

SWARTZ 27N-12HZ WELL LOCATION CERTIFICATE

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

BHL- 395' FSL
1013' FEL } SEC. 1

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

S89°36'41"E 2594.89'

S89°36'50"E 2594.45'

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

(BASIS OF BEARINGS) SEE NOTE 2

SURFACE LOCATION:
GROUND ELEVATION=4956'
NAD83 STATE PLANE CO N
LATITUDE:40.131978°
LONGITUDE:-104.605010°
LATITUDE=40° 07' 55.119"
LONGITUDE=-104° 36' 18.036"

HEEL LOCATION:
NAD83 STATE PLANE CO N
LATITUDE:40.133176°
LONGITUDE:-104.606963°
LATITUDE=40° 07' 59.434"
LONGITUDE=-104° 36' 25.068"

13

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

S89°55'24"E 2605.94'

S89°49'20"E 2602.73'

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

BOTTOM HOLE LOCATION:
NAD83 STATE PLANE CO N
LATITUDE:40.161056°
LONGITUDE:-104.606534°
LATITUDE=40° 09' 39.802"
LONGITUDE=-104° 36' 23.522"

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

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'

EX.WELL:
SWARTZ 16-13

HEEL- 740' FSL
1124' FEL

SWARTZ 27N-12HZ

N51°56'15"W 699.21'
(TRUE N51°21'34"W)

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

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

S89°57'07"W 2609.78'

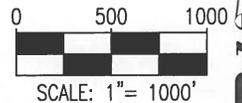
S89°57'07"W 2609.78'

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

LEGEND

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WELL SWARTZ 27N-12HZ TO BE LOCATED 309' FSL & 578' FEL



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 AND ADDITION OF SECTION 1. CORNERS ON EAST LINE OF SECTION 1 ARE CALCULATED DUE TO ROAD CONSTRUCTION AND WILL BE RESET BY THAT SURVEYOR AFTER CONSTRUCTION.

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.

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
REV. DATE: 01-06-17
JOB NO: B14.APC.0489
FOR AND ON BEHALF OF KERR-MCGEE OIL & GAS ONSHORE LP

PREPARED BY:



FIELD DATE:

01-05-15

DRAWING DATE:

01-05-17

BY:

MDC

CHECKED BY:

MLP

WELL NAME:

SWARTZ 27N-12HZ

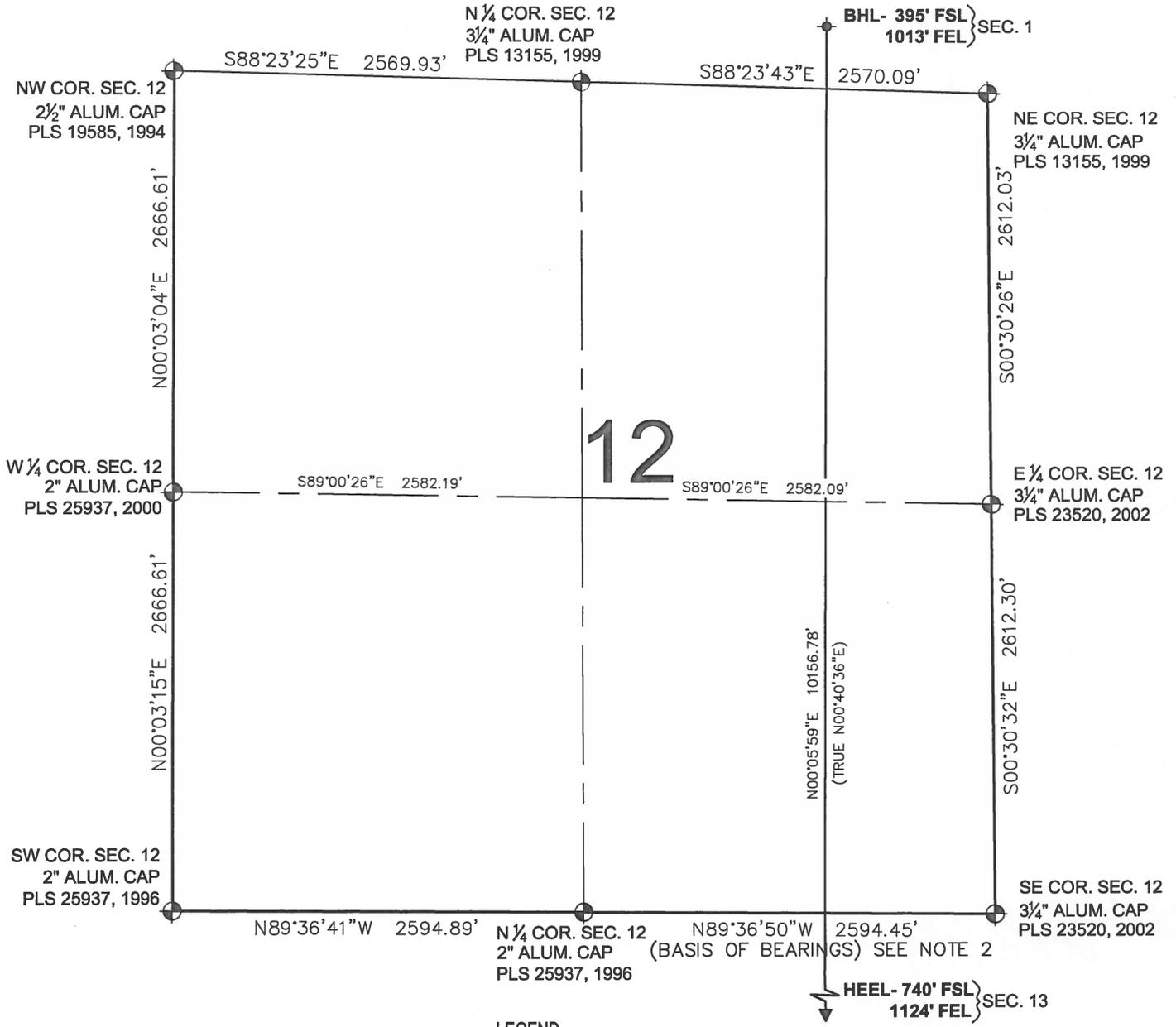
SURFACE LOCATION:

