

W-77-713

ALL COMPUTED COORDINATE ACCURACIES ARE LISTED AS PEAK-TO-PEAK VALUES.
FOR ADDITIONAL INFORMATION:
HTTP://WWW.NGS.NOAA.GOV/OPUS/ABOUT.JSP#ACCURACY

USER: TWENTWORTH@COBBENGR.COM DATE: JANUARY 08, 2013
RINEX FILE: LOG2320N.120 TIME: 14:49:21 UTC

SOFTWARE: PAGE5 1209.04 MASTER3.PL 082112 START: 2012/11/15 13:21:00
EPHEMERIS: 1GS17144.EPH [PRECISE] STOP: 2012/11/15 23:13:00
NAV FILE: BRDC3200.12N OBS USED: 21454 / 23644 : 91%
ANT NAME: TPSHIPER*11 NONE # FIXED AMB: 98 / 112 : 88%
ARP HEIGHT: 2 OVERALL RMS: 0.015(M)

REF FRAME: NAD83(2011)EPOCH: 2010.0000 1GS08 (EPOCH: 2012.8737)

X: -835076.101(M) 0.027(M) -835076.882(M) 0.027(M)
Y: -5083685.888(M) 0.021(M) -5083684.505(M) 0.021(M)
Z: 3748657.822(M) 0.008(M) 3748657.695(M) 0.008(M)

LAT: 36 13 27.56626 0.014(M) 36 13 27.58667 0.014(M)
E LON: 260 40 17.64228 0.025(M) 260 40 17.60245 0.025(M)
W LON: 99 19 42.35772 0.025(M) 99 19 42.39755 0.025(M)
EL HGT: 604.810(M) 0.019(M) 603.736(M) 0.019(M)
ORTHO HGT: 632.988(M) 0.034(M) [NAVD88 (COMPUTED USING GEOID12A)]

UTM COORDINATES		STATE PLANE COORDINATES	
UTM (ZONE 14)		SPC (3501 OK N)	
NORTHING (Y) [METERS]	4008879.720	EASTING (X) [METERS]	470483.151
EASTING (X) [METERS]	470483.151	NORTHING (Y) [METERS]	4008879.720
CONVERGENCE [DEGREES]	-0.19408811	POINT SCALE	0.99961073
POINT SCALE	0.99961073	COMBINED FACTOR	0.99951585
COMBINED FACTOR	0.99951585		

US NATIONAL GRID DESIGNATOR: 14SMF7048308879(NAD 83)

PID	DESIGNATION	BASE STATIONS USED		
		LATITUDE	LONGITUDE	DISTANCE(M)
DN5856	TXC1 CANADIAN CORS ARP	N355513.071	W1002241.907	100419.1
DG9774	OKBF BUFFALO CORS ARP	N364940.881	W0993828.840	72623.3
DM7151	TXPY PERRYTON CORS ARP	N362336.089	W1004855.888	134879.5

NEAREST NGS PUBLISHED CONTROL POINT			
GJ0246	K 33	N361307.	W0992047.
			1733.4

THIS POSITION AND THE ABOVE VECTOR COMPONENTS WERE COMPUTED WITHOUT ANY KNOWLEDGE BY THE NATIONAL GEODETIC SURVEY REGARDING THE EQUIPMENT OR FIELD OPERATING PROCEDURES USED.

STATE OF OKLAHOMA S.D. FORM NO. 11
DEPARTMENT OF HIGHWAYS REVISED 3/10/75
SURVEY DIVISION

POSITION AND DESCRIPTION OF SURVEY MONUMENTS

COUNTY WOODWARD STATION NUMBER W-77-713 S.W. 484311 DATE 01/08/13

TYPE OF MONUMENT 5/8" IRON PIN WITH ALUMINUM CAP MONUMENT SET FOR GPS CONTROL

METHOD ESTABLISHED: TRILATERATION , TRIANGULATION , TRAVERSE , OTHER (SPECIFY)

STATIC GPS OBSERVATIONS USING OPUS SOLUTIONS

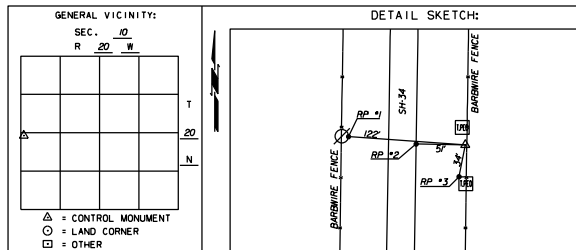
HEIGHT OF INSTRUMENT ABOVE MONUMENT: _____ FEET, TYPE OF WITNESS POST _____

WRITTEN DESCRIPTION OF LOCATION: APPROXIMATELY 12088 SOUTH OF EW-545 QUARTER SECTION LINE AND

APPROXIMATELY 8089 EAST OF NS-206 SECTION LINE.

