

# Texas Neches Lidar

## Report Produced for U.S. Geological Survey

USGS Contract: G16PC00020

Task Order: G16PD00324

Report Date: 11/21/2017

SUBMITTED BY:

**Dewberry**

1000 North Ashley Drive Suite 801  
Tampa, FL 33602  
813.225.1325

SUBMITTED TO:

**U.S. Geological Survey**

1400 Independence Road  
Rolla, MO 65401  
573.308.3810

## Table of Contents

Executive Summary .....	5
The Project Team.....	5
Survey Area.....	5
Date of Survey.....	5
Coordinate Reference System .....	5
Lidar Vertical Accuracy .....	6
Project Deliverables.....	6
Project Tiling Footprint.....	7
Quantum Spatial Lidar Acquisition Report.....	8
Lidar Acquisition Details.....	8
Lidar System parameters.....	8
Acquisition Status Report and Flightlines .....	9
Lidar Control .....	11
Airborne GPS Kinematic .....	12
Generation and Calibration of Laser Points (raw data) .....	13
Boresight and Relative accuracy.....	16
Preliminary Vertical Accuracy Assessment.....	16
Precision Aerial Reconnaissance Lidar Acquisition Report.....	27
Lidar Acquisition Details.....	27
Lidar System parameters.....	27
Acquisition Status Report and Flightlines .....	28
Lidar Control .....	29
Airborn GPS Kinematic .....	32
Generation and Calibration of Laser Points (raw data) .....	32
Boresight and Relative accuracy.....	33
Preliminary Vertical Accuracy Assessment.....	36
Lidar Processing & Qualitative Assessment .....	39
Initial Processing.....	39
Final Swath Vertical Accuracy Assessment.....	39
Inter-Swath (Between Swath) Relative Accuracy .....	41
Intra-Swath (Within a Single Swath) Relative Accuracy .....	43
Horizontal Alignment .....	45
Point Density and Spatial Distribution.....	46
Data Classification and Editing.....	49
Lidar Qualitative Assessment .....	50

Visual Review .....	50
Data Voids .....	50
Artifacts .....	50
Bridge Removal Artifacts .....	51
Culverts and Bridges .....	53
Dirt Mounds .....	55
Elevation Change Within Breaklines .....	56
Flight line Ridges .....	57
Temporal Changes .....	57
Formatting .....	58
Lidar Positional Accuracy .....	59
Background .....	59
Survey Vertical Accuracy Checkpoints .....	60
Vertical Accuracy Test Procedures .....	72
NVA .....	72
VVA .....	72
Vertical Accuracy Results .....	73
Horizontal Accuracy Test Procedures .....	76
Horizontal Accuracy Results .....	76
Breakline Production & Qualitative Assessment Report .....	77
Breakline Production Methodology .....	77
Breakline Qualitative Assessment .....	77
Breakline Checklist .....	78
Data Dictionary .....	79
Horizontal and Vertical Datum .....	79
Coordinate System and Projection .....	79
Inland Streams and Rivers .....	79
Feature Definition .....	80
Inland Ponds and Lakes .....	81
Beneath Bridge Breaklines .....	82
DEM Production & Qualitative Assessment .....	83
DEM Production Methodology .....	83
DEM Qualitative Assessment .....	85
DEM Vertical Accuracy Results .....	86
DEM Checklist .....	87
Appendix A: Checkpoint Survey Report .....	89

Appendix B: Ground Control Point Survey Report ..... 90  
Appendix C: Complete List of Delivered Tiles .....91  
Appendix D: Quantum Spatial GPS Processing.....176  
Appendix E: Precision Aerial Reconnaissance GPS Processing ..... 177

## Executive Summary

The primary purpose of this project was to develop a consistent and accurate surface elevation dataset derived from high-accuracy Light Detection and Ranging (lidar) technology for the USGS Texas Neches Project Area.

The lidar data were processed and classified according to project specifications. Detailed breaklines and bare-earth Digital Elevation Models (DEMs) were produced for the project area. Data was formatted according to tiles with each tile covering an area of 1500m by 1500m. The Texas Neches AOI covers approximately 14,148 square miles and an additional 89 square miles of Texas Red River was added to the Texas Neches Lidar project. A total of 16,796 tiles were produced for the project encompassing an area of approximately 14,237 sq. miles.

## THE PROJECT TEAM

Dewberry served as the prime contractor for the project. In addition to project management, Dewberry was responsible for LAS classification, all lidar products, breakline production, Digital Elevation Model (DEM) production, and quality assurance.

Dewberry's Gary D. Simpson completed ground surveying for the project and delivered surveyed checkpoints and surveyed ground control points. His task was to acquire surveyed checkpoints for the project to use in independent testing of the vertical accuracy of the lidar-derived surface model. He also acquired surveyed ground control points for use in calibration of the lidar data. Please see Appendices A and B to view the separate Survey Reports that were created for this portion of the project.

Quantum Spatial, Inc (Quantum Spatial) and Precision Aerial Reconnaissance (PAR) completed lidar data acquisition and data calibration for the project area.

## SURVEY AREA

The project area addressed by this report falls within the Texas counties of Kaufman, Navarro, Freestone, Leon, Madison, Van Zandt, Henderson, Smith, Anderson, Cherokee, Rusk, Shelby, Nacogdoches, Houston, Trinity, Angelina, San Augustine, Sabine, Newton, Jasper, Tyler, Hardin, Polk, Liberty, Jefferson and Orange

## DATE OF SURVEY

The lidar aerial acquisition was conducted from March 03, 2016 to February 25, 2017. A reflight occurred on October 9, 2017.

## COORDINATE REFERENCE SYSTEM

Data produced for the project were delivered in the following reference system.

**Horizontal Datum:** The horizontal datum for the project is North American Datum of 1983 with the 2011 Adjustment (NAD 83 (2011))

**Vertical Datum:** The Vertical datum for the project is North American Vertical Datum of 1988 (NAVD88)

**Coordinate System:** UTM Zone 15

**Units:** Horizontal units are in meters, Vertical units are in meters.

**Geoid Model:** Geoid12B (Geoid 12B was used to convert ellipsoid heights to orthometric heights).

## **LIDAR VERTICAL ACCURACY**

For the Texas Neches Lidar Project, the tested  $RMSE_z$  of the classified lidar data for checkpoints in non-vegetated terrain equaled **6.6** compared with the 10 cm specification; and the NVA of the classified lidar data computed using  $RMSE_z \times 1.9600$  was equal to **12.9 cm**, compared with the 19.6 cm specification.

For the Texas Neches Lidar Project, the tested VVA of the classified lidar data computed using the 95<sup>th</sup> percentile was equal to **16.7 cm**, compared with the 29.4 cm specification.

Additional accuracy information and statistics for the classified lidar data, raw swath data, and bare earth DEM data are found in the following sections of this report.

## **PROJECT DELIVERABLES**

The deliverables for the project are listed below.

1. Classified Point Cloud Data (Tiled)
2. Bare Earth Surface (Raster DEM – IMG Format)
3. Intensity Images (8-bit gray scale, tiled, GeoTIFF format)
4. Breakline Data (File GDB)
5. Independent Survey Checkpoint Data (Report, Photos, & Points)
6. Calibration Points
7. Metadata
8. Project Report (Acquisition, Processing, QC)
9. Project Extents, Including a shapefile derived from the lidar deliverable

### PROJECT TILING FOOTPRINT

Sixteen thousand seven hundred ninety-six (16,796) tiles were delivered for the project. Each tile's extent is 1,500 meters by 1,500 meters (see Appendix C for a complete listing of delivered tiles).

## USGS Texas Neches Lidar Project

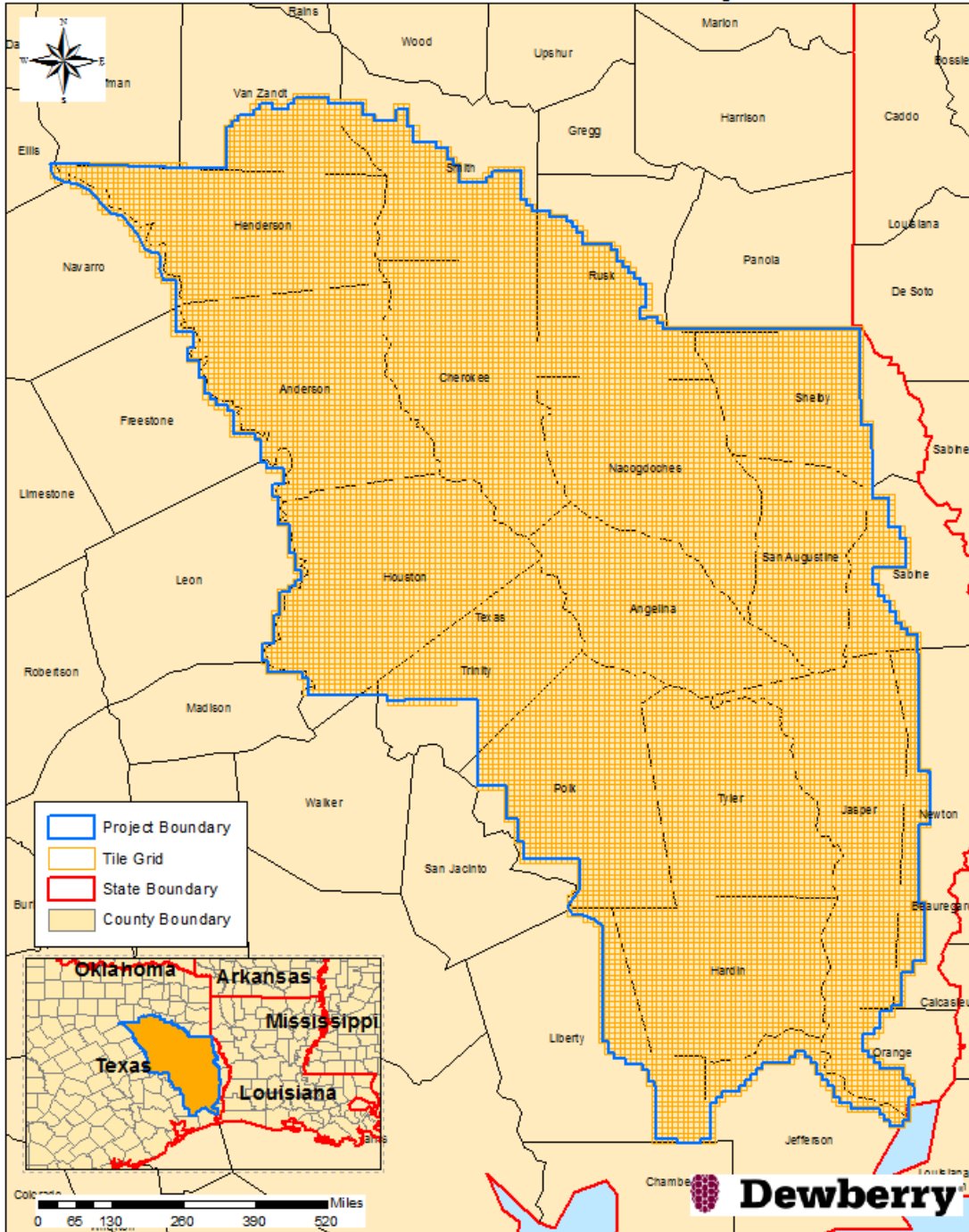


Figure 1 - Project Map

## Quantum Spatial Lidar Acquisition Report

Dewberry elected to subcontract the lidar acquisition and calibration activities to Quantum Spatial (Quantum Spatial). Quantum Spatial was responsible for providing lidar acquisition, calibration and delivery of lidar data files to Dewberry for 9,363 square miles of the Texas Neches Lidar Project.

Dewberry received calibrated swath data from Quantum Spatial on May 16, 2017. Two small voids were present in the data. A reflight occurred on October 9, 2017 to ensure complete coverage.

### LIDAR ACQUISITION DETAILS

Quantum Spatial planned 668 passes for the project area as a series of parallel flight lines with cross flightlines for the purposes of quality control. The flight plan included zigzag flight line collection as a result of the inherent IMU drift associated with all IMU systems. In order to reduce any margin for error in the flight plan, Quantum Spatial followed FEMA's Appendix A "guidelines" for flight planning and, at a minimum, includes the following criteria:

- A digital flight line layout using LEICA MISSION PRO flight design software for direct integration into the aircraft flight navigation system.
- Planned flight lines; flight line numbers; and coverage area.
- Lidar coverage extended by a predetermined margin beyond all project borders to ensure necessary over-edge coverage appropriate for specific task order deliverables.
- Local restrictions related to air space and any controlled areas have been investigated so that required permissions can be obtained in a timely manner with respect to schedule. Additionally, Quantum Spatial will file our flight plans as required by local Air Traffic Control (ATC) prior to each mission.

Quantum Spatial monitored weather and atmospheric conditions and conducted lidar missions only when no conditions exist below the sensor that will affect the collection of data. These conditions include leaf-off for hardwoods, no snow, rain, fog, smoke, mist and low clouds. Lidar systems are active sensors, not requiring light, thus missions may be conducted during night hours when weather restrictions do not prevent collection. Quantum Spatial accesses reliable weather sites and indicators (webcams) to establish the highest probability for successful collection in order to position our sensor to maximize successful data acquisition.

Within 72-hours prior to the planned day(s) of acquisition, Quantum Spatial closely monitored the weather, checking all sources for forecasts at least twice daily. As soon as weather conditions were conducive to acquisition, our aircraft mobilized to the project site to begin data collection. Once on site, the acquisition team took responsibility for weather analysis.

Quantum Spatial lidar sensors are calibrated at a designated site located at either the Sheboygan, Wisconsin or Frankfort, KY airports. The sensors are periodically checked and adjusted to minimize corrections at project sites.

### LIDAR SYSTEM PARAMETERS

Quantum Spatial operated the following planes with the following Leica ALS70 and ALS80 sensors:



- Piper Navajo - Tail # N812TB, Sensor # 7178
- Cessna 402 - Tail # N246MP, Sensor # 8146
- Piper Navajo - Tail # N812TB, Sensor # 7178
- Cessna Caravan - Tail # N208NR, Sensor # 8239
- Cessna 402 - Tail # N246MP, Sensor # 8227

Table 1 illustrates Quantum Spatial system parameters for lidar acquisition on this project.

Item	Parameter
System	Leica ALS-70 HP, Leica ALS80 HP
Altitude (AGL meters)	1775
Approx. Flight Speed (knots)	150
Scanner Pulse Rate (kHz)	312.4
Scan Frequency (hz)	57.3
Pulse Duration of the Scanner (nanoseconds)	4.5
Pulse Width of the Scanner (m)	1.35
Swath width (m)	1,085
Central Wavelength of the Sensor Laser (nanometers)	1064
Did the Sensor Operate with Multiple Pulses in The Air? (yes/no)	Yes
Beam Divergence (milliradians)	0.22
Nominal Swath Width on the Ground (m)	1085
Swath Overlap (%)	30
Total Sensor Scan Angle (degree)	34
Computed Down Track spacing (m) per beam	1.35
Computed Cross Track Spacing (m) per beam	0.88
Nominal Pulse Spacing (single swath), (m)	0.52
Nominal Pulse Density (single swath) (ppsm), (m)	3.73
Aggregate NPS (m) (if ANPS was designed to be met through single coverage, ANPS and NPS will be equal)	0.52
Aggregate NPD (m) (if ANPD was designed to be met through single coverage, ANPD and NPD will be equal)	3.73
Maximum Number of Returns per Pulse	7

Table 1: Quantum Spatial lidar system parameters

## ACQUISITION STATUS REPORT AND FLIGHTLINES

Upon notification to proceed, the flight crew loaded the flight plans and validated the flight parameters. The Acquisition Manager contacted air traffic control and coordinated flight pattern requirements. Lidar acquisition began immediately upon notification that control base stations were in place. During flight operations, the flight crew monitored weather and atmospheric conditions. Lidar missions were flown only when no condition existed below the sensor that would affect the collection of data. The pilot constantly monitored the aircraft course, position, pitch, roll, and yaw of the aircraft. The sensor operator monitored the sensor, the status of PDOPs, and performed the first Q/C review during acquisition. The flight crew

constantly reviewed weather and cloud locations. Any flight lines impacted by unfavorable conditions were marked as invalid and re-flown immediately or at an optimal time.

Figure 2 shows the combined trajectory of the flightlines.

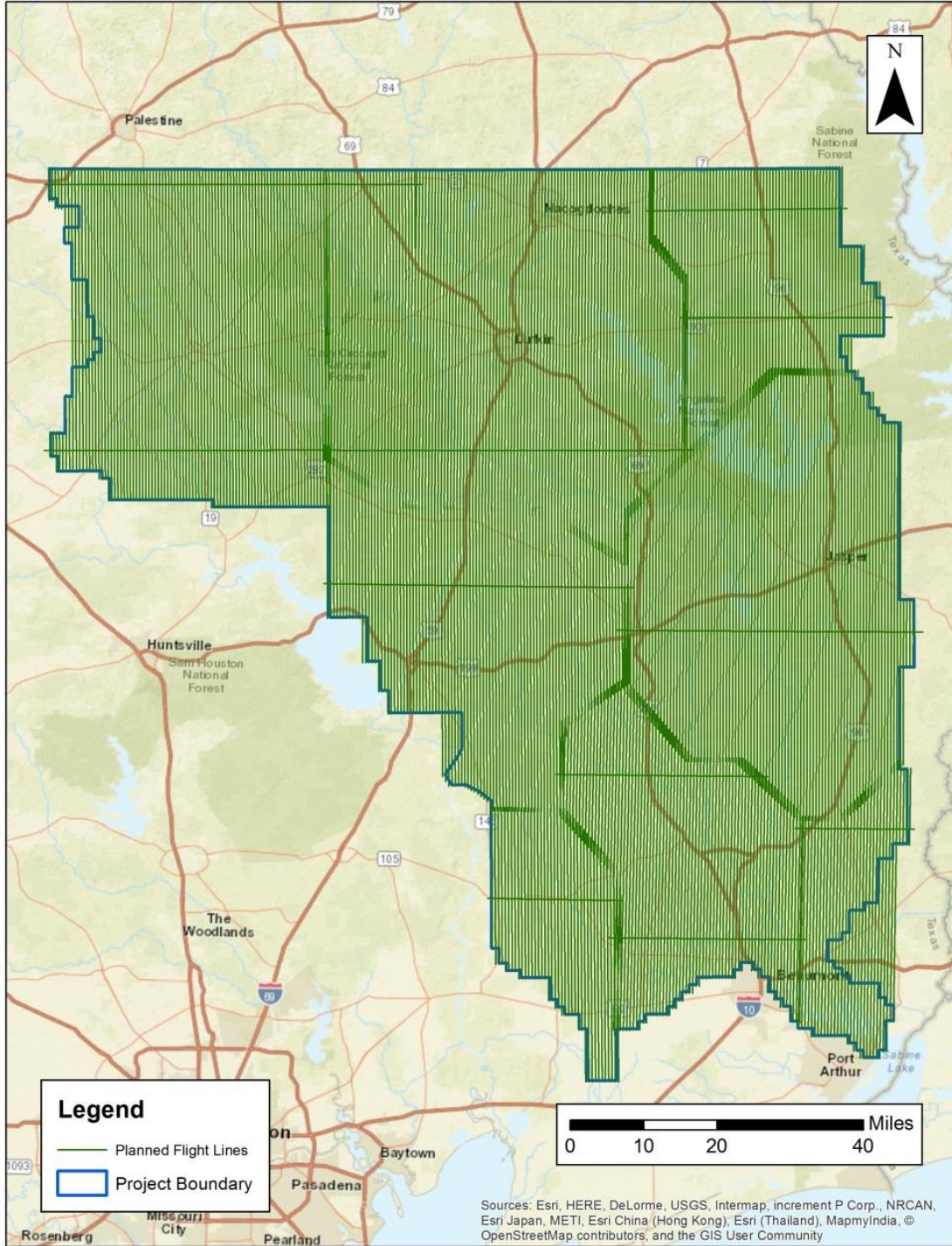


Figure 2: Trajectories as flown by Quantum Spatial

## LIDAR CONTROL

Sixteen (16) existing base stations and 55 virtual base stations were used to control the LiDAR acquisition for the Neches Basin Lidar project area. The coordinates of all used base stations are provided in the table below. All control and calibration points are also provided in shapefile format as part of the final deliverables.

### Existing Stations

Name	NAD83(2011) UTM 15		Ellipsoid Ht (m)	Orthometric Ht (NAVD88 Geoid12B, m)
	Easting X (m)	Northing Y (m)		
TXAC	3293487.124920	338395.815528	-16.926	10.279
TXC1	3520370.674340	390183.508573	70.726	97.057
TXCK	3467920.454520	268208.442400	88.725	115.565
TXHP	3467448.568170	417724.003049	67.378	94.839
TXKO	3363360.924180	372005.155642	3.329	30.835
TXLF	3470370.569110	336561.659947	78.737	106.106
TXLI	3326299.541270	329271.159835	-9.807	17.586
TXLV	3402940.935250	316038.310126	29.058	56.362
TXMA	3600505.514360	378989.781147	80.366	106.668
TXNC	3504822.336210	341778.482150	105.715	132.656
TXOR	3332942.167710	420972.207007	-19.511	7.783
TXPI	3512826.979100	254128.378837	125.866	152.276
TXPT	3313340.506890	408042.606959	-21.654	5.484
TXRU	3518561.668840	298684.343703	147.251	173.867
TXS1	3488448.158130	392939.736181	89.7	116.705
AB2805	315364.264	3456985.779	56.982	84.26

### Virtual Stations

Name	NAD83 (2011) UTM 15		Ellipsoid Ht (m)	Orthometric Ht (NAVD88 Geoid12B, m)
	Easting X (m)	Northing Y (m)		
V010	340024.4695	3363013.839	99.981	127.4203
V027	401542.1051	3399390.265	99.984	127.6935
V028	366333.0765	3428487.751	99.995	127.796
V029	365992.8256	3396204.425	99.998	127.6052
V030	374194.6962	3445659.071	100.005	127.8574
V031	384953.9508	3386649.285	99.996	127.6785
V032	338082.9474	3438707.554	100.008	127.5725
V033	398064.9285	3377499.292	99.975	127.5442
V035	346365.4906	3498415.165	100.012	127.0515
V036	344899.9871	3439471.221	100.007	127.6381
V037	378986.9854	3411914.516	100.022	127.8489
V038	388851.1586	3426361.194	100.002	128.0147
V039	390727.0158	3454502.014	100.016	127.7914
V040	384827.5315	3389723.463	100.03	127.7364

V042	413824.6083	3362364.311	100.017	127.4677
V043	409491.7999	3376327.541	100.008	127.4981
V045	409947.3972	3430491.461	100.029	127.8865
V047	423156.8568	3409333.081	100.02	127.5245
V080	414683.4698	3416824.542	100.02	127.7255
V100	357046.3036	3436120.866	100.009	127.7513
V115	373607.1982	3451537.555	100.009	127.8
V121	302155.1263	3484866.787	100.003	126.9755
V122	397517.7429	3468967.331	100.007	127.4703
V124	390077.9226	3355514.653	100.016	127.4836
V126	378900.7312	3338946.186	100.004	127.3722
V127	364804.2943	3333711.474	100.07	127.4415
V128	292682.4512	3483464.313	100.013	126.9331
V129	365401.127	3381930.677	100.007	127.5824
V130	354871.4668	3385428.412	100.013	127.5354
V131	354749.3235	3329904.607	99.987	127.353
V132	422133.7804	3368690.497	100.002	127.4259
V135	394853.2774	3458601.16	100	127.6892
V136	372093.8992	3445433.036	100.007	127.847
V137	288767.0707	3440499.327	99.992	127.1286
V138	287747.448	3494530.426	99.998	126.8315
V143	283945.4611	3444960.512	99.991	127.0881
V144	283345.2133	3489314.312	100.002	126.825
V174	240302.613	3448681.494	100.008	126.8167
V175	241003.5376	3448909.91	100.006	126.8185
V176	242695.166	3492507.462	99.99	126.5286
V187	354332.5614	3421312.794	99.986	127.5897
V188	354154.7336	3392249.06	99.993	127.5026
V189	332156.6195	3367012.712	99.984	127.428
V191	340719.8301	3415603.162	99.998	127.426
V192	340408.8193	3383062.7	99.99	127.4435
V200	330914.0071	3375571.937	99.991	127.4356
V201	330158.1365	3422160.479	99.996	127.3834
V202	312942.7211	3429004.017	99.996	127.2655
V203	300260.324	3437679.561	99.998	127.1861
V204I	269912.5116	3440444.459	100.01	127.054
V205	246080.5731	3454438.122	99.998	126.8153
V206	250347.7762	3447022.116	100.005	126.8733
V207	254548.5613	3445897.756	100.007	126.9005
VO25	355293.6136	3333727.244	99.98	127.3679
VO26	355687.1872	3312940.483	99.982	127.2633
TXAC	340024.4695	3363013.839	-16.926	10.5133

Table 2 – Base stations used to control lidar acquisition

## AIRBORNE GPS KINEMATIC

Airborne GPS data was processed using the Inertial Explorer kinematic On-The-Fly (OTF) software suite. Flights were flown with a minimum of 6 satellites in view (13° above the horizon) and with a PDOP of better than 4. Distances from base station to aircraft were kept to a maximum of 40km.

For all flights, the GPS data can be classified as excellent, with GPS residuals of 3cm average or better but no larger than 10cm being recorded.

GPS processing reports for each mission are included in Appendix D.

### **GENERATION AND CALIBRATION OF LASER POINTS (RAW DATA)**

The initial step of calibration is to verify availability and status of all needed GPS and Laser data against field notes and compile any data if not complete.

Subsequently the mission points are output using Leica CloudPro, initially with default values from Leica or the last mission calibrated for the system. The initial point generation for each mission calibration is verified within Microstation/Terrascan for calibration errors. If a calibration error greater than specification is observed within the mission, the roll, pitch and scanner scale corrections that need to be applied are calculated. The missions with the new calibration values are regenerated and validated internally once again to ensure quality.

Data collected by the lidar unit is reviewed for completeness, acceptable density and to make sure all data is captured without errors or corrupted values. In addition, all GPS, aircraft trajectory, mission information, and ground control files are reviewed and logged into a database.

On a project level, a supplementary coverage check is carried out to ensure no data voids unreported by Field Operations are present.



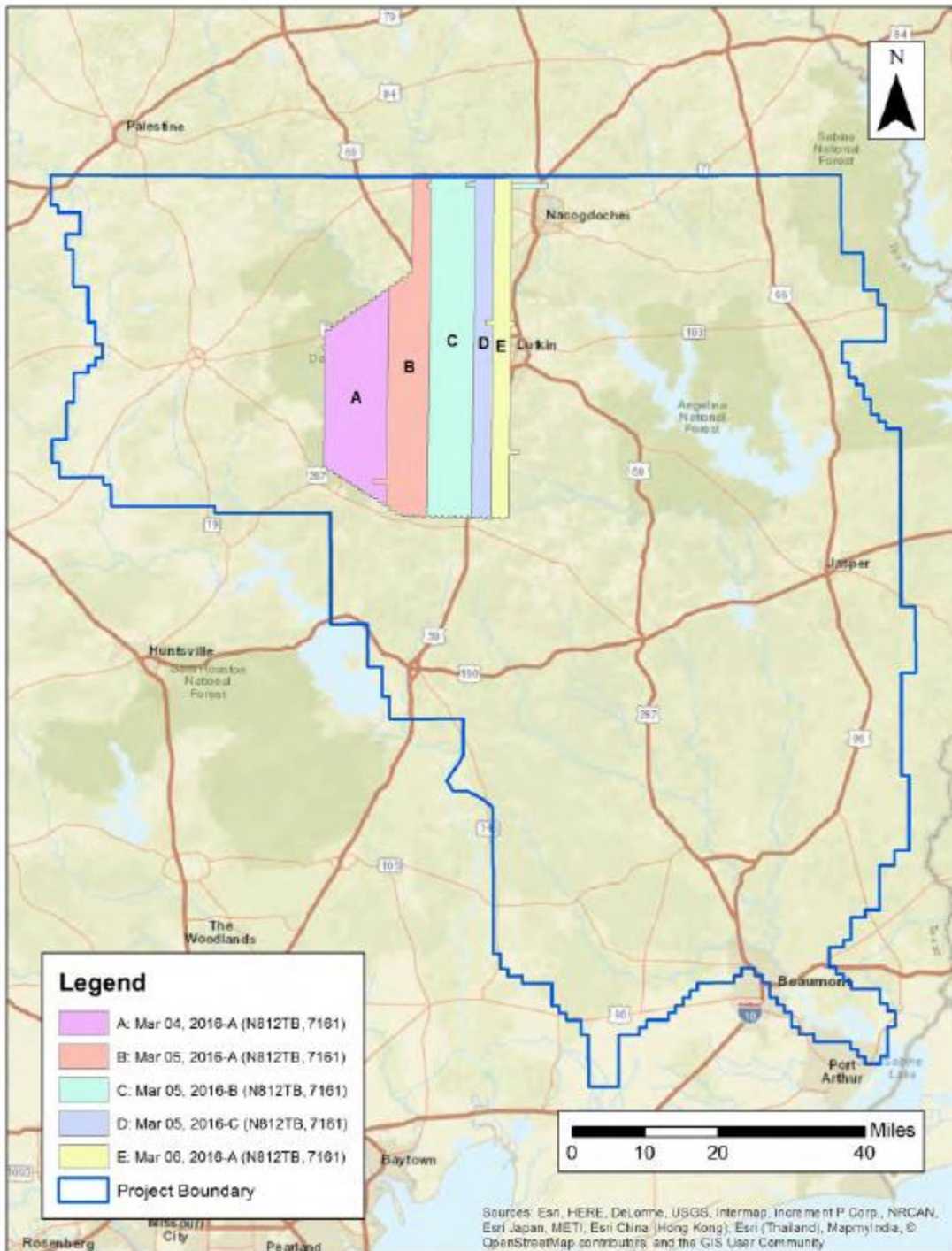


Figure 3 – 2016 Lidar swath output showing complete coverage.

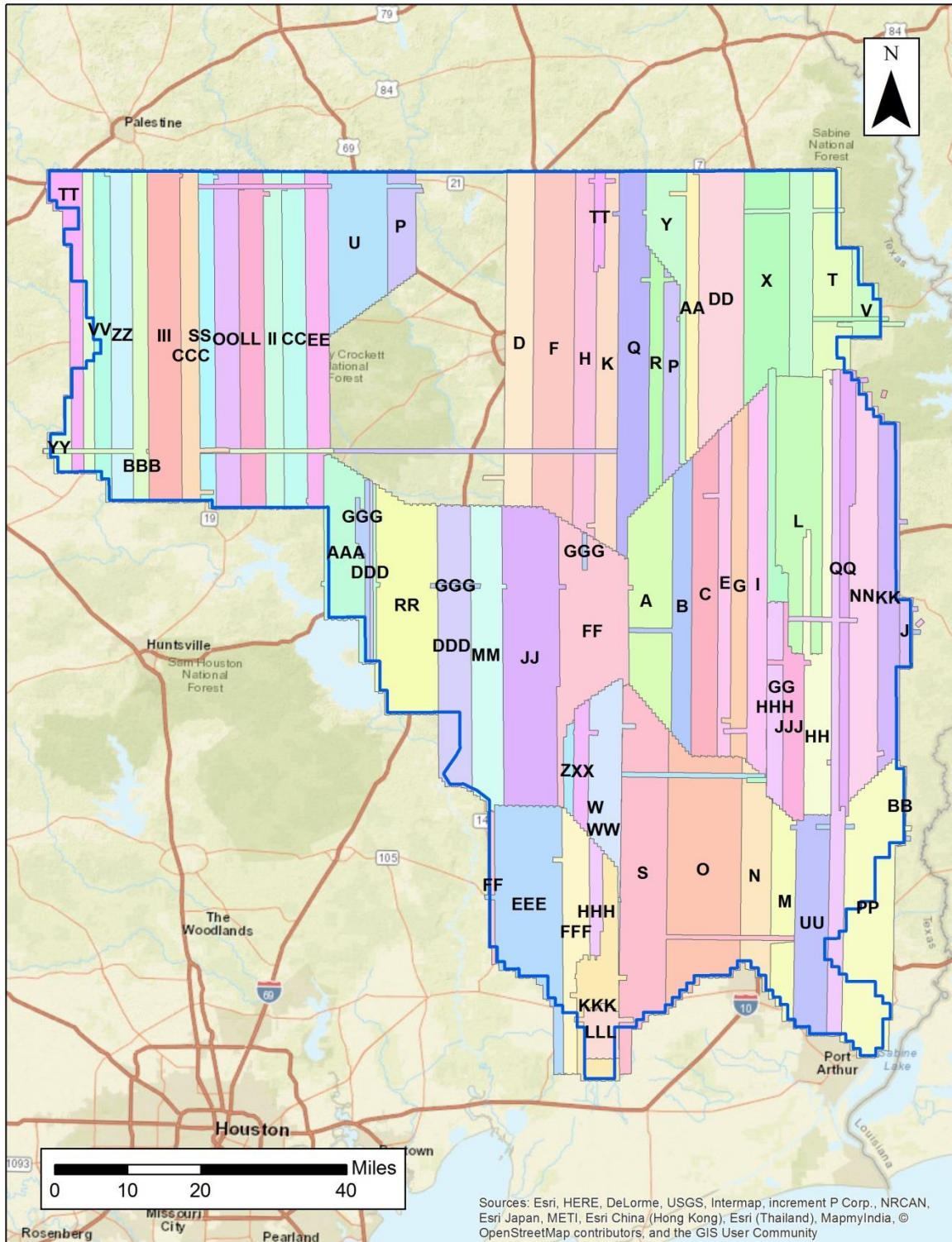


Figure 4 –2017 Lidar swath output showing complete coverage.

## **BORESIGHT AND RELATIVE ACCURACY**

The initial points for each mission calibration are inspected for flight line errors, flight line overlap, slivers or gaps in the data, point data minimums, or issues with the lidar unit or GPS. Roll, pitch and scanner scale are optimized during the calibration process until the relative accuracy is met.

Relative accuracy and internal quality are checked using at least 3 regularly spaced QC blocks in which points from all lines are loaded and inspected. Vertical differences between ground surfaces of each line are displayed. Color scale is adjusted so that errors greater than the specifications are flagged. Cross sections are visually inspected across each block to validate point to point, flight line to flight line and mission to mission agreement.

For this project the specifications used are as follow:

Relative accuracy  $\leq 6$  cm maximum difference within individual swaths and  $\leq 8$  cm RMSDz between adjacent and overlapping swaths.

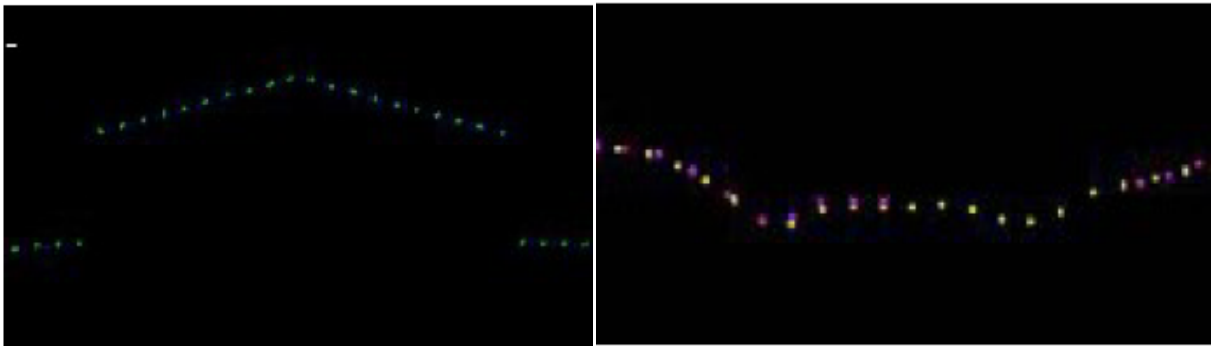


Figure 5 – Profile views showing correct roll and pitch adjustments.

## **PRELIMINARY VERTICAL ACCURACY ASSESSMENT**

A preliminary  $RMSE_z$  error check is performed by Quantum Spatial at this stage of the project life cycle in the raw lidar dataset against GPS static and kinematic data and compared to  $RMSE_z$  project specifications. The lidar data is examined in non-vegetated, flat areas away from breaks. Lidar ground points for each flight line generated by an automatic classification routine are used.

Prior to delivery to Dewberry, the elevation data was verified internally to ensure it met Non-vegetated Vertical Accuracy (NVA) requirements ( $RMSE_z \leq 10$  cm and  $Accuracy_z$  at the 95% confidence level  $\leq 19.6$  cm) when compared to static and kinematic GPS checkpoints. Below is a summary for the test:

The calibrated Neches Basin Lidar dataset was tested to the following vertical accuracy values at 95% confidence level based on  $RMSE_z \times 1.9600$  when compared to GPS static check points.



Flight Block	# of Points	NVA at 95% CL (m)
Crockett	42	0.094
Jasper	49	0.091
Kountze	33	0.087
Liberty	15	0.069
Livingston	36	0.082
Lufkin	24	0.115
Orange	18	0.101
Rusk	8	0.125
San Augustine	24	0.048

The following are the final statistics for the GPS static checkpoints used by Quantum Spatial to internally verify vertical accuracy.

### Crockett Flight Block

Number	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Laser Z (m)	Delta Z
	Easting X (m)	Northing Y (m)	Known Z (m)		
GCP-P056	239341.835	3507418.986	88.71	88.81	0.10
GCP-P160	280288.756	3433618.775	97.26	97.35	0.09
GCP-P229	271358.985	3466844.787	108.38	108.45	0.07
GCP-P182	262715.397	3447915.691	85.11	85.18	0.07
GCP-P006	280785.766	3469089.898	117.92	117.98	0.06
GCP-P050	264056.019	3459493.709	105.63	105.68	0.05
GCP-P079	295194.663	3470337.461	87.07	87.12	0.05
GCP-P054	239019.987	3447094.123	52.27	52.32	0.05
GCP-P213	242771.852	3492727.918	82.05	82.09	0.04
GCP-P218	294612.838	3501663.720	78.95	78.99	0.04
GCP-P234	275016.008	3501608.313	142.88	142.92	0.04
GCP-P235	255839.384	3439656.816	81.94	81.97	0.03
GCP-P232	278740.971	3490878.799	113.85	113.88	0.03
GCP-P120	268167.678	3484907.030	125.00	125.02	0.02
GCP-P119	259992.210	3471837.315	74.17	74.19	0.02
GCP-P161	282095.619	3443422.630	72.09	72.11	0.02
GCP-P220	276715.416	3506656.759	98.78	98.80	0.02
GCP-P188	296612.584	3434551.126	95.33	95.34	0.01
GCP-P052	295506.714	3445665.760	98.42	98.43	0.01
GCP-P036	295171.303	3497812.336	69.44	69.44	0.00
GCP-P159	286784.341	3444707.404	91.10	91.10	0.00

GCP-P158	268892.768	3436532.310	60.56	60.56	0.00
GCP-P219	289575.109	3506996.780	100.27	100.27	0.00
GCP-P233	277017.772	3495705.288	128.91	128.90	0.00
GCP-P217	270124.260	3505205.414	106.69	106.68	-0.01
GCP-P162	286955.358	3452978.513	105.66	105.65	-0.01
GCP-D358	286965.854	3507627.082	99.22	99.20	-0.02
GCP-P230	279384.855	3457373.421	80.39	80.37	-0.02
GCP-P212	250205.381	3455967.312	80.24	80.21	-0.03
GCP-P117	263802.381	3492370.038	147.94	147.91	-0.03
GCP-P231	277738.831	3478402.655	130.26	130.23	-0.03
GCP-P122	244144.120	3482631.037	77.56	77.52	-0.04
GCP-P185	288499.997	3438212.972	79.27	79.23	-0.04
GCP-P081	289619.181	3488671.684	101.54	101.49	-0.05
GCP-P183	253871.866	3435527.955	75.57	75.52	-0.05
GCP-P184	277103.186	3437557.422	65.13	65.08	-0.05
GCP-P216	261896.310	3507298.287	150.69	150.64	-0.05
GCP-D356	254854.433	3507575.899	124.36	124.30	-0.06
GCP-D355	238107.873	3507592.938	84.51	84.44	-0.07
GCP-P118	252600.916	3477322.816	85.62	85.55	-0.07
GCP-P181	266873.417	3445506.856	91.28	91.20	-0.08
GCP-P214	233788.435	3501418.351	75.70	75.59	-0.11

Table 3 - Static GPS Points – Crockett Block

100 % of Totals	# of Points	RMSEz (m) Spec=0.1 m	At 95% Spec=0.196 m	Mean (m)	Std Dev (m)	Min (m)	Max (m)
Non-Vegetated Terrain	42	0.048	0.094	0.000	0.048	-0.111	0.098

Table 4 - Static GPS Vertical Accuracy Results – Crockett Block

### Jasper Flight Block

Number	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Laser Z (m)	Delta Z
	Easting X (m)	Northing Y (m)	Known Z (m)		
GCP-P078	409905.500	3457120.765	77.46	77.54	0.08
GCP-P061	407535.108	3463352.122	102.46	102.53	0.07
GCP-P077	418918.335	3449804.967	83.64	83.70	0.06
GCP-P007	413857.486	3432681.398	150.19	150.25	0.06
GCP-P075	420448.887	3434782.990	140.21	140.27	0.06
GCP-P063	410584.425	3461596.883	109.50	109.56	0.06
GCP-P144	399920.430	3403609.292	58.54	58.59	0.06
GCP-P076	419405.734	3439383.975	156.38	156.43	0.05

GCP-P223	398104.428	3452564.795	59.00	59.05	0.05
GCP-P222	391018.155	3452948.802	60.89	60.93	0.04
GCP-P207	369929.145	3383589.495	38.78	38.81	0.03
GCP-P129	393159.170	3415292.403	37.74	37.77	0.03
GCP-P157	386249.877	3435299.317	47.98	48.01	0.03
GCP-P073	417443.860	3417681.223	77.60	77.63	0.03
GCP-P072	423541.099	3406586.166	47.61	47.64	0.03
GCP-P151	370927.395	3418603.649	72.09	72.11	0.02
GCP-P083	379256.047	3447494.501	52.76	52.78	0.02
GCP-P003	408346.273	3384492.839	36.37	36.38	0.01
GCP-P139	396133.861	3443931.611	57.24	57.25	0.01
GCP-P014	405267.171	3425725.455	107.42	107.43	0.01
GCP-P092	394350.140	3428896.959	80.33	80.33	0.00
GCP-P127	408858.801	3398071.421	47.31	47.31	0.00
GCP-P206	404113.300	3365346.250	17.41	17.41	0.00
GCP-P155	376639.504	3397768.661	81.20	81.20	0.00
GCP-P153	361205.001	3408588.220	110.93	110.92	0.00
GCP-P140	390670.696	3460580.445	65.04	65.03	-0.01
GCP-P071	420913.362	3395666.842	37.89	37.88	-0.01
GCP-P126	414439.525	3393690.973	31.10	31.09	-0.01
GCP-P043	406687.317	3413034.259	91.88	91.86	-0.02
GCP-P209	411457.681	3379739.260	33.24	33.22	-0.02
GCP-P035	411325.664	3406073.226	73.85	73.83	-0.02
GCP-P164	375650.857	3382339.485	28.68	28.66	-0.02
GCP-P004	399608.865	3396078.609	36.64	36.62	-0.02
GCP-P074	420606.432	3421697.640	69.14	69.12	-0.02
GCP-P030	364667.587	3398523.947	91.80	91.77	-0.03
GCP-P128	406428.763	3402633.746	70.15	70.12	-0.03
GCP-P152	365017.584	3395509.939	53.26	53.23	-0.03
GCP-P089	379384.942	3411652.564	62.53	62.49	-0.03
GCP-P130	387932.267	3433697.451	45.42	45.38	-0.04
GCP-P167	376271.127	3393086.969	55.75	55.70	-0.05
GCP-P208	407498.745	3374544.260	33.28	33.23	-0.05
GCP-P009	403164.464	3437785.630	86.71	86.66	-0.05
GCP-P156	377980.909	3428616.281	50.26	50.20	-0.06
GCP-P210	387549.458	3388299.353	43.19	43.11	-0.08
GCP-P154	382736.479	3398289.346	58.37	58.29	-0.08
GCP-P090	365548.659	3436276.455	60.67	60.59	-0.08
GCP-P101	361870.108	3421612.955	98.05	97.97	-0.08
GCP-P150	387940.247	3375065.196	35.92	35.83	-0.09
GCP-P125	401219.601	3379240.942	21.36	21.25	-0.11
GCP-P078	409905.500	3457120.765	77.46	77.54	0.08

Table 5 - Static GPS Points – Jasper Block

100 % of Totals	# of Points	RMSEz (m)	At 95% Spec=0.196 m	Mean (m)	Std Dev (m)	Min (m)	Max (m)
-----------------	-------------	-----------	---------------------	----------	-------------	---------	---------

		Spec=0.1 m					
Non-Vegetated Terrain	49	0.047	0.091	0.000	0.047	-0.107	0.077

Table 6 - Static GPS Vertical Accuracy Results – Jasper Block

### Kountze Flight Block

Number	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Laser Z (m)	Delta Z
	Easting X (m)	Northing Y (m)	Known Z (m)		
GCP-P207	369929.15	3383589.50	38.78	38.87	0.09
GCP-P192	369569.46	3353358.20	23.54	23.62	0.08
GCP-P082	383743.28	3346333.81	11.57	11.64	0.07
GCP-P038	384813.26	3334147.99	9.47	9.53	0.06
GCP-P103	368533.61	3367173.21	30.23	30.29	0.06
GCP-P087	397282.85	3358719.13	13.41	13.47	0.06
GCP-P062	397045.70	3349868.57	11.12	11.17	0.05
GCP-P031	399394.89	3331658.18	1.80	1.83	0.03
GCP-P008	359899.48	3372190.65	33.21	33.24	0.03
GCP-P041	358207.26	3322899.93	14.44	14.46	0.03
GCP-P145	393546.71	3338345.05	1.88	1.90	0.02
GCP-P204	362255.67	3363338.09	26.91	26.93	0.02
GCP-P065	375917.72	3352609.75	19.41	19.42	0.01
GCP-P149	382429.55	3363443.29	23.22	23.23	0.01
GCP-P033	385759.11	3338608.54	7.92	7.93	0.01
GCP-P028	391010.53	3330442.80	6.64	6.64	0.00
GCP-P039	377094.25	3331456.53	12.59	12.58	-0.01
GCP-P040	371265.21	3324781.49	12.06	12.05	-0.01
GCP-P025	394105.99	3325605.38	6.57	6.56	-0.01
GCP-P131	358722.80	3336817.56	14.61	14.60	-0.01
GCP-P143	364060.57	3334075.08	12.80	12.79	-0.01
GCP-P042	364216.38	3321613.71	10.03	10.01	-0.02
GCP-P053	387380.65	3358073.31	24.74	24.72	-0.02
GCP-P135	349784.57	3365929.87	36.63	36.61	-0.02
GCP-P146	373071.23	3335807.14	10.05	10.03	-0.02
GCP-P147	367218.40	3343444.45	13.99	13.96	-0.03
GCP-P055	353206.80	3389869.19	71.07	71.04	-0.03
GCP-P205	365658.85	3384286.89	38.61	38.58	-0.03
GCP-P023	347930.85	3377823.48	44.98	44.94	-0.04
GCP-P148	373698.09	3360844.68	25.34	25.29	-0.05

GCP-P088	361313.19	3388018.99	58.51	58.44	-0.07
GCP-P150	387940.25	3375065.20	35.92	35.84	-0.08
GCP-P163	362557.79	3376637.16	35.30	35.21	-0.09
GCP-P207	369929.15	3383589.50	38.78	38.87	0.09
GCP-P192	369569.46	3353358.20	23.54	23.62	0.08
GCP-P082	383743.28	3346333.81	11.57	11.64	0.07
GCP-P038	384813.26	3334147.99	9.47	9.53	0.06
GCP-P103	368533.61	3367173.21	30.23	30.29	0.06
GCP-P087	397282.85	3358719.13	13.41	13.47	0.06
GCP-P062	397045.70	3349868.57	11.12	11.17	0.05

Table 7 - Static GPS Points – Kountze Block

100 % of Totals	# of Points	RMSEz (m) Spec=0.1 m	At 95% Spec=0.196 m	Mean (m)	Std Dev (m)	Min (m)	Max (m)
Non-Vegetated Terrain	33	0.044	0.087	0.000	0.045	-0.093	0.094

Table 8 - Static GPS Vertical Accuracy Results – Kountze Block

### Liberty Flight Block

Number	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Laser Z (m)	Delta Z
	Easting X (m)	Northing Y (m)	Known Z (m)		
GCP-P041	358207.26	3322899.93	14.44	14.52	0.09
GCP-P176	355395.32	3339295.92	17.39	17.42	0.03
GCP-P131	358722.80	3336817.56	14.61	14.63	0.02
GCP-P046	354646.63	3321862.29	14.13	14.15	0.02
GCP-P048	334970.35	3331929.30	21.11	21.11	0.00
GCP-P132	356879.45	3352232.50	30.85	30.85	0.00
GCP-P024	339511.49	3367219.35	33.14	33.14	0.00
GCP-P049	332661.78	3336906.55	24.82	24.81	-0.01
GCP-P133	345482.38	3348551.64	26.52	26.51	-0.01
GCP-P047	341189.60	3330540.71	19.91	19.89	-0.02
GCP-P051	331601.89	3357636.61	22.11	22.09	-0.02
GCP-P045	347835.64	3322683.79	17.48	17.44	-0.04
GCP-P032	336883.73	3347384.77	25.89	25.85	-0.04
GCP-P134	348980.35	3355191.16	27.78	27.73	-0.05
GCP-P044	350941.99	3320211.59	16.48	16.42	-0.06
GCP-P041	358207.26	3322899.93	14.44	14.52	0.09
GCP-P176	355395.32	3339295.92	17.39	17.42	0.03

GCP-P131	358722.80	3336817.56	14.61	14.63	0.02
GCP-P046	354646.63	3321862.29	14.13	14.15	0.02
GCP-P048	334970.35	3331929.30	21.11	21.11	0.00

Table 9 - Static GPS Points – Liberty Block

100 % of Totals	# of Points	RMSEz (m) Spec=0.1 m	At 95% Spec=0.196 m	Mean (m)	Std Dev (m)	Min (m)	Max (m)
Non-Vegetated Terrain	15	0.035	0.069	-0.010	0.036	-0.059	0.085

Table 10 - Static GPS Vertical Accuracy Results – Liberty Block

### Livingston Flight Block

Number	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Laser Z (m)	Delta Z
	Easting X (m)	Northing Y (m)	Known Z (m)		
GCP-P200	311736.1	3407907	73.19	73.28	0.09
GCP-P105	310141.6	3401786	58.94	59.02	0.08
GCP-P153	361205	3408588	110.93	110.98	0.06
GCP-P202	311102.2	3388855	33.33	33.38	0.05
GCP-P020	316351.3	3419965	98.97	99.02	0.05
GCP-P094	325512.6	3430675	71.85	71.89	0.04
GCP-P101	361870.1	3421613	98.05	98.09	0.04
GCP-P109	345141	3411449	122.4	122.44	0.04
GCP-P110	345600.7	3424702	102.78	102.81	0.03
GCP-P138	333005.7	3401325	83.61	83.63	0.02
GCP-P225	325500.2	3421867	107.08	107.1	0.02
GCP-P175	304032.4	3438880	72.05	72.07	0.02
GCP-P102	316317.3	3397266	95.14	95.16	0.02
GCP-P064	347650.2	3396816	84.84	84.86	0.02
GCP-P106	318279.5	3406278	59.67	59.69	0.02
GCP-P203	334307.4	3410477	99.05	99.07	0.02
GCP-P178	322146.6	3388811	71.31	71.33	0.02
GCP-P179	336480.3	3399660	79.81	79.83	0.02
GCP-P187	301221	3435877	92.58	92.59	0.01
GCP-P194	298068.4	3409444	45.89	45.89	0
GCP-P027	309847.3	3419089	97.76	97.76	0
GCP-P107	321881.6	3413010	76.83	76.83	0
GCP-P186	300547.3	3435401	97.21	97.2	0
GCP-P190	296524.5	3423043	78.11	78.1	-0.01
GCP-P021	352943.5	3403268	78.19	78.18	-0.01

GCP-P055	353206.8	3389869	71.07	71.06	-0.01
GCP-P189	296936.4	3428982	78.94	78.92	-0.02
GCP-P104	305050.5	3400672	44.93	44.9	-0.03
GCP-P024	339511.5	3367219	33.14	33.11	-0.03
GCP-P199	301528.5	3418336	44.6	44.56	-0.04
GCP-P177	328541.2	3385527	67.01	66.97	-0.04
GCP-P188	296612.6	3434551	95.33	95.28	-0.05
GCP-P198	304191.4	3413494	80.11	80.04	-0.07
GCP-P137	340999.6	3383713	57.95	57.88	-0.07
GCP-P136	335671.8	3377544	50.19	50.11	-0.08
GCP-P100	311212.4	3431957	83.21	83.12	-0.08
GCP-P200	311736.1	3407907	73.19	73.28	0.09
GCP-P105	310141.6	3401786	58.94	59.02	0.08
GCP-P153	361205	3408588	110.93	110.98	0.06
GCP-P202	311102.2	3388855	33.33	33.38	0.05

Table 11 - Static GPS Points – Livingston Block

100 % of Totals	# of Points	RMSEz (m) Spec=0.1 m	At 95% Spec=0.196 m	Mean (m)	Std Dev (m)	Min (m)	Max (m)
Non-Vegetated Terrain	36	0.042	0.082	0.000	0.042	-0.085	0.094

Table 12 - Static GPS Vertical Accuracy Results – Livingston Block

### Lufkin Flight Block

Number	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Laser Z (m)	Delta Z
	Easting X (m)	Northing Y (m)	Known Z (m)		
GCP-D362	341508.243	3507584.442	158.16	158.3	0.14
GCP-P091	372514.978	3452979.468	56.6	56.69	0.09
GCP-P019	371608.162	3485707.748	99.05	99.13	0.08
GCP-P085	343373.488	3507146.629	146.44	146.51	0.07
GCP-P165	363933.651	3447782.777	67.44	67.47	0.03
GCP-P228	336299.333	3461531.637	93.56	93.59	0.03
GCP-P116	344457.084	3498531.621	87.5	87.53	0.03
GCP-P097	335985.769	3472002.626	89.64	89.67	0.03
GCP-P095	340771.449	3450279.861	65.71	65.74	0.03
GCP-P112	336006.817	3482388.285	61.2	61.22	0.02
GCP-P096	352010.803	3457316.144	83.54	83.55	0.01
GCP-P012	345595.493	3475401.629	94.04	94.04	0
GCP-P173	364448.149	3471459.76	62.16	62.15	-0.01

GCP-P015	336789.867	3435681.136	61.73	61.72	-0.01
GCP-P114	364497.622	3504876.071	118.41	118.4	-0.01
GCP-P090	365548.659	3436276.455	60.67	60.63	-0.04
GCP-D363	363403.589	3507657.785	84.53	84.49	-0.04
GCP-P115	358188.485	3501866.302	109.56	109.52	-0.04
GCP-P113	352757.01	3494213.516	112.06	112.01	-0.05
GCP-P029	354958.557	3486375.129	74.6	74.55	-0.05
GCP-P142	359705.137	3460060.198	59.39	59.33	-0.06
GCP-P197	355496.281	3443104.348	97.58	97.51	-0.07
GCP-P011	373512.835	3472769.673	57.5	57.42	-0.08
GCP-P180	354313.681	3426557.325	99.83	99.71	-0.12
GCP-D362	341508.243	3507584.442	158.16	158.3	0.14
GCP-P091	372514.978	3452979.468	56.6	56.69	0.09
GCP-P019	371608.162	3485707.748	99.05	99.13	0.08
GCP-P085	343373.488	3507146.629	146.44	146.51	0.07
GCP-P165	363933.651	3447782.777	67.44	67.47	0.03
GCP-P228	336299.333	3461531.637	93.56	93.59	0.03

Table 13 - Static GPS Points – Lufkin Block

100 % of Totals	# of Points	RMSEz (m) Spec=0.1 m	At 95% Spec=0.196 m	Mean (m)	Std Dev (m)	Min (m)	Max (m)
Non-Vegetated Terrain	24	0.059	0.115	0.000	0.06	-0.118	0.138

Table 14 - Static GPS Vertical Accuracy Results – Lufkin Block

**Orange Flight Block**

Number	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Laser Z (m)	Delta Z
	Easting X (m)	Northing Y (m)	Known Z (m)		
GCP-P123	401658.549	3340362.202	6.89	6.87	-0.02
GCP-P067	408418.368	3341321.023	8.37	8.35	-0.02
GCP-P124	405292.436	3345398.947	8.23	8.21	-0.02
GCP-P211	416022.204	3347413.938	10.54	10.51	-0.03
GCP-P001	416055.837	3312730.237	5.03	4.99	-0.04
GCP-P017	415419.712	3327476.928	4.38	4.33	-0.05
GCP-P018	406750.65	3328470.387	3.39	3.33	-0.06
GCP-P121	408461.183	3356232.819	14.19	14.12	-0.07
GCP-P022	402531.359	3318435.583	4.99	4.91	-0.08
GCP-P123	401658.549	3340362.202	6.89	6.87	-0.02
GCP-P067	408418.368	3341321.023	8.37	8.35	-0.02



GCP-P124	405292.436	3345398.947	8.23	8.21	-0.02
GCP-P211	416022.204	3347413.938	10.54	10.51	-0.03
GCP-P001	416055.837	3312730.237	5.03	4.99	-0.04
GCP-P017	415419.712	3327476.928	4.38	4.33	-0.05
GCP-P018	406750.65	3328470.387	3.39	3.33	-0.06
GCP-P121	408461.183	3356232.819	14.19	14.12	-0.07
GCP-P022	402531.359	3318435.583	4.99	4.91	-0.08
GCP-P123	401658.549	3340362.202	6.89	6.87	-0.02
GCP-P067	408418.368	3341321.023	8.37	8.35	-0.02

Table 15 - Static GPS Points – Orange Block

100 % of Totals	# of Points	RMSEz (m) Spec=0.1 m	At 95% Spec=0.196 m	Mean (m)	Std Dev (m)	Min (m)	Max (m)
Non-Vegetated Terrain	18	0.051	0.101	0.000	0.053	-0.084	0.118

Table 16 - Static GPS Vertical Accuracy Results – Orange Block

### Rusk Flight Block

Number	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Laser Z (m)	Delta Z
	Easting X (m)	Northing Y (m)	Known Z (m)		
GCP-D360	311191.796	3507490.01	92.55	92.64	0.09
GCP-P070	303461.457	3477035.036	88.68	88.74	0.06
GCP-D359	301724.549	3507493.972	128.72	128.74	0.02
GCP-P080	303115.249	3503454.056	131.09	131.09	0
GCP-P196	309324.789	3490403.748	100.59	100.58	-0.01
GCP-P218	294612.838	3501663.72	78.95	78.93	-0.02
GCP-P036	295171.303	3497812.336	69.44	69.39	-0.05
GCP-P108	299056.448	3481459.225	97.15	97.02	-0.13

Table 17 - Static GPS Points – Rusk Block

100 % of Totals	# of Points	RMSEz (m) Spec=0.1 m	At 95% Spec=0.196 m	Mean (m)	Std Dev (m)	Min (m)	Max (m)
Non-Vegetated Terrain	8	0.064	0.125	-0.01	0.068	-0.132	0.094

Table 18 - Static GPS Vertical Accuracy Results – Rusk Block

**San Augustine Flight Block**

Number	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Laser Z (m)	Delta Z
	Easting X (m)	Northing Y (m)	Known Z (m)		
GCP-P061	407535.108	3463352.122	102.46	102.53	0.07
GCP-P166	403829.677	3483869.947	105.44	105.49	0.05
GCP-P170	416955.668	3478086.713	106.48	106.53	0.05
GCP-P093	374726.296	3458714.167	55.17	55.21	0.05
GCP-P084	385830.245	3486715.41	113.1	113.14	0.04
GCP-P059	402440.649	3507310.907	114.17	114.2	0.03
GCP-P086	381918.372	3495196.994	105.09	105.11	0.02
GCP-P221	379422.255	3464546.83	77.29	77.31	0.02
GCP-P057	373954.616	3503300.374	134.72	134.74	0.02
GCP-P172	396954.906	3488623.827	122.86	122.88	0.02
GCP-P060	415323.398	3472625.818	65.07	65.07	0
GCP-P171	407272.279	3476593.729	95.46	95.46	0
GCP-P141	386836.161	3473886.259	76.36	76.35	-0.01
GCP-D364	376395.517	3507676.548	125.79	125.78	-0.01
GCP-P191	399783.866	3497473.366	115.26	115.24	-0.02
GCP-P058	389638.733	3507329.669	136.43	136.41	-0.02
GCP-P224	396396.045	3471684.796	85.5	85.48	-0.02
GCP-P034	395630.5	3480034.5	114.09	114.07	-0.02
GCP-P169	407214.412	3495678.368	94.57	94.54	-0.03
GCP-P140	390670.696	3460580.445	65.04	65.01	-0.03
GCP-D365	399136.586	3507753.763	109.05	109.02	-0.03
GCP-P168	394085.23	3497482.628	126.01	125.98	-0.03
GCP-P019	371608.162	3485707.748	99.05	98.99	-0.06
GCP-P011	373512.835	3472769.673	57.5	57.37	-0.13

Table 19 - Static GPS Points – San Augustine Block

100 % of Totals	# of Points	RMSEz (m) Spec=0.1 m	At 95% Spec=0.196 m	Mean (m)	Std Dev (m)	Min (m)	Max (m)
Non- Vegetated Terrain	24	0.041	0.081	0.000	0.042	-0.128	0.071

Table 20 - Static GPS Vertical Accuracy Results – San Augustine Block

Overall the calibrated LiDAR data products collected by Quantum Spatial meet or exceed the requirements set out in the Statement of Work. The quality control requirements of Quantum Spatial quality management program were adhered to throughout the acquisition stage for this project to ensure product quality.

## Precision Aerial Reconnaissance Lidar Acquisition Report

Dewberry elected to subcontract the lidar acquisition and calibration activities to Precision Aerial Reconnaissance. Precision Aerial Reconnaissance was responsible for providing lidar acquisition, calibration and delivery of lidar data files to Dewberry for 4,874 square miles of the Texas Neches Lidar Project.

### LIDAR ACQUISITION DETAILS

Precision Aerial Reconnaissance planned 473 passes for the project area as a series of parallel flight lines with cross flightlines for the purposes of quality control. The flight plan included zigzag flight line collection as a result of the inherent IMU drift associated with all IMU systems. In order to reduce any margin for error in the flight plan, Precision Aerial Reconnaissance followed FEMA's Appendix A "guidelines" for flight planning and, at a minimum, includes the following criteria:

- A digital flight line layout using LEICA MISSION PRO flight design software for direct integration into the aircraft flight navigation system.
- Planned flight lines; flight line numbers; and coverage area.
- Lidar coverage extended by a predetermined margin beyond all project borders to ensure necessary over-edge coverage appropriate for specific task order deliverables.
- Local restrictions related to air space and any controlled areas have been investigated so that required permissions can be obtained in a timely manner with respect to schedule. Additionally, Precision Aerial Reconnaissance will file our flight plans as required by local Air Traffic Control (ATC) prior to each mission.

Precision Aerial Reconnaissance monitored weather and atmospheric conditions and conducted lidar missions only when no conditions exist below the sensor that will affect the collection of data. These conditions include leaf-off for hardwoods, no snow, rain, fog, smoke, mist and low clouds. Lidar systems are active sensors, not requiring light, thus missions may be conducted during night hours when weather restrictions do not prevent collection. Precision Aerial Reconnaissance accesses reliable weather sites and indicators (webcams) to establish the highest probability for successful collection in order to position our sensor to maximize successful data acquisition.

### LIDAR SYSTEM PARAMETERS

Precision Aerial Reconnaissance operated a Cessna 206 (Tail # N799AC) outfitted with a LEICA ALS70-HP lidar system during the collection of the study area. Table 21 illustrates Precision Aerial Reconnaissance system parameters for lidar acquisition on this project.

Item	Parameter
System	Leica ALS-70 HP
Altitude (AGL meters)	1750
Approx. Flight Speed (knots)	115
Scanner Pulse Rate (kHz)	300
Scan Frequency (hz)	48
Pulse Duration of the Scanner (nanoseconds)	4.5

Item	Parameter
Pulse Width of the Scanner (m)	1.35
Swath width (m)	1274
Central Wavelength of the Sensor Laser (nanometers)	1064
Did the Sensor Operate with Multiple Pulses in The Air? (yes/no)	Yes
Beam Divergence (milliradians)	0.22
Nominal Swath Width on the Ground (m)	1274
Swath Overlap (%)	30
Total Sensor Scan Angle (degree)	40
Computed Down Track spacing (m) per beam	1.29
Computed Cross Track Spacing (m) per beam	1
Nominal Pulse Spacing (single swath), (m)	0.5
Nominal Pulse Density (single swath) (ppsm), (m)	4
Aggregate NPS (m) (if ANPS was designed to be met through single coverage, ANPS and NPS will be equal)	0.5
Aggregate NPD (m) (if ANPD was designed to be met through single coverage, ANPD and NPD will be equal)	4
Maximum Number of Returns per Pulse	4

Table 21: Precision Aerial Reconnaissance lidar system parameters

## ACQUISITION STATUS REPORT AND FLIGHTLINES

Upon notification to proceed, the flight crew loaded the flight plans and validated the flight parameters. The pilot contacted air traffic control and coordinated flight pattern requirements. Once the NTP was given the lidar acquisition began on March 3, 2016 and concluded on March 5, 2016 due to leaf-on conditions. Flying resumed January 25, 2017 and concluded on February 22, 2017. During flight operations, the flight crew monitored weather and atmospheric conditions. Lidar missions were flown only when favorable conditions were present for the collection of data. The pilot\Operator constantly monitored the aircraft course, position, and attitude. The sensor operator monitored the sensor, the status of PDOPs, and performed the first Q/C review during acquisition. The flight crew constantly reviewed weather and cloud locations. Any flight lines impacted by unfavorable conditions were marked as invalid and re-flown immediately or at an optimal time.

Figure 6 shows the combined trajectory of the flightlines.

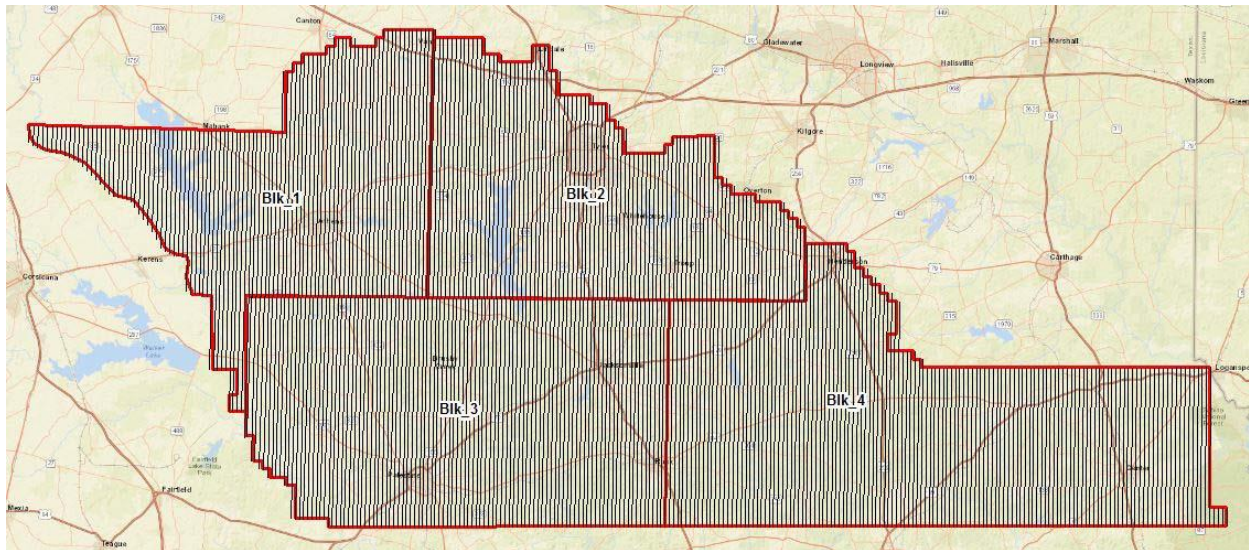


Figure 6: Trajectories as flown by Precision Aerial Reconnaissance

## LIDAR CONTROL

One hundred forty-six (146) NGS monuments or temporary markers set by PAR were used for GPS base stations during airborne lidar data capture. A 60P nail was set if an NGS monument was not available to occupy during acquisition. Opus was used to process out the final positions for the base stations set on temporary markers whereas the NGS datasheet was used if available for the Texas Neches Lidar project. The coordinates of all used base stations are provided in the table below. All control and calibration points are also provided in shapefile format as part of the final deliverables.

