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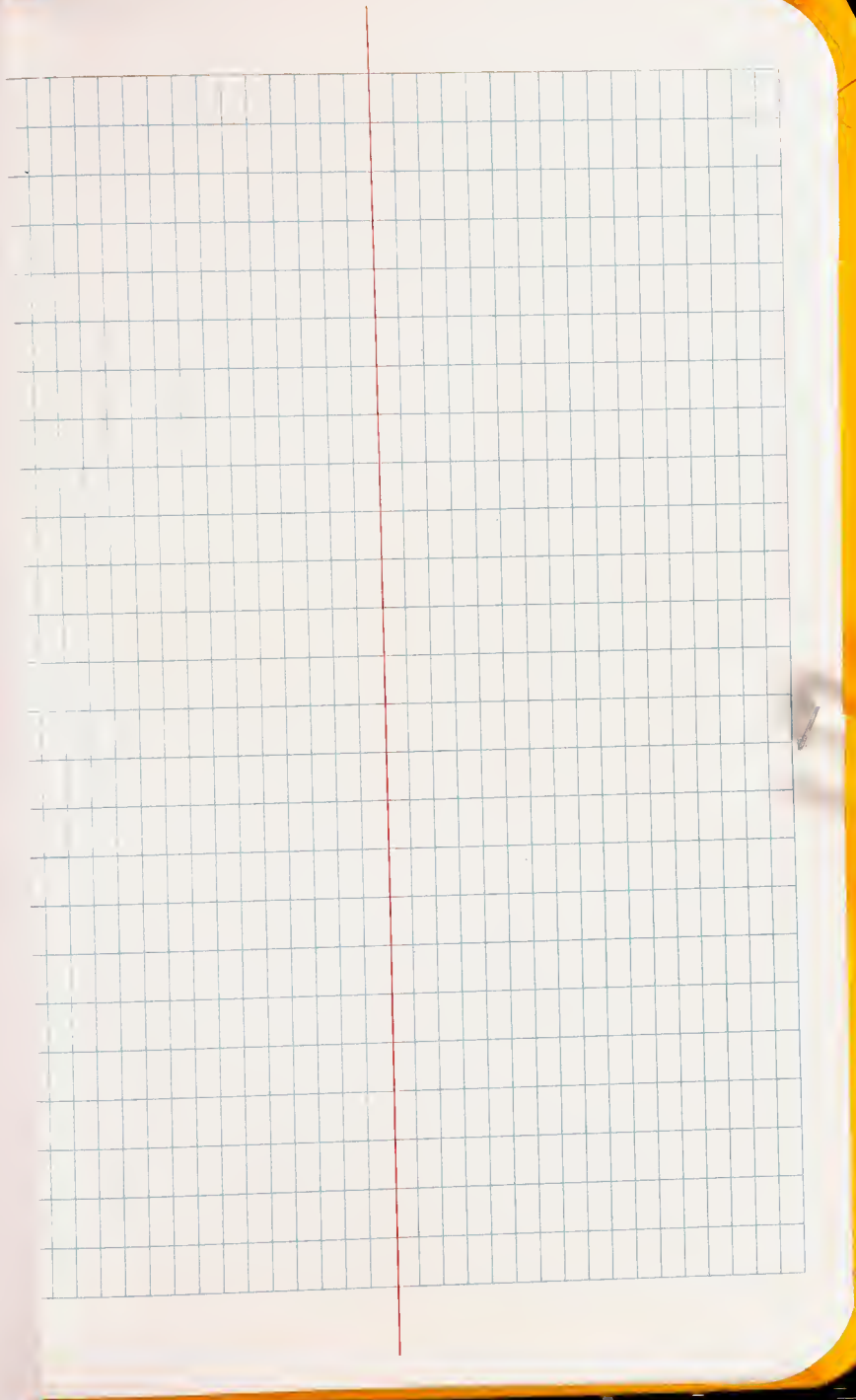
**TRANSIT
FIELD BOOK**

