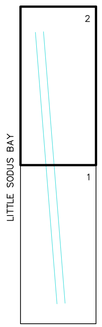


SHEET INDEX
"NOT TO SCALE"

SOUNDING COLOR LEGEND

	DEPTHS 0.1' OR MORE ABOVE PROJECT DEPTH
	DEPTHS AT OR BELOW PROJECT DEPTH
18.0	PROJECT DEPTH

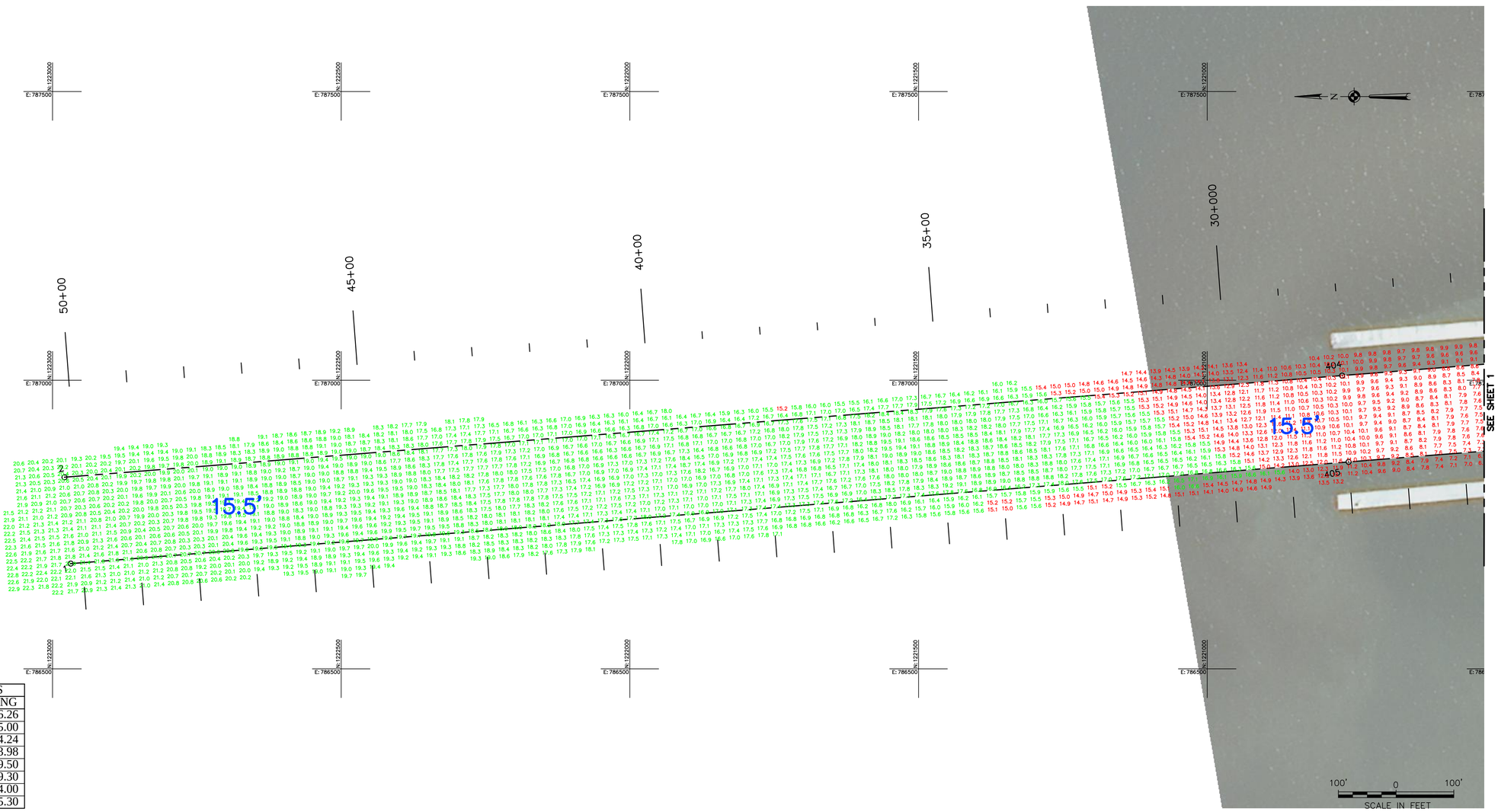
LEGEND OF SYMBOLS

17+00	CHANNEL STATIONING
⊙ 417	CHANNEL CORNER
◎ H.L.F.	HARBOR LINE CORNER
	FEDERAL CHANNEL
	HARBOR LINE
	SUBMARINE CABLE
C	CAN BUOY
N	NUN BUOY
	LIGHTED BUOY
	FIXED LIGHT
	LIGHT HOUSE
W	LIGHT COLOR WHITE
R	LIGHT COLOR RED
G	LIGHT COLOR GREEN
FL	FLASHING LIGHT
F	FIXED LIGHT
Oc	OCCULTING LIGHT
Iso	EQUAL INTERVAL
AL	ALTERNATING
Q	QUICK (FLASHING)
S	LIGHT CYCLE SECONDS

SITE SPECIFIC NOTES:

1. PROJECT DEPTHS AND SOUNDINGS ARE REFERRED TO LOW WATER DATUM OF 243.3 FEET IGLD 1985.
2. HORIZONTAL CONTROL IS REFERRED TO NORTH AMERICAN DATUM 1983 NEW YORK STATE PLANE COORDINATE SYSTEM–CENTRAL ZONE.
3. PROJECT DEPTH IS AS NOTED BELOW LOW WATER DATUM.
4. SOUNDINGS WERE TAKEN BY THE BUFFALO DISTRICT ARMY CORPS OF ENGINEERS BY D. DELL AND PARTY ON APRIL 30, 2014 USING:
   GPS POSITIONING, POS–MV VER.5 AND HEMISPHERE MBX–4
   BEACON USED: YOUNGSTOWN
   SONAR HEAD: 240 KHZ, SEABAT 7101 MULTIBEAM
   1.5 DEGREE BEAMS 210 DEGREE ARC
   HEAVE PITCH AND ROLL; APPLANIX POS–MV VER. 5
   VELOCITY PROFILER: SONTEK CASTAWAY CTD
   HYPACK SURVEY SOFTWARE
   SURVEY LAUNCH WITMER
5. THE SOUNDING INFORMATION DEPICTED ON THE MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION AT THAT TIME.
6. THE BACKGROUND IMAGERY SHOWN WAS ACQUIRED FROM THE NEW YORK STATE GIS CLEARINGHOUSE.
7. THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE STANDARDS OUTLINED IN CORPS OF ENGINEERS HYDROGRAPHIC SURVEY MANUAL EM 1110–2–1003.

VICINITY MAP
"NOT TO SCALE"


50+00
45+00
40+00
35+00
30+000
15.5'
15.5'
405
404
SEE SHEET 1
N:1223000
E:787500
N:1221500
E:787000
N:1220000
E:786500
N:1218500
E:786000
N:1217000
E:785500
N:1215500
E:785000
N:1214000
E:784500
N:1212500
E:784000
N:1211000
E:783500
N:1209500
E:783000
N:1208000
E:782500
N:1206500
E:782000
N:1205000
E:781500
N:1203500
E:781000
N:1202000
E:780500
N:1200500
E:780000
N:1199000
E:779500
N:1197500
E:779000
N:1196000
E:778500
N:1194500
E:778000
N:1193000
E:777500
N:1191500
E:777000
N:1190000
E:776500
N:1188500
E:776000
N:1187000
E:775500
N:1185500
E:775000
N:1184000
E:774500
N:1182500
E:774000
N:1181000
E:773500
N:1179500
E:773000
N:1178000
E:772500
N:1176500
E:772000
N:1175000
E:771500
N:1173500
E:771000
