NEW MEXICO BUREAU OF
MINES & MINERAL RESOURCES

open-file report 322

MEASURED SECTIONS OF PENNSYLVANIAN SEDIMENTARY ROCKS, TAOS TROUGH, NORTHERN NEW MEXICO

J. M. Casey

These measured sections accompany a Ph.D. Dissertation entitled:

DEPOSITIONAL SYSTEMS AND BASIN EVOLUTION
OF THE LATE PALEOZOIC TAOS TROUGH,
NORTHERN NEW MEXICO

THE UNIVERSITY OF TEXAS AT AUSTIN
May 1980

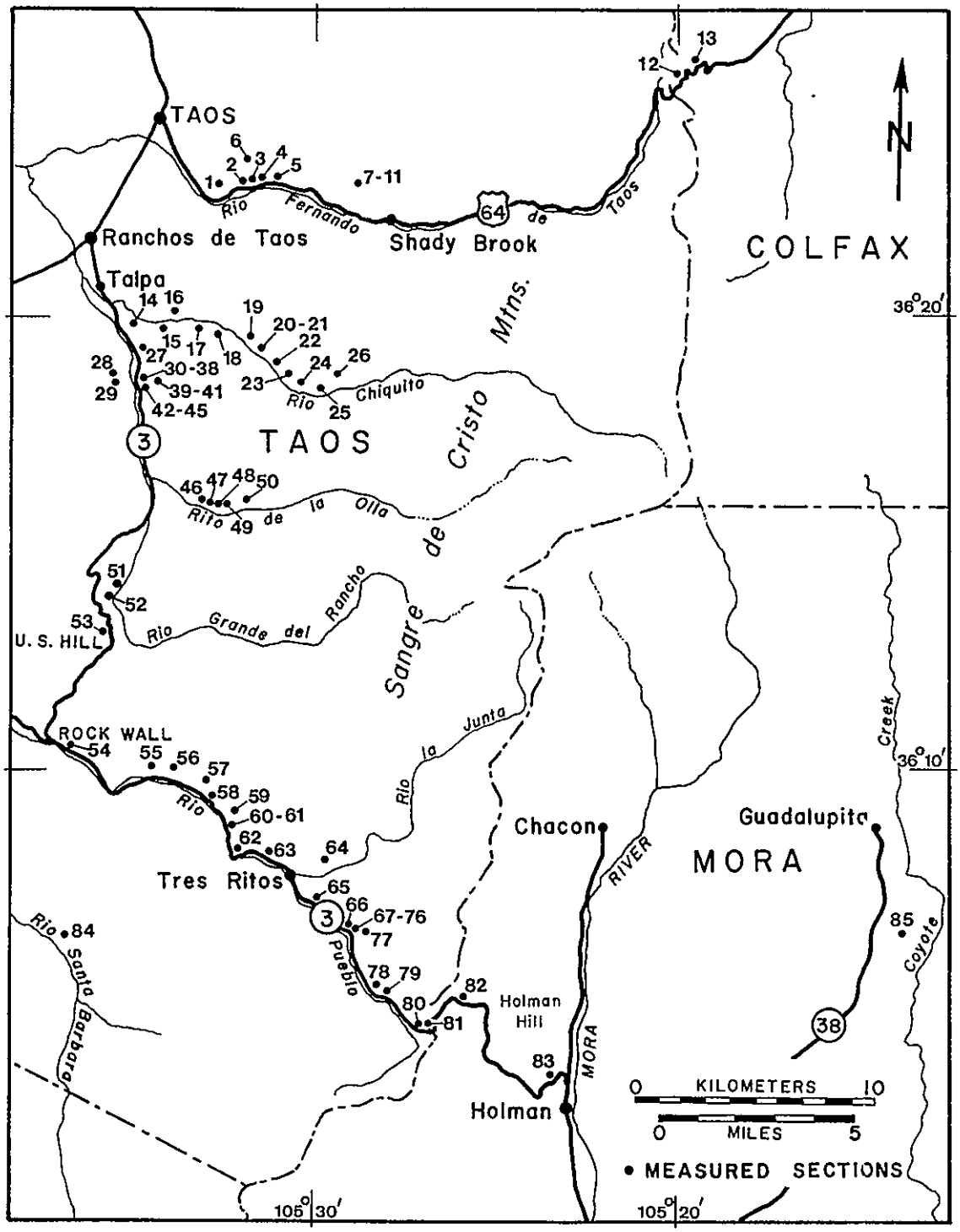


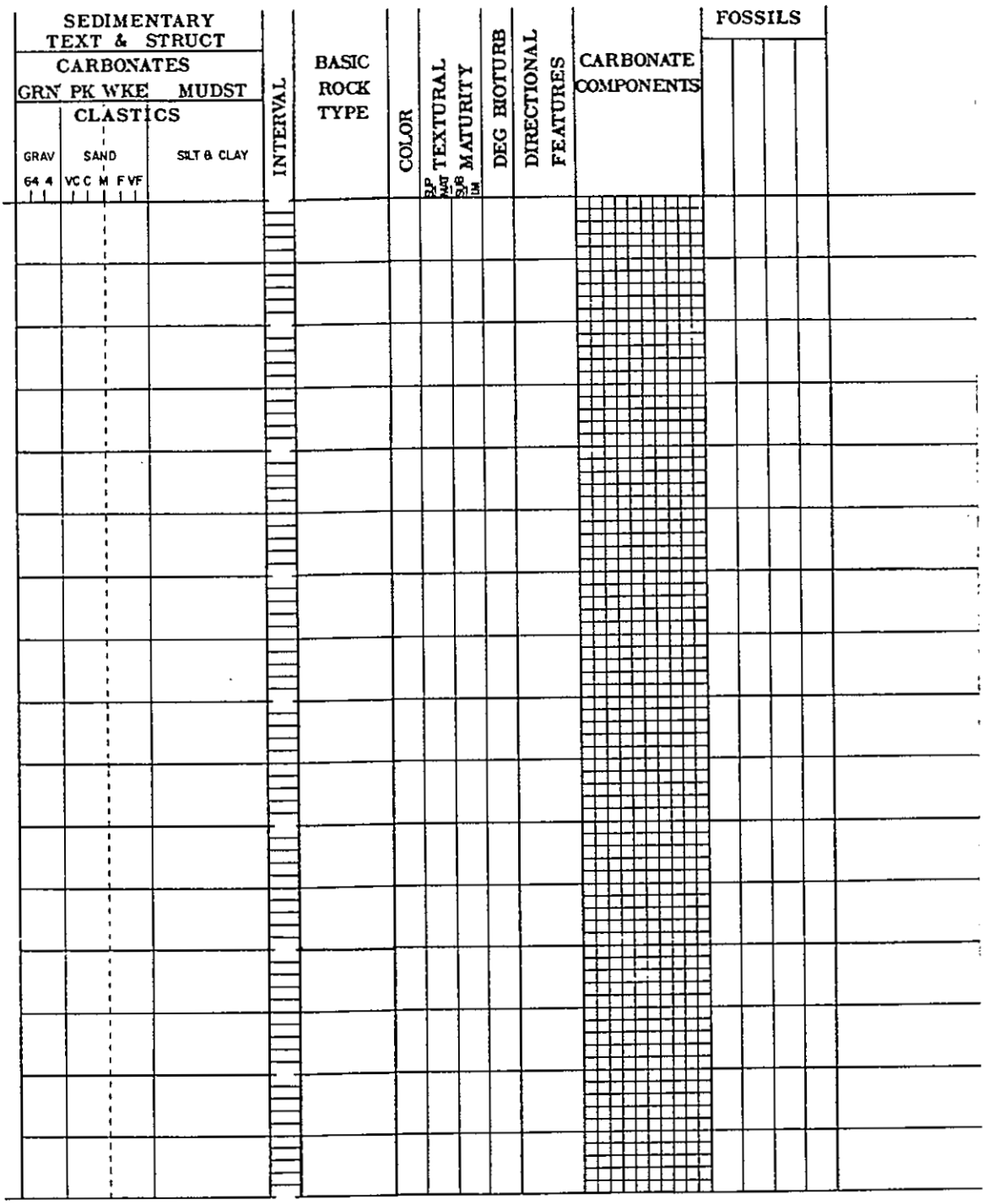
Figure 4. Map of study area with measured section localities indicated by numbers.

Measured Section Logging Form

Measured section data were recorded, graphically, on a standardized form (following page) using symbols shown in Figure 8. The logging form speeded section measuring and eliminated the need to later transform long written descriptions into graphic illustrations (measured section figures shown in text are exactly as they appear on the original field-recorded logging form).

NOTE: MEASURED SECTION LOCALITIES ARE SHOWN ON U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLES

ALL MEASURED SECTIONS ARE IN METERS



SAMPLE LOGGING FORM (75% actual size).

NOTE: MEASURED SECTION LOCALITIES ARE SHOWN ON U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLES

ALL MEASURED SECTIONS ARE IN METERS

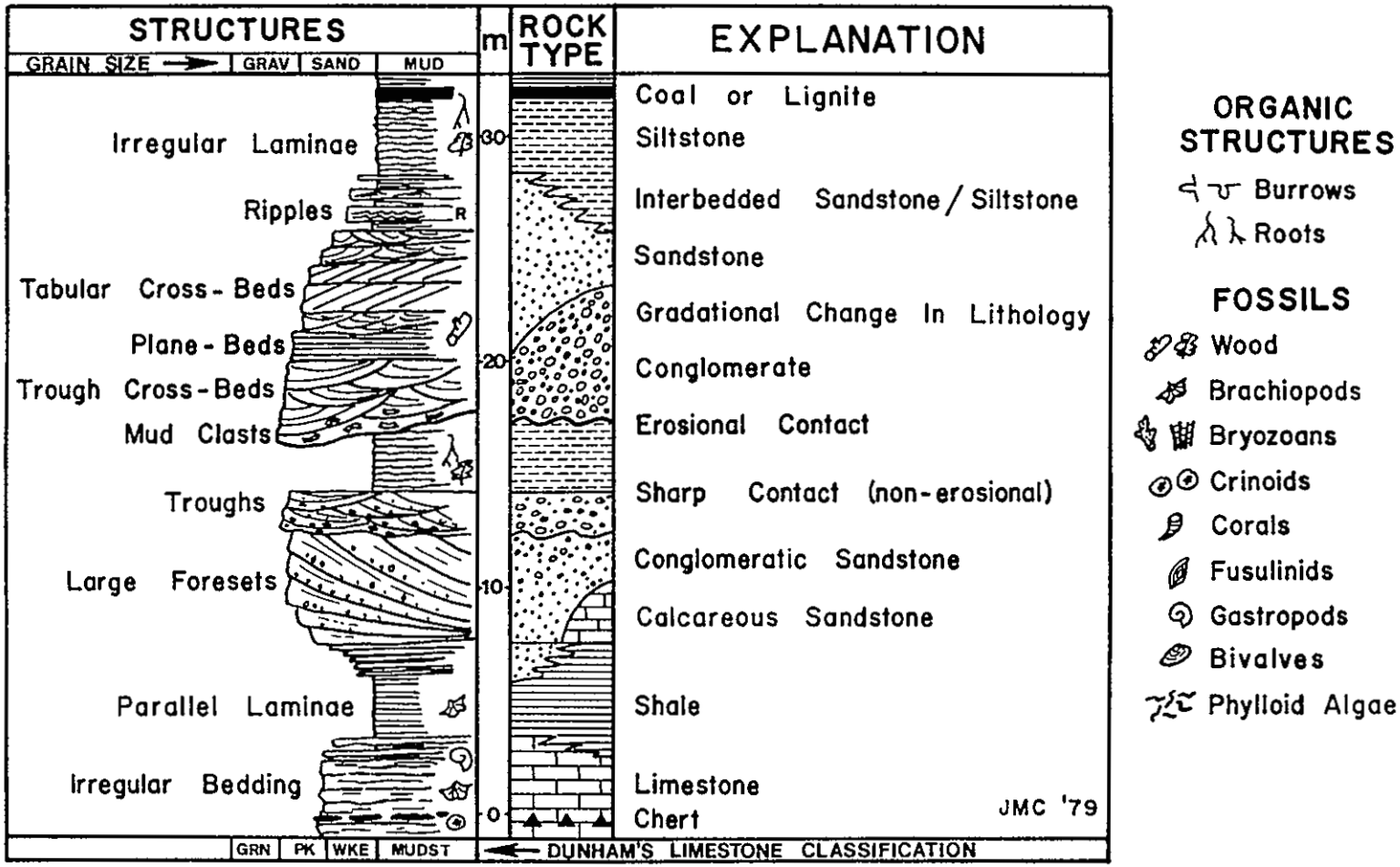


Figure 8. Explanation of symbols for sedimentary structures, lithology, and fossils used on all measured sections. Grain-size of clastic rocks and Dunham's (1962) classification of limestones are indicated in left-hand column. All sedimentary structures are depicted graphically as accurately as possible.

DEGREE OF BIOTURBATION

ʃ Weakly bioturbated

ʃʃ Moderately bioturbated

ʃʃʃ Strongly bioturbated

COLOR

L - light	G - gray	C - cream
M - medium	B - brown	W - white
D - dark	R - red	Bk- black
m - mottled	O - orange	T - tan
	Y - yellow	
	Gn- green	
	Bl- blue	

Example LBG - light brownish gray

FOSSILS

present

common

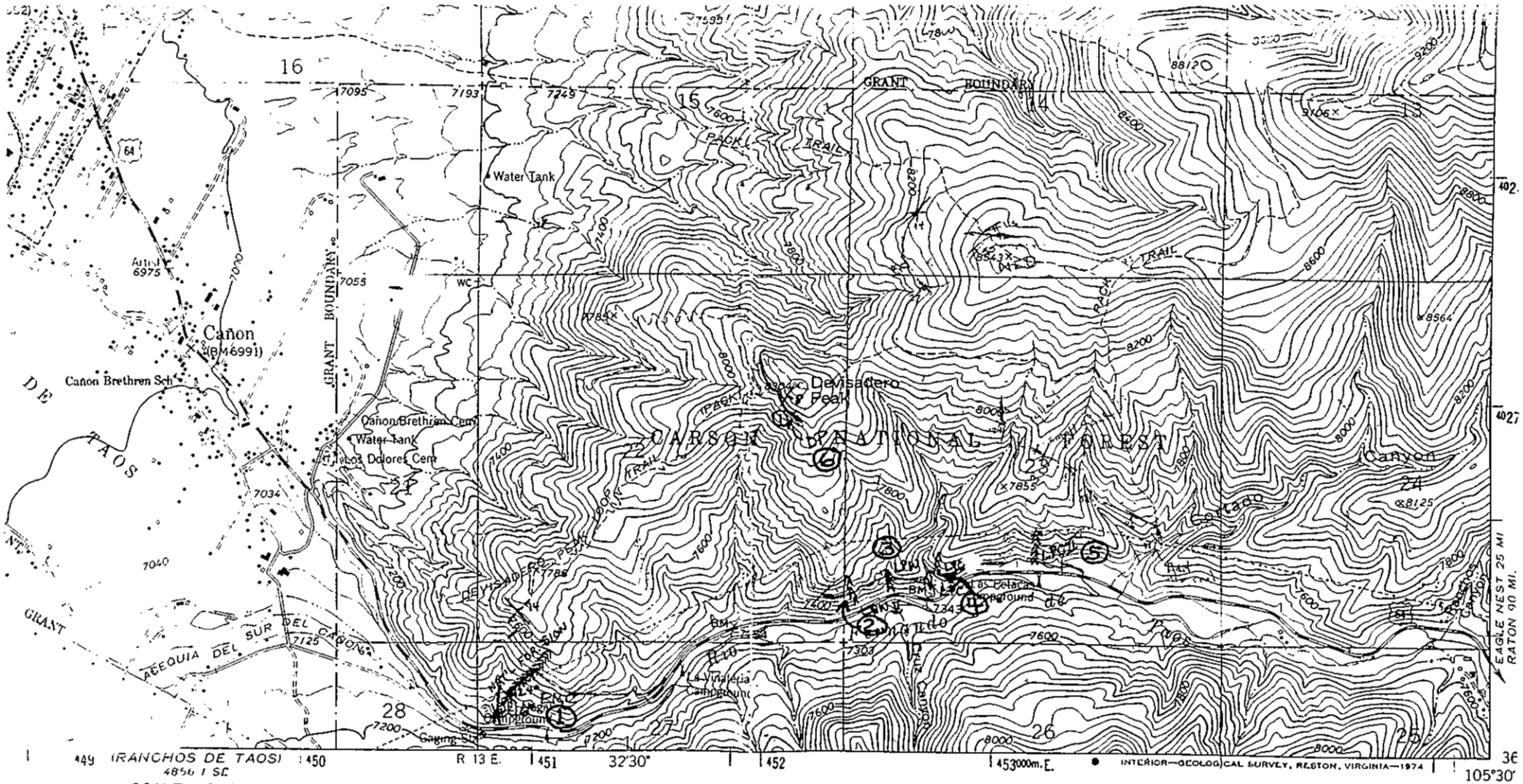
abundant

whole

broken

TAOS CANYON SECTIONS

MEASURED SECTIONS 1 THROUGH 11



SCALE 1:24 000

1 MILE

7000 FEET

1 KILOMETER

CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD CLASSIFICATION

Heavy-duty — Light-duty

Medium-duty — Unimproved dirt

U.S. Route — State Route

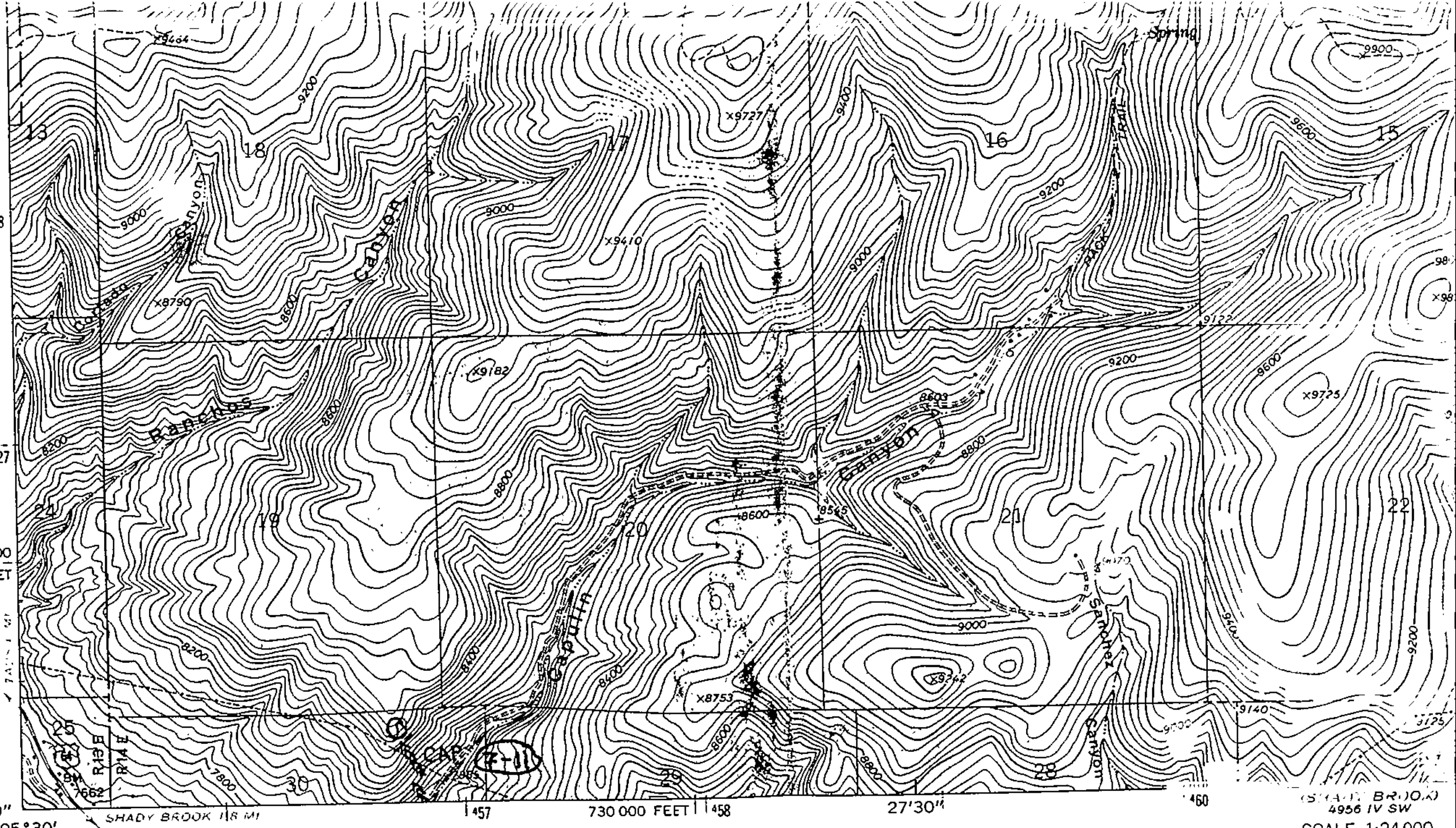
QUADRANGLE LOCATION

.P COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
OGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
IBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

TAOS, N. MEX.
N3622.5–W10530/7.5

1964

AMS 4856 I NE-SERIES V881



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial
965

n datum
dinate system,

grid ticks,

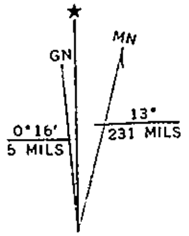
ablished

PUEBLO PEAK, N. MEX.

N3622.5—W10522.5/7.5

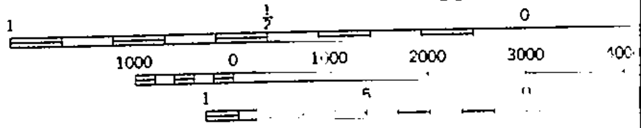
1965

AMS 4956 IV NW—SERIES V881



UTM GRID AND 1965 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24000



CONTOUR INTERVAL 40
DATUM IS MEAN SEA LE

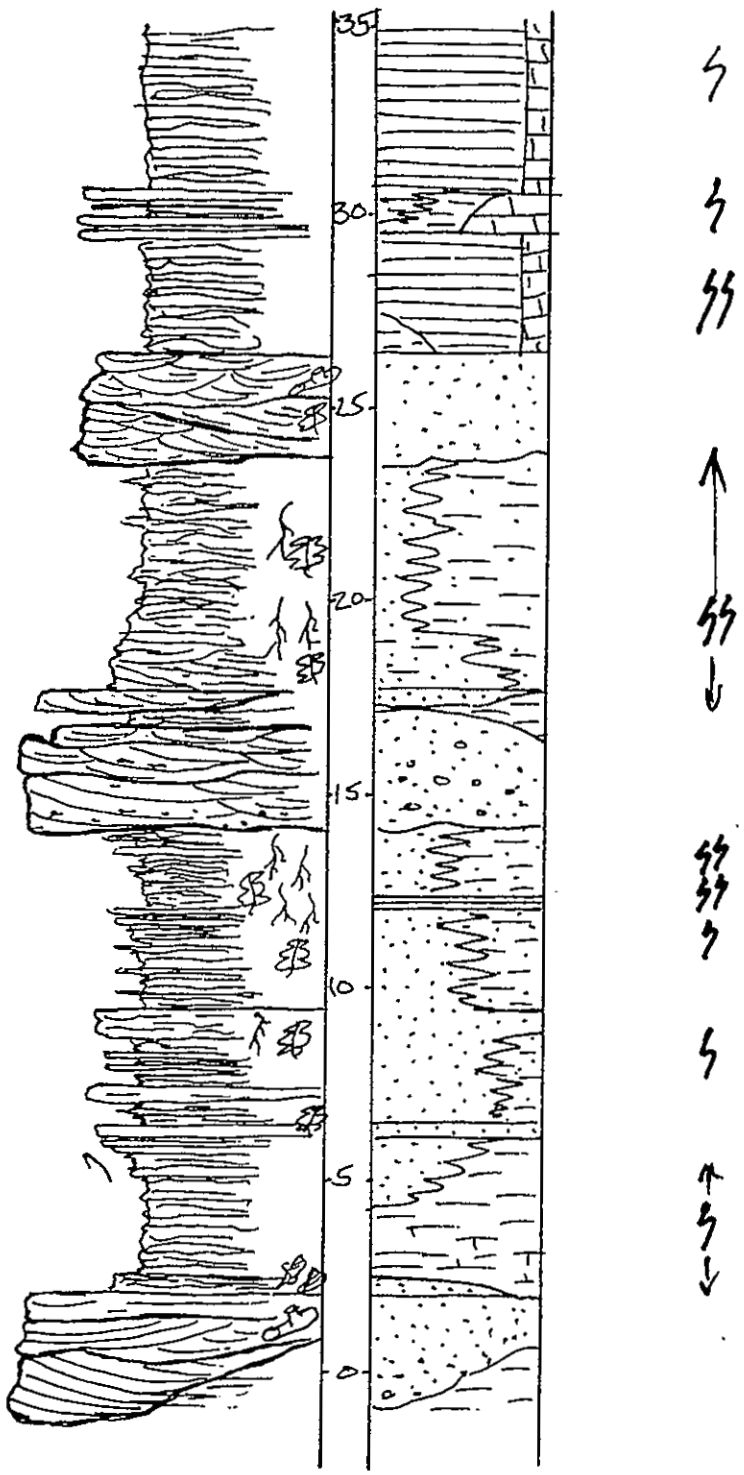
THIS MAP COMPLIES WITH NATIONAL MAP
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLOR
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYM

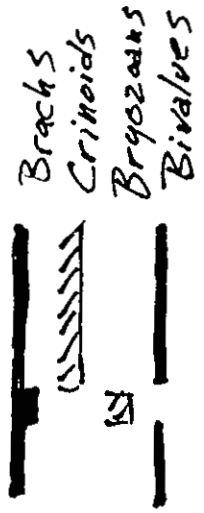
El Nogal Camp gully

July 7,

M.S. No. 1

PAGE 1





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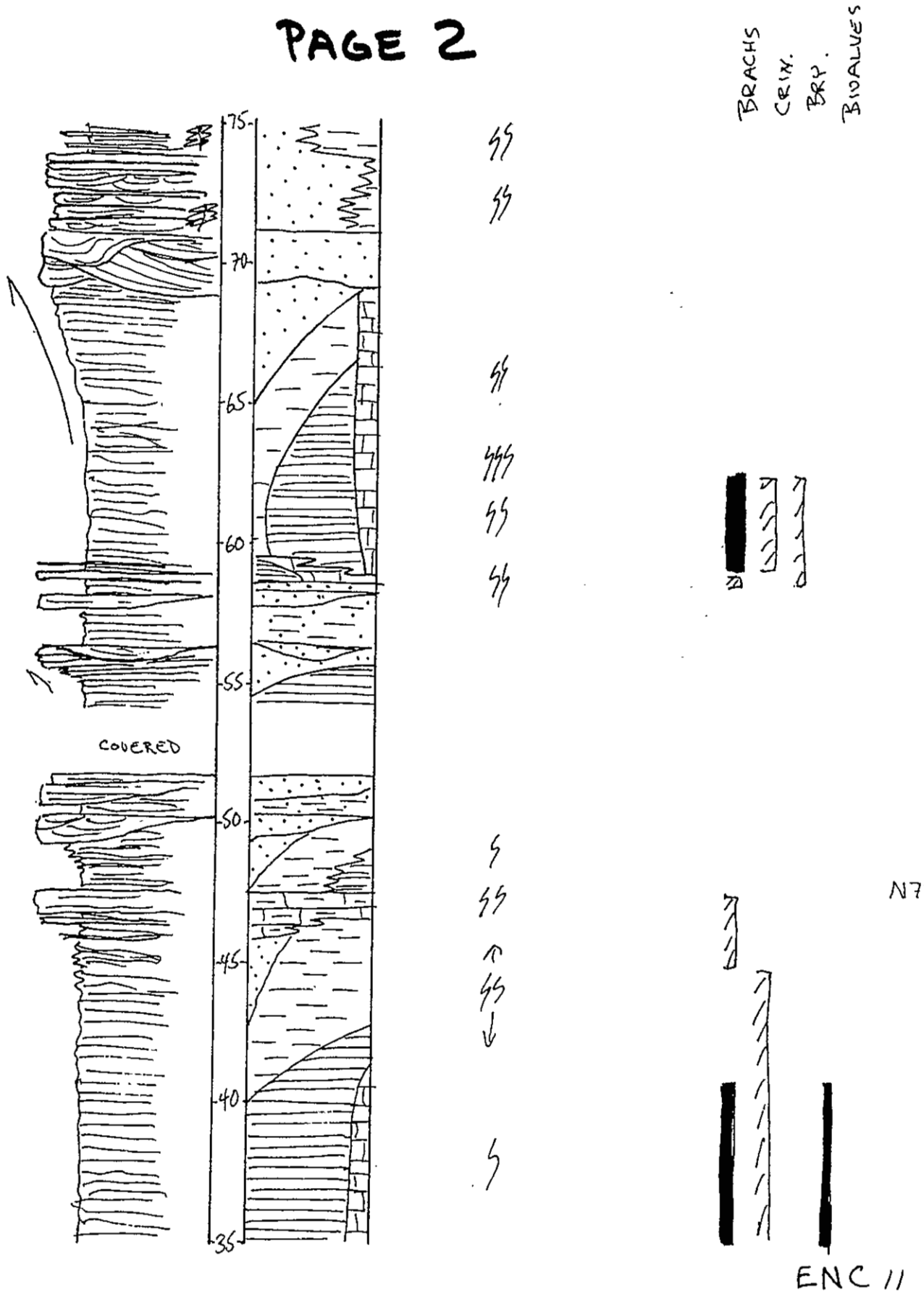
M.S. No. 1

PAGE 2

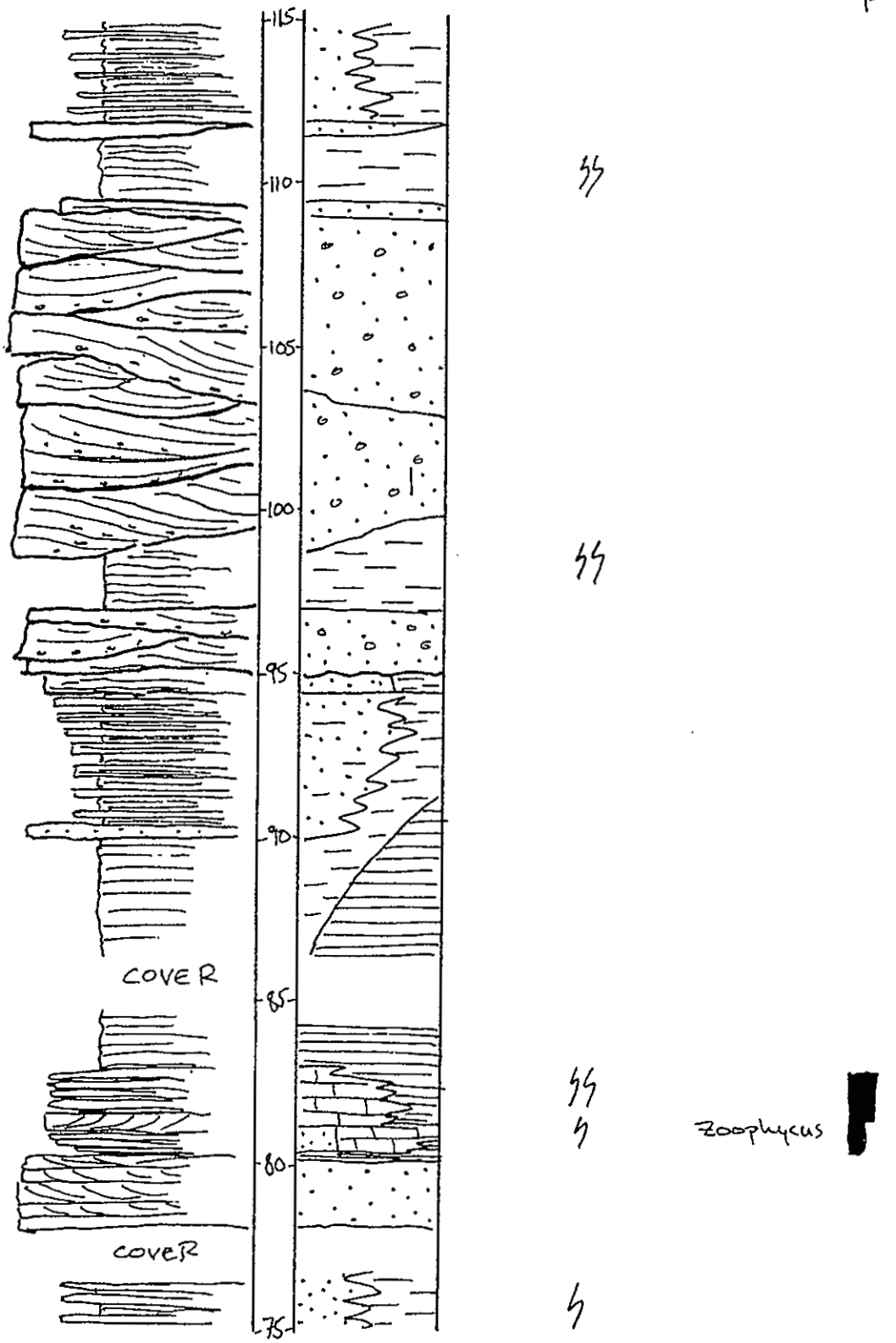


ENC 11

M.S. No. 1

PAGE 3

BRACHS



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M.S. No. 2

PAGE 1

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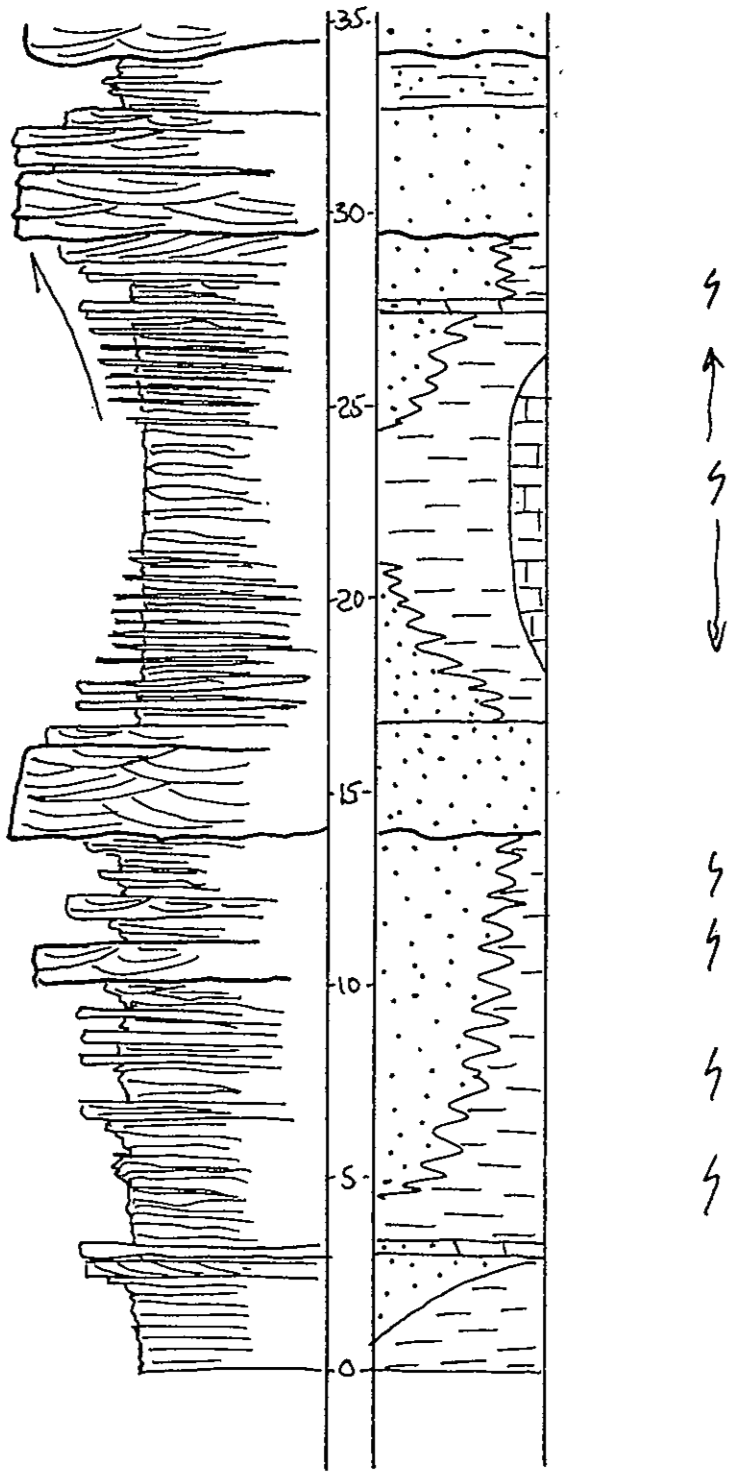
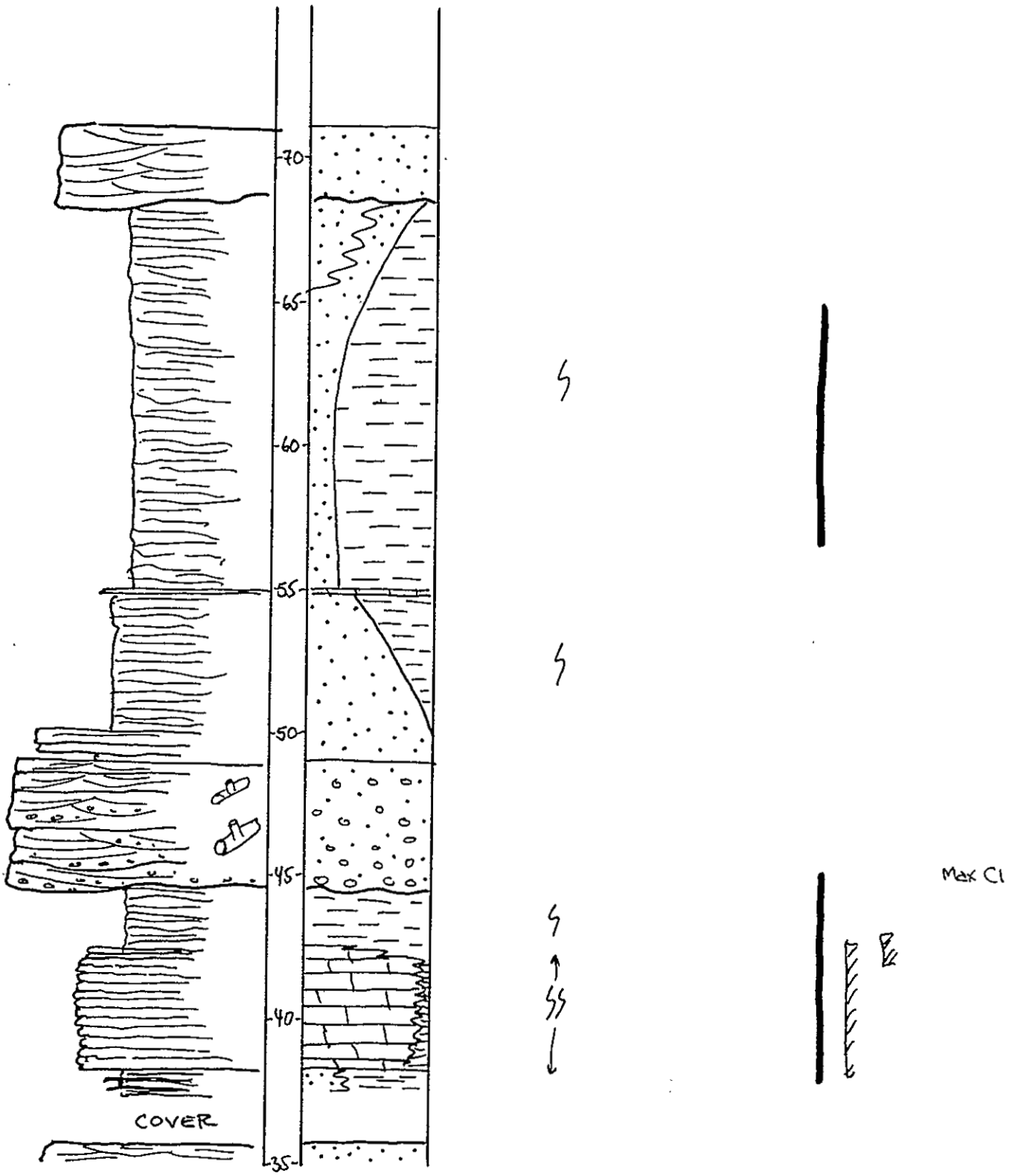


LPW11

M.S. No. 2
PAGE 2

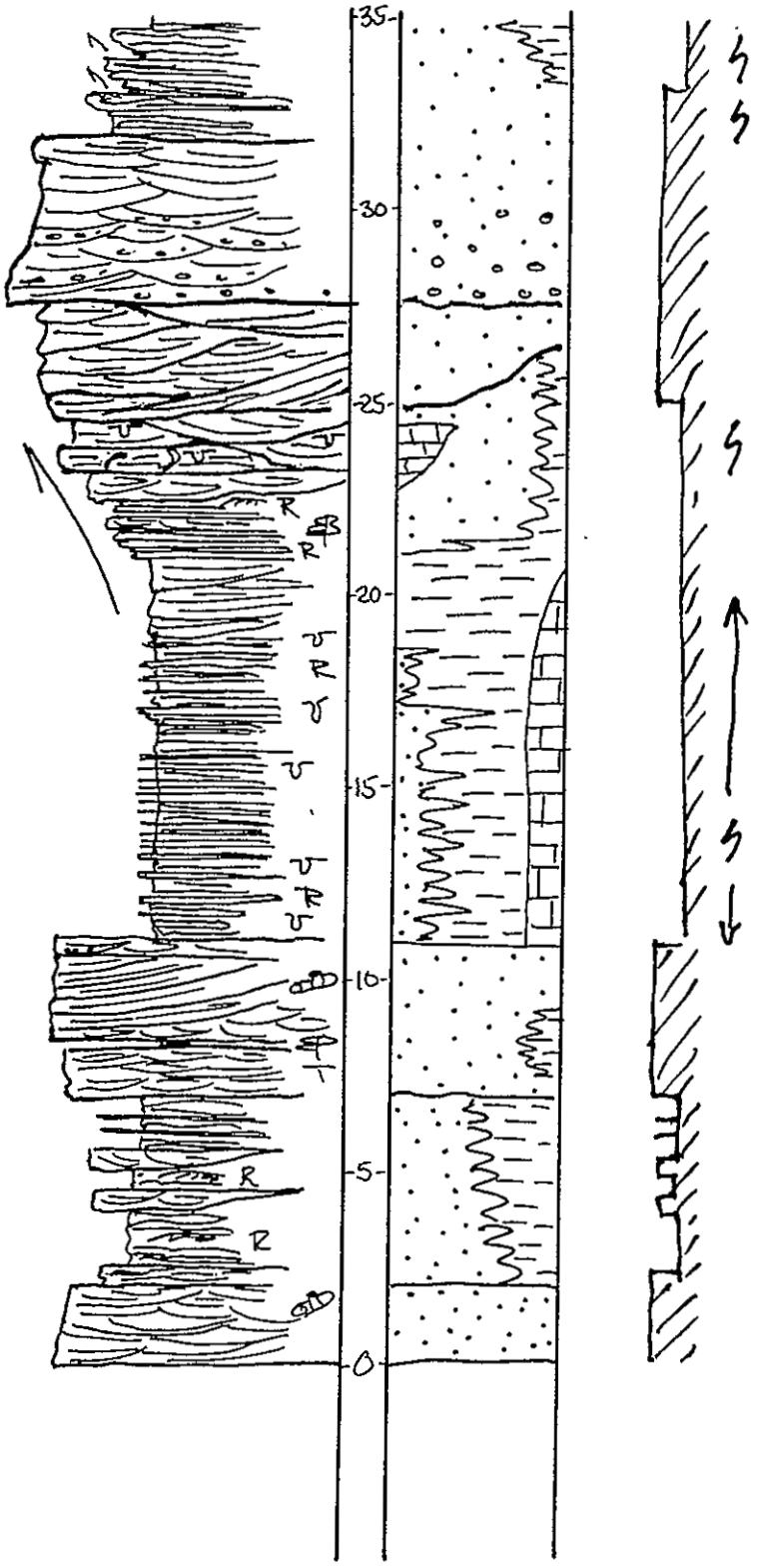


LPW II

Los Petacas West

July
JMC

M.S. No. 3
PAGE 1

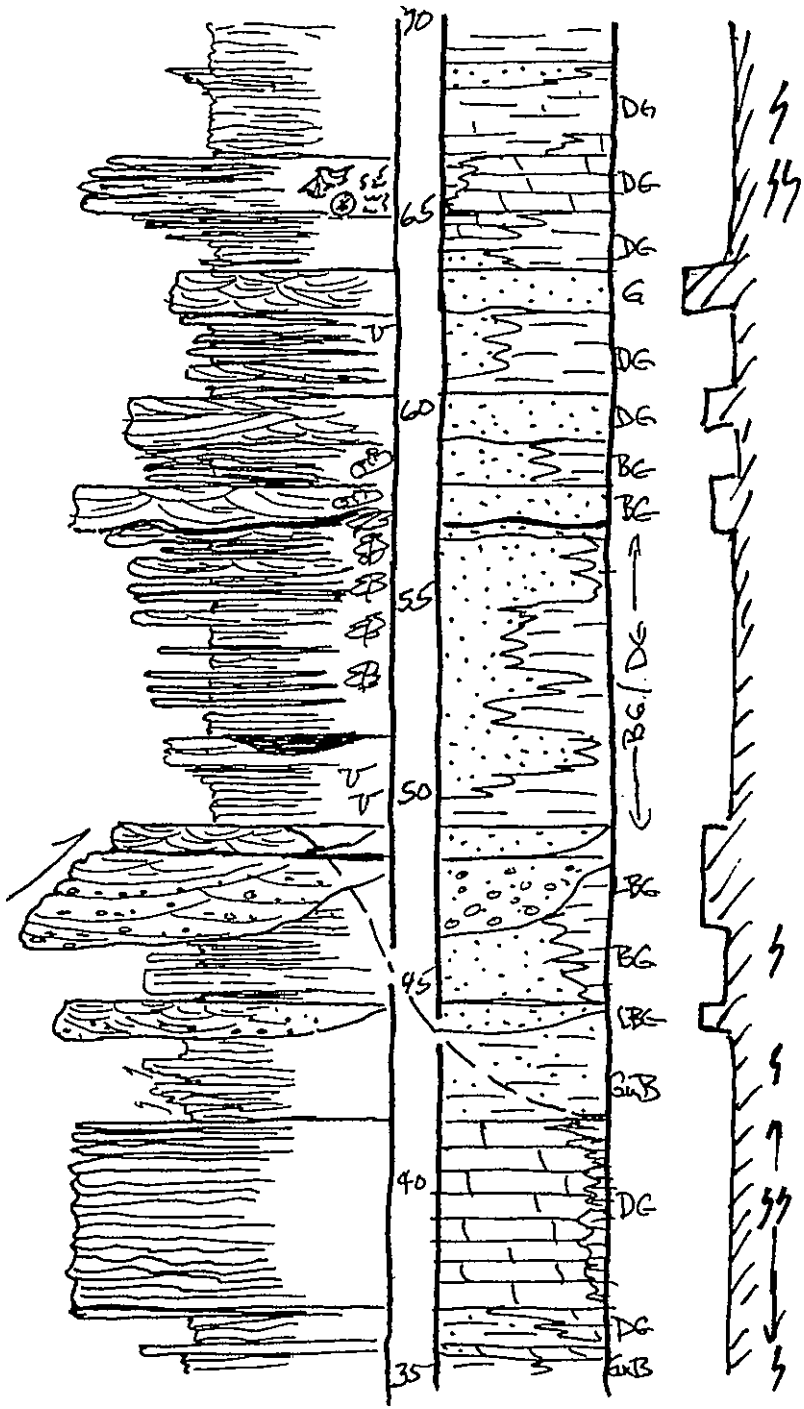


Brachs
Crinoids
Bivalves

300° @ 24°
305° @ 28°
302° @ 32°

M.S. No. 3

PAGE 2

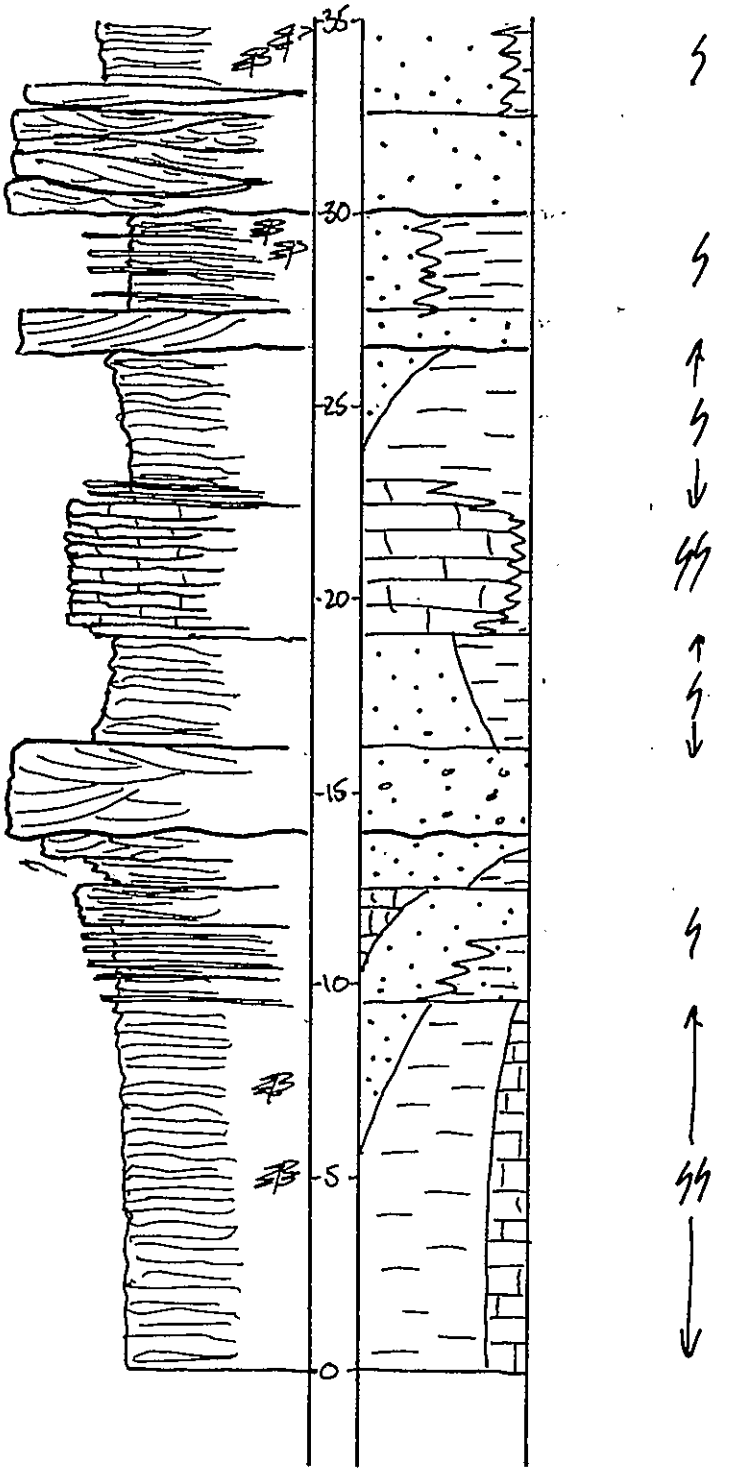


Just W of Las Petacas Camp
Gully

JM

M.S. No. 4

PAGE 1



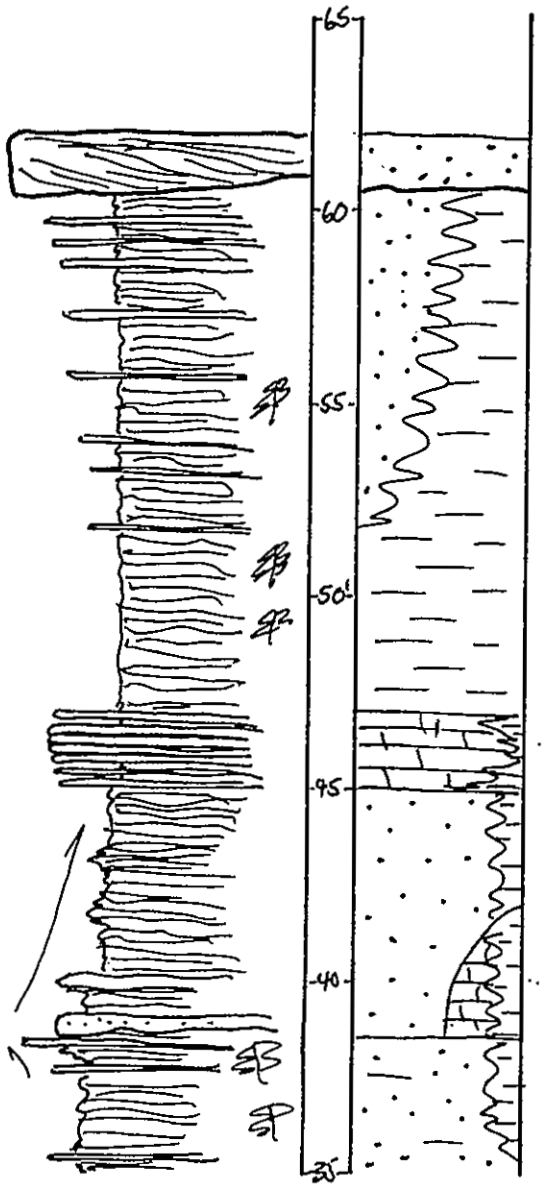
BRACHS
BIVALVES
BRYO.
PHY. ALGAE

LPC

17

M.S. No. 4

PAGE 2

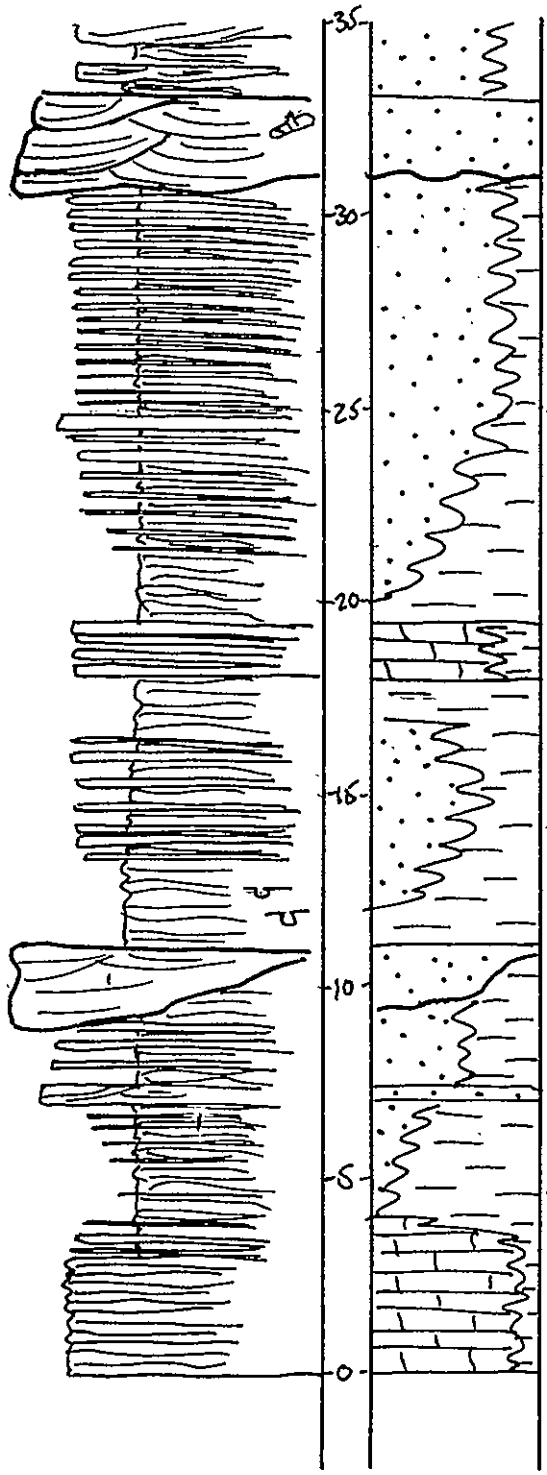


LPC

NRLas Petacas Camp Hwy 64
Hillside

JM

M.S. No. 5
PAGE 1



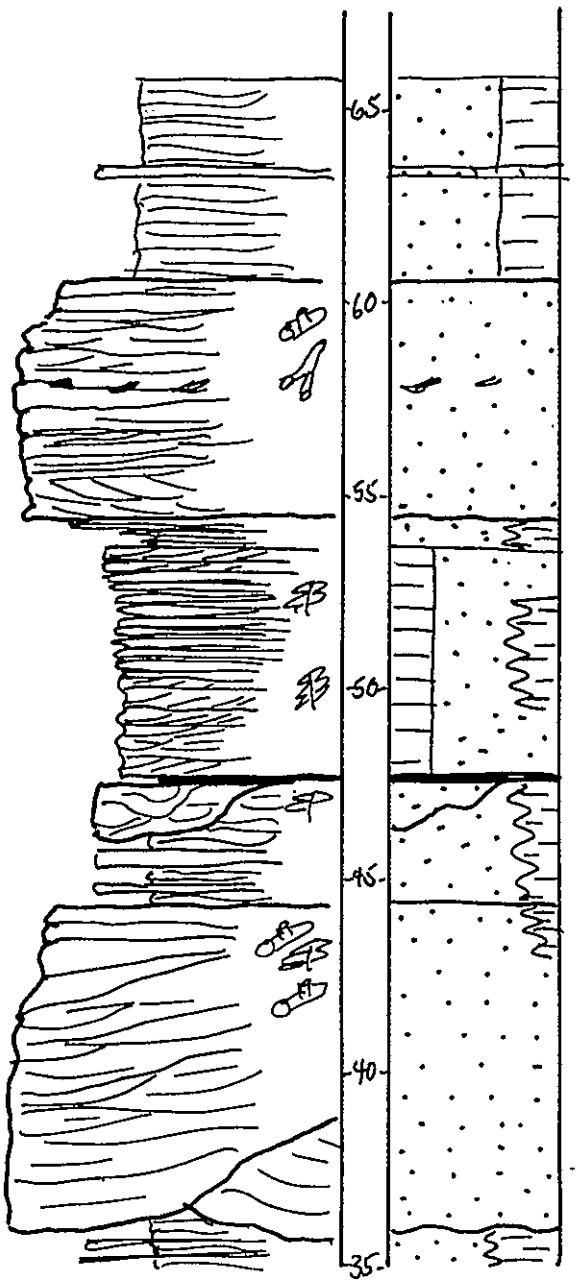
BRACHS
BRY
PHY. Algae

LP. II

M.S. No. 5
PAGE 2

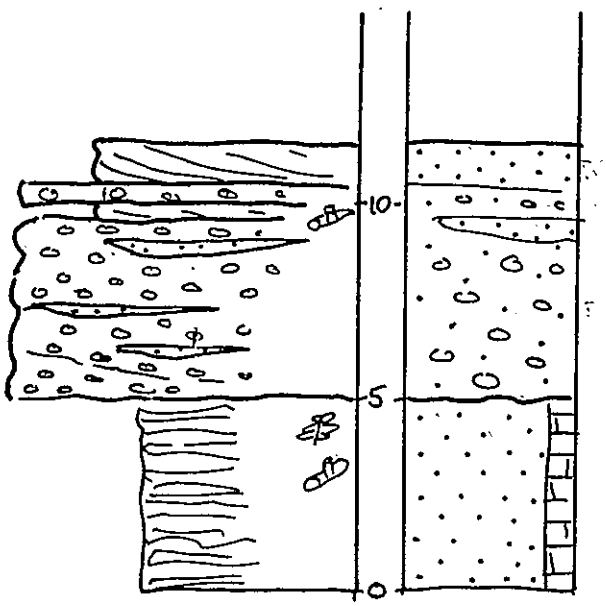
BRACHS

CRINOIDS



Devisadero Peak

M.S. No. 6

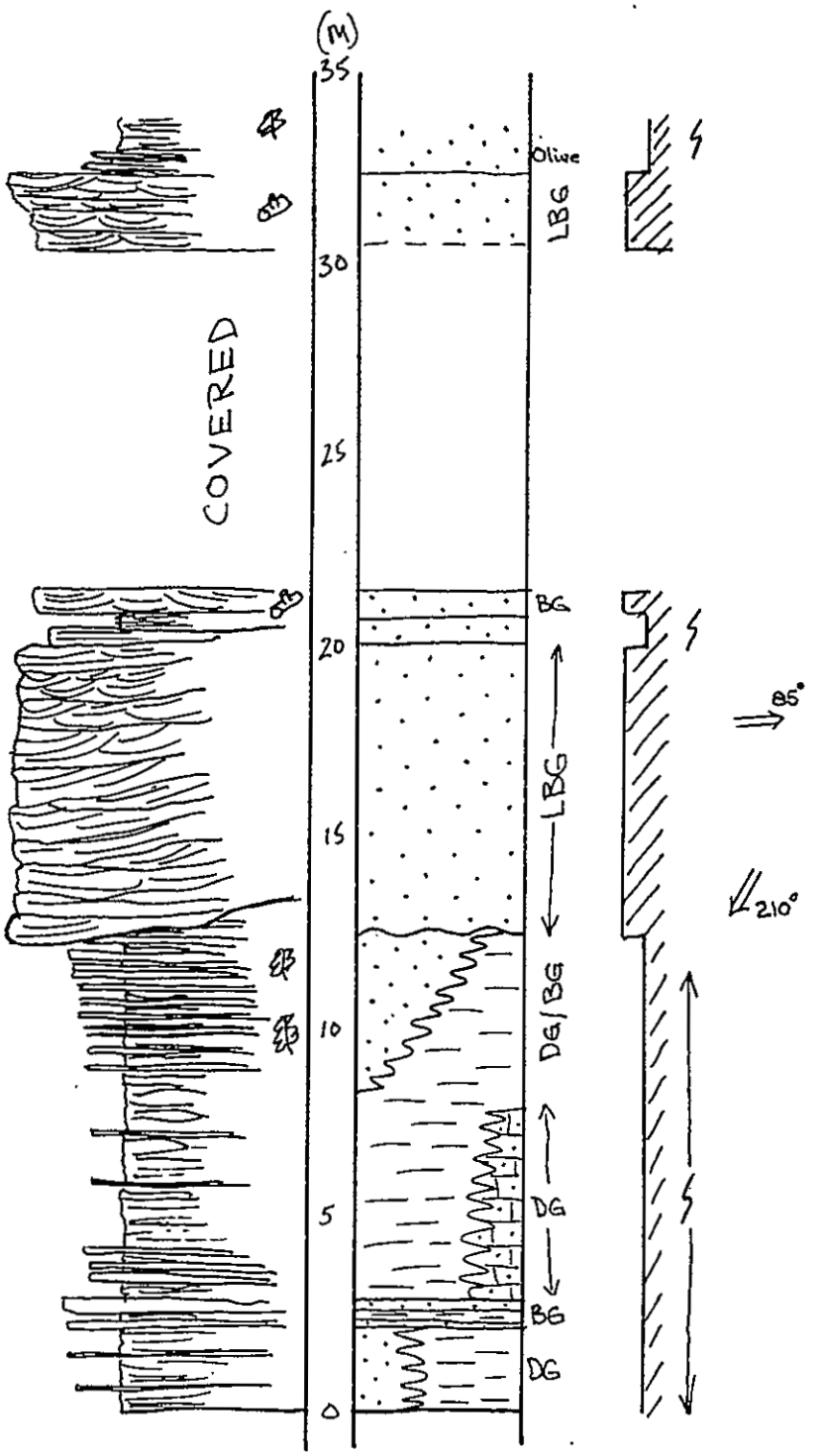


Capulin Canyon (FR 10)
Hillside

JM

M.S. No. 7

PAGE 1



Brachs
Crinoids

VERY

CAL

Feld

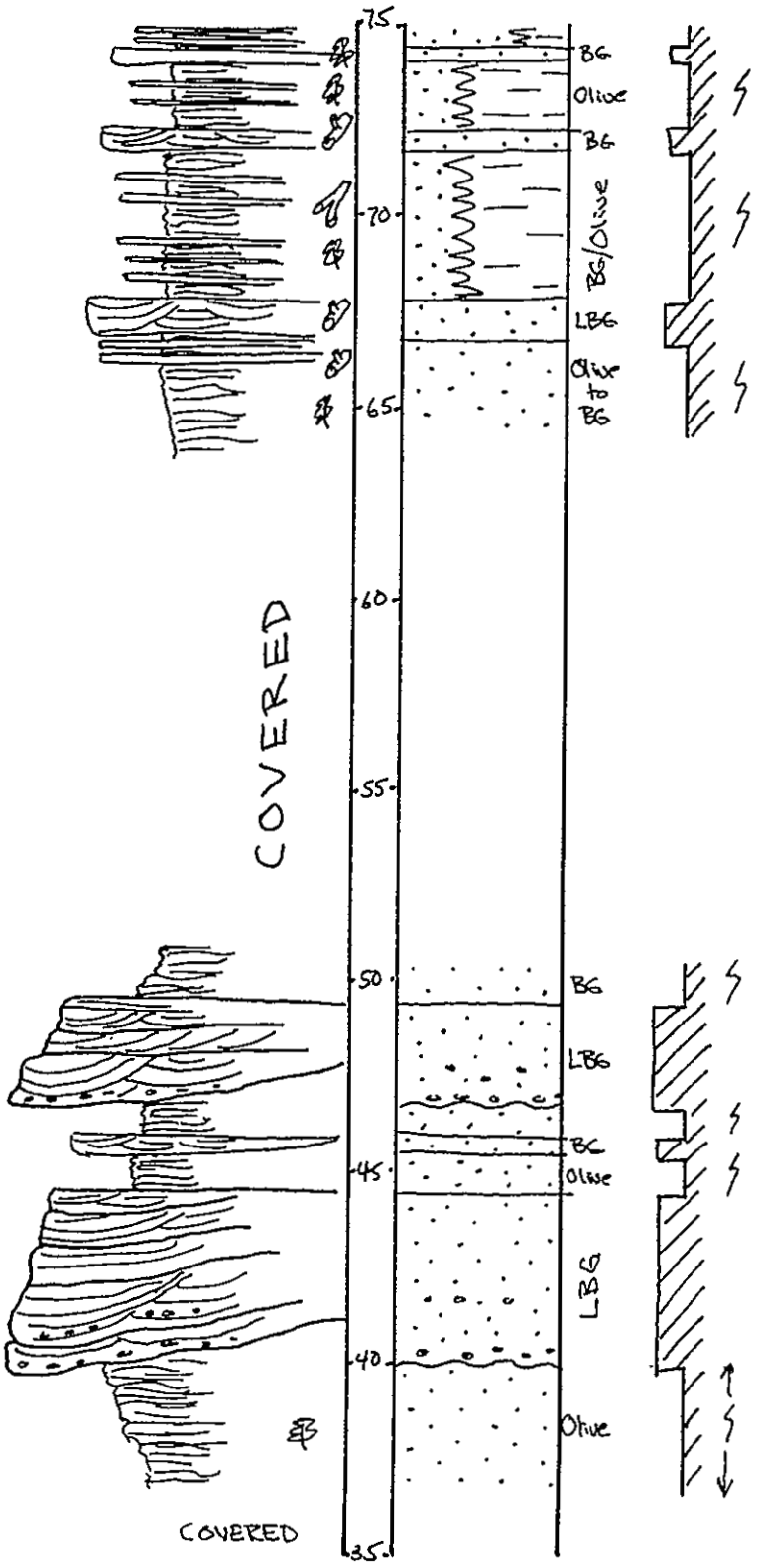
VERY

MICACI

JMC

M.S. No. 7

PAGE 2



Mic

Mic

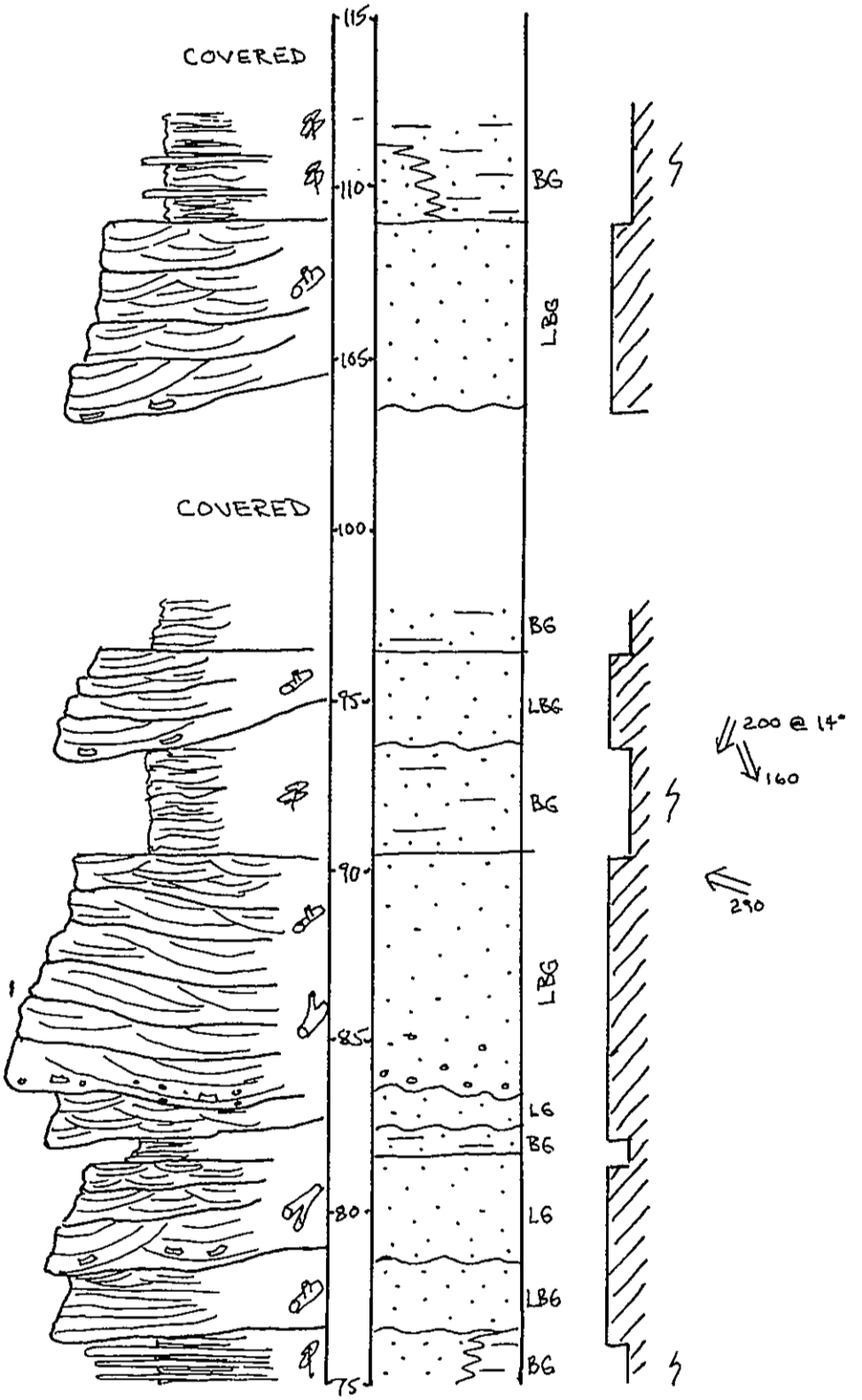
VERY

MCS

CAP page 2 of 4

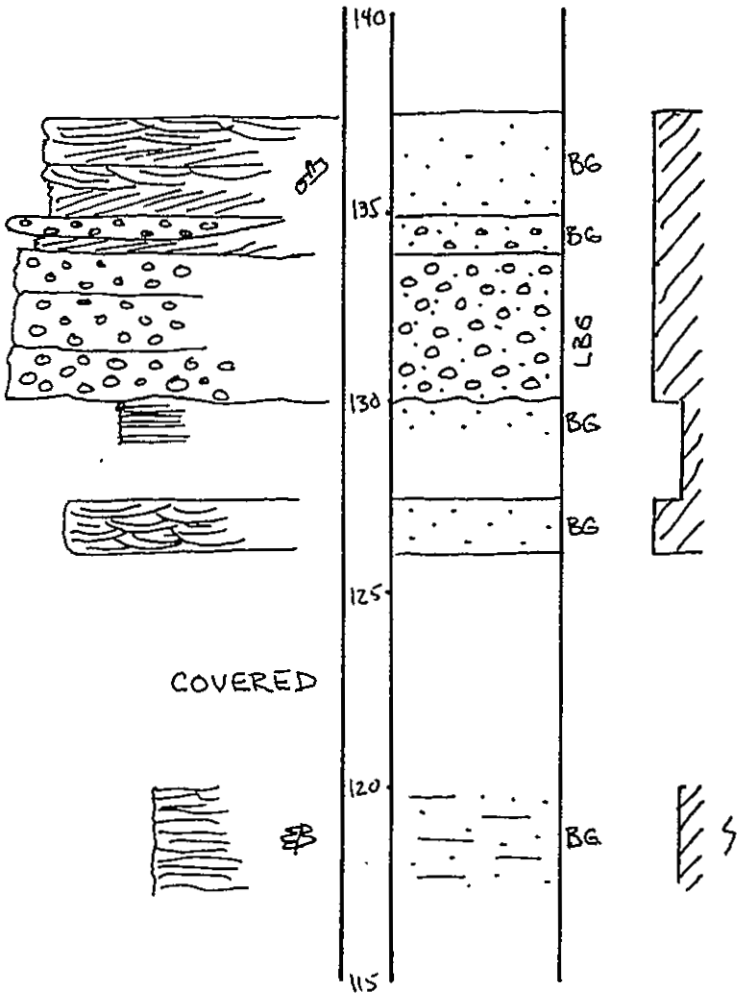
M.S. No. 7

PAGE 3


COVERED
COVERED
115
110
105
100
95
90
85
80
75
BG
LBG
BG
LBG
BG
LBG
LG
BG
LG
LBG
BG
200 @ 14°
160
290

M.S. No. 7

PAGE 4

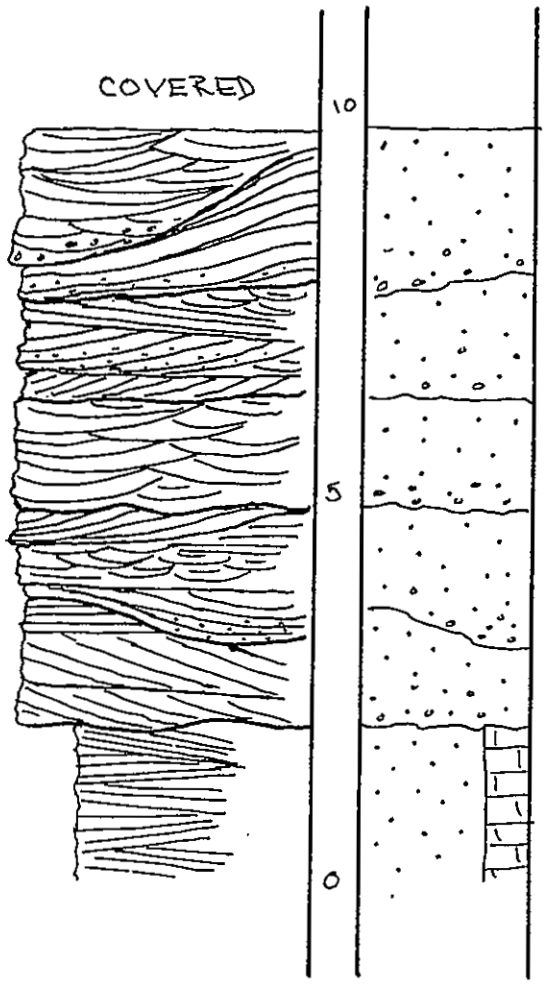


Tabs
Trou
plan

Ave
Max
granul
dom
matri

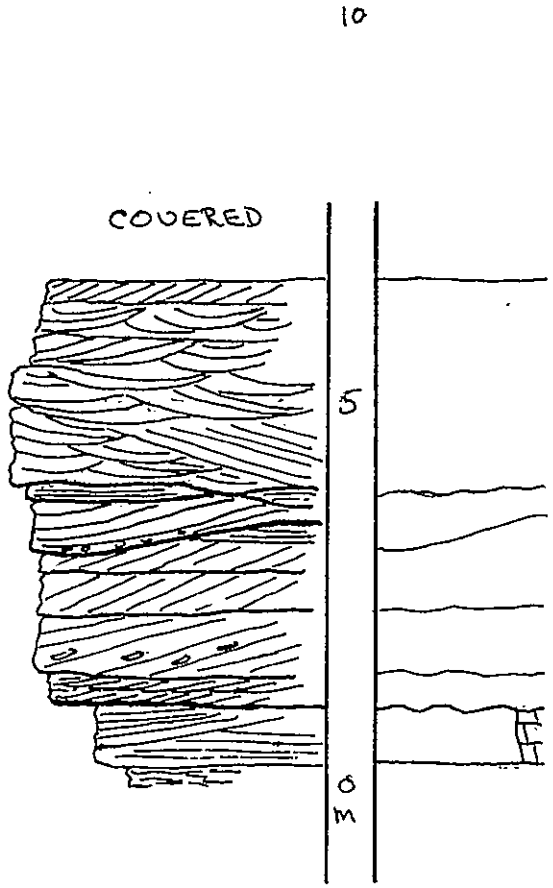
Mica

M.S. No. 8



~ 40 m S of CAP I

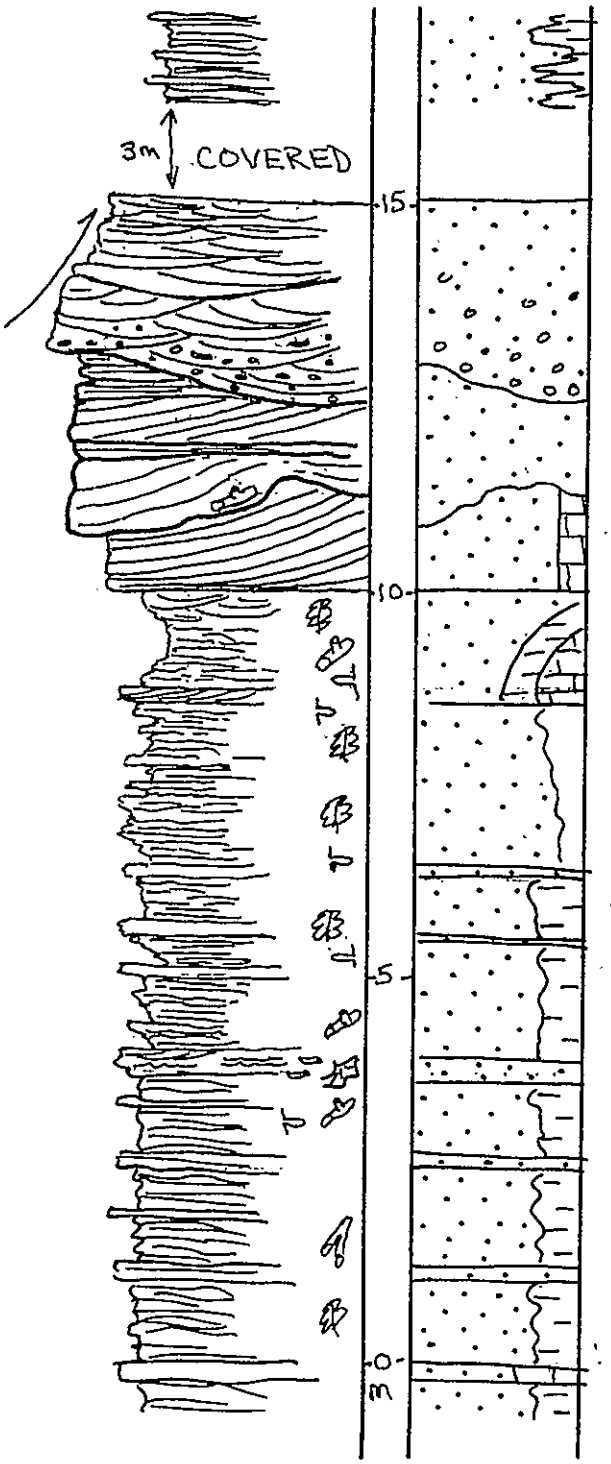
M.S. No. 9



~45m N of CAP I

M.S. No. 10

BRACHS

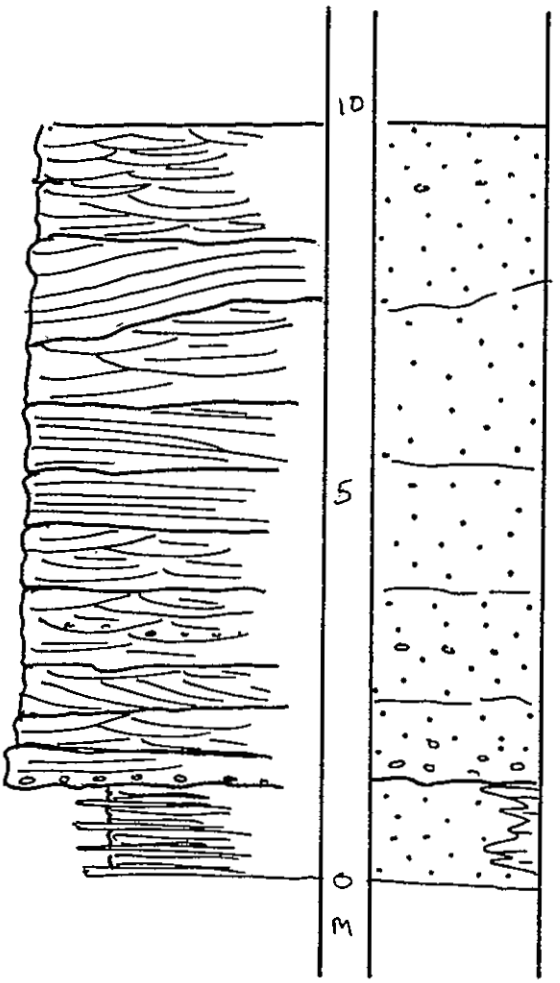


← VERY

~18 m above CAP II

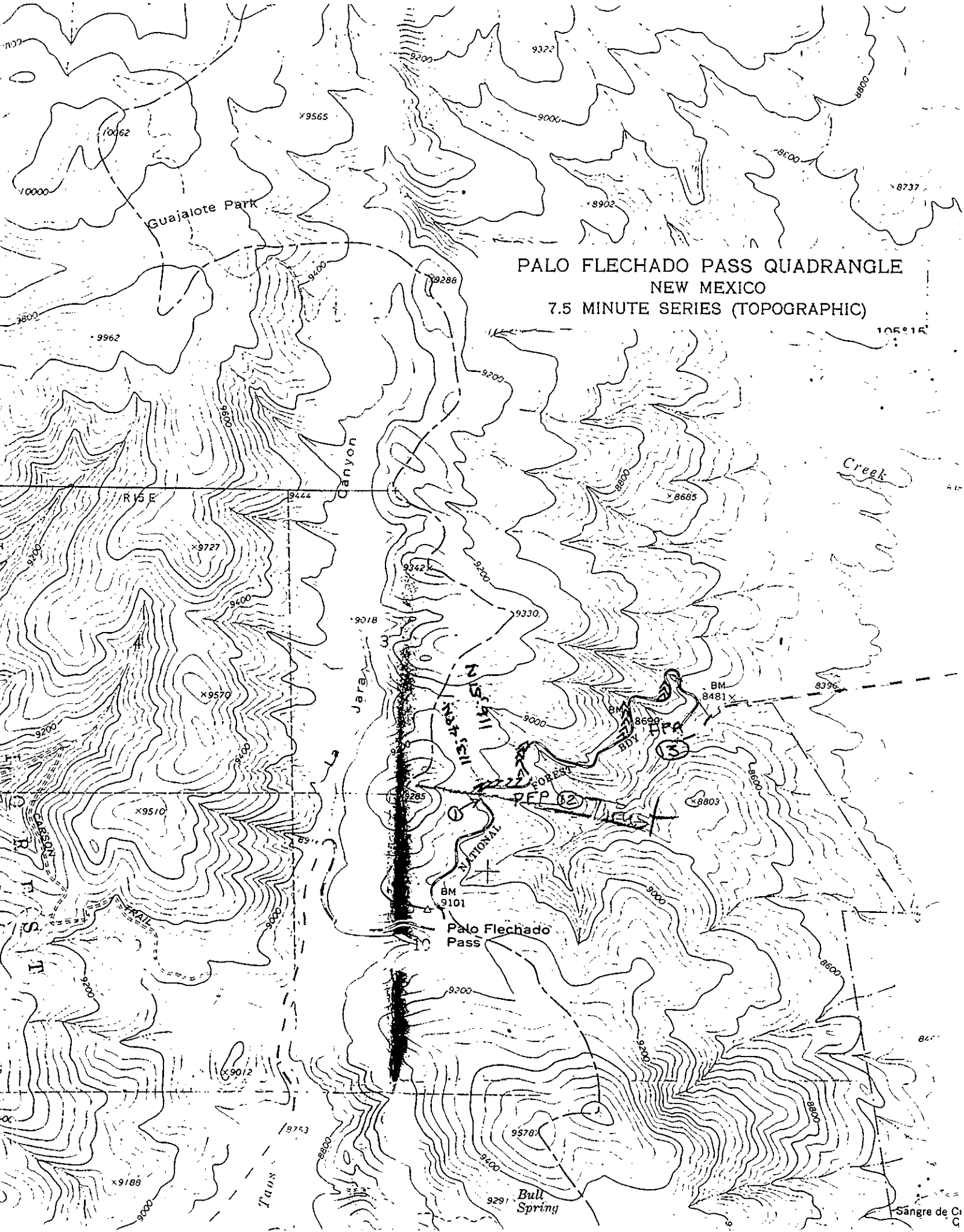
M.S. No. 11

15



PALO FLECHADO PASS SECTIONS

MEASURED SECTIONS 12 AND 13

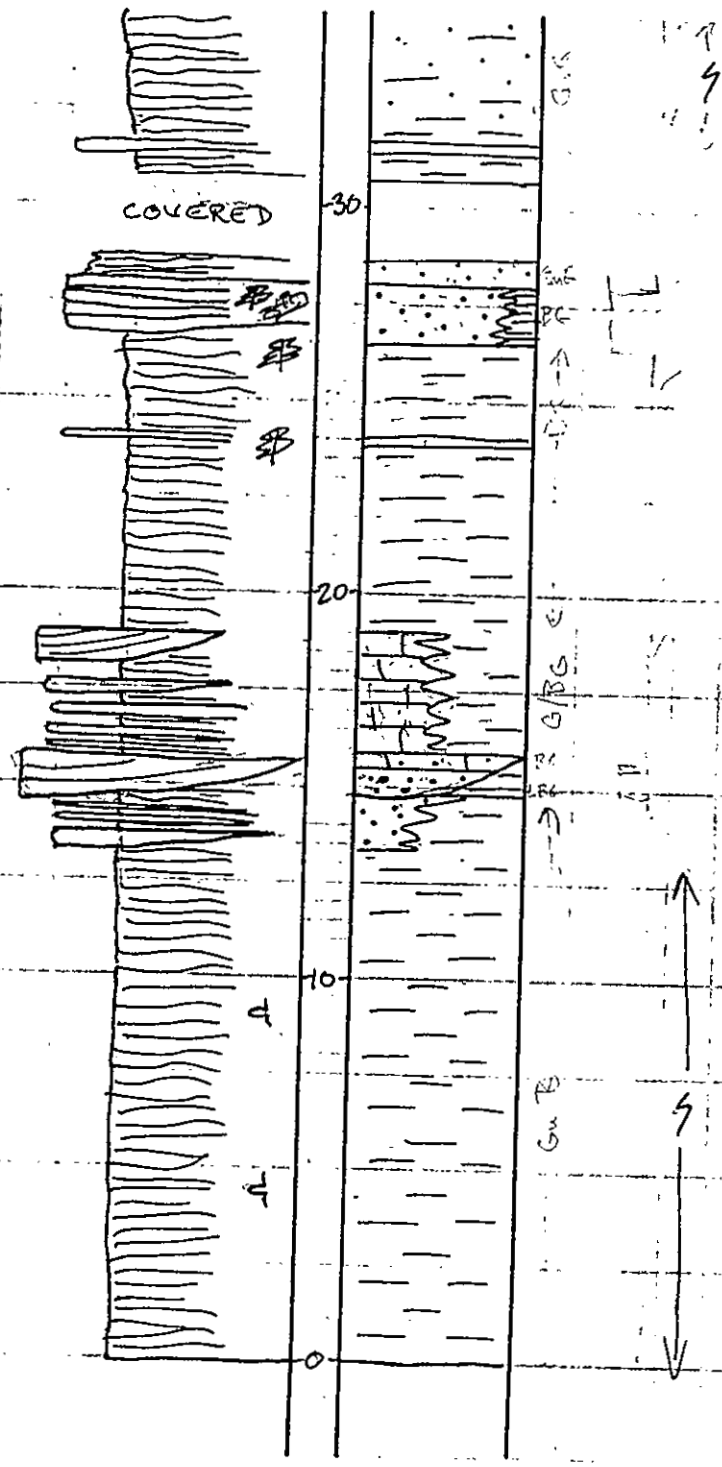

PALO FLECHADO PASS QUADRANGLE
NEW MEXICO
7.5 MINUTE SERIES (TOPOGRAPHIC)
Guajalote Park
Canyon
Jara
Creek
R 15 E
NATIONAL
FOREST
BDY
PFP 02
BM 8481
BM 8699
BM 9101
Palo Flechado Pass
Bull Spring
Taos
CARSON
TRAIL
Sangre de C

E of Palo Flechado Pass
Road Cuts

JMC

M.S. No. 12

PAGE 1



MICACEOUS SLTY VFSS TO F SS

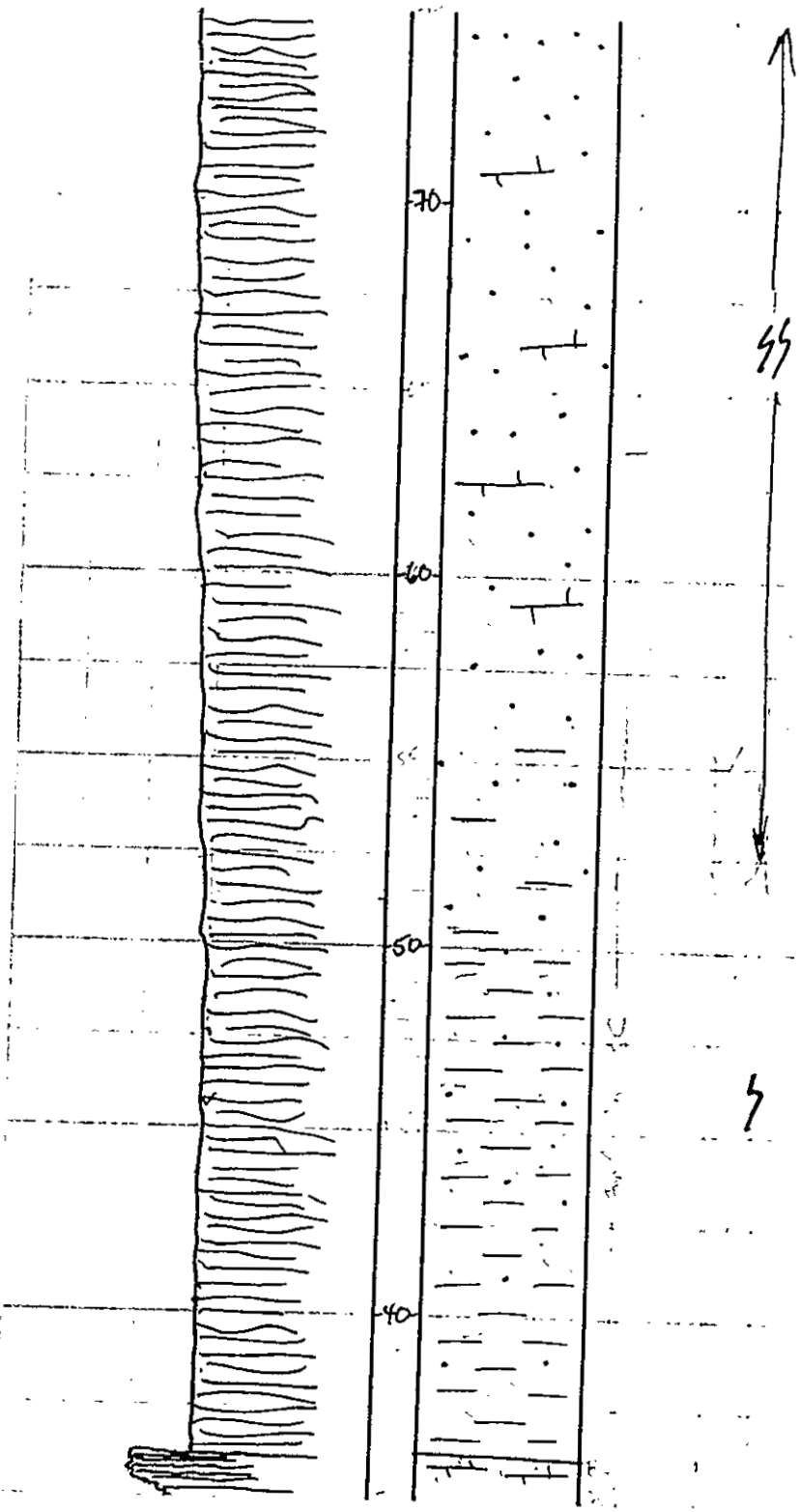
BRACH'S CRINOIDS

dehydrated axis trends N-S

BASE OF SECTION IS FAULTED

M.S. No. 12

PAGE 2



BRACHS
CRINOIDS

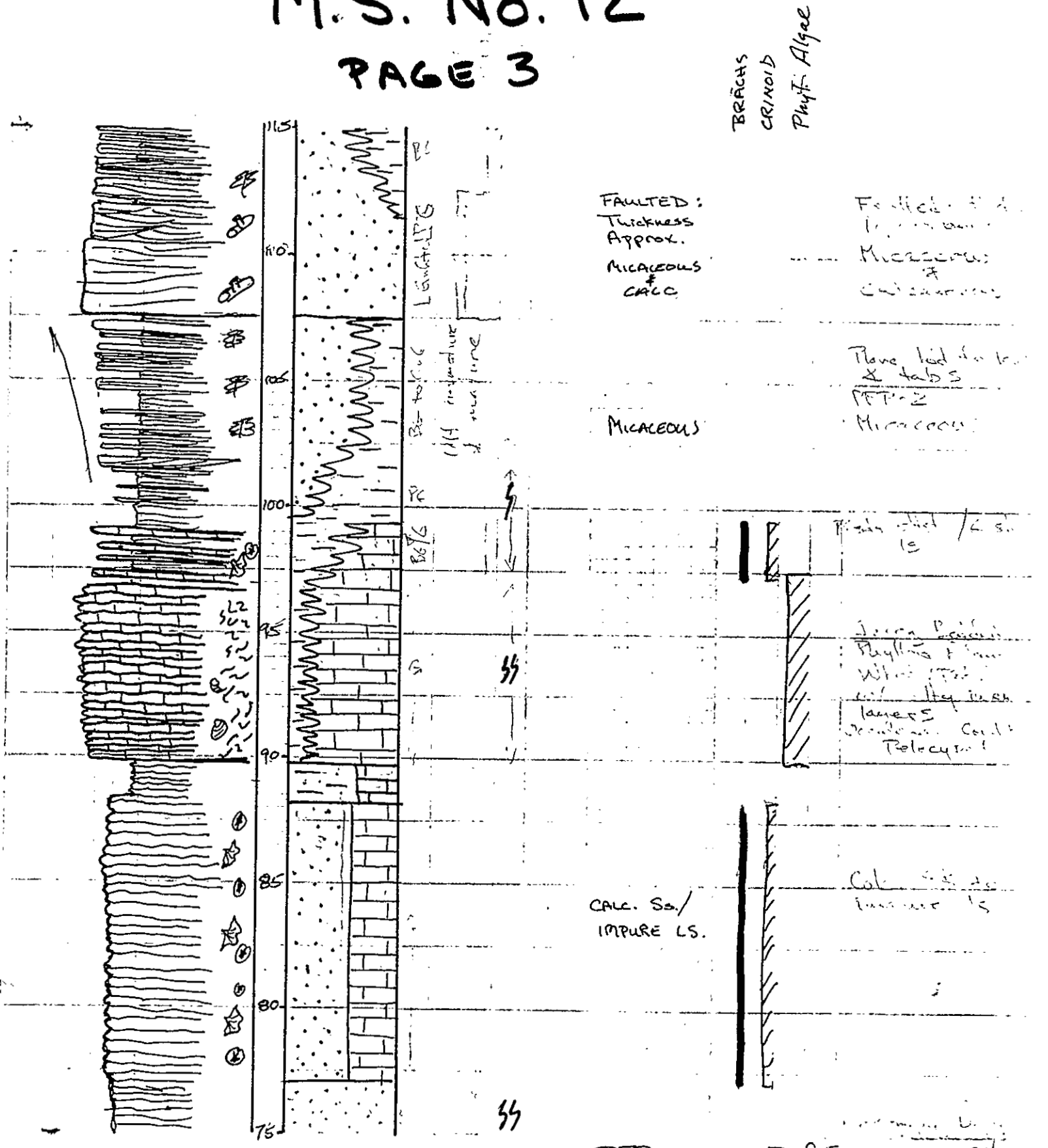
POORLY EXPOSED

MICACEOUS & CALC.

Sandy siltst grades upward into calc. f.g. Ss.

M.S. No. 12

PAGE 3



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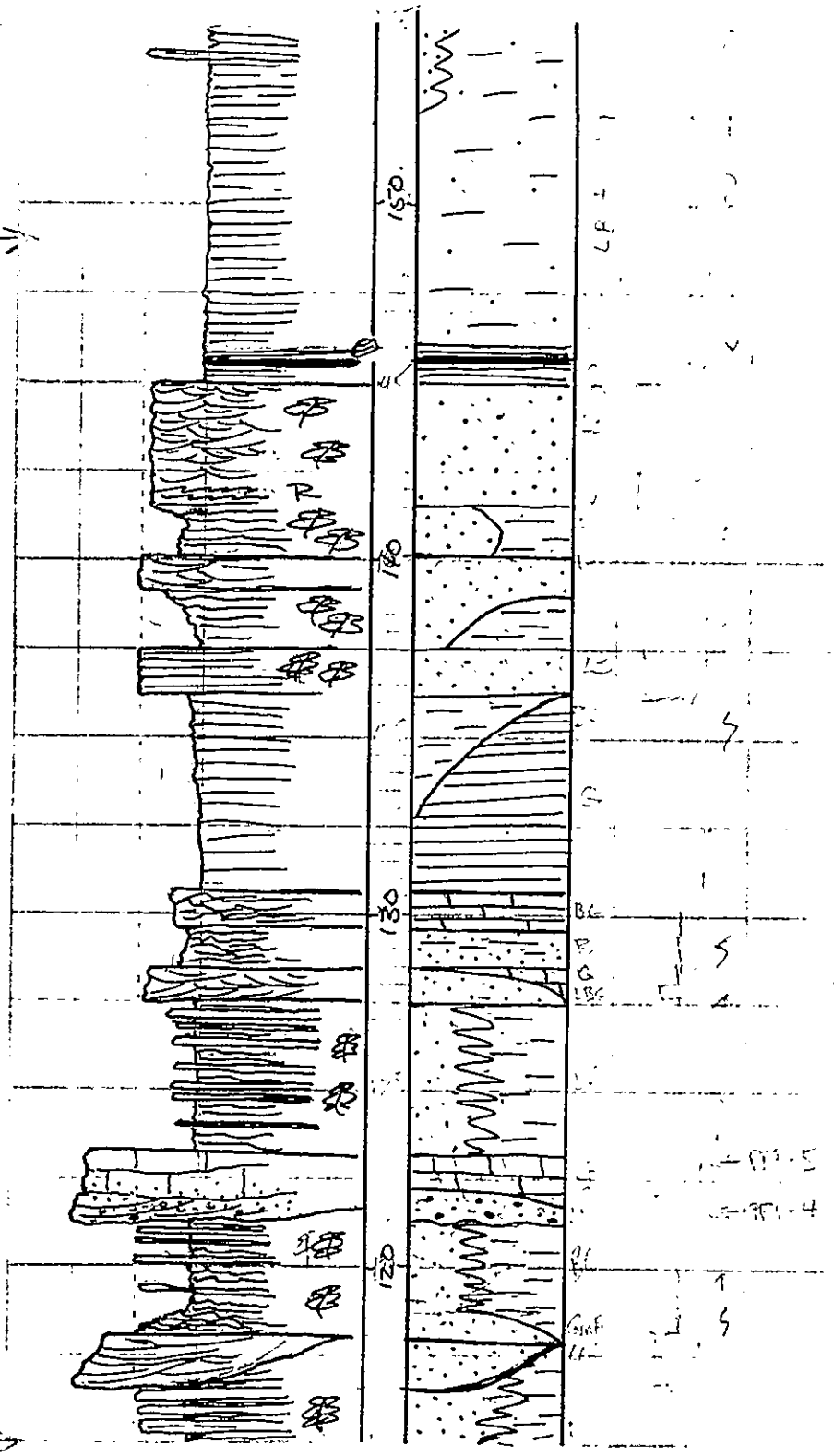
PAGE 4



BIVALES

Articulation

VERY MICACEOUS

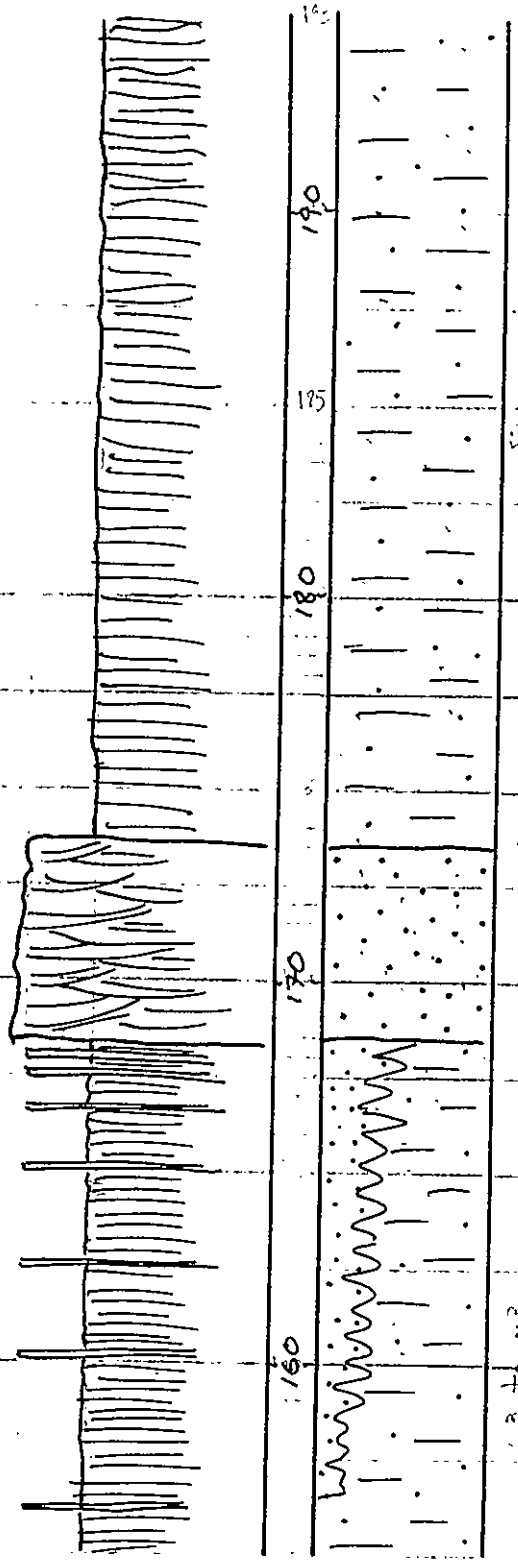
Bds 3 to 20 cm thk

MICACEOUS

VC. SS grades up into oolitic grainst.

M.S. No. 12

PAGE 5



POORLY EXPOSED & POSSIBLY FAULTED

Poorly Exposed & Faulted. This interval is from Young's Measured Section.

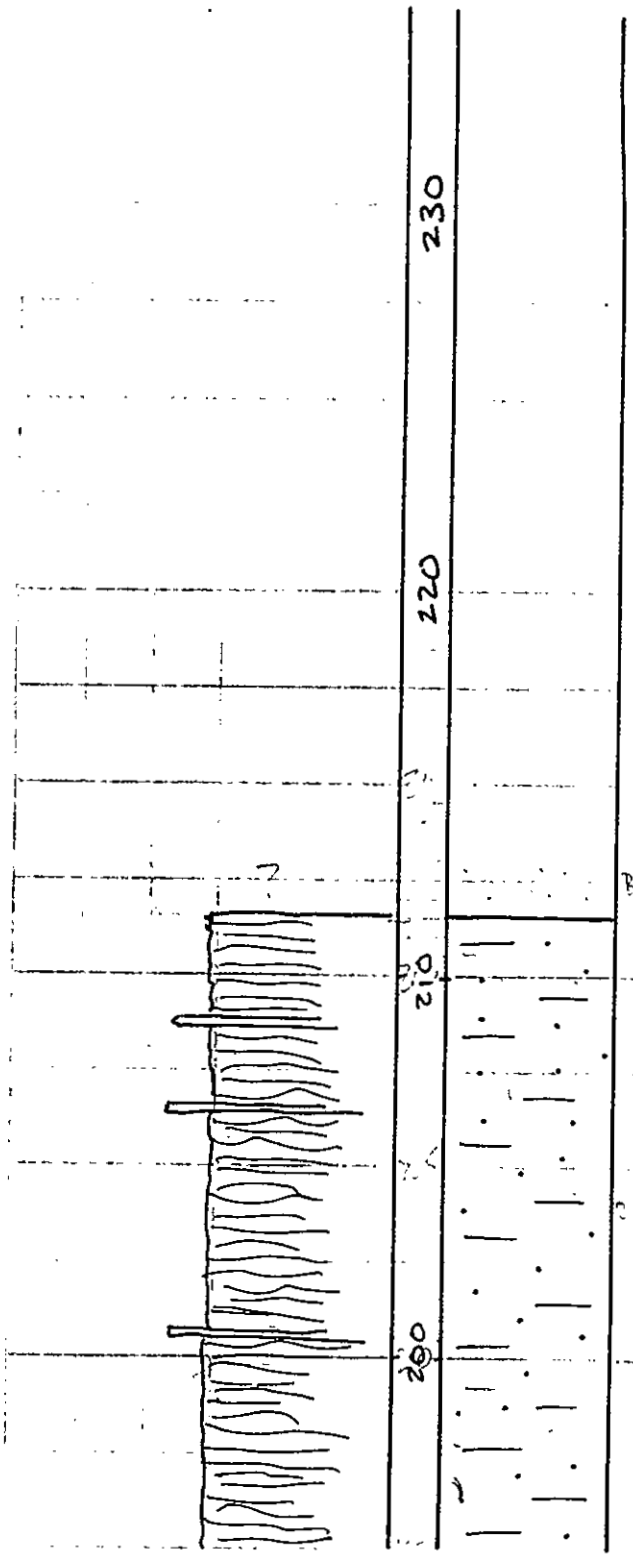
Silty shale & some muddy SS

MIKAEDUS

P.F.P. page 5 of 5

M.S. No. 12

PAGE 6

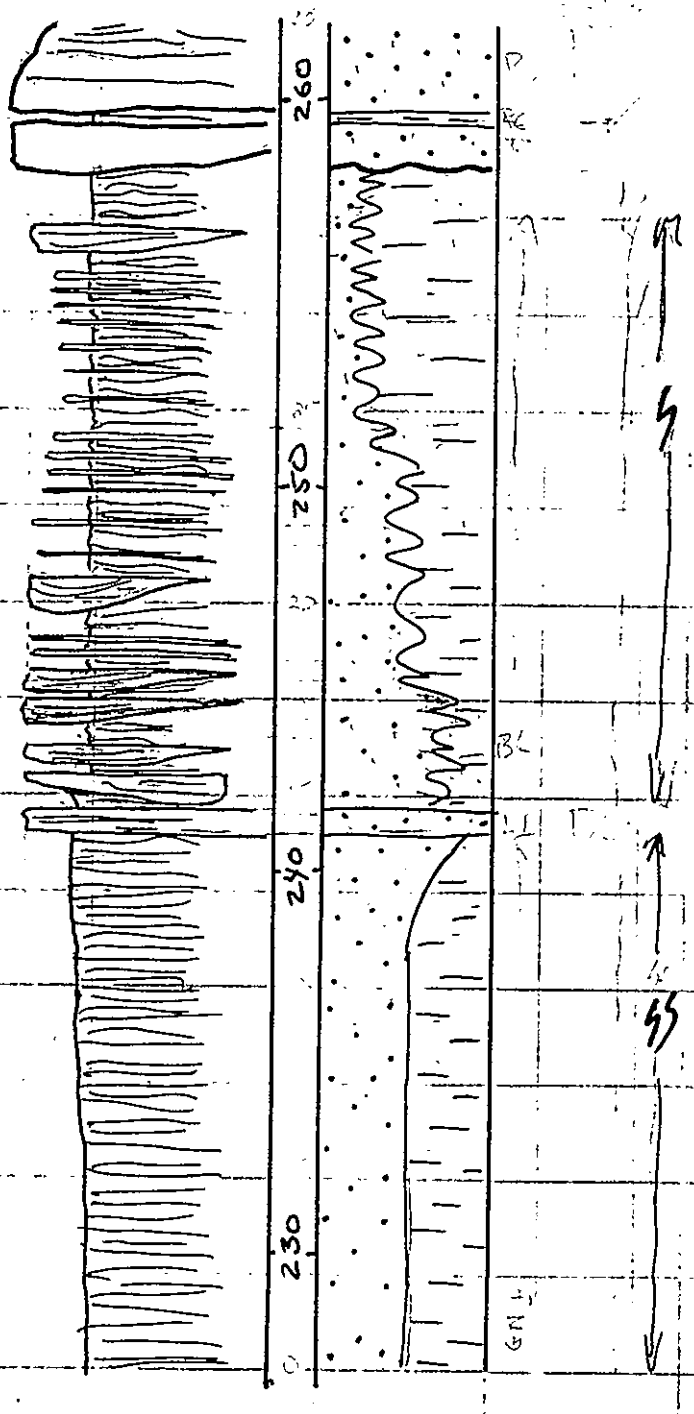


APPROX. 16 m of
COVERED SECTION
TO NEXT
ROAD CUT

Airborne

M.S. No. 12

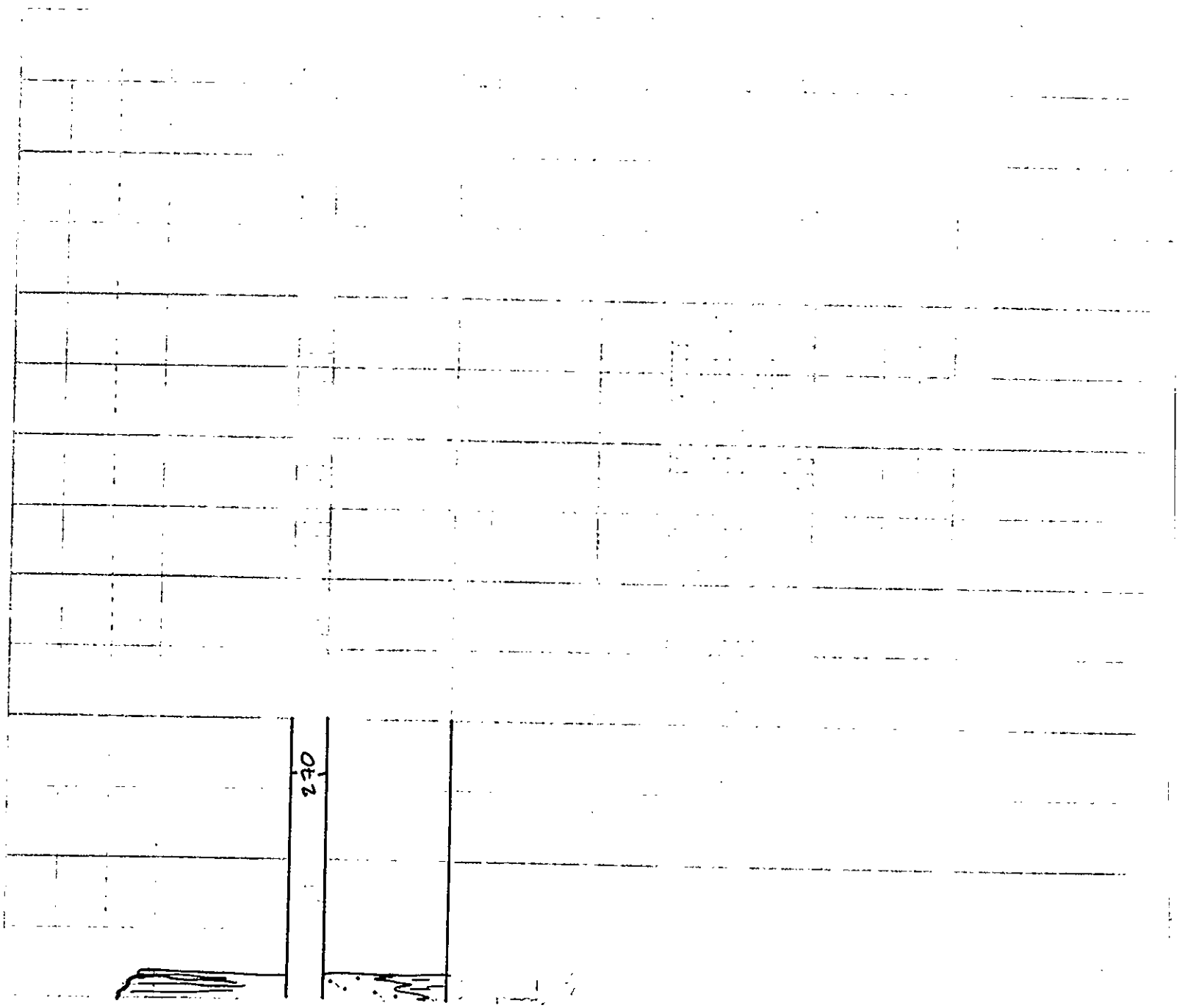
PAGE 7



SECTION SHIFTS TO NEXT ROAD CUT

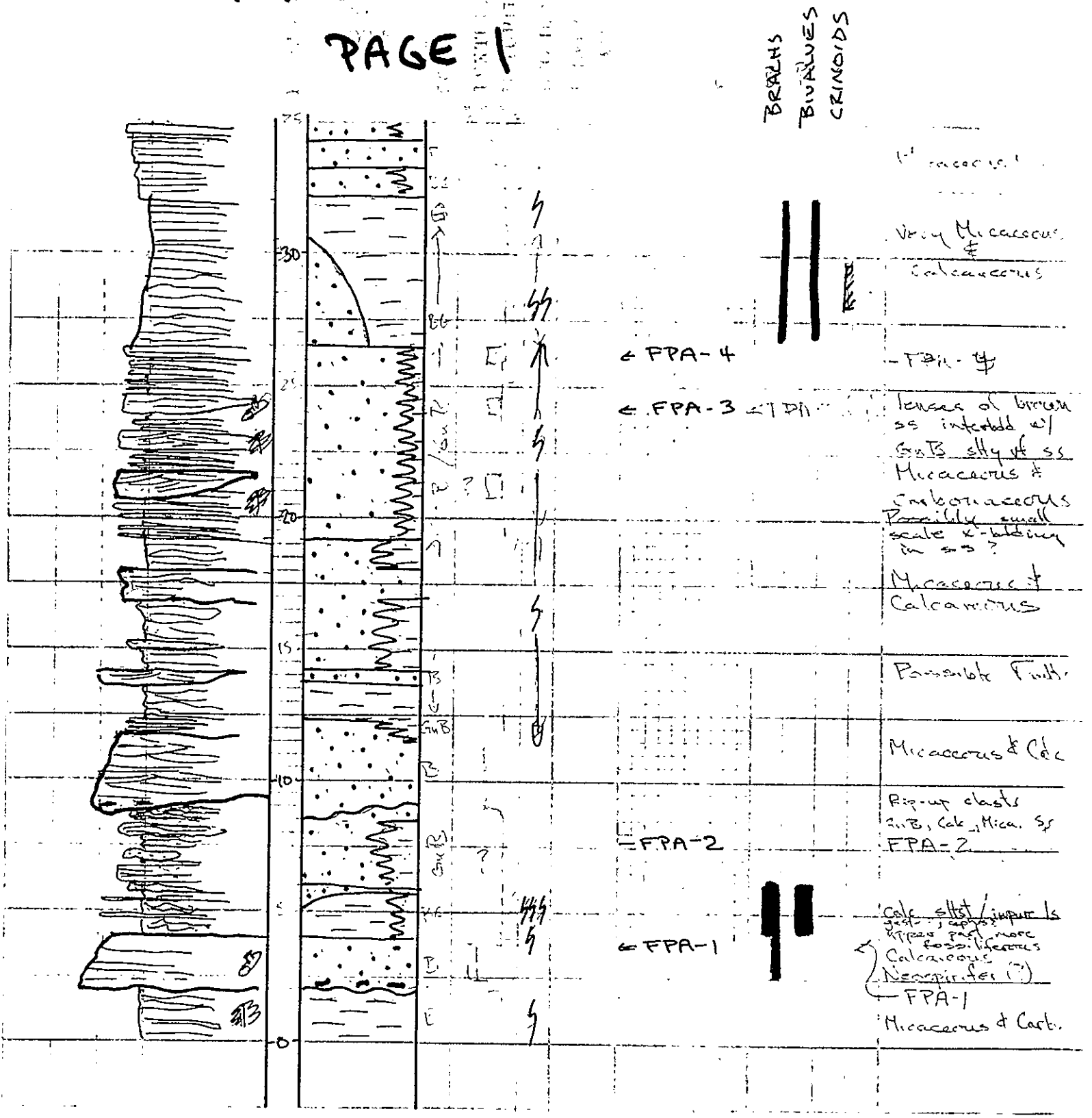
This section start one road [illegible] down [illegible] from [illegible]

M.S. No. 12
PAGE 8



M.S. No. 13

PAGE 1



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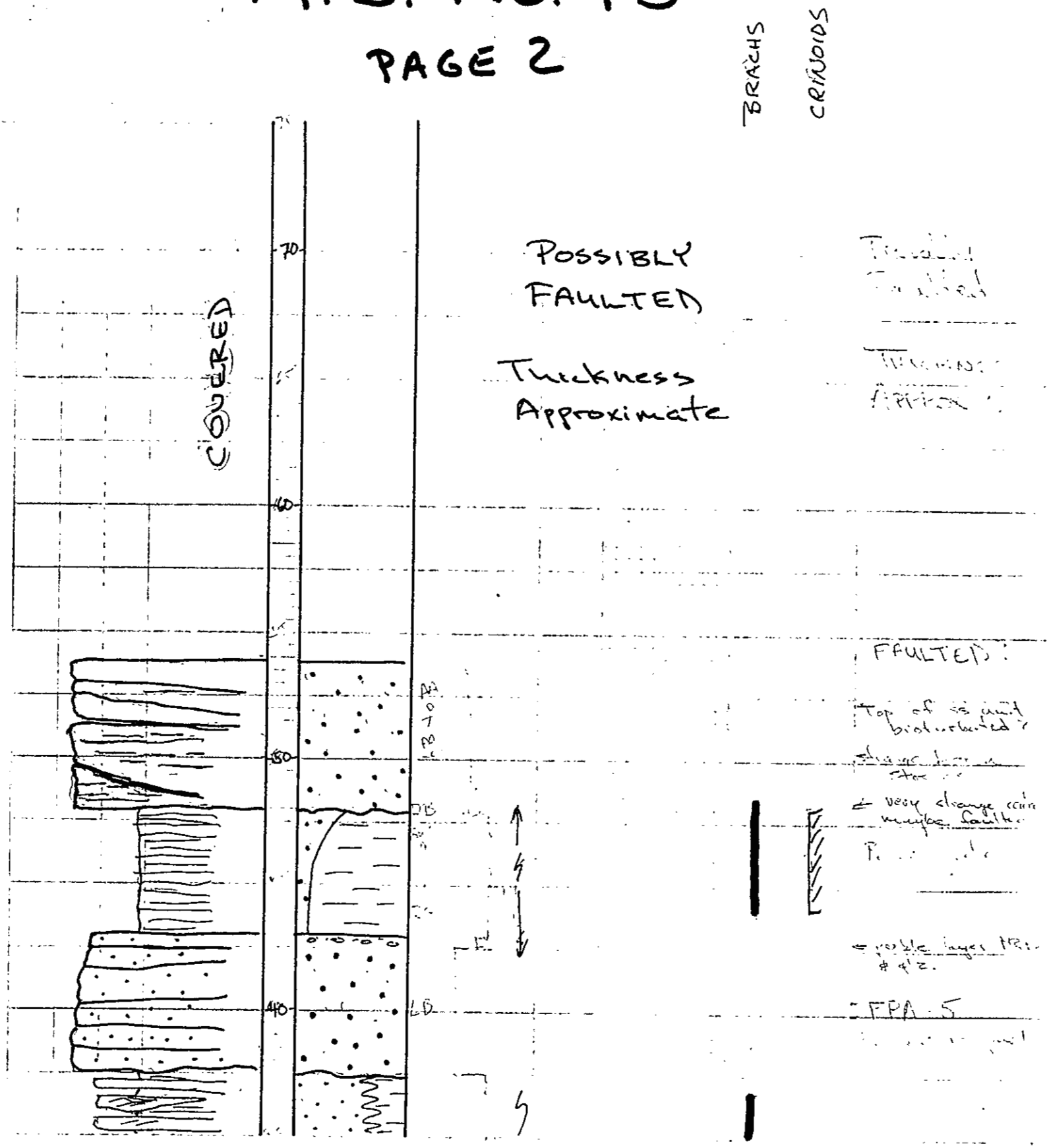
PAGE 2



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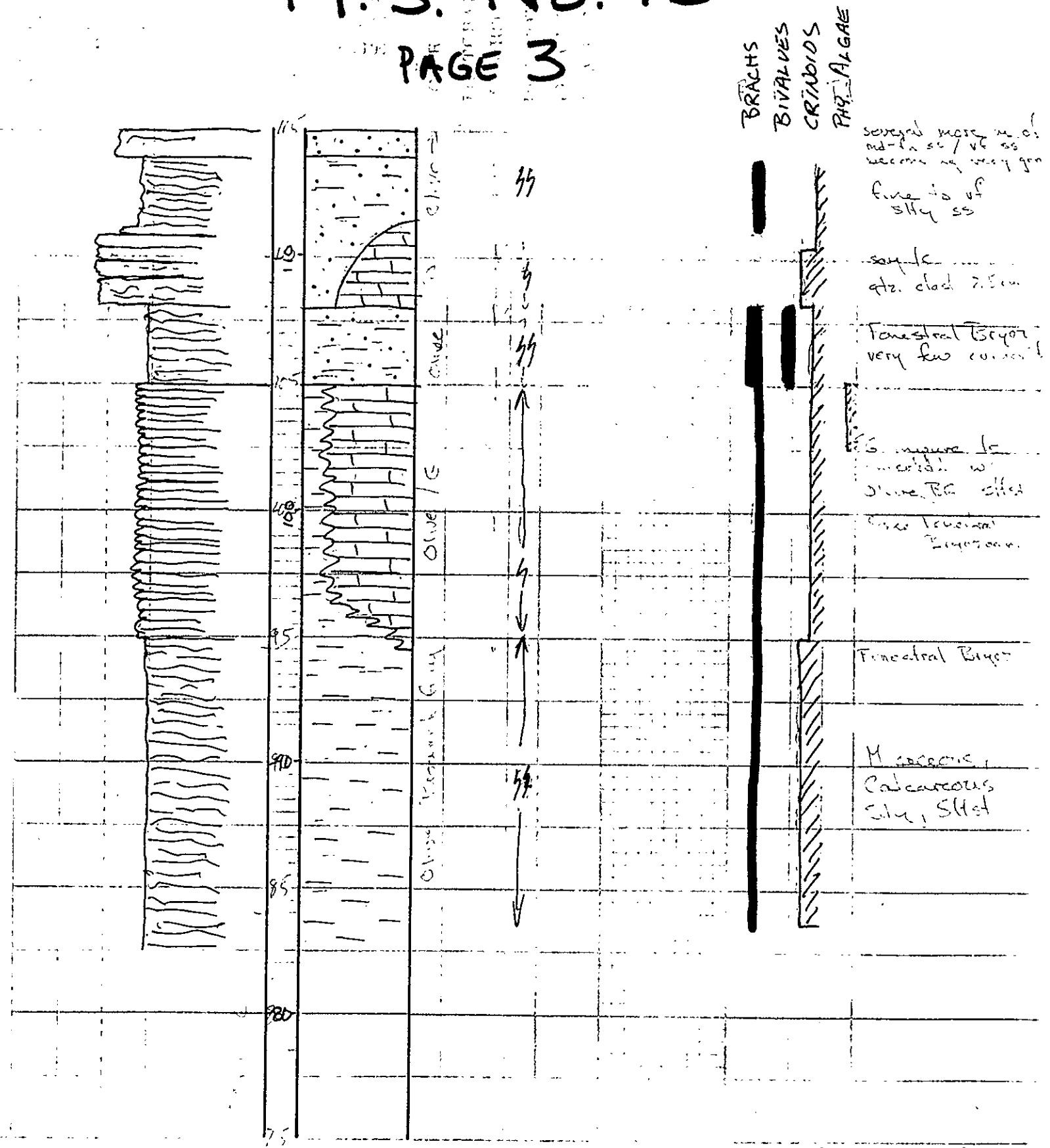
PAGE 3



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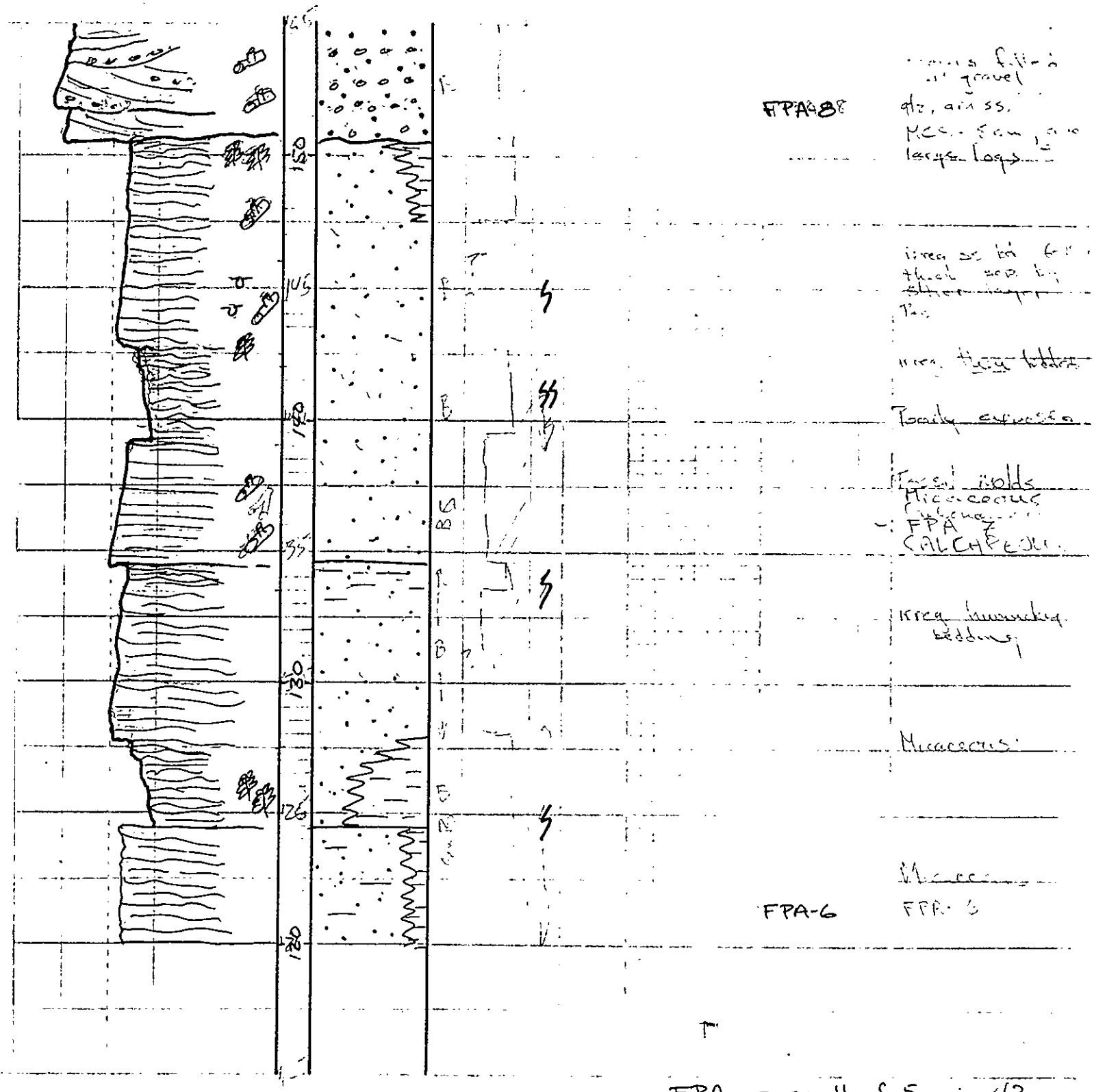
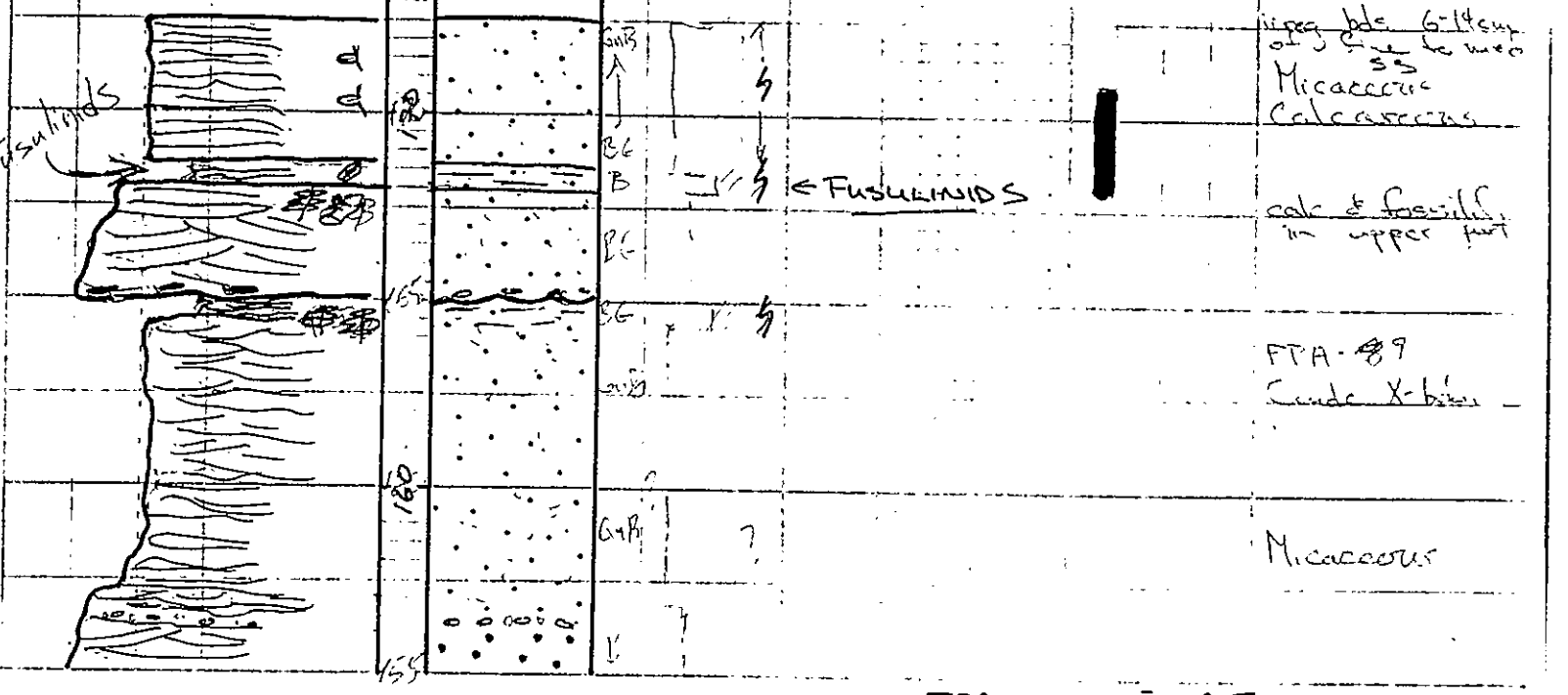
PAGE 4



M.S. No. 13

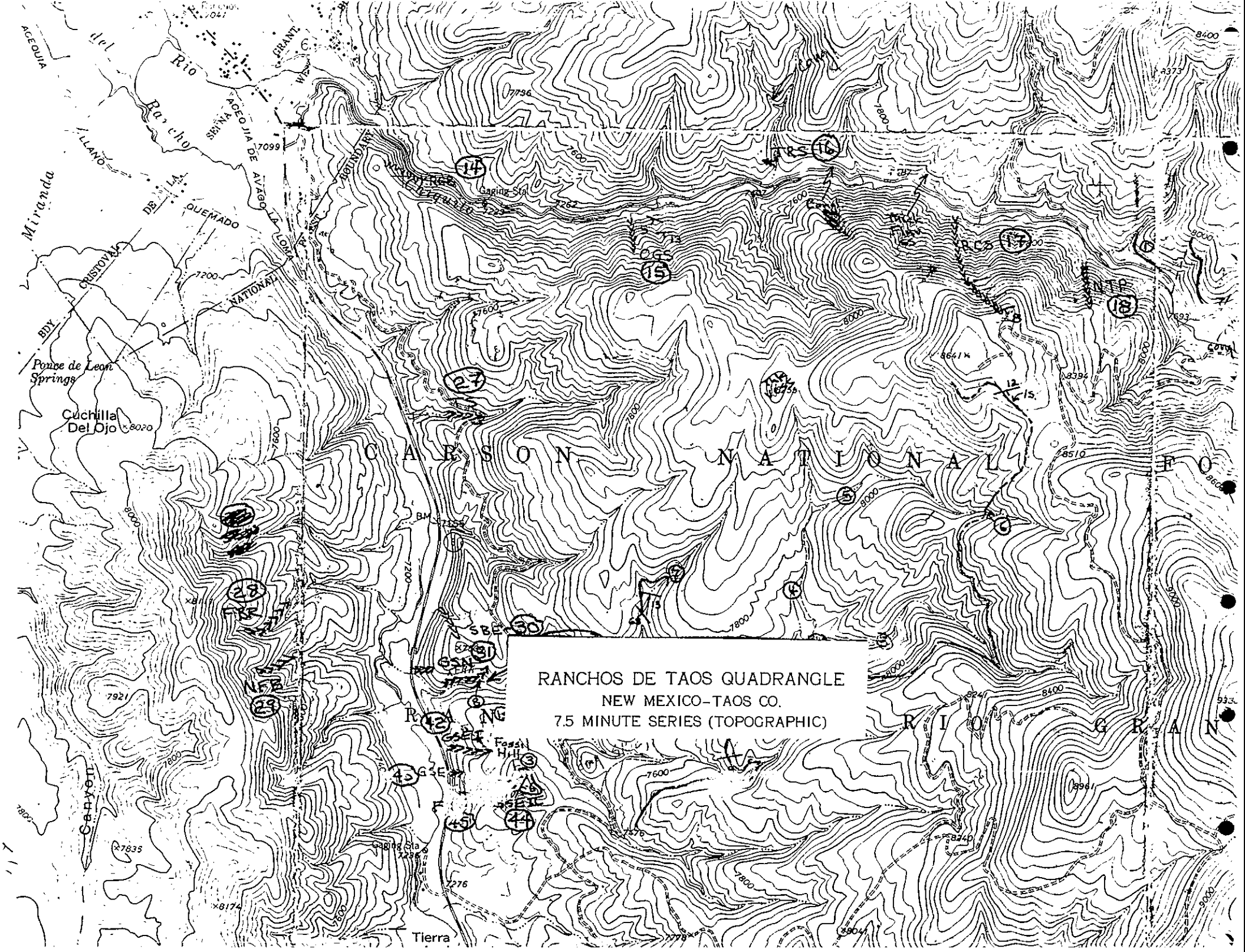
PAGE 5

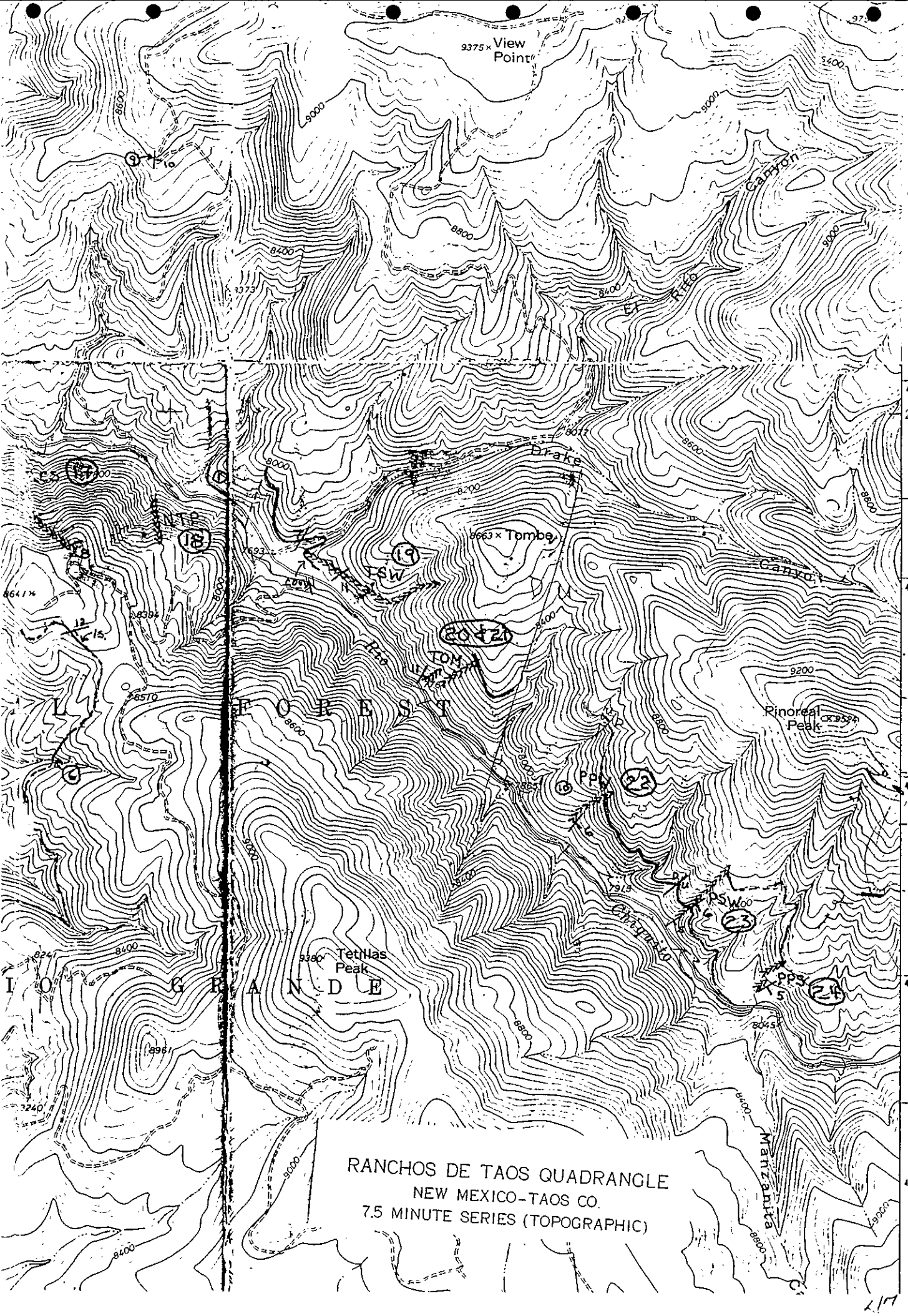
BRACHS



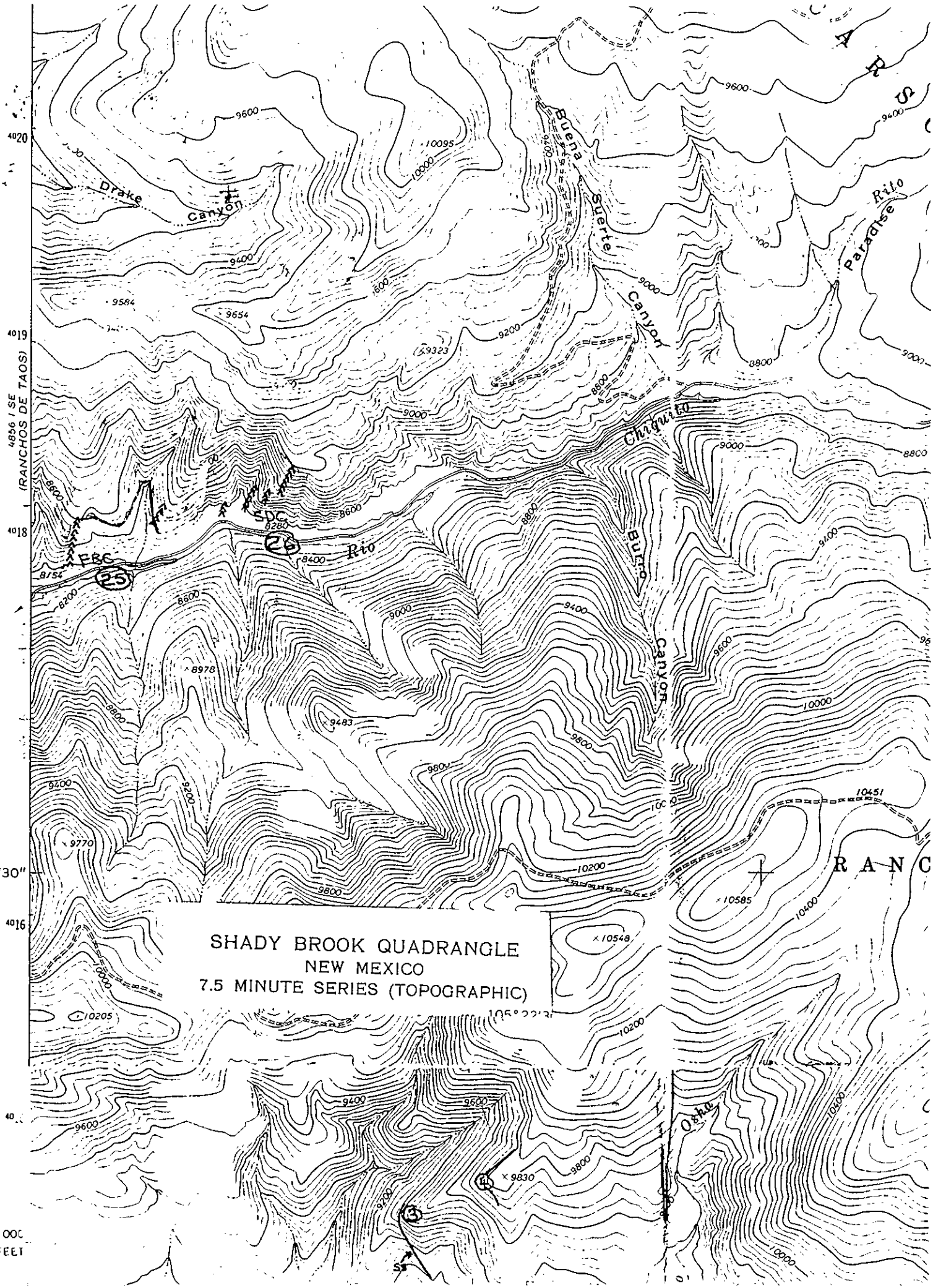
RIO CHIQUITO SECTIONS

MEASURED SECTIONS
14 THROUGH 26


RANCHOS DE TAOS QUADRANGLE
NEW MEXICO-TAOS CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
C A R S O N N A T I O N A L F O
R I O G R A N
Rio del Rancho
Miranda
Ponce de Leon Springs
Cuchilla Del Ojo
Fossil Hill
Gaging Sta
Tierra
NATIONAL
BDY
CRISTOBAL
QUEMADO
ACEQUIA
GRANT
Canyon

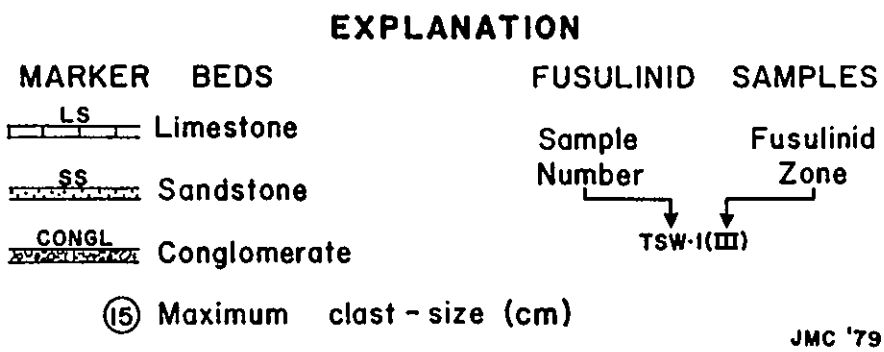


RANCHOS DE TAOS QUADRANGLE
NEW MEXICO-TAOS CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)


SHADY BROOK QUADRANGLE
NEW MEXICO
7.5 MINUTE SERIES (TOPOGRAPHIC)
Drake Canyon
Buena Suerte Canyon
Chiquito
Burro Canyon
Rio Paradise
Rio
Osha
RANC
4856 I SE
(RANCHOS DE TAOS)
17'30"
1 920 000
FEET
FBC
SDC
25
26
3
5
S3

48

Figure 10. Correlation of Rio Chiquito measured sections with fault displacements removed (approximate displacement indicated in parentheses). Maximum clast size of laterally persistent conglomerate zone is also shown. Fusulinid sample numbers refer to samples listed in Table 2.