Name	NAD83(2011) UTM 15		Ellipsoid Ht (NAD83(2011), m)	Orthometric Ht (NAVD88 Geoid12B, m)
	Easting X (m)	Northing Y (m)		
GCP-Q278	251309.52	3528748.087	119.2219	145.425
GCP-Q279	252910.985	3518516.684	92.662	118.994
GCP-Q253	219991.528	3552599.828	87.3291	112.948
GCP-D356	254854.433	3507575.899	97.8762	124.360
GCP-Q267	242541.113	3547520.209	122.5988	148.470
GCP-Q254	226385.813	3522128.485	55.9607	81.882
GCP-Q277	252324.583	3537940.405	138.4564	164.565
GCP-Q270	237792.939	3514382.297	63.8494	90.041
GCP-Q286	259072.786	3531902.152	91.3122	117.597
GCP-Q276	253358.949	3547684.766	143.0557	169.074
GCP-P056	239341.835	3507418.986	62.4099	88.712
GCP-D355	238107.873	3507592.938	58.2257	84.508
GCP-Q258	235279.986	3552523.705	81.4441	107.219
GCP-Q247	219733.29	3534504.889	68.0472	93.788
GCP-Q268	241176.12	3532759.961	110.895	136.898
GCP-Q259	232522.793	3539058.598	101.0924	126.921
GCP-Q260	230879.16	3528160.244	84.9036	110.822



GCP-Q261	231804.264	3517778.236	60.2905	86.342
GCP-Q269	242884.516	3519142.756	92.1534	118.359
GCP-P058	389638.733	3507329.669	109.8692	136.425
GCP-P059	402440.649	3507310.907	87.7168	114.169
GCP-P085	343373.488	3507146.629	119.5255	146.436
GCP-P111	322277.767	3507316.165	87.5156	114.368
GCP-P216	261896.31	3507298.287	124.1302	150.693
GCP-P219	289575.109	3506996.78	73.5439	100.272
GCP-P220	276715.416	3506656.759	72.1078	98.781
GCP-Q237	184240.167	3583417.861	86.8044	112.315
GCP-Q238	193499.873	3581817.31	85.5982	111.070
GCP-Q239	192432.023	3576576.356	81.6641	107.163
GCP-Q240	203996.268	3583315.939	84.7856	110.267
GCP-Q241	203630.995	3571405.775	70.9136	96.425
GCP-Q242	213402.247	3578037.124	100.3682	125.885
GCP-Q243	215944.813	3570130.798	95.1317	120.671
GCP-Q244	208221.106	3561011.752	69.104	94.633
GCP-Q245	214428.662	3551881.601	54.3828	79.966
GCP-Q246	216442.53	3541917.276	69.0662	94.711
GCP-Q248	228751.163	3598507.79	166.5509	192.180
GCP-Q249	225480.908	3590071.788	168.4569	194.057
GCP-Q250	223339.502	3578586.102	104.4478	130.040
GCP-Q251	228569.614	3568634.985	106.9863	132.652
GCP-Q252	223523.312	3559412.465	100.559	126.189
GCP-Q253	219991.528	3552599.828	87.3291	112.948
GCP-Q255	235683.117	3599799.578	138.7653	164.503
GCP-Q256	235472.675	3590113.911	126.4451	152.195
GCP-Q257	232127.794	3578011.537	121.1962	146.897
GCP-Q258	235279.986	3552523.705	81.4441	107.219
GCP-Q262	246268.572	3600930.494	131.0181	156.955
GCP-Q263	244066.339	3589212.485	133.123	159.020
GCP-Q264	245214.991	3578668.541	94.2344	120.146
GCP-Q265	242270.843	3568978.747	119.1737	145.006
GCP-Q266	236651.014	3558332.185	93.5039	119.272
GCP-Q272	255976.991	3588756.709	127.6567	153.745
GCP-Q273	254703.929	3577821.621	89.1932	115.240
GCP-Q274	252324.847	3569936.758	103.474	129.464
GCP-Q275	247615.305	3557896.167	124.4866	150.386
GCP-Q280	266521.265	3597939.382	160.4603	186.660
GCP-Q281	267757.896	3588069.528	126.2274	152.455
GCP-Q282	264674.469	3577623.535	87.9438	114.123
GCP-Q283	259856.832	3564212.738	108.6763	134.773
GCP-Q284	259568.585	3555612.479	111.1811	137.262
GCP-Q285	262513.966	3547176.882	88.7666	114.948
GCP-Q286	259072.786	3531902.152	91.3122	117.597
GCP-Q287	260734.768	3514743.617	92.2799	118.756
GCP-Q288	274802.971	3597404.094	139.4057	165.691
GCP-Q289	275600.528	3587398.645	114.867	141.167
GCP-Q290	275261.652	3576283.254	116.8179	143.103
GCP-Q291	272643.737	3567796.438	117.1676	143.441
GCP-P293	272507.666	3546020.988	81.72	108.033
GCP-Q294	273801.419	3536950.936	88.9248	115.303
GCP-Q295	271265.006	3526203.011	64.1809	90.641
GCP-Q296	269915.425	3515725.623	73.8485	100.409
GCP-Q297	286566.514	3586556.841	118.8452	145.204
GCP-Q298	284044.887	3565980.908	126.8091	153.168

GCP-Q299	284066.234	3552404.66	167.7923	194.141
GCP-Q300	281804.359	3541357.622	121.546	147.905
GCP-Q301	282177.801	3526053.07	171.8387	198.320
GCP-Q302	280632.728	3515137.913	82.1859	108.798
GCP-Q303	292005.209	3575344.05	163.5821	189.953
GCP-Q304	297094.786	3564039.213	78.7956	105.196
GCP-Q305	291335.24	3552117.457	99.3938	125.790
GCP-Q306	290183.788	3539407.157	110.257	136.679
GCP-Q307	290348.611	3528488.081	171.4148	197.903
GCP-Q308	291984.711	3513851.79	102.1198	128.768
GCP-Q309	303941.085	3583165.929	118.3569	144.740
GCP-Q310	303780.355	3574663.722	123.1028	149.480
GCP-Q311	310371.953	3564965.273	117.4617	143.849
GCP-Q312	302089.471	3552066.693	130.7617	157.177
GCP-Q313	299362.458	3542096.099	86.0284	112.480
GCP-Q314	304553.866	3539744.941	155.0152	181.481
GCP-Q315	298680.081	3525013.396	120.7919	147.344
GCP-Q316	319924.143	3570765.632	129.1638	155.529
GCP-Q317	322413.914	3551789.746	105.4277	131.878
GCP-Q318	313301.587	3543154.958	82.6873	109.171
GCP-Q319	313041.606	3533593.669	57.5198	84.070
GCP-Q320	308463.041	3518359.656	74.1452	100.823
GCP-Q321	325861.676	3557866.697	100.5897	127.017
GCP-Q322	324112.024	3543412.605	79.0507	105.555
GCP-Q323	322319.913	3535714.847	71.1957	97.756
GCP-Q324	319818.06	3522186.838	70.3629	97.051
GCP-Q325	321811.491	3513228.228	100.646	127.427
GCP-Q326	331732.62	3556567.514	107.3707	133.812
GCP-Q327	333509.211	3538937.863	114.0817	140.630
GCP-Q328	331456.434	3528581.045	95.1819	121.830
GCP-Q329	332359.284	3518078.027	102.9938	129.756
GCP-Q330	339954.843	3550096.226	134.9819	161.463
GCP-Q331	343861.737	3539654.759	115.2331	141.779
GCP-Q332	340968.579	3526249.831	115.4207	142.100
GCP-Q333	341164.538	3517163.03	102.2887	129.075
GCP-Q334	353853.162	3532732.579	114.3479	140.955
GCP-Q335	349845.816	3513834.707	100.7344	127.565
GCP-Q336	364050.566	3535197.378	110.1254	136.654
GCP-Q337	360749.709	3524803.128	78.0135	104.682
GCP-Q338	359104.622	3516211.649	70.643	97.433
GCP-Q339	374993.813	3533051.993	69.2976	95.737
GCP-Q340	373379.567	3516670.473	79.9721	106.599
GCP-Q341	385065.822	3528983.838	47.2773	73.595
GCP-Q342	403649.375	3517987.159	51.2111	77.366
GCP-Q343	375102.734	3524256.471	87.7983	114.312
GCP-Q344	389717.976	3536408.465	75.5872	101.763
GCP-Q345	401192.855	3535585.237	48.9322	74.896
GCP-Q346	382501.35	3517681.01	73.5296	100.018
GCP-Q347	388195.854	3514517.211	52.6947	79.142
GCP-Q348	399447.866	3528287.524	50.5946	76.638
GCP-Q349	404148.099	3522495.657	61.7696	87.826
GCP-Q350	398217.628	3513859.552	49.9456	76.255
GCP-Q351	306112.603	3530722.676	70.2538	96.805
GCP-Q352	283232.566	3575430.152	122.4245	148.758
GCP-Q353	247944.509	3592232.521	135.7509	161.714
GCP-Q354	299754.191	3558529.655	118.4925	144.895

GCP-D357	272719.415	3508469.927	112.34	138.972
GCP-D358	286965.854	3507627.082	72.5086	99.223
GCP-D359	301724.549	3507493.972	101.9795	128.722
GCP-D360	311191.796	3507490.01	65.7461	92.546
GCP-D361	326311.926	3507478.189	94.8022	121.667
GCP-D362	341508.243	3507584.442	131.2634	158.162
GCP-D363	363403.589	3507657.785	57.6494	84.53
GCP-D364	376395.517	3507676.548	99.0696	125.793
GCP-D365	399136.586	3507753.763	82.5921	109.048

Table 22 – Base stations used to control lidar acquisition

### AIRBORN GPS KINEMATIC

Airborne GPS data was processed using the Novatel’s Inertial Explorer software. Flights were flown with a minimum of 8 satellites in view (10° above the horizon) and with a PDOP of better than 4. Distances from base station to aircraft were kept to a maximum of 35km. For all flights, the GPS data can be classified as good, with GPS residuals of 3cm average or better but no larger than 6cm being recorded.

GPS processing reports for each mission are included in Appendix E.

### GENERATION AND CALIBRATION OF LASER POINTS (RAW DATA)

The initial step of calibration is to verify availability and status of all needed GPS and Laser data against field notes and compile any data if not complete.

Subsequently the mission points are output using Leica’s Cloud Pro. The initial point generation for each mission calibration is verified within Microstation/Terrascan for calibration errors. If a calibration error greater than specification is observed within the mission, the roll, pitch and scanner scale corrections that need to be applied are calculated. The missions with the new calibration values are regenerated and validated internally once again to ensure quality.

Data collected by the lidar unit is reviewed for completeness, acceptable density and to make sure all data is captured without errors or corrupted values. In addition, all GPS, aircraft trajectory, mission information, and ground control files are reviewed and logged into a database.

On a project level, a supplementary coverage check is carried out to ensure no data voids unreported by Field Operations are present.



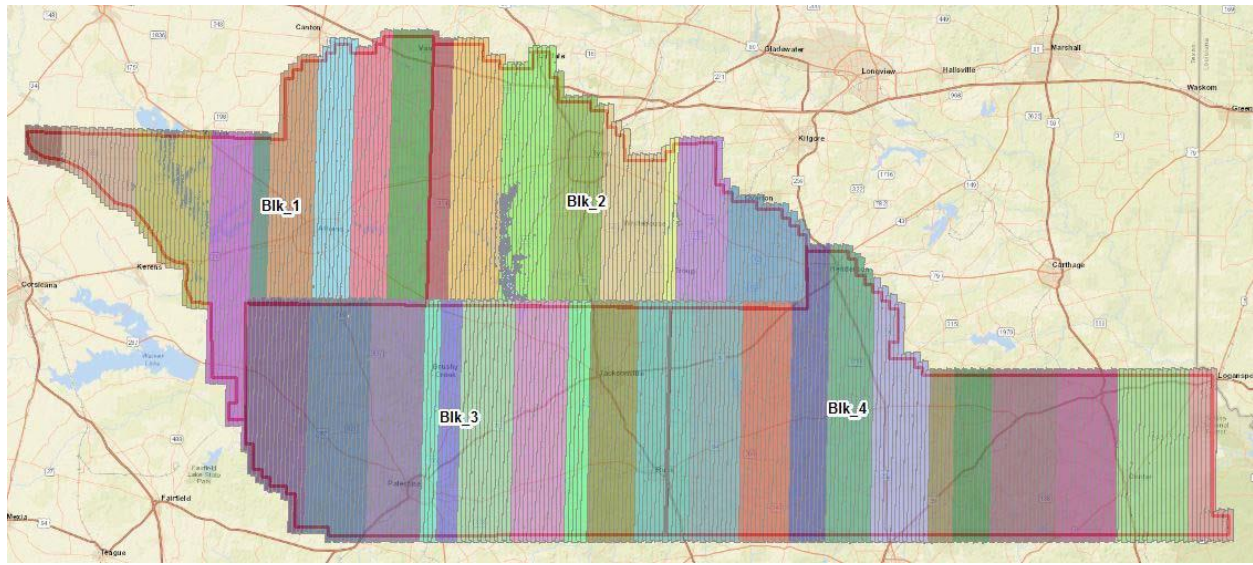


Figure 7 – Lidar swath output showing complete coverage.

## **BORESIGHT AND RELATIVE ACCURACY**

The initial points for each mission calibration are inspected for flight line errors, flight line overlap, slivers or gaps in the data, point data minimums, or issues with the lidar unit or GPS. Roll, pitch and scanner scale are optimized during the calibration process until the relative accuracy is met.

Relative accuracy and internal quality are checked using at least 3 regularly spaced QC blocks in which points from all lines are loaded and inspected. Vertical differences between ground surfaces of each line are displayed. Color scale is adjusted so that errors greater than the specifications are flagged. Cross sections are visually inspected across each block to validate point to point, flight line to flight line and mission to mission agreement.

For this project the specifications used are as follow:

Relative accuracy  $\leq 6$  cm maximum difference within individual swaths and  $\leq 8$  cm RMSDz between adjacent and overlapping swaths.

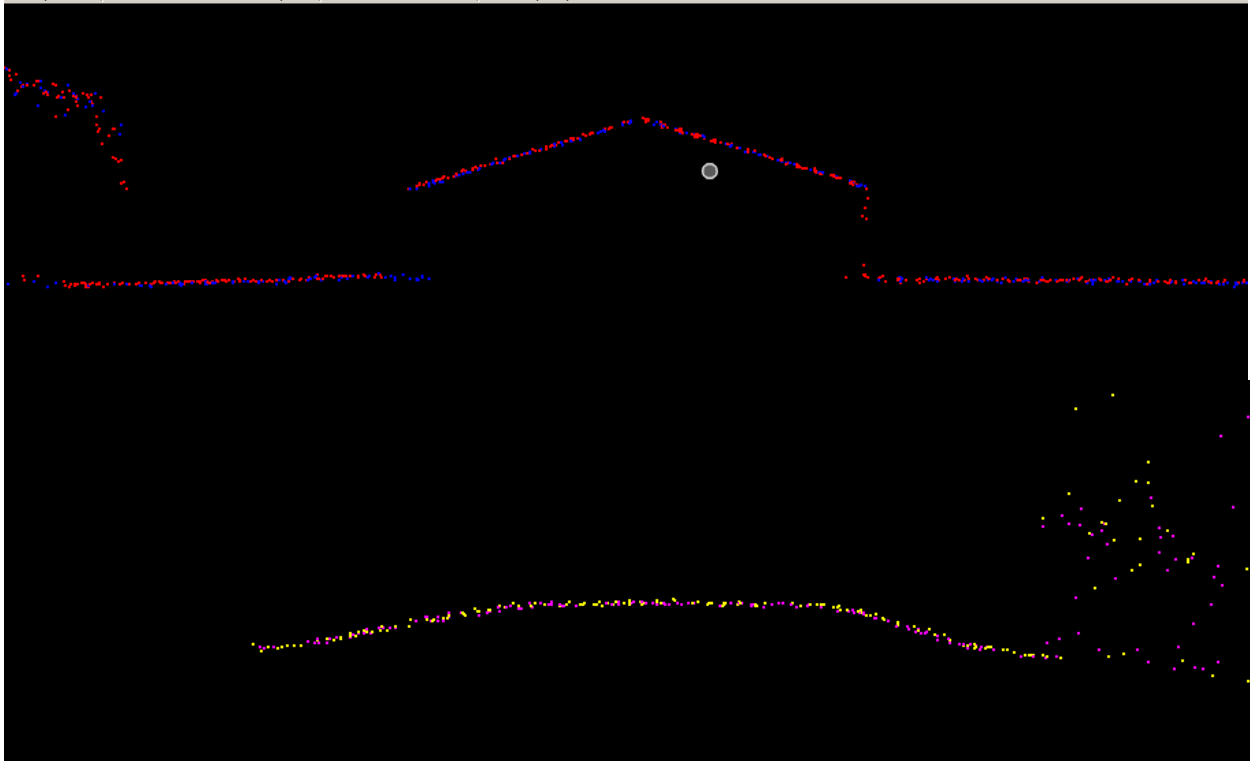


Figure 8 – Profile views showing correct roll and pitch adjustments.

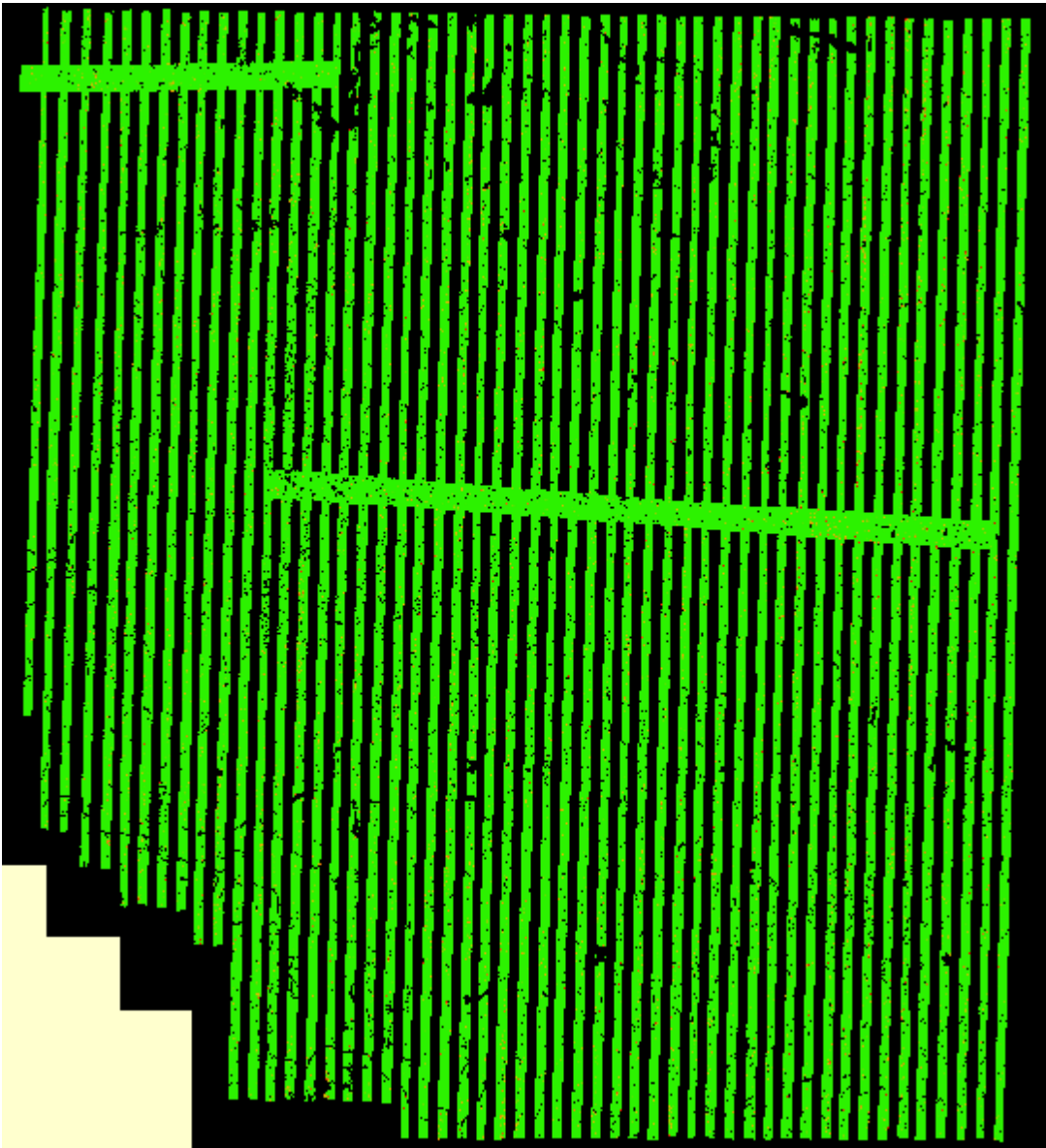


Figure 9 – Dz raster showing swath overlap differences, in meters for the 2016 data

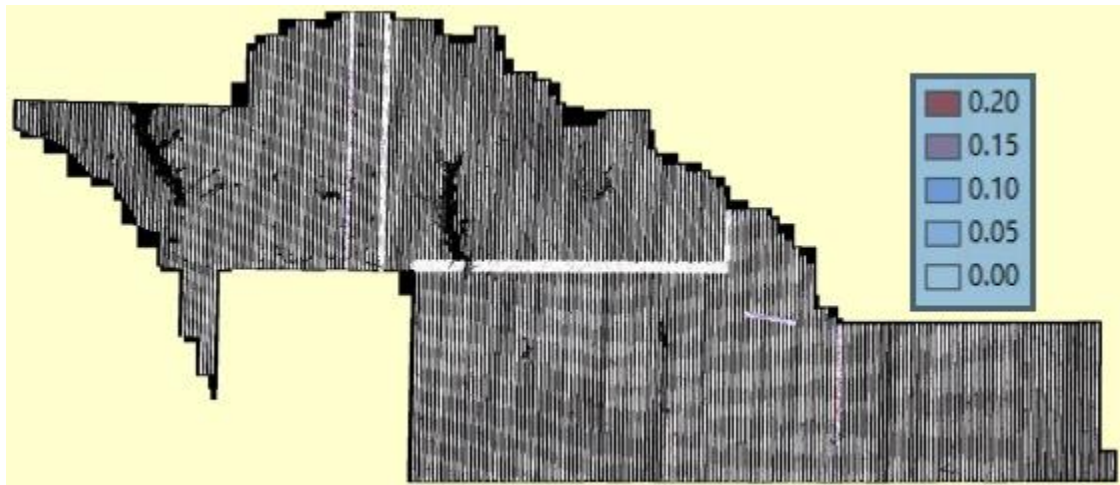


Figure 10 – Dz raster showing swath overlap differences, in meters for the 2017 data

A different set of QC blocks are generated for final review after all transformations have been applied.

### PRELIMINARY VERTICAL ACCURACY ASSESSMENT

A preliminary  $RMSE_z$  error check is performed by Precision Aerial Reconnaissance at this stage of the project life cycle in the raw lidar dataset against GPS static and kinematic data and compared to  $RMSE_z$  project specifications. The lidar data is examined in non-vegetated, flat areas away from breaks. Lidar ground points for each flight line generated by an automatic classification routine are used.

Prior to delivery to Dewberry, the elevation data was verified internally to ensure it met Non-vegetated Vertical Accuracy (NVA) requirements ( $RMSE_z \leq 10$  cm and  $Accuracy_z$  at the 95% confidence level  $\leq 19.6$  cm) when compared to static and kinematic GPS checkpoints. Below is a summary for the test:

The calibrated Texas Neches lidar dataset was tested to 0.10 m vertical accuracy at 95% confidence level based on  $RMSE_z$  (0.053 m x 1.9600) when compared to 119 GPS static check points.

The following are the final statistics for the GPS static checkpoints used by Precision Aerial Reconnaissance to internally verify vertical accuracy.

Number	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Laser Z (m)	Delta Z
	Easting X (m)	Northing Y (m)	Known Z (m)		
GCP-P058	389638.733	3507329.669	136.425	136.406	-0.019
GCP-P059	402440.649	3507310.907	114.169	114.155	-0.014
GCP-P085	343373.488	3507146.629	146.436	146.516	0.08
GCP-P111	322277.767	3507316.165	114.368	114.385	0.017
GCP-P216	261896.31	3507298.287	150.693	150.74	0.047

GCP-P219	289575.109	3506996.78	100.272	100.247	-0.025
GCP-P220	276715.416	3506656.759	98.781	98.72	-0.061
GCP-Q237	184240.167	3583417.861	112.315	112.228	-0.087
GCP-Q238	193499.873	3581817.31	111.07	110.981	-0.089
GCP-Q239	192432.023	3576576.356	107.163	107.067	-0.096
GCP-Q240	203996.268	3583315.939	110.267	110.261	-0.006
GCP-Q241	203630.995	3571405.775	96.425	96.476	0.051
GCP-Q242	213402.247	3578037.124	125.885	125.882	-0.003
GCP-Q243	215944.813	3570130.798	120.671	120.617	-0.054
GCP-Q244	208221.106	3561011.752	94.633	94.604	-0.029
GCP-Q245	214428.662	3551881.601	79.966	79.997	0.031
GCP-Q246	216442.53	3541917.276	94.711	94.691	-0.02
GCP-Q248	228751.163	3598507.79	192.18	192.166	-0.014
GCP-Q249	225480.908	3590071.788	194.057	193.948	-0.109
GCP-Q250	223339.502	3578586.102	130.04	130.063	0.023
GCP-Q251	228569.614	3568634.985	132.652	132.643	-0.009
GCP-Q252	223523.312	3559412.465	126.189	126.166	-0.023
GCP-Q253	219991.528	3552599.828	112.948	112.973	0.025
GCP-Q255	235683.117	3599799.578	164.503	164.517	0.014
GCP-Q256	235472.675	3590113.911	152.195	152.155	-0.04
GCP-Q257	232127.794	3578011.537	146.897	146.925	0.028
GCP-Q258	235279.986	3552523.705	107.219	107.243	0.024
GCP-Q262	246268.572	3600930.494	156.955	156.854	-0.101
GCP-Q263	244066.339	3589212.485	159.02	158.861	-0.159
GCP-Q264	245214.991	3578668.541	120.146	119.99	-0.156
GCP-Q265	242270.843	3568978.747	145.006	144.966	-0.04
GCP-Q266	236651.014	3558332.185	119.272	119.257	-0.015
GCP-Q272	255976.991	3588756.709	153.745	153.779	0.034
GCP-Q273	254703.929	3577821.621	115.24	115.257	0.017
GCP-Q274	252324.847	3569936.758	129.464	129.387	-0.077
GCP-Q275	247615.305	3557896.167	150.386	150.412	0.026
GCP-Q280	266521.265	3597939.382	186.66	186.701	0.041
GCP-Q281	267757.896	3588069.528	152.455	152.532	0.077
GCP-Q282	264674.469	3577623.535	114.123	114.254	0.131
GCP-Q283	259856.832	3564212.738	134.773	134.809	0.036
GCP-Q284	259568.585	3555612.479	137.262	137.33	0.068
GCP-Q285	262513.966	3547176.882	114.948	114.949	0.001
GCP-Q286	259072.786	3531902.152	117.597	117.615	0.018
GCP-Q287	260734.768	3514743.617	118.756	118.8	0.044
GCP-Q288	274802.971	3597404.094	165.691	165.721	0.03
GCP-Q289	275600.528	3587398.645	141.167	141.242	0.075
GCP-Q290	275261.652	3576283.254	143.103	143.104	0.001
GCP-Q291	272643.737	3567796.438	143.441	143.502	0.061
GCP-P293	272507.666	3546020.988	108.033	108.056	0.023
GCP-Q294	273801.419	3536950.936	115.303	115.361	0.058
GCP-Q295	271265.006	3526203.011	90.641	90.673	0.032
GCP-Q296	269915.425	3515725.623	100.409	100.419	0.01

GCP-Q297	286566.514	3586556.841	145.204	145.197	-0.007
GCP-Q298	284044.887	3565980.908	153.168	153.064	-0.104
GCP-Q299	284066.234	3552404.66	194.141	194.095	-0.046
GCP-Q300	281804.359	3541357.622	147.905	147.942	0.037
GCP-Q301	282177.801	3526053.07	198.32	198.374	0.054
GCP-Q302	280632.728	3515137.913	108.798	108.841	0.043
GCP-Q303	292005.209	3575344.05	189.953	189.945	-0.008
GCP-Q304	297094.786	3564039.213	105.196	105.199	0.003
GCP-Q305	291335.24	3552117.457	125.79	125.775	-0.015
GCP-Q306	290183.788	3539407.157	136.679	136.693	0.014
GCP-Q307	290348.611	3528488.081	197.903	197.894	-0.009
GCP-Q308	291984.711	3513851.79	128.768	128.799	0.031
GCP-Q309	303941.085	3583165.929	144.74	144.74	0
GCP-Q310	303780.355	3574663.722	149.48	149.577	0.097
GCP-Q311	310371.953	3564965.273	143.849	143.838	-0.011
GCP-Q312	302089.471	3552066.693	157.177	157.261	0.084
GCP-Q313	299362.458	3542096.099	112.48	112.6	0.12
GCP-Q314	304553.866	3539744.941	181.481	181.513	0.032
GCP-Q315	298680.081	3525013.396	147.344	147.328	-0.016
GCP-Q316	319924.143	3570765.632	155.529	155.473	-0.056
GCP-Q317	322413.914	3551789.746	131.878	131.897	0.019
GCP-Q318	313301.587	3543154.958	109.171	109.16	-0.011
GCP-Q319	313041.606	3533593.669	84.07	84.068	-0.002
GCP-Q320	308463.041	3518359.656	100.823	100.835	0.012
GCP-Q321	325861.676	3557866.697	127.017	127.087	0.07
GCP-Q322	324112.024	3543412.605	105.555	105.651	0.096
GCP-Q323	322319.913	3535714.847	97.756	97.766	0.01
GCP-Q324	319818.06	3522186.838	97.051	97.05	-0.001
GCP-Q325	321811.491	3513228.228	127.427	127.409	-0.018
GCP-Q326	331732.62	3556567.514	133.812	133.875	0.063
GCP-Q327	333509.211	3538937.863	140.63	140.789	0.159
GCP-Q328	331456.434	3528581.045	121.83	121.82	-0.01
GCP-Q329	332359.284	3518078.027	129.756	129.781	0.025
GCP-Q330	339954.843	3550096.226	161.463	161.535	0.072
GCP-Q331	343861.737	3539654.759	141.779	141.834	0.055
GCP-Q332	340968.579	3526249.831	142.1	142.173	0.073
GCP-Q333	341164.538	3517163.03	129.075	129.064	-0.011
GCP-Q334	353853.162	3532732.579	140.955	141.058	0.103
GCP-Q335	349845.816	3513834.707	127.565	127.592	0.027
GCP-Q336	364050.566	3535197.378	136.654	136.588	-0.066
GCP-Q337	360749.709	3524803.128	104.682	104.652	-0.03
GCP-Q338	359104.622	3516211.649	97.433	97.376	-0.057
GCP-Q339	374993.813	3533051.993	95.737	95.663	-0.074
GCP-Q340	373379.567	3516670.473	106.599	106.588	-0.011
GCP-Q341	385065.822	3528983.838	73.595	73.535	-0.06
GCP-Q342	403649.375	3517987.159	77.366	77.429	0.063
GCP-Q343	375102.734	3524256.471	114.312	114.216	-0.096



GCP-Q344	389717.976	3536408.465	101.763	101.68	-0.083
GCP-Q345	401192.855	3535585.237	74.896	74.863	-0.033
GCP-Q346	382501.35	3517681.01	100.018	99.973	-0.045
GCP-Q347	388195.854	3514517.211	79.142	79.157	0.015
GCP-Q348	399447.866	3528287.524	76.638	76.621	-0.017
GCP-Q349	404148.099	3522495.657	87.826	87.912	0.086
GCP-Q350	398217.628	3513859.552	76.255	76.313	0.058
GCP-Q351	306112.603	3530722.676	96.805	96.83	0.025
GCP-Q352	283232.566	3575430.152	148.758	148.739	-0.019
GCP-Q353	247944.509	3592232.521	161.714	161.723	0.009
GCP-Q354	299754.191	3558529.655	144.895	144.911	0.016
GCP-D357	272719.415	3508469.927	138.972	138.922	-0.05
GCP-D358	286965.854	3507627.082	99.223	99.254	0.031
GCP-D359	301724.549	3507493.972	128.722	128.801	0.079
GCP-D360	311191.796	3507490.01	92.546	92.592	0.046
GCP-D361	326311.926	3507478.189	121.667	121.809	0.142
GCP-D362	341508.243	3507584.442	158.162	158.26	0.098
GCP-D363	363403.589	3507657.785	84.53	84.524	-0.006
GCP-D364	376395.517	3507676.548	125.793	125.761	-0.032
GCP-D365	399136.586	3507753.763	109.048	109.081	0.033

Table 23 - Static GPS Points

Overall the calibrated lidar data products collected by Precision Aerial Reconnaissance meet or exceed the requirements set out in the Statement of Work. The quality control requirements of Precision Aerial Reconnaissance quality management program were adhered to throughout the acquisition stage for this project to ensure product quality.

## Lidar Processing & Qualitative Assessment

### INITIAL PROCESSING

Once Dewberry receives the calibrated swath data from the acquisition provider, Dewberry performs several validations on the dataset prior to starting full-scale production on the project. These validations include vertical accuracy of the swath data, inter-swath (between swath) relative accuracy validation, intra-swath (within a single swath) relative accuracy validation, verification of horizontal alignment between swaths, and confirmation of point density and spatial distribution. This initial assessment allows Dewberry to determine if the data are suitable for full-scale production. Addressing issues at this stage allows the data to be corrected while imposing the least disruption possible on the overall production workflow and overall schedule.

### Final Swath Vertical Accuracy Assessment

Once Dewberry received the calibrated swath data from Precision Aerial Reconnaissance, Dewberry tested the vertical accuracy of the non-vegetated terrain swath data prior to additional processing. Dewberry tested the vertical accuracy of the swath data using the two hundred sixty-five non-vegetated (open terrain and urban) independent survey check points. The vertical accuracy is tested by comparing survey checkpoints in non-vegetated terrain to a triangulated

irregular network (TIN) that is created from the raw swath points. Only checkpoints in non-vegetated terrain can be tested against raw swath data because the data has not undergone classification techniques to remove vegetation, buildings, and other artifacts from the ground surface. Checkpoints are always compared to interpolated surfaces from the lidar point cloud because it is unlikely that a survey checkpoint will be located at the location of a discrete lidar point. Dewberry typically uses LP360 software to test the swath lidar vertical accuracy, Terrascan software to test the classified lidar vertical accuracy, and Esri ArcMap to test the DEM vertical accuracy so that three different software programs are used to validate the vertical accuracy for each project. Project specifications require a NVA of 19.6 cm based on the  $RMSE_z$  (10 cm) x 1.96. The dataset for the USGS Texas Neches Lidar Project satisfies this criteria. This raw lidar swath data set was tested to meet ASPRS Positional Accuracy Standards for Digital Geospatial Data (2014) for a 10 cm  $RMSE_z$  Vertical Accuracy Class. Actual NVA accuracy was found to be  $RMSE_z = 8$  cm, equating to +/- 15.6 cm at 95% confidence level. The table below shows all calculated statistics for the raw swath data.

100 % of Totals	# of Points	$RMSE_z$ NVA Spec=0.10 m	NVA – Non-vegetated Vertical Accuracy ( $RMSE_z \times 1.9600$ ) Spec=0.196 m	Mean (m)	Median (m)	Skew	Std Dev (m)	Min (m)	Max (m)	Kurtosis
Non-Vegetated Terrain	264	0.080	0.156	0.016	0.013	3.244	0.078	-0.148	0.631	23.277

Table 24: NVA at 95% Confidence Level for Raw Swaths

One checkpoint (NVA-224) was removed from the raw swath vertical accuracy testing due to its location near a fence. Only non-vegetated terrain checkpoints are used to test the raw swath data because the raw swath data has not been classified to remove vegetation, structures, and other above ground features from the ground classification. While NVA-224 is located in open terrain, the fence is modeled by the lidar point cloud. These high points caused erroneous high values during the swath vertical accuracy testing so this point was removed from the final calculations. Once the data underwent the classification process, the fence was removed from the final ground classification and this point could be used in the final vertical accuracy testing for the fully classified lidar data. Table 25, below, provides the coordinates for this checkpoint and the vertical accuracy results from the raw swath data. Table 26, below, provides the usable vertical accuracy results of this checkpoint from the fully classified lidar. The differences in the tables show how above ground features can cause erroneous vertical accuracy results in the raw swath data. Figure 11, below, shows a 3D model of the lidar point cloud and the location of the checkpoint beneath a power line.

Point ID	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Lidar Z (m)	Delta Z	AbsDeltaZ
	Easting X (m)	Northing Y (m)	Survey Z (m)			
NVA-224	374060.941	3395879.426	69.369	70.356	0.987	0.987

Table 25: Checkpoint removed from raw swath vertical accuracy testing



Point ID	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)	Lidar Z (m)	Delta Z	AbsDeltaZ
	Easting X (m)	Northing Y (m)	Survey Z (m)			
NVA-224	374060.941	3395879.426	69.369	69.403	0.034	0.034

Table 26: Final tested vertical accuracy for NVA-224 post ground classification

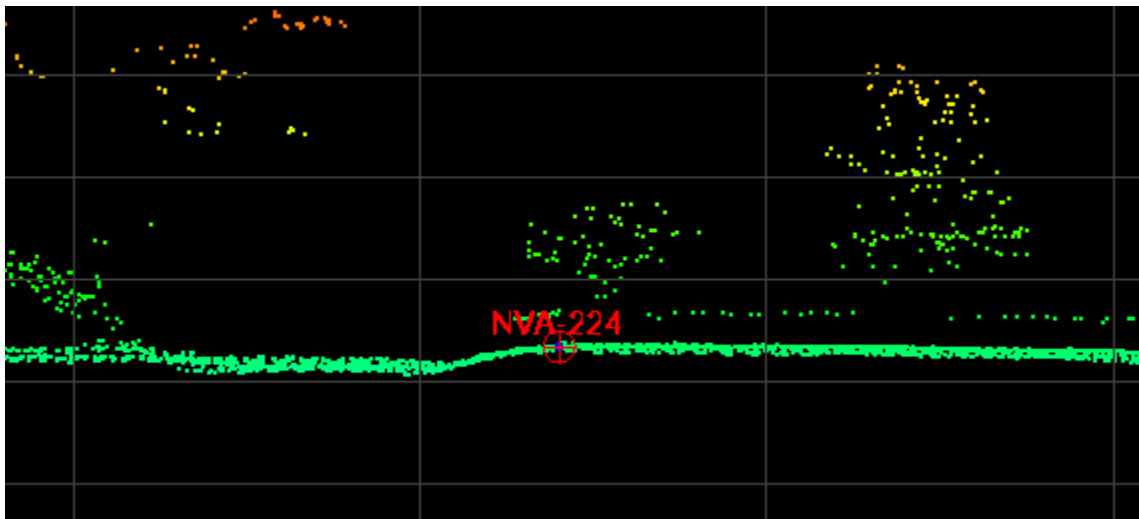


Figure 11 – Open Terrain checkpoint NVA-224, shown as the large red marker, is located near a fence. This point was removed from raw swath vertical accuracy testing because above ground features, including fences, have not been separated from the ground classification yet.

### Inter-Swath (Between Swath) Relative Accuracy

Dewberry verified inter-swath or between swath relative accuracy of the dataset by creating Delta-Z (DZ) orthos. According to the SOW, USGS Lidar Base Specifications v1.2, and ASPRS Positional Accuracy Standards for Digital Geospatial Data, 10 cm Vertical Accuracy Class or QL2 data must meet inter-swath relative accuracy of 8 cm RMSDz or less with maximum differences less than 16 cm. These measurements are to be taken in non-vegetated and flat open terrain using single or only returns from all classes. Measurements are calculated in the DZ orthos on 1-meter pixels or cell sizes. Areas in the dataset where overlapping flight lines are within 8 cm of each other within each pixel are colored green, areas in the dataset where overlapping flight lines have elevation differences in each pixel between 8 cm to 16 cm are colored yellow, and areas in the dataset where overlapping flight lines have elevation differences in each pixel greater than 16 cm are colored red. Pixels that do not contain points from overlapping flight lines are colored according to their intensity values. Areas of vegetation and steep slopes (slopes with 16 cm or more of valid elevation change across 1 linear meter) are expected to appear yellow or red in the DZ orthos. If the project area is heavily vegetated, Dewberry may also create DZ Orthos from the initial ground classification only, while keeping all other parameters consistent. This allows Dewberry to review the ground classification relative accuracy beneath vegetation and to ensure flight line ridges or other issues do not exist in the final classified data.

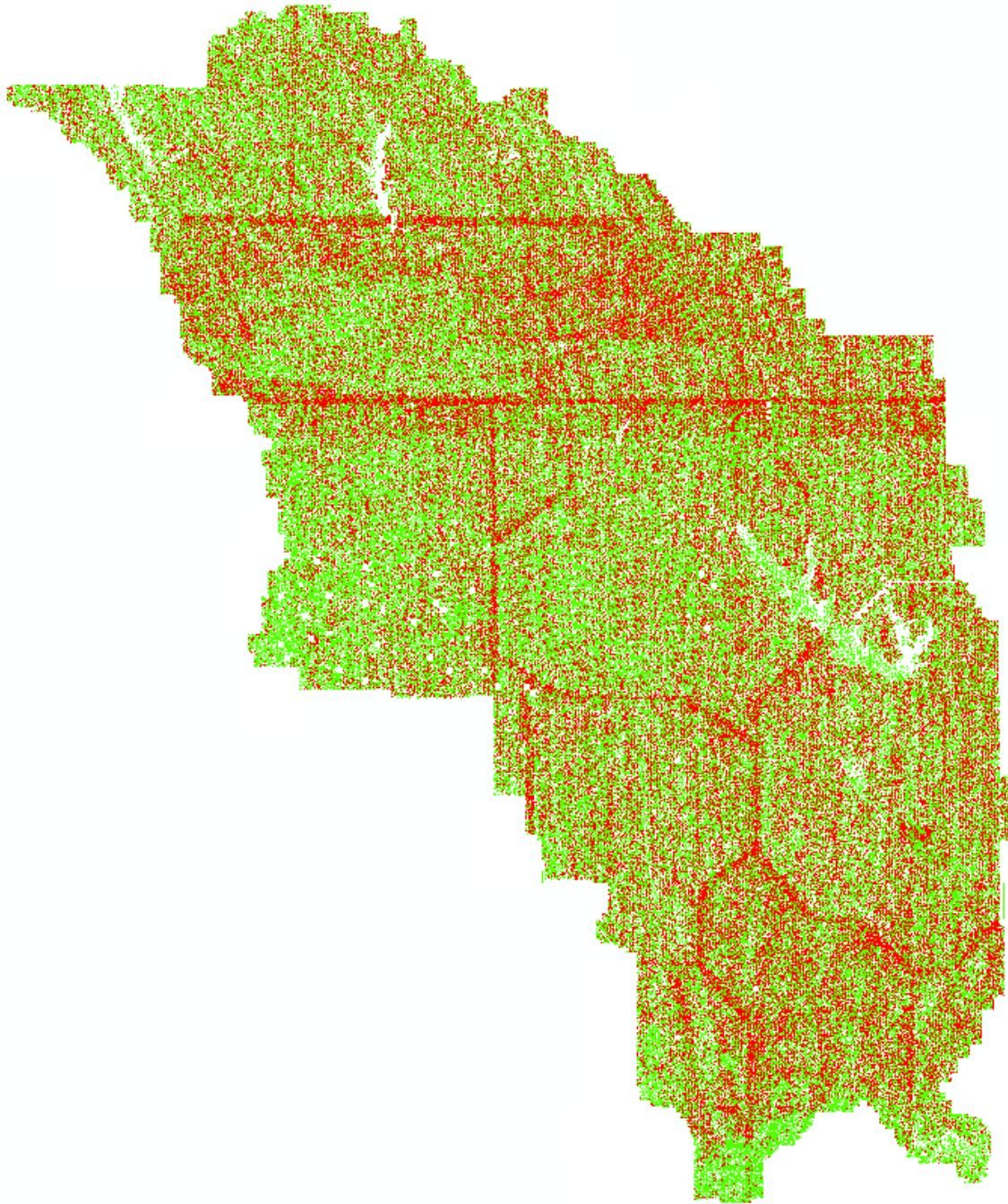
Flat, open areas are expected to be green in the DZ orthos. Large or continuous sections of yellow or red pixels can indicate the data was not calibrated correctly or that there were issues during acquisition that could affect the usability of the data, especially when these yellow/red sections follow the flight lines and not the terrain or areas of vegetation. The DZ orthos for Texas Neches are shown in the figure below; this project meets inter-swath relative accuracy specifications.



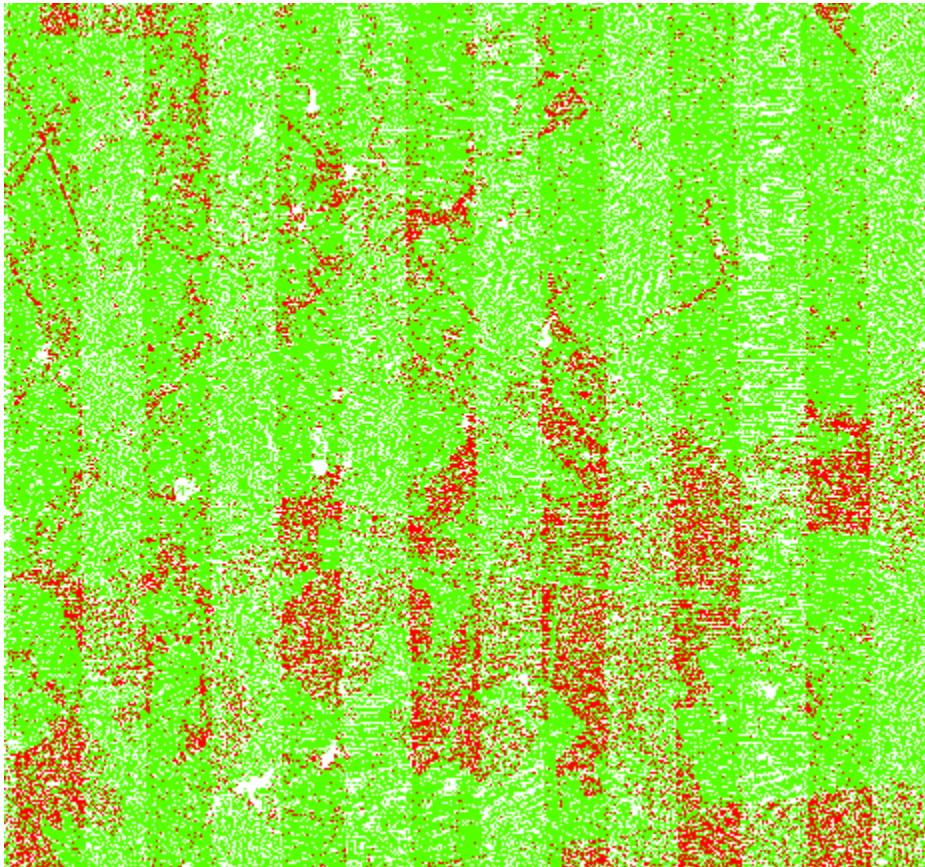
Figure 12– Single return DZ Orthos for the Texas Neches Lidar project. Inter-swath relative accuracy passes specifications.

### **Intra-Swath (Within a Single Swath) Relative Accuracy**

Dewberry verifies the intra-swath or within swath relative accuracy by using Quick Terrain Modeler (QTM) scripting and visual reviews. QTM scripting is used to calculate the maximum difference of all points within each 1-meter pixel/cell size of each swath. Dewberry analysts then identify planar surfaces acceptable for repeatability testing and analysts review the QTM results in those areas. According to the SOW, USGS Lidar Base Specifications v1.2, and ASPRS Positional Accuracy Standards for Digital Geospatial Data, 10 cm Vertical Accuracy Class or QL2 data must meet intra-swath relative accuracy of 6 cm maximum difference or less. The image below shows two examples of the intra-swath relative accuracy of Texas Neches; this project meets intra-swath relative accuracy specifications.







**Figure 13–Intra-swath relative accuracy.** The top image shows the full project area; areas where the maximum difference is  $\leq 6$  cm per pixel within each swath are colored green and areas exceeding 6 cm are colored red. The bottom image is a close-up of a flat area. With the exception of few trees (shown in red as the elevation/height difference in vegetated areas will exceed 6 cm) this open flat area is acceptable for repeatability testing. Intra-swath relative accuracy passes specifications.

### Horizontal Alignment

To ensure horizontal alignment between adjacent or overlapping flight lines, Dewberry uses QTM scripting and visual reviews. QTM scripting is used to create files similar to DZ orthos for each swath but this process highlights planar surfaces, such as roof tops. In particular, horizontal shifts or misalignments between swaths on roof tops and other elevated planar surfaces are highlighted. Visual reviews of these features, including additional profile verifications, are used to confirm the results of this process. The image below shows an example of the horizontal alignment between swaths for Texas Neches; no horizontal alignment issues were identified.

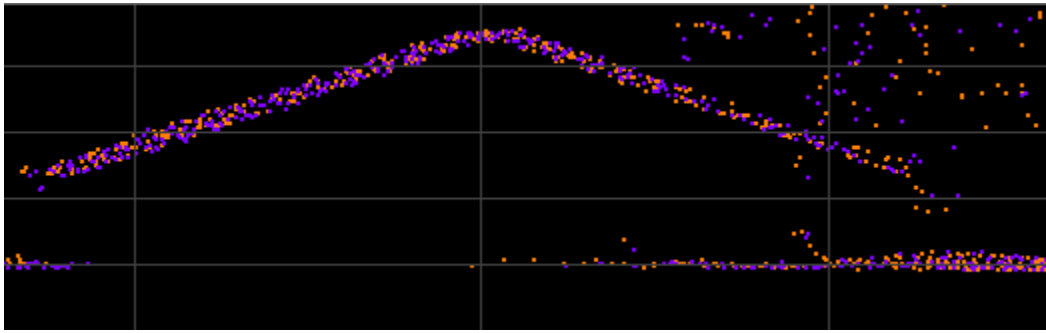
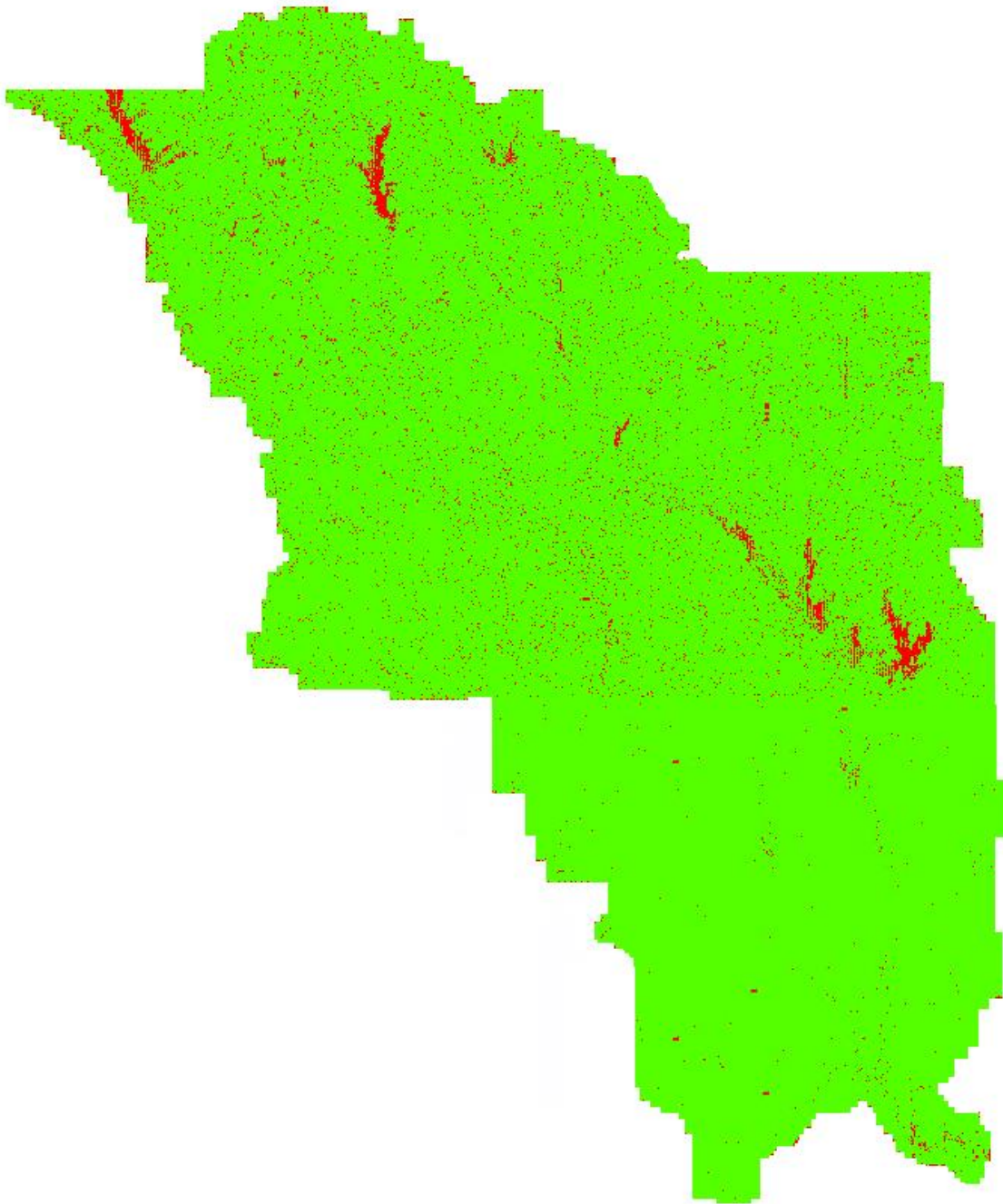


Figure 14– Horizontal Alignment. Two separate flight lines differentiated by color (Orange/Purple) are shown in this profile. There is no visible offset between these two flight lines. No horizontal alignment issues were identified.

### Point Density and Spatial Distribution

The required Aggregate Nominal Point Spacing (ANPS) for this project is no greater than 0.71 meters, which equates to an Aggregate Nominal Point Density (ANPD) of 2 points per square meter or greater. Density calculations were performed using first return data only located in the geometrically usable center portion (typically ~90%) of each swath. By utilizing statistics, the project area was determined to have an ANPS of 0.5 meters or an ANPD of 4 points per square meter which satisfies the project requirements. A visual review of a 1-square meter density grid (figure below) shows that there are some 1-meter cells that do not contain 2 points per square meter (red areas) due to the irregular spacing of lidar point cloud data. Most 1-square meter cells contain at least 2 points per square meter (green areas) and when density is viewed/analyzed by representative 1-square kilometer areas (to account for the irregular spacing of lidar point clouds), density passes with no issues.

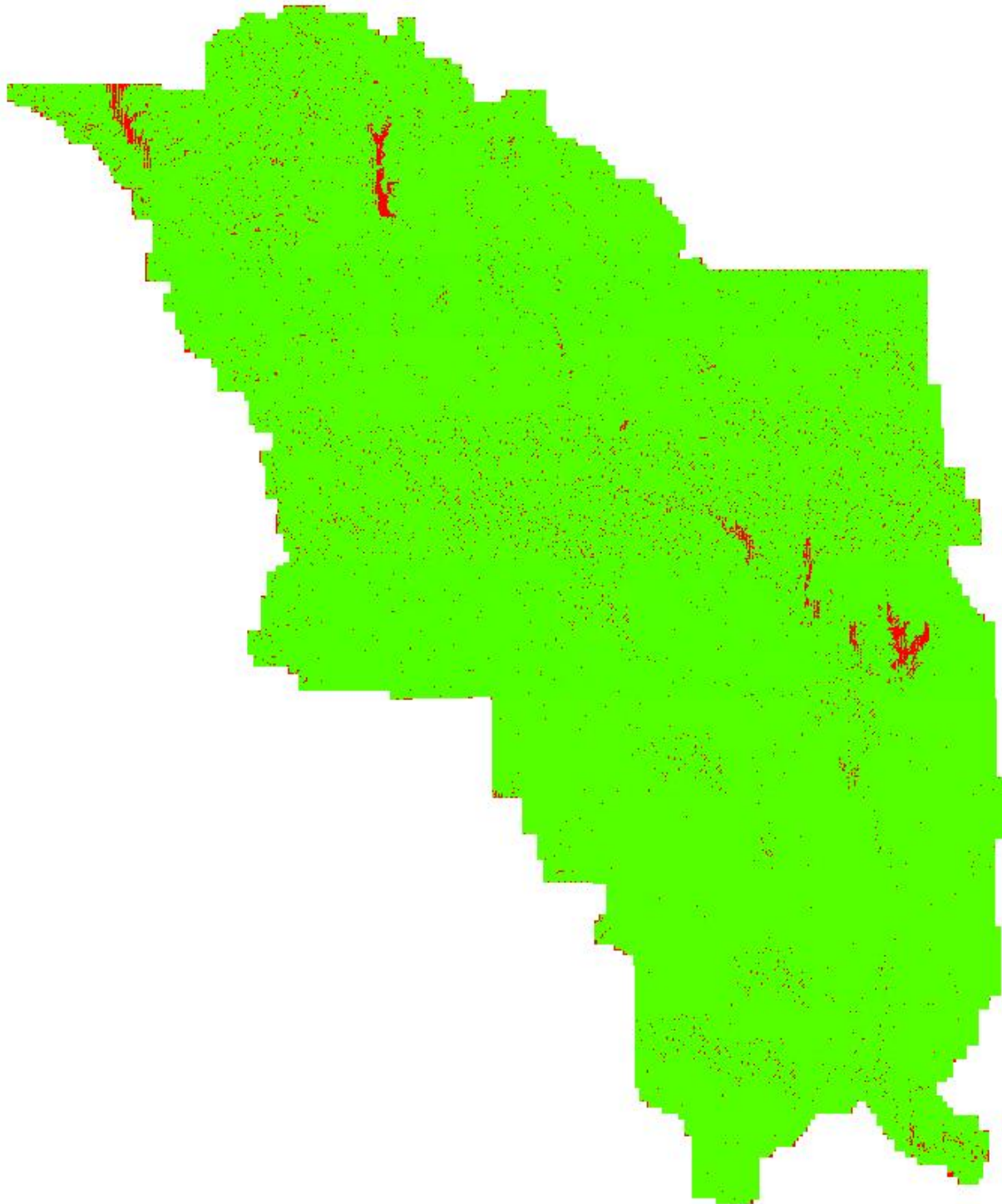




**Figure 15– 1-square meter density grid. There are some 1-meter cells that do not contain 2 points per square meter (red areas) due to the irregular spacing of lidar point cloud data. Most 1-square meter cells contain at least 2 points per square meter (green areas) showing there are no systematic density issues. When density is viewed/analyzed by representative 1-square kilometer areas, density passes with no issues.**

The spatial distribution of points must be uniform and free of clustering. This specification is tested by creating a grid with cell sizes equal to the design  $NPS^2$ . ArcGIS tools are then used to

calculate the number of first return points of each swath within each grid cell. At least 90% of the cells must contain 1 lidar point, excluding acceptable void areas such as water or low NIR reflectivity features, i.e. some asphalt and roof composition materials. This project passes spatial distribution requirements, as shown in the image below.



**Figure 16– Spatial Distribution.** All cells (2\*NPS cellsize) containing at least one lidar point are colored green. Cells that do not contain a lidar point, including water bodies which are acceptable NoData area, are colored red. Without removing acceptable NoData areas due to water, 98% of cells contain at least one lidar point.

## **DATA CLASSIFICATION AND EDITING**

Once the calibration, absolute swath vertical accuracy, and relative accuracy of the data was confirmed, Dewberry utilized a variety of software suites for data processing. The data was processed using GeoCue and TerraScan software. The initial step is the setup of the GeoCue project, which is done by importing a project defined tile boundary index encompassing the entire project area. The acquired 3D laser point clouds, in LAS binary format, were imported into the GeoCue project and tiled according to the project tile grid. Once tiled, the laser points were classified using a proprietary routine in TerraScan. This routine classifies any obvious low outliers in the dataset to class 7 and high outliers in the dataset to class 18. Points along flight line edges that are geometrically unusable are identified as withheld and classified to a separate class so that they will not be used in the initial ground algorithm. After points that could negatively affect the ground are removed from class 1, the ground layer is extracted from this remaining point cloud. The ground extraction process encompassed in this routine takes place by building an iterative surface model.

This surface model is generated using three main parameters: building size, iteration angle and iteration distance. The initial model is based on low points being selected by a "roaming window" with the assumption that these are the ground points. The size of this roaming window is determined by the building size parameter. The low points are triangulated and the remaining points are evaluated and subsequently added to the model if they meet the iteration angle and distance constraints. This process is repeated until no additional points are added within iterations. A second critical parameter is the maximum terrain angle constraint, which determines the maximum terrain angle allowed within the classification model.

Each tile was then imported into Terrascan and a surface model was created to examine the ground classification. Dewberry analysts visually reviewed the ground surface model and corrected errors in the ground classification such as vegetation, buildings, and bridges that were present following the initial processing conducted by Dewberry. Dewberry analysts employ 3D visualization techniques to view the point cloud at multiple angles and in profile to ensure that non-ground points are removed from the ground classification. Bridge decks are classified to class 17 using bridge breaklines compiled by Dewberry. After the ground classification corrections were completed, the dataset was processed through a water classification routine that utilizes breaklines compiled by Dewberry to automatically classify hydro features. The water classification routine selects ground points within the breakline polygons and automatically classifies them as class 9, water. During this water classification routine, points that are within 1x NPS or less of the hydrographic features are moved to class 10, an ignored ground due to breakline proximity. Overage points are then identified in Terrascan and GeoCue is used to set the overlap bit for the overage points and the withheld bit is set on the withheld points previously identified in Terrascan before the ground classification routine was performed.

The lidar tiles were classified to the following classification schema:

- Class 1 = Unclassified, used for all other features that do not fit into the Classes 2, 7, 9, 10, 17, or 18, including vegetation, buildings, etc.

- Class 2 = Bare-Earth Ground
- Class 7 = Low Noise
- Class 9 = Water, points located within collected breaklines
- Class 10 = Ignored Ground due to breakline proximity
- Class 17 = Bridge Decks
- Class 18 = High Noise

After manual classification, the LAS tiles were peer reviewed and then underwent a final QA/QC. After the final QA/QC and corrections, all headers, appropriate point data records, and variable length records, including spatial reference information, are updated in GeoCue software and then verified using proprietary Dewberry tools.

## Lidar Qualitative Assessment

Dewberry's qualitative assessment utilizes a combination of statistical analysis and interpretative methodology or visualization to assess the quality of the data for a bare-earth digital terrain model (DTM). This includes creating pseudo image products such as lidar orthos produced from the intensity returns, Triangular Irregular Network (TIN)'s, Digital Elevation Models (DEM) and 3-dimensional models as well as reviewing the actual point cloud data. This process looks for anomalies in the data, areas where man-made structures or vegetation points may not have been classified properly to produce a bare-earth model, and other classification errors. This report will present representative examples where the lidar and post processing had issues as well as examples of where the lidar performed well.

## VISUAL REVIEW

The following sections describe common types of issues identified in lidar data and the results of the visual review for Texas Neches.

### Data Voids

The LAS files are used to produce density grids using the commercial software package QT Modeler (QTM) which creates a 3-dimensional data model derived from Class 2 (ground) points in the LAS files. Grid spacing is based on the project density deliverable requirement for un-obscured areas. Acceptable voids (areas with no lidar returns in the LAS files) that are present in the majority of lidar projects include voids caused by bodies of water. Two small voids were present in the data. Reflights occurred to ensure complete ground coverage. No unacceptable voids are present in the Texas Neches lidar project.

### Artifacts

Artifacts are caused by the misclassification of ground points and usually represent vegetation and/or man-made structures. The artifacts identified are usually low lying structures, such as porches or low vegetation used as landscaping in neighborhoods and other developed areas. These low lying features are extremely difficult for the automated algorithms to detect as non-ground and must be removed manually. The vast majority of these features have been removed but a small number of these features are still in the ground classification. The limited numbers of features remaining in the ground are usually 0.3 meters or less above the actual ground surface, and should not negatively impact the usability of the dataset.



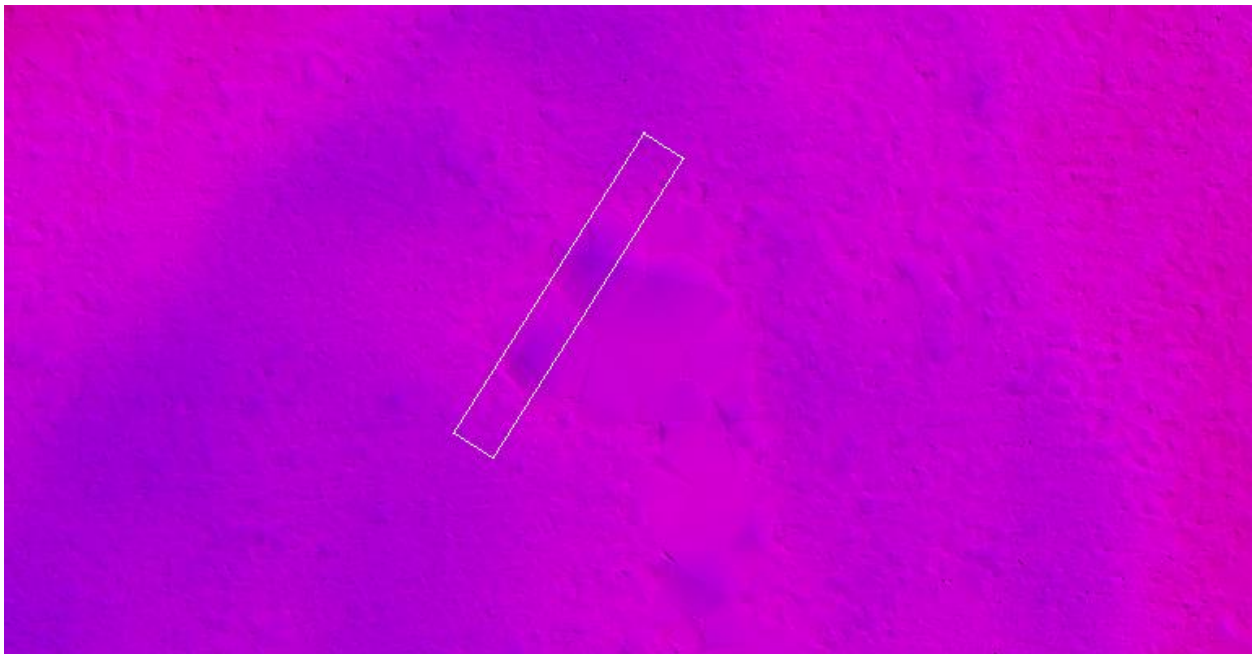


Figure 17 – Tile number 14SQA1995670. Profile with points colored by class (class 1=white, class 2=orange) is shown in the top view and a TIN of the surface is shown in the bottom view. The profile identifies low vegetation points. A limited number of these small features are still classified as ground but do not impact the usability of the dataset.

### Bridge Removal Artifacts

The DEM surface models are created from TINs or Terrains. TIN and Terrain models create continuous surfaces from the inputs. Because a continuous surface is being created, the TIN or Terrain will use interpolation to continue the surface beneath the bridge where no lidar data was acquired. Locations where bridges were removed will generally contain less detail in the bare-earth surface because these areas are interpolated.

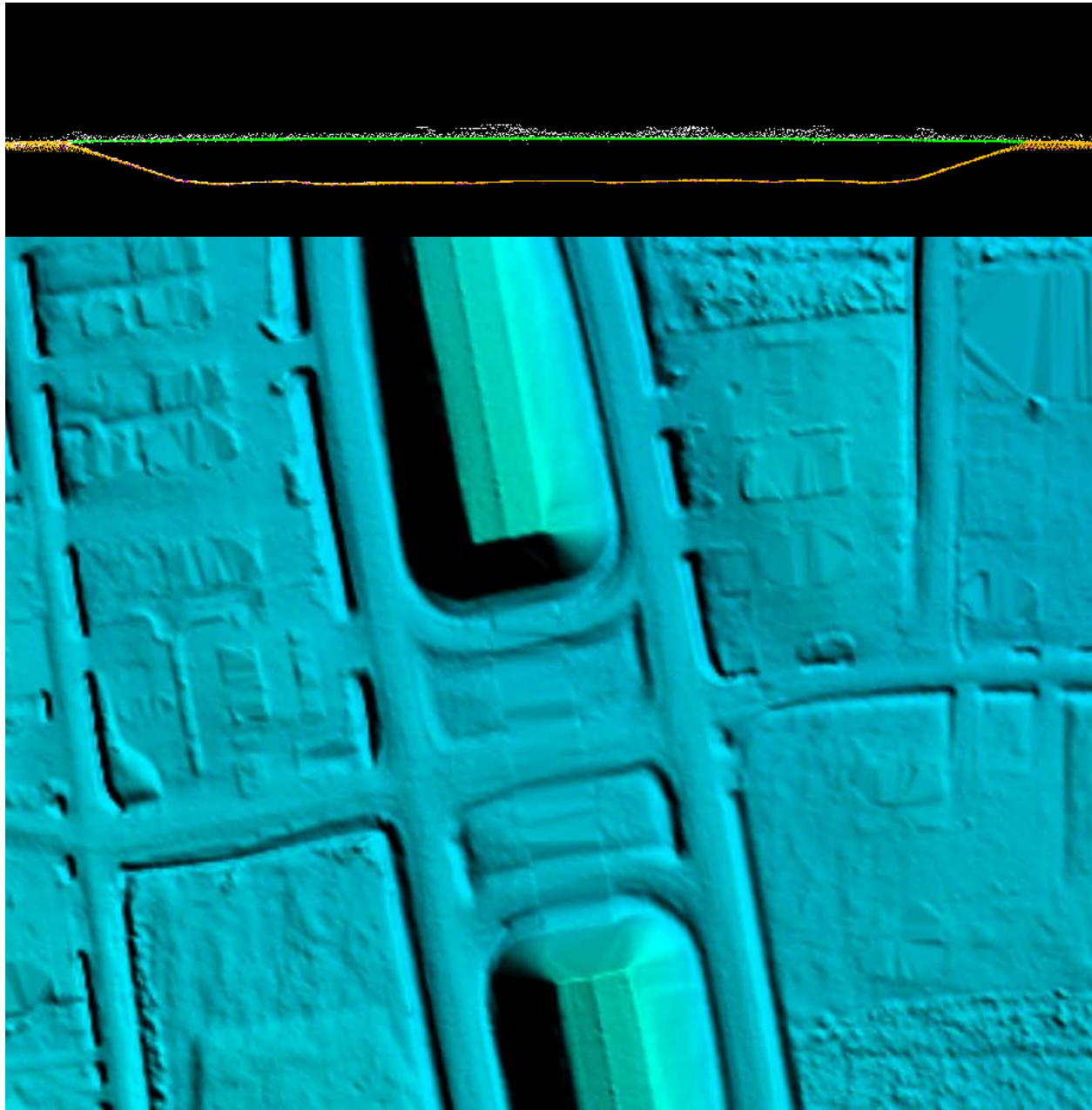
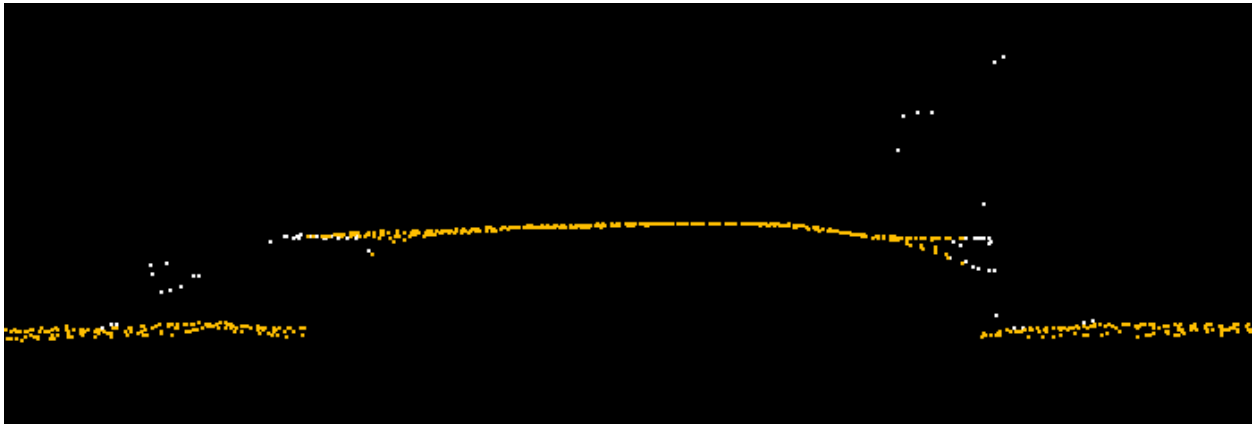


Figure 18 – Tile number 15RUP3853375. The DEM in the bottom view shows an area where a bridge has been removed from ground. The surface model must make a continuous model and in order to do so, points are connected through interpolation. This results in less detail where the surface must be interpolated. The profile in the top view shows the lidar points of this particular feature colored by class. All bridge points have been moved to bridge deck (green).



