

ALCOVA CANYON SECTION

Location: Beds 1 to 30 measured in west wall of Alcova Canyon,
remainder of section measured on east side of the river.
Sec. 24, T. 30 N., R. 83 W. and 19, T. 30 N., R. 82 W.

Sundance:

Brown shale.

Jelm:

No. 86	Massive gray and brown monumental sandstone.....	22'
No. 85	Red and gray shale.....	1-2'
No. 84	Massive deep-red monumental sandstone.....	32'

Chugwater:

No. 83	Alternating bands of red and gray shale.....	15'
No. 82	Salmon pink sandstone.....	6'
No. 81	Red and gray sandy shale.....	3'
No. 80	Soft, massive, salmon pink to gray sandstone.....	24'
No. 79	Red shale.....	6-8'
No. 78	Massive salmon-pink sandstone.....	2' 6"
No. 77	Soft red Shale.....	1'
No. 76	Red sandy shale and red sandstone.....	5' 6"
No. 75	Salmon-pink cross-bedded sandstone.....	4'
No. 74	Dark gray wavy limestone. Amplitude of waves 3" to the foot. This member is separated from the sand- stone below by a thin shale parting. A strong petroliferous odor is emitted on the fresh surface.	5' †
No. 73	Hard gray limy sandstone.....	1'
No. 72	Red shales and shaly sandstones containing numerous thin seams of white gypsum and an occasional streak	

	of mottled red and gray sandstone. One band of gray shaly sandstones measuring 2' thick was found to be continuous for a distance of half a mile.....	516'
No. 71	White gypsum.....	2'
No. 70	Red shale interbedded with thin bands of gray limy shale and red platy sandstones.....	14'
No. 69	Red sandy shale and red sandstone with minor amounts of gray.....	36'
No. 68	White gypsum.....	8"-1'
No. 67	Mottled, purplish pink and gray limestone interbedded with thin seams of gypsum. Color irregular. Approximately 60% purple (lavender).....	10' ?
No. 66	Hard purplish red limestone interbedded with thin seams of gypsum.....	18"-2'
No. 65	Massive white gypsum.....	6' 6"
No. 64	Red gypsite.....	6'
No. 63	White gypsum.....	5' 6"
No. 62	Gray limy shale.....	3' 3"
No. 61	Soft red and buff gypsite.....	1'
No. 60	White gypsum.....	5' 6"
No. 59	Gray shale.....	4'
No. 58	Soft red shale.....	6' 8"
No. 57	White gypsum.....	6'
No. 56	Red sandy shale passing into soft red gypsite above	5'
No. 55	White gypsum.....	10"
No. 54	Dark gray paper shale.....	4'
No. 53	White gypsum.....	2' 6"
No. 52	Gray limy shale.....	2'

No. 51	Red sandy shale.....	3'
No. 50	White gypsum.....	3'
No. 49	Shaly limestone.....	2' 4"
No. 48	Rust brown conglomerate passing upward into white gypsum. The conglomerate is composed of chert and gypsum fragments.....	3'
No. 47	Gray flaky shale and interbedded gray chert nodules	3'
No. 46	Black shale interbedded with thin bands of fine-grained gray limestone which is most abundant in the upper portion.....	8' 6"
No. 45	Brown gypsum conglomerate replaced locally by pure gypsum in a distance of 20 feet. Conglomerate composed of gypsum, sandstone, and shale fragments....	11'
No. 44	Gray and brown shale, contacts irregular.....	2'
No. 43	Red shale upper portion mottled with green patches. Less than one per cent green.....	73'
No. 42	Gray wavy porous limestone. Waves have an amplitude of 1 to 2 inches.....	1'
No. 41	Greenish gray shale.....	4' 2"
No. 40	Red shale containing a mottled green sandy streak near the middle and some thin gray streaks.....	58'
No. 39	Soft cream colored limestone.....	2' 8"
No. 38	Gray limy shale.....	1' 6"
No. 37	Dark gray massive limestone.....	3' 6"
No. 36	Greenish gray thinly bedded shaly sandstone.....	1' 6"
No. 35	Dark limestone.....	3"
No. 34	Green shale.....	$\frac{1}{2}$ "
No. 33	Dark limestone.....	3"

