**United States Department of Agriculture**

**Natural Resources Conservation Service**

**5 Radnor Corporate Center, Suite 200 Radnor, PA 19087-4585**

**Subject:** Lake Sedimentation Surveys -- Geophysical Assistance **Date:** 6 February 1998

**To:** Mark W. Berkland
State Conservationist
USDA - NRCS
1835 Assembly Street, Room 950
Columbia, South Carolina 29201

**Purpose:**
Sedimentation surveys of two lakes were completed using ground-penetrating radar (GPR) and global positioning systems (GPS). The two lakes surveyed were Lake Blalock (760 acres) and Lake Lyman (428 acres). These lakes, developed for water supply, have experienced rapid and extensive sedimentation. This study demonstrates the value of integrating ground-penetrating radar, global positioning systems and computer technologies to facilitate lake sedimentation surveys.

**Participating Agencies:**
Spartanburg Water Management District
Startex - Jackson - Wellford - Duncan (SJWD) Water District
USDA-Natural Resources Conservation Service

**Principal Participants:**
Tom Alvarez, Regional Geologist, USDA-NRCS, Nashville, TN
Keith Armstrong, Lake Supervisor, Startex - Jackson - Wellford - Duncan (SJWD) Water District, Greenville, SC
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Jimmy Bobo, Lake Warden, Spartanburg Water Management District, Inman, SC
Dave Demarest, Urban Conservationist, USDA-NRCS, Greenville, SC
Jim Doolittle, Research Soil Scientist, USDA-NRCS, Radnor, PA
Byron Jenkinson, Graduate Student, Purdue University, W. Lafayette, IN
Kim Kroeger, Geologist, USDA-NRCS, Raleigh, NC
Clifton Stokes, Lake Attendant, Spartanburg Water Management District, Inman, SC
Jeff Young, Startex - Jackson - Wellford - Duncan (SJWD) Water District, Greenville, SC

**Activities:**
All field activities were completed during the period of 26 to 29 January 1998.

**Equipment:**
The radar unit used in this study was the Subsurface Interface Radar (SIR) System-2, manufactured by Geophysical Survey Systems, Inc. The use and operation of GPR have been discussed by Morey (1974), Doolittle (1987), and Daniels and others (1988). The SIR System-2 consists of a digital control unit (DC-2) with keypad, VGA video screen, and connector panel. The model 5106 (200

MHz) and 3110 (120 mHz) antennas were used in this investigation. The 200 mHz antenna provides better depth and lateral resolution of subsurface features, but was too depth restricted to profile the deeper portions of either lake. The lower frequency, 120 mHz antenna has greater powers of radiation, longer pulse widths, and emits signals that are less rapidly attenuated than signals emitted from the 200 mHz antenna. The system was powered by a 12-VDC battery.

The position of each radar observation point was obtained with a Rockwell Precision Lightweight GPS Receiver (PLGR). The system was operated in the continuous mode. This receiver was operated using an external power source (portable 9 volt battery). The Universal Transverse Mercator (UTM) coordinate system was used.

The outline of each lake was transformed from 7.5 minute topographic quadrangles and aerial photographs to a digital format using Didger software, developed by Golden Software, Inc. To help summarize the results of this study, the SURFER for Windows program, developed by Golden Software, Inc., was used to construct two-dimensional simulations. Grids were created using kriging methods with an octant search. All grids were smoothed using a cubic spline interpolation.

**Background:**

Sedimentation is the major cause of the reduction in reservoir storage capacity. The primary objectives of lake sedimentation surveys are to determine current reservoir capacity, and to ascertain changes in storage volume and the volume of sediment accumulation. Secondary objectives include estimation of lateral and longitudinal deposition of sediments and annual yield rates.

Acoustic equipment (fathometers) has been used to survey lakes. However, this technology has difficulty resolving gradational contacts and penetrating aquatic vegetation and layers of organic materials. Recenttly, ground-penetrating radar has been used to survey lakes (Haeni et al., 1987, Izbicki and Parker, 1991; Mellett, 1995; Moorman and Michel, 1997; Sellmann et al., 1992; Truman et al., 1991) and stream channels (Spicer et al., 1997). In these studies, bathymetric cross-sections or contour maps were prepared from radar traverses conducted along parallel grid lines. Grid surveys are labor intensive and time consumptive. The present study is the first known attempt to integrate GPS and GPR technologies for bathymetric surveys. The use of GPS is less labor intensive and time consuming than conventional positioning methods.

**Survey Procedures:**

The radar system was mounted in a pontoon boat and a 120 mHz antenna was towed alongside in an inflatable raft. The boat and raft made multiple traverses accross each lake. Locations of traverse lines were determined before the survey and were adjusted using identifiable features on the lakes' shore. Slight variations in speed of advance were encountered because of water currents and wind conditions. As a consequence, horizontal scales or distances on the radar profile were variable. Observation points for both GPS and GPR were recorded simultaneously at intervals of either 15, 20, or 30 seconds. Intervals varied with the length of traverse.

**Global Positioning System:**

The estimated position error of the GPS was less than 10 m at Lake Lyman. The estimated position error averaged 13.3 m and ranged from 8.8 to 80 m at Lake Blalock. Poor satellite geometry and availability, and antenna masking (dense vegetation and high elevations bordering the lakes) accounted for some of these position errors. Greater position accuracy could be attained by using the *averaging* rather than the *continuous mode*. However, the use of the averaging mode would lengthen surveying time. The locations of the GPS waypoints recorded on Lake Lyman (452 waypoints) and

Lake Blalock (651 waypoints) are shown in Figures 1 and 2, respectively. In general, the locations of these waypoints reconstruct the boat's traverses and conform to the boundaries of the lake.

**Ground Penetrating Radar:**

*Calibration:*

The GPR is a time scaled system. This system measures the time that it takes electromagnetic energy to travel from the antenna to an interface (i.e., soil horizon, stratigraphic layer, lake bottom) and back. To convert the travel time into a depth scale, either the velocity of pulse propagation or the depth to a reflector must be known. The relationships among depth (d), two-way, pulse travel time (t), and velocity of propagation (v) are described in the following equation (Morey, 1974):

$$v = 2d/t \quad [1]$$

The velocity of propagation is inversely related to the dielectric permittivity (e) of the profiled material(s) according to the equation:

$$e = (c/v)^2 \quad [2]$$

where c is the velocity of propagation in a vacuum (0.3 m/nanosecond). The velocity is expressed in meter per nanosecond (ns). The amount and physical state of water (temperature dependent) have the greatest effect on the dielectric permittivity of a material. The dielectric permittivity of water is 81.

Calibration trials were conducted at each site. The purposes of these trials were to determine the velocity of propagation of electromagnetic energy through water, establish a depth scale, verify interpretations, and optimize control and recording settings.

At Lake Lyman, five measured depths to the lake bottom were compared with the radar imagery collected at these calibration points. The depths to the lake bottom were measured with a stadia rod. At these five points, depths to the lake bottom ranged from 0.41 to 4.82 meters. The coefficient of determination ($r^2$) between the measured depth and the interpreted depth (depth = speed * time) to this interface was 0.9942. At the five calibration points, differences between measured and interpreted depths to the lake bottom averaged 0.08 m, and ranged from 0.02 to -0.12 m.

Based on the averaged round-trip travel time to the lake bottom, the velocity of propagation was estimated to be 0.033 m/ns. The maximum depth of observation was estimated from equation [1]. For the bathymetric survey of Lake Lyman, a scanning time of 600 ns was used. This scanning time was based on the maximum depth to the lake bottom observed during calibration trials. A scanning time of 600 ns provided a maximum observation depth of about 10.0 meters.

At Lake Blalock, eight measured depths to lake bottom were compared with the radar imagery collected at these calibration points. The depths to the lake bottom were measured with a stadia rod. At the calibration points, depths to the lake bottom ranged from 1.42 to 5.64 meters. The coefficient of determination ($r^2$) between the measured depth and the interpreted depth to this interface was 0.9932. At the eight calibration points, differences between measured and interpreted depths to the lake bottom averaged 0.08 m, and ranged from 0.0 to -0.27 m.

The dielectric permittivity was estimated to be about 80.7. Based on the averaged round-trip travel time to the lake bottom, the velocity of propagation was estimated to be 0.033 m/ns. The maximum

depth of observation was estimated with equation [1]. For the bathymetric survey of Lake Blalock, a scanning time of 880 ns was used. This scanning time was based on the maximum depth to the lake bottom observed during calibration trials. A scanning time of 880 ns provided a maximum observation depth of about 14.7 meters.

*Interpretations:*
Radar profiles were highly interpretable. Figure 3 is a representative radar profile from Lake Blalock. The depth scale is meters and is plotted on the left-hand side of this figure. Although the radar provides a continuous profile of the lake, measurements of the water depth were restricted to observation points (vertical lines at the top of the radar profile). The lake bottom is apparent across this profile. This interface varies in depth from about 2 to 12 m.

High rates of attenuation within the lake bottom sediments limited signal penetration. Two to four internal reflections are evident in the lake bottom sediments. As no borings were made through these sediments at the time of the survey, the thickness of lake bottom sediments could not be reliably measured. Variations in sediments are distinguishable on radar profiles. Denser sediments have lower water contents and produce stronger reflections (Sellmann et al., 1992). Secondary reflections from the lake bottom can be observed in the lower part of the profile. These reflections are undesired background noise. They occur a twice the travel time and have the same shape as the initial reflections.

Lake Lyman and Lake Blalock lie in the drowned valleys of the Middle Tygre River and the Pacolet River, respectively. In Figure 3, the former channel and thalweg of the Pacolet River forms a conspicuous, U-shaped trough in the lake bottom. This feature was recorded on most radar traverses. However, because of the time interval used between observation points, this deep and comparatively narrow feature was not recorded as an observation point on some radar traverses. Future surveys can be improved by increasing the number of observation points or by insuring that the thalweg is georeferenced.

In the upper reaches of Lake Blalock, signal to noise ratios were low and the lake bottom was not apparent on the initial radar profiles. High concentrations of suspended silts and clays were suspected of producing the high levels of background noise that masked the lake bottom interface. Signal processing was needed to interpret the lake bottom.

*Results:*
The radar surveys of lakes Lyman and Blalock were completed in 2.5 days. Lake depths were measured on radar profiles at 452 and 651 points on Lake Lyman and Lake Blalock, respectively. The coordinates of each of these points were recorded with GPS.

Based on the radar survey, the average depth of Lake Lyman is 3.72 m. Measured depths ranged from 0.41 to 8.22 m. One half of the radar observation points had depths between 1.92 and 5.52 m. Lake Blalock is larger and deeper than Lake Lyman. Based on the radar survey, the average depth of Lake Blalock is 6.62 m. Measured depths ranged from 0.75 to 14.78 m. One half of the radar observation points had depths between 3.92 and 8.92 m.

**Results:**

1. This report documents the integrated use of innovated technologies to complete lake sedimentation surveys. This study is the first known bathymetric survey combing GPR with GPS technologies. The use of these technologies have reduced survey time and cost. The results of these surveys

demonstrate a quick and reliable method for measuring freshwater thicknesses. If the results of these surveys are acceptable, additional surveys in the Piedmont should be contemplated using these technologies. For deeper (greater than 15 to 20 m), more conductive bodies of water, a fathometer should be used.

2. The contour maps included in this report are preliminary. All radar profiles and a disc containing spreadsheets of the GPS and GPR data have been forwarded to Kim Kroeger. Kim will use computer aided drafting (CAD) software to manage and manipulate the data. Kim has digitized the initial topographic surveys of the lakes. He will compare these earlier surveys with the present surveys. Kim will produce the final products of this survey.

3. The accuracy of contour maps depends on the distance between observation points and traverse lines. The number and most appropriate distances between observation points and traverse lines should be ascertained by research studies.

It was my pleasure to work in South Carolina and with members of your fine staff.

