60002311

Mining District File Summary Sheet

DISTRICT	Mountain City
DIST_NO	3260
COUNTY If different from written on document	Elko
TITLE If not obvious	Vertebrates, Mountain City - Owyhee
AUTHOR	Coats, R; Stirton, R; Axelrod, D; Lance, J; Lewis E; Repenning, C
DATE OF DOC(S)	1958 - 1964
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Mountain City 15'
P_M_C_NAME (mine, claim & company names)	
COMMODITY If not obvious	
NOTES	Correspondence about fossils; handwritten notes; Coats donation 11p.

Keep docs at about 250 pages if no oversized maps attached (for every 1 oversized page (>11x17) with text reduce the amount of pages by ~25)

	Initials	Date
SS:	DD	12/12/08
DB:		
SCANNED:	MT	12.23.09

Revised: 1/22/08

Vertebrates
Fig. surface

(000 231) 3260

FOSSIL MAMMAL MATERIALS

collected by

Dr. Robert Coats
USGS

Owyhee Project, Nevada

57NC55 - Mountain City, Station 40 - Merycoidodont - skull fragment
associated? limb bone fragments

57NC56 - Mountain City, Station 41 - Merycoidodont - astragalus fragment $C^{\underline{\cdot}}$, $I^{\underline{\cdot}}$
limb bone fragments

Paleomerycidae - upper molar

cf. Nothocyon - $RM^{\underline{1}}$

57NC57 - Mountain City, Station 42 - Rhino - ulna

57NC58 - Mountain City, Station? - Merycoidodont - phalanx, MC
sta. 43

57NC59 - Mountain City, Station? - Rhino cf. Diceratherium, upper cheek teeth
sta. 44 fragments

Proboscidea - mastodont tooth fragment

Merycoidodont - cf. Ticholeptus - $RP_{\underline{4}}$

Age: middle Miocene

UNIVERSITY OF CALIFORNIA

MUSEUM OF PALEONTOLOGY
BERKELEY 4, CALIFORNIA

February 1, 1960

Dr. Robert Coats
U. S. Geological Survey
Menlo Park, California

59NC1

Dear Bob:

The fragmentary specimens that you sent to me are interesting in that they tend to support an early Miocene age for the bed from which they came. They could be a little older or a little younger, but certainly not much. This, as I recall, agrees with the determination of specimens I made for you some time ago from that area. I note the following in your samples:

Merycoidodontidae

Astragulus; approximal end of radius; distal end of radius-ulna, etc.

Artiodactyla?

This heading has reference to the end of a peculiar caniniform tooth. Ordinarily one might think it was a carnivore of some sort, but I doubt this. It is possible that it is the tip of the upper canine of an anthrocothere. The genus Arratotherium has a tooth much like this, but I cannot be at all certain this belongs in that genus

Rhinocerotidae

?Diceratherium. This is a lower premolar, probably a milk tooth ($D.P_3$). These rhinoceroses were common in the early Miocene, but for the most part gave way to the more advanced forms in the middle Miocene.

I hope that these comments will be of some interest to you.

With kindest regards,

Sincerely yours,

Stirt

R. A. Stirton

RAS:MP

cc: Donald E. Savage

April 26

Dear Bob,

Can you supply me with the most recent information that you have as to the composition and age of the Kissi Ranch fauna? Is it Oligocene, or Miocene?, and what is in it???

Thanks,

Dan

Daniel I. Axelrod

Earl Barstovian = Mascall fauna
early late Miocene
Menychippus secursus
Monosaulax sp.
~~rhino~~
other things not diagnostic
OAK

THE UNIVERSITY OF ARIZONA

TUCSON

COLLEGE OF MINES

DEPARTMENT OF GEOLOGY

June 19, 1963

Dr. Robert Coats
U. S. Geological Survey
345 Middlefield Road
Menlo Park, California

Dear Bob:

Sorry for the delay in sending you the information I have on the Rizzi Ranch specimens. I do not have any of the regular Survey sheets for reporting fossils, and can't find one just now to copy. If you need it, I can rig one up for you later. A few of the fragmentary bones could probably be identified in a rough way, but I saw nothing that would add any refinement to an age assignment, so I have concentrated on the beaver jaw fragment and on the horse teeth.

