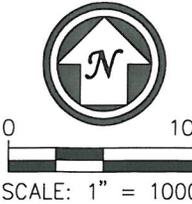
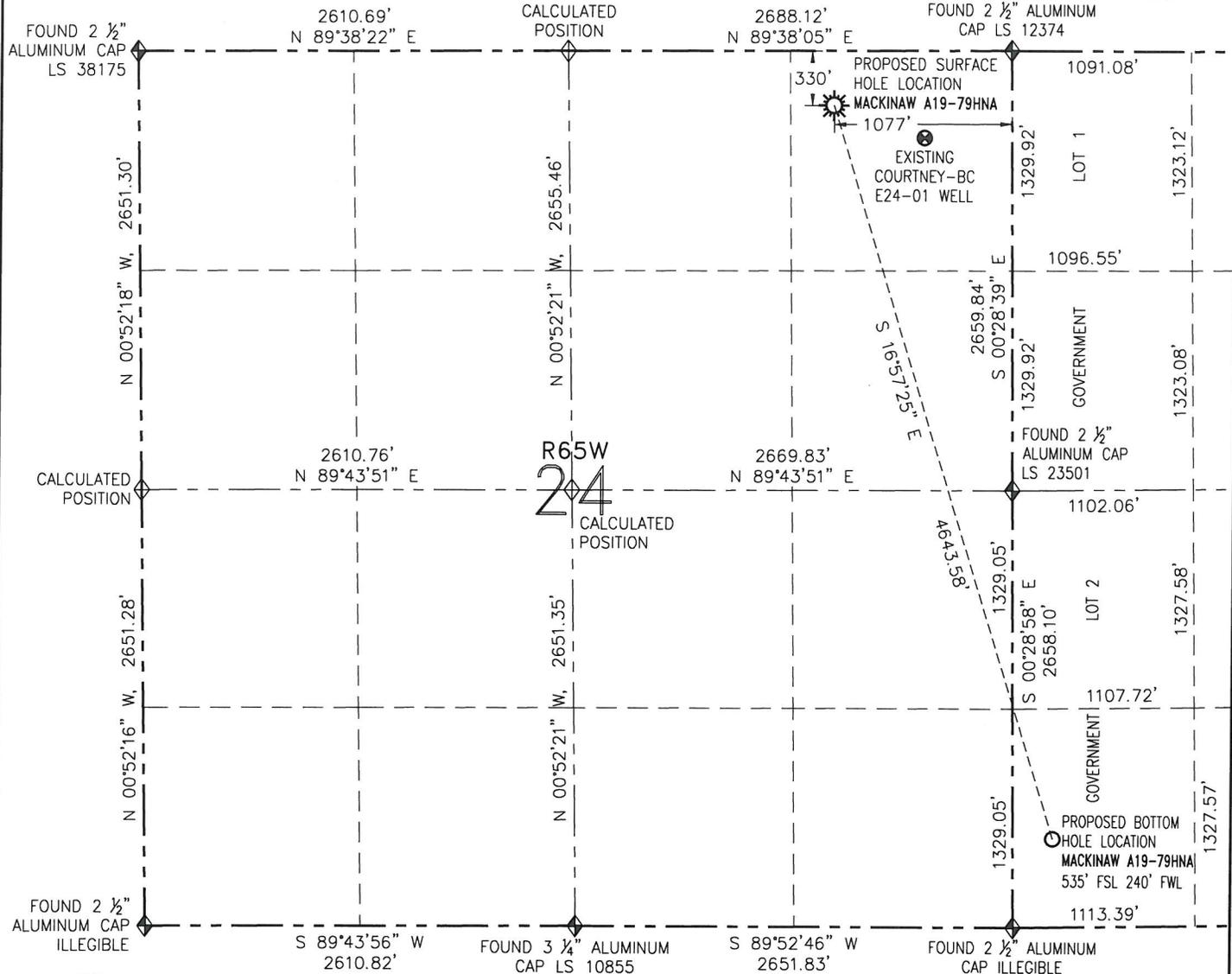


WELL LOCATION CERTIFICATE

MACKINAW A19-79HNA

THIS MAP DOES NOT REPRESENT A BOUNDARY SURVEY

SECTION: 24
TOWNSHIP: 6 NORTH
RANGE: 65 WEST



SURFACE HOLE LOCATION (NAD 83)
 LATITUDE: N 40.47782'
 LONGITUDE: W 104.60574'
 ELEVATION: 4684
 PDOP: 2.0
 ¼-¼: NE NE
 NEAREST PROPERTY LINE: 266' W

BOTTOM HOLE LOCATION
 LATITUDE: N 40.46559'
 LONGITUDE: W 104.60103'

