

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill, deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT-" for such proposals.

RECEIVED
MAR 20 PM 3:53

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: September 30, 1990

5. Lease Designation & Serial #:

NM-03845

6. If Indian, Allottee/Tribe Name

7. If Unit or CA, Agmt. Design.:

Northeast Blanco Unit

8. Well Name and No.:

N.E.B.U.# 475

9. API Well No.:

30-039-25049

10. Field & Pool/Expltry Area:

Basin Fruitland Coal

11. County or Parish, State:

Rio Arriba, New Mexico

SUBMIT IN TRIPLICATE

1. Type of Well: oil well _____ gas well ☒ other _____

2. Name of Operator: Blackwood & Nichols Co., A Limited Partnership

3. Address of Operator: P.O. Box 1237, Durango, CO 81302-1237

4. Location of Well: (Footage, Sec., T., R., M., or Survey Description)

Surface:
2560' FSL - 1695' FWL
Section 20, T30N, R7W

Bottom Hole:
1624' FNL - 71' FEL
Section 19, T30N, R7W

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other: COMPLETION
	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

See Addendum for a full description of the open hole "stress relieve" type coal completion.

RECEIVED
MAR 29 1991
OIL CON. DIV
DIST. 3

14. I hereby certify that the foregoing is true and correct.

Signed: R.W. Williams ROY W. WILLIAMS

Title: ADMINISTRATIVE MANAGER

Date: 3/19/91

(This space for Federal or State office use)

Approved By _____ Title _____
Conditions of approval, if any:

ACCEPTED FOR RECORD

Date MAR 21 1991

FARMINGTON RESOURCE AREA

BY RM

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency or the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Completion Report

Northeast Blanco Unit No. 475 - Basin Fruitland Coal

LOCATION: Surface: 2560' FSL, 1695' FWL
Section 20, T30N, R7W
FINAL: Bottom hole: 1624' FNL, 71' FEL
Section 19, T30N, R7W
Rio Arriba County, New Mexico

2-28-91 Testing blind rams and RIH with drill collars.

Rig up and move drilling equipment out.

Nipple up. Rig up. Wait on mud cross. Wait on backhoe and rework blooie ditch and berm. Finish laying blooie lines. Strap drill collars. Test blind rams to 1500 psig for 15 minutes - OK.

RIH with 11 drill collars.

3-01-91 7-5/8" casing set at 3884' MD; open hole 3884-4072' MD, 3020-3208' TVD.

Drilling Fruitland Coal formation at 3208'.

RIH with 3-1/2" drill pipe to insert float at 3843'. Test rams, HCR valves, and manifold to 2000 psig - OK.

Install stripper head. Pick up swivel. Drill insert float and shoe jt. Levy broke in blow pit. Pull up 1 jt, shut down and wait on backhoe. Drill cement shoe.

Drill Fruitland formation from 3884' MD (3020' TVD) to 4072' MD (3208' TVD). Penetrated 3 coal zones for 17' coal thickness. Have 30' flare.

3-02-91 Circulating from TD with 3-1/2 BPM water.

Drill Fruitland formation to 4179' MD (3315' TVD) with 8 BPM water, 8000# WOB, and 100 RPM.

(Cont'd)

3-02-91	Coal Intervals:	3946-3947' MD	1'
		4010-4012'	2'
		4029-4030'	1'
		4044-4048'	4'
		4051-4052'	1'
		4060-4072'	12'
		4075-4076'	1'
		4077-4078'	1'
		4098-4100'	2'
		4119-4129'	10'
		4135-4137'	2'
		4150-4158'	8'
		Total Coal	45'

Top Main P.C. - 4176' MD
 Total Depth - 4179' MD

Circulate from TD with 8 BPM water.

Circulate from TD working pipe when hole dictates with 8 BPM water; reduce pump rate 1/2 Bbl every 2 hours down to 3-1/2 BPM. Returns light 1/4" and less coal (50%), claystone (20%), and siltstone (30%).

3-03-91 Circulating from TD with 5 BPM water and 1.4 MM air.

