Correlation

The Shinarump (?) conglomerate and its recognized equivalents, the Higham Grit and the Gartra grit, although possibly derived from different source areas, may have had an original aerial extent of over 125,000 square miles in northern Arizona, Utah, western Colorado, northwestern New Mexico, eastern Nevada and southwestern Idaho. Throughout most of this area it is usually less than 50 feet thick although occasionally it may locally exceed 200 feet in thickness (Stokes, 1950). At Currie this formation was first recognized by Wheeler et al (1949) and later by Scott (1954), who measured a thickness of 42 feet of Shinarump at Rattler Ridge.

Age

H. E. Gregory (1950) in referring to the age of this formation at Zion Park stated:

> No truly diagnostic fossils were found in the Shinarump of the Zion Park region, but the fossils wood chiefly Araucarioxylon arizonicum, has a Triassic aspect. The age of this formation is determined chiefly by its stratigraphic position, it lies above the Lower Triassic Moenkopi and continues upward without a break into the Upper Triassic Chinle.

Chinle (?) formation

Name

The name Chinle was applied by H. E. Gregory to the sequence of beds between the Shinarump conglomerate and the La Plata group in northern Arizona. It was the same shale group that G. K. Gilbert originally called the Upper Trias shales (G. M. Wilmarth, 1937). The similarity between the sequence

of beds overlying the Shinarump (?) conglomerate at Currie and the Chinle formation of the Colorado Plateau was first pointed out by Wheeler et al., (1949).

Description

The Chinle formation consists of over 500 feet of light gray, olive green and deep red shales and siltstones interbedded with very fine-grained sandstones. At the top of the red siltstone stratum at Lava Cap Hill and Gravel Cap Ridge are several interbeds of pale grayish-brown fine-grained limestone. This limestone which occurs in beds one to twenty feet thick, is almost lithographic in character. The siltstones have either been eroded to form lowlands or may locally have been preserved beneath an unconformable cover. This formation outcrops at:

RATTLER RIDGE

The formation apparently forms a lowland in the Lava Hills syncline between the Dolly Varden anticline and the eastern flank of Rattler Ridge. Within this lowland are several ridges formed by resistant strata in the Chinle (?) (figure 8).

GRAVEL CAP RIDGE

The western slopes of this hill are formed from the brick red shales and siltstones of the upper part of the Chinle (?). The lithologic limestone beds that were so numerous at Black Cap Hill, a few miles to the east, are represented by only two thin beds overlying the shales. These dip under a cover of Quaternary gravel.

BLACK CAP HILL

At this outcrop the Chinle has been eroded to form a surrounding lowland. North of the hill the pale gray lithographic limestone forms pronounced hogback ridges. The limestone forming these ridges is overlain by about 50 feet of brick red shale and siltstone locally preserved beneath the unconformable cover of the "basalt."

MEDICAL MINE HILL

At this outcrop are several hundred feet of light green and yellowish-orange, extremely fine-grained, fine-bedded, calcareous quartzitic sandstone interbedded with medium-bedded, medium-green siltstone. These probably are part of the upper part of the Chinle (?). The upper gypsiferous part of this formation is unconformably overlain by the extrusive.

Correlation

This sequence of beds at Currie was first described by H. E. Wheeler et al (1949), who felt that these rocks had an overall similarity to those of the 5000 foot thick Harrington formation (B. S. Butler, 1913), of the Frisco district in southwestern Utah.

The Chinle formation at Zion Park and in the Colorado Plateau varies in a lithology from the Chinle (?) at Currie, but its stratigraphic position suggests this correlation is valid. This formation may be correlated with the Wood shale and the Deadman limestone (Mansfield, 1927), in north central Utah and southeastern Idaho. These names may perhaps have

been better applied to the sequence at Currie since this sequence seems lithologically more closely related to the Wood shale and the Deadman limestone than to the Chinle. At Rattler Ridge the "Deadman" limestone tongues are missing. This could be the result of either structural removal or may possibly be the result of local variation in the original deposition. If the latter were true, this area could be very close to the south-westerly limit of the Deadman limestone - Wood shale lithologic sequence.

The Luning formation (Muller and Ferguson, 1936) in west-central Nevada is possibly the partial age equivalent of this formation.