IN ACCORDANCE WITH A REQUEST FROM MIKE RODINE -NOBLE ENERGY INC., R&R ENGINEERS-SURVEYORS, INC. HAS DETERMINED THE SURFACE HOLE LOCATION OF THE MACKINAW A19-79HNA WELL TO BE 330' FNL AND 1077' FEL AS MEASURED AT (90) DEGREES FROM THE SECTION LINES OF SECTION 24, TOWNSHIP 6 NORTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, WELD COUNTY, COLORADO. THE BOTTOM HOLE LOCATION, AS PROVIDED BY THE CLIENT, IS TO BE 535' FSL AND 240' FWL OF SECTION 19, TOWNSHIP 6 NORTH, RANGE 64 WEST.

I HEREBY CERTIFY THAT THIS WELL LOCATION CERTIFICATE WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, THAT THE FIELD WORK WAS COMPLETED ON 12/18/12, FOR AND ON BEHALF OF NOBLE ENERGY INC., THAT IT IS NOT A LAND SURVEY PLAT OR AN IMPROVEMENT SURVEY PLAT, AND THAT IT IS NOT TO BE RELIED UPON FOR ESTABLISHMENT OF FENCES, BUILDINGS, OR OTHER FUTURE IMPROVEMENT LINES.

- NOTES:**
1. BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83. THE LINEAL DIMENSIONS SHOWN HEREON ARE BASED UPON THE "U.S. SURVEY FOOT".
 2. ELEVATIONS ARE BASED UPON NGS OPUS SOLUTION NAVD 88 DATUM COMPUTED USING GEOID09.
 3. THE NEAREST EXISTING WELL IS: COURTNEY-BC E24-01 586' SE.
 4. SEE LOCATION DRAWING FOR ALL IMPROVEMENTS WITHIN 400' OF THE OIL/GAS LOCATION.
 5. SURFACE USE: CROPLAND.

- LEGEND**
- ☀ PROPOSED WELL
 - ⊙ EXISTING WELL
 - BOTTOM HOLE
 - ◆ FOUND MONUMENT
 - ⊕ CALCULATED POSITION

PAGE 1 OF SHEET 1

	FIELD DATE: 12/18/12
	PLOT DATE: 10/14/13
	DRAWN BY: CJD
	JOB NO.: NE12383
SHEET NO.: 1 of 20	

NOTICE:
 ACCORDING TO COLORADO LAW, YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS W.L.C. WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS W.L.C. BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON (13-80-105 C.R.S.).



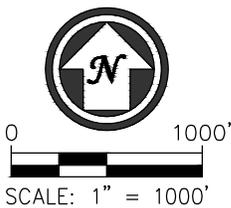
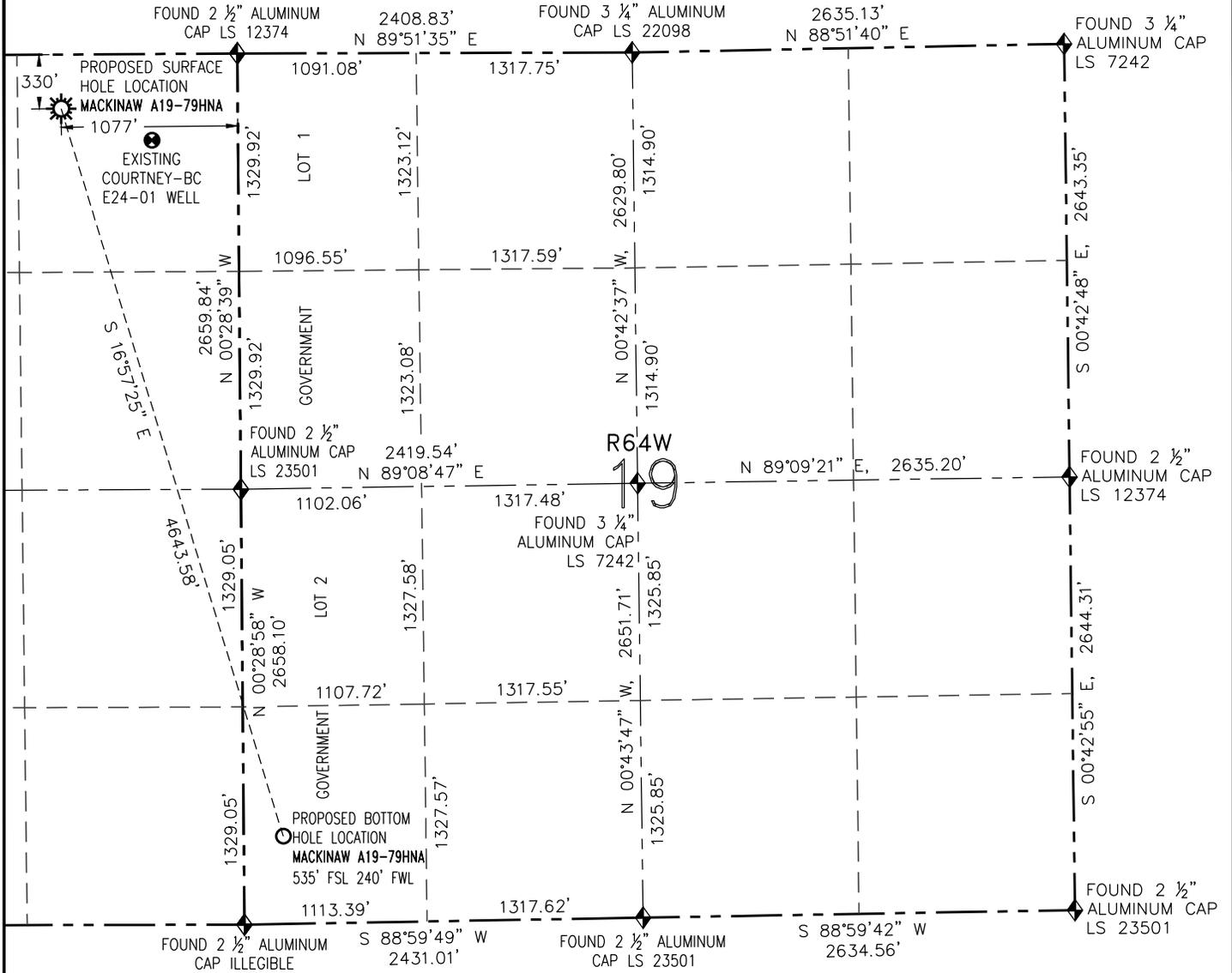
PAUL W. SMITH, PLS 29430
 FOR AND ON BEHALF OF R&R ENGINEERS-SURVEYORS, INC.

