

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

SUBMIT IN TRIPLICATE

1. Type of Well: oil well _____ gas well _____ other X SWD _____

2. Name of Operator: Blackwood & Nichols Co., Ltd.

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

4. Location of Well: (Footage, Sec., T., R., M., or Survey Description)
555' FSL, 720' FML
Section 11, T31N, R7W

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

5. Lease Designation & Serial #

MM03358

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. MM SWD #2

9. API Well No.:

30-045-28553

10. Field & Pool/Expltry Area:

Wildcat Morrison/Entrada

11. County or Parish, State:

San Juan, New Mexico

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 type="checkbox"/> Other: (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)
	<input type="checkbox"/> Change of Plans
	<input checked="" 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 date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured vertical depths for all markers and zones pertinent to this work.)*

9-13-91 WOC. Clean pits, cut off pipe and weld on 20" bradenhead. Test head and reweld 3 times (heavy rain). NU.

9-14-91 Made 196' in 8-3/4 hours drilling with bit no. 3; 25,000# WOB, 60 RPM. Mud weight 8.9 ppg, viscosity 37 sec, WL 14, 1.25% sand, cake 2/32, ph 11, PV 13, YP 6, Cl 200, 4.3% solids. Finish NU, test blind rams, casing, and manifold to 600 psi - held OK. PU bit no. 3 (rerun #1), 17-1/2" Hughes Tool Co. (jets: 19-19-19), bit sub, and IBS, two 9" DC, 8" DC, and 1 jt HWDP. RIH and test pipe rams to 650 psi - cement at 330'. Drill cement and shoe and formation.

(continued on attached page)

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

Signed: AL RECTOR AL RECTOR

(This space for Federal or State office use)

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

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

ACCEPTED FOR RECORD

NOV 13 1991

FARMINGTON RESOURCE AREA

NOV 14 1991

Title: OPERATIONS ENGINEER

Date: 10/7/91

9-15-91 Made 250' in 15 hours drilling. Drilled to 625' with bit no. 3; 25,000# WOB, 60-65 RPM, 1000 psi. Repair #2 pump, circulate, POOH. PU bit no. 4, 17-1/2" Smith Tool Co. 2JS, SN#10A8383 (jets: 16-16-16), and RIH. Drill with 25,000-30,000# WOB, 70 RPM, 1000 psi. Mud weight 9.0 ppg, viscosity 35, cake 2/32, ph 8, PV 8, YP 6, Cl 300, 5% solids. Surveys: 3' at 685'; 4' at 750'. POOH to pick up IBS. BHA: 17-1/2" bit, bit sub, IBS, two 9" DC, crossover, ten 8" DC, five 5" HWDP (54,000#).

9-16-91 TIH with new BHA. Drill, appear to be drilling in fractures; rough drilling and large cuttings. Made 157' in 20-1/2 hours drilling with bit no. 4, 25,000-30,000# WOB, 70 RPM, 1000 psi. Mud weight 9.0 ppg, viscosity 67, WL 14.4, cake 2/32, 0.5% sand, ph 9, PV 12, YP 12, Cl 300, 5.7% solids. Lost 25 Bbls mud. Surveys: 4' at 781'; 4-3/4' at 845'. BHA: 17-1/2" bit, bit sub, IBS, one 9" DC, IBS, one 9" DC, crossover, ten 8" DC, five 5" HWDP (54,000#).

9-17-91 Made 146' in 14-3/4 hours drilling with bit no. 4, 40,000# WOB, 60 RPM, 1100 psi. Mud weight 9.1 ppg, viscosity 73, WL 10, cake 2/32, 0.5% sand, ph 9, PV 25, YP 19, Cl 300, 6% solids. Surveys: 4-1/2' at 907'; 4-1/2' at 937'; and 4' at 1033'. Pump #1 slow pump rate - 76 SPM - 50 psi. Pump #2 slow pump rate - 78 SPM - 50 psi. Trip to check BHA, drilling very rough from 550' to 1000' - appears to be fractured formation. Bit was in gauge, both IBSs and bit balled up. TIH, ream and clean out 6' fill.