Circulate from TD and work pipe when hole dictates with 3-1/2 BPM water; reduce pump rate 1/2 Bbl every 2 hours. Returns light 1/4" and less coal (50%) with claystone (20%) and shale and siltstone (30%).

3-03-91 Circulate from TD and work pipe when hole dictates with 5 BPM water and .7 MM air; reduce pump rate 1/2 Bbl every hour. Returns light 3/8" and less coal (50%) with claystone (20%) and shale and siltstone (30%).

Circulate from TD and work pipe when hole dictates with 1 BPM water and .7 MM air. Returns same as above.

Circulate from TD and work pipe when hole dictates with 5 BPM water and 1.4 MM air. Returns moderate to light 3/8" and less coal (70%) with claystone (10%) and shale and siltstone (20%).

3-04-91 Circulating from TD with 1 BPM water and 1.4 MM air with 10 Bbl water sweeps hourly.

Circulate from TD with 5 BPM water and 1.4 MM air; reduce pump rate 1/2 Bbl every 2 hours. Returns light 1/4" and less coal (50%) with shale (40%) and claystone and siltstone (10%).

(Cont'd)

3-04-91 Circulate from TD with 1 BPM water and work pipe when hole dictates with 1.4 MM air and 10 Bbl water sweeps hourly. Returns moderate 1/4" and less coal (60%) with shale (30%) and claystone and siltstone (10%) on sweeps, then light returns.

3-05-91 7-5/8" casing set at 3884' MD, 3020' TVD; open hole 3884-4179' MD, 3020-3315' TVD.

Circulating from TD with 1 BPM water and 1.4 MM air with 10 Bbl water sweeps hourly.

Circulate from TD with 1 BPM water and 1.4 MM air with 10 Bbl water sweeps hourly. Very light returns.

Pull into 7-5/8" casing (bit at 3880') for pitot test #1 and shut in test #1. Pitot test: 1/4, 1/2, 3/4, and 1 hr - 3 psi, 1065 MCFD (dry). Shut in test: 1/4 hr - 260 psi; 1/2 hr - 500 psi; 3/4 hr - 700 psi; 1 hr - 800 psi. Surge well with 800 psi. RIH, no fill.

Circulate from TD with 1 BPM water and 1.4 MM air alternating 5 and 20 Bbl water sweeps hourly. Light returns.

Pull into 7-5/8" casing (bit at 3880') for pitot test #2 and shut in test #2. Pitot test: 1/4, 1/2, 3/4, and 1 hr - 4 psi, 1236 MCFD (dry). Shut in test: 1/4 hr - 290 psi; 1/2 hr - 540 psi; 3/4 hr - 720 psi; 1 hr - 860 psi. Surge well with 860 psi. RIH, 15' fill.

Circulate from TD with 1 BPM water and 1.4 MM air alternating 20 and 5 Bbl water sweeps. Returns moderate 1/4" and less coal (95%) with shale and siltstone.

3-06-91 7-5/8" casing set at 3884' MD, 3020' TVD; open hole 3884-4179' MD, 3020-3315' TVD.

Circulating and working pipe at TD with 1.4 MM air and 1 BPM water.

Circulate and work pipe at TD with 1.4 MM air and 1 BPM water alternating 5 and 20 Bbl water sweeps hourly. Returns moderate 3/8" and less coal (95%) with shale and siltstone.

Pull into 7-5/8" casing for pitot test #3 and shut in test #3. Pitot test: 1/4, 1/2, 3/4, and 1 hr - 4 psi, 1236 MCFD (dry). Shut in test: 1/4 hr - 250 psi; 1/2 hr - 500 psi; 3/4 hr - 700 psi; 1 hr - 850 psi. Surge well with 850 psi. RIH, had 20' fill.

(Cont'd)

3-06-91 Circulate and work pipe at TD with 1.4 MM air and 1 BPM water alternating 5 and 20 Bbl water sweeps hourly. Heavy coal returns for 1-1/2 hours, then moderate 1/2" and less coal (75%) with shale and siltstone. Getting some large 1" coal back. Water production TSTM.

3-07-91 Circulating and working pipe at TD with 1.4 MM air and 1 BPM water.