The beaver jaw seems to represent Monosaulax. I am not sure that a guess as to the species would be much help. Monosaulax is considered to be a guide fossil to Barstovian, so this would put us in the upper Miocene. The specimen is incomplete, consisting of a fragment of the left mandible, with P_4 broken off at the roots, the antero-internal corner of of M_1 broken off, all of M_2 but the anter-internal part broken, and all of M_3 missing. More complete material from this locality would be desirable.

The horse teeth, from your localities 62 NC 118 and 149 are similar enough so that I think that the 2 teeth from each locality belong to the same type of animal. The two teeth from 62 NC 118 are in good shape, and one is unworn and one is only slightly worn. The horse represented is Merychippus, which ranges from about the beginning of middle Miocene into early Pliocene, or Hemingfordian, Barstovian, and early Clarendonian. The species represented is moderately primitive, but more advanced than at least some of the Hemingfordian species. I need more comparative material than I have available before I would want to try to assign it to a species, and I would still hesitate even then to make an assignment with only four teeth. However, I tentatively consider the horse to be similar to Merychippus seversus. This is known from the Mascall of Oregon, which Downs considers to be very early Barstovian. The Rizzi Ranch horse does not appear to be as advanced as the forms from Tonopah or Barstow, but we must remember that the Merychippus that survived into Clarendonian time at Big Springs Canyon, South Dakota, was a relatively primitive form.

In summary, the beaver and horse together, assuming that they are from beds approximately correlative, suggest an early Barstovian age. A slightly younger age is not precluded, but a slightly older age is more likely than a younger one, particularly in view of age estimates that have been made earlier on the fragmentary rhino and merycoidodont material, which I have not seen.

I hope that this will be of some help. I will continue to work away on the material, but don't hope to get much more out of what material I have. I will be most interested in any results from the plant remains and geochemical dating. The Rizzi Ranch is, I think, a little older than the tuffs down around Nannies Peak, but probably not much.

Let me know if there is anything else that I can do at the moment on any of this material. I am tied up this summer because of some serious illness in my family, and couldn't get away for any field work even if there were funds available, except possibly for a week or so in August. I believe that without any doubt we could get some good datable material from any of the several localites you have collected at by a little digging. Possibly things will work out so that either I or Dick Tedford could work on the area during the summer of 1964. We could also get good material from the Nannies Peak area, and also from some of those north of Wells.

Sincerely yours,

John

John F. Lance

THE UNIVERSITY OF ARIZONA
TUCSON

COLLEGE OF MINES
DEPARTMENT OF GEOLOGY

May 26, 1963

Dr. Robert F. Coats
U.S.G.S.
Menlo Park, California

Dear Bob:

Sorry I haven't sent you more dope on Rossi (Rizzi) Ranch. I have been trying to get a chance to make another check on the bear & horse teeth & get you that fill, & will spend some time with them this coming week & give you a formal, but cagily worded statement. It is going to come out about Barstovian, or late Miocene.

You know the sequence of sediments & tuff on the road just north of Vanmier Peak? This stuff looks as if it should be younger than Rossi (Rizzi) Ranch & some of the mammals you are mapping, but it has Merycochoerus & Brachyosmus, so can't be much younger. It is somewhere near the Miocene-Pliocene boundary, I think.

Anyway, I'll tell you the dope I have on your possible round the end of next week. I never did see the rhino teeth from there, & suppose that Ed Lewis has them.

Sincerely

John

Feb. 12, 1963

Dr. John Lance
Department of Geology
University of Arizona
Tucson, Ariz.

Dear John,

I was surry to hear that the illness of your daughter had forced you to return to Tucson earlier than you had planned. I hope that she is well.

Do you have any more data for me on the Rizzi Ranch fauna that I turned over to you last fall? In this connection, I enclose a copy of a note from Axelrod, discussing a conversation he had regarding it with Tedford. I hope that the material you have is adequate to permit a definitive determination of age. I also hope that you can do some digging before too long.

Best regards,

Robert R. Coats

Branch of Mineral Deposits

February 3, 1960

Dr. R. A. Stirton
Department of Paleontology
University of California
Berkeley 4, California

Dear Stirt:

Many thanks for the exceedingly prompt return of the vertebrates and the very useful identifications. In case you did not keep a copy of the last year's identifications, I am sending you an autostat. The differences appear slight. The collection you just identified was from the same place as one of the 1957 ones. I suppose that most of the 1959 material must have weathered out in the two year interval.

