I hereby certify that the information above is true and complete to the best of my knowledge and belief.				
SIONATURE			ENGINEERING TECH	5/22/2000
TYPE OR PRINT NAME KEN	T KELLER			303-293-937
(Thus space for State Uee)				
			AMS	
AFTROYED BY		me.		DATE
CONDITIONS OF APPROVAL. IF ANY			•	

New Mexico State B #9 Sec 27B-T10S-R32E Mescalero Field Lea County, NM Workover to Perforate Upper Devonian AFE

Casing:

8 5/8" 32# K-55 @ 4380'.

Liner:

5 1/2 " 15.5 & 17# J-55 & N-80 @ 4181-9900'. TLH 4181'. Possible

casing part @ 5125'. See GR/CCL log dated 7/17/96.

Tubing:

310 jts 2 7/8" 6.5# N-80. SN @ 3650'. PLS pkr with on/off tool @ 9520'.

Rods:

145 - 7/8" Grade D rods with 2"x1 1/2"x20 rod pump.

Perforations: 5030', 5140' squeeze holes. 9454-60' (sqzd with 15 sx acid soluble cmt).

9515-25' (sqzd with 100 sx). 9576-88' (sqzd with 100 sx). 9840-81'

(sqzd with 225 sx). 9842-52' (2 JSPF).

Workover Procedure:

- MIRU. TOH w/rods and pump. ND WH. NU BOPE. TOH w/tbg. Tbg parted @ 3639'. PU tbg overshot w/extension and latch onto tbg fish. Release from on/off tool and TOH.
- 2. PU 4 ¾" bit and work through csg part @ 5120'. If necessary, rig up circulation equipment and PU 2 3/8" muleshoe jt, 3 7/8" string mill, 10 stands 2 7/8" tbg, 4 ¾" string mill and work through casing part. Work mills down to 5300'.
- 3. PU 5 ½" RBP with 2 3/8" tailpipe (if necessary) and set @ 5300'. Squeeze holes at 5030' & 5140', csg part at 5125'. PU 5 ½" pkr with 2 3/8" tailpipe (if necessary) and set at 5200'. Pressure csg and RBP to 500 psi.. Reset pkr at 5000'. Attempt to establish a pump rate down tbg. Pressure csg to 500 psi. Reset pkr to 5100' and attempt to circulate out csg split and through squeeze holes at 5030'. Pull pkr to 4900'. RU and run GR/CCL to locate pkr and get on depth with GR/CCL log dated 7/17/96 (csg part at 5125'). Tally tbg out.
- 4. If rate can be established out csg part and squeeze holes, TIH with 5 ½" casing alignment tool and EZ drill packer. Set casing alignment tool at 5115-40'. Correlate to GR/CCL log dated 7/17/96.
- 5. Squeeze casing with cement slurry. Actual slurry design to be based on injection rate established in step 3. Squeeze until 500 psi is maintained on tbg. Release and TOH. WOC.
- 6. PU 4 3/4" bit, scraper, 3 1/2" DC and TIH. Drill out squeeze. Test squeeze to 500 psi.
- 7. TIH and retrieve RBP. TIH and retrieve 5 ½" PLS pkr with on/off tool at 9520'.
- 8. RU wireline service. Wireline set CIBP at 9500'. Dump 2 sx cmt on CIBP.
- 9. Perforate 9454-60' with 4" csg gun, 23 gm. charges, 4 JSPF. Correlate to Neutron Porosity Log dated 9/16/73.
- 10. TIH with pkr. Hydrotest test tbg to 6000 psi. Set pkr at 9350'.

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- 11. RU acid service. Acidize perforations 9454-60' with 1000 gal 15% HCI. Spot acid across perforations and let soak. Slowly displace acid out perforations.
- 12. Swab back acid load. Establish working fluid level.
- 13. TIH with production string based on fluid level.
- 14. TIH with rods and pump to handle 100 BFPD.
- 15. Put well on production. RDMO.