9-18-91 Made 240' in 21-3/4 hours drilling with bit no. 4, 35,000-45,000# WOB, 60-70 RPM, 1100 psi. Mud weight 9.4 ppg, viscosity 44 sec, WL 22, cake 3/32, sand .5%, ph 9, PV 10, YP 11, Cl 380, solids 7.8%. Surveys: 4-1/4' at 1126'; 4' at 1218'.

9-19-91 Made 93' in 8-1/2 hours drilling with bit no. 4, 35,000-40,000# WOB, 60 RPM, 1300 psi. Mud weight 9.4 ppg, viscosity 45 sec, WL 14, cake 3/32, sand 1/2%, ph 9.5, PV 11, YP 11, Cl 280, solids 7.8%. Survey: 4' at 1385'. Drill to 1416', pipe torquing, POOH, bit no. 4 was 1/2" under gauge, both IBSs under gauge. Wait on IBS. PU bit no. 5, 17-1/2" Smith Tool Co. 2JS, SN# YA4824, (jets: 16-16-16), IBS and TIH. Start reaming at 785', now reaming at 1282'.

9-20-91 Ream from 1282' to 1316', high torque. POOH, LD two double jts DP, both boxes swelled. Check bit, LD near bit IBS, PU near bit three-point reamer. TIH, LD 30 jts DP to inspect. PU 30 jts inspected DP, ream to 1416', last 60' reamed slow. Made 45' in 1 hour drilling with bit no. 5, 35,000-40,000# WOB, 70 RPM, 1300 psi. Mud weight 9.5 ppg, viscosity 46 sec, WL 13.6, cake 3/32, sand .75%, ph 9.5, PV 12, YP 9, Cl 210, solids 8.5%. BHA: bit, 3-pt. reamer, crossover, one 9" DC, IBS, one 9" DC, ten 8" DC, crossover, five 5" HWDP (528.66'), 55,000#.

9-21-91 Made 242' in 23-1/4 hours drilling with bit no. 5, 30,000# WOB, 60 RPM, 1300 psi. Mud weight 9.4 ppg, viscosity 50 sec, WL 10.4, cake 3/32, sand .75%, pH 9, PV 16, YP 12, Cl 200, solids 7.8%. Survey: 3-3/4' at 1534'.

9-22-91 Made 80' in 10-3/4 hours drilling. Drilled to 1711' with bit no. 5, 30,000# WOB, 60 RPM, 1300 psi. Mud weight 9.5 ppg, viscosity 58 sec, WL 9.6, cake 3/32, sand .85%, pH 9, PV 18, YP 15, Cl 210, solids 8.5%. Survey: 3-3/4° at 1689'. Drilling rough and torquing up, circulate hole clean and run survey. POOH, IBS balled up, in gauge; 3-pt reamer balled up, 1/4" under gauge; bit 1/4" under gauge. PU new bit no. 6, 17-1/2" Smith Tool Co., 15JS, SN# K55077 (jets: 16-16-16), 3-pt reamer, shock sub, and TIH. Ream 60' to bottom. Drill with 40,000# WOB and 60 RPM. BHA: bit, 3-pt reamer, shock sub, crossover, one 9" DC, IBS, one 9" DC, ten 8" DCs, crossover, 5 jts 5" HWDP (60,000#).

9-23-91 Made 186' in 18-3/4 hours drilling with bit no. 6, 54,000# WOB, 60 RPM, 1400 psi. Mud weight 9.4 ppg, viscosity 58 sec, WL 8.8, cake 3/32, sand .75%, pH 9, PV 20, YP 15, Cl 150, solids 8%. Surveys: 4° at 1754'; 3-1/4° at 1846'. Took rig off payroll for 4 hours to repair mud pumps, desander, and desilter.

9-24-91 Made 246' in 23-1/4 hours drilling with bit no. 6, 55,000# WOB, 60 RPM, 1450 psi. Mud weight 9.2 ppg, viscosity 52 sec, WL 12.8, cake 3/32, sand .5%, pH 9, PV 17, YP 10, Cl 140, solids 7%. Survey: 3° at 2095'.

