

UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY

LITHOSTRATIGRAPHIC DESCRIPTIONS OF MEASURED SECTIONS OF
UPPER CRETACEOUS TRINIDAD SANDSTONE,
NORTHERN RATON BASIN, COLORADO

By

Stephen M. Tur and Romeo M. Flores

Open-File Report 80-818

1980

This report has not been edited for conformity with
U.S. Geological Survey editorial standards.

CONTENTS

	Page
Measured section descriptions-----	1

PLATES

- Plate 1. Localities of Measured sections numbered 1-31, 33, 34----(in pocket)
2. Localities of measured sections numbered 35-45----- (in pocket)
 3. Localities of measured sections numbered 32, 53-55----- (in pocket)
 4. Localities of measured sections numbered 46-48----- (in pocket)
 5. Localities of measured sections numbered 49-50----- (in pocket)
 6. Localities of measured sections numbered 51-52----- (in pocket)

SECTION 1

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
7	6	Siltstone, gray, burrowed, some shale interbeds.
1	3	Sandstone, light gray, fine grained, crossbedded, parallel laminated, some burrows.
	9	Shale, gray, silty, burrowed.
6		Siltstone, gray, sandy, rippled, parallel laminated, burrowed
3		Sandstone, gray, fine grained, rippled, some burrows, some shale interbeds.
7		Siltstone, gray, rippled, burrowed.
3	9	Sandstone, light gray, fine grained, small scale cross laminations, rippled, burrowed, some siltstone interbeds.
4		Siltstone, gray, parallel laminated, burrowed.
1		Sandstone, gray, fine grained, parallel laminated, lenticular bedded.
1		Siltstone, light gray, parallel laminated, burrowed, some sandstone interbeds.
22	6	Sandstone, light gray, very fine to fine grained, low angle crossbedded, some burrows, some siltstone interbeds.
3		Shale, gray, sandy, parallel laminated, lenticular bedded, burrowed.
7	9	Sandstone, light gray, fine grained, crossbedded.
1	4	Siltstone, gray.
1	2	Sandstone, light gray, fine grained, rippled.

SECTION 1--Continued

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S.,
R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
2	6	Siltstone, gray.
4		Sandstone, gray, fine to medium grained, crossbedded.

SECTION 2

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S.,
R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
8	4	Siltstone, gray, lenticular bedded, burrowed, some shale interbeds.
1	4	Sandstone, light gray, fine grained, parallel laminated, some burrows.
	5	Shale, gray, silty, some burrows.
6	5	Siltstone, gray, sandy, lenticular bedded, burrowed.
3	4	Sandstone, gray, fine grained, rippled, some burrows.
6	4	Siltstone, gray, lenticular bedded.
4	6	Sandstone, light gray, fine grained, crossbedded, parallel laminated, rippled, some burrows, some siltstone interbeds.
4		Siltstone, gray, lenticular bedded, burrows, some sandstone intervals.
7		Sandstone, gray, fine grained, crossbedded, rippled.
1	9	Siltstone, gray, lenticular bedded, burrowed, some sandstone interbeds.
21	3	Sandstone, light gray, very fine to fine grained, crossbedded, burrowed, some siltstone interbeds.
3	2	Siltstone, gray, parallel laminated, some burrows.
2		Sandstone, gray, fine grained, crossbedded, some burrows.
	8	Siltstone, gray, lenticular bedded.
3	6	Sandstone, gray, fine grained, crossbedded.

SECTION 3

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
11		Siltstone, gray, lenticular bedded, burrowed, some shale and sandstone interbeds.
1	3	Sandstone, gray, fine grained, crossbedded, some burrows.
3	6	Siltstone, gray, lenticular bedded, burrowed.
2		Sandstone, light gray, fine grained, some burrows.
3	9	Siltstone, gray, burrowed, some sandstone interbeds.
2	8	Sandstone, light gray, fine grained, crossbedded.
3	3	Siltstone, gray, lenticular bedded, burrowed, some sandstone interbeds.
1		Sandstone, light gray, fine grained, burrowed.
6		Sandstone, gray, very fine to fine grained, burrowed, some siltstone interbeds.
3	8	Sandstone, light gray, fine grained, crossbedded, rippled, burrowed.
4	9	Sandstone, light gray, fine grained, crossbedded, rippled.
2	3	Siltstone, light gray, sandy, lenticular bedded, some burrows.
19	6	Sandstone, light gray, very fine to fine grained, crossbedded, some burrows.

