35	7	35	7	72	5				
71	48					8					56	48	8	48	8	71	6				
70	60					10					70	60	10	60	10	70	6				
69	12.5					5					17.5	12.5	5	12.5	5	69	2.5				
68	84					12					96	84	12	84	12	68	7				
67	20					5					25	20	5	20	5	67	4				
66	12					6					18	12	6	12	6	66	2				
65	16					4					20	16	4	16	4	65	4				
64	72					12					84	72	12	72	12	64	6				
63	4					2					6	4	2	4	2	63	2				
62	3					1					4	3	1	3	1	62	3				
61	5					1					6	5	1	5	1	61	5				
60	6					2					8	6	2	6	2	60	3				
59	28					7					35	28	7	28	7	59	4				
58	28					7					35	28	7	28	7	58	4				
57	28					7					35	28	7	28	7	57	4				
56	21					7					28	21	7	21	7	56	3				
55	21					7					28	21	7	21	7	55	3				

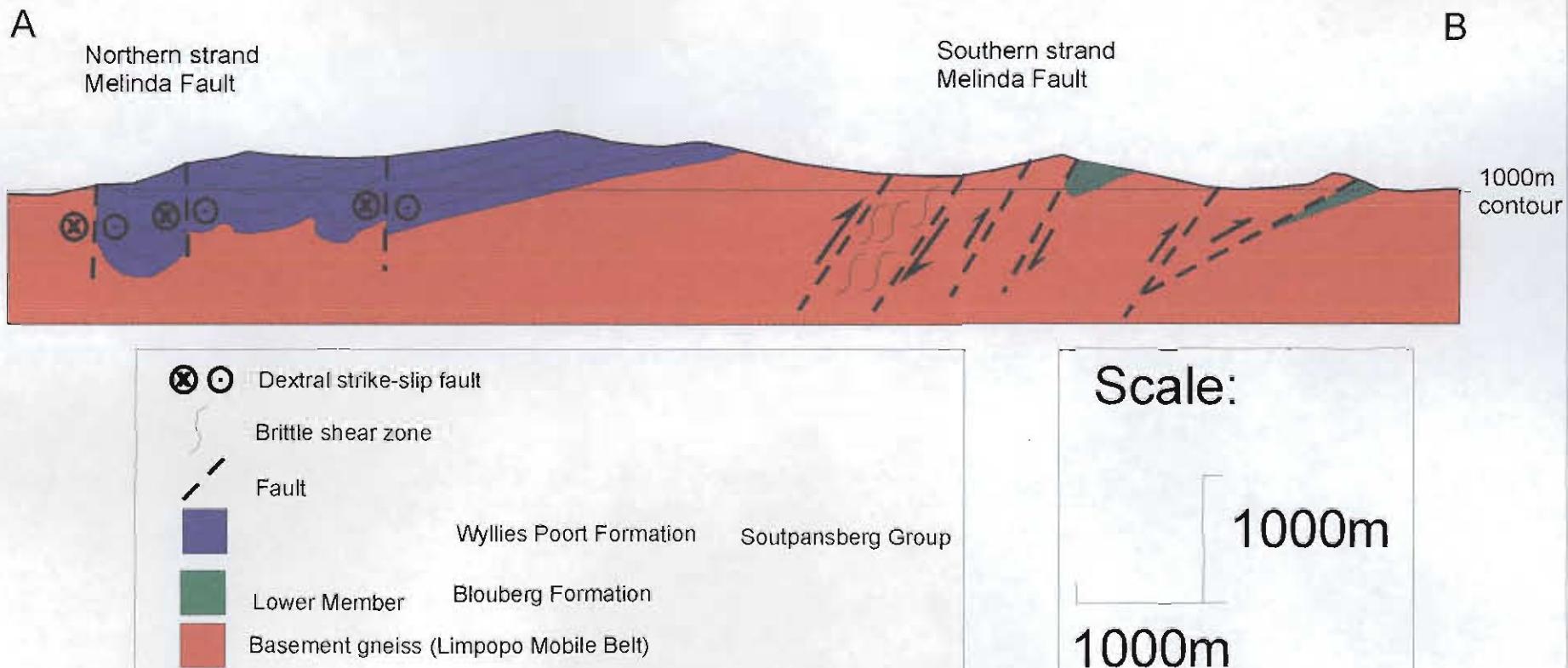
A m	B	C	D	E	F	G %	H %	I %	J %	K %	L	M	N %	O %	P %	Q	R cm	S cm	T cm	U cm	V cm
54	32					8					40	32	8	32	8	54	4				
53	28					7					35	28	7	28	7	53	4				
52	9					3					12	9	3	9	3	52	3				
51	12					4					16	12	4	12	4	51	3				
50	68		28			14		7			117	96	21	45.5	10.5	50	7		4		
49	28		48			7		6			89	76	13	38	6.5	49	4		8		
48	14		45			7		9			75	59	16	30	8	48	2		5		
47	17.5		90			5		9			121.5	107.5	14	54	7	47	3.5		10		
46	6		32			3		8			49	38	11	19	5.5	46	2		4		
45	12		32			4		8			56	44	12	12	6	45	3		4		
44	12.5		30			5		6			53.5	42.5	11	21	5.5	44	2.5		5		
43	7		15			2		5			29	22	7	11	3.5	43	3.5		3		
42	4		24			2		4			34	28	6	14	3	42	2		6		
41	20		55			4		11			90	75	15	37.5	7.5	41	5		5		
40	14		3			4		1			22	17	5	8.5	2.5	40	3.5		3		
39	10		30			5		5			50	40	10	20	5	39	2		6		
38	91					14					105	91	14	91	14	38	6.5				
37	10					4					14	10	4	10	4	37	2.5				
36	24		6			6		3			39	30	9	15	4.5	36	4		2		
35	8		20			4		4			36	28	8	14	4	35	2		4		
34	8		72			4		12			96	80	16	40	8	34	2		6		
33	12		28			3		7			50	40	10	20	5	33	4		4		
32	10	12	36			4	3	9			74	58	16	19	5.3333333 32	2.5	4		4		
31	2	12	28			1	3	7			53	42	11	14	3.6666666 31	2	4		4		
30	19.5	6	30			3	3	5			66.5	55.5	11	19	3.6666666 30	6.5	2		6		
29	60	15	9			10	5	3			102	84	18	28	6	29	6	3	3		
28	72	64	8			11	16	4			175	144	31	48	10.333333 28	6.5	4		2		
27	9	36	84			3	9	12			153	129	24	43	8	27	3	4	7		
26	56	54	10			8	9	5			142	120	22	40	7.3333333 26	7	6		2		
25	20	176	8			5	22	4			235	204	31	68	10.333333 25	4	8		2		
24	6	6				3		3			18	12	6	6	3	24	2		2		
23	30		28			5		7			70	58	12	29	6	23	6		4		
22	9	12	60			3	3	6			93	81	12	27	4	22	3	4	10		
21	4	24	30			1	4	6			69	58	11	19	4	21	4	6	5		
20	12	25	42			3	5	7			94	79	15	26	5	20	4	5	6		

