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WIRE DRAG

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WIRE DRAG

<small>Form 504</small> U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE DESCRIPTIVE REPORT	
<i>Type of Survey</i> Hydrographic	
<i>Field No.</i> CS-282 <i>Office No.</i> H 6777 (W.D.)	
LOCALITY	
<i>State</i> Alabama	
<i>General locality</i> Chilton County	
<i>Locality</i> Mitchell Reservoir	
194 <u>2</u>	
CHIEF OF PARTY Max. G. Ricketts	
LIBRARY & ARCHIVES	
<i>DATE</i> Dec. 21, 1942	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET
WIRE- DRAG

REG. NO. H6777

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. _____

REGISTER NO. H6777

State ALABAMA

General locality CHILTON COUNTY

Locality MITCHELL RESERVOIR

Scale 1:10,000 app. Date of survey November, 1942

Vessel Alabama Power Company launches and skiff.

Chief of Party Max G. Ricketts

Surveyed by Max G. Ricketts and Harry D. Reed, Jr.

Protracted by Field Party

Soundings penciled by " "

Soundings in fathoms feet

Plane of reference Lowest Water Level El. 345.0

Subdivision of wire dragged areas by Field Party

Inked by Field Party

Verified by R.H. Carstens

Instructions dated March 20 and November 9, 1942

Remarks: _____

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WIRE DRAG SHEET

DESCRIPTIVE REPORT

to accompany

MITCHELL RESERVOIR, ALABAMA

WIRE-DRAG SHEET

PROJECT CS-282

INSTRUCTIONS:

Director's instructions for Project CS-282 dated March 20, 1942 and his letter 22/MEK 1990 dated November 9, 1942.

CONTROL:

The control on this sheet is based on the air-photo positions of six objects as shown on the boat-sheet furnished by Washington Office. These objects are all located within the southern two miles of the area covered and are circled in red on the boat-sheet. Control was carried from these objects by sextant angles to cover the entire area surveyed. The original control is weak and although the intersections of the sextant cuts were definite, the signals located do not agree with the shoreline furnished on the boat-sheet. To facilitate field work the sextant locations were held and a tentative adjustment of the shoreline was made. This tentative shoreline is shown by a purple dash line on the boatsheet. All field work shown on this sheet is in relation to the field adjusted shoreline. The discrepancy between the boatsheet shoreline and the signals appears to become very pronounced in the vicinity of the second large creek above the dam on the west side, and from that area on to the northern end of the sheet becomes greater in both azimuth and distance. Additional adjustment seemed to be necessary in the vicinity where a junction in the pictures occurred. A smooth plot of the sextant control will likely improve conditions but it is believed that there is also displacement in distance and azimuth in the shoreline furnished on the boatsheet.

SURVEY METHODS:

Standard wire-drag practice has been followed. Two 20 foot launches furnished by the Alabama Power Company were used in towing the drag and their 16 foot skiff was used as a tender. A 1200 foot drag was used. Ground wire was 1/8 inch, intermediate buoys carried 35 pounds while end buoys carried 70 pounds.

DANGERS:

This reservoir was found to be quite clear of obstructions to project depth of elevation 335.0 feet. Practically all the dragging was done heading upstream, this because it appeared that all visible stumps had a tilt downstream. On clean-up work returning from the upper end of our work on E, F, & G days,

the drag passed over obstructions previously located even though traveling at an effective depth of 2 to 4 feet below the tops of these obstructions. The major dangers found are: Signal ROD, a stump standing 4 feet above water surface; The western of a group of three trees located off Signal RIDE in 15 feet of water. This tree top came 3 to 4 feet above the surface of the water in clearing the drag and is securely fastened to the bottom as the Guide Launch could not tow it free; An 18" diameter log secured to the bottom and showing awash off Signal RAT; A large foul area North of the shore between signals BLUE and DEAD. Numerous stumps are visible, the more important ones have been located; A tree located about central in the triangle of signals POLE, OLD and ROOF, the drag touched and pulled free when set at 4 feet. Foul areas have been indicated by a blue dash line on the boatsheet.

