

APPENDIX 1

DESCRIPTIVE LITHOLOGIC LOGS FOR
D.D.H. SMG-79-4, SMG-79-5, SMG-79-6
SMG-79-7, SMG-79-8, SMG-79-9
AND SMG-79-10

CORE DESCRIPTIC

HOLE# SMG-79-4 From 7.62m To 18.49m
 Area South Mount Gething By A.T. Armstrong &
N. Duncan

FROM	TO	DESCRIPTION
0	7.62	OVERBURDEN
7.62	10.18	SILTSTONE - light medium grey - few dark medium grey mudstone laminations - scattered worm burrows occasional load casts - very finely cross-bedded.
10.18	12.19	INTERLAMINATED SILTSTONE & MUDSTONE - light medium grey siltstones predominate near the top with increasing mud content toward the bottom - dark medium grey mudstones. Few fine silty clasts in mud - scattered worm burrows predominantly in the upper beds.
12.19	12.34	MUDSTONE - dark grey - few fine silty streaks
12.34	12.59	COALY MUDSTONE - dark grey to black with coal streaks few carbonaceous shear surfaces - occasional fine discontinuous calcite veins.
12.59	12.82	MUDSTONE - black - few scattered - discontinuous calcite veins.
12.82	13.00	COALY MUDSTONE - strongly broken - streaks of bright black coal in dark grey mud.
13.00	13.68	INTERLAMINATED SILTSTONE & MUDSTONE - predominantly light medium grey siltstone at the top - convoluted bedding - mudstone increasing downward - few scattered worm burrows and load casts (bedding at 75° to C/A)
13.68	14.23	MUDSTONE - dark grey
14.23	14.29	COAL - 0.06m canneloid coal - black - dull
14.29	14.33	COALY SILTSTONE - light medium grey - coal streaked
14.33	14.46	COAL - 0.13 metres -
		0.07 metres - black - cleated - often bright
		0.06 metres - canneloid - black, dull
14.46	14.79	MUDSTONE - dark grey
14.79	16.66	SILTSTONE - few thin mudstone laminations - laminations regular to strongly convoluted - cross-bedding common - traces of fine grained pyrite on carbonaceous bedding surfaces.
16.66	18.49	INTERLAMINATED MUDSTONE & SILTSTONE - predominately siltstone at the top and mudstone toward the base - light medium grey siltstone and dark grey mudstone - convoluted bedding to planar - scattered worm burrows - silt occurs as thin laminae and lenses toward the

HOLE# SMG-79-4From 18.49 To 29.26

FROM	TO	DESCRIPTION
18.49	18.92	MUDSTONE - dark grey - few silty laminae and lenses at the base.
18.92	19.45	COAL - 0.53 metres - black - dull to bright - coarse blocky to 19.41
		19.21m to 19.24m - silty coal
		19.41m to 19.15m - black, bright, strongly cleated
19.45	19.60	MUDSTONE - dark grey, coal streaks near the top.
19.60	20.50	MUDDY SILTSTONE - dark grey to brownish grey to light medium grey - generally siltstone with fine mudstone laminations - strongly convoluted bedding.
20.50	21.95	SILTSTONE - light medium grey - distinctly laminate with some well developed cross bedding - few medium size worm burrows - minor mud content bedding angle at 80° to C/A
21.95	22.46	INTERLAMINATED SILTSTONE AND MUDSTONE - predominately siltstone - distinct laminations - cross bedding common - muddy towards base.
22.46	25.30	INTERLAMINATED MUDSTONE AND SILTSTONE - predominately dark grey mudstone with lamination and lenses of light medium grey siltstone.
25.30	25.44	MUDSTONE - dark grey to dark brownish grey mud with numerous shells and shell fragments.
25.44	25.95	CYCLIC SEQUENCE of fine sandstones grading upward to dark grey mudstone.
25.95	27.24	MUDSTONE - dark grey - silty laminations toward base bedding angle at 80° to C/A
27.24	27.28	COAL - 0.04 meters - black - banded bright some excellent cleat in bright bands
27.28	27.38	MUDSTONE - black to dark grey - with coaly streaks
27.38	27.65	INTERLAMINATED MUDSTONE & SILTSTONE - predominately dark grey mudstone - convoluted bedding siltstone lenses.
27.65	27.91	INTERLAMINATED SILTSTONE & MUDSTONE - predominately siltstone convoluted bedding - cross bedding
27.91	29.26	CYCLIC SEQUENCE of fine sandstones grading upward to dark grey mudstones. At top of sequence have siltstone lenses in mudstone.

HOLE#

SMG-79-4

From 29.26

To

37.64

FROM	TO	DESCRIPTION
29.26	29.29	CARBONACEOUS MUDSTONE - with slickensides along carbonaceous surfaces - black.
29.29	30.04	Fine grained - salt and pepper sandstone - soft, so not quartzitic - could be tuffaceous.
30.04	30.16	MUDSTONE - black with coally streaks.
30.16	30.23	COAL - 0.07 medium - dull canneloid - black
30.23	30.32	MUDSTONE - black - with coaly streaks and claystone - brown toward base.
30.32	30.56	INTERLAMINATED MUDSTONE & SILTSTONE - predominately mudstone.
30.56	32.62	Cyclic Sequence of fine grained sandstone grading upward to mudstone. Convolute bedding and minor cross bedding.
32.62	33.18	SANDSTONE - salt and pepper - fine grained - fairly massive - some faint cross bedding.
33.18	33.67	MUDSTONE - dark grey - somewhat carbonaceous toward top - calcite veinlets scattered throughout.
33.67	35.45	INTERLAMINATED SILTSTONE & MUDSTONE - predominately siltstone - minor fine grained, salt and pepper sandstone lenses - minor cross bedding - minor worm burrows toward base - becoming muddier toward base.
35.45	36.36	INTERLAMINATED MUDSTONE & SILTSTONE - predominately mudstone - some siltstone lenses - mudstone increases toward base. Mudstone black to dark grey - siltstone light medium grey bedding at 80° to C/A.
36.36	36.80	MUDSTONE - black with coaly streaks
36.80	36.97	COAL - 0.17 metres - black - dull with bright bands disseminated pyrite approximately 0.5% very fine-minor calcite
36.97	37.15	MUDSTONE - dark grey to dark brown-grey - mud clasts within mudstone - highly disturbed - upper contact with coal is regular and at 85° to C/A - lower contact with coal is irregular
37.15	37.64	COAL - 0.49 metres 0 black 0 dull with bright vitrain bands toward top - becoming brighter toward base with high vitrain content at base, for lower 0.07m. and well developed cleat

HOLE#

SMG 79-4

From 37.64

To 45.61

FROM	TO	DESCRIPTION
37.64	39.26	MUDSTONE - dark grey - with coal streaks toward top - increasing siltstone laminations toward base - basal laminations are somewhat convoluted.
39.26	39.32	SANDSTONE - fine grained - salt and pepper
39.32	40.42	INTERLAMINATED SILTSTONE AND MUDSTONE with fine grained sandstone flutes minor cross laminations and convoluted bedding.
40.42	41.00	INTERLAMINATED MUDSTONE & SILTSTONE - predominately mudstone - with siltstone lenses.
41.00	41.30	MUDSTONE - dark grey to black - with coal streaks at 41.19 to 41.21m. - sandstone with coal chips
41.30	41.85	INTERLAMINATED SILTSTONE AND MUDSTONE - predominantly light-medium grey siltstone - mudstone dark medium grey, bedding at 80° to C/A.
41.85	42.39	SANDSTONE - laminated - salt and pepper - minor mudstone and siltstone laminations - minor convoluted bedding - cross bedding
42.39	42.95	INTERLAMINATED MUDSTONE & SILTSTONE - predominately light medium grey siltstone - highly convoluted bedding, minor sandstone lenses and siltstone lenses
42.95	43.09	COAL - 0.14 metres - 0.02 metres - dull - canneloid - 0.06 metres - bright - black vitrainous - well developed cleat in one direction.
43.09	43.22	MUDSTONE - black - coal laminations and streaks - minor calcite
43.22	43.60	INTERLAMINATED SANDSTONE & SILTSTONE - predominately fine grained salt and pepper sandstone - becoming sandier toward base-convoluted lamination.
43.60	43.91	SANDSTONE - salt and pepper - fine grained - minor laminations, minor cross bedding.
43.91	44.47	INTERLAMINATED SANDSTONE, SILTSTONE & MUDSTONE - predominately light-medium grey siltstone - minor convoluted laminations
44.47	44.73	MUDSTONE - dark grey - with sandstone - salt and pepper bed from 44.57m to 44.59m.
44.73	45.61	SANDSTONE - salt and pepper - minor laminations - mudstone laminations toward base.

HOLE# SMG 79-4

From 45.61 To 53.43

FROM	TO	DESCRIPTION
45.61	45.98	INTERLAMINATED SANDSTONE, SILTSTONE & MUDSTONE - predominately mudstone - dark grey - mudstone increasing toward base - convoluted laminations possibly some bioturbation.
45.98	47.46	BIOTURBATED SANDSTONE & MUDSTONE units - well developed worm burrow - sandstone salt and pepper, mudstone-dark grey.
47.46	48.33	SANDSTONE - fine grain - salt and pepper - minor mudstone laminations - convoluted laminations - minor worm burrows.
48.33	48.54	INTERLAMINATED SANDSTONE & MUDSTONE - somewhat convoluted minor coal streaks.
48.54	49.03	COAL 0.49 metres - 0.10 metres - dull canneloid with bright vitrain - black bands. - 0.05 metres (50% recovery) - bright vitrain - well developed cleat - black - 0.24 metres - dull fusain-clarain with vitrain bands - black - 0.10 metres - bright - vitrain rich - well developed cleat
49.03	49.31	MUDSTONE - dark grey to black - coal steaks
49.31	49.57	INTERLAMINATED MUDSTONE & SILTSTONE - predominately dark medium grey mudstone - siltstone laminae are light medium grey - minor lenses of siltstone - disseminated coaly debris, fine grained.
49.57	49.71	INTERLAMINATED SANDSTONE & MUDSTONE - highly bioturbated - pronounced worm burrows - sandstone is salt and pepper grey and fine grained - mudstone is dark medium grey
49.71	51.38	INTERLAMINATED SANDSTONE, SILTSTONE & MUDSTONE - fine grained salt and pepper sandstone predominant toward top - mudstone increasing toward base dark medium grey - minor bioturbation - minor sandstone lenses (flutes) in basal section.
51.38	53.43	HIGHLY BIOTURBATED SANDSTONE, SILTSTONE & MUDSTONE - sandstone fine grained, salt and pepper grey - mudstone dark medium grey - minor claystone inclusion mudstone increasing toward base where have only minor sandstone lenses - sandstone predominant towards top

HOLE#

SMG 79-4

From 53.43 To 61.74

FROM	TO	DESCRIPTION
53.43	55.36	INTERLAMINATED SILTSTONE & MUDSTONE - siltstone is light medium grey - mudstone is dark grey - minor worm burrows - predominately siltstone - cross bedded - load structures - convoluted bedding toward base - bedding @ 80° to C/A. minor graded laminae from very fine sandstone to mudstone - siltstone content increases toward top - minor pyrite rich laminae at base.
55.36	56.60	INTERLAMINATED SILTSTONE & SILTY MUDSTONE - Siltstone predominant - mudstone increasing toward base - cross laminations - minor worm burrows - minor lead structures - convoluted and bioturbated bedding toward base.
56.60	58.09	INTERLAMINATED MUDSTONE & SILTSTONE - mudstone is dark medium grey (silty) to dark grey and predominant - siltstone is light medium grey - convoluted bedding - minor sandstone lenses, fine grained, salt and pepper which grade up into siltstone.
58.09	58.13	PYRITE RICH - INTERLAMINATED SILTSTONE & SILTY MUDSTONE - minor siltstone lenses - ripple marks - pyrite nodules toward base as well as disseminated pyrite - pyrite content approximately 20%.
58.13	58.43	COAL - 0.03 metres, black - bright with very bright vitrain bands - poorly developed cleat - pyrite disseminated at top of seam.
58.43	58.50	COALY MUDSTONE - black - highly carbonaceous with coal streaks.
58.50	58.63	COAL - 0.13 metres - black - vitrainous at top of seam - canneloid with vitrain bands at base of seam - well developed cleat in highly vitrainous section.
58.63	59.03	MUDSTONE - dark grey to black - minor siltstone lenses - coaly streaks and coal seamlets throughout and decreasing toward base.
59.03	61.74	INTERLAMINATED SILTSTONE & SILTY MUDSTONE - siltstone light medium grey and predominant - mudstone dark medium grey - minor, thin, salt and pepper sandstone beds at top of section with graded bedding - minor worm burrows - cross bedding common.

HOLE#

SMG 79-4

From 61.74 To 72.27

FROM	TO	DESCRIPTION
61.74	62.63	SILTY MUDSTONE & SILTSTONE - Mudstone predominates at top of section grading down into siltstone and mudstone with convoluted, bioturbated laminae. Mudstone is silty and dark medium grey - siltstone is light medium grey.
62.63	65.06	INTERLAMINATED SILTSTONE AND SILTY MUDSTONE - Siltstone predominant and is light medium grey - mudstone is dark medium grey and increasing toward base - cross bedding - minor ripple marks - convoluted bedding at base. Bedding @ 85° to C/A.
65.06	67.67	MUDSTONE - dark grey to black - minor siltstone lenses
67.67	68.04	INTERLAMINATED MUDSTONE AND SILTSTONE - mudstone predominant, dark medium grey and silty - siltstone light medium grey - laminae are convolute and bioturbated - minor siltstone lenses.
68.04	69.51	INTERLAMINATED SILTSTONE & SILTY MUDSTONE - Siltstone predominant at top of section with silty mudstone increasing toward base - cross bedding - convolute bedding in basal section with minor siltstone lenses.
69.51	70.05	MUDSTONE - dark grey to black - minor coaly streaks and plant impressions.
70.05	71.67	INTERLAMINATED MUDSTONE & SILTSTONE - mudstone predominant and dark grey - siltstone light medium grey - convolute bedding - large scale worm burrows - minor salt and pepper, fine grained, thin sandstone beds - coaly streaks toward base of section.
71.67	71.75	COAL - 0.07 metres - black - dull durain-clarain with bright vitrain bands.
71.75	71.88	INTERLAMINATED SILTSTONE & SILTY MUDSTONE - siltstone light medium grey - minor sandstone lenses - graded convolute bedding..
71.88	72.27	SILTY MUDSTONE - dark grey to dark medium grey - minor siltstone lenses.

HOLE#

SMG 79-4

From 72.27 To 77.42

FROM	TO	DESCRIPTION
72.27	73.13	INTERLAMINATED SILTSTONE AND SILTY MUDSTONE - Siltstone predominant and light medium grey - dark medium grey. Silty mudstone increasing toward base cross bedding common - convoluted bedding throughout section - minor, thin, salt and pepper, fine grained sandstone beds at top of section.
73.13	73.60	INTERLAMINATED MUDSTONE AND SILTSTONE - Mudstone predominant and dark medium grey - minor siltstone lenses - minor ripple marks.
73.60	73.62	SANDSTONE - salt and pepper with minor coal chips.
73.62	73.72	COAL - 0.10 metres - black - bright - vitrain bands throughout - worn by drill bit at either end - ie. estimate 50% core loss - poor cleat.
73.72	73.84	COALY MUDSTONE - black to dark grey - abundant plant trash and thin coal seamlets.
73.84	74.30	COAL - 0.46 metres 0.10 - estimate 80% core loss - black - bright high vitrain content - well developed cleat.
74.30	74.95	MUDSTONE - dark grey to black - plant debris - minor graded sandstone to siltstone lenses - minor worm burrows.
74.95	75.93	SILTSTONE - strongly mixed with high mud content - medium grey.
75.93	76.27	INTERLAMINATED SILTSTONE AND SILTY MUDSTONE - minor graded laminae from fine grained sandstone to siltstone - cross bedding common - siltstone is light medium grey - silty mudstone is dark medium grey.
76.27	76.64	INTERLAMINATED SANDSTONE AND SILTSTONE - sandstone is salt and pepper grey - cross bedding common - minor worm burrows - siltstone is medium grey to light medium grey.
76.64	77.42	INTERLAMINATED MUDSTONE AND SILTSTONE - Mudstone is dark medium grey - minor thin sandstone laminae at top of - graded bedding at bottom of section from mudstone to salt and pepper, fine grained sandstone at base of section.

HOLE#

SMG 79-4

From 77.42 To 87.74

FROM	TO	DESCRIPTION
77.42	78.52	SILTY MUDSTONE - dark medium grey - minor siltstone laminae which are light medium grey - muddier toward base and darker in colour with coaly streaks and plant debris at base of section..
78.52	78.54	COAL - 0.02 metres - black - bright - vitrain bands fairly well developed cleat.
78.54	78.70	MUDSTONE - black to dark grey - coaly streaks and plant debris.
78.70	78.91	SANDSTONE - strongly mixed with siltstone - highly bioturbated
78.91	79.41	SILTY MUDSTONE - dark medium grey - carbonaceous plant debris throughout.
79.41	81.47	INTERLAMINATED SANDSTONE, SILTSTONE AND SILTY MUDSTONE - minor calcite - quartz veinlets - sandstone is salt and pepper colour - cross bedding common - numerous 1 to 3 cm. sandstone beds - fine grained increasing silt content toward the base.
81.47	81.79	MUDDY SILTSTONE - weakly banded medium to dark grey - finely laminate with some predominately silty laminae.
81.79	81.81	MUDSTONE - black
81.81	82.20	COAL - 0.39 m. - black - slight metallic sheen - conneloid coal, recovery 100%
82.20	82.36	MUDSTONE - dark brownish grey - strongly convoluted numerous fine irregular calcite veins.
82.36	83.25	COAL - 0.89 m. - black - rubbly breakage - fine indistinct banding - generally durrain with fine streaks of vitrain recovery at 75%
83.25	83.28	MUDSTONE - black
83.28	84.86	INTERLAMINATED MUDSTONE & SILTSTONE - medium to dark grey - well developed very fine cross-bedding in silts - scattered worm burrows.
84.86	86.20	SILTY MUDSTONE - medium grey, generally homogeneous with a few areas of strongly convoluted bedding.
86.20	87.74	SANDSTONE - light medium grey - salt and pepper colouring - massive to indistinctly laminate - mud clasts at 87.60 m.

HOLE#

SMG 79-4

From 87.74

To 98.35

FROM	TO	DESCRIPTION
87.74	88.20	SILTY SANDSTONE - very fine-grained sand with silty component - light medium to medium grey - thinlly laminate.
88.20	90.20	INTERLAMINATE MUDDY SILTSTONE & MUDSTONE - dark medium grey to dark grey - finely laminate to massive - few narrow brownish claystone bands.
90.20	90.36	MUDSTONE - black - few very fine silt streaks carbonaceous toward the base.
90.36	90.63	COAL - 0.27 metres - black - banded - predominately bright with dull streaks - well developed cleat at the base - recovery 100%
90.63	90.80	MUDSTONE - black - fine coal streaks
90.80	91.25	INTERLAMINATED MUDSTONE AND SILTSTONE - light medium to dark grey banded - few plastic deformation features
91.25	92.95	INTERLAMINATED SILTSTONE AND MUDSTONE - predominantly siltstone with darker muddy laminae defining the bedding - light medium grey silts possibly with a minor fine-grained sand component - cross bedded
92.95	94.20	INTERLAMINATED MUDDY SILTSTONE & MUDSTONE - medium to dark grey banded - increasing mud content downward.
94.20	95.12	SILTY MUDSTONE - dark medium to dark grey generally homogeneous with some indistinct laminations - several thin coal streaks at the base
95.12	96.29	SILTSTONE - medium grey - massive to strongly disturbed indistinct laminations
96.25	97.64	INTERLAMINATED SILTSTONE & MUDDY SILTSTONE - light medium to dark medium grey - thinly laminate, cross-bedded, weakly disturbed over short lengths. - minor fine-grained sand component toward the base.
97.64	98.35	MUDDY SILTSTONE - predominantly silt - massive to very finely laminate - medium to dark medium grey - bedding at 83° to C/A.

HOLE#

SMG 79-4

From 98.35 To 111.79

FROM	TO	DESCRIPTION
98.35	99.71	SANDY SILTSTONE - light medium grey - muddy siltstone bands at 98.88 to 98.95 and 99.36 to 99.50 - commonly cross-bedded - some disturbed bedding
99.71	104.64	MIXED TO INTERLAMINATED MUDDY SILTSTONE AND SILTSTONE - medium grey to dark medium grey - strongly disturbed down to 100.30 m. - finely laminated and finely cross-bedded below 100.30m. - bedding toward base at 78° to C/A.
104.64	105.00	MUDSTONE - dark grey - silty at the top - coal streaked toward the base
105.00	107.33	SANDSTONE - fine grained light medium grey - thinly laminate with distinct cross-bedding often defined by carbonaceous debris - occasional widely spaced fine carbonate veins - fine ripple marks and filled scour channels present.
107.33	107.90	INTERLAMINATED SILTSTONE OF MUDDY SILTSTONE - light medium to dark medium grey finely banded - good cross-bedding - scattered worm burrows.
107.90	109.10	SILTY MUDSTONE - dark grey - few fine lenses and laminae of silt.
109.10	109.32	INTERLAMINATED SANDSTONE AND SILTY MUDSTONE - light medium to dark grey - carbonaceous debris on bedding surfaces - disturbed bedding, sands are fine-grained
109.32	109.55	SILTY MUDSTONE - dark medium grey
109.55	109.82	INTERLAMINATED SILTSTONE, SANDSTONE & SILTY MUDSTONE - fine grained sands - banded appearance - moderately disturbed - scattered worm burrows.
109.82	110.87	SILTY SANDSTONE - light medium grey - fine-grained - finely laminate and cross-bedded.
110.87	111.50	INTERLAMINATED TO MIXED MUDSTONE AND SILTSTONE - banded to blotchy appearance - worm burrows - minor sandy laminae.
111.50	111.69	MUDSTONE - dark grey to black - scattered very fine silt lenses.
111.69	111.79	COAL - 0.10 metres - black - dull to bright granular approximately 10% pyrite, recovery 100%.

