

# RODSTAR 3.6.31

Company: Sandia Data

Theta Oilfield Services, Inc.

(gotheta.com)

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Well: Well 1

Norris/AOT DAL

User: Scott Malone 432-559-2005

Disk file: Sandia Data Well 1(SnapOn).rsdx

432-561-8101

Date: 8/1/2014

Comment: Test Number: 01. Test Date March, 1995

INPUT DATA				CALCULATED RESULTS			
Strokes per minute:	11	Fluid level		Production rate (bfpd):	204	Peak pol. pod load (lbs):	8988
Run time (hrs/day):	24.0	(ft from surface):	2710	Oil production (BOPD):	6	Min. pol. rod load (lbs):	1657
Tubing pres. (psi):	60	(ft over pump):	0	Strokes per minute:	11	MPRL/PPRL:	0.184
Casing pres. (psi):	0	Stuf.box fr. (lbs):	100	System eff. (Motor->Pump):	33%	Unit struct. loading:	42%
		Pol. rod. diam.	1.25"	Permissible load HP:	31.8	PRHP / PLHP:	0.25
				Fluid load on pump (lbs):	2169	Buoyant rod weight (lbs):	3871
				Fluid level tvd (ft from surface):	2710	N/No: .122 , Fo/SKr: .06	
				Polished rod HP:	8		

## Fluid Properties

Water cut: 97%  
Water sp. gravity: 1  
Oil API gravity: 38.0  
Fluid sp. gravity: 0.995

## Motor & Power Meter

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

## Pumping Unit: Lufkin Conventional - New

API Size: C-228-213-86 (Unit ID: CL70)  
Crank hole number: # 1 (out of 4)  
Calculated stroke length (in): 86.9  
Crank rotation with well to right: CW  
A dimension adjustment (in): -.25  
Max. cb moment (M in-lbs): Unknown  
Structural unbalance (lbs): 450  
Crank offset angle (degrees): 0.0

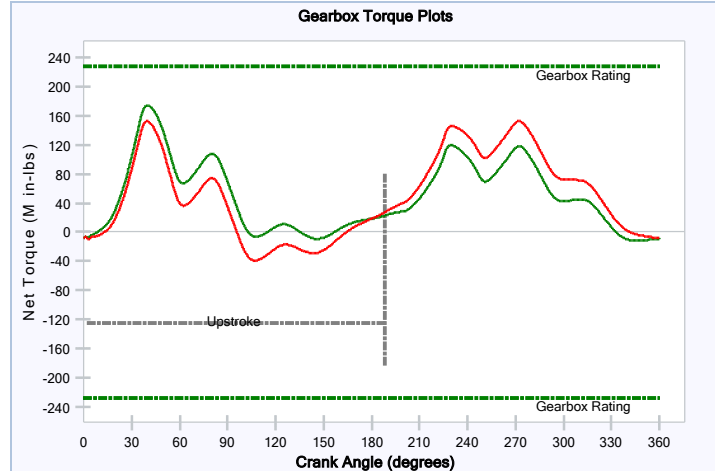
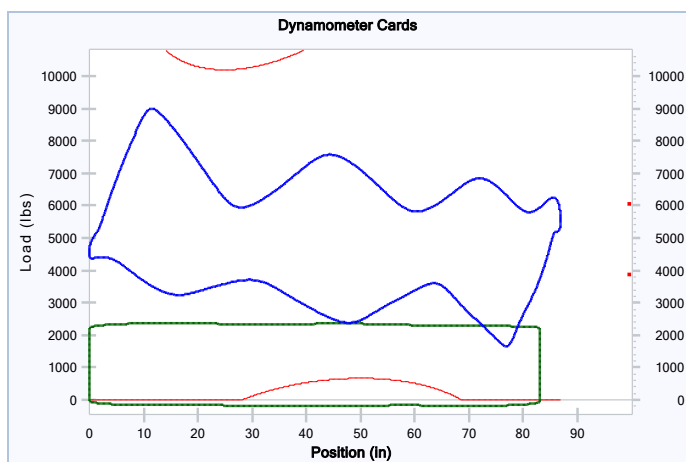
## Tubing And Pump Information

