

Lewis and Clark And The Corps of Discovery



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Presentation I
Wed, Jan 10, 2018



Ollie Name Tag 2018
Lewis and Clark and the Corps of Discovery
Ollie, Life Long Learning Short Course, Iowa State University



My concept of interest in Lewis and Clark Ames, Iowa 2018



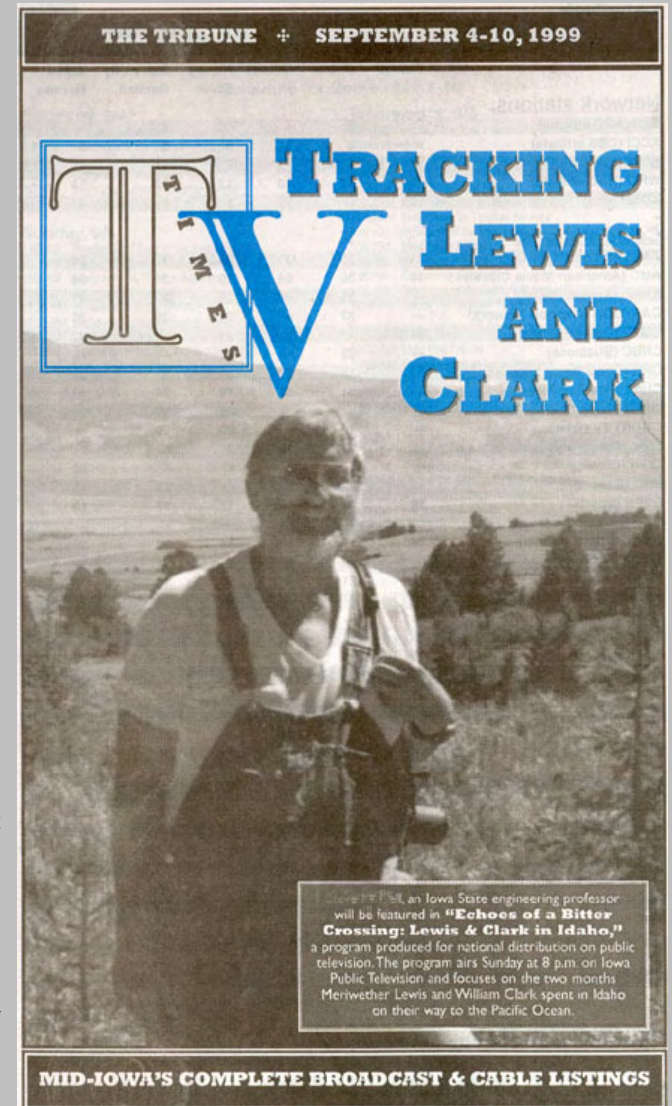
Actual Interest in Lewis and Clark

Hiking the Lewis and Clark Trail



**Moon Saddle,
Idaho
Fall 2009**

The Agony



**Big Hole
Pass
Montana
Summer 1999**

The Ecstasy

Topics to be Covered

- Purpose of the Expedition
- Orders from President Jefferson
- Corps of Discovery Leaders, Lewis and Clark
- Steve Russell, Who am I? Who I am Not?
- The Amazing Journals
- Westward 1804-1805, Maps and Photos
- Expedition Members
- Western Indian Tribes
- Surprises and Adventures
- Conceptions and Misconceptions
- Trail Research
- Trail Friends and Colleagues
- My Personal Research
- Photo Gallery

INFERENCE

A Skill Needed for Good Historical Research

Mark Twain: “I've found that common sense ain't so common.”

Inference

A Conclusion Reached on the Basis of
Evidence and Reasoning

A concept often misunderstood, or forgotten, or ignored, in the conduct and publishing of historic trail research

SYNONYMS: deduction, conclusion, reasoning, conjecture, speculation, guess, presumption, assumption, supposition, reckoning, extrapolation

Inference (cont.)

With most historical research, the researcher seldom has first-hand knowledge of the research subject. In the case of the Lewis and Clark Trail, we have wonderful historical journals, reports, and maps; and written accounts by contemporary observers. Thus, research results and conclusions depend on the skillful use of inference.

It is important for both reader and researcher to keep utmost in mind that absolute truth in historical research is unattainable. In spite of best efforts, mistakes are made in the original documents and mistakes are made by the researchers. In essence, historical research is based on best-effort concepts. For these reasons, I do not claim to be the “know all – tell all” of the Lewis and Clark trail or story.

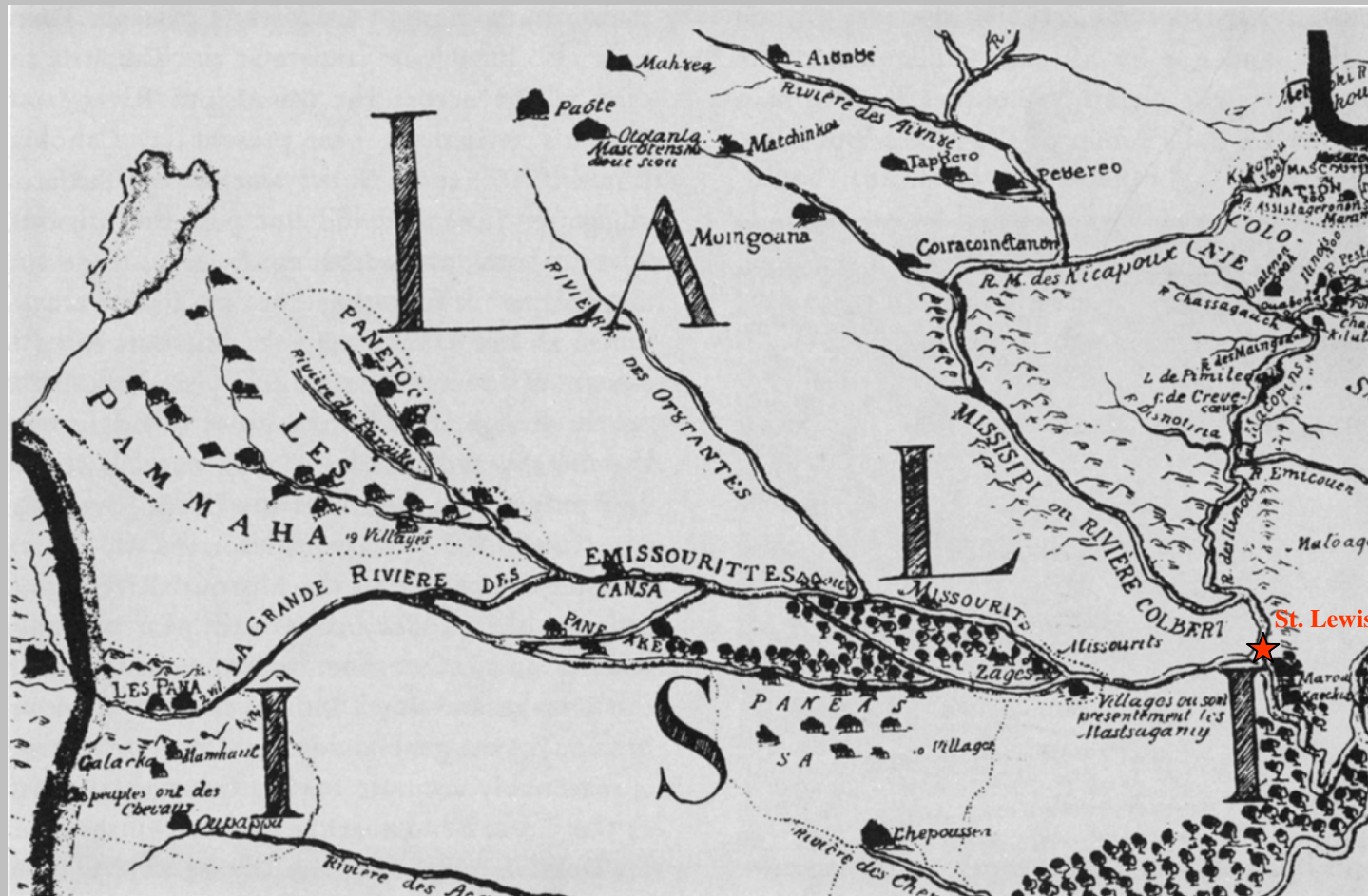
The Reasons for the Expedition

- **Opening of the ‘West’, East Coast to Midwest**
- **Opening of the West, Mississippi River to the Pacific Ocean (Louisiana Purchase 1803)**
- **Opening of the West, Orders From President Jefferson**

Opening Western North America

Opening of the West

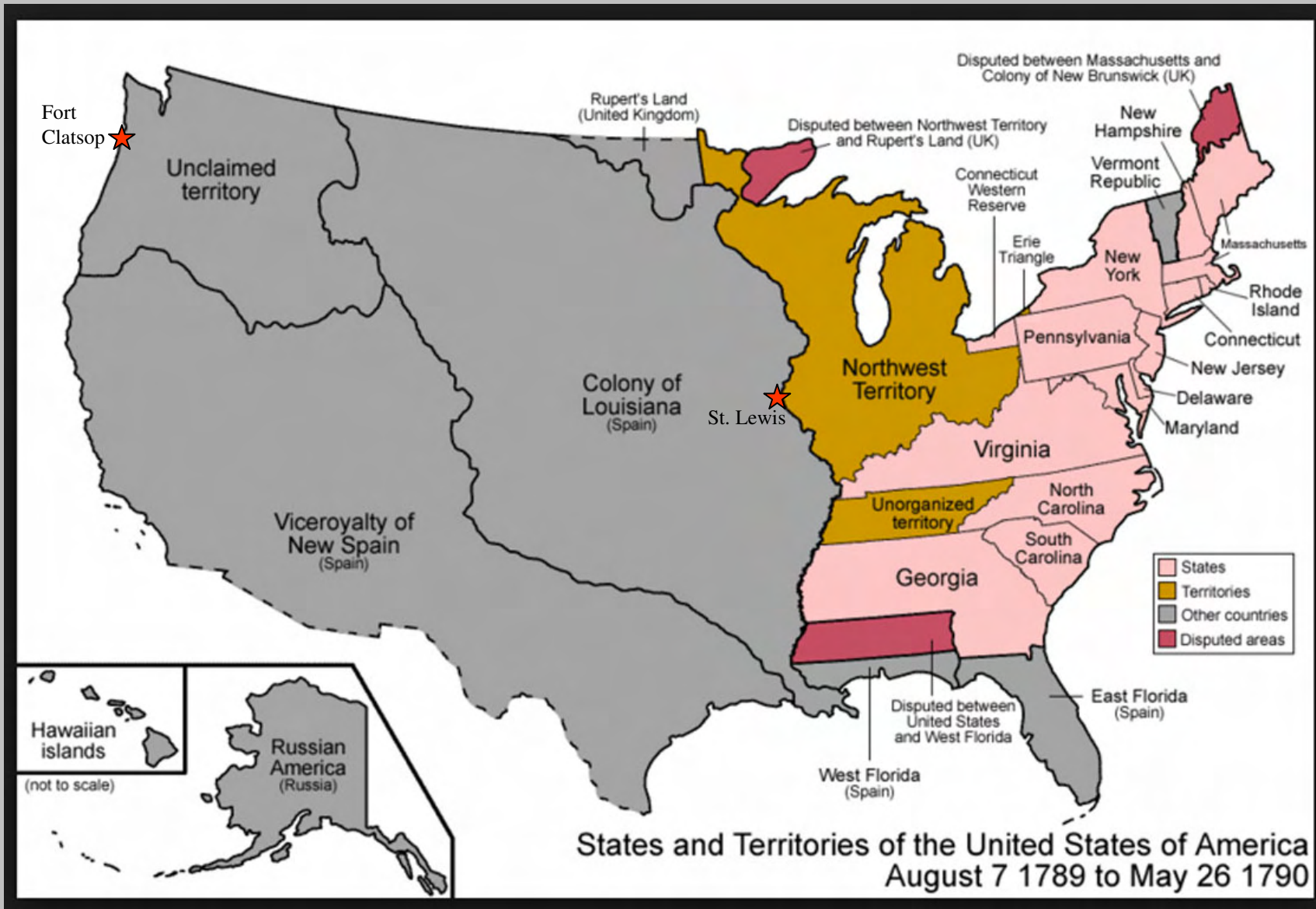
Midwest 1684



French Louisiana

Opening of the West

East Coast to Midwest 1790



Opening of the West

Mississippi River to the Pacific Ocean

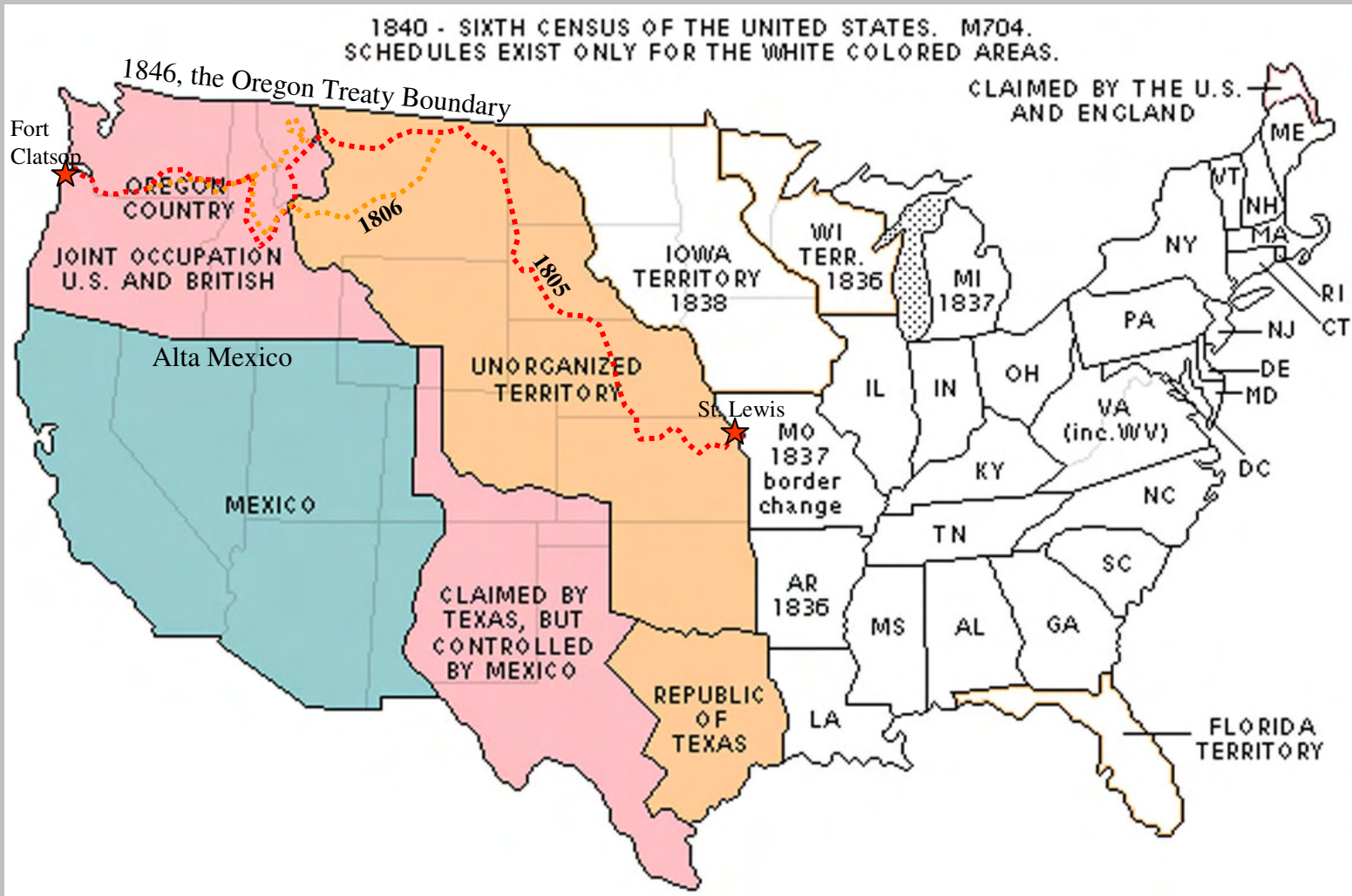
Louisiana Purchase 1803



Opening of the West

Mississippi River to the Pacific Ocean

North America (USA) 1840



President Thomas Jefferson

Orders from President Jefferson



Orders from President Jefferson

Suggestions from Colleagues

Record information about the western Indians such as Indian life, languages, customs, occupations, diseases, morals, tribal religions, native legal practice, concepts of property ownership, and medical procedures.

Attorney General Levi Lincoln Sr. recommended that the expedition carry some cowpox matter to administer to the Indians so they could be protected from smallpox.

Dr. Benjamin Rush asked the explorers to record Indian eating, sleeping, and bathing habits; when they married, how long children were breast fed and how long they lived; their pulse rates morning, noon, and night, and night both before and after they ate. He also wanted to know about crime, suicide, intoxication, worship practices, sacred objects, and burial rituals.

Orders from President Jefferson

Summary of Final Orders

A. The object of your mission is to explore the Missouri river, & such principal stream of it, as, by it's course & communication with the water of the Pacific ocean may offer the most direct & practicable water communication across this continent, for the purposes of commerce.

