

RECORD



F

64-2



Golden Valley

July 20, 1964

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7.2

massive, well
irregularly massive
S175T
Dips Annually to
S 50° W to A
to 70° W
Then to 10° - 20° W

8.6

N-1 Lignite
1" here
but 10' to west 1'
thick & dipping to
S 15° W
No bedding out
S 15° W to A
IT.

9.6

massive, S 15° W, MILACON
S 15° W S175T
10° W 1/2

12.2

Mollusc lens



1870
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 2097
 2098
 2099
 2100



16

Mid interval ...
 N-9. SITTY CLAY, mic (1%)
 MASSIVE ...
~~7h ...~~ ... 10A 7/4
 ...
 imp.

... LIMONITE STAINING ON
 JOINTS 10A 7/4 & 5Y 7/5

18' MINUTE limonite spherules
 ...
 ...
 SITST. Fr. col. N-8

wh color ...
 10YR 7/4

20' N-8, 7R 4/6, 10YR 8/6
 v. SITTY CLAY
 MASSIVE with min. h.m.
 spherules abt 5%
 mic x ceods abt 1%

21 SITST. MASSIVE N-8
 wh @ 2/0 ...
 10YR 6/5 + N-8

1900 - 2000 ✓

11-2 ...
...
1000 ...

11-1178 ...
SOME ...
9 ...

wh 0010 ...
... 5/10/1

...
2 ...
...
...
...

21 ...
...
...
...
...

...
...
...



28' ... irregularly fracturing
cherty, massive sh.
Upper ...

→ 29. 5y 4/11 massive
cherty, irregular
sh. ...
Plant frag.
Dicotyl. ... wood frag
Sey. fern.

30' ... 27'
... of ss.

34.5. ... massive ...
... clay
... ss

35' ... sh.

35.2 ...

36. ... (270)
cherty sh.



10. 2000 ft. ...
 ...
 ...

11. 2000 ft. ...
 ...
 ...

12. 2000 ft.

13. 2000 ft. ...
 ...
 ...

14. Very mixed ...
 ...
 ...

15. 2000 ft. ...
 ...
 ...

Set 1-201 ✓

46.5 do 42.5 exc.
EXPLANATION PLAINS
mic, ABI 77.

46.5 do 42.5 exc.
FOLIOLETS NOT SEPARATE
LIMB ST. 1/4 inch each side.
10 yr 6/4

47. do 46.5 BUT SUP
BLEBS APPEAR

49. 10 yr 6/4 X LAMINATED
SS. do 46.5.
X LAMINATIONS SOME
NOT LAMINATED.

SS. IN UNINDENTED

51. do 49 BUT NOT X LAMINATED

52 do 1/2 inch each side
10 yr 6/4



15'
18'

21'

24'

27'

30'

33'

36'

39'

42'

45'

48'

50 - sandy, fine d. brown
N-9 w. 200 yds. S

51 - sandy, fine d. brown
wh color 100 yds S

52 - silt 2/3 ver x
N-9 w. 200 yds S

wh color silt 1/4



50 - 1911 - 1912
1911 - 1912
1912 - 1913
1913 - 1914

1914 - 1915
1915 - 1916
1916 - 1917
1917 - 1918

1918 - 1919
1919 - 1920

1920 - 1921

1921 - 1922
1922 - 1923
1923 - 1924

1924 - 1925
1925 - 1926

1926 - 1927
1927 - 1928



72'
 75' A

- 74' vfg, MISC 2%
 misc. bottled, ledge
 of well indicated,
 carbonate, etc. etc.
 75' 200'

78'

81'

84'

87'

90'

93'

96'

99'



1872

1873

1874

1875

1876

1877

1878

1879

1880

1881

1882

1883

1884

1885

1886



116 Br grey clay
with blebs of white

117 ~~light grey~~
~~clay~~

118 ~~light grey~~
~~clay~~

119 $5 \frac{1}{2}$ ~~light grey~~ 117

LA...

114

120 Sh of p...

-tel

121

122

123



120 100

121 100 100 100

122 100 100 100

123 100 100 100

124.2 100 100 100

125 100 100 100

126 100 100 100

127 100 100 100

128 100 100 100

129 100 100 100

130 100 100 100

131 100 100 100

132 100 100 100

133 100 100 100

134 100 100 100

135 100 100 100

136 100 100 100

137 100 100 100

138 100 100 100



135. M... ..

135. M... ..

135.

135.

137.

✓

1881

1882

1883

1884

1885

1886

1887

1888

1889

1890

1891

1892

1893

1894

1895

1896



170 1000 1000
1000 1000 1000
1000 1000 1000
1000 1000 1000

170 1000 1000
1000 1000 1000
1000 1000 1000
1000 1000 1000

170 1000 1000
WITH 1000 1000
1000 1000 1000
1000 1000 1000

170 1000 1000
1000 1000 1000
1000 1000 1000
1000 1000 1000

170 1000 1000
1000 1000 1000
1000 1000 1000
1000 1000 1000



173 - No. 1000
1957. 28/11

174 - No. 1000
1957. 28/11

175 - No. 1000
1957. 28/11

176 - No. 1000
1957. 28/11

177 - No. 1000
1957. 28/11

✓✓

Received of _____
the sum of _____
for _____

July 21, ✓

LOCALITY L-21-1

SF $\frac{1}{4}$, NW $\frac{1}{4}$, Sec 21, T10N R93W

Present + ...
S.V.

0-6' F.O. A br grey bedded
med S.A. micaceous silt
ss. Top 4 bedded
Limonite ss. ss thin siltst.

