# Rolling Rock State No. 2 Block Squeeze & Test Delaware Sand A.F.E. 1173 A.P.I. NO. 30-015-30957

KB: 15 above GL

TD: 10.995; PBTD: 9150' CIBP with 3 sx cement 35' with TOC at 9115'

Casing: 13-3/8" 48#/FT 425' 900 sx circulated

8-5/8" 32#/ft J-55 @ 2700' with 1350 sx circulated

5-1/2"17-20# @ 10,990' bottom TOC at 8000'CBL DV @ 6900' w/ TOC @ 5174' CBL

Tubing: 213 jts 2-7/8" 6.5#/ft L-80

Packer: 5-1/2" Arrowset 1X w/ TOSSD w/2.25" "F" PN set at 6450'.

Perfs: 6514'-6523', with 4 JSPF, 36 holes

- 1. RUPU. Set test tank and dig, line and fence working pit. Set open top steel pit.
- 2. Blow tubing down to atmosphere. RU pump truck and pump 37 barrels 3% Kcl water down tubing.
- ND tree and NU BOP. Release 5-1/2" Arrowset IX casing packer with TOSSD and 2.25" F SS profile nipple set at 6450' FS.
- 4. Lay down 44 jts (+/-1330') of 2-7/8" tubing and stand remainder of tubing in derrick.
- 5. RUWL, RIW and set 5-1/2" CIBP at +/-6450'. Dump bail 35' of Class "H" cement on top of CIBP. POW and LD dump bailer.
- 6. RIW 3-1/8" gamma gun and CCL with full lubricator and perforate 5-1/2" casing at +/-5125'-5127' (Don't shoot perforations in casing collar) with 2 JSPF 2' and 6 holes. POW and RDWL. Have wireline stand by until formation is broken down.
- 7. RIW with 1jt 2-7/8" tubing, 5-1/2" compression packer with bypass, 2-7/8" seating nipple and 2-7/8" tubing. Place EOT at +/-5126'.
- 8. Spot 250 gallons of double inhibited 15% Hcl acid.
- 9. POW to +/- 5050'. RU pump truck and reverse 5 barrels into tubing. Set packer with 12-15.000# compression and EOT at +/-5050'.
- 10. Open 8-5/8" X 5-1/2" casing annulus valves. RU pump truck on tubing and attempt to break down squeeze holes. Attempt to establish injection rate and pump enough water to establish circulation on 8-5/8" X 5-1/2" casing annulus. If a injection rate is established, release wireline crew.
- 11. If circulation is established on annulus release packer and POW with packer and tubing.
- 12. RIW with 5-1/2" Mechanical set Cast Iron Cement retainer, 2-3/8" X 2-7/8" X-O, 2-7/8" seating nipple and 2-7/8" tubing.
- 13. Leave retainer swinging at +/- 5050' and RU pump truck. Establish circulation through retainer and pump at least 3 barrels fluid through retainer.
- 14. Set retainer and test tubing to 1500 psi and sting out. Sting back into retainer and stack 15-18, 000# compression on retainer.
- 15. Establish injection rate into squeeze holes and tie flowline from 8-5/8" X 5-1/2" annulus to test tank and lay line to lined open top steel tank.
- 16. RU cement pump truck and pump 500 gallons mud flush, 10 bfw, 300 sx Class "C" Super C cement w/ 0.4% LAP-1, 0.3% CFR-3, 1 #/sx salt, 1/4 #/sx D air-3000 (sw 13.0 ppg 1.66ft<sup>3</sup>