With kind regards,

James A. Doolittle
Research Soil Scientist

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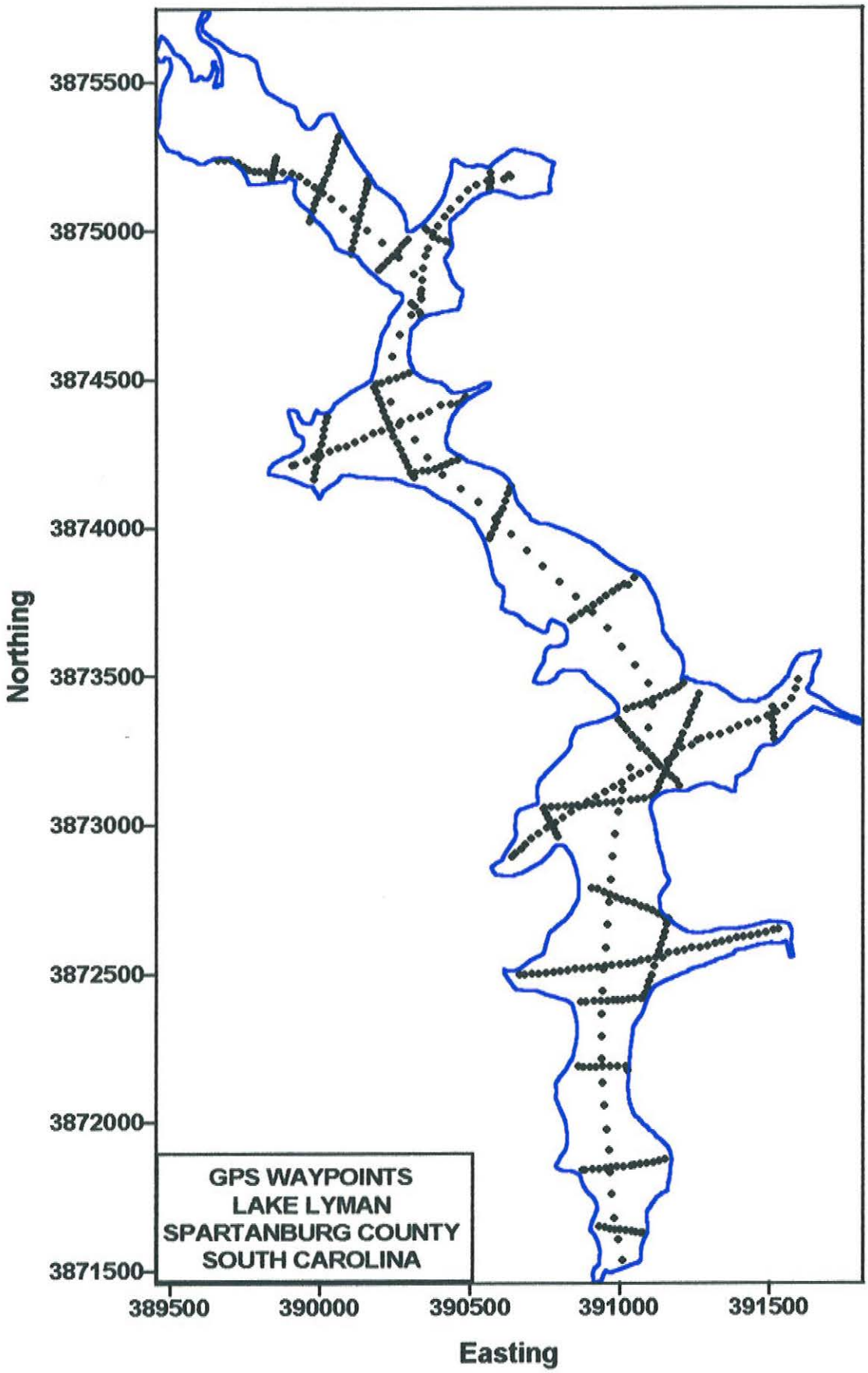
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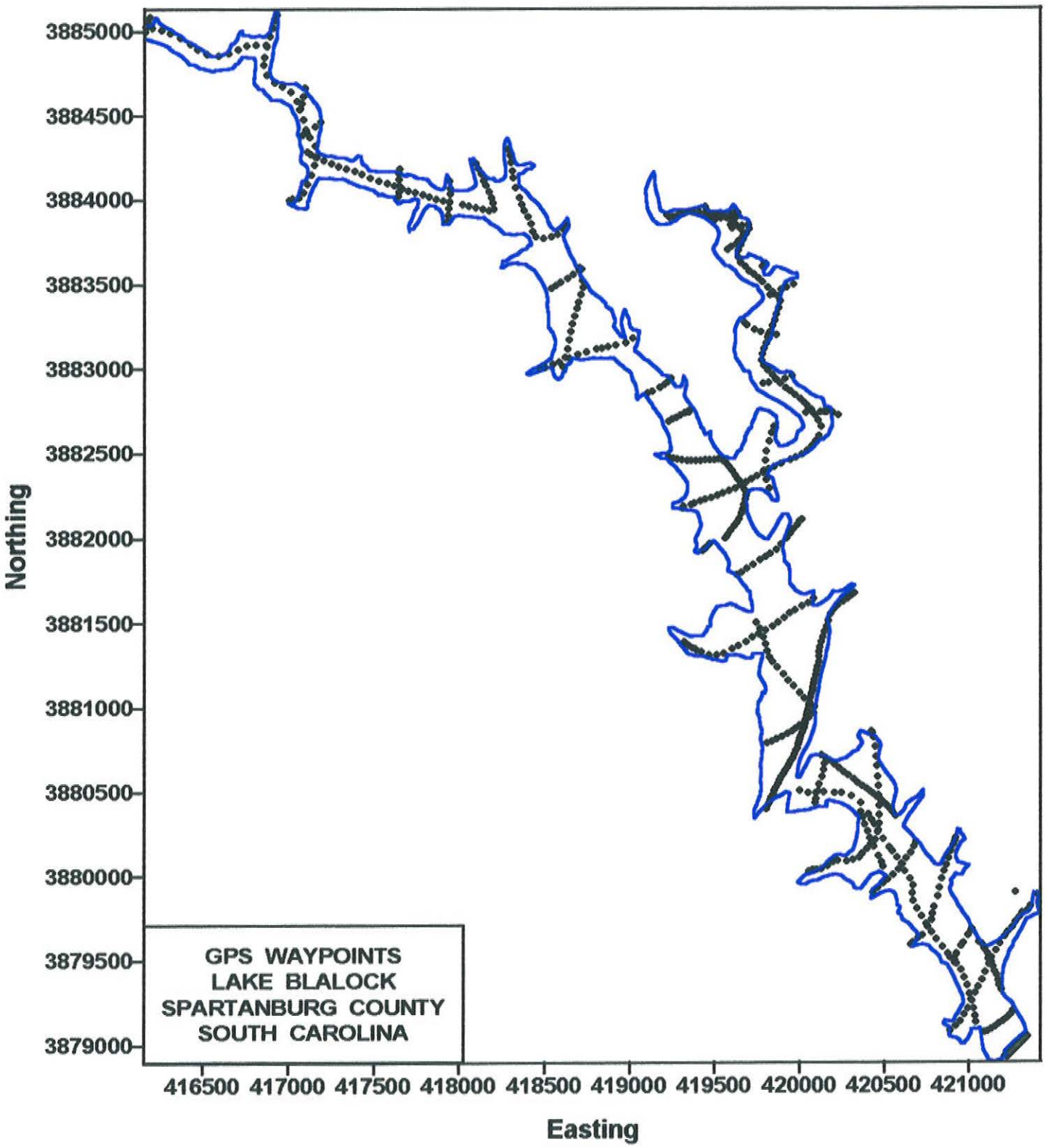
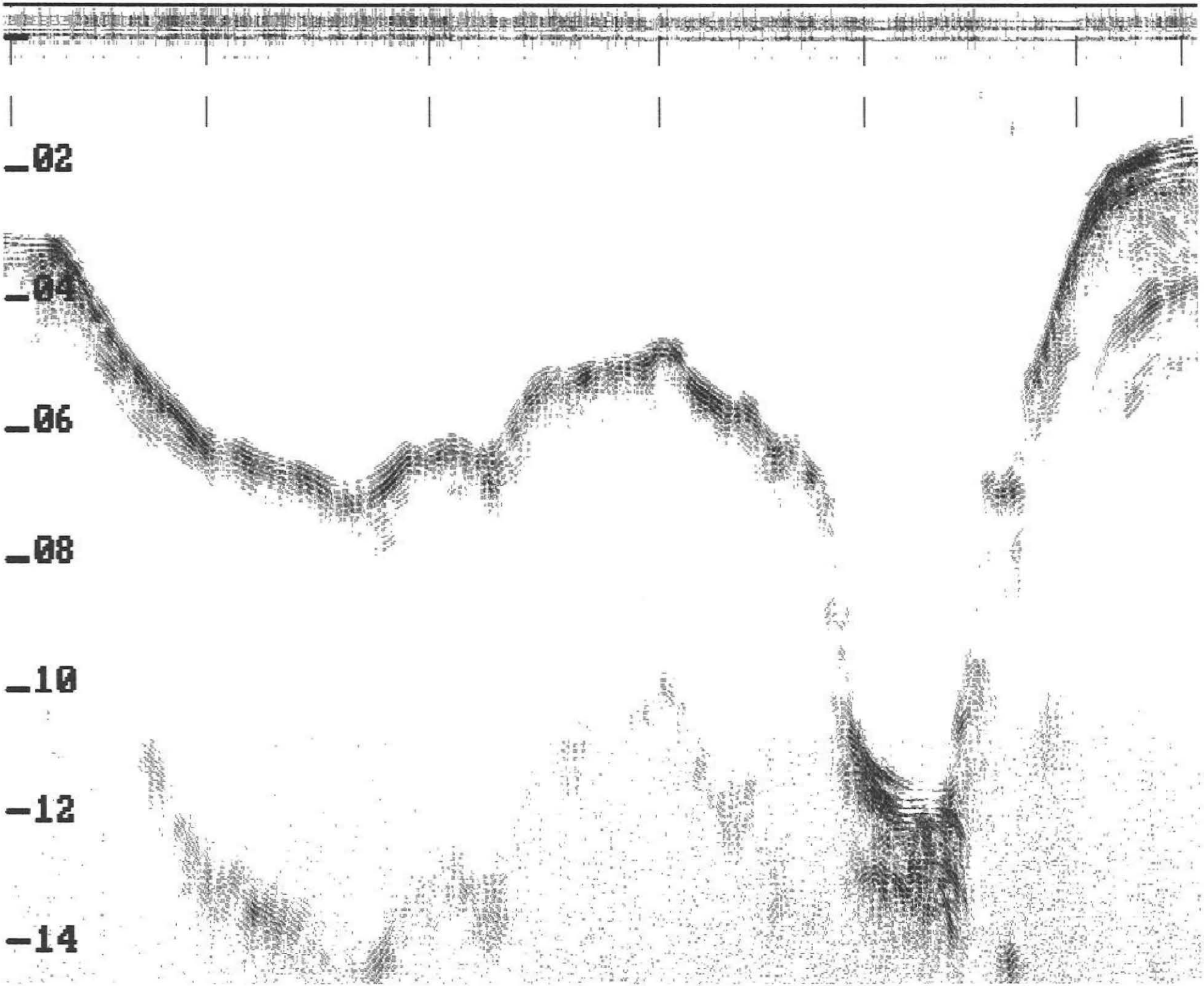
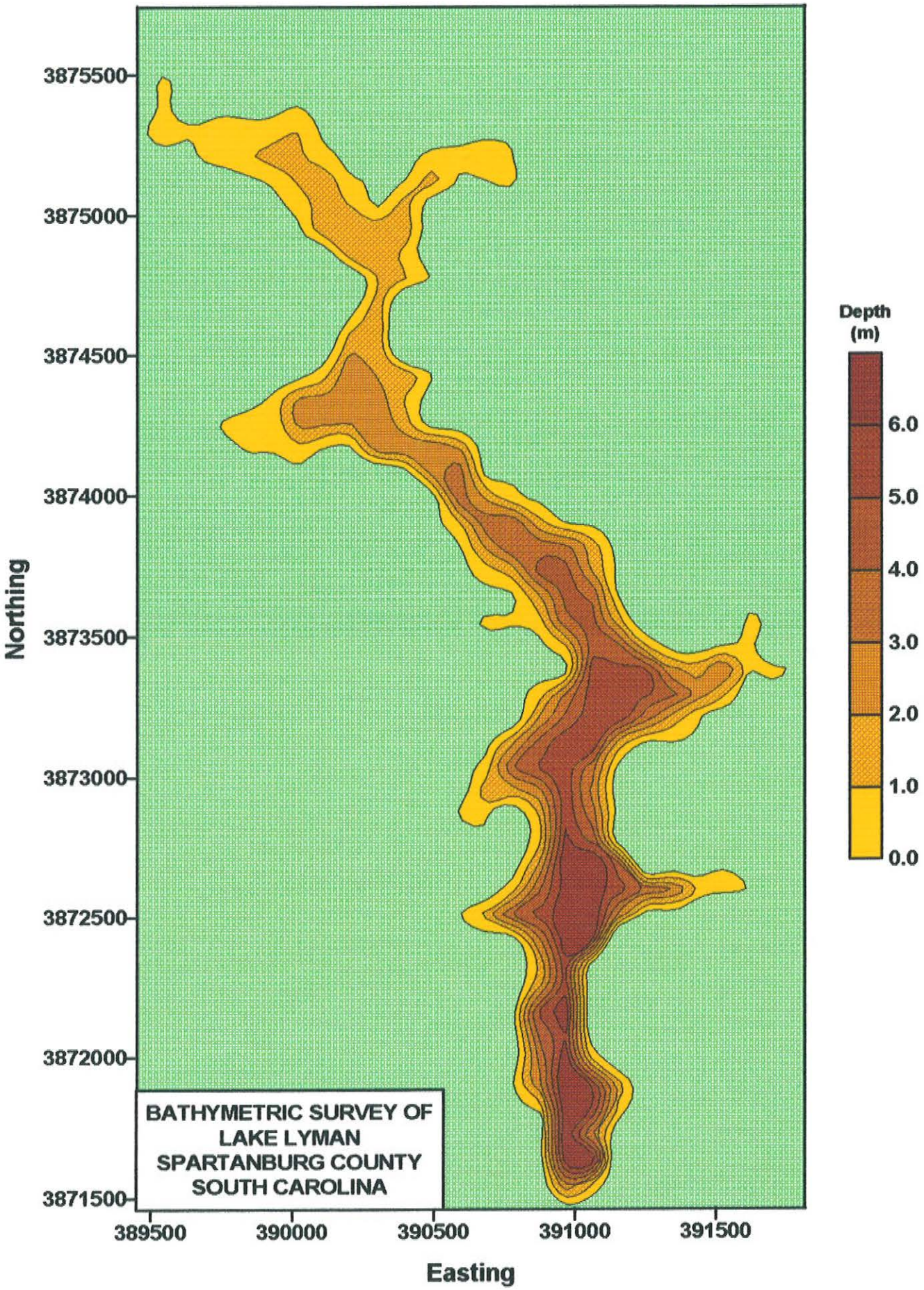
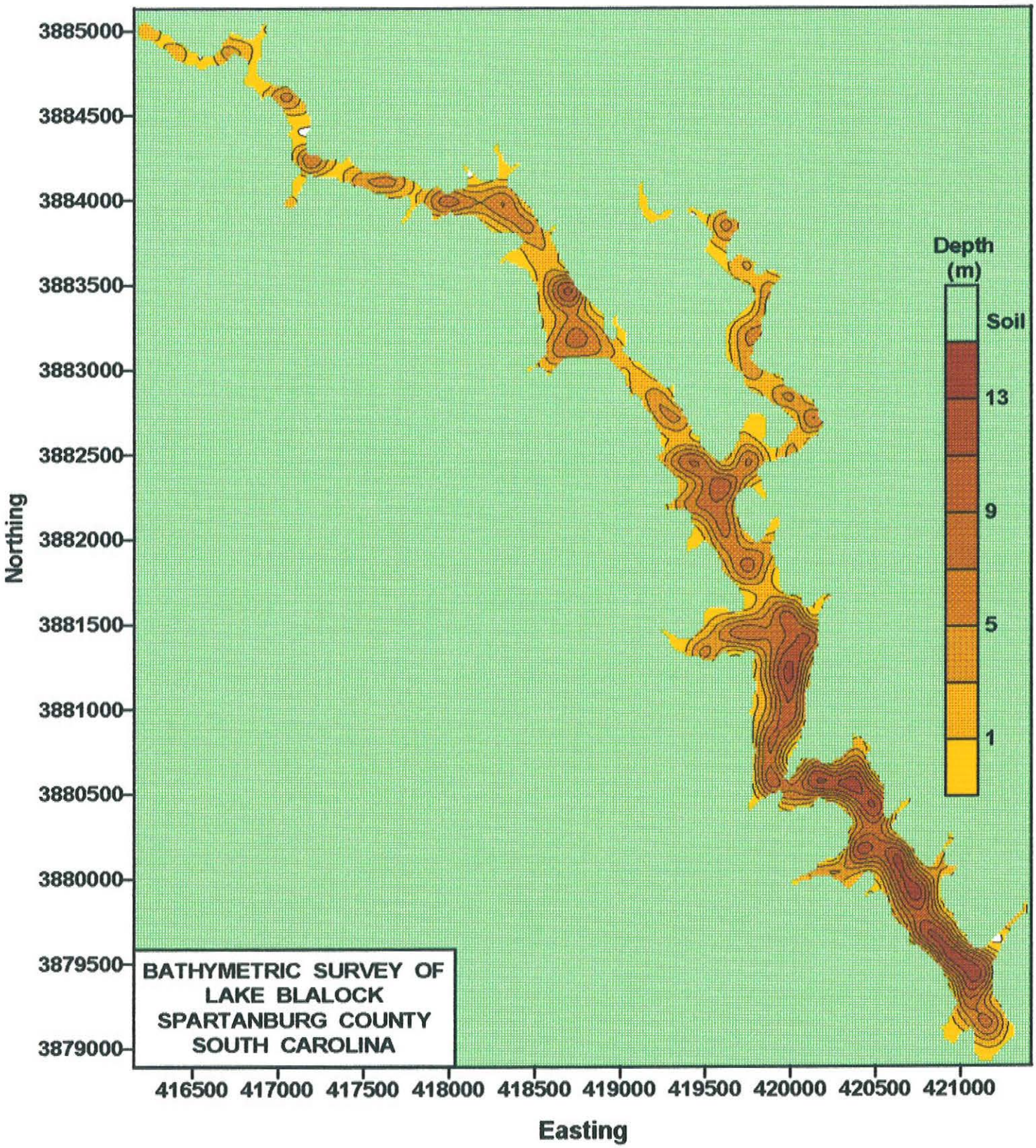
3875000
3874500
3874000
3873500
3873000
3872500
3872000
3871500
Northing
389500
390000
390500
391000
391500
Easting
GPS WAYPOINTS
LAKE LYMAN
SPARTANBURG COUNTY
SOUTH CAROLINA