Age

In referring to the age of the Chinle formation in the Zion Park, H. E. Gregory (1950) stated:

> That the Chinle is of Triassic age is now unquestioned but some difference of opinion exists regarding its position within the system. Von Huene has suggested that the lower part of the formation may be Middle Triassic and the upper part Upper Triassic, Branson or Nehl treat the whole formation as Middle Triassic, most other geologists as Upper Triassic.

Jurassic (?) system

The Jurassic (?) system at Currie is probably represented by only one formation the exact age of which is still open to some doubt. This formation overlies the Chinle and is overlain unconformably by Tertiary conglomerates, sandstones, and extrusives. The entire system is represented by approximately 2800 feet of sandstone.

Nugget (?) sandstone

Name

The name Nugget was first applied by A. C. Veatch (1907) to a sequence of yellow, pink, and red sandstones at Nugget station in southwestern Wyoming that overlies the Thaynes limestone and underlies the Twin Creek formation. H. E. Wheeler et al (1949) first pointed out the lithographic and stratigraphic similarities between this sandstone that outcrops at Currie and those of two other sandstone units: the Nugget sandstone, and the Glenn Canyon group of the Colorado Plateau.

General

The Nugget at Currie is a 2800 foot sequence of white, yellow, pink, and red fine-grained, massive to medium-bedded and in part cross-bedded quartzose sandstone that is uniform in almost all its lithologic characteristics except color. Throughout most of this unit the parting is parallel to the bedding. The sandstones at the base of the Nugget (?) apparently interfinger with the shales at the top of the Chinle (?) at the south end of Rattler Ridge. The top of the Nugget (?) is unconformably overlain by a variety of sediments all of which are probably of Tertiary age. There are two localities at which the Nugget (?) is exposed: the first is along the face of the Currie Hills, above the town of Currie, and the second is in the trough formed by the Lava Hills syncline. At both localities a distinctive bed occurs near the top of the exposed section. This bed is composed of reddish-violet, wavy

irregularly bedded sandstone containing "augen" shaped depressions on weathered surfaces. Below this distinctive bed is about 75 to 100 feet of pale yellow sandstone and pale green mudstone. This sandstone contains numerous raindrop, rill and oscillation impressions in an upright position. The oscillation marks have a wave length of about 3 inches. No footprints were found in this "raindrop sandstone" bed, although the sand shows nearly a perfect record of the aquatile events that transpired during its deposition. The remaining strata below this bed consist of red, pink and yellow massive beds of sandstone with occasional cross-bedding composed of well rounded, uniformly sized quartz grains about 0.5 mm. in diameter. The suggestion was made by Gregory (1917, p. 59) that similar grains in the Utah counterpart of the Nugget (?) were deposited.

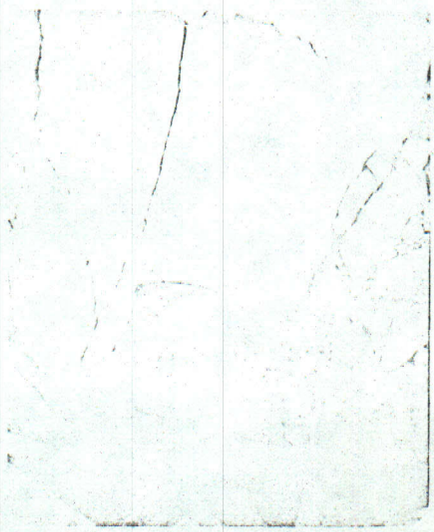

Figure 9. This is an exposure of the Nugget (?) sandstone in the quarry south of the town of Currie. There is some cross-bedding in this portion of the sandstone, but near the top of the exposed section the cross-bedding disappears.

Correlation

The Nugget (?) sandstone at Currie is lithologically similar to the Nugget in southeastern Idaho (Mansfield, 1927), the Nugget of western Wyoming, and the Nugget of northeastern Utah (Mathews, 1931). The Nugget in the Central Wasatch Mountains, which is very similar to that at Currie, has been correlated by A. A. Baker et al (1936) with the Glen Canyon group of the Colorado Plateau. They suggest the Entrada sandstone of the San Raphael group actually is an upper unit of the Nugget.