From 111.79 To 121.44

FROM	TO	DESCRIPTION
111.79	111.98	MUDSTONE - dark grey - silty toward the top.
111.98	112.26	MUDSTONE - SILTSTONE - poorly laminate to moderately mixed - predominantly mudstone.
112.26	113.90	SANDSTONE - minor components of silt and mud as discrete interlaminations and mixed - moderately to strongly disturbed - worm burrows common. - bedding variable at 80° to 85° to C/A.
113.90	115.00	SILTY MUDSTONE - predominantly dark grey mudstone with fine laminae and lenses of light grey siltstone.
115.00	116.10	MUDSTONE - dark grey - fine irregular coal streaks with minor calcite 115.75 to 115.82 m. - coal streaked with carbonaceous shear surfaces 115.00m. to 116.05m.
116.10	119.00	INTERLAMINATED TO MIXED SILTSTONE & SANDSTONE - light grey to dark medium grey - minor component of muddy siltstone increasing toward the base - cross bedded - finely laminate - numerous plastic deformation and load features in disturbed areas - carbonaceous debris on bedding surfaces - worm burrows common.
119.0	119.80	INTERLAMINATED MUDSTONE & SILTSTONE - lenses and fine laminae of light grey silt in a dark grey mudstone - increasing mud downward - bedding at 80° to C/A.
119.80	120.01	MUDSTONE - dark grey
120.01	120.10	COAL - 0.09m? Canneloid - probably a significant amount of mud included - black - dull
120.10	120.22	MUDSTONE - dark brown and coal streak at the top - black toward the base
120.22	120.55	COAL - 0.33 metres - black, bright banded, recovery 35%
120.55	121.44	MUDSTONE - black - few silty lenses at 121m. - scattered fine coal streaks

HOLE#

SMB -79-4

From 121.44 To 127.98

FROM	TO	DESCRIPTION
121.44	122.18	INTERLAMINATED SILTSTONE & SILTY MUDSTONE - light grey to dark medium grey - siltstone predominant at top and base with muddier component in middle of section - graded bedding from very fine grained sandstone to mudstone - cross bedding common - minor worm burrows.
122.18	122.52	MIXED MUDSTONE AND SILTSTONE - dark medium grey to medium grey - numerous load structures - carbonaceous debris on bedding surfaces toward base - coaly streaks at base.
122.52	122.99	COAL - 0.47 metres - black - dull, canneloid at top for 0.10 cm. brighter coal toward base with minor mud splits and well developed cleat - bright vitrainous bands throughout with dull durain. Recovery approximately 75%.
122.99	124.00	MUDSTONE - dark grey to dark medium grey - becoming siltier toward base - coaly debris throughout, but decreasing toward base.
124.00	125.07	INTERLAMINATED TO MIXED SILTSTONE & MUDSTONE - medium grey - cross bedded - minor convoluted bedding at base becoming more mixed toward top of section - siltstone content increasing toward base - minor fine grained sandstone lenses at base of section - minor worm burrows.
125.07	127.80	INTERLAMINATED TO MIXED SANDSTONE AND SILTSTONE - light medium grey to salt and pepper grey - cross bedding common. Most of section is well laminated with short intervals of mixed sediments - sand content increasing toward base - coaly streaks in middle of section becoming coal streaks and chips toward base.
127.80	127.87	COAL - 0.07 metres - black - bright - high vitrain content - well cleated in two directions.
127.87	127.95	MUDSTONE - dark grey to black - carbonaceous - coal debris and streaks.
127.95	127.98	COAL - 0.03 metres - black - bright - well developed cleat - high vitrain content with bright vitrain bands.

HOLE#

SMG - 79-4

From 127.98

To 135.02

FROM	TO	DESCRIPTION
127.98	128.59	MUDSTONE - dark grey - coal chips and streaks throughout - minor fine siltstone laminae.
128.59	128.65	COAL - 0.06 metres - black - dull canneloid coal with significant mud content - minor disseminated pyrite, small silty laminae toward base.
128.65	129.23	INTERLAMINATED SANDSTONE AND SILTSTONE - predominantly salt and pepper sandstone - cross bedded - minor mudstone laminae - graded laminae - disseminated pyrite throughout section
129.23	130.86	INTERLAMINATED SILTSTONE AND MUDSTONE - predominantly light medium grey siltstone - mud content increasing toward base - well laminated and cross bedded at top of section with laminae becoming convolute toward base and displaying load structures - minor worm burrows.
130.86	131.69	MUDSTONE - dark grey to dark medium grey - minor siltstone lenses throughout - becoming siltier toward base - basal section has abundant siltstone - sandstone lenses - plant debris throughout section.
131.69	132.89	MUDSTONE - dark grey to black - coaly debris throughout pyrite nodule at 132.38m. approximately 1cm. diameter - coal streaks at base of section - numerous plant imprints in basal section.
132.89	133.05	COAL - 0.16 metres - black - bright - vitrainous - well developed cleat in two directions - core highly broken
133.05	133.49	MUDSTONE - dark grey to black - coal streaks throughout
133.49	133.83	MIXED SILTSTONE AND MUDSTONE - mudstone predominant medium grey - no distinct laminations - load structures
133.83	135.02	INTERLAMINATED SILTSTONE AND SILTY MUDSTONE - light medium grey to medium grey - cross bedded - minor convoluted laminae coaly debris (plant debris) at top of section - siltstone predominant.

CORE DESCRIPTIC

HOLE # SMG 79-4 From 135.02 To 140.04
 Area _____ By _____

FROM	TO	DESCRIPTION
135.02	136.63	INTERLAMINATED TO MIXED SILSTONE AND MUDSTONE - siltstone predominant at top of section with increasing mud content toward base until mudstone predominates - light medium grey to dark medium grey (top to bottom) - laminae are convolute with some cross bedding - load structures - abundant plant debris - siltstone lenses abundant in basal portion of section.
136.63	136.79	MUDSTONE - dark grey - minor siltstone laminae.
136.79	136.82	SANDSTONE - very fine grained - light medium grey to light grey containing abundant coal chips.
136.82	136.89	INTERLAMINATED MUDSTONE AND SILSTONE - mudstone predominant siltstone lenses.
136.89	137.06	COAL - 0.17 metres - black, dull, high mud content - fusinite with few vitrain bands.
137.06	137.50	MUDSTONE - dark grey to black - coal chips and streaks throughout - abundant plant debris.
137.50	137.71	MIXED MUDSTONE AND SILSTONE - poorly developed, convolute laminae - load structures - minor worm burrows - mudstone predominant dark medium grey to medium grey.
137.71	138.08	INTERLAMINATED SILSTONE AND MUDSTONE - siltstone predominant - light medium grey - cross bedded - minor convolute bedding - disseminated pyrite.
138.08	139.22	INTERLAMINATED SANDSTONE AND SILSTONE - sandstone is salt and pepper colour - cross bedded - abundant disseminated pyrite - pyritiferous calcite veins cut section - minor mudstone laminae - sandstone predominant.
139.22	139.62	SANDSTONE - salt and pepper - cross bedded - fine to fine-medium grained.
139.62	139.77	INTERLAMINATED MUDSTONE AND SILSTONE - dark medium grey - mudstone predominant - graded siltstone lenses.
139.77	140.04	INTERLAMINATED SANDSTONE AND SILSTONE - sandstone predominant and salt and pepper colour - finely laminated bedding at 80° to C/A.

HOLE#

SMG 79-4

From 140.04 To 148.31

FROM	TO	DESCRIPTION
140.04	142.07	INTERLAMINATED MUDSTONE AND SILTSTONE - mudstone predominant and dark grey - siltstone laminae are fine - minor silty lenses - mudstone content increases toward bottom of section - minor plant debris.
142.07	142.65	MUDSTONE - dark grey to black
142.65	142.74	COAL - 0.09 metres - black - duller at top with increasing brightness and vitrain bands toward base. - well developed cleat at base.
142.74	142.99	MIXED MUDSTONE AND SILTSTONE - coal chips and debris throughout - very poorly developed laminae - load structures - dark medium grey.
142.99	144.52	INTERLAMINATED SILTSTONE AND SILTY MUDSTONE - light medium grey siltstone predominant - cross bedded - consolute laminae toward bottom of section with minor ripple marks - mud content increasing toward base.
144.52	145.27	MUDSTONE - dark grey - minor graded siltstone lenses and minor siltstone laminae - abundant plant debris - minor convolute bedding toward top of section.
145.27	145.30	BONEY COAL - 0.03 black - dull - high mud content - minor vitrain bands.
145.30	145.52	MUDSTONE - dark grey to black - coal streaks and minor tiny seamlets at top of section.
145.52	148.13	INTERLAMINATED SANDSTONE AND SILTSTONE - salt and pepper. Sandstone predominant - cross bedded - worm burrows at top of section - minor mudstone laminae - minor convolute bedding - laminated siltstone mudstone clast at 147.64 approximately 4 cm. x 2 cm. - sand content increasing and coarser toward base - fine grained sandstone at top of section, medium - fine grained sandstone at base - minor mud chips at base - foreset bedding. Bedding at 80° to C/A.
148.13	148.31	INTERLAMINATED SILTSTONE AND MUDSTONE - light medium grey siltstone predominant - mudstone is dark medium grey - cross bedded - minor worm burrows - graded bedding - minor plant debris in mudstone.

HOLE#

SMG 79-4

From 148.31 To 154.25

FROM	TO	DESCRIPTION
148.31	148.45	INTERLAMINATED SILTSTONE AND SANDSTONE - light medium grey siltstone predominant - sandstone is salt and pepper colour - minor cross bedding - small scale channels.
148.45	148.52	INTERLAMINATED SILTSTONE AND MUDSTONE - light medium grey siltstone predominant - minor worm burrows - graded bedding - minor sandstone lenses - sandstone from 148.50 to 148.51 m. salt and pepper, fine grained.
148.52	148.57	SANDSTONE - salt and pepper - cross bedding - fine grained
148.57	151.18	INTERLAMINATED SILTSTONE AND MUDSTONE - predominantly light medium grey siltstone at top of section grading down into predominantly dark grey mudstone at bottom of section - cross bedded - convolute bedding - middle section is highly mixed and bioturbated with abundant worm burrows and load structures - minor graded fine grained, salt and pepper sandstone lenses Siltstone occurs in lenses and very fine laminae at base of section.
151.18	151.20	INTERLAMINATED SILTSTONE AND SILTY MUDSTONE - light medium grey with salt and pepper, fine grained sandstone lenses - siltstone predominant.
151.20	151.23	COAL - 0.03 metres - black - dull - with few bright vitrain bands - mainly durain-fusain.
151.23	152.07	MUDSTONE - dark grey - minor siltstone laminae - minor coal streaks - plant debris - some convolute bedding.
152.07	152.31	MIXED SILTSTONE AND MUDSTONE - carbonaceous - slicken sides - bioturbated, medium grey color
152.31	153.78	INTERLAMINATED MUDSTONE AND SILTSTONE - coaly streaks plant debris - light medium grey color - worm burrows cross bedding - convolute bedding.
153.78	154.23	SILTY MUDSTONE - dark medium grey - minor siltstone lenses - minor plant debris
154.23	154.25	COAL - 0.02m. - black - dull - vitronous bands - high mud content.

HOLE#

SMG 79-4

From 154.25 To

FROM	TO	DESCRIPTION
154.25	155.36	One metre core loss - mudstone - dark grey - plant debris.
155.36	155.40	COAL - 0.04 metre- black - dull - vitrain bands.
155.40	156.24	SILTY MUDSTONE - medium grey - plant debris coal streaks - fine siltstone laminae - minor siltstone lenses - silt content increasing toward base.
156.24	156.60	INTERLAMINATED SILTSTONE AND MUDSTONE - light medium grey - convolute bedding - cross bedding - minor worm burrows - minor coaly streaks - plant debris.
156.60	156.77	MUDSTONE - dark grey - coal streaks - abundant plant debris.
156.77	157.31	INTERLAMINATED SILTSTONE AND SILTY MUDSTONE - convolute bedding - light medium grey color - cross bedding - minor worm burrows - abundant plant debris.
157.31	158.04	INTERLAMINATED TO MIXED SILTSTONE AND MUDSTONE - medium grey - convolute bedding - minor worm burrows - load structures - plant debris - minor coaly streaks.
158.04	158.31	MUDSTONE - dark grey - coal streaks - slickensides plant debris.
158.31	158.57	SILTSTONE - light grey (medium) - coaly streaks - convolute bedding - sandstone lenses - minor mudstone laminae - minor disseminated pyrite.
158.57	159.25	LAMINATED SANDSTONE - salt and pepper - minor mudstone laminae - fine grained sandstone - cross bedding - minor coaly streaks.
159.25	159.87	INTERLAMINATED TO MIXED SILTSTONE AND MUDSTONE BIOTURBATION - worm burrows - minor sandstone beds convolute bedding - bedding at 80° to C/A.
159.87	160.81	INTERLAMINATED SANDSTONE AND MUDSTONE - salt and pepper sandstone - slickensides along carbonaceous surfaces in mudstone laminae - coaly streaks - mudstone content is increasing towards the base - minor cross bedding - graded bedding.
160.81	162.67	INTERLAMINATED SILTSTONE, MUDSTONE, AND SANDSTONE - mudstone is dark medium grey and predominant - siltstone is light medium grey and occurs as fine laminae - sandstone is salt and pepper and occurs as lenses and small channel-type bodies - cross-bedded - graded bedding - worm burrows toward base of section - coaly streaks toward base of section.

HOLE#

SMG 79-4

From 162.67 To 170.72

FROM	TO	DESCRIPTION
162.67	162.81	COAL - 0.14 metres - black - bright - vitrain bands - well developed cleat in two directions.
162.81	162.87	MUDSTONE - dark grey to black - highly carbonaceous - coal streaks.
162.87	165.71	INTERLAMINATED SILTSTONE AND MUDSTONE - light medium grey siltstone predominant at top of section - mud content increasing towards base of section - minor sandstone lenses - cross bedded - worm burrows increasing toward base of section - graded bedding - minor coaly streaks at base.
165.71	166.42	MUDSTONE - dark grey carbonaceous - abundant plant debris - minor siltstone lenses at top of section - pyrite nodules at base.
166.42	166.47	COAL - 0.05 metres - black, dull, canneloid
166.47	166.50	MUDSTONE - dark grey to black - coal streaks - slicken sides on roof and foot of section.
166.50	166.57	COAL - 0.07 metres - black - bright vitrain bands in duller fusain - durain.
166.57	166.92	MUDSTONE - dark grey - coal streaks - slickensides on roof and foot of section.
166.50	166.57	COAL - 0.07 metres - black - bright vitrain bands in duller fusain - durain.
166.57	166.92	MUDSTONE - dark grey - coal streaks at top of section - abundant plant debris - silt content increasing toward base.
166.92	168.05	SILTSTONE AND SILTY MUDSTONE (Interlaminated) - medium grey - cross bedded - convoluted bedding - minor worm burrows - minor salt and pepper sandstone lenses.
168.05	168.07	COAL - -0.02 metres - black - dull with bright vitrain blebs - high mud content.
168.07	170.13	SILTSTONE AND SILTY MUDSTONE (Interlaminated) - medium grey - cross bedded - graded bedding - minor coaly streaks - worm burrows - convolute bedding - silt content decreasing toward base.
170.13	170.72	MUDSTONE - silty - dark medium grey - siltstone lenses and scattered thin laminae - minor ripple works and convolute bedding - coal streaks - plant debris

HOLE#

SMG 79-4

From 170.72 To 178.88

FROM	TO	DESCRIPTION
170.72	170.98	SANDSTONE & SILTSTONE - mixed - poorly laminated - worm burrows minor mudstone laminae - light medium grey.
170.98	171.44	MUDSTONE AND SILTSTONE - (Interlaminated) - cross bedding - load structures - minor worm burrows - minor graded bedding - medium grey - mudstone content increasing toward base - minor plant debris.
171.44	171.68	MUDSTONE - dark grey - minor siltstone lenses and laminae at top of section - coal streaks at base of section, slickensides at base.
171.68	171.77	COAL - 0.09 metres - black - bright - highly cleated abundant vitrinite - highly broken and crushed in core slickenside at base.
171.77	172.83	MUDSTONE - dark grey - coal streaks and small seams - highly carbonaceous - abundant plant debris - minor siltstone lenses at base of section.
172.83	173.02	SANDSTONE AND SILTSTONE - (Mixed) - poorly laminated - worm burrows - medium grey.
173.02	173.72	SILTSTONE AND SILTY MUDSTONE (Interlaminated) - coaly streaks - cross bedded - convoluted bedding - minor worm burrows, minor salt and pepper sandstone lenses.
173.72	173.94	SANDSTONE & SILTSTONE (Interlaminated) - salt and pepper coloured sandstone predominant - minor coaly streak - minor worm burrows - cross bedded - graded bedding.
173.94	175.00	MUDSTONE & SILTSTONE (Interlaminated) - convolute bedding - minor plant debris - siltstone lenses - mud content increasing toward base.
175.00	178.27	MUDSTONE - dark grey to black - highly carbonaceous at base - plant debris - pyrite laminations at base.
178.27	178.33	COAL - 0.06m. - black - duller fusain with bright vitrain bands poorly developed cleat.
178.33	178.55	MUDSTONE - dark grey carbonaceous.
178.55	178.88	MUDDY SILTSTONE - dark medium grey - mottled appearance

HOLE#

SMG 79-4

From 178.88 To 191.18

FROM	TO	DESCRIPTION
178.88	180.58	SILTSTONE & MUDSTONE (Interlaminated) - predominately light medium grey siltstone, thinnly laminated with distinct fine cross bedding, some convoluted bedding at the top. Many thin interlamination of dark grey mudstone.
180.58	181.65	MUDSTONE & SILTSTONE (Interlaminated) - predominantly dark grey to black mudstone with thin light medium siltstone laminations and blob-like lenses.
181.65	181.72	COALY MUDSTONE - dark grey with black coal streaks
181.72	182.42	COAL - 0.70m. - black, banded vitrainite with some durain and fusain. Recovery 10%
182.42	182.70	MUDSTONE - dark brownish-grey at the top, becoming dark grey downward - 182.42 to 182.57 - carbonaceous, strongly convoluted - disseminated fine-grained pyrite throughout - lacey calcite veining.
182.70	183.16	MUDSTONE & SILTSTONE (Interlaminated) - predominately dark grey mudstone at the top with silts content increasing downward. Siltstone as thin laminations.
183.16	184.07	SANDSTONE - fine-grained, light medium grey with minor thin interlamination of siltstone and mudstone. Bedding planar to moderately disturbed. scattered worm burrows.
184.02	184.60	SILTSTONE & MUDSTONE (Interlaminated) - predominately light medium grey siltstone with mud content increasing downward. Few small sandy laminae and lenses - numerous worm burrows.
184.60	186.63	MUDSTONE - dark grey to black - increasing silt content toward the base.
186.83	191.18	SANDSTONE, SILTSTONE & MUDSTONE (Including mixtures) - gradational from the previous mudstone through siltstone to sandstone then as discrete thin beds and laminations. Sandy with silty mudstone and mudstone laminations at the top to interbedded and interlaminated mudstone, siltstone, muddy siltstone and fine-grained sandstone laminations in the middle to fine-grained,

Cont'd ...

HOLE #

SMG 79-4

From 191.18 To 203.10

FROM	TO	DESCRIPTION
186.83	191.18	Cont'd
		light grey beds and lenses of sandstone in black mudstone at the base.
		- well developed worm burrows in the finer sediments
		- scour channels common - few tan colour claystone bands.
		- bedding at 80° to C/A.
191.18	194.87	SANDSTONE - light grey, fine grained indistinctly bedded and coarsely cross bedded. Occasionally bedding surface with carbonaceous debris - few thin mudstone bands and more prominently carbonaceous toward the base.
194.87	194.94	COAL - 0.07 metres - bright, black, well developed cleat.
		Recovery about 40%.
194.94	195.48	SILTY MUDSTONE - dark grey - massive with coal streak at the top.
195.48	195.99	MUDDY SILTSTONE - strongly disturbed to well mixed, light medium to medium grey, mottled.
195.99	201.30	SILTSTONE, MUDSTONE, SANDSTONE (Interlaminated) - generally finely laminated with very fine cross-bedding - banded light grey to dark grey - moderately disturbed at the top and strongly convoluted 198.11 to 198.39 m.
		- 200.5 to bottom, mudstone content increased and worm burrows are common.
201.30	201.53	COAL - 0.23m. - black, banded fusain and durain with streaks of vitrain - mainly blocky with some good cleat
		- recovery about 90%.
201.53	201.68	MUDSTONE - black, carbonaceous
201.68	203.06	MUDSTONE & SILTSTONE (Interlaminated) - thin laminae and lenses of light medium grey siltstone in mudstone banded appearance - numerous horizontal worm burrows.
203.06	203.10	COAL - 0.04 metres - black, dull ashy with few bright streaks.

HOLE#

SMG 79-4

From 203.10 To 219.17

FROM	TO	DESCRIPTION
203.10	205.60	SILTSTONE - light medium to medium grey mottled and banded with a minor component of muddy siltstone - few worm burrows.
205.60	207.20	MUDDY SILTSTONE - medium to dark medium grey - mottled and banded with minor amounts of siltstone and mudstone - few small worm burrows at the base.
207.20	208.30	SANDSTONE - fine-grained, light grey - carbonaceous debris on bedding surfaces - medium scale cross-bedding - minor silt content in some laminae.
208.03	208.85	SILTY MUDSTONE - dark grey - massive - increasing silt toward the base.
208.85	214.4	SANDSTONE - light grey. 208.03 to 209.76 massive, very fine-grained, dense, light grey, sandstone 209.76 to bottom - fine-grained, light grey, thinly laminate and finely cross bedded - some bedding surfaces with carbonaceous debris.
214.4	215.42	MUDSTONE & SILTSTONE (Interlaminated) - predominantly black mudstone with thin laminae and lenses of light grey siltstone which diminish in number downward. - strongly pyrite at 215.33 m. - coal streaked 215.34 to 215.42m.
215.42	215.46	COALY MUDSTONE - black
215.46	215.61	MUDSTONE - dark grey
215.61	216.19	SILTSTONE - light medium grey - indistinctly laminate and mottled - minor mud component - worm burrows.
216.19	217.10	MUDSTONE - dark grey - coal streaked 216.70 to 216.88 metres.
217.10	218.18	SANDY SILTSTONE - light medium to medium grey - generally mottled with few indistinct laminae - dispersed fine-grained sand.
218.18	218.54	MUDSTONE & SILTY MUDSTONE (Interlaminated and Mixed) medium to dark grey.
218.54	219.17	SILTY MUDSTONE & MUDSTONE - (Interlaminated and Mixed) light medium to dark grey.

T₀ 222.28

FROM	TO	DESCRIPTION
219.17	220.41	SANDSTONE - finely laminated and with medium scale crossbedding - very fine-grained at the top becoming medium grained at the base - some laminae display graded bedding - minor silt and mud fractions at the top. - Bedding at 80° to C/A.
220.41	221.26	SILTSTONE & SILTY MUDSTONE - (Interlaminated and strong disturbed) - light medium to dark grey 220.74 to 220.85 coaly and coal streaked. 221.04 to 221.15 coaly and coal streaked.
221.26	222.28	MUDDY SILTSTONE - generally mottled dark medium grey. 222.09 to 222.11m. and 221.55 to 221.57 coal streaked.
		END OF HOLE at 222.28 metres.

CORE DESCRIPTION.

HOLE# SMG-79-5 From 0 To 20.20
 Area SOUTH MOUNT GETHING By A.T. Armstrong
J. Ridley

FROM	TO	DESCRIPTION
0	6.70	OVERBURDEN
6.70	8.73	SILTY MUDSTONE - dark grey with mottled appearance - strongly broken core.
8.73	10.78	SANDSTONE AND SILTSTONE (Interlaminated) - fine-grained light grey sandstone interlaminated with light medium to medium grey siltstone - bedding well defined planar to strongly convoluted - some small scale cross-bedding - few scattered worm burrows - silt content with minor mud increasing toward base.
10.78	11.00	MUDSTONE - dark grey with minor silt component.
11.00	12.31	COALY MUDSTONE - dark grey to black mudstone with numerous streaks, lenses and fine seams of coal.
12.31	13.90	SILTY SANDSTONE AND MUDDY SILTSTONE (Interlaminated and Interbedded) - bedding most often irregular to strongly convoluted - light medium grey to dark medium grey.
13.90	14.67	MUDSTONE - moderately silty at the top to coal streaked at the base.
14.67	14.82	COAL - 0.15m - black - strongly broken, blocky recovery - 75%
14.82	15.54	COALY MUDSTONE - dark grey to black with numerous coal streaks.
15.54	16.78	MUDSTONE AND SILTSTONE - predominantly dark grey to black mudstone with fine lenses and laminae of light medium grey siltstone. Siltstone content increases downward. Few scattered worm burrows.
16.78	18.82	SILTSTONE AND MUDDY SILTSTONE - strongly disturbed to mixed - light medium to dark medium grey with a few bands rich in mud.
18.82	19.30	SANDSTONE - fine-grained, light grey, indistinctly thinly laminated.
19.30	20.20	SILTSTONE, SANDSTONE AND MUDSTONE (Interlaminated and Interbedded) - bonded light medium grey to dark medium grey - well developed festoon cross- bedding in silts - scattered worm burrows.