GPS WAYPOINTS
LAKE BLALOCK
SPARTANBURG COUNTY
SOUTH CAROLINA
Northing
3885000
3884500
3884000
3883500
3883000
3882500
3882000
3881500
3881000
3880500
3880000
3879500
3879000
416500 417000 417500 418000 418500 419000 419500 420000 420500 421000
Easting


-02
-04
-06
-08
-10
-12
-14


BATHYMETRIC SURVEY OF
LAKE LYMAN
SPARTANBURG COUNTY
SOUTH CAROLINA
Northing
3875500
3875000
3874500
3874000
3873500
3873000
3872500
3872000
3871500
Easting
389500
390000
390500
391000
391500
Depth
(m)
6.0
5.0
4.0
3.0
2.0
1.0
0.0


BATHYMETRIC SURVEY OF
LAKE BLALOCK
SPARTANBURG COUNTY
SOUTH CAROLINA
Depth
(m)
Soil
13
9
5
1
Northing
3885000
3884500
3884000
3883500
3883000
3882500
3882000
3881500
3881000
3880500
3880000
3879500
3879000
Easting
416500
417000
417500
418000
418500
419000
419500
420000
420500
421000

Field Notes:

**Lake Lyman**
January 26, 1998
Lake level - 844.84 feet

| | Transect # | Waypoints | Radar File Number |
|---|---|---|---|
| | 1 | 1 - 10 | 2 |
| | 2 | 11 - 25 | 3 |
| | 3 | 26 - 34 | 4 |
| | 4 | 35 - 45 | 5 |
| | 5 | 46 - 58 | 6 |
| | 6 | 59 - 72 | 7 |
| | 7 | 73 - 79 | 8 |
| | 8 | 80 - 95 | 9 |
| | 9 | 96 - 113 | 10 |
| | 10 | 114 - 119 | 11 |
| | 11 | 120 - 133 | 12 |
| | 12 | 134 - 143 | 13 |
| | 13 | 144 - 155 | 14 |
| | 14 | 156 - 165 | 15 |
| | 15 | 166 - 174 | 16 |
| | 16 | 175 - 190 | 17 |
| | 17 | 191 - 200 | 18 |
| | 18 | 201 - 206 | 19 |
| | 19 | 207 - 210 | 20 |
| | 20 | 211 - 216 | 21 |
| | 21 | 217 - 221 | 22 |
| | 22 | 222 - 229 | 23 |
| | 23 | 230 - 244 | 24 |
| | 24 | 245 - 257 | 25 |
| | 25 | 258 - 264 | 26 |
| January 29, 1998 | | | |
| Lake level - 844.84 feet | 1A | 1 - 37 | 68 |
| | 2A | 38 - 75 | 69 |
| | 3A | 76 - 97 | 70 |
| | 4A | 98 - 116 71 | |
| | 5A | 117 - 188 | 72 |

Field Notes:

**Lake Blalock**
January 28, 1998
Lake level -

| Transect # | Waypoints | Radar File Number |
|---|---|---|
| 1 | 1 - 10 | 28 |
| 2 | 11 - 22 | 29 |
| 3 | 23 - 47 | 30 |
| 4 | 48 - 56 | 31 |
| 5 | 57 - 74 | 32 |
| 6 | 75 - 85 | 33 |
| 7 | 86 - 105 34 | |
| 8 | 106 - 113 | 35 |
| 9 | 114 - 122 | 36 |
| 10 | 123 - 149 | 37 |
| 11 | 150 - 208 | 38 |
| 12 | 209 - 232 | 39 |
| 12 | 233 - 247 | 40 |
| 13 | 248 - 258 | 41 |
| 14 | 259 - 297 | 42 |
| 16 | 298 - 312 | 43 |
| 17 | 313 - 326 | 44 |
| 18 | 327 - 348 | 45 |
| 19 | 349 - 431 | 46 |
| 20 | 442 - 455 | 47 |
| 21 | 456 - 457 | 48 |
| 22 | 458 - 462 | 49 |
| 23 | 463 - 468 | 50 |
| 24 | 469 - 473 | 51 |
| 25 | 474 - 480 | 52 |
| 26 | 481 - 488 | 53 |
| 27 | 489 - 492 | 54 |
| 28 | 493 - 506 | 55 |
| 29 | 507 - 531 | 56 |
| 30 | 532 - 535 | 57 |
| 31 | 536 - 539 | 58 |
| 32 | 540 - 576 | 59 |
| 33 | 577 - 581 | 60 |
| 34 | 582 - 589 | 61 |
| 35 | 590 - 607 | 62 |
| 36 | 608 - 618 | 63 |
| 37 | 619 - 631 | 64 |
| 38 | 632 - 643 | 65 |
| 39 | 644 - 649 | 66 |
| 40 | 650 - 657 | 67 |

**Lake Lyman**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP001 | 391079 | 3871626 | 5.86 |
| WP002 | 391070 | 3871628 | 6.82 |
| WP003 | 391055 | 3871630 | 7.72 |
| WP004 | 391041 | 3871633 | 8.22 |
| WP005 | 391021 | 3871636 | 7.49 |
| WP006 | 391002 | 3871638 | 7.77 |
| WP007 | 390986 | 3871640 | 7.88 |
| WP008 | 390968 | 3871642 | 7.27 |
| WP009 | 390950 | 3871646 | 5.81 |
| WP010 | 390933 | 3871649 | 4.12 |
| WP011 | 390876 | 3871838 | 1.14 |
| WP012 | 390885 | 3871839 | 1.93 |
| WP013 | 390908 | 3871841 | 3.89 |
| WP014 | 390932 | 3871843 | 6.09 |
| WP015 | 390953 | 3871844 | 7.10 |
| WP016 | 390971 | 3871846 | 7.43 |
| WP017 | 390990 | 3871849 | 7.49 |
| WP018 | 391012 | 3871851 | 7.55 |
| WP019 | 391036 | 3871854 | 7.38 |
| WP020 | 391049 | 3871856 | 7.43 |
| WP021 | 391068 | 3871859 | 7.38 |
| WP022 | 391091 | 3871862 | 7.04 |
| WP023 | 391112 | 3871865 | 6.59 |
| WP024 | 391132 | 3871870 | 4.51 |
| WP025 | 391151 | 3871875 | 3.33 |
| WP026 | 391027 | 3872174 | 3.78 |
| WP027 | 391020 | 3872186 | 6.99 |
| WP028 | 390993 | 3872186 | 7.04 |
| WP029 | 390968 | 3872186 | 7.04 |
| WP030 | 390944 | 3872186 | 6.87 |
| WP031 | 390920 | 3872185 | 6.87 |
| WP032 | 390900 | 3872185 | 6.87 |
| WP033 | 390880 | 3872185 | 6.70 |
| WP034 | 390861 | 3872186 | 3.56 |
| WP035 | 390871 | 3872405 | 2.26 |
| WP036 | 390888 | 3872405 | 3.95 |
| WP037 | 390914 | 3872406 | 6.42 |
| WP038 | 390937 | 3872406 | 6.54 |
| WP039 | 390959 | 3872408 | 6.59 |
| WP040 | 390978 | 3872410 | 6.59 |
| WP041 | 390992 | 3872410 | 6.54 |
| WP042 | 391009 | 3872410 | 6.59 |
| WP043 | 391029 | 3872412 | 6.70 |
| WP044 | 391049 | 3872414 | 6.76 |
| WP045 | 391072 | 3872416 | 4.51 |
| WP046 | 391081 | 3872416 | 2.60 |
| WP047 | 391085 | 3872431 | 4.12 |
| WP048 | 391093 | 3872454 | 5.81 |
| WP049 | 391100 | 3872474 | 6.14 |
| WP050 | 391108 | 3872493 | 6.31 |
| WP051 | 391116 | 3872524 | 6.20 |
| WP052 | 391125 | 3872553 | 6.03 |
| WP053 | 391131 | 3872574 | 5.92 |