Thus, the correlation of this sandstone by paleontological evidence is impossible, although it is possible to correlate it tentatively with a large number of lithologically similar sandstone units in Idaho, Wyoming, Utah, Colorado, New Mexico, Arizona, and southern Nevada.

Age

There are no organic traces found in the Nugget (?) sandstone at Currie, but Mathews (1931) in referring to the age of similar sandstone in the Central Wasatch Mountains stated:

> One fossil a Trigonia was found in the formation and that in the sandstone near the base above the conglomerate. Most authors are agreed that the Nugget is of Jurassic age. Certainly it is not upper Middle or Upper Jurassic in Central Wasatch, consequently it must be restricted to the Lower and possibly the lower Middle Jurassic. Again a stratigraphic break at the bottom and a discordance at the top of the formation: makes one wonder if the sediments do not represent a greater time than the thickness of the strata would indicate. Reeside thinks the formation is higher in the Jurassic.

The stratigraphic evidence of the age of the Nugget sandstone regionally indicates it is later than the Upper Triassic Chinle formation and younger than the Middle to Upper Jurassic Twin Creek formation (A. A. Baker et al 1936) but because paleontologic data is absent and stratigraphic data is scanty an exact age cannot be assigned to the Nugget at Currie.

TERTIARY STRATIGRAPHY

General

There are three Tertiary (?) formations exposed at Currie, two of which lie unconformably above the Nugget (?) while the third lies unconformably upon one of the Tertiary formations.

Formations

"Pre-volcanic" sandstone

Description

This formation is composed of medium gray, medium to coarse-grained arkosic sandstone. The grains of feldspar and quartz in this sandstone are angular and loosely consolidated. It contains none of the volcanic materials that are so predominant in the later Tertiary.

This formation outcrops south and east of Currie at these two localities. The first is beneath the lava on Black Hat Hill. The second is in a gulch above the Nugget (?) sandstone east of the town of Currie. A measured section from Black Hat Hill is listed on page 44.

lie erratically on one another separated by a scour and fill surface. This formation also contains fine-grained bluish-gray mudstones similar to those described by Sharp (1939) lacustrine in origin. These were found along the flanks of the Butte.

Age

This group was dated by King (1878), who described it as filling basins and being characterized by recent genera of fresh water mollusks.

In studying the Humboldt formation west of Currie, Sharp (1939) has summarized the evidence of the age of this formation as follows:

> All the evidence indicates that the Humboldt formation was laid down in the latter part of the Miocene, with deposition possible extending into the Pliocene.

Wheeler and McNair (1950) have found lower Pliocene (?) camelids in the lakebeds of the Humboldt (?) formation north of Phalan Butte, while McDonald (1949) has substantiated the Mio-pliocene age of the restricted Humboldt formation.

Thus, there seems to be general agreement that this formation belongs in the time interval in either the upper Miocene, or lower Pliocene.

"Tuff and shard" formation

Description

This formation unconformably overlies the Chinle (?) formation at Ghosthead Hill and the Humboldt (?) formation along the north bank of Phalan Creek on the west of Phalan

Butte.

It consists of gray to chalk-white vitric tuff and shards with interfingering lenses of sand and gravel conglomerate near the top. At the base of the section, which is exposed at Ghosthead Hill, the beds are composed almost entirely of pale yellowish-brown pumice fragments.

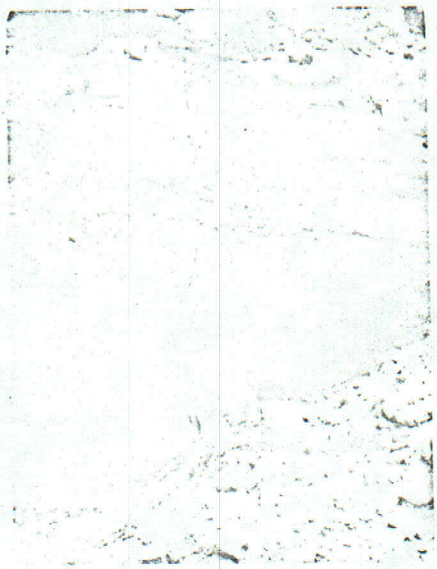

Figure 12. An exposure of the "tuff and shard" formation at Ghosthead Hill in the Currie Hills. The base is composed mainly of fragmental pumice grading upward into conglomeritic lenses of igneous rocks.