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): 2710 Tub.anch.depth (ft): 2647  
Pump conditions: Full  
Pump type: Insert Pump vol. efficiency: 85%  
Plunger size (in): 1.5 Pump friction (lbs): 200.0

## Rod string design

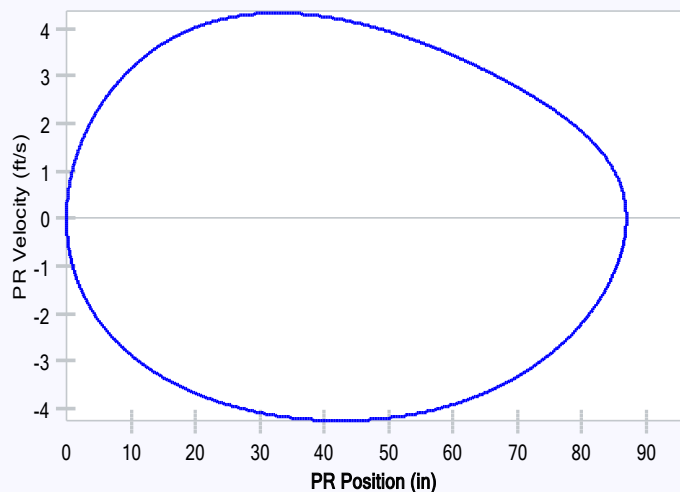
Diameter (inches)	Rod Grade	Length (ft)	Min. Ten. Str. (psi)	Fric. Coeff	Stress Load %	Top Maximum Stress (psi)	Top Minimum Stress (psi)	Bot. Minimum Stress (psi)	# Guides/Rod
0.75	C (API)	2710	90000	0.3	77.8%	20119	3977	-453	4

