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DEPARTMENT OF MINES AND TECHNICAL SURVEYS

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TRIASSIC STRATIGRAPHY NEAR THE NORTHERN BOUNDARY OF JASPER NATIONAL PARK, ALBERTA

(Report and 1 figure)

D. W. Gibson

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TRIASSIC STRATIGRAPHY NEAR THE NORTHERN BOUNDARY OF JASPER NATIONAL PARK, ALBERTA

INTRODUCTION

This is a preliminary account of a detailed stratigraphic study of the Triassic rocks of the Rocky Mountain Foothills and Front Ranges in the vicinity of the northern boundary of Jasper National Park between Snake Indian and Sulphur Rivers (Fig. 1). Seventeen partial and complete sections were examined and sampled in detail. The results of a preliminary laboratory examination of the material collected are included in the descriptions given in the appendix. The sections examined during the course of the field work are illustrated in a columnar chart (Fig. 1).

Previous Work

The Triassic rocks of northern Jasper Park were first examined by Collett and Paréjas (1932)*. Allan (1933) described an occurrence of gypsum at Mowitch Creek. Lang (1947), Irish (1955), and Mountjoy (1962) have described, summarized, and correlated the Triassic of the Jasper region with other areas of Alberta. Recent work includes papers by Manko (1960) who described the Triassic stratigraphy in the Rock Lake area, Govett (1961) who redescribed the Triassic gypsum deposit at Mowitch Creek, and Westermann (1962) who studied and briefly described stratigraphic sections at Mount Greenock and Winnifred Pass.

Field Work and Acknowledgments

Field work was begun in the summer of 1962 under the supervision of E.W. Mountjoy of the Geological Survey. Fossils collected during the course of field work were identified by E.T. Tozer and H. Frebold of the Geological Survey of Canada.

Assistance in the field was given by G.R. Dodd and R.H. Hoogerbrug, student assistants. T. Hoszouski, W. MacKinnon, and T. McCready assisted with horses, trail cutting, and various camp duties. The writer is also grateful to the wardens and officers of the Alberta Forestry Service and National Parks for their friendly cooperation and help. Special thanks are extended to E.M. Manko of Imperial Oil Limited for locality information on many of the sections presented in this paper.

*Dates and/or names in parentheses refer to publications listed in the References.

STRATIGRAPHY

The Triassic Spray River Group of the Jasper Park region is divided into two formations: an upper Whitehorse and a lower Sulphur Mountain; the type sections are located near Cadomin and Banff respectively. Warren (1945) defined the Sulphur Mountain Member of the Spray River Formation as "dark grey to black laminated shales and dark grey, fine-grained limestones or dolomites." The Whitehorse Member was designated as "light grey to whitish limestones, dolomites, sandy dolomites or sandstones with sometimes an intermixture of darker shales and evaporites such as gypsum." Warren stated that the division of the Spray River Formation into these two members was based directly on lithological characteristics, with fossils serving as accessory criteria. He also suggested that the Lower and Middle Triassic stage boundary may not coincide with the stratigraphic boundaries.

Manko (1960) has proposed several informal lithologic subdivisions of the Whitehorse and Sulphur Mountain Formations in the Rock Lake area (Table I). These are, in ascending order: Lower black siltstone member, Blocky brown siltstone member, Black shale member, Upper siltstone member, Evaporitic member, Carbonate member, and Red bed member. He placed the junction of the two formations at the contact between the Upper siltstone and Evaporitic members. Westermann (1962) disagreed with this choice and advocated a contact at or near the base of the Black shale member as marked by a phosphatic, richly fossiliferous bed of conglomerate. He stated that the formational contact of Manko and other geologists between the Sulphur Mountain and Whitehorse Formations was not in agreement with the original definition proposed by Warren. Westermann suggested that the Sulphur Mountain Formation should include only a fauna of Scythian age, although admitted that the Black shale and Upper siltstone members resemble lithologically Warren's original definition of the Sulphur Mountain Member. The Sulphur Mountain - Whitehorse contact, based on a distinct change in lithology as outlined by Manko (1960), is followed in this paper, as the writer is not in agreement with Westermann.

The nomenclature and unit boundaries adopted follow those proposed by Manko (1960), with minor revisions, and are used provisionally pending completion of the study. The Sulphur Mountain Formation is divided informally in ascending order as follows: Shaly siltstone member, Blocky brown siltstone member, Black shale member, and Silty dolomite member; and the Whitehorse Formation is divided into the Evaporitic, Crinoidal limestone, and Upper carbonate members.

Table I

Comparison of Nomenclature Used for the Spray River Group in the Jasper Region

		Irish (1954)	Mountjoy (1960)	Manko (1960)	Gibson (1962)
SPRAY RIVER GROUP	WHITEHORSE FORMATION	Unit A	Whitehorse Formation	Red Bed member / Carbonate member	Upper carbonate member
				Evaporitic member	Crinoidal limestone member
					Evaporitic member
	SULPHUR MOUNTAIN FORMATION	Unit B	Sulphur Mountain Formation	Upper siltstone member	Silty dolomite member
				Black shale member	Black shale member
				Blocky brown siltstone member	Blocky brown siltstone member
		Unit C		Lower black siltstone member	Shaly siltstone member

The Spray River Group in most of the region disconformably overlies chert and cherty dolomites of the Rocky Mountain Group. However, in the more easterly sections, the Triassic sequence lies on the cherty dolomites of Formation D (Mountjoy, 1962) of the Rundle Group. Disconformably overlying the Spray River Group is the Nordegg Member of the Fernie Group.

The Triassic succession outcrops in northwesterly trending valleys and mountain ridges. The physiography of the region is controlled by a series of southwesterly dipping thrust sheets (see Mountjoy, 1962).

Sulphur Mountain Formation

The Sulphur Mountain Formation is typically a dark grey to rusty-brown-weathering sequence of siltstone, shale, and dolomite and ranges in thickness from 620 feet in the vicinity of Rock Lake to 1,163 feet near Glacier Pass.

Shaly Siltstone Member

The Shaly siltstone member comprises an assemblage of thin-bedded, shaly to flaggy-weathering, grey to brown, pyritiferous, micromicaceous, shaly siltstones. These siltstones may in part be classed as very quartzose silty shales. Minor dolomitic siltstone and sandstone beds from 4 to 6 inches thick are intercalated in the upper and lower parts of the unit. Fine to coarse, regular to lensitic, pyritiferous laminations and cross-laminations occur throughout the unit. Small to medium-sized load casts were observed at the base of the member at Seep Creek (Section 3). This member has a maximum measured thickness of 435 feet at Eagles Nest Pass (Section 5), and a minimum thickness of 273 feet on Rock Creek (Section 9).

The siltstones consist essentially of subangular to angular quartz grains, fine flakes of mica, and grains of pyrite, cemented by finely crystalline dolomite and silica. Traces of feldspar, rutile, tourmaline, zircon, and amphibole occur. Collophane, generally amounting to 1 or 2 per cent by volume, occurs as pellets, subangular grains, and ooliths. It was found in all the siltstones examined throughout the member and was most abundant in the basal 50 feet. In general the amount of dolomite in the member is less than that of quartz.

The Sulphur Mountain Formation rests disconformably on the Rocky Mountain Group and the Rundle Group. In the eastern sections (see Sections 1, 2 and 3) where it overlies the Rundle Group a cherty, quartzose pebble-conglomerate, ranging in thickness from 4 to 6 inches, is commonly developed at the base, being most prominent at Section 1. The cherty cement of the conglomerate contains abundant sponge spicules, similar to those found in the upper beds of the Rocky Mountain Group in the western part of the region. The presence of these spicules in the conglomerate suggests that the conglomerate may have been partly derived from the Rocky Mountain Group, or represents an erosional remnant. In the western part of the region the base is characterized by a thin, pyritiferous, quartzose pebble-conglomerate with grains of collophane. It is devoid of organic remains. Subrounded pebbles averaging 3/4 inch in diameter are present; in some localities these pebbles are as large as 2 inches in diameter.

The contact with the overlying Blocky brown siltstone member is gradational but distinct. That is, the thin-bedded, shaly siltstones of this member grade upward into more resistant, thicker-bedded siltstones of the Blocky brown siltstone member. In most of the sections measured the contact is placed at the first occurrence of a resistant dolomitic siltstone bed that averages 1 foot in thickness. However, in the eastern sections of the region the resistant dolomitic siltstone marker bed is not apparent, thereby necessitating placement of the contact between the members within an interval of 10 to 15 feet.

The Shaly siltstone member is sparsely fossiliferous. Pelecypods, ammonites, and fish scales were collected mainly from the lower part of the member. The fauna includes Claraia stachei Bittner, of Lower Scythian age.

Blocky Brown Siltstone Member

The Blocky brown siltstone member consists of well-indurated, cyclical alternations of medium grey to yellowish brown, pyritiferous siltstones and shale. The siltstone may in part be classed as silty quartzose dolomite. It is variably thin to medium-bedded and weathers shaly to flaggy. The shale is medium grey, very soft and fissile. The cyclical alternations consist of medium grey shale at the base, overlain by thin- to medium-bedded siltstones, and the cycles are generally in the order of 1 foot to 2 feet thick. Thin-bedded shaly siltstones decrease in frequency from the base upwards whereas the medium-bedded siltstones are more common in the upper part and in the thicker, more westerly sections.

The member varies in thickness from 160 feet in the Wildhay River region to a maximum of 335 feet near Glacier Pass. The thickness variation is very regular and systematic, exhibiting a progressive thickening in a northwesterly direction.

Pyrite, micaceous laminations and cross-laminations characterize the thin-bedded siltstones and shale. The massive and thickly bedded siltstones are generally homogeneous and not laminated. The upper 30 to 40 feet of the member is characterized by large load casts or flow rolls, which are widely distributed throughout the region and form a prominent marker horizon. The load casts have been noted as far west as Glacier Pass, and as far southeast as the Fiddle River - Miette Hotsprings area. Other sedimentary features in the member are current-ripple marks and groove casts.

Mineralogically, the member is similar to the underlying Shaly siltstone member. The amount of dolomite however, is generally high and exceeds that of quartz, whereas in the Shaly siltstone member it is generally less than that of quartz. This feature presents considerable difficulty in the field classification of the rocks, as a distinction must need be made between quartzose dolomite and dolomitic quartzose siltstone, depending on whether dolomite or quartz is the greater.

The Blocky brown siltstone member contains very few fossils. Ganoid fish scales and fragments, and ammonite fragments, including Euflemingites sp. of early Upper Scythian age, were collected.

Black Shale Member

This member consists of very recessive shales that are commonly covered. The shales are medium to dark grey, argillaceous, pyritiferous, and are interbedded with quartzose dolomite and dolomitic quartzose siltstone. Quartz and dolomite are the main mineral constituents present in the member. Pyrite and carbonaceous minerals are abundant throughout and give rise to the dark grey and brownish grey weathering colour which so often characterizes the member. Nodules of pyrite and calcite up to 2 inches in diameter are common in the upper 25 feet. The member is generally uniform in thickness in comparison to other members of the Sulphur Mountain Formation (see Fig. 1) and averages about 60 feet. The maximum thickness measured is 76 feet at Seep Creek (Section 3), and the minimum is 43 feet measured on Rock Creek (Section 9).

The Black shale member appears to overlie the Blocky brown siltstone member disconformably. A 2-to-5-inch phosphatic pebble-conglomerate occurs at the base of the member at most sections, suggesting a hiatus in deposition. However, at some sections this conglomerate is not present. The contact with the Blocky brown siltstone member is then defined on the basis of a sharp colour and lithologic change, that is, from the yellow brown of the Blocky brown siltstone member to the dark grey to black of the Black shale member, and from siltstones to soft recessive weathering shale. Westermann (1962) places the contact between the Sulphur Mountain and Whitehorse Formations at the base of the conglomerate bed. The contact with the overlying Silty dolomite member is placed at the base of the lowest, thick, resistant, siltstone bed of the overlying member. This contact, although gradational, is distinct and recognized throughout the region.

Fossils are scarce, but Spiriferina cf. stracheyi and Pearylandites sp. were collected from the basal 10 feet, and Pseudomonotis sp., Gymnotoceras sp., and Ptychites sp. were obtained from the upper 10 to 15 feet. Tozer states that this fauna is of Anisian age.

Silty Dolomite Member

The Silty dolomite member comprises medium grey and yellowish brown, pyritiferous, slightly micaceous dolomites with interbeds of siltstone, sandstone, shale, and intraformational breccia. Individual beds are generally 1 foot to 2 feet thick, the whole being relatively resistant to weathering. However, the lower 30 to 40 feet in some sections is thin bedded and argillaceous, especially the upper 20 to 25 feet of the unit. These beds resemble the upper strata of the Black shale member, except for the few thick, resistant massive siltstone beds used to define the base of the Silty dolomite member. The thin-bedded nature of the lower part of the member occurs only in the western part of the area studied. The Silty dolomite member ranges from a maximum thickness of 361 feet at Glacier Pass, to 58 feet in the Rock Lake area.

The dolomites are fine to medium crystalline and are variably quartzose, grading into siltstone and sandstone. The principal mineral constituent is dolomite in all lithologic types however, varying from 40 to 60 per cent by volume, with quartz ranging from 25 to 35 per cent. Where dolomite is less than 50 per cent, the rock is accordingly considered a siltstone or sandstone. Accessory minerals include mica, pyrite, feldspar, collophane, and common heavy minerals. Collophane is present as black to dark grey chips, grains, and pebbles, the latter up to 1 inch in diameter.

It occurs throughout the member particularly near the base. Vugs up to 1 inch in diameter commonly occur in the upper part of the member. They are filled or lined with white or colourless quartz, chert, and calcite.

The Silty dolomite member is overlain conformably by the Evaporitic member of the Whitehorse Formation. The contact is gradational but is readily evident on the basis of a prominent colour change from the medium and dark greys of the Sulphur Mountain Formation to the light greys and yellows of the Whitehorse Formation. This colour change takes place within an interval of 25 to 35 feet and is generally accompanied by an abrupt change from the thick, resistant, silty to sandy dolomite beds of this member, to thinner, more recessive, argillaceous, sandy limestones and dolomites of the lower part of the Evaporitic member. In applying the above criteria, there is little difficulty in placing the Sulphur Mountain - Whitehorse Formation contact within a few feet.

Fossils collected from the Silty dolomite member include Spiriferina cf. stracheyi, lingulids, and unidentifiable pelecypod, mollusc, and fish fragments.

Whitehorse Formation

The Whitehorse Formation conformably overlies the Sulphur Mountain Formation. It is in turn overlain by the Nordegg Member of the Jurassic Fernie Group. The Whitehorse Formation is characterized in this region by facies changes occurring within relatively short distances. Subdivision into three members is tentatively proposed (see Table I); they are, in ascending order, the Evaporitic member, the Crinoidal Limestone member, and the Upper carbonate member. The Crinoidal Limestone member is herein separated as a distinctive lithologic unit from the upper part of the Evaporitic member of Manko (1960). The formation ranges in thickness from a minimum of 200 feet on the Wildhay River near Rock Lake, to a maximum of 1,085 feet on Monoghan Creek (Section 16). The systematic decrease in thickness from northwest to southeast may be partly or mainly the result of pre-Jurassic erosion.

Evaporitic Member

The Evaporitic member comprises a complex, interbedded, interfingering sequence of carbonates, sandstones, siltstones, shales, and solution breccias. The carbonate consists of finely crystalline limestone and dolomite, very quartzose for the most part,

and generally light grey to buff. The sandstones and siltstones are very quartzose, dolomitic, and in part calcareous. Green- to buff-weathering, dolomitic, quartzose shale occurs as thin interbeds with the carbonates and siltstones. This facies is very lensitic and recessive. The solution breccia which characterizes the member, consists of buff- to red-brown-weathering, lensitic, brecciated limestone, sandstone and dolomite. Facies changes are very common in a northwesterly direction in the study area. These are shown by the presence of sandstones and dolomite in the southeast, grading and interfingering laterally with siltstones, solution breccias and gypsum in the northwest. An extensive series of dominantly red-coloured beds, 10 to 25 feet thick, occur in the Rock Creek, Mowitch Creek, and Monoghan Creek regions (Sections 6, 7, 9, 11, 15 and 16). These red-coloured beds occur at a similar stratigraphic position near the top of the member at all sections, and are overlain by the Crinoidal limestone member. It is therefore evident that red-coloured strata also occur within the Whitehorse Formation at a lower stratigraphic level than that reported by Manko (1960) in the upper carbonate member. The Evaporitic member shows a marked increase in thickness from east to west, attaining a minimum measured thickness of 190 feet on Wildhay River (Section 2) one of the most easterly sections, to a maximum of 672 feet at the head of Mowitch Creek (Section 12).

The chief minerals of the sequence are very finely crystalline dolomite and recrystallized calcite. The amount of calcite increases progressively upwards in each section and from east to west in the study area. Very fine grained, subrounded quartz, averaging less than 25 per cent is dispersed throughout all facies of the member. Accessory minerals include plagioclase and microcline, chert, mica, pyrite, collophane, and common heavy minerals.

Gypsum is present at three localities, two of which have previously been studied and described by Allan (1934) and Govett (1961). The third occurrence is located in the Monoghan Creek area. The deposit at Mowitch Creek is about 200 feet thick, consisting of interbeds of light grey, very finely crystalline dolomite, and white to grey sugary gypsum. The gypsum beds are in general thin and lens-shaped. However, minor beds up to 10 feet occur. The occurrence in the Monoghan Creek area is local and attains a maximum thickness of 1 foot. The gypsum is white, sugary-fine to medium grained, and is interbedded with thin dolomite and dolomitic siltstone. The gypsum grades laterally into thin-bedded, buff to pink sandy limestones and dolomites.

The solution breccias are massive, cavernous, and generally non-bedded. They are highly variable in thickness but display a general trend in thickening towards the west. The breccia consists of angular to subangular fragments and blocks of yellow to greenish yellow, silty to sandy dolomite, chalky dolomite, and sandstone, cemented by coarsely crystalline recrystallized calcite. The fragments average 2 to 6 inches in diameter; however, blocks up to 3 feet in dimension occur in the vicinity of Blue Creek. The formation of these breccias is attributed to the removal by solution of gypsum and anhydrite.

The Evaporitic member has gradational contacts with the underlying Silty dolomite member, and the overlying Crinoidal limestone or Upper carbonate members. The contact with the Crinoidal limestone member is placed at the base of a sequence of thick, medium- to dark-grey-weathering, fossiliferous limestone beds. This contact is distinct and readily traceable in the western part of the study area. The contact with the Upper carbonate member, which is limited to the eastern sections, is transitional and difficult to locate. It is placed at the first continuous occurrence of relatively resistant, light-weathering, slightly silty carbonate beds occurring above the massive solution-breccia sequence.

Fossils identified by Tozer collected from the member include Gervillia sp., Lima sp., Myophoria sp., and Germanonautilus sp. Indeterminable pelecypods, lingulids and other brachiopods, and crinoid fragments occur. The fauna is Middle or Upper Triassic.

Crinoidal Limestone Member

The Crinoidal limestone member comprises an assemblage of medium- to dark-grey-weathering, resistant, thick-bedded, relatively pure organic pelletoid limestones. It varies in thickness from a minimum of 33 feet at the headwaters of Persimmon Creek (Section 6), to a maximum of 108 feet at Mowitch Creek (Section 13). Section 6 represents the most easterly occurrence of the member.

The limestones are dominantly coarse to medium grained, consisting of abraded organic detritus, the chief constituent being crinoid ossicles. Pellets, brachiopod and pelecypod fragments are also common. Accessory minerals include pyrite, chert, and collophane, all of which decrease in concentration westward. The detrital organic content progressively increases from east to west, attaining a maximum at Monoghan Creek where the unit may be termed an 'organic pelletoid limestone' or 'calcarenite'.

The upper contact is gradational but distinct. It is designated on the basis of a prominent colour and mineralogical change. The basal beds of the overlying Upper carbonate member consist of light-grey- to yellowish-grey-weathering, sandy to silty dolomites and limestones, strongly contrasting with the grey-weathering organic limestones of the Crinoidal limestone member. It appears that this facies is truncated, or grades into the overlying Upper carbonate member, as it is absent in the eastern part of the area.

Pentacrinus sp. has tentatively been identified and there are echinoid spines, pelecypod fragments, and terebratulid fragments. No age has been suggested for the fauna.

Upper Carbonate Member

The Upper carbonate member consists of resistant to slightly recessive, medium-bedded, yellowish- to dark-grey-weathering, sandy to silty dolomite and limestone. Minor beds of solution breccia, dark grey fissile dolomitic shale, and very fine grained quartzose sandstone are intercalated. Thickness ranges from a minimum of 9 feet in the Rock Lake area, to a maximum of 450 feet at Monoghan Creek. This thickening change from west to east is possibly due to pre-Jurassic bevelling.