HOLE#

SMG-79-5

From 20.20 To 33.00

FROM	TO	DESCRIPTION
20.20	20.64	MUDSTONE AND SILTSTONE - dark grey to black mudstone with thin laminae and lense of light medium grey siltstone - siltstone decreases downward.
<u>20.64</u>	<u>20.87</u>	<u>COAL</u> - 0.23 metres - canneloid (?) dull sheen - strongly pyritic at the base - recovery 100%
20.87	21.16	MUDSTONE - dark brownish grey - mottled.
<u>21.16</u>	<u>21.75</u>	<u>COAL</u> - 0.69 metres - 0.06m dull, ashy, pyritic, black - recovery 100%
		0.10 metres - ashy, dull black (muddy coal)
		<u>0.53 metres</u> - black, banded generally of durain with fine vitrain streaks - recovery 100%
21.75	24.07	MUDSTONE AND SILTSTONE - (Interlaminated) - well defined laminations of dark grey mudstone and light medium grey siltstone - distinct small scale cross-bedding and fine scattered worm burrows - siltstone content increases toward the base Bedding @ 82° to C/A.
24.07	25.87	SANDSTONE - light to light medium grey - minor silty and silty mudstone bands - small scale cross-bedding and few climbing ripple marks.
25.87	27.71	MUDSTONE - dark grey - few fine silty laminae and lenses near the top.
<u>27.71</u>	<u>27.90</u>	<u>COAL</u> - 0.19 metres - black, banded, ashy.
<u>27.90</u>	<u>28.01</u>	<u>MUDSTONE</u> - dark grey
28.01	32.55	SILTSTONE TO MUDSTONE (Interlaminated) - predominantly finely laminated light medium grey siltstone at the top to predominantly dark grey mudstone at the base (gradational) - banded appearance - well defined small scale cross-bedding in the siltstone - few sand lenses in mudstone toward the base Bedding @ 79° to C/A.
32.55	32.98	MUDSTONE - dark grey to black
<u>32.98</u>	<u>33.00</u>	<u>COAL</u> - 0.02 metres - bright black banded.

HOLE#

SMG-79-5

From 33.00

To 47.14

FROM	TO	DESCRIPTION
33.00	33.21	MUDSTONE - dark brownish grey, mottled - fine lacey calcite veining.
<u>33.21</u>	<u>33.68</u>	COAL - 0.47 metres - bright, black, granular, fine cleated - recovery ~ 10-20%.
33.68	33.83	MUDSTONE - dark grey - few coal streaks near base.
33.83	38.60	SANDSTONE AND MUDDY SILTSTONE - relatively clean light grey fine-grained sandstone with bands of medium grey mottled muddy siltstone.
38.60	41.05	MUDSTONE AND SILTSTONE - (Interlaminated) - predominantly light medium grey siltstone at the top to predominantly dark grey mudstone at the base.
41.05	42.42	SANDY SILTSTONE - minor fine-grained sand content in thinly laminated siltstone - small scale cross-bedding.
42.42	43.68	SILTY MUDSTONE - (Laminated) - banded light medium grey and dark grey - small scale cross bedding in silt bands - small scale load casts and disturbance at bedding - hairline carbonaceous bands in mudstone toward bottom.
43.68	44.98	SANDSTONE, SILTSTONE AND MUDSTONE - (Interlaminated) light grey fine-grained sandstone with several hairline carbonaceous bands - light medium grey siltstone - dark grey mudstone - small scale cross-bedding and load casts - bedding highly disturbed at top grading to only slightly disturbed at bottom - convoluted towards top.
44.98	47.14	SILTSTONE AND MUDSTONE - (Interlaminated) becomes a silty mudstone towards bottom - light grey to light medium grey siltstone (towards bottom) - dark grey mudstone - bedding slightly disturbed at top - several small scale horizontal worm burrows - load casts and cross-bedding in upper third - towards bottom predominantly mudstone with some very fine-grained siltstone - no well defined bands - hairline carbonaceous bands towards bottom.

HOLE#

SMG-79-5

From 47.14

To 52.21

FROM	TO	DESCRIPTION
47.14	47.41	SANDSTONE, SILTSTONE AND MUDSTONE - Interlaminated sandstone, siltstone and mudstone - light to dark grey - moderately disturbed towards top - small scale load casts and folds due to soft sediment deformation.
47.41	48.65	SILTY MUDSTONE - dark grey mostly - some dark medium grey siltstone - no distinct bands - highly disturbed patches of sandstone within mudstone (not in bands) - small scale soft sediment folds.
48.65	49.63	SANDSTONE, SILTSTONE AND MUDSTONE - (Interlaminated) light grey fine-grained sandstone - light medium grey to dark medium grey siltstone - dark grey mudstone - highly disturbed towards top - small scale soft sediment slumping and folding - also small scale load casts and cross-bedding - small scale worm burrows.
49.63	50.29	SANDY MUDSTONE - predominantly dark grey mudstone with some sandstone - no distinct bands - highly disturbed with increasing sand content towards bottom.
50.29	51.22	SANDSTONE, SILTSTONE AND MUDSTONE - (Interlaminated) very fine-grained, light grey sandstone - light medium grey to dark medium grey siltstone - dark grey mudstone - bedding disturbed by bioturbation towards top - dip at ~ 85° towards bottom - small scale load casts and cross-bedding.
51.22	51.82	SILTY MUDSTONE - (Laminated) becoming less silty towards bottom - thin coal streaks within - light medium grey siltstone - dark grey mudstone - slight soft sediment deformation.
51.82	52.21	MUDDY SILTSTONE - (Laminated) - moderately disturbed - medium grey siltstone - dark grey mudstone - small scale load casts - small amount of light medium grey fine-grained sandstone.

HOLE#

SMG-79-5

From 52.21 To 64.28

FROM	TO	DESCRIPTION
52.21	53.84	MUDDY SANDSTONE - (Laminated) - fine-grained, light grey sandstone - dark grey mudstone - some light medium grey siltstone - small vertical worm burrows - small scale cross-bedding and load casts - hairline carbonaceous streaks - mudstone content increases towards bottom and laminae becomes thinner.
53.84	54.38	SILTY MUDSTONE - laminated - siltstone content decreases towards bottom - dark grey mudstone - light medium grey siltstone - hairline carbonaceous streaks - small scale load casts.
54.38	56.05	MUDSTONE - dark grey - slight silt content - no distinct bands - thin coal streaks ~ 1.5cm slight sand content at bottom - no bands or laminae.
56.05	62.03	SANDSTONE, SILTSTONE AND MUDSTONE - (Interlaminated) - very fine-grained, light grey sandstone - medium grey siltstone - dark grey mudstone - laminae vary in thickness - small scale cross-bedding, bioturbation and load casts with flame structures - small scale convoluted bedding - calcite vein infilling in fractures - vuggy and coarsely crystalline - slightly carbonaceous
62.03	62.35	SILTSTONE AND MUDSTONE - (Interlaminated) - moderately disturbed - increasing mudstone content towards bottom - siltstone light grey to light medium grey - mudstone dark grey.
62.34	63.05	MUDSTONE - dark grey - slight siltstone content in hairline laminae.
<u>63.05</u>	<u>63.28</u>	COAL - 0.23 metres - recovery 75% - top canneloid - bottom cleated - dull coal, bright streaks, pyritic at base.
63.28	63.36	MUDSTONE - coal streaked and sand lenses - dark grey.
<u>63.36</u>	<u>63.90</u>	COAL - 0.54 metres - largely dull with a few bright streaks - sheared - recovery 20%
63.90	64.28	MUDSTONE - dark grey - some siltstone towards bottom.

HOLE#

SMG-79-5

From 64.28

To 70.40

FROM	TO	DESCRIPTION
64.28	65.00	SANDY SILTSTONE AND MUDSTONE - (Interlaminated) - highly disturbed - light medium grey siltstone - dark grey mudstone.
65.00	65.59	SANDSTONE AND MUDSTONE - (Interlaminated) - 2 bands of .08m and .13m predominantly sandstone - fine to medium grained light grey - small scale cross- bedding - very thin mudstone laminae - 2 bands of .17m each predominantly mudstone, dark grey - with sandstone and siltstone laminae.
65.59	66.02	MUDSTONE - dark grey - thin siltstone laminae and small sandstone lenses.
66.02	66.58	COAL - 0.56 metres - 50% recovery - black - dull - a few bright streaks.
66.58	66.80	MUDSTONE - coal streaked - dark grey - hairline calcite infilling.
66.80	66.83	COAL - 0.03 metres - 65% recovery - black mostly dull - a few bright streaks - thin calcite infillings
66.83	67.72	SANDSTONE, SILTSTONE AND MUDSTONE - (Interlaminated) - small scale cross-bedding and load casts - hairline coal streaks - light grey, fine to medium grained sandstone - light medium grey siltstone - dark grey mudstone.
67.72	68.10	SANDSTONE - moderately clean light grey medium grained.
68.10	69.16	SANDSTONE, SILTSTONE AND MUDSTONE - (Interlaminated) - light grey, fine-grained sandstone - light medium grey siltstone and dark grey mudstone - contacts unconformable to bedding - small scale load casts and cross-bedding - mudstone content increases towards bottom.
69.16	69.37	SANDSTONE - moderately clean, light grey, medium grained - slightly cross-bedding.
69.37	70.40	SANDY MUDSTONE - predominantly mudstone with very fine-grained sandstone lenses - hairline calcite streaks - carbonaceous towards bottom.

HOLE#

SMG-79-5

From 70.40

To 79.76

FROM	TO	DESCRIPTION
<u>70.40</u>	<u>70.60</u>	COAL - 0.20 metres - 75% recovery - cleated - mostly dull black - some shiny streaks.
70.60	70.80	MUDSTONE - coal streaked - dark grey
<u>70.80</u>	<u>70.85</u>	COAL - 0.05 metres - 40% recovery - mostly dull black - slight shiny streaks.
70.85	71.62	SILTY MUDSTONE - distinct bands only towards bottom.
71.62	73.16	SILTY SANDSTONE - predominantly light grey, fine-grained sandstone with light medium grey siltstone laminae and some mudstone - slightly disturbed - some load casts - small scale cross-bedding.
73.16	74.31	MUDDY SILTSTONE - becoming a silty mudstone towards the bottom - medium grey siltstone - dark grey mudstone - small scale cross-bedding and load casts.
74.31	74.98	MUDSTONE - dark grey - slight silt content - very thin laminae - small sandstone lenses.
<u>74.98</u>	<u>75.40</u>	COAL - 0.42 metres - 30% recovery - sheared - has a shear ~
75.40	75.61	MUDSTONE - black to dark grey - coal streaks.
75.61	77.21	SANDY SILTSTONE - light to light medium grey with fine grained sand. Disturbed bedding at the top to very well developed planar bedding lower down - distinct well formed small scale cross-bedding - carbonaceous debris on some bedding surfaces. Bedding @ 80° to C/A. - moderately disturbed towards the base and grading to predominantly siltstone with minor mud content in some bands.
77.21	77.90	SANDSTONE - mottled light medium to medium grey - minor silt and mud fractions - strongly disturbed with a few distinct laminae.
77.90	79.76	SILTSTONE AND MUDSTONE - (Interlaminated) - predominantly siltstone with minor fine-grained sand as narrow irregular lenses at the top - disturbed bedding, banded to blotchy light medium grey to dark medium grey - predominantly mudstone toward the base with silt laminae and lenses.

HOLE#

SMG-79-5

From 79.76

To 98.12

FROM	TO	DESCRIPTION
79.76	81.95	SILTY SANDSTONE - with few muddy siltstone bands - light grey to dark medium grey - carbonaceous debris - distinct planar bedding surfaces - generally increasing fine-grained sediments toward the base, well developed cross-bedding. Bedding @ 75° to C/A.
81.95	85.43	MUDSTONE - dark grey to black - few very small narrow silt lenses - blocky dessication fracturing.
85.43	87.38	MUDSTONE AND SILTSTONE (Interlaminated) - banded light medium and dark grey - bedding is weakly to moderately disturbed - few scattered small worm burrows.
87.38	87.45	COALY MUDSTONE - black, coal streaked, with white sand lenses at the top.
87.45	91.44	SANDSTONE - light to light medium grey, fine-grained sandstone - minor silty and muddy component at the top and bottoms as dark grey bands - carbonaceous, debris common on bedding planes.
91.44	92.82	SILTSTONE AND MUDSTONE (Interlaminated) - light medium grey and dark grey banded with mud content increasing downward.
92.82	94.22	MUDSTONE - dark grey to black - coal streaks and strongly carbonaceous at the base.
94.22	95.00	SANDSTONE - fine-grained, medium grey, dirty with minor mud and silt - strongly disturbed bedding.
95.00	95.18	MUDSTONE - dark grey, carbonaceous, sandy at the base.
95.18	96.42	SANDSTONE, SILTSTONE AND SILTY MUDSTONE - (Interlaminated) - light to dark grey - sequence becoming finer toward the base with increasing silt and mud content - well defined planar to convoluted bedding. Bedding x @ 70° to C/A.
96.42	98.12	MUDSTONE - dark grey to black - carbonaceous shear planes @ 97.18 metres - coal streaked toward the base.

HOLE# SMG-79-5From 98.12 To 109.77

FROM	TO	DESCRIPTION
<u>98.12</u>	<u>98.46</u>	COAL - 0.34 metres - black, dull to bright - weakly developed cleat Recovery ~ 30%
98.46	98.52	COALY MUDSTONE - dark brownish grey with coal streaks.
98.52	99.76	SILTY MUDSTONE AND SANDSTONE (Interbedded) light medium to dark grey bands, moderately disturbed.
99.76	102.17	SANDSTONE - light to light medium grey fine-grained to medium-grained - coarse cross-bedding and possibly some foreset bedding 101.74 to 102.17 metres fine-grained with minor mud and silt content - carbonaceous bedding surfaces common.
102.17	103.35	SILTSTONE, MUDSTONE, SANDSTONE - (Interlaminated) - banded light grey to dark grey, moderately irregular - seour surfaces - graded bedding common in sands - few fine worm burrows.
103.35	103.49	MUDSTONE - dark grey - light grey silty band at the base, resting on coal.
<u>103.49</u>	<u>103.86</u>	COAL - 0.37 metres - dull, black with few vitrain streaks. Recovery ~ 10%.
103.86	104.06	MUDSTONE - dark grey
104.06	107.00	SANDSTONE - generally light medium grey sandstone with minor silt content at the top and bottom - strongly disturbed bedding at the top, massive and dense in the middle and finely laminated and cross-bedded at base - carbonaceous debris on bedding surfaces at the top and bottom.
107.00	107.68	SILTSTONE AND SILTY MUDSTONE (Interlaminated) - light to medium to dark grey banded - moderately disturbed - numerous fine worm burrows.
107.68	108.50	MUDSTONE - dark grey.
108.50	109.77	MUDDY SILTSTONE - mottled dark medium grey.

HOLE#

SMG-79-5

From 109.77

To 123.44

FROM	TO	DESCRIPTION
109.77	111.93	SILTY SANDSTONE - light medium grey fine-grained sandstone - minor silt fraction giving darker bands - thinly laminated with some small scale cross-bedding - carbonaceous debris common on bedding surfaces - occasional irregular calcite veins.
111.93	113.80	SILTSTONE, MUDSTONE, SANDSTONE - predominantly Siltstone and Mudstone with some laminations of fine-grained sandstone - cross-bedding in the silts - small scour channels, scattered worm burrows.
113.80	114.30	MUDSTONE - dark grey.
114.30	114.70	MUDDY SILTSTONE - massive dark medium grey
114.70	115.76	SANDSTONE - dirty, medium grey - diffuse banding - silty toward the top and bottom.
115.76	116.27	MUDSTONE AND SILTSTONE - predominantly dark grey mudstone with thin laminae and lenses of siltstone.
116.27	117.30	SANDSTONE, SILTSTONE AND MUDSTONE (Interlaminated) - thin interlamination predominantly of Sandstone and Siltstone, medium to dark medium grey - disturbed bedding - worm burrows common.
117.30	120.45	MUDSTONE - dark grey to black, few siltstone laminations at the top - coaly and coal streaked at the base (core missing - could possibly be a thin coal seam)
120.45	120.95	SANDSTONE - fine-grained light medium to medium grey, thinly laminated, small scale festoon cross-bedding.
120.95	121.16	COALY MUDSTONE - dark grey mudstone with numerous streaks of coal.
121.16	122.40	SANDSTONE - fine-grained, light grey with occasional muddy bands (dark grey) - disturbed bedding.
122.40	122.75	COALY MUDSTONE - dark grey to black mudstone with numerous coal streaks.
122.75	123.21	SANDSTONE - fine-grained, light medium grey - few widely spaced calcite veins.
123.21	123.44	MUDSTONE - dark grey.

HOLE#

SMG-79-5

From 123.44 To 137.85

FROM	TO	DESCRIPTION
<u>123.44</u>	<u>124.27</u>	COAL (?) - 0.83m - few fragments recovered - black flaky sheared coal and bright black cleated recovery ~ 5%.
<u>124.27</u>	<u>124.67</u>	MUDSTONE - dark grey to black, coal streaked at the top.
<u>124.67</u>	<u>127.70</u>	MUDSTONE AND SILTSTONE (Interlaminated) - light medium to dark grey banded - predominantly mudstone with thin laminae and lenses of siltstone.
<u>127.70</u>	<u>128.61</u>	MUDSTONE - dark grey to black - coaly at the base.
<u>128.61</u>	<u>128.88</u>	COAL - 0.27 metres - black, moderately bright with brilliant streaks. recovery ~ 25%.
<u>128.88</u>	<u>129.22</u>	MUDSTONE - dark grey to black - coal streak at the top.
<u>129.22</u>	<u>130.16</u>	SANDSTONE, SILTSTONE AND MUDSTONE (Interlaminated) - predominantly fine-grained, dirty medium grey sandstone with siltstone and mudstone at the top - disturbed bedding.
<u>130.16</u>	<u>131.48</u>	MUDDY SILTSTONE - medium to dark medium grey, generally massive with mottled appearance - few distinct silt bands.
<u>131.48</u>	<u>132.02</u>	MUDSTONE - dark grey.
<u>132.02</u>	<u>132.69</u>	SILTSTONE, MUDDY SILTSTONE AND SANDSTONE - light medium to dark medium grey - disturbed to mixed.
<u>132.69</u>	<u>132.89</u>	SANDSTONE - fine-grained, light grey with few darker disturbed silty laminae.
<u>132.89</u>	<u>135.52</u>	MUDDY SANDSTONE - (laminated) - predominantly fine to medium grained light grey to light medium grey sandstone with mudstone laminae and some siltstone - medium scale cross-bedding - load casts - bedding dips at ~ 78° to C/A.
<u>135.52</u>	<u>137.85</u>	SILTY MUDSTONE - (laminated) - dark medium grey to dark grey siltstone - very fine-grained sandstone lenses - increasing sandstone content towards bottom - grain size of sandstone also increasing towards bottom.

SMG-79-5

From 137.85 To 150.02

FROM	TO	DESCRIPTION
137.85	141.38	SANDSTONE - light grey to light medium grey - medium grained moderately clean sandstone - slight mudstone content towards bottom in thin laminae - medium scale cross-bedding.
141.38	143.02	MUDSTONE - dark grey mottled with silty sandstone lenses light grey to light medium grey - moderately disturbed.
143.02	144.06	SILTY SANDSTONE AND MUDSTONE - (Interlaminated) much cross-bedding - small scale load casts - moderately disturbed in lower half - grain size of sandstone increases towards bottom.
144.06	144.73	SANDSTONE AND MUDSTONE (Interlaminated) - fine-grained light grey sandstone predominant with dark grey mudstone laminae - convoluted bedding, small scale cross-bedding and load casts.
144.73	145.05	COAL - 0.32 metres (?) - canneloid - dull black
<u>145.05</u>	<u>145.45</u>	<u>SANDSTONE AND SILTY MUDSTONE - (Interlaminated) - fine-grained light medium sands with small scale cross-bedding interlaminated with thin dark grey silty sandstone laminae.</u>
145.45	148.37	SANDSTONE - fine-grained, light grey - small scale cross-bedding throughout.
148.37	148.50	MUDSTONE - dark grey - 1cm sandstone lamination at the top - silty with thin siltstone laminations at the bottom.
148.50	149.06	SANDSTONE - fine-grained and silty at the top with medium grained carbonaceous sand at the bottom.
149.06	149.44	MUDSTONE AND SILTSTONE (Interlaminated) - banded with dark grey mudstone and light medium grey laminae and lenses of silt.
<u>149.44</u>	<u>149.90</u>	<u>COAL - 0.46 metres (?) - black, mixed durain and vitrain, banded. Recovery ~ 20%.</u>
149.90	150.02	MUDSTONE - dark grey

SMG-79-5

From 150.02 To 175.00

[illegible]

From 175.00 To 188.98

[illegible]

CORE DESCRIPTION

HOLE # SMG-79-6 From 0 To 32.30
 Area SOUTH MOUNT GETTING By A.T. Armstrong

FROM	TO	DESCRIPTION
0	16.76	OVERBURDEN (Casing 0 to 18.59)
16.76	18.5	MUDSTONE - dark grey to black - strongly broken recovery ~ 25% small fragments.
18.5	20.09	SANDSTONE AND MUDDY SILTSTONE - very finely inter- laminated light medium grey to dark grey - bedding well defined to wavy. Bedding \angle @ 80° to C/A.
20.09	22.9	MUDDY SILTSTONE - dark medium to dark grey mottled - appears to be a generally massive unit - dense - very strongly broken and recovered as short lengths and small fragments - recovery ~ 70%
22.9	24.00	MUDSTONE - dark grey to black, lacey calcite veining at the base - strongly carbonaceous toward the base - broken - recovered as short lengths and fragments - recovery ~ 85%
24.00	26.30	MUDSTONE, SILTY MUDSTONE, SILTSTONE - predominantly dark grey mudstone commonly mottled with silty mud- stone blobs - few well defined medium grey siltstone laminae and several pale brownish grey claystone bands
26.30	27.01	MUDSTONE, SANDY SILTSTONE, SILTSTONE (Interlaminated) - banded light medium to dark grey with sandy silt- stone and siltstone laminae and lenses in mudstone.
27.01	27.26	COAL - 0.25m - black - very strongly broken. recovered as a few fragments - recovery ~ 30%
27.26	27.70	MUDSTONE - dark grey to black, strongly broken.
27.70	27.90	COAL - 0.20m - fine - cleat fragments - black - recovery ~ 40%.
27.90	28.45	MUDSTONE - dark brownish grey - strongly pyritic at the base - strongly calcite veined in the middle.
28.45	28.65	COAL - 0.20 - black banded - recovered as fine coal particles - recovery ~ 25%
28.65	29.53	MUDSTONE - dark grey
29.53	32.30	MUDDY SILTSTONE - medium to dark medium grey mottled - indistinct disturbed laminations over short lengths.