### Culverts and Bridges

Bridges have been removed from the bare earth surface while culverts remain in the bare earth surface. In instances where it is difficult to determine if the feature is a culvert or bridge, such as with some small bridges, Dewberry erred on assuming they would be culverts especially if they are on secondary or tertiary roads. Below is an example of a culvert that has been left in the ground surface.



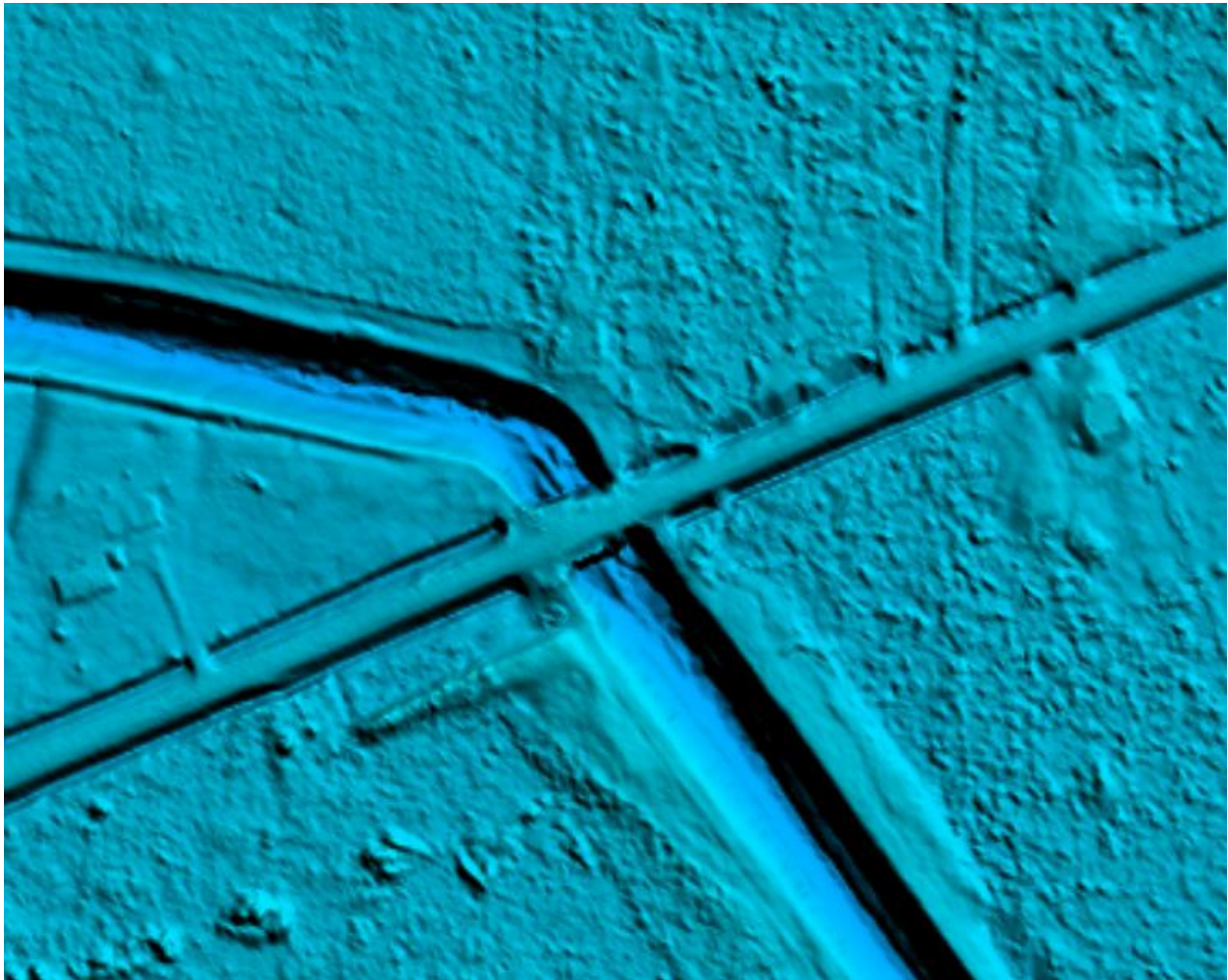


Figure 19– Tile number 15RUP3843375. Profile with points colored by class (class 1=white, class 2=orange) is shown in the top view and the DEM is shown in the bottom view. This culvert remains in the bare earth surface. Bridges have been removed from the bare earth surface and classified to class 17.

### Dirt Mounds

Irregularities in the natural ground exist and may be misinterpreted as artifacts that should be removed. Small hills and dirt mounds are present throughout the project area. These features are correctly included in the ground.

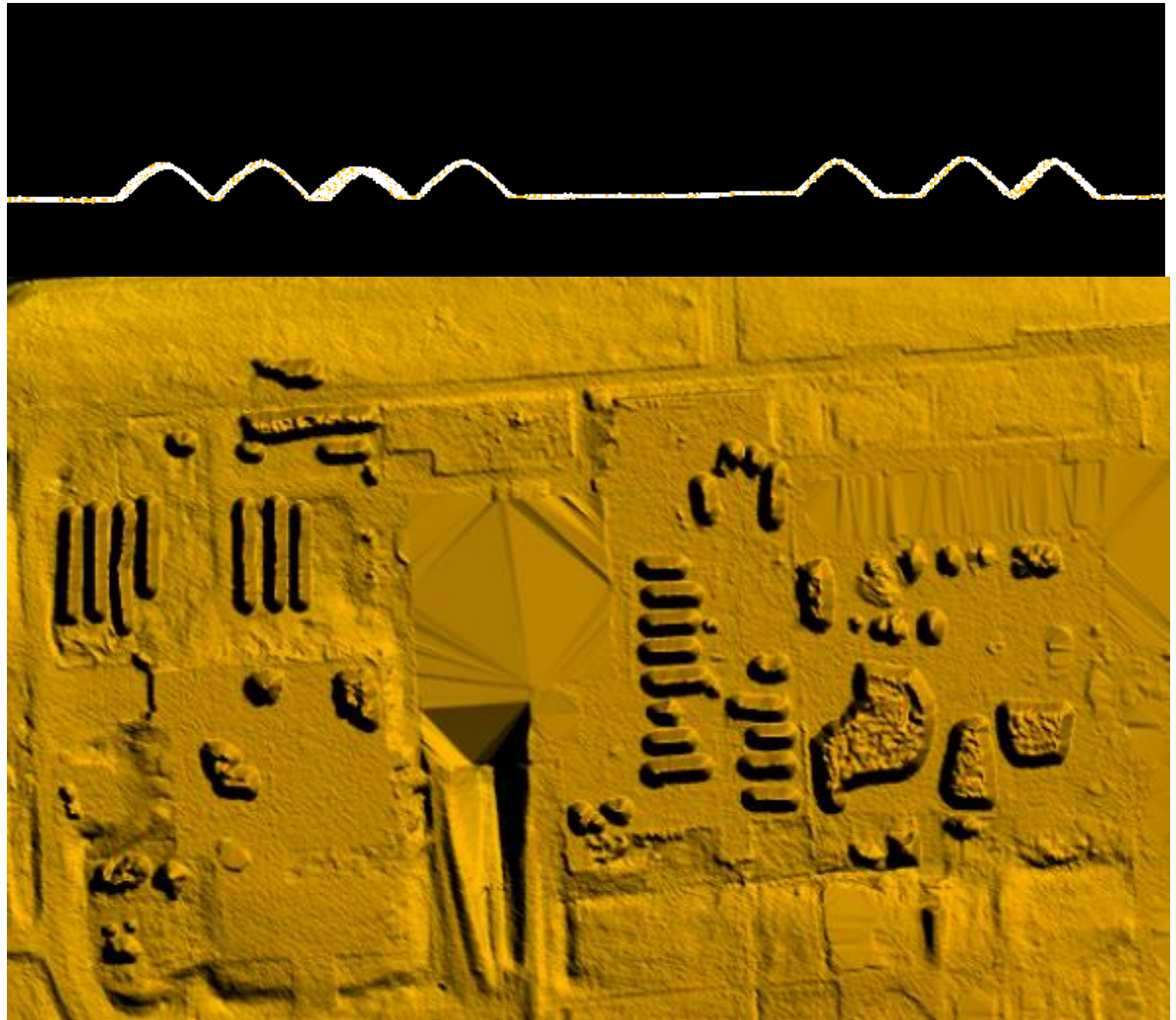


Figure 20 - Tile 15STR2744790. Profile with the points colored by class (class 1=white, class 2=orange) is shown in the top view and a DEM of the surface is shown in the bottom view. These features are correctly included in the ground classification.



### Elevation Change Within Breaklines

While water bodies are flattened in the final DEMs, other features such as linear hydrographic features can have significant changes in elevation within a small distance. In linear hydrographic features, this is often due to the presence of a structure that affects flow such as a dam or spillway. Dewberry has reviewed the DEMs to ensure that changes in elevation are shown from bank to bank. These changes are often shown as steps to reduce the presence of artifacts while ensuring consistent downhill flow. An example is shown below.



Figure 21 – Tile number 14SQA1905730. Elevation change has been stair stepped. The steps are flat from bank to bank and flow consistently downhill.

### Flight line Ridges

Ridges occur when there is a difference between the elevations of adjoining flight lines or swaths. Some flight line ridges are visible in the final DEMs but they do not exceed the project specifications and the overall relative accuracy requirements for the project area have been met. An example of a visible ridge that is within tolerance is shown below.

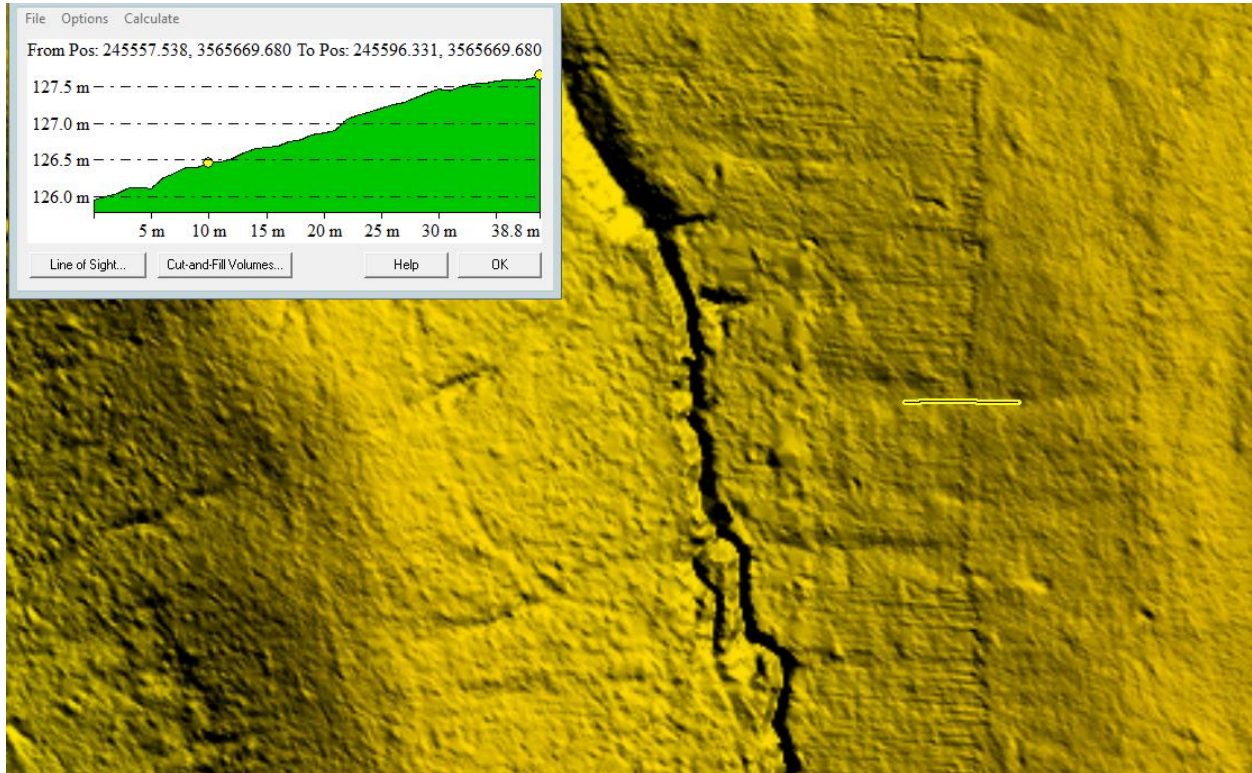


Figure 22– Tile number 15STR2445655. The flight line ridge is less than 8 cm. Overall, the Texas Neches lidar data meets the project specifications for 8 cm RMSDz relative accuracy.

### Temporal Changes

Because the Texas Neches lidar project was collected during two different acquisition windows, there are two temporal differences between the areas collected at different times. The temporal issues took place in an area where an overpass was being constructed. When possible the 2017 lidar data was used to represent the bare earth surface. The location of these temporal differences are provided with the deliverables in a shapefile named “Texas\_Neches\_Temporal.shp.”



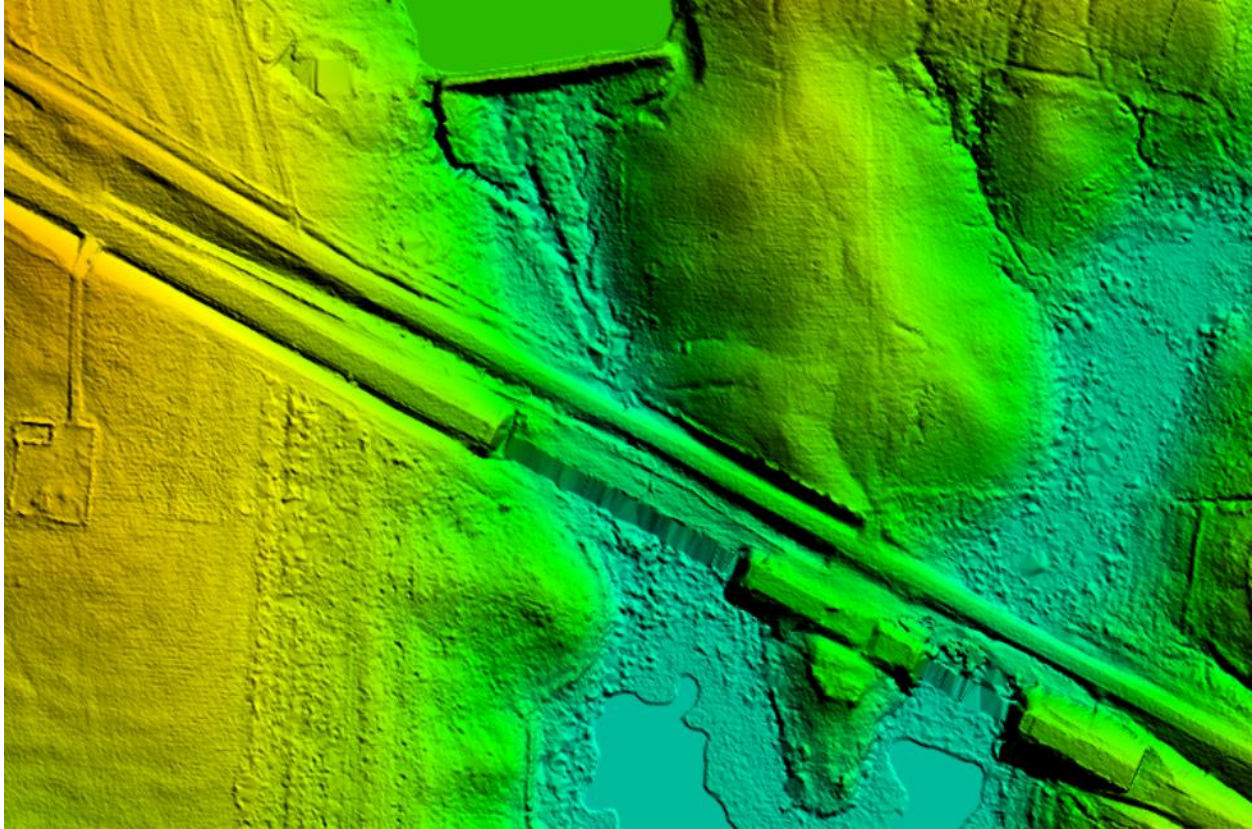


Figure 23-Tile number 15STR2505535. Temporal change where construction of an overpass is taking place

## FORMATTING

After the final QA/QC is performed and all corrections have been applied to the dataset, all lidar files are updated to the final format requirements and the final formatting, header information, point data records, and variable length records are verified using Dewberry proprietary tools. The table below lists some of the main lidar header fields that are updated and verified.

Classified Lidar Formatting		
Parameter	Requirement	Pass/Fail
LAS Version	1.4	Pass
Point Data Format	Format 6	Pass
Coordinate Reference System	NAD83 (2011) UTM Zone 15, meters and NAVD88 (Geoid 12B), meters in WKT Format	Pass
Global Encoder Bit	Should be set to 17 for Adjusted GPS Time	Pass
Time Stamp	Adjusted GPS Time (unique timestamps)	Pass



System ID	Should be set to the processing system/software and is set to NIIRS10 for GeoCue software	Pass
Multiple Returns	The sensor shall be able to collect multiple returns per pulse and the return numbers are recorded	Pass
Intensity	16 bit intensity values are recorded for each pulse	Pass
Classification	Required Classes include: Class 1: Unclassified Class 2: Ground Class 7: Low Noise Class 9: Water Class 10: Ignored Ground Class 17: Bridge Decks Class 18: High Noise	Pass
Overlap and Withheld Points	Overlap (Overage) and Withheld points are set to the Overlap and Withheld bits	Pass
Scan Angle	Recorded for each pulse	Pass
XYZ Coordinates	Unique Easting, Northing, and Elevation coordinates are recorded for each pulse	Pass

## Lidar Positional Accuracy

### BACKGROUND

Dewberry quantitatively tested the dataset by testing the vertical accuracy of the lidar. The vertical accuracy is tested by comparing the discreet measurement of the survey checkpoints to that of the interpolated value within the three closest lidar points that constitute the vertices of a three-dimensional triangular face of the TIN. Therefore, the end result is that only a small sample of the lidar data is actually tested. However there is an increased level of confidence with lidar data due to the relative accuracy. This relative accuracy in turn is based on how well one lidar point "fits" in comparison to the next contiguous lidar measurement, and is verified as part of the initial processing. If the relative accuracy of a dataset is within specifications and the dataset passes vertical accuracy requirements at the location of survey checkpoints, the vertical accuracy results can be applied to the whole dataset with high confidence due to the passing relative accuracy. Dewberry typically uses LP360 software to test the swath lidar vertical accuracy, Terrascan software to test the classified lidar vertical accuracy, and Esri ArcMap to test the DEM vertical accuracy so that three different software programs are used to validate the vertical accuracy for each project.

Dewberry also tests the horizontal accuracy of lidar datasets when checkpoints are photo-identifiable in the intensity imagery. Photo-identifiable checkpoints in intensity imagery typically include checkpoints located at the ends of paint stripes on concrete or asphalt surfaces or checkpoints located at 90 degree corners of different reflectivity, e.g. a sidewalk corner adjoining

a grass surface. The XY coordinates of checkpoints, as defined in the intensity imagery, are compared to surveyed XY coordinates for each photo-identifiable checkpoint. These differences are used to compute the tested horizontal accuracy of the lidar. As not all projects contain photo-identifiable checkpoints, the horizontal accuracy of the lidar cannot always be tested.

### SURVEY VERTICAL ACCURACY CHECKPOINTS

For the vertical accuracy assessment, four hundred fifty-four (454) check points were surveyed for the project and are located within bare earth/open terrain, grass/weeds/crops, and forested/fully grown land cover categories. Please see appendix A to view the survey report which details and validates how the survey was completed for this project.

Checkpoints were evenly distributed throughout the project area so as to cover as many flight lines as possible using the “dispersed method” of placement.

All checkpoints surveyed for vertical accuracy testing purposes are listed in the following table.

Point ID	NAD83(2011) UTM 15		NAVD88 (Geoid 12B)
	Easting X (m)	Northing Y (m)	Elevation (m)
NVA-01	231540.743	3593631.333	164.733
NVA-02	245513.202	3596824.201	161.746
NVA-03	262949.895	3596782.206	170.663
NVA-04	279353.545	3588150.084	152.477
NVA-05	181692.689	3585256.862	102.971
NVA-06	197646.483	3580349.53	116.572
NVA-07	213542.548	3581046.269	120.173
NVA-08	231843.903	3586740.495	137.782
NVA-09	243654.617	3586373.846	149.774
NVA-10	255211.193	3591906.937	156.108
NVA-11	266956.018	3593334.963	172.542
NVA-12	198061.267	3573541.552	101.562
NVA-13	216149.979	3572250.924	104.764
NVA-14	225926.85	3572122.943	130.058
NVA-15	240948.034	3574693.499	138.538
NVA-16	262491.305	3576054.524	115.237
NVA-17	279796.822	3577753.905	158.097
NVA-18	293116.98	3580491.988	135.999
NVA-19	302778.064	3576141.856	143.188
NVA-20	211934.395	3562254.249	87.614
NVA-21	230704.781	3565691.944	137.145
NVA-22	248733.399	3566790.333	139.92
NVA-23	274482.07	3570490.388	138.948
NVA-24	290706.636	3568495.703	143.713
NVA-25	307912.247	3568362.371	164.397
NVA-26	214877.705	3550716.395	81.684
NVA-27	234904.723	3555698.564	115.375

NVA-28	249360.847	3555102.432	146.289
NVA-29	265613.075	3558112.574	113.749
NVA-30	273192.96	3560157.071	125.071
NVA-31	278061.307	3565205.874	152.544
NVA-32	294770.905	3560794.011	105.005
NVA-33	224578.626	3550712.124	125.575
NVA-34	254877.188	3551419.925	132.834
NVA-35	280925.454	3558147.708	152.308
NVA-36	272993.769	3551754.493	124.242
NVA-37	296929.386	3548796.117	107.406
NVA-38	311064.685	3556254.299	122.804
NVA-39	278028.192	3544290.202	203.437
NVA-40	284809.557	3539766.97	178.946
NVA-41	302035.735	3539776.712	141.804
NVA-42	275191.767	3533559.8	136.837
NVA-43	287480.131	3535300.974	149.478
NVA-44	299614.99	3563724.208	137.276
NVA-45	303617.271	3531046.952	102.773
NVA-46	273812.33	3528794.765	169.548
NVA-47	283589.897	3529459.968	198.159
NVA-48	276147.355	3522184.935	102.008
NVA-49	294544.694	3529134.493	129.381
NVA-50	312061.347	3527175.106	96.108
NVA-51	219038.099	3541297.765	100.898
NVA-52	240484.304	3542655.966	120.036
NVA-53	261138.37	3540997.534	159.064
NVA-54	220506.145	3530333.651	90.155
NVA-55	239155.67	3536926.966	141.299
NVA-56	262484.845	3533279.415	120.873
NVA-57	228688.943	3523562.063	89.222
NVA-58	227708.726	3532068.526	93.15
NVA-59	244554.385	3524069.608	117.663
NVA-60	254647.785	3524619.265	134.958
NVA-61	266525.79	3520032.099	119.568
NVA-62	260259.297	3517598.572	146.019
NVA-63	250071.405	3514168.178	159.547
NVA-64	245905.147	3513673.778	116.835
NVA-65	240106.081	3517241.447	101.61
NVA-66	232507.522	3522500.322	100.948
NVA-67	240208.853	3510548.505	91.66
NVA-68	246997.554	3499046.779	104.211
NVA-69	266184.607	3515865.068	92.474
NVA-70	273756.124	3518239.991	109.207
NVA-71	297173.482	3518188.357	164.177
NVA-72	310013.202	3516248.593	98.605
NVA-73	295334.843	3510140.335	135.785
NVA-74	275339.603	3510115.778	116.98

NVA-75	266276.647	3502337.741	146.777
NVA-76	251839.381	3493313.136	124.763
NVA-77	262801.242	3495913.129	154.862
NVA-78	289422.365	3493013.706	133.374
NVA-79	307289.824	3504113.069	118.736
NVA-80	307037.486	3498183.704	98.142
NVA-81	312879.047	3489696.636	102.168
NVA-82	281154.343	3482715.093	131.696
NVA-83	264309.824	3486994.946	146.243
NVA-84	249088.403	3478751.741	107.097
NVA-85	250694.41	3467203.818	98.239
NVA-86	265100.62	3469962.225	96.313
NVA-87	279398.342	3471605.856	136.903
NVA-88	290762.483	3482330.32	87.08
NVA-89	296518.481	3475003.819	121.564
NVA-90	292424.696	3471533.375	110.837
NVA-91	282287.117	3455195.796	84.172
NVA-92	281340.947	3464413.093	93.456
NVA-93	264082.757	3461318.819	107.064
NVA-94	241543.062	3458514.234	62.682
NVA-95	253873.687	3458678.92	80.701
NVA-96	248549.692	3453190.601	77.131
NVA-97	280861.679	3456279.742	75.275
NVA-98	263603.839	3456823.587	113.418
NVA-99	275589.434	3451786.029	78.222
NVA-100	266716.969	3446207.201	88.677
NVA-101	249037.172	3447890.09	84.517
NVA-102	241900.832	3446968.907	52.366
NVA-103	243250.278	3442705.219	48.415
NVA-104	257004.48	3440380.874	90.361
NVA-105	263766.395	3436668.22	89.537
NVA-106	317235.764	3568916.442	170.894
NVA-107	316124.732	3563155.646	140.485
NVA-108	324828.861	3563797.179	146.418
NVA-109	331456.975	3560635.044	145.771
NVA-110	326858.254	3555182.036	139.401
NVA-111	300326.35	3565912.685	141.817
NVA-112	317239.084	3551494.493	127.514
NVA-113	332982.829	3553599.42	146.263
NVA-114	342775.129	3547938.826	144.019
NVA-115	337490.462	3542775.146	133.839
NVA-116	325413.403	3547081.9	145.448
NVA-117	318348.285	3547881.527	134.269
NVA-118	315473.529	3536864.26	132.074
NVA-119	328563.414	3538985.386	133.218
NVA-120	338598.801	3539033.415	150.474
NVA-121	312987.297	3529934.799	109.528

NVA-122	328830.799	3532929.344	154.544
NVA-123	340005.866	3532780	153.896
NVA-124	359407.349	3532814.573	113.366
NVA-125	366756.464	3530439.58	127.51
NVA-126	378743.549	3534579.162	104.817
NVA-127	400684.261	3537174.377	65.074
NVA-128	394346.374	3525377.009	89.083
NVA-129	386241.934	3519651.716	114.63
NVA-130	373185.902	3520778.718	125.517
NVA-131	359086.995	3522332.605	117.553
NVA-132	348059.165	3522551.579	152.702
NVA-133	340918.129	3521157.328	134.449
NVA-134	325838.332	3523113.793	145.507
NVA-135	314986.601	3523117.343	86.515
NVA-136	325257.196	3515635.684	146.885
NVA-137	341262.422	3514420.089	140.335
NVA-138	367153.955	3515564.586	84.406
NVA-139	380350.642	3511350.687	156.902
NVA-140	399290.041	3510166.08	98.171
NVA-141	406804.614	3499132.598	76.442
NVA-142	382940.217	3503686.525	125.087
NVA-143	366215.196	3501697.893	86.881
NVA-144	353343.921	3505968.261	142.188
NVA-145	340265.915	3501885.291	136.53
NVA-146	334063.185	3507175.736	99.557
NVA-147	321595.732	3505196.686	108.49
NVA-148	331954.897	3489622.695	86.651
NVA-149	358548.773	3492941.09	119.684
NVA-150	378495.524	3486400.002	104.588
NVA-151	393767.167	3488947.617	92.457
NVA-152	408306.243	3483638.758	100.661
NVA-153	403705.72	3468244.553	100.695
NVA-154	389597.356	3476525.329	83.448
NVA-155	371531.407	3479878.25	78.177
NVA-156	341259.034	3494195.263	91.956
NVA-157	337171.349	3485731.004	81.408
NVA-158	344621.239	3483362.255	103.461
NVA-159	363429.828	3473390.777	57.993
NVA-160	377117.232	3471774.284	77.534
NVA-161	383479.248	3462047.625	77.671
NVA-162	387768.527	3454377.412	58.251
NVA-163	404706.896	3446755.395	57.708
NVA-164	404706.898	3446755.402	57.695
NVA-164	322641.356	3481112.868	88.933
NVA-165	336315.57	3476143.384	110.47
NVA-166	353501.999	3469864.883	87.587
NVA-167	335611.451	3465274.847	78.375

NVA-168	316948.884	3461627.709	59.926
NVA-169	302900.308	3459990.635	105.931
NVA-170	327071.443	3454105.766	59.275
NVA-171	350903.309	3461777.627	96.956
NVA-172	364306.674	3458428.709	60.845
NVA-173	371639.199	3447154.238	100.971
NVA-174	381332.121	3439431.541	101.854
NVA-175	368067.854	3449895.598	69.97
NVA-176	348308.038	3445619.068	78.006
NVA-177	326963.597	3441611.91	79.864
NVA-178	313683.379	3447785.153	77.313
NVA-179	304306.197	3450622.515	102.906
NVA-180	289440.059	3447630.151	85.952
NVA-181	279851.726	3443310.613	74.179
NVA-182	293539.83	3439919.351	99.146
NVA-183	315560.672	3438117.431	87.648
NVA-184	336091.301	3436772.956	73.263
NVA-185	357787.627	3438854.562	58.545
NVA-186	333920.816	3421669.095	87.497
NVA-187	325811.257	3432189.666	68.509
NVA-188	313812.183	3431292.458	81.574
NVA-189	305670.422	3433954.139	100.829
NVA-190	297921.325	3420135.471	81.751
NVA-191	322783.878	3415151.499	82.092
NVA-192	331238.793	3411832.605	114.232
NVA-193	337772.205	3419022.622	91.528
NVA-194	327004.418	3415153.924	114.537
NVA-195	316007.241	3412551.86	83.903
NVA-196	301332.406	3410605.563	48.439
NVA-197	321338.714	3410804.719	73.158
NVA-198	337295.224	3403570.237	100.546
NVA-199	340073.992	3399721.777	112.151
NVA-200	329237.576	3404462.073	112.854
NVA-201	313535.771	3399081.945	48.853
NVA-202	313727.055	3392290.703	42.702
NVA-203	333029.628	3398219.193	104.842
NVA-204	343373.024	3389599.189	72.971
NVA-205	324876.552	3378223.733	45.393
NVA-206	416263.325	3444330.45	117.586
NVA-207	407856.169	3436421.615	145.87
NVA-208	394676.576	3436928.022	57.953
NVA-209	386732.443	3430775.903	44.974
NVA-210	368087.656	3432102.14	38.481
NVA-211	356975.01	3426488.006	96.722
NVA-212	347121.404	3422580.351	75.966
NVA-213	363314.159	3420297.624	94.557
NVA-214	381282.76	3420971.653	66.579



NVA-215	404944.004	3420288.693	74.68
NVA-216	422806.094	3410324.909	83.461
NVA-217	406800.519	3410484.788	104.77
NVA-218	401515.929	3403654.933	66.739
NVA-219	391001.527	3411152.683	29.18
NVA-220	378464.772	3406050.056	82.473
NVA-221	364474.571	3405694.973	83.982
NVA-222	349670.489	3403360.979	95.592
NVA-223	356184.294	3396110.909	83.339
NVA-224	374060.941	3395879.426	69.369
NVA-225	387198.404	3396153.266	50.077
NVA-226	402059.65	3396661.115	55.699
NVA-227	421579.184	3401350.875	43.904
NVA-228	415906.004	3386998.51	31.897
NVA-229	402165.992	3387717.838	40.586
NVA-230	387209.696	3382763.074	40.878
NVA-231	378157.01	3385708.66	37.089
NVA-232	367470.099	3393708.96	58.579
NVA-233	365328.49	3387525.481	47.152
NVA-234	359596.561	3386260.056	54.082
NVA-235	365714.639	3381073.175	40.804
NVA-236	381124.635	3381142.574	38.289
NVA-237	403012.791	3378823.048	32.533
NVA-238	406618.826	3368432.439	21.57
NVA-239	422400.498	3374751.726	15.909
NVA-240	407718.064	3367000.725	23.549
NVA-241	400685.025	3369160.834	17.346
NVA-242	385947.731	3370717.857	33.534
NVA-243	378560.622	3374097.677	19.591
NVA-244	365862.278	3374574.949	29.564
NVA-245	358613.025	3374620.544	36.056
NVA-246	339321.112	3368297.691	41.343
NVA-247	328963.731	3373984.385	38.867
NVA-248	331633.788	3356503.736	30.855
NVA-249	352477.59	3351224.72	21.331
NVA-250	379159.667	3356896.846	20.381
NVA-251	396471.505	3357592.881	10.22
NVA-252	411163.82	3356327.494	13.843
NVA-253	401687.638	3345586.333	8.936
NVA-254	395587.245	3342315.458	6.155
NVA-255	384157.543	3348897.601	16.118
NVA-256	369427.039	3341474.413	14.247
NVA-257	363609.166	3356320.126	24.165
NVA-258	353101.654	3343640.329	19.133
NVA-259	332463.281	3347480.109	29.379
NVA-260	341858.193	3335785.961	20.289
NVA-261	355024.652	3319999.366	15.197

NVA-262	362827.42	3323593.886	12.718
NVA-263	394468.747	3328349.247	5.652
NVA-264	416437.393	3318833.245	1.312
VVA-265	239714.517	3597363.627	161.903
VVA-266	252614.97	3594067.49	144.626
VVA-267	273547.591	3590972.664	128.839
VVA-268	282846.19	3591238.773	161.457
VVA-269	272860.523	3582451.683	158.834
VVA-270	252983.067	3584647.799	138.083
VVA-271	244139.68	3581127.201	140.925
VVA-272	225751.162	3584422.301	190.886
VVA-273	217858.172	3582878.919	122.929
VVA-274	215763.247	3574541.925	121.163
VVA-275	206699.253	3575817.152	104.825
VVA-276	197322.726	3576456.853	107.728
VVA-277	203830.897	3565717.24	87.324
VVA-278	217497.055	3564105.081	115.365
VVA-279	237404.004	3571704.694	147.579
VVA-280	262023.568	3570409.585	123.117
VVA-281	282235.455	3571130.107	164.119
VVA-282	302303.98	3579142.078	144.991
VVA-283	301677.65	3566959.728	142.925
VVA-284	307887.881	3558330.108	133.529
VVA-285	289019.949	3559774.253	114.838
VVA-286	275788.987	3559090.611	136.945
VVA-287	257029.59	3557418.246	149.494
VVA-288	249142.651	3562588.915	142.821
VVA-289	235624.091	3564355.729	152.565
VVA-290	227355.581	3556767.065	124.975
VVA-291	208776.734	3555887.556	89.131
VVA-292	220030.447	3547791.221	107.046
VVA-293	279572.264	3550055.032	148.471
VVA-294	284970.044	3548631.521	152.231
VVA-295	303987.183	3546863.338	141.927
VVA-296	301883.245	3535567.906	118.851
VVA-297	288127.486	3541108.817	137.282
VVA-298	277107.983	3537433.951	138.572
VVA-299	280722.192	3525702.012	206.149
VVA-300	293113.274	3525402.3	189.783
VVA-301	213177.815	3543230.667	83.809
VVA-302	231941.551	3545567.018	109.667
VVA-303	268460.22	3550325.519	131.521
VVA-304	247199.346	3543937.369	141.796
VVA-305	265590.681	3538552.89	103.2
VVA-306	241837.342	3534800.722	136.708
VVA-307	225800.07	3534113.707	108.722
VVA-308	218858.995	3528422.208	83.495

VVA-309	232013.802	3533168.471	113.889
VVA-310	250977.595	3534118.592	192.856
VVA-311	265649.787	3533974.346	135.592
VVA-312	267073.314	3529556.302	113.158
VVA-313	256658.259	3528910.895	121.805
VVA-314	248587.293	3526187.817	169.499
VVA-315	239870.386	3526818.028	109.893
VVA-316	230290.649	3526700.646	108.482
VVA-317	233824.389	3517364.799	95.639
VVA-318	238664.423	3522562.862	97.888
VVA-319	250278.035	3521381.41	145.749
VVA-320	250888.451	3510673.42	146.721
VVA-321	268267.867	3511008.995	139.949
VVA-322	280110.515	3520230.134	122.887
VVA-323	291908.868	3519587.821	121.206
VVA-324	310080.612	3524325.62	95.99
VVA-325	306642.839	3511719.924	135.307
VVA-326	286630.266	3510235.174	117.07
VVA-327	269809.046	3499006.347	120.576
VVA-328	248682.397	3501670.618	93.086
VVA-329	256884.171	3496617.839	121.394
VVA-330	250952.073	3484314.888	120.103
VVA-331	254042.755	3449670.358	84.986
VVA-332	267625.458	3454914.18	92.612
VVA-333	274226.992	3483094.664	115.391
VVA-334	305280.623	3489397.844	78.784
VVA-335	316090.213	3492579.789	102.384
VVA-336	289677.375	3460445.671	105.235
VVA-337	293216.071	3479217.173	109.283
VVA-338	318075.107	3561912.888	133.797
VVA-339	334716.534	3551264.754	116.725
VVA-340	321167.384	3554339.13	135.743
VVA-341	316511.595	3548573.567	117.059
VVA-342	329930.269	3549490.531	137.471
VVA-343	338965.097	3544033.925	130.779
VVA-344	333598.381	3540619.405	113.32
VVA-345	320406.58	3541312.347	113.777
VVA-346	313115.754	3539334.626	118.814
VVA-347	320354.75	3529189.545	98.29
VVA-348	326213.234	3530543.59	142.529
VVA-349	345484.272	3534942.14	173.936
VVA-350	352587.541	3528844.038	129.447
VVA-351	373886.728	3527466.376	116.874
VVA-352	396276.578	3531049.178	87.676
VVA-353	398189.597	3519204.231	76.662
VVA-354	373710.831	3510140.529	125.377
VVA-355	355497.213	3516118.66	152.985

VVA-356	331759.822	3512983.464	153.373
VVA-357	332747.632	3502544.319	149.597
VVA-358	328875.762	3496207.786	105.633
VVA-359	364621.51	3496192.209	155.838
VVA-360	385527.83	3497869.229	102.099
VVA-361	398421.57	3485870.509	128.75
VVA-362	383578.127	3480558.719	110.781
VVA-363	360887.155	3482158.797	80.266
VVA-364	341857.032	3490092.2	92.026
VVA-365	355552.582	3477941.94	62.232
VVA-366	371996.836	3477035.249	58.208
VVA-367	396932.514	3475357.602	95.237
VVA-368	414635.572	3475616.783	90.754
VVA-369	397360.363	3465347.831	82.717
VVA-370	370480.344	3463511.625	75.921
VVA-371	380600.028	3457569.065	63.267
VVA-372	391467.749	3450851.91	63.196
VVA-373	401890.696	3458066.385	74.082
VVA-374	305800.376	3460133.183	98.792
VVA-375	347169.997	3464848.59	84.878
VVA-376	348697.819	3450370.607	57.765
VVA-377	330802.389	3454169.217	72.171
VVA-378	319133.026	3454393.45	65.059
VVA-379	302073.283	3449112.558	90.095
VVA-380	284159.659	3439649.072	81.605
VVA-381	325971.688	3437983.214	69.123
VVA-382	352617.38	3426871.981	83.019
VVA-383	357744.675	3441108.841	57.015
VVA-384	378786.04	3441513.711	65.867
VVA-385	336708.26	3426182.373	88.067
VVA-386	325665.194	3425089.114	96.347
VVA-387	303008.275	3435128.587	95.877
VVA-388	296672.6	3435107.079	101.54
VVA-389	297088.429	3412411.197	49.747
VVA-390	310432.609	3411776.313	100.362
VVA-391	342559.525	3419723.225	92.238
VVA-392	342085.426	3405240.609	120.8
VVA-393	327486.117	3407039.37	130.758
VVA-394	306386.66	3404307.385	64.035
VVA-395	320407.202	3400380.705	87.554
VVA-396	325450.111	3392391.811	64.193
VVA-397	345748.872	3399089.75	84.018
VVA-398	345985.343	3391922.743	81.414
VVA-399	355823.778	3404083.4	103.143
VVA-400	318628.341	3393936.384	95.469
VVA-401	332122.004	3383405.176	67.671
VVA-402	348148.366	3379571.268	47.411

VVA-403	325473.079	3380618.496	61.121
VVA-404	414875.909	3438955.112	167.629
VVA-405	406484.35	3434539.325	112.508
VVA-406	372803.043	3426248.831	115.017
VVA-407	342569.446	3423508.636	72.362
VVA-408	374315.666	3425026.146	118.039
VVA-409	392449.582	3423984.982	40.494
VVA-410	421292.47	3428802.634	90.481
VVA-411	414756.395	3422660.461	83.286
VVA-412	400879.531	3418525.493	65.861
VVA-413	374531.978	3411544.976	64.869
VVA-414	353850.596	3414338.29	107.889
VVA-415	361752.886	3399869.59	89.288
VVA-416	369394.603	3405332.829	78.605
VVA-417	384686.461	3409580.07	63.169
VVA-418	405283.485	3406899.446	83.223
VVA-419	419456.42	3408173.461	64.882
VVA-420	416004.828	3400532.34	49.539
VVA-421	405725.78	3390394.361	39.973
VVA-422	396374.51	3394881.714	21.271
VVA-423	396843.045	3409506.921	49.56
VVA-424	387858.065	3402520.55	60.674
VVA-425	374058.143	3405743.753	77.894
VVA-426	363436.366	3400163.144	98.828
VVA-427	334890.91	3388709.464	70.623
VVA-428	356222.852	3386416.483	55.171
VVA-429	370955.949	3391106.596	46.86
VVA-430	381177.614	3395610.828	61.72
VVA-431	402854.382	3391321.659	42.313
VVA-432	411920.675	3382593.451	31.507
VVA-433	401897.526	3373243.454	24.149
VVA-434	401163.653	3384919.085	20.069
VVA-435	377109.662	3376270.117	29.594
VVA-436	366496.366	3371139.777	31.01
VVA-437	344663.011	3362728.533	36.043
VVA-438	337825.267	3383842.266	65.784
VVA-439	360175.818	3353143.573	22.215
VVA-440	390582.183	3358155.459	9.224
VVA-441	414158.258	3365000.721	18.47
VVA-442	413844.324	3351139.153	12.635
VVA-443	395581.844	3348719.374	11.047
VVA-444	389113.497	3340245.343	6.705
VVA-445	378430.618	3343351.875	11.415
VVA-446	368467.741	3347098.254	16.593
VVA-447	345150.842	3342483.936	22.551
VVA-448	360258.623	3336061.33	12.957
VVA-449	364257.662	3327815.539	11.221



VVA-450	358955.128	3320129.843	13.336
VVA-451	386637.798	3340274.439	3.523
VVA-452	408982.267	3329437.956	4.853
VVA-453	414707.063	3313458.447	0.865

**Table 27: Texas Neches Lidar project surveyed accuracy checkpoints**

One checkpoint (VVA-410) was removed from the vertical accuracy testing for the classified lidar due to its location being outside the project boundary. Even with the removal of this point, there are enough total checkpoints and enough checkpoints per land cover category to satisfy project requirements.

The figure below shows the location of the QA/QC checkpoints used to test the positional accuracy of the dataset.

## USGS Texas Neches Checkpoint Locations

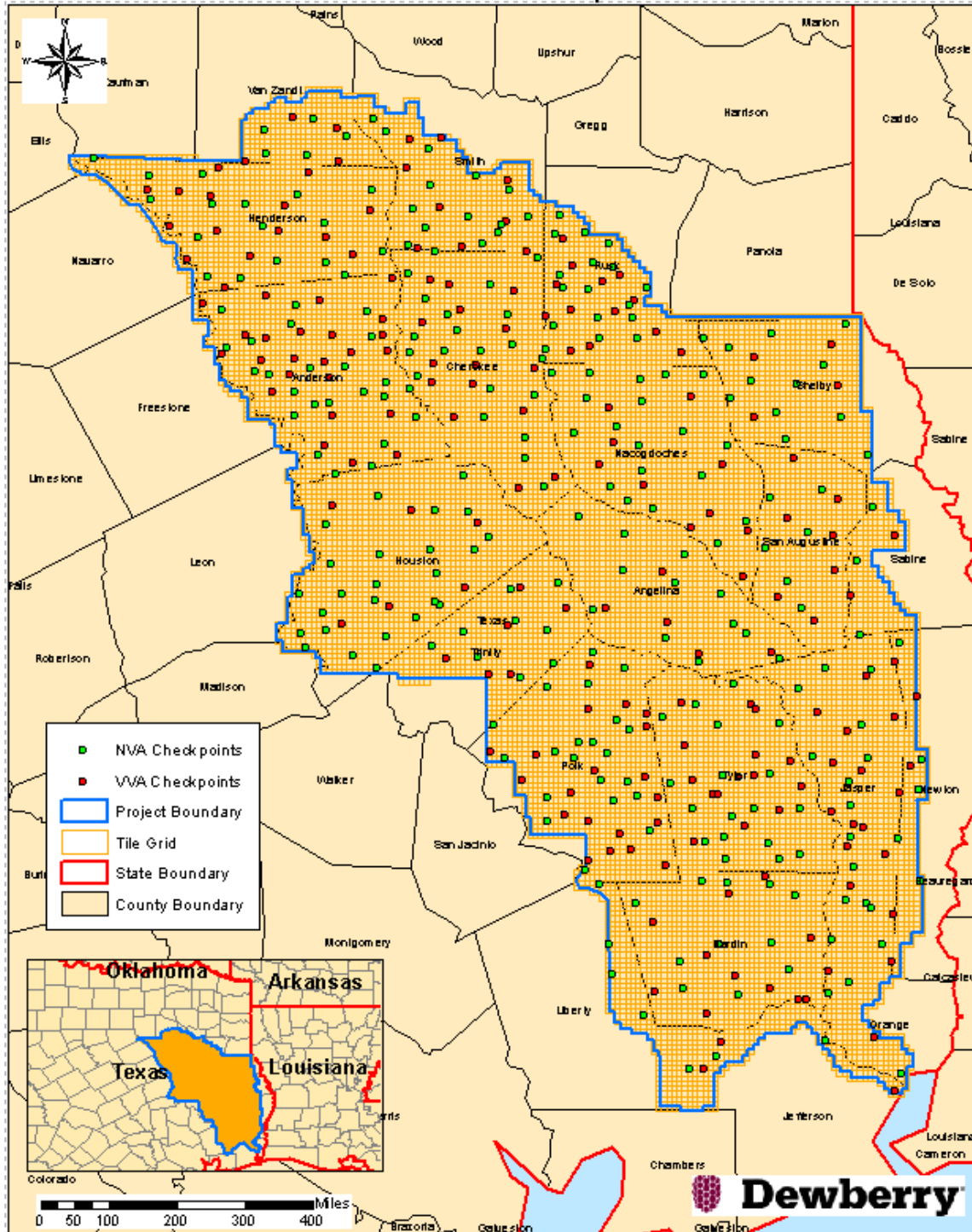


Figure 24 – Location of QA/QC Checkpoints

## VERTICAL ACCURACY TEST PROCEDURES

**NVA** (Non-vegetated Vertical Accuracy) is determined with check points located only in non-vegetated terrain, including open terrain (grass, dirt, sand, and/or rocks) and urban areas, where there is a very high probability that the lidar sensor will have detected the bare-earth ground surface and where random errors are expected to follow a normal error distribution. The NVA determines how well the calibrated lidar sensor performed. With a normal error distribution, the vertical accuracy at the 95% confidence level is computed as the vertical root mean square error (RMSE<sub>z</sub>) of the checkpoints x 1.9600. For the Texas Neches lidar project, vertical accuracy must be 19.6 cm or less based on an RMSE<sub>z</sub> of 10 cm x 1.9600.

**VVA** (Vegetated Vertical Accuracy) is determined with all checkpoints in vegetated land cover categories, including tall grass, weeds, crops, brush and low trees, and fully forested areas, where there is a possibility that the lidar sensor and post-processing may yield elevation errors that do not follow a normal error distribution. VVA at the 95% confidence level equals the 95<sup>th</sup> percentile error for all checkpoints in all vegetated land cover categories combined. The Texas Neches Lidar Project VVA standard is 29.4 cm based on the 95<sup>th</sup> percentile. The VVA is accompanied by a listing of the 5% outliers that are larger than the 95<sup>th</sup> percentile used to compute the VVA; these are always the largest outliers that may depart from a normal error distribution. Here, Accuracy<sub>z</sub> differs from VVA because Accuracy<sub>z</sub> assumes elevation errors follow a normal error distribution where RMSE procedures are valid, whereas VVA assumes lidar errors may not follow a normal error distribution in vegetated categories, making the RMSE process invalid.

The relevant testing criteria are summarized in Table 28.

Quantitative Criteria	Measure of Acceptability
Non-Vegetated Vertical Accuracy (NVA) in open terrain and urban land cover categories using RMSE <sub>z</sub> *1.9600	19.6 cm (based on RMSE <sub>z</sub> (10 cm) * 1.9600)
Vegetated Vertical Accuracy (VVA) in all vegetated land cover categories combined at the 95% confidence level	29.4 cm (based on combined 95 <sup>th</sup> percentile)

**Table 28 – Acceptance Criteria**

The primary QA/QC vertical accuracy testing steps used by Dewberry are summarized as follows:

1. Dewberry’s team surveyed QA/QC vertical checkpoints in accordance with the project’s specifications.
2. Next, Dewberry interpolated the bare-earth lidar DTM to provide the z-value for every checkpoint.
3. Dewberry then computed the associated z-value differences between the interpolated z-value from the lidar data and the ground truth survey checkpoints and computed NVA, VVA, and other statistics.
4. The data were analyzed by Dewberry to assess the accuracy of the data. The review process examined the various accuracy parameters as defined by the scope of work. The overall descriptive statistics of each dataset were computed to assess any trends or anomalies. This report provides tables, graphs and figures to summarize and illustrate data quality.

## VERTICAL ACCURACY RESULTS

The table below summarizes the tested vertical accuracy resulting from a comparison of the surveyed checkpoints to the elevation values present within the fully classified lidar LAS files.

Land Cover Category	# of Points	NVA – Non-vegetated Vertical Accuracy (RMSE <sub>z</sub> x 1.9600) Spec=0.196 m	VVA – Vegetated Vertical Accuracy (95th Percentile) Spec=0.294 m
NVA	265	0.129	
VVA	188		0.167

Table 29 – Tested NVA and VVA

This lidar dataset was tested to meet ASPRS Positional Accuracy Standards for Digital Geospatial Data (2014) for a 10 cm RMSE<sub>z</sub> Vertical Accuracy Class. Actual NVA accuracy was found to be RMSE<sub>z</sub> =6.6 cm, equating to +/- 12.9 cm at 95% confidence level. Actual VVA accuracy was found to be +/- 16.7 cm at the 95th percentile.

The figure below illustrates the magnitude of the differences between the QA/QC checkpoints and lidar data. This shows that the majority of lidar elevations were within +/- 10 cm of the checkpoints elevations, but there were some outliers where lidar and checkpoint elevations differed by up to +30.3 cm.

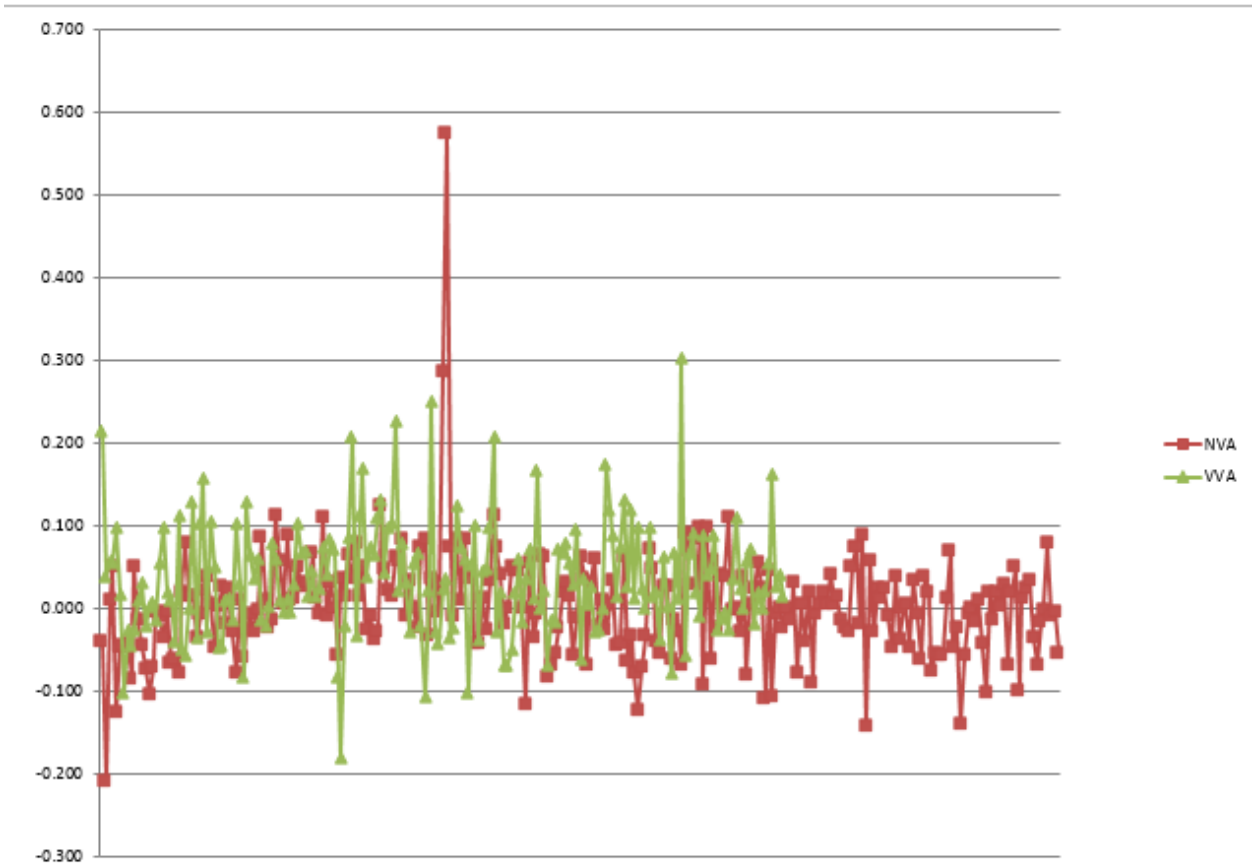


Figure 25 – Magnitude of elevation discrepancies per land cover category

Table 30 lists the 5% outliers that are larger than the VVA 95<sup>th</sup> percentile.

Point ID	NAD83(2011) UTM Zone 15		NAVD88 (Geoid 12B)	Lidar Z (m)	Delta Z	AbsDeltaZ
	Easting X (m)	Northing Y (m)	Survey Z (m)			
VVA-265	239714.517	3597363.627	161.903	162.119	0.216	0.216
VVA-331	254042.755	3449670.358	84.986	84.807	-0.179	0.179
VVA-334	305280.623	3489397.844	78.784	78.991	0.207	0.207
VVA-337	293216.071	3479217.173	109.283	109.452	0.169	0.169
VVA-346	313115.754	3539334.626	118.814	119.041	0.227	0.227
VVA-356	331759.822	3512983.464	153.373	153.623	0.250	0.250
VVA-373	401890.696	3458066.385	74.082	74.291	0.209	0.209
VVA-404	414875.909	3438955.112	167.629	167.804	0.175	0.175
VVA-425	374058.143	3405743.753	77.894	78.197	0.303	0.303
VVA-385	336708.260	3426182.373	88.067	88.235	0.168	0.168

Table 30 – 5% Outliers



Table 31 provides overall descriptive statistics.

100 % of Totals	# of Points	RMSEz (m) NVA Spec=0.1 m	Mean (m)	Median (m)	Skew	Std Dev (m)	Kurtosis	Min (m)	Max (m)
NVA	265	0.066	0.004	0.003	2.512	0.066	21.672	-0.207	0.575
VVA	188	N/A	0.036	0.028	0.568	0.069	1.471	-0.179	0.303

Table 31 – Overall Descriptive Statistics

The figure below illustrates a histogram of the associated elevation discrepancies between the QA/QC checkpoints and elevations interpolated from the lidar triangulated irregular network (TIN). The frequency shows the number of discrepancies within each band of elevation differences. Although the discrepancies vary between a low of -0.21 meters and a high of +0.57 meters, the histogram shows that the majority of the discrepancies are skewed on the positive side. The vast majority of points are within the ranges of -0.10 meters to +0.10 meters.

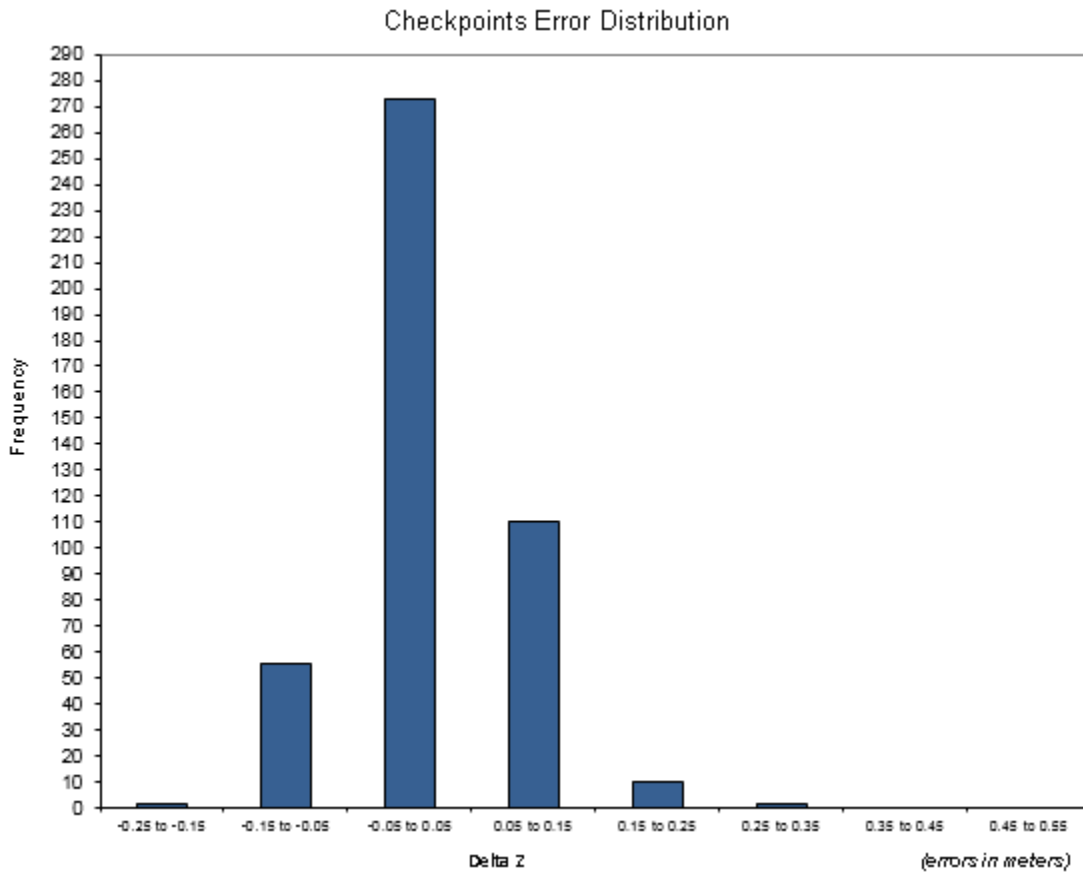


Figure 26 – Histogram of Elevation Discrepancies with errors in meters

**Based on the vertical accuracy testing conducted by Dewberry, the lidar dataset for the USGS Texas Neches Lidar Project satisfies the project’s pre-defined vertical accuracy criteria.**

## HORIZONTAL ACCURACY TEST PROCEDURES

Horizontal accuracy testing requires well-defined checkpoints that can be identified in the dataset. Elevation datasets, including lidar datasets, do not always contain well-defined checkpoints suitable for horizontal accuracy assessment. However, the ASPRS Positional Accuracy Standards for Digital Geospatial Data (2014) recommends at least half of the NVA vertical check points should be located at the ends of paint stripes or other point features visible on the lidar intensity image, allowing them to double as horizontal check points.

Dewberry reviews all NVA checkpoints to determine which, if any, of these checkpoints are located on photo-identifiable features in the intensity imagery. This subset of checkpoints are then used for horizontal accuracy testing.

The primary QA/QC horizontal accuracy testing steps used by Dewberry are summarized as follows:

1. Dewberry’s team surveyed QA/QC vertical checkpoints in accordance with the project’s specifications and tried to locate half of the NVA checkpoints on features photo-identifiable in the intensity imagery.
2. Next, Dewberry identified the well-defined features in the intensity imagery.
3. Dewberry then computed the associated xy-value differences between the coordinates of the well-defined feature in the lidar intensity imagery and the ground truth survey checkpoints.
4. The data were analyzed by Dewberry to assess the accuracy of the data. Horizontal accuracy was assessed using NSSDA methodology where horizontal accuracy is calculated at the 95% confidence level. This report provides the results of the horizontal accuracy testing.

## HORIZONTAL ACCURACY RESULTS

Twenty-two (22) checkpoints were determined to be photo-identifiable in the intensity imagery and were used to test the horizontal accuracy of the lidar dataset.

Using NSSDA methodology (endorsed by the ASPRS Positional Accuracy Standards for Digital Geospatial Data (2014)), horizontal accuracy at the 95% confidence level (called ACCURACY<sub>r</sub>) is computed by the formula  $RMSE_r * 1.7308$  or  $RMSE_{xy} * 2.448$ .

No horizontal accuracy requirements or thresholds were provided for this project. However, lidar datasets are generally calibrated by methods designed to ensure a horizontal accuracy of 1 meter or less at the 95% confidence level.

# of Points	RMSE <sub>x</sub> (Target=0.41 m)	RMSE <sub>y</sub> (Target=0.41 m)	RMSE <sub>r</sub> (Target=0.58 m)	ACCURACY <sub>r</sub> (RMSE <sub>r</sub> x 1.7308) Target=1 m
22	0.246	0.204	0.319	0.552

Table 32-Tested horizontal accuracy at the 95% confidence level

Twenty two (22) checkpoints were used for horizontal accuracy testing. This data set was tested to meet ASPRS Positional Accuracy Standards for Digital Geospatial Data (2014) for a 41 cm RMSE<sub>x</sub>/RMSE<sub>y</sub> Horizontal Accuracy Class which equates to Positional Horizontal Accuracy = +/- 1 meter at a 95% confidence level. Actual positional accuracy of this dataset was found to be RMSE<sub>x</sub> = 24.6 cm and RMSE<sub>y</sub> = 20.4 cm which equates to +/- 55.2 cm at 95% confidence level.

## **Breakline Production & Qualitative Assessment Report**

### **BREAKLINE PRODUCTION METHODOLOGY**

Dewberry used GeoCue software to develop lidar stereo models of the project area so the lidar derived data could be viewed in 3-D stereo using Socet Set softcopy photogrammetric software. Using lidargrammetry procedures with lidar intensity imagery, Dewberry used the stereo models to stereo-compile the two types of hydrographic breaklines in accordance with the project's Data Dictionary.

All drainage breaklines are monotonically enforced to show downhill flow. Water bodies are at a constant elevation where the lowest elevation of the water body has been applied to the entire water body.

### **BREAKLINE QUALITATIVE ASSESSMENT**

Dewberry completed breakline qualitative assessments according to a defined workflow. The following workflow diagram represents the steps taken by Dewberry to provide a thorough qualitative assessment of the breakline data.

Completeness and horizontal placement is verified through visual reviews against lidar intensity imagery. Automated checks are applied on all breakline features to validate topology, including the 3D connectivity of features, enforced monotonicity on linear hydrographic breaklines, and flatness on water bodies.

The next step is to compare the elevation of the breakline vertices against the ground elevation extracted from the ESRI Terrain built from the lidar ground points, keeping in mind that a discrepancy is expected because of the hydro-enforcement applied to the breaklines and because of the interpolated imagery used to acquire the breaklines. A given tolerance is used to validate if the elevations differ too much from the lidar.

After all corrections and edits to the breakline features, the breaklines are imported into the final GDB and verified for correct formatting.

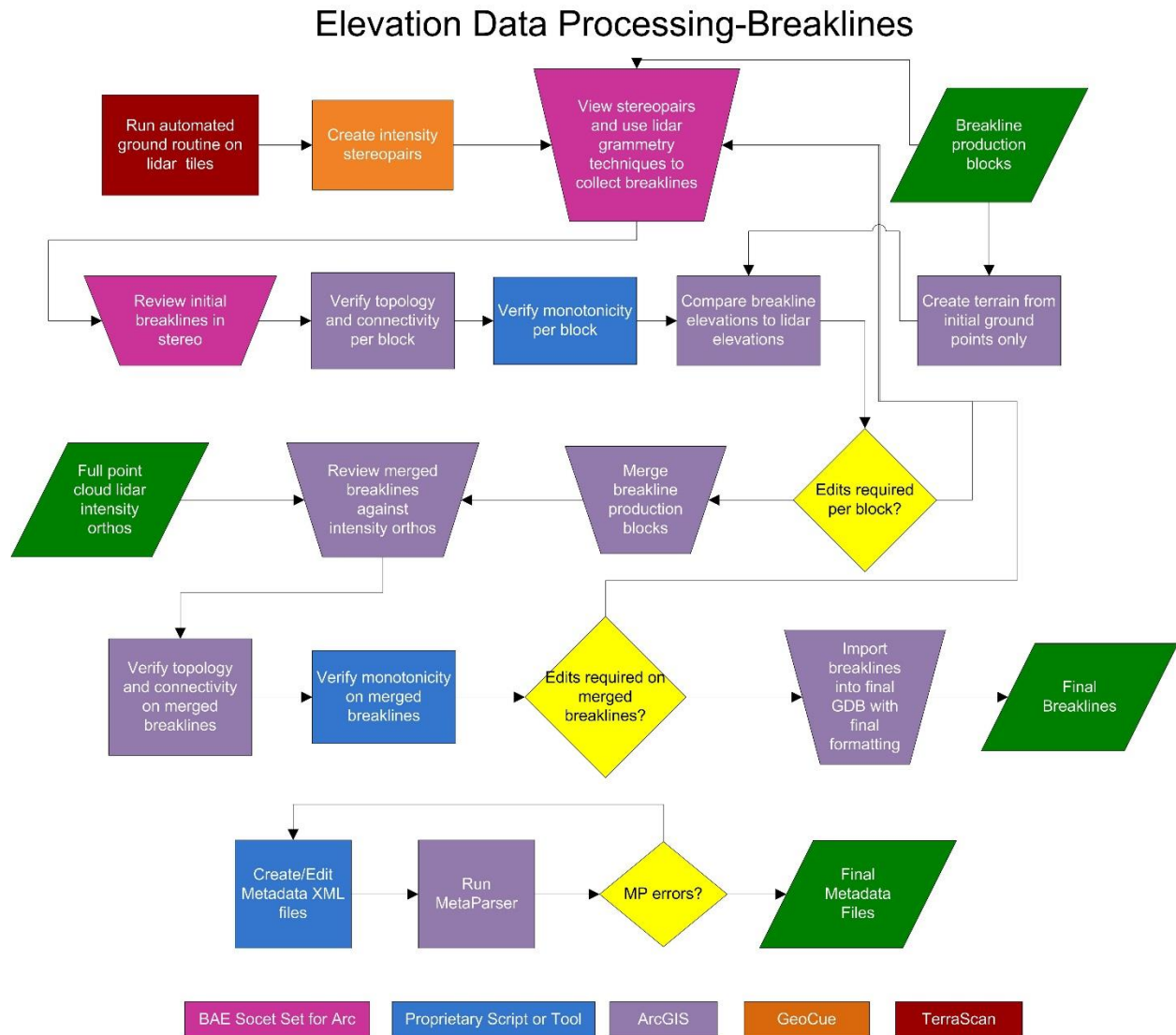


Figure 27-Breakline QA/QC workflow

### BREAKLINE CHECKLIST

The following table represents a portion of the high-level steps in Dewberry’s Production and QA/QC checklist that were performed for this project.

Pass/Fail	Validation Step
Pass	Use lidar-derived data, which may include intensity imagery, stereo pairs, bare earth ground models, density models, slope models, and terrains, to collect breaklines according to project specifications.
Pass	In areas of heavy vegetation or where the exact shoreline is hard to delineate, it is better to err on placing the breakline <i>slightly</i> inside or seaward of the shoreline (breakline can be inside shoreline by 1x-2x NPS).

Pass	After each producer finishes breakline collection for a block, each producer must perform a completeness check, breakline variance check, and all automated checks on their block before calling that block complete and ready for the final merge and QC
Pass	After breaklines are completed for production blocks, all production blocks should be merged together and completeness and automated checks should be performed on the final, merged GDB. Ensure correct snapping-horizontal (x,y) and vertical (z)-between all production blocks.
Pass	Check entire dataset for missing features that were not captured, but should be to meet baseline specifications or for consistency. Features should be collected consistently across tile bounds. Check that the horizontal placement of breaklines is correct. Breaklines should be compared to full point cloud intensity imagery and terrains
Pass	Breaklines are correctly edge-matched to adjoining datasets in completion, coding, and horizontal placement.
Pass	Using a terrain created from lidar ground (all ground including 2, 8, and 10) and water points (class 9), compare breakline Z values to interpolated lidar elevations.
Pass	Perform all Topology and Data Integrity Checks
Pass	Perform hydro-flattening and hydro-enforcement checks including monotonicity and flatness from bank to bank on linear hydrographic features and flatness of water bodies. Tidal waters should preserve as much ground as possible and can include variations or be non-monotonic.

Table 33-A subset of the high-level steps from Dewberry's Production and QA/QC checklist performed for this project.

## DATA DICTIONARY

The following data dictionary was used for this project.

### Horizontal and Vertical Datum

The horizontal datum shall be North American Datum of 1983(2011), Units in Meters. The vertical datum shall be referenced to the North American Vertical Datum of 1988 (NAVD 88), Units in Meters. Geoid12B shall be used to convert ellipsoidal heights to orthometric heights.

### Coordinate System and Projection

All data shall be projected to UTM Zone 15, Horizontal Units in Meters and Vertical Units in Meters.

### Inland Streams and Rivers

**Feature Dataset:** BREAKLINES  
**Feature Type:** Polygon  
**Contains Z Values:** Yes  
**XY Resolution:** Accept Default Setting  
**XY Tolerance:** 0.003

**Feature Class:** STREAMS\_AND\_RIVERS  
**Contains M Values:** No  
**Annotation Subclass:** None  
**Z Resolution:** Accept Default Setting  
**Z Tolerance:** 0.001

### Description

This polygon feature class will depict linear hydrographic features with a width greater than 100 feet.