This is the search for the northwest passage to the Pacific Ocean

Orders from President Jefferson

Summary of Final Orders (cont.)

B. The commerce which may be carried on with the people inhabiting the line you will pursue, renders a knowledge of these people important. You will therefore endeavor to make yourself acquainted, as far as a diligent pursuit of your journey shall admit, with the names of the nations & their numbers:

- a) the extent & limits of their possessions;
- b) their relations with other tribes or nations;
- c) their language, traditions, monuments;
- d) their ordinary occupations in agriculture, fishing, hunting, war, arts, & the implements for these;
- e) their food, clothing, & domestic accommodations;

This is Indian ethnography and relationships

Orders from President Jefferson

Summary of Final Orders (cont.)

B. (cont.)

- f) the diseases prevalent among them, & the remedies they use;
- g) moral and physical circumstance which distinguish them from the tribes they know;
- h) peculiarities in their laws, customs & dispositions;
- i) and articles of commerce they may need or furnish, & to what extent.

This is Indian ethnography and relationships

Orders from President Jefferson

Summary of Final Orders (cont.)

- C. ...objects worthy of notice will be :
- a) the soil & face of the country, it's growth & vegetable productions, especially those not of the U.S.
 - b) the animals of the country generally, & especially those not known in the U.S. the remains & accounts of any which may be deemed rare or extinct [mammoth fossils];
 - c) the mineral productions of every kind; but more particularly metals, limestone, pit coal & saltpeter;
 - d) salines & mineral waters, noting the temperature of the last & such circumstances as may indicate their character;

Record Minerals, Plants, and Animals

Orders from President Jefferson

Summary of Final Orders (cont.)

C. (cont.)

e) volcanic appearances;

f) climate as characterized by the thermometer, by the proportion of rainy, cloudy & clear days, by lightening, hail, snow, ice, by the access & recess of frost, by the winds, prevailing at different seasons;

g) the dates at which particular plants put forth or lose their flowers, or leaf, times of appearance of particular birds, reptiles or insects.

Record Minerals, Plants, and Animals

Orders from President Jefferson

Summary of Final Orders (cont.)

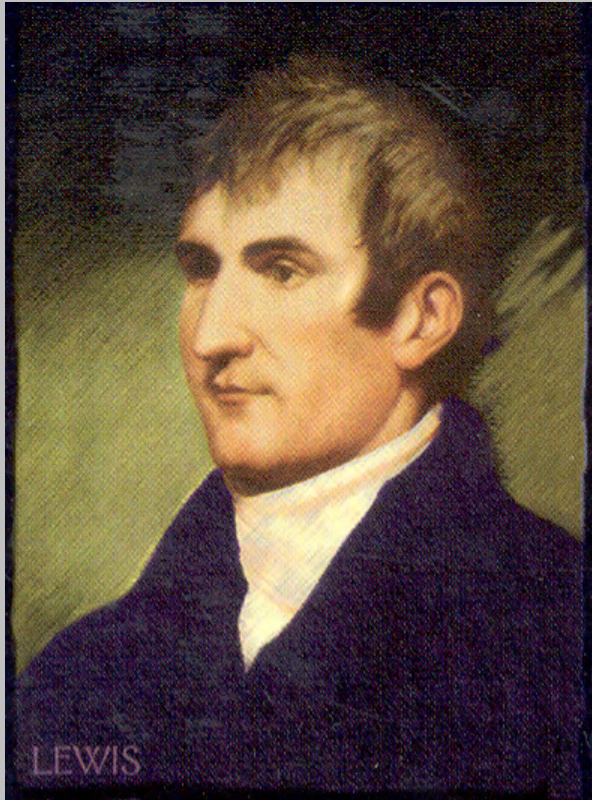
- D.** Map and record the geography of the country and make celestial observations.
- E.** Record information about botany, zoology, and Indian history.
- F.** Gather information from the western Indians while living at peace with them, i. e., ethnographic data.
- G.** Begin the development of trade with the Indians.
- H.** Organize delegations of Chiefs and Elders to be sent to Washington D. C.

Questions?

Meriwether Lewis & William Clark

Lewis and Clark

Co-Captains and Leaders



Captain Meriwether Lewis

“The Naturalist”



Lieutenant William Clark

“The Map Maker”

Lewis – The Naturalist



Clarkia or “Pinkfairies” or “Ragged Robin” *Clarkia pulchella* (Pursh)

Clark – The Map Maker



Lolo Creek and Hungary Creek in the Bitterroot Mountains of North-Central Idaho

Surprises and Adventures

Lewis named the Marias River in Montana for his ‘young’ cousin, Maria Wood (he was 31). *It is true that the hue of the waters of this turbulent and troubled stream but illy (ill-ly) comport with the pure celestial virtues and amiable qualifications of that lovely fair one; but on the other hand it is a noble river.*

Clark named the Judith River in Montana after Julia “Judith” Hancock who was 14 at the time (he was 35). He married her in 1808 when she was 17 and he was 37.

Could either Lewis or Clark run for the US senate today?

MY TRAIL RESEARCH

Steve F. Russell

Who Am I? Who Am I Not?

- **Electrical Engineer (PhD) and Engineering and Science Researcher. 20 years in industry and consulting, 23 years at Iowa State in EECpE.**
- **Researched, designed, and developed satellite communication subsystems.**
- **Researched, designed, and developed emergency radio call boxes.**
- **Original team member for the NAVSTAR Global Positioning System, 1976.**
- **Taught communication theory, circuits & systems, discrete math, computer networking, signal processing, etc. at Iowa State.**
- **30 years doing historic trail research: Aboriginal Trails of the western US, Lewis & Clark, Oregon and California Trails, military recon trails.**
- **30 years of solo hiking and primitive camping.**
- **Musician, Jazz Trumpet, Jazz Trombone, Euphonium (classical)**
- **Ham Radio (Extra Class), K0NJ.**

- **I SPECIALIZE IN FACTUAL, NO-NONSENSE, HIGH-QUALITY RESEARCH THAT IS BASED ON ORIGINAL SOURCES.**
- **I AM NOT A POLITICIAN.**
- **I DO NOT FOLLOW THE RULES OF POLITICAL CORRECTNESS.**

Why Me?



Trail Hiking is Hard * What Day Is It?

Why Me?

- Keen interest in historic trail research, especially Lewis and Clark.
- I have lived all of my young life along the trail in Idaho and Montana: Lewiston, Weippe, Lochsa Lodge, Missoula, Stevensville, Bitterroot Valley.
- Extensive experience using the Global Positioning System (GPS).
- Extensive experience using Geographic Information Systems.
- Extensive experience making maps (Cartography).
- A love of solo hiking and primitive tent camping, in sun, rain, snow, heat, cold etc.
- Love of Animals, Plants and Nature.
- Nobody else weird enough to do it.



**c1946 Steve Forrest Russell lived at Lochsa Lodge
when it was owned by the Steve Richard Russell Family**

Lochsa Lodge, Idaho (on the Lewis and Clark Trail)

Why Me? (cont.)



Research Methodology

Computers, Sweat, and Serendipity

What Makes My Trail Research Unique

- Hiking the actual trail tread
- Primitive Camping
- Photos I take while hiking the trail
- Computer research methods, GPS, GIS
- My map making ability
- Skill as a Woodsman
- Scholarly approach
- Use only original sources (don't read fiction)

How I am Like Others -- Work with:

- Historic journals
- Archive maps
- Historic photos
- Aerial and Satellite photos

Why Me? (cont.)



Why Me? (cont.)



Wet and Hypothermic

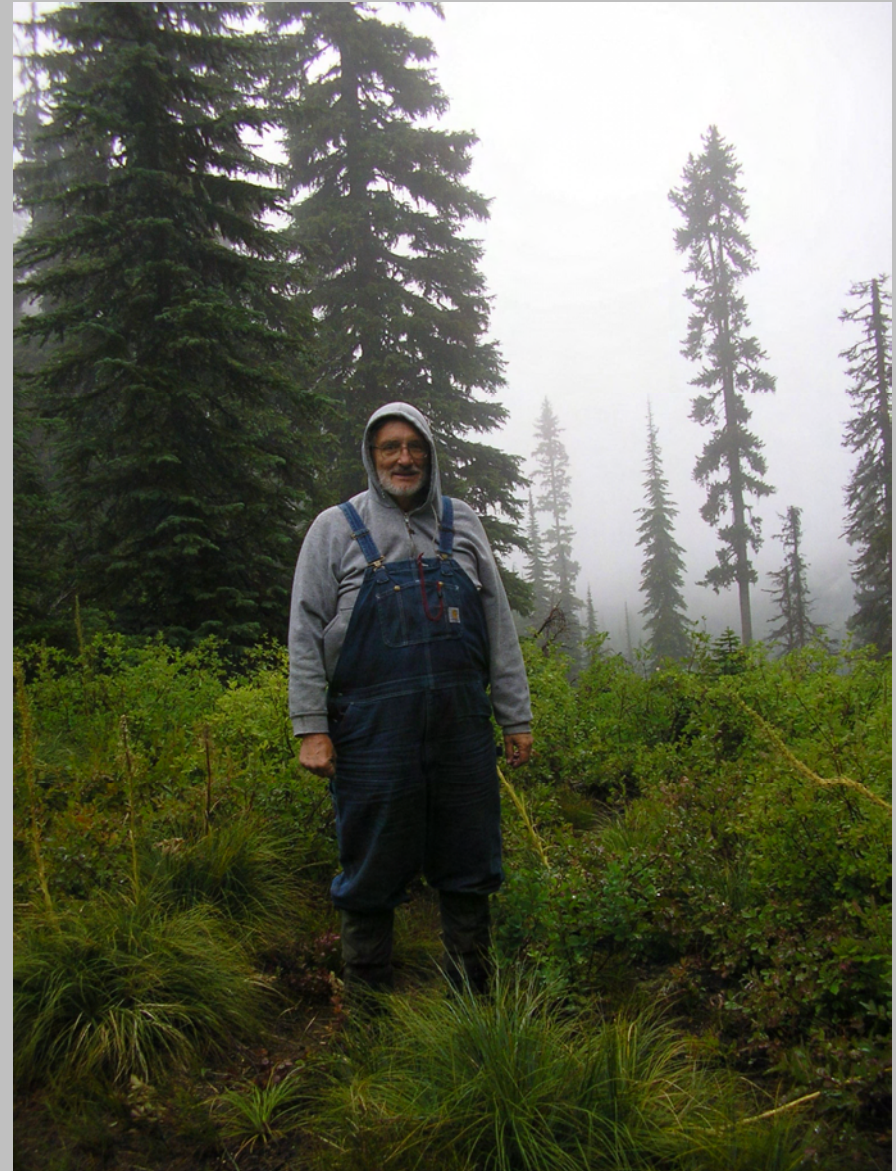


Wet but Warm

Why Me? (cont.)



When I was 'Young'



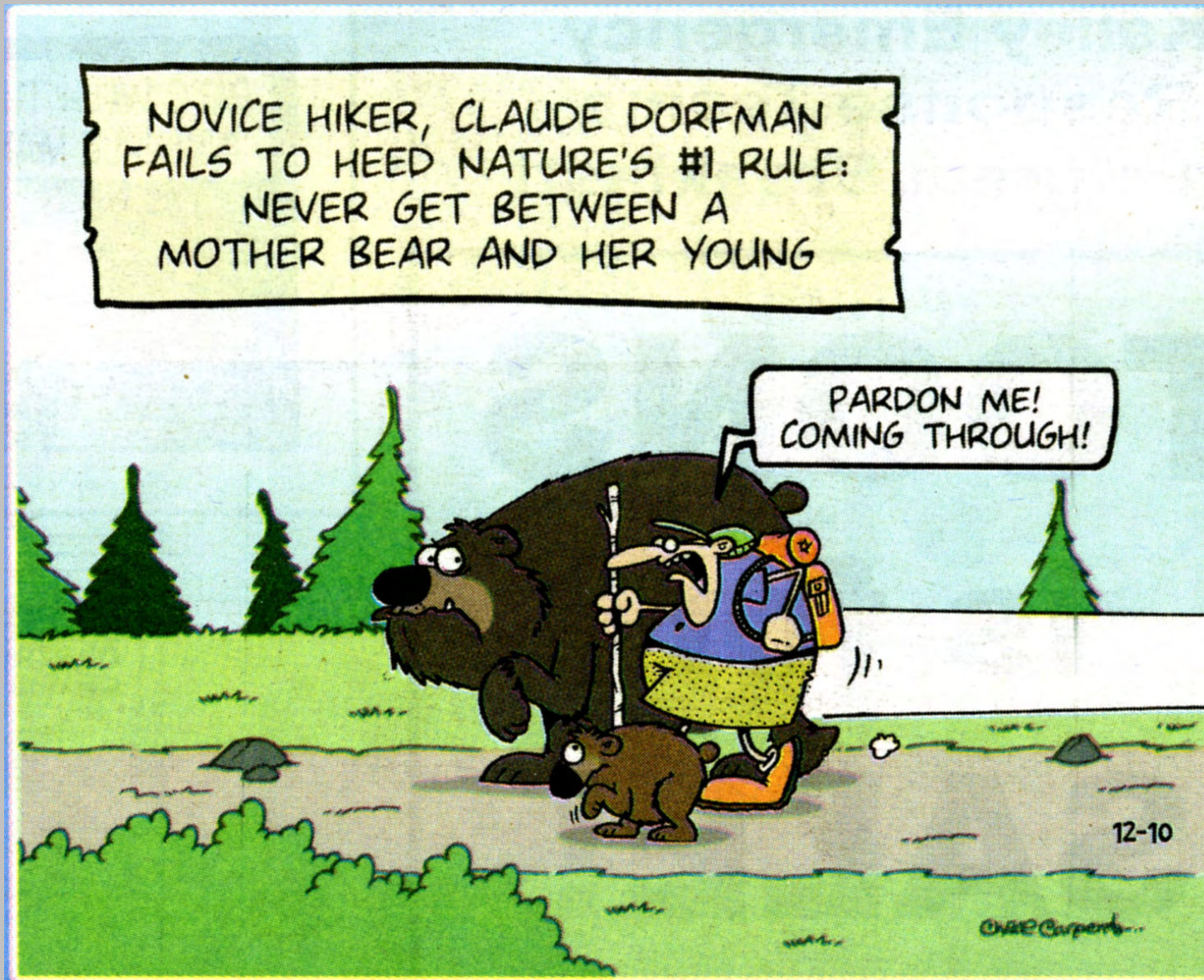
When I was not so 'Young'

Why Me? (cont.)



Cambium-Peeled Tree, Food for Horses and People

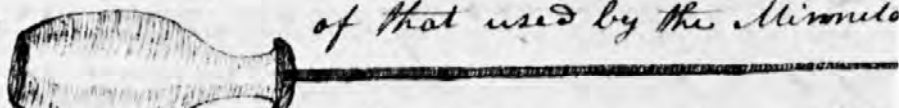
Why Me? (cont.)



