

- ① chopper time
- ② 106A GEOL + 1002
- ③ ANOTHER CLIFF STUFF

TND

- | | | |
|----|---|-----------------------|
| 2 | - | 23 |
| 3 | - | 6.5 |
| 4 | - | 0.0 US |
| 5 | - | 0.0 US |
| 6 | - | 58 |
| 7 | - | 5.7 |
| 8 | - | 3.1 |
| 9 | - | 3.5 |
| 10 | - | S.O. NO PILOT 1/2 DAY |
| 11 | - | NO PILOT |
| 12 | - | NO PILOT. |

a product of

J. L. DARLING CORPORATION
TACOMA, WASHINGTON 98421 U.S.A.



LEVEL

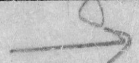
NOTEBOOK NO. 311

018623

P. DEAN

R45D 109 → 238

10 August 1975



Also R45T-1346 → 1357

10 Aug: RECCY.

STOP 1 SALINE RIVER FM

-SS & sh in ostep cliff 100FT high
Salt casts & mud cracks
oolites?

RUSP-109R - rusty w. ss

RUSP-110R - green-grey silty sh w mud cracks & salt x/casts
Sample

RUSP-111R - greenish, silty sh

RUSP-112R - wkly rusty eg-ss

RUSP-113R - blk sh sample

RUSP-114R - buff ss w maroon shaley partings, ripple marked
Sample

115R - wkly rusty dm

116R - same rock - more rusty vesp -
Sample

RUSP-117R - gn-purple shaley eg Sample

RUSP-118R - purplish, friable silty ss

119 }
120 } → see next page
121 }

STOP 2 Corcajou Canyon Falls

H5

RUSP-122R - rusty ~~little~~ ^{MT Cap} ss

123 - BLKSH 20FT above cu-bearing bed

124 - Cu stained ss - definitely bedded cu - ~ 0.1% over 2FT - traceable out of site in 2 directions ~ at least 100FT long. Clean white qtz arenite

125R - rusty blk shale band 50FT above Cu band.

R45P-126R - SS w. possible
Cu stain + lotsa glauconite

127R - sin glauc ss. w
Cu stain?

128R - FCT rck of blk,
atrose pyritic hard stuff.

129R BLK SOOTY SH
From ~ 100-150 FT STRAT.
ABOVE Cuiferous horizon

STOP 3 LOWER PORTION OF HS

R45P-130R - maroon
concretionary shale -
see photo C-1

R45P-119R - green band from
maroon shale

120R - pyritiferous SS
FCT - probably ~~the~~ Katherine Fm

STOP 4

DEVONIAN SECTION

R45P-131R - greenish grey
sh - could be Hare Ind or
Home Fm

132R - Home Fm blk sh
w. brachiopod Fcfs

133R BLK Fe-stiferous
LS w. pyrobitumen, Home Fm

134R - Bone Rk Bx

135S - SILT FROM ROSTM
STREAM

STOP 5:

136R - HK1 SS - marve
fg

137R - slightly rusty
SS cg. (SSdash)

138R - HK1 SS w yellowish
greenish coatings on
bedding planes.

R45P-139S - slightly rusty soap

140R - basal cg from
base of Hku?

141R - blk sooty
~~gmpk~~ hem. rich ss
from Hku not in
place but close.

STOP 6 - Little Dal

R45P-142L - rusty soil
from top of Little Dal

R45P-143R - orange w.
pale grey-green ds.

STOP 7 - Rob's traverse near
my STOP 5

R45P-144R } Hematitic
R45P-145R } ss
samples.

11 August: FC CLAIMS

- Lotsa Snow!

- went to Palmer Lk to visit Mike - he used our chopper for hopping to east & S. Rob & I looked at FC & vicinity.

Showings is small but flashy by filling of red & green sphalerite & barite in probable collapse bx. No wider than a few feet and seems to not continue far in any direction. Barite continues for a couple or few hundred feet.

12 August

TRAVERSE IN HS + Little Dal

106A-10

RYSR- 146R } pyritized H5 from
147R } nr contact w. L.D.
148R } (ABOVE D.E. Sh)

RK sample - edge-wise ds eg from
near base of D.E. Sh.

149L - sooty sh soil from
below D.E. Sh

150R - py blk sh from 50 FT
below D.E. Sh.