### Table Definition

Field Name	Data Type	Allow Null Values	Default Value	Domain	Precision	Scale	Length	Responsibility
OBJECTID	Object ID							Assigned by Software



SHAPE	Geometry						Assigned by Software
SHAPE_LENGTH	Double	Yes			0	0	Calculated by Software
SHAPE_AREA	Double	Yes			0	0	Calculated by Software

## Feature Definition

Description	Definition	Capture Rules
Streams and Rivers	Linear hydrographic features such as streams, rivers, canals, etc. with an average width greater than 100 feet. In the case of embankments, if the feature forms a natural dual line channel, then capture it consistent with the capture rules. Other natural or manmade embankments will not qualify for this project.	<p>Capture features showing dual line (one on each side of the feature). Average width shall be greater than 100 feet to show as a double line. Each vertex placed should maintain vertical integrity. Generally both banks shall be collected to show consistent downhill flow. There are exceptions to this rule where a small branch or offshoot of the stream or river is present.</p> <p>The banks of the stream must be captured at the same elevation to ensure flatness of the water feature. If the elevation of the banks appears to be different see the task manager or PM for further guidance.</p> <p>Breaklines must be captured at or just below the elevations of the immediately surrounding terrain. Under no circumstances should a feature be elevated above the surrounding lidar points. Acceptable variance in the negative direction will be defined for each project individually.</p> <p>These instructions are only for docks or piers that follow the coastline or water's edge, not for docks or piers that extend perpendicular from the land into the water. If it can be reasonably determined where the edge of water most probably falls, beneath the dock or pier, then the edge of water will be collected at the elevation of the water where it can be directly measured. If there is a clearly-indicated headwall or bulkhead adjacent to the dock or pier and it is evident that the waterline is most probably adjacent to the headwall or bulkhead, then the water line will follow the headwall or bulkhead at the elevation of the water where it can be directly measured. If there is no clear indication of the location of the water's edge beneath the dock or pier, then the edge of water will follow the outer edge of the dock or pier as it is adjacent to the water, at the measured elevation of the water.</p> <p>Every effort should be made to avoid breaking a stream or river into segments.</p> <p>Dual line features shall break at road crossings (culverts). In areas where a bridge is present the dual line feature shall continue through the bridge.</p> <p>Islands: The double line stream shall be captured around an island if the island is greater than 1 acre. In this case a segmented polygon shall be used around the island in order to allow for the island feature to remain as a "hole" in the feature.</p>

### Inland Ponds and Lakes

**Feature Dataset:** BREAKLINES  
**Feature Type:** Polygon  
**Contains Z Values:** Yes  
**XY Resolution:** Accept Default Setting  
**XY Tolerance:** 0.003

**Feature Class:** PONDS\_AND\_LAKES  
**Contains M Values:** No  
**Annotation Subclass:** None  
**Z Resolution:** Accept Default Setting  
**Z Tolerance:** 0.001

### Description

This polygon feature class will depict closed water body features that are at a constant elevation.

### Table Definition

Field Name	Data Type	Allow Null Values	Default Value	Domain	Precision	Scale	Length	Responsibility
OBJECTID	Object ID							Assigned by Software
SHAPE	Geometry							Assigned by Software
SHAPE_LENGTH	Double	Yes			0	0		Calculated by Software
SHAPE_AREA	Double	Yes			0	0		Calculated by Software

### Feature Definition

Description	Definition	Capture Rules
Ponds and Lakes	<p>Land/Water boundaries of constant elevation water bodies such as lakes, reservoirs, ponds, etc. Features shall be defined as closed polygons and contain an elevation value that reflects the best estimate of the water elevation at the time of data capture. Water body features will be captured for features 2 acres in size or greater.</p> <p>“Donuts” will exist where there are islands within a closed water body feature.</p>	<p>Water bodies shall be captured as closed polygons with the water feature to the right. <u>The compiler shall take care to ensure that the z-value remains consistent for all vertices placed on the water body.</u></p> <p>Breaklines must be captured at or just below the elevations of the immediately surrounding terrain. Under no circumstances should a feature be elevated above the surrounding lidar points. Acceptable variance in the negative direction will be defined for each project individually.</p> <p>An Island within a Closed Water Body Feature that is 1 acre in size or greater will also have a “donut polygon” compiled.</p> <p>These instructions are only for docks or piers that follow the coastline or water’s edge, not for docks or piers that extend perpendicular from the land into the water. If it can be reasonably determined where the edge of water most probably falls, beneath the dock or pier, then the edge of water will be collected at the elevation of the water where it can be directly measured. If there is a clearly-indicated headwall or bulkhead adjacent to the dock or pier and it is evident that the waterline is most probably adjacent to the headwall or bulkhead, then the water line will follow the headwall or bulkhead at the elevation of the water where it can be directly measured. If there is no clear indication of the location of the water’s edge beneath</p>

		the dock or pier, then the edge of water will follow the outer edge of the dock or pier as it is adjacent to the water, at the measured elevation of the water.
--	--	---

### Beneath Bridge Breaklines

**Feature Dataset:** BREAKLINES  
**Feature Type:** Polyline  
**Contains Z Values:** Yes  
**XY Resolution:** Accept Default Setting  
**XY Tolerance:** 0.003

**Feature Class:** Bridge\_Breaklines  
**Contains M Values:** No  
**Annotation Subclass:** None  
**Z Resolution:** Accept Default Setting  
**Z Tolerance:** 0.001

### Description

This polyline feature class is used to enforce terrain beneath bridge decks where ground data may not have been acquired. Enforcing the terrain beneath bridge decks prevents bridge saddles.

### Table Definition

Field Name	Data Type	Allow Null Values	Default Value	Domain	Precision	Scale	Length	Responsibility
OBJECTID	Object ID							Assigned by Software
SHAPE	Geometry							Assigned by Software
SHAPE_LENGTH	Double	Yes			0	0		Calculated by Software

### Feature Definition

Description	Definition	Capture Rules
Bridge Breaklines	Bridge Breaklines should be used where necessary to enforce terrain beneath bridge decks and to prevent bridge saddles in the bare earth DEMs.	<p>Bridge breaklines should be collected beneath bridges where bridge saddles exist or are likely to exist in the bare earth DEMs.</p> <p>Bridge breaklines should be collected perpendicular to the bridge deck so that the endpoints are on either side of the bridge deck. Typically two bridge breaklines are collected per bridge deck, one at either end of the bridge deck to enforce the terrain under the full bridge deck.</p> <p>The endpoints of the bridge breaklines will match the elevation of the ground at their xy position to enforce the ground/bare earth elevations beneath the bridge deck and prevent bridge saddles from forming.</p>

## **DEM Production & Qualitative Assessment**

### **DEM PRODUCTION METHODOLOGY**

Dewberry utilized ESRI software and Global Mapper for the DEM production and QC process. ArcGIS software is used to generate the products and the QC is performed in both ArcGIS and Global Mapper. The figure below shows the entire process necessary for bare earth DEM production, starting from the lidar swath processing.

The final bare-earth lidar points are used to create a terrain. The final 3D breaklines collected for the project are also enforced in the terrain. The terrain is then converted to raster format using linear interpolation. For most projects, a single terrain/DEM can be created for the whole project. For very large projects, multiple terrains/DEMs may be created. The DEM(s) is reviewed for any issues requiring corrections, including remaining lidar mis-classifications, erroneous breakline elevations, poor hydro-flattening or hydro-enforcement, and processing artifacts. After corrections are applied, the DEM(s) is then split into individual tiles following the project tiling scheme. The tiles are verified for final formatting and then loaded into Global Mapper to ensure no missing or corrupt tiles and to ensure seamlessness across tile boundaries.



Figure 28-DEM Production Workflow



## DEM QUALITATIVE ASSESSMENT

Dewberry performed a comprehensive qualitative assessment of the bare earth DEM deliverables to ensure that all tiled DEM products were delivered with the proper extents, were free of processing artifacts, and contained the proper referencing information. This process was performed in ArcGIS software with the use of a tool set Dewberry has developed to verify that the raster extents match those of the tile grid and contain the correct projection information. The DEM data was reviewed at a scale of 1:5000 to review for artifacts caused by the DEM generation process and to review the hydro-flattened features. To perform this review Dewberry creates HillShade models and overlays a partially transparent colored elevation model to review for these issues. All corrections are completed using Dewberry's proprietary correction workflow. Upon completion of the corrections, the DEM data is loaded into Global Mapper for its second review and to verify corrections. Once the DEMs are tiled out, the final tiles are again loaded into Global Mapper to ensure coverage, extents, and that the final tiles are seamless.

The images below show an example of a bare earth DEM.

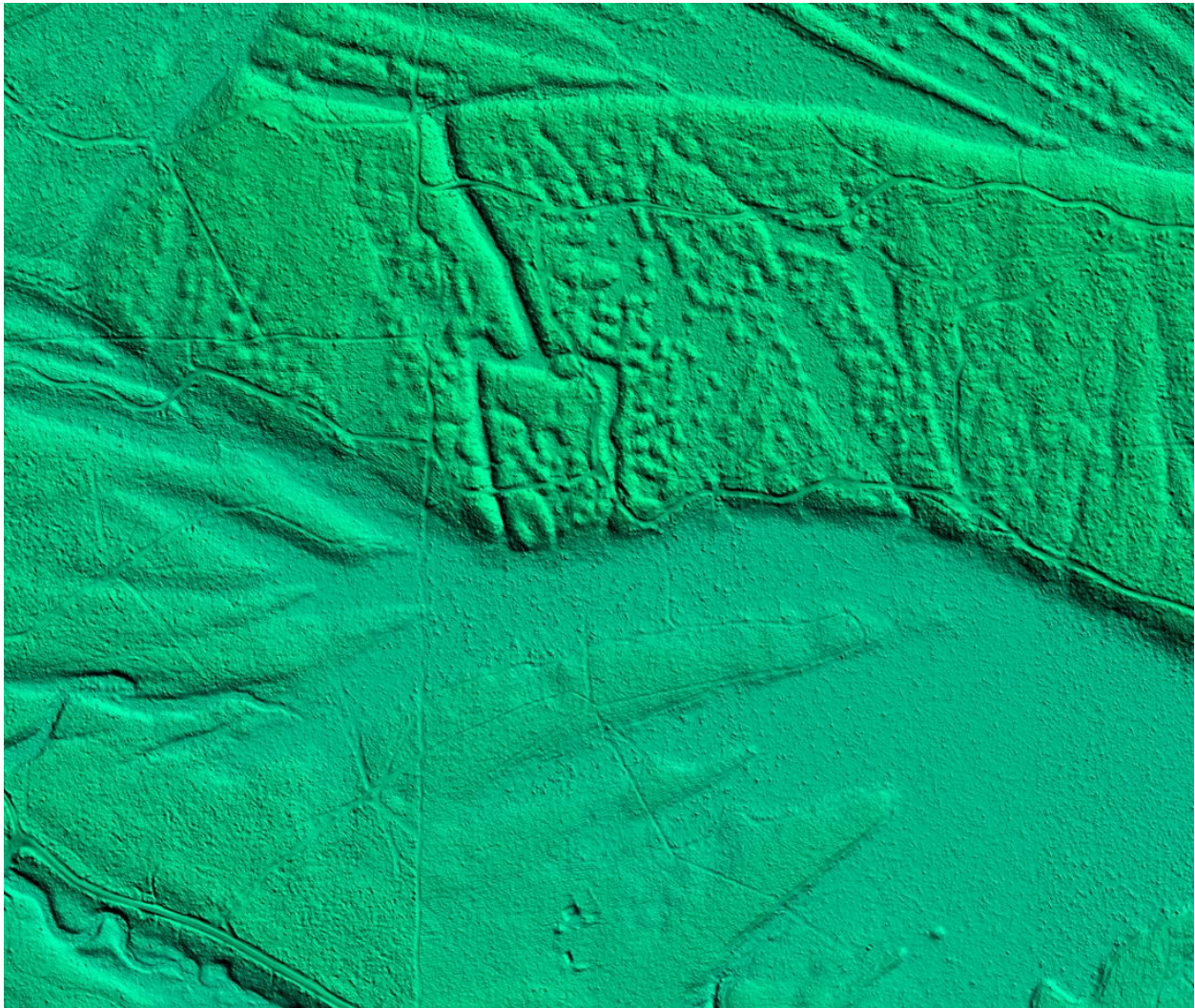


Figure 29- Tile name 15RUP3943960. Bare earth DEM

When some bridges are removed from the ground surface, the distance from bridge abutment to bridge abutment is small enough that the DEM interpolates across the entire bridge opening, forming 'bridge saddles.' Dewberry collected 3D bridge breaklines in locations where bridge saddles were present and enforced these breaklines in the final DEM creation to help mitigate the bridge saddle artifacts. The image below on the left shows a bridge saddle while the image below on the right shows the same bridge after bridge breaklines have been enforced.

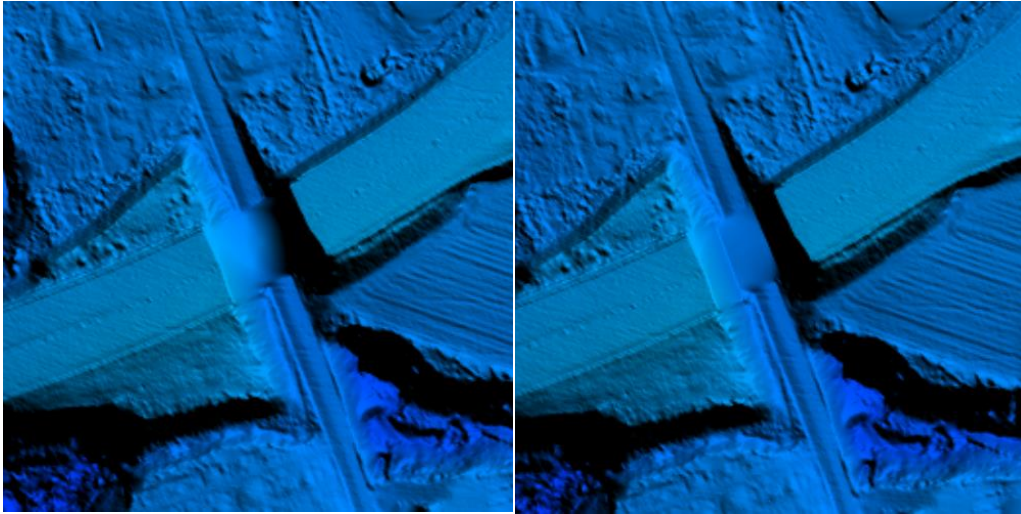


Figure 30-- The DEM on the left shows a bridge saddle artifact while the DEM on the right shows the same location after bridge breaklines have been enforced.

### DEM VERTICAL ACCURACY RESULTS

The same 453 checkpoints that were used to test the vertical accuracy of the lidar were used to validate the vertical accuracy of the final DEM products as well. Accuracy results may vary between the source lidar and final DEM deliverable. DEMs are created by averaging several lidar points within each pixel which may result in slightly different elevation values at each survey checkpoint when compared to the source LAS, which does not average several lidar points together but may interpolate (linearly) between two or three points to derive an elevation value. The vertical accuracy of the DEM is tested by extracting the elevation of the pixel that contains the x/y coordinates of the checkpoint and comparing these DEM elevations to the surveyed elevations. Dewberry typically uses LP360 software to test the swath lidar vertical accuracy, Terrascan software to test the classified lidar vertical accuracy, and Esri ArcMap to test the DEM vertical accuracy so that three different software programs are used to validate the vertical accuracy for each project.

Table 34 summarizes the tested vertical accuracy results from a comparison of the surveyed checkpoints to the elevation values present within the final DEM dataset.

Land Cover Category	# of Points	NVA – Non-vegetated Vertical Accuracy (RMSE <sub>z</sub> x 1.9600) Spec=0.196 m	VVA – Vegetated Vertical Accuracy (95th Percentile) Spec=0.294 m
NVA	265	0.128	
VVA	188		0.157

Table 34 – DEM tested NVA and VVA



This DEM dataset was tested to meet ASPRS Positional Accuracy Standards for Digital Geospatial Data (2014) for a 10 cm RMSE<sub>z</sub> Vertical Accuracy Class. Actual NVA accuracy was found to be RMSE<sub>z</sub> = 6.5 cm, equating to +/- 12.8 cm at 95% confidence level. Actual VVA accuracy was found to be +/- 15.7 cm at the 95th percentile.

Table 35 lists the 5% outliers that are larger than the VVA 95<sup>th</sup> percentile.

Point ID	NAD83(2011) UTM Zone 15		NAVD88 (Geoid 12B)	DEM Z (m)	Delta Z	AbsDeltaZ
	Easting X (m)	Northing Y (m)	Survey Z (m)			
VVA-293	279572.264	3550055.032	148.471	148.629	0.158	0.158
VVA-331	254042.755	3449670.358	84.986	84.816	-0.170	0.170
VVA-334	305280.623	3489397.844	78.784	78.986	0.202	0.202
VVA-346	313115.754	3539334.626	118.814	119.065	0.251	0.251
VVA-356	331759.822	3512983.464	153.373	153.594	0.221	0.221
VVA-373	401890.696	3458066.385	74.082	74.262	0.180	0.180
VVA-404	414875.909	3438955.112	167.629	167.806	0.177	0.177
VVA-425	374058.143	3405743.753	77.894	78.169	0.275	0.275
VVA-450	358955.128	3320129.843	13.336	13.53960647	0.204	0.204
VVA-265	239714.517	3597363.627	161.903	162.1294857	0.226	0.226

Table 35 – 5% Outliers

Table 36 provides overall descriptive statistics.

100 % of Totals	# of Points	RMSE <sub>z</sub> (m) NVA Spec=0.1 m	Mean (m)	Median (m)	Skew	Std Dev (m)	Kurtosis	Min (m)	Max (m)
NVA	265	0.065	0.005	0.005	2.676	0.065	23.094	-0.199	0.580
VVA	188	N/A	0.038	0.034	0.501	0.067	1.280	-0.170	0.275

Table 36 – Overall Descriptive Statistics

**Based on the vertical accuracy testing conducted by Dewberry, the DEM dataset for the USGS Texas Neches Lidar Project satisfies the project’s pre-defined vertical accuracy criteria.**

### DEM CHECKLIST

The following table represents a portion of the high-level steps in Dewberry’s bare earth DEM Production and QA/QC checklist that were performed for this project.

Pass/Fail	Validation Step
Pass	Masspoints (LAS to multipoint) are created from ground points only (class 2 and class 8 if model key points created, but no class 10 ignored ground points or class 9 water points)
Pass	Create a terrain for each production block using the final bare earth lidar points and final breaklines.
Pass	Convert terrains to rasters using project specifications for grid type, formatting, and cell size

Pass	Create hillshades for all DEMs
Pass	Manually review bare-earth DEMs in ArcMap with hillshades to check for issues
Pass	DEM should be hydro-flattened or hydro-enforced as required by project specifications
Pass	DEM should be seamless across tile boundaries
Pass	Water should be flowing downhill without excessive water artifacts present
Pass	Water features should NOT be floating above surrounding
Pass	Bridges should NOT be present in bare-earth DEMs.
Pass	Any remaining bridge saddles where below bridge breaklines were not used need to be fixed by adding below bridge breaklines and re-processing.
Pass	All qualitative issues present in the DEMs as a result of lidar processing and editing issues must be marked for corrections in the lidar These DEMs will need to be recreated after the lidar has been corrected.
Pass	Calculate DEM Vertical Accuracy including NVA, VVA, and other statistics
Pass	Split the DEMs into tiles according to the project tiling scheme
Pass	Verify all properties of the tiled DEMs, including coordinate reference system information, cell size, cell extents, and that compression has not been applied to the tiled DEMs
Pass	Load all tiled DEMs into Global Mapper to verify complete coverage to the (buffered) project boundary and that no tiles are corrupt.

**Table 37-A subset of the high-level steps from Dewberry’s bare earth DEM Production and QA/QC checklist performed for this project.**

## **Appendix A: Checkpoint Survey Report**

Please see the report included with this deliverable:  
**Appendix\_A\_Checkpoint\_Survey\_Report**



## **Appendix B: Ground Control Point Survey Report**

Please see the report included with this deliverable:

**Appendix\_B\_Ground\_Control\_Survey\_Report**

## Appendix C: Complete List of Delivered Tiles

15RUP3513075	15RUR3345370	15RTQ2554965	15RTQ2594530	15RVQ4034005
15RUP3523075	15RUR3365370	15RTQ2564965	15RTQ2614530	15RVQ4054005
15RUP3543075	15RUR3375370	15RTQ2584965	15RTQ2624530	15RVQ4064005
15RUP3553075	15RUR3395370	15RTQ2594965	15RTQ2644530	15RVQ4084005
15RUP3573075	15RUR3405370	15RTQ2614965	15RTQ2654530	15RVQ4094005
15RUP3583075	15RUR3425370	15RTQ2624965	15RTQ2674530	15RVQ4114005
15RUP3513090	15RUR3435370	15RTQ2644965	15RTQ2684530	15RVQ4124005
15RUP3523090	15RUR3455370	15RTQ2654965	15RTQ2704530	15RVQ4144005
15RUP3543090	15RUR3465370	15RTQ2674965	15RTQ2714530	15RVQ4154005
15RUP3553090	15RUR3485370	15RTQ2684965	15RTQ2734530	15RVQ4174005
15RUP3573090	15RUR3495370	15RTQ2704965	15RTQ2744530	15RVQ4184005
15RUP3583090	15RUR3515370	15RTQ2714965	15RTQ2764530	15RVQ4204005
15RUP3513105	15RUR3525370	15RTQ2734965	15RTQ2774530	15RVQ4214005
15RUP3523105	15RUR3545370	15RTQ2744965	15RTQ2794530	15RVQ4234005
15RUP3543105	15RUR3555370	15RTQ2764965	15RTQ2804530	15RUQ3034020
15RUP3553105	15RUR3575370	15RTQ2774965	15RTQ2824530	15RUQ3044020
15RUP3573105	15RUR3585370	15RTQ2794965	15RTQ2834530	15RUQ3064020
15RUP3583105	15RUR3605370	15RTQ2804965	15RTQ2854530	15RUQ3074020
15RUP3513120	15RUR3615370	15RTQ2824965	15RTQ2864530	15RUQ3094020
15RUP3523120	15RUR3635370	15RTQ2834965	15RTQ2884530	15RUQ3104020
15RUP3543120	15RUR3645370	15RTQ2854965	15RTQ2894530	15RUQ3124020
15RUP3553120	15RUR3665370	15RTQ2864965	15RTQ2914530	15RUQ3134020
15RUP3573120	15RUR3675370	15RTQ2884965	15RTQ2924530	15RUQ3154020
15RUP3583120	15RUR3695370	15RTQ2894965	15RTQ2944530	15RUQ3164020
15RVP4123120	15RUR3705370	15RTQ2914965	15RTQ2954530	15RUQ3184020
15RVP4143120	15RUR3725370	15RTQ2924965	15RTQ2974530	15RUQ3194020
15RVP4153120	15RUR3735370	15RTQ2944965	15RTQ2984530	15RUQ3214020
15RUP3513135	15RUR3755370	15RTQ2954965	15RUQ3004530	15RUQ3224020
15RUP3523135	15RUR3765370	15RTQ2974965	15RUQ3014530	15RUQ3244020
15RUP3543135	15RUR3785370	15RTQ2984965	15RUQ3034530	15RUQ3254020
15RUP3553135	15RUR3795370	15RUQ3004965	15RUQ3044530	15RUQ3274020
15RUP3573135	15RUR3815370	15RUQ3014965	15RUQ3064530	15RUQ3284020
15RUP3583135	15RUR3825370	15RUQ3034965	15RUQ3074530	15RUQ3304020
15RVP4113135	15RUR3845370	15RUQ3044965	15RUQ3094530	15RUQ3314020
15RVP4123135	15RUR3855370	15RUQ3064965	15RUQ3104530	15RUQ3334020
15RVP4143135	15RUR3875370	15RUQ3074965	15RUQ3124530	15RUQ3344020

15RVP4153135	15RUR3885370	15RUQ3094965	15RUQ3134530	15RUQ3364020
15RVP4173135	15RUR3905370	15RUQ3104965	15RUQ3154530	15RUQ3374020
15RUP3513150	15RUR3915370	15RUQ3124965	15RUQ3164530	15RUQ3394020
15RUP3523150	15RUR3935370	15RUQ3134965	15RUQ3184530	15RUQ3404020
15RUP3543150	15RUR3945370	15RUQ3154965	15RUQ3194530	15RUQ3424020
15RUP3553150	15RUR3965370	15RUQ3164965	15RUQ3214530	15RUQ3434020
15RUP3573150	15RUR3975370	15RUQ3184965	15RUQ3224530	15RUQ3454020
15RUP3583150	15RUR3995370	15RUQ3194965	15RUQ3244530	15RUQ3464020
15RVP4093150	15RVR4005370	15RUQ3214965	15RUQ3254530	15RUQ3484020
15RVP4113150	15RVR4025370	15RUQ3224965	15RUQ3274530	15RUQ3494020
15RVP4123150	15RVR4035370	15RUQ3244965	15RUQ3284530	15RUQ3514020
15RVP4143150	14RQA2085385	15RUQ3254965	15RUQ3304530	15RUQ3524020
15RVP4153150	14RQA2105385	15RUQ3274965	15RUQ3314530	15RUQ3544020
15RVP4173150	14RQA2115385	15RUQ3284965	15RUQ3334530	15RUQ3554020
15RUP3513165	14RQA2135385	15RUQ3304965	15RUQ3344530	15RUQ3574020
15RUP3523165	14RQA2145385	15RUQ3314965	15RUQ3364530	15RUQ3584020
15RUP3543165	14RQA2165385	15RUQ3334965	15RUQ3374530	15RUQ3604020
15RUP3553165	15RTR2175385	15RUQ3344965	15RUQ3394530	15RUQ3614020
15RUP3573165	15RTR2195385	15RUQ3364965	15RUQ3404530	15RUQ3634020
15RUP3583165	15RTR2205385	15RUQ3374965	15RUQ3424530	15RUQ3644020
15RVP4003165	15RTR2225385	15RUQ3394965	15RUQ3434530	15RUQ3664020
15RVP4023165	15RTR2235385	15RUQ3404965	15RUQ3454530	15RUQ3674020
15RVP4033165	15RTR2255385	15RUQ3424965	15RUQ3464530	15RUQ3694020
15RVP4053165	15RTR2265385	15RUQ3434965	15RUQ3484530	15RUQ3704020
15RVP4063165	15RTR2285385	15RUQ3454965	15RUQ3494530	15RUQ3724020
15RVP4083165	15RTR2295385	15RUQ3464965	15RUQ3514530	15RUQ3734020
15RVP4093165	15RTR2315385	15RUQ3484965	15RUQ3524530	15RUQ3754020
15RVP4113165	15RTR2325385	15RUQ3494965	15RUQ3544530	15RUQ3764020
15RVP4123165	15RTR2345385	15RUQ3514965	15RUQ3554530	15RUQ3784020
15RVP4143165	15RTR2355385	15RUQ3524965	15RUQ3574530	15RUQ3794020
15RVP4153165	15RTR2375385	15RUQ3544965	15RUQ3584530	15RUQ3814020
15RVP4173165	15RTR2385385	15RUQ3554965	15RUQ3604530	15RUQ3824020
15RUP3493180	15RTR2405385	15RUQ3574965	15RUQ3614530	15RUQ3844020
15RUP3513180	15RTR2415385	15RUQ3584965	15RUQ3634530	15RUQ3854020
15RUP3523180	15RTR2435385	15RUQ3604965	15RUQ3644530	15RUQ3874020
15RUP3543180	15RTR2445385	15RUQ3614965	15RUQ3664530	15RUQ3884020
15RUP3553180	15RTR2465385	15RUQ3634965	15RUQ3674530	15RUQ3904020
15RUP3573180	15RTR2475385	15RUQ3644965	15RUQ3694530	15RUQ3914020
15RUP3583180	15RTR2495385	15RUQ3664965	15RUQ3704530	15RUQ3934020
15RUP3603180	15RTR2505385	15RUQ3674965	15RUQ3724530	15RUQ3944020

15RUP3613180	15RTR2525385	15RUQ3694965	15RUQ3734530	15RUQ3964020
15RUP3633180	15RTR2535385	15RUQ3704965	15RUQ3754530	15RUQ3974020
15RUP3973180	15RTR2555385	15RUQ3724965	15RUQ3764530	15RUQ3994020
15RUP3993180	15RTR2565385	15RUQ3734965	15RUQ3784530	15RVQ4004020
15RVP4003180	15RTR2585385	15RUQ3754965	15RUQ3794530	15RVQ4024020
15RVP4023180	15RTR2595385	15RUQ3764965	15RUQ3814530	15RVQ4034020
15RVP4033180	15RTR2615385	15RUQ3784965	15RUQ3824530	15RVQ4054020
15RVP4053180	15RTR2625385	15RUQ3794965	15RUQ3844530	15RVQ4064020
15RVP4063180	15RTR2645385	15RUQ3814965	15RUQ3854530	15RVQ4084020
15RVP4083180	15RTR2655385	15RUQ3824965	15RUQ3874530	15RVQ4094020
15RVP4093180	15RTR2675385	15RUQ3844965	15RUQ3884530	15RVQ4114020
15RVP4113180	15RTR2685385	15RUQ3854965	15RUQ3904530	15RVQ4124020
15RVP4123180	15RTR2705385	15RUQ3874965	15RUQ3914530	15RVQ4144020
15RVP4143180	15RTR2715385	15RUQ3884965	15RUQ3934530	15RVQ4154020
15RVP4153180	15RTR2735385	15RUQ3904965	15RUQ3944530	15RVQ4174020
15RVP4173180	15RTR2745385	15RUQ3914965	15RUQ3964530	15RVQ4184020
15RVP4183180	15RTR2765385	15RUQ3934965	15RUQ3974530	15RVQ4204020
15RUP3493195	15RTR2775385	15RUQ3944965	15RUQ3994530	15RVQ4214020
15RUP3513195	15RTR2795385	15RUQ3964965	15RVQ4004530	15RVQ4234020
15RUP3523195	15RTR2805385	15RUQ3974965	15RVQ4024530	15RUQ3034035
15RUP3543195	15RTR2825385	15RUQ3994965	15RVQ4034530	15RUQ3044035
15RUP3553195	15RTR2835385	15RVQ4004965	15RVQ4054530	15RUQ3064035
15RUP3573195	15RTR2855385	15RVQ4024965	15RVQ4064530	15RUQ3074035
15RUP3583195	15RTR2865385	15RVQ4034965	15RVQ4084530	15RUQ3094035
15RUP3603195	15RTR2885385	15RVQ4054965	15RVQ4094530	15RUQ3104035
15RUP3613195	15RTR2895385	15RVQ4064965	15RVQ4114530	15RUQ3124035
15RUP3633195	15RTR2915385	15RTQ2354980	15RVQ4124530	15RUQ3134035
15RUP3643195	15RTR2925385	15RTQ2374980	15RVQ4144530	15RUQ3154035
15RUP3963195	15RTR2945385	15RTQ2384980	15RVQ4154530	15RUQ3164035
15RUP3973195	15RTR2955385	15RTQ2404980	15RVQ4174530	15RUQ3184035
15RUP3993195	15RTR2975385	15RTQ2414980	15RTQ2374545	15RUQ3194035
15RVP4003195	15RTR2985385	15RTQ2434980	15RTQ2384545	15RUQ3214035
15RVP4023195	15RUR3005385	15RTQ2444980	15RTQ2404545	15RUQ3224035
15RVP4033195	15RUR3015385	15RTQ2464980	15RTQ2414545	15RUQ3244035
15RVP4053195	15RUR3035385	15RTQ2474980	15RTQ2434545	15RUQ3254035
15RVP4063195	15RUR3045385	15RTQ2494980	15RTQ2444545	15RUQ3274035
15RVP4083195	15RUR3065385	15RTQ2504980	15RTQ2464545	15RUQ3284035
15RVP4093195	15RUR3075385	15RTQ2524980	15RTQ2474545	15RUQ3304035
15RVP4113195	15RUR3095385	15RTQ2534980	15RTQ2494545	15RUQ3314035
15RVP4123195	15RUR3105385	15RTQ2554980	15RTQ2504545	15RUQ3334035

15RVP4143195	15RUR3125385	15RTQ2564980	15RTQ2524545	15RUQ3344035
15RVP4153195	15RUR3135385	15RTQ2584980	15RTQ2534545	15RUQ3364035
15RVP4173195	15RUR3155385	15RTQ2594980	15RTQ2554545	15RUQ3374035
15RVP4183195	15RUR3165385	15RTQ2614980	15RTQ2564545	15RUQ3394035
15RUP3463210	15RUR3185385	15RTQ2624980	15RTQ2584545	15RUQ3404035
15RUP3483210	15RUR3195385	15RTQ2644980	15RTQ2594545	15RUQ3424035
15RUP3493210	15RUR3215385	15RTQ2654980	15RTQ2614545	15RUQ3434035
15RUP3513210	15RUR3225385	15RTQ2674980	15RTQ2624545	15RUQ3454035
15RUP3523210	15RUR3245385	15RTQ2684980	15RTQ2644545	15RUQ3464035
15RUP3543210	15RUR3255385	15RTQ2704980	15RTQ2654545	15RUQ3484035
15RUP3553210	15RUR3275385	15RTQ2714980	15RTQ2674545	15RUQ3494035
15RUP3573210	15RUR3285385	15RTQ2734980	15RTQ2684545	15RUQ3514035
15RUP3583210	15RUR3305385	15RTQ2744980	15RTQ2704545	15RUQ3524035
15RUP3603210	15RUR3315385	15RTQ2764980	15RTQ2714545	15RUQ3544035
15RUP3613210	15RUR3335385	15RTQ2774980	15RTQ2734545	15RUQ3554035
15RUP3633210	15RUR3345385	15RTQ2794980	15RTQ2744545	15RUQ3574035
15RUP3643210	15RUR3365385	15RTQ2804980	15RTQ2764545	15RUQ3584035
15RUP3663210	15RUR3375385	15RTQ2824980	15RTQ2774545	15RUQ3604035
15RUP3673210	15RUR3395385	15RTQ2834980	15RTQ2794545	15RUQ3614035
15RUP3693210	15RUR3405385	15RTQ2854980	15RTQ2804545	15RUQ3634035
15RUP3963210	15RUR3425385	15RTQ2864980	15RTQ2824545	15RUQ3644035
15RUP3973210	15RUR3435385	15RTQ2884980	15RTQ2834545	15RUQ3664035
15RUP3993210	15RUR3455385	15RTQ2894980	15RTQ2854545	15RUQ3674035
15RVP4003210	15RUR3465385	15RTQ2914980	15RTQ2864545	15RUQ3694035
15RVP4023210	15RUR3485385	15RTQ2924980	15RTQ2884545	15RUQ3704035
15RVP4033210	15RUR3495385	15RTQ2944980	15RTQ2894545	15RUQ3724035
15RVP4053210	15RUR3515385	15RTQ2954980	15RTQ2914545	15RUQ3734035
15RVP4063210	15RUR3525385	15RTQ2974980	15RTQ2924545	15RUQ3754035
15RVP4083210	15RUR3545385	15RTQ2984980	15RTQ2944545	15RUQ3764035
15RVP4093210	15RUR3555385	15RUQ3004980	15RTQ2954545	15RUQ3784035
15RVP4113210	15RUR3575385	15RUQ3014980	15RTQ2974545	15RUQ3794035
15RVP4123210	15RUR3585385	15RUQ3034980	15RTQ2984545	15RUQ3814035
15RVP4143210	15RUR3605385	15RUQ3044980	15RUQ3004545	15RUQ3824035
15RVP4153210	15RUR3615385	15RUQ3064980	15RUQ3014545	15RUQ3844035
15RVP4173210	15RUR3635385	15RUQ3074980	15RUQ3034545	15RUQ3854035
15RVP4183210	15RUR3645385	15RUQ3094980	15RUQ3044545	15RUQ3874035
15RUP3453225	15RUR3665385	15RUQ3104980	15RUQ3064545	15RUQ3884035
15RUP3463225	15RUR3675385	15RUQ3124980	15RUQ3074545	15RUQ3904035
15RUP3483225	15RUR3695385	15RUQ3134980	15RUQ3094545	15RUQ3914035
15RUP3493225	15RUR3705385	15RUQ3154980	15RUQ3104545	15RUQ3934035



15RUP3513225	15RUR3725385	15RUQ3164980	15RUQ3124545	15RUQ3944035
15RUP3523225	15RUR3735385	15RUQ3184980	15RUQ3134545	15RUQ3964035
15RUP3543225	15RUR3755385	15RUQ3194980	15RUQ3154545	15RUQ3974035
15RUP3553225	15RUR3765385	15RUQ3214980	15RUQ3164545	15RUQ3994035
15RUP3573225	15RUR3785385	15RUQ3224980	15RUQ3184545	15RVQ4004035
15RUP3583225	15RUR3795385	15RUQ3244980	15RUQ3194545	15RVQ4024035
15RUP3603225	15RUR3815385	15RUQ3254980	15RUQ3214545	15RVQ4034035
15RUP3613225	15RUR3825385	15RUQ3274980	15RUQ3224545	15RVQ4054035
15RUP3633225	15RUR3845385	15RUQ3284980	15RUQ3244545	15RVQ4064035
15RUP3643225	15RUR3855385	15RUQ3304980	15RUQ3254545	15RVQ4084035
15RUP3663225	15RUR3875385	15RUQ3314980	15RUQ3274545	15RVQ4094035
15RUP3673225	15RUR3885385	15RUQ3334980	15RUQ3284545	15RVQ4114035
15RUP3693225	15RUR3905385	15RUQ3344980	15RUQ3304545	15RVQ4124035
15RUP3703225	15RUR3915385	15RUQ3364980	15RUQ3314545	15RVQ4144035
15RUP3943225	15RUR3935385	15RUQ3374980	15RUQ3334545	15RVQ4154035
15RUP3963225	15RUR3945385	15RUQ3394980	15RUQ3344545	15RVQ4174035
15RUP3973225	15RUR3965385	15RUQ3404980	15RUQ3364545	15RVQ4184035
15RUP3993225	15RUR3975385	15RUQ3424980	15RUQ3374545	15RVQ4204035
15RVP4003225	15RUR3995385	15RUQ3434980	15RUQ3394545	15RVQ4214035
15RVP4023225	15RVR4005385	15RUQ3454980	15RUQ3404545	15RVQ4234035
15RVP4033225	15RVR4025385	15RUQ3464980	15RUQ3424545	15RUQ3034050
15RVP4053225	15RVR4035385	15RUQ3484980	15RUQ3434545	15RUQ3044050
15RVP4063225	14RQA2085400	15RUQ3494980	15RUQ3454545	15RUQ3064050
15RVP4083225	14RQA2105400	15RUQ3514980	15RUQ3464545	15RUQ3074050
15RVP4093225	14RQA2115400	15RUQ3524980	15RUQ3484545	15RUQ3094050
15RVP4113225	14RQA2135400	15RUQ3544980	15RUQ3494545	15RUQ3104050
15RVP4123225	14RQA2145400	15RUQ3554980	15RUQ3514545	15RUQ3124050
15RVP4143225	14RQA2165400	15RUQ3574980	15RUQ3524545	15RUQ3134050
15RVP4153225	15RTR2175400	15RUQ3584980	15RUQ3544545	15RUQ3154050
15RVP4173225	15RTR2195400	15RUQ3604980	15RUQ3554545	15RUQ3164050
15RVP4183225	15RTR2205400	15RUQ3614980	15RUQ3574545	15RUQ3184050
15RUP3433240	15RTR2225400	15RUQ3634980	15RUQ3584545	15RUQ3194050
15RUP3453240	15RTR2235400	15RUQ3644980	15RUQ3604545	15RUQ3214050
15RUP3463240	15RTR2255400	15RUQ3664980	15RUQ3614545	15RUQ3224050
15RUP3483240	15RTR2265400	15RUQ3674980	15RUQ3634545	15RUQ3244050
15RUP3493240	15RTR2285400	15RUQ3694980	15RUQ3644545	15RUQ3254050
15RUP3513240	15RTR2295400	15RUQ3704980	15RUQ3664545	15RUQ3274050
15RUP3523240	15RTR2315400	15RUQ3724980	15RUQ3674545	15RUQ3284050
15RUP3543240	15RTR2325400	15RUQ3734980	15RUQ3694545	15RUQ3304050
15RUP3553240	15RTR2345400	15RUQ3754980	15RUQ3704545	15RUQ3314050

15RUP3573240	15RTR2355400	15RUQ3764980	15RUQ3724545	15RUQ3334050
15RUP3583240	15RTR2375400	15RUQ3784980	15RUQ3734545	15RUQ3344050
15RUP3603240	15RTR2385400	15RUQ3794980	15RUQ3754545	15RUQ3364050
15RUP3613240	15RTR2405400	15RUQ3814980	15RUQ3764545	15RUQ3374050
15RUP3633240	15RTR2415400	15RUQ3824980	15RUQ3784545	15RUQ3394050
15RUP3643240	15RTR2435400	15RUQ3844980	15RUQ3794545	15RUQ3404050
15RUP3663240	15RTR2445400	15RUQ3854980	15RUQ3814545	15RUQ3424050
15RUP3673240	15RTR2465400	15RUQ3874980	15RUQ3824545	15RUQ3434050
15RUP3693240	15RTR2475400	15RUQ3884980	15RUQ3844545	15RUQ3454050
15RUP3703240	15RTR2495400	15RUQ3904980	15RUQ3854545	15RUQ3464050
15RUP3723240	15RTR2505400	15RUQ3914980	15RUQ3874545	15RUQ3484050
15RUP3933240	15RTR2525400	15RUQ3934980	15RUQ3884545	15RUQ3494050
15RUP3943240	15RTR2535400	15RUQ3944980	15RUQ3904545	15RUQ3514050
15RUP3963240	15RTR2555400	15RUQ3964980	15RUQ3914545	15RUQ3524050
15RUP3973240	15RTR2565400	15RUQ3974980	15RUQ3934545	15RUQ3544050
15RUP3993240	15RTR2585400	15RUQ3994980	15RUQ3944545	15RUQ3554050
15RVP4003240	15RTR2595400	15RVQ4004980	15RUQ3964545	15RUQ3574050
15RVP4023240	15RTR2615400	15RVQ4024980	15RUQ3974545	15RUQ3584050
15RVP4033240	15RTR2625400	15RVQ4034980	15RUQ3994545	15RUQ3604050
15RVP4053240	15RTR2645400	15RVQ4054980	15RVQ4004545	15RUQ3614050
15RVP4063240	15RTR2655400	15RVQ4064980	15RVQ4024545	15RUQ3634050
15RVP4083240	15RTR2675400	15RTQ2354995	15RVQ4034545	15RUQ3644050
15RVP4093240	15RTR2685400	15RTQ2374995	15RVQ4054545	15RUQ3664050
15RVP4113240	15RTR2705400	15RTQ2384995	15RVQ4064545	15RUQ3674050
15RVP4123240	15RTR2715400	15RTQ2404995	15RVQ4084545	15RUQ3694050
15RVP4143240	15RTR2735400	15RTQ2414995	15RVQ4094545	15RUQ3704050
15RVP4153240	15RTR2745400	15RTQ2434995	15RVQ4114545	15RUQ3724050
15RVP4173240	15RTR2765400	15RTQ2444995	15RVQ4124545	15RUQ3734050
15RVP4183240	15RTR2775400	15RTQ2464995	15RVQ4144545	15RUQ3754050
15RUP3433255	15RTR2795400	15RTQ2474995	15RVQ4154545	15RUQ3764050
15RUP3453255	15RTR2805400	15RTQ2494995	15RTQ2374560	15RUQ3784050
15RUP3463255	15RTR2825400	15RTQ2504995	15RTQ2384560	15RUQ3794050
15RUP3483255	15RTR2835400	15RTQ2524995	15RTQ2404560	15RUQ3814050
15RUP3493255	15RTR2855400	15RTQ2534995	15RTQ2414560	15RUQ3824050
15RUP3513255	15RTR2865400	15RTQ2554995	15RTQ2434560	15RUQ3844050
15RUP3523255	15RTR2885400	15RTQ2564995	15RTQ2444560	15RUQ3854050
15RUP3543255	15RTR2895400	15RTQ2584995	15RTQ2464560	15RUQ3874050
15RUP3553255	15RTR2915400	15RTQ2594995	15RTQ2474560	15RUQ3884050
15RUP3573255	15RTR2925400	15RTQ2614995	15RTQ2494560	15RUQ3904050
15RUP3583255	15RTR2945400	15RTQ2624995	15RTQ2504560	15RUQ3914050

15RUP3603255	15RTR2955400	15RTQ2644995	15RTQ2524560	15RUQ3934050
15RUP3613255	15RTR2975400	15RTQ2654995	15RTQ2534560	15RUQ3944050
15RUP3633255	15RTR2985400	15RTQ2674995	15RTQ2554560	15RUQ3964050
15RUP3643255	15RUR3005400	15RTQ2684995	15RTQ2564560	15RUQ3974050
15RUP3663255	15RUR3015400	15RTQ2704995	15RTQ2584560	15RUQ3994050
15RUP3673255	15RUR3035400	15RTQ2714995	15RTQ2594560	15RVQ4004050
15RUP3693255	15RUR3045400	15RTQ2734995	15RTQ2614560	15RVQ4024050
15RUP3703255	15RUR3065400	15RTQ2744995	15RTQ2624560	15RVQ4034050
15RUP3723255	15RUR3075400	15RTQ2764995	15RTQ2644560	15RVQ4054050
15RUP3733255	15RUR3095400	15RTQ2774995	15RTQ2654560	15RVQ4064050
15RUP3933255	15RUR3105400	15RTQ2794995	15RTQ2674560	15RVQ4084050
15RUP3943255	15RUR3125400	15RTQ2804995	15RTQ2684560	15RVQ4094050
15RUP3963255	15RUR3135400	15RTQ2824995	15RTQ2704560	15RVQ4114050
15RUP3973255	15RUR3155400	15RTQ2834995	15RTQ2714560	15RVQ4124050
15RUP3993255	15RUR3165400	15RTQ2854995	15RTQ2734560	15RVQ4144050
15RVP4003255	15RUR3185400	15RTQ2864995	15RTQ2744560	15RVQ4154050
15RVP4023255	15RUR3195400	15RTQ2884995	15RTQ2764560	15RVQ4174050
15RVP4033255	15RUR3215400	15RTQ2894995	15RTQ2774560	15RVQ4184050
15RVP4053255	15RUR3225400	15RTQ2914995	15RTQ2794560	15RVQ4204050
15RVP4063255	15RUR3245400	15RTQ2924995	15RTQ2804560	15RVQ4214050
15RVP4083255	15RUR3255400	15RTQ2944995	15RTQ2824560	15RVQ4234050
15RVP4093255	15RUR3275400	15RTQ2954995	15RTQ2834560	15RUQ3034065
15RVP4113255	15RUR3285400	15RTQ2974995	15RTQ2854560	15RUQ3044065
15RVP4123255	15RUR3305400	15RTQ2984995	15RTQ2864560	15RUQ3064065
15RVP4143255	15RUR3315400	15RUQ3004995	15RTQ2884560	15RUQ3074065
15RVP4153255	15RUR3335400	15RUQ3014995	15RTQ2894560	15RUQ3094065
15RVP4173255	15RUR3345400	15RUQ3034995	15RTQ2914560	15RUQ3104065
15RUP3433270	15RUR3365400	15RUQ3044995	15RTQ2924560	15RUQ3124065
15RUP3453270	15RUR3375400	15RUQ3064995	15RTQ2944560	15RUQ3134065
15RUP3463270	15RUR3395400	15RUQ3074995	15RTQ2954560	15RUQ3154065
15RUP3483270	15RUR3405400	15RUQ3094995	15RTQ2974560	15RUQ3164065
15RUP3493270	15RUR3425400	15RUQ3104995	15RTQ2984560	15RUQ3184065
15RUP3513270	15RUR3435400	15RUQ3124995	15RUQ3004560	15RUQ3194065
15RUP3523270	15RUR3455400	15RUQ3134995	15RUQ3014560	15RUQ3214065
15RUP3543270	15RUR3465400	15RUQ3154995	15RUQ3034560	15RUQ3224065
15RUP3553270	15RUR3485400	15RUQ3164995	15RUQ3044560	15RUQ3244065
15RUP3573270	14RQA2085415	15RUQ3184995	15RUQ3064560	15RUQ3254065
15RUP3583270	14RQA2105415	15RUQ3194995	15RUQ3074560	15RUQ3274065
15RUP3603270	14RQA2115415	15RUQ3214995	15RUQ3094560	15RUQ3284065
15RUP3613270	14RQA2135415	15RUQ3224995	15RUQ3104560	15RUQ3304065

15RUP3633270	14RQA2145415	15RUQ3244995	15RUQ3124560	15RUQ3314065
15RUP3643270	14RQA2165415	15RUQ3254995	15RUQ3134560	15RUQ3334065
15RUP3663270	15RTR2175415	15RUQ3274995	15RUQ3154560	15RUQ3344065
15RUP3673270	15RTR2195415	15RUQ3284995	15RUQ3164560	15RUQ3364065
15RUP3693270	15RTR2205415	15RUQ3304995	15RUQ3184560	15RUQ3374065
15RUP3703270	15RTR2225415	15RUQ3314995	15RUQ3194560	15RUQ3394065
15RUP3723270	15RTR2235415	15RUQ3334995	15RUQ3214560	15RUQ3404065
15RUP3733270	15RTR2255415	15RUQ3344995	15RUQ3224560	15RUQ3424065
15RUP3913270	15RTR2265415	15RUQ3364995	15RUQ3244560	15RUQ3434065
15RUP3933270	15RTR2285415	15RUQ3374995	15RUQ3254560	15RUQ3454065
15RUP3943270	15RTR2295415	15RUQ3394995	15RUQ3274560	15RUQ3464065
15RUP3963270	15RTR2315415	15RUQ3404995	15RUQ3284560	15RUQ3484065
15RUP3973270	15RTR2325415	15RUQ3424995	15RUQ3304560	15RUQ3494065
15RUP3993270	15RTR2345415	15RUQ3434995	15RUQ3314560	15RUQ3514065
15RVP4003270	15RTR2355415	15RUQ3454995	15RUQ3334560	15RUQ3524065
15RVP4023270	15RTR2375415	15RUQ3464995	15RUQ3344560	15RUQ3544065
15RVP4033270	15RTR2385415	15RUQ3484995	15RUQ3364560	15RUQ3554065
15RVP4053270	15RTR2405415	15RUQ3494995	15RUQ3374560	15RUQ3574065
15RVP4063270	15RTR2415415	15RUQ3514995	15RUQ3394560	15RUQ3584065
15RVP4083270	15RTR2435415	15RUQ3524995	15RUQ3404560	15RUQ3604065
15RVP4093270	15RTR2445415	15RUQ3544995	15RUQ3424560	15RUQ3614065
15RVP4113270	15RTR2465415	15RUQ3554995	15RUQ3434560	15RUQ3634065
15RVP4123270	15RTR2475415	15RUQ3574995	15RUQ3454560	15RUQ3644065
15RVP4143270	15RTR2495415	15RUQ3584995	15RUQ3464560	15RUQ3664065
15RVP4153270	15RTR2505415	15RUQ3604995	15RUQ3484560	15RUQ3674065
15RUP3433285	15RTR2525415	15RUQ3614995	15RUQ3494560	15RUQ3694065
15RUP3453285	15RTR2535415	15RUQ3634995	15RUQ3514560	15RUQ3704065
15RUP3463285	15RTR2555415	15RUQ3644995	15RUQ3524560	15RUQ3724065
15RUP3483285	15RTR2565415	15RUQ3664995	15RUQ3544560	15RUQ3734065
15RUP3493285	15RTR2585415	15RUQ3674995	15RUQ3554560	15RUQ3754065
15RUP3513285	15RTR2595415	15RUQ3694995	15RUQ3574560	15RUQ3764065
15RUP3523285	15RTR2615415	15RUQ3704995	15RUQ3584560	15RUQ3784065
15RUP3543285	15RTR2625415	15RUQ3724995	15RUQ3604560	15RUQ3794065
15RUP3553285	15RTR2645415	15RUQ3734995	15RUQ3614560	15RUQ3814065
15RUP3573285	15RTR2655415	15RUQ3754995	15RUQ3634560	15RUQ3824065
15RUP3583285	15RTR2675415	15RUQ3764995	15RUQ3644560	15RUQ3844065
15RUP3603285	15RTR2685415	15RUQ3784995	15RUQ3664560	15RUQ3854065
15RUP3613285	15RTR2705415	15RUQ3794995	15RUQ3674560	15RUQ3874065
15RUP3633285	15RTR2715415	15RUQ3814995	15RUQ3694560	15RUQ3884065
15RUP3643285	15RTR2735415	15RUQ3824995	15RUQ3704560	15RUQ3904065

15RUP3663285	15RTR2745415	15RUQ3844995	15RUQ3724560	15RUQ3914065
15RUP3673285	15RTR2765415	15RUQ3854995	15RUQ3734560	15RUQ3934065
15RUP3693285	15RTR2775415	15RUQ3874995	15RUQ3754560	15RUQ3944065
15RUP3703285	15RTR2795415	15RUQ3884995	15RUQ3764560	15RUQ3964065
15RUP3723285	15RTR2805415	15RUQ3904995	15RUQ3784560	15RUQ3974065
15RUP3733285	15RTR2825415	15RUQ3914995	15RUQ3794560	15RUQ3994065
15RUP3753285	15RTR2835415	15RUQ3934995	15RUQ3814560	15RVQ4004065
15RUP3913285	15RTR2855415	15RUQ3944995	15RUQ3824560	15RVQ4024065
15RUP3933285	15RTR2865415	15RUQ3964995	15RUQ3844560	15RVQ4034065
15RUP3943285	15RTR2885415	15RUQ3974995	15RUQ3854560	15RVQ4054065
15RUP3963285	15RTR2895415	15RUQ3994995	15RUQ3874560	15RVQ4064065
15RUP3973285	15RTR2915415	15RVQ4004995	15RUQ3884560	15RVQ4084065
15RUP3993285	15RTR2925415	15RVQ4024995	15RUQ3904560	15RVQ4094065
15RVP4003285	15RTR2945415	15RVQ4034995	15RUQ3914560	15RVQ4114065
15RVP4023285	15RTR2955415	15RVQ4054995	15RUQ3934560	15RVQ4124065
15RVP4033285	15RTR2975415	15RVQ4064995	15RUQ3944560	15RVQ4144065
15RVP4053285	15RTR2985415	15RTR2345010	15RUQ3964560	15RVQ4154065
15RVP4063285	15RUR3005415	15RTR2355010	15RUQ3974560	15RVQ4174065
15RVP4083285	15RUR3015415	15RTR2375010	15RUQ3994560	15RVQ4184065
15RVP4093285	15RUR3035415	15RTR2385010	15RVQ4004560	15RVQ4204065
15RVP4113285	15RUR3045415	15RTR2405010	15RVQ4024560	15RVQ4214065
15RVP4123285	15RUR3065415	15RTR2415010	15RVQ4034560	15RVQ4234065
15RVP4143285	15RUR3075415	15RTR2435010	15RVQ4054560	15RTQ2954080
15RVP4153285	15RUR3095415	15RTR2445010	15RVQ4064560	15RTQ2974080
15RUP3373300	15RUR3105415	15RTR2465010	15RVQ4084560	15RTQ2984080
15RUP3393300	15RUR3125415	15RTR2475010	15RVQ4094560	15RUQ3004080
15RUP3403300	15RUR3135415	15RTR2495010	15RVQ4114560	15RUQ3014080
15RUP3423300	15RUR3155415	15RTR2505010	15RVQ4124560	15RUQ3034080
15RUP3433300	15RUR3165415	15RTR2525010	15RVQ4144560	15RUQ3044080
15RUP3453300	15RUR3185415	15RTR2535010	15RTQ2374575	15RUQ3064080
15RUP3463300	15RUR3195415	15RTR2555010	15RTQ2384575	15RUQ3074080
15RUP3483300	15RUR3215415	15RTR2565010	15RTQ2404575	15RUQ3094080
15RUP3493300	15RUR3225415	15RTR2585010	15RTQ2414575	15RUQ3104080
15RUP3513300	15RUR3245415	15RTR2595010	15RTQ2434575	15RUQ3124080
15RUP3523300	15RUR3255415	15RTR2615010	15RTQ2444575	15RUQ3134080
15RUP3543300	15RUR3275415	15RTR2625010	15RTQ2464575	15RUQ3154080
15RUP3553300	15RUR3285415	15RTR2645010	15RTQ2474575	15RUQ3164080
15RUP3573300	15RUR3305415	15RTR2655010	15RTQ2494575	15RUQ3184080
15RUP3583300	15RUR3315415	15RTR2675010	15RTQ2504575	15RUQ3194080
15RUP3603300	15RUR3335415	15RTR2685010	15RTQ2524575	15RUQ3214080



15RUP3613300	15RUR3345415	15RTR2705010	15RTQ2534575	15RUQ3224080
15RUP3633300	15RUR3365415	15RTR2715010	15RTQ2554575	15RUQ3244080
15RUP3643300	15RUR3375415	15RTR2735010	15RTQ2564575	15RUQ3254080
15RUP3663300	15RUR3395415	15RTR2745010	15RTQ2584575	15RUQ3274080
15RUP3673300	15RUR3405415	15RTR2765010	15RTQ2594575	15RUQ3284080
15RUP3693300	15RUR3425415	15RTR2775010	15RTQ2614575	15RUQ3304080
15RUP3703300	15RUR3435415	15RTR2795010	15RTQ2624575	15RUQ3314080
15RUP3723300	15RUR3455415	15RTR2805010	15RTQ2644575	15RUQ3334080
15RUP3733300	15RUR3465415	15RTR2825010	15RTQ2654575	15RUQ3344080
15RUP3753300	14RQA2085430	15RTR2835010	15RTQ2674575	15RUQ3364080
15RUP3763300	14RQA2105430	15RTR2855010	15RTQ2684575	15RUQ3374080
15RUP3783300	14RQA2115430	15RTR2865010	15RTQ2704575	15RUQ3394080
15RUP3793300	14RQA2135430	15RTR2885010	15RTQ2714575	15RUQ3404080
15RUP3813300	14RQA2145430	15RTR2895010	15RTQ2734575	15RUQ3424080
15RUP3823300	14RQA2165430	15RTR2915010	15RTQ2744575	15RUQ3434080
15RUP3843300	15RTR2175430	15RTR2925010	15RTQ2764575	15RUQ3454080
15RUP3903300	15RTR2195430	15RTR2945010	15RTQ2774575	15RUQ3464080
15RUP3913300	15RTR2205430	15RTR2955010	15RTQ2794575	15RUQ3484080
15RUP3933300	15RTR2225430	15RTR2975010	15RTQ2804575	15RUQ3494080
15RUP3943300	15RTR2235430	15RTR2985010	15RTQ2824575	15RUQ3514080
15RUP3963300	15RTR2255430	15RUR3005010	15RTQ2834575	15RUQ3524080
15RUP3973300	15RTR2265430	15RUR3015010	15RTQ2854575	15RUQ3544080
15RUP3993300	15RTR2285430	15RUR3035010	15RTQ2864575	15RUQ3554080
15RVP4003300	15RTR2295430	15RUR3045010	15RTQ2884575	15RUQ3574080
15RVP4023300	15RTR2315430	15RUR3065010	15RTQ2894575	15RUQ3584080
15RVP4033300	15RTR2325430	15RUR3075010	15RTQ2914575	15RUQ3604080
15RVP4053300	15RTR2345430	15RUR3095010	15RTQ2924575	15RUQ3614080
15RVP4063300	15RTR2355430	15RUR3105010	15RTQ2944575	15RUQ3634080
15RVP4083300	15RTR2375430	15RUR3125010	15RTQ2954575	15RUQ3644080
15RVP4093300	15RTR2385430	15RUR3135010	15RTQ2974575	15RUQ3664080
15RUP3343315	15RTR2405430	15RUR3155010	15RTQ2984575	15RUQ3674080
15RUP3363315	15RTR2415430	15RUR3165010	15RUQ3004575	15RUQ3694080
15RUP3373315	15RTR2435430	15RUR3185010	15RUQ3014575	15RUQ3704080
15RUP3393315	15RTR2445430	15RUR3195010	15RUQ3034575	15RUQ3724080
15RUP3403315	15RTR2465430	15RUR3215010	15RUQ3044575	15RUQ3734080
15RUP3423315	15RTR2475430	15RUR3225010	15RUQ3064575	15RUQ3754080
15RUP3433315	15RTR2495430	15RUR3245010	15RUQ3074575	15RUQ3764080
15RUP3453315	15RTR2505430	15RUR3255010	15RUQ3094575	15RUQ3784080
15RUP3463315	15RTR2525430	15RUR3275010	15RUQ3104575	15RUQ3794080
15RUP3483315	15RTR2535430	15RUR3285010	15RUQ3124575	15RUQ3814080

15RUP3493315	15RTR2555430	15RUR3305010	15RUQ3134575	15RUQ3824080
15RUP3513315	15RTR2565430	15RUR3315010	15RUQ3154575	15RUQ3844080
15RUP3523315	15RTR2585430	15RUR3335010	15RUQ3164575	15RUQ3854080
15RUP3543315	15RTR2595430	15RUR3345010	15RUQ3184575	15RUQ3874080
15RUP3553315	15RTR2615430	15RUR3365010	15RUQ3194575	15RUQ3884080
15RUP3573315	15RTR2625430	15RUR3375010	15RUQ3214575	15RUQ3904080
15RUP3583315	15RTR2645430	15RUR3395010	15RUQ3224575	15RUQ3914080
15RUP3603315	15RTR2655430	15RUR3405010	15RUQ3244575	15RUQ3934080
15RUP3613315	15RTR2675430	15RUR3425010	15RUQ3254575	15RUQ3944080
15RUP3633315	15RTR2685430	15RUR3435010	15RUQ3274575	15RUQ3964080
15RUP3643315	15RTR2705430	15RUR3455010	15RUQ3284575	15RUQ3974080
15RUP3663315	15STR2715430	15RUR3465010	15RUQ3304575	15RUQ3994080
15RUP3673315	15STR2735430	15RUR3485010	15RUQ3314575	15RVQ4004080
15RUP3693315	15STR2745430	15RUR3495010	15RUQ3334575	15RVQ4024080
15RUP3703315	15STR2765430	15RUR3515010	15RUQ3344575	15RVQ4034080
15RUP3723315	15STR2775430	15RUR3525010	15RUQ3364575	15RVQ4054080
15RUP3733315	15STR2795430	15RUR3545010	15RUQ3374575	15RVQ4064080
15RUP3753315	15STR2805430	15RUR3555010	15RUQ3394575	15RVQ4084080
15RUP3763315	15STR2825430	15RUR3575010	15RUQ3404575	15RVQ4094080
15RUP3783315	15STR2835430	15RUR3585010	15RUQ3424575	15RVQ4114080
15RUP3793315	15STR2855430	15RUR3605010	15RUQ3434575	15RVQ4124080
15RUP3813315	15STR2865430	15RUR3615010	15RUQ3454575	15RVQ4144080
15RUP3823315	15STR2885430	15RUR3635010	15RUQ3464575	15RVQ4154080
15RUP3843315	15STR2895430	15RUR3645010	15RUQ3484575	15RVQ4174080
15RUP3853315	15STR2915430	15RUR3665010	15RUQ3494575	15RVQ4184080
15RUP3883315	15STR2925430	15RUR3675010	15RUQ3514575	15RVQ4204080
15RUP3903315	15STR2945430	15RUR3695010	15RUQ3524575	15RVQ4214080
15RUP3913315	15STR2955430	15RUR3705010	15RUQ3544575	15RVQ4234080
15RUP3933315	15STR2975430	15RUR3725010	15RUQ3554575	15RTQ2954095
15RUP3943315	15STR2985430	15RUR3735010	15RUQ3574575	15RTQ2974095
15RUP3963315	15SUR3005430	15RUR3755010	15RUQ3584575	15RTQ2984095
15RUP3973315	15SUR3015430	15RUR3765010	15RUQ3604575	15RUQ3004095
15RUP3993315	15SUR3035430	15RUR3785010	15RUQ3614575	15RUQ3014095
15RVP4003315	15SUR3045430	15RUR3795010	15RUQ3634575	15RUQ3034095
15RVP4023315	15SUR3065430	15RUR3815010	15RUQ3644575	15RUQ3044095
15RVP4033315	15SUR3075430	15RUR3825010	15RUQ3664575	15RUQ3064095
15RVP4053315	15SUR3095430	15RUR3845010	15RUQ3674575	15RUQ3074095
15RVP4063315	15SUR3105430	15RUR3855010	15RUQ3694575	15RUQ3094095
15RVP4083315	15SUR3125430	15RUR3875010	15RUQ3704575	15RUQ3104095
15RUP3313330	15SUR3135430	15RUR3885010	15RUQ3724575	15RUQ3124095

15RUP3333330	15SUR3155430	15RUR3905010	15RUQ3734575	15RUQ3134095
15RUP3343330	15SUR3165430	15RUR3915010	15RUQ3754575	15RUQ3154095
15RUP3363330	15SUR3185430	15RUR3935010	15RUQ3764575	15RUQ3164095
15RUP3373330	15SUR3195430	15RUR3945010	15RUQ3784575	15RUQ3184095
15RUP3393330	15SUR3215430	15RUR3965010	15RUQ3794575	15RUQ3194095
15RUP3403330	15SUR3225430	15RUR3975010	15RUQ3814575	15RUQ3214095
15RUP3423330	15SUR3245430	15RUR3995010	15RUQ3824575	15RUQ3224095
15RUP3433330	15SUR3255430	15RVR4005010	15RUQ3844575	15RUQ3244095
15RUP3453330	15SUR3275430	15RVR4025010	15RUQ3854575	15RUQ3254095
15RUP3463330	15SUR3285430	15RVR4035010	15RUQ3874575	15RUQ3274095
15RUP3483330	15SUR3305430	15RVR4055010	15RUQ3884575	15RUQ3284095
15RUP3493330	15SUR3315430	15RVR4065010	15RUQ3904575	15RUQ3304095
15RUP3513330	15SUR3335430	15RTR2345025	15RUQ3914575	15RUQ3314095
15RUP3523330	15SUR3345430	15RTR2355025	15RUQ3934575	15RUQ3334095
15RUP3543330	15SUR3365430	15RTR2375025	15RUQ3944575	15RUQ3344095
15RUP3553330	15SUR3375430	15RTR2385025	15RUQ3964575	15RUQ3364095
15RUP3573330	15SUR3395430	15RTR2405025	15RUQ3974575	15RUQ3374095
15RUP3583330	15SUR3405430	15RTR2415025	15RUQ3994575	15RUQ3394095
15RUP3603330	14SQA2085445	15RTR2435025	15RVQ4004575	15RUQ3404095
15RUP3613330	14SQA2105445	15RTR2445025	15RVQ4024575	15RUQ3424095
15RUP3633330	14SQA2115445	15RTR2465025	15RVQ4034575	15RUQ3434095
15RUP3643330	14SQA2135445	15RTR2475025	15RVQ4054575	15RUQ3454095
15RUP3663330	14SQA2145445	15RTR2495025	15RVQ4064575	15RUQ3464095
15RUP3673330	14SQA2165445	15RTR2505025	15RVQ4084575	15RUQ3484095
15RUP3693330	15STR2175445	15RTR2525025	15RVQ4094575	15RUQ3494095
15RUP3703330	15STR2195445	15RTR2535025	15RVQ4114575	15RUQ3514095
15RUP3723330	15STR2205445	15RTR2555025	15RVQ4124575	15RUQ3524095
15RUP3733330	15STR2225445	15RTR2565025	15RVQ4144575	15RUQ3544095
15RUP3753330	15STR2235445	15RTR2585025	15RTQ2384590	15RUQ3554095
15RUP3763330	15STR2255445	15RTR2595025	15RTQ2404590	15RUQ3574095
15RUP3783330	15STR2265445	15RTR2615025	15RTQ2414590	15RUQ3584095
15RUP3793330	15STR2285445	15RTR2625025	15RTQ2434590	15RUQ3604095
15RUP3813330	15STR2295445	15RTR2645025	15RTQ2444590	15RUQ3614095
15RUP3823330	15STR2315445	15RTR2655025	15RTQ2464590	15RUQ3634095
15RUP3843330	15STR2325445	15RTR2675025	15RTQ2474590	15RUQ3644095
15RUP3853330	15STR2345445	15RTR2685025	15RTQ2494590	15RUQ3664095
15RUP3873330	15STR2355445	15RTR2705025	15RTQ2504590	15RUQ3674095
15RUP3883330	15STR2375445	15RTR2715025	15RTQ2524590	15RUQ3694095
15RUP3903330	15STR2385445	15RTR2735025	15RTQ2534590	15RUQ3704095
15RUP3913330	15STR2405445	15RTR2745025	15RTQ2554590	15RUQ3724095

15RUP3933330	15STR2415445	15RTR2765025	15RTQ2564590	15RUQ3734095
15RUP3943330	15STR2435445	15RTR2775025	15RTQ2584590	15RUQ3754095
15RUP3963330	15STR2445445	15RTR2795025	15RTQ2594590	15RUQ3764095
15RUP3973330	15STR2465445	15RTR2805025	15RTQ2614590	15RUQ3784095
15RUP3993330	15STR2475445	15RTR2825025	15RTQ2624590	15RUQ3794095
15RVP4003330	15STR2495445	15RTR2835025	15RTQ2644590	15RUQ3814095
15RVP4023330	15STR2505445	15RTR2855025	15RTQ2654590	15RUQ3824095
15RVP4033330	15STR2525445	15RTR2865025	15RTQ2674590	15RUQ3844095
15RVP4053330	15STR2535445	15RTR2885025	15RTQ2684590	15RUQ3854095
15RVP4063330	15STR2555445	15RTR2895025	15RTQ2704590	15RUQ3874095
15RUP3313345	15STR2565445	15RTR2915025	15RTQ2714590	15RUQ3884095
15RUP3333345	15STR2585445	15RTR2925025	15RTQ2734590	15RUQ3904095
15RUP3343345	15STR2595445	15RTR2945025	15RTQ2744590	15RUQ3914095
15RUP3363345	15STR2615445	15RTR2955025	15RTQ2764590	15RUQ3934095
15RUP3373345	15STR2625445	15RTR2975025	15RTQ2774590	15RUQ3944095
15RUP3393345	15STR2645445	15RTR2985025	15RTQ2794590	15RUQ3964095
15RUP3403345	15STR2655445	15RUR3005025	15RTQ2804590	15RUQ3974095
15RUP3423345	15STR2675445	15RUR3015025	15RTQ2824590	15RUQ3994095
15RUP3433345	15STR2685445	15RUR3035025	15RTQ2834590	15RVQ4004095
15RUP3453345	15STR2705445	15RUR3045025	15RTQ2854590	15RVQ4024095
15RUP3463345	15STR2715445	15RUR3065025	15RTQ2864590	15RVQ4034095
15RUP3483345	15STR2735445	15RUR3075025	15RTQ2884590	15RVQ4054095
15RUP3493345	15STR2745445	15RUR3095025	15RTQ2894590	15RVQ4064095
15RUP3513345	15STR2765445	15RUR3105025	15RTQ2914590	15RVQ4084095
15RUP3523345	15STR2775445	15RUR3125025	15RTQ2924590	15RVQ4094095
15RUP3543345	15STR2795445	15RUR3135025	15RTQ2944590	15RVQ4114095
15RUP3553345	15STR2805445	15RUR3155025	15RTQ2954590	15RVQ4124095
15RUP3573345	15STR2825445	15RUR3165025	15RTQ2974590	15RVQ4144095
15RUP3583345	15STR2835445	15RUR3185025	15RTQ2984590	15RVQ4154095
15RUP3603345	15STR2855445	15RUR3195025	15RUQ3004590	15RVQ4174095
15RUP3613345	15STR2865445	15RUR3215025	15RUQ3014590	15RVQ4184095
15RUP3633345	15STR2885445	15RUR3225025	15RUQ3034590	15RVQ4204095
15RUP3643345	15STR2895445	15RUR3245025	15RUQ3044590	15RVQ4214095
15RUP3663345	15STR2915445	15RUR3255025	15RUQ3064590	15RVQ4234095
15RUP3673345	15STR2925445	15RUR3275025	15RUQ3074590	15RTQ2954110
15RUP3693345	15STR2945445	15RUR3285025	15RUQ3094590	15RTQ2974110
15RUP3703345	15STR2955445	15RUR3305025	15RUQ3104590	15RTQ2984110
15RUP3723345	15STR2975445	15RUR3315025	15RUQ3124590	15RUQ3004110
15RUP3733345	15STR2985445	15RUR3335025	15RUQ3134590	15RUQ3014110
15RUP3753345	15SUR3005445	15RUR3345025	15RUQ3154590	15RUQ3034110

