

CLIENTE:
YACIMIENTO:

POZO:
FECHA/HORA:

BAT:

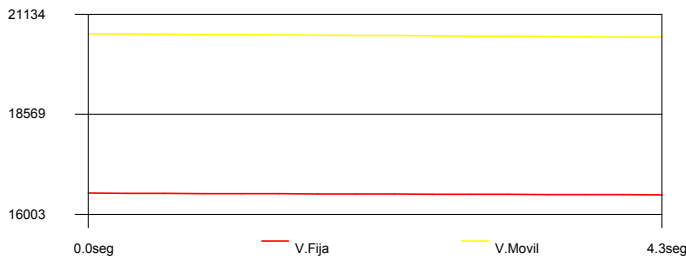
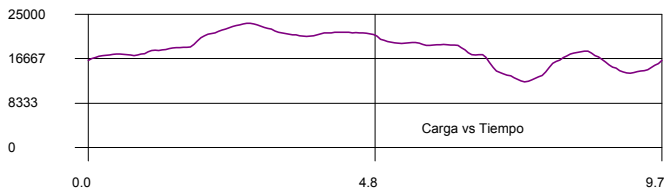
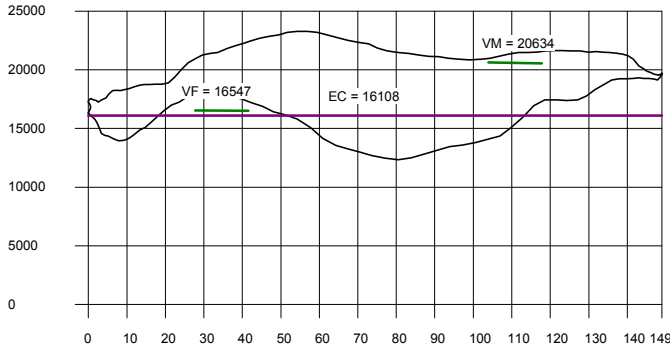
INSTALACION

| | | | | | |
|--------------------------|---------|-----------------------|-------------------------|--------|------------------------|
| Codigo AIB (API) | | LUFKIN M-640D-305-168 | Diam.del Tubing | In | 2.875 |
| Carrera | In | 149.0 | Prof.Ancla o Packer | m | 2,305.00 |
| Velocidad de Bombeo | GPM | 6.2 | Prof.de los Punzados | m | 2,402.00 |
| Dirección de Rotación | | Antihorario | Producción Bruta | m³/día | 30.00 |
| Tipo Contrapesos Super. | | OORO | Producción de Petróleo | m³/día | 10.00 |
| Cant.Contrapesos Super. | | 2 | Producción de Agua | m³/día | 20.00 |
| Dist.Contrapesos Super. | In / cm | 1 / 2.5 | Porcentaje de Agua | | 66.67 |
| Cant.Contr.Aux.Superior | | 0 | Grav.Espec.del Petroleo | | 0.85 |
| Tipo Contrapesos Inferi. | | OORO | Grav.Espec.del Agua | | 1.05 |
| Cant.Contrapesos Inferi. | | 2 | Grav.Espec.del Gas | | 0.00 |
| Dist.Contrapesos Inferi. | In / cm | 1 / 2.5 | Relac.Gas Petróleo(GOR) | m³/m3 | 0.00 |
| Cant.Contr.Aux.Inferior | | 0 | Presión Boca de Pozo | kg/cm² | 12.00 |
| Potencia del Motor | HP | 75 | Diam.Pistón de Bomba | In | 1.50 - RHBC-24-5-05-05 |
| Diámetro de Polea | mm | 200 | Prof.Zapato de Bomba | m | 2,402.00 |

