

TP-00834

TP-00834

NOAA FORM 76-35 (3-76) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
<h1>DESCRIPTIVE REPORT</h1>	
Map No. TP-00834	Edition No. 1
Job No. CM-7408	
Map Classification Final Field Edited Map	
Type of Survey CHART TOPOGRAPHY	
LOCALITY	
State Washington-Idaho	
General Locality Snake River Lower Granite Dam and Reservoir	
Locality Asotin	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 1974 TO 1977 </div>	
REGISTRY IN ARCHIVES	
DATE	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	
DESCRIPTIVE REPORT - DATA RECORD		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division, Atlantic Marine Center, Norfolk, Virginia OFFICER-IN-CHARGE Jeffrey G. Carlen		SURVEY TP. <u>00834</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>Final</u> JOB <u>PH. CM-7408</u>	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division, Atlantic Marine Center, Norfolk, Virginia OFFICER-IN-CHARGE Jeffrey G. Carlen		LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division, Atlantic Marine Center, Norfolk, Virginia OFFICER-IN-CHARGE Jeffrey G. Carlen		LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
I. INSTRUCTIONS DATED			
1. OFFICE		2. FIELD	
Aerotriangulation 9/23/74 Compilation 1/23/75		6/5/74	
II. DATUMS			
1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN		OTHER (Specify)	
2. VERTICAL: <input type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL		OTHER (Specify) National Geodetic Vertical Datum, 1929	
3. MAP PROJECTION Mercator-Central Parallel: 46°25'30"		4. GRID(S) STATE Washington ZONE South	
5. SCALE 1:10,000 at Central Parallel		STATE Idaho ZONE West	
III. HISTORY OF OFFICE OPERATIONS			
OPERATIONS		NAME	
DATE			
1. AEROTRIANGULATION BY METHOD: Wild STK-1 LANDMARKS AND AIDS BY		M. McGinley Jan 1975	
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: Calcomp. CHECKED BY		M. McGinley Jan 1975 R. Robertson Jan 1975 R. Robertson Jan 1975	
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY		L. Neterer, Jr. Jun 1975 A. Shands Jun 1975	
INSTRUMENT: Wild B-8 SCALE: 1:5,000		G. Morris Sep 1976 J. Byrd Sep 1976	
4. MANUSCRIPT DELINEATION PLANIMETRY BY CHECKED BY		D. Butler Sep 1976 J. Byrd Nov 1976	
METHOD: Smooth drafted SCALE: 1:10,000 at Central Parallel		D. Butler Sep 1976 J. Byrd Nov 1976	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY		NA J. Byrd Nov 1976	
6. APPLICATION OF FIELD EDIT DATA BY		J. Roderick Nov 1977	
7. COMPILATION SECTION REVIEW BY		L. Neterer, Jr. Dec 1977	
8. FINAL REVIEW BY		L. Neterer, Jr. Dec 1977	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY		A. L. Shands Jun 1979	
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY		A. L. Shands Jul 1979	
11. MAP REGISTERED - COASTAL SURVEY SECTION BY		E. L. Rolle Aug 1979 E. A. DAUGHERTY NOV 1979	

TP-00834
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-8 "E" and "W"		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE <input type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY		(C) <u>COLOR</u> (P) <u>PANCHROMATIC</u> (I) <u>INFRARED</u>		ZONE Pacific	<input checked="" type="checkbox"/> STANDARD
				MERIDIAN 120th	<input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
74E(C) 5950-5955	06/13/74	14:10	1:10,000	NOTE: Tides are not applicable to this project.	
74E(C) 5964-5968	06/13/74	14:35	1:10,000		
74E(C) 5940-5945	06/13/74	13:57	1:10,000		
W 75-3(P)37-43	02/15/75		1:12,000		
W 75-2(P)221-225	02/14/75		1:12,000		
W 75-2(P)226-230	02/14/75		1:12,000		
* W 75-6(P)176-181	04/21/75		1:12,000		
* W 75-6(P)183-186	04/21/75		1:12,000		

REMARKS

**** Corps of Engineers photography**
*Used for application of field edit items only.

2. SOURCE OF MEAN HIGH-WATER LINE:

The source of the pool shoreline (elev. 738 ft.) is the above listed photography and facilities plans as listed on page 3b, item #7 of this Descriptive Report.

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

Not applicable to this project.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
TP-00833	No Survey	No Survey	No Survey

REMARKS

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYTP-00834
HISTORY OF FIELD OPERATIONS1. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	Sep-Dec 1974
2. HORIZONTAL CONTROL	RECOVERED BY L. Riggers	Jun 1974
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY L. Riggers	Jun 1974
3. VERTICAL CONTROL	RECOVERED BY R. Melby	Sep-Dec '74
	ESTABLISHED BY R. Melby	Sep-Dec '74
	PRE-MARKED OR IDENTIFIED BY R. Melby	Sep-Dec '74
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY None	
	LOCATED (Field Methods) BY None	
	IDENTIFIED BY None	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input checked="" type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input type="checkbox"/> NO INVESTIGATION	BY R. Melby Jan 1975
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY None	Sep-Dec '74
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY None	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
74E(C)5708	AIRPORT, 1945	74E(C)5942	V34-02
74E(C)5712	B.M. A-46, 1945	74E(C)5944	V34-03
		74E(C)5945	V34-04, V34-05
		74E(C)5947	V34-08
		74E(C)5948	V34-06
		74E(C)5964	V34-09, V34-10, V34-11A
3. PHOTO NUMBERS (Clarification of details)		74E(C)5965	V34-11, V34-12
None		74E(C)5967	V34-07, V34-13
		74E(C)5955	V34-14
4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED		74E(C)5952	V34-15, V34-16
None		74E(C)5950	V34-17, V34-18

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☒ REPORT ☐ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

None

NOAA FORM 76-36C
(3-72)