WIRE-DRAG GROUNDINGS:

Position:	Depth:	Location:	Remarks:
1-4 a	^{at} 6-10 ft. <i>Lowest water level</i>	500 ft. arc from TEN	Stumps on shoal area off this point in depths of 9-12 ft. Pos. 3 & 4 were cleared at 11 feet on down-stream drag G day. <i>shown outside of strip</i>
1-2 g	⁵ 6-7 ft.	300 ft. E. of TEN	Stumps in 8 and 9 feet, not cleared as on shoal area about point.
5 b	awash	500 ft. W. of RAT	A log 18 inch diam. in 12 feet, lies parallel to shoreline.
5 a	⁷ 8 ft.	700 ft. SW of TUB	A log in 15 feet which was towed along a short distance by the End Launch.
1 b	⁸ 9 ft.	750 ft. W. of RIDE	A tree in 15 ft. which came 3-4 feet above surface on clearing drag, <u>DANGER</u> not cleared.
5,6,7 f	⁵⁻⁸ 6-9 ft.	Same as 1 & 2 b	Hang-up on same trees as 1 & 2 b with a sounding of 6 ft. on tree 2 b, 9 ft. on new tree in 16 ft.
3 b	³ 4 ft.	350 ft. NW of ROD	Stump in 10 ft., not cleared.
1 c	8 ft.	500 ft. SE of KEEP	Tree in 16 ft., cleared at ⁷ ft. on F day.

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WIRE DRAG SURVEY.

Position:	Depth:	Location:	Remarks:
4 f	0 ft.	600 ft. E. of KEEP	Tree in 11 ft., limbs at water surface. ✓
1 f	¹⁰ 11 ft.	700 ft. NE of BLUE	Shoal mud bottom. ✓
2 f	⁵ 8 ft.	1000 ft. NE of BLUE	Tree in 74 feet. ✓
3 f	⁸ 9 ft.	600 ft. ESE of BLUE	Shoal mud bottom. ✓
2 c	9 ft.	1700 ft. ENE of BLUE	Tree in 47 feet, not certain of top, cleared at 11 ft. on downstream drag F day. <i>Shown as not cleared. Portion of strip packed by verifier</i>
1 d	8 ft.	750 ft. SSE of OLD	Tree in 51 feet, cleared at 7 ft. upstream D day and at 11 ft. after pulling off downstream E day. <i>Shown as cleared only at 7 ft.</i>
3 d	⁴ 8 ft.	800 ft. S. of OLD	Tree in 45 feet, drag set at 4 feet touched and pulled free upstream D day, 11 ft. hung and pulled free downstream on E day. <i>Shown as grounding at 4'</i>
2 d	7 ft.	820 ft. S. of OLD	Tree in 42 ft., cleared at 4 feet upstream on D day and at 11 feet downstream on E day after pulling free. <i>In some spot as pos 3d</i>

COMPARISON WITH PREVIOUS SURVEYS: No previous surveys.

GENERAL INFORMATION: The following information was obtained from the Certified Copy of License (Project No. 82, issued by Federal Power Commission to The Alabama Power Company, Birmingham, Ala.) "MITCHELL DAM RESERVOIR CLEARING -- The License shall, in the general public interest, and to the satisfaction of said District Engineer, also cut in such manner or so remove or destroy, the brush or trees within said area to be submerged and below the contour line of said elevation 334 that no part of said brush or trees shall project above an elevation of 340 feet above said datum plane." This data was supplied by the Birmingham Office of the Alabama Power Company.

The Superintendent of Mitchell Dam states that flood conditions and local lumbering operations sometimes send very heavy drift timber down the Reservoir.

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WIRE DRAG SURVEY.

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The fourth and fifth runways had to be shifted from the layout furnished due to the foul area along the western shore. Some shift was also necessary on the upstream end of the third runway.

The Alabama Power Company has been very cooperative on this project. They supplied all boats used in the dragging operations, office and storage space, water level data and additional information as well as prints of their original surveys of the area.

WATER LEVEL DATA: The lowest level reached by this reservoir in recent years was 345.0. On this reservoir the water level is subject to variations of three to four feet due to load conditions which govern the drawdown necessary. Top of spillway is elevation 350.0 feet.

Date:	Elevation:	Date:	Elevation:
1942		1942	
Nov. 17	345.5	Nov. 24	345.2
18	345.7	25	345.7
19	345.8	26	345.6
20	345.5	27	345.9
21	345.1	28	346.4
22	344.9	29	346.3
23	345.0		

During the period of work the level has been near the low for the reservoir during most of the time, having gone 0.1 foot below on November 22, 1942.

CORRECTIONS AND ADDITIONS TO CHECK SHEET PROJECT "ITEM":

Docks and Boats Available:- The Alabama Power Company has two inboard power launches at the dam and one heavy skiff for use with outboard motor. No other power boats were found on the Reservoir. Fishing skiffs are available in several of the coves on the west side, the largest group being in the first inlet above the dam on the west side. All landings visited were in poor to unserviceable condition.

