

## Diamond Peak Formation

### Diamond Peak Quartzite<sup>1</sup>

#### Diamond Peak Series or Beds

Upper Mississippian: Northern Nevada and eastern California.

Original reference: Arnold Hague, 1882, U.S. Geol. Survey 2d Ann. Rept., p. 28; 1883, U.S. Geol. Survey 3d Ann. Rept., p. 253, 268.

C. W. Merriam, 1940, Geol. Soc. America Spec. Paper 25, p. 8 (table 1), 43-46. Diamond Peak series used to apply to post-Devils Gate sedimentary rocks in Roberts Mountains region. Used in preference to extending Hague's White Pine shale and Diamond Peak quartzite into area. Further work in post-Devils Gate deposits may lead to redefinition of Diamond Peak formation and necessitate revised terminology for beds in Devils Gate area.

C. W. Merriam and C. A. Anderson, 1942, Geol. Soc. America Bull., v. 53, no. 12, pt. 1, p. 1690-1691. Term Diamond Peak beds used to include not only original Diamond Peak quartzite of Diamond Peak (Eureka district) but also underlying black shales and sandy interbeds referred by Hague (1892, U.S. Geol. Survey Mon. 20) to White Pine shale.

"Diamond Peak quartzite" included large percentage of conglomerate at Diamond Peak; hence, lithologic term is misleading. Because stratigraphic relations of true White Pine formation in White Pine district are not well understood, it appears undesirable to use this term for dark shale in Eureka and Roberts Mountains area.

T. B. Nolan, C. W. Merriam, and J. S. Williams, 1956, U.S. Geol. Survey Prof. Paper 276, p. 57, 60-61. Proposed to use term Diamond Peak formation, in Eureka district, for the coarse clastic part of upper Mississippian sequence where it can be satisfactorily separated from underlying black shales and to adopt Spencer's name of Chainman shale for lower unit where it can be mapped separately. Hague characterized Diamond Peak as quartzite, but even at this type locality, unit contains large proportion of shale, conglomerate, and limestone; hence, term formation seems more appropriate. Formation mapped separately only south of Eureka, elsewhere equivalent beds are included in Chainman and Diamond Peak undifferentiated sequence. Thickness as much as 420 feet. Underlies Ely limestone. Discussion of problems of nomenclature and correlation of upper Mississippian sedimentary rocks in area.

Walter Sadlick, 1960, Intermountain Assoc. Petroleum Geologists 11th Ann. Field Conf., p. 84. Discussion of aspects of Chainman stratigraphy. The Chainman is recognized as valid stratigraphic unit. Diamond Peak and Scotty Wash are referred to as facies within the Chainman. Term Illipah suppressed as synonymous with the Diamond Peak. Named for exposures on flanks of Diamond Peak, Eureka district, Nevada.

## Diamond Peak quartzite.

Carboniferous (upper Mississippian) : Northern Nevada and Inyo County, California.

A. Hague, 1883 (U. S. G. S. 3d Ann. Rept., pp. 253, 268). *Diamond Peak qtzite*.— Massive, vitreous *qtzite* of grayish brown color, passing near summit into brown and green shales and schists, and with firmly cemented cgl. at base. A narrow belt of blue ls. about 500 ft. above base contains Carbf. fossils. Thickness 3,000 ft. Overlies White Pine sh. and is overlain by Lower Coal Measures. Named for exposures on flanks of Diamond Peak, Eureka dist., Nev.

According to G. H. Girty the fossils in the ls. 500 ft. above base of Diamond Peak *qtzite* are upper Miss. and rest of fm. is not fossiliferous. He would therefore tentatively assign whole fm. to upper Miss.

The Diamond Peak *qtzite*, with a thickness of 3,500 ft., has been identified by E. Kirk (U. S. G. S. P. P. 110, 1918) in Inyo Range, Calif., where it is separated from underlying White Pine sh. by 500 to 1,000 ft. of ls. carrying Penn. fossils.

Diamond Peak Fm.

1961

\*Brew, D. A., Relation of Chainman Sh. to Bold  
Bluff thrust fault, Southern Diamond Mountains,  
Eureka and White Pine Counties, Nevada: USGS  
Prof. Paper 424-C, Paper 191 (200)  
qB

Miss.

Eureka and White  
Pine Counties  
Nevada

Diamond Peak fm.

1961

\*Lehner, R. E., and others, Preliminary geologic map of Eureka County, Nevada: USGS Mineral Inv. Field Studies Map, MF-178  
expl.

Nothing new.

Miss.

Eureka Co.,  
Nevada

\*Robinson, G. B., Jr., Stratigraphy and Leonardian fusulinid paleontology in central Pequop Mountains, Elko County, Nevada: Brigham Young Univ. Geol. Studies, v. 8, p. 27-100

G(273)

Discusses included portion sometimes called Illipah

B76rs.