Dolomite and calcite are dominant minerals, generally in excess of 50 per cent by volume, and fine- to very-fine-grained quartz is usually less than 25 per cent by volume. The chief accessory minerals are feldspar, clay, mica, pyrite, chert, collophane, and common heavy minerals such as zircon, tourmaline, and rutile. The collophane shows a progressive increase in abundance from east to west. Chert occurs in the form of lenses, nodules, and vug fillings, particularly towards the top and base of the member.

The Upper carbonate member is overlain disconformably in most sections by the Nordegg Member of the Fernie Group. In the Sulphur River and Monoghan Creek region, the upper 50 feet of the Upper carbonate member is similar to the lower 15 to 25 feet of the Nordegg Member. However, a prominent quartz, phosphatic pebble-conglomerate varying in thickness from 2 inches to 2 feet is usually present and marks the base of the Nordegg Member. At sections where the conglomerate is absent the contact lies within a transition zone 10 feet thick, and is drawn arbitrarily in the middle of it. The Upper carbonate member gradationally overlies the Crinoidal limestone member in the western sections, and the Evaporitic member of the eastern sections.

The Red bed member designated by Manko (1960) in the Blue Creek region as the uppermost beds of the Whitehorse Formation would appear to represent strata confined solely to that area. The Upper carbonate member thus displays a pronounced facies change between Glacier Pass and Blue Creek.

Fossils collected from the Upper carbonate member are Myophoria sp., Paleocarditia sp., Lima sp., and brachiopod, pelecypod, and crinoid fragments. These fossils identified by Tozer are all of Middle or Upper Triassic age.

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APPENDIX [1]

Section 1

Location: Wolf Pass; Section 9, Center, Township 51, Range 2, W6. Measured in small steep gully for most part; basal portion complicated by folding and faulting; base of section obtained in first major gully southeast of main section. Section measured by D.W. Gibson 1962.

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Fernie Group		
	Nordegg Member		
	Limestone and shale, argillaceous; fine- to medium-crystalline; medium dark to dark grey, and weathering dark brown-grey; thin- to medium-bedded; poorly preserved ammonite fragments; shale very soft and crumbly; strong sulphurous odour; in part covered; unit represents base of Fernie Group; slightly recessive.		
	Whitehorse Formation (470 feet)		
	Upper carbonate member (20 feet)		
32	Dolomite, quartzose; finely crystalline; light to medium grey, and weathering light grey to greyish white; thin- to medium-bedded up to 1 1/2 feet; fine regular sand laminations at base of unit; small white calcite-filled vugs; resistant.	15	961 1/2

[1] The appendix gives detailed descriptions of selected columnar sections shown on Figure 1, section numbers correspond with those on the figure.

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
31	Shale and dolomite, quartzose, argillaceous; clastics very fine grained to silt size, carbonate fine to very finely crystalline; medium grey, and weathering medium grey brown; thin- to medium-bedded up to 1-foot; unit consists mainly of sandy to silty dolomitic shale; thicker beds very dense and hard; unit appears to represent transition zone between upper carbonate and evaporitic members; recessive.	5	946 1/2
	Evaporitic member (450 feet)		
	Covered interval, except for scattered outcrop in upper part of unit, which consists of reddish grey to brownish grey sandy dolomite weathering rusty brown; very soft and recessive; lower part of interval presumably consists of argillaceous carbonates.	23	941 1/2
30	Limestone, argillaceous, slightly quartzose, very dolomitic in part; medium to coarsely crystalline; pale yellowish brown to light grey to yellowish grey, and weathering medium light grey to light yellowish brown; thin- to medium-bedded up to 1 foot, wavy to lensitic bedding planes; soft; in part covered; recessive.	30 1/2	918 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
29	Dolomite, slightly quartzose, argillaceous, calcareous; fine to medium crystalline; pale yellowish brown, and weathering medium to light grey brown; indistinct bedding planes, but appears to be thick-bedded; mottled; soft and crumbly; recessive.	5	888
28	Limestone to dolomite, quartzose, slightly argillaceous; upper 5 feet partly brecciated, subangular dolomite and limestone fragments in a white calcite matrix; carbonate mainly fine- to medium-crystalline; pale yellowish brown to medium grey, and weathering brownish to yellow grey; thin- to medium-bedded up to 1 foot, poorly developed crossbedding; slightly recessive.	18	883
27	Limestone, quartzose, argillaceous, in part dolomitic; fine to medium crystalline; in part brecciated with carbonate pebbles and fragments up to 1 1/2 inches in diameter; medium light grey to yellowish grey, and weathering medium grey to yellow brown; thin- to medium-bedded up to 1 foot; poorly developed regular to lensitic sand laminations in lower part of unit; weathers shaly to flaggy; in part covered; recessive.	17 1/2	865
26	Limestone, dolomitic, slightly silty; finely crystalline; medium light grey with slight brown tint, and weathering yellowish grey brown; medium-bedded up to 2 feet; yellow sandy to silty laminations; mottled; resistant.	5	847 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
25	Sandstone to dolomite, quartzose, calcareous in part; fine to very fine grained, dolomite finely crystalline; light to medium light grey to greyish orange, and weathering yellowish grey brown; medium-bedded up to 1 1/2 feet; mottled in part; resistant.	16 1/2	842 1/2
24	Sandstone to limestone, quartzose, very dolomitic in part, may be classed as sandy dolomite; very fine grained to silt size; carbonate very fine to medium crystalline; medium light grey to yellowish grey, and weathering light grey yellow to yellowish grey brown; thin- to medium-bedded; very irregular colour laminations in lower 2 feet; in part mottled; minor vugs; upper 4 feet forms prominent recessive notch; unit in general slightly recessive.	21	826
23	Limestone and limestone breccia, slightly quartzose, minor interbeds of dolomite; breccia consists of angular to subangular limestone and dolomite fragments up to 1 1/2 inches in diameter, in a silty fine to coarsely crystalline matrix; light to very light grey to yellowish grey, and weathering light to medium grey; medium- to thick-bedded; abundant calcite-lined vugs; breccia contains small caverns; unit very porous; lower 2 feet consists of calcareous dolomite; resistant.	22	805

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Covered interval, talus consists of limestone conglomerate and breccia; very argillaceous and sandy; forms recessive notch.	8	783
22	Limestone to dolomite, slightly silty to sandy; finely crystalline; medium light to light grey to pale yellowish brown, and weathering medium greyish yellow; thin- to medium-bedded; wavy to lensitic bedding planes; center of unit contains 1 1/2 feet of dark grey dolomitic shale; regular to wavy colour laminations in upper 10 feet; small normal fault; unit partly covered; forms prominent recessive notch.	15 1/2	775
21	Sandstone, quartzose, very calcareous, may in part be classed as quartzose limestone, argillaceous; fine to very fine grained; yellowish grey, and weathering greyish yellow to medium yellow-brown; medium-bedded up to 2 feet; mottled in part; soft and crumbly; recessive.	14	759 1/2
	Covered interval, minor scattered outcrop; limestone and sandstone, quartzose, argillaceous; light grey to yellowish grey, and weathering medium grey yellow; thin- to medium-bedded up to 1 foot; recessive.	30	745 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
20	Dolomite, quartzose, calcareous in part; upper 2 feet consists of conglomerate-rounded limestone pebbles up to 1 inch in diameter, in a finely crystalline sandy matrix; light to very light grey to yellowish grey, and weathering light yellowish grey; thin- to medium-bedded up to 6 inches; faintly laminated; center of unit weathers shaly; slightly recessive.	10	715 1/2
19	Limestone, silty in part; fine- to medium-crystalline; medium to medium light grey, and weathering yellow-grey to medium grey; thin- to medium-bedded up to 1 foot; upper part of unit very porous and thicker bedded; resistant.	5	705 1/2
18	Dolomite, very calcareous, in part may be classed as dolomitic limestone; finely crystalline; light to very light grey to light olive-grey, and weathering light grey to light yellow-grey; thin- to medium-bedded up to 8 inches; faint trace of irregular colour laminations; upper part of unit soft and crumbly and very calcareous; recessive.	12	700 1/2
17	Dolomite, very calcareous in part, slightly quartzose; fine to very finely crystalline; appears to be brecciated in part; light to very light grey, and weathering medium grey to yellow-grey; medium-bedded; orange-yellow wavy irregular colour laminations; minor vugs; basal part of unit partly covered; resistant to slightly recessive.	31	688 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
16	Limestone to dolomite, silty in part; finely crystalline; very light grey to yellowish grey, and weathering medium grey to yellow grey; medium-bedded; irregular orange-yellow streaking; minor calcite-filled vugs; lower part of unit very dolomitic; resistant.	5	657 1/2
15	Dolomite, slightly quartzose; very fine to finely crystalline; light grey to light olive grey, and weathering light greyish yellow; medium bedded up to 9 inches; minor vugs; small drag-fold in basal 8 feet; slightly recessive.	13 1/2	652 1/2
	Covered interval, lithology masked by fold.	7	639
14	Dolomite, slightly quartzose, very calcareous in part; finely crystalline; yellowish grey with slight olive tint, and weathering medium to light yellowish grey; thin- to medium-bedded up to 1 1/2 feet; yellow silt laminations; calcite filled vugs up to 1 1/2 inches in diameter; slightly recessive.	23 1/2	632
13	Dolomite, argillaceous, slightly calcareous; very fine to finely crystalline; yellowish grey to pale reddish brown, and weathering greyish yellow to greyish purple; thin- to medium-bedded; large white to pink calcite-filled vugs up to 2 inches in diameter; mottled; purple colouration restricted to upper 5 feet; recessive.	12	608 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
12	Dolomite, slightly quartzose, very calcareous, may be classed in part as dolomitic limestone; lower part of unit contains minor intraformational conglomerate, with dolomite and limestone pebbles up to 1/2 inch in diameter in a fine grained finely crystalline quartzose dolomitic matrix; clastics very fine grained to silt size, carbonate very fine to finely crystalline; light grey to yellowish grey to pale reddish brown, and weathering light yellowish grey to reddish brown; thin- to medium-bedded up to 2 feet, minor green-grey shale beds in center of unit; vugs up to 1 inch in diameter lined with small colourless calcite crystals; bedding planes wavy and lensitic, lower 10 feet contains large sandstone lens 30 feet long by 2 feet thick, grading at both ends into dolomitic quartzose shale; lowermost 6 feet mainly covered; unit slightly recessive to recessive.	34 1/2	596 1/2
	Covered interval, except for lower 1 1/2 feet; limestone argillaceous, dolomitic; finely crystalline; yellowish grey, and weathering yellow grey; thin-bedded up to 1 1/2 inches, recessive.	20	562
11	Limestone, quartzose, slightly argillaceous; finely crystalline; medium grey to yellowish grey, and weathering grey-yellow to medium-grey; thin- to medium-bedded; minor intraformational conglomerate lenses in upper 5 feet, bedding planes wavy to lensitic; in part covered; slightly recessive.	9	542

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
10	Dolomite, quartzose; very fine to finely crystalline; greenish grey to yellowish grey to greyish red, and weathering grey-yellow to reddish brown; medium-bedded up to 9 inches; upper 5 feet mottled; white to pink calcite-lined vugs; center of unit contains 2 foot zone of greyish red to greenish grey shale; very recessive.	8 1/2	533
9	Dolomite, quartzose, very calcareous in part, slightly argillaceous; finely crystalline with minor intraformational conglomerate; light grey to yellowish grey, and weathering light brownish grey; medium-bedded up to 1 foot, minor calcite-filled vugs; lower 1 foot very sandy, and contains large rounded limestone balls up to 1 foot in diameter; slightly recessive.	3 1/2	524 1/2
	Covered interval.	21	521
8	Limestone, very quartzose; quartz very fine grained, carbonate medium-crystalline; yellowish grey with yellowish brown mottling, and weathering light grey to yellow-grey; thin- to medium-bedded up to 3 inches; wavy bedding planes; faint wavy colour laminations; minor calcite-filled vugs; recessive; unit represents base of Whitehorse Formation.	8 1/2	500

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Sulphur Mountain Formation (faulted)		
	Silty dolomite member (106')		
7	Dolomite, very quartzose, slightly argillaceous; quartz silt size to very fine grained, carbonate fine- to medium-crystalline; medium to medium light grey, and weathering medium yellow-grey-brown; thin- to medium-bedded up to 1 foot; large load cast or flow roll in upper 4 feet of unit; minor micromicaceous fissile sandy shale interbeds in center of unit; slightly recessive.	16	491 1/2
6	Dolomite, very quartzose, slightly argillaceous, may in part be classed as dolomitic quartzose siltstone; finely crystalline, clastics silt size to very fine grained; medium to medium dark grey to yellowish grey, and weathering medium grey-brown to light yellow-brown; medium-bedded up to 1 1/2 feet; colourless calcite-lined vugs up to 1 inch in diameter; minor micromicaceous argillaceous shale partings between beds; black phosphate grains and fragments concentrated at top and bottom of unit; indeterminate pelecypod fragment in center of unit; in part mottled; resistant; unit marks base of silty dolomite member.	90	475 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Black shale member (55')		
	Covered interval, no outcrop; talus consists of dark grey silty dolomitic shale; thickness of unit may be 5 - 10 feet less actual interval measurement, owing to lack of precise location of upper and lower contacts.	55	385 1/2
	Blocky brown siltstone member (faulted)		
5	Siltstone, quartzose, slightly argillaceous, very dolomitic, may in part be classed as silty quartzose dolomite; carbonate finely crystalline; medium to medium light grey, and weathering medium to dark grey brown; medium- to thin-bedded with beds up to 1 1/2 feet; wavy bedding planes; inter-bedded laminated micromicaceous sandy to silty shales; large load casts or flow rolls; resistant.	23	330 1/2
4	Siltstone, quartzose, very dolomitic, argillaceous; dolomite finely crystalline; medium to medium light grey to pale yellowish brown, and weathering yellowish grey-brown; thin- to medium-bedded up to 1 foot; thin beds display fine regular to lensitic pyritiferous laminations; interbedded micromicaceous fissile shales; minor crossbedding and ripple marks; indeterminate	91	307 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	ammonite fragments; unit weathers shaly to flaggy; lower 25 feet partly folded as a result of underlying fault; slightly recessive.		
	Faulted and folded interval, estimated thickness of missing strata 100 feet; contact of blocky brown siltstone and shaly siltstone members lies within interval; section continues in next major gully east of main section.	100	216 1/2
	Shaly siltstone member (faulted)		
3	Siltstone to silty shale, quartzose, argillaceous, very dolomitic; medium grey to pale yellowish brown, and weathering medium to dark grey-brown; fine wavy to regular colour laminations; poorly developed microcross-bedding; thin- to thick-bedded up to 5 feet, but averages 1 inch; one massive 5 foot non-laminated bed in center of unit; minor calcite-filled vugs up to 1/8 inch in diameter; minor black phosphate grains and fragments in lower 5 feet; unit weathers shaly to flaggy; micromicaceous; slightly recessive to recessive.	52	116 1/2
	Covered interval, talus same as overlying unit.	27	64 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
2	Siltstone and sandy shale, quartzose, argillaceous, very dolomitic; carbonate fine- to medium-crystalline; pale to medium yellowish brown, and weathering medium grey-brown; thin-bedded up to 3/4 inch; very fissile quartzose shale inter-beds; shale beds irregularly laminated while thicker beds non-laminated; unit weathers shaly to flaggy; slightly recessive.	37	37 1/2
1	Conglomerate, quartzose, cherty, pyritiferous; round to subangular dark grey quartzose, chert, and carbonate pebbles in a quartz-chert cement and matrix; chert contains abundant sponge spicules; unit marks base of Sulphur Mountain Formation, but in part represents erosional remnants of the Rocky Mountain Formation; unit has a variable thickness.	1/2	1/2
	Rundle Group		
	Dolomite, slightly silty; coarsely crystalline; medium light grey, and weathering yellowish grey; medium-bedded up to 1 foot; minor chert pebbles; resistant.		

Section 3

Location: Seep Creek; Section 35, Northwest, Township 52, Range 3, W6. Measured on northwest side of small intermittent stream gully, draining into east fork of Seep Creek. Measured by D. W. Gibson 1962.

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Whitehorse Formation Upper carbonate member (Incomplete)		
37	Dolomite, slightly calcareous, slightly argillaceous, quartzose; very fine to finely crystalline; light to very light grey, and weathering medium grey; medium-bedded up to 1 1/2 feet; minor very small vugs; resistant.	2 1/2	937
	Covered interval.	7	934 1/2
36	Dolomite, quartzose; finely crystalline; light grey with yellow tinting, and weathering medium to dark brownish grey; medium- to thick-bedded up to 2 1/2 feet; resistant.	8	927 1/2
	Covered interval, except for scattered outcrop in basal 2 feet; dolomite, quartzose; finely crystalline, clastics mainly very fine grained; light grey with medium grey mottling, and weathering medium grey; laminated in part; resistant.	14	919 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
35	Dolomite to dolomitic sandstone, very quartzose, slightly calcareous; fine to very finely crystalline, clastics mainly very fine grained; light to medium grey to yellowish grey, and weathering medium grey to greyish white; medium- to thick-bedded up to 3 feet; bedding planes wavy and lensitic in part; regular to lensitic coarser grained quartzose sand laminations throughout unit; minor white calcite filled vugs up to 1/2 inch in diameter near base; resistant; unit represents possible base of upper carbonate member.	56	905 1/2
	Evaporitic member (200')		
	Covered interval, talus consists of yellow-brown weathering argillaceous quartzose limestone.	9 1/2	849 1/2
34	Limestone to dolomite, slightly quartzose; medium to finely crystalline; light to very light grey, and weathering light to medium light grey; medium-bedded up to 1 foot; lower 2 1/2 feet consists of dolomite; abundant calcite-lined vugs up to 1/2 inch in diameter; limestone very soft and porous, and displays rough weathered surface; slightly recessive.	10	840
	Covered interval.	8 1/2	830

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
33	Dolomite, quartzose; very fine to finely crystalline; yellowish grey, and weathering greyish white; medium-bedded up to 1 foot; abundant calcite vugs up to 1 inch in diameter; slightly recessive.	8	821 1/2
32	Dolomite and limestone, quartzose, slightly argillaceous; finely crystalline; very light grey to yellowish grey, and weathering medium grey to yellow-grey to orange-brown; thin- to medium-bedded; minor vugs up to 1/2 inch in diameter; limestone appears to be in part brecciated; upper part of unit consists of chalky limestone; recessive.	14	813 1/2
31	Dolomite, slightly quartzose, calcareous in part finely crystalline; clastics siltsize; light grey to yellowish grey, and weathering medium to light grey to yellow-grey; medium-bedded up to 1 1/2 feet; lower 3 feet partly brecciated; vugs up to 1/2 inch in diameter; upper 6 feet contains regular quartzose silt laminations; lower part of unit soft porous and crumbly; unit may in part represent top of solution breccia unit; slightly recessive.	9	799 1/2
	Covered interval, talus consists of yellow-grey weathering solution breccia.	51	790 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
30	Limestone breccia, slightly quartzose, argillaceous; subangular to angular chalky silty dolomite fragments up to 30 mm. in diameter, in a very fine grained matrix of quartz and calcite; yellowish grey, and weathering medium grey to yellow-grey; indistinct bedding planes; very porous and vuggy; in part cavernous; lower 2 feet consists of silty dolomite; partly covered; recessive.	24 1/2	739 1/2
	Covered interval.	4	715
29	Dolomite, very shaly, calcareous, argillaceous, slightly silty; finely crystalline; yellowish grey, and weathering greyish yellow; thin-bedded up to 3/4 inch; small calcite-filled vugs; weathers shaly to flaggy; slightly recessive.	4	711
28	Limestone breccia, argillaceous, quartzose, dolomitic; yellowish grey subangular to angular fragments up to 1 inch in diameter, in a fine-grained to coarsely crystalline matrix and cement; yellowish grey to greyish orange, and weathering yellow-grey; indistinct bedding planes; lower 2 feet very sandy and may be classed in part as calcareous sandstone; unit partly covered; marks base of solution breccia; recessive.	28	707

