# BELCO SHOOTING-FRACCING REPORT

| WELL | Z24-21-SEE-1 LCL OFFICIAL NUMBER | LOG-24 BELCO NUMBER | Lobitos Offshore AREA | APE |
|---|---|---|---|---|
| Treated Seawater FRACCING FLUID | Rio Bravo FORMATION | 4770'-4148' INTERVAL | 237 MNF, 181 VNF NET SAND | 57,890 TOTAL VOL. TRE |

## OPERATIONAL RESULTS

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perforated by: GO<br>Fracced by: ESTERSA | | 1° STAGE | 2° STAGE | | | | | TOTAL | | | |
| INTERVAL (ft): | From: | 4770' | 4362' | | | | | | | | |
| | To: | 4410' | 4148' | | | | | | | | |
| NET SAND: | MNF | 109' | 128' | | | | | | | | |
| | VNF | 90' | 91' | | | | | | | | |
| SHOOTING | Date: | Aug. 1984 | Aug. 1984 | | | | | | | | |
| | Started at: | 7:40 | 19:50 | | | | | | | | |
| | Finished at: | 8:00 | 20:00 | | | | | | | | |
| | Shots | 30 | 29 | | | | | | | | |
| FRACCING | Date: | Aug. 19.84 | Aug. 1984 | | | | | | | | |
| | Started at: | 18:38 | 21:05 | | | | | | | | |
| | Finished: | 19:06 | 21:32 | | | | | | | | |
| Break down Pressure (psi) | | 2600 | 2200 | | | | | | | | |
| Inst. shut-in press. (psi) | | 1400 | 1450 | | | | | | | | |
| Rate (BPM) | Average | 26 | 27 | | | | | | | | |
| Pressure (psi) | Maximum | 4600 | 2200 | | | | | | | | |
| | Minimum | 2300 | 1800 | | | | | | | | |
| | Average | 3000 | 2000 | | | | | | | | |
| | Standing | 1400 | 1500 | | | | | | | | |
| | Final (10') | 1200 | 880 | | | | | | | | |
| Volume of Treatment (gln) | | 29,090 | 28,800 | | | | | 57,890 | | | |
| Pre-pad: gln: | | — | — | | | | | — | | | |
| Pad: gln: | | 9,000 | 9,000 | | | | | | | | |
| Carry: gln: | | 15,290 | 15,350 | | | | | | | | |
| Flush: gln: | | 300 | 300 | | | | | | | | |
| Displacement gln: | | 4,500 | 4,150 | | | | | | | | |

## MATERIALS

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SAND (Sks) | 20/40 | 131 | 65 | | | | | 196 | | | |
| | 10/20 | 143 | 212 | | | | | 355 | | | |
| Proppant Conc. | Carry (lb/gln) | 1.79 | 1.80 | | | | | | | | |
| | Form (Sk/VNF) | 3.04 | 3.04 | | | | | | | | |
| WG-11 (Lbs) | | 900 | 900 | | | | | 1800 | | | |
| GW-3 (Lbs) | | 20 | 20 | | | | | 40 | | | |
| CLASTA (Gls) | | 28 | 28 | | | | | 56 | | | |
| FRACFLO (Gls) | | 28 | 28 | | | | | 56 | | | |
| KCL (Lbs) | | 2200 | 2200 | | | | | 4400 | | | |
| SURFLO (Gls.) | | 6 | 6 | | | | | 12 | | | |
| BALLS RCN | | 6 | 11 | | | | | 17 | | | |
| SERVICE COMPANY: ESTERSA | | | | | | | | | | | |
| SUPER. ESTERSA: RAUL FRANCIA | | | | | | | | | | | |
| SUPER. BELCO: Rodolfo Carmen | | | | | | | | | | | |
| RCN ball sealers | | | | | | | | | | | |

BELCO PETROLEUM CORP. OF PERU
DPTO. TECNICO
3 SET. 1984
RECIBIDO

RECIBIDO

ENGINEER | V°B° | DATE | REPRESENTATIVE