

RODSTAR 3.6.31

Company: Sandia Data

Well: Well 5A

Disk file: Sandia Data Well 5A(SnapOn).rsdx

Comment: Test Number: 5A. Test Date July/Aug 1996

Theta Oilfield Services, Inc.

(gotheta.com)

Norris/AOT DAL

432-561-8101

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User: Scott Malone 432-559-2005

Date: 8/1/2014

INPUT DATA			CALCULATED RESULTS		
Strokes per minute:	9.1	Fluid level	Production rate (bfpd):	621	Peak pol. pod load (lbs): 17005
Run time (hrs/day):	24.0	(ft from surface): 304	Oil production (BOPD):	93	Min. pol. rod load (lbs): 6941
Tubing pres. (psi):	205	(ft over pump): 4756	Strokes per minute:	9.1	MPRL/PPRL: 0.408
Casing pres. (psi):	180	Stuf.box fr. (lbs): 100	System eff. (Motor->Pump):	5%	Unit struct. loading: 56%
		Pol. rod. diam. 1.25"	Permissible load HP:	74.4	PRHP / PLHP: 0.20
			Fluid load on pump (lbs):	1367	Buoyant rod weight (lbs): 10688
			Fluid level tvd (ft from surface):	304	N/No: .195 , Fo/SKr: .027
			Polished rod HP:	15.1	

Fluid Properties

Water cut: 85%
 Water sp. gravity: 1.01
 Oil API gravity: 35.0
 Fluid sp. gravity: 0.986

Motor & Power Meter

Power meter Detent
 Elect. cost: \$.06/KWH
 Type: NEMA D

Pumping Unit: Lufkin Conventional - New

API Size: C-640-305-168 (Unit ID: CL10)
 Crank hole number: # 1 (out of 4)
 Calculated stroke length (in): 169.8
 Crank rotation with well to right: CCW

Max. cb moment (M in-lbs): Unknown
 Structural unbalance (lbs): -1500
 Crank offset angle (degrees): 0.0

Tubing And Pump Information

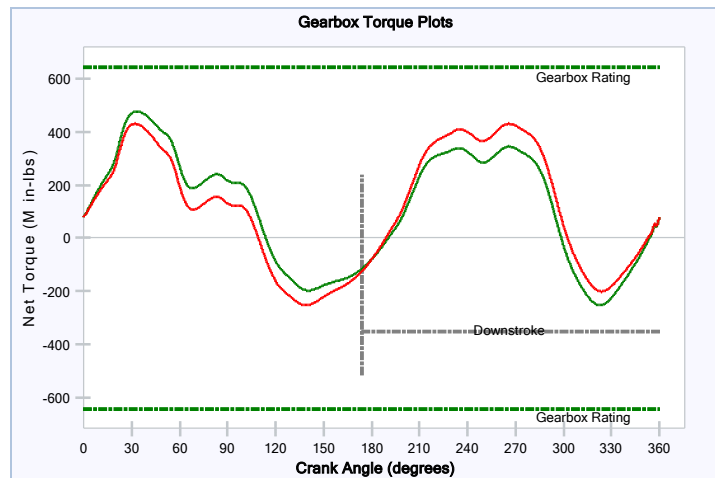
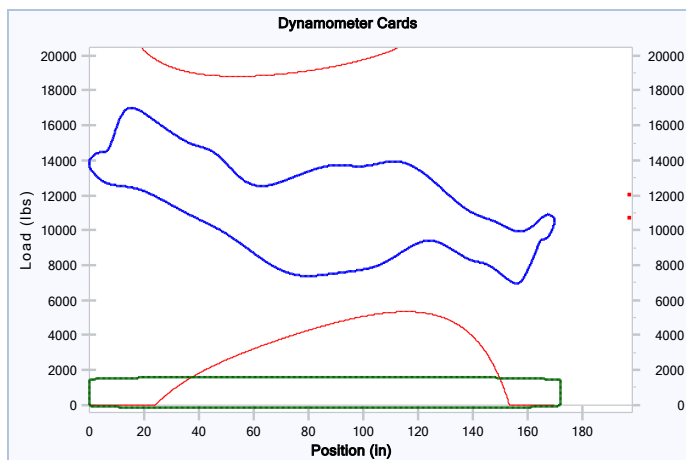
Tubing O.D. (in): 2.875 Upstr. rod-fl. damp. coeff.: 0.100
 Tubing I.D. (in): 2.441 Dnstr. rod-fl. damp. coeff.: 0.100
 Pump depth (ft): 5060 Tub.anch.depth (ft): 4970
 Pump conditions: Full
 Pump type: Insert Pump vol. efficiency: 85%
 Plunger size (in): 2 Pump friction (lbs): 200.0