HOLE# SMG-79-6From 32.30 To 56.06

FROM	TO	DESCRIPTION
32.30	32.75	MUDSTONE & SILTY SANDSTONE (interlaminated) - dark grey mudstone bands with thin interlaminae of light medium grey silty sandstone - weakly disturbed bedding
32.75	32.50	MUDDY SANDSTONE & SILTSTONE (mixed to interlaminated) - dark medium grey to medium grey mottled and massive to laminated light medium to dark medium grey - carbonaceous and with coal streaks toward the base
37.50	38.40	MUDSTONE - dark grey - strongly broken - recovery ~ 50%
38.40	39.20	COAL - 0.80m(?) - black - dull with bright bands - well cleated over short lengths - recovered as short chunks and fragments - recovery ~ 65%
39.20	39.32	MUDSTONE - dark brownish grey - coal streaked
39.32	39.52	COAL - 0.30m (?) - black - dull to bright - few fragments recovered - recovery ~ 20%
39.52	40.95	MUDSTONE - black - coal streaked - few narrow carbonaceous sandstone laminae
40.95	44.0	SILTY SANDSTONE - medium to dark medium grey dirty sandstone - fine grained - mixed to disturbed laminated - occasional irregular fine calcite veins - badly broken core
44.0	48.25	COALY MUDSTONE - dark grey to black - coal streaked and with few narrow coal seams present - very strongly broken with core lost - possibility of coal in lost core - recovery ~ 50%
48.25	53.69	SANDSTONE, SILTSTONE & MUDDY SILTSTONE (interlaminated and interbedded) - light medium grey to dark medium grey - predominantly sandstone with sandy fraction in many of the siltstone beds and laminations - scattered worm burrow - few scattered calcite veins and narrow calcite beaded breccia zones
53.69	56.06	SILTY MUDSTONE (laminated) - mostly dark grey - thin light medium grey laminations of siltstone - laminations are wavy and discontinuous

HOLE# SMG-79-6From 56.06 To 66.92

FROM	TO	DESCRIPTION
56.06	56.78	SANDSTONE - current mixed with mudstone blobs - line to medium grained - light medium grey to medium grey sandstone - dark medium grey mudstone - slightly carbonaceous increasing mudstone content toward bottom
56.78	57.43	SILTY MUDSTONE - dark medium grey to dark grey - no distinct laminations
57.43	58.63	COALY MUDSTONE - very dark grey to black - may be some coal - only 60 - 70% recovery
58.63	59.22	SANDY MUDSTONE - dark grey mudstone with sandy blobs - coal streaks with carbonate surrounding
59.22	59.26	COAL - .04m - 50% recovery - moderately shiney - calcite veins - thin
59.26	59.57	CARBONACEOUS MUDSTONE - dark grey with a brownish tinge - centres shattered and filled with calcite
59.57	59.78	COAL - .21m - 50% recovery - moderately dull with shiny parts
59.78	59.89	MUDSTONE - dark grey
59.89	61.96	SANDSTONE, SILTSTONE, MUDSTONE (interlaminated and interbedded) - mottled towards top - small worm burrows - small scale gestoon gross bedding - small scale mudstone in sandstone - medium grained light grey to light medium grey sandstone - medium grey siltstone with brownish tinge
61.96	62.73	SANDY MUDSTONE - dark grey with brownish tinge - light grey fine grained sandstone clumps and small beds within mudstone - slight silt content
62.73	65.70	SILTY MUDSTONE - mostly dark grey mudstone with some thin wavy and discontinuous siltstone laminae
65.70	65.93	SANDY MUDSTONE - current mixed mudstone with high sand content
65.93	66.69	SILTY MUDSTONE - only slight silt content - no distinct laminae - a few sandstone blobs towards bottom
66.69	66.92	MUDDY SANDSTONE - bedding disturbed at top - some current mixing small scale ripple laminations

HOLE# SMG-79-6From 66.92 To 73.81

FROM	TO	DESCRIPTION
		and coal casts toward bottom
66.92	67.68	MUDSTONE - dark grey - carbonaceous layer 11m thick, 9m from top with thin calcite veins - some sandstone clumps in middle of mudstone bed - small scale ripples
67.68	68.54	SANDSTONE & MUDSTONE - (interlaminated and interbedded) - small wavy discontinuous laminations - small scale ripples - dark grey with brownish tinged mudstone - light medium to dark medium grey sandstone - increasing mudstone content towards bottom
68.54	68.56	CARBONACEOUS MUDSTONE - dark grey to black
68.56	70.24	SANDY MUDSTONE - predominantly dark grey with brownish tinge mudstone with very fine grained sandstone - some small clumps and some small laminae discontinuous - larger clumps and grain size of sandstone towards bottom
70.24	71.05	SILTY MUDSTONE - (laminated)
71.05	71.83	SANDSTONE AND MUDSTONE - (interlaminated and interbedded) - some current mixing - ripple laminations - thin calcite veins - very fine grained light grey sandstone - slightly carbonaceous
71.83	71.92	SILTSTONE - dark medium grey - high mudstone content
71.92	72.16	SILTY MUDSTONE - dark medium grey to dark grey - thin calcite veins
72.16	73.57	SANDSTONE, SILTSTONE, MUDSTONE - (interlaminated and interbedded) - bioturb bottom - worm burrows - fine grained sandstone - light grey - light medium grey to dark medium grey siltstone - vuggy calcite vein
73.57	73.61	COALLY MUDSTONE - vitreous and very dark grey to black
73.61	73.81	SANDSTONE - moderately clean - some mudstone content - carbonaceous bands within

HOLE#

SMG-79-6

From 73.81

To 88.02

FROM	TO	DESCRIPTION
73.81	73.89	COAL - .08m - 50% recovery - quite shiney - griable
73.89	73.96	MUDSTONE - very coally - black
73.96	74.27	COAL - .31m - 80% recovery - one prominent cleat - ash content - moderately shiney
74.27	74.33	MUDSTONE - dark brownish grey
74.33	76.10	MUDDY SILTSTONE, SILTSTONE, SANDSTONE (interlaminated to mixed) - light medium to dark medium grey - regular planar to strongly disturbed laminations Bedding δ at $\sim 65^\circ$ to C/A
76.10	76.76	MUDSTONE - dark grey - several narrow light brownish grey claystone bands - narrow calcite veins at the base
76.76	76.98	COAL - 0.22m - black - primarily duroin and fusain with few vitrain streaks - few shear surfaces - recovery $\sim 80\%$
76.98	77.49	MUDSTONE - dark grey to black - coal streaked at the base
77.49	77.75	COAL - 0.26m - black - banded fusain and vitrain - few shear surfaces - recovery $\sim 85\%$
77.75	77.96	COALY MUDSTONE - black with numerous coal streaks
77.96	78.11	SANDSTONE, MUDSTONE (interlaminated) - light medium grey fine grained sand laminations alternating with black, strongly carbonaceous mudstone laminations
78.11	83.56	SANDSTONE - fine grained - light grey to light medium grey - commonly cross bedded - occasional carbonaceous bedding surfaces and few scattered narrow calcite veins
83.56	88.02	SILTY MUDSTONE, SILTSTONE, SANDSTONE (interlaminated and interbedded) - predominantly silty mudstone and muddy sandstone - banded light medium to dark grey cross bedding in silts and sands - occasional convoluted bed

HOLE# SMG-79-6

From 88.02 To 104.74

FROM	TO	DESCRIPTION
88.02	89.83	MUDSTONE - dark grey - two narrow light brownish grey claystone bands near the top - few small scattered coal streaks - minor silty fraction occurring as fine light medium grey lenses at 89.00 to the base
89.83	90.11	COAL - 0.28m - black - weakly banded and poorly developed cleat - recovery ~ 50%
90.11	90.58	MUDSTONE - dark grey - silty toward the base
90.58	92.73	SANDSTONE - light grey to light medium grey - fine grained - silty at the top - generally thinly laminated - often cross bedded - disturbed over short lengths
92.73	94.03	COAL - 1.30m - black - bright vitrain streaks and generally dull mass - moderately well developed cleat over short lengths - recovered as short lengths of core and fragments - recovery ~ 65%
94.03	94.97	MUDSTONE - dark grey to black - convoluted sandy laminations in the middle
94.97	95.97	COAL - 1.00m (?) - black - banded with minor vitrain in durain and fusain mass - prominent single cleat - recovered as solid core lengths and ground fragments - recovery ~ 65%
95.97	96.10	MUDSTONE - black with thin coal streaks
96.10	100.55	MUDDY SILTSTONE, SILTSTONE, SANDSTONE (interlaminated) - light grey to dark medium grey - generally well defined fine laminations - cross bedding and worm burrows common throughout - abundant muddy laminae near the top with fine grained sand predominating toward the base
100.55	101.95	MUDSTONE, SILTSTONE (interlaminated) - dark grey and light medium grey banded - predominantly mudstone with fine laminae and lenses of siltstone-coaly mudstone at the base
101.95	104.74	MUDSTONE, SANDSTONE (interlaminated to mixed) - generally a homogeneous to mottled mixture of fine grained sandstone and mudstone - dark medium grey

HOLE# SMG-79-6From 104.74 To 119.37

FROM	TO	DESCRIPTION
104.74	105.08	COAL - 0.34m (?) - black - very bright strongly sheared - recovered as chips - recovery ~ 30%
105.08	105.18	MUDSTONE - dark grey - coal streaked
105.18	108.98	SILTSTONE, SILTY MUDSTONE, SANDSTONE (interlaminated) - predominantly light medium to medium grey thinly laminated and finely cross bedded siltstone alternating with dark grey laminations and narrow beds of silty mudstone - minor very fine grained sandstone - well defined planar to moderately disturbed bedding - few scattered worm burrows and few convoluted laminae - increasing mud content toward the base with thin siltstone laminae and lenses - bedding \angle @ 75° to C/A
108.98	109.40	MUDSTONE - dark grey with few fine silty laminae and lenses
109.40	110.10	COAL - 0.70m - black - durain with broad laminae of vitrain - recovery ~ 35%
110.10	110.72	MUDSTONE - dark grey - coal streaks at the top - silty toward the base
110.72	111.23	SANDSTONE - fine grained - light grey - thinly laminated with well defined cross bedding - darker muddy bands @ 110.76 to 110.80m and 111.07 to 111.10m
111.23	113.93	SANDSTONE, SILTY MUDSTONE, SILTSTONE (interlaminated) - predominantly fine grained light medium grey sandstone interlaminated with siltstone and silty mudstone at the top to predominantly silty mudstone with thin laminae and lenses of siltstone and minor fine sandstone at the base - bedding weakly disturbed to convoluted - scattered small worm burrows
113.93	119.32	MUDSTONE - dark grey to black - occasional thin laminae or lens of light medium grey siltstone
119.32	119.37	CARBONACEOUS SANDSTONE - irregularly, finely striped medium grey to black - abundant carbonaceous debris

HOLE# SMG-79-6From 119.37 To 130.30

FROM	TO	DESCRIPTION
119.37	119.65	COAL - 0.28m (?) - black, banded durain with vitrain streaks - one prominent cleat - recovery ~ 25%
119.65	120.07	MUDSTONE - dark grey to black - coal streaked
120.07	120.47	SANDSTONE - medium grey mottled - fine grained - dirty sandstone with minor silt and mud present
120.47	121.61	SANDY MUDSTONE - mottled massive to well defined planar bedding - carbonaceous debris - medium to dark medium grey - bedding \angle @ 75° to C/A
121.61	123.90	SANDSTONE - fine to medium grained, light to light medium grey - well defined laminations and distinct cross bedding - bedding surfaces often defined with carbonaceous debris - finer grained and with minor silt and mud content toward the base - bedding \angle @ 75° to C/A
123.90	124.77	MUDSTONE, SILTSTONE (interlaminated) - predominantly dark grey to black mudstone with thin laminations and fine lenses of light medium grey siltstone - coal streaked with decreasing silt toward the base
124.77	125.31	COAL - 0.54m (?) - black - massive dull to bright and strongly cleated in one direction - recovered as short lengths and fragments - recovery ~ 40%
125.67	126.08	COALY MUDSTONE - black with numerous coal streaks and possibly some thin seams - very strongly broken becoming sandy toward the bottom
126.08	127.89	SANDSTONE - light medium grey, gritty at the top to medium grey very fine grained and dense toward the base
127.89	128.12	MUDSTONE - dark grey
128.12	129.31	SANDSTONE - light medium to medium grey fine grained thinly laminated with small scale cross bedding - few fine silty and muddy laminations - carbonaceous debris on bedding surfaces
129.31	130.30	MUDSTONE, SILTSTONE (interlaminated) - predominantly dark grey mudstone with thin laminations and lenses of light medium grey siltstone at the top and decreasing in frequency downward

HOLE# SMG-79-6From 130.30 To 151.79

FROM	TO	DESCRIPTION
130.30	131.44	SANDSTONE - light medium grey, fine grained - banded with minor amounts of silt and mud - muddy and strongly mixed toward the base
131.44	131.88	MUDSTONE - dark grey
131.88	132.45	SANDSTONE, SILTSTONE, MUDSTONE (interlaminated) - very thin wavy laminations of alternating light grey sandstone or siltstone and dark grey mudstone predominantly sandstone at the top to predominantly mudstone at the base
132.45	132.89	COAL - 0.44m (?) - black, dull and possibly ashy to banded durain and vitrain - recovery ~ 60%
132.89	141.47	SANDSTONE - generally fine grained and light grey to light medium grey - coaly at the top down to 133.02m - often thinly laminated with fine small scale cross bedding - size increases with increasing grain size - strongly disturbed with minor mud content and much carbonaceous debris 134.56 to 134.91; 135.37 to 135.59; 136.02 to 136.37; 136.67 to 137.10 - in part these areas are bioturbated - numerous carbonaceous wavy bedding surfaces 137.50 to 141.47m
141.47	141.80	COAL - 0.33m - black, generally bright fusain and vitrain - one prominent cleat - recovery ~ 90%
141.80	141.90	MUDSTONE - dark grey to black - coal streaked
141.90	145.20	MUDDY SILTSTONE, SILTSTONE, SANDSTONE (interlaminated) - light medium to dark medium grey predominantly of muddy siltstone and siltstone with occasional laminations and lenses of fine grained sandstone - often indistinct and wavy laminations bedding \angle @ 80° to C/A
145.20	147.07	SANDSTONE - light grey, fine grained with black irregular lines of carbonaceous debris - strongly disturbed probably bioturbated
147.07	151.79	SILTSTONE, SILTY MUDSTONE - thinly banded light medium to dark medium grey - few widely spaced fine grained sandy laminations and lenses - worm burrows - small scale cross bedding in the silts and sands - bedding \angle to C/A @ 80°

HOLE# SMG-79-6From 151.79 To 175.57

FROM	TO	DESCRIPTION
151.79	152.12	COAL - 0.33m - black, banded durain with vitrain streaks - one prominent cleat - recovery ~ 90%
152.12	152.43	MUDSTONE - dark brownish grey - few very fine lacey calcite veins near the centre
152.43	158.84	MUDSTONE, SILTSTONE, SANDSTONE (interlaminated and interbedded) - predominantly mudstone and light medium to medium grey siltstone with few laminations and beds of fine grained often finely cross bedded sandstones - bedding fairly regular to weakly disturbed over short lengths - bedding \angle @ 80° to C/A
158.84	158.92	COAL - 0.08m - black, bright, strongly cleated recovery ~ 50%
158.92	159.12	MUDSTONE - dark brownish grey - few thin coal streaks - sandy at the base
159.12	160.33	SANDSTONE - fine grained - light medium grey - moderately disturbed to finely and regularly laminated with some small scale cross bedding - few narrow dirty siltstone laminations
160.33	160.97	SANDSTONE, MUDDY SILTSTONE (interlaminated) - finely laminated light medium to dark medium grey banded - small scale cross bedding
160.97	163.10	MUDSTONE, SILTY MUDSTONE (mixed to interlaminated) - predominantly dark grey mudstone with narrow laminated bands being dark medium grey
163.10	163.96	SANDSTONE - light medium to medium grey fine grained small cross beds - generally dirty rock
163.96	164.46	MUDSTONE, SILTY SANDSTONE (mixed) - strongly disturbed medium grey to dark grey
164.46	164.68	MUDSTONE - dark grey to black
164.68	165.23	COAL - 0.55m (?) - black, banded, single prominent cleat
165.23	165.38	MUDSTONE - black
165.38	167.20	MUDSTONE, SANDSTONE - predominantly dark grey mudstone with laminations, lenses and thin beds of fine grained light grey sandstone
167.20	175.57	SANDSTONE - fine to medium grained light grey clean sandstone - fine grained, thinly laminated and

HOLE# SMG-79-6From 175.57 To 189.49

FROM	TO	DESCRIPTION
		with small scale cross bedding near the top -
		medium grained below 167.50m - cross bedding well
		developed - some carbonaceous debris
175.57	176.53	COAL - 0.96m - dull black canneloid type coal at
		the top - dull, black with fine vitrain bands at
		bottom - strongly pyritic near the middle - very
		strongly broken, recovery ~ 80%
176.33	176.94	MUDSTONE - dark grey to black
176.94	179.12	MUDSTONE, MUDDY SILTSTONE, SILTSTONE (interlamin-
		ated) - banded light medium to dark grey - few
		fine grained sandy laminations - occasional
		scattered worm burrows
179.12	181.18	SANDSTONE - fine grained, light grey with few
		narrow medium to dark medium bands of silt & mud-
		some well developed cross bedding
181.18	181.45	SANDSTONE, MUDDY SILTSTONE (interlaminated) -
		finely laminated light medium and dark medium grey-
		bedding distrubed by numerous worm burrows
181.45	183.10	MUDSTONE - grey to black - numerous very thin silt
		laminations
183.10	183.3>	COAL - 0.27m - black, band dull to bright - very
		strongly broken - recovery ~ 30%
183.37	183.68	MUDSTONE, SANDSTONE - black mudstone against coal
		at the top with increasing sand content toward
		the base
183.68	185.45	SANDSTONE - fine grained - thinly laminated with
		distinct well developed small scale cross bedding
		carbonaceous debris common on bedding planes -
		scattered distinct worm burrows
185.45	188.81	SANDSTONE, MUDSTONE (interlaminated) - banded
		with dark grey mudstone laminations alternating
		with light medium grey fine grained sandstone
		laminations - graded bedding in some sand laminae-
		occasional fine calcite vein - increasing mudstone
		content toward the base
188.81	189.49	MUDSTONE - dark grey

SMG-79-6

From 189.49 To 193.86

[illegible]

CORE DESCRIPTION.

HOLE # SMG 79-7 From 15.85 To 26.84
 Area SOUTH MOUNT GETHING By Joey Ridley
A. Armstrong
Peter Zell

FROM	TO	DESCRIPTION
<u>15.85</u>	<u>16.40</u>	MUDDY SANDSTONES - light grey to medium grey, medium grained dirty sandstone with muddy lenses, core badly broken.
<u>16.40</u>	<u>18.24</u>	MUDSTONE - dark grey, coal streaks towards bottom.
<u>18.24</u>	<u>18.59</u>	COAL - 0.35m, 60% recovery
<u>18.59</u>	<u>19.74</u>	SANDSTONE, MUDSTONE AND SILTSTONE (Interlaminated) - predominately light grey, fine to medium grained sandstone current mixed with mudstone and siltstone at top and containing laminations towards bottom. Sandstone is coarse grained and dirty from approximately 19.00 to 19.20 - entire unit becomes finer graded towards bottom.
<u>19.74</u>	<u>20.12</u>	SILTY MUDSTONE - mostly mudstone with some siltstone content - no distinct laminae increases towards bottom.
<u>20.12</u>	<u>22.49</u>	SANDSTONE, SILTSTONE AND MUDSTONE (Interlaminated and Interbedded) current mixing in top half, fine to medium grained, light grey to light medium grey sandstone - several small scale load cast structures, standing ripples and medium scale festoon cross bedding.
<u>22.49</u>	<u>22.94</u>	SILTY MUDSTONE - no distinct laminae, some small lenses, sandy lenses towards bottom.
<u>22.94</u>	<u>24.98</u>	SANDSTONE - medium to coarse grained, light grey to light medium grey, some thin mudstone laminae at at very top and towards bottom very thin coal streaks in middle.
<u>24.98</u>	<u>25.69</u>	SANDSTONE, SILTSTONE AND MUDSTONE - (Interlaminated) festoon cross-bedding and small scale load structures.
<u>25.69</u>	<u>26.27</u>	MUDSTONE AND SILTSTONE (Interlaminated) - thin laminae - load casts small scale predominately mudstone towards bottom and coal streaked - cleated bands up to 1.5 cm.
<u>26.27</u>	<u>26.52</u>	COAL - 0.25m approximately 65% recovery.
<u>26.52</u>	<u>26.68</u>	MUDSTONE - split, strongly carbonaceous
<u>26.68</u>	<u>26.84</u>	COAL - 0.16m 50% recovery
		moderately cleated 2 directions rhombohedral moderately shiny.

HOLE#

SMG 79-7

From 26.84 To 44.08

FROM	TO	DESCRIPTION
26.84	27.52	MUDSTONE AND SANDSTONE (Interbedded and Interlaminated) - medium grained, light grey moderately clean sandstone and dark grey mudstone, thin coal streaks.
27.52	29.26	SANDSTONE - medium to coarse grained light grey - a few mudstone laminae siltstone laminae - coal streaked.
29.26	29.62	SANDSTONE, SILTSTONE AND MUDSTONE (Interlaminated) fine to medium grained, light grey to light medium grey sandstone, load cast structures small scale light medium grey siltstone, coal streaks - one sandstone bed coarse grained 29.34 to 29.38 bedding at approximately 65° from C/A.
29.62	30.22	SILTY MUDSTONE - very fine siltstone laminations in upper half - coal streaked towards bottom.
30.22	30.89	COAL - 0.67m 50% recovery, black dull at top shinier towards bottom also well cleated at bottom.
30.89	31.55	SILTY MUDSTONE - coal streaked.
31.55	36.39	MUDDY SANDSTONE - light grey medium to coarse grained sandstone with silty mudstone laminations, coal streaked, slight calcite content thin veins, vertical worm burrow 12cm, well disturbed towards bottom and increasing mudstone content - 35.69 to 35.95 more mudstone than sandstone, current mixing and convoluted bedding at very bottom.
36.39	38.40	SANDSTONE AND SILTSTONE (Interlaminated) - light grey to light medium grey, fine to medium grained sandstone with siltstone and some mudstone laminations festoon cross-bedding, bedding \times @ 65° to C/A
38.40	38.80	SILTSTONE, MUDSTONE & SANDSTONE (Interlaminated) - thin alternating laminations of fine-grained light grey sandstone, dark grey mudstone and silty mudstone and light medium grey siltstone - well developed planar bedding \times @ 65° to C/A.
38.80	44.08	SANDSTONE AND CARBONACEOUS MUDSTONE - fine to medium grained, light grey to light medium grey sandstone mixed and interbedded and interlaminated black carbonaceous mudstone, bioturbated in places and well mixed to clean discrete units.