- sx) lead cement and 50 sx Class C cement with 2% CaCl  $\,$  (sw 14.8 ppg, 1.32 ft $^3$  / sx), SD and wash up pumps and lines.
- 17. Displace cement at 2-3 bpm and attempt to displace cement down to leave 1 barrels of slurry in tubing.
- 18. Sting out of retainer, PU 10' and reverse any excess cement to pit.
- 19. POW with retainer stinger and stand tubing in derrick.
- 20. SWI at least 48 hours for cement to set up.
- 21. RUWL and run GR-CBL-CCL log from TOC inside 5-1/2" casing at + /-5115' to TOC at +/-2500'. If needed run log with pressure on 5-1/2" casing. Report TOC to Midland office.
- 22. If TOC is approved by Midland office continue with procedure.
- 23. RIW with 2-7/8" perforated tubing sub, seating nipple and 2-7/8" tubing to +/-4820'. Circulate well with 2% Kcl water and spot 250 gallons 15% DI HCL acid.
- 24. POW and stand tubing in derrick.
- 25. RUWL and perforate 5-1/2" casing in Bone Springs Sand formation with 1 jspf 120deg phased from 4800' to 4818', POW and RDWL.
- 26. RIW with 1 jt tail pipe, 5-1/2" Arrowset I-X casing packer, 2-7/8" seating nipple and 2-7/8" tubing to leave EOT swinging at +/-4700'.
- 27. Reverse 5 bfw into tubing. Set packer with 12-14,000# compression. ND BOP and NU flow tree.
- 28. Displace spot acid into formation at maximum rate using maximum pressure of 2500 psi. Displace spot acid with 10 barrels 2% Kcl water.
- 29. RD pump truck and swab/flow load to test tank and establish production rate. A acid proposal will follow if needed.
- 30. If this zone is not commercial will set 5-1/2" CIBP at +/-4750' and dump bail 35' cement on top of CIBP.
- 31. Will test Basal Brushy Canyon sand 4640'-4700' and Delaware sand 3100-3144', 3170-3200' 3486-3600' and 4240'-4280'. A perforating proposal and treatment proposal will be issued at a later date for these zones.
- 32. If well is commercial a battery and artificial lift AFE will be issued for this well.

#### Cgt/Cwb

(Rolling rock 2 afe 1173 cmnt pro\_CGT\_CWB edit.doc)

- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
- D. Auxiliary equipment to include: annular preventer, mud-gas separator (if necessary) and rotating head.
- 2. Protective equipment for essential personnel:
  - A. 5-minute escape units located in the dog house and 30-minute air units at briefing areas, as indicated on well site diagram.
- 3. H2S detection and monitoring equipment:
  - A. 3 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.
  - B. 1 portable SO2 monitor positioned near flare line during H2S flaring operations.
- 4. Visual warning systems:
  - A. Wind direction indicators as shown on well site diagram.
  - B. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be a readable distance from the immediate location.
- 5. Mud program:
  - A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight safe drilling practices and the use of H2S scavengers when necessary will minimize hazards when penetrating H2S bearing zones.
- 6. Metallurgy:
  - A. All drill strings, casings, tubing, wellhead, blowout preventors, drilling spools kill lines, choke manifold and lines valves shall be suitable for H2S service.
  - B. All elastomers used for packing and seals shall be H2S trimmed.
- 7. Communications:
  - A. Radio communications will be available in company vehicles and rig dog house.
- 8. Well testing:
  - A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing of any known formation that contains H2S will be conducted during daylight hours.

#### HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

FASKEN OIL AND RANCH, LTD. Rolling Rock State No. 2 940' FSL, 710' FEL SEC.31, T23S, R25E EDDY COUNTY, NM

Hydrogen sulfide Training.

All personnel, whether regularly assigned, contracted or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- 1. The hazards and characteristics of hydrogen sulfide (H2S).
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques of first aid and rescue procedures.

In addition the supervisory personnel will be trained in the following areas:

- 1. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the H2S Drilling Operations Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan. This plan shall be available at the will site. All personnel will be required to carry documentation that they have received the proper training.

II. H2S Safety Equipment and Systems.

**NOTE:** All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above or three days prior to penetration the first zone containing or reasonable expected to contain H2S.

- 1. Well Control Equipment:
  - A. Flare line.
  - B. Choke manifold.