No. 8152-00

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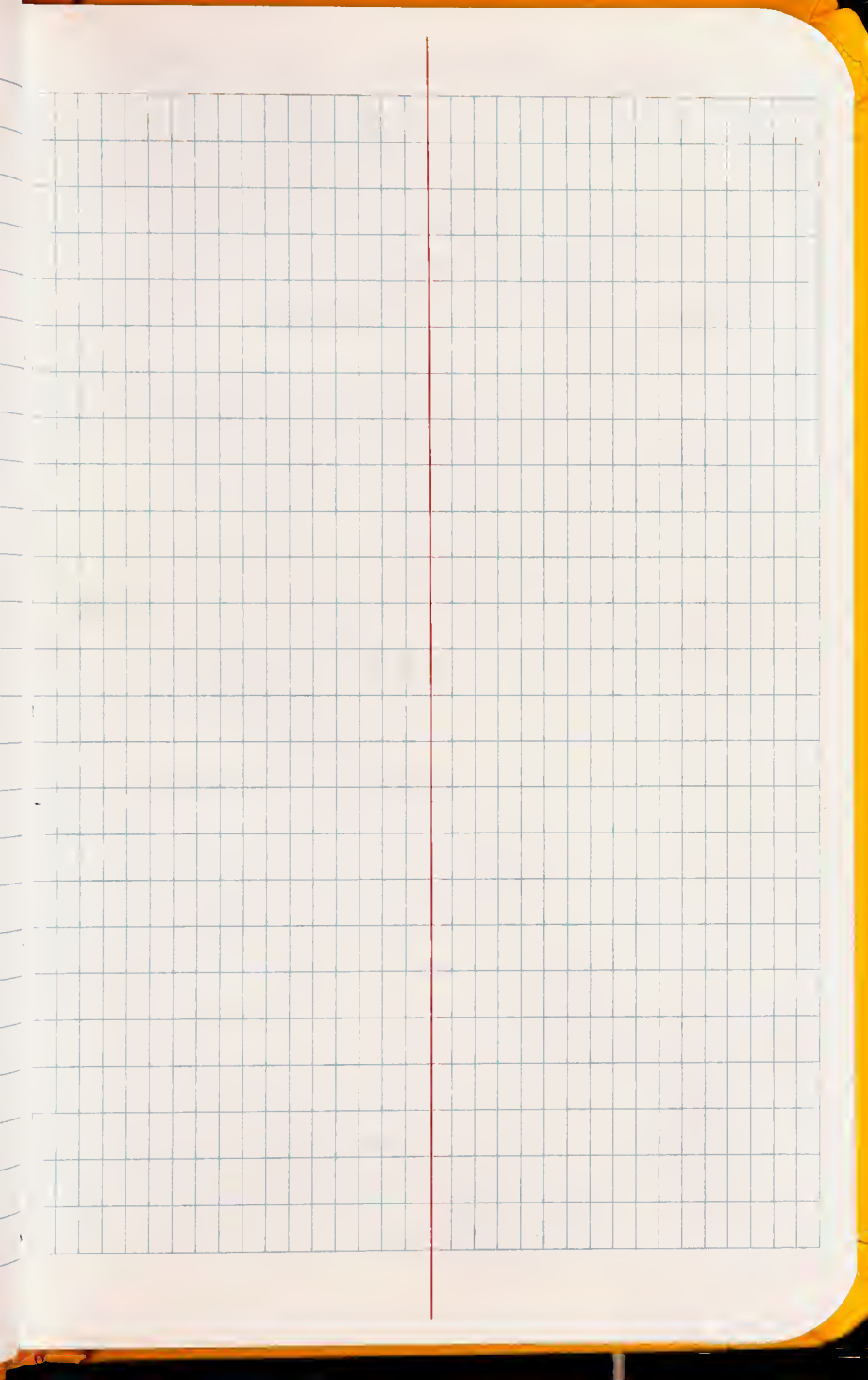
This Book is manufactured of a High Grade 50% Rag Ledger Paper having a Water Resistant Surface, and is sewed with Nylon Waterproof Thread.