15RUP3763345	15SUR3015445	15RUR3365025	15RUQ3164590	15RUQ3044110
15RUP3783345	15SUR3035445	15RUR3375025	15RUQ3184590	15RUQ3064110
15RUP3793345	15SUR3045445	15RUR3395025	15RUQ3194590	15RUQ3074110
15RUP3813345	15SUR3065445	15RUR3405025	15RUQ3214590	15RUQ3094110
15RUP3823345	15SUR3075445	15RUR3425025	15RUQ3224590	15RUQ3104110
15RUP3843345	15SUR3095445	15RUR3435025	15RUQ3244590	15RUQ3124110
15RUP3853345	15SUR3105445	15RUR3455025	15RUQ3254590	15RUQ3134110
15RUP3873345	15SUR3125445	15RUR3465025	15RUQ3274590	15RUQ3154110
15RUP3883345	15SUR3135445	15RUR3485025	15RUQ3284590	15RUQ3164110
15RUP3903345	15SUR3155445	15RUR3495025	15RUQ3304590	15RUQ3184110
15RUP3913345	15SUR3165445	15RUR3515025	15RUQ3314590	15RUQ3194110
15RUP3933345	15SUR3185445	15RUR3525025	15RUQ3334590	15RUQ3214110
15RUP3943345	15SUR3195445	15RUR3545025	15RUQ3344590	15RUQ3224110
15RUP3963345	15SUR3215445	15RUR3555025	15RUQ3364590	15RUQ3244110
15RUP3973345	15SUR3225445	15RUR3575025	15RUQ3374590	15RUQ3254110
15RUP3993345	15SUR3245445	15RUR3585025	15RUQ3394590	15RUQ3274110
15RVP4003345	15SUR3255445	15RUR3605025	15RUQ3404590	15RUQ3284110
15RVP4023345	15SUR3275445	15RUR3615025	15RUQ3424590	15RUQ3304110
15RVP4033345	15SUR3285445	15RUR3635025	15RUQ3434590	15RUQ3314110
15RVP4053345	15SUR3305445	15RUR3645025	15RUQ3454590	15RUQ3334110
15RUP3303360	15SUR3315445	15RUR3665025	15RUQ3464590	15RUQ3344110
15RUP3313360	15SUR3335445	15RUR3675025	15RUQ3484590	15RUQ3364110
15RUP3333360	15SUR3345445	15RUR3695025	15RUQ3494590	15RUQ3374110
15RUP3343360	15SUR3365445	15RUR3705025	15RUQ3514590	15RUQ3394110
15RUP3363360	15SUR3375445	15RUR3725025	15RUQ3524590	15RUQ3404110
15RUP3373360	15SUR3395445	15RUR3735025	15RUQ3544590	15RUQ3424110
15RUP3393360	15SUR3405445	15RUR3755025	15RUQ3554590	15RUQ3434110
15RUP3403360	15SUR3425445	15RUR3765025	15RUQ3574590	15RUQ3454110
15RUP3423360	15SUR3435445	15RUR3785025	15RUQ3584590	15RUQ3464110
15RUP3433360	14SQA2085460	15RUR3795025	15RUQ3604590	15RUQ3484110
15RUP3453360	14SQA2105460	15RUR3815025	15RUQ3614590	15RUQ3494110
15RUP3463360	14SQA2115460	15RUR3825025	15RUQ3634590	15RUQ3514110
15RUP3483360	14SQA2135460	15RUR3845025	15RUQ3644590	15RUQ3524110
15RUP3493360	14SQA2145460	15RUR3855025	15RUQ3664590	15RUQ3544110
15RUP3513360	14SQA2165460	15RUR3875025	15RUQ3674590	15RUQ3554110
15RUP3523360	15STR2175460	15RUR3885025	15RUQ3694590	15RUQ3574110
15RUP3543360	15STR2195460	15RUR3905025	15RUQ3704590	15RUQ3584110
15RUP3553360	15STR2205460	15RUR3915025	15RUQ3724590	15RUQ3604110
15RUP3573360	15STR2225460	15RUR3935025	15RUQ3734590	15RUQ3614110
15RUP3583360	15STR2235460	15RUR3945025	15RUQ3754590	15RUQ3634110



15RUP3603360	15STR2255460	15RUR3965025	15RUQ3764590	15RUQ3644110
15RUP3613360	15STR2265460	15RUR3975025	15RUQ3784590	15RUQ3664110
15RUP3633360	15STR2285460	15RUR3995025	15RUQ3794590	15RUQ3674110
15RUP3643360	15STR2295460	15RVR4005025	15RUQ3814590	15RUQ3694110
15RUP3663360	15STR2315460	15RVR4025025	15RUQ3824590	15RUQ3704110
15RUP3673360	15STR2325460	15RVR4035025	15RUQ3844590	15RUQ3724110
15RUP3693360	15STR2345460	15RVR4055025	15RUQ3854590	15RUQ3734110
15RUP3703360	15STR2355460	15RVR4065025	15RUQ3874590	15RUQ3754110
15RUP3723360	15STR2375460	15RTR2345040	15RUQ3884590	15RUQ3764110
15RUP3733360	15STR2385460	15RTR2355040	15RUQ3904590	15RUQ3784110
15RUP3753360	15STR2405460	15RTR2375040	15RUQ3914590	15RUQ3794110
15RUP3763360	15STR2415460	15RTR2385040	15RUQ3934590	15RUQ3814110
15RUP3783360	15STR2435460	15RTR2405040	15RUQ3944590	15RUQ3824110
15RUP3793360	15STR2445460	15RTR2415040	15RUQ3964590	15RUQ3844110
15RUP3813360	15STR2465460	15RTR2435040	15RUQ3974590	15RUQ3854110
15RUP3823360	15STR2475460	15RTR2445040	15RUQ3994590	15RUQ3874110
15RUP3843360	15STR2495460	15RTR2465040	15RVQ4004590	15RUQ3884110
15RUP3853360	15STR2505460	15RTR2475040	15RVQ4024590	15RUQ3904110
15RUP3873360	15STR2525460	15RTR2495040	15RVQ4034590	15RUQ3914110
15RUP3883360	15STR2535460	15RTR2505040	15RVQ4054590	15RUQ3934110
15RUP3903360	15STR2555460	15RTR2525040	15RVQ4064590	15RUQ3944110
15RUP3913360	15STR2565460	15RTR2535040	15RVQ4084590	15RUQ3964110
15RUP3933360	15STR2585460	15RTR2555040	15RVQ4094590	15RUQ3974110
15RUP3943360	15STR2595460	15RTR2565040	15RVQ4114590	15RUQ3994110
15RUP3963360	15STR2615460	15RTR2585040	15RVQ4124590	15RVQ4004110
15RUP3973360	15STR2625460	15RTR2595040	15RTQ2384605	15RVQ4024110
15RUP3993360	15STR2645460	15RTR2615040	15RTQ2404605	15RVQ4034110
15RVP4003360	15STR2655460	15RTR2625040	15RTQ2414605	15RVQ4054110
15RVP4023360	15STR2675460	15RTR2645040	15RTQ2434605	15RVQ4064110
15RVP4033360	15STR2685460	15RTR2655040	15RTQ2444605	15RVQ4084110
15RVP4053360	15STR2705460	15RTR2675040	15RTQ2464605	15RVQ4094110
15RUP3303375	15STR2715460	15RTR2685040	15RTQ2474605	15RVQ4114110
15RUP3313375	15STR2735460	15RTR2705040	15RTQ2494605	15RVQ4124110
15RUP3333375	15STR2745460	15RTR2715040	15RTQ2504605	15RVQ4144110
15RUP3343375	15STR2765460	15RTR2735040	15RTQ2524605	15RVQ4154110
15RUP3363375	15STR2775460	15RTR2745040	15RTQ2534605	15RVQ4174110
15RUP3373375	15STR2795460	15RTR2765040	15RTQ2554605	15RVQ4184110
15RUP3393375	15STR2805460	15RTR2775040	15RTQ2564605	15RVQ4204110
15RUP3403375	15STR2825460	15RTR2795040	15RTQ2584605	15RVQ4214110
15RUP3423375	15STR2835460	15RTR2805040	15RTQ2594605	15RVQ4234110

15RUP3433375	15STR2855460	15RTR2825040	15RTQ2614605	15RTQ2954125
15RUP3453375	15STR2865460	15RTR2835040	15RTQ2624605	15RTQ2974125
15RUP3463375	15STR2885460	15RTR2855040	15RTQ2644605	15RTQ2984125
15RUP3483375	15STR2895460	15RTR2865040	15RTQ2654605	15RUQ3004125
15RUP3493375	15STR2915460	15RTR2885040	15RTQ2674605	15RUQ3014125
15RUP3513375	15STR2925460	15RTR2895040	15RTQ2684605	15RUQ3034125
15RUP3523375	15STR2945460	15RTR2915040	15RTQ2704605	15RUQ3044125
15RUP3543375	15STR2955460	15RTR2925040	15RTQ2714605	15RUQ3064125
15RUP3553375	15STR2975460	15RTR2945040	15RTQ2734605	15RUQ3074125
15RUP3573375	15STR2985460	15RTR2955040	15RTQ2744605	15RUQ3094125
15RUP3583375	15SUR3005460	15RTR2975040	15RTQ2764605	15RUQ3104125
15RUP3603375	15SUR3015460	15RTR2985040	15RTQ2774605	15RUQ3124125
15RUP3613375	15SUR3035460	15RUR3005040	15RTQ2794605	15RUQ3134125
15RUP3633375	15SUR3045460	15RUR3015040	15RTQ2804605	15RUQ3154125
15RUP3643375	15SUR3065460	15RUR3035040	15RTQ2824605	15RUQ3164125
15RUP3663375	15SUR3075460	15RUR3045040	15RTQ2834605	15RUQ3184125
15RUP3673375	15SUR3095460	15RUR3065040	15RTQ2854605	15RUQ3194125
15RUP3693375	15SUR3105460	15RUR3075040	15RTQ2864605	15RUQ3214125
15RUP3703375	15SUR3125460	15RUR3095040	15RTQ2884605	15RUQ3224125
15RUP3723375	15SUR3135460	15RUR3105040	15RTQ2894605	15RUQ3244125
15RUP3733375	15SUR3155460	15RUR3125040	15RTQ2914605	15RUQ3254125
15RUP3753375	15SUR3165460	15RUR3135040	15RTQ2924605	15RUQ3274125
15RUP3763375	15SUR3185460	15RUR3155040	15RTQ2944605	15RUQ3284125
15RUP3783375	15SUR3195460	15RUR3165040	15RTQ2954605	15RUQ3304125
15RUP3793375	15SUR3215460	15RUR3185040	15RTQ2974605	15RUQ3314125
15RUP3813375	15SUR3225460	15RUR3195040	15RTQ2984605	15RUQ3334125
15RUP3823375	15SUR3245460	15RUR3215040	15RUQ3004605	15RUQ3344125
15RUP3843375	15SUR3255460	15RUR3225040	15RUQ3014605	15RUQ3364125
15RUP3853375	15SUR3275460	15RUR3245040	15RUQ3034605	15RUQ3374125
15RUP3873375	15SUR3285460	15RUR3255040	15RUQ3044605	15RUQ3394125
15RUP3883375	15SUR3305460	15RUR3275040	15RUQ3064605	15RUQ3404125
15RUP3903375	15SUR3315460	15RUR3285040	15RUQ3074605	15RUQ3424125
15RUP3913375	15SUR3335460	15RUR3305040	15RUQ3094605	15RUQ3434125
15RUP3933375	15SUR3345460	15RUR3315040	15RUQ3104605	15RUQ3454125
15RUP3943375	15SUR3365460	15RUR3335040	15RUQ3124605	15RUQ3464125
15RUP3963375	15SUR3375460	15RUR3345040	15RUQ3134605	15RUQ3484125
15RUP3973375	15SUR3395460	15RUR3365040	15RUQ3154605	15RUQ3494125
15RUP3993375	15SUR3405460	15RUR3375040	15RUQ3164605	15RUQ3514125
15RVP4003375	15SUR3425460	15RUR3395040	15RUQ3184605	15RUQ3524125
15RVP4023375	15SUR3435460	15RUR3405040	15RUQ3194605	15RUQ3544125

15RVP4033375	14SQA2085475	15RUR3425040	15RUQ3214605	15RUQ3554125
15RVP4053375	14SQA2105475	15RUR3435040	15RUQ3224605	15RUQ3574125
15RVP4063375	14SQA2115475	15RUR3455040	15RUQ3244605	15RUQ3584125
15RVP4083375	14SQA2135475	15RUR3465040	15RUQ3254605	15RUQ3604125
15RUP3303390	14SQA2145475	15RUR3485040	15RUQ3274605	15RUQ3614125
15RUP3313390	14SQA2165475	15RUR3495040	15RUQ3284605	15RUQ3634125
15RUP3333390	15STR2175475	15RUR3515040	15RUQ3304605	15RUQ3644125
15RUP3343390	15STR2195475	15RUR3525040	15RUQ3314605	15RUQ3664125
15RUP3363390	15STR2205475	15RUR3545040	15RUQ3334605	15RUQ3674125
15RUP3373390	15STR2225475	15RUR3555040	15RUQ3344605	15RUQ3694125
15RUP3393390	15STR2235475	15RUR3575040	15RUQ3364605	15RUQ3704125
15RUP3403390	15STR2255475	15RUR3585040	15RUQ3374605	15RUQ3724125
15RUP3423390	15STR2265475	15RUR3605040	15RUQ3394605	15RUQ3734125
15RUP3433390	15STR2285475	15RUR3615040	15RUQ3404605	15RUQ3754125
15RUP3453390	15STR2295475	15RUR3635040	15RUQ3424605	15RUQ3764125
15RUP3463390	15STR2315475	15RUR3645040	15RUQ3434605	15RUQ3784125
15RUP3483390	15STR2325475	15RUR3665040	15RUQ3454605	15RUQ3794125
15RUP3493390	15STR2345475	15RUR3675040	15RUQ3464605	15RUQ3814125
15RUP3513390	15STR2355475	15RUR3695040	15RUQ3484605	15RUQ3824125
15RUP3523390	15STR2375475	15RUR3705040	15RUQ3494605	15RUQ3844125
15RUP3543390	15STR2385475	15RUR3725040	15RUQ3514605	15RUQ3854125
15RUP3553390	15STR2405475	15RUR3735040	15RUQ3524605	15RUQ3874125
15RUP3573390	15STR2415475	15RUR3755040	15RUQ3544605	15RUQ3884125
15RUP3583390	15STR2435475	15RUR3765040	15RUQ3554605	15RUQ3904125
15RUP3603390	15STR2445475	15RUR3785040	15RUQ3574605	15RUQ3914125
15RUP3613390	15STR2465475	15RUR3795040	15RUQ3584605	15RUQ3934125
15RUP3633390	15STR2475475	15RUR3815040	15RUQ3604605	15RUQ3944125
15RUP3643390	15STR2495475	15RUR3825040	15RUQ3614605	15RUQ3964125
15RUP3663390	15STR2505475	15RUR3845040	15RUQ3634605	15RUQ3974125
15RUP3673390	15STR2525475	15RUR3855040	15RUQ3644605	15RUQ3994125
15RUP3693390	15STR2535475	15RUR3875040	15RUQ3664605	15RVQ4004125
15RUP3703390	15STR2555475	15RUR3885040	15RUQ3674605	15RVQ4024125
15RUP3723390	15STR2565475	15RUR3905040	15RUQ3694605	15RVQ4034125
15RUP3733390	15STR2585475	15RUR3915040	15RUQ3704605	15RVQ4054125
15RUP3753390	15STR2595475	15RUR3935040	15RUQ3724605	15RVQ4064125
15RUP3763390	15STR2615475	15RUR3945040	15RUQ3734605	15RVQ4084125
15RUP3783390	15STR2625475	15RUR3965040	15RUQ3754605	15RVQ4094125
15RUP3793390	15STR2645475	15RUR3975040	15RUQ3764605	15RVQ4114125
15RUP3813390	15STR2655475	15RUR3995040	15RUQ3784605	15RVQ4124125
15RUP3823390	15STR2675475	15RVR4005040	15RUQ3794605	15RVQ4144125

15RUP3843390	15STR2685475	15RVR4025040	15RUQ3814605	15RVQ4154125
15RUP3853390	15STR2705475	15RVR4035040	15RUQ3824605	15RVQ4174125
15RUP3873390	15STR2715475	15RVR4055040	15RUQ3844605	15RVQ4184125
15RUP3883390	15STR2735475	15RVR4065040	15RUQ3854605	15RVQ4204125
15RUP3903390	15STR2745475	15RTR2345055	15RUQ3874605	15RVQ4214125
15RUP3913390	15STR2765475	15RTR2355055	15RUQ3884605	15RVQ4234125
15RUP3933390	15STR2775475	15RTR2375055	15RUQ3904605	15RTQ2954140
15RUP3943390	15STR2795475	15RTR2385055	15RUQ3914605	15RTQ2974140
15RUP3963390	15STR2805475	15RTR2405055	15RUQ3934605	15RTQ2984140
15RUP3973390	15STR2825475	15RTR2415055	15RUQ3944605	15RUQ3004140
15RUP3993390	15STR2835475	15RTR2435055	15RUQ3964605	15RUQ3014140
15RVP4003390	15STR2855475	15RTR2445055	15RUQ3974605	15RUQ3034140
15RVP4023390	15STR2865475	15RTR2465055	15RUQ3994605	15RUQ3044140
15RVP4033390	15STR2885475	15RTR2475055	15RVQ4004605	15RUQ3064140
15RVP4053390	15STR2895475	15RTR2495055	15RVQ4024605	15RUQ3074140
15RVP4063390	15STR2915475	15RTR2505055	15RVQ4034605	15RUQ3094140
15RVP4083390	15STR2925475	15RTR2525055	15RVQ4054605	15RUQ3104140
15RVP4093390	15STR2945475	15RTR2535055	15RVQ4064605	15RUQ3124140
15RUP3303405	15STR2955475	15RTR2555055	15RVQ4084605	15RUQ3134140
15RUP3313405	15STR2975475	15RTR2565055	15RVQ4094605	15RUQ3154140
15RUP3333405	15STR2985475	15RTR2585055	15RVQ4114605	15RUQ3164140
15RUP3343405	15SUR3005475	15RTR2595055	15RVQ4124605	15RUQ3184140
15RUP3363405	15SUR3015475	15RTR2615055	15RTQ2384620	15RUQ3194140
15RUP3373405	15SUR3035475	15RTR2625055	15RTQ2404620	15RUQ3214140
15RUP3393405	15SUR3045475	15RTR2645055	15RTQ2414620	15RUQ3224140
15RUP3403405	15SUR3065475	15RTR2655055	15RTQ2434620	15RUQ3244140
15RUP3423405	15SUR3075475	15RTR2675055	15RTQ2444620	15RUQ3254140
15RUP3433405	15SUR3095475	15RTR2685055	15RTQ2464620	15RUQ3274140
15RUP3453405	15SUR3105475	15RTR2705055	15RTQ2474620	15RUQ3284140
15RUP3463405	15SUR3125475	15RTR2715055	15RTQ2494620	15RUQ3304140
15RUP3483405	15SUR3135475	15RTR2735055	15RTQ2504620	15RUQ3314140
15RUP3493405	15SUR3155475	15RTR2745055	15RTQ2524620	15RUQ3334140
15RUP3513405	15SUR3165475	15RTR2765055	15RTQ2534620	15RUQ3344140
15RUP3523405	15SUR3185475	15RTR2775055	15RTQ2554620	15RUQ3364140
15RUP3543405	15SUR3195475	15RTR2795055	15RTQ2564620	15RUQ3374140
15RUP3553405	15SUR3215475	15RTR2805055	15RTQ2584620	15RUQ3394140
15RUP3573405	15SUR3225475	15RTR2825055	15RTQ2594620	15RUQ3404140
15RUP3583405	15SUR3245475	15RTR2835055	15RTQ2614620	15RUQ3424140
15RUP3603405	15SUR3255475	15RTR2855055	15RTQ2624620	15RUQ3434140
15RUP3613405	15SUR3275475	15RTR2865055	15RTQ2644620	15RUQ3454140

15RUP3633405	15SUR3285475	15RTR2885055	15RTQ2654620	15RUQ3464140
15RUP3643405	15SUR3305475	15RTR2895055	15RTQ2674620	15RUQ3484140
15RUP3663405	15SUR3315475	15RTR2915055	15RTQ2684620	15RUQ3494140
15RUP3673405	15SUR3335475	15RTR2925055	15RTQ2704620	15RUQ3514140
15RUP3693405	15SUR3345475	15RTR2945055	15RTQ2714620	15RUQ3524140
15RUP3703405	15SUR3365475	15RTR2955055	15RTQ2734620	15RUQ3544140
15RUP3723405	15SUR3375475	15RTR2975055	15RTQ2744620	15RUQ3554140
15RUP3733405	15SUR3395475	15RTR2985055	15RTQ2764620	15RUQ3574140
15RUP3753405	15SUR3405475	15RUR3005055	15RTQ2774620	15RUQ3584140
15RUP3763405	15SUR3425475	15RUR3015055	15RTQ2794620	15RUQ3604140
15RUP3783405	15SUR3435475	15RUR3035055	15RTQ2804620	15RUQ3614140
15RUP3793405	14SQA2085490	15RUR3045055	15RTQ2824620	15RUQ3634140
15RUP3813405	14SQA2105490	15RUR3065055	15RTQ2834620	15RUQ3644140
15RUP3823405	14SQA2115490	15RUR3075055	15RTQ2854620	15RUQ3664140
15RUP3843405	14SQA2135490	15RUR3095055	15RTQ2864620	15RUQ3674140
15RUP3853405	14SQA2145490	15RUR3105055	15RTQ2884620	15RUQ3694140
15RUP3873405	14SQA2165490	15RUR3125055	15RTQ2894620	15RUQ3704140
15RUP3883405	15STR2175490	15RUR3135055	15RTQ2914620	15RUQ3724140
15RUP3903405	15STR2195490	15RUR3155055	15RTQ2924620	15RUQ3734140
15RUP3913405	15STR2205490	15RUR3165055	15RTQ2944620	15RUQ3754140
15RUP3933405	15STR2225490	15RUR3185055	15RTQ2954620	15RUQ3764140
15RUP3943405	15STR2235490	15RUR3195055	15RTQ2974620	15RUQ3784140
15RUP3963405	15STR2255490	15RUR3215055	15RTQ2984620	15RUQ3794140
15RUP3973405	15STR2265490	15RUR3225055	15RUQ3004620	15RUQ3814140
15RUP3993405	15STR2285490	15RUR3245055	15RUQ3014620	15RUQ3824140
15RVP4003405	15STR2295490	15RUR3255055	15RUQ3034620	15RUQ3844140
15RVP4023405	15STR2315490	15RUR3275055	15RUQ3044620	15RUQ3854140
15RVP4033405	15STR2325490	15RUR3285055	15RUQ3064620	15RUQ3874140
15RVP4053405	15STR2345490	15RUR3305055	15RUQ3074620	15RUQ3884140
15RVP4063405	15STR2355490	15RUR3315055	15RUQ3094620	15RUQ3904140
15RVP4083405	15STR2375490	15RUR3335055	15RUQ3104620	15RUQ3914140
15RVP4093405	15STR2385490	15RUR3345055	15RUQ3124620	15RUQ3934140
15RUP3303420	15STR2405490	15RUR3365055	15RUQ3134620	15RUQ3944140
15RUP3313420	15STR2415490	15RUR3375055	15RUQ3154620	15RUQ3964140
15RUP3333420	15STR2435490	15RUR3395055	15RUQ3164620	15RUQ3974140
15RUP3343420	15STR2445490	15RUR3405055	15RUQ3184620	15RUQ3994140
15RUP3363420	15STR2465490	15RUR3425055	15RUQ3194620	15RVQ4004140
15RUP3373420	15STR2475490	15RUR3435055	15RUQ3214620	15RVQ4024140
15RUP3393420	15STR2495490	15RUR3455055	15RUQ3224620	15RVQ4034140
15RUP3403420	15STR2505490	15RUR3465055	15RUQ3244620	15RVQ4054140



15RUP3423420	15STR2525490	15RUR3485055	15RUQ3254620	15RVQ4064140
15RUP3433420	15STR2535490	15RUR3495055	15RUQ3274620	15RVQ4084140
15RUP3453420	15STR2555490	15RUR3515055	15RUQ3284620	15RVQ4094140
15RUP3463420	15STR2565490	15RUR3525055	15RUQ3304620	15RVQ4114140
15RUP3483420	15STR2585490	15RUR3545055	15RUQ3314620	15RVQ4124140
15RUP3493420	15STR2595490	15RUR3555055	15RUQ3334620	15RVQ4144140
15RUP3513420	15STR2615490	15RUR3575055	15RUQ3344620	15RVQ4154140
15RUP3523420	15STR2625490	15RUR3585055	15RUQ3364620	15RVQ4174140
15RUP3543420	15STR2645490	15RUR3605055	15RUQ3374620	15RVQ4184140
15RUP3553420	15STR2655490	15RUR3615055	15RUQ3394620	15RVQ4204140
15RUP3573420	15STR2675490	15RUR3635055	15RUQ3404620	15RTQ2954155
15RUP3583420	15STR2685490	15RUR3645055	15RUQ3424620	15RTQ2974155
15RUP3603420	15STR2705490	15RUR3665055	15RUQ3434620	15RTQ2984155
15RUP3613420	15STR2715490	15RUR3675055	15RUQ3454620	15RUQ3004155
15RUP3633420	15STR2735490	15RUR3695055	15RUQ3464620	15RUQ3014155
15RUP3643420	15STR2745490	15RUR3705055	15RUQ3484620	15RUQ3034155
15RUP3663420	15STR2765490	15RUR3725055	15RUQ3494620	15RUQ3044155
15RUP3673420	15STR2775490	15RUR3735055	15RUQ3514620	15RUQ3064155
15RUP3693420	15STR2795490	15RUR3755055	15RUQ3524620	15RUQ3074155
15RUP3703420	15STR2805490	15RUR3765055	15RUQ3544620	15RUQ3094155
15RUP3723420	15STR2825490	15RUR3785055	15RUQ3554620	15RUQ3104155
15RUP3733420	15STR2835490	15RUR3795055	15RUQ3574620	15RUQ3124155
15RUP3753420	15STR2855490	15RUR3815055	15RUQ3584620	15RUQ3134155
15RUP3763420	15STR2865490	15RUR3825055	15RUQ3604620	15RUQ3154155
15RUP3783420	15STR2885490	15RUR3845055	15RUQ3614620	15RUQ3164155
15RUP3793420	15STR2895490	15RUR3855055	15RUQ3634620	15RUQ3184155
15RUP3813420	15STR2915490	15RUR3875055	15RUQ3644620	15RUQ3194155
15RUP3823420	15STR2925490	15RUR3885055	15RUQ3664620	15RUQ3214155
15RUP3843420	15STR2945490	15RUR3905055	15RUQ3674620	15RUQ3224155
15RUP3853420	15STR2955490	15RUR3915055	15RUQ3694620	15RUQ3244155
15RUP3873420	15STR2975490	15RUR3935055	15RUQ3704620	15RUQ3254155
15RUP3883420	15STR2985490	15RUR3945055	15RUQ3724620	15RUQ3274155
15RUP3903420	15SUR3005490	15RUR3965055	15RUQ3734620	15RUQ3284155
15RUP3913420	15SUR3015490	15RUR3975055	15RUQ3754620	15RUQ3304155
15RUP3933420	15SUR3035490	15RUR3995055	15RUQ3764620	15RUQ3314155
15RUP3943420	15SUR3045490	15RVR4005055	15RUQ3784620	15RUQ3334155
15RUP3963420	15SUR3065490	15RVR4025055	15RUQ3794620	15RUQ3344155
15RUP3973420	15SUR3075490	15RVR4035055	15RUQ3814620	15RUQ3364155
15RUP3993420	15SUR3095490	15RVR4055055	15RUQ3824620	15RUQ3374155
15RVP4003420	15SUR3105490	15RVR4065055	15RUQ3844620	15RUQ3394155

15RVP4023420	15SUR3125490	15RTR2325070	15RUQ3854620	15RUQ3404155
15RVP4033420	15SUR3135490	15RTR2345070	15RUQ3874620	15RUQ3424155
15RVP4053420	15SUR3155490	15RTR2355070	15RUQ3884620	15RUQ3434155
15RVP4063420	15SUR3165490	15RTR2375070	15RUQ3904620	15RUQ3454155
15RVP4083420	15SUR3185490	15RTR2385070	15RUQ3914620	15RUQ3464155
15RVP4093420	15SUR3195490	15RTR2405070	15RUQ3934620	15RUQ3484155
15RUP3303435	15SUR3215490	15RTR2415070	15RUQ3944620	15RUQ3494155
15RUP3313435	15SUR3225490	15RTR2435070	15RUQ3964620	15RUQ3514155
15RUP3333435	15SUR3245490	15RTR2445070	15RUQ3974620	15RUQ3524155
15RUP3343435	15SUR3255490	15RTR2465070	15RUQ3994620	15RUQ3544155
15RUP3363435	15SUR3275490	15RTR2475070	15RVQ4004620	15RUQ3554155
15RUP3373435	15SUR3285490	15RTR2495070	15RVQ4024620	15RUQ3574155
15RUP3393435	15SUR3305490	15RTR2505070	15RVQ4034620	15RUQ3584155
15RUP3403435	15SUR3315490	15RTR2525070	15RVQ4054620	15RUQ3604155
15RUP3423435	15SUR3335490	15RTR2535070	15RVQ4064620	15RUQ3614155
15RUP3433435	15SUR3345490	15RTR2555070	15RVQ4084620	15RUQ3634155
15RUP3453435	15SUR3365490	15RTR2565070	15RVQ4094620	15RUQ3644155
15RUP3463435	15SUR3375490	15RTR2585070	15RVQ4114620	15RUQ3664155
15RUP3483435	15SUR3395490	15RTR2595070	15RTQ2384635	15RUQ3674155
15RUP3493435	15SUR3405490	15RTR2615070	15RTQ2404635	15RUQ3694155
15RUP3513435	15SUR3425490	15RTR2625070	15RTQ2414635	15RUQ3704155
15RUP3523435	15SUR3435490	15RTR2645070	15RTQ2434635	15RUQ3724155
15RUP3543435	14SQA2085505	15RTR2655070	15RTQ2444635	15RUQ3734155
15RUP3553435	14SQA2105505	15RTR2675070	15RTQ2464635	15RUQ3754155
15RUP3573435	14SQA2115505	15RTR2685070	15RTQ2474635	15RUQ3764155
15RUP3583435	14SQA2135505	15RTR2705070	15RTQ2494635	15RUQ3784155
15RUP3603435	14SQA2145505	15RTR2715070	15RTQ2504635	15RUQ3794155
15RUP3613435	14SQA2165505	15RTR2735070	15RTQ2524635	15RUQ3814155
15RUP3633435	15STR2175505	15RTR2745070	15RTQ2534635	15RUQ3824155
15RUP3643435	15STR2195505	15RTR2765070	15RTQ2554635	15RUQ3844155
15RUP3663435	15STR2205505	15RTR2775070	15RTQ2564635	15RUQ3854155
15RUP3673435	15STR2225505	15RTR2795070	15RTQ2584635	15RUQ3874155
15RUP3693435	15STR2235505	15RTR2805070	15RTQ2594635	15RUQ3884155
15RUP3703435	15STR2255505	15RTR2825070	15RTQ2614635	15RUQ3904155
15RUP3723435	15STR2265505	15RTR2835070	15RTQ2624635	15RUQ3914155
15RUP3733435	15STR2285505	15RTR2855070	15RTQ2644635	15RUQ3934155
15RUP3753435	15STR2295505	15RTR2865070	15RTQ2654635	15RUQ3944155
15RUP3763435	15STR2315505	15RTR2885070	15RTQ2674635	15RUQ3964155
15RUP3783435	15STR2325505	15RTR2895070	15RTQ2684635	15RUQ3974155
15RUP3793435	15STR2345505	15RTR2915070	15RTQ2704635	15RUQ3994155

15RUP3813435	15STR2355505	15RTR2925070	15RTQ2714635	15RVQ4004155
15RUP3823435	15STR2375505	15RTR2945070	15RTQ2734635	15RVQ4024155
15RUP3843435	15STR2385505	15RTR2955070	15RTQ2744635	15RVQ4034155
15RUP3853435	15STR2405505	15RTR2975070	15RTQ2764635	15RVQ4054155
15RUP3873435	15STR2415505	15RTR2985070	15RTQ2774635	15RVQ4064155
15RUP3883435	15STR2435505	15RUR3005070	15RTQ2794635	15RVQ4084155
15RUP3903435	15STR2445505	15RUR3015070	15RTQ2804635	15RVQ4094155
15RUP3913435	15STR2465505	15RUR3035070	15RTQ2824635	15RVQ4114155
15RUP3933435	15STR2475505	15RUR3045070	15RTQ2834635	15RVQ4124155
15RUP3943435	15STR2495505	15RUR3065070	15RTQ2854635	15RVQ4144155
15RUP3963435	15STR2505505	15RUR3075070	15RTQ2864635	15RVQ4154155
15RUP3973435	15STR2525505	15RUR3095070	15RTQ2884635	15RVQ4174155
15RUP3993435	15STR2535505	15RUR3105070	15RTQ2894635	15RVQ4184155
15RVP4003435	15STR2555505	15RUR3125070	15RTQ2914635	15RVQ4204155
15RVP4023435	15STR2565505	15RUR3135070	15RTQ2924635	15RTQ2954170
15RVP4033435	15STR2585505	15RUR3155070	15RTQ2944635	15RTQ2974170
15RVP4053435	15STR2595505	15RUR3165070	15RTQ2954635	15RTQ2984170
15RVP4063435	15STR2615505	15RUR3185070	15RTQ2974635	15RUQ3004170
15RVP4083435	15STR2625505	15RUR3195070	15RTQ2984635	15RUQ3014170
15RVP4093435	15STR2645505	15RUR3215070	15RUQ3004635	15RUQ3034170
15RVP4113435	15STR2655505	15RUR3225070	15RUQ3014635	15RUQ3044170
15RVP4123435	15STR2675505	15RUR3245070	15RUQ3034635	15RUQ3064170
15RUP3303450	15STR2685505	15RUR3255070	15RUQ3044635	15RUQ3074170
15RUP3313450	15STR2705505	15RUR3275070	15RUQ3064635	15RUQ3094170
15RUP3333450	15STR2715505	15RUR3285070	15RUQ3074635	15RUQ3104170
15RUP3343450	15STR2735505	15RUR3305070	15RUQ3094635	15RUQ3124170
15RUP3363450	15STR2745505	15RUR3315070	15RUQ3104635	15RUQ3134170
15RUP3373450	15STR2765505	15RUR3335070	15RUQ3124635	15RUQ3154170
15RUP3393450	15STR2775505	15RUR3345070	15RUQ3134635	15RUQ3164170
15RUP3403450	15STR2795505	15RUR3365070	15RUQ3154635	15RUQ3184170
15RUP3423450	15STR2805505	15RUR3375070	15RUQ3164635	15RUQ3194170
15RUP3433450	15STR2825505	15RUR3395070	15RUQ3184635	15RUQ3214170
15RUP3453450	15STR2835505	15RUR3405070	15RUQ3194635	15RUQ3224170
15RUP3463450	15STR2855505	15RUR3425070	15RUQ3214635	15RUQ3244170
15RUP3483450	15STR2865505	15RUR3435070	15RUQ3224635	15RUQ3254170
15RUP3493450	15STR2885505	15RUR3455070	15RUQ3244635	15RUQ3274170
15RUP3513450	15STR2895505	15RUR3465070	15RUQ3254635	15RUQ3284170
15RUP3523450	15STR2915505	15RUR3485070	15RUQ3274635	15RUQ3304170
15RUP3543450	15STR2925505	15RUR3495070	15RUQ3284635	15RUQ3314170
15RUP3553450	15STR2945505	15RUR3515070	15RUQ3304635	15RUQ3334170

15RUP3573450	15STR2955505	15RUR3525070	15RUQ3314635	15RUQ3344170
15RUP3583450	15STR2975505	15RUR3545070	15RUQ3334635	15RUQ3364170
15RUP3603450	15STR2985505	15RUR3555070	15RUQ3344635	15RUQ3374170
15RUP3613450	15SUR3005505	15RUR3575070	15RUQ3364635	15RUQ3394170
15RUP3633450	15SUR3015505	15RUR3585070	15RUQ3374635	15RUQ3404170
15RUP3643450	15SUR3035505	15RUR3605070	15RUQ3394635	15RUQ3424170
15RUP3663450	15SUR3045505	15RUR3615070	15RUQ3404635	15RUQ3434170
15RUP3673450	15SUR3065505	15RUR3635070	15RUQ3424635	15RUQ3454170
15RUP3693450	15SUR3075505	15RUR3645070	15RUQ3434635	15RUQ3464170
15RUP3703450	15SUR3095505	15RUR3665070	15RUQ3454635	15RUQ3484170
15RUP3723450	15SUR3105505	15RUR3675070	15RUQ3464635	15RUQ3494170
15RUP3733450	15SUR3125505	15RUR3695070	15RUQ3484635	15RUQ3514170
15RUP3753450	15SUR3135505	15RUR3705070	15RUQ3494635	15RUQ3524170
15RUP3763450	15SUR3155505	15RUR3725070	15RUQ3514635	15RUQ3544170
15RUP3783450	15SUR3165505	15RUR3735070	15RUQ3524635	15RUQ3554170
15RUP3793450	15SUR3185505	15RUR3755070	15RUQ3544635	15RUQ3574170
15RUP3813450	15SUR3195505	15RUR3765070	15RUQ3554635	15RUQ3584170
15RUP3823450	15SUR3215505	15RUR3785070	15RUQ3574635	15RUQ3604170
15RUP3843450	15SUR3225505	15RUR3795070	15RUQ3584635	15RUQ3614170
15RUP3853450	15SUR3245505	15RUR3815070	15RUQ3604635	15RUQ3634170
15RUP3873450	15SUR3255505	15RUR3825070	15RUQ3614635	15RUQ3644170
15RUP3883450	15SUR3275505	15RUR3845070	15RUQ3634635	15RUQ3664170
15RUP3903450	15SUR3285505	15RUR3855070	15RUQ3644635	15RUQ3674170
15RUP3913450	15SUR3305505	15RUR3875070	15RUQ3664635	15RUQ3694170
15RUP3933450	15SUR3315505	15RUR3885070	15RUQ3674635	15RUQ3704170
15RUP3943450	15SUR3335505	15RUR3905070	15RUQ3694635	15RUQ3724170
15RUP3963450	15SUR3345505	15RUR3915070	15RUQ3704635	15RUQ3734170
15RUP3973450	15SUR3365505	15RUR3935070	15RUQ3724635	15RUQ3754170
15RUP3993450	15SUR3375505	15RUR3945070	15RUQ3734635	15RUQ3764170
15RVP4003450	15SUR3395505	15RUR3965070	15RUQ3754635	15RUQ3784170
15RVP4023450	15SUR3405505	15RUR3975070	15RUQ3764635	15RUQ3794170
15RVP4033450	15SUR3425505	15RUR3995070	15RUQ3784635	15RUQ3814170
15RVP4053450	15SUR3435505	15RVR4005070	15RUQ3794635	15RUQ3824170
15RVP4063450	14SQA2055520	15RVR4025070	15RUQ3814635	15RUQ3844170
15RVP4083450	14SQA2075520	15RVR4035070	15RUQ3824635	15RUQ3854170
15RVP4093450	14SQA2085520	15RVR4055070	15RUQ3844635	15RUQ3874170
15RVP4113450	14SQA2105520	15RVR4065070	15RUQ3854635	15RUQ3884170
15RVP4123450	14SQA2115520	15RTR2255085	15RUQ3874635	15RUQ3904170
15RUP3303465	14SQA2135520	15RTR2265085	15RUQ3884635	15RUQ3914170
15RUP3313465	14SQA2145520	15RTR2285085	15RUQ3904635	15RUQ3934170

15RUP3333465	14SQA2165520	15RTR2295085	15RUQ3914635	15RUQ3944170
15RUP3343465	15STR2175520	15RTR2315085	15RUQ3934635	15RUQ3964170
15RUP3363465	15STR2195520	15RTR2325085	15RUQ3944635	15RUQ3974170
15RUP3373465	15STR2205520	15RTR2345085	15RUQ3964635	15RUQ3994170
15RUP3393465	15STR2225520	15RTR2355085	15RUQ3974635	15RVQ4004170
15RUP3403465	15STR2235520	15RTR2375085	15RUQ3994635	15RVQ4024170
15RUP3423465	15STR2255520	15RTR2385085	15RVQ4004635	15RVQ4034170
15RUP3433465	15STR2265520	15RTR2405085	15RVQ4024635	15RVQ4054170
15RUP3453465	15STR2285520	15RTR2415085	15RVQ4034635	15RVQ4064170
15RUP3463465	15STR2295520	15RTR2435085	15RVQ4054635	15RVQ4084170
15RUP3483465	15STR2315520	15RTR2445085	15RVQ4064635	15RVQ4094170
15RUP3493465	15STR2325520	15RTR2465085	15RVQ4084635	15RVQ4114170
15RUP3513465	15STR2345520	15RTR2475085	15RVQ4094635	15RVQ4124170
15RUP3523465	15STR2355520	15RTR2495085	15RTQ2414650	15RVQ4144170
15RUP3543465	15STR2375520	15RTR2505085	15RTQ2434650	15RVQ4154170
15RUP3553465	15STR2385520	15RTR2525085	15RTQ2444650	15RVQ4174170
15RUP3573465	15STR2405520	15RTR2535085	15RTQ2464650	15RVQ4184170
15RUP3583465	15STR2415520	15RTR2555085	15RTQ2474650	15RVQ4204170
15RUP3603465	15STR2435520	15RTR2565085	15RTQ2494650	15RTQ2954185
15RUP3613465	15STR2445520	15RTR2585085	15RTQ2504650	15RTQ2974185
15RUP3633465	15STR2465520	15RTR2595085	15RTQ2524650	15RTQ2984185
15RUP3643465	15STR2475520	15RTR2615085	15RTQ2534650	15RUQ3004185
15RUP3663465	15STR2495520	15RTR2625085	15RTQ2554650	15RUQ3014185
15RUP3673465	15STR2505520	15RTR2645085	15RTQ2564650	15RUQ3034185
15RUP3693465	15STR2525520	15RTR2655085	15RTQ2584650	15RUQ3044185
15RUP3703465	15STR2535520	15RTR2675085	15RTQ2594650	15RUQ3064185
15RUP3723465	15STR2555520	15RTR2685085	15RTQ2614650	15RUQ3074185
15RUP3733465	15STR2565520	15RTR2705085	15RTQ2624650	15RUQ3094185
15RUP3753465	15STR2585520	15RTR2715085	15RTQ2644650	15RUQ3104185
15RUP3763465	15STR2595520	15RTR2735085	15RTQ2654650	15RUQ3124185
15RUP3783465	15STR2615520	15RTR2745085	15RTQ2674650	15RUQ3134185
15RUP3793465	15STR2625520	15RTR2765085	15RTQ2684650	15RUQ3154185
15RUP3813465	15STR2645520	15RTR2775085	15RTQ2704650	15RUQ3164185
15RUP3823465	15STR2655520	15RTR2795085	15RTQ2714650	15RUQ3184185
15RUP3843465	15STR2675520	15RTR2805085	15RTQ2734650	15RUQ3194185
15RUP3853465	15STR2685520	15RTR2825085	15RTQ2744650	15RUQ3214185
15RUP3873465	15STR2705520	15RTR2835085	15RTQ2764650	15RUQ3224185
15RUP3883465	15STR2715520	15RTR2855085	15RTQ2774650	15RUQ3244185
15RUP3903465	15STR2735520	15RTR2865085	15RTQ2794650	15RUQ3254185
15RUP3913465	15STR2745520	15RTR2885085	15RTQ2804650	15RUQ3274185



15RUP3933465	15STR2765520	15RTR2895085	15RTQ2824650	15RUQ3284185
15RUP3943465	15STR2775520	15RTR2915085	15RTQ2834650	15RUQ3304185
15RUP3963465	15STR2795520	15RTR2925085	15RTQ2854650	15RUQ3314185
15RUP3973465	15STR2805520	15RTR2945085	15RTQ2864650	15RUQ3334185
15RUP3993465	15STR2825520	15RTR2955085	15RTQ2884650	15RUQ3344185
15RVP4003465	15STR2835520	15RTR2975085	15RTQ2894650	15RUQ3364185
15RVP4023465	15STR2855520	15RTR2985085	15RTQ2914650	15RUQ3374185
15RVP4033465	15STR2865520	15RUR3005085	15RTQ2924650	15RUQ3394185
15RVP4053465	15STR2885520	15RUR3015085	15RTQ2944650	15RUQ3404185
15RVP4063465	15STR2895520	15RUR3035085	15RTQ2954650	15RUQ3424185
15RVP4083465	15STR2915520	15RUR3045085	15RTQ2974650	15RUQ3434185
15RVP4093465	15STR2925520	15RUR3065085	15RTQ2984650	15RUQ3454185
15RVP4113465	15STR2945520	15RUR3075085	15RUQ3004650	15RUQ3464185
15RVP4123465	15STR2955520	15RUR3095085	15RUQ3014650	15RUQ3484185
15RVP4143465	15STR2975520	15RUR3105085	15RUQ3034650	15RUQ3494185
15RVP4153465	15STR2985520	15RUR3125085	15RUQ3044650	15RUQ3514185
15RUP3303480	15SUR3005520	15RUR3135085	15RUQ3064650	15RUQ3524185
15RUP3313480	15SUR3015520	15RUR3155085	15RUQ3074650	15RUQ3544185
15RUP3333480	15SUR3035520	15RUR3165085	15RUQ3094650	15RUQ3554185
15RUP3343480	15SUR3045520	15RUR3185085	15RUQ3104650	15RUQ3574185
15RUP3363480	15SUR3065520	15RUR3195085	15RUQ3124650	15RUQ3584185
15RUP3373480	15SUR3075520	15RUR3215085	15RUQ3134650	15RUQ3604185
15RUP3393480	15SUR3095520	15RUR3225085	15RUQ3154650	15RUQ3614185
15RUP3403480	15SUR3105520	15RUR3245085	15RUQ3164650	15RUQ3634185
15RUP3423480	15SUR3125520	15RUR3255085	15RUQ3184650	15RUQ3644185
15RUP3433480	15SUR3135520	15RUR3275085	15RUQ3194650	15RUQ3664185
15RUP3453480	15SUR3155520	15RUR3285085	15RUQ3214650	15RUQ3674185
15RUP3463480	15SUR3165520	15RUR3305085	15RUQ3224650	15RUQ3694185
15RUP3483480	15SUR3185520	15RUR3315085	15RUQ3244650	15RUQ3704185
15RUP3493480	15SUR3195520	15RUR3335085	15RUQ3254650	15RUQ3724185
15RUP3513480	15SUR3215520	15RUR3345085	15RUQ3274650	15RUQ3734185
15RUP3523480	15SUR3225520	15RUR3365085	15RUQ3284650	15RUQ3754185
15RUP3543480	15SUR3245520	15RUR3375085	15RUQ3304650	15RUQ3764185
15RUP3553480	15SUR3255520	15RUR3395085	15RUQ3314650	15RUQ3784185
15RUP3573480	15SUR3275520	15RUR3405085	15RUQ3334650	15RUQ3794185
15RUP3583480	15SUR3285520	15RUR3425085	15RUQ3344650	15RUQ3814185
15RUP3603480	15SUR3305520	15RUR3435085	15RUQ3364650	15RUQ3824185
15RUP3613480	15SUR3315520	15RUR3455085	15RUQ3374650	15RUQ3844185
15RUP3633480	15SUR3335520	15RUR3465085	15RUQ3394650	15RUQ3854185
15RUP3643480	15SUR3345520	15RUR3485085	15RUQ3404650	15RUQ3874185

15RUP3663480	15SUR3365520	15RUR3495085	15RUQ3424650	15RUQ3884185
15RUP3673480	15SUR3375520	15RUR3515085	15RUQ3434650	15RUQ3904185
15RUP3693480	15SUR3395520	15RUR3525085	15RUQ3454650	15RUQ3914185
15RUP3703480	15SUR3405520	15RUR3545085	15RUQ3464650	15RUQ3934185
15RUP3723480	14SQA2045535	15RUR3555085	15RUQ3484650	15RUQ3944185
15RUP3733480	14SQA2055535	15RUR3575085	15RUQ3494650	15RUQ3964185
15RUP3753480	14SQA2075535	15RUR3585085	15RUQ3514650	15RUQ3974185
15RUP3763480	14SQA2085535	15RUR3605085	15RUQ3524650	15RUQ3994185
15RUP3783480	14SQA2105535	15RUR3615085	15RUQ3544650	15RVQ4004185
15RUP3793480	14SQA2115535	15RUR3635085	15RUQ3554650	15RVQ4024185
15RUP3813480	14SQA2135535	15RUR3645085	15RUQ3574650	15RVQ4034185
15RUP3823480	14SQA2145535	15RUR3665085	15RUQ3584650	15RVQ4054185
15RUP3843480	14SQA2165535	15RUR3675085	15RUQ3604650	15RVQ4064185
15RUP3853480	15STR2175535	15RUR3695085	15RUQ3614650	15RVQ4084185
15RUP3873480	15STR2195535	15RUR3705085	15RUQ3634650	15RVQ4094185
15RUP3883480	15STR2205535	15RUR3725085	15RUQ3644650	15RVQ4114185
15RUP3903480	15STR2225535	15RUR3735085	15RUQ3664650	15RVQ4124185
15RUP3913480	15STR2235535	15RUR3755085	15RUQ3674650	15RVQ4144185
15RUP3933480	15STR2255535	15RUR3765085	15RUQ3694650	15RVQ4154185
15RUP3943480	15STR2265535	15RUR3785085	15RUQ3704650	15RVQ4174185
15RUP3963480	15STR2285535	15RUR3795085	15RUQ3724650	15RVQ4184185
15RUP3973480	15STR2295535	15RUR3815085	15RUQ3734650	15RVQ4204185
15RUP3993480	15STR2315535	15RUR3825085	15RUQ3754650	15RTQ2954200
15RVP4003480	15STR2325535	15RUR3845085	15RUQ3764650	15RTQ2974200
15RVP4023480	15STR2345535	15RUR3855085	15RUQ3784650	15RTQ2984200
15RVP4033480	15STR2355535	15RUR3875085	15RUQ3794650	15RUQ3004200
15RVP4053480	15STR2375535	15RUR3885085	15RUQ3814650	15RUQ3014200
15RVP4063480	15STR2385535	15RUR3905085	15RUQ3824650	15RUQ3034200
15RVP4083480	15STR2405535	15RUR3915085	15RUQ3844650	15RUQ3044200
15RVP4093480	15STR2415535	15RUR3935085	15RUQ3854650	15RUQ3064200
15RVP4113480	15STR2435535	15RUR3945085	15RUQ3874650	15RUQ3074200
15RVP4123480	15STR2445535	15RUR3965085	15RUQ3884650	15RUQ3094200
15RVP4143480	15STR2465535	15RUR3975085	15RUQ3904650	15RUQ3104200
15RVP4153480	15STR2475535	15RUR3995085	15RUQ3914650	15RUQ3124200
15RUP3303495	15STR2495535	15RVR4005085	15RUQ3934650	15RUQ3134200
15RUP3313495	15STR2505535	15RVR4025085	15RUQ3944650	15RUQ3154200
15RUP3333495	15STR2525535	15RVR4035085	15RUQ3964650	15RUQ3164200
15RUP3343495	15STR2535535	15RVR4055085	15RUQ3974650	15RUQ3184200
15RUP3363495	15STR2555535	15RVR4065085	15RUQ3994650	15RUQ3194200
15RUP3373495	15STR2565535	15RTR2255100	15RVQ4004650	15RUQ3214200

15RUP3393495	15STR2585535	15RTR2265100	15RVQ4024650	15RUQ3224200
15RUP3403495	15STR2595535	15RTR2285100	15RVQ4034650	15RUQ3244200
15RUP3423495	15STR2615535	15RTR2295100	15RVQ4054650	15RUQ3254200
15RUP3433495	15STR2625535	15RTR2315100	15RVQ4064650	15RUQ3274200
15RUP3453495	15STR2645535	15RTR2325100	15RVQ4084650	15RUQ3284200
15RUP3463495	15STR2655535	15RTR2345100	15RVQ4094650	15RUQ3304200
15RUP3483495	15STR2675535	15RTR2355100	15RTQ2434665	15RUQ3314200
15RUP3493495	15STR2685535	15RTR2375100	15RTQ2444665	15RUQ3334200
15RUP3513495	15STR2705535	15RTR2385100	15RTQ2464665	15RUQ3344200
15RUP3523495	15STR2715535	15RTR2405100	15RTQ2474665	15RUQ3364200
15RUP3543495	15STR2735535	15RTR2415100	15RTQ2494665	15RUQ3374200
15RUP3553495	15STR2745535	15RTR2435100	15RTQ2504665	15RUQ3394200
15RUP3573495	15STR2765535	15RTR2445100	15RTQ2524665	15RUQ3404200
15RUP3583495	15STR2775535	15RTR2465100	15RTQ2534665	15RUQ3424200
15RUP3603495	15STR2795535	15RTR2475100	15RTQ2554665	15RUQ3434200
15RUP3613495	15STR2805535	15RTR2495100	15RTQ2564665	15RUQ3454200
15RUP3633495	15STR2825535	15RTR2505100	15RTQ2584665	15RUQ3464200
15RUP3643495	15STR2835535	15RTR2525100	15RTQ2594665	15RUQ3484200
15RUP3663495	15STR2855535	15RTR2535100	15RTQ2614665	15RUQ3494200
15RUP3673495	15STR2865535	15RTR2555100	15RTQ2624665	15RUQ3514200
15RUP3693495	15STR2885535	15RTR2565100	15RTQ2644665	15RUQ3524200
15RUP3703495	15STR2895535	15RTR2585100	15RTQ2654665	15RUQ3544200
15RUP3723495	15STR2915535	15RTR2595100	15RTQ2674665	15RUQ3554200
15RUP3733495	15STR2925535	15RTR2615100	15RTQ2684665	15RUQ3574200
15RUP3753495	15STR2945535	15RTR2625100	15RTQ2704665	15RUQ3584200
15RUP3763495	15STR2955535	15RTR2645100	15RTQ2714665	15RUQ3604200
15RUP3783495	15STR2975535	15RTR2655100	15RTQ2734665	15RUQ3614200
15RUP3793495	15STR2985535	15RTR2675100	15RTQ2744665	15RUQ3634200
15RUP3813495	15SUR3005535	15RTR2685100	15RTQ2764665	15RUQ3644200
15RUP3823495	15SUR3015535	15RTR2705100	15RTQ2774665	15RUQ3664200
15RUP3843495	15SUR3035535	15RTR2715100	15RTQ2794665	15RUQ3674200
15RUP3853495	15SUR3045535	15RTR2735100	15RTQ2804665	15RUQ3694200
15RUP3873495	15SUR3065535	15RTR2745100	15RTQ2824665	15RUQ3704200
15RUP3883495	15SUR3075535	15RTR2765100	15RTQ2834665	15RUQ3724200
15RUP3903495	15SUR3095535	15RTR2775100	15RTQ2854665	15RUQ3734200
15RUP3913495	15SUR3105535	15RTR2795100	15RTQ2864665	15RUQ3754200
15RUP3933495	15SUR3125535	15RTR2805100	15RTQ2884665	15RUQ3764200
15RUP3943495	15SUR3135535	15RTR2825100	15RTQ2894665	15RUQ3784200
15RUP3963495	15SUR3155535	15RTR2835100	15RTQ2914665	15RUQ3794200
15RUP3973495	15SUR3165535	15RTR2855100	15RTQ2924665	15RUQ3814200

15RUP3993495	15SUR3185535	15RTR2865100	15RTQ2944665	15RUQ3824200
15RVP4003495	15SUR3195535	15RTR2885100	15RTQ2954665	15RUQ3844200
15RVP4023495	15SUR3215535	15RTR2895100	15RTQ2974665	15RUQ3854200
15RVP4033495	15SUR3225535	15RTR2915100	15RTQ2984665	15RUQ3874200
15RVP4053495	15SUR3245535	15RTR2925100	15RUQ3004665	15RUQ3884200
15RVP4063495	15SUR3255535	15RTR2945100	15RUQ3014665	15RUQ3904200
15RVP4083495	15SUR3275535	15RTR2955100	15RUQ3034665	15RUQ3914200
15RVP4093495	15SUR3285535	15RTR2975100	15RUQ3044665	15RUQ3934200
15RVP4113495	15SUR3305535	15RTR2985100	15RUQ3064665	15RUQ3944200
15RVP4123495	15SUR3315535	15RUR3005100	15RUQ3074665	15RUQ3964200
15RVP4143495	15SUR3335535	15RUR3015100	15RUQ3094665	15RUQ3974200
15RVP4153495	15SUR3345535	15RUR3035100	15RUQ3104665	15RUQ3994200
15RUP3303510	15SUR3365535	15RUR3045100	15RUQ3124665	15RVQ4004200
15RUP3313510	15SUR3375535	15RUR3065100	15RUQ3134665	15RVQ4024200
15RUP3333510	15SUR3395535	15RUR3075100	15RUQ3154665	15RVQ4034200
15RUP3343510	14SQA2045550	15RUR3095100	15RUQ3164665	15RVQ4054200
15RUP3363510	14SQA2055550	15RUR3105100	15RUQ3184665	15RVQ4064200
15RUP3373510	14SQA2075550	15RUR3125100	15RUQ3194665	15RVQ4084200
15RUP3393510	14SQA2085550	15RUR3135100	15RUQ3214665	15RVQ4094200
15RUP3403510	14SQA2105550	15RUR3155100	15RUQ3224665	15RVQ4114200
15RUP3423510	14SQA2115550	15RUR3165100	15RUQ3244665	15RVQ4124200
15RUP3433510	14SQA2135550	15RUR3185100	15RUQ3254665	15RVQ4144200
15RUP3453510	14SQA2145550	15RUR3195100	15RUQ3274665	15RVQ4154200
15RUP3463510	14SQA2165550	15RUR3215100	15RUQ3284665	15RVQ4174200
15RUP3483510	15STR2175550	15RUR3225100	15RUQ3304665	15RVQ4184200
15RUP3493510	15STR2195550	15RUR3245100	15RUQ3314665	15RVQ4204200
15RUP3513510	15STR2205550	15RUR3255100	15RUQ3334665	15RTQ2954215
15RUP3523510	15STR2225550	15RUR3275100	15RUQ3344665	15RTQ2974215
15RUP3543510	15STR2235550	15RUR3285100	15RUQ3364665	15RTQ2984215
15RUP3553510	15STR2255550	15RUR3305100	15RUQ3374665	15RUQ3004215
15RUP3573510	15STR2265550	15RUR3315100	15RUQ3394665	15RUQ3014215
15RUP3583510	15STR2285550	15RUR3335100	15RUQ3404665	15RUQ3034215
15RUP3603510	15STR2295550	15RUR3345100	15RUQ3424665	15RUQ3044215
15RUP3613510	15STR2315550	15RUR3365100	15RUQ3434665	15RUQ3064215
15RUP3633510	15STR2325550	15RUR3375100	15RUQ3454665	15RUQ3074215
15RUP3643510	15STR2345550	15RUR3395100	15RUQ3464665	15RUQ3094215
15RUP3663510	15STR2355550	15RUR3405100	15RUQ3484665	15RUQ3104215
15RUP3673510	15STR2375550	15RUR3425100	15RUQ3494665	15RUQ3124215
15RUP3693510	15STR2385550	15RUR3435100	15RUQ3514665	15RUQ3134215
15RUP3703510	15STR2405550	15RUR3455100	15RUQ3524665	15RUQ3154215

15RUP3723510	15STR2415550	15RUR3465100	15RUQ3544665	15RUQ3164215
15RUP3733510	15STR2435550	15RUR3485100	15RUQ3554665	15RUQ3184215
15RUP3753510	15STR2445550	15RUR3495100	15RUQ3574665	15RUQ3194215
15RUP3763510	15STR2465550	15RUR3515100	15RUQ3584665	15RUQ3214215
15RUP3783510	15STR2475550	15RUR3525100	15RUQ3604665	15RUQ3224215
15RUP3793510	15STR2495550	15RUR3545100	15RUQ3614665	15RUQ3244215
15RUP3813510	15STR2505550	15RUR3555100	15RUQ3634665	15RUQ3254215
15RUP3823510	15STR2525550	15RUR3575100	15RUQ3644665	15RUQ3274215
15RUP3843510	15STR2535550	15RUR3585100	15RUQ3664665	15RUQ3284215
15RUP3853510	15STR2555550	15RUR3605100	15RUQ3674665	15RUQ3304215
15RUP3873510	15STR2565550	15RUR3615100	15RUQ3694665	15RUQ3314215
15RUP3883510	15STR2585550	15RUR3635100	15RUQ3704665	15RUQ3334215
15RUP3903510	15STR2595550	15RUR3645100	15RUQ3724665	15RUQ3344215
15RUP3913510	15STR2615550	15RUR3665100	15RUQ3734665	15RUQ3364215
15RUP3933510	15STR2625550	15RUR3675100	15RUQ3754665	15RUQ3374215
15RUP3943510	15STR2645550	15RUR3695100	15RUQ3764665	15RUQ3394215
15RUP3963510	15STR2655550	15RUR3705100	15RUQ3784665	15RUQ3404215
15RUP3973510	15STR2675550	15RUR3725100	15RUQ3794665	15RUQ3424215
15RUP3993510	15STR2685550	15RUR3735100	15RUQ3814665	15RUQ3434215
15RVP4003510	15STR2705550	15RUR3755100	15RUQ3824665	15RUQ3454215
15RVP4023510	15STR2715550	15RUR3765100	15RUQ3844665	15RUQ3464215
15RVP4033510	15STR2735550	15RUR3785100	15RUQ3854665	15RUQ3484215
15RVP4053510	15STR2745550	15RUR3795100	15RUQ3874665	15RUQ3494215
15RVP4063510	15STR2765550	15RUR3815100	15RUQ3884665	15RUQ3514215
15RVP4083510	15STR2775550	15RUR3825100	15RUQ3904665	15RUQ3524215
15RVP4093510	15STR2795550	15RUR3845100	15RUQ3914665	15RUQ3544215
15RVP4113510	15STR2805550	15RUR3855100	15RUQ3934665	15RUQ3554215
15RVP4123510	15STR2825550	15RUR3875100	15RUQ3944665	15RUQ3574215
15RVP4143510	15STR2835550	15RUR3885100	15RUQ3964665	15RUQ3584215
15RVP4153510	15STR2855550	15RUR3905100	15RUQ3974665	15RUQ3604215
15RUP3303525	15STR2865550	15RUR3915100	15RUQ3994665	15RUQ3614215
15RUP3313525	15STR2885550	15RUR3935100	15RVQ4004665	15RUQ3634215
15RUP3333525	15STR2895550	15RUR3945100	15RVQ4024665	15RUQ3644215
15RUP3343525	15STR2915550	15RUR3965100	15RVQ4034665	15RUQ3664215
15RUP3363525	15STR2925550	15RUR3975100	15RVQ4054665	15RUQ3674215
15RUP3373525	15STR2945550	15RUR3995100	15RVQ4064665	15RUQ3694215
15RUP3393525	15STR2955550	15RVR4005100	15RVQ4084665	15RUQ3704215
15RUP3403525	15STR2975550	15RVR4025100	15RTQ2444680	15RUQ3724215
15RUP3423525	15STR2985550	15RVR4035100	15RTQ2464680	15RUQ3734215
15RUP3433525	15SUR3005550	15RVR4055100	15RTQ2474680	15RUQ3754215

15RUP3453525	15SUR3015550	15RVR4065100	15RTQ2494680	15RUQ3764215
15RUP3463525	15SUR3035550	15RTR2255115	15RTQ2504680	15RUQ3784215
15RUP3483525	15SUR3045550	15RTR2265115	15RTQ2524680	15RUQ3794215
15RUP3493525	15SUR3065550	15RTR2285115	15RTQ2534680	15RUQ3814215
15RUP3513525	15SUR3075550	15RTR2295115	15RTQ2554680	15RUQ3824215
15RUP3523525	15SUR3095550	15RTR2315115	15RTQ2564680	15RUQ3844215
15RUP3543525	15SUR3105550	15RTR2325115	15RTQ2584680	15RUQ3854215
15RUP3553525	15SUR3125550	15RTR2345115	15RTQ2594680	15RUQ3874215
15RUP3573525	15SUR3135550	15RTR2355115	15RTQ2614680	15RUQ3884215
15RUP3583525	15SUR3155550	15RTR2375115	15RTQ2624680	15RUQ3904215
15RUP3603525	15SUR3165550	15RTR2385115	15RTQ2644680	15RUQ3914215
15RUP3613525	15SUR3185550	15RTR2405115	15RTQ2654680	15RUQ3934215
15RUP3633525	15SUR3195550	15RTR2415115	15RTQ2674680	15RUQ3944215
15RUP3643525	15SUR3215550	15RTR2435115	15RTQ2684680	15RUQ3964215
15RUP3663525	15SUR3225550	15RTR2445115	15RTQ2704680	15RUQ3974215
15RUP3673525	15SUR3245550	15RTR2465115	15RTQ2714680	15RUQ3994215
15RUP3693525	15SUR3255550	15RTR2475115	15RTQ2734680	15RVQ4004215
15RUP3703525	15SUR3275550	15RTR2495115	15RTQ2744680	15RVQ4024215
15RUP3723525	15SUR3285550	15RTR2505115	15RTQ2764680	15RVQ4034215
15RUP3733525	15SUR3305550	15RTR2525115	15RTQ2774680	15RVQ4054215
15RUP3753525	15SUR3315550	15RTR2535115	15RTQ2794680	15RVQ4064215
15RUP3763525	15SUR3335550	15RTR2555115	15RTQ2804680	15RVQ4084215
15RUP3783525	15SUR3345550	15RTR2565115	15RTQ2824680	15RVQ4094215
15RUP3793525	15SUR3365550	15RTR2585115	15RTQ2834680	15RVQ4114215
15RUP3813525	15SUR3375550	15RTR2595115	15RTQ2854680	15RVQ4124215
15RUP3823525	15SUR3395550	15RTR2615115	15RTQ2864680	15RVQ4144215
15RUP3843525	14SQA2045565	15RTR2625115	15RTQ2884680	15RVQ4154215
15RUP3853525	14SQA2055565	15RTR2645115	15RTQ2894680	15RVQ4174215
15RUP3873525	14SQA2075565	15RTR2655115	15RTQ2914680	15RVQ4184215
15RUP3883525	14SQA2085565	15RTR2675115	15RTQ2924680	15RVQ4204215
15RUP3903525	14SQA2105565	15RTR2685115	15RTQ2944680	15RTQ2954230
15RUP3913525	14SQA2115565	15RTR2705115	15RTQ2954680	15RTQ2974230
15RUP3933525	14SQA2135565	15RTR2715115	15RTQ2974680	15RTQ2984230
15RUP3943525	14SQA2145565	15RTR2735115	15RTQ2984680	15RUQ3004230
15RUP3963525	14SQA2165565	15RTR2745115	15RUQ3004680	15RUQ3014230
15RUP3973525	15STR2175565	15RTR2765115	15RUQ3014680	15RUQ3034230
15RUP3993525	15STR2195565	15RTR2775115	15RUQ3034680	15RUQ3044230
15RVP4003525	15STR2205565	15RTR2795115	15RUQ3044680	15RUQ3064230
15RVP4023525	15STR2225565	15RTR2805115	15RUQ3064680	15RUQ3074230
15RVP4033525	15STR2235565	15RTR2825115	15RUQ3074680	15RUQ3094230



15RVP4053525	15STR2255565	15RTR2835115	15RUQ3094680	15RUQ3104230
15RVP4063525	15STR2265565	15RTR2855115	15RUQ3104680	15RUQ3124230
15RVP4083525	15STR2285565	15RTR2865115	15RUQ3124680	15RUQ3134230
15RVP4093525	15STR2295565	15RTR2885115	15RUQ3134680	15RUQ3154230
15RVP4113525	15STR2315565	15RTR2895115	15RUQ3154680	15RUQ3164230
15RVP4123525	15STR2325565	15RTR2915115	15RUQ3164680	15RUQ3184230
15RVP4143525	15STR2345565	15RTR2925115	15RUQ3184680	15RUQ3194230
15RVP4153525	15STR2355565	15RTR2945115	15RUQ3194680	15RUQ3214230
15RUP3303540	15STR2375565	15RTR2955115	15RUQ3214680	15RUQ3224230
15RUP3313540	15STR2385565	15RTR2975115	15RUQ3224680	15RUQ3244230
15RUP3333540	15STR2405565	15RTR2985115	15RUQ3244680	15RUQ3254230
15RUP3343540	15STR2415565	15RUR3005115	15RUQ3254680	15RUQ3274230
15RUP3363540	15STR2435565	15RUR3015115	15RUQ3274680	15RUQ3284230
15RUP3373540	15STR2445565	15RUR3035115	15RUQ3284680	15RUQ3304230
15RUP3393540	15STR2465565	15RUR3045115	15RUQ3304680	15RUQ3314230
15RUP3403540	15STR2475565	15RUR3065115	15RUQ3314680	15RUQ3334230
15RUP3423540	15STR2495565	15RUR3075115	15RUQ3334680	15RUQ3344230
15RUP3433540	15STR2505565	15RUR3095115	15RUQ3344680	15RUQ3364230
15RUP3453540	15STR2525565	15RUR3105115	15RUQ3364680	15RUQ3374230
15RUP3463540	15STR2535565	15RUR3125115	15RUQ3374680	15RUQ3394230
15RUP3483540	15STR2555565	15RUR3135115	15RUQ3394680	15RUQ3404230
15RUP3493540	15STR2565565	15RUR3155115	15RUQ3404680	15RUQ3424230
15RUP3513540	15STR2585565	15RUR3165115	15RUQ3424680	15RUQ3434230
15RUP3523540	15STR2595565	15RUR3185115	15RUQ3434680	15RUQ3454230
15RUP3543540	15STR2615565	15RUR3195115	15RUQ3454680	15RUQ3464230
15RUP3553540	15STR2625565	15RUR3215115	15RUQ3464680	15RUQ3484230
15RUP3573540	15STR2645565	15RUR3225115	15RUQ3484680	15RUQ3494230
15RUP3583540	15STR2655565	15RUR3245115	15RUQ3494680	15RUQ3514230
15RUP3603540	15STR2675565	15RUR3255115	15RUQ3514680	15RUQ3524230
15RUP3613540	15STR2685565	15RUR3275115	15RUQ3524680	15RUQ3544230
15RUP3633540	15STR2705565	15RUR3285115	15RUQ3544680	15RUQ3554230
15RUP3643540	15STR2715565	15RUR3305115	15RUQ3554680	15RUQ3574230
15RUP3663540	15STR2735565	15RUR3315115	15RUQ3574680	15RUQ3584230
15RUP3673540	15STR2745565	15RUR3335115	15RUQ3584680	15RUQ3604230
15RUP3693540	15STR2765565	15RUR3345115	15RUQ3604680	15RUQ3614230
15RUP3703540	15STR2775565	15RUR3365115	15RUQ3614680	15RUQ3634230
15RUP3723540	15STR2795565	15RUR3375115	15RUQ3634680	15RUQ3644230
15RUP3733540	15STR2805565	15RUR3395115	15RUQ3644680	15RUQ3664230
15RUP3753540	15STR2825565	15RUR3405115	15RUQ3664680	15RUQ3674230
15RUP3763540	15STR2835565	15RUR3425115	15RUQ3674680	15RUQ3694230

