San Juan 30-6 Unit #60A Well Test Procedure I 31 30N 06W Rio Arriba County, NM

Latitude: 36 Deg., 46.00 Min Longitude: 107 Deg., 29.93 Min.

Summary:

The subject well was completed during 1999 in 7" and 4-1/2" casing. The Basin Opportunity Lewis Shale Team will perform a basic 7-day stabilized flow and 21-day build-up test on the subject well. This work will aid in determining a fracture conductivity and half-length for a particular stimulation treatment. From this information, the BOT will make recommendations to the division on the appropriate stimulation treatment for the Lewis Shale across the San Juan Basin. After the well testing is complete, the well will be taken off of Lewis only production and placed back on Mesaverde production.

- Comply to all NMOCD, BLM and BR regulations. Conduct daily safety meetings for all personnel on location.
- Inspect location and wellhead and install rig anchors prior to rig move.
- Construct blow pit.
- 1. MOL, hold safety meeting and RU completion rig. Ensure that all safety equipment is strategically located and functioning properly. NU relief lines to blow pit. Set one (1) 400 BBL frac tank and fill w/ 2% KCL. Blow well down and kill well w/ 2% KCL water as necessary. ND wellhead and NU 7-1/16" 3M BOP, stripping head and blooie line. Operationally test BOP.
- 2. TIH to PBTD @ 6368' and check for fill. If fill is encountered, clean out to PBTD w/ air package. If no fill is encountered, TOOH w/ 2-3/8" Mesaverde tbg and stand back.
- 3. Open rams on BOP. PU RBP, on-off tool, 6' perf. pup jt, 1 jt. 2-3/8" 4.7# J-55 tbg, SN w/ tubing plug, 23 jts. 2-3/8" 4.7# J-55 tbg, Schlumberger Model "HD" compression set pkr, and 143 jts. 2-3/8" 4.7# J-55 tbg. Set RBP @ +/- 5250' and set pkr @ +/- 4470'. There is a total of 167 jts. of 2-3/8" 4.7# J-55 tbg.
- 4. ND stripping head and BOP. NU single tubing hanger wellhead assembly. RU slickline unit. ND bullplug on flowtee. NU lubricator and open master valve. RIH and retrieve tubing plug in SN @ +/- 5179'. POOH w/ tubing plug. If well will not flow on it's own, make swab run to seating nipple. If swab run is not necessary, RD and MOL. Do not RD slickline.
- 5. RIH w/ ported No Go tool (1.85" OD), dual Schlumberger memory gauges (1.25" OD), and No Blow Tool. Set assembly in SN (1.78" ID) @ +/- 5179'. Shut in master valve, ND lubricator, and NU bullplug on flowtee. Open master valve and RD slickline unit.
- 6. Begin 7-day stabilized flow period. After 7-day stabilized flow, shut well in and begin 21-day build-up period. SHUT WELL IN AT WELLHEAD, NOT AT SEPARATOR.
- 7. After 21-day build-up period. RU slickline unit. ND bullplug on flowtee. NU lubricator and open master valve. RIH and retrieve gauge assembly set in seating nipple @ +/- 5179'. Shut in master valve, ND lubricator and NU bullplug on flowtee. Open master valve and return well to production.
- 8. MOL, hold safety meeting and RU completion rig. Ensure that all safety equipment is strategically located and functioning properly. NU relief lines to blow pit. Set one (1) 400 BBL frac tank and fill w/ 2% KCL. Blow well down and kill well w/ 2% KCL water as necessary. ND wellhead and NU 7-1/16" 3M BOP, stripping head and blooie line. Operationally test BOP.

San Juan 30-6 Unit #60A Well Test Procedure 131 30N 06W Rio Arriba County, NM

Latitude: 36 Deg., 46.00 Min Longitude: 107 Deg., 29.93 Min.

- Release pkr @ +/- 4470' and TIH to RBP @ +/- 5250'. Latch on to RBP and release. Kill well 9. as necessary. TOOH w/ 128 jts. 2-3/8" 4.7# J-55 tbg, Schlumberger Model "HD" compression set pkr, 28 jts. 2-3/8" 4.7# J-55 tbg, SN, 1 jt 2-3/8" 4.7# J-55 tbg, 6' perf. pup jt, on-off tool and RBP. Lay down RBP and pkr. Stand back workstring.
- 10. TIH w/ 1 jt 2-3/8" 4.7# J-55 tbg w/ expendable check, SN, and remaining 199 jts. 2-3/8" 4.7# J-55 tbg.. Land tbg @ +/- 6085'.
- ND BOP, NU single tubing hanger wellhead assy. Pump off expendable check. Obtain a final pitot up tubing. If well will not flow on it's own, make swab run to seating nipple. If swab run is not necessary, RD and MOL.

| Recommend: Sture | Capbiel | 11/29/ | 77 |
|------------------|---------|--------|----|
| Recommend. | - J | | |

Team Leader

VENDORS:

Tools (retrieving head, RBP, and pkr)

Slickline:

Data Analysis:

Schlumberger B&R Service Inc.

Holditch & Assoc.

325-50**06** 325-23**93**

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Steve Campbell Glen Christiansen Home 325-8218 Home 327-5089 Office 326-9546 Office 326-9733 Pager 564-1902

Hans Dube

Home 564-9401

Office 326-9555

San Juan 30-6 Unit #60A

Unit I, Section 31, T30N, R06W Rio Arriba County, NM

Well Test Schematic After Well Test Schematic Cmt Top @ Surf (circ) 9-5/8" Csg. Set at 220'. Cmt'd with 190 sx. 200 jts. 2-3/8" 4.7# J-55 tbg. Set @ 6085' 167 jts 2-3/8" 4.7# J-55 7" 20# J-55 set @ 4150' w/ 265 Tubing set @ 5210' sx. TOC @ 2400' (TS) Formation Tops at the following: Ojo Alamo N/A Pictured Cliffs N/A 4380' H. Bentonite Cliffhouse 55**56**' N/A Menefee 594**6**' Pt. Lookout 4-1/2" 10.5# J-55 liner set @ 4010'-Ret. Pkr set @ 6385'. TOC @ 4470' 4010' (LT) Lewis perfs @ 4510'-5222' Lewis perfs @ Retrieving 4510'-5222' head on btm of tbg. Mesaverde RBP set @ 5250' Perfs @ 5562'-6271' Mesaverde perfs @ 5562'-6271' PBTD @ 6368' PBTD @ 6368' TD @ 6385' TD @ 6385'