SECTION 4

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
22	4	Siltstone, gray, lenticular bedded, burrowed.
1	1	Sandstone, gray, fine grained, rippled, burrowed.
4	6	Siltstone, gray, lenticular bedded, burrowed.
3	3	Sandstone, light gray, fine grained, crossbedded, burrowed.
1	4	Siltstone, gray, rippled, burrowed.
	10	Sandstone, light gray, fine grained, crossbedded, rippled, burrowed.
	10	Siltstone, gray, burrowed.
1	6	Sandstone, light gray, fine grained, crossbedded, burrowed.
	9	Siltstone, gray, lenticular bedded, burrowed.
1	2	Sandstone, light gray, fine grained, rippled, burrowed.
	8	Siltstone, gray, lenticular bedded, burrowed.
1	3	Sandstone, light gray, fine grained, crossbedded, burrowed.
2	10	Siltstone, gray, sandy, lenticular bedded, burrowed.
1	2	Sandstone, light gray, fine grained, rippled, burrowed.
	8	Siltstone, gray, rippled, burrowed.
1	9	Sandstone, light gray, fine grained, crossbedded, burrowed.
3	8	Siltstone, gray, sandy, lenticular bedded, burrowed.
1		Sandstone, light gray, fine grained, crossbedded, burrowed.
1		Siltstone, gray, sandy, rippled, burrowed.
	4	Sandstone, light gray, fine grained, burrowed.
2	2	Siltstone, gray, sandy, lenticular bedded, burrowed.
17	6	Sandstone, light gray, fine grained, crossbedded.

SECTION 4--Continued

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S.,
R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
3	6	Sandstone, light gray, fine grained, parallel laminated.
9	10	Sandstone, light gray, fine grained, crossbedded, parallel laminated, some burrows.

SECTION 5

Measured and described from base to top at SW 1/4 NW 1/4 Sec. 26, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
8	4	Sandstone, light gray, fine grained, crossbedded.
	10	Siltstone, gray, lenticular bedded.
13	10	Sandstone, light gray, fine grained, crossbedded, burrowed.
	7	Siltstone, gray, burrowed.
4	2	Sandstone, gray, fine grained, parallel laminated, burrowed, some siltstone interbeds.
7		Sandstone, light gray, fine grained, crossbedded, parallel laminated, some shale and siltstone interbeds.
	7	Siltstone, gray, sandy, parallel laminated, some burrows.
3	4	Sandstone, light gray, fine grained, crossbedded, some burrows.
2	3	Siltstone, gray, parallel laminated.
	6	Sandstone, light gray, fine grained, rippled, some burrows.
	3	Siltstone, gray, lenticular bedded.
4		Sandstone, light gray, fine grained, burrowed.
14	6	Sandstone, light gray, fine grained, low angle crossbedded.

SECTION 6

Measured and described from base to top at SW 1/4 SW 1/4 Sec. 26, T. 33 S.,
R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
3	6	Sandstone, light gray, fine grained, burrowed.
1		Shale, gray, sandy, rippled.
1	2	Sandstone, light gray, fine grained, parallel laminated.
	8	Shale, gray, sandy.
1	6	Sandstone, light gray, fine grained, low angle crossbedded, rippled.
	5	Shale, gray, sandy.
4	6	Sandstone, light gray, fine grained, low angle crossbedded.
1		Shale, gray, silty, rippled.
7	5	Sandstone, light gray, fine to medium grained, low angle crossbedded.
1		Shale, gray, silty, rippled.
7	5	Sandstone, light gray, fine to medium grained, low angle crossbedded.
2	9	Sandstone, light gray, fine to medium grained, rippled, some siltstone interbeds.
28	7	Sandstone, light gray, fine grained, low angle crossbedded, burrowed.

SECTION 7

Measured and described from base to top at SW 1/4 NW 1/4 Sec. 26, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
2	3	Sandstone, light gray, fine grained, low angle crossbedded.
	5	Siltstone, gray, sandy.
1	5	Sandstone, light gray, fine grained, low angle crossbedded.
1	2	Sandstone, light gray, fine grained, low angle crossbedded, some shale interbeds.
7	2	Sandstone, light gray, fine grained, low angle crossbedded, some siltstone interbeds.
	4	Sandstone, gray, fine grained, rippled.
7	3	Sandstone, light gray, fine grained, low angle crossbedded.
3	10	Siltstone, gray, some burrows, some sandstone interbeds.
4	7	Sandstone, light gray, fine grained, low angle crossbedded, burrowed.
8		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
3	10	Sandstone, light gray, fine to medium grained, some shale and siltstone interbeds.
40	10	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
14		Siltstone, gray, sandy, burrowed.
6		Sandstone, light gray, fine grained, burrowed.
36		Sandstone, light gray, fine to medium grained, low angle crossbedded, rippled, some burrows.
1	10	Sandstone, gray, medium grained, rippled, burrowed.

