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SALT LAKE CITY CORPORATION

Engineering Department

Salt Lake City 1, Utah

May 12, 1947

Mr. Ed. H. Watson
State Engineer of
State of Utah
Capitol Building
Salt Lake City, Utah

Dear Sir:

As you have requested that the Board of Canal Presidents furnish you with a description, location and the elevation of monuments (listed below), which were established by Salt Lake City and the Board of Canal Presidents, or their predecessors, during the years 1884 to 1899 on the Jordan River from the head of the Jordan River north to Indian Ford, and from the head of the Jordan River along the east side of Utah Lake south to what is known as Snail Island, the following is a list of the monuments requested from the head of the Jordan River north to Indian Ford.

List of Monuments

- 1st. Monument at the head of the Jordan River - a red sandstone monument at fisherman's cabin, established 1885.
- 2nd. A large lake monument established by Board of Canal Presidents in 1899.
- 3rd. Top of sandstone monument 262 ft. northeast of the northeast corner of wagon bridge across the Jordan River west of Lehi.
- 4th. Steel ring on the southwest corner of the west abutment of the steel wagon bridge across Jordan River west of Lehi.
- 5th. Top of the sandstone monument 168 ft. southeast of the south end of the east bent in the Oregon Short Line Railroad bridge across the Jordan River near Lehi, known as Mercur branch.
- 6th. Top of sandstone monument set 9 ft. north of Station 126 of a line established by A. F. Doremus in 1884 near the new bar on Jordan River.
- 7th. Top of sandstone monument set on line of south side of new dam in front of tool house on the west side of Jordan River at Indian Ford.

The following is a list of monuments requested from the head of the Jordan River south to Snail Island.

List of Monuments

- 1st. Monument at Geneva Resort
- 2nd. Monument at Smith Lake.
- 3rd. Monument at Snail Island set in 1895.
- 4th. Lake Monument at Snail Island set in 1899.

In response to your request, as stated above, April 8, 1947 the Board of Canal Presidents passed a motion authorizing and instructing W. D. Beers, City Engineer and Chairman of the Board of Canal Presidents to search records of the City Engineer's Office and make a report to you as per your request.

The following is a report of W. D. Beers' findings.

Salt Lake City, Utah
May 12, 1947

I, W. D. Beers, hereby certify that I have had the records of the City Engineer's Office searched and find the following:

In 1884 arrangements were made with A. F. Doremus to run a line of levels and establish monuments between the head of the Jordan River and the Turner Dam, which is 3/4 mile north of Indian Ford.

The monuments placed by Mr. Doremus on this survey are made of sandstone, all of the same dimensions, being about 8 inches square on the top and 1 ft. square at the base and 3 ft. in length, set so that the top was about 1 to 2 inches above the ground surface, and the rod points were marked with a cross cut in the top of the stone.

As the City Engineer's Office had not been established in 1884, we do not have the original notes of Mr. Doremus' survey, but we find that on numerous occasions that Mr. Doremus furnished this office elevations, together with the description of the above monuments, as they are recorded in old field books on file in the City Engineer's Office, and the elevations shown in said field books have been used as the authentic elevations of monuments by the City Engineer's Office.

The following is a tabulation showing the descriptions and location of monuments with the elevations shown with reference to Utah Lake compromise datum.

	Utah Lake Compromise Level is assumed as		0.000
1.	Red sandstone monument at the southwest corner of log cabin at outlet of Utah Lake -- elevation	in ft.	+4.50
2.	Top of brass knob set in new monument located about 24 ft. southeast from the No. 1 monument - brass knob marked 5.985 ft. above compromise, established in 1899.	"	+5.985
3.	Top of sandstone monument 262 ft. northeast of the northeast corner of wagon bridge across Jordan River west of Lehi -- elevation	"	+8.188
4.	Steel ring on top of southwest corner of west abutment of steel bridge west of Lehi, established by Superintendent of Pumping Plant, W. A. Knight in 1907 and checked by Assistant City Engineer Park, April 12, 1909. -- elevation	in ft.	+4.560
5.	Top of sandstone monument 168 ft. southeast of the South end of the east bent in the Oregon Short Line bridge across Jordan River near Lehi, commonly known as Mercur Branch -- elevation	"	+7.176
6.	Top of sandstone monument set 9 ft. north of Station 126 of the line established by A. F. Doremus in 1884 near new bar in Jordan River -- elevation	"	+7.435
7.	Top of sandstone monument set on line of south side of new dam in front of tool house on west side of Jordan River at Indian Ford -- elevation	"	+7.323

The following is a copy of notes from Field Book No. 31 on file in the City Engineer's Office, which shows the elevations of bench marks running south from the head of the Jordan River to Snail Island. You will note from Mr. Doremus' explanation that in running levels he has assumed the elevation of Compromise Level at 100 in place of 0.000 in this field book, and we have copied his descriptions of monuments and the elevations as recorded.

Notes of A. F. Doremus

Page 1. Book 31

Notes of A. F. Doremus of the line of levels, run by himself and Charles DeMoisey, between the head of Jordan River and Snail Island, under authority of the District Court and for the purpose of establishing a permanent monument, on said Island, to perpetuate the elevation of what is known as the Compromise Level of Utah Lake.