The Amazing Journals

<https://lewisandclarkjournals.unl.edu/item/lc.jrn.introduction.general>

- 11 Journal Volumes in the Moulton Edition
- 1 Herbarium Volume (plants)
- 1 Map Volume (large format)
- Journal Keepers: Lewis, Clark, Gass, Whitehouse, Ordway, Floyd

small piece of bined clay is placed in the bottom of the bowl to separate the tobacco from the end of stem and is of an irregularly rounded figure not felt the tube perfectly close in order that the smoke may pass. this is the form of the pipe. their tobacco is of the same kind  of that used by the Minnito Mandans and

Picaris of the Mipauri. the Shoshonans do not cultivate this plant, but obtain it from the Rocky mountain Indian and some of the bands of their own nation who live further south. ^{I now explained to them the objects of our journey &c.} all the women and children of the camp shortly collected about the lodge to indulge themselves in looking at us, we being the first white persons they ever seen. after the ceremony of the pipe was over I distributed the remainder of the small articles I had brought with me among the women and children by this time it was late in the evening and we had not tasted any food since the evening before. the chief informed us that they had nothing but berries to eat

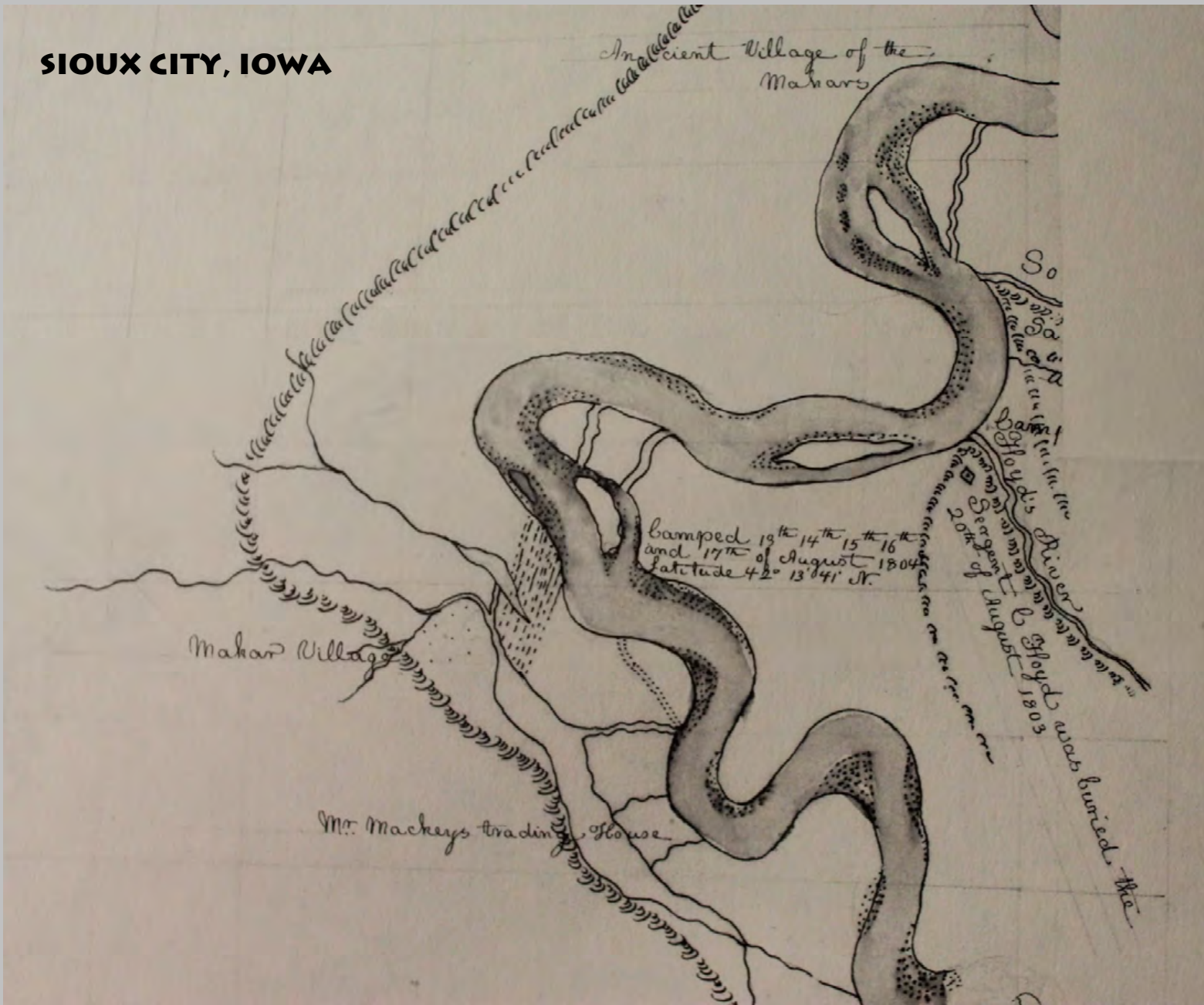
1. Shoshone Smoking-pipe, August 13, 1805, Codex F, p. 99

East and ending with the North. he now presented the pipe to me as if desirous that I should smoke, but when I reached my hand to receive it, he drew it back and repeated the same ceremony three times, after which he pointed the stem first to the heavens then to the center of the magic circle smoked himself with three whiffs and held the pipe untill I took as many as I thought proper; he then held it to each of the white persons and then gave it to be consumed by his warriors. this pipe was made of a dense simitransparent green stone¹⁴ very highly polished about 2 ½ inches long and of an oval figure, the bowl being in the same direction with the stem. a small piece of birned clay is placed in the bottom of the bowl to seperate the tobacco from the end of the stem and is of an irregularly rounded figure not fitting the tube perfectly close in order that the smoke may pass. this is the form of the pipe.¹⁵ their tobacco is of the



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SIoux CITY, IOWA



Surprises and Adventures

August 12, 1806: Lewis was shot in the butt by hunter Peter Cruzatte, who thought he was shooting at an elk. (It's not a bad idea to shoot the boss in the butt and then claim he was an Elk!)

Questions?

Lewis and Clark And The Corps of Discovery

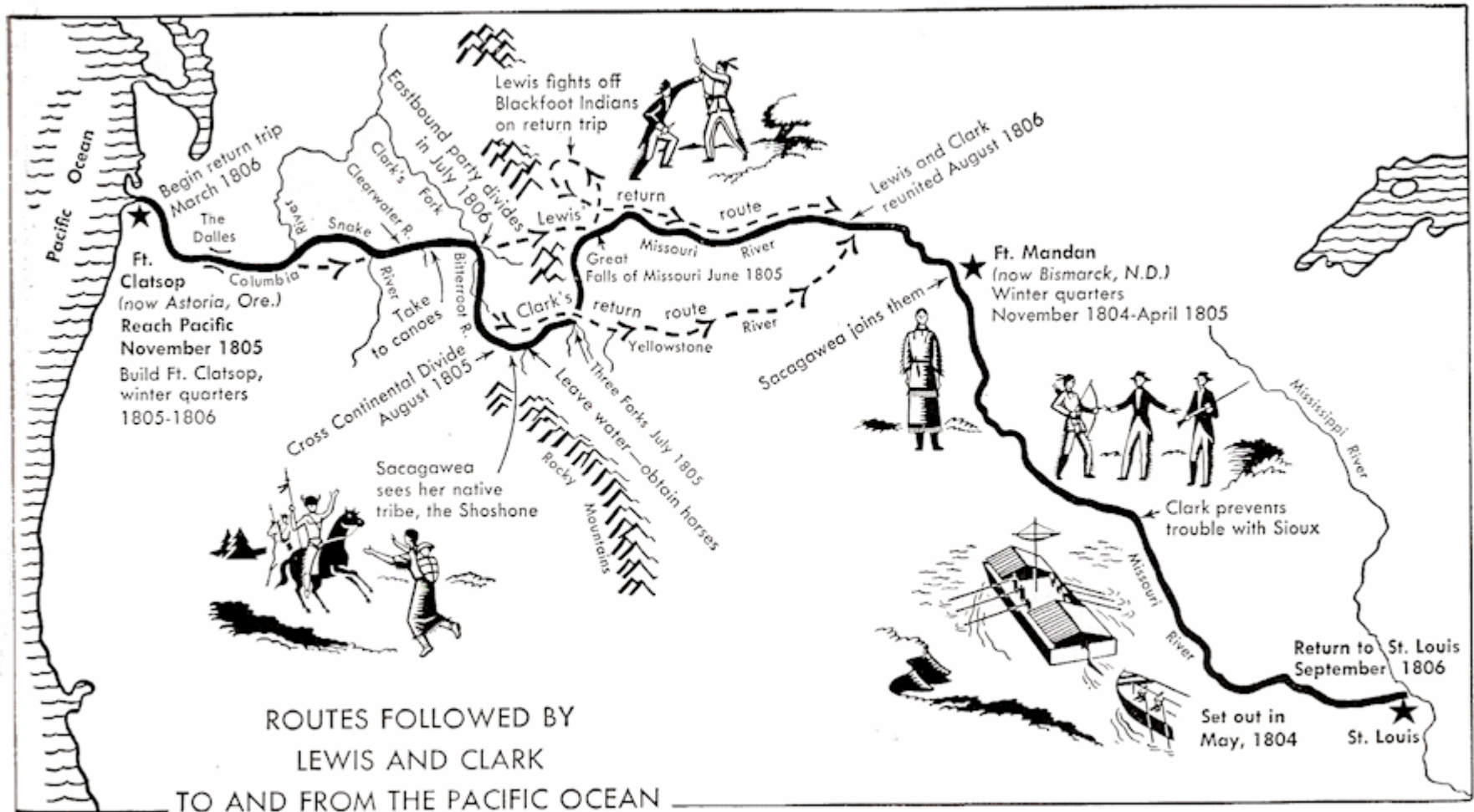


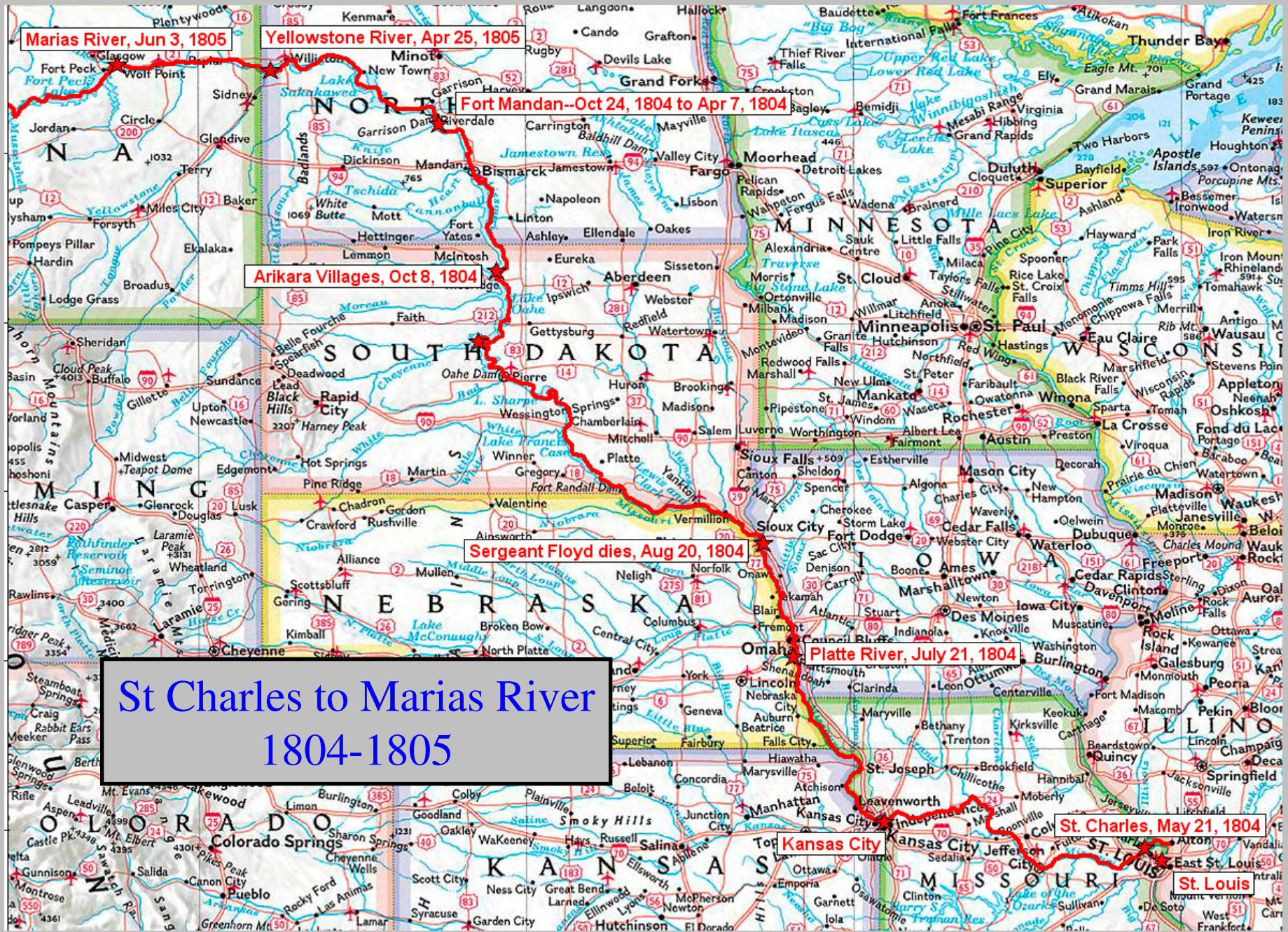
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Presentation II
Wed, Jan 17, 2017