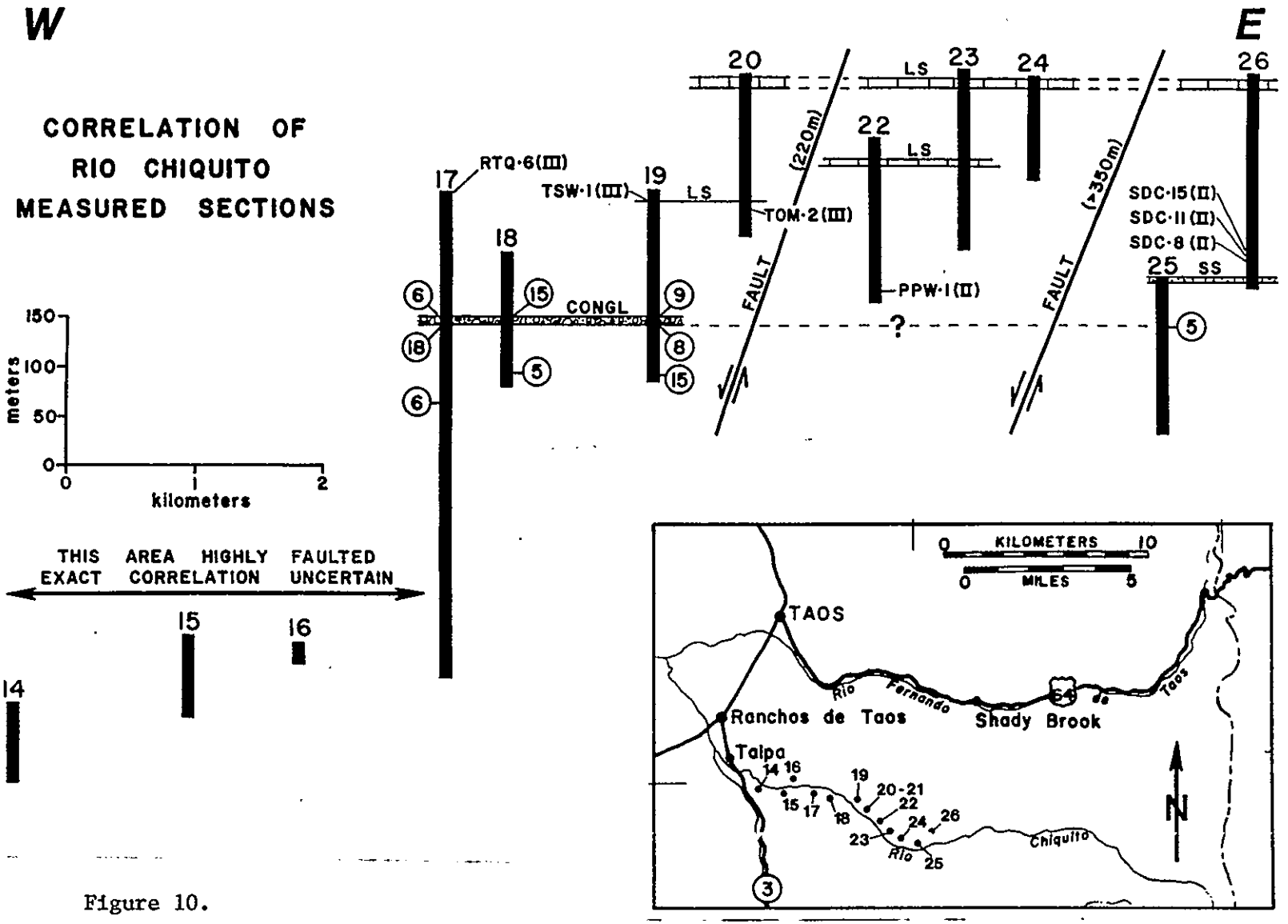
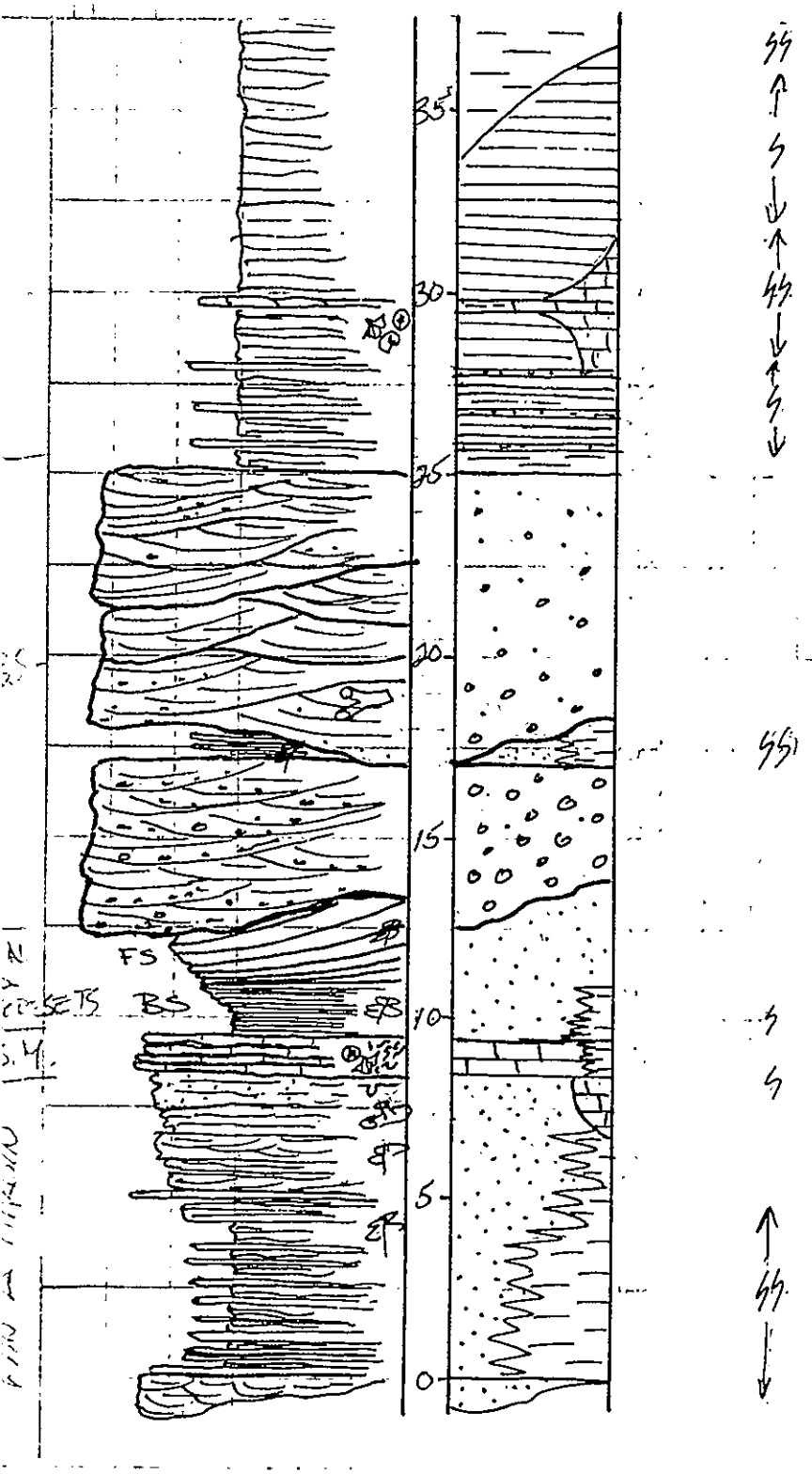

W
E
CORRELATION OF
RIO CHIQUITO
MEASURED SECTIONS
meters
150
100
50
0
0
1
2
kilometers
THIS AREA HIGHLY FAULTED
EXACT CORRELATION UNCERTAIN
14
15
16
17
18
19
20
22
23
24
25
26
RTQ·6(III)
TSW·1(III)
TOM·2(III)
PPW·1(II)
SDC·15(II)
SDC·11(II)
SDC·8(II)
LS
SS
CONGL
FAULT
(220m)
(>350m)
?
KILOMETERS
MILES
TAOS
Ranchos de Taos
Talpa
Rio Fernando
Shady Brook
Rio Chiquito
Taos
N

Figure 10.

M.S. No. 14

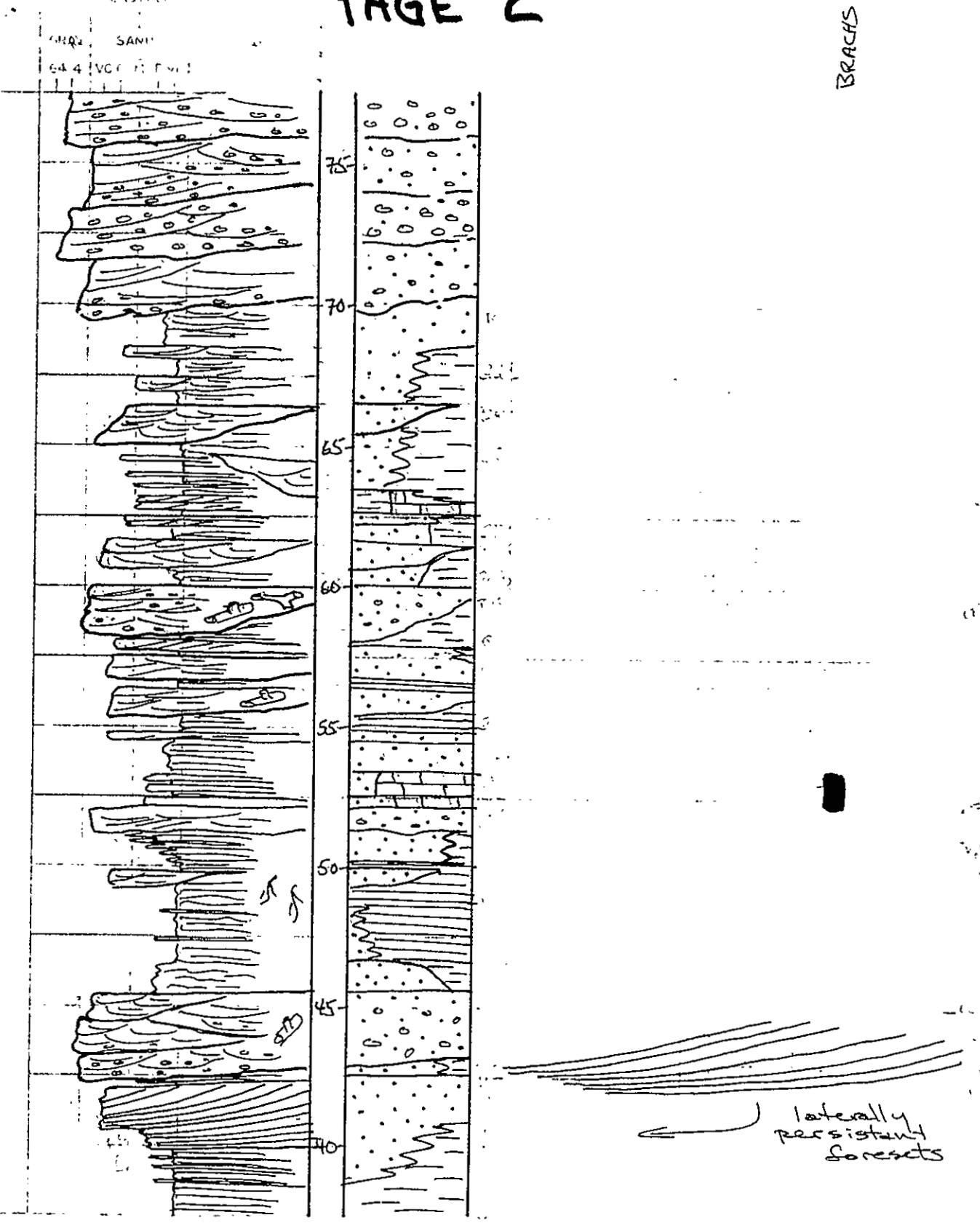
PAGE 1



RCB

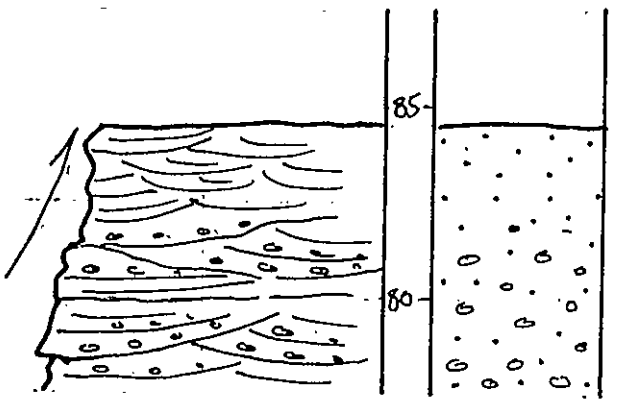
M.S. No. 14

PAGE 2



RCB

M.S. No. 14
PAGE 3



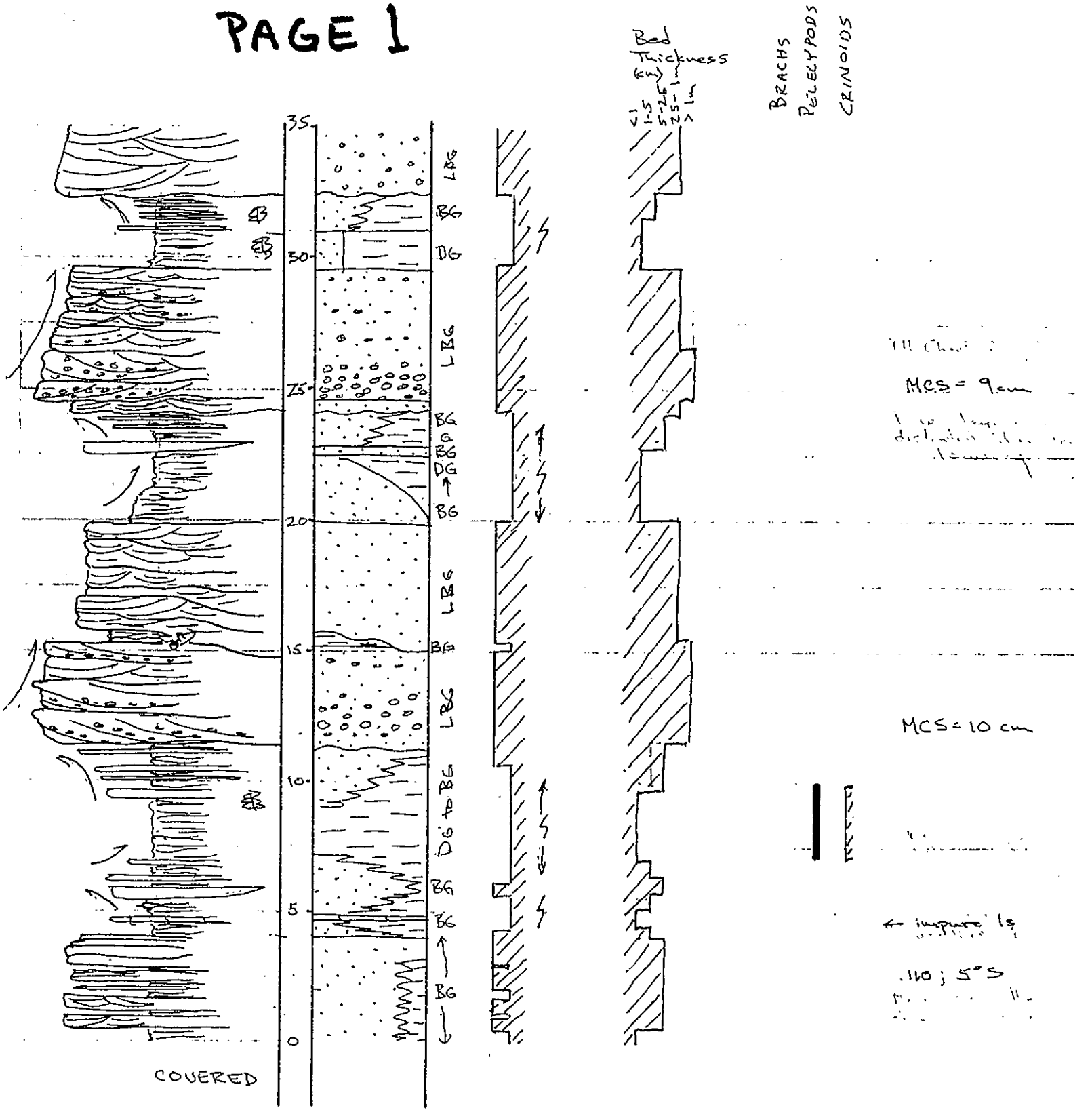
RCB

June 23, 1978

JMC

M.S. No. 15

PAGE 1



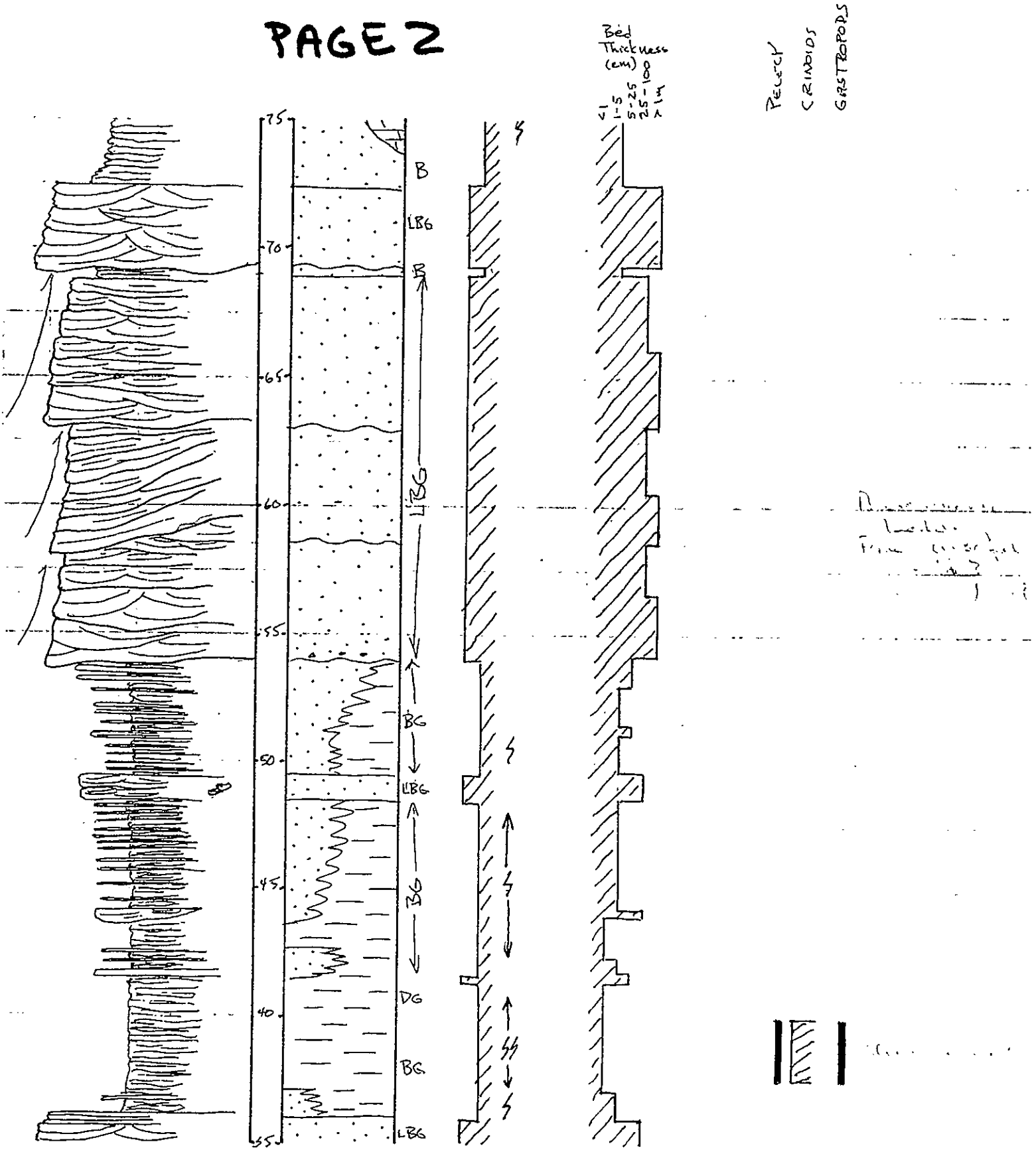
CGS

June 23, 1928

JMC

M.S. No. 15

PAGE 2



CGS

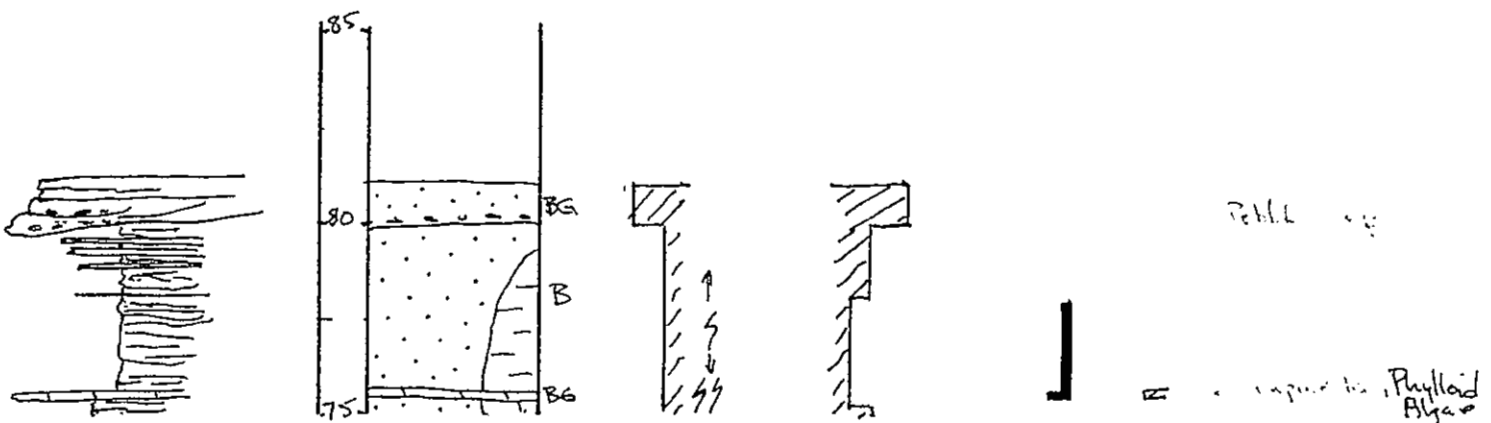
June 23, 1978

JHC

M.S. No. 15
PAGE 3

Bed Thickness (cm)
<1
1-5
5-25
25-1m
>1m

BRACHS
PELECYPODS
CRINOID
CASTS.



Phylloid Algae

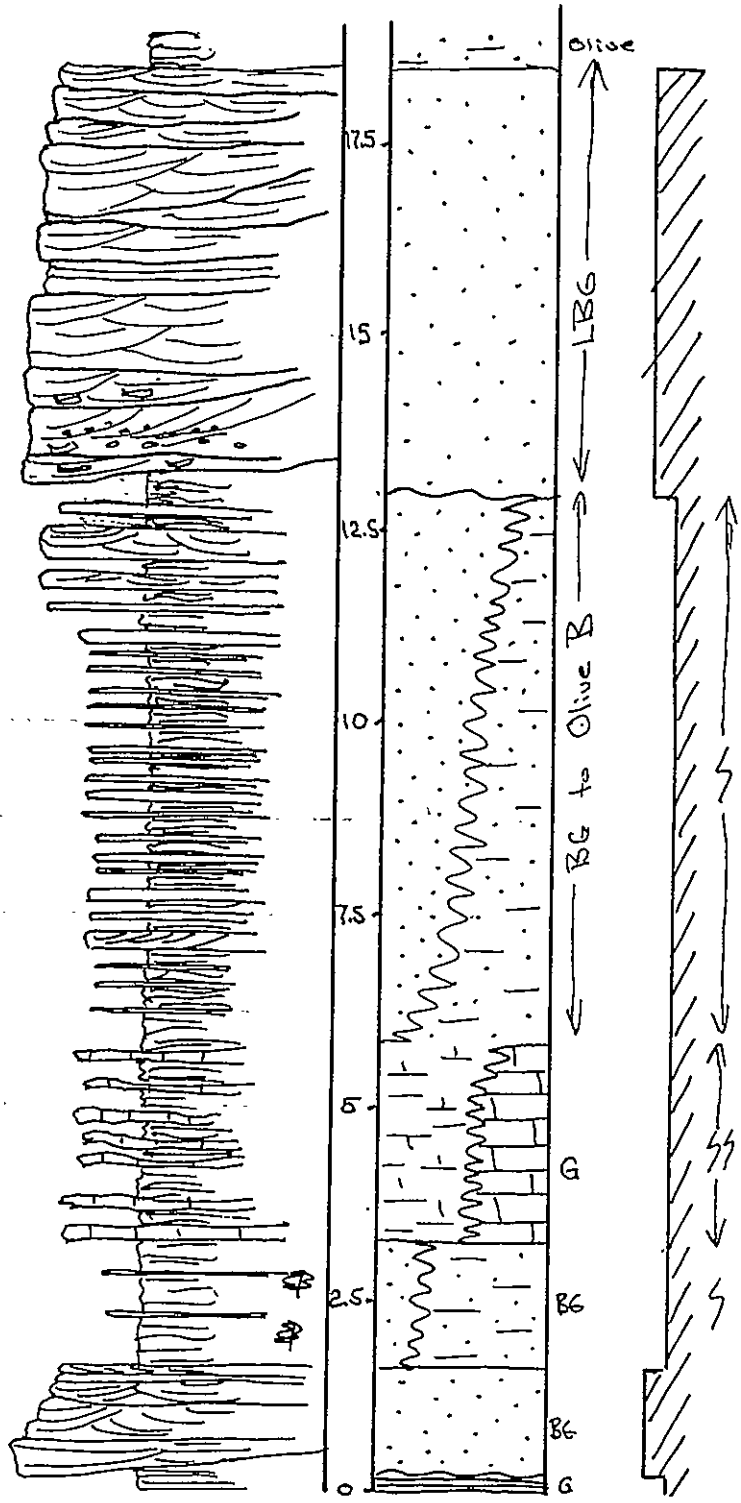
56

TRS

S of Talpa Ridge on FR 437
Gully (side)

June 13, 1978
JMC

M.S. No. 16



CRINOIDS
BRACHC

CALCAREOUS

MICACEOUS

MICACEOUS

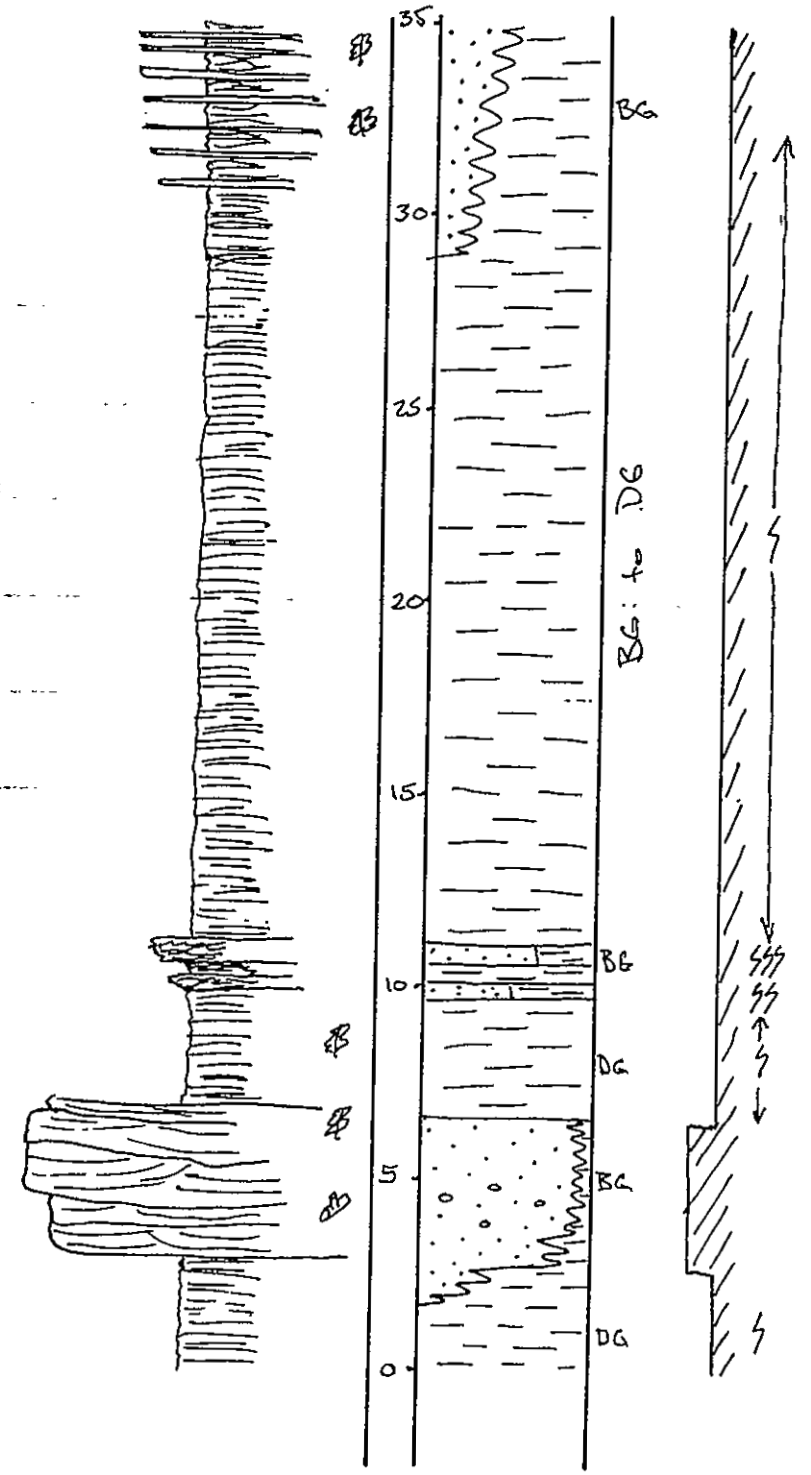
CALCAREOUS

RCS
S of Rio Chiquito on FR 437
Hillside

June 6, 1978
JMC

M.S. No. 17

PAGE 1



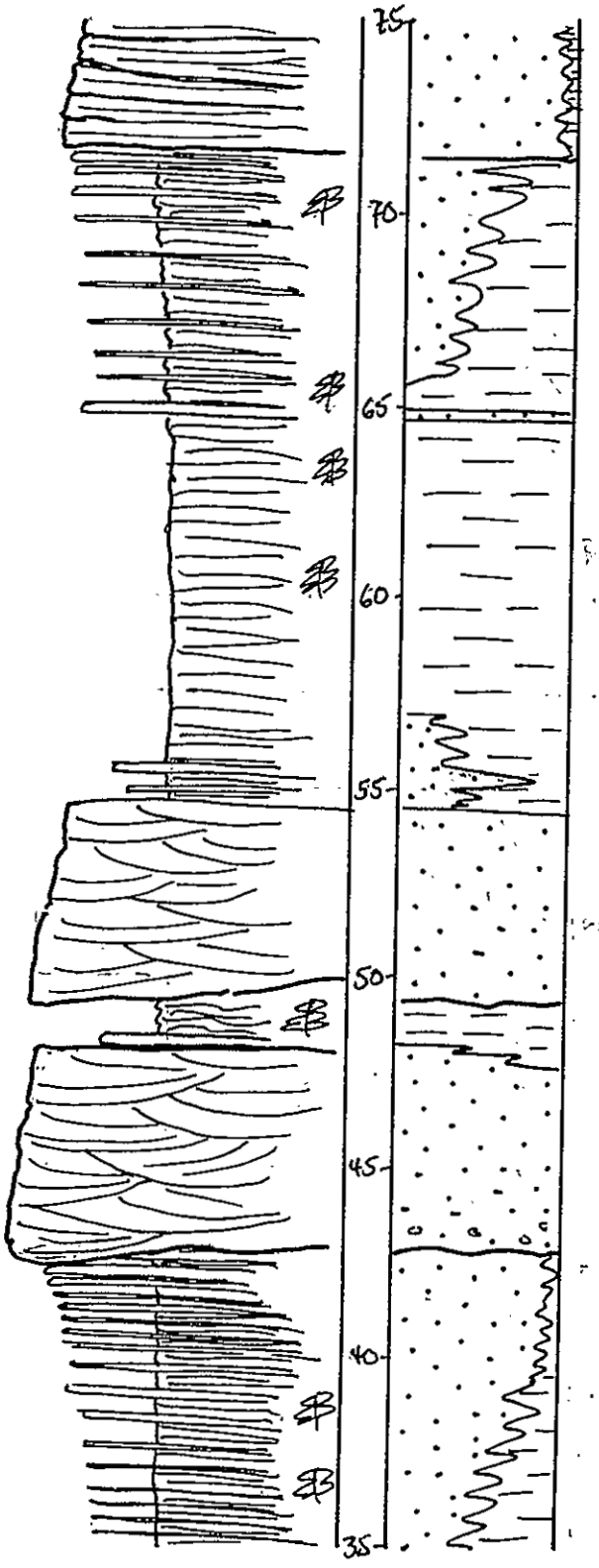
MICACEOUS & CALCAREOUS

MICACEOUS

MCS = 7cm

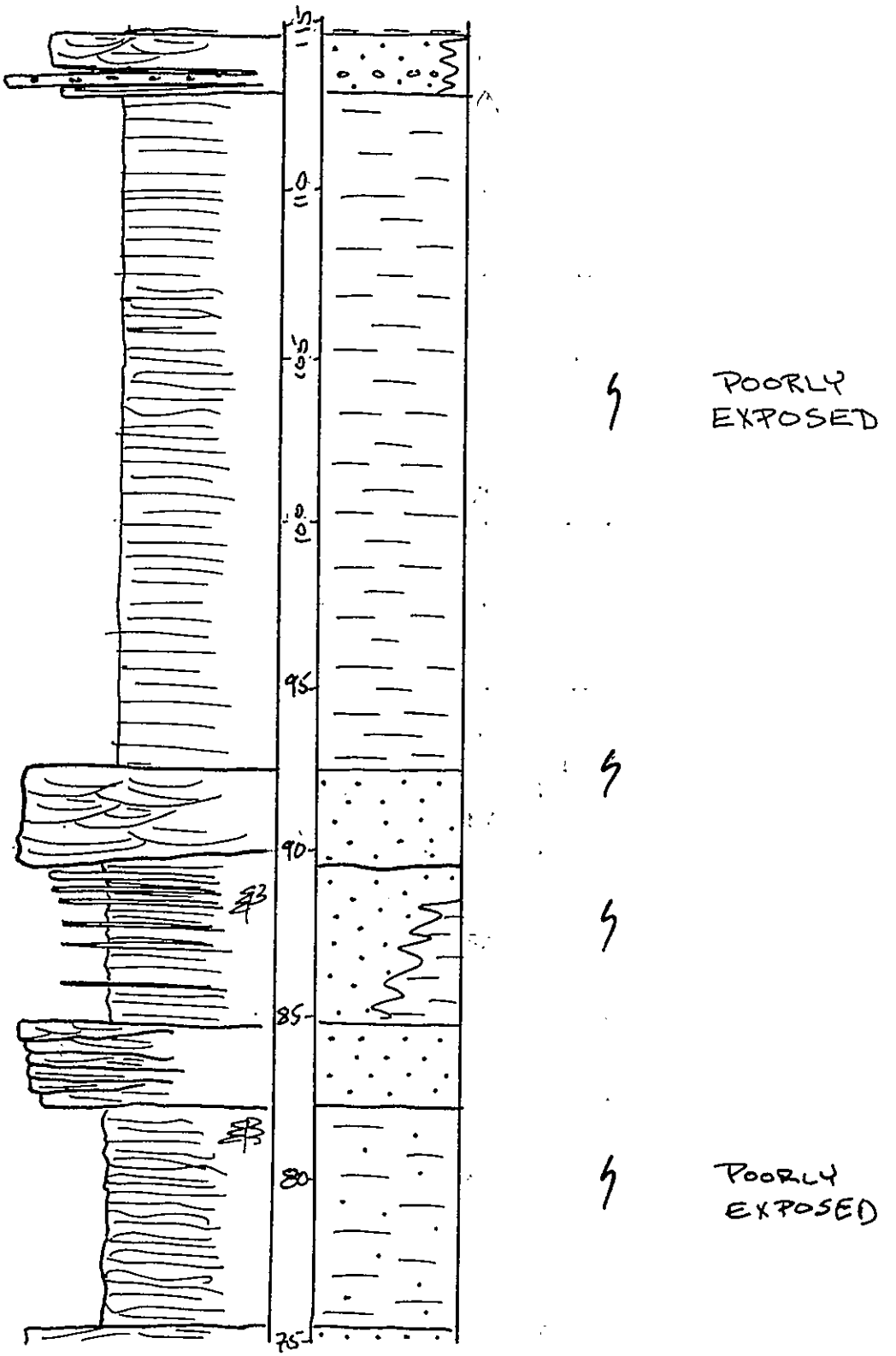
M. S. No. 17

PAGE 2



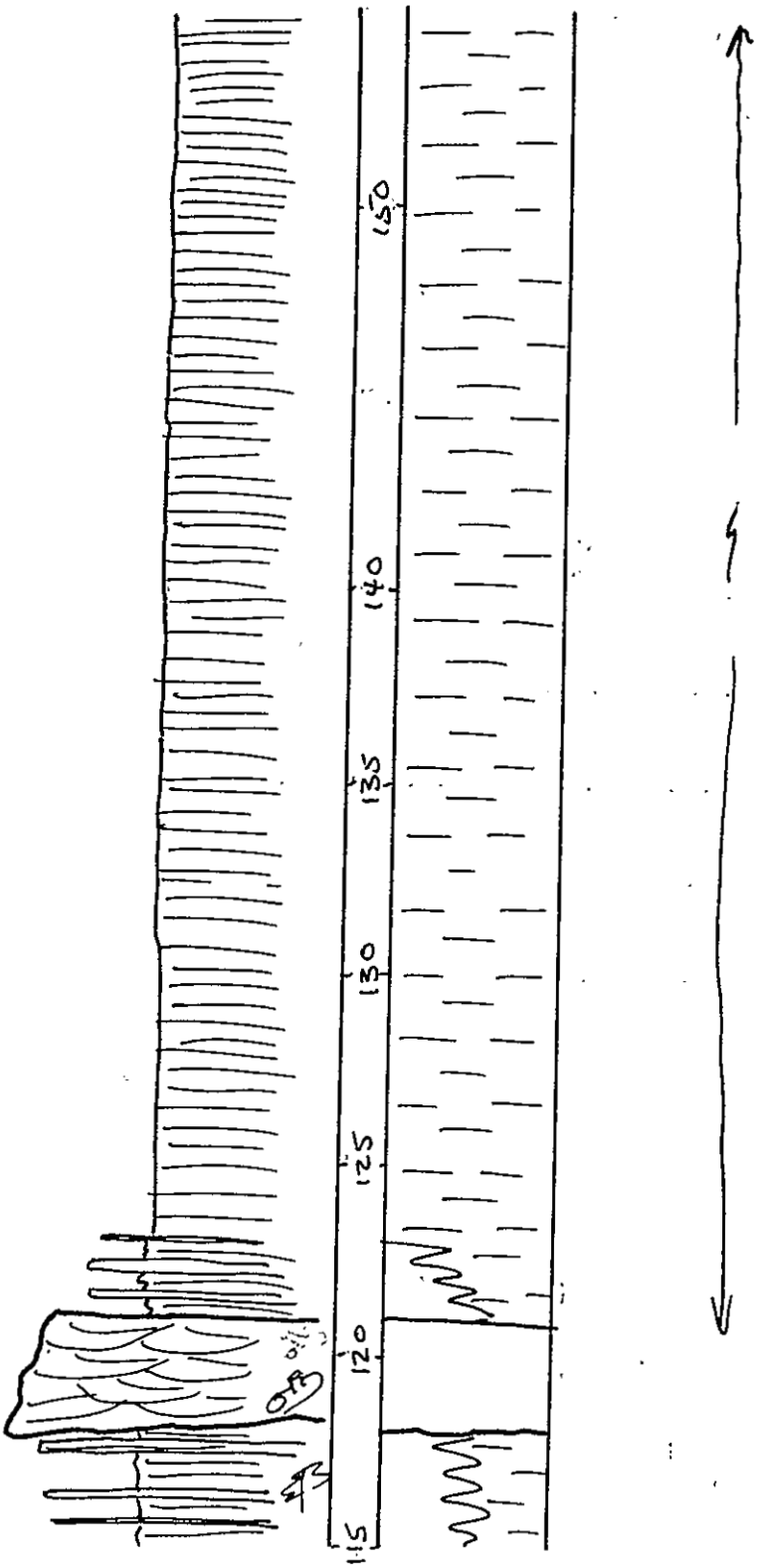
M.S. No. 17

PAGE 3



M. S. No. 17

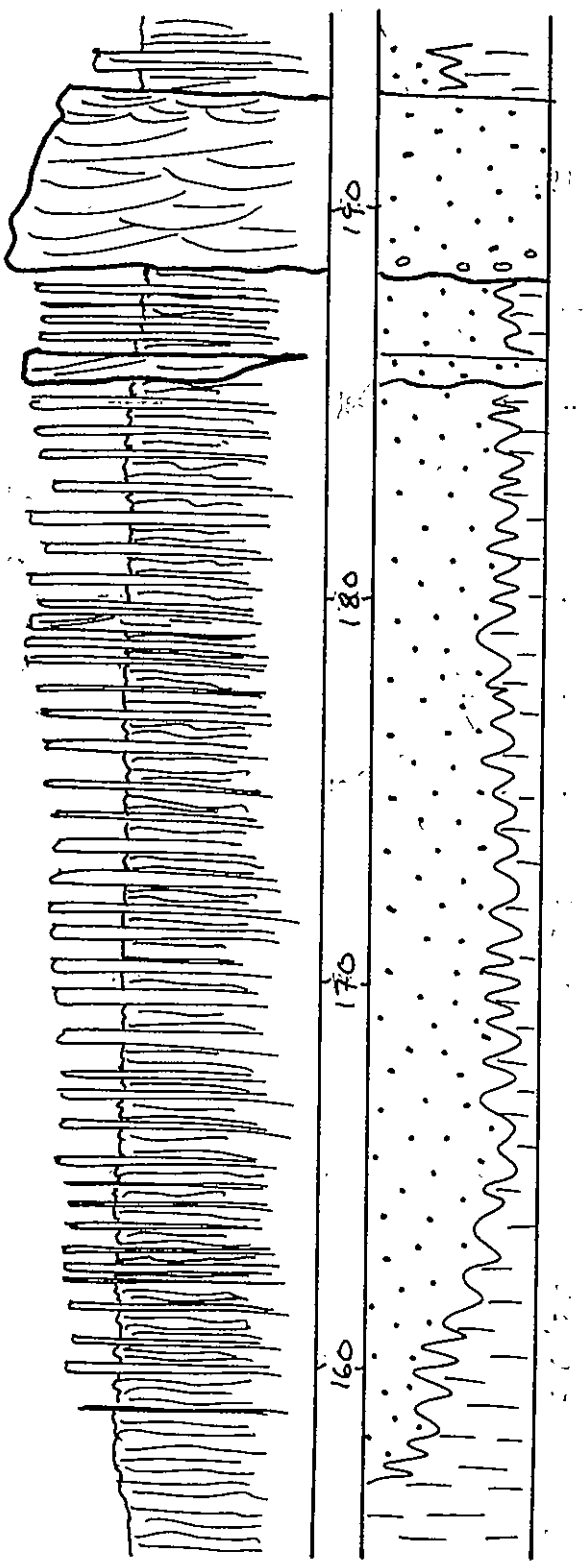
PAGE 4



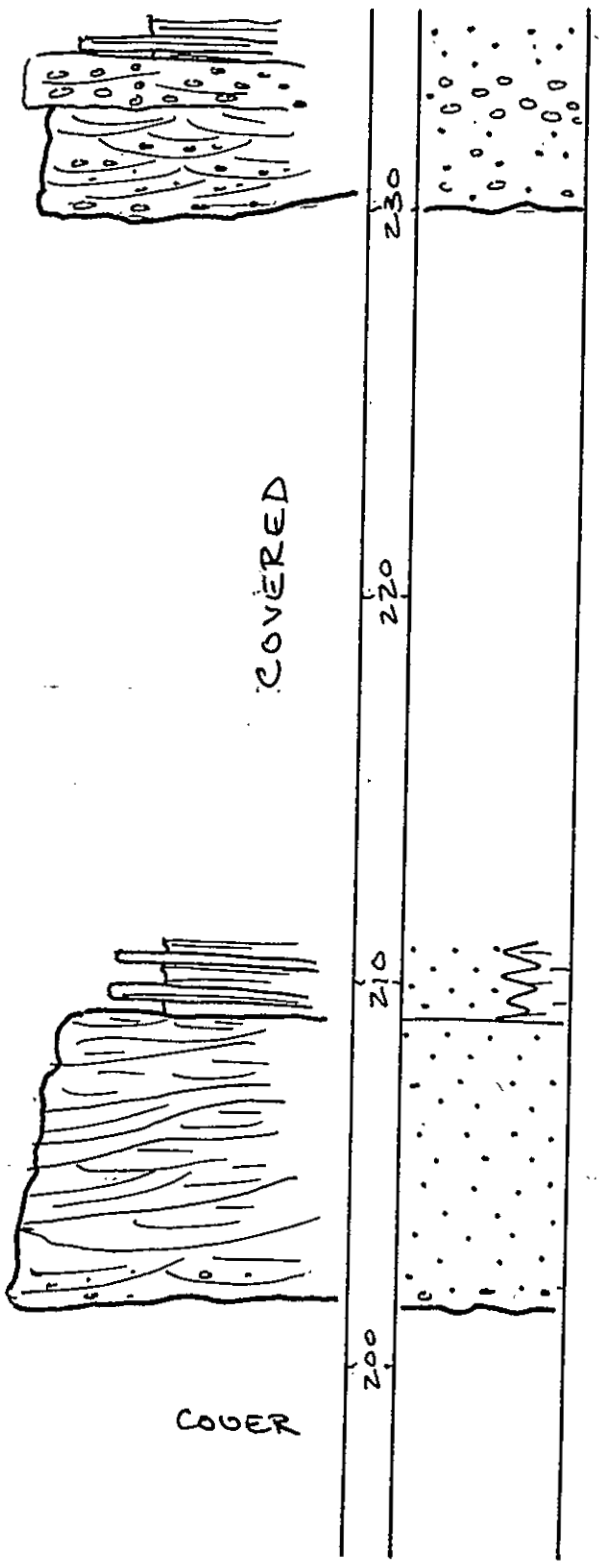
PARTLY COVERED

M.S. No. 17

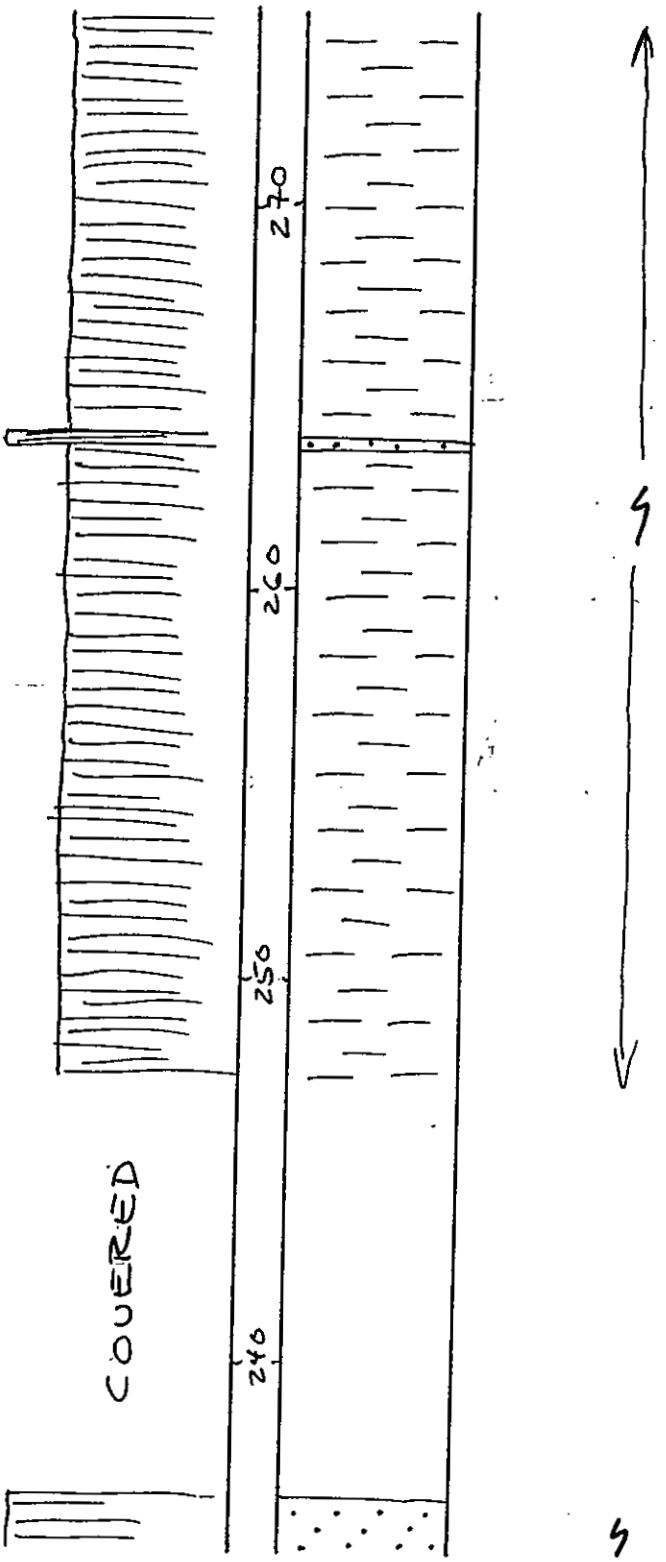
PAGE 5



M.S. No. 17
PAGE 6



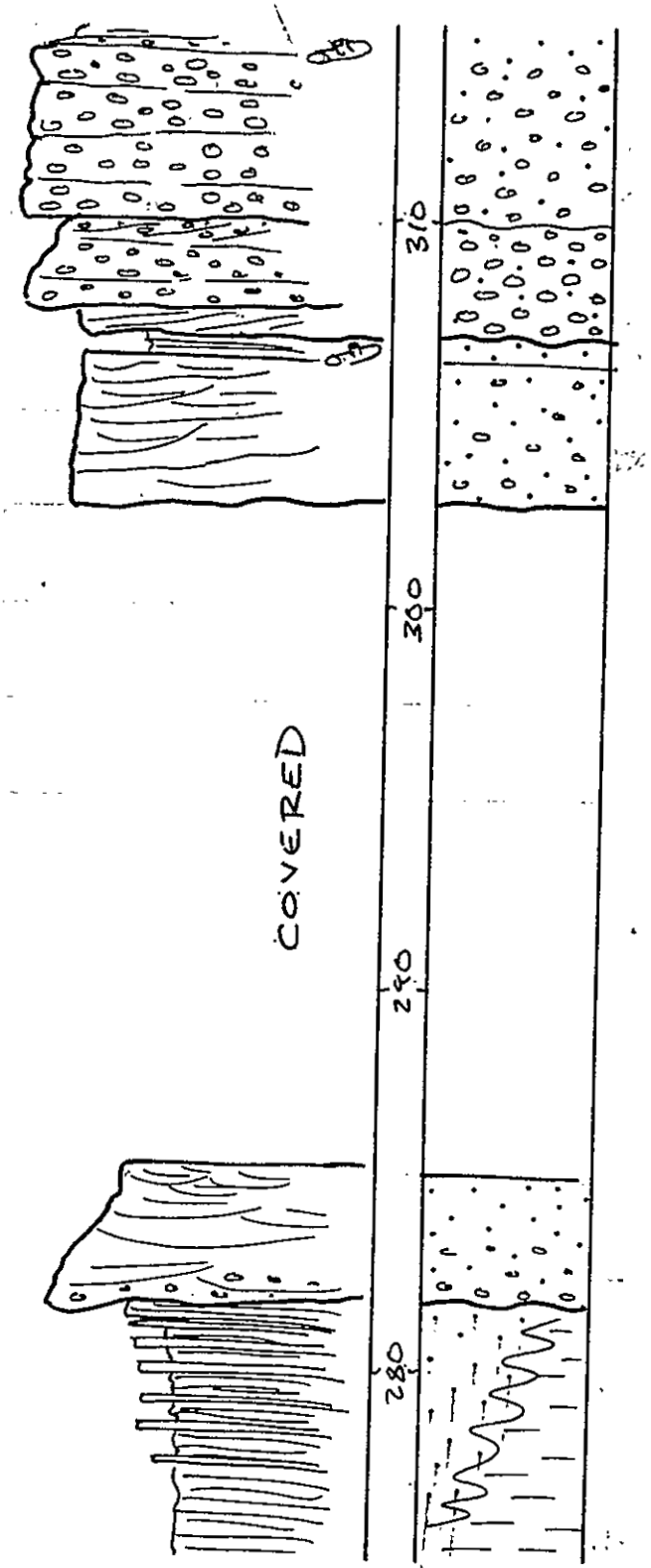
M.S. No. 17
PAGE 7



CALC. &
MICACEOUS

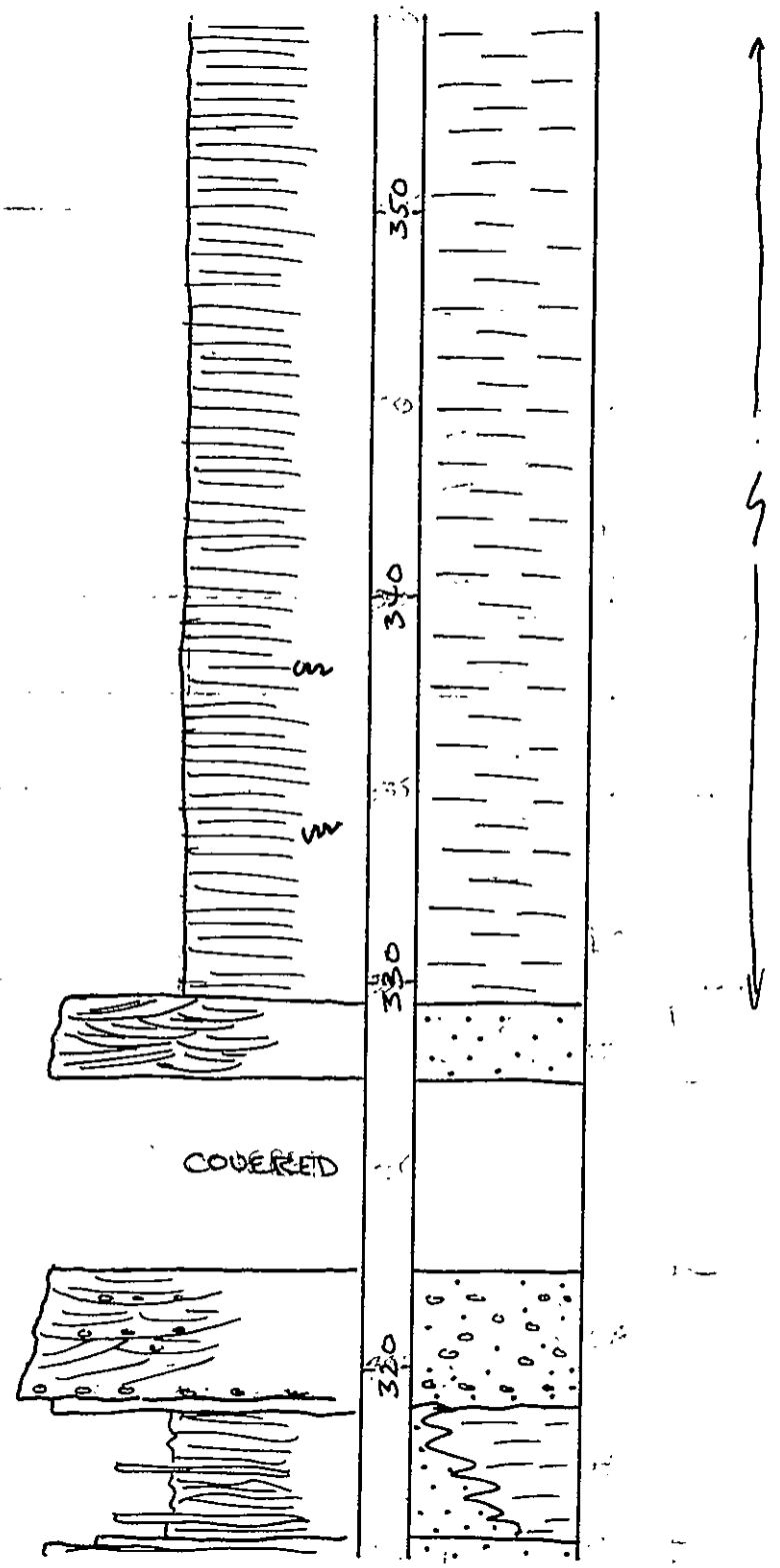
horiz. feeding
trails

M.S. No. 17
PAGE 8



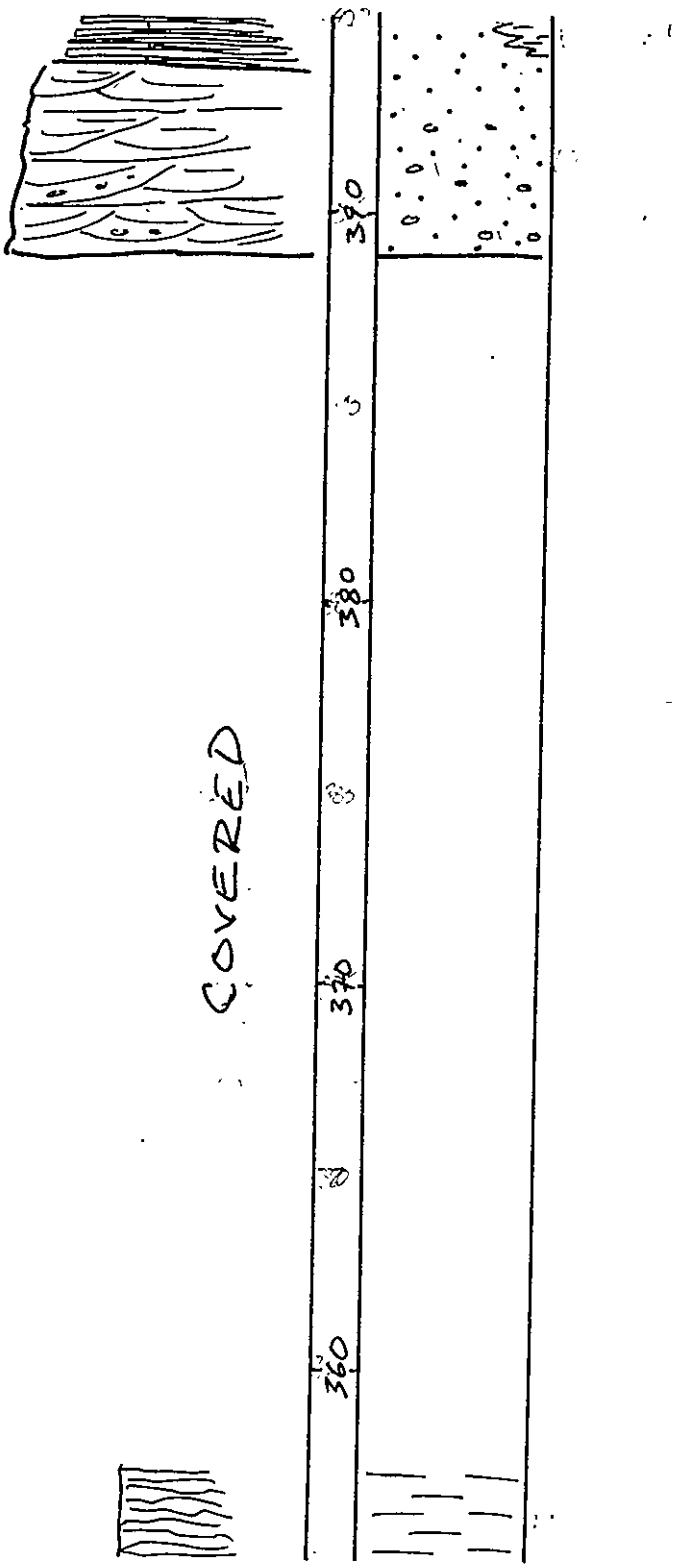
MAX. CLAST
= 18 CM

M.S. No. 17
PAGE 9



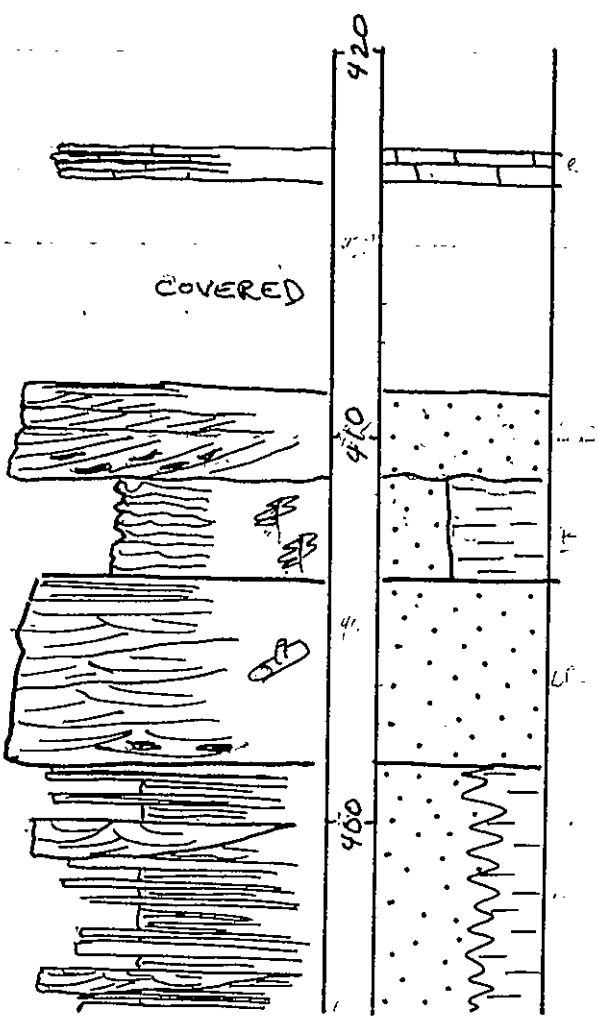
MICACEOUS
&
CALC

M.S. No. 17
PAGE 10



M.S. No. 17

PAGE 11



Brachs., Phyl. Algae, gast., [illegible] bryoz.

44

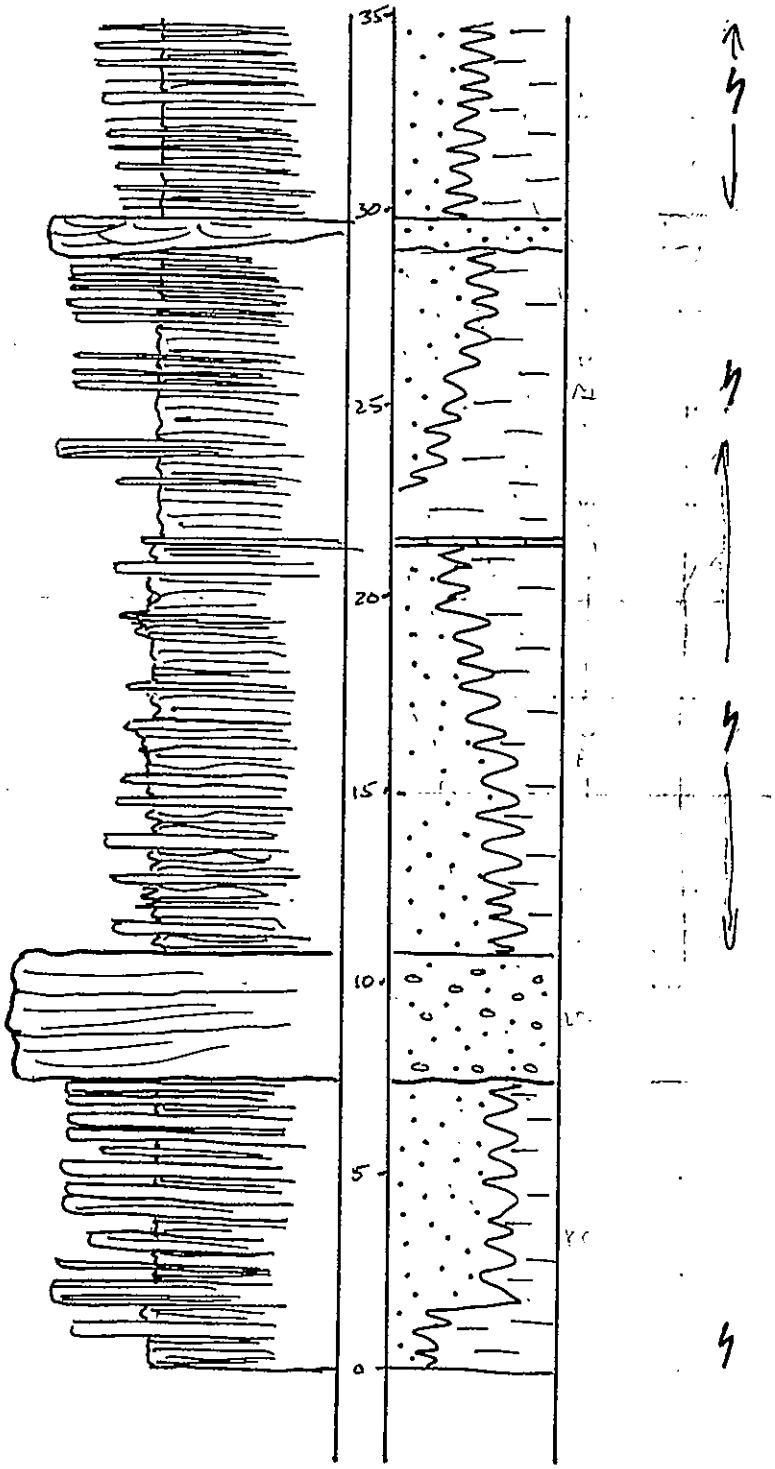
NTP
NW of Tetillas Peak, S of FR437
starts in gully & runs up hillside

June 16, 1978

JMC

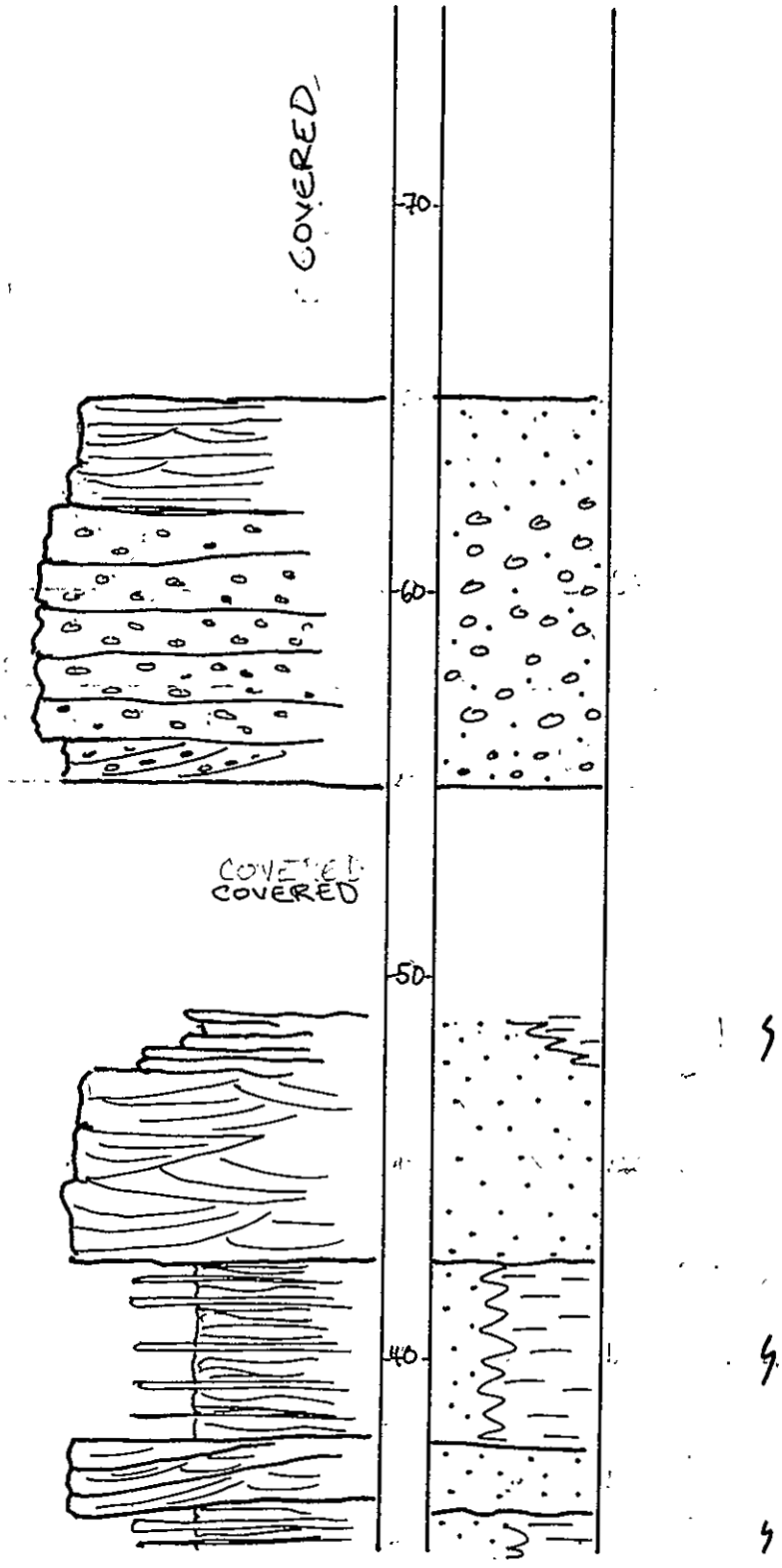
M.S. No. 18

PAGE 1



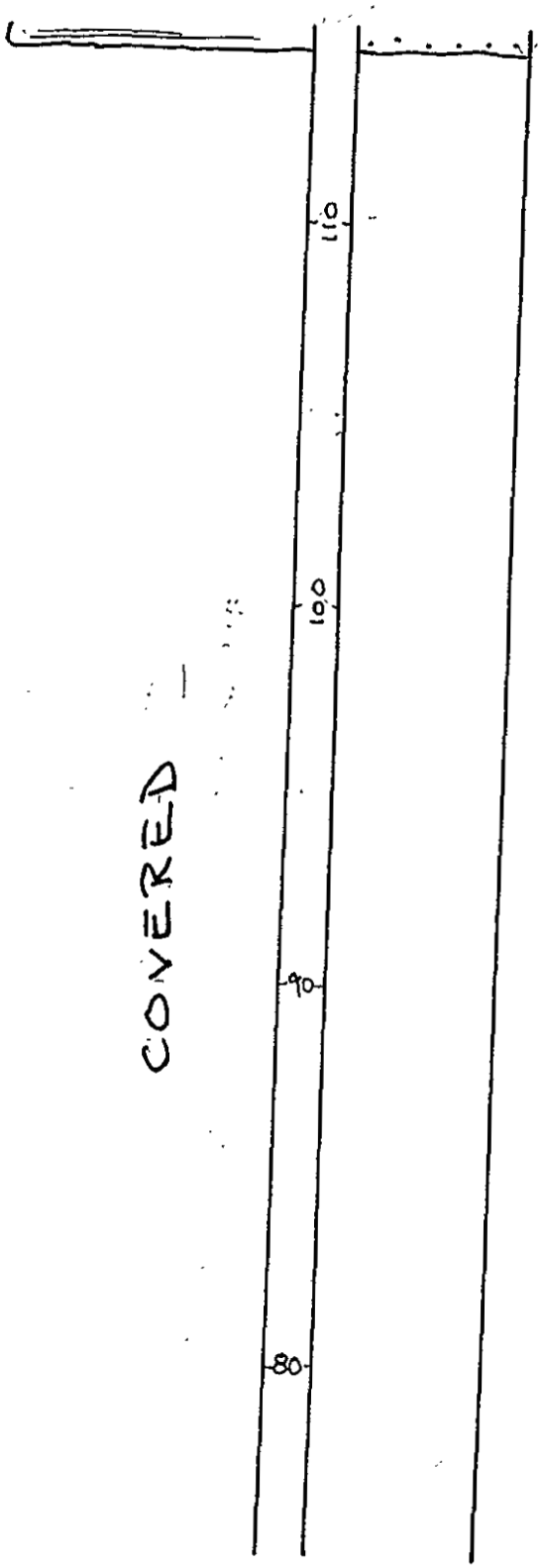
M. S. No. 18

PAGE 2

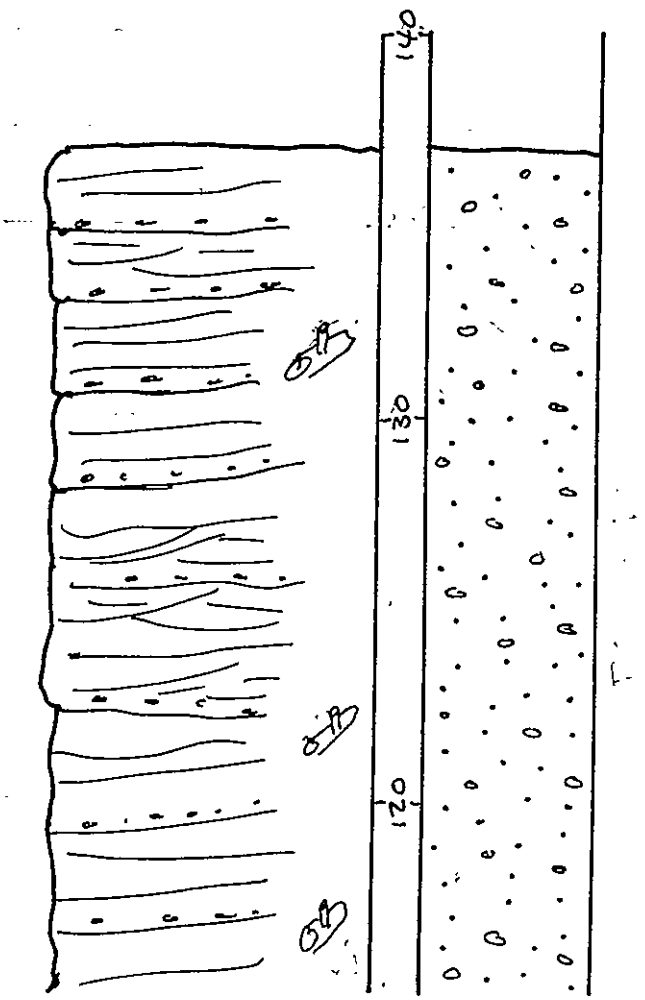


M.S. No. 18

PAGE 3



M.S. No. 18
PAGE 4



POORLY
EXPOSED

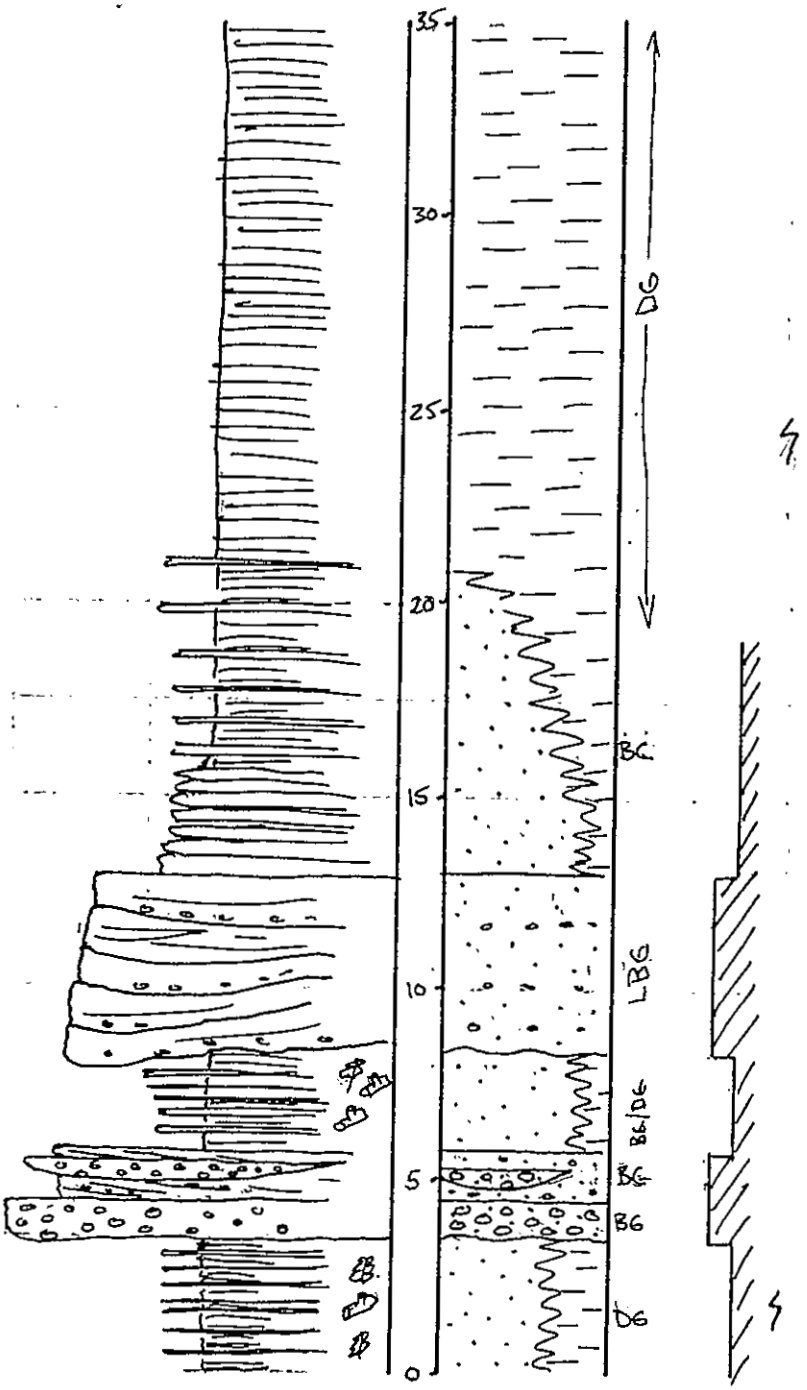
TSW
SW of Toube off FR 437
Hillside

June 9, 1978

JMC
(started May 24)

M.S. No. 19

PAGE 1



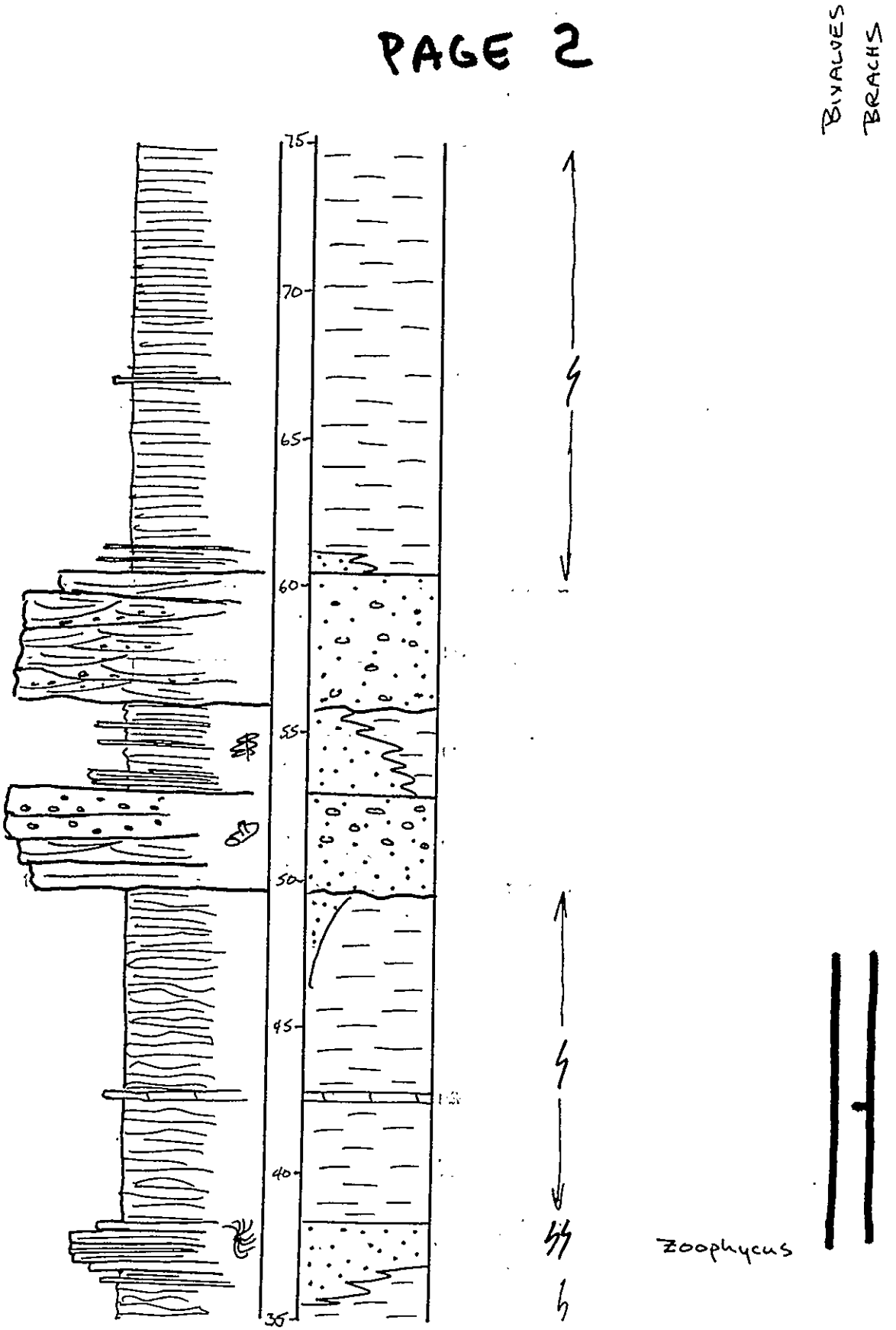
TSW

June 9, 1978

JMC

M.S. No. 19

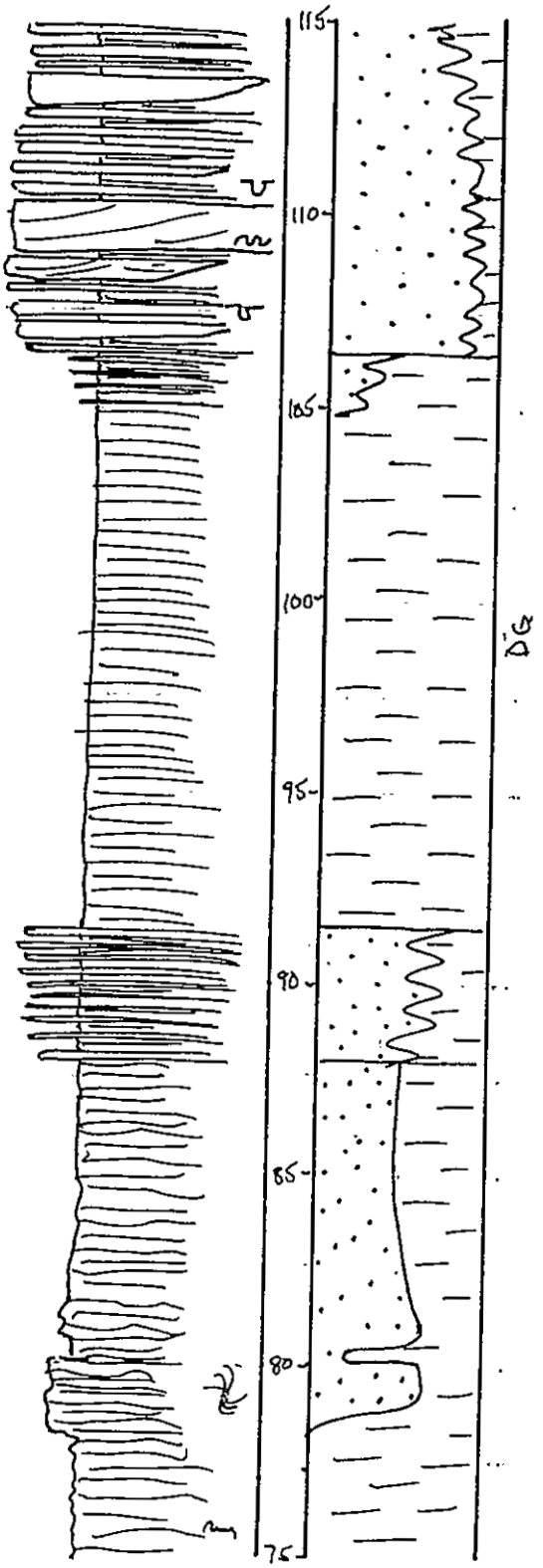
PAGE 2



TSW

June 9, 1978
JMC

M.S. No. 19
PAGE 3



BRACHS

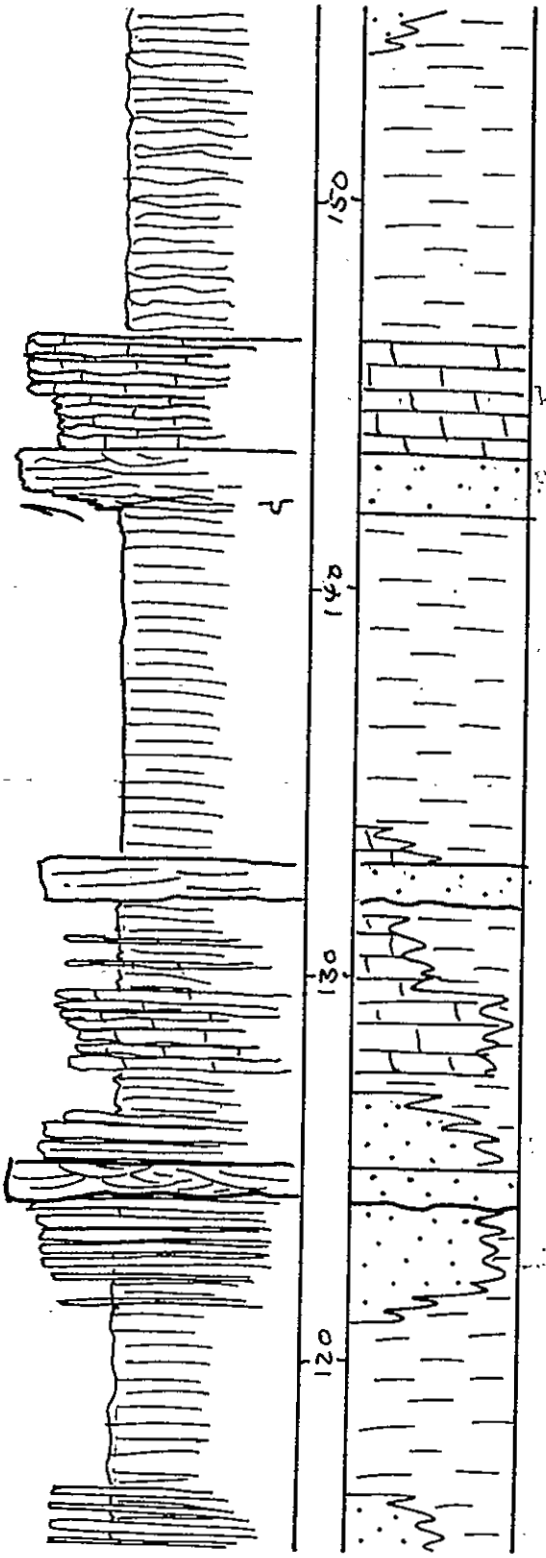
lenses & thin bed of micaceous & calc ss

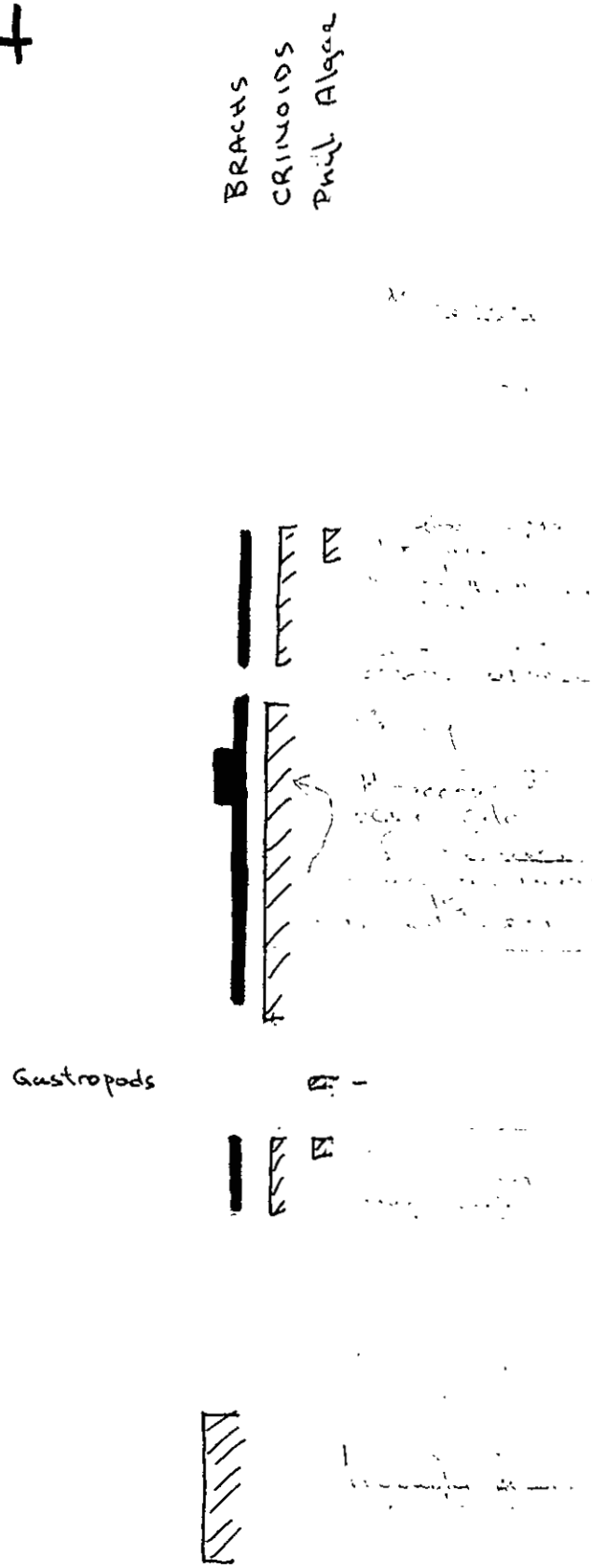
MICACEOUS

Zoophycus

M.S. No. 19

PAGE 4

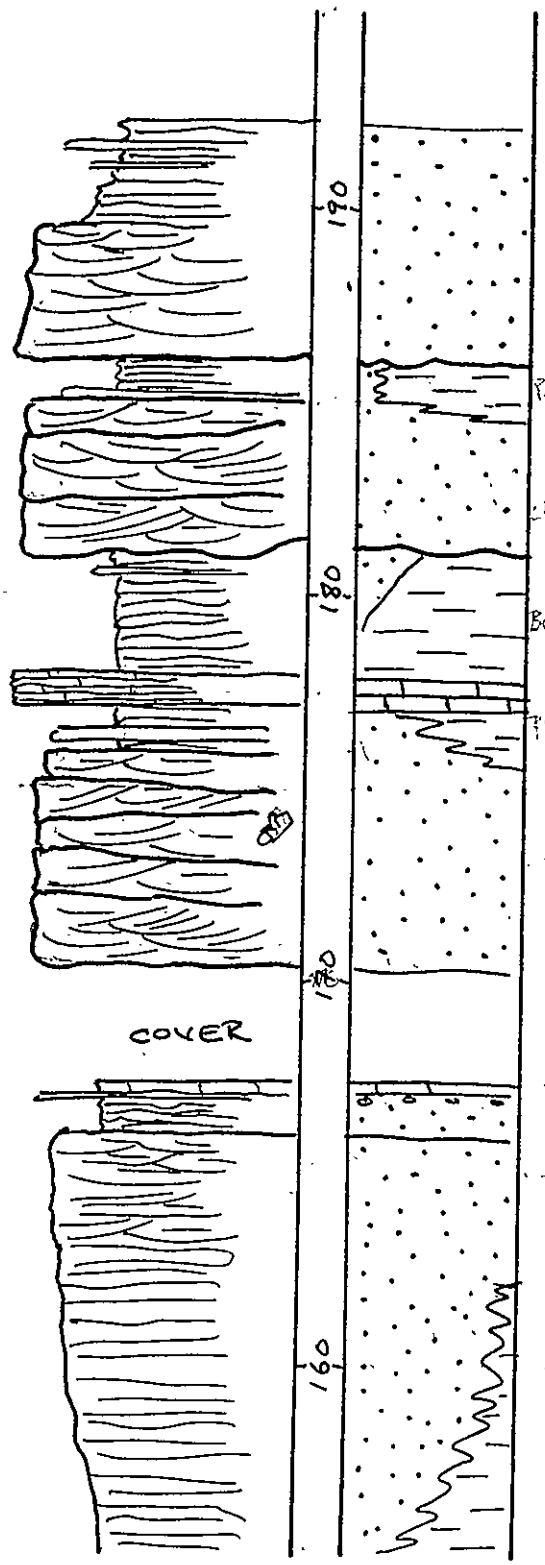




M.S. No. 19

PAGE 5

BRACHS
CRINOIDS



≡ TOM 34m
FUSULINIDS TSW-1

TSW-1

← Pebbles up to 2cm

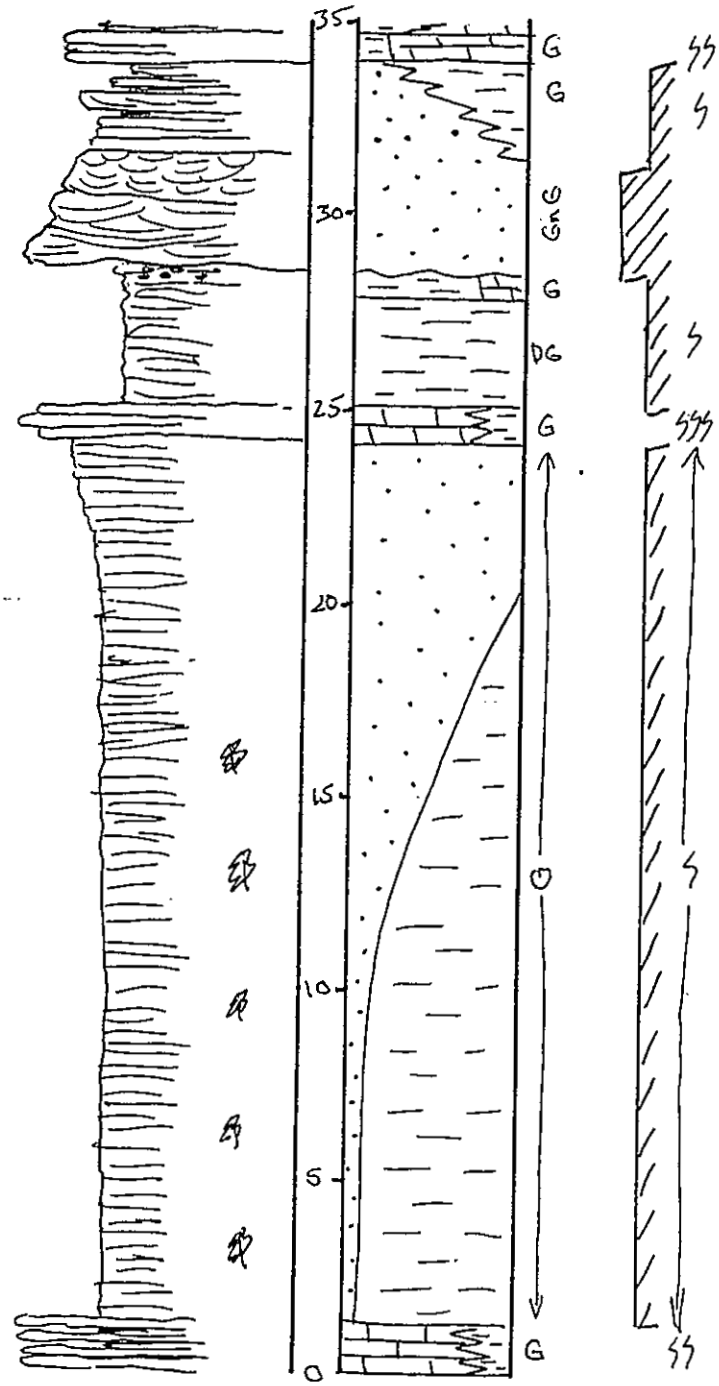
CALC &
MICACEOUS

TOM
FR 437 - second bridge
Hill side

June 1, 1978
JMC

③ M.S. No. 20

PAGE 1



Phylloid Algae
Bracks
Fusulinids
Crinoids

TSW 170m

60°; 12 SE

TOM-2 - Fus Pk

CALCAREOUS & MICACEOUS

Forms Resist. Cliff

80; 11°E

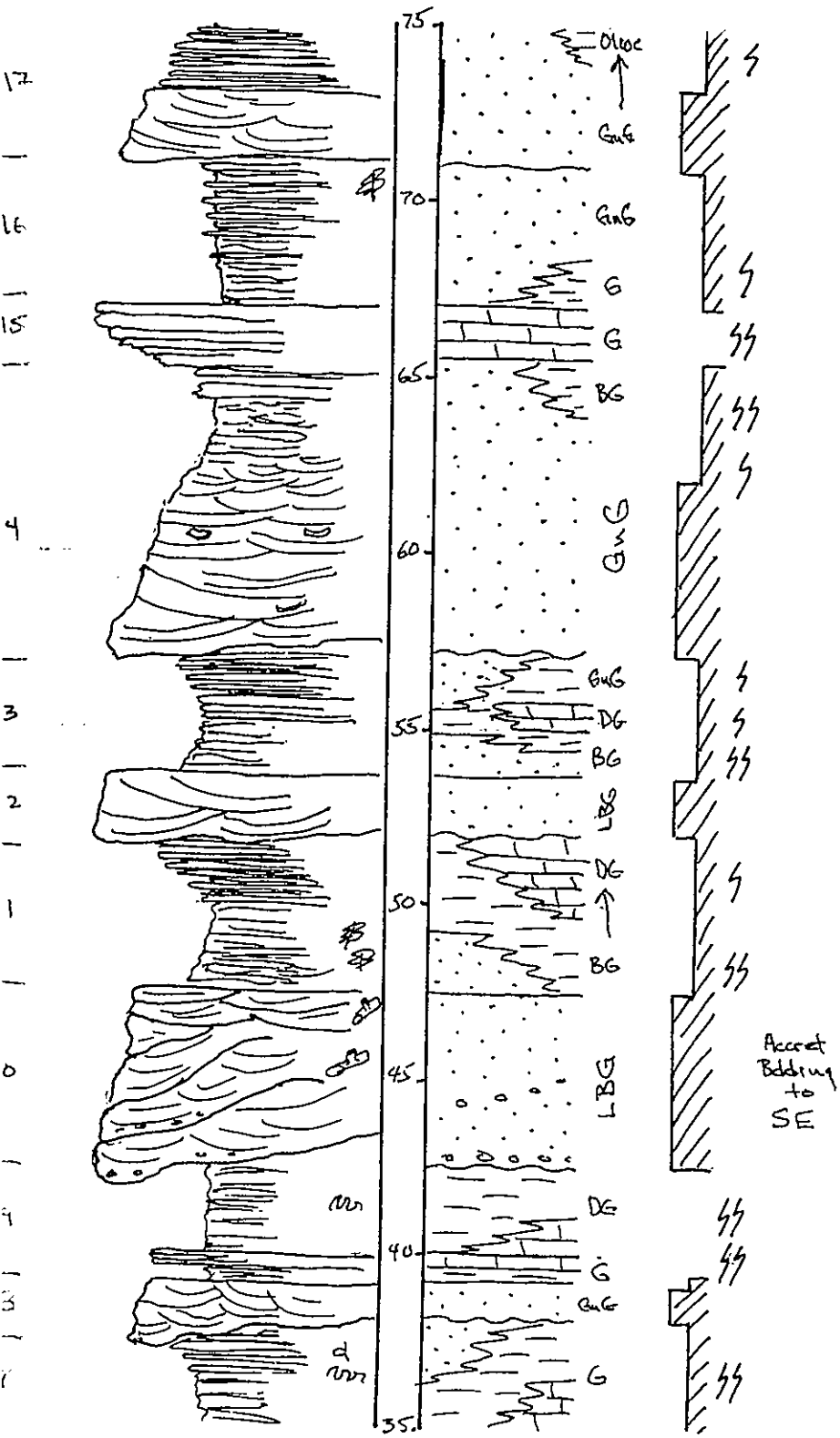
also a few coral
TOM-1

June 1, 1978

JMC

③ M.S. No. 20
PAGE 2

Phylloid Algae
Bracts
Fus
Crinoids



TOM-5

TOM-4

TOM

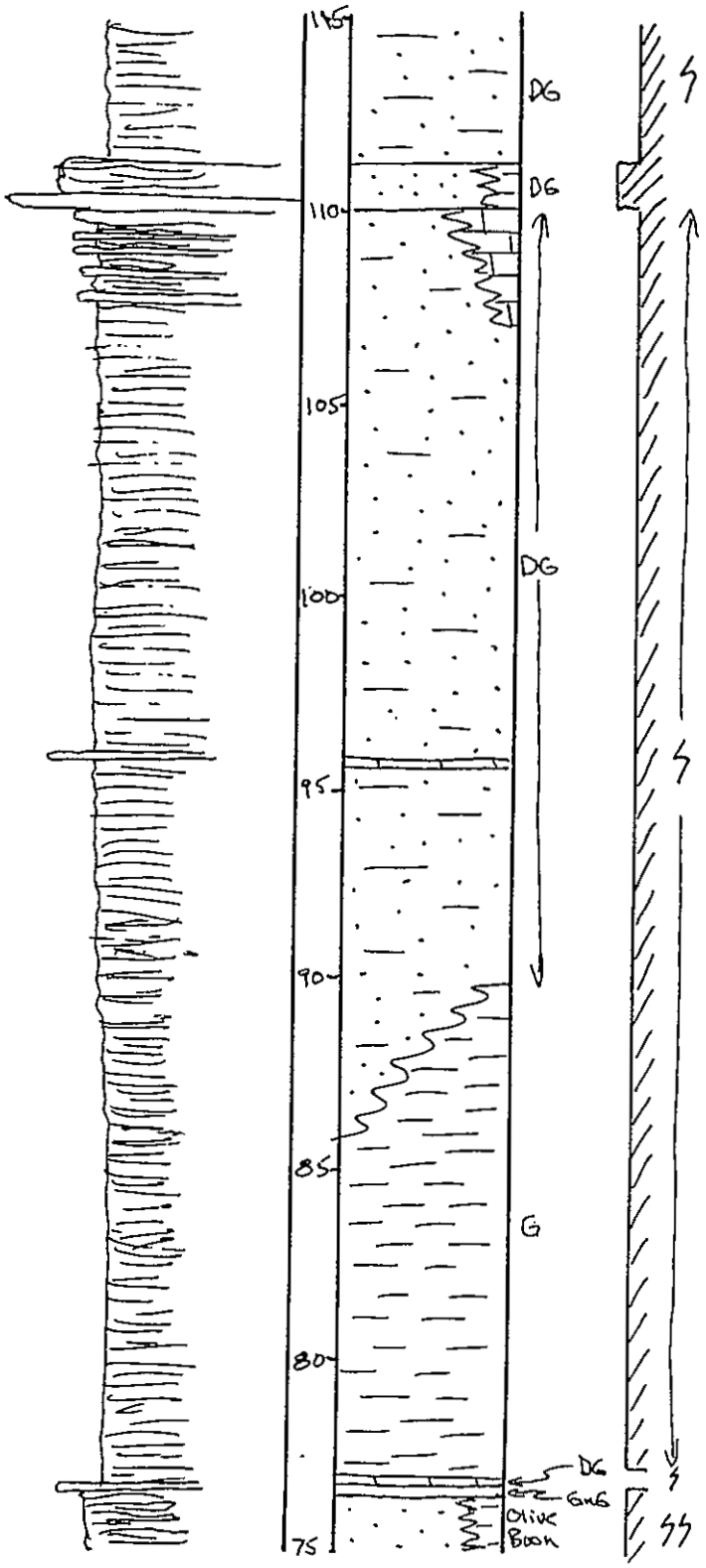
June 1, 1978

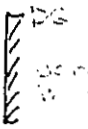
JMC

(E) M.S. No. 20

PAGE 3

Phylloid Algae
Bryozoans
Tins.
Crinoids





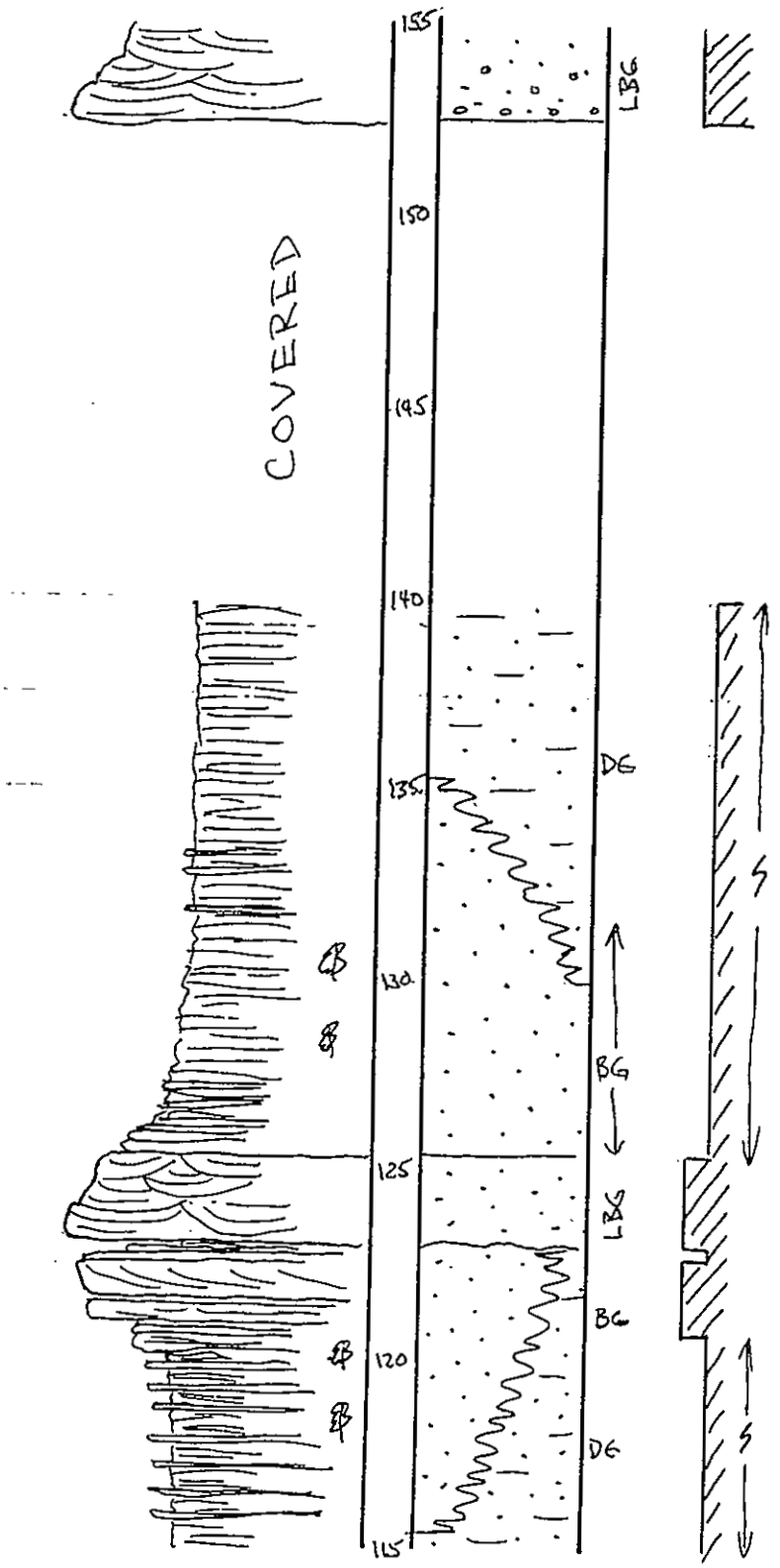
MINOR FAULTING

June 1, 1978

JMC

M.S. No. 20

PAGE 4



Green HRT's
Fatboro, rate
MCS = .18 mm

T.G. Micaceous
Calc. silt & v.f.

MICACEOUS

CALCAREOUS

MICACEOUS
&
CALCAREOUS

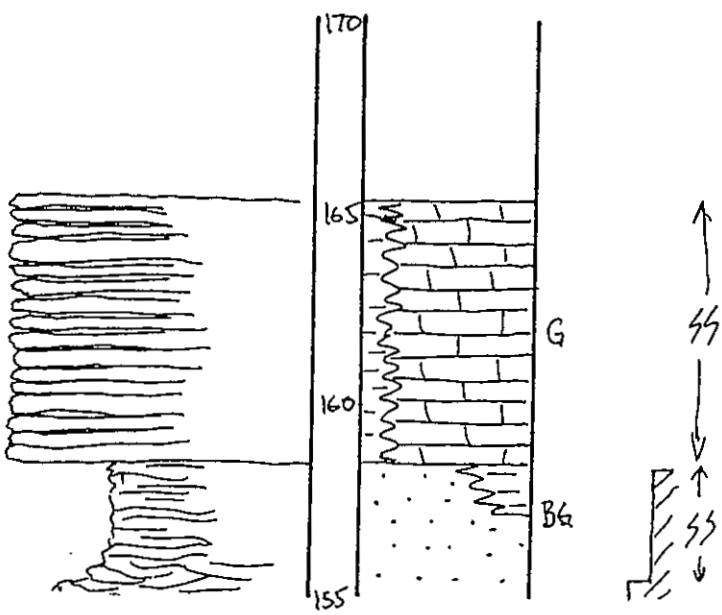
1017

June 1, 1971
JMC

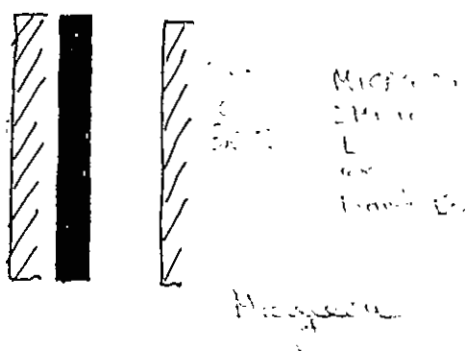
(M)

M.S. No. 20
PAGE 5

Phylloid Algae
Branches
Fins
Crinoid



POORLY EXPOSED TO TOP OF HILL

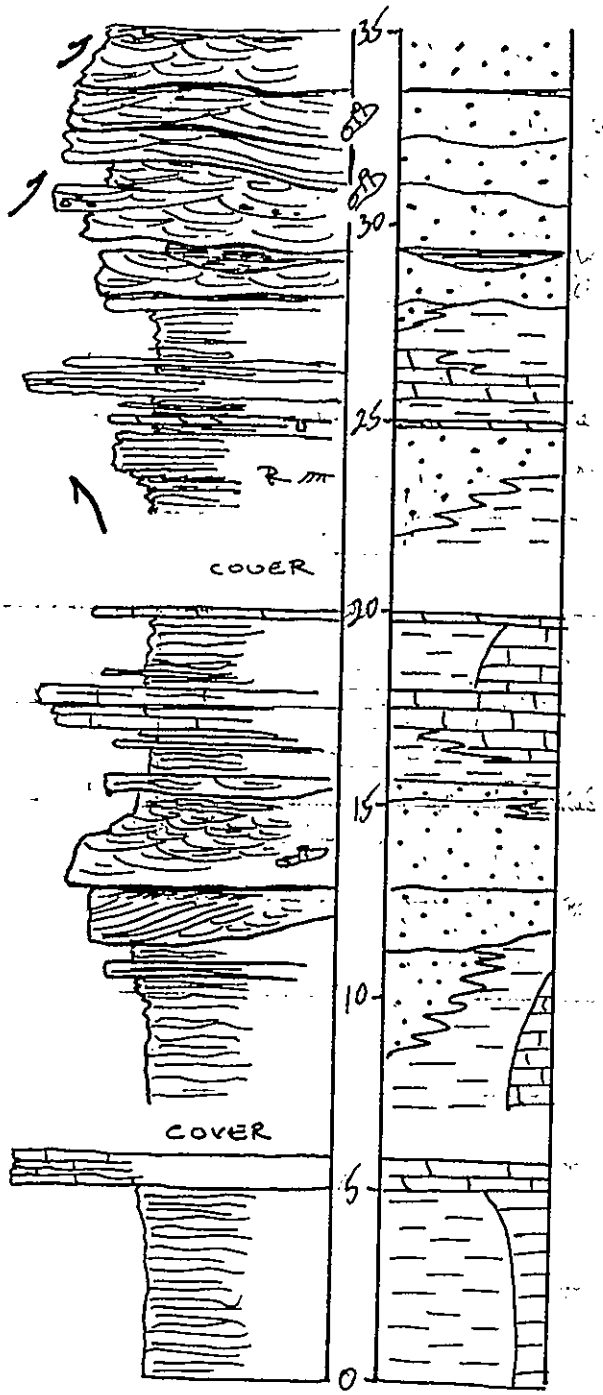


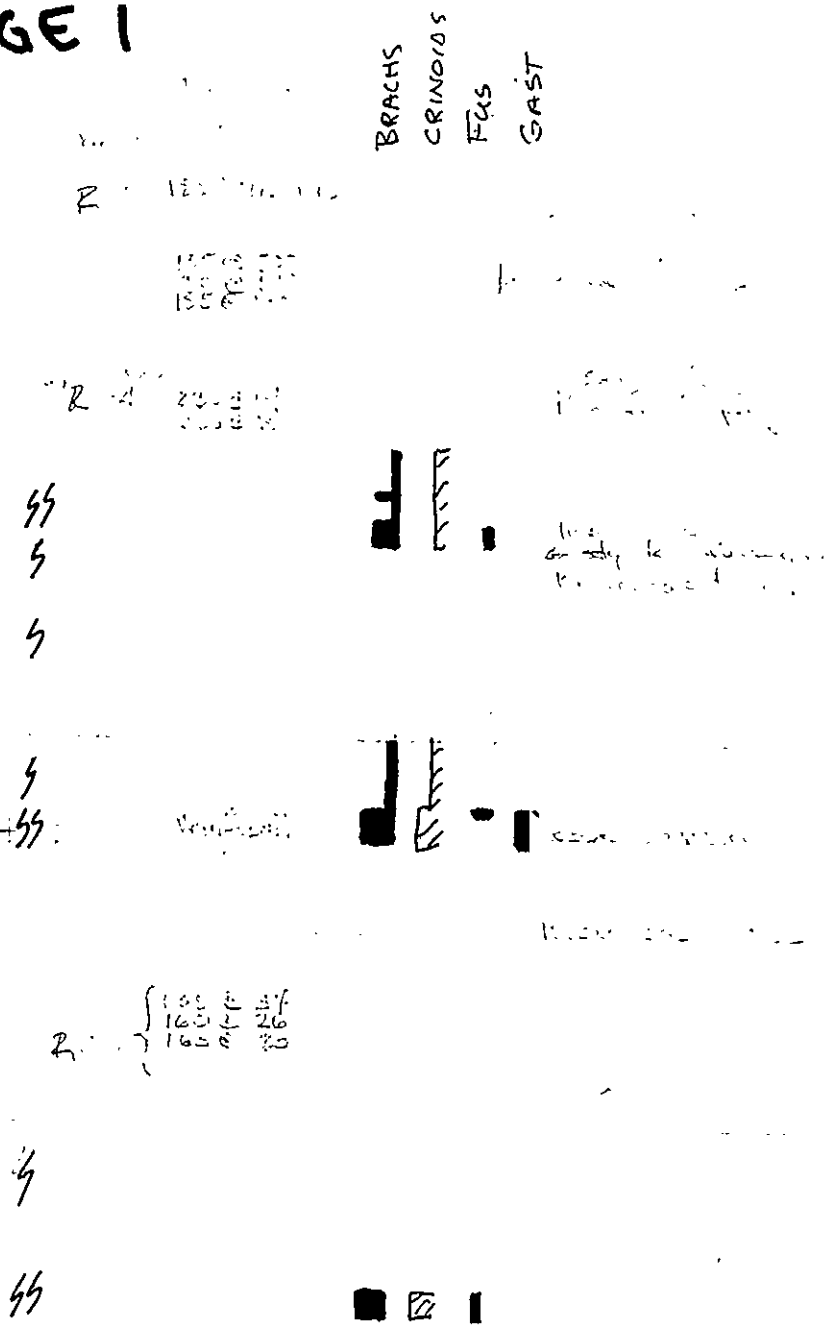
TOM II

Gully: E of TOM

M. S. No. 21

PAGE 1



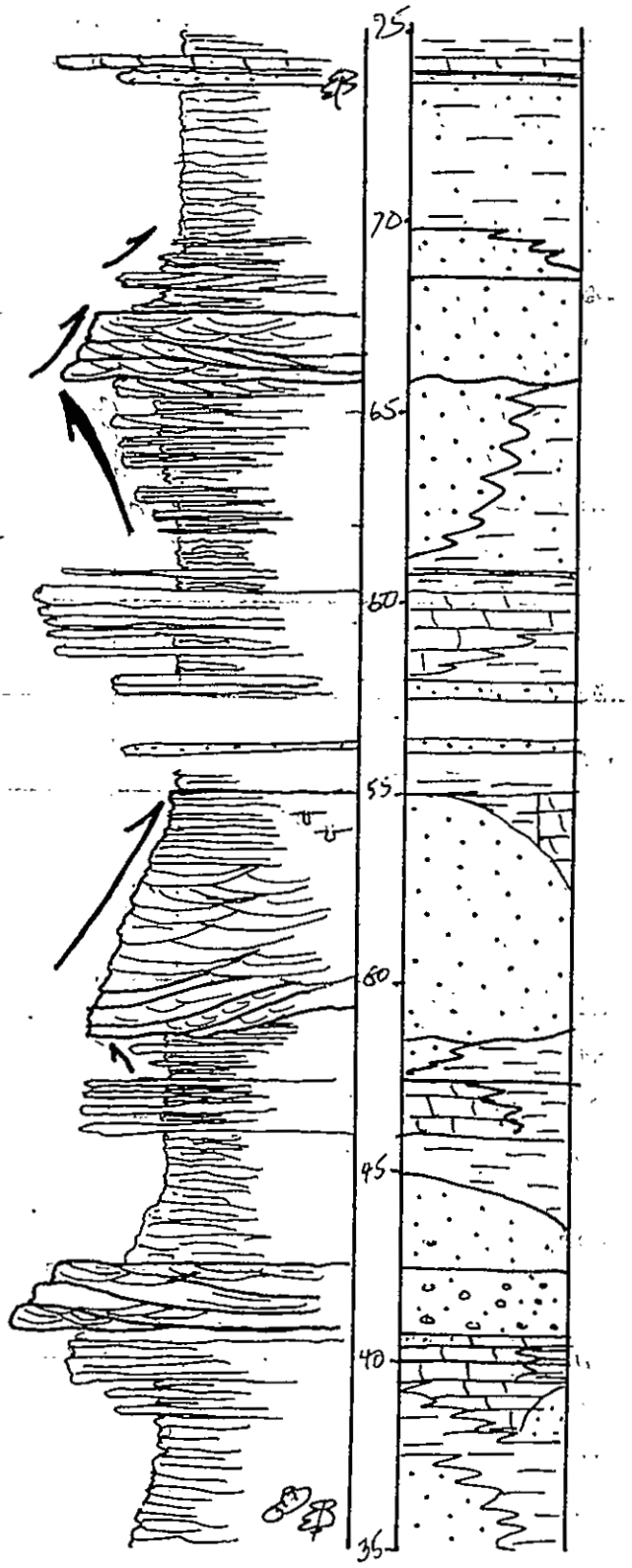


M.S. No. 21

PAGE 2

BRACHS

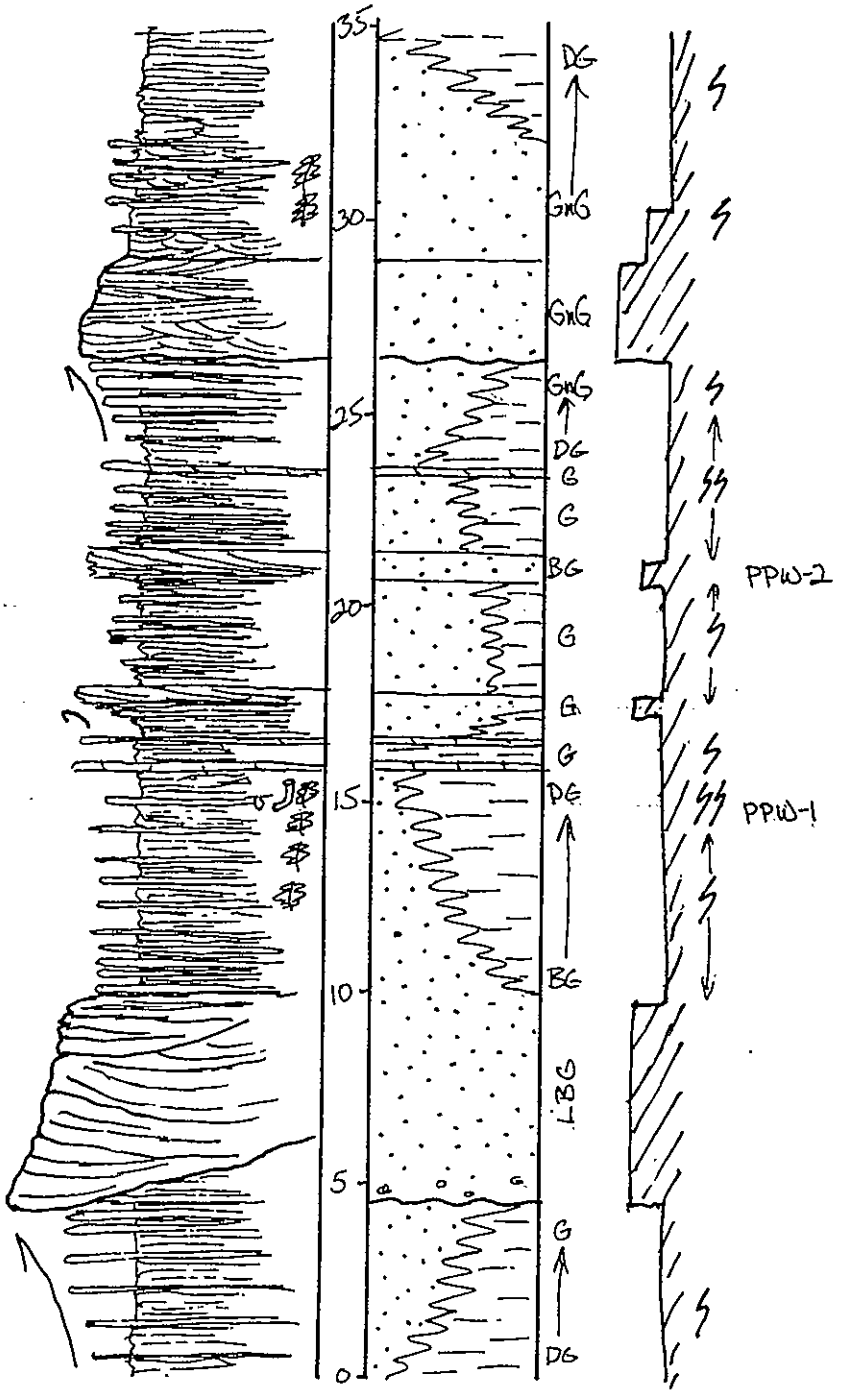
GAST



PPW
568W of Pinoreal Peak, F.R. 437

June 3, 1978
J.M. Casey

M.S. No. 22
PAGE 1



BRACHS
CRINOIDS
GASTS.

Ripples

SEE NOTEBOOK

38; 6°E
Plane to low ∠ tab

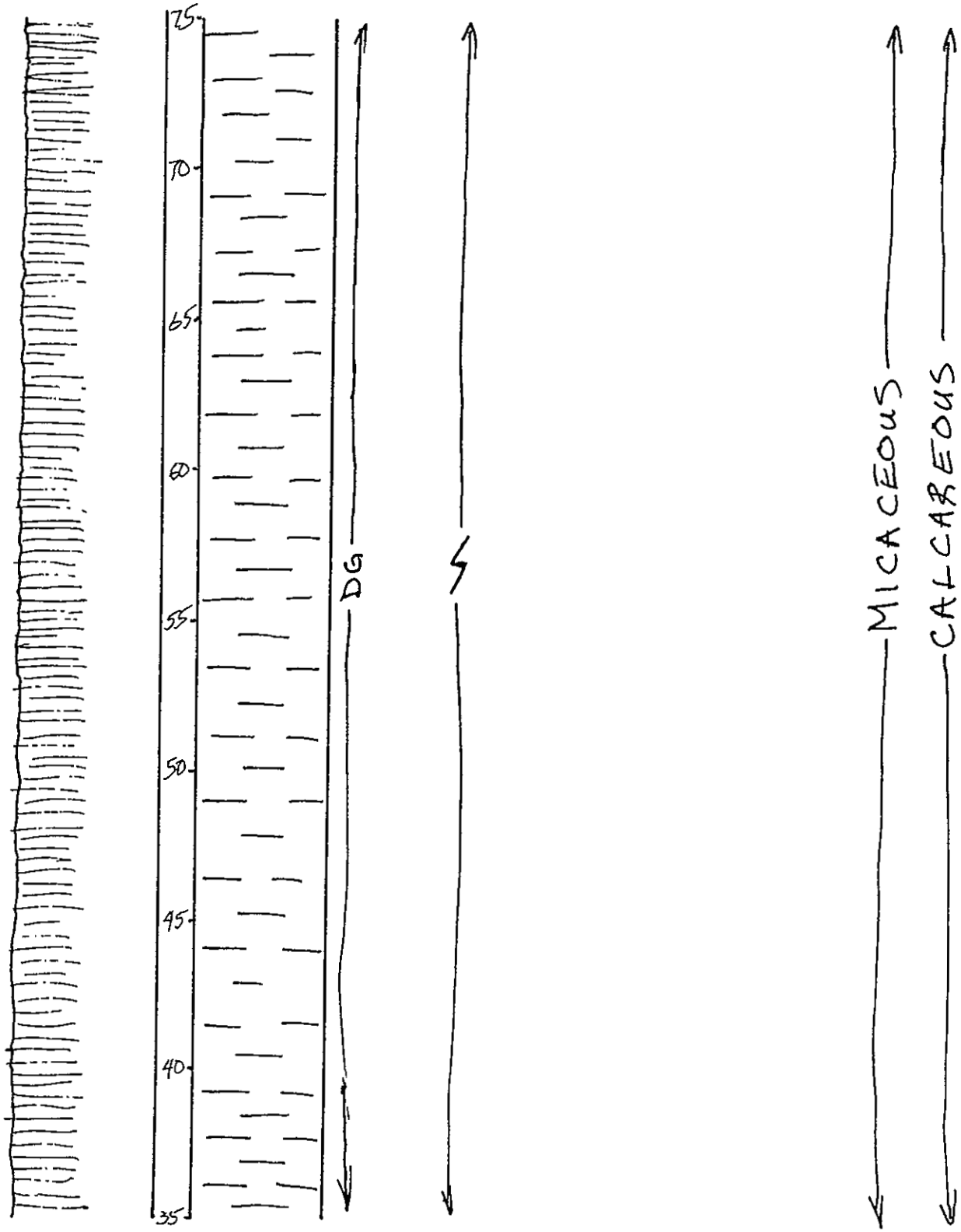
Micaceous

Calc. & Mica.