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

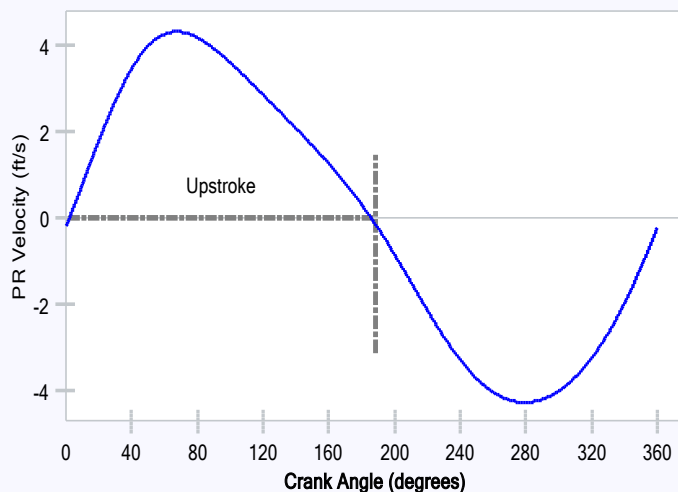


## VELOCITY PLOTS

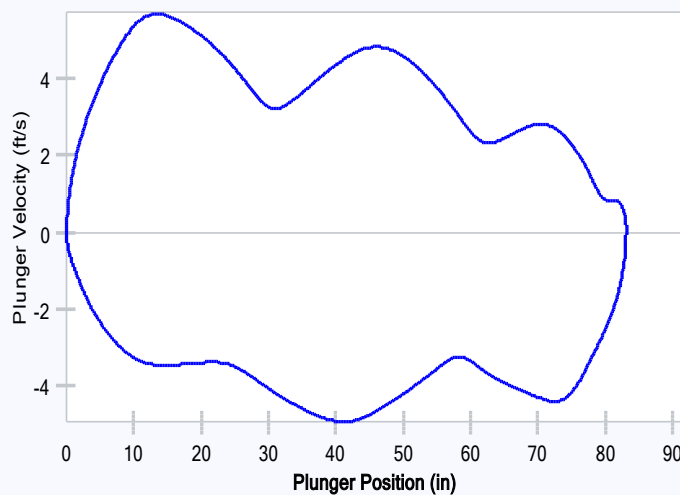
PR Velocity vs Position



PR Velocity vs Crank Angle



Plunger Velocity Plot