SECTION 8

Measured and described from base to top at SW 1/4 SE 1/4 Sec. 26, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
11	6	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1		Siltstone, light gray, burrowed, some sandstone interbeds.
5	5	Sandstone, light gray, fine grained, burrowed.
26		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
	8	Siltstone, gray, sandy, parallel laminated.
6		Sandstone, light gray, fine grained, crossbedded, erosional at base.

SECTION 9

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
5	6	Sandstone, light gray, fine grained, low angle crossbedded.
3	10	Siltstone, light gray, rippled, some sandstone interbeds.
4	4	Sandstone, light gray, fine grained, rippled, burrowed.
32		Sandstone, light gray, fine grained, low angle crossbedded.

SECTION 10

Measured and described from base to top at NW 1/4 SE 1/4 Sec. 35, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
21		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1	9	Siltstone, light gray, burrowed, some sandstone interbeds.
7	3	Sandstone, light gray, fine grained, burrowed.
18	6	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
27		Sandstone, light gray, medium grained, crossbedded, convoluted, erosional base.
2	10	Shale, dark gray.

SECTION 11

Measured and described from base to top at NW 1/4 SE 1/4 Sec. 35, T. 33 S.,
R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
5	5	Sandstone, light-gray, fine to medium grained, burrowed.
24	6	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
23		Sandstone, light gray, medium grained, crossbedded, erosional base, some shale interbeds.

SECTION 12

Measured and described from base to top at NW 1/4 SE 1/4 Sec. 35, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
4		Sandstone, light gray, fine to medium grained, burrowed.
32		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
4	6	Sandstone, light gray, medium grained, crossbedded, erosional base, some siltstone interbeds.
1		Shale, dark gray, sandy.
4	6	Sandstone, tan, medium grained, low angle, crossbedded.
1		Shale, dark gray, sandy.
1		Sandstone, tan, medium grained, low angle crossbedded, some shale interbeds.

SECTION 13

Measured and described from base to top at NW 1/4 SW 1/4 Sec. 35, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
15	6	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
11	6	Sandstone, light gray, medium grained, crossbedded, erosional base, some shale interbeds.
10		Sandstone, light gray, medium grained, crossbedded, erosional base, some shale interbeds.

SECTION 14

Measured and described from base to top at NW 1/4 SE 1/4 Sec. 27, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
8		Siltstone, gray, parallel laminated, rippled, burrowed.
22		Sandstone, light gray, very fine grained, parallel laminated, low angle crossbedded, some burrows.
4	2	Siltstone, gray, some sandstone interbeds.
5	4	Sandstone, light gray, fine grained, low angle crossbedded, some burrows, some siltstone interbeds.
6		Sandstone, light gray, fine grained, burrowed.
46		Sandstone, light gray, fine grained, low angle crossbedded, parallel laminated, some burrows.
1	6	Sandstone, light gray, fine grained, rippled, some siltstone interbeds.
5		Sandstone, light gray, fine grained, burrowed.
17		Sandstone, light gray, fine to medium grained, low angle crossbedded, some burrows.

SECTION 15

Measured and described from base to top at NW 1/4 SW 1/4 Sec. 27, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
50		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
3	4	Sandstone, light gray, fine grained, burrowed.
16		Sandstone, light gray, fine to medium grained.
4		Siltstone, gray, rippled, some shale and sandstone interbeds.

SECTION 16

Measured and described from base to top at SW 1/4 SE 1/4 Sec. 22, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
19		Siltstone, gray, rippled, some burrows, some shale and sandstone interbeds.
1		Sandstone, gray, very fine grained, parallel laminated.
16		Siltstone, gray, burrowed, some sandstone interbeds.
3		Sandstone, gray, very fine grained, parallel laminated, rippled.
8		Siltstone, gray, some shale interbeds, burrowed.
7	7	Sandstone, light gray, very fine grained, low angle crossbedded, parallel laminated, some burrows.
	5	Sandstone, gray, very fine grained, burrowed.
11		Sandstone, light gray, very fine grained, low angle crossbedded, some burrows.
14		Siltstone, gray, rippled, some burrows, some shale and sandstone interbeds.
3	2	Sandstone, gray, fine grained, burrowed.
15		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
20		Covered.
4	6	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
9		Sandstone, light gray, fine grained, low angle crossbedded, rippled, burrowed.

