

# WELL LOCATION CERTIFICATE: SWARTZ 27N-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= 4877'  
NAD83 STATE PLANE CO N  
LATITUDE= 40.132085°  
LONGITUDE= -104.610258°

LATITUDE= 40°07'55.507"  
LONGITUDE= -104°36'36.927"

HEEL LOCATION  
NAD83 STATE PLANE CO N  
LATITUDE= 40.132905°  
LONGITUDE= -104.608°

LATITUDE= 40°07'58.458"  
LONGITUDE= -104°36'27.592"

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= 40.114335°  
LONGITUDE= -104.607662°

LATITUDE= 40°06'51.606"  
LONGITUDE= -104°36'27.583"

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

N 00°17'38" W 2640.01'

S 00°22'42" E 2634.36'

S 00°32'03" E 2624.15'

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  
3/4" ALUM. CAP  
PLS 27269, 1998

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

N 67°02'39" E 784'  
(TRUE N 67°37'09" E)

HEEL- 640' FSL  
1320' FEL

SWARTZ 27N-25HZ

BH-864' FNL  
1370' FEL

S 00°34'57" E 6765'  
(TRUE S 00°00'21" E)

## LEGEND

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

## WELL SWARTZ 27N-25HZ TO BE LOCATED 335' FSL AND 2045' FEL

0 500 1000

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.
- CERTIFIED ON AUGUST 4, 2015 FOR WELLS STAKED ON JANUARY 5, 2015. THIRD REVISION DECEMBER 30, 2015 FOR HEEL AND BHL CHANGES.

SHEET 1 OF 3

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.



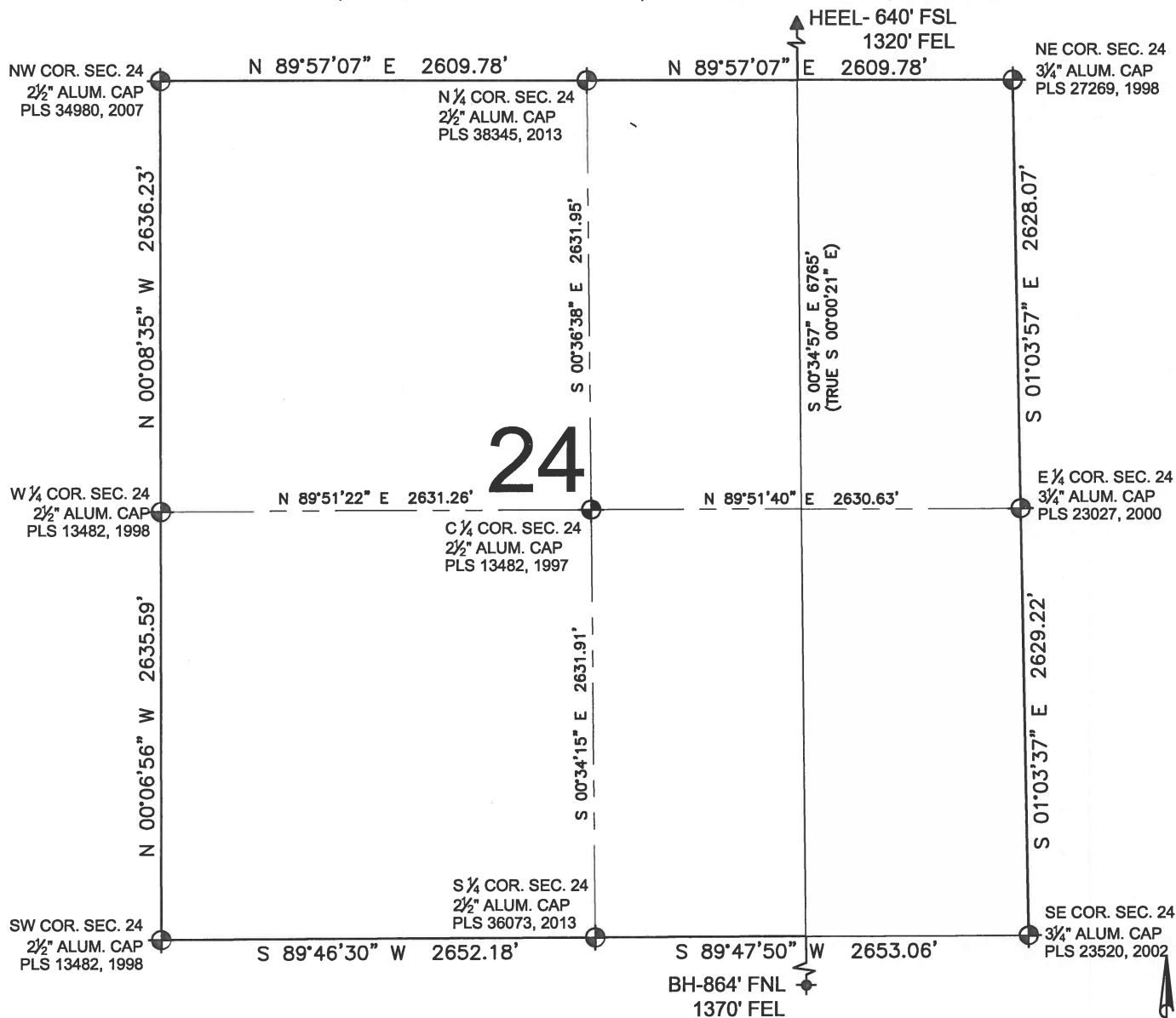
NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THIS SAID DATE OF THIS CERTIFICATION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