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
27	Dolomite to sandstone, quartzose, very calcareous in part may be classed as quartzose limestone, slightly argillaceous; clastics very fine grained to siltsize, carbonate fine- to medium-crystalline; light grey to yellowish grey, and weathering greyish yellow; thin- to medium-bedded up to 10 inches; unit contains abundant dark bluish grey indeterminate phosphatic Lingulids; mottled; minor small calcite-filled vugs; quartzose sandstone occurs as interbeds throughout unit; slightly recessive; unit represents base of Whitehorse Formation.	29 1/2	679
	Sulphur Mountain Formation (649 1/2)		
	Silty dolomite member (69')		
26	Dolomite to siltstone, quartzose, slightly argillaceous; fine- to medium-crystalline, clastics mainly siltsize but minor very fine grains; medium grey to yellowish grey to light olive-grey, and weathering greyish yellow; upper part medium-bedded up to 1 1/2 feet, lower part indistinctly bedded with possibility of small fault; minor calcite-filled vugs up to 1/2 inch in diameter; pyrite nodules up to 3/4 inch in diameter; poorly preserved indeterminate pelecypod fragments 3 1/2 feet from base; minor black phosphate grains and fragments in upper 13 feet; slightly recessive.	37 1/2	649 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
25	Dolomite, very calcareous in part, slightly silty; very fine to finely crystalline; yellowish grey to medium grey, and weathering greyish yellow; indistinct bedding planes; poorly preserved pelecypod molds and fragments near top of unit; minor calcite-lined vugs; upper 3 feet very chalky; minor lenses and pockets of black phosphate grains and fragments; minor fish fragments; slightly recessive.	11	612
24	Siltstone to dolomite, quartzose, slightly argillaceous; clastics siltsize to very fine grained, carbonate finely crystalline; medium grey and weathering medium grey; medium-bedded; indeterminate ammonite molds and fragments; dark blue phosphatic fragments up to 1 1/2 inch in diameter; minor vugs; slightly recessive.	5 1/2	601
23	Limestone and dolomite, quartzose, slightly argillaceous; fine- to medium-crystalline, clastics siltsize; medium to medium dark grey with slight bluish tint in upper 5 feet, and weathering medium to dark yellow-grey; thin- to medium-bedded up to 4 inches; wavy bedding planes; abundant black phosphate chips and fragments; slightly vuggy; upper 5 feet contains ammonite fragments and impressions--<u>Gymnotoceras</u> sp. GSC loc. 52922; slightly recessive.	10	595 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
22	Dolomite to siltstone, quartzose, slightly argillaceous; carbonate finely crystalline; medium dark grey with slight brownish tint, and weathering medium to dark yellow-brown; thin- to medium-bedded; vuggy in part; black phosphate grains and fragments; slightly recessive; unit marks base of silty dolomite member.	5	585 1/2
	Black shale member (75 1/2)		
21	Covered interval, minor scattered outcrop 18 feet from base; shale to shaly siltstone, very dolomitic, quartzose, argillaceous; carbonate fine- to medium-crystalline; olive-grey to medium dark grey, and weathering dark grey; thin-bedded; fine regular pyrite laminations; fetid odour; indeterminate ammonite fragments and fish scales; black phosphate fragments and grains in talus throughout interval; unit weathers rubbly; recessive.	65 1/2	580 1/2
20	Dolomite, very quartzose, argillaceous; finely crystalline; medium dark grey, and weathering dark brownish grey; indistinct bedding planes; laminated, partly covered; recessive.	10	515

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Blocky brown siltstone member (205)		
19	Dolomite to siltstone, quartzose; fine- to medium-crystalline; yellowish grey to medium light grey, and weathering brownish yellow; medium-bedded; minor black phosphate chips; in part mottled; slightly recessive.	5	505
18	Siltstone, quartzose, very dolomitic, slightly argillaceous; medium to medium dark grey, and weathering medium to light brownish grey; thin- to thick-bedded; unit contains two large massive load casts or flow rolls, bounded at top and bottom by pyrite stained laminated shaly quartzose siltstone and shale; load casts up to 8 feet thick but variable; resistant.	20	500
17	Siltstone, quartzose, very dolomitic, slightly argillaceous; medium grey, and weathering medium grey-brown; thin- to medium-bedded up to 1 foot; minor laminated silty shale to shaly siltstone interbeds; slightly recessive.	8	480
16	Siltstone, quartzose, very dolomitic, slightly argillaceous, in part may be classed as silty to sandy dolomite; clastics siltsize to very fine grained, carbonate fine- to medium-crystalline; medium grey to medium yellowish brown to light olive-grey, and weathering	55 1/2	472

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	medium brownish grey to yellow-brown; thin- to medium-bedded up to 1 foot; wavy bedding planes; center of unit contains large load casts up to 4 feet thick; fine regularly laminated silty to sandy shale interbeds; micro-micaceous; unit weathers flaggy; resistant.		
15	Siltstone to sandstone, quartzose, very dolomitic, slightly argillaceous; siltsize to very fine grained; medium light grey, and weathering grey-brown; thin- to medium-bedded up to 1 foot; thin beds display fine regular to lensitic pyritiferous laminations; interbeds of sandy to silty quartzose shale; resistant.	18	416 1/2
14	Siltstone to dolomite, quartzose; carbonate fine- to medium-crystalline, clastics mainly siltsize; medium light grey to very light olive-grey, and weathering yellowish grey-brown; thin-bedded up to 2 inches; regular to wavy colour laminations; poorly developed microcross-bedding; minor sandy to silty quartzose shale interbeds; unit forms axis of small anticline; slightly recessive.	9	398 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
13	Siltstone, quartzose, very dolomitic, in part may be classed as silty dolomite, slightly argillaceous; clastics mainly siltsize but in part grade to very fine grained; carbonate fine- to medium-crystalline; medium light to dark grey to light olive-grey, and weathering grey to yellowish brown; thin- to thick-bedded up to 3 feet; wavy bedding planes in part; minor lead casts up to 3 feet in center of unit; fine regular to wavy colour laminations in thinner beds; poorly developed micro-crossbedding; interbeds of sandy to silty quartzose shale; upper 10 feet contains ammonite casts and fragments: Euflemingites sp. GSC loc. 52923; thinner beds micro-micaceous; unit weathers flaggy to shaly unit characterized by numerous small folds; resistant; unit marks probable base of blocky brown siltstone member.	89 1/2	389 1/2
	Shaly siltstone member (300)		
12	Siltstone, quartzose, dolomitic, slightly argillaceous; medium dark grey to medium olive-grey, and weathering yellowish brown; thin-bedded up to 1 inch; regular to lensitic colour laminations; unit weathers shaly to flaggy; consists mainly of shaly silt-stone; very recessive.	9	300

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Covered interval, talus consists of sandy to silty quartzose shale, and shaly siltstone; very recessive.	10	291
11	Siltstone, very shaly, quartzose, very dolomitic in part, argillaceous; medium grey to light olive-grey, and weathering yellowish brown to grey-brown; thin- to medium-bedded up to 3 inches, but averaging 1 1/2 inches; fine regular to wavy colour laminations; interbeds of sandy to silty quartzose shale; micromicaceous; minor blue-black phosphate chips and fragments near base; lower 1 foot consists of resistant non-laminated siltstone bed; unit weathers flaggy, and slightly recessive.	36	281
	Covered interval.	9 1/2	245
10	Siltstone, very shaly, quartzose, very dolomitic, slightly argillaceous; carbonate finely crystalline; medium grey to brownish grey to light olive-grey; thin-bedded up to 1 1/2 inches; fine wavy to regular colour laminations; sandy to silty quartzose shale interbeds; micromicaceous; weathers flaggy to shaly; slightly recessive to recessive.	28	235 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Covered interval, talus consists of shaly quartzose siltstone and shale; very recessive.	16 1/2	207 1/2
9	Siltstone and shale, quartzose, very dolomitic, argillaceous; carbonate finely crystalline; pale yellowish brown, and weathering medium grey-brown to pale yellowish brown; thin-bedded; up to 40 per cent silty to sandy quartzose shale interbeds; very fine wavy to regular pyritiferous laminations; weathers shaly to flaggy; partly covered; recessive.	21	191
	Covered interval, talus consists of sandy to silty shale.	6 1/2	170
8	Siltstone and shale, quartzose, very dolomitic, may in part be classed as silty dolomite; slightly argillaceous; medium to light grey to olive-grey to pale yellowish brown, and weathering pale yellowish brown; thin-bedded up to 3/4 inch; bedding planes wavy to lensitic; up to 50 per cent laminated sandy to silty quartzose shale interbeds; unit weathers shaly to flaggy; in part covered; marks base of very prominent recessive zone; recessive.	21	163 1/2
7	Siltstone and shale, quartzose, very dolomitic in part, slightly argillaceous; clastics siltsize to very fine grained; carbonate fine- to medium-crystalline;	60	142 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	medium to dark grey to brownish grey to medium olive-grey, and weathering medium to yellowish grey-brown; thin- to medium-bedded up to 6 inches but averaging 1-2 inches; fine regular to wavy pyritiferous laminations; indeterminate ammonite and blue-black lingulid casts and fragments; weathers shaly to flaggy; sandy to silty quartzose shale interbeds; slightly recessive.		
6	Sandstone to siltstone, quartzose, very dolomitic, may in part be classed as sandy to silty dolomite; very fine grained to siltsize, carbonate fine- to medium-crystalline; medium to medium dark grey, and weathering medium to dark grey-brown to yellow-brown; thin- to medium-bedded up to 3 inches; irregular wavy colour laminations; micro-crossbedding; interbeds of sandy to silty fissile shale; weathers shaly to flaggy; resistant.	19	82 1/2
5	Siltstone to dolomite, quartzose, slightly argillaceous; clastics siltsize but in part very fine grained, carbonate fine- to medium-crystalline; pale yellowish brown, and weathering yellowish grey-brown; thin-bedded; wavy to very irregular colour laminations; weathers flaggy to shaly; recessive.	10	63 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
4	Siltstone, quartzose, dolomitic, slightly argillaceous; in part appears to be very fine grained; medium grey to pale yellow-brown, and weathering yellowish grey-brown; thin-bedded; fine wavy to irregular colour laminations; wavy bedding planes; weathers shaly to flaggy; resistant.	10	53 1/2
3	Siltstone to dolomite, in part very shaly, quartzose, slightly argillaceous; carbonate fine- to medium-crystalline; pale yellowish brown, and weathering medium to dark grey brown to yellow-brown; thin-bedded up to 1/2 inch; very fine irregular to wavy pyritiferous laminations; unit weathers very shaly; micromicaceous; very recessive.	35	43 1/2
2	Siltstone to dolomite, quartzose; carbonate fine- to medium-crystalline; medium to medium light grey, and weathering grey-brown; thick-bedded, unit forms one massive load cast of variable thickness; in part laminated; dark grey sandy to silty shales above and below load cast; resistant.	3 1/2	8 1/2
1	Siltstone and shale, quartzose, dolomitic, argillaceous; medium dark grey, and weathering dark to medium brownish grey; large rounded to lensitic load casts or boulders up to 1 1/2 feet thick, interbedded with shaly siltstone and shale; very lensitic varying from 1 foot to 5 feet; recessive; forms base of Sulphur Mountain Formation.	5	5

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Rundle Group		
	Dolomite, silty; finely crystalline; medium dark grey, and weathering medium to dark grey; medium-bedded up to 1 foot; resistant.		

Section 7

Location: Rock Creek; Section 26, Southeast, Township 52, Range 5, W6. 1 7/8 miles due east of mile 58 cabin, west bank of west fork of small intermittent stream. Measured by D. W. Gibson 1962.

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Fernie Group		
	Sandstone to siltstone, dolomitic to calcareous, slightly argillaceous; siltsize to very fine grained; medium to medium dark grey with slight brown tint, and weathering dark grey-brown to medium grey; medium-bedded up to 1 1/2 feet; minor black shale interbeds; resistant.		
	Conglomerate, quartzose, calcareous; rounded pebbles up to 1 1/2 inches in diameter but averaging 3/4 inch, in a matrix of very fine grained quartz and phosphate; medium to medium dark grey, and weathering dark grey-brown; pebbles in part consist of light grey chert; upper 3 feet partly covered contains Arietites sp., and Pecten sp. GSC loc. 52999; recessive.	2	
	Whitehorse Formation (683)		
	Upper carbonate member (105')		
41	Dolomite to limestone, silty, argillaceous; fine- to medium-crystalline; medium to medium dark grey, and weathering greyish white; medium-bedded up to 10 inches; fine quartzose silt laminations throughout unit; slightly recessive.	12	683

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Covered interval.	19 1/2	671
40	Dolomite, quartzose; medium crystalline; clastics siltsize; medium grey to yellowish grey, and weathering medium grey to yellow-grey; medium-bedded; minor coarse grained sand lenses and laminations in lower 5 feet; mottled; in part covered; slightly recessive.	11 1/2	651 1/2
39	Siltstone to dolomite, quartzose; medium grey with greyish orange mottling, and weathering yellowish grey; medium- to thick-bedded; in part covered; slightly recessive.	10	640
	Covered interval, talus same as unit 38.	6 1/2	630
38	Dolomite, very quartzose, slightly calcareous; clastics very fine grained to siltsize, carbonate fine- to medium-crystalline; medium dark grey to yellowish grey, and weathering medium light grey to brownish yellow; medium-bedded up to 2 feet; quartzose lenses and laminations; small white calcite-filled vugs; resistant.	10	623 1/2
37	Dolomite, in places silty and very calcareous, slightly argillaceous; fine- to medium-crystalline; medium to very light grey, and weathering greyish white; indistinct bedding planes; abundant medium grey chert lenses and nodules up to 2 inches; lenses	22	613 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	prominent in upper 10 feet; well fractured; slightly recessive.		
36	Dolomite to siltstone, very quartzose, calcareous, argillaceous; finely crystalline; very light grey to olive-grey, and weathering greyish white to dark greyish yellow; medium- to thick-bedded up to 3 1/2 feet; mottled in part; lower 2 feet consists of calcareous siltstone; slightly recessive.	10	591 1/2
35	Siltstone, quartzose, very dolomitic; medium grey, and weathering medium grey to yellow-grey; unit may in part be silty dolomite; medium-bedded; slightly recessive.	3 1/2	581 1/2
	Crinoidal limestone member (52')		
34	Limestone, slightly argillaceous, in part dolomitic; fine-grained, matrix of medium-crystalline calcite; minor ooliths; medium to light grey, and weathering medium grey to yellowish grey; thick- to medium-bedded up to 4 feet; slight mottled appearance; minor white calcite-filled vugs near base; resistant.	27 1/2	578

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
33	Dolomite to siltstone, quartzose, slightly argillaceous; pale yellowish brown to medium light grey, and weathering light grey to greyish yellow; medium-bedded up to 14 inches; wavy bedding planes; minor interbeds of silt laminated shaly limestone; minor small grey chert nodules; slightly recessive.	8 1/2	550 1/2
32	Limestone, slightly argillaceous; fine-grained crinoid-echinoid fragments in a finely crystalline calcite cement and matrix; medium to medium dark grey, and weathering medium to dark grey; medium- to thick-bedded up to 4 feet; upper 6 inches very shaly; minor small grey chert nodules; resistant.	16	542
	Evaporitic member (526')		
31	Limestone, quartzose; fine- to medium-crystalline; yellowish grey, and weathering greyish yellow; medium-bedded up to 9 inches; weathers flaky to rubbly; recessive.	3	526
	Covered interval.	11 1/2	523
30	Dolomite to siltstone, quartzose, calcareous, slightly argillaceous; clastics mainly siltsize, carbonate fine- to medium-crystalline; yellowish grey, and weathering greyish white; indistinct bedding planes but appears to be medium-bedded; recessive.	7	511 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Covered interval, talus consists of greenish grey weathering carbonate.	23	504 1/2
29	Limestone, quartzose, argillaceous; finely crystalline; greyish orange to pale red, and weathering greenish grey to reddish brown; indistinct bedding planes; weathers flaky; upper part of unit pale red; partly covered; recessive.	4	481 1/2
	Covered interval.	17	477 1/2
28	Limestone, quartzose, argillaceous; finely crystalline; clastics fine-grained to siltsize; very light grey, and weathering medium grey; thin- to medium-bedded; wavy bedding planes; minor vugs filled with small calcite crystals; recessive.	3	460 1/2
27	Dolomite, quartzose and calcareous in part, slightly argillaceous; clastics very fine grained, carbonate finely crystalline; medium to very light grey to pale orange, and weathering medium grey to brownish yellow; medium-bedded up to 8 inches; lower 1 1/2 feet very vuggy; resistant.	8 1/2	457 1/2
26	Dolomite to siltstone, quartzose, calcareous, in part argillaceous; very light grey to yellowish grey, and weathering brownish yellow to greenish grey; thin- to medium-bedded up to 13 inches; lower 2 feet appears to be in part conglomeratic; recessive.	8 1/2	449

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
25	Limestone, quartzose, argillaceous, dolomitic in lower 10 feet; clastics very fine grained to siltsize, carbonate finely crystalline; very light grey to yellowish grey, and weathering greyish white to medium dark grey; medium-bedded up to 1 foot; minor silt laminations; micro-vugs in lower 10 feet; recessive.	26	440 1/2
24	Covered interval, minor outcrop; limestone, slightly argillaceous, slightly silty; carbonate finely crystalline; medium light grey, and weathering dark grey; thin-bedded; recessive; talus consists of red to reddish brown to yellow to greyish white weathering carbonate.	35 1/2	414 1/2
23	Sandstone, quartzose, very calcareous to dolomitic; very fine grained; very light grey with slight green tint, and weathering greyish white; indistinct bedding planes but appears to be medium-bedded; forms resistant rib.	7 1/2	379
	Covered interval.	37	371 1/2
22	Limestone, in part very quartzose and may be classed as calcareous sandstone; carbonate fine to coarsely crystalline; yellowish grey and weathering medium to dark yellow-grey to light grey; medium-bedded up to 2 feet averaging 1 foot; well fractured; in part crumbly; small vugs in lower 7 feet; slightly recessive.	19	334 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
21	Limestone, slightly argillaceous, dolomitic; finely crystalline; very light grey, and weathering light grey to yellow-grey; medium-bedded up to 2 feet; minor vugs; slightly porous; resistant.	5	315 1/2
20	Limestone and limestone breccia, argillaceous, slightly silty; limestone is medium to coarsely crystalline; breccia consists of subangular to rounded fragments up to 9 inches in diameter, in a coarsely crystalline silty matrix; light grey to yellowish grey, and weathering medium grey to yellowish grey; indistinct bedding planes but appears to be medium- to thick-bedded; very porous soft and crumbly; small calcite-filled vugs; slightly recessive.	23 1/2	310 1/2
	Covered interval, probably solution breccia.	37	287
19	Limestone and limestone breccia, dolomitic, argillaceous, silty; limestone finely crystalline, breccia fragments and pebbles up to 1 inch in diameter; light to very light grey, and weathering greyish white; indistinct bedding planes; lower 2 1/2 feet covered; recessive.	5	250
18	Dolomite, in part calcareous, slightly argillaceous; very finely crystalline; very light grey to yellowish grey, and weathering light yellowish grey; thin- to medium-bedded up to 6 inches; vuggy in lower 3 feet; recessive.	5 1/2	245

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
17	Limestone breccia, argillaceous, slightly quartzose; fragments up to 2 inches in diameter in a finely crystalline calcite matrix; very light grey to white, and weathering greyish white to yellow-grey; indistinct bedding planes, appears to be thick-bedded; breccia fragments silty, argillaceous, chalky; in part covered; recessive.	20	239 1/2
	Covered interval, probably solution breccia.	8 1/2	219 1/2
16	Limestone and limestone breccia, argillaceous, quartzose in part; breccia fragments up to 1 1/2 inches in diameter, very angular, in a medium to coarsely crystalline matrix; rest of unit fine- to medium-crystalline; light to very light grey to yellowish grey, and weathering white to yellowish grey; indistinct bedding planes; small vugs in part of unit; unit weathers with honeycomb surface; in part covered; recessive.	16	211
	Covered interval, probably solution breccia.	19	195
15	Dolomite, calcareous, slightly quartzose, slightly argillaceous; carbonate consists of very fine grains in a finely crystalline matrix; very light grey, and weathering greyish white; medium-bedded up to 1 1/2 feet; lower 1 foot resembles solution breccia, but no obvious fragments; slightly recessive.	5	176

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Covered interval.	7 1/2	171
14	Dolomite, silty; finely crystalline; greenish grey to light grey with blue tint, and weathering greyish yellow; thin- to medium-bedded up to 1 foot; poorly preserved pelecypod casts; micro-vugs in lower part of unit; recessive.	5	163 1/2
13	Dolomite, quartzose in part, argillaceous; finely crystalline; medium dark grey, and weathering medium grey; medium-bedded up to 8 inches; minor black silty shale interbeds; vuggy; weathers rubbly; slightly recessive.	11 1/2	158 1/2
12	Dolomite, quartzose, slightly argillaceous; unit may in part be classed as dolomitic siltstone; finely crystalline; medium- to medium-light grey, and weathering light grey; medium-bedded up to 1 foot; calcite-filled vugs up to 2 inches in diameter; weathers rubbly; resistant.	6	147
	Covered interval.	6	141
11	Limestone to dolomite, silty; finely crystalline; light grey, and weathering medium grey with orange streaks and tinting; indistinct bedding planes but appears to be medium-bedded; calcite-filled vugs up to 1/2 inch in diameter; slightly recessive.	4	135
	Covered interval, talus consists of light grey and yellow weathering carbonate.	9	131