WELL LOCATION CERTIFICATE

MACKINAW A19-79HNA

THIS MAP DOES NOT REPRESENT A BOUNDARY SURVEY

SHL-SECTION: 24
TOWNSHIP: 6 NORTH
RANGE: 65 WEST



SURFACE HOLE LOCATION (NAD 83)
 LATITUDE: N 40.47782°
 LONGITUDE: W 104.60574°
 ELEVATION: 4684
 PDOP: 2.0
 ¼-¼: NE NE
 NEAREST PROPERTY LINE: 266' W

BOTTOM HOLE LOCATION
 LATITUDE: N 40.46559°
 LONGITUDE: W 104.60103°

	FIELD DATE: 12/18/12
	PLOT DATE: 10/14/13
	DRAWN BY: CJD
	JOB NO.: NE12383
	SHEET NO.: 1 of 20

NOTICE:
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LEGEND	
	PROPOSED WELL
	EXISTING WELL
	BOTTOM HOLE
	FOUND MONUMENT
	CALCULATED POSITION

SITE SKETCH

MACKINAW A19-79HNA

THIS MAP DOES NOT REPRESENT A BOUNDARY SURVEY

SECTION: 24
TOWNSHIP: 6 NORTH
RANGE: 65 WEST

① COURTNEY-BC E24-01
NE/NE SEC. 24
526' FNL
526' FEL
EL=4682
N 40.47727°
W 104.60376°
PDOP 2.5

② WEBER 4-19
NW/NW SEC. 19
½ GOVT LOT 1
668' FNL
651' FWL
EL=4680
N 40.47686°
W 104.59953°
PDOP 1.9

③ COURTNEY-BC E24-08
SE/NE SEC 24
1994' FNL