Traveling the Lewis and Clark Trail with The Corps of Discovery

Westward: 1804-1805





**St Charles to Marias River
1804-1805**



St. Charles Journal Map

New Madrid Earthquake
December 16, 1811

Missouri

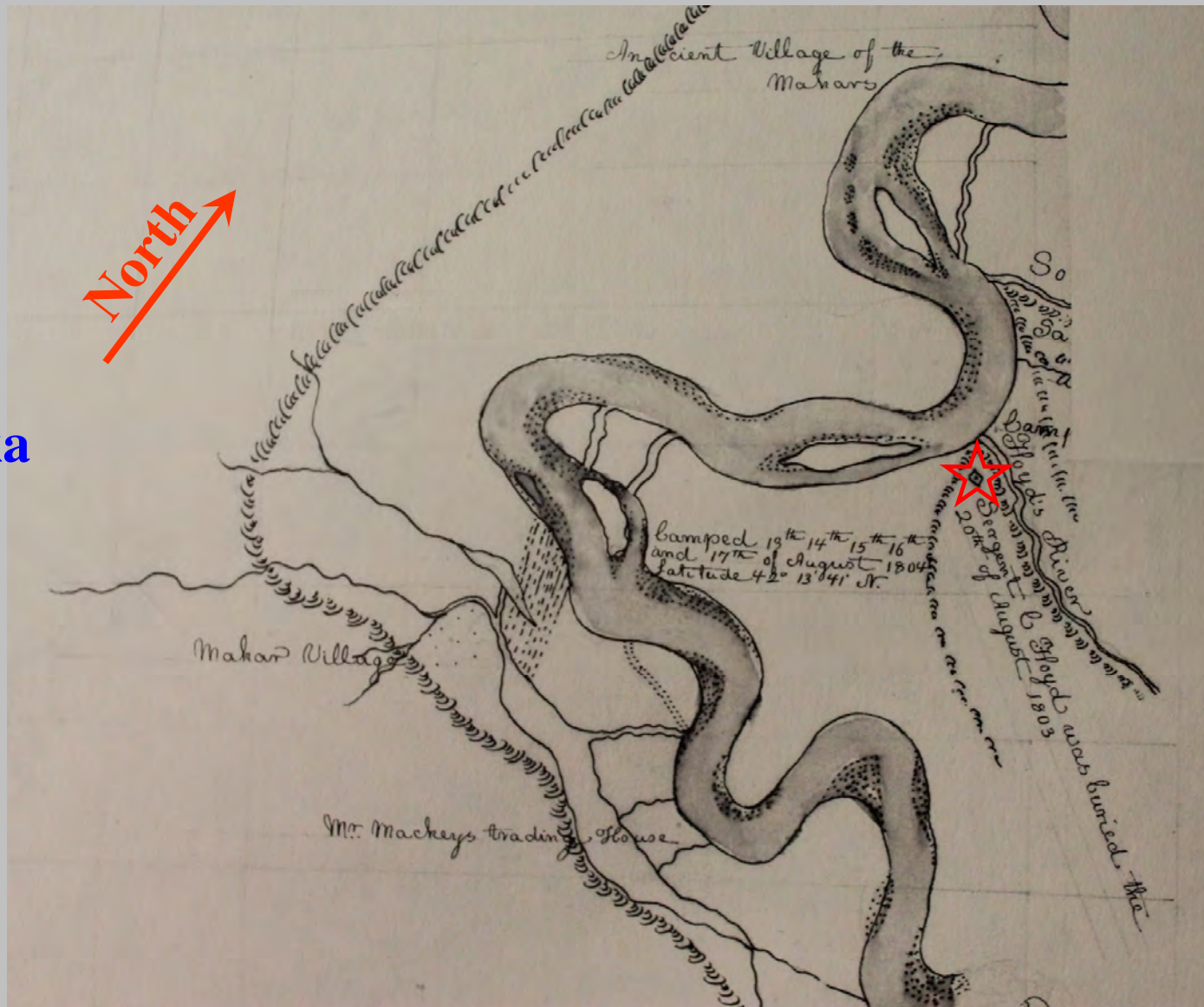


St. Charles Topo Map

New Madrid Earthquake
December 16, 1811

Missouri

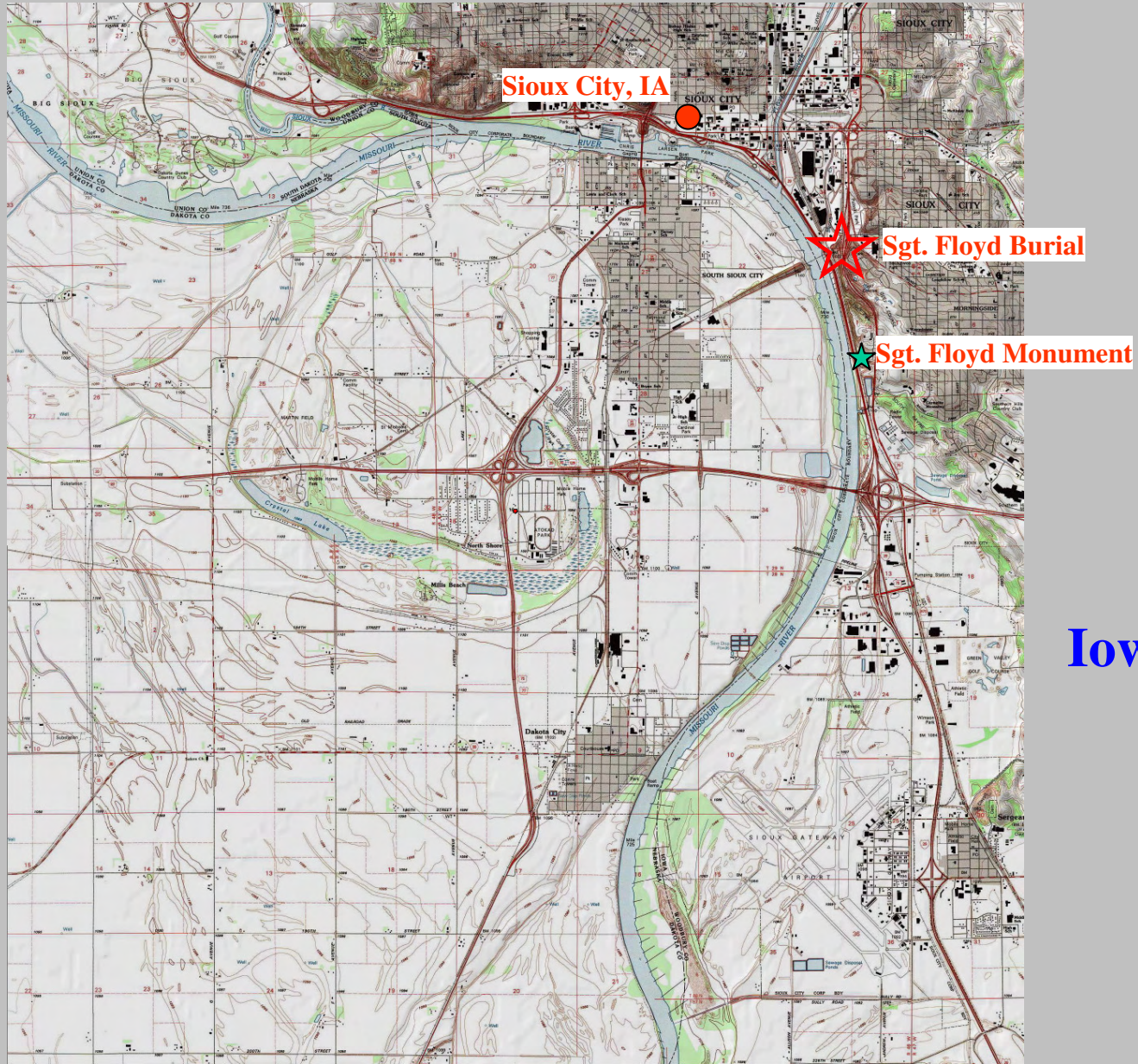
Nebraska



Iowa

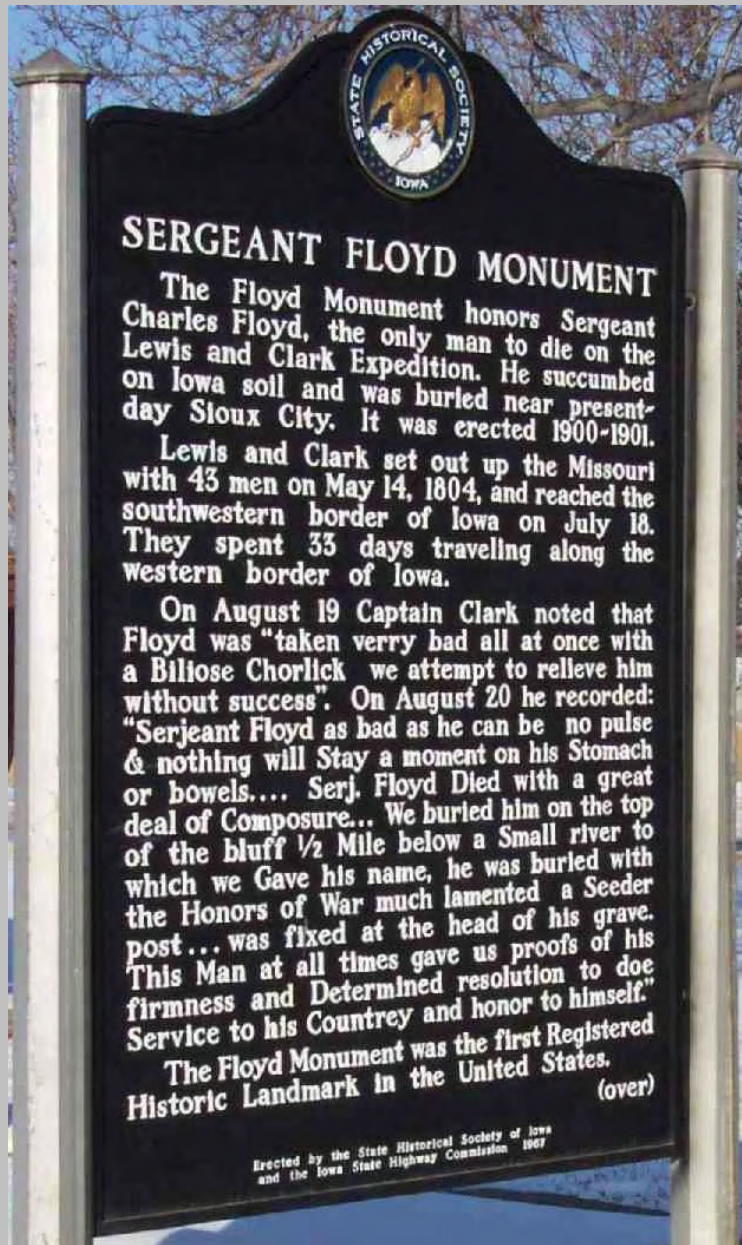
Sioux City – Sgt. Floyd Journal Map

Nebraska

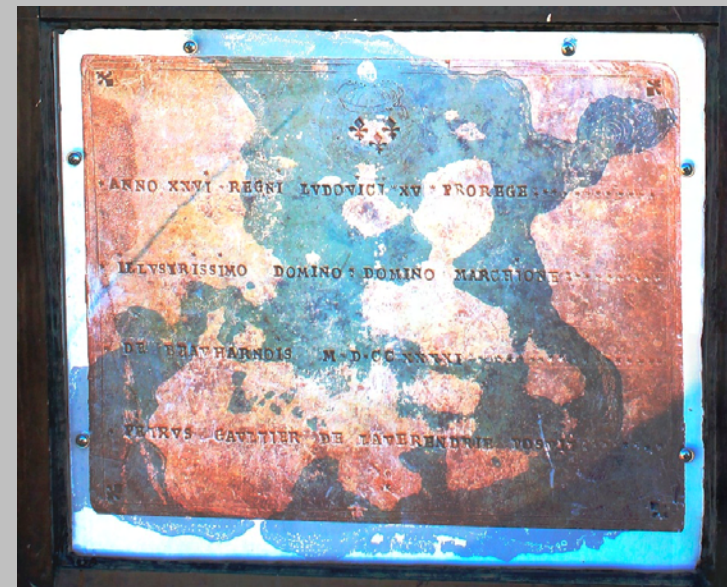


Iowa

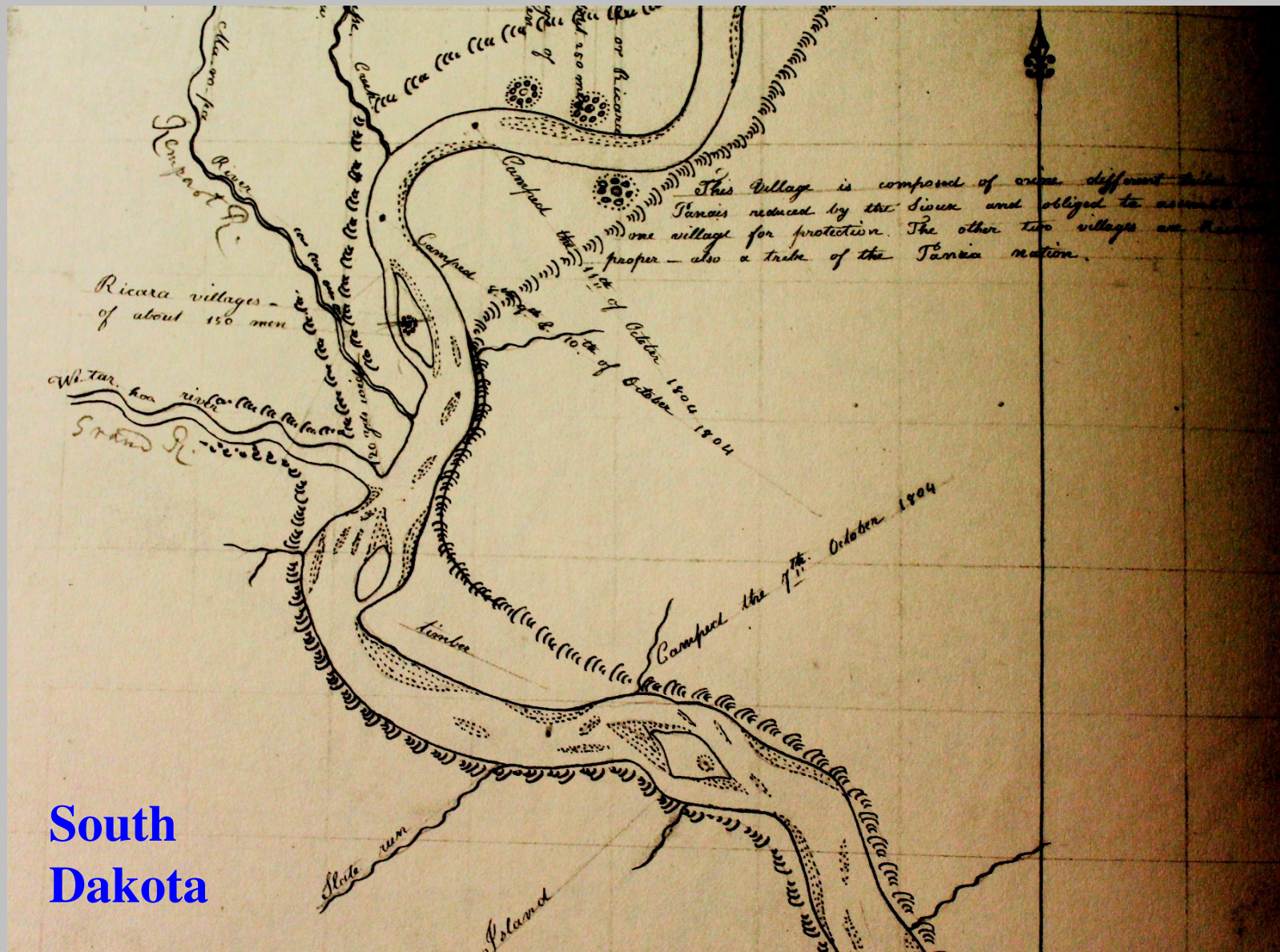
Sioux City – Sgt. Floyd Topo Map



Sgt. Floyd Monument, Sioux City

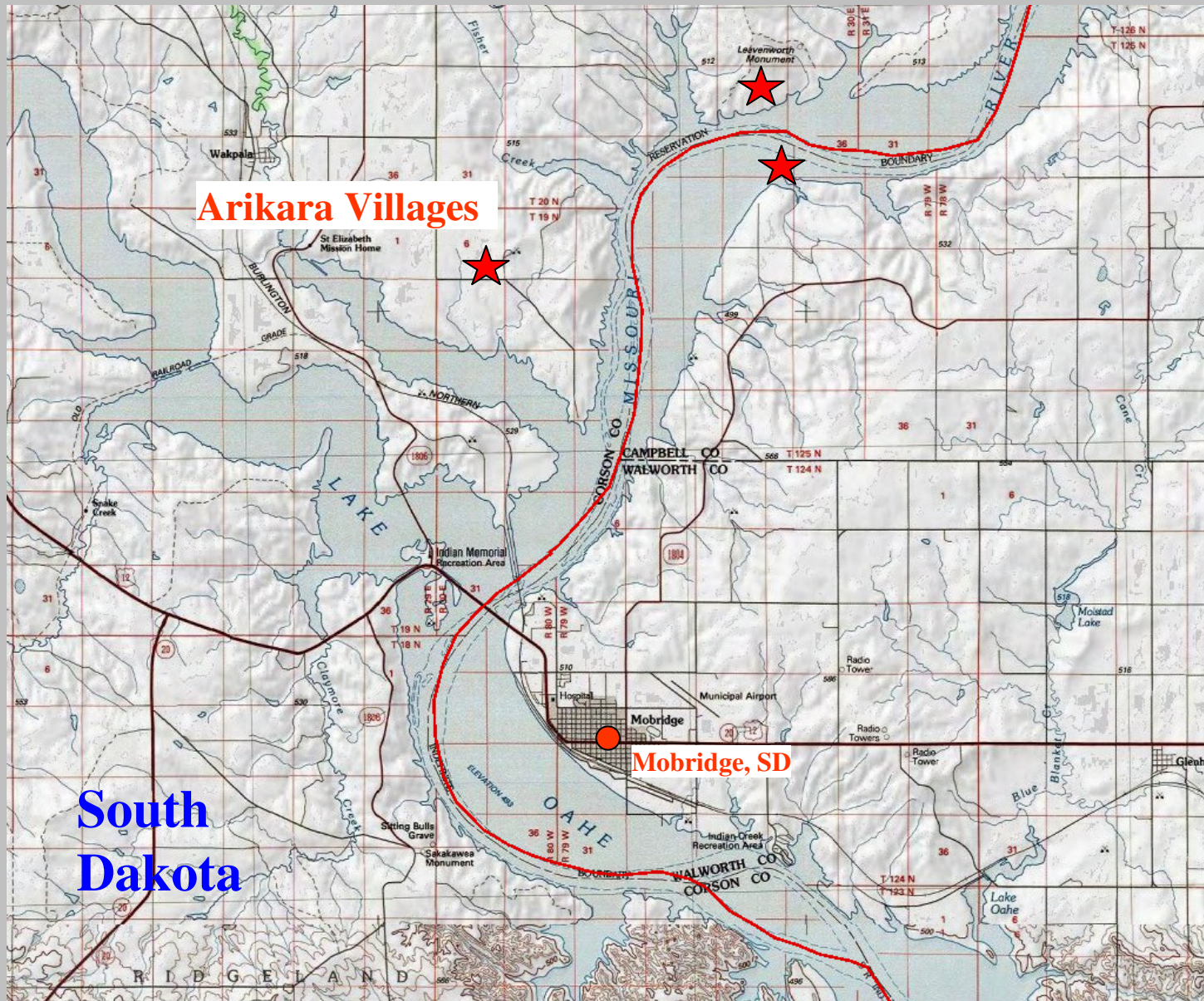


Lead Plate: Verendres Expedition 1743 (South Dakota)



**South
Dakota**

Arikara Villages Journal Map

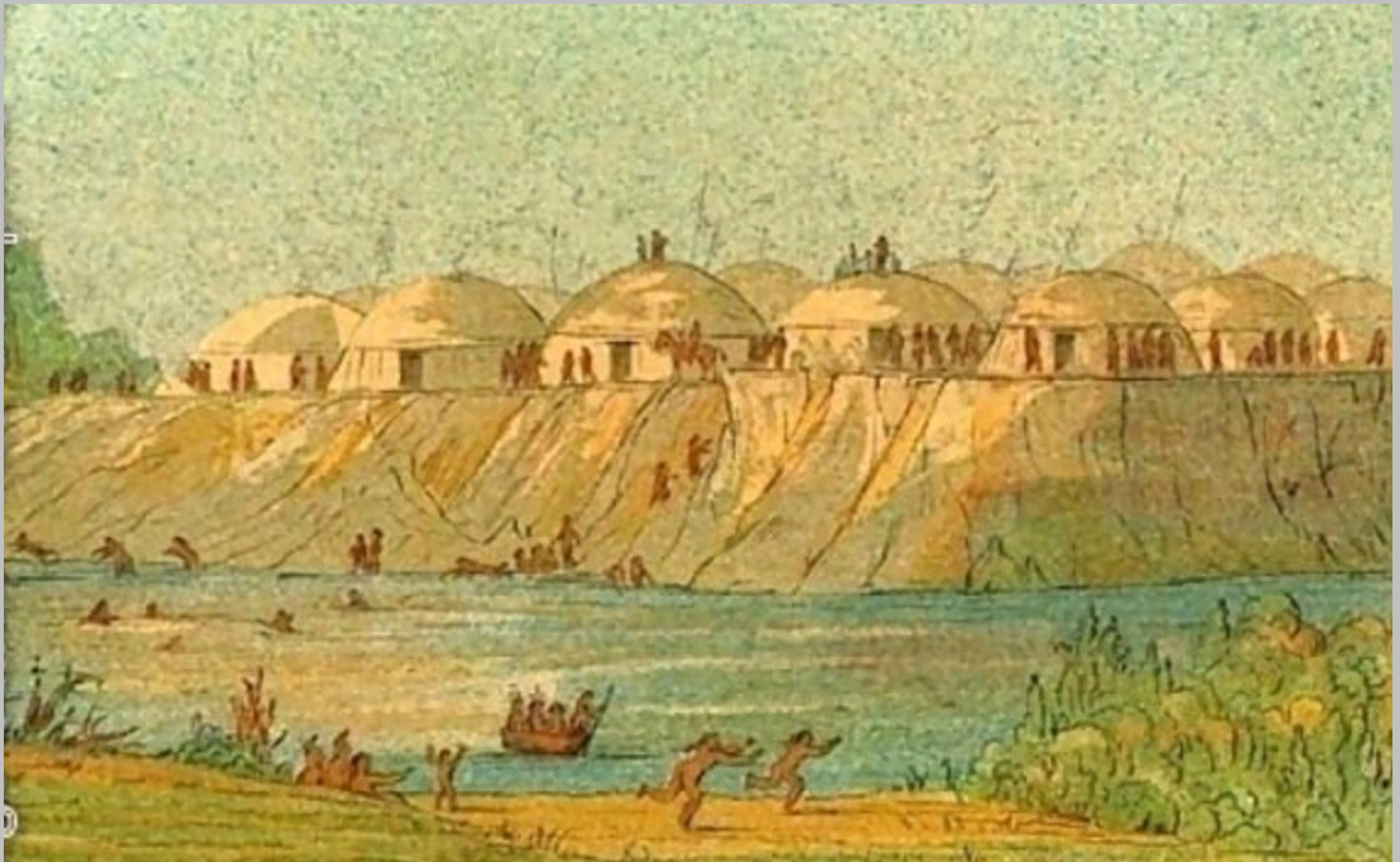


Arikara Villages Topo Map



**South
Dakota**

**Arikara Village 2016
(View Southward)**



North Dakota **A Village of the Hidatsa Tribe at Knife River, c1832**



Minnaterree Village. formerly located northwest of present-day Bismarck, N.D., as portrayed by George Catlin, c1832.

