

WELL LOCATION CERTIFICATE: SWARTZ 1C-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'

N ¼ COR. SEC. 13
2" ALUM. CAP
PLS 25937, 1996

(BASIS OF BEARINGS) SEE NOTE 2

NE COR. SEC. 13
¾" ALUM. CAP
PLS 23520, 2002

N 00°08'29" W 2648.40'

SURFACE LOCATION
GROUND ELEVATION= 4956'
NAD83 STATE PLANE CO N
LATITUDE= 40.131977°
LONGITUDE= 104.604688°

LATITUDE= 40°07'55.115"
LONGITUDE= 104°36'16.877"

HEEL LOCATION
NAD83 STATE PLANE CO N
LATITUDE= 40.133046°
LONGITUDE= 104.604295°

LATITUDE= 40°07'58.965"
LONGITUDE= 104°36'15.463"

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

PDOP= 1.5
GPS OPERATOR: BEN HARDENBERGH

13

W ¼ COR. SEC. 13
¾" ALUM. CAP
PLS 10855, 1998

S 89°55'24" E 2605.94'

BOTTOM HOLE LOCATION
NAD83 STATE PLANE CO N
LATITUDE= 40.115707°
LONGITUDE= 104.603906°

LATITUDE= 40°06'56.545"
LONGITUDE= 104°36'14.062"

S 89°49'20" E 2602.73'

C ¼ COR. SEC. 13
¾" ALUM. CAP
PLS 24307, 2006

E ¼ COR. SEC. 13
¾" ALUM. CAP
PLS 27269, 2004

N 00°17'38" W 2640.01'

S 00°22'42" E 2634.36'

HEEL- 700' FSL
378' FEL
N 15°09'53" E 404.67'
(TRUE N 15°44'36" E)

SWARTZ 1C-25HZ

SW COR. SEC. 13
2½" ALUM. CAP
PLS 34980, 2007

S 89°57'07" W 2609.78'

S ¼ COR. SEC. 13
2½" ALUM. CAP
PLS 38345, 2013

S 89°57'07" W 2609.78'

S 01°33'59" E 6317.07'
(TRUE S 00°59'15" E)

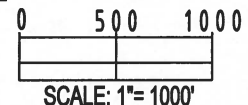
SE COR. SEC. 13
CALC'D FROM W.C. 30' E
¾" ALUM. CAP
PLS 27269, 1998

BH-358' FNL
316' FEL

LEGEND

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

WELL SWARTZ 1C-25HZ TO BE LOCATED 310' FSL AND 487' FEL



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: 08-05-15
JOB NO: B14.APC.0489
FOR AND ON BEHALF OF J.S.F.S. LLC