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
10	Dolomite, silty, argillaceous; fine to very finely crystalline; medium- to medium-light grey, and weathering light grey to yellow-grey; thin- to medium-bedded up to 1 foot; wavy bedding planes; minor silty shale interbeds; orange-brown mottling on weathered surface; resistant.	8 1/2	122
9	Limestone to sandstone, quartzose, slightly argillaceous; clastics very fine to fine grained, carbonate medium crystalline; yellowish grey, and weathering light to medium grey to yellowish grey; medium- to thick-bedded; wavy lenticular bedding planes; crossbedded in part; in part soft and crumbly; slightly recessive.	13	113 1/2
8	Limestone, slightly silty, argillaceous; fine- to medium-crystalline; light to medium grey to yellowish grey with orange-brown irregular streaks in upper 5 feet, and weathering medium grey to yellow-grey; thin- to medium-bedded; wavy lensitic bedding planes; colour laminations; resembles solution breccia unit but no obvious fragments; recessive.	10	100 1/2
	Covered interval.	5 1/2	90 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
7	Sandstone to limestone, quartzose; clastics fine- to medium-grained, carbonate fine- to medium-crystalline; yellowish grey, and weathering yellowish grey to greyish white; thick-bedded, forms one bed; slightly recessive.	3	85
6	Limestone, quartzose, slightly argillaceous; may in part be classed as calcareous siltstone; fine- to medium-crystalline; medium-light grey to pale yellowish brown, and weathering yellowish grey; thin- to medium-bedded up to 6 inches; wavy bedding planes; vugs up to 1 1/2 inches in diameter lined with colourless calcite crystals; unit resembles solution breccia but no obvious fragments, lower 5 feet cavernous; very porous; recessive.	11 1/2	82
5	Limestone to sandstone, quartzose, slightly argillaceous; clastics fine to very fine grained, carbonate finely crystalline; yellowish grey to medium-light grey, and weathering light yellow-brown to yellow-grey; medium-bedded up to 1 foot; wavy bedding planes; calcite vugs up to 3/4 inch in diameter; greyish orange laminations in lower part of unit; well fractured; slightly recessive.	19 1/2	70 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
4	Sandstone, quartzose, very calcareous; fine to very fine grained; yellowish grey, and weathering yellow-grey; indistinct bedding planes but appears to be medium-bedded; colour laminations; upper part of unit contains reddish brown weathered pyrite nodules up to 3 inches in diameter; resistant.	11	51
	Covered interval.	11 1/2	40
3	Dolomite, silty, calcareous; finely crystalline; yellowish grey to light grey, and weathering light greyish brown to light yellow-grey; medium-bedded; minor calcite-lined vugs; upper 2 feet silty; resistant.	4 1/2	28 1/2
2	Limestone to siltstone, quartzose; very dolomitic; in part may be classed as silty dolomite; fine- to medium-crystalline; light grey with yellow tint, and weathering light- to medium-grey with orange-brown staining; medium- to thick-bedded up to 2 1/2 feet; minor chert pebbles up to 1 inch in diameter in lower 5 feet; small curved slits on weathered surface simulating pelecypod fragments in upper 5 feet; resistant.	10	24

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
1	Sandstone, quartzose, calcareous to dolomitic; very fine grained; yellowish grey to light olive-grey, and weathering medium-grey to light-yellow-grey; thin- to medium-bedded up to 1 foot; faint trace colour laminations; thin bed of chert pebble conglomerate 7 feet from base; upper part of unit soft, porous and crumbly; slightly recessive; unit represents base of Whitehorse Formation.	14	14
	Sulphur Mountain Formation		
	Silty dolomite member		
	Siltstone to silty dolomite, quartzose; carbonate finely crystalline; medium grey, and weathering light grey to light yellow grey; thin- to medium-bedded; laminated; unit may be transitional with Whitehorse Formation; slightly recessive.		

Section 8

Location: Rock Creek; Section 36 SW., Township 52, W6. 1 1/4 miles N29°E of mile 58 cabin, on west side of small stream gully. Section measured by D. W. Gibson 1962.

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Whitehorse Formation		
	Evaporitic member (incomplete)		
43	Sandstone, quartzose, slightly dolomitic; fine to very fine grained; yellowish grey, and weathering light yellow-grey; medium-bedded; regular colour laminations in part; recessive.	4	844 1/2
	Covered interval.	21	840 1/2
42	Sandstone to siltstone, quartzose, very calcareous, slightly argillaceous; yellowish grey to very light grey with minor greyish orange mottling in upper half, and weathering yellow-grey to greyish white; medium-bedded up to 1 foot; unit soft and crumbly; some very poor cross bedding; unit partly covered; recessive.	12	819 1/2
	Covered interval.	13	807 1/2
41	Sandstone, quartzose, dolomitic to calcareous; very fine grained; light grey with greyish orange flecks, and weathering orange-yellow to medium grey; medium-bedded up to 1 foot; upper 1 foot covered; resistant.	5	794 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
40	Sandstone and sandy dolomite, quartzose, calcareous in part, slightly argillaceous; sandstone fine to very fine grained; light grey to yellowish grey, and weathering yellow-grey; medium-bedded up to 2 feet; black phosphatic lingulid fragments; minor white to colourless calcite filled vugs; slightly porous in lower 5 feet; slightly recessive; base of unit appears to represent contact with Sulphur Mountain Formation.	10	789 1/2
	Sulphur Mountain Formation (779 1/2')		
	Silty dolomite member (133')		
39	Siltstone to silty dolomite, quartzose; medium grey with greyish orange mottling, and weathering light grey to light yellowish grey; thin- to medium-bedded up to 11 inches; minor very fine grained discontinuous sand laminations; in part covered; unit may represent transition to Whitehorse Formation; slightly recessive.	5	779 1/2
38	Sandstone, quartzose, dolomitic to calcareous, slightly argillaceous; very fine grained; medium light grey with minor yellow-grey mottling, and weathering yellowish grey to greyish brown; medium-bedded; upper part of unit appears to have slight porosity; poorly preserved fossil casts; unit represents end of possible transition zone; slightly recessive.	7 1/2	774 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
37	Dolomite, very quartzose; quartz grains silt size; medium to medium light grey and weathering yellow-grey; thick-bedded up to 3 feet; poorly preserved unidentifiable pelecypod casts and fragments throughout unit; very minor calcite-filled vugs; resistant.	5	767
36	Siltstone to silty dolomite, quartzose; medium to medium dark grey, and weathering dark grey to dark grey-brown; medium-bedded up to 2 feet; Gervillia sp. GSC loc. 52986, collected in lower 6 inches; minor white calcite filled vugs; wavy, irregular sand laminations and cross laminations; unit appears to be in part conglomeratic; resistant.	5	762
35	Dolomite, very quartzose, slightly argillaceous; quartz grains silt size; medium grey with olive-grey streaking, and weathering dark grey; thin-bedded, may in part be classed as silty shale; fine wavy to irregular dark grey laminations; white calcite-filled vugs; micromicaceous in part; recessive.	2	757
34	Dolomite, quartzose; dolomite finely crystalline, quartz silt size; medium to medium light grey, and weathering yellowish grey; medium-bedded up to 1 foot; wavy dark grey pyritiferous laminations; dark grey to black phosphatic flecks and fragments; slightly recessive.	4	755

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Covered interval.	6	751
33	Dolomite to dolomitic siltstone, quartzose; medium grey, and weathering yellowish grey; thick-bedded up to 3 feet; small unidentifiable pelecypod and or brachiopod fragments; minor white calcite-filled vugs; resistant.	12	745
32	Dolomite, quartzose, slightly argillaceous; may in part be classed as very dolomitic siltstone; dolomite is finely crystalline; medium grey, and weathering medium grey-brown to yellow-brown; medium-bedded up to 2 feet; abundant black grains and flecks of phosphate in lower 5 feet; minor white calcite filled vugs; resistant.	15	733
31	Sandstone to sandy dolomite, quartzose; very fine grained; medium dark grey to light olive-grey, and weathering yellow-brown; indistinct bedding planes; abundant black phosphate chips and grains in upper 6 inches; faint trace of pyrite laminations in upper part of unit; recessive.	11 1/2	718
30	Sandstone and sandy to silty dolomite, quartzose; clastics very fine-grained to siltsize; medium to dark grey to olive-grey, and weathering yellow to grey-brown; indistinct bedding planes but appears to be thick-bedded; weathers very rubbly; minor phosphate grains in center of unit; recessive.	30	706 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
29	Sandstone to siltstone, quartzose, very dolomitic very fine grained to siltsize; medium dark grey, and weathering yellowish brown; indistinct bedding planes; weathers rubbly; unit closely resembles unit above; slightly recessive.	10	676 1/2
28	Siltstone, quartzose, very dolomitic; medium grey with slight brownish tint, and weathering light grey-brown to yellow-brown; minor black phosphate grains; trace crinoid fragments; indistinct bedding planes; weathers rubbly; slightly recessive.	10	666 1/2
27	Siltstone and dolomite, quartzose, argillaceous; medium grey, and weathering grey to yellow-brown; indistinct bedding planes; weathers rubbly; minor black phosphate chips and grains; slightly recessive; unit marks base of silty dolomite member.	10	656 1/2
	Black shale member (51 1/2')		
26	Siltstone to shale, quartzose, dolomitic, argillaceous, pyritiferous; medium dark grey, and weathering grey-yellow to very dark grey; thin- to medium-bedded; shale very sandy to silty; recessive.	4 1/2	646 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
25	Silty dolomite and shale, quartzose, argillaceous; medium dark grey to dark grey, and weathering greyish yellow to black; thin-bedded; very shaly; large calcite- and dolomite-filled vugs up to 9 inches in diameter; very pyritiferous; recessive.	10	642
	Covered interval, talus consists of soft, friable, dark grey to black sandy to silty dolomitic shale; very recessive; interval marks base of member.	37	632
	Blocky brown siltstone member (223 1/2')		
24	Siltstone, quartzose, very dolomitic; medium to medium light grey, and weathering greyish brown to medium grey; thin- to thick-bedded up to 4 feet; minor laminated silty shale interbeds; load casts (flow rolls) occur throughout the unit but most prominent in upper 9 feet; load casts of variable thickness 2-4 feet; small pockets of dark grey to black phosphate grains; micromicaceous in part; resistant.	29	595
23	Siltstone to sandstone, quartzose, dolomitic; clastics silt size to very fine grained; medium light grey, and weathering medium to dark grey-brown; thin- to medium-bedded up to 2 feet; bedding planes wavy and lensitic in part; thin beds	29 1/2	566

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	very shaly, micromicaceous, and display regular dark grey pyritiferous laminations; thicker beds non-laminated; resistant.		
22	Siltstone, quartzose, very dolomitic; pale yellowish brown, and weathering dark to medium grey, thin- to medium-bedded, but mainly thin-bedded; interbedded sandy to silty shales; fine regular to wavy dark grey pyritiferous laminations; micromicaceous; weathers flaggy; slightly recessive.	30	536 1/2
21	Siltstone, quartzose very dolomitic, slightly argillaceous; unit may in part be classed as very fine grained sandstone; medium to brownish grey to olive-grey, and weathering dark greyish brown to rusty brown; thin- to medium-bedded up to 1 foot, but averaging 2-3 inches; thin beds display fine wavy to regular dark pyritiferous laminations, thicker beds faintly laminated to non-laminated; 5 per cent sandy to silty shale interbeds; bedding planes wavy to lensitic in part; unit weathers flaggy in part; micromicaceous; resistant.	70	506 1/2
20	Siltstone to silty dolomite, quartzose, dolomite finely crystalline; medium grey and weathering medium to dark grey-brown; thin- to medium-bedded up to 9 inches; bedding planes wavy and lensitic; thin beds display	30	436 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	fine wavy to regular colour laminations; thicker beds non-laminated; minor silty shale interbeds; minor black phosphate grains and calcite-filled vugs in lower 10 feet; micromicaceous; resistant.		
19	Siltstone, quartzose, very dolomitic, may in part be classed as silty dolomite; medium light to medium dark grey, and weathering brownish to yellowish grey to dark grey; thin- to medium-bedded up to 1 foot; mainly thin-bedded; wavy to regular pyritiferous laminations restricted to thin beds; thicker beds non-laminated; minor silty shale interbeds; unit weathers flaggy in part; micromicaceous; upper part of unit partially covered; slightly recessive.	28 1/2	406 1/2
18	Siltstone to very fine grained sandstone, quartzose, dolomitic; medium grey, and weathering yellow-brown; forms one bed; lower 2 inches display poorly formed colour laminations; resistant.	1	378
17	Siltstone, quartzose, very dolomitic, slightly argillaceous; medium grey, and weathering dark grey; thin-bedded up to 2 inches; unit in part shaly; fine regular colour laminations; recessive.	3 1/2	377

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
16	Siltstone, quartzose, very dolomitic; pale yellowish brown to medium grey, and weathering bright yellow-brown; medium-bedded; in part lensitic; serves as useful marker unit for base of blocky brown siltstone member; resistant.	2	373 1/2
	Shaly siltstone member (371 1/2')		
15	Siltstone, quartzose, dolomitic, micaceous, argillaceous; pale yellowish brown to medium dark grey, and weathering dark grey-brown to black; thin-bedded; interbeds of sandy to silty shale; beds display regular to slightly wavy light grey laminations; unit weathers shaly to flaggy; slightly recessive.	8	371 1/2
14	Siltstone and shale, quartzose, dolomitic, argillaceous; medium dark grey, and weathering dark grey to dark brownish grey; thin- to medium-bedded up to 4 inches, but averaging 2 inches; 40-50 per cent silty shale interbeds; fine regular light grey laminations; micromicaceous; slightly recessive.	40	363 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
13	Siltstone, shaly; quartzose, dolomitic, argillaceous; medium dark grey, and weathering brownish grey to dark grey; thin- to medium-bedded, mainly thin-bedded; 5-10 per cent silty to sandy shale interbeds; upper 5 feet of unit consists of recessive fissile shale and minor shaly siltstone; regular light grey laminations; micromicaceous; unit mainly weathers flaggy; in part covered slightly recessive.	60	323 1/2
12	Siltstone, quartzose, dolomitic, argillaceous; medium dark grey, and weathering dark grey; thin- to medium-bedded; unidentifiable pelecypod, ammonite and fish fragments; very fine regular pyritiferous laminations; black phosphate chips and fragments in upper 1 foot; unit marks top of a general recessive weathering zone; slightly recessive.	5 1/2	263 1/2
11	Sandstone, quartzose, very dolomitic, argillaceous; very fine grained; appears to be abundant siltstone and sandy shale interbeds; medium dark grey to pale yellowish brown, and weathering greyish brown to dark grey; thin- to medium-bedded up to 9 inches; 5-10 per cent fissile silty shale interbeds; very fine wavy light grey pyritiferous laminations; minor black phosphate	65	258

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	grains throughout unit, lower 10 feet contains prominent pyrite grains and nodules; unit weathers flaggy to shaly; micro-micaceous; slightly recessive.		
10	Siltstone and shale, quartzose, dolomitic, slightly argillaceous; medium dark grey, and weathering dark grey to black; thin-bedded; unit consists of 50 per cent silty shale; light grey regular to lensitic laminations; micro-micaceous; lower 10 feet partly covered; recessive.	20	193
9	Siltstone, quartzose, very dolomitic, slightly argillaceous, medium dark grey, and weathering yellowish brown to rusty brown; forms distinctive marker bed; light grey wavy to lensitic laminations; micro-micaceous; resistant.	1	173
8	Siltstone, quartzose, very dolomitic, argillaceous; medium to medium light grey; and weathering dark grey to black; indistinct bedding planes; fine wavy, light and dark grey pyritiferous laminations; micromicaceous in part; unit weathers shaly to flaggy; slightly recessive.	27	172
	Covered interval, talus consists of shaly siltstone.	10	145

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
7	Siltstone and shale, quartzose, very dolomitic, argillaceous; may be classed in part as silty dolomite; medium to dark grey, and weathering grey-brown to rusty brown; thin-bedded up to 2 inches; fine regular to slightly wavy colour laminations; lower 10 feet contains poorly developed cross laminations; minor black phosphate grains; lower part of unit mainly silty shale; unit weathers shaly to flaggy; slightly recessive.	20	135
	Covered interval, talus same as above unit.	17	115
6	Shale to shaly siltstone, quartzose, argillaceous, very dolomitic; medium dark grey, and weathering dark grey to black; thin-bedded; unit consists mainly of silty shale; light grey wavy to lensitic pyritiferous laminations; unit partly covered; recessive.	20	98
	Covered interval, talus consists mainly of silty shale.	12	78
5	Shale and shaly siltstone, quartzose, dolomitic, slightly argillaceous; pale yellowish brown to medium grey, and weathering dark grey-brown to black; thin-bedded up to 1/2 inch; consists mainly of fissile, silty to sandy shale; regular to slightly wavy colour laminations; very recessive.	10	66

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
4	Siltstone to silty shale, quartzose, argillaceous, very dolomitic; medium grey with pale yellowish brown regular to slightly wavy laminations, and weathering grey-brown; thin-bedded up to 1 inch; weathers flaggy to shaly; slightly recessive.	5 1/2	56
3	Siltstone to silty shale, same as above unit, except more recessive weathering.	10	50 1/2
	Covered interval, minor outcrop of silty, pyritiferous argillaceous shale.	22	40 1/2
2	Sandstone and minor siltstone, quartzose, dolomitic; very fine grained to siltsize; medium grey to olive-grey to pale yellowish brown, and weathering dark greyish brown; thin- to medium-bedded up to 4 inches but averaging 2 inches; wavy, irregular, to lensitic colour laminations; slightly recessive.	18	18 1/2
1	Conglomerate and sandstone, quartzose, phosphatic, slightly dolomitic; dark grey to black subrounded pebbles in a fine to medium grained quartzose; phosphatic matrix pebbles up to 1 inch in diameter. Unit represents base of Sulphur Mountain Formation.	1/2	1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Rocky Mountain Formation		
	Sandstone, quartzose, phosphatic, cherty, slightly dolomitic and calcareous; medium to fine grained; medium dark grey, and weathering dark grey to black; unit has salt and pepper appearance; medium- to thick-bedded; resistant.		

Section 10

Location: Corser Gulch; Section 34, Southwest, Township 51, Range 5, W6. Measured in small intermittent stream gully draining from Arcturus Peak into Mowitch Creek. Measured by D. W. Gibson 1962.