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYTP-00834
HISTORY OF FIELD OPERATIONS1. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	Sep 1977
2. HORIZONTAL CONTROL	RECOVERED BY R. Melby	Sep 1977
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY None	
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY R. Melby	Sep 1977
	LOCATED (Field Methods) BY R. Melby	Sep 1977
	IDENTIFIED BY R. Melby	Sep 1977
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY BY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY R. Melby	Sep 1977
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY None	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED
None2. VERTICAL CONTROL IDENTIFIED
None

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)

W75-6(P)175-181, W75-6(P)184-186

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
W75-6(P)185	SPIRE		

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

Corps of Engineers, GDG-1-0-10/79, GDG-1-0-10/95, GDG-1-0-10/111,
Plans: GDG-1-0-10/31 GDG-1-0-10/112

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

1-Field edit ozalid
1-Field edit report
1-NOAA Form 76-1651-Form 76-40
Geographic Names ReportNOAA FORM 76-36C
(3-72)

NOAA FORM 76-36D
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONTP-00834
RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete pending field edit	June 1975 'Revised Sept 1976	Class III Manuscript	04/04/77	04/04/77
Field edit applied, compilation complete	Nov 1977	Class I Manuscript	02/02/78	
Final Review	Jun 1979	Final	Jul 1979	

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
1		2/3/78	3 Landmarks for charts

2. ☒ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: February 3, 19783. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

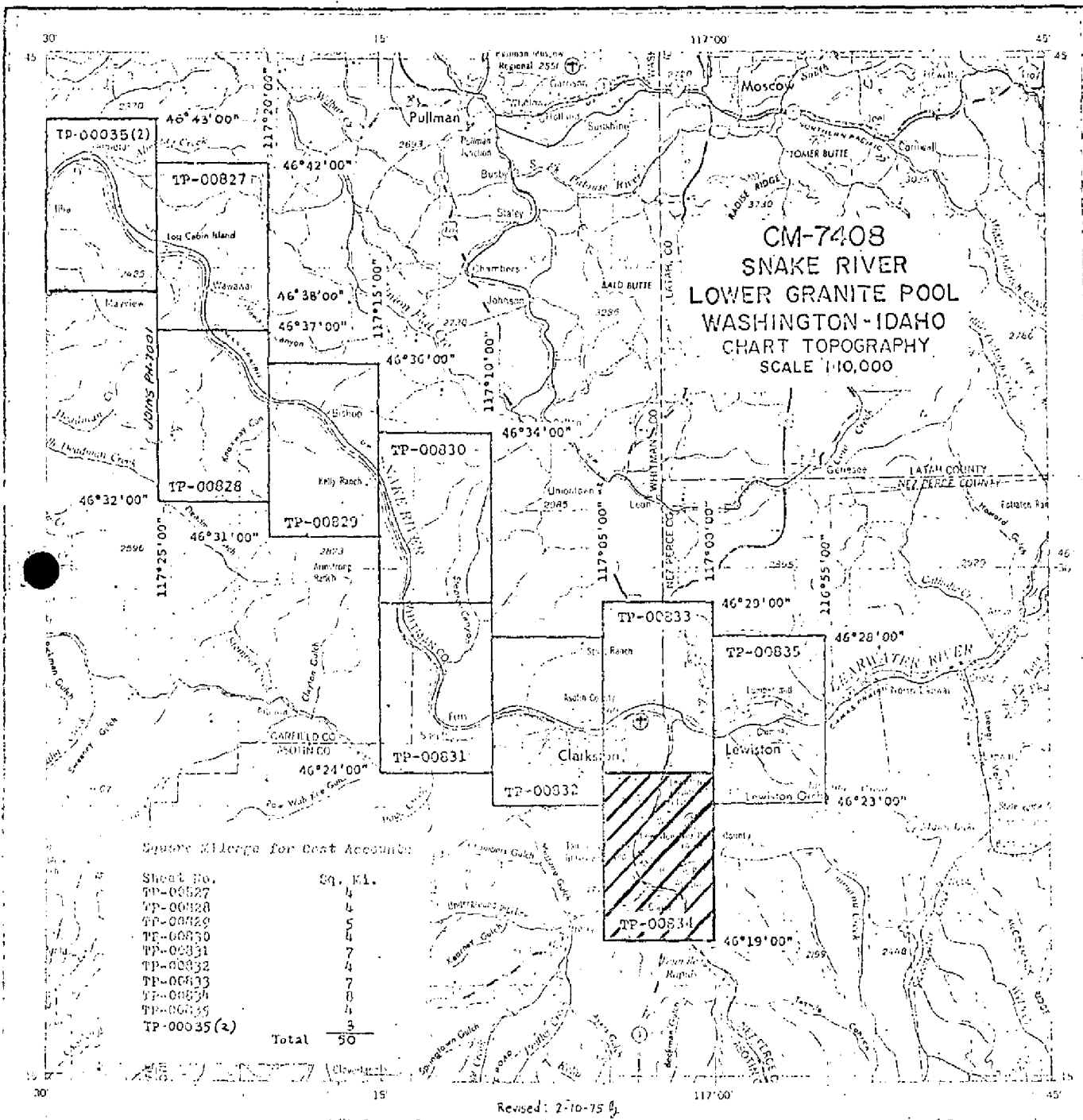
III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
 2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM NOS ⁷⁶⁴⁰ ~~559~~ SUBMITTED BY FIELD PARTIES.
 3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
 ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	



SUMMARY TO ACCOMPANY MAPS TP-00035(2)
AND
TP-00827 THROUGH TP-00835

This summary covers all of Project CM-7408 which consist of ten chart topography maps. They cover the area of the Lower Granite Dam Reservoir from the Lower Granite Dam southeastward to the town of Lewiston, Idaho, and from there south to just below Asotin, Washington. The area of the reservoir is bounded by a steep walled basaltic canyon, except at the southern end.

