Drift-Pac™

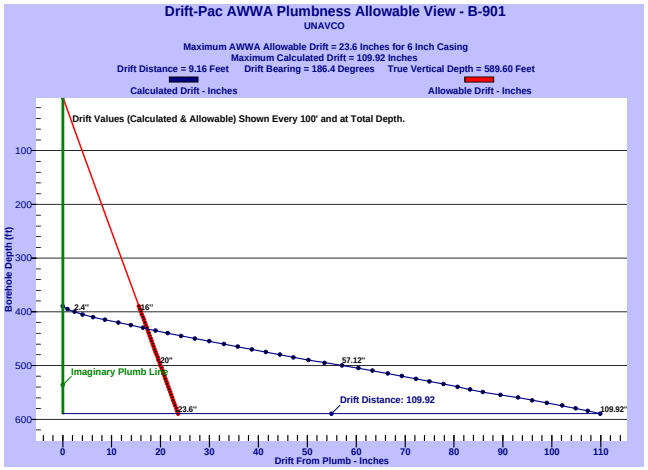
Wellbore DRIFT Interpretation Package

PREPARED ESPECIALLY FOR

UNAVCO

B-901

September 12, 2007



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Drift-Pac
New Solutions in Borehole Geophysics

Wellbore Drift Interpretation

welenco
(800) 445-9914

Company: UNAVCO **County:** Monterey **State:** California
Well Number: B-901 **Well Owner:** **Survey Date:** September 12, 2007 **Magnetic Declination:** Not Used
Field: Indian Springs **Operator:** Mitch tullis **Casing Size:** 6"
Van No.: L-18 **Job Ticket:** **Welenco Office:** Santa Ynez **Witness:** Sarah Venator
Location:
Remarks: **Tool Type:** Gyroscopic **Tool No.:**
Methodology: Balanced Tangential **Lat.:** 35° 41' 22.8" **Long.:** 120° 8' 28.2" **Sec:** 9 **Twp:** 26S **Rge:** 17E **Meridian:** Mt. Diablo

(NOTE: Latitude and Longitude values were determined using a recreational GPS accurate to +/- 45 feet. The Section, Township, Range and Meridian then determined using the TRS conversion program (TRS accuracy is not guaranteed).)

