

WELL LOCATION CERTIFICATE: PETTINGER 28N-18HZ

SECTION 18, TOWNSHIP 1 NORTH, RANGE 65 WEST, 6TH P.M.

NW SEC. 18
2" ALUM. CAP
PLS 25937

NE SEC. 18
2" ALUM. CAP
PLS 25937

N ¼ SEC. 18
3 ¾" ALUM. CAP
PLS 25937

BH- 1' FNL
2500' FEL

NOTES:
BH LOCATION PROVIDED BY CLIENT.
LAND SURFACE USE-RANGELAND
SEE ATTACHED MAP FOR ADDITIONAL
IMPROVEMENTS WITHIN 400'.

PDOP= 1.9
GPS OPERATOR: OWEN MCKEE

18

W ¼ SEC. 18
3 ¾" ALUM. CAP
PLS 27269

N 88°57'07" E 2654.66'

N 88°57'33" E 2651.89'

E ¼ SEC. 18
3 ¾" ALUM. CAP
PLS 27269

SURFACE LOCATION
GROUND ELEVATION= 4997'
NAD83
LATITUDE= 40.045598°
LONGITUDE= 104.703053°

LATITUDE= 40°02'44.152"
LONGITUDE= 104°42'10.991"

BOTTOM HOLE LOCATION
NAD83
LATITUDE= 40.058682°
LONGITUDE= 104.705974°

LATITUDE= 40°03'31.254"
LONGITUDE= 104°42'21.507"

C ¼ SEC. 18
2 ½" ALUM. CAP
PLS 29414

N 101°4'58" W 4836'
(TRUE N 9°44'05" W)

PETTINGER
28N-18HZ

N 00°20'34" W 2641.65'

S 00°24'22" E 2648.70'

S 00°24'51" E 2650.17'

(BASIS OF BEARINGS) SEE NOTE 3

SW SEC. 18
2 ½" ALUM. CAP
PLS 28656

S 89°06'17" W 2657.50'

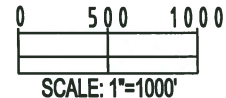
S 88°59'28" W 2652.25'

SE SEC. 18
2" ALUM. CAP
PLS 25937

WELL PETTINGER 28N-18HZ TO BE LOCATED 521' FSL AND 1673' FEL

LEGEND

- ⊙ = EXISTING MONUMENT
- ⊕ = BOTTOM HOLE
- BH = BOTTOM HOLE
- = PROPOSED WELL
- ◆ = EXISTING WELL




NOTES:

1. THIS FIELD SURVEY CONFORMS TO THE MINIMUM STANDARDS SET BY THE C.O.G.C.C., RULE NO. 215
2. HORIZONTAL POSITIONS AND ORTHOMETRIC ELEVATIONS SHOWN AT THE WELL HEAD, ARE BASED ON GPS-RTK POSITIONS DERIVED FROM MINIMUM 2-HOUR STATIC OBSERVATIONS CORRECTED BY THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE, O.P.U.S. DATUM: HORIZONTAL = NAD83/2007, VERTICAL = NAVD88
3. THE BASIS OF BEARINGS ARE STATE PLANE COORDINATE SYSTEM GRID BEARINGS SHOWN HEREON BETWEEN THE DESCRIBED MONUMENTS SHOWN HEREON.
4. GRID DISTANCES ARE SHOWN, AS MEASURED IN THE FIELD, WITH TIES TO WELLS MEASURED PERPENDICULAR TO SECTION LINES.

I, BRADLEY L. LAMAN, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO DO HEREBY CERTIFY TO KERR-MCGEE OIL & GAS ONSHORE LP, THAT THE SURVEY AND WELL LOCATION CERTIFICATE SHOWN HEREON WERE DONE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT THE DRAWING SHOWN HEREON ACCURATELY DEPICTS THE PROPOSED LOCATION OF THE WELL. THIS CERTIFICATE DOES NOT REPRESENT A LAND SURVEY PLAT OR IMPROVEMENT SURVEY PLAT AS DEFINED BY C.R.S. 38-51-102 AND CANNOT BE RELIED UPON TO DETERMINE OWNERSHIP.

BRADLEY L. LAMAN, PLS 38345
COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
FOR AND ON BEHALF OF P.F.S., LLC



PREPARED BY:  Petroleum Field Services, LLC 1801 W. 139th Ave. Denver, CO 80204	FIELD DATE: 03-18-13	SURFACE LOCATION: SW 1/4 SE 1/4,
	DRAWING DATE: 01-02-14	SEC. 18, T1N, R65W, 6TH P.M.
BY: CLM	CHECKED: TJN	WELD COUNTY, COLORADO

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THIS SAID DATE OF THIS CERTIFICATION SHOWN HEREON.