Rod string design

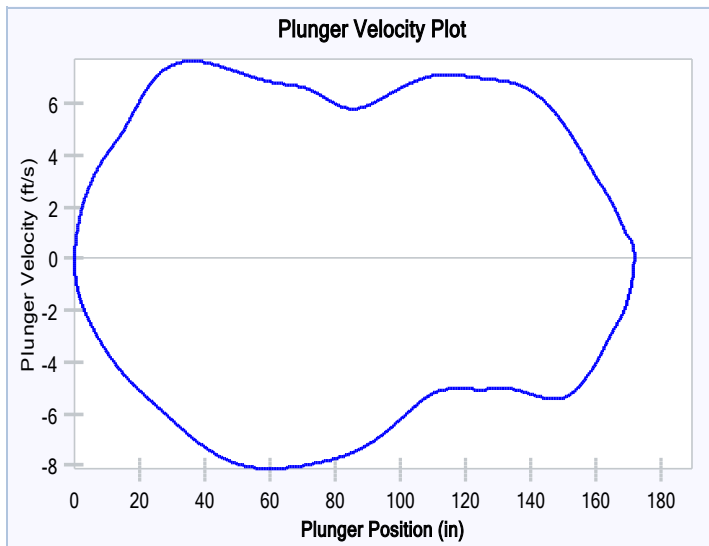
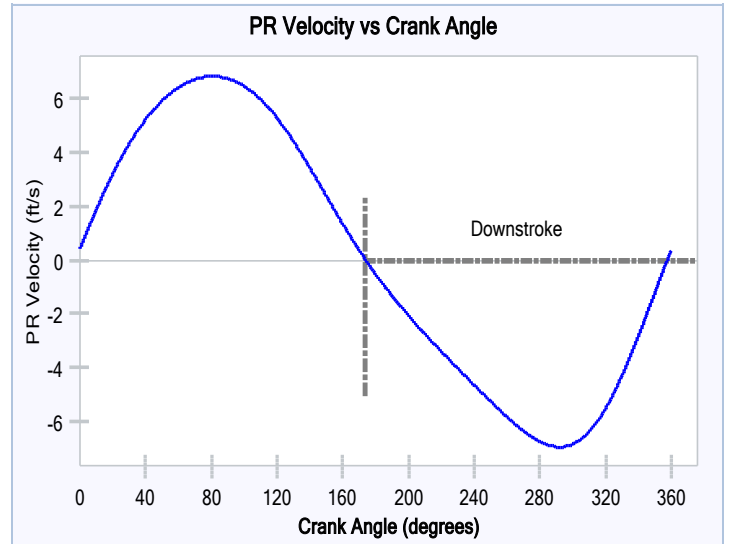
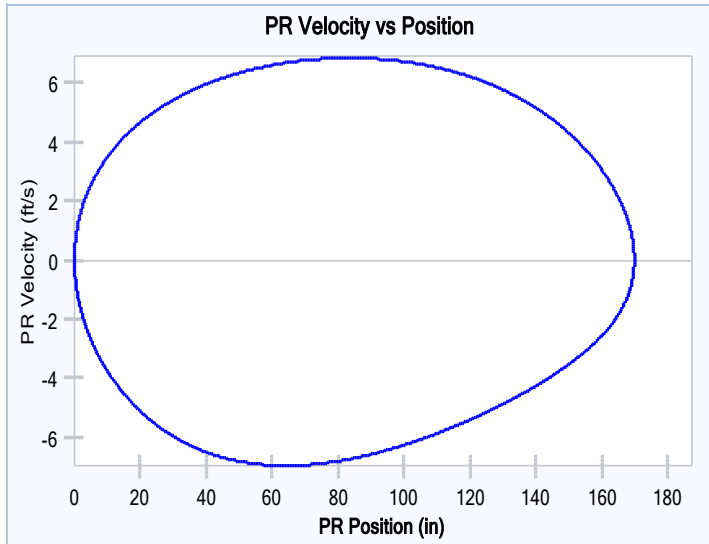
Diameter (inches)	Rod Grade	Length (ft)	Min. Ten. Str. (psi)	Fric. Coeff	Stress Load %	Top Maximum Stress (psi)	Top Minimum Stress (psi)	Bot. Minimum Stress (psi)	# Guides/Rod
+ 1	D (API)	1510	115000	0.2	50.6%	21524	8965	5506	0
0.875	D (API)	1600	115000	0.2	47.6%	19064	6801	3559	0
0.75	D (API)	1700	115000	0.3	41.8%	15447	4181	747	2
@ 1.5	C (API. SB)	250	90000	0.3	16.5%	3418	-322	-113	0

+requires slimhole couplings. @ stress calculations based on elevator neck of 7/8 (for 1.25 sinker bars) or 1 (for other sinker bars).