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Whitehorse Formation		
	Evaporitic member (Incomplete)		
41	Limestone breccia, argillaceous, dolomitic; subangular to angular dolomite fragments in a fine grained to finely crystalline matrix; yellowish grey, and weathering light yellow-grey; indistinct bedding planes; micro-vugs, very porous; unit abutts against thrust fault; slightly recessive.	2	505 1/2
40	Dolomite, calcareous, lower 2 1/2 feet very quartzose; clastics very fine grained to siltsize, carbonate very fine to finely crystalline; medium light to light grey to greyish yellow, and weathering grey-white to yellow-grey; medium- to thick-bedded up to 2 1/2 feet; lower 2 1/2 feet forms one bed; minor small calcite- and gypsum-lined vugs; rough weathering surface; slightly recessive.	8 1/2	503 1/2
39	Dolomite, slightly calcareous; very finely crystalline, in part brecciated; very light grey to yellowish grey, and weathering light to medium grey to yellow-grey; indistinct bedding planes; minor vugs; upper part of unit	27 1/2	495

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	more calcareous than base; rough weathering surface; slightly recessive.		
38	Dolomite and minor sandstone, quartzose, calcareous, argillaceous; carbonate very fine to finely crystalline, clastics very fine grained to siltsize; yellowish grey, and weathering medium grey to yellow-grey; indistinct bedding planes; sandstone in part brecciated; slightly recessive.	10 1/2	467 1/2
37	Gypsum, fine grained; white, and weathering greyish white, lower 6 feet displays red and green tinting; very soft and powdery; lower 6 feet strongly folded, resulting in possibility of repetition of gypsum strata; slightly recessive.	23	457
36	Gypsum and dolomite, gypsum fine grained to fibrous, white to yellowish grey; dolomite very finely crystalline, medium light grey and weathering greyish white to medium grey; thin- to medium-bedded; minor slumping; lower 8 feet contains more dolomite than gypsum; slightly recessive.	15	434
35	Gypsum and dolomite, same as unit 36, except minor greenish yellow dolomitic to calcareous shale interbeds; gypsum very sugary; 50 per cent gypsum.	8	419

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
34	Dolomite and gypsum, argillaceous; very finely crystalline; light grey to yellowish grey, and weathering grey-yellow; thin-bedded up to 2 inches; top and bottom of unit capped by one foot beds of white sugary gypsum; minor interbeds argillaceous and dolomitic shale; faint silt laminations.	11	411
33	Gypsum and minor dolomite, gypsum very fine to fine grained, soft, and powdery; dolomite slightly calcareous, slightly silty; very fine to finely crystalline; medium light to light grey, and weathering grey-white; thin- to medium-bedded, bedding planes not discernible in gypsum; dolomite very lensitic; slightly recessive.	14 1/2	400
32	Dolomite and minor interbeds of gypsum; slightly quartzose; very finely crystalline; gypsum white, fine to medium grained; unit grey to very light olive-grey, and weathering medium to light grey; thin- to medium-bedded up to 4 inches; minor vugs; resistant.	9	385 1/2
31	Gypsum and dolomite; gypsum white, fine to very fine grained, soft and powdery; dolomite, very finely crystalline; unit is medium light grey to greyish white to very light olive-grey, and weathering yellow-grey to greyish white; thin-bedded; fine regular sand to silt laminations; dolomite very vuggy; slightly recessive to recessive.	5 1/2	376 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
30	Gypsum and minor dolomite, white to light grey; fine grained; soft and powdery; weathers light grey; 5 per cent lensitic dolomite interbeds; thin beds up to 1/4 inch in thickness of dark brown chalky soft earthy material in unit; large drag fold; slightly recessive.	7 1/2	371
29	Dolomite and minor gypsum; dolomite, slightly silty; very finely crystalline; light grey to yellowish grey, and weathering light grey to light yellow-grey; thin- to medium-bedded; minor white sugary gypsum interbeds; lower 1 foot very shaly; slightly recessive.	3 1/2	363 1/2
28	Gypsum, same as in unit 29.	3 1/2	360
27	Dolomite, slightly calcareous; very finely crystalline; medium light grey, and weathering medium grey; thin- to medium-bedded up to 10 inches; gypsum- and calcite-filled vugs; minor thin interbeds white powdery gypsum; resistant.	5 1/2	356 1/2
26	Gypsum, same as in unit 29, except displays faint colour laminations.	7 1/2	351
25	Dolomite, slightly silty; very fine to finely crystalline; medium light grey, and weathering medium grey to yellow-grey; thin- to medium-bedded up to 6 inches; small normal fault; resistant.	6	343 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
24	Sandstone to siltstone, quartzose, calcareous to dolomitic, argillaceous; very fine grained to siltsize; light grey, and weathering yellow-grey; indistinct bedding planes, but appears to be thin-bedded; very minor gypsum interbeds; slightly recessive.	9	337 1/2
23	Dolomite, slightly calcareous, slightly silty, argillaceous; mainly very finely crystalline; medium grey to yellowish grey, and weathering medium grey to yellow-grey; thin- to medium-bedded up to 3 inches; wavy silt laminations; recessive.	8 1/2	328 1/2
22	Dolomite, slightly calcareous, silty; fine to very finely crystalline; medium to medium light grey, and weathering medium grey to yellow-grey to greyish white; thin- to medium-bedded up to 8 inches; bedding wavy to lensitic; load cast 4 feet from base of unit; minor sandy to silty shale interbeds; upper part of unit very vuggy; fine colour laminations in lower part of unit; slightly recessive.	35 1/2	320
21	Dolomite, very quartzose, very calcareous in lower 3 feet; clastics very fine grained, carbonate finely crystalline; yellowish grey to pale yellowish brown, and weathering yellow-brown to yellow-grey; medium- to thin-bedded; crossbedded; weathers shaly in places; slightly recessive.	15 1/2	284 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
20	Dolomite, slightly argillaceous, slightly silty; very fine to finely crystalline; medium light to light grey to yellowish grey, and weathering medium grey to yellow-grey to grey-white; thin- to medium-bedded up to 5 inches but averaging 2 inches; minor interbedded shale; very porous in part; slightly recessive.	9	269
19	Sandstone, quartzose, very calcareous, slightly argillaceous; fine to very fine grained, carbonate finely crystalline; yellowish grey, and weathering greyish white to grey-yellow; thin- to medium-bedded; white powdery gypsum bed up to 1 1/2 feet in center of unit; vuggy, porous; slightly recessive.	6 1/2	260
18	Sandstone, quartzose, calcareous to dolomitic; fine to very fine grained; greyish orange to greyish pink to yellowish grey, and weathering light grey-brown to pinkish brown; medium-bedded; very well cross-bedded; faint trace argillaceous laminations; slightly recessive to resistant.	10	253 1/2
17	Gypsum and dolomite; gypsum white, soft, fine to very fine grained, sugary to powdery; dolomite, slightly argillaceous; very finely crystalline; light grey, and weathering grey-white; indistinct bedding planes; upper 7 1/2 feet slightly quartzose; slightly recessive.	18 1/2	243 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
16	Dolomite, slightly silty; fine to very finely crystalline; medium light to light grey, and weathering medium grey to yellow-grey thin- to medium-bedded; upper 5 feet silty to sandy and slightly argillaceous; small vugs in resistant beds; resistant.	9 1/2	225
15	Gypsum and dolomite; gypsum white, powdery, fine to very fine grained, soft, crumbly, lensitic, weathers dark grey to greyish white; dolomite slightly silty; very finely crystalline; medium light to light grey, and weathering medium grey to brownish grey; thin- to medium-bedded; lensitic; slightly recessive.	4 1/2	215 1/2
14	Limestone, very quartzose, slightly argillaceous; clastics very fine grained, carbonate finely crystalline; greyish yellow, and weathering yellow-grey; thin- to medium-bedded; coarse wavy argillaceous laminations; minor dolomite interbeds; vuggy, porous; recessive.	4 1/2	211
13	Limestone and dolomite, quartzose, slightly argillaceous; fine- to medium-crystalline, clastics fine to very fine grained; medium light grey to yellowish grey, and weathering yellow-grey; medium-bedded up to 9 inches; minor indeterminate pelecypod fragments; minor microvugs in lower 1 foot; poorly developed ripple marks; slightly recessive.	3 1/2	206 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
12	Dolomite to sandstone, quartzose, slightly calcareous, slightly argillaceous; fine to very fine grained, carbonate finely crystalline; very light to medium grey to yellowish grey, and weathering yellow-grey; thin- to medium-bedded; minor microvugs; in part soft and crumbly; slightly porous; recessive.	16 1/2	203
	Covered interval.	7	186 1/2
11	Sandstone to dolomite, quartzose, slightly argillaceous, slightly calcareous; clastics very fine grained, carbonate finely crystalline; yellowish grey to pale yellowish brown, and weathering yellow-grey; thin- to medium-bedded up to 6 inches; small vugs lined with pyrite-stained calcite crystals; faint trace colour laminations; slightly recessive.	10	179 1/2
10	Sandstone to dolomite, quartzose; very fine grained, in part conglomeratic–rounded to sub-angular dolomite pebbles and fragments in a quartzose sand matrix in lower 5 feet; dolomite very fine to finely crystalline; very light grey to yellowish grey, and weathering medium brown to light yellow-grey; medium bedded up to 1 1/2 feet, minor crossbedding; fossiliferous-Lima sp. GSC loc. 52976 and other indeterminate pelecypods; unit may represent transition zone to Sulphur Mountain Formation; slightly recessive.	9 1/2	169 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Sulphur Mountain Formation		
	Silty dolomite member (Incomplete)		
9	Dolomite, very quartzose, slightly calcareous; clastics fine grained, carbonate finely crystalline; medium light grey with slight yellow tint, and weathering yellow-grey to dark greyish yellow; medium- to thick-bedded up to 3 feet; minor crossbedding; black phosphate grains in lower 5 feet; resistant.	8	160
8	Sandstone to dolomite, quartzose, slightly calcareous in part; clastics fine- to medium-grained, carbonate fine- to medium-crystalline; in part conglomeratic, grey chert pebbles up to 1 inch in diameter but averaging 1/4 inch; light grey to yellowish grey and weathering light yellow-grey to greyish yellow; medium-bedded up to 1 1/2 feet; very well crossbedded; indeterminate brachiopod or pelecypod fragments; resistant.	10	152
7	Dolomite to siltstone, slightly calcareous, slightly argillaceous; carbonate fine- to medium-crystalline; medium light grey to pale yellowish brown, and weathering medium to dark grey-brown to yellow-brown; medium- to thick-bedded up to 3 feet; minor interbeds sandy shale in upper part of unit; faint colour laminations; wavy to lensitic bedding planes; in part micro-crossbedded; minor vugs; Lingulid fragments from basal 5 inches of unit; resistant.	35	142

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
6	Dolomite to siltstone, quartzose, slightly calcareous, slightly argillaceous; carbonate finely crystalline; medium dark grey, and weathering dark yellow-brown to brownish grey; medium bedded up to 1 foot; faint trace wavy colour laminations; minor black phosphatic grains and fragments; slightly recessive.	17	107
5	Siltstone, quartzose, very dolomitic, slightly argillaceous; medium grey with brownish tint, and weathering yellow-brown; thin-bedded up to 2 inches; wavy to lensitic bedding planes; weathers flaggy; small normal fault; slightly recessive.	9 1/2	90
4	Siltstone to dolomite, quartzose, argillaceous; carbonate finely crystalline; medium dark grey, and weathering medium to dark grey-yellow; thin-bedded up to 1 inch; minor microvugs; weathers shaly to flaggy; recessive.	20	80 1/2
3	Dolomite to siltstone, quartzose, slightly argillaceous; finely crystalline; medium grey with brown tint, and weathering grey-brown to yellow-brown; thin- to medium-bedded up to 6 inches; faint irregular colour laminations; lower 10 feet weathers rubbly and is more quartzose; slightly recessive.	20 1/2	60 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
2	Sandstone to dolomite, quartzose; very fine grained to siltsize, carbonate finely crystalline; medium dark grey, and weathering dark to medium grey-brown; indistinct bedding planes; weathers rubbly in part; slightly recessive.	30	40
1	Siltstone to dolomite, quartzose, argillaceous; siltsize to very fine grained; medium grey with brown tint, and weathering dark grey-brown to yellow-brown; indistinct bedding planes; weathers rubbly; unit represents probable base of silty dolomite member; underlying unit covered but talus consists of black silty shale; slightly recessive.	10	10

Section 15

Location: Sulphur River; Section 5, Southwest, Township 52, Range 6, W6; 23/4 miles N 5°E of Noonday Peak, on both banks of small stream gully. Glacier Pass. Measured by D. W. Gibson 1962.

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Fernie Group		
	Nordegg Member (Incomplete)		
	Limestone, argillaceous, dolomitic, quartzose; carbonate is very fine to finely crystalline, clastics silt-size; medium dark grey, and weathering yellow grey to dark grey; thin- to medium-bedded up to 1 foot; minor fissile shale interbeds; upper 5 feet very fossiliferous, Arietites sp., Pecten sp., Pleuromya sp., Rhynchonella sp., and gastropods; unit has slight fetid odour; small normal fault in upper part of unit; resistant.		
	Conglomerate, quartzose, phosphatic, calcareous, argillaceous; subrounded pebbles up to 2 inches in diameter in a medium-grained matrix; medium dark grey, and weathering yellowish grey; forms one bed; slightly recessive; unit represents base of Nordegg member.	1/2	

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Whitehorse Formation (1,063 1/2)		
	Upper carbonate member (350 1/2)		
104	Dolomite to siltstone, quartzose, argillaceous; clastics siltsize, carbonate finely crystalline; medium dark grey, and weathering medium grey to yellow-grey; thin- to medium-bedded, mainly medium beds up to 1 foot; regular to lensitic very fine grained quartz laminations; resistant.	6 1/2	2185 1/2
103	Dolomite to siltstone, quartzose, calcareous, argillaceous; clastics siltsize, carbonate finely crystalline; medium dark grey, and weathering medium to dark grey-brown; thin- to medium-bedded, up to 6 inches; interbeds of dark grey calcareous silty shale; in part laminated; resistant.	10	2179
102	Sandstone to sandy dolomite, quartzose, calcareous in part; very fine grained; medium grey, and weathering dark grey to yellow-grey; medium bedded up to 1 foot; compositional mottling-sand and carbonate; lower part of unit covered; recessive.	10	2169
101	Conglomerate, quartzose, dolomitic, phosphatic; rounded to subangular pebbles up to 2 inches in diameter in a silt and finely crystalline matrix of calcareous dolomite; medium dark grey, and weathering dark grey; forms one bed; resistant; unit may be another possible contact with Fernie Group, however compositional change not as apparent as between units 104 and above.	1/2	2159

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
100	Dolomite, quartzose, pyritiferous, slightly argillaceous; finely crystalline, clastics siltsize; medium dark to medium light grey, and weathering medium dark to yellowish grey; medium-bedded up to 1 1/2 feet; oscillation ripple marks in lower 5 feet; resistant.	11 1/2	2158 1/2
99	Sandstone to sandy dolomite, quartzose, slightly calcareous; very fine grained for clastics, carbonate finely crystalline; medium to medium light grey, and weathering dark grey to yellowish brown-grey; medium-bedded up to 1 1/2 feet; in places unit weathers very shaly; mottled in part; resistant.	10	2147
98	Dolomite, argillaceous, carbonaceous, slightly silty; very finely crystalline; medium to light grey, and weathering light to dark grey; thin- to medium-bedded up to 7 inches; transitional mottled colour change within unit; unit marks base of overlying dark weathering strata; recessive.	2	2137
97	Dolomite, quartzose, argillaceous; finely crystalline; clastics siltsize; medium to light grey, and weathering light grey to yellowish brown; medium-bedded; center of unit displays fine regular quartzose sand laminations; upper bed chertified; recessive.	3 1/2	2135

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Covered interval, forms prominent recessive notch.	6	2131 1/2
96	Dolomite, slightly silty, carbonaceous; finely crystalline; very light to medium grey, and weathering greyish white; medium-bedded up to 1 1/2 feet; upper 2 feet mottled; dark grey chert nodules up to 4 inches in upper part of unit; resistant.	16	2125 1/2
	Covered interval forms prominent recessive notch.	4	2109 1/2
95	Dolomite and siltstone, quartzose, slightly argillaceous; dolomite is silty and finely crystalline, siltstone is very dolomitic; medium to light grey with slight yellow tint, and weathering medium grey to yellow-grey; medium-bedded up to 1 1/2 feet; laminated; lower 6 inches contains poorly preserved pelecypod fragments; siltstone forms upper part of unit; resistant.	6 1/2	2105 1/2
94	Dolomite, slightly quartzose, cherty, slightly calcareous; finely crystalline; medium to very light grey, and weathering medium grey to greyish white; medium-bedded up to 1 1/2 feet; small chert nodules throughout unit; unit partly laminated; poorly preserved pelecypod casts in upper 10 feet; minor white dolomite and calcite filled vugs; resistant.	20 1/2	2099

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
93	Dolomite, calcareous, slightly argillaceous; finely crystalline; very light grey, and weathering yellow-grey; indistinct bedding planes; weathers rubbly; minor empty vugs up to 1/2 inch in diameter; recessive.	4	2078 1/2
92	Limestone, quartzose, dolomitic; upper part of unit consists of intraformational conglomerate with subrounded to angular fragments in a very finely crystalline matrix of limestone; clastics mainly very fine grained; very light grey, and weathering medium grey to yellow-grey; medium-bedded; recessive.	10	2074 1/2
91	Dolomite and dolomitic limestone, argillaceous, slightly silty; very fine to finely crystalline; medium light to light grey, and weathering medium grey to brownish grey; thin- to medium-bedded up to 1 1/2 feet; thin beds very shaly; minor small light grey chert nodules; minor silt lenses and laminations throughout unit; resistant.	10	2064 1/2
90	Limestone, argillaceous, dolomitic, slightly quartzose; conglomeratic in part; matrix finely crystalline; light grey to yellowish grey and weathering medium brown; fragments subrounded to subangular up to 1 inch in diameter; pebbles and fragments consist of chert, sandstone, and carbonate; recessive.	11	2054 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
89	Sandstone, slightly quartzose, phosphatic, dolomitic, calcareous; very fine to fine grained; medium grey, and weathering medium to dark grey, in places yellow-grey; medium-bedded; small light grey chert lenses and nodules in center of unit; chert-filled vugs; slightly recessive.	9 1/2	2043 1/2
88	Dolomite, calcareous, quartzose; clastics very fine grained to siltsize, carbonate finely crystalline; may in part be classed as dolomitic siltstone; medium light grey, and weathering medium to dark grey; medium-bedded up to 1 foot; minor chert nodules and lenses; chert-filled vugs up to 1 inch in diameter; minor silty shale interbeds; resistant.	10	2034
87	Sandstone, quartzose, phosphatic, cherty, slightly dolomitic; very fine grained; medium dark grey, and weathering very dark grey; medium-bedded up to 2 feet; small grey-white chert-filled vugs up to 1 inch in diameter; resistant.	6 1/2	2024
86	Limestone, quartzose, cherty, slightly argillaceous, dolomitic; clastics very fine grained, carbonate finely crystalline; medium dark grey to very light grey, and weathering medium to dark grey; thin- to medium-bedded up to 5 inches; poorly preserved chertified pelecypod casts and fragments, in pockets and lenses especially near base; very sandy in center of unit; recessive.	6 1/2	2017 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
85	Dolomite to dolomitic siltstone, quartzose; carbonate finely crystalline; medium dark grey, and weathering dark grey to dark brownish grey; medium-bedded up to 2 feet; light grey chert filled vugs up to 1 1/2 inches in diameter; laminated; resistant.	11	2011
	Covered interval, except for upper 1 foot; limestone, quartzose; finely crystalline; medium light grey, and weathering medium to dark greyish yellow; contains black phosphate grains and fragments; recessive.	8 1/2	2000
84	Dolomite, quartzose, calcareous; finely crystalline; minor dolomitic sandstone interbeds; medium light grey, and weathering medium to dark grey; thin-bedded up to 3 inches; upper 2 feet contains dark grey chertified pebbles; fossiliferous, Palaeocarditia sp., and Lima sp. GSC loc. 52982; contains minor phosphate grains; slightly recessive.	6	1991 1/2
83	Siltstone and silty dolomite, quartzose, calcareous, slightly argillaceous; light bluish grey to medium light grey, and weathering medium to dark grey to yellow-grey; medium- to thick-bedded up to 3 feet; pelecypods in upper 1 foot; upper 5 feet contains grains and fragments of phosphatic material; sand lenses and laminations throughout unit; resistant.	14 1/2	1985 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
82	Sandstone to siltstone, calcareous to dolomitic; very fine grained to siltsize; light to medium light grey with slight bluish tint, and weathering light yellow-grey; medium-bedded up to 1 1/2 feet; upper part consists of dolomitic siltstone or silty dolomite; slightly recessive.	12	1971
81	Limestone, silty; medium light grey, and weathering medium grey; thin- to medium-bedded; wavy bedding planes; porous; minor chert pebbles; weathers with rough surface; slightly recessive.	5	1959
80	Dolomite and siltstone, quartzose, argillaceous; carbonate finely crystalline; medium dark grey, and weathering medium grey to greyish white; medium-bedded up to 7 inches; light grey chert lenses and nodules up to 5 inches in diameter; fine laminations in upper part of unit; slightly recessive.	8 1/2	1954
79	Limestone and limestone breccia, argillaceous; fragments sub-angular in a coarsely crystalline calcite matrix; medium grey with yellowish tints, and weathering medium to dark grey to yellow-grey; thin- to medium-bedded up to 1 1/2 feet; wavy irregular beds; very porous and crumbly; slightly recessive.	20	1945 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
78	Covered interval, except between 30 and 36 feet from base of interval; dolomite, quartzose, calcareous; clastics very fine grained, carbonate finely crystalline; pale yellowish brown with slight green and pink tinting, and weathering bright grey-yellow; indistinct bedding planes but appears to be medium-bedded; minor calcite-filled vugs; 15 feet above base talus weathers orange-yellow; recessive.	62	1925 1/2
77	Limestone, quartzose, argillaceous; medium crystalline; light grey, and weathering medium yellow-grey, indistinct bedding planes; weathers rubbly; recessive.	7	1863 1/2
76	Limestone and limestone breccia, slightly silty; fine to medium crystalline; light to very light grey, and weathering grey-white; thin- to medium-bedded up to 6 inches; lower 3 inches consists of solution breccia, fragments up to 1 1/2 inches in diameter and very argillaceous; large stylolites; minor vugs filled with colourless calcite crystals; resistant.	3	1856 1/2
75	Limestone, argillaceous, slightly silty; fine to very finely crystalline; medium light grey, and weathering medium grey to light yellow-grey; indistinct bedding planes; fossiliferous Myophoria sp. GSC loc. 52978 and indeterminable pelecypod and gastropod fragments; minor vugs; well fractured; weathers rubbly; recessive.	4 1/2	1853 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Covered interval.	14	1849
	Crinoidal limestone member (114 1/2')		
74	Limestone, slightly argillaceous, slightly silty; fine to very finely crystalline, very minor intra-formational conglomerate; medium dark to medium light grey, and weathering medium to yellow-grey; medium-bedded up to 2 feet; crinoid fragments, and indeterminable brachiopod fragments of the spiriferinid type; calcite-filled vugs; small light grey chert nodules in lower 10 feet; slightly recessive.	19 1/2	1835
73	Limestone, slightly argillaceous, slightly silty in part; fine to very finely crystalline; medium grey with slight brownish tint, and weathering medium to dark grey to yellowish grey; indistinct bedding planes, but appears to be medium-bedded; fossiliferous in part, Pentacrinus sp. GSC loc. 52997 and terebratulid brachiopod fragments; abundance of crinoid and echinoid fragments throughout unit; resistant.	95	1815 1/2
	Evaporitic members (598 1/2')		
72	Dolomite, very calcareous, slightly argillaceous; may in part be classed as dolomitic limestone; fine to very finely crystalline; medium dark grey, and weathering medium grey; thin- to medium-bedded; wavy bedding	7 1/2	1720 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	planes; silt laminations; very vuggy and porous; closely resembles solution breccia but no obvious fragments; slightly recessive.		
	Covered interval.	42	1713
71	Limestone, slightly silty and argillaceous; very fine to finely crystalline; medium dark grey, and weathering medium grey; thin- to medium-bedded; very rough weathering surface; slightly recessive.	5	1671
	Covered interval.	14	1666
70	Limestone and limestone breccia, slightly silty; matrix and cement finely crystalline; medium dark grey, and weathering medium to dark grey; indistinct bedding planes; weathers rubbly; slightly recessive to resistant.	23	1652
	Covered interval.	15	1629
69	Limestone, argillaceous; finely crystalline; medium grey, and weathering medium to dark grey; indistinct bedding planes; very vuggy and porous; resembles solution breccia but no obvious fragments; weathers rubbly; slightly recessive.	4 1/2	1614
	Covered interval.	48	1609 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
68	Dolomite, quartzose, slightly calcareous; clastics siltsize, carbonate mainly finely crystalline; light grey, and weathering greyish white; medium-bedded up to 1 1/2 feet; uppermost bed consists of a fine grained calcareous sandstone; dolomite laminated; slightly recessive to resistant.	9	1561 1/2
	Covered interval.	9	1552 1/2
67	Siltstone, quartzose, very dolomitic, slightly argillaceous; light grey with slight yellow tint, and weathering greyish white; medium-bedded; well laminated; small vugs; slightly recessive.	9	1543 1/2
	Covered interval.	40	1534 1/2
66	Limestone, argillaceous; finely crystalline; medium grey, and weathering medium grey; forms one bed; soft, crumbly; resembles solution breccia but no obvious fragments; recessive.	1	1494 1/2
	Covered interval.	22 1/2	1493 1/2
65	Siltstone to silty dolomite, quartzose, calcareous; dolomite very finely crystalline; medium to medium light grey, and weathering greyish yellow to light grey; indistinct bedding planes; lower 1 foot consists of intraformational conglomerate, very vuggy and porous; upper 1 1/2 feet very sandy; recessive.	5	1471