SECTION 16--Continued

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
6		Sandstone, light gray, fine grained, some burrows.
18	5	Covered.
15		Sandstone, light gray, fine to medium grained, crossbedded, erosional base, some siltstone layers.
5		Covered.
18		Sandstone, gray, medium grained, crossbedded, convoluted, erosional base.

SECTION 17

Measured and described from base to top at NW 1/4 SE 1/4 Sec. 22, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
4	4	Siltstone, gray, sandy, burrowed.
14		Sandstone, light gray, very fine grained, low angle crossbedded, parallel laminated.
6	4	Siltstone, gray, sandy, burrowed.
10		Sandstone, light gray, very fine grained, low angle crossbedded, parallel laminated.
5	3	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
	7	Siltstone, light gray, burrowed.
6		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1		Sandstone, gray, fine grained, rippled, some siltstone interbeds.
24		Sandstone, light gray, fine grained, crossbedded, some burrows.
6		Sandstone, light gray, fine grained, low angle crossbedded, burrowed.
20		Covered.
28		Sandstone, light gray, very fine to coarse grained, crossbedded, some burrows.

SECTION 18

Measured and described from base to top at NW 1/4 SE 1/4 Sec. 22, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
7		Siltstone, gray, sandy, burrowed.
11	7	Siltstone, gray, rippled, burrowed, some sandstone interbeds.
17	8	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
13	6	Siltstone, gray, some sandstone interbeds.
2	4	Sandstone, light gray, fine grained, low angle crossbedded.
1	4	Sandstone, gray, some silty shale interbeds, fine grained.
10	4	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
4	6	Sandstone, light gray, fine grained, crossbedded, some burrows, some siltstone interbeds.
9	7	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
2	2	Sandstone, light gray, fine grained, burrowed, some siltstone interbeds.
16	3	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1	6	Sandstone, gray, fine grained, burrowed.
2		Sandstone, light gray, fine grained, low angle crossbedded.
2		Sandstone, light gray, fine grained, burrowed.
28		Sandstone, light gray, fine to medium grained, crossbedded, some burrows.

SECTION 18--Continued

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S.,
R. 64 W.

Thickness

Feet Inches

Lithology

15	Sandstone, gray, fine to medium grained, crossbedded, erosional base.
----	--

SECTION 19

Measured and described from base to top at SE 1/4 NW 1/4 Sec. 15, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
21		Siltstone, gray, burrowed, some sandstone interbeds.
16		Sandstone, gray, fine grained, rippled, some siltstone interbeds.
15		Siltstone, gray, lenticular bedded, burrowed, some sandstone interbeds.
6	8	Sandstone, light gray, fine grained, low angle crossbedded.
10		Sandstone, light gray, fine grained, low angle crossbedded, some burrows, some siltstone interbeds.
8		Sandstone, light gray, fine grained, rippled, some burrows.
2		Siltstone, gray, sandy, lenticular bedded, burrowed.
3	6	Sandstone, light gray, fine grained, crossbedded, burrowed.
5		Siltstone, gray, some sandstone interbeds, some burrows.
42		Sandstone, light gray, fine to medium grained, low angle crossbedded, burrowed.
20		Sandstone, tan, some siltstone interbeds, fine grained, crossbedded, erosional base, some siltstone interbeds.

SECTION 20

Measured and described from base to top at SE 1/4 SE 1/4 Sec. 15, T. 33 S.,
R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
19		Siltstone, gray, lenticular bedded, burrows, some sandstone interbeds.
12		Sandstone, light gray, fine grained, rippled, some burrows, some sandstone interbeds.
18		Siltstone, gray, rippled, some burrows.
3		Sandstone, light gray, fine grained, low angle crossbedded.
26		Covered.
4		Sandstone, light gray, fine grained, low angle crossbedded.
34		Covered.
1	3	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
12		Sandstone, gray, fine to medium grained, crossbedded, erosional base.

SECTION 21

Measured and described from base to top at SW 1/4 SW 1/4 Sec. 22, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
55		Siltstone, gray, lenticular bedded, burrowed, some sandstone interbeds.
18		Sandstone, tan, very fine grained, parallel laminated, rippled, some burrows.
11		Siltstone, gray, sandy, burrowed.
5	9	Sandstone, light gray, fine grained, low angle crossbedded.
30		Covered.
1		Sandstone, tan, fine grained, low angle crossbedded.