Micaceous

June 3, 1978
JMC

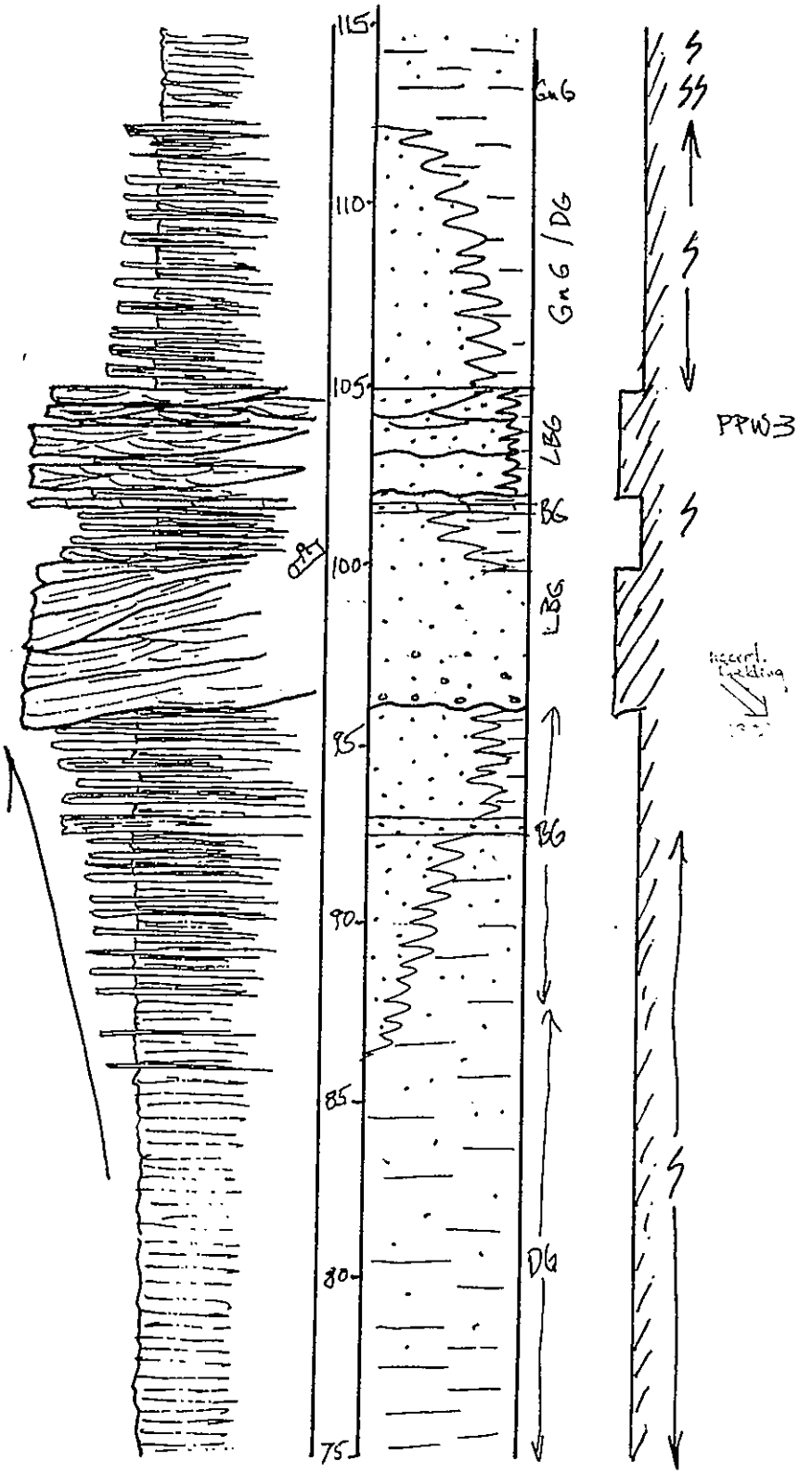
③ M.S. No. 22
PAGE 2



June 3
JMC

(M) # M.S. No. 22
PAGE 3

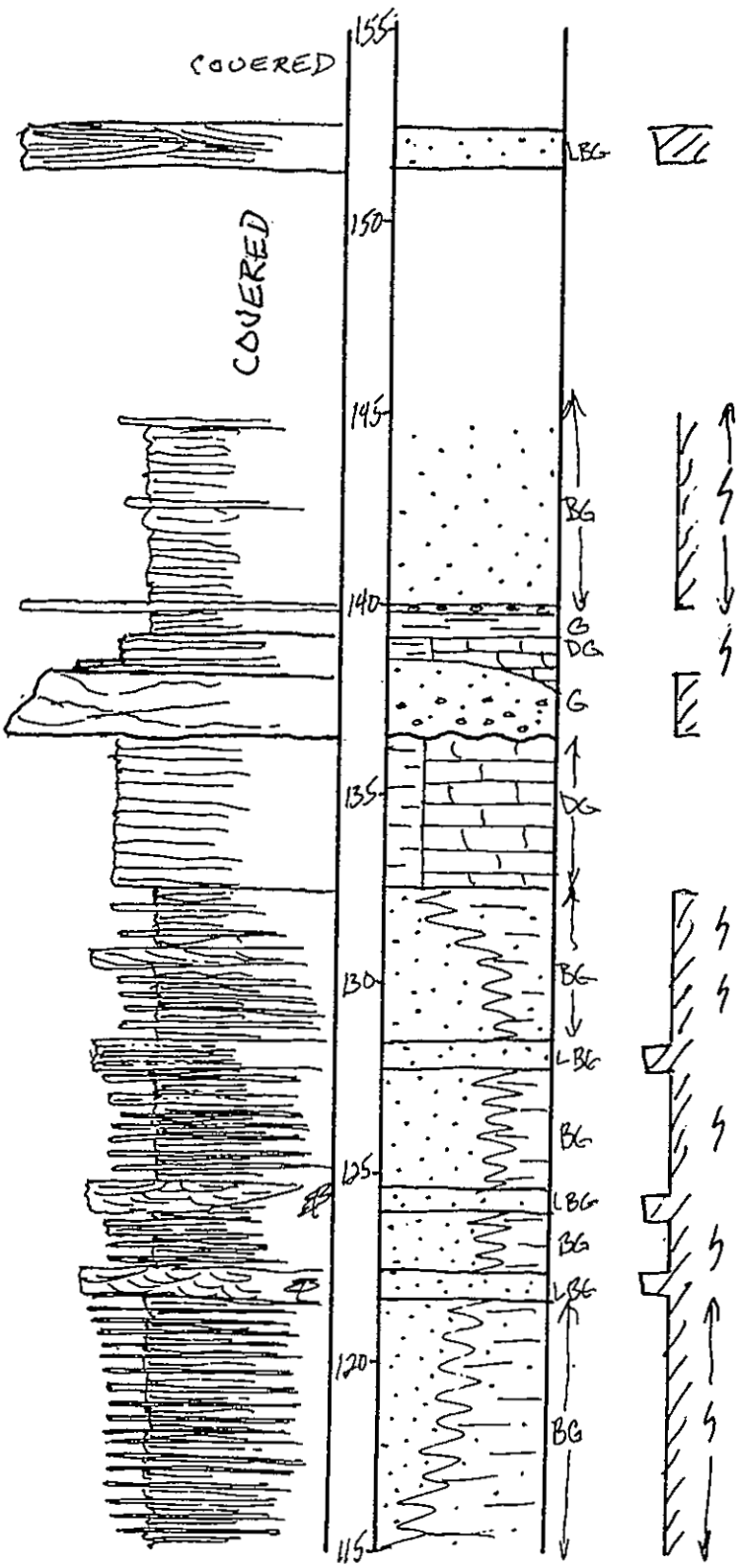
Phylloid Algae



PPW

June 3
JMC

M.S. No. 22
PAGE 4



Crinoids

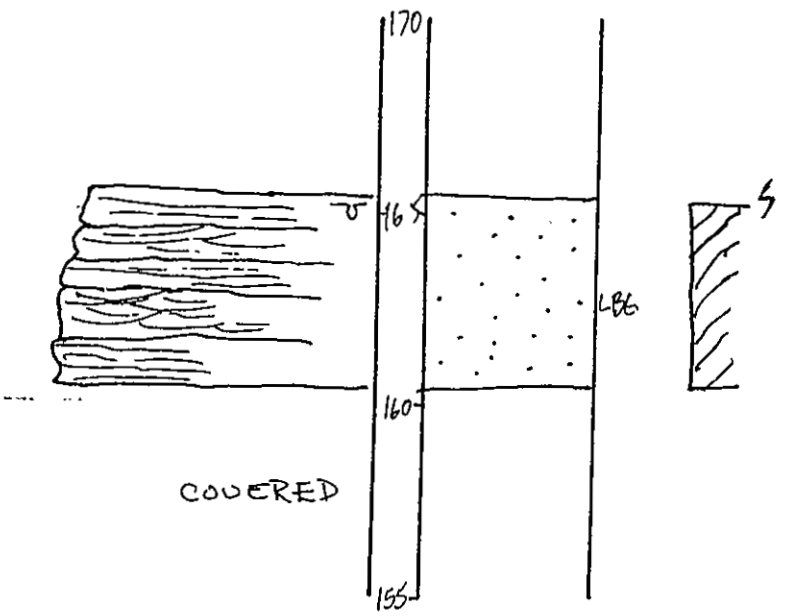
Low-4 Tabs

PPW-4

88

June 3
JMC

(ms) M.S. No. 22
PAGE 5



Calcareous

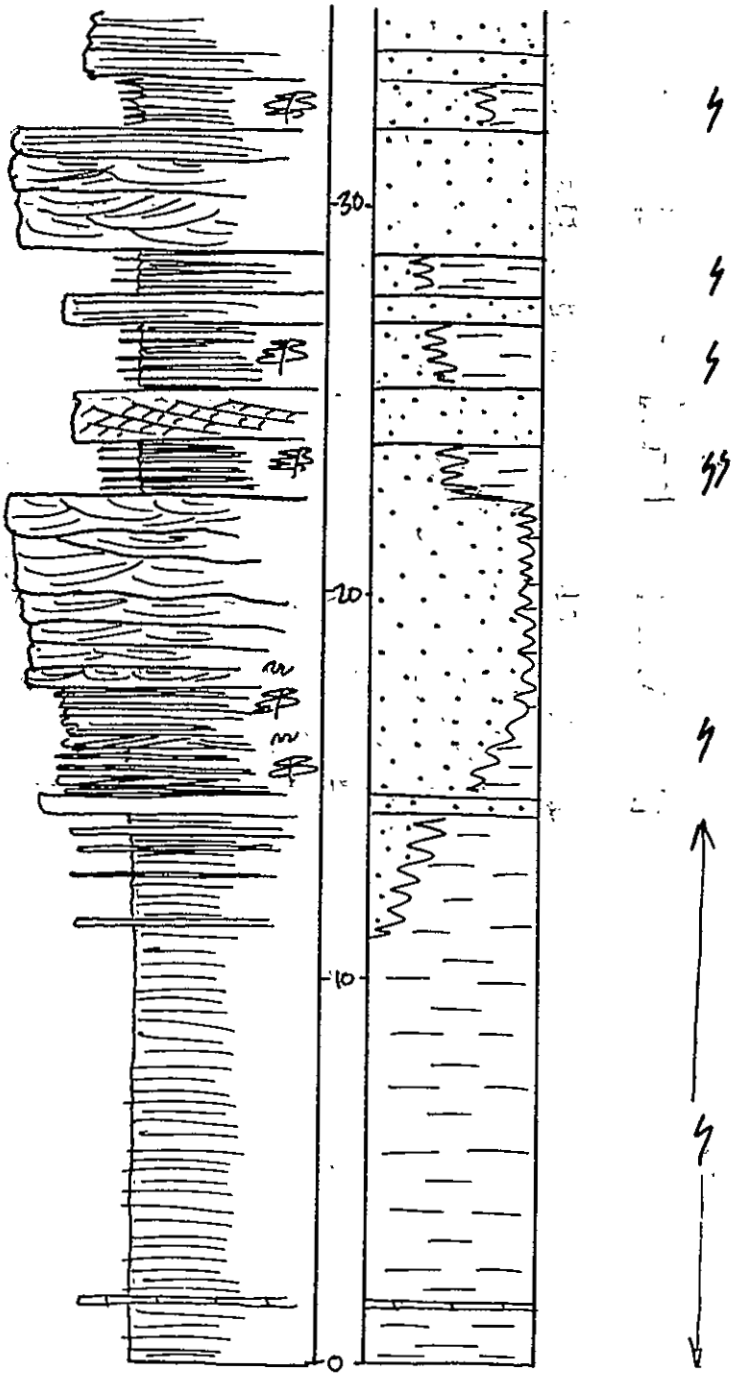
June 1, 1978

JMC

M.S. No. 23

PAGE 1

Pmyll. Algae
Crinoids

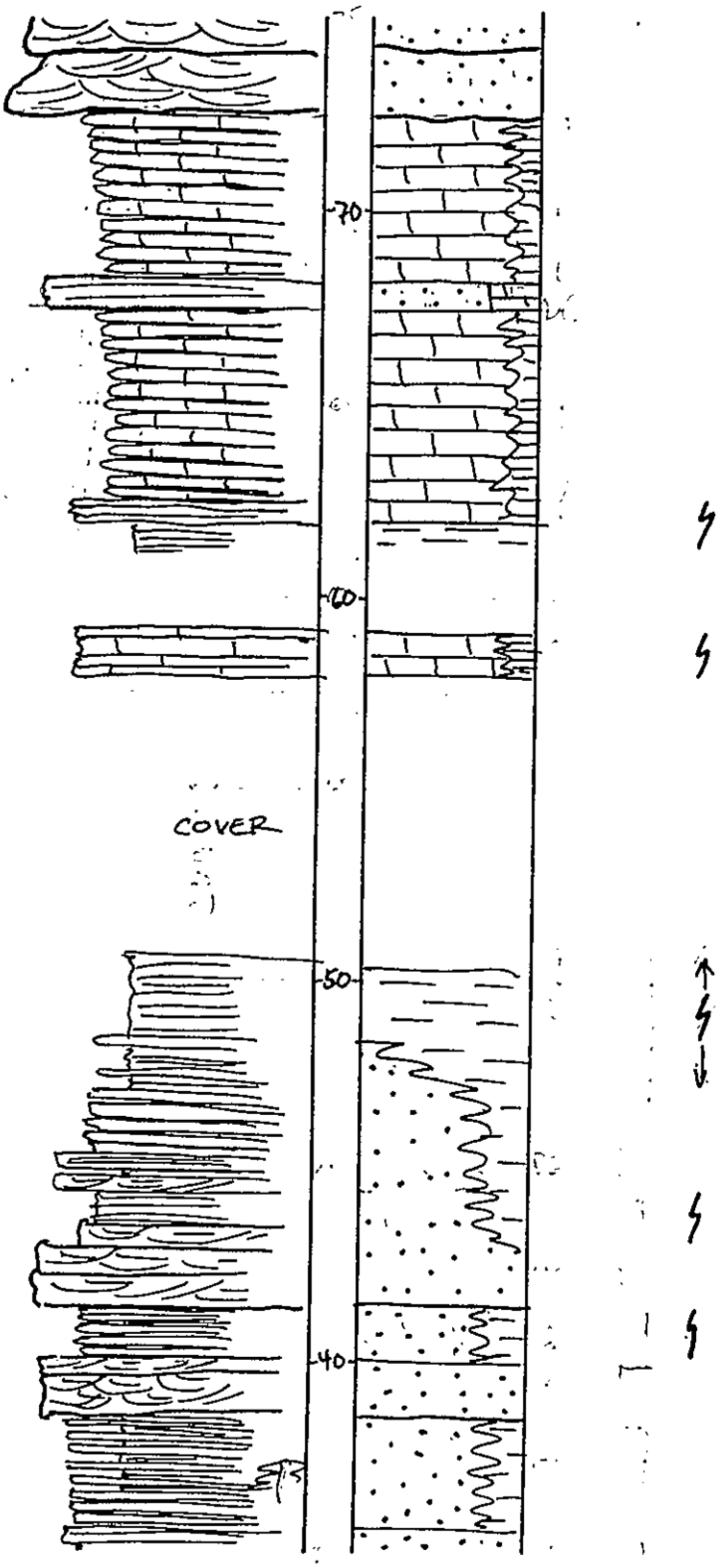


June 7, 1978
JMC

M.S. No. 23
PAGE 2

Phyll Algae

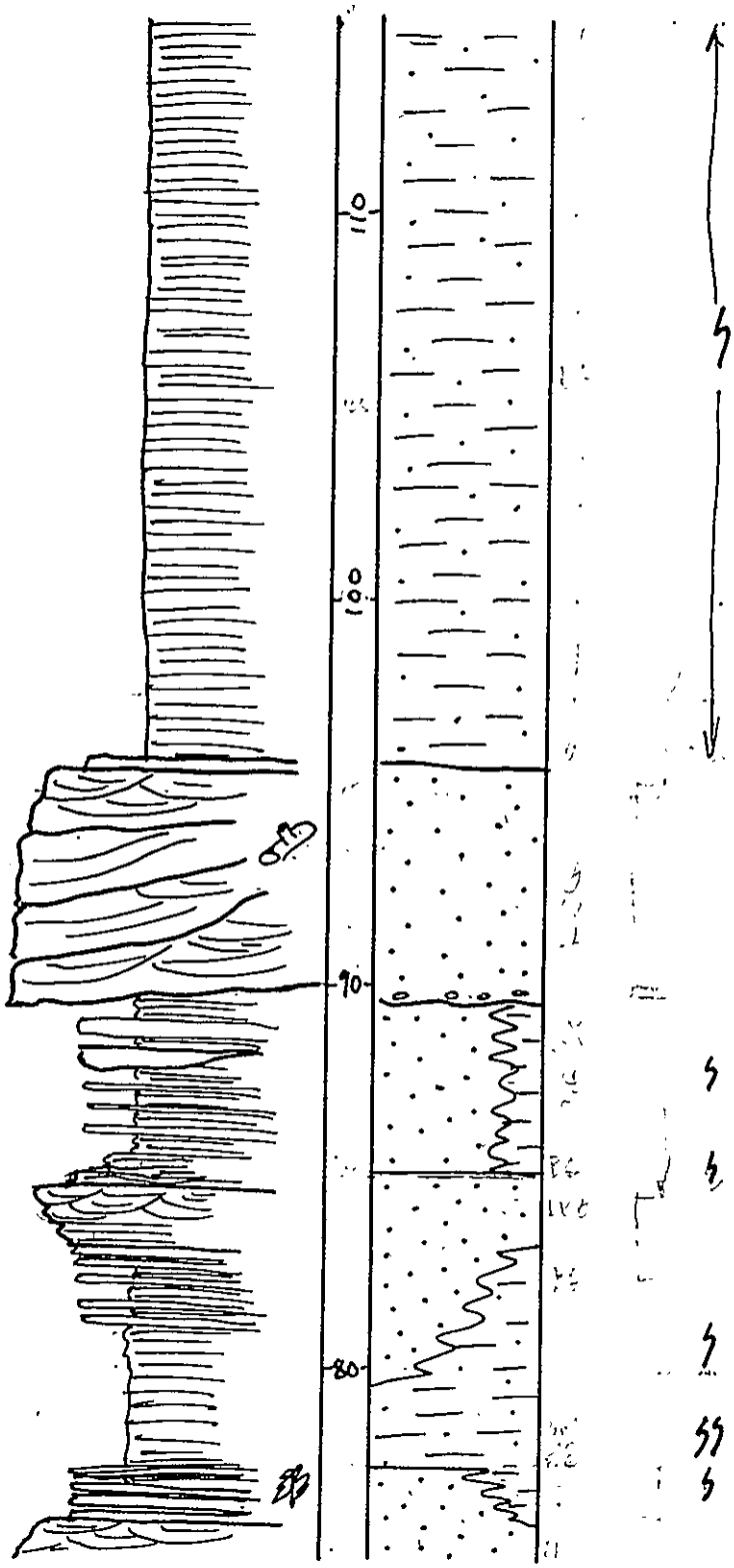
very fossiliferous



M.S. No. 23

PAGE 3

BIVALES
GASTS.



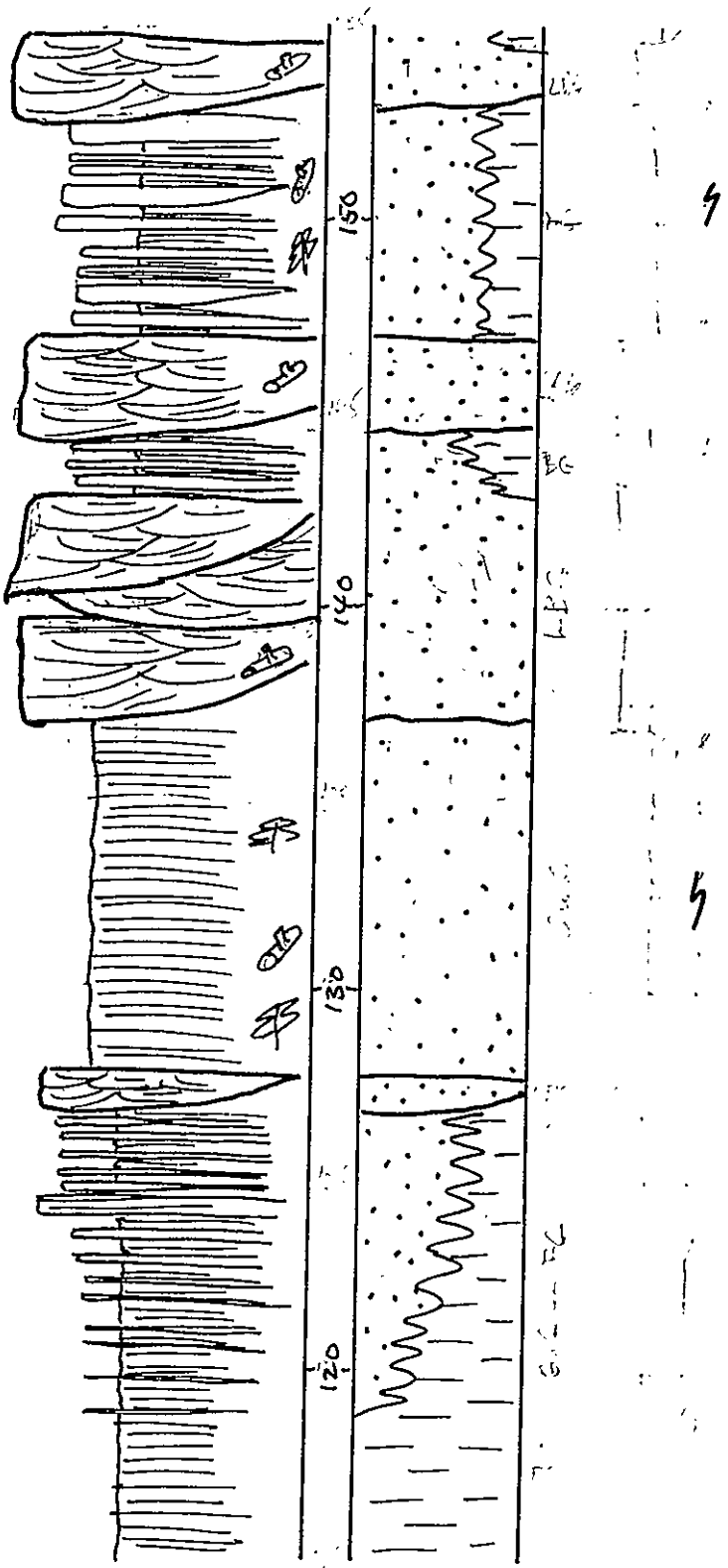
POORLY EXPOSED

POSSIBLY FAULTED

MICACEOUS CALC. SDY. SILTST.

M.S. No. 23

PAGE 4

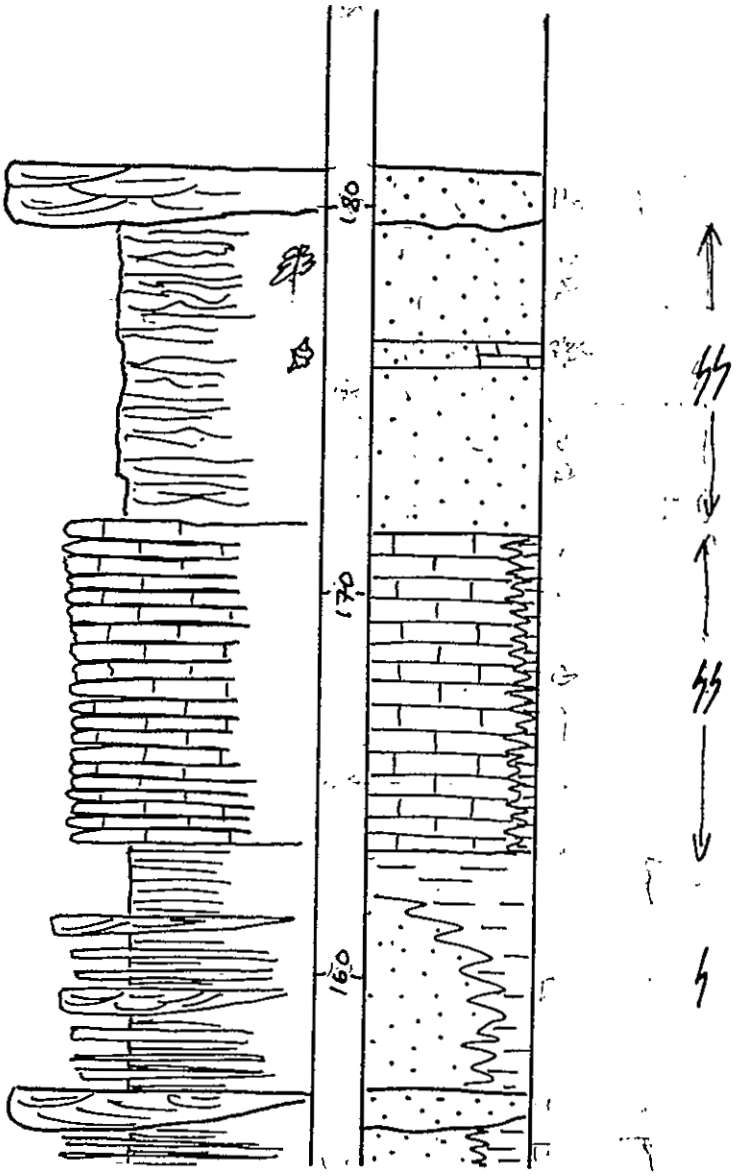


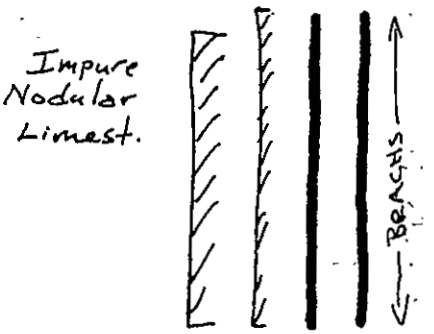
VERY
MICACEOUS
&
CARBONACEOUS

M.S. No. 23

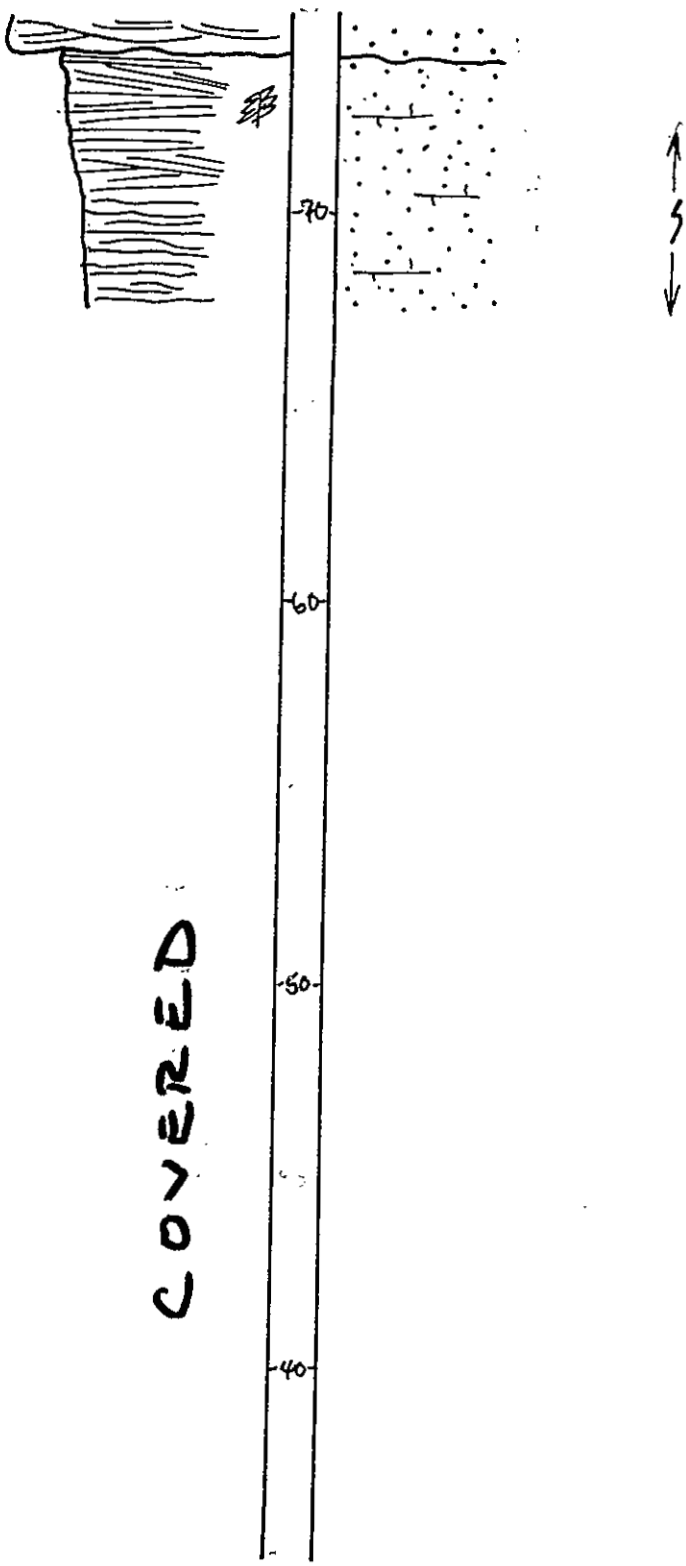
PAGE 5

Rull Algae
Crinoids
Bivalves
Gasts.





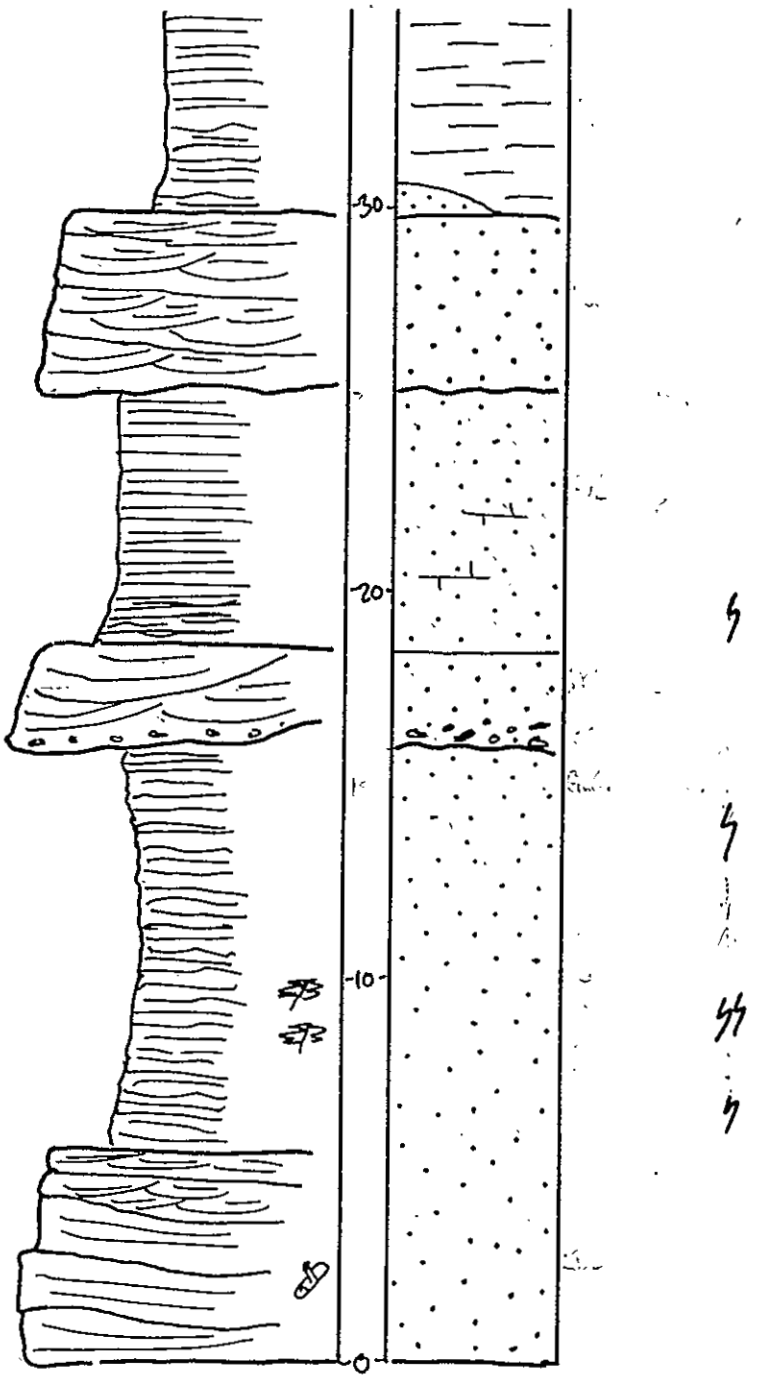
M.S. No. 24
PAGE 2



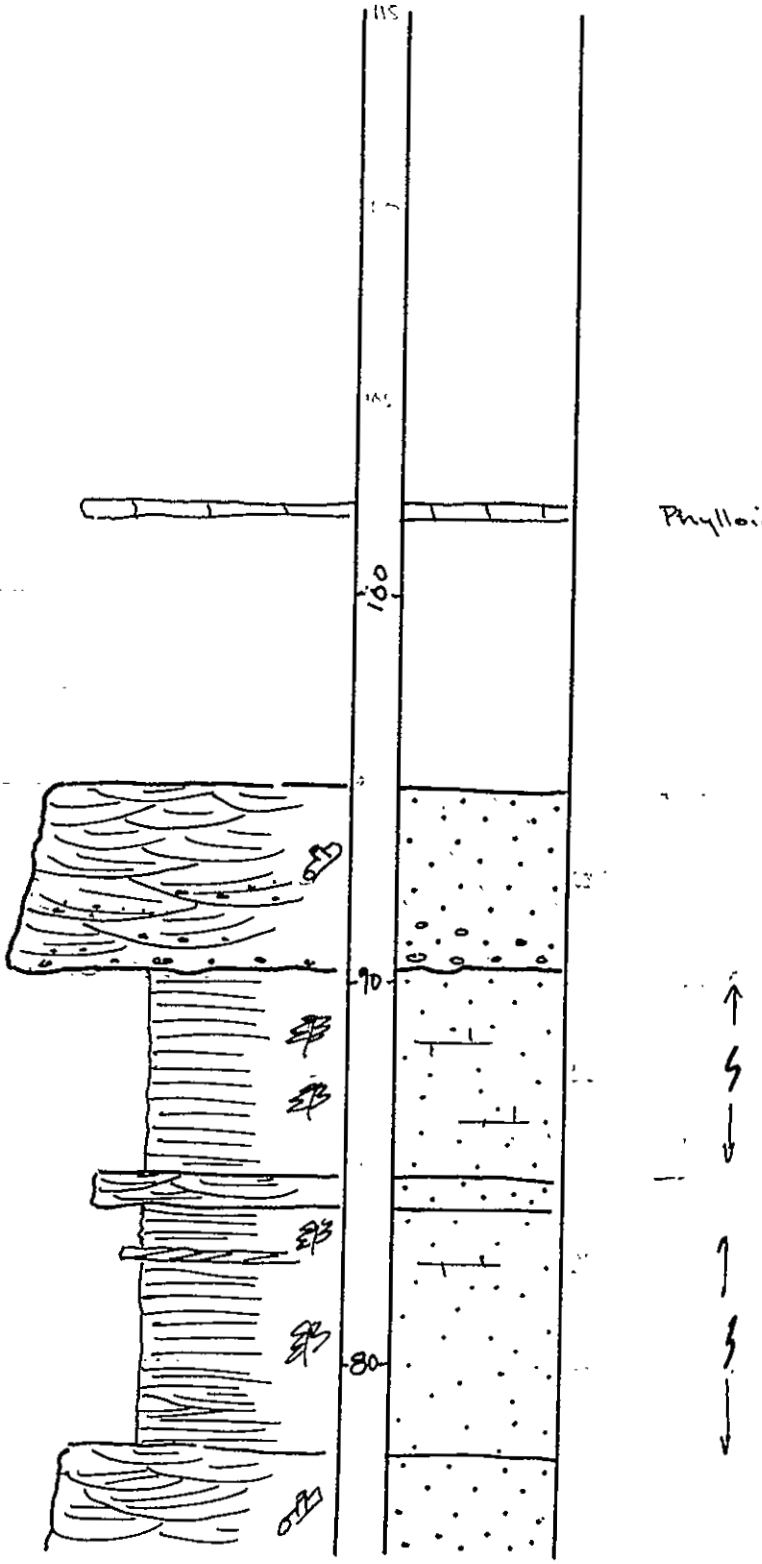
4th

M.S. No. 24

PAGE 1



M. S. No. 24
PAGE 3



Phylloid Algae ls.

MEASURED SECTION NO. SDC

DATE JULY 21, 1977

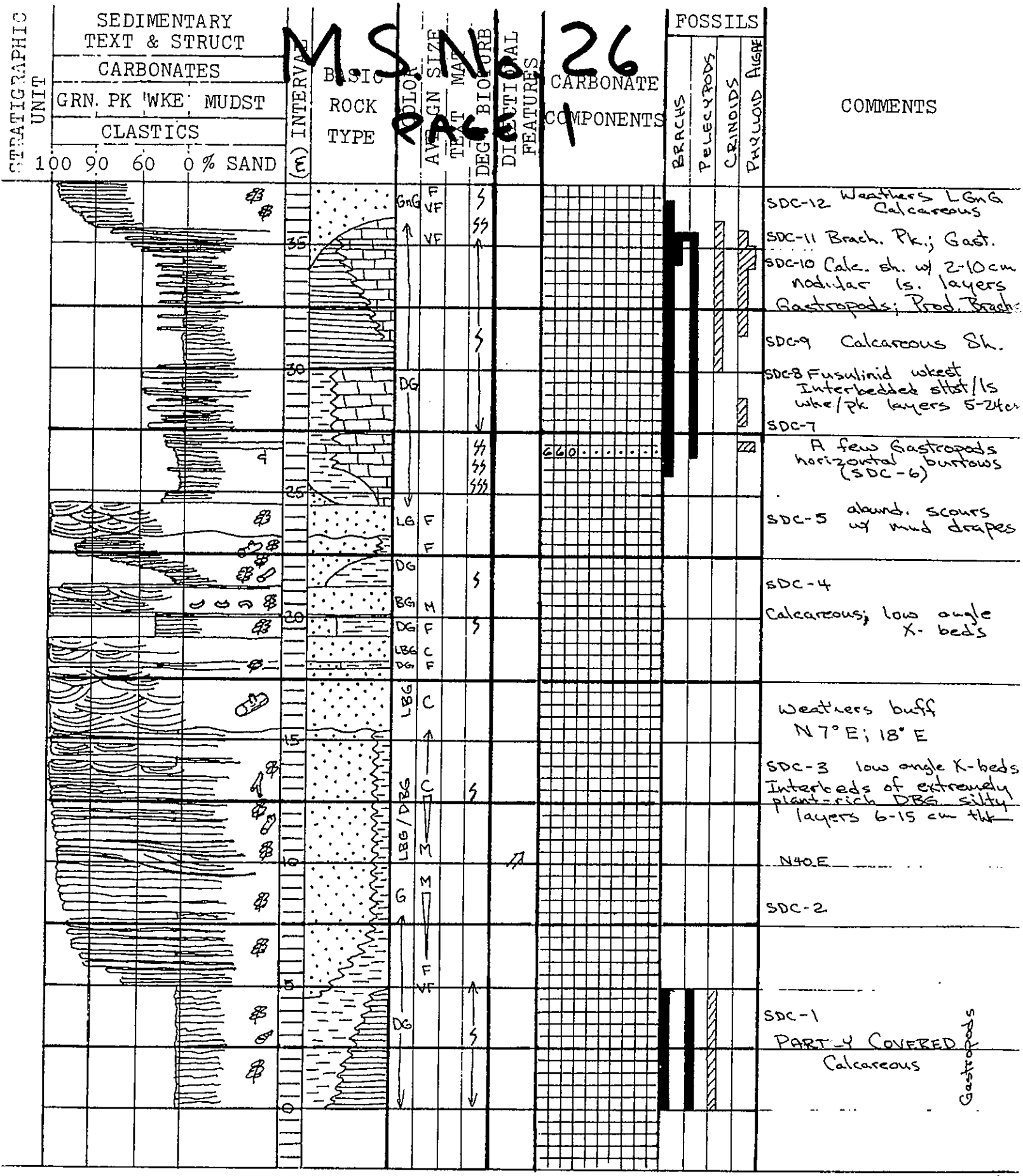
LOCALITY S of Drake Canyon (FR 437)

STRATIGRAPHIC UNIT

SETTING Side Canyon off Rio Chiquito

MEASURED BY JMC

M.S. No. 26 PAGE 1

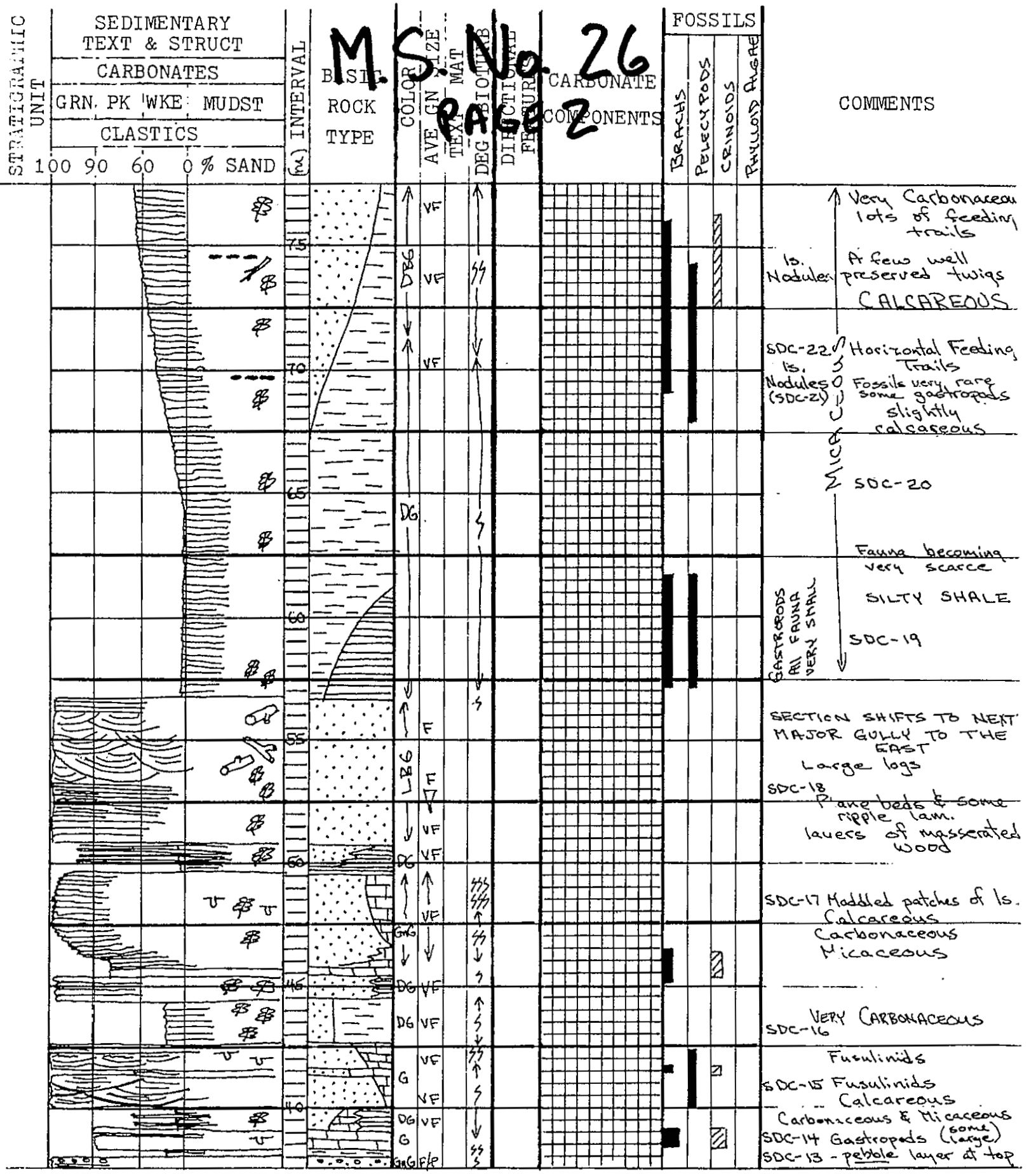


MEASURED SECTION NO. SDC DATE July 22, 1977

LOCALITY _____ STRATIGRAPHIC UNIT _____

SETTING _____ MEASURED BY JMC

M.S. No 26 PAGE 2



MEASURED SECTION NO. SDC

DATE

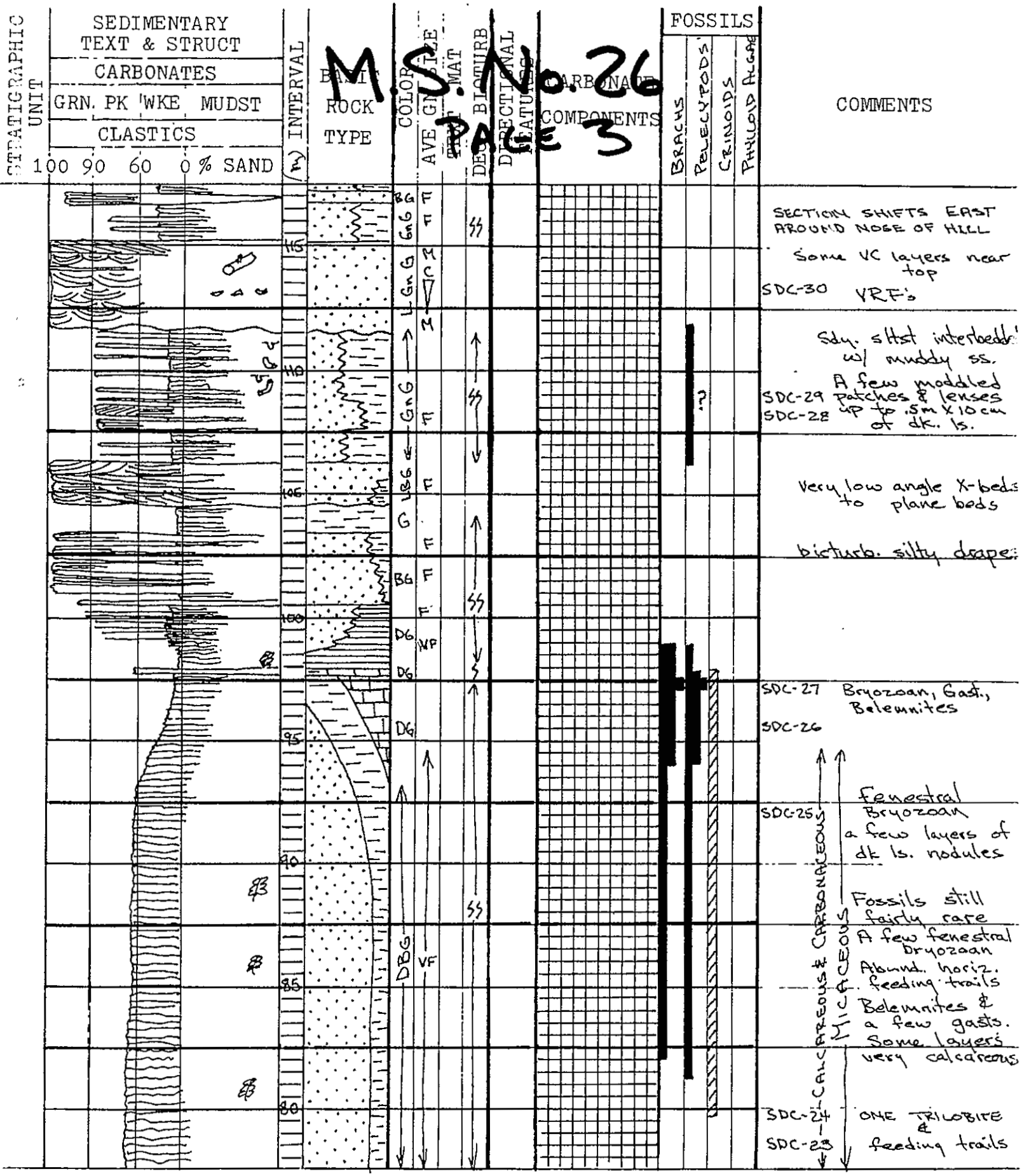
LOCALITY

STRATIGRAPHIC UNIT

SETTING

MEASURED BY JMC

M.S. No. 26
PAGE 3

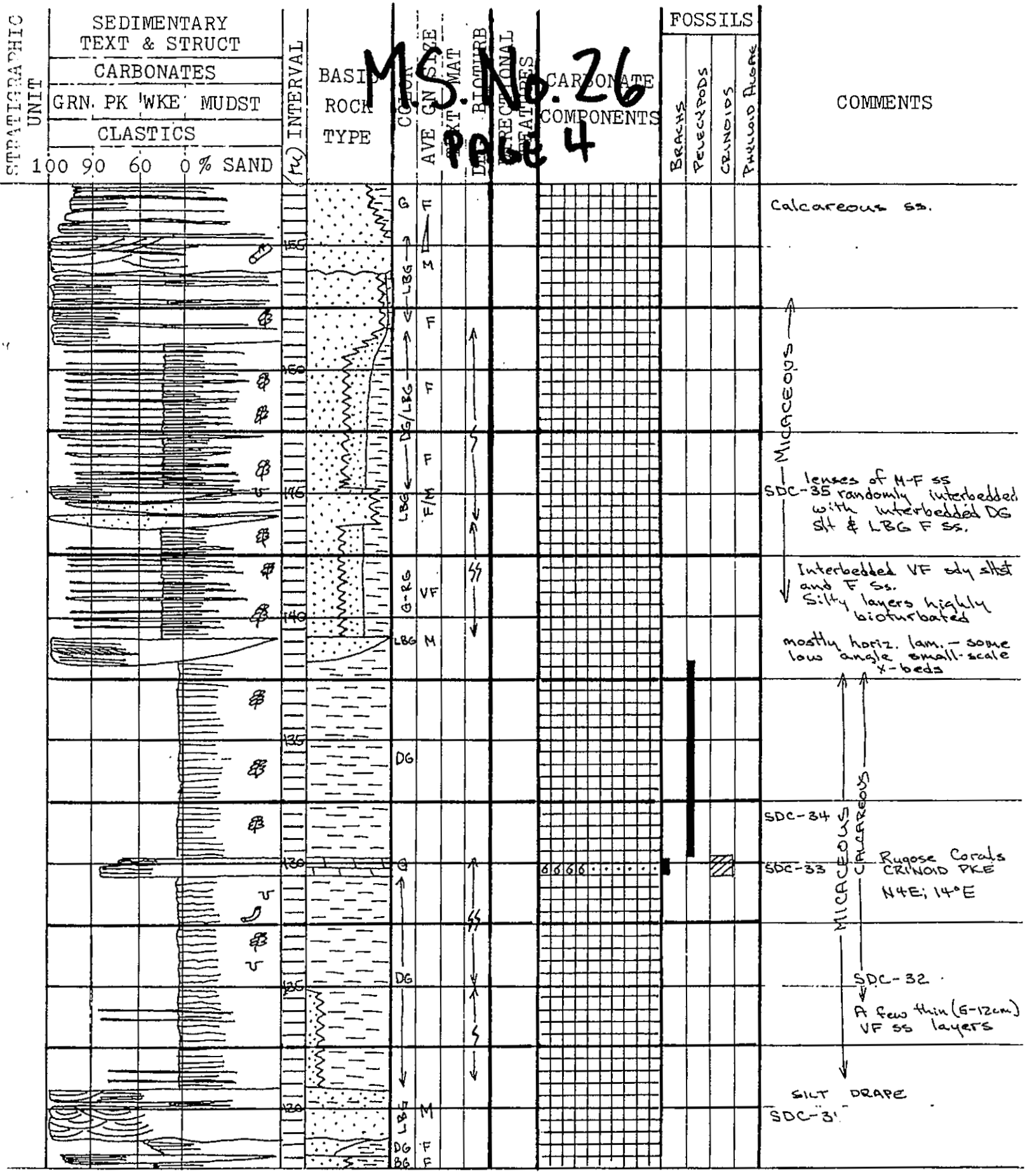


MEASURED SECTION NO. SDC DATE

LOCALITY SDC STRATIGRAPHIC UNIT

SETTING MEASURED BY JMC

MS. No. 26 PAGE 4

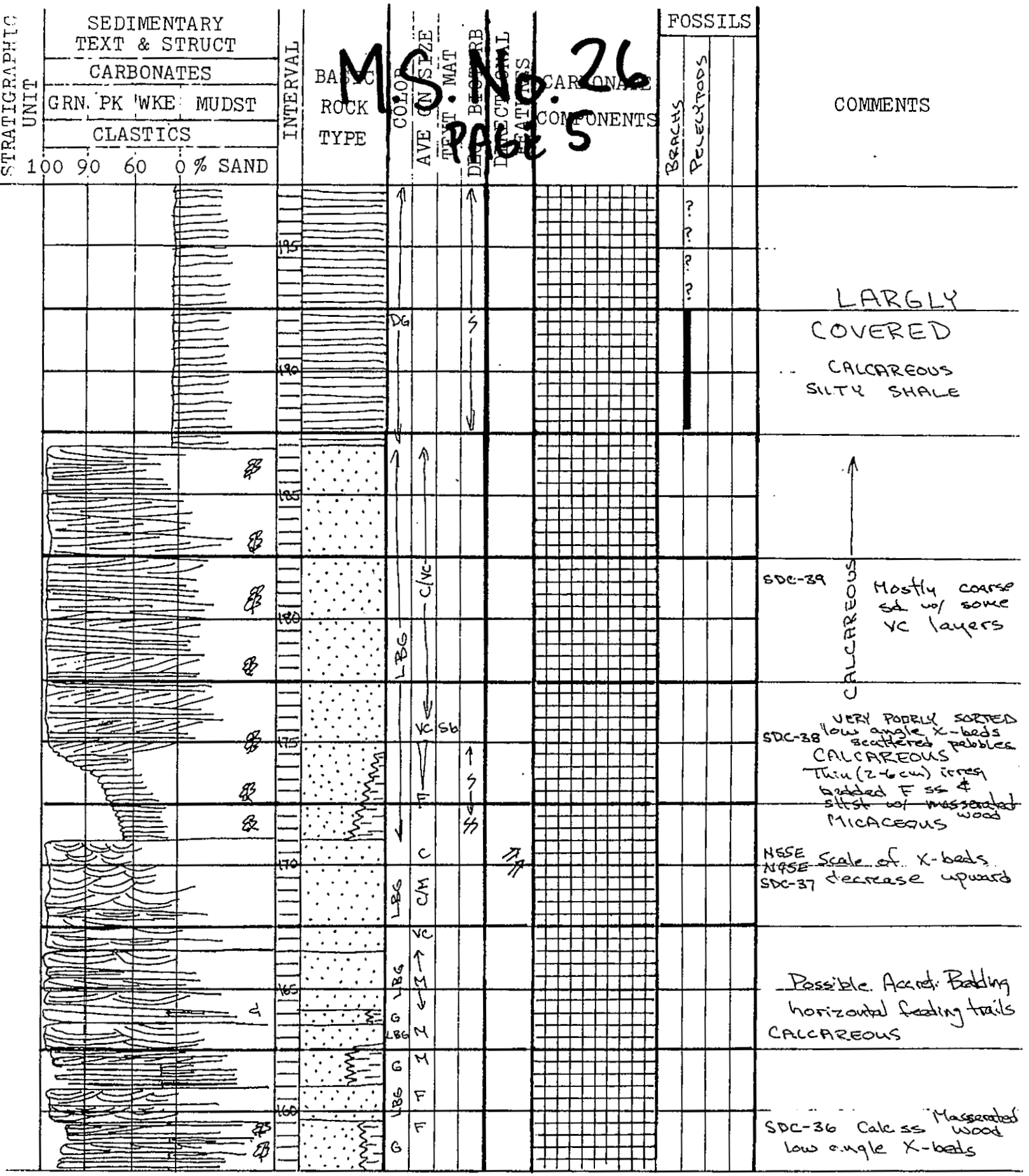


MEASURED SECTION NO. _____ DATE _____

LOCALITY SDC STRATIGRAPHIC UNIT _____

SETTING _____ MEASURED BY JMC

MS No. 26
PAGE 5

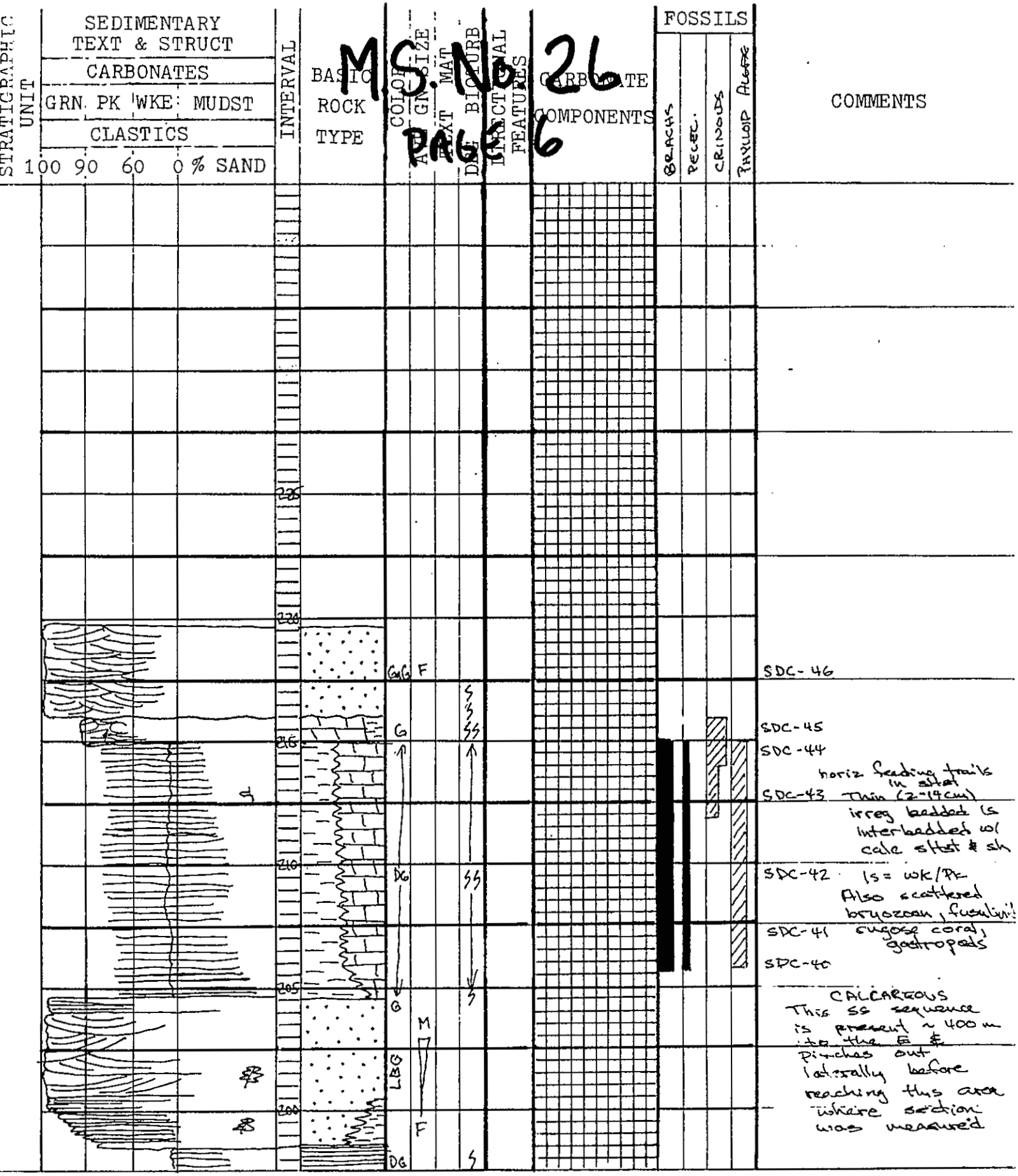


MEASURED SECTION NO. _____ DATE _____

LOCALITY SDC STRATIGRAPHIC UNIT _____

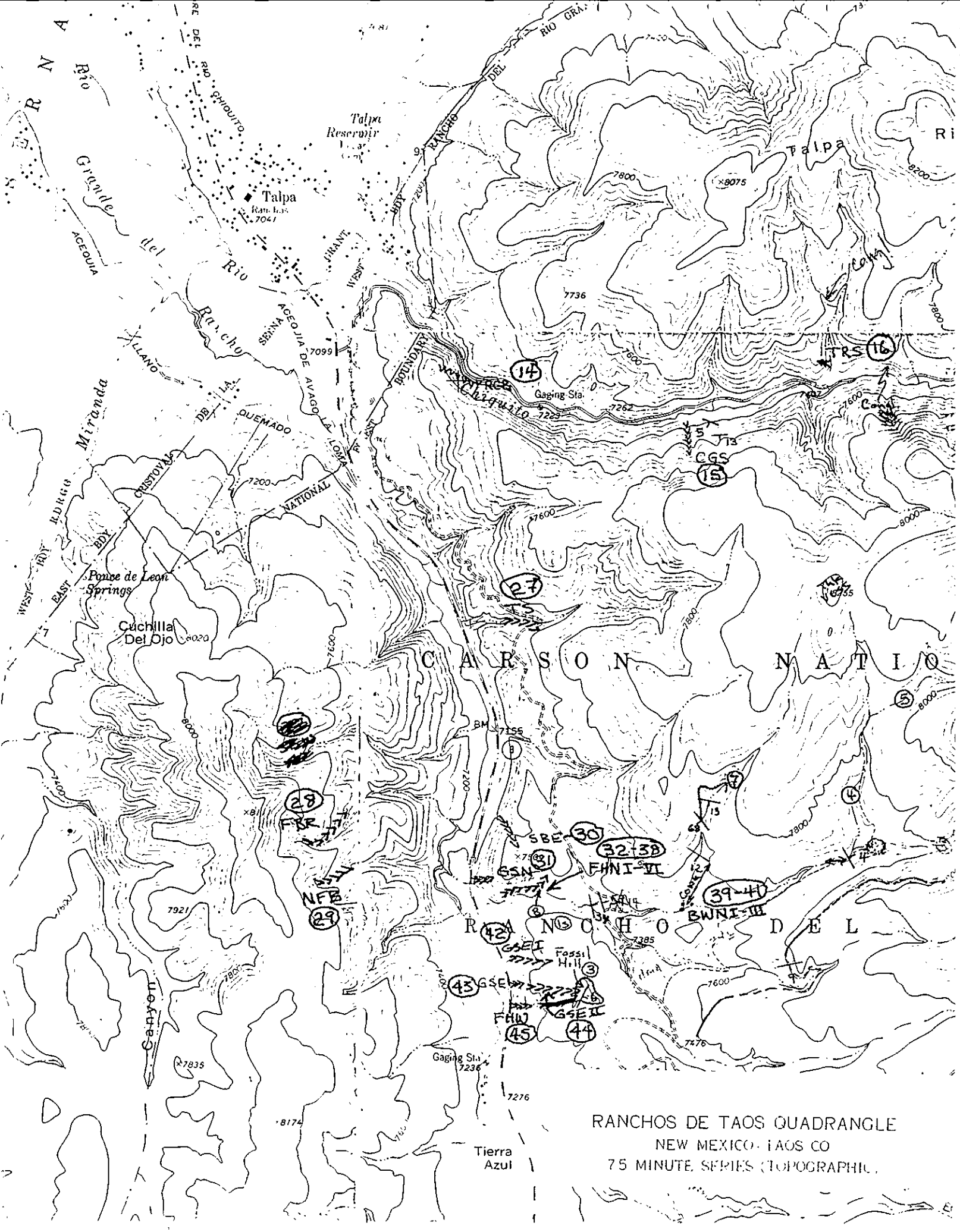
SETTING _____ MEASURED BY _____

MS. No 26 PAGE 6



TALPA SOUTH SECTIONS

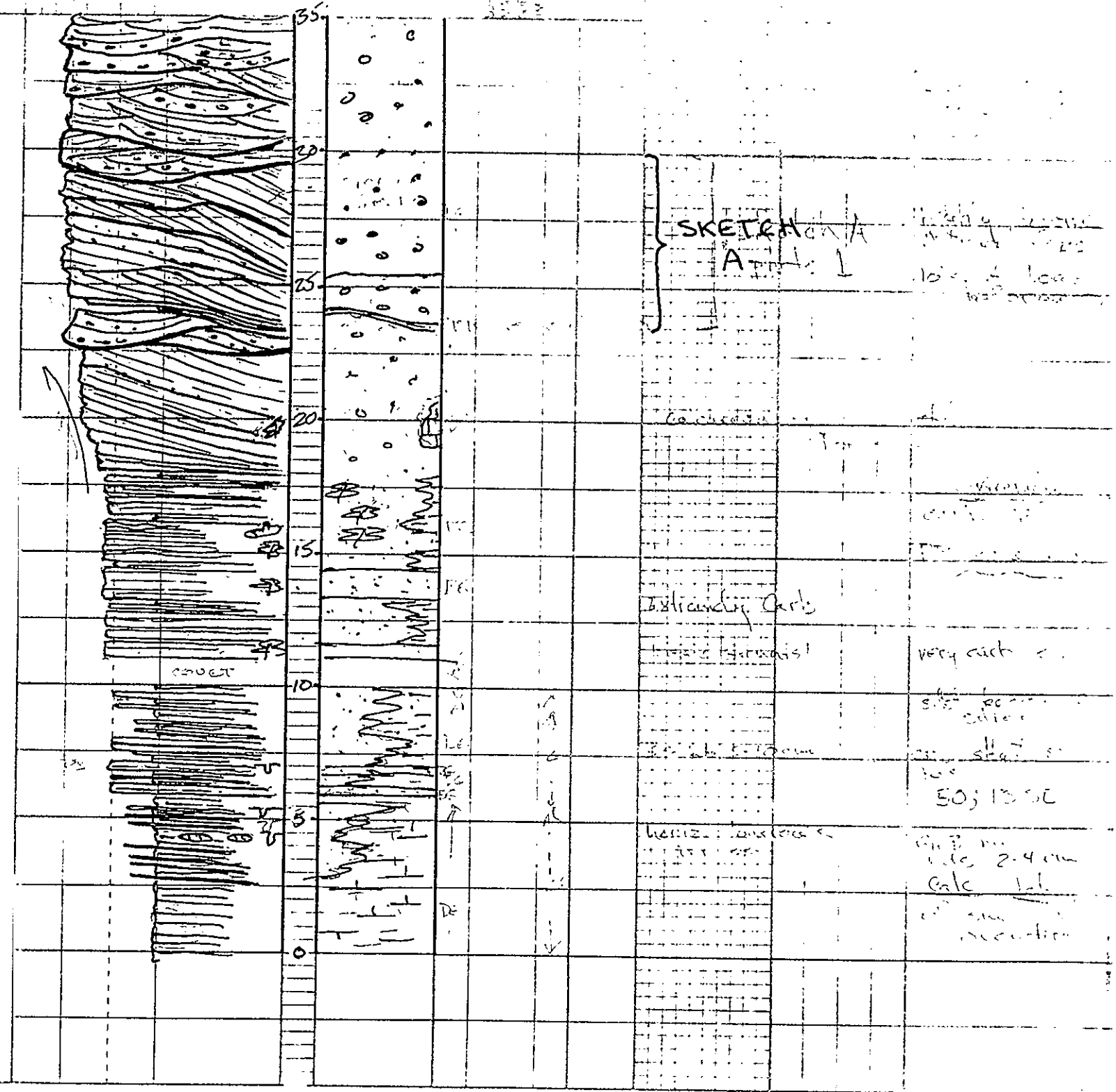
MEASURED SECTIONS
27 THROUGH 45



RANCHOS DE TAOS QUADRANGLE
NEW MEXICO-TAOS CO
7.5 MINUTE SERIES (TOPOGRAPHIC)

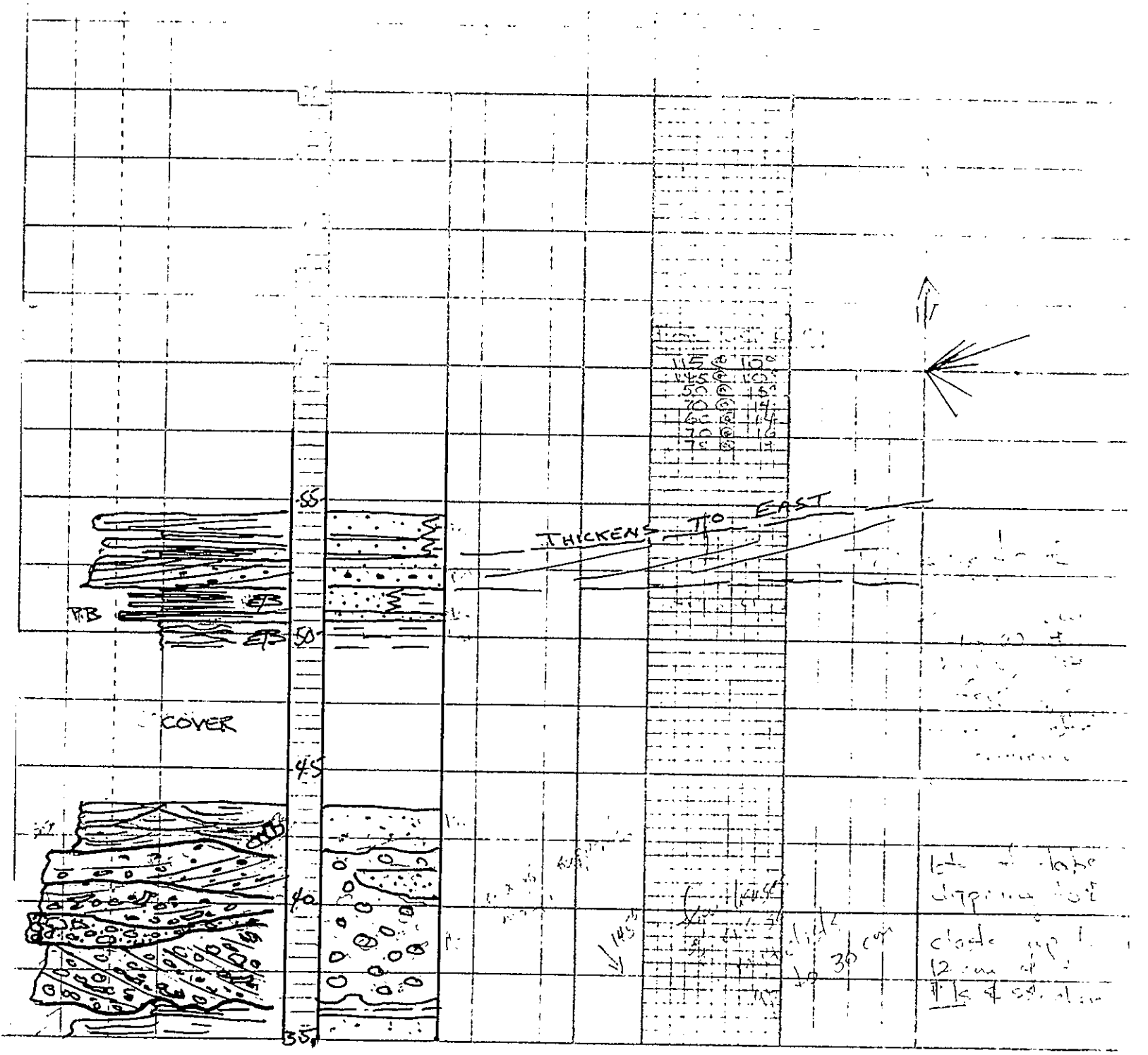
M.S. No. 27

PAGE 1



T.S. page 1 of 2

M.S. No. 27
PAGE 2



Fort Burgwin Gully

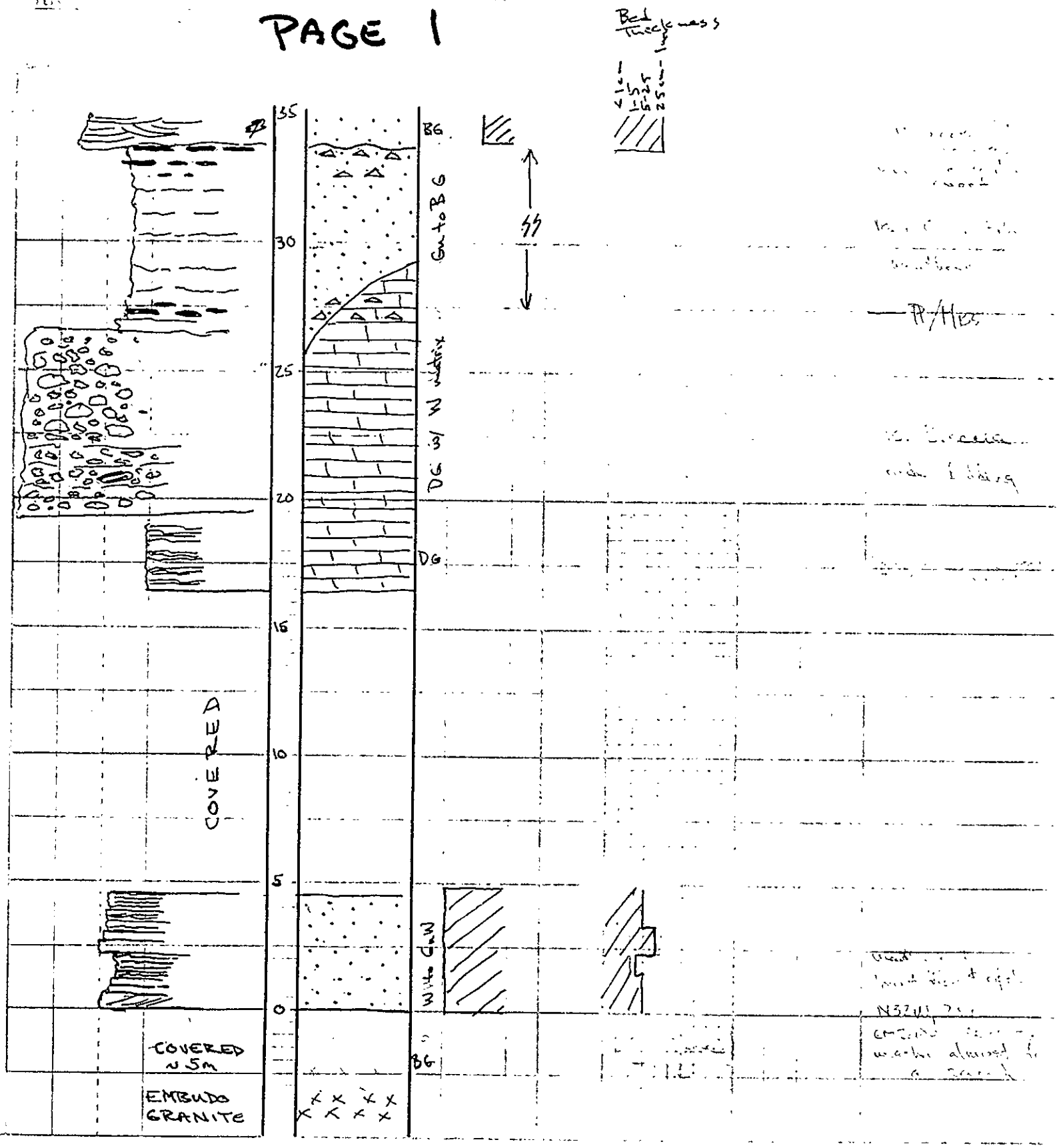
FBR Ridge

July 2, 1978

JMC

M.S. No. 28

PAGE 1



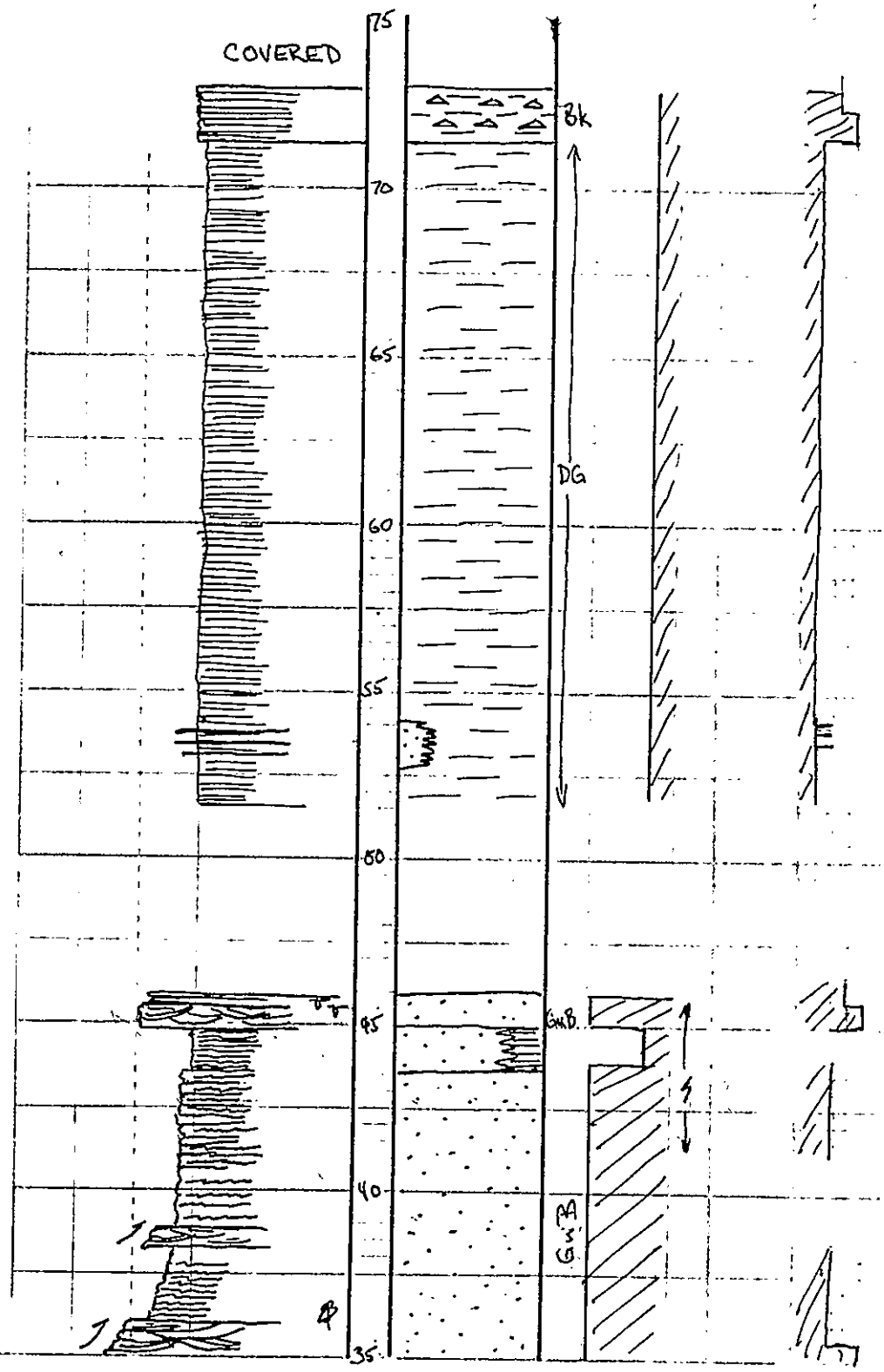
08

FBR

July 2, 1978
JMC

M.S. No. 28

PAGE 2

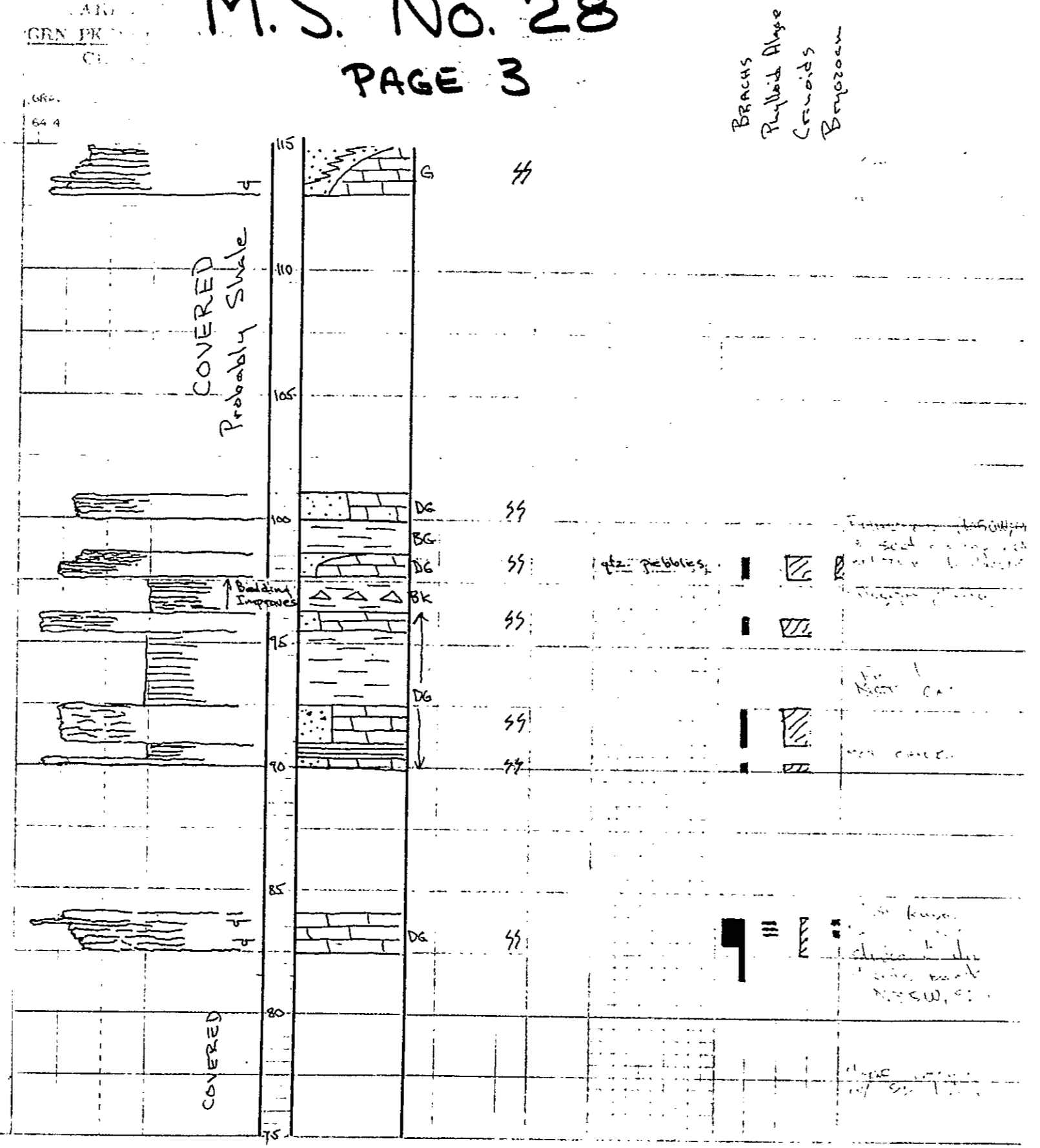


FBR

FBR

July 2, 1978
JMC

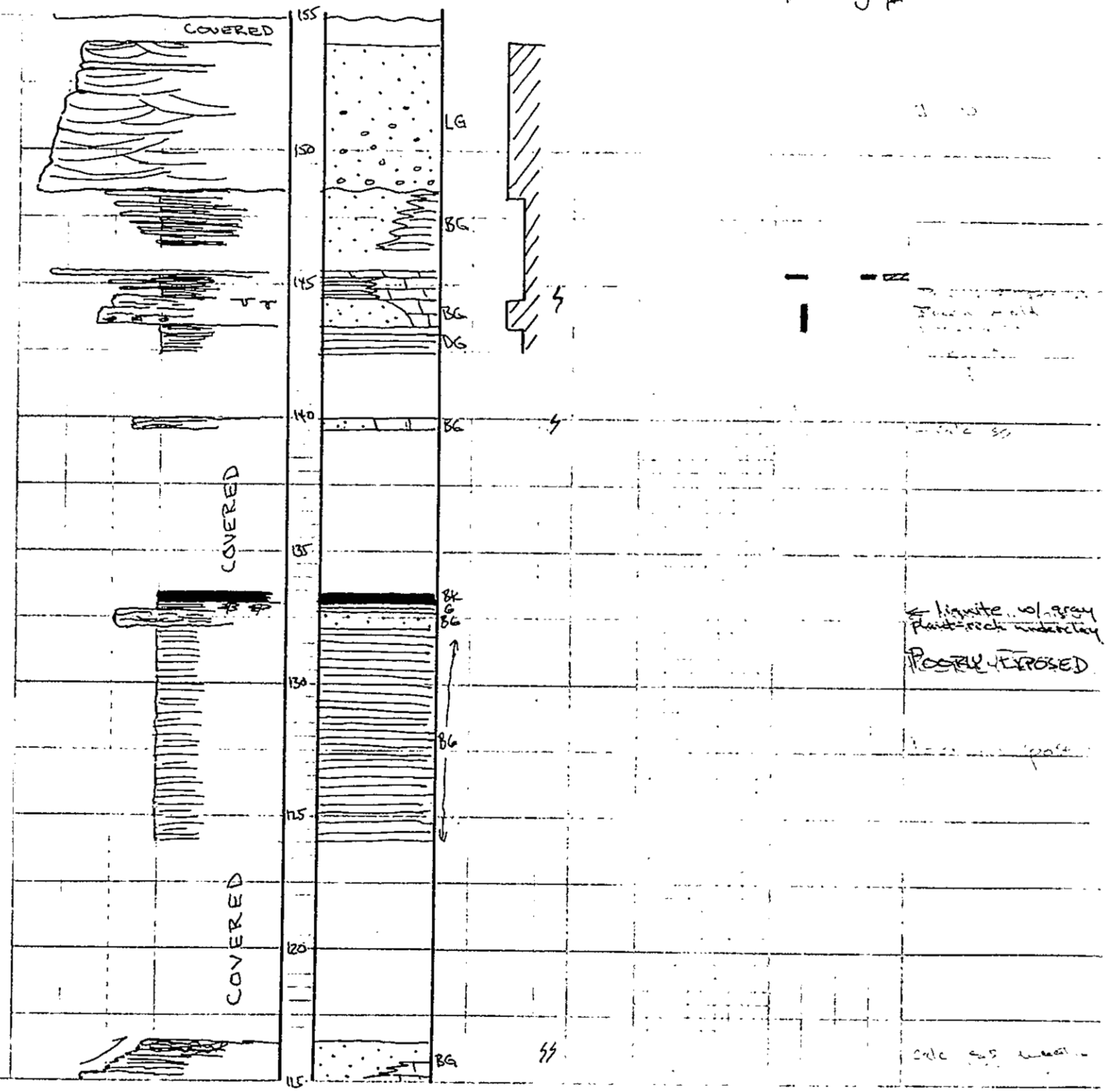
M.S. No. 28
PAGE 3



July 2
JMC

M.S. No. 28

PAGE 4



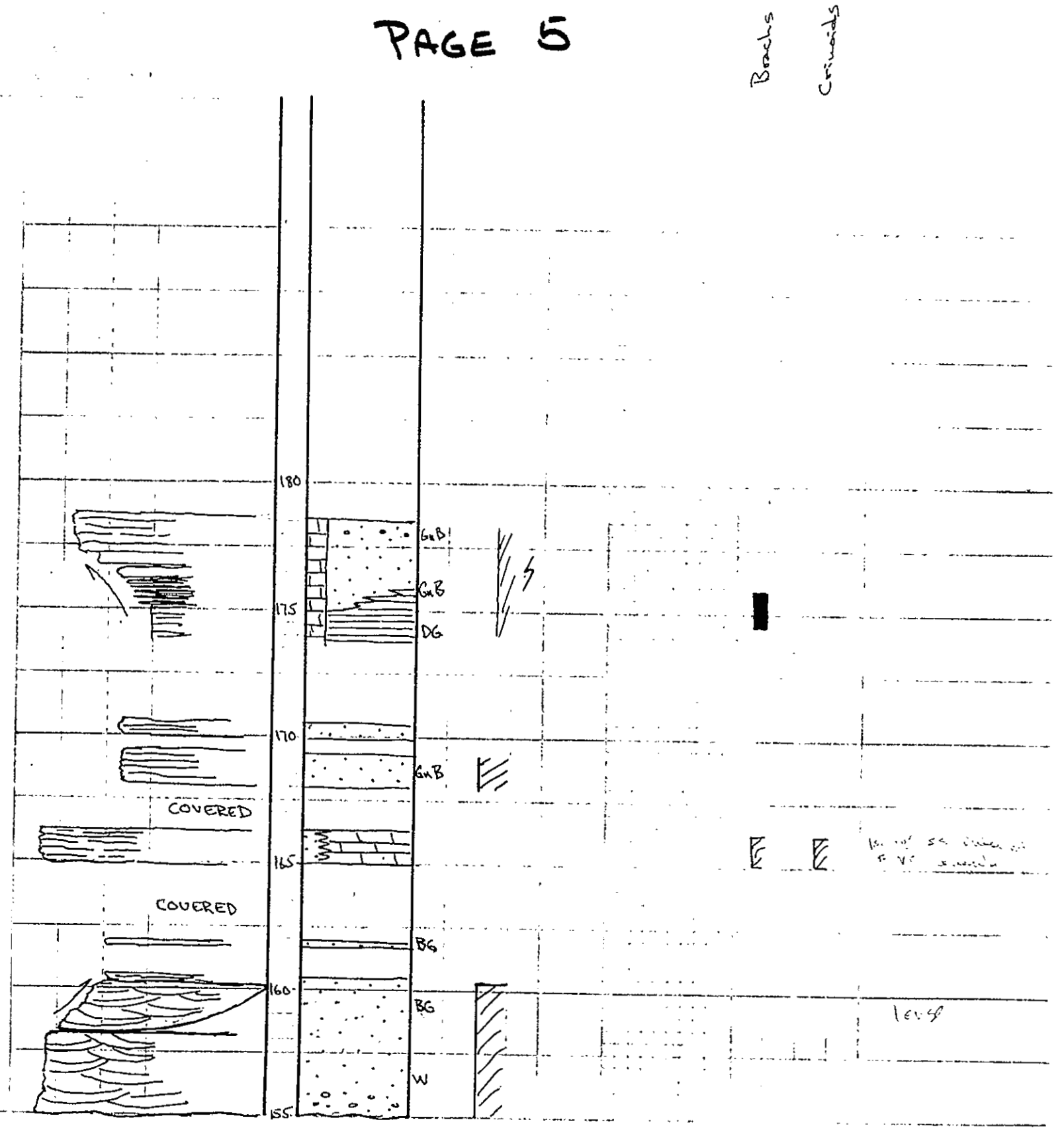
111

FBR

July 2
JMC

M.S. No. 28

PAGE 5

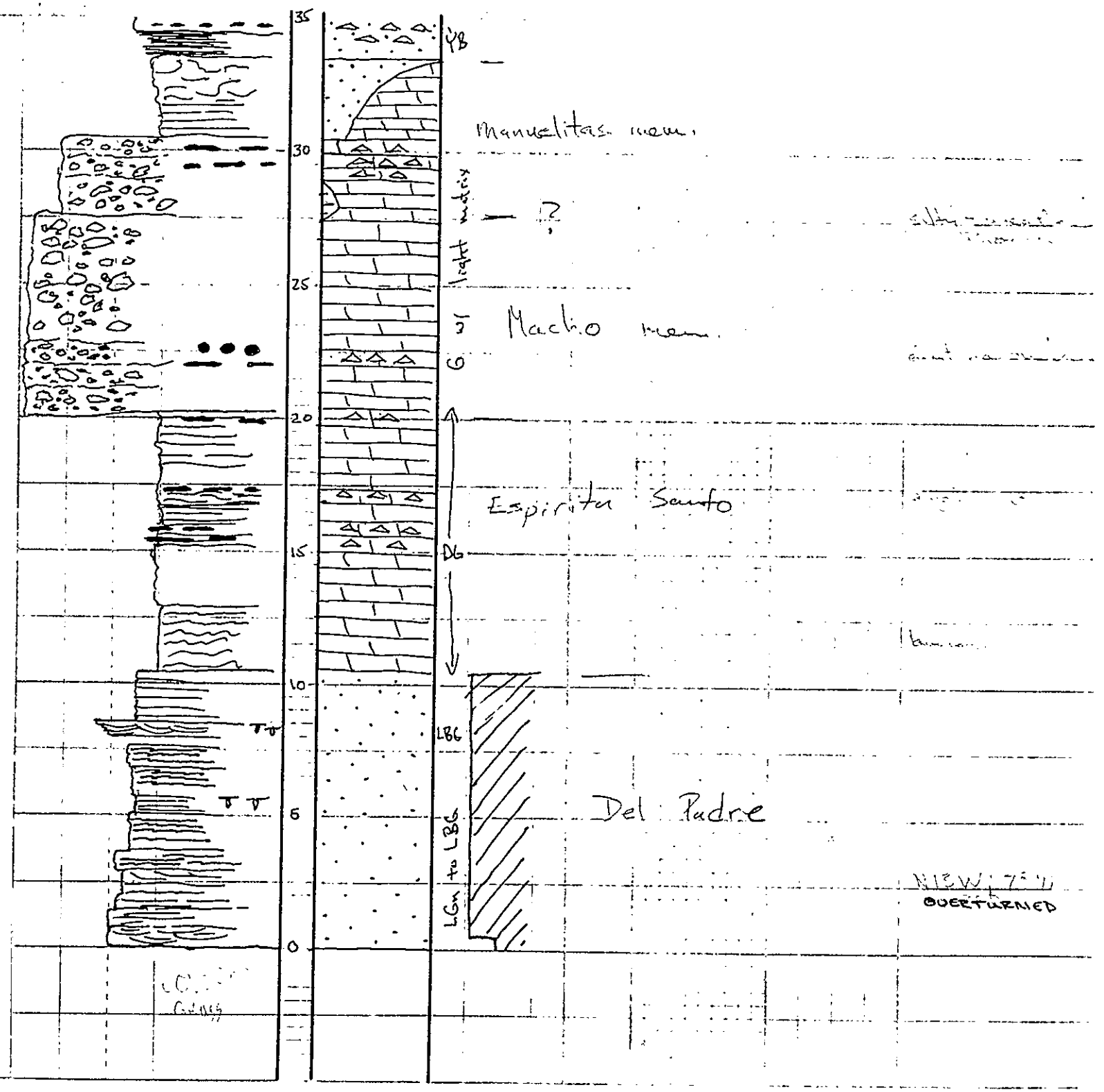


NFB
North of Ft Burgwin
Gully W side Hwy 3

July 2, 1978
JMC

M.S. No. 29

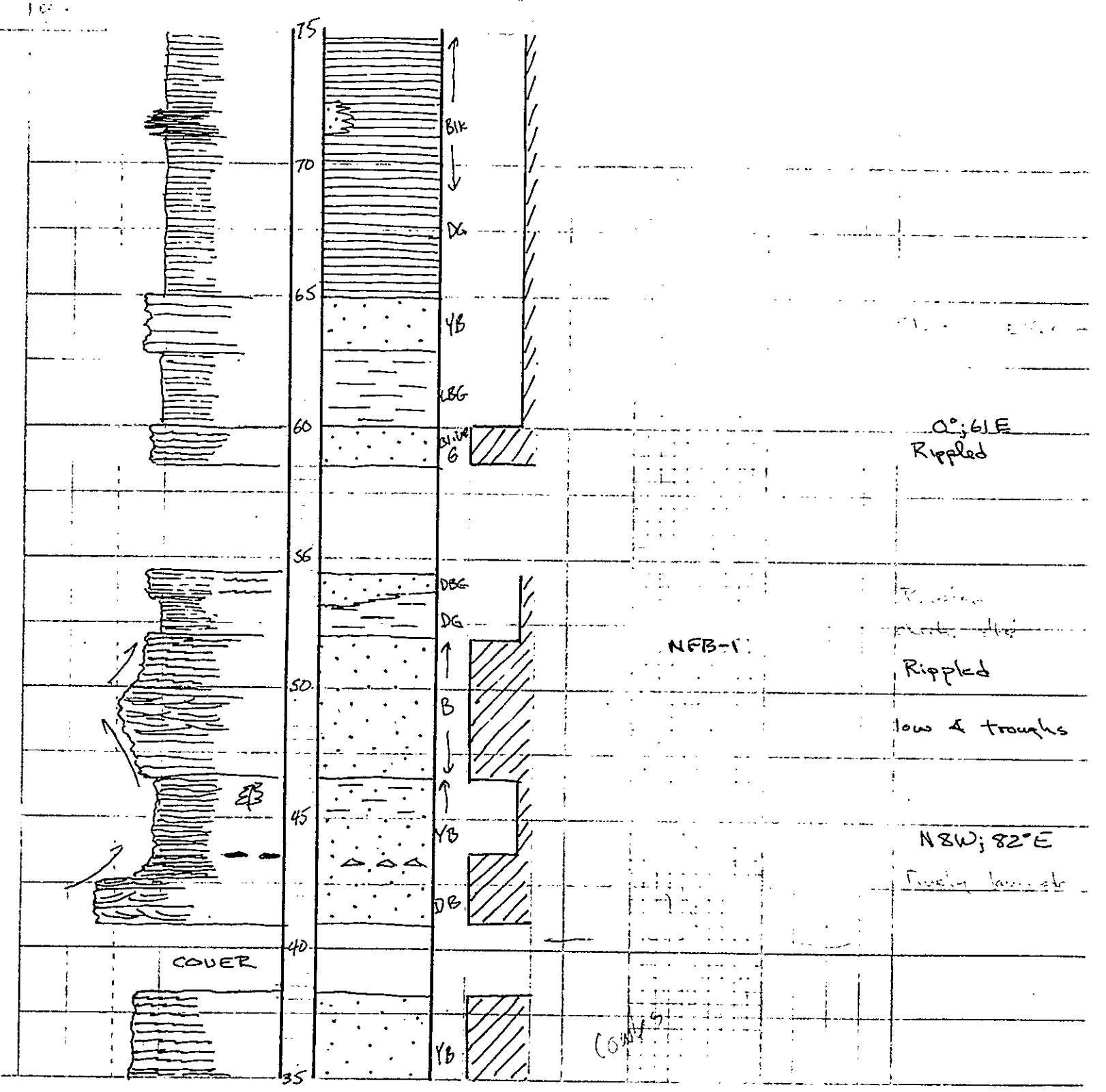
PAGE 1



July 2, 1978
JMC

M.S. No. 29

PAGE 2

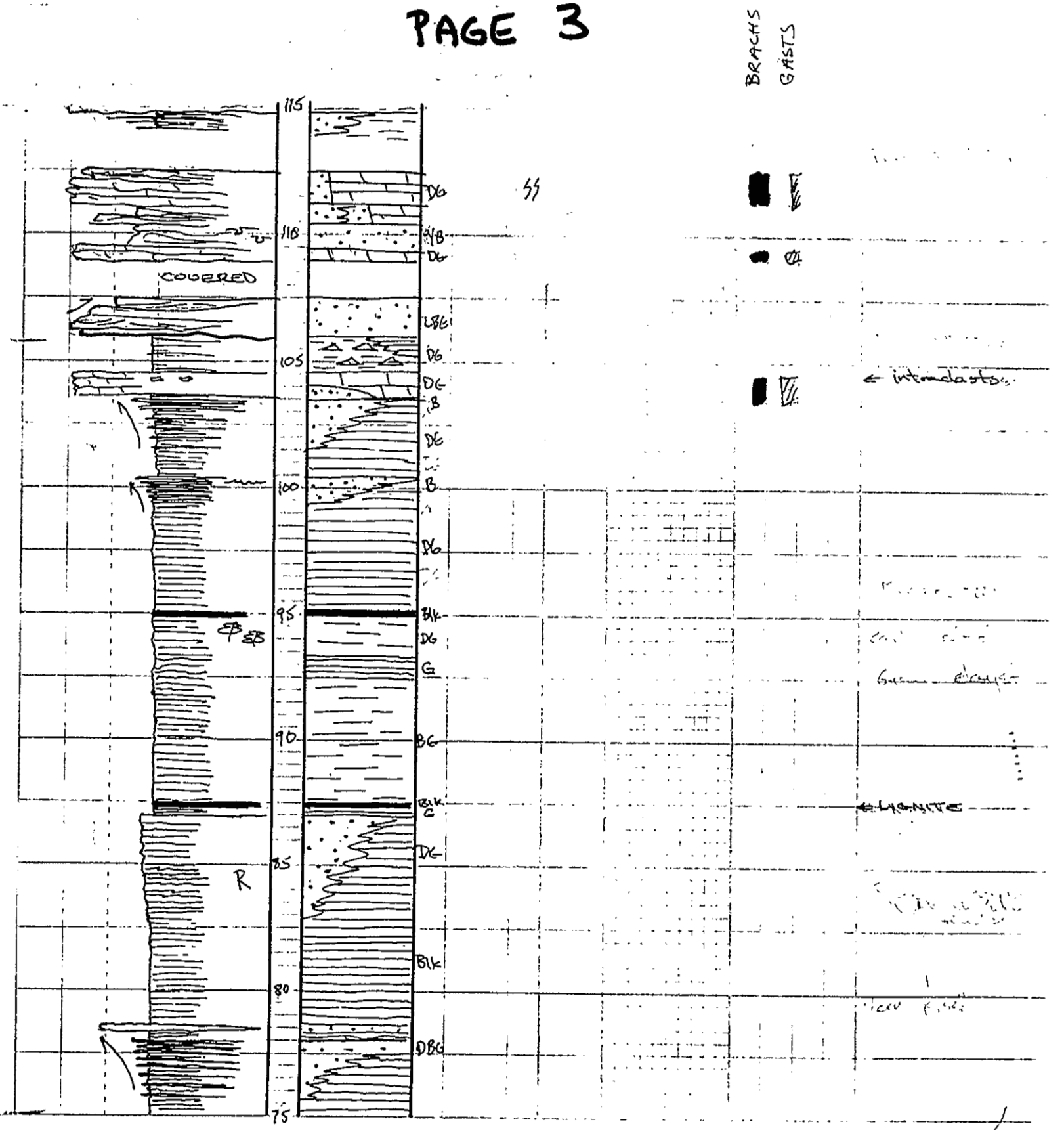


June 2, 1976

JMC

M.S. No. 29

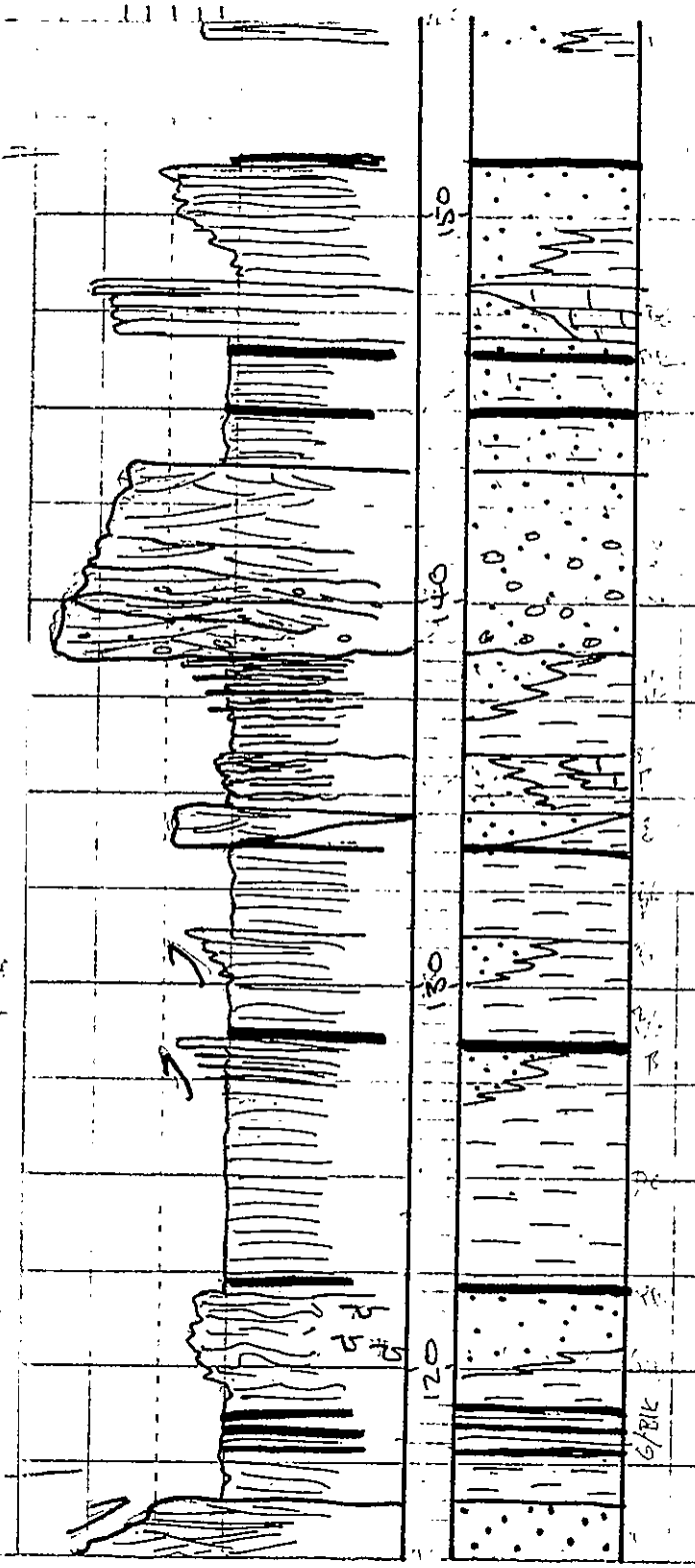
PAGE 3



M. S. No. 29

PAGE 4

BRACHS
CASTS



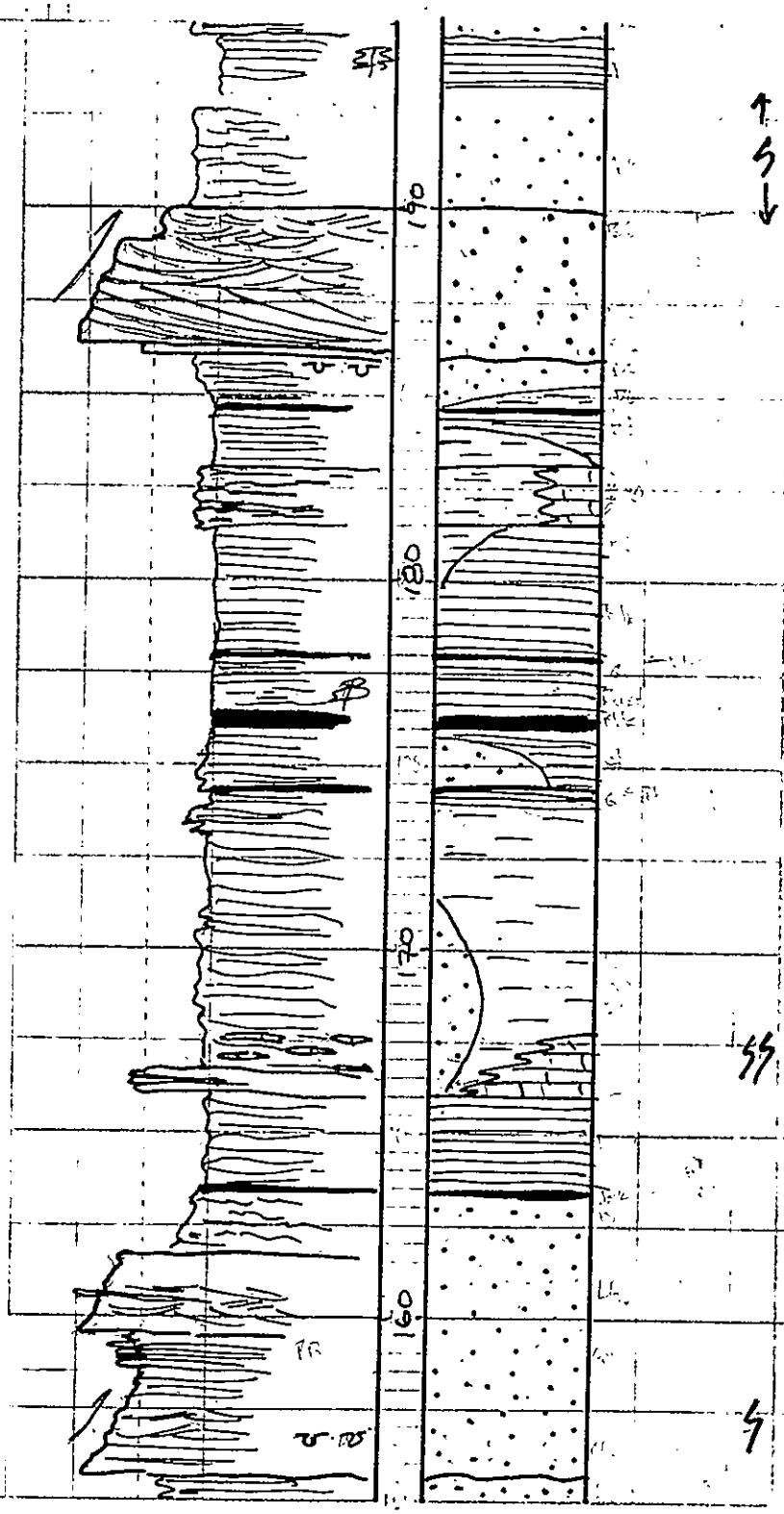
← lignite w/ in dar clay

M.S. No. 29

PAGE 5

BRACHS

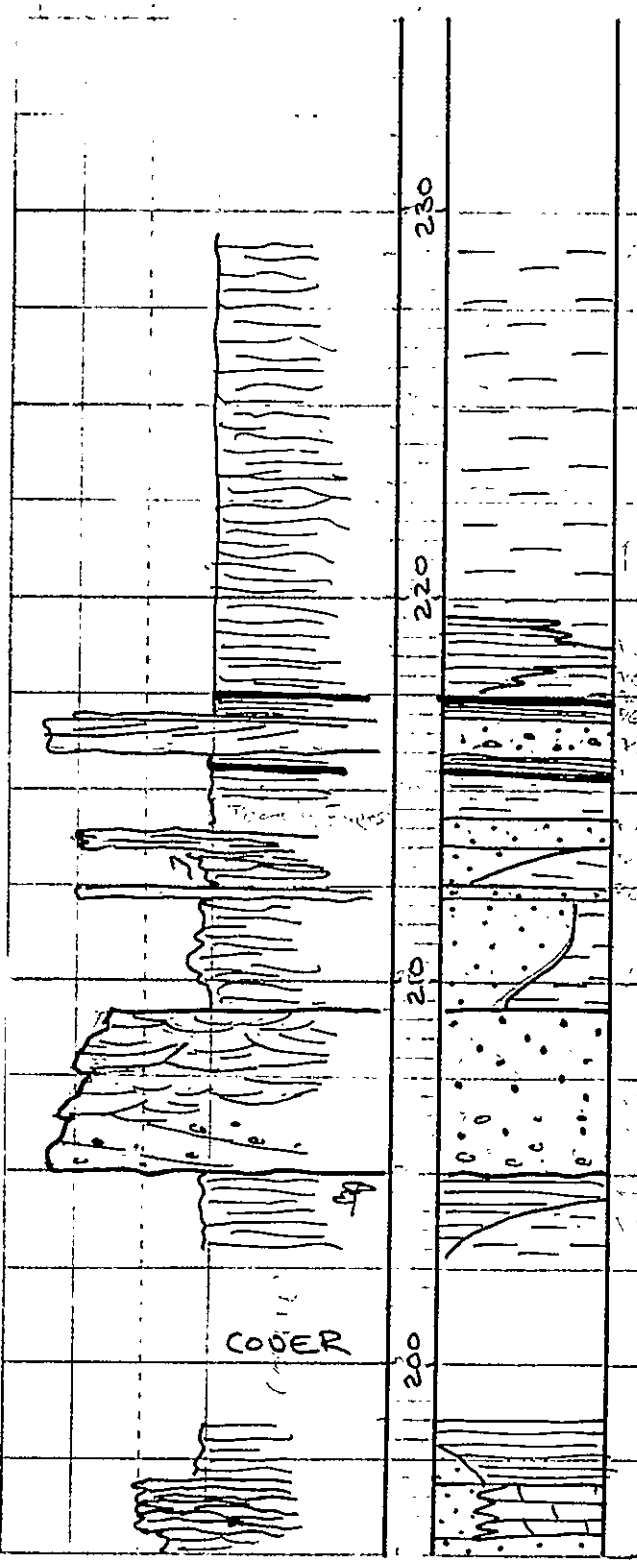
CRINOIDS



Very Microcrinoid

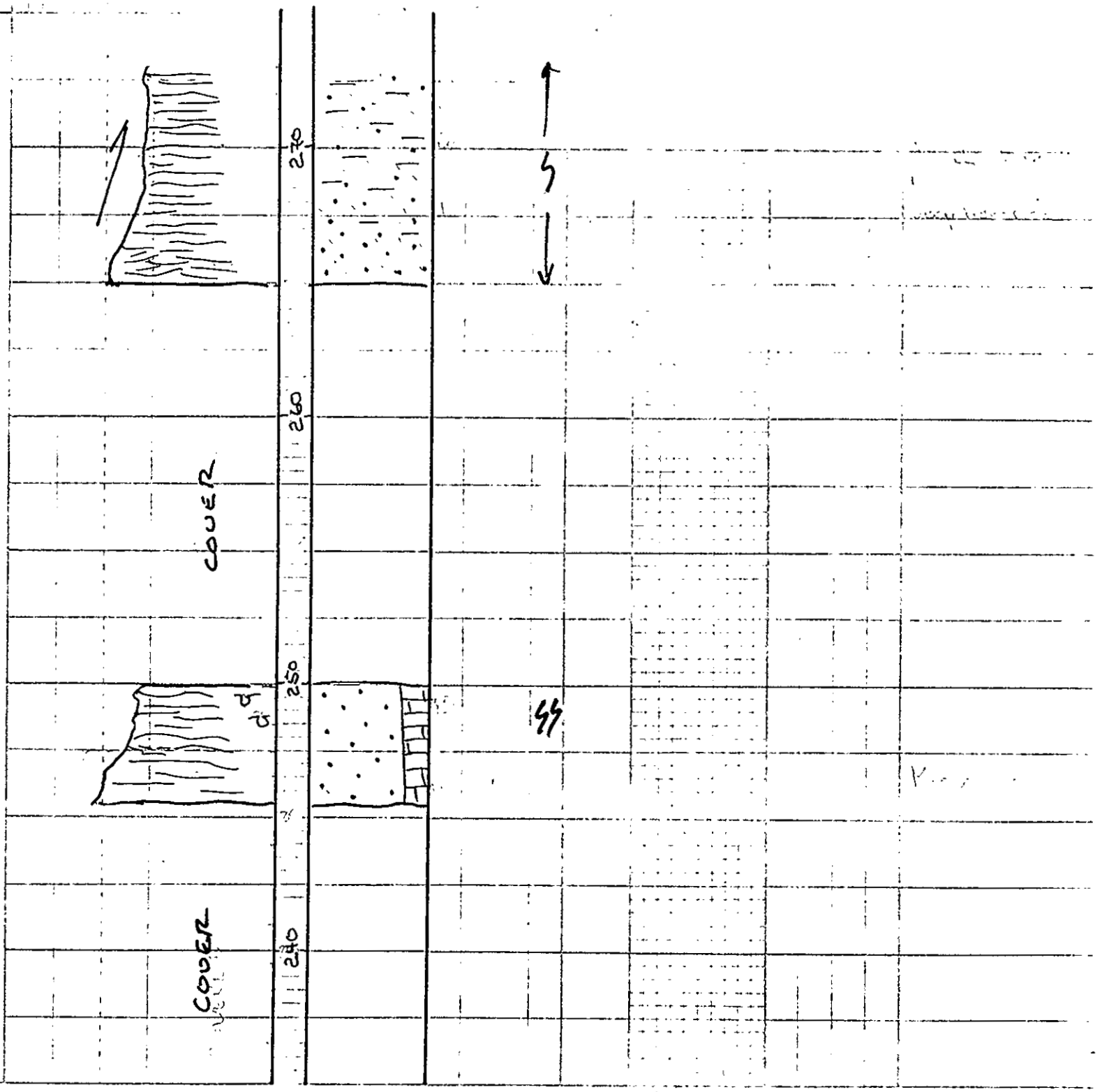
M.S. No. 29

PAGE 6



M.S. No. 29

PAGE 7

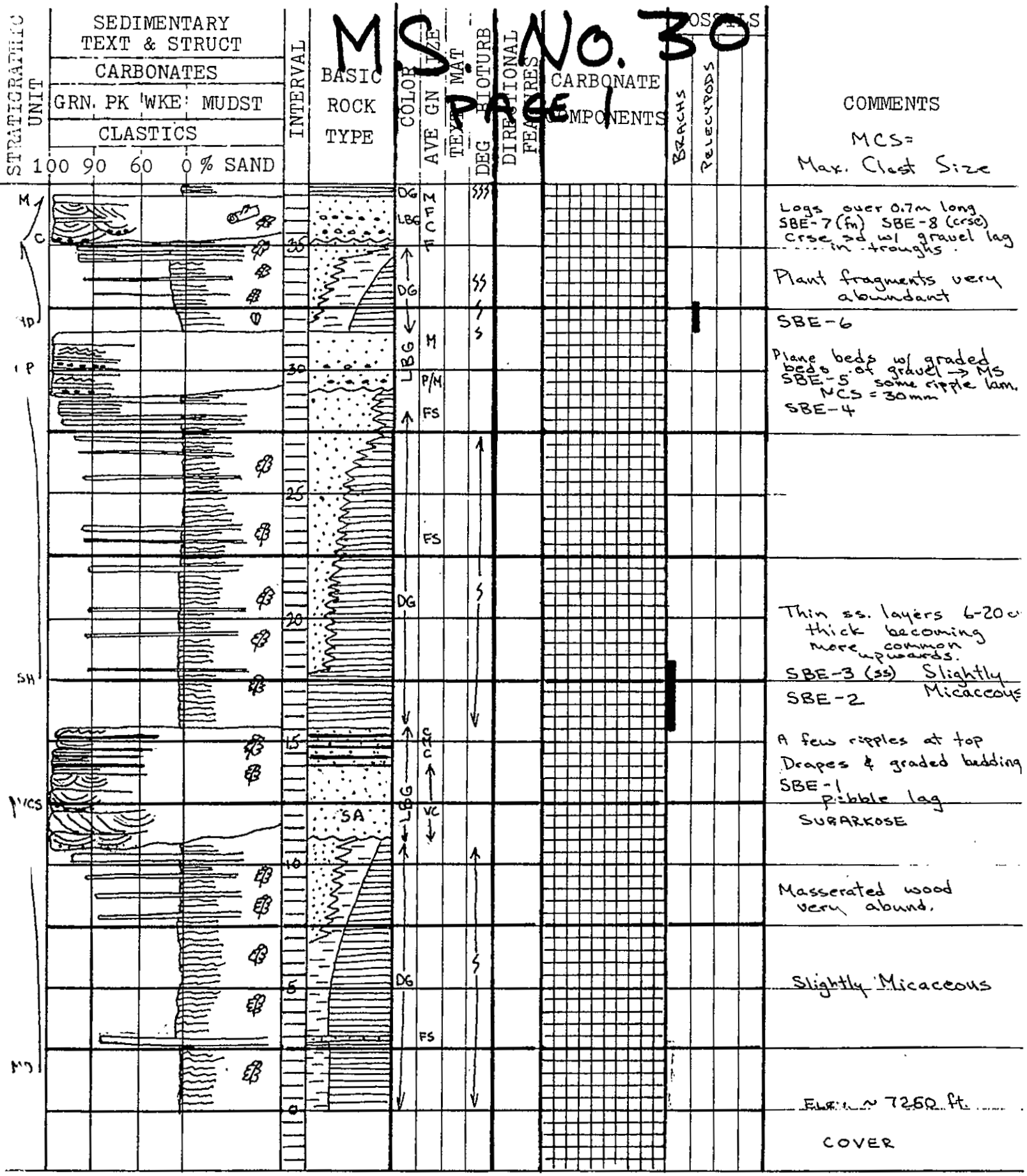


MEASURED SECTION NO. _____ DATE June 28, 1977

LOCALITY E of Smokey Bear Sign on Hwy 3 STRATIGRAPHIC UNIT _____

SETTING Gully MEASURED BY JMC

MS. No. 30 PAGE 1

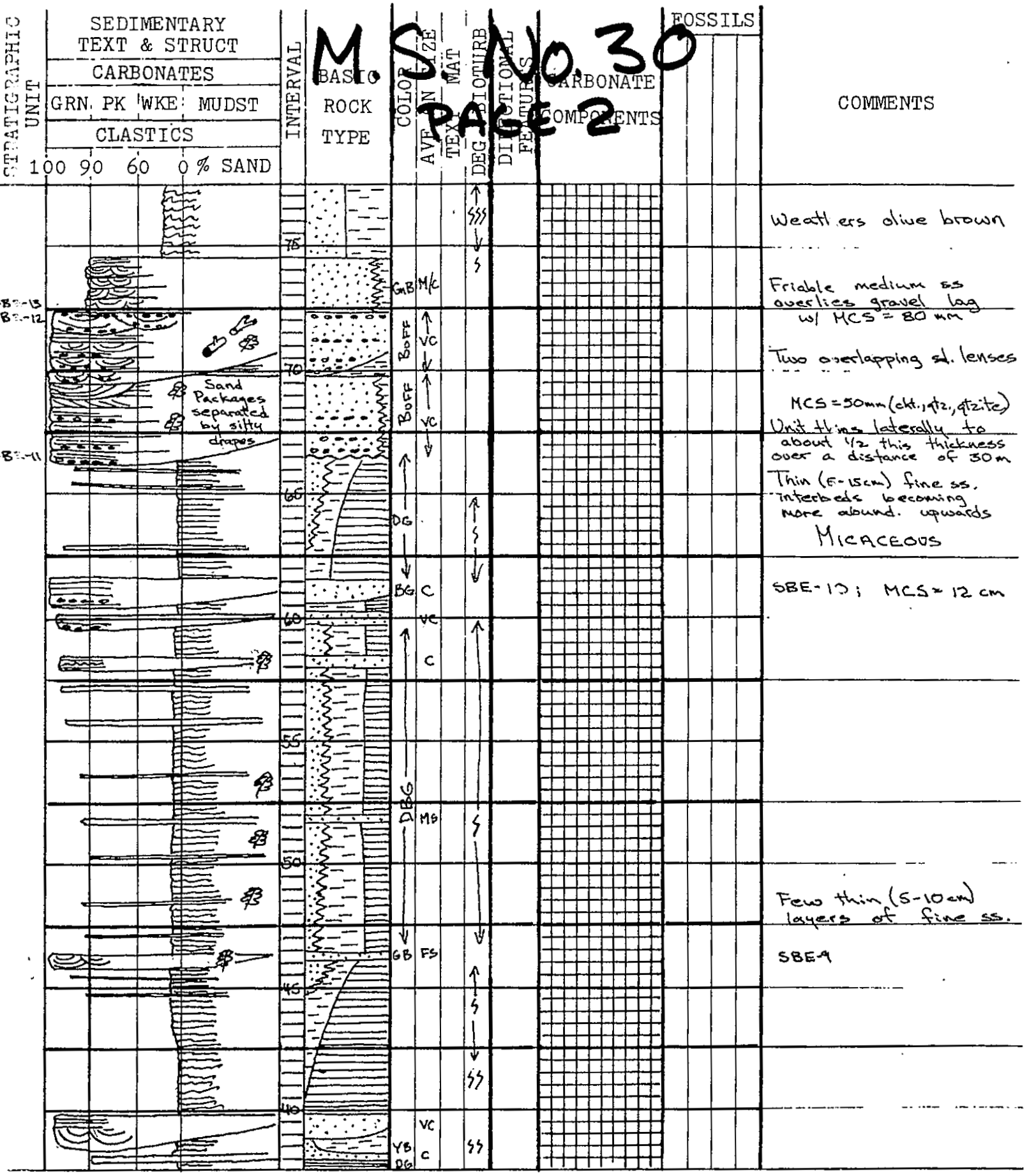


MEASURED SECTION NO. _____ DATE JUNE 28, 1977

LOCALITY Smokey Bear East STRATIGRAPHIC UNIT _____

SETTING Gully MEASURED BY JMC

M.S. No. 30 PAGE 2



MEASURED SECTION NO. _____ DATE June 29, 1977

LOCALITY Smokey Bear East STRATIGRAPHIC UNIT _____

SETTING Gully MEASURED BY JMC

M.S. No. 30 PAGE 3

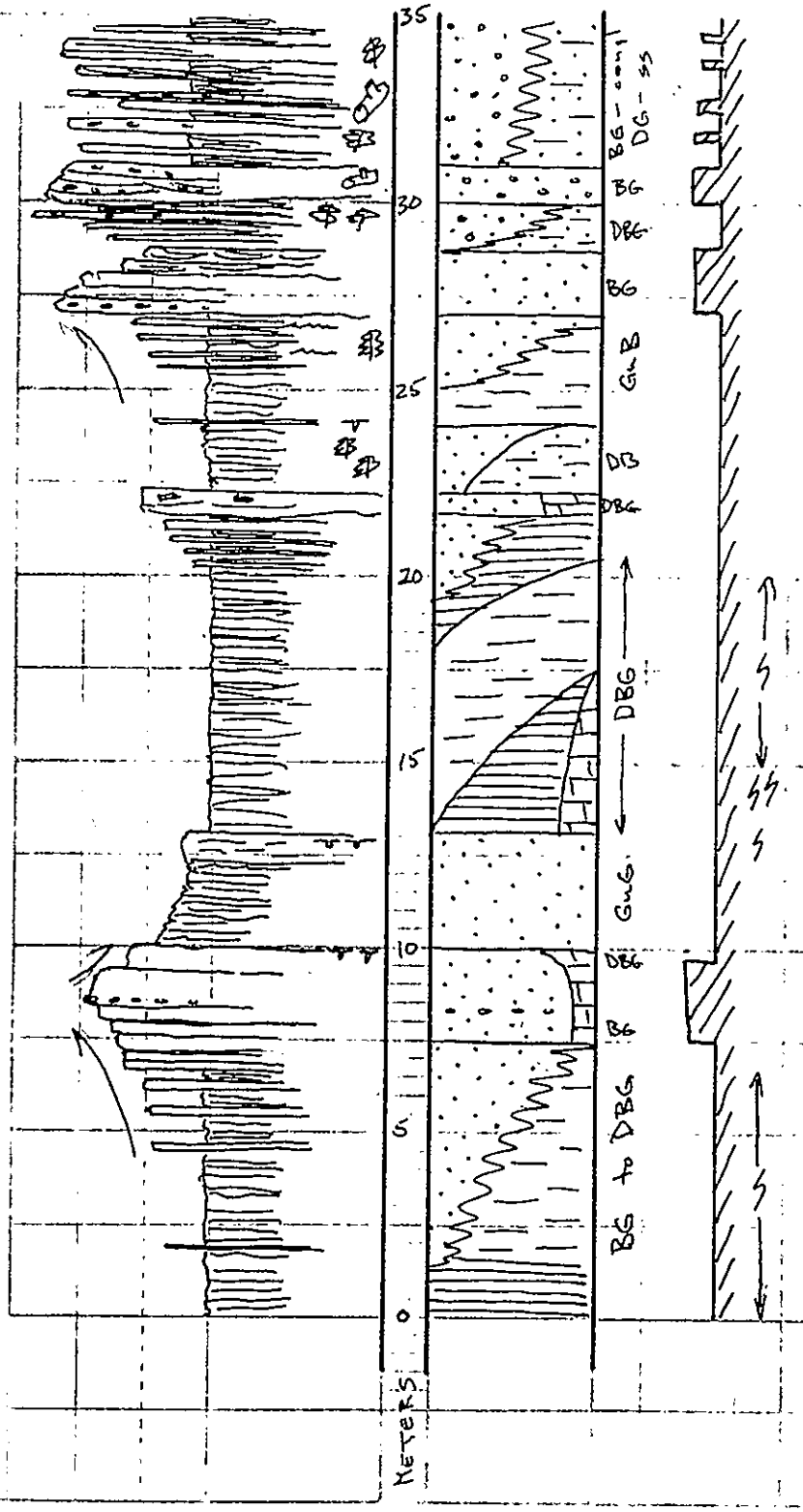
STRATIGRAPHIC UNIT	SEDIMENTARY TEXT & STRUCT: CARBONATES (GRN. PK WKE MUDST) / CLASTICS (100 90 60 0 % SAND)	INTERVAL	BASIC ROCK TYPE	COLOR	AVERAGE SIZE	MAX. SIZE	DEG. BIOTURB	DIRECTIONAL FEATURES	CARBONATE COMPONENTS	FOSSILS: BRACHS	FOSSILS: PELECYPODS	COMMENTS
		90										
		85		GrB	VC ↑ P			①				Highly weathered & friable MCS = 130 mm SBE-15 ① 570°E @ 44°
				DG	FS VC					■	■	inarticulated brachs SBE-1
		80		BG	P M M							

GSN
N of gaging stat. on Hwy 3

July 5, 1978
JMC

M.S. No. 31

PAGE 1



CAST BRACHS

low ∡ X-bds
dip S75E @ 13

MCS = 5 cm

Ripples

a few thin bds & nodules of micrite straight cephs.

slightly rate
Rippled

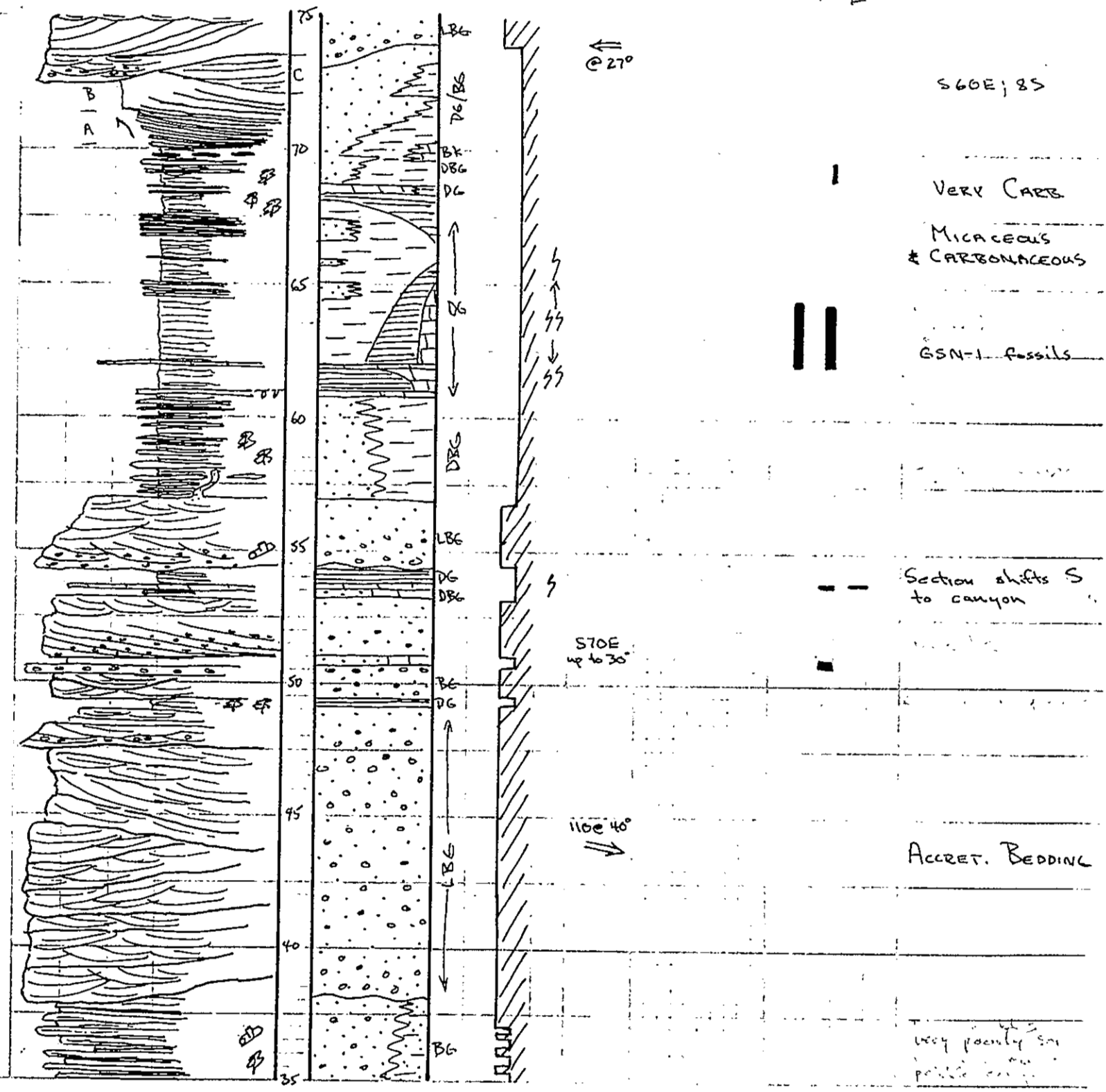
Iron Stained

Dips
N80E; 15S

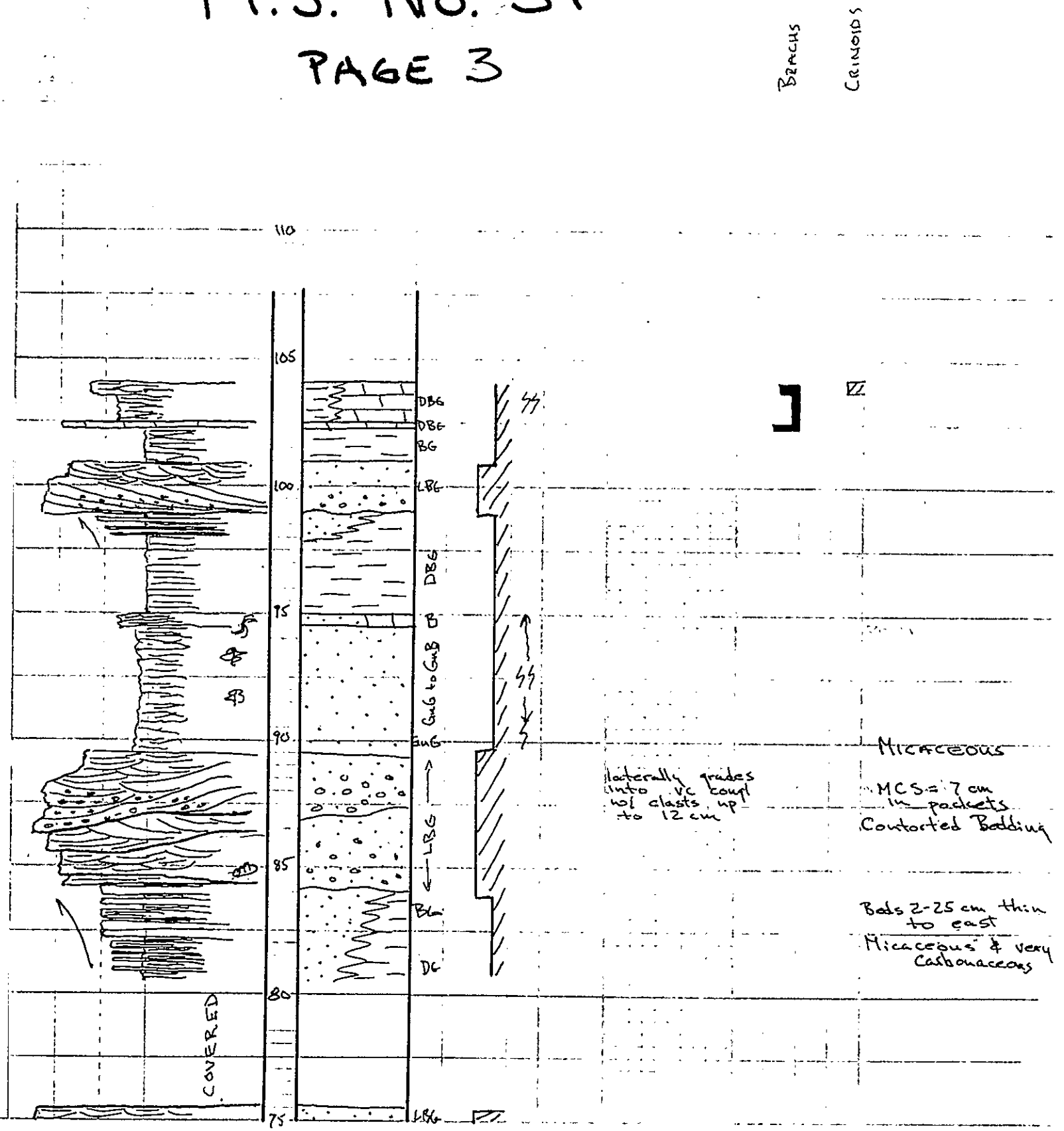
Section starts @ bottom of hill just N of mouth of canyon ~ 50 m from road

M.S. No. 31

PAGE 2

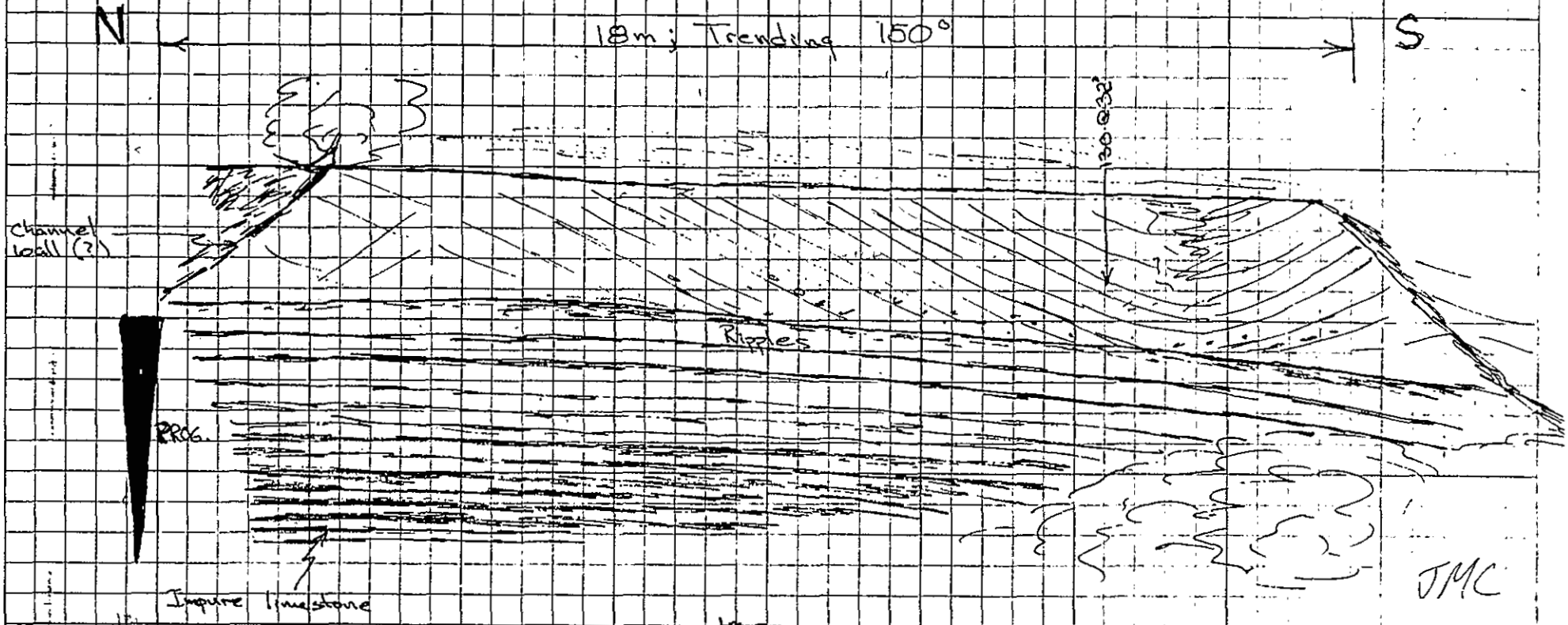


M.S. No. 31
PAGE 3



E WALL OF BOX CANYON (FHN)

SKETCH I



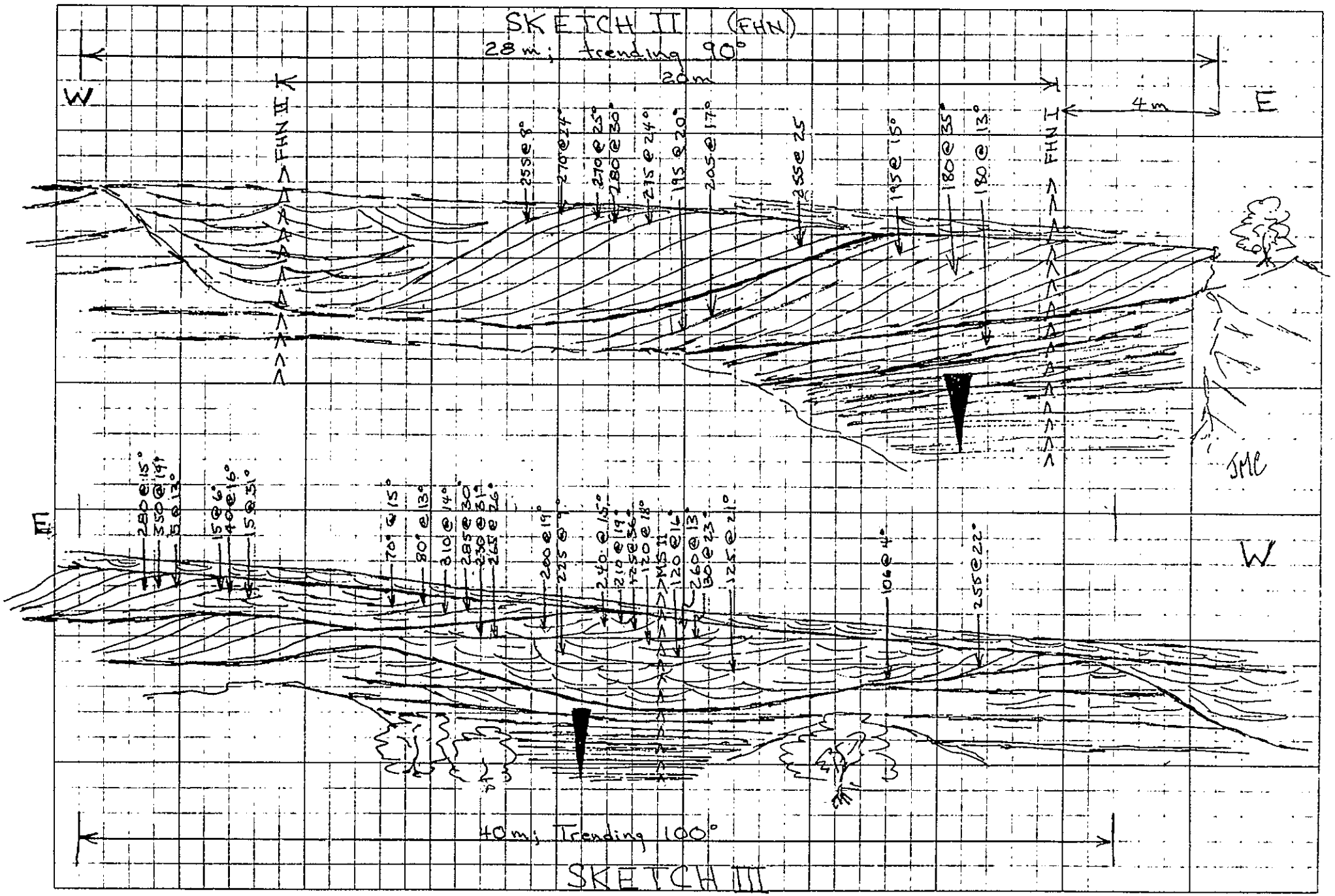
1m

VERT SCALE

0

MS 32 = FHN I
MS 33 = FHN II
MS [illegible] = FHN III
MS 35 = FHN IV
MS 36 = FHN V
MS 37 = FHN VI
MS 38 = FHN VII

Note: MEASURED SECTIONS FHN I – VII ARE LOCATED ON SKETCHES I – VI; SEE SKETCH IV FOR MAP VIEW OF SKETCHES


SKETCH II (FHN)
28 m; trending 90°
20 m
4 m
W
E
FHN II
FHN I
255 @ 8°
270 @ 14°
270 @ 25°
280 @ 30°
235 @ 24°
195 @ 20°
205 @ 17°
255 @ 25
195 @ 15°
180 @ 35°
180 @ 13°
JMC
E
W
280 @ 15°
350 @ 19°
5 @ 13°
15 @ 6°
40 @ 16°
15 @ 31°
70° @ 15°
80° @ 13°
310 @ 14°
285 @ 30°
230 @ 31°
265 @ 26°
280 @ 19°
225 @ 9°
240 @ 15°
210 @ 19°
125 @ 36°
120 @ 18°
MS II
120 @ 16°
260 @ 13°
80 @ 23°
125 @ 21°
106 @ 4°
255 @ 22°
40 m; Trending 100°
SKETCH III

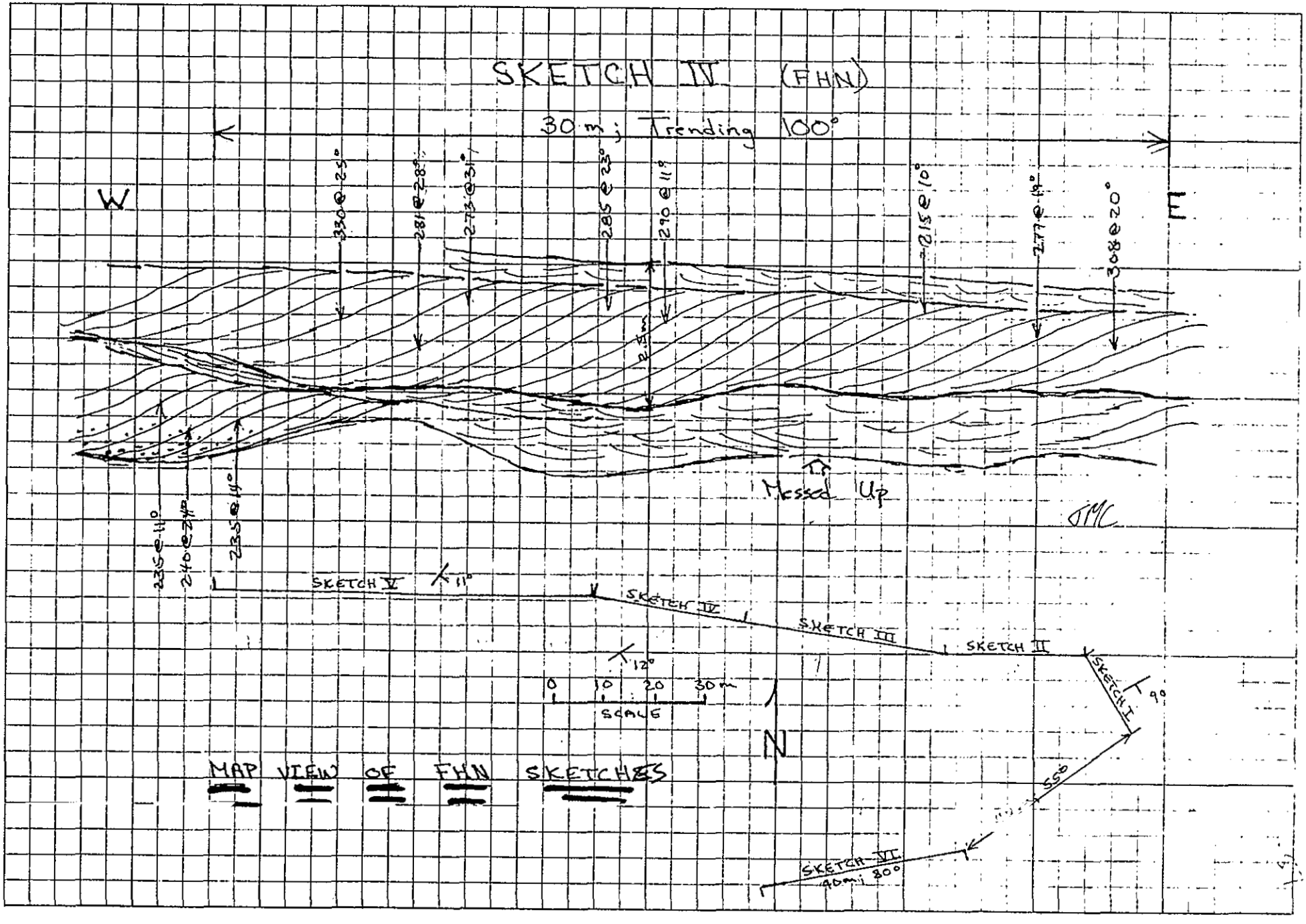
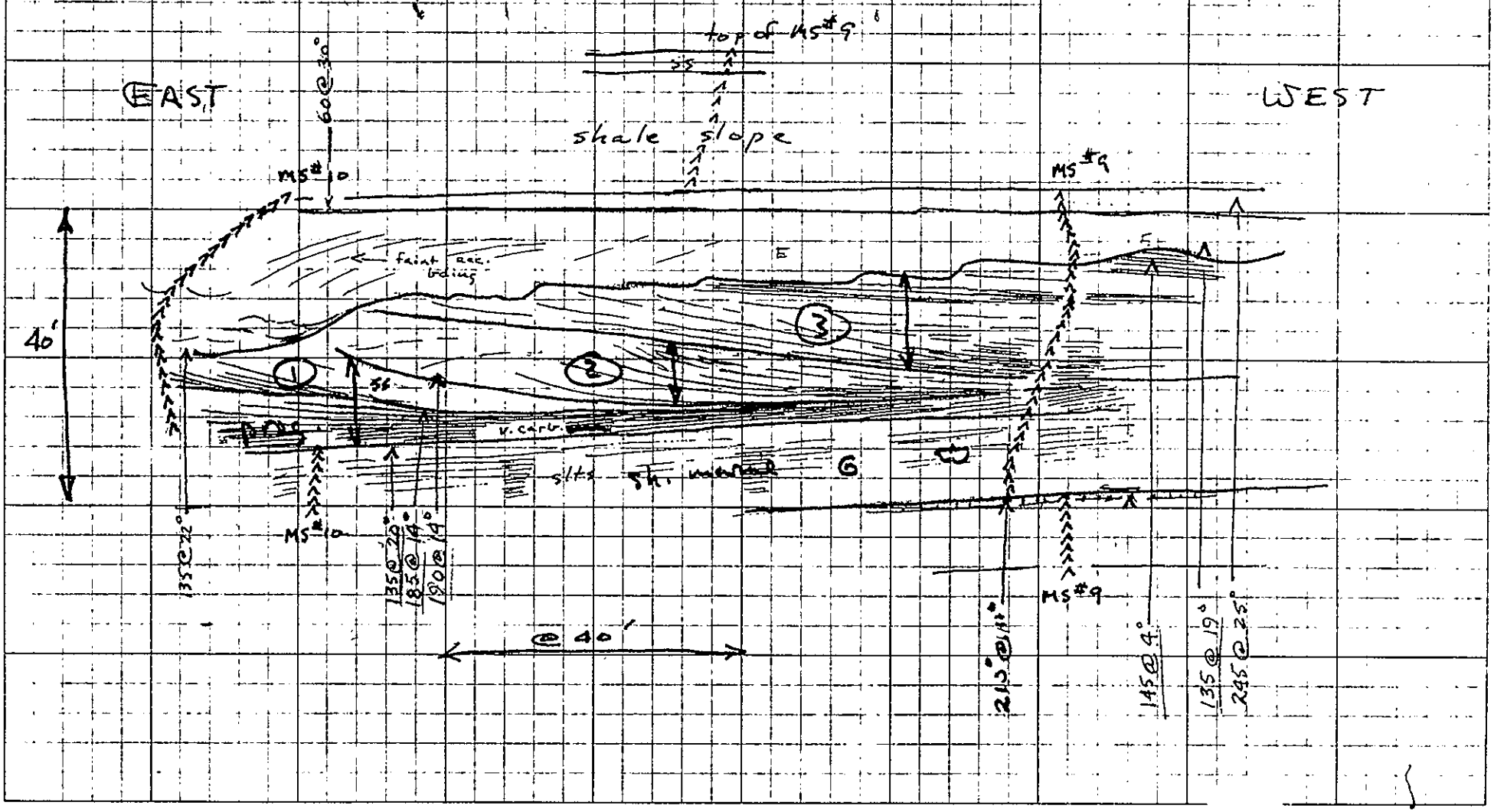

SKETCH IV (FHN)
30 m; Trending 100°
W
E
330 @ 25°
281 @ 28°
273 @ 31°
285 @ 23°
290 @ 11°
215 @ 10°
277 @ 19°
308 @ 20°
235 @ 41°
240 @ 24°
235 @ 19°
Messed Up
JMC
SKETCH V
11°
SKETCH IV
SKETCH III
SKETCH II
12°
0 10 20 30 m
SCALE
N
SKETCH I
90°
55°
SKETCH VI
40 m; 80°
MAP VIEW OF FHN SKETCHES

Fig 7

SKETCH VI

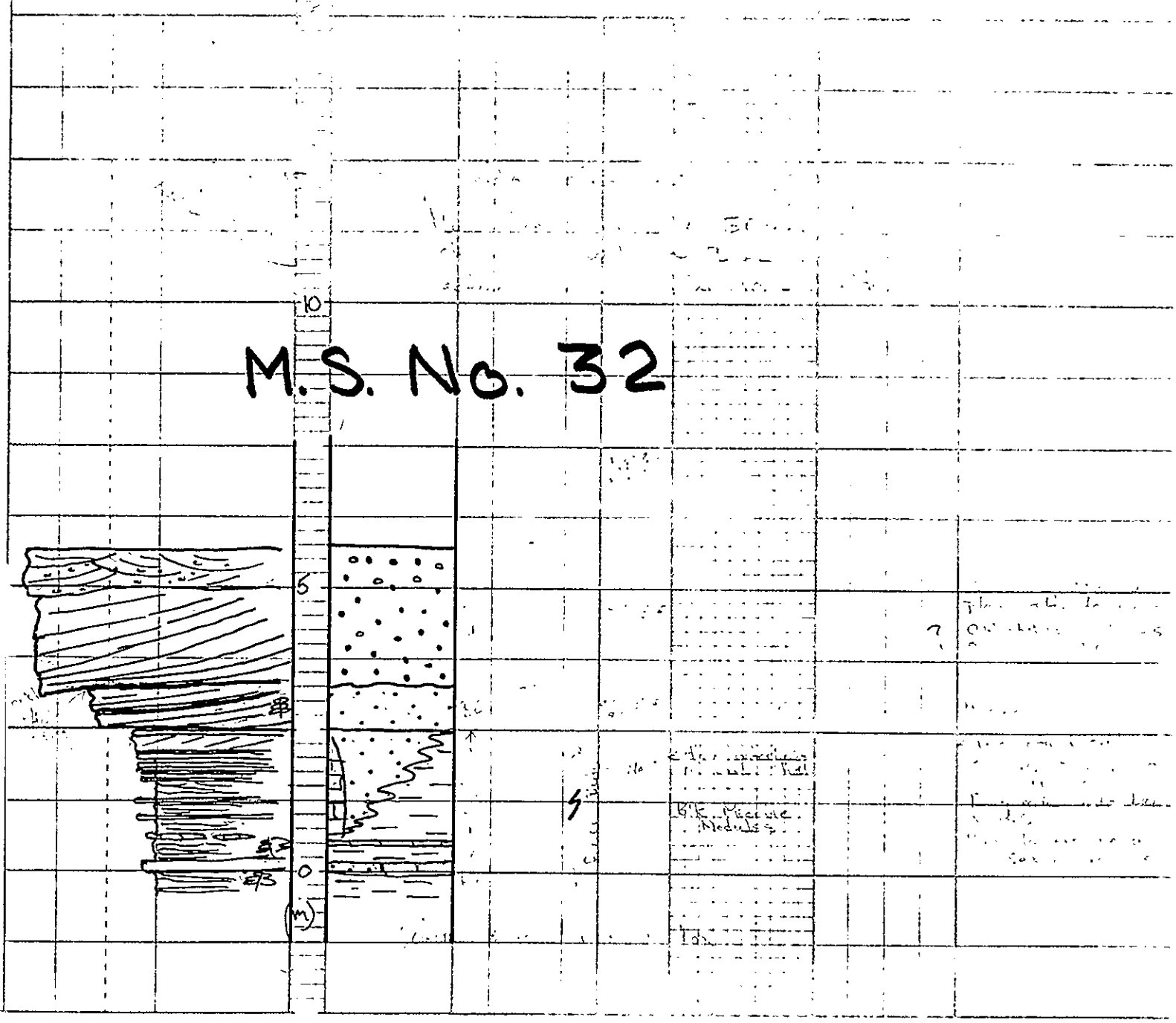
South wall of canyon as viewed from top of MS #2 & MS #3.