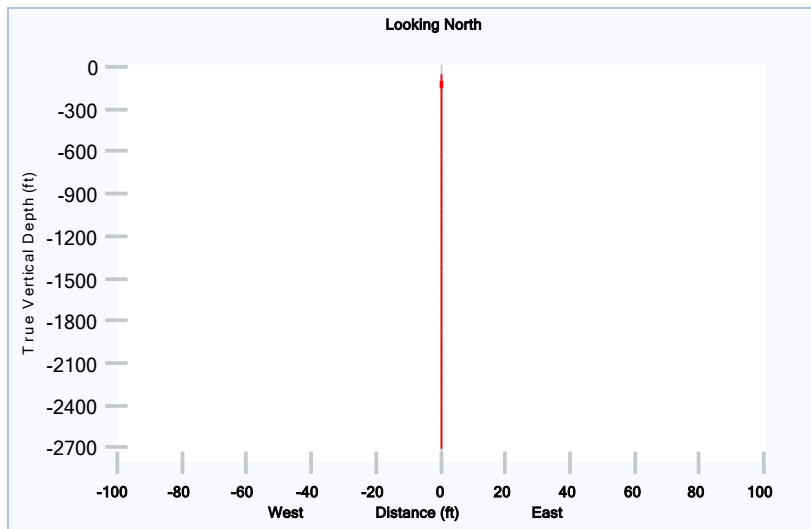
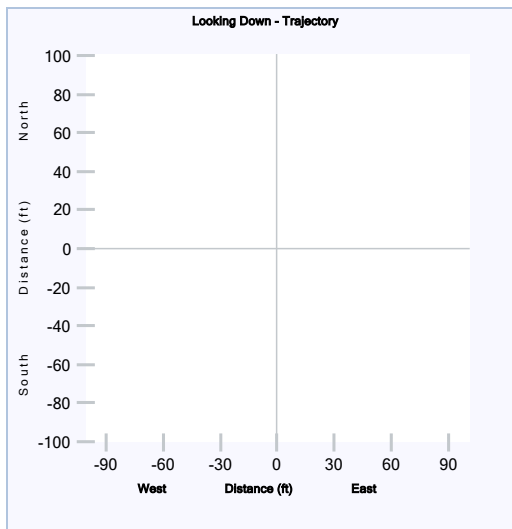
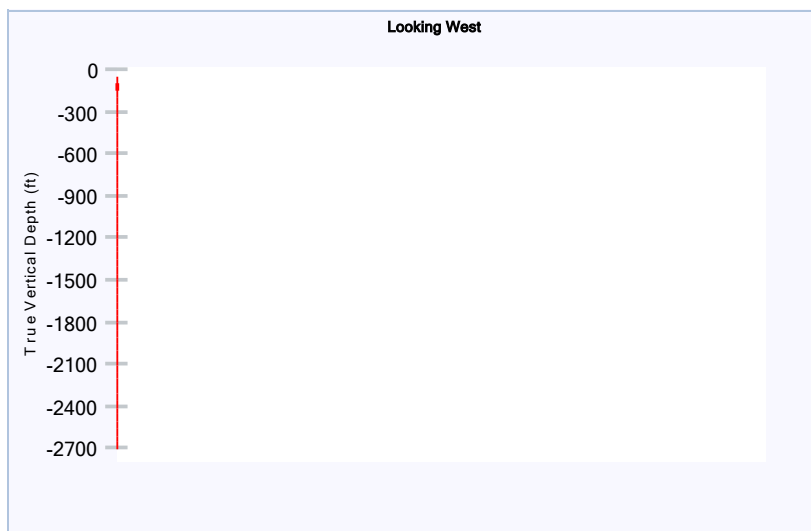
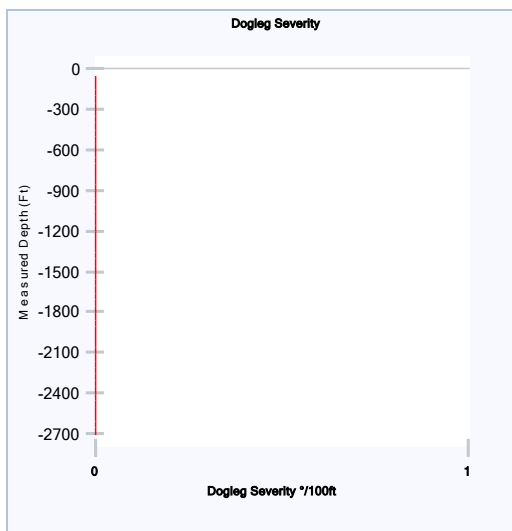
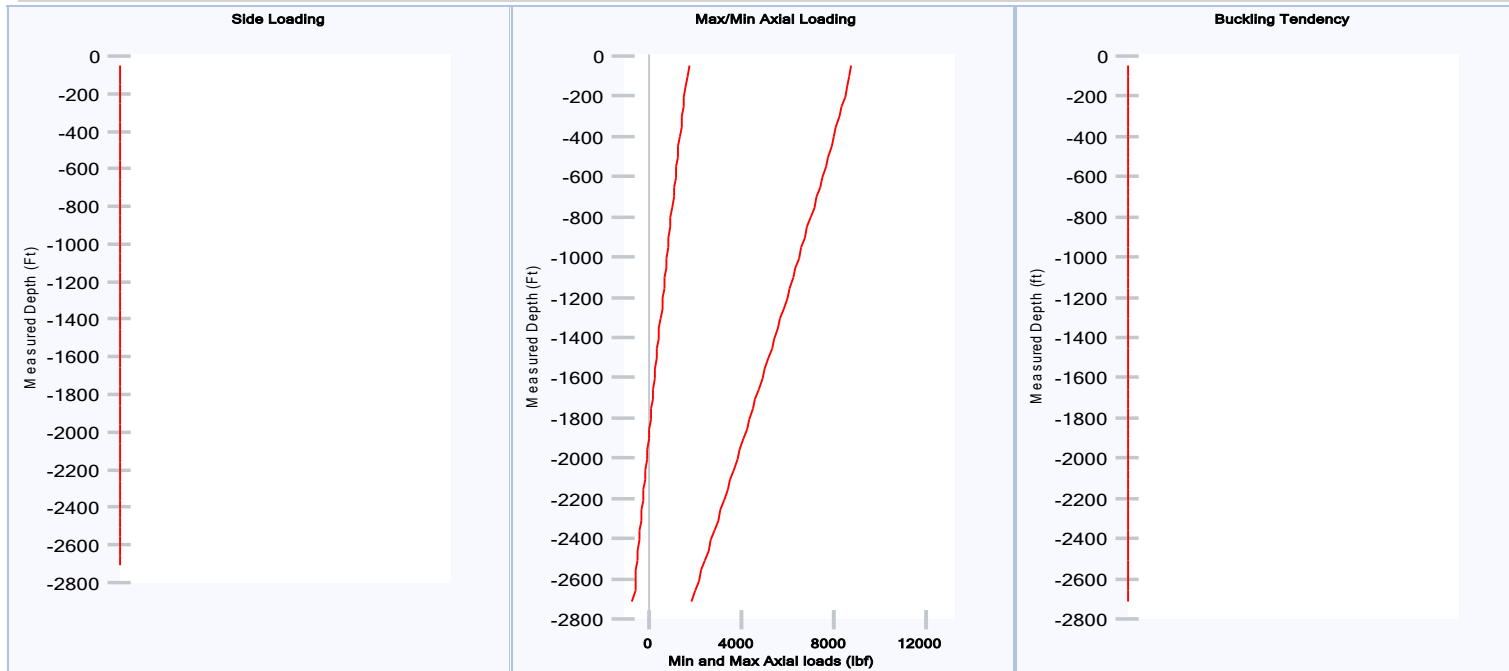
Maximum Upstroke Polished Rod Velocity (ft/s) : 4.323

