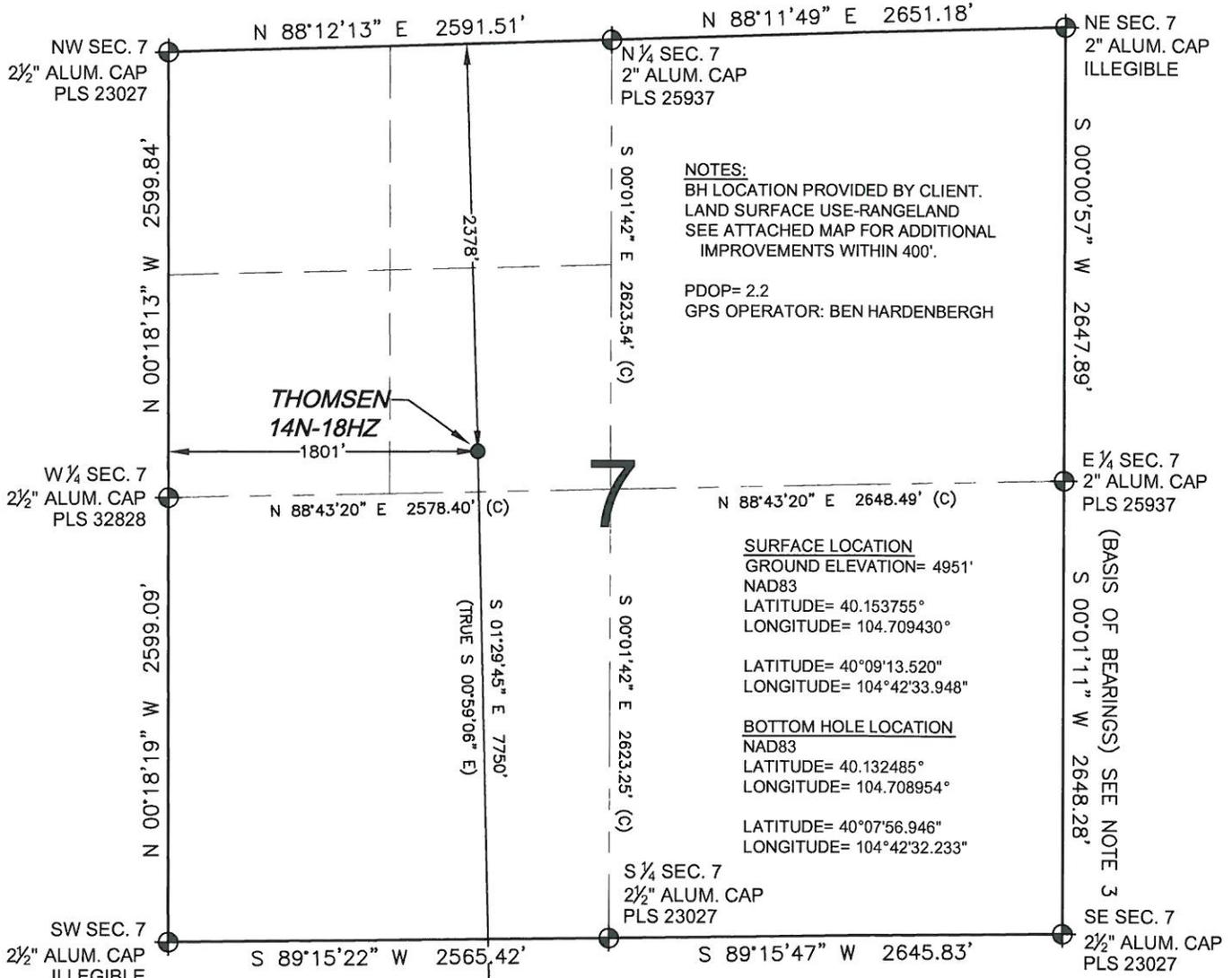


WELL LOCATION CERTIFICATE: THOMSEN 14N-18HZ

SECTION 7, TOWNSHIP 2 NORTH, RANGE 65 WEST, 6TH P.M.



NOTES:
 BH LOCATION PROVIDED BY CLIENT.
 LAND SURFACE USE-RANGELAND
 SEE ATTACHED MAP FOR ADDITIONAL
 IMPROVEMENTS WITHIN 400'.
 PDOP= 2.2
 GPS OPERATOR: BEN HARDENBERGH

SURFACE LOCATION
 GROUND ELEVATION= 4951'
 NAD83
 LATITUDE= 40.153755°
 LONGITUDE= 104.709430°

LATITUDE= 40°09'13.520"
 LONGITUDE= 104°42'33.948"

BOTTOM HOLE LOCATION
 NAD83
 LATITUDE= 40.132485°
 LONGITUDE= 104.708954°

LATITUDE= 40°07'56.946"
 LONGITUDE= 104°42'32.233"

WELL THOMSEN 14N-18HZ TO BE LOCATED
 2378' FNL AND 1801' FWL

BH- 460' FSL
 1950' FWL

LEGEND

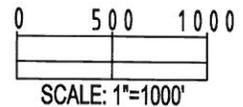
- ⊕ = EXISTING MONUMENT
- ⊙ = PROPOSED WELL
- ◆ = BOTTOM HOLE
- BH = BOTTOM HOLE

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 MEASURED, AS MEASURED IN THE FIELD, WITH TIES TO WELLS MEASURED PERPENDICULAR TO SECTION LINES.