662' FEL
EL=4680
N 40.47325°
W 104.60425°
PDOP 1.7

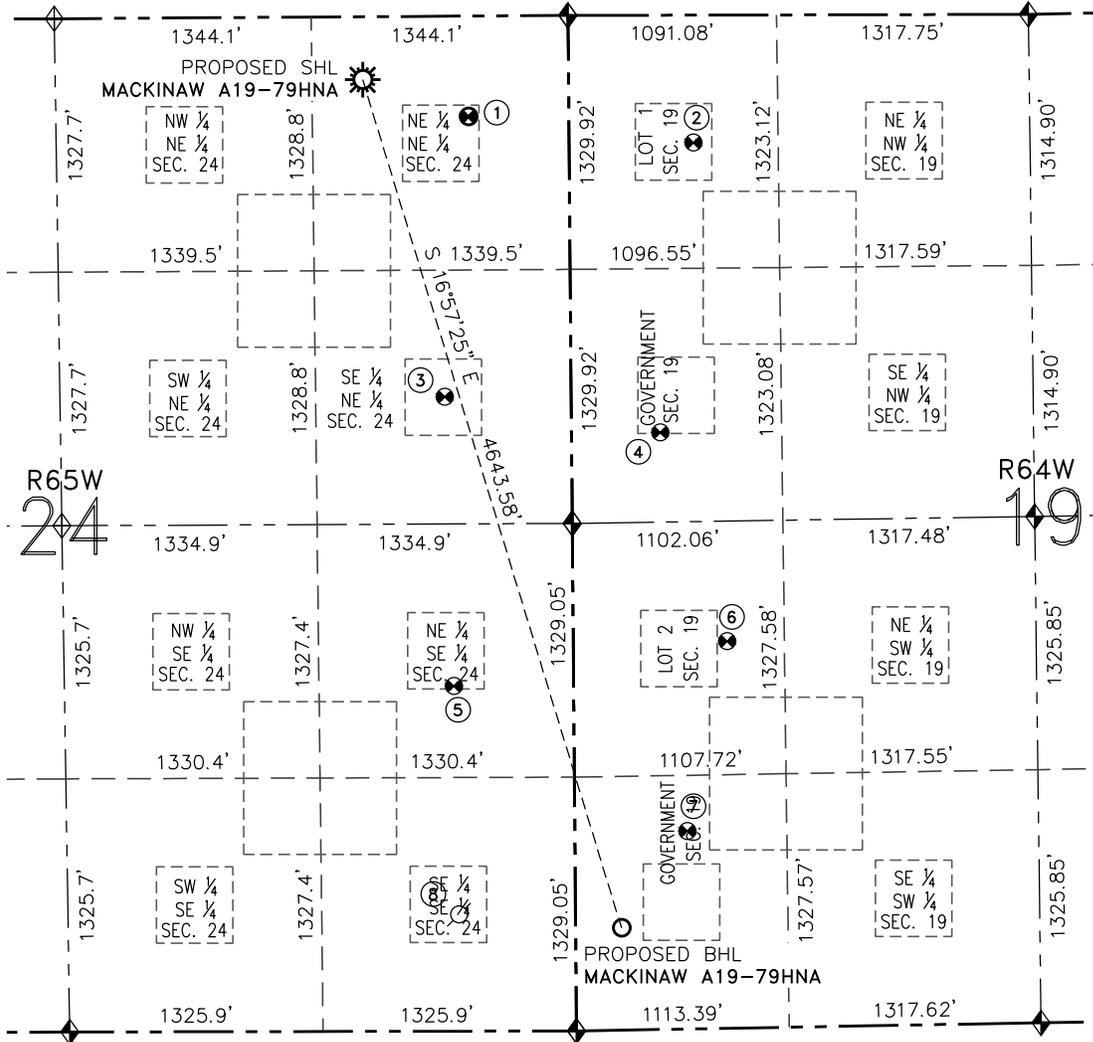
④ LUPPENS 5-19
SW/NW SEC 19
½ GOVT LOT 1
2185' FNL
464' FWL
EL=4678
N 40.47271°
W 104.60021°
PDOP 1.8

⑤ JESSIE NO.2
NE/SE SEC 24
1807' FSL
627' FEL
EL=4675
N 40.46909°
W 104.60414°
PDOP 1.6

⑥ ROTH A19-12
NW/SW SEC. 19
½ GOVT LOT 2
2026' FSL
805' FWL
EL=4671
N 40.46970°
W 104.59899°
PDOP 1.7

⑦ ROTH A19-13
SW/SW SEC. 19
½ GOVT LOT 2
1036' FSL
588' FWL
EL=4667
N 40.46697°
W 104.59978°
PDOP 2.1

⑧ JESSIE NO. 1
SE/SE SEC. 24
PER COGCC:
610' FSL
610' FEL
DRILLED &
ABANDONED



NOTES:

1. THIS SKETCH DOES NOT REPRESENT A BOUNDARY SURVEY.
2. HORIZONTAL DATUM IS NAD 83.
3. VERTICAL DATUM IS NAVD 88.

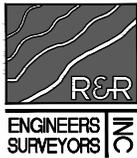


0 1000' 2000'

SCALE: 1" = 1000'

LEGEND

- PROPOSED WELL
- EXISTING WELL
- BOTTOM HOLE
- ABANDONED WELL
- FOUND MONUMENT
- CALCULATED POSITION



FIELD DATE: 12/18/12
PLOT DATE: 10/14/13
DRAWN BY: CJD
JOB NO.: NE12383
SHEET NO.: 2 of 20