N:1172000
E:770500
N:1170500
E:770000
N:1169000
E:769500
N:1167500
E:769000
N:1166000
E:768500
N:1164500
E:768000
N:1163000
E:767500
N:1161500
E:767000
N:1160000
E:766500
N:1158500
E:766000
N:1157000
E:765500
N:1155500
E:765000
N:1154000
E:764500
N:1152500
E:764000
N:1151000
E:763500
N:1149500
E:763000
N:1148000
E:762500
N:1146500
E:762000
N:1145000
E:761500
N:1143500
E:761000
N:1142000
E:760500
N:1140500
E:760000
N:1139000
E:759500
N:1137500
E:759000
N:1136000
E:758500
N:1134500
E:758000
N:1133000
E:757500
N:1131500
E:757000
N:1130000
E:756500
N:1128500
E:756000
N:1127000
E:755500
N:1125500
E:755000
N:1124000
E:754500
N:1122500
E:754000
N:1121000
E:753500
N:1119500
E:753000
N:1118000
E:752500
N:1116500
E:752000
N:1115000
E:751500
N:1113500
E:751000
N:1112000
E:750500
N:1110500
E:750000
N:1109000
E:749500
N:1107500
E:749000
N:1106000
E:748500
N:1104500
E:748000
N:1103000
E:747500
N:1101500
E:747000
N:1100000
E:746500
N:1098500
E:746000
N:1097000
E:745500
N:1095500
E:745000
N:1094000
E:744500
N:1092500
E:744000
N:1091000
E:743500
N:1089500
E:743000
N:1088000
E:742500
N:1086500
E:742000
N:1085000
E:741500
N:1083500
E:741000
N:1082000
E:740500
N:1080500
E:740000
N:1079000
E:739500
N:1077500
E:739000
N:1076000
E:738500
N:1074500
E:738000
N:1073000
E:737500
N:1071500
E:737000
N:1070000
E:736500
N:1068500
E:736000
N:1067000
E:735500
N:1065500
E:735000
N:1064000
E:734500
N:1062500
E:734000
N:1061000
E:733500
N:1059500
E:733000
N:1058000
E:732500
N:1056500
E:732000
N:1055000
E:731500
N:1053500
E:731000
N:1052000
E:730500
N:1050500
E:730000
N:1049000
E:729500
N:1047500
E:729000
N:1046000
E:728500
N:1044500
E:728000
N:1043000
E:727500
N:1041500
E:727000
N:1040000
E:726500
N:1038500
E:726000
N:1037000
E:725500
N:1035500
E:725000
N:1034000
E:724500
N:1032500
E:724000
N:1031000
E:723500
N:1029500
E:723000
N:1028000
E:722500
N:1026500
E:722000
N:1025000
E:721500
N:1023500
E:721000
N:1022000
E:720500
N:1020500
E:720000
N:1019000
E:719500
N:1017500
E:719000
N:1016000
E:718500
N:1014500
E:718000
N:1013000
E:717500
N:1011500
E:717000
N:1010000
E:716500
N:1008500
E:716000
N:1007000
E:715500
N:1005500
E:715000
N:1004000
E:714500
N:1002500
E:714000
N:1001000
E:713500
N:999500
E:713000
N:998000
E:712500
N:996500
E:712000
N:995000
E:711500
N:993500
E:711000
N:992000
E:710500
N:990500
E:710000
N:989000
E:709500
N:987500
E:709000
N:986000
E:708500
N:984500
E:708000
N:983000
E:707500
N:981500