FHN I
Canyon N of Fossil Hill
N side of Canyon

July 8, 1978
JMC

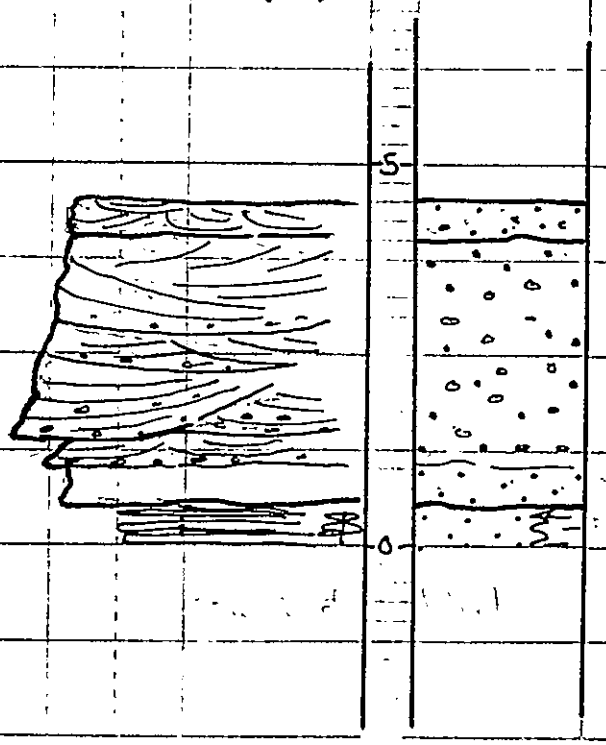
M.S. No. 32



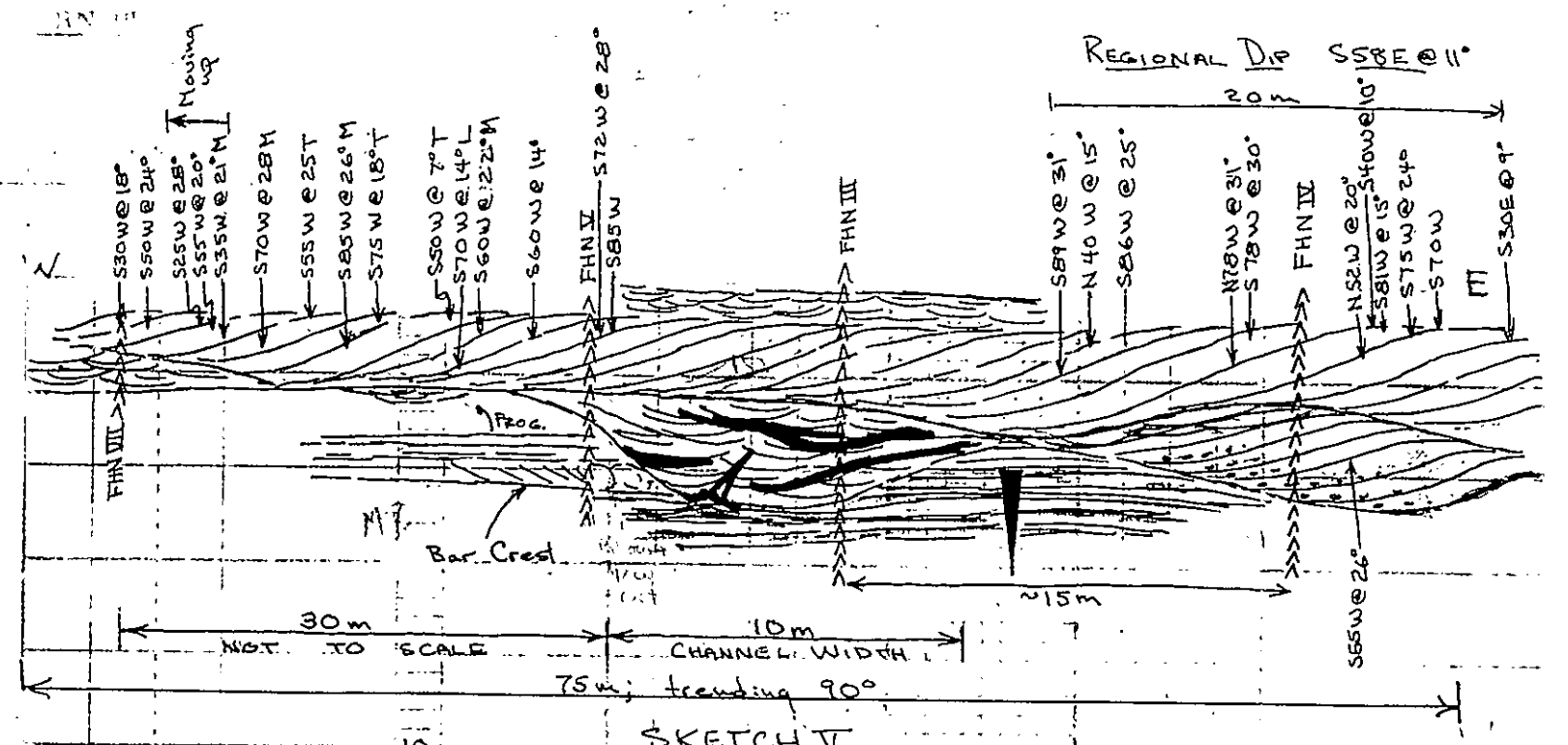
FHN I

FHN II

M.S. No. 33

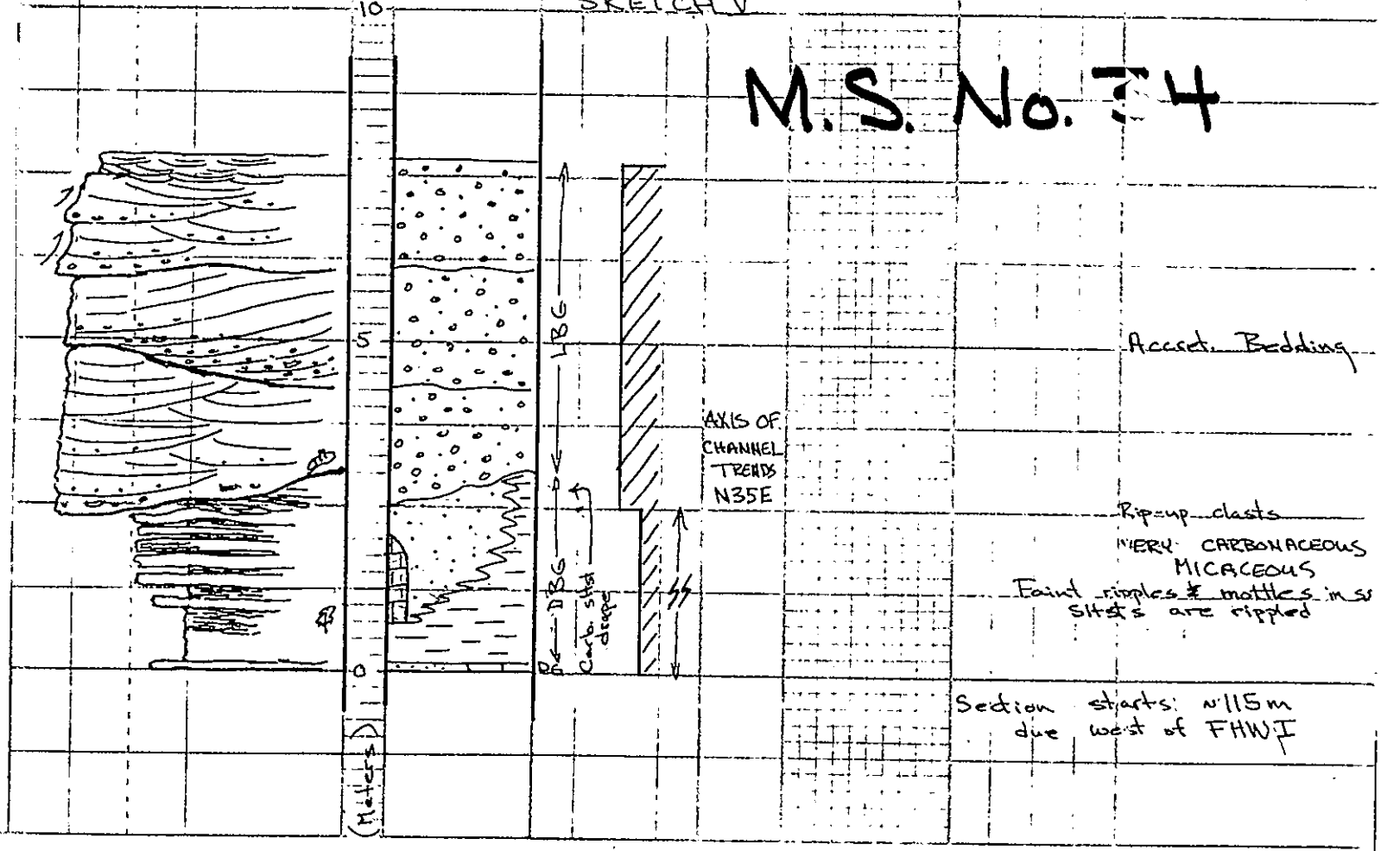


July 8, 1978
JMC

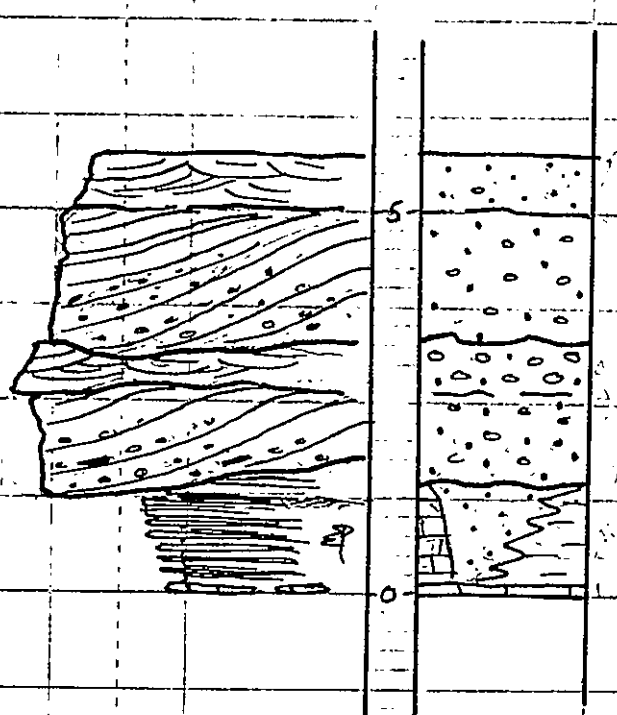


SKETCH V

M.S. No. 74



M.S. No. 35



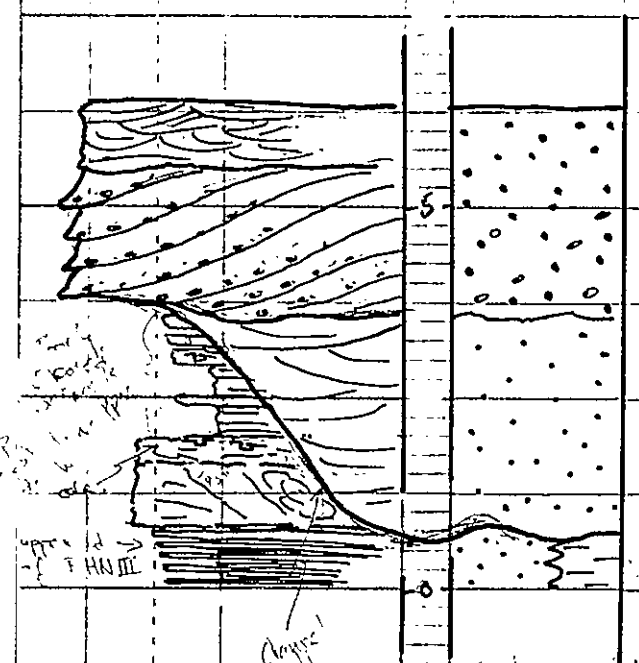
Rip-up's large Elk Shale

>.7m relief on ripples

Microcrystal. Carb

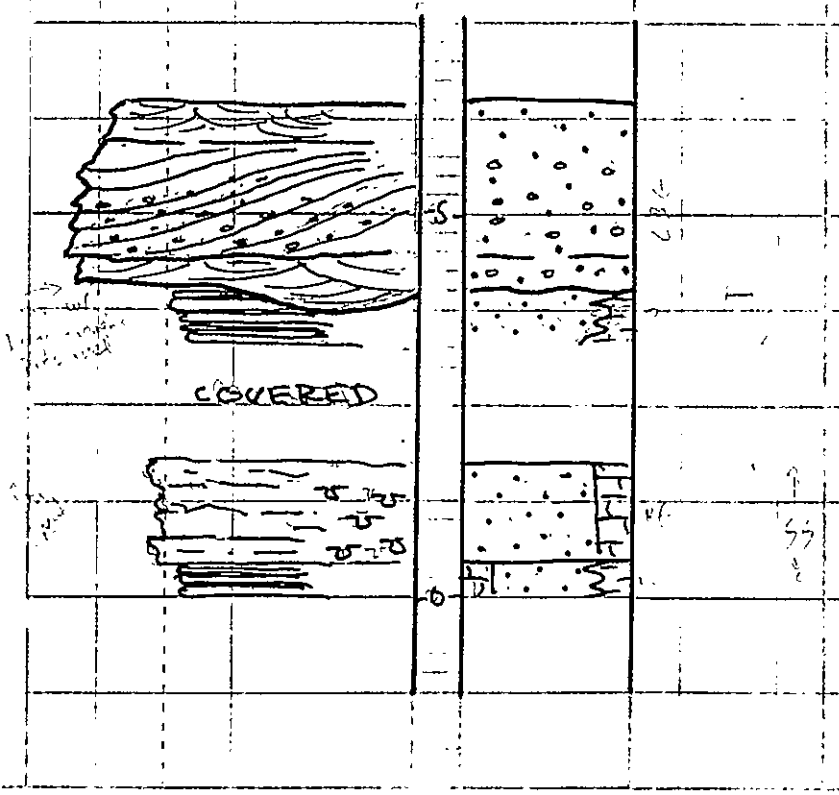
FHN IX

M.S. No. 36



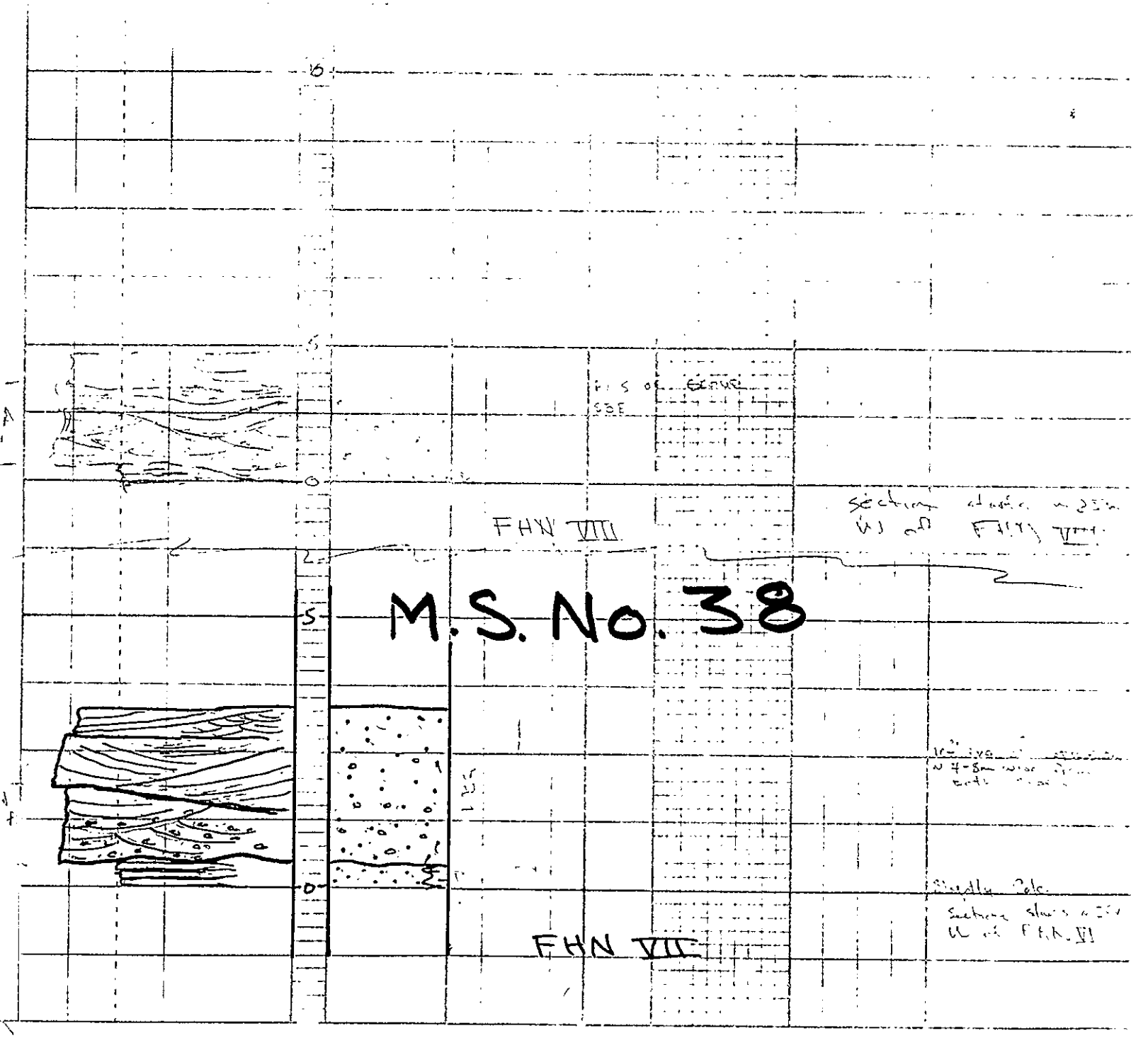
FHN VI

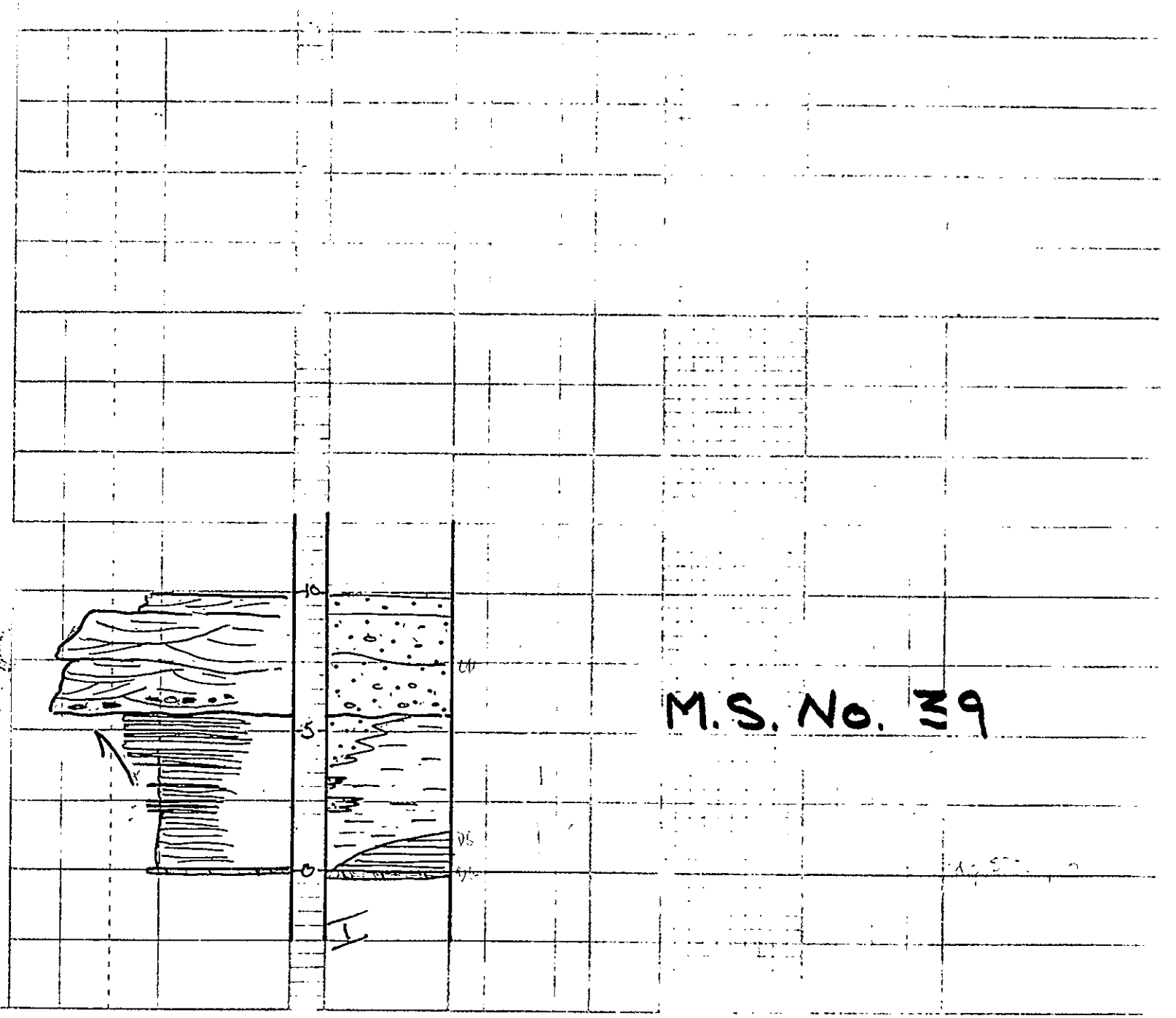
M.S. No. 37

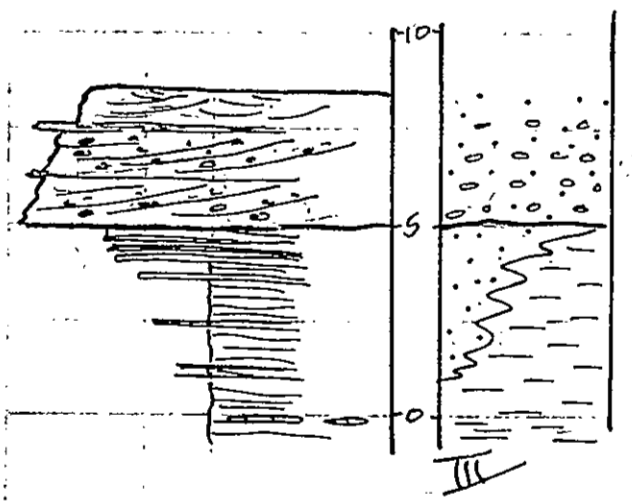


contoured on last fill. mgs

Section starts ~ 8 m W of FHN5


FHN VIII
M.S. No. 38
FHN VII


10
5
0
M.S. No. 39



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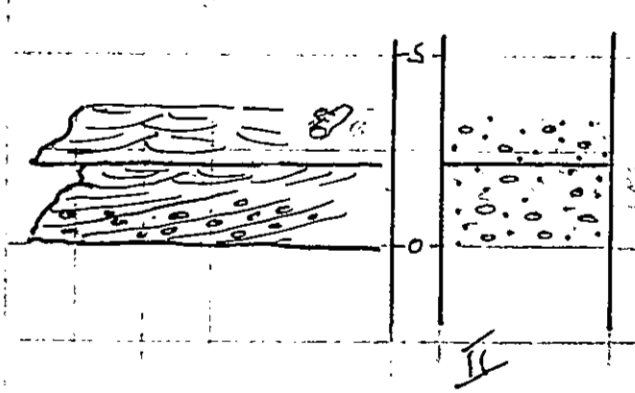
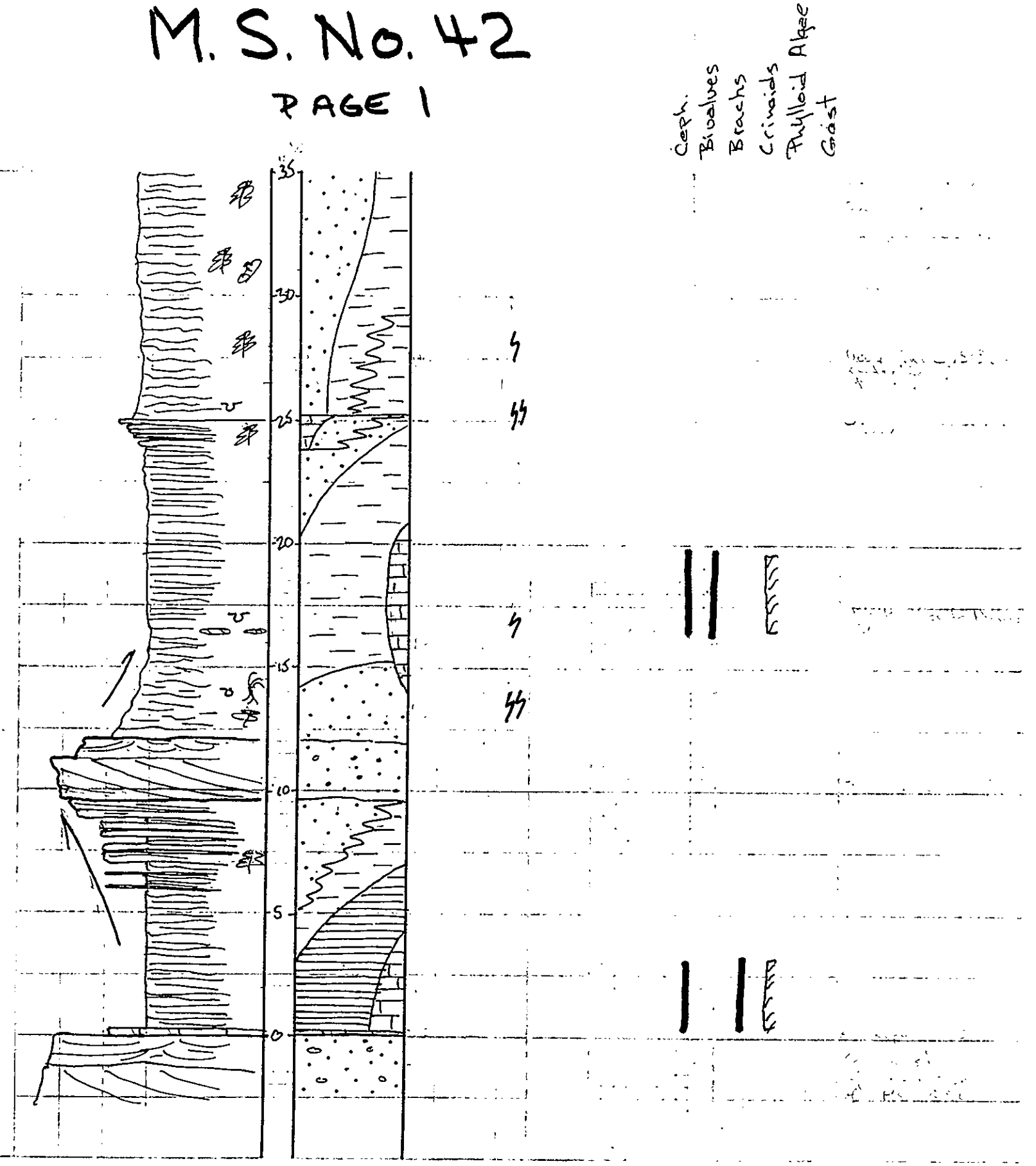


M.S. No. 40

M. S. No. 42

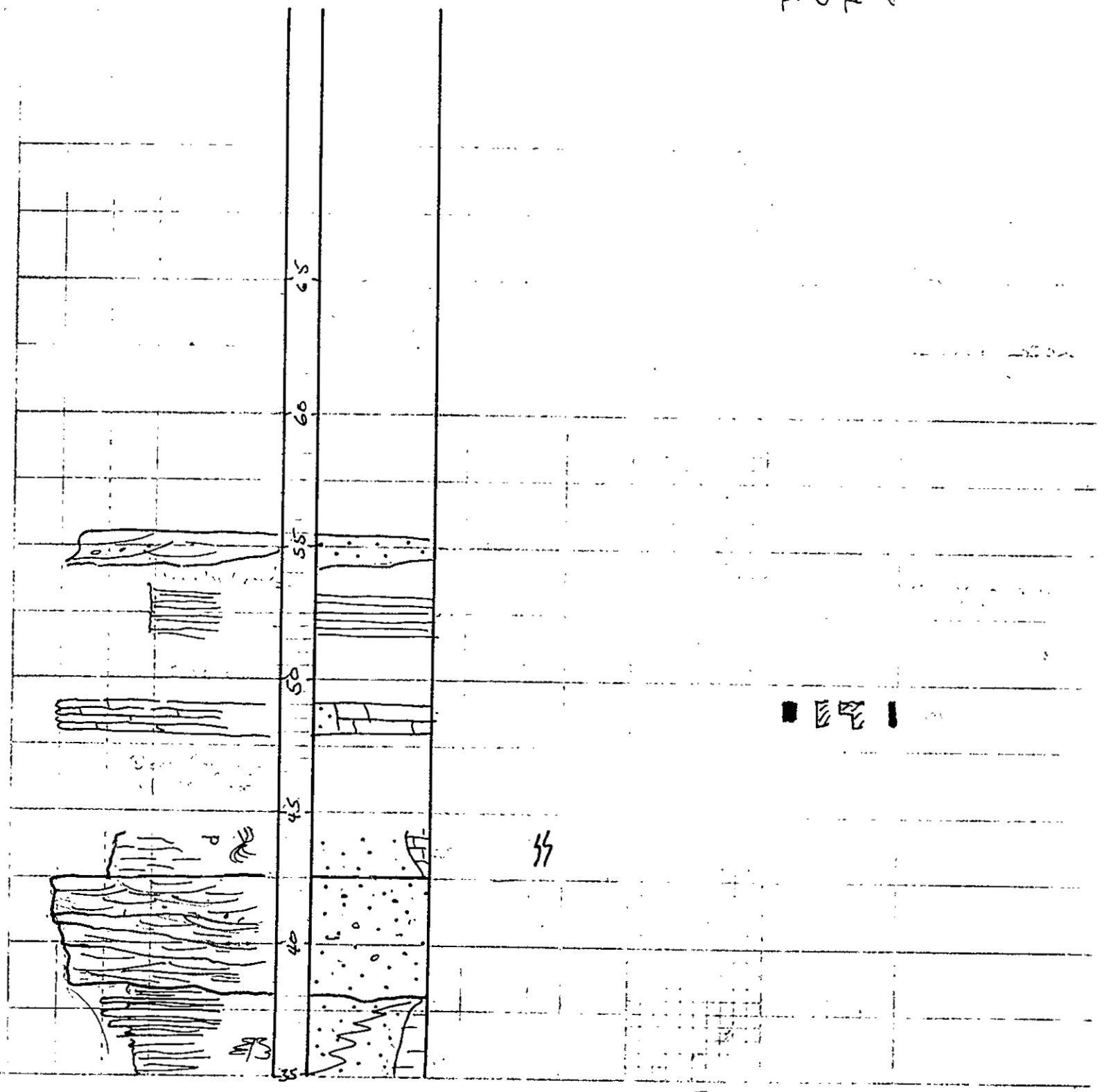
PAGE 1



M.S. No. 42

PAGE 2

Bracks
Crinoids
Phylloid Algae
Cast.

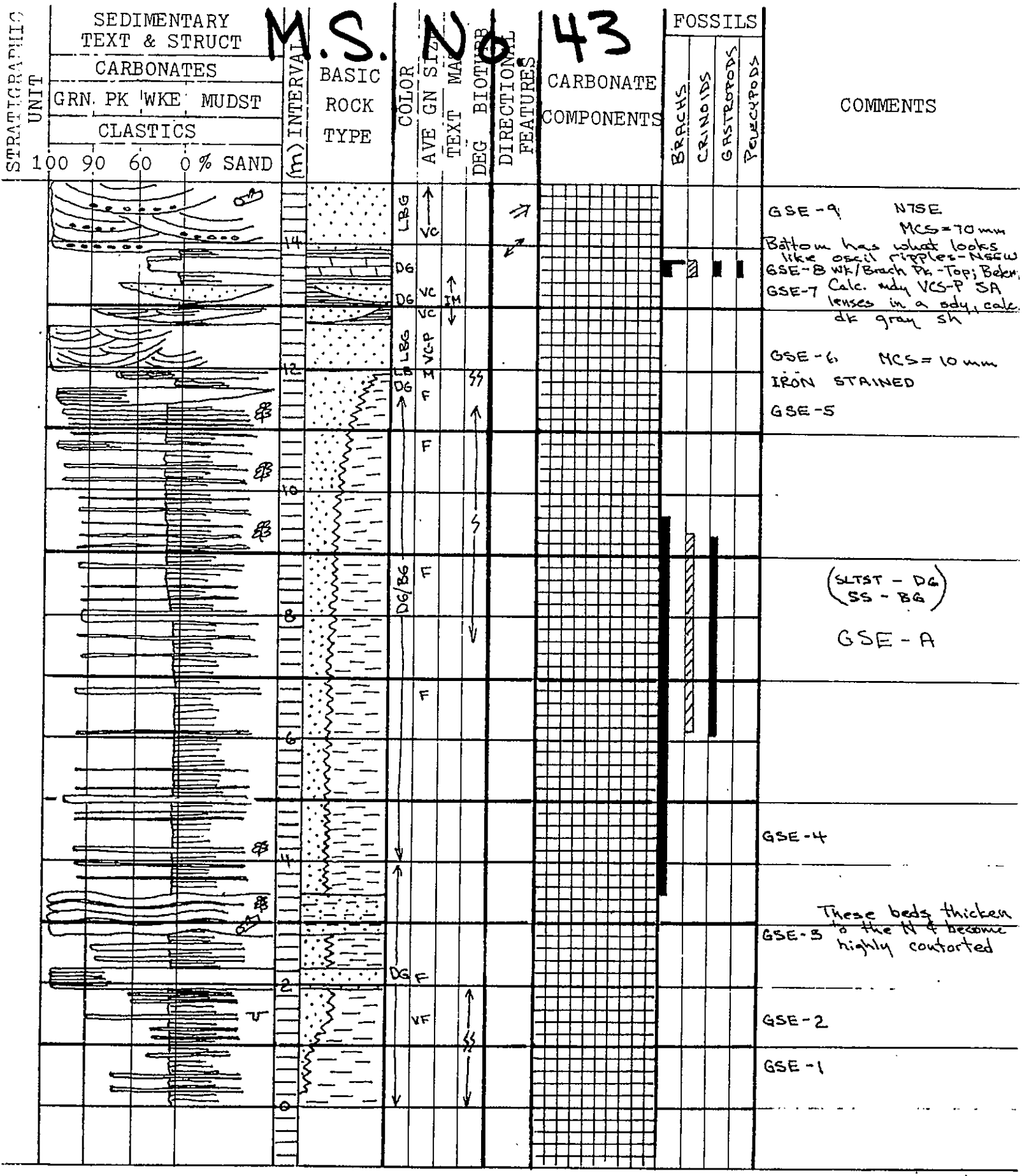


MEASURED SECTION NO. _____ DATE July 1977

LOCALITY E of Guaging Station Hwy 3 STRATIGRAPHIC UNIT _____

SETTING Roadcut MEASURED BY JNC

M.S. No 43

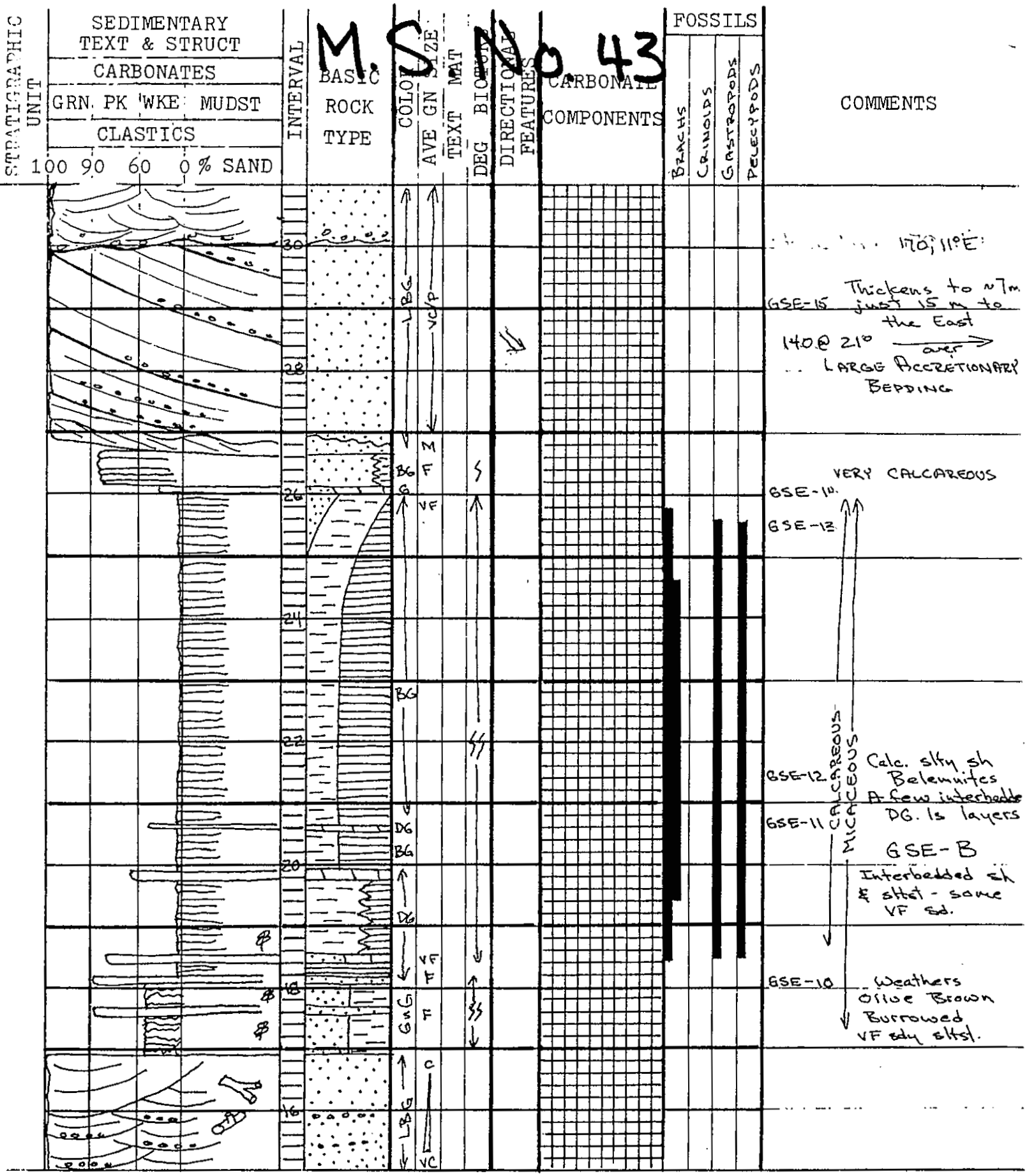


MEASURED SECTION NO. _____ DATE _____

LOCALITY GSE STRATIGRAPHIC UNIT _____

SETTING _____ MEASURED BY _____

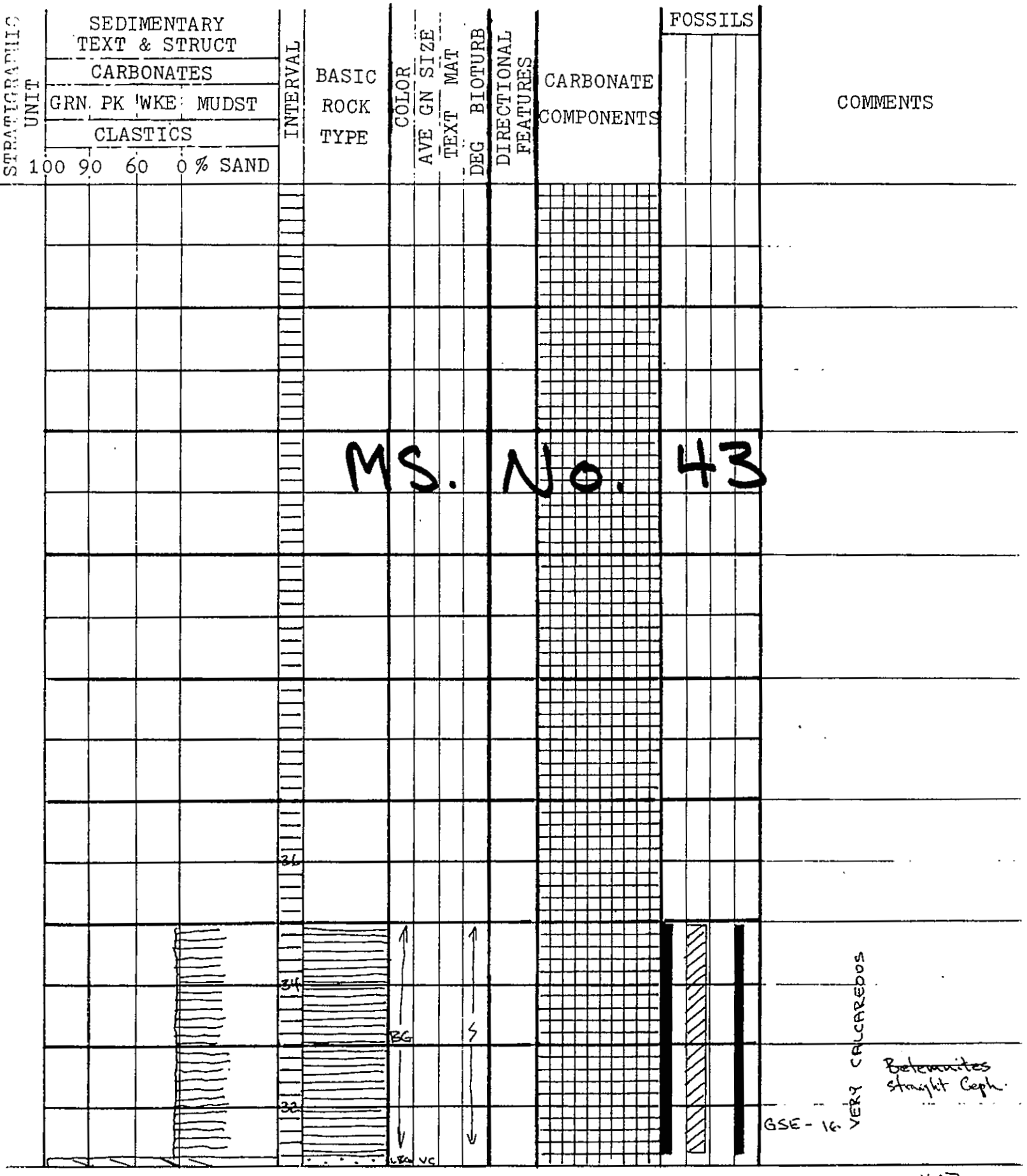
M.S. No. 43



MEASURED SECTION NO. _____ DATE _____

LOCALITY GSE STRATIGRAPHIC UNIT _____

SETTING _____ MEASURED BY _____



GSE II

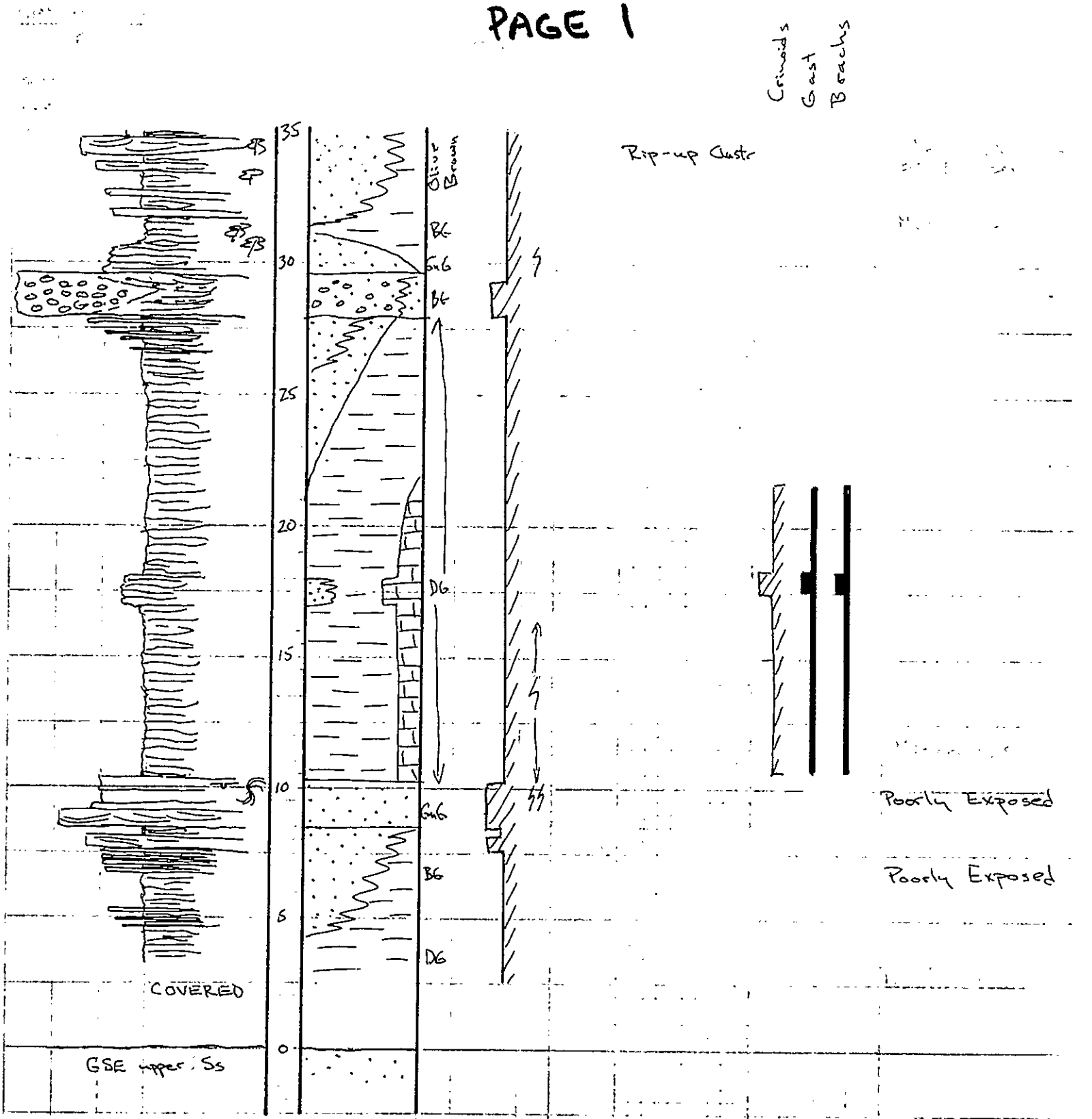
Hill side

July 7, 1978

JMC

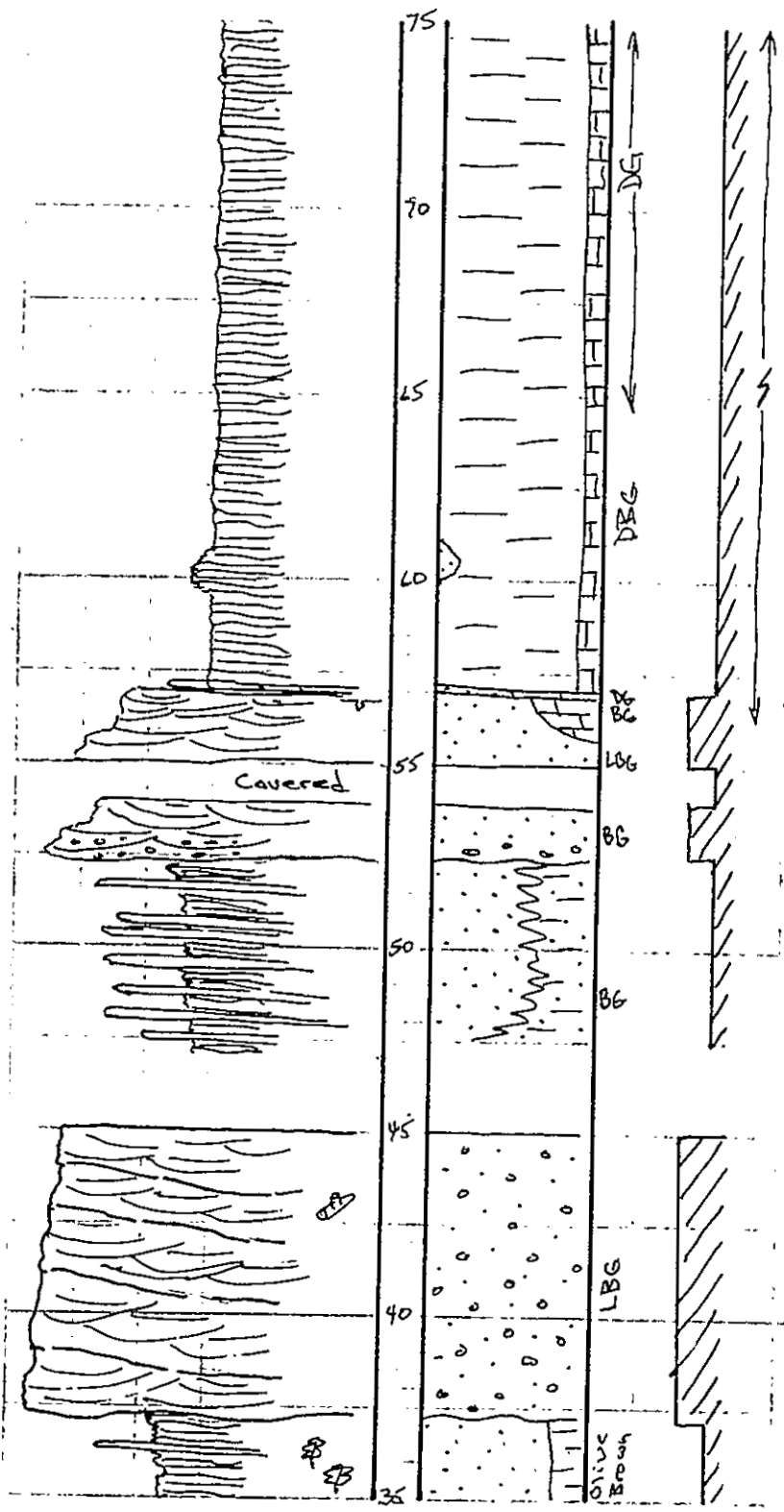
M.S. No. 44

PAGE 1



July 7
JMC

M.S. No. 44
PAGE 2



A few fossils

Micaceous

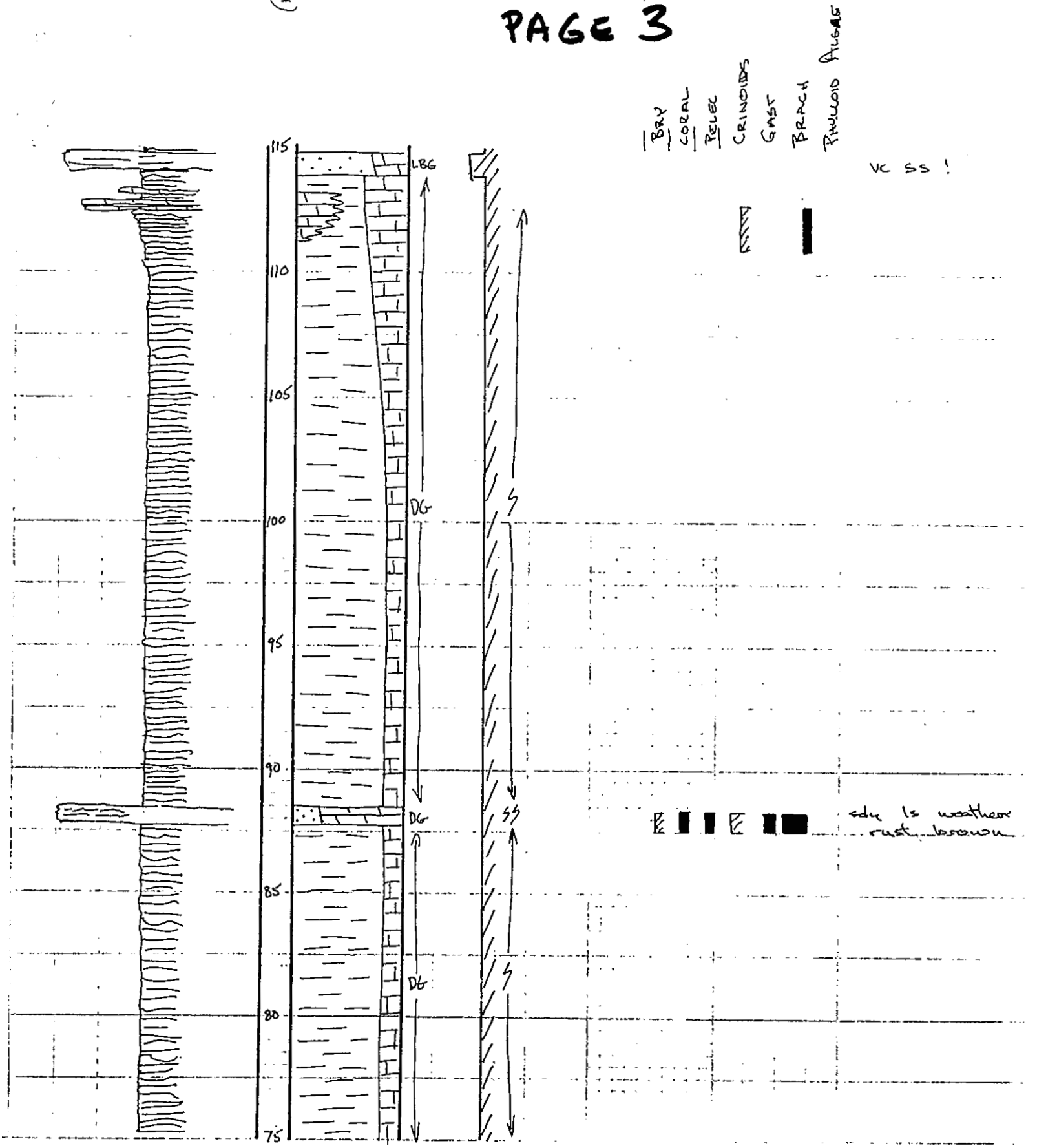
CSE

July 7

JMC

M.S. No. 44

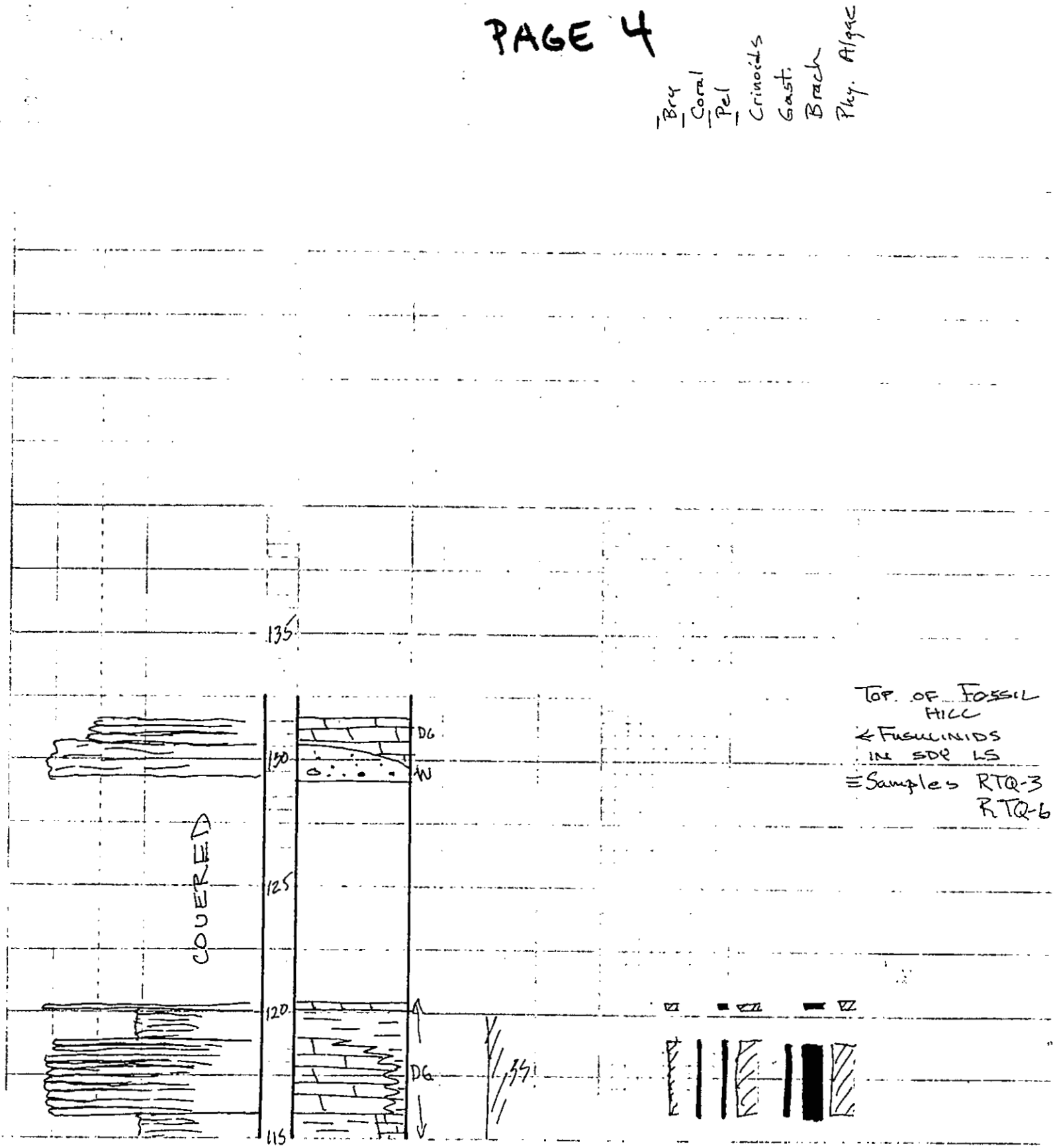
PAGE 3



11.6

July 7
JMC

M.S. No. 44
PAGE 4



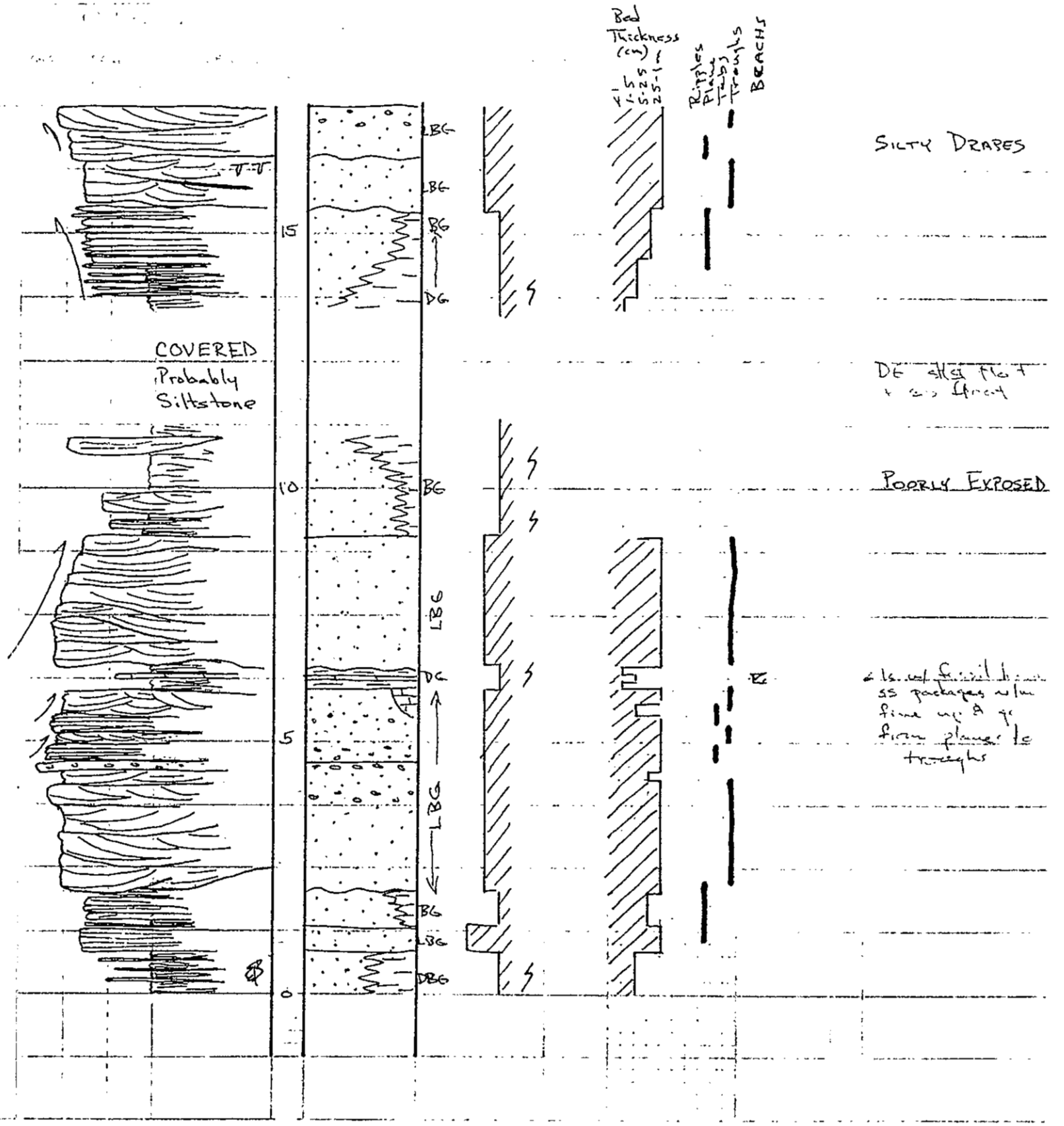
FHW

June 24, 1978

JMC

M.S. No. 45

PAGE 1



FHW

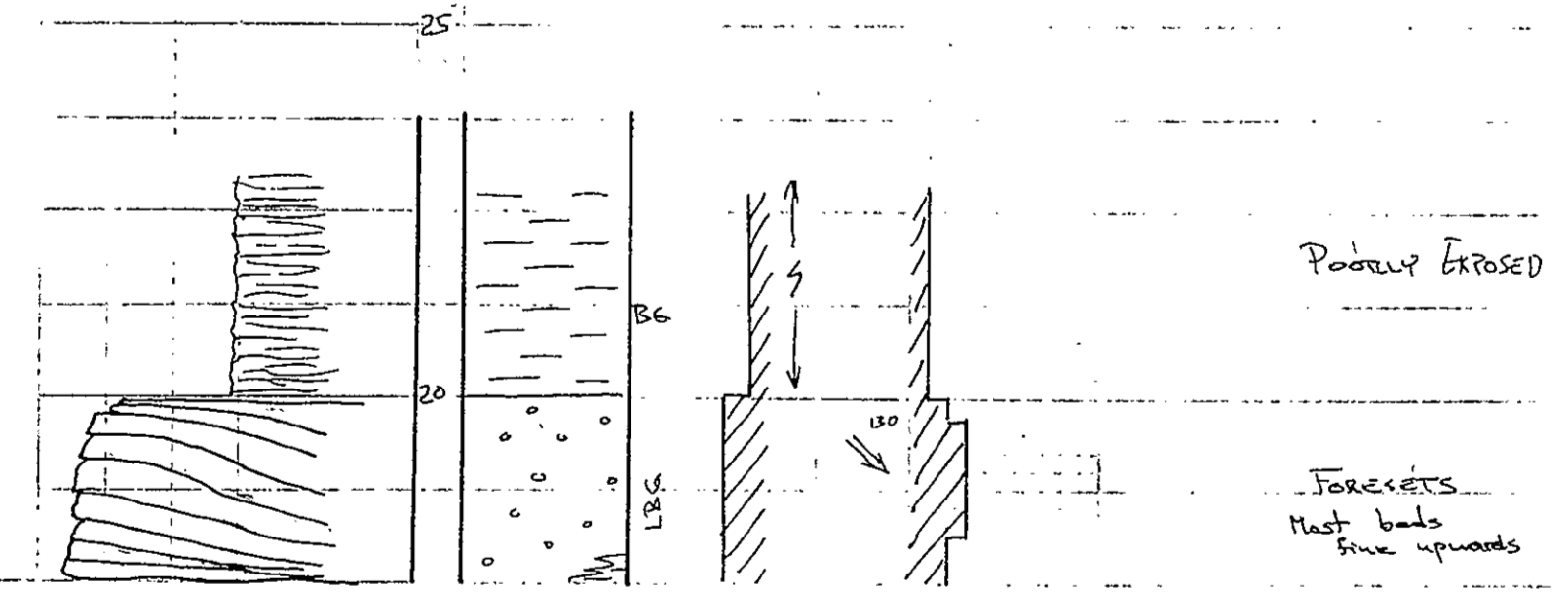
June 24, 1978

JMC

Bed Thickness
V. L. M. S. V. S.

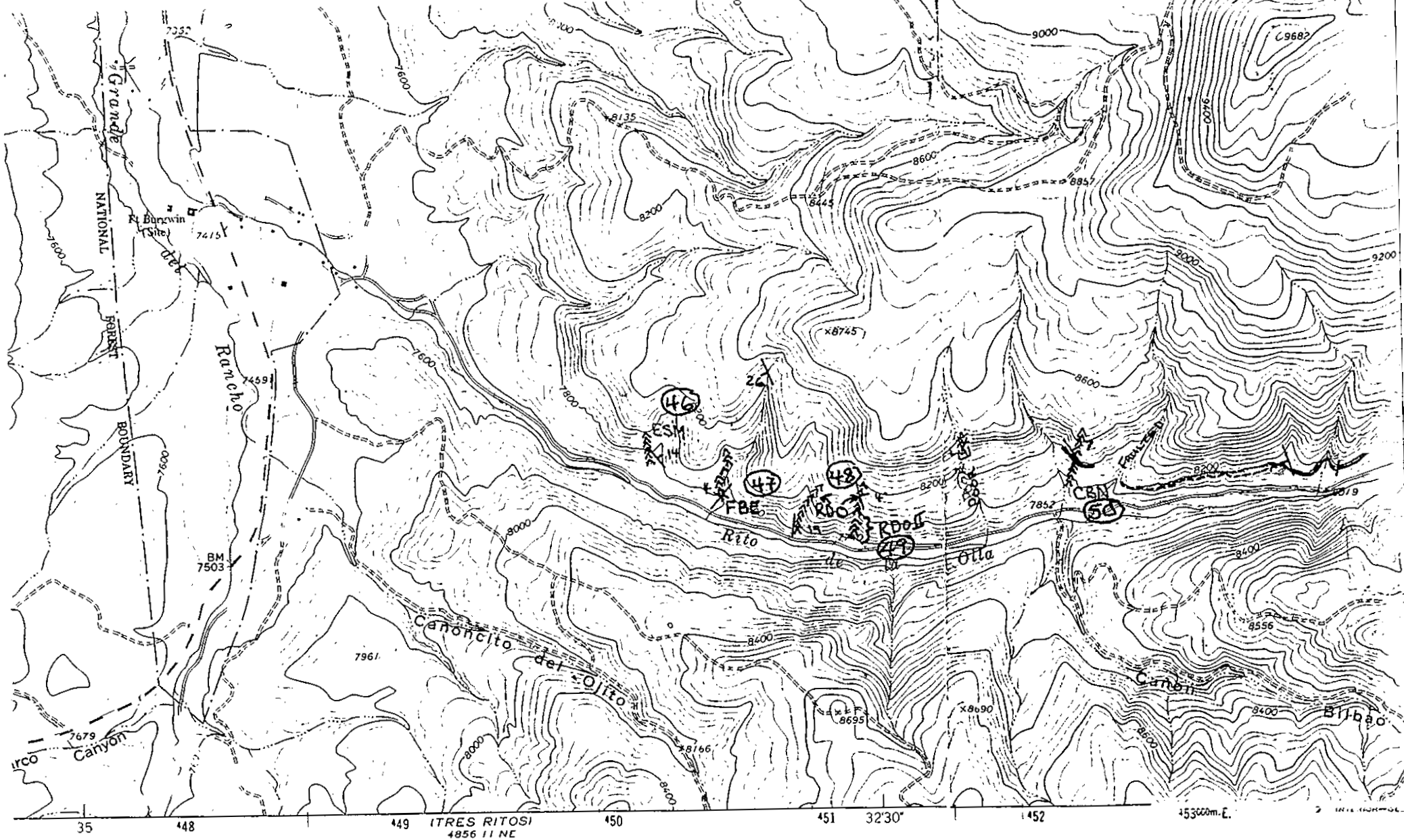
M.S. No. 45

PAGE 2



RITO DE LA OLLA SECTIONS
(Forest Road 438)

MEASURED SECTIONS
46 THROUGH 50


Rio Grande
NATIONAL
FOREST
BOUNDARY
Ft Burgwin (Site)
Rancho
BM 7503
Canoncito del Olito
Canyon
Rito de la Olla
Cambil
Bilbao
ESM
FBE
RDO
RDO II
CBN
46
47
48
49
50
9000
8600
8200
8400
8000
7600
7800
9200
8745
8135
8445
8857
7415
7459
7961
7679
8695
8690
8166
8556
7852
9682
35
448
449
450
451
452
32'30"
(TRES RITOS)
4856 II NE
SCALE 1:24 000
1 MILE
7000 FEET
1 KILOMETER
CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL
RANCHOS DE TAOS, N. MEX.
1964
Heavy-duty
Medium-duty
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

ESM

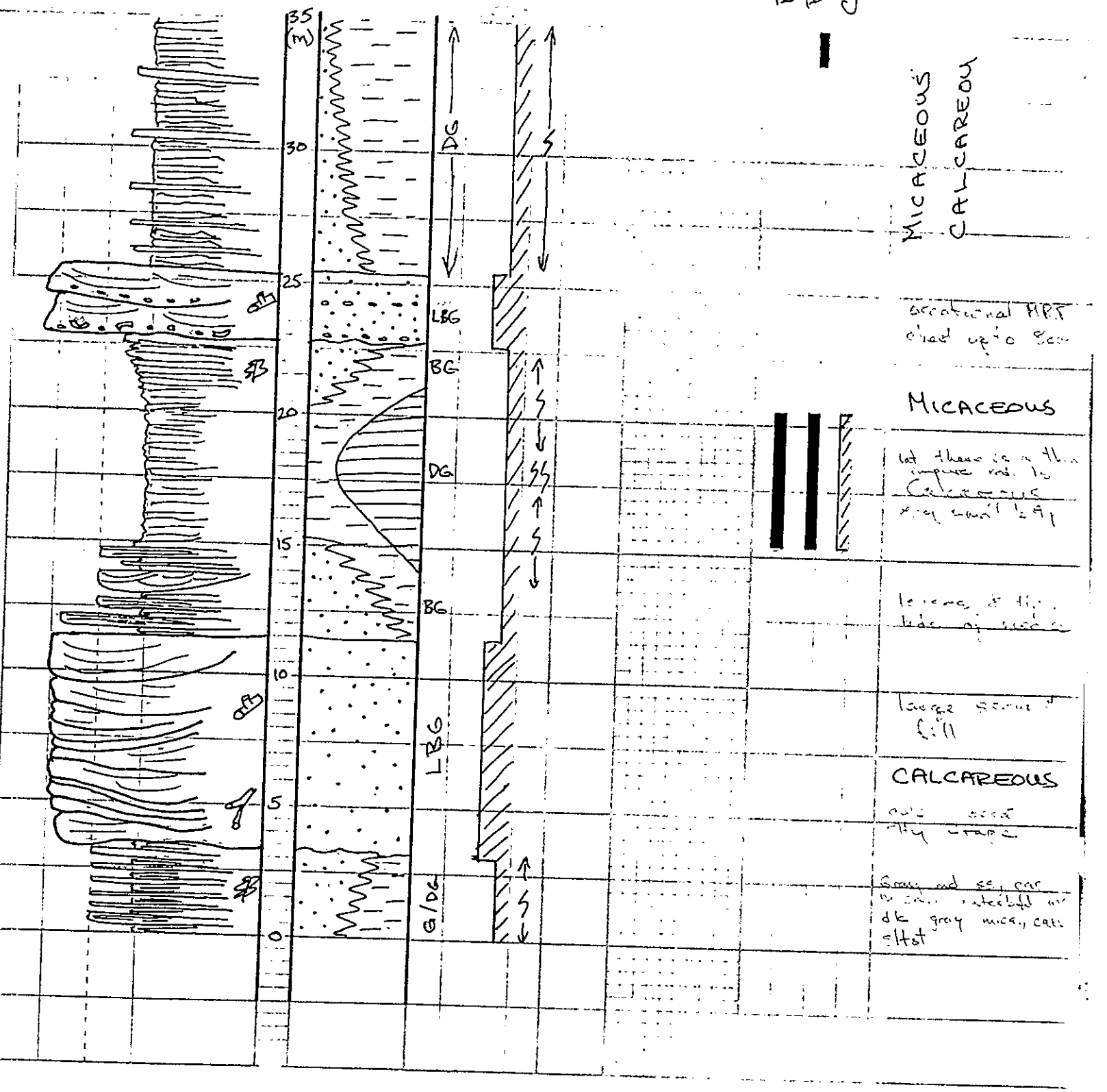
Gully off FR 438

May 27, 1978

JMC

M.S. No. 46

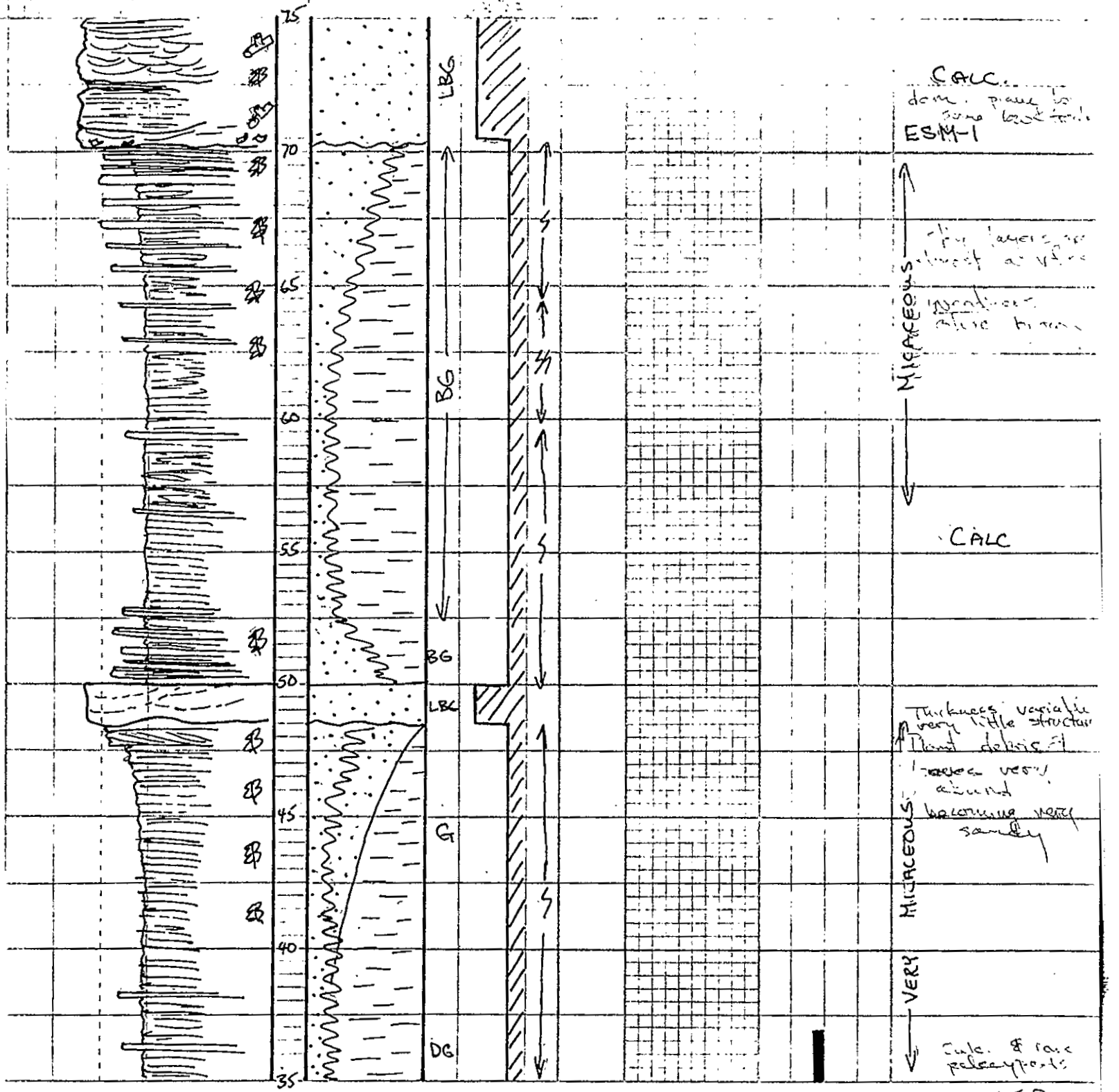
PAGE 1



ESM

May 27, '78
JMC

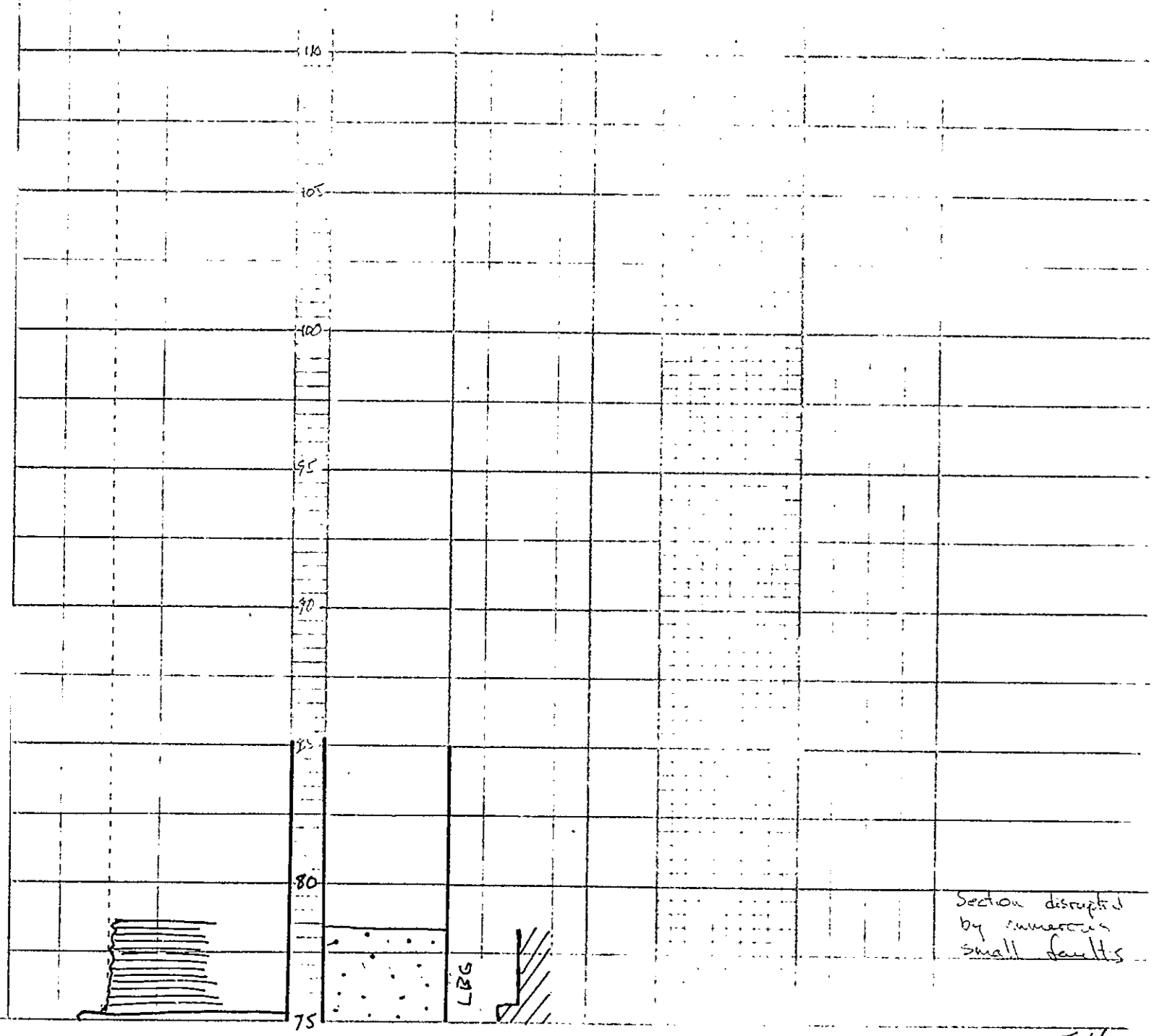
M.S. No. 46
PAGE 2



ESM

May 27

M. S. No. 46
PAGE 3

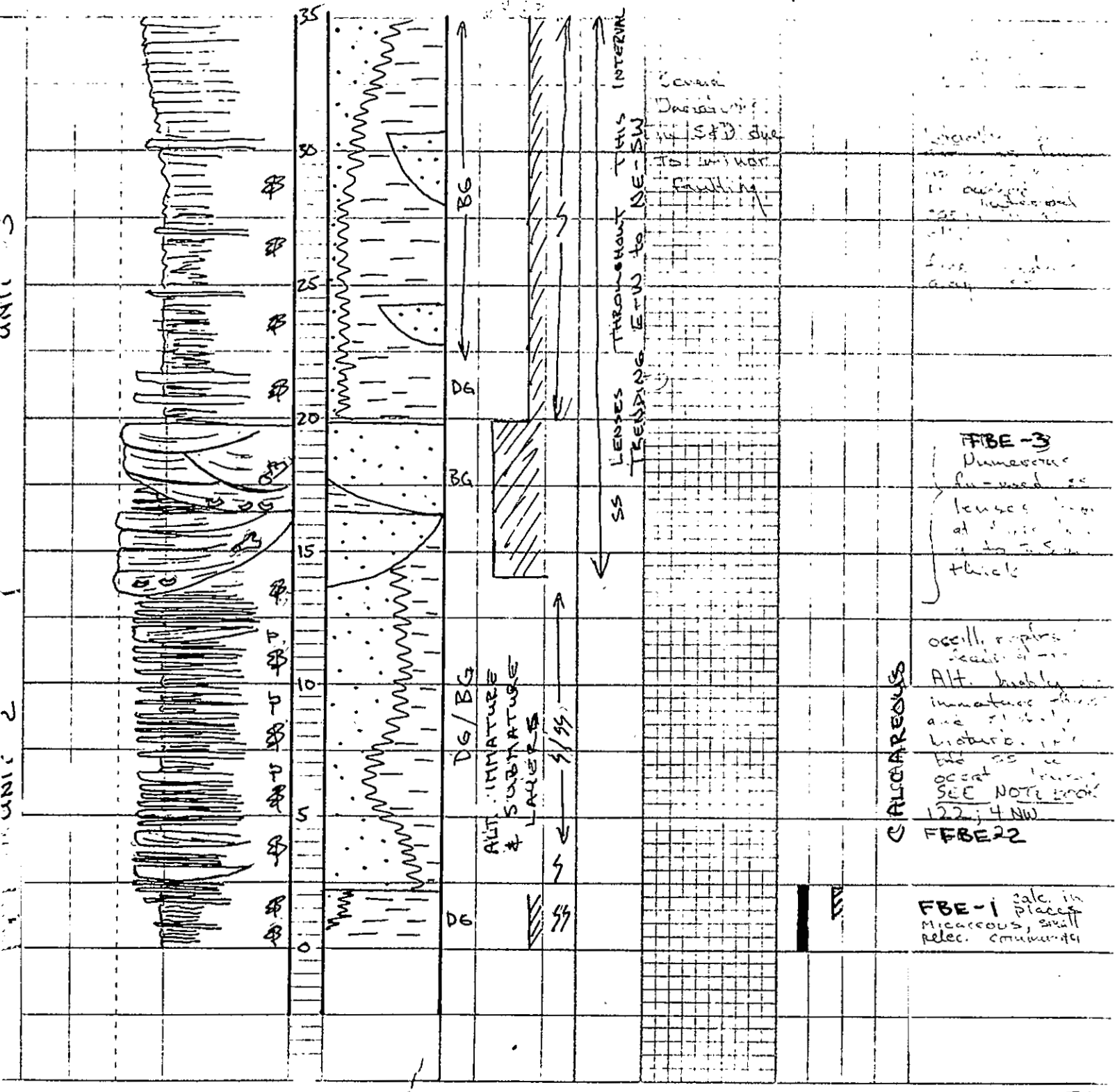


FBE
Forest Rd 438

May 20, 1978
Sandia
Casey

M.S. No. 47

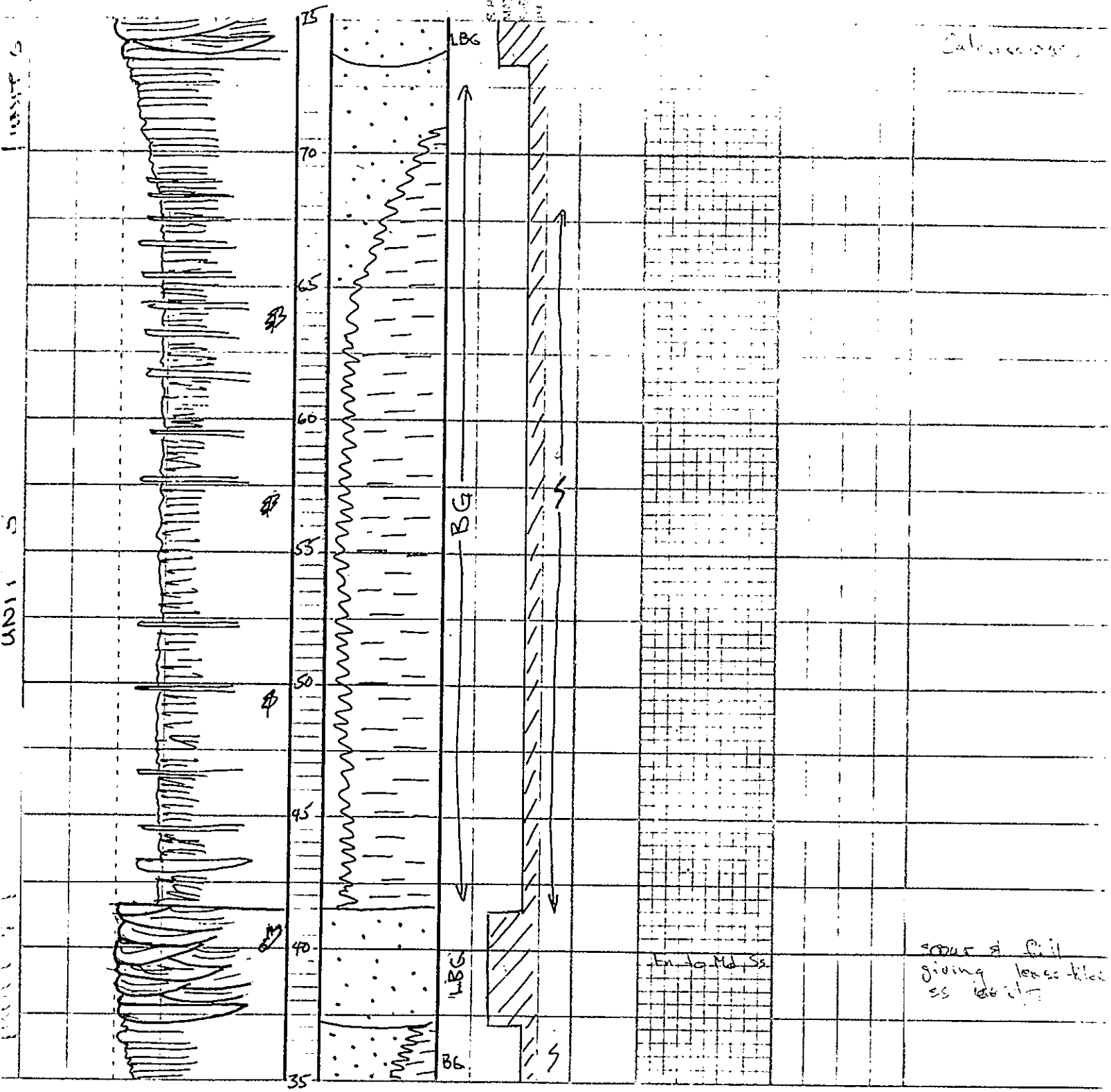
PAGE 1



FBE

M.S. NO. 47

PAGE 2



FBE
Forest Rd 438

May 20, 1978
Sandia

BASIC ROCK TYPE

COLOR

TEXTURAL PARTICULARITY

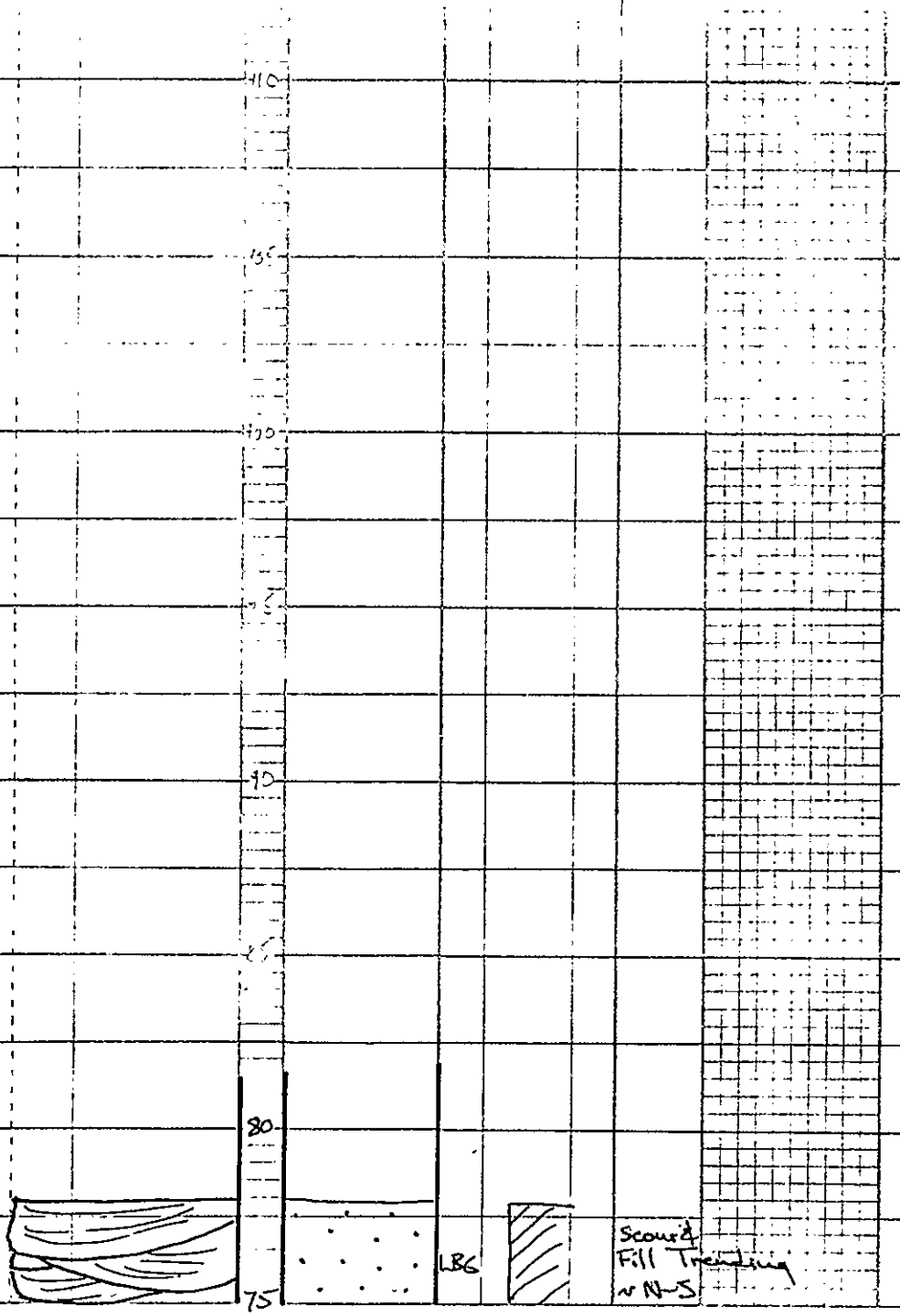
DEG BIOTURB

INCLUSIONS

SEDIMENTARY STRUCTURES

M.S. No. 47

PAGE 3



DISCONT. SECTN. BECAUSE OF FAULTING

~2m above ss. East. West ~~(FBE-4) & then~~ grades up to ss

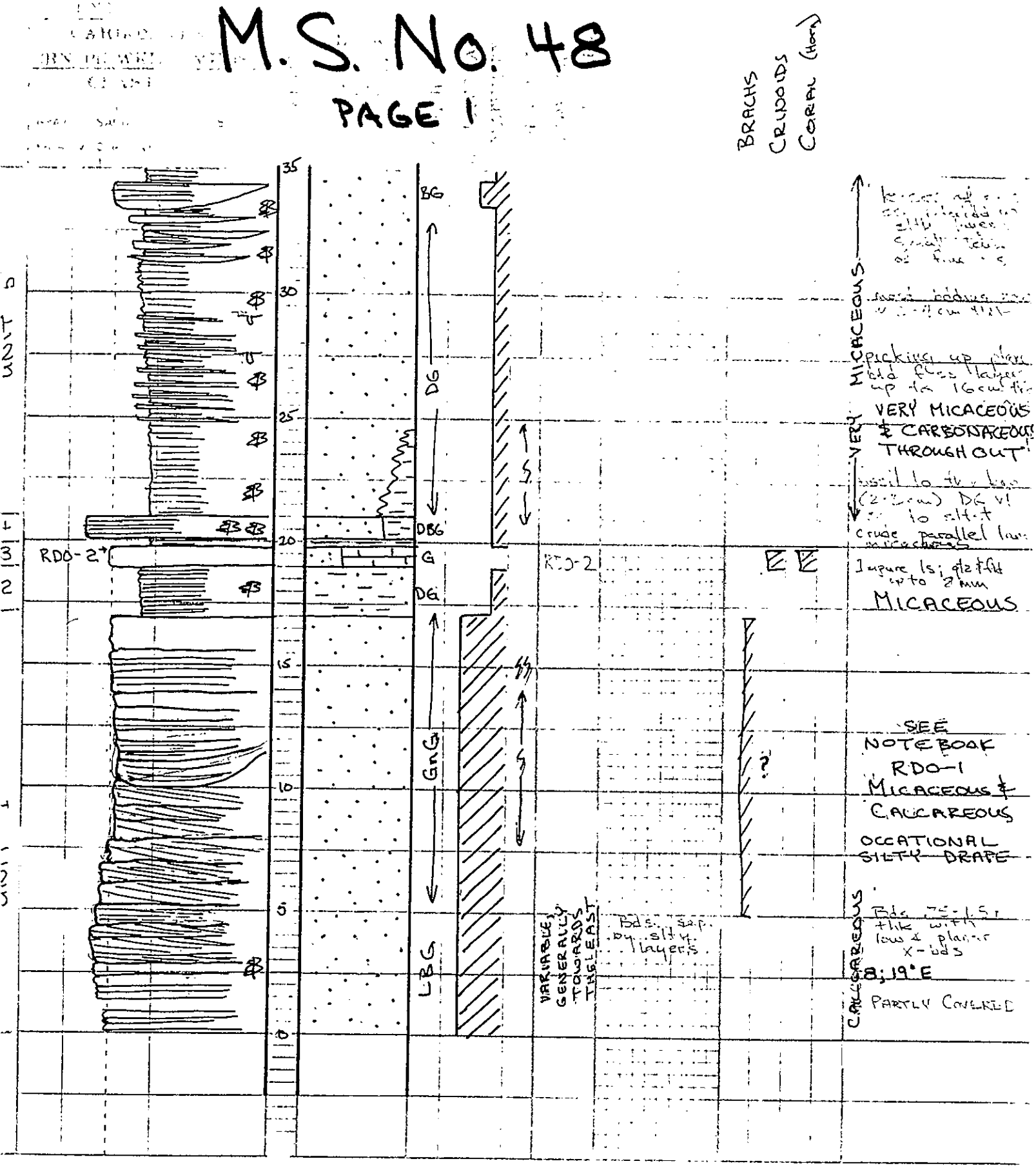
SEVERAL FAULTS have chopped these units up into blocks; measured section may have crossed unknown faults

N off of RDO FR 438
Gully

May 29, 1978
JMC

M.S. No. 48

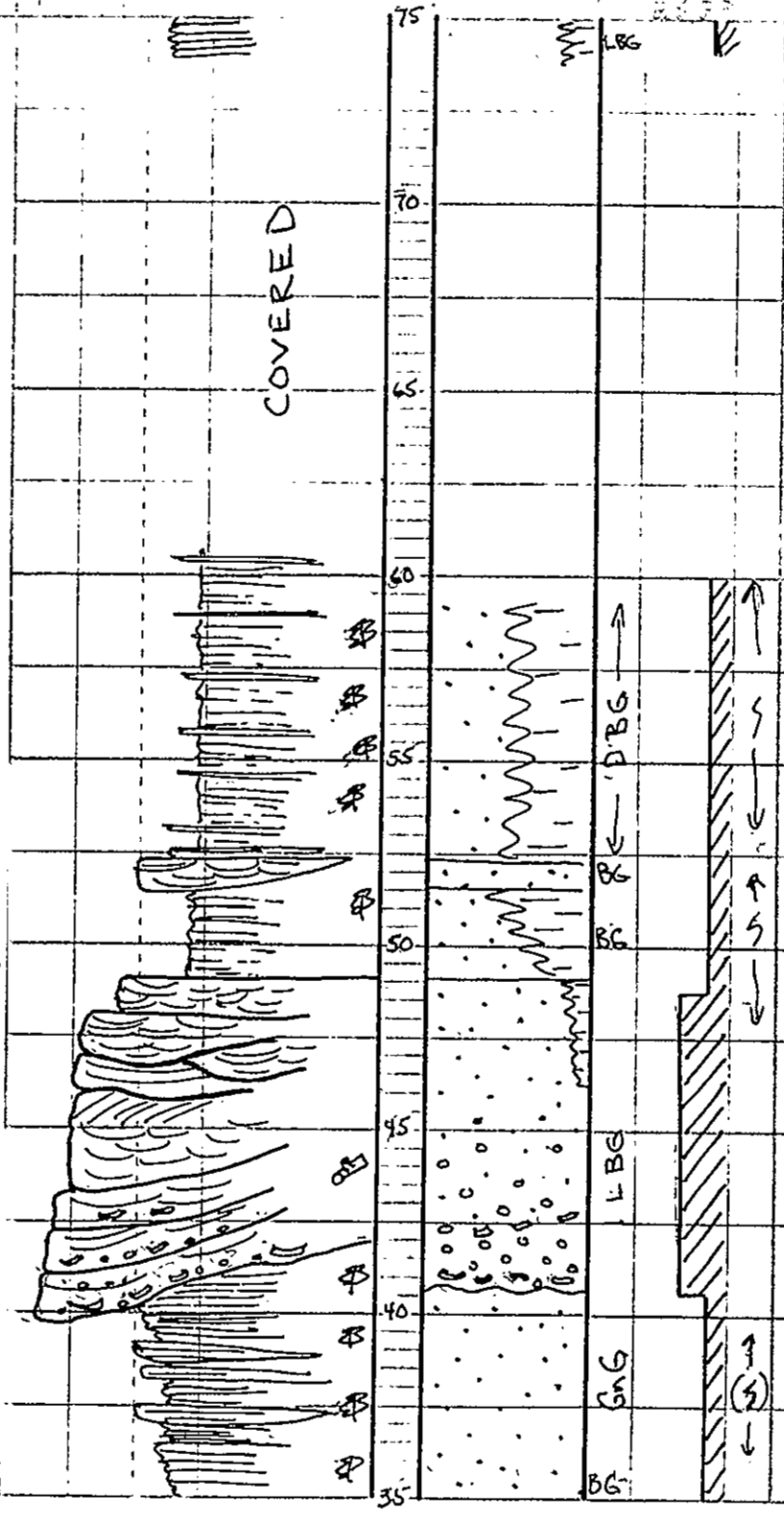
PAGE 1



RDO

May 29
JMC

M.S. No 48
PAGE 2



In next gully to the E can see nice crossing up trend.

MICACEOUS
very calc fine ss and sty silt

CALC & MICA.

SECTION NOW STARTS UP E SIDE OF GULLY

CALC
Some scour & fill dom troughs some tabs to planar bedd large scour bedding to N w/ rip-up clasts & gravel lag; white fell up to 4 cm
Rip-up clasts

RDO-3

Thickness may be wrong!?!

Some silty bioturbated intervals

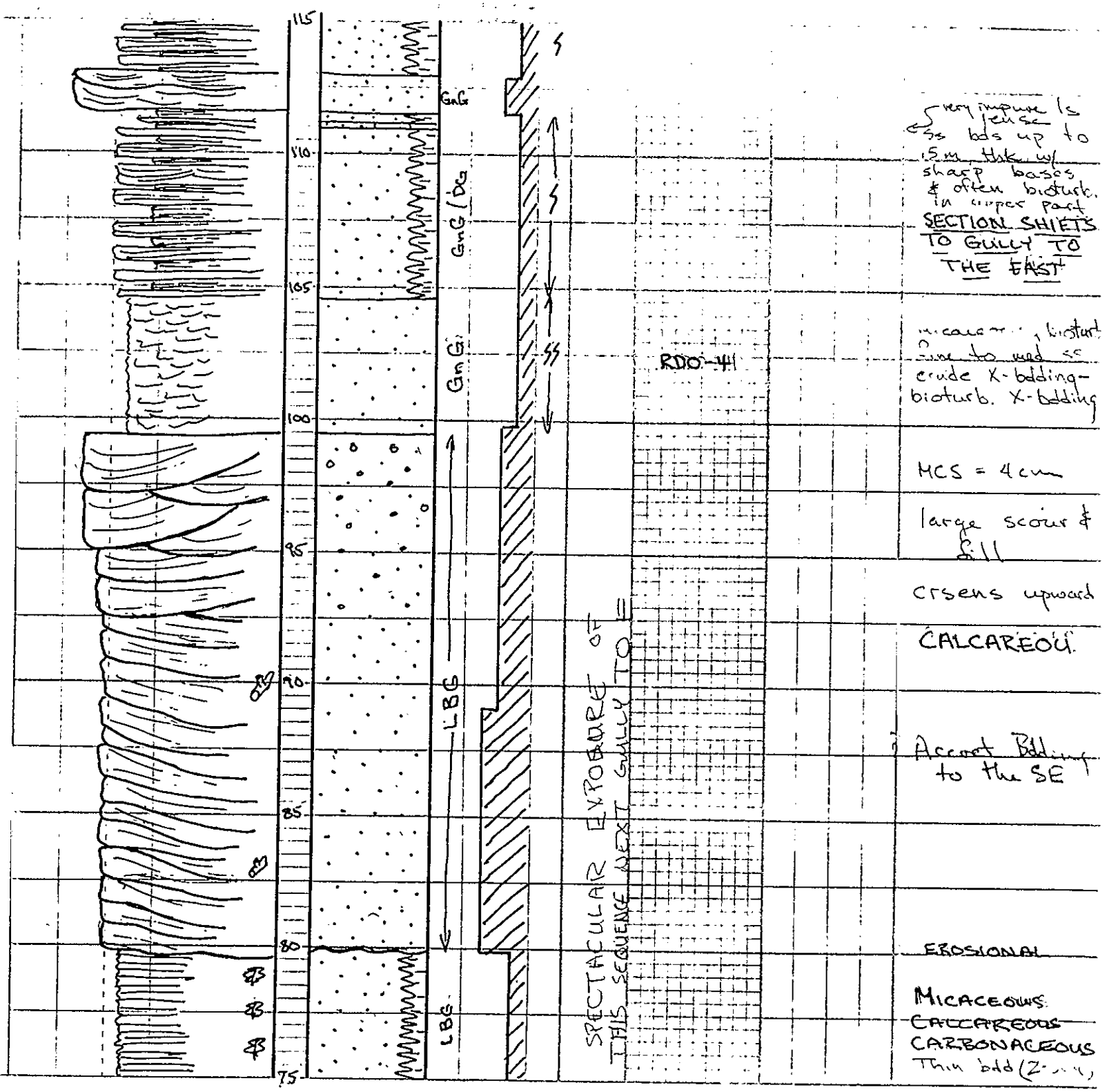
MICACEOUS

RDO

May 29
JMC

M.S. No. 48

PAGE 3

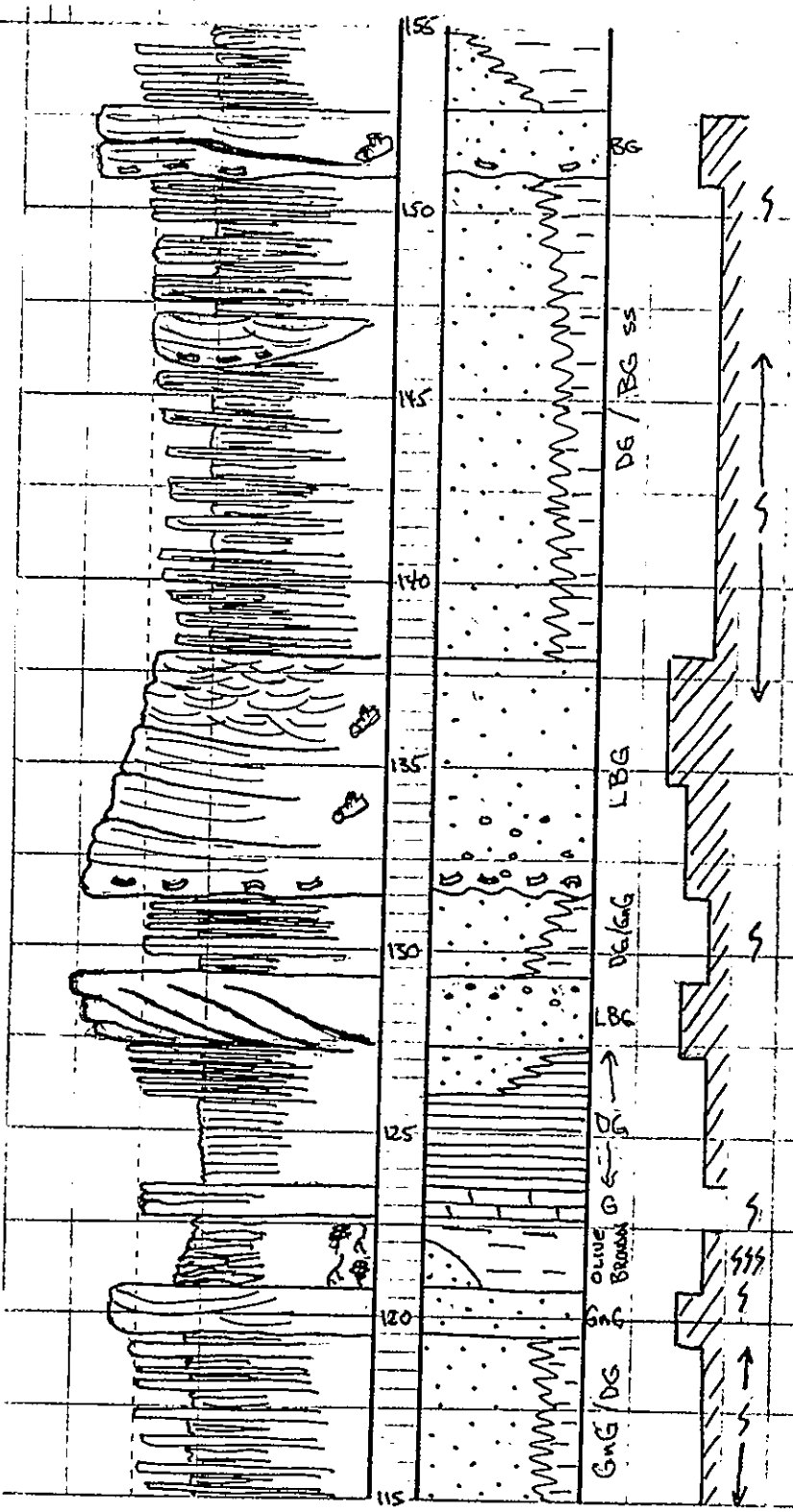


RDO

May 29
JMC

M.S. No. 48

PAGE 4



CRINOIDS

PELECY.

THIS GRADES UP INTO SLTST AT BASE OF CBN
165; 4° NE
fines time in middle - low x accret bedding
Flume bds to thin x X-bds.
Fabric because more distinct upward

Laterally there are some scour & fill channels up to 2m deep w/ vc sed.

Rip-up clasts 12cm

~~dips 30° to W (50°)~~
accret. bedding w/ fine drapes which ~~die out upwards~~

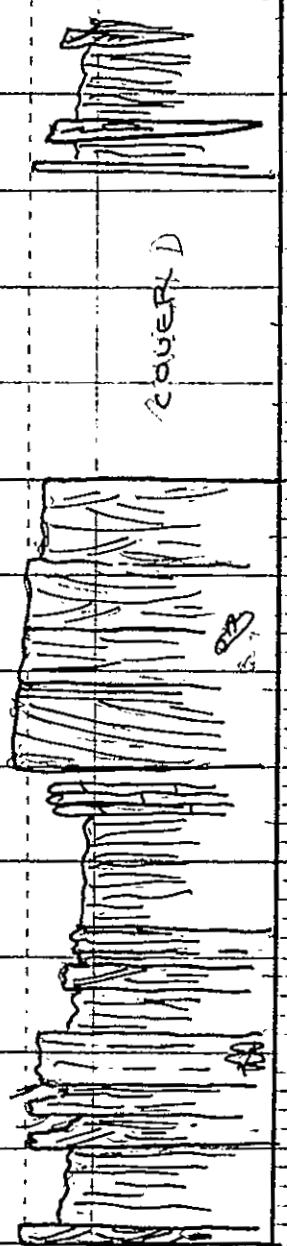
RDO-5 also taller 9°S

July 13, 1978
JPC

M.S. No 49
PAGE II

SEDIMENTARY TEXT & STRUCTURE
CARBONATES
GRN PK WKE
CLASTICS
GRAV SAND
64 RC

BASIC ROCK TYPE | INTERVAL | COLOR | TEXTURE | MATURITY | DEG BIOTURB | DIRECTIONAL FEATURES | FOSSILS



Interval	Color	Texture	Maturity	Deg Bioturb	Directional Features	Fossils	Comments
15	RG			ϟ			Micaceous * Calc.
	DG			ϟ			
	GRG						Calc in lower bed
10	LG						
	LSG						
							worm tubes & fo. fragments
5	G						
							slightly Calc.
				ϟ			
				ϟ			Micaceous
	FGRG						
0							

DATE
UNIT
RECORDED BY

SEDIMENTARY TEXTURE & STRUCTURE
CARBONATES
GRN PB WKE MUDST
CLASTICS
GRAV SAND
CG C M F VF

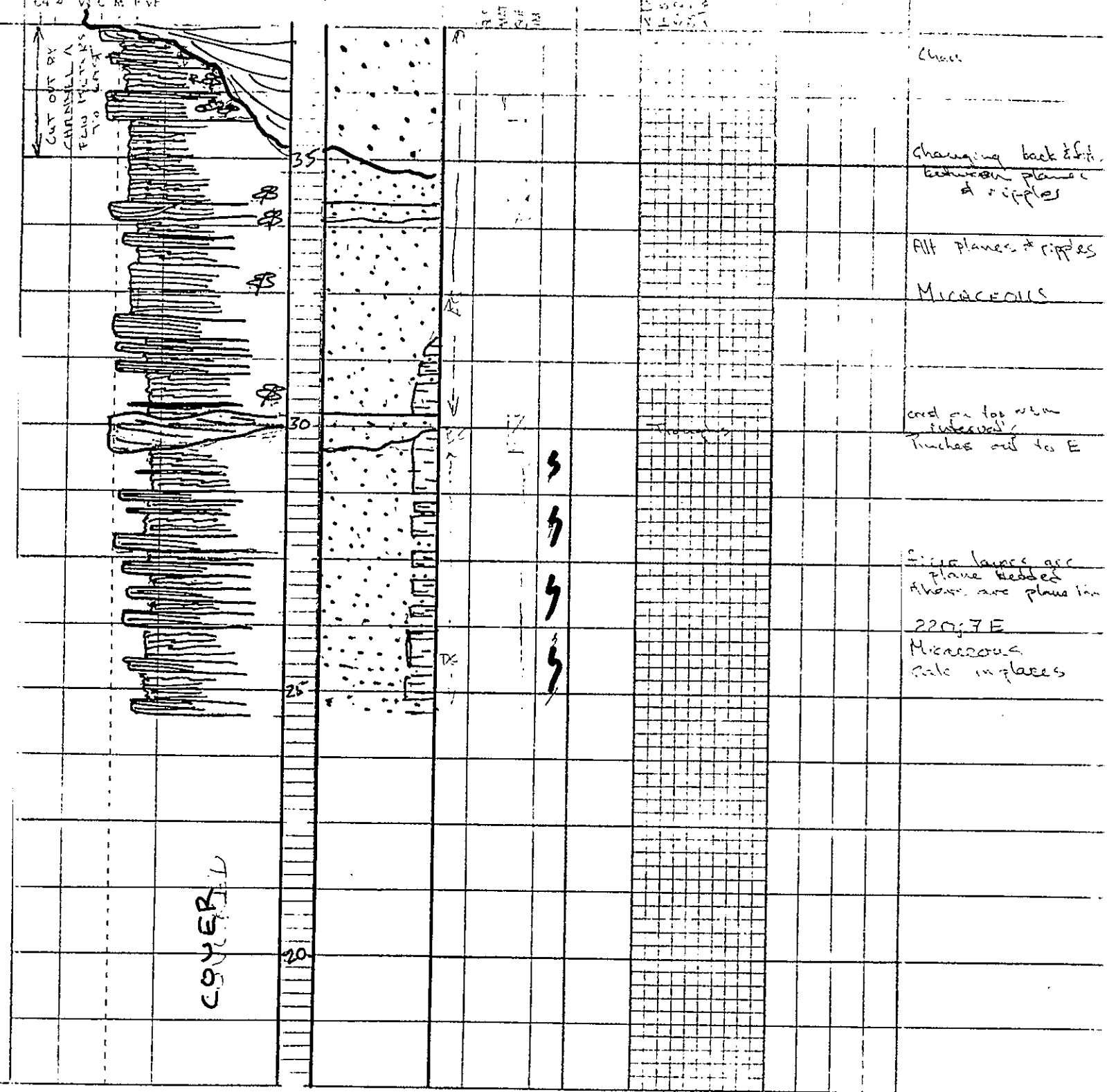
BASIC ROCK TYPE

MS. NO 49
PAGE 2

MAJOR STRUCTURAL FEATURES

DEG INCLINATION

FOSSILS



MS No. 49

PAGE 3

CARBONATES

CLASTICS

GRAV SAND

INTERVAL

BASIC ROCK TYPE

FOSSILS

50

45

40

Sweet green ss

Accent Bedding

Loaded w/ gravels

Contorted Bedding locally

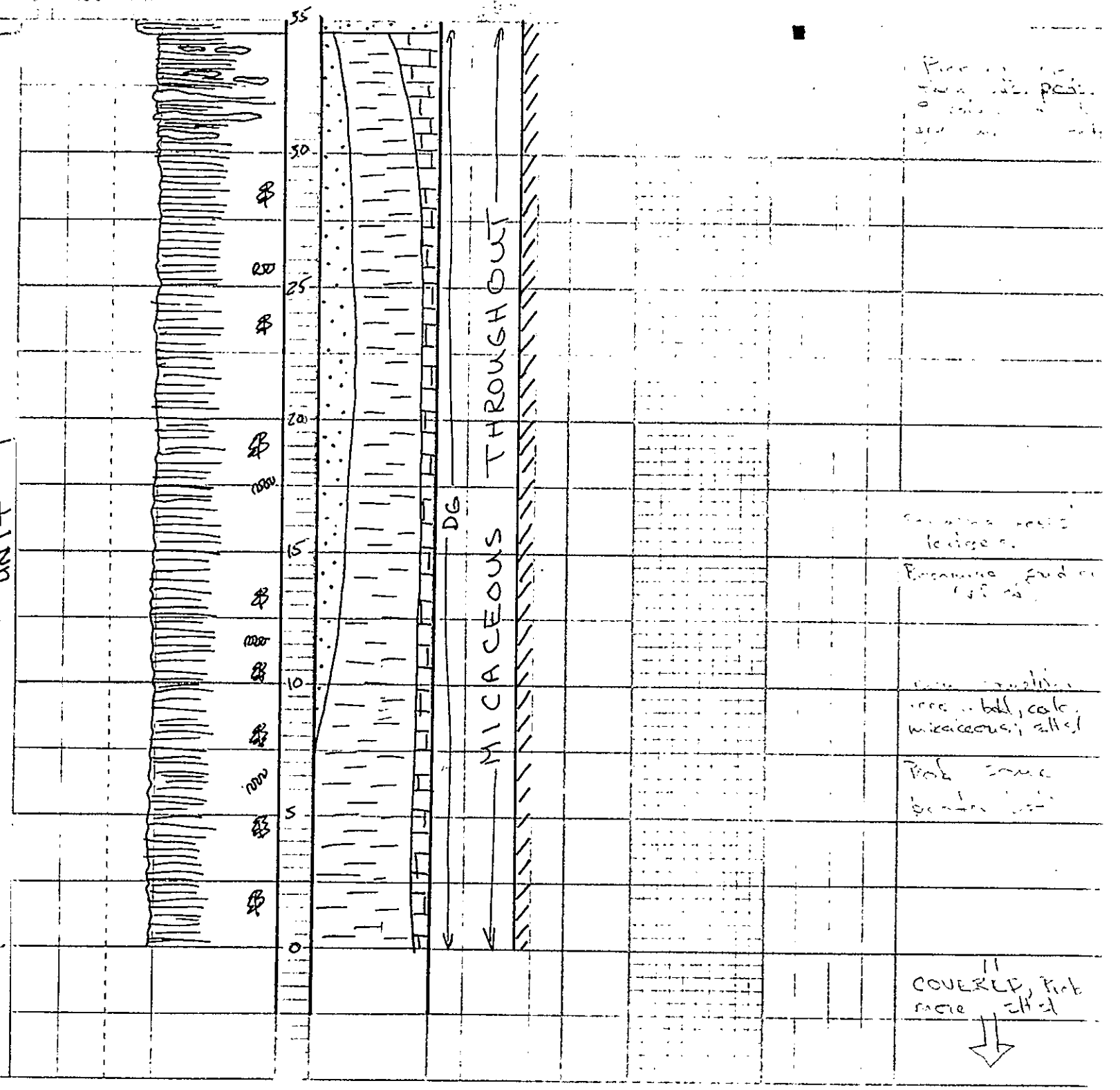
logs S85E S65E

CBN

May 27, 1978
JMC

M.S. No. 50

PAGE 1

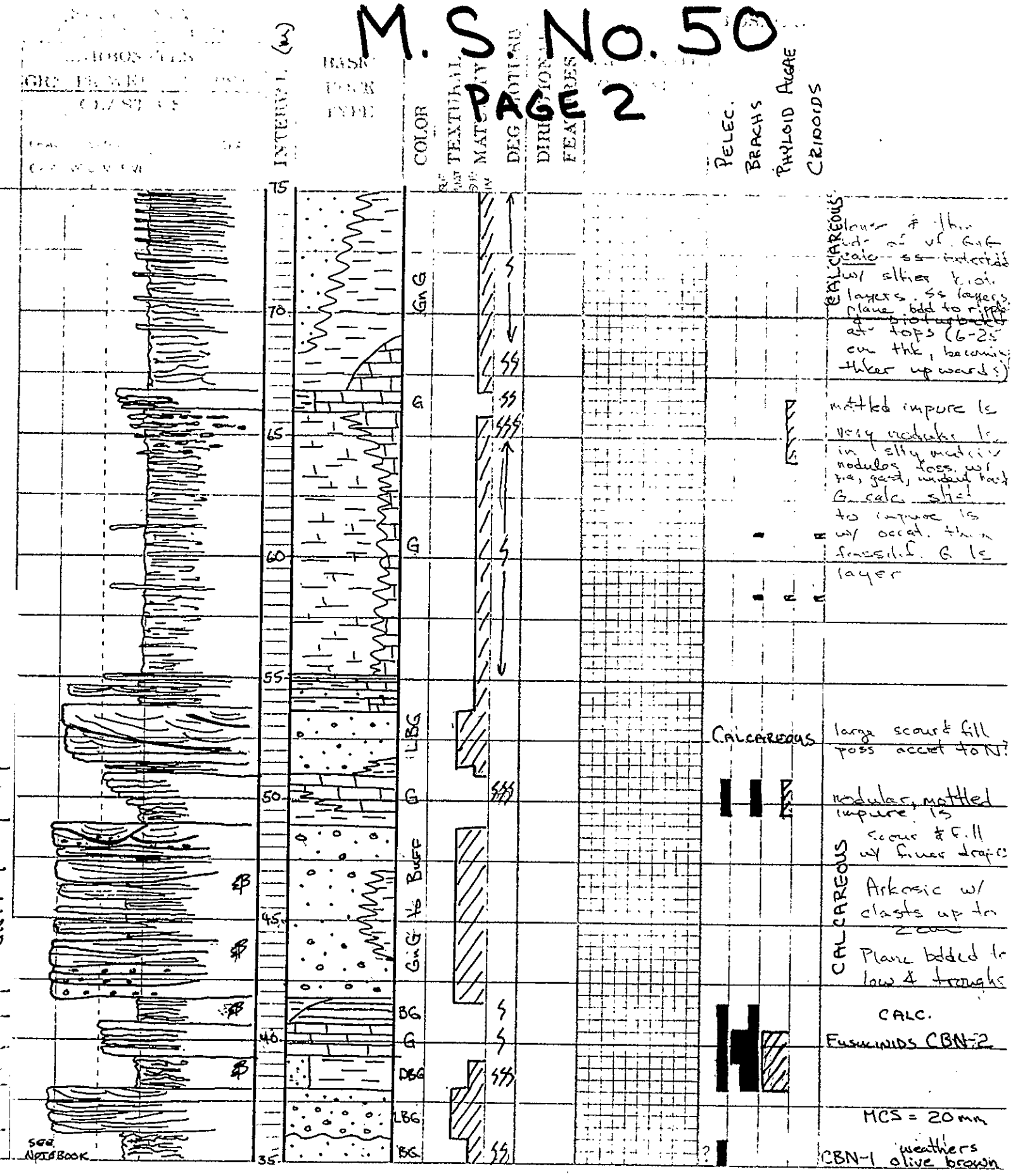


CBN

May 27
OMC

M.S No. 50

PAGE 2



lower ¾ thin bed of vf. GnG calc ss interbed w/ silty brown layers. ss layers plane bdd to ripple & bioturbated at tops (6-25 cm thk, becoming thicker upward)

mottled impure ls

very nodular ls in silty matrix nodules loss. w/ fra, gast, indent bark

G calc silt to impure ls w/ occas. thin fossil. G ls layer

large scour & fill poss accret to N?

nodular, mottled impure ls

scour & fill w/ finer drapes

Arkosic w/ clasts up to 2 cm

Plane bdded ls low & troughs

CALC.

FUSULINIDS CBN-2

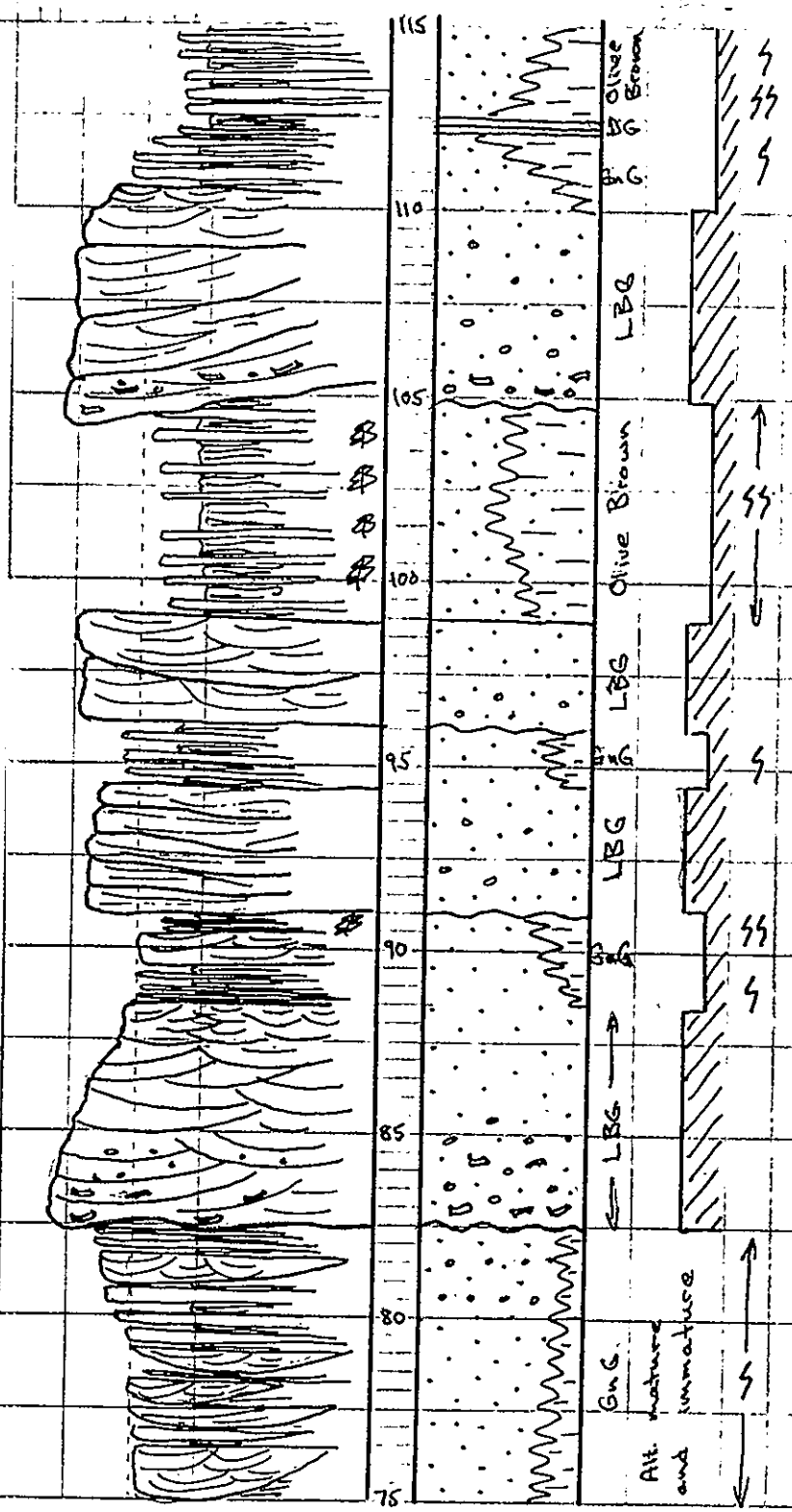
MCS = 20mm

CBN-1 weathers olive brown

CBN

May 27
JMC

M.S. No. 50
PAGE 3



VERY. MICACEOUS

MICACEOUS
~~fine to med ss~~
interbed w/ sdy siltst

CBN-3
Calc. Arkose?

covered (?)

Calc. Arkose

CALC.