HOLE #

SMG-79-7

From 44.08

To 65.25

FROM	TO	DESCRIPTION
44.08	55.80	SANDSTONE - fine to medium grained, light grey to light medium grey - generally very indistinct bedding carbonaceous debris forming black film on bedding surfaces, particularly from 46.60 to 47.70 m. - pebble beds - 44.68 to 44.93m; 45.12 to 45.15m; pebbles up to 0.5 cm. - scattered pebbles 48.20 to 48.85 m. up to 0.03m in diameter - carbonaceous stylolitic type bedding surfaces 5 to 20 cm apart from 46.60 to 47.70 m. and 48.80 m. to 49.40m - sandstone becomes fine-grained, massive and dense at 49.90 m., 50.70m to 53.0 m. rock has numerous small lensoidal vugs which have fine calcite deposited on the walls - calcite lined and healed veins and brecciated zones are also present - numerous highly irregular carbonaceous bedding surfaces present toward the base.
55.80	62.70	MUDSTONE AND SILTSTONE (Interlaminated and Interbedded) - alternating dark grey mudstone beds and laminations with light grey to light medium grey and laminations of siltstone - siltstone laminations often have a minor fine sand fraction toward the base - current ripple laminations and small scale cross bedding occurs in many of the silty laminations - few scattered small worm burrows - occasional small cut and fill features on base of sandy siltstone laminations - mudstone at the base.
62.70	63.25	COAL - 0.55 metres black, banded dull with few vitrain streaks - increasing vitrain toward the base. Recovery ~ 60%.
63.25	63.60	MUDSTONE - dark grey - strongly broken
63.60	64.53	SILTSTONE, MUDSTONE & SANDSTONE (Interlaminated and Interbedded) - alternating beds and laminations of dark grey mudstone, medium grey siltstone and fine grained light medium grey sandstone, often silty.
64.53	64.75	COAL - 0.22 metres - dull with vitrain bands - blocky poorly cleated - recovery ~ 90%.
64.75	65.25	MUDSTONE AND SILTSTONE - convoluted bedding - some fine grained sandstone laminae - quite dark grey and muddy at top of section - minor worm burrows

HOLE#

SMG 79-7

From 65.25

To

73.62

FROM	TO	DESCRIPTION
65.25	65.56	SANDSTONE - fine grained - poorly laminated at top of section - increasing in carbonaceous laminae towards base of section - contains coaly streaks (minor).
65.56	66.41	SANDSTONE AND SILTSTONE - (Interlaminated) - grading from previous section over 0.10 metre depth - carbonaceous laminae and minor mudstone laminae.
66.41	67.12	MUDSTONE AND SILTSTONE - (Convolutated) bioturbated - siltstone concentration increasing towards the base of section.
67.12	67.52	MUDSTONE - dark grey - contains some plant debris - minor siltstone lenses.
67.52	67.57	COAL - 0.05 metres - dull and bright - contains calcite veinlets - mostly dull with bright vitrain bands.
67.57	67.91	MUDSTONE - dark grey, contains hairlike calcite veinlets and coal streaks
67.91	67.97	COAL - 0.06m 75% recovery - well cleated, moderately shiny.
67.97	69.25	SILTY MUDSTONE - dark grey with lenticular (and thin) siltstone laminae and lenses, silt content increases towards bottom, small scale load casts.
69.25	70.35	SANDSTONE, SILTSTONE and MUDSTONE - predominately siltstone and very fine grained light to light medium grey sandstone current mixed with mudstone - a few small medium grained sandstone beds - coal streaks - small scale load casts - calcite veinlets.
70.35	70.64	SILTY MUDSTONE - dark grey with siltstone lenses.
70.64	70.92	MUDSTONE - very carbonaceous.
70.92	71.32	COAL - 0.40m 50% recovery, slickensides - sheared - mostly dull slightly shiny
71.32	71.59	MUDDY COAL - ashbands
71.59	71.68	MUDSTONE
71.68	73.62	SANDSTONE, MUDSTONE AND SILTSTONE (Interlaminated - interbedded and current mixed) several standing ripples, fine to medium grained light to light medium grey sandstone and dark grey mudstone with thin siltstone laminae.

HOLE#

SMG 79-7

From 73.62

To

86.81

FROM	TO	DESCRIPTION
73.62	74.76	SILTY MUDSTONE - dark grey mudstone with several siltstone laminae and slight fine grained sandstone content.
74.76	75.55	MUDSTONE - dark grey to black one calcite veinlet.
75.55	76.08	SANDY MUDSTONE (Interlaminated) - dark grey mudstone with sandstone laminae and small beds, very fine grained sandstone, less sandstone content towards top.
76.08	76.87	COAL - 0.79m ~ 100% recovery, split 76.65 to 76.72 slightly shiny - sheared.
76.87	77.42	SILTY MUDSTONE - dark grey to black with lenticular siltstone laminae, small worm burrows.
77.42	77.54	COAL - ~ 100% recovery 0.12m, mostly dull - shiny bands.
77.54	77.76	SILTY MUDSTONE - dark grey with siltstone lenses and lenticular laminae increasing towards bottom.
77.76	78.96	SANDY MUDSTONE - dark medium grey mudstone with sandstone laminae decreasing towards bottom 0.4m core loss.
78.96	82.12	MUDDY SANDSTONE - light grey, fine to medium grained sandstone with mudstone laminae and one mudstone bed. 79.35 to 79.41 also some siltstone laminae - calcite= open space filling, festoon cross bedding .44m core loss, core badly broken.
82.12	82.54	SILTY MUDSTONE - dark medium grey mudstone with lenticular siltstone laminae.
82.54	83.58	MUDSTONE - dark grey to black
83.58	84.18	COAL - 0.60m ~ 80% recovery, predominantly dull, few shiny cleated banded - sheared
84.18	84.60	MUDSTONE, SILTSTONE AND SANDSTONE (Interlaminated) - dark grey mudstone, dark medium grey siltstone and very fine grained medium grey sandstone, bedding moderately disturbed.
84.60	86.81	MUDDY SANDSTONE - fine grained sandstone laminated with thin mudstone laminae and a few siltstone laminae bedding at ~ 65° from C/A - coal streaks festoon cross bedding

HOLE#

SMG 79-7

From 86.81

To 105.46

FROM	TO	DESCRIPTION
86.81	87.11	SANDSTONE - medium to coarse grained mostly light grey some darker due to mud content.
87.11	89.45	SANDSTONE AND MUDSTONE - with a slight siltstone content (interbedded and interlaminated) medium to coarse grained sandstone light grey - dark grey mudstone and dark medium grey siltstone, festoon cross-bedding - coal streaks, calcite veinlet at bottom.
89.45	91.38	SILTY MUDSTONE - dark grey mudstone with siltstone and very fine sandstone laminae festoon cross-bedding increases sand content towards bottom.
91.38	91.82	SANDSTONE - medium to fine grained, light medium grey small scale festoon cross-bedding, standing ripples vertical and horizontal worm burrows, one mudstone bed near top, calcite veinlet at bottom.
91.82	93.24	SILTY MUDSTONE - Interlaminated high silt content at top.
93.24	96.70	SANDSTONE - predominately clean, medium to coarse, light grey sandstone with a few mudstone beds and laminae, a few coal streaks and vertical calcite veinlets.
96.70	99.36	SANDY MUDSTONE - dark grey to black mudstone with a few sandstone laminae and lenses more towards the top small standing ripples.
99.36	100.04	COAL - 0.68m ~ 50% recovery, predominately dull, few shiny cleated bands sheared.
100.04	100.86	MUDSTONE AND SANDSTONE AND SILTSTONE - interlaminated black mudstone, very fine grained light grey sandstone and medium grey siltstone, several load casts and slightly convoluted bedding, several thin coal bands.
100.86	102.58	MUDDY SANDSTONE - several coal bands, very fine grained dark medium grey to light grey sandstone with mudstone laminae increasing mudstone content towards bottom.
102.58	104.92	SILTY MUDSTONE - dark grey to black mudstone with thin siltstone laminae and lenses, not constant throughout.
104.92	105.46	COAL - 0.54 metres ~ 50% recovery, predominately dull - a few shiny bands sheared.

HOLE#

SMG 79-7

From 105.46

To 120.20

FROM	TO	DESCRIPTION
105.46	105.89	SILTY MUDSTONE - few distinct laminae, several hairline calcite veinlets.
105.89	106.97	COAL - 1.08m ~ 50% recovery, mud bands at 105.94 to 105.98 and 106.25 to 106.30, 106.82 to 106.88 predominately dull, few shiny bands.
106.97	107.53	MUDSTONE - massive dark grey to black.
107.53	107.80	MUDDY SANDSTONE - fine to medium grained light grey sandstone, mixed with mudstone.
107.80	108.98	MUDSTONE - dark grey - few fine light medium grey siltstone lenses and laminations near the top - coal streaked 108.26 to 108.51 metres.
108.98	109.9	SANDSTONE AND MUDDY SILTSTONE - (Interbedded and Interlaminated) - generally fine wavy laminations of alternating light medium grey fine-grained sandstone and dark grey muddy siltstone.
109.9	111.42	MUDSTONE - dark grey, massive - few thin silty laminations and lenses near the top and a minor silt component near the base.
111.42	112.47	SANDSTONE AND MUDDY SILTSTONE (Interlaminated) - fine wavy laminations and fine current ripple laminations - light medium grey, fine-grained sandstone alternating with very thin dark grey muddy siltstone laminations.
112.47	113.02	MUDSTONE - dark grey, massive
113.02	118.08	SANDSTONE - predominately fine-grained, light grey to light medium grey sandstone - interlaminated with dark grey muddy siltstone at the top down to 114 metres - black coal streaked mudstone beds 113.58 to 113.66 metres - small scale current ripple marks in sandstone - carbonaceous debris on bedding surfaces - occasional scattered worm burrows.
118.08	118.80	MUDDY SILTSTONE AND SANDSTONE - fine grained light medium grey sandstone interlaminated with dark grey muddy siltstone - moderately to strong disturbed bedding
118.80	120.20	MUDDY SILTSTONE - dark grey - indistinct distorted laminations.

HOLE#

SMG 79-7

From 120.20

To 148.22

FROM	TO	DESCRIPTION
120.20	120.46	MUDSTONE - dark grey and massive.
120.46	120.90	COAL? - 0.45 metres - dull, black, ashy, recovery ~ 60%.
120.90	121.48	MUDDY SILTSTONE - dark medium to dark grey - predominatly mud at the top - few fine-grained sandy laminations at the base.
121.48	127.70	SANDSTONE - generally light grey to light medium grey, fine-grained - very strong broken with sheared zones - generally moderately to strongly disturbed bedding - fine calcite veins associated with shear zones and fractures - carbonaceous debris on some bedding surfaces and minor thin silty laminations.
127.70	132.30	SILTY MUDSTONE, MUDSTONE AND SILTSTONE - in part interlaminated and in part mixed - medium to dark grey - completely shattered and strongly sheared
132.30	132.49	MUDSTONE - dark grey to black - coal streaks
132.49	132.89	COAL - 0.40 metres ~ 65% recovery, extremely friable and flaky, moderately shiny.
132.89	134.63	COALY MUDSTONE - very dark grey to black, core badly broken.
134.36	136.70	SILTY MUDSTONE - dark grey mudstone with siltstone laminae and lenses - hairline calcite veinlets - no silt at very bottom.
136.70	137.24	COALLY MUDSTONE - black ~ 28% recovery, shiny centre.
137.24	137.77	COAL - 0.53 metres ~ 28% recovery, mostly dull, well indurated.
137.77	138.23	SILTY MUDSTONE - dark medium grey to dark grey, hair- line calcite veinlets.
138.23	147.42	MUDDY SANDSTONE - light grey, medium grained sandstone with a few mudstone laminae and mudstone mixed in - few coal streaks, core badly broken, festoon cross- bedding towards bottom - coal streaks and bands.
147.42	148.22	MUDSTONE - dark grey - has the appearance of a conglomerate due to abundant rip up clasts of fine grained sandstone and siltstone - slickensides crossbedding.

HOLE#

SMG 79-7

From 148.22 To 160.05

FROM	TO	DESCRIPTION
148.22	148.59	COAL - muddy .37 metres, 77% recovery all loose poorly indurated.
148.59	149.80	MUDDY SANDSTONE - fine to medium grained light grey sandstone with some mudstone laminae and some mudstone mixed in high mudstone content 148.96 to 149.00, hairlike calcite veinlets, standing ripples - high carbon content.
149.80	150.37	COALLY MUDSTONE - dark medium grey - plant debris - some silt content - slickensides - sandstone bed at bottom, 5 cm thick - transition from unit below.
150.37	151.54	SANDSTONE ~ 50% recovery medium grained light to medium grey, some mudstone content mixed in.
151.54	151.93	COALLY MUDSTONE - with rip up clasts of fine-grain sandstone and siltstone, conglomeratic appearance.
151.93	152.24	VERY COALLY MUDSTONE - very fractured.
152.24	153.00	COAL - 0.76 metres 70% recovery, black dull - poorly indurated
153.00	153.93	COALLY MUDSTONE - slickensides - sand band towards bottom
153.93	154.58	SILTY MUDSTONE - dark grey - mudstone with siltstone content, few distinct laminae, fine grained sandstone beds and lenses towards bottom.
154.58	157.95	MUDSTONE AND SANDSTONE - Interlaminated and interbedded in some places and mixed as mudstone matrix and rip up clasts of fine grained sandstone - at 155.31 matrix for clasts becomes more sandy most of mudstone now occurs as laminations.
157.95	159.56	SANDSTONE - medium grained light grey to medium grey very thin mudstone laminae, coal streaks, calcite bands with slickensides cross-bedding.
159.56	159.91	MUDSTONE AND SANDSTONE - interlaminated and interbedded, minor cross bedding.
159.91	160.05	SANDSTONE - fine grained - salt and pepper and quite dirty, bedding x @ 70° to C/A.

HOLE#

SMG 79-7

From 160.05 To 170.45

FROM	TO	DESCRIPTION
160.05	160.53	SANDSTONE AND MUDSTONE - Interlaminated and Inter-bedded worm burrows - sandstone is fine grain salt and pepper - mudstone laminae are medium grey.
160.53	161.49	MUDSTONE - dark medium grey - fine grained sandstone laminae and lenses - minor calcite veinlets.
161.49	163.76	MUDSTONE - minor fine grained sandstone lenses - grades from medium grey to dark grey - also becomes very crumbly near base of section.
163.76	164.19	MUDSTONE - medium dark grey - has a conglomerate appearance due to abundant fine grained sandstone rip up clasts - slickensides.
164.19	165.67	MUDSTONE AND SANDSTONE - Interlaminated and inter-bedded - sandstone is fine grained salt and pepper - mudstone is dark medium grey - slickensides - contains minor calcite veinlets - bioturbated.
165.67	166.26	MUDSTONE - dark medium grey - minor coaly streaks - slickensides - carbonaceous.
166.26	166.65	MUDSTONE - medium grey and very soft - resembles a conglomerate due to abundant rip up clasts of siltstone and fine grained sandstone.
166.65	166.94	MUDSTONE - dark grey - slickensides.
166.94	167.29	SANDSTONE AND MUDDY SILTSTONE - sandstone is salt and pepper and fine grained - convoluted bedding - minor coal streaks - some mudstone rip up clasts at base of section.
167.29	167.66	SANDSTONE - fine grained - salt and pepper - slickensides - carbonaceous
167.66	167.89	MUDSTONE AND SILTSTONE - Interlaminated - fine grained sandstone lenses - (minor).
167.89	169.30	MUDSTONE - contains abundant sandstone rip up clasts - has the appearance of conglomerate due to the rip up clasts - contains calcite veinlets.
169.30	169.54	MUDSTONE AND SILTSTONE - convoluted - abundant sandstone, rip up clasts.
169.54	170.45	SANDSTONE AND MUDSTONE - contains mudstone and siltstone rip up clasts - section is very crumbly and very dirty.

HOLE# SMG 79-7From 170.45 To 178.51

FROM	TO	DESCRIPTION
170.45	170.81	SANDSTONE - fine grained - salt and pepper - quite clean.
170.81	171.43	SANDSTONE AND SILTSTONE - fine grained sandstone with siltstone laminae - convoluted bedding - rip up clasts.
171.43	171.60	SANDSTONE - medium and fine grained - poorly laminated - salt and pepper - contains carbonaceous material.
171.60	171.69	SILTSTONE AND SANDSTONE - sandstone is fine grained, salt and pepper - very disturbed - carbonaceous debris.
171.69	172.96	MUDSTONE AND SILTSTONE - bioturbated - becomes more muddy towards base of section - contains calcite veinlets in upper portion of section.
172.96	173.74	MUDSTONE AND FINE GRAINED SANDSTONE - interlaminated and interbedded - very broken up, minor calcite veinlets.
173.74	173.97	MUDSTONE, SILTSTONE AND SANDSTONE CLASTS - minor calcite veinlets.
173.97	175.78	SANDSTONE AND MUDSTONE - predominately fine grained sandstone grading through section to predominately mudstone with sandstone laminae and lenses - bioturbated - worm burrows. Bedding λ @ 73° to C/A.
175.78	176.14	MUDSTONE - dark grey - very clean mudstone.
176.14	176.32	COAL - 0.18 metres - dull and bright becoming very bright and well cleated at base of section.
176.32	176.83	MUDSTONE AND FINE GRAINED SANDSTONE - sandstone is light grey - predominately sandstone - minor bioturbation. Bedding λ @ 68° to C/A.
176.83	177.02	SANDSTONE AND MUDSTONE - quite disturbed - sandstone is very silty with mudstone laminae - minor worm burrows.
177.02	178.38	SANDSTONE - fine grained salt and pepper - mudstone laminae throughout becoming more concentrated towards base of section - very well laminated worm burrows.
178.38	178.51	MUDSTONE - dark grey - grading from mudstone to coaly mudstone.

HOLE# SMG 79-7 From 178.51 To 187.91

FROM	TO	DESCRIPTION
178.51	178.88	COAL - 0.37 metres - dull grading to dull and bright through section. Recovery approximately 100%.
178.88	180.03	MUDSTONE - dark medium grey - minor coaly streaks - plant debris.
180.03	180.16	SANDSTONE - very muddy with mudstone clasts - dark medium grey - fine grained.
180.16	180.65	SANDSTONE AND MUDSTONE - sandstone is light grey and fine grained - bioturbated - worm burrows - minor carbonaceous debris.
180.65	180.94	MUDSTONE - dark grey - coaly streaks near base of section.
180.94	181.00	COAL - 0.06 metres - dull and bright - black - muddy.
181.00	181.52	MUDSTONE AND SANDSTONE - mudstone is dark medium grey, sandstone is muddy salt and pepper - thinly laminated or thin lenses of silt in mudstone. Bedding λ @ 70° to C/A
181.52	182.55	MUDDY SILTSTONE AND SILTY SANDSTONE (Interbedded and Interlaminated) - light medium to dark medium grey thinlly to coarsly colour banded - laminations from well defined planar to strong convoluted. - few coal streaks @ 181.90m.
182.55	185.21	SANDSTONE - light grey to light medium grey, fine-grained becoming slightly coarser downward - thinlly laminated with some indistinct current ripple laminations.
185.21	187.00	MUDDY SILTSTONE AND SANDSTONE (Interlaminated) - alternating laminations and beds of dark medium grey siltstone and light medium grey fine-grained finely laminated sandstone displaying small scale crossbedding and occasional narrow graded bed.
187.00	187.76	SILTY MUDSTONE - dark grey mudstone laminated with fine siltstone laminae - small scale ripples and load casts.
187.76	187.91	COAL - ~ 80% recovery, 0.15 metres, black, shiny and well cleated, friable at top dull and more indurated.

HOLE#

SMG 79-7

From 187.91 To 195.35

FROM	TO	DESCRIPTION
187.91	188.60	MUDDY SANDSTONE - very fine grained, light medium to dark medium grey sandstone with mudstone laminae - hairlike coal streaks and calcite veinlets.
188.60	189.00	SILTY MUDSTONE - dark medium grey - brownish tints mudstone with a few siltstone laminae and siltstone mixed in less silty at bottom, two coal bands at 188.94 and 188.99
189.00	189.34	MUDDY SANDSTONE - fine grained medium grey sandstone with mudstone laminae and mudstone mixed in.
189.34	190.30	SANDY MUDSTONE - dark grey mudstone with fine grained sandstone laminae and lenses, coal band at 190.242 to 190.248.
190.30	190.39	VERY COALLY MUDSTONE - friable all broken, black coal band at 190.30 to 190.31, mudstone - dark grey, slight silt content.
190.39	191.00	MUDSTONE - dark grey, slight silt content.
191.00	191.04	COAL - 0.04 metres, black dull with shiny flaky bands
191.04	191.13	MUDSTONE - dark grey to black.
191.13	191.82	SANDSTONE AND MUDSTONE (Interlaminated and Interbedded) fine grained light grey to light medium, grey sandstone, small scale ripple marks.
191.82	192.62	SANDY MUDSTONE - dark grey with fine grained sandstone lenses.
192.62	193.36	MUDDY SANDSTONE - highly convoluted bedding fine to medium light medium grey sandstone and dark grey mudstone in convoluted laminae, calcite vein at 193.34 to 193.36 microlitic texture.
193.36	193.64	SANDSTONE - fine to medium grained very light grey small scale cross bedding - slightly pyritic, very thin mudstone laminae, bedding close to planar.
193.64	194.16	MUDDY SANDSTONE - light grey fine grained sandstone strongly convoluted bedding and mudstone laminae several calcite veinlets slightly bent or rounded - few beds more muddy than sandy.
194.16	195.35	SANDSTONE - fine grained at top grades to coarse grained at bottom, light grey to light medium grey - few thin mudstone laminae bedding approximately planar coal streak at bottom 195.34, vuggy calcite vein at 194.92.

HOLE#

SMG 79-7

From 195.35 To 213.43

FROM	TO	DESCRIPTION
195.35	196.94	MUDSTONE AND SANDSTONE (Interbedded and Interlaminated) fine to medium grained sandstone light grey dark grey mudstone calcite veinlets and coal streaks. Bedding at $\sim 65^{\circ}$ from C/A, small scale ripples and load casts.
196.94	198.55	SANDY MUDSTONE - dark grey mudstone with sandstone mixed in and in lenses, bedding not distinct, less sand content towards bottom coal streaks.
198.55	204.60	MUDSTONE - dark grey to black, scattered small sand lenses, coal band 200.36 to 200.39, 202.55 to 202.63? Core less 80%? Several coal streaks, plant debris vertical and horizontal worm burrows.
204.60	205.55	SANDY MUDSTONE - dark grey to black mudstone with thin fine grained sandstone laminae and lenses, sandstone content increases towards bottom several small scale ripples and load casts, vertical worm burrows.
205.55	206.32	SANDSTONE AND MUDSTONE (Interbedded and Interlaminated) moderately disturbed, small scale load casts and ripples, fine to medium grained sandstone, coal streaked towards bottom, coal band at 206.28.
206.32	209.46	SANDY MUDSTONE - dark grey, no distinct laminae at top, coal band at 206.79, 207.14, distinct laminae from 207.22 to 207.56, 208.69 to 208.78 and 209.40 to 209.46.
209.46	210.59	MUDSTONE - dark grey to black coal streaks.
210.59	212.24	SANDSTONE AND MUDSTONE (Interbedded and Interlaminated) wavy laminae, several ripples, fine grained light grey sandstone and dark grey to black mudstone, sandstone content increases towards bottom.
212.24	212.55	MUDDY SANDSTONE - fine grain, light grey sandstone with mudstone laminae coal streaks.
212.55	212.71	MUDDY SANDSTONE - very fine grained light grey sandstone, trough cross-bedding mudstone laminae.
212.71	213.43	MUDDY SANDSTONE - trough cross-bedding, mudstone laminae medium grained light grey sandstone heavily coal streaked from 213.16 to 213.34 coarse grained from 213.34 to 213.43.