NOTE: Displayed bottom minimum stress calculations do not include buoyancy effects (top minimum and maximum stresses always include buoyancy).



VELOCITY PLOTS



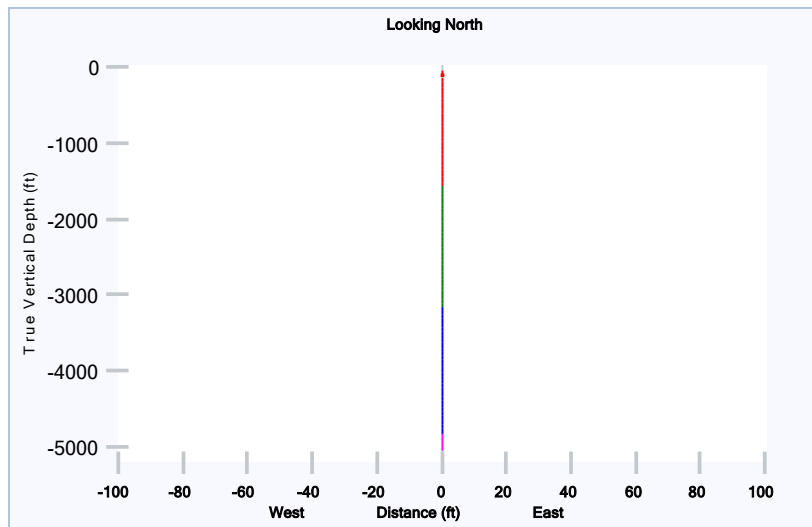