FIELD DATE: 01-05-15  
DRAWING DATE: 12-12-16  
BY: BMO  
CHECKED: CSG  
SURFACE LOCATION: SW 1/4 SE 1/4, SEC. 13, T2N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

# WELL LOCATION CERTIFICATE: SWARTZ 27N-25HZ

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



## LEGEND

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- ▲ = HEEL LOCATION
- BH = BOTTOM HOLE
- = CALCULATED POSITION

0 500 1000

SCALE: 1"=1000'

## 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. CERTIFIED ON AUGUST 4, 2015 FOR WELLS STAKED ON JANUARY 5, 2015. THIRD REVISION DECEMBER 30, 2015 FOR HEEL AND BHL CHANGES.

SHEET 2 OF 3

PREPARED BY:



FIELD DATE:  
01-05-15

DRAWING DATE:  
12-12-16

BY: BMO  
CHECKED: CSG

SURFACE LOCATION:

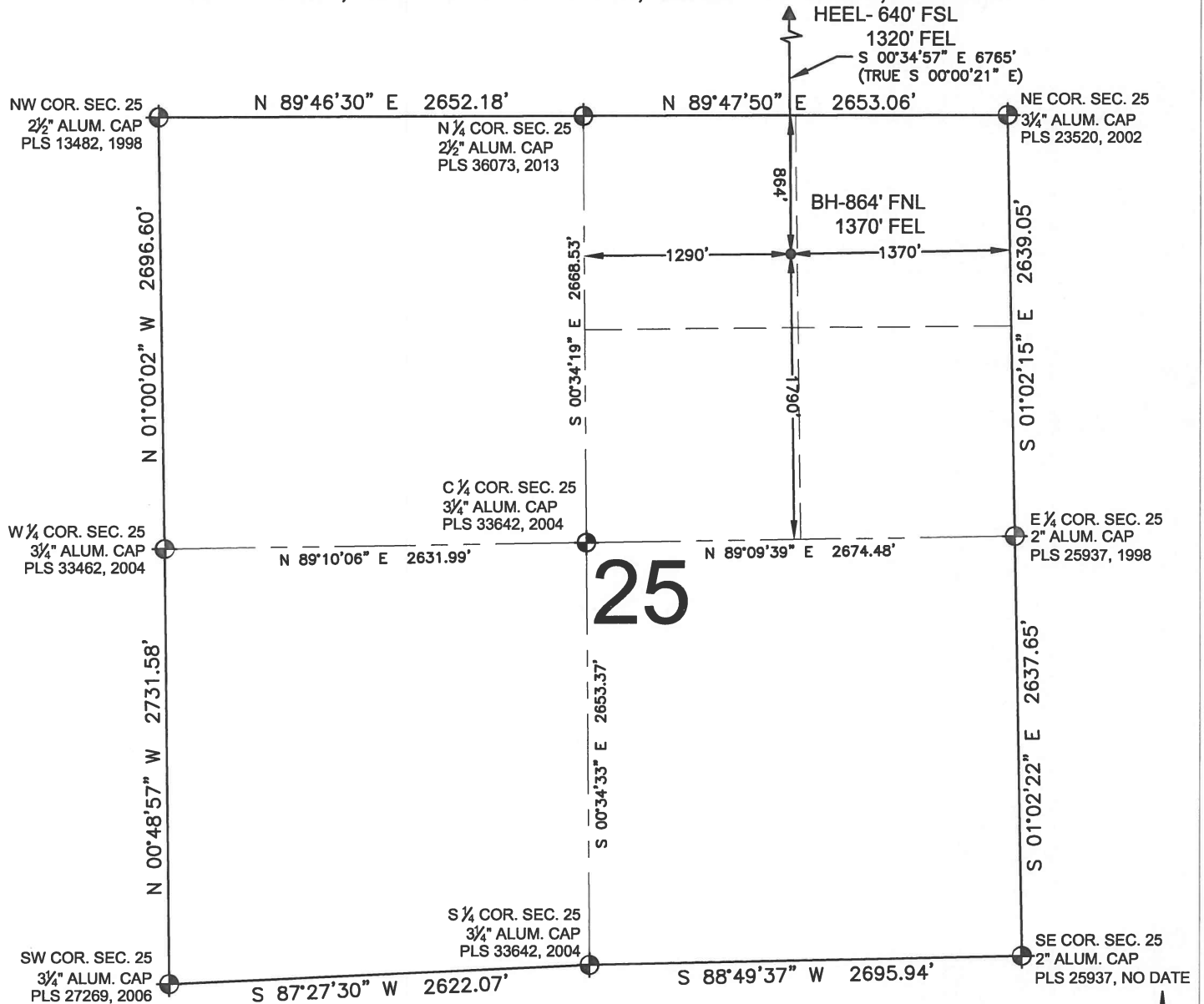
SW 1/4 SE 1/4,  
SEC. 13, T2N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO



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 27N-25HZ

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



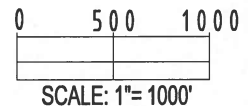
## NOTES:

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.
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SHEET 3 OF 3

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PREPARED BY



FIELD DATE:  
01-05-15

DRAWING DATE:  
12-12-16

BY: BMO  
CHECKED: CSG

SURFACE LOCATION:

SW 1/4 SE 1/4,  
SEC. 13, T2N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO