

# WELL LOCATION CERTIFICATE: SWARTZ 2N-25HZ

SECTION 13, TOWNSHIP 2 NORTH, RANGE 65 WEST, 6TH P.M.

NW COR. SEC. 13  
2" ALUM. CAP  
PLS 25937, 1996

S 89°36'41" E 2594.89'

S 89°36'50" E 2594.45'

NE COR. SEC. 13  
3/4" ALUM. CAP  
PLS 23520, 2002

N 1/4 COR. SEC. 13  
2" ALUM. CAP  
PLS 25937, 1996

(BASIS OF BEARINGS) SEE NOTE 2

## SURFACE LOCATION

GROUND ELEVATION= 4878'  
NAD83 STATE PLANE CO N  
LATITUDE= 40.132087°  
LONGITUDE= 104.610794°

LATITUDE= 40°07'55.514"  
LONGITUDE= 104°36'38.859"

## HEEL LOCATION

NAD83 STATE PLANE CO N  
LATITUDE= 40.133204°  
LONGITUDE= 104.611913°

LATITUDE= 40°07'59.534"  
LONGITUDE= 104°36'42.887"

## NOTES:

BH AND HEEL  
LOCATIONS PROVIDED BY CLIENT.  
SEE ATTACHED MAP FOR ADDITIONAL  
IMPROVEMENTS WITHIN 500'.

PDOP= 1.5

GPS OPERATOR: BEN HARDENBERGH

W 1/4 COR. SEC. 13  
3/4" ALUM. CAP  
PLS 10855, 1998

S 89°55'24" E 2605.94'

S 89°49'20" E 2602.73'

E 1/4 COR. SEC. 13  
3/4" ALUM. CAP  
PLS 27269, 2004

BOTTOM HOLE LOCATION  
NAD83 STATE PLANE CO N  
LATITUDE= 40.115738°  
LONGITUDE= 104.611977°

LATITUDE= 40°06'56.657"  
LONGITUDE= 104°36'43.117"

C 1/4 COR. SEC. 13  
3/4" ALUM. CAP  
PLS 24307, 2006

SW COR. SEC. 13  
2 1/2" ALUM. CAP  
PLS 34980, 2007

S 89°57'07" W 2609.78'

S 89°57'07" W 2609.78'

SE COR. SEC. 13  
CALC'D FROM W.C. 30' E  
3/4" ALUM. CAP  
PLS 27269, 1998

S 1/4 COR. SEC. 13  
2 1/2" ALUM. CAP  
PLS 38345, 2013

BH-361' FNL  
2573' FEL

S 00°24'45" E 6363'  
(TRUE S 00°09'40" W)

HEEL- 738' FSL  
2508' FEL

SWARTZ 2N-25HZ

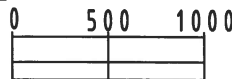
N 38°07'47" W 513'  
(TRUE N 37°33'18" W)

2195'

## LEGEND

- = EXISTING MONUMENT    ● = BOTTOM HOLE  
● = PROPOSED WELL    ▲ = HEEL LOCATION  
BH = BOTTOM HOLE    ○ = CALCULATED POSITION

WELL **SWARTZ 2N-25HZ** TO BE LOCATED 334' FSL AND 2195' FEL



SCALE: 1"= 1000'

## NOTES:

- THIS FIELD SURVEY CONFORMS TO THE MINIMUM STANDARDS SET BY THE C.O.G.C.C., RULE NO. 215
- BEARINGS ARE BASED ON THE ASSUMPTION THAT THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 13, BEARS S89°36'50"E BETWEEN THE MONUMENTS DESCRIBED HEREON.
- GRID DISTANCES ARE SHOWN, AS MEASURED IN THE FIELD, WITH TIES TO WELLS MEASURED PERPENDICULAR TO SECTION LINES. TO GET GROUND DISTANCES MULTIPLY THE SHOWN DISTANCE BY 1.000272228.
- ALL LINES SHOWN THAT ARE WITHOUT DIMENSION SHOULD BE CONSIDERED SCALED AND ONLY REPRESENT A GRAPHICAL DEPICTION OF THE APPROXIMATE LOCATION OF SAID LINE.
- ORIGINAL WELL STAKING COMPLETED ON JANUARY 5, 2015. SECTION MONUMENTS VERIFIED 5/2013.