SARTA

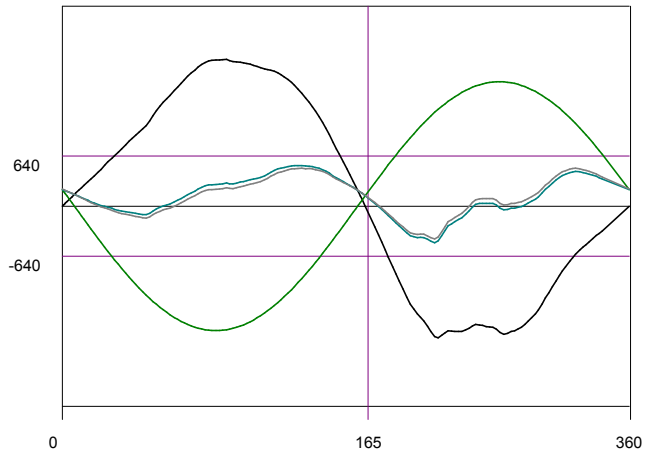
| TRAMOS | DIAMETRO [In] | CANTIDAD | LONGITUD [Ft] | GRADO | LIBRAJE [Lb/In] | M.ELAST. [10^6] | D.FACTOR |
|--------|---------------|----------|---------------|-------|-----------------|-----------------|----------|
| 1 | 1 | 83.0 | 2075 | M | 2.904 | 30 | 0.32 |
| 2 | 0.875 | 84.0 | 2100 | M | 2.224 | 30 | |
| 3 | 0.75 | 139.0 | 3475 | M | 1.633 | 30 | |
| 4 | 1.5 | 10.0 | 250 | D | 6.008 | 30 | |
| 5 | | | | | | | |
| 6 | | | | | | | |

VALORES MEDIDOS Y CALCULADOS



VALVULAS

| | | | |
|-------|------------------|---------|------------------|
| Fija | 16547 a 16503 lb | Perdida | 44 lb en 4.3 seg |
| Movil | 20634 a 20546 lb | Perdida | 88 lb en 4.3 seg |



CALCULO DE TORQUE

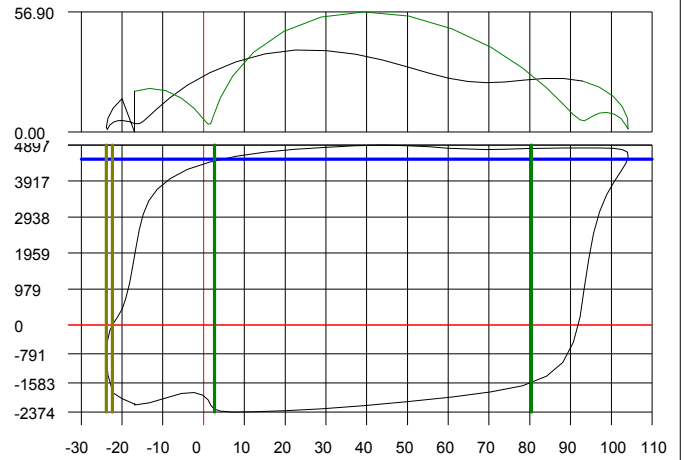
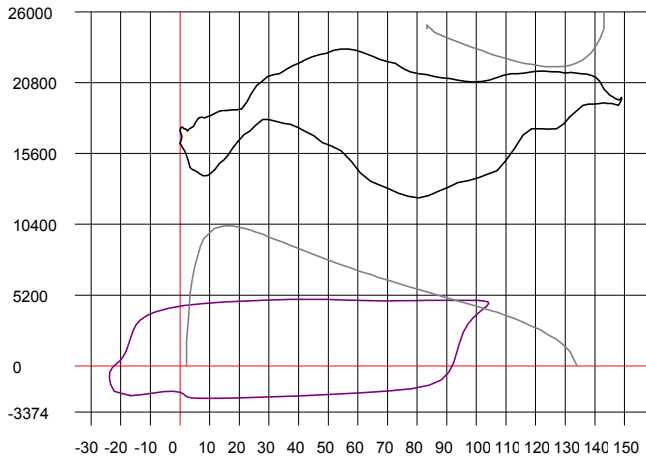
| | Exist. | Balance | |
|----------------------------|--------|-------------|-------------|
| Torque Máximo Reductor | Lb/In | 519666 | 484334 |
| Torque Máximo Contrapesos | Lb/In | 1591518 | 1653131 |
| % Torque Respecto al AIB | | 81.20 | 75.68 |
| Efecto de Contrapeso | Lb | 18635 | 19545 |
| Distancia de Contrapesos | cm | 3/3 | -8/-8 |
| Presión Máxima Air Balance | PSI | No Corresp. | No Corresp. |
| % de Carga Estructural | | 76.30 | |

POTENCIAS Y EFICIENCIAS

| | | | |
|-------------------------|----|-------|------|
| En la Bomba | HP | 8.20 | |
| En el Vástago | HP | 12.61 | |
| Estimada en el Motor | HP | 19.74 | |
| Pico en el Motor | HP | 33.59 | |
| Eficiencia Global | | 0.42 | |
| Eficiencia Torsional | | 0.45 | 0.46 |
| Factor de Carga Cíclica | | 1.41 | 1.65 |