**Lake Lyman**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP054 | 391138 | 3872595 | 5.81 |
| WP055 | 391145 | 3872617 | 5.69 |
| WP056 | 391152 | 3872639 | 5.75 |
| WP057 | 391158 | 3872662 | 5.75 |
| WP058 | 391160 | 3872678 | 4.23 |
| WP059 | 391162 | 3872683 | 4.40 |
| WP060 | 391149 | 3872689 | 4.85 |
| WP061 | 391128 | 3872698 | 5.86 |
| WP062 | 391110 | 3872710 | 6.20 |
| WP063 | 391091 | 3872719 | 6.20 |
| WP064 | 391071 | 3872725 | 6.09 |
| WP065 | 391048 | 3872734 | 5.97 |
| WP066 | 391027 | 3872741 | 6.03 |
| WP067 | 391007 | 3872747 | 6.20 |
| WP068 | 390987 | 3872755 | 6.25 |
| WP069 | 390968 | 3872764 | 6.20 |
| WP070 | 390948 | 3872772 | 6.20 |
| WP071 | 390926 | 3872781 | 6.14 |
| WP072 | 390907 | 3872786 | 3.78 |
| WP073 | 390794 | 3872957 | 1.76 |
| WP074 | 390788 | 3872968 | 3.44 |
| WP075 | 390779 | 3872986 | 3.56 |
| WP076 | 390771 | 3873002 | 3.05 |
| WP077 | 390763 | 3873018 | 2.66 |
| WP078 | 390755 | 3873037 | 3.50 |
| WP079 | 390746 | 3873053 | 2.43 |
| WP080 | 390749 | 3873056 | 2.38 |
| WP081 | 390769 | 3873059 | 4.01 |
| WP082 | 390793 | 3873059 | 4.62 |
| WP083 | 390817 | 3873060 | 4.85 |
| WP084 | 390841 | 3873061 | 5.07 |
| WP085 | 390860 | 3873063 | 5.24 |
| WP086 | 390884 | 3873064 | 5.47 |
| WP087 | 390908 | 3873066 | 5.64 |
| WP088 | 390933 | 3873069 | 5.81 |
| WP089 | 390957 | 3873071 | 5.75 |
| WP090 | 390980 | 3873073 | 5.69 |
| WP091 | 391004 | 3873077 | 5.64 |
| WP092 | 391036 | 3873079 | 5.58 |
| WP093 | 391059 | 3873082 | 5.47 |
| WP094 | 391083 | 3873086 | 5.69 |
| WP095 | 391106 | 3873090 | 2.88 |
| WP096 | 391111 | 3873089 | 2.15 |
| WP097 | 391120 | 3873104 | 3.22 |
| WP098 | 391128 | 3873123 | 5.19 |
| WP099 | 391136 | 3873141 | 5.64 |
| WP100 | 391145 | 3873160 | 5.58 |
| WP101 | 391155 | 3873181 | 5.58 |
| WP102 | 391163 | 3873201 | 5.52 |
| WP103 | 391173 | 3873222 | 5.47 |
| WP104 | 391182 | 3873240 | 5.36 |
| WP105 | 391191 | 3873260 | 5.24 |
| WP106 | 391201 | 3873282 | 5.24 |

**Lake Lyman**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP107 | 391211 | 3873304 | 5.24 |
| WP108 | 391223 | 3873332 | 5.24 |
| WP109 | 391231 | 3873351 | 5.19 |
| WP110 | 391239 | 3873372 | 5.19 |
| WP111 | 391248 | 3873394 | 5.13 |
| WP112 | 391257 | 3873415 | 4.96 |
| WP113 | 391266 | 3873437 | 3.89 |
| WP114 | 391510 | 3873391 | 2.55 |
| WP115 | 391512 | 3873373 | 3.00 |
| WP116 | 391511 | 3873348 | 3.16 |
| WP117 | 391512 | 3873325 | 3.16 |
| WP118 | 391514 | 3873304 | 2.88 |
| WP119 | 391516 | 3873285 | 1.98 |
| WP120 | 391198 | 3873128 | 1.93 |
| WP121 | 391187 | 3873146 | 3.78 |
| WP122 | 391171 | 3873162 | 5.41 |
| WP123 | 391154 | 3873179 | 5.52 |
| WP124 | 391136 | 3873195 | 5.64 |
| WP125 | 391121 | 3873212 | 5.58 |
| WP126 | 391106 | 3873228 | 5.36 |
| WP127 | 391089 | 3873245 | 5.47 |
| WP128 | 391073 | 3873263 | 5.30 |
| WP129 | 391057 | 3873281 | 5.47 |
| WP130 | 391041 | 3873298 | 5.52 |
| WP131 | 391025 | 3873316 | 5.58 |
| WP132 | 391010 | 3873334 | 4.91 |
| WP133 | 390996 | 3873349 | 2.21 |
| WP134 | 391025 | 3873387 | 3.56 |
| WP135 | 391045 | 3873394 | 5.41 |
| WP136 | 391067 | 3873401 | 5.19 |
| WP137 | 391090 | 3873409 | 5.13 |
| WP138 | 391113 | 3873419 | 5.02 |
| WP139 | 391135 | 3873428 | 5.19 |
| WP140 | 391157 | 3873439 | 5.24 |
| WP141 | 391179 | 3873449 | 5.36 |
| WP142 | 391197 | 3873458 | 5.30 |
| WP143 | 391214 | 3873472 | 4.91 |
| WP144 | 391048 | 3873828 | 2.04 |
| WP145 | 391029 | 3873804 | 3.16 |
| WP146 | 391015 | 3873807 | 3.78 |
| WP147 | 390995 | 3873795 | 4.34 |
| WP148 | 390976 | 3873781 | 4.51 |
| WP149 | 390955 | 3873767 | 4.46 |
| WP150 | 390934 | 3873751 | 4.46 |
| WP151 | 390913 | 3873737 | 4.29 |
| WP152 | 390891 | 3873723 | 4.40 |
| WP153 | 390870 | 3873709 | 4.23 |
| WP154 | 390848 | 3873695 | 3.39 |
| WP155 | 390836 | 3873687 | 1.42 |
| WP156 | 390564 | 3873963 | 1.70 |
| WP157 | 390571 | 3873977 | 3.44 |
| WP158 | 390580 | 3873999 | 3.44 |
| WP159 | 390590 | 3874020 | 3.73 |

**Lake Lyman**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP160 | 390599 | 3874043 | 3.44 |
| WP161 | 390608 | 3874063 | 3.33 |
| WP162 | 390618 | 3874089 | 3.44 |
| WP163 | 390626 | 3874112 | 3.50 |
| WP164 | 390634 | 3874132 | 3.56 |
| WP165 | 390638 | 3874139 | 2.71 |
| WP166 | 390458 | 3874228 | 2.60 |
| WP167 | 390439 | 3874221 | 2.77 |
| WP168 | 390423 | 3874214 | 2.83 |
| WP169 | 390403 | 3874205 | 2.88 |
| WP170 | 390383 | 3874197 | 2.94 |
| WP171 | 390362 | 3874191 | 3.22 |
| WP172 | 390343 | 3874190 | 2.94 |
| WP173 | 390317 | 3874186 | 3.22 |
| WP174 | 390311 | 3874179 | 3.00 |
| WP175 | 390314 | 3874169 | 2.49 |
| WP176 | 390304 | 3874184 | 3.16 |
| WP177 | 390294 | 3874206 | 2.88 |
| WP178 | 390287 | 3874224 | 2.71 |
| WP179 | 390277 | 3874241 | 2.71 |
| WP180 | 390269 | 3874263 | 2.66 |
| WP181 | 390258 | 3874286 | 2.66 |
| WP182 | 390245 | 3874308 | 2.55 |
| WP183 | 390238 | 3874329 | 2.66 |
| WP184 | 390230 | 3874352 | 3.11 |
| WP185 | 390220 | 3874373 | 3.11 |
| WP186 | 390211 | 3874395 | 3.16 |
| WP187 | 390204 | 3874416 | 3.05 |
| WP188 | 390197 | 3874435 | 3.05 |
| WP189 | 390189 | 3874458 | 2.55 |
| WP190 | 390182 | 3874474 | 2.49 |
| WP191 | 390025 | 3874374 | 1.81 |
| WP192 | 390019 | 3874358 | 1.93 |
| WP193 | 390014 | 3874334 | 2.15 |
| WP194 | 390010 | 3874309 | 2.10 |
| WP195 | 390004 | 3874284 | 2.04 |
| WP196 | 389998 | 3874258 | 1.93 |
| WP197 | 389993 | 3874233 | 1.76 |
| WP198 | 389988 | 3874206 | 1.59 |
| WP199 | 389984 | 3874185 | 1.37 |
| WP200 | 389981 | 3874162 | 1.14 |
| WP201 | 390189 | 3874485 | 2.38 |
| WP202 | 390206 | 3874490 | 2.88 |
| WP203 | 390231 | 3874497 | 1.00 |
| WP204 | 390255 | 3874505 | 2.32 |
| WP205 | 390279 | 3874515 | 2.60 |
| WP206 | 390298 | 3874523 | 2.38 |
| WP207 | 390339 | 3874714 | 2.04 |
| WP208 | 390332 | 3874725 | 2.71 |
| WP209 | 390318 | 3874744 | 2.77 |
| WP210 | 390306 | 3874757 | 1.08 |
| WP211 | 390433 | 3874958 | 1.37 |
| WP212 | 390421 | 3874965 | 1.59 |

**Lake Lyman**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP213 | 390397 | 3874971 | 1.65 |
| WP214 | 390378 | 3874993 | 1.76 |
| WP215 | 390360 | 3875002 | 1.76 |
| WP216 | 390352 | 3875006 | 1.25 |
| WP217 | 390566 | 3875135 | 1.14 |
| WP218 | 390567 | 3875144 | 1.14 |
| WP219 | 390569 | 3875160 | 1.25 |
| WP220 | 390569 | 3875173 | 1.31 |
| WP221 | 390571 | 3875194 | 1.42 |
| WP222 | 390293 | 3874970 | 1.03 |
| WP223 | 390288 | 3874965 | 1.48 |
| WP224 | 390276 | 3874950 | 2.15 |
| WP225 | 390261 | 3874932 | 1.93 |
| WP226 | 390244 | 3874916 | 1.76 |
| WP227 | 390227 | 3874898 | 1.87 |
| WP228 | 390210 | 3874881 | 1.93 |
| WP229 | 390197 | 3874868 | 1.98 |
| WP230 | 389967 | 3875031 | 1.25 |
| WP231 | 389971 | 3875047 | 1.37 |
| WP232 | 389976 | 3875068 | 1.42 |
| WP233 | 389983 | 3875089 | 1.31 |
| WP234 | 389990 | 3875110 | 1.20 |
| WP235 | 389999 | 3875132 | 1.08 |
| WP236 | 390009 | 3875151 | 0.75 |
| WP237 | 390017 | 3875170 | 0.97 |
| WP238 | 390026 | 3875192 | 1.14 |
| WP239 | 390033 | 3875212 | 1.20 |
| WP240 | 390040 | 3875234 | 1.31 |
| WP241 | 390046 | 3875256 | 1.37 |
| WP242 | 390053 | 3875277 | 1.25 |
| WP243 | 390059 | 3875298 | 1.14 |
| WP244 | 390064 | 3875315 | 0.92 |
| WP245 | 390159 | 3875167 | 0.86 |
| WP246 | 390160 | 3875155 | 1.20 |
| WP247 | 390157 | 3875142 | 1.53 |
| WP248 | 390152 | 3875125 | 1.65 |
| WP249 | 390148 | 3875104 | 1.59 |
| WP250 | 390142 | 3875083 | 1.59 |
| WP251 | 390136 | 3875058 | 1.48 |
| WP252 | 390130 | 3875034 | 1.42 |
| WP253 | 390124 | 3875012 | 1.59 |
| WP254 | 390118 | 3874987 | 1.65 |
| WP255 | 390114 | 3874964 | 1.81 |
| WP256 | 390108 | 3874940 | 1.93 |
| WP257 | 390104 | 3874922 | 1.65 |
| WP258 | 389839 | 3875170 | 0.75 |
| WP259 | 389837 | 3875179 | 0.69 |
| WP260 | 389841 | 3875193 | 0.63 |
| WP261 | 389846 | 3875207 | 0.69 |
| WP262 | 389849 | 3875222 | 0.63 |
| WP263 | 389853 | 3875236 | 0.69 |
| WP264 | 389856 | 3875245 | 0.41 |
| 1 | 390665 | 3872496 | 1.70 |