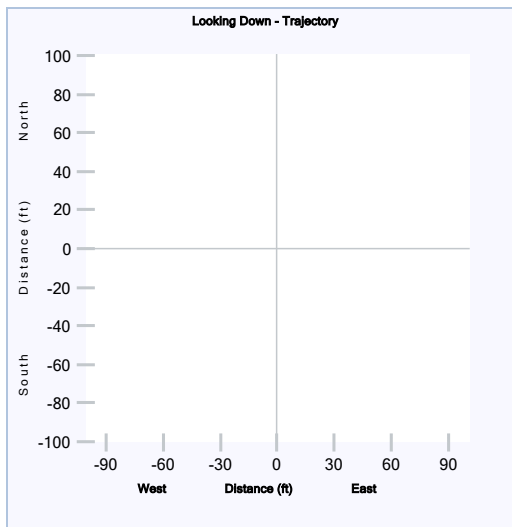
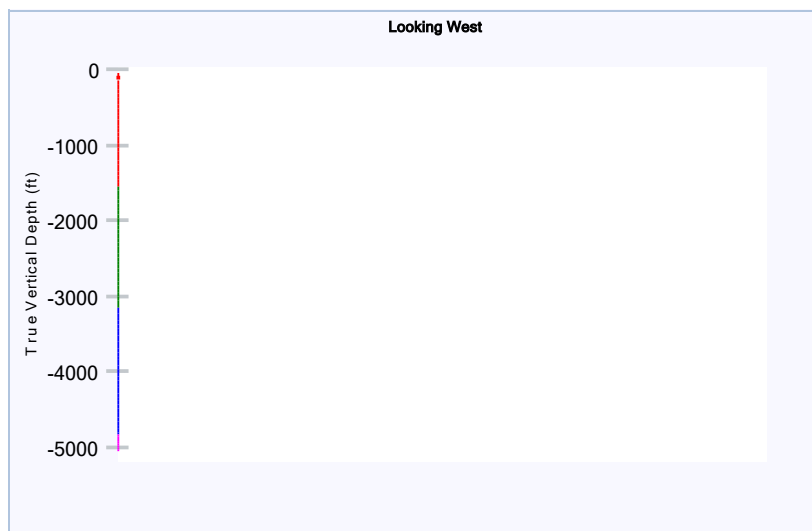
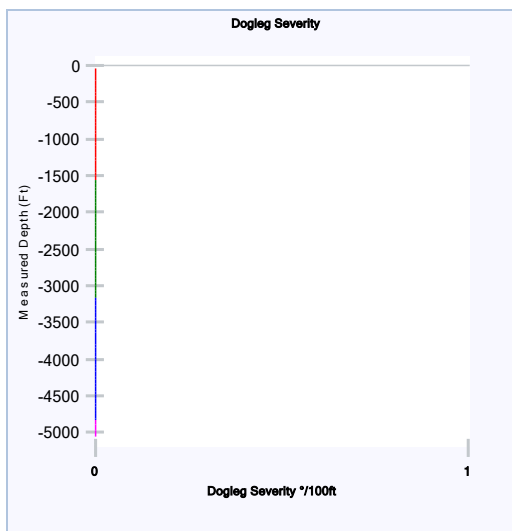
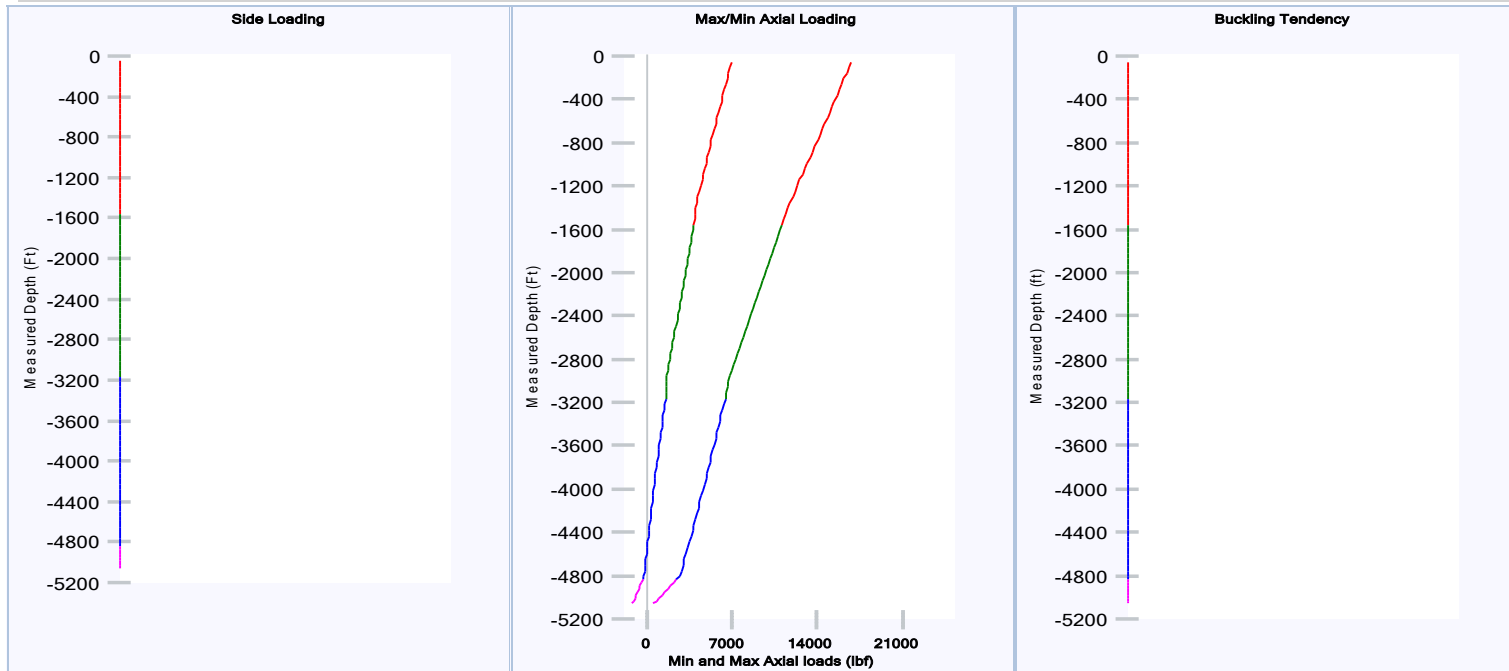
Maximum Upstroke Polished Rod Velocity (ft/s) : 6.836

