

FORM 51-102F3
MATERIAL CHANGE REPORT

Item 1. Reporting Issuer

HIGH PLAINS URANIUM, INC. (the "Issuer")
1718 Capitol Avenue
Cheyenne, WY 82001 USA

Item 2. Date of Material Change

January 8, 2007

Item 3. News Release

The Issuer issued a press release via a Canadian news wire. A copy of which has been filed on SEDAR.

Item 4. Summary of Material Change

High Plains Uranium, Inc. and New Horizon Uranium Corporation announced favourable results from a drilling program conducted on the Sand Creek Joint Venture area of interest near Douglas, Wyoming. The drilling was conducted by operating partner New Horizon Uranium Corporation.

High Plains also announced the issuance of 333,333 common shares to Uranium Energy Corporation on January 4, 2007 in pursuance with the letter agreement dated July 18, 2006, which provided for the purchase by High Plains Uranium, Inc. of certain uranium databases relating to the Cadena properties in south Texas.

Item 5. Full Description of Material Change

High Plains Uranium, Inc. (TSX: HPU) (the "Company" or "High Plains") and New Horizon Uranium Corporation announce favourable results from a drilling program conducted on the Sand Creek Joint Venture area of interest near Douglas, Wyoming. The drilling was conducted by operating partner New Horizon Uranium Corporation.

A drilling program was initiated on November 24, 2006 that focused on the "Scott Ranch" target area. Mid December, following the completion of 14 drill holes and 10,395 feet of drilling, the program was paused due to the approaching year-end holidays and seasonally inclement weather. Completion of the first phase of drilling is anticipated for early 2007, and a second phase of 12 additional rotary drill holes is presently being permitted for completion during the same timeframe.

The drilling program currently being executed by New Horizon consisted of wide-spaced, reconnaissance style drilling on five fences of drilling over a strike length of 1.5 miles and with drill hole spacing of 500 to 1,000 feet. Of the 14 drill holes

completed to date, 13 holes encountered intercepts of uranium mineralization indicative of a “roll front” style uranium deposit. In addition, the drill holes have provided considerable additional information regarding both the location of a uranium bearing roll front, its apparent orientation and the rock types. Uranium mineralization has been previously identified in sediments of the White River Formation that trends through the Sand Creek JV area. The White River formation is the same formation that hosts Cameco Corporation’s Crow Butte in-situ leaching (ISL) uranium operation in Nebraska.

In addition to the intercepts quoted below, considerable low-grade uranium mineralization peripheral to the indicated intercepts may be amenable to solution mining with present ISL technology. Bill Wilson, President of New Horizon said, “In light of the widespread nature of these drill holes, we are very pleased with the results to date, that in part, helps to confirm the historic drilling completed by Canyon’s partner Aquitaine in 1981. We look forward to additional drilling planned for the first quarter of 2007.” Tom Parker, President and CEO of High Plains Uranium stated, “We are pleased that the Sand Creek Joint Venture has rapidly progressed to a significant drilling program and encouraged by the results thus far in this highly prospective area.”

Uranium drill intercepts summarized by New Horizon include the following:

Sand Creek Program				
Hole ID (Location)	From (Feet)	To (Feet)	Feet	% U ₃ O ₈
SR06-1	775.0	785.5	10.5	0.066
	Including		2.0	0.146
	793.0	797.0	4.0	0.031
SR06-2	735.5	738.0	2.5	0.038
	755.0	767.0	12.0	0.054
	Including		4.0	0.093
SR06-3	711.5	713.0	1.5	0.031
	724.0	726.5	2.5	0.031
SR06-4	650.0	651.5	1.5	0.046
SR06-5	696.0	696.5	0.5	0.027
SR06-6	648.5	653.5	5.0	0.031
SR06-7	631.0	653.0	22.0	Local anomalies to 1,000 counts/second
SR06-8	597.5	598.5	1.0	0.025
	601.5	607.0	5.5	0.021
SR06-9	613.0	614.0	1.0	0.026
SR06-10	No significant values			
SR06-11	740.0	743.5	3.5	0.024
	754.0	755.5	1.5	0.017
SR06-12	622.5	625.5	3.0	0.022
	710.5	714.0	3.5	0.017
	722.0	725.0	3.0	0.017

Sand Creek Program (cont'd)				
Hole ID (Location)	From (Feet)	To (Feet)	Feet	% U ₃ O ₈
SR06-13	685.0	686.5	1.5	0.024
	728.5	733.0	4.5	0.016
	758.0	762.5	4.5	0.018
SR06-14	542.5	547.5	5.0	0.021

Letter Agreement with Uranium Energy Corp.

On July 18, 2006, High Plains entered into a letter agreement with Uranium Energy Corp., which provided for the purchase by High Plains Uranium, Inc. of certain uranium databases relating to the Cadena properties in south Texas. In consideration of this arrangement, High Plains issued 333,333 common shares to UEC on January 4, 2007.

Item 6. Reliance on subsection 7.1(2) or (3) of National Instrument 51-102

N/A

Item 7. Omitted Information

N/A

Item 8. Senior Officers

The following senior officer of the Issuer is knowledgeable about the material change and may be contacted by the Commission at the following telephone number:

Thomas Parker
Phone: (307) 433-8708

The foregoing accurately discloses the material change referred to herein.

Dated at Cheyenne, Wyoming this 9th day of January 2007.

High Plains Uranium, Inc.

"Thomas Parker"

Thomas Parker,
President & Chief Executive Officer