

# SWARTZ 1N-25HZ WELL LOCATION CERTIFICATE

S ¼ COR. SEC. 13  
2" ALUM. CAP (BASIS OF BEARINGS) SEE NOTE 2  
PLS 25937, 1996

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

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

**SURFACE LOCATION:**  
GROUND ELEVATION=4956'  
NAD83 STATE PLANE CO N  
LATITUDE:40.131977°  
LONGITUDE:-104.604903°  
LATITUDE=40° 07' 55.118"  
LONGITUDE=-104° 36' 17.650"

**NOTES:**  
BH AND HEEL LOCATIONS PROVIDED BY CLIENT.  
LAND SURFACE USE-RANGELAND  
EXISTING WELL SWARTZ 16-13 IS 361' NW AT 660' FSL & 660' FEL.  
SEE ATTACHED MAP FOR ADDITIONAL IMPROVEMENTS WITHIN 500'

**HEEL LOCATION:**  
NAD83 STATE PLANE CO N  
LATITUDE:40.132919°  
LONGITUDE:-104.606527°  
LATITUDE=40° 07' 58.508"  
LONGITUDE=-104° 36' 23.498"

PDOP=1.5  
GPS OPERATOR: BEN HARDENBERGH

# 13

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

**BOTTOM HOLE LOCATION:**  
NAD83 STATE PLANE CO N  
LATITUDE:40.109663°  
LONGITUDE:-104.606523°  
LATITUDE=40° 06' 34.787"  
LONGITUDE=-104° 36' 23.483"

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

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

N00°08'29"W 2648.40'

S00°23'01"E 2634.34'

S00°34'00"E 2625.00'

N00°17'38"W 2640.01'

S00°22'42"E 2634.36'

S00°32'03"E 2624.15'

SW COR. SEC. 13  
½" ALUM. CAP  
PLS 34980, 2007

S89°57'07"W 2609.78'

S ¼ COR. SEC. 13  
½" ALUM. CAP  
PLS 38345, 2013

S89°57'07"W 2609.78'

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

EX. WELL:  
SWARTZ 16-13

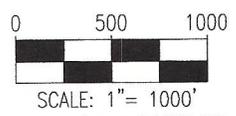
HEEL- 648' FSL  
1002' FEL

S00°35'07"E 8471.61'  
(TRUE S00°00'28"E)

BHL- 2564' FNL  
1065' FEL

N53°31'16"W 569.18'  
(TRUE N52°56'34"W)

SWARTZ 1N-25HZ



**LEGEND**

- ⊙ = EXISTING MONUMENT
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- ◆ = EXISTING WELL
- ⊕ = BOTTOM HOLE
- ▲ = HEEL
- BHL = BOTTOM HOLE LOCATION

**WELL SWARTZ 1N-25HZ TO BE LOCATED 309' FSL & 548' FEL**

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.