Chesterian  
Early Pennsylvanian to  
Late Miss.

E. Nevada

Diamond Peak Fm.

1961

\*Brew, D. A., Lithologic character of the Diamond Peak Formation (Mississippian) at the type locality, Eureka and White Pine Counties, Nevada: USGS prof. Paper 424-C, Paper 190. (200)

qB

Divided into 8 units, A-H, and discussed  
Overlies Chainman Sh.  
Underlies Ely Ls.

3525'

Mississippian

Eureka & White Pine Cos.  
Nevada

Diamond Peak

1962

Bissell, H. J., Pennsylvanian and Permian rocks of  
Cordilleran area, in Pennsylvanian System in the  
United States, Symposium: AAPG 336(200)  
Correl. Chart & Sections-new name Am3p

p. 230

questions use of Tonka Fm. which is the better  
known Diamond Peak and part of Illipah

Springeran  
Penn.

Cordilleran area  
Western U. S.

Diamond Peak Quartzite

1962

Langenheim, R. L., Jr., Nomenclature of the Late Mississippian White Pine Shale and associated rocks in Nevada: Illinois State Acad. Sci. Trans., v. 55, no. 2 Fig. 2, 3 (new name) S(253)  
Acl

p. 143

applied to appropriate, separate (Eureka District) coarse-grained rock body overlying White Pine Gp. (rank raised) (see Scotty Wash Quartzite)

Upper Mississippian

Eastern & Southern Nevada

Diamond Peak fm.

1963

\*Merriam, C. W., Paleozoic rocks of Antelope  
Valley, Eureka and Nye Counties, Nevada: USGS  
Prof. Paper 423

p. 57

Mississippian

Central Nevada

Diamond Peak Fm.

1963

Larson, E. R., and Riva, J. F., Preliminary geologic map of the Diamond Springs Quadrangle, Nevada: Nevada Bur. Mines Map 20 (Scale 1:62,500)  
M(275)

Col. 3

Separated provisionally from Chainman Shale.

Upper Miss. and upper  
portion prob. Lower Penn.

Cent. Nevada

Diamond Peak Fms.

1963

Blue, D. M., Stratigraphy of the Pilot Mountains,  
Box Elder and Tooele Counties, Utah, and Elko  
County, Nevada (abs.): GSA Spec. Paper 73

p. 28

G(200)

G29sp

Morrowan(?) - Chesterian -  
Meramecian  
Penn. - Miss.

Pilot Mtns.  
Utah & Nevada

Diamond Peak Quartzite

1964

Langenheim, R. L., Jr., Nomenclature of the Upper Miss.  
White Pine Shale and associated rocks in Nevada: GSA Spec.  
Paper 76 (abs.)

p. 209

Nev.

Diamond Pk mbi  
Chairman

Arnold + Sallick 1962

<sup>Univ</sup>  
Mich Mus. Paleontol

v. 17, no 11, 242 -

Diamond Peak Fm. (geog. restr.)

1966

Sadlick, Walter, Biostratigraphy of the Chainman Formation (Carboniferous), Eastern Nevada and Western Utah: Dissert. Abs., sec. B, v. 26, no. 10, Apr.

p. 5978

043

qD63

type area only

M. Carbon.

E. Nev.-  
W. Utah

Diamond Peak Fm.

1967

Bissell, H. J., Pennsylvanian and Permian Basins  
in Northwestern Utah, Northeastern Nevada, and  
South-Central Idaho: Discussion: AAPG Bull.,  
v. 51, no. 5, May.

p. 791-802

G(200)  
Am3

799

Penn-Perm.

NW. Utah  
NE. Nev.  
SC. Idaho

Diamond Peak Fm.

1967

\* Willden, Ronald, Thomas, H.H., and \*Stern, T. W.,  
Oligocene or Younger Thrust Faulting in the Ruby  
Mountains, Northeastern Nevada: GSA Bull., v. 78,  
no. 11, Nov.

p. 1345-58

G(200)  
G29

1348,  
1350 - age, 1354

U. Miss.

NE. Nev.

Diamond Peak Fm.

1967

Sides, J. W., The Geology of the Central Butte  
Mountains, White Pine County, Nevada: Dissert. Abs.,  
Sec. B, V. 27, No. 7, Jan. p. 2418

043  
a D 63

Carb.

E. Nevada

Diamond Peak Fm.

1967

Roberts, R. J., and others, Geology and Mineral Resources of Eureka County, Nevada: Nevada. Bur. Mines, Bull. 64.

p. 36-38

S(275)

N5

text & plates

U. Miss.(?)-Penn.(?)

EC. Nevada

Diamond Peak (Tonka) [Fm.]

