

The Great American Mammal Search

“Good Morning, Mantua. This is Utah Bob of KMEW AM and FM welcoming you to the Great American Mammal Search sponsored by the Utah State Wildlife Photographic Society. Tension is mounting as 8:00 AM approaches, signaling the beginning of today’s anxiously awaited competition. Three teams have accepted the society’s challenge to seek out and photograph native wolves, foxes, deer, lynx, bear, bighorn sheep, mountain goats, moose and beaver living within some of the most rugged terrain our beautiful state has to offer. Teams have been given until 8:00 PM to photography as many native mammals as possible before returning to USWPS headquarters in downtown Mantua. The team to photograph the most species will receive a trophy plus \$1000.00 at a special awards ceremony scheduled for this evening. KMEW plans to follow this exciting event from both land and air throughout the day.”

- 1 [HM] State the map grid coordinates for the town of Mantua.
- 2 [HM] According to the 1990 census, what is the population of Mantua?
- 3 [HM] How many US states share or touch Utah’s borders?
- 4 [MT] In what county is the town of Mantua located? [Difficult to determine using the highway map.]
- 5 [MP] KMEW’s radio tower is located a short distance NW of the Mantua Reservoir. What is the value of the indexed contour encircling this radio tower?



The Rivermen have chosen to begin their search near Pelican Pond, C sector of the Wellsville Quad, where they believe it likely they may encounter both elk and deer. From Mantua, they immediately proceed N-NE along Route 89-91.

6. [WV] Use the mileage information provided in the lower margin of the Wellsville Quad plus the Scale of Miles to determine the distance, to the nearest mile, from Mantua to the intersection of Routes 89-91 and the light-duty road NE of Wellsville leading to Pelican Pond.

7 [WV] Is Route 89-91 an **Interstate**, a **US**, or a **State** Route?

8 [WV] What **two** classes of roads will the Rivermen encounter once they turn off Route 89-91 to head directly into the area of Pelican Pond?

9 [WV] What type of land/water area surrounds much of Pelican Pond?

A second group, the Mountaineers, had been tipped off that moose and black bear had been spotted less than a week earlier in the area of the North Fork Ogden River, located in the S and SE sectors of the Mantua Quad. Because there is no direct route to this remote area, the Mountaineers traveled South on Route 89-91 to North Ogden and proceeded Eastward along several unimproved roads.



10 [HM] What winter recreational activity most likely attracts sportsmen to the area the Mountaineers are about to enter?

11 [MT] Because the Mountaineers had carefully prepared for this special event, they were aware that they might be traveling within the area directly South of the Mantua Quad, and therefore had purchased that neighboring quad. What additional quadrangle had they purchased?

12 [MT] Their preparation paid off as one member of the Mountaineers spotted and photographed a female bear groping for rainbow trout in the clear waters of the North Fork Ogden River to feed herself and her hungry cubs. In which general direction does the North Fork Ogden River flow?

13 [MT] The Mountaineers spotted a herd of elk near the Utaba Reservoir [SE sector]. What **two** tributaries serve as the source of water for this reservoir?

14 [MT] Is the North Fork Ogden River classified as **perennial** or **intermittent**?

A third group, the Trailblazers, chose to travel the mostly unimproved roads Southward from Mantua to the area within the West sector of the Mantua Quad. The rugged, mountainous terrain found there, according to their team leader, was certain to be home to members of nearly every species of creatures on their list. A strenuous hike to the American Mine SE of Grizzly Peak paid off handsomely, for when they arrived a large bull moose was immediately spotted and photographed near the entrance to the mine.

15 [MT] According to the symbol, what kind of mine is the American Mine?

16 [MT] State the PLSS description of Grizzly Peak to the nearest quarter section.

“This is Utah Bob of KMEW AM and FM reporting live from Pelican Pond where, early this morning, the Rivermen successfully photographed both deer and beaver. The Rivermen are now heading toward the Logan River area where they plan to launch their canoe approximately 1.4 miles East of the point at which Route 30 crosses the Union Pacific Railroad tracks.”

17 [HM] The Rivermen headed NE on Route 89-91 to Route 30, picked up their canoe, and proceeded West to the Logan River. Near which city do Routes 30 and 89-91 intersect?

18 [WV] In which sector of the Wellsville Quad did the Rivermen launch their canoe?

19 [WV/HM] What natural feature most likely determined the location of the meridian that forms the boundary between R1W and R1E?

20 [WV] Is the Logan River a **slowly** or **rapidly** flowing river?