**Lake Lyman**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| 2 | 390681 | 3872496 | 1.87 |
| 3 | 390707 | 3872499 | 2.49 |
| 4 | 390728 | 3872500 | 3.11 |
| 5 | 390753 | 3872502 | 3.67 |
| 6 | 390778 | 3872505 | 4.01 |
| 7 | 390802 | 3872508 | 4.23 |
| 8 | 390827 | 3872511 | 4.68 |
| 9 | 390851 | 3872514 | 5.07 |
| 10 | 390876 | 3872516 | 5.58 |
| 11 | 390902 | 3872519 | 6.03 |
| 12 | 390927 | 3872522 | 6.31 |
| 13 | 390950 | 3872524 | 6.54 |
| 14 | 390975 | 3872526 | 6.59 |
| 15 | 391001 | 3872529 | 6.48 |
| 16 | 391026 | 3872532 | 6.54 |
| 17 | 391049 | 3872536 | 6.42 |
| 18 | 391071 | 3872542 | 6.37 |
| 19 | 391095 | 3872545 | 6.20 |
| 20 | 391120 | 3872551 | 6.14 |
| 21 | 391144 | 3872552 | 5.92 |
| 22 | 391162 | 3872569 | 5.52 |
| 23 | 391190 | 3872570 | 5.24 |
| 24 | 391215 | 3872577 | 4.79 |
| 25 | 391241 | 3872585 | 4.51 |
| 26 | 391268 | 3872584 | 4.12 |
| 27 | 391294 | 3872591 | 3.95 |
| 28 | 391318 | 3872599 | 3.67 |
| 29 | 391342 | 3872605 | 3.44 |
| 30 | 391366 | 3872611 | 3.16 |
| 31 | 391390 | 3872618 | 2.77 |
| 32 | 391414 | 3872621 | 2.66 |
| 33 | 391439 | 3872625 | 2.32 |
| 34 | 391464 | 3872629 | 2.10 |
| 35 | 391489 | 3872636 | 1.76 |
| 36 | 391514 | 3872644 | 1.42 |
| 37 | 391529 | 3872647 | 1.14 |
| 38 | 390640 | 3872892 | 1.20 |
| 39 | 390650 | 3872901 | 1.20 |
| 40 | 390669 | 3872917 | 1.37 |
| 41 | 390684 | 3872933 | 1.59 |
| 42 | 390704 | 3872952 | 2.43 |
| 43 | 390729 | 3872968 | 3.05 |
| 44 | 390758 | 3872988 | 3.67 |
| 45 | 390784 | 3873006 | 4.06 |
| 46 | 390809 | 3873023 | 4.46 |
| 47 | 390838 | 3873040 | 4.91 |
| 48 | 390866 | 3873057 | 5.24 |
| 49 | 390894 | 3873075 | 5.69 |
| 50 | 390921 | 3873092 | 5.92 |
| 51 | 390951 | 3873108 | 5.81 |
| 52 | 390979 | 3873124 | 5.81 |
| 53 | 391008 | 3873139 | 5.75 |
| 54 | 391039 | 3873157 | 5.64 |

**Lake Lyman**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| 55 | 391069 | 3873170 | 5.86 |
| 56 | 391099 | 3873185 | 5.64 |
| 57 | 391129 | 3873199 | 5.75 |
| 58 | 391159 | 3873211 | 5.58 |
| 59 | 391184 | 3873233 | 5.41 |
| 60 | 391207 | 3873256 | 5.24 |
| 61 | 391240 | 3873265 | 5.19 |
| 62 | 391259 | 3873281 | 5.07 |
| 63 | 391272 | 3873286 | 4.96 |
| 64 | 391301 | 3873296 | 4.74 |
| 65 | 391336 | 3873301 | 4.46 |
| 66 | 391368 | 3873313 | 4.29 |
| 67 | 391395 | 3873329 | 4.06 |
| 68 | 391430 | 3873340 | 3.84 |
| 69 | 391462 | 3873348 | 3.67 |
| 70 | 391494 | 3873362 | 3.33 |
| 71 | 391523 | 3873376 | 3.05 |
| 72 | 391552 | 3873396 | 2.66 |
| 73 | 391574 | 3873419 | 2.38 |
| 74 | 391589 | 3873454 | 1.98 |
| 75 | 391596 | 3873484 | 1.59 |
| 76 | 389907 | 3874209 | 1.03 |
| 77 | 389916 | 3874212 | 1.08 |
| 78 | 389956 | 3874228 | 1.48 |
| 79 | 389981 | 3874240 | 1.76 |
| 80 | 390002 | 3874244 | 1.98 |
| 81 | 390032 | 3874257 | 2.21 |
| 82 | 390061 | 3874268 | 2.49 |
| 83 | 390088 | 3874276 | 2.66 |
| 84 | 390117 | 3874288 | 2.71 |
| 85 | 390146 | 3874303 | 2.71 |
| 86 | 390177 | 3874318 | 2.71 |
| 87 | 390206 | 3874328 | 2.71 |
| 88 | 390234 | 3874337 | 3.33 |
| 89 | 390264 | 3874347 | 2.66 |
| 90 | 390304 | 3874370 | 2.55 |
| 91 | 390335 | 3874378 | 2.71 |
| 92 | 390364 | 3874392 | 2.49 |
| 93 | 390404 | 3874413 | 2.21 |
| 94 | 390436 | 3874416 | 1.59 |
| 95 | 390460 | 3874416 | 1.31 |
| 96 | 390476 | 3874425 | 0.97 |
| 97 | 390488 | 3874442 | 0.97 |
| 98 | 390338 | 3874713 | 1.93 |
| 99 | 390340 | 3874769 | 2.83 |
| 100 | 390339 | 3874801 | 2.43 |
| 101 | 390343 | 3874835 | 2.21 |
| 102 | 390344 | 3874873 | 2.04 |
| 103 | 390354 | 3874916 | 2.15 |
| 104 | 390361 | 3874941 | 1.98 |
| 105 | 390378 | 3874980 | 1.87 |
| 106 | 390396 | 3875015 | 1.87 |
| 107 | 390416 | 3875046 | 1.87 |

**Lake Lyman**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| 108 | 390436 | 3875071 | 1.76 |
| 109 | 390467 | 3875105 | 1.59 |
| 110 | 390495 | 3875135 | 1.59 |
| 111 | 390522 | 3875151 | 1.42 |
| 112 | 390558 | 3875166 | 1.37 |
| 113 | 390569 | 3875163 | 1.31 |
| 114 | 390615 | 3875172 | 1.20 |
| 115 | 390631 | 3875186 | 1.08 |
| 116 | 390636 | 3875178 | 1.03 |
| 117 | 389661 | 3875237 | 0.69 |
| 118 | 389683 | 3875238 | 0.52 |
| 119 | 389706 | 3875237 | 0.52 |
| 120 | 389727 | 3875229 | 0.75 |
| 121 | 389747 | 3875215 | 0.75 |
| 122 | 389764 | 3875203 | 0.63 |
| 123 | 389782 | 3875200 | 0.58 |
| 124 | 389799 | 3875199 | 0.75 |
| 125 | 389822 | 3875196 | 0.69 |
| 126 | 389849 | 3875198 | 0.86 |
| 127 | 389877 | 3875196 | 0.80 |
| 128 | 389909 | 3875193 | 0.97 |
| 129 | 389933 | 3875182 | 2.21 |
| 130 | 389959 | 3875163 | 1.53 |
| 131 | 389983 | 3875146 | 0.58 |
| 132 | 390010 | 3875127 | 1.20 |
| 133 | 390038 | 3875106 | 1.25 |
| 134 | 390077 | 3875074 | 1.37 |
| 135 | 390114 | 3875039 | 1.53 |
| 136 | 390158 | 3875000 | 1.65 |
| 137 | 390207 | 3874958 | 1.76 |
| 138 | 390264 | 3874910 | 1.98 |
| 139 | 390315 | 3874853 | 2.10 |
| 140 | 390337 | 3874786 | 2.49 |
| 141 | 390305 | 3874717 | 2.66 |
| 142 | 390266 | 3874651 | 2.71 |
| 143 | 390241 | 3874577 | 3.22 |
| 144 | 390231 | 3874500 | 2.60 |
| 145 | 390237 | 3874425 | 2.32 |
| 146 | 390269 | 3874357 | 2.55 |
| 147 | 390316 | 3874297 | 2.77 |
| 148 | 390359 | 3874235 | 2.88 |
| 149 | 390409 | 3874177 | 3.16 |
| 150 | 390470 | 3874129 | 3.50 |
| 151 | 390528 | 3874084 | 3.56 |
| 152 | 390585 | 3874030 | 4.06 |
| 153 | 390636 | 3873977 | 3.61 |
| 154 | 390689 | 3873921 | 3.84 |
| 155 | 390743 | 3873867 | 3.89 |
| 156 | 390798 | 3873815 | 4.23 |
| 157 | 390854 | 3873765 | 4.29 |
| 158 | 390910 | 3873713 | 4.29 |
| 159 | 390959 | 3873658 | 4.34 |
| 160 | 391006 | 3873595 | 4.68 |