Maps in this project are to serve as the basis for construction of a small craft chart of the area. The maps are all ruled on the Mercator projection system. Maps TP-00827 through TP-00835 have lat. $46^{\circ}25'30''$ as the central parallel and Map TP-00035(2) has lat. $46^{\circ}38'00''$ as its central parallel. As can be expected, there is a significant difference in the scales of Maps TP-00035(2) and TP-00827, which joins it. See diagram, page 5 of this Descriptive Report.

Map TP-00035 (2) was added to this project just prior to the bridging function. All bridging was done at the Washington Science Center using the STK-1.

The photographs used for compilation were flown on three separate occasions. The first was taken with color film by the National Ocean Survey in June, 1974. This was followed with two sets taken by the Corp of Engineers using black and white film in February, 1975 and April, 1975. The April photographs were flown after the reservoir was flooded.

A bridge was run only on the color photography. Control for setting models of the black and white photography was obtained by identifying points common to that photography from the B-8 models of the color photographs.

All maps were compiled at the Atlantic Marine Center using the B-8 stereoplotter and graphic methods. The B-8 stereoplotter was used to obtain all elevations and contours, as well as the bulk of the planimetric features. Some map features, recommended for charting by the field editor, were identified on the 1975 U.S. Corps of Engineers photography. These features were applied to the map bases using graphic methods. In areas where control was sparse, the field edited map features were labeled (PA) for position approximate. Field edit was done in the Fall of 1977. All field edit items were applied to the maps at the Atlantic Marine Center.

All maps were final reviewed at the Atlantic Marine Center during the Spring of 1979. The original base maps and all applicable data was forwarded to the Washington Science Center for reproduction and final registration.

FIELD INSPECTION REPORT

Project CM-7408

Map Manuscripts T-00827 through TP-00835

September - December 1974

FIELD INSPECTION REPORT

Project CM-7408

Map Manuscripts T-00827 through TP-00835

September - December 1974

General

The area contained in this report commences at the vicinity of the Lower Granite Dam, on the Snake River and upstream along the Snake River to the vicinity of the town of Asotin, and upstream along the Clearwater River, from its confluence with the Snake River to a point about 5 miles upstream.

Except in the area of the cities of Lewiston and Clarkston, the rivers flow through steep walled, basaltic canyons.

The Camas Prairie Railroad serves the area along the Snake River from the Lower Granite Dam to the city of Lewiston, Idaho, then along the south shore of the Clearwater River. There is little industry along the rivers, except in the Lewiston-Clarkston area.

Horizontal Control

1. Four supplemental control stations were established by the field party.
2. All horizontal control stations required by the Project Instructions for aero-triangulation were recovered and paneled for aerial photography. Control Station Identification Form 152 were submitted to the Rockville, Maryland, office on June 19, 1974.

Vertical Control

All bench marks necessary to establish the required photo-elevation points were recovered and NOAA Form 76-89 will be submitted for each mark searched for.

Critical Features

The pool area was inspected for critical features and possible obstructions to navigation. At the time the field party was determining the photo elevations, Corps of Engineers contractors were removing possible rocks, knobs, etc., and "dressing" slopes. Dredging and quarrying were in progress in the bottom of the Clearwater River on the downstream side of the Lewiston-North Lewiston Highway Bridge (see photo 74E 5921). Shoreline changes were in progress from Clarkston to Asotin on the Snake River, also between Clarkston and the mouth of Alpowa Creek. The Corps of Engineers, Walla Walla

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District should be consulted as to the extent and profiling of the changes. Two contractors bridges, one upstream of the Lower Granite Dam and one downstream of the railroad bridge over the Clearwater River, were being removed. A highway bridge over the Snake River is under construction (see photo 74E 5877).

Leveling

The elevations of the preselected photo-elevation points were determined by trigonometric leveling, utilizing the Wild T-1 and T-2 theodolites. Where the terrain or distances involved were not conducive to trig-leveling with the theodolite and stadio rod, the distances were measured with a RANGER III, Laser, distance measuring instrument. Two distances to each vertical point were observed, and non-reciprocal vertical angles were measured with a Wild T-2 theodolite, 2 D/R with a 10-second rejection limit. The distances were recorded in the field record book in meters to 3 decimal places. Pressure altitude, temperature, instrument and mirror constants were dialed into the RANGER III's system. This, in effect, is a closed loop observation, but the foresights and backsights were unbalanced. Therefore, Form 29D, Computations of Elevations for Non-Reciprocal Observations, was used; the difference in elevations of the long lines and the RANGER III distances were treated as two foresights.

The use of the RANGER III allowed the packing unit to carry only a retrodirective prism, a radio, telescoping tripod, photos, etc., as most of the photo-elevation points were on the near vertical slopes of the canyon walls, requiring back-packing up the steep slopes and bluffs to reach the preselected points. Otherwise, it would have required backpacking a tellurometer unit. The backpacking was a rigorous experience, but only the time factor in climbing slowed the field progress. The weather was favorable, the majority of the time cool and clear.

Bottom Characteristics

Bottom characteristics were indicated on the field photographs. Most of the river bottom is either rocky or boulder/stone/gravel sediments.

Photography

The photographs furnished the field unit were of good quality as to resolution and contrast.

Geographic Names

Geographic names will be the subject of a separate report.

Field Edit

Field edit will be the subject of a separate report at a later date, after the field edit has been accomplished.

Aids to Navigation

At the time the photo party was determining the photo-vertical points, employees of the Coast Guard were observed erecting the pedestals and towers for fixed aids to navigation. None of the images of the aids appear on the existing field photography.

RECOMMENDATIONS

It is recommended during the 1975 field season that the pool area be rephotographed to correct the shoreline changes and to permit the location of the aids to navigation by photogrammetric methods if so desired.