COLORADO LICENSED  
JACOB S. FRISCH  
PROFESSIONAL LAND SURVEYOR

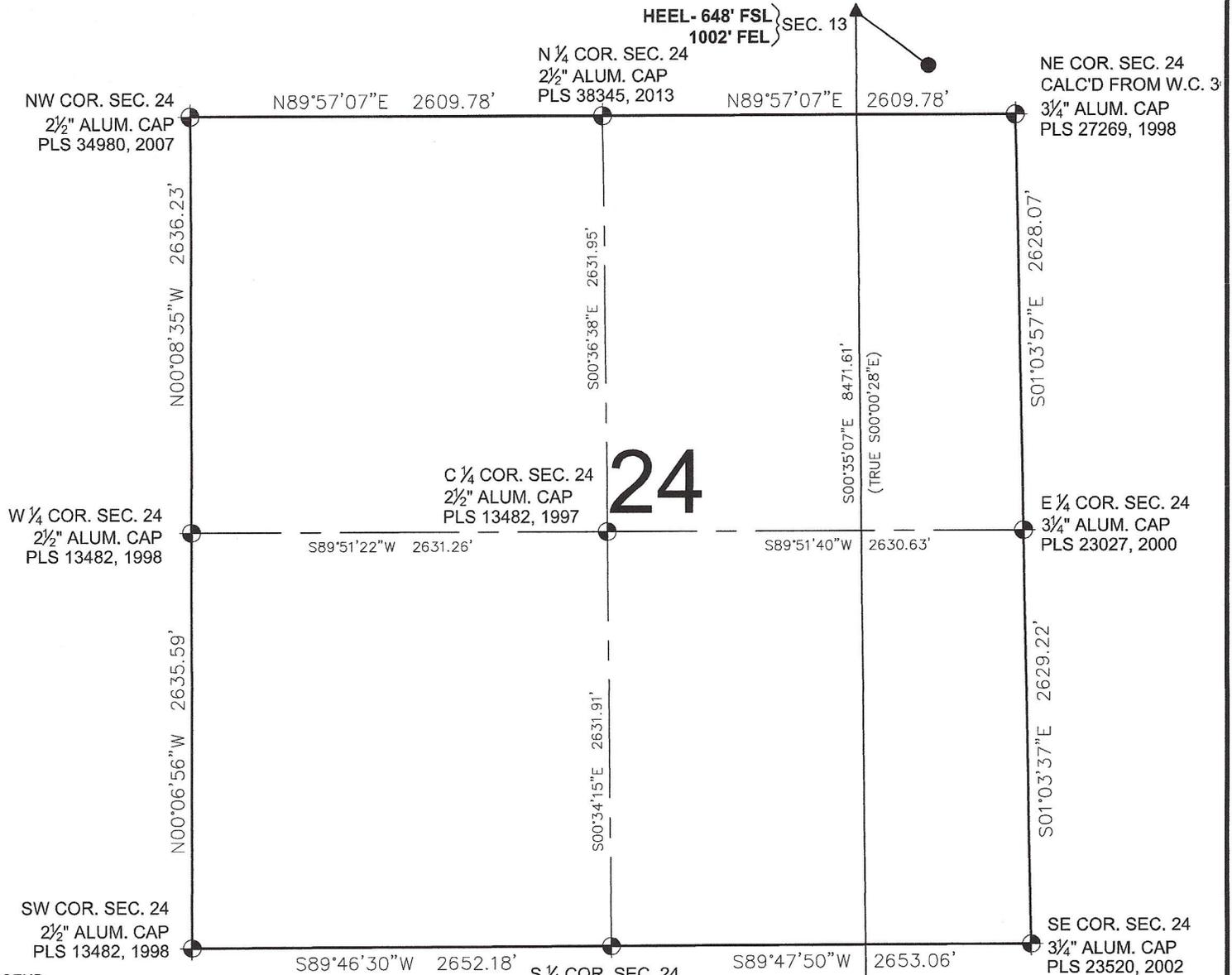
JACOB S. FRISCH, PLS 38149  
DATE: 08-05-15  
REV. DATE: 01-06-17  
JOB NO: B14.APC.0489  
FOR AND ON BEHALF OF KERR-MCGEE OIL & GAS ONSHORE LP

- 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 SHOWN HEREON.
  3. GRID DISTANCES ARE SHOWN, AS GPS 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. ELEVATIONS SHOWN ARE NAVD 88, AS DERIVED BY GPS OBSERVATIONS.
  5. CERTIFIED AUGUST 5, 2015 FOR WELLS STAKED ON JANUARY 5, 2015. REVISED JANUARY 6, 2017 FOR HEEL AND BHL CHANGES.

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.

<p>PREPARED BY:</p> <p>PFS Petroleum Field Services, LLC 7533 Hilltop Circle Denver, CO 80221</p>	<p>FIELD DATE: 01-05-15</p> <p>DRAWING DATE: 01-05-17</p> <p>BY: MDC</p> <p>CHECKED BY: MLP</p>	<p>WELL NAME: SWARTZ 1N-25HZ</p> <p>SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 13 T2N, R65W, 6TH P.M. WELD COUNTY, COLORADO</p>	<p>PREPARED FOR:</p> <p>Anadarko Petroleum Corporation</p>
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# SWARTZ 1N-25HZ WELL LOCATION CERTIFICATE