Circulate and work pipe at TD with 1.4 MM air.

Pull into 7-5/8" casing for pitot test #4 and shut in test #4. Pitot test: 1/4, 1/2, 3/4, and 1 hr - 5 psi, 1374 MCFD (dry). Shut in test: 1/4 hr - 300 psi; 1/2 hr - 500 psi; 3/4 hr - 750 psi; 1 hr - 900 psi. Surge well with 900 psi. RIH, no fill.

Circulate and work pipe at TD with 1.4 MM air and 1 BPM water alternating 5 and 20 Bbl water sweeps hourly. Returns moderate to light 1/4" and less coal (90%) with shale and siltstone.

Pull into 7-5/8" casing for pitot test #5 and shut in test #5. Pitot test: 1/4, 1/2, 3/4, and 1 hr - 5 psi, 1374 MCFD (dry). Shut in test: 1/4 hr - 300 psi; 1/2 hr - 500 psi; 3/4 hr - 750 psi; 1 hr - 900 psi; 1-1/4 hrs - 950 psi; 1-1/2 hrs - 990; 1-3/4 hrs - 1010 psi; 2 hrs - 1040 psi. Surge well with 1050 psi. RIH, no fill.

Circulate and work pipe at TD with 1.4 MM air and 1 BPM water with 20 Bbl water sweeps. Returns moderate 1/4" and less coal (90%) with shale and siltstone. No water production.

3-08-91 7-5/8" casing set at 3884' MD, 3020' TVD; open hole 3884-4179' MD, 3020-3315' TVD.

Circulating and working pipe at TD with 1.4 MM air and 3 BPM water.

Circulate and work pipe at TD with 1.4 MM air and 1 BPM water with 5 to 20 Bbl water sweeps hourly.

Pull into 7-5/8" casing. Run pitot test #6 and shut in test #6. Pitot test: 1/4 hr - 4.5 psi, 1304 MCFD; 1/2, 3/4, and 1 hr - 5 psi, 1374 MCFD (all gauges dry). Shut in test: 1/4 hr - 300 psi; 1/2 hr - 500 psi; 3/4 hr - 725 psi; 1 hr - 850 psi. Pressure up with air to 1500 psi, surge well. RIH, hit bridge at 4134', wash to bottom.

(Cont'd)

3-08-91 Circulate and work pipe at TD with 1.4 MM air and 1 BPM water with 5 to 20 Bbl water sweeps hourly. Returns moderate to light 1/4" and less coal (95%), with shale and siltstone.

Pull into 7-5/8" casing for pitot test #7 and shut in test #7. Pitot test: 1/4 hr - 5 psi, 1374 MCFD; 1/2 hr - 5.5 psi, 1454 MCFD; 3/4 and 1 hr - 6 psi, 1520 MCFD (all gauges dry). Shut in test: 1/4 hr - 300 psi; 1/2 hr - 500 psi; 3/4 hr - 700 psi; 1 hr - 860 psi. Pressure up with air, formation taking air @ 1200 psi. Pump into formation 45 minutes @ 1.4 MM, gradually pressured up to 1500 psi. Surge well. RIH, hit bridge at 4134', wash to bottom. Had 10' of solid fill on bottom.

Circulate and work pipe at TD with 1.4 MM air and 3 BPM water. Returns heavy 3/8" and less coal (95%) in black water with floating coal fines. No apparent water production.

3-09-91 7-5/8" casing set at 3884' MD, 3020' TVD; open hole 3884-4179' MD, 3020-3315' TVD.

Circulating from TD with 3 BPM water and 1.4 MM air.

Circulate from TD with 1 BPM water and 1.4 MM air with 5 to 20 Bbl water sweeps hourly. Returns moderate to light 1/4" and less coal (95%) with shale and siltstone.

Pull into 7-5/8" casing (bit at 3880') for pitot test #8 and shut in test #8. Pitot test: 1/4, 1/2, 3/4, and 1 hr - 7 psi, 1654 MCFD (all gauges dry). Shut in test: 1/4 hr - 300 psi; 1/2 hr - 550 psi; 3/4 hr - 750 psi; 1 hr - 875 psi. Pressure up with air to 1500 psi and surge well. RIH, hit bridge at 4090', wash to bottom. Had 15' fill.