Maximum Downstroke Polished Rod Velocity (ft/s) : 4.25

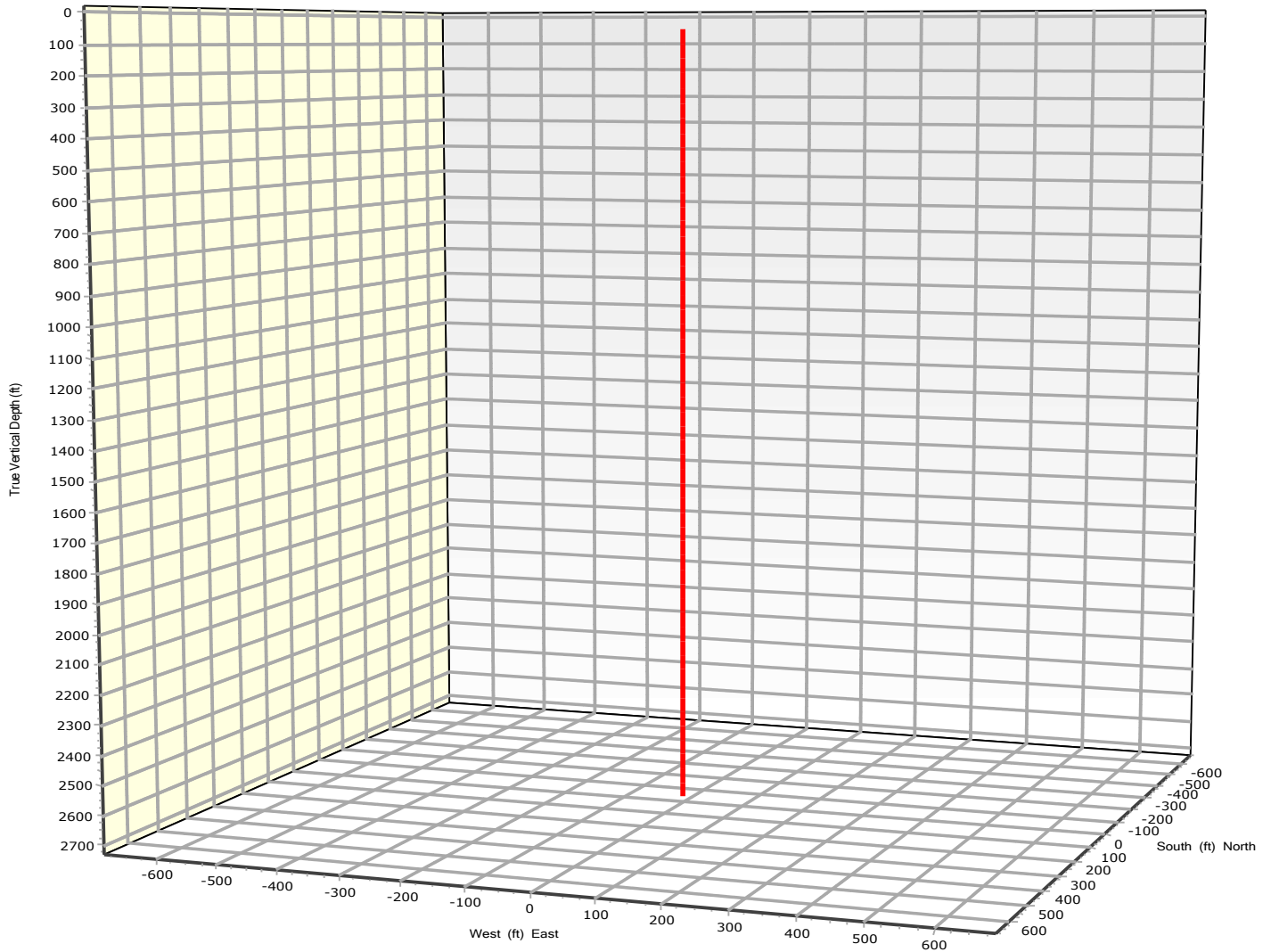
Maximum Upstroke Plunger Velocity (ft/s) : 5.692

Maximum Downstroke Plunger Velocity (ft/s) : 4.949

## DEVIATION SURVEY PLOT



## DEVIATION SURVEY PLOT



Rod Diameters 3/4"

# Guides/Rod: 4

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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	0	2000	0	0
4000	0	0	0	4000	0	0