6' S.V. TRANSITION to
dark grey laminated
micaceous siltst.

12' Dark grey well bedded
siltst. (3") clay

14' ...

17' Light grey silt & clay
with mic lim spn.

... x ch. (10x) crumbly



1880-1881

L-21-2

S 1/2 Sec 20 T 40N R 50W

Lower, mbr. 5' V
25' Capel soil in
field - soil of a road

On N side of road
at intersection of Sec 11
& section 20



a few more good ones
 at the corner of bit
 20nd min of Lim. sp
 present in it
 of series of 24' thin

Sections from 1-12
 all with thin layers

L-21-3

SW 1/4 Sec 31 T 142N R 93W

30 foot section with
 Brownish sandstone
 of F.V.
 Bottom of

1.5' fine into
 very calcareous, somewhat
 micaceous fine sand white
 to light grey ~~ss.~~

20' vfy ss.

V

26. Massive light grey sandstone

7' thick

Top of bed

Top of bed

Top of bed

Poor section

L-21-4 - 1/4 sec 21-4 ch

7' thick

SI 5' thick

Top of bed

L-21-5 - 1/4 sec 21-5 ch

7' thick

Top of bed

Top of bed

✓

17W side of site 53 T 1111 174W
of several 5' ranges
100.

8:11 AM
A 200.
from NEAD - bits of
T 1111.

L-21

11-10-1957
copy of 10/10/57
SL 10/10/57
AMP.

July 23, 1964 ✓

Section 1

1. 10' - 12' - 13' - 14' - 15' - 16' - 17' - 18' - 19' - 20'

21' - 22' - 23' - 24' - 25' - 26' - 27' - 28' - 29' - 30'

31' - 32' - 33' - 34' - 35' - 36' - 37' - 38' - 39' - 40'

41' - 42' - 43' - 44' - 45' - 46' - 47' - 48' - 49' - 50'

51' - 52' - 53' - 54' - 55' - 56' - 57' - 58' - 59' - 60'

61' - 62' - 63' - 64' - 65' - 66' - 67' - 68' - 69' - 70'

71' - 72' - 73' - 74' - 75' - 76' - 77' - 78' - 79' - 80'

81' - 82' - 83' - 84' - 85' - 86' - 87' - 88' - 89' - 90'



G.V.

5' 5YR 5/1 ...
(1/2") ...
... 170

7' A ...
M-7 ...
470 SITST. LAMINATION
plav. ...
Samp. L 23-1-1

10 5YR 5/1 CLAY ...
SMALL AMT of ...
...

11 ...
...
V-1

12 ...
...
...
...
...

13' M-8 ...
ST. ...
...



110 3/4 N-1

111

112

113

114



5 1/2 ft. ...

\$ 30, 2 1" layer of ...
UTST, Concretion
dip ... UTST.

30 - ...
SS with
MICA flakes

30 End of section



L-23-2

W 1/4 of Sec 22 T 14 N

R 24 W

2'

Covered
CV 25
Th 3 1/2

1'

Very fine
1' - 1 1/2'

Large
Covered
1 1/2'

3'

2 1/2
1 1/2'

L-2003



SW 1/4, NW 1/4, middle line
of sec 28 T 14N R 94W

Fort Union Fm.

1	10' 17 1/2, 2
2	11' 12 1/2
3	11' 5 1/2
4	11' 5 1/2
5	11' 5 1/2
6	11' 5 1/2
7	11' 5 1/2
8	11' 5 1/2
9	11' 5 1/2
10	11' 5 1/2

wh color to red sand

11	11' 5 1/4
12	11' 5 1/4
13	11' 5 1/4
14	11' 5 1/4
15	11' 5 1/4
16	11' 5 1/4
17	11' 5 1/4
18	11' 5 1/4
19	11' 5 1/4
20	11' 5 1/4

21	11' 5 1/4
22	11' 5 1/4
23	11' 5 1/4
24	11' 5 1/4
25	11' 5 1/4
26	11' 5 1/4
27	11' 5 1/4
28	11' 5 1/4
29	11' 5 1/4
30	11' 5 1/4

31	11' 5 1/4
32	11' 5 1/4
33	11' 5 1/4
34	11' 5 1/4
35	11' 5 1/4
36	11' 5 1/4
37	11' 5 1/4
38	11' 5 1/4
39	11' 5 1/4
40	11' 5 1/4



Centers 11 p 11 also
 Fuss 5' 5'
 G.V.

Wh. color 3.3 - 4.8 - N. 6

~~3.3~~ G.V. L.M. L.G.

3.3. 5YR 5/1 micaceous clay
 fissile & bedded with
 a slightly argillaceous lower
 contact with
 somewhat to some micaceous
 4.5 5Y 6/1 slightly silty
 micaceous clay

5.6. 5Y 7/2
 somewhat micaceous clay
 L.C. + silty

Wh. color 4.8 - 2 5Y 7/2

m.o.
 2' lo - 5 clay
 micaceous with limonite
 center color 5Y 7/2
 wh. color 8 - 12 N-8

9 5Y 7/1 cherty clay
 micaceous with silty

✓

L-23-⁴ Center sec 20 T140N R93W.

Lignite above sh layer at least
4 feet thick has burned and
formed a scoria bed.