**Lake Lyman**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| 161 | 391050 | 3873533 | 4.74 |
| 162 | 391095 | 3873472 | 4.91 |
| 163 | 391109 | 3873399 | 5.02 |
| 164 | 391095 | 3873324 | 5.52 |
| 165 | 391068 | 3873256 | 5.36 |
| 166 | 391035 | 3873189 | 5.58 |
| 167 | 391011 | 3873114 | 5.64 |
| 168 | 390995 | 3873040 | 5.69 |
| 169 | 390986 | 3872966 | 5.92 |
| 170 | 390976 | 3872890 | 6.09 |
| 171 | 390970 | 3872814 | 6.14 |
| 172 | 390966 | 3872739 | 6.25 |
| 173 | 390960 | 3872664 | 6.37 |
| 174 | 390955 | 3872586 | 6.37 |
| 175 | 390945 | 3872512 | 6.42 |
| 176 | 390943 | 3872439 | 6.59 |
| 177 | 390941 | 3872363 | 6.76 |
| 178 | 390941 | 3872287 | 6.87 |
| 179 | 390941 | 3872213 | 6.93 |
| 180 | 390944 | 3872132 | 7.10 |
| 181 | 390949 | 3872056 | 7.27 |
| 182 | 390956 | 3871976 | 7.38 |
| 183 | 390965 | 3871907 | 7.43 |
| 184 | 390969 | 3871831 | 7.49 |
| 185 | 390975 | 3871757 | 7.32 |
| 186 | 390981 | 3871677 | 7.72 |
| 187 | 390995 | 3871605 | 8.00 |
| 188 | 391010 | 3871535 | 6.93 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP001 | 421087 | 3879072 | 4.46 |
| WP002 | 421105 | 3879076 | 5.73 |
| WP003 | 421129 | 3879089 | 13.51 |
| WP004 | 421154 | 3879104 | 10.80 |
| WP005 | 421176 | 3879119 | 8.90 |
| WP006 | 421200 | 3879134 | 3.64 |
| WP007 | 421220 | 3879151 | 3.10 |
| WP008 | 421235 | 3879164 | 2.92 |
| WP009 | 421248 | 3879179 | 2.83 |
| WP010 | 421260 | 3879197 | 3.01 |
| WP011 | 421187 | 3879323 | 4.46 |
| WP012 | 421178 | 3879348 | 4.46 |
| WP013 | 421169 | 3879375 | 6.18 |
| WP014 | 421163 | 3879406 | 10.62 |
| WP015 | 421149 | 3879430 | 14.78 |
| WP016 | 421137 | 3879458 | 13.96 |
| WP017 | 421128 | 3879484 | 12.06 |
| WP018 | 421113 | 3879506 | 12.43 |
| WP019 | 421109 | 3879535 | 11.97 |
| WP020 | 421089 | 3879563 | 9.08 |
| WP021 | 421073 | 3879591 | 5.18 |
| WP022 | 421059 | 3879605 | 3.55 |
| WP024 | 421402 | 3879888 | 1.83 |
| WP025 | 421271 | 3879901 | 2.65 |
| WP026 | 421364 | 3879820 | 3.10 |
| WP027 | 421346 | 3879792 | 3.55 |
| WP028 | 421312 | 3879779 | 3.83 |
| WP029 | 421293 | 3879752 | 5.45 |
| WP030 | 421270 | 3879721 | 4.64 |
| WP031 | 421251 | 3879693 | 5.18 |
| WP032 | 421228 | 3879665 | 4.55 |
| WP033 | 421206 | 3879635 | 7.18 |
| WP034 | 421179 | 3879595 | 9.62 |
| WP035 | 421156 | 3879556 | 11.34 |
| WP036 | 421131 | 3879511 | 12.70 |
| WP037 | 421115 | 3879472 | 14.78 |
| WP038 | 421092 | 3879427 | 12.97 |
| WP039 | 421073 | 3879383 | 11.34 |
| WP040 | 421053 | 3879341 | 11.79 |
| WP041 | 421035 | 3879305 | 8.17 |
| WP042 | 421012 | 3879260 | 7.36 |
| WP043 | 420994 | 3879214 | 7.54 |
| WP044 | 420972 | 3879175 | 7.08 |
| WP045 | 420949 | 3879136 | 7.90 |
| WP046 | 420921 | 3879105 | 3.64 |
| WP047 | 420888 | 3879082 | 2.11 |
| WP048 | 420915 | 3879480 | 3.64 |
| WP049 | 420914 | 3879496 | 8.90 |
| WP050 | 420927 | 3879529 | 14.78 |
| WP051 | 420926 | 3879537 | 10.89 |
| WP052 | 420953 | 3879579 | 11.88 |
| WP053 | 420966 | 3879598 | 12.61 |
| WP054 | 420993 | 3879645 | 10.16 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP055 | 421012 | 3879673 | 6.54 |
| WP056 | 421018 | 3879681 | 4.46 |
| WP057 | 420922 | 3880222 | 2.29 |
| WP058 | 420915 | 3880205 | 2.56 |
| WP059 | 420907 | 3880185 | 4.28 |
| WP060 | 420891 | 3880145 | 6.09 |
| WP061 | 420878 | 3880108 | 7.18 |
| WP062 | 420864 | 3880065 | 7.81 |
| WP063 | 420853 | 3880030 | 8.80 |
| WP064 | 420840 | 3879981 | 10.43 |
| WP065 | 420824 | 3879927 | 10.43 |
| WP066 | 420815 | 3879876 | 11.43 |
| WP067 | 420795 | 3879813 | 10.71 |
| WP068 | 420783 | 3879772 | 9.98 |
| WP069 | 420777 | 3879737 | 14.78 |
| WP070 | 420756 | 3879694 | 12.43 |
| WP071 | 420724 | 3879647 | 6.72 |
| WP072 | 420702 | 3879631 | 4.28 |
| WP073 | 420669 | 3879605 | 2.65 |
| WP074 | 420655 | 3879589 | 2.47 |
| WP075 | 420435 | 3879903 | 3.46 |
| WP076 | 420461 | 3879928 | 4.37 |
| WP077 | 420492 | 3879953 | 5.82 |
| WP078 | 420519 | 3879977 | 6.81 |
| WP079 | 420551 | 3880007 | 9.80 |
| WP080 | 420582 | 3880039 | 10.71 |
| WP081 | 420605 | 3880070 | 13.96 |
| WP082 | 420630 | 3880105 | 10.16 |
| WP083 | 420655 | 3880140 | 11.25 |
| WP084 | 420673 | 3880176 | 10.16 |
| WP085 | 420686 | 3880204 | 5.27 |
| WP086 | 420564 | 3880356 | 7.72 |
| WP087 | 420549 | 3880380 | 5.27 |
| WP088 | 420534 | 3880398 | 8.71 |
| WP089 | 420517 | 3880418 | 14.33 |
| WP090 | 420495 | 3880436 | 10.89 |
| WP091 | 420476 | 3880454 | 9.17 |
| WP092 | 420457 | 3880471 | 9.17 |
| WP093 | 420435 | 3880488 | 9.44 |
| WP094 | 420413 | 3880502 | 9.89 |
| WP095 | 420392 | 3880519 | 13.42 |
| WP096 | 420367 | 3880535 | 14.33 |
| WP097 | 420342 | 3880554 | 10.52 |
| WP098 | 420319 | 3880573 | 10.07 |
| WP099 | 420286 | 3880597 | 11.70 |
| WP100 | 420260 | 3880617 | 10.89 |
| WP101 | 420233 | 3880637 | 10.89 |
| WP102 | 420203 | 3880661 | 10.07 |
| WP103 | 420176 | 3880683 | 8.26 |
| WP104 | 420151 | 3880703 | 6.63 |
| WP105 | 420129 | 3880715 | 4.19 |
| WP106 | 420154 | 3880699 | 6.81 |
| WP107 | 420144 | 3880667 | 7.99 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP108 | 420140 | 3880631 | 9.17 |
| WP109 | 420130 | 3880588 | 10.07 |
| WP110 | 420115 | 3880541 | 10.98 |
| WP111 | 420108 | 3880501 | 10.16 |
| WP112 | 420095 | 3880458 | 13.87 |
| WP113 | 420090 | 3880434 | 9.89 |
| WP114 | 420361 | 3880380 | 4.19 |
| WP115 | 420374 | 3880347 | 2.20 |
| WP116 | 420382 | 3880308 | 4.01 |
| WP117 | 420399 | 3880265 | 6.36 |
| WP118 | 420416 | 3880226 | 9.80 |
| WP119 | 420439 | 3880175 | 11.79 |
| WP120 | 420464 | 3880120 | 4.55 |
| WP121 | 420482 | 3880082 | 2.47 |
| WP122 | 420493 | 3880056 | 2.01 |
| WP123 | 420054 | 3880029 | 2.83 |
| WP124 | 420078 | 3880035 | 3.37 |
| WP125 | 420101 | 3880038 | 3.83 |
| WP126 | 420126 | 3880044 | 4.64 |
| WP127 | 420163 | 3880061 | 4.73 |
| WP128 | 420195 | 3880081 | 8.17 |
| WP129 | 420223 | 3880092 | 8.26 |
| WP130 | 420278 | 3880088 | 9.35 |
| WP131 | 420315 | 3880096 | 9.71 |
| WP132 | 420353 | 3880110 | 11.43 |
| WP133 | 420370 | 3880133 | 10.71 |
| WP134 | 420395 | 3880160 | 11.25 |
| WP135 | 420420 | 3880186 | 11.16 |
| WP136 | 420447 | 3880216 | 11.43 |
| WP137 | 420461 | 3880259 | 10.43 |
| WP138 | 420470 | 3880311 | 10.16 |
| WP139 | 420470 | 3880359 | 10.07 |
| WP140 | 420468 | 3880417 | 9.44 |
| WP141 | 420467 | 3880480 | 9.98 |
| WP142 | 420466 | 3880535 | 14.33 |
| WP143 | 420462 | 3880590 | 11.43 |
| WP144 | 420457 | 3880654 | 9.35 |
| WP145 | 420452 | 3880708 | 4.82 |
| WP146 | 420447 | 3880766 | 4.46 |
| WP147 | 420438 | 3880820 | 5.91 |
| WP148 | 420429 | 3880847 | 4.01 |
| WP149 | 420423 | 3880857 | 2.56 |
| WP150 | 419803 | 3880396 | 3.01 |
| WP151 | 419809 | 3880416 | 4.64 |
| WP152 | 419818 | 3880430 | 4.55 |
| WP153 | 419827 | 3880450 | 5.64 |
| WP154 | 419833 | 3880466 | 7.27 |
| WP155 | 419843 | 3880486 | 7.72 |
| WP156 | 419851 | 3880506 | 8.17 |
| WP157 | 419860 | 3880526 | 9.35 |
| WP158 | 419872 | 3880549 | 10.52 |
| WP159 | 419883 | 3880569 | 9.35 |
| WP160 | 419892 | 3880588 | 14.06 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP161 | 419904 | 3880607 | 10.43 |
| WP162 | 419915 | 3880625 | 10.89 |
| WP163 | 419925 | 3880644 | 10.52 |
| WP164 | 419935 | 3880662 | 9.89 |
| WP165 | 419945 | 3880680 | 8.26 |
| WP166 | 419958 | 3880700 | 7.63 |
| WP167 | 419967 | 3880723 | 6.99 |
| WP168 | 419976 | 3880742 | 6.09 |
| WP169 | 419985 | 3880759 | 4.82 |
| WP170 | 419992 | 3880779 | 4.01 |
| WP171 | 419995 | 3880794 | 3.73 |
| WP172 | 419999 | 3880811 | 3.46 |
| WP173 | 420005 | 3880826 | 3.01 |
| WP174 | 420013 | 3880848 | 3.55 |
| WP175 | 420020 | 3880865 | 4.46 |
| WP176 | 420027 | 3880883 | 6.09 |
| WP177 | 420032 | 3880905 | 7.45 |
| WP178 | 420037 | 3880929 | 8.26 |
| WP179 | 420041 | 3880953 | 8.35 |
| WP180 | 420046 | 3880973 | 8.35 |
| WP181 | 420050 | 3880991 | 8.53 |
| WP182 | 420055 | 3881011 | 7.90 |
| WP183 | 420059 | 3881032 | 8.35 |
| WP184 | 420065 | 3881057 | 9.80 |
| WP185 | 420070 | 3881081 | 13.33 |
| WP186 | 420076 | 3881100 | 13.51 |
| WP187 | 420077 | 3881119 | 13.51 |
| WP188 | 420082 | 3881141 | 13.51 |
| WP189 | 420088 | 3881165 | 13.69 |
| WP190 | 420093 | 3881189 | 11.43 |
| WP191 | 420100 | 3881218 | 10.80 |
| WP192 | 420106 | 3881240 | 10.98 |
| WP193 | 420112 | 3881267 | 11.16 |
| WP194 | 420113 | 3881302 | 12.52 |
| WP195 | 420114 | 3881327 | 13.24 |
| WP196 | 420120 | 3881355 | 9.35 |
| WP197 | 420126 | 3881387 | 9.08 |
| WP198 | 420136 | 3881414 | 9.53 |
| WP199 | 420147 | 3881444 | 8.62 |