I hope to see you or Mr. Douglas in the field this summer.

Best regards,

Robert R. Coats

Enclosure

Director's reading file

Coats

RRC:bls

Coats

REPORT ON REFERRED FOSSILS

P&S Branch, Denver Lab, U.S.G.S.
Bldg. 25, Federal Center, Denver, Colorado

Stratigraphic range: Cenozoic

Kinds of fossils: Vertebrate

General locality: Nevada

Quadrangle or area: Elko Co.

Referred by: R. R. Coats, 1/28/58

Shipment No.: MD-58-4D
Mineral Deposits

Report prepared by: Edward Lewis, 2/12/58

Date material received: 2/3/58

Status of work: Complete

Report not to be quoted or paraphrased in publication without a final recheck by the Paleontology and Stratigraphy Branch.

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1. All six lots of fossil vertebrates are so fragmentary that conclusive identifications are not possible.

2. At the same time, there is a good chance that this may be a very important collection, so we should not be misled by a disappointing first glance. Further, very careful collecting might yield uncommonly worthwhile results.

3. More geographic and stratigraphic data would be very helpful: the Request for Identification only listed six locality numbers, without giving geographic localities other than "Elko County, Nevada--Mountain City Quadrangle", and stated only that 5 lots were from one formation and the sixth "from separate area, may be of different age".

4. The "Nomenclature and correlation of the North American Continental Tertiary" (G.S.A. Bull. 52, p. 1-48, 1941) listed no Nevada Cenozoic faunas older than late Miocene. These Elko County, Nevada, fossils suggest something new and decidedly older, and therefore possibly very important.

5. Inconclusive identifications are as follows:

57NC55-40; fragment of ?merycoidodont lower molar; 42 indeterminate small fragments; perhaps somewhere between middle Oligocene and lower Miocene.

57NC56-41; fragment of right M^2 of a canid gen. & sp. indet.; much worn fragment of upper molar, lower incisor, and ungual phalanx of merycoidodonts gen. & sp. indet.; astragalus and metapodial epiphysis of artiodactyls gen. & sp. indet.; 24 small indeterminate fragments of bones and teeth; age probably between middle Oligocene and lower Miocene.

57NC57-42; 8 indeterminate fragments, possibly rhinocerotid.

57NC58 (no sta. no.); 2 indeterminate fragments.

57NC59 (no sta. no.); 31 small fragments of teeth, 5 of which could be joined to form parts of an upper premolar and a third upper molar morphologically close to those of the caenopine Rhinocerotidae of the Brulé, John Day, and Arikaree, referred--with some misgivings--to ?Diceratherium sp.; 26 small fragments of bones gen. & sp. indet.

57NC70-51; 80 indeterminate fragments.

6. The 5 lots from one formation suggest correlation with the Brulé or Arikaree of Nebraska and South Dakota, or with the John Day of Oregon.

7. No microfossils were detected.

Edward Lewis

Edward Lewis

R R Coats

REPORT ON REFERRED FOSSILS

P & S Branch, U. S. Geological Survey
345 Middlefield Road, Menlo Park, California

Stratigraphic range: Miocene

Kinds of fossils: Vertebrate

General locality: Elko Co., Nevada

Quadrangle or area: Mountain City

Referred by: R. R. Coats, Southwest States Branch

Shipment No: SW-64-6M

Report prepared by: C. A. Repenning, 11/10/64

Date material received: 10/28/64

Status of work: Complete

Report not to be quoted or paraphrased in publication without a final recheck by the Paleontology and Stratigraphy Branch.

Locality 64NC-9

Monosaulax sp. cf. M. curtus (Matthew and Cook)
Rhinocerotid, indeterminate
Carnivore, indeterminate

The small beaver is most characteristic of the species of the Barstovian mammal age (generally considered to be late Miocene) but could represent a late Hemingfordian (middle Miocene) form on stage of evolution. The other fragments are not identifiable. This locality has been assigned USGS Vertebrate locality number M1087.

Locality 64NC-7

Indeterminate bone fragments.

Charles A. Repenning

Charles A. Repenning

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