### U.S. DEPARTMENT OF TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)

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| City, State | Airport               | Effective Date | Amdt. No. |
|-------------|-----------------------|----------------|-----------|
| KETCHUM, OK | SOUTH GRAND LAKE RGNL | 21 JULY 2016   | ORIG      |

#### **TAKEOFF MINIMUMS:**

RWY 18 STANDARD.

RWY 36 300-1 1/4 OR STANDARD WITH MINIMUM CLIMB OF 453 FEET PER NM TO 1200.

#### **TEXTUAL DEPARTURE PROCEDURES:**

RWY 18 - CLIMB ON HEADING 178.31 TO 1400 BEFORE TURNING LEFT. RWY 36 - CLIMB ON HEADING 358.31 TO 1400 BEFORE TURNING LEFT.

### **VISUAL CLIMB OVER AIRPORT:**

#### **TAKEOFF OBSTACLE NOTES:**

NOTE: RWY 18: TREE, BUSH BEGINNING 58 FEET FROM DER, 42 FEET RIGHT OF CENTERLINE, UP TO 789 FEET MSL. VEHICLES ON ROAD BEGINNING 274 FEET FROM DER, 199 FEET RIGHT OF CENTERLINE, UP TO 796 FEET MSL. VEHICLES ON ROAD BEGINNING 275 FEET FROM DER, 13 FEET RIGHT OF CENTERLINE, UP TO 797 FEET MSL. POLE 294 FEET FROM DER, 125 FEET RIGHT OF CENTERLINE, 21 FEET AGL/803 FEET MSL. POLE 300 FEET FROM DER, 442 FEET RIGHT OF CENTERLINE, 813 FEET MSL. TREE, POLE BEGINNING 410 FEET FROM DER, 22 FEET RIGHT OF CENTERLINE, UP TO 820 FEET MSL. TREE 1416 FEET FROM DER, 717 FEET RIGHT OF CENTERLINE, 823 FEET MSL. TREE 1429 FEET FROM DER, 541 FEET RIGHT OF CENTERLINE, 827 FEET MSL. TREES BEGINNING 1477 FEET FROM DER, 8 FEET RIGHT OF CENTERLINE, UP TO 60 FEET AGL/829 FEET MSL. TREES BEGINNING 1710 FEET FROM DER, 15 FEET RIGHT OF CENTERLINE, UP TO 60 FEET AGL/830 FEET MSL. TREE 2972 FEET FROM DER, 839 FEET RIGHT OF CENTERLINE, 859 FEET MSL. TREE, VEHICLES ON ROAD, POLE, POST BEGINNING 75 FEET FROM DER, 10 FEET LEFT OF CENTERLINE, UP TO 44 FEET AGL/824 FEET MSL. TREES BEGINNING 792 FEET FROM DER, 544 FEET LEFT OF CENTERLINE, UP TO 828 FEET MSL. TREE 1052 FEET FROM DER, 634 FEET LEFT OF CENTERLINE, 835 FEET MSL. TREES BEGINNING 1089 FEET FROM DER, 137 FEET LEFT OF CENTERLINE, UP TO 840 FEET MSL. TREES BEGINNING 1405 FEET FROM DER, 54 FEET LEFT OF CENTERLINE, UP TO 842 FEET MSL. TREES BEGINNING 1500 FEET FROM DER, 62 FEET LEFT OF CENTERLINE, UP TO 844 FEET MSL. TREES BEGINNING 1600 FEET FROM DER, 16 FEET LEFT OF CENTERLINE, UP TO 846 FEET MSL. TREES BEGINNING 1734 FEET FROM DER, 87 FEET LEFT OF CENTERLINE, UP TO 853 FEET MSL. TREE 2282 FEET FROM DER, 981 FEET LEFT OF CENTERLINE, 855 FEET MSL. TREE 2309 FEET FROM DER, 1108 FEET LEFT OF CENTERLINE, 858 FEET MSL.