Respectfully submitted,

Robert B. Melby 1/9/75

Robert B. Melby, CPML03

cc: CPML

PHOTOGRAMMETRIC PLOT REPORT

Job CM-7408

Snake River

Lower Granite Pool

Washington-Idaho

January 1975

21. Area Covered

This project covers the Snake River from Lower Granite Dam to just south of Asotin, Idaho, and a portion of the Clearwater River to just east of Lewiston, Idaho. Included are ten T-sheets (TP-00827 thru TP-00835 and TP-00035). T-sheet TP-00035 was generated at the request of the Rockville Review Section.

Sheets TP-00827 thru TP-00835 were plotted with 1:10,000-scale Mercator projections - central parallel $46^{\circ}25'30''N$. Sheet TP-00035 was plotted with 1:10,000-scale Mercator projections - central parallel $46^{\circ}38'00''N$. All sheets have the Washington State Grid (south zone) intersections plotted at 5,000-foot intervals. Sheets TP-00832 thru TP-00835 also have the Idaho State Grid (west zone) intersections plotted at 5,000-foot intervals.

22. Method

A total of twenty-one strips of color photography were bridged on the Wild STK-1 in order to obtain pass-point positions and elevations to be used during compilation. Three strips of 1:30,000-scale photography (strips 1, 2, and 3) were bridged in order to obtain horizontal tie point positions for use in adjusting the other eighteen strips of 1:10,000-scale photography (strips 4 thru 21).

Strip 1 was adjusted on five field-identified triangulation stations and sixteen vertical points with six horizontal tie points and eight vertical points as checks. Strip 2 was adjusted on four field-identified triangulation stations and ten vertical points with one additional triangulation station and eight horizontal tie points as checks. Strip 3 was adjusted on three field-identified triangulation stations and seven vertical points with seven horizontal tie points as checks. Strip 4 was adjusted on four horizontal tie points and eight field-identified vertical points with four horizontal and one vertical tie point as checks. Strip 5 was adjusted on three horizontal tie points and eight field-identified vertical points with seven horizontal and four vertical tie points as checks. Strip 6 was adjusted on four horizontal tie points and twelve field-identified vertical points with eleven horizontal and six vertical points as checks. Strip 7 was adjusted on four horizontal tie points and nine field-identified vertical points with twelve horizontal and six vertical tie points as checks. Strip 8 was adjusted on five horizontal

tie points and eight field-identified vertical points with ten horizontal and five vertical tie points as checks. Strip 9 was adjusted on four horizontal tie points and ten field-identified vertical points with eleven horizontal and five vertical tie points as checks. Strip 10 was adjusted on three horizontal tie points and seven field-identified vertical points with nine horizontal and four vertical tie points as checks. Strip 11 was adjusted on five horizontal tie points and six field-identified vertical points with seven horizontal and three vertical tie points as checks. Strip 12 was adjusted on three horizontal tie points; six field-identified vertical points; and one vertical tie point with one additional field-identified vertical point; nine horizontal and five vertical tie points as checks. Strip 13 was adjusted on one field-identified triangulation station; five horizontal tie points; and nine field-identified vertical points with three additional field-identified vertical points; nine horizontal and three vertical tie points as checks. Strip 14 was adjusted on one field-identified triangulation station; three horizontal tie points; seven field-identified vertical points; and one vertical tie point with twelve horizontal and six vertical tie points as checks. Strip 15 was adjusted on seven horizontal tie points; seven field-identified vertical points; and one vertical tie point with eight horizontal and seven vertical tie points as checks. Strip 16 was adjusted on three horizontal tie points and eight field-identified vertical points with one additional field-identified triangulation station; twelve horizontal and eight vertical tie points as checks. Strip 17 was adjusted on three horizontal tie points; seven field-identified vertical points; and one vertical tie point with eight horizontal tie points; one additional field-identified vertical point; and four vertical tie points as checks. Strip 18 was adjusted on three horizontal tie points and seven field-identified vertical points with five horizontal and two vertical tie points as checks. Strip 19 was adjusted on five horizontal tie points and ten field-identified vertical points with eight horizontal tie points; one additional field-identified vertical point; and three vertical tie points as checks. Strip 20 was adjusted on three horizontal tie points and six field-identified vertical points with seven horizontal tie points; two additional field-identified vertical points; and four vertical tie points as checks. Strip 21 was adjusted on three horizontal tie points and eight field-identified vertical points with five horizontal and two vertical tie points as checks.

All adjustments were performed on the IBM 6600. All sheets were ruled and plotted on the Calcomp.

23. Adequacy of Control

All horizontal and vertical control utilized in the adjustments held within National Map Accuracy.

24. Supplemental Data

Vertical control for bridging the three 1:30,000-scale strips only was obtained from local USGS quadrangles.