Circulate from TD with 1 BPM water and 1.4 MM air and 5 to 20 Bbl water sweeps hourly. Returns heavy to moderate to light 3/8" and less coal (95%) with shale and siltstone in black to clear water.

Pull into 7-5/8" casing (bit at 3880';) to run pitot test #9 and shut in test #9. Pitot test: 1/4 and 1/2 hr - 7.5 psi, 1702 MCFD; 3/4 and 1 hr - 8 psi, 1756 MCFD (all gauges dry). Shut in test: 1/4 hr - 350 psi; 1/2 hr - 650 psi; 3/4 hr - 850 psi; 1 hr - 900 psi. Pressure up with air to 1500 psi and surge well. RIH, hit bridge at 4060', fell through, 15' fill on bottom. Clean out with 3 BPM water and 1.4 MM air. Heavy 1/4" and less coal returns (95%) with shale and siltstone in black water.

3-10-91 Circulating from TD with 3 BPM water and 1.4 MM air.

Circulate from TD with 1 BPM water and 1.4 MM air with 5 to 20 Bbl water sweeps hourly. Returns heavy to moderate to light 1/4" and less coal (90%) with shale and siltstone in black water diminishing to clear water.

Pull into 7-5/8" casing (bit at 3880') for pitot test #10 and shut in test #10. Pitot test: 1/4 hr - 11 psi, 2039 MCFD; 1/2, 3/4, and 1 hr - 10 psi, 1948 MCFD (all gauges dry). Shut in test: 1/4 hr - 350 psi; 1/2 hr - 800 psi; 3/4 hr - 950 psi; 1 hr - 1000 psi. Pressure up to 1500 psi with air and surge well. RIH, no fill.

Circulate from TD with 1 BPM water and 1.4 MM air and 5 to 20 Bbl water sweeps hourly. Returns light 1/4" and less coal (90%) with shale and siltstone in gray water.

Pull into 7-5/8" casing (bit at 3880';) to run pitot test #11 and shut in test #11. Pitot test: 1/4 hr - 11.5 psi, 2109 MCFD; 1/2, 3/4 and 1 hr - 11 psi, 2039 MCFD (all gauges dry). Shut in test: 1/4 hr - 400 psi; 1/2 hr - 700 psi; 3/4 hr - 900 psi; 1 hr - 1000 psi. Pressure up to 1500 psi with air and surge well. RIH, had 20' fill. Clean out to bottom with 3 BPM water and 1.4 MM air. Returns heavy 3/8" and less coal returns (90%) with shale and siltstone in black water.

3-11-91 Circulating from TD with 3 BPM water and 1.4 MM air.

Circulate from TD with 1 BPM water and 1.4 MM air with 5 to 20 Bbl water sweeps hourly. Returns moderate to light 1/4" and less coal (90%) with shale and siltstone in gray water. Blow well dry.

Pull into 7-5/8" casing (bit at 3880') for pitot test #12 and shut in test #12. Pitot test: 1/4 hr - 10 psi, 1948 MCFD; 1/2, 3/4, and 1 hr - 12.5 psi, 2195 MCFD (all gauges dry). Shut in test: 1/4 hr - 310 psi; 1/2 hr - 725 psi; 3/4 hr - 875 psi; 1 hr - 1000 psi. Pressure up to 1500 psi with air and surge well. RIH, 20' fill, clean out.

Circulate from TD with 1 BPM water and 1.4 MM air and 5 to 20 Bbl water sweeps hourly. Returns heavy to moderate to light 1/4" and less coal (90%) with shale and siltstone in black to gray water. Blow well dry.

Pull into 7-5/8" casing (bit at 3880';) to run pitot test #13 and shut in test #13. Pitot test: 1/4 hr - 13 psi, 2237 MCFD; 1/2, 3/4 and 1 hr - 14 psi, 2326 MCFD (all gauges dry). Shut in test: 1/4 hr - 450 psi; 1/2 hr - 700 psi; 3/4 hr - 900 psi; 1 hr - 1000 psi. Pressure up to 1500 psi with air

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3-11-91 and surge well. RIH, had 20' fill. Clean out to bottom with 3 BPM water and 1.4 MM air. Returns heavy 3/8" and less coal returns (90%) with shale and siltstone in black water.