E:707000
N:980000
E:706500
N:978500
E:706000
N:977000
E:705500
N:975500
E:705000
N:974000
E:704500
N:972500
E:704000
N:971000
E:703500
N:969500
E:703000
N:968000
E:702500
N:966500
E:702000
N:965000
E:701500
N:963500
E:701000
N:962000
E:700500
N:960500
E:700000
N:959000
E:699500
N:957500
E:699000
N:956000
E:698500
N:954500
E:698000
N:953000
E:697500
N:951500
E:697000
N:950000
E:696500
N:948500
E:696000
N:947000
E:695500
N:945500
E:695000
N:944000
E:694500
N:942500
E:694000
N:941000
E:693500
N:939500
E:693000
N:938000
E:692500
N:936500
E:692000
N:935000
E:691500
N:933500
E:691000
N:932000
E:690500
N:930500
E:690000
N:929000
E:689500
N:927500
E:689000
N:926000
E:688500
N:924500
E:688000
N:923000
E:687500
N:921500
E:687000
N:920000
E:686500
N:918500
E:686000
N:917000
E:685500
N:915500
E:685000
N:914000
E:684500
N:912500
E:684000
N:911000
E:683500
N:909500
E:683000
N:908000
E:682500
N:906500
E:682000
N:905000
E:681500
N:903500
E:681000
N:902000
E:680500
N:900500
E:680000
N:899000
E:679500
N:897500
E:679000
N:896000
E:678500
N:894500
E:678000
N:893000
E:677500
N:891500
E:677000
N:890000
E:676500
N:888500
E:676000
N:887000
E:675500
N:885500
E:675000
N:884000
E:674500
N:882500
E:674000
N:881000
E:673500
N:879500
E:673000
N:878000
E:672500
N:876500
E:672000
N:875000
E:671500
N:873500
E:671000
N:872000
E:670500
N:870500
E:670000
N:869000
E:669500
N:867500
E:669000
N:866000
E:668500
N:864500
E:668000
N:863000
E:667500
N:861500
E:667000
N:860000
E:666500
N:858500
E:666000
N:857000
E:665500
N:855500
E:665000
N:854000
E:664500
N:852500
E:664000
N:851000
E:663500
N:849500
E:663000
N:848000
E:662500
N:846500
E:662000
N:845000
E:661500
N:843500
E:661000
N:842000
E:660500
N:840500
E:660000
N:839000
E:659500
N:837500
E:659000
N:836000
E:658500
N:834500
E:658000
N:833000
E:657500
N:831500
E:657000
N:830000
E:656500
N:828500
E:656000
N:827000
E:655500
N:825500
E:655000
N:824000
E:654500
N:822500
E:654000
N:821000
E:653500
N:819500
E:653000
N:818000
E:652500
N:816500
E:652000
N:815000
E:651500
N:813500
E:651000
N:812000
E:650500
N:810500
E:650000
N:809000
E:649500
N:807500
E:649000
N:806000
E:648500
N:804500
E:648000
N:803000
E:647500
N:801500
E:647000
N:800000
E:646500
N:798500
E:646000
N:797000
E:645500
N:795500
E:645000
N:794000
E:644500
N:792500
E:644000
N:791000
E:643500
N:789500
E:643000
N:788000
E:642500
N:786500
E:642000
N:785000
E:641500
N:783500
E:641000
N:782000
E:640500