HOLE #

SMG 79-7

From 213.43 To 237.17

FROM	TO	DESCRIPTION
213.43	214.27	SANDSTONE - coarse to medium grained, light grey slightly coal streaked, calcite veinlet.
214.27	218.95	SANDSTONE AND MUDSTONE AND SILTSTONE - (Interbedded and interlaminated) small scale vertical worm burrows, ripples, load casts bedding moderately disturbed at 215.58 to 215.70 and 218.13 to 218.23 and 218.44 to 218.75 clean mudstone bed 217.00 to 217.32 clean mudstone bed 218.23 to 218.43.
218.95	220.18	SANDSTONE - medium to coarse grained light grey, very thin mudstone and sandstone mixed, laminae coal streaked towards bottom
220.18	220.94	MUDDY SANDSTONE - several hairlike coal streaks bedding disturbed moderately, mudstone dark grey to black.
220.94	222.08	COAL - band at 220.94 and 221.04, shiny well cleated coally sand lenses.
222.08	222.67	SANDY MUDSTONE - dark grey current mixed with fine grained sandstone.
222.67	227.94	MUDDY SANDSTONE - laminated and slightly convoluted, fine to medium grained sandstone at bottom, coarse grained from 225.95 to 226.80 fine to medium grained below 226.80, mudstone content increases toward bottom
227.94	228.82	MUDSTONE AND SANDSTONE - Interlaminated dark grey to black mudstone, fine grained light grey sandstone and siltstone
228.82	231.82	SANDY MUDSTONE - dark grey to black mudstone with light grey fine grained sandstone and siltstone laminae.
231.82	233.14	SANDSTONE AND MUDSTONE (Interbedded and interlaminated)
233.14	233.89	MUDSTONE - black, few siltstone lenses
233.89	235.11	SILTY MUDSTONE - no distinct laminae, but mudstone is light medium grey due to silt content
235.11	235.68	MUDSTONE - black, sandstone laminae towards bottom = gradation into next unit.
235.68	236.28	MUDDY SANDSTONE - very fine grained sandstone with siltstone and mudstone laminae.
236.28	237.17	SILTY MUDSTONE - dark grey to black mudstone with siltstone laminae.

SMG 79-7

From 237.17

To

[illegible]

CORE DESCRIPTION

HOLF* SMG-79-8

From 17.68 To 39.18

Area SOUTH MOUNT GETHING

Bv A.T. Armstrong,

J. Ridley & R.B. Anderson

[illegible]

SMG-79-8

From 39.18

To 49.88

FROM	TO	DESCRIPTION
39.18	39.91	PEBBLY SANDSTONE - light medium to dark grey mottled and well mixed sandstone with much mud and silt - Bands of pebbles from 39.18 to 39.43m with pebbles up to 0.5cm - Pebble band 39.68 to 39.61m - Pebble band 39.80 to 39.91 - pebbles 0.2cm to 2cm diameter - rounded, with pyrite blebs and nodules up to 0.3cm diameter - also some pyrite nodules in upper pebble bands.
39.91	40.36	SANDSTONE - light medium to medium grey - fine-grained - disturbed bedding with carbonaceous debris on bedding surfaces.
40.36	41.75	SANDSTONE - light medium grey - uniformly very fine-grained - distinct planar fine laminations - festoon cross-bedding Bedding \times @ 72° to C/A.
41.75	49.01	MUDSTONE, SANDSTONE AND SILTSTONE (Interlaminated and Interbedded) - alternating beds and laminations of dark grey to black mudstone and light grey to light medium grey sandstone with minor lamination of siltstone grading to fine-grained sandstone and medium grey muddy siltstones - Sequence is predominantly mudstone and mudstone with occasional silty laminations and lenses toward the base - Colour banding is distinct - Sands have produced small scale cut and fill features on the upper surfaces of many mudstone beds.
49.01	49.49	COAL - 0.48 metres - black, few thin vitrain streaks in durain and fusain - recovered as solid core with few rounded fragments - Recovery 80%
49.49	49.78	MUDSTONE - dark grey, carbonaceous, few fine silt streaks.
49.78	49.88	COAL - 0.10 metres - black, fine granular dull to bright mixed - Recovery 50%.

To 61.39

FROM	TO	DESCRIPTION
49.88	51.64	MUDSTONE AND SILTSTONE (Interlaminated) - predominantly mudstone - alternating laminations of dark grey to black mudstone with thin laminations of light grey siltstone - altering to mudstone with numerous coal streaks toward the base.
51.64	51.80	COAL - 0.16 metres (?) - black - alternating coarse dull to bright bands - Recovery approx. 50%.
51.80	51.86	COALY MUDSTONE - black - coal streaked.
51.86	52.00	COAL - 0.14 metres (?) - fine chips of black dull coal - Recovery approx. 50%.
52.00	52.26	MUDSTONE - black - silty toward the base.
52.26	53.97	SANDSTONE - light medium grey, fine-grained, massive at the top to thinly laminated downward - occasional bedding plane with carbonaceous debris - Bedding \angle 68° to C/A.
53.97	54.77	SILTSTONE, MUDDY SILTSTONE AND MUDSTONE - banded medium grey to dark grey, thinly laminated with wavy laminations.
54.77	55.21	MUDSTONE - dark grey to black, silty at the top.
55.21	55.53	COALY MUDSTONE, COALY, MUDSTONE - black coal bands and coaly mudstone with dark brownish grey mudstones.
55.53	55.85	MUDSTONE - dark grey to black.
55.85	59.15	MUDSTONE AND SILTSTONE (Interlaminated) - predominantly dark grey mudstone with thin light medium to medium grey siltstone laminations - increasing silt content toward the base.
59.15	59.73	MUDSTONE - dark grey to black.
59.73	60.14	COAL - 0.41 metres - black, banded - streaks of bright vitrain in durain mass. Recovery approx. 90%.
60.14	60.43	MUDSTONE - dark brownish grey.
60.43	61.39	COAL - 0.96 metres - black, indistinctly banded - bright and dull to finely granular bright - solid core with minor breakage. Recovery 100%.

HOLE#

SMG-79-8

From 61.39

To 79.52

FROM	TO	DESCRIPTION
61.39	61.90	MUDSTONE - black, with occasional very thin silty laminations.
61.90	62.10	COAL - 0.20 metres - black, recovered as small bright chips - Recovery ~ 50%.
62.10	62.53	COALY MUDSTONE - dark brownish grey mudstone with numerous coal streaks and several thin laminations.
62.53	63.11	SANDSTONE - light medium to medium grey fine-grained, minor silt fragment - fine current ripple and climbing ripple marks.
63.11	65.62	MUDSTONE AND SILTSTONE (Interbedded and Inter-laminated) - predominantly dark grey mudstone beds with interbedded mudstone and siltstone interlaminated sequences - coal streaked from 64.05 to 64.31 metres
65.62	67.23	SILTSTONE, MUDDY SILTSTONE AND MUDSTONE (Inter-laminated) - thin alternating light medium to dark grey wavy laminations.
67.23	68.29	MUDSTONE - dark grey to black.
68.29	69.17	COAL - 0.88 metres - black, thin vitrain streaks in generally dull coal - few shears - bright and finely cleated at the base - Recovery ~ 95%.
69.17	69.29	MUDSTONE - black.
69.29	72.85	SILTY SANDSTONE - light medium to medium grey fine-grained thinly laminated sandstone with strong silty components - numerous thin block carbonaceous muddy laminations throughout. Bedding λ @ 70° to C/A.
72.85	77.07	MUDSTONE AND SILTY SANDSTONE - (Interbedded and Inlaminated) - alternating thin beds and laminations of dark grey mudstone with light medium grey fine-grained silty sandstone - occasional small scale cut and fill channel of sand into mud.
77.07	79.52	SANDSTONE - generally light medium grey fine-grained indistinctly laminated sandstone - minor carbonaceous muddy laminations near the top and bottom.

HOLE #

SMG-79-8

From 79.52

To 92.09

FROM	TO	DESCRIPTION
79.52	80.59	SANDSTONE AND MUDSTONE (Interlaminated) - predominantly light medium grey fine-grained sandstone at the top to predominantly dark grey mudstone at the base.
80.59	82.43	MUDSTONE - dark grey to black - few very fine silty laminations.
82.43	82.78	COAL - 0.35 metres - black, banded to irregular vitrain streaks in durain and fusain mass. Recovery = 100%.
82.78	83.02	MUDSTONE - dark grey to black, coal streaked.
83.02	86.41	MUDSTONE, SILTSTONE AND SANDSTONE (Interlaminated and Interbedded) - alternating beds and laminations of predominantly dark grey mudstone with lesser amounts of light grey to light medium grey siltstone and fine-grained sandstones - distinctly colour banded - very small scale festoon cross-bedding in the silts - some graded bedding.
86.41	87.69	MUDSTONE - dark grey to black.
87.69	87.78	COAL - 0.09 metres - black, coarse banded with minor bright vitrain in durain and fusain Core Recovery 100%
87.78	87.91	COALY MUDSTONE - dark grey with numerous coal streaks and thin seams.
87.91	88.95	SILTY SANDSTONE - light medium to medium grey, fine-grained - massive thinly laminated Bedding \times @ 75° to C/A.
88.95	89.06	COALY MUDSTONE - dark grey, coal streaked.
89.06	91.25	SANDSTONE - generally fine-grained, light grey, thinly laminated with distinct small scale festoon cross-bedding - some climbing ripple marks - dark medium grey and massive mottled at the top - planar bedding at the base @ 70° to C/A.
91.25	92.09	SILTY SANDSTONE AND SILTSTONE (Interlaminated) - generally thinly laminated light grey to medium grey - distinct planar to wavy laminations.

HOLE#

SMG-79-8

From 92.09 To 109.87

FROM	TO	DESCRIPTION
92.09	92.88	SANDSTONE - fine-grained light medium grey generally massive with few laminations evident.
92.88	94.10	COALY MUDSTONE - dark brownish grey to dark grey to black with numerous coal streaks and narrow seams of coal.
94.10	95.54	MUDSTONE - dark grey to black, massive silty toward the base.
95.54	95.92	SANDSTONE - fine-grained, medium grey with minor silty and mud - weakly disturbed bedding.
95.92	98.62	MUDSTONE - dark grey to black, occasional small coal streaks - silty toward the base.
98.62	99.89	MUDSTONE, SANDSTONE AND SILTSTONE (Interlaminated and Mixed) - very inhomogeneous interlaminated and mixed sequence of light medium grey fine-grained sands, dark grey muds and silty muds and medium grey silts.
		99.17 to 99.36 black carbonaceous sandstone with rounded dark brownish grey mud clasts.
99.89	101.27	MUDSTONE - dark grey to black, silty at the top and bottom - coaly in the middle.
101.27	104.87	SANDSTONE - light grey fine-grained, strongly disturbed to planar bedding down to 103.30 - light medium grey, fine-grained, thinly laminated with well defined cross-bedding.
104.87	107.13	MUDSTONE AND SANDY SILTSTONE (Interlaminated and Interbedded) - predominantly dark grey mudstone beds and laminations with thin laminations and lenses of light medium grey sandy siltstone Bedding λ @ 70° to C/A.
107.13	107.65	MUDSTONE - dark grey
107.65	108.05	COAL - 0.40 metres (?) - black, dull, cannelloid Recovery 75%.
108.05	108.20	MUDSTONE - dark grey.
108.20	109.87	MUDSTONE AND SILTSTONE (Mixed to Interlaminated) - often mottled light medium to dark grey with some laminations.

HOLE #

SMG-79-8

From 109.87

To 124.45

FROM	TO	DESCRIPTION
109.87	113.66	SANDSTONE - light grey to light medium grey with salt and pepper colouring - carbonaceous muddy laminations common to 111.64 - medium grained with coarse indistinct laminations from 111.64 to base.
113.66	114.65	MUDSTONE AND SANDSTONE (Interlaminated and Mixed) - predominantly light medium grey fine-grained sandstone at the top to predominantly dark grey mudstone downward - grading into mudstone downward.
114.65	117.54	MUDSTONE AND COALY MUDSTONE - dark grey to black - narrow coal seams with sand laminations 115.40 to 115.63 - few thin silty laminations.
117.54	118.47	COAL - 0.93 metres - black, banded to fine granular dull - Recovery ~ 90%.
118.47	118.76	MUDSTONE - dark grey massive
118.76	118.88	COAL - 0.12 metres - black, bright, largely vitrain Recovery ~ 75%.
118.88	119.31	MUDSTONE - dark grey, few silty laminations and lenses. Bedding \times @ 70° to C/A.
119.31	119.81	COAL - 0.50 metres - black, banded fusain and durain with minor vitrain - Recovery ~ 90% - some coaly streaks.
119.81	120.01	MUDSTONE - dark brownish grey with fine calcite veining.
120.01	120.43	COAL - 0.42 metres - black, dull to bright - fine granular fragmented - some thin asy bands.
120.43	121.46	MUDSTONE AND SILTSTONE (Interlaminated) - predominantly dark grey mudstone at the top with increasing numbers of fine light medium grey silty laminations toward the base.
121.46	124.45	MUDSTONE, SANDSTONE, SILTSTONE (Interlaminated and Interbedded) - alternating bands of dark grey mudstone, light grey, fine-grained sandstone and light medium grey siltstone - distinct bedding features - small scale cut and fill channels common with sands cutting and filling the upper surfaces of mud laminae - festoon cross-bedding, graded laminae and fine enterolithic worm burrows common.

HOLE#

SMG-79-8

From 124.45

To 130.41

FROM	TO	DESCRIPTION
124.45	125.31	MUDSTONE - dark grey, sandy at the base - coal streaked.
125.31	125.38	COAL - 0.07 metres - black.
125.38	126.21	MUDSTONE - dark grey, in part coaly.
126.21	127.14	COAL - 0.93 metres - black, variable dull to dull and bright - short well cleated lengths, ashy bands. Recovery ~ 85%.
127.14	127.25	MUDSTONE - black, coaly.
127.25	127.31	COAL - 0.06 metres - black, fine banded vitrain and durain - very strongly cleated - thin ashy bands.
127.31	127.50	SILTY MUDSTONE - dark grey to dark medium grey, coal streaked at the top.
127.50	127.65	SNADY MUDSTONE - dark grey to dark medium grey, with very fine-grained sandstone lenses increasing towards bottom.
127.65	128.89	MUDDY SANDSTONE - Sandstone fine to medium-grained at top, coarse towards bottom - some mudstone laminae but most mixed in with sandstone, much cross-bedding - coal streaks Bedding ~ 62° from C/A.
128.89	129.03	SANDSTONE, MUDSTONE AND SILTSTONE (Interlaminated) ripples.
129.03	129.09	MUDSTONE - dark grey to black - Sandstone lenses.
129.09	129.87	MUDDY SANDSTONE - coarse to medium-grained sandstone - light grey with mudstone mixed in - much cross-bedding - coal streaks - mudstone laminae towards bottom.
129.87	130.08	SANDY MUDSTONE - dark grey mudstone with sand lenses and one disturbed muddy sandstone bed.
130.08	130.16	MUDDY SANDSTONE - medium-grained, light medium grey - festoon cross-bedding.
130.16	130.26	MUDSTONE dark grey with sandstone lenses and horizontal worm burrows.
130.26	130.29	MUDDY SANDSTONE
130.29	130.41	SILTY MUDSTONE - dark medium grey

SMG-79-8

From 130.41 To 142.20

FROM	TO	DESCRIPTION
130.41	130.55	SANDY MUDSTONE - bedding well disturbed - medium grey mudstone with fine-grained sandstone mixed in silty towards bottom.
130.55	132.75	SANDY MUDSTONE - dark grey to black with sandstone lenses intermittent - several small worm burrows - sandstone decreases towards bottom to almost none.
132.75	132.81	COAL - 0.06 metres - 100% recovery - moderately dull - sheared slicken sides.
132.81	133.06	COALY MUDSTONE - black - several shiny cleated coal bands 1 - 2mm thick.
133.06	134.71	MUDSTONE, SANDSTONE, SILTSTONE (interlaminated and Interbedded) - cross-bedding - vertical and horizontal worm burrows.
134.71	135.06	MUDSTONES - dark grey to black - slight siltstone content - very small lenses and laminae.
135.06	136.28	SANDY MUDSTONE - dark grey with fine-grained sandstone mixed in - some small lenses and laminae and small beds.
136.28	138.84	SILTY MUDSTONE AND SANDSTONE (Interbedded and Interlaminated) - fine to medium-grained sandstone - hairline coal streaks - bedding moderately disturbed - several small horizontal worm burrows.
138.84	139.44	MUDDY SANDSTONE - medium to coarse-grained, light grey with mudstone mixed in and in some laminae cross-bedding in medium grained coal streaks increasing towards bottom.
139.44	140.20	SANDSTONE - coarse-grained, light grey - slight mudstone content - a few mudstone clasts - coal streaks towards bottom.
140.20	142.20	SANDSTONE - medium to coarse-grained, light grey to medium grey due to mudstone content - coal bands at 141.57 and streaks from 141.12 to 142.10.

HOLE#

SMG 79-9

From 50.49

To 63.81

FROM	TO	DESCRIPTION
50.49	50.85	COAL - 0.36 metres - black, bright, vitrain and fusain, recovery ~ 60%.
50.85	51.61	MUDSTONE - dark grey to black, coal streaked at the top and bottom.
51.61	52.01	COAL - 0.40 metres
		- black, banded, moderately bright with bright vitrain streaks, recovery 100%.
52.01	52.18	MUDSTONE - dark grey, coal streaked at the top.
52.18	55.78	SANDSTONE - massive, medium grey, fine-grained, silty at the top - fine to medium-grained, light grey with indistinct laminations - some carbonaceous debris and occasional thin wavy carbonaceous mudstone lamination.
55.78	56.87	SANDSTONE & MUDDY SILTSTONE (Interbedded & Interlaminated) - alternating moderately disturbed to convoluted muddy siltstone and sandstone beds and laminations.
56.87	59.53	MUDSTONE - dark grey to black - silty in part and with fine silty or sandy laminations and lenses, coaly from 58.43 to 58.58
		59.41 to 59.50
59.53	59.95	SILTSTONE & MUDDY SILTSTONE - thinly laminated light grey to medium grey, moderately to strongly disturbed.
59.95	60.07	MUDSTONE - dark brownish grey.
60.07	60.18	COAL - 0.11 metres - black, bright with few dull streaks, recovery 100%.
60.18	60.25	MUDSTONE - dark brownish grey.
60.25	61.95	MUDDY SILTSTONE - light medium grey to dark medium grey generally massive with mottled colouring.
61.95	62.44	SANDSTONE & MUDDY SILTSTONE (Interlaminated & Interbedded) - predominately fine-grained light grey sandstone laminations alternating with very thin wavy muddy siltstone laminations.
		- bedding λ @ 85° to C/A
		- small scale current ripple laminations and small scale cross-bedding are common.
62.44	63.81	MUDDY SILTSTONE - dark medium grey siltstone with a few light grey sandstone lenses and laminae.

HOLE# SMG-79-8

From 152.47 To 169.03

FROM	TO	DESCRIPTION
152.47	154.74	MUDSTONE, SILTY MUDSTONE, SILTY SANDSTONE (Interlaminated) - predominantly Silty Sandstone with alternating thin laminations of mudstone (often carbonaceous) and Silty Mudstone - wavy bedding surfaces.
154.74	155.02	MUDSTONE - dark grey to black
155.02	155.43	COAL - 0.41 metres - black coarsely banded, 5% vitrain - Recovery ~ 40%.
155.43	155.66	MUDSTONE - dark grey, coal streaked.
155.66	157.71	SANDSTONE - light grey, fine-grained, indistinct bedding and cross-bedding - interlaminated fine muddy bands 155.97 to 156.07 metres and 157.23 to the base.
157.71	158.33	COALY MUDSTONE - dark grey to black, coal streaked and with coal seams 158.00 to base - coal ore bright, black, well cleated.
158.33	159.41	SANDY MUDSTONE - dark medium to dark grey - indistinctly banded.
159.41	162.12	SANDSTONE - light grey, fine-grained, with thin laminated narrow beds of strongly carbonaceous mudstone (wavy).
162.12	164.20	MUDSTONE - dark grey with occasional thin laminations of light medium grey siltstone - 162.62 to 162.77 silty and sandy laminations predominant.
164.20	164.64	COAL - 0.44 metres - black, strongly broken, some bright coal but mostly dull - Recovery ~ 50%.
164.64	165.07	MUDSTONE - dark grey, silty toward the base.
165.07	167.25	SANDSTONE AND MUDDY SILTSTONE (Interbedded) - alternating beds of light grey to light medium grey, fine-grained, sandstone and dark medium grey muddy siltstone - beds have diffuse contacts.
167.25	167.88	MUDSTONE - dark grey to black, few fine coaly laminations and streaks.
167.88	169.03	SANDSTONE AND MUDDY SILTSTONE (Interbedded) (see above).

HOLE#

SMG-79-8

From 169.03

To 182.48

FROM	TO	DESCRIPTION
169.03	170.14	MUDSTONE AND COALY MUDSTONE - dark grey to black in part with coal streaks and strong carbonaceous content.
170.14	171.82	SANDSTONE - light grey, fine-grained, thinly laminated with small scale cross-bedding - few muddy siltstone laminations - some carbonaceous debris on bedding surface.
171.82	175.50	SANDSTONE, SILTSTONE AND MUDSTONE (Interlaminated and Mixed) - predominantly fine-grained, light medium grey sandstone at the top to predominantly dark grey mudstone and silty mudstone at the base - thinly laminated with wavy laminations often various shades of mottled grey.
175.50	175.76	COALY MUDSTONE - black, coal streaked.
175.76	176.17	COAL - 0.41 metres (?) - black, strongly fragmented mixed dull and bright - Recovery ~ 25%.
176.17	178.15	MUDSTONE AND COALY MUDSTONE - dark grey to black with numerous narrow coal seams and fine coal streaks - silty in part.
178.15	180.15	MUDSTONE AND SILTSTONE (Interlaminated) - predominantly dark grey mudstone with fine light medium grey siltstone lenses and laminations.
180.15	180.52	SANDSTONE, SILTSTONE AND MUDDY SILTSTONE (Interlaminated) - alternating laminations - medium grey to dark grey.
180.52	181.30	MUDSTONE with fine flute casted silty sandstone laminations - medium dark grey to dark grey.
181.30	181.55	SANDSTONE, SILTSTONE AND MUDSTONE (Interlaminated) - light grey to dark grey - sandstone predominantly bioturbated, bedding distorted
181.55	181.62	SILTY MUDSTONE - medium dark grey, with numerous thin coal streaks - Bedding @ 70° to C/A.
181.62	182.48	MUDDY SILTY SANDSTONE - medium grey - carbonaceous debris and streaks throughout - coursing to the base - wavy bedding often distorted.

HOLE#

SMG-79-8

From 182.48

To 191.56

FROM	TO	DESCRIPTION
182.48	182.91	COAL - 0.43 metres (less than 25% recovery) - bright, black, finely banded - crushed - slicken sided fragments clearly evident.
182.91	183.05	COALY MUDSTONE - dark grey to black - numerous thin coal streaks.
183.05	183.34	SILTY MUDSTONE - medium grey occasional sandstone lenses - Mudstone predominant.
183.34	183.39	COAL - 0.05 metres - broken, less than 10% recovery.
183.39	183.85	SILTY MUDSTONE - dark medium grey - occasional thin coal streaks and extensive carbonaceous debris on bed surfaces - Bedding @ approx. 68° to C/A.
183.85	185.00	MUDSTONE, SILTSTONE AND SANDSTONE - Interlaminated - light grey to dark grey - worm burrows and load casts throughout.
185.00	187.02	SANDSTONE - light medium grey - fine to medium- grained - cross-bedded - occasional thin mud clast - carbonaceous debris on some bed surfaces - open calcite filled tension fracture @ 20° to C/A - occasional thin Mudstone lenses.
187.02	187.57	SILTY MUDSTONE AND SILTSTONE (Interlaminated) - light medium grey to dark grey - apparent bed dip 65° to C/A - worm burrowed throughout.
187.57	187.77	SANDSTONE - fine-grained - light grey - uniform planar bedding @ 75° to C/A.
187.77	190.25	MUDSTONE AND OCCASIONAL THIN SANDSTONE LENSES (Interlaminated) - Mudstone predominate - dark grey - occasional worm burrows.
190.25	190.46	SANDSTONE - fine to medium-grained - light medium grey - lower surface slicken sided @ 72° to C/A.
190.46	190.63	MUDSTONE AND SANDY SILTSTONE (Interlaminated) - light medium grey to dark grey - a thin sand lense near the base is coarse-grained
190.63	191.18	SANDSTONE - medium-grained - salt and pepper texture - massive bedding.
191.18	191.56	MUDSTONE - dark grey - mottled appearance due to both horizontal and vertical 0.5cm sand filled worm burrows - numerous thin distorted siltstone laminae near base.