3-12-91 7-5/8" casing set at 3884' MD, 3020' TVD; open hole 3884-4179' MD, 3020-3315' TVD.

Circulating and working pipe at TD with 1.4 MM air and 1 BPM water.

Circulate and work pipe at TD with 1.4 MM air and 1 BPM water with 5 to 20 Bbl water sweeps hourly. Returns heavy to moderate to light 1/4" and less coal (905) in black to gray water.

Pull into 7-5/8" casing (bit at 3880') for pitot test #14 and shut in test #14. Pitot test: 1/4 hr - 16 psi, 2506 MCFD; 1/2, 3/4 and 1 hr - 15 psi, 2416 MCFD (all gauges dry). Shut in test: 1/4 hr - 500 psi; 1/2 hr - 800 psi; 3/4 hr - 900 psi; 1 hr - 1000 psi. Pressure up with air to 1500 psi, surge well. RIH, no fill. Formation appears to take air @ 1200 psi.

Circulate and work pipe at TD with 1.4 MM air and 1 BPM water alternating 5 and 20 Bbl water sweeps hourly. Returns same as above.

Pull into 7-5/8" casing for pitot test #15 and shut in test #15. Pitot test: 1/4 and 1/2 hr - 16.5 psi, 2550 MCFD; 3/4 and 1 hr - 17 psi, 2595 MCFD (all gauges dry). Shut in test: 1/4 hr - 550 psi; 1/2 hr - 750 psi; 3/4 hr - 900 psi; 1 hr - 1000 psi. Pressure up with air to 1500 psi, surge well. RIH, had 3' fill. Returns heavy 1/4" and less coal (95%) in black water with heavy floating coal dust. No apparent water production.

3-13-91 7-5/8" casing set at 3884' MD, 3020' TVD; open hole 3884-4179' MD, 3020-3315' TVD.

Circulating and working pipe at TD with 1.4 MM air and 1 BPM water.

Circulate and work pipe at TD with 1.4 MM air and 1 BPM water with 5 to 20 Bbl water sweeps hourly. Returns moderate to light 1/4" and less coal (90%) with shale and siltstone in gray water.

Pull into 7-5/8" casing (bit at 3880') for pitot test #16 and shut in test #16. Pitot test: 1/4, 1/2, 3/4, and 1 hr - 19 psi, 2774 MCFD (all gauges dry). Shut in test: 1/4 hr - 575 psi; 1/2 hr - 825 psi; 3/4 hr - 900 psi; 1 hr - 1000 psi.

(Cont'd)

3-13-91 Pressure up with air to 1200 psi, pump into formation for one hour @ 1200 psi, surge well. TIH, had 3' fill.

Circulate and work pipe at TD with 1.4 MM air and 1 BPM water alternating 5 and 20 Bbl water sweeps hourly. Returns heavy to light 1/4" and less coal (90%) in black to gray water.

Pull into 7-5/8" casing for pitot test #17 and shut in test #17. Pitot test: 1/4, 1/2, 3/4, and 1 hr - 20 psi, 2863 MCFD (all gauges dry). Shut in test: 1/4 hr - 500 psi; 1/2 hr - 800 psi; 3/4 hr - 900 psi; 1 hr - 1000 psi. Pressure up with air to 1190 psi, pump in for one hour @ 1190 psi, surge well. TIH, had 3' fill.

3-14-91 7-5/8" casing set at 3884' MD, 3020' TVD; open hole 3884-4179' MD, 3020-3315' TVD.

Circulating and working pipe at TD with 1.4 MM air and 3 BPM water.

Circulate and work pipe at TD with 1.4 MM air and 1 BPM alternating 5 and 20 Bbl water sweeps hourly. Returns moderate to light 1/4" and less coal (90%) in gray water.