N:780500
E:640000
N:779000
E:639500
N:777500
E:639000
N:776000
E:638500
N:774500
E:638000
N:773000
E:637500
N:771500
E:637000
N:770000
E:636500
N:768500
E:636000
N:767000
E:635500
N:765500
E:635000
N:764000
E:634500
N:762500
E:634000
N:761000
E:633500
N:759500
E:633000
N:758000
E:632500
N:756500
E:632000
N:755000
E:631500
N:753500
E:631000
N:752000
E:630500
N:750500
E:630000
N:749000
E:629500
N:747500
E:629000
N:746000
E:628500
N:744500
E:628000
N:743000
E:627500
N:741500
E:627000
N:740000
E:626500
N:738500
E:626000
N:737000
E:625500
N:735500
E:625000
N:734000
E:624500
N:732500
E:624000
N:731000
E:623500
N:729500
E:623000
N:728000
E:622500
N:726500
E:622000
N:725000
E:621500
N:723500
E:621000
N:722000
E:620500
N:720500
E:620000
N:719000
E:619500
N:717500
E:619000
N:716000
E:618500
N:714500
E:618000
N:713000
E:617500
N:711500
E:617000
N:710000
E:616500
N:708500
E:616000
N:707000
E:615500
N:705500
E:615000
N:704000
E:614500
N:702500
E:614000
N:701000
E:613500
N:699500
E:613000
N:698000
E:612500
N:696500
E:612000
N:695000
E:611500
N:693500
E:611000
N:692000
E:610500
N:690500
E:610000
N:689000
E:609500
N:687500
E:609000
N:686000
E:608500
N:684500
E:608000
N:683000
E:607500
N:681500
E:607000
N:680000
E:606500
N:678500
E:606000
N:677000
E:605500
N:675500
E:605000
N:674000
E:604500
N:672500
E:604000
N:671000
E:603500
N:669500
E:603000
N:668000
E:602500
N:666500
E:602000
N:665000
E:601500
N:663500
E:601000
N:662000
E:600500
N:660500
E:600000
N:659000
E:599500
N:657500
E:599000
N:656000
E:598500
N:654500
E:598000
N:653000
E:597500
N:651500
E:597000
N:650000
E:596500
N:648500
E:596000
N:647000
E:595500
N:645500
E:595000
N:644000
E:594500
N:642500
E:594000
N:641000
E:593500
N:639500
E:593000
N:638000
E:592500
N:636500
E:592000
N:635000
E:591500
N:633500
E:591000
N:632000
E:590500
N:630500
E:590000
N:629000
E:589500
N:627500
E:589000
N:626000
E:588500
N:624500
E:588000
N:623000
E:587500
N:621500
E:587000
N:620000
E:586500
N:618500
E:586000
N:617000
E:585500
N:615500
E:585000
N:614000
E:584500
N:612500
E:584000
N:611000
E:583500
N:609500
E:583000
N:608000
E:582500
N:606500
E:582000
N:605000
E:581500
N:603500
E:581000
N:602000
E:580500
N:600500
E:580000
N:599000
E:579500
N:597500
E:579000
N:596000
E:578500
N:594500
E:578000
N:593000
E:577500
N:591500
E:577000
N:590000
E:576500
N:588500
E:576000
N:587000
E:575500
N:585500
E:575000
N:584000
E:574500
N:582500
E:574000
N:581000
E:573500