| WP200 | 420159 | 3881477 | 6.72 |
| WP201 | 420168 | 3881509 | 7.54 |
| WP202 | 420181 | 3881549 | 6.18 |
| WP203 | 420201 | 3881579 | 3.83 |
| WP204 | 420225 | 3881600 | 5.73 |
| WP205 | 420255 | 3881622 | 5.09 |
| WP206 | 420283 | 3881644 | 3.92 |
| WP207 | 420303 | 3881660 | 3.83 |
| WP208 | 420322 | 3881676 | 1.74 |
| WP209 | 420081 | 3881641 | 5.55 |
| WP210 | 420050 | 3881616 | 6.54 |
| WP211 | 420012 | 3881596 | 9.80 |
| WP212 | 419973 | 3881575 | 8.44 |
| WP213 | 419942 | 3881557 | 9.17 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP214 | 419907 | 3881527 | 7.99 |
| WP215 | 419872 | 3881499 | 3.19 |
| WP216 | 419840 | 3881478 | 9.44 |
| WP217 | 419801 | 3881455 | 7.90 |
| WP218 | 419757 | 3881434 | 8.80 |
| WP219 | 419723 | 3881416 | 8.53 |
| WP220 | 419684 | 3881389 | 8.17 |
| WP221 | 419642 | 3881365 | 8.26 |
| WP222 | 419601 | 3881345 | 3.92 |
| WP223 | 419555 | 3881319 | 5.09 |
| WP224 | 419513 | 3881311 | 7.45 |
| WP225 | 419467 | 3881311 | 5.91 |
| WP226 | 419419 | 3881326 | 3.83 |
| WP227 | 419395 | 3881337 | 3.83 |
| WP228 | 419385 | 3881344 | 3.73 |
| WP229 | 419373 | 3881352 | 3.64 |
| WP230 | 419350 | 3881363 | 3.28 |
| WP231 | 419331 | 3881376 | 3.92 |
| WP232 | 419320 | 3881388 | 0.84 |
| WP233 | 419743 | 3881502 | 6.90 |
| WP234 | 419768 | 3881466 | 6.00 |
| WP235 | 419785 | 3881415 | 8.08 |
| WP236 | 419798 | 3881374 | 4.19 |
| WP237 | 419810 | 3881330 | 3.92 |
| WP238 | 419823 | 3881296 | 1.92 |
| WP239 | 419842 | 3881270 | 3.83 |
| WP240 | 419868 | 3881235 | 7.63 |
| WP241 | 419902 | 3881196 | 8.62 |
| WP242 | 419933 | 3881161 | 9.53 |
| WP243 | 419964 | 3881127 | 9.35 |
| WP244 | 420002 | 3881086 | 9.98 |
| WP245 | 420029 | 3881055 | 11.97 |
| WP246 | 420061 | 3881028 | 9.08 |
| WP247 | 420087 | 3881006 | 4.64 |
| WP248 | 420084 | 3880965 | 5.18 |
| WP249 | 420057 | 3880940 | 7.99 |
| WP250 | 420030 | 3880918 | 7.99 |
| WP251 | 420002 | 3880895 | 8.62 |
| WP252 | 419977 | 3880876 | 11.07 |
| WP253 | 419953 | 3880859 | 13.69 |
| WP254 | 419926 | 3880843 | 11.43 |
| WP255 | 419896 | 3880826 | 9.98 |
| WP256 | 419865 | 3880812 | 9.26 |
| WP257 | 419837 | 3880800 | 10.52 |
| WP258 | 419809 | 3880790 | 6.18 |
| WP259 | 419999 | 3880508 | 13.87 |
| WP260 | 420048 | 3880494 | 9.44 |
| WP261 | 420096 | 3880491 | 9.17 |
| WP262 | 420142 | 3880499 | 13.87 |
| WP263 | 420205 | 3880493 | 11.79 |
| WP264 | 420247 | 3880494 | 11.43 |
| WP265 | 420305 | 3880473 | 9.62 |
| WP266 | 420358 | 3880434 | 10.07 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP267 | 420407 | 3880366 | 9.26 |
| WP268 | 420424 | 3880335 | 9.26 |
| WP269 | 420444 | 3880304 | 10.16 |
| WP270 | 420466 | 3880270 | 10.43 |
| WP271 | 420493 | 3880219 | 11.16 |
| WP272 | 420529 | 3880168 | 10.71 |
| WP273 | 420546 | 3880147 | 10.34 |
| WP274 | 420572 | 3880111 | 10.25 |
| WP275 | 420599 | 3880072 | 11.25 |
| WP276 | 420622 | 3880027 | 14.06 |
| WP277 | 420651 | 3879981 | 14.78 |
| WP278 | 420672 | 3879942 | 14.60 |
| WP279 | 420665 | 3879894 | 10.52 |
| WP280 | 420671 | 3879849 | 11.43 |
| WP281 | 420693 | 3879804 | 11.25 |
| WP282 | 420721 | 3879761 | 11.16 |
| WP283 | 420749 | 3879713 | 11.79 |
| WP284 | 420781 | 3879663 | 11.79 |
| WP285 | 420807 | 3879624 | 10.71 |
| WP286 | 420842 | 3879578 | 10.71 |
| WP287 | 420875 | 3879538 | 11.34 |
| WP288 | 420890 | 3879514 | 9.08 |
| WP289 | 420925 | 3879476 | 9.35 |
| WP290 | 420951 | 3879439 | 9.80 |
| WP291 | 420972 | 3879396 | 9.89 |
| WP292 | 420989 | 3879347 | 7.81 |
| WP293 | 421004 | 3879299 | 6.18 |
| WP294 | 421014 | 3879259 | 7.27 |
| WP295 | 421026 | 3879214 | 8.99 |
| WP296 | 421035 | 3879166 | 5.00 |
| WP297 | 421040 | 3879132 | 2.01 |
| WP298 | 420013 | 3882107 | 1.38 |
| WP299 | 420001 | 3882097 | 1.56 |
| WP300 | 419988 | 3882077 | 1.20 |
| WP301 | 419963 | 3882051 | 2.29 |
| WP302 | 419945 | 3882027 | 3.92 |
| WP303 | 419920 | 3881998 | 3.92 |
| WP304 | 419892 | 3881961 | 4.37 |
| WP305 | 419861 | 3881931 | 4.91 |
| WP306 | 419827 | 3881906 | 6.90 |
| WP307 | 419798 | 3881887 | 9.08 |
| WP308 | 419767 | 3881872 | 8.71 |
| WP309 | 419728 | 3881844 | 8.08 |
| WP310 | 419692 | 3881819 | 8.26 |
| WP311 | 419658 | 3881797 | 6.18 |
| WP312 | 419629 | 3881782 | 3.55 |
| WP313 | 419429 | 3881925 | 2.38 |
| WP314 | 419450 | 3881945 | 3.55 |
| WP315 | 419471 | 3881966 | 4.46 |
| WP316 | 419563 | 3881999 | 8.80 |
| WP317 | 419569 | 3882002 | 12.61 |
| WP318 | 419578 | 3882017 | 9.80 |
| WP319 | 419596 | 3882042 | 7.08 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP320 | 419616 | 3882070 | 7.45 |
| WP321 | 419632 | 3882090 | 8.80 |
| WP322 | 419646 | 3882114 | 7.72 |
| WP323 | 419657 | 3882142 | 6.72 |
| WP324 | 419665 | 3882165 | 5.27 |
| WP325 | 419672 | 3882195 | 3.92 |
| WP326 | 419680 | 3882226 | 1.74 |
| WP327 | 419684 | 3882248 | 1.20 |
| WP328 | 419675 | 3882280 | 4.82 |
| WP329 | 419664 | 3882304 | 7.45 |
| WP330 | 419652 | 3882325 | 8.08 |
| WP331 | 419636 | 3882346 | 11.70 |
| WP332 | 419620 | 3882369 | 6.81 |
| WP333 | 419603 | 3882395 | 5.18 |
| WP334 | 419586 | 3882418 | 5.82 |
| WP335 | 419569 | 3882439 | 5.55 |
| WP336 | 419551 | 3882456 | 5.36 |
| WP337 | 419520 | 3882461 | 7.45 |
| WP338 | 419498 | 3882457 | 6.90 |
| WP339 | 419472 | 3882458 | 12.61 |
| WP340 | 419442 | 3882457 | 7.81 |
| WP341 | 419417 | 3882454 | 7.63 |
| WP342 | 419389 | 3882453 | 8.17 |
| WP343 | 419362 | 3882452 | 8.08 |
| WP344 | 419337 | 3882454 | 7.81 |
| WP345 | 419308 | 3882457 | 6.81 |
| WP346 | 419281 | 3882463 | 6.72 |
| WP347 | 419258 | 3882468 | 5.82 |
| WP348 | 419228 | 3882476 | 3.73 |
| WP349 | 419310 | 3882178 | 3.37 |
| WP350 | 419318 | 3882187 | 3.37 |
| WP351 | 419361 | 3882194 | 4.28 |
| WP352 | 419380 | 3882205 | 5.73 |
| WP353 | 419416 | 3882216 | 7.72 |
| WP354 | 419445 | 3882225 | 8.80 |
| WP355 | 419479 | 3882236 | 8.80 |
| WP356 | 419515 | 3882249 | 7.99 |
| WP357 | 419548 | 3882260 | 12.15 |
| WP358 | 419586 | 3882276 | 7.81 |
| WP359 | 419621 | 3882290 | 8.35 |
| WP360 | 419653 | 3882307 | 7.81 |
| WP361 | 419686 | 3882326 | 5.91 |
| WP362 | 419719 | 3882345 | 4.91 |
| WP363 | 419749 | 3882363 | 4.55 |
| WP364 | 419784 | 3882383 | 4.55 |
| WP365 | 419820 | 3882401 | 3.73 |
| WP366 | 419852 | 3882418 | 4.73 |
| WP367 | 419889 | 3882434 | 4.37 |
| WP368 | 419945 | 3882459 | 5.00 |
| WP369 | 419977 | 3882471 | 7.81 |
| WP370 | 420013 | 3882488 | 7.08 |
| WP371 | 420046 | 3882512 | 7.63 |
| WP372 | 420071 | 3882540 | 7.36 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP373 | 420095 | 3882570 | 8.90 |
| WP374 | 420115 | 3882602 | 7.54 |
| WP375 | 420127 | 3882656 | 6.90 |
| WP376 | 420110 | 3882692 | 6.54 |
| WP377 | 420091 | 3882725 | 6.36 |
| WP378 | 420070 | 3882753 | 6.72 |
| WP379 | 420046 | 3882777 | 7.54 |
| WP380 | 420028 | 3882795 | 8.17 |
| WP381 | 420003 | 3882817 | 6.81 |
| WP382 | 419972 | 3882842 | 6.63 |
| WP383 | 419945 | 3882863 | 6.45 |
| WP384 | 419917 | 3882883 | 6.63 |
| WP385 | 419887 | 3882907 | 6.36 |
| WP386 | 419860 | 3882932 | 6.09 |
| WP387 | 419839 | 3882959 | 6.00 |
| WP388 | 419814 | 3882986 | 5.91 |
| WP389 | 419791 | 3883013 | 5.73 |
| WP390 | 419777 | 3883045 | 5.82 |
| WP391 | 419779 | 3883082 | 6.99 |
| WP392 | 419790 | 3883113 | 6.54 |
| WP393 | 419802 | 3883146 | 5.55 |
| WP394 | 419815 | 3883181 | 5.36 |
| WP395 | 419828 | 3883214 | 8.35 |
| WP396 | 419841 | 3883250 | 8.17 |
| WP397 | 419853 | 3883285 | 8.53 |
| WP398 | 419862 | 3883318 | 7.72 |
| WP399 | 419875 | 3883357 | 5.09 |
| WP400 | 419884 | 3883396 | 7.54 |
| WP401 | 419867 | 3883428 | 7.72 |
| WP402 | 419842 | 3883452 | 7.81 |
| WP403 | 419815 | 3883480 | 8.17 |
| WP404 | 419783 | 3883511 | 6.90 |
| WP405 | 419758 | 3883533 | 7.90 |
| WP406 | 419729 | 3883556 | 6.54 |
| WP407 | 419706 | 3883575 | 4.37 |
| WP408 | 419679 | 3883602 | 3.37 |
| WP409 | 419654 | 3883627 | 2.74 |
| WP410 | 419641 | 3883659 | 2.65 |
| WP411 | 419640 | 3883697 | 4.37 |
| WP412 | 419653 | 3883731 | 5.00 |
| WP413 | 419667 | 3883760 | 6.72 |
| WP414 | 419672 | 3883796 | 2.92 |
| WP415 | 419651 | 3883824 | 2.74 |
| WP416 | 419627 | 3883848 | 6.09 |
| WP417 | 419598 | 3883873 | 4.46 |
| WP418 | 419572 | 3883892 | 2.74 |
| WP419 | 419543 | 3883905 | 2.83 |
| WP420 | 419511 | 3883912 | 3.64 |
| WP421 | 419475 | 3883918 | 2.29 |
| WP422 | 419444 | 3883923 | 2.11 |
| WP423 | 419408 | 3883928 | 1.83 |
| WP424 | 419373 | 3883928 | 2.01 |
| WP425 | 419335 | 3883925 | 2.56 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP426 | 419316 | 3883919 | 3.28 |