Age

Since this formation unconformably overlies the Humboldt (?) formation and conformably underlies the extrusives that cover the Currie Hills, it is post-lower Pliocene and perhaps associated with the extrusives that cover it.

"Undifferentiated" Tertiary (?) strata

In the quarry south of the town of Currie the Nugget (?) is overlain unconformably by sandy black and white layered sandstones, fresh water limes and conglomerate that may be the base of the Humboldt, but could also be the basal segment of one of the other Tertiary formations. Section 3 on page is a section of this sequence measured from the Nugget (?) to the overlying extrusives.

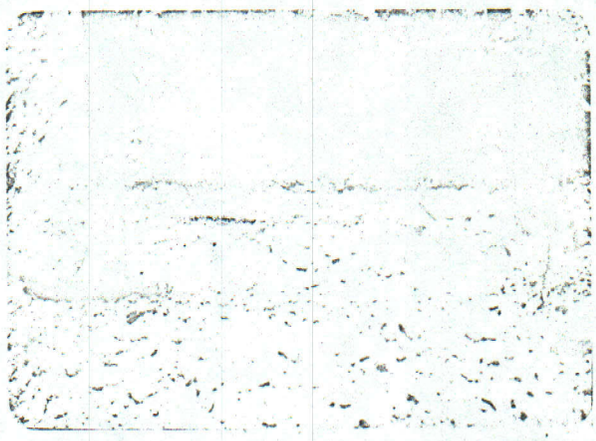

Figure 13. This is the contact between the Nugget (?) sandstone and overlying "Undifferentiated" Tertiary in the quarry south of Currie.

Nelson — Currie Area

Phosphoria ? Fm. – subdivided like Snelson did to N. into 3 members.

Dinwoody(?) Fm – named after the fm. of that name in Dinwoody Gyn., Wind River Range, Wyo. (Blackwelder, 1918).
nomenclature extended by Snelson & Nelson because of lithologic similarity to Dinwoody Fm. at Montpelier, Idaho (Newell & Kummel, 1942).

calc. sts.
sh. + lst. sts. } Montpelier

Thaynes – best exposures at Juniper Jungle & Rattler Ridges

Chinle ? Fm. – named assigned because of stratigraphic position. Lithology varies from type Chinle in northern Arizona.

Undiff. Tertiary (?) strata - O Quarry S. of Currie, Nugget Ss. unconf. overlain by sdy. blk. & wh. layered ss., f/w lsts. + cg. (section 3)

Nelson - Currie Area
Tertiary stratigraphy

"Pre-volcanic" sandstone - see section (Xerox)

m. gy., m.-c.grn. arkosic ss. Grains - angular & loosely-consolidated.
No volcanic mat'l.

Outcrops: 1) Beneath basalt on Black Hat Hill (measured section)
2) Gulch above Nugget ss. e. of Currie

Humboldt (?) formation

Composed of numerous volcanic-derived constituents + small fragments that probably were derived from pre-Tertiary lsts. & ss.

Phalen Buttes: contains gy-wh. pumicites & sdy cg.'s.
Cg's. composed of chert, lst. & qtz. pebbles + boulders intermixed w/ purplish felsite pebbles + pumicite.
Some f.grn., blu.-gy. mudstones (lacustrine?)

"Tuff and shard" Formation

unconf. overlies Humboldt? Fm. sw. of Phalen Butte.
gy. - chalk wh. vitric tuff & shards w/ intfingering lenses of sand & gravel cg. nr. t/ top.
base (exposed at Ghosthead Hill) - almost entirely pale yl.-brn. pumice frags.

Nelson- Currie Hills

"Basalt" fm. buttresses against "rhyolite" fm. on flanks of Lava Hills syncline.
May be ignimbrites

"Rhyolite" Fm.

gy. vitreous rhyolite w/ Bt. flakes.
pronounced layering
fractured phenos of Or, Ab, Q, & undeformed Bt in a vitreous groundmass.