A m	B	C	D	E	F	G %	H %	I %	J %	K %	L	M	N %	O %	P %	Q m	R cm	S cm	T cm	U cm	V cm
19		45	119				5	17			186	164	22	82	11	19	7	7			
18		424	4				53	2			483	428	55	214	27.5	18	8	2			
17		6	24				3	6			39	30	9	15	4.5	17	2	4			
16		56	16				14	8			94	72	22	36	11	16	4	4			
15		36	63	40			6	9	8		162	139	23	46	8	15	6	7	5		
14		16	77	30			4	11	6			123	21	41	7	14	4	7	5		
13		72	42	960	105		6	8	48	7		1179	69	295	17	13	12	6	20	15	
12		6	96	160	70		3	16	16	7		332	42	83	11	12	2	6	10	10	
11		60	110	210	56		10	11	21	7		436	49	109	12.25	11	6	10	10	8	
10		28	180	650	480		7	12	26	32		1338	77	335	19.25	10	4	15	25	15	
9		10	78	5	48		5	13	3	12		141	33	35	8.25	9	2	6	2	4	
8		6	440	12	600		3	22	4	24		1058	53	265	13	8	2	20	3	25	
7		36	130	27	72		9	13	9	9		265	40	66	10	7	4	10	3	8	
6		84	12	14	60		14	2	7	6		170	29	43	7	6	6	6	2	10	
5		100	20	12	96		20	5	4	12		228	41	57	10	5	5	4	3	8	
4		90	18	48	190		15	6	8	19		346	48	87	12	4	6	3	6	10	
3		171	32	24	64		19	8	8	8		291	43	73	11	3	9	4	3	8	
2		470	70	27	35		47	10	9	5		602	71	151	17.75	2	10	7	3	7	
1		110	12	680	740		11	6	24	37		1542	78	386	20	1	10	2	20	20	