### LEGEND

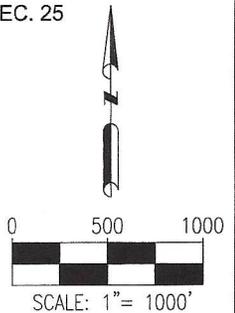
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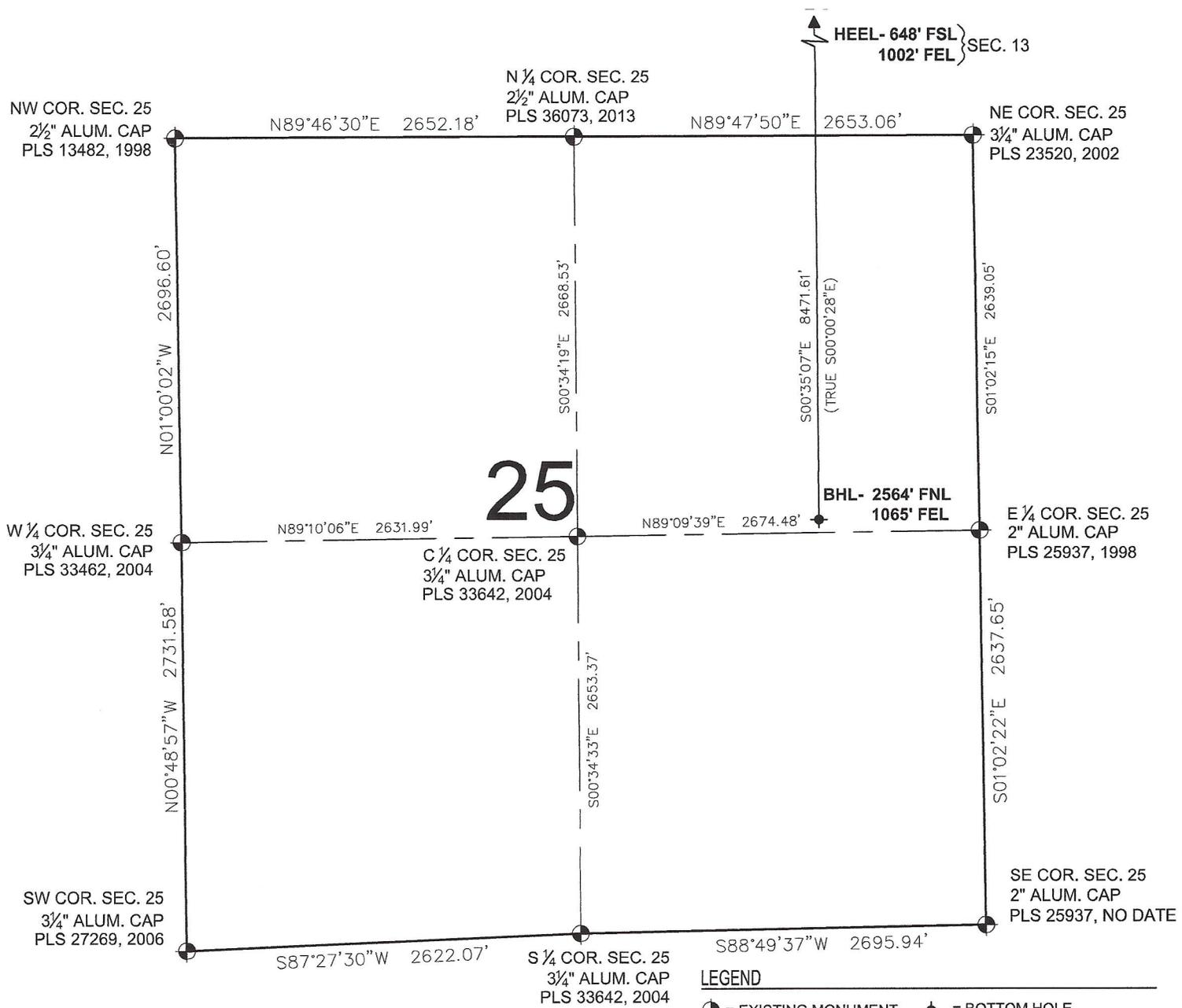
JACOB S. FRISCH PLS 38149  
 DATE: 08-05-15  
 REV. DATE: 01-06-17  
 JOB NO: B14.APC.0488  
 FOR AND ON BEHALF OF P.F.S., LLC



SHEET 2 OF 3

PREPARED BY: 	FIELD DATE: 01-05-15 DRAWING DATE: 01-05-17 BY: MDC	CHECKED BY: MLP	WELL NAME: SWARTZ 1N-25HZ SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 13 T2N, R65W, 6TH P.M. WELD COUNTY, COLORADO	PREPARED FOR: 
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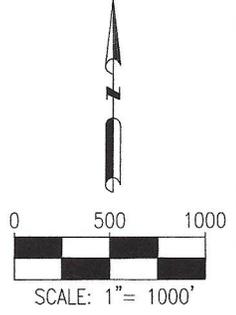
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