SECTION 22

Measured and described from base to top at SE 1/4 SW 1/4 Sec. 21, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
35		Siltstone, gray, shale and sandstone interbeds, rippled, burrowed.
22		Sandstone, light gray, fine grained, low angle crossbedded, some burrows, some siltstone interbeds.
16		Covered.
2		Sandstone, tan, fine grained, low angle crossbedded.

SECTION 23

Measured and described from base to top at NE 1/4 SW 1/4 Sec. 15, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
5		Siltstone, gray, lenticular bedded, burrowed.
7		Sandstone, gray, very fine grained, rippled, some siltstone interbeds.
19		Sandstone, gray, fine grained, low angle crossbedded, some burrows.
6		Siltstone, gray, lenticular bedded, some sandstone interbeds.
28		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
2		Sandstone, gray, fine grained, burrowed.
5		Covered.
16		Sandstone, light gray, fine grained, low angle crossbedded, parallel laminated, rippled, some shale and siltstone interbeds.
32		Covered.
6		Sandstone, tan, fine grained, crossbedded, erosional base.

SECTION 24

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 10, T. 33 S.,
R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
40		Siltstone, gray, lenticular bedded, burrowed.
22		Siltstone, gray, lenticular bedded, some burrows, some sandstone interbeds.
26		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
2	4	Sandstone, tan, fine grained, burrowed.
48		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
4	4	Sandstone, light gray, fine grained, crossbedded.
14		Sandstone, light gray, fine grained, low angle crossbedded.
13		Sandstone, gray, fine to medium grained, crossbedded, some burrows.
38		Sandstone, gray, fine to medium grained, crossbedded, erosional base.

SECTION 25

Measured and described from base to top at SW 1/4 SE 1/4 Sec. 11, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
2		Siltstone, gray, lenticular bedded, with sandstone interbeds.
3		Sandstone, tan, fine grained, rippled, some burrows.
13		Siltstone, gray, lenticular bedded, burrowed.
25		Sandstone, tan, fine grained, rippled, some siltstone interbeds.
8		Sandstone, tan, fine grained, low angle crossbedded.
15		Sandstone, light gray, fine grained, low angle crossbedded.
5		Sandstone, tan, fine grained, rippled.
40		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
3		Sandstone, tan, fine grained, rippled, some siltstone interbeds.
2	6	Sandstone, gray, fine grained, burrowed.
26		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
4		Sandstone, light gray, fine to medium grained, crossbedded, erosional base.

SECTION 26

Measured and described from base to top at SW 1/4 SE 1/4 Sec. 11, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
25		Siltstone, gray. rippled, burrowed, some sandstone interbeds.
10		Siltstone, gray, lenticular bedded, burrowed.
29	6	Sandstone, tan, fine grained, rippled, some burrows, some siltstone interbeds.
6	6	Sandstone, tan, fine grained, low angle crossbedded.
16		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
3	6	Sandstone, tan, fine grained, rippled.
43		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1	6	Sandstone, tan, fine grained, rippled, some siltstone interbeds.
2	6	Sandstone, light gray, fine grained, burrowed.
24		Sandstone, light gray, fine grained, low angle crossbedded.
2		Sandstone, light gray, fine to medium grained, crossbedded, erosional base.

SECTION 27

Measured and described from base to top at NW 1/4 SW 1/4 Sec. 14, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
75		Siltstone, gray, burrowed, some shale interbeds.
12		Sandstone, tan, fine grained, rippled, some burrows, some siltstone interbeds.
3		Sandstone, light gray, fine grained, low angle crossbedded.
12		Sandstone, tan, fine grained, rippled, some burrows, some siltstone interbeds.
4		Sandstone, light gray, fine grained, low angle crossbedded.
4		Sandstone, light gray, fine grained, rippled, some burrows, some siltstone interbeds.
16		Sandstone, light gray, fine grained, low angle crossbedded.
12		Sandstone, light gray, fine grained, rippled, some siltstone interbeds.
4		Sandstone, tan, fine grained, rippled, burrowed.
46		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1	6	Sandstone, light gray, fine grained, burrowed.
35		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.

SECTION 28

Measured and described from base to top at NW 1/4 NW 1/4 Sec. 11, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
8		Siltstone, gray, rippled, burrowed, some sandstone interbeds.
3		Sandstone, light gray, fine grained, low angle crossbedded.
4		Siltstone, gray, lenticular bedded, burrowed, some sandstone interbeds.
50		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1	6	Sandstone, light gray, fine grained, burrowed.
40		Sandstone, light gray, fine to medium grained, low angle crossbedded, some burrows.