Pull into 7-5/8" casing (bit at 3880') for pitot test #18 and shut in test #18. Pitot test: 1/4, 1/2, 3/4, and 1 hr - 23 psi, 3132 MCFD (all gauges dry). Shut in test: 1/4 hr - 450 psi; 1/2 hr - 675 psi; 3/4 hr - 850 psi; 1 hr - 950 psi. Pressure up with air and pump into formation @ 1200 psi for one hour, surge well. RIH, had 2' fill.

Circulate and work pipe at TD with 1.4 MM air and 1 BPM water alternating 5 and 20 Bbl water sweeps hourly. Returns same as above.

Pull into 7-5/8" casing (bit at 3880') for pitot test #19 and shut in test #19. Pitot test: 1/4 and 1/2 hr - 21 psi, 2953 MCFD; 3/4 hr - 21.5 psi, 2997 MCFD; and 1 hr - 22 psi, 3042 MCFD (all gauges dry). Shut in test: 1/4 hr - 500 psi; 1/2 hr - 750 psi; 3/4 hr - 900 psi; 1 hr - 1000 psi. Pressure up with air and pump into formation @ 1200 psi for one hour, surge well. RIH, had 5' fill. Returns heavy 3/8" and less coal (90%) in black water with floating coal fines.

3-15-91 7-5/8" casing set at 3884' MD, 3020' TVD; open hole 3884-4179' MD, 3020-3315' TVD.

Changing rams and rigging up to run liner.

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3-15-91 Circulate and work pipe at TD with 1.4 MM air and 1 BPM water, alternating 5 and 20 Bbl water sweeps hourly. Returns moderate to light 1/4" and less coal (90%) with shale and siltstone in black to gray water.

Blow well dry. Pull into 7-5/8" casing (bit at 3880') for pitot test #20. Pitot test: 1/4 hr - 23 pi, 3132 MCFD; 1/2 and 3/4 hr - 22 psi, 3042 MCFD; and 1 hr - 23 psi, 3132 MCFD (all gauges dry). RIH, had 12' fill. Clean out to bottom. Heavy 1/2" and less coal returns (90%) with shale and siltstone in black water.

Circulate and work pipe at TD with 1.4 MM air and 1 BPM water alternating 5 and 20 Bbl water sweeps hourly. Returns heavy to moderate to light 3/8" and less coal (90%) with shale and siltstone in black to gray water.

Blow well dry.

TOH with drill pipe and drill collars.

3-16-91 7-5/8" casing set at 3884' MD, 3020' TVD; 5-1/2" liner 3792-4179' MD, 2928-3315' TVD.

Nippling down BOP.

Pitot test #21: 1/4 hr - 23 #, 3132 MCFD (dry).

Rig up and run 6 full perf'd and 3 full plain jts (382.00') 5-1/2" 23# L-80 USS casing with V-set shoe on Baker 5-1/2" x 7-5/8" SLP-R hanger with 123 jts 3-1/2" drill pipe. Hang hanger, pack off and release with BJ pump truck - OK.

Lay down drill pipe and drill collars.

Change rams. Rig up. Pick up expendable mill, 1 jt 2-7/8" tubing, F nipple (2.25" ID), 120 jts 2-7/8" tubing. Tag liner top at 3792'. Tag plugs at 3925' and drill to 4177'. Lay down 2 jts tubing and hang off with donut in tubing head. Nipple down BOP.

TUBING SUMMARY:

Ran 131 jts (4122.80') 2-7/8" 6.5# J-55 FBNAU USS tubing with bottom of tubing at 4138.80' MD, 3274.8' TVD, F nipple (2.25" ID) profile top at 4107.31'.

LINER SUMMARY:

5-1/2" liner shoe	4179.00'
Top of liner	3791.61'
Overlap	92.39'
Perfs (8 HPF)	3925-4177'

3-17-91 Nippling down BOP, mud cross, and HCR valves. Nipple up Christmas tree and pump off expendable mill/check with water @ 1600 psig. Reverse out all water with air.

Final gauge 3132 MCFD gas, water production TSTM.

Rig down. Inspect 3-1/2" drill pipe and drill collars. Release rig at 11:59 p.m., 3-17-91.