July 24, 1904

Loc 2-24-1

~~15 20' section~~

~~15 20' section~~

~~200' section~~

~~FAIR section~~

~~Some fossiliferous~~

~~would be of great value~~

~~section~~

Loc 4-24-2

~~Dragon pit pond~~

~~NW 1/4 NE 1/4 Sec 5 T14N R9W~~

~~93W~~

Loc 1-24-3

~~15 20' section~~

~~32 45' section~~

~~NE section~~

~~NW NE Sec 5~~

~~14 N W~~

L-24-4

~~SL capping~~

~~lithology~~

~~NE 1/4 NE 1/4 Sec 5~~

~~T~~

~~T 140N R 93W~~



L-24-5

100 ft. 2' from top of
 ... with ...
 ...
 ...
 ... T 141N B 74W

Top of Br. Grey fg.
 ... on ...
 SS (F.V.) ...
 ...

AT BASE of ... on N side
 of ...
 ...
 which had slumped down
 ...
 ...

→ Samp L-24-5-1

ON Boulder of H-6 on
 BUTTE 40' ABOVE,

Stratified ...
 ... above cliff -



L-24 0 NW, NW, Sec 36, T141N
 R95W
 1/2 mi. G.V. capped by
 1.5' of filler over
 which is a thin
 1/2 in. oil
 layer

L-24-2 NW, NW, Sec 25, T141N, R95W

1/2 mi. G.V. capped by
 1.5' of filler over
 which is a thin
 1/2 in. oil
 layer

L-24-8

~~High ... hills
... SECTION
...
SW, SW, Sec 23, T 141 N, R 95 W~~

L-24-9

~~KAOLINITIC grey F.V. outcrop
with a rather ... appearance
SE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec 4 T 141 N R 95 W.~~

L-24-10

~~KAOLINITIC channel lensing
out within a distance of
1/4 mile exposed in
cut 25 NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec 36
T 141 N R 95 W.~~





L-24-11 ~~...~~

L-24-12 ~~...~~ 5

L-24-13 ~~S.V. ...~~

L-24-14 NW 1/4 - NW 1/4 Sec 11, T 142N
R 96W

L-24-15 ~~...~~

L-24-16 S.V. Channel. NW 1/4
SE 1/4, SE 1/4, Sec 17 T
142N R 96W

Feb 21 1890



2-24-17 ~~CAMELS~~ BUTTE E of N. Head.
G.V. ~~on~~ W. side of BUTTE
FAIR SECTION.

July 25 1944 ✓

Sec 4
T 13711 1' 1/2 W.

G.V. base covered in
A pit on Telephone
Tower BUTTE.

- 2'

Thin bedded ...
red. Some ...
55.

Some red ...
... ..

Some sph. ...
... ..
... ..

... ..
... ..

Some y 10 +

sec, 2 25-1



Lowville Sandstone

CAAB trash in matrix bed/pl.
Color 10YR 7/2

- 0.2 5Y 7/4 medium to fine silt
medium grained silt
Thin bedded silt with
layer of spherical
limonite & cup chert
concretions
MUCH kaolinite

Color at 2' 5Y 8/1
Some lim. concretions

25

MAINE V. silty clay, 10YR 7/2

114. Very decomposed sandstone
with some limonite
color 5Y 7/1 & 5Y 7/1

115. The A very thin bedded
silt with 1/2" x 1/4"
beds of limonite &
concretions
MAINE 5Y 7/2 for CA1b.
5Y 7/4 for limonite
FCV PROTECT 405915 115



2-2

Ind. ...
... ..
... ..

50
... ..
... ..

100
... ..

... ..
... ..
... ..
... ..
... ..

Some ...

... ..

Specs
L-2511



MAA
... ..

... ..
... ..

... ..
... ..
... ..



67

UNIT CON
 UNIT
 9 $\sqrt{4}$ SA
 11-2
 11-7

717. $\sqrt{4}$ 8
 11-2
 11-7

913- N-8
 SITST.

9. SITST. do 113-N-8

11. SITST. do 113-N-8
 SITST. do 113-N-8
 SITST. do 113-N-8

13. Chippel
 11-7



1. 1000 ft. ...
... ..
... ..

10. 7000 ft. ...
X
... ..

5. 8. -

1. 8. 5. N 8
SITS,
... ..
... ..
... ..
... ..
... ..

... ..
... ..

1. 7.
... ..



L-25-2

Dragonfly Pond

NW, NE, Sec 5, T140N, R95W
St. Marks Co.

F. U. (?)

0'

f. u. A m. l. s. 1/2
15 yr s/z (no T)
wh s/z 1/2

2.9'

Silty massive chippy
10 yr s/z sh. with
Areas st. 1/2 s/z
Top 1" st. 1/2 s/z 50% chippy

4.1'

G. V

MASSIVE 5 yr 1/2 silty
s/z, 1/2 chippy
Large pieces of s/z
fragments

5'

N-8 MASSIVE 2 1/2
s/z st.

17 N+6.5 MASSIVE
chippy s/z st.

2052 ✓

17.8 (SL) N.W. 1/4 1003-24
507/4 unconsolidated
siliceous siltstone
SIT ST. with plant
fossil impressions.
Plant fossils
in situ
507/2

upper mor

on upper surface of 2-
15
on the surface of 2-
15

507,3 massive sandstone
siltstone

2. 5-21 → with siliceous siltstone
with siliceous siltstone

22.2 507/3 shale
thin

23.5 507/4 shale
siltstone

24.1 507/2 shale, cherty

L-25-2



sh.

wh color white v.m.

5x8/1

25

Thin bedded siltstone, v. fine
non mic. ss, slightly
clayey, some ind. ss.

ab.