1968

Schleh, E. E., Stratigraphic Evidence for Late  
Mississippian Instability in Western United States:  
AAPG, Bull., v. 52, no. 5, May.

p. 767-781

G(200)  
Am3

Meramec-Chester  
U. Miss.

Nev.  
W. United States

Diamond Peak Fm. (stratig. extend.)

1968

Smith, J. F. Jr. and Ketner, K. B., Devonian and Mississippian Rocks and the Date of the Roberts Mountains Thrust in the Carlin-Pinon Range Area, Nevada: USGS Bull. 1251-I

p. 1-18

p. 3 (fig. 2)

(200)

(p. 12)

E

✓68 ("Age changed from Miss. to Late Miss. and Early Penn. in Carlin-P.R. area.")  
incl. Tonka Fm. (aband.)

Low. Miss.-Low. Penn.

NE. Nevada

(So indicated on p. 12 of pub; but see B-card, note # 7.)

Diamond Peak Fm.

1968  
pub.

Armstrong, R. L., Pre-Tertiary Stratigraphy of the  
Albion Range, Southern Idaho: Abs. for 1966, GSA  
Spec. Papers 101.

p. 384-5

G(200)  
G29sp

Miss.  
Paleoz.

S. Idaho

Diamond Peak Fm.

1968  
pub.

\*Brew, D. A., Diamond Peak-Chainman Relations at  
Type Locality of the Diamond Peak Formation,  
Eureka Quadrangle, Nevada: in Abs. for 1966, GSA  
Spec. Papers 101.

p. 388-9

G(200)  
G29sp

U. Miss.

Nev.

Diamond Peak congl. & ss.

1968

Moore, E. M., Tertiary Tectonics of the White  
Pine-Grant Range Region, East-Central Nevada,  
and some Regional Implications: GSA Bull., v. 79,  
no. 12, Dec.

p. 1703-26, pl. 1 G(200)  
1708 G29

... lenses in Chainman Fm.

Miss.

EC. Nev.

Diamond Peak Fm.

1968

Armstrong, R. L., The Cordilleran Miogeosyncline  
in Nevada and Utah: Utah. Geol. & Mineral. Survey,  
Bull. 78, Feb.

p. 1-58

(273)

B

27

Penn.

EC. Nev. & ~~Utah~~

Diamond Peak Qtzite.

1969

Moore, D. M. & Henderson, D. M., Mineralogic Strati-  
graphic Marker in White Pine Group, Eastern Nevada:  
AAPG Bull., v. 53, no. 3, Mar.

p. 683 - 87

684

G(200)

Am3

U. Miss.

E. Nev.

Diamond Peak Fm.

1970

Riva, John, Thrusted Paleozoic Rocks in the  
Northern and Central HD Range, Northeastern Nevada:

GSA Bull., v. 81, no. 9, Sept.

G(200)

p. 2689-2716

G29

foldouts opp. 2692

2693 (T. 1), 2695 (Fig. 6)

2694

Miss.

NE. Nev.

Diamond Peak Fm.

1970

Hyde, J. H. and Hutterer, G. W., Geology of Central  
Grant Range, Nevada: AAPG Bull., v. 54, no. 3, Mar.  
p. 503-521

G(200)

Am3

513

with Chainman Fm.

U. Miss.

EC. Nev.

Diamond Peak Fm.

1970

Thorman, C.H., Metamorphosed & Nonmetamorphosed  
Paleozoic Rocks in the Wood Hills & Pequop  
Mountains, Northeast Nevada: GSA Bull., v.81,  
no.8, Aug.

p. 2417-2448

2425

G(200)  
G29

Low Chester- U. Morrowan  
Miss-Penn.

NE. Nev.

Diamond Peak Fm.

1970

Ketner, K. B., Geology and Mineral Potential of  
the Adobe Range, Elko Hills and Adjacent Areas,  
Elko County, Nevada: USGS PP 700-B. (200)  
p. 105-108. qB

Miss.-Penn.

NE. Nev.

Diamond Peak Fm.

1970

Tschanz, C. M. and Pampeyan, E. H., Geology and  
Mineral Deposits of Lincoln County, Nevada:  
Nevada. Bur. Mines, Bull. 73. p. 1-187 S(275)  
N5

53-corr. with Scotty Wash Qtzite.

U. Miss-Low. Penn.

SE. Nev.

Diamond Peak Fm.

1971

Nolan, T.B., Merriam, C.W., and Brew, D.A.,  
Geologic Map of the Eureka Quadrangle, Eureka and  
White Pine Counties, Nevada: USGS Misc. Geol. Inv.  
Map I-612.

(200)

A38mg

U. Miss.

EC. Nev.

Diamond Peak Fm. (3-5,000 ft.)