Brunton set at
0° Dc.

$$HCM = 10m$$

$$1 \frac{19}{32}'' = 10m$$



980-H

6/18/98

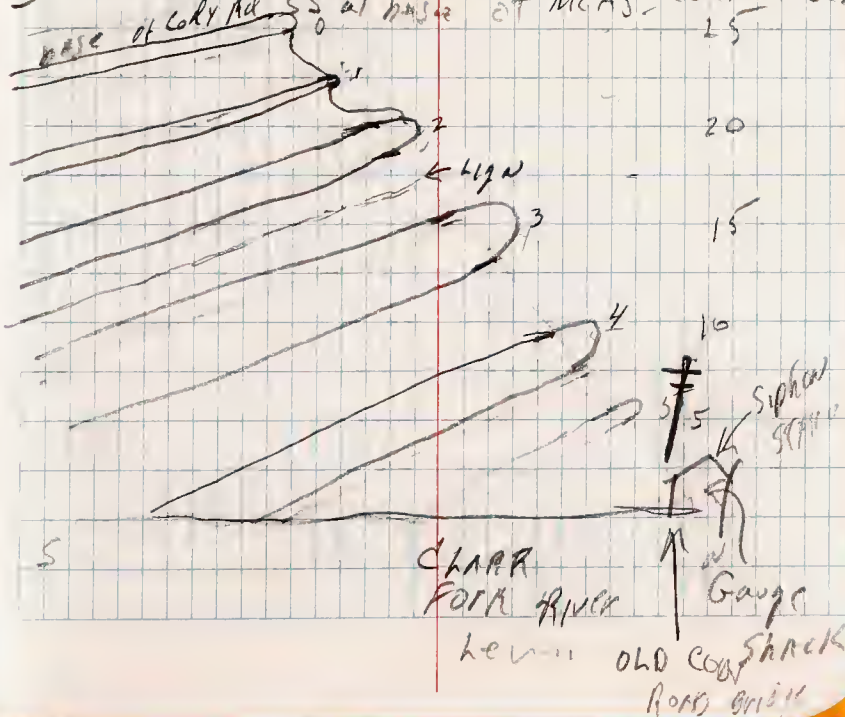
Cody Roadcut

NEXT SS above the
leaf bearing unit
abt 5m above road

Pedogenic STRS. in SS.

Round nodules to abt
1" in dia. I would have
thought there were
rip up clasts

9805 - River Bank below N Cody Road c.
base of Cody Ad. SS at base of MEAS. Cody R. Sec



CLARK FORK RIVER Gauge SHACK
OLD CODY RIVER BRIDGE

9806

6/18/98

PUMPING STATION AT
DHD CORY ROAD CROSSING
NW, NE, Sec 27 T8S, R 22 E, Carbon Co.
MT.

SHOT TO STRIKE OF
Belfry Mbr.
156° (0° Dec.)

THIS PUT ^{base of} CORY ROAD
SECTION AT base of
Belfry Mbr.

9807 Head of Hollenbeck Draw

N₄N, NW 34, T9S, R. 22E., Carbon Co.
Double X SS. WY.

Concretion ~~above~~ directly
above the 2nd Double
X SS. in a deformed
marl.

9808

8/18/98

NW 1/4 Sec 36 T9S, R22E, CARBON CO, MT

Top of Hallelujah II on
Big Nose.