Exposed but prob. A ss
at base of

5x8/1-12

End of section

L-26-1 ✓

A ~~thin~~ layer of
of. sh. 10-20 ft
LATERAL CONTINUITY
- defined by 50/11 very
limy v. fine gr. mic.
cherty limestone.
The ~~rock~~ The 2 was dic
peached in x L to
with
Lateral continuity
with
with 50/11
to 50/12 INTERMEDIATE
UNWEATHERED N-7 zone.

812

7000
50

915. Highest discord
formed at 10000 ft

6V.

10.5 Wh color 90.5-12 N-7
wh. 31.5-10000 ft
with 10000 ft
to

6-20-1 ✓

Received from [unclear]
\$100.00

Received from [unclear]
\$100.00

Received from [unclear]
\$100.00

Received from [unclear]
\$100.00

Received from [unclear]
\$100.00

Received from [unclear]
\$100.00

Received from [unclear]
\$100.00

Received from [unclear]
\$100.00

L-26-1



18' 11.5' 11.5' 11.5' 11.5'
11.5' 11.5' 11.5' 11.5' 11.5'
11.5'

19' 11.5' 11.5' 11.5' 11.5'
11.5' 11.5' 11.5' 11.5' 11.5'
20' 11.5' 11.5' 11.5' 11.5'

Wh color 20.4 11.5

20.4 11.5 11.5 11.5 11.5
11.5 11.5 11.5 11.5 11.5

21.6 11.5 11.5 11.5 11.5
11.5 11.5 11.5 11.5 11.5

22.5 11.5 11.5 11.5 11.5
11.5 11.5 11.5 11.5 11.5

24. 11.5 11.5 11.5 11.5
11.5 11.5 11.5 11.5 11.5

25 11.5 11.5 11.5 11.5
11.5 11.5 11.5 11.5 11.5
11.5 11.5 11.5 11.5 11.5
high 11.5 11.5 11.5 11.5

10 200



Subrules

32 1000 2000 1000
 1000 and 2000
 1" approx 2 1/2 ft
 to 3000 3000
 through 1000
 Cl. 1000 2000 3000
 241 - 341

30 1000 2000 3000

32 2000 3000 4000
 2000 3000 4000
 2000 3000 4000
 2000 3000 4000

33 2000 3000 4000

2000 3000 4000 5000

34 2000 3000 4000 5000
 2000 3000 4000 5000

2 22-1 ✓

36.1 5/2 ...
Bl...
some ...
frag

36.3' 26.5' 10x8 2/2

56.35

36.35 10x8 5/2 LIGNITE fine
sh ...

spec. laterally ... fgs.

36.5 10x8 5x8/1
sh ...

36.5 11.5
5x8/1

38.6 1" LAM ...

Thin bedded ... 8/4 sh.

HO.2 5x8 5/2 ...
sh ...
Pod ...



11.7

11.7 2 1/2 sh 11.7

11.3 1/2 sh 11.3
11.3 1/2 sh 11.3
11.3 1/2 sh 11.3

11.8. 5h 11.8
11.8. 5h 11.8

~~11.8 5h 11.8~~
~~11.8 5h 11.8~~

11.8 5h 11.8

Here 11.8
11.8 5h 11.8

11.8 5h 11.8
11.8 5h 11.8



A4.2 1' inc incipit
 section of ...
 Gastropod ...

A4.3 Lignite fissile paper
 in ...
 ...

A4.8 ... fissile ...
 sh.

...
 ...
 ...
 ...

L-26-1-2 crushed ...
 ...

...
 3" Thick 2-4 ft dia
 ...
 57 7/8 ft ...



Car 1. Best plant frogs.

out 45' ...
... 7/2 ...
... 17 ...
... 2" ...
...
...

...
... 4/6 ...
...
... 2/2 ...

...
...
... 4 ...
...

... 2-60

... 2



50.5. ...
 ...
 ...
 ...
 50 - 232 ...
 - 1300

63 do 57' 678 X 13

64 1078 ...
 65-8
 62.8 do

66 ...
 ...
 ... 575/1 5h,
 Some limonite ST,
 ...
 ...
 ...

67 ...
 ...
 ...
 ...

72' do ...



75 10/20/10 1/2 17/20/10
fifty 6/10 2/10
bearing sh.

76

76 1/2 10/20/10 1/2 17/20/10
sh

77 - Covered

77 - 10/20/10 1/2 17/20/10
covered
with oil
10/20/10 1/2 17/20/10
10/20/10 1/2 17/20/10

80 1/2 10/20/10 1/2 17/20/10
non f.

80 1/2 10/20/10 1/2 17/20/10

7'

90 1/2 10/20/10 1/2 17/20/10
10/20/10 1/2 17/20/10



90.5 PLATEX, 10YR 6/4,
MICRO-000 270 5175T

92.5 covered.

do 90.5 except
CITATION B.P.

95.5 covered.

2 ft soil.

End Section.

221 ✓

5777.

wh. col. 11-11
N 8, 5777/6, 57-12
SITST.

11. MASSIVE, thin bedded
11-11, 5777/1, SITST. with
SCATTERED small pieces of
MAGNETITE 1%

14. wh. color sh. 11-20-15 N-8
MASSIVE 11-9, 11-10
11-11, 11-12, 11-13, 11-14, 11-15, 11-16, 11-17, 11-18, 11-19, 11-20
5777/6

11' do 11' No. 11-11 spns.

20' N-8 MASSIVE 11-11 to 11-20

wh. col. slope 11-11
5777/2

21. 5777/1 MASSIVE SITST.
which when silicified
prob, forms sh elsewhere.