SECTION 29

Measured and described from base to top at NW 1/4 NE 1/4 Sec. 11, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
23		Siltstone, gray, lenticular bedded, burrowed, some sandstone interbeds.
12		Covered.
	10	Sandstone, light gray, fine grained, rippled.
14		Covered.
20		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
	9	Sandstone, light gray, fine grained, burrowed.
35		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.

SECTION 30

Measured and described from base to top at NW 1/4 SW 1/4 Sec. 11, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
42		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
2	6	Sandstone, light gray, fine grained, rippled, burrowed.
12		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
6		Sandstone, light gray, fine grained, burrowed.
9		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.

SECTION 31

Measured and described from base to top at NE 1/4 NE 1/4 Sec. 10, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
28		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
5	4	Sandstone, light gray, fine grained, burrowed.
20		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
15		Sandstone, tan, fine to medium grained, crossbedded, erosional base.

SECTION 32

Measured and described from base to top at SE 1/4 SW 1/4 Sec. 35, T. 33 S.,
R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
3		Sandstone, light gray, fine grained, rippled, some burrows.
5		Sandstone, light gray, fine grained, burrowed.
37		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
20		Partly covered, some sandstone ledges.

SECTION 33

Measured and described from base to top at SW 1/4 NE 1/4 Sec. 36, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
25		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
2		Sandstone, tan, fine grained, rippled, some burrows.
6		Sandstone, gray, fine grained, burrowed.
27		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
32		Sandstone, tan, fine grained, crossbedded, erosional base, some siltstone interbeds.

SECTION 34

Measured and described from base to top at NW 1/4 NW 1/4 Sec. 36, T. 33 S.,
R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
19		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1	3	Sandstone, tan, fine grained, parallel laminated.
7	2	Sandstone, gray, fine grained, burrowed.
26		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
21 base.		Sandstone, light gray, fine grained, crossbedded, erosional

SECTION 35

Measured and described from base to top at SE 1/4 NE 1/4 Sec. 19, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
26		Siltstone, gray, lenticular bedded, burrowed, some shale interbeds.
17		Sandstone, gray, very fine to fine grained, low angle crossbedded, parallel laminated, some burrows, some siltstone interbeds.
5	4	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
25		Sandstone, light gray, fine grained, low angle crossbedded, some siltstone interbeds.
3		Sandstone, tan, fine grained, rippled, burrowed.
12		Sandstone, light gray, fine grained, low angle crossbedded, burrowed.

SECTION 36

Measured and described from base to top at NE 1/4 NE 1/4 Sec. 30, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
35		Siltstone, gray, lenticular bedded, burrowed, some shale and sandstone interbeds.
7	6	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
23		Sandstone, light gray, fine grained, low angle crossbedded, some burrows, some siltstone interbeds.
7		Sandstone, light gray, fine grained, crossbedded, burrowed.
11		Sandstone, light gray, rippled, burrowed, some siltstone interbeds.
4	6	Siltstone, gray, sandy, lenticular bedded.
53		Sandstone, light gray, fine grained, low angle crossbedded, some burrows, some siltstone interbeds.
2		Sandstone, gray, fine grained, burrowed.
15		Sandstone, light gray, fine to medium grained, low angle festooned, some burrows.

SECTION 37

Measured and described from base to top at NW 1/4 NE 1/4 Sec. 29, T. 33 S., R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
25		Siltstone, gray, lenticular bedded, burrowed.
28		Sandstone, gray, very fine to fine grained, rippled, some siltstone interbeds.
4	10	Sandstone, tan, fine grained, rippled, burrowed.
12		Sandstone, tan, very fine to fine grained, rippled, some siltstone interbeds.
3	3	Sandstone, light gray, fine grained, rippled, some burrows.
103		Sandstone, light gray, fine to medium grained, low angle crossbedded, some burrows.
6	6	Sandstone, gray, fine to medium grained, crossbedded, erosional base, some siltstone interbeds.

SECTION 38

Measured and described from base to top at NW 1/4 NW 1/4 Sec. 21, T. 33 S., R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
65		Siltstone, gray, lenticular bedded, burrowed.
11	6	Sandstone, tan, fine grained, low angle crossbedded, some siltstone interbeds.
9	4	Siltstone, gray, lenticular bedded, burrowed, some sandstone interbeds.
5		Sandstone, tan, very fine to fine grained, low angle crossbedded, some burrows, some siltstone interbeds.
25		Sandstone, tan, fine grained, low angle crossbedded, some burrows, some siltstone interbeds.
15		Sandstone, light gray, fine grained, low angle crossbedded.
48		Sandstone, light gray, fine grained, low angle crossbedded, burrowed.
2	5	Sandstone, light gray, fine grained, burrowed.
13		Sandstone, light gray, fine grained, low angle crossbedded, burrowed.