"Basalt" fm.

Conformable w/ "tuff & shard" fm.
color: dk. red to blk. w/ pale-purple blk. rx. most common.
med. grn. vitreous basalt
Phenos. of labradorite, qtz. & chloritized biotite in a micropilitic grndmass. Some Pg zoned. Grndmass is sl. pleochroic (Bt?). Q - rounded xenocrysts.
% of Phenos. Labradorite— 60%
Q - 25%
Bt - 15%

Nelson-Currie Area- Structure

Lava Hills syncline — In block diagram shows units from "rhyolite" formation & Humboldt(?) Fm. on down folded into syncline w/ "Basalt" Fm. flat-lying across t/axis.

Midway anticline — right-separations of axis by two ↖ faults; also noted to N. by Snelson.

Says faulting contemporaneous w/ folding. But faults seem to be <u>later</u> according to his map since they cut Teb while his Teb is shown flat-lying in a diagram (fig. 16, p. 51).

GENERALIZED SECTION

AGE		NAME	COLUMNAR SECTION	THICKNESS	DESCRIPTION
					Alluvium
TERTIARY	UPPER	BASALT "fm"		50'+	Basalt
		TUFF and SHARD" fm.		50'-200'	Tuff, pumice and congl.
		HUMBOLDT? FORMATION		UNKNOWN	Sandstone, conglomeritic sandstone erratically intermixed and interbedded.
	?LOWER	"PRE-VOLCANIC" SANDSTONE		50-300'	Arkosic sandstone, congl. at base.
JURASSIC	LOWER	NUGGET? SANDSTONE		2800'+	Quartzose sandstone, fine-grained red and yellow quartzose sandstone. wh., yel., pink & red f. grn., mass. to m. bdd., in part x-bdd qtzose ss. upper part of section (near top) red.-violet, wavy, irreg-bdd. ss. w/ "augen" shaped depressions on weathered surfaces. 75-100': pale yel. ss. & pale gn. mudst. ss. contains raindrop, rill and oscillation impressions. λ = 3" Quarry NE & S of Currie. Interfingers with shale at base (s. end of Rattler Ridge)
TRIASSIC	UPPER	CHINLE? FORMATION		500'+	Shale, calcareous olive-drab and red shales and siltstones. w/ int bdd. u. f grn. ss. In the upper part interfingering with lithographic limestone.
		SHINARUMP?		0-200'+	YELLOW-BROWN SANDSTONE AND RED, BLACK AND BROWN CHERT PEBBLE CONGLOMERATE ABUNDANT FOSSIL WOOD
		TIMOTHY? SS		0-200'+	SHALE WITH GREY QUARTZOSE SS AT BASE
	LOWER	THAYNES? LS. "UPPER" MEMBER		263'-500'±	Argillaceous limestone and silstone dol. + sh., variety of pale gn., brn., yel., & gy. colors. Abund. Aviculopecten cf. A. utahensis (Meek).
		"MIDDLE" MEMBER		376'	Limestone, Grey, med.-grained ls.
		"BASAL" MEMBER		1560'	Interbedded greenish-grey calcareous shales and fine to medium-grained grey limestone. Forms Juniper, Jungle Ridge.
		DINWOODY? FORMATION		550'±	Olive-drab to greenish grey shale with Meekoceras ls near base
PERMIAN	UPPER	PHOSPHORIA? FM "UPPER" REX? CHERT MEMBER		500'	Limestone, medium-grey, medium-grained ls. abundant chert and fossils
		LOWER REX? CHERT MEMBER		1100'	Limestone, pale grey, cherty ls, interbed of red quartzite overlying a limestone sharpstone conglomerate near the base.
		SHALE M.		90'+	SHALE WITH CHERT AND OOLITIC PHOSPHATE
		KAIBAB? LS.		200'+	Limestone, pale grey with some chert

TIMOTHY? FM.
disconf. at top & bottom(?)
Shale above

Locally basal friable, m.-c. grn. quartzose ss. milky wh. qtz. grns. in yel.-brn. matrix

THAYNES? "LST."