DAILY WORKOVER REPORT

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4/18/00 - Day 1

Key well service MIRUSU. TOOH w/145 - 7/8" grade 90 rods. NDWH and NUBOPE, PU on tubing, tubing parted. Tallied out of hole w/tubing, pulled 100 jts. 2-7/8" N-80 tubing, LD next 17 jts.. Tubing was badly corroded, had body-part on 118th jt.. 515' tubing was bad. Ordered more tubing and prep to run overshot in A.M. SDFN. DC \$1350

4/19/00 - Day 2

TIH w/ 5 ½" overshot and extensions and worked over tubing @3943'. Tried to release on-off tool, worked from 58K#-65K #and tool slipped off. Unable to catch fish. TOOH w/ tubing and overshot, tools full of scale and rust. PU new 5 ½" overshot and TIH to 3943', caught fish, worked on-off tool from 58K# to 75K#. Tubing gives back all torque put into it, unable to release on-off tool or packer, SDFN. Will run freepoint and cut tubing in A.M. DC \$5897

4/20/00 - Day 3

RU wireline and TIH w/1-7/16' free point. Showed some fill around packer but packer had little movement, unable to get good reading. TOOH w/freepoint, PU 2 1/8" chemical cutter and TIH to 2038', unable to get through tubing, TOOH w/chemical cutter and PU two sinker bars w/broach, TIH to 9700'. PU 2-1/8" chemical cutter and TIH, cut tubing @ 9682', left 1-1/2' jt above packer. TOOH w/tubing, laid down 4 bad jts.(total of 22 bad jts.) Note: tubing was pitted and had 44-50 bad collars, will change out latter. SDFN.

CWC \$14,519

4/24/00 - Day 4

PU 4 3/" bit and TIH on tubing to 4180', tagged top of liner, turned tubing and fell through, TIH to 5120' and tagged bad casing. Worked through bad casing, TIH with bit to 9578'(changed out 41 2-7/8" tbg. collars) TOOH w/tubing, PU 5-1/2" RBP with 1 jt. 2-3/8" tubing under RBP, RU tubing testers and test 182 jts. going in hole to 6000 psi. Had to work through bad casing @ 5120'. Tested tubing to 5690', will finish in the A.M. SDFN CWC \$18,946

4/25/00 - Day 5

Finish testing tubing while TIH to 9553', busted 16 jts. (total 37 jts. Bad) TOOH w/RBP and set @ 5300' test to 500 psi, OK. TOOH w/ tubing. PU 5-1/2" packer and and TIH tag bad csg. @ 5120' and worked through tight spot. Packer would not set, SDFN.

DC \$5866

CWC \$24,812

4/26/00 - Day 6

Pressure test RBP to 500#, OK. Pulled packer up-hole and set @ 4900'. Pumped down tubing to pressure test Casing to 1000 psi, OK. Loaded backside and test from packer to surface @ 500 psi, OK. Release packer and tried to go through tight spot @ 5120', no go. TOOH w/ packer and tubing, LD packer and TIH w/retrieving tool, tag-up @ 5120', could not work through. TOOH w/ retrieving tool, left skirt from retrieving tool in hole. SDFN DC \$2712

4/27/00 - Day 7

PU 3-9/16" taper tap and TIH on tubing to 5120', tag junk, worked to get taper in skirt, could not catch fish. Tried again and did not catch fish. PU 1 jt. 2-7/8" tubing and cut w/tapered angle, TIH with cut tubing and tagged fish @ 5120', worked tubing down 31" until collar tagged fish. SDFN.

DC \$2712

CWC \$ 30,236

4/28/00 -Day 8

TIH w/sinker bar and sand line to 5120', unable to get in casing. PU on tubing and work for 1-1/2 hr., TOOH w/ casing, tapered tubing joint had been outside casing and had wrapped around 5-1/2" casing 3 times. TIH w/ impression block and set down w/4 pts., TOOH w/impression block, skirt appears to be lying @ 33 degree angle on top of casing, casing appears to be off-set from center about 3 inches, SDFN.

DC \$2622

CWC \$32,858

5/1/00 - Day 9

PU and TiH w/4 ½" magnet to top of fish @ 5120', set down on skirt and pull back into casing, set down on skirt again and TOOH w/ magnet, did not catch fish, TOOH w/magnet. PU and TIH w/4" cut-lip shoe, could not turn shoe into skirt, TOOH w/tubing and shoe, SDFN.

DC: \$5163

CWC: \$38,021

5/2/00 - Day 10

PU and TIH w/concave mill, tag fish @ 5,120'. Milled on skirt for 3 hrs. and fell through, RIH to end of tubing @ 5132'. PU tubing and TIH to top of RBP @ 5299', circulate hole and TOOH w/tubing, DC's and mill, no trouble getting out of hole, SDFN.