I, MARK A. HALL, 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.

MARK A. HALL, PLS 36073
 COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
 FOR AND ON BEHALF OF P.F.S., LLC



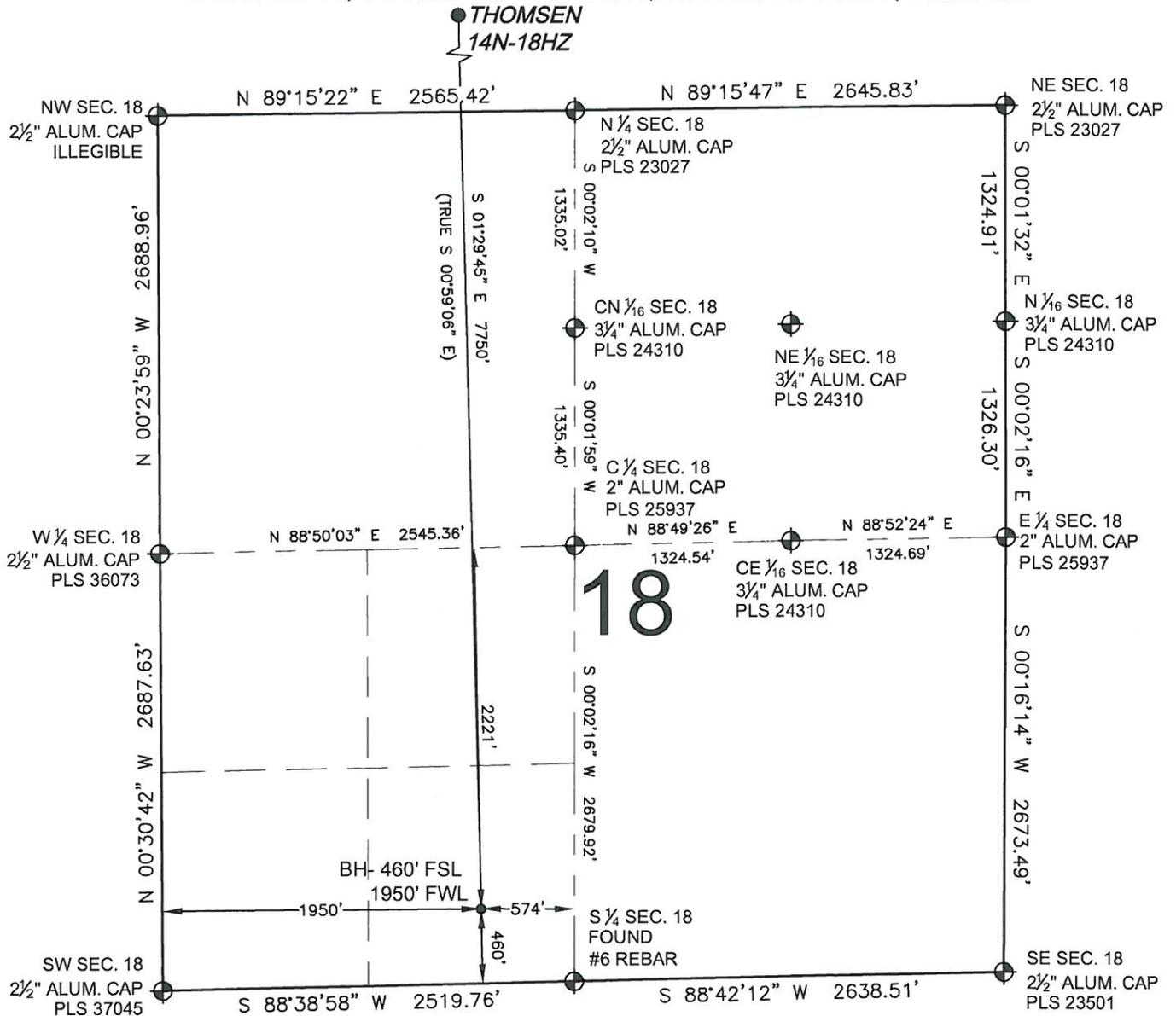
SHEET 1 OF 2

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.

PREPARED BY: Petroleum Field Services, LLC 1801 W. 13th Ave. Denver, CO 80204	FIELD DATE: 11-15-12	SURFACE LOCATION: SE 1/4 NW 1/4, SEC. 7, T2N, R65W, 6TH P.M.
	DRAWING DATE: 11-19-12	WELD COUNTY, COLORADO
	BY: SMF	CHECKED: TJN

WELL LOCATION CERTIFICATE: THOMSEN 14N-18HZ

SECTION 18, TOWNSHIP 2 NORTH, RANGE 65 WEST, 6TH P.M.



LEGEND

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

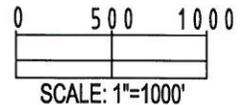
NOTES:

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.

SHEET 2 OF 2



MARK A. HALL, PLS 36073
COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
FOR AND ON BEHALF OF P.F.S., LLC



PREPARED BY: 1801 W. 138th Ave. Denver, CO 80204	FIELD DATE: 11-15-12	SURFACE LOCATION: SE 1/4 NW 1/4, SEC. 7, T2N, R65W, 6TH P.M. WELD COUNTY, COLORADO
	DRAWING DATE: 11-19-12	BY: SMF

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.