**North
Dakota**



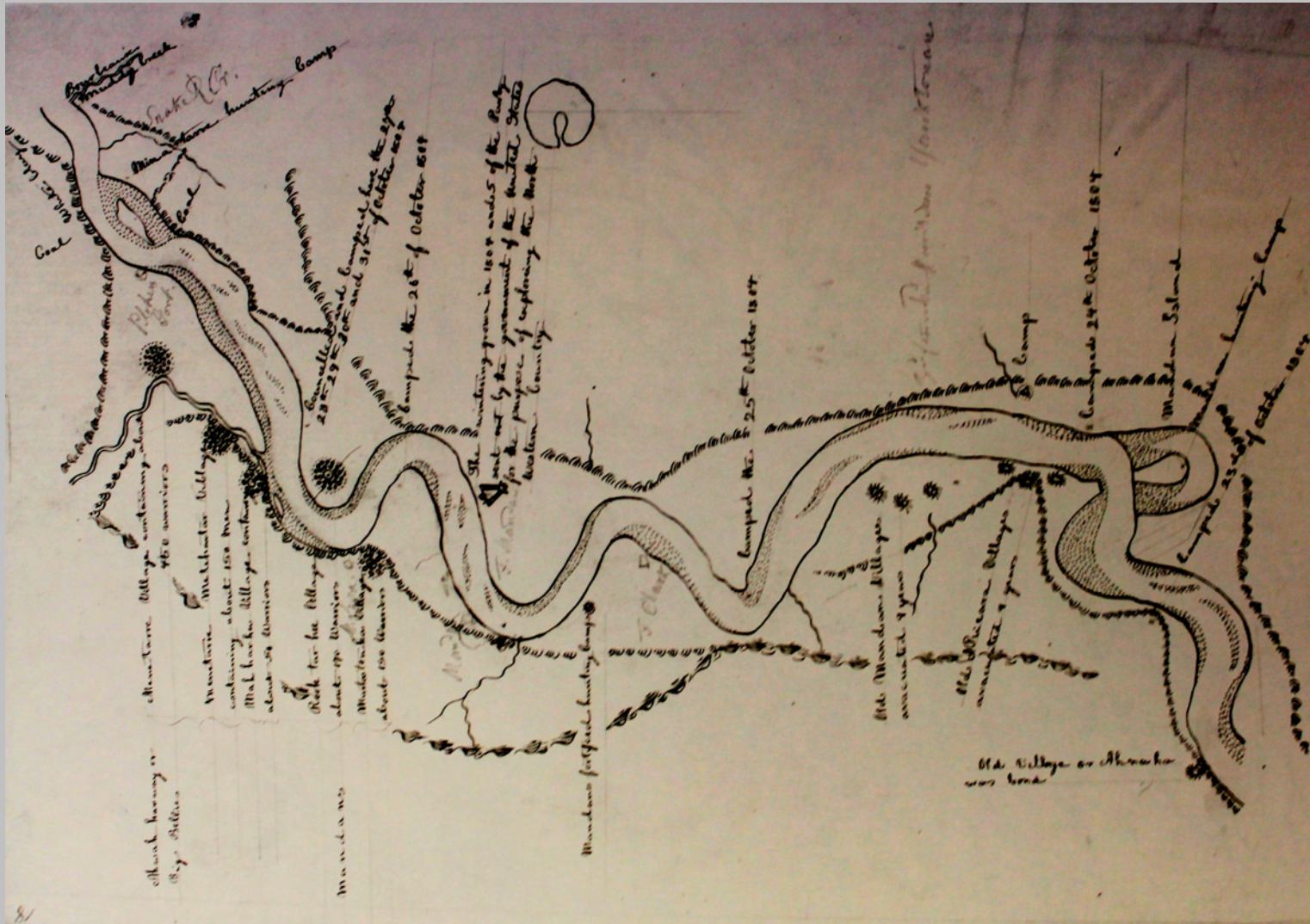
Slant Village, once home of the Mandan Indians near Mandan, N.D., now restored as a historical attraction along the Lewis and Clark Trail.

Surprises and Adventures

Scarify

October 9, 1805 (Clark): a woman fainted madly &c. &c. Singular acts of this woman in giving in Small potions all She had & if they were not received She would Scarrify her Self in a horrid manner &c.

October 9, 1805 (Ordway): one of their women was taken with fit by one of our fires. She began Singing Indian and to giving all around hir Some commass roots, and brasslets which hung about hir one of our party refused to take them from hir. She then appeared angry threw them in the fire. took a Sharp flint from hir husband and cut both of hir arms in Sundry places So that the blood gushed out. She Scraped the blood in hir hand and Eat it, and So continued in this way about half an hour then fainted or went in to a fit Some time then came too by their puting water on hir and Seemed to take great care of hir &C



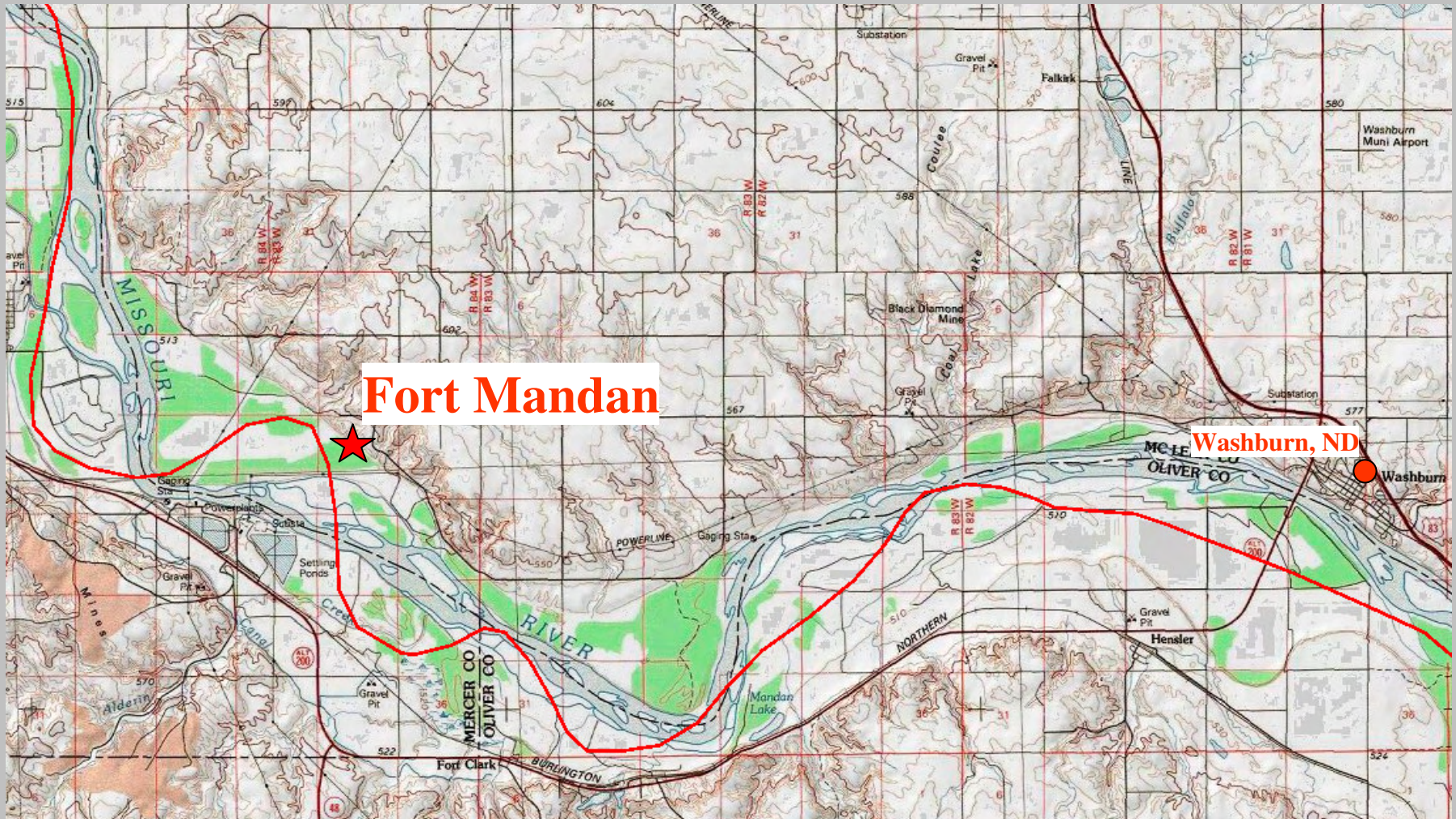
North
Dakota

Fort Mandan Journal Map



**North
Dakota**

Fort Mandan Sat Map



Fort Mandan

Washburn, ND

Fort Mandan Topo Map

**North
Dakota**



Fort Mandan, North Dakota



Fort Mandan, North Dakota

Montana

Yellowstone River

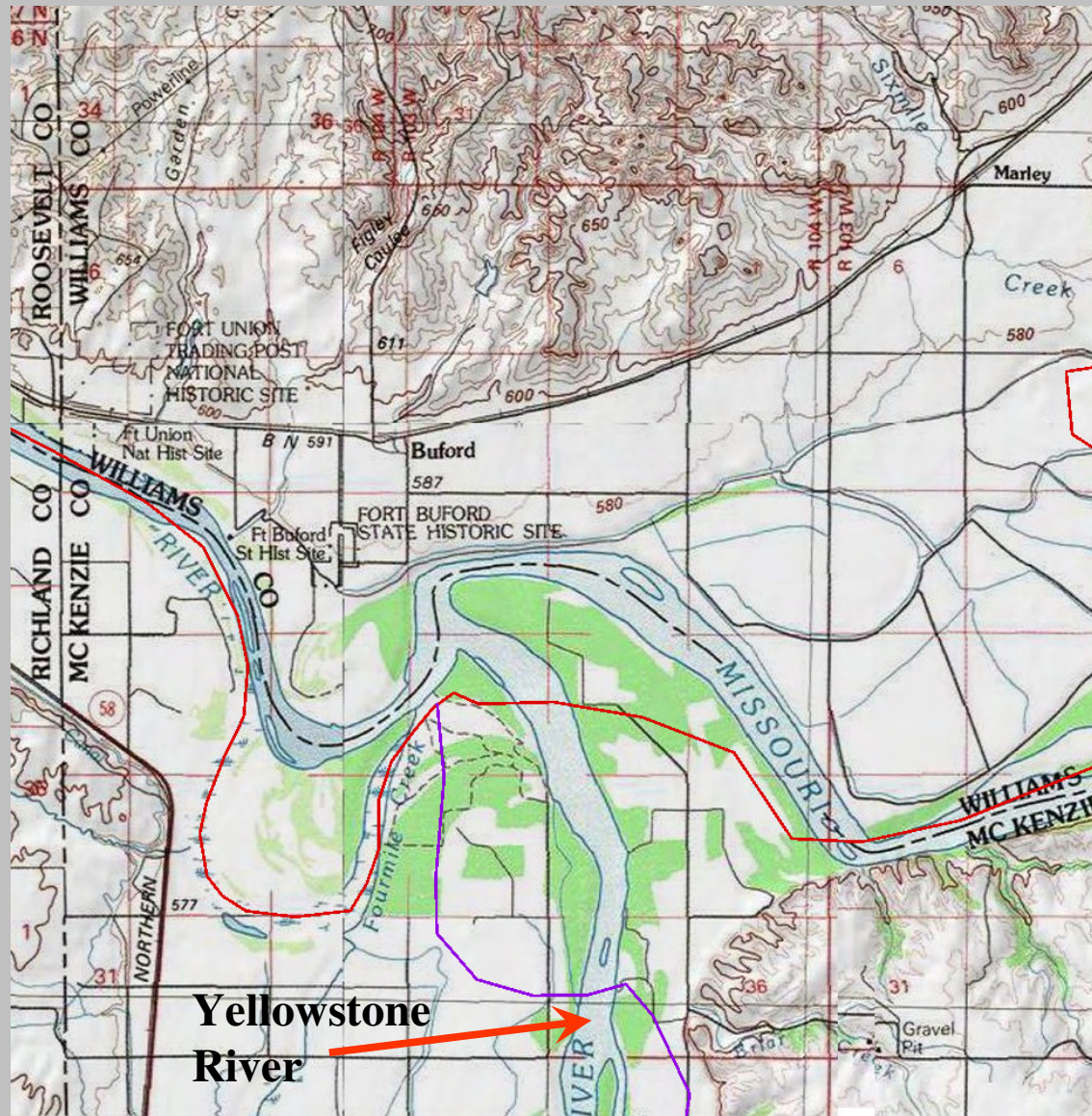


North
Dakota

Yellowstone River Journal Map

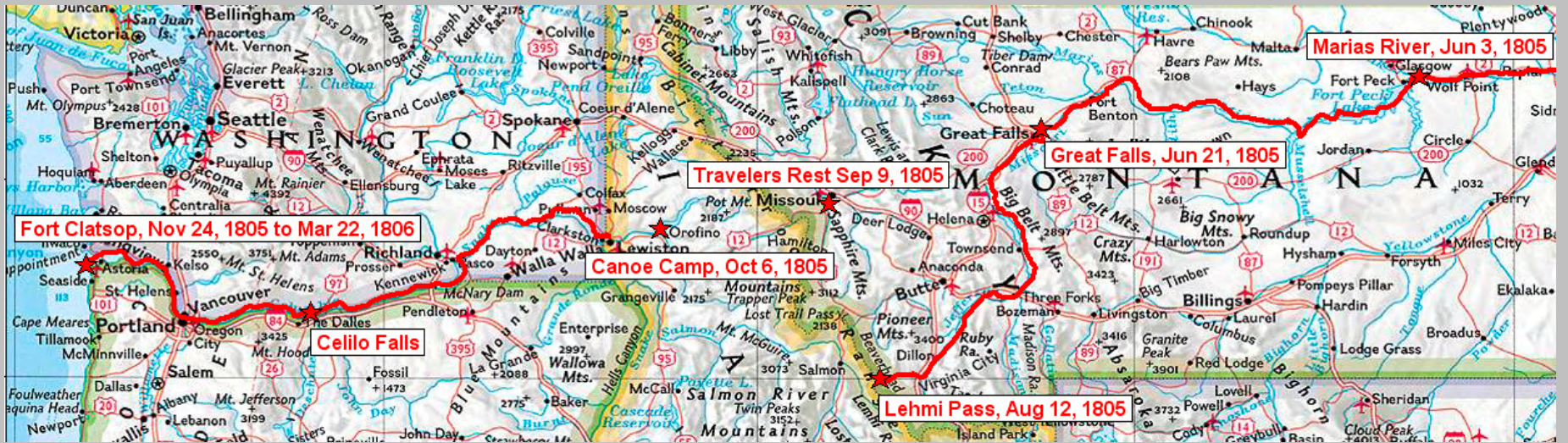
Montana

North
Dakota



Yellowstone River Topo Map

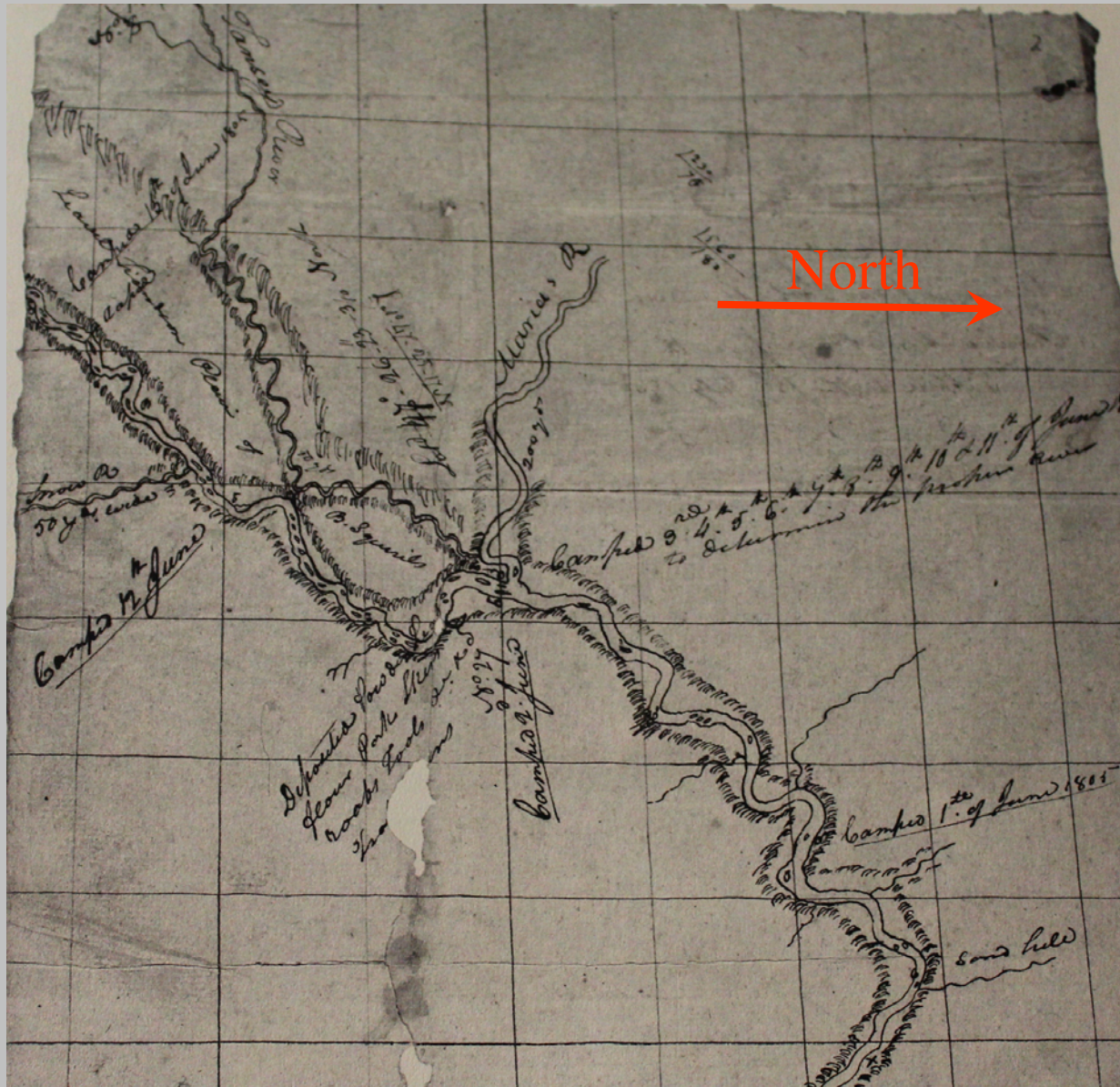
Questions?