9-25-91 Made 232' in 23-1/4 hours drilling with bit no. 6, 50,000-55,000# WOB, 60-65 RPM, 1400 psi. Mud weight 9.2 ppg, viscosity 60 sec, WL 16, cake 3/32, sand .75%, pH 9, PV 11, YP 13, Cl 160, solids 6.5%, no LCM. Survey: 2-3/4° at 2385'. Began mud logging at 5:00 p.m., 9-24-91. Carrying 2-3 units of background gas (C₁), no shows in past 24 hours. Ojo Alamo Sand through. Automatic driller, desander, and desilter all working. Altering drilling with one pump while changing liners and swabs in other pump. Slow pump rate #1, 60 SPM, 150 psig. Slow pump rate #2, same. Total of 187 rotating hours in 17-1/2" hole.

9-26-91 Made 185' in 21-1/2 hours drilling with bit no. 6, 50,000-55,000# WOB, 60-65 RPM, 1400 psi. Mud weight 9.1 ppg, viscosity 46 sec, WL 15.2, cake 3/32, sand .5%, pH 9, PV 12, YP 6, Cl 120, solids .6%. BHA - same. Drill. Rig service and check pipe rams. Drill with torque and roughness. TD at 2632' in Kirtland shale (top at 2449'). Top of Fruitland expected at 3000'. TOOH to check BHA. Show of 242 units at 2519-2529'. No odor, no fluorescence, no cut. Makeup: C₁, 15,500 ppm; C₂, 1050 ppm; C₃, 240 ppm. Background gas before show - 10 units. Background gas before tripping out, 25-30 units. POOH to check BHA. Pumps requiring constant repair. Automatic driller, desander, and desilter working. Slow pump rates #1 and #2, 60 SPM, 150 psig.

9-27-91 Made 184' in 17-3/4 hours drilling with bit no. 7, 17-1/2" Hughes Tool Co. J-22, SN# 728QM (jets: 16-16-16), in at 2643', 55,000# WOB, 65 RPM, 1400 psi. Mud weight 9.6 ppg, viscosity 44 sec, WL 12, cake 2/32, sand .5%, pH 9, PV 18, YP 10, Cl 120, solids 8%. BHA: bit, 3-pt reamer, shock sub, two 9" DC, ten 8" DC, crossover, 5 jts HWDP (60,000#). POOH, change bit (bit no. 6 was 1/4" out of gauge) and reamer cutters, check BOP. RIH, ream 60'. 13 units background gas, predominantly C₁.

9-28-91 Repair pump, drill. Made 181' in 21-3/4 hours drilling with bit no. 7, 50,000-55,000# WOB, 60-70 RPM, 1400 psi. Mud weight 10.0 ppg, viscosity 48 sec., WL 9.8, cake 2/32, sand .5%, pH 9, PV 18, YP 10, Cl 120, solids 9.5%. Had show at 2840-48', total gas 469 units, C₁ through C₄, no odor, tight siltstone. Current background gas 26 units.

9-29-91 Made 190' in 22-1/2 hours drilling with bit no. 7, 50,000-55,000# WOB, 60-65 RPM, 1400 psi. Mud weight 10.1 ppg, viscosity 47 sec, WL 8.8, cake 2/32, sand .5%, pH 9, PV 18, YP 12, Cl 130, solids 9.5%. Top of Fruitland sand at 3013'. Current background gas 300 units.

Coal Intervals:

3121-24'	3'	
3125-34'	9'	2 cans desorption, 1600 units
3170-77'	7'	2 cans desorption, 2600 units

9-30-91 Made 168' in 20-1/2 hours drilling with bit no. 7, 50,000-55,000# WOB, 60-65 RPM, 1400 psi. Mud weight 10.2 ppg, viscosity 44 sec, WL 7.2, cake 2/32, sand .5%, pH 9, PV 15, YP 8, Cl 120, solids 11%. Survey: 1' at 3175'. Top of PC tongue at 3303'. Current background gas 500-600 units.