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

PREPARED FOR:



SWARTZ 27N-12HZ WELL LOCATION CERTIFICATE



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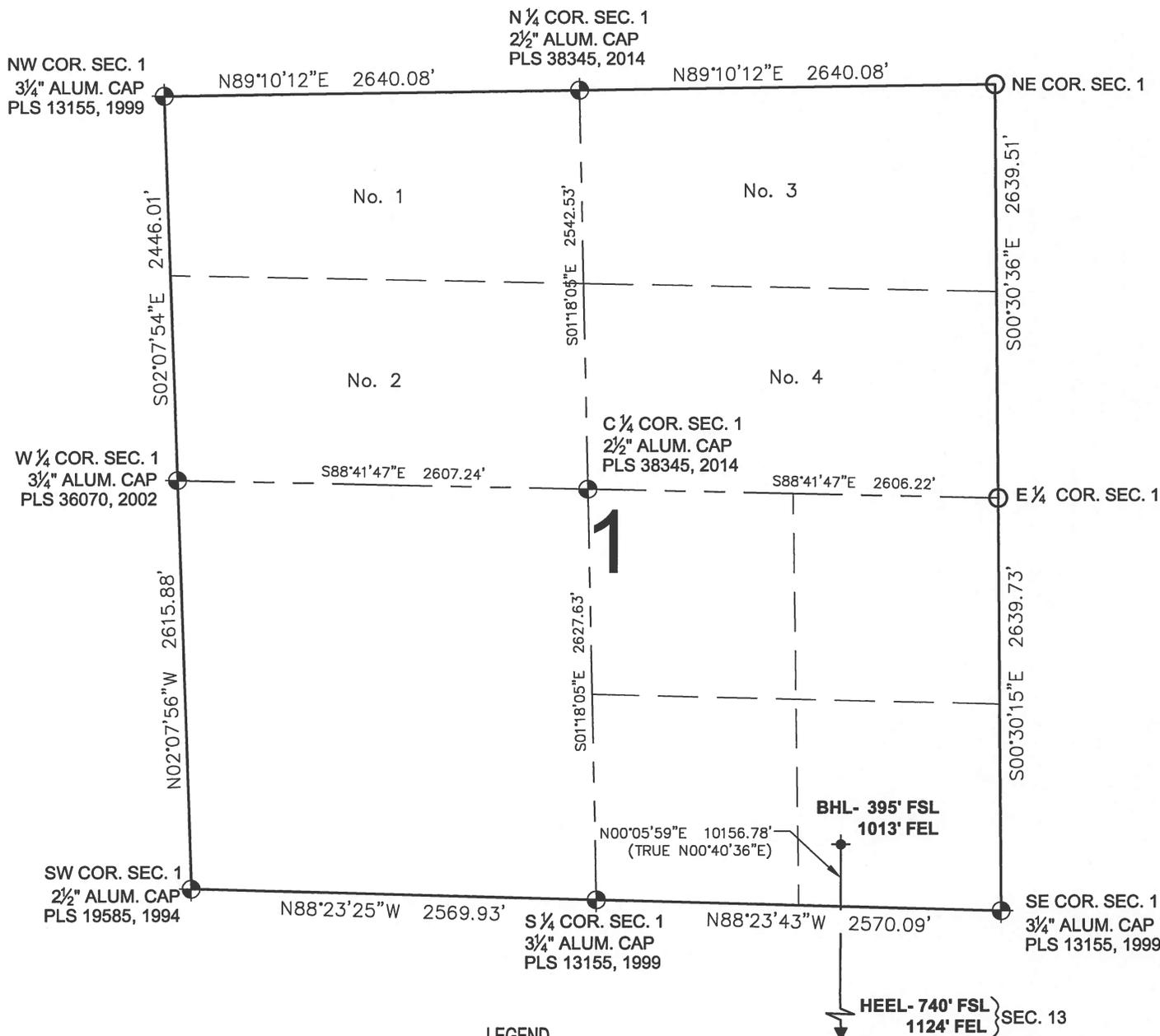
JACOB S. FRISCH, PLS 38149
 DATE: 08-05-15
 REV. DATE: 01-06-17
 JOB NO: B14.APC.0458
 FOR AND ON BEHALF OF P.F.S., LLC



SHEET 2 OF 3

PREPARED BY: 	FIELD DATE: 01-05-15 DRAWING DATE: 01-05-17 BY: MDC CHECKED BY: MLP	WELL NAME: SWARTZ 27N-12HZ SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 13 T2N, R65W, 6TH P.M. WELD COUNTY, COLORADO	PREPARED FOR:
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SWARTZ 27N-12HZ WELL LOCATION CERTIFICATE



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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 3 OF 3

PREPARED BY: Petroleum Field Services, LLC 7535 Hilltop Circle Denver, CO 80221	FIELD DATE: 01-05-15 DRAWING DATE: 01-05-17 BY: MDC CHECKED BY: MLP	WELL NAME: SWARTZ 27N-12HZ SURFACE LOCATION: SE 1/4 SE 1/4 SEC. 13 T2N, R65W, 6TH P.M. WELD COUNTY, COLORADO	PREPARED FOR: Petroleum Corporation
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