Marias River to Fort Clatsop 1805

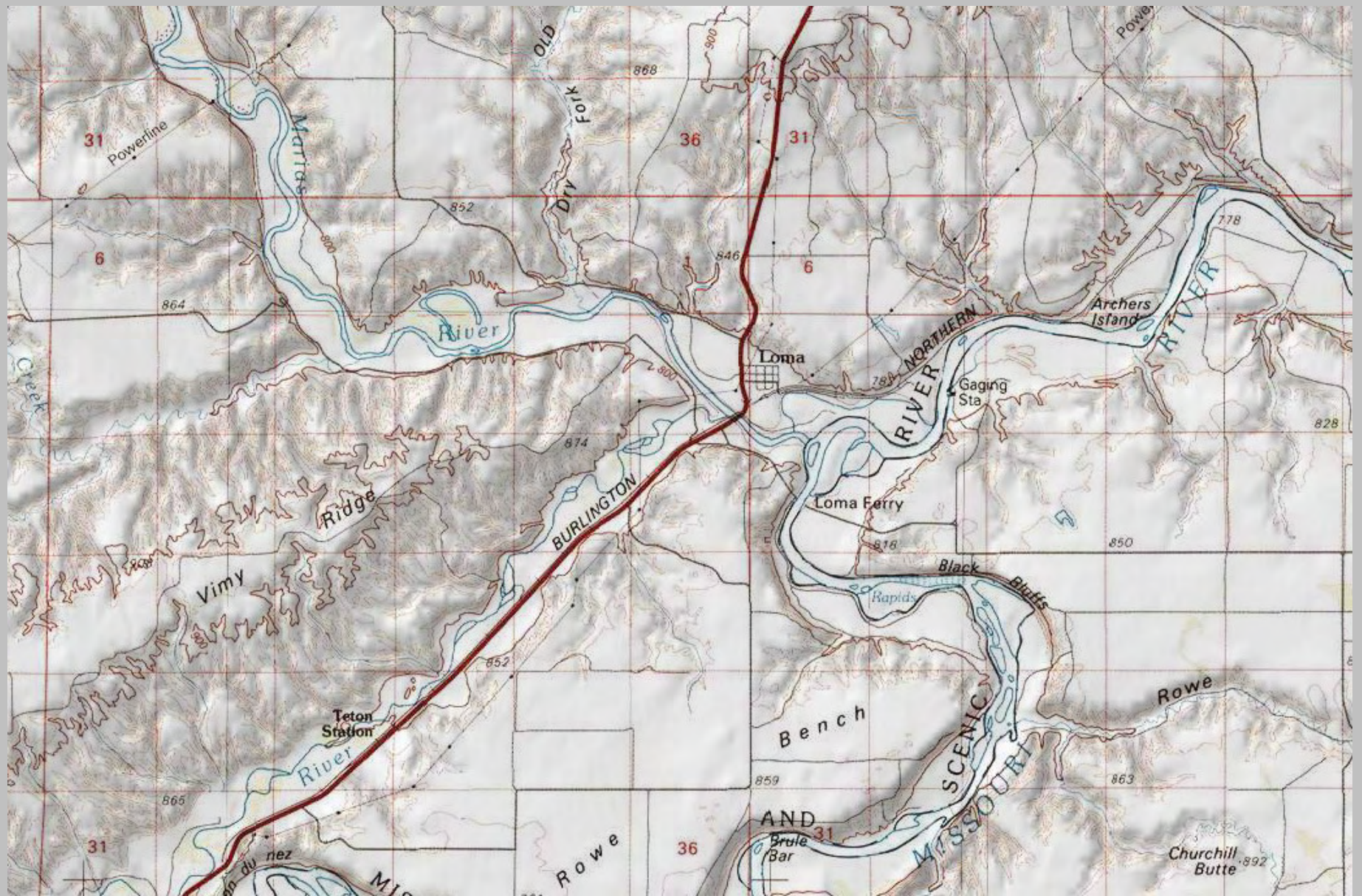
https://en.wikipedia.org/wiki/Fort_Mandan

http://www.pbs.org/lewisandclark/inside/idx_corp.html



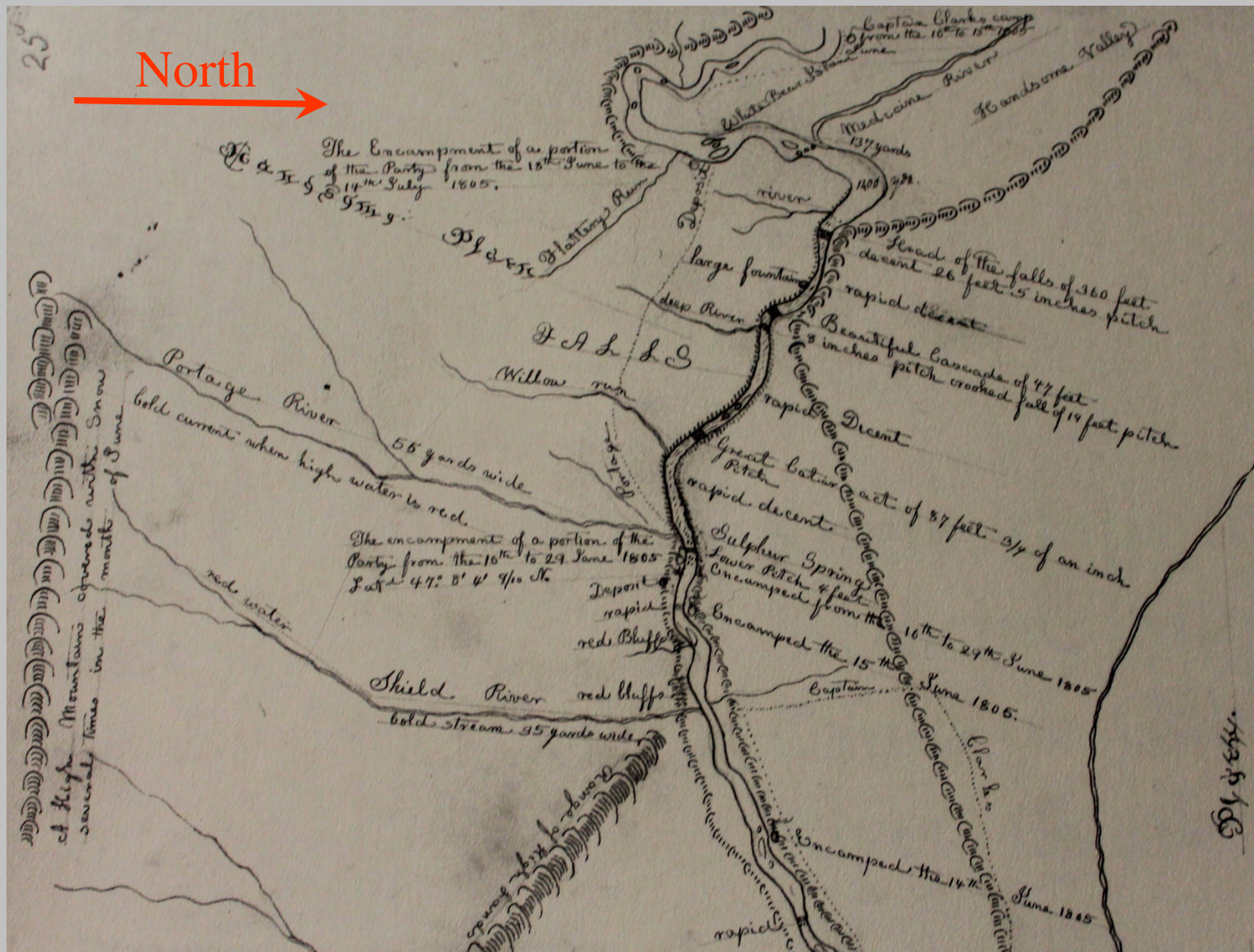
Montana

Marias River Journal Map



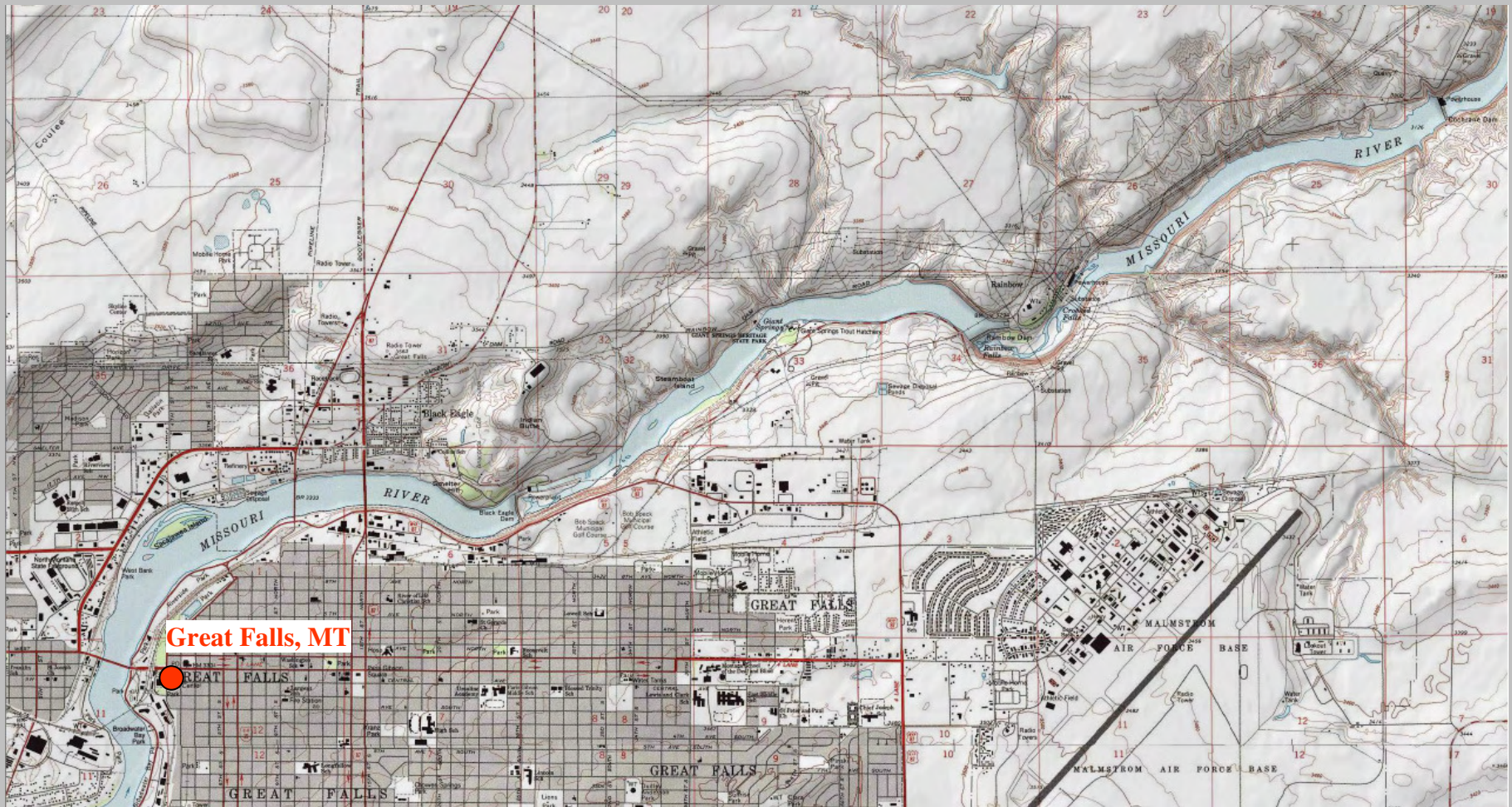
Marias River Topo Map

Montana



Montana

Great Falls Journal Map



Montana

Great Falls Topo Map



Black Eagle Falls, Great Falls, Montana



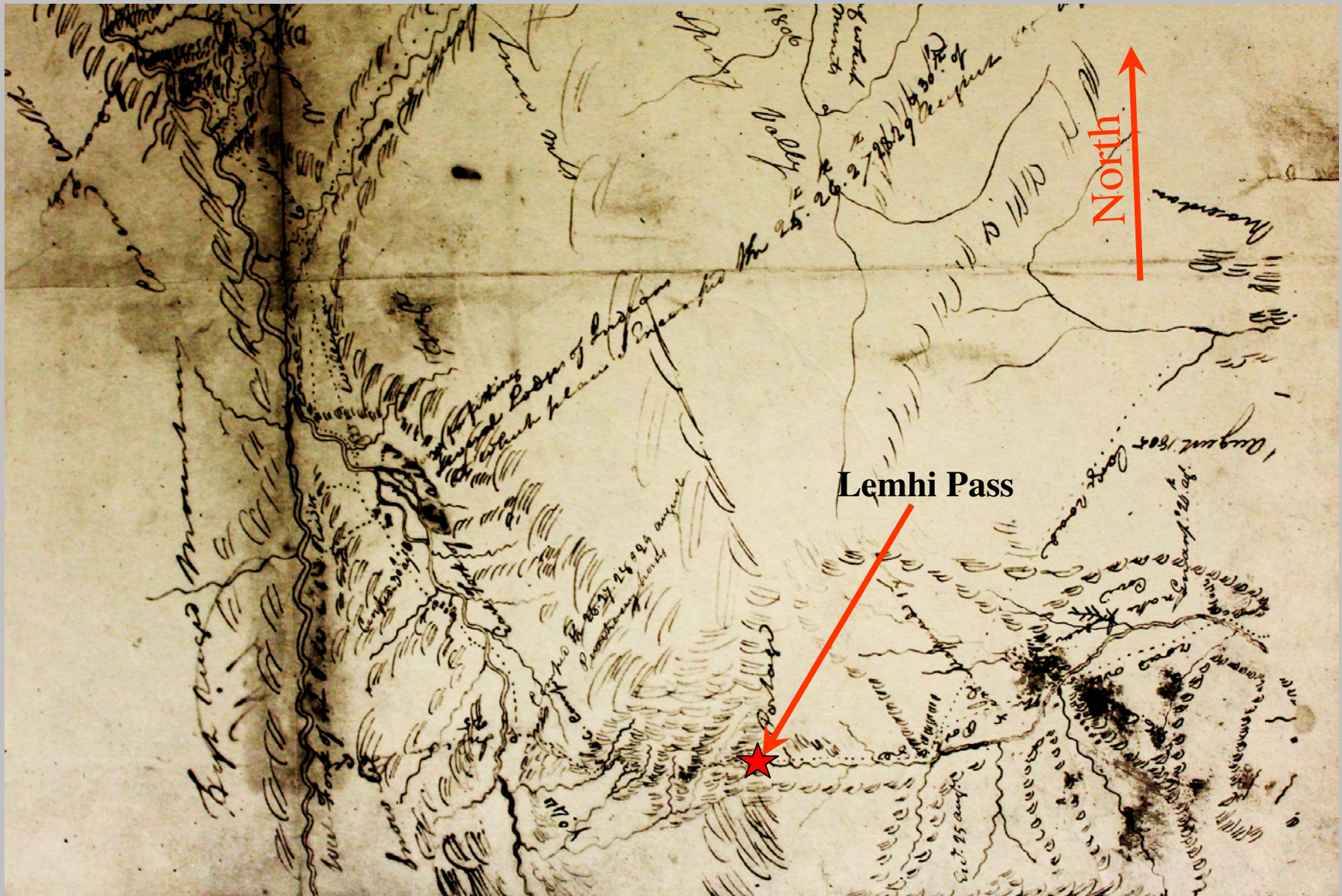
Black Eagle Falls, Great Falls, Montana



Great Falls, Montana

Surprises and Adventures

August 21, 1804: In a monumental act of democracy, the Corps of Discovery held an election. All men, including York, Clark's slave, voted. They elected Patrick Gass as a new sergeant.