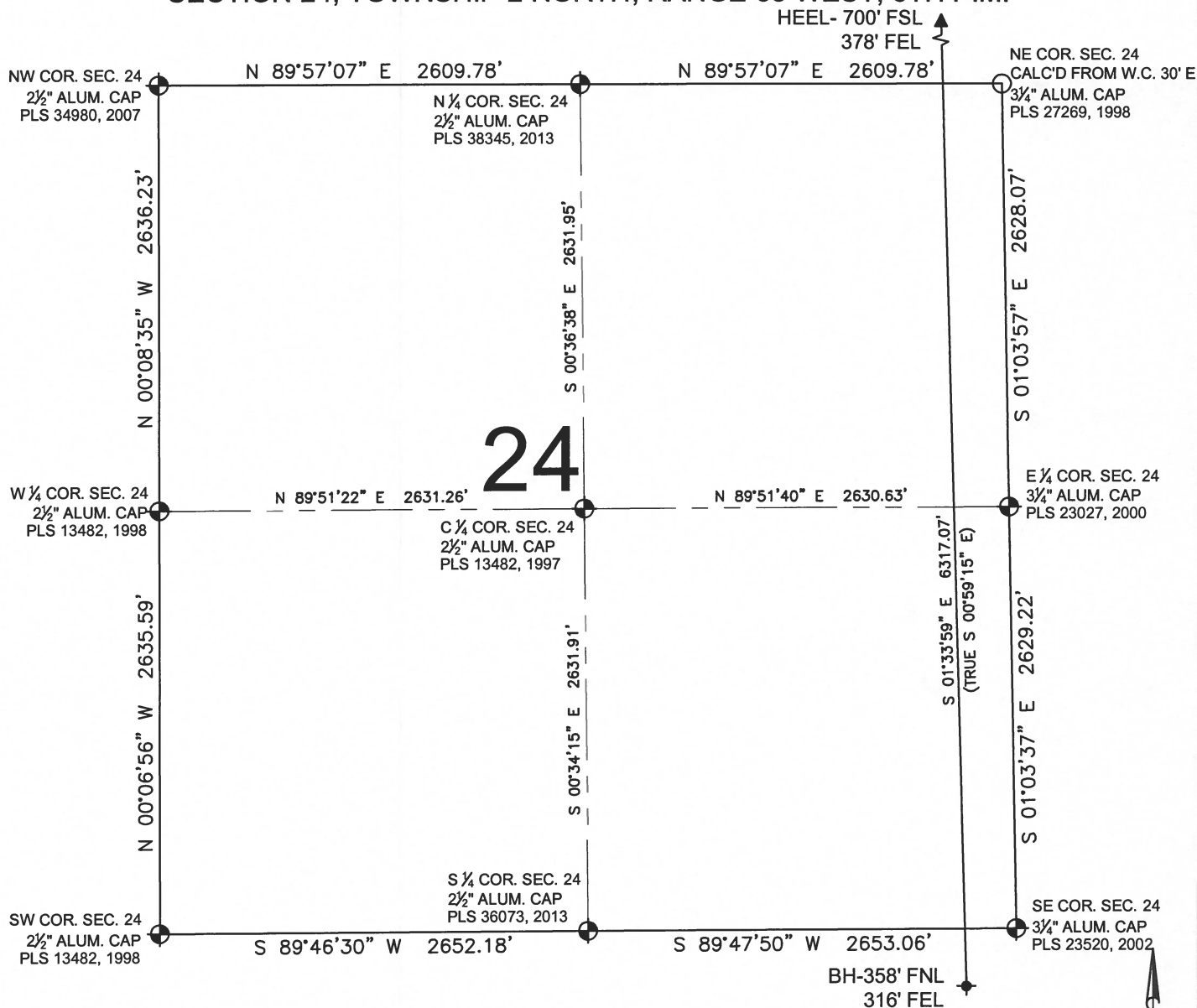
SHEET 1 OF 3

PREPARED BY: PFS Petroleum Field Services, LLC 7536 Hilltop Circle Denver, CO 80221	FIELD DATE: 01-05-15 DRAWING DATE: 08-04-15 BY: TJN CHECKED: WDW	SURFACE LOCATION: SE 1/4 SE 1/4, SEC. 13, T2N, R65W, 6TH P.M. WELD COUNTY, COLORADO
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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.

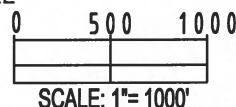
WELL LOCATION CERTIFICATE: SWARTZ 1C-25HZ

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



LEGEND

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



NOTES:

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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:
01-05-15

DRAWING DATE:
08-04-15

BY: TJN
CHECKED: WDW

SURFACE LOCATION:

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

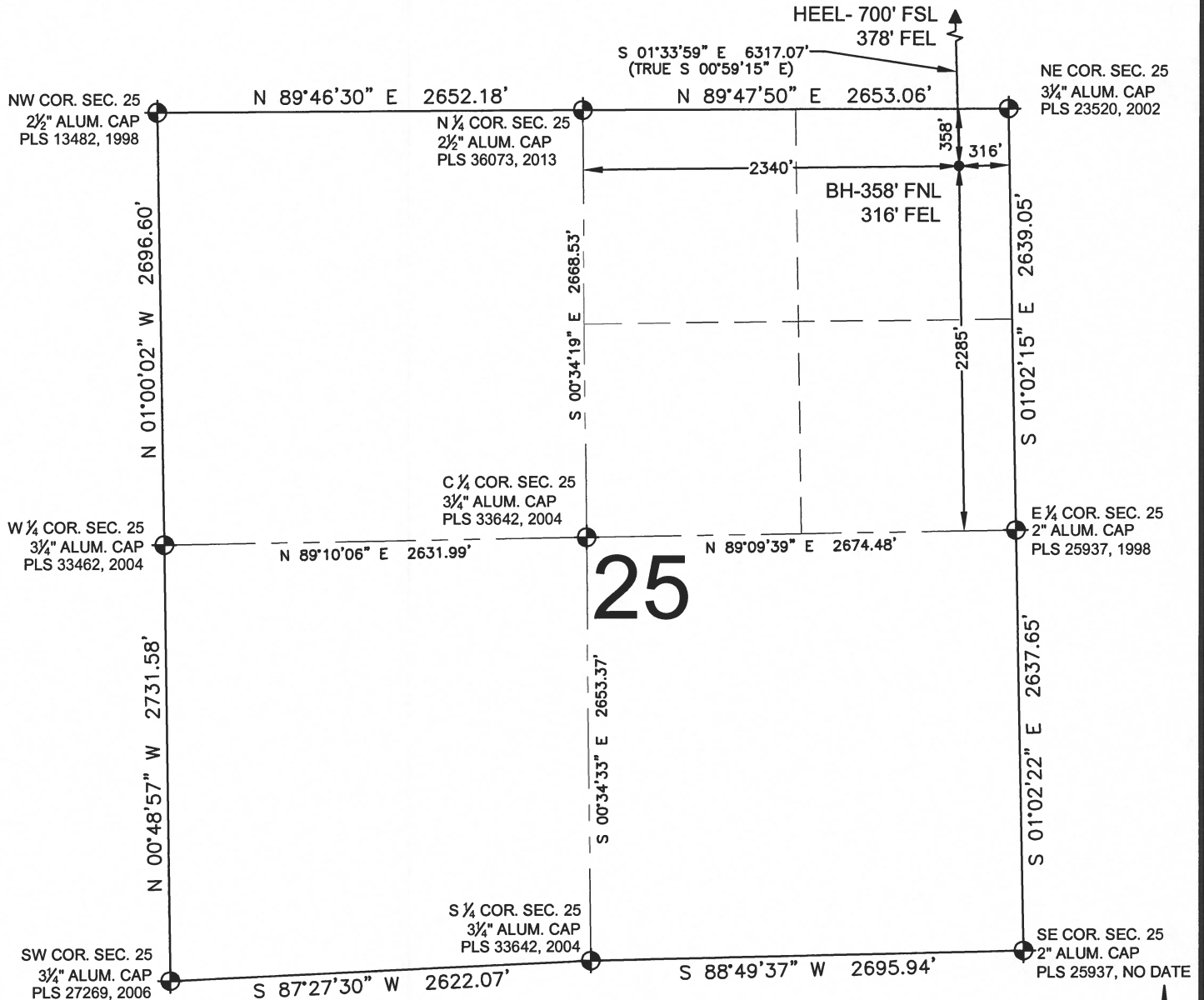
JACOB S. FRISCH, PLS 38149
DATE: 08-05-15
JOB NO: B14.APC.0488
FOR AND ON BEHALF OF J.S.F.S., LLC



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WELL LOCATION CERTIFICATE: SWARTZ 1C-25HZ

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

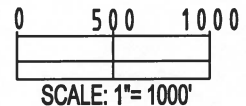


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SHEET 3 OF 3

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FIELD DATE:
01-05-15

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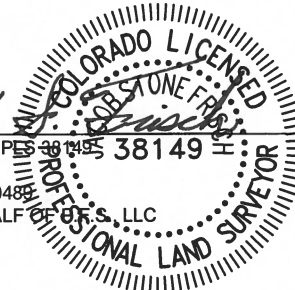
SURFACE LOCATION:

SE 1/4 SE 1/4,

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

WELD COUNTY, COLORADO

JACOB S. FRISCH, PLS 38149
DATE: 08-05-15
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