N:579500
E:573000
N:578000
E:572500
N:576500
E:572000
N:575000
E:571500
N:573500
E:571000
N:572000
E:570500
N:570500
E:570000
N:569000
E:569500
N:567500
E:569000
N:566000
E:568500
N:564500
E:568000
N:563000
E:567500
N:561500
E:567000
N:560000
E:566500
N:558500
E:566000
N:557000
E:565500
N:555500
E:565000
N:554000
E:564500
N:552500
E:564000
N:551000
E:563500
N:549500
E:563000
N:548000
E:562500
N:546500
E:562000
N:545000
E:561500
N:543500
E:561000
N:542000
E:560500
N:540500
E:560000
N:539000
E:559500
N:537500
E:559000
N:536000
E:558500
N:534500
E:558000
N:533000
E:557500
N:531500
E:557000
N:530000
E:556500
N:528500
E:556000
N:527000
E:555500
N:525500
E:555000
N:524000
E:554500
N:522500
E:554000
N:521000
E:553500
N:519500
E:553000
N:518000
E:552500
N:516500
E:552000
N:515000
E:551500
N:513500
E:551000
N:512000
E:550500
N:510500
E:550000
N:509000
E:549500
N:507500
E:549000
N:506000
E:548500
N:504500
E:548000
N:503000
E:547500
N:501500
E:547000
N:500000
E:546500
N:498500
E:546000
N:497000
E:545500
N:495500
E:545000
N:494000
E:544500
N:492500
E:544000
N:491000
E:543500
N:489500
E:543000
N:488000
E:542500
N:486500
E:542000
N:485000
E:541500
N:483500
E:541000
N:482000
E:540500
N:480500
E:540000
N:479000
E:539500
N:477500
E:539000
N:476000
E:538500
N:474500
E:538000
N:473000
E:537500
N:471500
E:537000
N:470000
E:536500
N:468500
E:536000
N:467000
E:535500
N:465500
E:535000
N:464000
E:534500
N:462500
E:534000
N:461000
E:533500
N:459500
E:533000
N:458000
E:532500
N:456500
E:532000
N:455000
E:531500
N:453500
E:531000
N:452000
E:530500
N:450500
E:530000
N:449000
E:529500
N:447500
E:529000
N:446000
E:528500
N:444500
E:528000
N:443000
E:527500
N:441500
E:527000
N:440000
E:526500
N:438500
E:526000
N:437000
E:525500
N:435500
E:525000
N:434000
E:524500
N:432500
E:524000
N:431000
E:523500
N:429500
E:523000
N:428000
E:522500
N:426500
E:522000
N:425000
E:521500
N:423500
E:521000
N:422000
E:520500
N:420500
E:520000
N:419000
E:519500
N:417500
E:519000
N:416000
E:518500
N:414500
E:518000
N:413000
E:517500
N:411500
E:517000
N:410000
E:516500
N:408500
E:516000
N:407000
E:515500
N:405500
E:515000
N:404000
E:514500
N:402500
E:514000
N:401000
E:513500
N:399500
E:513000
N:398000
E:512500
N:396500
E:512000
N:395000
E:511500
N:393500
E:511000
N:392000
E:510500
N:390500
E:510000
N:389000
E:509500
N:387500
E:509000
N:386000
E:508500
N:384500
E:508000
N:383000
E:507500
N:381500
E:507000
N:380000
E:506500
N:378500
E:506000
N:377000
E:505500
N:375500
E:505000
N:374000
E:504500
N:372500
E:504000
N:371000
E:503500
N:369500
E:503000
N:368000
E:502500
N:366500
E:502000
N:365000
E:501500
N:363500
E:501000
N:362000
E:500500
N:360500
E:500000
N:359000
E:499500
N:357500
E:499000
N:356000
E:498500
N:354500
E:498000
N:353000
E:497500
N:351500
E:497000
N:350000
E:496500
N:348500
E:496000
N:347000
E:495500
N:345500
E:495000
N:344000
E:494500
N:342500
E:494000
N:341000
E:493500
N:339500
E:493000
N:338000
E:492500
N:336500
E:492000
N:335000
E:491500
N:333500
E:491000
N:332000
E:490500
N:330500
E:490000
N:329000
E:489500
N:327500
E:489000
N:326000
E:488500
N:324500
E:488000
N:323000
E:487500
N:321500
E:487000
N:320000
E:486500
N:318500
E:486000
N:317000
E:485500
N:315500
E:485000
N:314000
E:484500
N:312500
E:484000
N:311000
E:483500
N:309500
E:483000
N:308000
E:482500
N:306500
E:482000
N:305000
E:481500
N:303500
E:481000
N:302000
E:480500
N:300500
E:480000
N:299000
E:479500
N:297500
E:479000
N:296000
E:478500
N:294500
E:478000
N:293000
E:477500
N:291500
E:477000
N:290000
E:476500
N:288500
E:476000
N:287000
E:475500
N:285500
E:475000
N:284000
E:474500
N:282500
E:474000
N:281000
E:473500
N:279500
E:473000
N:278000
E:472500
N:276500
E:472000
N:275000
E:471500
N:273500
E:471000
N:272000
E:470500
N:270500
E:470000
N:269000
E:469500
N:267500
E:469000
N:266000
E:468500
N:264500
E:468000
N:263000
E:467500
N:261500
E:467000
N:260000
E:466500
N:258500
E:466000
N:257000
E:465500
N:255500
E:465000
N:254000
E:464500
N:252500
E:464000
N:251000
E:463500
N:249500
E:463000
N:248000
E:462500
N:246500
E:462000
N:245000
E:461500
N:243500
E:461000
N:242000
E:460500
N:240500
E:460000
N:239000
E:459500
N:237500
E:459000
N:236000
E:458500
N:234500
E:458000
N:233000
E:457500
N:231500
E:457000
N:230000
E:456500
N:228500
E:456000
N:227000
E:455500
N:225500
E:455000
N:224000
E:454500
N:222500
E:454000
N:221000
E:453500
N:219500
E:453000
N:218000
E:452500
N:216500
E:452000
N:215000
E:451500
N:213500
E:451000
N:212000
E:450500
N:210500
E:450000
N:209000
E:449500
N:207500
E:449000
N:206000
E:448500
N:204500
E:448000
N:203000
E:447500
N:201500
E:447000
N:200000
E:446500
N:198500
E:446000
N:197000
E:445500
N:195500
E:445000
N:194000
E:444500
N:192500
E:444000
N:191000
E:443500
N:189500
E:443000
N:188000
E:442500
N:186500
E:442000
N:185000
E:441500
N:183500
E:441000
N:182000
E:440500
N:180500
E:440000
N:179000
E:439500
N:177500
E:439000
N:176000
E:438500
N:174500
E:438000
N:173000
E:437500
N:171500
E:437000
N:170000
E:436500
N:168500
E:436000
N:167000
E:435500
N:165500
E:435000
N:164000
E:434500
N:162500
E:434000
N:161000
E:433500
N:159500
E:433000
N:158000
E:432500
N:156500
E:432000
N:155000
E:431500
N:153500
E:431000
N:152000
E:430500
N:150500
E:430000
N:149000
E:429500
N:147500
E:429000
N:146000
E:428500
N:144500
E:428000
N:143000
E:427500
N:141500
E:427000
N:140000
E:426500
N:138500
E:426000
N:137000
E:425500
N:135500
E:425000
N:134000
E:424500
N:132500
E:424000
N:131000
E:423500
N:129500
E:423000
N:128000
E:422500
N:126500
E:422000
N:125000
E:421500
N:123500
E:421000
N:122000
E:420500
N:120500
E:420000
N:119000
E:419500
N:117500
E:419000
N:116000
E:418500
N:114500
E:418000
N:113000
E:417500
N:111500
E:417000
N:110000
E:416500
N:108500
E:416000
N:107000
E:415500
N:105500
E:415000
N:104000
E:414500
N:102500
E:414000
N:101000
E:413500
N:99500
E:413000
N:98000
E:412500
N:96500
E:412000
N:95000
E:411500
N:93500
E:411000
N:92000
E:410500
N:90500
E:410000
N:89000
E:409500
N:87500
E:409000
N:86000
E:408500
N:84500
E:408000
N:83000
E:407500
N:81500
E:407000
N:80000
E:406500
N:78500
E:406000
N:77000
E:405500
N:75500
E:405000
N:74000
E:404500
N:72500
E:404000
N:71000
E:403500
N:69500
E:403000
N:68000
E:402500
N:66500
E:402000
N:65000
E:401500
N:63500
E:401000
N:62000
E:400500
N:60500
E:400000
N:59000
E:399500
N:57500
E:399000
N:56000
E:398500
N:54500
E:398000
N:53000
E:397500
N:51500
E:397000
N:50000
E:396500
N:48500
E:396000
N:47000
E:395500
N:45500
E:395000
N:44000
E:394500
N:42500
E:394000
N:41000
E:393500
N:39500
E:393000
N:38000
E:392500
N:36500
E:392000
N:35000
E:391500
N:33500
E:391000
N:32000
E:390500
N:30500
E:390000
N:29000
E:389500
N:27500
E:389000
N:26000
E:388500
N:24500
E:388000
N:23000
E:387500
N:21500
E:387000
N:20000
E:386500
N:18500
E:386000
N:17000
E:385500
N:15500
E:385000
N:14000
E:384500
N:12500
E:384000
N:11000
E:383500
N:9500
E:383000
N:8000
E:382500
N:6500
E:382000
N:5000
E:381500
N:3500
E:381000
N:2000
E:380500
N:500
E:380000
N:1000
E:379500
N:2500
E:379000
N:4000
E:378500
N:5500
E:378000
N:7000
E:377500
N:8500
E:377000
N:10000
E:376500
N:11500
E:376000
N:13000
E:375500
N:14500
E:375000
N:16000
E:374500
N:17500
E:374000
N:19000
E:373500
N:20500
E:373000
N:22000
E:372500
N:23500
E:372000
N:25000
E:371500
N:26500
E:371000
N:28000
E:370500
N:29500