Maximum Downstroke Polished Rod Velocity (ft/s) : 6.972

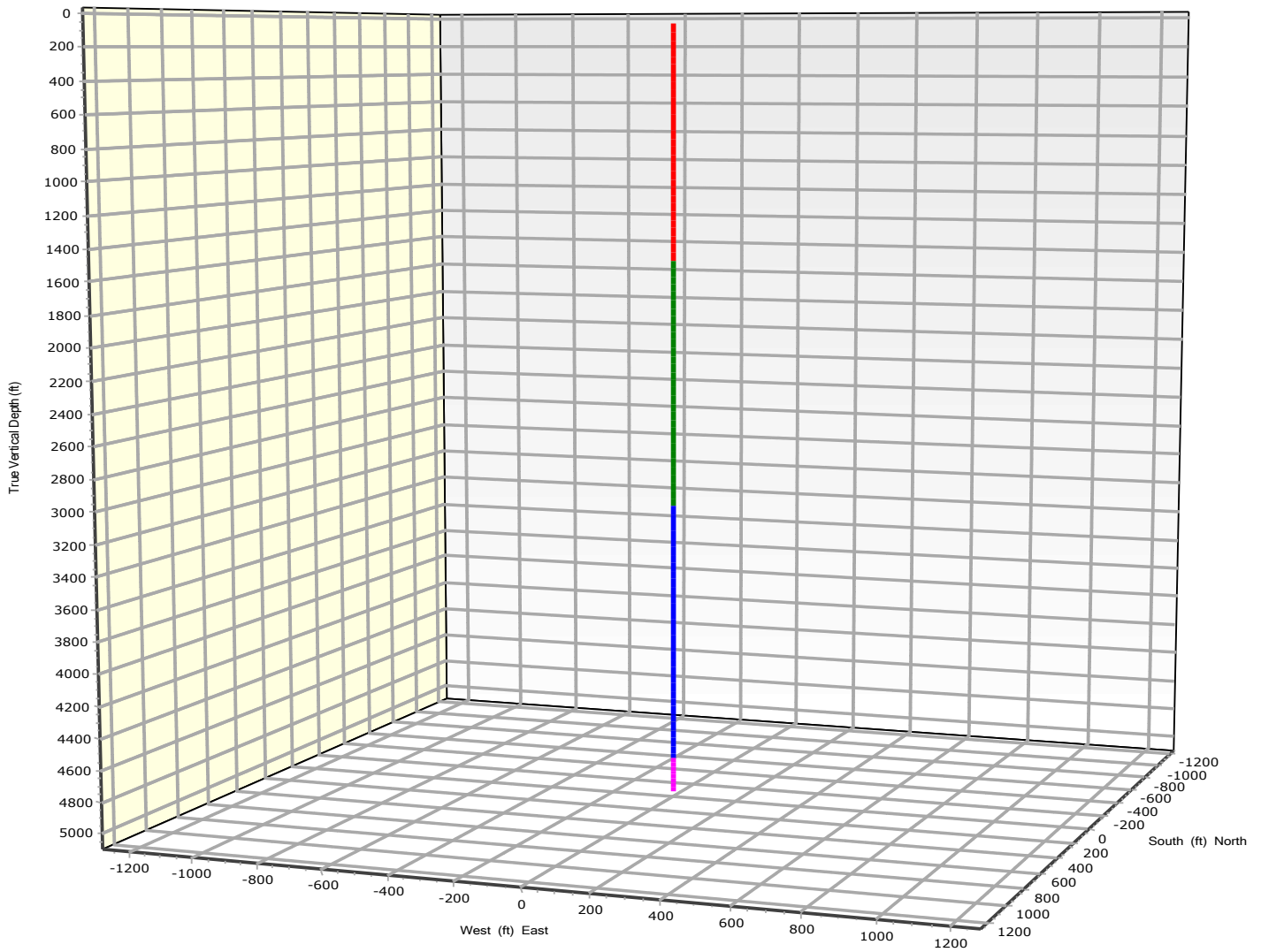
Maximum Upstroke Plunger Velocity (ft/s) : 7.657

Maximum Downstroke Plunger Velocity (ft/s) : 8.132

DEVIATION SURVEY PLOT



DEVIATION SURVEY PLOT



Rod Diameters	1"	7/8"	3/4"	1 1/2"
# Guides/Rod:	0	0	2	0

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MEASURED DEVIATION SURVEY

MD (ft)	Inclination (°)	Azimuth (°)	Dogleg sev. °/100ft	TVD (ft)	N-S (ft)	E-W (ft)
0	0	0	0	0	0	0
2000	0	0				
4000	0	0				
9000	0	0				
11000	0	0				