Calc
MCS = 30mm
Rip-up Clast to 7cm

cd. these units are cut by a steep-side channel 4m thk of vc, congl. ss

CALCAREOUS

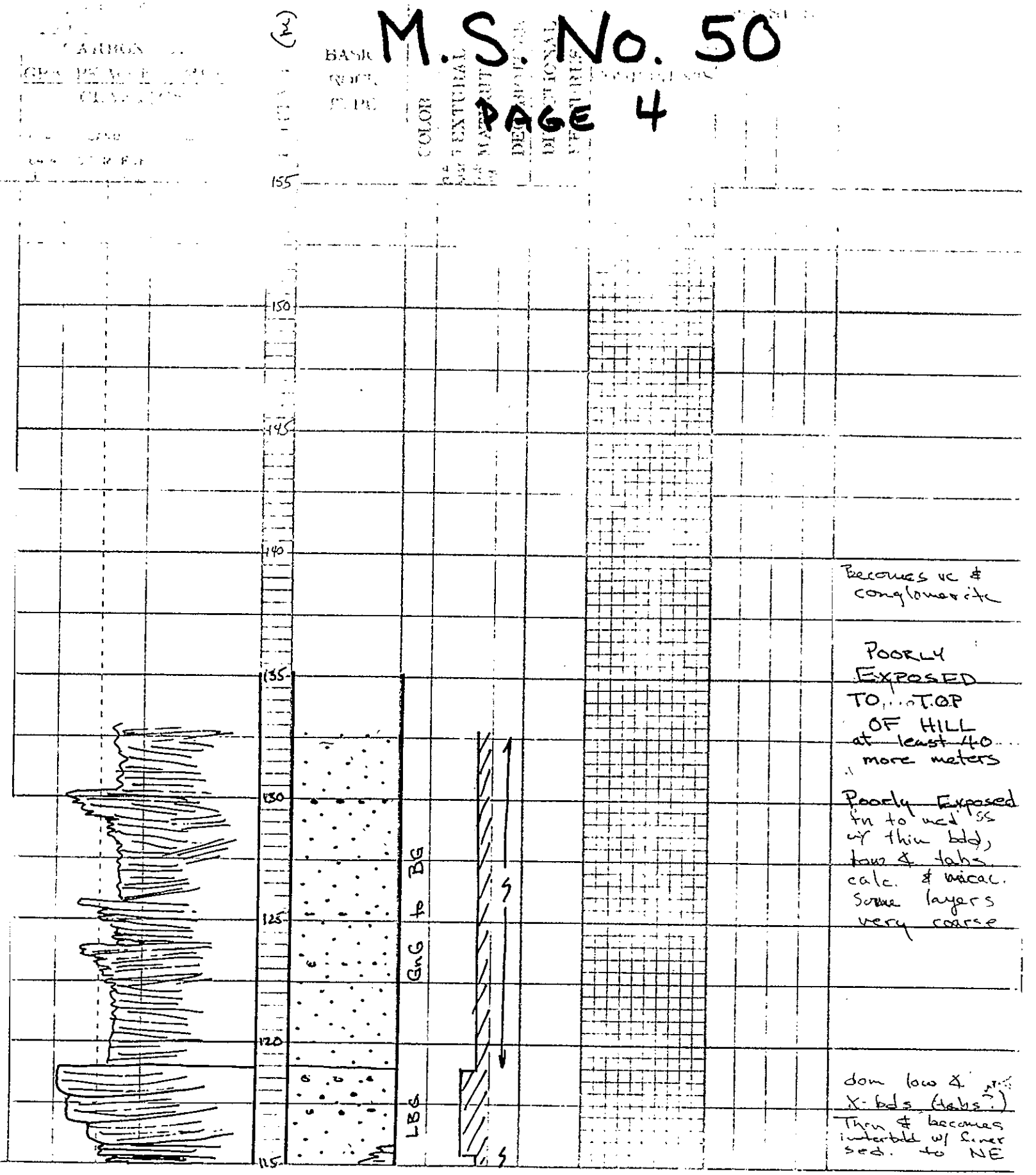
lenses up to 1.5 m w/ low & med scale trough brd. ~~at base~~

CBN

May 27
JMC

M.S. No. 50

PAGE 4

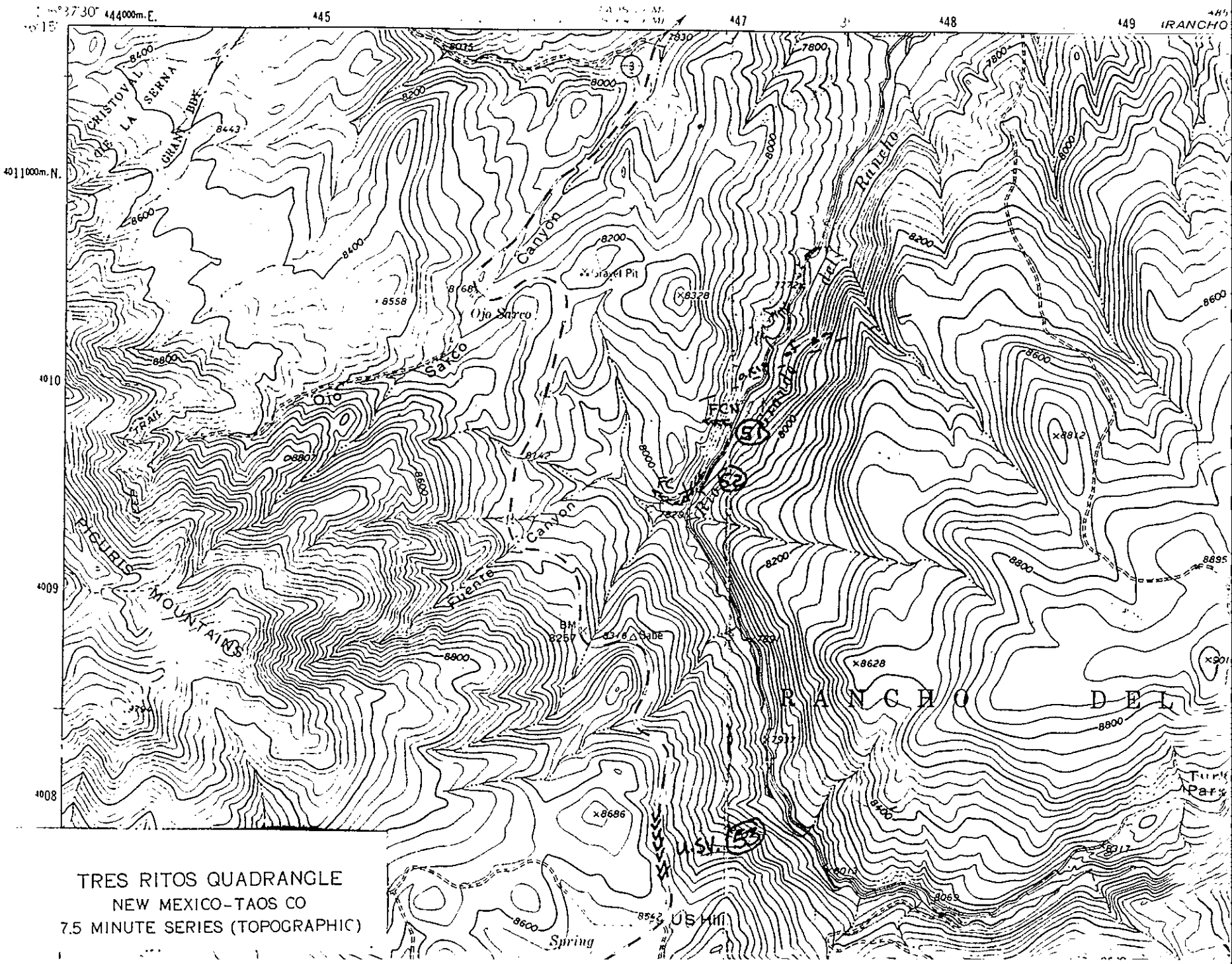


CR' ... of 1.. '68

U. S. HILL SECTIONS

MEASURED SECTIONS
51 THROUGH 53

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



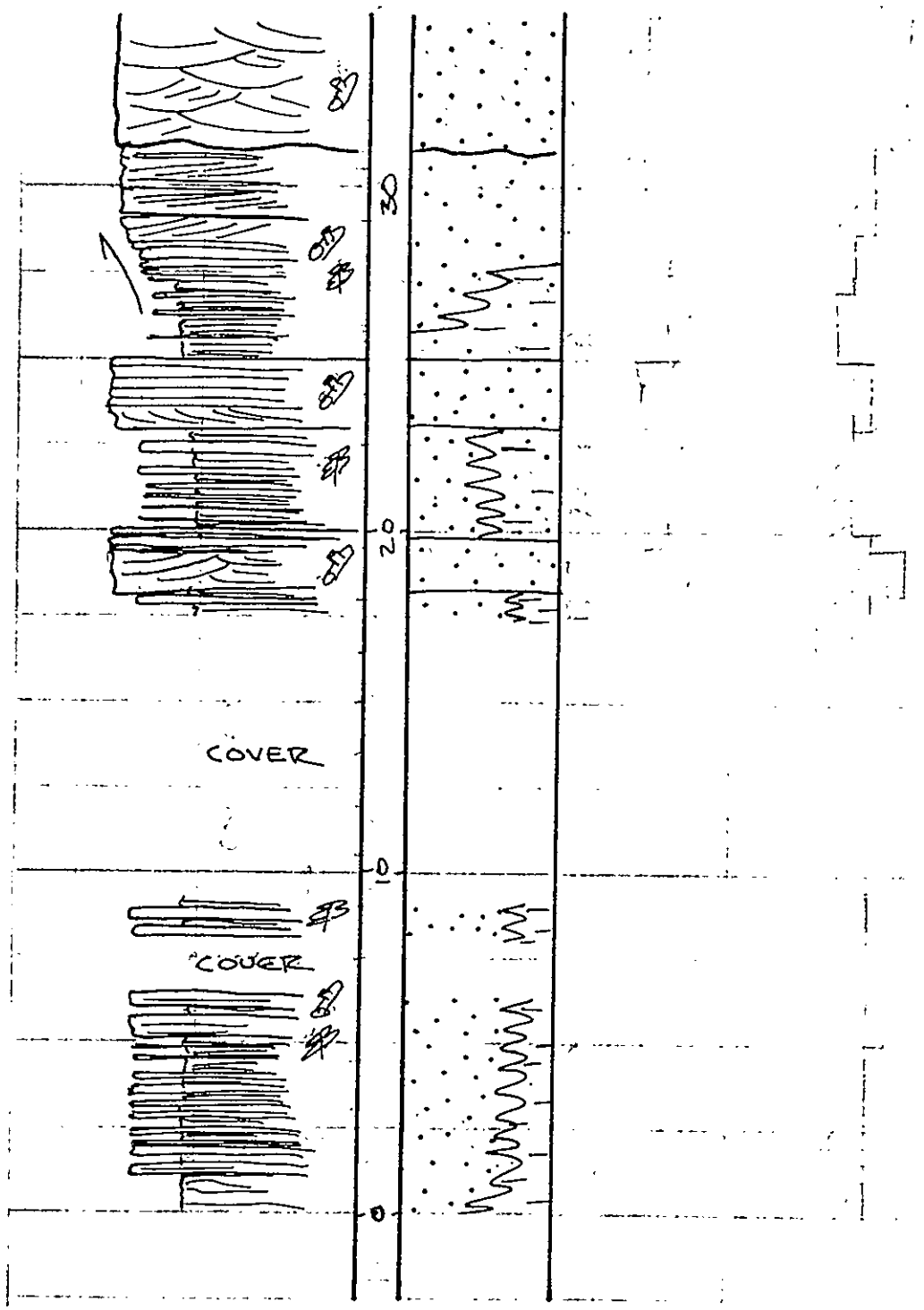
TRES RITOS QUADRANGLE
NEW MEXICO-TAOS CO
7.5 MINUTE SERIES (TOPOGRAPHIC)

FCN
N of Fuente Canyon (FR 442)
Hillside

June 27, 1978
JMC

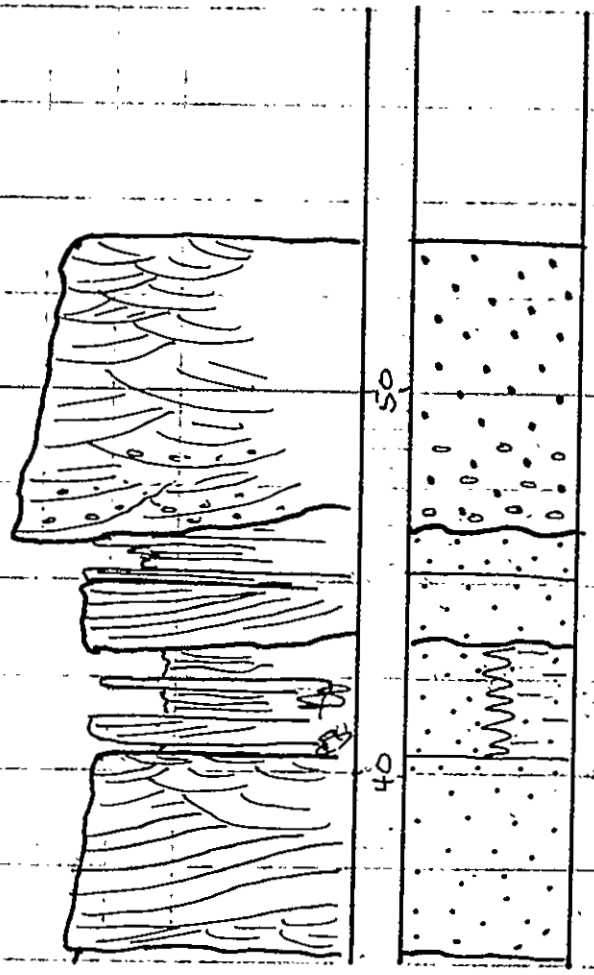
M.S. No. 51

PAGE 1



M. S. No. 51

PAGE 2



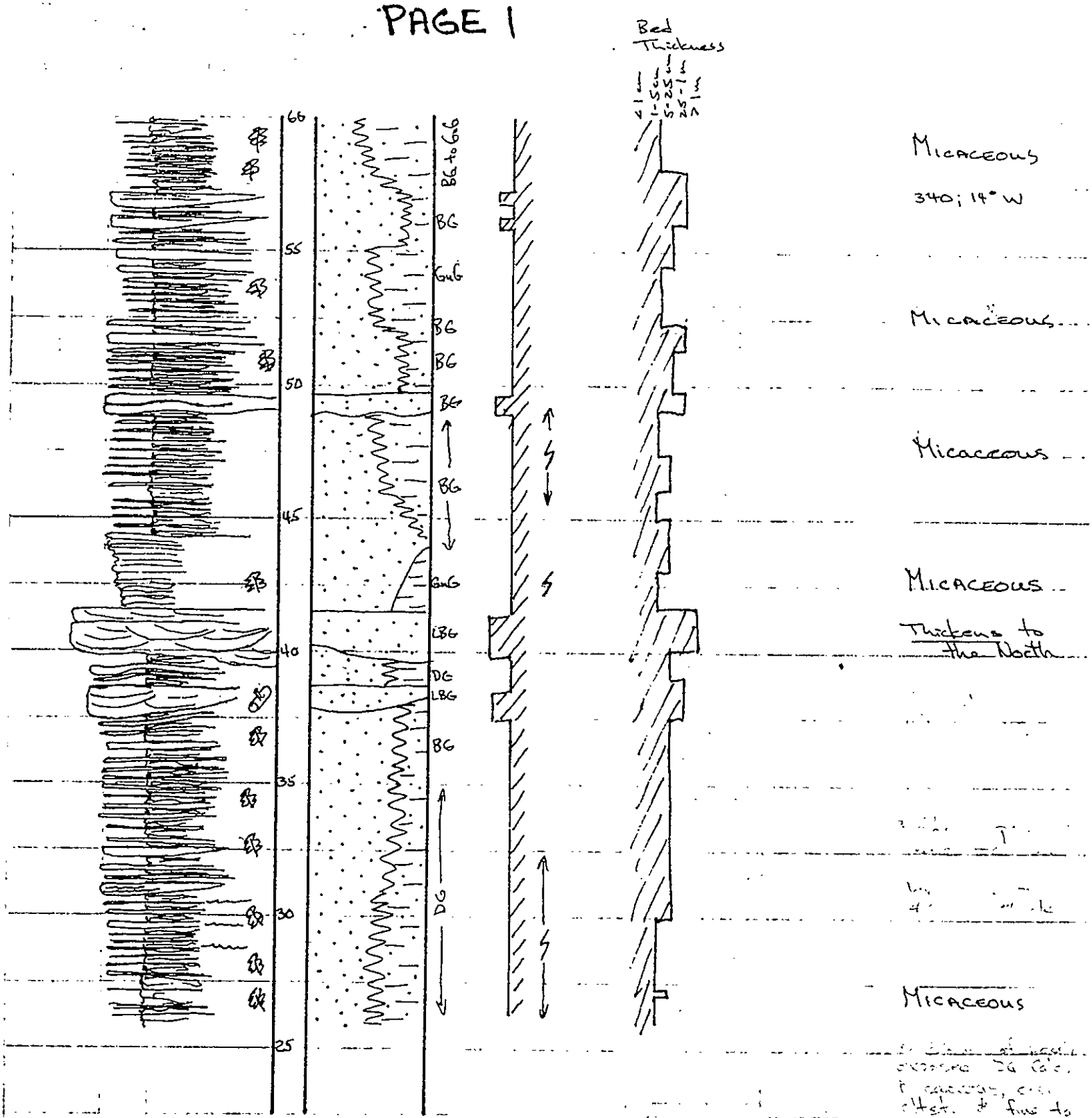
FC
FR. 442 at Fuente Canyon
Hillside

June 26, 1978

JMC

M. S. No. 52

PAGE 1



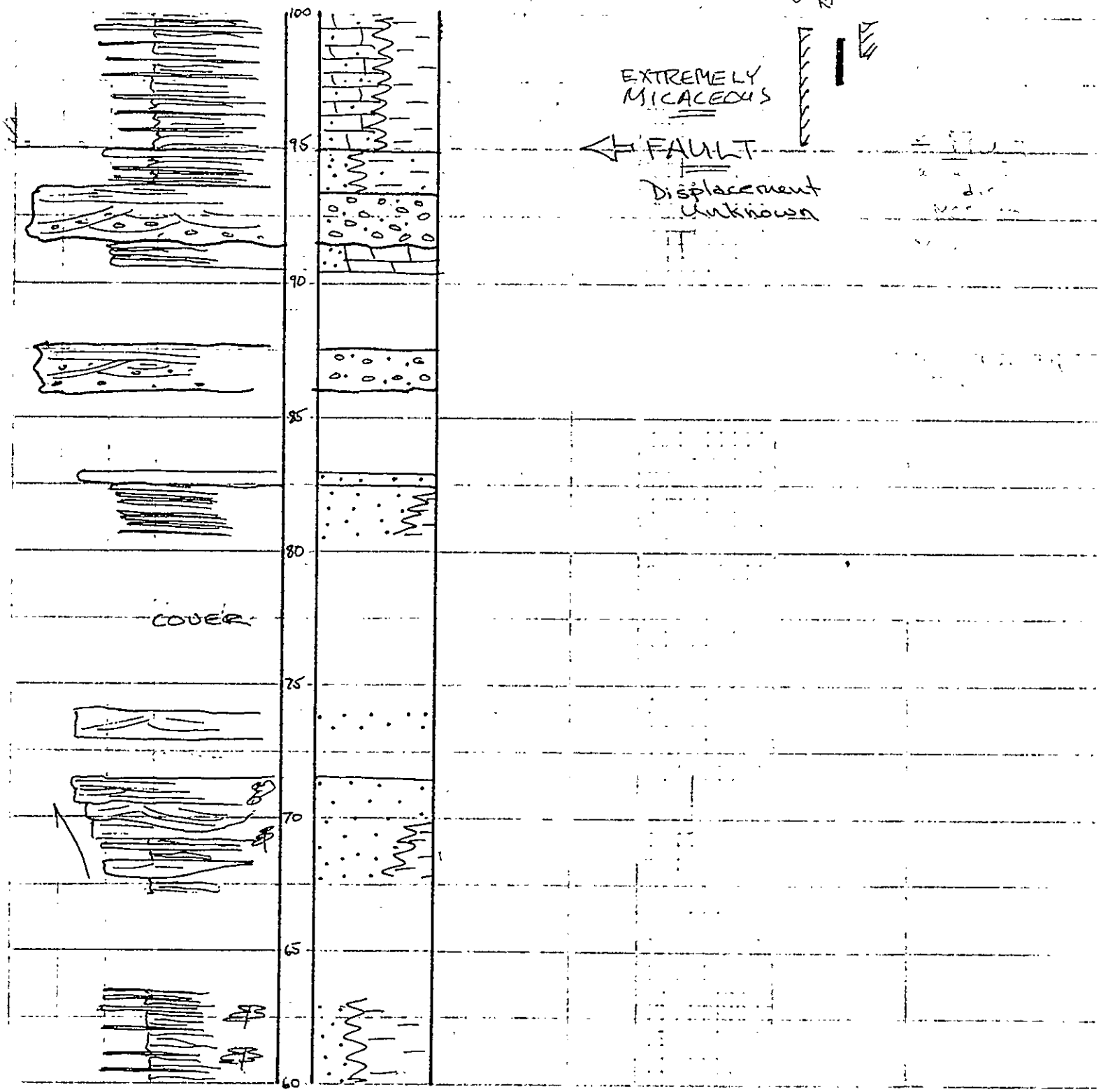
FC

June 26

JMC

M.S. No. 52

PAGE 2



FC

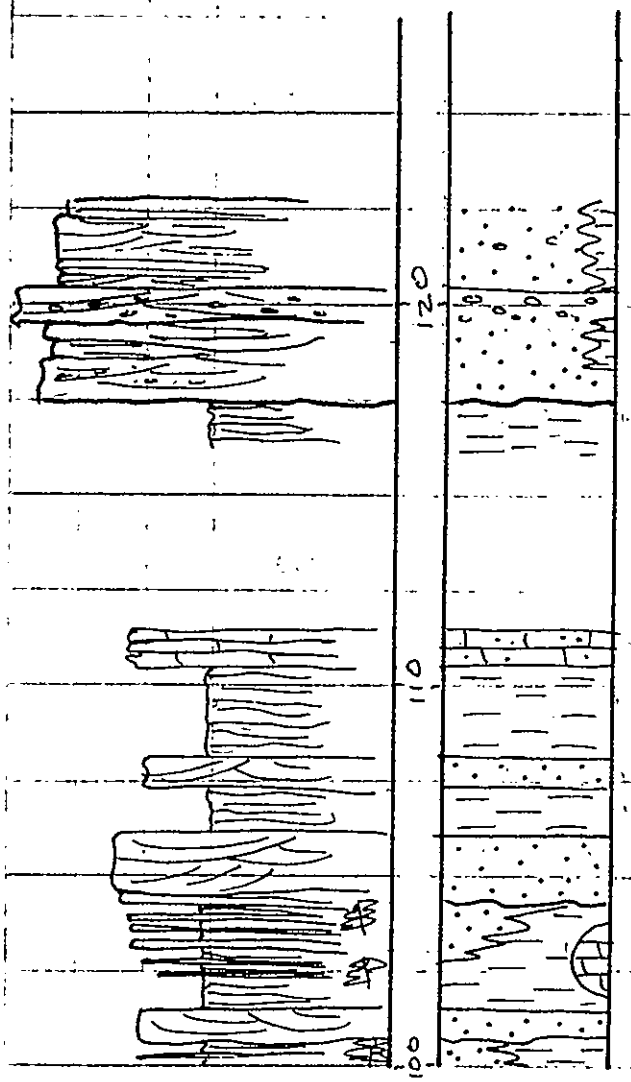
174

FC

M. S. No. 52

PAGE 3

CRINOIDS
BRACHS
GASTS

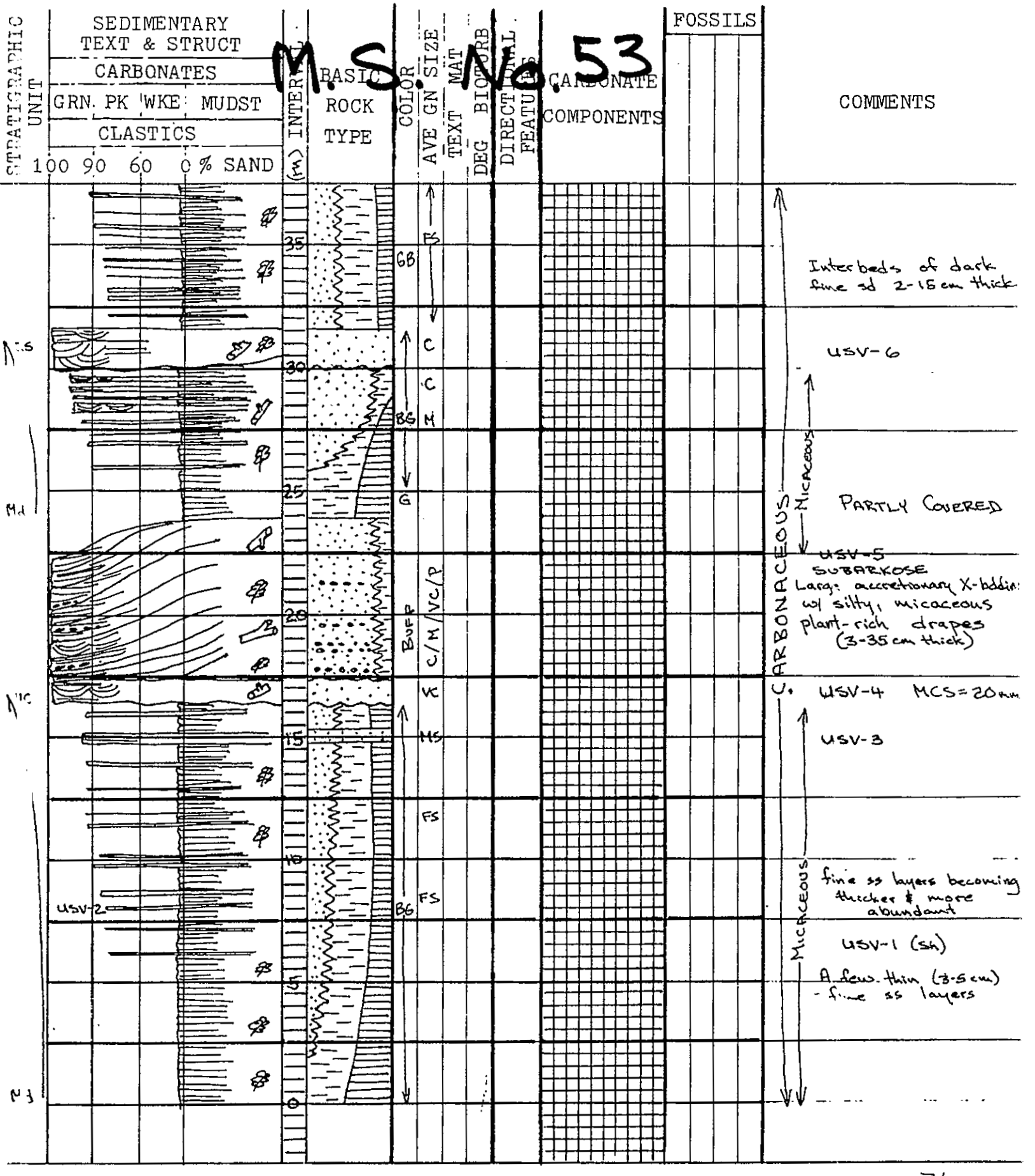


MEASURED SECTION NO. _____ DATE June 30, 1977

LOCALITY U.S. Hill Vista STRATIGRAPHIC UNIT _____

SETTING Road Cut MEASURED BY JMC

M.S. No. 53

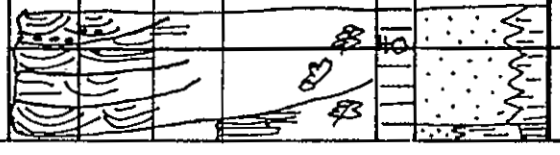


MEASURED SECTION NO. _____ DATE _____

LOCALITY US Hill Vista STRATIGRAPHIC UNIT _____

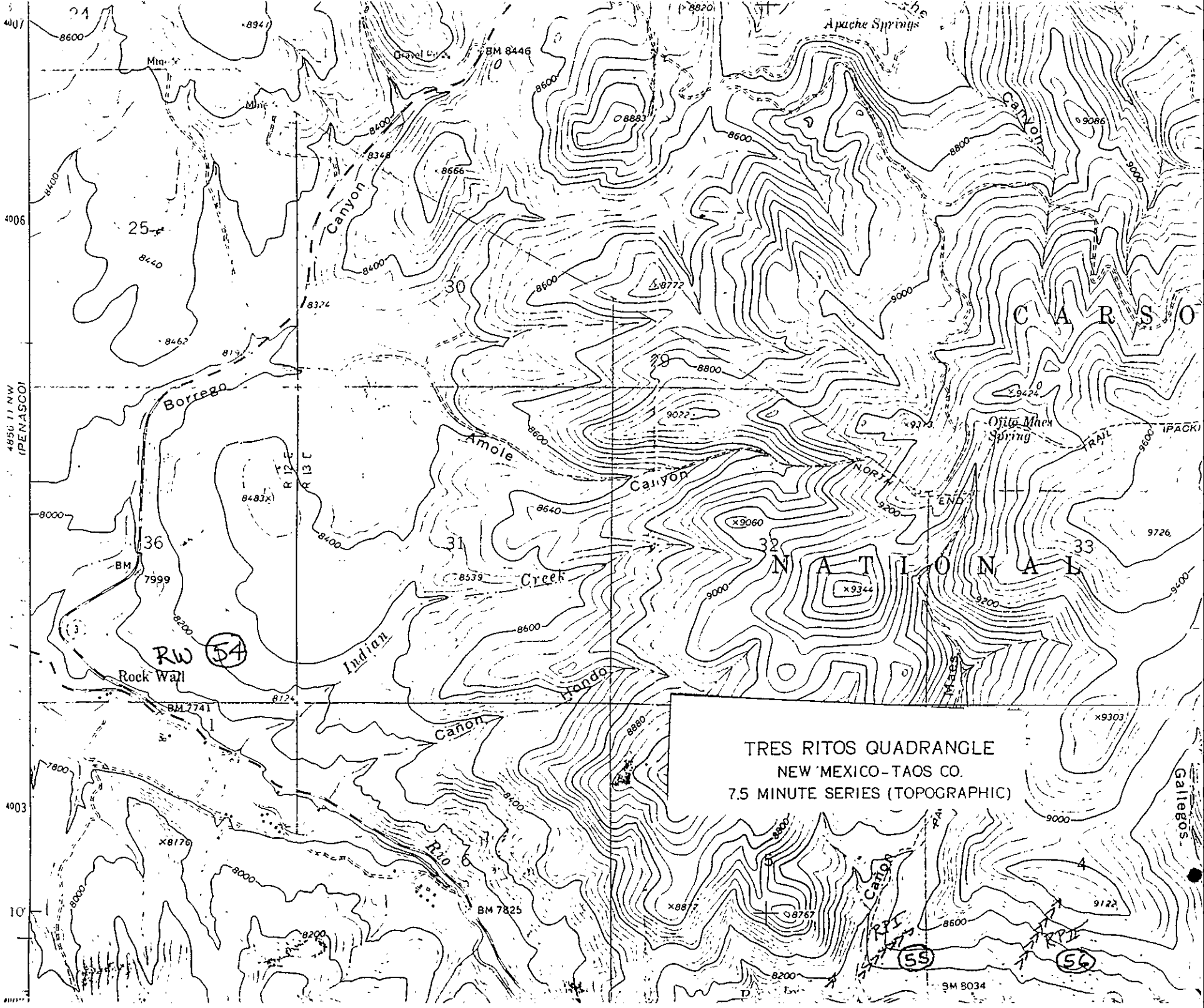
SETTING Road Cut MEASURED BY JMC

M.S. No. 53

STRATIGRAPHIC UNIT	SEDIMENTARY TEXT & STRUCT / CARBONATES / GRN. PK WKE MUDST / CLASTICS / 100 90 60 0 % SAND	INTERVAL	BASIC ROCK TYPE	COLOR	AVE GN SIZE	TEXT MAT	DEG BIOTURB	DIRECTIONAL FEATURES	CARBONATE COMPONENTS	FOSSILS	COMMENTS
		45									
		40		LBG	VC / MS						Micaceous USV-7

ROCK WALL SECTION

MEASURED SECTION
No. 54

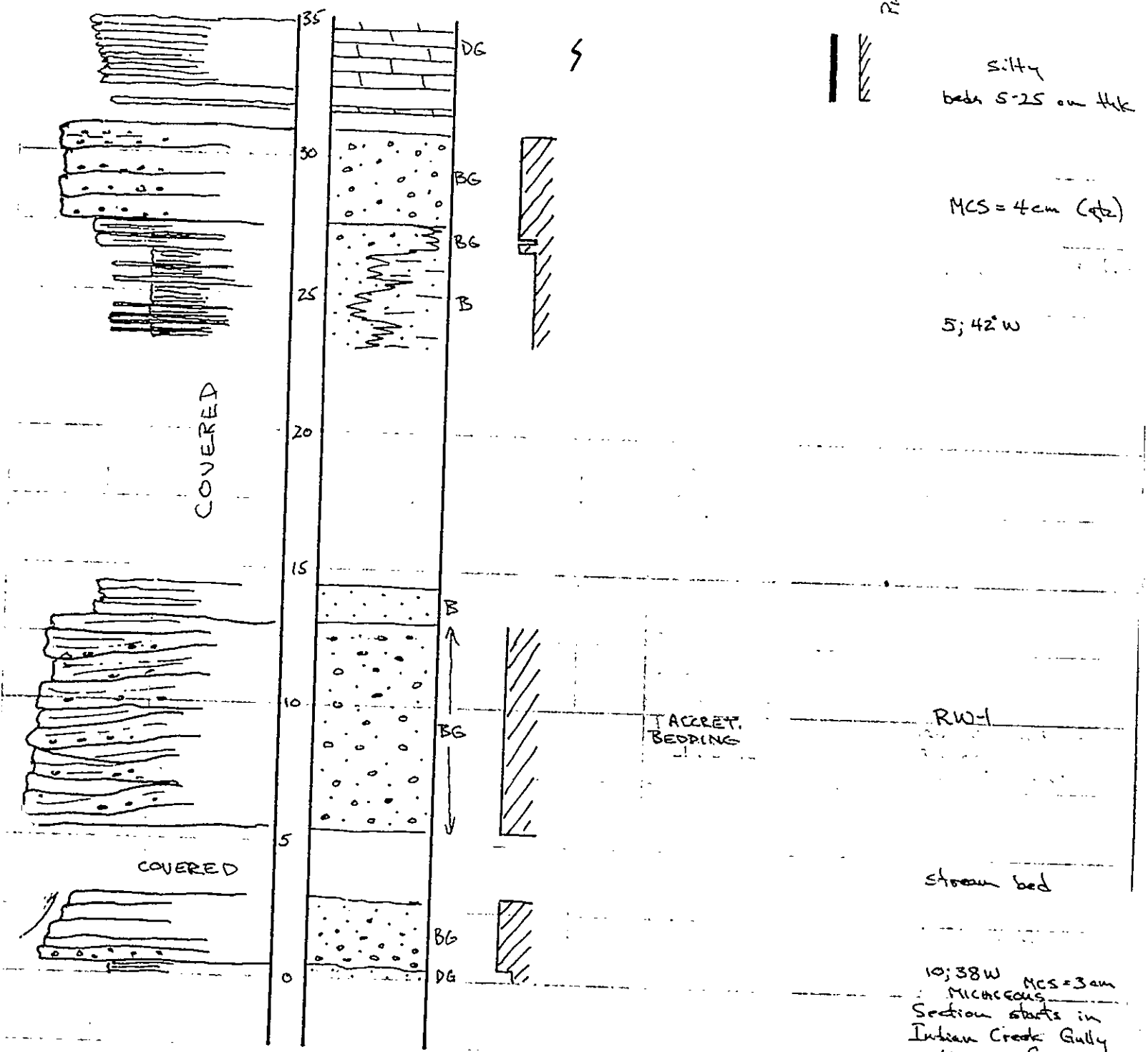

TRES RITOS QUADRANGLE
NEW MEXICO-TAOS CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
Apache Springs
Canyon
Borrego
Amole
Canyon
Indian
Creek
Rio
Canon
Hondo
Canon
Ojito Maes Spring
NORTH END
RAIL (PACK)
C A R S O
N A T I O N A L
Rock Wall
RW 54
RPI 55
RPII 56
Gallegos
BM 8446
BM 7999
BM 7825
BM 8034
BM 2741
R 12 E
R 13 E
4895 II NW (PENASCO)
4007
4006
4003
10'
25
30
29
36
31
32
33
1
6
5
4

Rio
Canon
Creek
Indian
Rock Wash
Cottage
31
36
R 12 E
R 13 E
T 23 N
T 22 N
BM 7999
8483
8539
8400
8600
8200
8000
8000
8000
8400
8200
8178
8124
7800
7999
8196
10
400
3
15
DC fossil
DC RA
DC wood
DC wood
0°20'
6 MILS
1°8'
231 MILS
GN
MN
½ MILE
0
CONTOUR INTERVAL = 40 ft.

Rock Wall, RW Hwy 3

Aug. 4, 1978
JMC

M.S. No. 54



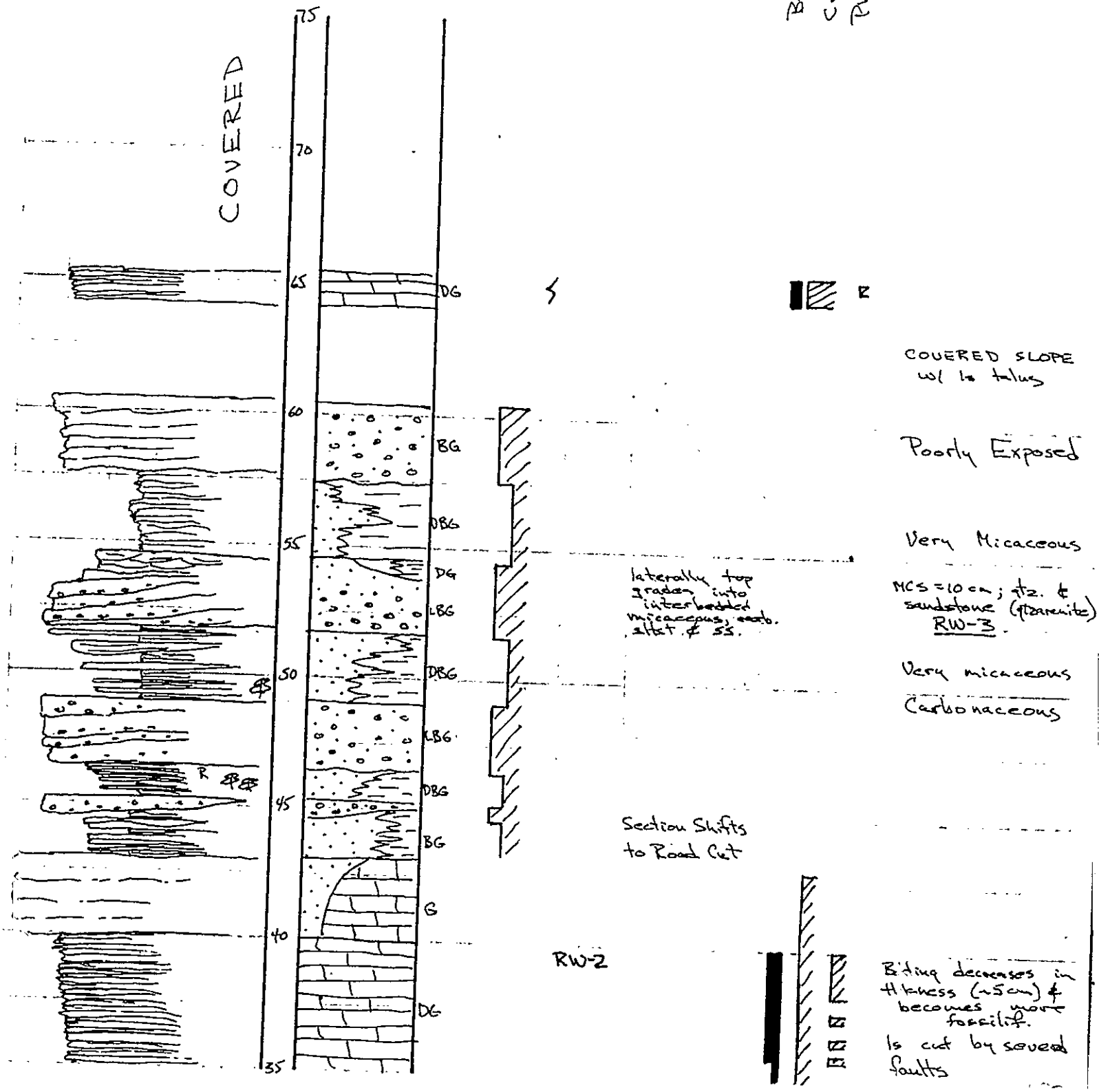
181

RW

Aug. 4
JMC

(3)

M.S. No. 54



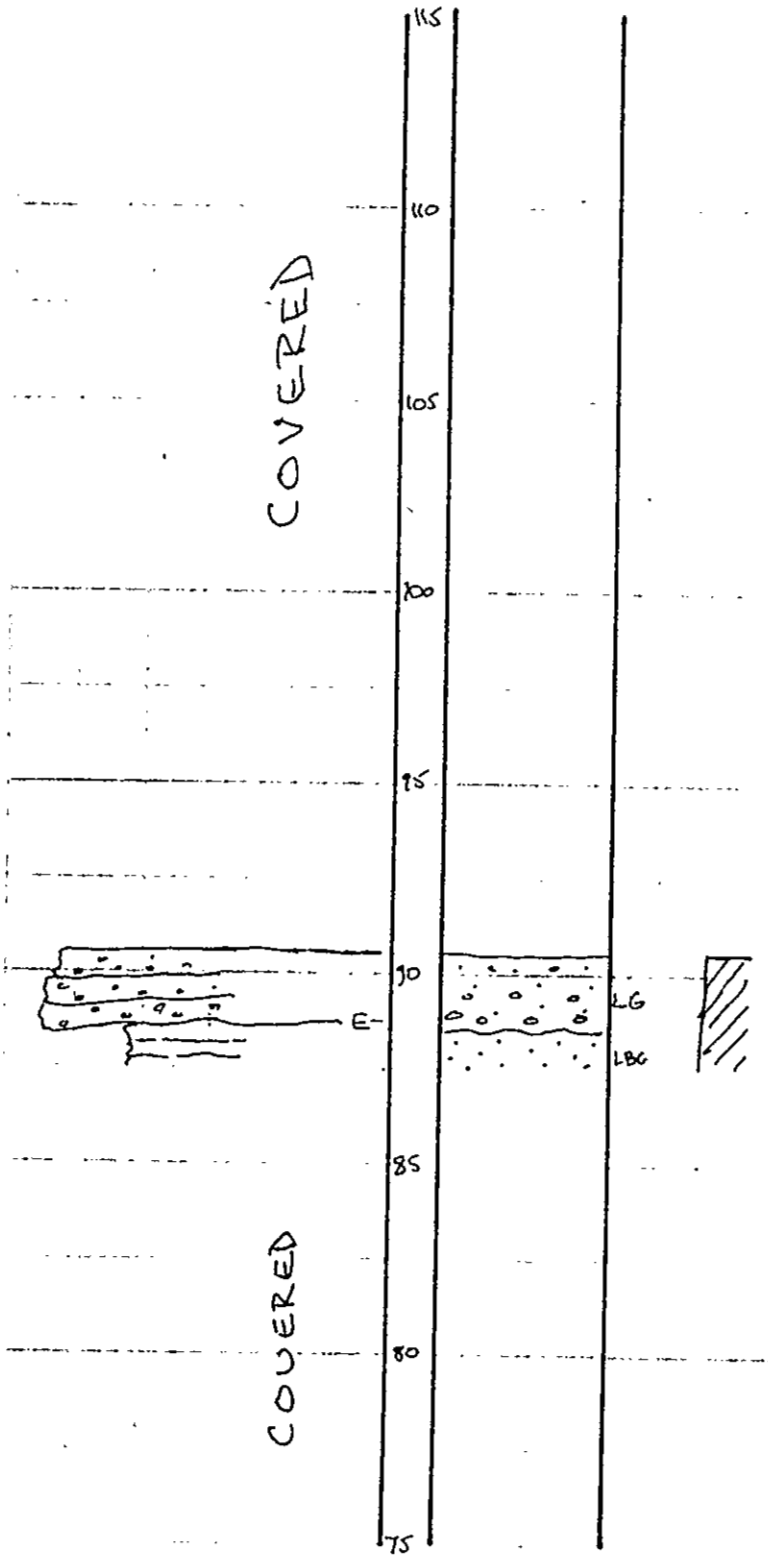
RW

Aug 5

JMC

(3)

M.S. No. 54



Dirt Covered Slope w/ Blocks of VC. ss.

MCS = 11 cm
Very Poorly Sorted
10', 38° W

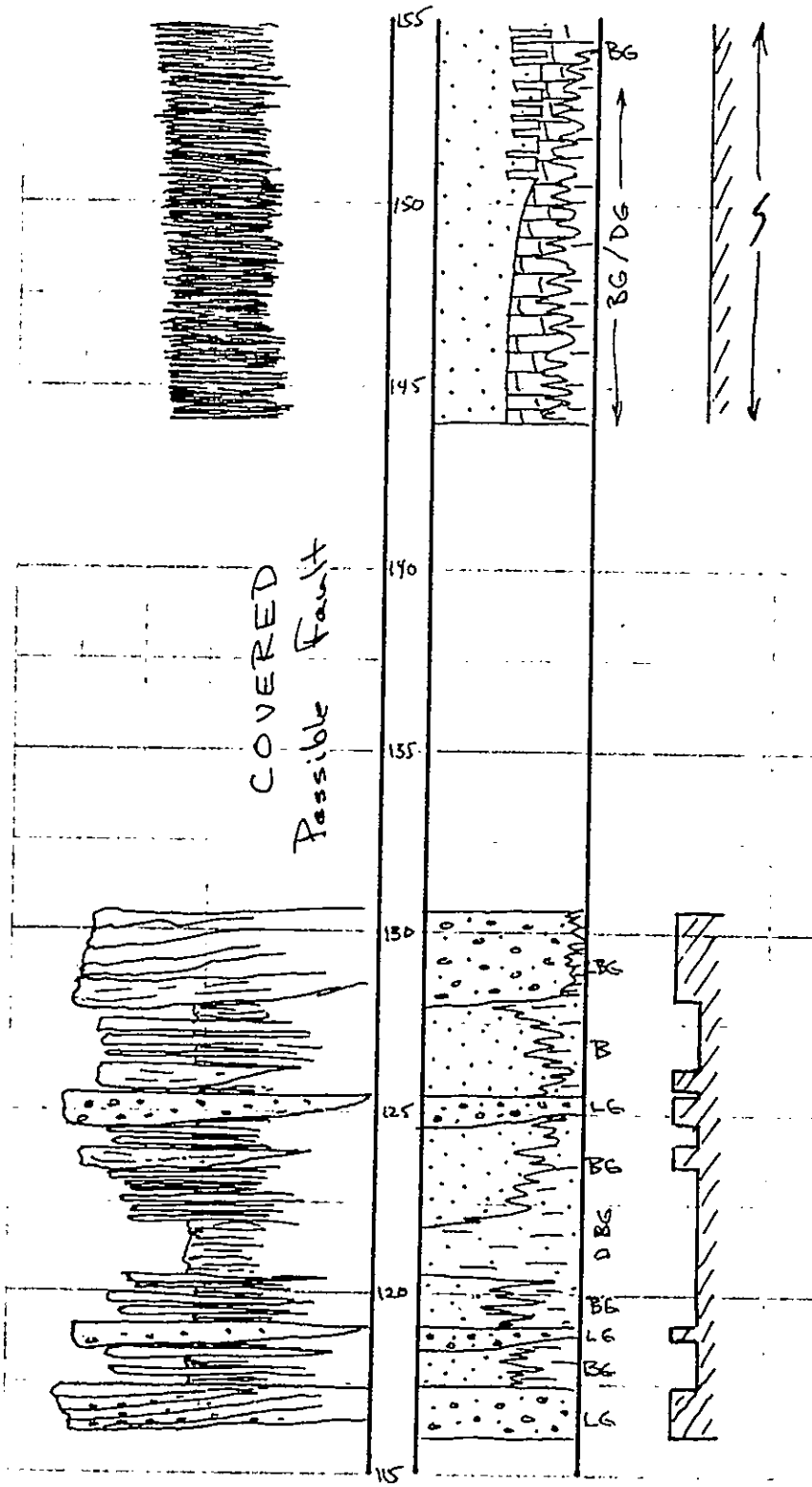
RW

Aug 5

JMC

(3)

M.S. No. 54



Brachs

Diff. in resist. b/s now just appears to be diff. in carb content

30;58W
Calc., mica., carb. BC mud ss layers 2-15cm thick interbdd w/ fewer silty DG layers

SIGNIFICANT CHANGE IN STRIKE & DIP AT THIS POINT

ACCRET BEDDING

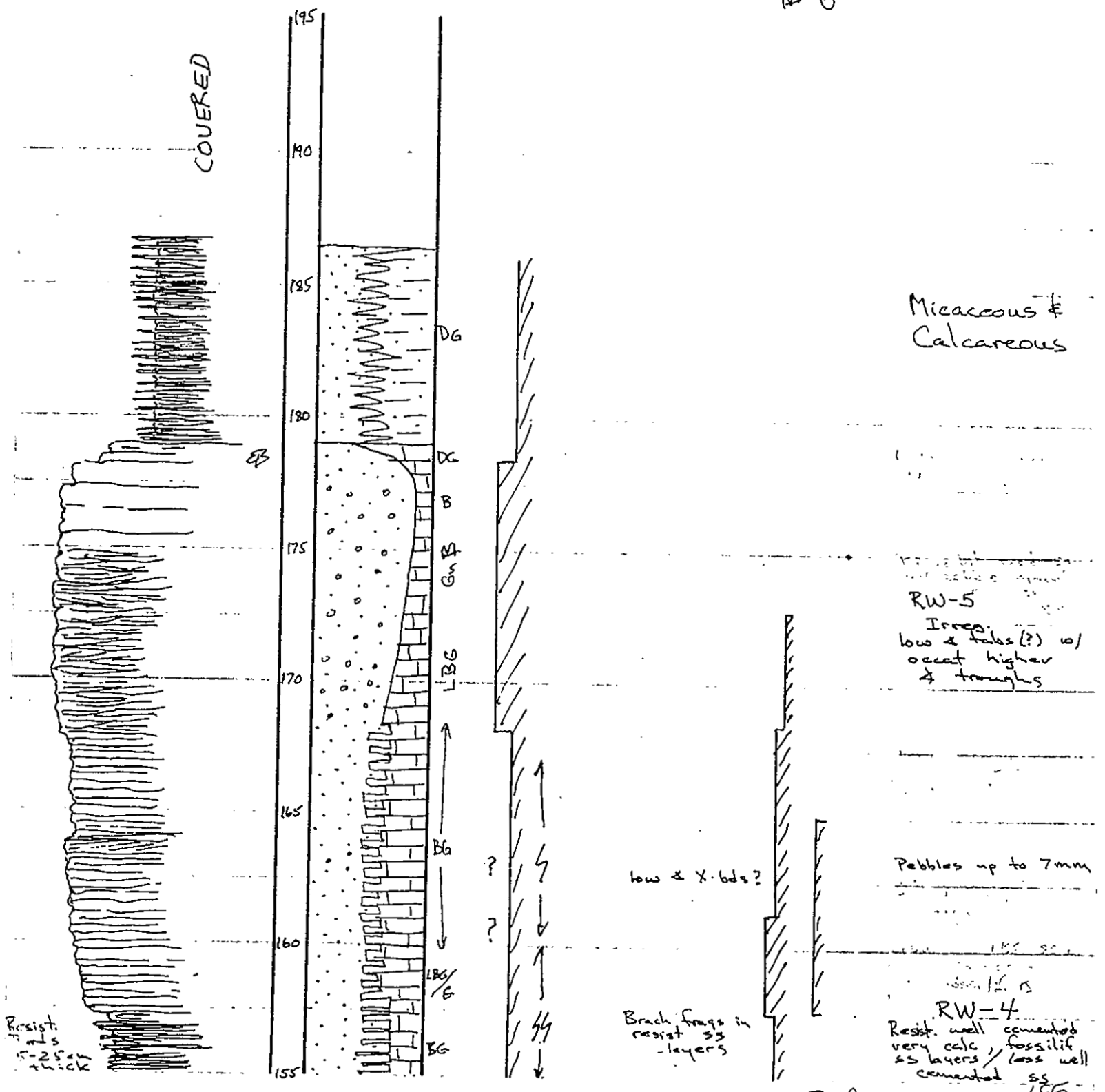
MCS = 7cm

RW

Aug 5
JMC

(W)

M. S. No. 54

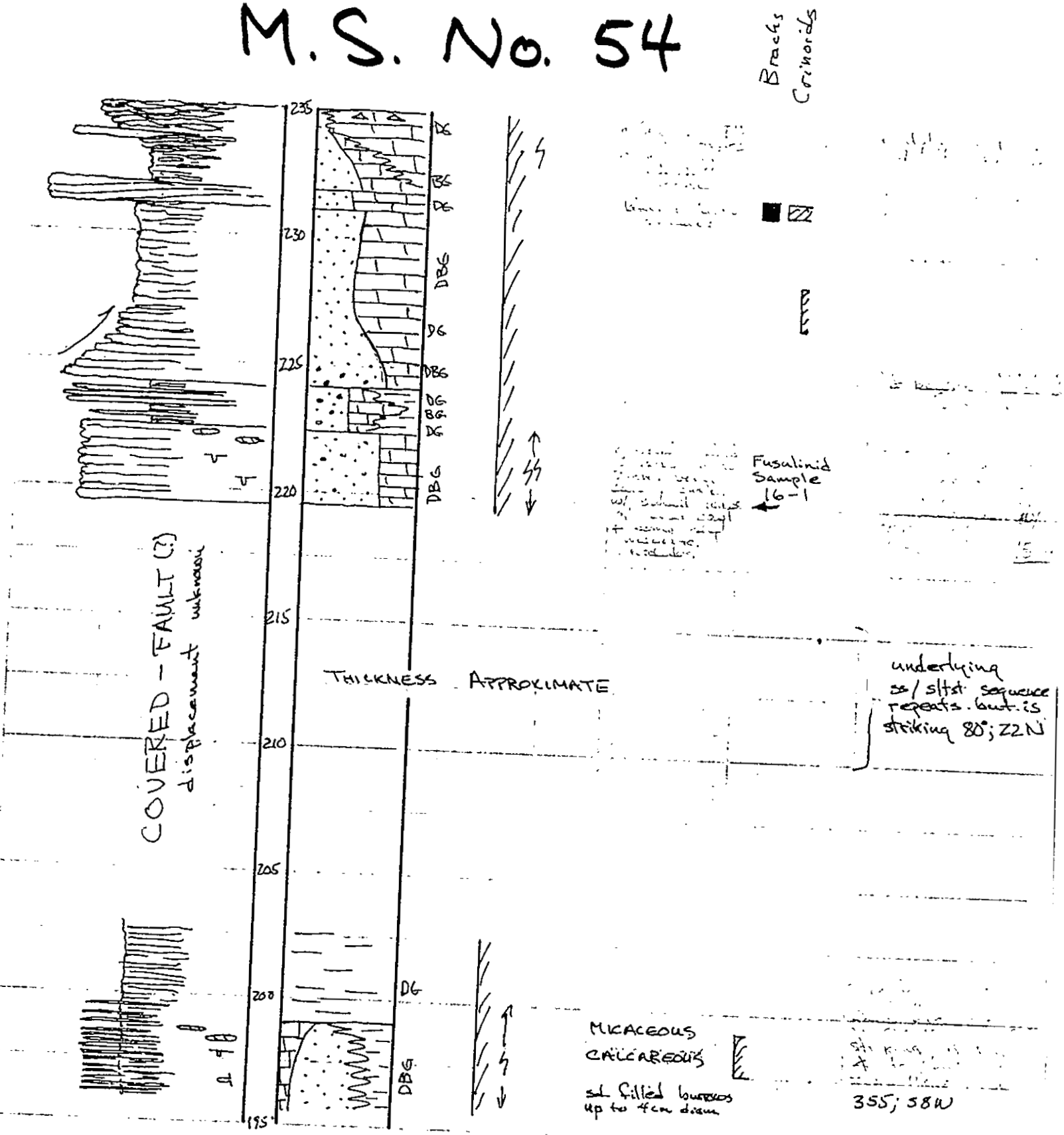


RW

Aug 6
JMC

(M)

M.S. No. 54



2N

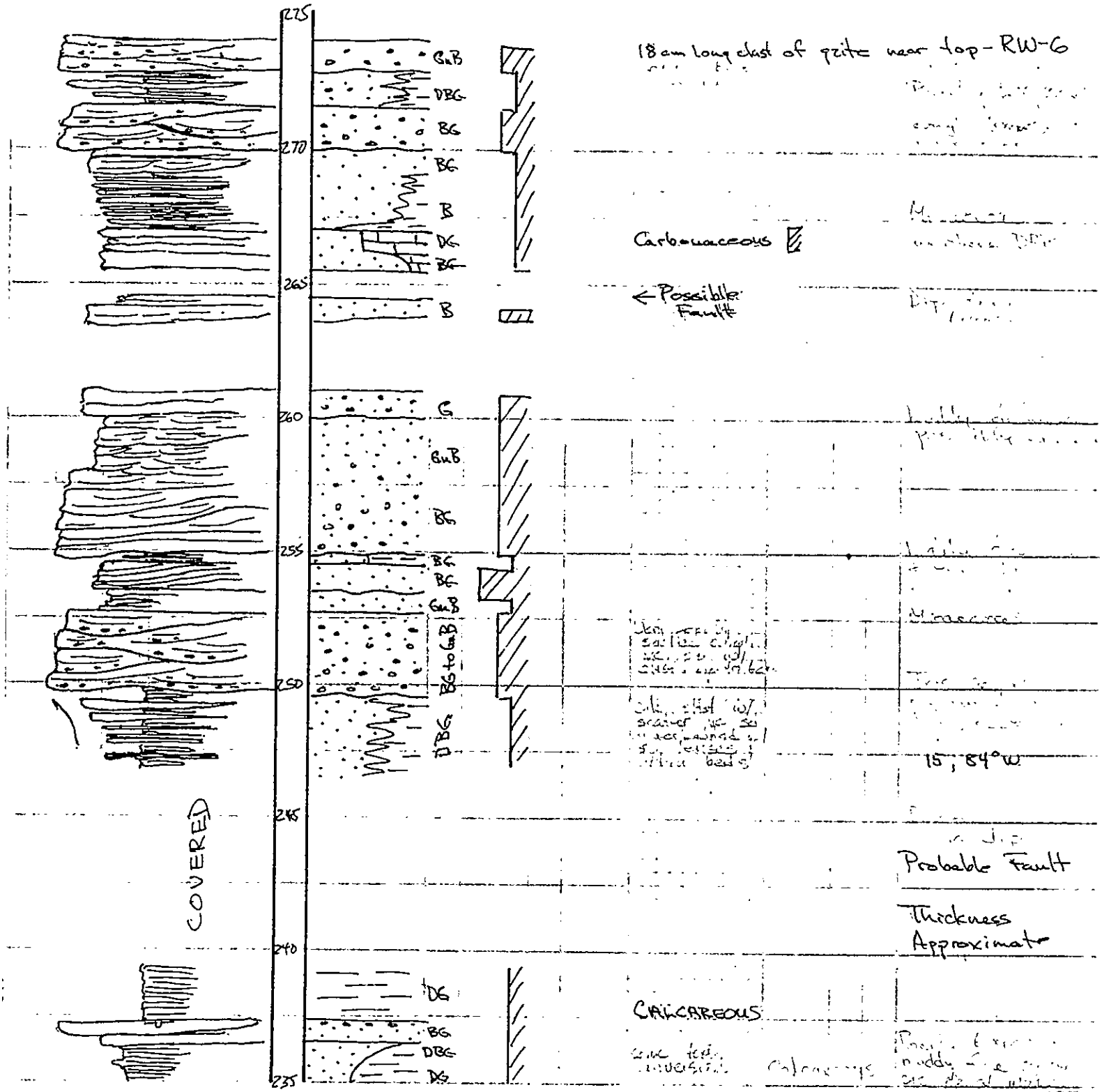
RW

Aug. 6
JMC

(M)

M.S. No. 54

Brachs



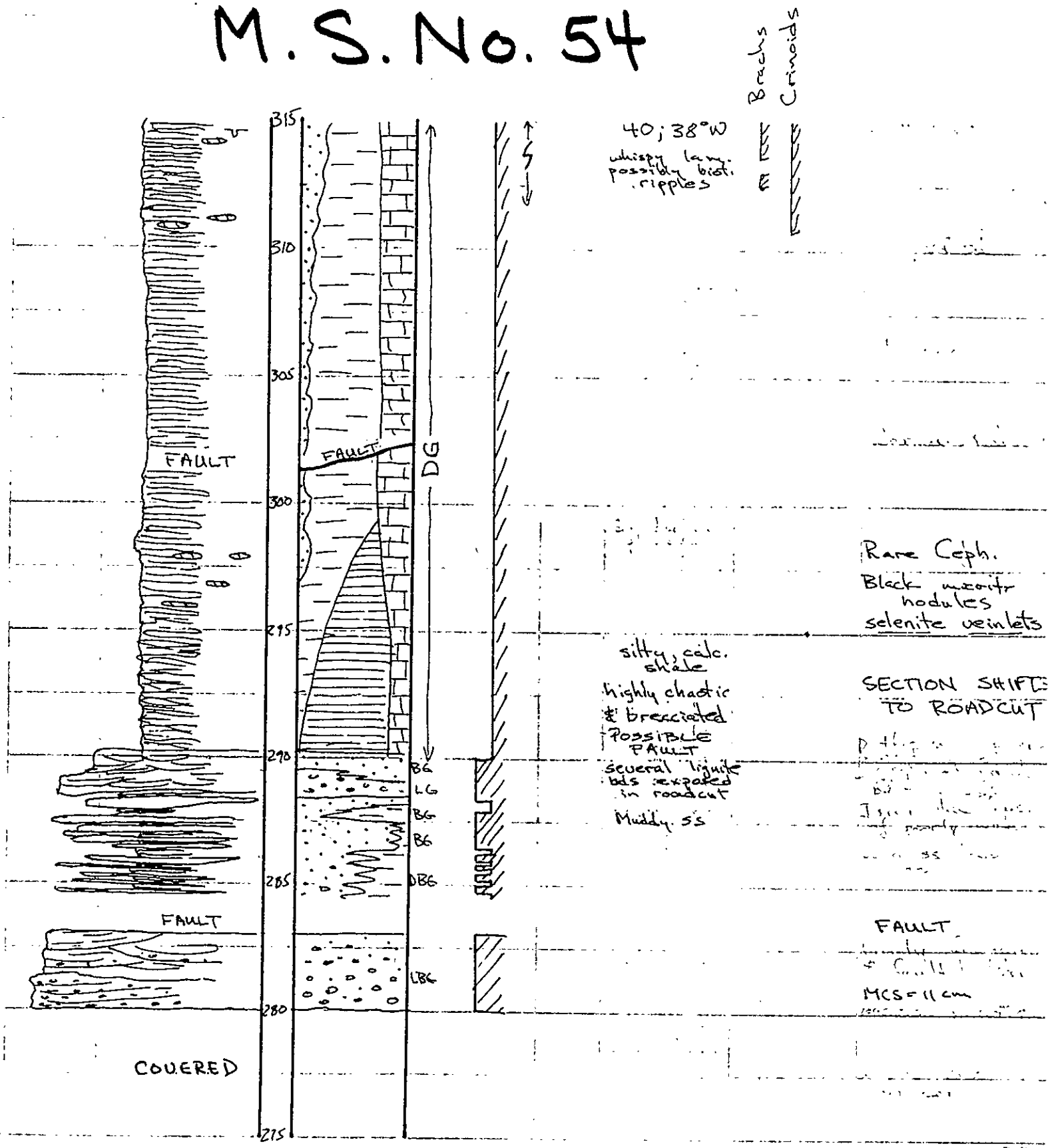
RW

Aug 6

JMC

(3)

M.S. No. 54

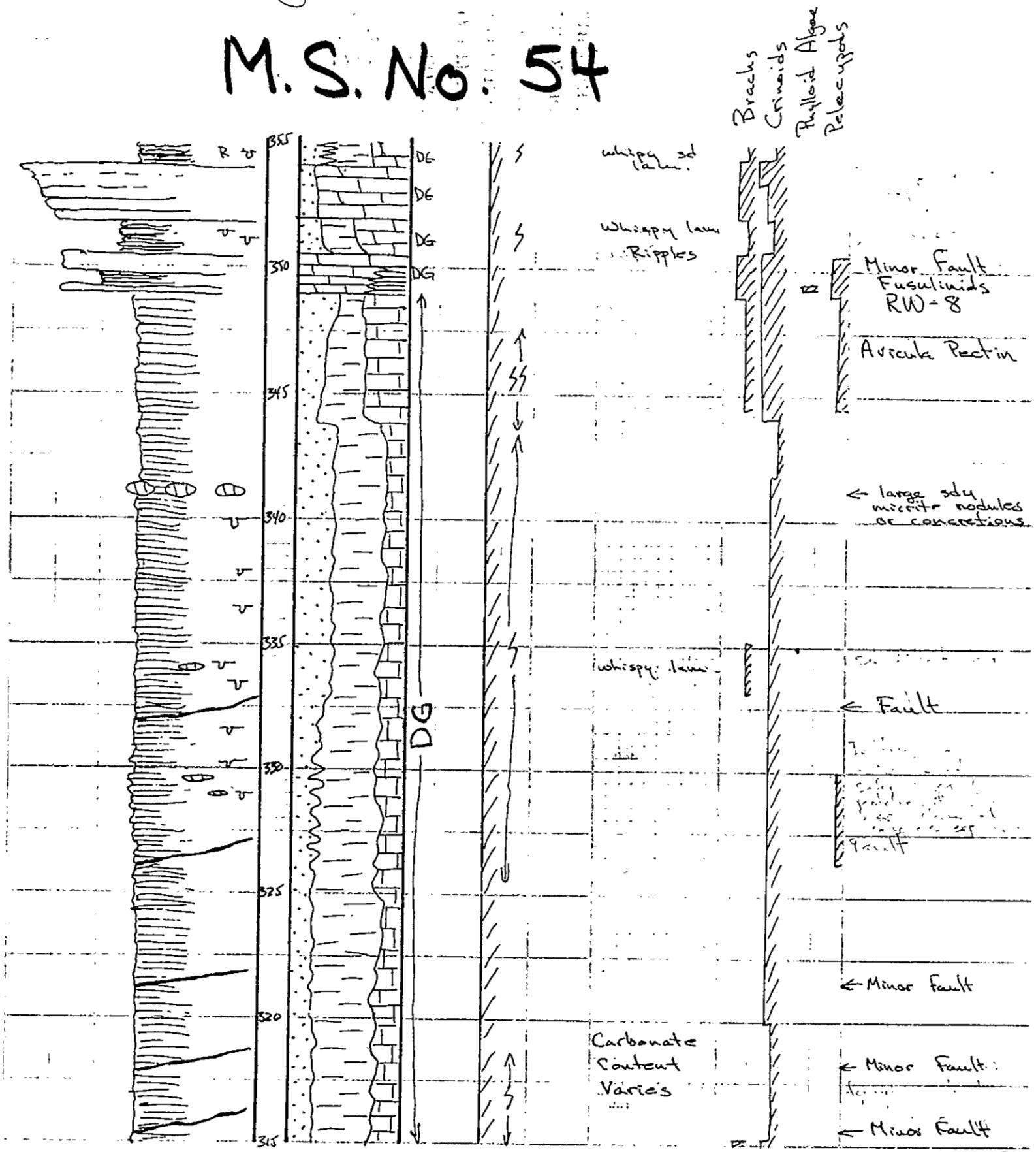


RW

Aug. 6
JMC

(Σ)

M.S. No. 54



RW

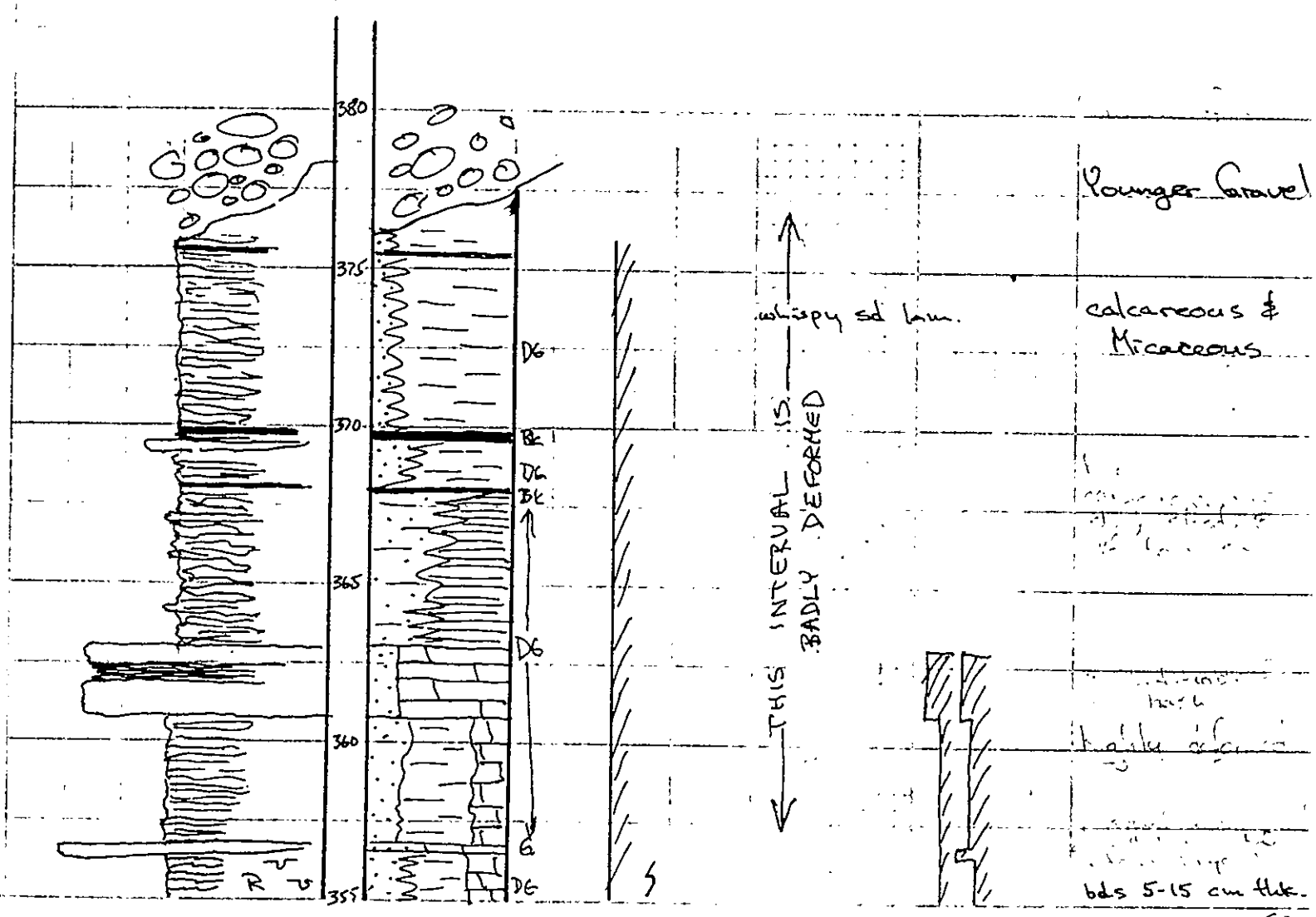
Aug. 6
JMC

(M)

M.S. No. 54

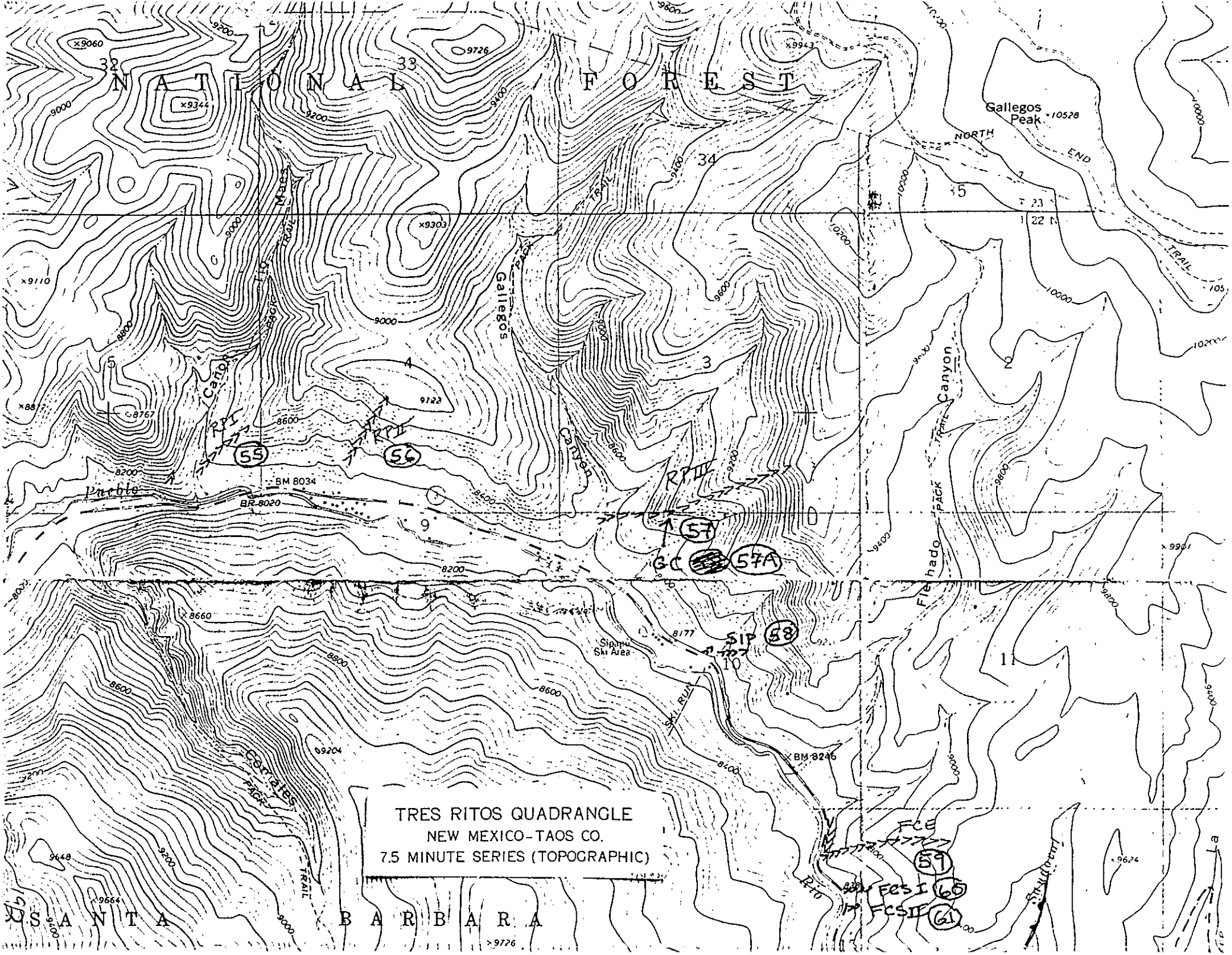
Brachs
Crinoids

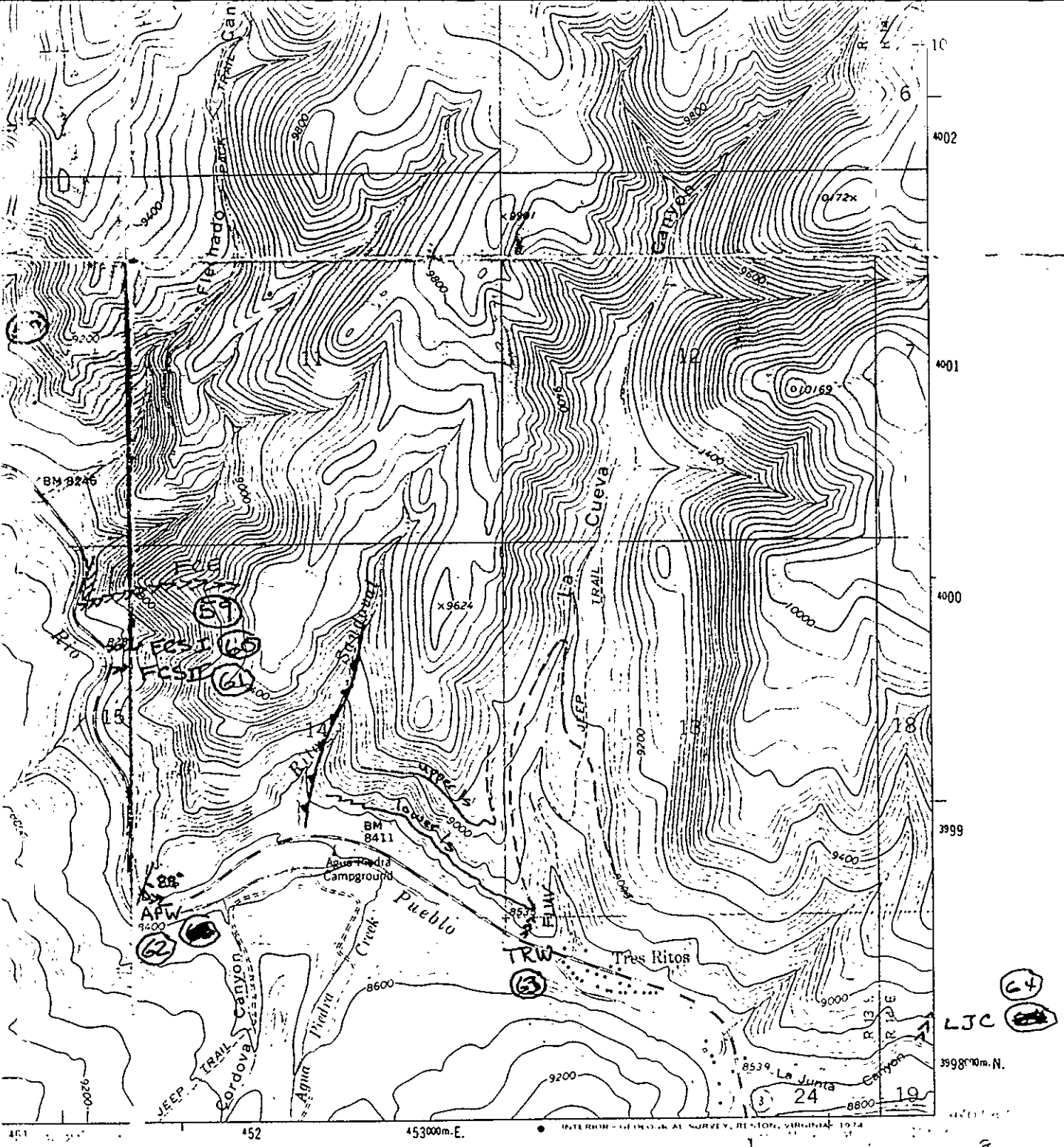
Sample RW-9 is from a nodular DG, fossilif. (abund brachs) ls. which is exposed up the hill from this section. It is up to 9m thick & directly overlies a thick VC congl. (w/ clasts up to 10 cm) This lo may belong strat. below the units exposed at 220 m.



RIO PUEBLO SECTIONS

MEASURED SECTIONS
55 THROUGH 63


NATIONAL FOREST
Gallegos Peak
10528
NORTH END TRAIL
Gallegos Canyon
Flechado Canyon
Pueblo Canyon
Estrates Pack Trail
Sipapu Ski Area
Ski Run
BM 8034
BM 8246
RPI
RPII
RPIII
55
56
57
57A
GC
SIP
58
FCE
59
FCSI
65
FCSII
61
TRES RITOS QUADRANGLE
NEW MEXICO-TAOS CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
SANTA BARBARA



ROAD CLASSIFICATION

Medium-duty — — — Light-duty

Unimproved dirt

State Route

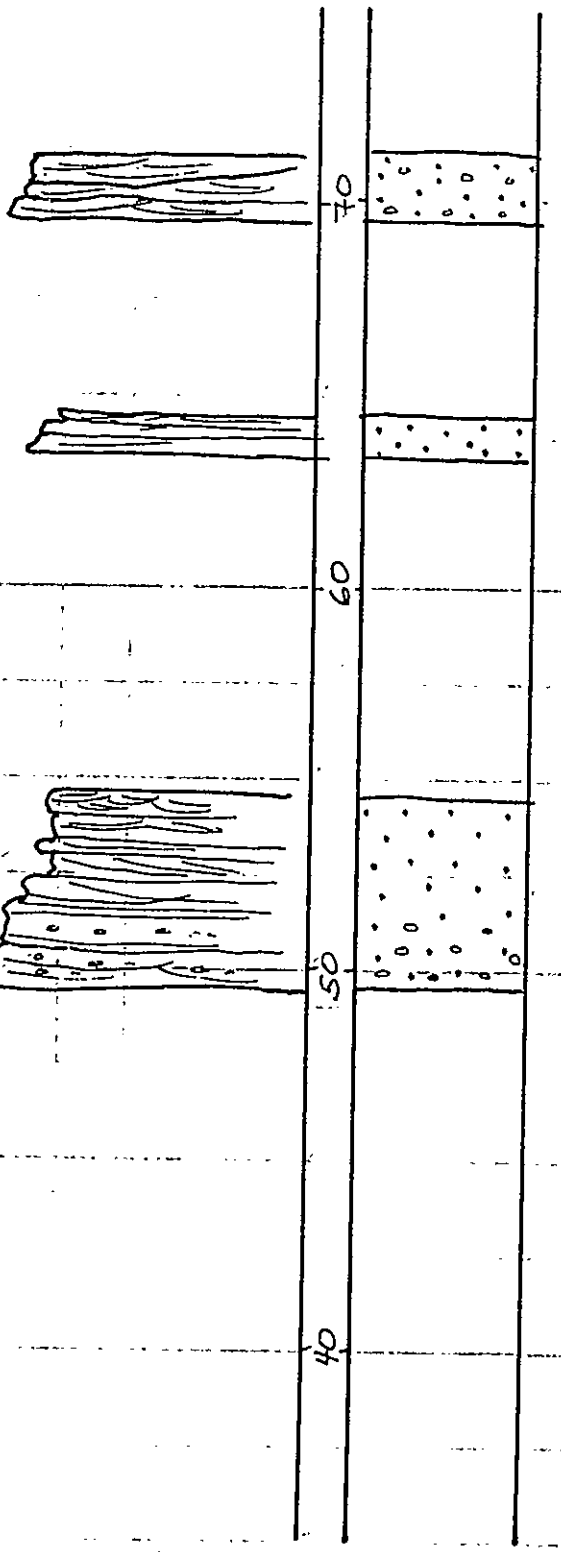
QUADRANGLE LOCATION

TRES RITOS, N. MEX.

1964

M.S. No. 55

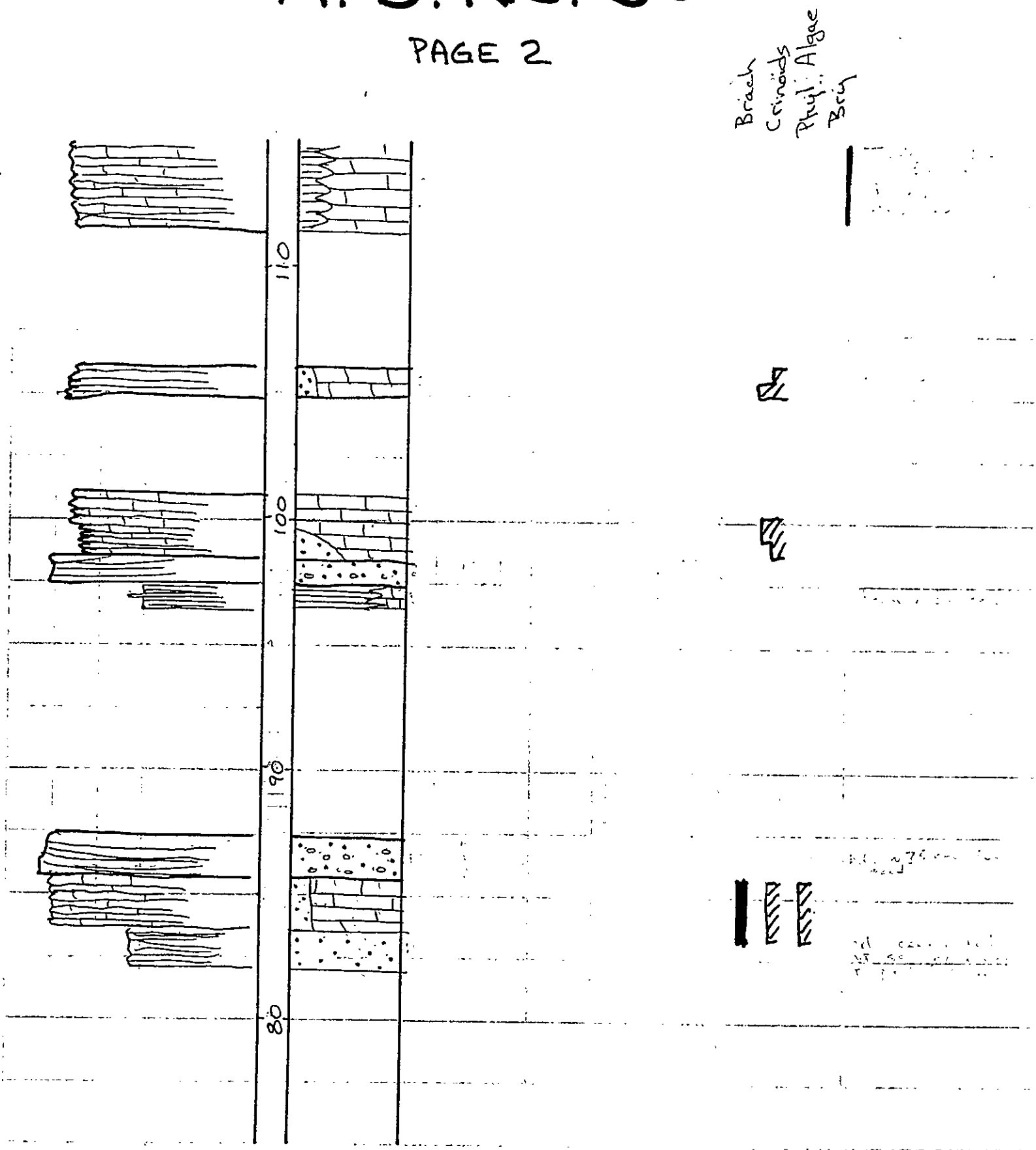
PAGE 1



SECTION BEGINS
APPROX. 50 m ABOVE
THE MISS. / PENN.
UNCONFORMITY

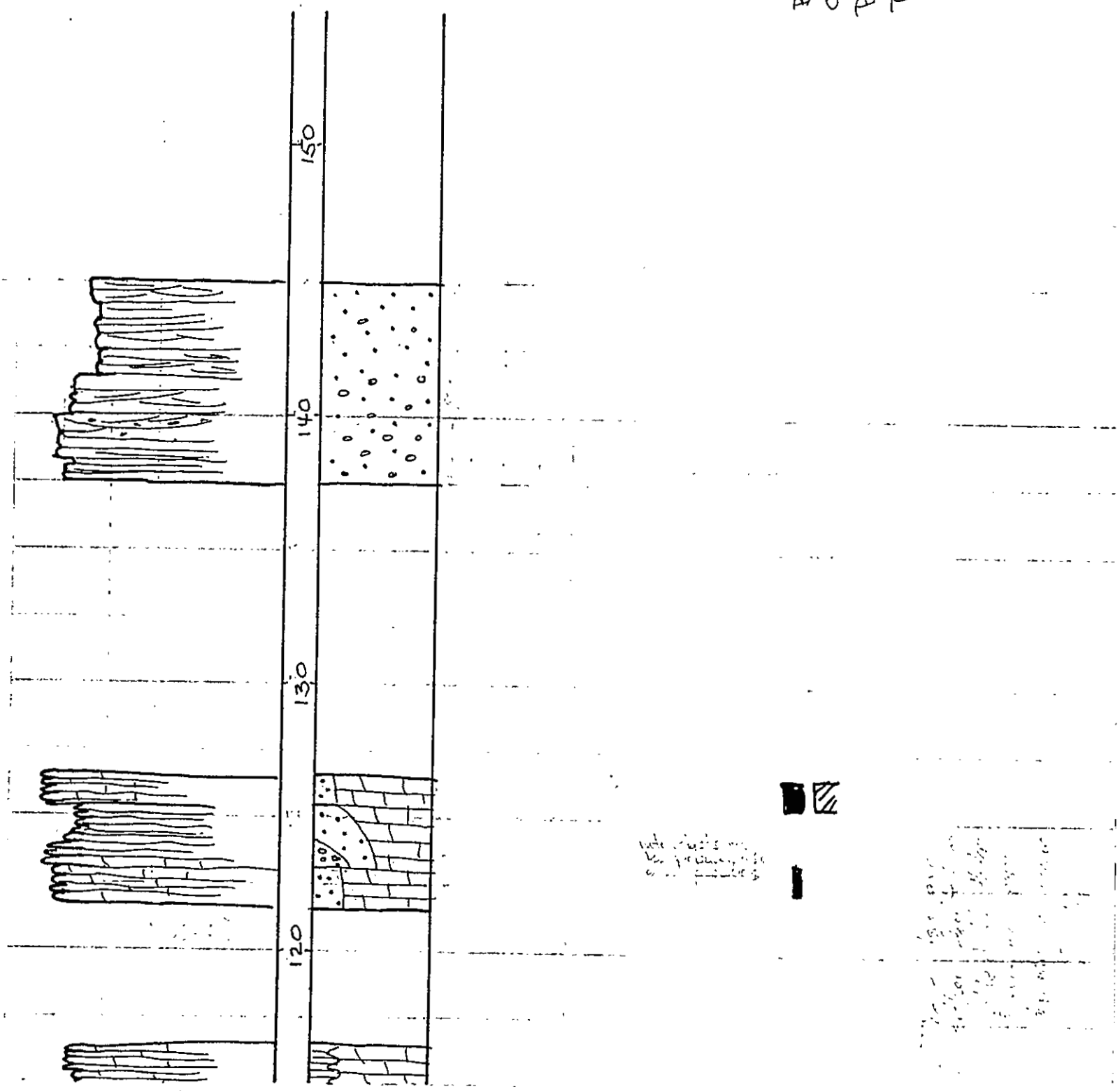
M. S. No. 55

PAGE 2



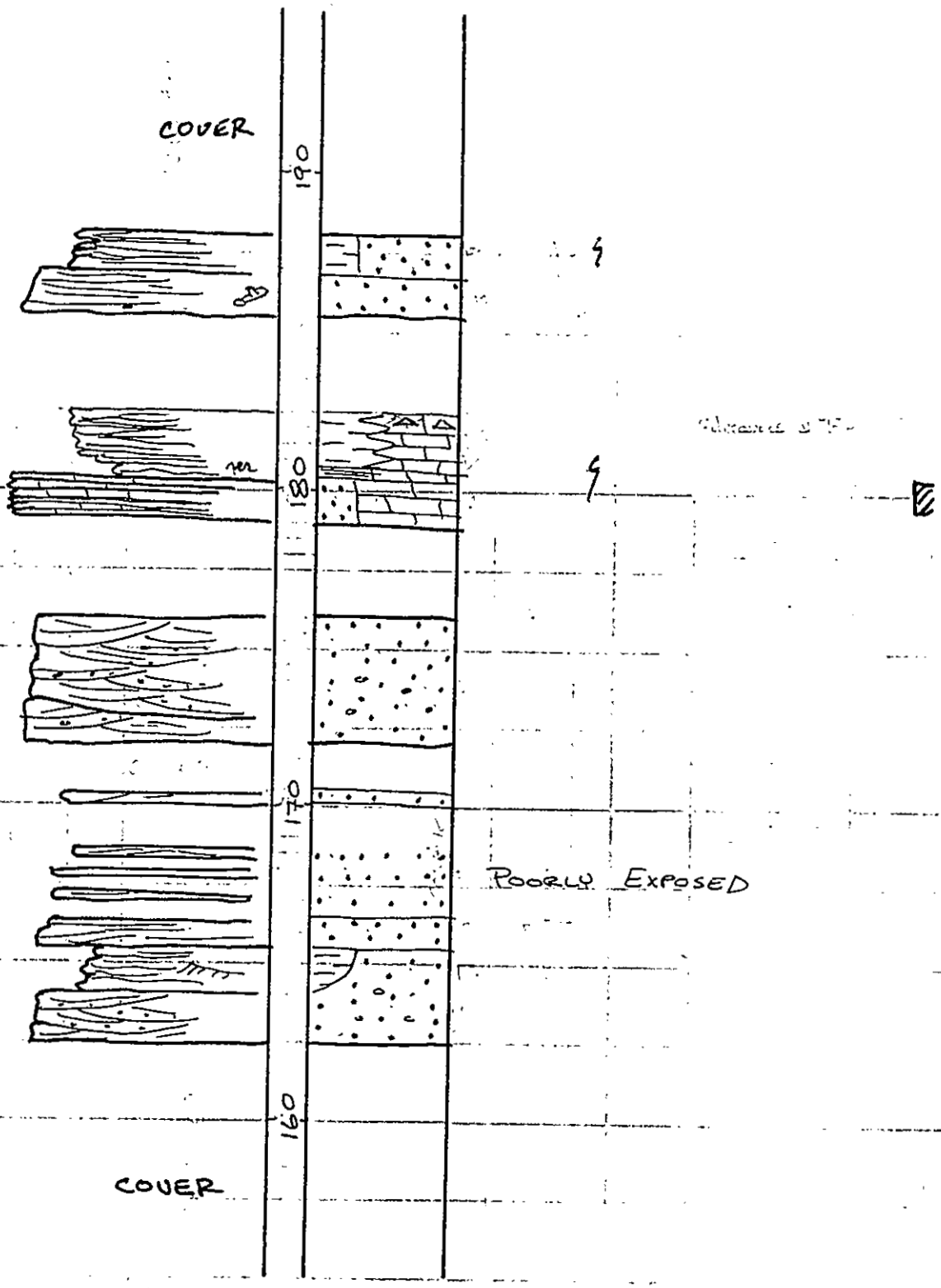
M. S. No. 55

PAGE 3



M.S. No. 55

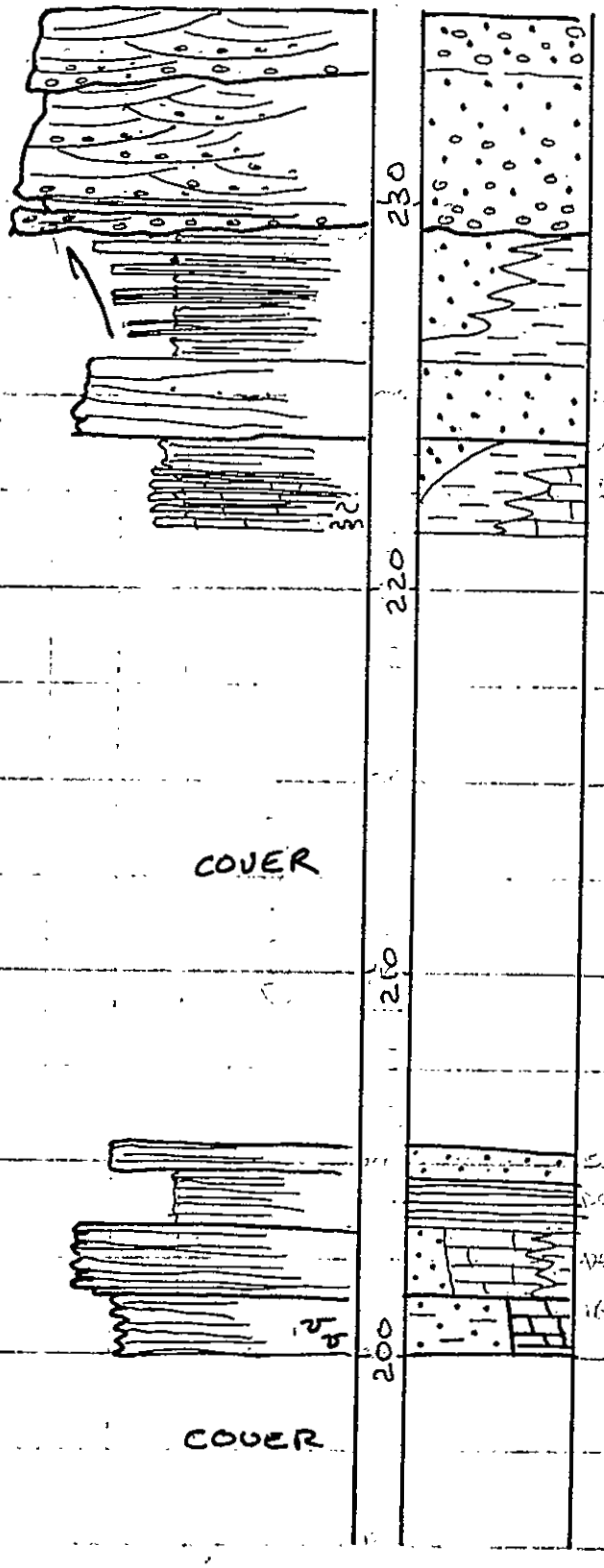
PAGE 4



M.S. No. 55

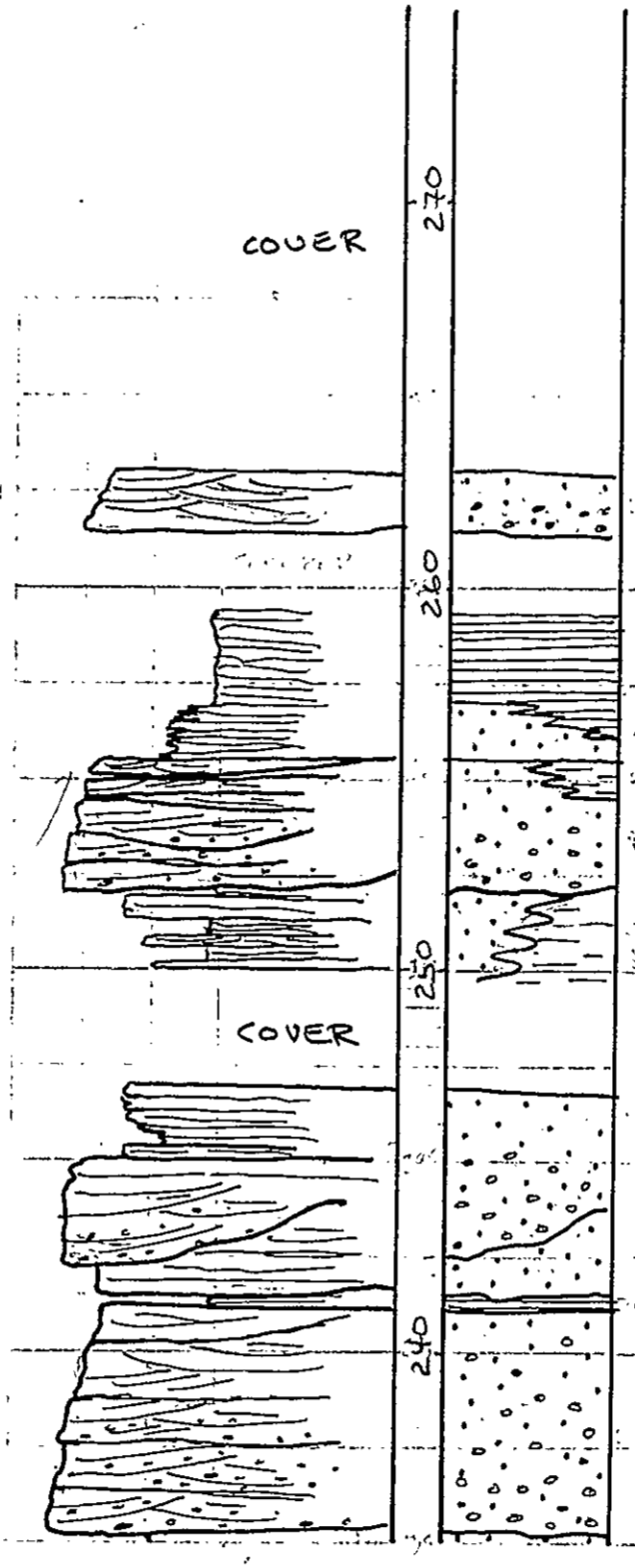
PAGE 5

BRACHS



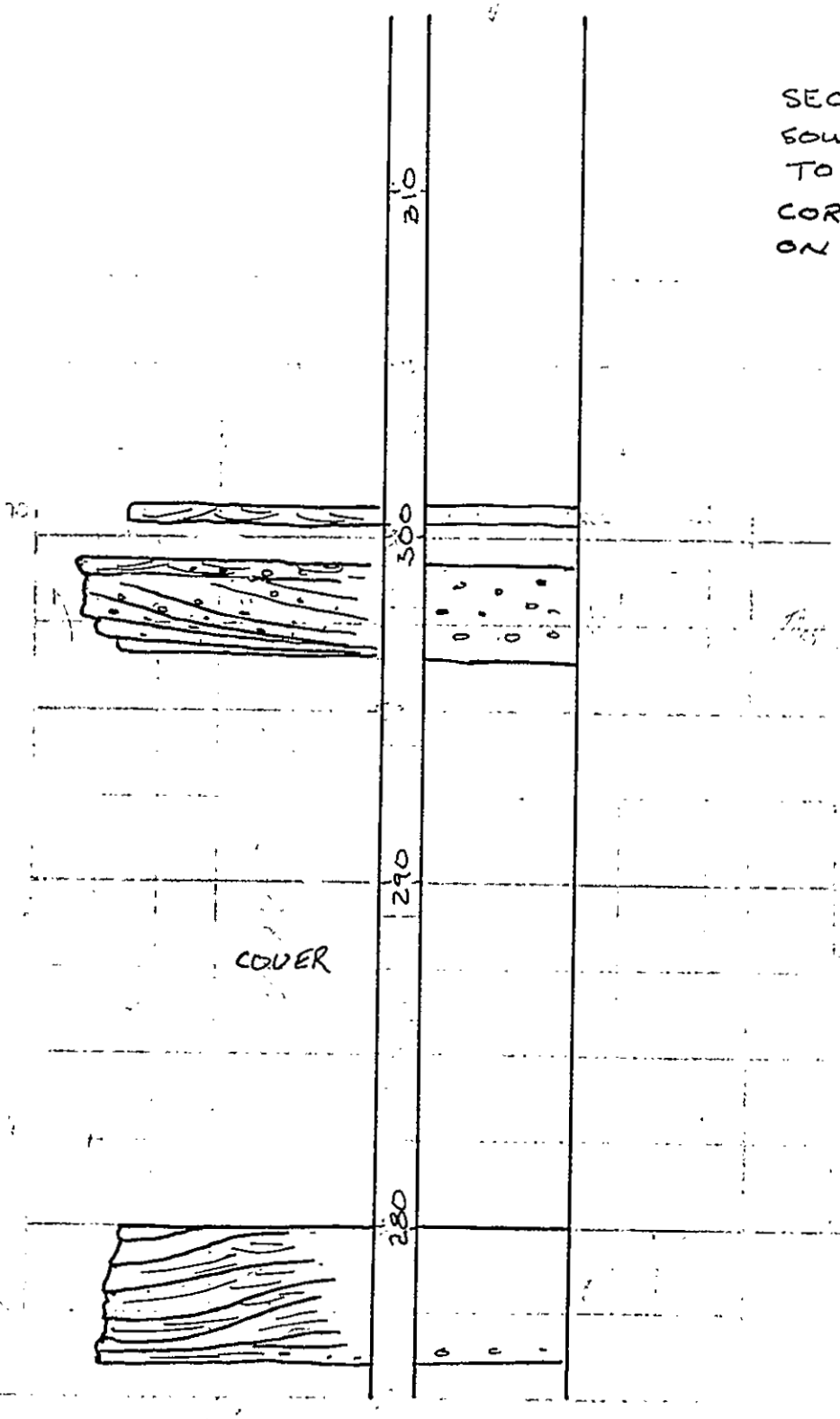
M. S. No. 55

PAGE 6



M.S. No. 55

PAGE 7

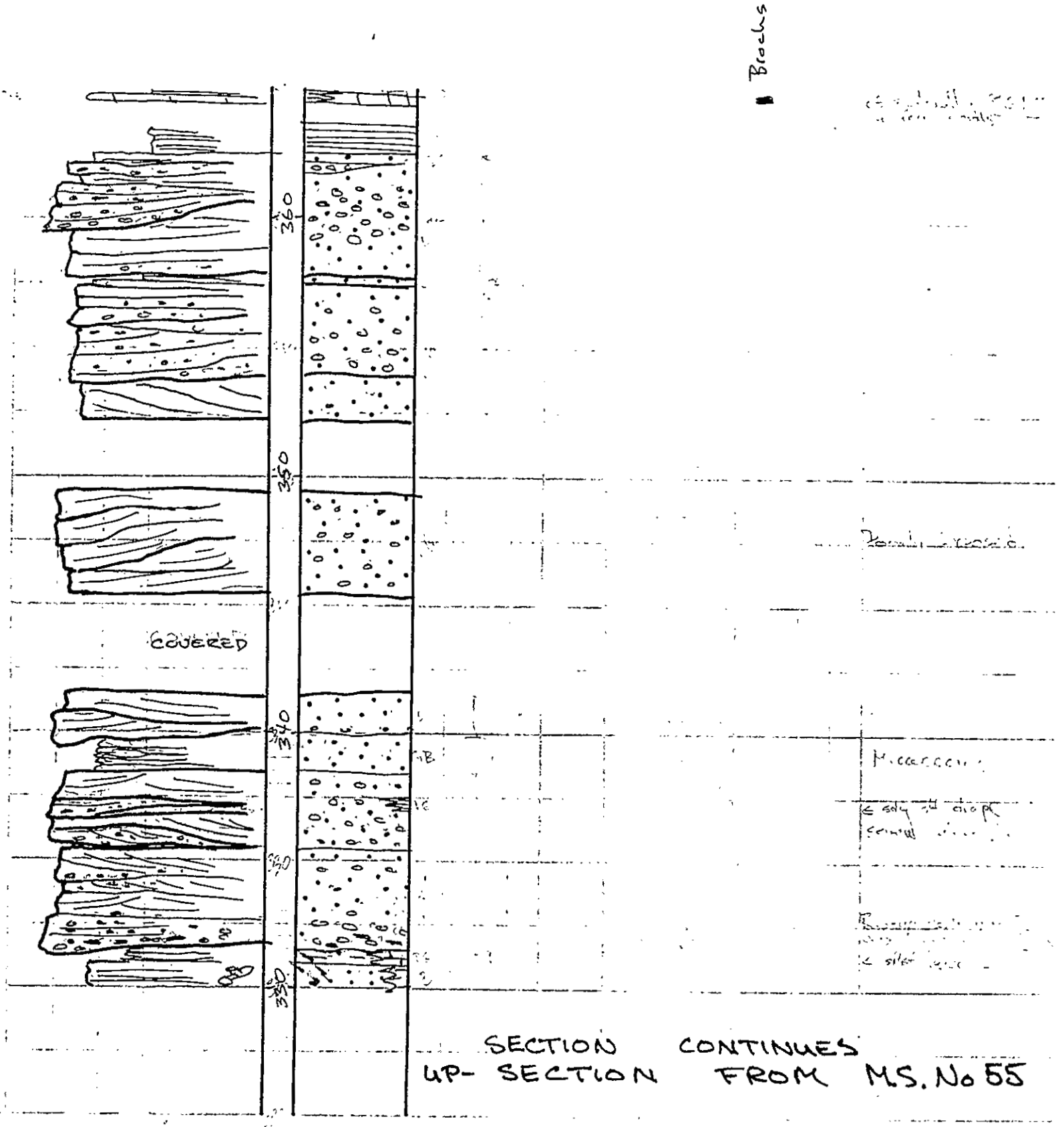


SECTION SHIFTS SOUTHEASTWARD TO M.S. No. 56

CORRELATION BASED ON SUTHERLAND (1963)

M.S. No. 56

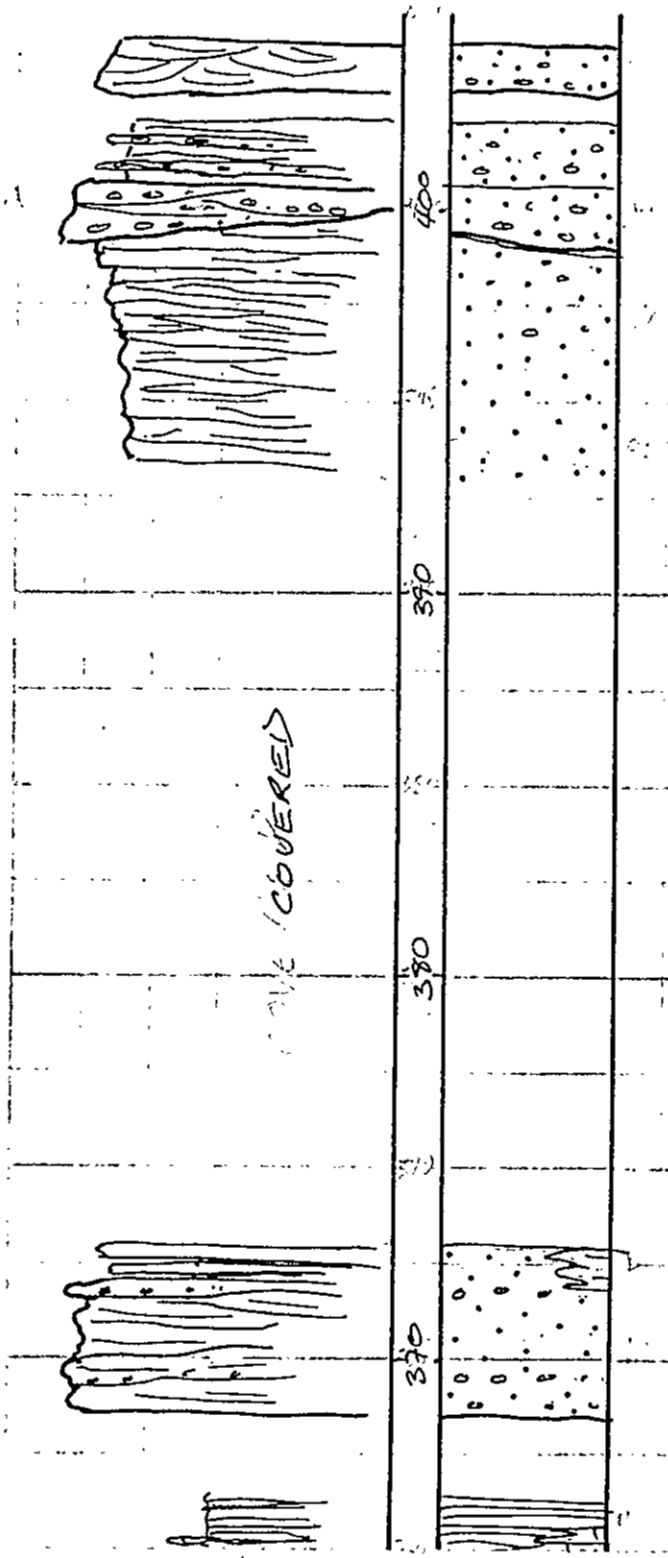
PAGE 1



SECTION CONTINUES UP-SECTION FROM M.S. No 55

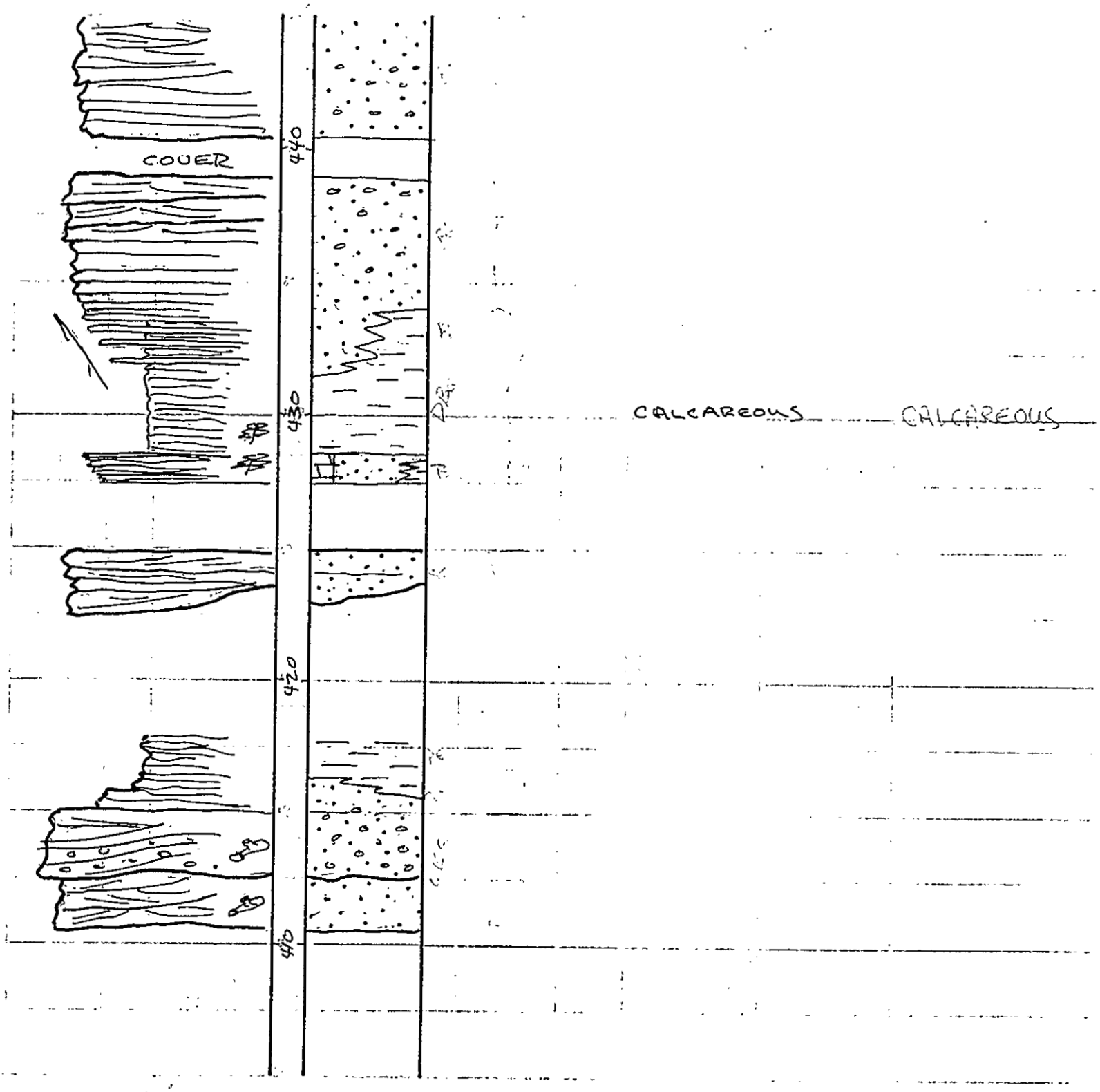
M. S. No. 56

PAGE 2



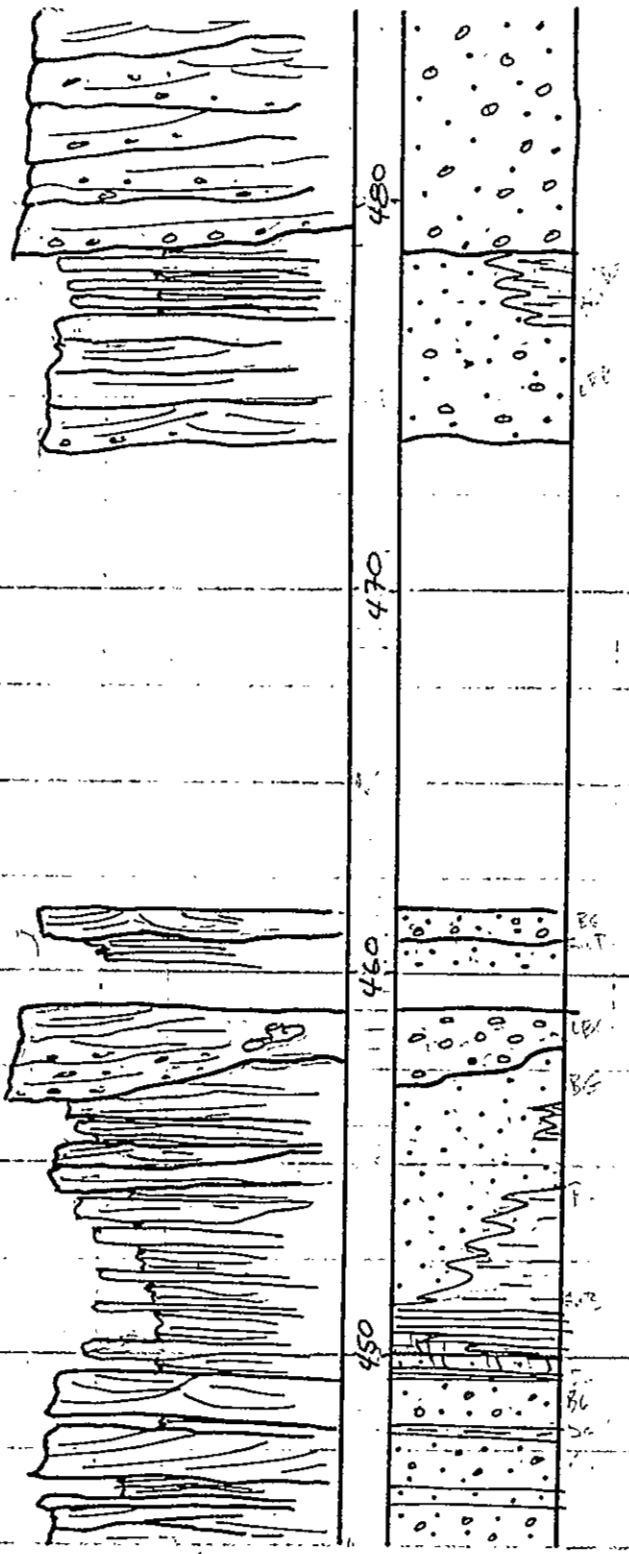
M. S. No. 56

PAGE 3



M.S. No. 56

PAGE 4



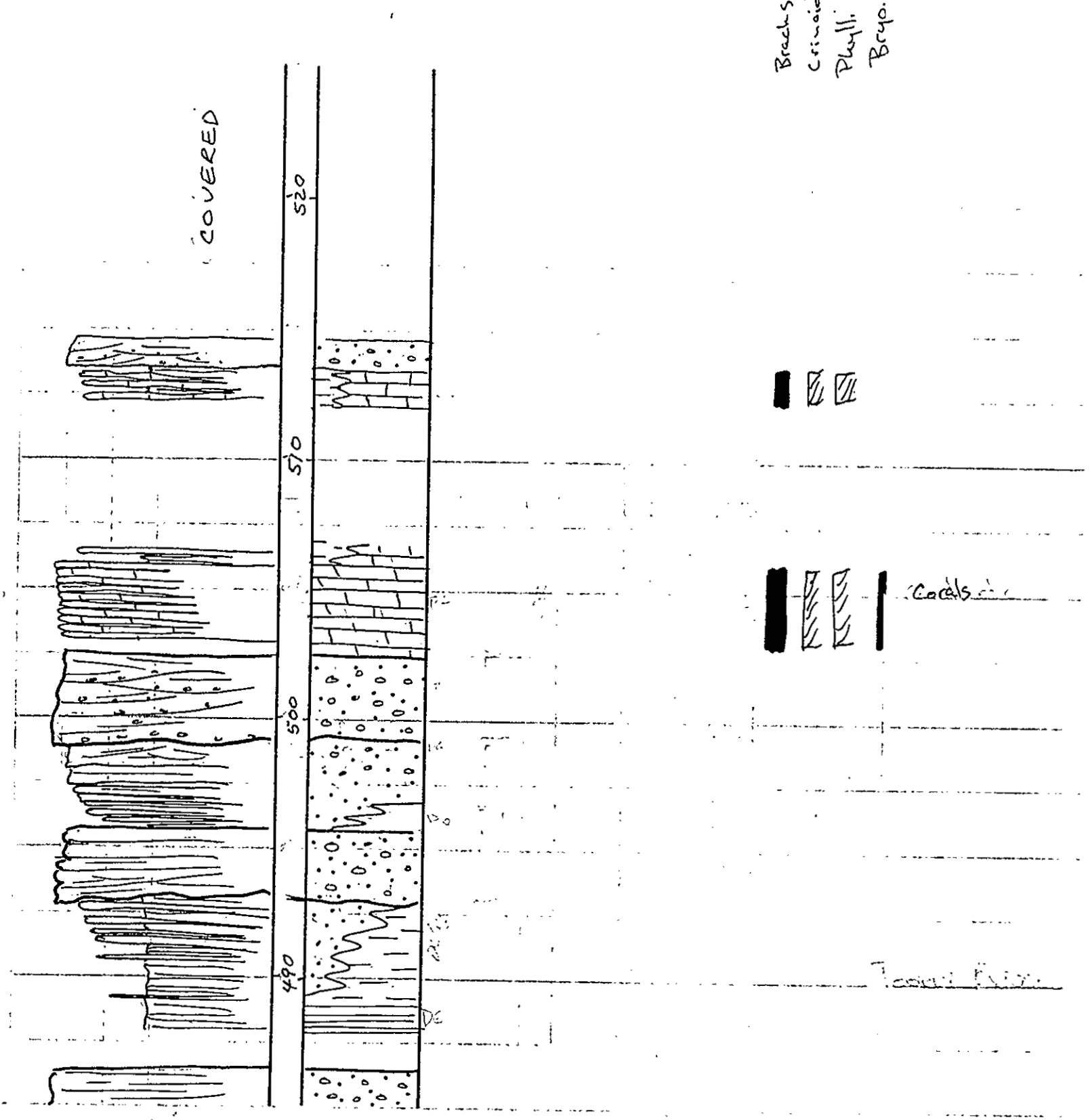
Poor Exposure

shy 1s

20'

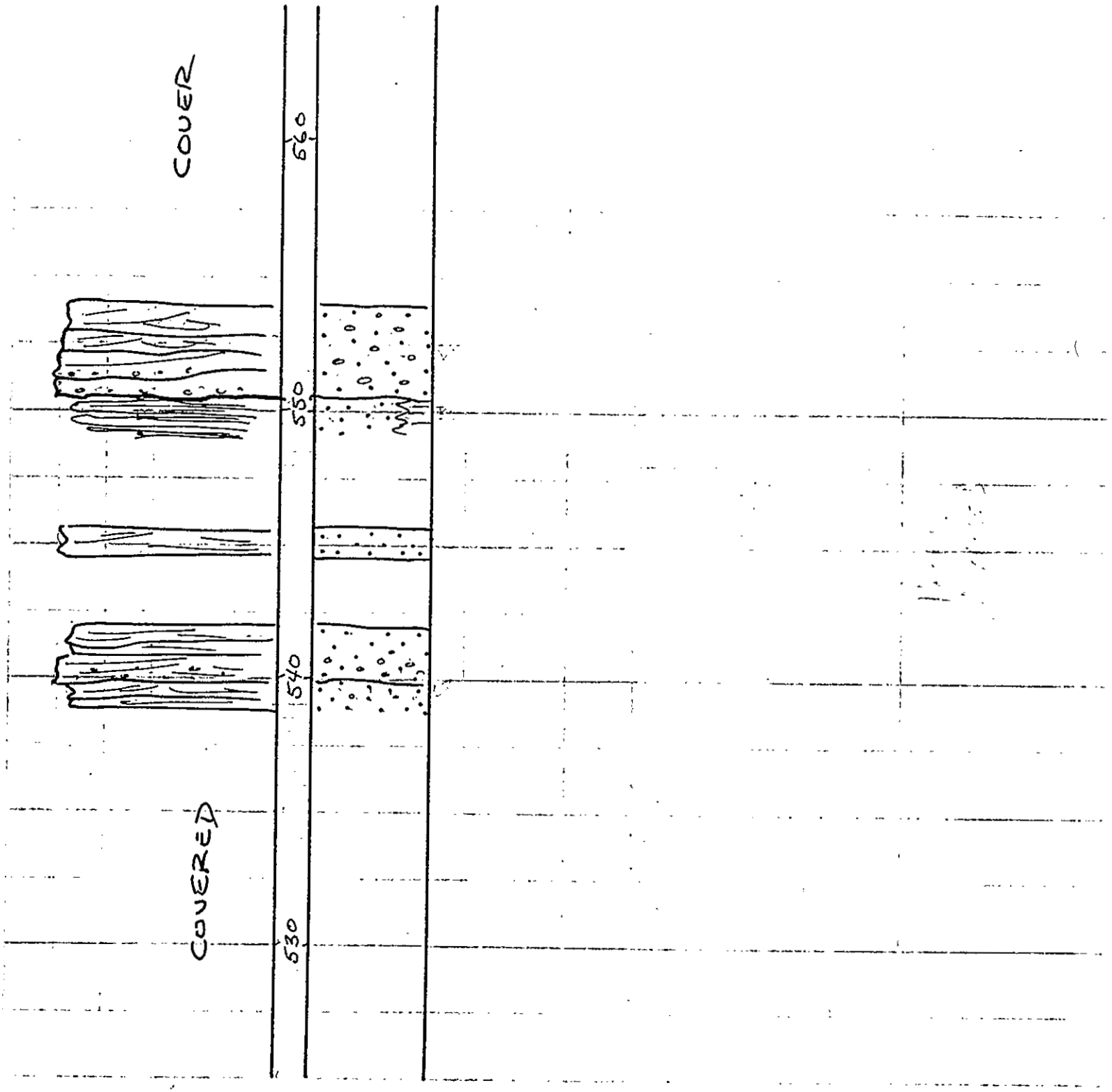
M. S. No. 56

PAGE 5



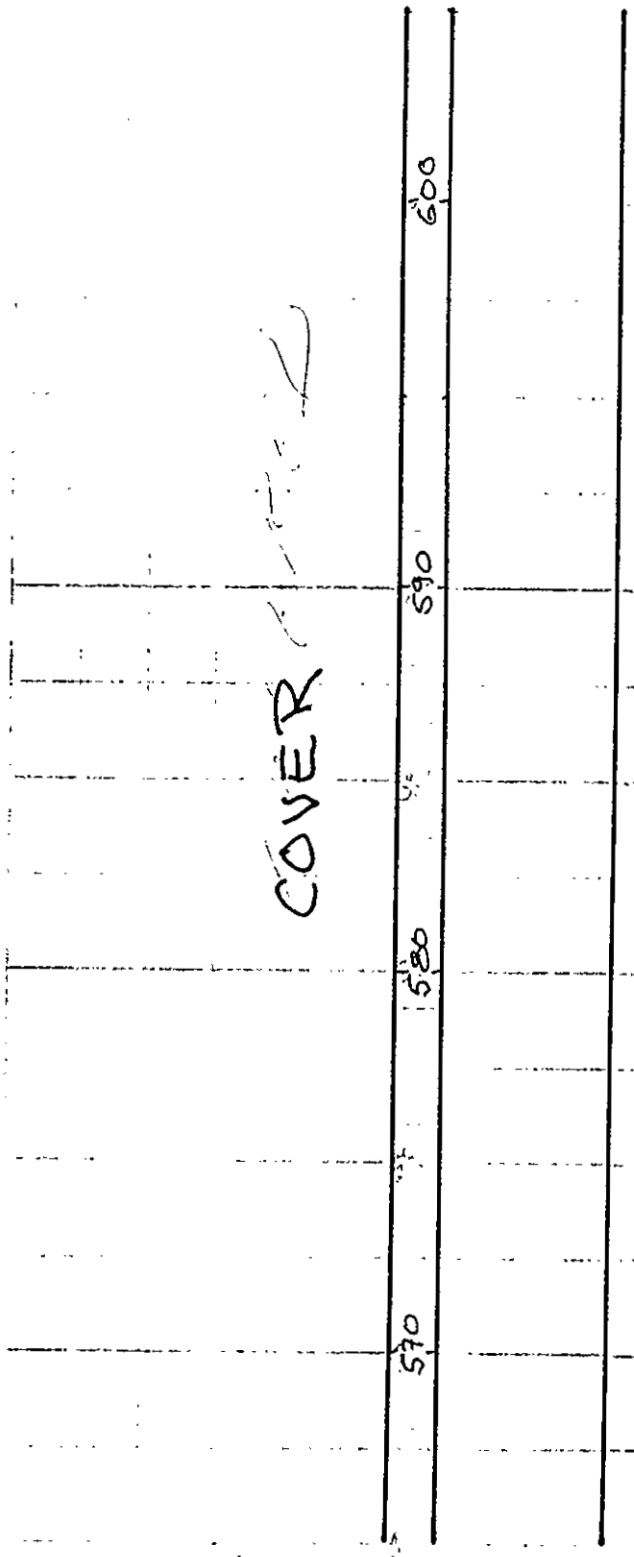
M. S. No. 56

PAGE 6



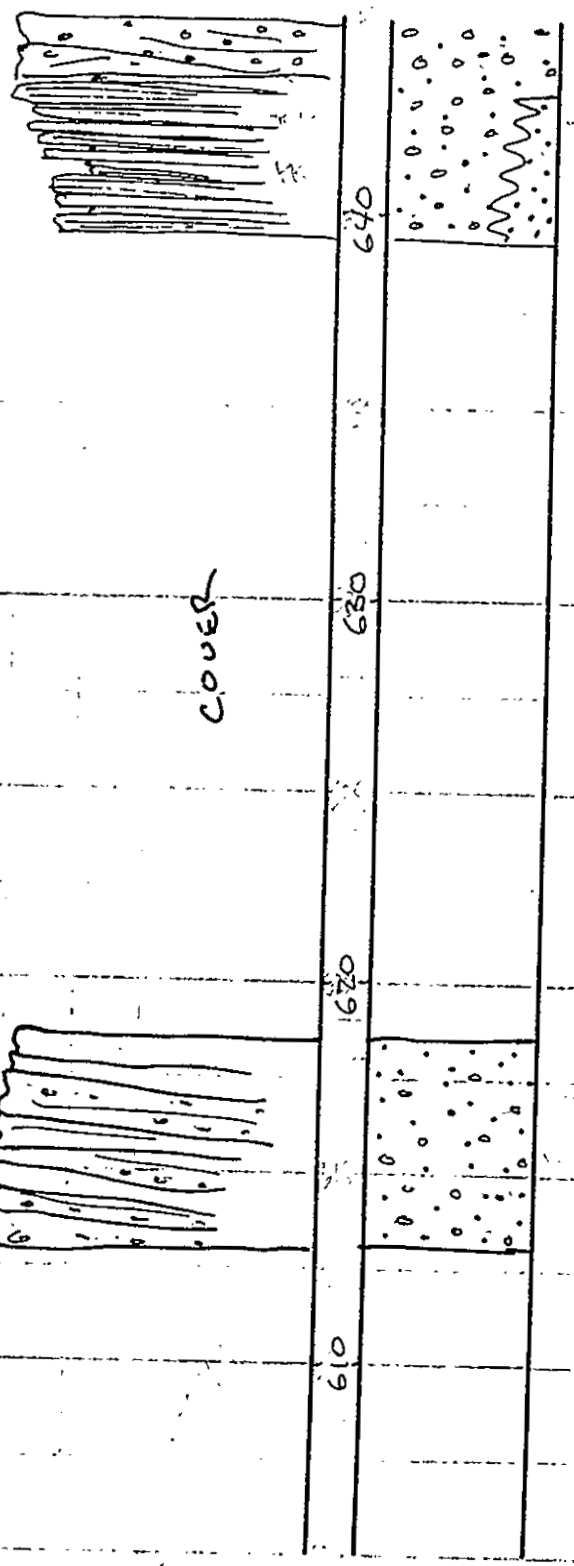
M.S. No. 56

PAGE 7



M. S. No. 56

PAGE 8

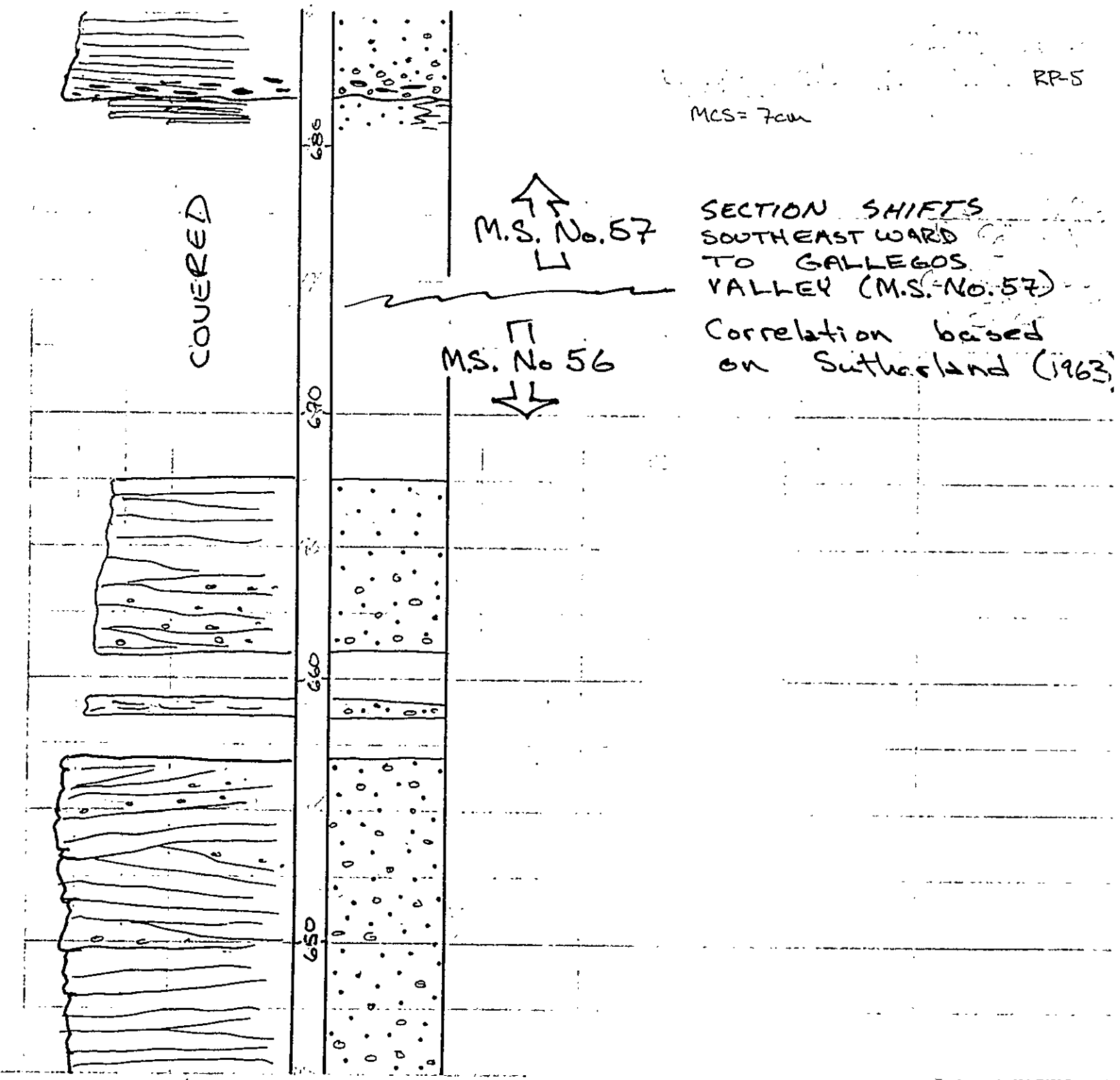


MCS = 12cm

MCS = 8cm

M. S. No. 57

PAGE 1



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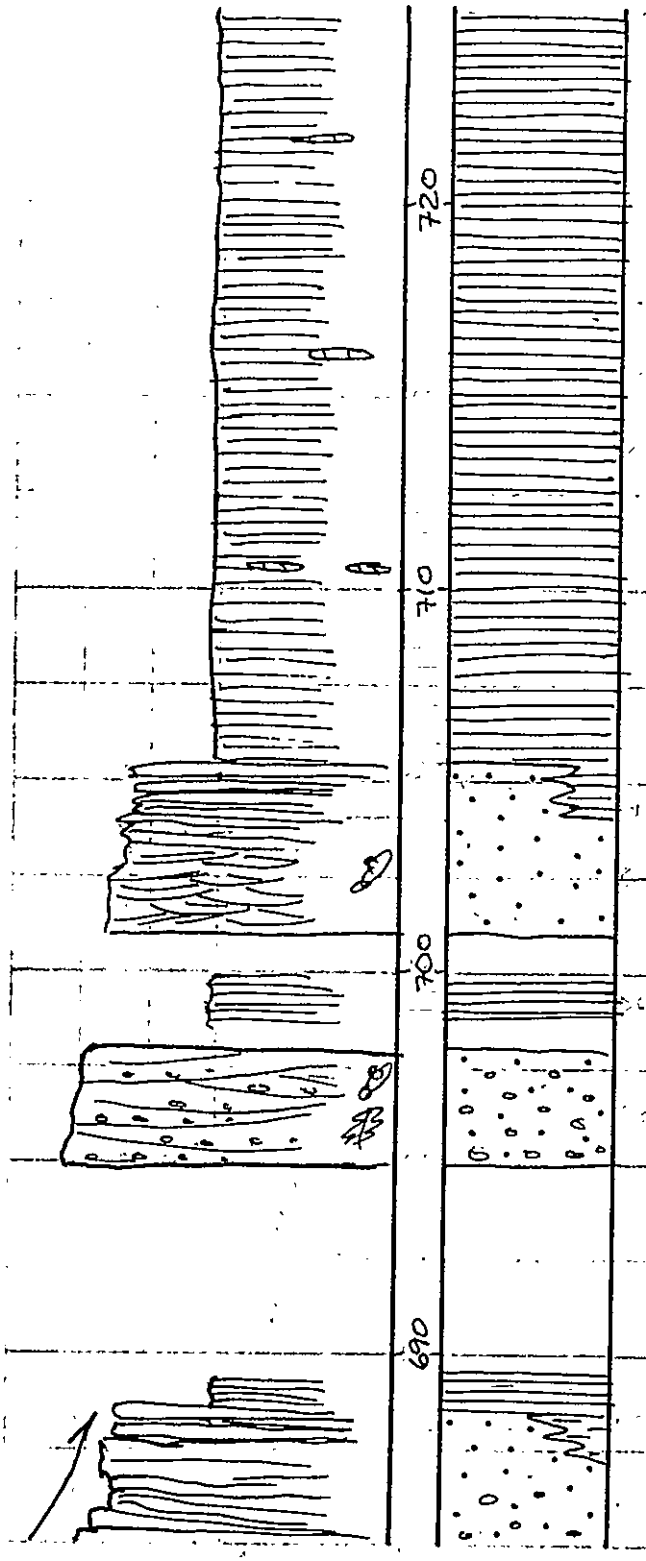
PAGE 2



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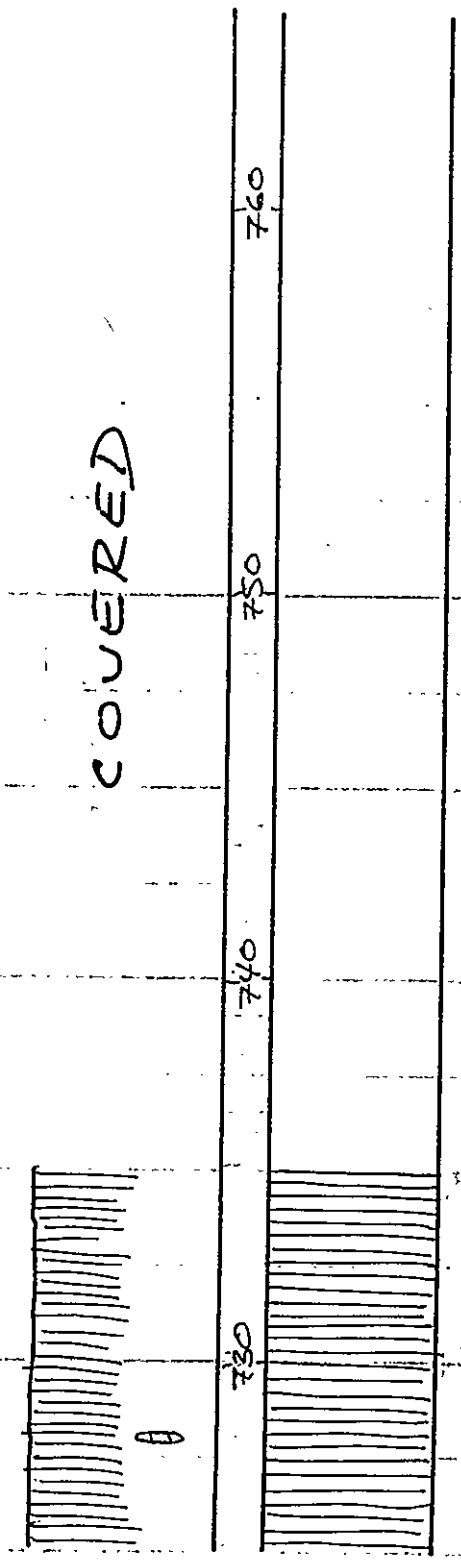
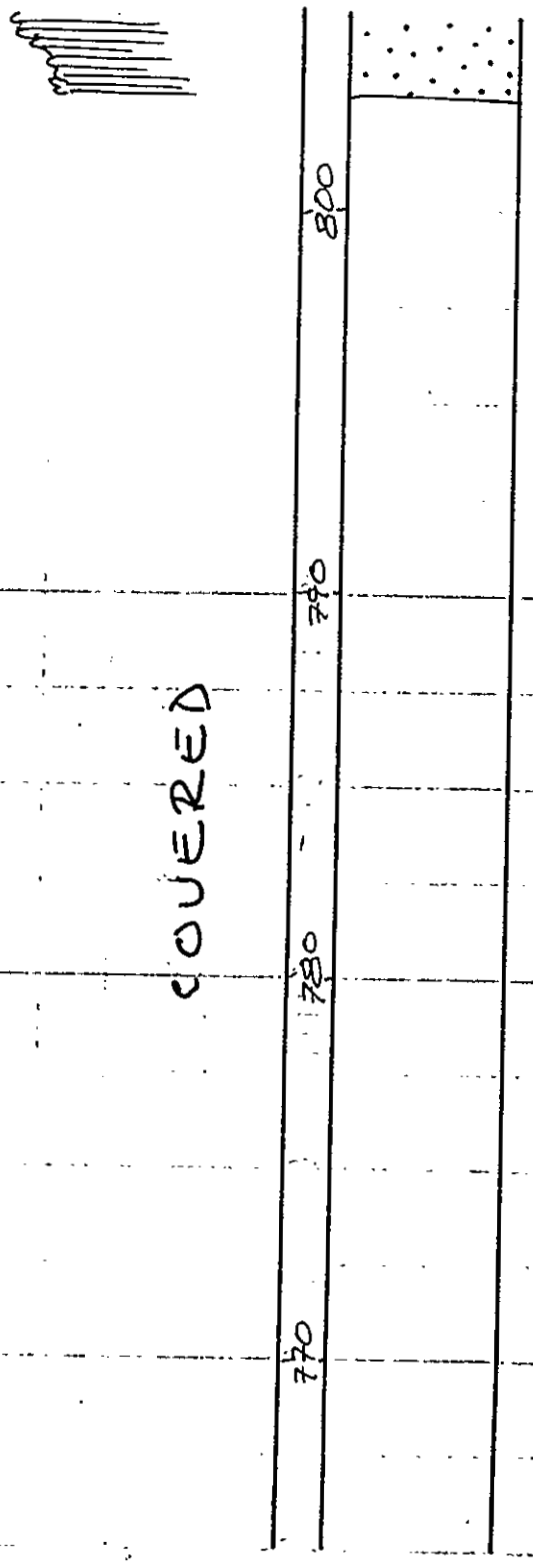
PAGE 3