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
64	Dolomite, quartzose, calcareous; silty; finely crystalline; medium to medium dark grey, and weathering medium to dark grey; indistinct bedding planes; upper 1 foot finely crystalline dolomitic limestone, laminated; vuggy; resistant.	5	1466
	Covered interval, talus consists of limestone solution breccia.	26 1/2	1461
63	Limestone and limestone breccia, quartzose, argillaceous, dolomitic; carbonate fine to coarsely crystalline, clastics silt to medium grained; medium dark to very light grey, and weathering yellowish grey to dark grey; thin- to medium-bedded; breccia porous and cavernous, chalky; minor interbeds of calcareous shale; resistant.	16	1434 1/2
62	Dolomite and limestone, slightly silty and argillaceous; very finely crystalline to finely crystalline; very light grey, and weathering grey-white to light yellow-grey; thin- to medium-bedded up to 4 inches; faint trace of laminations; vugs up to 3 inches in diameter filled with white calcite; limestone confined to upper part of unit; resistant.	20	1418 1/2
61	Limestone, slightly argillaceous; fine- to medium-crystalline; medium dark grey, and weathering dark grey to dark greyish yellow; thin- to medium-bedded up to 6 inches; beds wavy and lensitic; resistant.	6 1/2	1398 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
60	Limestone and limestone breccia, argillaceous; fine- to medium-crystalline, breccia fragments up to 1 inch in diameter; medium grey to light olive-grey, and weathering medium grey to orange-yellow-grey; thin- to medium-bedded up to 1 foot; lower 2 feet consists of breccia; minor dark grey shale interbeds; resistant.	10	1392
59	Limestone, slightly argillaceous, dolomitic; finely crystalline; medium dark grey to yellow-grey, and weathering medium- to yellow-grey; thin- to medium-bedded up to 1 foot; colour laminations; upper 1 foot contains grey chert lenses and nodules; recessive.	4 1/2	1382
58	Limestone breccia; subangular fragments in a fine- to medium-crystalline matrix and cement; medium grey, and weathering medium grey to orange-yellow-grey; cavernous; very porous; medium-bedded up to 2 feet; resistant.	10	1377 1/2
	Covered interval, probably consists of solution breccia.	26 1/2	1367 1/2
57	Dolomite, slightly calcareous; argillaceous, slightly silty; fine to very finely crystalline; very light grey with yellowish grey tinting, and weathering medium- to yellow-grey; thin- to medium-bedded; weathers shaly; lower 3 1/2 feet exposed in creek bed; recessive.	6	1341

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
56	Limestone, dolomitic, silty; finely crystalline; medium light grey, and weathering medium grey to light yellow-grey; thin- to medium-bedded; minor regular silt laminations; slightly recessive.	7	1335
55	Dolomite, silty, calcareous, slightly argillaceous; finely crystalline; light grey, and weathering medium grey to light yellow-grey; medium- to thick-bedded up to 2 1/2 feet; resistant.	10	1328
54	Limestone and limestone breccia, slightly silty; fine- to medium-crystalline; light to very light grey, and weathering medium grey to yellow-grey; medium-bedded up to 1 foot; wavy bedding planes; angular vugs; porous; resistant.	10	1318
53	Dolomite, argillaceous; finely crystalline; light to very light grey with greenish yellow streaks, and weathering yellow-grey to light brownish grey; thin to medium beds up to 9 inches; abundant vugs up to 1 inch in diameter, lined with small colourless calcite crystals; beds wavy and lensitic; slightly recessive.	9	1308

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
52	Limestone, slightly silty and argillaceous; finely crystalline; medium light grey, and weathering yellowish grey; indistinct bedding planes but appears to be medium-bedded up to 1 foot; wavy bedding planes; vuggy; porous and crumbly; resembles solution breccia but no obvious fragments; slightly recessive.	10	1299
51	Limestone, quartzose, slightly argillaceous; clastics very fine grained, carbonate finely crystalline; yellowish grey, and weathering medium grey to yellow-grey; indistinct bedding planes; beds very wavy; partly brecciated; faint trace of colour laminations; vuggy, porous and crumbly; recessive.	10	1289
50	Dolomite, slightly silty, very calcareous in lower part, may be classed as limestone; very fine to finely crystalline; medium light to very light grey, and weathering medium grey to yellow-grey; thin- to medium-bedded up to 2 feet; micro-vugs, porous; in part covered; slightly recessive.	14	1279
	Covered interval.	23	1265
49	Dolomite and sandstone, quartzose, very calcareous in part, slightly argillaceous; clastics very fine grained, carbonate finely crystalline; light to medium grey to yellowish grey, and weathering	19	1242

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	grey-yellow; thin- to medium-bedded up to 9 inches; minor vugs; lower part of unit very sandy; in part covered; recessive.		
48	Limestone, quartzose, slightly argillaceous; clastics very fine grained, carbonate finely crystalline; yellowish grey to light grey, and weathering medium grey to yellow-grey; thin- to medium-bedded up to 1 1/2 feet; linear vugs, porous; minor shale interbeds at base of unit; upper 10 feet closely resembles solution breccia, but no obvious fragments; in part covered; recessive.	31	1223
47	Limestone and dolomite, argillaceous, slightly silty; very fine to finely crystalline; medium light grey to light olive-grey, and weathering medium grey to light grey-yellow; thin- to medium-bedded up to 7 inches; dolomite contains small vugs up to 1/2 inch in diameter lined with colourless calcite crystals; unit in part resembles solution breccia; dolomite restricted to lower part of unit; slightly recessive.	30	1192
46	Sandstone, quartzose, very dolomitic and calcareous in places; very fine grained; light grey, and weathering grey-yellow; indistinct bedding planes; in part covered; recessive.	10	1162

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
45	Dolomite and limestone, quartzose, slightly argillaceous; very fine to finely crystalline, lower 2 feet brecciated; light grey, and weathering medium to light grey; thin- to medium-bedded up to 6 inches; minor black phosphate fragments in lower 10 feet; unit weathers in part shaly to flaggy; recessive.	16	1152
44	Sandstone, quartzose, dolomitic, slightly calcareous; very fine grained; yellowish grey to light olive-grey, and weathering light grey-yellow; medium-bedded up to 6 inches wavy bedding planes; slightly recessive; unit represents probable base of Whitehorse Formation.	2	1136
	Covered interval.	12	1134
	Sulphur Mountain Formation (1122)		
	Silty dolomite member (361 1/2)		
43	Dolomite, very quartzose, calcareous; clastics very fine to fine grained, carbonate finely crystalline; yellowish grey, and weathering light greyish yellow; indistinct bedding planes; mainly covered; recessive.	5	1122
	Covered interval.	5	1117

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
42	Dolomite to siltstone, quartzose, slightly argillaceous; dolomite finely crystalline; medium to medium dark grey, and weathering dark to medium grey; medium- to thick-bedded up to 2 1/2 feet; abundant calcite and grey chert filled vugs up to 3/4 inch in diameter; weathers rubbly; minor intraformational conglomerate in upper 2 1/2 feet; slightly recessive.	12	1112
41	Dolomite, quartzose, slightly calcareous; finely crystalline; medium to light grey with slight yellow tint, and weathering medium to light grey; thin- to medium-bedded up to 1 foot; minor calcite-filled vugs; resistant.	20	1100
40	Dolomite, quartzose, slightly calcareous and argillaceous; fine- to medium-crystalline, clastics siltsize; medium grey, and weathering medium to light brownish grey; medium-bedded up to 1 1/2 feet; slightly recessive.	9	1080
39	Dolomite, quartzose, calcareous; fine- to medium-crystalline, clastics fine-grained; light to medium dark grey, and weathering light to medium grey; medium-bedded up to 1 1/2 feet; minor quartz-filled vugs; slightly recessive.	7 1/2	1071
	Covered interval.	8	1063 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
38	Dolomite, argillaceous, slightly silty; finely crystalline; medium grey with slight bluish tint, and weathering greyish white; thin-bedded; partly covered; fine colour laminations; weathers in part shaly; recessive.	5	1055 1/2
	Covered interval.	9 1/2	1050 1/2
37	Sandstone to siltstone, quartzose, very dolomitic; very fine grained to siltsize; light grey and weathering greyish yellow; medium-bedded up to 2 feet; resistant.	2 1/2	1041
	Covered interval.	53	1038 1/2
36	Dolomite to sandstone, quartzose, slightly argillaceous; carbonate finely crystalline, sandstone very fine grained; medium grey, and weathering dark grey-brown to dark yellow-brown; indeterminate pelecypod fragments and casts in upper 10 feet; medium-bedded up to 15 inches; laminated in part; dark blue phosphatic fragments parallel to bedding; upper 1 foot very vuggy and porous; slightly recessive.	20	985 1/2
35	Dolomite to siltstone, quartzose, argillaceous, phosphatic; fine- to medium-crystalline; medium to light to dark grey, and weathering dark grey to dark brownish grey; medium- to thick-bedded up to 3 feet; coarse grained quartzose sand lenses and laminations;	79	965 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	poorly developed crossbedding; black phosphate grains and fragments throughout unit; unit mainly silty dolomite; resistant.		
34	Dolomite, quartzose, slightly calcareous; clastics very fine grained; carbonate finely crystalline; light grey with yellow tinting, and weathering medium to dark yellow-grey; medium-bedded; indeterminate pelecypod fragments, in places forms coquina; abundant phosphatic fragments and grains; lensitic calcite veinlets; vuggy, and porous; slightly recessive.	10	886 1/2
33	Dolomite to dolomitic siltstone, quartzose; carbonate finely crystalline; medium to medium light grey, and weathering dark yellow-grey to yellow-grey-brown; medium-bedded up to 2 feet; indeterminate pelecypod fragments in upper 6 feet; minor fine wavy colour laminations; black phosphatic grains and fragments; resistant.	26	876 1/2
32	Siltstone to silty dolomite, quartzose; carbonate very finely crystalline; medium to medium dark grey, and weathering yellowish grey to yellow-brown; medium- to thick-bedded up to 3 feet; linguloid fragments; thin chertified sand lenses in middle 10 feet; black phosphatic grains and fragments; resistant.	27	850 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
31	Siltstone, quartzose, very dolomitic, may in part be classed as silty dolomite; carbonate finely crystalline; medium grey with brown tinting, and weathering dark brown-grey; indistinct bedding planes, appears to be medium-bedded; wavy irregular colour laminations; lower 10 feet contains minor chert-filled vugs; slightly recessive.	18	823 1/2
30	Siltstone to silty dolomite, argillaceous; carbonate finely crystalline; medium dark grey, and weathering dark grey to dark yellow-grey; indistinct bedding planes; minor white chert filled vugs up to 1/2 inch in diameter; light grey wavy lensitic laminations; weathers flaggy; slightly recessive; unit resembles black shale member.	20	805 1/2
29	Siltstone, quartzose, argillaceous, very dolomitic; medium grey with slight brown tint, and weathering dark yellowish brown to yellowish grey; indistinct bedding planes; faint trace wavy laminations; slightly recessive.	5	785 1/2
28	Sandstone, quartzose, slightly dolomitic to calcareous, argillaceous; very fine grained; medium grey, and weathering yellowish brown; medium- to thick-bedded up to 3 feet minor dark grey coarser grained phosphatic siltstone pebbles within unit; faint trace wavy colour laminations; resistant.	20	780 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Black shale member (72 1/2)		
27	Dolomite, quartzose, very argillaceous; finely crystalline, clastics siltsize; medium dark grey, and weathering dark grey; thin- to medium-bedded up to 4 inches; unit contains Gymnotoceras sp. interbeds of silty shale; large calcite nodules up to 2 1/2 inches; pyrite nodules up to 1 1/2 inches; bedding wavy and lensitic; microvugs, slightly porous; thin beds laminated; slightly recessive.	8	760 1/2
26	Dolomite and shale, argillaceous, silty; medium to medium dark grey, and weathering dark grey; thin-bedded; laminated; soft and crumbly; in part covered; recessive.	20	752 1/2
	Covered interval, talus consists of black to dark grey weathering silty shale.	39 1/2	732 1/2
25	Siltstone to very fine grained sandstone, quartzose, dolomitic, very argillaceous; medium grey with brownish tinting, and weathering dark grey; indistinct bedding planes but appears to be thin-bedded; abundant Spiriferina cf. stracheyi present; black phosphatic grains and fragments; in part covered; recessive.	5	693

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Blocky brown siltstone member (335 1/2)		
24	Shale, quartzose, argillaceous, dolomitic; very fine grained; olive-grey, and weathering dark grey-brown; fine regular colour laminations; fissile; recessive.	5	688
23	Siltstone, quartzose, very dolomitic, slightly argillaceous; medium dark grey, and weathering dark grey-brown; thin- to medium-bedded; two beds containing large load casts up to 1 1/2 feet; material surrounding load casts is same siltstone but appears to be more argillaceous; interbeds of silty shale; in places load casts resemble large well rounded boulders or sand pillows; slightly recessive to recessive.	10	683
22	Shale to shaly siltstone, very dolomitic, slightly argillaceous; very fine grained to siltsize; light grey, and weathering medium to dark grey-brown; thin-bedded; unit consists mainly of sandy shale; fine regular colour laminations; minor interbeds of siltstone up to 4 inches; recessive.	10 1/2	673
21	Siltstone and shale, quartzose, argillaceous, very dolomitic; in part classed as very fine grained sandstone; medium grey with slight yellow to brown tint, and weathering dark grey-brown; thin- to thick-bedded; 3-foot load cast in upper 10 feet of unit; thin beds	30	662 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	display fine regular colour laminations; unit consists of 60% to 70% shale and shaly siltstone; slightly recessive.		
20	Siltstone to silty dolomite, quartzose, very dolomitic, slightly argillaceous; medium light grey with blue tinting, and weathering rusty brown to dark grey-brown; thin- to medium-bedded up to 10 inches; thin beds have fine regular colour laminations; beds wavy to lensitic; unit consists of 60% shaly siltstone to silty shale; slightly recessive.	20	632 1/2
19	Siltstone and shale, quartzose, very dolomitic, slightly argillaceous; siltsize to very fine grained; medium light grey with slight bluish tint, and weathering dark grey-brown to rusty brown; thin- to medium-bedded up to 1 foot, averaging 2 inches; beds wavy and lensitic; 40% to 60% sandy shale interbeds; thin beds display fine regular colour laminations; minor calcite-filled vugs; small normal fault in center of unit; slightly recessive.	70	612 1/2
18	Siltstone to dolomite, quartzose, argillaceous; carbonate medium crystalline; medium grey with blue tint to dark yellowish brown, and weathering dark grey-brown to rusty brown; thin- to medium-bedded up to 5 inches; 40% sandy to silty very argillaceous, laminated shale interbeds; beds wavy and	30	542 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	lensitic; lower 10 feet mainly silty dolomite; resistant.		
17	Siltstone and shale, quartzose, argillaceous, dolomitic; medium grey with bluish tint to pale yellowish brown, and weathering dark grey-brown; thin- to medium-bedded up to 9 inches; wavy bedding planes; silty shales have fine regular colour laminations; slightly recessive.	30	512 1/2
16	Siltstone to dolomite, quartzose; carbonate very fine to finely crystalline; medium grey, and weathering rusty brown; thin- to medium-bedded up to 5 inches; 20% interbedded sandy fissile regularly laminated shale; resistant.	10	482 1/2
15	Siltstone, quartzose, very dolomitic; medium grey with slight brown tint, and weathering dark grey-brown; thin- to medium-bedded; minor laminated sandy shale interbeds; poorly developed flow roll in center of unit up to 1 foot thick; wavy bedding planes; weathers shaly to flaggy; shale micromicaceous; recessive.	10	472 1/2
	Covered interval, talus and very minor outcrop same as unit 14.	10	462 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
14	Siltstone to dolomite, quartzose, slightly calcareous, slightly argillaceous; dolomite medium crystalline; medium grey to light olive-grey, and weathering rusty brown to dark grey-brown; thin- to medium-bedded up to 1 foot; wavy bedding planes; minor sandy to silty laminated shale interbeds; slightly recessive.	20	452 1/2
13	Siltstone to silty dolomite and shale, quartzose, argillaceous; carbonate fine- to medium-crystalline; light to medium dark grey to light olive-grey, and weathering medium to dark grey-brown to yellow-brown; thin to medium-bedded up to 1 foot; wavy bedding planes in part; minor crossbedding in thicker beds; 30% to 40% sandy to silty shale interbeds; in part covered; slightly recessive.	50	432 1/2
12	Siltstone and shale, quartzose, argillaceous, very dolomitic; medium dark grey, and weathering dark yellow-brown to dark grey-brown; thin- to medium-bedded up to 8 inches; 50% sandy to silty laminated shale interbeds; recessive.	10	382 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
11	Siltstone, quartzose, argillaceous, very dolomitic; may in part be classed as silty dolomite; carbonate is finely crystalline; medium dark grey, and weathering rusty brown to dark grey-brown; thin- to medium-bedded up to 1 foot; wavy bedding planes; minor interbeds of laminated silty shale; minor black phosphatic fragments; unit represents base of member; resistant.	20	372 1/2
	Shaly siltstone member (352 1/2)		
10	Shale and siltstone, quartzose, very dolomitic, argillaceous; very fine grained to siltsize, carbonate fine- to medium-crystalline; medium grey to pale yellow-brown, and weathering dark grey-brown to rusty brown; thin-bedded with prominent 1 foot bed in center of unit; fine regular colour laminations; shale fissile, soft and crumbly; unit weathers shaly and recessive.	21 1/2	352 1/2
9	Siltstone and shale, quartzose, argillaceous; very dolomitic; pale yellowish brown to medium grey, and weathering yellow-grey-brown; thin-bedded up to 2 inches; unit consists mainly of shaly siltstone; wavy to lensitic beds; wavy to regular colour laminations; minor micro-vugs elongated parallel to bedding planes; unit weathers shaly; recessive.	10	331