SMG-79-8

From 191.56

To 191.80

[illegible]

CORE DESCRIPTION

HOLE # SMG 79-9 From 0 To 18.24
 Area South Mount Gething By A. T. Armstrong
 FROM TO DESCRIPTION Joey Ridley

0	4.57	OVERBURDEN
4.57	6.70	SANDSTONE - uniformly fine-grained, light medium grey indistinctly laminated - strongly broken, weathered, iron stained, broken bedrock or large glacial boulder
6.70	7.04	SANDSTONE & CARBONACEOUS MUDSTONE (Interlaminated) - thin wavy alternating laminations of light medium grey sandstone and black carbonaceous mudstone.
7.04	7.90	SILTY MUDSTONE - dark medium grey massive.
7.90	8.85	MUDSTONE - dark grey to black with scattered fine light medium grey, fine-grained sandstone.
8.85	9.19	COAL - 0.34 metres, upper section - moderately bright with dull bands middle - dull with conchoidal to blocky fracture lower section - bright black strongly cleated recovery ~ 75%.
9.19	9.36	MUDSTONE - dark brownish grey - sandy laminations toward the base.
9.36	12.13	SANDSTONE AND CARBONACEOUS MUDSTONE (Interlaminated) - predominately sandstone with thin alternating laminations of black carbonaceous mudstone - sandstones are fine-grained, light medium grey, very thinlly laminated, occasional lamination display graded bedding - very small scale cross bedding common - few scattered worm burrows.
12.13	13.01	MUDSTONE - black, homogeneous, massive
13.01	13.20	COAL - 0.19 metres, black, banded, generally very bright, recovery 100%.
13.20	15.78	SANDSTONE & MUDDY SILTSTONE (Interbedded) alternating beds of dark medium grey muddy siltstone and light medium to medium grey dirty sandstone - coal streaked at the top and 14.75 to 14.79m - beds are gradational into each other.
15.78	17.91	SANDSTONE - light medium grey, fine-grained at the top to coarse grained at the base - occasional rounded light brown mud clast - carbonaceous debris on indistinct bedding surfaces.
17.91	18.24	COAL (Muddy) - 0.33 metres - brilliant black finely cleated coal with numerous dark brownish grey ash bands and lenses.

HOLE#

SMG 79-9

From 18.24

To 36.55

FROM	TO	DESCRIPTION
18.24	19.80	MUDSTONE - dark grey to black, thin laminations and streaks of bright coal common throughout - some disturbed sandy beds. Interlaminated.
19.80	25.61	MUDSTONE BEDS AND SANDSTONE AND MUDDY SILTSTONE BEDS - dark grey mudstone 20.53 to 22.18m 22.86 to 24.05m 24.45 to 25.13m (coaly) - Interlaminated fine-grained light medium grey sandstone with medium to dark medium grey siltstone - moderately to strongly disturbed bedding.
25.61	27.55	SANDSTONE - fine-grained, light grey sandstone massive at the top to thinly laminated and finely cross-bedded at the base. Bedding \times @ 85° to C/A.
27.55	29.40	SANDSTONE & MUDDY SILTSTONE (Interlaminated) - thinly laminated with alternating light grey fine-grained sandstones and dark medium grey muddy siltstone - weakly to strongly disturbed - few small convolutions.
29.40	29.99	MUDSTONE - dark grey - silty at the top - euhedral fine pyrite crystals on fracture surface.
29.99	30.31	COAL - 0.32 metres - black, ashy canneloid coal - recovery 50%.
30.31	30.64	SILTY MUDSTONE AND SILTSTONE (Mixed) - strongly disturbed dark medium grey silty mudstone and light medium grey siltstone.
32.06	35.00	SANDSTONE - light grey to light medium grey, fine-grained at the top and bottom and medium to coarse grained in the middle - carbonaceous debris on bedding surfaces and fine irregular carbonaceous streaks common throughout, bedding \times @ 85° to C/A
35.00	35.80	SANDSTONE & MUDSTONE (Interlaminated) gradational laminations between sandstone above and mudstone below - increasing mudstone downward.
35.80	36.25	MUDSTONE - dark grey to black - few fine sandy lenses.
36.25	36.55	COAL - 0.30 metres - black, banded dull to bright with few ashy laminations. Recovery \sim 30%.

HOLE #

SMG 79-9

From 36.55 To 50.49

FROM	TO	DESCRIPTION
36.55	38.10	MUDSTONE & SANDSTONE (Interlaminated) - predominately black mudstone with small lenses and laminations of light grey fine-grained sandstone.
38.10	39.04	COAL - 0.94 metres - Sample 1 narrow black dull ashy band at the top with the remainder as generally bright with dull black bands, often strongly cleated. Recovery = 100%.
39.04	40.20	MUDSTONE - dark grey to black, few fine-grained silty laminations - silty mudstone toward the bottom.
40.20	41.66	SILTY MUDSTONE & SILTSTONE - dark medium grey silty mudstone with laminations of siltstone - concretion @ 41.32m.
41.66	42.18	COAL - 0.52 metres - Sample 2 - black, predominately fusain with dull black band - few narrow brilliant vitrain laminations, recovery 100%.
42.18	42.53	MUDSTONE - black, coaly at the top, sandy at the base.
42.53	44.43	SANDSTONE - light grey, medium-grained at the top with occasional very thin muddy laminations to light medium grey, very fine-grained, thinly laminated, with distinct small festoon cross-bedding.
44.43	45.09	SANDSTONE & MUDDY SILTSTONE (Interlaminated) - alternating thin beds and laminations of dark grey muddy siltstone with light medium grey, fine-grained thinly laminated cross-bedded sandstone - few small cut and fill channels - occasional fine worm burrows.
45.09	47.49	MUDSTONE - dark grey to black, few sandy beds and lenses - coaly 46.19 to 46.29 metres..
47.49	48.80	SANDSTONE & MUDDY SILTSTONE (Mixed and Interbedded) - light medium to dark medium grey strongly disturbed to mixed sandstone and muddy siltstone down to 48.10 metres interbedded light grey, fine-grained sandstone and dark grey muddy siltstone to the end - few horizontal worm burrows.
48.80	50.49	SILTY MUDSTONE - dark grey with few silty to fine sandy disturbed laminations and lenses.

HOLE #

SMG 79-9

From 50.49

To 63.81

FROM	TO	DESCRIPTION
50.49	50.85	COAL - 0.36 metres - black, bright, vitrain and fusain, recovery ~ 60%.
50.85	51.61	MUDSTONE - dark grey to black, coal streaked at the top and bottom.
51.61	52.01	COAL - 0.40 metres
		- black, banded, moderately bright with bright vitrain streaks, recovery 100%.
52.01	52.18	MUDSTONE - dark grey, coal streaked at the top.
52.18	55.78	SANDSTONE - massive, medium grey, fine-grained, silty at the top - fine to medium-grained, light grey with indistinct laminations - some carbonaceous debris and occasional thin wavy carbonaceous mudstone lamination.
55.78	56.87	SANDSTONE & MUDDY SILTSTONE (Interbedded & Interlaminated) - alternating moderately disturbed to convoluted muddy siltstone and sandstone beds and laminations.
56.87	59.53	MUDSTONE - dark grey to black - silty in part and with fine silty or sandy laminations and lenses, coaly from 58.43 to 58.58
		59.41 to 59.50
59.53	59.95	SILTSTONE & MUDDY SILTSTONE - thinly laminated light grey to medium grey, moderately to strongly disturbed.
59.95	60.07	MUDSTONE - dark brownish grey.
60.07	60.18	COAL - 0.11 metres - black, bright with few dull streaks, recovery 100%.
60.18	60.25	MUDSTONE - dark brownish grey.
60.25	61.95	MUDDY SILTSTONE - light medium grey to dark medium grey generally massive with mottled colouring.
61.95	62.44	SANDSTONE & MUDDY SILTSTONE (Interlaminated & Interbedded) - predominately fine-grained light grey sandstone laminations alternating with very thin wavy muddy siltstone laminations.
		- bedding λ @ 85° to C/A
		- small scale current ripple laminations and small scale cross-bedding are common.
62.44	63.81	MUDDY SILTSTONE - dark medium grey siltstone with a few light grey sandstone lenses and laminae.

HOLE#

SMG 79-9

From 63.81

To 79.52

FROM	TO	DESCRIPTION
63.81	64.04	SANDSTONE AND MUDDY SILTSTONE (Interlaminated and mixed)
64.04	64.38	SILTY MUDSTONE - dark grey mudstone with light grey fine grained siltstone laminae and lenses.
64.38	65.16	SANDSTONE AND MUDDY SILTSTONE (Interlaminated and Interbedded)-fine to medium grained light grey sandstone with muddy siltstone laminae, small scale standing ripples, calcite veinlets 1-2 mm thick.
65.12	71.70	SANDSTONE, MUDDY SILTSTONE AND MUDSTONE (Interlaminated and Interbedded)-fine to medium grained light grey sandstone dark medium grey siltstone and dark grey mudstone, small scale standing ripples and cross beds and scour and fill structures, worm burrows 2mm coal band shiny and cleated at 69.36 to 69.38.
71.70	72.53	MUDDY SANDSTONE - light grey medium grained sandstone shallow cross bedding, mudstone mixed in.
72.53	73.53	MUDDY SANDSTONE AND MUDSTONE (Interlaminated and Interbedded) - medium grained light grey sandstone shallow crossbeds - few hairline coal streaks.
73.53	75.87	MUDDY SANDSTONE - at top light grey medium grained sandstone with a few mudstone laminae and mudstone mixed in grades into coarse grained salt and pepper sandstone with a few mudstone beds at 73.97m to 74.00 and 74.18 to 74.26 which have light grey very fine grained sandstone laminae. Coally mudstone bands at 75.13 and 75.75 mudstone clasts at 75.19, several hairlike coal streaks.
75.87	76.41	SANDSTONE AND MUDSTONE - (Interbedded and Interlaminated) - fine to medium grained light grey sandstone calcite veinlet at 75.95.
76.41	77.11	SANDSTONE - fine to medium grained light grey to light medium grey with several hairline coal streaks.
77.11	79.30	SANDSTONE - dark medium grey with light patches, coarse grained planar bedding channel sand - wavy coal bands a few mud clasts.
79.30	79.52	COALLY SANDSTONE - light grey medium grained sandstone with several coal bands .5 cm thick wavy, shiny and and cleated, contains pebbles.

HOLE#

SMG 79-9

From 79.52

To 85.95

FROM	TO	DESCRIPTION
79.52	79.68	COAL 0.16 metres approximately 90% recovery dull and shiny - cleated where shiny 3mm mud band at 79.57 to 79.60
79.68	79.74	MUDSTONE - dark grey to black.
79.74	80.20	MUDDY SILTSTONE - medium grey siltstone with mudstone laminae - bedding moderately disturbed small scale ripples.
80.20	81.34	SANDSTONE AND MUDDY SILTSTONE AND MUDSTONE (Interlam- inated) fine grained light grey sandstone - dark medium grey siltstone several hairline mudstone streaks at top increasing mudstone content towards bottom.
81.34	81.68	SANDY MUDSTONE - black mudstone with fine grained sandstone laminae and lenses worm burrows, vertical and horizontal, sand content decreasing towards bottom
81.68	81.82	MUDSTONE - black.
81.82	81.89	COAL - 0.07 metres, 100% approximate recovery - shiny, cleated in two directions
81.89	81.93	SPLIT - sandy and coally mudstone
81.93	82.12	COAL - 0.19 metres approximately 74% recovery, mostly well cleated in two directions and shiny.
82.12	82.65	MUDSTONE - black coally at top.
82.65	83.21	SILTY SANDSTONE - light medium grey siltstone and fine grained sandstone mixed hairline mudstone streaks
83.21	83.70	SANDSTONE, SILTSTONE AND MUDSTONE (Interlaminated) several small worm burrows, calcite flecks.
83.70	84.03	COALLY MUDSTONE - black, coal bands up to 3 mm thick cleated and shiny, slight siltstone content.
84.03	84.55	MUDDY SILTSTONE, SANDSTONE AND MUDSTONE - interbedded and mixed, fine grained sandstone.
84.55	85.15	SILTY SANDSTONE - sheared slickensides around 84.73
85.15	85.95	SANDSTONE, SILTSTONE AND MUDSTONE - current mixed, several worm burrows - vertical fine to medium grained light grey sandstone, small scale ripples, convoluted bedding.

HOLE#

SMG 79-9

From 85.95

To 108.98

FROM	TO	DESCRIPTION
85.95	86.35	SILTY MUDSTONE - dark grey to black mudstone with siltstone lenses and fine laminae.
86.35	89.49	MUDDY SANDSTONE - fine to medium grained sandstone light grey with mudstone and muddy siltstone laminae - horizontal worm burrows small cross beds - few hairlike coal streaks.
89.49	90.79	MUDSTONE - black - slight siltstone content increasing towards bottom as laminae.
90.79	91.20	COAL - 0.41 metres approximately 50% recovery, shiny and flaky friable.
91.20	91.30	SILTY MUDSTONE - dark medium grey contains a coal band 1 cm thick at an angle of 50° to core axis.
91.30	91.93	SANDSTONE - fine grained light grey with slight mudstone mixed mixed in one muddy bed at 91.63 to 91.73.
91.93	99.06	SANDY MUDSTONE - dark grey carbonaceous sandstone lenses and beds hairline coal streaks 95.42 to 95.52.
99.06	99.94	MUDDY SANDSTONE - fine grained light grey sandstone with mudstone laminae moderately disturbed.
99.94	103.02	SANDY MUDSTONE - dark grey mudstone with light grey very fine grained sandstone laminae and lenses partially current mixed, increasing sandstone content towards bottom.
103.02	105.20	MUDDY SANDSTONE AND MUDDY SILTSTONE - Interlaminated and Interbedded - contains mudstone clasts and laminae coal streaks and ore band.
105.20	106.66	MUDSTONE - black.
106.66	106.91	COAL - 0.25 metres approximately 50% recovery, one mud band, .8 cm thick, shiny - well cleated - two directions.
106.91	107.52	SILTY MUDSTONE - dark grey
107.52	107.84	COAL - 0.32 metres - 100% recovery, moderately shiny cleated in two directions, highly pyritic band 107.65 to 107.66, very muddy band at 107.78 to 107.82.
107.84	108.05	MUDSTONE - dark grey to black
108.05	108.98	MUDSTONE AND SANDSTONE - (Interlaminated and Interbedded) lenticular laminae fine grained sandstone medium grey.

HOLE#

SMG 79-9

From 108.98

To 123.53

FROM	TO	DESCRIPTION
108.98	109.83	SILTY MUDSTONE - black to dark grey, one coal clast 1 cm x 2 cm, close to top, siltstone lenses and laminae and some medium grained sandstone lenses.
109.83	111.50	SANDSTONE, MUDSTONE, SILTSTONE (Interlaminated) fine to medium grained sandstone, light medium grey, black mudstone and dark medium grey siltstone, more mudstone at top decreasing towards bottom.
111.50	112.67	SANDSTONE - medium grained, light medium - some mudstone content, coal streaks increasing towards bottom.
112.67	113.09	COAL - 0.42m approximately 50% recovery, moderately shiny - partially cleated - friable, two pyritic bands, 1 cm thick and 0.2 cm thick.
113.09	113.39	MUDSTONE - dark grey
113.39	113.62	MUDDY SANDSTONE (Interlaminated) - fine grained light medium grey, small scale ripples.
113.62	113.77	SILTY MUDSTONE - dark grey
113.77	113.95	COAL - 0.18m approximately 95% recovery, moderately shiny, well cleated.
113.95	114.12	SANDY MUDSTONE - dark grey mudstone with sandstone lenses.
114.12	117.89	MUDDY SANDSTONE AND MUDDY SILTSTONE - (Interlaminated) several vertical and horizontal worm burrows, light grey fine to medium grained sandstone, mudstone laminae towards bottom as mudstone content increases
117.89	119.79	SILTY MUDSTONE - dark grey to black mudstone with siltstone laminae and some sandstone, bedding horizontal, sandstone bed at 119.16 to 119.21 and 119.35 to 119.47, more sandstone laminae towards bottom.
119.79	121.68	SANDSTONE - coarse grained salt and pepper, some cross-bedding, slight mudstone content.
121.68	122.06	SANDSTONE AND MUDSTONE (Interlaminated) well disturbed - medium grained light grey sandstone - black mudstone - more sandstone, down to 122.21 then more mudstone to 122.06, vertical worm burrows.
122.06	123.53	SILTY MUDSTONE - dark grey, some laminae, most siltstone mixed in with mudstone sandstone lenses

122.47 to 122.61

HOLE# SMG 79-9

From 123.53 To 140.21

FROM	TO	DESCRIPTION
123.53	126.49	MUDDY SANDSTONE - current mixed at top - interlaminated below 124.00m, fine to medium grained light grey sandstone with thick mudstone (black) laminae.
126.49	128.20	SANDSTONE - medium grained, light grey, some mudstone content in laminae and small beds, calcite veinlets-coarser towards bottom.
128.20	129.83	SANDSTONE, SILTSTONE AND MUDSTONE (Interlaminated and Interbedded) - festoon crossbedding, worm burrows sandstone is fine to coarse grained, light grey to salt and pepper - siltstone medium grey increasing mudstone content towards bottom.
129.83	130.72	SILTY MUDSTONE - black with siltstone laminae and lenses.
130.72	131.20	SILTSTONE AND MUDSTONE - interlaminated but well disturbed, vertical worm burrows
131.20	132.71	MUDDY SILTSTONE - light medium grey siltstone with mudstone laminae coal streaks - more mud and well disturbed at bottom.
132.71	132.87	SILTY MUDSTONE - black with light medium grey siltstone lenses mixed in carbonaceous, well disturbed.
132.87	133.83	MUDDY SILTSTONE and very fine grained sandstone (interlaminated) coal streaked.
133.83	135.36	SILTY MUDSTONE - black with siltstone laminae.
135.36	136.55	MUDDY SILTSTONE - medium grey siltstone with a few mudstone laminae, and mixed in and some sandstone at top.
136.55	137.68	SILTY MUDSTONE - dark grey to black siltstone with siltstone laminae and lenses.
137.68	139.30	SANDY MUDSTONE - dark grey to medium grey - well mixed.
139.30	139.60	MUDSTONE - dark grey to black coally at bottom
139.60	139.70	COAL - 0.10 metre shiny, sheared all broken hard to tell where coal is and where coally mudstone is.
139.70	139.76	MUDSTONE - black
139.76	140.21	SILTY MUDSTONE - dark grey to black plant debris-siltstone mixed in, no lenses or laminae.

From 140.21 To 156.25

FROM	TO	DESCRIPTION
140.21	142.30	SILTY SANDSTONE - light grey medium grained sandstone with muddy siltstone laminae - above 141 m. bedding at 50° to C/A, horizontal below 141.00 m, carbonaceous laminae calcite veinlet, flaky.
142.30	143.93	SANDSTONE, MUDDY SILTSTONE AND MUDSTONE - (Interlaminated and Interbedded) larger mudstone beds towards bottom.
143.93	144.44	SANDSTONE - coarse grained, salt and pepper, carbonaceous bands.
144.44	147.14	MUDSTONE, SILTSTONE AND SANDSTONE - Interlaminated light grey fine grained sandstone, medium grey siltstone and black mudstone, vertical and horizontal worm burrows, bedding horizontal, heavily bioturbated increasing mudstone towards bottom.
147.14	147.81	MUDSTONE - black, coal streaks
147.81	148.48	MUDDY SILTSTONE AND SANDSTONE (Interlaminated and Interbedded)
148.48	151.14	MUDSTONE - dark grey to black, silty at top and sandy at bottom, large worm burrows, vertical 6cm x 1cm.
151.14	152.22	SANDSTONE - some mudstone beds and laminae several horizontal worm burrows at mudstone sandstone contacts - light grey fine grained sandstone, some crossbeds, increasing mudstone towards bottom.
152.22	153.59	SANDSTONE, SILTSTONE AND MUDSTONE (Interlaminated and Interbedded) bioturbated.
153.59	153.94	SILTY MUDSTONE - dark grey - most siltstone at top coal streaks towards bottom.
153.94	154.32	COAL - 0.38 metres approximately 33% recovery, dull and shiny, cleated.
154.32	154.49	MUDSTONE
154.49	156.25	MUDDY SANDSTONE - light grey, medium grained sandstone with black mudstone and muddy siltstone laminae and mudstone beds up to 5 cm thick, sandstone becomes coarse towards bottom, cross-bedded.

HOLE#

SMG 79-9

From 156.25 To 179.24

FROM	TO	DESCRIPTION
156.25	157.24	SILTY MUDSTONE - dark grey to black with siltstone laminae.
157.24	157.33	SANDSTONE - light grey medium grained coal streaked.
157.33	157.43	MUDSTONE - black
157.43	157.53	COAL - 0.10 metres approximately 100% recovery, dull and sandy some shiny cleated bands.
157.53	159.22	SILTY MUDSTONE AND MUDDY SANDSTONE (Interbedded) current mixed within beds light grey medium grained sandstone, black mudstone.
159.22	159.41	COAL - 0.19 metres, 100% recovery moderately dull, shiny cleated bands
159.41	159.91	MUDSTONE - black, coal streaks.
159.91	160.39	MUDDY SANDSTONE - fine grained, light medium grey sandstone with mudstone laminae.
160.39	160.69	MUDSTONE - black
160.69	161.05	COAL - 0.36 metres approximately 70% recovery, dull and shiny, friable.
161.05	161.56	MUDDY COAL - 0.51 metres, 86% recovery, several mud bands, coal is flaky and moderately dull - 75% coal.
161.56	161.99	COALLY MUDSTONE - black with coal bands.
161.99	164.08	SILTY MUDSTONE - dark grey mudstone with siltstone lenses.
164.08	167.71	MUDDY SANDSTONE - light grey, fine to medium grained sandstone with mudstone laminae and small beds coarse grained towards bottom from 166.00 to 167.71.
167.71	168.83	SILTY MUDSTONE - dark grey to black
168.83	169.67	MUDDY SANDSTONE - light medium grey fine grained sandstone with a lot of mudstone mixed in.
169.67	173.04	MUDSTONE AND SILTSTONE (Interlaminated and Interbedded) bedding disturbed, some current mixing.
173.04	174.05	MUDSTONE - dark grey to black silty at top.
174.05	174.45	SANDSTONE AND MUDDY SILTSTONE - (Interlaminated)
174.45	178.72	SILTY MUDSTONE - dark grey with infrequent siltstone laminae and lenses, black towards bottom and less silt
178.72	179.24	COAL - 0.48 metres, mostly dull, some shiny and cleated, 100% recovery

HOLE#

SMG 79-9

From 179.24

To 190.33

FROM	TO	DESCRIPTION
179.24	179.29	MUDSTONE - split.
179.29	179.36	COAL - 0.07 metres, 100% recovery, shiny and flaky
179.36	180.50	SILTY MUDSTONE - dark grey mudstone with siltstone laminae and some very fine grained sandstone.
180.50	180.67	COAL - 0.17 metres, 100% recovery, mostly shiny and cleated, sheared.
180.67	181.49	MUDSTONE - silty towards bottom.
181.49	183.84	MUDDY SANDSTONE - fine to medium grained, light medium grey sandstone with mudstone laminae, some convoluted bedding, high mudstone content between 182.37 and 182.82.
183.84	184.16	COALLY MUDSTONE - several coal bands
184.16	184.42	COAL - 0.26 metres, 100% recovery, shiny cleated.
184.42	185.32	SILTY MUDSTONE - dark grey to black coal bands at top siltstone lenses and laminae.
185.32	186.26	MUDSTONE - black occasional thin coal streaks
186.26	187.23	SANDSTONE, MUDDY SILTSTONE and some mudstone (Interbedded and Interlaminated) - bedding contorted dark grey to light grey - occasional thin and isolated coal clasts.
187.23	187.32	MUDSTONE - dark grey to black - occasional thin coal streaks.
187.32	187.43	COALY MUDSTONE - thin black mudstone beds and occasional thin coal seamlets less than 2 mm.
187.43	187.84	SILTY MUDSTONE - dark grey - occasional thin and isolated coal clasts.
187.84	188.04	MUDSTONE - dark grey - weakly silty - extremely thin coal streaks.
188.04	188.45	SILTY SANDSTONE - medium grey - disturbed bedding
188.45	188.66	SILTY MUDSTONE - medium dark grey - becomes weakly coaly at the base.
188.66	189.0	INTERLAMINATED MUDSTONE-SILTSTONE - medium grey to dark grey - occasional worm burrows
189.0	189.18	COALY MUDSTONE - dark grey to black with occasional thin coal streaks at base.
189.18	190.33	MUDDY SILTSTONE - medium dark grey - no apparent bedding.