15RUP3783540	15STR2855565	15RUR3435115	15RUQ3694680	15RUQ3704230
15RUP3793540	15STR2865565	15RUR3455115	15RUQ3704680	15RUQ3724230
15RUP3813540	15STR2885565	15RUR3465115	15RUQ3724680	15RUQ3734230
15RUP3823540	15STR2895565	15RUR3485115	15RUQ3734680	15RUQ3754230
15RUP3843540	15STR2915565	15RUR3495115	15RUQ3754680	15RUQ3764230
15RUP3853540	15STR2925565	15RUR3515115	15RUQ3764680	15RUQ3784230
15RUP3873540	15STR2945565	15RUR3525115	15RUQ3784680	15RUQ3794230
15RUP3883540	15STR2955565	15RUR3545115	15RUQ3794680	15RUQ3814230
15RUP3903540	15STR2975565	15RUR3555115	15RUQ3814680	15RUQ3824230
15RUP3913540	15STR2985565	15RUR3575115	15RUQ3824680	15RUQ3844230
15RUP3933540	15SUR3005565	15RUR3585115	15RUQ3844680	15RUQ3854230
15RUP3943540	15SUR3015565	15RUR3605115	15RUQ3854680	15RUQ3874230
15RUP3963540	15SUR3035565	15RUR3615115	15RUQ3874680	15RUQ3884230
15RUP3973540	15SUR3045565	15RUR3635115	15RUQ3884680	15RUQ3904230
15RUP3993540	15SUR3065565	15RUR3645115	15RUQ3904680	15RUQ3914230
15RVP4003540	15SUR3075565	15RUR3665115	15RUQ3914680	15RUQ3934230
15RVP4023540	15SUR3095565	15RUR3675115	15RUQ3934680	15RUQ3944230
15RVP4033540	15SUR3105565	15RUR3695115	15RUQ3944680	15RUQ3964230
15RVP4053540	15SUR3125565	15RUR3705115	15RUQ3964680	15RUQ3974230
15RVP4063540	15SUR3135565	15RUR3725115	15RUQ3974680	15RUQ3994230
15RVP4083540	15SUR3155565	15RUR3735115	15RUQ3994680	15RVQ4004230
15RVP4093540	15SUR3165565	15RUR3755115	15RVQ4004680	15RVQ4024230
15RVP4113540	15SUR3185565	15RUR3765115	15RVQ4024680	15RVQ4034230
15RVP4123540	15SUR3195565	15RUR3785115	15RVQ4034680	15RVQ4054230
15RVP4143540	15SUR3215565	15RUR3795115	15RVQ4054680	15RVQ4064230
15RVP4153540	15SUR3225565	15RUR3815115	15RVQ4064680	15RVQ4084230
15RUP3303555	15SUR3245565	15RUR3825115	15RVQ4084680	15RVQ4094230
15RUP3313555	15SUR3255565	15RUR3845115	15RTQ2434695	15RVQ4114230
15RUP3333555	15SUR3275565	15RUR3855115	15RTQ2444695	15RVQ4124230
15RUP3343555	15SUR3285565	15RUR3875115	15RTQ2464695	15RVQ4144230
15RUP3363555	15SUR3305565	15RUR3885115	15RTQ2474695	15RVQ4154230
15RUP3373555	15SUR3315565	15RUR3905115	15RTQ2494695	15RVQ4174230
15RUP3393555	15SUR3335565	15RUR3915115	15RTQ2504695	15RVQ4184230
15RUP3403555	15SUR3345565	15RUR3935115	15RTQ2524695	15RVQ4204230
15RUP3423555	15SUR3365565	15RUR3945115	15RTQ2534695	15RTQ2954245
15RUP3433555	15SUR3375565	15RUR3965115	15RTQ2554695	15RTQ2974245
15RUP3453555	14SQA2045580	15RUR3975115	15RTQ2564695	15RTQ2984245
15RUP3463555	14SQA2055580	15RUR3995115	15RTQ2584695	15RUQ3004245
15RUP3483555	14SQA2075580	15RVR4005115	15RTQ2594695	15RUQ3014245
15RUP3493555	14SQA2085580	15RVR4025115	15RTQ2614695	15RUQ3034245

15RUP3513555	14SQA2105580	15RVR4035115	15RTQ2624695	15RUQ3044245
15RUP3523555	14SQA2115580	15RVR4055115	15RTQ2644695	15RUQ3064245
15RUP3543555	14SQA2135580	15RVR4065115	15RTQ2654695	15RUQ3074245
15RUP3553555	14SQA2145580	15RTR2255130	15RTQ2674695	15RUQ3094245
15RUP3573555	14SQA2165580	15RTR2265130	15RTQ2684695	15RUQ3104245
15RUP3583555	15STR2175580	15RTR2285130	15RTQ2704695	15RUQ3124245
15RUP3603555	15STR2195580	15RTR2295130	15RTQ2714695	15RUQ3134245
15RUP3613555	15STR2205580	15RTR2315130	15RTQ2734695	15RUQ3154245
15RUP3633555	15STR2225580	15RTR2325130	15RTQ2744695	15RUQ3164245
15RUP3643555	15STR2235580	15RTR2345130	15RTQ2764695	15RUQ3184245
15RUP3663555	15STR2255580	15RTR2355130	15RTQ2774695	15RUQ3194245
15RUP3673555	15STR2265580	15RTR2375130	15RTQ2794695	15RUQ3214245
15RUP3693555	15STR2285580	15RTR2385130	15RTQ2804695	15RUQ3224245
15RUP3703555	15STR2295580	15RTR2405130	15RTQ2824695	15RUQ3244245
15RUP3723555	15STR2315580	15RTR2415130	15RTQ2834695	15RUQ3254245
15RUP3733555	15STR2325580	15RTR2435130	15RTQ2854695	15RUQ3274245
15RUP3753555	15STR2345580	15RTR2445130	15RTQ2864695	15RUQ3284245
15RUP3763555	15STR2355580	15RTR2465130	15RTQ2884695	15RUQ3304245
15RUP3783555	15STR2375580	15RTR2475130	15RTQ2894695	15RUQ3314245
15RUP3793555	15STR2385580	15RTR2495130	15RTQ2914695	15RUQ3334245
15RUP3813555	15STR2405580	15RTR2505130	15RTQ2924695	15RUQ3344245
15RUP3823555	15STR2415580	15RTR2525130	15RTQ2944695	15RUQ3364245
15RUP3843555	15STR2435580	15RTR2535130	15RTQ2954695	15RUQ3374245
15RUP3853555	15STR2445580	15RTR2555130	15RTQ2974695	15RUQ3394245
15RUP3873555	15STR2465580	15RTR2565130	15RTQ2984695	15RUQ3404245
15RUP3883555	15STR2475580	15RTR2585130	15RUQ3004695	15RUQ3424245
15RUP3903555	15STR2495580	15RTR2595130	15RUQ3014695	15RUQ3434245
15RUP3913555	15STR2505580	15RTR2615130	15RUQ3034695	15RUQ3454245
15RUP3933555	15STR2525580	15RTR2625130	15RUQ3044695	15RUQ3464245
15RUP3943555	15STR2535580	15RTR2645130	15RUQ3064695	15RUQ3484245
15RUP3963555	15STR2555580	15RTR2655130	15RUQ3074695	15RUQ3494245
15RUP3973555	15STR2565580	15RTR2675130	15RUQ3094695	15RUQ3514245
15RUP3993555	15STR2585580	15RTR2685130	15RUQ3104695	15RUQ3524245
15RVP4003555	15STR2595580	15RTR2705130	15RUQ3124695	15RUQ3544245
15RVP4023555	15STR2615580	15RTR2715130	15RUQ3134695	15RUQ3554245
15RVP4033555	15STR2625580	15RTR2735130	15RUQ3154695	15RUQ3574245
15RVP4053555	15STR2645580	15RTR2745130	15RUQ3164695	15RUQ3584245
15RVP4063555	15STR2655580	15RTR2765130	15RUQ3184695	15RUQ3604245
15RVP4083555	15STR2675580	15RTR2775130	15RUQ3194695	15RUQ3614245
15RVP4093555	15STR2685580	15RTR2795130	15RUQ3214695	15RUQ3634245

15RVP4113555	15STR2705580	15RTR2805130	15RUQ3224695	15RUQ3644245
15RVP4123555	15STR2715580	15RTR2825130	15RUQ3244695	15RUQ3664245
15RVP4143555	15STR2735580	15RTR2835130	15RUQ3254695	15RUQ3674245
15RVP4153555	15STR2745580	15RTR2855130	15RUQ3274695	15RUQ3694245
15RVP4173555	15STR2765580	15RTR2865130	15RUQ3284695	15RUQ3704245
15RVP4183555	15STR2775580	15RTR2885130	15RUQ3304695	15RUQ3724245
15RUP3303570	15STR2795580	15RTR2895130	15RUQ3314695	15RUQ3734245
15RUP3313570	15STR2805580	15RTR2915130	15RUQ3334695	15RUQ3754245
15RUP3333570	15STR2825580	15RTR2925130	15RUQ3344695	15RUQ3764245
15RUP3343570	15STR2835580	15RTR2945130	15RUQ3364695	15RUQ3784245
15RUP3363570	15STR2855580	15RTR2955130	15RUQ3374695	15RUQ3794245
15RUP3373570	15STR2865580	15RTR2975130	15RUQ3394695	15RUQ3814245
15RUP3393570	15STR2885580	15RTR2985130	15RUQ3404695	15RUQ3824245
15RUP3403570	15STR2895580	15RUR3005130	15RUQ3424695	15RUQ3844245
15RUP3423570	15STR2915580	15RUR3015130	15RUQ3434695	15RUQ3854245
15RUP3433570	15STR2925580	15RUR3035130	15RUQ3454695	15RUQ3874245
15RUP3453570	15STR2945580	15RUR3045130	15RUQ3464695	15RUQ3884245
15RUP3463570	15STR2955580	15RUR3065130	15RUQ3484695	15RUQ3904245
15RUP3483570	15STR2975580	15RUR3075130	15RUQ3494695	15RUQ3914245
15RUP3493570	15STR2985580	15RUR3095130	15RUQ3514695	15RUQ3934245
15RUP3513570	15SUR3005580	15RUR3105130	15RUQ3524695	15RUQ3944245
15RUP3523570	15SUR3015580	15RUR3125130	15RUQ3544695	15RUQ3964245
15RUP3543570	15SUR3035580	15RUR3135130	15RUQ3554695	15RUQ3974245
15RUP3553570	15SUR3045580	15RUR3155130	15RUQ3574695	15RUQ3994245
15RUP3573570	15SUR3065580	15RUR3165130	15RUQ3584695	15RVQ4004245
15RUP3583570	15SUR3075580	15RUR3185130	15RUQ3604695	15RVQ4024245
15RUP3603570	15SUR3095580	15RUR3195130	15RUQ3614695	15RVQ4034245
15RUP3613570	15SUR3105580	15RUR3215130	15RUQ3634695	15RVQ4054245
15RUP3633570	15SUR3125580	15RUR3225130	15RUQ3644695	15RVQ4064245
15RUP3643570	15SUR3135580	15RUR3245130	15RUQ3664695	15RVQ4084245
15RUP3663570	15SUR3155580	15RUR3255130	15RUQ3674695	15RVQ4094245
15RUP3673570	15SUR3165580	15RUR3275130	15RUQ3694695	15RVQ4114245
15RUP3693570	15SUR3185580	15RUR3285130	15RUQ3704695	15RVQ4124245
15RUP3703570	15SUR3195580	15RUR3305130	15RUQ3724695	15RVQ4144245
15RUP3723570	15SUR3215580	15RUR3315130	15RUQ3734695	15RVQ4154245
15RUP3733570	15SUR3225580	15RUR3335130	15RUQ3754695	15RVQ4174245
15RUP3753570	15SUR3245580	15RUR3345130	15RUQ3764695	15RVQ4184245
15RUP3763570	15SUR3255580	15RUR3365130	15RUQ3784695	15RVQ4204245
15RUP3783570	15SUR3275580	15RUR3375130	15RUQ3794695	15RTQ2954260
15RUP3793570	15SUR3285580	15RUR3395130	15RUQ3814695	15RTQ2974260

15RUP3813570	15SUR3305580	15RUR3405130	15RUQ3824695	15RTQ2984260
15RUP3823570	15SUR3315580	15RUR3425130	15RUQ3844695	15RUQ3004260
15RUP3843570	15SUR3335580	15RUR3435130	15RUQ3854695	15RUQ3014260
15RUP3853570	15SUR3345580	15RUR3455130	15RUQ3874695	15RUQ3034260
15RUP3873570	15SUR3365580	15RUR3465130	15RUQ3884695	15RUQ3044260
15RUP3883570	14SQA2015595	15RUR3485130	15RUQ3904695	15RUQ3064260
15RUP3903570	14SQA2025595	15RUR3495130	15RUQ3914695	15RUQ3074260
15RUP3913570	14SQA2045595	15RUR3515130	15RUQ3934695	15RUQ3094260
15RUP3933570	14SQA2055595	15RUR3525130	15RUQ3944695	15RUQ3104260
15RUP3943570	14SQA2075595	15RUR3545130	15RUQ3964695	15RUQ3124260
15RUP3963570	14SQA2085595	15RUR3555130	15RUQ3974695	15RUQ3134260
15RUP3973570	14SQA2105595	15RUR3575130	15RUQ3994695	15RUQ3154260
15RUP3993570	14SQA2115595	15RUR3585130	15RVQ4004695	15RUQ3164260
15RVP4003570	14SQA2135595	15RUR3605130	15RVQ4024695	15RUQ3184260
15RVP4023570	14SQA2145595	15RUR3615130	15RVQ4034695	15RUQ3194260
15RVP4033570	14SQA2165595	15RUR3635130	15RVQ4054695	15RUQ3214260
15RVP4053570	15STR2175595	15RUR3645130	15RVQ4064695	15RUQ3224260
15RVP4063570	15STR2195595	15RUR3665130	15RVQ4084695	15RUQ3244260
15RVP4083570	15STR2205595	15RUR3675130	15RTQ2434710	15RUQ3254260
15RVP4093570	15STR2225595	15RUR3695130	15RTQ2444710	15RUQ3274260
15RVP4113570	15STR2235595	15RUR3705130	15RTQ2464710	15RUQ3284260
15RVP4123570	15STR2255595	15RUR3725130	15RTQ2474710	15RUQ3304260
15RVP4143570	15STR2265595	15RUR3735130	15RTQ2494710	15RUQ3314260
15RVP4153570	15STR2285595	15RUR3755130	15RTQ2504710	15RUQ3334260
15RVP4173570	15STR2295595	15RUR3765130	15RTQ2524710	15RUQ3344260
15RVP4183570	15STR2315595	15RUR3785130	15RTQ2534710	15RUQ3364260
15RUP3303585	15STR2325595	15RUR3795130	15RTQ2554710	15RUQ3374260
15RUP3313585	15STR2345595	15RUR3815130	15RTQ2564710	15RUQ3394260
15RUP3333585	15STR2355595	15RUR3825130	15RTQ2584710	15RUQ3404260
15RUP3343585	15STR2375595	15RUR3845130	15RTQ2594710	15RUQ3424260
15RUP3363585	15STR2385595	15RUR3855130	15RTQ2614710	15RUQ3434260
15RUP3373585	15STR2405595	15RUR3875130	15RTQ2624710	15RUQ3454260
15RUP3393585	15STR2415595	15RUR3885130	15RTQ2644710	15RUQ3464260
15RUP3403585	15STR2435595	15RUR3905130	15RTQ2654710	15RUQ3484260
15RUP3423585	15STR2445595	15RUR3915130	15RTQ2674710	15RUQ3494260
15RUP3433585	15STR2465595	15RUR3935130	15RTQ2684710	15RUQ3514260
15RUP3453585	15STR2475595	15RUR3945130	15RTQ2704710	15RUQ3524260
15RUP3463585	15STR2495595	15RUR3965130	15RTQ2714710	15RUQ3544260
15RUP3483585	15STR2505595	15RUR3975130	15RTQ2734710	15RUQ3554260
15RUP3493585	15STR2525595	15RUR3995130	15RTQ2744710	15RUQ3574260

15RUP3513585	15STR2535595	15RVR4005130	15RTQ2764710	15RUQ3584260
15RUP3523585	15STR2555595	15RVR4025130	15RTQ2774710	15RUQ3604260
15RUP3543585	15STR2565595	15RVR4035130	15RTQ2794710	15RUQ3614260
15RUP3553585	15STR2585595	15RTR2235145	15RTQ2804710	15RUQ3634260
15RUP3573585	15STR2595595	15RTR2255145	15RTQ2824710	15RUQ3644260
15RUP3583585	15STR2615595	15RTR2265145	15RTQ2834710	15RUQ3664260
15RUP3603585	15STR2625595	15RTR2285145	15RTQ2854710	15RUQ3674260
15RUP3613585	15STR2645595	15RTR2295145	15RTQ2864710	15RUQ3694260
15RUP3633585	15STR2655595	15RTR2315145	15RTQ2884710	15RUQ3704260
15RUP3643585	15STR2675595	15RTR2325145	15RTQ2894710	15RUQ3724260
15RUP3663585	15STR2685595	15RTR2345145	15RTQ2914710	15RUQ3734260
15RUP3673585	15STR2705595	15RTR2355145	15RTQ2924710	15RUQ3754260
15RUP3693585	15STR2715595	15RTR2375145	15RTQ2944710	15RUQ3764260
15RUP3703585	15STR2735595	15RTR2385145	15RTQ2954710	15RUQ3784260
15RUP3723585	15STR2745595	15RTR2405145	15RTQ2974710	15RUQ3794260
15RUP3733585	15STR2765595	15RTR2415145	15RTQ2984710	15RUQ3814260
15RUP3753585	15STR2775595	15RTR2435145	15RUQ3004710	15RUQ3824260
15RUP3763585	15STR2795595	15RTR2445145	15RUQ3014710	15RUQ3844260
15RUP3783585	15STR2805595	15RTR2465145	15RUQ3034710	15RUQ3854260
15RUP3793585	15STR2825595	15RTR2475145	15RUQ3044710	15RUQ3874260
15RUP3813585	15STR2835595	15RTR2495145	15RUQ3064710	15RUQ3884260
15RUP3823585	15STR2855595	15RTR2505145	15RUQ3074710	15RUQ3904260
15RUP3843585	15STR2865595	15RTR2525145	15RUQ3094710	15RUQ3914260
15RUP3853585	15STR2885595	15RTR2535145	15RUQ3104710	15RUQ3934260
15RUP3873585	15STR2895595	15RTR2555145	15RUQ3124710	15RUQ3944260
15RUP3883585	15STR2915595	15RTR2565145	15RUQ3134710	15RUQ3964260
15RUP3903585	15STR2925595	15RTR2585145	15RUQ3154710	15RUQ3974260
15RUP3913585	15STR2945595	15RTR2595145	15RUQ3164710	15RUQ3994260
15RUP3933585	15STR2955595	15RTR2615145	15RUQ3184710	15RVQ4004260
15RUP3943585	15STR2975595	15RTR2625145	15RUQ3194710	15RVQ4024260
15RUP3963585	15STR2985595	15RTR2645145	15RUQ3214710	15RVQ4034260
15RUP3973585	15SUR3005595	15RTR2655145	15RUQ3224710	15RVQ4054260
15RUP3993585	15SUR3015595	15RTR2675145	15RUQ3244710	15RVQ4064260
15RVP4003585	15SUR3035595	15RTR2685145	15RUQ3254710	15RVQ4084260
15RVP4023585	15SUR3045595	15RTR2705145	15RUQ3274710	15RVQ4094260
15RVP4033585	15SUR3065595	15RTR2715145	15RUQ3284710	15RVQ4114260
15RVP4053585	15SUR3075595	15RTR2735145	15RUQ3304710	15RVQ4124260
15RVP4063585	15SUR3095595	15RTR2745145	15RUQ3314710	15RVQ4144260
15RVP4083585	15SUR3105595	15RTR2765145	15RUQ3334710	15RVQ4154260
15RVP4093585	15SUR3125595	15RTR2775145	15RUQ3344710	15RVQ4174260



15RVP4113585	15SUR3135595	15RTR2795145	15RUQ3364710	15RVQ4184260
15RVP4123585	15SUR3155595	15RTR2805145	15RUQ3374710	15RVQ4204260
15RVP4143585	15SUR3165595	15RTR2825145	15RUQ3394710	15RTQ2954275
15RVP4153585	15SUR3185595	15RTR2835145	15RUQ3404710	15RTQ2974275
15RVP4173585	15SUR3195595	15RTR2855145	15RUQ3424710	15RTQ2984275
15RVP4183585	15SUR3215595	15RTR2865145	15RUQ3434710	15RUQ3004275
15RVP4203585	15SUR3225595	15RTR2885145	15RUQ3454710	15RUQ3014275
15RVP4213585	15SUR3245595	15RTR2895145	15RUQ3464710	15RUQ3034275
15RUP3303600	15SUR3255595	15RTR2915145	15RUQ3484710	15RUQ3044275
15RUP3313600	15SUR3275595	15RTR2925145	15RUQ3494710	15RUQ3064275
15RUP3333600	15SUR3285595	15RTR2945145	15RUQ3514710	15RUQ3074275
15RUP3343600	15SUR3305595	15RTR2955145	15RUQ3524710	15RUQ3094275
15RUP3363600	15SUR3315595	15RTR2975145	15RUQ3544710	15RUQ3104275
15RUP3373600	15SUR3335595	15RTR2985145	15RUQ3554710	15RUQ3124275
15RUP3393600	15SUR3345595	15RUR3005145	15RUQ3574710	15RUQ3134275
15RUP3403600	14SQA1995610	15RUR3015145	15RUQ3584710	15RUQ3154275
15RUP3423600	14SQA2015610	15RUR3035145	15RUQ3604710	15RUQ3164275
15RUP3433600	14SQA2025610	15RUR3045145	15RUQ3614710	15RUQ3184275
15RUP3453600	14SQA2045610	15RUR3065145	15RUQ3634710	15RUQ3194275
15RUP3463600	14SQA2055610	15RUR3075145	15RUQ3644710	15RUQ3214275
15RUP3483600	14SQA2075610	15RUR3095145	15RUQ3664710	15RUQ3224275
15RUP3493600	14SQA2085610	15RUR3105145	15RUQ3674710	15RUQ3244275
15RUP3513600	14SQA2105610	15RUR3125145	15RUQ3694710	15RUQ3254275
15RUP3523600	14SQA2115610	15RUR3135145	15RUQ3704710	15RUQ3274275
15RUP3543600	14SQA2135610	15RUR3155145	15RUQ3724710	15RUQ3284275
15RUP3553600	14SQA2145610	15RUR3165145	15RUQ3734710	15RUQ3304275
15RUP3573600	14SQA2165610	15RUR3185145	15RUQ3754710	15RUQ3314275
15RUP3583600	15STR2175610	15RUR3195145	15RUQ3764710	15RUQ3334275
15RUP3603600	15STR2195610	15RUR3215145	15RUQ3784710	15RUQ3344275
15RUP3613600	15STR2205610	15RUR3225145	15RUQ3794710	15RUQ3364275
15RUP3633600	15STR2225610	15RUR3245145	15RUQ3814710	15RUQ3374275
15RUP3643600	15STR2235610	15RUR3255145	15RUQ3824710	15RUQ3394275
15RUP3663600	15STR2255610	15RUR3275145	15RUQ3844710	15RUQ3404275
15RUP3673600	15STR2265610	15RUR3285145	15RUQ3854710	15RUQ3424275
15RUP3693600	15STR2285610	15RUR3305145	15RUQ3874710	15RUQ3434275
15RUP3703600	15STR2295610	15RUR3315145	15RUQ3884710	15RUQ3454275
15RUP3723600	15STR2315610	15RUR3335145	15RUQ3904710	15RUQ3464275
15RUP3733600	15STR2325610	15RUR3345145	15RUQ3914710	15RUQ3484275
15RUP3753600	15STR2345610	15RUR3365145	15RUQ3934710	15RUQ3494275
15RUP3763600	15STR2355610	15RUR3375145	15RUQ3944710	15RUQ3514275

15RUP3783600	15STR2375610	15RUR3395145	15RUQ3964710	15RUQ3524275
15RUP3793600	15STR2385610	15RUR3405145	15RUQ3974710	15RUQ3544275
15RUP3813600	15STR2405610	15RUR3425145	15RUQ3994710	15RUQ3554275
15RUP3823600	15STR2415610	15RUR3435145	15RVQ4004710	15RUQ3574275
15RUP3843600	15STR2435610	15RUR3455145	15RVQ4024710	15RUQ3584275
15RUP3853600	15STR2445610	15RUR3465145	15RVQ4034710	15RUQ3604275
15RUP3873600	15STR2465610	15RUR3485145	15RVQ4054710	15RUQ3614275
15RUP3883600	15STR2475610	15RUR3495145	15RVQ4064710	15RUQ3634275
15RUP3903600	15STR2495610	15RUR3515145	15RVQ4084710	15RUQ3644275
15RUP3913600	15STR2505610	15RUR3525145	15RVQ4094710	15RUQ3664275
15RUP3933600	15STR2525610	15RUR3545145	15RVQ4114710	15RUQ3674275
15RUP3943600	15STR2535610	15RUR3555145	15RVQ4124710	15RUQ3694275
15RUP3963600	15STR2555610	15RUR3575145	15RVQ4144710	15RUQ3704275
15RUP3973600	15STR2565610	15RUR3585145	15RVQ4154710	15RUQ3724275
15RUP3993600	15STR2585610	15RUR3605145	15RVQ4174710	15RUQ3734275
15RVP4003600	15STR2595610	15RUR3615145	15RTQ2434725	15RUQ3754275
15RVP4023600	15STR2615610	15RUR3635145	15RTQ2444725	15RUQ3764275
15RVP4033600	15STR2625610	15RUR3645145	15RTQ2464725	15RUQ3784275
15RVP4053600	15STR2645610	15RUR3665145	15RTQ2474725	15RUQ3794275
15RVP4063600	15STR2655610	15RUR3675145	15RTQ2494725	15RUQ3814275
15RVP4083600	15STR2675610	15RUR3695145	15RTQ2504725	15RUQ3824275
15RVP4093600	15STR2685610	15RUR3705145	15RTQ2524725	15RUQ3844275
15RVP4113600	15STR2705610	15RUR3725145	15RTQ2534725	15RUQ3854275
15RVP4123600	15STR2715610	15RUR3735145	15RTQ2554725	15RUQ3874275
15RVP4143600	15STR2735610	15RUR3755145	15RTQ2564725	15RUQ3884275
15RVP4153600	15STR2745610	15RUR3765145	15RTQ2584725	15RUQ3904275
15RVP4173600	15STR2765610	15RUR3785145	15RTQ2594725	15RUQ3914275
15RVP4183600	15STR2775610	15RUR3795145	15RTQ2614725	15RUQ3934275
15RVP4203600	15STR2795610	15RUR3815145	15RTQ2624725	15RUQ3944275
15RVP4213600	15STR2805610	15RUR3825145	15RTQ2644725	15RUQ3964275
15RUP3303615	15STR2825610	15RUR3845145	15RTQ2654725	15RUQ3974275
15RUP3313615	15STR2835610	15RUR3855145	15RTQ2674725	15RUQ3994275
15RUP3333615	15STR2855610	15RUR3875145	15RTQ2684725	15RVQ4004275
15RUP3343615	15STR2865610	15RUR3885145	15RTQ2704725	15RVQ4024275
15RUP3363615	15STR2885610	15RUR3905145	15RTQ2714725	15RVQ4034275
15RUP3373615	15STR2895610	15RUR3915145	15RTQ2734725	15RVQ4054275
15RUP3393615	15STR2915610	15RUR3935145	15RTQ2744725	15RVQ4064275
15RUP3403615	15STR2925610	15RUR3945145	15RTQ2764725	15RVQ4084275
15RUP3423615	15STR2945610	15RUR3965145	15RTQ2774725	15RVQ4094275
15RUP3433615	15STR2955610	15RUR3975145	15RTQ2794725	15RVQ4114275

15RUP3453615	15STR2975610	15RUR3995145	15RTQ2804725	15RVQ4124275
15RUP3463615	15STR2985610	15RVR4005145	15RTQ2824725	15RVQ4144275
15RUP3483615	15SUR3005610	15RVR4025145	15RTQ2834725	15RVQ4154275
15RUP3493615	15SUR3015610	15RVR4035145	15RTQ2854725	15RVQ4174275
15RUP3513615	15SUR3035610	15RTR2205160	15RTQ2864725	15RVQ4184275
15RUP3523615	15SUR3045610	15RTR2225160	15RTQ2884725	15RVQ4204275
15RUP3543615	15SUR3065610	15RTR2235160	15RTQ2894725	15RTQ2954290
15RUP3553615	15SUR3075610	15RTR2255160	15RTQ2914725	15RTQ2974290
15RUP3573615	15SUR3095610	15RTR2265160	15RTQ2924725	15RTQ2984290
15RUP3583615	15SUR3105610	15RTR2285160	15RTQ2944725	15RUQ3004290
15RUP3603615	15SUR3125610	15RTR2295160	15RTQ2954725	15RUQ3014290
15RUP3613615	15SUR3135610	15RTR2315160	15RTQ2974725	15RUQ3034290
15RUP3633615	15SUR3155610	15RTR2325160	15RTQ2984725	15RUQ3044290
15RUP3643615	15SUR3165610	15RTR2345160	15RUQ3004725	15RUQ3064290
15RUP3663615	15SUR3185610	15RTR2355160	15RUQ3014725	15RUQ3074290
15RUP3673615	15SUR3195610	15RTR2375160	15RUQ3034725	15RUQ3094290
15RUP3693615	15SUR3215610	15RTR2385160	15RUQ3044725	15RUQ3104290
15RUP3703615	15SUR3225610	15RTR2405160	15RUQ3064725	15RUQ3124290
15RUP3723615	15SUR3245610	15RTR2415160	15RUQ3074725	15RUQ3134290
15RUP3733615	15SUR3255610	15RTR2435160	15RUQ3094725	15RUQ3154290
15RUP3753615	15SUR3275610	15RTR2445160	15RUQ3104725	15RUQ3164290
15RUP3763615	15SUR3285610	15RTR2465160	15RUQ3124725	15RUQ3184290
15RUP3783615	15SUR3305610	15RTR2475160	15RUQ3134725	15RUQ3194290
15RUP3793615	15SUR3315610	15RTR2495160	15RUQ3154725	15RUQ3214290
15RUP3813615	15SUR3335610	15RTR2505160	15RUQ3164725	15RUQ3224290
15RUP3823615	15SUR3345610	15RTR2525160	15RUQ3184725	15RUQ3244290
15RUP3843615	14SQA1995625	15RTR2535160	15RUQ3194725	15RUQ3254290
15RUP3853615	14SQA2015625	15RTR2555160	15RUQ3214725	15RUQ3274290
15RUP3873615	14SQA2025625	15RTR2565160	15RUQ3224725	15RUQ3284290
15RUP3883615	14SQA2045625	15RTR2585160	15RUQ3244725	15RUQ3304290
15RUP3903615	14SQA2055625	15RTR2595160	15RUQ3254725	15RUQ3314290
15RUP3913615	14SQA2075625	15RTR2615160	15RUQ3274725	15RUQ3334290
15RUP3933615	14SQA2085625	15RTR2625160	15RUQ3284725	15RUQ3344290
15RUP3943615	14SQA2105625	15RTR2645160	15RUQ3304725	15RUQ3364290
15RUP3963615	14SQA2115625	15RTR2655160	15RUQ3314725	15RUQ3374290
15RUP3973615	14SQA2135625	15RTR2675160	15RUQ3334725	15RUQ3394290
15RUP3993615	14SQA2145625	15RTR2685160	15RUQ3344725	15RUQ3404290
15RVP4003615	14SQA2165625	15RTR2705160	15RUQ3364725	15RUQ3424290
15RVP4023615	15STR2175625	15RTR2715160	15RUQ3374725	15RUQ3434290
15RVP4033615	15STR2195625	15RTR2735160	15RUQ3394725	15RUQ3454290

15RVP4053615	15STR2205625	15RTR2745160	15RUQ3404725	15RUQ3464290
15RVP4063615	15STR2225625	15RTR2765160	15RUQ3424725	15RUQ3484290
15RVP4083615	15STR2235625	15RTR2775160	15RUQ3434725	15RUQ3494290
15RVP4093615	15STR2255625	15RTR2795160	15RUQ3454725	15RUQ3514290
15RVP4113615	15STR2265625	15RTR2805160	15RUQ3464725	15RUQ3524290
15RVP4123615	15STR2285625	15RTR2825160	15RUQ3484725	15RUQ3544290
15RVP4143615	15STR2295625	15RTR2835160	15RUQ3494725	15RUQ3554290
15RVP4153615	15STR2315625	15RTR2855160	15RUQ3514725	15RUQ3574290
15RVP4173615	15STR2325625	15RTR2865160	15RUQ3524725	15RUQ3584290
15RVP4183615	15STR2345625	15RTR2885160	15RUQ3544725	15RUQ3604290
15RVP4203615	15STR2355625	15RTR2895160	15RUQ3554725	15RUQ3614290
15RVP4213615	15STR2375625	15RTR2915160	15RUQ3574725	15RUQ3634290
15RUP3303630	15STR2385625	15RTR2925160	15RUQ3584725	15RUQ3644290
15RUP3313630	15STR2405625	15RTR2945160	15RUQ3604725	15RUQ3664290
15RUP3333630	15STR2415625	15RTR2955160	15RUQ3614725	15RUQ3674290
15RUP3343630	15STR2435625	15RTR2975160	15RUQ3634725	15RUQ3694290
15RUP3363630	15STR2445625	15RTR2985160	15RUQ3644725	15RUQ3704290
15RUP3373630	15STR2465625	15RUR3005160	15RUQ3664725	15RUQ3724290
15RUP3393630	15STR2475625	15RUR3015160	15RUQ3674725	15RUQ3734290
15RUP3403630	15STR2495625	15RUR3035160	15RUQ3694725	15RUQ3754290
15RUP3423630	15STR2505625	15RUR3045160	15RUQ3704725	15RUQ3764290
15RUP3433630	15STR2525625	15RUR3065160	15RUQ3724725	15RUQ3784290
15RUP3453630	15STR2535625	15RUR3075160	15RUQ3734725	15RUQ3794290
15RUP3463630	15STR2555625	15RUR3095160	15RUQ3754725	15RUQ3814290
15RUP3483630	15STR2565625	15RUR3105160	15RUQ3764725	15RUQ3824290
15RUP3493630	15STR2585625	15RUR3125160	15RUQ3784725	15RUQ3844290
15RUP3513630	15STR2595625	15RUR3135160	15RUQ3794725	15RUQ3854290
15RUP3523630	15STR2615625	15RUR3155160	15RUQ3814725	15RUQ3874290
15RUP3543630	15STR2625625	15RUR3165160	15RUQ3824725	15RUQ3884290
15RUP3553630	15STR2645625	15RUR3185160	15RUQ3844725	15RUQ3904290
15RUP3573630	15STR2655625	15RUR3195160	15RUQ3854725	15RUQ3914290
15RUP3583630	15STR2675625	15RUR3215160	15RUQ3874725	15RUQ3934290
15RUP3603630	15STR2685625	15RUR3225160	15RUQ3884725	15RUQ3944290
15RUP3613630	15STR2705625	15RUR3245160	15RUQ3904725	15RUQ3964290
15RUP3633630	15STR2715625	15RUR3255160	15RUQ3914725	15RUQ3974290
15RUP3643630	15STR2735625	15RUR3275160	15RUQ3934725	15RUQ3994290
15RUP3663630	15STR2745625	15RUR3285160	15RUQ3944725	15RVQ4004290
15RUP3673630	15STR2765625	15RUR3305160	15RUQ3964725	15RVQ4024290
15RUP3693630	15STR2775625	15RUR3315160	15RUQ3974725	15RVQ4034290
15RUP3703630	15STR2795625	15RUR3335160	15RUQ3994725	15RVQ4054290

15RUP3723630	15STR2805625	15RUR3345160	15RVQ4004725	15RVQ4064290
15RUP3733630	15STR2825625	15RUR3365160	15RVQ4024725	15RVQ4084290
15RUP3753630	15STR2835625	15RUR3375160	15RVQ4034725	15RVQ4094290
15RUP3763630	15STR2855625	15RUR3395160	15RVQ4054725	15RVQ4114290
15RUP3783630	15STR2865625	15RUR3405160	15RVQ4064725	15RVQ4124290
15RUP3793630	15STR2885625	15RUR3425160	15RVQ4084725	15RVQ4144290
15RUP3813630	15STR2895625	15RUR3435160	15RVQ4094725	15RVQ4154290
15RUP3823630	15STR2915625	15RUR3455160	15RVQ4114725	15RVQ4174290
15RUP3843630	15STR2925625	15RUR3465160	15RVQ4124725	15RVQ4184290
15RUP3853630	15STR2945625	15RUR3485160	15RVQ4144725	15RVQ4204290
15RUP3873630	15STR2955625	15RUR3495160	15RVQ4154725	15RTQ2954305
15RUP3883630	15STR2975625	15RUR3515160	15RVQ4174725	15RTQ2974305
15RUP3903630	15STR2985625	15RUR3525160	15RTQ2414740	15RTQ2984305
15RUP3913630	15SUR3005625	15RUR3545160	15RTQ2434740	15RUQ3004305
15RUP3933630	15SUR3015625	15RUR3555160	15RTQ2444740	15RUQ3014305
15RUP3943630	15SUR3035625	15RUR3575160	15RTQ2464740	15RUQ3034305
15RUP3963630	15SUR3045625	15RUR3585160	15RTQ2474740	15RUQ3044305
15RUP3973630	15SUR3065625	15RUR3605160	15RTQ2494740	15RUQ3064305
15RUP3993630	15SUR3075625	15RUR3615160	15RTQ2504740	15RUQ3074305
15RVP4003630	15SUR3095625	15RUR3635160	15RTQ2524740	15RUQ3094305
15RVP4023630	15SUR3105625	15RUR3645160	15RTQ2534740	15RUQ3104305
15RVP4033630	15SUR3125625	15RUR3665160	15RTQ2554740	15RUQ3124305
15RVP4053630	15SUR3135625	15RUR3675160	15RTQ2564740	15RUQ3134305
15RVP4063630	15SUR3155625	15RUR3695160	15RTQ2584740	15RUQ3154305
15RVP4083630	15SUR3165625	15RUR3705160	15RTQ2594740	15RUQ3164305
15RVP4093630	15SUR3185625	15RUR3725160	15RTQ2614740	15RUQ3184305
15RVP4113630	15SUR3195625	15RUR3735160	15RTQ2624740	15RUQ3194305
15RVP4123630	15SUR3215625	15RUR3755160	15RTQ2644740	15RUQ3214305
15RVP4143630	15SUR3225625	15RUR3765160	15RTQ2654740	15RUQ3224305
15RVP4153630	15SUR3245625	15RUR3785160	15RTQ2674740	15RUQ3244305
15RVP4173630	15SUR3255625	15RUR3795160	15RTQ2684740	15RUQ3254305
15RVP4183630	15SUR3275625	15RUR3815160	15RTQ2704740	15RUQ3274305
15RVP4203630	15SUR3285625	15RUR3825160	15RTQ2714740	15RUQ3284305
15RVP4213630	15SUR3305625	15RUR3845160	15RTQ2734740	15RUQ3304305
15RUP3303645	15SUR3315625	15RUR3855160	15RTQ2744740	15RUQ3314305
15RUP3313645	15SUR3335625	15RUR3875160	15RTQ2764740	15RUQ3334305
15RUP3333645	14SQA1985640	15RUR3885160	15RTQ2774740	15RUQ3344305
15RUP3343645	14SQA1995640	15RUR3905160	15RTQ2794740	15RUQ3364305
15RUP3363645	14SQA2015640	15RUR3915160	15RTQ2804740	15RUQ3374305
15RUP3373645	14SQA2025640	15RUR3935160	15RTQ2824740	15RUQ3394305

15RUP3393645	14SQA2045640	15RUR3945160	15RTQ2834740	15RUQ3404305
15RUP3403645	14SQA2055640	15RUR3965160	15RTQ2854740	15RUQ3424305
15RUP3423645	14SQA2075640	15RUR3975160	15RTQ2864740	15RUQ3434305
15RUP3433645	14SQA2085640	15RUR3995160	15RTQ2884740	15RUQ3454305
15RUP3453645	14SQA2105640	15RVR4005160	15RTQ2894740	15RUQ3464305
15RUP3463645	14SQA2115640	15RVR4025160	15RTQ2914740	15RUQ3484305
15RUP3483645	14SQA2135640	15RVR4035160	15RTQ2924740	15RUQ3494305
15RUP3493645	14SQA2145640	15RTR2195175	15RTQ2944740	15RUQ3514305
15RUP3513645	14SQA2165640	15RTR2205175	15RTQ2954740	15RUQ3524305
15RUP3523645	15STR2175640	15RTR2225175	15RTQ2974740	15RUQ3544305
15RUP3543645	15STR2195640	15RTR2235175	15RTQ2984740	15RUQ3554305
15RUP3553645	15STR2205640	15RTR2255175	15RUQ3004740	15RUQ3574305
15RUP3573645	15STR2225640	15RTR2265175	15RUQ3014740	15RUQ3584305
15RUP3583645	15STR2235640	15RTR2285175	15RUQ3034740	15RUQ3604305
15RUP3603645	15STR2255640	15RTR2295175	15RUQ3044740	15RUQ3614305
15RUP3613645	15STR2265640	15RTR2315175	15RUQ3064740	15RUQ3634305
15RUP3633645	15STR2285640	15RTR2325175	15RUQ3074740	15RUQ3644305
15RUP3643645	15STR2295640	15RTR2345175	15RUQ3094740	15RUQ3664305
15RUP3663645	15STR2315640	15RTR2355175	15RUQ3104740	15RUQ3674305
15RUP3673645	15STR2325640	15RTR2375175	15RUQ3124740	15RUQ3694305
15RUP3693645	15STR2345640	15RTR2385175	15RUQ3134740	15RUQ3704305
15RUP3703645	15STR2355640	15RTR2405175	15RUQ3154740	15RUQ3724305
15RUP3723645	15STR2375640	15RTR2415175	15RUQ3164740	15RUQ3734305
15RUP3733645	15STR2385640	15RTR2435175	15RUQ3184740	15RUQ3754305
15RUP3753645	15STR2405640	15RTR2445175	15RUQ3194740	15RUQ3764305
15RUP3763645	15STR2415640	15RTR2465175	15RUQ3214740	15RUQ3784305
15RUP3783645	15STR2435640	15RTR2475175	15RUQ3224740	15RUQ3794305
15RUP3793645	15STR2445640	15RTR2495175	15RUQ3244740	15RUQ3814305
15RUP3813645	15STR2465640	15RTR2505175	15RUQ3254740	15RUQ3824305
15RUP3823645	15STR2475640	15RTR2525175	15RUQ3274740	15RUQ3844305
15RUP3843645	15STR2495640	15RTR2535175	15RUQ3284740	15RUQ3854305
15RUP3853645	15STR2505640	15RTR2555175	15RUQ3304740	15RUQ3874305
15RUP3873645	15STR2525640	15RTR2565175	15RUQ3314740	15RUQ3884305
15RUP3883645	15STR2535640	15RTR2585175	15RUQ3334740	15RUQ3904305
15RUP3903645	15STR2555640	15RTR2595175	15RUQ3344740	15RUQ3914305
15RUP3913645	15STR2565640	15RTR2615175	15RUQ3364740	15RUQ3934305
15RUP3933645	15STR2585640	15RTR2625175	15RUQ3374740	15RUQ3944305
15RUP3943645	15STR2595640	15RTR2645175	15RUQ3394740	15RUQ3964305
15RUP3963645	15STR2615640	15RTR2655175	15RUQ3404740	15RUQ3974305
15RUP3973645	15STR2625640	15RTR2675175	15RUQ3424740	15RUQ3994305



15RUP3993645	15STR2645640	15RTR2685175	15RUQ3434740	15RVQ4004305
15RVP4003645	15STR2655640	15RTR2705175	15RUQ3454740	15RVQ4024305
15RVP4023645	15STR2675640	15RTR2715175	15RUQ3464740	15RVQ4034305
15RVP4033645	15STR2685640	15RTR2735175	15RUQ3484740	15RVQ4054305
15RVP4053645	15STR2705640	15RTR2745175	15RUQ3494740	15RVQ4064305
15RVP4063645	15STR2715640	15RTR2765175	15RUQ3514740	15RVQ4084305
15RVP4083645	15STR2735640	15RTR2775175	15RUQ3524740	15RVQ4094305
15RVP4093645	15STR2745640	15RTR2795175	15RUQ3544740	15RVQ4114305
15RVP4113645	15STR2765640	15RTR2805175	15RUQ3554740	15RVQ4124305
15RVP4123645	15STR2775640	15RTR2825175	15RUQ3574740	15RVQ4144305
15RVP4143645	15STR2795640	15RTR2835175	15RUQ3584740	15RVQ4154305
15RVP4153645	15STR2805640	15RTR2855175	15RUQ3604740	15RVQ4174305
15RVP4173645	15STR2825640	15RTR2865175	15RUQ3614740	15RVQ4184305
15RVP4183645	15STR2835640	15RTR2885175	15RUQ3634740	15RVQ4204305
15RVP4203645	15STR2855640	15RTR2895175	15RUQ3644740	15RTQ2704320
15RVP4213645	15STR2865640	15RTR2915175	15RUQ3664740	15RTQ2714320
15RUP3303660	15STR2885640	15RTR2925175	15RUQ3674740	15RTQ2734320
15RUP3313660	15STR2895640	15RTR2945175	15RUQ3694740	15RTQ2744320
15RUP3333660	15STR2915640	15RTR2955175	15RUQ3704740	15RTQ2764320
15RUP3343660	15STR2925640	15RTR2975175	15RUQ3724740	15RTQ2774320
15RUP3363660	15STR2945640	15RTR2985175	15RUQ3734740	15RTQ2794320
15RUP3373660	15STR2955640	15RUR3005175	15RUQ3754740	15RTQ2804320
15RUP3393660	15STR2975640	15RUR3015175	15RUQ3764740	15RTQ2824320
15RUP3403660	15STR2985640	15RUR3035175	15RUQ3784740	15RTQ2834320
15RUP3423660	15SUR3005640	15RUR3045175	15RUQ3794740	15RTQ2854320
15RUP3433660	15SUR3015640	15RUR3065175	15RUQ3814740	15RTQ2864320
15RUP3453660	15SUR3035640	15RUR3075175	15RUQ3824740	15RTQ2884320
15RUP3463660	15SUR3045640	15RUR3095175	15RUQ3844740	15RTQ2954320
15RUP3483660	15SUR3065640	15RUR3105175	15RUQ3854740	15RTQ2974320
15RUP3493660	15SUR3075640	15RUR3125175	15RUQ3874740	15RTQ2984320
15RUP3513660	15SUR3095640	15RUR3135175	15RUQ3884740	15RUQ3004320
15RUP3523660	15SUR3105640	15RUR3155175	15RUQ3904740	15RUQ3014320
15RUP3543660	15SUR3125640	15RUR3165175	15RUQ3914740	15RUQ3034320
15RUP3553660	15SUR3135640	15RUR3185175	15RUQ3934740	15RUQ3044320
15RUP3573660	15SUR3155640	15RUR3195175	15RUQ3944740	15RUQ3064320
15RUP3583660	15SUR3165640	15RUR3215175	15RUQ3964740	15RUQ3074320
15RUP3603660	15SUR3185640	15RUR3225175	15RUQ3974740	15RUQ3094320
15RUP3613660	15SUR3195640	15RUR3245175	15RUQ3994740	15RUQ3104320
15RUP3633660	15SUR3215640	15RUR3255175	15RVQ4004740	15RUQ3124320
15RUP3643660	15SUR3225640	15RUR3275175	15RVQ4024740	15RUQ3134320

15RUP3663660	15SUR3245640	15RUR3285175	15RVQ4034740	15RUQ3154320
15RUP3673660	15SUR3255640	15RUR3305175	15RVQ4054740	15RUQ3164320
15RUP3693660	14SQA1965655	15RUR3315175	15RVQ4064740	15RUQ3184320
15RUP3703660	14SQA1985655	15RUR3335175	15RVQ4084740	15RUQ3194320
15RUP3723660	14SQA1995655	15RUR3345175	15RVQ4094740	15RUQ3214320
15RUP3733660	14SQA2015655	15RUR3365175	15RVQ4114740	15RUQ3224320
15RUP3753660	14SQA2025655	15RUR3375175	15RVQ4124740	15RUQ3244320
15RUP3763660	14SQA2045655	15RUR3395175	15RVQ4144740	15RUQ3254320
15RUP3783660	14SQA2055655	15RUR3405175	15RVQ4154740	15RUQ3274320
15RUP3793660	14SQA2075655	15RUR3425175	15RVQ4174740	15RUQ3284320
15RUP3813660	14SQA2085655	15RUR3435175	15RTQ2414755	15RUQ3304320
15RUP3823660	14SQA2105655	15RUR3455175	15RTQ2434755	15RUQ3314320
15RUP3843660	14SQA2115655	15RUR3465175	15RTQ2444755	15RUQ3334320
15RUP3853660	14SQA2135655	15RUR3485175	15RTQ2464755	15RUQ3344320
15RUP3873660	14SQA2145655	15RUR3495175	15RTQ2474755	15RUQ3364320
15RUP3883660	14SQA2165655	15RUR3515175	15RTQ2494755	15RUQ3374320
15RUP3903660	15STR2175655	15RUR3525175	15RTQ2504755	15RUQ3394320
15RUP3913660	15STR2195655	15RUR3545175	15RTQ2524755	15RUQ3404320
15RUP3933660	15STR2205655	15RUR3555175	15RTQ2534755	15RUQ3424320
15RUP3943660	15STR2225655	15RUR3575175	15RTQ2554755	15RUQ3434320
15RUP3963660	15STR2235655	15RUR3585175	15RTQ2564755	15RUQ3454320
15RUP3973660	15STR2255655	15RUR3605175	15RTQ2584755	15RUQ3464320
15RUP3993660	15STR2265655	15RUR3615175	15RTQ2594755	15RUQ3484320
15RVP4003660	15STR2285655	15RUR3635175	15RTQ2614755	15RUQ3494320
15RVP4023660	15STR2295655	15RUR3645175	15RTQ2624755	15RUQ3514320
15RVP4033660	15STR2315655	15RUR3665175	15RTQ2644755	15RUQ3524320
15RVP4053660	15STR2325655	15RUR3675175	15RTQ2654755	15RUQ3544320
15RVP4063660	15STR2345655	15RUR3695175	15RTQ2674755	15RUQ3554320
15RVP4083660	15STR2355655	15RUR3705175	15RTQ2684755	15RUQ3574320
15RVP4093660	15STR2375655	15RUR3725175	15RTQ2704755	15RUQ3584320
15RVP4113660	15STR2385655	15RUR3735175	15RTQ2714755	15RUQ3604320
15RVP4123660	15STR2405655	15RUR3755175	15RTQ2734755	15RUQ3614320
15RVP4143660	15STR2415655	15RUR3765175	15RTQ2744755	15RUQ3634320
15RVP4153660	15STR2435655	15RUR3785175	15RTQ2764755	15RUQ3644320
15RVP4173660	15STR2445655	15RUR3795175	15RTQ2774755	15RUQ3664320
15RVP4183660	15STR2465655	15RUR3815175	15RTQ2794755	15RUQ3674320
15RVP4203660	15STR2475655	15RUR3825175	15RTQ2804755	15RUQ3694320
15RVP4213660	15STR2495655	15RUR3845175	15RTQ2824755	15RUQ3704320
15RUP3303675	15STR2505655	15RUR3855175	15RTQ2834755	15RUQ3724320
15RUP3313675	15STR2525655	15RUR3875175	15RTQ2854755	15RUQ3734320

15RUP3333675	15STR2535655	15RUR3885175	15RTQ2864755	15RUQ3754320
15RUP3343675	15STR2555655	15RUR3905175	15RTQ2884755	15RUQ3764320
15RUP3363675	15STR2565655	15RUR3915175	15RTQ2894755	15RUQ3784320
15RUP3373675	15STR2585655	15RUR3935175	15RTQ2914755	15RUQ3794320
15RUP3393675	15STR2595655	15RUR3945175	15RTQ2924755	15RUQ3814320
15RUP3403675	15STR2615655	15RUR3965175	15RTQ2944755	15RUQ3824320
15RUP3423675	15STR2625655	15RUR3975175	15RTQ2954755	15RUQ3844320
15RUP3433675	15STR2645655	15RUR3995175	15RTQ2974755	15RUQ3854320
15RUP3453675	15STR2655655	15RVR4005175	15RTQ2984755	15RUQ3874320
15RUP3463675	15STR2675655	15RVR4025175	15RUQ3004755	15RUQ3884320
15RUP3483675	15STR2685655	15RVR4035175	15RUQ3014755	15RUQ3904320
15RUP3493675	15STR2705655	15RTR2175190	15RUQ3034755	15RUQ3914320
15RUP3513675	15STR2715655	15RTR2195190	15RUQ3044755	15RUQ3934320
15RUP3523675	15STR2735655	15RTR2205190	15RUQ3064755	15RUQ3944320
15RUP3543675	15STR2745655	15RTR2225190	15RUQ3074755	15RUQ3964320
15RUP3553675	15STR2765655	15RTR2235190	15RUQ3094755	15RUQ3974320
15RUP3573675	15STR2775655	15RTR2255190	15RUQ3104755	15RUQ3994320
15RUP3583675	15STR2795655	15RTR2265190	15RUQ3124755	15RVQ4004320
15RUP3603675	15STR2805655	15RTR2285190	15RUQ3134755	15RVQ4024320
15RUP3613675	15STR2825655	15RTR2295190	15RUQ3154755	15RVQ4034320
15RUP3633675	15STR2835655	15RTR2315190	15RUQ3164755	15RVQ4054320
15RUP3643675	15STR2855655	15RTR2325190	15RUQ3184755	15RVQ4064320
15RUP3663675	15STR2865655	15RTR2345190	15RUQ3194755	15RVQ4084320
15RUP3673675	15STR2885655	15RTR2355190	15RUQ3214755	15RVQ4094320
15RUP3693675	15STR2895655	15RTR2375190	15RUQ3224755	15RVQ4114320
15RUP3703675	15STR2915655	15RTR2385190	15RUQ3244755	15RVQ4124320
15RUP3723675	15STR2925655	15RTR2405190	15RUQ3254755	15RVQ4144320
15RUP3733675	15STR2945655	15RTR2415190	15RUQ3274755	15RVQ4154320
15RUP3753675	15STR2955655	15RTR2435190	15RUQ3284755	15RVQ4174320
15RUP3763675	15STR2975655	15RTR2445190	15RUQ3304755	15RVQ4184320
15RUP3783675	15STR2985655	15RTR2465190	15RUQ3314755	15RVQ4204320
15RUP3793675	15SUR3005655	15RTR2475190	15RUQ3334755	15RTQ2704335
15RUP3813675	15SUR3015655	15RTR2495190	15RUQ3344755	15RTQ2714335
15RUP3823675	15SUR3035655	15RTR2505190	15RUQ3364755	15RTQ2734335
15RUP3843675	15SUR3045655	15RTR2525190	15RUQ3374755	15RTQ2744335
15RUP3853675	15SUR3065655	15RTR2535190	15RUQ3394755	15RTQ2764335
15RUP3873675	15SUR3075655	15RTR2555190	15RUQ3404755	15RTQ2774335
15RUP3883675	15SUR3095655	15RTR2565190	15RUQ3424755	15RTQ2794335
15RUP3903675	15SUR3105655	15RTR2585190	15RUQ3434755	15RTQ2804335
15RUP3913675	15SUR3125655	15RTR2595190	15RUQ3454755	15RTQ2824335

15RUP3933675	15SUR3135655	15RTR2615190	15RUQ3464755	15RTQ2834335
15RUP3943675	15SUR3155655	15RTR2625190	15RUQ3484755	15RTQ2854335
15RUP3963675	15SUR3165655	15RTR2645190	15RUQ3494755	15RTQ2864335
15RUP3973675	15SUR3185655	15RTR2655190	15RUQ3514755	15RTQ2884335
15RUP3993675	15SUR3195655	15RTR2675190	15RUQ3524755	15RTQ2894335
15RVP4003675	15SUR3215655	15RTR2685190	15RUQ3544755	15RTQ2914335
15RVP4023675	15SUR3225655	15RTR2705190	15RUQ3554755	15RTQ2924335
15RVP4033675	15SUR3245655	15RTR2715190	15RUQ3574755	15RTQ2944335
15RVP4053675	15SUR3255655	15RTR2735190	15RUQ3584755	15RTQ2954335
15RVP4063675	14SQA1965670	15RTR2745190	15RUQ3604755	15RTQ2974335
15RVP4083675	14SQA1985670	15RTR2765190	15RUQ3614755	15RTQ2984335
15RVP4093675	14SQA1995670	15RTR2775190	15RUQ3634755	15RUQ3004335
15RVP4113675	14SQA2015670	15RTR2795190	15RUQ3644755	15RUQ3014335
15RVP4123675	14SQA2025670	15RTR2805190	15RUQ3664755	15RUQ3034335
15RVP4143675	14SQA2045670	15RTR2825190	15RUQ3674755	15RUQ3044335
15RVP4153675	14SQA2055670	15RTR2835190	15RUQ3694755	15RUQ3064335
15RVP4173675	14SQA2075670	15RTR2855190	15RUQ3704755	15RUQ3074335
15RVP4183675	14SQA2085670	15RTR2865190	15RUQ3724755	15RUQ3094335
15RVP4203675	14SQA2105670	15RTR2885190	15RUQ3734755	15RUQ3104335
15RVP4213675	14SQA2115670	15RTR2895190	15RUQ3754755	15RUQ3124335
15RUP3283690	14SQA2135670	15RTR2915190	15RUQ3764755	15RUQ3134335
15RUP3303690	14SQA2145670	15RTR2925190	15RUQ3784755	15RUQ3154335
15RUP3313690	14SQA2165670	15RTR2945190	15RUQ3794755	15RUQ3164335
15RUP3333690	15STR2175670	15RTR2955190	15RUQ3814755	15RUQ3184335
15RUP3343690	15STR2195670	15RTR2975190	15RUQ3824755	15RUQ3194335
15RUP3363690	15STR2205670	15RTR2985190	15RUQ3844755	15RUQ3214335
15RUP3373690	15STR2225670	15RUR3005190	15RUQ3854755	15RUQ3224335
15RUP3393690	15STR2235670	15RUR3015190	15RUQ3874755	15RUQ3244335
15RUP3403690	15STR2255670	15RUR3035190	15RUQ3884755	15RUQ3254335
15RUP3423690	15STR2265670	15RUR3045190	15RUQ3904755	15RUQ3274335
15RUP3433690	15STR2285670	15RUR3065190	15RUQ3914755	15RUQ3284335
15RUP3453690	15STR2295670	15RUR3075190	15RUQ3934755	15RUQ3304335
15RUP3463690	15STR2315670	15RUR3095190	15RUQ3944755	15RUQ3314335
15RUP3483690	15STR2325670	15RUR3105190	15RUQ3964755	15RUQ3334335
15RUP3493690	15STR2345670	15RUR3125190	15RUQ3974755	15RUQ3344335
15RUP3513690	15STR2355670	15RUR3135190	15RUQ3994755	15RUQ3364335
15RUP3523690	15STR2375670	15RUR3155190	15RVQ4004755	15RUQ3374335
15RUP3543690	15STR2385670	15RUR3165190	15RVQ4024755	15RUQ3394335
15RUP3553690	15STR2405670	15RUR3185190	15RVQ4034755	15RUQ3404335
15RUP3573690	15STR2415670	15RUR3195190	15RVQ4054755	15RUQ3424335

15RUP3583690	15STR2435670	15RUR3215190	15RVQ4064755	15RUQ3434335
15RUP3603690	15STR2445670	15RUR3225190	15RVQ4084755	15RUQ3454335
15RUP3613690	15STR2465670	15RUR3245190	15RVQ4094755	15RUQ3464335
15RUP3633690	15STR2475670	15RUR3255190	15RVQ4114755	15RUQ3484335
15RUP3643690	15STR2495670	15RUR3275190	15RVQ4124755	15RUQ3494335
15RUP3663690	15STR2505670	15RUR3285190	15RVQ4144755	15RUQ3514335
15RUP3673690	15STR2525670	15RUR3305190	15RVQ4154755	15RUQ3524335
15RUP3693690	15STR2535670	15RUR3315190	15RVQ4174755	15RUQ3544335
15RUP3703690	15STR2555670	15RUR3335190	15RTQ2414770	15RUQ3554335
15RUP3723690	15STR2565670	15RUR3345190	15RTQ2434770	15RUQ3574335
15RUP3733690	15STR2585670	15RUR3365190	15RTQ2444770	15RUQ3584335
15RUP3753690	15STR2595670	15RUR3375190	15RTQ2464770	15RUQ3604335
15RUP3763690	15STR2615670	15RUR3395190	15RTQ2474770	15RUQ3614335
15RUP3783690	15STR2625670	15RUR3405190	15RTQ2494770	15RUQ3634335
15RUP3793690	15STR2645670	15RUR3425190	15RTQ2504770	15RUQ3644335
15RUP3813690	15STR2655670	15RUR3435190	15RTQ2524770	15RUQ3664335
15RUP3823690	15STR2675670	15RUR3455190	15RTQ2534770	15RUQ3674335
15RUP3843690	15STR2685670	15RUR3465190	15RTQ2554770	15RUQ3694335
15RUP3853690	15STR2705670	15RUR3485190	15RTQ2564770	15RUQ3704335
15RUP3873690	15STR2715670	15RUR3495190	15RTQ2584770	15RUQ3724335
15RUP3883690	15STR2735670	15RUR3515190	15RTQ2594770	15RUQ3734335
15RUP3903690	15STR2745670	15RUR3525190	15RTQ2614770	15RUQ3754335
15RUP3913690	15STR2765670	15RUR3545190	15RTQ2624770	15RUQ3764335
15RUP3933690	15STR2775670	15RUR3555190	15RTQ2644770	15RUQ3784335
15RUP3943690	15STR2795670	15RUR3575190	15RTQ2654770	15RUQ3794335
15RUP3963690	15STR2805670	15RUR3585190	15RTQ2674770	15RUQ3814335
15RUP3973690	15STR2825670	15RUR3605190	15RTQ2684770	15RUQ3824335
15RUP3993690	15STR2835670	15RUR3615190	15RTQ2704770	15RUQ3844335
15RVP4003690	15STR2855670	15RUR3635190	15RTQ2714770	15RUQ3854335
15RVP4023690	15STR2865670	15RUR3645190	15RTQ2734770	15RUQ3874335
15RVP4033690	15STR2885670	15RUR3665190	15RTQ2744770	15RUQ3884335
15RVP4053690	15STR2895670	15RUR3675190	15RTQ2764770	15RUQ3904335
15RVP4063690	15STR2915670	15RUR3695190	15RTQ2774770	15RUQ3914335
15RVP4083690	15STR2925670	15RUR3705190	15RTQ2794770	15RUQ3934335
15RVP4093690	15STR2945670	15RUR3725190	15RTQ2804770	15RUQ3944335
15RVP4113690	15STR2955670	15RUR3735190	15RTQ2824770	15RUQ3964335
15RVP4123690	15STR2975670	15RUR3755190	15RTQ2834770	15RUQ3974335
15RVP4143690	15STR2985670	15RUR3765190	15RTQ2854770	15RUQ3994335
15RVP4153690	15SUR3005670	15RUR3785190	15RTQ2864770	15RVQ4004335
15RVP4173690	15SUR3015670	15RUR3795190	15RTQ2884770	15RVQ4024335

15RVP4183690	15SUR3035670	15RUR3815190	15RTQ2894770	15RVQ4034335
15RVP4203690	15SUR3045670	15RUR3825190	15RTQ2914770	15RVQ4054335
15RVP4213690	15SUR3065670	15RUR3845190	15RTQ2924770	15RVQ4064335
15RUP3253705	15SUR3075670	15RUR3855190	15RTQ2944770	15RVQ4084335
15RUP3273705	15SUR3095670	15RUR3875190	15RTQ2954770	15RVQ4094335
15RUP3283705	15SUR3105670	15RUR3885190	15RTQ2974770	15RVQ4114335
15RUP3303705	15SUR3125670	15RUR3905190	15RTQ2984770	15RVQ4124335
15RUP3313705	15SUR3135670	15RUR3915190	15RUQ3004770	15RVQ4144335
15RUP3333705	15SUR3155670	15RUR3935190	15RUQ3014770	15RVQ4154335
15RUP3343705	15SUR3165670	15RUR3945190	15RUQ3034770	15RVQ4174335
15RUP3363705	15SUR3185670	15RUR3965190	15RUQ3044770	15RVQ4184335
15RUP3373705	15SUR3195670	15RUR3975190	15RUQ3064770	15RVQ4204335
15RUP3393705	15SUR3215670	15RUR3995190	15RUQ3074770	15RTQ2464350
15RUP3403705	15SUR3225670	15RVR4005190	15RUQ3094770	15RTQ2474350
15RUP3423705	15SUR3245670	15RVR4025190	15RUQ3104770	15RTQ2494350
15RUP3433705	14SQA1955685	15RVR4035190	15RUQ3124770	15RTQ2504350
15RUP3453705	14SQA1965685	15RTR2175205	15RUQ3134770	15RTQ2524350
15RUP3463705	14SQA1985685	15RTR2195205	15RUQ3154770	15RTQ2534350
15RUP3483705	14SQA1995685	15RTR2205205	15RUQ3164770	15RTQ2554350
15RUP3493705	14SQA2015685	15RTR2225205	15RUQ3184770	15RTQ2564350
15RUP3513705	14SQA2025685	15RTR2235205	15RUQ3194770	15RTQ2584350
15RUP3523705	14SQA2045685	15RTR2255205	15RUQ3214770	15RTQ2594350
15RUP3543705	14SQA2055685	15RTR2265205	15RUQ3224770	15RTQ2614350
15RUP3553705	14SQA2075685	15RTR2285205	15RUQ3244770	15RTQ2624350
15RUP3573705	14SQA2085685	15RTR2295205	15RUQ3254770	15RTQ2644350
15RUP3583705	14SQA2105685	15RTR2315205	15RUQ3274770	15RTQ2654350
15RUP3603705	14SQA2115685	15RTR2325205	15RUQ3284770	15RTQ2674350
15RUP3613705	14SQA2135685	15RTR2345205	15RUQ3304770	15RTQ2684350
15RUP3633705	14SQA2145685	15RTR2355205	15RUQ3314770	15RTQ2704350
15RUP3643705	14SQA2165685	15RTR2375205	15RUQ3334770	15RTQ2714350
15RUP3663705	15STR2175685	15RTR2385205	15RUQ3344770	15RTQ2734350
15RUP3673705	15STR2195685	15RTR2405205	15RUQ3364770	15RTQ2744350
15RUP3693705	15STR2205685	15RTR2415205	15RUQ3374770	15RTQ2764350
15RUP3703705	15STR2225685	15RTR2435205	15RUQ3394770	15RTQ2774350
15RUP3723705	15STR2235685	15RTR2445205	15RUQ3404770	15RTQ2794350
15RUP3733705	15STR2255685	15RTR2465205	15RUQ3424770	15RTQ2804350
15RUP3753705	15STR2265685	15RTR2475205	15RUQ3434770	15RTQ2824350
15RUP3763705	15STR2285685	15RTR2495205	15RUQ3454770	15RTQ2834350
15RUP3783705	15STR2295685	15RTR2505205	15RUQ3464770	15RTQ2854350
15RUP3793705	15STR2315685	15RTR2525205	15RUQ3484770	15RTQ2864350



15RUP3813705	15STR2325685	15RTR2535205	15RUQ3494770	15RTQ2884350
15RUP3823705	15STR2345685	15RTR2555205	15RUQ3514770	15RTQ2894350
15RUP3843705	15STR2355685	15RTR2565205	15RUQ3524770	15RTQ2914350
15RUP3853705	15STR2375685	15RTR2585205	15RUQ3544770	15RTQ2924350
15RUP3873705	15STR2385685	15RTR2595205	15RUQ3554770	15RTQ2944350
15RUP3883705	15STR2405685	15RTR2615205	15RUQ3574770	15RTQ2954350
15RUP3903705	15STR2415685	15RTR2625205	15RUQ3584770	15RTQ2974350
15RUP3913705	15STR2435685	15RTR2645205	15RUQ3604770	15RTQ2984350
15RUP3933705	15STR2445685	15RTR2655205	15RUQ3614770	15RUQ3004350
15RUP3943705	15STR2465685	15RTR2675205	15RUQ3634770	15RUQ3014350
15RUP3963705	15STR2475685	15RTR2685205	15RUQ3644770	15RUQ3034350
15RUP3973705	15STR2495685	15RTR2705205	15RUQ3664770	15RUQ3044350
15RUP3993705	15STR2505685	15RTR2715205	15RUQ3674770	15RUQ3064350
15RVP4003705	15STR2525685	15RTR2735205	15RUQ3694770	15RUQ3074350
15RVP4023705	15STR2535685	15RTR2745205	15RUQ3704770	15RUQ3094350
15RVP4033705	15STR2555685	15RTR2765205	15RUQ3724770	15RUQ3104350
15RVP4053705	15STR2565685	15RTR2775205	15RUQ3734770	15RUQ3124350
15RVP4063705	15STR2585685	15RTR2795205	15RUQ3754770	15RUQ3134350
15RVP4083705	15STR2595685	15RTR2805205	15RUQ3764770	15RUQ3154350
15RVP4093705	15STR2615685	15RTR2825205	15RUQ3784770	15RUQ3164350
15RVP4113705	15STR2625685	15RTR2835205	15RUQ3794770	15RUQ3184350
15RVP4123705	15STR2645685	15RTR2855205	15RUQ3814770	15RUQ3194350
15RVP4143705	15STR2655685	15RTR2865205	15RUQ3824770	15RUQ3214350
15RVP4153705	15STR2675685	15RTR2885205	15RUQ3844770	15RUQ3224350
15RVP4173705	15STR2685685	15RTR2895205	15RUQ3854770	15RUQ3244350
15RVP4183705	15STR2705685	15RTR2915205	15RUQ3874770	15RUQ3254350
15RVP4203705	15STR2715685	15RTR2925205	15RUQ3884770	15RUQ3274350
15RVP4213705	15STR2735685	15RTR2945205	15RUQ3904770	15RUQ3284350
15RUP3213720	15STR2745685	15RTR2955205	15RUQ3914770	15RUQ3304350
15RUP3223720	15STR2765685	15RTR2975205	15RUQ3934770	15RUQ3314350
15RUP3243720	15STR2775685	15RTR2985205	15RUQ3944770	15RUQ3334350
15RUP3253720	15STR2795685	15RUR3005205	15RUQ3964770	15RUQ3344350
15RUP3273720	15STR2805685	15RUR3015205	15RUQ3974770	15RUQ3364350
15RUP3283720	15STR2825685	15RUR3035205	15RUQ3994770	15RUQ3374350
15RUP3303720	15STR2835685	15RUR3045205	15RVQ4004770	15RUQ3394350
15RUP3313720	15STR2855685	15RUR3065205	15RVQ4024770	15RUQ3404350
15RUP3333720	15STR2865685	15RUR3075205	15RVQ4034770	15RUQ3424350
15RUP3343720	15STR2885685	15RUR3095205	15RVQ4054770	15RUQ3434350
15RUP3363720	15STR2895685	15RUR3105205	15RVQ4064770	15RUQ3454350
15RUP3373720	15STR2915685	15RUR3125205	15RVQ4084770	15RUQ3464350