1972

Oversby, Brian, Thrust Sequences in the Windermere Hills  
Northeastern Elko County, Nevada: GSA Bull., v. 83,  
no. 9, Sept.

G(200)

G29

p. 2677-88

2679 (Fig. 3)

2680

Black Mt. Sequence

Penn. (?)

NE. Nev.

Diamond Peak Fm. (4,700 ft.)

1972

Smith, J. F. Jr. & Ketner, K. B., Generalized Geologic Map of the Carlin, Dixie Flats, Pine Valley & Robinson Mountain Quadrangles, Elko and Eureka Counties, Nevada: USGS Misc. Field Stud. Map MF-481.

Low. & U. Penn. & Low. Miss.

NE. Nev.

Diamond Peak Fm. (950')

1972

Mount, J. D., Late Paleozoic Biostratigraphy of the  
Pancake Range, Nye County, Nevada: S. Calif.  
Paleont. Soc., Spec. Pub. #1, Dec.

p. 1-80

G(276)

qSo88sp

64-74 - meas. sec.

6-8, 69

detailed study at type loc. by Brew, '71-estab. U. &  
Low. contacts

U. Miss.

EC. NV

Diamond Peak Fm. (assoc. with new name)

1973

Oversby, B., New Mississippian Formation in North-  
eastern Nevada & Its Possible Significance: AAPG  
Bull., v. 57, #9, Sept. p. 1779-83

G(200)

Am3

over: Tripon Pass Ls. (new, f.p.)

Miss.

Windermere Hills,  
NE. NV

Diamond Peak Fm.

1974

Nolan, T. B., Stratigraphic Evidence on the Age of the Roberts Mountains Thrust, Eureka & White Pine Counties, Nevada: USGS J Research, v. 2, #4, July-Aug.  
p. 411-416

411

U. Miss.

C. NV

Diamond Peak Fm. (age ext.)

1975

Smith, J. F. Jr. & Ketner, K. B., Stratigraphy of  
Paleozoic Rocks in the Carlin-Pinon Range Area,

Nevada; USGS PP 867-A,

(200)

p. 1-87

qB

2

40-51 (meas. sec.)

50-age ext. to Low. Perm.

cgl. & ss.

combined w/Chainman Sh. to form sequence of

6-7,000'

Low. & U. Miss. & Low. Penn.

NY

Diamond Peak Fm. (366 m)

1975

Marcantel, J., Late Pennsylvanian and Early Permian  
Sedimentation in northeast Nevada: AAPG B. v. 59,  
no. 11 (pt. 1 of 2) Nov.

G(200)

p. 2079-2098

Am3

2081 (F. 2)

2080...of Nolan et al, '56

variegated cgl., brown qtz., gray ls.

Miss. to Penn. (Morrow)

ne. NY

Diamond Peak Fm. (max. 2500';)  
(White Pine Gp)

1976

\*Hose, R. K., Blake, M. C. Jr. (pt. I); Smith, R. M.  
(pt. II), Geology (pt. I) and Mineral Resources (pt. II)  
of White Pine County, Nevada: NV Bur. Mines + Geol.,  
B. 85. S(275)  
p.1-105, pl 1 in pocket N5

13...unit is locally in W.P. Gp in n. White Pine Range  
over: Chainman Sh, White Pine Gp(Low. Miss.)  
Miss.

ec. NV

Diamond Peak Fm

1978

Stewart, J. H. and Carlson, J. E., Geologic Map of Nevada: Prepared by USGS with the Nevada Bureau of Mines and Geology (scale: 1:500,000) [most names are grouped in generalized age categories]

M(275)2  
1978s

Dev-Miss

NV

Diamond Peak Formation (geographic extension) 1979

Moore, W. J., and Sorensen, M. L., 1979, Geologic map of the Tooele 1° by 2° Quadrangle, Utah: U.S. Geological Survey Miscellaneous Investigations Series Map I-1132.

M(273)<sup>2</sup>

T617m

Geographically extended from Nevada into: northwestern Utah; former usage remains unchanged in Nevada.

Low. Miss. to Low. Penn. (varies locally) nw. UT

Diamond Peak Fm (age data)

1985

\*Miller, D.M., and \*Schneyer, J.D., Geologic map of the  
Tecoma Quadrangle, Box Elder County, Utah and Elko  
County, Nevada: UT Geol and Mineral Survey, Dept Nat  
Resources, Map 77 (text only) (273)  
p. 1-8 M322

4..mapped w/ Chainman Sh (Miss); see also map:  
paleontological evidence for Early Penn age M(273)2  
(other workers) of upper Diamond Peak Fm is T227m  
lacking..thus considered entirely Miss in this rept;  
combined units consist of qtz w/ minor sh, sts, and cgl;  
form slopes, ledges, cliffs

Miss

Pilot Range  
nw UT, ne NV