

Company: Anadarko
Well: Walden #12
Disk file: WALDEN12.RST
Comment:

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Tel: (714) 526-8878

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User: Richard Lauderdale
Date: 27-Jul-99

INPUT DATA

Strokes per minute: 12.0 Fluid level
Run time (hrs/day): 24.0 (ft from surface): 3665
Tubing pres. (psi): 35.0 (ft over pump): 311
Casing pres. (psi): 35.0 Stuf.box fr. (lbs): 100

Fluid properties

Water cut: 90%
Water sp. gravity: 1.05
Oil API gravity: 35.0
Fluid sp. gravity: 1.031

Motor & power meter

Power meter: Detent
Electr. cost: \$.05/KWH
Type: NEMA D
Size: 30 hp

Unit: American (less than 100" stroke); WITH TF-8*

API size: C-228-246-86 (unit ID: CAB9)

Crank hole #1 (out of 4)
Calculated stroke length (in): 86.1
Rotation with well to right: CCW
Max. CB moment (M in-lbs): Unknown
Structural unbalance (lbs): 680
Crank offset angle (deg): 0.0

Tubing and pump information

Tubing O.D. (in): 2.375 Rod-tub. frict.: 0.90 (up)
Tubing I.D. (in): 1.995 0.90 (dn)

Pump depth (ft): 3976.0 Tub.anch.depth (ft): 3547
Pump condition: Full Pump load adj. (lbs): 0
Pump type: Insert Pump vol. efficiency: 85%
Plunger size (in): 1.75 Pump friction (lbs): 250

Rod string design

Diameter (inches)	Rod Grade	Length (ft)	Tensile Strength (psi)
+ 0.875	D (API)	1300	115000
0.75	D (API)	2676	115000

+ Requires slimhole couplings.

NOTE: Stress calculations include buoyancy effects.

CALCULATED RESULTS

Peak pol. rod load (lbs): 14205 Balanced minimum
Min. pol. rod load (lbs): 2812 required motor HP: 23.7
System eff. (Motor->Pump): 40% Polished rod HP: 14.3
Fluid load on pump (lbs): 3994 Unit struct. loading: 58%
Buoyant rod weight (lbs): 6516 N/No': 0.182, Fo/SKr: 0.150
Production rate (BFPD): 282

Prime mover speed variation

Speed variation not considered

Torque analysis and electricity consumption

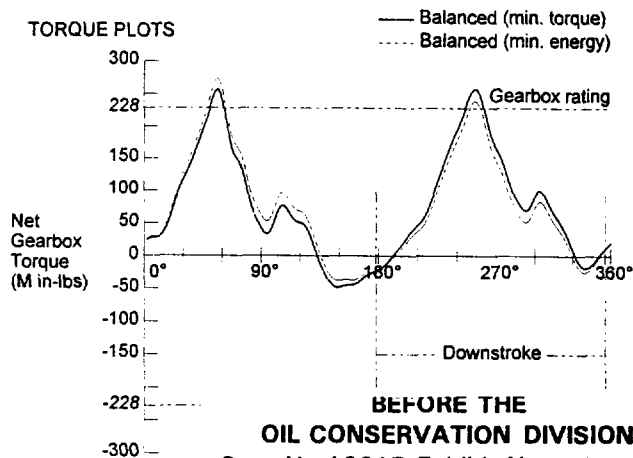
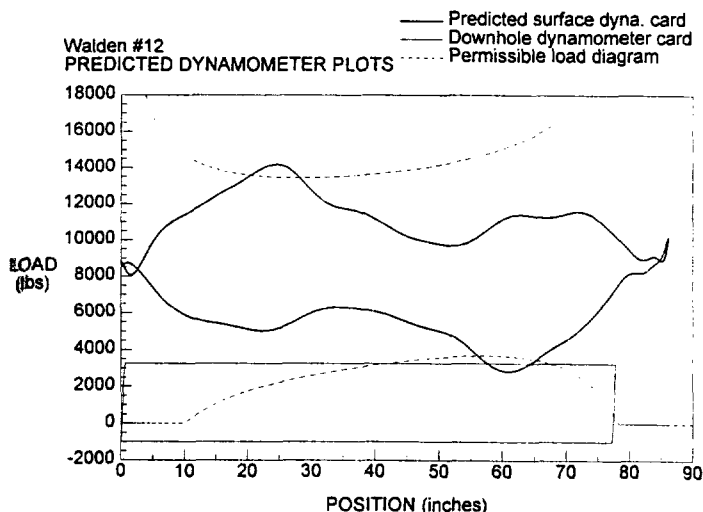
	BALANCED (Min Ener)	BALANCED (Min Torq)
Peak g'box torq. (M in-lbs):	274	258
Gearbox loading:	120%	113%
Cyclic load factor:	1.48	1.5
Max. CB moment (M in-lbs):	328.67	348.38
Counterbalance effect (lbs):	8569	9042
Daily electr. use (KWH/day):	349	353
Monthly electric bill:	\$532	\$538
Electr. cost per bbl. fluid:	\$0.062	\$0.063
Electr. cost per bbl. oil:	\$0.652	\$0.659

Tubing, pump and plunger calculations

Tubing stretch (in):	0.5
Prod. loss due to tubing stretch (BFPD):	2
Gross pump stroke (in):	78
Pump spacing (in. from bottom):	11.9
Minimum pump length (ft):	12.0
Recommended plunger length (ft):	3.0

Rod string stress analysis (service factor: 0.9)

Stress: Top Maximum Load % Stress (psi)	Top Minimum Stress (psi)	Bot. Minimum Stress (psi)	Stress Calc. Method
79%	23457	4842	API MG
86%	23405	2190	API MG



BEFORE THE
OIL CONSERVATION DIVISION
Case No.12215 Exhibit No. **6**
Submitted By:
Anadarko Petroleum Corp.
Hearing Date: August 5, 1999