No. 32	Green shale.....	$\frac{1}{2}$ "
No. 31	Dark gray massive limestone similar to next below..	7'
No. 30	Greenish gray sandstone.....	4'
No. 29	Slate gray hard limestone weathering brown. On fresh fracture this bed exhibits carbonaceous specks and emits a strong petroliferous odor.....	2'
No. 28	Green shale sandy in the upper part.....	4' 6"
No. 27	Red shale containing some thin green bands. The green making up one per cent of the whole.....	41'
No. 26	White gypsum near the middle of which occurs an 8' band of red shale containing numerous thin gypsum seams and dikes.....	64' 8"
No. 25	Soft mottled, red and gray shale.....	2' 6"
No. 24	Irregular band of hard brownish gray gypsum with irregular contact with overlying shale.....	1'-18"
No. 23	Soft green brown, and red shale.....	3'
No. 22	Gray wavy limestone.....	6"
No. 21	Soft green, gray and red shale.....	3' 6"
No. 20	Gray wavy limestone.....	6"-10"
No. 19	Red sandy shale and thin sandstones mottled with brown	5' 10"
No. 18	Deep-red sandy shale mottled with brown spots.....	2'
No. 17	Brownish green sandstone, shaly in the lower portion but becoming more massive in the upper. Some reddish brown tints at intervals. This bed has not definite structure. The contact with the underlying bed is transitional.....	9' 6"
No. 16	Massive gray partly quartzitic sandstone, passing gradually in the upper third into a golden brown, lagging, strongly cross-bedded (eolian) sandstone..	90'

No. 15	Brown wavy limestone, sandy in lower portion. The lower contact is transitional and the upper sharp..	10'
No. 14	Massive light brown uniformly grained eolian cross-bedded sandstone.....	113'
No. 13	Light brown massive sandstone becoming limy in upper 3 feet. Both upper and lower contacts are sharp...	15'
No. 12	Brown massive limestone containing poorly preserved impressions of pelecypods and crinoid stems.....	29'
No. 11	White, hard, massive sandstone. The contact with the overlying is transitional.....	10'
No. 10	Gray limestone. Both contacts sharp and regular...	6'
No. 9	Massive gray sandstone.....	10'
No. 8	Gray limestone, both upper and lower contacts of which are shale and regular.....	2'
No. 7	White quartzitic sandstone.....	12' 6"
No. 6	Light gray massive limestone weathering brown. Upper contact sharp and regular.....	19'
No. 5	Creamy white torrentially cross-bedded sandstone. The lower contact is sharp and regular while the upper is transitional.....	12'
No. 4	Gray massive uniform limestone.....	27'
No. 3	Purplish gray to reddish limestone. The bedding planes which are extremely undulatory and approximately 2" apart are separated by thin bands of deep-red shale. Numerous spheroidal green spots with minute red centers occur thruout. Both lower and upper contact are sharp and regular.....	11' 6"

- No. 2 Cross-bedded hard red sandstone, containing irregular bands of cherty conglomerates. The lower 12" to 18" consist of a coarse breccia, made up of limestone, chert, and gray and red sandstone fragments. One fragment of gray chert measured 8" wide by 18" long. The upper 2" of the bed is light buff in color..... 8'
- No. 1 Gray massive fossiliferous limestone, the upper 15' of which is cut with a ramifying series of red sandstone dikes. These dikes are very irregular varying in thickness from a fraction of an inch to 3 inches. The contact of this limestone with the overlying member is very irregular, being cut in one instance to a depth of eight feet. The fossils consists of fragments of Productus shells and crinoid stems..... 47'

Platte River.