

**AIRBORNE UNIT ASSUMES RESPONSIBILITY FOR PERSONNEL INJURY AND EQUIPMENT DAMAGE ON DZ**

<b>DROP ZONE SURVEY</b>	1A. DZ NAME Highland Circular DZ	1B. ZAR INDEX NO. 704	2A. COUNTRY US	2B. STATE MT
	3. MAP SERIES/SHEET NUMBER/ EDITION/ DATE OF MAP 1:250K JOG / NL1204 / Ed 1 / 30 Mar 1983			

**4. SURVEY APPROVAL/DISAPPROVAL DATA**

4A1. DATE SURVEYED 20180314	4A2. TYPED NAME AND GRADE OF SURVEYOR Alston Osterdyk, E-5, USAF	4A3. PHONE NUMBER (DSN) 382-8646	4A4. UNIT 22nd STS, McChord AFB WA						
4B. DROP ZONE APPROVAL/DISAPPROVAL A = APPROVED D = DISAPPROVED	FOR	CDS/CRL/CRS	PER	HE	MFF	SATB	CRRC	HSSLADS	HVCDS
	DAY	D	D	D	A	D	D	D	D
	NIGHT	D	D	D	A	D	D	D	D
4C. DATE APPROVED FOR GROUND OPERATIONS	NAME, GRADE AND SERVICE OF APPROVAL AUTHORITY Nathaniel L. Smith, O-4, USAF		PHONE NUMBER (DSN) 382-2499		SIGNATURE				
	UNIT AND LOCATION 22d STS, JBLM, WA								
4D. DATE SAFETY OF FLIGHT REVIEW APPROVED	NAME AND GRADE OF REVIEWING OFFICER Donald L. Ellis, GS-11		PHONE NUMBER (DSN) 382-3615		SIGNATURE				
	UNIT AND LOCATION 62 OSS/OSK, JBLM, WA								
4E. DATE OF MAJCOM APPROVAL	NAME AND GRADE OF APPROVING AUTHORITY Mark S. Fuhrmann, Col		PHONE NUMBER (DSN) 382-5631		SIGNATURE				
	UNIT AND LOCATION 62 OG/CC, JBLM, WA								

**5. COORDINATING ACTIVITIES**

A. DZ CONTROLLING AGENCY OR UNIT Mr Rod Alne (The Peak Inc)	B. MEMORANDUM OF UNDERSTANDING/LAND USE YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> ATTACHED <input type="checkbox"/>	C. PHONE NUMBER (DSN) (C) (406) 490-9586
D. RANGE CONTROL Salt Lake Center 132.4 / 338.3 / Great Falls FSS, Butte RCO 122.2 / 122.4 / Bert Mooney KBTM UNICOM 123.0		E. PHONE NUMBER (DSN) (C) (800) 320-2255

**6. DZ DIMENSIONS (YDS/MTRS) (FOR CIRCULAR DZ, ENTER RADIUS ONLY)**

A. LENGTH N/A	B. WIDTH N/A	C. RADIUS 90 YDS / 82.3 MTRS	
POINT OF IMPACT DISTANCES FROM DZ LEADING EDGE	D. CDS PI N/A	E. PE PI N/A	F. HE PI N/A

**7. DZ AXIS DATA (OPTIONAL FOR CIRCULAR DZ)**

A. MAGNETIC N/A	B. GRID (MGRS) N/A	C. TRUE N/A	D. SOURCE/DATE OF VARIATION DATA N/A
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8. GROUND POINT ELEVATION	A. CDS PI N/A	B. HE PI N/A	C. PE PI 7,891 ft MSL	D. HIGHEST 7,891 ft MSL
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**9. DZ COORDINATES**