Upper Member

Middle Member

(poorly-exposed, pale yellow brn., gn & gy calc. sh. + sts. intbdd. w/ lst

Basal Member

(ol. gy. sdy. lst. w/ Terebratula thaynesiana(?), et al.

(dk. brn. sdy. lsts.

(mass. lst.

Dinwoody(?) fm.

Meekoceras limestone 10-50' thick; dk. gy.; m. grn., m. bdd, Fe-impreg., fossil gyn. 50' above base. Cottonwood Gyn. best collecting locality.

m? Slight angular unconf?

UPPER REX CHERT(?) MEMBER

chert - m.-dk. brn. productids & spirifers abundant.

LOWER REX CHERT(?) MEMBER

~900' (pale gy. & buff, m.-f. grn. lsts. w/ brn. yellow to milk-wh. chert nodules & lenses, few fossils

(very resistant, dull red med. grn., well-cemented qtz. ridge-former.

75-100' - pale gy., f. grn., mass. lst. w/ angill. lst. intbds.

50' - pale gy., calcified sharpstone lst. pbbl. cg.

50' - pale gy., f. to m. grn., mass. lst.

SHEEPCAMP CREEK (Section (1))

At the south end of Walkover Ridge in the bottom of Sheepcamp Creek a section is exposed that consists of representatives from the Lower Rex Chert (?) member of the Phosphoria (?) formation through to the lower portion of the Thaynes (?) limestone. It consists mainly of medium gray limestones and greenish-gray shales in the upper part and gray and yellowish brown limestones and cherts in the lower part.

Measured section:

THAYNES (?) LIMESTONE
(Basal member)

		Thickness in feet
1.	Limestone medium gray, medium to coarse grained wavy medium-bedded fossiliferous limestone. Cleavage and white calcite veins parallel to bedding.	11
2.	Covered (float of greenish-gray calcareous shale.)	4
3.	Limestone as (1).	12
x	Covered (probably similar to 2).	105
4.	Limestone, medium gray-medium to coarse-grained, massive fossiliferous limestone.	12
x	Covered (probably similar to 2).	51
5.	Limestone, medium gray-medium to coarse-grained massive limestone.	15
x	Covered (probably like 2).	45
6.	Limestone like (1).	18

		Thickness in feet
DINWOODY (?) FORMATION		
X	Covered (similar to 2).	550
DISCONFORMITY (?)		
PHOSPHORIA (?) FORMATION (Upper Rex Chert (?) member)		
7.	Limestone medium gray, medium to fine-grained limestone, remains fresh on exposed surfaces.	66
8.	Limestone and chert - pale yellowish gray fine to medium grained medium-bedded limestone with interbeds and nodules of creamy chert that has weathered to a dark brown. There are some productids.	66
9.	Limestone and chert (similar to 8 only), numerous productids and spiriferinas. The following species: Productus geniculatus (?) Productus (?) semi reticulites Composita subtilita Spiriferina pulchras, Meek	34
10.	Limestone - yellowish-brown, coarse - grained, massive fossiliferous limestone that weathers to a very pale gray.	106
11.	Limestone and chert, medium gray, medium grained extremely fossiliferous limestone with interbeds of light brown chert.	53
x	Covered.	34
12.	Limestone and chert (similar to 11 only less fossiliferous).	43
x	Covered.	33
PHOSPHORIA (?) FORMATION (Lower Rex Chert (?) member)		
13.	Limestone and chert, pale gray, fine-grained medium-bedded limestone with nodules of creamy-white chert that has weathered to a light brown.	18
TOTAL MEASURED SECTION		1275

BLACK CAP HILL (Section 2)

In the Currie Hills, southeast of the town of Currie, is an exposed section of sandstones between the Chinle (?) formation and the extrusives. These are mainly coarse-grained graywacke sandstones that do not contain any volcanic constituents.

Measured section:

PRE-VOLCANIC SANDSTONE		Thickness in feet
1.	Sandstone, pale brownish - gray, coarse-grained massive gray wacke sandstone extremely friable.	7
2.	Sandstone light gray medium-grained, massive graywacke sandstone.	5
x	Covered.	10
3.	Sandstone pale brown, medium-grained, medium-bedded graywacke sandstone.	2
4.	Sandstone medium gray, medium-grained, medium-bedded graywacke sandstone. Some of the interbeds contain a high percentage of quartz.	4
TOTAL MEASURED SECTION		28

UNCONFORMITY

CHINLE (?) FORMATION

CURRIE HILLS (Section 3)

Above a quarry in the Nugget (?) sandstone, south of the town of Currie, is an exposed Tertiary section of unknown affinity. This section consists of a basal conglomerate overlain by fresh water (?) limes and stratified sandstones.

