

F. RECOMMENDED PROCEDURE:

NOTE: Prior to starting workover, obtain an accurate well test.

1. MIRU DDU. Install BOP. COOH with tubing and Kobe pump. LD production tubing.
2. RU Red Man Air Drilling Services, American Eagle Tool Company power swivel, reverse unit etc, and three frac tanks. Rig up to pump produced fluids to the test separator.
3. MU mill and RIH w/9700' of 2 7/8", 6.5#, N-80, 8rd workstring. Remainder of string to be 2 7/8", 8.7#, N-80, 8rd tubing from American Eagle. Cleanout to Model 'D' packer at 11,990'. COOH. GIH with packer picker. Mill and retrieve Model 'D' packer at 11990'. COOH.
4. RIH with picker shoe and attempt to "friction" catch Model 'D' packer which was pushed to +/-12440' in 1976. If no success, then mill up packer.
5. Drill up CIBP set at 12440'. POOH. GIH with packer picker and attempt to pick Model 'D' packer at 12460'. COOH.
6. RIH with bit and drill up cement from 12613'-12625', CIBP at 12625' and shoe at 12695'. POOH and run new 4-5/8" sealed bearing insert bit and deepen well to 12775'. Circulate hole clean and COOH. LD 8.7# tubing. RD all American Eagle and Red Man Air Drilling equipment.
7. HALLIBURTON LOGGING SERVICES to run GR-CNL from TD to 12000'. Tie into Schlumberger Compensated Neutron Log dated 8/10/76.
8. HALLIBURTON LOGGING SERVICES to perforate 5-1/2" casing with 4" casing gun, 2 SPF over the following intervals:

DEPTH	FEET	SHOTS
12440'-12475'	35'	70
12240'-12330'	90'	180
12110'-12150'	40'	80
11610'-11626'	16'	32
11503'-11550'	47'	94
TOTAL	228'	456
9. GIH with RTTS-type treating packer on 2-7/8" 6.5#, N-80 workstring. Set packer at 12680'.(NOTE: Perfs located at 12640'-12670' and end of 5-1/2" casing at 12695'.)
10. ACID ENGINEERING to acidize Devonian openhole from 12696'-12775' down 2-7/8" workstring with 4000 gallons 15% NEFe HCL Pentol acid with 400 gallons 10# brine carrying 400 lbs rock salt as follows:
 - a. Pressure test all lines to 4000 psi.
 - b. Pump 2000 gallons acid at 4 BPM.
 - c. Pump 400 gallons 10# brine with 400 lbs rock salt.
 - d. Pump 2000 gallons acid.
 - e. Displace with 74 bbl lease Devonian produced water.

Max. Treating Rate = 5 BPM Max. Treating Pressure = 3500 psi

11. Swab back load (179 bbls) plus 4 hours. Call Carole Stevens (x1310) with swab results.
12. COOH with packer and workstring. PU RBP. GIH with RBP and treating packer on 2-7/8" workstring. Set RBP at 12687'. Test to 1000 psi. Set packer at 12625'.
13. ACID ENGINEERING to acidize Devonian perms (12640'-12670') down 2-7/8" workstring with 1500 gallons 15% NEFe HCl Pentol acid at 4 BPM. Test all lines to 4000 psi. Max. treating pressure not to exceed 3500 psi. Displace with 74 bbls lease Devonian produced water.
14. Swab back load (110 bbls) plus 4 hrs. Call Carole Stevens (x1310) with swab results.
15. Release packer and PU RBP. Reset RBP at 12630'. Test to 1000 psi. Set packer at 12480'. NOTE: Monitor backside close on next step. If communication occurs move packer to 12400', and add step 19 acid volumes to the job.
16. ACID ENGINEERING to acidize Devonian perms (12490'-12610') down 2-7/8" workstring with 6000 gallons 15% NEFe HCl Pentol acid and 800 gallons 10# brine with 800 lbs rock salt as follows:
 - a. Pressure test all lines to 4000 psi.
 - b. Pump 2000 gallons acid at 4 BPM.
 - c. Pump 400 gallons brine carrying 400 lbs rock salt.
 - d. Repeat steps b and c once.
 - e. Pump 2000 gallons acid.
 - f. Displace with 73 bbls lease Devonian produced water.Max. Treating Pressure = 3500 psi Max. Treating Rate = 5 BPM
17. Swab back load (23540 bbls) plus 4 hrs. Call Carole Stevens (x1310) with swab results.
18. Release packer and PU RBP. Reset RBP at 12485'. Test to 1000 psi. Set packer at 12400'.
19. ACID ENGINEERING to acidize Devonian perms (12440'-12475') down 2-7/8" workstring with 1500 gallons 15% NEFe HCl Pentol acid at 4 BPM Test all lines to 4000 psi. Max treating rate not exceed 5 BPM and 3500 psi. Displace with 73 bbls lease Devonian produced water.
20. Swab back load (109 bbls) plus 4 hrs. Call Carole Stevens (x1310) with swab results.
21. Release packer and RBP. Reset RBP at 12380'. Test to 1000 psi. Set packer at 12190'.
22. ACID ENGINEERING to acidize Devonian perms (12240'-12330') down 2-7/8" workstring with 4000 gallons 15% NEFe HCl Pentol acid and 400 gallons 10# brine with 400 lbs rock salt as follows:
 - a. Pressure test all lines to 4000 psi.
 - b. Pump 2000 gallons acid at 4 BPM.
 - c. Pump 400 gallons brine with 400 lbs rock salt.

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