Coal Intervals:

3121-24'	3'	
3125-34'	9'	2 cans desorption, 1602 units
3170-77'	7'	2 cans desorption, 2617 units
3230-38'	8'	2 cans desorption, 3164 units
3249-51'	2'	
3258-59'	1'	
3283-87'	4'	2 cans desorption, 2930 units
3290-91'	1'	
3298-3300'	2'	

10-01-91 Made 116' in 12-1/4 hours drilling with bits no. 7 and 8. Drilled to 3380' with bit no. 7, 50,000-55,000# WOB, 60-65 RPM, 1450 psi. POOH to change bit, bit 1/4" out of gauge, bearing seals gone. PU bit no. 8, (RR #6), 17-1/2" Smith Tool Co. 15JS (jets: 16-16-16), in at 3380'. Ream 30' to TD, drill with 50,000-55,000# WOB, 60-65 RPM, 1450 psi. Made 91' in 8 hours drilling. Mud weight 10.3 ppg, viscosity 48 sec, WL 5.6, cake 2/32, sand .5%, pH 8.5, PV 22, YP 18, Cl 180, solids 12%.

Coal Intervals:

3392-96'	4'	
3397-3404'	7'	2 cans desorption, 3672 units (287100 ppm C ₁)

Total coal 46'. Top of main PC 3407'. 560-600 units background gas.

10-02-91 Made 166' in 22 hours drilling with bit no. 8, 50,000-55,000# WOB, 60-65 RPM, 1450 psi. Mud weight 10.3 ppg, viscosity 51 sec, WL 5.6, cake 2/32, sand .5%, pH 9, PV 25, YP 15, Cl 140, solids 12%. Top of Lewis shale at 3560'. Background gas 140-160 units.

10-03-91 Made 63' in 13-3/4 hours drilling with bit no. 8, 50,000# WOB, 70 RPM, 1450 psi. Mud weight 10.4 ppg, viscosity 60 sec, WL 5.6, cake 2/32, sand .5%, pH 9, PV 26, YP 19, Cl 150, solids 12.5%. Survey: 3/4' at 3670'. Finished drilling hole at 8:00 p.m., 10-02-91. Strap out of hole. RU lubricating head and log. Loggers TD 3696'. Strap TD 3700'. Background gas 200 units.

10-04-91 Finished logging. RD and RU drilling nipple. RIH, 4' fill. Circulate and condition mud. POOH laying down DP and DC. PU Baker inflatable packer on 1 jt DP and hang below BOP. ND BOP, change pipe rams to 13-3/8", NU BOP. RU to run 13-3/8" casing.

10-05-91 Ran 34 jts 13-3/8" 68# K-55 USS casing, 33 jts on bottom, 1 jt at surface with 51 jts 61# K-55 USS (3698.63'), guide shoe on bottom, float collar 1 jt up, 20 centralizers on bottom, stage tool at 2446', 10 centralizers starting below stage tool and extending up through Ojo Alamo, guide shoe set at 3700'. Cement first stage with 40 Bbl mud flush, 100 Bbl Poz scavenger flush, 700 sx (1365 cf) 65/35 Poz with 6% gel, 2% CaCl₂, and 6-1/4 #/sk gilsonite, 12.2 ppg. Tail with 200 sx (232 cf) Class B with 2% CaCl₂ and 1/4 #/sk celloflake, 15.74 ppg. Plug down at 5:48 p.m., 10-04-91. Circulate 30 Bbls cement to surface, open stage tool and circulate 4-1/2 hours. Cement second stage with 40 Bbl mud flush and 100 Bbl Poz scavenger flush, cement with 1670 sx (2973 cf) 65/35 Poz with 6% gel, 2% CaCl₂, and 6-1/4 #/sk gilsonite, 12.3 ppg. Circulate 100 sx (116 cf) Class B with 2% CaCl₂, and 1/4 #/sk celloflake, 15.74 ppg. 200 Bbls cement to surface. Plug down at 1:00 a.m., 10-05-91. WOC.

10-06-91 ND BOP, cut off 13-3/8", cut off 20" bradenhead, weld on 13-3/8" head. Test weld to 2000 psi - held OK. NU BOPs.