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
8	Shale, dolomitic, quartzose, argillaceous; upper 20-30 feet very dolomitic, rest of unit quartzose; very fine grained to siltsize, carbonate fine to very finely crystalline; pale yellowish brown to brownish grey, and weathering dark yellow-brown to dark grey-brown minor shaly siltstone beds up to 3/4 inch; fine regular colour laminations; shaly fissile to papery, soft and crumbly; recessive.	80	321
7	Siltstone to silty shale, quartzose, dolomitic, argillaceous; medium dark grey to brownish grey, and weathering dark grey-brown to yellow-brown; thin-bedded; fine regular light grey laminations; micromicaceous bedding planes; lower 10 feet mainly covered; recessive.	20	241
6	Siltstone very shaly and silty shale, quartzose, very argillaceous, dolomitic; dark yellow-brown to brownish grey, and weathering yellow-brown to greyish brown; thin-bedded up to 3/4 inch; fine wavy to regular colour laminations; minor blue-black phosphatic fragments in upper 10 feet; micro-micaceous; very fissile in part; weathers shaly and recessive.	33	221
5	Shale to shaly siltstone, quartzose, argillaceous, dolomitic; pale yellowish brown to brownish grey to medium dark grey at base, and weathering dark grey-brown to yellow-brown; fine- to micro-light	60	188

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	grey pyritiferous wavy to regular laminations; fissile, soft and crumbly; weathers shaly to flaggy; black phosphatic grains and fragments in upper 20 feet; recessive.		
4	Siltstone and shale, quartzose, dolomitic, argillaceous; medium dark grey with slight brownish tint, and weathering dark grey-brown to yellow-brown; thin- to thick-bedded up to 3 feet, thick beds form two resistant ribs at top and base of unit; thin beds up to 1 1/2 inches; fine regular colour laminations; very fissile in part; weathers shaly to flaggy; recessive.	10	128
3	Shale, quartzose, very argillaceous, slightly dolomitic; very fine grained to siltsize; light brownish grey to medium dark grey, and weathering dark grey-brown; minor shaly sandstone beds up to 1 inch; lower 10 feet contain minor black phosphate grains and fragments; weathers shaly; recessive.	20	118
2	Siltstone and shale, quartzose, argillaceous, dolomitic; pale yellowish brown, and weathering dark yellow-grey to dark brownish grey; thin-bedded up to 1 inch; wavy to lensitic colour laminations; minor black phosphatic grains; shales very fissile; thicker beds form resistant rib of 3 feet; micromicaceous; recessive.	10	98

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
1	Shale, very quartzose, very argillaceous, slightly dolomitic; very fine grained to siltsize; light brownish grey, and weathering dark brownish grey; minor shaly siltstone to sandstone interbeds; very fissile; fine wavy to regular colour laminations; minor phosphate grains and fragments; unit weathers shaly; recessive.	20	88
	Covered interval, talus consists of laminated, very fissile, argillaceous, sandy shale and minor shaly sandstone.	68	68
	Rocky Mountain Formation		
	Covered interval.	45	
	Sandstone, quartzose, cherty, slightly calcareous; fine grained; light grey and weathering dark grey brown; indistinct bedding planes but appears to be medium-bedded; contact with Sulphur Mountain Formation covered; resistant.		

Section 16

Location: Monoghan Creek East; Section 3, Northeast, Township 53, Range 7, W6. In 2 small creek gullies off Monoghan Creek, east side, 3/4 of a mile from junction of Sulphur River. Measured by D. W. Gibson 1962.

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Fernie Group		
	Limestone, quartzose, slightly argillaceous, may in part be classed as calcareous siltstone medium dark grey, and weathering dark brownish grey; medium-bedded up to 2 feet; resistant.	10	
	Conglomerate, quartzose, calcareous, phosphatic; subrounded pebbles slightly chertified up to 1 inch in diameter in a fine grained and finely crystalline matrix and cement; unit represents base of Fernie Group; resistant.	1/2	
	Whitehorse Formation (1106 1/2)		
	Upper carbonate member (457 1/2)		
75	Dolomite to siltstone, and minor conglomerate, quartzose, argillaceous, calcareous; medium light grey to medium dark grey, and weathering yellow-brown to dark grey; thin- to medium-bedded; conglomerate forms lowermost 3 inches, consists of dark grey calcareous siltstone pebbles in a light grey calcareous siltstone matrix, pebbles up to 1 inch in diameter; this unit may represent transition to Fernie Group; resistant.	10 1/2	1443

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
74	Siltstone, quartzose, very dolomitic, argillaceous; medium to medium dark grey, and weathering dark grey-brown to yellow-grey; medium-bedded up to 1 1/2 feet; minor black phosphatic grains; resistant.	13	1432 1/2
	Covered interval.	17 1/2	1419 1/2
73	Sandstone to siltstone, quartzose, dolomitic; very fine grained to siltsize; medium light grey to medium grey, and weathering dark grey-brown; medium-bedded up to 2 feet; upper part of unit displays light and dark grey mottling; coarse grains of quartz or chert scattered throughout base of unit; forms highest waterfall; resistant.	13	1402
72	Sandstone to siltstone and conglomerate, quartzose, very fine grained to siltsize, conglomerate consists of well rounded siltstone pebbles up to 1/2 inch in diameter in a medium dark grey silty to sandy matrix; unit is medium to medium dark grey, and weathering dark grey; conglomerate forms upper 6 inches; resistant.	10	1389
71	Dolomite, quartzose in part, argillaceous, pyritiferous, slightly calcareous; very finely crystalline; medium to medium dark grey, and weathering grey-white to medium grey to yellow-grey; medium- to thick-bedded up to 3 feet; black chert nodules up to 3 inches in	50	1379

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	diameter in lower 20 feet; indeterminate fossil fragments in lower 10 feet; mottled in part; resistant.		
70	Dolomite, argillaceous, cherty, calcareous, in part quartzose; finely crystalline; medium to medium dark grey, and weathering medium to dark yellow-grey; medium-bedded; poorly preserved fossil fragments; black to dark grey chert lenses and bands up to 2 inches; resistant.	10	1329
69	Siltstone to dolomite, quartzose; carbonate finely crystalline; medium grey, and weathering dark grey to black; faint trace regular light grey laminations; medium- to thick-bedded up to 2 1/2 feet; resistant.	3 1/2	1319
68	Dolomite and conglomerate, quartzose, calcareous, slightly argillaceous; carbonate finely crystalline, conglomerate consists of subrounded silty carbonate and chert pebbles up to 1/2 inch in diameter, in a silty to sandy quartzose dolomite matrix; medium light to medium dark grey, and weathering light to medium grey; medium-bedded up to 1 foot; chert-filled vugs, appear to be replacing calcite; upper 2 feet partly covered; slightly recessive.	5	1315 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
67	Dolomite to siltstone, quartzose; finely crystalline; medium to medium dark grey, and weathering medium to yellow-grey to grey-white; medium-bedded; minor chert-filled vugs and nodules in lower 5 feet; poorly developed micro-crossbedding; forms part of waterfall; resistant.	15	1310 1/2
66	Dolomite to limestone, silty, may in part be dolomitic siltstone; carbonate finely crystalline; light grey, and weathering medium grey; medium-bedded; very fine dark grey silt laminations; small white to grey white chert pockets; slightly recessive.	7	1295 1/2
65	Dolomite to sandstone, quartzose; in part conglomeratic, with subangular dolomite pebbles up to 1/2 inch in diameter in a silty carbonate matrix; dolomite very fine to finely crystalline; medium grey to very light grey, and weathering medium grey; indistinct bedding planes but appears to be medium-bedded; phosphatic flecks and fragments in lower 10 feet; in part covered; recessive to slightly recessive.	30	1288 1/2
64	Sandstone, quartzose, slightly dolomitic, phosphatic in part; very fine grained; medium dark grey, and weathering dark grey; indistinct bedding planes; fine light grey laminations; resistant.	10	1258 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
63	Sandstone, quartzose, dolomitic, in part chertified; very fine grained to siltsize; medium dark grey, and weathering medium dark grey; medium-bedded; abundant grey chert filled vugs up to 1/2 inch in diameter in upper 1 foot; slightly recessive.	5	1248 1/2
62	Sandstone to dolomite, quartzose, slightly argillaceous, cherty in part; very fine grained to siltsize, carbonate finely crystalline; medium dark grey, and weathering dark grey to dark brownish grey; medium-bedded up to 2 feet; dark bluish black to light grey quartz and chert lenses and nodules throughout unit; unit forms waterfall; resistant.	24 1/2	1243 1/2
61	Sandstone, quartzose, slightly calcareous to dolomitic; very fine grained; medium to medium dark grey, and weathering medium to dark grey; medium-bedded; greyish white chert-filled vugs up to 1/2 inch in diameter; recessive.	5 1/2	1219
60	Dolomite, slightly quartzose, argillaceous; finely crystalline; medium light grey to medium dark grey, and weathering medium grey to yellow-grey; medium-bedded up to 1 foot; grey to greyish white chert and quartz filled vugs up to 2 inches in diameter; part of unit contains dark grey to black carbonaceous or phosphatic flecks and fragments; unit forms waterfall; resistant.	9 1/2	1213 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
59	Dolomite, quartzose, argillaceous; clastics very fine grained to siltsize, carbonate finely crystalline; light to medium light grey, and weathering greyish yellow to medium grey; medium-bedded; chert- and quartz-filled vugs; up to 1 1/2 inches in diameter; black phosphate grains and fragments in upper 10 feet; recessive.	27 1/2	1204
58	Sandstone to dolomite, calcareous in part, quartzose; very fine grained, carbonate finely crystalline; medium light grey, and weathering grey-yellow; medium- to thick-bedded up to 3 feet; unit forms waterfall; resistant.	13	1176 1/2
57	Sandstone, quartzose, very dolomitic; very fine grained; very light grey to yellowish grey, and weathering greyish white to light yellow-grey; medium-bedded up to 10 inches; wavy irregular light and dark grey laminations; slightly recessive.	6	1163 1/2
	Covered interval, recessive, dark and medium grey weathering sandy limestone in talus.	10	1157 1/2
56	Dolomite, quartzose, phosphatic, calcareous in part; very fine to finely crystalline; medium grey, and weathering medium grey to yellow-grey; medium-bedded up to 1 foot; phosphate grains and fragments up to 1/2 inch; light grey chert filled vugs; slightly recessive.	15	1147 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
55	Limestone and sandstone, quartzose, phosphatic, dolomitic; sandstone very fine grained; limestone sandy and dolomitic; white to medium light grey, and weathering white to yellow-grey; medium-bedded up to 1 foot, minor chert-filled vugs in sandstone; resistant.	8	1132 1/2
54	Dolomite, calcareous, quartzose in part; finely crystalline; very light grey, and weathering light grey to yellow-grey; medium-bedded up to 1 1/2 feet; vuggy in part; slightly recessive.	10	1124 1/2
53	Limestone, dolomitic, slightly silty; very fine to finely crystalline; medium light to light grey, and weathering light grey to medium yellow-grey; medium-bedded up to 1 foot; bedding planes very wavy; black chert fragments in lower 10 feet; minor vugs; in part mottled; upper 7 feet partly covered; resistant.	20	1114 1/2
52	Sandstone to limestone, quartzose, slightly argillaceous; fine- to medium-grained; light to medium light grey, and weathering bright yellow to dark grey-yellow; medium-bedded; wavy bedding planes; lower 5 feet argillaceous, soft and crumbly; slightly recessive.	17 1/2	1094 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
51	Limestone, quartzose, clastics very fine grained carbonate finely crystalline; medium to light grey with yellow-grey argillaceous mottling, and weathering grey-yellow; medium-bedded up to 8 inches; in part brecciated, fragments light grey up to 1/2 inch; wavy bedding planes; well fractured in part; slightly recessive.	16	1077
50	Sandstone to limestone, quartzose; very fine grained, carbonate finely crystalline; medium light grey to yellow-grey, and weathering a mottled grey-yellow; medium-bedded; faint trace regular colour laminations; upper part of unit slightly porous; slightly recessive.	10	1061
49	Sandstone, quartzose, very dolomitic; very fine grained; yellowish grey, and weathering bright greyish yellow; medium-bedded up to 2 feet; calcite- and quartz-filled vugs; minor very argillaceous interbeds; resistant.	10	1051
48	Dolomite and limestone, quartzose in part; very fine to finely crystalline; medium dark grey to yellowish grey, and weathering medium to dark grey to light grey-yellow; thin- to medium-bedded; unit weathers shaly to flaggy in part; lower 10 feet limestone; recessive.	17 1/2	1041

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
47	Dolomite, calcareous, quartzose, argillaceous; very fine to finely crystalline; yellowish grey, and weathering grey-yellow; indistinct bedding planes; well fractured; weathers rubbly; recessive.	10	1023 1/2
46	Limestone, slightly argillaceous, slightly silty; finely crystalline; greyish yellow to light grey, and weathering greyish white to yellow; indistinct bedding planes but appears to be thin-bedded; soft, crumbly and weathers shaly; recessive.	10	1013 1/2
45	Limestone and dolomite, argillaceous, slightly silty; finely crystalline; light to medium grey to pale yellowish brown, and weathering medium grey to pale yellow-grey; thin- to medium-bedded up to 1 foot; wavy bedding planes; very porous in part and simulates solution breccia; in part covered; slightly recessive.	18	1003 1/2
	Crinoidal limestone member (81 feet)		
44	Limestone, slightly argillaceous; fine to very fine grained-subrounded organic fragments in a fine to very finely crystalline carbonate matrix; medium grey with minor yellow-grey mottling at top, and weathering medium grey to bright yellow-grey; indistinct bedding planes but appears to be medium-bedded; abundant crinoid fragments throughout unit; well-fractured; resistant.	81	985 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Evaporitic member (568 feet)		
	Covered interval.	25	904 1/2
43	Limestone and dolomite, slightly quartzose, argillaceous; very fine to finely crystalline; very light grey to medium grey to yellowish grey, and weathering bright yellow to bluish grey; indistinct bedding planes; vuggy, porous, and well-fractured; may be part of solution breccia unit; slightly recessive.	20	879 1/2
	Covered interval, talus consists of limestone solution breccia; fragments angular up to 1 1/2 inches; light to medium grey; soft crumbly and porous; interval complicated by folding and faulting; very recessive.	48	859 1/2
42	Limestone, brecciated, argillaceous; dolomitic angular fragments up to 9 inches in diameter, averaging 2 inches in a finely crystalline matrix; medium grey, and weathering medium grey; indistinct bedding planes; very porous; lower 10 feet partly covered; slightly recessive.	20	811 1/2
41	Limestone and dolomite, slightly silty to sandy, argillaceous; fine to very finely crystalline; light to medium dark grey, and weathering light grey to dark grey to dark yellow-grey; thin- to medium-bedded up to 6 inches; bedding slightly contorted as result of small normal fault; minor black shale at base of unit; well-fractured; small vugs; crumbly; slightly recessive.	12 1/2	791 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
40	Limestone to siltstone, quartzose, dolomitic, slightly argillaceous; light to medium grey, and weathering dark greyish yellow; thin- to medium-bedded up to 1 1/2 feet; fine dark grey regular laminations; upper 2 feet mottled; center of unit very soft and powdery; unit may contain white powdery gypsum in other parts of area; resistant to slightly recessive.	6	779
39	Limestone to sandstone, quartzose, argillaceous; clastics very fine grained, carbonate finely crystalline; medium light to medium dark grey to yellowish grey, and weathering greyish yellow to medium grey; indistinct bedding planes, although medium dark grey limestone forms two bands within unit up to 1 foot in thickness; upper 5 feet displays pinkish green mottling and contains minor calcareous shale; slightly recessive.	15	773
	Covered interval.	12	758
38	Limestone, slightly quartzose; finely crystalline; medium light grey with minor yellowish green mottling and streaking, and weathering greyish white to yellowish grey; indistinct bedding planes; very well fractured; recessive.	10	746

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
37	Limestone, very quartzose, slightly argillaceous; finely crystalline, clastics mainly siltsize; light grey to yellowish grey, and weathering grey white to greyish yellow; indistinct bedding planes but appears to be medium-bedded; unit complicated by small drag fold; in part mottled; partially covered; recessive.	20	736
36	Limestone, slightly silty; finely crystalline; medium light grey, and weathering greyish yellow to medium grey; medium- to thick-bedded up to 2 1/2 feet; wavy bedding planes; vuggy; porous; rough rubbly looking weathered surface; unit resembles solution breccia but no obvious fragments; resistant.	11	716
35	Limestone, very quartzose, argillaceous, dolomitic; clastics siltsize to very fine grained, carbonate fine- to medium-crystalline; light to medium dark grey, and weathering dark to yellow-grey; medium-bedded up to 1 foot; vugs up to 1/4 inch in diameter; mottling on weathered surface near base; well-fractured; slightly recessive to recessive.	14 1/2	705
34	Limestone, argillaceous; fine to very finely crystalline; medium light to medium dark grey with yellowish brown argillaceous quartzose mottling, and weathering	5	690 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	greyish yellow to medium grey; 6 inches limestone intraformational breccia bed near base; mainly thin-bedded but minor beds up to 6 inches; resistant.		
	Covered interval.	19	685 1/2
33	Limestone and limestone breccia, quartzose, dolomitic, slightly argillaceous; subangular silty dolomite fragments up to 1 1/2 inches in diameter, in a slightly quartzose finely crystalline carbonate matrix; medium grey with yellowish grey fragments, and weathering medium grey to yellow-grey; indistinct bedding planes; porous; rough weathering surface; recessive.	21 1/2	666 1/2
	Covered interval, talus same as unit 33.	10	645
32	Limestone, quartzose, slightly dolomitic; lower 1 1/2 feet very quartzose may be classed as calcareous quartzose sandstone; very light grey to medium light grey, and weathering greyish yellow to grey; indistinct bedding planes but appears to be medium-bedded; vuggy, porous; resembles solution breccia large white calcite nodules up to 9 inches in diameter; resistant.	10	635