25. Photography

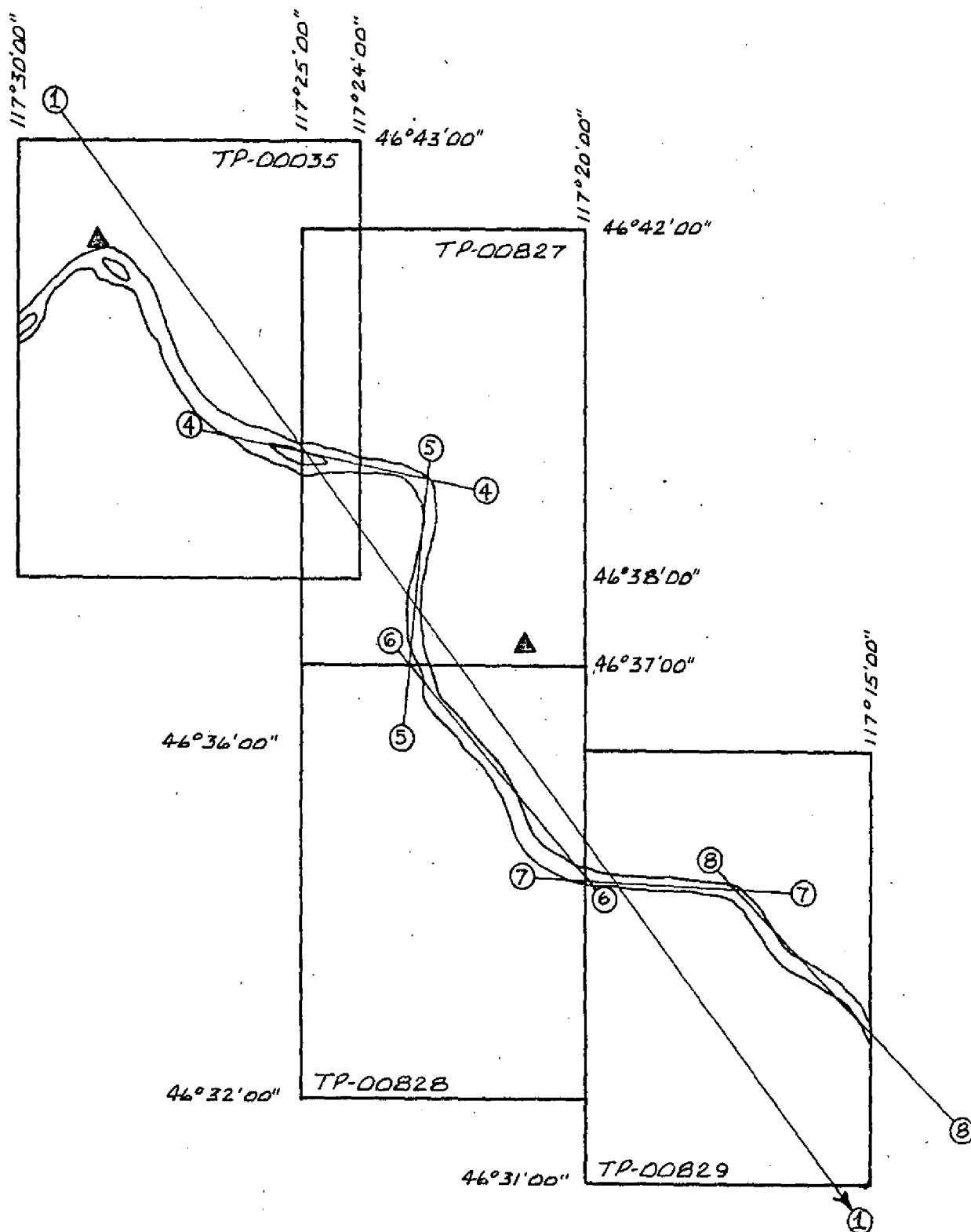
Photography was adequate as to overlap, definition, and coverage.

Submitted by:

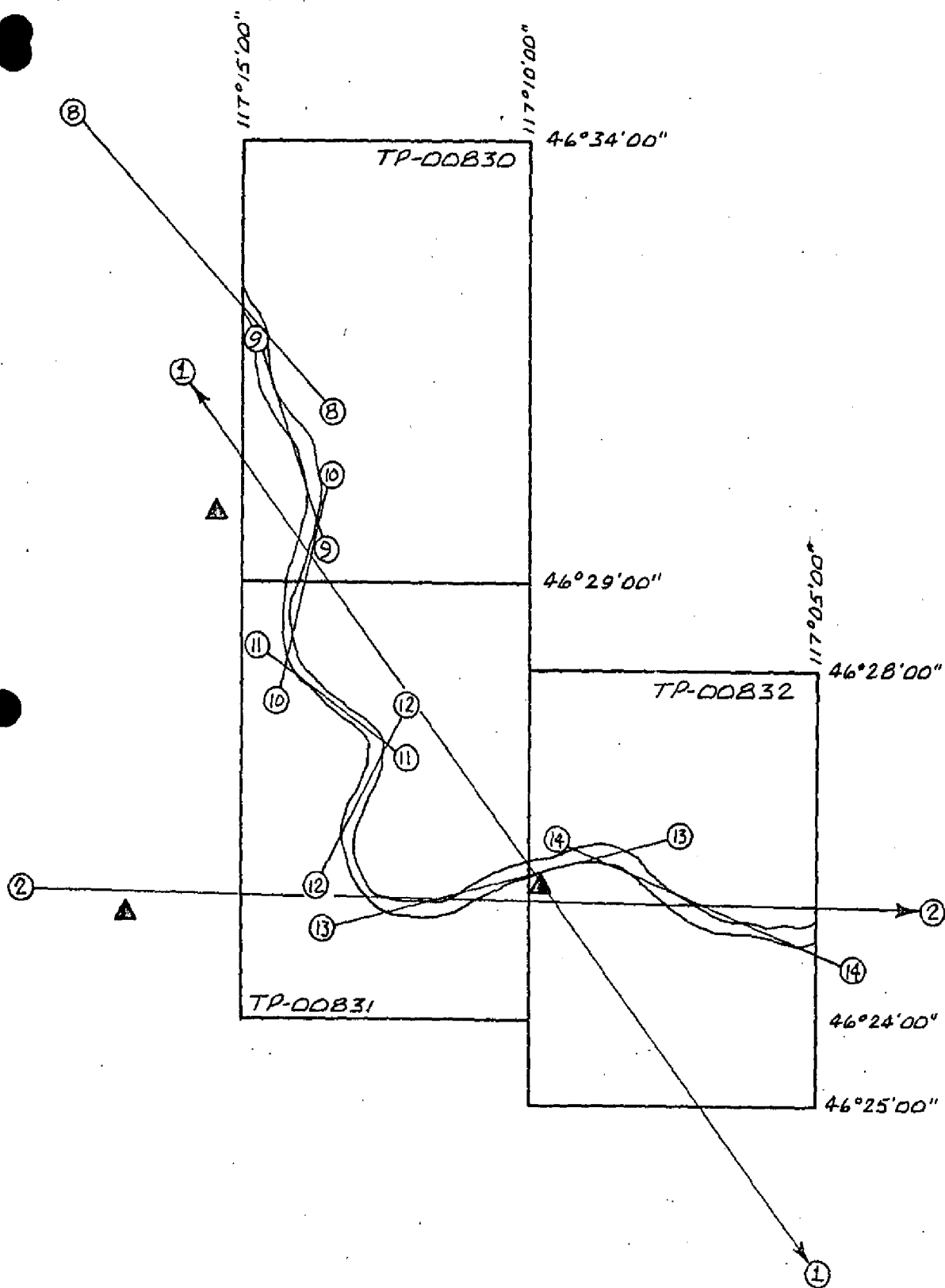
Michael L. McGinley
Michael L. McGinley

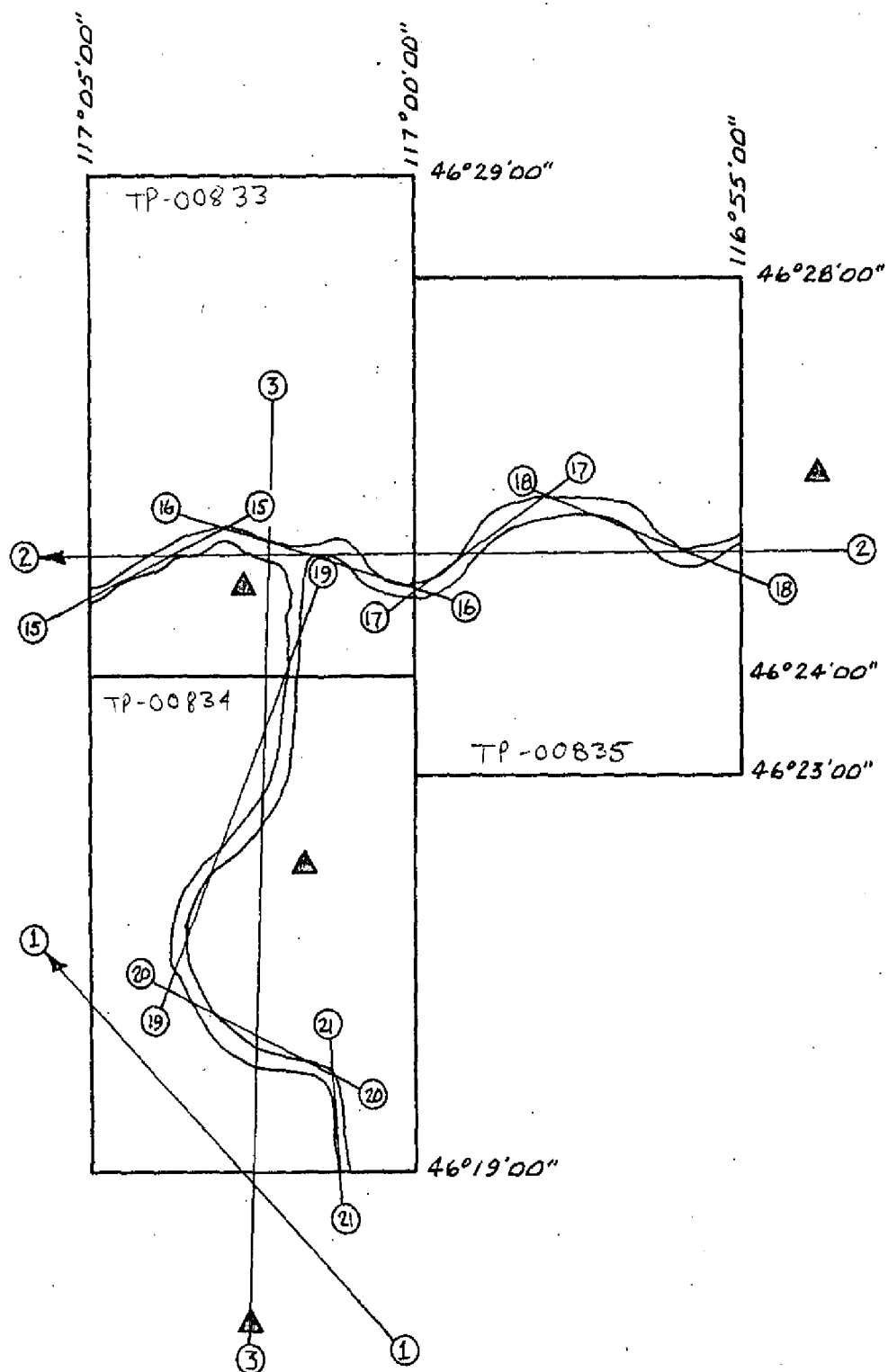
Approved by:

John D. Perrow, Jr.
John D. Perrow, Jr.
Chief, Aerotriangulation Section



JOB CM-7408
 SNAKE RIVER
 WASHINGTON - IDAHO
 JANUARY, 1975





DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	JOB NO.	STATION NAME	SOURCE OF INFORMATION (Index)	AEROTRI- ANGULATION POINT NUMBER	GEODETIC DATUM		ORIGINATING ACTIVITY		REMARKS	
					TP-00834	CM07408	NA 1927	Division, Norfolk, VA		
					COORDINATES IN FEET	GEOGRAPHIC POSITION				
					STATE	South	ϕ LATITUDE			
					ZONE		λ LONGITUDE			
B.M. A-46, 1945	P.C. pg. 239 WASH.				X=	2872 809.26	ϕ		Falls South of map limits	
					Y=	368 835.04	λ			
AIRPORT (IDAHO), 1945	P.C. pg. 239 WASH.				X=	2876 420.86	ϕ			
					Y=	399 041.47	λ			
LEWISTON, RADIO STATION KOZE, SOUTH MAST, 1959	Quad. 461172 Pg 1010 (Idaho)				X=		ϕ 46 23 31.628			
					Y=		λ 117 02 04.344			
					X=		ϕ			
					Y=		λ			
					X=		ϕ			
					Y=		λ			
					X=		ϕ			
					Y=		λ			
					X=		ϕ			
					Y=		λ			
					X=		ϕ			
					Y=		λ			
					X=		ϕ			
					Y=		λ			
					X=		ϕ			
					Y=		λ			
					X=		ϕ			
					Y=		λ			
COMPUTED BY	A. C. Rauck, Jr.				DATE	2/4/75	COMPUTATION CHECKED BY	D. Butler	DATE	3/7/75
LISTED BY					DATE		LISTING CHECKED BY		DATE	
HAND PLOTTING BY					DATE		HAND PLOTTING CHECKED BY		DATE	