The work was commenced on Monday, November 25th, 1895. Two parties were employed. Two levels and two rods were used. The two parties were made up of the following persons who acted in the capacity indicated below:

L. C. Kelsey	-- levelman	
Frank Gawn	-- rodman	Field notes made by Doremus
Chas. W. Hardy	-- levelman	
S. J. Norris	-- rodman	Field notes made by DeMoisey
Grant Andrus	-- stakeman	
Chris. Poulsen	-- teamster	

Compromise Level of lake assumed as having elevation of 100 feet, and the red sandstone monument, at southwest corner of log cabin at head of Jordan River, as having elevation 104.50 feet. Kelsey leading, Hardy following and using same turning points.

GENEVA MONUMENT

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December 3rd, 1895

Note: This B.M. consists of a red sandstone 8 inches square and 3 feet long, set in the ground so that the top of the stone is about 2 inches above the surface of the ground. The rod point is indicated by a cross (+) cut in the top of the stone. The elevation 114.647 is the mean of the two lines of levels. The stone is between the 3rd and 4th trees, in a row of poplars, south of the wooden steps leading down to the water from the top of bluff or table on which the Pavilion and other buildings at this lake resort stand.

Smith Lake Monument

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"B.M. on red sandstone set on north shore of Smith's Lake, arm of Utah Lake, making mean elevation 101.831."

Note: "This B.M. consists of a red sandstone 8 inches square and 3 ft. long, set in the ground so that the top of the stone is about 3 inches above the surface of the ground. The rod point is indicated by a cross (+) cut in the top of the stone. The elevation is 101.831, that being the mean of the two lines of levels. The stone is west of old river channel and north of the Lake, or arm of Lake, at this point, and was set with the view that this might be determined upon as the loca-

tion for the permanent monument; and to, in the meantime, perpetuate the elevation. After setting this stone we returned to Hub. No. 101 under willow, in Knudsen's pasture, previously set as A.B.M., and from there continue line southward to Snail Island, as shown by the notes which here follow:"

Snail Island Monument

Page 12.

Note: "This B.M. consists of a red sandstone 8 inches square and 3 ft. long set in the ground so that the top of the stone is about 3 inches above the surface of the ground. The rod point is indicated by a cross (+) cut in the top of the stone. The elevation 101.058 is the mean of the two lines of levels. The stone is on the crest of Snail Island about one mile south of the Provo Lake Resort, and was set with a view that this might be selected as the site of the permanent monument and to, in the meantime, perpetuate the elevation. The Island is quite narrow at this place, as will appear from the cross-section represented by the notes recorded on the next page (13.)"

On Page 17 of the above book, we find notes by Mr. Doremus, as follows:

December 20, 1899

I, having been authorized by the Board of Canal Presidents to erect a substantial stone monument on the shore of Utah Lake near the outlet of the Jordan River, and after having erected the stone which is a shaft of white sandstone about 6 ft. long set 3 ft. in the ground, surrounded by a cube of concrete about 6 ft. square, and projecting about 3 ft. above the surface of the ground. The stone is hammer dressed to taper from 16 inches square at the ground line to 10 inches square at the top. The stone presents a quarry face with chisel draft at each of the four corners. A brass plate with the words "Lake Monument" is embedded in one face of the stone. The Rod point is a copper bolt set into the stone near its base. For the purpose of transferring the essential point from the old red sandstone at S.W. corner of cabin, I went to the Lake on Wednesday, December 20th, 1899, accompanied by George Chaney. From Lehi we were driven to the Lake by Mr. William Wing - Chaney handling the level and I the rod. We made the transfer in the manner shown by the following notes.

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Observation	Elevation	Description
	104.50	B.M. top of old red sandstone mon. at S.W. corner of cabin
+4.210	108.71	Instrument
-2.725	105.985	On metal rod point on new stone mon. (5.985 above Compromise)
+3.472	109.457	Instrument
-0.430	109.027	On top of shaft - new stone monument
10.28	99.18	Surface of water in Utah Lake (0.82 ft. below Compromise)

Note: Made B.M. on top of shaft as well as on metal rod point as precaution against loss of elevation in case the metal point should be destroyed, a possibility which is suggested by a bullet mark already upon it.

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December 21, 1899

"Thursday, December 21st, 1899, went to Provo, accompanied by Frank Gawn, and met Mr. Chas. DeMoisey. Hired a team at Sharp's stable (Wm. Woodhead driver) and went to Snail Island to transfer elevation from temporary to permanent stone monument recently erected there, by DeMoisey and myself, under authority of the District Court. The monument is similar to the one erected by me at the head of the Jordan River and described on the preceding page. Frank Gawn acted as levelman, DeMoisey as rodman and I as note keeper and photographer. The transfer was made in the manner indicated by the following notes."

Observation	Elevation	Description
	101.058	B.M. on temporary stone monument - established December 2nd, 1895
+3.951	105.009	Instrument
-2.687	102.322	On metal rod point of permanent monument (2.322' above Compromise)
+3.432	105.754	Instrument
-0.373	105.381	On top of shaft of permanent monument.

Note: Established B.M. on top of shaft of the permanent monument in order to perpetuate elevation in case of the destruction of metal rod point."

Respectfully yours,

WDB:mb/nty

/s/ W. D. Beers

City Engineer & Chairman of
Board of Canal Presidents