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VALORES EN LA BOMBA

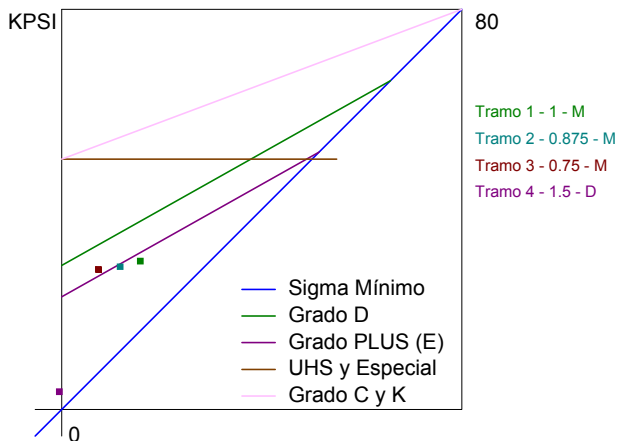
| | | |
|----------------------------|--------|-------|
| Carga Máxima | Lb | 4897 |
| Carga Mínima | Lb | -2374 |
| Carrera de Fondo | Pulg. | 128 |
| Carrera Efectiva | Pulg. | 78 |
| Desplazam. Carrera Fondo | m³/día | 33 |
| Desplazam Carrera Efectiva | m³/día | 20 |
| Eficiencia Tanque Bomba | | 67 |
| Llenado de la Bomba | | 61 |
| Peso del Fluido s/Bomba | Lb | 4518 |
| Estiramiento de Sarta | Pulg. | 44.8 |
| Sobre Recorrido | Pulg. | 23.85 |
| Desplazam.de Cañería | Pulg. | 1.5 |

NIVEL POR CALCULO DE FONDO

| GRAVED. ESPECIFI. | PRESION FONDO kg/cm² | SUMERG. CALC. m | NIVEL CALC. m |
|-------------------|-------------------------|--------------------|------------------|
| 0.98 | 14.88 | 152 | 2250 |
| 1.00 | 18.33 | 183 | 2219 |
| 0.90 | 0.00 | 0 | 2402 |
| 0.80 | 0.00 | 0 | 2402 |
| 0.70 | 0.00 | 0 | 2402 |
| 0.60 | 0.00 | 0 | 2402 |

| TRAMOS | CARGA MAX [Lb] | CARGA MIN [Lb] | POTENCIA [HP] | PESO [Lb] | | API - GOODMAN FACTOR | | | | | |
|--------|----------------|----------------|---------------|-----------|------|----------------------|-----------|-------|-----------|-------|----|
| | | | | WRA | WRF | SIGMA 1.0 | SIGMA 0.9 | | SIGMA 0.8 | | |
| 1.000 | 23271 | 12329 | 12.61 | 6026 | 5269 | 59887 | 32 | 53898 | 36 | 47909 | 43 |
| 0.875 | 17158 | 7016 | 12.52 | 4670 | 4084 | 58375 | 36 | 52538 | 41 | 46700 | 48 |
| 0.750 | 12364 | 3244 | 12.45 | 5675 | 4962 | 56753 | 42 | 51078 | 47 | 45403 | 54 |
| 1.500 | 6273 | -856 | 12.32 | 1502 | 1313 | 28477 | 14 | 25630 | 15 | 22782 | 17 |
| Bomba | 4897 | -2374 | 11.89 | | | | | | | | |

DIAGRAMA DE GOODMAN



Minimum Tensile Strength (API RP 11 BR)
Service Factor = 1.0

MEDICION DE NIVEL

DATOS DE LA MEDICION

| | | |
|--------------------------|---------|--------|
| Cant. Cuplas Contadas | | 236.0 |
| Long. Prom. Cada Caño | m | 9.6 |
| Inicial | PSI | 44.0 |
| Final | PSI | 44.0 |
| Delta de Tiempo | min | 10 |
| Increment. de la Presion | PSI/min | 0.000 |
| Prof. Zapato Bomba | m | 2402.0 |
| Prof. Punzados | m | 2402.0 |

RESULTADOS

| | | |
|------------------------|------|---------|
| Nivel Acustico | m | 2253.8 |
| Nivel Corregido | m | 2253.8 |
| Presión de Fondo | PSIa | 236.69 |
| Pres. Entrada Bomba | PSIa | 236.69 |
| Sumergencia de Bomba | m | 148.20 |
| Fracción Ef. Petróleo | % | 100.00 |
| Colum. Total s/Bomba | m | 148.20 |
| Pres. Estática Formac. | PSIg | 1000.00 |
| PBHP / SBHP | | 0.24 |
| Efic. Productiv. (IPR) | | 89.12 |