ESTABLISHED BY: JOSEPH H.FARMER/RPLS

COORDINATE SYSTEM: <input type="checkbox"/> USCGS, <input type="checkbox"/> OHD, <input checked="" type="checkbox"/> OTHER (SPECIFY) <u>OK STATE PLANE (NAD 83)</u>			
GRID DATA:	COORDINATES (FEET)	GRID BEARING	DISTANCE
NORTH ZONE	X 1576682.9687	WEST-NORTHWEST	122'
ACCURACY:	Y 448357.479	WEST	5'
3RD ORDER		SOUTH-SOUTHWEST	34'
GEODETIC DATA:	POSITION	ELEVATION	
ANGLE OF VARIANCE (D)	LATITUDE <u>N3613°27'56.63"</u> NORTH	2063.572'	
027°47'02.29"	LONGITUDE <u>W99°19'42.3577"</u> WEST	SOURCE: <u>NAVD88</u>	
		ACCURACY: <u>3RD</u>	



W-77-714

ALL COMPUTED COORDINATE ACCURACIES ARE LISTED AS PEAK-TO-PEAK VALUES.
FOR ADDITIONAL INFORMATION:
HTTP://WWW.NGS.NOAA.GOV/OPUS/ABOUT.JSP#ACCURACY

USER: TWENTWORTH@COBBENGR.COM DATE: JANUARY 08, 2013
RINEX FILE: LOG2320N.120 TIME: 14:52:16 UTC

SOFTWARE: PAGE5 1209.04 MASTER3.PL 0821123 START: 2012/11/15 13:34:00
EPHEMERIS: 1GS17144.EPH [PRECISE] STOP: 2012/11/15 20:15:00
NAV FILE: BRDC3200.12N OBS USED: 13776 / 15400 : 89%
ANT NAME: TPSHIPER*11 NONE # FIXED AMB: 97 / 101 : 96%
ARP HEIGHT: 2 OVERALL RMS: 0.014(M)

REF FRAME: NAD83(2011)EPOCH: 2010.0000 1GS08 (EPOCH: 2012.8735)

X: -834922.438(M) 0.019(M) -834923.219(M) 0.019(M)
Y: -5082750.603(M) 0.025(M) -5082749.220(M) 0.025(M)
Z: 3749944.580(M) 0.026(M) 3749944.454(M) 0.026(M)

LAT: 36 14 19.41055 0.035(M) 36 14 19.43100 0.035(M)
E LON: 260 40 17.64337 0.021(M) 260 40 17.60353 0.021(M)
W LON: 99 19 42.35663 0.021(M) 99 19 42.39647 0.021(M)
EL HGT: 600.799(M) 0.008(M) 599.726(M) 0.008(M)
ORTHO HGT: 628.987(M) 0.016(M) [NAVD88 (COMPUTED USING GEOID12A)]

UTM COORDINATES		STATE PLANE COORDINATES	
UTM (ZONE 14)		SPC (3501 OK N)	
NORTHING (Y) [METERS]	4010477.092	EASTING (X) [METERS]	470488.590
EASTING (X) [METERS]	470488.590	NORTHING (Y) [METERS]	4010477.092
CONVERGENCE [DEGREES]	-0.19415452	POINT SCALE	0.99994618
POINT SCALE	0.99994618	COMBINED FACTOR	0.99985190
COMBINED FACTOR	0.99985190		

US NATIONAL GRID DESIGNATOR: 14SMF7048810477(NAD 83)

PID	DESIGNATION	BASE STATIONS USED		
		LATITUDE	LONGITUDE	DISTANCE(M)
DF4058	OKCL CLINTON CORS ARP	N352859.349	W0985817.246	89828.8
DN5856	TXC1 CANADIAN CORS ARP	N355513.071	W1002241.907	100959.2
DM7151	TXPY PERRYTON CORS ARP	N362336.089	W1004855.888	134654.4

NEAREST NGS PUBLISHED CONTROL POINT			
GJ0245	J 33	N361449.	W0991956.
			976.2

THIS POSITION AND THE ABOVE VECTOR COMPONENTS WERE COMPUTED WITHOUT ANY KNOWLEDGE BY THE NATIONAL GEODETIC SURVEY REGARDING THE EQUIPMENT OR FIELD OPERATING PROCEDURES USED.