Measured Data			Drift Computations				Rectangular Computations			
Depth, Feet	Inclination, Degrees From Vertical	Azimuth, Degrees, True	Course Deviation, Feet	True Vertical Depth, Feet	Drift Distance, Feet	Drift Bearing, Degrees, True	Latitude, Feet	Departure, Feet	Total Latitude, Feet	Total Departure, Feet
390'	2.08°	313°	0.00'	390.00'	0.00' (.00")	00.00°	.00'	0.00'	.00'	0.00'
395'	2.14°	182°	0.08'	394.99'	0.08' (.96")	245.70°	-.03'	-0.07'	-.03'	-0.07'
400'	1.55°	245°	0.14'	399.98'	0.20' (2.40")	221.40°	-.12'	-0.07'	-.15'	-0.14'
405'	1.98°	196°	0.14'	404.97'	0.34' (4.08")	219.80°	-.11'	-0.09'	-.27'	-0.22'
410'	2.25°	198°	0.18'	409.96'	0.52' (6.24")	211.80°	-.18'	-0.05'	-.44'	-0.27'
415'	2.58°	196°	0.21'	414.95'	0.72' (8.64")	207.60°	-.20'	-0.06'	-.64'	-0.34'
420'	2.64°	192°	0.23'	419.94'	0.95' (11.40")	204.30°	-.22'	-0.06'	-.86'	-0.39'
425'	2.43°	190°	0.22'	424.93'	1.16' (13.92")	201.80°	-.22'	-0.04'	-1.08'	-0.43'
430'	2.45°	192°	0.21'	429.92'	1.37' (16.44")	200.10°	-.21'	-0.04'	-1.29'	-0.47'
435'	2.41°	190°	0.21'	434.91'	1.58' (18.96")	198.90°	-.21'	-0.04'	-1.50'	-0.51'
440'	2.48°	191°	0.21'	439.90'	1.79' (21.48")	197.90°	-.21'	-0.04'	-1.71'	-0.55'
445'	2.70°	186°	0.23'	444.89'	2.02' (24.24")	196.90°	-.22'	-0.03'	-1.93'	-0.59'
450'	2.83°	182°	0.24'	449.88'	2.25' (27.00")	195.50°	-.24'	-0.02'	-2.17'	-0.60'
455'	2.96°	182°	0.25'	454.87'	2.50' (30.00")	194.10°	-.25'	-0.01'	-2.42'	-0.61'
460'	2.86°	180°	0.25'	459.86'	2.75' (33.00")	193.00°	-.25'	-0.01'	-2.68'	-0.62'
465'	2.67°	181°	0.24'	464.85'	2.98' (35.76")	192.00°	-.24'	0.00'	-2.92'	-0.62'
470'	2.90°	185°	0.24'	469.84'	3.22' (38.64")	191.30°	-.24'	-0.01'	-3.16'	-0.63'
475'	2.68°	182°	0.24'	474.83'	3.46' (41.52")	190.80°	-.24'	-0.02'	-3.40'	-0.65'
480'	2.68°	182°	0.23'	479.82'	3.70' (44.40")	190.20°	-.23'	-0.01'	-3.64'	-0.65'
485'	2.77°	183°	0.24'	484.81'	3.93' (47.16")	189.70°	-.24'	-0.01'	-3.87'	-0.66'
490'	3.31°	183°	0.27'	489.80'	4.19' (50.28")	189.30°	-.27'	-0.01'	-4.14'	-0.68'
495'	2.92°	183°	0.27'	494.79'	4.46' (53.52")	188.90°	-.27'	-0.01'	-4.41'	-0.69'
500'	3.91°	181°	0.30'	499.78'	4.76' (57.12")	188.50°	-.30'	-0.01'	-4.71'	-0.70'
505'	2.61°	177°	0.28'	504.77'	5.04' (60.48")	188.00°	-.28'	0.00'	-4.99'	-0.70'
510'	3.00°	182°	0.24'	509.76'	5.28' (63.36")	187.60°	-.24'	0.00'	-5.24'	-0.70'
515'	3.01°	179°	0.26'	514.75'	5.54' (66.48")	187.30°	-.26'	0.00'	-5.50'	-0.70'
520'	2.50°	175°	0.24'	519.74'	5.78' (69.36")	186.80°	-.24'	0.01'	-5.74'	-0.69'

TVD: 589.60' **Final Drift Distance:** 9.16' (109.92") **Final Drift Bearing:** 186.40°

Note: Magnetic Declination is not used because it is not a factor in the calculation of well drift or alignment. Magnetic Declination is only important if attempting to hit a target or miss another well and then it is included in the calculations.

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(NOTE: Latitude and Longitude values were determined using a recreational GPS accurate to +/- 45 feet. The Section, Township, Range and Meridian then determined using the TRS conversion program (TRS accuracy is not guaranteed).)