This may possibly be the base of the Humboldt formation.

Measured section:

EXTRUSIVE

UNCONFORMITY

TERTIARY FORMATION OF UNKNOWN AFFINITY		Thickness in feet
1.	Sandstone a medium-grained, medium bedded rock the larger beds are very dark gray, while the grey white beds are smaller, less than mm. Crumbles easily in the hand.	21
2.	Sandstone, fine-grained semi-massive light gray sandstone.	6
x.	Covered - lag indicates probably same as unit #3, but becoming browner near the base.	45
3.	Sandstone, similar to 3.	3
4.	Limestone, very fine grained purplish gray limestone that appears brown on scratched surfaces.	7
5.	Sandstone and conglomerate: a medium grained massive sandstone that grades upward into a conglomeritic sandstone, with Greenstone pebbles near the top and red weathered pebbles near the middle of the unit.	16
TOTAL MEASURED SECTION		98

UNCONFORMITY

NUGGET (?) SANDSTONE

GHOSTHEAD HILL (Section 4)

In the Currie Hills, east of Currie is exposed a section of pumaceous - vitric tuff and sandy conglomerate lithologically identical to the formation overlying the Humboldt (?) formation west of Phalan Butte.

An incomplete section 67 feet thick was measured across the face of Ghosthead Hill in section 19 T 28 N., R 65 E. This segment unconformably underlies the late Tertiary extrusives.

Measured section:

	EXTRUSIVES CONFORMABLY OVERLYING	Thickness in feet
1.	Conglomerate - red and purple pebbles from rock similar to extrusives of the Currie Hills with vitric tuff.	6
x.	Covered	6
2.	Conglomerate as (1)	3
3.	Sandstone and conglomerate interbedded, No. 2 is interbedded with lenses of dark gray, coarse-grained sandstone. These lenses of sandstone are 1 to 6 inches thick.	5
x	Covered.	8
4.	Conglomeratic sandstone, pebbles of white pumice in a gray sandstone matrix.	21
5.	Sandstone, gray medium-grained, medium bedded sandstone.	1
6.	Conglomeritic sandstone same as (4).	8
7.	Conglomeritic sandstone, gray, coarse-bedded pumaceous sandstone and conglomerate.	9
	TOTAL MEASURED SECTION	66

UNCONFORMITY

CHINLE (?) FORMATION

GEOLOGIC MAP OF THE CURRIE REGION NORTHEASTERN NEVADA

Geology by R.B. Nelson 1964

AREA NOT MAPPED

SCALE IN MILES

0 1 2 3 4 5

114°50' 114°45' 114°40' 40°25' 40°20' 40°15'

STEPTOE VALLEY

U.S. Highway 93

CURRIE

LAVA HILLS

HALAN BUTTE

HARMONY HILL

CURRIE HILLS

WALKOVER RIDGE

SHEEPROCK RIDGE

DOLLY VARDEN ANTICLINE

SHEEPCAMP CREEK

SHEEPROCK SYNCLINE

RATTLER RIDGE

HORSE CREEK

LAVA HILLS SYNCLINE

COTTONWOOD CANYON

NORTHERN RAILROAD

NEVADA ANTICLINE

MIDWAY ANTICLINE

GRAVEL CAP RIDGE

MIDWAY GULLY

ROCK CREEK

MEDICAL MINE HILL

HOSTHEAD HILL

BLACK CAP HILL

Qal ALLUVIUM

Tts "TUFF AND SHARD" FORMATION

Tu UNDIFFERENTIATED

Th HUMBOLDT(?) FORMATION

Tpv "PRE-VOLCANIC" FORMATION

QUATERNARY

TERTIARY

Jn NUGGET(?) SANDSTONE

Jc CHINLE(?) FORMATION

JURASSIC(?)