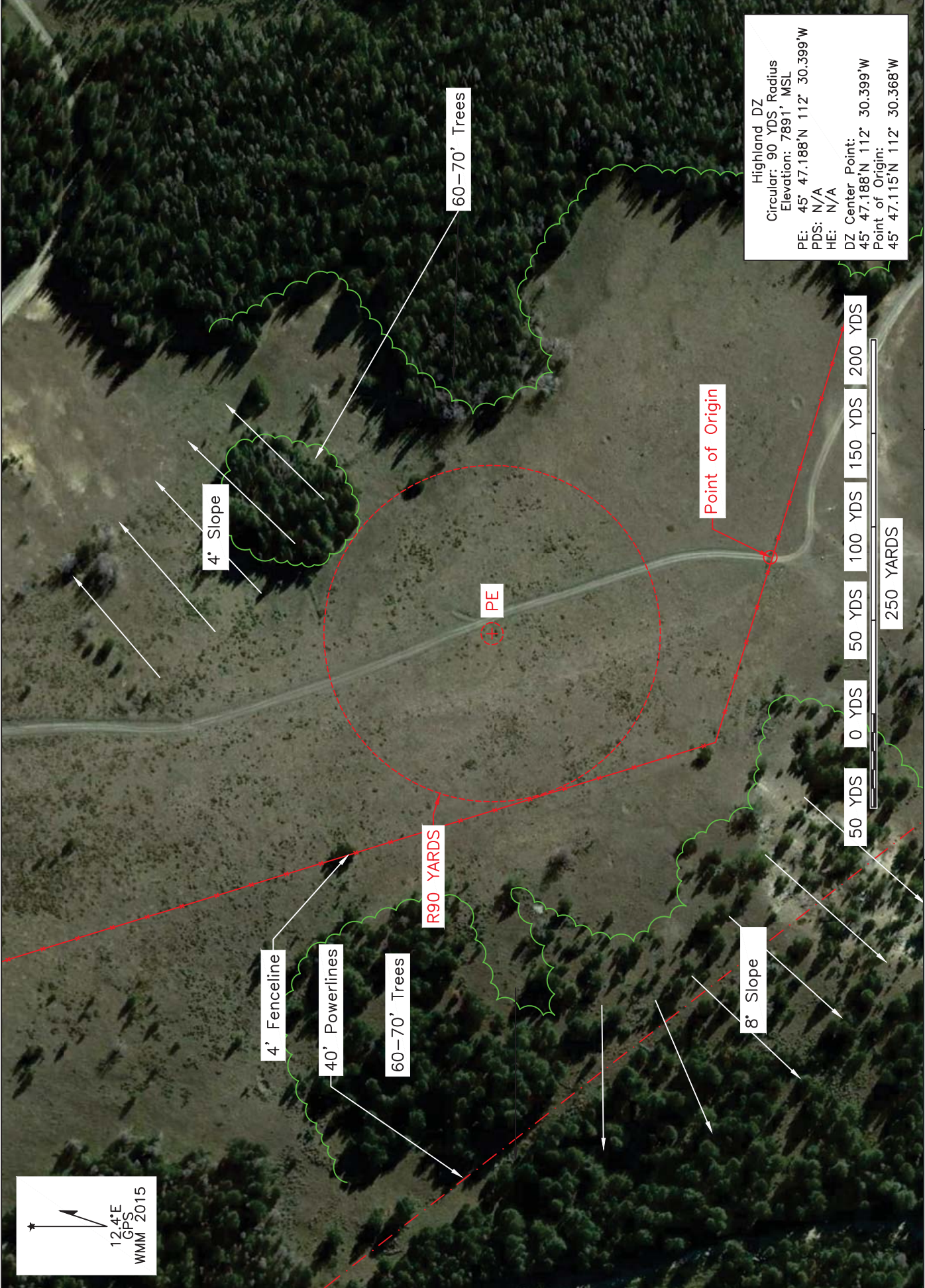
A. SPHEROID WGS-84	B. DATUM WGS-84	C. GRID ZONE 12T	D. EASTING 3	E. NORTHING 50
F. GPS DERIVED COORDINATES YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	G. POINT OF ORIGIN (12T UR 82926 71291) From cattle guard fence and dirt road: PI is 141m at 331.3° Mag.			

H. POINT	MGRS COORDINATES	WGS84 LATITUDE (D-M.MM)	WGS84 LONGITUDE (D-M.MM)
DZ CENTERPOINT	12T UR 82889 71427	N 45° 47.188' / N 45° 47' 11.3"	W 112° 30.399' / N 112° 30' 23.9"
CDS PI	N/A	N/A	N/A
PE PI	N/A	N/A	N/A
HE PI	N/A	N/A	N/A