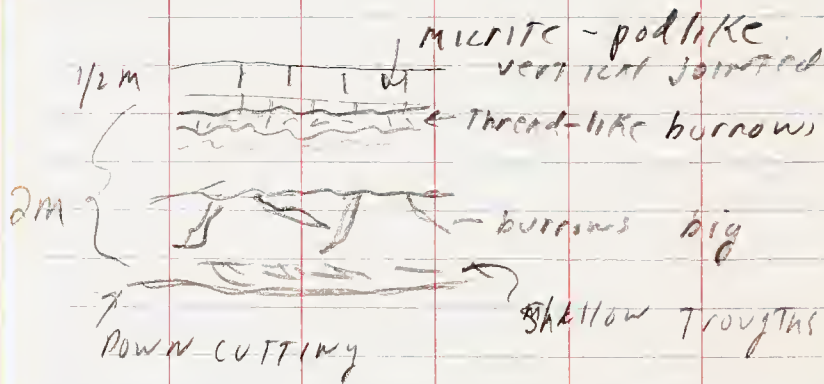
SS. UNIT at top of

Hallel II package

abt. 2 m thick

Shows bioturbation &
ripple marking.

Fine burrows below micrite



9809

6/19/98

AT PUMP STATION

AT CROSSING

of

Rd. ~~PAV~~

CLARK'S FICK, WEST BANK AT

9806

6/19

COLE ROAD

Sec 9809

SECTION STARTS PUMPING
STATION \approx 1M ABOVE CLARK'S FORK
RIVER

SE, NW, Sec 27, T8S, R22E, Carbon Co. MT.

1 1/2 M INTERVALS

0 SECTION STARTS 1M
ABOVE LEVEL OF CLARK'S
FORK RIVER ON N SIDE
OF PUMPING STATION
COVERED - POORLY
EXPOSED INTERVALS TO
BASE OF SS.

7.90m INTERVAL MARKS TOP
OF "6" WHICH IS AT
LEAST 2 M THICK

3.30m TOP OF "5"
 \approx 50 cm THICK

2.5m TO BASE OF "4" WHICH
IS 2.04 m THICK

6.20m TO TOP OF "3"

~~1.1~~ | 5+1.1.80 | 5+1.80 ||| 4.20 ||+1.31 | 1.24 | +1m

"3" IS AT LEAST
2.15 m THICK

4.37 m

TO BASE OF "2" WHICH IS
2 1/2 m THICK

(REDUCING DIP FROM 7° TO 4°)

2.5 m

TO BASE OF "1"
WHICH IS 1 m THICK

2.58 m

TO BASE OF "0"
WHICH IS 2.19 m THICK

1 + 1.19 + 1 + 0.89 m + 0.69 m

Sec 9809

SECTION STARTS 1m above level of
Clarks Fork River on N. side of
Pumping Station located on W.
BANK just S. of bridge of
Hotzum Rd.

INTERVAL

0 Start of Sect at 1 m. above
river level. Most of interval
covered, showing thickness
of Sect, only.

6m. Base of lowest ss. in
exposure, designated as
"6" below 0 ss which is
basal ss. of sect. of
~~Yarvis~~^{Hickey} et al. 1986. (Colx
Road Cut.)

1.98 Top of "6" ss.

2.88 Base of "#5" ss. Brown
thin bedded, flaggy ss.

3.38 Top of #5 ss

2.5 Base #4 ss. Interval of
fine grained clastics
covered. #4 ss thin

INT.

Sec. 9809

bedded to Thinly laminated
f to m. g. SS. color tan to
buff w/ ripples or small
scale x-lamination in
several layers.

2.04 Top #4 SS.

4.0 Approximate base of #3
SS.

Similar to #4 except
not as well exposed
some prominent layers
~ 1-2 cm thick, of
weathers to rounded
knobby appearance.
Thin interbeds of
less resistant, silty
SS.

2.2 Top of "#3" SS

4.37 Interval of fine grained
seds., ll bedded w/
~ 15 cm. bed of lignite
~ 2.25 m above base
top of interval is base

of "# 2 SS"
2.75 "~~#~~ 2" SS More MASSIVE SS
w/ set 30-50 cm THICK
of Thin, med. scale X-
bedding, w/ some interbeds
of un^laminated or disturbed
Knobby layers.