Idaho

Lemhi Pass Journal Map

Montana



Idaho

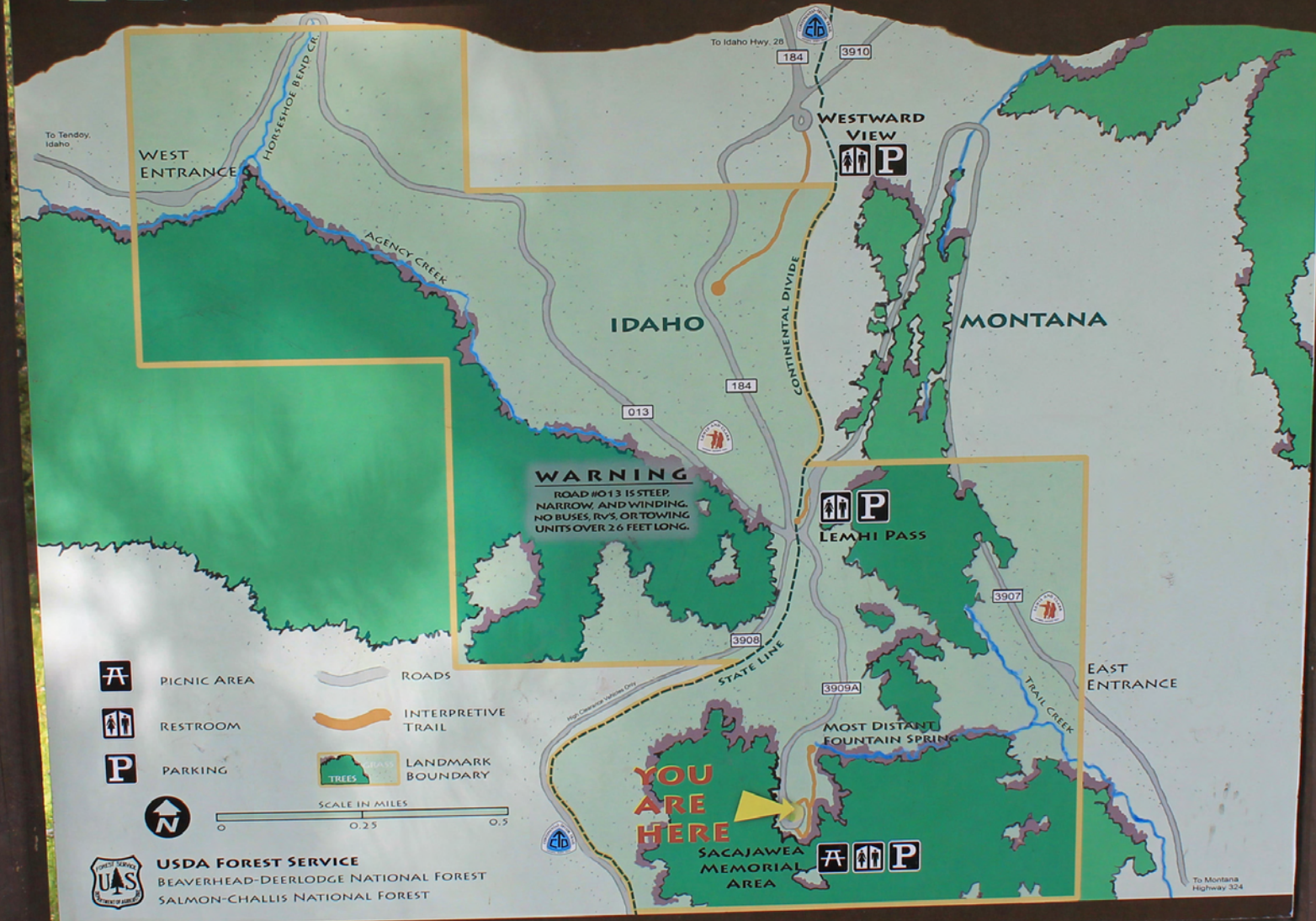
Montana

Lemhi Pass Topo Map



Lemhi Pass Aerial Photo

LEMHI PASS NATIONAL HISTORIC LANDMARK





Lemhi Pass Photo

Idaho

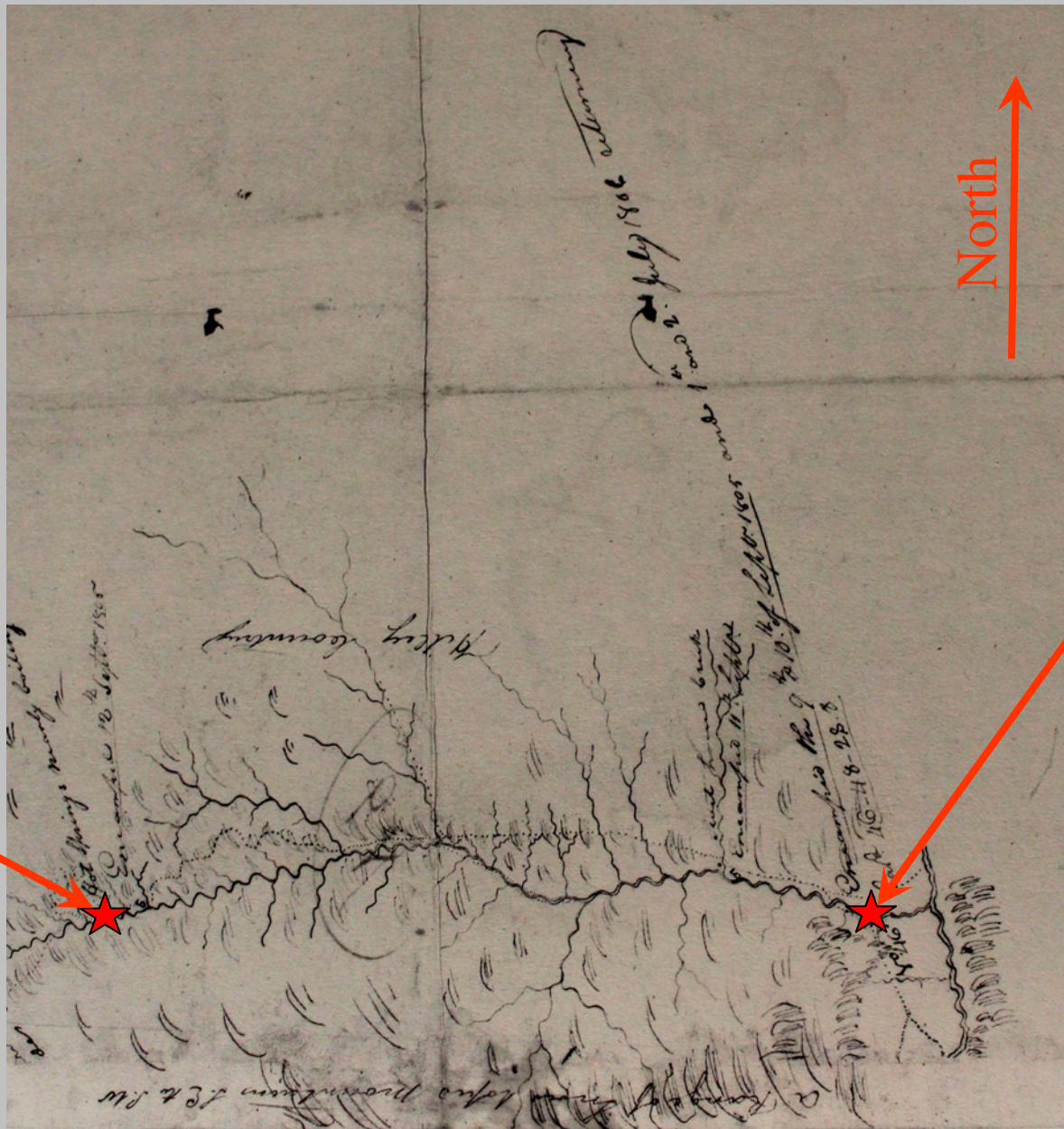


Lemhi Pass Photo – What Lewis Saw Looking Westward



Lemhi Pass Photo – Grad Students Hiking Westward

Questions?

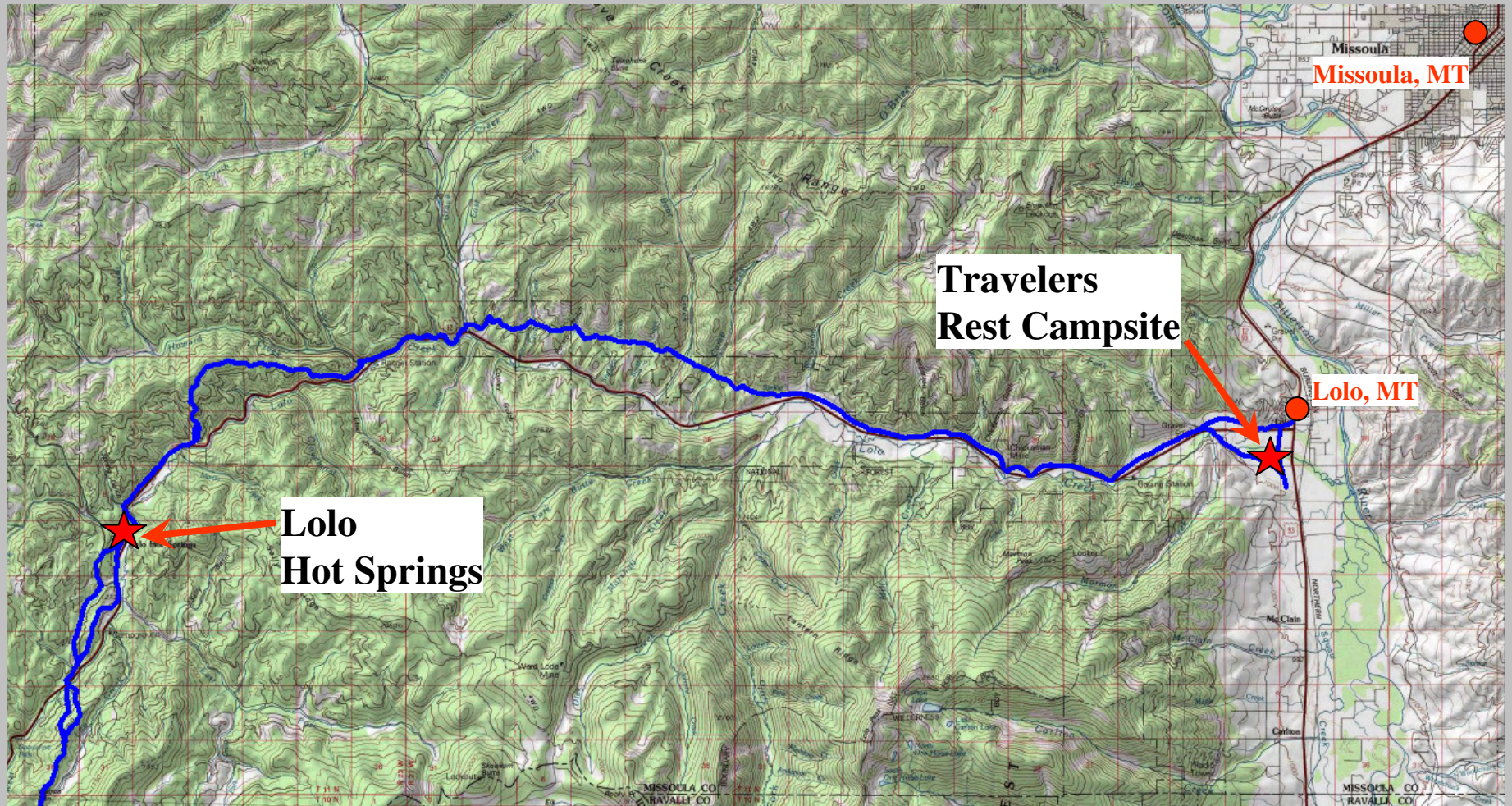


**Lolo
Hot Springs**

**Travelers
Rest Campsite**

Montana

Travelers Rest Journal Map



Travelers Rest Topo Map

Montana

TRAVELLERS REST

BITTER ROOT CHAPTER DAUGHTERS OF THE AMERICAN REVOLUTION
MISSOULA MONTANA DEDICATE THIS MARKER TO CAPTAINS LEWIS AND
CLARK, SAGAJAWEA, THEIR INSPIRATION AND GUIDE AND THE BRAVE MEN
OF THE TRANS-MISSISSIPPI EXPEDITION WHO ENGAMPED ON LO LO
CREEK SEPTEMBER 10 - 1805



ORDWAY	WILLARD	COLTER	BRATTON
GASS	M'NEAL	HALL	THOMPSON
PRYOR	WISER	COLLINS	WHITEHOUSE
WINDSOR	LEPAGE	WERNER	FIELDS BROTHERS
GIBSON	HOWARD	FRAZIER	DROUILLARD
SHIELDS	POTTS	SHANNON	GOODRICH
	LABICHE	GRUZATTE	

CHABONEAU HUSBAND OF SAGAJAWEA, BAPTISTE
THEIR BABY AND YORK THE SLAVE

DEDICATED

OCTOBER 9-1925

A C M CO



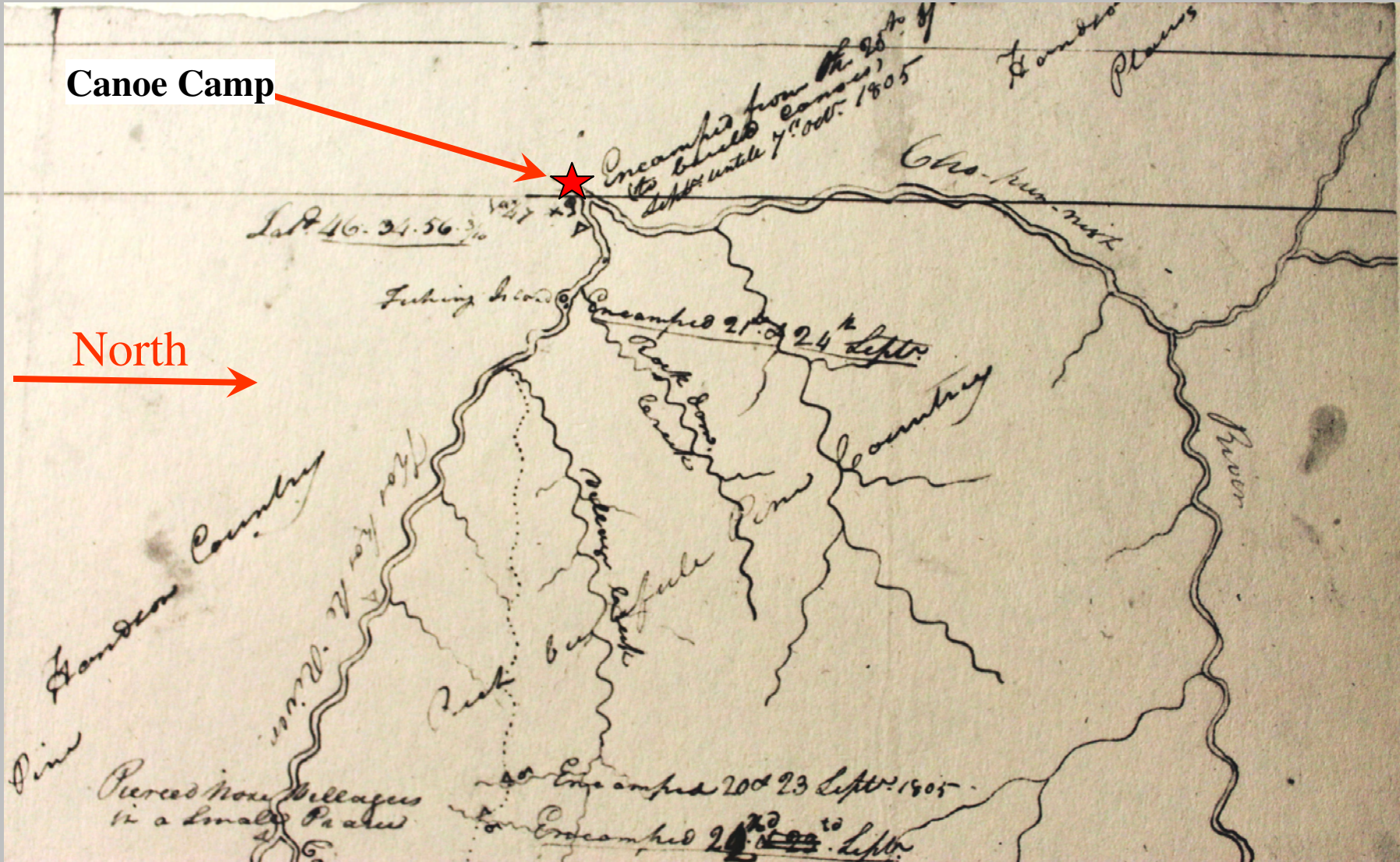
Travelers Rest Campsite, Aerial Photo



Travelers Rest Campsite (telephoto)



