

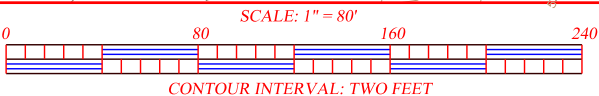
WELL PAD CUT-FILL TABLE						
POINT NO.	STATION	OFFSET	ELEV.	HINGE PT. ELEV.	CUT FILL(+)	SLOPE H:V
1	-0+28.80	-149.00	5495.70	5476.50	-19.20	1.5:1
2	0+25.00	-199.48	5493.50	5476.50	-17.00	1.5:1
3	1+75.00	-198.49	5492.80	5476.50	-16.30	1.5:1
4	3+00.00	-192.33	5488.70	5476.50	-12.20	1.5:1
5	4+50.00	-182.29	5482.00	5476.50	-5.50	1.5:1
6	6+05.00	-178.64	5473.40	5476.50	3.10	1.5:1
7	6+37.49	-149.00	5471.50	5476.50	5.00	1.5:1

**WELL SITE DESIGN AND CONSTRUCTION NOTES:**  
1. The graded well pad elevation was selected to approximate balance of excavation to embankment and to provide a stockpile of earth for the eventual frac pit reclamation.  
2. The approximate volume of the frac pit is 10,480 C.Y. Material for frac pit reclamation will be obtained from the waste material stockpile.  
3. The area of the proposed pad and waste material stockpile is 8.06 acres within the computed catch lines. The area of the channel change within the computed catch lines is 0.15 acres. This area does not include the area of the topsoil stockpile nor the small additional area required for grading machine travel. The estimated area of the disturbance limits of the pad as shown is 9.53 acres. The estimated area of the disturbance limits of the channel change is 0.31 acres. The area enclosed on the perimeter of the pad and channel change at a 10 foot width for potential BMP installations is 0.53 and 0.15 acres, respectively.  
4. A permanent water diversion channel is planned at the north west side of the pad. See Exhibit VI-B for the channel profile.  
5. Approximately 1,310 feet of existing fence is to be removed and 1,802 of new fence and an 8' x 18' cattle guard is to be installed.  
6. The well will be drilled with a semi-closed loop mud system. During the drilling of the well, the cuttings will be placed in the temporary cuttings storage area shown. This area will be constructed on the pad surface elevation with dikes of a 5-foot height. The interior of the area and berm inslopes will be lined with a liner meeting BLM specifications.  
7. Immediately after completion of drilling of the proposed well, the cuttings will be removed from the temporary storage area and buried in the permanent storage area shown for that well. This area will be excavated with nearly vertical slopes to a 10-foot depth. A liner meeting BLM specifications will be installed in the excavation. The cuttings will then be placed in the excavation. The liner will be closed over the cuttings, and covered with earth. This will be a short duration operation requiring perhaps one day of work.

**DIVERSION CHANNEL NOTES:**  
1. The existing channel to be diverted and the existing channel to the west to receive the diversion are each approximately 8 feet in width.  
2. The proposed channel is planned with an 8 foot flat bottom width with 1.5:1 side slopes.  
3. The estimated drainage area is 4.4 acres. The slope of the basin is 0.16. Using the Rational Method the flows for a 10-year and 25-year event are 1.1 CFS and 2.1 CFS, respectively. The normal depth of flow in the channel for a 25-year event is less than 0.2 foot.  
4. The profile of the proposed channel is shown on Exhibit VI-B.

ESTIMATED EARTHWORK QUANTITIES		
PAD TOPSOIL (6" DEPTH)	5,910	C.Y.
CHANNEL TOPSOIL (6" DEPTH)	60	C.Y.
ROAD TOPSOIL (6" DEPTH)	90	C.Y.
PAD EXCAVATION	51,520	C.Y.
CHANNEL EXCAVATION	1,000	C.Y.
CHANNEL SUB-EXCAVATION	40	C.Y.
PAD EXCAVATION	0	C.Y.
PAD EMBANKMENT (10% SHRINK ASSUMED)	40,730	C.Y.
CHANNEL EMBANKMENT (10% SHRINK ASSUMED)	10	C.Y.
ROAD EMBANKMENT (10% SHRINK ASSUMED)	650	C.Y.
WASTE MATERIAL	11,170	C.Y.
TOTAL EARTHWORK VOLUME	58,620	C.Y.

PREPARED BY:	SUR:	DES:	DWN:	REV:	PRJ. #:	REC:	FILE:	DWG:
P.E. GROSCH CONSTRUCTION, INC.	SAG	SAG	SAG	SAG	25a12	lidar	T7400/GpkData-v8/Client/Black Hills E&P/Colo/Mesa	25A12 HDU 9-41/Dgn/9-41R_ex6A-site
SURVEYORS - ENGINEERS - CONSTRUCTORS		8/27/12	8/12/12	11/21/12				
P.O. BOX 36 WORLAND, WY 82401 (307)347-3332								



OWNER

**BLACK HILLS PLATEAU  
PRODUCTION COMPANY, LLC  
DENVER, COLORADO**

PROJECT

**HOMER DEEP UNIT 9-41AH  
HOMER DEEP UNIT 9-41BH  
NE¼ NE¼, SECTION 9, T. 8 S., R. 98 W.  
GARFIELD COUNTY, COLORADO**

DRAWING TITLE

**EXHIBIT VI-A  
DRAWING DESCRIPTION**

**WELL SITE GRADING PLAN - REVISED**