L PR ✓

Color - 10 - 1

39.4 to 40

41' -
in color change to 40

42 - Very dark grey with 10-15%
marble in block. Some
small spots of white
in the J. From marble
it is a sandy clay.
Marble spots
Gyp's of white in
clay.

Clay high in gyp
at 40 to 41
Some 10-15% in
same in 42
wh. 10-15%

wh color 10-15 5/7/1

* further des. next page

1881



1881
1881
1881
1881

1881
1881
1881
1881

1881

1881

1881

1881



Stamp L-26-1-1

from 6 in above ground
24.7'

at 25.3'

L-28-1-1 A. Bud?

Canid scale.

Water lily leaves?

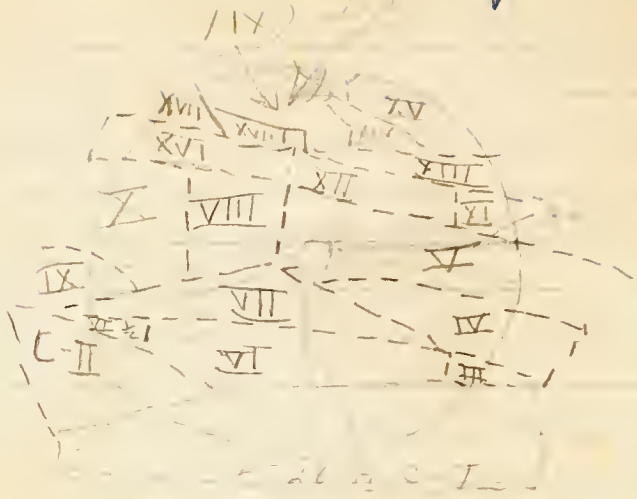
Some with a ~~diameter~~
of a radius of 6-8"

same

L-26-1-1



RAd



July 29, 1964

Loc L-29-1-1

NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec 25 T141N
R 9 SW

Fossils

L-29-1-1 from
Lower gray unit
Lower near G.V.



cc A-3-1

... ..
... ..
... ..

0

A
... ..
... ..

LA
... ..
... ..
... ..

7

6
... ..

7.0

... ..
... ..
... ..
... ..
... ..



15. Much color N-E
 Much color & small lampr.
 A massive layer of
 Limestone med. SA.
 Very ~~light~~ rich, micac
 fossils in larger
 SS. MASSIVE but with
 some ~~fg~~ of cc

16. SS. do. N-E with less
 micac, settling, micac abt
 some ~~small~~ plates
 of limestone at base

21. Slope ~~fill~~ gully fill
 MBI

~~20~~
 20 Very light grey N-8
 micacitic Almost pure
 massive SS. fg. SA.

24 do. 20'



30' 1/2" to 1" ...

30' ...
but ...
trash ...

31' ...
but ...
abt ...

34' ... do ...
...
...
... 1/2"

N- ... with ... 1/2"

31' ... but 1/2"



41 to 46

(7-CA, 2016 7 1/2"
N-4 KADIMTIC, MASSIVE
with abt 370. 1/2 in. ss. Poorly indurated.

42 to 41'

49.9

Grad contact G.V. base rb, chost
Thin bedded, N-7 ^{here at 49.9} MICACIFOL
~~thin bedded~~
~~thin bedded~~

1/2 in. ss. 2 in. ss. on
B.P. at SITST

one 3" bed of do 45 ss
in the unit.

51.2

SS 1' 36.

SS 1' 36. with
4 beds of ss. 1/2 in. ss.
2 in. ss. 1/2 in. ss.

5 X M 4/1 beds are
A. 1/2 in. ss.

SS 1' 36. 2 in. ss. 1/2 in. ss.
SS 1' 36.



27. ~~thin bedded~~ with
 some ~~thin bedded~~ limst
 a few ~~thin bedded~~
 L.T.S.T.

28.5 P.B.S. - ~~Very~~
 very clayey silty
 massive non mic.
 massive

29 - 5/11 very silty
 clay with occ.
 fossils ^{incl.} stems
 SL UNIT. INTERNAL. ~~thin~~
 hard here type SL.

30 5/11 2/1 2/1
 30.75 - 5/11 1/2 lignite

31.8 Upper mbr.
 Thin bedded sh. silty
 clay with rare ph.
 frags. [Nelimbo bed]
 Col. 5/11 ^{clay}

August 5, 1964



Sec 4-6-1

NE $\frac{1}{4}$, NW $\frac{1}{4}$

Sec 35 T 142N
R 96W

Section 35 T 142N R 96W
F.V.

Fig. 2A, very silty bedded
10YR 5/4, micaceous, 10YR 7/6
limonite stained ss. with
5YR 3/4 carb. trash in silts

2.5 10YR 5/4 Fig. 1A, mic. 12,
clayey or silty, micaceous
ss. 10YR 6/4 carb. trash

3. 10YR 6/4, silty clay
micaceous ss.