M. S. No. 57

PAGE 4



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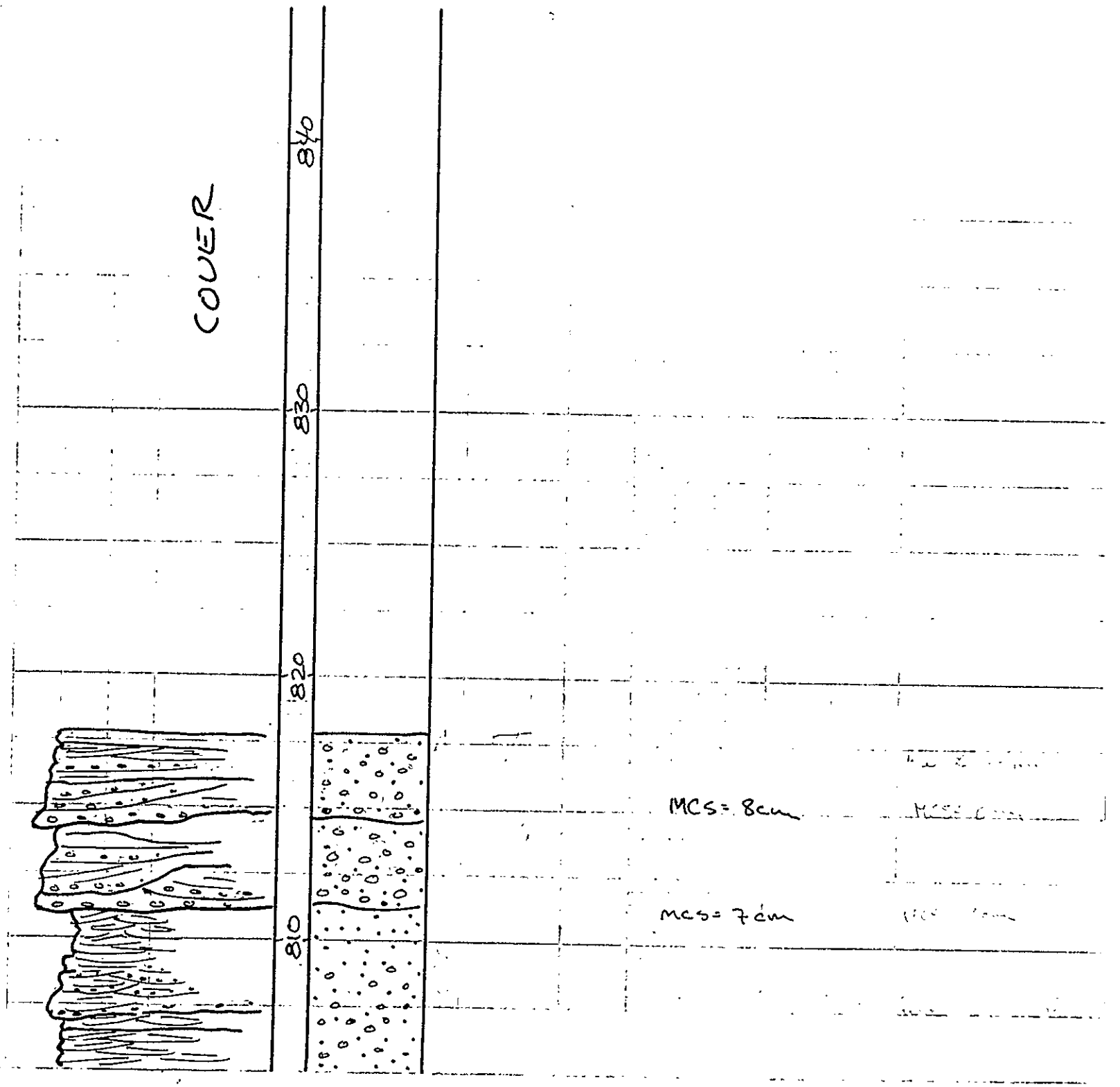
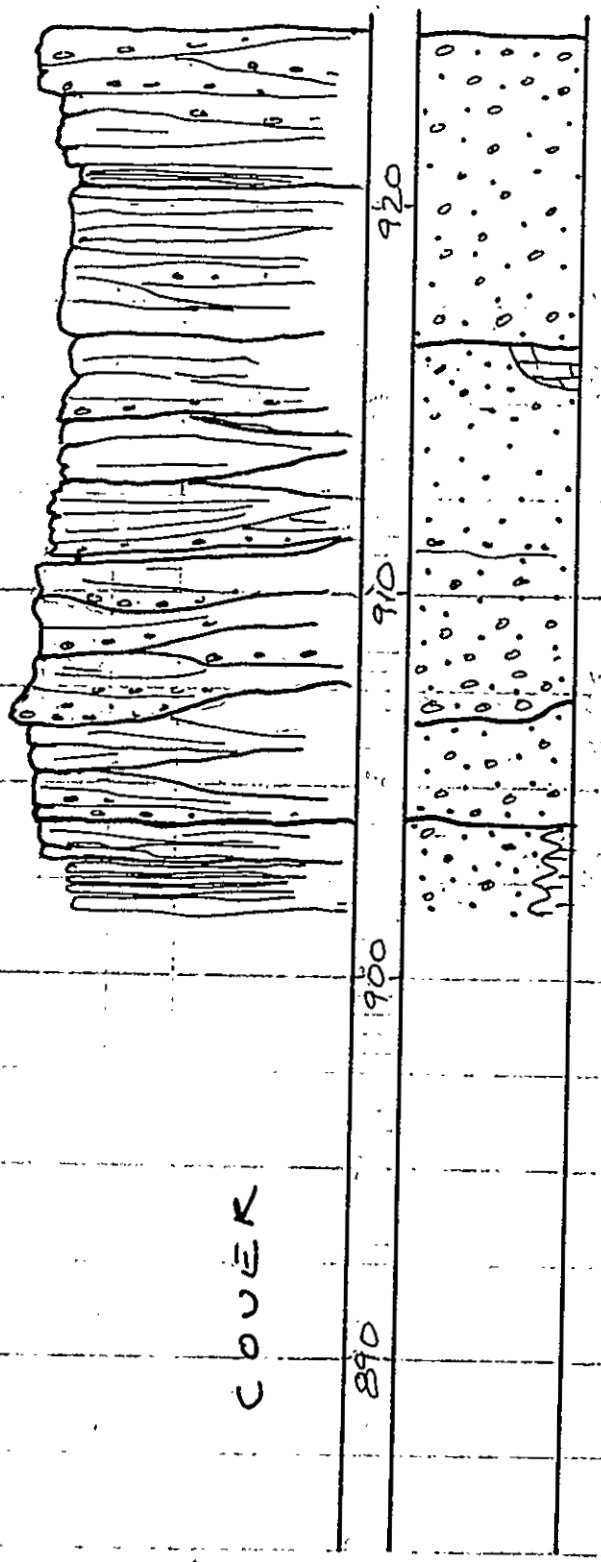
PAGE 5



M. S. No. 57

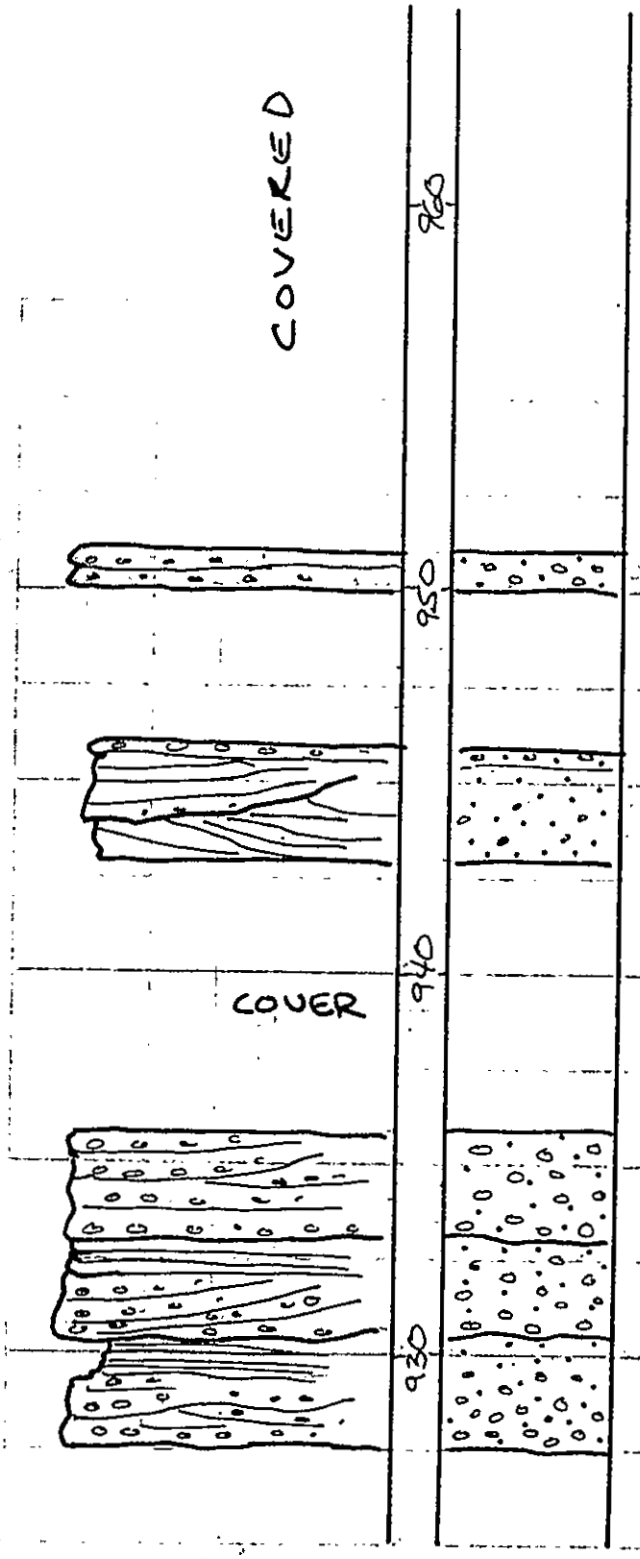
PAGE 6



ARKOSE

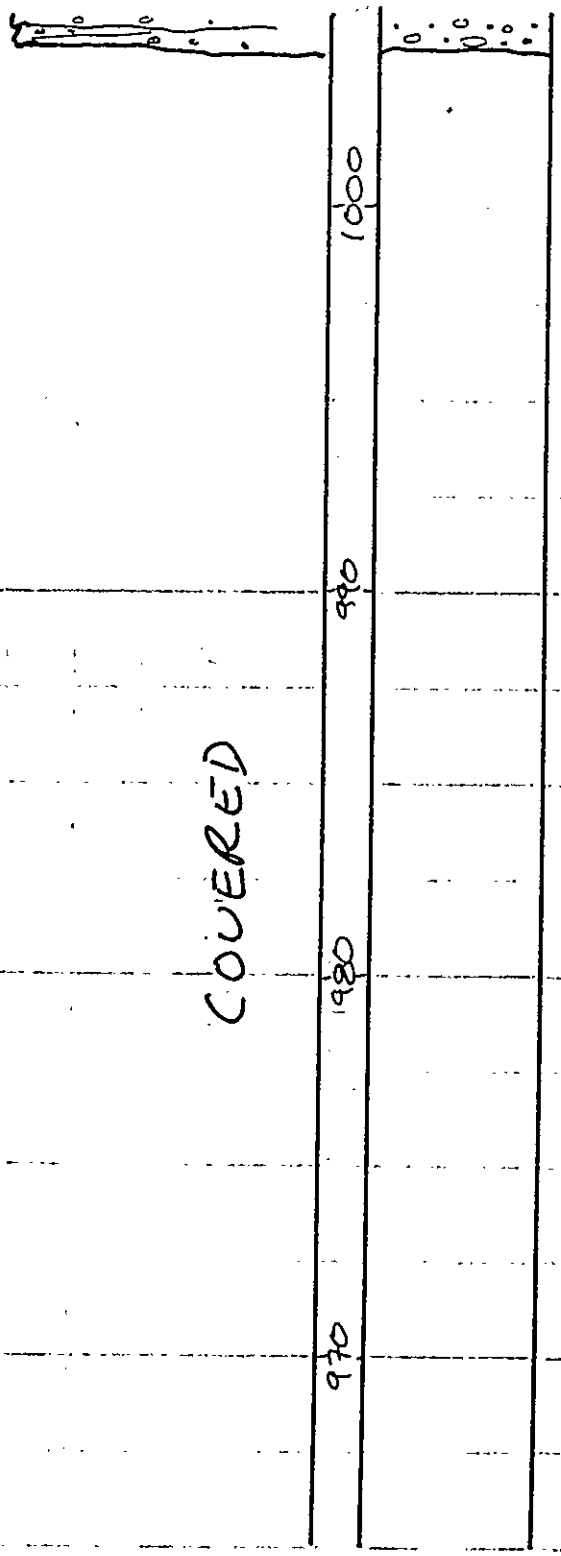
M. S. No. 57

PAGE 7



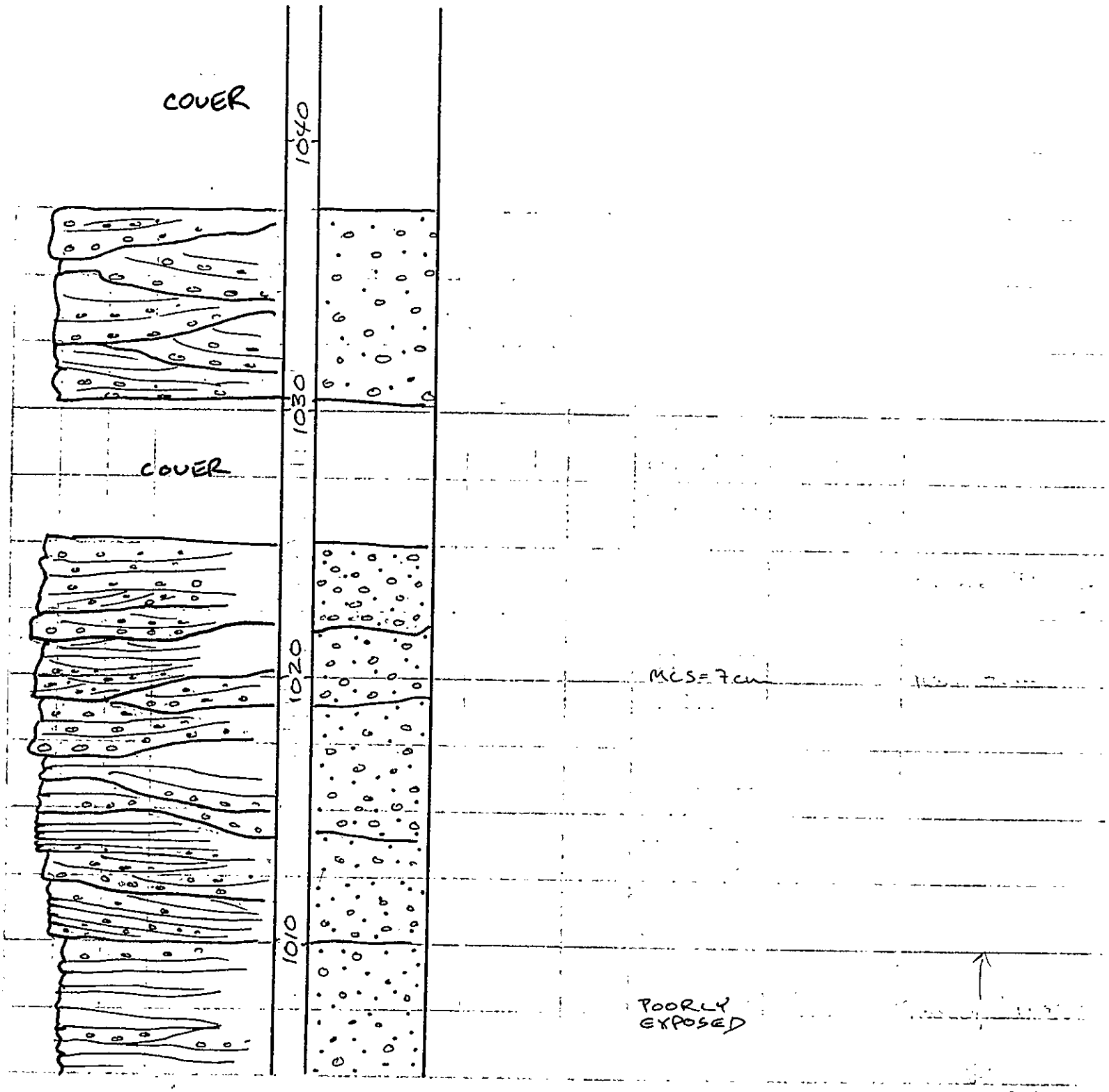
M. S. No. 57

PAGE 8



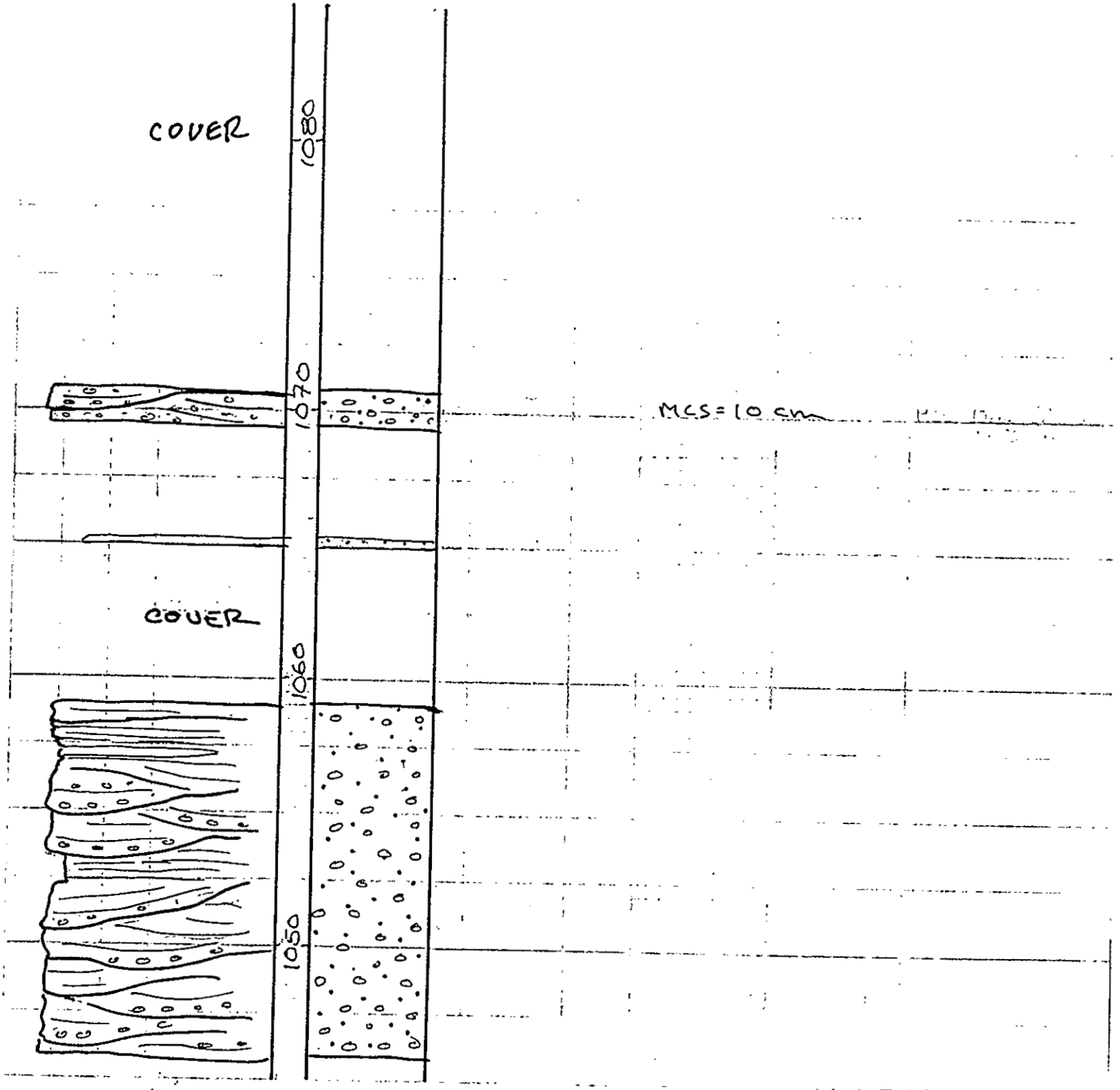
M. S. No. 57

PAGE 9



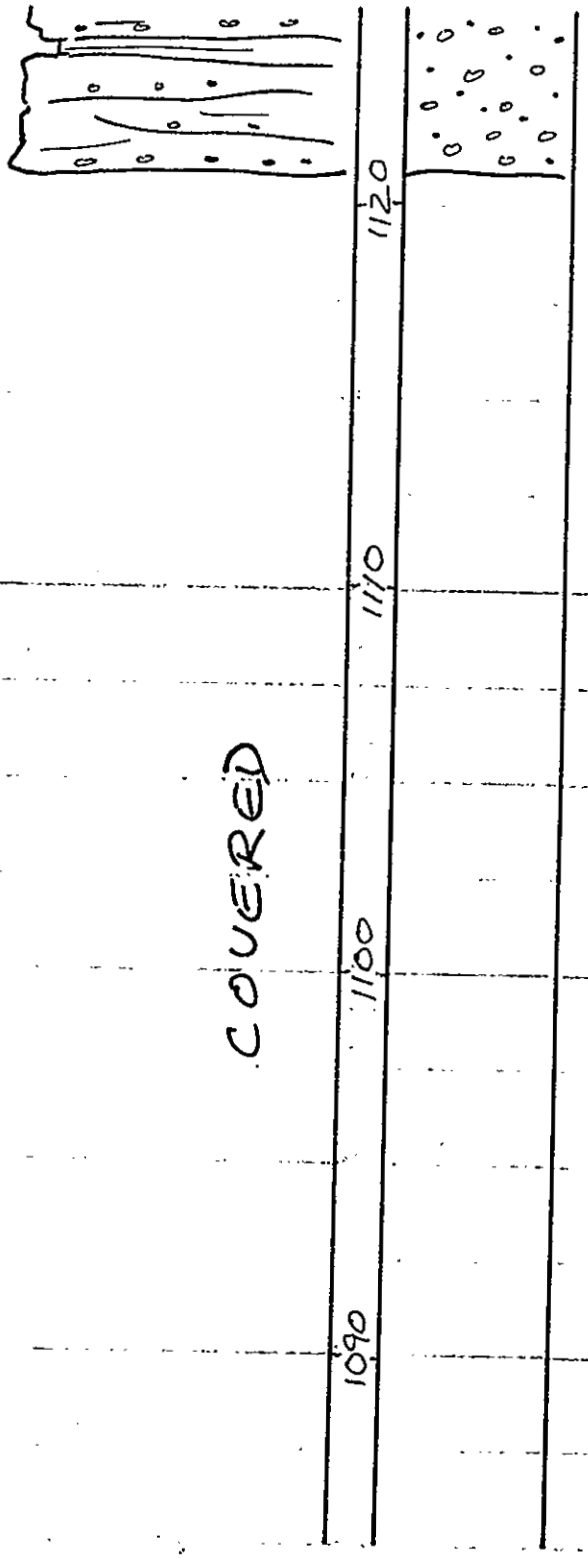
M.S. No. 57

PAGE 10



M. S. No. 57

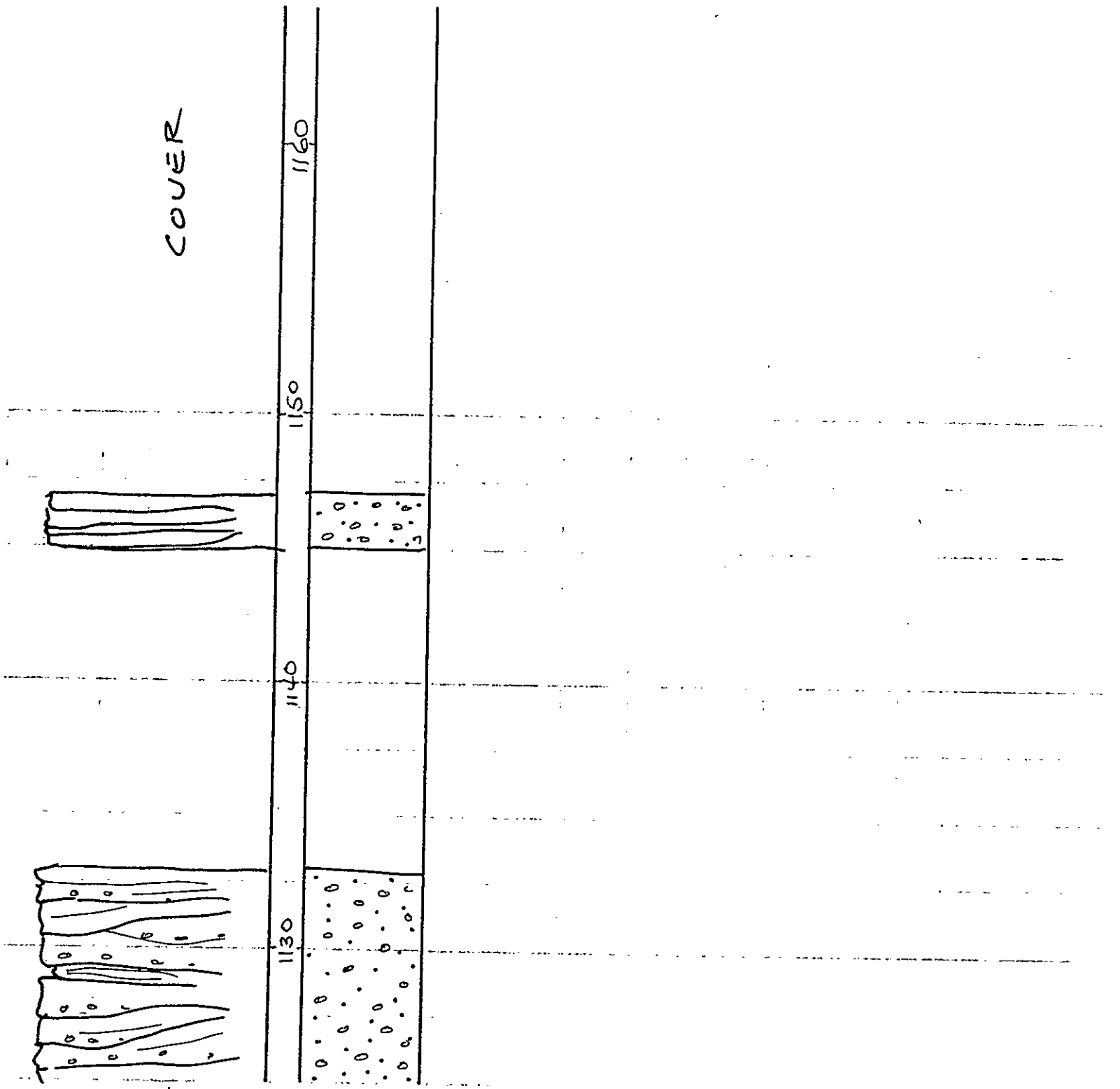
PAGE 11



POORLY EXPOSED

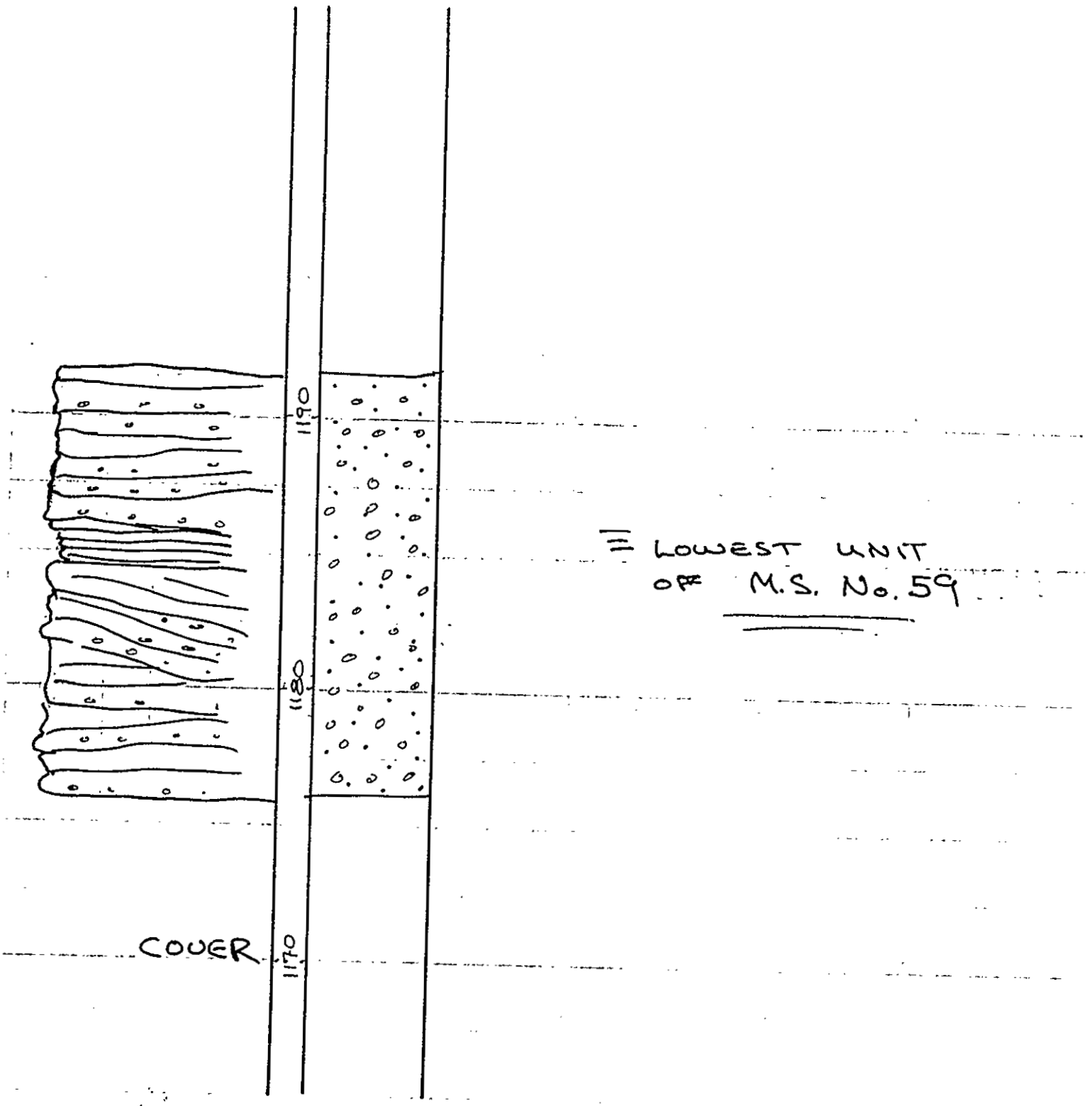
M. S. No. 57

PAGE 12



M. S. No. 57

PAGE 13

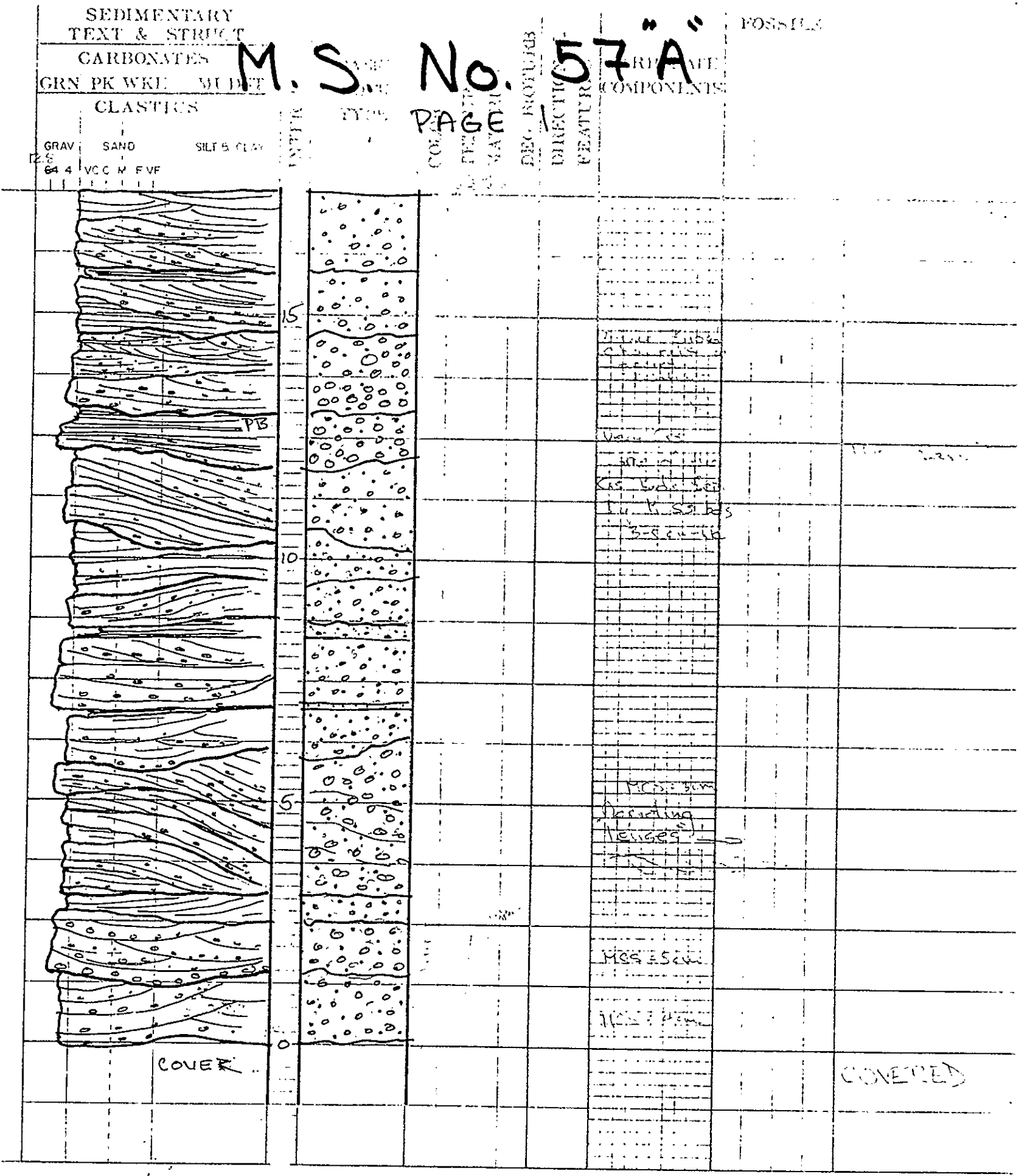


MEASURED SECTION GC
LOCALITY Rio Puerco - Gallinas Canyon E
SETTING [illegible] side

DATE July 9, 1979
STRATIGRAPHIC UNIT 4th Bay Ss. - RP III
MEASURED BY J.M.C.

M.S. No. 57"A"

PAGE 1



222

MEASURED SECTION
LOCALITY
SETTING

DATE
STRATIGRAPHIC UNIT
MEASURED BY

SEDIMENTARY TEXT & STRUCT
CARBONATES
GRN PK WKE MUDST
CLASTICS
GRAV SAND

BEDDING

DEC BIOTURB
DIRECTIONAL FEATURES

CARBONATE COMPONENTS

FOSSILS

M.S. No. 57 "A"

PAGE 2

30

COVERED

25

20

COVERED

?

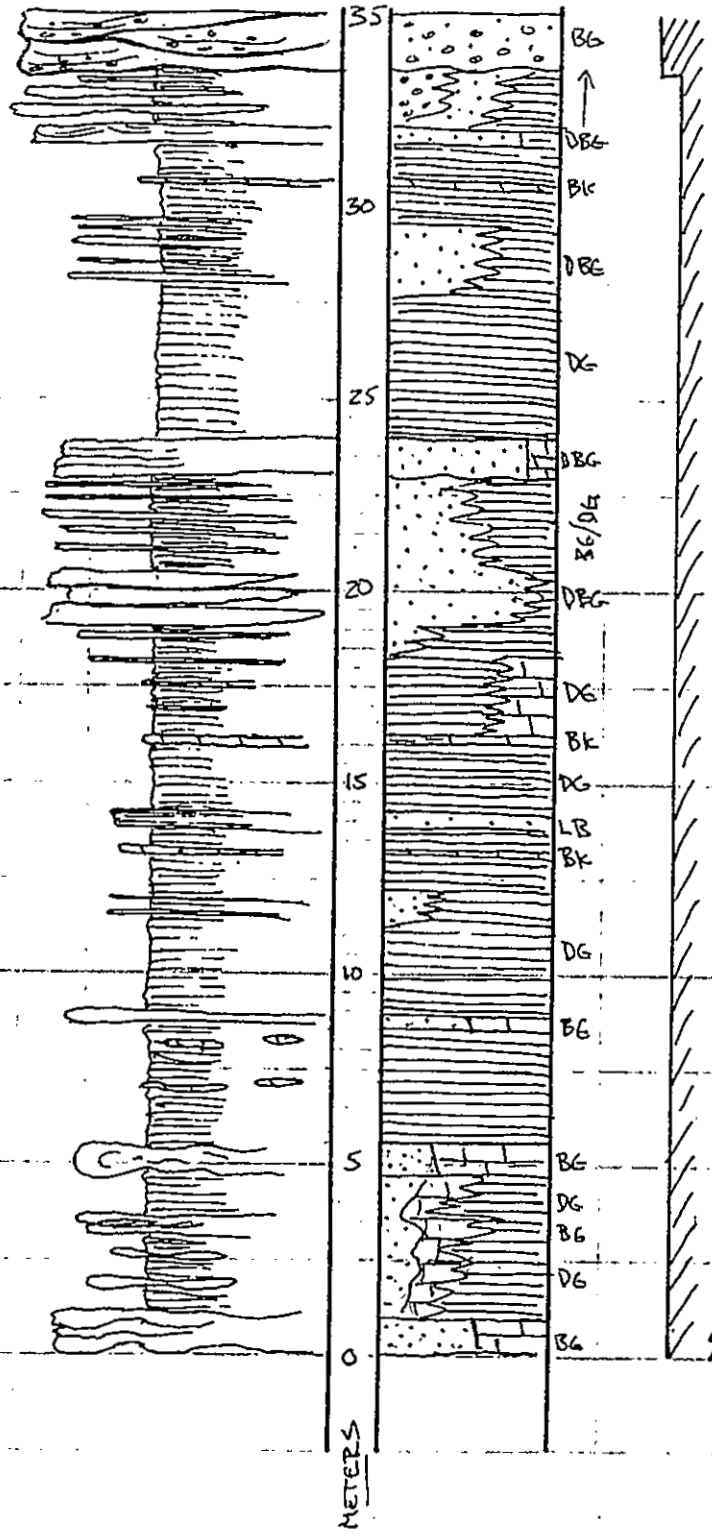
POORLY EXPOSED

SIP
directly across hwy 3 from
Sipapu Lodge ; Hillside

Aug 6, 1978
JMC

M.S. No. 58

PAGE 1



Tonally Sorted
MCS = 2 cm

mud laminae
lower part

Rip-up clasts

BK laminae
nodules

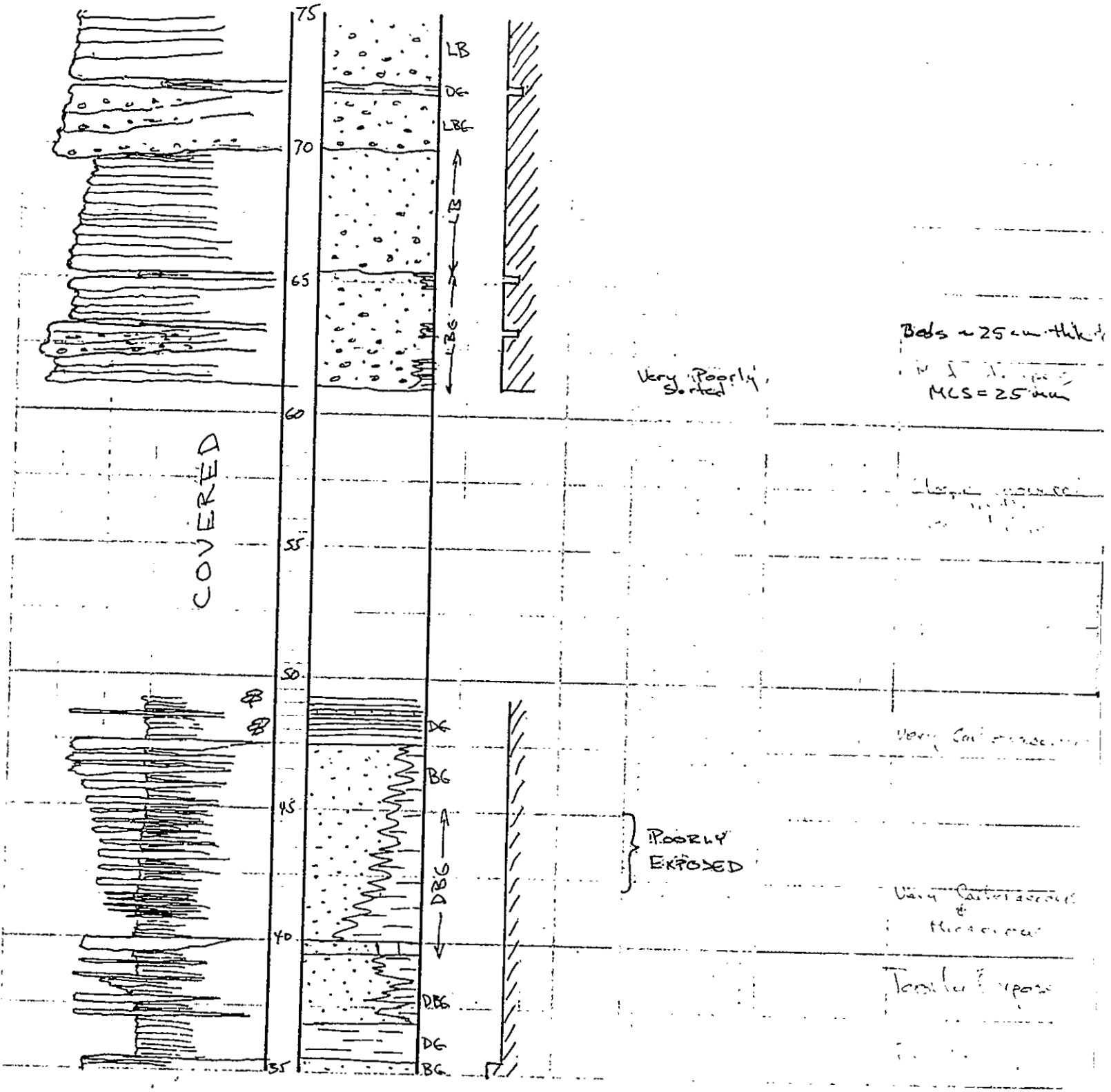
CALCAREOUS

Microcrystalline
Calcareous

Aug 6, 1978
JMC

M. S. No. 58

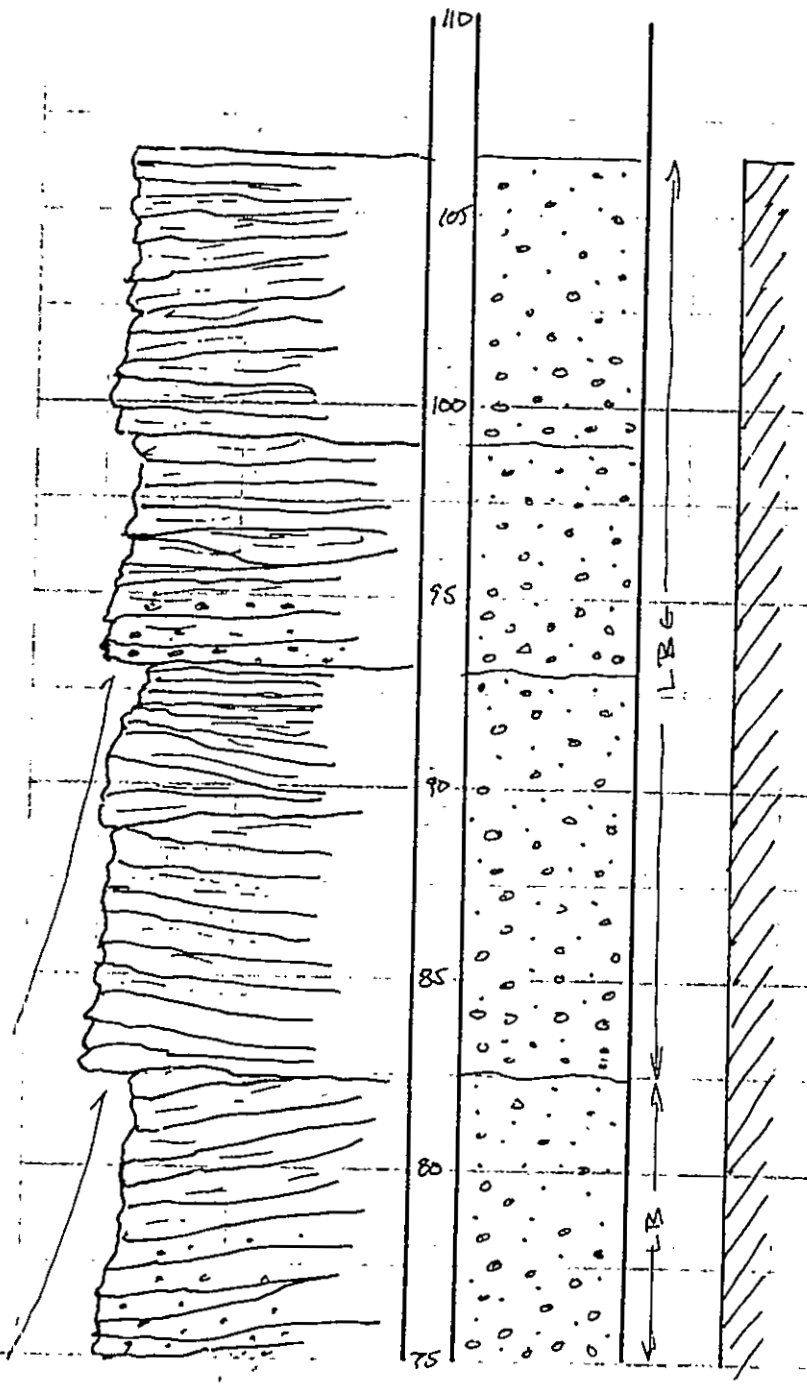
PAGE 2



Aug. 6
JMC

M.S. No. 58

PAGE 3



Next 15 m is a ss covered slope w/ cts. congl. ss again at 15 m

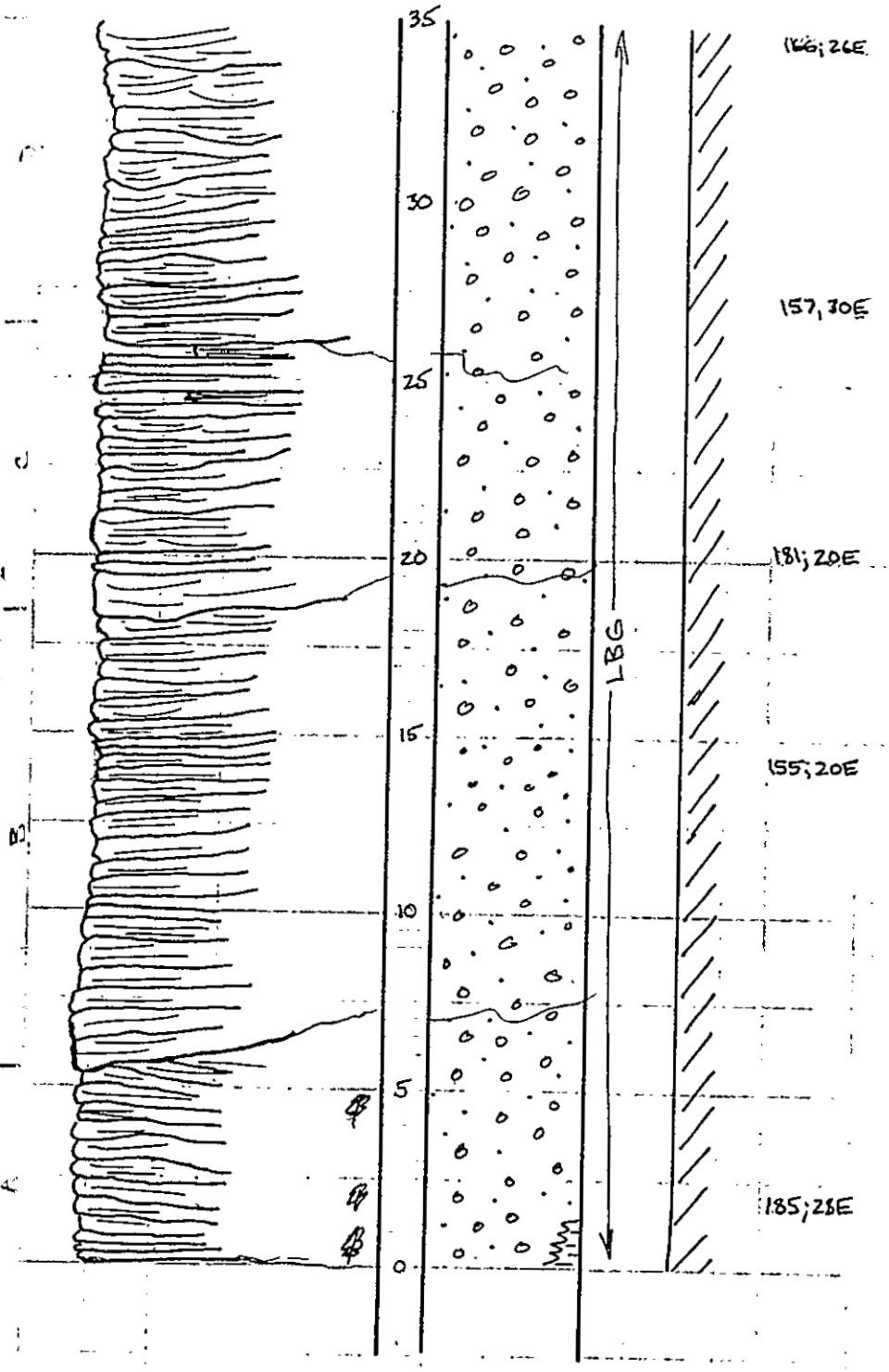
ACCRET. BEDDING

FCE

JMCasey

M.S. No. 59

PAGE 1

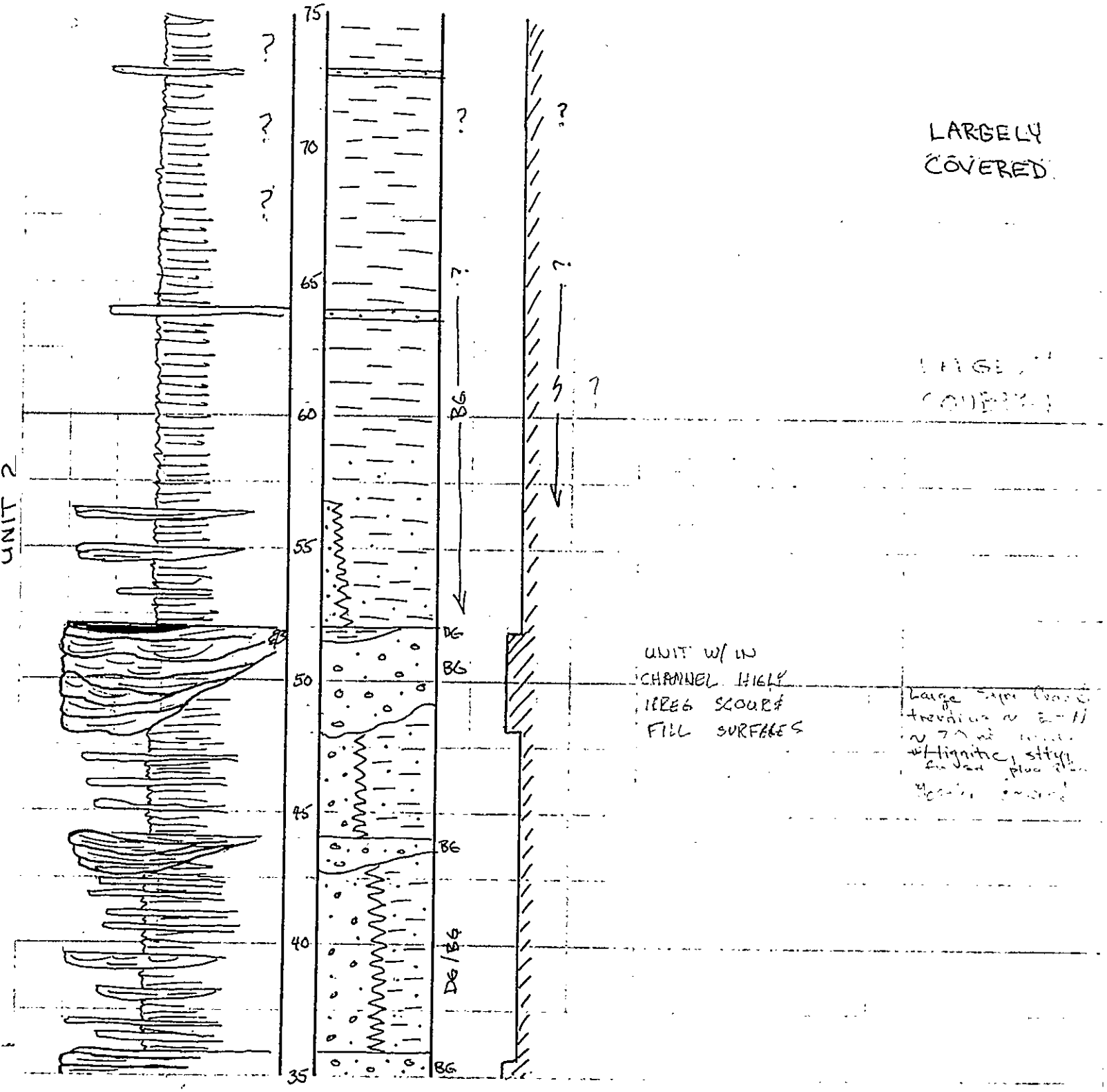


FCE

JMC

M.S. No. 59

PAGE 2



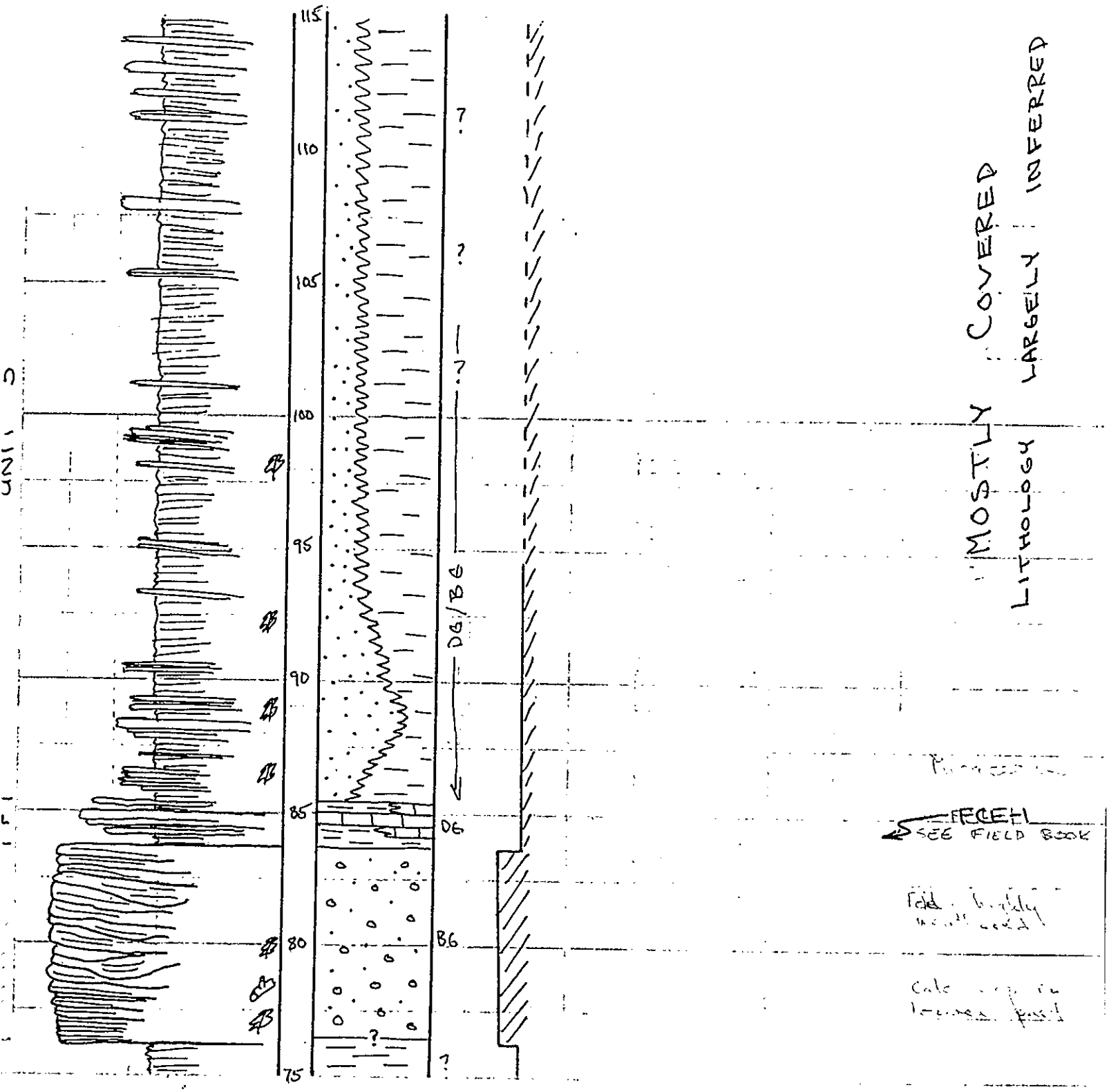
FCE

JMC

(3)

M.S. No. 59

PAGE 3



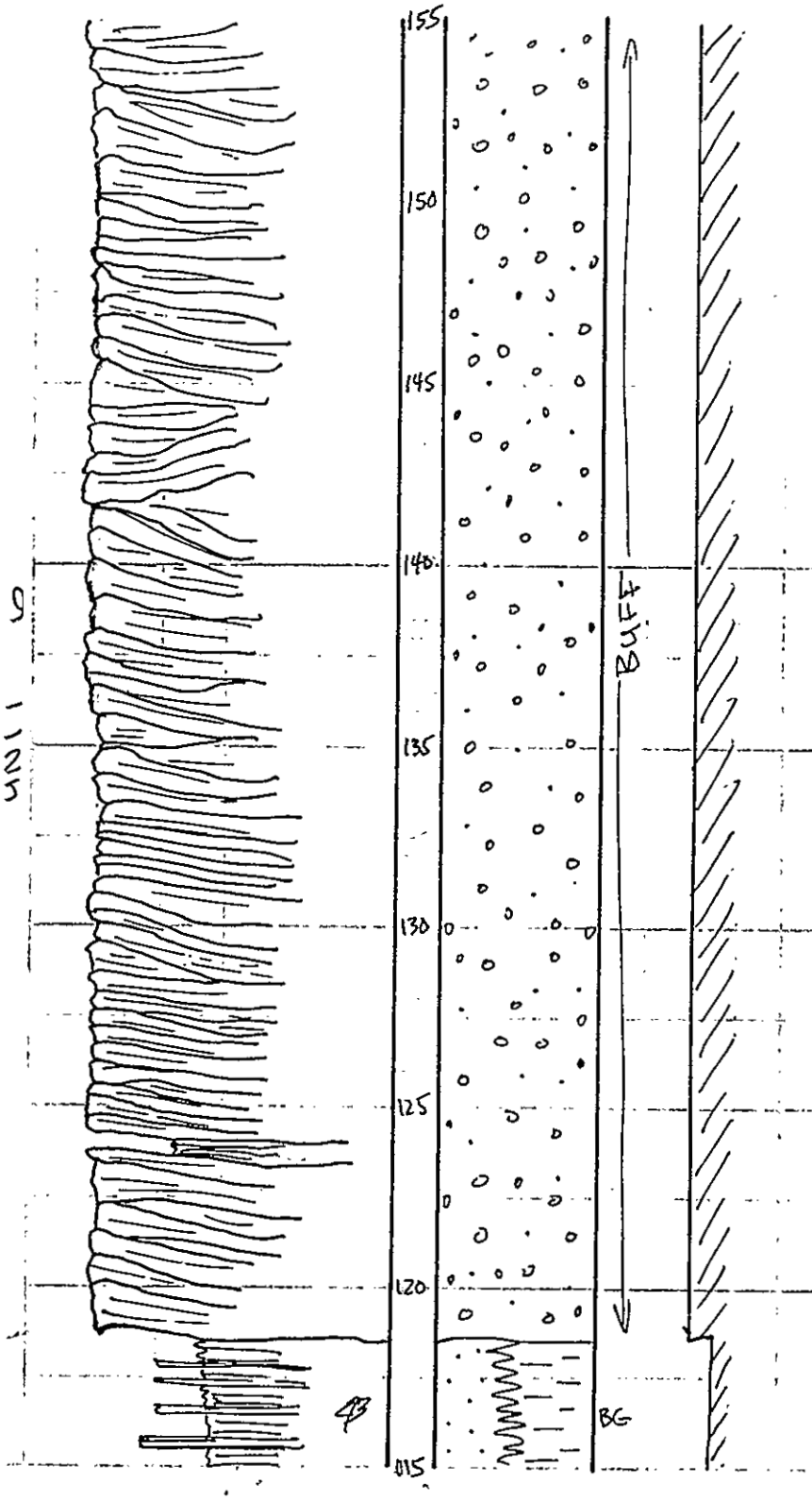
FCE

JMC

(3)

M.S. No. 59

PAGE 4



UNITS

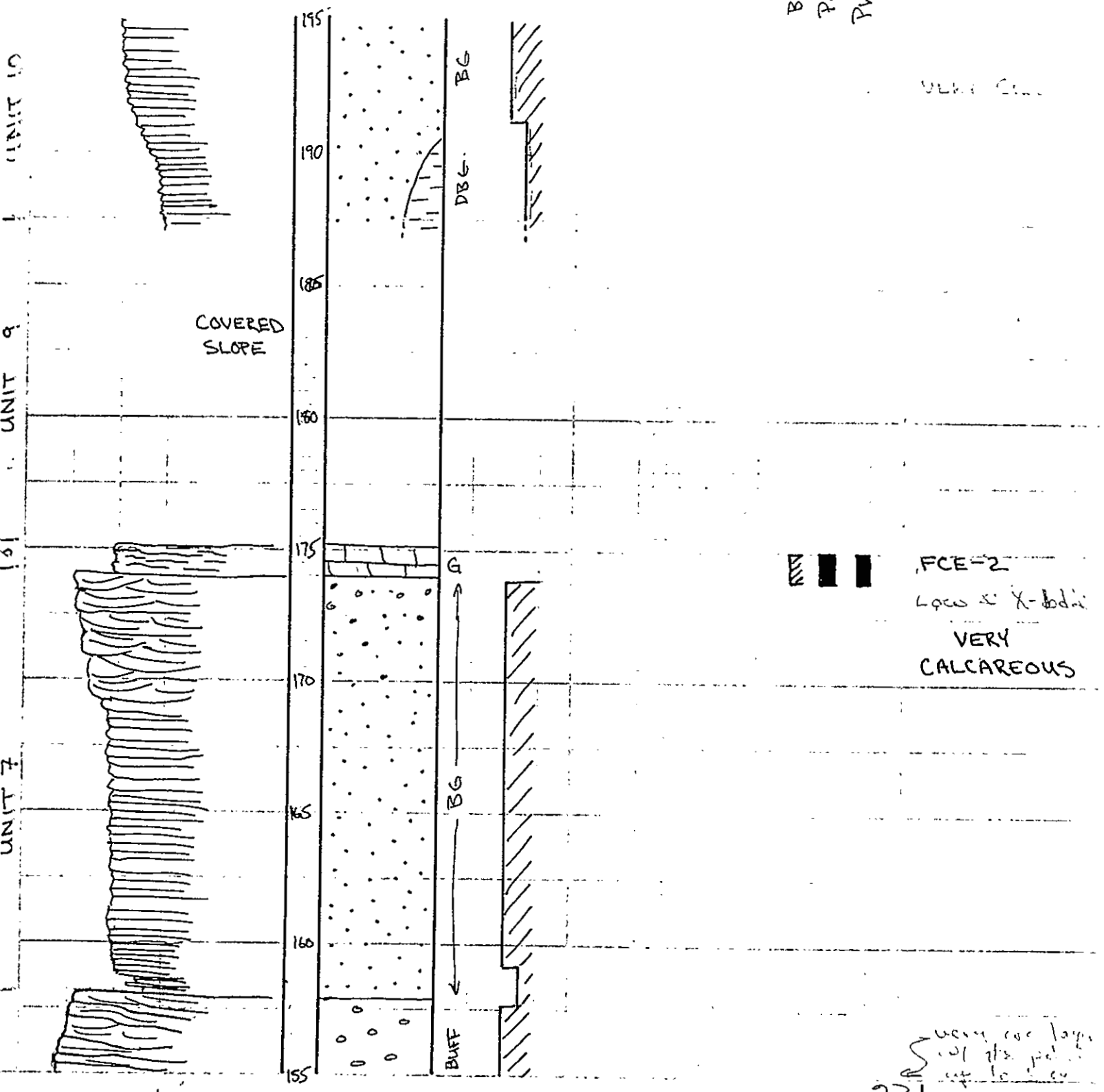
230

FCE

JMC

M. S. No. 59

PAGE 5

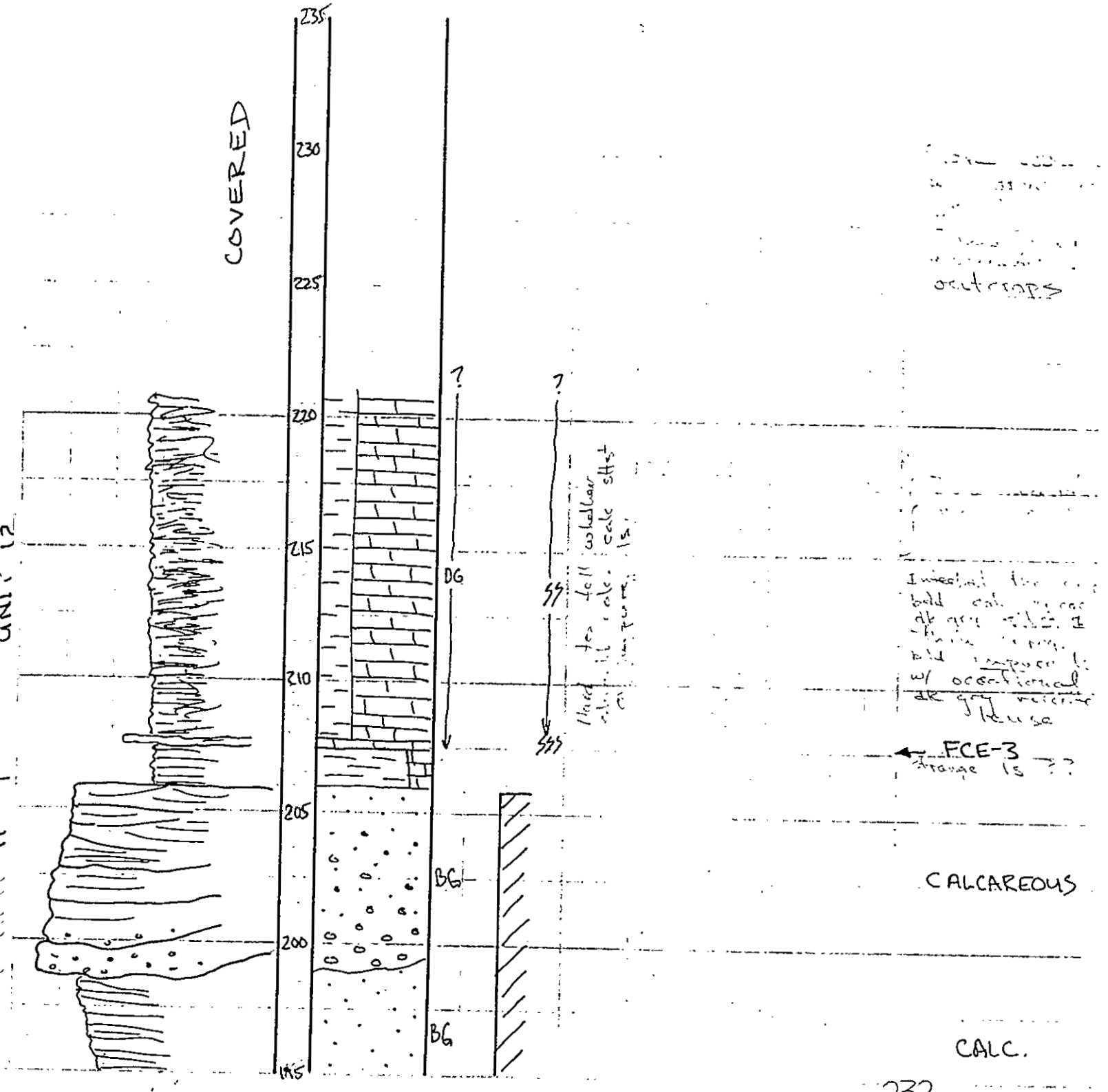


FCE

JMC

M. S. No. 59

PAGE 6

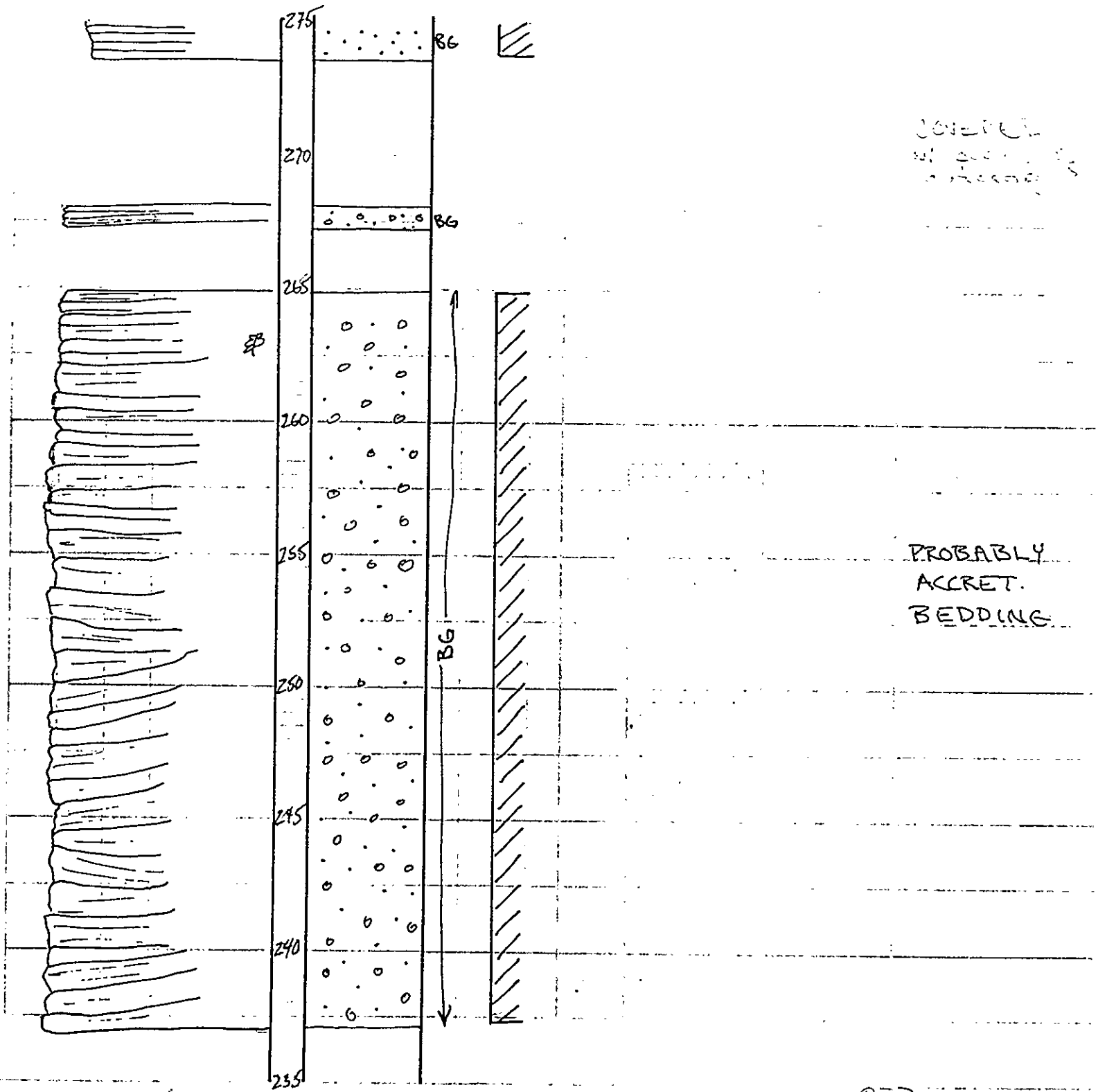


FCE

JMC

M.S. No. 59

PAGE 7

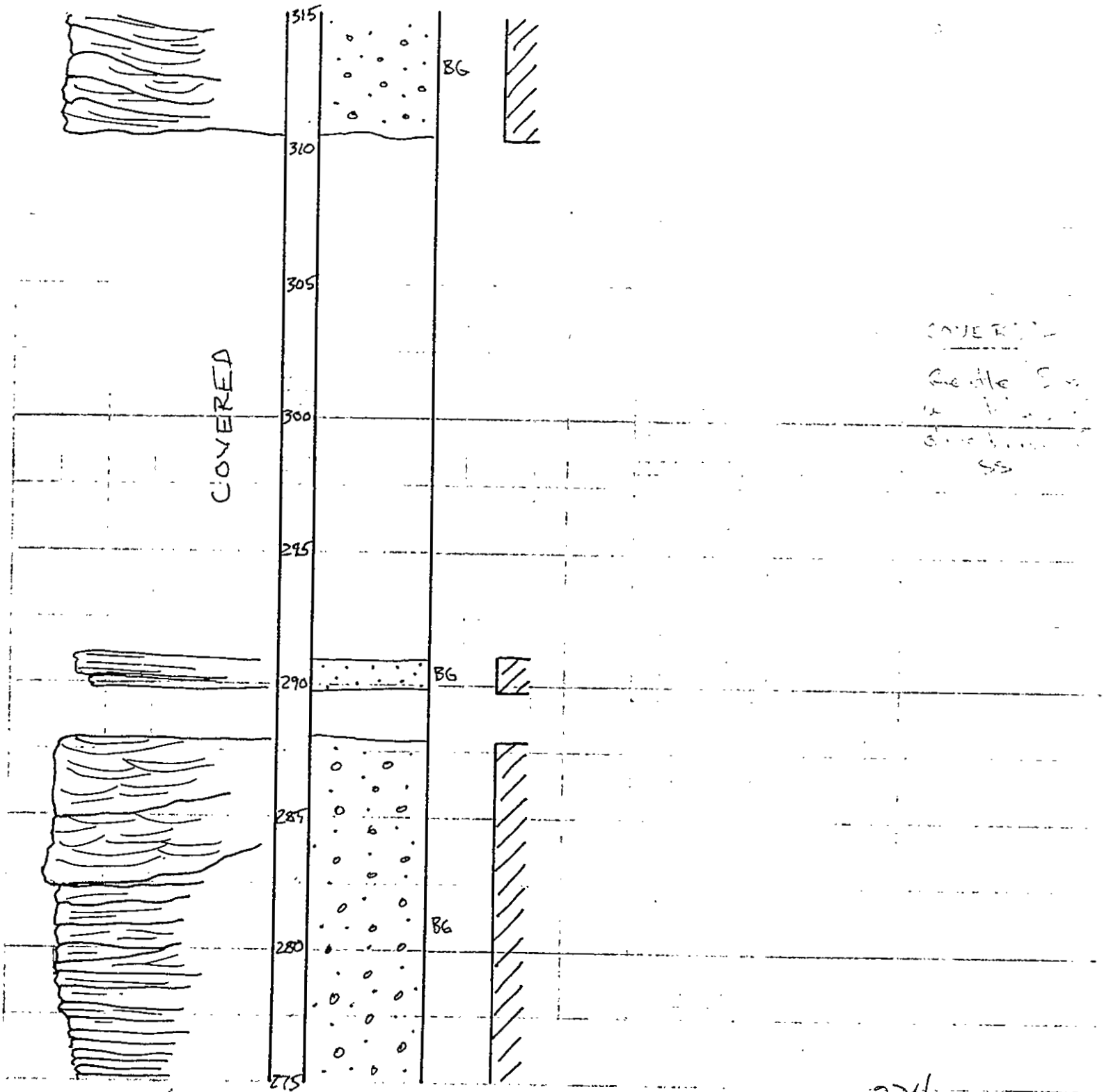


FCE

JMC

M. S. No. 59

PAGE 8

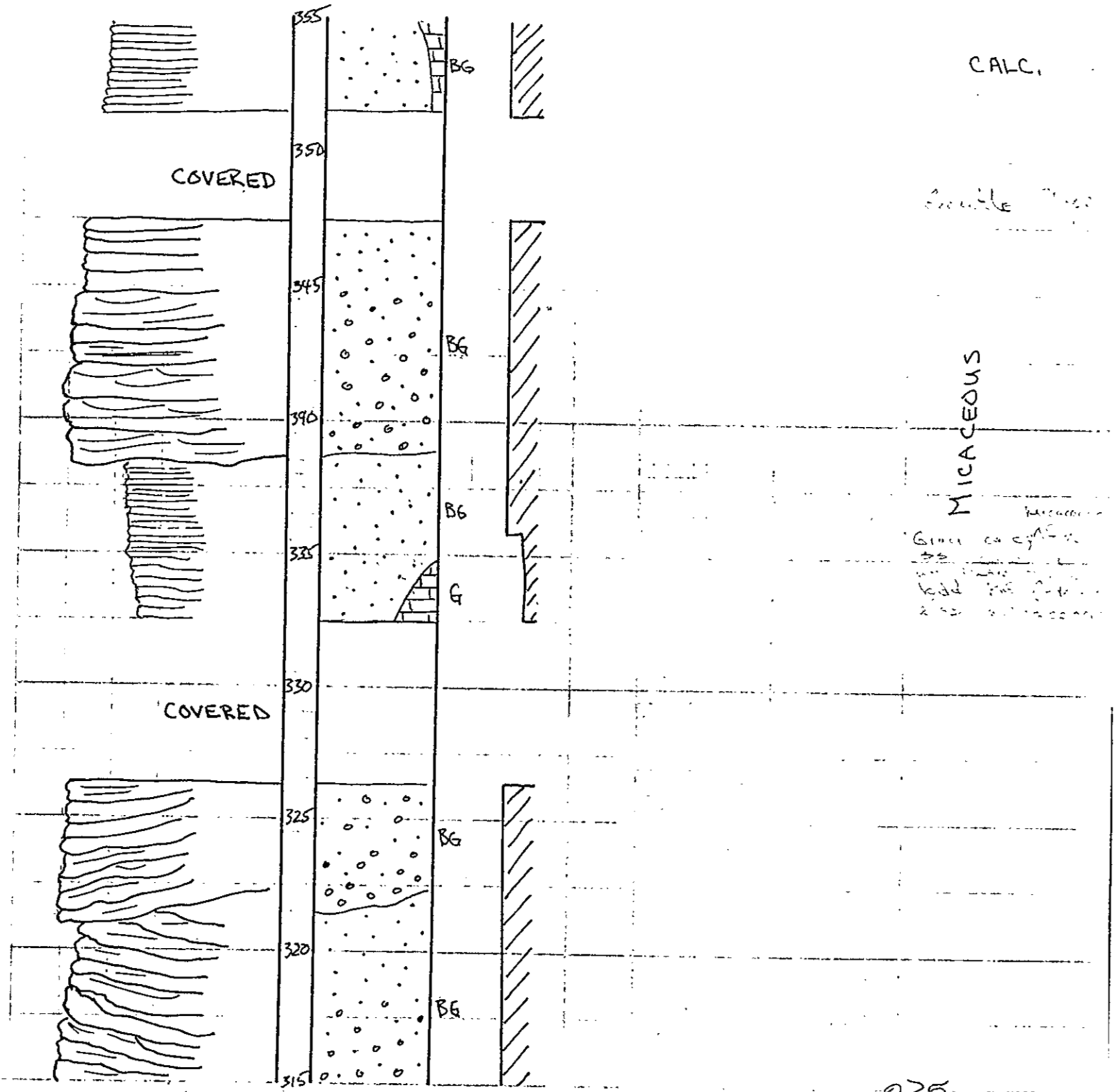


FCE

JMC

M.S. No. 59

PAGE 9

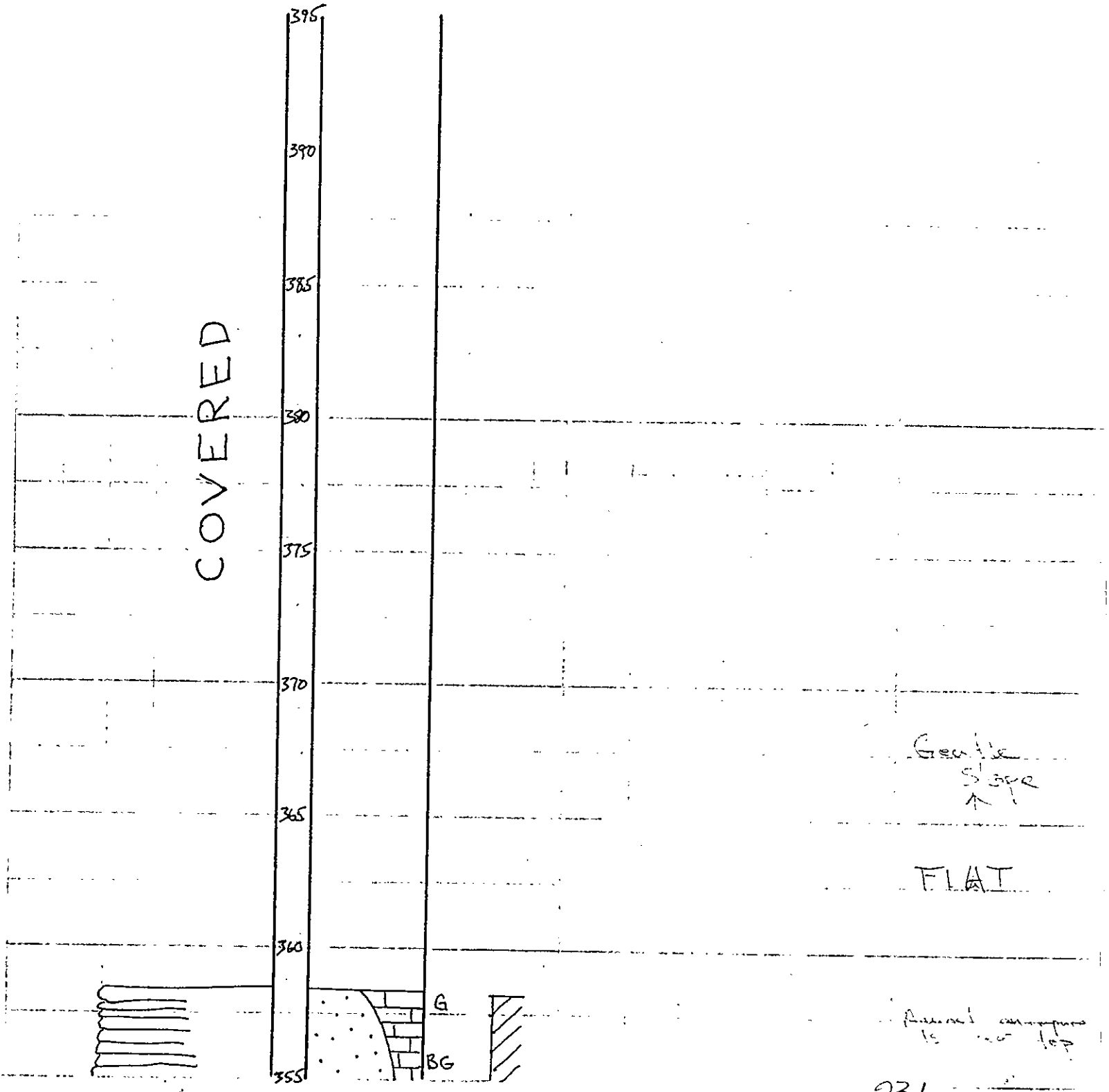


FCE

JMC

M. S. No. 59

PAGE 10



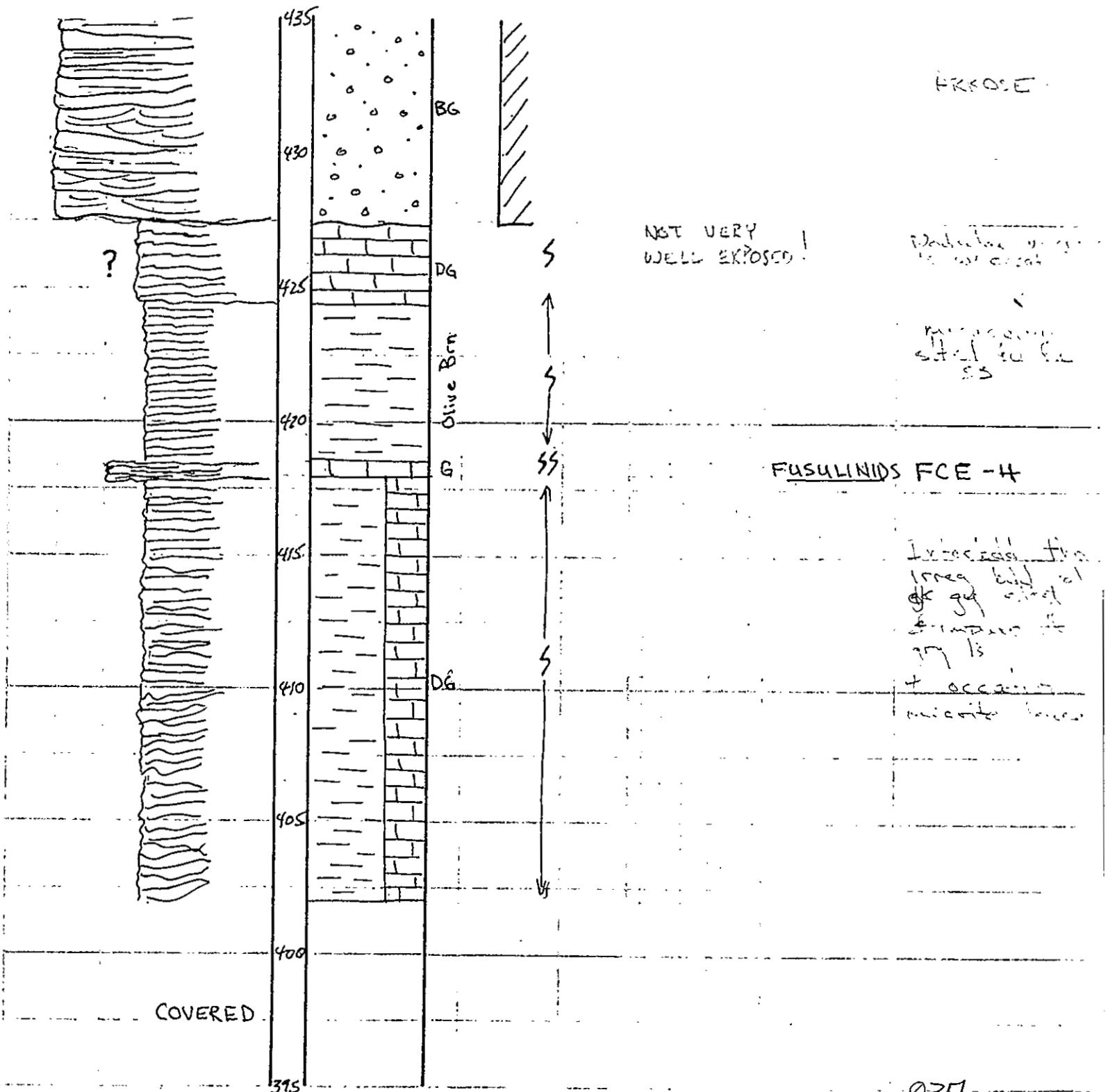
FCE 236 10 of 14

FCE

JMC

M.S. No. 59

PAGE 11



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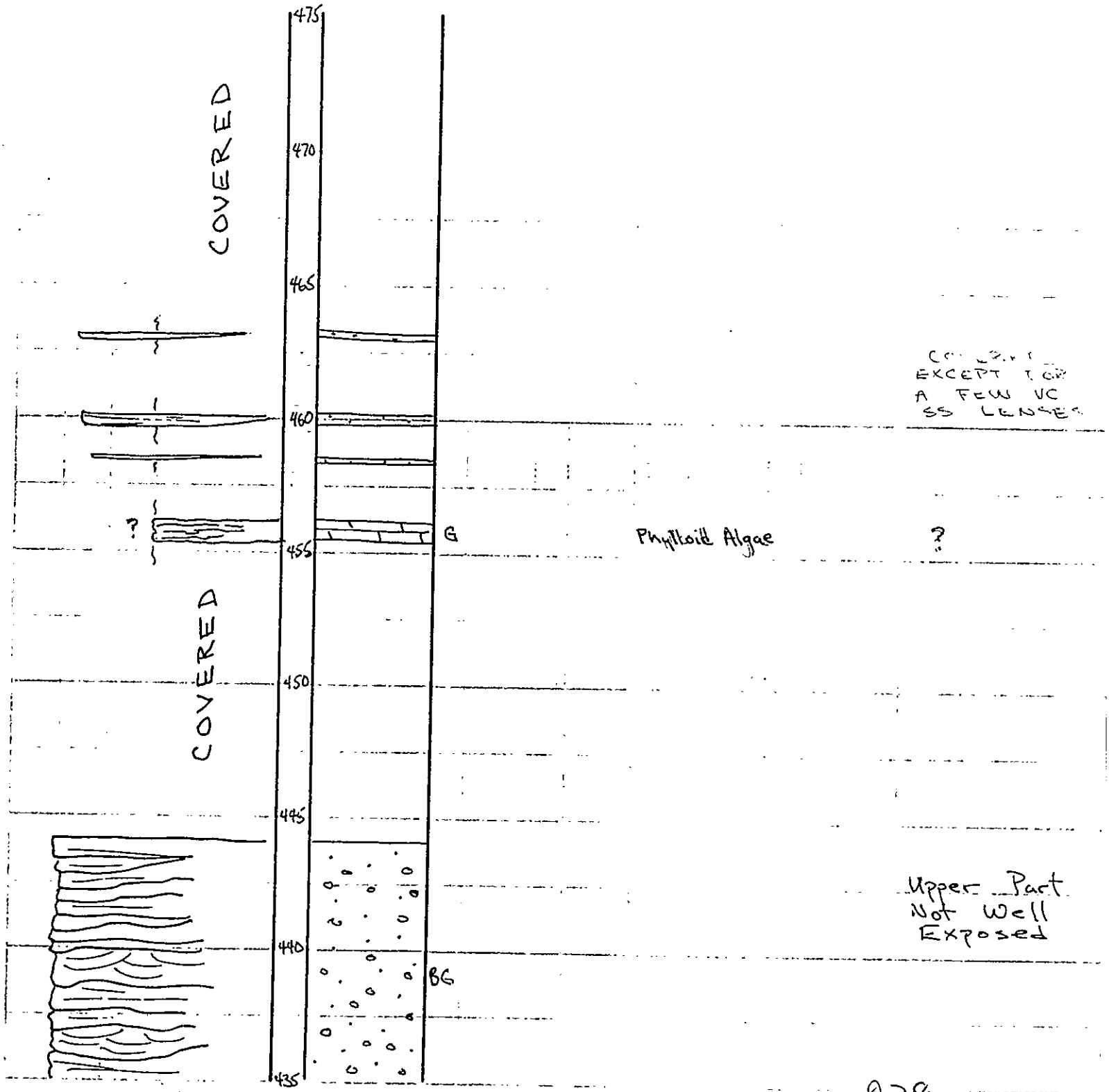
JMC

(3)

M.S. No. 59

PAGE 12

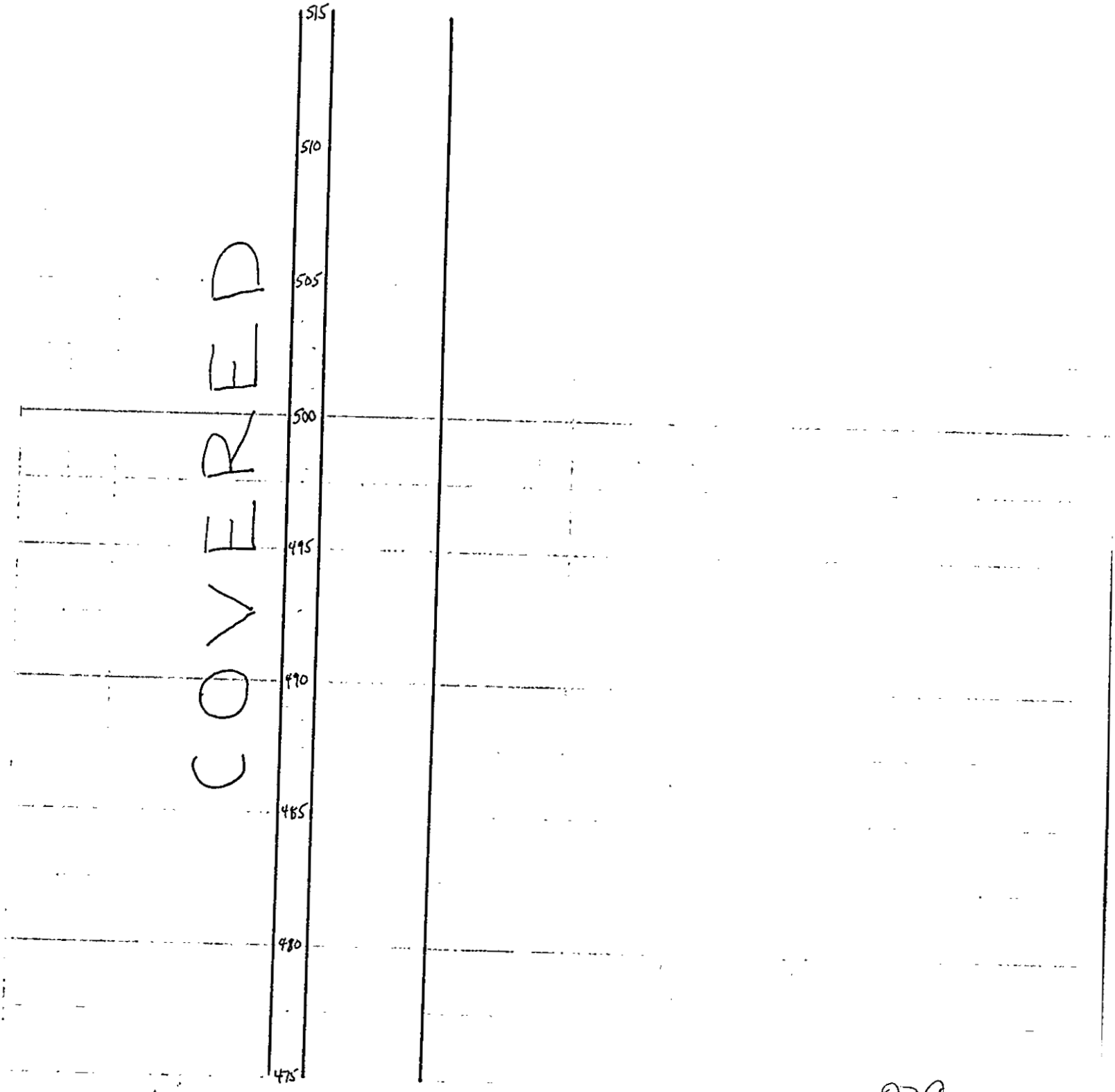


FCE

JMC

M. S. No. 59

PAGE 13

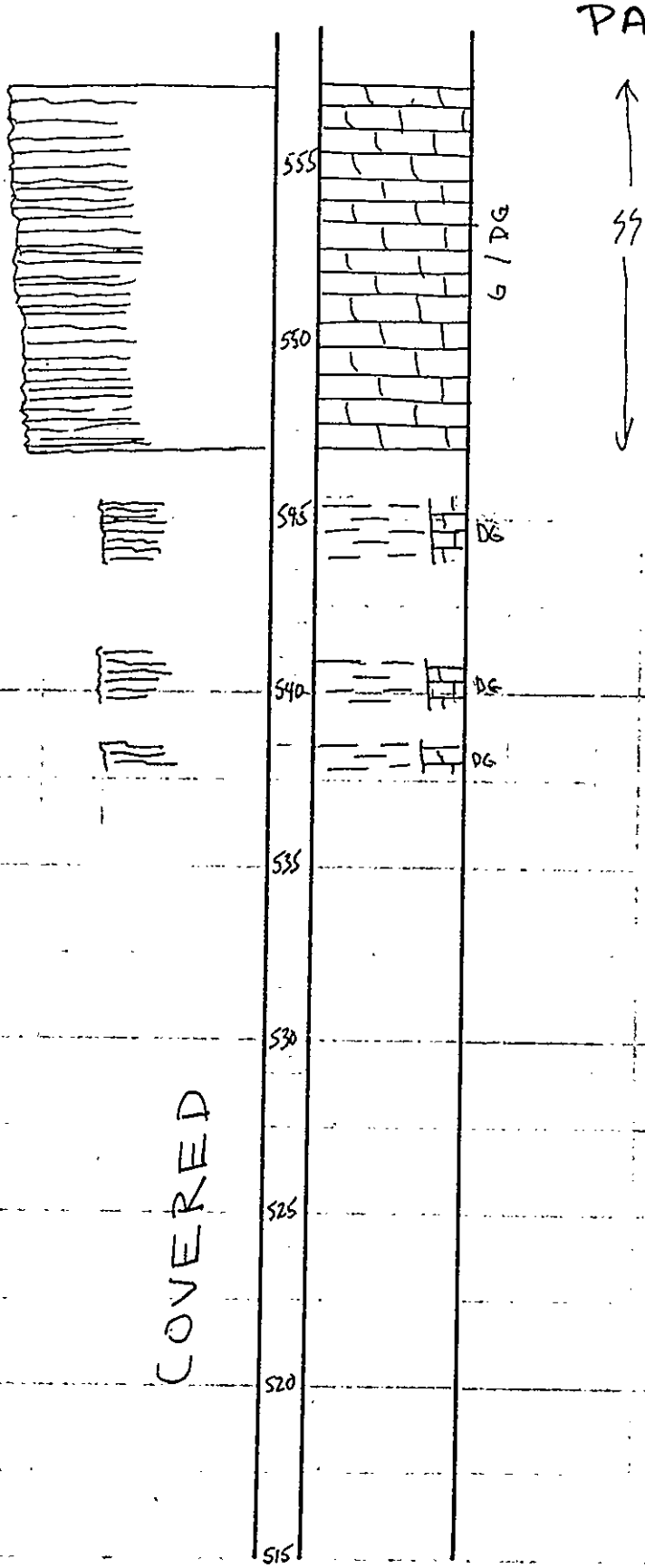


FCE

JMC

M. S. No. 59

PAGE 14

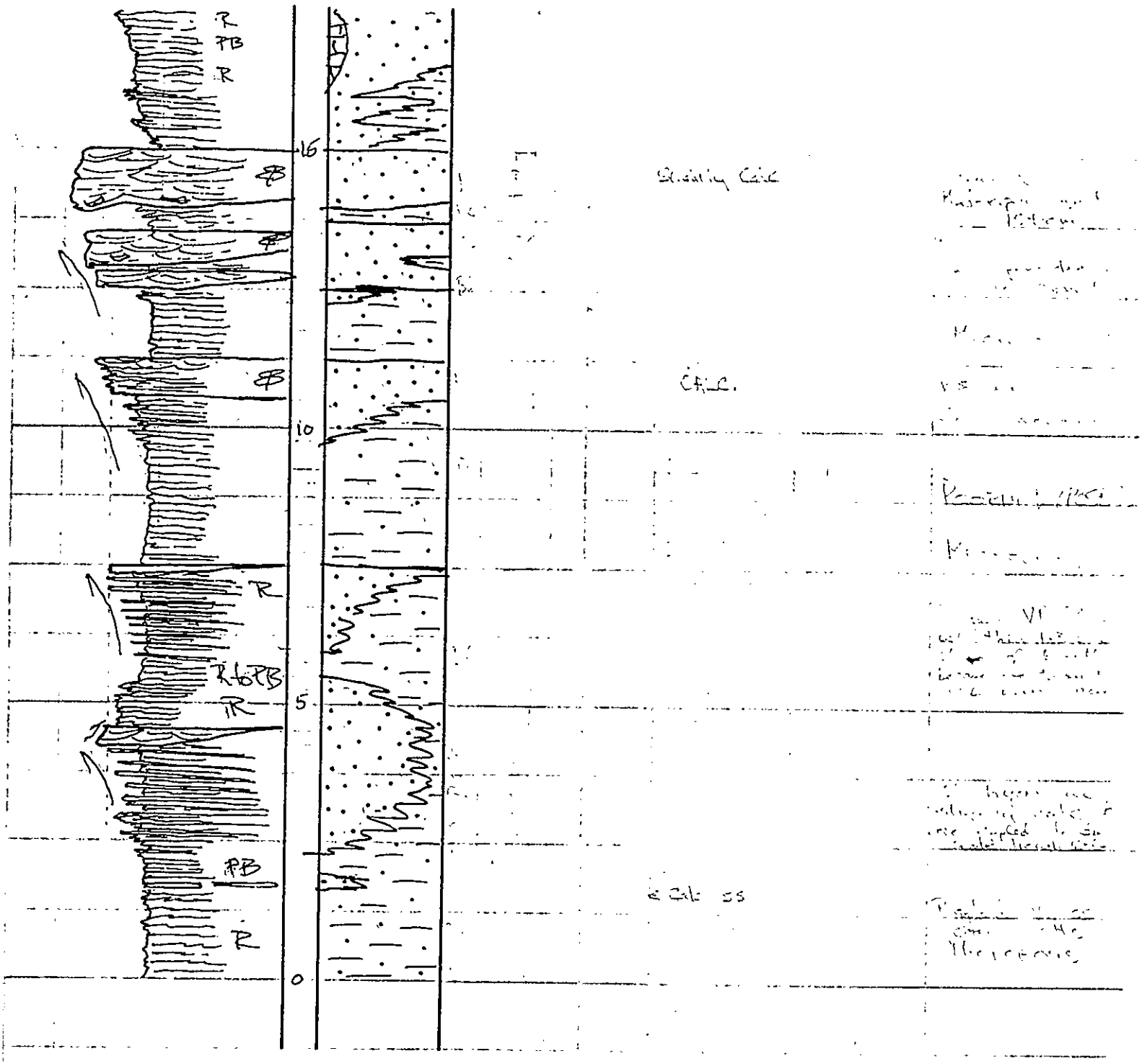


SS

DIVERSE

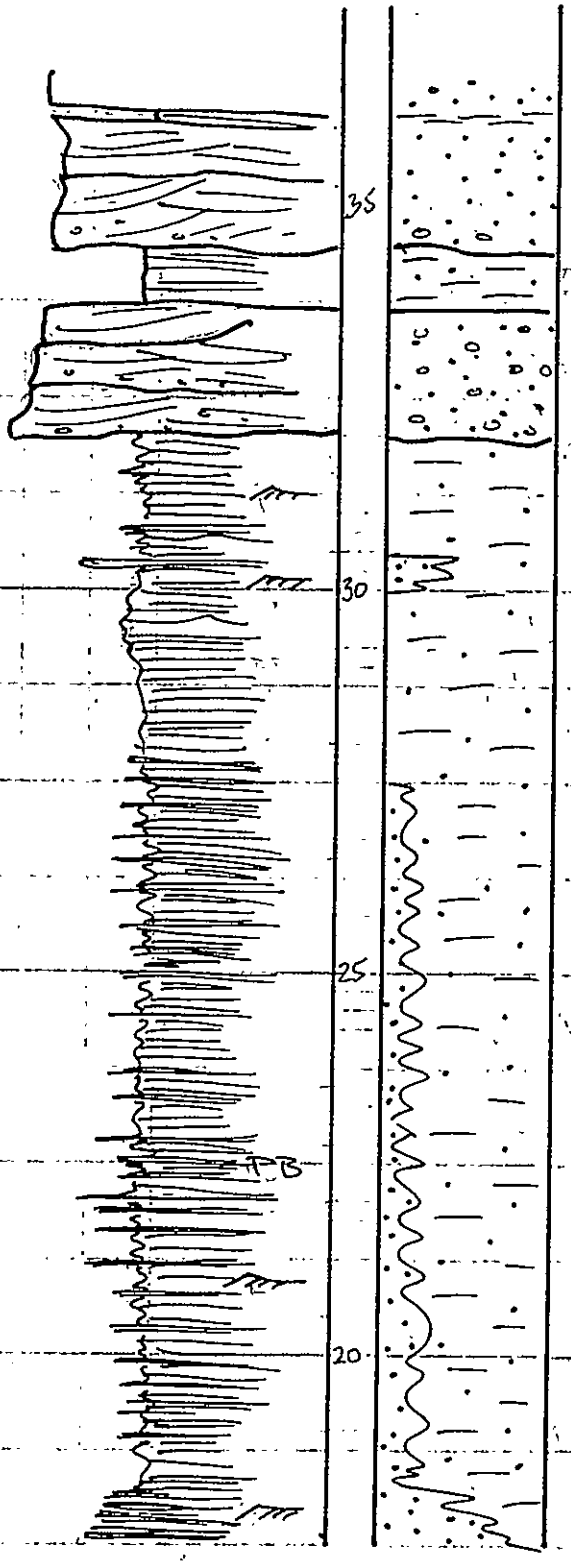
M.S. No. 60

PAGE 1



M. S. No. 60

PAGE 2

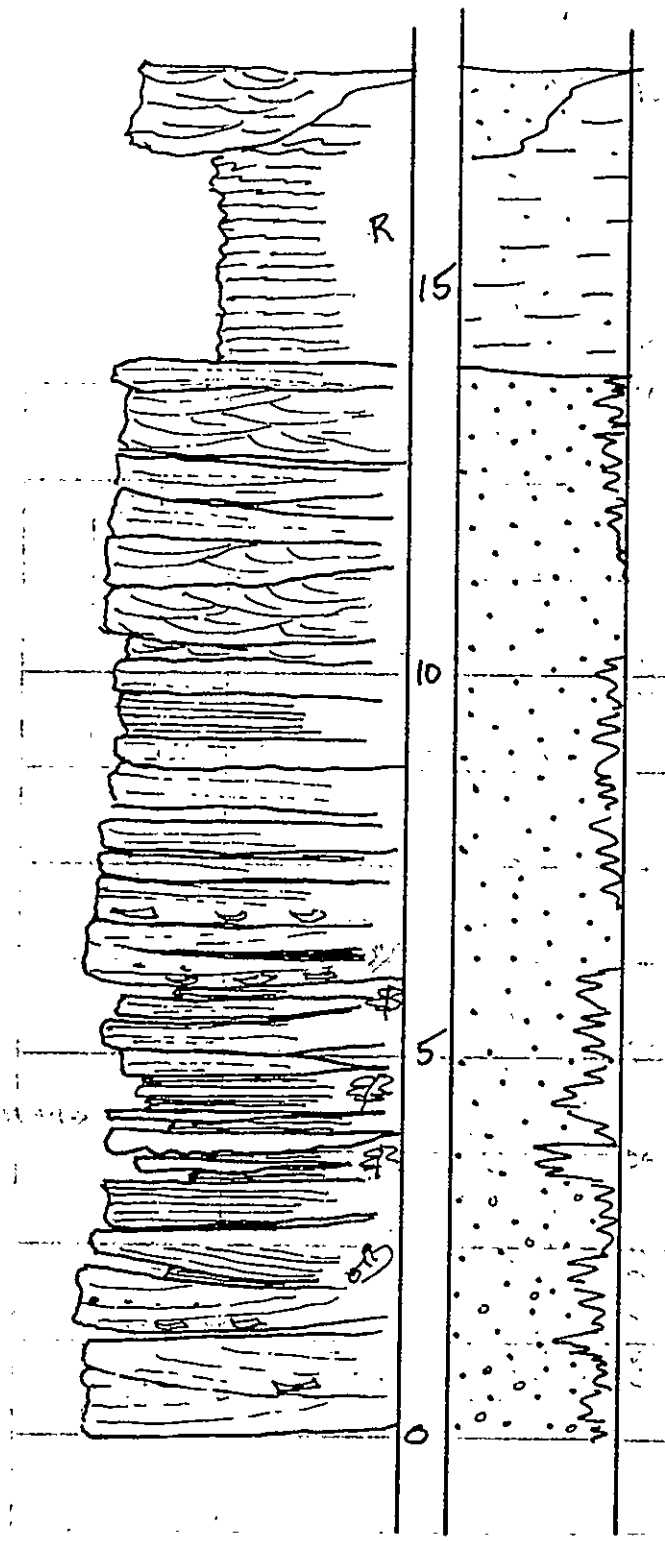


horiz. bedding

Micaceous silty very fine-grained sandstone with thin interbeds of fine- to med-grained ss.

M.S. No. 61

PAGE 1

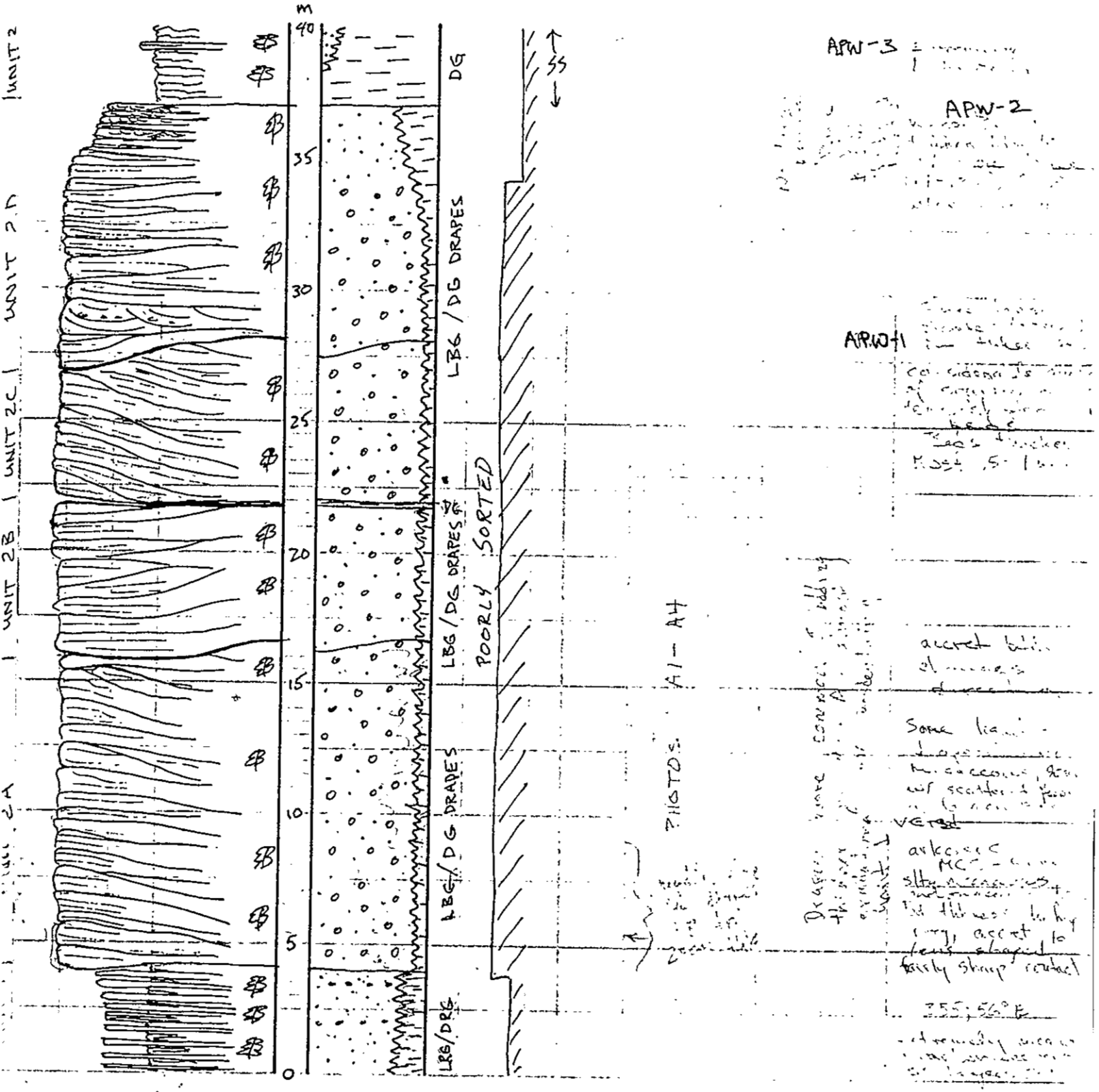


APW
W of Agua Piedra Camp
Roadcut (north side)

May 12, 1978
Casey

M. S. No. 62

PAGE 1



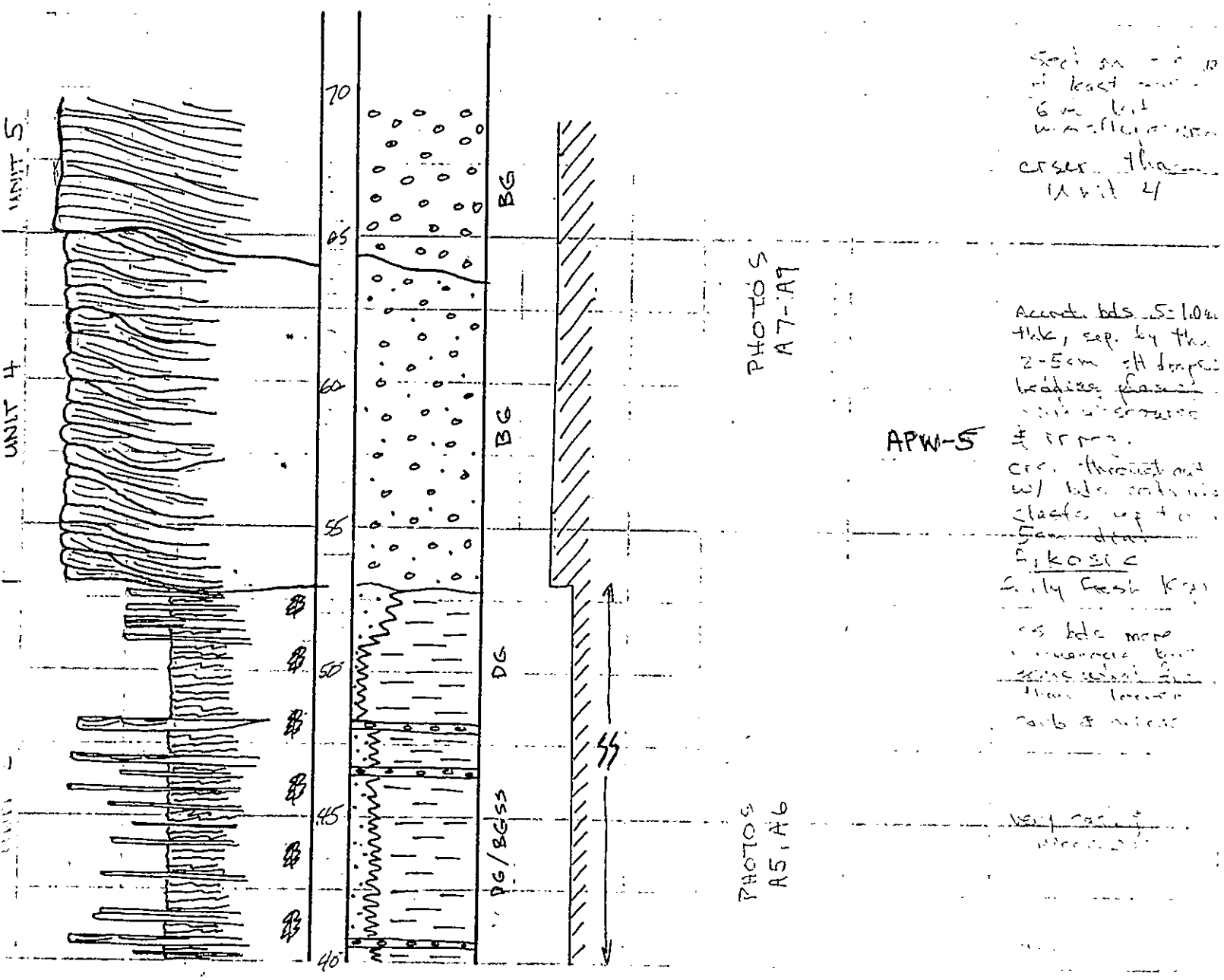
APW

May 12

Casey

M.S. No. 62

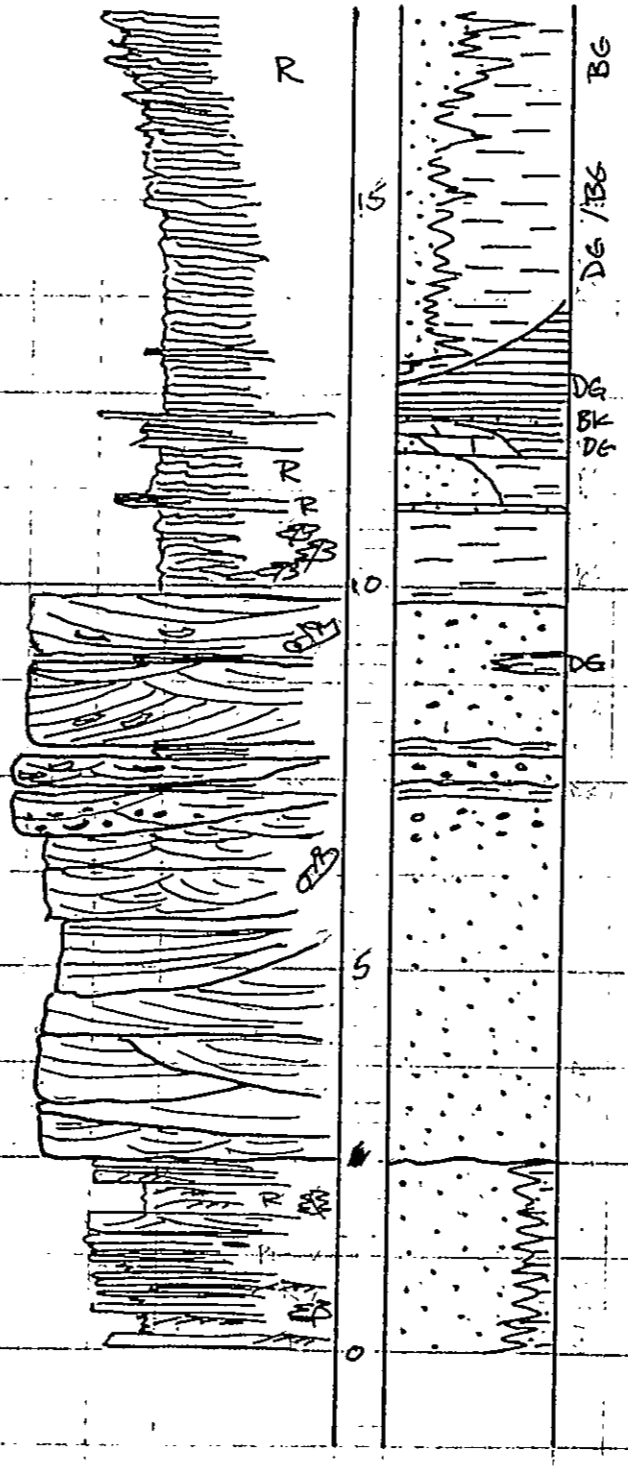
PAGE 2



M. S. No. 63

PAGE 1

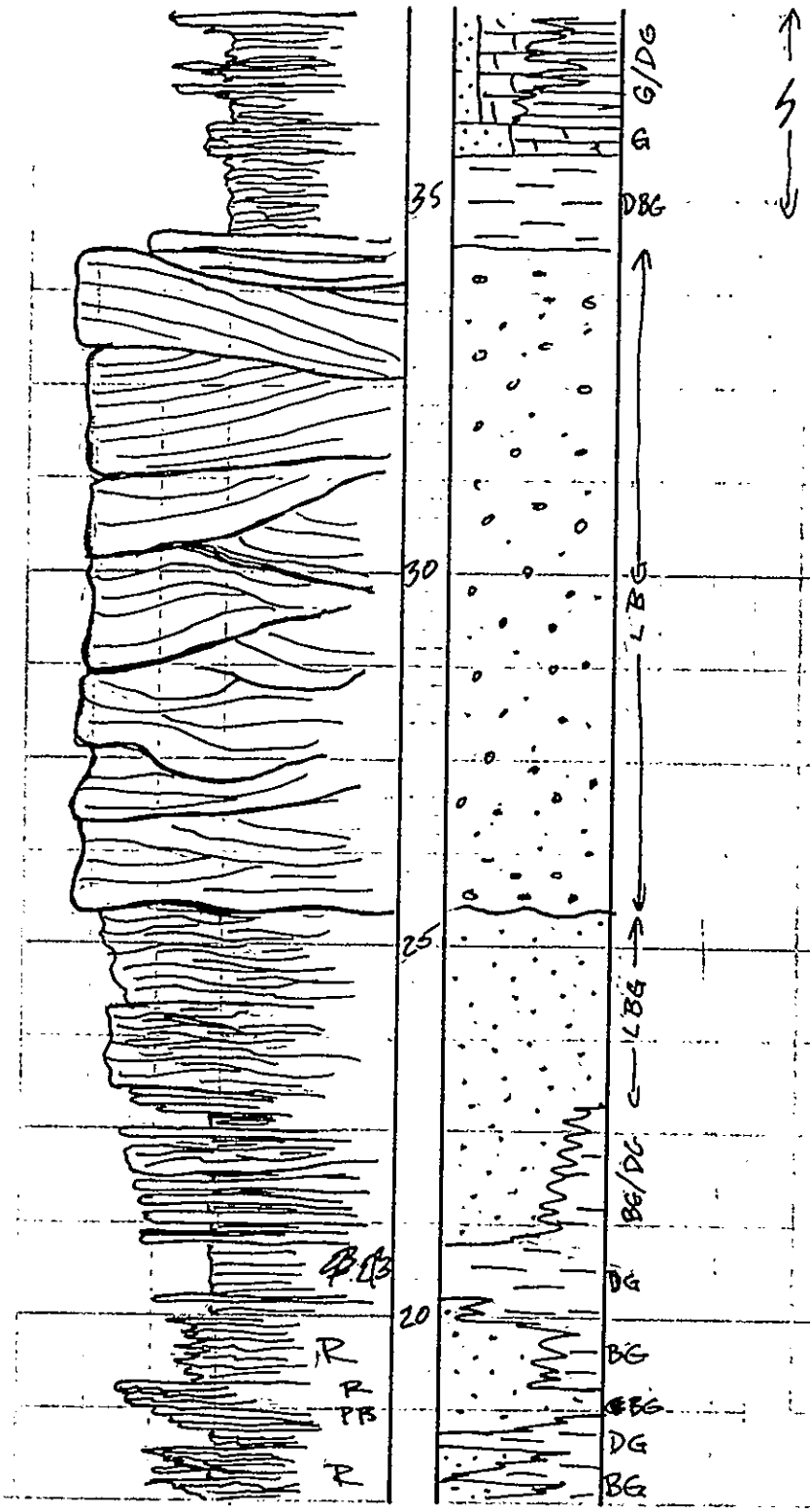
Gast Brach



TKW

M.S. No. 63

PAGE 2

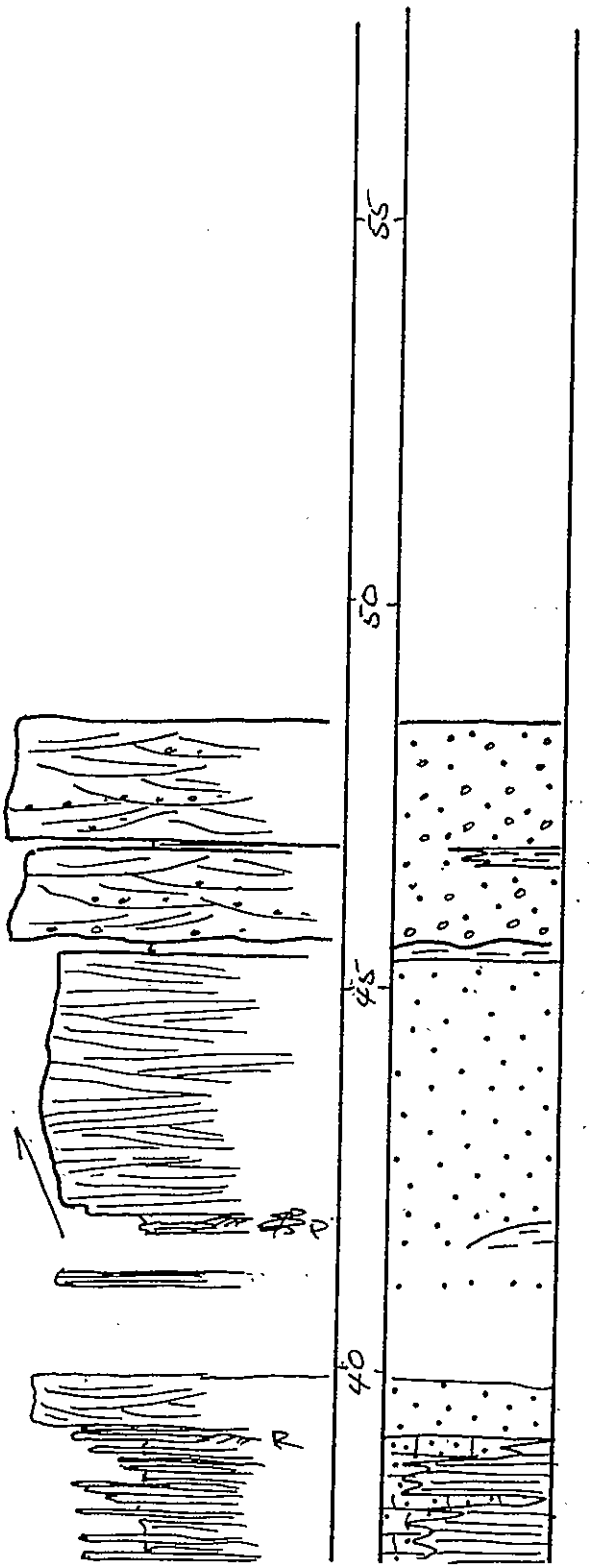


Pelecypod
Pylloid Algae

M.S. No. 63

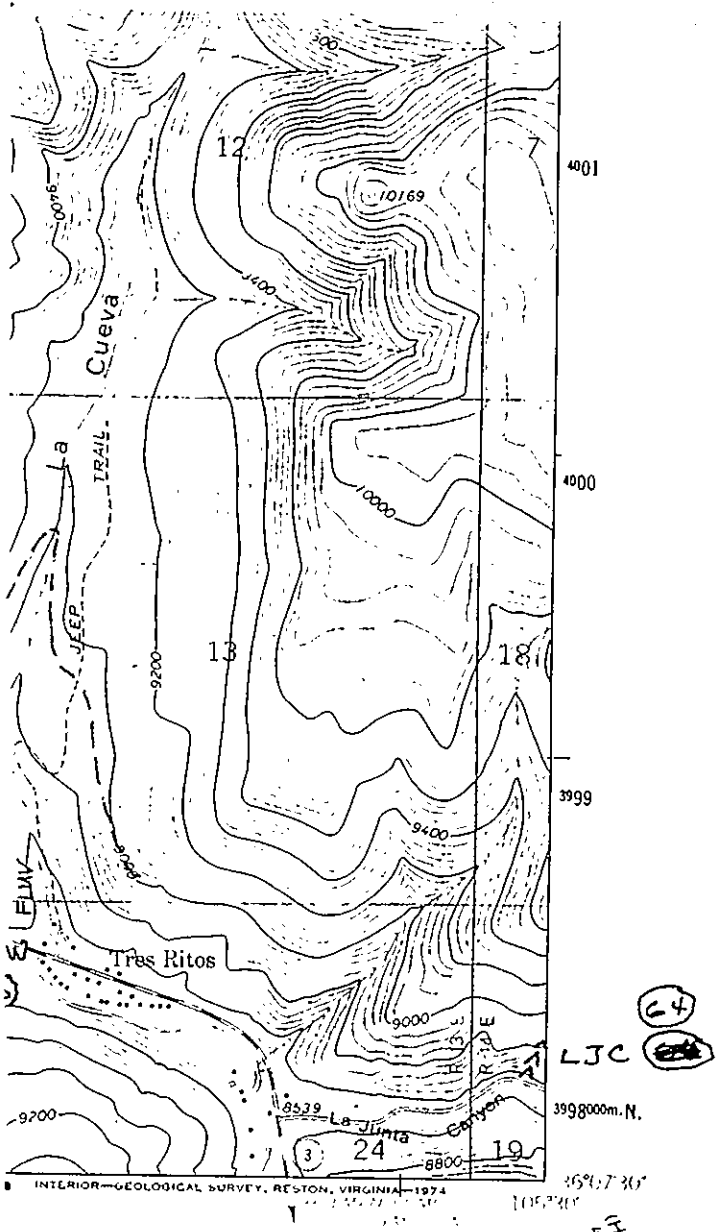
PAGE 3

Bivalves



LA JUNTA CANYON

MEASURED SECTION NO. 64



ROAD CLASSIFICATION

Light-duty

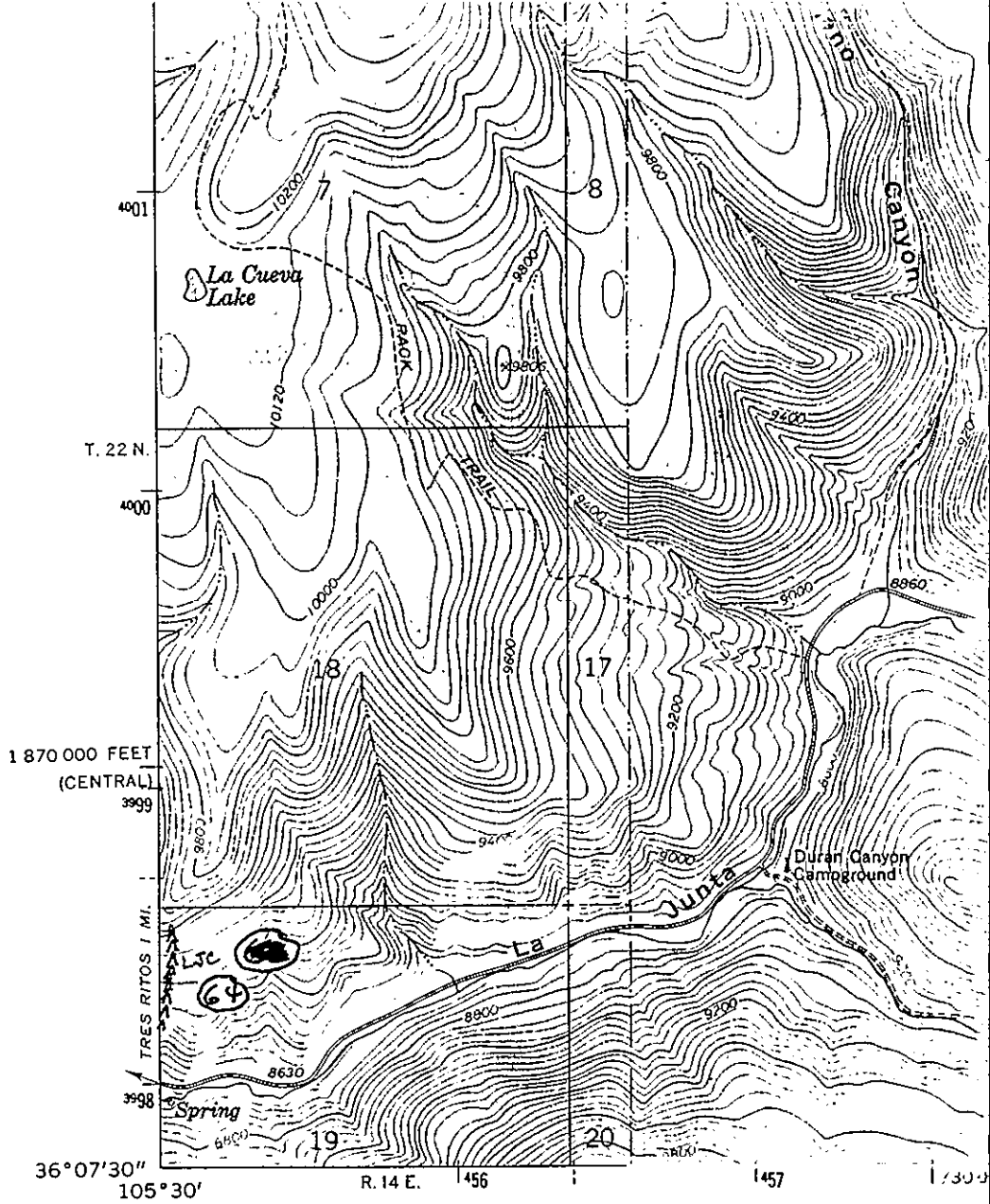
Unimproved dirt

State Route

TRES RITOS, N. MEX.

N3607.5—W10530/7.5

1964



(JICARITA PEAK)
4856 II SE

Mapped, edited, and published by the Geological Survey

Cont

Topo

phot

CERRO VISTA, N. MEX.