COMPILATION REPORT

TP-00834

31. DELINEATION:

Delineation was done from two sets of photographs. The first set was flown in June, 1974 with color film. It was bridged by the Rockville Office. The second set was flown by the Corps of Engineers in February, 1975 using black and white film. No bridge was run on it.

Control for the second set of photographs was established in the B-8 models of the first set. Details which had been altered by construction since the first photography were revised.

32. CONTROL:

See the Photogrammetric Plot Report dated January 31, 1975, and the Field Inspection Report dated September-December, 1974, for horizontal and vertical control.

33. SUPPLEMENTAL DATA:

None.

34. CONTOURS AND DRAINAGE:

Contours at 3, 6, and 10 ft. intervals decreasing from the 738 ft. pool level line, and drainage were delineated by the Wild B-8 stereoplotter and office interpretation of the photographs. See Project Instructions dated January 23, 1974, Item #9. 04. 1 Contours (Depth Curves)

35. SHORELINE AND ALONGSHORE DETAILS:

The pool level line at 738 ft. and alongshore details were delineated by office interpretation of the photographs.

36. OFFSHORE DETAILS:

Critical features, such as rocks, boulders, knobs and hilltops, thought to be dangers to navigation for the new chart, were compiled by the stereoplotter.

37. LANDMARKS AND AIDS:

This area was not previously charted. The field editor is to determine the existence and positions of landmarks and aids in the area.

38. CONTROL FOR FUTURE SURVEYS:

None.

39. JUNCTIONS:

See the Form 76-36B, Item #5 of the Descriptive Report concerning junctions.

40. HORIZONTAL AND VERTICAL ACCURACY:

Refer to the Photogrammetric Plot Report, dated January, 1975, for horizontal accuracy. Vertical control established by field methods and bridging was adequate for the model leveling process.

46. COMPARISON WITH EXISTING MAPS:

A comparison was made with the following U.S. Geological Survey Quadrangle Maps: Clarkston, Washington-Idaho, scale 1:24,000, dated 1971, Asotin, Washington-Idaho, scale 1:24,000, dated 1971, and Clarkston, Washington-Idaho, scale 1:62,500, dated 1945.

47. COMPARISON WITH NAUTICAL CHARTS:

This area has not been previously charted.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by:

David P. Butler

David P. Butler
Cartographic Aid
September 30, 1976

Approved:

Albert C. Rauck, Jr.

Albert C. Rauck, Jr.
Chief, Coastal Mapping Section

December 8, 1977

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7408 (Snake River, Lower Granite Dam to Asotin, Washington, Idaho)

TP-00834

Asotin✓

Asotin Creek✓

Clarkston Heights

Idaho✓

Lewiston - Nez Perce County Airport✓

Lewiston Orchards (locality)✓

Snake River✓

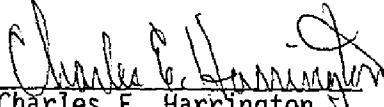
Swallows Nest✓

Swallows Park and Marina✓

Tammany Creek✓

Washington✓

Approved by:


Charles E. Harrington
Staff Geographer - C51x2

PHOTOGRAMMETRIC OFFICE REVIEW
TP - 00834

1. PROJECTION AND GRIDS JLB	2. TITLE LN	3. MANUSCRIPT NUMBERS LN	4. MANUSCRIPT SIZE JLB
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY JLB	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) JLB		7. PHOTO HYDRO STATIONS NA
8. BENCH MARKS LN	9. PLOTTING OF SEXTANT FIXES JB	10. PHOTOGRAMMETRIC PLOT REPORT JLB	11. DETAIL POINTS NA
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE JLB	13. LOW-WATER LINE NA	14. ROCKS, SHOALS, ETC. JLB	15. BRIDGES JLB
16. AIDS TO NAVIGATION JLB	17. LANDMARKS JLB	18. OTHER ALONGSHORE PHYSICAL FEATURES JLB	19. OTHER ALONGSHORE CULTURAL FEATURES JLB
PHYSICAL FEATURES			
20. WATER FEATURES JLB	21. NATURAL GROUND COVER JLB		22. PLANETABLE CONTOURS N A
23. STEREOSCOPIC INSTRUMENT CONTOURS JLB	24. CONTOURS IN GENERAL JLB	25. SPOT ELEVATIONS JLB	26. OTHER PHYSICAL FEATURES JLB
CULTURAL FEATURES			
27. ROADS JLB	28. BUILDINGS JLB	29. RAILROADS JLB	30. OTHER CULTURAL FEATURES JLB
BOUNDARIES			
31. BOUNDARY LINES NA		32. PUBLIC LAND LINES NA	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES JLB	34. JUNCTIONS JLB		35. LEGIBILITY OF THE MANUSCRIPT JLB
36. DISCREPANCY OVERLAY JLB	37. DESCRIPTIVE REPORT JB	38. FIELD INSPECTION PHOTOGRAPHS JB	39. FORMS JLB
40. REVIEWER Jim Byrd 11/19/76		SUPERVISOR, REVIEW SECTION OR UNIT Albert C. Rauck, Jr.	
41. REMARKS (See attached sheet)			
FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT			
42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.			
COMPILER J. Roderick 11/77	SUPERVISOR Albert C. Rauck, Jr.		
Reviewer L. Neferer, Jr. 12/77	Albert C. Rauck, Jr.		
43. REMARKS See Form 76-36C, items 7 and 8.			