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
31	Limestone, slightly quartzose, slightly argillaceous; very fine to finely crystalline; very light to medium light grey, and weathering medium grey to yellow-grey; thin- to medium-bedded from 1 1/2 inches to 1 foot; upper part of unit displays quartzose sand laminations; lower 9 feet vuggy porous, resembles solution breccia unit but fragments not obvious; in part covered; slightly recessive.	14	625
	Covered interval.	9	611
30	Limestone, dolomitic; finely crystalline; medium light to medium dark grey, and weathering medium grey to yellow-grey; medium-bedded up to 10 inches; stylolites; resistant.	9	602
	Covered interval.	57 1/2	593
29	Limestone, slightly quartzose, slightly argillaceous; very fine to finely crystalline; medium light grey to yellowish grey, and weathering medium grey to yellow-grey; indistinct bedding planes but appears to be wavy; very vuggy and porous; resembles solution breccia but no fragments; slightly recessive.	20	535 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
28	Limestone, slightly quartzose; oolitic carbonate grains in a very fine to finely crystalline matrix; light to medium light grey, and weathering medium grey to yellowish grey; thin- to medium-bedded from 2 to 8 inches; minor calcite-filled vugs; porous; resistant.	14	515 1/2
27	Limestone and limestone breccia, argillaceous, dolomitic, slightly quartzose; limestone finely crystalline, breccia fragments up to 1 inch in diameter, very chalky and silty, in a fine- to medium-crystalline calcite matrix; light to medium light grey, and weathering medium grey to yellow-grey; indistinct bedding planes but appears to be medium-bedded; cavernous in part; weathers with rough surface, and rubbly; slightly recessive.	25	501 1/2
26	Limestone, quartzose, argillaceous; finely crystalline; light to medium light grey, and weathering yellow-grey; medium-bedded up to 2 feet; calcite-filled fractures perpendicular to bedding; small vugs; resistant.	10	476 1/2
	Covered interval, talus and minor outcrop consists of solution breccia type carbonates.	26	466 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
25	Limestone, very quartzose; fine- to medium-crystalline, clastics fine to very fine grained; medium grey to yellowish grey, and weathering medium grey to yellow-grey; indistinct bedding planes but appears to be medium-bedded; minor regular quartzose sand laminations; resistant.	5	440 1/2
24	Limestone and minor dolomite, argillaceous in part, silty to sandy; finely crystalline, upper 3 feet partly brecciated; very light grey to medium grey, and weathering medium grey to yellowish grey; thin- to medium-bedded; wavy bedding planes; dolomite very chalky weathering appearance; vuggy and porous; recessive.	13	435 1/2
23	Dolomite and limestone, slightly argillaceous; finely crystalline; light grey with yellowish grey sandy mottling, and weathering yellow-grey; thin-bedded; weathers shaly; vuggy and porous; in part covered; recessive.	7	422 1/2
22	Dolomite, quartzose, argillaceous; clastics siltsize, carbonate finely crystalline; light grey, and weathering greyish white to yellow-grey; thin-bedded; lower 2 feet very silty; unit weathers shaly; in part fissile, soft and crumbly; very recessive.	10	415 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
21	Dolomite and limestone breccia, with minor interbeds of dolomitic limestone, quartzose, slightly argillaceous; finely crystalline, in center of unit 1 foot limestone breccia, yellow-grey angular fragments up to 1 inch in diameter in a matrix of very finely crystalline calcite; yellowish grey to medium light grey, and weathering greyish white to light yellow-grey, thin- to medium-bedded up to 4 inches; wavy bedding planes; lower 4 feet consists of porous vuggy limestone, resembling solution breccia; unit represents probable base of solution breccia sequence; slightly recessive.	23	405 1/2
	Covered interval, very minor scattered outcrop; sandstone, quartzose, dolomitic, argillaceous; very fine grained; yellowish grey to light grey, and weathering light yellow-brown; recessive.	18	382 1/2
20	Sandstone and dolomite, quartzose, calcareous and argillaceous in part; clastics very fine grained, carbonate finely crystalline; yellowish grey to light grey to brownish grey, and weathering light grey to grey-yellow; thin- to medium-bedded; very shaly in lower 3 feet; small calcite-filled vugs; regular quartzose sand laminations; unit partly covered; recessive.	13	364 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
19	Dolomite, quartzose in part, slightly argillaceous; finely crystalline; very light to light grey and weathering light yellow-grey; thin- to medium-bedded up to 4 inches; upper part of unit darker grey and less quartzose; recessive.	5	351 1/2
18	Limestone, very quartzose, very dolomitic in part; fine- to medium-crystalline, clastics very fine grained; light grey to yellowish grey, and weathering yellow-grey to light grey; medium-bedded up to 6 inches; pelecypod fragments Myophoria sp. GSC loc. 52996; unit porous, appears to be result of weathering and solution of fossil fragments; unit represents base of Whitehorse Formation; slightly recessive.	10	346 1/2
	Sulphur Mountain Formation (Incomplete)		
	Silty dolomite member (336 1/2)		
17	Dolomite, quartzose; finely crystalline; clastics mainly very fine grained; medium to medium dark grey, and weathering dark grey to dark grey-brown; medium-bedded up to 1 1/2 feet; coarse-grained sand lenses and laminations; minor calcite- quartz- and chert-filled vugs up to 1 1/2 inches in diameter; resistant.	14	336 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
16	Dolomite, argillaceous; finely crystalline; medium dark grey, and weathering dark grey to dark brownish grey; medium-bedded up to 1 1/2 feet; small dark grey flecks and fragments of phosphate throughout unit; vuggy and porous notably at top and bottom of unit; weathers rubbly; recessive.	9	322 1/2
15	Dolomite to siltstone, quartzose; finely crystalline medium to medium dark grey, and weathering medium grey to dark brownish grey; medium-bedded up to 10 inches; wavy bedding planes; fine-grained sand laminations; resistant.	14	313 1/2
14	Dolomite in part brecciated, quartzose, slightly argillaceous; clastics very fine grained to siltsize, carbonate fine- to medium-crystalline medium to medium light grey, and weathering medium grey; thin- to medium-bedded; minor interbeds of dark grey to black silty shale; irregular dark grey laminations in part of unit; unit partly covered; recessive.	19	299 1/2
13	Siltstone to dolomite, quartzose; medium light grey to yellow-grey, and weathering medium grey to yellow-grey; thin-bedded; lower 1 foot very shaly; green to pink tint in part of unit; very fine colour laminations in thin shaly beds; resistant.	2 1/2	280 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Covered interval.	15	278
12	Dolomite, in part quartzose, slightly calcareous; fine to very finely crystalline; medium light to medium grey, and weathering grey-white to yellow-grey with minor orange-brown mottling in upper part of unit; medium-bedded; laminated in part; resistant.	3 1/2	263
	Covered interval.	7 1/2	259 1/2
11	Dolomite, quartzose; clastics very fine grained to siltsize, carbonate finely crystalline; medium light grey, and weathering greyish white to medium grey; indistinct bedding planes; well-fractured; recessive.	2	252
	Covered interval.	10	250
10	Dolomite, quartzose, slightly argillaceous; may in part be classed as dolomitic siltstone; finely crystalline; medium light to medium dark grey, and weathering dark grey-brown to yellow-grey-brown; thin- to medium-bedded; dark grey wavy laminations; minor interbeds of dark grey-brown shale in lower part of unit; unit weathers mainly shaly; minor vugs and phosphate grains and fragments in lower 1 foot; in part covered; slightly recessive.	19 1/2	240

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Covered interval.	7 1/2	220 1/2
9	Dolomite, quartzose; finely crystalline, clastics siltsize; medium to medium dark grey, and weathering dark yellow-grey-brown; medium-bedded up to 2 feet; minor argillaceous sandy shale interbeds; blue-black Lingulid fragments and chips on bedding planes; upper 2 feet very vuggy; resistant.	12 1/2	213
8	Dolomite, quartzose, slightly calcareous in part; clastics very fine grained to siltsize, carbonate finely crystalline; medium light to medium dark grey to yellowish grey, and weathering dark grey to dark yellow-grey; thin- to medium-bedded up to 1 foot; Lingulid casts and fragments; upper 1 1/2 feet very vuggy and porous as a result of solution of phosphatic fragments; slightly recessive.	13	200 1/2
7	Dolomite, quartzose, slightly calcareous, slightly argillaceous; finely crystalline, clastics siltsize; medium light grey to dark yellow-grey, and weathering medium yellow-grey; indistinct bedding planes but appears to be medium-bedded; contains abundant dark blue-black phosphatic Lingulid casts and fragments; faint trace of coarser grained sand laminations; slightly recessive; lower part of unit vuggy.	23	187 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
6	Dolomite, quartzose; finely crystalline; clastics very fine grained to siltsize; medium to medium light grey with slight yellow tint, and weathering medium grey-brown to dark yellow-brown; medium-bedded up to 1 1/2 feet; upper 20 feet fossiliferous- Spiriferina cf. stracheyi Salter, GSC loc. 52914; in part laminated; vuggy in part; resistant.	29 1/2	164 1/2
5	Dolomite, quartzose, slightly argillaceous; finely crystalline; medium to medium light grey, and weathering medium to dark grey-brown; medium-bedded up to 1 1/2 feet; wavy dark grey laminations; lower 10 feet displays poorly developed crossbedding; upper 19 feet contains indeterminate fragments of molluscs, gastropods, and pelecypods; weathers flaggy in part, slightly recessive to resistant.	29 1/2	135
4	Dolomite, quartzose; fine- to medium-crystalline, clastics very fine grained to siltsize; light to medium dark grey, and weathering medium to dark grey-brown to yellow-brown; medium-bedded up to 1 foot; regular light and dark grey laminations; phosphatic blue-black Lingulid fragments and casts near base of unit; minor white calcite filled vugs; resistant.	31	105 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
3	Dolomite, quartzose; fine to very finely crystalline, clastics mainly siltsize; medium dark grey, and weathering dark yellowish brown; medium- to thick-bedded up to 3 feet; faint trace colour laminations; dark grey to black phosphate fragments parallel to bedding planes; unit weathers flaggy in places; slightly recessive.	13	74 1/2
2	Dolomite to siltstone, quartzose, very argillaceous; finely crystalline; olive-grey to medium dark grey to pale yellowish brown, and weathering black to dark grey-brown; thin-bedded; faint trace very dark pyritiferous laminations; unit resembles black shale member; micromicaceous; recessive.	35 1/2	61 1/2
1	Sandstone, quartzose, very dolomitic, argillaceous; very fine grained to siltsize; medium dark grey to olive-grey to pale yellowish brown, and weathering dark brownish grey to dark grey; indistinct bedding planes but appears to be thick-bedded; in part wavy irregular laminations; minor black phosphate fragments; minor calcite-filled vugs; unit displays slight mottled appearance; black shale member approximately 5 feet below base of unit; resistant.	26	26

Section 17

Location: Monoghan Creek West; Section 10, Northwest; Township 53; Range 7; W6. In small creek gully off Monoghan Creek, 3/4 of a mile from junction of Sulphur River. Measured by D. W. Gibson 1962.

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Sulphur Mountain Formation		
	Silty dolomite member (Incomplete)		
33	Siltstone to dolomite, quartzose; carbonate finely crystalline; medium dark grey, and weathering dark grey-brown; medium-bedded; light and dark grey laminations; resistant.	15 1/2	793 1/2
32	Siltstone to dolomite, quartzose; medium light grey, and weathering medium grey-brown; thin- to medium-bedded; dark blue to black Lingulid fragments; slightly recessive.	10	778
	Covered interval.	6	768
31	Sandstone to siltstone to dolomite, quartzose, slightly argillaceous; very fine grained to siltsize, carbonate finely crystalline; medium to dark grey, and weathering dark grey-brown; thin- to medium-bedded; wavy light and dark grey pyritiferous laminations; minor calcite- and quartz-filled vugs up to 1/2 inch in diameter in lower 20 feet; sand and silt content increases in lower 20 feet; in part covered; recessive.	50	762

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
30	Sandstone, quartzose, very dolomitic, slightly argillaceous; very fine grained to siltsize; dark brownish grey to medium dark grey, and weathering dark greyish brown; thin- to medium-bedded; weathers in part rubbly; serves as distinctive marker unit above black shale member; well jointed; slightly recessive to resistant.	20	712
	Black shale member (68')		
29	Siltstone and shale, quartzose, dolomitic, argillaceous; greyish black, and weathering dark grey; thin-bedded; siltstone very flaggy; calcite- and quartz-filled vugs in upper 3 feet; unit very pyritiferous, small pyrite nodules; recessive.	26 1/2	692
28	Shale to siltstone, very argillaceous, pyritiferous, quartzose, dolomitic; greyish black and weathering grey-black; thin-bedded; fissile in part; unit weathers shaly; in part covered; very recessive.	31 1/2	665 1/2
27	Siltstone and shale, quartzose, dolomitic, argillaceous, pyritiferous; medium grey to brownish grey, and weathering dark brownish grey; thin-bedded; siltstone displays regular light and dark grey pyritiferous laminations; soft and crumbly; recessive.	10	634

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Blocky brown siltstone member (284 1/2)		
26	Siltstone and shale, quartzose, very dolomitic, slightly argillaceous; medium dark grey and weathering medium grey-brown to light yellow-brown; thin-bedded; minor silty shale interbeds; regular light and dark grey pyritiferous laminations; poorly developed micro-crossbedding; small load cast at top of unit; slightly recessive to resistant.	14	624
25	Siltstone to dolomite, quartzose, slightly argillaceous; carbonate finely crystalline; medium dark grey, and weathering medium grey-brown to light yellow-brown; thin- to medium-bedded up to 6 inches; very fine light and dark grey laminations and crossbedding; very small pyrite-filled vugs near base; minor silty shale interbeds; black phosphate grains and fragments; micromicaceous; slightly recessive.	40	610
24	Siltstone, quartzose, very dolomitic; medium to medium dark grey, and weathering medium grey-brown to yellow-brown; thin- to medium-bedded; beds lensitic in part; light and dark grey pyritiferous laminations and crossbedding; thicker beds non-laminated; thin beds weather shaly to flaggy; resistant.	20	570

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
23	Siltstone, quartzose, dolomitic; medium dark grey, and weathering medium grey-brown to yellow-brown; thin- to medium-bedded; medium beds non-laminated; thin beds display fine regular light and dark grey laminations; minor silty shale interbeds; slightly recessive.	10	550
22	Siltstone, quartzose, dolomitic; medium grey-brown, and weathering grey-brown to yellow-brown; thin- to medium-bedded; well developed irregular colour laminations in thin beds; medium beds non-laminated; resistant.	10	540
21	Siltstone and shale, quartzose, very dolomitic, slightly argillaceous; medium dark grey to brownish grey, and weathering rusty to dark grey-brown to yellow-brown; thin- to medium-bedded up to 6 inches but averaging 1 inch to 2 inches; wavy to lensitic light and dark grey laminations; poorly developed crossbedding; wavy bedding planes; up to 30% silty shale interbeds decreasing in lower 20 feet; slightly recessive.	40 1/2	530
20	Siltstone, quartzose, very dolomitic, argillaceous; medium dark grey, and weathering dark grey-brown to rusty brown; thin- to medium-bedded; bedding wavy and lensitic; unit very shaly; poorly developed colour laminations in thinner beds; medium beds non-laminated; micro-micaceous in part; unit weathers flaggy to shaly; slightly recessive.	10	489 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
19	Siltstone and silty shale, quartzose, dolomitic, argillaceous; medium dark grey to dark grey, and weathering rusty brown to dark grey-brown; thin- to medium-bedded; bedding planes wavy; finely laminated; micromicaceous; unit consists of up to 60% silty to sandy shale; slightly recessive.	20	479 1/2
18	Siltstone to dolomite, quartzose; carbonate very fine to finely crystalline; medium to medium dark grey to light olive-grey, and weathering medium grey-brown to rusty brown; thin- to medium-bedded up to 4 inches; well developed light and dark grey laminations; indeterminate ammonite and pelecypods in upper 5 feet of unit; micromicaceous bedding surfaces; 25% to 30% silty shale interbeds; unit weathers flaggy; slightly recessive.	20	459 1/2
17	Siltstone, quartzose, very dolomitic, slightly argillaceous; medium to medium dark to yellow-brown-grey, and weathering medium grey-brown to yellow-brown to rusty brown; thin- to medium-bedded up to 1 foot; thin beds display faint light and dark grey regular laminations; medium beds non-laminated; up to 10% fissile silty shale interbeds; resistant.	20 1/2	439 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
16	Shale to shaly dolomite, quartzose, argillaceous; clastics siltsize, carbonate very fine to finely crystalline; medium to dark grey, and weathering rusty brown to dark grey-yellow-brown; thin- to medium-bedded; shale very fissile to papery; very fine wavy light and dark colour laminations; medium beds non-laminated; indeterminate ammonite impression in shale; beds wavy to lensitic; unit consists of 60% sandy to silty shale; minor calcite vugs in lower 10 feet; slightly recessive.	20	419
15	Siltstone, quartzose, very dolomitic, slightly argillaceous; medium to medium dark grey, and weathering rusty brown to dark grey-brown; thin- to medium-bedded; beds wavy to lensitic; irregular to wavy light and dark grey laminations; micro-crossbedding; up to 20% sandy shale interbeds; unit weathers flaggy and resistant.	10	399
14	Dolomite and silty shale, quartzose; carbonate very fine to finely crystalline; medium dark grey to light olive-grey, and weathering rusty brown to medium grey-brown; thin- to medium-bedded; wavy and lensitic bedding planes; wavy light and dark grey laminations; 50% sandy to silty shale interbeds; medium beds non-laminated; slightly recessive to resistant.	20	389

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
13	Shale and dolomite, slightly quartzose, slightly argillaceous; clastics very fine grained to silt-size, carbonate finely crystalline; medium dark grey, and weathering medium grey-brown to rusty brown; thin- to medium-bedded; thin beds display fine regular to wavy colour laminations; thicker beds non-laminated; unit consists of 60% black sandy to silty soft fissile shale; recessive.	10	369
12	Siltstone to dolomite, quartzose; carbonate finely crystalline; medium to medium dark grey, and weathering dark grey-brown to rusty brown; thin- to medium-bedded up to 10 inches; 10% to 20% slightly laminated fissile sandy shale interbeds; resistant.	19 1/2	359
	Shaly siltstone member (339 1/2)		
11	Dolomite and shale, slightly quartzose, argillaceous; finely crystalline; medium dark grey, and weathering dark grey-brown; thin- to medium-bedded; unit consists of silty shale to shaly siltstone; light and dark grey pyritiferous laminations; unit represents possible transition between blocky brown siltstone and shaly siltstone members; recessive.	9	339 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
10	Siltstone, quartzose, dolomitic, argillaceous; medium grey, and weathering rusty brown; forms regular non-laminated bed; forms prominent marker unit; resistant.	1	330 1/2
9	Siltstone and minor shale, quartzose, dolomitic, slightly argillaceous; medium grey to dark yellowish brown, and weathering dark grey-brown; thin-bedded up to 2 inches; fine regular to wavy light and dark grey-brown pyritiferous laminations; micromicaceous in part; minor vugs in upper 9 feet; slightly recessive.	19	329 1/2
8	Shale to shaly siltstone, quartzose, dolomitic, argillaceous; dark grey to olive-grey to dark yellowish brown, and weathering medium to dark grey-brown; thin-bedded, in places minor lensitic siltstone interbeds up to 2 inches; medium grey regular to lensitic pyritiferous laminations; poorly developed micro-crossbedding; unit very soft and fissile in part; micromicaceous; recessive.	90	310 1/2
7	Siltstone and shale, quartzose, argillaceous, slightly dolomitic; olive-grey to brownish grey, and weathering medium to dark grey-brown; thin-bedded; up to 50% sandy to silty laminated shale in upper part of unit; beds weather flaggy to shaly; small lensitic 1/4 inch pyrite band in lower 10 feet; slightly recessive.	30	220 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
6	Shale to shaly siltstone, quartzose, very argillaceous, pyritiferous, very dolomitic; carbonate finely crystalline; medium to dark grey, and weathering dark grey to dark brownish grey; thin-bedded up to 1 1/2 inches; very fine lensitic light and dark grey pyritiferous laminations; unit weathers shaly to flaggy; shale fissile to papery; micromicaceous; minor lensitic pyrite bands up to 1/4 inch; recessive.	50	190 1/2
5	Shale to shaly siltstone, quartzose, argillaceous, pyritiferous; medium dark grey to dark greyish brown, and weathering dark grey to dark grey-brown; thin-bedded; shale very soft and fissile; well-developed light and dark grey pyritiferous laminations; minor lensitic bands of pyrite; micromicaceous; minor grey chert pebbles and fragments in lower 10 feet; minor white quartz filled vugs up to 1 inch in diameter; white coating on exposed bedding surfaces of unit; recessive.	60	140 1/2
4	Shale to shaly dolomite, quartzose in part, argillaceous; clastics silt-size to very fine grained; carbonate finely crystalline; medium dark grey, and weathering dark grey to very dark brownish grey; thin-bedded up to 2 inches; well-developed light and dark grey regular pyritiferous laminations; shale very fissile and soft; small pyrite nodules up to 1/2 inch in diameter in upper 10 feet; unit weathers shaly to flaggy; micromicaceous; recessive.	30	80 1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
3	Shale, quartzose, very argillaceous, dolomitic, pyritiferous; clastics siltsize, carbonate finely crystalline; medium dark grey, and weathering dark grey to black; very fine regular light and dark grey pyritiferous laminations; very fissile, soft, and crumbly; white coating on exposed bedding surfaces; unit partly covered; micromicaceous; recessive.	40	50 1/2
2	Dolomite and sandy shale, very quartzose, slightly argillaceous, clastics very fine grained, carbonate finely crystalline; medium dark grey, and weathering dark grey to black; thin-bedded up to 2 inches; fine light and dark grey wavy laminations; small white quartz filled vugs up to 1/2 inch in diameter; black phosphate grains and fragments up to 1 inch in diameter; white coating on bedding surfaces; slightly recessive.	10	10 1/2
1	Conglomerate, quartzose, pyritiferous, slightly calcareous; pebbles difficult to see but average 1 1/2 inches in diameter, and consist of phosphatic siltstone in a quartzose pyrite matrix; green-black, and weathering dark greenish grey due to pyrite content; resistant unit marks base of Sulphur Mountain Formation.	1/2	1/2

Unit	Lithology	Thickness (feet)	Height Above Base (feet)
	Rocky Mountain Formation		
	Sandstone, quartzose, dolomitic and slightly calcareous; fine-grained; medium light grey, and weathering dark grey-brown; thin- to medium-bedded; resistant; unit forms sharp contact with Sulphur Mountain Formation.		