NOTE: RWY 36: TREE, TERRAIN BEGINNING 4728 FEET FROM DER, ON CENTERLINE, UP TO 39 FEET AGL/985 FEET MSL. BUSH 28 FEET FROM DER, 82 FEET RIGHT OF CENTERLINE, 8 FEET AGL/787 FEET MSL. TREE 55 FEET FROM DER, 290 FEET RIGHT OF CENTERLINE, 795 FEET MSL. TREE, VEHICLES ON ROAD BEGINNING 185 FEET FROM DER, 27 FEET RIGHT OF CENTERLINE, UP TO 798 FEET MSL TREE 292 FEET FROM DER, 297 FEET RIGHT OF CENTERLINE, 816 FEET MSL. TREES BEGINNING 293 FEET FROM DER, 33 FEET RIGHT OF CENTERLINE, UP TO 818 FEET MSL. TREES BEGINNING 629 FEET FROM DER, 31 FEET RIGHT OF CENTERLINE, UP TO 36 FEET AGL/820 FEET MSL. TREE 741 FEET FROM DER, 145 FEET RIGHT OF CENTERLINE, 41 FEET AGL/827 FEET MSL. TREES BEGINNING 785 FEET FROM DER, 2 FEET RIGHT OF CENTERLINE, UP TO 43 FEET AGL/829 FEET MSL. TREE 1413 FEET FROM DER, 525 FEET RIGHT OF CENTERLINE, 836 FEET MSL. TREES BEGINNING 1529 FEET FROM DER, 425 FEET RIGHT OF CENTERLINE, UP TO 845 FEET MSL. TREE 2457 FEET FROM DER, 1093 FEET RIGHT OF CENTERLINE, 856 FEET MSL. TREES BEGINNING 2612 FEET FROM DER, 8 FEET RIGHT OF CENTERLINE. UP TO 861 FEET MSL. TREES BEGINNING 2897 FEET FROM DER. 60 FEET RIGHT OF CENTERLINE. UP TO 862 FEET MSL. TREE 2990 FEET FROM DER, 387 FEET RIGHT OF CENTERLINE, 55 FEET AGL/872 FEET MSL. TREE 3031 FEET FROM DER, 260 FEET RIGHT OF CENTERLINE, 57 FEET AGL/879 FEET MSL. TREES BEGINNING 3127 FEET FROM DER, 113 FEET RIGHT OF CENTERLINE, UP TO 71 FEET AGL/892 FEET MSL. TREES BEGINNING 3427 FEET FROM DER, 9 FEET RIGHT OF CENTERLINE, UP TO 64 FEET AGL/897 FEET MSL. TREE 3843 FEET FROM DER, 170 FEET RIGHT OF CENTERLINE, 40 FEET AGL/899 FEET MSL. TREES BEGINNING 3846 FEET FROM DER, 56 FEET RIGHT OF CENTERLINE, UP TO 59 FEET AGL/912 FEET MSL. TREES BEGINNING 3932 FEET FROM DER, 18 FEET RIGHT OF CENTERLINE, UP TO 50 FEET AGL/913 FEET MSL. TREES BEGINNING 4065 FEET FROM DER, 144 FEET RIGHT OF CENTERLINE, UP TO 49 FEET AGL/918 FEET MSL. TREES BEGINNING 4072 FEET FROM DER, 26 FEET RIGHT OF CENTERLINE, UP TO 47 FEET AGL/920 FEET MSL. TREES BEGINNING 4144 FEET FROM DER, 19 FEET RIGHT OF CENTERLINE, UP TO 62 FEET AGL/929 FEET MSL. TREE, BUSH BEGINNING 4223 FEET FROM DER, 69 FEET RIGHT OF CENTERLINE, UP TO 63 FEET AGL/943 FEET MSL. TREE, BUSH, TERRAIN BEGINNING 4422 FEET FROM DER, 36 FEET RIGHT OF CENTERLINE, UP TO 56 FEET AGL/945 FEET MSL. TREE, BUSH, TERRAIN BEGINNING 4619 FEET FROM DER, 51 FEET RIGHT OF CENTERLINE, UP TO 58 FEET AGL/968 FEET MSL. TREE 4709 FEET FROM DER, 344 FEET RIGHT OF CENTERLINE, 58 FEET AGL/977 FEET MSL. TREES BEGINNING 4833 FEET FROM DER, 99 FEET RIGHT OF CENTERLINE, UP TO 44 FEET AGL/998 FEET MSL. TREES BEGINNING 4902 FEET FROM DER, 229 FEET RIGHT OF CENTERLINE, UP TO 63 FEET AGL/1009 FEET MSL. TREE, TERRAIN BEGINNING 4933 FEET FROM DER, 26 FEET RIGHT OF CENTERLINE, UP TO 57 FEET AGL/1013 FEET MSL. TREES BEGINNING 4982 FEET FROM DER, 97 FEET RIGHT OF CENTERLINE, UP TO 39 FEET AGL/1019 FEET MSL. TREE, BUSH, TERRAIN BEGINNING 5020 FEET FROM DER, 64 FEET RIGHT OF CENTERLINE, UP TO 40 FEET AGL/1020 FEET MSL. TREE, TERRAIN, BUSH BEGINNING 5223 FEET FROM DER, 4 FEET RIGHT OF CENTERLINE, UP TO 51 FEET AGL/1026 FEET MSL. TREE 1 NM FROM DER, 1132 FEET RIGHT OF CENTERLINE, 947 FEET MSL. TREE, BUSH BEGINNING 2 FEET FROM DER, 122 FEET LEFT OF CENTERLINE, UP TO 800 FEET MSL. TREE. TERRAIN, BUSH, FENCE, VEHICLES ON ROAD BEGINNING 109 FEET FROM DER. 3 FEET LEFT OF CENTERLINE, UP TO 36 FEET AGL/833 FEET MSL. TREE, TERRAIN, DRIVEWAY BEGINNING 388 FEET FROM DER, 2 FEET LEFT OF CENTERLINE, UP TO 845 FEET MSL. TREES BEGINNING 1490 FEET FROM DER, 41 FEET LEFT OF CENTERLINE, UP TO 48 FEET AGL/846 FEET MSL. TREES BEGINNING 1582 FEET FROM DER, 13 FEET LEFT OF CENTERLINE, UP TO 47 FEET AGL/848 FEET MSL. TREE 1640 FEET FROM DER, 65 FEET LEFT OF CENTERLINE, 48 FEET AGL/849 FEET MSL. TREE 1699 FEET FROM DER, 131 FEET LEFT OF CENTERLINE, 47 FEET AGL/851 FEET MSL. TREE, TERRAIN BEGINNING 1704 FEET FROM DER, 25 FEET LEFT OF CENTERLINE, UP TO 45 FEET AGL/857 FEET MSL. TRED AL / >