SECTION 39

Measured and described from base to top at SW 1/4 NW 1/4 Sec. 29, T. 33 S., R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
20		Siltstone, gray, lenticular bedded, burrowed.
40		Sandstone, tan, very fine to fine grained, crossbedded, some siltstone interbeds.
38		Covered.
17		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
4		Sandstone, light gray, fine grained, burrowed.
18		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
12		Sandstone, gray, fine grained, low angle crossbedded, burrowed.
9	6	Sandstone, light gray, fine grained, low angle crossbedded, some burrows.

SECTION 40

Measured and described from base to top at NE 1/4 NE 1/4 Sec. 29, T. 33 S., R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
25		Sandstone, tan, fine grained, rippled, some siltstone interbeds.
60		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
6		Covered.
23		Sandstone, light gray, fine to medium grained, crossbedded, some siltstone interbeds.
5		Sandstone, light gray, fine grained, burrowed.
35		Sandstone, light gray, fine grained, low angle crossbedded.

SECTION 41

Measured and described from base to top at NW 1/4 NE 1/4 Sec. 28, T. 33 S., R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
10		Siltstone, gray, lenticular bedded, burrowed.
67		Sandstone, light gray, fine grained, low angle crossbedded, rippled, some siltstone interbeds.
4		Sandstone, tan, rippled, some siltstone interbeds.
17		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
57		Covered.
28		Sandstone, light gray, fine to medium grained, crossbedded.

SECTION 42

Measured and described from base to top at NW 1/4 NE 1/4 Sec. 28, T. 33 S.,
R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
15		Siltstone, gray, lenticular bedded, burrowed.
58		Sandstone, tan, fine grained, low angle nonbedded, rippled, some siltstone interbeds.
5		Sandstone, light gray, fine grained, low angle crossbedded, some shale interbeds.
44		Covered.
40		Sandstone, light gray, fine to medium grained, low angle crossbedded, some burrows.

SECTION 43

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 21, T. 33 S., R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
7		Sandstone, tan, very fine to fine grained, parallel laminated, rippled, lenticular bedded, some burrows.
5		Covered.
4		Sandstone, tan, fine grained, low angle crossbedded, subparallel laminated.
6	6	Sandstone, light gray, fine grained, subparallel laminated.
54		Sandstone, light gray, fine to medium grained, low angle crossbedded, subparallel laminated, rippled, some burrows.
1	6	Sandstone, light gray, fine grained, burrowed.
26		Sandstone, light gray, fine to medium grained, low angle crossbedded, subparallel laminated, some burrows.
1		Sandstone, light gray, fine grained, subparallel laminated.
3	6	Sandstone, light gray, fine grained, rippled, some burrows.
1	6	Sandstone, light gray, fine grained, burrowed.
23		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.

SECTION 44

Measured and described from base to top at SE 1/4 NE 1/4 Sec. 22, T. 33 S., R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
30		Siltstone, gray, lenticular bedded, burrowed.
10		Sandstone, gray, very fine to fine grained, rippled, some burrows, some siltstone interbeds.
12		Siltstone, gray, subparallel laminated, burrowed, some sandstone interbeds.
33		Sandstone, tan, very fine to fine grained, rippled, some burrows, some siltstone interbeds.
72		Sandstone, light gray, fine grained, low angle crossbedded, subparallel laminated, some burrows.
16		Sandstone, light gray, fine grained, low angle crossbedded, subparallel laminated, some burrows.

SECTION 45

Measured and described from base to top at SW 1/4 SW 1/4 Sec. 26, T. 33 S.,
R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
38		Sandstone, light gray, fine to medium grained, low angle crossbedded, subparallel laminated, rippled, some burrows.
2		Sandstone, gray, fine grained, burrowed.
23		Sandstone, light gray, fine to medium grained, low angle crossbedded, subparallel laminated, some burrows.
2	6	Sandstone, gray, fine grained, subparallel laminated, burrowed.
33		Sandstone, light gray, fine to medium grained, low angle crossbedded, rippled, some burrows.
25		Sandstone, light gray, fine to medium grained, crossbedded, erosional base.

