ANNULAR FLUID DEPRESSION TEST

SAMPLE COMPANY
SAMPLE et al SASKATCHEWAN 1-2-3-14
100/01-02-003-14W2/0
FIELD: SASKATCHEWAN
FORMATION: MIDALE

TEST DATE: JUNE 11, 2004
(Analysis provided by NR-Tec Ltd.)

DISTRIBUTION: BOB LOBLAW, Calgary, AB.

PREPARED BY: NR-TEC ANALYST

DATE: 2004-06-12
LEVEL BEST TECHNOLOGIES LTD.

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SAMPLE et al SASKATCHEWAN 1-2-3-14
100/01-02-003-14W2/0
Test Date: June 11, 2004

INTRODUCTION

An annular fluid depression test was conducted on the subject well in order to determine an annular fluid gradient and producing subsurface pressure at the mid-point of the perforated interval.

PROCEDURE

Pumping fluid levels and wellhead pressures were obtained using an automated acoustic fluid level instrument.

Backpressure was applied to the annulus by closing the casing valve on the "D" wing. The increasing gas/liquid interface pressure causes the fluid level to change. The fluid gradient is established by calculating the gas/liquid interface pressure and measuring the corresponding fluid level at various intervals after the backpressure is applied.

The fluid rates and properties were provided by SAMPLE COMPANY.

RESULTS

The results of the test indicate that the annular fluid column is comprised of multiple fluid gradients. The producing subsurface pressure at the mid-point of the producing interval was determined to be 3175 kPaa from this test.

A summary sheet showing test results, calculations and a graph of pumping fluid level versus gas-liquid interface pressure is included with this report.
**NR-TEC LTD.**

**ANNULAR FLUID DEPRESSION TEST**

**COMPANY:** SAMPLE COMPANY  
**FIELD:** SASKATCHEWAN  
**POOL NAME:** MIDALE  
**WELL NAME:** SAMPLE et al SASKATCHEWAN 1-2-3-14  
**LOCATION:** 100/01-02-003-14W2/0  
**LICENSE:** 0123456

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**ELEVATIONS**
- KELLY BUSHING (K.B.) = 771.90 m
- CASING FLANGE (C.F.) = 767.55 m
- K.B. TO C.F. = 4.35 m

**TUBING**
- TOTAL JOINTS = 108.000
- TUBING BOTTOM = 1021.5 m KB
- PUMP DEPTH = 1012.0 m KB

**PRODUCING INTERVAL**
- TOP OF INTERVAL = 1007.00 m KB
- BOTTOM OF INTERVAL = 1014.70 m KB
- MID-POINT = 1010.85 m KB

**FLUID PROPERTIES**
- GAS GRAVITY = 0.700
- OIL GRAVITY = 40.000 °API
- WATER GRAVITY = 1.050

**PRODUCTION**
- OIL RATE = 35.00 m³/d
- WATER RATE = 35.00 m³/d
- GAS RATE = 8.00 E³m³/d
- G.O.R. = 228.57 m³/m³

**SURFACE UNIT**
- TUBING PRESSURE = 587.0 kPaa
- PUMPING SPEED = 6.4 SPM
- STROKE LENGTH = 488.0 cm

**ACOUSTIC TESTING COMMENCED ON 2004-JUN-11 AT 15:38:00**

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<th>JOINTS TO FLUID</th>
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