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POLE, TERRAIN BEGINNING 1881 FEET FROM DER, 83 FEET LEFT OF CENTERLINE, UP TO 44 FEET AGL/859 FEET MSL, TREE, TERRAIN BEGINNING 1986 FEET FROM DER, 103 FEET LEFT OF CENTERLINE, UP TO 56 FEET AGL/866 FEET MSL. TREES BEGINNING 2210 FEET FROM DER, 175 FEET LEFT OF CENTERLINE, UP TO 56 FEET AGL/868 FEET MSL. TREES BEGINNING 2379 FEET FROM DER, 220 FEET LEFT OF CENTERLINE, UP TO 53 FEET AGL/870 FEET MSL. TREE, POLE BEGINNING 2477 FEET FROM DER, 304 FEET LEFT OF CENTERLINE. UP TO 876 FEET MSL. TREES BEGINNING 2641 FEET FROM DER. 366 FEET LEFT OF CENTERLINE. UP TO 58 FEET AGL/884 FEET MSL. TREE, POLE BEGINNING 2709 FEET FROM DER, 112 FEET LEFT OF CENTERLINE, UP TO 891 FEET MSL. TREES BEGINNING 2931 FEET FROM DER, 35 FEET LEFT OF CENTERLINE, UP TO 928 FEET MSL. TREES BEGINNING 3043 FEET FROM DER, 163 FEET LEFT OF CENTERLINE, UP TO 929 FEET MSL. TREES BEGINNING 3213 FEET FROM DER, 286 FEET LEFT OF CENTERLINE, UP TO 942 FEET MSL. TREE, POLE BEGINNING 3329 FEET FROM DER, 168 FEET LEFT OF CENTERLINE, UP TO 958 FEET MSL. TREE 3426 FEET FROM DER, 1210 FEET LEFT OF CENTERLINE, 965 FEET MSL. TREES BEGINNING 3427 FEET FROM DER, 154 FEET LEFT OF CENTERLINE, UP TO 969 FEET MSL. TREES BEGINNING 3533 FEET FROM DER. 66 FEET LEFT OF CENTERLINE. UP TO 988 FEET MSL. TREES BEGINNING 3680 FEET FROM DER, 12 FEET LEFT OF CENTERLINE, UP TO 997 FEET MSL. TREE, BUSH BEGINNING 4265 FEET FROM DER, 47 FEET LEFT OF CENTERLINE, UP TO 998 FEET MSL. TREE, BUSH BEGINNING 4325 FEET FROM DER, 267 FEET LEFT OF CENTERLINE, UP TO 1008 FEET MSL. TREE, BUSH BEGINNING 4351 FEET FROM DER, 95 FEET LEFT OF CENTERLINE, UP TO 1013 FEET MSL. TREE, BUSH BEGINNING 4393 FEET FROM DER, 30 FEET LEFT OF CENTERLINE, UP TO 1017 FEET MSL. TREES BEGINNING 4466 FEET FROM DER, 376 FEET LEFT OF CENTERLINE, UP TO 1024 FEET MSL. TREE, TERRAIN, BUSH BEGINNING 4485 FEET FROM DER, 50 FEET LEFT OF CENTERLINE, UP TO 1022 FEET MSL. TREE, BUSH, TERRAIN BEGINNING 4602 FEET FROM DER, 11 FEET LEFT OF CENTERLINE, UP TO 1025 FEET MSL. TREE, TERRAIN BEGINNING 4682 FEET FROM DER, 84 FEET LEFT OF CENTERLINE, UP TO 1030 FEET MSL. TREE, TERRAIN BEGINNING 4797 FEET FROM DER, 143 FEET LEFT OF CENTERLINE, UP TO 1032 FEET MSL. TREE, TERRAIN, BUSH, TRMSN TOWERS BEGINNING 4880 FEET FROM DER. 4 FEET LEFT OF CENTERLINE. UP TO 1033 FEET MSL.

