Company:Sandia Data Well:Well 4

Disk file:Sandia Data Well 4.rsdx

Comment:Test Number: 04. Test Date Mar.1996

Theta Oilfield Services, Inc.Norris/AOT DAL432-561-8101

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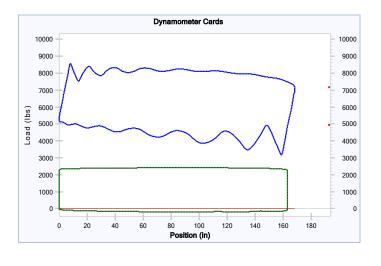
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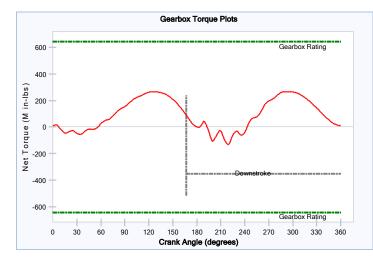
Date:8/1/2014

INPUT DATA					CALCULATED RESULTS						
Strokes per minute: Run time (hrs/day): Tubing pres. (psi): Casing pres. (psi):	24.0 20 0	Fluid level (ft from surfa (ft over pump Stuf.box fr. (Il Pol. rod. dian	os): 243 os): 100	3	Production rate (bfpd): Oil production (BOPD): Strokes per minute: System eff. (Motor->Pump): Permissible load HP: Fluid load on pump (lbs):		34	58 !%	Min. pol. rod loa MPRL/PPRL: Unit struct. loadi PRHP / PLHP:	uct. loading: / PLHP:	
Fluid Properties		Motor & Power Meter			Fluid level tvd (ft from surface):			318		yant rod weight (lbs): 4944	
Water cut: Water sp. gravity: Oil API gravity: Fluid sp. gravity:	1 E	Power meter Detent Elect. cost: \$.06/KWH Type: NEMA D			Polished rod HP: Required prime mover size (speed var. not included)		6.	BALA (Min	N/No: .053 , NCED Torq)	Fo/SKr: .	033
Fluid Sp. gravity.	0.9963				Single/dou	NEMA D motor: Single/double cyl. engine: Multicylinder Engine:		15	5 HP 5 HP 5 HP		
Pumping Unit:Lufkin Mark II					Torque analysis and electricity		ricity		NCED		
API Size: M-640-305-168 (Unit ID: ML17) Crank hole number: # 1 (out of 3) Calculated stroke length (in): 168 Crank rotation with well to right: CCW Max. cb moment (M in-lbs): Unknown Structural unbalance (lbs): -4680 Crank offset angle (degrees): 19.0				consumption Peak g'box torq.(M in-lbs): Gearbox loading: Cyclic load factor: Max. cb moment (M in-lbs): Counterbalance effect(lbs): Daily electr.use (Kwh/Day): Monthly electric bill: Electr.cost per bbl fluid: Electr.cost per bbl oil:			(Min Torq) 266 41.5% 1.599 901.49 7302 181 \$332 \$0.065 \$6.541				
Tubing And Pump Information					Tubing, Pump And Plunger Calculations						
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): 3061 Tub.anch.depth (ft): 3058 Pump conditions: Full Pump type: Insert Pump vol. efficiency: 85% Plunger size (in): 1.5 Pump friction (lbs): 200.0					Tubing stretch (in): Prod. loss due to tubing stretch (bfpd): Gross pump stroke (in): Pump spacing (in. from bottom): Minimum pump length (ft): Recommended plunger length (ft): 2.0						
					Rod string stress analysis (service factor: 1)						
Diameter (inches)	Rod Grade	Length (ft)	Min. Ten. Str. (psi)	Fric. Coeff	Stress Load %	Top Maximum Stress (psi)	Top Mir Stress		Bot. Minimum Stress (psi)	# Gı	iides/Rod
0.875 0.75 @ 1.25	D (API) D (API) C (API, SB)	1006 2030 25	115000 115000 90000	0.3 0.3 0.3	32.8% 36.3% 19.1%	14101 13459 3264	545 359 -11	94	2789 -738 -163		0 0 0

@ 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).





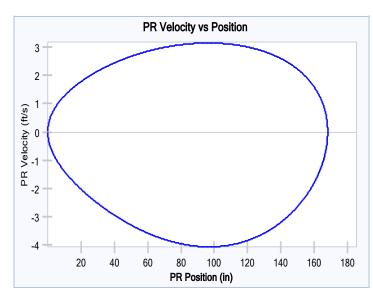
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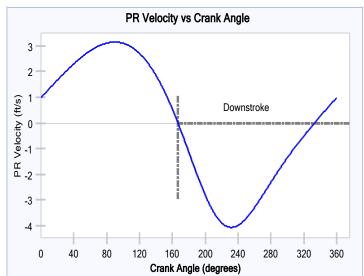
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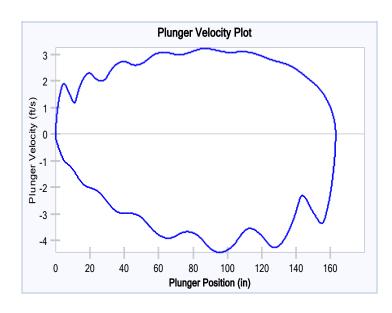
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VELOCITY PLOTS