151R - glauc. sh band
below massive ss unit 30 FT
thick - could be top of HKU or
bottom of H5.

photo _____ -16- collapse
structure in Little Dal Fm

152RG - gossan FCT from
below where EOF crosses ch

153 -

154 S }
155 S } SILTS at main fork in
156 S } creek

157R - slightly rusty, bx
grey ds. Beer Rock ISx?

158RG - gossan FCT from
2nd ch

159R - rusty Di shale

13 Aug. DODO CANYON

R45P-160R - py. blk sh - HS
just below DE sh

R45P-161R - rusty quartz sand nodules
below 160 HKU OR HK

162R - typical Koth Fm
purple ss

163R - atypical K Fm with
purple spots

- hand spec of typical
K Fm

164R - hem con ss
from K Fm

165R - blk sh from K Fm

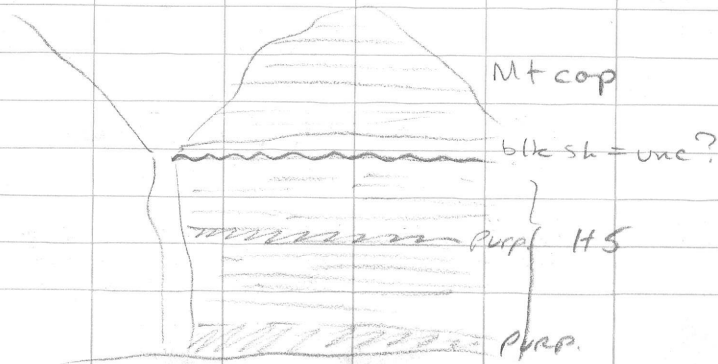
166R - rusty w. quartz
from K Fm

R45P-167R - rusty blk sh
from top of K Fm

168R - ss FCT prob
K Fm trace py & ep?
glauc. w. rounded
mg quartzite.

169R - py ss Alt
Unit? K Fm or
Mt Cap.

photo 30 - red HS at base
to LE Mt Cap at top
both units are perfectly con.
& there is no sign of angular uncat
except for thin sh band:



Presence of 500,000,000 yr
unconformity between H5 and
Mt. Cap does not seem credible

R45P-170R middle of Mt Cap Fm
py. ss

171R - glauc brn ss

hand spec - ls bed from Mt Cap

172R - greenish sh from
base of EOF6

173L - pink, unconsolidated
gypsiferous mudstn from
nr top of Saline River Fm

174R - salmon pink silty
gypsum nr top of
S. R.

175R - grey silty band
(por. ls) from mid
Saline R.

R45P-176R - grey, gyps cemented
qtz ss. mid S.R. Fm

177R - blk sh from
nr top of S.R.

178R - oily smelling
blk sh from
nr top of S.R.

14 Aug 1975 - Upper Canyon of
Carcajón River.

- Fall zone in sandy ds w
trace of cp w. qtz & cal in
small vug.
Large magnitude ripple
marks.

- Canyon is mapped as HS.

- more cp on joint or
fault surface

R45P-179R - blk sh from
top of exposed section

180R - blk sh from
lower in section ~50 FT

hand sample 1 - HS w oolitic?
texture

R45P-181R - qtz ss w
grn sh fragments ~20 FT
above highest red mudstone
bed in HS d.e. sh

182R - ss w siltstr clasts
(cg) w pyrite & cp? No Custer
from cg bed a few inches
thick. Sample.

183R - from underlying
brittle shale, grey to pale
greenish grey in color -
averaged 2 FT below 182g
also with finely divided py
throughout

hand sample 2 - red mudstone w
anomalous red ct granules

" " 3 - red ct granule ss

- both from ~15 FT
stratigraphically below py bed

R45P-184R - sample across
2 FT of higher pyritic sh
bed

185R - massive py.
band ~ 1 FT wide ~ 20 FT up

- py rich beds occur
across ~ 25-30 FT OF SECTION,
beginning about 10 FT
stratigraphically above
highest red sh in H5

186R: sid, py, cal &
remob material from
X cutting veinlet

- 15 Aug 1975. Loretta Canyon

Photo 17 - Franklin / Katherine fm
Contact 96D-13

R45T-1228R - blk shale
band in upper portion of
HKU

1229R - reddish
hem from top of HKU

1230R - green sh
band imm underlying 1229R HKU

Mt Cap fm? 1231R - rusty
PLACE Not in
but close - O.B.
covered,

1232 - missing

1233R - Mt Cap fm?

bright gm sh w minor py
(not Cu stained)

R45P-187R - green friable
from Mt Cap fm

R45P-188R - glauc ss w
py - Mt Cap

R45P-189R - soft
friable green ^{py} from
Mt Cap

190R Thin bed
of hem cemented cg -
could be uppermost of HKU

191R - rusty w.
greenish sh from SR fm.