I, JACOB S. FRISCH, 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.

JACOB S. FRISCH, PLS 38149  
DATE: 08-04-15  
JOB NO: B14.APC.0569  
FOR AND ON BEHALF OF KERR-MCGEE OIL & GAS ONSHORE LP, LLC



SHEET 1 OF 3

PREPARED BY:



FIELD DATE:

01-05-15

DRAWING DATE:

08-03-15

BY:

TJN

CHECKED:

KAD

SURFACE LOCATION:

SW 1/4 SE 1/4,

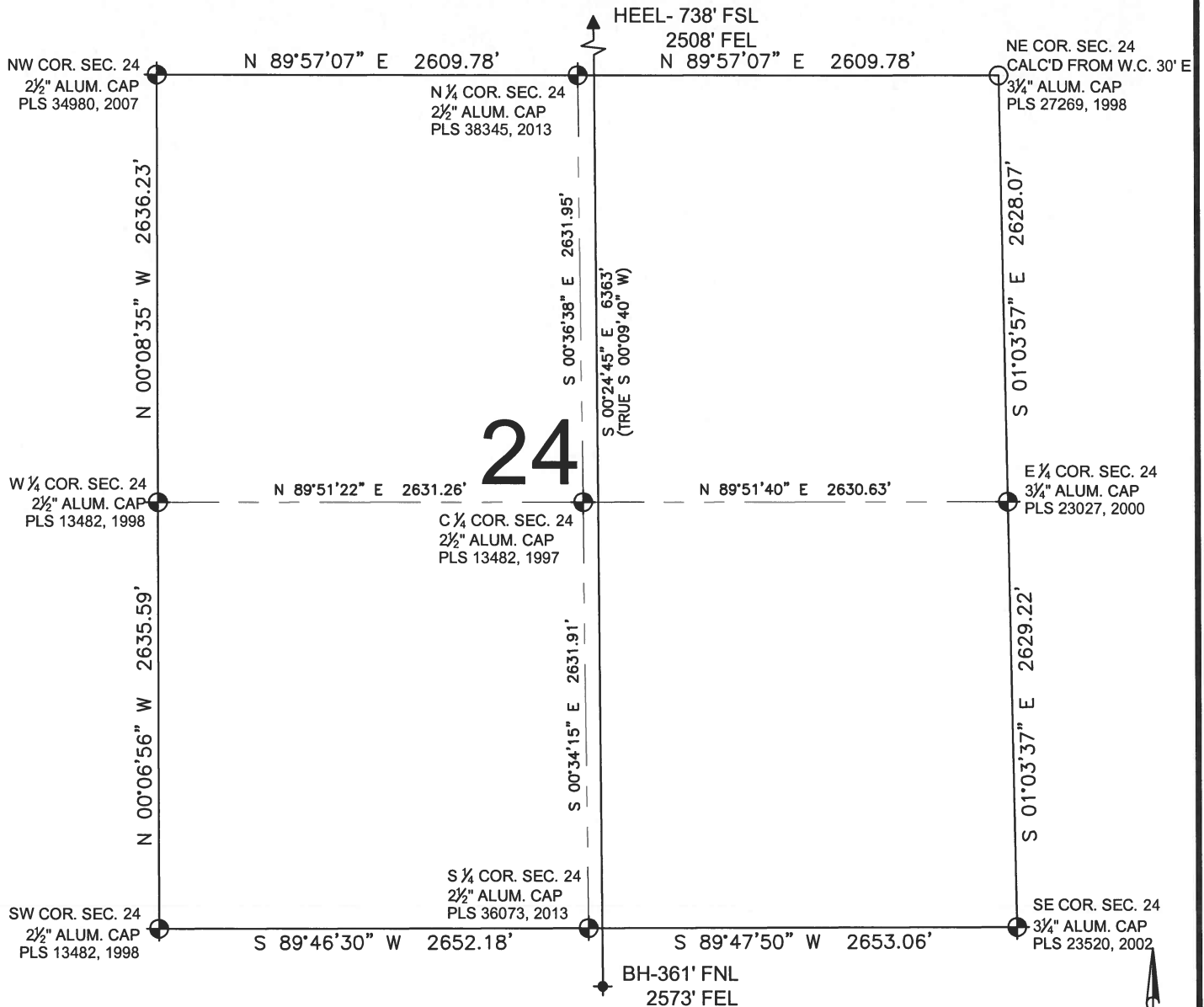
SEC. 13, T2N, R65W, 6TH P.M.