15RUP3393720	15STR2925685	15RUR3135205	15RVQ4094770	15RUQ3484350
15RUP3403720	15STR2945685	15RUR3155205	15RVQ4114770	15RUQ3494350
15RUP3423720	15STR2955685	15RUR3165205	15RVQ4124770	15RUQ3514350
15RUP3433720	15STR2975685	15RUR3185205	15RVQ4144770	15RUQ3524350
15RUP3453720	15STR2985685	15RUR3195205	15RVQ4154770	15RUQ3544350
15RUP3463720	15SUR3005685	15RUR3215205	15RVQ4174770	15RUQ3554350
15RUP3483720	15SUR3015685	15RUR3225205	15RTQ2414785	15RUQ3574350
15RUP3493720	15SUR3035685	15RUR3245205	15RTQ2434785	15RUQ3584350
15RUP3513720	15SUR3045685	15RUR3255205	15RTQ2444785	15RUQ3604350
15RUP3523720	15SUR3065685	15RUR3275205	15RTQ2464785	15RUQ3614350
15RUP3543720	15SUR3075685	15RUR3285205	15RTQ2474785	15RUQ3634350
15RUP3553720	15SUR3095685	15RUR3305205	15RTQ2494785	15RUQ3644350
15RUP3573720	15SUR3105685	15RUR3315205	15RTQ2504785	15RUQ3664350
15RUP3583720	15SUR3125685	15RUR3335205	15RTQ2524785	15RUQ3674350
15RUP3603720	15SUR3135685	15RUR3345205	15RTQ2534785	15RUQ3694350
15RUP3613720	15SUR3155685	15RUR3365205	15RTQ2554785	15RUQ3704350
15RUP3633720	15SUR3165685	15RUR3375205	15RTQ2564785	15RUQ3724350
15RUP3643720	15SUR3185685	15RUR3395205	15RTQ2584785	15RUQ3734350
15RUP3663720	15SUR3195685	15RUR3405205	15RTQ2594785	15RUQ3754350
15RUP3673720	15SUR3215685	15RUR3425205	15RTQ2614785	15RUQ3764350
15RUP3693720	15SUR3225685	15RUR3435205	15RTQ2624785	15RUQ3784350
15RUP3703720	14SQA1935700	15RUR3455205	15RTQ2644785	15RUQ3794350
15RUP3723720	14SQA1955700	15RUR3465205	15RTQ2654785	15RUQ3814350
15RUP3733720	14SQA1965700	15RUR3485205	15RTQ2674785	15RUQ3824350
15RUP3753720	14SQA1985700	15RUR3495205	15RTQ2684785	15RUQ3844350
15RUP3763720	14SQA1995700	15RUR3515205	15RTQ2704785	15RUQ3854350
15RUP3783720	14SQA2015700	15RUR3525205	15RTQ2714785	15RUQ3874350
15RUP3793720	14SQA2025700	15RUR3545205	15RTQ2734785	15RUQ3884350
15RUP3813720	14SQA2045700	15RUR3555205	15RTQ2744785	15RUQ3904350
15RUP3823720	14SQA2055700	15RUR3575205	15RTQ2764785	15RUQ3914350
15RUP3843720	14SQA2075700	15RUR3585205	15RTQ2774785	15RUQ3934350
15RUP3853720	14SQA2085700	15RUR3605205	15RTQ2794785	15RUQ3944350
15RUP3873720	14SQA2105700	15RUR3615205	15RTQ2804785	15RUQ3964350
15RUP3883720	14SQA2115700	15RUR3635205	15RTQ2824785	15RUQ3974350
15RUP3903720	14SQA2135700	15RUR3645205	15RTQ2834785	15RUQ3994350
15RUP3913720	14SQA2145700	15RUR3665205	15RTQ2854785	15RVQ4004350
15RUP3933720	14SQA2165700	15RUR3675205	15RTQ2864785	15RVQ4024350
15RUP3943720	15STR2175700	15RUR3695205	15RTQ2884785	15RVQ4034350
15RUP3963720	15STR2195700	15RUR3705205	15RTQ2894785	15RVQ4054350
15RUP3973720	15STR2205700	15RUR3725205	15RTQ2914785	15RVQ4064350

15RUP3993720	15STR2225700	15RUR3735205	15RTQ2924785	15RVQ4084350
15RVP4003720	15STR2235700	15RUR3755205	15RTQ2944785	15RVQ4094350
15RVP4023720	15STR2255700	15RUR3765205	15RTQ2954785	15RVQ4114350
15RVP4033720	15STR2265700	15RUR3785205	15RTQ2974785	15RVQ4124350
15RVP4053720	15STR2285700	15RUR3795205	15RTQ2984785	15RVQ4144350
15RVP4063720	15STR2295700	15RUR3815205	15RUQ3004785	15RVQ4154350
15RVP4083720	15STR2315700	15RUR3825205	15RUQ3014785	15RVQ4174350
15RVP4093720	15STR2325700	15RUR3845205	15RUQ3034785	15RVQ4184350
15RVP4113720	15STR2345700	15RUR3855205	15RUQ3044785	15RVQ4204350
15RVP4123720	15STR2355700	15RUR3875205	15RUQ3064785	15RTQ2464365
15RVP4143720	15STR2375700	15RUR3885205	15RUQ3074785	15RTQ2474365
15RVP4153720	15STR2385700	15RUR3905205	15RUQ3094785	15RTQ2494365
15RVP4173720	15STR2405700	15RUR3915205	15RUQ3104785	15RTQ2504365
15RVP4183720	15STR2415700	15RUR3935205	15RUQ3124785	15RTQ2524365
15RVP4203720	15STR2435700	15RUR3945205	15RUQ3134785	15RTQ2534365
15RVP4213720	15STR2445700	15RUR3965205	15RUQ3154785	15RTQ2554365
15RUP3213735	15STR2465700	15RUR3975205	15RUQ3164785	15RTQ2564365
15RUP3223735	15STR2475700	15RUR3995205	15RUQ3184785	15RTQ2584365
15RUP3243735	15STR2495700	15RVR4005205	15RUQ3194785	15RTQ2594365
15RUP3253735	15STR2505700	15RVR4025205	15RUQ3214785	15RTQ2614365
15RUP3273735	15STR2525700	15RVR4035205	15RUQ3224785	15RTQ2624365
15RUP3283735	15STR2535700	15RTR2175220	15RUQ3244785	15RTQ2644365
15RUP3303735	15STR2555700	15RTR2195220	15RUQ3254785	15RTQ2654365
15RUP3313735	15STR2565700	15RTR2205220	15RUQ3274785	15RTQ2674365
15RUP3333735	15STR2585700	15RTR2225220	15RUQ3284785	15RTQ2684365
15RUP3343735	15STR2595700	15RTR2235220	15RUQ3304785	15RTQ2704365
15RUP3363735	15STR2615700	15RTR2255220	15RUQ3314785	15RTQ2714365
15RUP3373735	15STR2625700	15RTR2265220	15RUQ3334785	15RTQ2734365
15RUP3393735	15STR2645700	15RTR2285220	15RUQ3344785	15RTQ2744365
15RUP3403735	15STR2655700	15RTR2295220	15RUQ3364785	15RTQ2764365
15RUP3423735	15STR2675700	15RTR2315220	15RUQ3374785	15RTQ2774365
15RUP3433735	15STR2685700	15RTR2325220	15RUQ3394785	15RTQ2794365
15RUP3453735	15STR2705700	15RTR2345220	15RUQ3404785	15RTQ2804365
15RUP3463735	15STR2715700	15RTR2355220	15RUQ3424785	15RTQ2824365
15RUP3483735	15STR2735700	15RTR2375220	15RUQ3434785	15RTQ2834365
15RUP3493735	15STR2745700	15RTR2385220	15RUQ3454785	15RTQ2854365
15RUP3513735	15STR2765700	15RTR2405220	15RUQ3464785	15RTQ2864365
15RUP3523735	15STR2775700	15RTR2415220	15RUQ3484785	15RTQ2884365
15RUP3543735	15STR2795700	15RTR2435220	15RUQ3494785	15RTQ2894365
15RUP3553735	15STR2805700	15RTR2445220	15RUQ3514785	15RTQ2914365

15RUP3573735	15STR2825700	15RTR2465220	15RUQ3524785	15RTQ2924365
15RUP3583735	15STR2835700	15RTR2475220	15RUQ3544785	15RTQ2944365
15RUP3603735	15STR2855700	15RTR2495220	15RUQ3554785	15RTQ2954365
15RUP3613735	15STR2865700	15RTR2505220	15RUQ3574785	15RTQ2974365
15RUP3633735	15STR2885700	15RTR2525220	15RUQ3584785	15RTQ2984365
15RUP3643735	15STR2895700	15RTR2535220	15RUQ3604785	15RUQ3004365
15RUP3663735	15STR2915700	15RTR2555220	15RUQ3614785	15RUQ3014365
15RUP3673735	15STR2925700	15RTR2565220	15RUQ3634785	15RUQ3034365
15RUP3693735	15STR2945700	15RTR2585220	15RUQ3644785	15RUQ3044365
15RUP3703735	15STR2955700	15RTR2595220	15RUQ3664785	15RUQ3064365
15RUP3723735	15STR2975700	15RTR2615220	15RUQ3674785	15RUQ3074365
15RUP3733735	15STR2985700	15RTR2625220	15RUQ3694785	15RUQ3094365
15RUP3753735	15SUR3005700	15RTR2645220	15RUQ3704785	15RUQ3104365
15RUP3763735	15SUR3015700	15RTR2655220	15RUQ3724785	15RUQ3124365
15RUP3783735	15SUR3035700	15RTR2675220	15RUQ3734785	15RUQ3134365
15RUP3793735	15SUR3045700	15RTR2685220	15RUQ3754785	15RUQ3154365
15RUP3813735	15SUR3065700	15RTR2705220	15RUQ3764785	15RUQ3164365
15RUP3823735	15SUR3075700	15RTR2715220	15RUQ3784785	15RUQ3184365
15RUP3843735	15SUR3095700	15RTR2735220	15RUQ3794785	15RUQ3194365
15RUP3853735	15SUR3105700	15RTR2745220	15RUQ3814785	15RUQ3214365
15RUP3873735	15SUR3125700	15RTR2765220	15RUQ3824785	15RUQ3224365
15RUP3883735	15SUR3135700	15RTR2775220	15RUQ3844785	15RUQ3244365
15RUP3903735	15SUR3155700	15RTR2795220	15RUQ3854785	15RUQ3254365
15RUP3913735	15SUR3165700	15RTR2805220	15RUQ3874785	15RUQ3274365
15RUP3933735	15SUR3185700	15RTR2825220	15RUQ3884785	15RUQ3284365
15RUP3943735	15SUR3195700	15RTR2835220	15RUQ3904785	15RUQ3304365
15RUP3963735	14SQA1895715	15RTR2855220	15RUQ3914785	15RUQ3314365
15RUP3973735	14SQA1905715	15RTR2865220	15RUQ3934785	15RUQ3334365
15RUP3993735	14SQA1925715	15RTR2885220	15RUQ3944785	15RUQ3344365
15RVP4003735	14SQA1935715	15RTR2895220	15RUQ3964785	15RUQ3364365
15RVP4023735	14SQA1955715	15RTR2915220	15RUQ3974785	15RUQ3374365
15RVP4033735	14SQA1965715	15RTR2925220	15RUQ3994785	15RUQ3394365
15RVP4053735	14SQA1985715	15RTR2945220	15RVQ4004785	15RUQ3404365
15RVP4063735	14SQA1995715	15RTR2955220	15RVQ4024785	15RUQ3424365
15RVP4083735	14SQA2015715	15RTR2975220	15RVQ4034785	15RUQ3434365
15RVP4093735	14SQA2025715	15RTR2985220	15RVQ4054785	15RUQ3454365
15RVP4113735	14SQA2045715	15RUR3005220	15RVQ4064785	15RUQ3464365
15RVP4123735	14SQA2055715	15RUR3015220	15RVQ4084785	15RUQ3484365
15RVP4143735	14SQA2075715	15RUR3035220	15RVQ4094785	15RUQ3494365
15RVP4153735	14SQA2085715	15RUR3045220	15RVQ4114785	15RUQ3514365

15RVP4173735	14SQA2105715	15RUR3065220	15RVQ4124785	15RUQ3524365
15RVP4183735	14SQA2115715	15RUR3075220	15RVQ4144785	15RUQ3544365
15RVP4203735	14SQA2135715	15RUR3095220	15RVQ4154785	15RUQ3554365
15RVP4213735	14SQA2145715	15RUR3105220	15RVQ4174785	15RUQ3574365
15RUP3213750	14SQA2165715	15RUR3125220	15RTQ2414800	15RUQ3584365
15RUP3223750	15STR2175715	15RUR3135220	15RTQ2434800	15RUQ3604365
15RUP3243750	15STR2195715	15RUR3155220	15RTQ2444800	15RUQ3614365
15RUP3253750	15STR2205715	15RUR3165220	15RTQ2464800	15RUQ3634365
15RUP3273750	15STR2225715	15RUR3185220	15RTQ2474800	15RUQ3644365
15RUP3283750	15STR2235715	15RUR3195220	15RTQ2494800	15RUQ3664365
15RUP3303750	15STR2255715	15RUR3215220	15RTQ2504800	15RUQ3674365
15RUP3313750	15STR2265715	15RUR3225220	15RTQ2524800	15RUQ3694365
15RUP3333750	15STR2285715	15RUR3245220	15RTQ2534800	15RUQ3704365
15RUP3343750	15STR2295715	15RUR3255220	15RTQ2554800	15RUQ3724365
15RUP3363750	15STR2315715	15RUR3275220	15RTQ2564800	15RUQ3734365
15RUP3373750	15STR2325715	15RUR3285220	15RTQ2584800	15RUQ3754365
15RUP3393750	15STR2345715	15RUR3305220	15RTQ2594800	15RUQ3764365
15RUP3403750	15STR2355715	15RUR3315220	15RTQ2614800	15RUQ3784365
15RUP3423750	15STR2375715	15RUR3335220	15RTQ2624800	15RUQ3794365
15RUP3433750	15STR2385715	15RUR3345220	15RTQ2644800	15RUQ3814365
15RUP3453750	15STR2405715	15RUR3365220	15RTQ2654800	15RUQ3824365
15RUP3463750	15STR2415715	15RUR3375220	15RTQ2674800	15RUQ3844365
15RUP3483750	15STR2435715	15RUR3395220	15RTQ2684800	15RUQ3854365
15RUP3493750	15STR2445715	15RUR3405220	15RTQ2704800	15RUQ3874365
15RUP3513750	15STR2465715	15RUR3425220	15RTQ2714800	15RUQ3884365
15RUP3523750	15STR2475715	15RUR3435220	15RTQ2734800	15RUQ3904365
15RUP3543750	15STR2495715	15RUR3455220	15RTQ2744800	15RUQ3914365
15RUP3553750	15STR2505715	15RUR3465220	15RTQ2764800	15RUQ3934365
15RUP3573750	15STR2525715	15RUR3485220	15RTQ2774800	15RUQ3944365
15RUP3583750	15STR2535715	15RUR3495220	15RTQ2794800	15RUQ3964365
15RUP3603750	15STR2555715	15RUR3515220	15RTQ2804800	15RUQ3974365
15RUP3613750	15STR2565715	15RUR3525220	15RTQ2824800	15RUQ3994365
15RUP3633750	15STR2585715	15RUR3545220	15RTQ2834800	15RVQ4004365
15RUP3643750	15STR2595715	15RUR3555220	15RTQ2854800	15RVQ4024365
15RUP3663750	15STR2615715	15RUR3575220	15RTQ2864800	15RVQ4034365
15RUP3673750	15STR2625715	15RUR3585220	15RTQ2884800	15RVQ4054365
15RUP3693750	15STR2645715	15RUR3605220	15RTQ2894800	15RVQ4064365
15RUP3703750	15STR2655715	15RUR3615220	15RTQ2914800	15RVQ4084365
15RUP3723750	15STR2675715	15RUR3635220	15RTQ2924800	15RVQ4094365
15RUP3733750	15STR2685715	15RUR3645220	15RTQ2944800	15RVQ4114365

15RUP3753750	15STR2705715	15RUR3665220	15RTQ2954800	15RVQ4124365
15RUP3763750	15STR2715715	15RUR3675220	15RTQ2974800	15RVQ4144365
15RUP3783750	15STR2735715	15RUR3695220	15RTQ2984800	15RVQ4154365
15RUP3793750	15STR2745715	15RUR3705220	15RUQ3004800	15RVQ4174365
15RUP3813750	15STR2765715	15RUR3725220	15RUQ3014800	15RVQ4184365
15RUP3823750	15STR2775715	15RUR3735220	15RUQ3034800	15RVQ4204365
15RUP3843750	15STR2795715	15RUR3755220	15RUQ3044800	15RTQ2464380
15RUP3853750	15STR2805715	15RUR3765220	15RUQ3064800	15RTQ2474380
15RUP3873750	15STR2825715	15RUR3785220	15RUQ3074800	15RTQ2494380
15RUP3883750	15STR2835715	15RUR3795220	15RUQ3094800	15RTQ2504380
15RUP3903750	15STR2855715	15RUR3815220	15RUQ3104800	15RTQ2524380
15RUP3913750	15STR2865715	15RUR3825220	15RUQ3124800	15RTQ2534380
15RUP3933750	15STR2885715	15RUR3845220	15RUQ3134800	15RTQ2554380
15RUP3943750	15STR2895715	15RUR3855220	15RUQ3154800	15RTQ2564380
15RUP3963750	15STR2915715	15RUR3875220	15RUQ3164800	15RTQ2584380
15RUP3973750	15STR2925715	15RUR3885220	15RUQ3184800	15RTQ2594380
15RUP3993750	15STR2945715	15RUR3905220	15RUQ3194800	15RTQ2614380
15RVP4003750	15STR2955715	15RUR3915220	15RUQ3214800	15RTQ2624380
15RVP4023750	15STR2975715	15RUR3935220	15RUQ3224800	15RTQ2644380
15RVP4033750	15STR2985715	15RUR3945220	15RUQ3244800	15RTQ2654380
15RVP4053750	15SUR3005715	15RUR3965220	15RUQ3254800	15RTQ2674380
15RVP4063750	15SUR3015715	15RUR3975220	15RUQ3274800	15RTQ2684380
15RVP4083750	15SUR3035715	15RUR3995220	15RUQ3284800	15RTQ2704380
15RVP4093750	15SUR3045715	15RVR4005220	15RUQ3304800	15RTQ2714380
15RVP4113750	15SUR3065715	15RVR4025220	15RUQ3314800	15RTQ2734380
15RVP4123750	15SUR3075715	15RVR4035220	15RUQ3334800	15RTQ2744380
15RVP4143750	15SUR3095715	15RTR2175235	15RUQ3344800	15RTQ2764380
15RVP4153750	15SUR3105715	15RTR2195235	15RUQ3364800	15RTQ2774380
15RVP4173750	15SUR3125715	15RTR2205235	15RUQ3374800	15RTQ2794380
15RVP4183750	15SUR3135715	15RTR2225235	15RUQ3394800	15RTQ2804380
15RVP4203750	15SUR3155715	15RTR2235235	15RUQ3404800	15RTQ2824380
15RVP4213750	14SQA1875730	15RTR2255235	15RUQ3424800	15RTQ2834380
15RUP3213765	14SQA1895730	15RTR2265235	15RUQ3434800	15RTQ2854380
15RUP3223765	14SQA1905730	15RTR2285235	15RUQ3454800	15RTQ2864380
15RUP3243765	14SQA1925730	15RTR2295235	15RUQ3464800	15RTQ2884380
15RUP3253765	14SQA1935730	15RTR2315235	15RUQ3484800	15RTQ2894380
15RUP3273765	14SQA1955730	15RTR2325235	15RUQ3494800	15RTQ2914380
15RUP3283765	14SQA1965730	15RTR2345235	15RUQ3514800	15RTQ2924380
15RUP3303765	14SQA1985730	15RTR2355235	15RUQ3524800	15RTQ2944380
15RUP3313765	14SQA1995730	15RTR2375235	15RUQ3544800	15RTQ2954380



15RUP3333765	14SQA2015730	15RTR2385235	15RUQ3554800	15RTQ2974380
15RUP3343765	14SQA2025730	15RTR2405235	15RUQ3574800	15RTQ2984380
15RUP3363765	14SQA2045730	15RTR2415235	15RUQ3584800	15RUQ3004380
15RUP3373765	14SQA2055730	15RTR2435235	15RUQ3604800	15RUQ3014380
15RUP3393765	14SQA2075730	15RTR2445235	15RUQ3614800	15RUQ3034380
15RUP3403765	14SQA2085730	15RTR2465235	15RUQ3634800	15RUQ3044380
15RUP3423765	14SQA2105730	15RTR2475235	15RUQ3644800	15RUQ3064380
15RUP3433765	14SQA2115730	15RTR2495235	15RUQ3664800	15RUQ3074380
15RUP3453765	14SQA2135730	15RTR2505235	15RUQ3674800	15RUQ3094380
15RUP3463765	14SQA2145730	15RTR2525235	15RUQ3694800	15RUQ3104380
15RUP3483765	14SQA2165730	15RTR2535235	15RUQ3704800	15RUQ3124380
15RUP3493765	15STR2175730	15RTR2555235	15RUQ3724800	15RUQ3134380
15RUP3513765	15STR2195730	15RTR2565235	15RUQ3734800	15RUQ3154380
15RUP3523765	15STR2205730	15RTR2585235	15RUQ3754800	15RUQ3164380
15RUP3543765	15STR2225730	15RTR2595235	15RUQ3764800	15RUQ3184380
15RUP3553765	15STR2235730	15RTR2615235	15RUQ3784800	15RUQ3194380
15RUP3573765	15STR2255730	15RTR2625235	15RUQ3794800	15RUQ3214380
15RUP3583765	15STR2265730	15RTR2645235	15RUQ3814800	15RUQ3224380
15RUP3603765	15STR2285730	15RTR2655235	15RUQ3824800	15RUQ3244380
15RUP3613765	15STR2295730	15RTR2675235	15RUQ3844800	15RUQ3254380
15RUP3633765	15STR2315730	15RTR2685235	15RUQ3854800	15RUQ3274380
15RUP3643765	15STR2325730	15RTR2705235	15RUQ3874800	15RUQ3284380
15RUP3663765	15STR2345730	15RTR2715235	15RUQ3884800	15RUQ3304380
15RUP3673765	15STR2355730	15RTR2735235	15RUQ3904800	15RUQ3314380
15RUP3693765	15STR2375730	15RTR2745235	15RUQ3914800	15RUQ3334380
15RUP3703765	15STR2385730	15RTR2765235	15RUQ3934800	15RUQ3344380
15RUP3723765	15STR2405730	15RTR2775235	15RUQ3944800	15RUQ3364380
15RUP3733765	15STR2415730	15RTR2795235	15RUQ3964800	15RUQ3374380
15RUP3753765	15STR2435730	15RTR2805235	15RUQ3974800	15RUQ3394380
15RUP3763765	15STR2445730	15RTR2825235	15RUQ3994800	15RUQ3404380
15RUP3783765	15STR2465730	15RTR2835235	15RVQ4004800	15RUQ3424380
15RUP3793765	15STR2475730	15RTR2855235	15RVQ4024800	15RUQ3434380
15RUP3813765	15STR2495730	15RTR2865235	15RVQ4034800	15RUQ3454380
15RUP3823765	15STR2505730	15RTR2885235	15RVQ4054800	15RUQ3464380
15RUP3843765	15STR2525730	15RTR2895235	15RVQ4064800	15RUQ3484380
15RUP3853765	15STR2535730	15RTR2915235	15RVQ4084800	15RUQ3494380
15RUP3873765	15STR2555730	15RTR2925235	15RVQ4094800	15RUQ3514380
15RUP3883765	15STR2565730	15RTR2945235	15RVQ4114800	15RUQ3524380
15RUP3903765	15STR2585730	15RTR2955235	15RVQ4124800	15RUQ3544380
15RUP3913765	15STR2595730	15RTR2975235	15RVQ4144800	15RUQ3554380

15RUP3933765	15STR2615730	15RTR2985235	15RVQ4154800	15RUQ3574380
15RUP3943765	15STR2625730	15RUR3005235	15RTQ2414815	15RUQ3584380
15RUP3963765	15STR2645730	15RUR3015235	15RTQ2434815	15RUQ3604380
15RUP3973765	15STR2655730	15RUR3035235	15RTQ2444815	15RUQ3614380
15RUP3993765	15STR2675730	15RUR3045235	15RTQ2464815	15RUQ3634380
15RVP4003765	15STR2685730	15RUR3065235	15RTQ2474815	15RUQ3644380
15RVP4023765	15STR2705730	15RUR3075235	15RTQ2494815	15RUQ3664380
15RVP4033765	15STR2715730	15RUR3095235	15RTQ2504815	15RUQ3674380
15RVP4053765	15STR2735730	15RUR3105235	15RTQ2524815	15RUQ3694380
15RVP4063765	15STR2745730	15RUR3125235	15RTQ2534815	15RUQ3704380
15RVP4083765	15STR2765730	15RUR3135235	15RTQ2554815	15RUQ3724380
15RVP4093765	15STR2775730	15RUR3155235	15RTQ2564815	15RUQ3734380
15RVP4113765	15STR2795730	15RUR3165235	15RTQ2584815	15RUQ3754380
15RVP4123765	15STR2805730	15RUR3185235	15RTQ2594815	15RUQ3764380
15RVP4143765	15STR2825730	15RUR3195235	15RTQ2614815	15RUQ3784380
15RVP4153765	15STR2835730	15RUR3215235	15RTQ2624815	15RUQ3794380
15RVP4173765	15STR2855730	15RUR3225235	15RTQ2644815	15RUQ3814380
15RVP4183765	15STR2865730	15RUR3245235	15RTQ2654815	15RUQ3824380
15RVP4203765	15STR2885730	15RUR3255235	15RTQ2674815	15RUQ3844380
15RUP3223780	15STR2895730	15RUR3275235	15RTQ2684815	15RUQ3854380
15RUP3243780	15STR2915730	15RUR3285235	15RTQ2704815	15RUQ3874380
15RUP3253780	15STR2925730	15RUR3305235	15RTQ2714815	15RUQ3884380
15RUP3273780	15STR2945730	15RUR3315235	15RTQ2734815	15RUQ3904380
15RUP3283780	15STR2955730	15RUR3335235	15RTQ2744815	15RUQ3914380
15RUP3303780	15STR2975730	15RUR3345235	15RTQ2764815	15RUQ3934380
15RUP3313780	15STR2985730	15RUR3365235	15RTQ2774815	15RUQ3944380
15RUP3333780	15SUR3005730	15RUR3375235	15RTQ2794815	15RUQ3964380
15RUP3343780	15SUR3015730	15RUR3395235	15RTQ2804815	15RUQ3974380
15RUP3363780	15SUR3035730	15RUR3405235	15RTQ2824815	15RUQ3994380
15RUP3373780	15SUR3045730	15RUR3425235	15RTQ2834815	15RVQ4004380
15RUP3393780	15SUR3065730	15RUR3435235	15RTQ2854815	15RVQ4024380
15RUP3403780	15SUR3075730	15RUR3455235	15RTQ2864815	15RVQ4034380
15RUP3423780	15SUR3095730	15RUR3465235	15RTQ2884815	15RVQ4054380
15RUP3433780	15SUR3105730	15RUR3485235	15RTQ2894815	15RVQ4064380
15RUP3453780	14SQA1875745	15RUR3495235	15RTQ2914815	15RVQ4084380
15RUP3463780	14SQA1895745	15RUR3515235	15RTQ2924815	15RVQ4094380
15RUP3483780	14SQA1905745	15RUR3525235	15RTQ2944815	15RVQ4114380
15RUP3493780	14SQA1925745	15RUR3545235	15RTQ2954815	15RVQ4124380
15RUP3513780	14SQA1935745	15RUR3555235	15RTQ2974815	15RVQ4144380
15RUP3523780	14SQA1955745	15RUR3575235	15RTQ2984815	15RVQ4154380

15RUP3543780	14SQA1965745	15RUR3585235	15RUQ3004815	15RVQ4174380
15RUP3553780	14SQA1985745	15RUR3605235	15RUQ3014815	15RVQ4184380
15RUP3573780	14SQA1995745	15RUR3615235	15RUQ3034815	15RVQ4204380
15RUP3583780	14SQA2015745	15RUR3635235	15RUQ3044815	15RTQ2444395
15RUP3603780	14SQA2025745	15RUR3645235	15RUQ3064815	15RTQ2464395
15RUP3613780	14SQA2045745	15RUR3665235	15RUQ3074815	15RTQ2474395
15RUP3633780	14SQA2055745	15RUR3675235	15RUQ3094815	15RTQ2494395
15RUP3643780	14SQA2075745	15RUR3695235	15RUQ3104815	15RTQ2504395
15RUP3663780	14SQA2085745	15RUR3705235	15RUQ3124815	15RTQ2524395
15RUP3673780	14SQA2105745	15RUR3725235	15RUQ3134815	15RTQ2534395
15RUP3693780	14SQA2115745	15RUR3735235	15RUQ3154815	15RTQ2554395
15RUP3703780	14SQA2135745	15RUR3755235	15RUQ3164815	15RTQ2564395
15RUP3723780	14SQA2145745	15RUR3765235	15RUQ3184815	15RTQ2584395
15RUP3733780	14SQA2165745	15RUR3785235	15RUQ3194815	15RTQ2594395
15RUP3753780	15STR2175745	15RUR3795235	15RUQ3214815	15RTQ2614395
15RUP3763780	15STR2195745	15RUR3815235	15RUQ3224815	15RTQ2624395
15RUP3783780	15STR2205745	15RUR3825235	15RUQ3244815	15RTQ2644395
15RUP3793780	15STR2225745	15RUR3845235	15RUQ3254815	15RTQ2654395
15RUP3813780	15STR2235745	15RUR3855235	15RUQ3274815	15RTQ2674395
15RUP3823780	15STR2255745	15RUR3875235	15RUQ3284815	15RTQ2684395
15RUP3843780	15STR2265745	15RUR3885235	15RUQ3304815	15RTQ2704395
15RUP3853780	15STR2285745	15RUR3905235	15RUQ3314815	15RTQ2714395
15RUP3873780	15STR2295745	15RUR3915235	15RUQ3334815	15RTQ2734395
15RUP3883780	15STR2315745	15RUR3935235	15RUQ3344815	15RTQ2744395
15RUP3903780	15STR2325745	15RUR3945235	15RUQ3364815	15RTQ2764395
15RUP3913780	15STR2345745	15RUR3965235	15RUQ3374815	15RTQ2774395
15RUP3933780	15STR2355745	15RUR3975235	15RUQ3394815	15RTQ2794395
15RUP3943780	15STR2375745	15RUR3995235	15RUQ3404815	15RTQ2804395
15RUP3963780	15STR2385745	15RVR4005235	15RUQ3424815	15RTQ2824395
15RUP3973780	15STR2405745	15RVR4025235	15RUQ3434815	15RTQ2834395
15RUP3993780	15STR2415745	15RVR4035235	15RUQ3454815	15RTQ2854395
15RVP4003780	15STR2435745	14RQA2165250	15RUQ3464815	15RTQ2864395
15RVP4023780	15STR2445745	15RTR2175250	15RUQ3484815	15RTQ2884395
15RVP4033780	15STR2465745	15RTR2195250	15RUQ3494815	15RTQ2894395
15RVP4053780	15STR2475745	15RTR2205250	15RUQ3514815	15RTQ2914395
15RVP4063780	15STR2495745	15RTR2225250	15RUQ3524815	15RTQ2924395
15RVP4083780	15STR2505745	15RTR2235250	15RUQ3544815	15RTQ2944395
15RVP4093780	15STR2525745	15RTR2255250	15RUQ3554815	15RTQ2954395
15RVP4113780	15STR2535745	15RTR2265250	15RUQ3574815	15RTQ2974395
15RVP4123780	15STR2555745	15RTR2285250	15RUQ3584815	15RTQ2984395

15RVP4143780	15STR2565745	15RTR2295250	15RUQ3604815	15RUQ3004395
15RVP4153780	15STR2585745	15RTR2315250	15RUQ3614815	15RUQ3014395
15RVP4173780	15STR2595745	15RTR2325250	15RUQ3634815	15RUQ3034395
15RVP4183780	15STR2615745	15RTR2345250	15RUQ3644815	15RUQ3044395
15RVP4203780	15STR2625745	15RTR2355250	15RUQ3664815	15RUQ3064395
15RUP3243795	15STR2645745	15RTR2375250	15RUQ3674815	15RUQ3074395
15RUP3253795	15STR2655745	15RTR2385250	15RUQ3694815	15RUQ3094395
15RUP3273795	15STR2675745	15RTR2405250	15RUQ3704815	15RUQ3104395
15RUP3283795	15STR2685745	15RTR2415250	15RUQ3724815	15RUQ3124395
15RUP3303795	15STR2705745	15RTR2435250	15RUQ3734815	15RUQ3134395
15RUP3313795	15STR2715745	15RTR2445250	15RUQ3754815	15RUQ3154395
15RUP3333795	15STR2735745	15RTR2465250	15RUQ3764815	15RUQ3164395
15RUP3343795	15STR2745745	15RTR2475250	15RUQ3784815	15RUQ3184395
15RUP3363795	15STR2765745	15RTR2495250	15RUQ3794815	15RUQ3194395
15RUP3373795	15STR2775745	15RTR2505250	15RUQ3814815	15RUQ3214395
15RUP3393795	15STR2795745	15RTR2525250	15RUQ3824815	15RUQ3224395
15RUP3403795	15STR2805745	15RTR2535250	15RUQ3844815	15RUQ3244395
15RUP3423795	15STR2825745	15RTR2555250	15RUQ3854815	15RUQ3254395
15RUP3433795	15STR2835745	15RTR2565250	15RUQ3874815	15RUQ3274395
15RUP3453795	15STR2855745	15RTR2585250	15RUQ3884815	15RUQ3284395
15RUP3463795	15STR2865745	15RTR2595250	15RUQ3904815	15RUQ3304395
15RUP3483795	15STR2885745	15RTR2615250	15RUQ3914815	15RUQ3314395
15RUP3493795	15STR2895745	15RTR2625250	15RUQ3934815	15RUQ3334395
15RUP3513795	15STR2915745	15RTR2645250	15RUQ3944815	15RUQ3344395
15RUP3523795	15STR2925745	15RTR2655250	15RUQ3964815	15RUQ3364395
15RUP3543795	15STR2945745	15RTR2675250	15RUQ3974815	15RUQ3374395
15RUP3553795	15STR2955745	15RTR2685250	15RUQ3994815	15RUQ3394395
15RUP3573795	15STR2975745	15RTR2705250	15RVQ4004815	15RUQ3404395
15RUP3583795	15STR2985745	15RTR2715250	15RVQ4024815	15RUQ3424395
15RUP3603795	15SUR3005745	15RTR2735250	15RVQ4034815	15RUQ3434395
15RUP3613795	15SUR3015745	15RTR2745250	15RVQ4054815	15RUQ3454395
15RUP3633795	15SUR3035745	15RTR2765250	15RVQ4064815	15RUQ3464395
15RUP3643795	15SUR3045745	15RTR2775250	15RVQ4084815	15RUQ3484395
15RUP3663795	15SUR3065745	15RTR2795250	15RVQ4094815	15RUQ3494395
15RUP3673795	15SUR3075745	15RTR2805250	15RVQ4114815	15RUQ3514395
15RUP3693795	15SUR3095745	15RTR2825250	15RVQ4124815	15RUQ3524395
15RUP3703795	14SQA1865760	15RTR2835250	15RVQ4144815	15RUQ3544395
15RUP3723795	14SQA1875760	15RTR2855250	15RVQ4154815	15RUQ3554395
15RUP3733795	14SQA1895760	15RTR2865250	15RTQ2384830	15RUQ3574395
15RUP3753795	14SQA1905760	15RTR2885250	15RTQ2404830	15RUQ3584395

15RUP3763795	14SQA1925760	15RTR2895250	15RTQ2414830	15RUQ3604395
15RUP3783795	14SQA1935760	15RTR2915250	15RTQ2434830	15RUQ3614395
15RUP3793795	14SQA1955760	15RTR2925250	15RTQ2444830	15RUQ3634395
15RUP3813795	14SQA1965760	15RTR2945250	15RTQ2464830	15RUQ3644395
15RUP3823795	14SQA1985760	15RTR2955250	15RTQ2474830	15RUQ3664395
15RUP3843795	14SQA1995760	15RTR2975250	15RTQ2494830	15RUQ3674395
15RUP3853795	14SQA2015760	15RTR2985250	15RTQ2504830	15RUQ3694395
15RUP3873795	14SQA2025760	15RUR3005250	15RTQ2524830	15RUQ3704395
15RUP3883795	14SQA2045760	15RUR3015250	15RTQ2534830	15RUQ3724395
15RUP3903795	14SQA2055760	15RUR3035250	15RTQ2554830	15RUQ3734395
15RUP3913795	14SQA2075760	15RUR3045250	15RTQ2564830	15RUQ3754395
15RUP3933795	14SQA2085760	15RUR3065250	15RTQ2584830	15RUQ3764395
15RUP3943795	14SQA2105760	15RUR3075250	15RTQ2594830	15RUQ3784395
15RUP3963795	14SQA2115760	15RUR3095250	15RTQ2614830	15RUQ3794395
15RUP3973795	14SQA2135760	15RUR3105250	15RTQ2624830	15RUQ3814395
15RUP3993795	14SQA2145760	15RUR3125250	15RTQ2644830	15RUQ3824395
15RVP4003795	14SQA2165760	15RUR3135250	15RTQ2654830	15RUQ3844395
15RVP4023795	15STR2175760	15RUR3155250	15RTQ2674830	15RUQ3854395
15RVP4033795	15STR2195760	15RUR3165250	15RTQ2684830	15RUQ3874395
15RVP4053795	15STR2205760	15RUR3185250	15RTQ2704830	15RUQ3884395
15RVP4063795	15STR2225760	15RUR3195250	15RTQ2714830	15RUQ3904395
15RVP4083795	15STR2235760	15RUR3215250	15RTQ2734830	15RUQ3914395
15RVP4093795	15STR2255760	15RUR3225250	15RTQ2744830	15RUQ3934395
15RVP4113795	15STR2265760	15RUR3245250	15RTQ2764830	15RUQ3944395
15RVP4123795	15STR2285760	15RUR3255250	15RTQ2774830	15RUQ3964395
15RVP4143795	15STR2295760	15RUR3275250	15RTQ2794830	15RUQ3974395
15RVP4153795	15STR2315760	15RUR3285250	15RTQ2804830	15RUQ3994395
15RVP4173795	15STR2325760	15RUR3305250	15RTQ2824830	15RVQ4004395
15RVP4183795	15STR2345760	15RUR3315250	15RTQ2834830	15RVQ4024395
15RVP4203795	15STR2355760	15RUR3335250	15RTQ2854830	15RVQ4034395
15RUP3243810	15STR2375760	15RUR3345250	15RTQ2864830	15RVQ4054395
15RUP3253810	15STR2385760	15RUR3365250	15RTQ2884830	15RVQ4064395
15RUP3273810	15STR2405760	15RUR3375250	15RTQ2894830	15RVQ4084395
15RUP3283810	15STR2415760	15RUR3395250	15RTQ2914830	15RVQ4094395
15RUP3303810	15STR2435760	15RUR3405250	15RTQ2924830	15RVQ4114395
15RUP3313810	15STR2445760	15RUR3425250	15RTQ2944830	15RVQ4124395
15RUP3333810	15STR2465760	15RUR3435250	15RTQ2954830	15RVQ4144395
15RUP3343810	15STR2475760	15RUR3455250	15RTQ2974830	15RVQ4154395
15RUP3363810	15STR2495760	15RUR3465250	15RTQ2984830	15RVQ4174395
15RUP3373810	15STR2505760	15RUR3485250	15RUQ3004830	15RVQ4184395

15RUP3393810	15STR2525760	15RUR3495250	15RUQ3014830	15RVQ4204395
15RUP3403810	15STR2535760	15RUR3515250	15RUQ3034830	15RTQ2354410
15RUP3423810	15STR2555760	15RUR3525250	15RUQ3044830	15RTQ2374410
15RUP3433810	15STR2565760	15RUR3545250	15RUQ3064830	15RTQ2384410
15RUP3453810	15STR2585760	15RUR3555250	15RUQ3074830	15RTQ2404410
15RUP3463810	15STR2595760	15RUR3575250	15RUQ3094830	15RTQ2414410
15RUP3483810	15STR2615760	15RUR3585250	15RUQ3104830	15RTQ2434410
15RUP3493810	15STR2625760	15RUR3605250	15RUQ3124830	15RTQ2444410
15RUP3513810	15STR2645760	15RUR3615250	15RUQ3134830	15RTQ2464410
15RUP3523810	15STR2655760	15RUR3635250	15RUQ3154830	15RTQ2474410
15RUP3543810	15STR2675760	15RUR3645250	15RUQ3164830	15RTQ2494410
15RUP3553810	15STR2685760	15RUR3665250	15RUQ3184830	15RTQ2504410
15RUP3573810	15STR2705760	15RUR3675250	15RUQ3194830	15RTQ2524410
15RUP3583810	15STR2715760	15RUR3695250	15RUQ3214830	15RTQ2534410
15RUP3603810	15STR2735760	15RUR3705250	15RUQ3224830	15RTQ2554410
15RUP3613810	15STR2745760	15RUR3725250	15RUQ3244830	15RTQ2564410
15RUP3633810	15STR2765760	15RUR3735250	15RUQ3254830	15RTQ2584410
15RUP3643810	15STR2775760	15RUR3755250	15RUQ3274830	15RTQ2594410
15RUP3663810	15STR2795760	15RUR3765250	15RUQ3284830	15RTQ2614410
15RUP3673810	15STR2805760	15RUR3785250	15RUQ3304830	15RTQ2624410
15RUP3693810	15STR2825760	15RUR3795250	15RUQ3314830	15RTQ2644410
15RUP3703810	15STR2835760	15RUR3815250	15RUQ3334830	15RTQ2654410
15RUP3723810	15STR2855760	15RUR3825250	15RUQ3344830	15RTQ2674410
15RUP3733810	15STR2865760	15RUR3845250	15RUQ3364830	15RTQ2684410
15RUP3753810	15STR2885760	15RUR3855250	15RUQ3374830	15RTQ2704410
15RUP3763810	15STR2895760	15RUR3875250	15RUQ3394830	15RTQ2714410
15RUP3783810	15STR2915760	15RUR3885250	15RUQ3404830	15RTQ2734410
15RUP3793810	15STR2925760	15RUR3905250	15RUQ3424830	15RTQ2744410
15RUP3813810	15STR2945760	15RUR3915250	15RUQ3434830	15RTQ2764410
15RUP3823810	15STR2955760	15RUR3935250	15RUQ3454830	15RTQ2774410
15RUP3843810	15STR2975760	15RUR3945250	15RUQ3464830	15RTQ2794410
15RUP3853810	15STR2985760	15RUR3965250	15RUQ3484830	15RTQ2804410
15RUP3873810	15SUR3005760	15RUR3975250	15RUQ3494830	15RTQ2824410
15RUP3883810	15SUR3015760	15RUR3995250	15RUQ3514830	15RTQ2834410
15RUP3903810	15SUR3035760	15RVR4005250	15RUQ3524830	15RTQ2854410
15RUP3913810	15SUR3045760	15RVR4025250	15RUQ3544830	15RTQ2864410
15RUP3933810	15SUR3065760	15RVR4035250	15RUQ3554830	15RTQ2884410
15RUP3943810	15SUR3075760	14RQA2165265	15RUQ3574830	15RTQ2894410
15RUP3963810	14SQA1835775	15RTR2175265	15RUQ3584830	15RTQ2914410
15RUP3973810	14SQA1845775	15RTR2195265	15RUQ3604830	15RTQ2924410



15RUP3993810	14SQA1865775	15RTR2205265	15RUQ3614830	15RTQ2944410
15RVP4003810	14SQA1875775	15RTR2225265	15RUQ3634830	15RTQ2954410
15RVP4023810	14SQA1895775	15RTR2235265	15RUQ3644830	15RTQ2974410
15RVP4033810	14SQA1905775	15RTR2255265	15RUQ3664830	15RTQ2984410
15RVP4053810	14SQA1925775	15RTR2265265	15RUQ3674830	15RUQ3004410
15RVP4063810	14SQA1935775	15RTR2285265	15RUQ3694830	15RUQ3014410
15RVP4083810	14SQA1955775	15RTR2295265	15RUQ3704830	15RUQ3034410
15RVP4093810	14SQA1965775	15RTR2315265	15RUQ3724830	15RUQ3044410
15RVP4113810	14SQA1985775	15RTR2325265	15RUQ3734830	15RUQ3064410
15RVP4123810	14SQA1995775	15RTR2345265	15RUQ3754830	15RUQ3074410
15RVP4143810	14SQA2015775	15RTR2355265	15RUQ3764830	15RUQ3094410
15RVP4153810	14SQA2025775	15RTR2375265	15RUQ3784830	15RUQ3104410
15RVP4173810	14SQA2045775	15RTR2385265	15RUQ3794830	15RUQ3124410
15RVP4183810	14SQA2055775	15RTR2405265	15RUQ3814830	15RUQ3134410
15RVP4203810	14SQA2075775	15RTR2415265	15RUQ3824830	15RUQ3154410
15RUP3243825	14SQA2085775	15RTR2435265	15RUQ3844830	15RUQ3164410
15RUP3253825	14SQA2105775	15RTR2445265	15RUQ3854830	15RUQ3184410
15RUP3273825	14SQA2115775	15RTR2465265	15RUQ3874830	15RUQ3194410
15RUP3283825	14SQA2135775	15RTR2475265	15RUQ3884830	15RUQ3214410
15RUP3303825	14SQA2145775	15RTR2495265	15RUQ3904830	15RUQ3224410
15RUP3313825	14SQA2165775	15RTR2505265	15RUQ3914830	15RUQ3244410
15RUP3333825	15STR2175775	15RTR2525265	15RUQ3934830	15RUQ3254410
15RUP3343825	15STR2195775	15RTR2535265	15RUQ3944830	15RUQ3274410
15RUP3363825	15STR2205775	15RTR2555265	15RUQ3964830	15RUQ3284410
15RUP3373825	15STR2225775	15RTR2565265	15RUQ3974830	15RUQ3304410
15RUP3393825	15STR2235775	15RTR2585265	15RUQ3994830	15RUQ3314410
15RUP3403825	15STR2255775	15RTR2595265	15RVQ4004830	15RUQ3334410
15RUP3423825	15STR2265775	15RTR2615265	15RVQ4024830	15RUQ3344410
15RUP3433825	15STR2285775	15RTR2625265	15RVQ4034830	15RUQ3364410
15RUP3453825	15STR2295775	15RTR2645265	15RVQ4054830	15RUQ3374410
15RUP3463825	15STR2315775	15RTR2655265	15RVQ4064830	15RUQ3394410
15RUP3483825	15STR2325775	15RTR2675265	15RVQ4084830	15RUQ3404410
15RUP3493825	15STR2345775	15RTR2685265	15RVQ4094830	15RUQ3424410
15RUP3513825	15STR2355775	15RTR2705265	15RVQ4114830	15RUQ3434410
15RUP3523825	15STR2375775	15RTR2715265	15RVQ4124830	15RUQ3454410
15RUP3543825	15STR2385775	15RTR2735265	15RTQ2384845	15RUQ3464410
15RUP3553825	15STR2405775	15RTR2745265	15RTQ2404845	15RUQ3484410
15RUP3573825	15STR2415775	15RTR2765265	15RTQ2414845	15RUQ3494410
15RUP3583825	15STR2435775	15RTR2775265	15RTQ2434845	15RUQ3514410
15RUP3603825	15STR2445775	15RTR2795265	15RTQ2444845	15RUQ3524410

15RUP3613825	15STR2465775	15RTR2805265	15RTQ2464845	15RUQ3544410
15RUP3633825	15STR2475775	15RTR2825265	15RTQ2474845	15RUQ3554410
15RUP3643825	15STR2495775	15RTR2835265	15RTQ2494845	15RUQ3574410
15RUP3663825	15STR2505775	15RTR2855265	15RTQ2504845	15RUQ3584410
15RUP3673825	15STR2525775	15RTR2865265	15RTQ2524845	15RUQ3604410
15RUP3693825	15STR2535775	15RTR2885265	15RTQ2534845	15RUQ3614410
15RUP3703825	15STR2555775	15RTR2895265	15RTQ2554845	15RUQ3634410
15RUP3723825	15STR2565775	15RTR2915265	15RTQ2564845	15RUQ3644410
15RUP3733825	15STR2585775	15RTR2925265	15RTQ2584845	15RUQ3664410
15RUP3753825	15STR2595775	15RTR2945265	15RTQ2594845	15RUQ3674410
15RUP3763825	15STR2615775	15RTR2955265	15RTQ2614845	15RUQ3694410
15RUP3783825	15STR2625775	15RTR2975265	15RTQ2624845	15RUQ3704410
15RUP3793825	15STR2645775	15RTR2985265	15RTQ2644845	15RUQ3724410
15RUP3813825	15STR2655775	15RUR3005265	15RTQ2654845	15RUQ3734410
15RUP3823825	15STR2675775	15RUR3015265	15RTQ2674845	15RUQ3754410
15RUP3843825	15STR2685775	15RUR3035265	15RTQ2684845	15RUQ3764410
15RUP3853825	15STR2705775	15RUR3045265	15RTQ2704845	15RUQ3784410
15RUP3873825	15STR2715775	15RUR3065265	15RTQ2714845	15RUQ3794410
15RUP3883825	15STR2735775	15RUR3075265	15RTQ2734845	15RUQ3814410
15RUP3903825	15STR2745775	15RUR3095265	15RTQ2744845	15RUQ3824410
15RUP3913825	15STR2765775	15RUR3105265	15RTQ2764845	15RUQ3844410
15RUP3933825	15STR2775775	15RUR3125265	15RTQ2774845	15RUQ3854410
15RUP3943825	15STR2795775	15RUR3135265	15RTQ2794845	15RUQ3874410
15RUP3963825	15STR2805775	15RUR3155265	15RTQ2804845	15RUQ3884410
15RUP3973825	15STR2825775	15RUR3165265	15RTQ2824845	15RUQ3904410
15RUP3993825	15STR2835775	15RUR3185265	15RTQ2834845	15RUQ3914410
15RVP4003825	15STR2855775	15RUR3195265	15RTQ2854845	15RUQ3934410
15RVP4023825	15STR2865775	15RUR3215265	15RTQ2864845	15RUQ3944410
15RVP4033825	15STR2885775	15RUR3225265	15RTQ2884845	15RUQ3964410
15RVP4053825	15STR2895775	15RUR3245265	15RTQ2894845	15RUQ3974410
15RVP4063825	15STR2915775	15RUR3255265	15RTQ2914845	15RUQ3994410
15RVP4083825	15STR2925775	15RUR3275265	15RTQ2924845	15RVQ4004410
15RVP4093825	15STR2945775	15RUR3285265	15RTQ2944845	15RVQ4024410
15RVP4113825	15STR2955775	15RUR3305265	15RTQ2954845	15RVQ4034410
15RVP4123825	15STR2975775	15RUR3315265	15RTQ2974845	15RVQ4054410
15RVP4143825	15STR2985775	15RUR3335265	15RTQ2984845	15RVQ4064410
15RVP4153825	15SUR3005775	15RUR3345265	15RUQ3004845	15RVQ4084410
15RVP4173825	15SUR3015775	15RUR3365265	15RUQ3014845	15RVQ4094410
15RVP4183825	15SUR3035775	15RUR3375265	15RUQ3034845	15RVQ4114410
15RVP4203825	15SUR3045775	15RUR3395265	15RUQ3044845	15RVQ4124410

15RUP3243840	15SUR3065775	15RUR3405265	15RUQ3064845	15RVQ4144410
15RUP3253840	15SUR3075775	15RUR3425265	15RUQ3074845	15RVQ4154410
15RUP3273840	14SQA1805790	15RUR3435265	15RUQ3094845	15RVQ4174410
15RUP3283840	14SQA1815790	15RUR3455265	15RUQ3104845	15RVQ4184410
15RUP3303840	14SQA1835790	15RUR3465265	15RUQ3124845	15RVQ4204410
15RUP3313840	14SQA1845790	15RUR3485265	15RUQ3134845	15RTQ2354425
15RUP3333840	14SQA1865790	15RUR3495265	15RUQ3154845	15RTQ2374425
15RUP3343840	14SQA1875790	15RUR3515265	15RUQ3164845	15RTQ2384425
15RUP3363840	14SQA1895790	15RUR3525265	15RUQ3184845	15RTQ2404425
15RUP3373840	14SQA1905790	15RUR3545265	15RUQ3194845	15RTQ2414425
15RUP3393840	14SQA1925790	15RUR3555265	15RUQ3214845	15RTQ2434425
15RUP3403840	14SQA1935790	15RUR3575265	15RUQ3224845	15RTQ2444425
15RUP3423840	14SQA1955790	15RUR3585265	15RUQ3244845	15RTQ2464425
15RUP3433840	14SQA1965790	15RUR3605265	15RUQ3254845	15RTQ2474425
15RUP3453840	14SQA1985790	15RUR3615265	15RUQ3274845	15RTQ2494425
15RUP3463840	14SQA1995790	15RUR3635265	15RUQ3284845	15RTQ2504425
15RUP3483840	14SQA2015790	15RUR3645265	15RUQ3304845	15RTQ2524425
15RUP3493840	14SQA2025790	15RUR3665265	15RUQ3314845	15RTQ2534425
15RUP3513840	14SQA2045790	15RUR3675265	15RUQ3334845	15RTQ2554425
15RUP3523840	14SQA2055790	15RUR3695265	15RUQ3344845	15RTQ2564425
15RUP3543840	14SQA2075790	15RUR3705265	15RUQ3364845	15RTQ2584425
15RUP3553840	14SQA2085790	15RUR3725265	15RUQ3374845	15RTQ2594425
15RUP3573840	14SQA2105790	15RUR3735265	15RUQ3394845	15RTQ2614425
15RUP3583840	14SQA2115790	15RUR3755265	15RUQ3404845	15RTQ2624425
15RUP3603840	14SQA2135790	15RUR3765265	15RUQ3424845	15RTQ2644425
15RUP3613840	14SQA2145790	15RUR3785265	15RUQ3434845	15RTQ2654425
15RUP3633840	14SQA2165790	15RUR3795265	15RUQ3454845	15RTQ2674425
15RUP3643840	14SQA2175790	15RUR3815265	15RUQ3464845	15RTQ2684425
15RUP3663840	15STR2195790	15RUR3825265	15RUQ3484845	15RTQ2704425
15RUP3673840	15STR2205790	15RUR3845265	15RUQ3494845	15RTQ2714425
15RUP3693840	15STR2225790	15RUR3855265	15RUQ3514845	15RTQ2734425
15RUP3703840	15STR2235790	15RUR3875265	15RUQ3524845	15RTQ2744425
15RUP3723840	15STR2255790	15RUR3885265	15RUQ3544845	15RTQ2764425
15RUP3733840	15STR2265790	15RUR3905265	15RUQ3554845	15RTQ2774425
15RUP3753840	15STR2285790	15RUR3915265	15RUQ3574845	15RTQ2794425
15RUP3763840	15STR2295790	15RUR3935265	15RUQ3584845	15RTQ2804425
15RUP3783840	15STR2315790	15RUR3945265	15RUQ3604845	15RTQ2824425
15RUP3793840	15STR2325790	15RUR3965265	15RUQ3614845	15RTQ2834425
15RUP3813840	15STR2345790	15RUR3975265	15RUQ3634845	15RTQ2854425
15RUP3823840	15STR2355790	15RUR3995265	15RUQ3644845	15RTQ2864425

15RUP3843840	15STR2375790	15RVR4005265	15RUQ3664845	15RTQ2884425
15RUP3853840	15STR2385790	15RVR4025265	15RUQ3674845	15RTQ2894425
15RUP3873840	15STR2405790	15RVR4035265	15RUQ3694845	15RTQ2914425
15RUP3883840	15STR2415790	14RQA2165280	15RUQ3704845	15RTQ2924425
15RUP3903840	15STR2435790	15RTR2175280	15RUQ3724845	15RTQ2944425
15RUP3913840	15STR2445790	15RTR2195280	15RUQ3734845	15RTQ2954425
15RUP3933840	15STR2465790	15RTR2205280	15RUQ3754845	15RTQ2974425
15RUP3943840	15STR2475790	15RTR2225280	15RUQ3764845	15RTQ2984425
15RUP3963840	15STR2495790	15RTR2235280	15RUQ3784845	15RUQ3004425
15RUP3973840	15STR2505790	15RTR2255280	15RUQ3794845	15RUQ3014425
15RUP3993840	15STR2525790	15RTR2265280	15RUQ3814845	15RUQ3034425
15RVP4003840	15STR2535790	15RTR2285280	15RUQ3824845	15RUQ3044425
15RVP4023840	15STR2555790	15RTR2295280	15RUQ3844845	15RUQ3064425
15RVP4033840	15STR2565790	15RTR2315280	15RUQ3854845	15RUQ3074425
15RVP4053840	15STR2585790	15RTR2325280	15RUQ3874845	15RUQ3094425
15RVP4063840	15STR2595790	15RTR2345280	15RUQ3884845	15RUQ3104425
15RVP4083840	15STR2615790	15RTR2355280	15RUQ3904845	15RUQ3124425
15RVP4093840	15STR2625790	15RTR2375280	15RUQ3914845	15RUQ3134425
15RVP4113840	15STR2645790	15RTR2385280	15RUQ3934845	15RUQ3154425
15RVP4123840	15STR2655790	15RTR2405280	15RUQ3944845	15RUQ3164425
15RVP4143840	15STR2675790	15RTR2415280	15RUQ3964845	15RUQ3184425
15RVP4153840	15STR2685790	15RTR2435280	15RUQ3974845	15RUQ3194425
15RVP4173840	15STR2705790	15RTR2445280	15RUQ3994845	15RUQ3214425
15RVP4183840	15STR2715790	15RTR2465280	15RVQ4004845	15RUQ3224425
15RVP4203840	15STR2735790	15RTR2475280	15RVQ4024845	15RUQ3244425
15RUP3243855	15STR2745790	15RTR2495280	15RVQ4034845	15RUQ3254425
15RUP3253855	15STR2765790	15RTR2505280	15RVQ4054845	15RUQ3274425
15RUP3273855	15STR2775790	15RTR2525280	15RVQ4064845	15RUQ3284425
15RUP3283855	15STR2795790	15RTR2535280	15RVQ4084845	15RUQ3304425
15RUP3303855	15STR2805790	15RTR2555280	15RVQ4094845	15RUQ3314425
15RUP3313855	15STR2825790	15RTR2565280	15RVQ4114845	15RUQ3334425
15RUP3333855	15STR2835790	15RTR2585280	15RVQ4124845	15RUQ3344425
15RUP3343855	15STR2855790	15RTR2595280	15RTQ2384860	15RUQ3364425
15RUP3363855	15STR2865790	15RTR2615280	15RTQ2404860	15RUQ3374425
15RUP3373855	15STR2885790	15RTR2625280	15RTQ2414860	15RUQ3394425
15RUP3393855	15STR2895790	15RTR2645280	15RTQ2434860	15RUQ3404425
15RUP3403855	15STR2915790	15RTR2655280	15RTQ2444860	15RUQ3424425
15RUP3423855	15STR2925790	15RTR2675280	15RTQ2464860	15RUQ3434425
15RUP3433855	15STR2945790	15RTR2685280	15RTQ2474860	15RUQ3454425
15RUP3453855	15STR2955790	15RTR2705280	15RTQ2494860	15RUQ3464425

15RUP3463855	15STR2975790	15RTR2715280	15RTQ2504860	15RUQ3484425
15RUP3483855	15STR2985790	15RTR2735280	15RTQ2524860	15RUQ3494425
15RUP3493855	15SUR3005790	15RTR2745280	15RTQ2534860	15RUQ3514425
15RUP3513855	15SUR3015790	15RTR2765280	15RTQ2554860	15RUQ3524425
15RUP3523855	15SUR3035790	15RTR2775280	15RTQ2564860	15RUQ3544425
15RUP3543855	15SUR3045790	15RTR2795280	15RTQ2584860	15RUQ3554425
15RUP3553855	15SUR3065790	15RTR2805280	15RTQ2594860	15RUQ3574425
15RUP3573855	15SUR3075790	15RTR2825280	15RTQ2614860	15RUQ3584425
15RUP3583855	14SQA1755805	15RTR2835280	15RTQ2624860	15RUQ3604425
15RUP3603855	14SQA1775805	15RTR2855280	15RTQ2644860	15RUQ3614425
15RUP3613855	14SQA1785805	15RTR2865280	15RTQ2654860	15RUQ3634425
15RUP3633855	14SQA1805805	15RTR2885280	15RTQ2674860	15RUQ3644425
15RUP3643855	14SQA1815805	15RTR2895280	15RTQ2684860	15RUQ3664425
15RUP3663855	14SQA1835805	15RTR2915280	15RTQ2704860	15RUQ3674425
15RUP3673855	14SQA1845805	15RTR2925280	15RTQ2714860	15RUQ3694425
15RUP3693855	14SQA1865805	15RTR2945280	15RTQ2734860	15RUQ3704425
15RUP3703855	14SQA1875805	15RTR2955280	15RTQ2744860	15RUQ3724425
15RUP3723855	14SQA1895805	15RTR2975280	15RTQ2764860	15RUQ3734425
15RUP3733855	14SQA1905805	15RTR2985280	15RTQ2774860	15RUQ3754425
15RUP3753855	14SQA1925805	15RUR3005280	15RTQ2794860	15RUQ3764425
15RUP3763855	14SQA1935805	15RUR3015280	15RTQ2804860	15RUQ3784425
15RUP3783855	14SQA1955805	15RUR3035280	15RTQ2824860	15RUQ3794425
15RUP3793855	14SQA1965805	15RUR3045280	15RTQ2834860	15RUQ3814425
15RUP3813855	14SQA1985805	15RUR3065280	15RTQ2854860	15RUQ3824425
15RUP3823855	14SQA1995805	15RUR3075280	15RTQ2864860	15RUQ3844425
15RUP3843855	14SQA2015805	15RUR3095280	15RTQ2884860	15RUQ3854425
15RUP3853855	14SQA2025805	15RUR3105280	15RTQ2894860	15RUQ3874425
15RUP3873855	14SQA2045805	15RUR3125280	15RTQ2914860	15RUQ3884425
15RUP3883855	14SQA2055805	15RUR3135280	15RTQ2924860	15RUQ3904425
15RUP3903855	14SQA2075805	15RUR3155280	15RTQ2944860	15RUQ3914425
15RUP3913855	14SQA2085805	15RUR3165280	15RTQ2954860	15RUQ3934425
15RUP3933855	14SQA2105805	15RUR3185280	15RTQ2974860	15RUQ3944425
15RUP3943855	14SQA2115805	15RUR3195280	15RTQ2984860	15RUQ3964425
15RUP3963855	14SQA2135805	15RUR3215280	15RUQ3004860	15RUQ3974425
15RUP3973855	14SQA2145805	15RUR3225280	15RUQ3014860	15RUQ3994425
15RUP3993855	14SQA2165805	15RUR3245280	15RUQ3034860	15RVQ4004425
15RVP4003855	14SQA2175805	15RUR3255280	15RUQ3044860	15RVQ4024425
15RVP4023855	15STR2195805	15RUR3275280	15RUQ3064860	15RVQ4034425
15RVP4033855	15STR2205805	15RUR3285280	15RUQ3074860	15RVQ4054425
15RVP4053855	15STR2225805	15RUR3305280	15RUQ3094860	15RVQ4064425

15RVP4063855	15STR2235805	15RUR3315280	15RUQ3104860	15RVQ4084425
15RVP4083855	15STR2255805	15RUR3335280	15RUQ3124860	15RVQ4094425
15RVP4093855	15STR2265805	15RUR3345280	15RUQ3134860	15RVQ4114425
15RVP4113855	15STR2285805	15RUR3365280	15RUQ3154860	15RVQ4124425
15RVP4123855	15STR2295805	15RUR3375280	15RUQ3164860	15RVQ4144425
15RVP4143855	15STR2315805	15RUR3395280	15RUQ3184860	15RVQ4154425
15RVP4153855	15STR2325805	15RUR3405280	15RUQ3194860	15RVQ4174425
15RVP4173855	15STR2345805	15RUR3425280	15RUQ3214860	15RVQ4184425
15RVP4183855	15STR2355805	15RUR3435280	15RUQ3224860	15RVQ4204425
15RVP4203855	15STR2375805	15RUR3455280	15RUQ3244860	15RTQ2344440
15RUP3073870	15STR2385805	15RUR3465280	15RUQ3254860	15RTQ2354440
15RUP3093870	15STR2405805	15RUR3485280	15RUQ3274860	15RTQ2374440
15RUP3103870	15STR2415805	15RUR3495280	15RUQ3284860	15RTQ2384440
15RUP3123870	15STR2435805	15RUR3515280	15RUQ3304860	15RTQ2404440
15RUP3133870	15STR2445805	15RUR3525280	15RUQ3314860	15RTQ2414440
15RUP3153870	15STR2465805	15RUR3545280	15RUQ3334860	15RTQ2434440
15RUP3163870	15STR2475805	15RUR3555280	15RUQ3344860	15RTQ2444440
15RUP3183870	15STR2495805	15RUR3575280	15RUQ3364860	15RTQ2464440
15RUP3193870	15STR2505805	15RUR3585280	15RUQ3374860	15RTQ2474440
15RUP3213870	15STR2525805	15RUR3605280	15RUQ3394860	15RTQ2494440
15RUP3223870	15STR2535805	15RUR3615280	15RUQ3404860	15RTQ2504440
15RUP3243870	15STR2555805	15RUR3635280	15RUQ3424860	15RTQ2524440
15RUP3253870	15STR2565805	15RUR3645280	15RUQ3434860	15RTQ2534440
15RUP3273870	15STR2585805	15RUR3665280	15RUQ3454860	15RTQ2554440
15RUP3283870	15STR2595805	15RUR3675280	15RUQ3464860	15RTQ2564440
15RUP3303870	15STR2615805	15RUR3695280	15RUQ3484860	15RTQ2584440
15RUP3313870	15STR2625805	15RUR3705280	15RUQ3494860	15RTQ2594440
15RUP3333870	15STR2645805	15RUR3725280	15RUQ3514860	15RTQ2614440
15RUP3343870	15STR2655805	15RUR3735280	15RUQ3524860	15RTQ2624440
15RUP3363870	15STR2675805	15RUR3755280	15RUQ3544860	15RTQ2644440
15RUP3373870	15STR2685805	15RUR3765280	15RUQ3554860	15RTQ2654440
15RUP3393870	15STR2705805	15RUR3785280	15RUQ3574860	15RTQ2674440
15RUP3403870	15STR2715805	15RUR3795280	15RUQ3584860	15RTQ2684440
15RUP3423870	15STR2735805	15RUR3815280	15RUQ3604860	15RTQ2704440
15RUP3433870	15STR2745805	15RUR3825280	15RUQ3614860	15RTQ2714440
15RUP3453870	15STR2765805	15RUR3845280	15RUQ3634860	15RTQ2734440
15RUP3463870	15STR2775805	15RUR3855280	15RUQ3644860	15RTQ2744440
15RUP3483870	15STR2795805	15RUR3875280	15RUQ3664860	15RTQ2764440
15RUP3493870	15STR2805805	15RUR3885280	15RUQ3674860	15RTQ2774440
15RUP3513870	15STR2825805	15RUR3905280	15RUQ3694860	15RTQ2794440