2.5 Base of "# 1" SS
SS, lower half is ^{ll}
laminated SS overlain by
10 cm. of less resistant
SS. w/ flaggy parting,
Thin beds 1/2 to 1 cm
Thick; upper half dominated
by medium scale & rough
X-bedding.

1.0 Top of "# 1 SS",

2.58 Base of "# 0" SS. & base of
"Cody Road" Type section
of Hickey et al, 1986.

Loc 9810 Li 6/20/98

Limestone Paradise Loc 9716

Center S¹/₂, NE¹/₄, Sec 32, T. 58N, R. 100 W
Park Co., WY.

Coal P.C. Throat of MAIN

Above ~~80m~~ 80m SS M2 SS

Micrite concretions
separated by about 2-3m.

These are gradational
both vertically &
laterally to a laminated
limy shale.

Laminae are oft-w
rippled or flat.

Photos - 1 of Limestone Paradise
2. Detail of basal contact
of ls. con.

About 1.5m below top of
cones "throat" like burrows
occ. in a ripple drift

9810 (CONT)

SS. †

Sec. 9810

Detailed section through
80m Cycle (Roller Derby)

9810 a one sample labeled
9810 3a

AQUATIC
a = PLANT horizon 0.3m
below CARBONATE rich

UNIT #3 of SECTION

0.2 below downcutting
calc. channel

IN SECTION

1.6 - 1.1. PLANT beds

Charophyceae

MONOCOT lvs.

Mollusks (PULMONATE snails)

Fish scales

1 poor *Cercidiphyllum*
leaf fragment

9811 Epiphany Pt Section

9711

level in

Sec.

Sample levels plotted on Sec. 9711

Sample 9811-01

54M

Micrite above The
1st Council

Sample 9811-02

65M

Ferruginous micrite.

Ripple marks sinuous
ripple drift 185° (uncorr.)
Secor reading 213° just below
1st.

Sample 9811-03

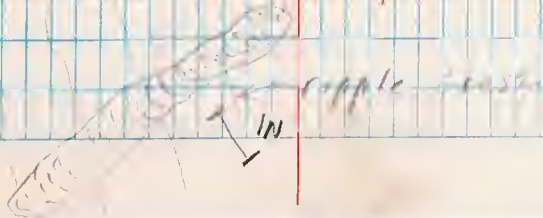
micrite above 110 SS or
Hallelujah ~~SS~~

Top of Hallelujah ~~SS~~

strongly ripple marked

+ w/ large burrows

+ horizontal pipe con.



Some burrows 1" in diameter.

level 1171 Thin br. lumpy
ss. laterally w/ orange
wh sandy micrite

concs. to 3' in diam.

Sample 9811-05

9812 CONTINUATION of 9711

Epiphany pt. SECTION

IN NE, NW, Sec 32, T58N, R100W, PARK Co.

START AT TOP of 130' SS. WY.

EIM BASIN, NW QUAD. 712⁹

9813

~~Sec 14~~

- D

NW¹/₄, SE¹/₄, NE¹/₄, Sec. 14 T57N., R16W
~~OT~~ Park Co., WY.

Fluvial Mbr of F. V.
Fm.

Tiffanian

Sequence of drak TAN
to grey mudsts.

w/ sideritic nodules
and lenticular channels
of ss (ind. x bedded.)

Correlation of SS. Units.

- #2 Blazing SS.
#1 Rosetta (?)
#0 130 \ Hallelulah II \ 22 JPL
M-1 110 m \ Hallelulah \ (Piss) PUB
M-2 \ 80 m \ Roller Derby (?) \ Ac(?)
M-3 Council / Double cross

9814.