N3607.5—W10522.5/7.5

Poly

1965

10,000 feet grid system,

central and east zones

1000-meter Universal Transverse Mercator grid ticks,

zone 13, shown in blue

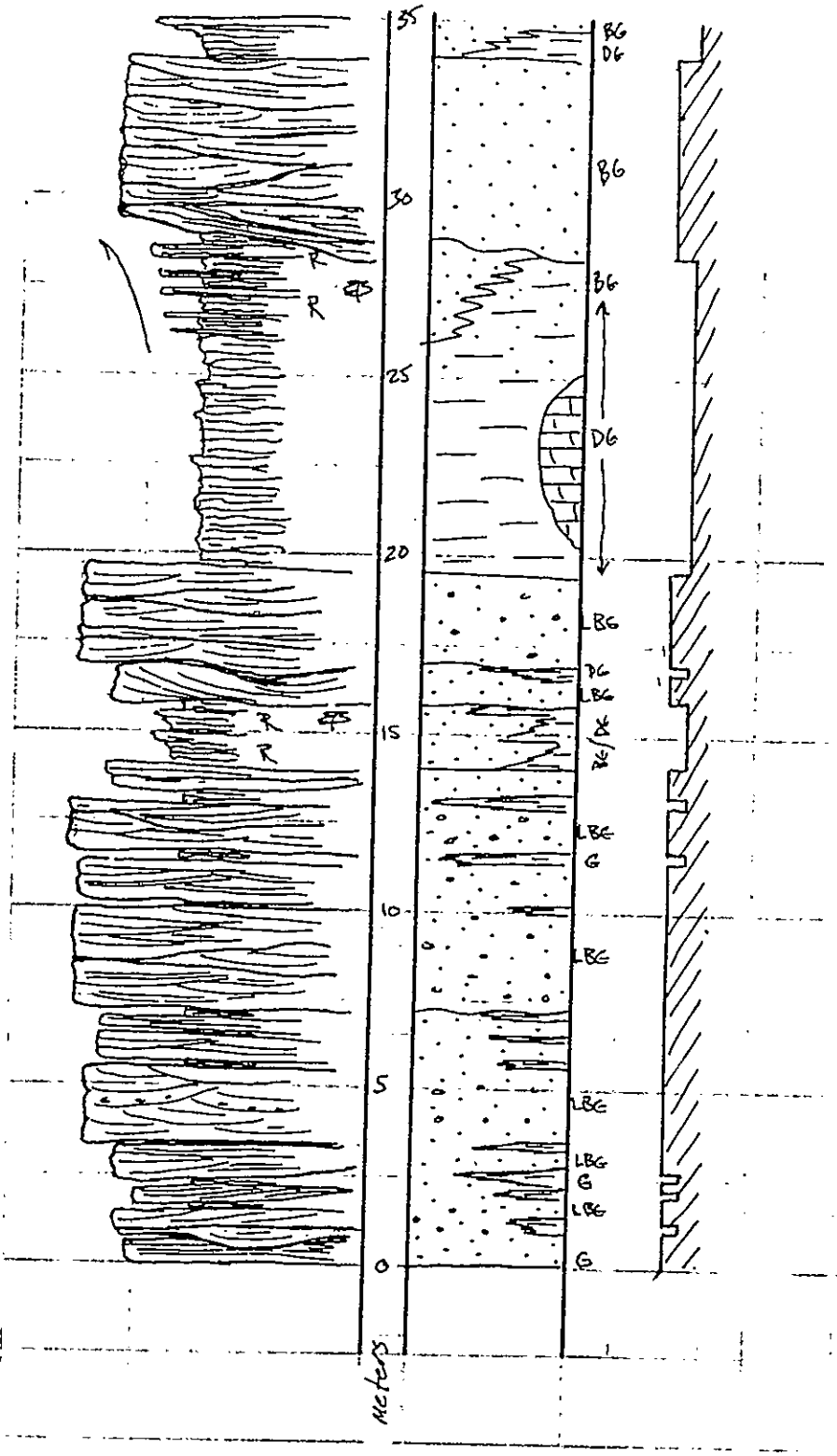
Where omitted, land lines have not been established

UTM GRID AND
DECLINATION

LJC
La Junta Canyon
Hillside

July 26, 1978
JMC & JCM

M.S. No. 64
PAGE 1

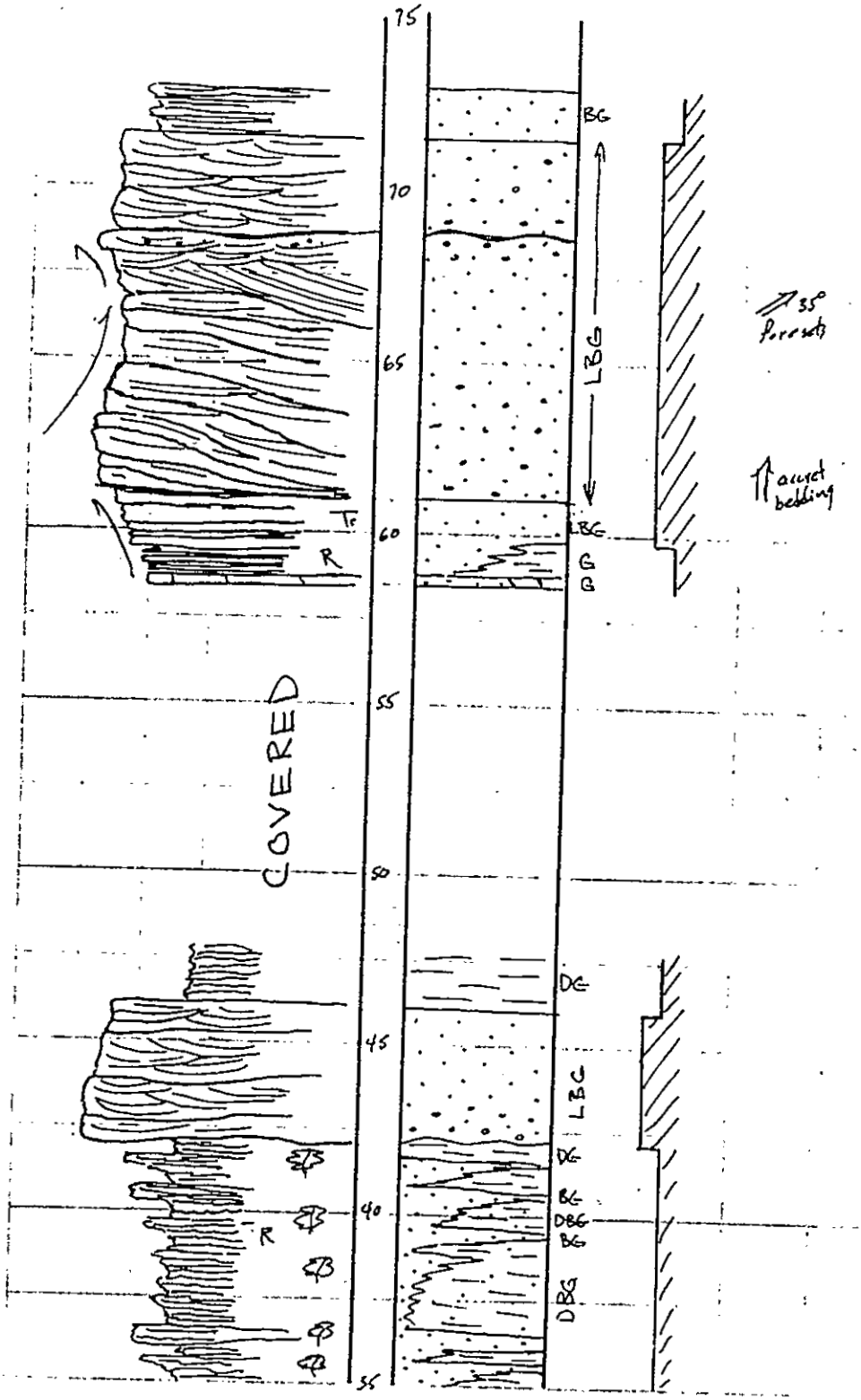


BECOMING SANDY

Very thin bedded

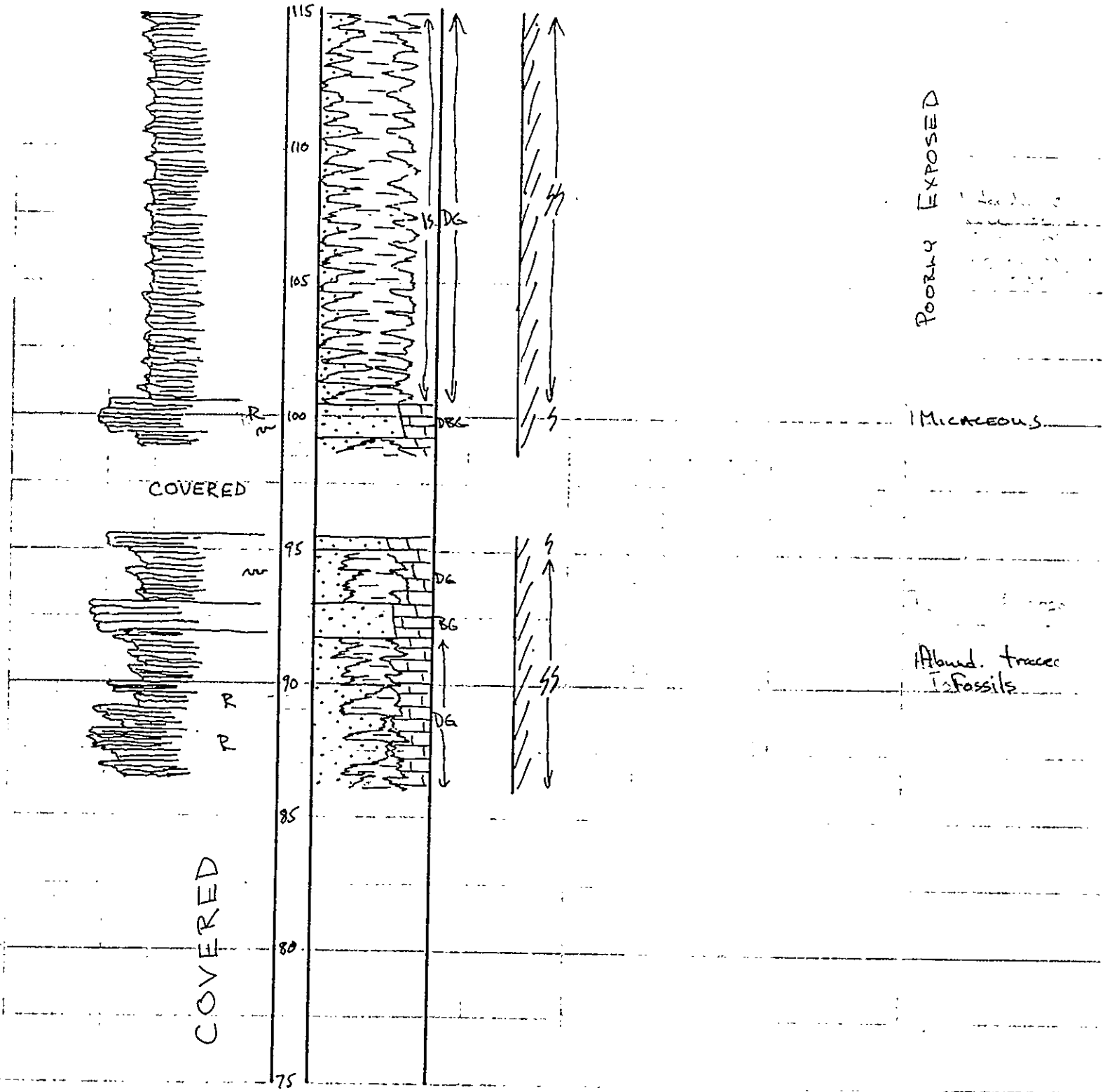
M.S. No. 64

PAGE 2



M. S. No. 64

PAGE 3

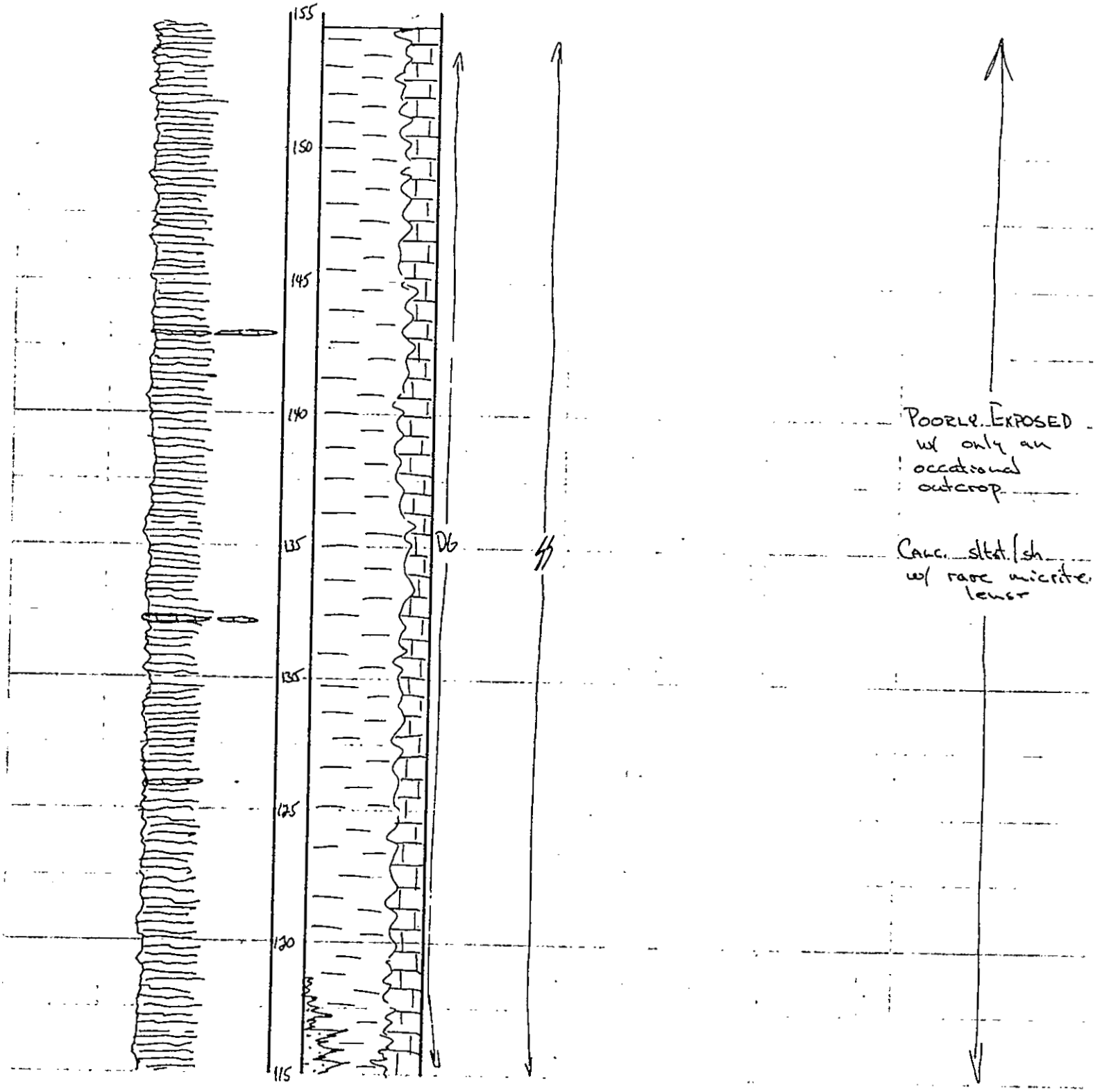


LJC

JMC

M.S. No. 64

PAGE 4



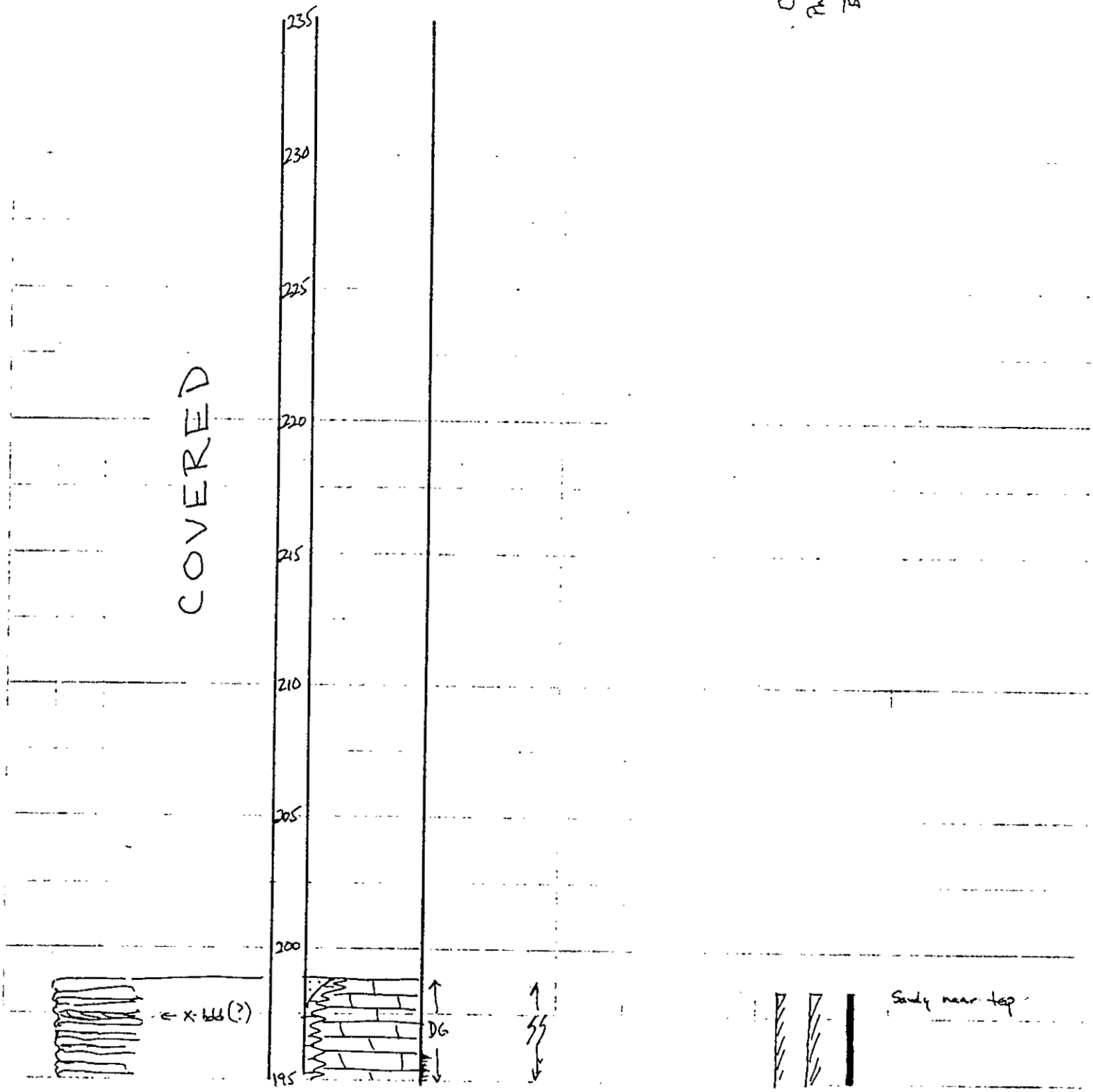
LJC

LJC

JMC

M.S. No. 64

PAGE 6



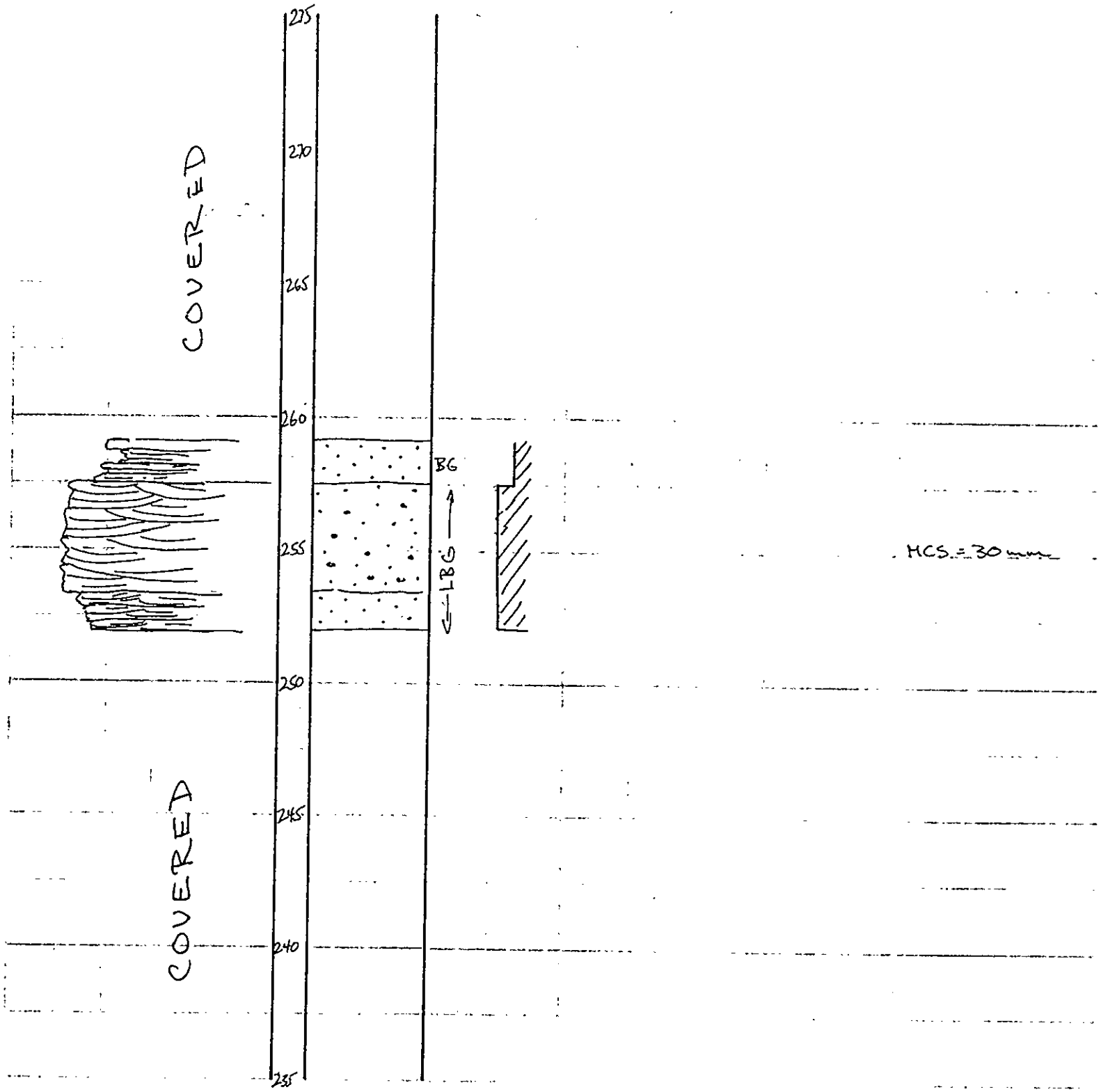
LJC

LJC

JMC

M.S. No. 64

PAGE 7

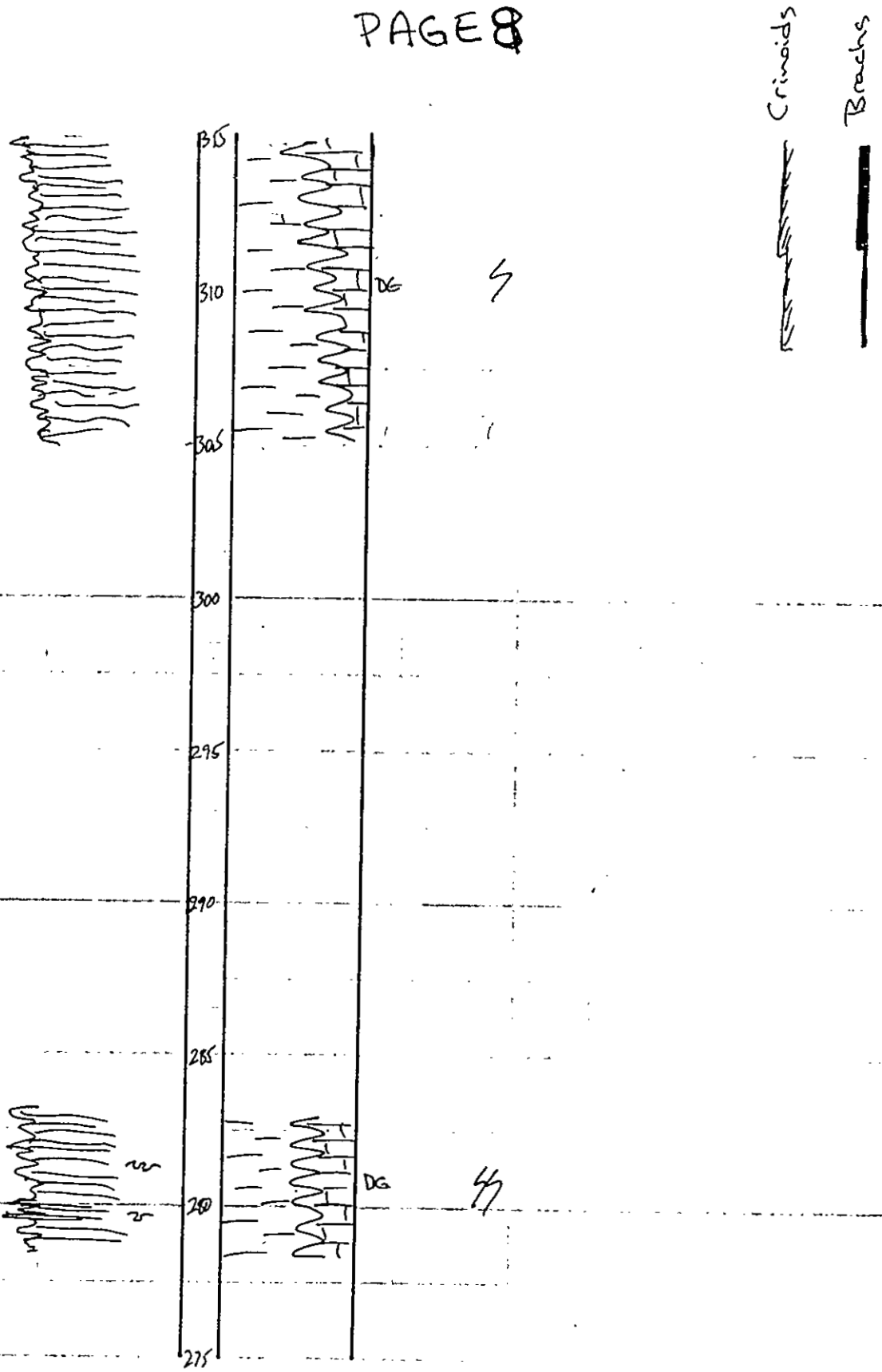


LJC

256

M.S. No. 64

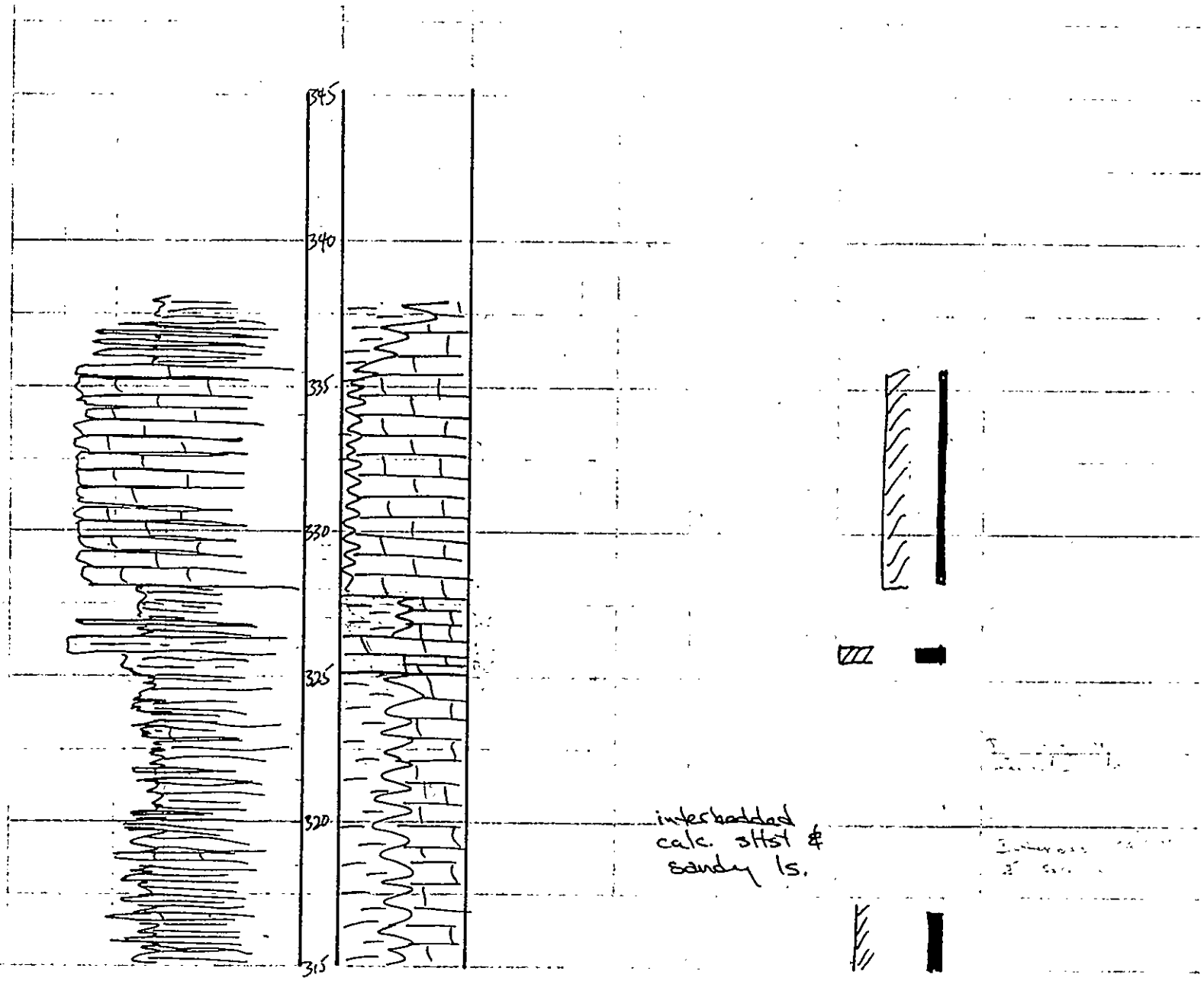
PAGE 8



M.S. No. 64

PAGE 9

Crinoids
Phylloid Algae
Bryozoans



LJC

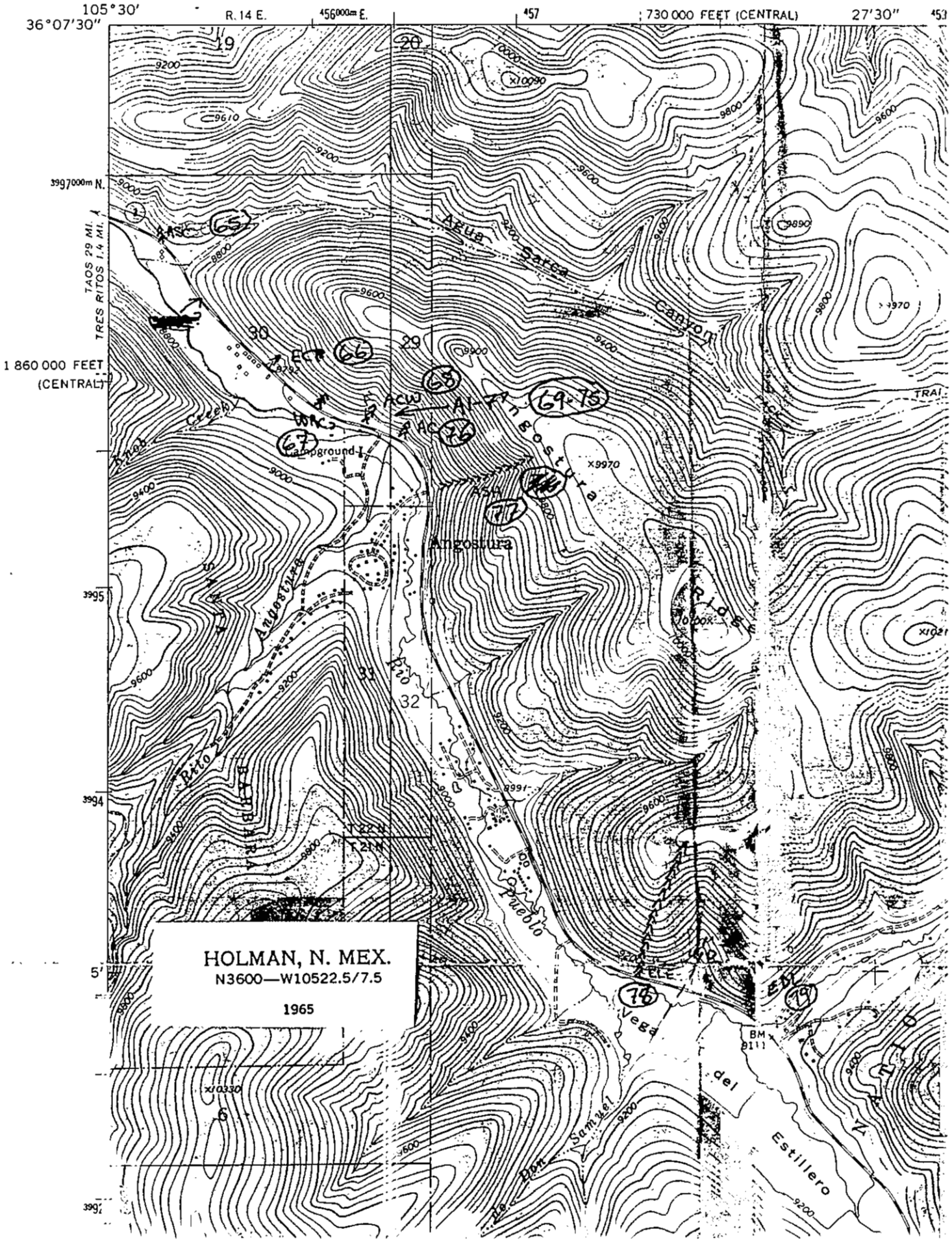
ANGOSTURA SECTIONS

MEASURED SECTIONS

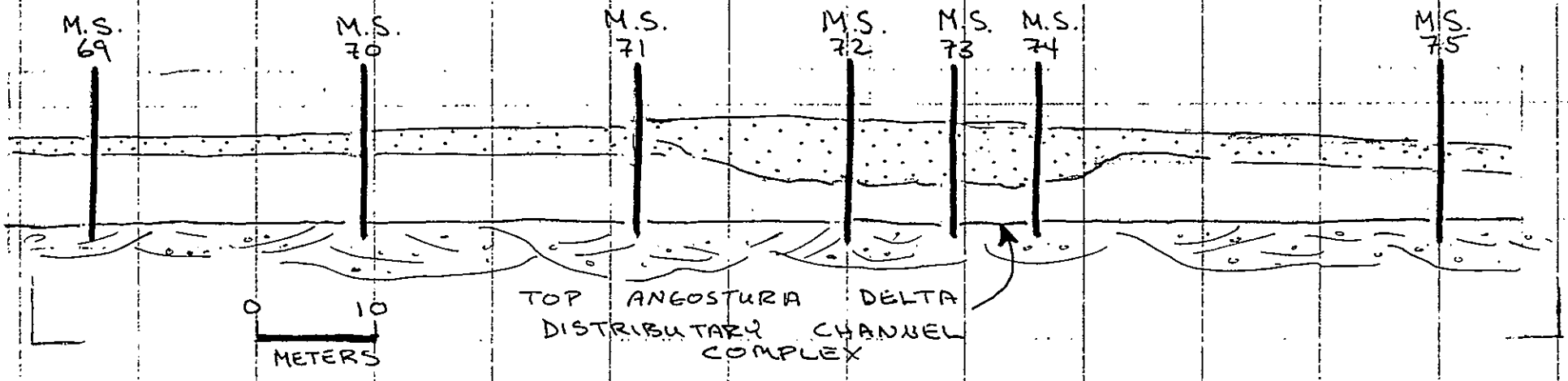
65 THROUGH 78

4856 II NE
(TRES RITOS)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

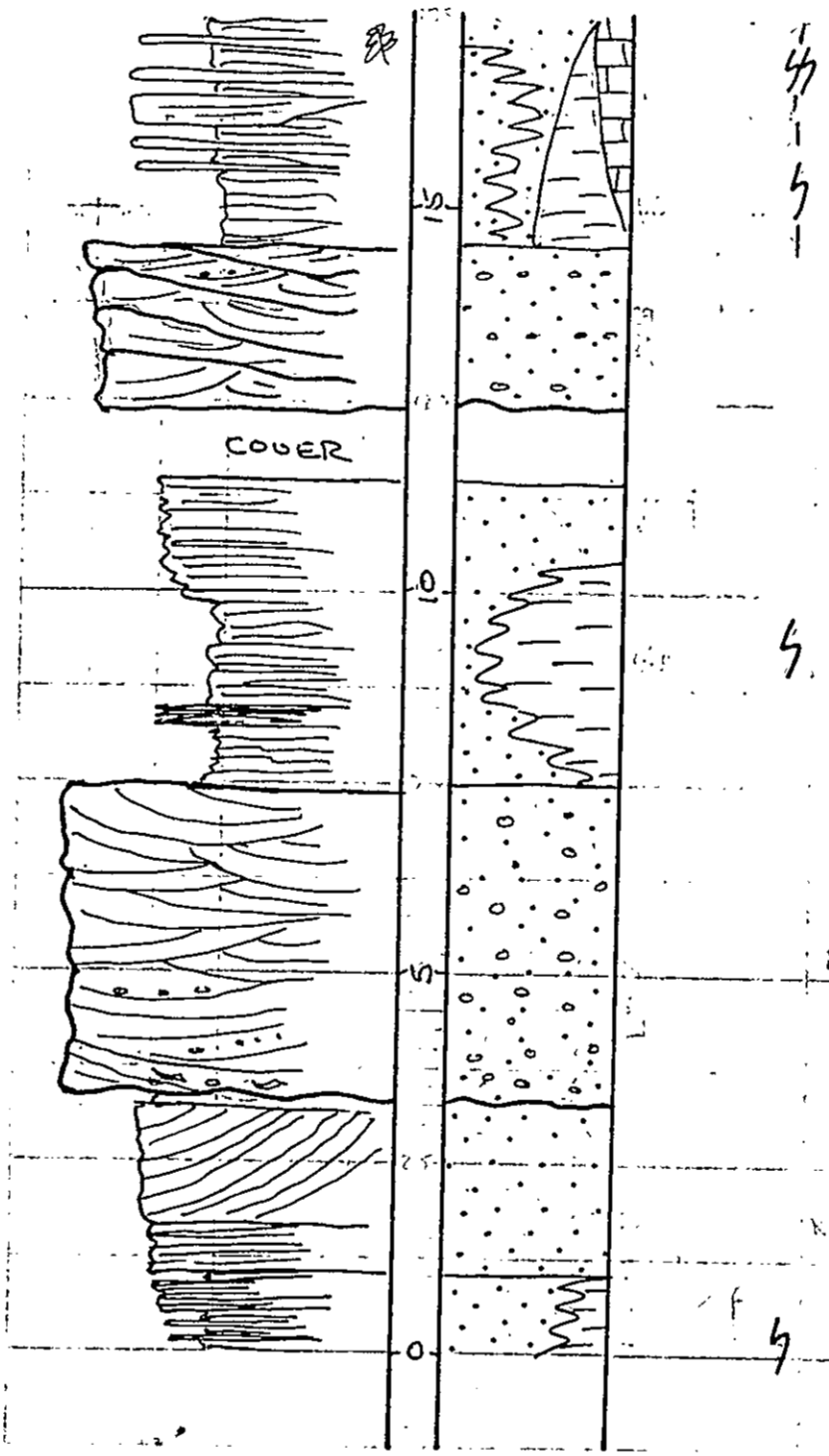


RELATIVE POSITIONS OF MEASURED SECTIONS 69-75



M.S. No. 65

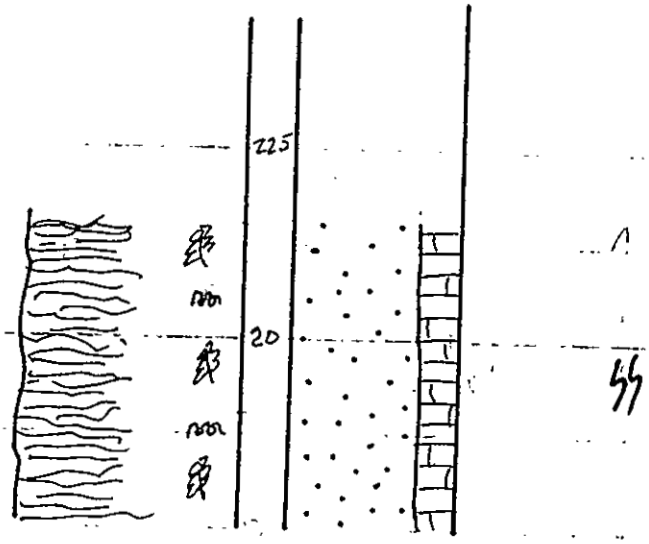
PAGE 1



M. S. No. 65

PAGE 2

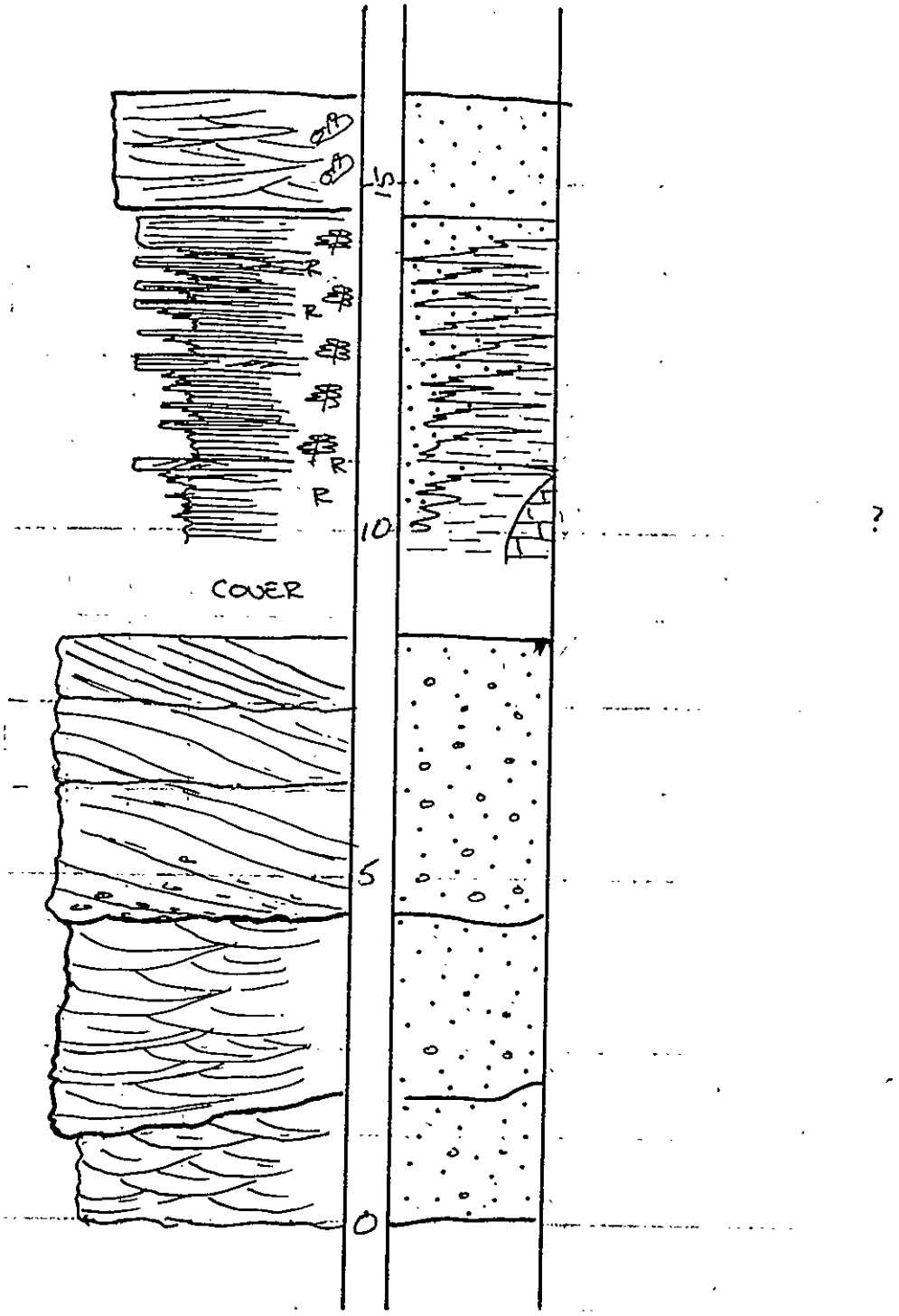
Brachs



ECP

M.S. No. 66

PAGE 1



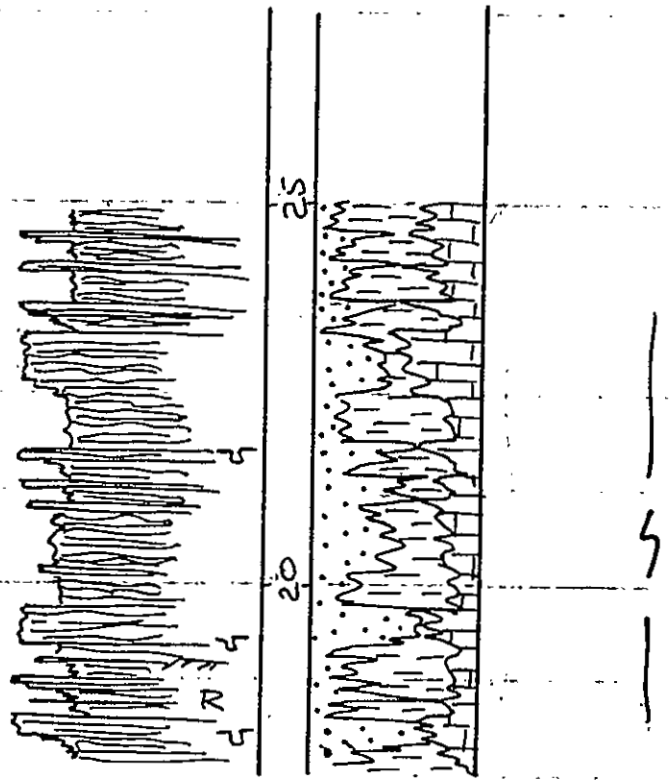
?

2W

ELY

M.S. No. 66

PAGE 2

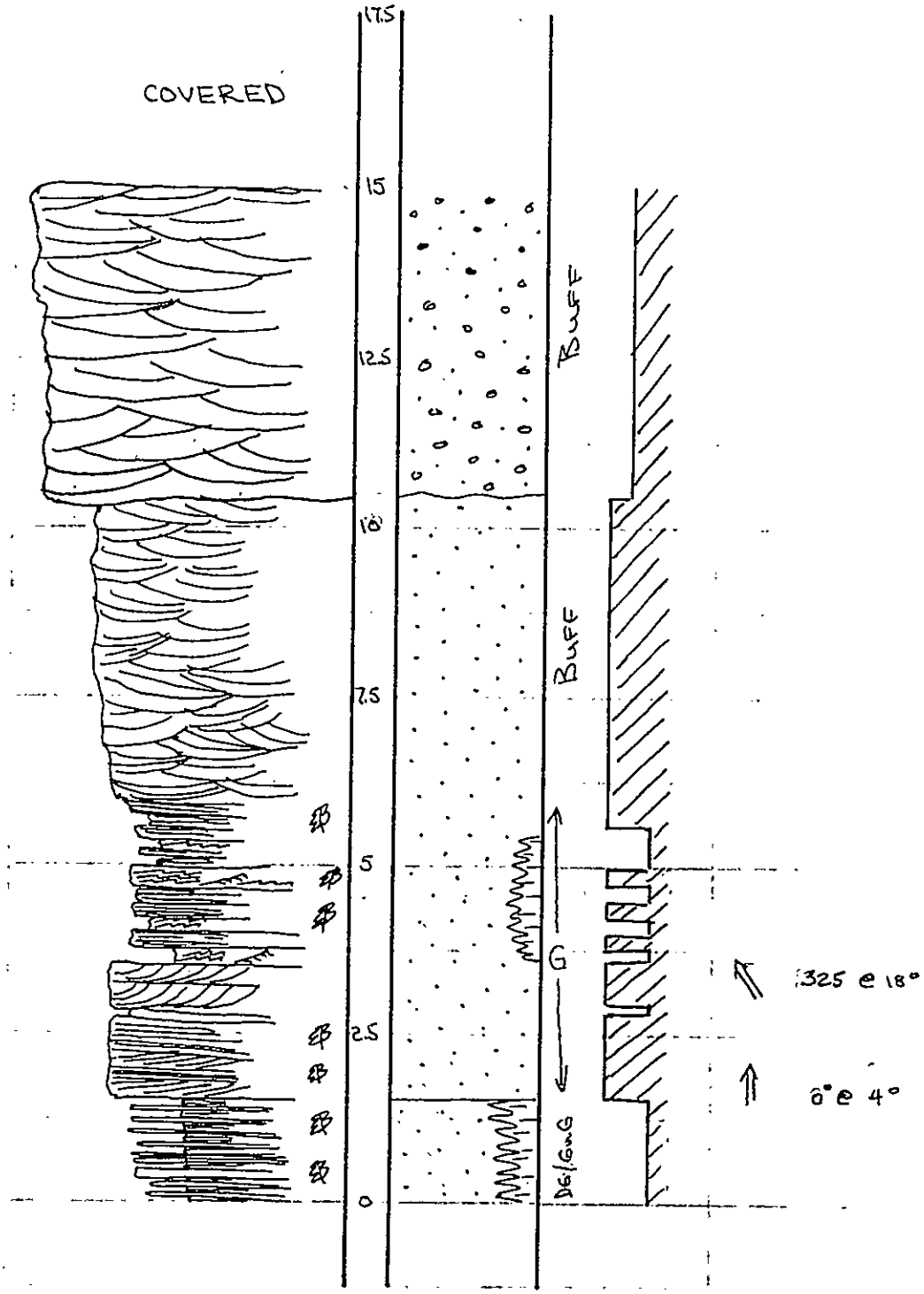


WAC
West of Angostura Camp

June 17, 1978
JMC

M. S. No. 67

PAGE 1



MCS = 36 mm

Fines layers are DG
MICACEOUS
Mann to low X th
MICACEOUS
ss layers 3-12 cm th
& rippled

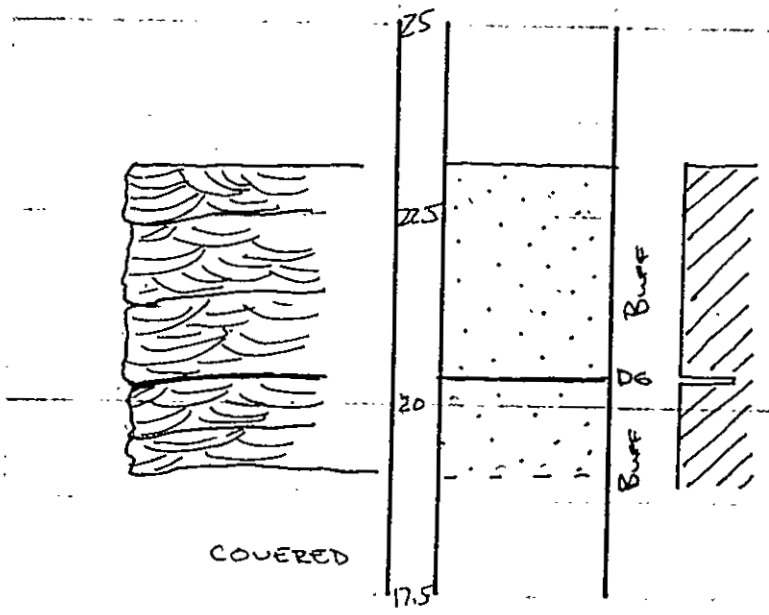
WAC

June 17, 1978

JMC

M.S. No. 67

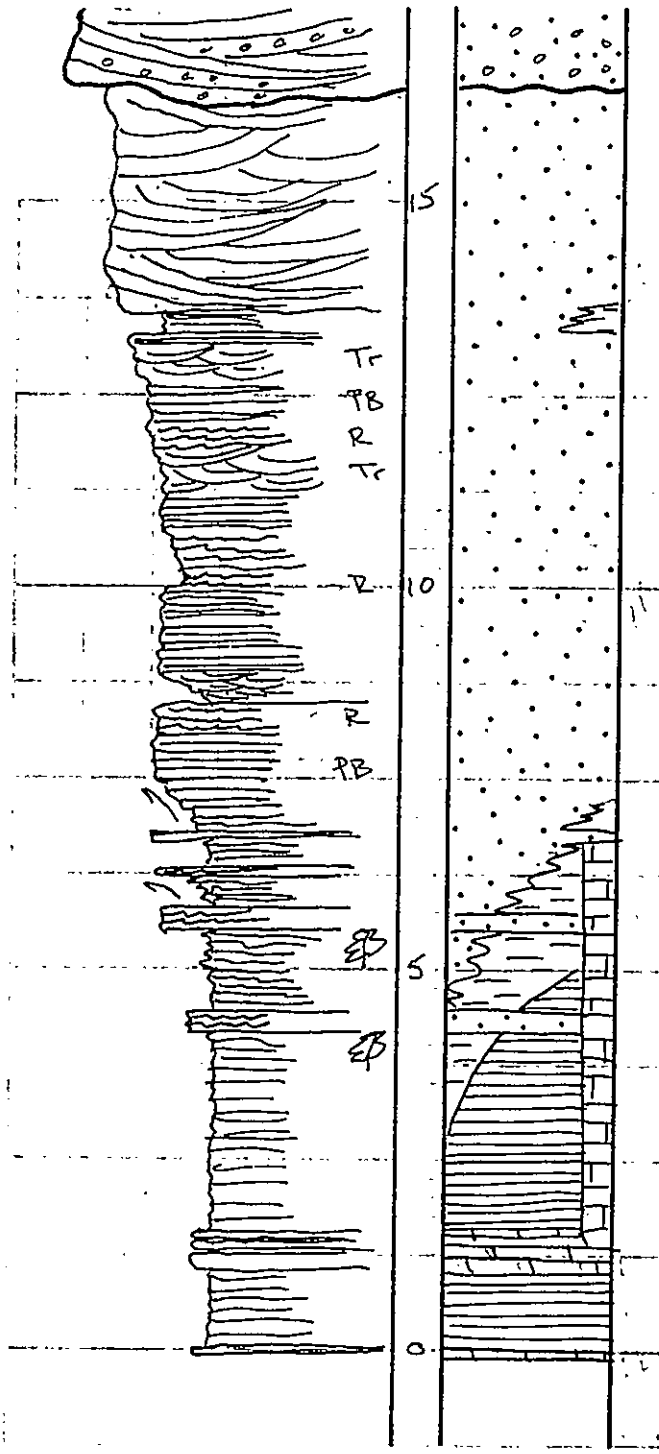
PAGE 2



← Silt Drape

M.S. No. 68

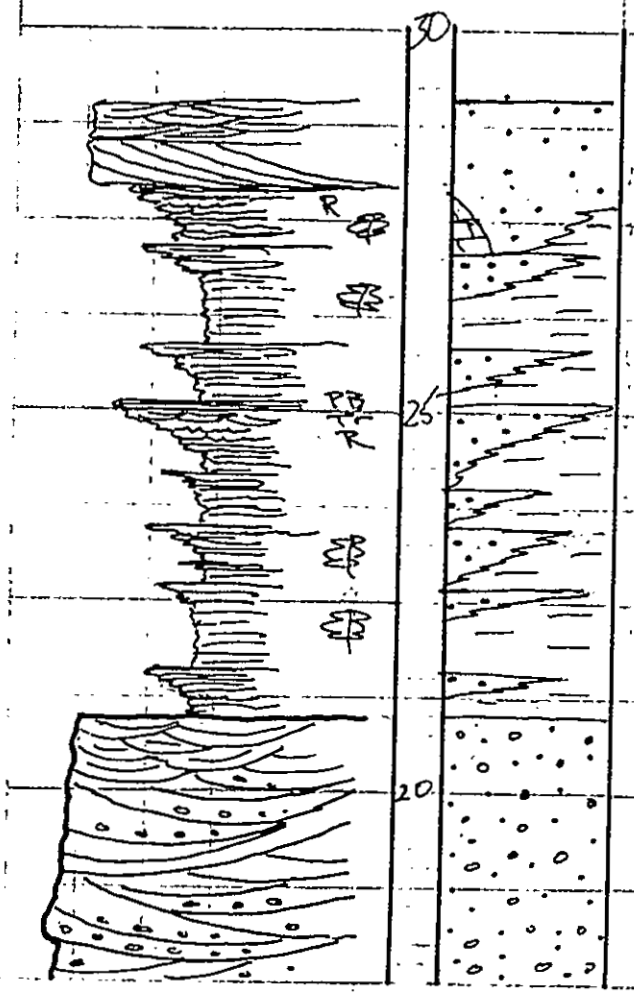
PAGE 1



2ii

M.S. No. 68

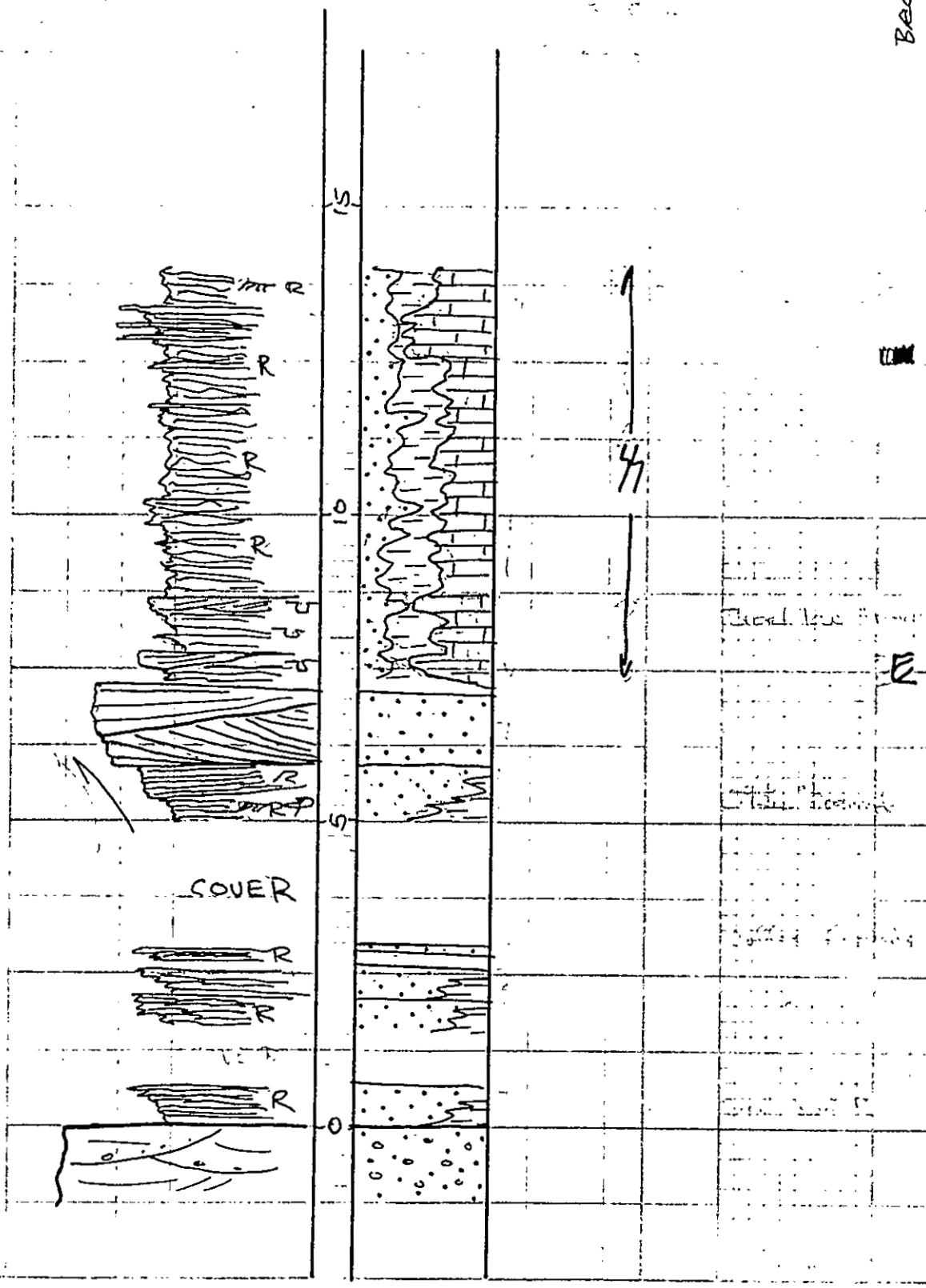
PAGE 2



M.S. No. 69

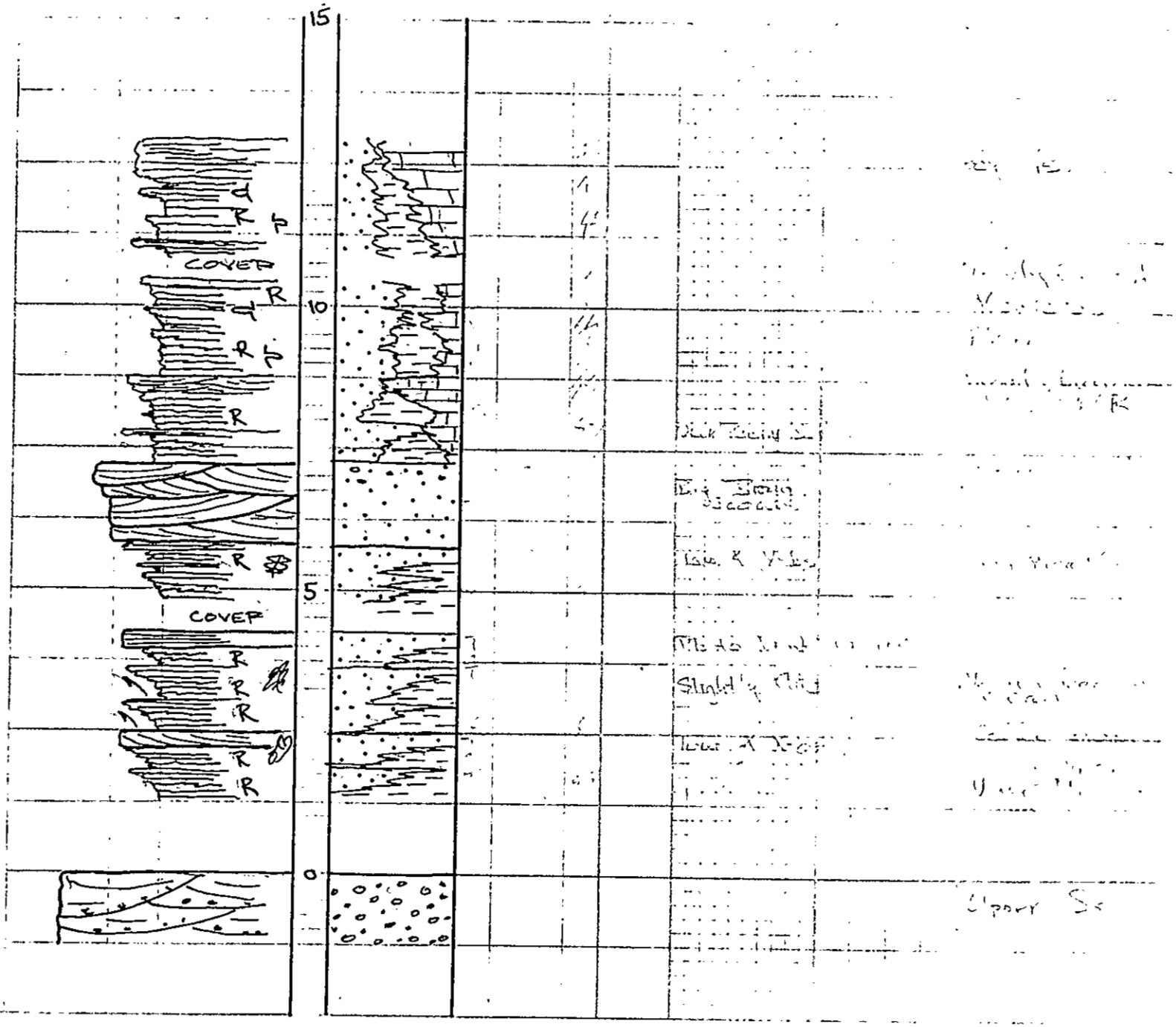
PAGE 1

Bachs



M. S. No. 70

PAGE 1



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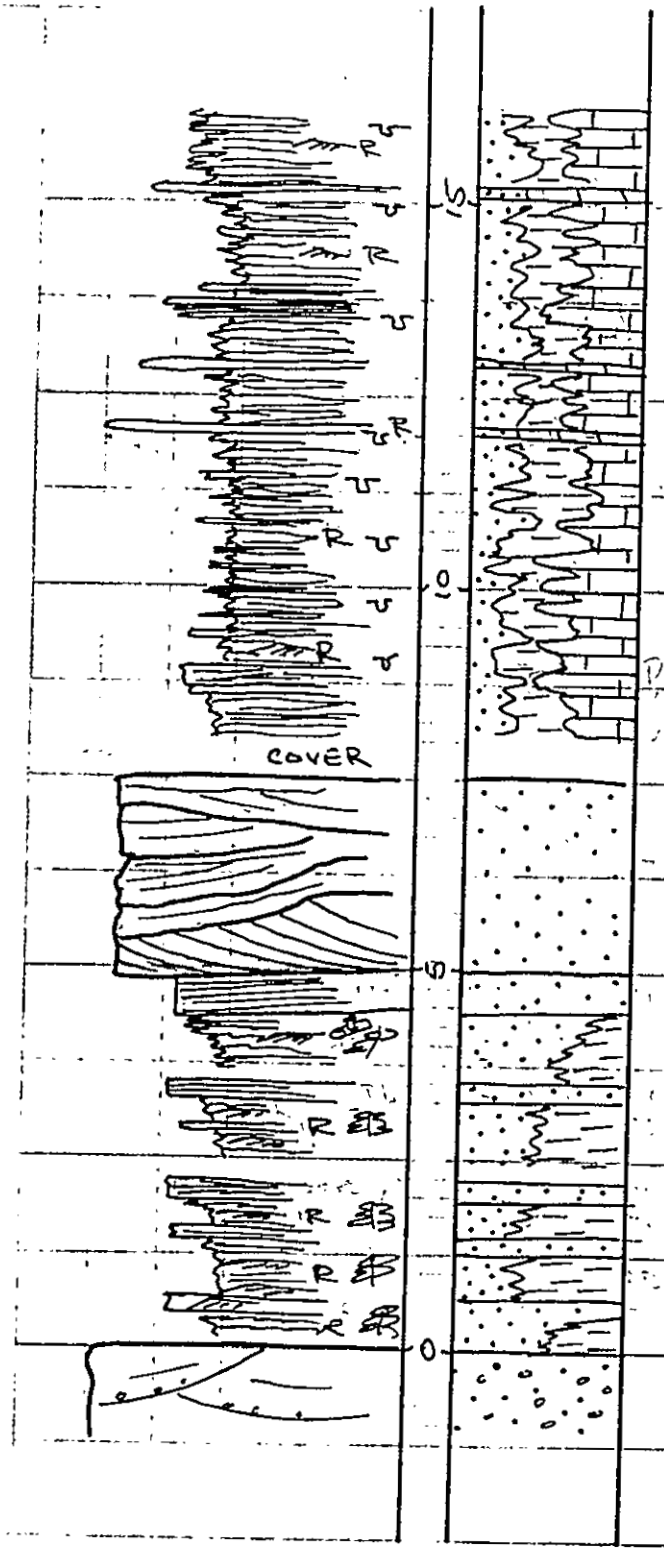


Brachs
Crinoids

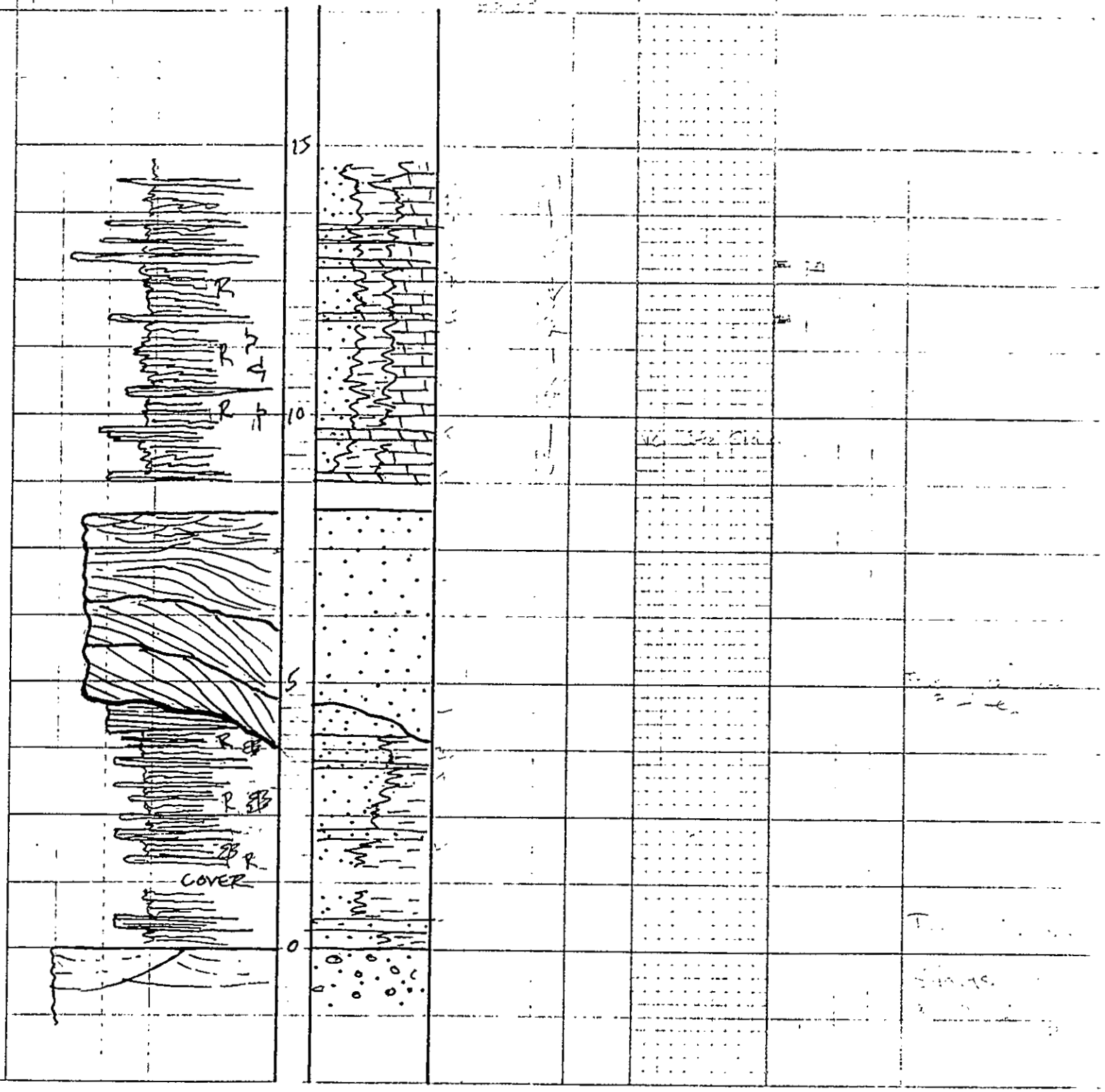
MEASURED SECTION
LOCALITY
SETTING

STRATIGRAPHIC UNIT
MEASURED BY

M.S. No. 72

SEDIMENTARY TEXT & STRUCT
CARBONATES
GRN PK WKE MUDSTONE
CLASTICS
GRAV SAND

FOSSILS
CARBONATE COMPONENTS
MATL STRUCTURES
DEG PROPERTIES
DIREC TION FEATURES



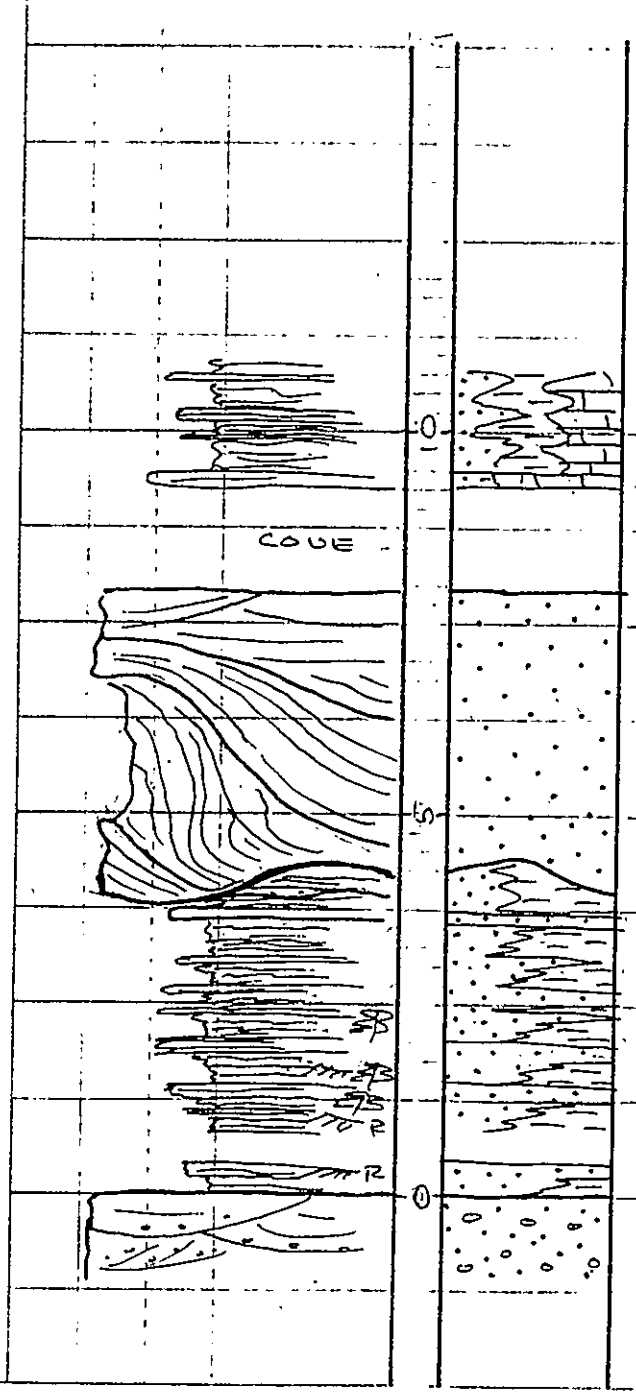
ATLAS [illegible]
LOCALITY
SETTING

STRATIGRAPHIC UNIT
MEASURED BY

SEDIMENTARY
TEXT & STRUCT
CARBONATES
GRN PK WKE SLOT
CLASTICS

GRAV SAND
54 [illegible] M F VF

M. S. No. 73



27'

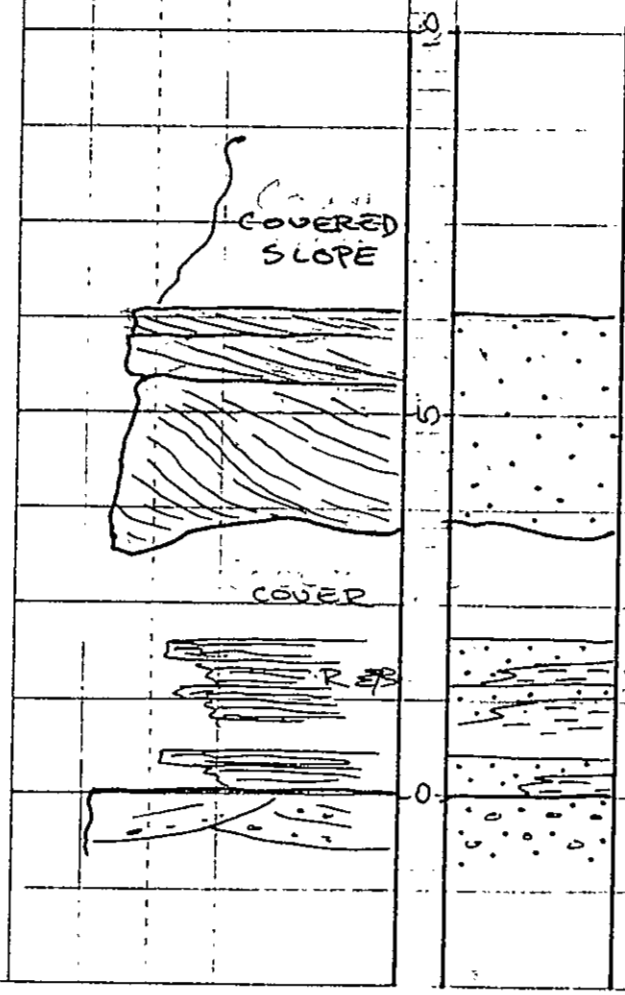
MEASURED SECTION
LOCALITY
SETTING

DATE
STRATIGRAPHIC UNIT
MEASURED BY

M.S. No. 74

SEDIMENTARY TEXT & STRUCT
CARBONATES
GRN PK WKE MUDST
CLASTICS
GRAV SAND
64 4 VC C M F VF

FOSSILS
CARBONATE COMPONENTS



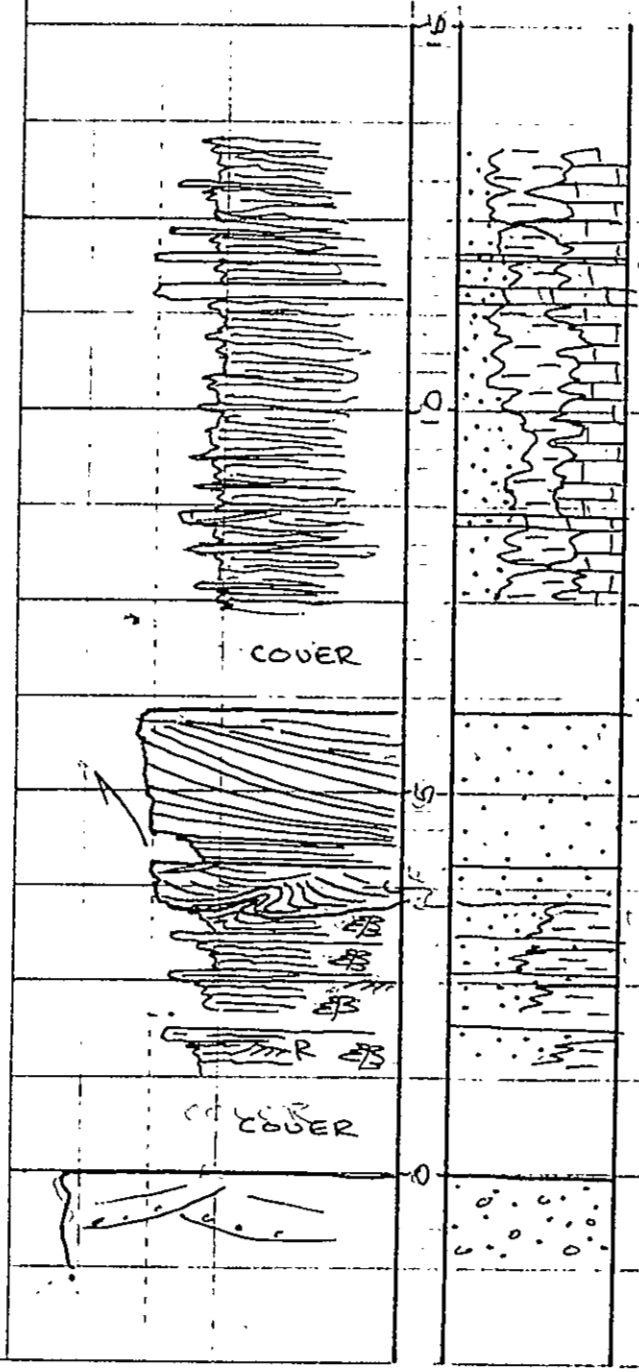
MEASURED
LOCALITY
SETTING

DATE
STRATIGRAPHIC UNIT
MEASURED BY

M.S. No 75

SEDIMENTARY
TEXT & STR
CARBONATES
GRN PK WKE MUDST
CLASTICS
GRAV SAND
64 4 C C M F F

FOSSIL

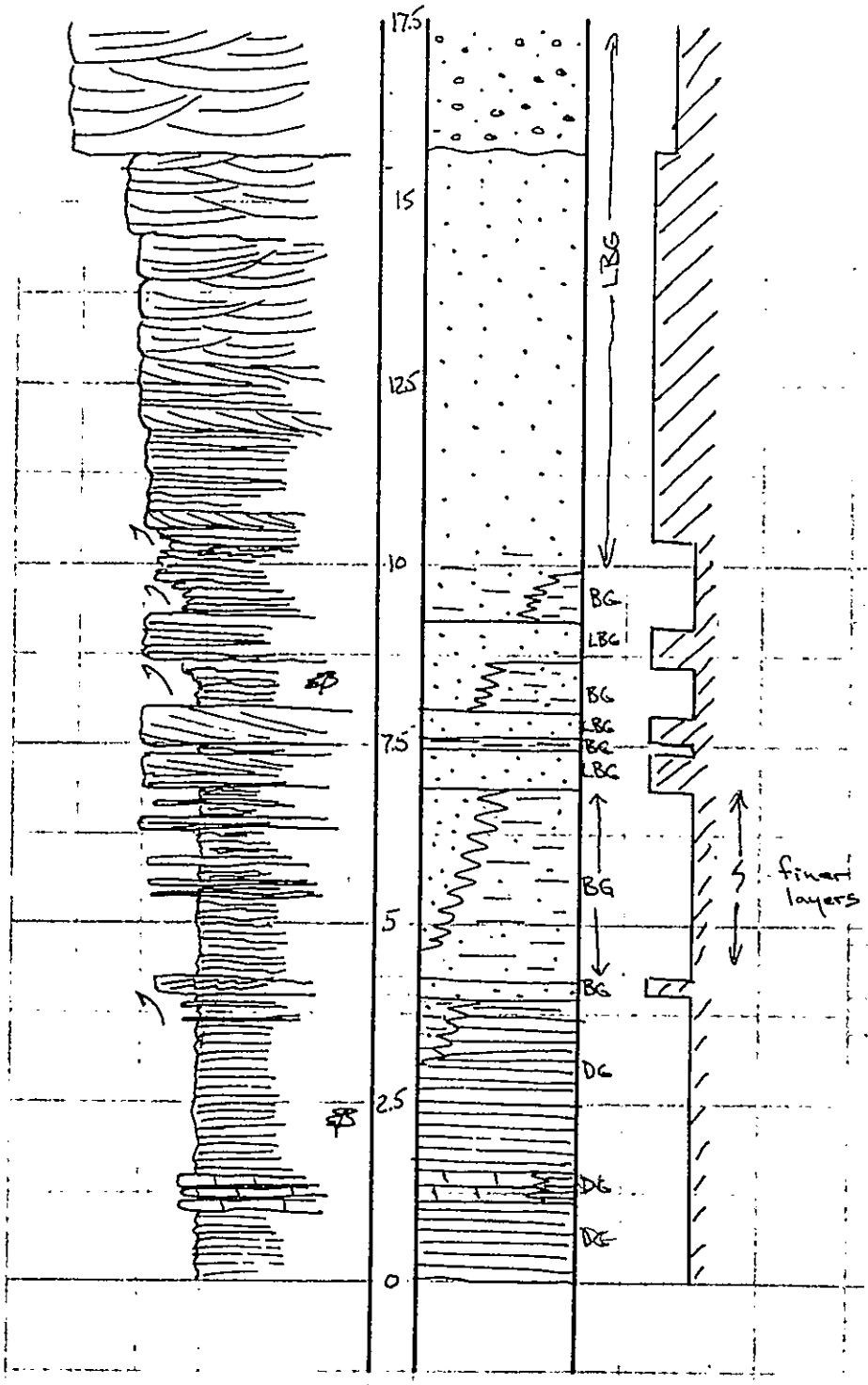


AC

June 21, 1978
Sambia
JMC

M. S. No. 76

PAGE 1



Arkosic
Calcareous

Micaceous

Micaceous

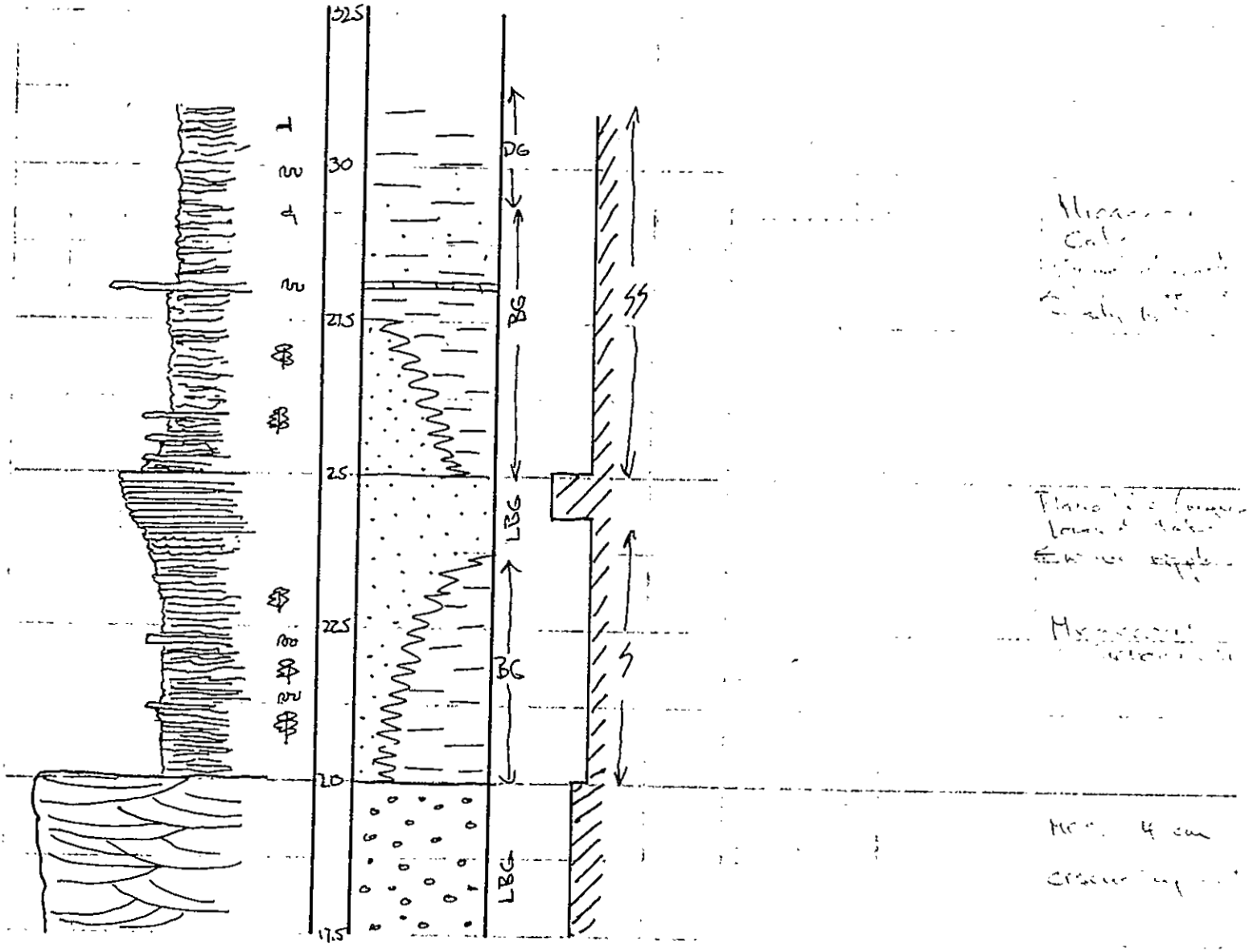
AC

June 21, 1978

JMC

M.S. No. 76

PAGE 2

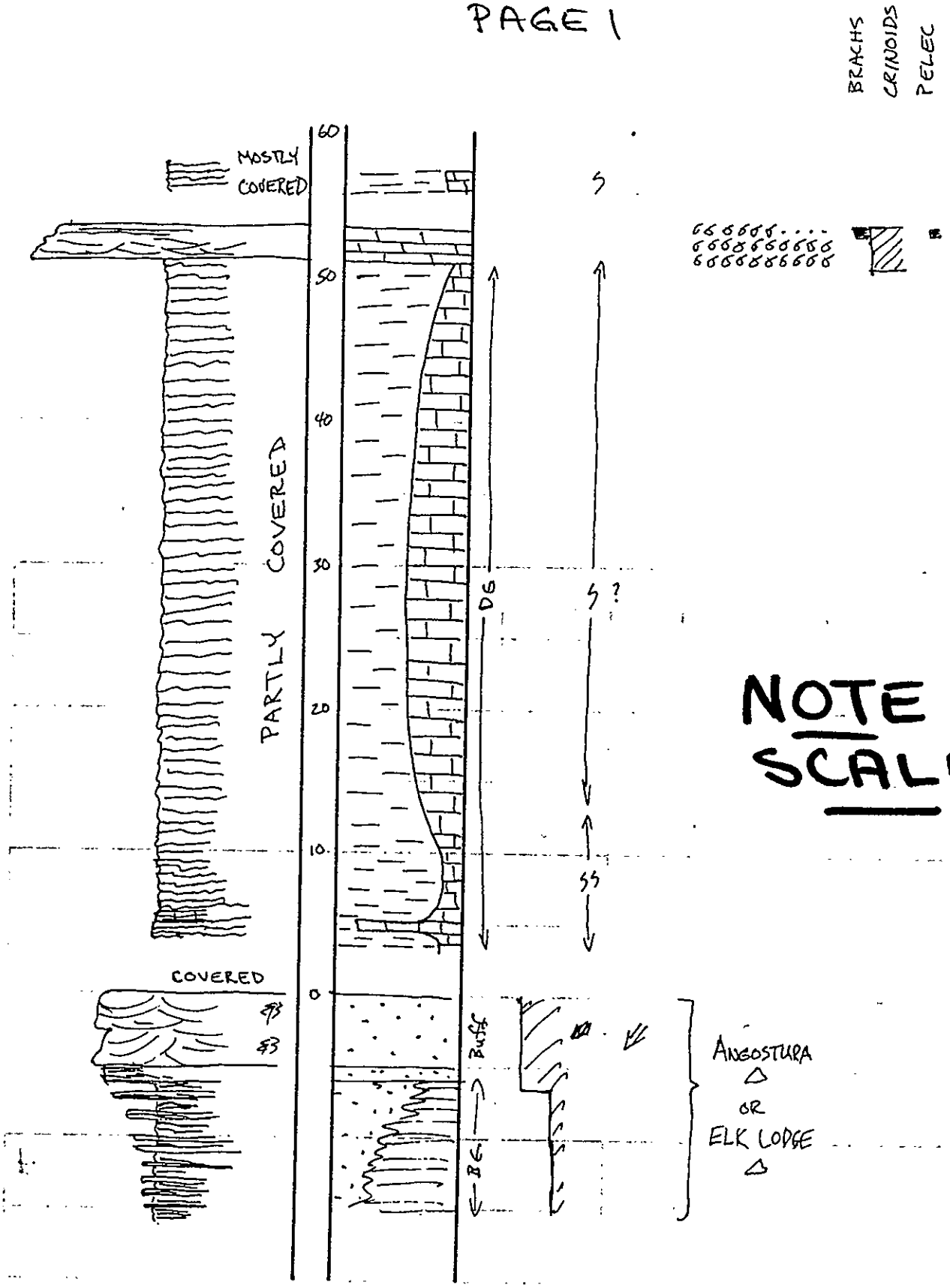


ASH

May 15, 1978

M.S. No. 77

PAGE 1



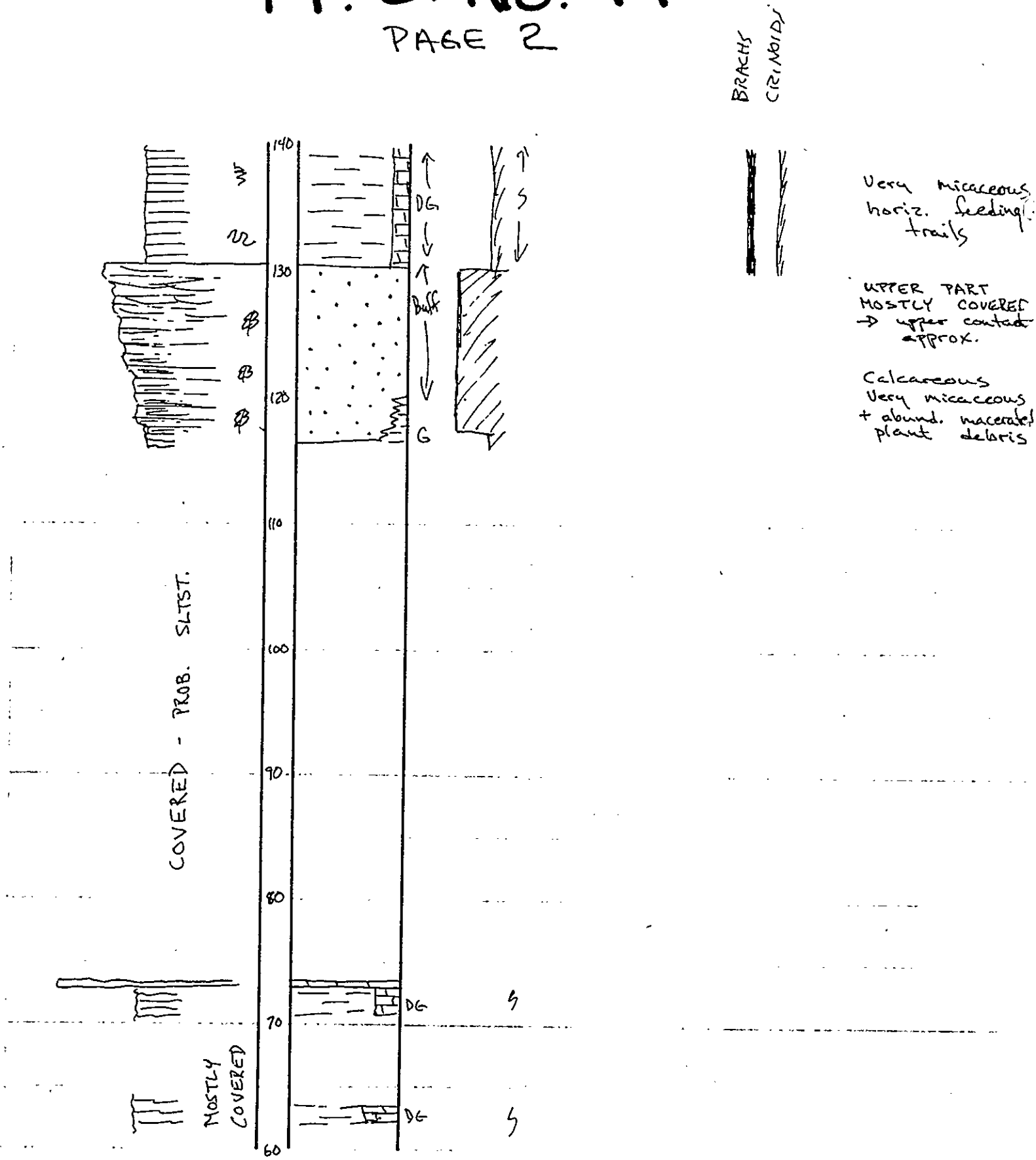
NOTE SCALE

This is From section measured at Elk Lodge

ASH
Across from Angostura Summer
Gully up Angostura Ridge Homes

May 15, 1978
Sandia / lower Madera
Casey

M. S. No. 77
PAGE 2

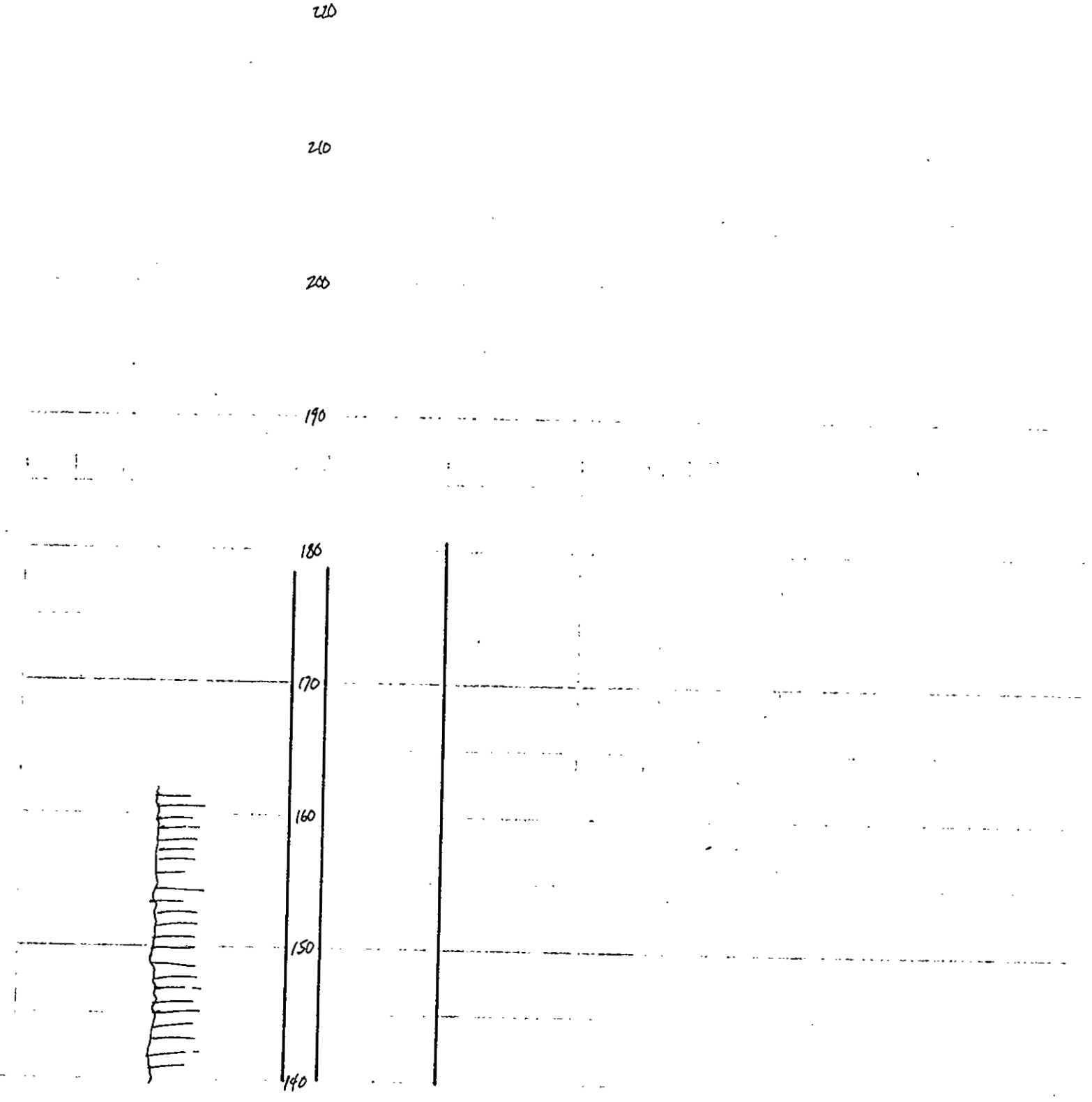


ASH

May 15, 1978
Casey

M. S. No. 77

PAGE 3



MEASURED
LOCALITY
SETTING

STRATIGRAPHIC UNIT
MEASURED BY

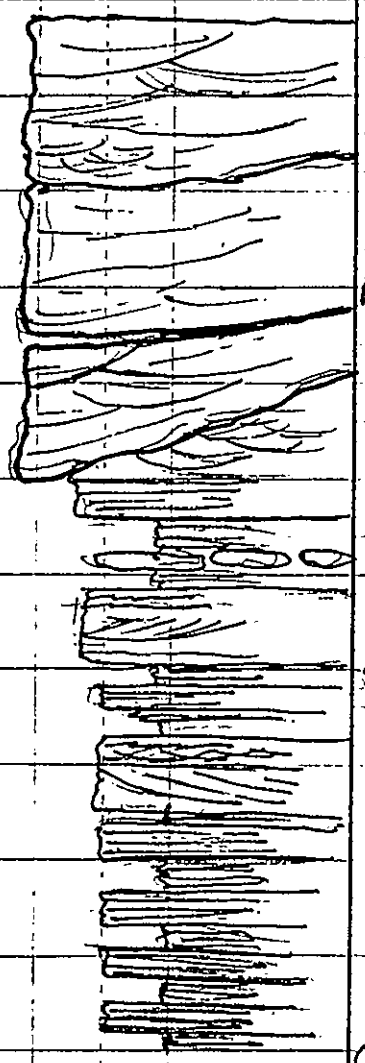
SEDIMENTARY
TEXT & STRUCT
CARBONATES
GRN PK WKE MUD
CLASTICS

GRAV SAND

64 4 VC C M F VF

M.S. No. 78A

(Measured by A. J. Scott)



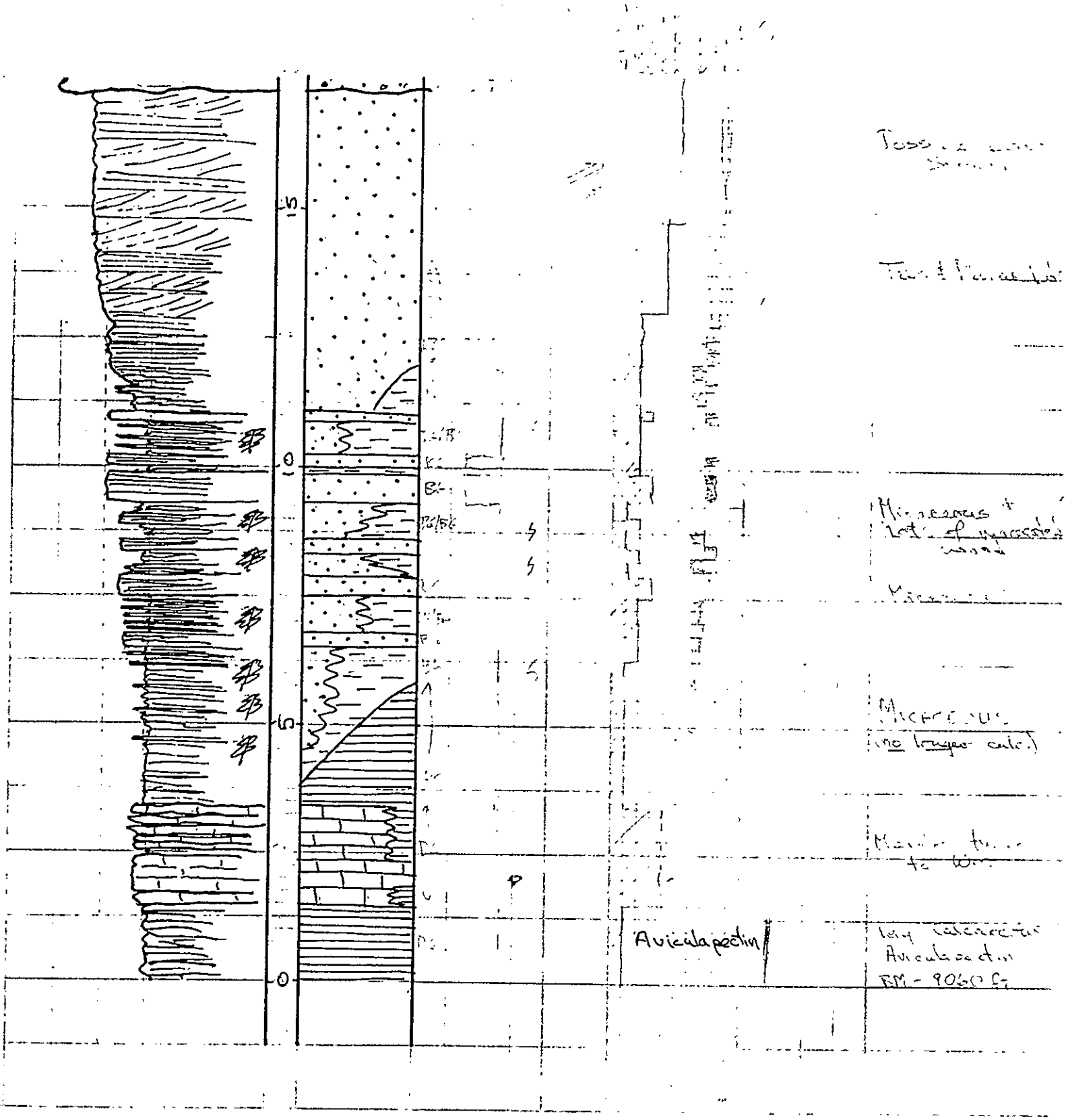
15

10

5

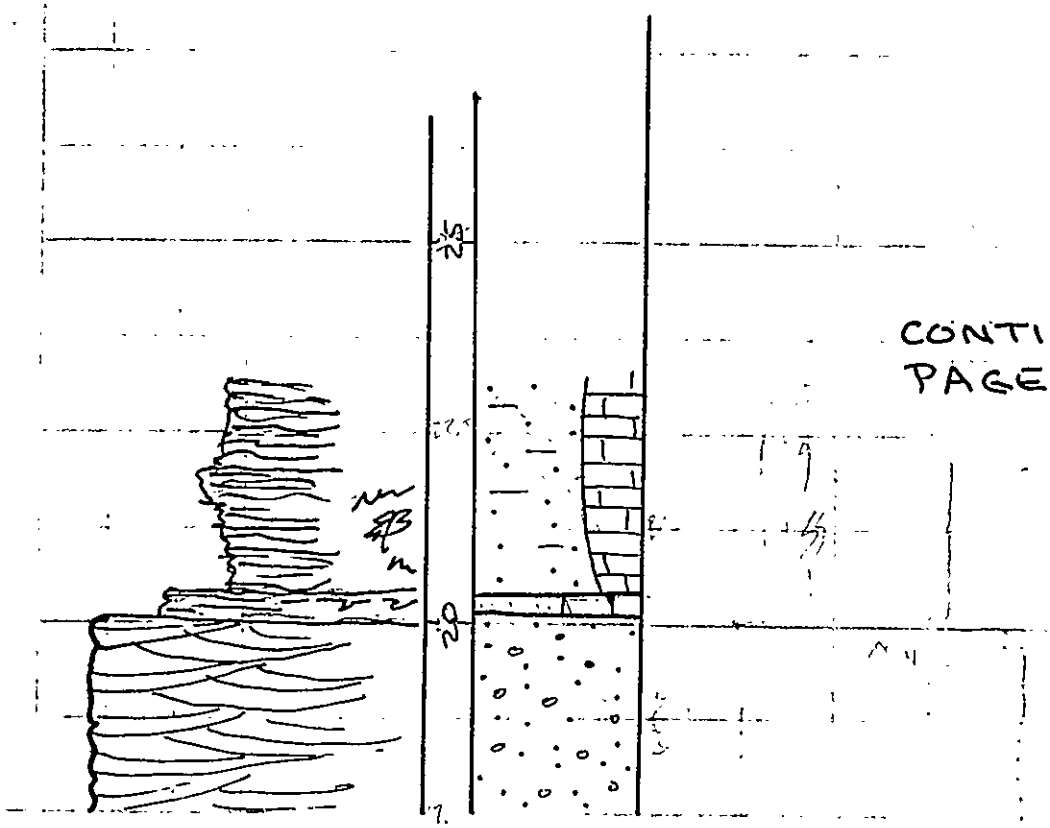
0

M. S. No. 78 "B"



ELE

M. S. No. 78 "B"



CONTINUED ON NEXT PAGE AT DIFFERENT SCALE

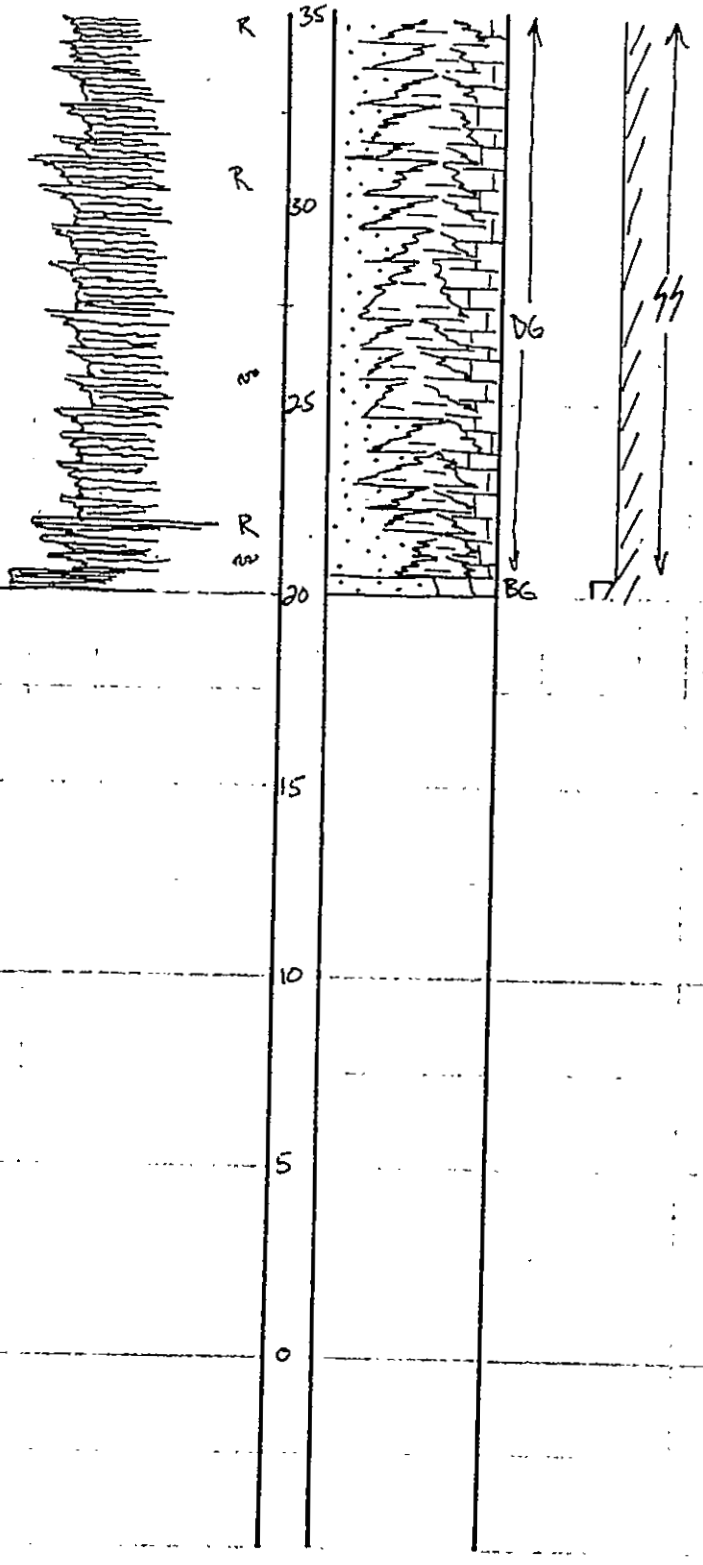
E of Elk Lodge Hillside

ELE upper part

July 25, 1978

JMC

M.S. 78 B



scattered granule ft.
TOP △ SS

NOTE CHANGE IN SCALE

ELE

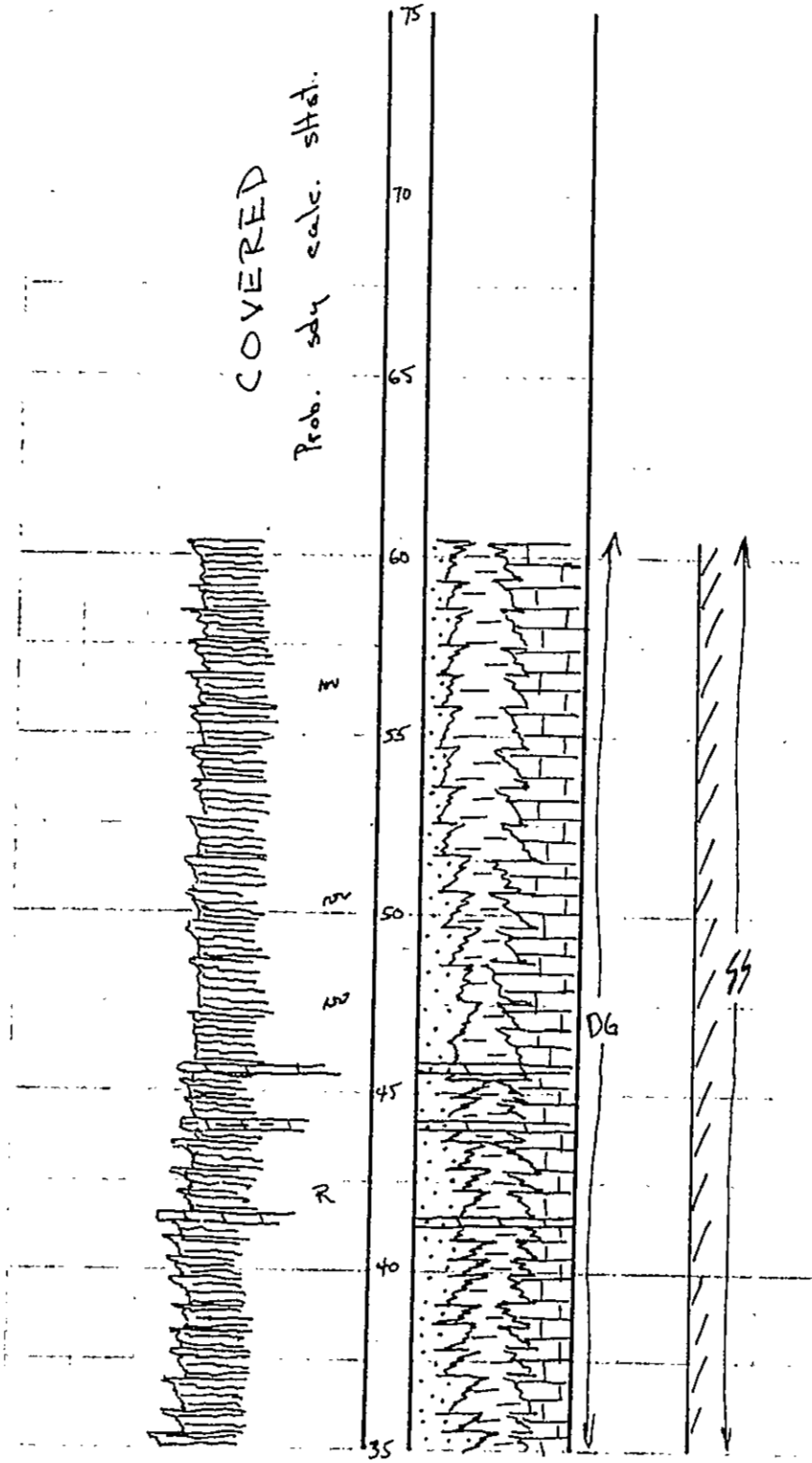
285

ELE

July 25, 1978

JMC

M.S. No. 78E



BRACHS
CRINOIDS

SLOPE COVERED w/ ls & SOME SS TALUS

Sand content is dropping out

BECOMING MORE CALC

A few unident. fossils

ABUND. TRACE FOSSILS

ELE

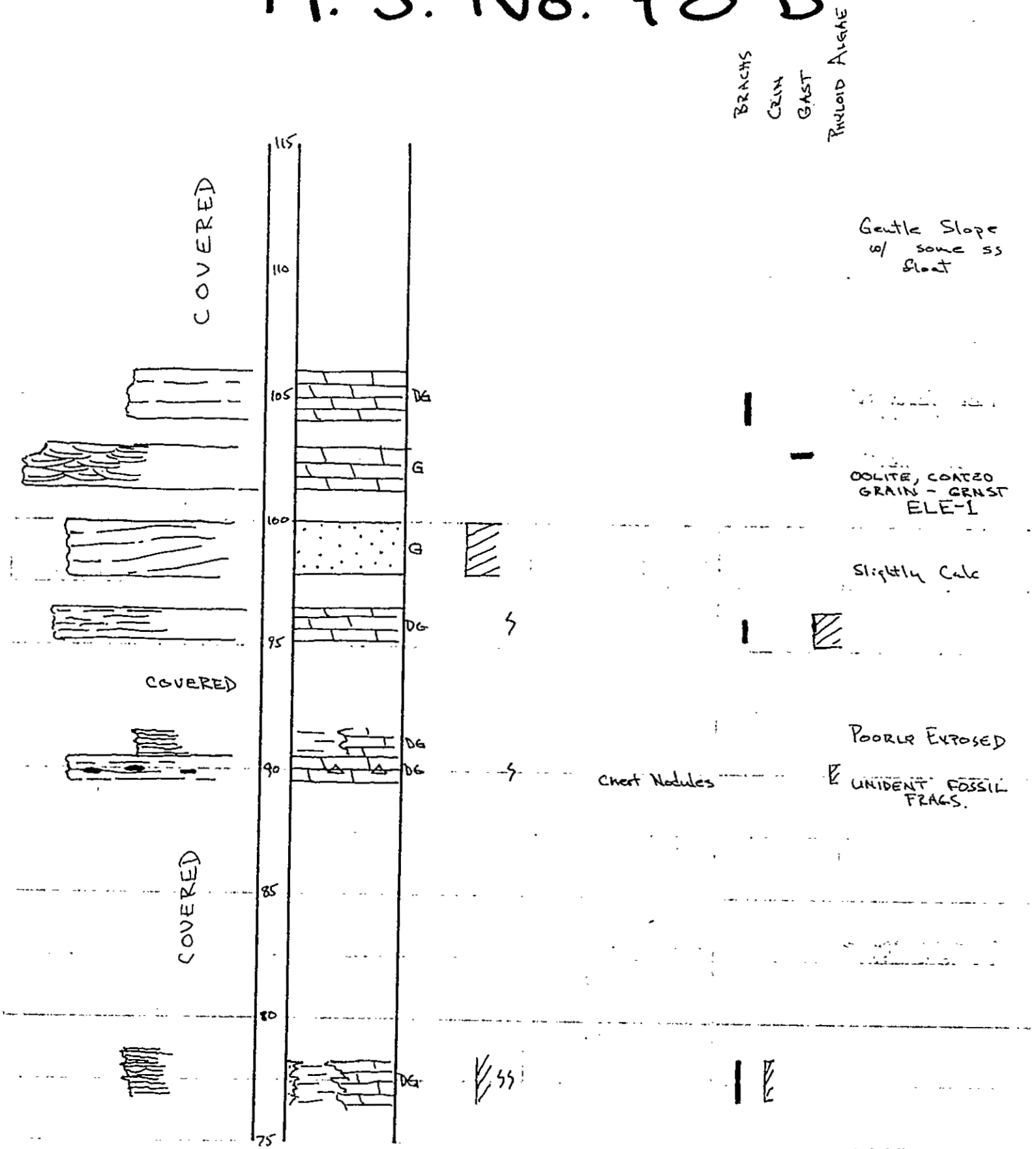
286

ELE

July 25

JMC

M.S. No. 78B



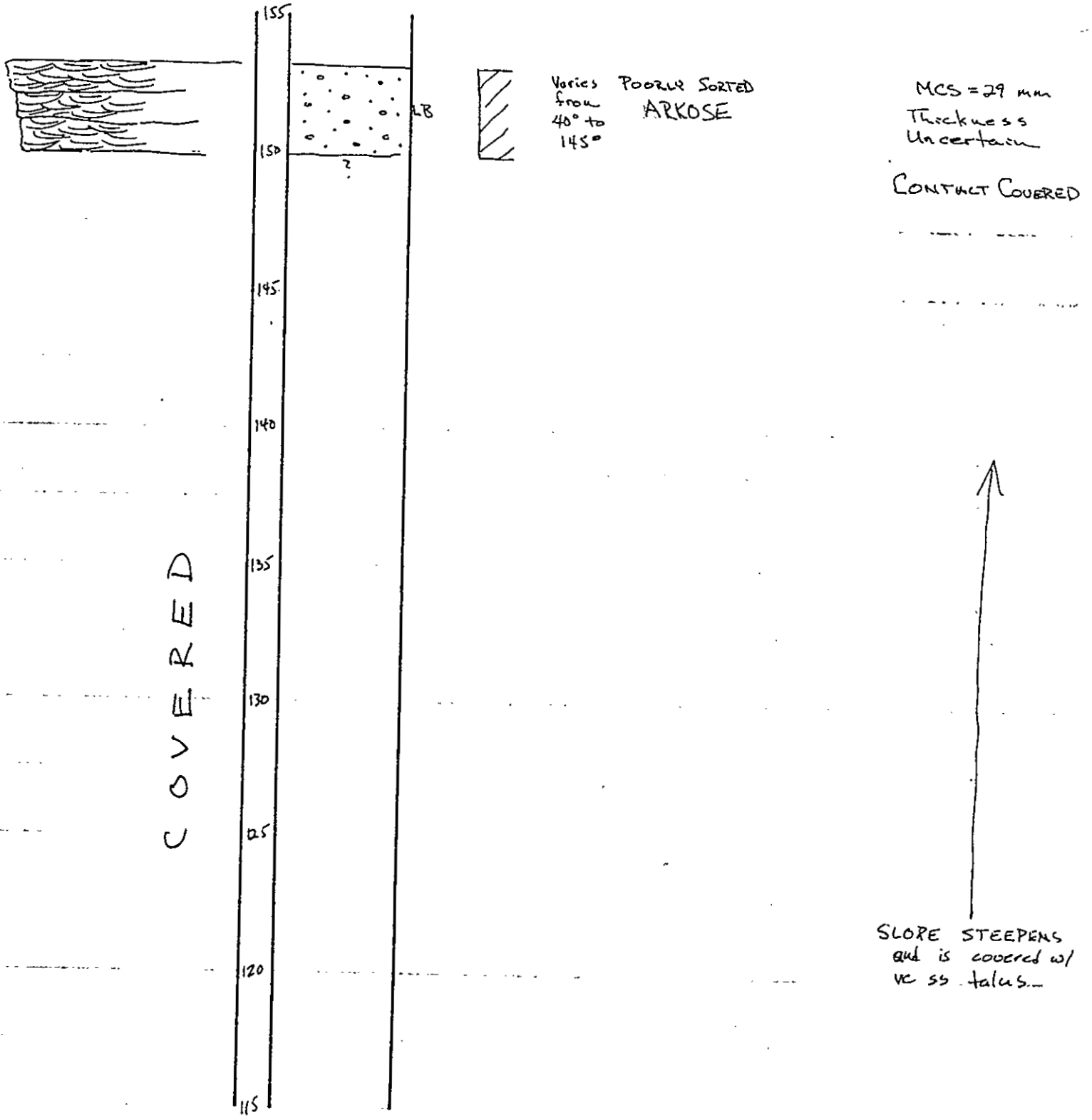
ELE

ELE

July 25

JMC

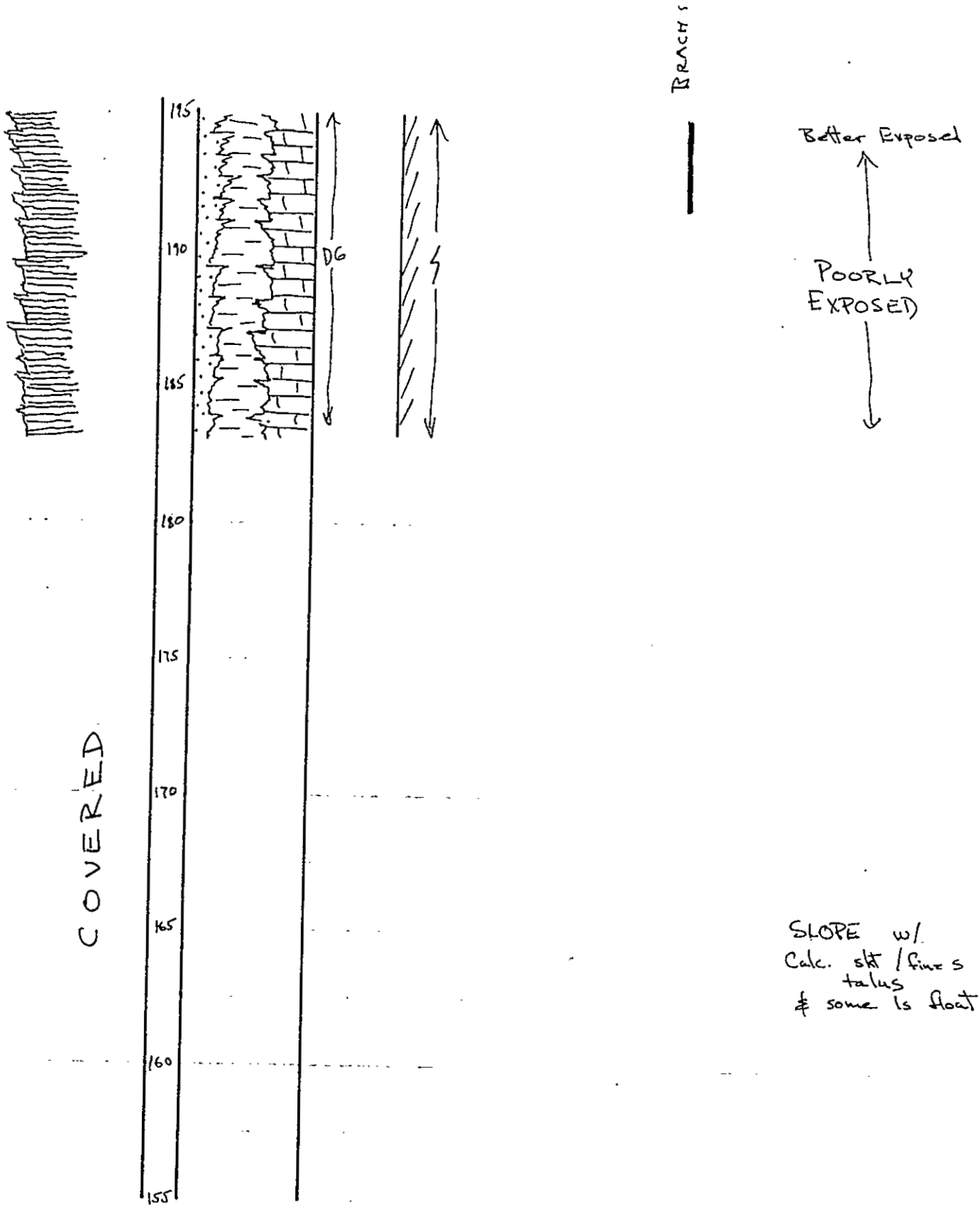
M.S. No. 78B



ELE

July 25
JMC

M.S. No. 78 B



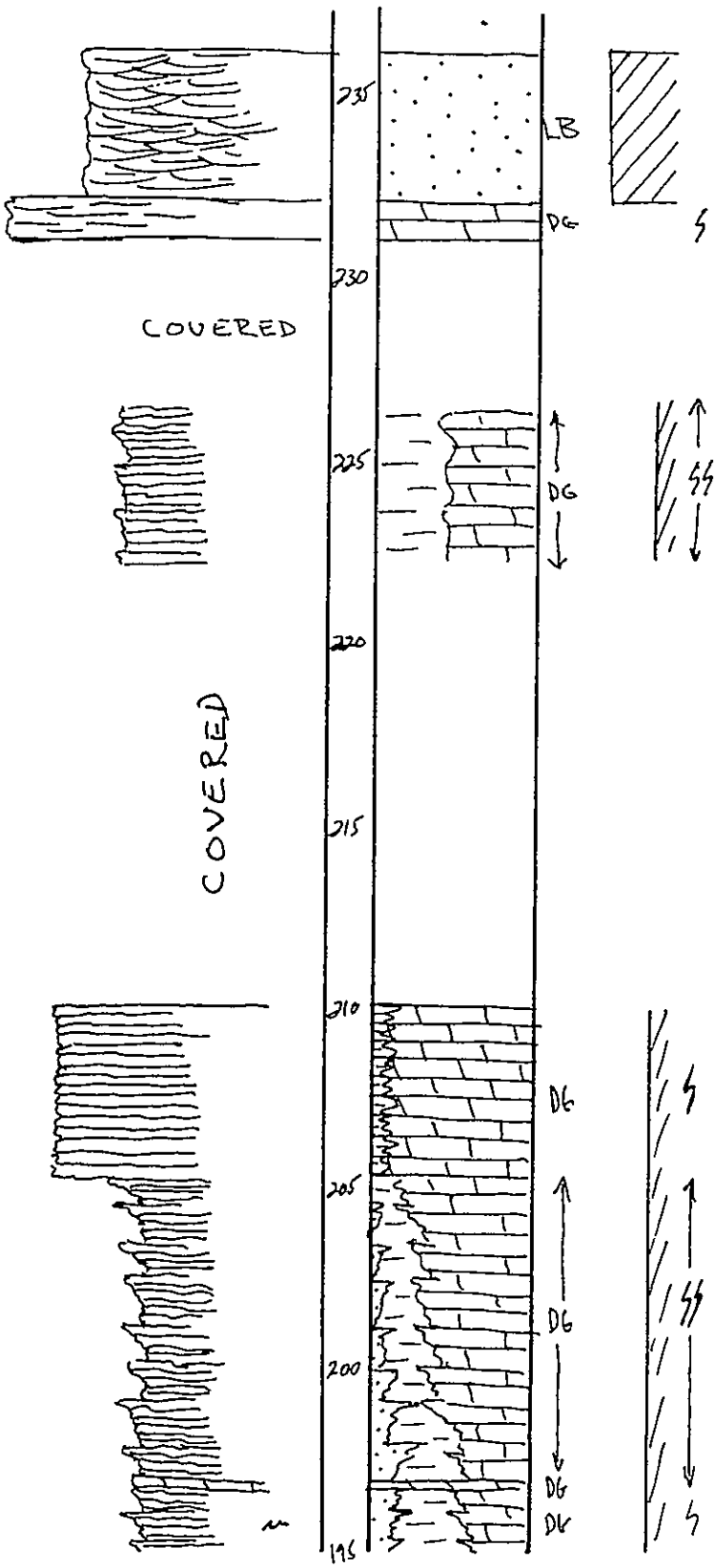
ELE

ELE

July 25

JMC

M.S. No. 78B



BRACHS
CRIN
RHYCOID ALGAE

TOP OF HILL

CALC

a few fns.
ELE-2

Calc., very mica. fine ss w/ abund. trace fossils

GRASSY SLOPE

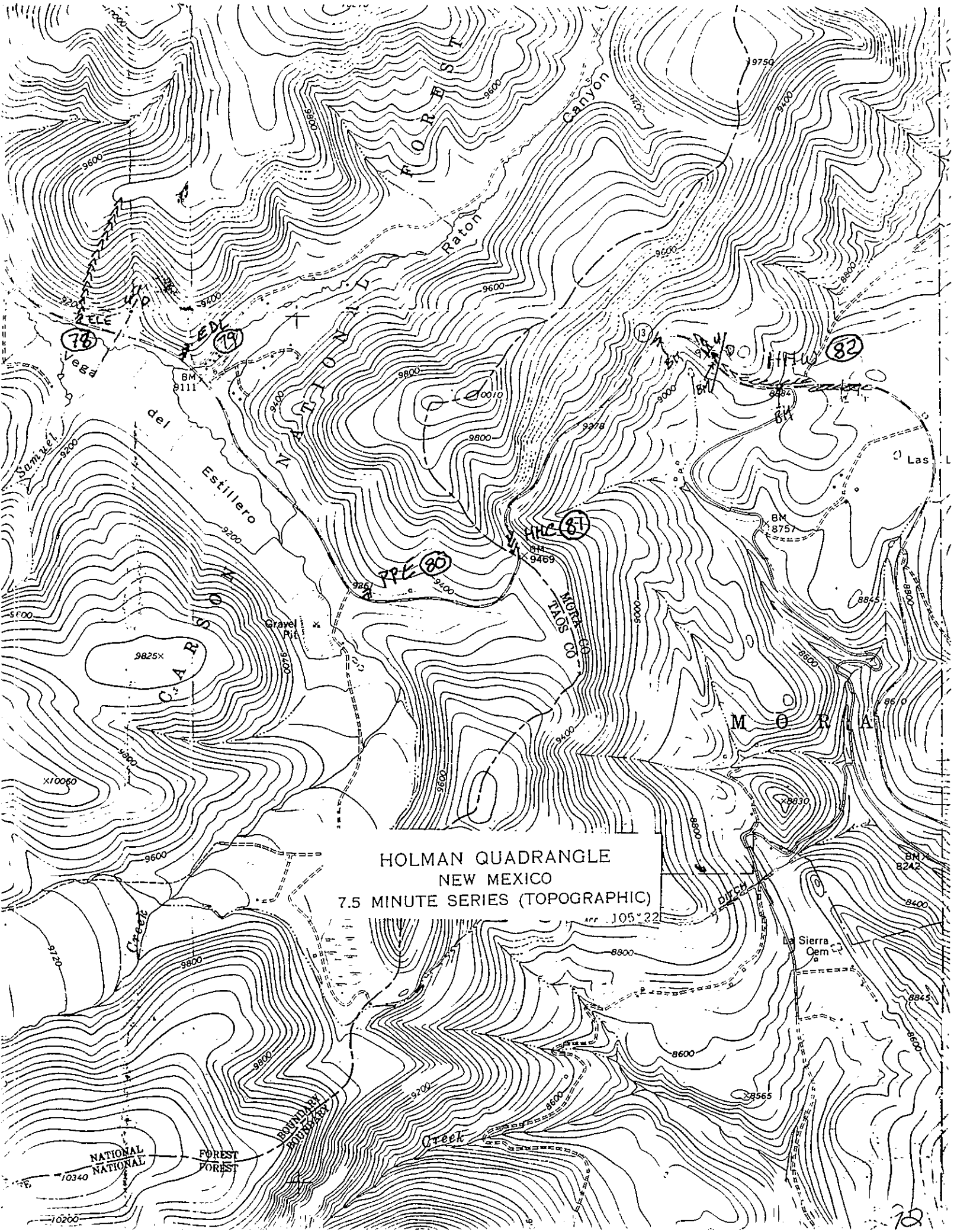
Abund trace fossils

ELE

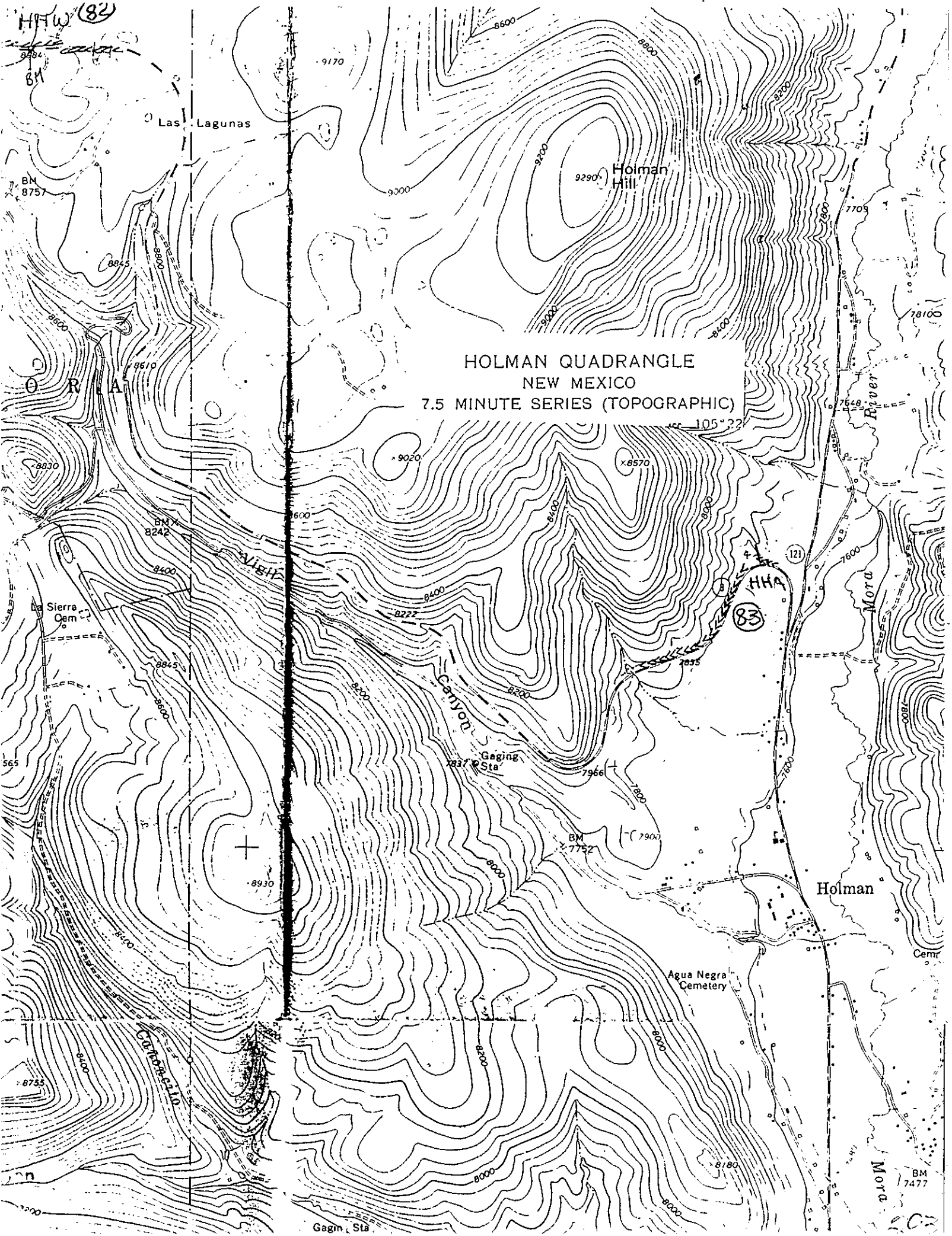
290

HOLMAN HILL SECTIONS

MEASURED SECTIONS
79 THROUGH 83


HOLMAN QUADRANGLE
NEW MEXICO
7.5 MINUTE SERIES (TOPOGRAPHIC)
NATIONAL FOREST
Raton Canyon
Vega del Estillero
Samuel
Creek
Gravel Pit
MORA CO
TAOS CO
MORA
La Sierra Cem
DITCH
BOUNDARY
NATIONAL FOREST
BM 9111
BM 9469
BM 8757
BM 8242
9825
9750
9720
10060
10340
10200
8830
8565
8845
78
79
80
81
82

HHW (82)

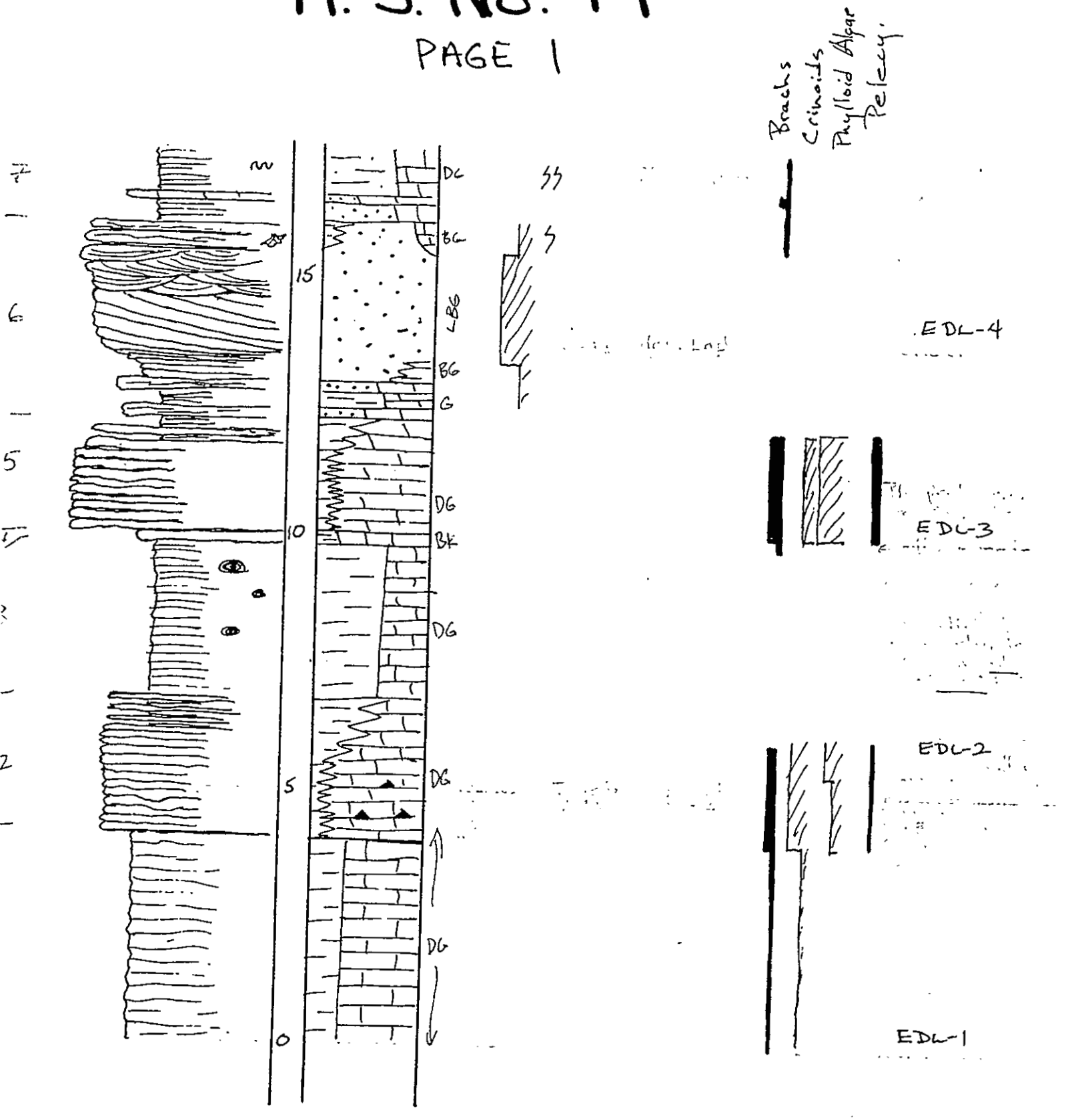

HOLMAN QUADRANGLE
NEW MEXICO
7.5 MINUTE SERIES (TOPOGRAPHIC)
Las Lagunas
Holman Hill
9290
9170
9020
8570
8930
8845
8830
8755
8610
8242
8222
8180
7966
7752
7709
7648
7477
BM 8757
BM 8242
BM 7752
BM 7477
La Sierra Cem
Gaging Sta
Gagin Sta
Holman
Agua Negra Cemetery
Mora River
Mora
Canyon
Carretto
HHA
83
121
105°22'
8600
8800
9000
9200
8400
8200
8000
7800
7600
7900

EDL
~~East~~ of Demar Lodge, Hwy. 3

Aug 22, 1978
JMC

M.S. No. 79

PAGE 1



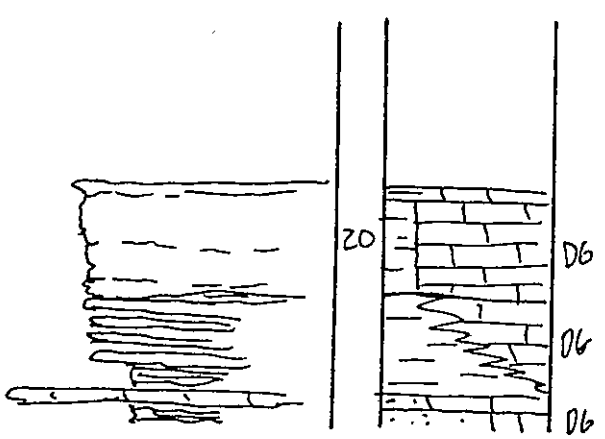
EDL

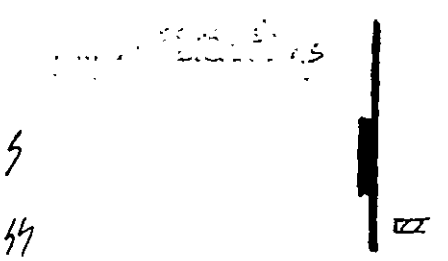
Aug 22, 1978

M. S. No. 79

PAGE 2

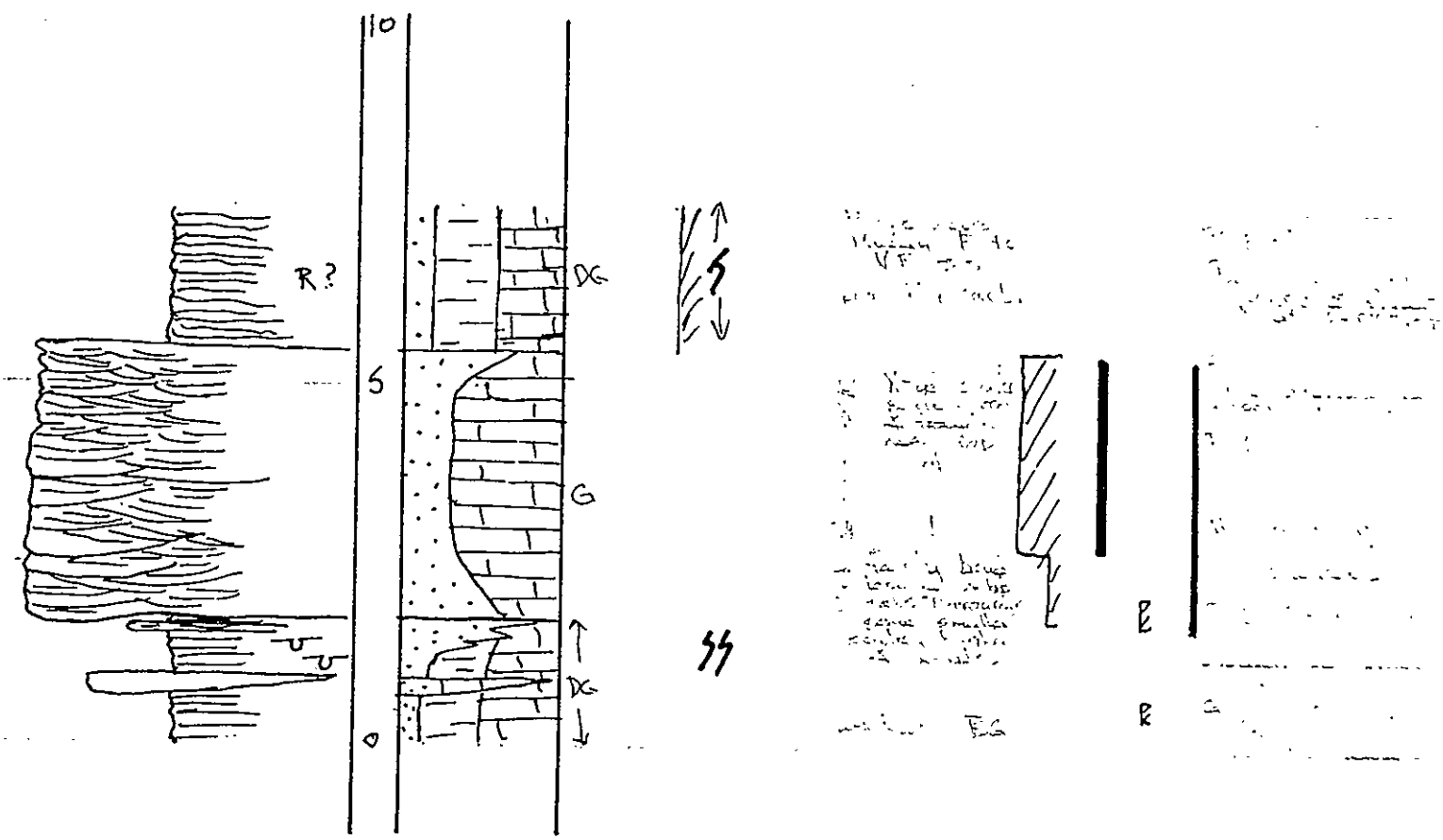
Brachs
Crinoids





M.S. No. 80

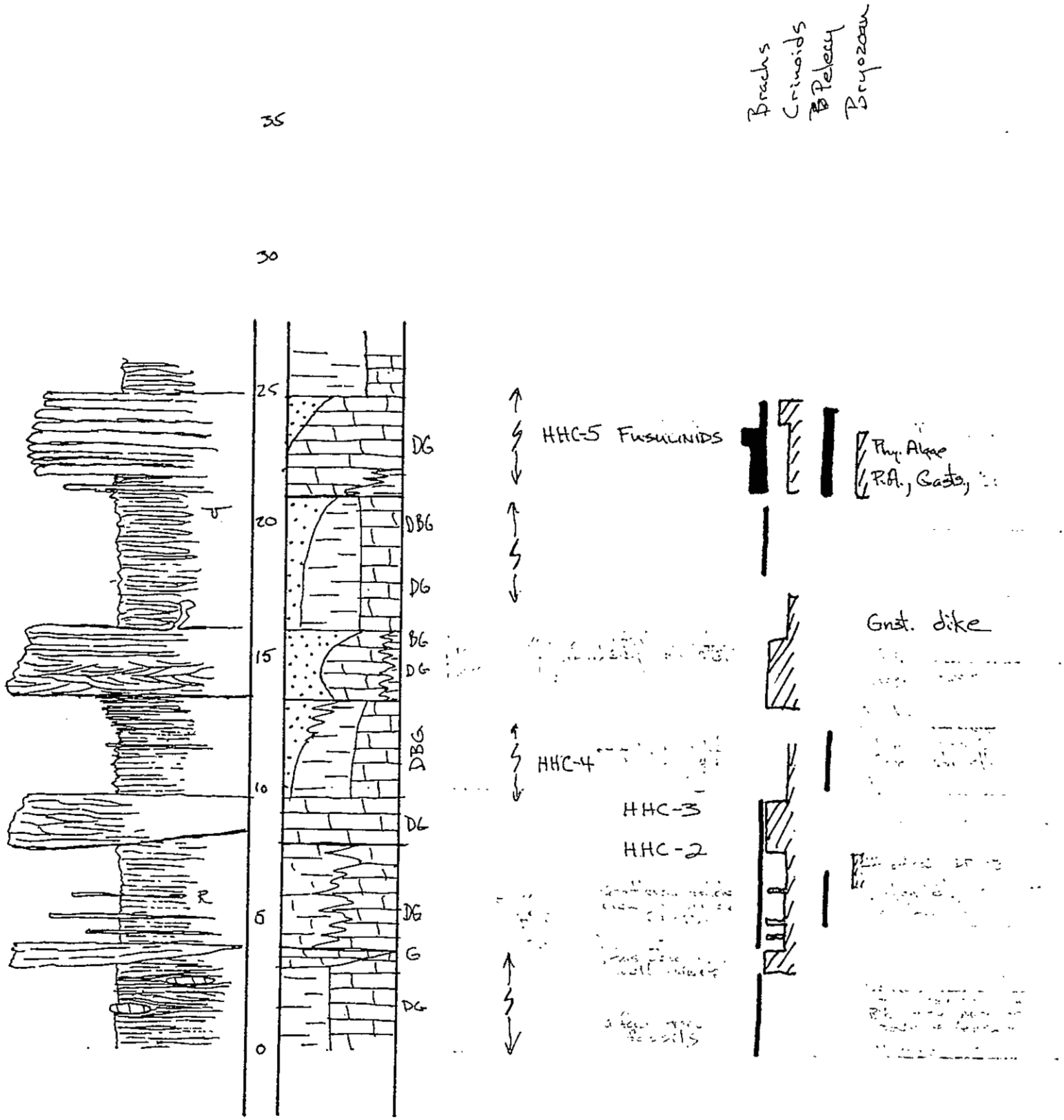
Crinoids
Brachs
Bryoz.
Fusulinids



HHC
Crest of Holman Hill
Roadcut

Aug 16, 1978
JMC

M. S. No. 81

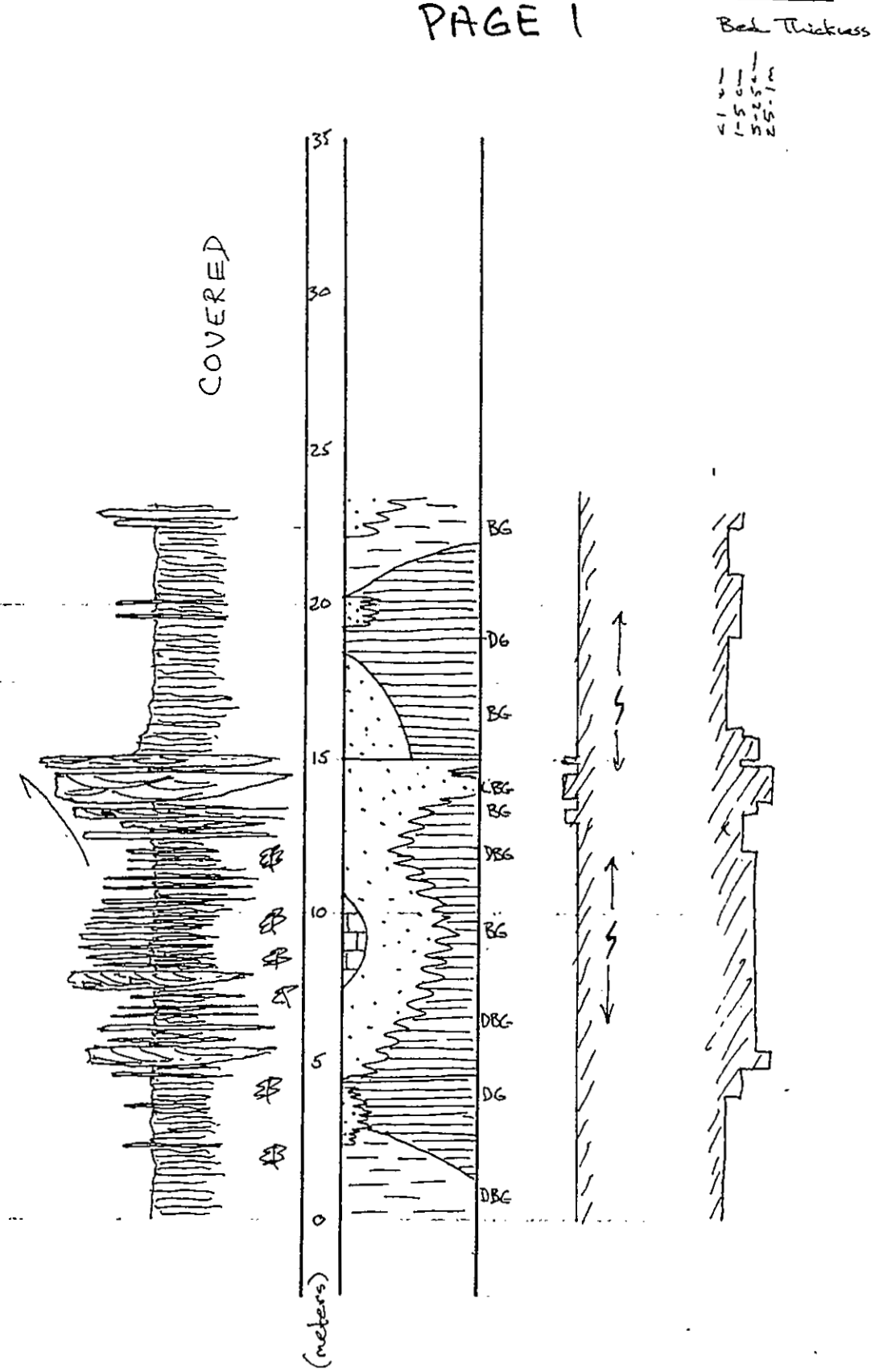


HHW
W of Holman Hill
Roadcut

June 1978
JMC

M.S. No. 82

PAGE 1



MCS = 23 mm. (qtz)
Micaceous
Rip-up clasts
Abund load casts

SECTION CUT BY
SEVERAL MINOR
FAULTS

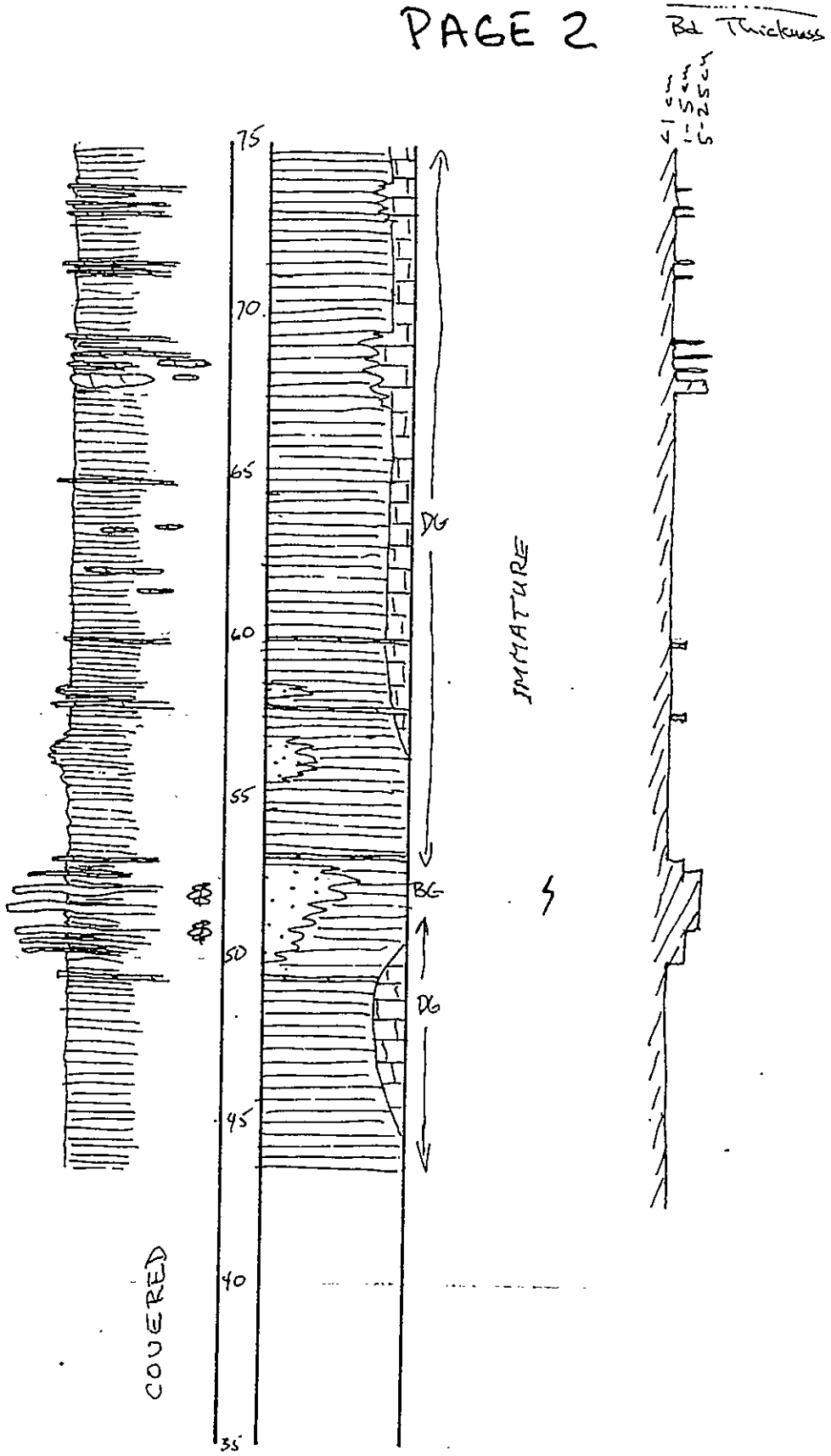
HHW

June 1978

JMC

M.S. No. 82

PAGE 2



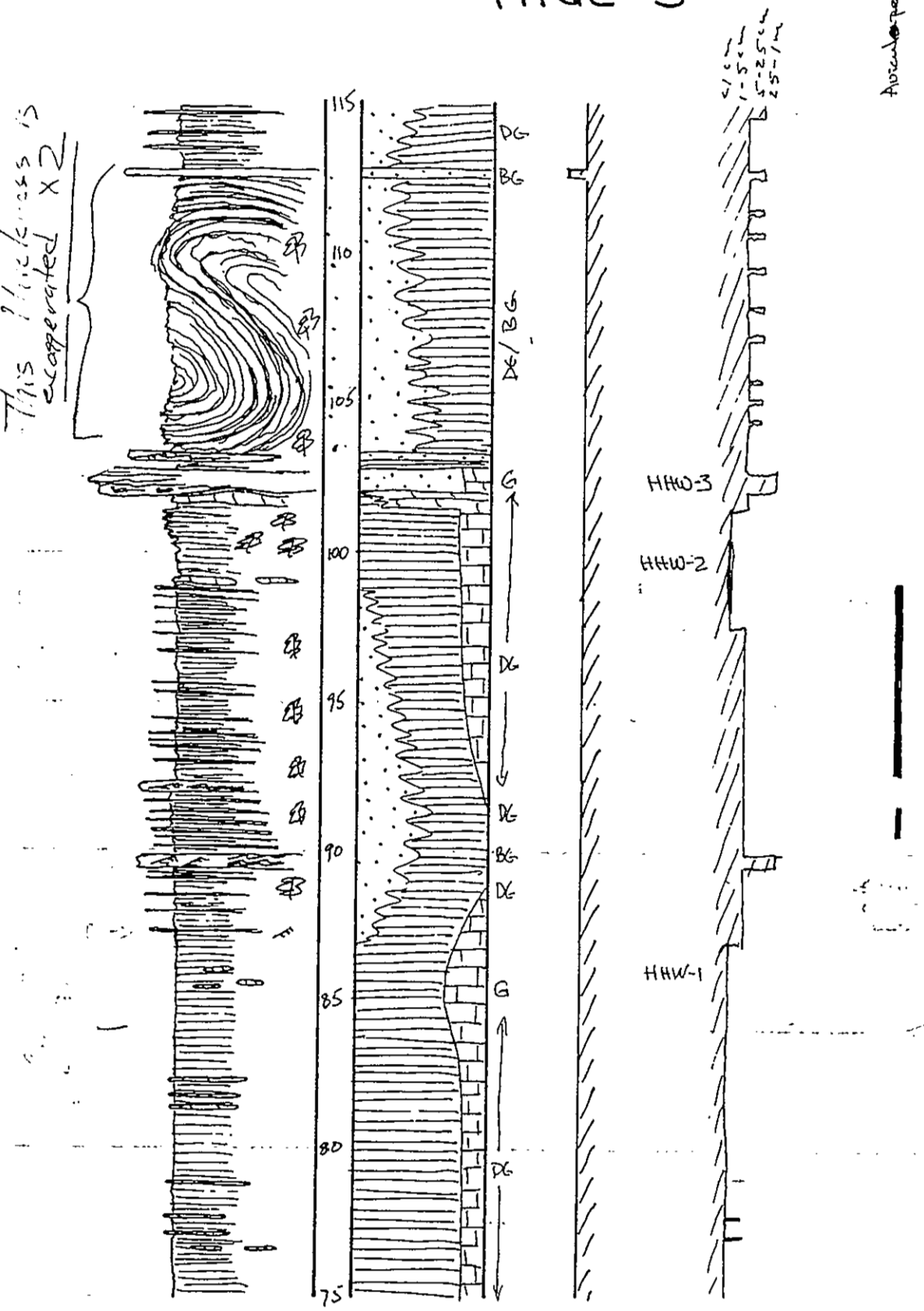
40°; 6° W
Micrite beds
4-12 cm thick
weather brown

CALCAREOUS

← BM 8995 ft

June 1978
JMC

M.S. No. 82
PAGE 3



300

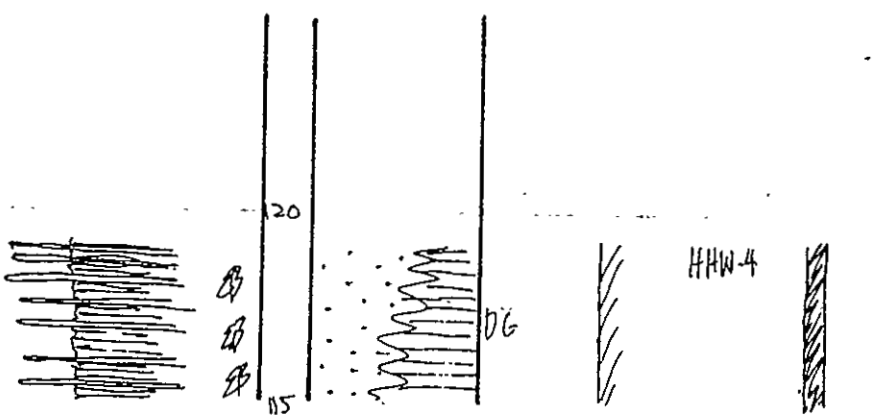
HHW

June 1978

JMC

M.S. No. 82

PAGE 4

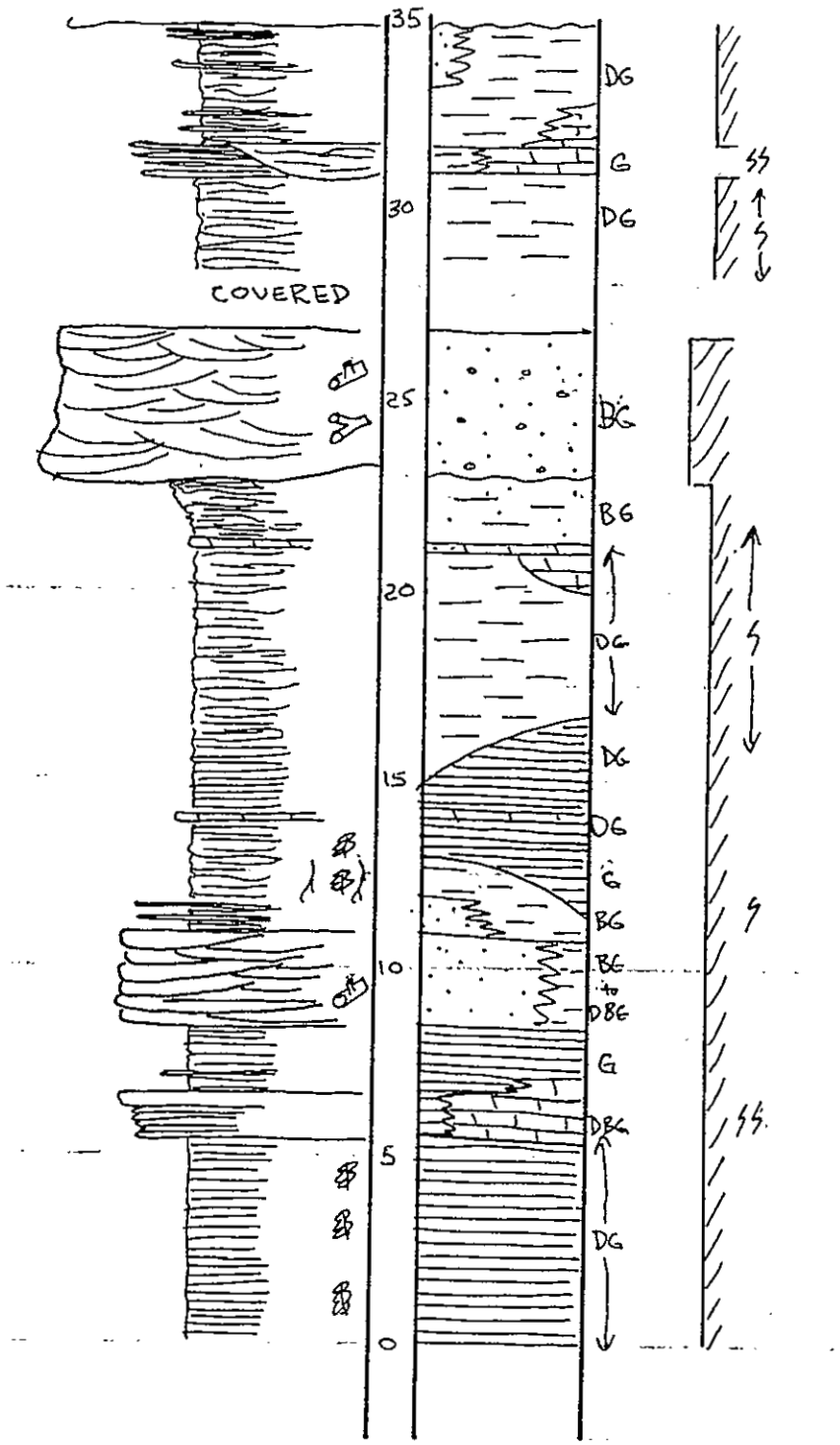


Holman Hill HHA
Roadside

June 14, 1978
Lower Sandia Fm
J.M.C.