192R - blk sh
band from top of Mt Cap -
contact w. SR

R45P-193R - S.R. Fm -
brn siltstone.

194R - S.R. Fm -
mauve ds orls w shale
partings.

195R - S.R. Fm.
black bituminous gypsiferous
siltstone

196R - red mudstn
from top of S.R. or base
of Fm. fm.

R45T - 1234R → 1241R

- cross section of
Saline River from Mt
Cape contact to contact
with overlying EOF

16 Aug: BEAR ROCK

RUSP-197R - greenish
gyrogonous siltstone
From S.R. fm

Also - hand sample w
Salt XI casts.

SE flank of Bear rock
~ 1/2 - 2 mi from
Mackenzie River

Anthea's soil line
starts here.

RUSP-198R - more
greenish gyp siltstn
From same step

Anthea sample 1247 500ft
just 1246 - small stn

1248 - 1000ft beyond
last seepage

1249 - midflow of mainly
Bear Rock Bx ls, but
Saline River steps up the
valley (within the drainage)

RUSP-199R - ct cg w
lotsa py - from beach
of Mackenzie at Bear Rock
probably Cretaceous
not rounded

1250 → 5B - see map

1254 - set from small
stream draining nose of
Bear Rock

1255 #56 - waxy seep 500ft
dn from last.

1256 B - seep on beach - strong
smell of H₂S

RUSP-200 }
201 }

gossans

Rk Di
Vermillion ck

coming out of Dev? or
Mesozoic vt 1/2 mi W of
Bear r/c

→ sent for analysis

17 Aug: nr. GSC Section MQ-2-
Franklin Mtns

RUSP-202L - soil from
outcrop of S.R. fm

203R - rusty Saline River
fm.

204R - gyss. & dm
cemented qtz granule ss

205R - rusty S.R. fm

206R - mud chip cgs
py.

207L } GEOCHEMICAL
↓ } CROSS SECTION
211L } OF S.R. fm
FROM TOP TO
BOTTOM

212S - SILT DRAINING
SR fm + Franklin fm

213RG - gossan FCT
from sm ck as set.

214S }
↓ } SILTS - SEE
216S } MAP.

18 Aug: 107A - ~~7~~ 7

Tron in HSg.

photo — 1 - Katherine Fm, HS,
x Eof

Saw of Andy Ck 106A

R45P-217R - gossanous
limb from L Fm

218R grn glauc ss
from HS near top.

219R grn to purple
shly ss. HS

220R purple dom sh
HS

221R greenish
yellow to rose sh

R45P-222: py ss

Photo S - mud cracks
in Eofb.

223 - grn ss w.
marve sh partings. Small
enh. py xls throughout.
- probably HS or base
of L.D.

2245 - silt from
small rusty seep at outlet
of Lk under air by HS.

OTCP OF HSg - See map
for location - gypsum
in HS is much different
from that of Saline River -
all grey, all gypsum, finely
laminated. No salt or casts
shale, ss or other impurities
except possibly fine clay
diss through gypsum.

RUSP-225- typical
sample of gypsum

226- gypsum with
thin rust band

227 - flt from ck -
probably from EOFb.

228R - EOFb -
ssw elongate blebs of
py & 2^oqtz

229R ssw
shale partings & mud cracks
greenish to purpleish

19 August: GSC Section U-13
(96D - top of Little Bear)

R45P-230 - Sandy sh w. Lotsa
graph[?] on bedding planes
HKU

section:



hand samples - stream ds from HKU
qtzite from HKL

Mt Cop Fm

R45P-232 → 235 - all
pyritic blk sh samples
from Mt Cop. Most pyrite
is in a few narrow bands
4-8" thick. Lotsa graph.
& up to ~ 10-15% py in some
bands. Could be cc but
no cu stain. One small
grain of Cp in a fracture
with cal & dm suggests

that the rx are at least
weakly cupriferous.

S.R.Fm covered in
area of section.