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.

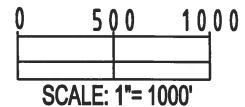
# WELL LOCATION CERTIFICATE: SWARTZ 2N-25HZ

SECTION 24, TOWNSHIP 2 NORTH, RANGE 65 WEST, 6TH P.M.



## LEGEND

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- = CALCULATED POSITION

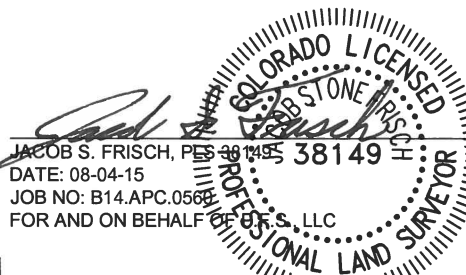


## NOTES:

1. THIS FIELD SURVEY CONFORMS TO THE MINIMUM STANDARDS SET BY THE C.O.G.C.C., RULE NO. 215
2. BEARINGS ARE BASED ON THE ASSUMPTION THAT THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 13, BEARS S89°36'50"E BETWEEN THE MONUMENTS DESCRIBED HEREON.
3. GRID DISTANCES ARE SHOWN, AS MEASURED IN THE FIELD, WITH TIES TO WELLS MEASURED PERPENDICULAR TO SECTION LINES. TO GET GROUND DISTANCES MULTIPLY THE SHOWN DISTANCE BY 1.000272228.
4. ALL LINES SHOWN THAT ARE WITHOUT DIMENSION SHOULD BE CONSIDERED SCALED AND ONLY REPRESENT A GRAPHICAL DEPICTION OF THE APPROXIMATE LOCATION OF SAID LINE.
5. ORIGINAL WELL STAKING COMPLETED ON JANUARY 5, 2015. SECTION MONUMENTS VERIFIED 5/2013.