#### **CONTROLLING OBSTACLES:**

RWY 36: 1033 FEET MSL TREE 363358.58N/0950104.06W (CEILING) 947 FEET MSL TREE 363414.76N/0950034.19W (VISIBILITY) 997 FEET MSL TREE 363346.72N/0950105.56W (CLIMB GRADIENT) 1024 FEET MSL TREE 363354.50N/0950107.33W (CLIMB-TO ALTITUDE)

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 18: 1275 FEET MSL TOWER 363111.25N/0950001.80W. OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 36: 1259 FEET MSL TOWER 363455.48N-0950138.07W.



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**REMARKS:** 

FLIGHT INSPECTED BY:

Digitally signed by

REQUIRED EFFECTIVE DATE:

GARY BELL FICO JACOB POWERS 04/21/2016 ROUTINE

DEVELOPED BY: May 23, 2016

Digitally signed by

PABLO ORTIZ PABLO ORTIZ-JR AJV-5422 03/15/2016

APPROVED BY: Mar 21, 2016

GEORGE GONZALEZ

AJV-5420

Digitally signed by JACOB POWERS

COORDINATED WITH:

May 23, 2016

ALPA, AOPA, NBAA, ZKC, AMGR

**CHANGES:** 

ORIGINAL PROCEDURE.

**REASONS:**