FIELD EDIT REPORT

Project CM-7408

Lower Granite Reservoir, Snake River
Idaho, Washington

September 1977

2. Areal Field Inspection:

The project area is a section of the Snake River that is impounded by the Lower Granite Dam, forming a navigable pool and the lands adjacent to the pool.

The river passes through a steep canyon with numerous basaltic bluffs. The tops of the bluffs give way to open, rolling prairies which in a large part are cultivated grain fields.

Except for the area near the mouth of the Clearwater River where the cities of Lewiston, Idaho and Clarkston, Washington are located the area is sparsely populated.

The area is traversed by a line of the Camas Prairie Railroad, along the north and east shore of the Snake River and the Clearwater River. Two highway bridges and one railroad bridge are found in the area. One highway bridge in the vicinity of Clarkston, Washington is under construction.

3. Horizontal Control:

Horizontal control requirements consisted on paneling of preselected triangulation stations, necessary for aerial photography. The panels were the conventional, white opaque polyethylene material, cut to conform to the specifications for the premarking of control stations. All of the stations paneled were bureau triangulation stations. The establishment of new horizontal control stations was not required for photo-horizontal control.

Form 152, Control Station Identification cards were submitted for each station paneled. All of the paneled stations were in open areas and no difficulty should be encountered due to trees or shadows.

4. Vertical Control:

Vertical control consisted of the determination by the usual field methods of the elevations of preselected, photogrammetric vertical control points. These points are indicated on the field photographs with

the prefix "V" and a numbering system utilizing the last two digits of the numbered "TP" sheet (quadrangle) and consecutive numbers. A sketch of the feature appears on the reverse side of the photograph.

All leveling was based on bench marks established by the Coast and Geodetic Survey and the Corps of Engineers.

5. Contours and Drainage:

Contours only applicable for the office compilation of depth curves for underwater topography, based on the field determination of pre-selected photogrammetric vertical control points are required for the project.

7. Alongshore Features:

Alongshore features in the form of small boat launching ramps, floats, piers, bridges, pumping stations and power transmission lines have been indicated on the field photography.

8. Offshore Features:

Several features in the form of rocks were found along the shoreline. They have been indicated on the field photography. Several concrete bridge piers are found in the channel of the Snake River, near the mouth of the Clearwater River. The piers have been in place for four years and no progress on the bridge construction is evident, although local sources indicate the bridge construction may begin in the near future.

9. Landmarks and Aids to Navigation:

All aids to navigation were located by the field party. The majority of the fixed aids to navigation were photo-identified on the prints furnished by the U.S. Corps of Engineers. Several of the fixed aids to navigation were determined by ground survey methods.

Several landmarks for charts were located by the field party either by photo-identification or ground survey methods.

There are numerous skeleton steel, power transmission towers in the area and they are of landmark value. But, except for instances where they are the ends of overhead cable crossings, it is difficult to isolate and identify a particular tower from offshore.

The area is unusual as few salient landmark objects are visible from offshore.

All landmarks and fixed aids to navigation have been listed on Form 76-40.

13. Geographic Names:

Geographic names are the subject of a separate report. The report is dated January 1975.

14. Special Reports:

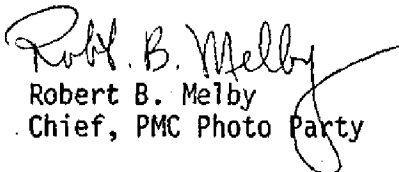
The method of leveling used by the field party was the conventional trigonometric leveling with the Wild T1A theodolite and stadia rod. Due to the steepness of the canyon walls it was necessary to observe vertical angles across the river to avoid exceeding the 10° limit as imposed by the project instructions. Due to the distance involved, the RANGER III laser system was used with good results. A double determination or a closed loop leveling method was employed to obtain a check elevation.

The entire shoreline was field edited (inspected) from a small boat.

15. Small Craft Facilities Investigation:

The small craft investigation was conducted during the month of September 1977. All the facilities were visited and the pertinent information has been entered on Form 77-3.

Respectfully submitted,


Robert B. Melby
Chief, PMC Photo Party

REVIEW REPORT
TP-00834
CHART TOPOGRAPHY

June 15, 1979

61. GENERAL STATEMENT:

See Summary, page 6 of this Descriptive Report.

The configuration and position of small craft facilities located at Hells Gate Marina, Swallows Park Marina and Chief Looking Glass Marina were revised during final review. Plans of these facilities, submitted by the field editor, include Washington South state grid system at 250 foot intervals. This allowed accurate positioning on the map of features on the plans which have been constructed since photography.

The 738 foot contour is not shown on the plans around breakwaters located at the north and south ends of Hells Gate Marina. See plans for Marina Area I and II. These features were constructed since photography. As a result, the shoreline around these features is shown as approximate on the map.

The southerly of two over head cables located just north of Asotin Creek was deleted during final review. This was recommended by the field editor.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Not applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

Not applicable.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

The topography on this map will serve as the hydrography for the new chart of this area.

65. COMPARISON WITH NAUTICAL CHARTS:

Maps of this project will serve as the basis for construction of a new chart for this area. There is no published chart of this area to date.

TP-00834

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This map was compiled in accordance with the project instructions. See Summary page 6, of this Descriptive Report concerning the application of field edit.

Submitted by:

A. L. Shands

A. L. Shands
Final Reviewer

Approved for forwarding:

Billy B. Bann

Chief, Photogrammetric Branch, AMC

Approved:

John D. Perrault Jr.
Chief, Photogrammetric Branch*John Allen*
Chief, Photogrammetry Division