4. CT & lim. ss. present
otherwise do 2.5

4.7 ss grades into A
silty then at
A silty clay
N-2, very micaceous, 470
some carb. trash

Golden Valley →



10.7 - 2' non 17C stained edge
2"

10.4 - do 7.6. much less
aggregations
fine 1/2" to
1/4" masses
LARGE 3' of
masses at 1' to 4"
layer 2.5' -

above 11' ss 1' 1/2" in
instead

12.4
fine, N-2 non
if, 1/2" to 1/4" ss
lean well indurated
no 1/2" to 1/4" ss
+ 1/2" to 1/4" ss

13' unit grades into a 1757
N-8 MASSIVE some 100A
1/2" to 1/4" ss

14' 100A - 1757 15'
with 100A/1757

V

22.8 UNIT 600002 SYR 7/1
Y 2000 15 8 10.0
1000 1000 1000 1000
ST 20 1000

wh color sl. 2015 N-7.5

25.8. MA 1000 1000 1000
1000 1000 1000 1000
sl. 2015 wh.

UNIT 1000 1000 1000
1000 1000 1000 1000

27- UNIT 1000 1000 1000
SYR 7/1 with 1000
N-7.5

wh. color sl. 2015 N-7.5

SYR 7/1 1000 1000 1000
1000 1000 1000 1000



41.8 10286/2 fissile argillite
 shale with carbonaceous
 material abundant
 Gyp xls from
 wh color 5Y 8/1
 at 41.5 11-7

41.4 10286/2 fissile argillite
 shale with carbonaceous
 material abundant
 Gyp xls from
 wh color 5Y 8/1

41.9. N-d very fissile shale.
 Bears SALVINIA for
 8" inches starting
 at 41.9

A-1-2 → Samples A-6-1-2
 other pt frags as well
 dilts, ferns.
 water lily frags at 42.2
 large Gyp xls wh from
 this unit.
 wh color 41.9-5Y 8/1

large water lily leaves
 & salvinias.
 at 42.8.

"Water lily" leaves & fairy dells

✓

487 ...
... 577/2 ...
... 2/14

... 27 ...
...
... 2/14

...
... 2/14

488 ...
... 26/1 ...
...
... 2/14

✓

51 do 41.5

54 do Over 100 on slope
1157 ... up to 507

55 5 inc. amt. of carb
trash on apr of it
1157 ...

56 Lignite mostly color
Supports ...
56 2/2

57 5/6 Very friable, shale
bearing plant frags.
1157 ...

57.5. 57811, ^{now} ~~very~~ friable
sh. - but is chippy
1157 ...

5015-61- Lignite
Very crumbly &
SOOTY many gyf xls
N-1 to 578 2/2
with Lignite 1078 8/6



Yellow core

~~_____~~
~~_____~~
~~_____~~
~~_____~~

~~Wh. core~~

63. 2 1/2 ft. rock grade
shale from top of core

63.3 Covered

63. 2 1/2 ft. top of core
shale, 1/2 ft. top
of core



66.5 Whit. ss' becomes a
 massive clay with
 Abt 270 large
 flakes. 5y 5/1
 Sequoia frags present.

67.5 Clay becomes a silt
 with
 large mica flakes
 Then

67.6 - Very SA, massive.
 non-saturated massive,
 soft to hard, 1 sph
 containing spheres of
 white stained or
 cemented sand with
 or without, 10y 4 1/2
 5y 4 1/2

67.7 - CONTAINS VERY
 large log of petrified
 wood.
 Samp A-6-4

70 Covered,
 71.8 - wh. color 10R 4/4
 Broken pieces of 10R 4/4
 Calc. concs. containing



Sequoia 7 plant spec
frag
11-8.
A 5-1-6

AUGUST 7, 1964

SEC 4-7-1 ✓

SE, NE, Sec ²⁷ 35, T142N, R96W

Section

0'

3/26/1 silty sh
2" PL gray sh some
1/2" silty sh. 2 layers
Finely bedded

1'

Silicified wood
Wh color of slope 0' - ~~1'~~ 5/6/1
Wh. color slope 3.2 - 3.5. N-7

3'

5/6/1 thin bedded
...
...
...
Layer of ... 5/6/1 ...

3.5

5/6/1 MASSIVE sh ...
... Some ... 5/6/1
...
... 5/6/1

3.5. 1" layer of discoidal
4" dia. silicified

✓

5/25/11 11:00 AM - 11:30 AM
Meeting with 1/2 1/2 1/2

Standard - Inc. Inc.
Standard - Inc. Inc.

Standard - Inc. Inc.
Standard - Inc. Inc.

Standard - Inc. Inc.
Standard - Inc. Inc.

Standard - Inc. Inc.
Standard - Inc. Inc.

4 1/2 1/2 1/2 1/2
1/2 1/2 1/2 1/2

1/2 1/2 1/2 1/2
1/2 1/2 1/2 1/2

✓

Signature of [unclear]
[unclear]
[unclear]

Wk 2.5
5/4 2/1

~~13.2 - Discont. [unclear]
at [unclear] [unclear]
[unclear] [unclear]~~

14' ~~A~~ 5/4 6/1 SLIGHTLY SILTY
fine sh. with many
fragments, some [unclear]
fragments
6/4 1/1

15' Vfg, mll, 2/1, 5/4 6/1
SILTY, ss with
many plant frags
discs + ss.
BOTTOM 2" IS WELL
IND. L. MON CEMENTED
10' 5/4 ss.



1913 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 1914 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 1915 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2

1916 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 1917 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 1918 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2

1919 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 1920 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 1921 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2

2029 N-2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 2030 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 2031 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2

2032 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 2033 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 2034 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2

2035 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 2036 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 2037 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 2038 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
 2039 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2

20-1



1000

1000 - 1000 5/7/11

1000 - 1000 5/7/11

1000 - 1000

1000 - 1000 ~~5/7/11~~ N-7

1000 - 1000 2000 f 1000

1000 - 1000 Sh some

1000 - 1000 2000 5/7/11

1000 - 1000 5/7/11

1000 - 1000 1000 2000

1000 - 1000 5" 2000

1000 - 1000

30,1

1000 - 1000 N-7

CONCRETE 1000 2000 1000

1000 - 1000 5/7/11

1000 - 1000 1000 2000

1000 - 1000 1000 2000

1000 - 1000 5/7/11



21st 1872
 A. J. ...
 ...
 ...