To 206.65

[illegible]

CORE DESCRIPTION

HOLE* SMG 79-10 From 0 To 45.98
 Area SOUTH MT. GETHING By R. B. Anderson

FROM	TO	DESCRIPTION
0	35.05	OVERBURDEN - casing to 35.96.
35.05	37.9	SILTY SANDSTONE - medium grey - abundant carbonaceous debris, bedding generally 55° CA but often bioturbated calcite filled tension fractures nearly perpendicular to bedding.
37.9	38.4	INTERLAMINATED SILTSTONE - sandstone and thin carbonaceous mudstone beds - medium grey to dark grey, scour textures and mud clasts common to sandstone - slickensides common to carbonaceous film surfaces // bedding 45° C.A.
38.4	38.65	SILTY MUDSTONE - bedding mildly contorted in sections containing some sand.
38.65	38.98	SANDSTONE - fine grained - light medium grained, cross-bedded (small scale) - occasional thin mudstone near top.
38.98	39.31	INTERLAMINATED MUDSTONE - Siltstone and thin sandstone - medium dark grey to light grey, occasional worm burrows - bedding 52° CA
39.31	41.3	SANDSTONE - light medium grey, fine grained, occasional mudstone lense and worm burrow - slickensides on carbonaceous surfaces 40.11 to 40.2 thinly bedded , mudstone lenses 39.8 breccia zone - calcite welded - calcite veinlets (tension fractures) at 55° CA cutting bedding nearly perpendicularly.
41.3	42.83	SILTY MUDSTONE - dark grey - occasional thin sandy flutes.
42.83	43.56	COAL - .73m ² bedding 60° C.A. Sample #1 (.63 recovered = 86% recovery) - bright - appears to be 20% vitrain or better - bedding surfaces usually slickensided.
43.56	44.8	MUDDY SILTSTONE - disturbed bedding - numerous thin calcite filled tension fractures @ approximately 90° CA.
44.8	45.98	SANDSTONE - medium grey - abundant carbonaceous debris on bedding - calcite vitrains abundant - calcite filled breccia zone 45.21 - 45.38

HOLE# SMG 79-10From 45.98 To 64.55

FROM	TO	DESCRIPTION
45.98	46.57	INTERLAMINATED MUDSTONE - SILTSTONE - worm burrows throughout medium grey to dark grey.
46.57	47.72	SANDSTONE - light medium grey - wavy cross-bedding - base is fault zone to 47.75 - 60° C.A.
47.72	48.36	SILTY MUDSTONE - medium dark grey - slickensides on bedding.
48.36	48.71	SANDSTONE - with occasional thin carbonaceous mudstone interbeds - bedding cross-bedded.
48.71	48.92	COAL - .21
		Upper bench - bright, black
		Lower bench - dull, black - ashy - all exposed surfaces slickensided.
48.92	49.15	CARBONACEOUS SILTSTONE - dark grey - thin carbonaceous films.
49.15	51.03	COAL - 1.88m with a .08 ash band near top Sample #2 - broken and sheared - 20% vitrain 20% fusain approximately 75% recovery.
51.03	51.38	CARBONACEOUS SILTY MUDSTONE - medium dark grey - occasional thin coal streaks - bedding 60° C.A.
51.38	56.20	INTERLAMINATED SILTSTONE-MUDSTONE - medium grey to dark grey - worm burrows vertical and horizontal - fining upwards within each laminae
56.20	59.30	SANDSTONE - fine grey, medium light grey - bedding at 55° C.A. - calcite at 60° C.A. cutting bedding - commonly cross-bedded - occasional thin silt lenses.
59.30	59.81	INTERLAMINATED - SILTSTONE-SANDSTONE - very fine grained - medium grey - slickensides on bedding surfaces.
59.81	61.26	SILTY MUDSTONE - dark grey - thin silt flutes, bedding 40° C.A.
61.26	64.05	SANDY SILTSTONE - medium grey - bedding wavy - numerous thin sand lenses.
64.05	64.4	SANDSTONE - carbonaceous - medium dark grey - massive bedded.
64.4	64.55	SILTY MUDSTONE - dark grey - plant debris throughout.

HOLE#

SMG 79-10

From 64.55

To 89.24

FROM	TO	DESCRIPTION
64.55	66.84	SANDSTONE - medium grey - fine grained at top down to base - trough and festooned cross-beds, thin calcite at various angles.
66.84	67.87	SILTSTONE - calcite cemented - brecciated and welded with calcite - light b grey.
67.87	68.0	COAL (.13) bright - banded, approximately 25 vitrain, 15% fusain. } Sample#3
68.0	68.04	SANDSTONE - carbonaceous - medium dark grey (split .04)
68.04	68.54	COAL (.50) - highly sheared - 25% recovery
68.54	69.41	COALY MUDSTONE - dark grey with occasional thin coal streak - massive - silty towards base.
69.41	70.3	INTERLAMINATED MUDSTONE-SILTSTONE - medium light grey to dark grey - distorted bedding
70.3	71.27	MUDDY SILTSTONE - medium dark grey - carbonaceous debris throughout - thin fluted siltstone lenses.
71.27	71.93	COAL - .66 - highly broken and sheared - bedding 42° to C.A.
71.93	72.65	MUDSTONE - dark grey - silty.
72.65	73.46	COAL - (0.8lm)?? - .2 present - highly broken and sheared - base fault zone full of gouge at 50° C.A.
73.46	74.52	SILTSTONE (medium dark grey - muddy and carbonaceous locally).
74.52	83.15	SANDSTONE (Silty) - medium grey - fine grained - massive - weakly bedded, occasional carbonaceous slip on bedding at 50° C.A. - numerous thin calcite vitraains at all angles - occasional cross-bedded zones - slip surfaces at 20° C.A.
83.15	86.2	SILTY MUDSTONE - dark grey - calcite sub parallel to bedding at 40° slip surfaces common to bedding - clam fossils.
86.2	87.17	COAL - .97? Sample #4 (look to density for true thickness) - calcite band intermingled with coal at top - 40% recovery - highly sheared.
87.17	87.38	MUDDY SILTSTONE - medium dark grey, massive, occasion- al thin coal streak.
87.38	89.24	SILTY SANDSTONE - medium grey - distorted bedding - occasional slip surfaces at 45°

HOLE#

SMG 79-10

From 89.24 To 103.14

FROM	TO	DESCRIPTION
89.24	89.93	CARBONACEOUS SILTSTONE - medium dark grey - weak siderite cementation at base.
89.93	90.22	MUDSTONE - black.
90.22	91.11	CARBONACEOUS SILTSTONE - medium dark grey - massive bedding.
91.11	92.41	SANDSTONE - fine grained - light medium grey with thin silty mudstone laminations - bedding 35° to C.A.
92.41	93.21	SILTSTONE - carbonaceous - medium dark grey - calcite filled at 80° and 0° to core.
93.21	94.34	SILTY SANDSTONE - medium dark grey - carbonaceous - small scale cross beds
94.34	94.79	SANDSTONE - medium grey - medium light grey - fining upwards (bedding planar at 35° C.A.)
94.79	95.16	SILTY MUDSTONE - dark grey
95.16	97.69	SANDSTONE - medium coarse grained - medium grey - calcite filled at 60° C.A. - bedding dip surfaces at 36° C.A.
97.69	98.65	INTERLAMINATED SILTSTONE AND MUDSTONE - medium grey bedding at 35° - siltstone predominates in upper part, mudstone predominates in lower.
98.65	99.10	SILTY MUDSTONE - few siltstone laminae in mudstone, silt content decreases towards bottom.
99.10	99.70	SILTSTONE AND MUDSTONE - interlaminated, light grey siltstone and dark grey to black mudstone - thin laminae 0.3 to 1 cm., wavy bedding, small worm burrows, sheared slickensides.
99.70	100.05	MUDSTONE - dark grey, coally at top
100.05	100.58	MUDDY SANDSTONE - fine grained, light medium grey with muddy laminae, slightly convoluted bedding, sheared slickensides.
100.58	100.85	SILTY MUDSTONE with coal band vitrain, 3 cm thick.
100.85	102.00	MUDDY SANDSTONE - fine to medium grained-light medium grey sandstone with thin mudstone laminae sheared slickensides, core all broken.
102.00	103.14	SILTY MUDSTONE - dark grey, sand blobs near bottom.

HOLE#

SMG 79-10

From 103.14 To 119.50

FROM	TO	DESCRIPTION
103.14	107.84	SANDSTONE - medium to coarse grained, light medium grey - muddy beds at top - sheared slickensides core badly broken, several calcite filled fractures bedding 45° from C/A.
107.84	107.97	SILTSTONE AND MUDSTONE - interlaminated and mixed.
107.97	108.09	MUDDY SANDSTONE - fine grained, light grey sandstone with several thin muddy laminae
108.09	108.97	SILTSTONE MUDSTONE AND SANDSTONE - Interlaminated fine grained, light grey sandstone, wavy bedding, small scale ripples.
108.97	109.31	MUDSTONE - dark grey to black
109.31	109.55	COAL - 0.24 metres, 100% recovery, shiny, well indurated.
109.55	109.90	COALLY MUDSTONE - 90% recovery, coal and mudstone mixed - sheared.
109.90	111.84	MUDSTONE - dark grey to black, some fine grained sandstone - hairlike calcite veinlets, several 1 mm coal streaks - sheared slickensides, more sandstone content towards bottom.
111.84	111.98	SANDSTONE - medium grained, light grey, slight mudstone content.
111.98	112.33	COAL - 0.35 metres, 100% recovery, shiny and cleated muddy band mixed with coal towards bottom up to 3 cm thick.
112.32	112.70	COALLY MUDSTONE - dark grey mudstone with >50% silt clasts average 1 mm - 1 cm
112.70	113.08	COAL - 0.30 metres, 85% recovery, shiny - sheared slickensides cleated.
113.08	113.70	VERY COALLY MUDSTONE - black to dark grey less coally towards bottom - contains some medium grained sandstone lenses.
113.70	116.97	SANDSTONE - coarse to medium grained, light grey with some mudstone content, coal streaks - sheared - slickensides.
116.97	119.50	MUDDY SANDSTONE - current mixed mudstone with sandstone, medium grained - several mudstone and coal laminae, sheared and slickensided, pyritic band at 119.44.

HOLE#

SMG 79-10

From 119.50

To

142.49

FROM	TO	DESCRIPTION
119.50	119.70	MUDSTONE - dark grey to black, coal streaks, sheared slickensides.
119.70	122.66	SANDSTONE AND MUDDY SILTSTONE - Interbedded and Interlaminated - fine to medium grained light grey sandstone, coal streaked, seven calcite veinlets 1 mm to hairlike, some mudstone laminae.
122.66	123.49	SILTY MUDSTONE - dark grey to black mudstone with siltstone laminae, small worm burrows, horizontal sheared slickensided.
123.49	124.10	MUDSTONE - black - some fine grained sandstone laminae and blobs.
124.10	124.93	SANDY MUDSTONE - black mudstone with medium grained light grey and medium grey sandstone, several horizontal worm burrows.
124.93	130.08	SANDSTONE - medium grained some mudstone content and coal streaks, sheared along wavy coally bands slickensides and hairlike veinlets.
130.08	130.60	MUDDY SILTSTONE AND SANDSTONE (Interlaminated) fine grained.
130.60	132.86	SANDSTONE - fine to medium grained, muddy laminae, calcite filling fractures.
132.86	132.98	COAL - 0.12 metres - 50% recovery, shiny poorly indurated.
132.98	135.06	VERY COALLY MUDSTONE - black and shiny, some sandstone bands and sandstone fine grained mixed in coal band vitrain shiny cleated 135.00 to 135.02m.
135.06	135.15	COAL - 0.09m 100% recovery, shiny moderately indurated.
135.15	137.62	CARBONACEOUS SANDSTONE - medium to dark medium grey-medium grained, calcite filling.
137.62	138.22	MUDDY SILTSTONE AND MUDSTONE (Interlaminated) dark grey to black.
138.22	140.51	CARBONACEOUS SANDSTONE - Interbedded with muddy siltstone and mudstone (interlaminated) - coal streaks in everything medium grained light grey sandstone.
140.51	142.49	SANDSTONE - light grey medium to coarse grained - wavy coal laminae.

HOLE#

SMG 79-10

From 142.49 To 162.93

FROM	TO	DESCRIPTION
142.49	143.60	MUDDY SANDSTONE - light grey medium grained with several mudstone laminae and coal streaks - laminae are wavy.
143.60	143.69	SANDY MUDSTONE - black mudstone with sandstone laminae and blobs, several horizontal worm burrows.
143.69	154.28	SANDSTONE - light grey medium grained, several mudstone laminae in middle of section - coal streaks - fine grained between 146.61 and 152.70, medium to coarse grained again below 142.70, calcite filling fractures brecciated zone, very pyritic 151.90 to 152.15.
154.28	154.44	SANDSTONE - light grey medium to fine grained - several siltstone clasts and mudstone laminae wavy mixed in with sand and clasts - sheared and slicken-sided.
154.44	155.20	SANDSTONE AND MUDSTONE - Interbedded predominantly light grey medium grained sandstone with black mudstone beds and blobs - some small 1 mm siltstone clasts, sheared slickensides.
155.20	155.85	MUDSTONE - black, light grey sandstone lenses, ripple marks - thin sand lenses near base - bedding 47° CA - small sandstone clasts at base - slicken-sides on bedding.
155.85	156.9	SANDSTONE - medium grey - abundant carbonaceous debris, convoluted distorted bedding.
156.9	157.13	CONGLOMERATE - medium dark grey - chert pebbles 2 mm. to 2 cm. in size.
157.13	158.0	SANDSTONE AND MUDSTONE - medium dark grey - abundant thin mudstone laminae distorted bedding - some of the mudstone appears to have been injected.
158.0	158.44	MUDSTONE - dark grey, 0.05 fault gouge at 158.05
158.44	162.51	SILTY MUDSTONE - black mudstone with siltstone laminae and blobs, several small vertical and horizontal worm burrows, sheared and slickensided.
162.51	162.93	COAL - 0.42 metres approximately 100% recovery moderately shiny friable - muddy in several spots, pyritic at 162.81.

HOLE#

SMG 79-10

From 162.93 To 182.65

FROM	TO	DESCRIPTION
162.93	163.28	COALY MUDSTONE - black, sheared and slickensided - core all broken.
163.28	164.71	SILTSTONE AND MUDSTONE - (Interlaminated) light grey siltstone, black mudstone, ripple marks, vertical worm burrows, scour and fill structures.
164.71	164.89	MUDDY SANDSTONE - fine grained, light medium grey coal streaks, calcite veinlets, mudstone mixed in.
164.89	165.13	MUDSTONE AND SILTSTONE (Interlaminated) - worm burrows, ripple marks.
165.13	165.51	MUDSTONE - black, siltstone laminae at top.
165.51	165.83	COAL - 0.32 metres 70% recovery, mostly shiny and cleated.
165.83	166.24	MUDSTONE - black to dark grey, coal streaked.
166.24	166.42	MUDDY SILTSTONE AND SANDSTONE - MIXED - dark grey siltstone and fine grained light grey siltstone
166.42	167.63	MUDDY SANDSTONE - fine to medium grained - light medium grey sandstone with mudstone laminae and coal streaks
167.63	168.74	SILTSTONE AND MUDSTONE - inter-laminated and mixed
168.74	169.95	MUDSTONE - black siltstone lenses towards bottom
169.95	174.20	SILTSTONE, MUDSTONE AND SANDSTONE (inter-laminated) dark medium grey to black - fine grained sandstone - sheared and slickensided worm burrows - ripple marks
174.20	175.56	SILTY MUDSTONE - black mudstone with silty laminae and blobs - sheared and slickensided
175.56	176.57	SANDSTONE, SILTSTONE, AND MUDSTONE (inter-laminated) worm burrows and ripples marks
176.57	181.55	CARBONACEOUS SANDSTONE - mudstone and siltstone laminae in fine grained light medium grey sandstone hairlike calcite billings - worm burrows - bedding 35° CA - ripple marks
181.55	182.65	SILTSTONE, MUDSTONE, SANDSTONE - mixed - fine grained sandstone - light medium grey - medium grey siltstone and black mudstone - worm burrows - hairlike calcite veinlets.

HOLE#

SMG-79-10

From 182.65

To 199.95

FROM	TO	DESCRIPTION
182.65	183.18	SILTY MUDSTONE - dark grey with siltstone blobs, lenses - worm burrows
183.18	184.04	MUDSTONE - black - slight siltstone content - hairli calcite veinlets filling fractures
184.04	184.71	COAL - 0.67 metres - 50% recovery- shiny fleky - sheared slickensides
184.71	185.42	MUDSTONE - dark grey - coaly siltstone clasts - calcite veinlet at various angles - carb. surfaces at 40° CA
185.42	186.5	COAL - 1.08m - recovery 85% Sample #6 - bright, thinly banded, broken and highly sheared, shearing principally along bedding and at 70° CA & 45° CA
186.5	186.8	COALY MUDSTONE - dark grey - black
186.8	187.49	MUDSTONE - occ. thin silt laminae - dark grey - bedding at 45° CA
187.49	189.28	COAL - 1.79m Sample #7, recovery 85%, extremely broken, appears uniformly bright and finely banded.
189.28	189.35	COALY MUDSTONE
189.35	189.56	COAL - .21m - 50% ashy - 50% bright black and finely layered.
189.56	189.67	COALY MUDSTONE - dark grey with thin coal streaks - bedding 48° CA
189.67	190.83	CARBONACEOUS SILTY SANDSTONE - medium grey, distorted bedding, abundant carbonaceous debris
190.83	195.5	CARBONACEOUS SANDSTONE-medium grey, planar to small scale X-beds - carbonaceous debris on bedding surfaces - bedding 40° CA - becomes silty at 195.3 - calc filled jts. at 50° CA cutting bedding
195.5	197.5	CARBONACEOUS SILTSTONE AND MUDSTONE LAMINAE - medium to dark grey - siltstone predominates at top, mudstone at 197.3 to 197.5
197.5	199.05	MUDSTONE - dark grey - occ. thin siltstone lenses up to .01 m. thick
199.05	199.17	SANDSTONE -medium grained - light grey - lower contact load coasted features
199.17	199.95	MUDSTONE - dark grey - silty near base - carbonaceous debris and calcite veinlets sub-parallel to parallel bedding @ 40° CA-lower surface is a coal smeared shear

HOLE# SMG-79-10From 199.95 To 216.25

FROM	TO	DESCRIPTION
199.95	200.2	CARBONACEOUS SANDSTONE - medium - dark grey - fine grained
200.2	200.65	SANDSTONE - light - medium grey - thin calcite stringers at various angles
200.65	201.03	CARBONACEOUS SANDSTONE - medium - dark grey - abundant fine grained carbonaceous debris throughout
201.03	202.65	SANDSTONE - medium - coarse grain - light - medium grey - minor carbonaceous debris - calcite at various angles near 90° to CA - bedding 40°CA - planar bedding
202.65	202.97	INTERBEDDED SILTY MUDSTONE AND MUDSTONE - Mudstone predominates - medium - dark grey
202.97	204.00	SILTY MUDSTONE - dark medium grey - few widely spaced carbonaceous shears - few worm burrows
204.00	206.65	MUDSTONE - black, carbonaceous with few thin coal seams and streaks - few widely spaced carbonaceous shear planes.
206.65	211.48	SANDSTONE AND MUDDY SILTSTONE (interlaminated and interbedded) - light grey to light medium grey - fine grained beds and laminations of sandstone alternating with thin laminations of dark grey muddy siltstone - planar to weakly disturbed bedding. Bedding to CA 55°
211.48	214.85	MUDSTONE & SANDSTONE (interlaminated) - predominately dark grey mudstone with thin laminations and lenses and occasional thin beds of fine grained light grey to light medium grey sandstone - some small cut & fill channels of sand into mud - numerous shear planes of bright black carbonaceous material.
214.85	215.60	MUDSTONE - dark grey to black - massive
215.60	215.65	COAL - 0.05 metres - black, broken
215.65	215.75	MUDSTONE - dark grey brown - lacey calcite veins
215.75	216.25	COAL - 0.50 metres - generally black bright coal - crushed in part - several narrow mudstone splits at 45° to O/A

SMG-79-10

From 216.25 To 233.48

FROM	TO	DESCRIPTION
216.25	216.43	MUDSTONE - dark grey - coaly at the top
216.43	221.60	SANDSTONE - light medium grey, fine grained with minor thin laminations of medium grey siltstone - planar bedding at 45° to CA to moderately disturbed - bedding at 60° to CA toward the base with increasing silt content - small scale cross bedding and small worm burrows common
221.60	224.30	SANDSTONE & MUDDY SILTSTONE (interlaminated) - thin alternating laminations of dark grey muddy siltstone and fine grained, light grey sandstone - bedding is distinct planar to wavy - worm burrows are common - bedding to CA @ 45°
224.30	226.30	MUDSTONE - dark grey, silty at the top and bottom - prominent coaly fracture, irregular but paralleling core axis
226.30	227.63	SANDSTONE AND MUDDY SILTSTONE (interlaminated) - fine grained, light medium grey sandstone with minor interlaminations of muddy siltstone - increasing mud content toward the base - bedding 45° to CA
227.63	228.16	MUDSTONE - dark grey
228.16	228.47	COAL - 0.31 metres - fine, granular, bright, black
228.47	228.60	MUDSTONE - dark grey to black
228.60	230.10	MUDDY SILTSTONE - dark grey massive
230.10	231.04	SANDSTONE AND MUDDY SILTSTONE (interlaminated and interbedded) - fine grained light grey sandstone alternating with muddy siltstone and occasional silty mudstone laminations - bedding is planar to moderately disturbed - bedding to CA 50°
231.04	233.48	SILTY MUDSTONE - dark grey, generally massive with a few silty laminations toward the base.
		E.O.H. at 233.48 metres