STATE OF OKLAHOMA S.D. FORM NO. 11
DEPARTMENT OF HIGHWAYS REVISED 3/10/75
SURVEY DIVISION

POSITION AND DESCRIPTION OF SURVEY MONUMENTS

COUNTY WOODWARD STATION NUMBER W-77-714 S.W. 484311 DATE 01/08/13

TYPE OF MONUMENT 5/8" IRON PIN WITH ALUMINUM CAP MONUMENT SET FOR GPS CONTROL

METHOD ESTABLISHED: TRILATERATION , TRIANGULATION , TRAVERSE , OTHER (SPECIFY)

STATIC GPS OBSERVATIONS USING OPUS SOLUTIONS

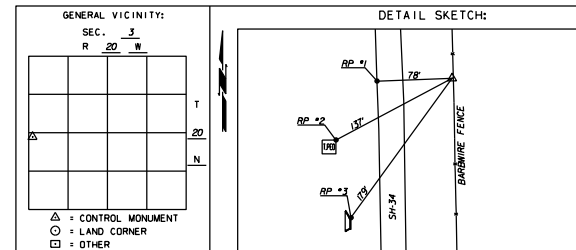
HEIGHT OF INSTRUMENT ABOVE MONUMENT: _____ FEET, TYPE OF WITNESS POST _____

WRITTEN DESCRIPTION OF LOCATION: APPROXIMATELY 7793 EAST OF NS-206 SECTION LINE AND APPROXIMATELY

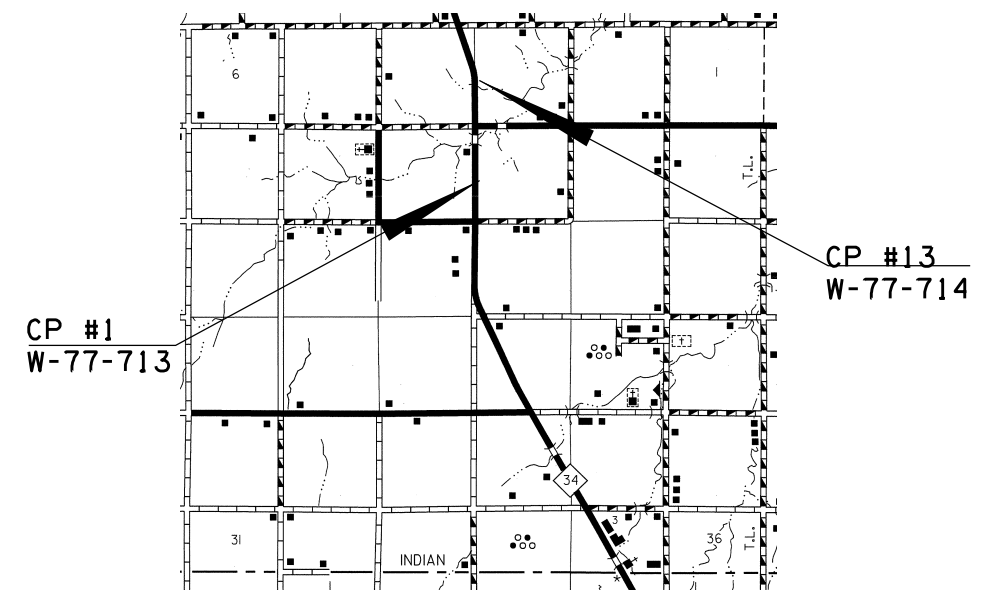
14346 SOUTH OF EW-535 QUARTER SECTION LINE.

ESTABLISHED BY: JOSEPH H.FARMER/RPLS

COORDINATE SYSTEM: <input type="checkbox"/> USCGS, <input type="checkbox"/> OHD, <input checked="" type="checkbox"/> OTHER (SPECIFY) <u>OK STATE PLANE (NAD 83)</u>			
GRID DATA:	COORDINATES (FEET)	GRID BEARING	DISTANCE
NORTH ZONE	X 15767547.476	WEST	78'
ACCURACY:	Y 453599.051	SOUTH-SOUTHWEST	137'
3RD ORDER		SOUTHWEST	179'
GEODETIC DATA:	POSITION	ELEVATION	
ANGLE OF VARIANCE (D)	LATITUDE <u>N3614°19'40"</u> NORTH	2063.572'	
027°47'02.29"	LONGITUDE <u>W99°19'42.3577"</u> WEST	SOURCE: <u>NAVD88</u>	
		ACCURACY: <u>3RD</u>	



CONTROL MAP



P.L.S.	J.H.F.	04/24/13	SH-34 BRIDGE OVER S. PERSIMMON CREEK, 4.9 MI. N. OF DEWEY COUNTY LINE	WOODWARD COUNTY
DRAWN	J.E.M.	04/24/13		
CHECKED	J.H.F.	04/24/13	CONTROL MAP & INFORMATION	
APPROV.	J.H.F.	04/24/13		
CREW CHIEF	T.J.W.		SWO NO. <u>484311</u> J/P NO. <u>28825(04)</u> SHEET NO. <u>13</u>	