21st 1872
 ...
 ...

21st 1872
 ...
 ...

21st 1872
 ...
 ...

21st 1872
 ...



37.1 24 200000 2.5 FT
S.S.

10 YR 7/3 clayey clayey
M/CAC. 7/3, 7/3.

24 200000 2.5 FT
S.S.

37.2 25 200000 2.5 FT
S.S. clayey clayey, 7/3, 7/3
S.S.

37.3 26 200000 2.5 FT
S.S.

37.4 27 200000 2.5 FT
Lower S.S.

37.5 28 200000 2.5 FT
S.S. clayey clayey, 7/3, 7/3
S.S. clayey clayey, 7/3, 7/3

37.6 29 200000 2.5 FT
S.S. clayey clayey, 7/3, 7/3

Clay with MAX leaf
frag. all over 7/3, 7/3, 7/3

37.7 30 200000 2.5 FT
S.S. clayey clayey, 7/3, 7/3

✓

1944

~~_____~~
MIL 16+ 171 - 188
188 191
191 194

194 197 200 203

4.

194 197 200 203

194 197 200 203

194 197 200 203

194 197 200 203

194 197 200 203

194 197 200 203

194 197 200 203

194 197 200 203



47.5

47.1 SVR 5/2 slightly
f. sandy STST.
mod. well ind.
NO N Calc.

Thin bedded

48.7

~~SVR~~, carbonaceous SVR
STST WITH carb wood
frags, a poor pl. frags.
Well indurated

Wk color, SVR - 1

50.6 Fissile, SVR 7/4, sh.
with carb wood frags.

52.7 Fissile, STST clay
10YR 6/2 STAINED
10YR 8/6 NO pl. frags.
same SVR as above.



65.8 ...

65.8 ...
Upper mbr.

65.8 ...
with N-1 carb frags

M

66.3 massive, ...
S/A

66.9 ...
Wh. color slope 65-69.5

67.1 ...
5 Y 7/2

69.2 ...
S/A

A-7-1-20 ...
A-VI-NI A. g. Ygodium



Faint handwritten notes at the top of the page, possibly including a date or location.

Several lines of very faint handwritten text, likely bleed-through from the reverse side of the page.

9

Faint handwritten notes, possibly starting with "1000" or similar.

11th Area - 1000
- 1000 1st and 2nd
11. 0.000

25. slightly 500
5/14 1/2 1/2 1/2

26 few poor 50m 100m



76 MASSIVE 117 do
76.

79. LIGNITE, 1/2
SYNTH. in many
places pres. pl. frags
S. Y. schre
Some free carb.

80. ? LIGNITE 1/2
PART. LIGNITE HAS
AN

H.S. - layer with fibrous
woody texture

- H.S. may occupy
a portion of the
lignite or take up
almost all of its
thickness or more

silicified lignite &
color of H.S. white ^{Charcoal}

SYNTH. outside
1/2

H.S. HAS fib. TEXT. &
druses filled with

ATZ X. SY
H.S. SAMPLE A-7-1-1



88. Thin bedded 5Y6/4
 S17ST. micaceous
 Abt 270

90 do do

92 vfg micaceous 370
 5Y8/1 ss. MIN
 indurated & app
 massive.
 see Lim nodules,

95' S17ST. 5Y8/1 with
 pods of wh. syp

97.2 Br fissile ligh sh with wh. syp 5Y8/4-1

98 10Y4/2 mottled wh.

99.5 do 92 - except
 do mica &
 top fill at base
 2"

101. 10YR 6/4 vfg ss.

Some pieces of
 thin platy wh. syp



COATED SURFACE
WATER ON APPROX
1/2 IN

NO CONTACT WITH SURFACE
P21

1/2 IN

HARD SURFACE OF
1/2 IN



ONE SURFACE LONG
1/2 IN

Aug 13,

Loc A-13-1



North of abandoned ranch

S. 1/4 NW 1/4 Sec 20 T. 21 N. R. 21 W. 9W

Lower Mor G.V. very silty
without well developed
orange layer. Instead
in lower part of orange
layer a thin bed
of yellow clay shale
comes into sharp contact
with the lower group

CONTACT F.V. G.V. ~~etc.~~

Upper 2 ft of L.M. is
blue gray graded into
white show typical
G.M. ss. with plants
& water lily zone of
L.M.

L.M. 25'

G.M. 20' TO TOP OF CLIFF

J

500

311

1

Shoreline
top of ...
v. m. s.

NE, NE, Sec 24, T142N, R6W.

0

TYPE ...
EXPOSED ...
PRINT ...
MILAC ...
SS ...

3' ...
L.S.



Few sand, s.p. f. in course
on slope

G V

7.5

Covered interval.

CONTACT BETWEEN F.V. - G.V.
IS IN THIS INTERVAL BUT
IS COVERED IN A GRASSY
BENCH. HOWEVER IT IS
PROBABLY A CHANGING
RELATIONSHIP SOME G.V.
AT BASE OR CHANNEL
CHANNEL BEDDING

7.6

Very fine

7.8

Very fine, thin bedded
sh. bearing some small
fossils. at base wood fragments

Wh. color 5.64

7.7 7.8

8.5

F.g. micaceous, 22. 10x 7/2,
channel bedded lenticular
unit and some with some
fossils.

11 Color 10 yR 7/2
Some silt
fresh
7.7

12

12 Color 5YR 7/2
Thin 1/2" ...
5YR 7/4 ...
B...

12.2

13.1 → AT. 10.2 ...