**I. DZ CORNERS MGRS COORDINATES**

LEFT LEADING EDGE N/A	RIGHT LEADING EDGE N/A
LEFT TRAILING EDGE N/A	RIGHT TRAILING EDGE N/A

DZ NAME	
Highland Circular DZ	
10. DZ DIAGRAM	
See Attached Diagram	
11. REMARKS	
<p>1. DANGEROUS TERRAIN! Supported units commander and all users accepts responsibility for damage to equipment, property, and/or injury to personnel on and around DZ.</p> <p>2. Coordinates, elevation data derived from Garmin Foretrex.  a. Horizontal margin of error +/- 10 meters, Vertical margin of error 1.5 X horizontal error.  b. MAGVAR 12.3°E changing 9.6282' W per year derived from WMM 2015 as of 02-MAR-2018.</p> <p>3. Administration / Coordination / Planning / Scheduling Instructions:  a. User MUST coordinate with Mr Rod Alne, The Peak Inc. at (C) (406) 490-9586 or email: rod.alne@thepeakinc.com at least 15 days prior to use.  b. User must NOTAM airspace prior to jump operations. Coordinate through Bert Mooney Airport with airfield manager Pam Chamberlin (C) (406) 494-3771.  c. Bert Mooney airfield is uncontrolled, aircraft must announce jumpers away on local airfield frequency 123.0 UNICOM.</p> <p>4. Surveyor Observed Obstacles/Hazards (All distances from DZ Centerpoint unless otherwise specified. User is responsible for confirming all obstacles/hazards prior to conducting airdrops).</p> <p>a. Obstacles/Hazards INSIDE DZ  1) 4' Barbed wire fence 315'(96M) at 257° mag from PI. Fence runs south 145.8° mag on west side of DZ then east 403'(123M) south of PI.  2) 1' - 3' sagebrush throughout DZ.  3) Numerous 2" - 8" rocks and brush throughout DZ surface.  4) Fish Creek gravel road runs south to north through the center of DZ.</p> <p>b. Obstacles/Hazards OUTSIDE DZ  1) A few 6' - 12' Trees located near western edge of DZ.  2) DZ is surrounded by 60'-70' Trees.  3) 40' - 60' High voltage power-lines near western edge of DZ 663'(202M), power cannot be shut off.  4) -8° slope 260'(79M) southwest - west of DZ.  5) -4° slope 350'(107M) northeast of DZ.</p> <p>5. Surveyor Observed Terrain Obstacles / Hazards:  a. 10,223' Table Mountain is located 3.2 NM at 132.5° Mag.  b. 10,020' Red Mountain is located 1.6 NM at 128.4° Mag.  c. Tower located 5 NM northeast, height unknown.</p> <p>6. Safety of Flight Review:  a. SOF Review Reported Obstacles/Hazards (including Rapidly Rising / High Terrain) within 5 NM Radius of the DZ Centerpoint:  1) 9,833' MSL tower is located 1.4 NM southeast at 127.4° Mag.  2) 5,755' MSL tower is located 8.3 NM north at 344° Mag.  3) 6,627' MSL tower is located 8.7 NM north at 013° Mag.  4) 46' - 69' AGL power lines running north to south 8 NM east of DZ.  5) 46' - 52; AGL power lines running east to west 8.3 NM north of DZ.  b. Additional Information and Airspace:  1) Bert Mooney Airport (KBTM) is an uncontrolled facility. Advise aircraft intentions at 10 miles on UNICOM frequency 123.0. Aircraft are required to monitor and provide position reports on UNICOM during all operations.  2) KBTM supports commercial aviation, so expect delays during parachute operations.  3) DZ is located within Deer Lodge Class E airspace, 1,200' - 18,000' MSL.  4) Four environmental sensitive areas are located within 10 NM of DZ center point: Basin Creek Research Natural Area - 1.2 NM northwest, Centen Intensive Study Area - 3.4 NM west, Humbug Spires Primitive Area - 4.2 NM west, and Fleeceer Mountain Wildlife Management Area - 8.7 NM west. Avoid these areas by 2,000' horizontally and/or 2,000' AGL.  5) Airways J9, J16, Q125, Q152, V86, and V257 are located within 10 NM of DZ centerpoint.</p> <p>7. Notes:  a. Survey was conducted in the winter and snow obscured DZ surface. Surface condition unknown user is responsible for confirming all obstacles/hazards prior to conducting airdrops. Surveyor observed multiple 1'-3' sagebrush throughout DZ and 4"-8" rocks observed near southern edge of DZ.  b. Strong prevailing winds were observed at time of the survey from 210° - 240° Mag.  c. DZ surface has negative slope from southwest to northeast.  d. Use extreme caution, DZ is located in hazardous terrain.</p>	
12. PHOTOGRAPH AVAILABLE	LOW LEVEL ROUTES
YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	<input checked="" type="checkbox"/> NONE AVAILABLE <input type="checkbox"/> ROUTE NAME/DESIGNATOR



Highland DZ  
 Circular: 90 YDS Radius  
 Elevation: 7891' MSI  
 PE: 45° 47.188'N 112° 30.399'W  
 PDS: N/A  
 HE: N/A  
 DZ Center Point:  
 45° 47.188'N 112° 30.399'W  
 Point of Origin:  
 45° 47.115'N 112° 30.368'W

12.4°E  
 GPS  
 WMM 2015

Name:	Highland DZ	Lat/Long:	45° 47.188'N 112° 30.399'W	Datum:	WGS-84
Location:	Butte Montana	Date:	13 April 2018	Surveyor:	Alston Osterdyk E-5 USAF