Maximum Upstroke Polished Rod Velocity (ft/s): 3.147

Maximum Downstroke Polished Rod Velocity (ft/s): 4.07

Maximum Upstroke Plunger Velocity (ft/s): 3.224

Maximum Downstroke Plunger Velocity (ft/s): 4.45

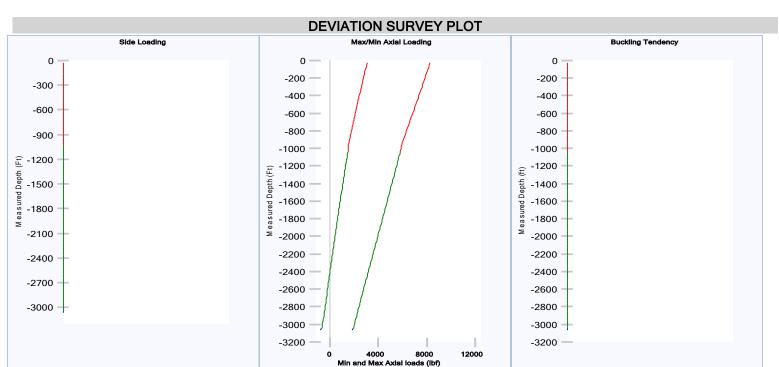
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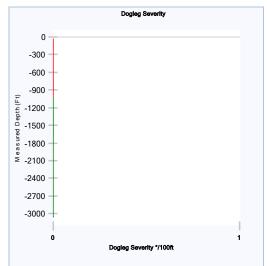
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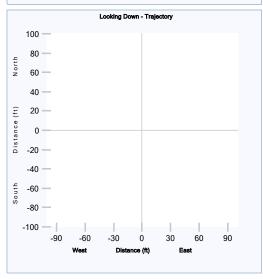
⁻ Theta Oilfield Services, Inc. Norris/AOT DAL 432-561-8101

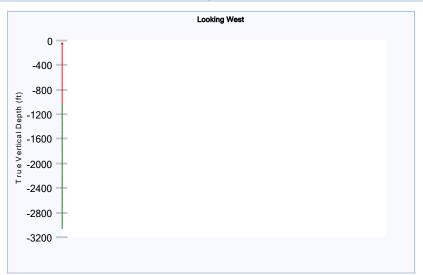
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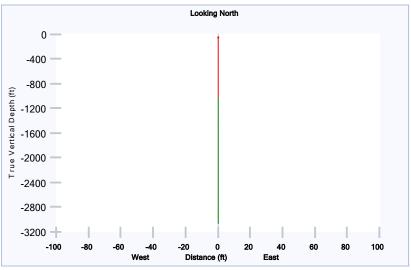
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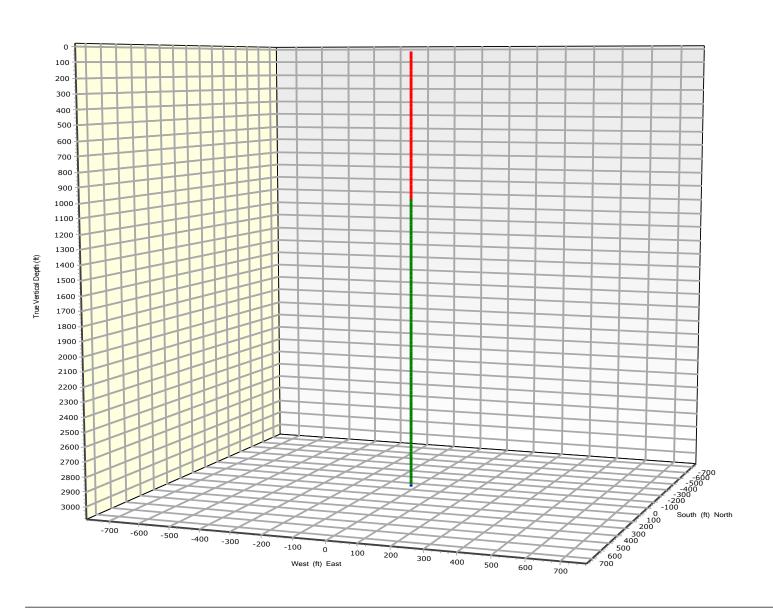
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DEVIATION SURVEY PLOT



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Comment:Test Number: 04. Test Date Mar.1996

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					
9000	0	0	0	9000	0	0					
11000	0	0	0	11000	0	0					