6/21/98

CAPSTONE BUTTE

NW¹/₄, SW¹/₄, NE¹/₄, Sec 3, T 57N, R 100W

#1 SS CAPS BUTTE

Park Co., Wyo.

#0 SS FORMS APPROX.

ON ELK BASIN

NW 7¹/₂.

Mapped.

9815

6/21/98

Hill 4905 SW, NE, NE, Sec 3

T. 57N, R. 100W Park Co.

SW 1/4, NE 1/4, NE 1/4, Sec 3.

Micrite 0.5m thick below
a rusty ferruginous cov.

x bedded ss 0.25m thick.

Equated w M-2



M1

9216

Center, W line, NW¹/₄ Sec 2
T 57N, R 100W, Park Co., WY
Eik Basin NW⁷/₂'

Sideritic conchs above M3

Sandy, sideritic micrite
between M3 & M2

Top of lower Council SS

180° ± 160° (uncorr decl.)

1 m thick micrite below
lower Council

NOTE M3 should occur
in Tel poles c on road to
SCORPION GAP. from
Crossing labeled (1)

9817

On MILKITE ridge

SE $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 2, T 57N, R. 100W

M-8 of Council 15 M3

ELK BASIN NW. 7 $\frac{1}{2}$ '

9818

6/22/98

Shell bed in upper Lebo or
Scorpion Hollow Rd.

S

9819

6/22/98

Fine Dry.

Top of Ridge, Scorpion Pass.

MICRITE Ridge Bed. (ls.)

becomes less well defined
from its high pt on
ridge about 400' W of
Road X-ing of ridge.

Strike of bed abt 118°
MICRITE in IT now
punky & laminar
SS is thinning.

Tabulariry of section
below M-3 is local on
order of a few kms. NOT
basin-wide

9820

Double Cross SS

Dip on top of JAPRV
SS 8°

9821 ~~SHORT~~ ^{SHORT} GRASS POINT
LITTLE NOSE SET.

Rod notes

AT 8m Turned at NFL
dip on level 50 TASH

AT 66.87 Reduced dip to
 $3\frac{1}{2}^{\circ}$ SW

6/23 Resuming measurement of
on 9821 on #0 NW 24
Short Grass Lunch Bowl.
Dip now 6° SW

Rezeroed on top of #M1

9822

6/23/98

DN #1 SS IN SW, SE, Sec 11
T57N, R100W, PARK CO., WY.

ELK BASIN, NW $\frac{7}{2}$

INTERVALS between 0 - #1 - #2

Very thin, NO MICRITES

ONLY LIMEX SITST

SS RUSTY, ferruginous
CONCRETED & Channel
bedded

This is the RUNNING OUT
of the upper sequence
southward

NO MICRITE IN #1 & #2

Vector on trough
As bed in seq. in #1
90° (uncorr.) Vector on Trough

First fluvial channel ss
appears

9821 Extended walking toward
top of section at 9823 down dip slope.

Top of #2

occasional thin
micrite pods in 0.25
m above it on
dip slope

Top of section

First fluviat ss

1.7 m above #2

med gr. brown lenticular
& bedded. 1.16 m thick.

This is top of Sect 9821

This is fluvi. mbr

Obs. of micrite on #2 contradicts
obs of no micrite made initially
at 9822

9823 top of fluvial
ledge at top of Sec. 9821

Short Grass Point.

NE, NW, Sec 14, T 57N, R100 W,
EAR PARK Co, NY.

See NOTE ON TOP of Sect. 9821
ON PREVIOUS PAGE

9824 Lake Shore Draw

Southernmost outcrop of
Belfry Member - 0 bed.

Three thin ledges of
Flaggy TAN SS to 0.25m
thick interbedded w/
CALC SHALE, laminated.
whole interval ~ 2m thick
of 0.

Immediately above top SS
ledge is typical soil
profile + lenticular SS
+ siderite nodules of
Fluvial mbr.

12° SE Dip.