DC: \$4013 CWC: \$42,034

5/3/00 - Day 11

Shut-down, waiting on orders

DC: \$750 CWC: \$42,784

5/4/00 - Day 12

PU retrieving tool and TIH on tubing, tagged bad casing @ 5120', got through bad spot. Continue TIH and tag RBP, circulate hole clean. Release RBP and push fish down-hole, set RBP @ 9626'. Dump 2 sx. sand on RBP. TOOH w/tbg., SDFN. DC: \$7830 CWC: \$50.614

5/5/00 - Day 13

RU wireline, PU 4" casing gun/gamma ray and TIH, tagged @ 5120', could not get through bad spot, TOOH. PU 3 1/8" casing gun/gamma ray and TIH, tagged bad casing @ 5120', could not work gun through, TOOH. TIH w/mule shoe and tagged bad casing, work for 45 min., fell through bad spot, TIH w/tubing and set packer @ 9395', RU wireline and run gamma log, correlate to neutron porosity log(9/6/73) TIH w/tubing gun and perforate 9454-9455', TOOH. RU to swab, TIH and tagged fluid @ 300', swab well down to 4300' in 4 runs, recovered 100% oil, FL @ 3200' on 5th run, FL @ 3100' for next four runs, swabbed total of 36 Bbls in 2 hours, oil cut 80%, SDFWE.

DC: \$10,136 CWC: \$60,750

5/8/00 - Day 14

SITP 60#. TIH w/swab, FL @ 800', swabbed 100% oil on 1st five runs, 18 Bbls 1st hour, FL @ 3200' and oil cut 40% next 3 hours. Swabbed total of 43 BW & 53 BO in 6 Hr.. Well kicked off flowing on 32/64" choke, 190 # FTP, flowed 6BO + 2 BW 1st hour, 21 BO + 0 BW 2nd hour. Swabbed and flowed 86 BO + 50 BW in 9.5 hour. Left well flowing to tank, SDFN.

DC: \$1850 CWC: \$62,600

5/9/00 - Day 15

Well flowed 204 BO in 14 Hr., on 32/64" choke w/90# FTP. RU pump truck and kill well with 25 Bbl. FW. TOOH w/tubing, TlH and set seating nipple @ 3999', NUWH, TlH w/pump and rods. SDFN.

DC: \$4333 CWC: \$66,933

5/10/00 - Day 16

Finish TIH w/rods, seat pump, hang well on, check pump action, good pump action, RDMOSU, SDFN.

DC: \$650

CWC: \$67,583

5/11/00 - Day 17

Pumped & flowed 126 BO + 33 BW + 0 MCFG in 22, TP 52#.

5/12/00 - Day 18

Pumped & flowed156 BO + 38 BW + 0 MCFG in 24 hr., will put on time clock.

5/13/00 - Day 19

Pumped & flowed152 BO + 35 BW + 0 MCFG in 24 hr., 4 hr. on- 2 hr. off.

5/14/00 - Day 20

Pumped & flowed142 BO + 33 BW + 0 MCFG in 24 hr., (16 hr. time clock)

5/15/00 - Day 21

Pumped & flowed192 BO + 0 BW + 0 MCFG in 24 hr., (9 hr. time clock)

MIRUSU, killed well, TOOH w/rods and pump, set 1.87" plug in profile nipple, RU and circulate w/corrosion inhibitor, fished plug with wire-line, PU new pump and TIH, SDFN. Circulated 133 BO from backside (Will PWBOP in A.M.)

DC: \$11,802

CWC: \$79,735

5/16/00 - Day 22

Flowed 5 BO + 68 BW overnight

Space out pump, hang well on, RDMOSU, PWBOP

DC: \$200

CWC: \$79.935

5/17/00 - Day 23

Pumped 190 BO + 63 BW + 0 MCFG in 24 hr.

5/18/00 - Day 24

Pumped 189 BO + 5 BW + 0 MCFG in 24 hr. (12 hr. time clock - 30on/30off)

5/19/00 - Day 25

Pumped 86 BO + 0 BW + 0 MCFG in 24 hr. (4 hr. time clock -15 on/60 off)

5/20/00 - Day 26

Pumped 168 BO + 0 BW + 0 MCFG in 24 hr. (12 hr. time clock – 1 hr. on/1 hr. off) Installed back- pressure valve. Well holding 150 psi.

5/21/00 - Day 27 Pumped 76 BO + 0 BW + 0 MCFG in 24 hr. (6 hr. time clock - 30 on/60 off)