SHEET 2 OF 3

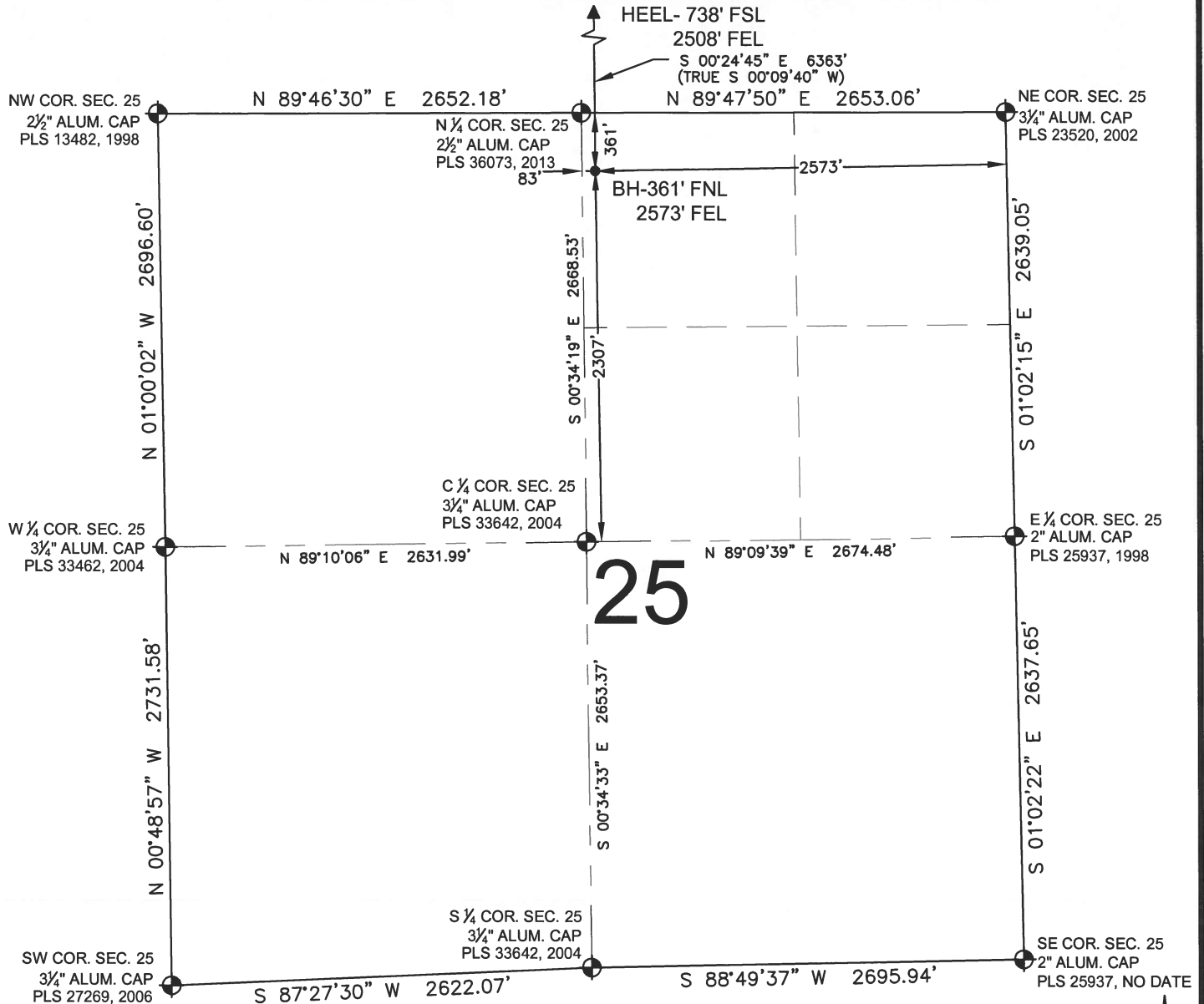
PREPARED BY:	FIELD DATE:	SURFACE LOCATION:
PFS	01-05-15	SW 1/4 SE 1/4,
Petroleum Field Services, LLC	DRAWING DATE:	SEC. 13, T2N, R65W, 6TH P.M.
7536 Hilltop Circle	08-03-15	WELD COUNTY, COLORADO
Denver, CO 80221	BY:	CHECKED:
	TJN	KAD



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# WELL LOCATION CERTIFICATE: SWARTZ 2N-25HZ

SECTION 25, TOWNSHIP 2 NORTH, RANGE 65 WEST, 6TH P.M.

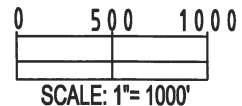


## NOTES:

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2. BEARINGS ARE BASED ON THE ASSUMPTION THAT THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 13, BEARS S89°36'50"E BETWEEN THE MONUMENTS DESCRIBED HEREON.
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- ◆ = BOTTOM HOLE
- ▲ = HEEL LOCATION
- = CALCULATED POSITION



SHEET 3 OF 3

PREPARED BY: <b>PFS</b> Petroleum Field Services, LLC 7535 Hilltop Circle Denver, CO 80221	FIELD DATE: 01-05-15	SURFACE LOCATION: SW 1/4 SE 1/4, SEC. 13, T2N, R65W, 6TH P.M. WELD COUNTY, COLORADO
	DRAWING DATE: 08-03-15	
BY: TJN	CHECKED: KAD	

JACOB S. FRISCH, PLS 38149  
DATE: 08-04-15  
JOB NO: B14.APC.0568  
FOR AND ON BEHALF OF PFS, LLC

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.