NW corner, sec 30, T57N, R99W
EIK BASIN 7'12
OUTCROP IN DRAW.

9825 DRAW ON CENTER W LINE
Sec 30, T 57N, R 99W, PARK CO,
WY.

ELK BASIN 7'12 Q.

TYPICAL FLUVIAL SEQUENCE EXPOSURE;
NO TRACE OF LACUSTRINE MBR.

9826

6/24/98

On Divide between S &
N Fork of Long Draw
S. Facing slope

At base of Double X
micrite

SW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 8, T 9 S, R 23 E,
Carbon Co., MONT.
Long Draw 7 $\frac{1}{2}$ Quad.

9827

6/24/98

NE 1/4, SW 1/4, Sec. 31, T 8 S, R 23 E,
Carbon 60, Mt. Long Draw 7 1/2' Quad.

PLANTS in lign. seq.

with grade upward
to a micrite in 1 m.

MICRITE 1 m THICK

Plan + s ~ 0.5 m above

top of Council ss.

(Double X)

PLANTS *Limonium phyllon*

SOUL. 7

Cercid (poor
leaf frags).

9828

NW 1/4, SE 1/4, SW 1/4
Carbon Co., MI.

6/24/98

Sec. 31, T. 8S, R. 23E
Long Draw 7 1/2' 9

Shooting from top of

Double X to top of

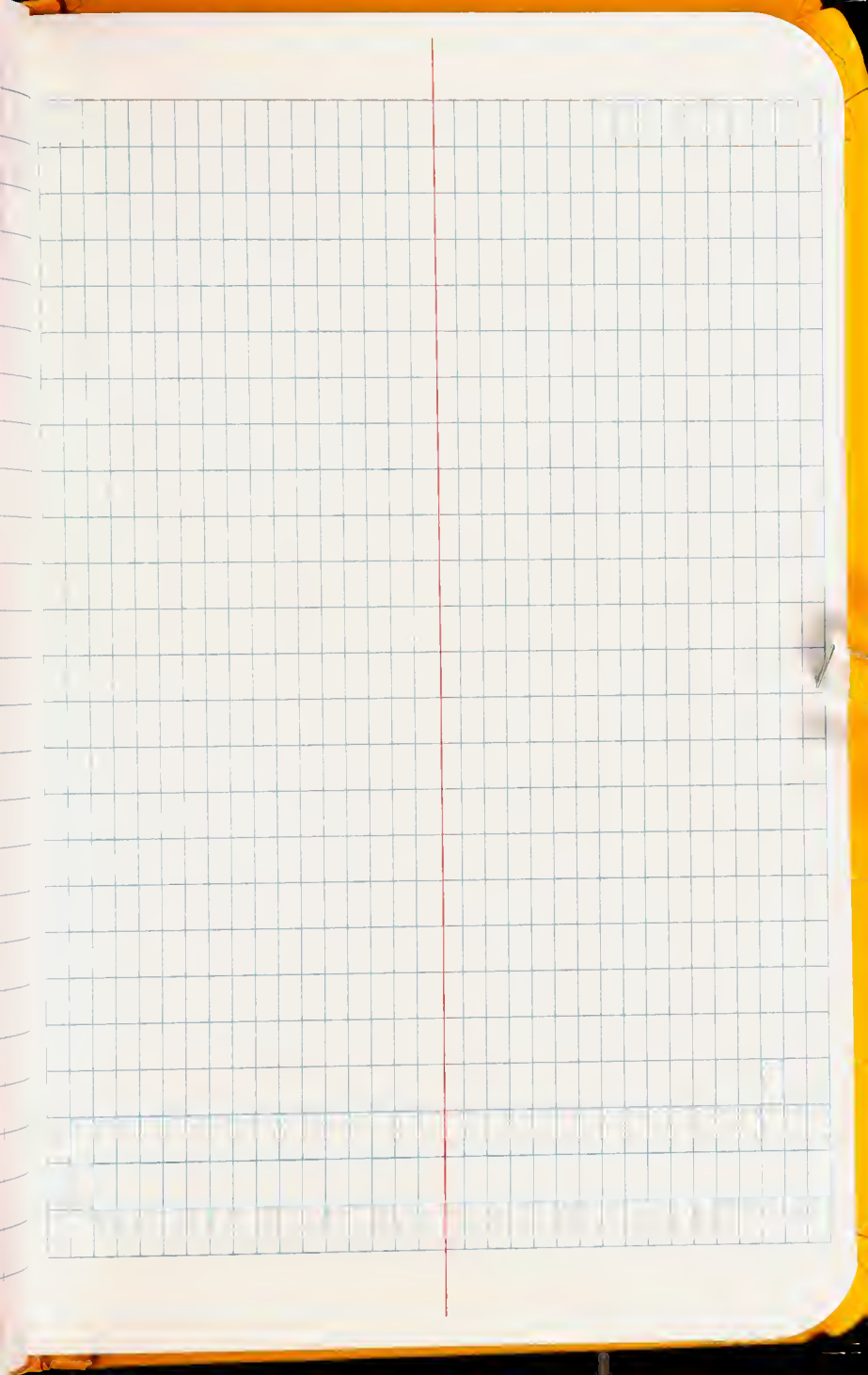
Escarpot SS	4.0 HI	top
Bric	3.8 HI	

HI @ 5.5'

Escarpot head loose
with wear being in
a dir of SS.

↓
variable





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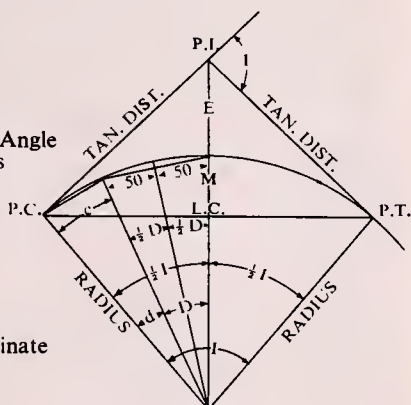
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CURVE FORMULAE

- D** = Degree of Curve
1° = 1-Degree of Curve
2° = 2-Degree of Curve