Canoe Camp Sign, 1965

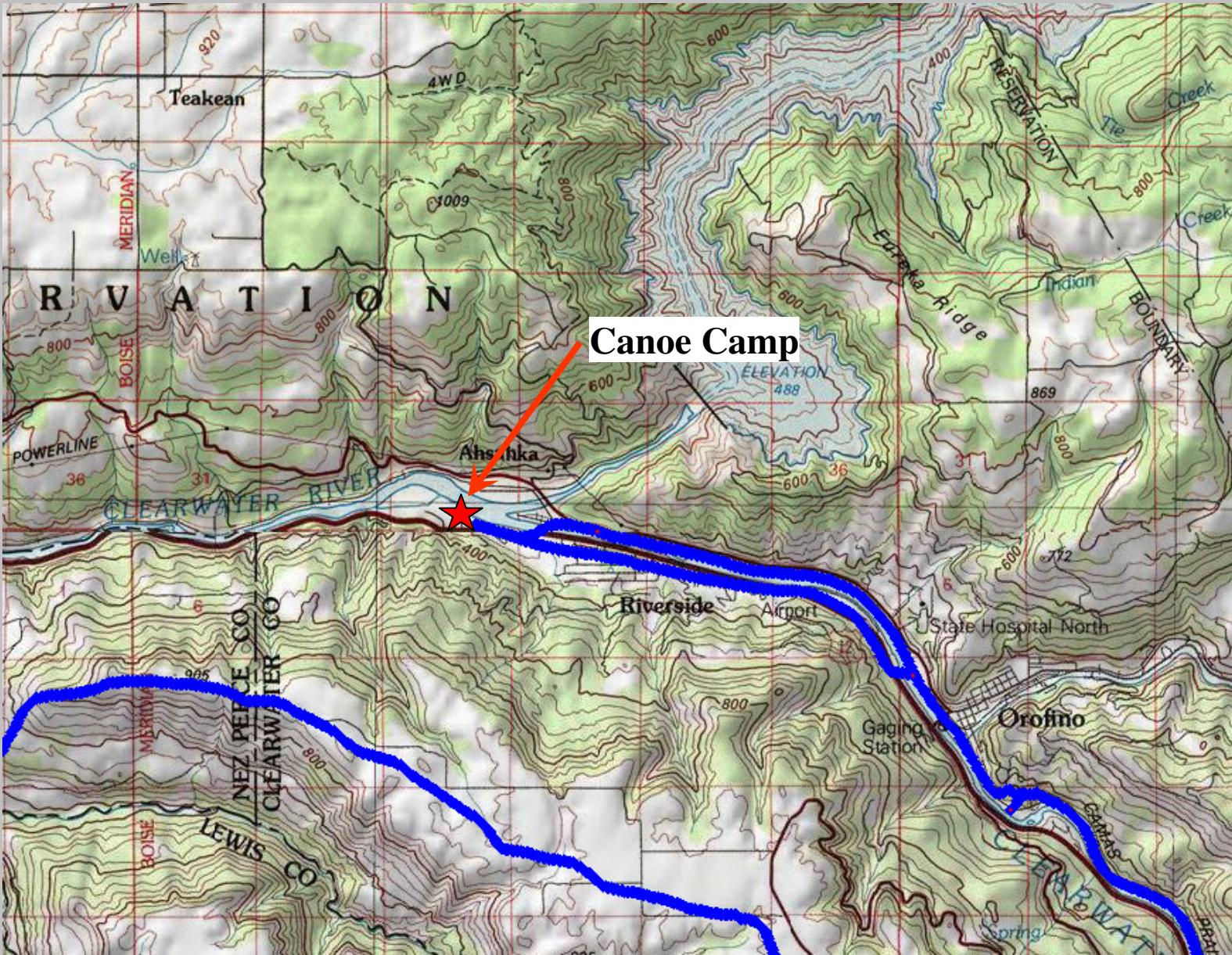


Canoe Camp

North

Idaho

Canoe Camp Journal Map



Idaho

Canoe Camp Topo Map



Canoe Camp Aerial Photo

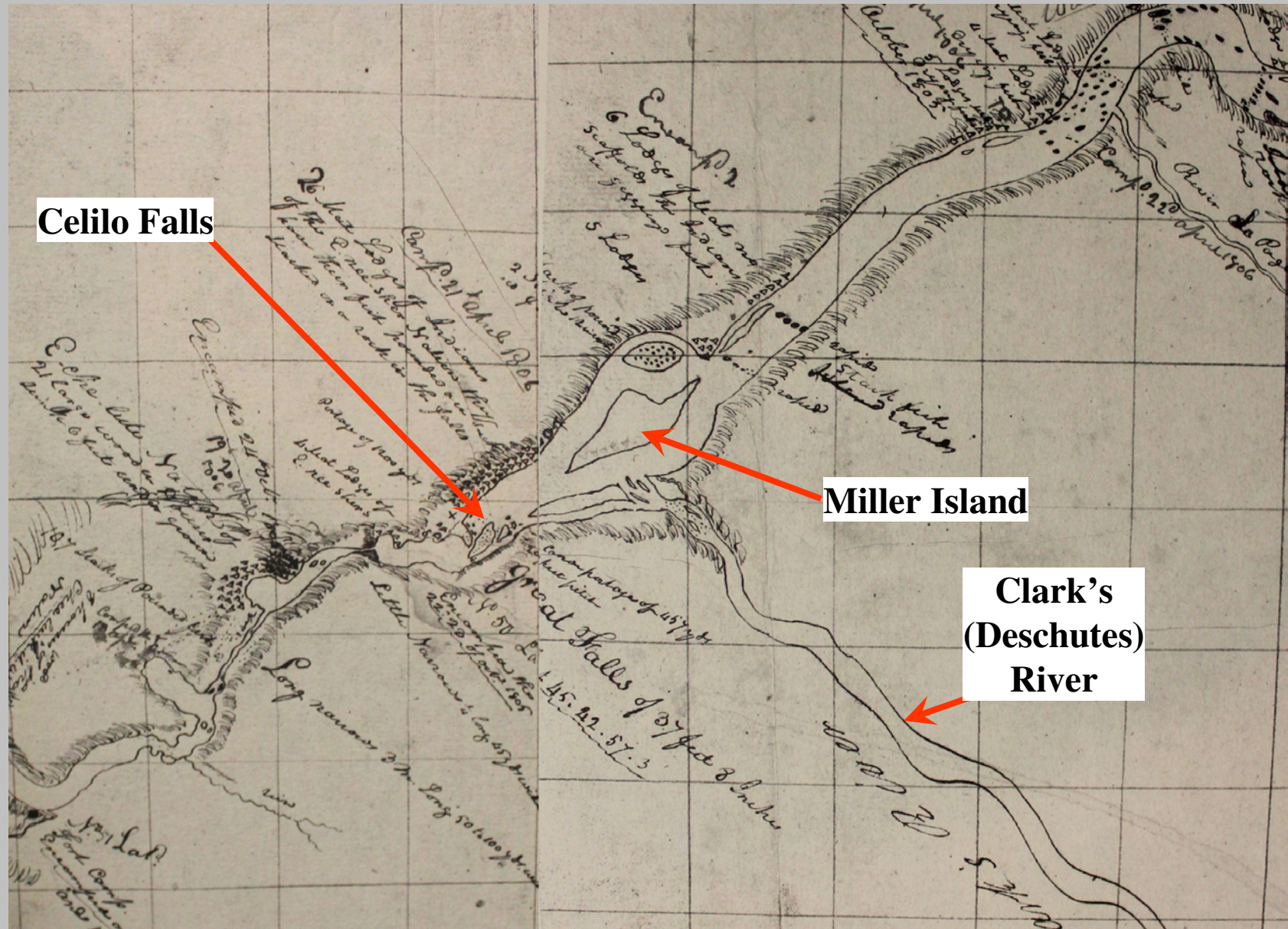


Canoe Camp Telephoto

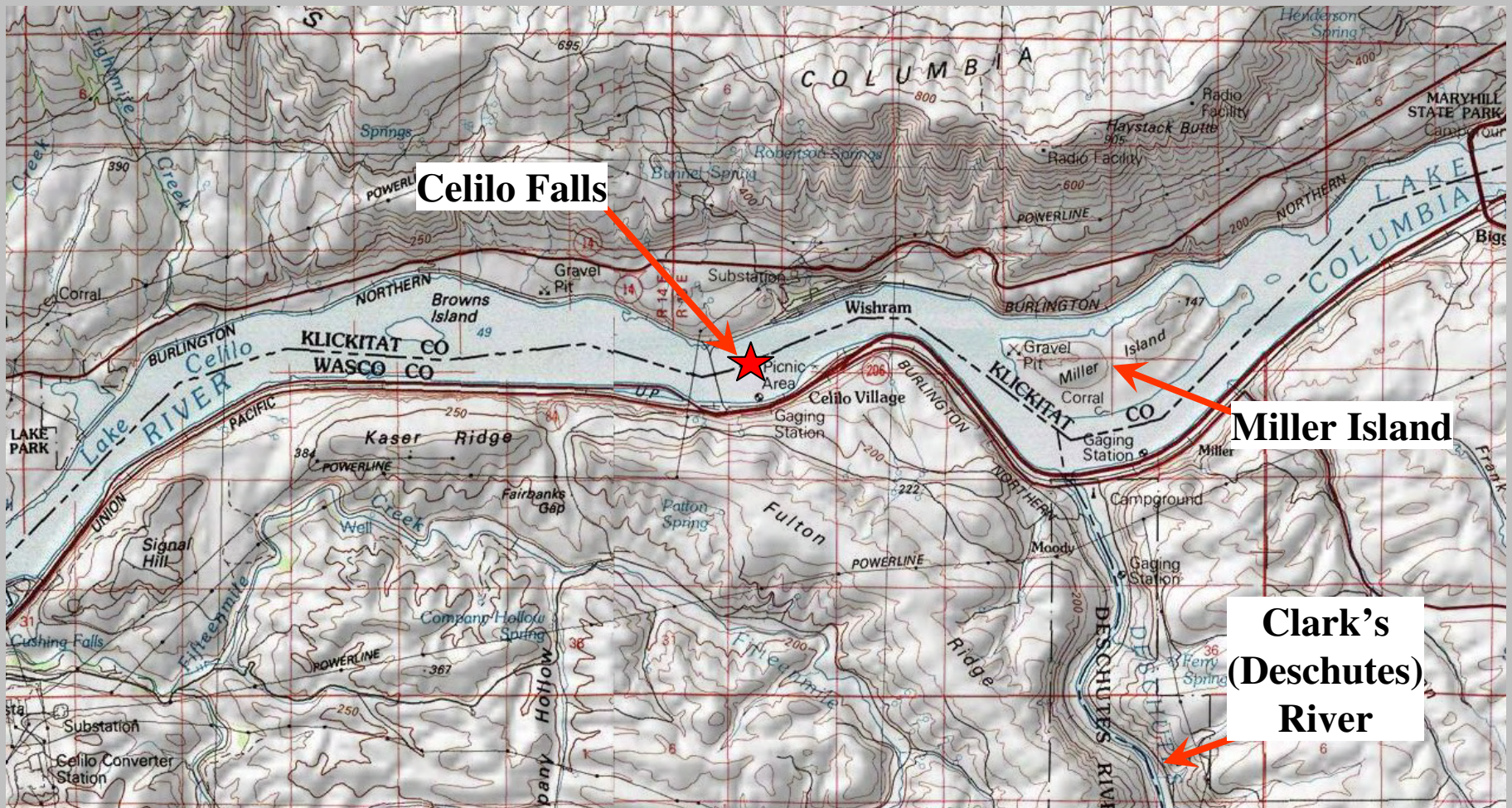
Surprises and Adventures

The ‘official’ version of the Lewis and Clark National Historic Trail, by the National Park Service, does not include numerous short land routes and explorations. The most glaring omission is the route of Sgt. Ordway from the Clearwater River, west to the Salmon River. He traveled over 130 miles roundtrip.

These other routes of the Lewis and Clark Trail will not be included unless Congress changes the Historic Trail Act.

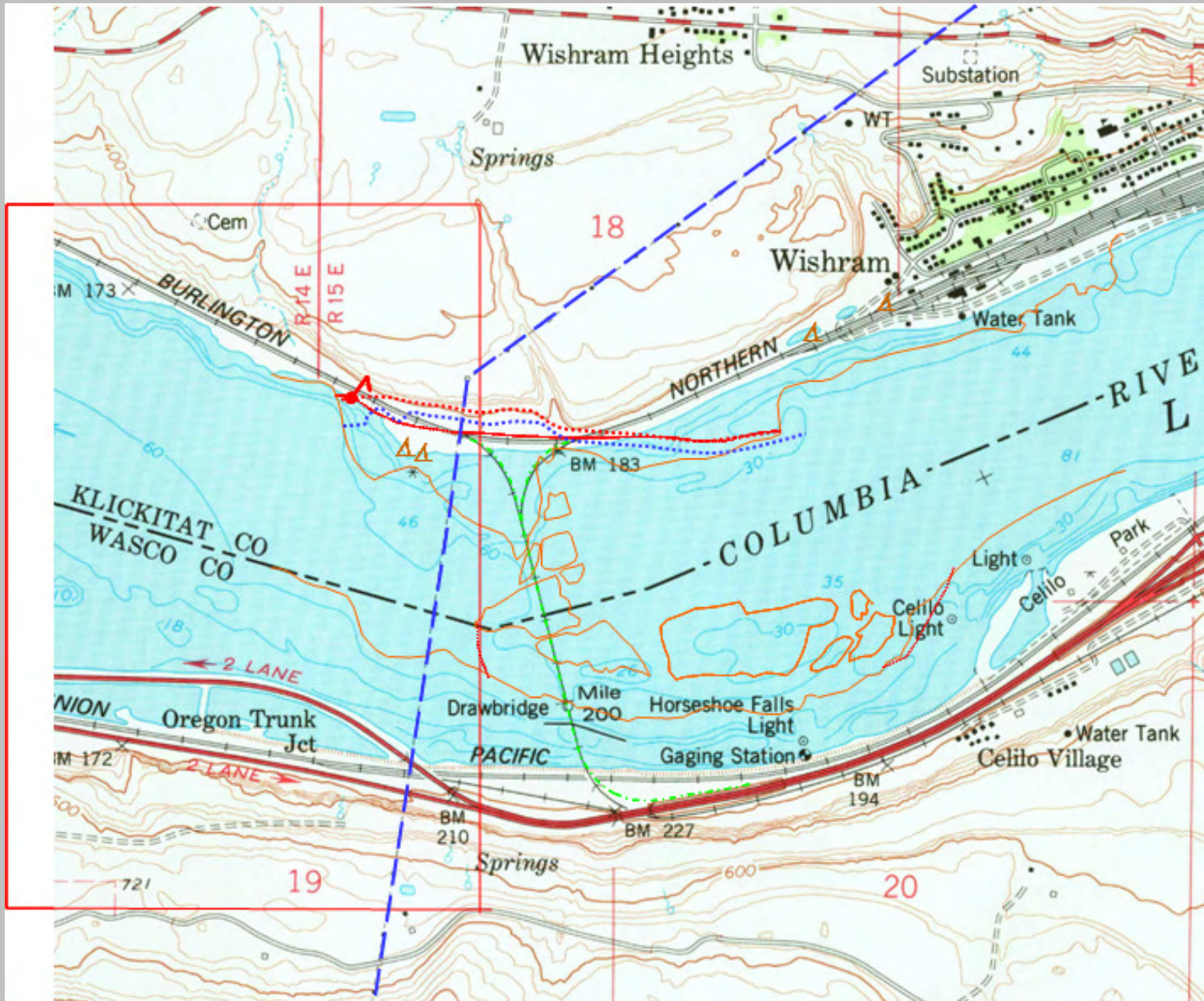


Oregon-Washington Celilo Falls Journal Map #1



Oregon-Washington

Celilo Falls Topo Map



Oregon-Washington Celilo Falls Topo Map



Falls

*Sand
rock*

Pitch of 20 feet

*87 feet 8 inches falls
The river is 37 feet 8 inches
wide at the throat of about 900 yds.*

*1. Fall of Celilohead
River is 37 feet 8 inches
wide at the throat of about 900 yds.*

Celilo Falls Journal Map #2



Celilo Falls L&C Map #3



Celilo Falls, 1935



Celilo Falls Salmon Fishing, 1950s



Celilo Falls (Salmon Fishing??), 2014





Horace Axtel, Nez Perce Tribal Elder, 1996

The End

Questions?

Photo Gallery

3000+

Questions?