SECTION 46

Measured and described from base to top at SE 1/4 SE 1/4 Sec. 35, T. 33 S., R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
70		Siltstone, gray, rippled, burrowed, some sandstone interbeds.
27		Sandstone, tan, very fine to fine grained, low angle crossbedded, rippled.
23		Sandstone, tan, very fine to fine grained, rippled, some burrows, some siltstone interbeds.
55		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1	6	Sandstone, light gray, fine grained, burrowed.
47		Sandstone, light gray, fine to medium grained, low angle crossbedded, some burrows.

SECTION 47

Measured and described from base to top at SW 1/4 NE 1/4 Sec. 1, T. 34 S., R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
45		Siltstone, gray, lenticular bedded, burrowed, some shale interbeds.
23		Sandstone, gray, very fine to fine grained, rippled, some burrows, some siltstone interbeds.
72		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1	6	Sandstone, light gray, fine grained, burrowed.
28		Sandstone, light gray, fine to medium grained, low angle crossbedded, some burrows.

SECTION 48

Measured and described from base to top at NE 1/4 NW 1/4 Sec. 18, T. 34 S., R. 63 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
15		Sandstone, gray, very fine to fine grained, rippled, some burrows, some siltstone interbeds.
33		Covered.
22		Sandstone, light gray, fine grained, low angle crossbedded, parallel laminated, some burrows.
1	6	Sandstone, gray, fine grained, parallel laminated, some siltstone interbeds.
48		Sandstone, light gray, fine grained, low angle crossbedded, parallel laminated, some burrows.
43		Covered.
18		Sandstone, gray, fine to medium grained, crossbedded, erosional base.

SECTION 49

Measured and described from base to top at SE 1/4 SW 1/4 Sec. 17, T. 34 S.,
R. 62 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
30		Sandstone, light gray, fine grained, low angle crossbedded.
2	6	Sandstone, gray, fine grained, parallel laminated, some siltstone interbeds.
60		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
16		Sandstone, tan, medium grained, crossbedded, erosional base.

SECTION 50

Measured and described from base to top at NE 1/4 SW 1/4 Sec. 21, T. 34 S.,
R. 62 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
27		Siltstone, gray, lenticular bedded, rippled, burrowed.
31		Covered.
41		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
2		Sandstone, gray, fine grained, subparallel laminated, some siltstone interbeds.
47		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.

SECTION 51

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
40		Sandstone, light gray, fine grained, low angle crossbedded.
70		Covered.
1		Sandstone, light gray, fine grained, rippled.
1	6	Sandstone, gray, fine grained, rippled, some burrows.
68		Sandstone, light gray, fine to medium grained, low angle crossbedded, some burrows.
3	6	Sandstone, dark brown, fine to medium grained, parallel laminated, contains heavy-mineral placer.

SECTION 52

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
35		Sandstone, gray, very fine to fine grained, rippled, some burrows, some siltstone interbeds.
10		Sandstone, light gray, fine grained, low angle festooned.
1	6	Sandstone, tan, fine grained, subparallel laminated.
60		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1	6	Sandstone, light gray, fine grained, burrowed.
48		Sandstone, light gray, fine to medium grained, low angle crossbedded, subparallel laminated, some burrows.

SECTION 53

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S., R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
25		Siltstone, gray, lenticular bedded, rippled, burrowed, some shale and sandstone interbeds.
5		Sandstone, tan, very fine grained, rippled.
6		Siltstone, gray, rippled, burrowed, some shale and sandstone interbeds.
5	6	Sandstone, tan, very fine grained, rippled.
18		Siltstone, gray, rippled, some burrows, some sandstone interbeds.
44		Sandstone, light gray, fine to medium grained, low angle crossbedded, some burrows.
12		Sandstone, tan, fine to medium grained, crossbedded, erosional base.

SECTION 54

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S.,
R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
30		Siltstone, gray, rippled, burrowed, some shale and sandstone interbeds.
8		Covered.
4	6	Sandstone, light gray, fine grained, rippled, some burrows.
18		Covered.
23		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.

SECTION 55

Measured and described from base to top at NE 1/4 SE 1/4 Sec. 27, T. 33 S.,
R. 64 W.

Thickness

<u>Feet</u>	<u>Inches</u>	<u>Lithology</u>
42		Sandstone, light gray, fine grained, low angle crossbedded, some burrows.
1	6	Sandstone, tan, fine grained, subparallel laminated, some shale interbeds.
16		Sandstone, light gray, fine to medium grained, crossbedded, erosional base.