Water Obstructions:- See dangers, groundings and general information in this report. In addition the upper section has trot lines across it most of the time, these use driftwood plugs for floats on channel uprights.

Aerial Obstructions:- The power line a few hundred yards inshore along the west side is quite close to the south end of number 3 runway, a telephone line also runs under the power line with poles in the water at the end of this runway. These completely block a close approach from the SW on this end of the runway.

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STATISTICS:

Date:	Day Letter:	Volume:	Drag Length:	Positions:	Statute Miles:	Sdgs.:
Nov. 19	A	1	1200	78(5)	3.8	5
Nov. 20	B	1	1200	32(5)	1.6	4
Nov. 23	C	1	1200	36(2)	1.8	2
Nov. 24	D	1	1200	68(3)	3.1	3
Nov. 25	E	1	1200	44(6)	2.8	1
Nov. 26	F	1	1200	42(7)	1.3	5
Nov. 27	G	1	1200	35(2)	2.1	2
TOTALS - - - - -				335(30)	16.5	22

Area:- 2.0 square statute miles.

Respectfully submitted,

Max G. Ricketts
Max G. Ricketts,
Lieut., U.S.C. & G.Survey.

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ME

MEMORANDUM BY REVIEWER

An effective depth of 10' was carried over almost the entire area of the survey. Several submerged trees and stumps covered by 4-9 foot of water were found well out in the reservoir.

Soundings and effective depths were reduced for daily variation of the water level from the lowest water level, used as the datum.

The dashed purple line is the shoreline from the mosaic, adjusted to signals whose positions were determined by sextant cuts. The accuracy of such a determination is probably not of the best, considering the length of the reservoir. Although the control is recognized as being weak the positions of the dragged area and soundings, relative to the shoreline is considered sufficiently accurate for the purpose of the survey.

R. H. Carstens
R. H. Carstens

Approved:
Robert W. Knox
Robert W. Knox
Chief, Surveys Section

"I"

TRANSCONTINENTAL SEAPLANE ROUTE - PROJECT " ITEM - 1 "

Project designation - TR "I "

Date - 18 December, 1941.

Location - Lat. 32 - 49 to 32 - 55 N. Long. 86 - 26 to 86 - 31 W.
Located on the COOSA RIVER
See Dept. of Comm. Sectional Airway Map " BIRMINGHAM "

Nearest Town - Montgomery, Ala (Maxwell Field) 30 miles - 180

Local Name - MITCHELL RESERVOIR

Prevailing wind - Same as MARTIN LAKE

Minimum depth of water - (1) at dam 75 ft (2) 2 mi. up 75
(3) 5 miles up 70 (4) 10 miles up 40

(see comments under MARTIN LAKE)

True altitude above sealevel - (Normal) 350 ft.

Height of water this date - 345.5 ft

Current velocity - negligible

Aircraft servicing facilities - None at ~~this~~ reservoir. There is an auxiliary airfield (GRAGG) on the outskirts of CLANTON 10 miles WNW from dam/. This field is in fairly good shape but was deserted when visited. No runways - all sod, but well outlined. Nearest reliable source - Maxwell Field.

Access by highways and railroads - There is a paved road to the dam and a primary highway runs its entire length about ~~xxxxx~~ five to seven miles west. Rail connections at CLANTON

Docks and boats available - The Power Co employees have a power boat at dam. There are a moderate number of private boats and landings at the southern end

TRANSCONTINENTAL SEAPLANE ROUTE - PROJECT " ITEM "
(cont.)

Character of beaches - Wooded with very few cleared areas reaching the waters edge. Some rocky stretches of shoreline.

Water obstructions - A few isolated logs were observed which were readily visible. It could not be determined whether these were permanent or floating. There were very few stumps observed along the banks. The reservoir lies in a natural valley and it is believed that the bottom drops away quite rapidly from the shoreline. No driftwood was observed in the water. A small amount was noted in the upper reaches on the beach at the high water mark.

Aerial obstructions - A power line runs along the western shore a few hundred yards inland.

Height of surrounding terrain - The surrounding hills are 250 to 300 feet in height and drop away to the waters edge quite rapidly. They are wooded almost the entire length.

Best anchorages - In the vicinity of the dam

Sheltered lees - Available behind the hills for winds of any direction and reasonable velocity.

TRANSCONTINENTAL SEAPLANE ROUTE - PROJECT " ITEM
(cont.)

Character of the bottom - Red clay, silt and rocky.