P.C. = Point of Curve
P.T. = Point of Tangent
P.I. = Point of Intersection
I = Intersection of Angle, Angle between Two Tangents
L = Length of Curve, from P.C. to P.T.
T = Tangent Distance
E = External Distance
R = Radius
L.C. = Length of Chord
M = Length of Middle Ordinate
c = Length of Sub-Chord
d = Angle of Sub-Chord



$$R = \frac{L.C.}{2 \sin \frac{1}{2} I} \quad T = R \tan \frac{1}{2} I = \frac{L.C.}{2 \cos \frac{1}{2} I}$$

$$\frac{L.C.}{2} = R \sin \frac{I}{2}, \quad D 1^\circ = R = 5730, \quad D 2^\circ = \frac{5730}{2}, \quad D = \frac{5730}{R}$$

$$M = R (1 - \cos \frac{1}{2} I), \quad = R - R \cos \frac{I}{2}$$

$$\frac{E + R}{R} = \sec \frac{I}{2}, \quad \frac{R - M}{R} = \cos \frac{I}{2}$$

$$c = 2 R \sin \frac{1}{2} d, \quad d = \frac{c}{2R}$$

$$L.C. = 2 R \sin \frac{1}{2} I, \quad E = R (\sec \frac{1}{2} I - 1), \quad = R \sec \frac{I}{2} - R$$

Minutes in Decimals of a Degree

1'	.0167	11'	.1833	21'	.3500	31'	.5167	41'	.6833	51'	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

Inches in Decimals of a Foot

$\frac{1}{16}$	$\frac{3}{32}$	$\frac{1}{8}$	$\frac{8}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729
1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

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