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#### **NADEL AND GUSSMAN PERMIAN**

687-1570

## ROLLING ROCK STATE #2

940' FSL, 710' FEL, Unit P, Sec 31, 23S, 25E, Eddy County, NM APT# 30-015-30957

Elev: 3834', KB = 3849'

4326824325

PRO PO SED 13-3/8", 48#, H-40 @ 425 900 sx, cement circulated 17-1/2 hole 6-5/6", 32#, J-55 @ 2700" 1350 sx, coment circulated 12-1/4" hole

27/8 +bg@ 4700

DV tool at 6900" 310 sx, TOC at 5174" by CBL

5-1/2", 17& 20#, N80 @ 10,990" 551 sx, TOC @ 8000' by CBL 7-7/8" Hole

Block squeeze thru perfs et 5126'-5127'

W 350 Sx Class Comt. TO C@ # 2500'

CIBP @ 6450' w/ 35' cmt

2-7/8", 6.5#, 1-80 tubing 5 1/2" Arrowset 1X packer w/ 2.25" ID "F" nipple @ 9105"

Upper Penn Perfs: 8,200' - 9,219' @ 4 SPF, 80 holes, 2000 gals 15% w/ 15 tone CO2

CIBP @ 9360 w/ 3 sx cement

Strawn Perfs: 9,396" - 9,612"

(2) 2/4 SPF, 172 holes, 2000 gwts 15% w/ CO2

CIBP @ 10,340 w/ 4 sx cement

Morrow Perfs; 10,387" - 10,383"

@ 4 SPF, 24 holes

CIBP @ 10,745' w/ no cement

Morrow Perfs: 10,202" - 10,214" @ 4 SPF, 24 holes

PBTD @ 10,745\*

TD @ 10,896'

exter

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687-1570

### ROLLING ROCK STATE #2

940' FSL, 710' FEL, Unit P, Sec 31, 23S, 25E, Eddy County, NM AFI # 29-015-30657

Elev: 3834', KB = 3849'

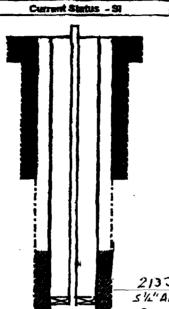
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213 Jts 27/8"6.5 /17 Lise the S'L" Arrowset / X Packer W/L. 25" F nipple @ 6/50" Bonespring Ports 6514-23 136h)

CIBPE 9156' W/3 SX CMT TOE 9115'

Upper Ponn Ports: 8,208' - 9,219' @ 4 SPF, 80 holes, 2000 gats 15% w/ 15 tone CO2

CIBP @ 9360 w/ 3 sx centent

Strawn Perfe: 9,368" - 8,612"

@ 2/4 SPF, 172 holes, 2000 gets 16% w/ CO2

CIBP & 10,347 w/ 4 sx cernent

Morrow Paris; 10,387 - 10,383 @ 4 SPF, 24 troles

CIRP @ 10,745' w/ no coment

Morrow Perfe: 10,288" - 10,214"

@ 4 SPF, 24 miles

PBTD @ 10,746'

TD @ 10,530

# FASKEN OIL AND RANCH, LTD.

303 WEST WALL AVENUE, SUITE 1800 MIDLAND, TEXAS 79701-5116

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Jimmy D. Carlile Regulatory Affairs Coordinator

September 26, 2006

Mr. Bryan Arrant NMOCD 1301 W. Grand Artesia, NM 88201

Re: Fa

Fasken Oil and Ranch, Ltd. Rolling Rock State No. 2

Plugback - Additional Information

Attached you will find before and after wellbore schematics and our H2S Contingency Plan for the plugback of the Rolling Rock State No. 2. Also, for well control we will be using a double blow out preventer (BOP) with blind and pipe rams and a working pressure of 3000#. We will perform a block squeeze with perfs at 5125' – 5127' with 350 sx of Class C cement. We calculate the top of cement will be approximately 2500'. See the attached workover procedure for additional data.

If you have any additional questions please give me a call.

Yours truly,

Jimmy D. Carlile

Regulatory Affairs Coordinator