Ts SHINARUMP(?) CONGLOMERATE

Tr TIMOTHY(?) SANDSTONE

Thu "Upper" Member

Thm "Middle" Member

Thl "Basal" Member

THAYNES(?) LIMESTONE

Thd DINWOODY(?) FORMATION

TRIASSIC

Pu UNDIFFERENTIATED

Pr "Upper" Rex Chert Member

Pr Lower Rex Chert (?) Member

Pr Black Chert and Phosphate Member

PHOSPHORIA(?) FORMATION

Pk KAIBAB(?) LIMESTONE

PERMIAN

IGNEOUS ROCKS

Tb "BASALT" FORMATION

Ter "RHYOLITE" FORMATION

TERTIARY

SYMBOLS

CONTACTS

KNOWN

CONCEALED

INFERRED

FAULTS

KNOWN

INFERRED

ATTITUDES

NORMAL

OVERTURNED

AXIS OF ANTICLINE (plunge indicated)

AXIS OF SYNCLINE (plunge indicated)

LINE OF MEASURED SECTION

APPROXIMATE MEAN DECLINATION, 1953

TRUE NORTH

MAGNETIC NORTH

17½°

550-Tts

00500133

AREA NOT MAPPED

Thaynes Lowland syncline
Caprock Ridge Anticline

Sec. 1

SHEEPCAMP CREEK

PHALAN PEAK BUTTE

PHALAN CREEK

HORSE CREEK

LAVA HILLS

CURRIE HILLS

CURRIE

GOTTONWOOD CANYON

STEPTOE VALLEY

U.S. Highway 93

NORTHERN NEVADA RAILROAD

SHEEP ROCK RIDGE

BATTLER RIDGE

HALKOVA RIDGE

HARDEN ANTICLINE

DOLLY VARDEN SYNCLINE

HARMONY HILL

GRAVEL CAP RIDGE

MERCURY GULCH

MEDICAL PINE HILL

BLACK CAP HILL

Shinarump(?) Cg

Tuff bx + tuff ss

Section 4

Chinle underlies bx + ss

1st ? Probably upper Thaynes

Section 3

Section 2

Wo Jm Tab tuff ss, underlies Tab

AREA NOT MAPPED

40°30'

40°25'

40°20'

40°15'

114°50'

114°45'

114°40'

Base compiled from aerial photographs

Geology by R.B. Nelson

EXPLANATION

SEDIMENTARY ROCKS

QUATERNARY

Qal — ALLUVIUM

TERTIARY

Tts — "TUFF AND SHARD" FORMATION

Tu — UNDIFFERENTIATED

Th — HUMBOLDT(?) FORMATION

Tpv — "PRE-VOLCANIC" FORMATION

JURASSIC(?)

Jn — NUGGET(?) SANDSTONE

Jc — CHINLE(?) FORMATION

Js — SHINARUMP(?) CONGLOMERATE

Jt — TWOTHY(?) SANDSTONE

TRIASSIC

THAYNES(?) LIMESTONE

Thu — "Upper" Member

Thm — "Middle" Member

Thl — "Basal" Member

Td — Dinwoody(?) Formation

PERMIAN

PHOSPHORIA(?) FORMATION

Ppu — Upper Rex Chert Member

Ppm — Lower Rex Chert(?) Member

Pu — UNDIFFERENTIATED

Ppl — Black Chert and Phosphate Member

Pk — KAIBAB(?) LIMESTONE

IGNEOUS ROCKS

TERTIARY

Tab — "BASALT" FORMATION

Tar — "RHYOLITE" FORMATION

SYMBOLS

CONTACTS
- KNOWN
- CONCEALED
- INFERRED

FAULTS
- KNOWN
- inferred

AXIS OF ANTICLINE (plunge indicated)

AXIS OF SYNCLINE (plunge indicated)

ATTITUDES
- NORMAL
- OVERTURNED

TRUE NORTH
MAGNETIC NORTH
17½°

measured sections 530 - Th 8911

GEOLOGIC MAP OF THE CURRIE REGION NORTHEASTERN NEVADA

Nelson, M.S.

1 ½ 0 1 2 3 4 5

SCALE IN MILES

00500133