M.S. No. 83

PAGE 1



BRACHS
CRINOIDS
PHRLLOID ALGAE
PELECYPODS

SECTION SHIFTS UP HILL TO NEXT ROADCUT

135; 4°W

HHA-4

HHA-3
MICACEOUS

HHA-2

HHA-1

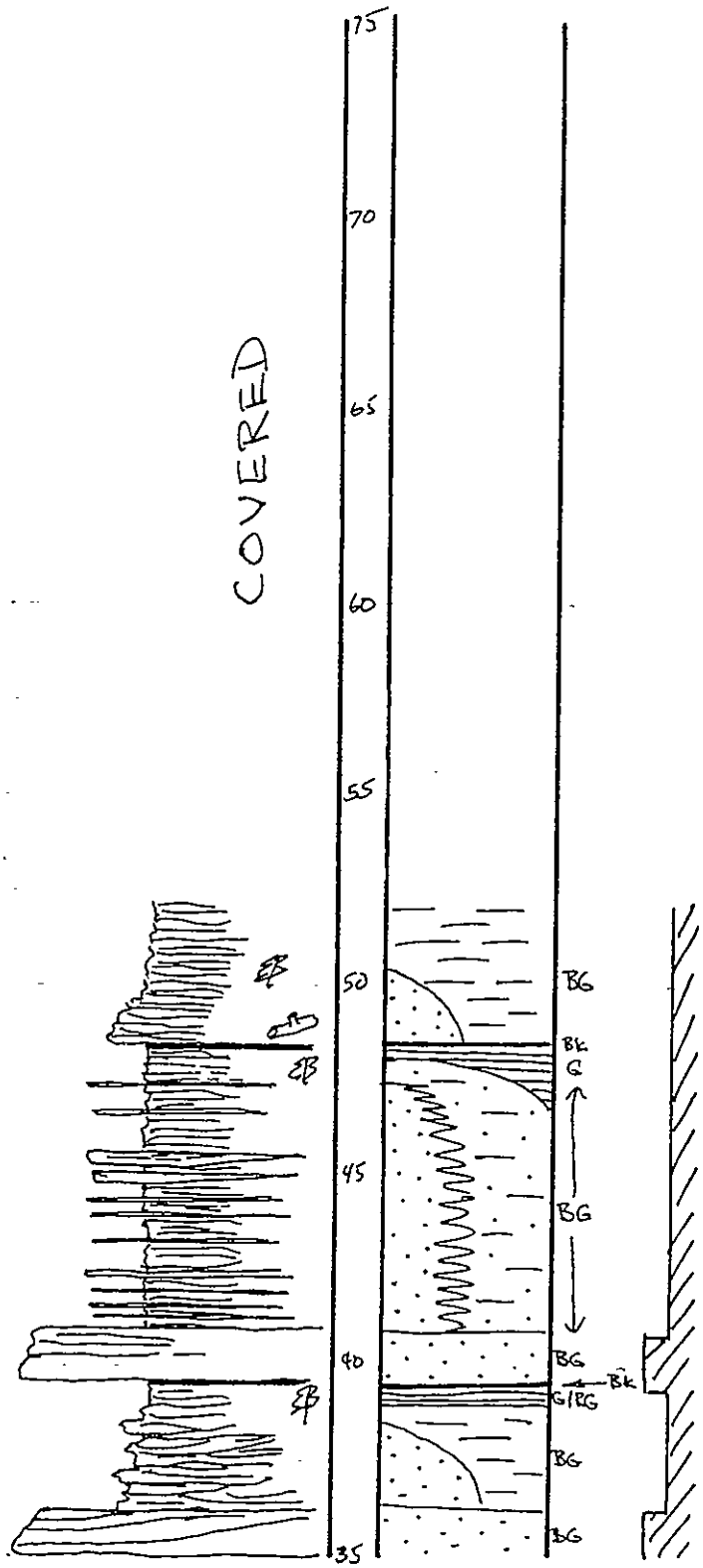
49; 5°W ??

HHA

June 14, 1978
lower Sandia
GMC

M.S. No. 83
PAGE 2

Breaks



SECTION SHIFTS TO NEXT ROADCUT

THICKNESS APPROXIMATE

Extremely Micaceous w/ large logs

← Lignite

VERY MICACEOUS

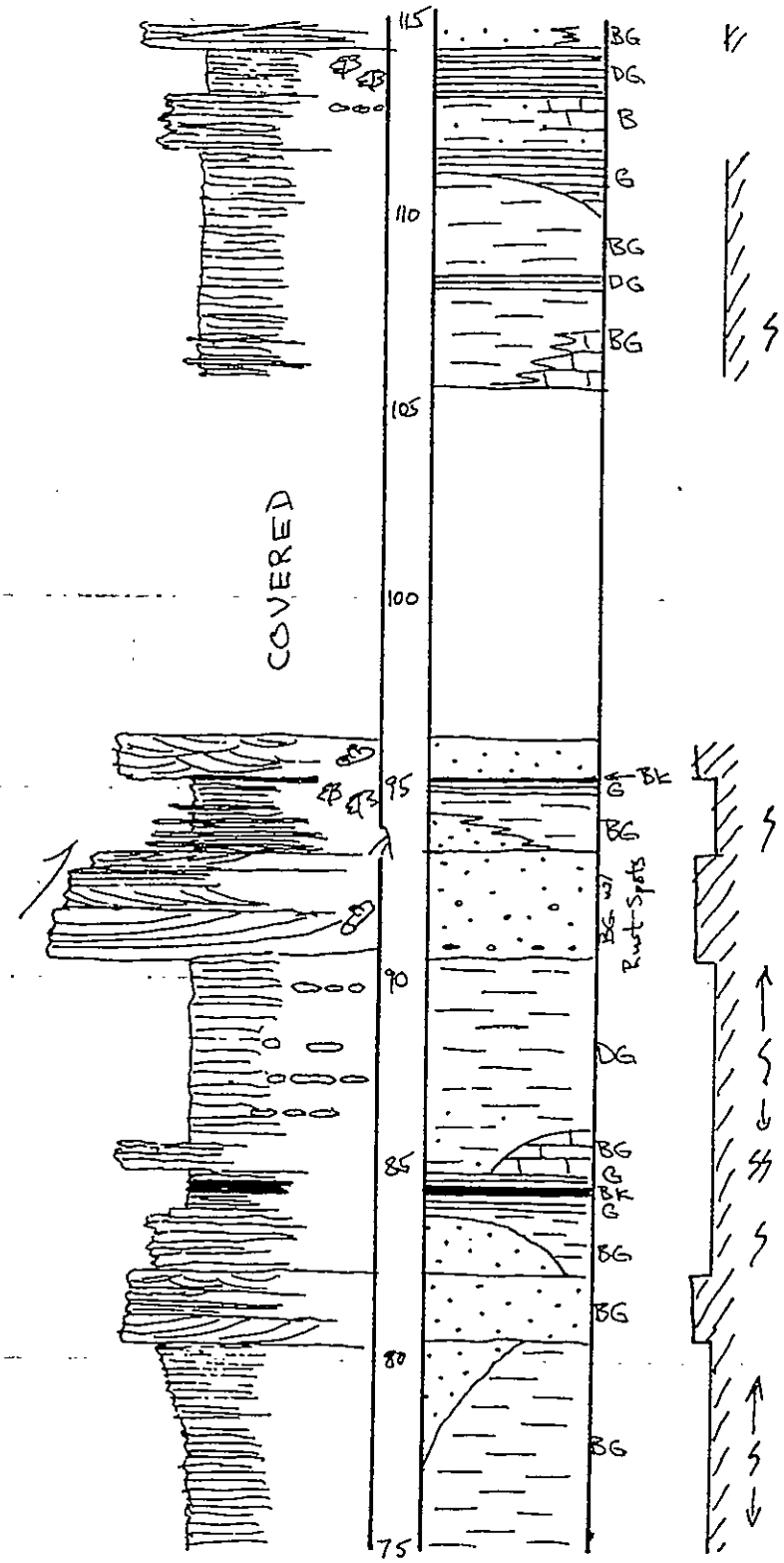
calc, in concretions

← lignite

HHA-5

June 14
JMC

M.S. No. 83
PAGE 3



Brachs
Crinoids
Phylloid Algae
Pelecypods

Septarian Iron Mudstone HHA-5

← Elev. 7833 ft.

SECTION SHIFTS TO FORTH ROADCUT

H.H.-13

Beler. Gast.

Mesolobus, prod, etc

MICACEOUS

3 of 4

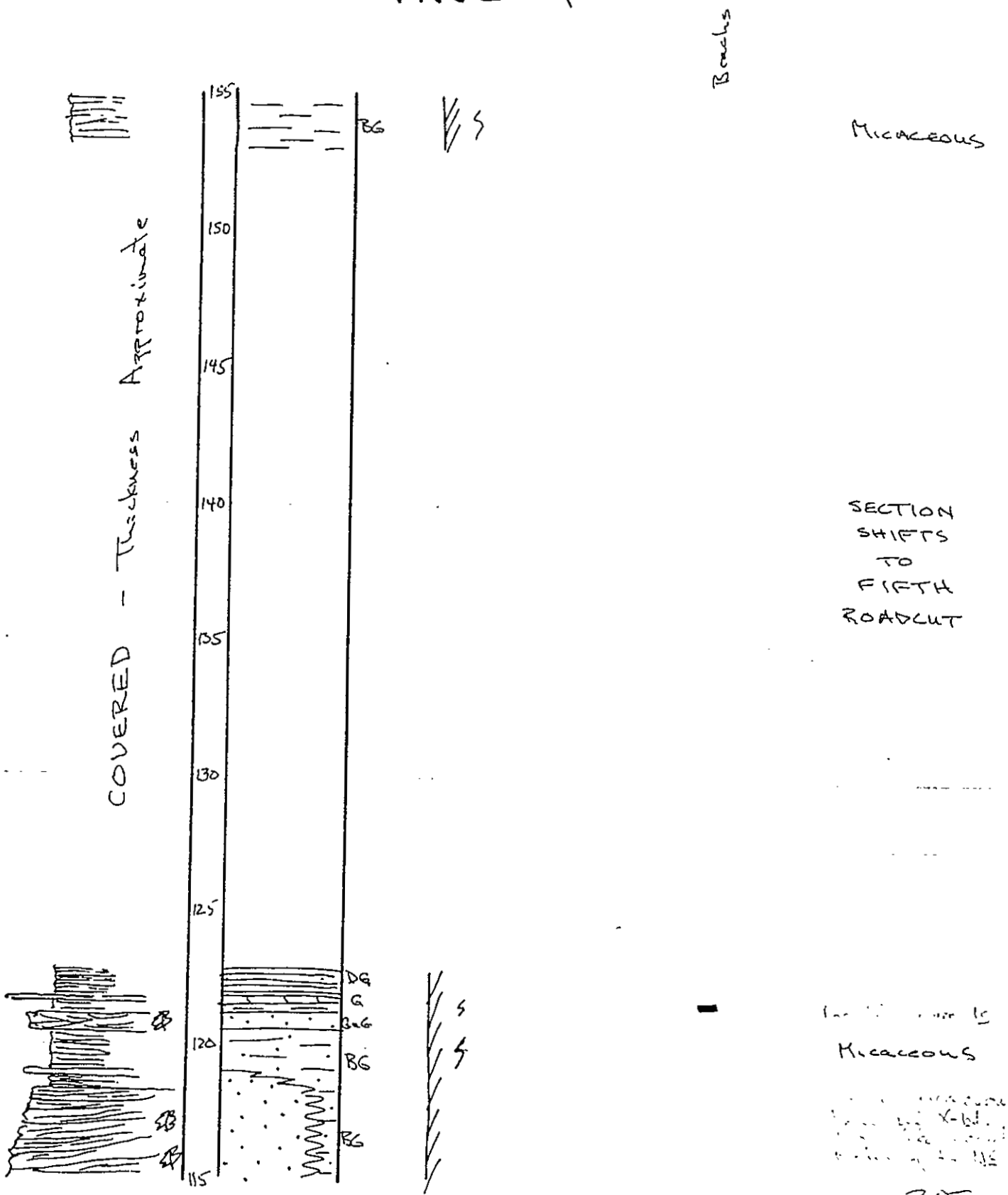
HHA

June 14, 1978

JMC

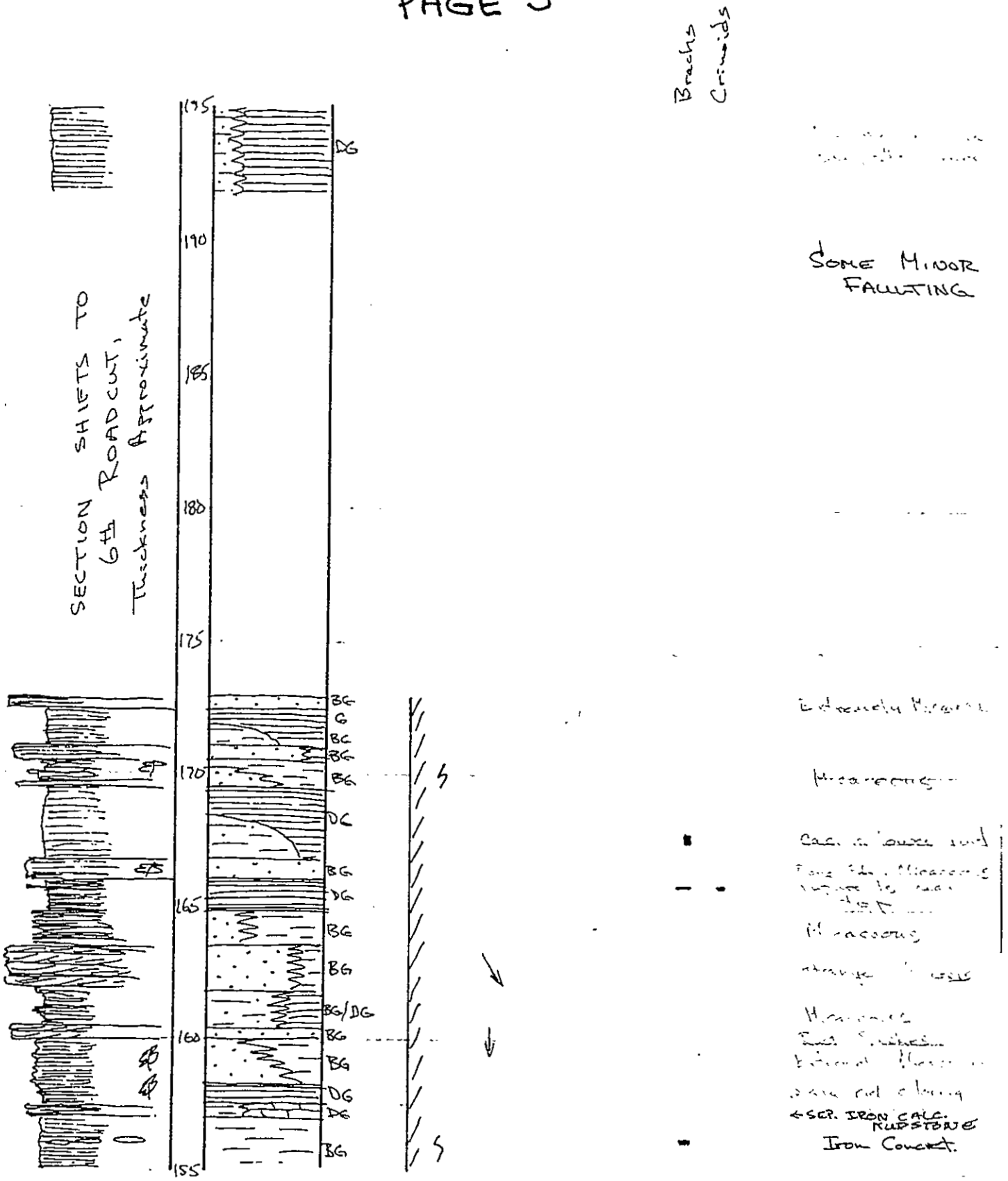
M.S. No. 83

PAGE 4



June 14
JMC

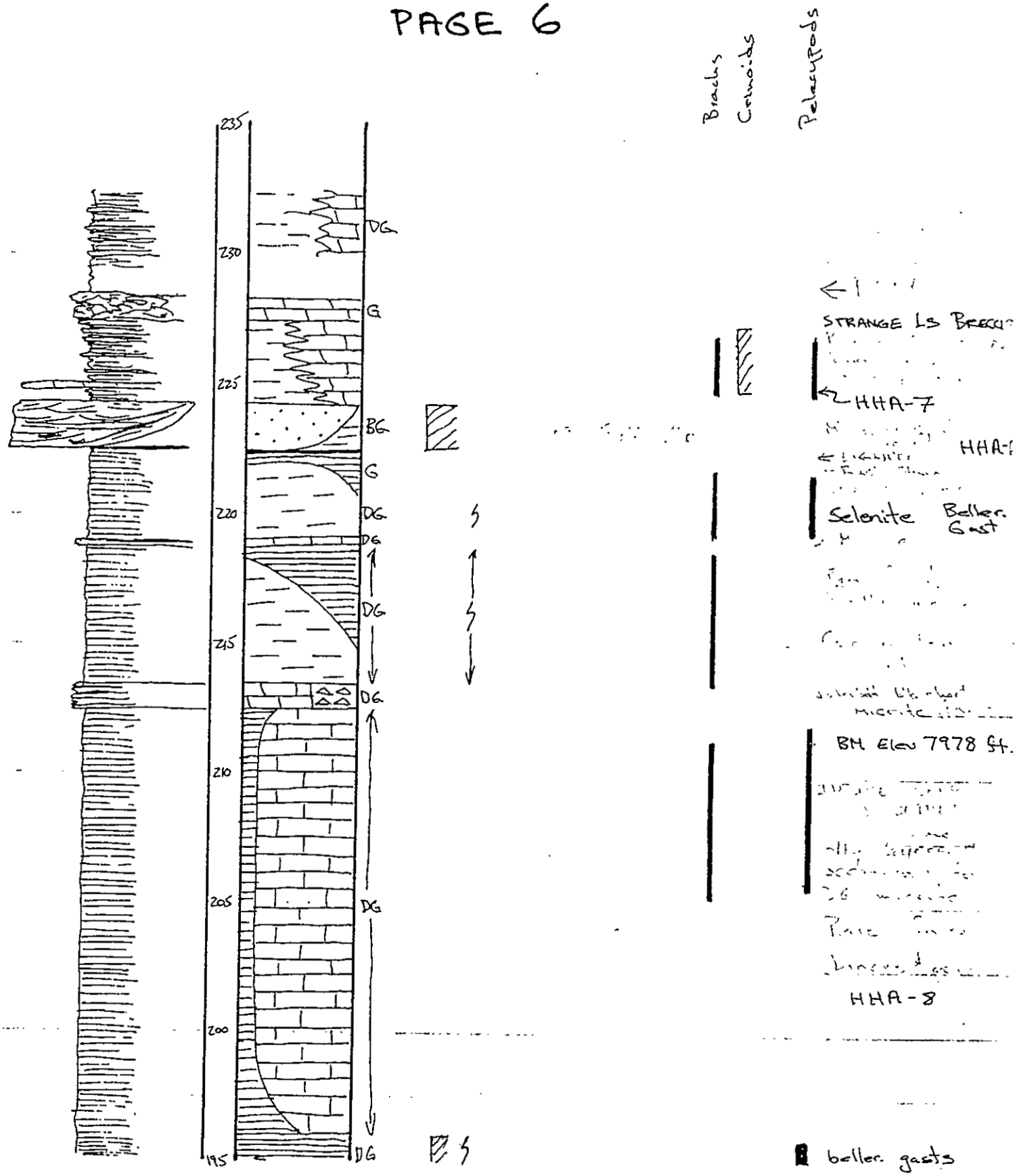
M. S. No. 83
PAGE 5



306

June 14
JMC

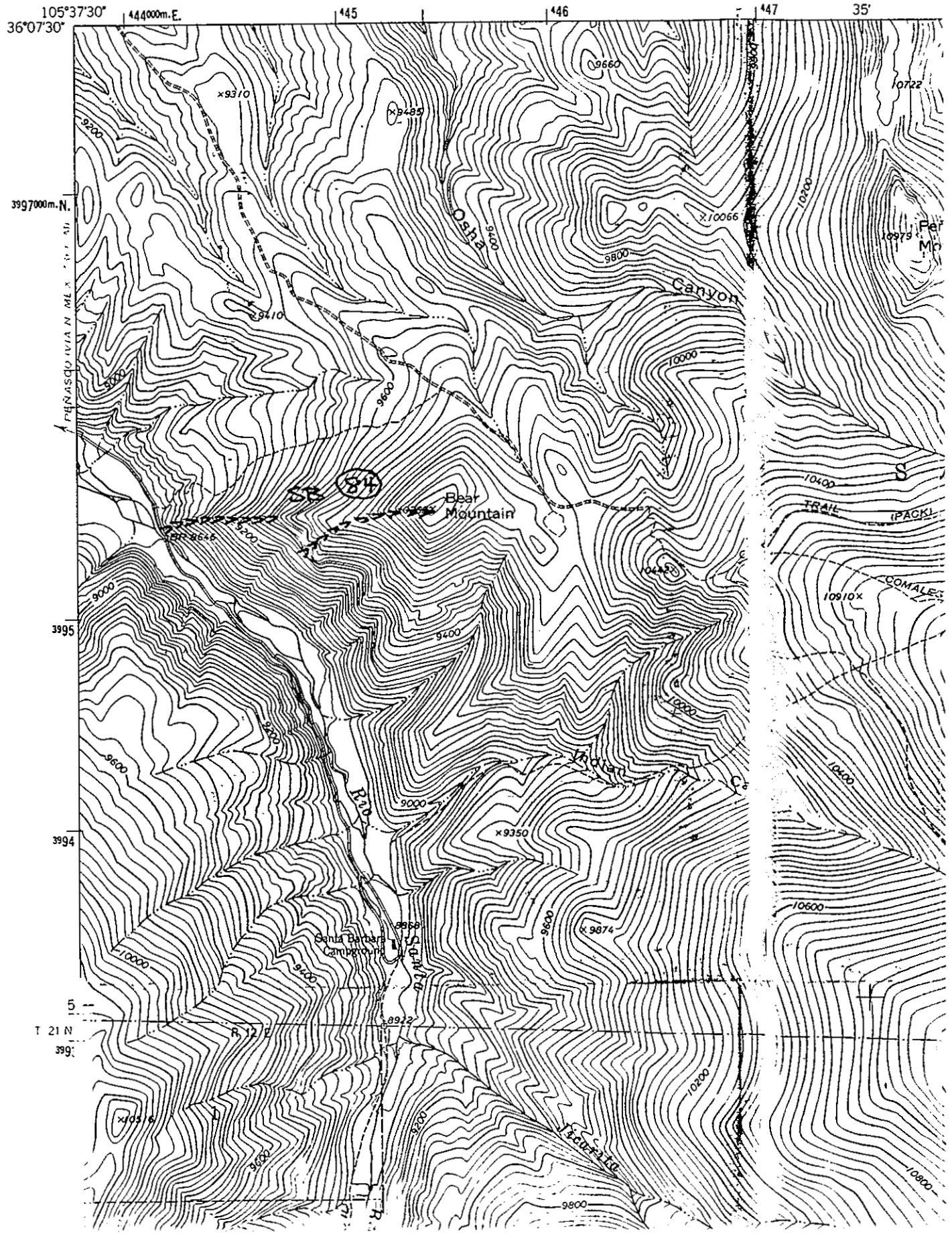
M.S. No. 83
PAGE 6



BEAR MOUNTAIN SECTION

MEASURED SECTION 84

JICARITA PEAK QUADRANGLE
NEW MEXICO
7.5 MINUTE SERIES (TOPOGRAPHIC)



304

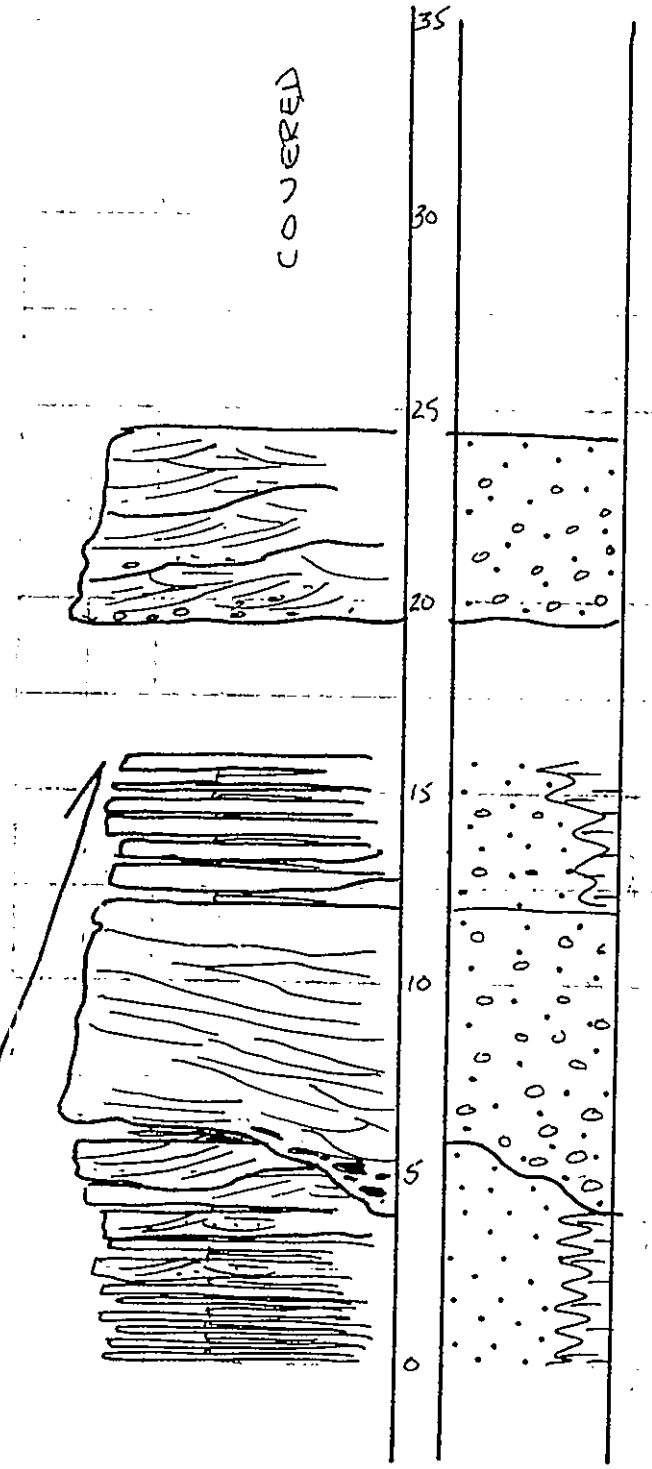
SB

Aug. 9, 1978

JMC

M.S. No. 84

PAGE 1

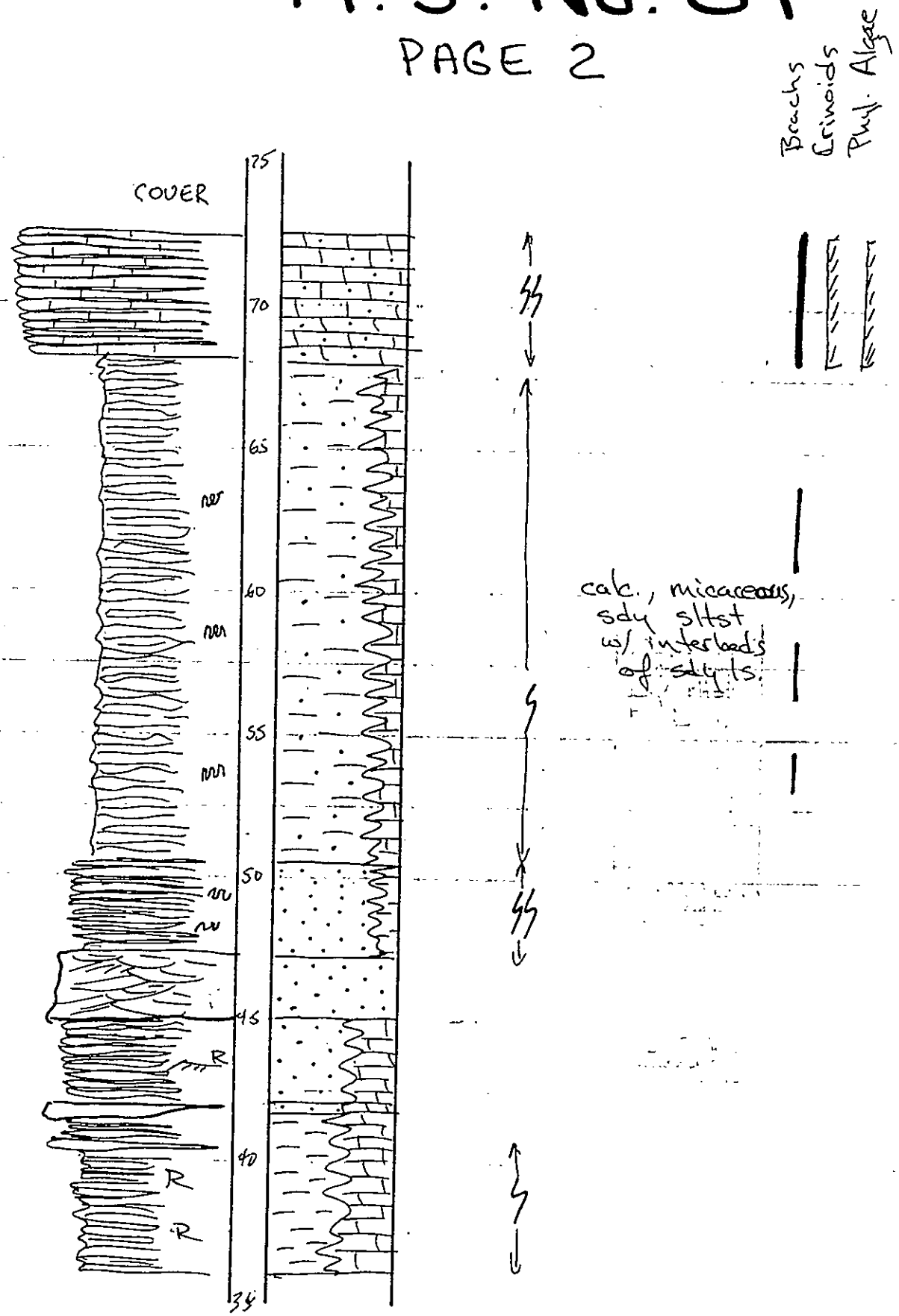


MCS=8cm

THIS SECTION CORRESPONDS TO SUTHERLAND'S (1963) MEASURED SECTION 25.

M.S. No. 84

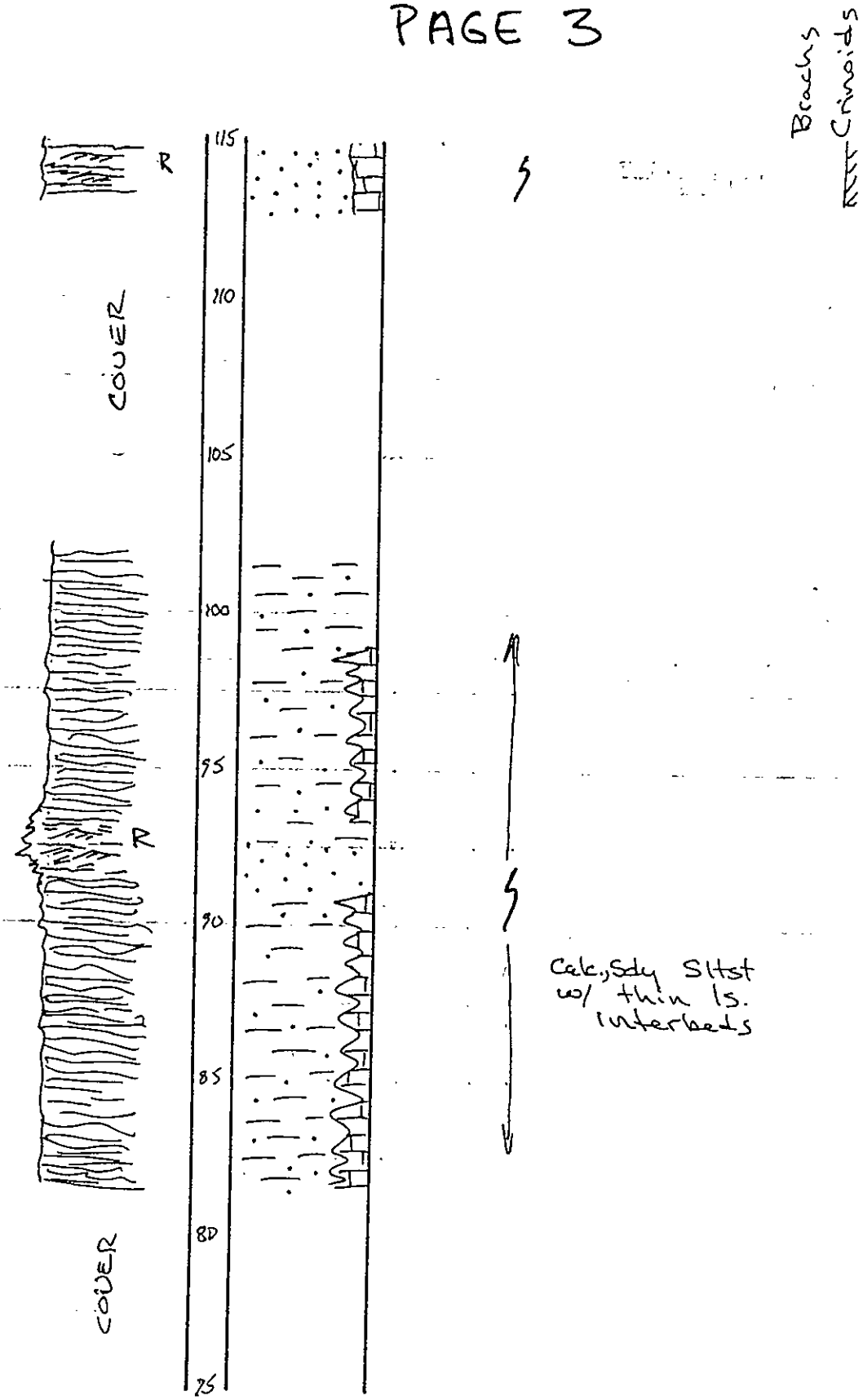
PAGE 2



SB

M.S. No. 84

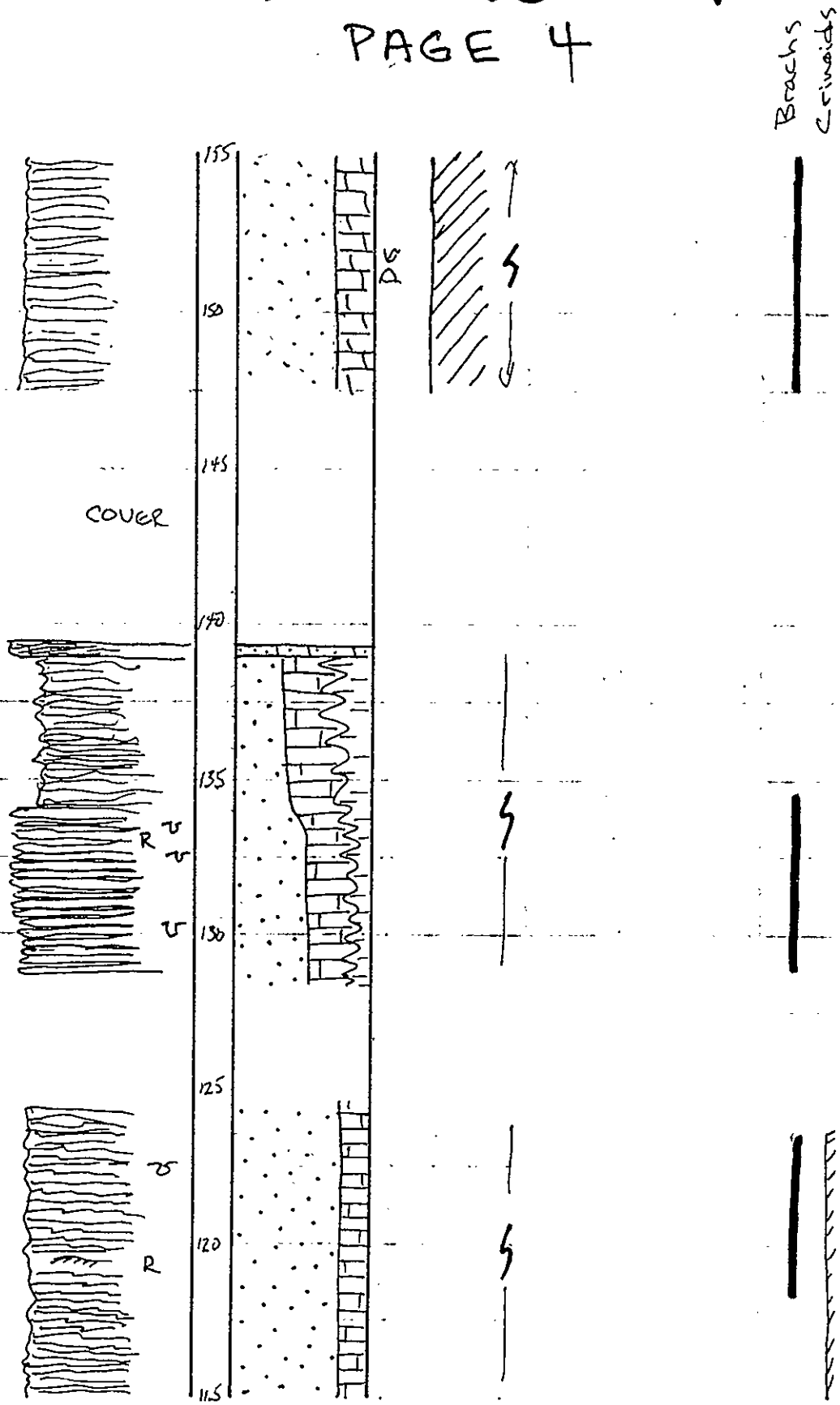
PAGE 3



SB

M.S. No. 84

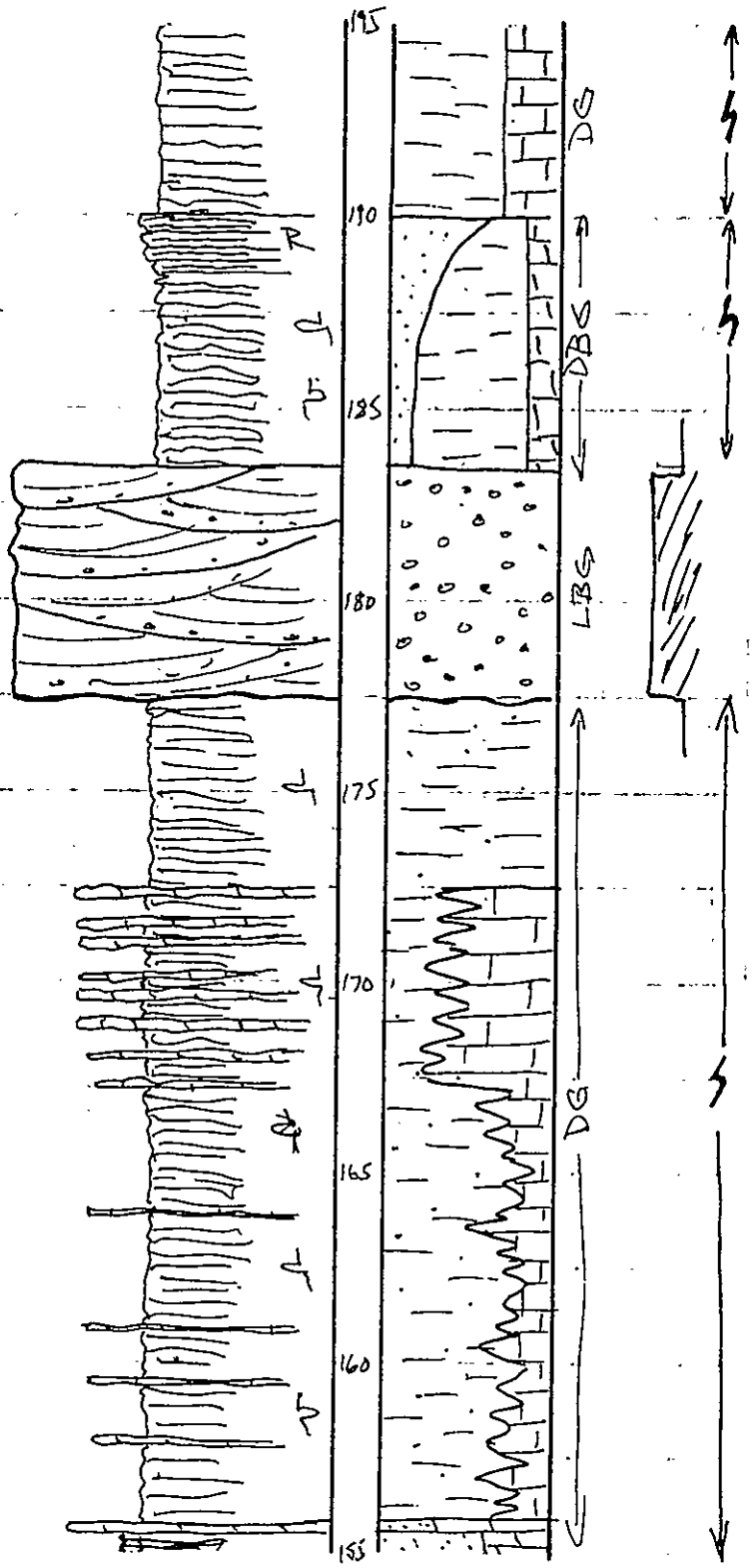
PAGE 4



M. S. No. 84

PAGE 5

Beachs

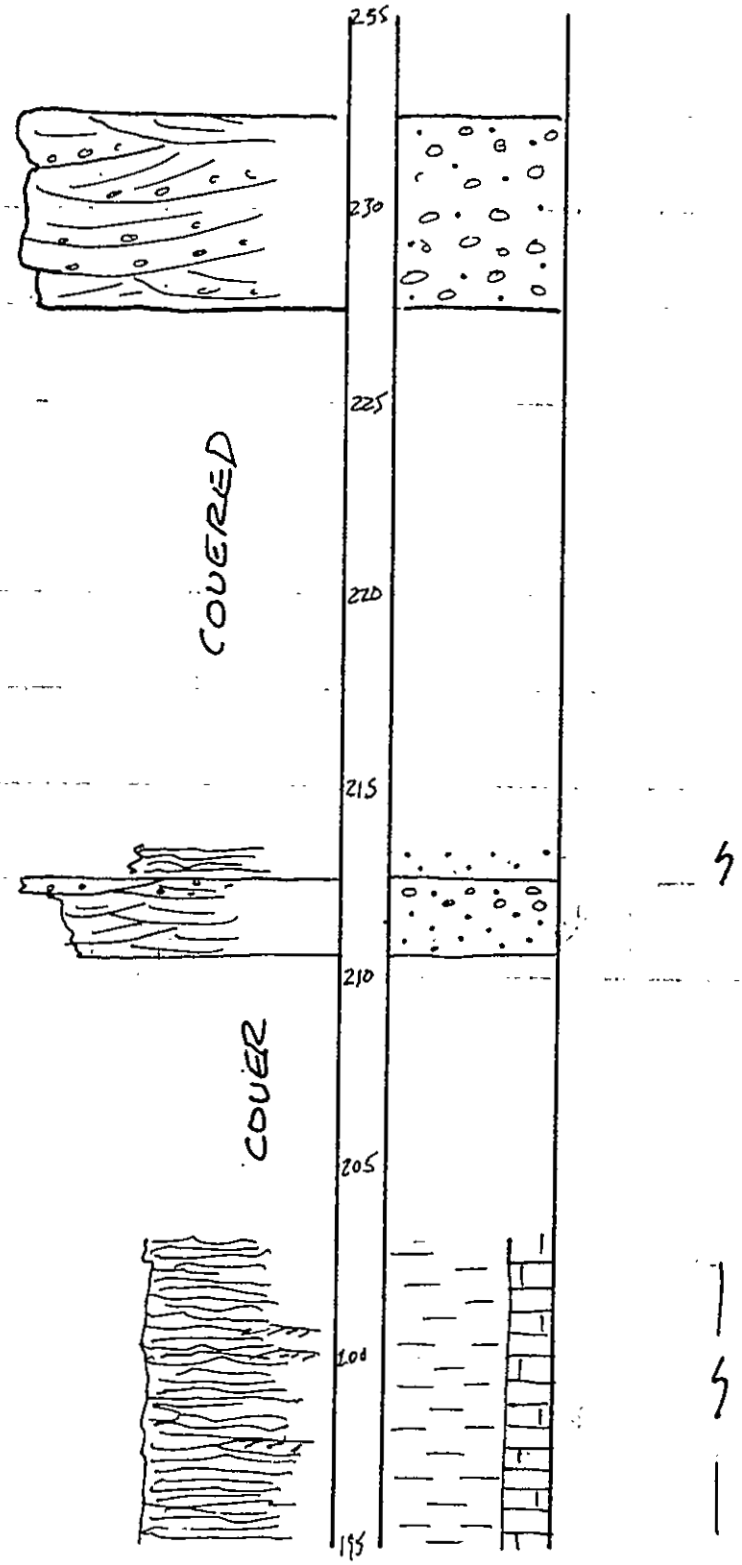


SF

314

M. S. No. 84

PAGE 6

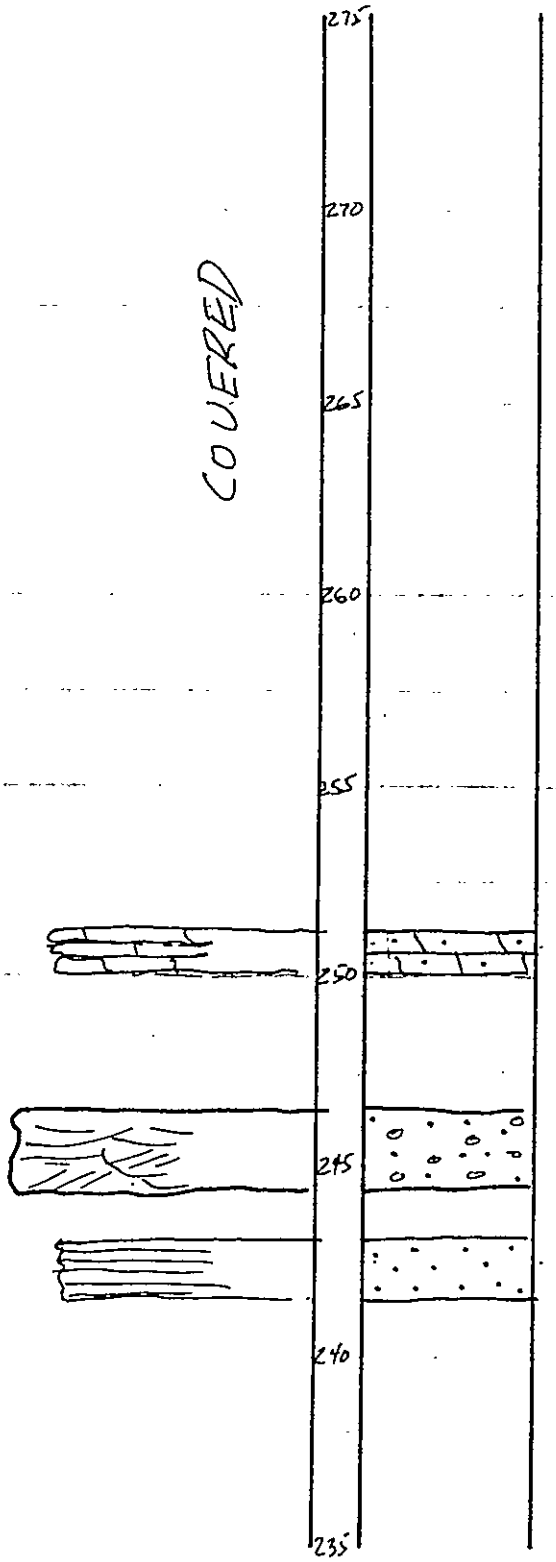


SB

M. S. No. 84

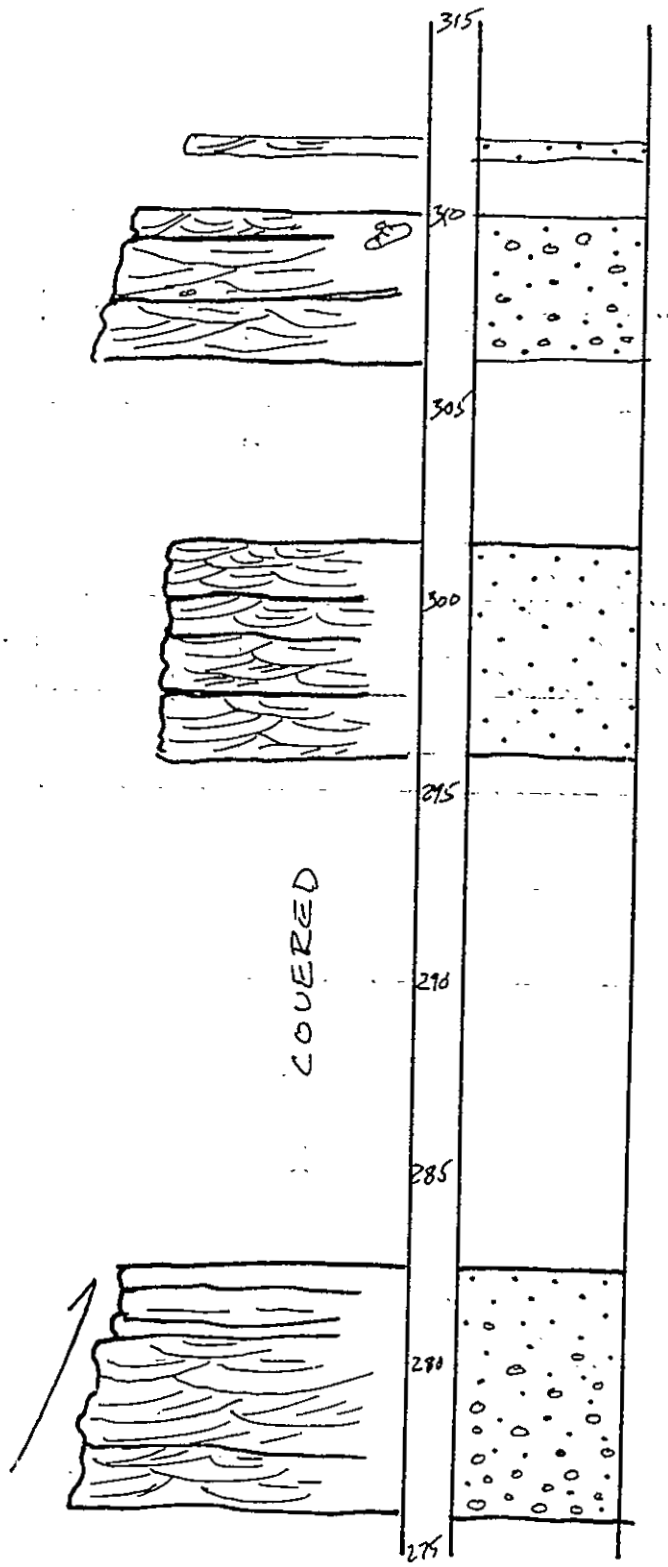
PAGE 7

Phyl. Algae



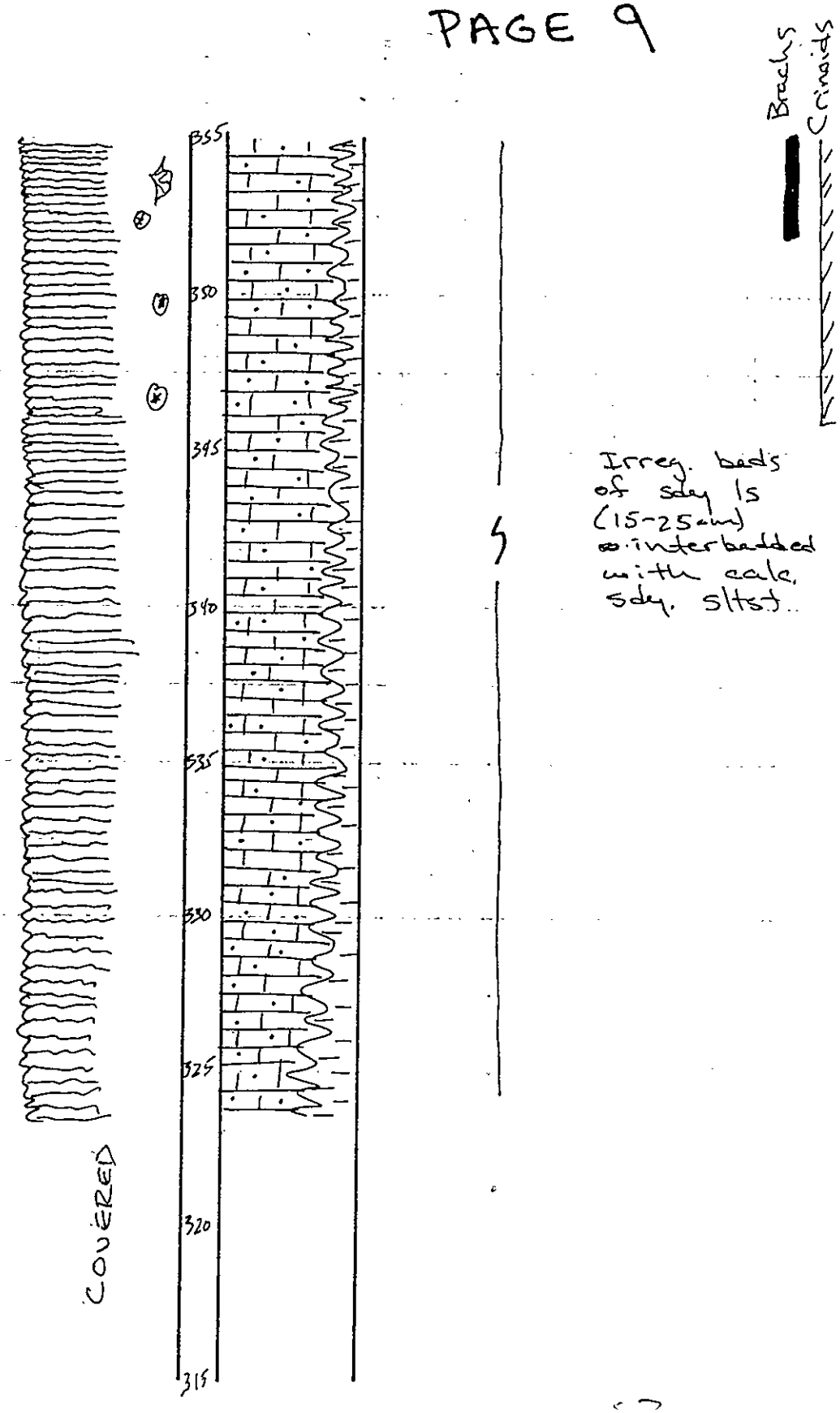
SB

M.S. No. 84
PAGE 8



M.S. No. 84

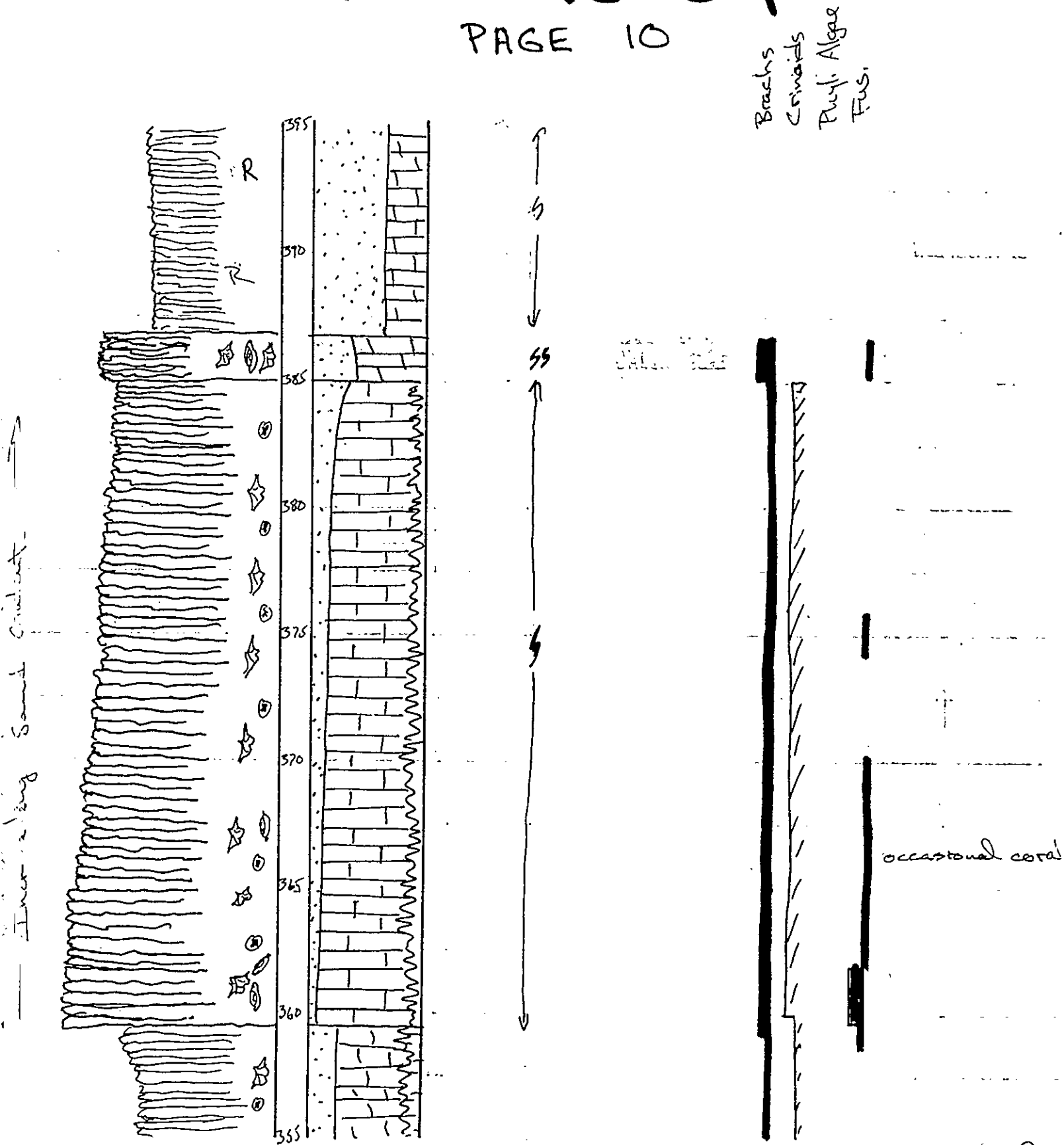
PAGE 9



FORMS HIGH CLIFF

M.S. No. 84

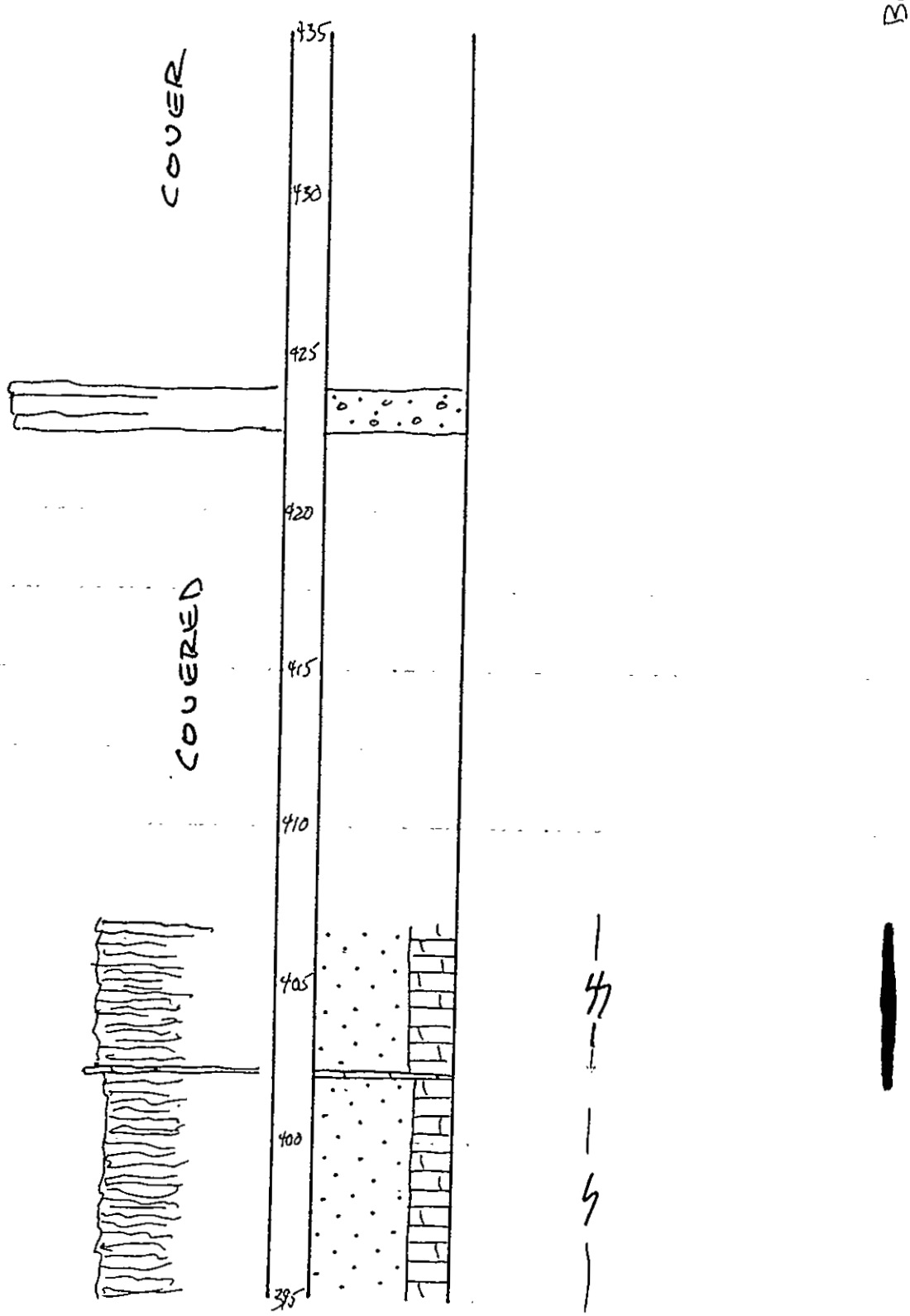
PAGE 10



M.S. No. 84

PAGE 11

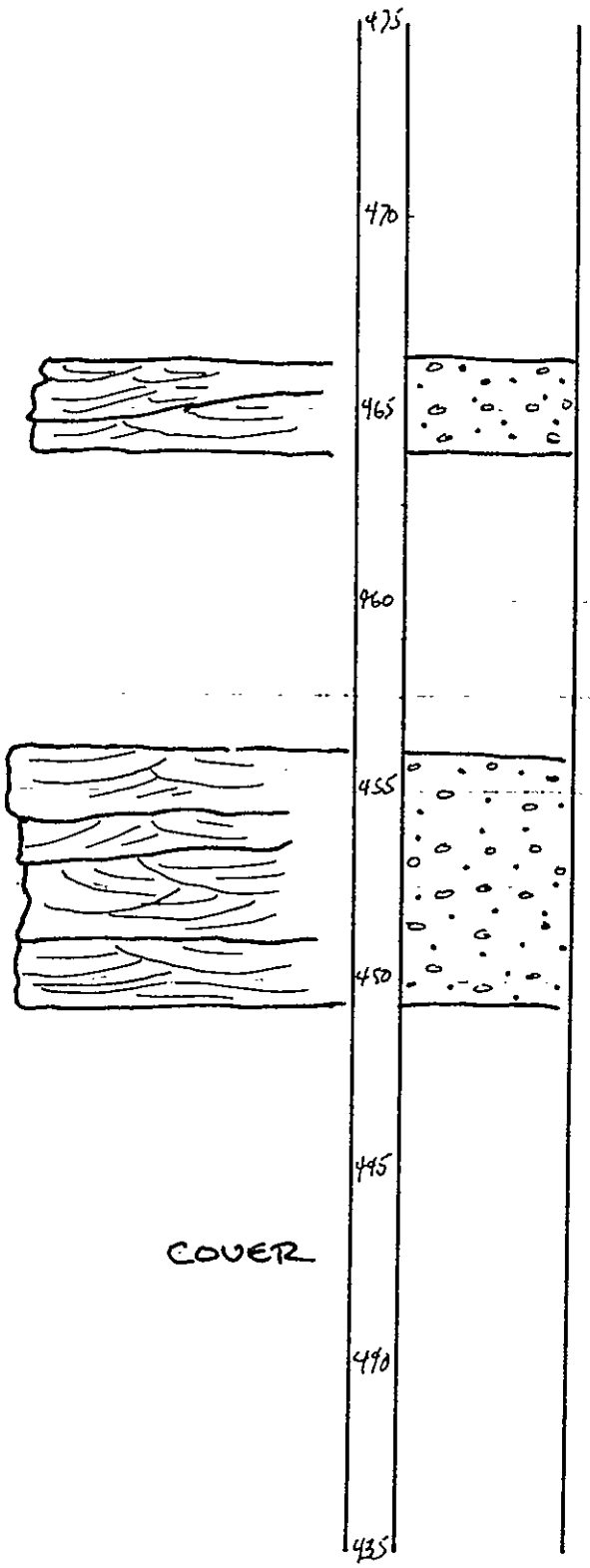
Brachs



SB

M.S. No. 84

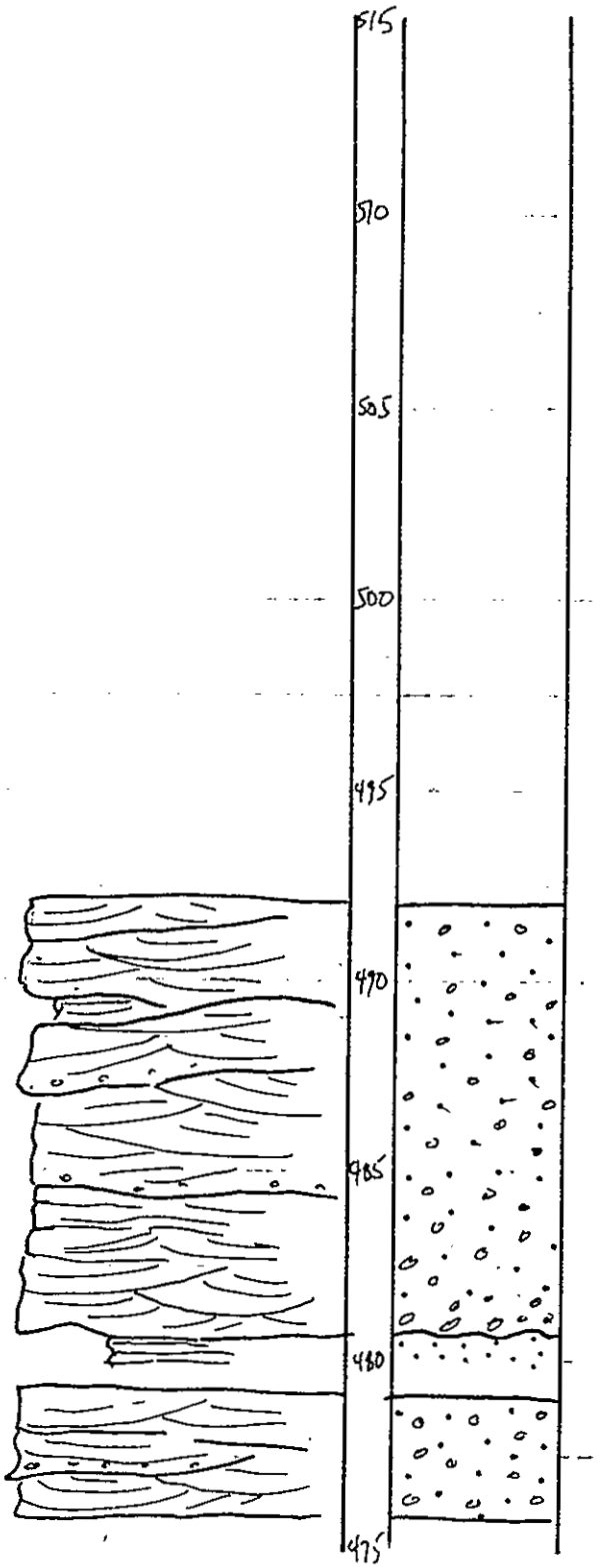
PAGE 12



SB

M. S. No. 84

PAGE 13



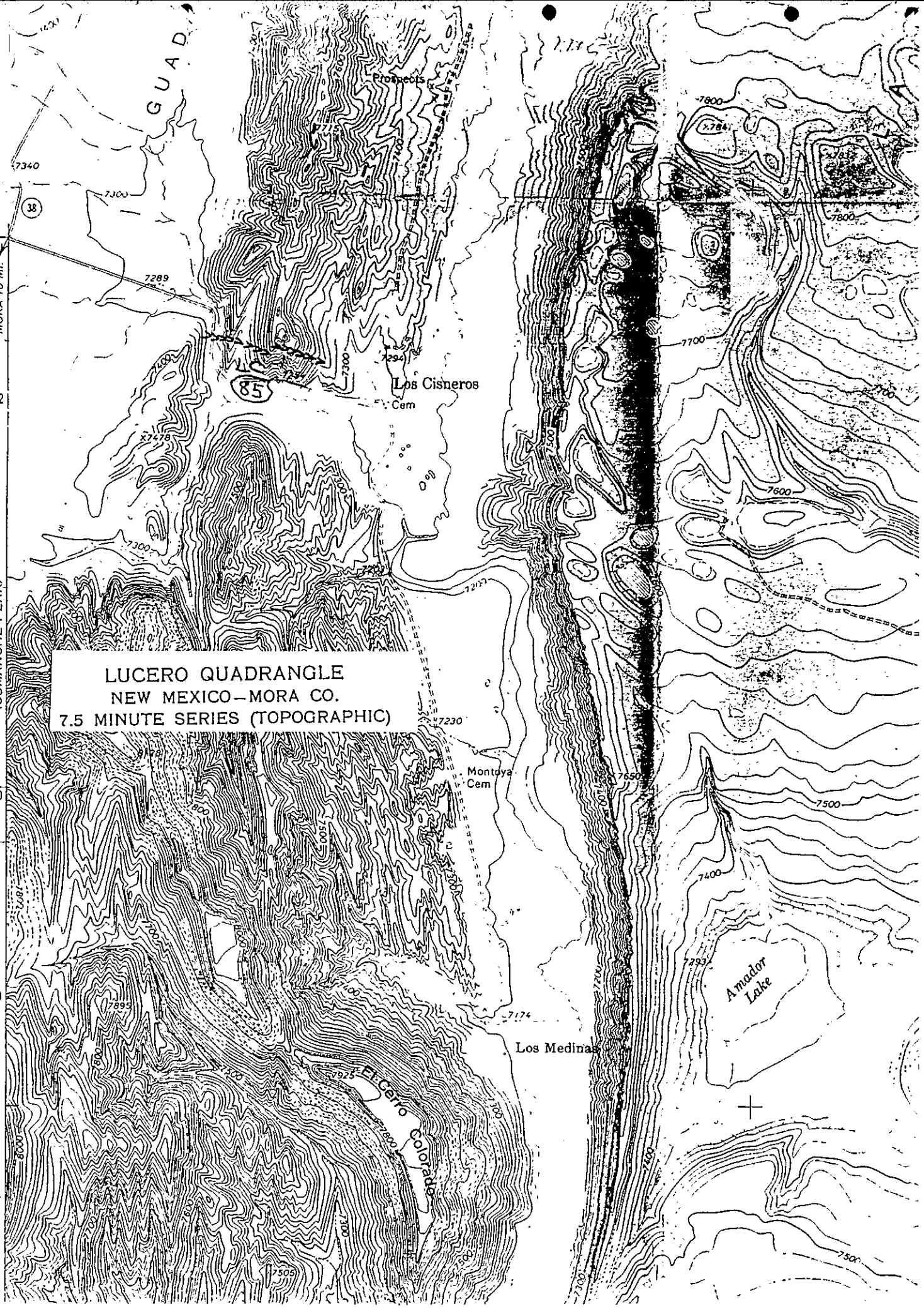
FORMS MASSIVE CLIFF

SB

LOS CISNEROS SECTION

MEASURED SECTION 85

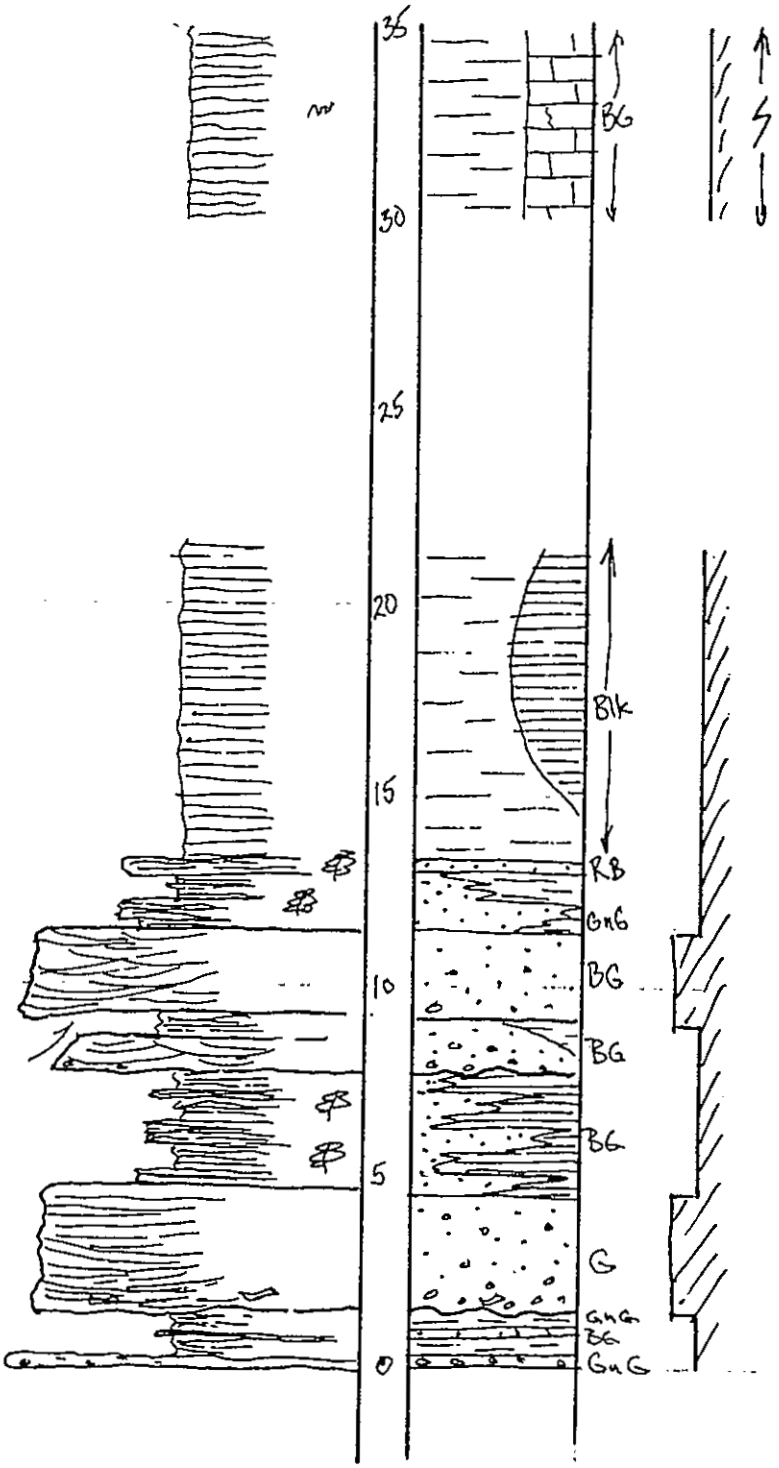
(Arkosic Ls. Member - Madero Fm.)


LUCERO QUADRANGLE
NEW MEXICO—MORA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
Prospects
Los Cisneros
Cem
Montoya
Cem
Los Medinas
El Cerro Colorado
Amador Lake
MORA 10 MI.
4956 III SE
(COMANCHE PEAK)
38
85
5
3992
3990
3989
3988
2'30"

LC
W. of Los Cisneros

E.B & JMC
(Elmo Brown
J. M Casey)

(M) M.S. No. 85



iron-rich

Micaceous

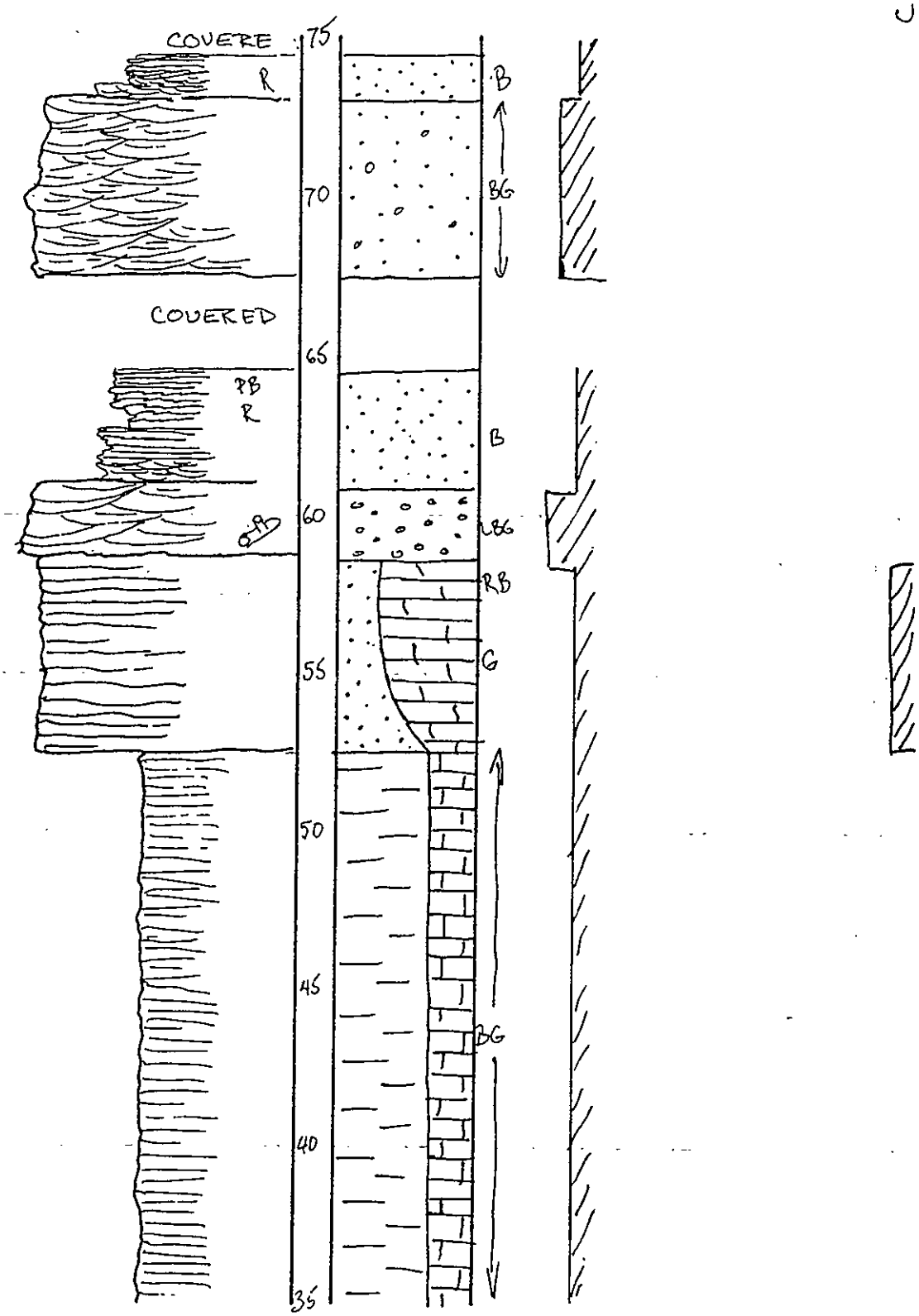
low ∡ X-beds
large rip-ups
Very Micaceous

LC

EB & JMC

(M) M.S. No. 85

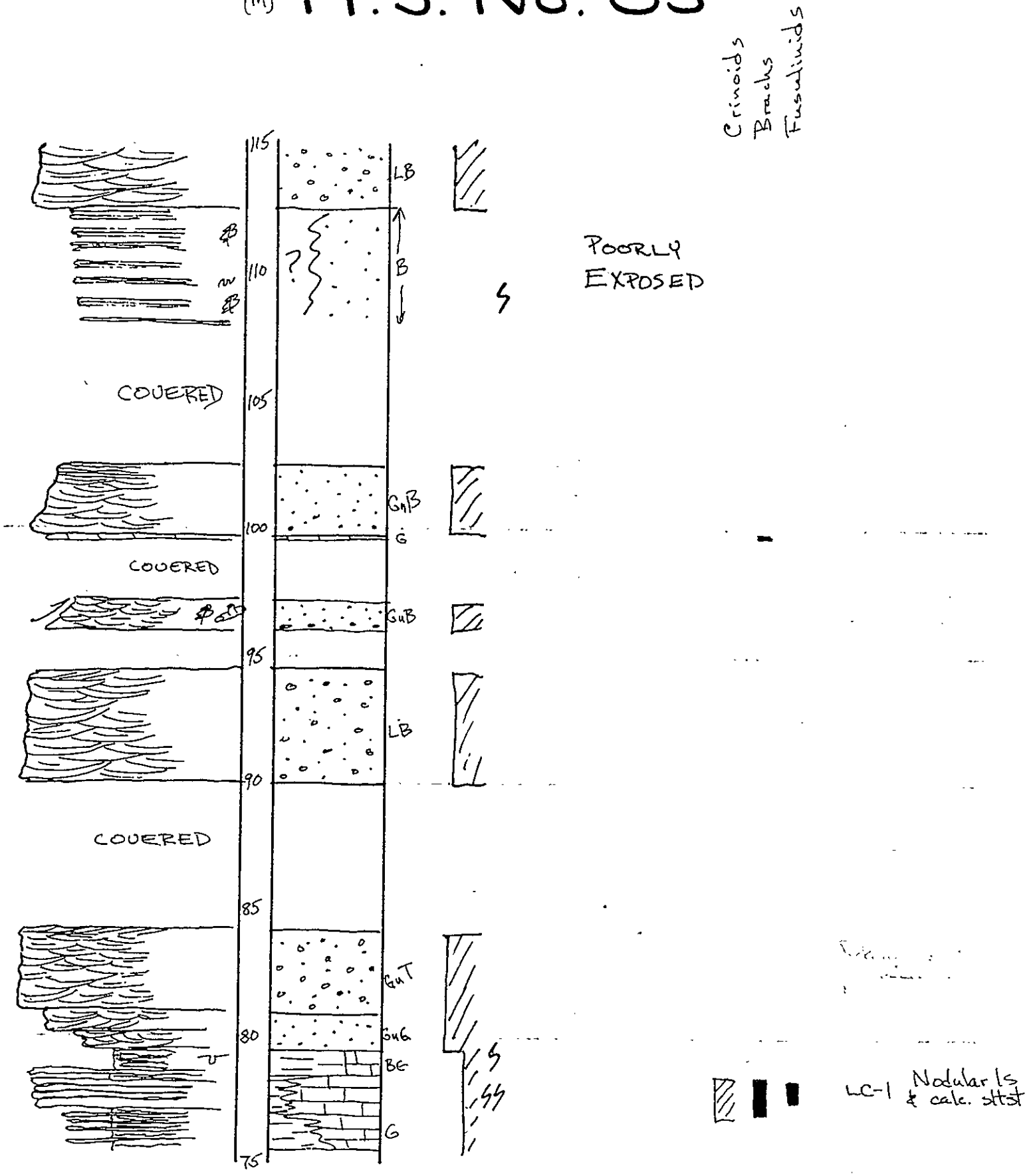
Crinoids



LC

EB & JMC

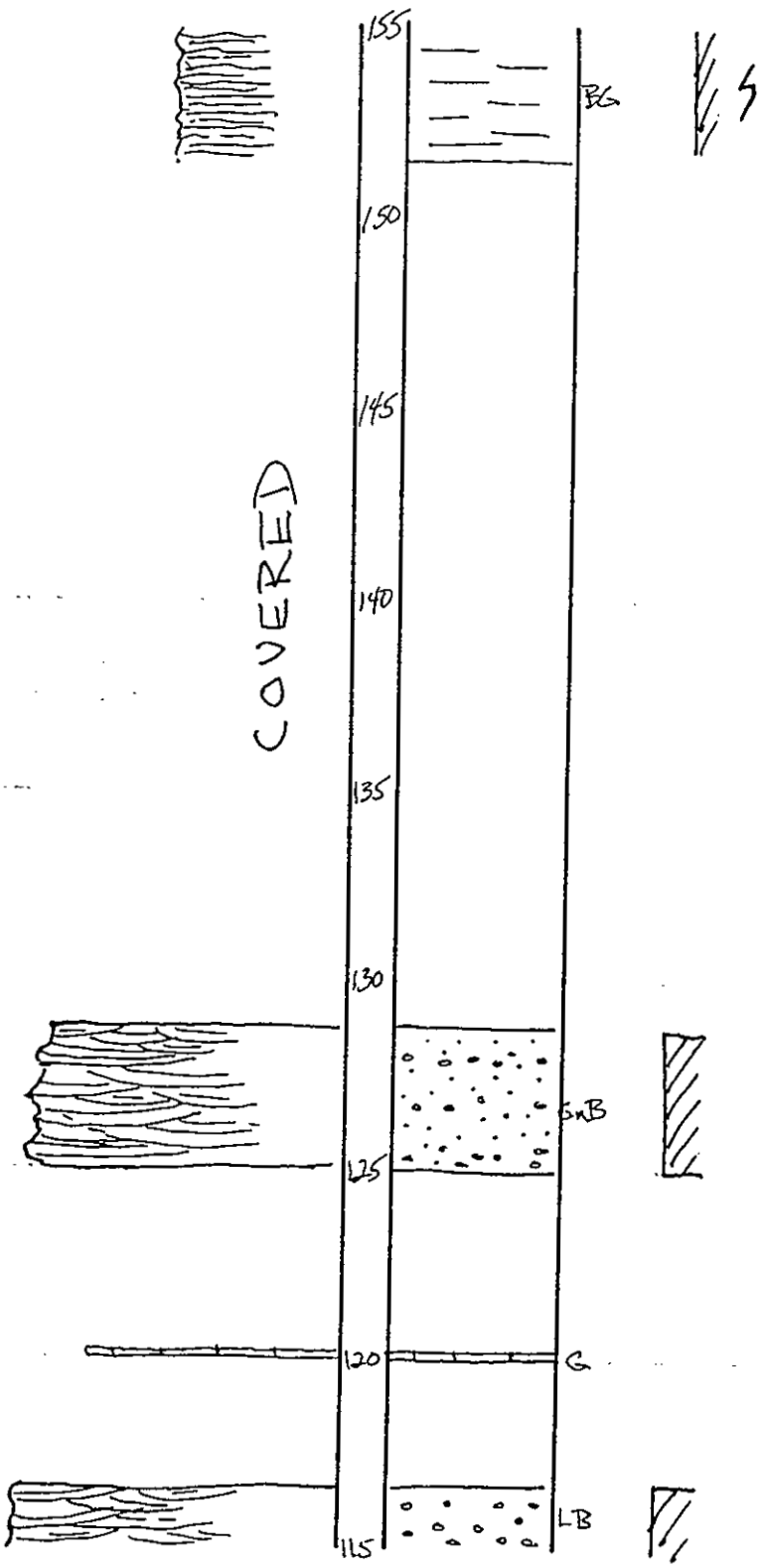
(m) M.S. No. 85



LC

EB & JMC

(M) M. S. No. 85



CALC

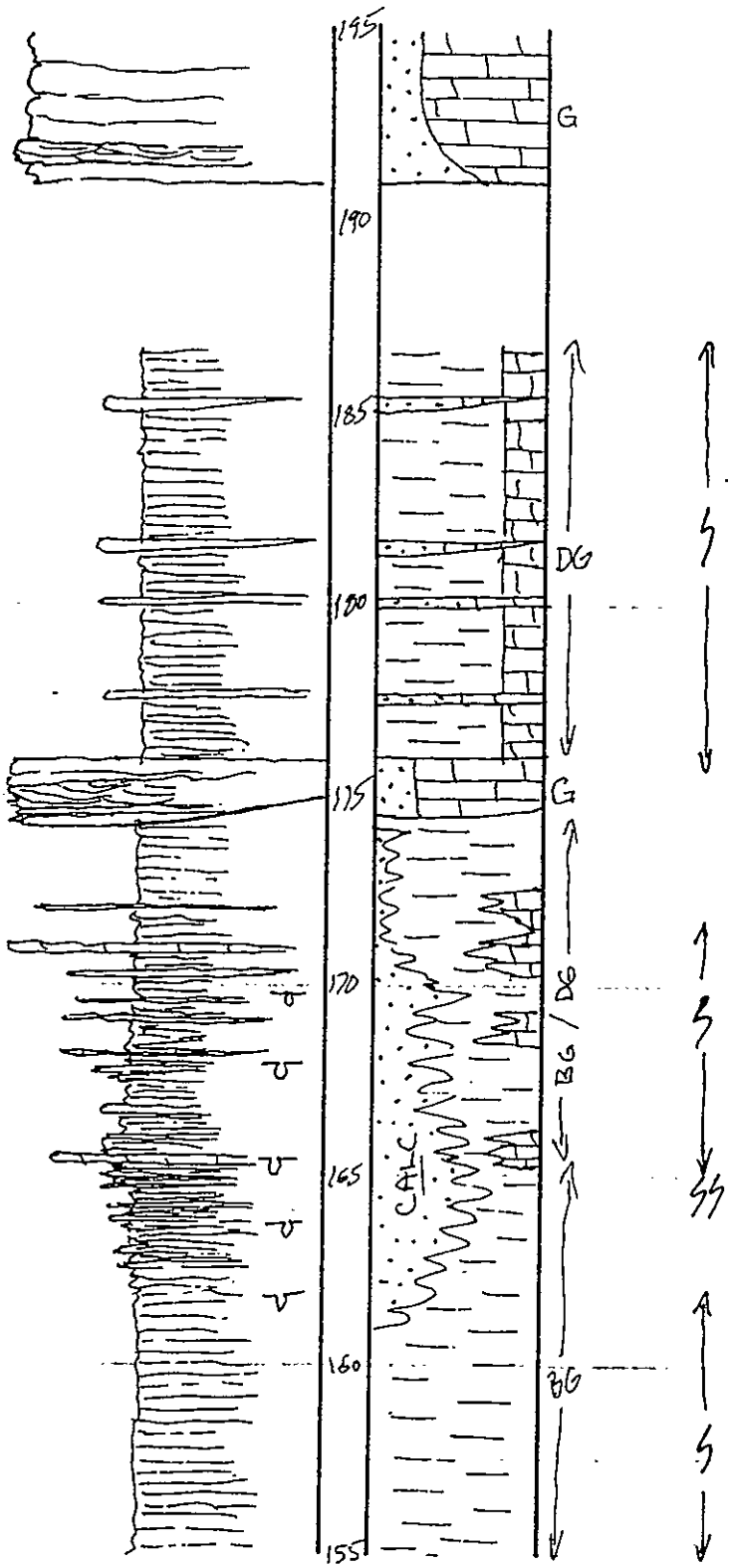
MICACEOUS

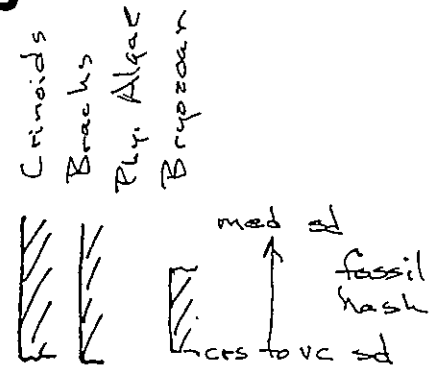
← Small.. Gasts.

LC

EB & JMC

(M) M. S. No. 85





lenses of rippled fine calc ss.

thins to N & S

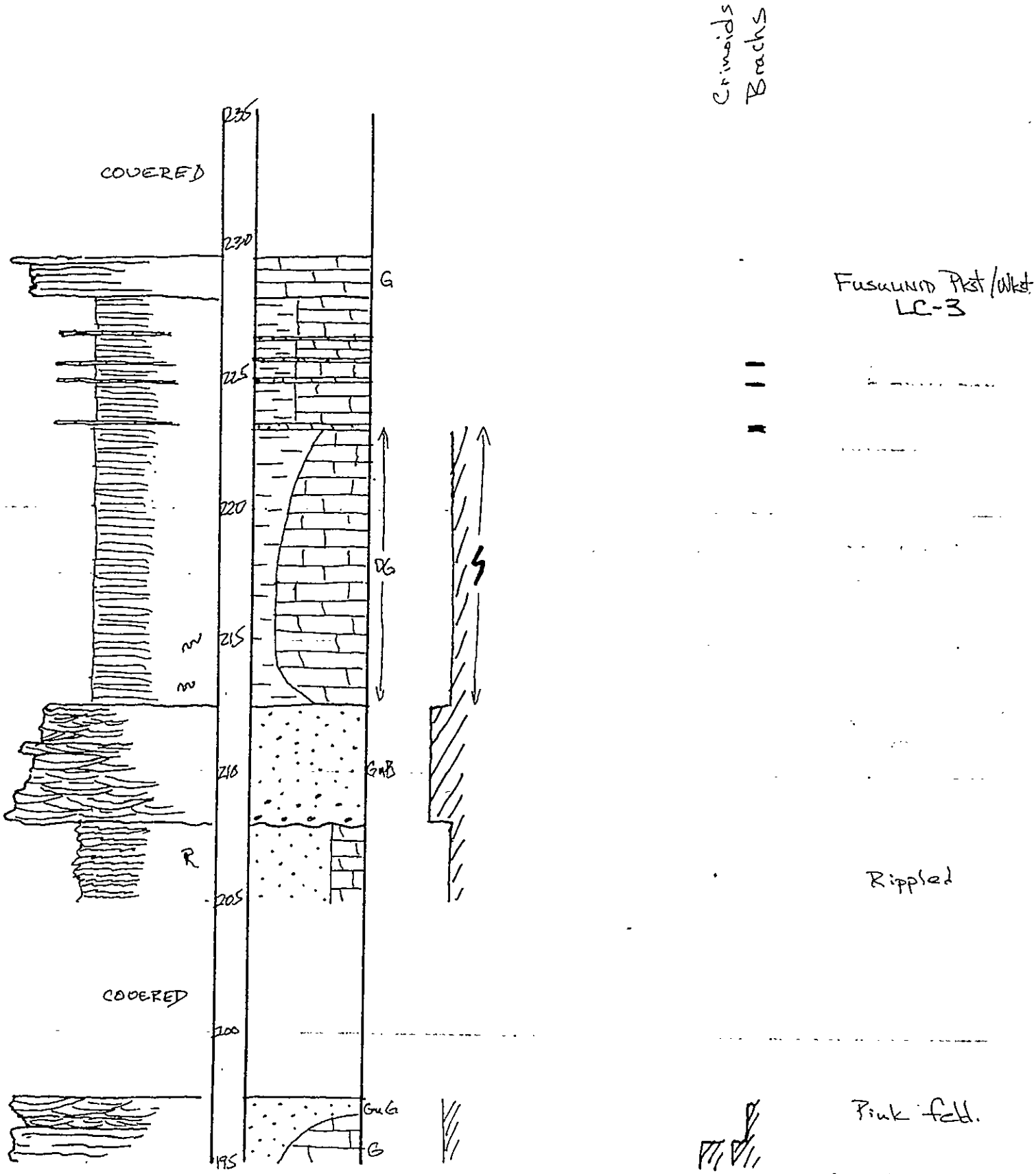
Discont. lenses of calc vf ss w/ whispy lam. & Crinoid pkst lenses

Some crinoid pkst. lenses

CALC.

EB & JMC

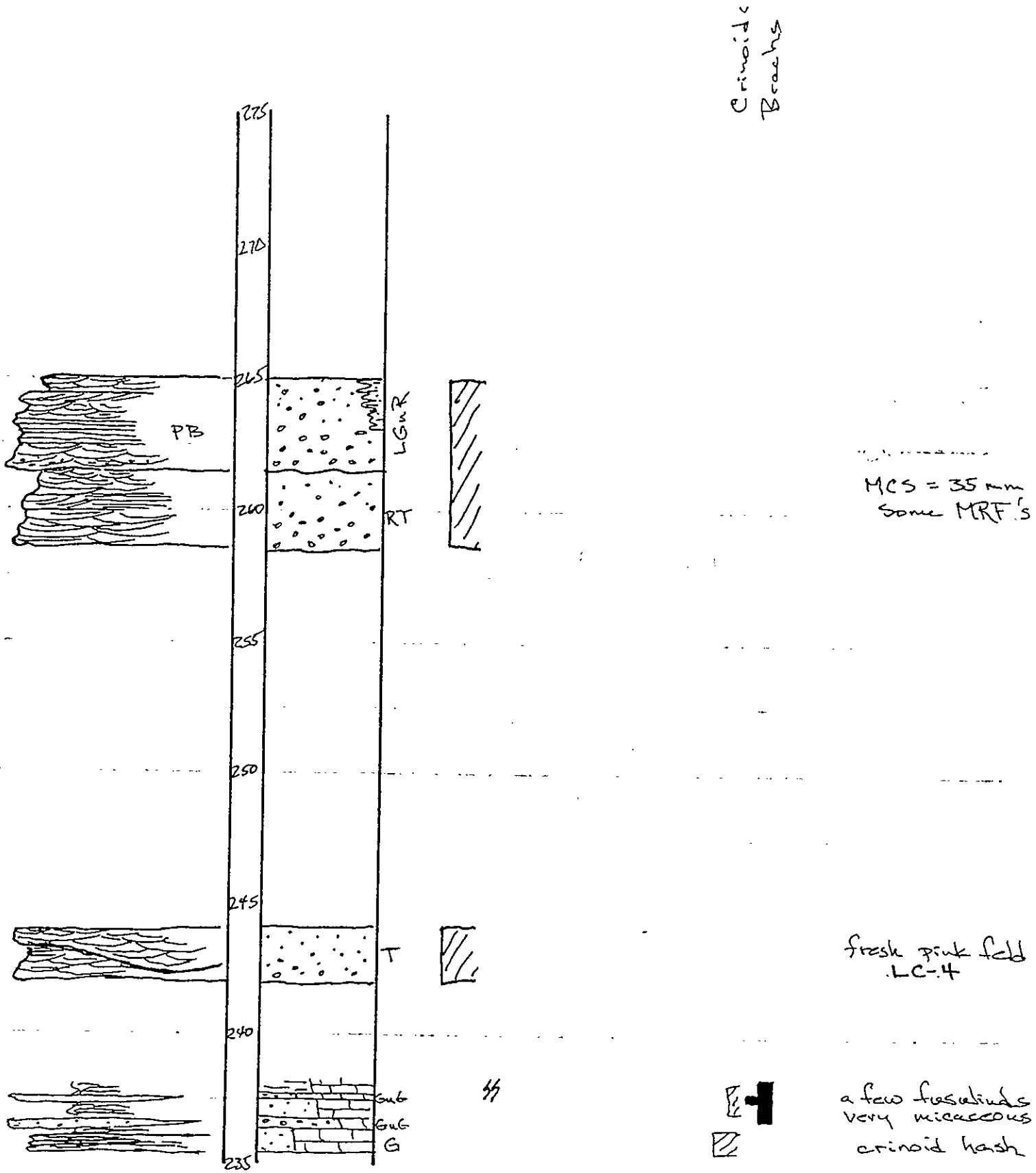
(m) M.S. No. 85



LC

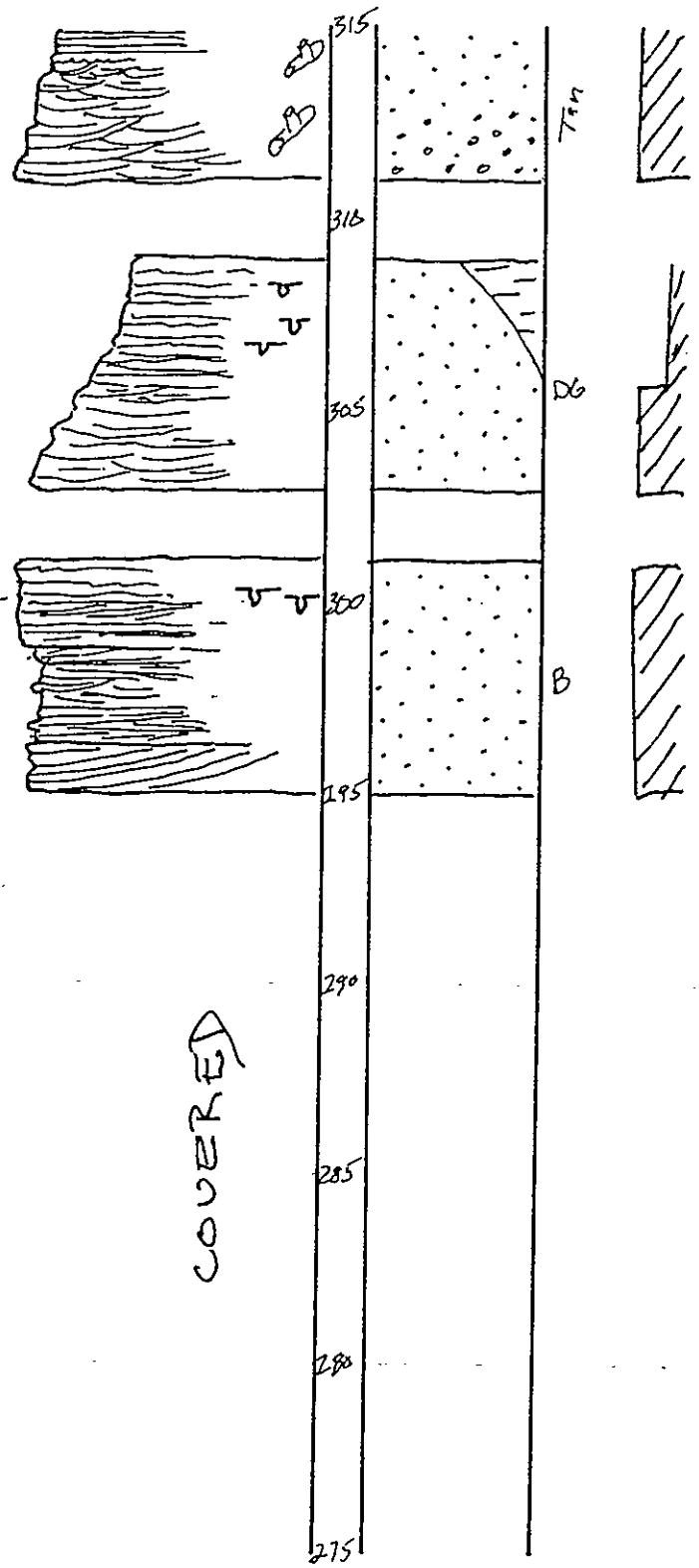
EB & JMC

(M) M. S. No. 85



EB & JMC

(m) M.S. No. 85



burrows filled w/ tan ss.

Very micaceous & slightly calc.

LC-5

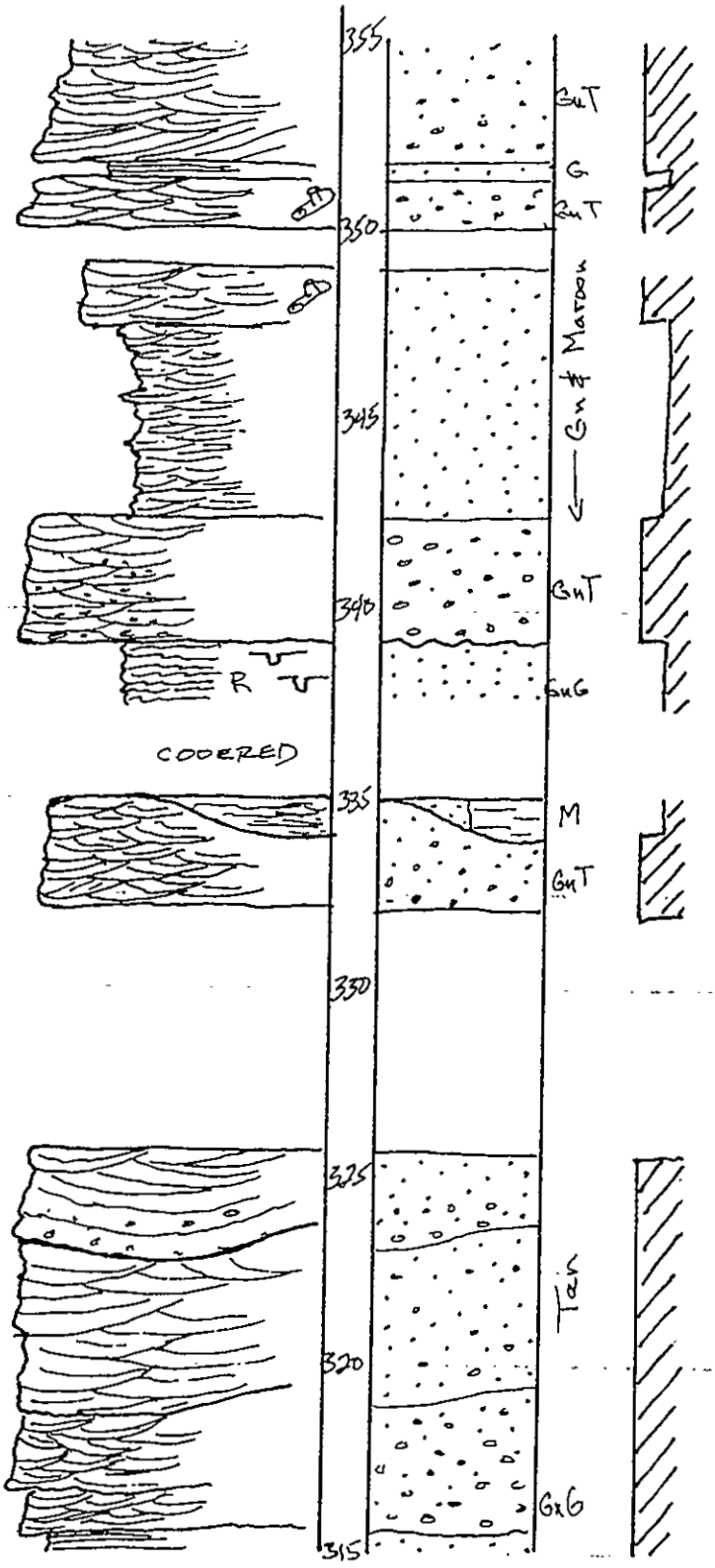
low ∡ Tabs

low ∡ Tabs

LC

EB & JMC

(M) M. S. No. 85



Very Micaceous

Abund. pink K-spar

very micaceous LC-6

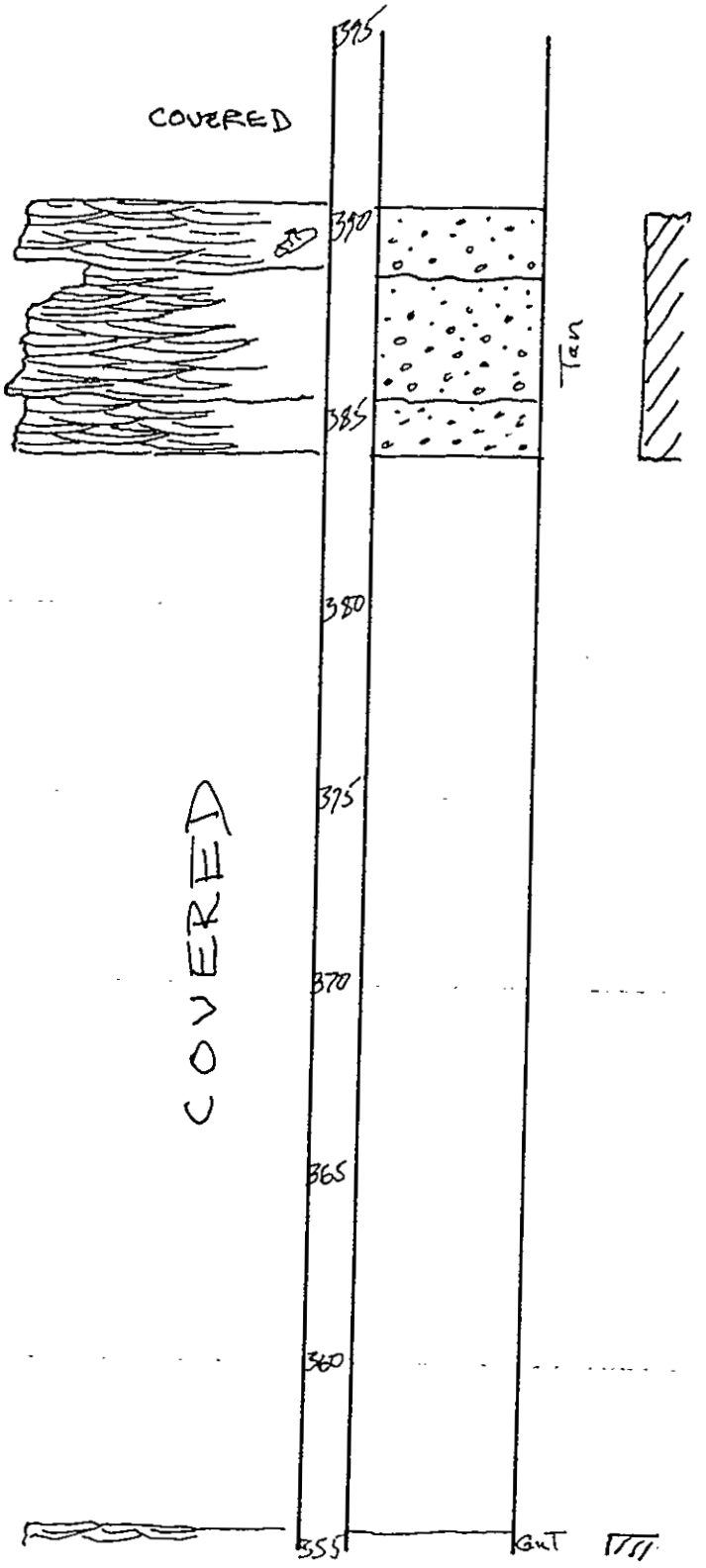
Maroon

med-scale Troughs

fresh pink K-spar

EB & JMC

(m) M.S. No. 85



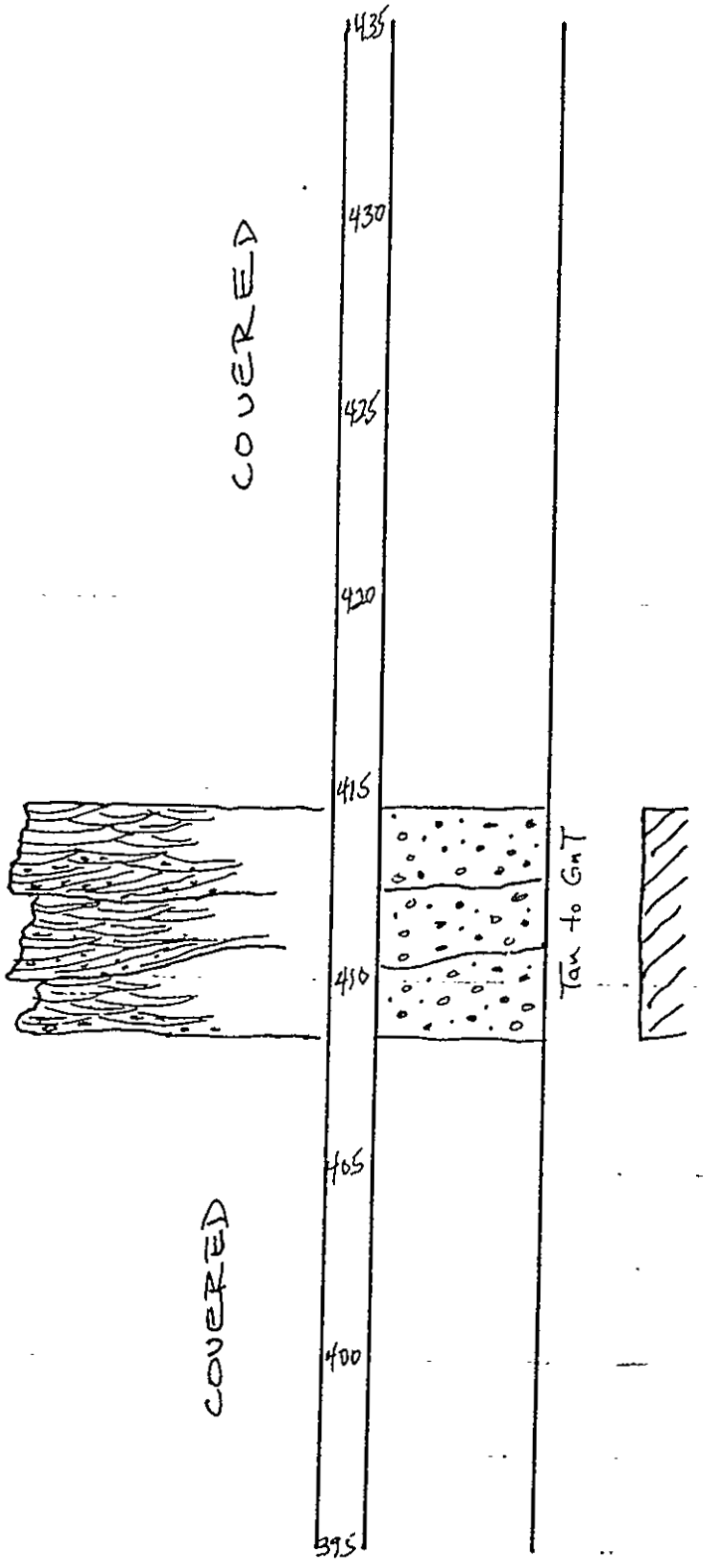
MICACEOUS

100's troughs

LC

EB & JMC

(M) M.S. No. 85

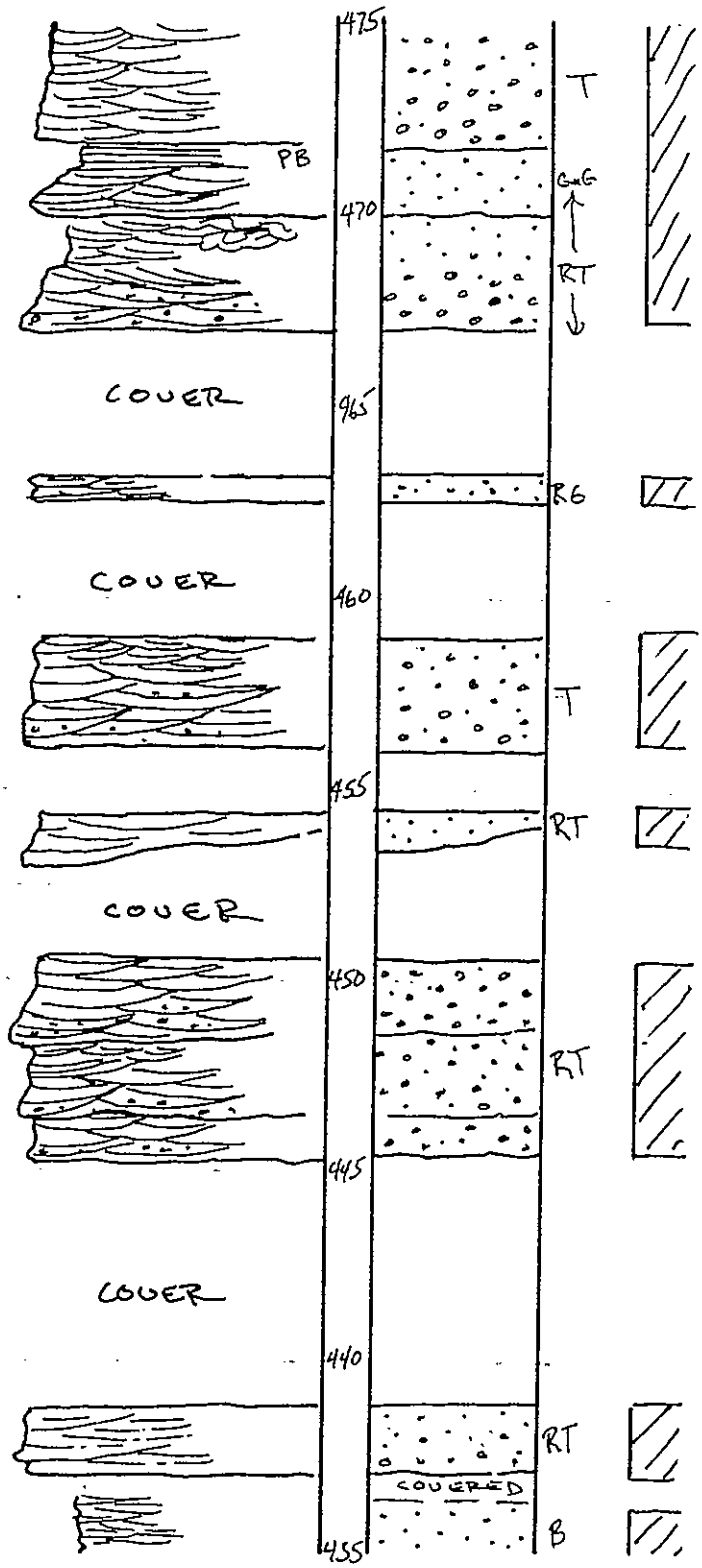


MCS = 5 cm

LC

EB & JMC

(m) M.S. No. 85



Micaceous

Contorted X-bds

Red Soil

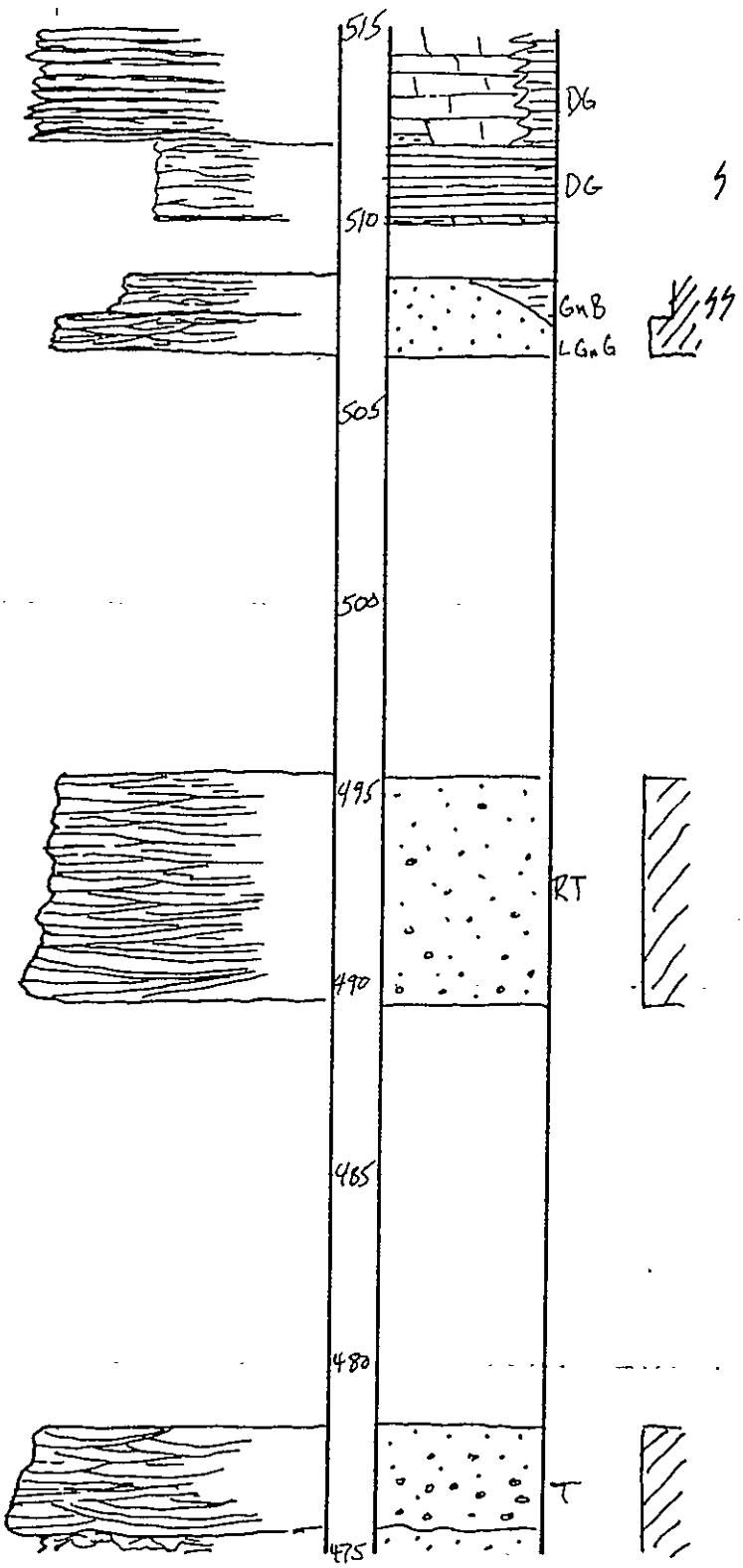
Red. Soil

Ridge Former

LC

EB & JMC

(M) M. S. No. 85



Brachs
Phylloid Algae

Composita brachs

few small gasts
pelec(?),
← thin impure ls

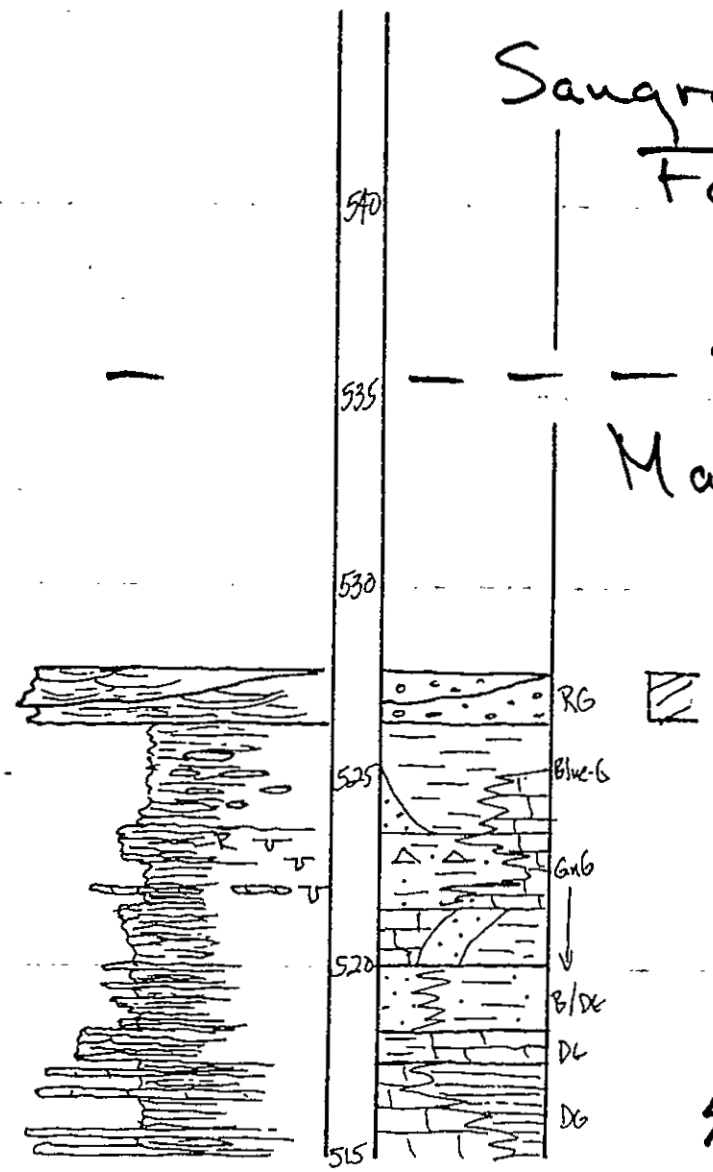
Very Micaceous

Very low ∠ X-bds

Elmer Brown
& J.M. Casey

M.S. No. 85

Brachy



LC-8

patches of calc. cement, rest silica cement LC-7

siliceous vf ss w/ sdy B calc. patch. nodular gray ls

alt. calc fn ss & calc sdy sltst nod. ls w/ patchy slty chert