Measured Data			Drift Computations				Rectangular Computations			
Depth, Feet	Inclination, Degrees From Vertical	Azimuth, Degrees, True	Course Deviation, Feet	True Vertical Depth, Feet	Drift Distance, Feet	Drift Bearing, Degrees, True	Latitude, Feet	Departure, Feet	Total Latitude, Feet	Total Departure, Feet
525'	3.02°	181°	0.24'	524.73'	6.02' (72.24")	186.50°	-.24'	0.01'	-5.98'	-0.68'
530'	2.43°	191°	0.24'	529.72'	6.25' (75.00")	186.50°	-.24'	-0.02'	-6.21'	-0.70'
535'	3.02°	175°	0.24'	534.71'	6.49' (77.88")	186.30°	-.24'	-0.01'	-6.45'	-0.71'
540'	2.67°	185°	0.25'	539.70'	6.73' (80.76")	186.10°	-.25'	0.00'	-6.70'	-0.71'
545'	2.06°	179°	0.21'	544.69'	6.94' (83.28")	186.00°	-.21'	-0.01'	-6.90'	-0.72'
550'	3.16°	195°	0.23'	549.68'	7.16' (85.92")	186.10°	-.22'	-0.03'	-7.13'	-0.76'
555'	3.73°	186°	0.30'	554.67'	7.46' (89.52")	186.20°	-.30'	-0.05'	-7.42'	-0.81'
560'	3.00°	177°	0.29'	559.66'	7.76' (93.12")	186.10°	-.29'	-0.01'	-7.71'	-0.82'
565'	2.74°	187°	0.25'	564.65'	8.00' (96.00")	185.90°	-.25'	-0.01'	-7.96'	-0.83'
570'	2.93°	191°	0.25'	569.64'	8.25' (99.00")	186.00°	-.24'	-0.04'	-8.21'	-0.87'
575'	2.93°	191°	0.26'	574.63'	8.51' (102.12")	186.20°	-.25'	-0.05'	-8.46'	-0.91'
580'	2.41°	184°	0.23'	579.62'	8.74' (104.88")	186.20°	-.23'	-0.03'	-8.69'	-0.95'
585'	2.57°	196°	0.22'	584.61'	8.95' (107.40")	186.30°	-.21'	-0.04'	-8.90'	-0.98'
590'	2.31°	183°	0.21'	589.60'	9.16' (109.92")	186.40°	-.21'	-0.04'	-9.11'	-1.02'

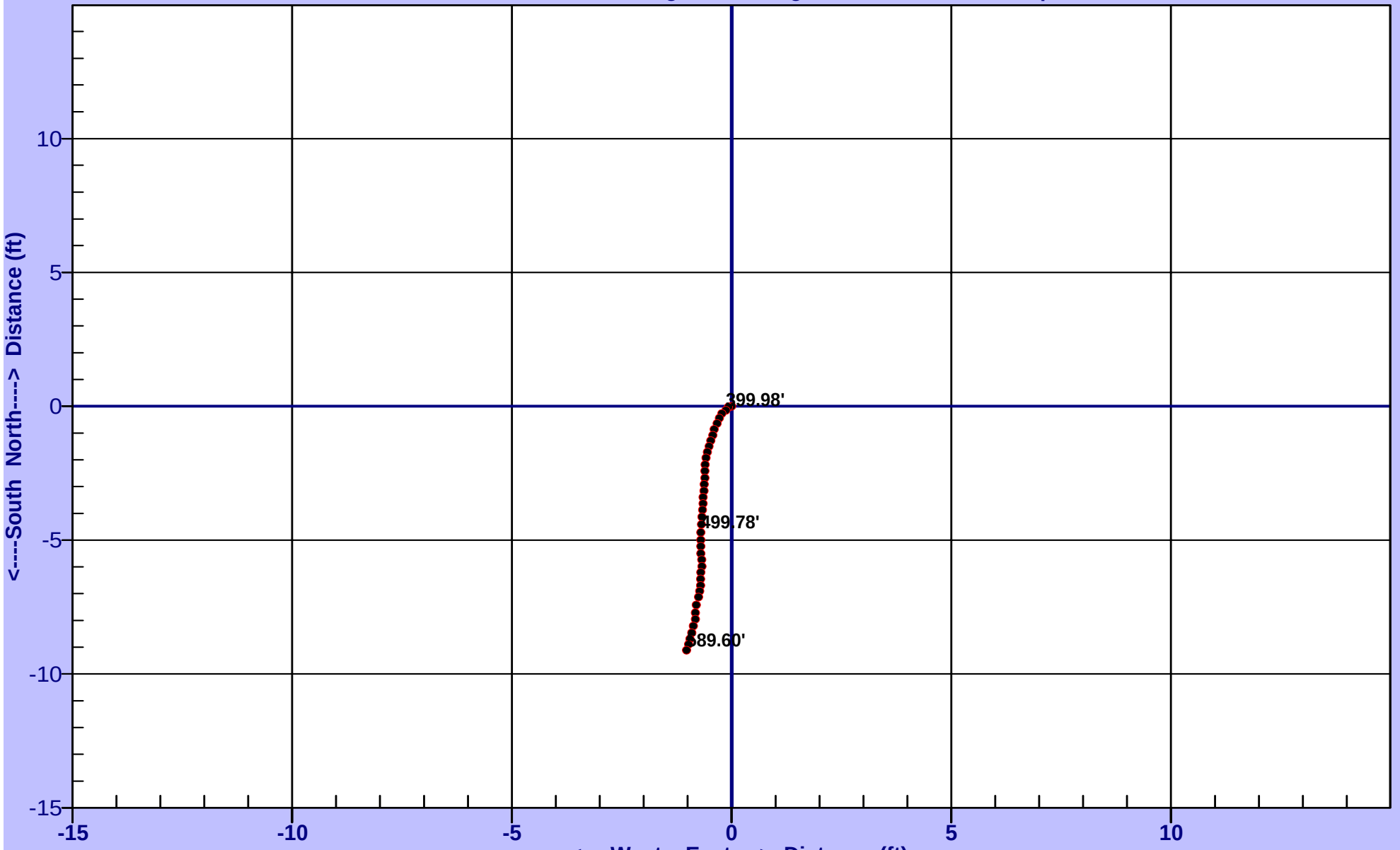
TVD: 589.60' **Final Drift Distance:** 9.16' (109.92") **Final Drift Bearing:** 186.40°