| WP427 | 419298 | 3883911 | 4.19 |
| WP428 | 419284 | 3883906 | 2.92 |
| WP429 | 419259 | 3883897 | 1.29 |
| WP430 | 419235 | 3883896 | 1.56 |
| WP431 | 419220 | 3883909 | 1.56 |
| WP432 | 419444 | 3883957 | 2.01 |
| WP433 | 419452 | 3883937 | 3.10 |
| WP434 | 419467 | 3883908 | 1.83 |
| WP435 | 419478 | 3883884 | 2.38 |
| WP436 | 419503 | 3883881 | 2.38 |
| WP437 | 419533 | 3883888 | 4.01 |
| WP438 | 419564 | 3883895 | 2.92 |
| WP439 | 419592 | 3883908 | 2.29 |
| WP440 | 419619 | 3883927 | 2.11 |
| WP441 | 419637 | 3883920 | 2.56 |
| WP442 | 419624 | 3883895 | 2.92 |
| WP443 | 419607 | 3883869 | 4.91 |
| WP444 | 419593 | 3883847 | 3.73 |
| WP445 | 419605 | 3883833 | 1.29 |
| WP446 | 419636 | 3883838 | 2.92 |
| WP447 | 419664 | 3883844 | 5.82 |
| WP448 | 419697 | 3883850 | 2.74 |
| WP449 | 419703 | 3883826 | 3.55 |
| WP450 | 419684 | 3883801 | 3.64 |
| WP451 | 419664 | 3883776 | 2.92 |
| WP452 | 419642 | 3883754 | 3.01 |
| WP453 | 419624 | 3883736 | 2.74 |
| WP454 | 419597 | 3883719 | 2.29 |
| WP455 | 419575 | 3883703 | 2.29 |
| WP456 | 419799 | 3883619 | 1.74 |
| WP457 | 419782 | 3883602 | 2.56 |
| WP458 | 419826 | 3883435 | 1.65 |
| WP459 | 419850 | 3883438 | 4.46 |
| WP460 | 419889 | 3883465 | 4.55 |
| WP461 | 419922 | 3883480 | 4.37 |
| WP462 | 419962 | 3883500 | 3.64 |
| WP463 | 419864 | 3883197 | 2.74 |
| WP464 | 419817 | 3883202 | 8.71 |
| WP465 | 419771 | 3883214 | 5.36 |
| WP466 | 419734 | 3883227 | 4.91 |
| WP467 | 419689 | 3883255 | 2.56 |
| WP468 | 419676 | 3883270 | 1.65 |
| WP469 | 419786 | 3882911 | 6.18 |
| WP470 | 419818 | 3882914 | 6.09 |
| WP471 | 419863 | 3882933 | 6.18 |
| WP472 | 419914 | 3882938 | 5.73 |
| WP473 | 419955 | 3882955 | 3.10 |
| WP474 | 420038 | 3882735 | 5.27 |
| WP475 | 420077 | 3882738 | 6.81 |
| WP476 | 420123 | 3882739 | 6.45 |
| WP477 | 420146 | 3882739 | 10.43 |
| WP478 | 420158 | 3882739 | 7.72 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP479 | 420194 | 3882736 | 6.54 |
| WP480 | 420226 | 3882724 | 2.83 |
| WP481 | 419852 | 3882653 | 2.65 |
| WP482 | 419834 | 3882620 | 2.74 |
| WP483 | 419821 | 3882569 | 2.29 |
| WP484 | 419806 | 3882508 | 3.92 |
| WP485 | 419797 | 3882456 | 9.80 |
| WP486 | 419790 | 3882393 | 6.54 |
| WP487 | 419802 | 3882338 | 1.74 |
| WP488 | 419824 | 3882291 | 2.83 |
| WP489 | 416191 | 3885084 | 1.47 |
| WP490 | 416178 | 3885058 | 1.83 |
| WP491 | 416169 | 3885025 | 3.64 |
| WP492 | 416163 | 3884998 | 2.56 |
| WP493 | 416167 | 3885032 | 3.37 |
| WP494 | 416205 | 3885021 | 3.46 |
| WP495 | 416256 | 3885006 | 2.74 |
| WP496 | 416310 | 3884990 | 2.74 |
| WP497 | 416369 | 3884960 | 3.19 |
| WP498 | 416426 | 3884925 | 3.92 |
| WP499 | 416469 | 3884891 | 4.10 |
| WP500 | 416523 | 3884864 | 5.00 |
| WP501 | 416593 | 3884857 | 2.83 |
| WP502 | 416649 | 3884868 | 3.10 |
| WP503 | 416705 | 3884895 | 7.08 |
| WP504 | 416754 | 3884916 | 5.09 |
| WP505 | 416808 | 3884922 | 4.19 |
| WP506 | 416869 | 3884920 | 5.55 |
| WP507 | 416933 | 3885097 | 2.56 |
| WP508 | 416925 | 3885066 | 2.83 |
| WP509 | 416908 | 3885019 | 3.64 |
| WP510 | 416891 | 3884971 | 3.10 |
| WP511 | 416873 | 3884913 | 5.45 |
| WP512 | 416859 | 3884849 | 3.28 |
| WP513 | 416856 | 3884800 | 4.10 |
| WP514 | 416872 | 3884743 | 7.36 |
| WP515 | 416918 | 3884697 | 5.09 |
| WP516 | 416966 | 3884674 | 5.18 |
| WP517 | 417013 | 3884641 | 9.62 |
| WP518 | 417049 | 3884586 | 5.73 |
| WP519 | 417071 | 3884540 | 1.74 |
| WP520 | 417087 | 3884479 | 1.83 |
| WP521 | 417101 | 3884421 | 1.92 |
| WP522 | 417125 | 3884375 | 3.73 |
| WP523 | 417156 | 3884325 | 8.71 |
| WP524 | 417158 | 3884260 | 8.62 |
| WP525 | 417152 | 3884207 | 4.01 |
| WP526 | 417134 | 3884148 | 4.19 |
| WP527 | 417109 | 3884093 | 4.91 |
| WP528 | 417087 | 3884046 | 2.47 |
| WP529 | 417061 | 3884011 | 3.37 |
| WP530 | 417025 | 3884007 | 3.10 |
| WP531 | 417004 | 3884000 | 1.47 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP532 | 417063 | 3884536 | 1.56 |
| WP533 | 417079 | 3884573 | 7.36 |
| WP534 | 417089 | 3884614 | 3.92 |
| WP535 | 417097 | 3884664 | 1.74 |
| WP536 | 417189 | 3884464 | 7.08 |
| WP537 | 417155 | 3884438 | 4.01 |
| WP538 | 417105 | 3884400 | 2.11 |
| WP539 | 417085 | 3884386 | 1.29 |
| WP540 | 417110 | 3884287 | 3.01 |
| WP541 | 417127 | 3884275 | 4.01 |
| WP542 | 417164 | 3884254 | 8.62 |
| WP543 | 417207 | 3884235 | 6.81 |
| WP544 | 417252 | 3884216 | 5.55 |
| WP545 | 417294 | 3884200 | 6.45 |
| WP546 | 417339 | 3884187 | 8.08 |
| WP547 | 417387 | 3884171 | 5.45 |
| WP548 | 417430 | 3884153 | 5.73 |
| WP549 | 417479 | 3884133 | 6.72 |
| WP550 | 417531 | 3884111 | 5.91 |
| WP551 | 417580 | 3884101 | 6.18 |
| WP552 | 417620 | 3884088 | 6.63 |
| WP553 | 417666 | 3884069 | 9.62 |
| WP554 | 417704 | 3884056 | 10.43 |
| WP555 | 417746 | 3884046 | 8.99 |
| WP556 | 417791 | 3884031 | 6.45 |
| WP557 | 417826 | 3884016 | 5.64 |
| WP558 | 417867 | 3884006 | 5.55 |
| WP559 | 417908 | 3883996 | 5.55 |
| WP560 | 417942 | 3883986 | 5.91 |
| WP562 | 418022 | 3883970 | 6.00 |
| WP563 | 418057 | 3883962 | 6.54 |
| WP564 | 418101 | 3883952 | 6.99 |
| WP565 | 418142 | 3883943 | 6.90 |
| WP566 | 418177 | 3883934 | 6.63 |
| WP567 | 418204 | 3883945 | 6.18 |
| WP568 | 418198 | 3883982 | 5.09 |
| WP569 | 418189 | 3884013 | 5.55 |
| WP570 | 418177 | 3884051 | 5.00 |
| WP571 | 418161 | 3884084 | 4.82 |
| WP572 | 418145 | 3884115 | 4.37 |
| WP573 | 418130 | 3884155 | 3.37 |
| WP574 | 418115 | 3884188 | 2.56 |
| WP575 | 418101 | 3884219 | 1.38 |
| WP576 | 417653 | 3884186 | 0.75 |
| WP577 | 417650 | 3884160 | 2.38 |
| WP578 | 417649 | 3884123 | 5.18 |
| WP579 | 417650 | 3884085 | 6.63 |
| WP580 | 417647 | 3884050 | 9.62 |
| WP581 | 417645 | 3884022 | 3.01 |
| WP582 | 417930 | 3883871 | 3.01 |
| WP583 | 417935 | 3883908 | 5.82 |
| WP584 | 417941 | 3883948 | 5.73 |
| WP585 | 417946 | 3883992 | 9.35 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP586 | 417950 | 3884035 | 6.90 |
| WP587 | 417950 | 3884070 | 3.37 |
| WP588 | 417946 | 3884113 | 2.47 |
| WP589 | 418288 | 3884302 | 2.47 |
| WP590 | 418298 | 3884263 | 1.92 |
| WP591 | 418305 | 3884222 | 2.65 |
| WP592 | 418313 | 3884174 | 3.64 |
| WP593 | 418319 | 3884133 | 4.82 |
| WP594 | 418332 | 3884073 | 5.00 |
| WP595 | 418353 | 3884012 | 6.18 |
| WP596 | 418367 | 3883974 | 6.36 |
| WP597 | 418383 | 3883937 | 6.81 |
| WP598 | 418403 | 3883899 | 6.72 |
| WP599 | 418421 | 3883857 | 10.80 |
| WP600 | 418434 | 3883812 | 5.55 |
| WP601 | 418452 | 3883779 | 6.00 |
| WP602 | 418494 | 3883771 | 3.73 |
| WP603 | 418543 | 3883779 | 5.55 |
| WP604 | 418576 | 3883793 | 11.61 |
| WP605 | 418612 | 3883821 | 6.81 |
| WP606 | 418632 | 3883847 | 5.82 |
| WP607 | 418707 | 3883597 | 3.92 |
| WP612 | 418541 | 3883473 | 3.28 |
| WP613 | 418569 | 3883493 | 6.18 |
| WP614 | 418597 | 3883512 | 6.27 |
| WP615 | 418636 | 3883536 | 4.73 |
| WP616 | 418669 | 3883556 | 11.16 |
| WP617 | 418705 | 3883580 | 3.28 |
| WP618 | 418718 | 3883589 | 1.74 |
| WP619 | 418722 | 3883520 | 6.63 |
| WP620 | 418729 | 3883480 | 11.43 |
| WP621 | 418715 | 3883438 | 5.73 |
| WP622 | 418702 | 3883392 | 5.91 |
| WP623 | 418690 | 3883355 | 6.63 |
| WP624 | 418677 | 3883312 | 6.63 |
| WP625 | 418664 | 3883267 | 6.45 |
| WP626 | 418655 | 3883218 | 6.00 |
| WP627 | 418648 | 3883172 | 6.63 |
| WP628 | 418637 | 3883115 | 7.18 |
| WP629 | 418625 | 3883066 | 6.54 |
| WP630 | 418610 | 3883011 | 5.18 |
| WP631 | 418474 | 3882997 | 2.29 |
| WP632 | 418507 | 3883006 | 3.55 |
| WP633 | 418551 | 3883024 | 4.64 |
| WP634 | 418589 | 3883036 | 5.64 |
| WP635 | 418648 | 3883060 | 5.18 |
| WP636 | 418698 | 3883081 | 6.18 |
| WP637 | 418748 | 3883097 | 6.00 |
| WP638 | 418804 | 3883113 | 8.80 |
| WP639 | 418838 | 3883121 | 11.97 |
| WP640 | 418873 | 3883130 | 7.54 |
| WP641 | 418919 | 3883138 | 6.81 |
| WP642 | 418977 | 3883150 | 6.90 |

**Lake Blalock**

| WP | Easting | Northing | Depth(m) |
|---|---|---|---|
| WP643 | 419022 | 3883178 | 6.27 |
| WP644 | 419107 | 3882855 | 4.19 |
| WP645 | 419135 | 3882864 | 6.54 |
| WP646 | 419180 | 3882885 | 7.45 |
| WP647 | 419208 | 3882905 | 11.79 |
| WP648 | 419223 | 3882917 | 7.99 |
| WP649 | 419244 | 3882939 | 2.20 |
| WP650 | 419354 | 3882748 | 7.90 |
| WP651 | 419347 | 3882743 | 9.89 |
| WP652 | 419337 | 3882740 | 11.97 |
| WP653 | 419324 | 3882735 | 8.44 |
| WP654 | 419298 | 3882722 | 7.99 |
| WP655 | 419274 | 3882711 | 7.08 |
| WP656 | 419251 | 3882699 | 4.82 |
| WP657 | 419228 | 3882688 | 2.38 |