“This is Utah Bob reporting live from the KMEW helicopter presently hovering directly above the summit of Grizzly Peak, West Sector of the Mantua Quad. We’ve received word that the Trailblazers are now searching for a herd of mountain goats at 7000 feet and an azimuth of 080° from our present location. Although it is getting quite late, their leader has assured us that this should present no problem.”



21 [MT] On what specific geographical feature are the Trailblazers scouting for mountain goats?

22 [MT] What type of boundary is represented by the series of alternating long and short dashes meandering through this location?

23 [MT] What type of vertical control marks the elevation of the geographical feature where the Trailblazers are searching for the herd of mountain goats?

“And now the latest from KMEW concerning an item of special interest to many of us in Northern Utah – today’s suspenseful Great American Mammal Search! The Mountaineers have arrived in Paradise. They had hoped to locate and photograph a family of wolves reportedly living near the Eastern bank of the large sink hole West of Paradise, Sectors NE and E on the Mantua Quad, before rushing back to Mantua over unimproved back-country roads. It’s now 6:00 PM and there is growing concern that not all teams are likely to arrive back at USWPS headquarters by the 8:00 PM deadline.”

24 [MT/HM] On which quadrangle is Paradise located? [Relate the locations of Mantua and Paradise on the highway map with their positions on the topographic maps. You will, of course, not find Paradise on any of the quads you have been given.]

25 [MT] What special type of contour completely surrounds this sink hole?

“This is Utah Bob from the KMEW helicopter reporting a surprising turn of events. Their hike into the swampy sink hole has proven disastrous for the Mountaineers. Not only did they fail to photograph wolves; they became lost as well. It is 6:30 PM, and they have just now returned to their vehicle. The Mountaineers are planning to travel Northward through Clay Valley and onward to Mantua. All I can say, Guys, is ‘Good Luck!’”

26 [MT] Is Clay Valley, located in the NE sector of the Mantua Quad, **sparsely** or **densely** covered with vegetation?

27 [MT] Do the banks of the tributary at the Western edge of Clay Valley over which the Mountaineers must cross **increase** or **decrease** in steepness as its waters approach Maple Creek directly South of Mantua Reservoir?

28 [MT] What is the total drop in elevation of this tributary as it flows Westward from the 6000 foot contour near the Mountaineers’ present position to the 5200 foot contour?

29 [MT] What is the distance, to the nearest thousand feet, between the two points given in question 28. [Measure this distance directly from point to point.]

30 [MT] Calculate this tributary’s gradient between these two points in feet per thousand feet.

“This is Utah Bob reporting live from the KMEW studio in downtown Mantua. Unfortunately no winner has been declared in today’s Great American Mammal Search. It appears as though the Rivermen lost precious time when they accidentally miscalculated the direction of stream flow; the Trailblazers became lost on a rugged mountainside; and the Mountaineers’ four-wheel drive vehicle sits axle-deep in the loose sands of a rapidly-flowing mountain stream. Too bad this year’s search teams decided against including

their state's Science Olympiad Road Scholar finalists. I wouldn't be at all surprised if they carefully rethink that decision when planning next year's event. Incidentally, the awards ceremony scheduled for later this evening has been cancelled due to sudden apathy. This is Utah Bob with a hardy goodnight."

The Great American Mammal Search

Answer Key

1. C-5
2. 665
3. 6
4. Box Elder
5. 5600 feet
6. 15 miles
7. US
8. Light Duty & Unimproved dirt
9. Marsh [or] swamp
10. Skiing
11. North Ogden
12. SE
13. Cutler Creek & North Fork Ogden River
14. Perennial
15. Prospect and/or mine shaft
16. SW ¼ Sec 17 T8N R1W
17. Logan
18. North sector
19. Great Salt Lake
20. Slowly
21. Black Mountain
22. County
23. Spot elevation
24. Paradise
25. Depression contour
26. Sparsely
27. Decrease
28. 800 feet

29. 6000 feet
30. 133.33 feet per thousand feet

Maps used in this exam:

Rand-McNally's Utah Highway Map

Mantua Quad, Utah

Mount Pisgah Quad, Utah

Wellsville Quad, Utah

To purchase a set of USGS quads and Highway map for "The Great American Mammal Search," you may visit:
<http://www.otherworlds-edu.com>

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Name: _____

Key to maps used in this unit:

HM = Highway Map

MT = Mantua Quad, Utah

MP = Mount Pisgah Quad, Utah

WV = Wellsville Quad, Utah

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