Note: Magnetic Declination is not used because it is not a factor in the calculation of well drift or alignment. Magnetic Declination is only important if attempting to hit a target or miss another well and then it is included in the calculations.

Drift-Pac Plan View - B-901

UNAVCO

Drift Distance = 9.16 Feet Drift Bearing = 186.4 Degrees True Vertical Depth = 589.60 Feet



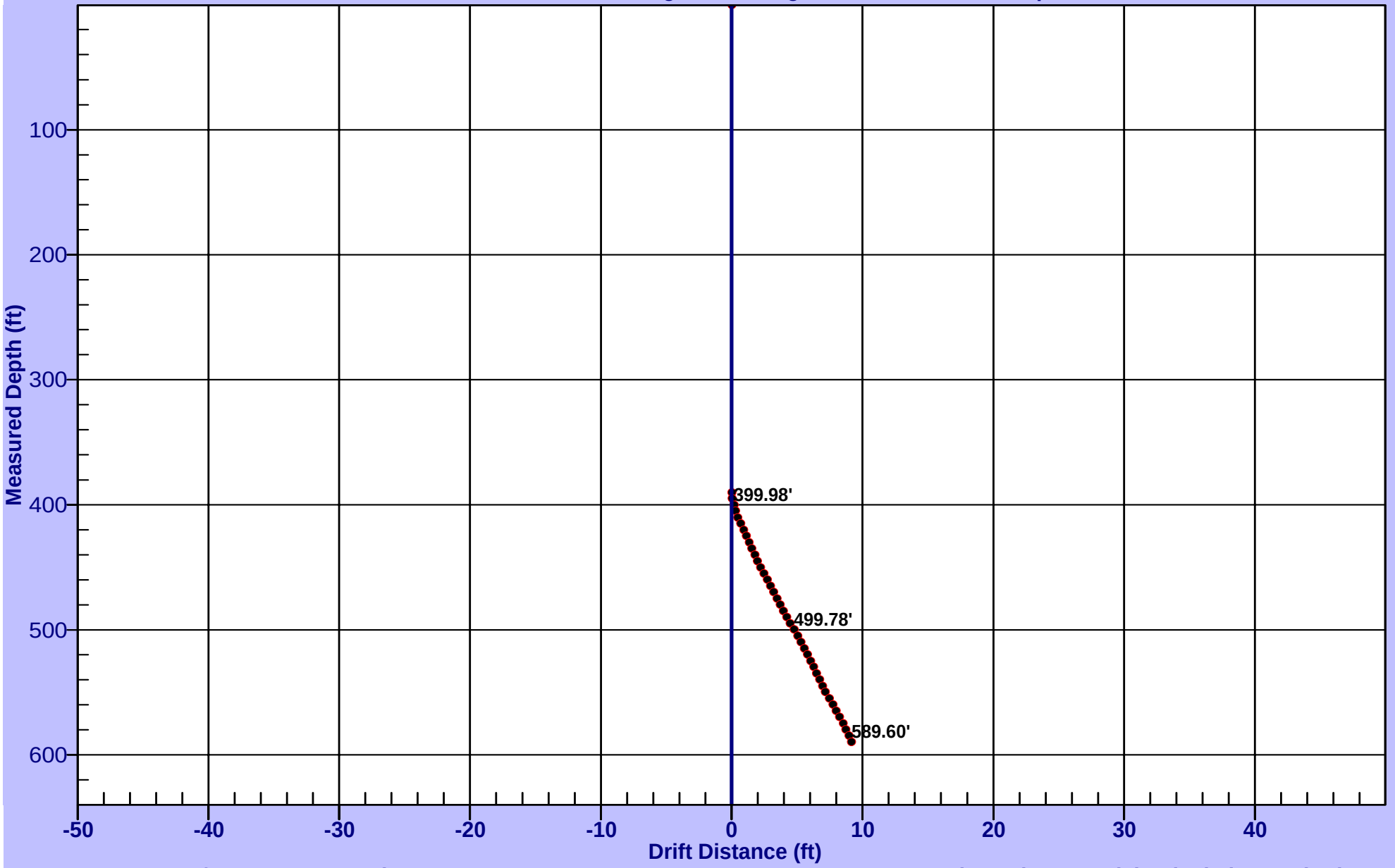
Date of Survey: September 12, 2007

Balanced Tangential Calculation Method

Drift-Pac Plane of Drift View - B-901

UNAVCO

Drift Distance = 9.16 Feet Drift Bearing = 186.4 Degrees True Vertical Depth = 589.60 Feet