20 Aug: Section on Katherine Ck
96D - Starting in
Mt cap ~ 2 mi below falls

R45P-236R py bed w.
blk sandy sh Mt Cap

237R - rusty seep
from between bedding
planes nr bs of Mt Cap

238R - Mt cap gtz
arenite w glauco or chl in
matrix, occ py grains

R45T-1346 } blk sh
1347 } Mt cap nr
bs
1348 - py Mt Cap
1349 - sooty incorp.
sh band w greenish
efflorescence & minor
rust

1350R - brownish sh
band from top of Mt Cap nr
grad boundary w. Sabine River

1351R - soft greyish
sh - still top of Mt Cap

1352R - 6 ft sand
above - gtzs with
fine greenish grey
matrix could be
partly gypsum cementation
& prob start of
S.R.Fm

R45T-1353R - greenish
gypsiferous? mudstone
from base of S.R. Fm.

-1354R - pinkish & grayish
gypsiferous mudstone
from middle of S.R. Fm.

1355R - rust zone
in Δ at creek level \sim
50-100 FT below highest
red mudstone horizon
S.R. lie - top of S.R.)

1356R - grayish sh
from S.F. above highest
red bed in S.R.

1357R - blk gray sh -
base of F.M. Fm.

1975 REPORTS

OZ } WAYNE
 TART }
 KIWI } LARRY
 UG } ROB
 HOT-ID ← IF WARRANTED } LARRY
 CLOE }
 GREMLIN } MYSELF
 ALE }
 UUG }
 WILL }

REGIONAL OEX SUMMARY
 REPORT

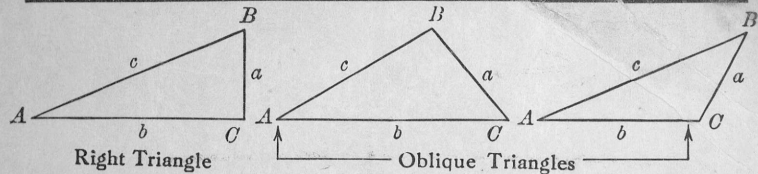
PROPOSED EXPLORATION FOR 1976

1976

A FURTHER WORK IN
 CARCASSON AREA - geol. prospecting
 in selected areas - possibly using
 flycamps & casual 206 or contract
 B-47 for 1 month

B WORK IN RD RIVER SA
 & GRIT? IN DAWSON AREA - contract
 47 or casual 206 from May of Dawson
 FOLLOWUP MAINLY.

C LAKE BOTTOM SAMPLING IN
 SELECTED PORTION OF GOULBURN, EPWORTH
 OR SHALER FM., + GEOL RECCY.



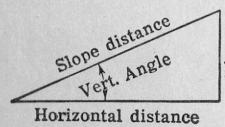
Solution of Right Triangles
 For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\operatorname{cosec} = \frac{c}{a}$

Given	Required	Formulas
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B, c = \sqrt{a^2 + b^2} = a \sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B, b = \sqrt{(c+a)(c-a)} = c \sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90^\circ - A, b = a \cot A, c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90^\circ - A, a = b \tan A, c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90^\circ - A, a = c \sin A, b = c \cos A$

Solution of Oblique Triangles

Given	Required	Formulas
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}, C = 180^\circ - (A + B), c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}, C = 180^\circ - (A + B), c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180^\circ - C, \tan \frac{1}{2}(A - B) = \frac{(a - b) \tan \frac{1}{2}(A + B)}{a + b}$ $c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a + b + c}{2}, \sin \frac{1}{2}A = \sqrt{\frac{(s - b)(s - c)}{bc}}$ $\sin \frac{1}{2}B = \sqrt{\frac{(s - a)(s - c)}{ac}}, C = 180^\circ - (A + B)$
a, b, c	Area	$s = \frac{a + b + c}{2}, \text{area} = \sqrt{s(s - a)(s - b)(s - c)}$
A, b, c	Area	$\text{area} = \frac{bc \sin A}{2}$
A, B, C, a	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL



Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = $5^\circ 10'$. From Table, Page IX. $\cos 5^\circ 10' = .9959$. Horizontal distance = $319.4 \times .9959 = 318.09$ ft. Horizontal distance also = Slope distance minus slope distance times (1 - cosine of vertical angle). With the same figures as in the preceding example, the following result is obtained. $\text{Cosine } 5^\circ 10' = .9959. 1 - .9959 = .0041. 319.4 \times .0041 = 1.31. 319.4 - 1.31 = 318.09$ ft.

When the rise is known, the horizontal distance is approximately:—the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft. slope distance = 302.6 ft. Horizontal distance = $302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.