A-13-2

V

15.8 5YR 6/10, 9.5
INC. amt of silt mat.
washed.

Slope color 12-25
N-7

17.4 5YR 6/1, fine m...
silt frags in
slope wash.

20.5 1T 5, 10...

24 do 20.5

26 1T 5, 10...
massive than below

27 5/8' massive, dark
clay, blue-gray
- 1/2'

28'

28' 1/4' shale
- 1/4' shale
N-6 clay
fine medium grained

29 1/4' shale
- 1/4' shale
shale
color brownish

30'

30' 1/4' shale
- 1/4' shale
shale
HAS + yd. at base
medium grained
color grayish brown



Lithology of the ...

43
Some part of fresh
... stained ...

33 f. g. SA. MIC. Abt 270 ...
10YR 8/2 SS.

Aggregates of ...
... thin
There are ... in it.

36 v f g ...
... of ...
some ...
color ... with some
10YR 8/6 ...

37, 8 ST ST 110 36
Whole orange unit has
limonite ... crust
fillings of ... joint
planes.

427 MIC. ... layer ST ST.
N-915-117 app. ...

412, 10 4012 exc. ext. ...
stained ... limonite



Wh color of slope 43-45
570 1/2

23 No. 1000000000
MILLACOUS 120

44.7 SYB/1
Upper member.

45.51 SYB/1 1/2

show a few AB 1/2

non-mic. shale with

few poor lenses

SHALVIA 10

ABT 2

color SYB/1

Wh. color of slope 45.5
570 1/2

Exposure of well bedded
sh. clay
with 4" thin
lenses but not white
SYB/1

UNIT SHOWS LAMINATION

some beds are white

Bedding plane AT BT 1"

V

VERY SLTY CLAY or
SITST AT 49.9

50.5. UNIT benomor A mic. 17.
SITST Bedded 1/2 to 1"
ONE 10YR 6/6 LIMONITE
ST SITST, Bed with
gyp in CRUSTS AT
51.9

LIM LAYER

51.6 Lim. 1" layer

52.8 SITST do 50.5
10YR 7/2

SITST of this unit
has IS CALCAREOUS

54. V. fine mic. 23 very
well bedded clay.
Thin bedded 1/4" calc
SS thin 10YR 8/2

56 Less well bedded
othw. do 52.
10YR 8/2



56.0 ledge of 2000 ft
 x-2 x laminated
 calcareous well
 indurated fine grained
 ss. x laminations are
 herring bone like
 mica 27. v f ss



wh. color 2000 ft
 9 100 ft

Above 56.5 no x laminations
 LAMINATIONS

Especially under 56.5
 loss well ind. in some
 ledges of which
 cemented ss

56.7 ledge of 2000 ft
 x-2 x laminated
 calcareous well
 indurated fine grained
 ss. x laminations are
 herring bone like
 mica 27. v f ss



STRONG POINT

A post 4" THICK becomes
WATER & FUEL OUI
= 0.5 2.0 1.0 1.0

375. 11 feet of ...
... indurated ...
... calc ss.
Becomes partly indurated
wh. color 10YR 8/2

67 ... channel of
... bedded ss ...
... well ...
under it. There is a
2" pocket of ...
... 13 1/2" in
size of the ...
... which is partly
indurated



could be
A
B
C
simplex less well indurated
UNIT A

✓

67 Platey soil
Calc. clay, SA, 1950
270 ft. deep
SS. 10 ft. in
+ 13 ft. in
B. P. 15, 50 ft. in
Samp. 100 ft.

Camp A-13-2-1

69! END 20 2000

- 2' 2000 - 2000

Camp B - 2000

2000 ft. deep
100 ft. in
100 ft. in
100 ft. in

100 ft. in
100 ft. in
100 ft. in

Sec A-10-3



100' - 200' ft.

A-10-2

Lower member of the
100' - 200' ft. which
is not present

0' Fort Union - upper part
Lower gray unit - 5' V
contact observed
with underlying

7.5. A pseudo SL & 100'
if silicified silt.

7.7. MARCONI UNIT
MARCONI UNIT
MARCONI UNIT

11' MARCONI IS A
chippy sh very lignitic

11.9. Lignitic

12 - Upper Mkt.



100 - 1001

98

NE 1/4 Sec 35 T12N R10E

09

31500 and down 100

Lower 1000

Lower 1000

Lower 1000

11500 - 15000

1007

56

11500 - 15000

11500 - 15000

11500 - 15000

11500 - 15000

11500 - 15000

11500 - 15000

11500 - 15000

11500 - 15000

11500 - 15000

11500 - 15000

11500 - 15000

11500 - 15000

11500 - 15000



99
99

6.5. 100% ... 100% ... 100%

6.5. 100% ... 100% ... 100% ... 100%

6.5. 100% ... 100% ... 100% ... 100%

12' No 9.3 ... 100% ... 100% ... 100%



28.

Top of [unclear]

30.1

Top of [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear]

31.

Top of [unclear] [unclear] [unclear]
[unclear] H-S FLOAT TO

39.5

[unclear] [unclear] [unclear]

74
ft
mi











MINIATURE
PERSONAL ACCOUNT BOOKS
for home and office



NO. 2044 OPEN STOCK
in following rulings
JOURNAL • CASH • S. E. LEDGER
RECORD • D. E. LEDGER



NO. 2044-A ASSORTMENT
consisting of
3-JOURNAL 3-CASH 2-S. E. LEDGER
2-RECORD 2-D. E. LEDGER



Made in U.S.A.