Date of Survey: September 12, 2007

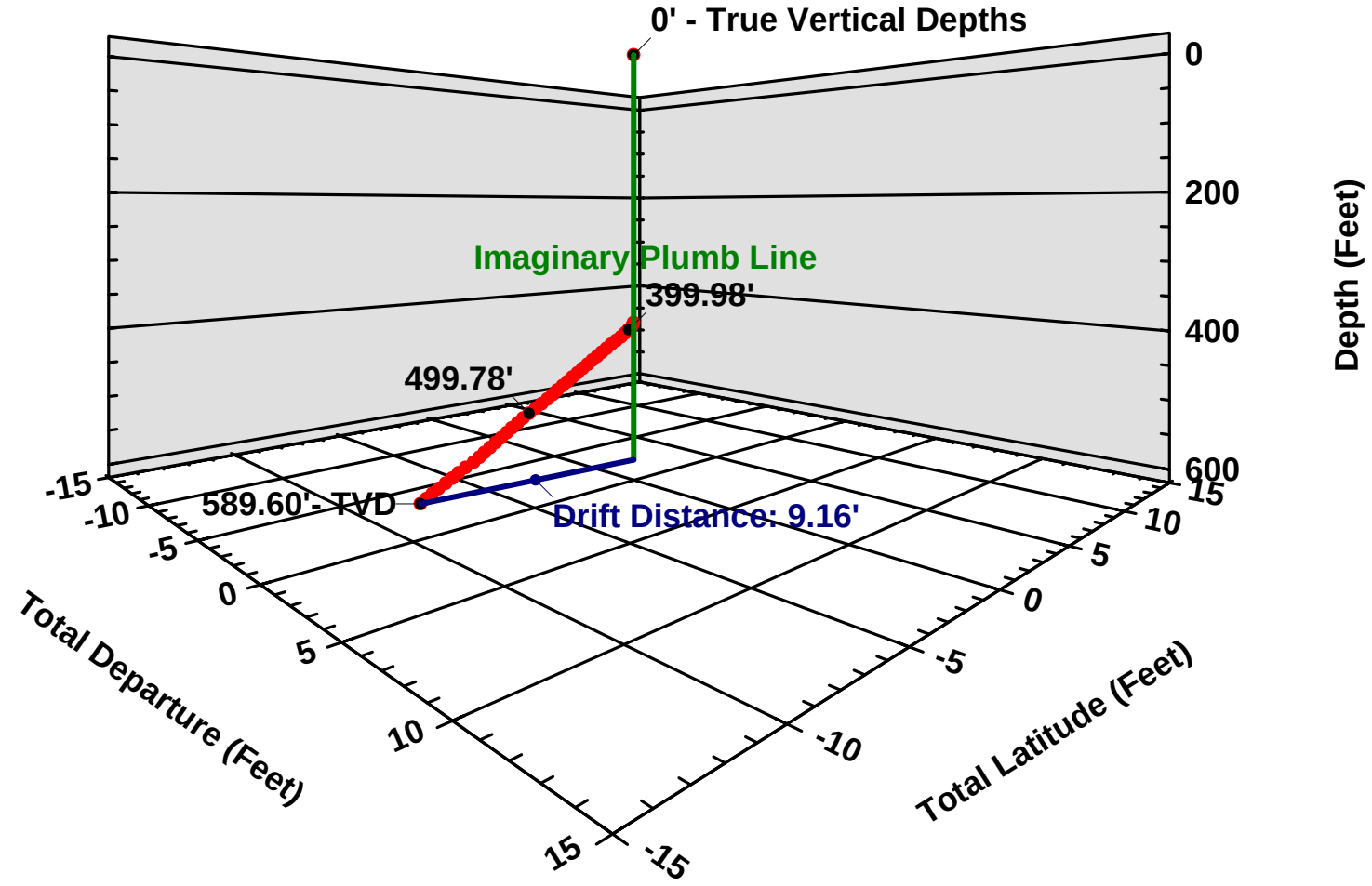
Balanced Tangential Calculation Method

Drift-Pac 3-D Projection View - B-901

UNAVCO

Drift Distance = 9.16 Feet **Drift Bearing = 186.4 Degrees** **True Vertical Depth = 589.60 Feet**