Was bottom cleared of trees prior to flooding? - yes

Personnel accommodations - None at reservoir.

Communication facilities - Telephone at dam

Seasonal fluctuations of water level - 3 to 4 ft.

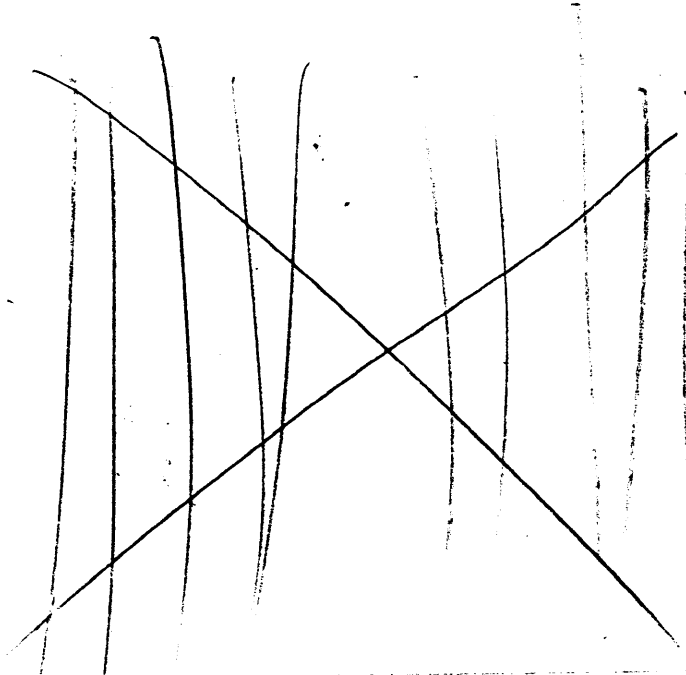
Length of take-off run available - (see photo)

COMMENTS - This appears to be an excellent reservoir for seaplane operation. It is a toss-up between this and Jordan as being the best in this area. This reservoir offers take-off and landing areas in almost any direction (see low obliques) It appears to be relatively free from stumps and driftwood. Its waters are filtered by LAY dam directly above and its steep sides would preclude ~~xxx~~ stumps normally found in these reservoirs from extending very far into the channel. The water level is nearly constant. The hills are somewhat higher than those of other reservoirs in the vicinity and tend to make bumpy air when there is any amount of wind. The valley is sufficiently wide to allow an aircraft to follow the water below the level of the hills to where it was desired to land. LAY RESERVOIR lies directly above this reservoir but was not surveyed due to obvious shoal spots and a great number of snags and driftwood.

TO ACCOMPANY H

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WIRE DRAG



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GEOGRAPHIC NAMES

Survey No. **H6777**

Name on Survey

On Chart No.
 On previous survey No.
 On U. S. quadrangle Maps
 From local information
 On local Maps
 P. O. Guide or Map
 Rand McNally Atlas
 U. S. Light List

	A	B	C	D	E	F	G	H	K	
Alabama										1
Chilton County										2
Mitchell Reservoir										3
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WIRE DRAG SURVEY

Remarks

Decisions

	Remarks	Decisions
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Surveys Section (Chart Division)

WIRE DRAG SURVEY.

HYDROGRAPHIC SURVEY NO.

Records accompanying survey:

Boat sheets .2...; sounding vols.; wire drag vols. 2...;

bomb vols. 0....; graphic recorder rolls 0....;

special reports, etc. .Folder, Sextant Angle. Control. (37 sheets)....

...Photostats, Project Item (3) pages.....

1 Print D-16779(Alabama Power Co.) 3 Mosaics (1:10000)

1 Oblique Photograph 1 Mosaic (1:48000) complete reservoir

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet .665

Number of positions checked .30.

Number of positions revised0.

Number of soundings recorded22

Number of soundings revised (refers to depth only)0.

Number of soundings erroneously spaced0.

Number of signals erroneously plotted or transferred0.

Topographic details Time0.

Junctions Time0.

Verification of soundings from graphic record Time0.

Verification by *R.H. Carstens*.....Total time .27 1/2 Date *Feb. 4, 1944*

No formal review only comments
Review by *R.H. Carstens*..... Time .2.. Date *Feb. 5, 1944*

SP

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WIRE TAG

FORM M-238

MEMORANDUM IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

No. H 6777 (W.D.)

~~SECRET~~

received Dec. 21, 1942
registered Dec. 21, 1942
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
✓ 22	Comdr Reynor -	LR	
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RETURN TO

82	R. W. Knox
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