15RUP3523870	15STR2835805	15RUR3915280	15RUQ3704860	15RTQ2804440
15RUP3543870	15STR2855805	15RUR3935280	15RUQ3724860	15RTQ2824440
15RUP3553870	15STR2865805	15RUR3945280	15RUQ3734860	15RTQ2834440
15RUP3573870	15STR2885805	15RUR3965280	15RUQ3754860	15RTQ2854440
15RUP3583870	15STR2895805	15RUR3975280	15RUQ3764860	15RTQ2864440
15RUP3603870	15STR2915805	15RUR3995280	15RUQ3784860	15RTQ2884440
15RUP3613870	15STR2925805	15RVR4005280	15RUQ3794860	15RTQ2894440
15RUP3633870	15STR2945805	15RVR4025280	15RUQ3814860	15RTQ2914440
15RUP3643870	15STR2955805	15RVR4035280	15RUQ3824860	15RTQ2924440
15RUP3663870	15STR2975805	14RQA2135295	15RUQ3844860	15RTQ2944440
15RUP3673870	15STR2985805	14RQA2145295	15RUQ3854860	15RTQ2954440
15RUP3693870	15SUR3005805	14RQA2165295	15RUQ3874860	15RTQ2974440
15RUP3703870	15SUR3015805	15RTR2175295	15RUQ3884860	15RTQ2984440
15RUP3723870	15SUR3035805	15RTR2195295	15RUQ3904860	15RUQ3004440
15RUP3733870	15SUR3045805	15RTR2205295	15RUQ3914860	15RUQ3014440
15RUP3753870	15SUR3065805	15RTR2225295	15RUQ3934860	15RUQ3034440
15RUP3763870	15SUR3075805	15RTR2235295	15RUQ3944860	15RUQ3044440
15RUP3783870	14SQA1745820	15RTR2255295	15RUQ3964860	15RUQ3064440
15RUP3793870	14SQA1755820	15RTR2265295	15RUQ3974860	15RUQ3074440
15RUP3813870	14SQA1775820	15RTR2285295	15RUQ3994860	15RUQ3094440
15RUP3823870	14SQA1785820	15RTR2295295	15RVQ4004860	15RUQ3104440
15RUP3843870	14SQA1805820	15RTR2315295	15RVQ4024860	15RUQ3124440
15RUP3853870	14SQA1815820	15RTR2325295	15RVQ4034860	15RUQ3134440
15RUP3873870	14SQA1835820	15RTR2345295	15RVQ4054860	15RUQ3154440
15RUP3883870	14SQA1845820	15RTR2355295	15RVQ4064860	15RUQ3164440
15RUP3903870	14SQA1865820	15RTR2375295	15RVQ4084860	15RUQ3184440
15RUP3913870	14SQA1875820	15RTR2385295	15RVQ4094860	15RUQ3194440
15RUP3933870	14SQA1895820	15RTR2405295	15RVQ4114860	15RUQ3214440
15RUP3943870	14SQA1905820	15RTR2415295	15RVQ4124860	15RUQ3224440
15RUP3963870	14SQA1925820	15RTR2435295	15RTQ2384875	15RUQ3244440
15RUP3973870	14SQA1935820	15RTR2445295	15RTQ2404875	15RUQ3254440
15RUP3993870	14SQA1955820	15RTR2465295	15RTQ2414875	15RUQ3274440
15RVP4003870	14SQA1965820	15RTR2475295	15RTQ2434875	15RUQ3284440
15RVP4023870	14SQA1985820	15RTR2495295	15RTQ2444875	15RUQ3304440
15RVP4033870	14SQA1995820	15RTR2505295	15RTQ2464875	15RUQ3314440
15RVP4053870	14SQA2015820	15RTR2525295	15RTQ2474875	15RUQ3334440
15RVP4063870	14SQA2025820	15RTR2535295	15RTQ2494875	15RUQ3344440
15RVP4083870	14SQA2045820	15RTR2555295	15RTQ2504875	15RUQ3364440
15RVP4093870	14SQA2055820	15RTR2565295	15RTQ2524875	15RUQ3374440
15RVP4113870	14SQA2075820	15RTR2585295	15RTQ2534875	15RUQ3394440

15RVP4123870	14SQA2085820	15RTR2595295	15RTQ2554875	15RUQ3404440
15RVP4143870	14SQA2105820	15RTR2615295	15RTQ2564875	15RUQ3424440
15RVP4153870	14SQA2115820	15RTR2625295	15RTQ2584875	15RUQ3434440
15RVP4173870	14SQA2135820	15RTR2645295	15RTQ2594875	15RUQ3454440
15RVP4183870	14SQA2145820	15RTR2655295	15RTQ2614875	15RUQ3464440
15RVP4203870	14SQA2165820	15RTR2675295	15RTQ2624875	15RUQ3484440
15RUP3073885	14SQA2175820	15RTR2685295	15RTQ2644875	15RUQ3494440
15RUP3093885	15STR2195820	15RTR2705295	15RTQ2654875	15RUQ3514440
15RUP3103885	15STR2205820	15RTR2715295	15RTQ2674875	15RUQ3524440
15RUP3123885	15STR2225820	15RTR2735295	15RTQ2684875	15RUQ3544440
15RUP3133885	15STR2235820	15RTR2745295	15RTQ2704875	15RUQ3554440
15RUP3153885	15STR2255820	15RTR2765295	15RTQ2714875	15RUQ3574440
15RUP3163885	15STR2265820	15RTR2775295	15RTQ2734875	15RUQ3584440
15RUP3183885	15STR2285820	15RTR2795295	15RTQ2744875	15RUQ3604440
15RUP3193885	15STR2295820	15RTR2805295	15RTQ2764875	15RUQ3614440
15RUP3213885	15STR2315820	15RTR2825295	15RTQ2774875	15RUQ3634440
15RUP3223885	15STR2325820	15RTR2835295	15RTQ2794875	15RUQ3644440
15RUP3243885	15STR2345820	15RTR2855295	15RTQ2804875	15RUQ3664440
15RUP3253885	15STR2355820	15RTR2865295	15RTQ2824875	15RUQ3674440
15RUP3273885	15STR2375820	15RTR2885295	15RTQ2834875	15RUQ3694440
15RUP3283885	15STR2385820	15RTR2895295	15RTQ2854875	15RUQ3704440
15RUP3303885	15STR2405820	15RTR2915295	15RTQ2864875	15RUQ3724440
15RUP3313885	15STR2415820	15RTR2925295	15RTQ2884875	15RUQ3734440
15RUP3333885	15STR2435820	15RTR2945295	15RTQ2894875	15RUQ3754440
15RUP3343885	15STR2445820	15RTR2955295	15RTQ2914875	15RUQ3764440
15RUP3363885	15STR2465820	15RTR2975295	15RTQ2924875	15RUQ3784440
15RUP3373885	15STR2475820	15RTR2985295	15RTQ2944875	15RUQ3794440
15RUP3393885	15STR2495820	15RUR3005295	15RTQ2954875	15RUQ3814440
15RUP3403885	15STR2505820	15RUR3015295	15RTQ2974875	15RUQ3824440
15RUP3423885	15STR2525820	15RUR3035295	15RTQ2984875	15RUQ3844440
15RUP3433885	15STR2535820	15RUR3045295	15RUQ3004875	15RUQ3854440
15RUP3453885	15STR2555820	15RUR3065295	15RUQ3014875	15RUQ3874440
15RUP3463885	15STR2565820	15RUR3075295	15RUQ3034875	15RUQ3884440
15RUP3483885	15STR2585820	15RUR3095295	15RUQ3044875	15RUQ3904440
15RUP3493885	15STR2595820	15RUR3105295	15RUQ3064875	15RUQ3914440
15RUP3513885	15STR2615820	15RUR3125295	15RUQ3074875	15RUQ3934440
15RUP3523885	15STR2625820	15RUR3135295	15RUQ3094875	15RUQ3944440
15RUP3543885	15STR2645820	15RUR3155295	15RUQ3104875	15RUQ3964440
15RUP3553885	15STR2655820	15RUR3165295	15RUQ3124875	15RUQ3974440
15RUP3573885	15STR2675820	15RUR3185295	15RUQ3134875	15RUQ3994440

15RUP3583885	15STR2685820	15RUR3195295	15RUQ3154875	15RVQ4004440
15RUP3603885	15STR2705820	15RUR3215295	15RUQ3164875	15RVQ4024440
15RUP3613885	15STR2715820	15RUR3225295	15RUQ3184875	15RVQ4034440
15RUP3633885	15STR2735820	15RUR3245295	15RUQ3194875	15RVQ4054440
15RUP3643885	15STR2745820	15RUR3255295	15RUQ3214875	15RVQ4064440
15RUP3663885	15STR2765820	15RUR3275295	15RUQ3224875	15RVQ4084440
15RUP3673885	15STR2775820	15RUR3285295	15RUQ3244875	15RVQ4094440
15RUP3693885	15STR2795820	15RUR3305295	15RUQ3254875	15RVQ4114440
15RUP3703885	15STR2805820	15RUR3315295	15RUQ3274875	15RVQ4124440
15RUP3723885	15STR2825820	15RUR3335295	15RUQ3284875	15RVQ4144440
15RUP3733885	15STR2835820	15RUR3345295	15RUQ3304875	15RVQ4154440
15RUP3753885	15STR2855820	15RUR3365295	15RUQ3314875	15RVQ4174440
15RUP3763885	15STR2865820	15RUR3375295	15RUQ3334875	15RVQ4184440
15RUP3783885	15STR2885820	15RUR3395295	15RUQ3344875	15RVQ4204440
15RUP3793885	15STR2895820	15RUR3405295	15RUQ3364875	15RTQ2344455
15RUP3813885	15STR2975820	15RUR3425295	15RUQ3374875	15RTQ2354455
15RUP3823885	15STR2985820	15RUR3435295	15RUQ3394875	15RTQ2374455
15RUP3843885	15SUR3005820	15RUR3455295	15RUQ3404875	15RTQ2384455
15RUP3853885	15SUR3015820	15RUR3465295	15RUQ3424875	15RTQ2404455
15RUP3873885	15SUR3035820	15RUR3485295	15RUQ3434875	15RTQ2414455
15RUP3883885	15SUR3045820	15RUR3495295	15RUQ3454875	15RTQ2434455
15RUP3903885	15SUR3065820	15RUR3515295	15RUQ3464875	15RTQ2444455
15RUP3913885	15SUR3075820	15RUR3525295	15RUQ3484875	15RTQ2464455
15RUP3933885	14SQA1745835	15RUR3545295	15RUQ3494875	15RTQ2474455
15RUP3943885	14SQA1755835	15RUR3555295	15RUQ3514875	15RTQ2494455
15RUP3963885	14SQA1775835	15RUR3575295	15RUQ3524875	15RTQ2504455
15RUP3973885	14SQA1785835	15RUR3585295	15RUQ3544875	15RTQ2524455
15RUP3993885	14SQA1805835	15RUR3605295	15RUQ3554875	15RTQ2534455
15RVP4003885	14SQA1815835	15RUR3615295	15RUQ3574875	15RTQ2554455
15RVP4023885	14SQA1835835	15RUR3635295	15RUQ3584875	15RTQ2564455
15RVP4033885	14SQA1845835	15RUR3645295	15RUQ3604875	15RTQ2584455
15RVP4053885	14SQA1865835	15RUR3665295	15RUQ3614875	15RTQ2594455
15RVP4063885	14SQA1875835	15RUR3675295	15RUQ3634875	15RTQ2614455
15RVP4083885	14SQA1895835	15RUR3695295	15RUQ3644875	15RTQ2624455
15RVP4093885	14SQA1905835	15RUR3705295	15RUQ3664875	15RTQ2644455
15RVP4113885	14SQA1925835	15RUR3725295	15RUQ3674875	15RTQ2654455
15RVP4123885	14SQA1935835	15RUR3735295	15RUQ3694875	15RTQ2674455
15RVP4143885	14SQA1955835	15RUR3755295	15RUQ3704875	15RTQ2684455
15RVP4153885	14SQA1965835	15RUR3765295	15RUQ3724875	15RTQ2704455
15RVP4173885	14SQA1985835	15RUR3785295	15RUQ3734875	15RTQ2714455

15RVP4183885	14SQA1995835	15RUR3795295	15RUQ3754875	15RTQ2734455
15RVP4203885	14SQA2015835	15RUR3815295	15RUQ3764875	15RTQ2744455
15RUP3073900	14SQA2025835	15RUR3825295	15RUQ3784875	15RTQ2764455
15RUP3093900	14SQA2045835	15RUR3845295	15RUQ3794875	15RTQ2774455
15RUP3103900	14SQA2055835	15RUR3855295	15RUQ3814875	15RTQ2794455
15RUP3123900	14SQA2075835	15RUR3875295	15RUQ3824875	15RTQ2804455
15RUP3133900	14SQA2085835	15RUR3885295	15RUQ3844875	15RTQ2824455
15RUP3153900	14SQA2105835	15RUR3905295	15RUQ3854875	15RTQ2834455
15RUP3163900	14SQA2115835	15RUR3915295	15RUQ3874875	15RTQ2854455
15RUP3183900	14SQA2135835	15RUR3935295	15RUQ3884875	15RTQ2864455
15RUP3193900	14SQA2145835	15RUR3945295	15RUQ3904875	15RTQ2884455
15RUP3213900	14SQA2165835	15RUR3965295	15RUQ3914875	15RTQ2894455
15RUP3223900	14SQA2175835	15RUR3975295	15RUQ3934875	15RTQ2914455
15RUP3243900	15STR2195835	15RUR3995295	15RUQ3944875	15RTQ2924455
15RUP3253900	15STR2205835	15RVR4005295	15RUQ3964875	15RTQ2944455
15RUP3273900	15STR2225835	15RVR4025295	15RUQ3974875	15RTQ2954455
15RUP3283900	15STR2235835	15RVR4035295	15RUQ3994875	15RTQ2974455
15RUP3303900	15STR2255835	14RQA2135310	15RVQ4004875	15RTQ2984455
15RUP3313900	15STR2265835	14RQA2145310	15RVQ4024875	15RUQ3004455
15RUP3333900	15STR2285835	14RQA2165310	15RVQ4034875	15RUQ3014455
15RUP3343900	15STR2295835	15RTR2175310	15RVQ4054875	15RUQ3034455
15RUP3363900	15STR2315835	15RTR2195310	15RVQ4064875	15RUQ3044455
15RUP3373900	15STR2325835	15RTR2205310	15RVQ4084875	15RUQ3064455
15RUP3393900	15STR2345835	15RTR2225310	15RVQ4094875	15RUQ3074455
15RUP3403900	15STR2355835	15RTR2235310	15RVQ4114875	15RUQ3094455
15RUP3423900	15STR2375835	15RTR2255310	15RVQ4124875	15RUQ3104455
15RUP3433900	15STR2385835	15RTR2265310	15RTQ2384890	15RUQ3124455
15RUP3453900	15STR2405835	15RTR2285310	15RTQ2404890	15RUQ3134455
15RUP3463900	15STR2415835	15RTR2295310	15RTQ2414890	15RUQ3154455
15RUP3483900	15STR2435835	15RTR2315310	15RTQ2434890	15RUQ3164455
15RUP3493900	15STR2445835	15RTR2325310	15RTQ2444890	15RUQ3184455
15RUP3513900	15STR2465835	15RTR2345310	15RTQ2464890	15RUQ3194455
15RUP3523900	15STR2475835	15RTR2355310	15RTQ2474890	15RUQ3214455
15RUP3543900	15STR2495835	15RTR2375310	15RTQ2494890	15RUQ3224455
15RUP3553900	15STR2505835	15RTR2385310	15RTQ2504890	15RUQ3244455
15RUP3573900	15STR2525835	15RTR2405310	15RTQ2524890	15RUQ3254455
15RUP3583900	15STR2535835	15RTR2415310	15RTQ2534890	15RUQ3274455
15RUP3603900	15STR2555835	15RTR2435310	15RTQ2554890	15RUQ3284455
15RUP3613900	15STR2565835	15RTR2445310	15RTQ2564890	15RUQ3304455
15RUP3633900	15STR2585835	15RTR2465310	15RTQ2584890	15RUQ3314455

15RUP3643900	15STR2595835	15RTR2475310	15RTQ2594890	15RUQ3334455
15RUP3663900	15STR2615835	15RTR2495310	15RTQ2614890	15RUQ3344455
15RUP3673900	15STR2625835	15RTR2505310	15RTQ2624890	15RUQ3364455
15RUP3693900	15STR2645835	15RTR2525310	15RTQ2644890	15RUQ3374455
15RUP3703900	15STR2655835	15RTR2535310	15RTQ2654890	15RUQ3394455
15RUP3723900	15STR2675835	15RTR2555310	15RTQ2674890	15RUQ3404455
15RUP3733900	15STR2685835	15RTR2565310	15RTQ2684890	15RUQ3424455
15RUP3753900	15STR2705835	15RTR2585310	15RTQ2704890	15RUQ3434455
15RUP3763900	15STR2715835	15RTR2595310	15RTQ2714890	15RUQ3454455
15RUP3783900	15STR2735835	15RTR2615310	15RTQ2734890	15RUQ3464455
15RUP3793900	15STR2745835	15RTR2625310	15RTQ2744890	15RUQ3484455
15RUP3813900	15STR2765835	15RTR2645310	15RTQ2764890	15RUQ3494455
15RUP3823900	15STR2775835	15RTR2655310	15RTQ2774890	15RUQ3514455
15RUP3843900	15STR2795835	15RTR2675310	15RTQ2794890	15RUQ3524455
15RUP3853900	15STR2805835	15RTR2685310	15RTQ2804890	15RUQ3544455
15RUP3873900	15STR2825835	15RTR2705310	15RTQ2824890	15RUQ3554455
15RUP3883900	15STR2835835	15RTR2715310	15RTQ2834890	15RUQ3574455
15RUP3903900	15STR2855835	15RTR2735310	15RTQ2854890	15RUQ3584455
15RUP3913900	15STR2865835	15RTR2745310	15RTQ2864890	15RUQ3604455
15RUP3933900	15STR2885835	15RTR2765310	15RTQ2884890	15RUQ3614455
15RUP3943900	15STR2895835	15RTR2775310	15RTQ2894890	15RUQ3634455
15RUP3963900	15STR2985835	15RTR2795310	15RTQ2914890	15RUQ3644455
15RUP3973900	15SUR3005835	15RTR2805310	15RTQ2924890	15RUQ3664455
15RUP3993900	15SUR3015835	15RTR2825310	15RTQ2944890	15RUQ3674455
15RVP4003900	15SUR3035835	15RTR2835310	15RTQ2954890	15RUQ3694455
15RVP4023900	15SUR3045835	15RTR2855310	15RTQ2974890	15RUQ3704455
15RVP4033900	15SUR3065835	15RTR2865310	15RTQ2984890	15RUQ3724455
15RVP4053900	15SUR3075835	15RTR2885310	15RUQ3004890	15RUQ3734455
15RVP4063900	14SQA1745850	15RTR2895310	15RUQ3014890	15RUQ3754455
15RVP4083900	14SQA1755850	15RTR2915310	15RUQ3034890	15RUQ3764455
15RVP4093900	14SQA1775850	15RTR2925310	15RUQ3044890	15RUQ3784455
15RVP4113900	14SQA1785850	15RTR2945310	15RUQ3064890	15RUQ3794455
15RVP4123900	14SQA1805850	15RTR2955310	15RUQ3074890	15RUQ3814455
15RVP4143900	14SQA1815850	15RTR2975310	15RUQ3094890	15RUQ3824455
15RVP4153900	14SQA1835850	15RTR2985310	15RUQ3104890	15RUQ3844455
15RVP4173900	14SQA1845850	15RUR3005310	15RUQ3124890	15RUQ3854455
15RVP4183900	14SQA1865850	15RUR3015310	15RUQ3134890	15RUQ3874455
15RVP4203900	14SQA1875850	15RUR3035310	15RUQ3154890	15RUQ3884455
15RUP3073915	14SQA1895850	15RUR3045310	15RUQ3164890	15RUQ3904455
15RUP3093915	14SQA1905850	15RUR3065310	15RUQ3184890	15RUQ3914455

15RUP3103915	14SQA1925850	15RUR3075310	15RUQ3194890	15RUQ3934455
15RUP3123915	14SQA1935850	15RUR3095310	15RUQ3214890	15RUQ3944455
15RUP3133915	14SQA1955850	15RUR3105310	15RUQ3224890	15RUQ3964455
15RUP3153915	14SQA1965850	15RUR3125310	15RUQ3244890	15RUQ3974455
15RUP3163915	14SQA1985850	15RUR3135310	15RUQ3254890	15RUQ3994455
15RUP3183915	14SQA1995850	15RUR3155310	15RUQ3274890	15RVQ4004455
15RUP3193915	14SQA2015850	15RUR3165310	15RUQ3284890	15RVQ4024455
15RUP3213915	14SQA2025850	15RUR3185310	15RUQ3304890	15RVQ4034455
15RUP3223915	14SQA2045850	15RUR3195310	15RUQ3314890	15RVQ4054455
15RUP3243915	14SQA2055850	15RUR3215310	15RUQ3334890	15RVQ4064455
15RUP3253915	14SQA2075850	15RUR3225310	15RUQ3344890	15RVQ4084455
15RUP3273915	14SQA2085850	15RUR3245310	15RUQ3364890	15RVQ4094455
15RUP3283915	14SQA2105850	15RUR3255310	15RUQ3374890	15RVQ4114455
15RUP3303915	14SQA2115850	15RUR3275310	15RUQ3394890	15RVQ4124455
15RUP3313915	15STR2235850	15RUR3285310	15RUQ3404890	15RVQ4144455
15RUP3333915	15STR2255850	15RUR3305310	15RUQ3424890	15RVQ4154455
15RUP3343915	15STR2265850	15RUR3315310	15RUQ3434890	15RVQ4174455
15RUP3363915	15STR2285850	15RUR3335310	15RUQ3454890	15RVQ4184455
15RUP3373915	15STR2295850	15RUR3345310	15RUQ3464890	15RVQ4204455
15RUP3393915	15STR2315850	15RUR3365310	15RUQ3484890	15RTQ2344470
15RUP3403915	15STR2325850	15RUR3375310	15RUQ3494890	15RTQ2354470
15RUP3423915	15STR2345850	15RUR3395310	15RUQ3514890	15RTQ2374470
15RUP3433915	15STR2355850	15RUR3405310	15RUQ3524890	15RTQ2384470
15RUP3453915	15STR2375850	15RUR3425310	15RUQ3544890	15RTQ2404470
15RUP3463915	15STR2385850	15RUR3435310	15RUQ3554890	15RTQ2414470
15RUP3483915	15STR2405850	15RUR3455310	15RUQ3574890	15RTQ2434470
15RUP3493915	15STR2415850	15RUR3465310	15RUQ3584890	15RTQ2444470
15RUP3513915	15STR2435850	15RUR3485310	15RUQ3604890	15RTQ2464470
15RUP3523915	15STR2445850	15RUR3495310	15RUQ3614890	15RTQ2474470
15RUP3543915	15STR2465850	15RUR3515310	15RUQ3634890	15RTQ2494470
15RUP3553915	15STR2475850	15RUR3525310	15RUQ3644890	15RTQ2504470
15RUP3573915	15STR2495850	15RUR3545310	15RUQ3664890	15RTQ2524470
15RUP3583915	15STR2505850	15RUR3555310	15RUQ3674890	15RTQ2534470
15RUP3603915	15STR2525850	15RUR3575310	15RUQ3694890	15RTQ2554470
15RUP3613915	15STR2535850	15RUR3585310	15RUQ3704890	15RTQ2564470
15RUP3633915	15STR2555850	15RUR3605310	15RUQ3724890	15RTQ2584470
15RUP3643915	15STR2565850	15RUR3615310	15RUQ3734890	15RTQ2594470
15RUP3663915	15STR2585850	15RUR3635310	15RUQ3754890	15RTQ2614470
15RUP3673915	15STR2595850	15RUR3645310	15RUQ3764890	15RTQ2624470
15RUP3693915	15STR2615850	15RUR3665310	15RUQ3784890	15RTQ2644470



15RUP3703915	15STR2625850	15RUR3675310	15RUQ3794890	15RTQ2654470
15RUP3723915	15STR2645850	15RUR3695310	15RUQ3814890	15RTQ2674470
15RUP3733915	15STR2655850	15RUR3705310	15RUQ3824890	15RTQ2684470
15RUP3753915	15STR2675850	15RUR3725310	15RUQ3844890	15RTQ2704470
15RUP3763915	15STR2685850	15RUR3735310	15RUQ3854890	15RTQ2714470
15RUP3783915	15STR2705850	15RUR3755310	15RUQ3874890	15RTQ2734470
15RUP3793915	15STR2715850	15RUR3765310	15RUQ3884890	15RTQ2744470
15RUP3813915	15STR2735850	15RUR3785310	15RUQ3904890	15RTQ2764470
15RUP3823915	15STR2745850	15RUR3795310	15RUQ3914890	15RTQ2774470
15RUP3843915	15STR2765850	15RUR3815310	15RUQ3934890	15RTQ2794470
15RUP3853915	15STR2775850	15RUR3825310	15RUQ3944890	15RTQ2804470
15RUP3873915	15STR2795850	15RUR3845310	15RUQ3964890	15RTQ2824470
15RUP3883915	15STR2805850	15RUR3855310	15RUQ3974890	15RTQ2834470
15RUP3903915	15STR2825850	15RUR3875310	15RUQ3994890	15RTQ2854470
15RUP3913915	15STR2835850	15RUR3885310	15RVQ4004890	15RTQ2864470
15RUP3933915	15STR2855850	15RUR3905310	15RVQ4024890	15RTQ2884470
15RUP3943915	15STR2865850	15RUR3915310	15RVQ4034890	15RTQ2894470
15RUP3963915	15STR2885850	15RUR3935310	15RVQ4054890	15RTQ2914470
15RUP3973915	15STR2895850	15RUR3945310	15RVQ4064890	15RTQ2924470
15RUP3993915	15STR2235865	15RUR3965310	15RVQ4084890	15RTQ2944470
15RVP4003915	15STR2255865	15RUR3975310	15RVQ4094890	15RTQ2954470
15RVP4023915	15STR2265865	15RUR3995310	15RVQ4114890	15RTQ2974470
15RVP4033915	15STR2285865	15RVR4005310	15RVQ4124890	15RTQ2984470
15RVP4053915	15STR2295865	15RVR4025310	15RTQ2374905	15RUQ3004470
15RVP4063915	15STR2315865	15RVR4035310	15RTQ2384905	15RUQ3014470
15RVP4083915	15STR2325865	14RQA2135325	15RTQ2404905	15RUQ3034470
15RVP4093915	15STR2345865	14RQA2145325	15RTQ2414905	15RUQ3044470
15RVP4113915	15STR2355865	14RQA2165325	15RTQ2434905	15RUQ3064470
15RVP4123915	15STR2375865	15RTR2175325	15RTQ2444905	15RUQ3074470
15RVP4143915	15STR2385865	15RTR2195325	15RTQ2464905	15RUQ3094470
15RVP4153915	15STR2405865	15RTR2205325	15RTQ2474905	15RUQ3104470
15RVP4173915	15STR2415865	15RTR2225325	15RTQ2494905	15RUQ3124470
15RVP4183915	15STR2435865	15RTR2235325	15RTQ2504905	15RUQ3134470
15RVP4203915	15STR2445865	15RTR2255325	15RTQ2524905	15RUQ3154470
15RUP3063930	15STR2465865	15RTR2265325	15RTQ2534905	15RUQ3164470
15RUP3073930	15STR2475865	15RTR2285325	15RTQ2554905	15RUQ3184470
15RUP3093930	15STR2495865	15RTR2295325	15RTQ2564905	15RUQ3194470
15RUP3103930	15STR2505865	15RTR2315325	15RTQ2584905	15RUQ3214470
15RUP3123930	15STR2525865	15RTR2325325	15RTQ2594905	15RUQ3224470
15RUP3133930	15STR2535865	15RTR2345325	15RTQ2614905	15RUQ3244470

15RUP3153930	15STR2555865	15RTR2355325	15RTQ2624905	15RUQ3254470
15RUP3163930	15STR2565865	15RTR2375325	15RTQ2644905	15RUQ3274470
15RUP3183930	15STR2585865	15RTR2385325	15RTQ2654905	15RUQ3284470
15RUP3193930	15STR2595865	15RTR2405325	15RTQ2674905	15RUQ3304470
15RUP3213930	15STR2615865	15RTR2415325	15RTQ2684905	15RUQ3314470
15RUP3223930	15STR2625865	15RTR2435325	15RTQ2704905	15RUQ3334470
15RUP3243930	15STR2645865	15RTR2445325	15RTQ2714905	15RUQ3344470
15RUP3253930	15STR2655865	15RTR2465325	15RTQ2734905	15RUQ3364470
15RUP3273930	15STR2675865	15RTR2475325	15RTQ2744905	15RUQ3374470
15RUP3283930	15STR2685865	15RTR2495325	15RTQ2764905	15RUQ3394470
15RUP3303930	15STR2705865	15RTR2505325	15RTQ2774905	15RUQ3404470
15RUP3313930	15STR2715865	15RTR2525325	15RTQ2794905	15RUQ3424470
15RUP3333930	15STR2735865	15RTR2535325	15RTQ2804905	15RUQ3434470
15RUP3343930	15STR2745865	15RTR2555325	15RTQ2824905	15RUQ3454470
15RUP3363930	15STR2765865	15RTR2565325	15RTQ2834905	15RUQ3464470
15RUP3373930	15STR2775865	15RTR2585325	15RTQ2854905	15RUQ3484470
15RUP3393930	15STR2795865	15RTR2595325	15RTQ2864905	15RUQ3494470
15RUP3403930	15STR2805865	15RTR2615325	15RTQ2884905	15RUQ3514470
15RUP3423930	15STR2825865	15RTR2625325	15RTQ2894905	15RUQ3524470
15RUP3433930	15STR2835865	15RTR2645325	15RTQ2914905	15RUQ3544470
15RUP3453930	15STR2855865	15RTR2655325	15RTQ2924905	15RUQ3554470
15RUP3463930	15STR2865865	15RTR2675325	15RTQ2944905	15RUQ3574470
15RUP3483930	15STR2885865	15RTR2685325	15RTQ2954905	15RUQ3584470
15RUP3493930	15STR2235880	15RTR2705325	15RTQ2974905	15RUQ3604470
15RUP3513930	15STR2255880	15RTR2715325	15RTQ2984905	15RUQ3614470
15RUP3523930	15STR2265880	15RTR2735325	15RUQ3004905	15RUQ3634470
15RUP3543930	15STR2285880	15RTR2745325	15RUQ3014905	15RUQ3644470
15RUP3553930	15STR2295880	15RTR2765325	15RUQ3034905	15RUQ3664470
15RUP3573930	15STR2315880	15RTR2775325	15RUQ3044905	15RUQ3674470
15RUP3583930	15STR2325880	15RTR2795325	15RUQ3064905	15RUQ3694470
15RUP3603930	15STR2345880	15RTR2805325	15RUQ3074905	15RUQ3704470
15RUP3613930	15STR2355880	15RTR2825325	15RUQ3094905	15RUQ3724470
15RUP3633930	15STR2375880	15RTR2835325	15RUQ3104905	15RUQ3734470
15RUP3643930	15STR2385880	15RTR2855325	15RUQ3124905	15RUQ3754470
15RUP3663930	15STR2405880	15RTR2865325	15RUQ3134905	15RUQ3764470
15RUP3673930	15STR2415880	15RTR2885325	15RUQ3154905	15RUQ3784470
15RUP3693930	15STR2435880	15RTR2895325	15RUQ3164905	15RUQ3794470
15RUP3703930	15STR2445880	15RTR2915325	15RUQ3184905	15RUQ3814470
15RUP3723930	15STR2465880	15RTR2925325	15RUQ3194905	15RUQ3824470
15RUP3733930	15STR2475880	15RTR2945325	15RUQ3214905	15RUQ3844470

15RUP3753930	15STR2495880	15RTR2955325	15RUQ3224905	15RUQ3854470
15RUP3763930	15STR2505880	15RTR2975325	15RUQ3244905	15RUQ3874470
15RUP3783930	15STR2525880	15RTR2985325	15RUQ3254905	15RUQ3884470
15RUP3793930	15STR2535880	15RUR3005325	15RUQ3274905	15RUQ3904470
15RUP3813930	15STR2555880	15RUR3015325	15RUQ3284905	15RUQ3914470
15RUP3823930	15STR2565880	15RUR3035325	15RUQ3304905	15RUQ3934470
15RUP3843930	15STR2585880	15RUR3045325	15RUQ3314905	15RUQ3944470
15RUP3853930	15STR2595880	15RUR3065325	15RUQ3334905	15RUQ3964470
15RUP3873930	15STR2615880	15RUR3075325	15RUQ3344905	15RUQ3974470
15RUP3883930	15STR2625880	15RUR3095325	15RUQ3364905	15RUQ3994470
15RUP3903930	15STR2645880	15RUR3105325	15RUQ3374905	15RVQ4004470
15RUP3913930	15STR2655880	15RUR3125325	15RUQ3394905	15RVQ4024470
15RUP3933930	15STR2675880	15RUR3135325	15RUQ3404905	15RVQ4034470
15RUP3943930	15STR2685880	15RUR3155325	15RUQ3424905	15RVQ4054470
15RUP3963930	15STR2705880	15RUR3165325	15RUQ3434905	15RVQ4064470
15RUP3973930	15STR2715880	15RUR3185325	15RUQ3454905	15RVQ4084470
15RUP3993930	15STR2735880	15RUR3195325	15RUQ3464905	15RVQ4094470
15RVP4003930	15STR2745880	15RUR3215325	15RUQ3484905	15RVQ4114470
15RVP4023930	15STR2765880	15RUR3225325	15RUQ3494905	15RVQ4124470
15RVP4033930	15STR2775880	15RUR3245325	15RUQ3514905	15RVQ4144470
15RVP4053930	15STR2795880	15RUR3255325	15RUQ3524905	15RVQ4154470
15RVP4063930	15STR2805880	15RUR3275325	15RUQ3544905	15RVQ4174470
15RVP4083930	15STR2825880	15RUR3285325	15RUQ3554905	15RVQ4184470
15RVP4093930	15STR2835880	15RUR3305325	15RUQ3574905	15RVQ4204470
15RVP4113930	15STR2855880	15RUR3315325	15RUQ3584905	15RTQ2344485
15RVP4123930	15STR2865880	15RUR3335325	15RUQ3604905	15RTQ2354485
15RVP4143930	15STR2235895	15RUR3345325	15RUQ3614905	15RTQ2374485
15RVP4153930	15STR2255895	15RUR3365325	15RUQ3634905	15RTQ2384485
15RVP4173930	15STR2265895	15RUR3375325	15RUQ3644905	15RTQ2404485
15RVP4183930	15STR2285895	15RUR3395325	15RUQ3664905	15RTQ2414485
15RVP4203930	15STR2295895	15RUR3405325	15RUQ3674905	15RTQ2434485
15RUP3063945	15STR2315895	15RUR3425325	15RUQ3694905	15RTQ2444485
15RUP3073945	15STR2325895	15RUR3435325	15RUQ3704905	15RTQ2464485
15RUP3093945	15STR2345895	15RUR3455325	15RUQ3724905	15RTQ2474485
15RUP3103945	15STR2355895	15RUR3465325	15RUQ3734905	15RTQ2494485
15RUP3123945	15STR2375895	15RUR3485325	15RUQ3754905	15RTQ2504485
15RUP3133945	15STR2385895	15RUR3495325	15RUQ3764905	15RTQ2524485
15RUP3153945	15STR2405895	15RUR3515325	15RUQ3784905	15RTQ2534485
15RUP3163945	15STR2415895	15RUR3525325	15RUQ3794905	15RTQ2554485
15RUP3183945	15STR2435895	15RUR3545325	15RUQ3814905	15RTQ2564485

15RUP3193945	15STR2445895	15RUR3555325	15RUQ3824905	15RTQ2584485
15RUP3213945	15STR2465895	15RUR3575325	15RUQ3844905	15RTQ2594485
15RUP3223945	15STR2475895	15RUR3585325	15RUQ3854905	15RTQ2614485
15RUP3243945	15STR2495895	15RUR3605325	15RUQ3874905	15RTQ2624485
15RUP3253945	15STR2505895	15RUR3615325	15RUQ3884905	15RTQ2644485
15RUP3273945	15STR2525895	15RUR3635325	15RUQ3904905	15RTQ2654485
15RUP3283945	15STR2535895	15RUR3645325	15RUQ3914905	15RTQ2674485
15RUP3303945	15STR2555895	15RUR3665325	15RUQ3934905	15RTQ2684485
15RUP3313945	15STR2565895	15RUR3675325	15RUQ3944905	15RTQ2704485
15RUP3333945	15STR2585895	15RUR3695325	15RUQ3964905	15RTQ2714485
15RUP3343945	15STR2595895	15RUR3705325	15RUQ3974905	15RTQ2734485
15RUP3363945	15STR2615895	15RUR3725325	15RUQ3994905	15RTQ2744485
15RUP3373945	15STR2625895	15RUR3735325	15RVQ4004905	15RTQ2764485
15RUP3393945	15STR2645895	15RUR3755325	15RVQ4024905	15RTQ2774485
15RUP3403945	15STR2655895	15RUR3765325	15RVQ4034905	15RTQ2794485
15RUP3423945	15STR2675895	15RUR3785325	15RVQ4054905	15RTQ2804485
15RUP3433945	15STR2685895	15RUR3795325	15RVQ4064905	15RTQ2824485
15RUP3453945	15STR2705895	15RUR3815325	15RVQ4084905	15RTQ2834485
15RUP3463945	15STR2715895	15RUR3825325	15RVQ4094905	15RTQ2854485
15RUP3483945	15STR2735895	15RUR3845325	15RVQ4114905	15RTQ2864485
15RUP3493945	15STR2745895	15RUR3855325	15RVQ4124905	15RTQ2884485
15RUP3513945	15STR2765895	15RUR3875325	15RTQ2374920	15RTQ2894485
15RUP3523945	15STR2775895	15RUR3885325	15RTQ2384920	15RTQ2914485
15RUP3543945	15STR2795895	15RUR3905325	15RTQ2404920	15RTQ2924485
15RUP3553945	15STR2805895	15RUR3915325	15RTQ2414920	15RTQ2944485
15RUP3573945	15STR2825895	15RUR3935325	15RTQ2434920	15RTQ2954485
15RUP3583945	15STR2835895	15RUR3945325	15RTQ2444920	15RTQ2974485
15RUP3603945	15STR2855895	15RUR3965325	15RTQ2464920	15RTQ2984485
15RUP3613945	15STR2865895	15RUR3975325	15RTQ2474920	15RUQ3004485
15RUP3633945	15STR2235910	15RUR3995325	15RTQ2494920	15RUQ3014485
15RUP3643945	15STR2255910	15RVR4005325	15RTQ2504920	15RUQ3034485
15RUP3663945	15STR2265910	15RVR4025325	15RTQ2524920	15RUQ3044485
15RUP3673945	15STR2285910	15RVR4035325	15RTQ2534920	15RUQ3064485
15RUP3693945	15STR2295910	14RQA2145340	15RTQ2554920	15RUQ3074485
15RUP3703945	15STR2315910	14RQA2165340	15RTQ2564920	15RUQ3094485
15RUP3723945	15STR2325910	15RTR2175340	15RTQ2584920	15RUQ3104485
15RUP3733945	15STR2345910	15RTR2195340	15RTQ2594920	15RUQ3124485
15RUP3753945	15STR2355910	15RTR2205340	15RTQ2614920	15RUQ3134485
15RUP3763945	15STR2375910	15RTR2225340	15RTQ2624920	15RUQ3154485
15RUP3783945	15STR2385910	15RTR2235340	15RTQ2644920	15RUQ3164485

15RUP3793945	15STR2405910	15RTR2255340	15RTQ2654920	15RUQ3184485
15RUP3813945	15STR2415910	15RTR2265340	15RTQ2674920	15RUQ3194485
15RUP3823945	15STR2435910	15RTR2285340	15RTQ2684920	15RUQ3214485
15RUP3843945	15STR2445910	15RTR2295340	15RTQ2704920	15RUQ3224485
15RUP3853945	15STR2465910	15RTR2315340	15RTQ2714920	15RUQ3244485
15RUP3873945	15STR2475910	15RTR2325340	15RTQ2734920	15RUQ3254485
15RUP3883945	15STR2495910	15RTR2345340	15RTQ2744920	15RUQ3274485
15RUP3903945	15STR2505910	15RTR2355340	15RTQ2764920	15RUQ3284485
15RUP3913945	15STR2525910	15RTR2375340	15RTQ2774920	15RUQ3304485
15RUP3933945	15STR2535910	15RTR2385340	15RTQ2794920	15RUQ3314485
15RUP3943945	15STR2555910	15RTR2405340	15RTQ2804920	15RUQ3334485
15RUP3963945	15STR2565910	15RTR2415340	15RTQ2824920	15RUQ3344485
15RUP3973945	15STR2585910	15RTR2435340	15RTQ2834920	15RUQ3364485
15RUP3993945	15STR2595910	15RTR2445340	15RTQ2854920	15RUQ3374485
15RVP4003945	15STR2615910	15RTR2465340	15RTQ2864920	15RUQ3394485
15RVP4023945	15STR2625910	15RTR2475340	15RTQ2884920	15RUQ3404485
15RVP4033945	15STR2645910	15RTR2495340	15RTQ2894920	15RUQ3424485
15RVP4053945	15STR2655910	15RTR2505340	15RTQ2914920	15RUQ3434485
15RVP4063945	15STR2675910	15RTR2525340	15RTQ2924920	15RUQ3454485
15RVP4083945	15STR2685910	15RTR2535340	15RTQ2944920	15RUQ3464485
15RVP4093945	15STR2705910	15RTR2555340	15RTQ2954920	15RUQ3484485
15RVP4113945	15STR2715910	15RTR2565340	15RTQ2974920	15RUQ3494485
15RVP4123945	15STR2735910	15RTR2585340	15RTQ2984920	15RUQ3514485
15RVP4143945	15STR2745910	15RTR2595340	15RUQ3004920	15RUQ3524485
15RVP4153945	15STR2765910	15RTR2615340	15RUQ3014920	15RUQ3544485
15RVP4173945	15STR2775910	15RTR2625340	15RUQ3034920	15RUQ3554485
15RVP4183945	15STR2795910	15RTR2645340	15RUQ3044920	15RUQ3574485
15RVP4203945	15STR2805910	15RTR2655340	15RUQ3064920	15RUQ3584485
15RUP3063960	15STR2825910	15RTR2675340	15RUQ3074920	15RUQ3604485
15RUP3073960	15STR2835910	15RTR2685340	15RUQ3094920	15RUQ3614485
15RUP3093960	15STR2235925	15RTR2705340	15RUQ3104920	15RUQ3634485
15RUP3103960	15STR2255925	15RTR2715340	15RUQ3124920	15RUQ3644485
15RUP3123960	15STR2265925	15RTR2735340	15RUQ3134920	15RUQ3664485
15RUP3133960	15STR2285925	15RTR2745340	15RUQ3154920	15RUQ3674485
15RUP3153960	15STR2295925	15RTR2765340	15RUQ3164920	15RUQ3694485
15RUP3163960	15STR2315925	15RTR2775340	15RUQ3184920	15RUQ3704485
15RUP3183960	15STR2325925	15RTR2795340	15RUQ3194920	15RUQ3724485
15RUP3193960	15STR2345925	15RTR2805340	15RUQ3214920	15RUQ3734485
15RUP3213960	15STR2355925	15RTR2825340	15RUQ3224920	15RUQ3754485
15RUP3223960	15STR2375925	15RTR2835340	15RUQ3244920	15RUQ3764485

15RUP3243960	15STR2385925	15RTR2855340	15RUQ3254920	15RUQ3784485
15RUP3253960	15STR2405925	15RTR2865340	15RUQ3274920	15RUQ3794485
15RUP3273960	15STR2415925	15RTR2885340	15RUQ3284920	15RUQ3814485
15RUP3283960	15STR2435925	15RTR2895340	15RUQ3304920	15RUQ3824485
15RUP3303960	15STR2445925	15RTR2915340	15RUQ3314920	15RUQ3844485
15RUP3313960	15STR2465925	15RTR2925340	15RUQ3334920	15RUQ3854485
15RUP3333960	15STR2475925	15RTR2945340	15RUQ3344920	15RUQ3874485
15RUP3343960	15STR2495925	15RTR2955340	15RUQ3364920	15RUQ3884485
15RUP3363960	15STR2505925	15RTR2975340	15RUQ3374920	15RUQ3904485
15RUP3373960	15STR2525925	15RTR2985340	15RUQ3394920	15RUQ3914485
15RUP3393960	15STR2535925	15RUR3005340	15RUQ3404920	15RUQ3934485
15RUP3403960	15STR2555925	15RUR3015340	15RUQ3424920	15RUQ3944485
15RUP3423960	15STR2565925	15RUR3035340	15RUQ3434920	15RUQ3964485
15RUP3433960	15STR2585925	15RUR3045340	15RUQ3454920	15RUQ3974485
15RUP3453960	15STR2595925	15RUR3065340	15RUQ3464920	15RUQ3994485
15RUP3463960	15STR2615925	15RUR3075340	15RUQ3484920	15RVQ4004485
15RUP3483960	15STR2625925	15RUR3095340	15RUQ3494920	15RVQ4024485
15RUP3493960	15STR2645925	15RUR3105340	15RUQ3514920	15RVQ4034485
15RUP3513960	15STR2655925	15RUR3125340	15RUQ3524920	15RVQ4054485
15RUP3523960	15STR2675925	15RUR3135340	15RUQ3544920	15RVQ4064485
15RUP3543960	15STR2685925	15RUR3155340	15RUQ3554920	15RVQ4084485
15RUP3553960	15STR2705925	15RUR3165340	15RUQ3574920	15RVQ4094485
15RUP3573960	15STR2715925	15RUR3185340	15RUQ3584920	15RVQ4114485
15RUP3583960	15STR2735925	15RUR3195340	15RUQ3604920	15RVQ4124485
15RUP3603960	15STR2745925	15RUR3215340	15RUQ3614920	15RVQ4144485
15RUP3613960	15STR2765925	15RUR3225340	15RUQ3634920	15RVQ4154485
15RUP3633960	15STR2775925	15RUR3245340	15RUQ3644920	15RVQ4174485
15RUP3643960	15STR2235940	15RUR3255340	15RUQ3664920	15RVQ4184485
15RUP3663960	15STR2255940	15RUR3275340	15RUQ3674920	15RVQ4204485
15RUP3673960	15STR2265940	15RUR3285340	15RUQ3694920	15RTQ2374500
15RUP3693960	15STR2285940	15RUR3305340	15RUQ3704920	15RTQ2384500
15RUP3703960	15STR2295940	15RUR3315340	15RUQ3724920	15RTQ2404500
15RUP3723960	15STR2315940	15RUR3335340	15RUQ3734920	15RTQ2414500
15RUP3733960	15STR2325940	15RUR3345340	15RUQ3754920	15RTQ2434500
15RUP3753960	15STR2345940	15RUR3365340	15RUQ3764920	15RTQ2444500
15RUP3763960	15STR2355940	15RUR3375340	15RUQ3784920	15RTQ2464500
15RUP3783960	15STR2375940	15RUR3395340	15RUQ3794920	15RTQ2474500
15RUP3793960	15STR2385940	15RUR3405340	15RUQ3814920	15RTQ2494500
15RUP3813960	15STR2405940	15RUR3425340	15RUQ3824920	15RTQ2504500
15RUP3823960	15STR2415940	15RUR3435340	15RUQ3844920	15RTQ2524500



15RUP3843960	15STR2435940	15RUR3455340	15RUQ3854920	15RTQ2534500
15RUP3853960	15STR2445940	15RUR3465340	15RUQ3874920	15RTQ2554500
15RUP3873960	15STR2465940	15RUR3485340	15RUQ3884920	15RTQ2564500
15RUP3883960	15STR2475940	15RUR3495340	15RUQ3904920	15RTQ2584500
15RUP3903960	15STR2495940	15RUR3515340	15RUQ3914920	15RTQ2594500
15RUP3913960	15STR2505940	15RUR3525340	15RUQ3934920	15RTQ2614500
15RUP3933960	15STR2525940	15RUR3545340	15RUQ3944920	15RTQ2624500
15RUP3943960	15STR2535940	15RUR3555340	15RUQ3964920	15RTQ2644500
15RUP3963960	15STR2555940	15RUR3575340	15RUQ3974920	15RTQ2654500
15RUP3973960	15STR2565940	15RUR3585340	15RUQ3994920	15RTQ2674500
15RUP3993960	15STR2585940	15RUR3605340	15RVQ4004920	15RTQ2684500
15RVP4003960	15STR2595940	15RUR3615340	15RVQ4024920	15RTQ2704500
15RVP4023960	15STR2615940	15RUR3635340	15RVQ4034920	15RTQ2714500
15RVP4033960	15STR2625940	15RUR3645340	15RVQ4054920	15RTQ2734500
15RVP4053960	15STR2645940	15RUR3665340	15RVQ4064920	15RTQ2744500
15RVP4063960	15STR2655940	15RUR3675340	15RTQ2374935	15RTQ2764500
15RVP4083960	15STR2675940	15RUR3695340	15RTQ2384935	15RTQ2774500
15RVP4093960	15STR2685940	15RUR3705340	15RTQ2404935	15RTQ2794500
15RVP4113960	15STR2705940	15RUR3725340	15RTQ2414935	15RTQ2804500
15RVP4123960	15STR2715940	15RUR3735340	15RTQ2434935	15RTQ2824500
15RVP4143960	15STR2735940	15RUR3755340	15RTQ2444935	15RTQ2834500
15RVP4153960	15STR2745940	15RUR3765340	15RTQ2464935	15RTQ2854500
15RVP4173960	15STR2765940	15RUR3785340	15RTQ2474935	15RTQ2864500
15RVP4183960	15STR2775940	15RUR3795340	15RTQ2494935	15RTQ2884500
15RVP4203960	15STR2235955	15RUR3815340	15RTQ2504935	15RTQ2894500
15RUP3063975	15STR2255955	15RUR3825340	15RTQ2524935	15RTQ2914500
15RUP3073975	15STR2265955	15RUR3845340	15RTQ2534935	15RTQ2924500
15RUP3093975	15STR2285955	15RUR3855340	15RTQ2554935	15RTQ2944500
15RUP3103975	15STR2295955	15RUR3875340	15RTQ2564935	15RTQ2954500
15RUP3123975	15STR2315955	15RUR3885340	15RTQ2584935	15RTQ2974500
15RUP3133975	15STR2325955	15RUR3905340	15RTQ2594935	15RTQ2984500
15RUP3153975	15STR2345955	15RUR3915340	15RTQ2614935	15RUQ3004500
15RUP3163975	15STR2355955	15RUR3935340	15RTQ2624935	15RUQ3014500
15RUP3183975	15STR2375955	15RUR3945340	15RTQ2644935	15RUQ3034500
15RUP3193975	15STR2385955	15RUR3965340	15RTQ2654935	15RUQ3044500
15RUP3213975	15STR2405955	15RUR3975340	15RTQ2674935	15RUQ3064500
15RUP3223975	15STR2415955	15RUR3995340	15RTQ2684935	15RUQ3074500
15RUP3243975	15STR2435955	15RVR4005340	15RTQ2704935	15RUQ3094500
15RUP3253975	15STR2445955	15RVR4025340	15RTQ2714935	15RUQ3104500
15RUP3273975	15STR2465955	15RVR4035340	15RTQ2734935	15RUQ3124500

15RUP3283975	15STR2475955	14RQA2145355	15RTQ2744935	15RUQ3134500
15RUP3303975	15STR2495955	14RQA2165355	15RTQ2764935	15RUQ3154500
15RUP3313975	15STR2505955	15RTR2175355	15RTQ2774935	15RUQ3164500
15RUP3333975	15STR2525955	15RTR2195355	15RTQ2794935	15RUQ3184500
15RUP3343975	15STR2535955	15RTR2205355	15RTQ2804935	15RUQ3194500
15RUP3363975	15STR2555955	15RTR2225355	15RTQ2824935	15RUQ3214500
15RUP3373975	15STR2565955	15RTR2235355	15RTQ2834935	15RUQ3224500
15RUP3393975	15STR2585955	15RTR2255355	15RTQ2854935	15RUQ3244500
15RUP3403975	15STR2595955	15RTR2265355	15RTQ2864935	15RUQ3254500
15RUP3423975	15STR2615955	15RTR2285355	15RTQ2884935	15RUQ3274500
15RUP3433975	15STR2625955	15RTR2295355	15RTQ2894935	15RUQ3284500
15RUP3453975	15STR2645955	15RTR2315355	15RTQ2914935	15RUQ3304500
15RUP3463975	15STR2655955	15RTR2325355	15RTQ2924935	15RUQ3314500
15RUP3483975	15STR2675955	15RTR2345355	15RTQ2944935	15RUQ3334500
15RUP3493975	15STR2685955	15RTR2355355	15RTQ2954935	15RUQ3344500
15RUP3513975	15STR2705955	15RTR2375355	15RTQ2974935	15RUQ3364500
15RUP3523975	15STR2715955	15RTR2385355	15RTQ2984935	15RUQ3374500
15RUP3543975	15STR2735955	15RTR2405355	15RUQ3004935	15RUQ3394500
15RUP3553975	15STR2745955	15RTR2415355	15RUQ3014935	15RUQ3404500
15RUP3573975	15STR2765955	15RTR2435355	15RUQ3034935	15RUQ3424500
15RUP3583975	15STR2775955	15RTR2445355	15RUQ3044935	15RUQ3434500
15RUP3603975	15STR2255970	15RTR2465355	15RUQ3064935	15RUQ3454500
15RUP3613975	15STR2265970	15RTR2475355	15RUQ3074935	15RUQ3464500
15RUP3633975	15STR2285970	15RTR2495355	15RUQ3094935	15RUQ3484500
15RUP3643975	15STR2295970	15RTR2505355	15RUQ3104935	15RUQ3494500
15RUP3663975	15STR2315970	15RTR2525355	15RUQ3124935	15RUQ3514500
15RUP3673975	15STR2325970	15RTR2535355	15RUQ3134935	15RUQ3524500
15RUP3693975	15STR2345970	15RTR2555355	15RUQ3154935	15RUQ3544500
15RUP3703975	15STR2355970	15RTR2565355	15RUQ3164935	15RUQ3554500
15RUP3723975	15STR2375970	15RTR2585355	15RUQ3184935	15RUQ3574500
15RUP3733975	15STR2385970	15RTR2595355	15RUQ3194935	15RUQ3584500
15RUP3753975	15STR2405970	15RTR2615355	15RUQ3214935	15RUQ3604500
15RUP3763975	15STR2415970	15RTR2625355	15RUQ3224935	15RUQ3614500
15RUP3783975	15STR2435970	15RTR2645355	15RUQ3244935	15RUQ3634500
15RUP3793975	15STR2445970	15RTR2655355	15RUQ3254935	15RUQ3644500
15RUP3813975	15STR2465970	15RTR2675355	15RUQ3274935	15RUQ3664500
15RUP3823975	15STR2475970	15RTR2685355	15RUQ3284935	15RUQ3674500
15RUP3843975	15STR2495970	15RTR2705355	15RUQ3304935	15RUQ3694500
15RUP3853975	15STR2505970	15RTR2715355	15RUQ3314935	15RUQ3704500
15RUP3873975	15STR2525970	15RTR2735355	15RUQ3334935	15RUQ3724500

15RUP3883975	15STR2535970	15RTR2745355	15RUQ3344935	15RUQ3734500
15RUP3903975	15STR2555970	15RTR2765355	15RUQ3364935	15RUQ3754500
15RUP3913975	15STR2565970	15RTR2775355	15RUQ3374935	15RUQ3764500
15RUP3933975	15STR2585970	15RTR2795355	15RUQ3394935	15RUQ3784500
15RUP3943975	15STR2595970	15RTR2805355	15RUQ3404935	15RUQ3794500
15RUP3963975	15STR2615970	15RTR2825355	15RUQ3424935	15RUQ3814500
15RUP3973975	15STR2625970	15RTR2835355	15RUQ3434935	15RUQ3824500
15RUP3993975	15STR2645970	15RTR2855355	15RUQ3454935	15RUQ3844500
15RVP4003975	15STR2655970	15RTR2865355	15RUQ3464935	15RUQ3854500
15RVP4023975	15STR2675970	15RTR2885355	15RUQ3484935	15RUQ3874500
15RVP4033975	15STR2685970	15RTR2895355	15RUQ3494935	15RUQ3884500
15RVP4053975	15STR2705970	15RTR2915355	15RUQ3514935	15RUQ3904500
15RVP4063975	15STR2715970	15RTR2925355	15RUQ3524935	15RUQ3914500
15RVP4083975	15STR2735970	15RTR2945355	15RUQ3544935	15RUQ3934500
15RVP4093975	15STR2745970	15RTR2955355	15RUQ3554935	15RUQ3944500
15RVP4113975	15STR2265985	15RTR2975355	15RUQ3574935	15RUQ3964500
15RVP4123975	15STR2285985	15RTR2985355	15RUQ3584935	15RUQ3974500
15RVP4143975	15STR2295985	15RUR3005355	15RUQ3604935	15RUQ3994500
15RVP4153975	15STR2315985	15RUR3015355	15RUQ3614935	15RVQ4004500
15RVP4173975	15STR2325985	15RUR3035355	15RUQ3634935	15RVQ4024500
15RVP4183975	15STR2345985	15RUR3045355	15RUQ3644935	15RVQ4034500
15RVP4203975	15STR2355985	15RUR3065355	15RUQ3664935	15RVQ4054500
15RVP4213975	15STR2375985	15RUR3075355	15RUQ3674935	15RVQ4064500
15RVP4233975	15STR2385985	15RUR3095355	15RUQ3694935	15RVQ4084500
15RUP3033990	15STR2405985	15RUR3105355	15RUQ3704935	15RVQ4094500
15RUP3043990	15STR2415985	15RUR3125355	15RUQ3724935	15RVQ4114500
15RUP3063990	15STR2435985	15RUR3135355	15RUQ3734935	15RVQ4124500
15RUP3073990	15STR2445985	15RUR3155355	15RUQ3754935	15RVQ4144500
15RUP3093990	15STR2465985	15RUR3165355	15RUQ3764935	15RVQ4154500
15RUP3103990	15STR2475985	15RUR3185355	15RUQ3784935	15RVQ4174500
15RUP3123990	15STR2495985	15RUR3195355	15RUQ3794935	15RVQ4184500
15RUP3133990	15STR2505985	15RUR3215355	15RUQ3814935	15RVQ4204500
15RUP3153990	15STR2525985	15RUR3225355	15RUQ3824935	15RTQ2374515
15RUP3163990	15STR2535985	15RUR3245355	15RUQ3844935	15RTQ2384515
15RUP3183990	15STR2555985	15RUR3255355	15RUQ3854935	15RTQ2404515
15RUP3193990	15STR2565985	15RUR3275355	15RUQ3874935	15RTQ2414515
15RUP3213990	15STR2585985	15RUR3285355	15RUQ3884935	15RTQ2434515
15RUP3223990	15STR2595985	15RUR3305355	15RUQ3904935	15RTQ2444515
15RUP3243990	15STR2615985	15RUR3315355	15RUQ3914935	15RTQ2464515
15RUP3253990	15STR2625985	15RUR3335355	15RUQ3934935	15RTQ2474515

15RUP3273990	15STR2645985	15RUR3345355	15RUQ3944935	15RTQ2494515
15RUP3283990	15STR2655985	15RUR3365355	15RUQ3964935	15RTQ2504515
15RUP3303990	15STR2715985	15RUR3375355	15RUQ3974935	15RTQ2524515
15RUP3313990	15STR2735985	15RUR3395355	15RUQ3994935	15RTQ2534515
15RUP3333990	15STR2745985	15RUR3405355	15RVQ4004935	15RTQ2554515
15RUP3343990	15STS2316000	15RUR3425355	15RVQ4024935	15RTQ2564515
15RUP3363990	15STS2326000	15RUR3435355	15RVQ4034935	15RTQ2584515
15RUP3373990	15STS2346000	15RUR3455355	15RVQ4054935	15RTQ2594515
15RUP3393990	15STS2356000	15RUR3465355	15RVQ4064935	15RTQ2614515
15RUP3403990	15STS2376000	15RUR3485355	15RTQ2404950	15RTQ2624515
15RUP3423990	15STS2386000	15RUR3495355	15RTQ2414950	15RTQ2644515
15RUP3433990	15STS2406000	15RUR3515355	15RTQ2434950	15RTQ2654515
15RUP3453990	15STS2416000	15RUR3525355	15RTQ2444950	15RTQ2674515
15RUP3463990	15STS2436000	15RUR3545355	15RTQ2464950	15RTQ2684515
15RUP3483990	15STS2446000	15RUR3555355	15RTQ2474950	15RTQ2704515
15RUP3493990	15STS2466000	15RUR3575355	15RTQ2494950	15RTQ2714515
15RUP3513990	15STS2476000	15RUR3585355	15RTQ2504950	15RTQ2734515
15RUP3523990	15STS2496000	15RUR3605355	15RTQ2524950	15RTQ2744515
15RUP3543990	15STS2506000	15RUR3615355	15RTQ2534950	15RTQ2764515
15RUP3553990	15STS2526000	15RUR3635355	15RTQ2554950	15RTQ2774515
15RUP3573990	15STS2536000	15RUR3645355	15RTQ2564950	15RTQ2794515
15RUP3583990	15STS2556000	15RUR3665355	15RTQ2584950	15RTQ2804515
15RUP3603990	15STS2566000	15RUR3675355	15RTQ2594950	15RTQ2824515
15RUP3613990	15STS2586000	15RUR3695355	15RTQ2614950	15RTQ2834515
15RUP3633990	15STS2596000	15RUR3705355	15RTQ2624950	15RTQ2854515
15RUP3643990	15STS2616000	15RUR3725355	15RTQ2644950	15RTQ2864515
15RUP3663990	15STS2626000	15RUR3735355	15RTQ2654950	15RTQ2884515
15RUP3673990	15STS2716000	15RUR3755355	15RTQ2674950	15RTQ2894515
15RUP3693990	15STS2736000	15RUR3765355	15RTQ2684950	15RTQ2914515
15RUP3703990	15STS2746000	15RUR3785355	15RTQ2704950	15RTQ2924515
15RUP3723990	15STS2316015	15RUR3795355	15RTQ2714950	15RTQ2944515
15RUP3733990	15STS2326015	15RUR3815355	15RTQ2734950	15RTQ2954515
15RUP3753990	15STS2346015	15RUR3825355	15RTQ2744950	15RTQ2974515
15RUP3763990	15STS2356015	15RUR3845355	15RTQ2764950	15RTQ2984515
15RUP3783990	15STS2376015	15RUR3855355	15RTQ2774950	15RUQ3004515
15RUP3793990	15STS2386015	15RUR3875355	15RTQ2794950	15RUQ3014515
15RUP3813990	15STS2406015	15RUR3885355	15RTQ2804950	15RUQ3034515
15RUP3823990	15STS2416015	15RUR3905355	15RTQ2824950	15RUQ3044515
15RUP3843990	15STS2436015	15RUR3915355	15RTQ2834950	15RUQ3064515
15RUP3853990	15STS2446015	15RUR3935355	15RTQ2854950	15RUQ3074515

15RUP3873990	15STS2466015	15RUR3945355	15RTQ2864950	15RUQ3094515
15RUP3883990	15STS2476015	15RUR3965355	15RTQ2884950	15RUQ3104515
15RUP3903990	15STS2496015	15RUR3975355	15RTQ2894950	15RUQ3124515
15RUP3913990	15STS2506015	15RUR3995355	15RTQ2914950	15RUQ3134515
15RUP3933990	15STS2526015	15RVR4005355	15RTQ2924950	15RUQ3154515
15RUP3943990	15STS2536015	15RVR4025355	15RTQ2944950	15RUQ3164515
15RUP3963990	15STS2556015	15RVR4035355	15RTQ2954950	15RUQ3184515
15RUP3973990	15STS2566015	14RQA2085370	15RTQ2974950	15RUQ3194515
15RUP3993990	15STS2586015	14RQA2105370	15RTQ2984950	15RUQ3214515
15RVP4003990	15STS2596015	14RQA2115370	15RUQ3004950	15RUQ3224515
15RVP4023990	15STS2616015	14RQA2135370	15RUQ3014950	15RUQ3244515
15RVP4033990	15STS2626015	14RQA2145370	15RUQ3034950	15RUQ3254515
15RVP4053990	15STS2716015	14RQA2165370	15RUQ3044950	15RUQ3274515
15RVP4063990	15STS2736015	15RTR2175370	15RUQ3064950	15RUQ3284515
15RVP4083990	15STS2746015	15RTR2195370	15RUQ3074950	15RUQ3304515
15RVP4093990	15STS2326030	15RTR2205370	15RUQ3094950	15RUQ3314515
15RVP4113990	15STS2346030	15RTR2225370	15RUQ3104950	15RUQ3334515
15RVP4123990	15STS2356030	15RTR2235370	15RUQ3124950	15RUQ3344515
15RVP4143990	15STS2376030	15RTR2255370	15RUQ3134950	15RUQ3364515
15RVP4153990	15STS2416030	15RTR2265370	15RUQ3154950	15RUQ3374515
15RVP4173990	15STS2436030	15RTR2285370	15RUQ3164950	15RUQ3394515
15RVP4183990	15STS2446030	15RTR2295370	15RUQ3184950	15RUQ3404515
15RVP4203990	15STS2466030	15RTR2315370	15RUQ3194950	15RUQ3424515
15RVP4213990	15STS2476030	15RTR2325370	15RUQ3214950	15RUQ3434515
15RVP4233990	15STS2496030	15RTR2345370	15RUQ3224950	15RUQ3454515
15RUQ3034005	15STS2506030	15RTR2355370	15RUQ3244950	15RUQ3464515
15RUQ3044005	15STS2526030	15RTR2375370	15RUQ3254950	15RUQ3484515
15RUQ3064005	15STS2536030	15RTR2385370	15RUQ3274950	15RUQ3494515
15RUQ3074005	15STS2556030	15RTR2405370	15RUQ3284950	15RUQ3514515
15RUQ3094005	15STS2566030	15RTR2415370	15RUQ3304950	15RUQ3524515
15RUQ3104005	15STS2586030	15RTR2435370	15RUQ3314950	15RUQ3544515
15RUQ3124005	15STS2596030	15RTR2445370	15RUQ3334950	15RUQ3554515
15RUQ3134005	15STS2616030	15RTR2465370	15RUQ3344950	15RUQ3574515
15RUQ3154005	15STS2626030	15RTR2475370	15RUQ3364950	15RUQ3584515
15RUQ3164005	15STS2436045	15RTR2495370	15RUQ3374950	15RUQ3604515
15RUQ3184005	15STS2446045	15RTR2505370	15RUQ3394950	15RUQ3614515
15RUQ3194005	15STS2466045	15RTR2525370	15RUQ3404950	15RUQ3634515
15RUQ3214005	15STS2476045	15RTR2535370	15RUQ3424950	15RUQ3644515
15RUQ3224005	15STS2496045	15RTR2555370	15RUQ3434950	15RUQ3664515
15RUQ3244005	15STS2506045	15RTR2565370	15RUQ3454950	15RUQ3674515

15RUQ3254005	15STS2526045	15RTR2585370	15RUQ3464950	15RUQ3694515
15RUQ3274005	15RUP4228850	15RTR2595370	15RUQ3484950	15RUQ3704515
15RUQ3284005	15RUP4521100	15RTR2615370	15RUQ3494950	15RUQ3724515
15RUQ3304005	15RUP4519950	15RTR2625370	15RUQ3514950	15RUQ3734515
15RUQ3314005	15RUP46191950	15RTR2645370	15RUQ3524950	15RUQ3754515
15RUQ3334005	15RUP4819950	15RTR2655370	15RUQ3544950	15RUQ3764515
15RUQ3344005	15RUP4517800	15RTR2675370	15RUQ3554950	15RUQ3784515
15RUQ3364005	15RUP4618800	15RTR2685370	15RUQ3574950	15RUQ3794515
15RUQ3374005	15RUP4718800	15RTR2705370	15RUQ3584950	15RUQ3814515
15RUQ3394005	15RUP4516650	15RTR2715370	15RUQ3604950	15RUQ3824515
15RUQ3404005	15RUP4616650	15RTR2735370	15RUQ3614950	15RUQ3844515
15RUQ3424005	15RUP4716650	15RTR2745370	15RUQ3634950	15RUQ3854515
15RUQ3434005	15RUP4916650	15RTR2765370	15RUQ3644950	15RUQ3874515
15RUQ3454005	15RUP4515500	15RTR2775370	15RUQ3664950	15RUQ3884515
15RUQ3464005	15RUP4615500	15RTR2795370	15RUQ3674950	15RUQ3904515
15RUQ3484005	15RUP4714500	15RTR2805370	15RUQ3694950	15RUQ3914515
15RUQ3494005	15RUP4915500	15RTR2825370	15RUQ3704950	15RUQ3934515
15RUQ3514005	15RUP4513350	15RTR2835370	15RUQ3724950	15RUQ3944515
15RUQ3524005	15RUP4613350	15RTR2855370	15RUQ3734950	15RUQ3964515
15RUQ3544005	15RUP4713350	15RTR2865370	15RUQ3754950	15RUQ3974515
15RUQ3554005	15RUP4913350	15RTR2885370	15RUQ3764950	15RUQ3994515
15RUQ3574005	15RUP4511200	15RTR2895370	15RUQ3784950	15RVQ4004515
15RUQ3584005	15RUP4611200	15RTR2915370	15RUQ3794950	15RVQ4024515
15RUQ3604005	15RUP4712200	15RTR2925370	15RUQ3814950	15RVQ4034515
15RUQ3614005	15RUP4912200	15RTR2945370	15RUQ3824950	15RVQ4054515
15RUQ3634005	15RUP4510050	15RTR2955370	15RUQ3844950	15RVQ4064515
15RUQ3644005	15RUP4610050	15RTR2975370	15RUQ3854950	15RVQ4084515
15RUQ3664005	15RUP4710050	15RTR2985370	15RUQ3874950	15RVQ4094515
15RUQ3674005	15RUP4910050	15RUR3005370	15RUQ3884950	15RVQ4114515
15RUQ3694005	15RUP4509900	15RUR3015370	15RUQ3904950	15RVQ4124515
15RUQ3704005	15RUP4609900	15RUR3035370	15RUQ3914950	15RVQ4144515
15RUQ3724005	15RUP4808900	15RUR3045370	15RUQ3934950	15RVQ4154515
15RUQ3734005	15RUP4909900	15RUR3065370	15RUQ3944950	15RVQ4174515
15RUQ3754005	15RUP4407750	15RUR3075370	15RUQ3964950	15RVQ4184515
15RUQ3764005	15RUP4607750	15RUR3095370	15RUQ3974950	15RVQ4204515
15RUQ3784005	15RUP4707750	15RUR3105370	15RUQ3994950	15RTQ2374530
15RUQ3794005	15RUP4907750	15RUR3125370	15RVQ4004950	15RTQ2384530
15RUQ3814005	15RUP6007750	15RUR3135370	15RVQ4024950	15RTQ2404530
15RUQ3824005	15RUP6107750	15RUR3155370	15RVQ4034950	15RTQ2414530
15RUQ3844005	15RUP6008900	15RUR3165370	15RVQ4054950	15RTQ2434530



15RUQ3854005	15RUP6108900	15RUR3185370	15RVQ4064950	15RTQ2444530
15RUQ3874005	15RUP6010050	15RUR3195370	15RTQ2404965	15RTQ2464530
15RUQ3884005	15RUP6110050	15RUR3215370	15RTQ2414965	15RTQ2474530
15RUQ3904005	15RUP5911200	15RUR3225370	15RTQ2434965	15RTQ2494530
15RUQ3914005	15RUP6112200	15RUR3245370	15RTQ2444965	15RTQ2504530
15RUQ3934005	15RUP5913350	15RUR3255370	15RTQ2464965	15RTQ2524530
15RUQ3944005	15RUP6113350	15RUR3275370	15RTQ2474965	15RTQ2534530
15RUQ3964005	15RUP5915500	15RUR3285370	15RTQ2494965	15RTQ2554530
15RUQ3974005	15RUP6115500	15RUR3305370	15RTQ2504965	15RTQ2564530
15RUQ3994005	15RUP5916650	15RUR3315370	15RTQ2524965	15RTQ2584530
15RVQ4004005	15RUP6116650	15RUR3335370	15RTQ2534965	15RVQ4024005

## **Appendix D: Quantum Spatial GPS Processing**

Please see the report included with this deliverable:

**Appendix\_D\_Quantum\_Spatial\_GPS\_Processing**

## **Appendix E: Precision Aerial Reconnaissance GPS Processing**

Please see the report included with this deliverable:

**Appendix\_E\_Precision\_Aerial\_Reconnaissance\_GPS\_Processing**