226.0

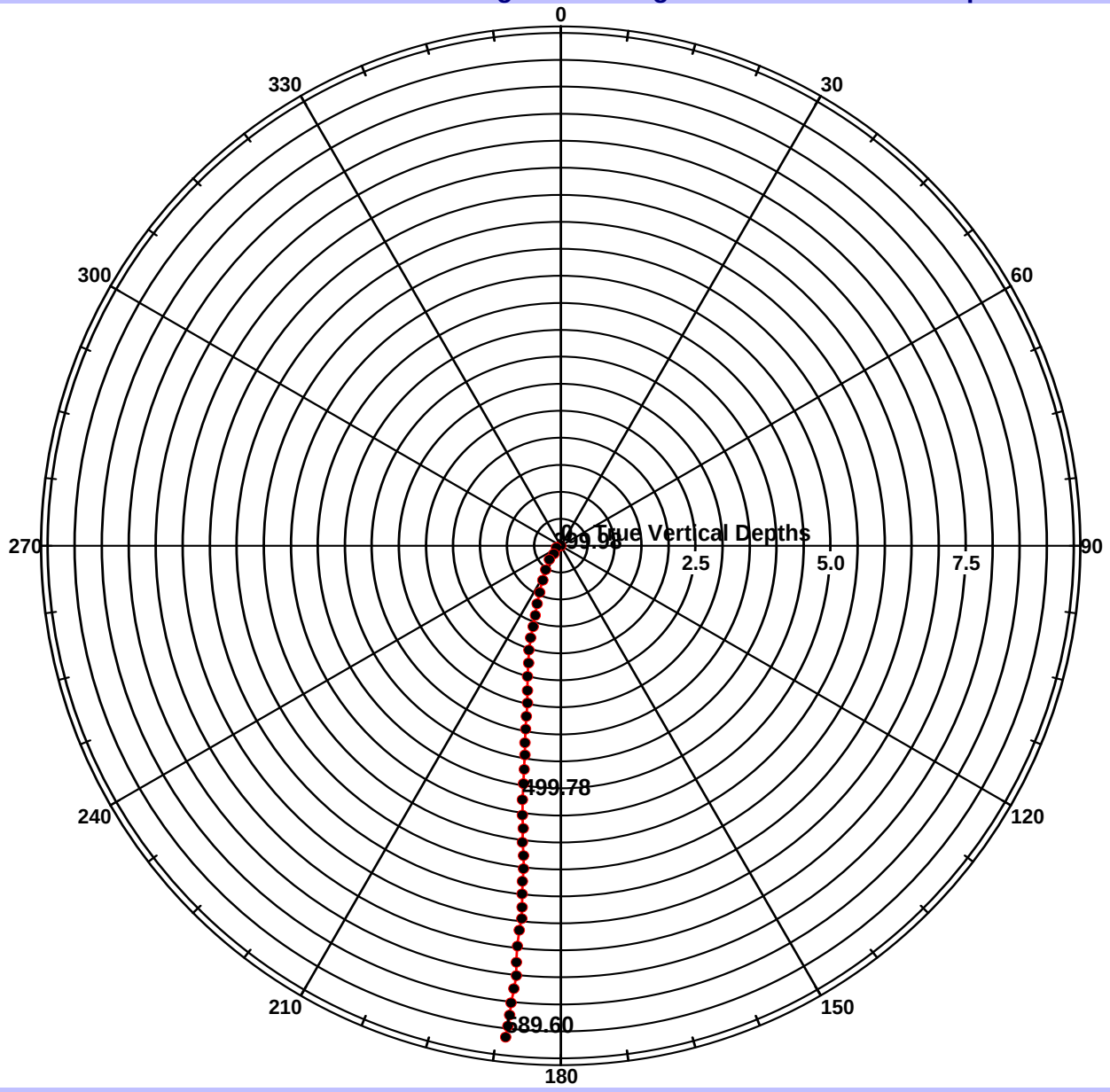


Date of Survey: September 12, 2007 **Balanced Tangential Calculation Method**

Drift-Pac Polar View - B-901

UNAVCO

Drift Distance = 9.16 Feet Drift Bearing = 186.4 Degrees True Vertical Depth = 589.60 Feet



Date of Survey: September 12, 2007 **Balanced Tangential Calculation Method**

DRIFT-PAC METHODOLOGY

Balanced Tangential Method

The Balanced Tangential Method uses the inclination and direction angles at the upper and lower ends of the course length in a manner so as to balance the two sets of measured angles over a course length. From a theoretical standpoint, this method combines the trigonometric functions to provide the average balanced inclination and direction angles, which are used in standard computational procedures. Other common names for this method are Vector Averaging, Acceleration, and Trapezoidal.

$$\Delta \text{North} = [\ \Delta MD/2] \times [\sin(I_1) \times \cos(A_1) + \sin(I_2) \times \cos(A_2)]$$

$$\Delta \text{East} = [\ \Delta MD/2] \times [\sin(I_1) \times \sin(A_1) + \sin(I_2) \times \sin(A_2)]$$

$$\Delta \text{Vertical} = [\ \Delta MD/2] \times [\cos(I_2) + \cos(I_1)]$$