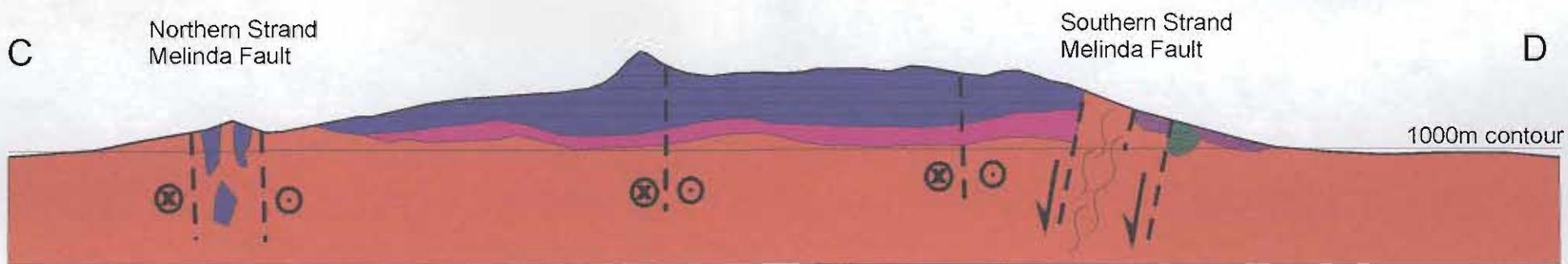
A = Stratigraphic height above base  
 B = Product of i/a and % (Masebe)  
 C = Product of i/a and % (Sadu)  
 D = Product of i/a and % (Tsolametse S)  
 E = Product of i/a and % (Tsolametse N)  
 F = Product of i/a and % (Blackhill)  
 G = % of clasts >1cm (Masebe)  
 H = % of clasts >1cm (Sadu)  
 I = % of clasts >1cm (Tsolametse S)  
 J = % of clasts >1cm (Tsolametse N)  
 K = % of clasts >1cm (Blackhill)

L = Sum of (% of clasts)+(Product x %)  
 M = Total product for specific height  
 N = Total % clasts for specific height  
 O = Average product of i/a x % for specific height (M/n)  
 P = Average % of clasts for specific height (N/n)  
 Q = Stratigraphic height above base  
 R = i/a of largest clast(Masebe)  
 S = i/a of largest clast (Sadu)  
 T = i/a of largest clast (Tsolametse S)  
 U = i/a of largest clast (Tsolametse N)  
 V = i/a of largest clast (Blackhill)

Location of cross-section is shown on Sheet 3, Appendix 1



Location of cross-section is shown on Sheet 2, Appendix 1



Dextral strike-slip fault

Brittle shear zone

Fault

Wyllies Poort Formation

Soutpansberg Group

Coarse sandstone and granulestone Conglomerate

Mogalakwena Formation Waterberg Group

Conglomerate

Lower Member

Blouberg Formation

Basement gneiss (Limpopo Mobile Belt)

Scale:

1000m

1000m

Location of cross-section is shown on Sheet 2, Appendix 1

E

Melinda Fault  
Northern strand

F

Melinda Fault  
Southern strand

1000m contour



↗ Reactivated fault (↗ = most recent movement)

✖ ○ Dextral strike-slip fault

Brittle shear zone

Fault

Wyllies Poort Formation

Soutpansberg Group

Coarse sandstone  
and granulestone

Mogalakwena Formation

Waterberg Group

Conglomerate

Makgabeng Formation

Lower Member

Blouberg Formation

Basement gneiss (Limpopo Mobile Belt)

Scale:

1000m

1000m